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Index to Financial Statements

As filed with the Securities and Exchange Commission on November 15, 2018

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-4
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Apergy Corporation

***And the Additional Registrants listed below**
(Exact name of registrant issuer as specified in its charter)

Delaware	3530	82-3066826
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

2445 Technology Forest Blvd
Building 4, 12th Floor
The Woodlands, Texas 77381
(281) 403-5772
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Julia Wright
Senior Vice President, General Counsel and Secretary
2445 Technology Forest Blvd
Building 4, 12th Floor
The Woodlands, Texas 77381
(281) 403-5772
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Jonathan B. Newton

Michael S. Hamilton
Baker & McKenzie LLP
700 Louisiana St
Suite 3000
Houston, Texas 77002
(713) 427-5000

Approximate date of commencement of proposed sale of securities to the public: As soon as practicable after this Registration Statement is declared effective.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☐
	Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☒

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) ☐

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer) ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
6.375% Senior Notes due 2026	$300,000,000	100%	$300,000,000	$36,360
Guarantees related to the 6.375% Senior Notes due 2026	N/A	N/A	N/A	N/A(2)

(1) Estimated solely for the purpose of calculating the registration fee under Rule 457(f) of the Securities Act of 1933, as amended (the "Securities Act").
(2) Pursuant to Rule 457(n) under the Securities Act, no separate registration fee is payable in respect of the registration of the guarantees.

The registrants hereby amend this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrants shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

TABLE OF ADDITIONAL REGISTRANTS

Name of Additional Registrant*	State or Other Jurisdiction of Incorporation or Formation	Primary Standard Industrial Classification Code Number	I.R.S. Employer Identification Number
Accelerated Process Systems, Inc.	Texas	3533	76-0264303
Apergy (Delaware) Formation, Inc.	Delaware	3530	82-3110663
Apergy Artificial Lift, LLC	Delaware	3533	47-2609671
Apergy BMCS Acquisition Corp.	Delaware	3533	26-2254713
Apergy Energy Automation, LLC	Delaware	3533	46-5648391
Apergy ESP Systems, LLC	Oklahoma	3533	27-3714367
Apergy Funding Corporation	Delaware	3530	82-3110990
Apergy USA, Inc.	Delaware	3533	82-3066935
Harbison-Fischer, Inc.	Delaware	3533	75-0861442
Honetreat Company	California	3533	95-2122549
Norris Rods, Inc.	Delaware	3533	75-2751426
Norriseal-Wellmark, Inc.	Delaware	3491	73-1121398
PCS Ferguson, Inc.	Delaware	3533	13-4137030
Quartzdyne, Inc.	Delaware	3679	74-2861968
Spirit Global Energy Solutions, Inc.	Delaware	3533	26-3199867
Theta Oilfield Services, Inc.	Delaware	3533	20-8725451
UPCO, Inc.	Oklahoma	3533	73-1165601
US Synthetic Corporation	Delaware	3299	87-0342600
Wellmark Holdings, Inc.	Delaware	3530	46-1355894
Windrock, Inc.	Tennessee	3825	62-1422184

* Addresses and telephone numbers of principal executive offices are the same as those of Apergy Corporation, with the exception of: (i) Apergy BMCS Acquisition Corp., 1320 South 1600 West, Orem, UT 84058, 1 (800) 535-7419; and (ii) US Synthetic Corporation, 1260 South 1600 West, Orem, UT 84058, (801) 235-9001.

The information in this prospectus is not complete and may be changed. We may not complete the exchange offer or sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED NOVEMBER 15, 2018

PROSPECTUS

Apergy Corporation

Offer to Exchange

$300,000,000 aggregate principal amount of its 6.375% Senior Notes due 2026 (the "exchange notes"), which have been registered under the Securities Act of 1933, as amended (the "Securities Act"), for any and all of its outstanding 6.375% Senior Notes due 2026 (the "outstanding notes" and such transaction, the "exchange offer")

We are conducting the exchange offer in order to provide you with an opportunity to exchange your unregistered outstanding notes for the exchange notes that have been registered under the Securities Act.

The Exchange Offer

- We will exchange all unregistered outstanding notes that are validly tendered and not validly withdrawn for an equal principal amount of exchange notes that are registered under the Securities Act.
- You may withdraw tenders of outstanding notes at any time prior to the expiration of the exchange offer.
- The exchange offer expires at 11:59 p.m., New York City time, on , , unless extended (the "expiration date"). We do not currently intend to extend the expiration date.
- The exchange of outstanding notes for exchange notes in the exchange offer will not constitute a taxable exchange or other taxable event for U.S. federal income tax purposes. See the discussion under the caption "Summary of Material United States Federal Income Tax Consequences" for more information. You should consult your own tax advisor as to the particular tax consequences to you of the exchange offer, as well as the tax consequences of the ownership and disposition of outstanding notes or exchange notes.
- The terms of the exchange notes to be issued in the exchange offer are substantially identical to the outstanding notes, except that the exchange notes will be registered under the Securities Act, do not have any transfer restrictions and do not have registration rights or additional interest provisions.

Results of the Exchange Offer

- Except as prohibited by applicable law, the exchange notes may be sold in the over-the-counter market, in negotiated transactions or through a combination of such methods.
- We will not receive any proceeds from the exchange offer.

There is no established trading market for the exchange notes or the outstanding notes and we do not intend to list the exchange notes or the outstanding notes on any securities exchange.

All untendered outstanding notes will remain outstanding and continue to be subject to the restrictions on transfer set forth in the outstanding notes and in the Indenture (as defined herein). In general, the outstanding notes may not be offered or sold, unless registered under the Securities Act, except pursuant to an exemption from, or in a transaction not subject to, the Securities Act and applicable state securities laws. Other than in connection with the exchange offer, we do not currently anticipate that we will register the outstanding notes under the Securities Act.

Each broker-dealer that receives exchange notes for its own account in the exchange offer must acknowledge that it will deliver a prospectus in connection with any resale of those exchange notes. The letter of transmittal states that by so acknowledging and delivering a prospectus, a broker-dealer will not be deemed to admit that it is an "underwriter" within the meaning of the Securities Act. This prospectus, as it may be amended or supplemented from time to time, may be used by a broker-dealer in connection with resales of exchange notes received in exchange for outstanding notes where the broker-dealer acquired such outstanding notes as a result of market-making or other trading activities. We have agreed to keep effective the registration statement of which this prospectus is a part until 180 days after the completion of the exchange offer. See "Plan of Distribution."

See "Risk Factors" beginning on page 12 for a discussion of certain risks that you should consider before participating in the exchange offer.

Neither the Securities and Exchange Commission (the "SEC") nor any state securities commission has approved or disapproved these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2018.

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Unless otherwise indicated or context otherwise requires, all references in this prospectus to "Apergy Corporation," "Apergy," "the Company," "we," "us," "our" and "our company" refer (i) prior to the Separation (as defined herein), to the Apergy businesses, consisting of entities, assets and liabilities, conducting the upstream oil and gas business within Dover's Energy segment and (ii) after the Separation, to Apergy Corporation and its consolidated subsidiaries.

References in this prospectus to "Dover" refer to Dover Corporation, a Delaware corporation and its consolidated subsidiaries (other than Apergy Corporation and its combined subsidiaries), unless the context otherwise requires or as otherwise specified herein.

This prospectus incorporates or references important business and financial information about Apergy that is not included in or delivered with this prospectus. This information is available without charge to any person to whom this prospectus is delivered, upon written or oral request. Written requests should be sent to:

Apergy Corporation
2445 Technology Forest Blvd
Building 4, 12th Floor
The Woodlands, Texas 77381
Attn: David Skipper

Oral requests should be made by telephoning (713) 230-8031.

To ensure timely delivery, you should make your request to us no later than , , which is five business days prior to the expiration date of the exchange offer.

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

This prospectus contains "forward-looking statements" within the meaning of the safe harbors from liability established by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are usually related to future events and anticipated revenues, earnings, cash flows or other aspects of our operations or operating results. Forward-looking statements are often identified by the words "believe," "anticipate," "expect," "may," "intend," "foresee," "guidance," "estimate," "potential," "outlook," "plan," "should," "will," "would," "could," "target," "forecast" and similar expressions, including the negative thereof. The absence of these words, however, does not mean that the statements are not forward-looking statements. Forward-looking statements are based on our current expectations, beliefs and assumptions concerning future developments and business conditions and their potential effect on us. While management believes that these forward-looking statements are reasonable as and when made, there can be no assurance that future developments affecting us will be those that we anticipate.

All of our forward-looking statements involve risk, uncertainties (some of which are significant or beyond our control) and assumptions that could cause actual results to materially differ from our historical experience and our present expectations or projections. Known material factors that could cause actual results to materially differ from those contemplated in the forward-looking statements include those set forth in this prospectus under the heading entitled "Risk Factors," which are summarized as follows:

- Demand for our products and services, which is affected by changes in the price of, and demand for, crude oil and natural gas in domestic and international markets;
- Our ability to successfully compete with other companies in our industry;
- Our ability to develop and implement new technologies and services, as well as our ability to protect and maintain critical intellectual property assets;
- Cost inflation and availability of raw materials;
- Changes in federal, state and local legislation and regulations relating to hydraulic fracturing or oil and gas development and the potential for related litigation or restrictions on our customers;
- Our ability to successfully execute our capital allocation and acquisition programs;
- Potential liabilities arising out of the installation or use of our products;
- Continuing consolidation within our customers' industry;
- A failure of our information technology infrastructure or any significant breach of security;
- Changes in environmental and health and safety laws and regulations which may increase our costs, limit the demand for our products and services or restrict our operations;
- Risks relating to our existing international operations and expansion into new geographical markets;
- Changes in domestic and foreign governmental public policies, risks associated with entry into emerging markets, changes in statutory tax rates and unanticipated outcomes with respect to tax audits;
- Failure to attract, retain and develop personnel for key management;
- The impact of our indebtedness on our financial position and operating flexibility;
- The impact of tariffs and other trade measures on our business;
- Credit risks related to our customer base or the loss of significant customers;
- Deterioration in future expected profitability or cash flows and its effect on our goodwill;
- Disruptions in the political, regulatory, economic and social conditions of the countries in which we conduct business;

- Fluctuations in currency markets worldwide; and
- Increased compliance costs for us and our customers due to changes in climate change legislation and other regulatory initiatives.

We undertake no obligation to publicly update or revise any of our forward-looking statements after the date they are made, whether as a result of new information, future events or otherwise, except to the extent required by law.

WHERE YOU CAN FIND MORE INFORMATION

We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public on the SEC's website at http://www.sec.gov.

We have filed with the SEC a registration statement on Form S-4 relating to the securities covered by this prospectus. This prospectus is a part of the registration statement and does not contain all of the information in the registration statement. Whenever a reference is made in this prospectus to a contract or other document of ours, please be aware that the reference is only a summary and that you should refer to the exhibits that are a part of the registration statement for a copy of the contract or other document. You may access a copy of the registration statement through the SEC's website.

SUMMARY

This summary highlights selected information appearing elsewhere in this prospectus and is, therefore, qualified in its entirety by the more detailed information appearing elsewhere in this prospectus. It may not contain all the information that is important to you. We urge you to read carefully this entire prospectus and the other documents to which it refers to understand fully the terms of the exchange notes and the exchange offer. You should pay special attention to "Risk Factors" and "Cautionary Statement Concerning Forward-Looking Statements."

Our Business

We are a leading provider of highly engineered equipment and technologies that help companies drill for and produce oil and gas safely and efficiently around the world. Our products provide efficient functioning throughout the lifecycle of a well—from drilling to completion to production. We report our results of operations in the following reporting segments: Production & Automation Technologies; and Drilling Technologies. Our Production & Automation Technologies segment offerings consist of artificial lift equipment and solutions, including rod pumping systems, electric submersible pump systems, progressive cavity pumps and drive systems and plunger lifts, as well as a full automation and digital offering consisting of equipment, software and Industrial Internet of Things solutions for downhole monitoring, wellsite productivity enhancement and asset integrity management. Our Drilling Technologies segment offering provides market leading polycrystalline diamond cutters and bearings that result in cost effective and efficient drilling. See "Our Business and Properties."

Separation and Distribution

On April 18, 2018, the Dover Corporation ("Dover") Board of Directors approved the separation of entities conducting its upstream oil and gas energy business within Dover's Energy segment (the "Separation") into an independent, publicly traded company named Apergy Corporation. In accordance with the separation and distribution agreement, the two companies were separated by Dover distributing to Dover's stockholders all 77,339,828 shares of common stock of Apergy on May 9, 2018. Each Dover stockholder received one share of Apergy stock for every two shares of Dover stock held at the close of business on the record date of April 30, 2018. In conjunction with the Separation, Dover received a private letter ruling from the Internal Revenue Service (the "IRS") to the effect that, based on certain facts, assumptions, representations and undertakings set forth in the ruling, for U.S. federal income tax purposes, the distribution of Apergy common stock was not taxable to Dover or U.S. holders of Dover common stock, except in respect to cash received in lieu of fractional share interests. Following the Separation, Dover retained no ownership interest in Apergy, and each company, as of May 9, 2018, has separate public ownership, boards of directors and management. On May 9, 2018, Apergy common stock began "regular-way" trading on the New York Stock Exchange under the "APY" symbol. See "Certain Relationships and Related Person Transactions."

Corporate Information

Apergy Corporation was incorporated in Delaware on October 10, 2017, under the name Wellsite Corporation and was renamed Apergy Corporation on February 2, 2018. Apergy was formed for the purpose of holding entities, assets and liabilities used in conducting Dover's upstream oil and gas business within Dover's Energy segment prior to the Separation. The address of our principal executive offices is 2445 Technology Forest Blvd, Building 4, 12th Floor, The Woodlands, Texas 77381. Our telephone number is (281) 403-5772.

We also maintain an internet site at *www.apergy.com*. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated herein, and you should not rely on any such information in deciding whether or not to participate in the exchange offer.

The Exchange Offer

General	In connection with the private offering of the outstanding notes, we entered into a registration rights agreement with the initial purchasers in such offering pursuant to which we agreed, among other things, to deliver this prospectus to you and to use commercially reasonable efforts to complete the exchange offer within one year after the date of original issuance of the outstanding notes. You are entitled to exchange in the exchange offer your outstanding notes for the exchange notes that are identical in all material respects to the outstanding notes except: • the exchange notes have been registered under the Securities Act; • the exchange notes are not entitled to any registration rights which are applicable to the outstanding notes under the registration rights agreement; and • the additional interest provision of the registration rights agreement is not applicable.
The Exchange Offer	We are offering to exchange $300.0 million aggregate principal amount of 6.375% Senior Notes due 2026 that have been registered under the Securities Act for any and all of our existing restricted 6.375% Senior Notes due 2026. You may only exchange outstanding notes in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof.
Resale	Based on an interpretation by the staff of the SEC set forth in no-action letters issued to third parties, we believe that the exchange notes issued pursuant to the exchange offer in exchange for the outstanding notes may be offered for resale, resold and otherwise transferred by you (unless you are our “affiliate” within the meaning of Rule 405 under the Securities Act) without compliance with the registration and prospectus delivery provisions of the Securities Act, provided that: • you are acquiring the exchange notes in the ordinary course of your business; and • you have not engaged in, do not intend to engage in, and have no arrangement or understanding with any person to participate in, a distribution of the exchange notes. If you are a broker-dealer and receive exchange notes for your own account in exchange for outstanding notes that you acquired as a result of market-making activities or other trading activities, you must acknowledge that you will deliver this prospectus in connection with any resale of the exchange notes and that you are not our affiliate. See “Plan of Distribution.”

	Any holder of outstanding notes who: • is our affiliate; • does not acquire exchange notes in the ordinary course of its business; or • tenders its outstanding notes in the exchange offer with the intention to participate, or for the purpose of participating, in a distribution of exchange notes, cannot rely on the position of the staff of the SEC enunciated in *Morgan Stanley & Co. Incorporated* (available June 5, 1991) and *Exxon Capital Holdings Corporation* (available May 13, 1988), as interpreted in *Shearman & Sterling* (available July 2, 1993), or similar no-action letters and, in the absence of an exemption therefrom, must comply with the registration and prospectus delivery requirements of the Securities Act in connection with any resale of the exchange notes. Our belief that the exchange notes may be offered for resale without compliance with the registration or prospectus delivery provisions of the Securities Act is based on interpretations of the SEC for other exchange offers that the SEC expressed in some of its no-action letters to other issuers in exchange offers like ours. We cannot guarantee that the SEC would make a similar decision about our exchange offer. If our belief is wrong, or if you cannot truthfully make the representations mentioned above, and you transfer any exchange note issued to you in the exchange offer without meeting the registration and prospectus delivery requirements of the Securities Act, or without an exemption from such requirements, you could incur liability under the Securities Act. We are not indemnifying you for any such liability.
Expiration Date	The exchange offer will expire at 11:59 p.m., New York City time, on , , unless extended by us. We do not currently intend to extend the expiration date.
Withdrawal	You may withdraw the tender of your outstanding notes at any time prior to the expiration of the exchange offer. We will return to you any of your outstanding notes that are not accepted for any reason for exchange, without expense to you, promptly after the expiration or termination of the exchange offer.
Conditions to the Exchange Offer	The exchange offer is subject to customary conditions. We reserve the right to waive any defects, irregularities or conditions to exchange as to particular outstanding notes. See “The Exchange Offer—Conditions to the Exchange Offer.”
Procedures for Tendering Outstanding Notes	If you wish to participate in the exchange offer, you must either: • complete, sign and date the accompanying letter of transmittal, or a facsimile of the letter of transmittal, in accordance with the

	instructions contained in this prospectus and the letter of transmittal, and mail or deliver such letter of transmittal or facsimile thereof to the exchange agent at the address set forth on the cover page of the letter of transmittal; or • if you hold outstanding notes through the Depository Trust Company ("DTC"), comply with DTC's Automated Tender Offer Program procedures described in this prospectus, by which you will agree to be bound by the letter of transmittal. By signing, or agreeing to be bound by, the letter of transmittal, you will represent to us that, among other things: • you are acquiring the exchange notes in the ordinary course of your business; • you have no arrangement or understanding with any person to participate in the distribution of the exchange notes; • you are not our "affiliate" within the meaning of Rule 405 under the Securities Act; • you are not engaged in, and do not intend to engage in, a distribution of the exchange notes; and • if you are a broker-dealer that will receive exchange notes for your own account in exchange for outstanding notes that were acquired as a result of market-making activities, you will deliver a prospectus, as required by law, in connection with any resale of such exchange notes.
Guaranteed Delivery Procedures	None.
Special Procedures for Beneficial Owners	If you are a beneficial owner of outstanding notes that are registered in the name of a broker, dealer, commercial bank, trust company or other nominee, and you wish to tender those outstanding notes in the exchange offer, you should contact the registered holder promptly and instruct the registered holder to tender those outstanding notes on your behalf. If you wish to tender on your own behalf, you must, prior to completing and executing the letter of transmittal and delivering your outstanding notes, either make appropriate arrangements to register ownership of the outstanding notes in your name or obtain a properly completed bond power from the registered holder. The transfer of registered ownership may take considerable time and may not be able to be completed prior to the expiration date.
Effect on Holders of Outstanding Notes	As a result of the making of the exchange offer, and upon acceptance for exchange of all validly tendered outstanding notes pursuant to the terms of the exchange offer, we will have fulfilled a covenant under the registration rights agreement. Accordingly, there will be no increase in the applicable interest rate on the outstanding notes under

	the circumstances described in the registration rights agreement. If you do not tender your outstanding notes in the exchange offer, you will continue to be entitled to all the rights and limitations applicable to the outstanding notes as set forth in the Indenture, except we will not have any further obligation to you to provide for the exchange and registration of untendered outstanding notes under the registration rights agreement. To the extent that outstanding notes are tendered and accepted in the exchange offer, the trading market for outstanding notes that are not so tendered and accepted could be adversely affected.
Consequences of Failure to Exchange	All untendered outstanding notes will remain outstanding and continue to be subject to the restrictions on transfer set forth in the outstanding notes and in the Indenture. In general, the outstanding notes may not be offered or sold unless registered under the Securities Act, except pursuant to an exemption from, or in a transaction not subject to, the Securities Act and applicable state securities laws. Other than in connection with the exchange offer, we do not currently anticipate that we will register the outstanding notes under the Securities Act.
United States Federal Income Tax Consequences	The exchange of outstanding notes for exchange notes in the exchange offer will not constitute a taxable exchange or other taxable event for U.S. federal income tax purposes. See “Summary of Material United States Federal Income Tax Consequences.” You should consult your own tax advisor as to the particular tax consequences to you of the exchange offer, as well as the tax consequences of the ownership and disposition of outstanding notes or exchange notes.
Use of Proceeds	We will not receive any proceeds from the issuance of the exchange notes in the exchange offer. See “Use of Proceeds.”
Exchange Agent	Wells Fargo Bank, National Association is the exchange agent for the exchange offer. Any questions and requests for assistance, requests for additional copies of this prospectus or of the letter of transmittal should be directed to the exchange agent. The address and telephone number of the exchange agent are set forth in the section captioned “The Exchange Offer—Exchange Agent.”

The Exchange Notes

The terms of the exchange notes and those of the outstanding notes are substantially identical, except that the transfer restrictions and registration rights relating to the outstanding notes do not apply to the exchange notes. For a more detailed description of the terms of the notes and the guarantees, see "Description of the Exchange Notes." When we use the term "notes" in this prospectus, the term includes the outstanding notes and the exchange notes, as applicable.

Issuer	Apergy Corporation
Securities Offered	$300,000,000 aggregate principal amount of exchange notes.
Maturity Date	May 1, 2026.
Indenture	We will issue the exchange notes under the Indenture, dated as of May 3, 2018, as amended and supplemented (the "Indenture"), between us and Wells Fargo Bank, National Association, as trustee (the "Trustee").
Interest Rate	6.375% per year.
Interest Payment Dates	May 1 and November 1 of each year.
Guarantees	The exchange notes will be guaranteed, jointly and severally, by all existing and future direct and indirect 100% owned domestic subsidiaries of Apergy that incur or that guarantee any obligations under our senior secured credit facilities (the "Senior Secured Credit Facilities") (the "Guarantors") or certain series of capital markets debt securities (other than the notes) of Apergy or any Guarantor. See "Description of the Exchange Notes—Guarantees." All of our existing direct and indirect 100% owned domestic subsidiaries (other than certain immaterial subsidiaries) will guarantee the exchange notes. In the future, additional subsidiaries may not guarantee the notes and guarantees provided may be released in certain circumstances. See "Risk Factors—Risks Related to Holding the Exchange Notes—Claims of holders of the notes will be structurally subordinated to all obligations of our existing and future subsidiaries that do not become Guarantors of the notes." In the event of a bankruptcy, liquidation, reorganization or similar proceeding of any of these non-Guarantor subsidiaries, the non-Guarantor subsidiaries will pay the holders of their debt and their trade creditors before they will be able to distribute any of their assets to Apergy or a Guarantor. As a result, all of the existing and future liabilities of our non-Guarantor subsidiaries, including any claims of trade creditors, will be effectively senior to the notes. The Indenture does not limit the amount of liabilities that are not considered indebtedness that may be incurred by Apergy or its restricted subsidiaries, including the non-Guarantor subsidiaries.

Ranking	The exchange notes and guarantees will constitute senior indebtedness of Apergy and the Guarantors and will rank: • *pari passu* in right of payment with any existing and future senior indebtedness of Apergy and the Guarantors, including under the Senior Secured Credit Facilities; • senior in right of payment to any future subordinated indebtedness of Apergy and the Guarantors; • effectively subordinated to all of Apergy's and the Guarantors' existing and future secured indebtedness, including the Senior Secured Credit Facilities, to the extent of the value of the collateral securing such indebtedness; and • structurally subordinated to all existing and future indebtedness and other claims and liabilities, including preferred stock, of Apergy's subsidiaries that will not guarantee the notes (other than indebtedness and liabilities owed to Apergy or one of the Guarantors). As of September 30, 2018, the notes and related guarantees were effectively subordinated to approximately $395.0 million (excluding any original issue discount and deferred financing costs) principal amount of senior secured indebtedness, to the extent of the collateral securing such senior secured indebtedness, such indebtedness consisting solely of approximately $395.0 million (excluding any original issue discount and deferred financing costs) of borrowings under term loan B facility (the "Term Loan Facility") of the Senior Secured Credit Facilities. As of September 30, 2018, we were able to incur approximately an additional $244.5 million of indebtedness under the senior secured revolving credit facility (the "Revolving Credit Facility") of the Senior Secured Credit Facilities. See "Description of the Exchange Notes—Ranking."
Optional Redemption	Except as described below, Apergy cannot redeem the notes before May 1, 2021. Thereafter, Apergy may redeem some or all of the notes at any time at the redemption prices listed under "Description of the Exchange Notes—Optional Redemption," plus accrued and unpaid interest up to, but excluding, the redemption date. At any time and from time to time prior to May 1, 2021, Apergy may redeem some or all of the exchange notes at a price equal to 100% of the aggregate principal amount thereof plus the make-whole premium described under "Description of the Exchange Notes—Optional Redemption," plus accrued and unpaid interest up to, but excluding, the redemption date. At any time and from time to time prior to May 1, 2021, Apergy may redeem up to 35% of the aggregate principal amount of the notes at a

	redemption price of 106.375% of the aggregate principal amount thereof, plus accrued and unpaid interest up to, but excluding, the redemption date, with the net proceeds of certain equity offerings if at least 65% of the aggregate principal amount of notes issued remains outstanding afterward and Apergy redeems the notes within 180 days of completing the equity offering.
Change of Control Offer	If a Change of Control Repurchase Event (as defined under "Description of the Exchange Notes") occurs, Apergy will be required to make an offer to purchase all of the notes at a price in cash equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest up to, but excluding, the repurchase date. See "Description of the Exchange Notes—Repurchase at the Option of Holders—Change of control repurchase events."
Asset Sale Proceeds	If Apergy or any of its restricted subsidiaries engages in certain asset sales, Apergy will be required under certain circumstances to make an offer to purchase the notes at 100% of the principal amount thereof, plus accrued and unpaid interest up to, but excluding, the repurchase date. See "Description of the Exchange Notes—Repurchase at the Option of Holders—Asset sales."
Covenants	The Indenture limits the ability of Apergy and its restricted subsidiaries to, among other things: • pay dividends or distributions, repurchase equity, prepay subordinated indebtedness and make other restricted payments; • incur additional indebtedness or issue certain preferred shares; • make certain investments; • sell or transfer certain assets; • incur liens on assets; • merge, consolidate or sell all or substantially all of its assets; • enter into transactions with affiliates; • designate our subsidiaries as unrestricted subsidiaries; and • create or cause to exist certain restrictions on the ability of non-Guarantor restricted subsidiaries to pay dividends or make other payments to us. These covenants are subject to important exceptions and qualifications. Following the first date on which (i) the notes have an investment grade rating, (ii) no default has occurred and is continuing under the Indenture and (iii) Apergy has delivered an officer's certificate to the Trustee certifying that the conditions set forth in clauses (i) and (ii) above are satisfied, Apergy and its restricted subsidiaries will not be subject to certain of these covenants and the obligation to grant further guarantees will be terminated. See "Description of the Exchange Notes—Certain Covenants."

No Prior Market	The exchange notes will be new securities for which there is currently no market. We do not intend to apply for a listing of the exchange notes on any securities exchange or to arrange for the inclusion of the exchange notes on any automated dealer quotation system. Accordingly, there can be no assurance as to the development or liquidity of any market for the exchange notes. Accordingly, we cannot assure you that a liquid market for the exchange notes will develop or be maintained.
Risk Factors	You should consider carefully all of the information set forth in this prospectus prior to exchanging your outstanding notes. In particular, we urge you to consider carefully the factors set forth under the heading “Risk Factors.”

RISK FACTORS

You should carefully consider the risk factors set forth below as well as the other information contained in this prospectus. Any of the following risks could materially and adversely affect our business, financial condition, operating results or cash flow; however, these risks are not our only risks. In such a case, the trading price of the notes could decline or we may not be able to make payments of interest and principal on the notes, and you may lose all or part of your original investment.

Risks Related to Apergy's Business

Trends in oil and natural gas prices may affect the drilling and production activity, profitability and financial stability of Apergy's customers and therefore the demand for, and profitability of, Apergy's products and services, which could have a material adverse effect on Apergy's business, results of operations and financial condition.

The oil and gas industry is cyclical in nature and experiences periodic downturns of varying length and severity. Most recently, the oil and gas industry experienced a significant downturn in 2015 and 2016. Apergy's ability to manage periodic industry downturns is important to its business, results and prospects. Demand for Apergy's energy products and services is sensitive to the level of drilling and production activity of, and the corresponding capital spending by, oil and natural gas companies. The level of drilling and production activity is directly affected by trends in oil and natural gas prices, which are influenced by numerous factors affecting the supply and demand for oil and gas, including:

- worldwide economic activity;
- the level of exploration and production activity;
- interest rates and the cost of capital;
- environmental regulation;
- federal, state and foreign policies regarding exploration and development of oil and gas;
- the ability and/or desire of the Organization of the Petroleum Exporting Countries ("OPEC") and other major producers to set and maintain production levels and pricing;
- governmental regulations regarding future oil and gas exploration and production;
- the cost of exploring and producing oil and gas;
- the pace of adoption and cost of developing alternative energy sources;
- the availability, expiration date and price of onshore and offshore leases;
- the discovery rate of new oil and gas reserves in onshore and offshore areas;
- the success of drilling for oil and gas in unconventional resource plays such as shale formations;
- alternative opportunities to invest in onshore exploration and production opportunities;
- domestic and global political and economic uncertainty, socio-political unrest and instability, terrorism or hostilities;
- technological advances; and
- weather conditions.

Oil and gas prices and the level of drilling and production activity have been characterized by significant volatility in recent years. In particular, the prices of oil and natural gas were highly volatile in 2014 and 2015 and declined dramatically. Prices of oil began to recover in late 2016, but there can be no assurance that increases

will continue. Apergy expects continued volatility in both crude oil and natural gas prices, as well as in the level of drilling and production related activities. Even the perception of longer-term lower oil and natural gas prices can reduce or defer major capital expenditures by Apergy's customers in the oil and gas industry. A significant downturn in the industry could result in the reduction in demand for Apergy's products and services, and could have a material adverse effect on Apergy's business, results of operations, financial condition and cash flows.

Apergy might be unable to compete successfully with other companies in its industry.

The markets in which Apergy operates are highly competitive. The principal competitive factors in Apergy's markets are customer service, product quality and performance, price, breadth of product offering, market expertise and innovation. In some of Apergy's product and service offerings, it competes with the oil and natural gas industry's largest oilfield service providers. These large national and multi-national companies may have longer operating histories, greater financial, technical, and other resources, greater brand recognition, and a stronger presence in geographic markets than Apergy. In addition, Apergy competes with many smaller companies capable of competing effectively on a regional or local basis. Apergy's competitors may be able to respond more quickly to new or emerging technologies and services, and changes in customer requirements. Many contracts are awarded on a bid basis, which further increases competition based on price. As a result of competition, Apergy may lose market share or be unable to maintain or increase prices for its present services, or to acquire additional business opportunities, which could have a material adverse effect on Apergy's business, results of operations, financial condition and cash flows.

If Apergy is unable to develop new products and technologies, its competitive position may be impaired, which could materially and adversely affect its sales and market share.

The markets in which Apergy operates are characterized by changing technologies and introductions of new products and services. As a result, Apergy's success is dependent upon its ability to develop or acquire new services and products on a cost-effective basis, to introduce them into the marketplace in a timely manner and to protect and maintain critical intellectual property assets related to these developments. Difficulties or delays in research, development or production of new products and technologies, or failure to gain market acceptance of new products and technologies, may significantly reduce future revenues and materially and adversely affect Apergy's competitive position. While Apergy intends to continue committing substantial financial resources and effort to the development of new services and products, Apergy may not be able to successfully differentiate its services and products from those of its competitors. Apergy's customers may not consider its proposed services and products to be of value to them or may not view them as superior to Apergy's competitors' services and products. In addition, competitors or customers may develop new technologies, which address similar or improved solutions to Apergy's existing technology. Further, Apergy may not be able to adapt to evolving markets and technologies, develop new products, achieve and maintain technological advantages or protect technological advantages through intellectual property rights. If Apergy does not compete successfully, its business, results of operations, financial condition and cash flows could be materially adversely affected.

Apergy could lose customers or generate lower revenue, operating profits and cash flows if there are significant increases in the cost of raw materials or if Apergy is unable to obtain raw materials.

Apergy purchases raw materials, sub-assemblies and components for use in its manufacturing operations, which exposes Apergy to volatility in prices for certain commodities. Significant price increases for these commodities could adversely affect Apergy's operating profits. While Apergy generally attempts to mitigate the impact of increased raw material prices by endeavoring to make strategic purchasing decisions, broaden its supplier base and pass along increased costs to customers, there may be a time delay between the increased raw material prices and the ability to increase the prices of products, or Apergy may be unable to increase the prices of products due to a competitor's pricing pressure or other factors. In addition, while raw materials are generally available now, the inability to obtain necessary raw materials could affect Apergy's ability to meet customer commitments and satisfy market demand for certain products. Certain of Apergy's product lines depend on a

limited number of third-party suppliers and vendors. The ability of these third parties to deliver raw materials may be affected by events beyond Apergy's control. Consequently, a significant price increase in raw materials, or their unavailability, may result in a loss of customers and adversely impact Apergy's business, results of operations, financial condition and cash flows.

Federal, state and local legislative and regulatory initiatives relating to hydraulic fracturing and the potential for related litigation could result in increased costs and additional operating restrictions or delays for Apergy's customers, which could reduce demand for Apergy's products and negatively impact Apergy's business, financial condition and results of operations.

Environmental laws and regulations could limit Apergy's customers' exploration and production activities. Although Apergy does not directly engage in hydraulic fracturing activities, it provides products and services to hydraulic fracturing operators in the oil and natural gas industry. Hydraulic fracturing is a widely used industry production technique that is used to recover oil and/or natural gas from dense subsurface rock formations. The process involves the injection of water, proppants and chemicals, under pressure, into the formation to fracture the surrounding rock and stimulate production. The hydraulic fracturing process is typically regulated by state or local governmental authorities. However, the practice of hydraulic fracturing has become controversial in some areas and is undergoing increased scrutiny. Several federal agencies, regulatory authorities, and legislative entities are investigating the potential environmental impacts of hydraulic fracturing and whether additional regulation may be necessary. The U.S. Congress has from time to time considered, but has not yet adopted, legislation to provide for federal regulation of hydraulic fracturing and to require disclosure of the chemicals used in the process. The U.S. Environmental Protection Agency ("EPA") has issued a number of regulations in recent years that may affect hydraulic fracturing; however, the current administration has more generally indicated an interest in scaling back or rescinding regulations that inhibit the development of the U.S. oil and gas industry. It is difficult to predict the extent to which proposed regulations will be implemented or the outcome of any related litigation.

In addition, various state and local governments have implemented, or are considering, increased regulatory oversight of hydraulic fracturing through additional permitting requirements, operational restrictions, disclosure requirements and temporary or permanent bans on hydraulic fracturing in certain areas such as environmentally sensitive watersheds. For example, many states have imposed disclosure requirements on hydraulic fracturing well owners and operators regarding the chemicals used in hydraulic fracturing. Some local governments have adopted and others may seek to adopt ordinances prohibiting or regulating the time, place and manner of drilling activities in general or hydraulic fracturing activities within their jurisdictions. Concerns have been raised that hydraulic fracturing may also contribute to seismic activity and in response to these concerns, regulators in some states, including Texas, are seeking to impose additional requirements. Increased regulation and attention given to induced seismicity could lead to greater opposition to, and litigation concerning, oil and natural gas activities utilizing hydraulic fracturing or injection wells for waste disposal.

The adoption of new laws or regulations at the federal, state, or local levels imposing reporting obligations on, or otherwise limiting or delaying, the hydraulic fracturing process could make it more difficult to complete oil and gas wells, increase Apergy's customers' costs of compliance and doing business, and otherwise adversely affect the hydraulic fracturing services they perform, which could negatively impact demand for Apergy's products and services. In addition, heightened political, regulatory and public scrutiny of hydraulic fracturing practices, including lawsuits, could expose Apergy or its customers to increased legal and regulatory proceedings, which could be time-consuming, costly or result in substantial legal liability or significant reputational harm. Apergy could be directly affected by adverse litigation, or indirectly affected if the cost of compliance or the risks of liability limit the ability or willingness of Apergy's customers to operate. Such costs and scrutiny could directly or indirectly, through reduced demand for Apergy's products and services, have a material adverse effect on its business, results of operations, financial condition and cash flows.

Apergy's growth and results of operations may be adversely affected if it is unsuccessful in its capital allocation and acquisition program.

If Apergy fails to allocate its capital appropriately, in respect of either its acquisition program or organic growth in its operations, it could be overexposed in certain markets and geographies and unable to expand into adjacent products or markets. Apergy expects to pursue a strategy of acquiring value creating, add-on businesses that broaden its existing position and global reach thereby complementing its existing businesses. However, there can be no assurance that Apergy will be able to continue to find suitable businesses to purchase, that Apergy will be able to acquire such businesses on acceptable terms, or that all closing conditions will be satisfied with respect to any pending acquisition. If Apergy is unsuccessful in its acquisition efforts, then its ability to continue to grow could be adversely affected. In addition, Apergy faces the risk that a completed acquisition may underperform relative to expectations. Apergy may not achieve the synergies originally anticipated, may become exposed to unexpected liabilities or may not be able to sufficiently integrate completed acquisitions into its current business and growth model. These factors could potentially have an adverse impact on Apergy's business, results of operations, financial condition and cash flows.

Apergy's products are used in operations that are subject to potential hazards inherent in the oil and natural gas industry and, as a result, Apergy is exposed to potential liabilities that may affect its financial condition and reputation.

Apergy's products are used in potentially hazardous drilling, completion and production applications in the oil and natural gas industry where an accident or a failure of a product can potentially have catastrophic consequences. Risks inherent to these applications, such as equipment malfunctions and failures, equipment misuse and defects, explosions, blowouts and uncontrollable flows of oil, natural gas or well fluids and natural disasters can cause personal injury, loss of life, suspension of operations, damage to formations, damage to facilities, business interruption and damage to or destruction of property, surface water and drinking water resources, equipment and the environment. In addition, Apergy provides certain services that could cause, contribute to or be implicated in these events. If Apergy's products or services fail to meet specifications or are involved in accidents or failures, Apergy could face warranty, contract or other litigation claims, which could expose Apergy to substantial liability for personal injury, wrongful death, property damage, loss of oil and natural gas production, and pollution and other environmental damages. Apergy may agree to indemnify its customers against specific risks and liabilities. While Apergy currently maintains insurance protection against some of these risks, and seeks to obtain indemnity agreements from its customers requiring them to hold Apergy harmless from some of these risks, Apergy's current insurance and contractual indemnity protection may not be sufficient or effective enough to protect it under all circumstances or against all risks. The defense of these lawsuits may require significant expenses and divert management's attention, and Apergy may be required to pay damages that could adversely affect its business, results of operations, financial condition and cash flows. In addition, the frequency and severity of such incidents could affect insurability and relationships with customers, employees and regulators. In particular, Apergy's customers may elect not to purchase its products or services if they view its safety record as unacceptable, which could cause Apergy to lose customers and substantial revenues.

Apergy's customers' industries are undergoing continuing consolidation that may impact Apergy's results of operations.

The oil and gas industry is rapidly consolidating and, as a result, some of Apergy's largest customers have consolidated and are using their size and purchasing power to seek economies of scale and pricing concessions. This consolidation may result in reduced capital spending by some of Apergy's customers or the acquisition of one or more of Apergy's primary customers, which may lead to decreased demand for Apergy's products and services. Apergy cannot assure you that it will be able to maintain its level of sales to a customer that has consolidated or replace that revenue with increased business activity with other customers. As a result, the acquisition of one or more of Apergy's primary customers may have a significant negative impact on Apergy's

business, results of operations, financial condition or cash flows. Apergy is unable to predict what effect consolidations in the industry may have on price, capital spending by its customers, its selling strategies, its competitive position, its ability to retain customers or its ability to negotiate favorable agreements with its customers.

Apergy is subject to information technology, cybersecurity and privacy risks.

Apergy depends on various information technologies throughout its company to store and process information and support its business activities. Apergy also manufactures and sells hardware and software to provide monitoring, controls and optimization of customer critical assets in oil and gas production and distribution. Apergy also provides services to maintain these systems and to enable higher return through their business and technical domain knowledge. Additionally, Apergy's operations rely upon partners, vendors and other third-party providers of information technology software and services. If these technologies, systems, products or services are damaged, cease to function properly, are breached due to employee error, malfeasance, system errors, or other vulnerabilities, or are subject to cybersecurity attacks, such as those involving unauthorized access, malicious software and/or other intrusions, including by criminals, nation states or insiders, Apergy or its partners, vendors or other third parties could experience production downtimes, operational delays, other detrimental impacts on its operations or ability to provide products and services to its customers, the compromising of confidential, proprietary or otherwise protected information, including personal and customer data, destruction, corruption, or theft of data, security breaches, other manipulation, disruption, misappropriation or improper use of its systems or networks, financial losses from remedial actions, loss of business or potential liability, adverse media coverage, legal claims or legal proceedings, including regulatory investigations and actions, and/or damage to its reputation. While Apergy attempts to mitigate these risks by employing a number of measures, including employee training, technical security controls and maintenance of backup and protective systems, Apergy's and its partners', vendors' and other third-parties' systems, networks, products and services remain potentially vulnerable to known or unknown cybersecurity attacks and other threats, any of which could have a material adverse effect on Apergy's business, results of operations, financial condition and cash flows.

Apergy and its customers are subject to extensive environmental and health and safety laws and regulations that may increase Apergy's costs, limit the demand for Apergy's products and services or restrict Apergy's operations. In addition, future regulations, or more stringent enforcement of existing regulations, could increase those costs and liabilities, which could adversely affect Apergy's results of operations.

Apergy's operations and the operations of its customers are subject to numerous and complex federal, state, local and foreign laws and regulations relating to the protection of human health, safety and the environment. These laws and regulations affect Apergy's customers by limiting or curtailing their exploration, drilling and production activities, the products and services Apergy designs, markets and sells and the facilities where Apergy manufactures its products. For example, Apergy's operations and the operations of its customers are subject to numerous and complex laws and regulations that, among other things: may regulate the management and disposal of hazardous and non-hazardous wastes; may require acquisition of environmental permits related to its operations; may restrict the types, quantities and concentrations of various materials that can be released into the environment; may limit or prohibit operation activities in certain ecologically sensitive and other protected areas; may regulate specific health and safety criteria addressing worker protection; may require compliance with operational and equipment standards; may impose testing, reporting and record-keeping requirements; and may require remedial measures to mitigate pollution from former and ongoing operations. Sanctions for noncompliance with such laws and regulations may include revocation of permits, corrective action orders, administrative or civil penalties, criminal prosecution and the imposition of injunctions to prohibit certain activities or force future compliance.

Some environmental laws and regulations provide for joint and several strict liability for remediation of spills and releases of hazardous substances. In addition, Apergy or its customers may be subject to claims alleging personal injury or property damage as a result of alleged exposure to hazardous substances, as well as

damage to natural resources. These laws and regulations may expose Apergy or its customers to liability for the conduct of or conditions caused by others, or for Apergy's acts or for the acts of Apergy's customers that were in compliance with all applicable laws and regulations at the time such acts were performed. Any of these laws and regulations could result in claims, fines or expenditures that could be material to Apergy's business, results of operations, financial condition and cash flows.

Environmental laws and regulations, and the interpretation and enforcement thereof, change frequently, and have tended to become more stringent over time. New laws and regulations may have a material adverse effect on Apergy's customers by limiting or curtailing their exploration, drilling and production activities, which may adversely affect Apergy's operations by limiting demand for Apergy's products and services. Additionally, the implementation of new laws and regulations may have a material adverse effect on Apergy's operating results by requiring Apergy to modify its operations or products or shut down some or all of its facilities.

Apergy is subject to risks relating to existing international operations and expansion into new geographical markets.

Approximately 24%, 26% and 25% of Apergy's revenues for 2017, 2016 and 2015, respectively, were derived outside the U.S. Apergy continues to focus on penetrating global markets as part of its overall growth strategy and expects sales from outside the U.S. to continue to represent a significant portion of its revenues. Apergy's international operations and its global expansion strategy are subject to general risks related to such operations, including:

- political, social and economic instability and disruptions;
- government export controls, economic sanctions, embargoes or trade restrictions;
- the imposition of duties and tariffs and other trade barriers;
- limitations on ownership and on repatriation or dividend of earnings;
- transportation delays and interruptions;
- labor unrest and current and changing regulatory environments;
- increased compliance costs, including costs associated with disclosure requirements and related due diligence;
- difficulties in staffing and managing multi-national operations;
- limitations on Apergy's ability to enforce legal rights and remedies; and
- access to or control of networks and confidential information due to local government controls and vulnerability of local networks to cyber risks.

If Apergy is unable to successfully manage the risks associated with expanding its global business or adequately manage operational risks of its existing international operations, the risks could have a material adverse effect on Apergy's growth strategy involving expansion into new geographical markets, its reputation, its business, results of operations, financial condition and cash flows.

New tariffs and other trade measures could adversely affect our consolidated results of operations, financial position and cash flows.

Recently, the U.S. government imposed tariffs on steel and aluminum and a broad range of other products imported into the U.S. In response to the tariffs imposed by the U.S. government, the European Union, Canada, Mexico and China have announced tariffs on U.S. goods and services. The new tariffs have increased our manufacturing and material costs and any further trade restrictions, retaliatory trade measures and additional tariffs implemented could result in higher input costs to our products. We may not be able to fully mitigate the

impact of these increased costs or pass price increases on to our customers. While tariffs and other retaliatory trade measures imposed by other countries on U.S. goods have not yet had a significant impact on our business or results of operations, we cannot predict further developments, and such existing or future tariffs could have a material adverse effect on our consolidated results of operations, financial position and cash flows.

Apergy's business, profitability and reputation could be adversely affected by domestic and foreign governmental and public policy changes, risks associated with emerging markets, changes in statutory tax rates and laws, including recently enacted U.S. tax reform legislation, and unanticipated outcomes with respect to tax audits.

Apergy's domestic and international sales and operations are subject to risks associated with changes in laws, regulations and policies (including environmental and employment regulations, export/import laws, tax policies such as export subsidy programs and research and experimentation credits, carbon emission regulations and other similar programs). Failure to comply with any of the foregoing could result in civil and criminal, monetary and non-monetary penalties, as well as damage to Apergy's reputation. In addition, Apergy cannot provide assurance that its costs of complying with new and evolving regulatory reporting requirements and current or future laws, including environmental protection, employment, data security, data privacy and health and safety laws, will not exceed Apergy's estimates. In addition, Apergy has made investments in certain countries, including Argentina, Australia, Bahrain, Colombia, Oman and Kenya, and may in the future invest in other countries, any of which may carry high levels of currency, political, compliance, or economic risk. While these risks or the impact of these risks are difficult to predict, any one or more of them could adversely affect Apergy's business, profitability and reputation.

Apergy is subject to taxation in a number of jurisdictions. Accordingly, Apergy's effective tax rate is impacted by changes in the mix among earnings in countries with differing statutory tax rates, changes in the valuation allowance of deferred tax assets, disagreements with taxing authorities with respect to the interpretation of tax laws and changes in tax laws. The amount of income taxes and other taxes paid could be adversely impacted by changes in statutory tax rates and laws (which have been and may in the future be under active consideration in various jurisdictions) and are subject to ongoing audits by domestic and international authorities. For example, the U.S. bill commonly referred to as the Tax Cuts and Jobs Act ("Tax Reform Act"), which was enacted on December 22, 2017, significantly changes U.S. tax law by, among other things, imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries and imposing limitations on the ability to deduct interest expense. If changes in statutory tax rates or laws or audits result in assessments different from amounts estimated, then Apergy's business, results of operations, financial condition and cash flows may be adversely affected. In addition, changes in tax laws could have an adverse effect on our customers, resulting in lower demand for our products and services.

Failure to attract, retain and develop personnel for key management could have an adverse effect on Apergy's results of operations, financial condition and cash flows.

Apergy's growth, profitability and effectiveness in conducting its operations and executing its strategic plans depend in part on its ability to attract, retain and develop qualified personnel, align them with appropriate opportunities for key management positions and support for strategic initiatives. Additionally, during periods of increased investment in the oil and gas industry, competition to hire may increase and the availability of qualified personnel may be reduced. If Apergy is unsuccessful in its efforts to attract and retain qualified personnel, its business, results of operations, financial condition and cash flows could be adversely affected, its market share and competitive position could be adversely affected and/or Apergy could miss opportunities for growth and efficiencies.

The credit risks of Apergy's customer base could result in losses.

Many of Apergy's customers are oil and gas companies that have faced or may in the future face liquidity constraints during adverse commodity price environments like the recent industry downturn. These customers

impact Apergy's overall exposure to credit risk as they are also affected by prolonged changes in economic and industry conditions. If a significant number of Apergy's customers experience a prolonged business decline or disruptions, Apergy may incur increased exposure to credit risk and bad debts.

Apergy's revenue, operating profits and cash flows could be adversely affected if it is unable to protect or obtain patent and other intellectual property rights.

Apergy owns patents, trademarks, licenses and other forms of intellectual property related to its products and continuously invests in research and development that may result in innovations and general intellectual property rights. Apergy employs various measures to develop, maintain and protect its intellectual property rights. These measures may not be effective in capturing intellectual property rights, and they may not prevent Apergy's intellectual property from being challenged, invalidated, or circumvented, particularly in countries where intellectual property rights are not highly developed or protected. Unauthorized use of Apergy's intellectual property rights could adversely impact its competitive position and have a negative impact on its business, results of operations, financial condition and cash flows.

Climate change legislation and regulatory initiatives could result in increased compliance costs for Apergy and its customers.

Numerous proposals have been made and are likely to continue to be made at various levels of government to monitor and limit emissions of greenhouse gases ("GHG"). Past sessions of the U.S. Congress considered, but did not enact, legislation to address climate change. The EPA and other federal agencies under the previous administration issued regulations that aim to reduce GHG emissions; however, the current administration has more generally indicated an interest in scaling back or rescinding regulations addressing GHG emissions, including those affecting the U.S. oil and gas industry. It is difficult to predict the extent to which such policies will be implemented or the outcome of any related litigation. Any regulation of GHG emissions could result in increased compliance costs or additional operating restrictions for Apergy or its customers and limit or curtail exploration, drilling and production activities of Apergy's customers, which could directly or indirectly, through reduced demand for Apergy's products and services, adversely affect Apergy's business, results of operations, financial condition and cash flows.

The loss of a significant customer could have an adverse impact on Apergy's financial results.

Apergy's customers represent some of the largest operators in the oil and gas drilling and production markets, including major integrated, large independent and foreign national oil and gas companies, as well as oil field equipment and service providers. In 2017, Apergy's top 10 customers represented approximately 34% of total revenues, and no single customer accounted for more than 10% of Apergy's revenues. While Apergy is not dependent on any one customer or group of customers, the loss of one or more of Apergy's significant customers could have an adverse effect on its business, results of operations, financial condition and cash flows.

Apergy's results may be impacted by current domestic and international economic conditions and uncertainties.

Apergy may be adversely affected by disruptions in the financial markets or declines in economic activity both domestically and internationally in those countries in which it operates. These circumstances will also impact Apergy's suppliers and customers in various ways which could have an impact on Apergy's business operations, particularly if global credit markets are not operating efficiently and effectively to support industrial commerce.

Apergy is subject to risk due to the volatility of global energy prices and regulations that impact drilling and production, with overall demand for Apergy's products and services impacted by depletion rates, global economic conditions and related energy demands.

Negative changes in worldwide economic and capital market conditions are beyond Apergy's control, are highly unpredictable and can have an adverse effect on Apergy's business, results of operations, financial condition, cash flows and cost of capital.

A significant decline in the future economic outlook of Apergy's business and expected future cash flows could result in goodwill or intangible asset impairment charges, which would negatively impact its results of operations.

Apergy has significant goodwill and intangible assets. The valuation and classification of these assets and the assignment of useful lives involve significant judgments and the use of estimates. The testing of goodwill and intangibles for impairment requires significant use of judgment and assumptions, particularly as it relates to the determination of fair market value. A decrease in the long-term economic outlook and future cash flows of Apergy's business could significantly impact asset values and potentially result in the impairment of intangible assets, including goodwill. Although fair values currently exceed carrying values for each reporting unit, the value of Apergy's business was unfavorably impacted by the steep declines in revenue and order rates during 2015 and 2016 as drilling and production activity fell due to unfavorable oil prices and lower U.S. rig counts. Future economic declines could result in charges relating to impairments that could have a material adverse effect on Apergy's results of operations in future periods.

Apergy's reputation, ability to do business and results of operations may be impaired by improper conduct by any of its employees, agents or business partners.

While Apergy strives to maintain high standards, Apergy cannot provide assurance that its internal controls and compliance systems will always protect it from acts committed by its employees, agents or business partners that would violate U.S. and/or non-U.S. laws or fail to protect Apergy's confidential information, including the laws governing payments to government officials, bribery, fraud, anti-kickback and false claims, competition, export and import compliance, money laundering and data privacy, as well as the improper use of proprietary information or social media. Any such violations of law or improper actions could subject Apergy to civil or criminal investigations in the U.S. and in other jurisdictions, could lead to substantial civil or criminal, monetary and non-monetary penalties and related stockholder lawsuits, could lead to increased costs of compliance and could damage Apergy's reputation, its business, results of operations, financial condition and cash flows.

Apergy's exposure to exchange rate fluctuations on cross-border transactions and the translation of local currency results into U.S. dollars could negatively impact its results of operations.

A portion of our business is transacted and/or denominated in foreign currencies, and fluctuations in currency exchange rates could have a significant impact on our reported results of operations, financial condition and cash flows, which are presented in U.S. dollars. Cross-border transactions, both with external parties and intercompany relationships, result in increased exposure to foreign exchange effects. Although the impact of foreign currency fluctuations on our results of operations has historically not been material, significant changes in currency exchange rates, principally the Canadian Dollar, Australian Dollar and Colombian Peso, could cause fluctuations in the reported results of Apergy's business that could negatively affect its results of operations. Additionally, the strengthening of the U.S. dollar potentially exposes Apergy to competitive threats from lower cost producers in other countries and could result in unfavorable translation effects as the results of foreign locations are translated into U.S. dollars for reporting purposes.

Customer requirements and new regulations may increase Apergy's expenses and impact the availability of certain raw materials, which could adversely affect its revenue and operating profits.

Apergy's business uses parts or materials that are impacted by the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") requirement for disclosure of the use of "conflict minerals" mined in the Democratic Republic of the Congo and adjoining countries. It is possible that some of Apergy's

customers will require “conflict free” metals in products purchased from Apergy. Apergy is in the process of determining the country of origin of certain metals used by its business, as required by the Dodd-Frank Act. The supply chain due diligence and verification of sources may require several years to complete based on the current availability of smelter origin information and the number of vendors. Apergy may not be able to complete the process in the time frame required because of the complexity of its supply chain. Other governmental social responsibility regulations also may impact Apergy’s suppliers, manufacturing operations and operating profits.

The need to find alternative sources for certain raw materials or products because of customer requirements and regulations may impact Apergy’s ability to secure adequate supplies of raw materials or parts, lead to supply shortages, or adversely impact the prices at which its business can procure compliant goods.

Adverse and unusual weather conditions could have an adverse impact on Apergy’s business.

Apergy’s business could be materially and adversely affected by severe weather conditions. Hurricanes, tropical storms, flash floods, blizzards, cold weather and other severe weather conditions could result in evacuation of personnel, curtailment of services, damage to equipment and facilities, interruption in transportation of products and materials, and loss of productivity. For example, certain of Apergy’s manufactured products and components are manufactured at a single facility, and disruptions in operations or damage to any such facilities could reduce Apergy’s ability to produce products and satisfy customer demand. If Apergy’s customers are unable to operate or are required to reduce operations due to severe weather conditions, and as a result curtail purchases of Apergy’s products and services, Apergy’s business could be adversely affected.

Risks Related to the Separation

Apergy may not achieve some or all of the expected benefits of the Separation, and the Separation may adversely affect Apergy’s business.

Apergy may not be able to achieve the full strategic and financial benefits expected to result from the Separation, or such benefits may be delayed or not occur at all. The Separation is expected to provide the following benefits, among others:

- The Separation will allow Apergy to more effectively pursue its own distinct operating priorities and strategies, and will enable the management of Apergy to pursue separate opportunities for long-term growth and profitability and to recruit, retain and motivate employees pursuant to compensation policies which are appropriate for their respective lines of business.
- The Separation will permit Apergy to concentrate its financial resources solely on its own operations, providing greater flexibility to invest capital in its business in a time and manner appropriate for its distinct strategy and business needs.
- The Separation will enable investors to evaluate the merits, performance and future prospects of Apergy’s businesses and to invest in Apergy separately based on these distinct characteristics.
- The Separation created an independent equity structure that will afford Apergy direct access to capital markets and will facilitate the ability to capitalize on its unique growth opportunities and effect future acquisitions utilizing, among other types of consideration, shares of its common stock.

Apergy may not achieve these and other anticipated benefits for a variety of reasons, including, among others: (a) the Separation requires significant amounts of management’s time and effort, which may divert management’s attention from operating and growing Apergy’s business; (b) Apergy’s stock price may be more susceptible to market fluctuations and other events particular to one or more of Apergy’s products than if it were still a part of Dover; and (c) Apergy’s business is less diversified than Dover’s business prior to the Separation. If Apergy fails to achieve some or all of the benefits expected to result from the Separation, or if such benefits are delayed, the business, results of operations, financial condition and cash flows of Apergy could be adversely affected.

Prior to the Separation, Apergy had no history operating as an independent publicly traded company, and Apergy's historical financial information is not necessarily representative of the results that it would have achieved as a separate, publicly traded company and therefore may not be a reliable indicator of its future results.

Apergy was spun-off from Dover, its former parent company, on May 9, 2018 and had no operating history as a separate publicly traded company prior to the Separation. The historical information about Apergy for periods prior to the Separation refer to Apergy's business as part of Dover. Apergy's historical financial information for such periods is derived from the financial statements and accounting records of Dover and, accordingly, does not necessarily reflect the financial condition, results of operations or cash flows that Apergy would have achieved as a separate, publicly traded company during such periods presented or those that Apergy will achieve in the future primarily as a result of the factors described below:

- Apergy will need to make significant investments to replicate or outsource certain systems, infrastructure and functional expertise. These initiatives to develop Apergy's independent ability to operate without access to Dover's existing operational and administrative infrastructure will be costly to implement. Apergy may not be able to operate its business efficiently or at comparable costs, and its profitability may decline; and
- Prior to the Separation, Apergy relied upon Dover for working capital requirements and other cash requirements. Subsequent to the Separation, Dover does not provide Apergy with funds to finance Apergy's working capital or other cash requirements. In addition, Apergy's access to and cost of debt financing may be different from the historical access to and cost of debt financing under Dover. Differences in access to and cost of debt financing may result in differences in the interest rate charged to Apergy on financings, as well as the amounts of indebtedness, types of financing structures and debt markets that may be available to Apergy, which could have an adverse effect on Apergy's business, financial condition, results of operations and cash flows.

For additional information about the past financial performance of Apergy's business prior to the Separation and the basis of presentation of the historical combined financial statements, see the sections entitled "Selected Historical Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the historical financial statements and accompanying notes included elsewhere in this prospectus.

Dover may fail to perform under various transaction agreements executed as part of the Separation or Apergy may fail to have necessary systems and services in place when certain of the transaction agreements expire.

Apergy and Dover entered into certain agreements, such as the separation and distribution agreement, a transition services agreement and those other agreements discussed in greater detail in the section entitled "Certain Relationships and Related Person Transactions—Agreements with Dover," which provide for the performance of services by each company for the benefit of the other for a period of time after the Separation. Apergy relies on Dover to satisfy its performance and payment obligations under these agreements. If Dover is unable to satisfy its obligations under these agreements, including its indemnification obligations, Apergy could incur operational difficulties or losses.

If Apergy does not have in place its own systems and services, does not have agreements with other providers of these services when the transitional or long-term agreements terminate, or if Apergy does not implement the new systems or replace Dover's services successfully, Apergy may not be able to operate its business effectively, which could disrupt its business and have a material adverse effect on its business, results of operations, financial condition and cash flows. These systems and services may also be more expensive to install, implement and operate, or less efficient than the systems and services Dover is expected to provide during the transition period.

Potential indemnification liabilities to Dover pursuant to the separation and distribution agreement could materially and adversely affect Apergy's business, financial condition, results of operations and cash flows.

The separation and distribution agreement, among other things, provides for indemnification obligations designed to make Apergy financially responsible for substantially all liabilities that may exist relating to its business activities, whether incurred prior to or after the Separation. If Apergy is required to indemnify Dover under the circumstances set forth in the separation and distribution agreement, Apergy may be subject to substantial liabilities.

In connection with Apergy's separation from Dover, Dover agreed to indemnify Apergy for certain liabilities. However, there can be no assurance that the indemnity will be sufficient to insure Apergy against the full amount of such liabilities, or that Dover's ability to satisfy its indemnification obligation will not be impaired in the future.

Pursuant to the separation and distribution agreement and certain other agreements with Dover, Dover agreed to indemnify Apergy for certain liabilities as discussed further in "Certain Relationships and Related Person Transactions—Agreements with Dover." However, third parties could also seek to hold Apergy responsible for any of the liabilities that Dover has agreed to retain, and there can be no assurance that the indemnity from Dover will be sufficient to protect Apergy against the full amount of such liabilities, or that Dover will be able to fully satisfy its indemnification obligations. In addition, Dover's insurers may attempt to deny coverage to Apergy for liabilities associated with certain occurrences of indemnified liabilities prior to the Separation. Moreover, even if Apergy ultimately succeeds in recovering from Dover or such insurance providers any amounts for which Apergy is held liable, Apergy may be temporarily required to bear these losses. Each of these risks could negatively affect Apergy's business, results of operations, financial condition and cash flows.

Apergy is subject to continuing contingent liabilities of Dover following the Separation.

There are several significant areas where the liabilities of Dover may become Apergy's obligations. For example, under the U.S. Internal Revenue Code of 1986, as amended (the "Code") and the related rules and regulations, each corporation that was a member of the Dover U.S. consolidated group during a taxable period or portion of a taxable period ending on or before the effective time of the distribution is jointly and severally liable for the U.S. federal income tax liability of the entire Dover U.S. consolidated group for that taxable period. Consequently, Apergy could be required to pay the entire amount of Dover's consolidated U.S. federal income tax liability for a prior period, which could be substantial and in excess of the amount allocated to Apergy under the tax matters agreement between it and Dover. For a discussion of the tax matters agreement, see the section entitled "Certain Relationships and Related Person Transactions—Agreements with Dover—Tax Matters Agreement." Other provisions of federal law establish similar liability for other matters, including laws governing tax-qualified pension plans as well as other contingent liabilities.

If the distribution, together with certain related transactions, does not qualify as a transaction that is generally tax-free for U.S. federal income tax purposes, Dover could be subject to significant tax liability and, in certain circumstances, Apergy could be required to indemnify Dover for material taxes pursuant to indemnification obligations under the tax matters agreement.

A condition to the Separation was the receipt by Dover of (i) a private letter ruling from the IRS (the "IRS Ruling") together with an opinion of McDermott Will & Emery LLP, tax counsel to Dover, substantially to the effect that, among other things, the contribution and the distribution, taken together, would qualify as a tax-free reorganization for U.S. federal income tax purposes under Section 368(a)(1)(D) of the Code, and the distribution would qualify as a tax-free distribution to Dover's stockholders under Section 355 of the Code or (ii) an opinion of McDermott Will & Emery LLP, tax counsel to Dover, substantially to the effect that, among other things, the contribution and the distribution, taken together, would qualify as a tax-free reorganization for U.S. federal income tax purposes under Section 368(a)(1)(D) of the Code and the distribution would qualify as a tax-free

distribution to Dover's stockholders under Section 355 of the Code. Prior to the distribution, Dover received the IRS Ruling. The IRS Ruling relies on, and the opinion of tax counsel relies on, certain facts and assumptions, and certain representations and undertakings from Dover and Apergy, including those regarding the past and future conduct of the companies' respective businesses and other matters. If any of these facts, assumptions, representations or undertakings are incorrect or not satisfied, Dover and its stockholders may not be able to rely on the IRS Ruling or the opinion, and could be subject to significant tax liabilities. Notwithstanding the IRS Ruling and the opinion of tax counsel, the IRS could determine on audit that the distribution is taxable if it determines that any of these facts, assumptions, representations or undertakings are not correct or have been violated or if it disagrees with the conclusions in the opinion. In addition, Dover and Apergy intend for certain related transactions to qualify for tax-free treatment under U.S. federal, state and local tax law and/or foreign tax law.

If the distribution is determined to be taxable for U.S. federal income tax purposes, Dover and its stockholders that are subject to U.S. federal income tax could incur significant U.S. federal income tax liabilities. For example, if the distribution fails to qualify for tax-free treatment, Dover would for U.S. federal income tax purposes be treated as if it had sold the Apergy common stock in a taxable sale for its fair market value, and Dover's stockholders who are subject to U.S. federal income tax would be treated as receiving a taxable distribution in an amount equal to the fair market value of the Apergy common stock received in the distribution. In addition, if certain related transactions fail to qualify for tax-free treatment under U.S. federal, state and local tax law and/or foreign tax law, Dover (and, under the tax matters agreement described below, Apergy) could incur significant tax liabilities under U.S. federal, state, local and/or foreign tax law, respectively.

Under the tax matters agreement between Dover and Apergy, Apergy would generally be required to indemnify Dover for taxes incurred by Dover that arise as a result of Apergy's taking or failing to take, as the case may be, certain actions or any breach of any representations made by Apergy that, in either case, result in the distribution failing to meet the requirements of a tax-free distribution under Section 355 of the Code or of such related transactions failing to qualify for tax-free treatment. Also, under the tax matters agreement, Apergy would generally be required to indemnify Dover for one-half of taxes and other liabilities incurred by Dover if the distribution fails to meet the requirements of a tax-free distribution under Section 355 of the Code for reasons other than an act or failure to act on the part of Apergy or Dover, and therefore Apergy might be required to indemnify Dover for such taxes and liabilities due to circumstances and events not within the control of Apergy. Under the tax matters agreement, Apergy is also required to indemnify Dover for one-half of certain taxes incurred as a result of the restructuring activities undertaken to effectuate the distribution, whether payable upon filing tax returns related to the restructuring and distribution or upon a subsequent audit of those returns. Apergy's indemnification obligations to Dover under the tax matters agreement are not limited by a maximum amount. If Apergy is required to indemnify Dover under the circumstances set forth in the tax matters agreement, Apergy may be subject to substantial liabilities, which could materially adversely affect its business, results of operations, financial condition and cash flows.

Under the tax matters agreement between Dover and Apergy, Dover may, in its sole discretion, make protective elections under Section 336(e) of the Code for Apergy and some or all of its domestic subsidiaries with respect to the distribution. If, notwithstanding the IRS Ruling and the opinion of tax counsel, the distribution fails to qualify as tax-free under Section 355 of the Code, the Section 336(e) elections would generally cause deemed sales of the assets of Apergy and its electing subsidiaries, causing the Dover group to recognize a gain to the extent the fair market value of the assets exceeded the basis of Apergy and its electing subsidiaries in such assets. In such case, to the extent that Dover is responsible for the resulting transaction taxes, Apergy generally would be required under the tax matters agreement to make periodic payments to Dover equal to the tax savings arising from a "step up" in the tax basis of Apergy's assets.

Apergy may not be able to engage in certain corporate transactions as a result of the Separation.

To preserve the tax-free treatment to Dover and its stockholders of the contribution and the distribution and certain related transactions, under the tax matters agreement that Apergy entered into with Dover, Apergy is

restricted from taking any action following the distribution that prevents the distribution and related transactions from being tax-free for U.S. federal income tax purposes. Under the tax matters agreement, for the two-year period following the distribution, Apergy may be prohibited, except in certain circumstances, from:

- entering into any transaction resulting, when combined with prior transactions, in the acquisition of 40% or more of its stock or substantially all of its assets, whether by merger or otherwise;
- merging, consolidating or liquidating;
- issuing equity securities representing 40% or more of its stock, subject to certain exceptions and adjustments;
- repurchasing its capital stock in excess of specified amounts;
- ceasing to actively conduct its business or disposing of more than 25% of the assets used in its actively conducted business; and
- engaging in certain internal transactions.

These restrictions may limit Apergy's ability to pursue certain strategic transactions or other transactions that it may believe to be in the best interests of its stockholders or that might increase the value of its business. In addition, under the tax matters agreement, Apergy may be required to indemnify Dover against all or a portion of such tax liabilities as a result of the acquisition of Apergy's stock or assets, even if it did not participate in or otherwise facilitate the acquisition. For more information, see the section entitled "Certain Relationships and Related Person Transactions—Agreements with Dover—Tax Matters Agreement."

The spin-off and related internal restructuring transactions may expose Apergy to potential liabilities arising out of state and federal fraudulent conveyance laws and legal dividend requirements.

If Dover files for bankruptcy or is otherwise determined or deemed to be insolvent under federal bankruptcy laws, a court could deem the spin-off or certain internal restructuring transactions undertaken by Dover in connection with the Separation to be a fraudulent conveyance or transfer. Fraudulent conveyances or transfers are defined to include transfers made or obligations incurred with the actual intent to hinder, delay or defraud current or future creditors or transfers made or obligations incurred for less than reasonably equivalent value when the debtor was insolvent, or that rendered the debtor insolvent, inadequately capitalized or unable to pay its debts as they become due. A court could void the transactions or impose substantial liabilities upon Apergy, which could adversely affect Apergy's financial condition and its results of operations. Among other things, the court could require Apergy's stockholders to return to Dover some or all of the shares of its common stock issued in the spin-off, or require Apergy to fund liabilities of other companies involved in the restructuring transactions for the benefit of creditors.

The distribution of Apergy's common stock is also subject to review under state corporate distribution statutes. Under the Delaware General Corporation Law, a corporation may only pay dividends to its stockholders either (i) out of its surplus (net assets minus capital) or (ii) if there is no such surplus, out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. Although Dover made the distribution of Apergy's common stock entirely out of surplus, Apergy cannot assure you that a court will not later determine that some or all of the distribution to Dover stockholders was unlawful.

Certain of Apergy's executive officers and directors may have actual or potential conflicts of interest because of their previous positions at Dover.

Because of their former positions with Dover, certain of Apergy's executive officers and directors own equity interests in Dover. Even though Apergy's Board of Directors consists of a majority of directors who are independent, and Apergy's executive officers who were formerly employees of Dover ceased to be employees of Dover upon the Separation, some of Apergy's executive officers and directors will continue to have a financial

interest in shares of Dover's common stock. Continuing ownership of shares of Dover's common stock and equity awards could create, or appear to create, potential conflicts of interest if Apergy and Dover pursue the same corporate opportunities or face decisions that could have different implications for Dover and Apergy.

Apergy may have received better terms from unaffiliated third parties than the terms it received in its agreements with Dover.

The agreements Apergy entered into with Dover in connection with the Separation, including the separation and distribution agreement, transition services agreement, tax matters agreement and employee matters agreement, which were prepared in the context of Apergy's separation from Dover while Apergy was still a wholly owned subsidiary of Dover. Accordingly, during the period in which the terms of those agreements were prepared, Apergy did not have an independent board of directors or a management team that was independent of Dover. As a result, the terms of those agreements may not reflect terms that would have resulted from arm's-length negotiations between unaffiliated third parties. Arm's-length negotiations between Dover and an unaffiliated third party in another form of transaction, such as a buyer in a sale of a business transaction, may have resulted in more favorable terms to the unaffiliated third party. For more information, see the section entitled "Certain Relationships and Related Person Transactions—Agreements with Dover."

Apergy's accounting and other management systems and resources may not be adequately prepared to meet the financial reporting and other requirements to which it is subject following the Separation.

Prior to the Separation, Apergy's financial results were included within the consolidated results of Dover, and Apergy believes that its financial reporting and internal controls were appropriate for a subsidiary of a public company. However, Apergy is now directly subject to the reporting and other requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In addition, the Indenture requires that we file annual, quarterly and current reports with respect to our business and financial condition. Beginning with our Annual Report on Form 10-K for the year ending December 31, 2019, Apergy will be required to comply with Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), which will require annual management assessments of the effectiveness of Apergy's internal control over financial reporting. Apergy's independent registered public accounting firm is not required to express an opinion as to the effectiveness of its internal control over financial reporting until after Apergy is no longer an "emerging growth company," as defined in the Jumpstart Our Business Startups Act ("JOBS Act"). These reporting and other obligations may place significant demands on its management, administrative and operational resources, including accounting systems and resources.

The Exchange Act requires that Apergy file annual, quarterly and current reports with respect to its business and financial condition. Under the Sarbanes-Oxley Act, Apergy is required to maintain effective disclosure controls and procedures and internal control over financial reporting. To comply with these requirements, Apergy may need to upgrade its systems, implement additional financial and management controls, reporting systems and procedures and/or hire additional accounting and finance staff. Apergy expects to incur additional annual expenses for the purpose of addressing these requirements, and those expenses may be significant. If Apergy is unable to upgrade its financial and management controls, reporting systems, information technology systems and procedures in a timely and effective fashion, Apergy's ability to comply with its financial reporting requirements and other rules that apply to reporting companies under the Exchange Act could be impaired. Any failure to achieve and maintain effective internal controls could have a material adverse effect on Apergy's business, results of operations, financial condition or cash flows.

Apergy is an emerging growth company, and any decision on its part to comply with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make its securities less attractive to investors.

Apergy is an emerging growth company, and, for as long as it continues to be an emerging growth company, Apergy currently intends to take advantage of exemptions from various reporting requirements applicable to

public companies other than "emerging growth companies," including, but not limited to, not being required to have its independent registered public accounting firm audit its internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its registration statements, periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. Apergy could be an emerging growth company for up to five years following the completion of the spin-off. Apergy will cease to be an emerging growth company upon the earliest of: (1) the end of the fiscal year following the fifth anniversary of the spin-off; (2) the first fiscal year after its annual gross revenues are $1.07 billion or more; (3) the date on which Apergy has, during the previous three-year period, issued more than $1.0 billion in non-convertible debt securities; or (4) the date on which Apergy is deemed to be a "large accelerated filer" under the Exchange Act. Apergy cannot predict if investors will find its securities less attractive if Apergy chooses to rely on these exemptions. If some investors find its securities less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for its securities and the price of its securities may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. Apergy has irrevocably elected not to avail itself of this accommodation allowing for delayed adoption of new or revised accounting standards, and, therefore, Apergy will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Risks Related to the Exchange Offer

There may be adverse consequences if you do not exchange your outstanding notes.

If you do not exchange your outstanding notes for exchange notes in the exchange offer, you will continue to be subject to restrictions on transfer of your outstanding notes as set forth in the offering memorandum distributed in connection with the May 2018 private offering of the outstanding notes. In general, the outstanding notes may not be offered or sold unless they are registered or exempt from registration under the Securities Act and applicable state securities laws. Except as required by the registration rights agreement, we do not intend to register resales of the outstanding notes under the Securities Act. You should refer to "Summary—The Exchange Offer" and "The Exchange Offer" for information about how to tender your outstanding notes.

The tender of outstanding notes under the exchange offer will reduce the outstanding amount of the outstanding notes, which may have an adverse effect upon, and increase the volatility of, the market prices of the outstanding notes due to a reduction in liquidity.

Your ability to transfer the exchange notes may be limited if there is no active trading market, and there is no assurance that any active trading market will develop for the exchange notes.

We are offering the exchange notes to the holders of the outstanding notes. We do not intend to list the notes on any securities exchange. There is currently no established market for the exchange notes, and we cannot assure you as to the liquidity of markets that may develop for the exchange notes, your ability to sell the exchange notes or the price at which you would be able to sell the exchange notes. If such markets were to exist, the exchange notes could trade at prices that may be lower than their principal amount or purchase price depending on many factors, including prevailing interest rates, the market for similar notes, our financial and operating performance and other factors. We cannot assure you that an active market for the exchange notes will develop or, if developed, that it will continue. If no active trading market develops, you may not be able to resell the notes at their fair market value or at all.

Certain persons who participate in the exchange offer must deliver a prospectus in connection with resales of the exchange notes.

We have not requested, and do not intend to request, an interpretation by the staff of the SEC as to whether the exchange notes issued pursuant to our exchange offer in exchange for the outstanding notes may be offered for resale, resold or otherwise transferred by any holder without compliance with the registration and prospectus delivery provisions of the Securities Act. Instead, based on interpretations of the staff of the SEC contained in *Exxon Capital Holdings Corp.*, SEC no-action letter (April 13, 1988), *Morgan Stanley & Co. Inc.*, SEC no-action letter (June 5, 1991) and *Shearman & Sterling*, SEC no-action letter (July 2, 1983), we believe that you may offer for resale, resell or otherwise transfer the exchange notes without compliance with the registration and prospectus delivery requirements of the Securities Act. We cannot guarantee that the SEC would make a similar decision about our exchange offer. If our belief is wrong, or if you cannot truthfully make the representations mentioned above, and you transfer any exchange note issued to you in the exchange offer without meeting the registration and prospectus delivery requirements of the Securities Act, or without an exemption from such requirements, you could incur liability under the Securities Act. Additionally, in some instances described in this prospectus under "Plan of Distribution," certain holders of exchange notes will remain obligated to comply with the registration and prospectus delivery requirements of the Securities Act to transfer the exchange notes. If such a holder transfers any exchange notes without delivering a prospectus meeting the requirements of the Securities Act or without an applicable exemption from registration under the Securities Act, such a holder may incur liability under the Securities Act. We do not and will not assume, or indemnify such a holder against, this liability.

Risks related to Holding the Exchange Notes

Our indebtedness could adversely affect our financial condition and operating flexibility and prevent us from fulfilling our obligations under the notes.

In connection with the Separation, we incurred a significant amount of indebtedness. Subject to the limits contained in the credit agreement governing the Senior Secured Credit Facilities and the Indenture, we may be able to incur substantial additional indebtedness from time to time to finance working capital, capital expenditures, investments or acquisitions, or for other purposes. If we do so, the risks related to our level of indebtedness could intensify.

Specifically, our level of indebtedness could have important consequences, including:

- making it more difficult for us to satisfy our obligations with respect to the notes and our other indebtedness;
- limiting our ability to obtain additional financing to fund our business operations;
- requiring a substantial portion of our cash flows to be dedicated to debt service payments;
- increasing our vulnerability to general adverse economic and industry conditions;
- exposing us to the risk of increased interest rates as certain of our borrowings, including borrowings under the Senior Secured Credit Facilities, are at variable rates of interest;
- limiting our flexibility in planning for and reacting to changes in the industry in which we compete;
- placing us at a disadvantage compared to other, less leveraged competitors; and
- increasing our cost of borrowing.

In addition, the credit agreement governing the Senior Secured Credit Facilities and the Indenture contain restrictive covenants that limit our ability to engage in activities that may be in our long-term interests. Our failure to comply with these covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all our indebtedness.

Our ability to make payments on and to refinance our indebtedness as well as any future indebtedness that we may incur depends upon the level of cash flows generated by our operations, our ability to sell assets, availability under the Revolving Credit Facility and our ability to access the capital markets and/or other sources of financing. Our ability to generate cash is subject to general economic, industry, financial, competitive, legislative, regulatory and other factors that are beyond our control. If we are not able to repay or refinance our indebtedness as it becomes due, we may be forced to sell assets or take other disadvantageous actions, including (i) reducing financing in the future for working capital, capital expenditures, acquisitions and general corporate purposes or (ii) dedicating an unsustainable level of our cash flow from operations to the payment of principal and interest on our indebtedness. In addition, our ability to withstand competitive pressures and to react to changes in the oil and gas industry could be impaired.

Despite our current level of indebtedness and restrictive covenants, we and our subsidiaries may still be able to incur substantially more indebtedness or make certain restricted payments, which could further exacerbate the risks to our financial condition described above.

We and our subsidiaries may be able to incur significant additional indebtedness, including additional secured indebtedness, in the future. Although the credit agreement governing the Senior Secured Credit Facilities and the Indenture contain restrictions on the incurrence of additional indebtedness and liens, these restrictions are subject to a number of qualifications and exceptions, and the additional indebtedness and liens incurred in compliance with these restrictions could be substantial. As of September 30, 2018, the Revolving Credit Facility had unused commitments of up to approximately $250 million (less the amount of any outstanding letters of credit issued thereunder). All of those borrowings would be secured and therefore would be effectively senior to the notes and the guarantees by the Guarantors to the extent of the assets securing such indebtedness.

The Indenture permits us to incur certain additional indebtedness, including secured indebtedness, and will allow our non-Guarantor subsidiaries to incur additional indebtedness that would be structurally senior to the notes, and the Indenture does not prevent us from incurring other liabilities that do not constitute indebtedness as defined in the Indenture. If we incur any additional indebtedness that ranks equally with the notes, including any additional notes, the holders of that indebtedness will be entitled to share ratably with you in any proceeds distributed in connection with any insolvency, liquidation, reorganization, dissolution or other winding up of our company. This may have the effect of reducing the amount of proceeds paid to you.

We are permitted under certain circumstances to designate some of our restricted subsidiaries under the Indenture as unrestricted subsidiaries. Those unrestricted subsidiaries will not be subject to many of the restrictive covenants in the Indenture and therefore will be able to incur indebtedness beyond the limitations specified in the Indenture and engage in other activities in which restricted subsidiaries may not engage.

We may also pursue investments in joint ventures or acquisitions, which may increase our indebtedness. Moreover, although the credit agreement governing the Senior Secured Credit Facilities and the Indenture contains restrictions on our ability to make restricted payments, including the declaration and payment of dividends, we will be able to make substantial restricted payments under certain circumstances. If new indebtedness is added to our current indebtedness levels, the related risks that we and the Guarantors now face could intensify.

The terms of the credit agreement governing the Senior Secured Credit Facilities and the Indenture restrict, and the documents governing other indebtedness that we may incur in the future may restrict, our current and future operations, particularly our ability to respond to changes or to take certain actions.

The credit agreement governing the Senior Secured Credit Facilities and the Indenture contain, and the documents governing other indebtedness that we may incur in the future may contain, a number of restrictive

covenants that impose significant operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interests, including restrictions on our ability to:

- incur additional indebtedness and guarantee indebtedness;
- create or incur liens;
- engage in mergers or consolidations or sell all or substantially all of our assets;
- sell, transfer or otherwise dispose of assets;
- make investments, acquisitions, loans or advances or other restricted payments;
- pay dividends or distributions, repurchase our capital stock or make certain other restricted payments;
- prepay, redeem, or repurchase any subordinated indebtedness;
- designate our subsidiaries as unrestricted subsidiaries;
- enter into agreements which limit the ability of our non-Guarantor subsidiaries to pay dividends or make other payments to us; and
- enter into certain transactions with our affiliates.

You should read the discussions under the headings “Description of the Exchange Notes—Certain Covenants” and See in Note 8—“Debt” accompanying the Interim Financial Statements (as defined herein) for further information about these covenants.

In addition, the restrictive covenants in the credit agreement governing the Senior Secured Credit Facilities require us to maintain specified financial ratios and satisfy other financial condition tests to the extent subject to certain financial covenant conditions. Our ability to meet those financial ratios and tests can be affected by events beyond our control. We may not meet those ratios and tests.

A breach of the covenants or restrictions under the Indenture or under the credit agreement governing the Senior Secured Credit Facilities could result in an event of default under the applicable indebtedness. Such a default may allow the creditors under such facility to accelerate the related indebtedness, which may result in the acceleration of any other indebtedness to which a cross-acceleration or cross-default provision applies. In addition, an event of default under the credit agreement governing the Senior Secured Credit Facilities would permit the lenders under our Revolving Credit Facility to terminate all commitments to extend further credit under that facility. Furthermore, if we were unable to repay the amounts due and payable under the Senior Secured Credit Facilities, those lenders could proceed against the collateral granted to them to secure that indebtedness. We will pledge substantially all of our assets as collateral under the Senior Secured Credit Facilities. In the event our lenders or holders of the notes accelerate the repayment of our borrowings, we may not have sufficient assets to repay that indebtedness or be able to borrow sufficient funds to refinance it. Even if we are able to obtain new financing, it may not be on commercially reasonable terms or on terms acceptable to us. As a result of these restrictions, we may be:

- limited in how we conduct our business;
- unable to raise additional indebtedness or equity financing to operate during general economic or business downturns; or
- unable to compete effectively or to take advantage of new business opportunities.

These restrictions, along with restrictions that may be contained in agreements evidencing or governing other future indebtedness, may affect our ability to grow in accordance with our growth strategy.

If we default on our obligations to pay our other indebtedness, we may not be able to make payments on the notes.

Any default under the agreements governing our indebtedness, including a default under the credit agreement governing the Senior Secured Credit Facilities, that is not waived by the required lenders, and the remedies sought by the holders of such indebtedness could make us unable to pay principal, premium, if any, and interest on the notes and substantially decrease the market value of the notes. If we are unable to generate sufficient cash flow and are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness, or if we otherwise fail to comply with the various covenants, including financial and operating covenants, in the instruments governing our indebtedness (including the credit agreement governing the Senior Secured Credit Facilities), we could be in default under the terms of the agreements governing such indebtedness.

In the event of such default, the holders of such indebtedness could elect to declare all the funds borrowed thereunder to be due and payable, together with accrued and unpaid interest, the lenders of our Revolving Credit Facility could elect to terminate their commitments and cease making further loans and the holders of such indebtedness could institute foreclosure proceedings against our assets, and we could be forced into bankruptcy or liquidation. Upon any bankruptcy filing, we would be stayed from making any ongoing payments on the notes (and any Guarantor that had also filed for bankruptcy would also be stayed from making any ongoing payments on the applicable guarantee), and the holders of the notes would not be legally entitled to receive post-petition interest or applicable fees, costs or charges, or any “adequate protection” under Title 11 of the United States Code (the “Bankruptcy Code”). Furthermore, if a bankruptcy case were to be commenced under the Bankruptcy Code, any payments made by us or a Guarantor within 90 days prior to commencement of such a case, could be subject to claims that we or such Guarantor were insolvent at the time any such payments were made and that all or a portion of such payments, which could include repayments of amounts due under the notes or a guarantee, might be deemed to constitute a preference under the Bankruptcy Code, and that such payments should be voided by the bankruptcy court and recovered from the recipients for the benefit of the entire bankruptcy estate. Also, in the event that we were to become a debtor in a bankruptcy case seeking reorganization or other relief under the Bankruptcy Code, a delay and/or substantial reduction in payments under the notes may otherwise occur. In addition, if our operating performance declines, or if we breach our covenants under our indebtedness, we may in the future need to seek waivers from the holders of such indebtedness and the required lenders under the Senior Secured Credit Facilities to avoid being in default. In such a case, we may not be able to obtain a waiver from the holders of such indebtedness and the required lenders on terms acceptable to us, or at all. If this occurs, we could be forced into bankruptcy or liquidation, and we may not be able to make payments on the notes.

Our variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

Borrowings under our Senior Secured Credit Facilities are at variable rates of interest and expose us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness could increase even though the amount borrowed remains the same, and our net income and cash flows, including cash available for servicing our indebtedness, would correspondingly decrease. As of September 30, 2018, approximately $395.0 million of our indebtedness (net of original issue discount and deferred financing costs) was variable rate debt. In the future, we may enter into interest rate swaps that involve the exchange of floating for fixed rate interest payments in order to reduce interest rate volatility. However, we may not maintain interest rate swaps with respect to all of our variable rate indebtedness, and any swaps we enter into may not fully mitigate our interest rate risk.

Repayment of our debt, including the notes, is dependent on cash flow generated by Apergy’s subsidiaries.

Apergy is a holding company and all of our tangible assets are owned by Apergy’s subsidiaries. As such, repayment of our indebtedness is dependent on the generation of cash flow by our subsidiaries and their ability to

make such cash available to Apergy, directly or indirectly, by dividend, loan, debt repayment or otherwise. Unless they are Guarantors of the notes, Apergy's subsidiaries do not have any obligation to pay amounts due on the notes or to make funds available for that purpose. Apergy's subsidiaries may not be able to, or be permitted to, make distributions or other payments to enable Apergy to make payments in respect of the notes. Each of Apergy's subsidiaries is a distinct legal entity and, under certain circumstances, legal and contractual restrictions may limit Apergy's ability to obtain cash from its subsidiaries. While the terms of the Indenture and the credit agreement governing the Senior Secured Credit Facilities will limit the ability of Apergy's subsidiaries to incur consensual restrictions on their ability to pay dividends or make other intercompany payments, these limitations are subject to waiver and to important qualifications and exceptions. In the event that Apergy does not receive distributions or other payments from its subsidiaries, Apergy may be unable to make required payments on the notes.

Your right to receive payments on the notes is effectively junior to the right of lenders who have a security interest in our assets to the extent of the value of those assets.

Our obligations under the notes and our Guarantors' obligations under their guarantees of the notes are unsecured, but our obligations under the Senior Secured Credit Facilities and each Guarantor's obligations under its guarantee of the Senior Secured Credit Facilities are secured by a security interest in substantially all of our domestic tangible and intangible assets, including the stock of substantially all of our 100% owned domestic subsidiaries. If we are declared bankrupt or insolvent, or if we default under the Senior Secured Credit Facilities, the lenders could declare all of the funds borrowed thereunder, together with accrued interest, immediately due and payable. If we were unable to repay such indebtedness, the lenders could foreclose on the pledged assets to the exclusion of holders of the notes, even if an event of default exists under the Indenture at such time. Furthermore, if the lenders foreclose and sell the pledged equity interests in any Guarantor under the notes, then that Guarantor will be released from its guarantee of the notes automatically and immediately upon such sale. In any such event, because the notes will not be secured by any of our assets or the equity interests in the Guarantors, it is possible that there would be no assets remaining from which your claims could be satisfied or, if any assets remained, they might be insufficient to satisfy your claims in full.

Claims of holders of the notes will be structurally subordinated to all obligations of our existing and future subsidiaries that do not become Guarantors of the notes.

The notes will be guaranteed, jointly and severally, by all existing and future direct and indirect 100% owned domestic subsidiaries of Apergy that incur or that guarantee any obligations under the Senior Secured Credit Facilities or certain series of capital markets debt securities (other than the notes) of Apergy or any Guarantor. Our subsidiaries that do not guarantee the notes, including any foreign subsidiaries and any subsidiaries that we designate as unrestricted, will have no obligation, contingent or otherwise, to pay amounts due under the notes or to make any funds available to pay those amounts, whether by dividend, distribution, loan or other payment. Claims of holders of the notes will be structurally subordinated to all indebtedness and other obligations and liabilities of any non-Guarantor subsidiary such that in the event of insolvency, liquidation, reorganization, dissolution or other winding up of any subsidiary that is not a Guarantor, all of that subsidiary's creditors (including trade creditors) would be entitled to payment in full out of that subsidiary's assets before we would be entitled to any payment.

In addition, any dividend or other distribution made by a non-100% owned non-Guarantor subsidiary, such as a joint venture, would need to be made ratably to other equity holders and us. These non-100% owned subsidiaries may also be subject to restrictions on their ability to distribute cash to Apergy or a Guarantor in their financing or other agreements and, as a result, we may not be able to access their cash flow to service our debt obligations, including in respect of the notes.

The Indenture, subject to some limitations, permits our subsidiaries that do not guarantee the notes to incur additional indebtedness and does not contain any limitation on the amount of other liabilities, such as trade payables, that may be incurred by these subsidiaries.

As of the date hereof, we have 20 non-U.S. subsidiaries that do not guarantee the notes (including Apergy Middle East Services LLC (f/k/a Norris Production Solutions Middle East LLC), a subsidiary company in the Sultanate of Oman in which we own a 60% equity interest ("AMES")).

In addition, our subsidiaries that provide, or will provide, guarantees of the notes will be automatically released from those guarantees upon the occurrence of certain events, including the following:

- the designation of that subsidiary Guarantor as an unrestricted subsidiary;
- the release or discharge of any guarantee or indebtedness that resulted in the creation of the guarantee of the notes by such subsidiary Guarantor; or
- the sale or other disposition, including the sale of substantially all the assets, of that subsidiary Guarantor.

If any subsidiary guarantee is released, no holder of the notes will have a claim as a creditor against that subsidiary, and the indebtedness and other liabilities, including trade payables and preferred stock, if any, whether secured or unsecured, of that subsidiary will be effectively senior to the claim of any holders of the notes. See "Description of the Exchange Notes—Guarantees."

The Indenture also permits us to designate certain of our subsidiaries as unrestricted subsidiaries, which subsidiaries would not be subject to the restrictive covenants in the Indenture. This means that these entities would be able to engage in many of the activities the Indenture restricts for Apergy and its restricted subsidiaries, such as incurring substantial additional indebtedness (secured or unsecured), making investments, selling, encumbering or disposing of substantial assets, entering into transactions with affiliates and entering into mergers or other business combinations. These actions could be detrimental to our ability to make payments when due and to comply with our other obligations under the notes, and could reduce the amount of our assets that would be available to satisfy your claims should we default on the notes. In addition, the initiation of bankruptcy or insolvency proceedings or the entering of a judgment against these entities, or their default under their other credit arrangements, will not result in a default under the notes.

The lenders under the Senior Secured Credit Facilities will have the discretion to release any Guarantors under those facilities in a variety of circumstances, which will cause those Guarantors to be released from their guarantees of the notes.

While any obligations under the Senior Secured Credit Facilities remain outstanding, any guarantee of the notes may be released without action by, or consent of, any holder of the notes or the Trustee, at the discretion of lenders under the Senior Secured Credit Facilities, if the related Guarantor is no longer a Guarantor of obligations under the Senior Secured Credit Facilities or certain other indebtedness. The lenders under the Senior Secured Credit Facilities will have the discretion to release the guarantees under the Senior Secured Credit Facilities in a variety of circumstances. Any of our subsidiaries that are released as a Guarantor of the Senior Secured Credit Facilities will automatically be released as a Guarantor of the notes. You will not have a claim as a creditor against any subsidiary that is no longer a Guarantor of the notes, and the indebtedness and other liabilities, including trade payables, whether secured or unsecured, of those subsidiaries will effectively be senior to claims of notes.

Because each Guarantor's liability under its guarantees may be reduced to zero, voided or released under certain circumstances, holders of notes may not receive any payments from some or all of the Guarantors.

Holders of notes have the benefit of the guarantees of the Guarantors. However, by their terms, the guarantees by the Guarantors are limited to the maximum amount that the Guarantors are permitted to guarantee under applicable law. Further, under the circumstances discussed more fully below, a court under federal and state fraudulent conveyance and transfer statutes could void or reduce the obligations under a guarantee or further

subordinate it to all other obligations of the Guarantor. See "—Federal and state statutes allow courts, under specific circumstances, to void the notes and the guarantee of the notes by certain of our subsidiaries and to require holders of notes to return payments received from us, and if that occurs, you may not receive any payments on the notes." As a result, a Guarantor's liability under its guarantee could be reduced to zero or to another amount that would significantly reduce the value of the guarantee, depending upon, among other things, the amount of other obligations of such Guarantor. In addition, you will lose the benefit of a particular guarantee if it is released under certain circumstances described under "Description of the Exchange Notes—Guarantees."

We may not be able to repurchase the notes upon a change of control.

Upon the occurrence of specific kinds of change of control events, we will be required to make an offer to purchase all of the notes at 101% of the aggregate principal amount thereof plus accrued and unpaid interest, if any, up to but excluding the date of repurchase. Additionally, under the credit agreement governing the Senior Secured Credit Facilities, a change of control (as defined therein) will constitute an event of default that permits the lenders to accelerate the maturity of borrowings under the credit agreement and terminate their commitments to lend. The source of funds for any purchase of the notes and repayment of borrowings under the Senior Secured Credit Facilities would be our available cash or cash generated from our subsidiaries' operations or other sources, including borrowings, sales of assets or sales of equity. We may not be able to repurchase the notes upon a change of control because we may not have sufficient financial resources to purchase all of the debt securities that are tendered upon a change of control and repay our other indebtedness that will become due. If we fail to repurchase the notes in that circumstance, we will be in default under the indenture that will govern the notes. We may require additional financing from third parties to fund any such purchases, and we may be unable to obtain financing on satisfactory terms, or at all. Further, our ability to repurchase the notes may be limited by law. In order to avoid the obligations to repurchase the notes and events of default and potential breaches of the credit agreement governing the Senior Secured Credit Facilities, we may have to avoid certain change of control transactions that would otherwise be beneficial to us.

In addition, some important corporate events, such as leveraged recapitalizations, may not, under the Indenture, constitute a "change of control" that would require us to repurchase the notes, even though those corporate events could increase the level of our indebtedness or otherwise adversely affect our capital structure, credit ratings or the value of the notes. In addition, the occurrence of certain events that might otherwise constitute a "change of control" under the Indenture will not be deemed to be a "change of control repurchase event" if the notes have an investment grade rating from both Moody's Investors Service, Inc. (together with any successor to its rating agency business, "Moody's") and Standard & Poor's Ratings Services (together with any successor to its rating agency business, "S&P") during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by Apergy of any "change of control" (or pending "change of control") and ending 60 days following consummation of such "change of control" (which Trigger Period will be extended following consummation of a "change of control" for up to an additional 60 days for so long as any of Moody's or S&P has publicly announced that it is considering a possible ratings change). See "Description of the Exchange Notes—Repurchase at the Option of Holders—Change of control repurchase event."

Holders of the notes may not be able to determine when a change of control giving rise to their right to have the notes repurchased has occurred following a sale of "substantially all" of our assets.

The definition of change of control in the Indenture includes a phrase relating to the sale of "all or substantially all" of our assets. There is no precise established definition of the phrase "substantially all" under applicable law. Accordingly, the ability of a holder of the notes to require us to repurchase its notes as a result of a sale of less than all our assets to another person may be uncertain.

Federal and state statutes allow courts, under specific circumstances, to void the notes and the guarantee of the notes by certain of our subsidiaries and to require holders of notes to return payments received from us, and if that occurs, you may not receive any payments on the notes.

Our issuance of the notes and the guarantee of the notes by certain of our subsidiaries may be subject to review under federal bankruptcy law and comparable provisions of state fraudulent transfer or fraudulent conveyance laws. While the relevant laws may vary from state to state, under such laws, the issuance of the notes or a guarantee could be voided, or claims in respect of the notes or a guarantee could be subordinated to all other debts of Apergy or of a Guarantor, as applicable, if, among other things, Apergy or the applicable Guarantor, at the time it incurred the indebtedness:

- intended to hinder, delay or defraud any present or future creditor;
- received less than reasonably equivalent value or fair consideration for the incurrence of such indebtedness and if Apergy or the applicable Guarantor:
- was insolvent or rendered insolvent by reason of such incurrence;
- was engaged in a business or transaction for which its remaining assets constituted unreasonably small capital; or
- intended to incur, or believed that it would incur, debts beyond its ability to pay such debts as they mature.

A court might also void the notes or a guarantee without regard to the above factors, if the court found that we or the applicable Guarantor issued the notes or entered into its guarantee with the actual intent to hinder, delay or defraud its creditors.

In addition, any payment by us or that Guarantor pursuant to the notes or a guarantee, as applicable, could be voided and required to be returned to us or the Guarantor, as applicable, or to a fund for the benefit of our creditors or the creditors of the Guarantor. If the notes or guarantees were voided or limited under fraudulent transfer or other laws, any claim you may make against Apergy or the Guarantors for amounts payable on the notes would be unenforceable to the extent of such voidance or limitation. Moreover, the court could order you to return any payments previously made by Apergy or the Guarantors.

The measures of insolvency for purposes of these laws will vary depending upon the law applied in any proceeding to determine whether a voidable transfer has occurred, such that we cannot assure you as to what standard a court would apply in making these determinations or, regardless of the standard that a court uses, that any payments to the holders of the notes or under the guarantees did not constitute preferences, fraudulent transfers or conveyances on other grounds. Generally, however, our company or a Guarantor would be considered insolvent if:

- the sum of its debts, including contingent liabilities, was greater than the fair value of all of its assets;
- the present fair saleable value of its assets was less than the amount that would be required to pay its probable liability on its existing debts, including contingent liabilities, as they become absolute and mature; or
- it could not pay its debts as they become due.

On the basis of historical financial information, recent operating history and other factors, we believe that Apergy and each Guarantor is solvent, does not have unreasonably small capital for the business in which it is engaged and has not incurred debts beyond its ability to pay such debts as they mature. We cannot assure you, however, that a court would agree with our conclusions in this regard.

If a court were to find that the issuance of the notes or the incurrence of a guarantee was a fraudulent transfer or conveyance, the court could void the payment obligations under the notes or such guarantee or

subordinate the notes or such guarantee to presently existing and future indebtedness of ours or of the related Guarantor, or require the holders of the notes to repay any amounts received with respect to the notes or such guarantee. In the event of a finding that a fraudulent transfer or conveyance occurred, you may not receive any repayment on the notes. Sufficient funds to repay the notes may not be available from other sources, including any remaining Guarantor, if any. Further, the voidance of the notes could result in an event of default with respect to our and our subsidiaries' other indebtedness that could result in acceleration of such indebtedness.

As a general matter, value is given for a transfer or an obligation if, in exchange for the transfer or obligation, property is transferred or a valid antecedent debt is satisfied. A court may find that we or a Guarantor did not receive reasonably equivalent value or fair consideration for the notes or such guarantee if we or such Guarantor did not substantially benefit directly or indirectly from the issuance of the notes or such guarantee. Specifically, if the guarantees were legally challenged, any guarantee could also be subject to the claim that, since the guarantee was incurred for Apergy's benefit, and only indirectly for the benefit of the applicable Guarantor, the obligations of the applicable Guarantor were incurred for less than fair consideration. A court could thus void the obligations under the guarantees, subordinate them to the applicable Guarantor's other indebtedness or take other action detrimental to you as a holder of the notes.

Although each guarantee entered into by a subsidiary will contain a provision intended to limit that Guarantor's liability to the maximum amount that it could incur without causing the incurrence of obligations under its guarantee to be a fraudulent transfer, this provision may not be effective (as a legal matter or otherwise) to protect those guarantees from being voided under fraudulent transfer law, or may reduce that Guarantor's obligation to an amount that effectively makes its guarantee worthless.

In addition, any payment by us pursuant to the notes made at a time we were found to be insolvent could be voided and required to be returned to us or to a fund for the benefit of our creditors if such payment is made to an insider within a one-year period prior to a bankruptcy filing or within 90 days for any non-insider party if such payment would give such insider or non-insider party more than such creditor would have received in a distribution under Chapter 7 of the Bankruptcy Code, and certain applicable statutory defenses did not apply.

Finally, as a court of equity, the bankruptcy court may subordinate the claims in respect of the notes to other claims against us under the principle of equitable subordination, if the court determines that: (i) the holder of notes engaged in some type of inequitable conduct; (ii) such inequitable conduct resulted in injury to our other creditors or conferred an unfair advantage upon the holder of notes; and (iii) equitable subordination is not inconsistent with the provisions of the bankruptcy code.

We may redeem your notes at our option, which may adversely affect your return.

As described under "Description of the Exchange Notes—Optional Redemption," we have the right to redeem the notes in whole or in part beginning on May 1, 2021, at the redemption prices specified under "Description of the Exchange Notes—Optional Redemption." At any time and from time to time prior to May 1, 2021, we may redeem some or all of the notes at a price equal to 100% of the aggregate principal amount thereof plus the make-whole premium described under "Description of the Exchange Notes—Optional Redemption," plus accrued and unpaid interest up to, but excluding, the redemption date. At any time and from time to time prior to May 1, 2021, we may redeem up to 35% of the aggregate principal amount of the notes at a redemption price of 106.375% of the aggregate principal amount thereof, plus accrued and unpaid interest up to, but excluding, the redemption date, with the net proceeds of certain equity offerings if at least 65% of the aggregate principal amount of notes issued remains outstanding afterward and we redeem the notes within 180 days of completing the equity offering. We may choose to exercise this redemption right when prevailing interest rates are relatively low. As a result, you may not be able to reinvest the redemption proceeds in a comparable security at an effective interest rate as high as that of the notes.

A lowering or withdrawal of the ratings assigned to our debt securities by rating agencies could cause the liquidity or market value of the notes to decline and may increase our future borrowing costs and reduce our access to capital.

Our indebtedness currently has a non-investment grade rating, and any rating assigned could be lowered or withdrawn entirely by a rating agency if, in that rating agency's judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Real or anticipated changes in our credit ratings will generally affect the market value of the notes. Credit ratings are not recommendations to purchase, hold or sell the notes. Additionally, credit ratings may not reflect the potential effect of risks relating to the structure or marketing of the notes.

Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing. If any credit rating initially assigned to the notes is subsequently lowered or withdrawn for any reason, you may not be able to resell your notes without a substantial discount.

If the notes are rated investment grade at any time by both Moody's and S&P's, most of the restrictive covenants and corresponding events of default contained in the Indenture will be terminated.

If, at any time, the credit rating on the notes, as determined by both Moody's and S&P's Rating Services equals or exceeds Baa3 or BBB-, respectively, or any equivalent replacement ratings, we will no longer be subject to most of the restrictive covenants and corresponding events of default contained in the Indenture. If these restrictive covenants are terminated, the obligation to grant further guarantees of the notes will be terminated, and we may incur other indebtedness, make restricted payments and take other actions that would have been prohibited if these covenants had been in effect. Accordingly, if these covenants and corresponding events of default are terminated, holders of the notes will have less credit protection than at the time the notes were issued.

USE OF PROCEEDS

We will not receive any cash proceeds from the issuance of the exchange notes pursuant to the exchange offer. In consideration for issuing the exchange notes as contemplated in this prospectus, we will receive in exchange a like principal amount of outstanding notes, the terms of which are identical in all material respects to the exchange notes, except that the exchange notes will not contain terms with respect to transfer restrictions, registration rights and additional interest for failure to observe certain obligations in the registration rights agreement. The outstanding notes surrendered in exchange for the exchange notes will be retired and cancelled and cannot be reissued. Accordingly, the issuance of the exchange notes will not result in any change in our capitalization.

SELECTED HISTORICAL FINANCIAL DATA

The following selected financial data reflects the combined and consolidated operations of Apergy. The selected combined income statement data for the years ended December 31, 2017, 2016, and 2015, and the selected combined balance sheet data as of December 31, 2017 and 2016, were derived from Apergy's audited combined financial statements and accompanying notes (collectively, the "Audited Combined Financial Statements") included elsewhere in this prospectus. The selected historical combined balance sheet data as of December 31, 2015, was derived from Apergy's audited combined financial statements, which are not included in this prospectus. The selected historical combined financial data as of and for the years ended December 31, 2014 and 2013, and as of September 30, 2017, were derived from Apergy's underlying financial records, which were derived from the financial records of Dover Corporation, and which are not included in this prospectus. In Apergy's management opinion, the unaudited combined financial statements for these periods have been prepared on the same basis as the audited combined financial statements and include all adjustments, consisting only of normal recurring adjustments and allocations, necessary for a fair statement of the information for the periods presented.

The selected consolidated balance sheet data as of September 30, 2018, and the selected consolidated income statement data for the nine months ended September 30, 2018 and 2017, were derived from Apergy's unaudited condensed consolidated financial statements and accompanying notes (collectively, the "Interim Financial Statements"), included elsewhere in this prospectus.

The selected historical financial data should be read in conjunction with the discussion in "Management's Discussion and Analysis of Financial Condition and Results of Operations," the Audited Combined Financial Statements and the Interim Financial Statements.

	Nine Months Ended September 30,		Years Ended December 31,				
(in thousands)	2018	2017	2017	2016	2015	2014(1)	2013(1)
Statement of income data:							
Revenue	$ 906,318	$ 745,093	$1,009,591	$ 751,337	$1,076,680	$1,530,631	$1,357,713
Gross profit(2)	311,713	244,764	318,467	195,328	334,639	621,091	576,084
Provision for (benefit from) income taxes	24,324	22,973	(22,284)	(8,043)	24,131	110,323	103,159
Net income (loss)	72,284	51,304	111,568	(10,791)	53,134	223,496	217,026
Net income (loss) attributable to Apergy	71,989	50,444	110,638	(12,642)	51,698	222,707	216,525
Balance sheet data:							
Cash and cash equivalents	$ 18,014	$ 23,447	$ 23,712	$ 26,027	$ 10,417	$ 24,355	$ 14,475
Property, plant and equipment, net	236,067	210,478	211,832	201,747	232,886	250,482	196,966
Total assets	1,983,356	1,921,331	1,904,775	1,850,895	1,983,379	2,218,752	1,489,750
Long-term debt, less current portion(2)	687,543	3,708	3,742	1,919	3,282	3,516	1,294
Total Apergy stockholders' equity	962,547	—	—	—	—	—	—
Total Parent Company equity	—	1,586,377	1,635,285	1,546,322	1,639,865	1,793,176	1,192,600
Statement of cash flows data:							
Net cash provided by operating activities	$ 92,806	$ 41,205	$ 76,917	$ 129,709	$ 215,671	$ 280,990	$ 238,181
Net cash used in investing activities(2)	(44,809)	(26,829)	(46,506)	(28,028)	(34,101)	(660,177)	(82,000)
Net cash provided by (used in) financing activities	(53,620)	(20,432)	(33,003)	(85,981)	(194,977)	389,149	(153,030)

(1) During 2014, Apergy acquired Timberline Manufacturing Company, WellMark Holdings, Inc., and Accelerated Companies LLC in three separate transactions for net cash consideration of $627.0 million reflected in Net cash used in investing activities in the Statement of Cash Flows. During 2013, Apergy acquired SPIRIT Global Energy Solutions for net cash consideration of $47.4 million reflected in Net cash used in investing activities in the Statement of Cash Flows. The businesses were acquired to complement and expand upon existing operations within the Production & Automation Technologies segment. Our results of operations, financial position and cash flows reflect these businesses since the date of acquisition.

(2) Prior-year amounts have been reclassified to conform to the current year presentation.

OUR BUSINESS AND PROPERTIES

Overview

Apergy is a leading provider of highly engineered technologies that help companies drill for and produce oil and gas safely and efficiently around the world. Our products include a full range of equipment and technologies that enable efficient drilling and safe and efficient production throughout the lifecycle of a well. Our principal products consist of artificial lift equipment and solutions, including electric submersible pump systems ("ESP"), rod pumping systems ("Rod Lift"), gas lift systems, progressive cavity pump systems ("PCP") and plunger lift systems, as well as polycrystalline diamond cutters ("PDCs") for drilling. We also provide a comprehensive digital product offering consisting of equipment, software and Industrial Internet of Things ("IIoT") solutions for downhole monitoring, wellsite productivity enhancement and asset integrity management. Our expansive digital product offering includes quartz pressure transducers and hybrid electronics, artificial lift controllers and optimization software, monitoring and predictive diagnostic instruments, and software for reciprocating machinery. Our products and technologies enhance our customers' drilling and production economics.

Apergy's products are used by a broad spectrum of customers in the global oil and gas industry, including national oil and gas companies, large integrated and independent oil and gas companies, all of the major oilfield equipment and services providers, and pipeline companies. We compete across major oil and gas markets globally with a particular strength in the North American onshore market. Our products are particularly well suited for unconventional/shale oil and gas markets. While our products are used in both the oil and gas markets, over 75% of our revenues come from oil markets.

The quality, innovative technology and performance of our technologies drive improved cost-effectiveness, productivity, efficiency and safety for our customers. We believe our strong market share in our core markets and our long-term customer relationships are due to our focus on technological advancement, product reliability and our commitment to superior customer service across the organization. Our long-term customer relationships and the consumable nature of many of our products also enable us to benefit from recurring revenues throughout the lifecycle of a producing well. We believe we are also differentiated from competitors through our proven business model focused on high customer intimacy, innovative technology and application engineering.

History and Development

Apergy was formerly a part of the Energy segment within Dover, a global, diversified industrial manufacturer. Apergy has a long history of innovation across these businesses and our heritage in the oil field equipment industry extends over 60 years. During this time, Apergy has expanded through a series of strategic acquisitions of well-known businesses and brands as well as internal growth initiatives. Key acquisitions that built our artificial lift platform include Harbison-Fischer, Accelerated, Wellmark, PCS Ferguson (f/k/a Production Controls Services, Inc.) and Oil Lift Technology. Our leading PDC business was created through the acquisition of US Synthetic. Over this time, Apergy has developed experience as an effective operator as well as a successful integrator of businesses.

Our Industry

We principally operate in the oil and gas drilling and production industry and provide a broad range of technologies and products that enhance oilfield efficiency, improve productivity, maximize reserve recovery and increase asset value. Demand for our products is impacted by overall global demand for oil and gas, which is expected to benefit from a variety of long-term fundamental trends.

According to the U.S. Energy Information Administration's (the "EIA") International Energy Outlook 2017 (the "EIA International Energy Outlook"), global economic expansion, coupled with a growing population, will help drive up global energy consumption by about 41% by the year 2050. The majority of this growth is forecasted

to come from China, India and other Asian nations. Increasing urbanization and a significant expansion of the middle class globally are expected to contribute to higher personal and commercial transportation needs, rising electricity in homes and greater industrial energy demand. For these reasons, the EIA International Energy Outlook projects that demand for petroleum and other liquid fuels will grow by 28% from 2015 through 2050, while demand for natural gas will increase by 69% and natural gas will overtake coal as the world's second largest fuel source during this period.

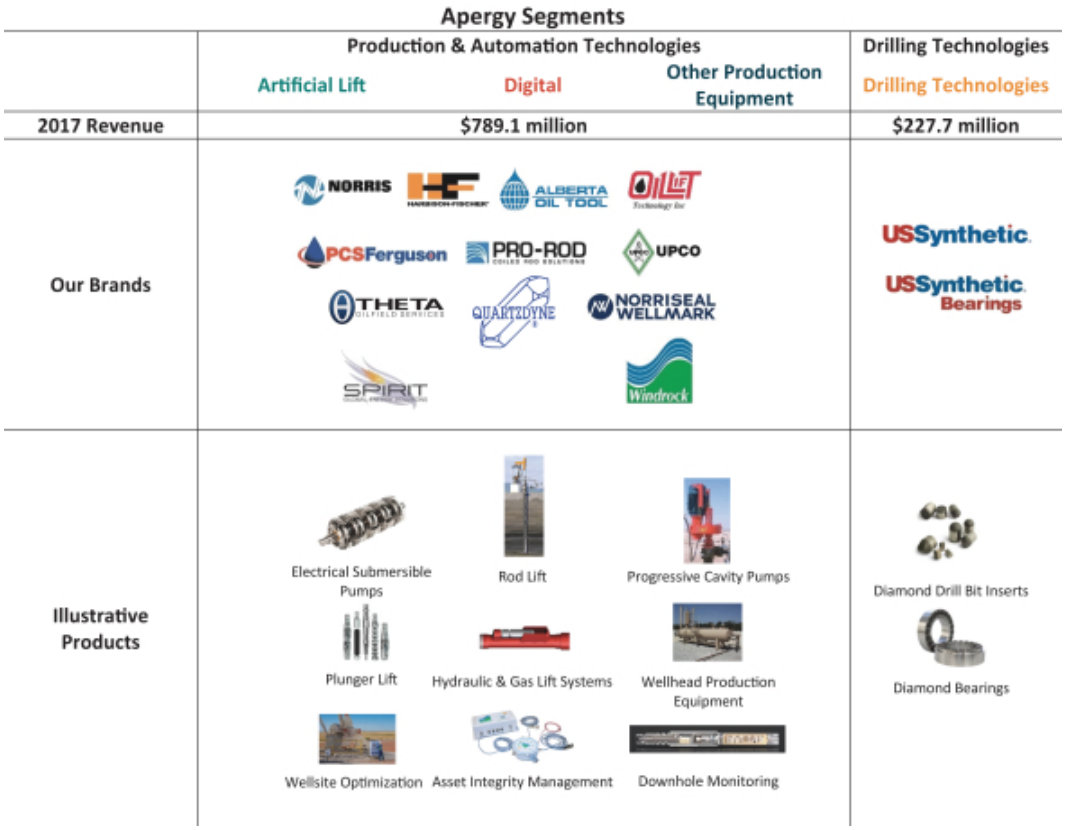
As new technology has unlocked resources previously considered too costly to produce, unconventional oil and natural gas reservoirs, particularly in the U.S., have become a larger part of the global energy supply landscape. Technological developments in horizontal drilling and hydraulic fracturing have enabled exploration and production ("E&P") companies to access the vast hydrocarbon reserves contained in the unconventional oil and natural gas reservoirs of the U.S. In addition, North America is expected to become the largest liquefied natural gas ("LNG") exporter due to growing demand for LNG from Asia and Europe. As a result, the U.S., an oil importer for decades, is on pace to become a net exporter of oil in the near-term.

The oil and gas industry has traditionally been volatile and is influenced by long-term, short-term and cyclical trends, including oil and gas supply and demand, current and projected oil and gas prices, and the level of upstream spending by E&P companies. As a result, demand for our technologies and products depends primarily upon the level of expenditures by our customers in the oil and natural gas industry, particularly those within the U.S. A rapid increase in supply over a seven year period from 2008 to 2015 contributed to a decline in oil and gas prices and reduced customer spending levels from year-end 2014 through 2016. Oil prices rebounded meaningfully in 2017 and have been relatively stable year to date in 2018, resulting in an increase in our customers' spending and demand for Apergy's technologies and products in both 2017 and year to date 2018. Although there remains a risk that oil prices and activity levels could deteriorate from current levels, we believe that the outlook for our businesses over the long-term is favorable. Increasing global demand for oil and gas as well as continued depletion of existing reservoirs will drive continued investment in the drilling and completion of new wells. In addition, productivity and efficiency are becoming increasingly important in the oil and gas industry as operators focus on improving per-well economics, driven by a flattening of the West Texas Intermediate crude oil ("WTI") forward price curve, and the North American onshore oil and gas industry moving from an exploration phase into a more mature production phase.

Technology has become increasingly critical to oil and natural gas producers as a result of the maturity of the world's oil and natural gas reservoirs, the acceleration of production decline, the focus on complex well designs and the oil and gas industry's aging workforce. While the aggregate number of wells drilled per year has fluctuated relative to market conditions, E&P companies, on a proportional basis, have increased expenditures on technology in an effort to improve reservoir performance, increase oil and gas recovery and lower the cost per barrel produced over the life of a well. Our customers continue to seek, test and use production-enabling technologies at an increasing rate. We have invested substantially in building our technology offerings, which help us to provide more efficient tools and solutions to produce oil and natural gas. Apergy's portfolio of data collection, controllers, and remote monitoring solutions are intended to improve reliability and drive down costs. We believe our efficiency enhancing products contribute to a reduction in the breakeven cost of unconventional development for our E&P customers. We believe our business will benefit as operators increasingly focus on optimizing production and improving per-well economics.

Business Segments

Our business is organized into two reportable segments: Production & Automation Technologies; and Drilling Technologies.



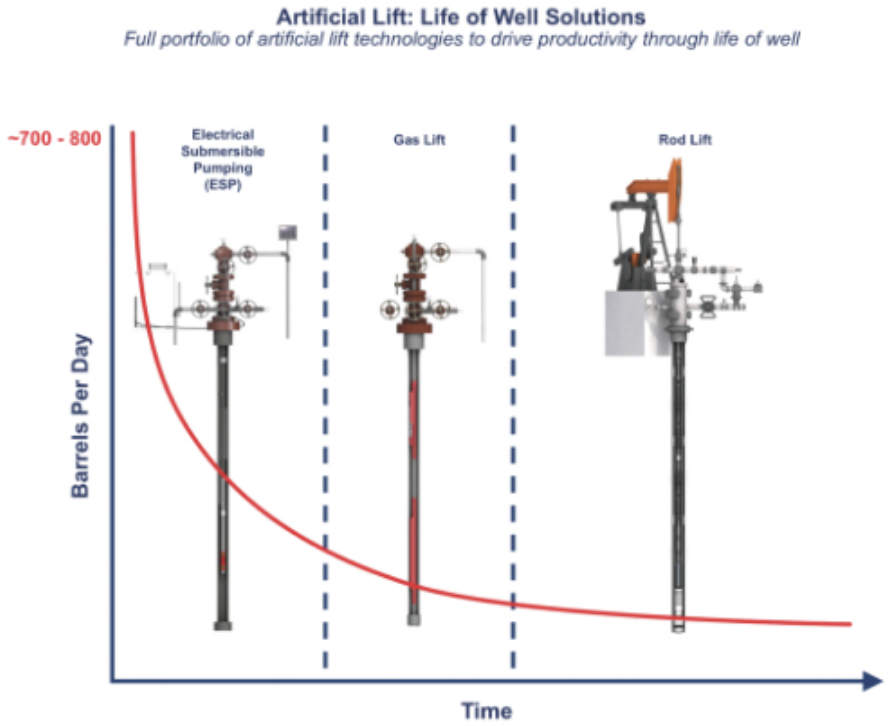
Production & Automation Technologies

Our Production & Automation Technologies segment generated revenues of $781.9 million in 2017, representing 77% of our total 2017 revenues. Production & Automation Technologies facilitates the efficient, safe and cost effective extraction of oil and gas. We design, manufacture, market and service a full range of artificial lift equipment, end-to-end automation and digital solutions, as well as other production equipment. A portion of Production & Automation Technologies revenue is derived from activity-based consumable products, as customers routinely replace items such as sucker rods, plunger lifts and pump parts. We believe that the combination of our artificial lift equipment and our end-to-end proprietary automation solutions helps oil and gas operators lower production costs and optimize well efficiency by enabling oil and gas operators to monitor, predict and optimize performance. Our products are sold under a collection of premier brands, which we believe are recognized by customers as leaders in their market spaces, including Harbison-Fischer, Norris, Alberta Oil Tool, Oil Lift Technology, PCS Ferguson, Pro-Rod, Upco, Accelerated, Norriseal-Wellmark, Quartzdyne, Spirit, Theta, Timberline and Windrock.

Within our Production & Automation Technologies segment, we offer artificial lift products, digital products and other production equipment.

Artificial Lift

We believe artificial lift equipment is mission-critical to oil and gas operators as a means to increase pressure within the reservoir and improve oil and gas production. Artificial lift is a key technology for increasing oil and gas production throughout the lifecycle of a producing well and is therefore directly linked to operator economics. Apergy offers a full suite of artificial lift solutions to meet the varying needs of operators as oil production volume levels decline over the lifecycle of a producing well, as demonstrated in the figure below. Apergy's comprehensive offering provides our customers with cost effective solutions tailored to a well's specific characteristics and production volumes. Apergy is particularly strong within key U.S. basins where artificial lift technologies are prevalent. According to Spears, the U.S. is the world's largest lift market, followed by Canada, and artificial lift technologies are used in approximately 95% of all producing wells in North America. We believe that our offerings also have significant international potential, as production rates continue to decline in existing wells in regions such as the Middle East, South America and Eastern Europe. Our artificial lift products represented approximately 77% of our Production & Automation Technologies segment revenues in 2017.



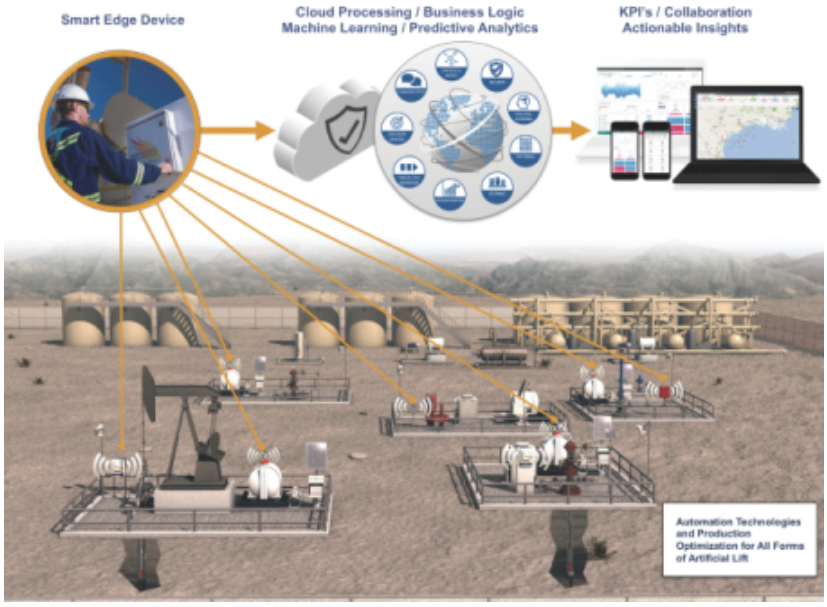
Key artificial lift products include:

- **ESP:** Our ESPs are fully integrated and customizable ESP systems that are used during the earlier stages of production when barrels per day volume is at its highest level. Apergy's ESP products include centrifugal pumps, gas handling devices, motors, controls and digital solutions to monitor and optimize ESP performance.
- **Gas Lift:** Gas lift is a method of artificial lift that involves injecting high pressure gas to lift oil from the wells. Gas lift is a preferred artificial lift for deviated wells and wells characterized by large amounts of sand or solid materials. Apergy has been delivering innovative and flexible gas lift solutions to our customers for more than 30 years. Our software takes into account the well complexity and production characteristics of the well to deliver the best gas lift solution for each well.

- **Rod Lift:** As well production extends beyond the initial years, operators typically begin to employ a Rod Lift extraction solution. Apergy's Rod Lift solutions include standard and fit-for-purpose sucker rods and accessories as well as a full range of downhole pumps that address all rod pumping applications. We believe Rod Lift is one of the more prevalent lift solutions employed in wells in the U.S. and globally. Our Rod Lift business provides for significant recurring revenue as sucker rods, pumps and accessories are replaced with use.
- **PCP (Progressive Cavity Pump), Plunger, Hydraulic and Jet Lift Systems:** Apergy also offers a full range of PCP solutions including top drives, high performance pumps, drive rods and controls; a broad range of plunger lift systems including surface, downhole equipment and controllers; and a full range of hydraulic and jet lift systems including jet pumps, hydraulic reciprocating pumps, surface multiplex pumps and automation controllers. These solutions are typically used in wells that have been producing for multiple years and are essential for increasing productivity at lower production volumes.

Digital

Our proprietary digital products are aimed at creating an end-to-end production optimization platform that enables oil and gas operators to monitor, predict and optimize well performance and drive improved return on investment during the production process. Apergy is a leading provider of productivity tools and performance management software for artificial lift and asset integrity management. Our software has modular architecture that enables specific solutions to be tailored to meet exact customer needs. Real-time data is used by our customers to drive decisions, enhance well servicing and obtain an accurate picture of the well's functioning over time, resulting in a more connected, digital wellsite that not only operates more efficiently but is also safer and more secure. Our digital products represented approximately 10% of our Production & Automation Technologies segment revenues in 2017.



Digital solutions touch multiple parts of the wellsite and allow an operator centralized monitoring and control. Smart instrumentation and hardware at the wellsite have sensing capabilities that allow the capture of data. Once captured, that data is communicated to a cloud based IIoT infrastructure platform where it can be analyzed and used to drive insights for customers. We believe that the combination of Apergy's digital products and its strong artificial lift presence enables Apergy to drive the continued adoption of digital solutions by its

customers. Apergy sees digital adoption as a key secular trend in the oil and gas industry, particularly in the current lower oil price environment where operators are focused on lowering the cost per barrel produced over the lifecycle of a well.

Digital solutions bring together multiple layers of equipment, sensors and software. A site may employ a full-scale solution (e.g., a fully connected wellsite using Apergy equipment and software) or a more application specific solution (e.g., a controller used for diagnostics on an ESP lift). Technologies included in Apergy's digital products offering include:

- **Controllers and Software Solutions:** Controllers and software solutions, including proprietary cloud-based software, to monitor and optimize artificial lift and production. Software is sold on a subscription based model and can be tailored to the breadth of solution the customer is seeking.
- **Downhole Monitoring, Logging and Management:** Quartz pressure transducers and smart downhole tools for measuring, monitoring and logging downhole well conditions to improve well productivity.
- **Asset Integrity Management Solutions:** End-to-End digital IIoT Solutions and portable analyzers to monitor, predict, and optimize health and performance of reciprocating compressors and engines used in wellsites, pipelines, refineries and chemical plants.

Other Production Equipment

Apergy also offers other production equipment including chemical injection systems, flow control valves, oil and water separation, gas conditioning, process heating and pressure vessel products. These products are complementary to our artificial lift and automation technologies offerings and are used by customers in the production of oil and gas. Apergy's other production equipment allows Apergy to build its share of customers' wallets and enhances our ability to cross-sell products across the production equipment portfolio. Our other production equipment offerings represented approximately 13% of our Production & Automation Technologies segment revenues in 2017.

As of December 31, 2017, our Production & Automation Technologies segment operated 18 manufacturing facilities in North America, Australia, Colombia and Oman, as well as 105 sales and service facilities in North America.

Drilling Technologies

Our Drilling Technologies segment generated revenues of $227.7 million in 2017, representing 23% of our total 2017 revenues. In operation for over 30 years, Drilling Technologies provides highly specialized products used in drilling oil and gas wells. We design, manufacture and market PDCs for use in oil and gas drill bits under the US Synthetic brand. Our proprietary PDCs are based on years of innovation and intellectual property development in material science applications including the production of highly stable synthetic diamonds, known as "polycrystalline diamonds." US Synthetic has historically filed new patents at a rate of over 50 patents per year and has previously received the prestigious Shingo Prize for operational excellence. We believe our highly engineered PDCs are distinguished by their quality, rate of penetration and longevity. PDCs are a relatively small cost to the oil and gas operator in the context of overall drilling costs, but are critical to successful drilling. As a result, we believe our customers value the quality and performance of US Synthetic PDCs over less expensive alternatives because a lower quality PDC can cause unnecessary and expensive drilling delays. Over 95% of our PDCs are custom designed to meet unique customer requirements and are finished to exact customer specification to ensure optimal performance. PDCs are utilized in both vertical and horizontal drilling and need to be replaced as they wear out during the drilling process.

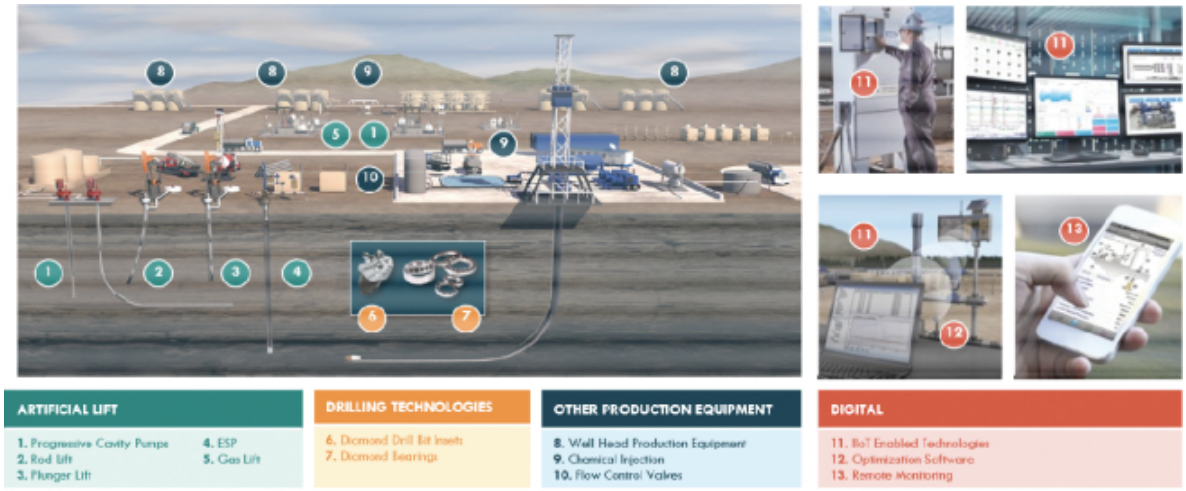
Key products of our Drilling Technologies segment include:

- **PDC Drill Bit Inserts:** Custom designed and manufactured drill bit inserts that fit within a customer's drill.

- **Other Drilling Equipment:** Apergy also offers long-lasting diamond bearings for process-fluid lubricated applications, including underwater applications, downhole drilling tools and industrial pumps, as well as diamond roof bolt mining tools for underground mining.

As of December 31, 2017, our Drilling Technologies segment operated two facilities, which are located in North America.

The following graphic illustrates where the key products of our Production & Automation Technologies and Drilling Technologies segments are used at a wellsite.



Apergy's Strengths

We believe that the following strengths position us well to achieve our primary business objective of creating value for all of our stakeholders, including our customers, employees and stockholders:

Attractive businesses benefiting from favorable industry trends in oil and gas.

We believe that increasing global demand for oil and gas and steady depletion of existing reservoirs will continue to drive investment in the drilling and completion of new wells, despite the current oversupply. The EIA International Energy Outlook forecasts that global tight gas, shale gas and coalbed methane production will grow by 3.6% per annum through 2050, driven primarily by demand in the U.S. Additionally, the EIA International Energy Outlook projects that global tight oil production will more than double between 2015 and 2040, growing from 5.0 Mmb/d in 2015 to 10.3 Mmb/d in 2040. At the same time, we believe the current oil price environment supports increased investment to maximize productivity from existing oil fields and increase the efficiency of oilfield operations. We believe operators' continued focus on improving per-well economics, driven by a flattening of the WTI forward price curve, and the North American onshore oil and gas industry moving from an exploration phase into a more mature production phase, will increase demand for our artificial lift and wellsite automation solutions.

Substantial presence in growing basins, segments and regions.

For the year ended December 31, 2017, 84% of our revenue was generated in North America, where the onshore rig activity was the highest growth region in the oil and gas industry in 2017, achieving a 70% year-over-year increase. Onshore unconventional oil and gas production is expected to continue to grow in North America through 2050, according to the EIA Annual Outlook. Apergy has established positions in key

North American unconventional basins, such as the Permian, Eagle Ford and Bakken basins, that are expected to experience continued growth in the coming years. We have also been expanding our presence in key international markets, including the Middle East, Latin America and Australia.

Significant recurring revenue enhances the stability of our results.

Historically, approximately 40% of our revenue is recurring. This includes replacement hardware, such as rod pumps and sucker rods, which replace previously deployed equipment in established producing wells. It also includes equipment service revenue, as well as ongoing revenue connected with our automation offering, particularly subscription-based revenue for automated well monitoring and management. We believe this recurring revenue enhances the predictability and stability of our revenue and cash flow, and helps to mitigate the impact of down market cycles.

Proven business model driving strong relative performance across market cycles.

We have built our business through differentiated technology and application engineering, high customer intimacy and superior customer service, continuous new product innovation and a culture of continuous improvement. We have also focused on delivering products and solutions that are non-commoditized and that we believe are critical to an oil or gas producer's efficiency and profitability. Through this consistent approach, we have achieved strong relative operating results across market cycles, especially during down cycles, demonstrating the resilience of our business model. Despite the recent oil and gas market downturn, we achieved significant net cash provided by operating activities during 2015 and 2016, in part through proactive working capital management.

Industry leadership with strong brand portfolio and reputation for quality, performance and service.

Our products are sold under a collection of premier brands with strong reputations for quality, performance and service in the industry. These brands include Norris, Harbison-Fischer, Accelerated, PCS Ferguson, Oil Lift Technology, Norriseal-Wellmark, Spirit, Quartzdyne, Theta, Windrock and US Synthetic. Our heritage in the oil field equipment industry extends over 60 years. We believe the quality of our brands has enabled us to achieve a strong Net Promoter Score, which we believe is among the highest in the artificial lift market.

Comprehensive artificial lift portfolio in an attractive market segment.

Artificial lift is one of the fastest growing segments in oilfield equipment, as spending for artificial lift per well has outpaced other areas of growth. According to Spears, the global artificial lift market was approximately $8.3 billion in 2016 and grew approximately 6% in 2017. During the previous oil and gas upcycle from 2009 to 2014, the artificial lift market grew at an average annual rate of approximately 19%, according to Spears. Additionally, according to Spears, artificial lift spending per active rig has grown at an average annual rate of almost 8% between 2006 and 2017. We believe we are well positioned to benefit from this favorable trend with a broad portfolio of artificial lift solutions to drive productivity throughout the lifecycle of the well, including ESP, Rod Lift, PCP, plunger lift, hydraulic and jet lift systems.

Our automation business is well positioned to capitalize on increasing adoption of digital applications by our customers.

As our customers increasingly focus on maximizing the productivity and efficiency of existing wells, we believe they will continue to adopt automation technologies at the wellsite and that our business is well positioned to capitalize on this trend. We believe technology has become increasingly important to the oil and natural gas marketplace as a result of the maturity of the world's oil and natural gas reservoirs, the acceleration of production decline, the focus on complex well designs and the oil and gas industry's aging workforce. In the current lower oil price environment, our customers are focused on lowering the cost per barrel produced over the

lifecycle of a well and have begun to seek, test and use production-enabling technologies at an increasing rate. We believe that our strong domain expertise, customer access and innovative hardware and proprietary optimization software offer advantages in this regard.

We are an award-winning global leader in PDCs for oil and gas drilling and an important partner to customers in achieving drilling productivity.

Our US Synthetic business has over thirty years of experience in the development and production of PDCs and has achieved a strong leadership position in the industry primarily due to our expertise in diamond science technology and our ongoing commitment to innovation, quality and superior customer service. We custom design PDCs to the specific characteristics of the unique geological formations in which our customers are drilling. We are able to analyze the needs of our customers and deliver customized solutions in a reliable and timely manner, enabling our customers to operate more efficiently and reduce their total drilling costs. US Synthetic is a recognized leader in lean manufacturing and engineering. Currently, US Synthetic remains the only upstream oilfield equipment company to receive the Shingo Prize for operational excellence.

Strong operating system that delivers sustainable performance.

We utilize an operating system that we believe distinguishes us from our peers. Our operating system is built on a foundation of a strong continuous improvement program that drives relentless focus on business process improvements and eliminating waste. Key focus areas of our operating system include strategic planning, organic growth, pricing, productivity, strategic sourcing and talent management. Our operating system has enabled us to deliver attractive margin and cash flow performance. We also believe this operating system allows us to integrate new businesses effectively and deliver value.

Executive management team with proven track record of success.

Our senior management team is led by Sivasankaran (“Soma”) Somasundaram, who serves as our President and Chief Executive Officer. Other members of Apergy’s senior management team include Jay A. Nutt, Senior Vice President and Chief Financial Officer, Paul E. Mahoney, President, Production and Automation Technologies, Robert K. Galloway, President, Drilling Technologies, Syed (“Ali”) Raza, Senior Vice President and Chief Digital Officer and Shankar Annamalai, Senior Vice President Operations. Our senior management team consists of proven industry operators, with an average of 24 years of relevant experience. We believe our senior leadership team has the extensive operational, financial and managerial experience needed to effectively navigate the key opportunities and challenges facing our business today and have been responsible for developing and executing our success to date. For more information regarding the executive officers of Apergy, see “Directors, Executive Officers and Corporate Governance—Executive Officers.”

Apergy’s Strategies

Our goal is to continue to create value and to become the leader at the wellsite, driving customer productivity and efficiency. We intend to achieve this goal by executing the following strategies:

Expand market coverage and increase market share in growing unconventional basins.

Onshore unconventional oil and gas production is expected to continue to grow in North America. The EIA International Energy Outlook projects global tight gas, shale gas and coalbed methane production to grow by 3.6% per annum through 2050, driven primarily by the U.S. According to the EIA Annual Outlook, shale output in the U.S. is expected to increase by approximately 130% over this period, while U.S. tight oil output will grow by approximately 74%. As a result, North America is projected to become a major exporter of natural gas during this period. Apergy has established positions with customers that operate in key North American unconventional basins, such as the Permian, Eagle Ford and Bakken basins, that are expected to experience continued growth in

the coming years. We intend to expand our market coverage and increase our share in these markets by leveraging our existing customer relationships, sales and service infrastructure and new product initiatives. Key elements of the strategy will include expanding sales coverage, key account management to drive cross selling, targeted product launches to capture market share, data analytics to drive increased customer penetration opportunities and educational programs to drive awareness of our technology differentiation.

Capitalize on increasing customer adoption of automation solutions to drive wellsite productivity.

We believe our customers will increasingly adopt automation solutions to drive productivity and efficiency in the coming years. Technology has become increasingly critical to the oil and natural gas marketplace as a result of the maturity of the world's oil and natural gas reservoirs, the acceleration of production decline, the focus on complex well designs and the oil and gas industry's aging workforce. While the aggregate number of wells being drilled per year has fluctuated relative to market conditions, E&P companies have increased expenditures on technology in an effort to improve reservoir performance, increase oil and gas recovery and to lower the cost per barrel produced over the life of a well. Customers continue to seek, test and use production-enabling technologies at an increasing rate. We have invested a substantial amount of our time and resources into building our technology offerings, which help us to provide our customers with more efficient tools to produce oil and natural gas. Apergy's proprietary automation solutions improve reliability and drive down costs. We offer a full range of automation solutions consisting of equipment, software and full end-to-end IIoT solutions to meet specific customer needs. We believe our automation solutions contribute to a reduction in the breakeven cost of unconventional development, improving the efficient use of capital and operating budgets of our E&P customers. We believe our business will benefit as operators increasingly focus on optimizing production and improving per-well economics. We intend to leverage our extensive customer access and deep domain expertise in these applications to capitalize on this growth trend.

Continue to innovate and expand our product offerings.

We intend to continue our strong track record of developing and launching new and innovative products that drive improved cost-effectiveness, productivity, efficiency and safety for our customers. We operate in a market that is characterized by rapidly changing technology and frequent new product introductions. As a result, we maintain an active research, development and engineering program with a focus on solving customer challenges and developing innovative technologies to improve customer efficiency and profitability. We believe maintaining a robust innovation pipeline will allow us to continue to win market share and increase our penetration in key markets and with key customers. In the near-term, we expect to launch several new products that will help our customers gain efficiency, reduce operating costs and improve safety. Key focus areas for innovation and new product launches include increasing the performance of our artificial lift systems, developing new digital platforms for our production management and asset integrity management solutions, increasing the drilling productivity of our PDC cutters and developing diamond bearings for new applications.

Continue to expand our global reach.

As producing wells in the Middle East continue to age and deplete and shale-based production continues to expand in areas like South America, our globally recognized brands, market ready products and application knowledge offer the opportunity for international market penetration and growth. We believe there will be a substantial opportunity in the coming years to leverage our technologies currently used in unconventional oil and gas production in North America in targeted international markets. To capitalize on these opportunities, we are focused on expanding our operations and capabilities in targeted global markets such as the Middle East, Latin America and Australia, regions which we believe have aging wells and significant unconventional resource development potential. For example, we recently completed an acquisition in Argentina that will give us access to the market and enable us to capitalize on shale developments in that country. We have begun to win tenders in these markets, and we expect to continue to build on these successes in the future, especially as these international markets move towards adopting artificial lift and automation technologies.

Continue to drive margin expansion and cash from operations through operational excellence.

We remain focused on driving margin expansion and cash from operations as the oil and gas markets continue to recover. We have a demonstrated track record of strong relative performance through market cycles, including maintaining cash from operations positive throughout the recent oil and gas downturn. We are committed to continuing operational excellence and driving strong performance by utilizing our differentiated operating system. We plan to achieve this through a rigorous focus on improving productivity in our facilities, reducing material costs by strategic sourcing in best value countries, reducing working capital through effective inventory, receivables and payables management and eliminating waste in our processes through lean and continuous improvement principles.

Expand our technology and product portfolio through selective acquisitions.

In addition to our organic growth initiatives, we may choose to pursue select strategic acquisition opportunities as part of our growth strategy. We benefit from a track record of successfully growing our earnings and technology offering through selective acquisitions. For example, over the last cycle, we expanded our comprehensive artificial lift platform through several acquisitions, including Harbison-Fischer, Oil Lift Technology, PCS Ferguson, and Accelerated. Most recently, we completed the acquisition of an Argentina-based supplier of progressive cavity pump products and services in October of 2017. We have historically employed a disciplined approach to acquisitions focused on opportunities where we believe we can achieve an attractive return on our investment. These have included opportunities that (i) increased our exposure to the most important growth trends in the industry, (ii) added key products and technologies, (iii) enhanced our market position, (iv) expanded our geographic scope and/or (v) provided the opportunity to realize synergies while strengthening our capabilities. To the extent we choose to pursue acquisition opportunities, as part of our disciplined approach, we intend to focus on those that we believe will be accretive to earnings while consistent with our goal to maintain a strong and flexible balance sheet and healthy credit profile. In order to preserve the tax-free nature of the spin-off, we must execute any such transactions in compliance with the tax matters agreement. As a result, the ability of Apergy to engage in, among other things, certain mergers and equity transactions could be limited or restricted for a two-year period following the spin-off. See “Risk Factors—Risks Related to the Separation—Apergy may not be able to engage in certain corporate transactions as a result of the Separation.”

Competition

The markets in which we operate are highly competitive. The principal bases of competition in our markets are customer service, product quality and performance, price, breadth of product offering, market expertise and innovation. We believe we differentiate ourselves from our competitors through our model of high customer intimacy, differentiated technology, innovation and a high level of customer service.

We face competition from other manufacturers and suppliers of oil and gas production and drilling equipment. Key competitors include Weatherford International plc, Baker Hughes, a GE Company, Halliburton, BORETS, Tenaris, Novomet and Emerson in Production and Automation Technologies; as well as DeBeers (Element 6), Schlumberger Ltd. (Mega Diamond) and various Chinese suppliers in Drilling Technologies.

Customers, Sales and Distribution

We have built our business through high customer intimacy and superior customer service, and we view intense customer focus as being central to our goal of creating value for all of our stakeholders. Drawing on our deep industry and application engineering expertise, we strive to develop close, collaborative relationships with our customers. We work closely with our customers’ engineering teams to develop technologies and applications that help improve efficiency and productivity.

We have established deep and long-standing customer relationships with some of the largest operators in the oil and gas drilling and production markets. Our customers include national oil and gas companies, large and

integrated independent oil and gas companies, all of the major oil field equipment and service providers, and pipeline companies.

We market and sell our products and technologies through a combination of sales representatives, technical seminars, trade shows and print advertising. We sell directly to customers through our direct sales force and indirectly through independent distributors and sales representatives. Our direct sales force is composed of highly trained industry experts who can advise our customers on the advantages of our technology and product offering. We have also developed an extensive network of 108 sales and service locations throughout key regions and basins in North America to better serve our customers. We also host forums and training sessions, such as our Artificial Lift Academy, where our customers can share their experiences and we can educate and train our customers in the use of our new technologies. Nearly all of our Drilling Technologies sales and over 70% of our Production & Automation Technologies sales in 2017 were sold directly to the end-use customer.

In addition to our direct sales force, we support a global network of distributors and representatives. We provide our distributors with sales and product literature, advertising and sales promotions, and technical assistance and training with our products. Many of our distributors also stock our products.

Our customer base is diverse and no single customer accounted for more than 10% of total revenue for the year ended December 31, 2017.

Intellectual Property

Apergy owns many patents, trademarks, licenses and other forms of intellectual property, which have been acquired over a number of years and, to the extent relevant, expire at various times over a number of years. A large portion of Apergy's intellectual property consists of patents, unpatented technology and proprietary information constituting trade secrets that Apergy seeks to protect in various ways, including confidentiality agreements with employees and suppliers where appropriate. While Apergy's intellectual property is important to its success, the loss or expiration of any of these rights, or any group of related rights, is not likely to materially affect Apergy's results on a combined basis. Apergy believes that its commitment to continuous engineering improvements, new product development and improved manufacturing techniques, as well as strong sales, marketing and service efforts, are significant to its general leadership positions in the niche markets that it serves.

Research and Development and Engineering

Apergy operates in markets that are characterized by changing technology and frequent new product introductions. As a result, Apergy's success is dependent on its ability to develop and introduce new technologies and products for its customers. Apergy maintains an active research, development and engineering program with a focus on developing innovative products and solutions as well as upgrading and improving existing offerings to satisfy the changing needs of its customers, expand revenue opportunities domestically and internationally, maintain or extend competitive advantages, improve product reliability and reduce production costs. Apergy believes maintaining a robust innovation pipeline will allow it to continue to win market share and increase its penetration in key markets and with key customers.

Raw Materials

Apergy uses a wide variety of raw materials, primarily metals and semi-processed or finished components. We have not historically experienced material impacts to our financial results due to shortages or the loss of any single supplier. Although the required raw materials are generally available, commodity pricing for metals, such as nickel, chrome, molybdenum, vanadium, manganese and steel scrap, fluctuate with the market. Although cost increases in commodities may be recovered through increased prices to customers, Apergy's operating results are exposed to such fluctuations. Apergy attempts to control such costs through short-duration fixed-price contracts with suppliers and various other programs, such as Apergy's global supply chain activities. In addition, Apergy sources material globally. This global supply chain is intended to provide Apergy with a cost-effective solution

for raw materials. Our supply chain could be exposed to logistical disruptions. Apergy maintains domestic suppliers in most cases to provide temporary contingencies. Despite contingencies and back-up processes, sustained inflation and unpredictable disruptions to supply could have an adverse impact on our business.

Regulation and Environmental and Occupational Health and Safety Matters

Apergy's operations are subject to a variety of international, national, state and local laws and regulations, including those relating to the discharge of materials into the environment, health and worker safety, or otherwise relating to human health and environmental protection. Failure to comply with these laws or regulations may result in the assessment of administrative, civil and criminal penalties, imposition of remedial or corrective action requirements, and the imposition of injunctions to prohibit certain activities or force future compliance.

In addition, Apergy depends on the demand for its products and services from the oil and gas industry and, therefore, is affected by changing taxes, price controls, tariffs and trade restrictions and other laws and regulations relating to the oil and gas industry in general, including those specifically directed to hydraulic fracturing and onshore products. The adoption of laws and regulations curtailing exploration, drilling or production in the oil and gas industry, or the imposition of more stringent enforcement of existing regulations, could adversely affect Apergy's operations by limiting demand for Apergy's products and services or restricting Apergy's or its customers operations. For more information, see "Risk Factors—Risks Related to Apergy's Business—Federal, state and local legislative and regulatory initiatives relating to hydraulic fracturing and the potential for related litigation could result in increased costs and additional operating restrictions or delays for Apergy's customers, which could reduce demand for Apergy's products and negatively impact Apergy's business, financial condition and results of operations," "—Apergy and its customers are subject to extensive environmental and health and safety laws and regulations that may increase Apergy's costs, limit the demand for Apergy's products and services or restrict Apergy's operations. In addition, future regulations, or more stringent enforcement of existing regulations, could increase those costs and liabilities, which could adversely affect Apergy's results of operations" and "—Climate change legislation and regulatory initiatives could result in increased compliance costs for Apergy and its customers."

Apergy utilizes behavioral-based safety practices to promote a safe working environment for all its employees. On a consistent and regular basis, safety is discussed, measured and promoted in all levels of the organization. Additionally, Apergy's operations are subject to a number of federal and state laws and regulations relating to workplace safety and worker health, such as the Occupational Safety and Health Act and regulations promulgated thereunder.

Apergy has incurred and will continue to incur operating and capital expenditures to comply with environmental, health and safety laws and regulations. Historically, there have been no material effects upon Apergy's earnings and competitive position resulting from Apergy's compliance with such laws or regulations; however, there can be no assurance that such costs will not be material in the future or that such future compliance will not have a material adverse effect on our business or operational costs.

Employees

Apergy employed approximately 3,200 persons in nine countries as of September 30, 2018. Approximately 100 of Apergy's employees in the U.S. are subject to a collective bargaining agreement. Outside the U.S., some of Apergy's employees are represented by unions or works councils. Apergy believes that it has good relations with its employees.

Properties

Apergy's corporate headquarters is located in The Woodlands, Texas. Apergy maintains technical customer support offices and operating facilities in North America, the Middle East, Latin America and Australia.

The number, type, location and size of the properties used by Apergy's continuing operations as of December 31, 2017 are shown in the following charts, by segment:

	Number and Nature of Facilities				Square Footage (in 000s)	
	Manufacturing	Warehouse	Sales / Service / Other	Total	Owned	Leased(1)
Production & Automation Technologies	18	72	36	126	1,362	1,997
Drilling Technologies	1	—	1	2	173	11

	Locations			
	North America	Australia	Other	Total
Production & Automation Technologies	107	7	12	126
Drilling Technologies	2	—	—	2

(1) Expiration dates on leased facilities range from 1 to 15 years.

Apergy believes that its owned and leased facilities are well-maintained and suitable for its operations.

LEGAL PROCEEDINGS

Apergy and certain of its subsidiaries are parties to a number of legal proceedings incidental to their businesses. These proceedings primarily involve claims by private parties alleging injury arising out of use of Apergy's products, intellectual property infringement, employment matters and commercial disputes. Management and legal counsel, at least quarterly, review the probable outcome of such proceedings, the costs and expenses reasonably expected to be incurred and currently accrued to-date. Apergy has reserves for legal matters that are probable and estimable, and at September 30, 2018 and December 31, 2017, 2016 and 2015, respectively, these reserves were not significant. While it is not possible at this time to predict the outcome of these legal actions, in the opinion of management, based on the aforementioned reviews, Apergy is not currently involved in any legal proceedings which, individually or in the aggregate, could have a material effect on its financial position, results of operations, or cash flows.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is our analysis of our financial performance, financial condition and significant trends that may affect our future performance. It should be read in conjunction with the Audited Combined Financial Statements and Interim Financial Statements, each included elsewhere in this prospectus. It contains forward-looking statements including, without limitation, statements relating to Apergy's plans, strategies, objectives, expectations and intentions that are made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are often identified by the words "believe," "anticipate," "expect," "may," "intend," "foresee," "guidance," "estimate," "potential," "outlook," "plan," "should," "will," "would," "could," "target," "forecast" and similar expressions, including the negative thereof. We do not undertake to update, revise or correct any of the forward-looking information unless required to do so under the federal securities laws. Readers are cautioned that such forward-looking statements should be read in conjunction with the disclosures under the heading: "Cautionary Statement Concerning Forward-Looking Statements."

Executive Overview and Business Outlook

Apergy is a leading provider of highly engineered equipment and technologies that help companies drill for and produce oil and gas safely and efficiently around the world. Our products provide efficient functioning throughout the lifecycle of a well—from drilling to completion to production.

Separation and Distribution

On April 18, 2018, the Dover Board of Directors approved the separation of entities conducting its upstream oil and gas energy business within the Dover Energy segment into an independent, publicly traded company named Apergy Corporation. In accordance with the separation and distribution agreement, the two companies were separated by Dover distributing to its stockholders all 77,339,828 shares of Apergy common stock on May 9, 2018. Each Dover stockholder received one share of Apergy common stock for every two shares of Dover common stock held at the close of business on the record date of April 30, 2018. In conjunction with the Separation, Dover received a private letter ruling from the IRS to the effect that, based on certain facts, assumptions, representations and undertakings set forth in the ruling, for U.S. federal income tax purposes, the distribution of Apergy common stock was not taxable to Dover or U.S. holders of Dover common stock, except in respect to cash received in lieu of fractional share interests. Following the Separation, Dover retained no ownership interest in Apergy, and each company now has separate public ownership, boards of directors and management. On May 9, 2018, Apergy common stock began "regular-way" trading on the New York Stock Exchange under the "APY" symbol.

Basis of Presentation

See Note 1—"Basis of Presentation" in the Audited Combined Financial Statements and Note 1—"Basis of Presentation and Separation" in the Interim Financial Statements for information on the basis of presentation of the Audited Combined Financial Statements and Interim Financial Statements included in this prospectus.

Business Environment

Our business provides a broad range of technologies and products for the oil and gas drilling and production industry and, as a result, is substantially dependent upon activity levels in the oil and gas industry. Demand for our products is impacted by overall global demand for oil and gas, ongoing depletion rates of existing wells which produce oil and gas, and our customers' willingness to invest in the development and production of oil and gas resources. Our customers determine their operating and capital budgets based primarily on current and future

crude oil and natural gas prices, U.S. and worldwide rig count and U.S. well completions. Crude oil and natural gas prices are impacted by geopolitical, macroeconomic and local events and have historically been subject to substantial volatility and cyclicality. Future higher oil and gas prices typically translate into higher exploration and production budgets. Rig count, footage drilled and exploration and production investment by oil and gas operators have often been used as leading indicators for the level of drilling and development activity in the oil and gas sector.

Market Conditions and Outlook

Oil supply markets tightened in the back half of 2017 and throughout the first half of 2018, driving 2018 average WTI crude prices higher. Although certain OPEC and non-OPEC producers announced their intention to increase production beginning in the third quarter of 2018, the crude oil price outlook remained relatively stable driven by expectations that these announced production increases would not offset falling production levels in Venezuela and Iran, given the anticipated declines in Iranian production as a result of the reinstatement of U.S. sanctions during late 2018. U.S., Canadian and worldwide rig counts increased sequentially in the third quarter of 2018. We expect continued growth in rig count, as well as footage drilled, as the demand for oil and gas continues to grow and commodity prices remain constructive. We expect that U.S. rig count growth will be more modest through the end of 2018 due to takeaway capacity constraints in the Permian basin and as oil and gas operators experience budgeting pressures as year-end approaches.

Recently announced tariffs by the U.S. government, and retaliatory tariffs and other trade restrictions by others, introduce uncertainty to our business since some of our products are impacted by the tariffs. We expect these products to experience higher input costs; however, we expect to be able to mitigate some of the impacts of higher costs through various measures, including price increases, supplier concessions and productivity improvement initiatives. In addition, we remain ready to respond to any changes in our customers' plans based on the recent takeaway capacity issues in the Permian basin. Although we have not experienced any material impact to our business to date from slower Permian activity, we believe U.S. producers will redirect their capital to other basins which we currently serve.

Although risk remains that oil prices and activity levels could deteriorate from current levels, we believe the long-term outlook for our businesses is favorable. Increasing global demand for oil and gas, in combination with ongoing depletion of existing reservoirs, is expected to drive continued investment in the drilling and completion of new wells. In addition, productivity and efficiency are becoming increasingly important in the oil and gas industry as operators focus on improving per-well economics.

Average oil and gas prices, rig counts and well completions are summarized below:

	2017					2018			
	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	YTD
Average Price WTI Crude (per bbl)[a]	$51.62	$48.10	$48.18	$55.27	$50.80	$62.91	$68.07	$69.69	$66.89
Average Price Brent Crude (per bbl)[a]	53.59	49.55	52.10	61.40	54.12	66.86	74.53	75.08	72.16
Average Price Henry Hub Natural Gas (per mmBtu)[a]	3.02	3.08	2.95	2.91	2.99	3.16	2.85	2.93	2.98
U.S. Rig Count[b]	742	895	946	921	876	966	1,039	1,051	1,019
Canada Rig Count[b]	295	117	208	204	206	269	108	209	195
International Rig Count[b]	939	958	947	949	948	970	968	1,003	980
Worldwide Rig Count	1,976	1,970	2,101	2,074	2,030	2,205	2,115	2,263	2,194
U.S. Well Completions[a]	786	954	1,043	1,043	957	1,054	1,198	1,270	1,175

(a) Source: EIA, as of October 1, 2018.
(b) Source: Baker Hughes Rig Count, as of October 5, 2018.

Components of our Results of Operations

Revenues—Our revenues are generated substantially from product sales, which approximated 89% and 91% of our revenues for the nine months ended September 30, 2018 and 2017, respectively, and 91%, 90% and 92% of our revenues for the years ended December 31, 2017, 2016 and 2015, respectively. The remaining revenue is derived from services and leases, which represented less than 8% and 5%, respectively, in all such periods. Product revenues are derived from the sale of drilling and production equipment. Service revenues are earned as we provide technical advisory assistance and field services related to our products. Lease revenue is derived from rental income of leased production equipment. Most of our operations are in the U.S. with approximately 79% and 76% of our sales derived domestically in the nine months ended September 30, 2018 and 2017, respectively, and 76%, 74% and 75% of our sales derived domestically in the years ended December 31, 2017, 2016 and 2015, respectively. International operations are spread across Canada, Europe, Australia, the Middle East, Asia-Pacific and South America. Foreign sales approximated 21% and 24% of our total revenues in the nine months ended September 30, 2018 and 2017, respectively, and 24%, 26% and 25% of our total revenues in the years ended December 31, 2017, 2016 and 2015, respectively.

Cost of goods and services—The principal elements of cost of goods and services are labor, raw materials and manufacturing overhead. Cost of goods and services as a percentage of revenues is influenced by the product mix sold in any particular period, the over or under absorption of manufacturing overhead and market conditions. Our costs related to our foreign operations do not significantly differ from our domestic costs.

Selling, general and administrative expense—Selling, general and administrative expense includes the costs associated with sales and marketing, general corporate overhead, business development expenses, compensation expense, stock-based compensation expense, legal expenses and expenses from other related administrative functions. Selling, general and administrative expense also includes allocations of costs that were incurred by Dover for functions such as corporate executive management, human resources, information technology, facilities, tax, shared services, finance and legal, including the costs of salaries, benefits and other related costs. These expenses have been allocated to Apergy based on direct usage or benefit where identifiable, with the remainder allocated on the basis of revenues, headcount, or other measures.

Other expense, net—Other expense, net primarily includes royalty expense and foreign currency gains and losses. Royalty expense is payable to Dover for our use of patents and intangible assets owned by Dover. The royalty is charged based upon Apergy revenues. Patents and intangibles owned by Dover related to Apergy transferred to Apergy upon the Separation. Following the Separation, no further royalty charges are expected to be incurred by Apergy from Dover. Foreign currency gains and losses includes re-measurement and settlement of foreign currency denominated balances and foreign currency hedging activities.

(Benefit from) provision for income taxes—We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in determining the provision for income taxes and income tax assets and liabilities, including evaluating uncertainties in the application of accounting principles and complex tax laws. In our Audited Combined Financial Statements, (benefit from) provision for income taxes and deferred income tax balances have been calculated on a stand-alone basis, although our operations have historically been included in the tax returns filed by Dover. As a stand-alone entity, we file tax returns on our own behalf and our deferred taxes and effective tax rate may differ from those in historical periods prior to the Separation. The Tax Reform Act, which was enacted on December 22, 2017, significantly changed U.S. tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. Effective in 2018, the U.S. statutory rate decreased from 35% to 21%. In addition, our overall effective income tax rate can be lower or higher than the U.S. statutory rate due to U.S. state and local income taxes and the tax effect on foreign operations.

Key Performance Indicators

Throughout this MD&A, we refer to measures used by management to evaluate performance, including a number of financial and operational measures. We believe that both of these operational measures provide us and our investors an indication of our performance and outlook. These measures include:

Bookings—Bookings represent the dollar value of customer orders for a particular period.

Book-to-bill ratio—The book-to-bill ratio is used as an indicator of demand versus current period revenue, and it compares the total dollar amount of orders received relative to revenues for the corresponding period. A ratio above 1.0 implies that more orders were received than filled, indicating strong customer demand, while a ratio below 1.0 implies weaker customer demand.

Results of Operations

Three Months Ended September 30, 2018 and 2017

(dollars in thousands)	Three Months Ended September 30, 2018	2017	Change $	Change %
Revenue	$316,468	$258,654	57,814	22.4
Cost of goods and services	202,734	173,880	28,854	16.6
Gross profit	113,734	84,774	28,960	34.2
Selling, general and administrative expense	69,022	54,828	14,194	25.9
Interest expense, net	10,584	79	10,505	*
Other expense, net	910	2,941	(2,031)	*
Income before income taxes	33,218	26,926	6,292	23.4
Provision for income taxes	7,723	8,241	(518)	(6.3)
Net income	25,495	18,685	6,810	36.4
Net income attributable to noncontrolling interest	232	264	(32)	*
Net income attributable to Apergy	$ 25,263	$ 18,421	6,842	37.1
Gross profit margin	*35.9%*	*32.8%*		3.1 pts.
Selling, general and administrative expense, percent of revenue	*21.8%*	*21.2%*		0.6 pts.
Effective tax rate	*23.2%*	*30.6%*		(7.4) pts.

* Not meaningful

Revenue

Revenue for the third quarter of 2018 increased $57.8 million, or 22.4%, year-over-year driven by broad-based volume growth in our Production & Automation Technologies' artificial lift and digital offerings due to improving oil and gas markets, particularly U.S. rig count and well completion activity. In addition, revenue increased in our Drilling Technologies segment year-over-year due to increased volumes driven by increased worldwide rig counts and footage drilled, combined with continued customer adoption of our diamond bearings technology.

Gross Profit

Gross profit for the third quarter of 2018 increased $29.0 million, or 34.2%, year-over-year, reflecting benefits of increased sales volumes in both our Production & Automation Technologies and Drilling Technologies segments, combined with the realization of productivity initiatives.

Selling, General and Administrative Expense

Selling, general and administrative expense in the third quarter of 2018 increased $14.2 million, or 25.9%, year-over-year, primarily due to increased headcount in support of our growth initiatives, higher bonus accruals, and $4.4 million in professional fees and other related charges associated with the Separation.

Interest Expense, Net

Interest expense, net in the third quarter of 2018 increased $10.5 million year-over-year due to issuances of our Term Loan Facility and the outstanding notes during the second quarter of 2018.

Provision for Income Taxes

The effective tax rates for the third quarter of 2018 and 2017 were 23.2% and 30.6%, respectively. The year-over-year decrease in the effective tax rate was primarily due to the Tax Reform Act, which was enacted on December 22, 2017, and which reduced the U.S. corporate income tax rate from a maximum of 35% to 21%, effective January 1, 2018.

Nine Months Ended September 30, 2018 and 2017

	Nine Months Ended September 30,		Change	
(dollars in thousands)	**2018**	**2017**	**$**	**%**
Revenue	$906,318	$745,093	161,225	21.6
Cost of goods and services	594,605	500,329	94,276	18.8
Gross profit	311,713	244,764	66,949	27.4
Selling, general and administrative expense	194,568	162,359	32,209	19.8
Interest expense, net	16,813	199	16,614	*
Other expense, net	3,724	7,929	(4,205)	*
Income before income taxes	96,608	74,277	22,331	30.1
Provision for income taxes	24,324	22,973	1,351	5.9
Net income	72,284	51,304	20,980	40.9
Net income attributable to noncontrolling interest	295	860	(565)	*
Net income attributable to Apergy	$ 71,989	$ 50,444	21,545	42.7
Gross profit margin	*34.4%*	*32.9%*		1.5 pts.
Selling, general and administrative expense, percent of revenue	*21.5%*	*21.8%*		(0.3) pts.
Effective tax rate	*25.2%*	*30.9%*		(5.7) pts.

* Not meaningful

Revenue

Revenue for the first nine months of 2018 increased $161.2 million, or 21.6%, year-over-year driven by broad-based volume growth in our Production & Automation Technologies' artificial lift and digital offerings due to improving oil and gas markets, particularly U.S. rig count and well completion activity. In addition, revenue increased in our Drilling Technologies segment year-over-year due to increased volumes driven by increased U.S. rig counts and market share gains.

Gross Profit

Gross profit for the first nine months of 2018 increased $66.9 million, or 27.4%, year-over year, reflecting benefits of increased sales volumes in both our Production & Automation Technologies and Drilling Technologies segments, combined with realization of productivity initiatives.

Selling, General and Administrative Expense

Selling, general and administrative expense for the first nine months of 2018 increased $32.2 million, or 19.8%, year-over-year, primarily due to increased headcount in support of our growth initiatives, higher bonus accruals and $9.5 million in professional fees and other related charges associated with the Separation.

Interest Expense, Net

Interest expense, net in the first nine months of 2018 increased $16.6 million year-over-year due to issuances of our Term Loan Facility and the outstanding notes during the second quarter of 2018.

Provision for Income Taxes

The effective tax rates for the first nine months of 2018 and 2017 were 25.2% and 30.9%, respectively. The year-over-year decrease in the effective tax rate was primarily due to the Tax Reform Act, which was enacted on December 22, 2017, and which reduced the U.S. corporate income tax rate from a maximum of 35% to 21%, effective January 1, 2018. This benefit was partially offset by tax on capital gains related to certain reorganizations of our subsidiaries as a result of the Separation.

Years Ended December 31, 2017, 2016 and 2015

	Years Ended December 31,			% / Point Change	
(dollars in thousands)	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
Revenue	$1,009,591	$751,337	$1,076,680	34.4%	(30.2)%
Cost of goods and services	691,124	556,009	742,041	24.3%	(25.1)%
Gross profit	318,467	195,328	334,639	63.0%	(41.6)%
Gross profit margin	*31.5%*	*26.0%*	*31.1%*	*5.5%*	*(5.1)%*
Selling, general and administrative expense	219,517	205,409	245,723	6.8%	(16.4)%
Selling, general and administrative expense as a percent of revenue	*21.7%*	*27.3%*	*22.8%*	*(5.6)*	*4.5*
Other expense, net	9,666	8,753	11,651	10.4%	(24.9)%
Income (loss) before income taxes	89,284	(18,834)	77,265	(574.1)%	(124.4)%
Provision for (benefit from) income taxes	(22,284)	(8,043)	24,131	177.1%	(133.3)%
Effective tax rate	*(25.0)%*	*42.7%*	*31.2%*	*(67.7)*	*11.5*
Net income (loss)	111,568	(10,791)	53,134	(1,133.9)%	(120.3)%
Less: Net income attributable to noncontrolling interest	930	1,851	1,436	(49.8)%	28.9%
Net income (loss) attributable to Apergy	110,638	(12,642)	51,698	(975.2)%	(124.5)%

Revenue

For the year ended December 31, 2017, revenue increased $258.3 million, or 34.4%, to $1.0 billion compared with 2016, driven by significant growth in U.S. and Canada rig counts and increased well completion activity during the year. Customer pricing did not have a significant impact to revenue in 2017.

For the year ended December 31, 2017, U.S. revenue increased 37.7% compared with 2016, primarily due to a 72.1% increase in U.S. rig count from 509 rigs in 2016 to 876 rigs in 2017. Non-U.S. revenue increased 24.8% for the year ended December 31, 2017 compared with 2016 largely due to the increase in Canada rig count of 58% from 130 in 2016 to 206 in 2017.

For the year ended December 31, 2016, revenue decreased $325.3 million, or 30.2%, to $751.3 million compared with 2015, driven by significant declines in market fundamentals, especially with regard to U.S. rig count and end-customer capital spending. These reductions broadly impacted our segments. Customer pricing unfavorably impacted revenue by approximately 1.9% in 2016.

For the year ended December 31, 2016, U.S. revenue declined 30.8% compared with 2015, primarily as a result of a U.S. rig count decline of 48.0%, from 978 rigs in 2015 to 509 rigs in 2016. Non-U.S. revenue declined 28.4% for the year ended December 31, 2016 compared with 2015 largely due to the decline in oil and gas prices leading to decreased exploration and production activities outside of the U.S.

Gross Profit

For the year ended December 31, 2017, our gross profit increased $123.1 million, or 63.0%, to $318.5 million compared with 2016, primarily due to a significant increase in organic sales volume due to an improving oil and gas market compared to the prior year. Gross profit margin increased 550 basis points primarily due to the increase in sales volume, increased leverage on operating costs, the benefits of prior year restructuring actions and lower restructuring cost.

For the year ended December 31, 2016, our gross profit decreased $139.3 million, or 41.6%, to $195.3 million compared with 2015, primarily due to the significant decline in organic sales volumes related to the decline in the oil and gas market, which also led to decreased leverage on operating costs. This decline was partially offset by supply chain cost containment initiatives, cost savings realized from restructuring programs, net of costs, and a decrease in depreciation and amortization costs of $6.9 million. Gross profit margin declined 510 basis points primarily due to significant decline in sales volume combined with pricing weakness.

Selling, General and Administrative Expense

For the year ended December 31, 2017, selling, general and administrative expense increased $14.1 million, or 6.8%, to $219.5 million compared with 2016, primarily reflecting an increase in employee incentive compensation and corporate allocations as a result of a significant increase in revenues and earnings and an increase in the number of employees, partially offset by the benefits of prior restructuring actions and lower restructuring costs. As a percentage of revenue, selling, general and administrative expense decreased 560 basis points in 2017 to 21.7%, reflecting increased leverage of operating costs on a higher revenue base, partially offset by the aforementioned increase in expenses.

For the year ended December 31, 2016, selling, general and administrative expense decreased $40.3 million, or 16.4%, to $205.4 million compared with 2015, reflecting the impact of cost savings realized from restructuring programs and reduced discretionary spending, as well as a decrease in restructuring charges of $6.4 million. As a percentage of revenue, selling, general and administrative expense increased 450 basis points in 2016 to 27.3%, as we were unable to reduce costs as rapidly as sales were declining due to overall market weakness.

Other Expense, Net

For the years ended December 31, 2017, 2016 and 2015, other expense, net of $9.7 million, $8.8 million and $11.7 million, respectively, included royalty expenses paid to Dover of $9.8 million, $7.4 million and $10.4 million, respectively, for the use of patents and intangible assets owned by Dover. Patents and intangibles owned by Dover related to Apergy transferred to Apergy upon separation. Following the Separation, no further

royalty charges are expected to be incurred by Apergy from Dover. Other expense, net also included $0.3 million of net foreign exchange gains for 2017 and $0.7 million of net foreign exchange losses for both 2016 and 2015 resulting from the re-measurement and settlement of foreign currency denominated balances including gains and losses on hedging activities.

Provision for (Benefit from) Income Taxes

Our businesses operate globally, as such, we generate income and losses in many different jurisdictions. For the years ended December 31, 2017, 2016 and 2015, pre-tax earnings generated in foreign jurisdictions was $22.4 million, $7.1 million and $15.6 million, respectively. As a percentage of our total pre-tax earnings (loss), foreign pre-tax earnings was 25.1%, (37.7)% and 20.2%, respectively. With regard to 2016, the rate of (37.7)% reflects foreign pre-tax earnings of $7.1 million as a percentage of our total pre-tax loss of $18.8 million. Foreign earnings are generally subject to local country tax rates that are below the 35.0% U.S. statutory tax rate as of December 31, 2017. As a result, our historical effective non-U.S. tax rate has typically been significantly lower than the U.S. statutory tax rate. Effective January 1, 2018, the U.S. statutory rate was permanently decreased to 21.0%, due to the Tax Reform Act.

For the year ended December 31, 2017, our effective tax rate was (25.0)%, driven predominantly by a provisional net tax benefit of $49.3 million due to the Tax Reform Act. The net tax benefit was primarily related to a $53.2 million impact from the re-measurement of deferred tax liabilities arising from a lower U.S. corporate income tax rate. The Tax Reform Act also imposed a tax for a one-time deemed repatriation of post-1986 unremitted foreign earnings and profits through the year ended December 31, 2017. As a result, we also recorded a provisional tax expense related to the deemed repatriation of $3.9 million. The final impact may differ from these provisional amounts, and such differences may be material, due to, among other things, issuance of additional regulatory guidance, changes in interpretations and assumptions we made, and actions we may take as a result of the Tax Reform Act.

For the year ended December 31, 2016, our effective tax rate was 42.7% compared to 31.2% for the year ended December 31, 2015. The 2016 tax rate increased from 2015 primarily due to the impact of foreign operations and domestic manufacturing deductions.

The Company has not recorded a liability for uncertain tax positions at December 31, 2017 and 2016.

See Note 11—“Income Taxes” in the Audited Combined Financial Statements included elsewhere in this prospectus for additional details.

Net Income (Loss) Attributable to Apergy

For the year ended December 31, 2017, net income (loss) attributable to Apergy increased $123.3 million, or 975.2%, to net income of $110.6 million, compared with a net loss of $12.6 million for the year ended December 31, 2016. This increase was primarily driven by increased sales volume due to significant growth in U.S. and Canada rig counts, increased well completion activity during the year and the favorable impact in 2017 of the Tax Reform Act of $49.3 million.

For the year ended December 31, 2016, net (loss) income attributable to Apergy decreased $64.3 million, or 124.5%, to a $12.6 million net loss, compared with income of $51.7 million, for the year ended December 31, 2015. This decrease is primarily driven by significantly lower volume attributable to deteriorating oil and gas related market conditions, partially offset by savings from restructuring actions of approximately $60 million and decreases in restructuring charges of $6.1 million and depreciation and amortization of $7.9 million.

Restructuring Activities

The restructuring charges of $6.9 million incurred in 2017 related to restructuring programs designed to continue to optimize our operations within our Production & Automation Technologies segment through facility

consolidations, exiting from certain non-strategic product lines and work force reductions. The Drilling Technologies segment did not incur any restructuring charges in 2017.

In 2016 and 2015, we incurred restructuring charges totaling $15.2 million and $21.2 million, respectively, relating to targeted facility consolidations at certain businesses, headcount reductions and other actions taken to optimize our cost structure. See Note 9—"Restructuring Activities" in the Audited Combined Financial Statements included elsewhere in this prospectus for additional details regarding our recent restructuring activities.

The cost savings realized as a result of restructuring programs and other cost management actions previously initiated were approximately $18 million, $60 million and $45 million during 2017, 2016 and 2015, respectively. The cost savings associated with these actions are reflected in cost of goods and services and selling, general and administrative expense in the combined statements of income.

Segment Results of Operations

Prior to the Separation, Apergy was part of the Dover Energy operating segment. As Apergy transitioned into a stand-alone company, its Chief Executive Officer, in his capacity as Chief Operating Decision Maker ("CODM"), evaluated how to view and measure the business performance. Based upon such evaluation, and effective during the fourth quarter of 2017, Apergy determined it is organized into two operating segments, which are also its reportable segments based on how the CODM analyzes performance, allocates capital and makes strategic and operational decisions. The CODM allocates resources to and evaluates the financial performance of each operating segment primarily based on revenues and segment operating profit. Segment results for the periods covered by the Audited Combined Financial Statements and the Interim Financial Statements are presented in accordance with this structure.

The summary that follows provides a discussion of the results of operations of both reportable segments: Production & Automation Technologies and Drilling Technologies. See Note 16—"Segment Information" in the Audited Combined Financial Statements for the years ended December 31, 2017, 2016 and 2015 and Note 17—"Segment Information" in the Interim Financial Statements for the three and nine month periods ended September 30, 2018 and 2017, each included elsewhere in this prospectus, for a reconciliation of segment revenue and segment operating profit to our results for the applicable periods.

Production & Automation Technologies

Three Months Ended September 30, 2018 and 2017

(dollars in thousands)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Change $	Change %
Revenue	$241,214	$199,454	41,760	20.9
Operating profit	24,257	8,403	15,854	188.7
Operating profit margin	10.1%	4.2%		5.9 pts.
Depreciation and amortization	$ 27,305	$ 25,690	1,615	6.3
Royalty expense	—	2,473	(2,473)	*
Restructuring and other related charges	(39)	8	(47)	*
Other measures:				
Bookings	$241,729	$209,615	32,114	15.3
Book-to-bill ratio	1.00	1.05		

* Not meaningful

Revenue

Production & Automation Technologies revenue increased $41.8 million, or 20.9%, year-over-year, driven by broad-based volume growth in our artificial lift offering, particularly from further penetration in the U.S. onshore electrical submersible pump market. Additionally, we realized higher revenue from our digital offerings due to increased customer adoption.

Operating Profit

Production & Automation Technologies operating profit increased $15.9 million year-over-year. The increase was primarily driven by growth in sales volume associated with improving oil and gas markets, particularly U.S. rig count and well completion activity. In addition, the increase in operating profit was due to productivity savings, partially offset by higher material costs related to aluminum and steel. Operating profit during the third quarter of 2018 benefitted from the absence of the royalty charge from Dover.

Bookings and Book-to-Bill

Bookings for the third quarter of 2018 increased $32.1 million, or 15.3%, year-over-year, reflecting ongoing market improvement. Our book-to-bill ratio was 1.00 in the third quarter of 2018, reflecting strong customer demand. The decline in our book-to-bill ratio year-over-year was due to a large customer order in the third quarter of 2017.

Nine Months Ended September 30, 2018 and 2017

(dollars in thousands)	Nine Months Ended September 30, 2018	2017	Change $	Change %
Revenue	$696,591	$578,429	118,162	20.4
Operating profit	57,957	26,247	31,710	120.8
Operating profit margin	8.3%	4.5%		3.8 pts.
Depreciation and amortization	$ 83,006	$ 73,475	9,531	13.0
Royalty expense	2,277	7,406	(5,129)	(69.3)
Restructuring and other related charges	2,473	21	2,452	*
Other measures:				
Bookings	$708,124	$596,296	111,828	18.8
Book-to-bill ratio	1.02	1.03		

* Not meaningful

Revenue

Production & Automation Technologies revenue for the first nine months of 2018 increased $118.2 million, or 20.4%, year-over-year, driven by broad-based volume growth in our artificial lift offering, particularly from further penetration in the U.S. onshore electrical submersible pump market. Additionally, we realized higher revenue from our digital offerings due to increased customer adoption.

Operating Profit

Production & Automation Technologies operating profit increased $31.7 million year-over-year. The increase was primarily driven by growth in sales volume associated with improving oil and gas markets, particularly U.S. rig count and well completion activity. In addition, the increase in operating profit was due to productivity savings, partially offset by higher material costs related to aluminum and steel. Operating profit during the first nine months of 2018 benefitted from lower royalty charges from Dover which ended on April 1, 2018; however, this benefit was partially offset by restructuring charges incurred during the first nine months of 2018.

Bookings and Book-to-Bill

Bookings for the first nine months of 2018 increased $111.8 million, or 18.8%, year-over-year, reflecting ongoing market improvement. Our book-to-bill ratio was 1.02 in the first nine months of 2018, reflecting strong customer demand.

Years Ended December 31, 2017, 2016 and 2015

(dollars in thousands)	Years Ended December 31,			% Change	
	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
Revenue	$781,938	$638,017	$912,383	22.6%	(30.1)%
Segment operating profit (loss)	$ 24,889	$ (21,687)	$ 58,446	214.8%	(137.1)%
Depreciation and amortization(1)	$ 99,929	$ 99,607	$103,612	0.3%	(3.9)%
Restructuring charges(2)	$ 6,921	$ 12,757	$ 18,750	(45.7)%	(32.0)%
Other measures:					
Bookings	$792,817	$625,149	$869,947	26.8%	(28.1)%
Book-to-bill	1.01	0.98	0.95	3.1%	3.2%

(1) Depreciation and amortization expense reported in: a) cost of goods and services was $52.4 million, $49.6 million and $52.1 million for the years ended December 31, 2017, 2016 and 2015, respectively; and b) selling, general and administrative expense was $47.5 million, $50.0 million and $51.5 million for the years ended December 31, 2017, 2016 and 2015, respectively. Depreciation and amortization expense includes acquisition-related depreciation and amortization of $57.4 million, $60.0 million and $63.2 million for the years ended December 31, 2017, 2016 and 2015, respectively.

(2) Restructuring charges reported in: a) cost of goods and services were $6.3 million, $7.8 million and $6.9 million for the years ended December 31, 2017, 2016 and 2015, respectively; and b) selling, general and administrative expense was $0.6 million, $5.0 million and $11.9 million for the years ended December 31, 2017, 2016 and 2015, respectively.

2017 Versus 2016

Production & Automation Technologies segment revenue increased for the year ended December 31, 2017, by $143.9 million, or 22.6%, compared to the prior year, driven by higher demand from our customers as a result of the increase of active drilling rigs and well completion activity in the U.S. and abroad. Customer pricing favorably impacted revenue by 0.4% for the year ended December 31, 2017.

Production & Automation Technologies segment operating profit for the year ended December 31, 2017 compared to prior year segment operating loss increased by $46.6 million, or 214.8%, primarily driven by an increase in sales volume due to improving oil and gas markets. The increase in operating profit included cost savings realized from restructuring programs of approximately $14.7 million as well as a reduction in restructuring charges of $5.8 million.

Bookings for the year ended December 31, 2017 increased $167.7 million, or 26.8%, compared to the prior year, reflecting market improvement. Segment book-to-bill was 1.01 in 2017, an increase of 3.1% compared to the prior year.

2016 Versus 2015

Production & Automation Technologies segment revenue decreased for the year ended December 31, 2016, by $274.4 million, or 30.1%, compared to the prior year, driven by lower demand from our customers as a result of the dramatic decrease in the price of oil and a decline of active drilling rigs and well completion activity in the U.S. and abroad due to global supply of oil and gas exceeding demand. Customer pricing unfavorably impacted revenue by approximately 1.9% in 2016.

Production & Automation Technologies segment operating loss for the year ended December 31, 2016 compared to prior year segment operating profit decreased by $80.1 million, or 137.1%, primarily driven by a decline in sales volume due to deteriorating oil and gas markets. The decline was partially offset by the impact of cost savings realized from restructuring programs of approximately $47 million as well as a reduction in depreciation and amortization expense of $4.0 million and restructuring charges of $6.0 million.

Bookings for the year ended December 31, 2016 decreased $244.8 million, or 28.1%, compared to the prior year, reflecting ongoing market weakness. Segment book-to-bill was 0.98 in 2016, an increase of 3.2% compared to the prior year.

Drilling Technologies

Three Months Ended September 30, 2018 and 2017

(dollars in thousands)	Three Months Ended September 30, 2018	2017	Change $	Change %
Revenue	$75,254	$59,200	16,054	27.1
Operating profit	26,209	20,420	5,789	28.3
Operating profit margin	34.8%	34.5%		0.3 pts.
Depreciation and amortization	$ 2,717	$ 3,001	(284)	(9.5)
Restructuring and other related charges	—	—	—	
Other measures:				
Bookings	$75,834	$56,142	19,692	35.1
Book-to-bill ratio	1.01	0.95		

Revenue

Drilling Technologies revenue increased $16.1 million, or 27.1%, year-over-year due to increased volumes driven by increased worldwide rig counts and continued customer adoption of our diamond bearings technology.

Operating Profit

Drilling Technologies operating profit increased $5.8 million year-over-year due to higher volumes driven by increased rig counts and overall operational productivity gains.

Bookings and Book-to-Bill

Bookings for the third quarter of 2018 increased $19.7 million, or 35.1%, year-over-year, reflecting improved market conditions. Our book-to-bill ratio was 1.01 in the third quarter of 2018, reflecting strong customer demand.

Nine Months Ended September 30, 2018 and 2017

(dollars in thousands)	Nine Months Ended September 30, 2018	2017	Change $	Change %
Revenue	$209,727	$166,664	43,063	25.8
Operating profit	71,738	55,067	16,671	30.3
Operating profit margin	34.2%	33.0%		1.2 pts.
Depreciation and amortization	$ 8,379	$ 8,948	(569)	(6.4)
Restructuring and other related charges	—	—	—	
Other measures:				
Bookings	$215,468	$170,786	44,682	26.2
Book-to-bill ratio	1.03	1.02		

Revenue

Drilling Technologies revenue increased $43.1 million, or 25.8%, year-over-year due to increased volumes driven by increased worldwide rig counts and footage drilled, market share gains and continued customer adoption of our diamond bearings technology.

Operating Profit

Drilling Technologies operating profit increased $16.7 million year-over-year due to higher volumes driven by increased U.S. rig counts and overall operational productivity gains.

Bookings and Book-to-Bill

Bookings for the first nine months of 2018 increased $44.7 million, or 26.2%, year-over-year, reflecting improved market conditions. Our book-to-bill ratio was 1.03 in 2018, reflecting strong customer demand.

Years Ended December 31, 2017, 2016 and 2015

(dollars in thousands)	Years Ended December 31, 2017	2016	2015	% Change 2017 vs. 2016	% Change 2016 vs. 2015
Revenue	$227,653	$113,320	$164,297	100.9%	(31.0)%
Segment operating profit	$ 74,317	$ 8,397	$ 26,819	785.0%	(68.7)%
Depreciation and amortization(1)	$ 11,950	$ 12,448	$ 16,380	(4.0)%	(24.0)%
Restructuring charges(2)	$ —	$ 2,405	$ 2,480	(100.0)%	(3.0)%
Other measures:					
Bookings	$232,796	$118,433	$160,756	96.6%	(26.3)%
Book-to-bill	1.02	1.05	0.98	(3)%	7.1%

(1) Depreciation and amortization expense reported in: a) cost of goods and services was $11.5 million, $11.9 million and $13.0 million for the years ended December 31, 2017, 2016 and 2015, respectively; and b) selling, general and administrative expense was $0.4 million, $0.6 million and $3.4 million for the years ended December 31, 2017, 2016 and 2015, respectively. Depreciation and amortization expense includes acquisition-related depreciation and amortization of $0.1 million and $3.0 million for the years ended December 31, 2016 and 2015, respectively. Acquisition-related depreciation and amortization was not significant for the year ended December 31, 2017.

(2) Restructuring charges reported in: a) cost of goods and services were $1.7 million and $2.2 million for the years ended December 31, 2016 and 2015, respectively; and b) selling, general and administrative expense

was $0.7 million and $0.3 million for the years ended December 31, 2016 and 2015, respectively. There were no restructuring charges related to the Drilling Technologies segment for the year ended December 31, 2017.

2017 Versus 2016

Drilling Technologies segment revenue for the year ended December 31, 2017 increased $114.3 million, or 100.9%, compared to the prior year, driven by higher demand from our customers as a result of the increase in active drilling rigs in the U.S. and Canada. Customer pricing unfavorably impacted revenue by approximately 2.6% for the year ended December 31, 2017.

Drilling Technologies segment operating profit for the year ended December 31, 2017 increased $65.9 million, or 785.0%, compared to the prior year primarily driven by increased sales volume and from the benefit of approximately $2.9 million in restructuring savings, partially offset by unfavorable pricing.

Bookings for the year ended December 31, 2017 increased $114.4 million, or 96.6%, compared to the prior year, due to market improvement. Segment book-to-bill was 1.02 in 2017, a decrease of 2.9% compared to the prior year.

2016 Versus 2015

Drilling Technologies segment revenue for the year ended December 31, 2016 decreased $51.0 million, or 31.0%, compared to the prior year, driven by lower demand from our customers as a result of the dramatic decrease in the price of oil and a decline in active drilling rigs in the U.S. and abroad. Customer pricing did not have a significant impact to revenue for the year ended December 31, 2016.

Drilling Technologies segment operating profit for the year ended December 31, 2016 decreased $18.4 million, or 68.7%, compared to the prior year primarily driven by declining sales volume. The decline was partially offset by the impact of cost savings realized from restructuring actions of approximately $13 million as well as a reduction in depreciation and amortization expense of $3.9 million.

Bookings for the year ended December 31 2016, decreased $42.3 million, or 26.3%, compared to the prior year, due to ongoing market weakness. Segment book-to-bill was 1.05 in 2016, an increase of 7.1% compared to the prior year.

Capital Resources and Liquidity

Historically, Apergy has generated and expects to continue to generate positive cash flow from operations. In response to the unprecedented market conditions beginning in the second half of 2014 and continuing through 2016, we pursued a comprehensive contingency plan that aimed at managing short-term financial performance and preserving long-term competitive advantage. As part of this plan, we identified and preserved the core capabilities that will position us well for the recovery. We implemented aggressive restructuring actions aimed at facility and cost structure rationalization, including headcount reductions. Enterprise wide working capital reduction efforts were deployed specifically targeting inventory reductions and increases in supplier payment terms. Additionally, our global sourcing teams secured incremental material savings to lower product costs, while our operations teams drove incremental productivity gains within our factories. In parallel, we worked diligently to preserve key technology investments and customer relationships, as well as retention of key talent during this period. As a result of our efforts, we continued to generate positive cash from operating activities in 2015 and 2016. As the market began to stabilize in 2017, we saw a significant increase in U.S. rig count and customer spending. In response, we have utilized more cash to increase production and invest in working capital needs while still maintaining positive cash from operating activities.

Subsequent to the Separation, we no longer participate in cash management and funding arrangements with Dover. Historically, we have utilized these arrangements to fund significant expenditures, such as manufacturing capacity expansion and acquisitions. Our ability to fund our operations and capital needs will depend on our ongoing ability to generate cash from operations and access capital markets. We believe that our future cash from operations and access to capital markets will provide adequate resources to fund working capital needs, make capital expenditures and strategic investments and pay dividends (if any).

Our ability to make payments on and to refinance our indebtedness, including the indebtedness incurred in conjunction with the Separation, as well as any indebtedness that we may incur in the future, will depend on our future ability to generate cash from operations, as well as financings or asset sales. Our cash and cash equivalents totaled $23.7 million and $26.0 million at December 31, 2017 and 2016, respectively, which was held by our non-pooling, non-U.S. operations. As a result of the Tax Reform Act, during 2018, we plan to make cash distributions to the U.S. from non-U.S. subsidiaries of up to an estimated $6.0 million, which is not anticipated to result in any withholding tax expense.

Prior to the Separation, our U.S. cash was pooled to Dover through intercompany advances and is not reflected on our combined balance sheets. AMES, where Apergy is the majority owner at 60% and has the controlling financial interest, held $9.5 million and $11.3 million of Apergy's total cash and cash equivalents at December 31, 2017 and 2016, respectively. The funds are not formally segregated or legally restricted. Distributions are determined based upon simple majority vote and subject to customary statutory requirements. Apergy is entitled to 60% of any approved distributions.

Cash Flow Summary

The following tables are derived from our combined or consolidated statements of cash flows, as applicable:

Cash Flows from Continuing Operations *(in thousands)*	**Years Ended December 31,**		
	2017	**2016**	**2015**
Net cash flows provided by (used in):			
Operating activities	$ 76,917	$129,709	$ 215,671
Investing activities	(46,506)	(28,028)	(34,101)
Financing activities	(33,003)	(85,981)	(194,977)

(in thousands)	**Nine Months Ended September 30,**	
	2018	**2017**
Cash provided by operating activities	$ 92,806	$ 41,205
Cash required by investing activities	(44,809)	(26,829)
Cash required by financing activities	(53,620)	(20,432)
Effect of exchange rate changes on cash and cash equivalents	(75)	3,476
Net increase (decrease) in cash and cash equivalents	$ (5,698)	$ (2,580)

Operating Activities

Nine Months Ended September 30, 2018 and 2017

We generated cash from operating activities for the nine months ended September 30, 2018 and 2017, of $92.8 million and $41.2 million, respectively. The increase in cash provided by operating activities was primarily driven by higher cash income generated from operations. Both our Production & Automation Technologies and Drilling Technologies segments reported increased earnings year-over-year. The increase was partially offset by cash required for working capital needs.

Years Ended December 31, 2017, 2016 and 2015

Cash provided by operating activities for the year ended December 31, 2017 decreased $52.8 million compared to 2016. This decrease was primarily a result of higher investments in working capital driven by sales volume increases. For the year ended December 31, 2017, cash used to invest in working capital was $71.3 million, whereas for the year ended December 31, 2016, cash provided by working capital was $46.2 million, resulting in an overall decrease in cash of $117.5 million. The decrease in cash was partially offset by higher net income of $73.8 million, excluding non-cash activity from depreciation and amortization and the impact of the Tax Reform Act.

Cash provided by operating activities for the year ended December 31, 2016 decreased $86.0 million compared to 2015. This decrease was driven primarily by lower income of $80.3 million, excluding depreciation and amortization, due to lower sales volumes from the deteriorating oil and gas related market conditions. The decrease was also driven by lower cash inflows from working capital of $5.6 million primarily due to the aforementioned lower sales levels.

Investing Activities

Nine Months Ended September 30, 2018 and 2017

For the nine months ended September 30, 2018 and 2017, we used cash from investing activities of $44.8 million and $26.8 million, respectively. The increase in cash used by investing activities was primarily due to investments to support increased sales and investments in assets available to customers on a rental basis.

Years Ended December 31, 2017, 2016 and 2015

Cash used in investing activities resulted primarily from cash outflows for capital expenditures, acquisition of a business and the additions of intangible assets, partially offset by proceeds from the sale of property, plant and equipment. The majority of the activity in investing activities comprised the following:

Capital spending*:* Capital expenditures, primarily to support productivity, new product launches and investments in assets available to customers on a rental basis, were $41.2 million in 2017, $26.9 million in 2016 and $32.0 million in 2015 or 4.1%, 3.6% and 3.0%, respectively, as a percentage of revenue. Our capital expenditures increased $1.0 million for the year ended December 31, 2017 as compared to 2016, primarily within the Production & Automation Technologies segment, to invest in facility expansion to accommodate reorganization and consolidation elsewhere in the business.

Acquisition*:* In 2017, we deployed $8.8 million to acquire PCP Oil Tools, within the Production & Automation Technologies segment. See Note 4—"Acquisitions" in the Audited Combined Financial Statements included elsewhere in this prospectus for additional details.

Additions to intangible assets*:* During the years ended December 31, 2016 and 2015, we acquired patents for $3.7 million and $10.0 million, respectively, from Dover. We capitalized the patent costs in the combined balance sheets and are amortizing them to the combined statements of income based upon their estimated useful lives. There were no such additions in 2017.

Financing Activities

Nine Months Ended September 30, 2018 and 2017

Cash used in financing activities of $53.6 million for the nine months ended September 30, 2018, was the result of (i) net transfers to Dover of $728.9 million, primarily comprised of our $700 million payment to Dover related to the Separation, (ii) $20.0 million of debt repayment on our Term Loan Facility and (iii) $2.7 million of

distributions to our noncontrolling interest holder in AMES. These payments were partially offset by issuances of long-term debt, net of debt issuance costs, of $698.0 million. Cash used in financing activities for the nine months ended September 30, 2017, primarily resulted from net transfers to Dover.

Years Ended December 31, 2017, 2016 and 2015

Cash used in financing activities prior to the Separation results primarily from using cash for net transfers to parent and the distribution to non-controlling interest. Transfers of cash to and from Dover are reflected as a component of Parent Company investment in Apergy in the combined balance sheets for periods prior to the Separation. During the years ended December 31, 2017 and 2016, we also made distributions to our noncontrolling interest holder in AMES of approximately $1.2 million and $1.7 million, respectively, with no similar activity during the year ended December 31, 2015.

Debt

Senior Notes

On May 3, 2018, and in connection with the Separation, we completed the private placement of $300 million in aggregate principal amount of the outstanding notes. Interest on the outstanding notes is payable semi-annually in arrears on May 1 and November 1 of each year. Net proceeds of $293.8 million from the offering were utilized to partially fund the cash payment to Dover and to pay fees and expenses incurred in connection with the Separation.

Senior Secured Credit Facilities

On May 9, 2018, Apergy entered into a credit agreement governing the terms of its the Senior Secured Credit Facilities, consisting of (i) a seven-year senior secured term loan B facility (which is referred to in this prospectus as the Term Loan Facility) and (ii) a five-year senior secured revolving credit facility (which is referred to in this prospectus as the Revolving Credit Facility), with JPMorgan Chase Bank, N.A. as administrative agent. The net proceeds of the Senior Secured Credit Facilities were used (i) to pay fees and expenses in connection with the Separation, (ii) partially fund the cash payment to Dover and (iii) provide for working capital and other general corporate purposes.

Term Loan Facility. The Term Loan Facility had an initial commitment of $415.0 million. The full amount of the Term Loan Facility was funded on May 9, 2018. Amounts borrowed under the Term Loan Facility that are repaid or prepaid may not be re-borrowed. The Term Loan Facility matures in May 2025. Net proceeds of $408.7 million from the Term Loan Facility were utilized to partially fund the cash payment to Dover at the Separation and to pay fees and expenses incurred in connection with the Separation.

Revolving Credit Facility. The Revolving Credit Facility consists of a five-year senior secured facility with aggregate commitments in an amount equal to $250.0 million, of which up to $50.0 million is available for the issuance of letters of credit. Amounts repaid under the Revolving Credit Facility may be re-borrowed. The Revolving Credit Facility matures in May 2023.

A summary of our Revolving Credit Facility at September 30, 2018 was as follows:

(in millions) Description	Amount	Debt Outstanding	Letters of Credit	Unused Capacity	Maturity
Revolving Credit Facility	$250.0	—	$ 5.5	$ 244.5	May 2023

As of September 30, 2018, we were in compliance with all restrictive covenants under our Senior Secured Credit Facilities. See Note 8—“Debt” to the Interim Financial Statements included elsewhere in this prospectus for additional information.

Outlook

As a result of the Separation, we no longer participate in cash management and funding arrangements with Dover. Prior to the Separation, we utilized these arrangements to fund both daily operating activities and significant business expenditures, such as manufacturing capacity expansion and acquisitions.

We expect to generate our liquidity and capital resources through operations and, when needed, through our Revolving Credit Facility. We have $244.5 million of capacity available under our Revolving Credit Facility that we expect to utilize if working capital needs temporarily increase. The volatility in credit, equity and commodity markets creates some uncertainty for our businesses. However, management believes, based on our current financial condition and current expectations of future market conditions, that we will meet our short- and long-term needs with a combination of cash on hand, cash generated from operations, our use of our revolving credit facility and access to capital markets.

Over the next year, we expect to fund our organic capital expenditure needs and reduce our leverage through earnings growth and debt reduction. We continue to focus on improving our customer collection efforts and overall working capital turnover to improve our cash flow position. In 2018, we project spending approximately 3% of revenue for infrastructure related capital expenditures and an additional $25 million to $30 million for capital investments directed at expanding our portfolio of electrical submersible pump leased assets. During the fourth quarter of 2018, we expect to pay $7.7 million to Dover related to tax liabilities incurred as a result of the Separation.

Off-Balance Sheet Arrangements and Contractual Obligations

As of September 30, 2018, December 31, 2017 and December 31, 2016, we had approximately $5.5 million, $8.1 million and $16.0 million, respectively, outstanding in letters of credit with financial institutions, which expire at various dates between 2018 and 2020. These letters of credit are primarily maintained as security for insurance, warranty and other performance obligations. In general, we would only be liable for the amount of these guarantees in the event of default in the performance of our obligations, the probability of which we believe is remote.

A summary of our combined contractual obligations and commitments as of December 31, 2017 and the years when these obligations are expected to be due is as follows:

		Payments Due by Period(1)			
(in thousands)	**Total**	**Less than 1 Year**	**1-3 Years**	**3-5 Years**	**More than 5 Years**
Rental commitments(2)	$44,992	$11,668	$18,285	9,934	$ 5,105
Purchase obligations(2)	27,803	27,457	346	—	—
Capital leases	4,109	2,232	1,877	—	—
Supplemental and post-retirement benefits(3)	12,178	1,658	3,026	2,622	4,872
Total obligations	$89,082	$43,015	$23,534	$12,556	$ 9,977

(1) Historical amounts do not give effect to payments required under new indebtedness that we entered into in connection with the Separation, as described under "—Capital Resources and Liquidity—Debt."

(2) Represents off-balance sheet commitments and obligations for rental commitments related to operating leases and purchase obligations related to open purchase orders with our vendors.

(3) Amounts represent estimated benefit payments under our unfunded defined benefit plans. See Note 14—"Employee Benefit Plans and Non-Qualified Plans" to the Audited Combined Financial Statements included elsewhere in this prospectus for additional information.

One-time deemed repatriation obligations of unremitted earnings of foreign subsidiaries arising from the Tax Reform Act have been excluded from the above table as such obligations are those of Dover.

Risk Management

See "Quantitative and Qualitative Disclosures About Market Risk."

Critical Accounting Policies

Critical Accounting Policies and Estimates

Our financial statements and related public financial information are based on the application of GAAP. GAAP requires the use of estimates, assumptions, judgments and subjective interpretations of accounting principles that have an impact on the assets, liabilities, revenue and expense amounts we report. These estimates can also affect supplemental information contained in our public disclosures, including information regarding contingencies, risk and our financial condition. The significant accounting policies used in the preparation of our financial statements are discussed in Note 2—"Summary of Significant Accounting Policies" in the Audited Combined Financial Statements included elsewhere in this prospectus. The accounting assumptions and estimates discussed in the section below are those that we consider most critical to an understanding of our financial statements because they inherently involve significant judgments and estimates. We believe our use of estimates and underlying accounting assumptions conforms to GAAP and is consistently applied.

Revenue Recognition—Beginning January 1, 2018, and in connection with the adoption of Accounting Standards Codification Topic 606, revenue is recognized to depict the transfer of control of the related goods and services. Prior to January 1, 2018, revenue was recognized when all of the following conditions were satisfied: (a) persuasive evidence of an arrangement exists; (b) price is fixed or determinable; (c) collectability is reasonably assured; and (d) delivery has occurred or services have been rendered. The majority of the Company's revenue is generated through the manufacture and sale of a broad range of specialized products and components, with revenue recognized upon transfer of title and risk of loss, which is generally upon shipment. The Company derives product revenue from the sale of software standalone products and software-enabled tangible products. Software product revenue is recorded when the software product is shipped to the customer or over the term of the contract. Service revenue is recognized as the services are performed. Lease revenue is recognized ratably over the lease term and the leased asset is included in property, plant and equipment and depreciated to its estimated residual value over the lease term.

In limited cases, our revenue arrangements with customers require delivery, installation, testing or other acceptance provisions to be satisfied before revenue is recognized. We include shipping costs billed to customers in revenue and the related shipping costs in cost of goods and services.

Inventories—Inventories for the majority of our subsidiaries, including all international subsidiaries, are stated at the lower of net realizable value, determined on the first-in, first-out (FIFO) basis, or cost. Certain domestic inventories are stated at cost, determined on the last-in, first-out (LIFO) basis, which is less than market value. Under certain market conditions, estimates and judgments regarding the valuation of inventories are employed by us to properly value inventories.

Goodwill and Other Intangible Assets—We have significant goodwill and intangible assets on our balance sheet as a result of past acquisitions. The valuation and classification of these assets and the assignment of useful lives involve significant judgments and the use of estimates. In addition, the testing of goodwill and intangibles for impairment requires significant use of judgment and assumptions, particularly as it relates to the determination of fair market value. Our indefinite-lived intangible assets and reporting units are tested and reviewed for impairment on an annual basis during the fourth quarter, or more frequently when indicators of impairment exist.

Prior to the Separation, the Company was part of the Dover Energy operating segment. We performed the annual goodwill impairment test for the Audited Combined Financial Statements using our two historical reporting units within Dover Energy: (i) Drilling and Production, excluding a business component that was retained by Dover ("D&P"); and (ii) Dover Energy Automation ("DEA") as of October 1, 2017 and 2016. Beginning in the fourth quarter of 2017, we also performed the annual goodwill impairment testing based upon the new segment structure discussed in "—Segment Results of Operations". We performed goodwill impairment testing as of October 1, 2017 on our two new reporting units: (i) Production & Automation Technologies; and (ii) Drilling Technologies. When performing an impairment test, we estimate fair value using the income approach. Under the income approach, fair value is determined based on the present value of estimated future cash flows, discounted at an appropriate risk-adjusted rate. We use our internal forecasts to estimate future cash flows and include an estimate of long-term future growth rate based on our most recent views of the long-term outlook for each reporting unit. Actual results may differ from these estimates. The discount rates used in these analyses vary by reporting unit and are based on a capital asset pricing model and published relevant industry rates. We use discount rates commensurate with the risks and uncertainties inherent to each reporting unit and in our internally developed forecasts. Discount rates used in our 2017 and 2016 valuations were 10.0% and 10.5%, respectively.

Based on the impairment tests performed, the fair value of our reporting units exceeded their carrying value. As such, no goodwill impairment was recognized. As of October 1, 2017, the goodwill balances for the D&P and DEA reporting units were $733.6 million and $172.5 million, respectively. The D&P and DEA reporting units had fair values in excess of their carrying values of 90% and 233%, respectively. Under the new segment structure, as of October 1, 2017, the goodwill balances for the Production & Automation Technologies and Drilling Technologies reporting units were $805.0 million and $101.1 million, respectively. The Production & Automation Technologies and Drilling Technologies reporting units had fair values in excess of their carrying values of 69% and 464%, respectively. While we believe the assumptions used in the impairment analyses are reasonable and representative of expected results, if market conditions worsen or persist for an extended period of time, an impairment of goodwill or assets may occur. We will continue to monitor the long-term outlook and forecasts, including estimated future cash flows, for these businesses and the impact on the carrying value of goodwill and assets.

Employee Benefit Plans—Dover provides a defined benefit pension plan for its eligible U.S. employees and retirees. This plan was closed to new participants effective December 31, 2013. All pension-eligible employees as of December 31, 2013 continue to earn a pension benefit through December 31, 2023 as long as they remain employed by an operating company participating in the plan. As of the Plan Separation Date (as defined herein), Apergy participants in this plan (other than Norris USW Participants (as defined herein)) fully vested in their benefits, and all participants ceased accruing benefits. As such, the portion of our liability associated with this U.S. plan is not reflected in our consolidated balance sheets as this obligation will be maintained and serviced by Dover. Norris USW Participants were moved to a new pension plan, and continue to accrue benefits at Apergy following the Separation.

Dover also provides a defined benefit pension plan for its eligible salaried non-U.S. employees and retirees in Canada. As this obligation is being maintained and serviced by Dover, the portion of our liability associated with this non-U.S. plan is not reflected in our combined balance sheet as of December 31, 2017. This plan, including all assets and liabilities, was transferred to Apergy at the distribution date and was recorded at that point. Shortly before the Plan Separation Date, all non-Apergy participants in this plan ceased accruing benefits. The non-Apergy participants may elect a lump sum cash payment post-separation that will be the responsibility of Apergy, will be funded out of the plan assets, and could result in a non-cash settlement charge to earnings.

Dover also provides to certain U.S. management employees, through non-qualified plans, supplemental retirement benefits in excess of qualified plan limits imposed by federal tax law. Generally as of the Plan Separation Date, Apergy participants in these non-qualified plans no longer accrue benefits or are permitted to make contributions, as applicable. The benefit obligation attributable to our employees for these non-qualified plans are reflected in our consolidated balance sheet as of the distribution date.

The Company also provides a defined benefit plan for certain hourly non-U.S. employees and retirees in Canada. The plan is closed to new participants; however, all active participants in this plan continue to accrue benefits. The plan is considered a direct obligation of the Company and is recorded within the Audited Combined Financial Statements and the Interim Financial Statements, respectively.

The Company sponsors a non-qualified plan covering certain U.S. employees and retirees of the Company. The plan provides supplemental retirement benefits in excess of qualified plan limits imposed by federal tax law. The plan is closed to new hires and all benefits under the plan are frozen. The plan is considered a direct obligation of the Company and is recorded within the Audited Combined Financial Statements and the Interim Financial Statements, respectively.

The valuation of our pension and other post-retirement plans requires the use of assumptions and estimates that are used to develop actuarial valuations of expenses and assets/liabilities. Inherent in these valuations are key assumptions, including discount rates, investment returns, projected salary increases and benefits and mortality rates. Annually, we review the actuarial assumptions used in our pension reporting and compare them with external benchmarks to ensure that they accurately account for our future pension obligations. Changes in assumptions and future investment returns could potentially have a material impact on our pension expense and related funding requirements. Our expected long-term rate of return on plan assets is reviewed annually based on actual returns, economic trends and portfolio allocation. Our discount rate assumption is determined by developing a yield curve based on high quality corporate bonds with maturities matching the plans' expected benefit payment streams. The plans' expected cash flows are then discounted by the resulting year-by-year spot rates. As disclosed in Note 14—"Employee Benefit Plans and Non-Qualified Plans" to the Audited Combined Financial Statements included elsewhere in this prospectus, the 2017 weighted-average discount rate used to measure our qualified defined benefit was 3.50%, a decrease from the 2016 discount rate of 3.75%. The lower 2017 discount rate is reflective of decreased market interest rates over this period. A 25 basis point decrease in the discount rate used for this plan would not have a material impact to the post retirement benefit obligations from the amount recorded in the financial statements at December 31, 2017. Our pension expense is also sensitive to changes in the expected long-term rate of return on plan assets.

Income Taxes—For purposes of the Audited Combined Financial Statements and the Interim Financial Statements prior to the Separation, respectively, the Company's income tax expense and deferred tax balances have been estimated as if we had filed income tax returns on a stand-alone basis separate from Dover. Income taxes payable at each balance sheet date computed under the stand-alone return basis are classified within Parent Company investment in Apergy since Dover is legally liable for the tax. Accordingly, changes in income taxes payable are recorded as a component of financing activities in the combined statements of cash flows prior to the Separation. As a stand-alone entity, our deferred taxes and effective tax rate may differ from those of Dover in the historical periods prior to the Separation.

We record a provision (benefit) for income taxes for the anticipated tax consequences of the reported results of operations using the asset and liability method. Under this method, we recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, as well as for operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using the tax rates that are expected to apply to taxable income for the years in which those tax assets and liabilities are expected to be realized or settled. A valuation allowance is recorded to reduce deferred tax assets to the net amount that is more likely than not to be realized.

We review deferred tax assets for recoverability at each reporting period. These assets are evaluated by using estimates of future taxable income streams and the impact of tax planning strategies. The need for reserves are evaluated, using more likely than not criteria, for ongoing audits regarding federal, state and international issues that are currently unresolved. We routinely monitor the potential impact of these situations and there are no reserves recorded for uncertain tax positions for Apergy. Reserves related to tax accruals and valuations related to deferred tax assets can be impacted by changes in tax codes and rulings, changes in statutory tax rates

and our future taxable income levels. The provision for uncertain tax positions provides a recognition threshold and measurement attribute for financial statement tax benefits taken or expected to be taken in a tax return and disclosure requirements regarding uncertainties in income tax positions. The tax position is measured at the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. It is our policy to record interest and penalties related to unrecognized tax benefits as a component of our provision for income taxes.

The Tax Reform Act, which was enacted on December 22, 2017, significantly changed U.S. tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The Tax Reform Act permanently reduced the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018. The Tax Reform Act also provided for a one-time deemed repatriation of post-1986 undistributed foreign subsidiary earnings and profits through the year ended December 31, 2017. The Global Intangible Low-Taxed Income ("GILTI") provisions of the Tax Reform Act also require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The Company expects that it will be subject to incremental U.S. tax on GILTI income beginning in 2018, due to expense allocations required by the U.S. foreign tax credit rules. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore has not provided any deferred tax impacts of GILTI in its Audited Combined Financial Statements for the year ended December 31, 2017.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Reform Act. We have recognized the provisional tax impacts related to deemed repatriated earnings and the benefit for the revaluation of deferred tax assets and liabilities, and included these amounts in its Audited Combined Financial Statements for the year ended December 31, 2017. The final impact may differ from these provisional amounts, possibly materially, due to, among other things, additional analysis, changes in interpretations and assumptions we made, additional regulatory guidance that may be issued, and actions we may take as a result of the Tax Reform Act. In accordance with SAB 118 the financial reporting impact of the Tax Reform Act will be completed in the fourth quarter of 2018.

Contingencies—We have established liabilities for environmental and legal contingencies at both the business and corporate levels. A significant amount of judgment and the use of estimates are required to quantify our ultimate exposure in these matters. The liability balances are adjusted to account for changes in circumstances for ongoing issues and the establishment of additional liabilities for emerging issues. While we believe that the amount accrued to-date is adequate, future changes in circumstances could impact these determinations.

Restructuring—We establish liabilities for restructuring activities at an operation when management has committed to an exit or reorganization plan and when termination benefits are probable and can be reasonably estimated based on circumstances at the time the restructuring plan is approved by management or when termination benefits are communicated. Exit costs include future minimum lease payments on vacated facilities and other contractual terminations. In addition, asset impairments may be recorded as a result of an approved restructuring plan. The accrual of both severance and exit costs requires the use of estimates. Though we believe that these estimates accurately reflect the anticipated costs, actual results may be different than the estimated amounts.

Stock-Based Compensation—Prior to the Separation, our employees participated in Dover's stock-based compensation plans. Stock-based compensation has been allocated to Apergy based on the awards and terms previously granted to our employees. The cost of awards is measured at the grant date based on the fair value of the award. The value of the portion of the award that is expected to ultimately vest is recognized as expense on a straight-line basis, generally over the explicit service period of three years (except for retirement-eligible

employees and retirees) and is included in selling, general and administrative expense in the consolidated statements of income. Expense for awards granted to retirement-eligible employees is recorded over the period from the date of grant through the date the employee first becomes eligible to retire and is no longer required to provide service.

For awards granted prior to the Separation, we used the Black-Scholes valuation model to estimate the fair value of stock settled appreciation rights ("SARs") and stock options granted to employees. The model requires that we estimate the expected life of the SAR or option, expected forfeitures and the volatility of Dover's stock using historical data. After the Separation, we use the Monte Carlo valuation model to estimate the fair value of performance units granted to employees. The model simulates stock prices for companies using a volatility assumption based on a historical period equal to the remaining term of the performance period. See Note 12—"Equity and Cash Incentive Program" to the Audited Combined Financial Statements for additional information related to our stock-based compensation.

Recent Accounting Pronouncements—See Note 2—"New Accounting Standards" to our to Interim Financial Statements included elsewhere in this prospectus for a discussion of recent accounting pronouncements and recently adopted accounting standards.

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain market risks, including fluctuations in commodity prices, foreign currency exchange rates and interest rates. After the Separation from Dover, we have not utilized derivative financial instruments to manage or mitigate our exposure to these risks. Also, we do not use derivative financial instruments where the objective is to generate profits solely from trading activities.

Commodity Price Risk

We use a wide variety of raw materials, primarily metals and semi-processed or finished components, that are generally available from a number of sources. While generally available, commodity pricing for metals, such as nickel, chrome, molybdenum, vanadium, manganese and steel scrap, fluctuate with the market. As a result, our operating results are exposed to market price fluctuations. Although some cost increases may be recovered through increased prices to customers if commodity prices trend upward, we attempt to control such costs through fixed-price contracts with suppliers and various other programs, such as our global supply chain activities.

Foreign Currency Risk

We conduct operations around the world in a number of different currencies. Many of our foreign subsidiaries have designated the local currency as their functional currency. Our earnings are therefore subject to change due to fluctuations in foreign currency exchange rates when the earnings in foreign currencies are translated into U.S. dollars. We do not hedge this translation impact on earnings. A 10% increase or decrease in the average exchange rates of all foreign currencies would have changed our revenue and income before income taxes by approximately 1.4% for the nine months ended September 30, 2018.

When transactions are denominated in currencies other than our subsidiaries' respective functional currencies, both with external parties and intercompany relationships, these transactions result in increased exposure to foreign currency exchange effects. Currently, we do not manage these exposures through the use of derivative instruments. Consequently, significant changes in foreign currency exchange rates, particularly the Canadian Dollar, the Australian Dollar and the Colombian Peso, could have negative impacts in our reported results of operations.

Interest Rate Risk

Our use of fixed- or variable-rate debt directly exposes us to interest rate risk. Fixed-rate debt, such as the notes, exposes us to changes in the fair value of our debt due to changes in market interest rates. Fixed-rate debt also exposes us to the risk that we may need to refinance maturing debt with new debt at higher rates, or that we may be obligated to pay rates higher than the current market rate. Variable-rate debt, such as our term loan or borrowings under our Revolving Credit Facility, exposes us to short-term changes in market rates that impact our interest expense.

At September 30, 2018, we had unhedged variable rate debt of $395.0 million with an interest rate of 4.75%. Using sensitivity analysis to measure the impact of a change in the interest rate, a 10% adverse movement in the interest rate, or 48 basis points, would result in an increase to interest expense of $1.9 million on an annualized basis.

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Executive Officers

The following table sets forth information regarding the individuals who serve as Apergy's executive officers. None of Apergy's executive officers serve as employees or executive officers of Dover.

Name	Age	Position
Sivasankaran Somasundaram	53	President and Chief Executive Officer
Jay A. Nutt	55	Senior Vice President and Chief Financial Officer
Paul E. Mahoney	54	President, Production & Automation Technologies
Robert K. Galloway	52	President, Drilling Technologies
Syed Raza	52	Senior Vice President and Chief Digital Officer
Julia Wright	43	Senior Vice President, General Counsel and Secretary
Amy Thompson Broussard	42	Senior Vice President and Chief Human Resources Officer
Shankar Annamalai	37	Senior Vice President Operations

Sivasankaran ("Soma") Somasundaram serves as Apergy's President and Chief Executive Officer, and is a member of its Board of Directors. Mr. Somasundaram previously served as a Vice President of Dover Corporation and as President and Chief Executive Officer of Dover Energy, in which capacity he acted from August 2013 until the Separation. Previously, Mr. Somasundaram served as Executive Vice President (from November 2011 to August 2013) of Dover Energy, Executive Vice President (from January 2010 to November 2011) of Dover Fluid Management, President (from January 2008 to December 2009) of Dover's Fluid Solutions Platform, President (from June 2006 to December 2007) of Dover's Gas Equipment Group, and President (from March 2004 to May 2006) of Dover's RPA Process Technologies. Prior to joining Dover, Mr. Somasundaram served in various global leadership roles at GL&V Inc. and Baker Hughes Inc. Mr. Somasundaram received a B.S. in Mechanical Engineering from Anna University and a M.S. in Industrial Engineering from University of Oklahoma.

Jay A. Nutt serves as Apergy's Senior Vice President and Chief Financial Officer, a position that he held with Dover Energy from March 2018 until the Separation. Prior to joining Dover Energy, Mr. Nutt served as Senior Vice President and Controller of TechnipFMC plc, a life cycle services company for the energy industry, upon completion of the merger of FMC Technologies, Inc. and Technip S.A. in January 2017, Vice President, Controller and Treasurer of FMC Technologies, Inc., an oil service equipment manufacturer for the energy industry (from October 2015 to January 2017), and Vice President and Controller of FMC Technologies, Inc. (from August 2009 through October 2015). Mr. Nutt became Corporate Controller in July 2008 and prior to that held multiple positions in FMC Corporation and FMC Technologies leading the financial operations of multiple business units. Mr. Nutt received his undergraduate degree in accounting from Michigan State University and an MBA from Loyola University of Chicago.

Paul E. Mahoney serves as Apergy's President, Production & Automation Technologies. Mr. Mahoney previously served as President of Dover Artificial Lift, part of Dover Energy, in which capacity he acted from January 2014 until the Separation. Previously, Mr. Mahoney served as Chief Operations Officer as well as Senior Vice President of Global Sales and Operations for Dover Artificial Lift (from January 2012 to December 2013). Prior to joining Dover Energy, Mr. Mahoney served in various sales and management roles at Emerson Electric Company a manufacturer of products and provider of engineering services for industrial, commercial and consumer markets including VP General Manager, Analyzers Group (from 2010 to 2012) within Emerson Process Management, VP Global Sales and Operations for the Analytical Group (from 2006 to 2010), and Director of Sales for the Process Automation Group (from 2002 to 2006). Mr. Mahoney received a B.S. in Electrical Engineering and Physics from the University of Buffalo and an MBA from Seattle University.

Robert K. Galloway serves as Apergy's President, Drilling Technologies. Mr. Galloway previously served as President of US Synthetic, part of Dover Energy, in which capacity he acted from January 2010 until the

Separation. Previously, Mr. Galloway served as Chief Operating Officer of US Synthetic, a developer and manufacturer of polycrystalline diamond wafers for oil and gas exploration (from November 2008 to December 2009) and Vice President of Operations of US Synthetic (from September 2005 to November 2008). Prior to joining Dover Energy, Mr. Galloway served in various engineering roles for Baker Hughes, Hughes Christensen (1995 – 1997). Mr. Galloway received a B.S. in Mechanical Engineering from the University of Utah.

Syed ("Ali") Raza serves as Apergy's Senior Vice President and Chief Digital Officer. Mr. Raza previously served as President of Dover Energy Automation, part of Dover Energy, in which capacity he acted from July 2016 until the Separation. Prior to joining Dover Energy, Mr. Raza was employed by Honeywell Process Solutions, an industrial process services company, as Vice President and General Manager—Advanced Solutions (from June 2014 to July 2016), General Manager Advanced Solutions—Europe, Middle East & Africa (from November 2013 to June 2014), General Manager —Americas (from February 2012 to November 2013) and Director, Global Business Development (from July 2006 to April 2012). Mr. Raza received a B.E. in Computer Systems Engineering from NED University of Engineering and Technology and a MSc in Computer Engineering from Wayne State University.

Julia Wright served as Apergy's Senior Vice President, General Counsel and Secretary, a position she held with Dover Energy from February 2018 until the Separation. Prior to joining Dover Energy, Ms. Wright served as Vice President and General Counsel at Nabors Industries Ltd., an oil, natural gas and geothermal drilling contractor, from October 2016 to February 2018. Ms. Wright served in various capacities in the Nabors law department during her tenure from 2011 to 2016 and 2005 to 2009, including as Interim General Counsel (from August 2016 to October 2016), Assistant General Counsel (from April 2013 to August 2016) and Senior Counsel (from September 2011 to April 2013). Ms. Wright also served in senior legal roles at Tesco Corporation during her tenure from 2009 to 2011. She began her legal career as a corporate attorney at the international law firms Baker & McKenzie LLP and Vinson & Elkins L.L.P. Ms. Wright received a B.A. in Liberal Arts from Southern Methodist University, an M.A. in International Affairs from Columbia University and a J.D. from Fordham Law School.

Amy Thompson Broussard serves as Apergy's Senior Vice President and Chief Human Resources Officer. Ms. Broussard previously served as Vice President, Human Resources, a position she held with Dover Energy from August 2016 until the Separation. Previously, Ms. Broussard served as the Vice President of Human Resources for Dover Artificial Lift (from October 2014 to August 2016). Prior to joining Dover Energy, Ms. Broussard was employed by Baker Hughes Inc., an oil and gas services company, in various human resources roles from 1998 to 2005 and 2006 to 2014), most recently serving as the Director of Human Resources for the Western Hemisphere HR Service Centers (from July 2013 to October 2014), as the Director of Human Resources for the US Land Region (from February 2012 to June 2013), and Director of Human Resources for the Middle East Region (from February 2010 to February 2012). Ms. Broussard received a B.S. in Human Resource Management from Louisiana State University and an MBA from the University of Dallas.

Shankar Annamalai serves as Apergy's Senior Vice President Operations, a position he held with Dover Energy from May 2017 until the Separation. Prior to joining Dover Energy, Mr. Annamalai was employed by Pentair plc, a multinational diversified industrial company, and served as Global Vice President of Operations and Supply of Pentair Technical Solutions (from March 2015 to April 2017), Senior Director of Operations of Pentair Valves & Controls (from March 2013 to March 2015), and Director of Operations of Pentair Water (from June 2006 to March 2013). Mr. Annamalai received a B.S. in Mechanical Engineering and an MBA from Texas A&M University.

Board of Directors

The following table sets forth information with respect to those persons who serve on Apergy's Board of Directors and is followed by biographies of each such individual (except that Mr. Somasundaram's biographical information is set forth above under "—Executive Officers").

Name	Age	Title
Daniel W. Rabun	64	Chairman of the Board of Directors
Sivasankaran Somasundaram	53	Director, President & Chief Executive Officer
Stephen M. Todd	70	Director
Stephen K. Wagner	71	Director
Gary P. Luquette	62	Director
Kenneth M. Fisher	56	Director
Mamatha Chamarthi	49	Director

Daniel W. Rabun

Age: 64

Chairman of the Board of Directors since 2018

Committees: Governance and Nominating; Compensation

Other Public Company Boards: 2

Experience: From 2007 to his retirement in May 2015, Mr. Rabun served as the Chairman of Ensco plc, an offshore drilling services company, based in London. He retired as President and Chief Executive Officer of Ensco in June 2014, having held the office of Chief Executive Officer for more than seven years and President for more than eight years.

From 1986 through 2005, prior to joining Ensco, Mr. Rabun was a partner with the international law firm of Baker & McKenzie LLP, where he provided legal advice to oil and gas companies.

Mr. Rabun has served on the Board of Directors and as a member of the Audit Committee of Golar LNG Ltd. since February 2015 and served as the non-executive Chairman from September 2015 to September 2017. He has also served on the Board of Directors of Apache Corporation since May 2015, where he is currently a member of the Management Development and Compensation Committee. During 2012, he served as Chairman of the International Association of Drilling Contractors. Mr. Rabun has also been a certified public accountant since 1976.

Skills and Qualifications: Mr. Rabun brings a variety of experiences to the Board, including service as Chairman of the Board, President, and Chief Executive Officer of Ensco. During Mr. Rabun's term at Ensco, Ensco drilled some of the most complex wells for super majors, national oil companies, and independent operators in nearly every strategic oil and gas area in the world.

Mr. Rabun's legal expertise gathered over many years at Baker & McKenzie LLP, accounting knowledge gained from having been a certified public accountant since 1976, along with his board committee experience as both an Audit Committee and Management Development and Compensation Committee member, provides substantial value to the Board.

Mr. Rabun's international experience, global perspective, experience with strategic acquisitions, and financial acumen from having served a total of more than eight years as the business head of a public company, assist the Board in the assessment and management of risks faced by oil and gas companies.

Sivasankaran Somasundaram

Age: 53

Director since 2018

Committees: None

Other Public Company Boards: None

Skills and Qualifications: Mr. Somasundaram's strong international business background, having lived and worked in India, Germany, Singapore and Australia, deep operational insights and financial acumen from having served more than four years as President and Chief Executive Officer of Dover Energy, a segment of Dover, a public company, and years of experience in the energy industry makes him a valuable resource for the Board. Mr. Somasundaram's technical experience developed during his time in a number of positions in businesses that serve the energy, chemical, mining, sanitary and other process industries, including RPA Process Technologies and Baker Hughes, along with his degrees in both Industrial and Mechanical Engineering, provide him with unique insights into the highly engineered technologies that Apergy provides to its customers.

Stephen M. Todd

Age: 70

Director since 2018

Committees: Audit

Other Public Company Boards: 2

Experience: Mr. Todd is a former Global Vice Chairman (from 2003 to 2010) of Assurance Professional Practice of Ernst & Young Global Limited, London, UK, an assurance, tax, transaction and advisory services firm; and prior thereto, various served in positions with Ernst & Young (since 1971). Mr. Todd is a member of the Board of Trustees and Chairman of the Audit Committee of PNC Funds and PNC Advantage Funds (registered management investment companies). Mr. Todd is also a member of the Board of Directors and Audit Committee of Dover.

Skills and Qualifications: Mr. Todd's experience in the accounting profession makes him a valuable resource for the Board. Mr. Todd brings to the Board significant financial experience in both domestic and international business following a 40-year career at Ernst & Young where he specialized in assurance and audit. Mr. Todd developed and directed Ernst & Young's Global Capital Markets Centers, which provide accounting, regulatory, internal control and financial reporting services to multinational companies in connection with cross-border debt and equity securities transactions and acquisitions, making him well suited to advise the Board on capital allocation decisions, financing alternatives, and acquisition activities. His experience, especially his years as Global Vice Chairman of Ernst & Young Global Limited's Assurance Professional Practice and as audit partner for several multinational companies, gives him unique insights into accounting and financial issues relevant to multinational companies like Apergy, and he brings the perspective of an outside auditor to the Board.

Stephen K. Wagner

Age: 71

Director since 2018

Committees: Audit; Governance and Nominating (Chair)

Other Public Company Boards: 1

Experience: Mr. Wagner is a former Senior Advisor, Center for Corporate Governance, of Deloitte & Touche LLP, an audit, financial advisory, tax and consulting firm (from 2009 to 2011); Managing Partner, Center

for Corporate Governance, of Deloitte (from 2005 to 2009); Deputy Managing Partner, Innovation, Audit and Enterprise Risk, United States, of Deloitte (from 2002 to 2007); and Co-Leader, Sarbanes-Oxley Services, of Deloitte (from 2002 to 2005). Mr. Wagner is a member of the Board of Directors, Audit Committee and Chairman of the Governance and Nominating Committee of Dover.

Skills and Qualifications: Mr. Wagner's over 30 years of experience in accounting make him a valuable resource for the Board. His work with the Sarbanes-Oxley Act and other corporate governance regulations, including his years as Managing Partner at Deloitte & Touche's Center for Corporate Governance, makes him well suited to advise the Board on financial, auditing and finance-related corporate governance matters as well as risk management. Mr. Wagner is an expert in risk oversight and co-authored a book on risk management entitled *Surviving and Thriving in Uncertainty: Creating the Risk Intelligent Enterprise* . He brings to the Board an outside auditor's perspective on matters involving audit committee procedures, internal control and accounting and financial reporting matters.

Gary P. Luquette

Age: 62

Director since 2018

Committees: Governance and Nominating; Compensation (Chair)

Other Public Company Boards: 2

Experience: Mr. Luquette previously served as President and Chief Executive Officer of Frank's International N.V., a global provider of engineered tubular services to the oil and gas industry, from January 2015 to November 2016, following which he served as a special advisor to Frank's until his retirement in December 2016. Mr. Luquette also served as a member of Frank's Supervisory Board from November 2013 to May 2017. From 2006 to September 2013, Mr. Luquette served as President of Chevron North America Exploration and Production, a unit of Chevron Corporation. Mr. Luquette began his career with Chevron in 1978 and, prior to serving as President, held several other key exploration and production positions in Europe, California, Indonesia and Louisiana. Mr. Luquette has served as the non-executive Chairman of the Board of Directors of McDermott International, Inc., a global offshore engineering and procurement company, since May 2014, where he is currently a member of the Compensation Committee. He has also served on the Board of Directors of Southwestern Energy Company since 2017, where he is currently a member of the Health, Safety, Environment and Corporate Responsibility Committee.

Skills and Qualifications: Mr. Luquette brings a depth of business, industry and strategic planning experience to the Board, including his two years as President and Chief Executive Officer at Frank's International N.V., his seven years as President of Chevron North America Exploration and Production, along with his holding several key exploration and production positions at Chevron. Mr. Luquette's international experience also adds a valuable global perspective to the Board.

Mr. Luquette's extensive board committee participation, including his membership on the Compensation Committee at McDermott International, Inc. and Health, Safety, Environment and Corporate Responsibility Committee at Southwestern Energy Company, makes him well suited to advise the Board on various corporate governance matters.

Kenneth M. Fisher

Age: 56

Director since 2018

Committees: Audit (Chair)

Other Public Company Boards: 1

Experience: Executive Vice President and Chief Financial Officer (from April 2014 to present) and Senior Vice President and Chief Financial Officer (from November 2009 to April 2014) of Noble Energy Inc., an oil and natural gas exploration and production company. Before joining Noble Energy, Mr. Fisher served in a number of senior leadership roles at Shell from 2002 to 2009, including as Executive Vice President of Finance for Upstream Americas, Director of Strategy & Business Development for Royal Dutch Shell plc in The Hague, Executive Vice President of Strategy and Portfolio for Global Downstream in London and Chief Financial Officer of Shell Oil Products U.S. responsible for U.S. downstream finance operations including Shell Pipeline Company. Prior to joining Shell in 2002, Mr. Fisher held senior finance positions within business units of General Electric Company. Mr. Fisher has served as the Chairman of the Board of Directors of the general partner of Noble Midstream Partners LP since October 2015. He also served on the Board of Directors of the general partner of CONE Midstream Partners LP from May 2014 to December 2017.

Skills and Qualifications: Mr. Fisher's 33 years of business, strategy, mergers and acquisitions, and extensive financial management experience, along with his significant experience in the oil and gas industry, make him a valuable resource for the Board. His six senior finance leadership roles with Noble Energy, Shell and GE, including his years as the Chief Financial Officer of Noble Energy, make him well suited to advise the Board on financial, auditing and finance-related corporate governance matters.

Mamatha Chamarthi

Age: 49

Director since 2018

Committees: Compensation

Other Public Company Boards: None

Experience: Ms. Chamarthi is the Senior Vice President and Chief Digital Officer of ZF Friedrichshafen AG, a German supplier of driveline and chassis technology (from August 2016 to present). She has also served as Senior Vice President, Chief Digital Officer and Chief Information Officer of ZF TRW Automotive Holdings Corporation (from April 2014 to August 2016), Vice President and Chief Information Officer of CMS Energy Corporation (from May 2010 to December 2013) and Senior IT Executive of Daimler Financial Services (from August 2007 to May 2010).

Skills and Qualifications: Ms. Chamarthi's 20 years of domestic and global technology experience in the energy, financial services and automotive industries makes her a valuable resource for the Board. Ms. Chamarthi brings to the Board significant experience collaborating with boards of directors, including technology and audit committees, as an officer of ZF Friedrichshafen AG, ZF TRW Automotive Holdings, CMS Energy and Daimler Financial. Her innovative technology and transformation experience provide her with unique insights into the highly engineered technologies that Apergy provides to its customers.

Apergy's Board of Directors is divided into three approximately equal classes. The directors designated as Class I directors have terms expiring at the first annual meeting of stockholders following the distribution, which Apergy expects to hold in 2019. The directors designated as Class II directors have terms expiring at the second annual meeting of stockholders following the distribution, which Apergy expects to hold in 2020, and the directors

designated as Class III directors have terms expiring at the third annual meeting of stockholders following the distribution, which Apergy expects to hold in 2021. Class I consists of Messr. Todd and Ms. Chamarthi; Class II consists of Messrs. Rabun and Luquette; and Class III consists of Messrs. Somasundaram, Fisher and Wagner. Commencing with the first annual meeting of stockholders following the Separation, directors elected to succeed those directors whose terms then expire will be elected for a term of office to expire at the 2022 annual meeting. Beginning at the 2022 annual meeting, all of Apergy's directors will stand for election each year for annual terms, and Apergy's Board of Directors will therefore no longer be divided into three classes. Members of Apergy's Board of Directors will be elected by a plurality of the votes cast at each annual meeting of stockholders.

Director Independence

Apergy's Board of Directors expects to make a determination that each current non-management director is independent under the standards established by the Sarbanes-Oxley Act and the applicable rules of the SEC and the NYSE. In the future, Apergy expects to make a determination of the independence of each nominee for director prior to his or her nomination for (re)election. No director may be deemed independent unless the board determines that he or she has no material relationship with Apergy, directly or as an officer, stockholder or partner of an organization that has a material relationship with Apergy.

Compensation Committee Interlocks and Insider Participation

During Apergy's fiscal year ended 2017, Apergy was not an independent company and did not have a compensation committee or any other committee serving a similar function. Decisions as to Mr. Somasundaram's compensation in 2017 were made by the Compensation Committee of Dover's Board of Directors (the "Dover Compensation Committee").

EXECUTIVE COMPENSATION

For the fiscal year ended December 31, 2017 and December 31, 2016, Apergy was a 100% owned subsidiary of Dover and Dover's senior management and the Dover Compensation Committee determined Apergy's executive compensation. Since the Separation, the Apergy Compensation Committee and Board of Directors determine Apergy's executive compensation.

This Executive Compensation section presents historical compensation information for Sivasankaran Somasundaram, who now serves as the Chief Executive Officer of Apergy and who is a named executive officer ("NEO") of Apergy. The other NEOs at Apergy are Paul E. Mahoney and Syed Raza.

Summary Compensation Table

The Summary Compensation Table and notes show all remuneration paid to (i) Mr. Somasundaram by Dover for the fiscal years ended December 31, 2017 and December 31, 2016 and (ii) each of Mr. Mahoney and Mr. Raza by Dover for the fiscal year ended December 31, 2017.

Name and Principal Position	Year	Salary ($)	Stock Awards ($)(1)	Option Awards ($)(2)	Non-Equity Incentive Plan Compensation ($)(3)	All Other Compensation ($)(4)	Total ($)
Sivasankaran Somasundaram	2017	535,000	549,965	350,394	970,000	21,903	2,427,262
President and Chief Executive Officer	2016	502,000	550,001	355,313	355,000	13,832	1,776,146
Paul E. Mahoney	2017	386,250	79,994	76,462	240,000	16,963	799,669
President, Production and Automation Technologies							
Syed Raza	2017	288,750	140,008	38,231	240,820	6,657	714,466
Senior Vice President and Chief Digital Officer							

(1) The amounts generally represent (a) the aggregate grant date fair value of performance shares granted by Dover during the year indicated, calculated in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 718 and (b) the aggregate grant date fair value of Dover restricted stock unit awards granted during the year, calculated in accordance with FASB ASC Topic 718. Under FASB ASC Topic 718, the 2016 and 2017 awards were considered performance and service conditioned. The grant date fair value for the 2016 Dover performance share awards was $57.25, and the grant date fair value for the 2017 Dover performance share awards was $79.28, determined in accordance with FASB ASC Topic 718 using the closing price of Dover's common stock on the date of grant.

The amounts represent the aggregate grant date fair value of Dover awards granted during the year indicated, calculated in accordance with FASB ASC Topic 718 and do not correspond to the actual value that might be realized by the NEOs. The grant date fair value of Dover restricted stock unit awards was calculated in accordance with FASB ASC Topic 718 using the assumptions set forth in the footnotes to the Combined Financial Statements included elsewhere in this prospectus. All Dover restricted stock unit grants were eligible for dividend equivalent payments which are paid upon vesting. For a discussion of the assumptions relating to calculation of the cost of equity awards, see Note 12—"Equity and Cash Incentive Program" to the Audited Combined Financial Statements contained elsewhere in this prospectus.

(2) The amounts represent the aggregate grant date fair value of Dover Stock Settled Appreciation Rights ("SSARs") awards granted during the year indicated, calculated in accordance with FASB ASC Topic 718, and do not correspond to the actual value that may be realized by the NEOs. For a discussion of the assumptions relating to the calculation of the cost of the SSARs, see Note 12—"Equity and Cash Incentive Program" to the Audited Combined Financial Statements contained elsewhere in this prospectus.

(3) Amounts generally represent (i) the payouts earned under cash performance awards granted under the Dover Corporation 2012 Equity and Cash Incentive Plan (the "Dover LTIP") for the three-year performance period ended December 31 of the year indicated and (ii) payments under Dover's Annual Incentive Plan (the "Dover AIP") for the year indicated, for which payments were made in the first quarter of the following year. As no payouts were earned under the Dover LTIP by any of the NEOs in any of the years indicated, the full amounts shown in each year were earned under the Dover AIP. Mr. Mahoney was granted cash performance units for the performance period ending December 31, 2017; however, the operations did not achieve the EBITDA growth and free cash flow required under iTSR (as defined below) to earn a payment. Mr. Raza was not granted cash performance units for the performance period ending December 31, 2017. Please see the Performance Shares, Cash Performance Units & iTSR section for a further explanation of iTSR.

(4) The amount in 2017 for Mr. Somasundaram represents $9,450 in 401(k) matching contributions, $2,000 in health club membership reimbursement, as well as dividends received in respect of Dover restricted stock units. The amount in 2017 for Mr. Mahoney represents $9,450 in 401(k) matching contributions, as well as dividends received in respect of Dover restricted stock units. The amount in 2017 for Mr. Raza represents $6,657 in 401(k) matching contributions.

Narrative Disclosure to Summary Compensation Table

Executive Employment Arrangements

None of our NEOs has an individual employment agreement with us or with Dover.

2017 Dover Annual Incentive Plan

Each of our NEOs participated in the Dover AIP in 2017. An annual bonus may be earned each year under the Dover AIP based on an individual's performance against both financial and individual strategic goals.

For 2017, 60% of Mr. Somasundaram's annual bonus was based on the achievement of financial performance criteria. Financial targets for each of Mr. Mahoney and Mr. Raza were also set at 60% of the bonus target; however, 50% is based on operating company results and 10% is based on the same segment results as Mr. Somasundaram. The other 40% of the annual bonus was based on the achievement of individual strategic objectives designed to create long-term value for Dover stockholders.

Under the Dover AIP, executives can achieve anywhere between 0% and 200% of their target bonus. However, above-target payout is only earned for performance that is significantly above the targeted performance.

2017 Dover AIP Target Performance and Payout

Overall, Dover and its Apergy businesses performed above Dover and Apergy's respective financial targets in 2017 and made progress on Dover and Apergy's respective strategic objectives, including key acquisitions and divestures. Actual compensation varies widely based on the individual's business unit and performance against specific strategic objectives.

2017 Dover AIP Funding

The Dover AIP is designed to reward executives, including our NEOs, for the achievement of financial and strategic objectives that are linked to Dover's longer term goals. The Dover AIP was funded for Section 162(m) of the Code purposes by the achievement of an earnings per share ("EPS") goal, as determined under the plan. Achievement of Dover's EPS target allows maximum bonuses to be paid, subject to the negative discretion of the Dover Compensation Committee in determining the final bonuses. Achievement below the target reduces the

bonus pool by 1% for every 1% below target; achievement above target does not increase the bonus pool. Taking into account the impact of businesses acquired during 2017, Dover's 2017 EPS target was $3.50. Dover achieved adjusted EPS of $4.03, so bonuses were available to be paid at the maximum level.

2017 Dover AIP Financial Results Performance

Targets under the Dover AIP were set at the segment level for Dover's segment NEOs such as Mr. Somasundaram. The financial targets listed below was utilized to determine the 60% of Mr. Somasundaram's bonus tied to financial results. Financial targets for each of Mr. Mahoney and Mr. Raza were also set at 60% of the bonus target; however, 50% is based on operating company results and 10% is based on the same segment results as Mr. Somasundaram.

	2017 Targets(1)		2017 Results(1)	
	In $ millions			
	Sales	EDITDA(2)	Sales	EDITDA(2)
Dover Energy—Sivasankaran Somasundaram	1,270	276	1,406	327
Dover Artificial Lift—Paul E. Mahoney	575	119	605	115
Dover Energy Automation—Syed Raza	137	32	153	38

(1) Financial targets and results include both operating company and segment targets and results for Messrs. Mahoney and Raza.
(2) EBITDA refers to earnings before interest, taxes, depreciation and amortization. The EBITDA results exclude unplanned fourth quarter 2017 restructuring charges.

2017 Dover AIP Individual Strategic Objective Performance

For 2017, each of Dover's NEOs, including Mr. Somasundaram, had unique strategic objectives that were utilized to determine 40% of their annual incentive. Dover's Chief Executive Officer developed strategic goals for his direct reports, including Mr. Somasundaram, which focused on measurable accomplishments in their individual areas of responsibility that would also benefit Dover's stockholders over the long term.

Mr. Somasundaram (President & Chief Executive Officer of Apergy) led the preparation of Apergy to become a separate publicly traded company. In addition, he effectively managed the energy market rebound exceeding his organic growth, productivity and working capital targets. The safety record of the business did not improve as much as had been expected.

Mr. Mahoney (President, Production and Automation Technologies of Apergy) achieved productivity and organic growth targets, but did not meet the safety or working capital targets set for Dover Artificial Lift.

Mr. Raza (President, Senior Vice President and Chief Digital Officer of Apergy) achieved productivity and organic growth targets, as well as working capital improvements and a successful platform launch, but did not meet the safety targets set for Dover Energy Automation.

2017 AIP Payouts

Based on the performance of Mr. Somasundaram's business unit and his performance against specific strategic objectives, his 2017 Dover AIP payout was $970,000, which was 181% of his 2017 Dover AIP target. Based on the performance of Mr. Mahoney's business unit and his performance against specific strategic objectives, his 2017 Dover AIP payout was $240,000, which was 124% of his 2017 Dover AIP target. Based on the performance of Mr. Raza's business unit and his performance against specific strategic objectives, his 2017 Dover AIP payout was $240,820, which was 167% of his 2017 Dover AIP target.

Going forward: Apergy has adopted the Apergy Corporation Executive Officer Annual Incentive Plan ("Apergy AIP") for Apergy's executives. The Apergy Compensation Committee will determine the executives who participate in the Apergy AIP, determine the target bonus amounts for each participant, set the specific performance targets for the Apergy AIP bonuses and determine the final Apergy AIP bonus amounts to be paid to participants.

2017 Long-Term Incentive Compensation

The following table summarizes the components of Dover's 2017 long-term incentive plan ("LTIP") and the related performance criteria for awards granted in 2017 to Dover's NEOs, including Mr. Somasundaram. All components of Dover's 2017 LTIP awards are paid in stock to Dover's NEOs and stock and cash performance units to all other participants.

LTIP COMPONENT	PERFORMANCE CRITERIA	VESTING OR EXERCISE PERIOD
Stock Settled Appreciation Rights	Market price of Dover's common stock	SSARs are not exercisable until three years after grant; they remain exercisable for another seven years
Restricted Stock Units	Market price of Dover's common stock	Awards vest ratably over three years
Performance Shares	iTSR (EBITDA growth and cash flow generation)	Awards vest at the end of three calendar years
Cash Performance Units	iTSR (EBITDA growth and cash flow generation)	Awards vest at the end of three calendar years

In 2017, Mr. Somasundaram's LTIP award was comprised 50% of SSARs, 30% of performance shares and 20% of restricted stock units. In 2017, Mr. Mahoney's and Mr. Raza's LTIP awards were each comprised 30% of SSARs, 50% of cash performance units and 20% of restricted stock units.

Going forward: Dover adopted the Apergy Corporation 2018 Equity and Cash Incentive Plan (the "Apergy 2018 LTIP"), which provides equity-based awards to Apergy employees, including the Apergy NEOs, and Apergy directors. See "—New Apergy Plans—Long-Term Incentive Plan." In connection with the Separation, the outstanding Dover performance shares and cash performance units held by Apergy NEOs were cancelled.

Performance Shares, Cash Performance Units & iTSR

Definition of iTSR. iTSR measures the change in enterprise value over a three-year period. EBITDA is assigned a multiple based on prevailing market multiples among industrial companies. iTSR tracks the change in that EBITDA-based value, along with operational free cash flow (defined as operating cash flow less capital spending, less cash used for acquisitions, plus cash received from divestitures) generated during the three-year performance period. The two together work similarly to an external TSR measure: the EBITDA-based value becomes a proxy for share price, and operational free cash flow becomes a proxy for dividends.

iTSR Targets, Threshold and Cap Levels. Awards are earned three years after the grant, provided iTSR exceeds a threshold level. No payouts will be made unless iTSR equals or exceeds 6%. The payout to any individual may not exceed 500,000 shares.

Chart 1

Payouts of cash performance units are made on a sliding scale using the following formula:

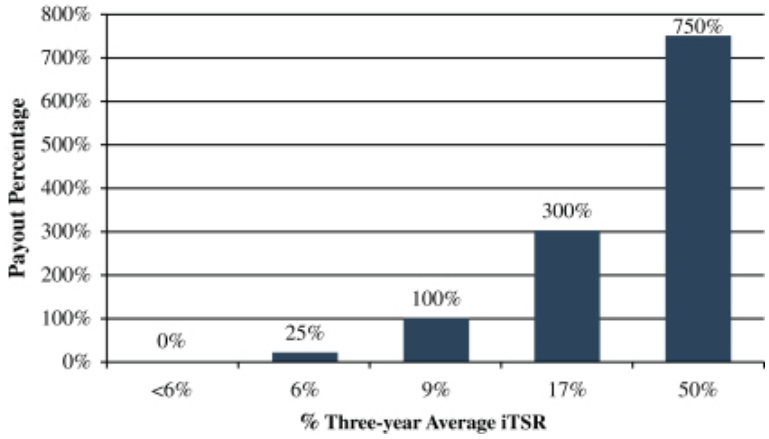
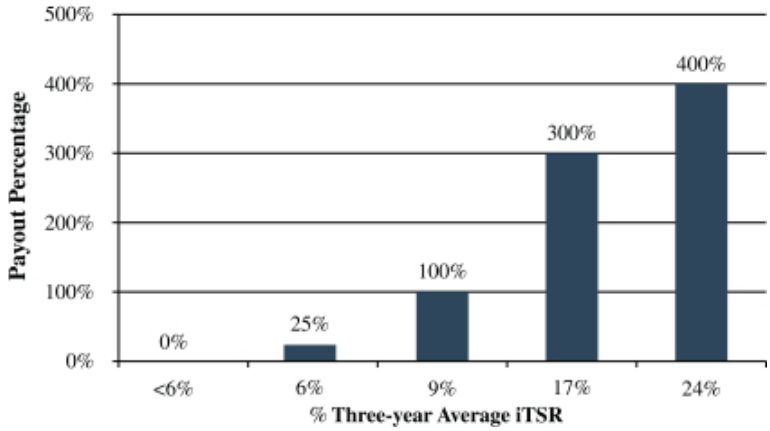


Chart 2

Payouts of performance shares are made on a sliding scale using the following formula:



2017 Performance Share and Cash Performance Unit Payouts

For the performance period ended December 31, 2017, payouts of cash performance units were determined based on the sliding scale set forth in Chart 1 above and payouts of performance shares were determined based on the sliding scale set forth in Chart 2 above. Based on the sliding scale set forth in Chart 2 above and the performance of Mr. Somasundaram's business unit, the payout of his performance shares relating to the performance period ended December 31, 2017 was 0 shares, due to an iTSR performance of (15.61)%. Based on the sliding scale set forth in Chart 1 above and the performance of Mr. Mahoney's business unit, the payout of his cash performance units relating to the performance period ended December 31, 2017 was $0, due to an iTSR performance of (18.43)%. Mr. Raza did not receive a grant of cash performance units for the performance period ended December 31, 2017.

Stock Settled Appreciation Rights

SSARs vest on the third anniversary of the grant date. Once SSARs vest, an NEO may exercise them any time prior to the expiration date, which is the tenth anniversary of the grant date. The proceeds from the exercise are paid to the NEO in the form of shares of Dover common stock.

Illustration of SSARs Exercise:

Base Price/Exercise Price:	$ 60
Fair Market Value ("FMV") on date of exercise:	$ 80
Number of SSARs Granted:	100

EXERCISE STEP	Gain in Value	Total Value after Exercise	Total Shares Awarded post Exercise(1)
Calculation Formula	FMV—Exercise Price	Gain in Value x Number of SSARs	Total Value ÷ FMV
Result	$80 – $60 = $20 ($20 per SSAR)	$20 x 100 = $2,000	$2,000 ÷ $80 = 25

(1) Subject to tax withholding.

Restricted Stock Units

Restricted stock unit grants vest ratably over three years. Executives do not actually own the shares underlying the units, nor enjoy the benefits of ownership, such as dividends and voting, until the vesting conditions are satisfied. Once vested, the NEO receives shares of Dover stock equivalent in number to the vested units and receives a cash amount equal to accrued dividends during the vesting period, net of withholding taxes.

Treatment of outstanding Dover equity awards: Effective as of the Separation, the Dover SSAR and restricted stock unit awards previously granted to Apergy's NEOs were converted to corresponding Apergy equity awards under the new Apergy 2018 LTIP. In general, each award is subject to the same terms and conditions as were in effect prior to the Separation. The outstanding performance shares and cash performance units held by Apergy's NEOs were cancelled as of the Separation. In addition, Apergy's NEOs received new Apergy equity-based awards.

Outstanding Equity Awards at Fiscal Year-End 2017

Dover awards listed below with grant dates beginning in 2013 were made under the Dover LTIP. Awards listed below with grant dates between 2006 through 2012 were made under the Dover Corporation 2005 Equity and Cash Incentive Plan (the "2005 Dover Plan"). All equity awards outstanding as of February 28, 2014 were adjusted as a result of the spin-off of Knowles Corporation to preserve the value of the awards in accordance with the Employee Matters Agreement, dated February 28, 2014, between Dover and Knowles Corporation.

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)
Somasundaram, Sivasankaran		27,750(1)	79.28	2/10/2027				
		38,428(2)	57.25	2/11/2026				
		30,022(3)	73.28	2/12/2025				
	24,239 (4)		82.51	3/10/2024				
	14,211(5)		63.33	2/14/2023				
	15,620(6)		57.62	2/9/2022				
	15,336(7)		58.69	2/10/2021				
	23,816(8)		37.79	2/11/2020				
					2,775(9)	280,247(12)	16,648(13)	1,681,281(16)
					2,562(10)	258,736(12)	23,056(14)	2,328,425(16)
					1,001(11)	101,091(12)	— (15)	1,819,032(16)
Mahoney, Paul E.		6,054(1)	79.28	2/10/2027				
		8,384(2)	57.25	2/11/2026				
		6,550(3)	73.28	2/12/2025				
	5,090(4)		82.51	3/10/2024				
	5,052(5)		63.33	2/14/2023				
	4,165(6)		57.62	2/9/2022				
					336(9)	33,933(12)		
					2,213(10)	223,491(12)		
					364(11)	36,760(12)		
Raza, Syed		3,027(1)	79.28	2/10/2027	1,766(9)	178,348(12)		

(1) SSARs granted on February 10, 2017 that are not exercisable until February 10, 2020.
(2) SSARs granted on February 11, 2016 that are not exercisable until February 11, 2019.
(3) SSARs granted on February 12, 2015 that become exercisable on February 12, 2018.
(4) SSARs granted on March 10, 2014 that became exercisable on March 10, 2017.
(5) SSARs granted on February 14, 2013 that became exercisable on February 14, 2016.
(6) SSARs granted on February 9, 2012 that became exercisable on February 9, 2015.
(7) SSARs granted on February 10, 2011 that became exercisable on February 10, 2014.
(8) SSARs granted on February 11, 2010 that became exercisable on February 11, 2013.
(9) Unvested portion of Dover restricted stock units granted on February 10, 2017. The units vest in three equal annual installments beginning on March 15, 2018.
(10) Unvested portion of Dover restricted stock units granted on February 11, 2016. The units vest in three equal annual installments beginning on March 15, 2017.
(11) Unvested portion of Dover restricted stock units granted on February 12, 2015. The units vest in three equal annual installments beginning on February 12, 2016.
(12) The amount reflects the number of unvested Dover restricted stock units multiplied by $100.99, the closing price of Dover's common stock on December 29, 2017.

(13) Dover performance shares granted on February 10, 2017 become payable after December 31, 2019 subject to the achievement of the applicable performance goal. The amount reflected in the table represents the number of shares payable based on the achievement of the maximum level of performance, 400%.
(14) Dover performance shares granted on February 11, 2016 become payable after December 31, 2018 subject to the achievement of the applicable performance goal. The amount reflected in the table represents the number of shares payable based on achievement of the maximum level of performance, 400%.
(15) Dover performance shares granted on February 12, 2015 become payable after December 31, 2017 subject to the achievement of the applicable performance goal. The performance goals were not met and no amounts were paid with respect to the performance shares granted on February 12, 2015.
(16) The amount reflects the number of performance shares payable based on achievement of the maximum level of performance multiplied by $100.99, the closing price of Dover's common stock on December 29, 2017.

Executive Severance Policies

Dover has an executive severance plan (the "Dover Severance Plan") and a senior executive Change in Control ("CIC") Severance Plan (the "Dover CIC Severance Plan") in which all of Dover's executives, including, prior to the Separation, our NEOs, were eligible to participate.

The Dover CIC Severance Plan likewise establishes a consistent policy regarding double-trigger CIC severance payments based on current market practices. The Dover CIC Severance Plan applies to all executives who are subject to Dover's senior executive shareholding guidelines on the date of a CIC (as defined in such plan), including, prior to the Separation, Mr. Somasundaram. Each of the Dover Severance Plan and the Dover CIC Severance Plan gives Dover the right to recover amounts paid to an executive under the plan as required under any clawback policy of Dover as in effect from time to time or under applicable law. The Dover 2005 Plan, the Dover LTIP and Dover's other benefit plans each has its own provisions relating to rights and obligations under the plan upon termination.

No Dover executive may receive severance benefits under more than one plan or arrangement. If Dover determines that (i) any payment or distribution to an executive in connection with CIC, whether under the Dover CIC Severance Plan or otherwise, would be subject to excise tax as an excess parachute payment under the Code and (ii) the executive would receive a greater net-after-tax amount by reducing the amount of the severance payment, Dover will reduce the severance payments made under the Dover CIC Severance Plan to the maximum amount that might be paid (but not less than zero) without the executive becoming subject to the excise tax. The Dover CIC Severance Plan does not provide any gross-up for excise taxes.

Under the Dover Severance Plan, each of our NEOs would have been entitled to the following payments in the event of non-CIC involuntary termination without "cause", as defined in the plan:

- Twelve (12) months' salary continuation plus an amount equal to the pro rata portion of the annual bonus paid for the prior year, subject to the Dover Compensation Committee's discretion to reduce the payment amount; and
- A monthly amount equal to the then cost of COBRA health continuation coverage based on the level of health care coverage in effect on the termination date, if any, for the lesser of 12 months or the period that the executive receives COBRA benefits.

Under the Dover CIC Severance Plan, Mr. Somasundaram would have been entitled to receive the following severance payments if, within 18 months after a CIC, either his employment was terminated by Dover without "cause" or he terminated employment for "good reason," as such terms are defined in the plan:

- A lump sum payment equal to 2.0 multiplied by the sum of (i) his annual salary on the termination date or the CIC date, whichever is higher, and (ii) his target annual incentive bonus for the year in which the termination or the date of the CIC occurs, whichever is higher; and
- A lump sum payment equal to the then cost of COBRA health continuation coverage, based on the level of health care coverage in effect on the termination date, if any, for one year.

Under the Dover LTIP, upon a CIC of Dover (as defined in the Dover LTIP) and if, within 18 months following the date of the CIC, the participant's employment is either involuntarily terminated other than for cause, death or disability, such that the participant is no longer employed by a Dover company or an event or condition that constitutes "good reason" under the LTIP occurs, and the participant subsequently resigns for good reason within applicable time limits and other applicable requirements under the LTIP:

- All Dover options and Dover SSARs immediately vest upon the date of termination and become exercisable in accordance with the terms of the applicable award agreement;
- All Dover cash performance and performance share awards will be deemed to have been earned "at target" as if the performance target had been achieved and such awards will immediately vest and become immediately due and payable on the date of termination; and
- All outstanding restrictions, including any performance targets, on Dover restricted stock or Dover restricted stock unit awards will immediately vest or expire on the date of termination and be deemed to have been satisfied or earned "at target" as if the performance targets, if any, have been achieved, and the award will become immediately due and payable on the date of termination.

In the event of a CIC in which a participant's outstanding awards are impaired in value or rights as determined solely in the discretion of Dover's "continuing directors" (as defined in the LTIP), are not assumed by a successor corporation or an affiliate thereof, or are not replaced with an award or grant that, solely in the discretion of Dover's continuing directors, will preserve the existing value of the outstanding awards at the time of the CIC:

- All outstanding Dover options and Dover SSARs will immediately vest on the date of the CIC and become exercisable in accordance with the terms of the applicable award agreement;
- All outstanding Dover performance share awards and cash performance awards will immediately vest and become due and payable on the date of the CIC as follows: the performance period of each such award will terminate on the last day of the month prior to the month in which the CIC occurs; the participant will be entitled to a cash or stock payment, the amount of which will be determined in accordance with the LTIP and the applicable award agreement prorated based on the number of months in the performance period which have passed prior to the CIC as compared to the total number of months in the original performance period; and
- All outstanding restrictions, including any performance targets with respect to any Dover options, Dover SSARs, Dover restricted stock or Dover restricted stock unit awards will immediately vest or expire on the date of the CIC and be deemed to have been satisfied or earned at "target" as if the performance targets, if any, have been achieved and such awards will become immediately due and payable on the date of the CIC.

Each person granted an award under the Dover 2005 Plan or Dover LTIP is deemed to agree that, upon a tender or exchange offer, proxy solicitation or other action seeking to effect a CIC of Dover, he or she will not voluntarily terminate employment with Dover or any of its companies and, unless terminated by Dover, will continue to render services to Dover until the person seeking to effect a CIC of Dover has abandoned, terminated or succeeded in such person's efforts to effect the CIC.

Under the Dover PRP, upon a CIC, each participant will become entitled to receive the actuarial value of the participant's benefit accrued through the date of the CIC. Under the Dover Deferred Compensation Plan, amounts deferred under the plan will continue to accrue any earnings and will be payable in accordance with the elections made by the executive officer.

Going forward: Apergy has adopted the Apergy Corporation Executive Severance Plan (the "Apergy Severance Plan") and the Apergy Corporation Senior Executive Change-in-Control Severance Plan (the "Apergy CIC Plan"), which offer executive severance and CIC benefits, as applicable, to certain Apergy employees

(including Apergy's NEOs) that are substantially similar to those provided to eligible Dover employees pursuant to the Dover Severance Plan and the Dover CIC Severance Plan, respectively. See "—New Apergy Plans—Apergy Severance Plan and Apergy CIC Plan."

Employee Benefit Plans

401(k), Pension Plan and Health & Wellness Plans

Each of our NEOs were able to participate in retirement and benefit plans generally available to Dover's employees on the same terms as other employees. Our NEOs do not receive enhanced health and wellness benefits.

Non-Qualified Retirement Plans

Dover offers two non-qualified plans with participation generally limited to individuals whose annual salary and bonus earnings exceed the IRS limits applicable to its qualified plans: the Dover PRP and the Dover Deferred Compensation Plan.

Mr. Somasundaram and Mr. Mahoney participated in the Dover PRP. After December 31, 2009, benefits under the Dover PRP before offsets are determined using the benefit calculation and eligibility criteria as under the pension plan, except that IRS limits on compensation and benefits do not apply. Prior to December 31, 2009, the participants in the Dover PRP accrued benefits greater than those offered in the Dover pension plan. Effective January 1, 2010, Dover modified this plan so that executives subject to IRS compensation limits will accrue future benefits that are substantially the same as benefits under the Dover pension plan. Individuals who participated in the Dover PRP prior to January 1, 2010 will receive benefits calculated under the prior benefit formula through December 31, 2009 and benefits calculated under the lower Dover PRP benefit formula on and after January 1, 2010. Amounts receivable by the executives under the Dover PRP are reduced by any amounts receivable by them under the Dover pension plan, any qualifying profit sharing plan, Dover-paid portion of social security benefits, and the amounts of the Dover match in its 401(k) plan.

Dover offers a deferred compensation plan to allow participants to elect to defer their receipt of some or all of their salary, bonuses and any payout of a cash performance award. Messrs. Somasundaram, Mahoney and Syed were eligible to participate in this plan. The plan permits Dover executive officers to defer receipt of part of their compensation to later periods and facilitates tax planning for the participants. Effective January 1, 2014, the Dover Deferred Compensation Plan was amended to provide for certain matching and additional contributions for participants who do not also participate in the Dover PRP. PRP Participants are not eligible for matching or additional contributions under the Dover Deferred Compensation Plan. Participants are not guaranteed any particular return on deferrals. As of the Plan Separation Date (as defined herein), Apergy participants, including Messrs. Somasundaram, Mahoney and Syed ceased deferring compensation under the Dover Deferred Compensation Plan. See the section entitled "Certain Relationships and Related Person Transactions—Agreements with Dover—Employee Matters Agreement—Non-Qualified Deferred Compensation Plans."

Going forward: Apergy executive officers participate in retirement and benefits plans generally available to other Apergy employees on the same terms as other employees. Apergy has adopted the Apergy Executive Deferred Compensation Plan. See "—New Apergy Plans—Apergy Executive Deferred Compensation Plan." Apergy adopted 401(k) and health and wellness benefits plans for Apergy employees effective January 1, 2018. See "—New Apergy Plans—Apergy 401(k) Plan."

New Apergy Plans

Long-Term Incentive Plan

In connection with the distribution, Dover adopted the Apergy 2018 LTIP. The form of the Apergy 2018 LTIP has been incorporated by reference as an exhibit to the registration statement of which this prospectus is a

part. The material features of the Apergy 2018 LTIP are summarized below, but this summary is qualified in its entirety by reference to the full text of the Apergy 2018 LTIP.

The Apergy Compensation Committee intends grants and awards under the Apergy 2018 LTIP to foster behavior that will produce the greatest increase in value for stockholders, reinforce key company goals and objectives that help drive stockholder value, and attract, motivate and retain officers, key employees and directors. The Apergy Compensation Committee intends to grant incentive awards for Apergy's NEOs under the Apergy 2018 LTIP.

Duration and Amendment. The Apergy 2018 LTIP has a predetermined term of 10 years and will terminate in 2028. The Apergy Compensation Committee may make grants and awards at any time or from time to time before the Apergy 2018 LTIP terminates.

The Apergy Board of Directors may amend or terminate the Apergy 2018 LTIP as it deems advisable, except as provided for in the Apergy 2018 LTIP. In addition, without stockholder approval, the Apergy Board of Directors cannot approve either the (i) cancellation of outstanding options or SSARs and grants in substitution therefor of new awards having a lower exercise price or base price, as applicable, or (ii) amendment of outstanding options and SSARs to reduce the exercise price or base price thereof, as applicable (including cash buyouts).

Administration. The Apergy Compensation Committee will administer the Apergy 2018 LTIP. The Apergy Compensation Committee consists of independent members of the Apergy Board of Directors each of whom is also a "non-employee director" for purposes of the rules under the Exchange Act.

The Apergy Compensation Committee will select employees who shall receive awards, determine the number of shares covered thereby, and establish the terms, conditions and other provisions of the awards. The Apergy Board of Directors will determine the form and amount of directors' compensation to be paid to directors from time to time, subject to the limits of the Apergy 2018 LTIP. The Apergy Compensation Committee will determine the procedures and terms under which a director may elect to defer receipt of his or her directors' shares. The Apergy Compensation Committee may interpret the Apergy 2018 LTIP and establish, amend and rescind any rules relating to the Apergy 2018 LTIP. The Apergy Compensation Committee may delegate all or part of its responsibilities under the Apergy 2018 LTIP to the Chief Executive Officer to the extent permitted by Delaware law, except for granting awards to individuals subject to Section 16 of the Exchange Act. Only the Apergy Board of Directors may determine awards to members of the Apergy Board of Directors.

Eligibility. Officers and other key employees of Apergy and its subsidiaries, as selected by the Apergy Compensation Committee, and non-employee directors of Apergy will be eligible to participate in the Apergy 2018 LTIP.

Shares Reserved for Issuance; Share Counting. A total of 6,500,000 shares of Apergy common stock are reserved for issuance under the Apergy 2018 LTIP. The maximum number of shares issuable under the Apergy 2018 LTIP is subject to adjustments resulting from stock dividends, stock splits, recapitalizations, reorganizations and other similar changes.

Shares subject to stock options and SSARs will reduce the shares available for awards under the Apergy 2018 LTIP by one share for every one share issued. Performance share awards, restricted stock, restricted stock units that are settled in shares of Apergy common stock, directors' shares and deferred stock units will reduce the shares available for awards under the Apergy 2018 LTIP by three shares for every one share awarded. Cash performance awards do not count against the pool of available shares. The number of shares earned when an award is exercised, vests or is paid out will count against the pool of available shares, including shares withheld to pay taxes or an option's exercise price. Shares subject to an award under the Apergy 2018 LTIP that is cancelled, terminated, or forfeited or that expires will be available for reissuance under the Apergy 2018 LTIP.

Award Limits. No non-employee director may be granted more than 20,000 shares of Apergy common stock in any fiscal year. No more than 5% of the aggregate share reserve may be awarded as restricted stock awards or restricted stock unit awards having a vesting period more rapid than annual pro rata vesting over a period of three years.

Types of Awards. The Apergy 2018 LTIP provides for stock options and SSAR grants, restricted stock awards, restricted stock units, performance share awards, cash performance awards, directors' shares and deferred stock units. The Apergy 2018 LTIP also permits the issuance of awards to Apergy employees in substitution for such employees' outstanding Dover awards (see the section entitled "—2017 Long-Term Incentive Compensation—Treatment of outstanding Dover equity awards").

Stock Options and Stock-Settled Appreciation Rights. The Apergy Compensation Committee may grant options and SSARs under the Apergy 2018 LTIP. Grants of options under the Apergy 2018 LTIP permit the participant to acquire shares of Apergy common stock at an exercise price fixed on the date of grant during the life of the award. SSARs granted under the plan are "freestanding," meaning they are granted separately from options and the exercise of SSARs is not linked in any way to the exercise of options. An SSAR allows the Apergy 2018 LTIP participant to receive the increase, if any, in the fair market value of the number of shares of Apergy common stock underlying the award during the life of the award over a base price set on the date of grant. The amount payable upon the exercise of the SSAR will be paid to the Apergy 2018 LTIP participant in shares of Apergy common stock. The Apergy Compensation Committee determines the exercise price for options and the base price of SSARs, which may not be less than the fair market value of the Apergy common stock on the date of grant. The Apergy Compensation Committee may provide for SSARs to be settled in cash to the extent the Apergy Compensation Committee determines to be advisable under foreign laws or customs.

The Apergy Compensation Committee determines any conditions to the exercisability of options and SSARs, including requirements of a period of continuous service by the participant (time vesting) or performance or other criteria. Options and SSARs may not generally be exercised prior to the third anniversary of the date of grant. The Apergy Compensation Committee also determines the term of each award, provided that the maximum term of any option or SSAR is ten years from the date of grant.

Restricted Stock and Restricted Stock Units. The Apergy Compensation Committee may award restricted stock or restricted stock units to participants under the Apergy 2018 LTIP. Restricted stock is registered in the name of a participant on the date of grant subject to vesting requirements and restricted stock units are rights credited to a bookkeeping account that will be settled by the delivery of shares if certain vesting conditions are satisfied. The Apergy Compensation Committee determines the vesting period, of not less than one year or more than five years, with respect to a restricted stock or restricted stock unit award and whether other restrictions, including the satisfaction of any performance targets, are applicable to the awards. A holder of unvested restricted stock may not exercise voting rights during the restriction period. No dividends or dividend equivalents will be paid on unvested restricted stock or restricted stock unit awards during the restriction period, but in the discretion of the Apergy Compensation Committee, dividend equivalents may be credited to an account for distribution to a participant after vesting.

Performance Share Awards. The Apergy Compensation Committee may grant performance share awards to employees that will become payable in shares of Apergy common stock upon the achievement of objective pre-established performance targets based on specified performance criteria over a performance period of not less than three full fiscal years. Awards may set a specific number of performance shares that may be earned, or a range of performance shares that may be earned depending on the degree of achievement of the pre-established performance targets. Shares of Apergy common stock in payment of performance shares will be issued only if the Apergy Compensation Committee has certified after the end of the performance period that the required performance targets have been met and the amount of the award.

Cash Performance Awards. The Apergy Compensation Committee may grant a participant the opportunity to earn a cash performance award conditional upon the satisfaction, over a performance period of not less than

three full fiscal years, of certain pre-established objective performance targets based on specified performance criteria. The Apergy Compensation Committee will establish a percentage of the value created at the relevant business unit (or Apergy as a whole) during the performance period that the maximum total payout for that business unit (or Apergy as a whole) may not exceed. Cash in payment of cash performance awards will be issued only if the Apergy Compensation Committee has certified after the end of the performance period that the required performance targets have been met and the amount of the award.

Directors' Shares and Deferred Stock Units. The Apergy Board of Directors may designate a percentage of a non-employee director's compensation to be paid in directors' shares or may in its discretion determine to pay a specified dollar amount or number of shares as part of the non-employee director's annual compensation. Subject to procedures the Apergy Compensation Committee may establish from time to time, a non-employee director may elect to defer receipt of directors' shares. Should a director elect to defer receipt of directors' shares, deferred stock units will be credited to a bookkeeping account on the basis of one deferred stock unit for each directors' share deferred, which deferred stock units will be settled by the delivery of Apergy common stock upon the termination of the director's service as a director or, if earlier, upon a date specified by the director at the time of the deferral election. Dividend equivalents will be credited on deferred stock units and distributed at the same time the shares are delivered upon settlement of the deferred stock units.

Performance Criteria. Cash performance awards and performance share awards will be, and other awards may be, made subject to performance criteria. The Apergy Compensation Committee establishes performance targets based on the Apergy 2018 LTIP's performance criteria that include objective formulas or standards for determining the amount of the performance award that may be payable to a participant when the targets are satisfied. The performance targets do not need to be the same for all participants.

The performance objectives under the Apergy 2018 LTIP will be based on one or more of the following performance criteria: (i) the attainment of certain target levels of, or a specified percentage increase in, revenues, income before income taxes and extraordinary items, income or net income, earnings before income tax, earnings before interest, taxes, depreciation and amortization, or a combination of any or all of the foregoing; (ii) the attainment of certain target levels of, or a percentage increase in, after-tax or pre-tax profits including, without limitation, those attributable to continuing and/or other operations; (iii) the attainment of certain target levels of, or a specified increase in, operational cash flow; (iv) the achievement of a certain level of, reduction of, or other specified objectives with regard to limiting the level of increase in, all or a portion of Apergy's or an affiliate's bank debt or other long-term or short-term public or private debt or other similar financial obligations of Apergy or affiliate, which may be calculated net of such cash balances and/or other offsets and adjustments as may be established by the Apergy Compensation Committee; (v) the attainment of a specified percentage increase in earnings per share or earnings per share from continuing operations; (vi) the attainment of certain target levels of, or a specified increase in, return on capital employed or return on invested capital or operating revenue or return on invested cash; (vii) the attainment of certain target levels of, or a percentage increase in, after-tax or pre-tax return on stockholders' equity; (viii) the attainment of certain target levels of, or a specified increase in, economic value added targets based on a cash flow return on investment formula; (ix) the attainment of certain target levels in the fair market value of the shares of Apergy common stock; (x) market segment share; (xi) product release schedules; (xii) new product innovation; (xiii) product or other cost reductions; (xiv) brand recognition or acceptance; (xv) product ship targets; (xvi) customer satisfaction; (xvii) total stockholder return; (xviii) return on assets or net assets; (xix) assets, operating margin or profit margin; (xx) the growth in the value of an investment in Apergy common stock assuming the reinvestment of dividends; and (xxi) such other business or other performance criteria determined appropriate by the Apergy Compensation Committee.

Effect of Termination, Death, Disability or Change in Control on Awards. If a participant's employment is voluntarily or involuntarily terminated other than for cause, vested stock options and SSARs will expire three months after the termination of the participant's employment or the expiration of the original term, whichever is earlier. If a participant dies or becomes disabled while employed by Apergy, outstanding stock options and SSARs will fully vest and may be exercised by the participant or the participant's estate, as applicable, for the

balance of the original term or 60 months, whichever is shorter. If a participant retires at or after age 65, a participant may exercise options and SSARs that are, or within 60 months of the date of retirement become, exercisable, but not beyond the balance of the original term.

Subject to certain exceptions, cash performance awards, restricted stock, restricted stock units, and performance shares will be forfeited if such awards are not vested when a participant's employment terminates. If a participant dies, becomes disabled while employed by Apergy, or in the event of any special circumstances as determined by the Apergy Compensation Committee, any purely temporal restrictions remaining with respect to restricted stock and restricted stock units will lapse, and, if any performance targets are applicable, the restricted stock and restricted stock units will continue to vest subject to attainment of applicable performance targets. If a participant retires at or after age 65, (i) the participant's restricted stock and restricted stock units will continue to vest until the earlier of 60 months from the date of termination or such time as the remaining temporal restrictions lapse, subject to compliance with certain non-competition restrictions, and (ii) if the participant holds one or more performance-based restricted stock or restricted stock unit awards, such awards will be cancelled and will terminate, except that (a) the oldest performance-based restricted stock or restricted stock unit award will remain outstanding and entitle the participant to receive on the regular payment date the same number of shares of Apergy common stock that the participant would have earned had such participant been an employee of Apergy as of such payment date, subject to attainment of applicable performance targets, and (b) the Apergy Compensation Committee (or the Chief Executive Officer as its delegate, as applicable) will determine whether the participant is eligible to receive any shares of Apergy common stock with respect to any other performance-based restricted stock or restricted stock unit awards, and if so, the amount thereof, and any such payment will be subject to attainment of applicable performance targets.

In the case of cash performance awards and performance shares, if a participant dies or becomes disabled while employed by Apergy, a participant or the participant's estate, as applicable, is entitled to a pro rata award for the period of service during the performance period, subject to attainment of applicable performance targets.

If the participant retires at or after age 65, a participant's cash performance awards and performance shares will be cancelled and will terminate, except that (i) the oldest cash performance award and performance shares will remain outstanding and entitle the participant to receive on the regular payment date the same payment or number of shares of Apergy common stock, as applicable, that the participant would have earned had such participant been an employee of Apergy as of such payment date, subject to attainment of applicable performance targets, and (ii) the Apergy Compensation Committee (or the Chief Executive Officer as its delegate, as applicable) will determine whether the participant is eligible to receive any payment or shares of Apergy common stock, as applicable, with respect to any other cash performance awards or performance shares and, if so, the amount thereof, and any such payment or shares shall be subject to attainment of applicable performance targets.

The enhanced post-employment benefits for retirement at or after age 65 are conditioned upon a participant's complying with certain non-competition restrictions that correspond to the period during which enhanced post-employment benefits are provided.

Vesting of outstanding awards to employees under the Apergy 2018 LTIP accelerates upon the consummation of a change in control (as defined in the Apergy 2018 LTIP) (including deemed satisfaction of applicable performance criteria "at target" as if such performance criteria had been achieved) and one of the following double-trigger vesting requirements: (i) involuntary termination other than for cause, death or disability within 18 months following the change in control, (ii) a resignation for good reason within 18 months following the change in control, or (iii) outstanding awards are not replaced by a successor with awards that preserve existing value, the awards are not assumed by a successor, or the awards are impaired in value or rights. In addition, the Apergy Compensation Committee has the right to take such other action with respect to awards in connection with a change in control as it determines to be appropriate. In the case of a change in the ownership of effective control of Apergy or in the ownership of a substantial portion of the assets of Apergy, any deferred

stock units will settle on the date of such change in control or change in ownership by delivery of shares of Apergy common stock.

Apergy Severance Plan and Apergy CIC Plan

In connection with the distribution, Apergy adopted the Apergy Severance Plan and the Apergy CIC Plan, which offers executive severance and CIC benefits, as applicable, to certain Apergy employees (including Apergy's NEOs) that are substantially similar to those provided to eligible Dover employees pursuant to the Dover Severance Plan and the Dover CIC Severance Plan, respectively.

Apergy Executive Deferred Compensation Plan

In connection with the distribution, Apergy adopted the Apergy Executive Deferred Compensation Plan to administer the deferred compensation liabilities with respect to certain Apergy employees under the Dover Deferred Compensation Plan and the Dover PRP which Apergy assumed pursuant to the employee matters agreement. For additional information, see "Certain Relationships and Related Person Transactions—Agreements with Dover—Employee Matters Agreement—Non-Qualified Deferred Compensation Plans."

Apergy 401(k) Plan

As of the Plan Separation Date, Apergy established the Apergy USA, Inc. 401(k) Savings Plan, with Apergy participants' accounts under the Dover 401(k) plan and the assets and liabilities allocable to such accounts transferring to the Apergy 401(k) Plan as of the Plan Separation Date or as soon as practicable thereafter. Apergy provides a matching contribution denominated as a percentage of the amount of salary deferred into the plan by a participant (including Apergy NEOs) during the course of the year.

DIRECTOR COMPENSATION

Apergy's non-employee directors receive annual compensation in an amount Apergy's Board of Directors will set from time to time. The compensation is payable partly in cash and partly in Apergy common stock, in an allocation Apergy's Board of Directors may adjust from time to time. Apergy directors initially receive an annual retainer of $225,000, payable $112,500 in cash and $112,500 in Apergy common stock. Apergy's Board Chairman receives an additional annual retainer of $75,000, payable in cash. The chair of Apergy's Audit Committee receives an additional annual retainer of $15,000, payable in cash. The chairs of Apergy's Compensation Committee and Governance and Nominating Committee each receive an additional annual retainer of $10,000, payable in cash. If a director serves for less than a full calendar year, the compensation to be paid to that director may be prorated as deemed appropriate by Apergy's Compensation Committee. For their service in 2018, the compensation paid to Apergy's non-employee directors who were elected to Apergy's Board of Directors effective on May 9, 2018 will be prorated based on the number of days from and including May 9, 2018 to and including December 31, 2018.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following tables sets forth, as of October 30, 2018 (except as otherwise noted), information with respect to the beneficial ownership of Apergy's common stock by (1) each person Apergy believes is a beneficial owner of 5% or more of Apergy's outstanding common stock, (2) each director and NEO of Apergy and (3) all of Apergy's directors and executive officers as a group. Except as otherwise noted in the footnotes below, each person or entity identified below has sole voting and investment power with respect to such securities. The number of shares beneficially owned by each stockholder, director or executive officer is determined according to the rules of the SEC and the information is not necessarily indicative of beneficial ownership for any other purpose.

Holdings of Major Stockholders

The following table sets forth information regarding each stockholder who Apergy believes owns more than 5% of Apergy's common stock, as of June 30, 2018.

Name of Beneficial Owner	Shares of Apergy's Common Stock Beneficially Owned	% of Class
BlackRock, Inc.	7,219,753(1)	9.33%
The Vanguard Group Inc.	7,011,451(2)	9.07%
Boston Partners.	6,247,942(3)	8.08%
FMR LLC	3,933,192(4)	5.09%

(1) Based on information contained in a Form 13F report for the quarter ended June 30, 2018, filed with the SEC by BlackRock, Inc. BlackRock, Inc.'s offices are located at 55 East 52nd Street, New York, NY 10022. BlackRock, Inc. has sole investment power over all 7,219,753 shares and sole voting power over 6,800,366 shares.

(2) Based on information contained in a Form 13F report for the quarter ended June 30, 2018, filed with the SEC by Vanguard Group Inc. Vanguard Group Inc.'s offices are located at 100 Vanguard Blvd., Malvern, PA 19355. The Vanguard Group Inc. has sole investment power over 6,976,124 shares, shared investment power over 25,327 shares, sole voting power over 30,060 shares and shared voting power over 5,300 shares.

(3) Based on information contained in a Form 13F report for the quarter ended June 30, 2018, filed with the SEC by Boston Partners. Boston Partners' offices are located at One Beacon Street—30th Floor, Boston, MA 02108. Boston Partners has shared investment power over all 6,247,942 shares, sole voting power over 5,059,532 shares and shared voting power over 5,598 shares.

(5) Based on information contained in a Form 13F report for the quarter ended June 30, 2018, filed with the SEC by FMR LLC. FMR LLC's offices are located at 245 Summer Street, Boston, MA 02210. FMR LLC has shared investment power over all 3,933,192 and sole voting power over 565,363 shares.

Holdings of Directors and Executive Officers

The following table sets forth the number of shares of Apergy's common stock beneficially owned by (1) each director and NEO of Apergy and (2) all of Apergy's directors and executive officers as a group. The address of each person shown in the table below is c/o Apergy Corporation, 2445 Technology Forest Blvd., Building 4, 12th Floor, The Woodlands, Texas 77381.

Name and Address of Beneficial Owner	Shares of Apergy's Common Stock Beneficially Owned	% of Class
Daniel W. Rabun	2,525	*
Sivasankaran Somasundaram	165,523(1)	*
Gary P. Luquette	—	*
Stephen M. Todd	3,989	*
Stephen K. Wagner	1,989	*
Kenneth M. Fisher	3,000	*
Mamatha Chamarthi	—	*
Paul E. Mahoney	33,555(2)	*
Syed Raza	18,043(3)	*
Directors and executive officers as a group (14 persons)	325,040(4)	*

* Less than 1% of Apergy's outstanding common stock.

(1) Includes 12,967 shares held in a limited partnership of which Mr. Somasundaram is a partner and 894 shares held in Apergy's 401(k) plan.

(2) Includes 398 shares held in Apergy's 401(k) plan.

(3) Includes 58 shares held in Apergy's 401(k) plan.

(4) Includes 1,527 shares held in Apergy's 401(k) plan.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

Procedures for Approval of Related Person Transactions

Apergy generally does not engage in transactions in which Apergy's senior executive officers or directors, any of their immediate family members or any of Apergy's stockholders owning 5% or more of Apergy's outstanding shares of common stock have a material interest. Should a proposed transaction or series of similar transactions involve any such persons in an amount that exceeds $120,000, it will be subject to review and approval by the Governance and Nominating Committee in accordance with a written policy and the procedures adopted by Apergy's Board of Directors, which is available with the governance materials on Apergy's website at *www.apergy.com*.

Management will determine whether a proposed transaction requires review under the policy and, if so, will present the transaction to the Governance and Nominating Committee. The Governance and Nominating Committee will review the relevant facts and circumstances of the transaction and approve or reject the transaction. If the proposed transaction is immaterial or it is impractical or undesirable to defer the proposed transaction until the next committee meeting, the chair of the committee will decide whether to (i) approve the transaction and report the transaction at the next meeting or (ii) call a special meeting of the committee to review and approve the transaction. Should the proposed transaction involve the Chief Executive Officer or enough members of the Governance and Nominating Committee to prevent a quorum, the disinterested members of the committee will review the transaction and make a recommendation to Apergy's Board of Directors, and disinterested members of the Board will then approve or reject the transaction. No director may participate in the review of any transaction in which he or she is a related person.

The Distribution by Dover

Dover distributed all of its shares of Apergy's common stock to holders of Dover's common stock entitled to such distribution, as described under "Summary—Separation and Distribution" elsewhere in this prospectus.

Agreements with Dover

Apergy and Dover operate separately, each as an independent public company. Prior to the Separation and distribution, Apergy and Dover entered into a separation and distribution agreement and several other agreements to effect the Separation and provide a framework for Apergy's relationship with Dover after the Separation. These agreements govern the relationships between Dover and Apergy following the Separation and distribution and provide for the allocation between Apergy and Dover of Dover's and Apergy's assets, employees, liabilities and obligations (including investments, property and employee benefits and tax-related assets and liabilities) attributable to periods prior to, at and after Apergy's Separation from Dover. In addition to the separation and distribution agreement (which contains many of the key provisions related to Apergy's separation from Dover and the distribution of Apergy's shares of common stock to Dover stockholders), these agreements include:

- the transition services agreement;
- the tax matters agreement; and
- the employee matters agreement.

The material agreements described below have been incorporated by reference as exhibits to the registration statement of which this prospectus forms a part, and the summaries below set forth material terms of such agreements. The summaries of the material agreements are qualified in their entireties by reference to the full text of the applicable agreements, which are incorporated by reference into this prospectus.

The Separation and Distribution Agreement

The separation and distribution agreement sets forth Apergy's agreement with Dover regarding the principal transactions necessary to separate Apergy from Dover. It also sets forth other agreements that govern certain

aspects of Apergy's relationship with Dover after the completion of the separation plan. The parties entered into the separation and distribution agreement immediately before the distribution of Apergy's common stock to Dover stockholders.

Releases and Indemnification. Except as otherwise provided in the separation and distribution agreement or any ancillary agreement, each party released and forever discharged the other party and its subsidiaries, affiliates and other related parties from all liabilities existing or arising from any acts or events occurring or failing to occur or alleged to have occurred or to have failed to occur or any conditions existing or alleged to have existed on or before the distribution. The releases do not extend to obligations or liabilities under any agreements between the parties that remain in effect following the Separation pursuant to the separation and distribution agreement or any ancillary agreement. In addition, the separation and distribution agreement provided for cross-indemnities that, except as otherwise provided in the separation and distribution agreement, are principally designed to place financial responsibility for the obligations and liabilities of Apergy's business with Apergy and financial responsibility for the obligations and liabilities of Dover's business with Dover. Specifically, each party will, and will cause, its subsidiaries and affiliates to, indemnify, defend and hold harmless the other party, its affiliates and subsidiaries and each of its officers, directors, employees and agents for any losses arising out of or otherwise in connection with:

- the liabilities each such party assumed or retained pursuant to the separation and distribution agreement; and
- any breach by such party of the separation and distribution agreement or any ancillary agreement.

Indemnification with respect to taxes is governed solely by the tax matters agreement.

Legal Matters. Except as otherwise set forth in the separation and distribution agreement (or as further described below), each party to the separation and distribution agreement has assumed the liability for, and control of, all pending, threatened and future legal matters related to its own business or assumed or retained liabilities and has agreed to indemnify the other party for any liability arising out of or resulting from such assumed legal matters. With respect to any third party claims that implicate both Dover and Apergy (or their respective subsidiaries) the applicable parties will use commercially reasonable efforts to cooperate in defending any such claims. Subject to certain conditions, Dover may elect to have exclusive control of any actions pending at the time of the distribution that relate to the business, assets or liabilities of Apergy and also relate to the business, assets or liabilities of Dover and Dover or its subsidiaries are named as a target or defendant thereunder.

Insurance. Apergy is responsible for obtaining and maintaining at its sole cost and expense Apergy's own insurance coverage and is no longer an insured party under Dover's insurance policies following the Separation, except that, to the extent reasonably possible, Apergy continues to have coverage under existing shared policies with Dover for claims arising out of insured events that occurred prior to the distribution. Apergy has procured and will maintain at its own cost, for a period of at least five years following the Separation, general liability insurance with annual limits of at least $104.0 million.

Other Matters. Other matters governed by the separation and distribution agreement include access to financial and other information, intellectual property, confidentiality, access to and provision of records and treatment of outstanding guarantees and similar credit support.

Transition Services Agreement

Prior to the Separation, Apergy entered into a transition services agreement with Dover to provide for an orderly transition to being an independent company. Under the transition services agreement, Dover agreed to provide Apergy with various services, including information technology services, and Apergy agreed to provide Dover with various services. Apergy does not currently provide or expect to provide any services to Dover pursuant to the transition services agreement. However, subject to certain limitations, Dover has the right to request that Apergy provide services to Dover.

Apergy pays a fee to Dover for any services utilized under the transition services agreement at an agreed amount as set forth in the agreement, which fee is generally intended to allow Dover to recover all of its direct and indirect costs, generally without profit. The transition services agreement was prepared in the context of a parent-subsidiary relationship and in the context of the separation of Dover into two companies. All services currently or to be provided under the transition services agreement are or will be provided for a specified period of time. Except as provided otherwise in the transition services agreement, or with respect to specific services with other specified terms, the initial term of the transition services agreement will end on January 31, 2019, and the term may then be extended until the one-year anniversary of execution of the transition services agreement or such other period set forth on the schedules thereto. Any service provided under the transition services agreement may be terminated under certain circumstances (including due to a material uncured breach, at the election of the party receiving such service at any time subject to certain conditions or at the election of the provider in the event such provider no longer employs the individuals needed to perform the services). The transition services agreement will terminate on the earliest to occur of (a) a date mutually agreed by the parties, (b) the latest date on which any service is to be provided under the transition services agreement, and (c) the date on which the provision of all services has been terminated by the parties. In addition, if either party materially breaches its obligations under the transition services agreement, such breach is not cured within 30 days after notice and there is no good faith dispute between the parties as to whether a material breach has occurred, the nonbreaching party may terminate the transition services agreement in its entirety or may choose to terminate the individual service as to which the uncured breach relates. After the expiration of the arrangements contained in the transition services agreement, Apergy may not be able to replace these services in a timely manner or on terms and conditions, including cost, as favorable as those Apergy has received from Dover. Apergy is working to increase its own internal capabilities in the future to reduce its reliance on Dover for these services. Apergy will have the right to receive reasonable information with respect to the charges to it by Dover and other service providers for transition services provided by them.

Tax Matters Agreement

Dover and Apergy entered into a tax matters agreement prior to the distribution which generally governs the respective rights, responsibilities and obligations of Dover and Apergy after the distribution with respect to tax liabilities and benefits, tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings and other matters regarding taxes.

Allocation of taxes. In general, under the agreement:

- Dover and Apergy are each liable for all pre-distribution U.S. federal income taxes, foreign income taxes and non-income taxes imposed on them or any of their subsidiaries (determined following the distribution);
- Dover and Apergy are each liable for 50% of certain taxes that are incurred as a result of the restructuring activities undertaken to effectuate the distribution or as a result of the application of certain rules relating to consolidated federal income tax returns;
- Apergy will be liable for taxes incurred by Dover that may arise if Apergy takes, or fails to take, as the case may be, certain actions that may result in the distribution failing to meet the requirements of a tax-free distribution under Section 355 of the Code;
- Dover and Apergy are each liable for 50% of taxes incurred by Dover upon the distribution failing to meet the requirements for a tax-free distribution under Section 355 of the Code, where such failure was the result of an act or failure to act on the part of both Dover and Apergy or neither Dover or Apergy; and
- Dover and Apergy are each liable for any transition tax under Section 965 of the Code resulting from the deferred foreign income of any of their non-U.S. subsidiaries (determined following the distribution).

Neither party’s obligations under the agreement are limited in amount or subject to any cap.

Administrative matters. The agreement also assigns responsibilities for administrative matters, such as the filing of returns, payment of taxes due, retention of records and conduct of audits, examinations or similar proceedings. In addition, the agreement provides for cooperation and information sharing with respect to tax matters. Apergy is solely responsible for preparing and filing any tax return with respect to Apergy or its subsidiaries (determined following the distribution) for time periods beginning after the distribution. Dover is generally responsible for preparing and filing all other tax returns. Apergy generally has full responsibility and discretion to control tax contests with respect to tax returns that (i) include only Apergy and/or any of its subsidiaries (determined following the distribution) and (ii) are not relevant to taxes incurred as a result of the restructuring. Dover generally has full responsibility and discretion to control all other tax contests.

Preservation of the tax-free status of certain aspects of the Separation. Apergy and Dover intend the Separation and the distribution to qualify as a reorganization pursuant to which no gain or loss is recognized by Dover or its stockholders for U.S. federal income tax purposes under Sections 355, 368(a)(1)(D) and related provisions of the Code. In addition, Apergy and Dover intend for certain aspects of the Separation, the distribution and certain related transactions to qualify for tax-free treatment under U.S. federal, state and local tax law and/or foreign tax law.

Dover received an opinion from McDermott Will & Emery LLP that the distribution qualified as a transaction that is tax-free for U.S. federal income tax purposes under Section 355 and 368(a)(1)(D) of the Code, which opinion was confirmed on the distribution date. In addition, Dover received other opinions from McDermott Will & Emery LLP regarding the tax-free status of certain other aspects of the Separation. In connection with the receipt of tax opinions, Apergy and Dover made certain representations regarding the past and future conduct of their respective businesses and certain other matters.

Apergy also agreed to certain covenants that contain restrictions intended to preserve the tax-free status of the Separation, the distribution and certain related transactions. Apergy and certain of its subsidiaries were barred from taking any action, or failing to take any action, where such action or failure to act may be expected to result in any increased tax liability or reduced tax attribute of Dover or any of its subsidiaries (determined following the distribution). In addition, during the time period ending two years after the date of the distribution, these covenants include specific restrictions on the ability of Apergy and certain of its subsidiaries to:

- issue or sell stock or other securities (including securities convertible into Apergy stock but excluding certain compensatory arrangements);
- cease to actively conduct its business or dispose of assets outside the ordinary course of business; and
- enter into certain other corporate transactions which would cause Apergy to undergo a 40% or greater change in its stock ownership.

Apergy generally agreed to indemnify Dover and its affiliates against any and all tax-related liabilities incurred by them relating to the Separation, the distribution and/or certain related transactions to the extent caused by an acquisition of Apergy stock or assets or by any other action or failure to act undertaken by Apergy or its affiliates. This indemnification provision will apply even if Apergy is permitted to take an action that would otherwise have been prohibited under the tax-related covenants described above. The term of this agreement is indefinite and it may only be terminated with the prior written consent of Dover and Apergy.

Employee Matters Agreement

Prior to the Separation, Apergy also entered into an employee matters agreement (the “EMA”) with Dover. The EMA allocated assets, liabilities and responsibilities relating to employee compensation and benefit plans and programs and other related matters in connection with the Separation, including the treatment of outstanding incentive awards and certain retirement and welfare benefit obligations, both inside and outside of the U.S. To the extent that any provisions of the EMA conflict with the provisions of a local transfer agreement or, in respect of jurisdictions outside of the U.S., with the terms of a contract entered into with an employee, the terms of such local transfer agreement or contract will govern in the applicable jurisdiction.

Employment and Benefit Plans Generally. As of January 1, 2018 (the "Plan Separation Date"), Apergy established its own defined contribution plan and health and welfare benefit plans, and as of the distribution date, Apergy established its own non-qualified deferred compensation plan, each of which generally corresponds to the applicable Dover benefit plan. Effective immediately prior to the distribution date, Apergy and Dover continued the employment of Apergy employees and Dover employees, respectively. Apergy assumed severance liabilities (i) where severance relates to or results from a failure by Apergy to continue the employment of any Apergy employee, to continue employment on such terms and conditions that would preclude severance, or to comply with the EMA and (ii) in the event that severance is required to be paid to Apergy employees under applicable law without regard to such terms and conditions of employment or such continuation of employment.

Credited Service. Apergy provided for its employee benefit plans to credit service by Apergy employees with Dover prior to the applicable plan effective date for purposes of determining eligibility to participate, vesting and entitlement to benefits.

Defined Benefit Pension Plan. Apergy participants in the Dover U.S. defined benefit pension plan (the "Dover Pension Plan") ceased accruing additional benefits following the distribution date. Effective as of the distribution date, Apergy participants are 100% vested in all benefits under the Dover Pension Plan, other than Apergy participants who accrued benefits under the Dover Pension Plan as a result of participating therein pursuant to a collective bargaining agreement with the United Steelworkers of America covering employees of Dover's Norris division (such participants, "Norris USW Participants," and such accrued benefits of Norris USW Participants, the "Norris Benefits"). Prior to the distribution date, Apergy established its own U.S. defined benefit pension plan for Norris USW Participants who participated in the Dover Pension Plan as of immediately prior to the distribution date (the "Apergy Pension Plan"). Effective as of the distribution date, the Apergy Pension Plan assumed all liabilities under the Dover Pension Plan related to the Norris Benefits and Dover retained and is solely responsible for all other liabilities with respect to Apergy participants under the Dover Pension Plan. Assets related to the Norris Benefits were transferred to the Apergy Pension Plan partly at and partly shortly after the distribution date.

Defined Contribution Plan. As of the Plan Separation Date, Apergy established its own 401(k) plan, with Apergy participants' accounts under the Dover 401(k) plan and the assets and liabilities allocable to such accounts transferring to such Apergy 401(k) plan as of the Plan Separation Date.

Non-Qualified Deferred Compensation Plans. Generally, as of the Plan Separation Date, Apergy participants ceased deferring compensation under the Dover Deferred Compensation Plan. As of immediately prior to the distribution date, Apergy participants who were actively accruing benefits under the Dover Pension Replacement Plan ceased accruing additional benefits under such plan, and the benefit accrual of each such Apergy participant were converted into an account balance (subject to adjustment for applicable taxes). Prior to the distribution date, Apergy adopted its own non-qualified deferred compensation plan, which serves as the plan document for the Dover Deferred Compensation Plan and Dover Pension Replacement Plan liabilities assumed by Apergy as of the distribution date with respect Apergy participants in such plans who were Apergy employees as of such time. As of and following the distribution date, Apergy retained all liabilities and the administration of the Harbison-Fischer Manufacturing Company Restoration of Income Plan and the Harbison-Fischer Manufacturing Company Deferred Compensation Agreement.

Health and Welfare Plans. As of the Plan Separation Date, Apergy employees who participated in the Dover health and welfare plans ceased participation in such plans and commenced participation in the newly-established Apergy health and welfare plans. Dover will generally retain and be solely responsible for all liabilities relating to, arising out of or resulting from health and welfare coverage or claims incurred by Apergy participants under the Dover health and welfare plans prior to the Plan Separation Date.

Treatment of Cash Incentives. At the regularly scheduled payment date, Apergy will pay to each Apergy employee (and Dover will pay to each Dover employee) the annual cash incentive for 2018 based on actual

performance. Each Dover long-term cash incentive award that is held by an Apergy employee with a performance period that extends beyond the distribution date was cancelled and forfeited as of the distribution date.

Treatment of Equity Awards. Other than with respect to Dover performance shares, the outstanding Dover equity awards held by Apergy employees were converted to Apergy equity awards and the outstanding Dover equity awards held by Dover employees were equitably adjusted, in each case, as of the distribution date (see the section entitled "Executive Compensation—2017 Long-Term Incentive Compensation—Treatment of outstanding Dover equity awards"). Generally, each Apergy equity award is subject to the same terms and conditions as were in effect prior to the distribution date. For purposes of the conversion into Apergy equity awards, a ratio was used equal to the average five-day pre-distribution price of Dover common stock over the average five-day post-distribution price of Apergy common stock. For purposes of the adjustment of Dover equity awards, a ratio was used equal to the average five-day pre-distribution price of Dover common stock over the average five-day post-distribution price of Dover common stock. Immediately prior to the distribution date, with respect to outstanding Dover performance shares held by Apergy employees, (i) each ongoing performance period was terminated and (ii) each such Dover performance share that relates to a performance period ending after the distribution date was cancelled.

Termination of the EMA. The EMA may not be terminated except by an agreement in writing signed by each of the parties.

THE EXCHANGE OFFER

Purpose and Effect of the Exchange Offer

The outstanding notes were sold to the initial purchasers on May 3, 2018 pursuant to a purchase agreement. The initial purchasers subsequently sold the outstanding notes to qualified institutional buyers (as defined in Rule 144A under the Securities Act) in reliance on Rule 144A, and to persons in offshore transactions in reliance on Regulation S under the Securities Act.

We entered into a registration rights agreement with J.P. Morgan Securities LLC, as representative of the initial purchasers, on the issue date of the outstanding notes. In that agreement, we agreed for the benefit of the holders of the outstanding notes that we will use our commercially reasonable efforts to file with the SEC and cause to become effective a registration statement relating to a registered offer to exchange the outstanding notes for an issue of SEC-registered notes with terms identical in all material respects to the notes (except that the exchange notes will not be subject to restrictions on transfer or any increase in annual interest rate as described below).

After the SEC declares the exchange offer registration statement effective, we will use commercially reasonable efforts to commence promptly the registered offer to exchange the outstanding notes (and the related note guarantees) in return for the exchange notes (and the related note guarantees). The exchange offer will remain open for at least 20 business days (or longer if required by applicable law) after the date we send notice of the exchange offer to noteholders. For each outstanding note surrendered to us under the exchange offer, the noteholder will receive an exchange note of equal principal amount. Interest on each exchange note will accrue (1) from the last interest payment date on which interest was paid on the outstanding notes or (2), if no interest has been paid on the outstanding notes, from the issue date of the outstanding notes. A holder of outstanding notes that participates in the exchange offer will be required to make certain representations to us (as described in the registration rights agreement). Under existing interpretations of the SEC contained in several no action letters to third parties (as discussed in more detail below), the exchange notes (and the related note guarantees) will generally be freely transferable after the exchange offer without further registration under the Securities Act, except that any broker-dealer that participates in the exchange must deliver a prospectus meeting the requirements of the Securities Act when it resells the exchange notes.

In the event that (i) the exchange offer registration described above is not available or may not be completed because it would violate any applicable law or SEC interpretations, (ii) the exchange offer is not for any other reason completed on or prior to the date that is 365 days after the issue date of the outstanding notes or (iii) upon receipt of a written request from any initial purchaser representing that it holds “registrable securities” (as defined in the registration rights agreement) that are or were ineligible to be exchanged in the exchange offer, we will use our commercially reasonable efforts to file and to have become effective a shelf registration statement relating to resales of the notes and to keep that shelf registration statement effective until the earlier of (x) date that the notes cease to be registrable securities, including when all the outstanding notes covered by the shelf registration statement have been sold pursuant to the shelf registration statement, and (y) the second anniversary after the issue date of the outstanding notes.

We will, in the event of such a shelf registration, provide to each participating holder of outstanding notes copies of a prospectus, notify each participating holder of outstanding notes when the shelf registration statement has become effective and take certain other actions to permit resales of the outstanding notes. A holder of outstanding notes that sells outstanding notes under the shelf registration statement will generally be required to make certain representations to us (as described in the registration rights agreement) to be named as a selling security holder in the related prospectus, and will be subject to certain of the civil liability provisions under the Securities Act in connection with those sales and will be bound by the provisions of the registration rights agreement that are applicable to such a holder of outstanding notes (including certain indemnification obligations). Holders of outstanding notes will also be required to suspend their use of the prospectus included in

the shelf registration statement under specified circumstances upon receipt of notice from us. Under applicable interpretations of the staff of the SEC, our affiliates will not be permitted to exchange their outstanding notes for exchange notes in the exchange offer.

If (i) the exchange offer is not completed on or prior to the date that is 365 days after the issue date of the notes, (ii) a shelf registration statement is required and the shelf registration statement is not declared effective on or prior to the later of the 365th day after the issue date and the 120th day after our obligation to file the shelf registration statement arises, (iii) if applicable, a shelf registration statement covering resales of the outstanding notes has been declared effective and such shelf registration statement ceases to be effective or the prospectus contained therein ceases to be usable for resales of the outstanding notes at any time during the required effectiveness period, and such failure to remain effective or be usable exists for more than 90 days (whether or not consecutive) in any 12-month period, or (iv) if applicable, a shelf registration statement covering resales of the outstanding notes has been declared effective and such shelf registration statement ceases to be effective or the prospectus contained therein ceases to be usable for resales of the outstanding notes on more than two occasions in any 12-month period (any such event, a "Registration Default"), the annual interest rate borne by the outstanding notes will be increased (i) 0.25% per annum for the first 90-day period immediately following the occurrence of such Registration Default and (ii) an additional 0.25% per annum with respect to each subsequent 90-day period, in each case until such Registration Default is cured or the outstanding notes cease to be registrable securities, up to a maximum of 1.00% per annum of additional interest (it being understood that in no event will we be required to pay additional interest for more than one Registration Default at any given time). A Registration Default is cured with respect to the outstanding notes, and additional interest ceases to accrue on such outstanding notes that are registrable securities, when the exchange offer is completed or the registration statement is declared effective. Any amounts of additional interest due will be payable in cash on the same original interest payment dates as interest on the outstanding notes is payable. The exchange notes will vote and consent together with the outstanding notes on all matters on which holders of outstanding notes or exchange notes are entitled to vote and consent. The exchange notes will be accepted for clearance through DTC.

We will agree to make available, during the period required by the Securities Act, a prospectus meeting the requirements of the Securities Act for use by participating broker-dealers and other persons, if any, with similar prospectus delivery requirements for use in connection with any resale of exchange notes. Any notes not tendered in the exchange offer shall continue to bear interest at the rate set forth on the cover of the offering memorandum distributed in connection with the May 2018 private offering of the outstanding notes and be subject to all the terms and conditions specified in the Indenture, including transfer restrictions, but will not retain any rights under the registration rights agreement (including with respect to increases in annual interest rate described above) after the consummation of the exchange offer.

Notwithstanding the foregoing, we will be entitled to suspend the occurrence of a Registration Default in the case of a shelf registration statement covering resales of the notes that has been declared effective in the event such shelf registration statement ceases to be effective, if the board of directors of the Company determines that there is a valid business purpose for such suspension and such shelf registration statement is suspended for not longer than 60 consecutive days or more than two times during any calendar year.

Each broker-dealer that receives exchange notes for its own account in exchange for outstanding notes, where the broker-dealer acquired the outstanding notes as a result of market-making activities or other trading activities, must acknowledge that it will deliver a prospectus in connection with any resale of such exchange notes and that it did not purchase its outstanding notes from us or any of our affiliates. See "Plan of Distribution."

Resale of Exchange Notes

Based on interpretations by the SEC set forth in no-action letters issued to third parties, we believe that you may resell or otherwise transfer exchange notes issued in the exchange offer without complying with the registration and prospectus delivery provisions of the Securities Act if:

- you are acquiring the exchange notes in the ordinary course of your business;

- you do not have an arrangement or understanding with any person to participate in a distribution of the exchange notes;
- you are not our affiliate within the meaning of Rule 405 under the Securities Act; and
- you are not engaged in, and do not intend to engage in, a distribution of the exchange notes.

If you are our affiliate, or are engaging in, or intend to engage in, or have any arrangement or understanding with any person to participate in, a distribution of the exchange notes, or are not acquiring the exchange notes in the ordinary course of your business:

- you cannot rely on the position of the SEC set forth in *Morgan Stanley & Co. Incorporated* (available June 5, 1991) and *Exxon Capital Holdings Corporation* (available May 13, 1988), as interpreted in the SEC's letter to *Shearman & Sterling*, dated July 2, 1993, or similar no-action letters; and
- in the absence of an exception from the position stated immediately above, you must comply with the registration and prospectus delivery requirements of the Securities Act in connection with any resale of the exchange notes.

This prospectus may be used for an offer to resell, resale or other transfer of exchange notes only as specifically set forth in this prospectus. With regard to broker-dealers, only broker-dealers that acquired the outstanding notes as a result of market-making activities or other trading activities may participate in the exchange offer. Each broker-dealer that receives exchange notes for its own account in exchange for outstanding notes, where such outstanding notes were acquired by such broker-dealer as a result of market-making activities or other trading activities, must acknowledge that it will deliver a prospectus in connection with any resale of the exchange notes. Read "Plan of Distribution" for more details regarding the transfer of exchange notes.

Our belief that the exchange notes may be offered for resale without compliance with the registration or prospectus delivery provisions of the Securities Act is based on interpretations of the SEC for other exchange offers that the SEC expressed in some of its no-action letters to other issuers in exchange offers like ours. We cannot guarantee that the SEC would make a similar decision about our exchange offer. If our belief is wrong, or if you cannot truthfully make the representations mentioned above, and you transfer any exchange note issued to you in the exchange offer without meeting the registration and prospectus delivery requirements of the Securities Act, or without an exemption from such requirements, you could incur liability under the Securities Act. We are not indemnifying you for any such liability.

Terms of the Exchange Offer

On the terms and subject to the conditions set forth in this prospectus and in the accompanying letter of transmittal, we will accept for exchange in the exchange offer any outstanding notes that are validly tendered and not validly withdrawn prior to the expiration date. Outstanding notes may only be tendered in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof. We will issue exchange notes in principal amount identical to outstanding notes surrendered in the exchange offer.

The form and terms of the exchange notes will be identical in all material respects to the form and terms of the outstanding notes except the exchange notes will be registered under the Securities Act, will not bear legends restricting their transfer and will not provide for any additional interest upon our failure to fulfill our obligations under the registration rights agreement to complete the exchange offer, or file, and cause to be effective, a shelf registration statement, if required thereby, within the specified time period. The exchange notes will evidence the same indebtedness as the outstanding notes. The exchange notes will be issued under and entitled to the benefits of the Indenture. For a description of the Indenture, see "Description of the Exchange Notes."

The exchange offer is not conditioned upon any minimum aggregate principal amount of outstanding notes being tendered for exchange.

This prospectus and the letter of transmittal are being sent to all registered holders of outstanding notes. There will be no fixed record date for determining registered holders of outstanding notes entitled to participate in the exchange offer. We intend to conduct the exchange offer in accordance with the provisions of the registration rights agreement, the applicable requirements of the Securities Act and the Exchange Act, and the rules and regulations of the SEC. Outstanding notes that are not tendered for exchange in the exchange offer will remain outstanding and continue to accrue interest and will be entitled to the rights and benefits such holders have under the Indenture relating to such holders' outstanding notes, except we will not have any further obligation to you to provide for the registration of the outstanding notes under the registration rights agreement.

We will be deemed to have accepted for exchange properly tendered outstanding notes when we have given written notice of the acceptance to the exchange agent. The exchange agent will act as agent for the tendering holders for the purposes of receiving the exchange notes from us and delivering exchange notes to holders. Subject to the terms of the registration rights agreement, we expressly reserve the right to amend or terminate the exchange offer and to refuse to accept the occurrence of any of the conditions specified below under "—Conditions to the Exchange Offer."

If you tender your outstanding notes in the exchange offer, you will not be required to pay brokerage commissions or fees. We will pay all charges and expenses, other than certain applicable taxes described below in connection with the exchange offer. It is important that you read "—Fees and Expenses" below for more details regarding fees and expenses incurred in the exchange offer.

If you are a broker-dealer and receive exchange notes for your own account in exchange for outstanding notes that you acquired as a result of market-making activities or other trading activities, you must acknowledge that you will deliver this prospectus in connection with any resale of the exchange notes and that you did not purchase your outstanding notes from us or any of our affiliates. Read "Plan of Distribution" for more details regarding the transfer of exchange notes.

We make no recommendation to you as to whether you should tender or refrain from tendering all or any portion of your outstanding notes into the exchange offer. In addition, no one has been authorized to make this recommendation. You must make your own decision whether to tender into the exchange offer and, if so, the aggregate amount of outstanding notes to tender after reading this prospectus and the letter of transmittal and consulting with your advisors, if any, based on your financial position and requirements.

Expiration Date, Extensions and Amendments

The exchange offer expires at 11:59 p.m., New York City time, on , , which we refer to as the "expiration date". However, if we, in our sole discretion, extend the period of time for which the exchange offer is open, the term "expiration date" will mean the latest date to which we shall have extended the expiration of the exchange offer.

To extend the period of time during which the exchange offer is open, we will notify the exchange agent of any extension by written notice, followed by notification by press release or other public announcement to the registered holders of the outstanding notes no later than 9:00 a.m., New York City time, on the next business day after the previously scheduled expiration date.

We reserve the right, in our sole discretion:

- to delay accepting for exchange any outstanding notes (only in the case that we amend or extend the exchange offer);
- to extend the expiration date and retain all outstanding notes tendered in the exchange offer, subject to your right to withdraw your tendered outstanding notes as described under "—Withdrawal Rights";

- to terminate the exchange offer if we determine that any of the conditions set forth below under "—Conditions to the Exchange Offer" have not been satisfied; and
- subject to the terms of the registration rights agreement, to amend the terms of the exchange offer in any manner or waive any condition to the exchange offer. In the event of a material change in the exchange offer, including the waiver of a material condition, we will extend the offer period, if necessary, so that at least five business days remain in such offer period following notice of the material change.

Any delay in acceptance, extension, termination or amendment will be followed as promptly as practicable by written notice (which may take the form of a press release or other public announcement) to the registered holders of the outstanding notes. If we amend the exchange offer in a manner that we determine to constitute a material change, or if we waive a material condition to the exchange offer, we will promptly disclose the amendment in a manner reasonably calculated to inform the holders of outstanding notes of that amendment.

In the event we terminate the exchange offer, all outstanding notes previously tendered and not accepted for payment will be returned promptly to the tendering holders.

Conditions to the Exchange Offer

Despite any other term of the exchange offer, we will not be required to accept for exchange, or to issue exchange notes in exchange for, any outstanding notes, and we may terminate or amend the exchange offer as provided in this prospectus prior to the expiration date if in our reasonable judgment:

- the exchange offer or the making of any exchange by a holder violates any applicable law or interpretation of the SEC; or
- any action or proceeding has been instituted or threatened in writing in any court or by or before any governmental agency with respect to the exchange offer that, in our judgment, would reasonably be expected to impair our ability to proceed with the exchange offer.

In addition, we will not be obligated to accept for exchange the outstanding notes of any holder that has not made to us:

- the representations described under "—Purpose and Effect of the Exchange Offer;" or
- any other representations as may be reasonably necessary under applicable SEC rules, regulations or interpretations to make available to us an appropriate form for registration of the exchange notes under the Securities Act.

We expressly reserve the right at any time or at various times to extend the period of time during which the exchange offer is open. Consequently, we may delay acceptance of any outstanding notes by giving written notice of such extension to the holders. We will return any outstanding notes that we do not accept for exchange for any reason without expense to the tendering holder promptly after the expiration or termination of the exchange offer. We also expressly reserve the right to amend or terminate the exchange offer and to reject for exchange any outstanding notes not previously accepted for exchange if we determine that any of the conditions of the exchange offer specified above have not been satisfied. We will give written notice of any extension, amendment, non-acceptance or termination to the holders of the outstanding notes as promptly as practicable. In the case of any extension, such notice will be issued no later than 9:00 a.m., New York City time, on the next business day after the previously scheduled expiration date. Written notice to the holders may take the form of a press release or other public announcement.

We reserve the right to waive any defects, irregularities or conditions to the exchange as to particular outstanding notes. These conditions are for our sole benefit, and we may assert them regardless of the

circumstances that may give rise to them or waive them in whole or in part at any time or at various times prior to the expiration of the exchange offer in our sole discretion. If we fail at any time to exercise any of the foregoing rights, this failure will not constitute a waiver of such right. Each such right will be deemed an ongoing right that we may assert at any time or at various times prior to the expiration of the exchange offer.

In addition, we will not accept for exchange any outstanding notes tendered, and will not issue exchange notes in exchange for any such outstanding notes, if at such time any stop order is threatened or in effect with respect to the registration statement of which this prospectus constitutes a part or the qualification of the Indenture under the Trust Indenture Act of 1939, as amended.

Procedures for Tendering Outstanding Notes

To tender your outstanding notes in the exchange offer, you must comply with either of the following:

- complete, sign and date the letter of transmittal, or a facsimile of the letter of transmittal, have the signature(s) on the letter of transmittal guaranteed if required by the letter of transmittal and mail or deliver such letter of transmittal or facsimile thereof to the exchange agent at the address set forth below under "—Exchange Agent" prior to the expiration date; or
- comply with DTC's Automated Tender Offer Program procedures described below.

In addition:

- the exchange agent must receive certificates for outstanding notes along with the letter of transmittal prior to the expiration of the exchange offer; or
- the exchange agent must receive a timely confirmation of book-entry transfer of outstanding notes into the exchange agent's account at DTC according to the procedures for book-entry transfer described below or a properly transmitted agent's message prior to the expiration of the exchange offer.

The term "agent's message" means a message transmitted by DTC, received by the exchange agent and forming part of the book-entry confirmation, which states that:

- DTC has received an express acknowledgment from a participant in its Automated Tender Offer Program that is tendering outstanding notes that are the subject of the book-entry confirmation;
- the participant has received and agrees to be bound by the terms of the letter of transmittal; and
- we may enforce that agreement against such participant.

DTC is referred to herein as a "book-entry transfer facility."

Your tender, if not withdrawn prior to the expiration of the exchange offer, constitutes an agreement between us and you upon the terms and subject to the conditions described in this prospectus and in the letter of transmittal.

The method of delivery of outstanding notes, letters of transmittal and all other required documents to the exchange agent is at your election and risk. Delivery of such documents will be deemed made only when actually received by the exchange agent. We recommend that instead of delivery by mail, you use an overnight or hand delivery service, properly insured. If you determine to make delivery by mail, we suggest that you use properly insured, registered mail with return receipt requested. In all cases, you should allow sufficient time to assure timely delivery to the exchange agent before the expiration of the exchange offer. Letters of transmittal and certificates representing outstanding notes should be sent only to the exchange agent, and not to us or to any book-entry transfer facility. No alternative, conditional or contingent tenders of outstanding notes will be accepted. You may request that your broker, dealer, commercial bank, trust company or nominee effect the above transactions for you.

There is no procedure for guaranteed late delivery of the outstanding notes.

If you are a beneficial owner whose outstanding notes are registered in the name of a broker, dealer, commercial bank, trust company or other nominee and you wish to tender your outstanding notes, you should promptly contact the registered holder and instruct the registered holder to tender on your behalf. If you wish to tender the outstanding notes yourself, you must, prior to completing and executing the letter of transmittal and delivering your outstanding notes, either:

- make appropriate arrangements to register ownership of the outstanding notes in your name; or
- obtain a properly completed bond power from the registered holder of outstanding notes.

The transfer of registered ownership may take considerable time and may not be able to be completed prior to the expiration of the exchange offer. Signatures on the letter of transmittal or a notice of withdrawal (as described below in "—Withdrawal Rights"), as the case may be, must be guaranteed by a member firm of a registered national securities exchange or of the Financial Industry Regulatory Authority, a commercial bank or trust company having an office or correspondent in the U.S. or another "eligible guarantor institution" within the meaning of Rule 17A(d)-15 under the Exchange Act unless the outstanding notes surrendered for exchange are tendered:

- by a registered holder of the outstanding notes who has not completed the box entitled "Special Registration Instructions" or "Special Delivery Instructions" on the letter of transmittal; or
- for the account of an eligible guarantor institution.

If the letter of transmittal is signed by a person other than the registered holder of any outstanding notes listed on the outstanding notes, such outstanding notes must be endorsed or accompanied by a properly completed bond power. The bond power must be signed by the registered holder as the registered holder's name appears on the outstanding notes, and an eligible guarantor institution must guarantee the signature on the bond power.

If the letter of transmittal, any certificates representing outstanding notes or bond powers are signed by trustees, executors, administrators, guardians, attorneys-in-fact, officers of corporations or others acting in a fiduciary or representative capacity, those persons should also indicate when signing and, unless waived by us, they should also submit evidence satisfactory to us of their authority to so act.

The exchange agent and DTC have confirmed that any financial institution that is a participant in DTC's system may use DTC's Automated Tender Offer Program to tender outstanding notes. Participants in the program may, instead of physically completing and signing the letter of transmittal and delivering it to the exchange agent, electronically transmit their acceptance of outstanding notes for exchange by causing DTC to transfer the outstanding notes to the exchange agent in accordance with DTC's Automated Tender Offer Program procedures for transfer. DTC will then send an agent's message to the exchange agent.

Book-Entry Delivery Procedures

Promptly after the date of this prospectus, the exchange agent will establish an account with respect to the outstanding notes at DTC, as the book-entry transfer facility, for purposes of the exchange offer. Any financial institution that is a participant in the book-entry transfer facility's system may make book-entry delivery of the outstanding notes by causing the book-entry transfer facility to transfer those outstanding notes into the exchange agent's account at the facility in accordance with the facility's procedures for such transfer. To be timely, book-entry delivery of outstanding notes requires receipt of a confirmation of a book-entry transfer, or a "book-entry confirmation," prior to the expiration date.

In addition, in order to receive exchange notes for tendered outstanding notes, an agent's message in connection with a book-entry transfer into the exchange agent's account at the book-entry transfer facility or the

letter of transmittal or a manually signed facsimile thereof, together with any required signature guarantees and any other required documents must be delivered or transmitted to and received by the exchange agent at its address set forth on the cover page of the letter of transmittal prior to the expiration of the exchange offer. Tender will not be deemed made until such documents are received by the exchange agent. Delivery of documents to the book-entry transfer facility does not constitute delivery to the exchange agent.

Acceptance of Outstanding Notes for Exchange

In all cases, we will promptly issue exchange notes for outstanding notes that we have accepted for exchange under the exchange offer only after the exchange agent timely receives:

- outstanding notes or a timely book-entry confirmation of such outstanding notes into the exchange agent's account at the book-entry transfer facility; and
- a properly completed and duly executed letter of transmittal and all other required documents or a properly transmitted agent's message.

In addition, each broker-dealer that is to receive exchange notes for its own account in exchange for outstanding notes must represent that such outstanding notes were acquired by that broker-dealer as a result of market-making activities or other trading activities and must acknowledge that it will deliver a prospectus that meets the requirements of the Securities Act in connection with any resale of the exchange notes. The letter of transmittal states that by so acknowledging and by delivering a prospectus, a broker-dealer will not be deemed to admit that it is an "underwriter" within the meaning of the Securities Act. See "Plan of Distribution."

We will interpret the terms and conditions of the exchange offer, including the letter of transmittal and the instructions to the letter of transmittal, and will resolve all questions as to the validity, form, eligibility, including time of receipt, and acceptance of outstanding notes tendered for exchange. Our determinations in this regard will be final and binding on all parties. We reserve the absolute right to reject any and all tenders of any particular outstanding notes not properly tendered or to not accept any particular outstanding notes if the acceptance might, in our or our counsel's judgment, be unlawful. We also reserve the absolute right to waive any defects or irregularities as to any particular outstanding notes prior to the expiration of the exchange offer.

Unless waived, any defects or irregularities in connection with tenders of outstanding notes for exchange must be cured within such reasonable period of time as we determine. None of Apergy, the exchange agent or any other person will be under any duty to give notification of any defect or irregularity with respect to any tender of outstanding notes for exchange, nor will any of them incur any liability for any failure to give notification. Any certificates representing outstanding notes received by the exchange agent that are not properly tendered and as to which the irregularities have not been cured or waived will be returned by the exchange agent to the tendering holder, unless otherwise provided in the letter of transmittal, promptly after the expiration of the exchange offer or termination of the exchange offer.

Withdrawal Rights

Except as otherwise provided in this prospectus, you may withdraw your tender of outstanding notes at any time prior to 11:59 p.m., New York City time, on the expiration date.

For a withdrawal to be effective:

- the exchange agent must receive a written notice, which may be by facsimile or letter, of withdrawal at its address set forth below under "— Exchange Agent"; or
- you must comply with the appropriate procedures of DTC's Automated Tender Offer Program system.

Any notice of withdrawal must:

- specify the name of the person who tendered the outstanding notes to be withdrawn;

- identify the outstanding notes to be withdrawn, including the certificate numbers and principal amount of the outstanding notes; and
- where certificates for outstanding notes have been transmitted, specify the name in which such outstanding notes were registered, if different from that of the withdrawing holder.

If certificates for outstanding notes have been delivered or otherwise identified to the exchange agent, then, prior to the release of such certificates, you must also submit:

- the serial numbers of the particular certificates to be withdrawn; and
- a signed notice of withdrawal with signatures guaranteed by an eligible institution unless you are an eligible guarantor institution.

If outstanding notes have been tendered pursuant to the procedures for book-entry transfer described above, any notice of withdrawal must specify the name and number of the account at the book-entry transfer facility to be credited with the withdrawn outstanding notes and otherwise comply with the procedures of the facility. We will determine all questions as to the validity, form and eligibility, including time of receipt of notices of withdrawal, and our determination will be final and binding on all parties. Any outstanding notes so withdrawn will be deemed not to have been validly tendered for exchange for purposes of the exchange offer. Any outstanding notes that have been tendered for exchange but that are not exchanged for any reason will be returned to their holder, without cost to the holder, or, in the case of book-entry transfer, the outstanding notes will be credited to an account at the book-entry transfer facility, promptly after withdrawal, rejection of tender or termination of the exchange offer. Properly withdrawn outstanding notes may be retendered by following the procedures described under "—Procedures for Tendering Outstanding Notes" above at any time prior to the expiration of the exchange offer.

Exchange Agent

Wells Fargo Bank, National Association has been appointed as the exchange agent for the exchange offer. Wells Fargo Bank, National Association also acts as trustee under the Indenture. You should direct all executed letters of transmittal and all questions and requests for assistance, requests for additional copies of this prospectus or of the letter of transmittal to the exchange agent addressed as follows:

By Mail, Overnight Courier or Hand Delivery:	*By Facsimile Transmission (eligible institutions only):*
Wells Fargo Bank, N.A. Corporate Trust Operations MAC N9300-070 600 South Fourth Street Minneapolis, Minnesota 55402	1-877-407-4679 *To Confirm by Telephone:* 1-800-344-5128

If you deliver the letter of transmittal to an address other than the one set forth above or transmit instructions via facsimile to a number other than the one set forth above, that delivery or those instructions will not be effective.

Fees and Expenses

The registration rights agreement provides that we will bear all expenses in connection with the performance of our obligations relating to the registration of the exchange notes and the conduct of the exchange offer. These expenses include registration and filing fees, accounting and legal fees and printing costs, among others. We will pay the exchange agent reasonable and customary fees for its services and reasonable out-of-pocket expenses. We will also reimburse brokerage houses and other custodians, nominees and fiduciaries for customary mailing and handling expenses incurred by them in forwarding this prospectus and related documents to their clients that are holders of outstanding notes and for handling or tendering for such clients.

We have not retained any dealer-manager in connection with the exchange offer and will not pay any fee or commission to any broker, dealer, nominee or other person, other than the exchange agent, for soliciting tenders of outstanding notes pursuant to the exchange offer.

Accounting Treatment

We will record the exchange notes in our accounting records at the same carrying value as the outstanding notes, which is the aggregate principal amount as reflected in our accounting records on the date of exchanges. Accordingly, we will not recognize any gain or loss for accounting purposes upon the consummation of the exchange offer. We will record the expenses of the exchange offer as incurred.

Transfer Taxes

Holders who tender their outstanding notes for exchange will not be obligated to pay any transfer taxes in connection therewith. If, however, exchange notes are to be delivered to, or are to be issued in the name of, any person other than the registered holder of the outstanding notes tendered, or if a transfer tax is imposed for any reason other than on the exchange of outstanding notes in connection with the exchange offer, then the amount of any such transfer taxes (whether imposed on the registered holder or any other persons) will be payable by the tendering holder. If satisfactory evidence of payment of such taxes or exemption therefrom is not submitted with the letter of transmittal, the amount of such transfer taxes will be billed directly to the tendering holder.

Consequences of Failure to Exchange

If you do not exchange your outstanding notes for exchange notes under the exchange offer, your outstanding notes will remain subject to the restrictions on transfer of such outstanding notes:

- as set forth in the legend printed on the outstanding notes as a consequence of the issuance of the outstanding notes pursuant to the exemptions from, or in transactions not subject to, the registration requirements of the Securities Act and applicable state securities laws; and
- as otherwise set forth in the offering memorandum distributed in connection with the May 2018 private offering of the outstanding notes.

In general, you may not offer or sell your outstanding notes unless they are registered under the Securities Act or if the offer or sale is exempt from registration under the Securities Act and applicable state securities laws. Except as required by the registration rights agreement, we do not intend to register resales of the outstanding notes under the Securities Act.

Other

Participating in the exchange offer is voluntary, and you should carefully consider whether to accept. You are urged to consult your financial and tax advisors in making your own decision on what action to take.

We may in the future seek to acquire untendered outstanding notes in open market or privately negotiated transactions, through subsequent exchange offers or otherwise. We have no present plans to acquire any outstanding notes that are not tendered in the exchange offer or to file a registration statement to permit resales of any untendered outstanding notes.

DESCRIPTION OF THE EXCHANGE NOTES

General

Certain terms used in this description are defined under the subheading "—Certain Definitions." In this description, (i) the term "Issuer" refers only to Apergy Corporation and not to any of its Affiliates and (ii) the terms "we," "our" and "us" each refer to the Issuer and its consolidated Subsidiaries. When we use the term "notes" in this description, the term includes the outstanding notes and the exchange notes.

The Issuer issued the outstanding notes and will issue the exchange notes under the Indenture, dated as of May 3, 2018 (the "Original Indenture"), between the Issuer and the Trustee, as amended and supplemented by the Effective Date Supplemental Indenture, dated as of May 9, 2018, among the Guarantors and the Trustee (the "First Supplemental Indenture" and the Original Indenture, as amended and supplemented by the First Supplemental Indenture, the "Indenture"). Copies of the form of the Indenture (including the First Supplemental Indenture) and the registration rights agreement may be obtained from the Issuer upon request.

The following description is only a summary of the material provisions of the Indenture and does not purport to be complete and is qualified in its entirety by reference to the provisions of the Indenture, including the definitions therein of certain terms used below. We urge you to read the Indenture because it, not this description, defines your rights as Holders of the exchange notes. You may request copies of the Indenture at our address set forth under the heading "Where You Can Find More Information."

Like the outstanding notes, the exchange notes:

- will be unsecured senior debt obligations of the Issuer;
- will be pari passu in right of payment with all existing and future Senior Indebtedness (including the Senior Credit Facilities) of the Issuer and the Guarantors;
- will be effectively subordinated to all Secured Indebtedness of the Issuer and the Guarantors (including the Senior Credit Facilities) to the extent of the value of the assets securing such Indebtedness;
- will be senior in right of payment to any future Subordinated Indebtedness (as defined with respect to the notes) of the Issuer and the Guarantors;
- will be initially guaranteed on a senior unsecured basis by each Restricted Subsidiary of the Issuer that incurs or guarantees any Obligations under the Senior Credit Facilities; and
- will be structurally subordinated to all existing and future Indebtedness and other claims and liabilities, including preferred stock, of Subsidiaries of the Issuer that are not Guarantors.

On the Issue Date, the Issuer was a 100% owned Subsidiary of Dover. Following the Issue Date, Dover completed the Separation. To effect the Separation:

- Dover underwent a reorganization that, among other things and subject to limited exceptions, resulted in the allocation and transfer or assignment to the Issuer of the equity interests of the entities that held certain assets and liabilities conducting Dover's upstream oil and gas business within its Energy segment and certain other assets and liabilities (the "contribution");
- Substantially concurrently with the contribution, the net proceeds of the offering of the outstanding notes were released from escrow as described under "—Escrow of proceeds; special mandatory redemption" in the Offering Memorandum, the term loan lenders under our Senior Credit Facilities funded the term loans thereunder in the amount of $415.0 million and the Issuer paid approximately $700.0 million of cash to Dover; and
- Dover effected the distribution (the date of such distribution, the "Effective Date") of the Issuer's shares of common stock to Dover stockholders by causing us to register Dover's stockholders as our stockholders on our books and records (the foregoing steps taken together, the "Spin-off").

The Spin-off, together with the reorganization referred to above and all other transactions pursuant to, and the performance of all other obligations under, the Spin-Off Documents (as defined herein), constitute "Transactions" for purposes of the Indenture and this "Description of the Exchange Notes." For the purposes of this "Description of the Exchange Notes" and the Indenture, and the interpretation thereof, the Transactions shall be deemed to have occurred immediately prior to the Issue Date (and the Transactions were exempt from the limitations set forth under the heading "—Certain Covenants" below), and for all periods prior to the consummation of the Spin-off, the Issuer, its Subsidiaries and the other Subsidiaries of Dover transferred to the Issuer as part of the Transactions were deemed to have been Restricted Subsidiaries of the Issuer.

Guarantees

Any Restricted Subsidiary of the Issuer that incurs or guarantees Obligations under the Senior Credit Facilities or any series of capital markets debt securities (other than the notes) of the Issuer or a Guarantor issued in an aggregate principal amount of $50.0 million or more, will jointly and severally guarantee, as primary obligors and not merely as sureties, on a senior unsecured basis, the performance and full and punctual payment when due, whether at maturity, by acceleration or otherwise, of all obligations of the Issuer under the Indenture and the notes, whether for payment of principal of or interest on the notes, expenses, indemnification or otherwise, on the terms set forth in the Indenture by executing the Indenture. Each of the Guarantees will be a general unsecured obligation of the relevant Guarantor and will rank equal in right of payment to all existing and future Senior Indebtedness of each such Guarantor and will be effectively subordinated to all Secured Indebtedness of each such entity (including each Guarantor's guarantee of Indebtedness or Obligations under our Senior Credit Facilities) to the extent of the value of the assets securing such Secured Indebtedness and will be senior in right of payment to all existing and future Subordinated Indebtedness of each such entity. The notes are structurally subordinated to Indebtedness and other liabilities of Subsidiaries of the Issuer that do not Guarantee the notes.

Not all of the Issuer's Subsidiaries will Guarantee the notes. Unrestricted Subsidiaries, Foreign Subsidiaries and Restricted Subsidiaries that do not incur or guarantee Obligations under the Senior Credit Facilities or any series of capital markets debt securities (other than the notes) of the Issuer or a Guarantor issued in an aggregate principal amount of $50.0 million or more will not be required to be Guarantors. In the event of a bankruptcy, liquidation or reorganization of any of these non-guarantor Subsidiaries, such non-guarantor Subsidiaries will pay the holders of their debt and their trade creditors before they will be able to distribute any of their assets to the Issuer or any other Guarantor. As of the Issue Date, the Issuer has one Subsidiary, Apergy Middle East Services LLC ("AMES"), a joint venture organized in the Sultanate of Oman with a local partner in which the Issuer owns a 60% equity interest, that is an "Unrestricted Subsidiary" (as defined in the Indenture). See "Risk Factors—Risks related to Holding the Exchange Notes—Claims of holders of the notes will be structurally subordinated to all obligations of our existing and future subsidiaries that do not become Guarantors of the notes."

The obligations of each Guarantor under its Guarantee will be limited as necessary to prevent such Guarantee from constituting a fraudulent conveyance under applicable law and, therefore, are limited to the amount that such Guarantor could guarantee without such Guarantee constituting a fraudulent conveyance; this limitation, however, may not be effective to prevent such Guarantee from constituting a fraudulent conveyance. If a Guarantee was rendered voidable, it could be subordinated by a court to all other indebtedness (including guarantees and other contingent liabilities) of the applicable Guarantor, and, depending on the amount of such indebtedness, a Guarantor's liability on its Guarantee could be reduced to zero. See "Risk Factors—Risks related to Holding the Exchange Notes—Federal and state statutes allow courts, under specific circumstances, to void the notes and the guarantee of the notes by certain of our subsidiaries and to require holders of notes to return payments received from us, and if that occurs, you may not receive any payments on the notes."

Each Guarantor that makes a payment under its Guarantee will be entitled upon payment in full of all guaranteed obligations under the Indenture to a contribution from each other Guarantor in an amount equal to

such other Guarantor's pro rata portion of such payment based on the respective net assets of all the Guarantors at the time of such payment determined in accordance with GAAP.

Any Guarantee by a Guarantor of the notes shall provide by its terms that it shall be automatically and unconditionally released and discharged upon:

(i) (a) any sale, exchange or transfer (by merger or otherwise) of (I) the Capital Stock of such Guarantor (including any sale, exchange or transfer), after which the applicable Guarantor is no longer a Restricted Subsidiary or (II) all or substantially all of the assets of such Guarantor, which sale, exchange or transfer is made in compliance with the applicable provisions of the Indenture,

(b) the release or discharge of the guarantee by, or direct obligation of, such Guarantor with respect to the Senior Credit Facilities or capital markets debt securities that resulted in the creation of such Guarantee,

(c) the designation of any Guarantor as an Unrestricted Subsidiary in compliance with the applicable provisions of the Indenture,

(d) exercise of the legal defeasance option or covenant defeasance option by the Issuer as described under "—Legal Defeasance and Covenant Defeasance" or the Issuer's obligations under the Indenture being discharged in accordance with the terms of the Indenture,

(e) the merger or consolidation of any Guarantor with and into the Issuer or another Guarantor that is the surviving Person in such merger or consolidation, or upon the liquidation of such Guarantor following the transfer of all of its assets to the Issuer or another Guarantor; or

(f) as described under "—Amendment, Supplement and Waiver"; and

(ii) such Guarantor delivering to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent provided for in the Indenture relating to such transaction have been complied with.

Ranking

Senior indebtedness versus notes

The Indebtedness evidenced by the notes and the Guarantees will be unsecured and will rank pari passu in right of payment to all Senior Indebtedness of the Issuer or the relevant Guarantor, as the case may be. Secured Indebtedness and other secured obligations of the Issuer and the Guarantors (including obligations with respect to the Senior Credit Facilities) will be effectively senior to the notes to the extent of the value of the assets securing such debt or other obligations.

As of September 30, 2018, the Issuer's Senior Indebtedness was approximately $695.0 million, including $395.0 million of Secured Indebtedness.

In addition, as of September 30, 2018, the Issuer had approximately $250.0 million in availability for borrowing as additional Senior Indebtedness under our revolving facility under the Senior Credit Facilities (less the amount of any outstanding letters of credit outstanding thereunder), which would also be Secured Indebtedness.

Although the Indenture contains limitations on the amount of additional Indebtedness that the Issuer and the Restricted Subsidiaries may incur, under certain circumstances the amount of such Indebtedness could be substantial and, in certain circumstances, such Indebtedness may be Secured Indebtedness. See "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock" and "—Certain Covenants—Liens."

Liabilities of subsidiaries versus notes

The Issuer does not directly have any operations. All of our operations are conducted through Subsidiaries of the Issuer. Some of the Issuer's Subsidiaries are not Guaranteeing the notes, and, as described above under "Guarantees," Guarantees may be released under certain circumstances. In addition, the Issuer's future Subsidiaries may not be required to Guarantee the notes. Claims of creditors of any non-guarantor Subsidiaries of the Issuer, including trade creditors and creditors holding indebtedness or guarantees issued by such non-guarantor Subsidiaries, and claims of preferred stockholders of such non-guarantor Subsidiaries generally will have priority with respect to the assets and earnings of such non-guarantor Subsidiaries over the claims of our creditors, including Holders of the notes, even if such claims do not constitute Senior Indebtedness. Accordingly, the notes will be structurally subordinated to creditors (including trade creditors) and preferred stockholders, if any, of such non-guarantor Subsidiaries.

Although the Indenture limits the incurrence of Indebtedness and the issuance of Disqualified Stock and preferred stock by certain of our Subsidiaries, such limitation is subject to a number of significant exceptions and qualifications and the Indebtedness incurred and Disqualified Stock and preferred stock issued in compliance with the covenants could be substantial. Moreover, the Indenture does not impose any limitation on the incurrence or issuance by such subsidiaries of liabilities that are not considered Indebtedness or Disqualified Stock or preferred stock under the Indenture. See "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock."

Principal, Maturity and Interest

The Issuer has issued $300.0 million aggregate principal amount of outstanding notes. The notes will mature on May 1, 2026. The Issuer may issue additional notes from time to time after under the Indenture ("Additional Notes"). Any offering of Additional Notes is subject to the covenant described below under the heading "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock." The notes and any Additional Notes subsequently issued under the Indenture, together with the exchange note, will be treated as a single class for all purposes under the Indenture, including waivers, amendments, redemptions and offers to purchase. Unless the context requires otherwise, references to "notes" for all purposes of the Indenture and this "Description of the Exchange Notes" also include any Additional Notes and the exchange notes that are actually issued; provided that Additional Notes will not be issued with the same CUSIP, if any, as existing notes unless such Additional Notes are fungible with existing notes for U.S. federal income tax purposes.

Interest on the notes will accrue at the rate of 6.375% per annum and will be payable semiannually in arrears on May 1 and November 1, to Holders of record on the immediately preceding April 15 and October 15, as the case may be. Interest on the notes will accrue from the most recent date to which interest has been paid or, if no interest has been paid, from and including the Issue Date. Interest on the notes will be computed on the basis of a 360-day year comprised of twelve 30-day months. Principal of, premium, if any, and interest on the notes will be payable at the office or agency of the Issuer maintained for such purpose as described under "—Paying Agent and Registrar for the Notes" or, at the option of the Issuer, payment of interest may be made by check mailed to the Holders of the notes at their respective addresses set forth in the register of Holders; provided that all payments of principal, premium, if any, and interest with respect to the notes represented by one or more global notes registered in the name of or held by The Depository Trust Company or its nominees will be made by wire transfer of immediately available funds to The Depository Trust Company. The notes will be issued in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof.

Additional interest is payable with respect to the notes in certain circumstances if the Issuer does not consummate the exchange offer (or shelf registration, if applicable) as provided in the registration rights agreement and as further described in this prospectus under "The Exchange Offer."

If any interest payment date, the maturity date, any redemption date, or any earlier required repurchase date of a note falls on a day that is not a Business Day, the required payment will be made on the next succeeding Business Day and no interest on such payment will accrue in respect of such delay.

Mandatory Redemption; Offers to Purchase; Open Market Purchases

The Issuer is not required to make any mandatory redemption or sinking fund payments with respect to the notes. However, under certain circumstances, the Issuer may be required to offer to purchase notes as described under the heading "—Repurchase at the Option of Holders." We may at any time and from time to time purchase notes in a tender offer, the open market, negotiated transactions or otherwise.

Optional Redemption

At any time prior to May 1, 2021, the Issuer may redeem all or a part of the notes, upon written notice as described under the heading "—Selection and notice," at a redemption price equal to 100% of the principal amount of the notes redeemed plus the Applicable Premium as of, and accrued and unpaid interest, if any, to, but excluding, the date of redemption (the "Redemption Date"), subject to the rights of Holders of record of notes on the relevant record date to receive interest due on the relevant interest payment date.

On and after May 1, 2021, the Issuer may redeem the notes, in whole or in part, upon notice as described under the heading "—Selection and notice," at the redemption prices (expressed as percentages of principal amount of the notes to be redeemed) set forth below, plus accrued and unpaid interest thereon, if any, to, but excluding, the applicable Redemption Date, subject to the right of Holders of record of notes on the relevant record date to receive interest due on the relevant interest payment date, if redeemed during the twelve-month period beginning on May 1 of each of the years indicated below:

Year	Percentage
2021	104.781%
2022	103.188%
2023	101.594%
2024 and thereafter	100.000%

In addition, until May 1, 2021, the Issuer may, at its option, upon notice as described under the heading "—Selection and notice," on one or more occasions redeem up to 35% of the aggregate principal amount of notes issued under the Indenture at a redemption price equal to 106.375% of the aggregate principal amount thereof, plus accrued and unpaid interest thereon, if any, to, but excluding, the applicable Redemption Date, subject to the right of Holders of record of notes on the relevant record date to receive interest due on the relevant interest payment date, with the net cash proceeds of one or more Equity Offerings to the extent such net cash proceeds are received by or contributed to the Issuer; provided that at least 65% of the sum of the aggregate principal amount of notes originally issued under the Indenture (including any Additional Notes issued under the Indenture after the Issue Date) remains outstanding immediately after the occurrence of each such redemption; provided, further, that each such redemption occurs within 180 days of the date of closing of each such Equity Offering.

Any redemption may, at the Issuer's discretion, be subject to one or more conditions precedent, which shall be set forth in the related notice of redemption, including, but not limited to, completion of an Equity Offering, other offering or other transaction or event. In addition, if such redemption is subject to satisfaction of one or more conditions precedent, such notice shall describe each such condition, and if applicable, shall state that, in the Issuer's discretion, the Redemption Date may be delayed until such time as any or all such conditions shall be satisfied or waived by the Issuer in its sole discretion, or such redemption may not occur and such notice may be rescinded in the event that any or all such conditions shall not have been satisfied or waived by the Redemption Date, or by the Redemption Date as so delayed. The Issuer shall provide written notice of the satisfaction or waiver of such conditions, the delay of such Redemption Date or the rescission of such notice of redemption to the Trustee prior to the close of business one Business Day prior to the Redemption Date, and the Trustee shall provide such notice to each Holder in the same manner in which the notice of redemption was given. Upon receipt of such notice of the delay of such Redemption Date or the rescission of such notice of redemption, such Redemption Date shall be automatically delayed or such notice of redemption shall be automatically rescinded, as applicable, and the redemption of the notes shall be automatically delayed or rescinded and cancelled, as applicable, as provided in such notice.

The Issuer and its Affiliates may acquire notes by means other than a redemption, whether by tender offer, open market purchases, negotiated transactions or otherwise, in accordance with applicable securities laws, so long as such acquisition does not otherwise violate the terms of the Indenture.

Selection and notice

With respect to any partial redemption or repurchase of notes made pursuant to the Indenture, if less than all of the notes are to be redeemed at any given time, selection of such notes for redemption will be made by the Trustee (a) if the notes are listed on any securities exchange, in compliance with the requirements of the principal securities exchange on which the notes are listed, or (b) if the notes are not listed on any national securities exchange, on a pro rata basis (except that any notes represented by one or more global notes registered in the name of or held by The Depository Trust Company will be selected by lot or such other similar method in accordance with the procedures of The Depository Trust Company); provided that no notes of $2,000 or less shall be redeemed or repurchased in part.

Notices of purchase or redemption shall be delivered electronically or mailed by first-class mail, postage prepaid, at least 10 but not more than 60 days before the purchase or redemption date to each Holder of notes at such Holder's registered address or otherwise in accordance with the procedures of The Depository Trust Company, except that redemption notices may be mailed or sent more than 60 days prior to a redemption date if the notice is issued in connection with a defeasance of the notes or a satisfaction and discharge of the Indenture. If any note is to be purchased or redeemed in part only, any notice of purchase or redemption that relates to such note shall state the portion of the principal amount thereof that has been or is to be purchased or redeemed.

If any notes are to be purchased or redeemed in part only, the Issuer will issue a new note (or cause to be transferred by book entry) in principal amount equal to the unredeemed portion of the original note in the name of the Holder thereof upon cancellation of the original note. Notes called for redemption become due on the date fixed for redemption, unless such redemption is conditioned on the happening of a future event. On and after the Redemption Date, unless the Issuer defaults in payment of the redemption price, interest shall cease to accrue on notes or portions thereof called for redemption, unless such redemption is conditioned on the happening of a future event and such redemption is delayed or rescinded as a result thereof.

Repurchase at the Option of Holders

Change of control repurchase event

The Indenture provides that if a Change of Control Repurchase Event occurs after the Effective Date, unless the Issuer has, prior to or concurrently with the time the Issuer is required to make a Change of Control Offer (as defined herein), delivered electronically or mailed a redemption notice with respect to all the outstanding notes as described under "—Optional Redemption" or "—Satisfaction and Discharge," the Issuer will make an offer to purchase all of the notes pursuant to the offer described below (the "Change of Control Offer") at a price in cash (the "Change of Control Payment") equal to 101% of the aggregate principal amount thereof plus accrued and unpaid interest, if any, to, but excluding, the date of purchase, subject to the right of Holders of record on the relevant record date to receive interest due on the relevant interest payment date. No later than 30 days following any Change of Control Repurchase Event, the Issuer will send notice of such Change of Control Offer by first class mail or overnight mail or delivered electronically, with a copy to the Trustee sent in the same manner, to each Holder of notes to the address of such Holder appearing in the security register or otherwise in accordance with the procedures of The Depository Trust Company, with the following information:

(1) that a Change of Control Offer is being made pursuant to the covenant entitled "Change of Control Repurchase Event," and that all notes properly tendered pursuant to such Change of Control Offer will be accepted for payment by the Issuer;

(2) the purchase price and the purchase date (the "Change of Control Payment Date"), which will be no earlier than 30 days nor later than 60 days from the date such notice is mailed or sent;

(3) that any note not properly tendered will remain outstanding and continue to accrue interest;

(4) that, unless the Issuer defaults in the payment of the Change of Control Payment, all notes accepted for payment pursuant to the Change of Control Offer will cease to accrue interest on the Change of Control Payment Date;

(5) that Holders electing to have any notes purchased pursuant to a Change of Control Offer will be required to surrender such notes, with the form entitled "Option of Holder to Elect Purchase" on the reverse of such notes completed, to the Paying Agent specified in the notice at the address specified in the notice prior to the close of business on the third Business Day preceding the Change of Control Payment Date;

(6) that Holders will be entitled to withdraw their tendered notes and their election to require the Issuer to purchase such notes; provided that the Paying Agent receives, not later than the expiration time of the Change of Control Offer, electronic transmission (in PDF), facsimile transmission or letter (sent in the same manner provided in the Change of Control Offer) setting forth the name of the Holder of the notes, the principal amount of notes tendered for purchase, and a statement that such Holder is withdrawing its tendered notes and its election to have such notes purchased;

(7) that if the Issuer is purchasing less than all of the notes, the Holders of the remaining notes will be issued new notes and such new notes will be equal in principal amount to the unpurchased portion of the notes surrendered. The unpurchased portion of the notes must be equal to $2,000 or an integral multiple of $1,000 in excess thereof;

(8) if such notice is delivered prior to the occurrence of a Change of Control, stating that the Change of Control Offer is conditional on the occurrence of such Change of Control, and, if applicable, shall state that, in the Issuer's discretion, the Change of Control Payment Date may be delayed until such time as the Change of Control shall occur, or that such redemption may not occur and such notice may be rescinded in the event that the Issuer shall determine in good faith that such condition will not be satisfied by the Change of Control Payment Date, or by the Change of Control Payment Date as so delayed; and

(9) the other instructions, as determined by us, consistent with the covenant hereunder, that a Holder must follow.

While the notes are in global form and the Issuer makes an offer to purchase all of the notes pursuant to the Change of Control Offer, a Holder shall exercise its option to elect for the purchase of the notes through the facilities of The Depository Trust Company, subject to its rules and regulations.

The Issuer will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent such laws or regulations are applicable in connection with the repurchase of the notes pursuant to a Change of Control Offer. To the extent that the provisions of any securities laws or regulations conflict with the provisions of the Indenture, the Issuer will comply with the applicable securities laws and regulations and shall not be deemed to have breached its obligations described in the Indenture by virtue thereof.

On the Change of Control Payment Date, the Issuer will, to the extent permitted by law:

(1) accept for payment all notes issued by it or portions thereof properly tendered pursuant to the Change of Control Offer;

(2) deposit with the Paying Agent an amount equal to the aggregate Change of Control Payment in respect of all notes or portions thereof so tendered; and

(3) deliver, or cause to be delivered, to the Trustee for cancellation the notes so accepted together with an Officer's Certificate stating that all notes or portions thereof have been tendered to and purchased by the Issuer.

The Senior Credit Facilities provide, and future credit agreements or other agreements relating to Indebtedness to which the Issuer (or one of its Affiliates) becomes a party may provide, that certain change of

control events with respect to the Issuer would constitute a default thereunder (including a Change of Control under the Indenture). If we experience a change of control event that triggers a default under our Senior Credit Facilities, we may seek a waiver of such default or seek to refinance our Senior Credit Facilities. In the event we do not obtain such a waiver or refinance the Senior Credit Facilities, such default could result in amounts outstanding under our Senior Credit Facilities being declared due and payable. Our ability to pay cash to the Holders of notes following the occurrence of a Change of Control may be limited by our then existing financial resources. Therefore, sufficient funds may not be available when necessary to make any required repurchases of the notes. See "Risk Factors—Risks related to Holding the Exchange Notes—We may not be able to repurchase the notes upon a change of control."

In the event that we make a Change of Control Payment, the Paying Agent will promptly mail to each Holder of the notes the Change of Control Payment for such notes, and the Trustee will promptly authenticate a new note (or cause to be transferred by book entry) equal in principal amount to any unpurchased portion of the notes surrendered, if any; provided that each such new note will be in a minimum principal amount of $2,000 or an integral multiple of $1,000 in excess thereof. The Issuer will publicly announce the results of the Change of Control Offer on or as soon as practicable after the Change of Control Payment Date.

The Change of Control Repurchase Event purchase feature of the notes may in certain circumstances make more difficult or discourage a sale or takeover of the Issuer and, thus, the removal of incumbent management. The Change of Control purchase feature is a result of negotiations between the Issuer and the Initial Purchasers. We have no present intention to engage in a transaction involving a Change of Control after the Effective Date, although it is possible that we could decide to do so in the future. Subject to the limitations discussed below, we could, in the future, enter into certain transactions, including acquisitions, refinancings or other recapitalizations, that would not constitute a Change of Control under the Indenture, but that could increase the amount of indebtedness outstanding at such time or otherwise affect our capital structure or credit ratings. Restrictions on our ability to incur additional Indebtedness are contained in the covenants described under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock" and "Certain Covenants—Liens." Such restrictions in the Indenture can be waived only with the consent of the Holders of a majority in principal amount of the notes then outstanding. Except for the limitations contained in such covenants, however, the Indenture does not contain any covenants or provisions that may afford Holders of the notes protection in the event of a highly leveraged transaction.

We will not be required to make a Change of Control Offer following a Change of Control Repurchase Event if a third party makes the Change of Control Offer in the manner, at the times and otherwise in compliance with the requirements set forth in the Indenture applicable to a Change of Control Offer made by us and purchases all such notes validly tendered and not withdrawn under such Change of Control Offer.

Notwithstanding anything to the contrary herein, a Change of Control Offer may be made in advance of a Change of Control Repurchase Event, conditional upon such Change of Control Repurchase Event, if a definitive agreement is in place for the Change of Control at the time of the making of such Change of Control Offer.

If Holders of not less than 90% in aggregate principal amount of the outstanding notes validly tender and do not withdraw such notes in a Change of Control Offer and the Issuer, or any third party making a Change of Control Offer in lieu of the Issuer as described above, purchases all of the notes validly tendered and not withdrawn by such Holders, the Issuer or such third party will have the right, upon not less than 10 days nor more than 60 days' prior notice, provided that such notice is given not more than 30 days following such purchase pursuant to the Change of Control Offer described above, to redeem all notes that remain outstanding following such purchase on a date (the "Second Change of Control Payment Date") at a price in cash equal to the applicable Change of Control Payment in respect of the Second Change of Control Payment Date.

The definition of "Change of Control" includes a disposition of all or substantially all of the assets of the Issuer to any Person. Although there is a limited body of case law interpreting the phrase "substantially all," there

is no precise established definition of the phrase under applicable law. Accordingly, in certain circumstances there may be a degree of uncertainty as to whether a particular transaction would involve a disposition of "all or substantially all" of the assets of the Issuer. As a result, it may be unclear as to whether a Change of Control has occurred and whether a Holder of notes may require the Issuer to make an offer to repurchase the notes as described above. See "Risk Factors—Risks related to Holding the Exchange Notes—Holders of the notes may not be able to determine when a change of control giving rise to their right to have the notes repurchased has occurred following a sale of "substantially all" of our assets."

The provisions under the Indenture relating to the Issuer's obligation to make an offer to repurchase the notes as a result of a Change of Control Repurchase Event, including the definition of "Change of Control," may be waived or modified with the written consent of the Holders of a majority in principal amount of the notes outstanding.

Asset sales

The Indenture provides that the Issuer will not, and will not permit any Restricted Subsidiary to, consummate, directly or indirectly, an Asset Sale, unless:

(1) the Issuer or such Restricted Subsidiary, as the case may be, receives consideration (including by way of relief from, or by any other Person assuming responsibility for, any liabilities, contingent or otherwise) at the time of such Asset Sale at least equal to the Fair Market Value (as determined at the time of contractually agreeing to such Asset Sale) of the assets sold or otherwise disposed of; and

(2) except in the case of a Permitted Asset Swap, at least 75% of the consideration from such Asset Sale and all other Asset Sales since the Issue Date, on a cumulative basis, received by the Issuer or such Restricted Subsidiary, as the case may be, is in the form of cash or Cash Equivalents; provided that the amount of:

(a) any liabilities (as reflected on the Issuer's most recent consolidated balance sheet, or if incurred or accrued subsequent to the date of such balance sheet, such liabilities that would have been reflected on the Issuer's consolidated balance sheet if such incurrence or accrual had taken place on or prior to the date of such balance sheet, as determined in good faith by the Issuer) of the Issuer, other than liabilities that are by their terms subordinated to the notes, that are assumed by the transferee of any such assets (or are otherwise extinguished in connection with the transactions relating to such Asset Sale) and for which the Issuer and all such Restricted Subsidiaries have been validly released by all applicable creditors in writing,

(b) any securities, notes or other obligations or assets received by the Issuer or such Restricted Subsidiary from such transferee that are converted by the Issuer or such Restricted Subsidiary into cash or Cash Equivalents, or by their terms are required to be satisfied for cash or Cash Equivalents (to the extent of the cash or Cash Equivalents received), in each case, within 180 days following the closing of such Asset Sale,

(c) any Capital Stock or assets of the kind referred to in clause (2) of the next paragraph, and

(d) any Designated Non-cash Consideration received by the Issuer or such Restricted Subsidiary in such Asset Sale having an aggregate Fair Market Value, taken together with all other Designated Non-cash Consideration received pursuant to this clause (d) not to exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of such Asset Sale, with the Fair Market Value of each item of Designated Non-cash Consideration being measured either at the time of contractually agreeing to such Asset Sale or at the time received and without giving effect to subsequent changes in value, shall be deemed to be cash for purposes of this provision and for no other purpose.

Within 540 days after the Issuer's or any Restricted Subsidiary's receipt of the Net Proceeds of any Asset Sale (the "Asset Sale Proceeds Application Period"), the Issuer or such Restricted Subsidiary, at its option, may apply the Net Proceeds from such Asset Sale:

(1) to the extent the Issuer or such Restricted Subsidiary elects or is required by the terms of any Credit Facility, any Senior Indebtedness of the Issuer or any Guarantor, or any Indebtedness that would appear as a liability upon a balance sheet of a Restricted Subsidiary that is not a Guarantor, to prepay, repay or purchase any such Indebtedness (in each case other than Indebtedness owed to the Issuer or a Restricted Subsidiary); provided, however, that in connection with any such prepayment, repayment or purchase of Indebtedness, the Issuer or such Restricted Subsidiary will retire such Indebtedness and will cause the related loan commitment (if any) to be permanently reduced in an amount equal to the principal amount so prepaid, repaid or purchased;

(2) to the extent the Issuer or such Restricted Subsidiary elects, to reinvest in Additional Assets (including by means of an investment in Additional Assets by a Restricted Subsidiary with Net Proceeds received by the Issuer or another Restricted Subsidiary) within 540 days from the later of the date of such Asset Sale and the date of receipt of such Net Proceeds;

(3) to make any Permitted Investment; or

(4) any combination of the foregoing.

The Issuer and its Restricted Subsidiaries will be deemed to have complied with clause (2) and (3) above if and to the extent that, within 540 days after the Asset Sale that generated the Net Proceeds, the Issuer or such Restricted Subsidiary has entered into and not abandoned or rejected a binding agreement to consummate any such investment described in clause (2) with the good faith expectation that such Net Proceeds will be applied to satisfy such commitment within 180 days of such commitment (an "Acceptable Commitment") and, in the event any Acceptable Commitment is later cancelled or terminated for any reason before the Net Proceeds are applied in connection therewith, then such Net Proceeds shall constitute Excess Proceeds (as defined below).

No later than ten Business Days after the date that the balance of any Net Proceeds not invested or applied in the timeframe and as permitted by clauses (1) through (4) above (any such Net Proceeds, whether from one or more Asset Sales, "Excess Proceeds") exceeds $50.0 million, the Issuer shall make an offer to all Holders of the notes, and, if the Issuer or any Restricted Subsidiary elects, or is required by the terms of any Senior Indebtedness of the Issuer or any Guarantor or Indebtedness of any other Restricted Subsidiary ("Pari Passu Indebtedness"), to the holders of such Pari Passu Indebtedness (an "Asset Sale Offer"), to purchase the maximum aggregate principal amount of notes and such Pari Passu Indebtedness, (with respect to the notes only) in denominations of $2,000 initial principal amount and multiples of $1,000 thereafter, that may be purchased out of the Excess Proceeds at an offer price, in the case of the notes, in cash in an amount equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date fixed for the closing of such offer, in accordance with the procedures set forth in the Indenture. In the event that the Issuer or a Restricted Subsidiary prepays any Pari Passu Indebtedness that is outstanding under a revolving credit or other committed loan facility pursuant to an Asset Sale Offer, the Issuer or such Restricted Subsidiary shall cause the related loan commitment to be permanently reduced in an amount equal to the principal amount so prepaid.

The Issuer will commence an Asset Sale Offer for the notes by transmitting electronically or by mailing the notice required pursuant to the terms of the Indenture, with a copy to the Trustee. To the extent that the aggregate amount of notes and, if applicable, Pari Passu Indebtedness tendered pursuant to an Asset Sale Offer is less than the Excess Proceeds (or, in the case of an Asset Sale Offer being effected in advance of being required to do so by the Indenture, the amount of Net Proceeds to be applied in such Asset Sale Offer), the Issuer may use any remaining Excess Proceeds (or such amount offered) in any manner not prohibited by the Indenture. If the aggregate principal amount of notes and, if applicable, Pari Passu Indebtedness surrendered in an Asset Sale Offer exceeds the amount of Excess Proceeds, the Issuer shall determine the aggregate principal amount of notes to be purchased or repaid on a pro rata basis based on the accreted value or principal amount of the notes or such

Pari Passu Indebtedness tendered, and the Trustee shall select the notes to be purchased or repaid on a pro rata basis based on the accreted value or principal amount of the notes tendered or by lot or such similar method in accordance with the procedures of The Depository Trust Company; provided that no notes of $2,000 or less shall be repurchased in part. Upon completion of any such Asset Sale Offer, the amount of Excess Proceeds shall be reset at zero, and in the case of an Asset Sale Offer being effected in advance of being required to do so by the Indenture, the amount of Net Proceeds to be applied in such Asset Sale Offer shall be excluded in subsequent calculations of Excess Proceeds.

Pending the final application of any Net Proceeds pursuant to this covenant, the Issuer or the applicable Restricted Subsidiary may apply such Net Proceeds temporarily to reduce Indebtedness outstanding under a revolving credit facility or otherwise invest such Net Proceeds in any manner not prohibited by the Indenture.

The Issuer will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent such laws or regulations are applicable in connection with the repurchase of the notes pursuant to an Asset Sale Offer. To the extent that the provisions of any securities laws or regulations conflict with the provisions of the Indenture, the Issuer will comply with the applicable securities laws and regulations and shall not be deemed to have breached its obligations described in the Indenture by virtue thereof.

The provisions under the Indenture relative to the Issuer's obligation to make an offer to repurchase the notes as a result of an Asset Sale may be waived or modified with the written consent of the Holders of a majority in principal amount of the notes outstanding.

The Senior Credit Facilities limit, and future credit agreements or other agreements relating to Indebtedness to which the Issuer (or one of its Affiliates) becomes a party may prohibit or limit, the Issuer from purchasing any notes pursuant to this Asset Sales covenant. In the event the Issuer is contractually prohibited from purchasing the notes, the Issuer or one of its Affiliates, as the case may be, may seek the consent of its lenders to the purchase of the notes or may attempt to refinance the borrowings that contain such prohibition. If the Issuer or one of its Affiliates, as the case may be, does not obtain such consent or repay such borrowings, the Issuer will remain contractually prohibited from purchasing the notes. In such case, the Issuer's failure to purchase tendered notes would constitute a Default under the Indenture.

Certain Covenants

Effectiveness of covenants

Set forth below are summaries of certain covenants contained in the Indenture. Following the first date after the Effective Date that (i) the notes have Investment Grade Ratings from both Rating Agencies and (ii) no Default has occurred and is continuing under the Indenture, then upon delivery by the Issuer to the Trustee of an Officer's Certificate to the foregoing effect, the Issuer and the Restricted Subsidiaries will not be subject to the following provisions of the Indenture:

(1) "—Limitation on restricted payments";

(2) "—Limitation on incurrence of indebtedness and issuance of disqualified stock";

(3) "—Transactions with affiliates";

(4) "—Note guarantees";

(5) "—Dividend and other payment restrictions affecting restricted subsidiaries";

(6) "—Repurchase at the Option of Holders—Asset sales"; and

(7) clause (4) of the first paragraph of "—Merger, consolidation or sale of all or substantially all assets".

The Trustee shall have no obligation to monitor the ratings of the notes or independently determine or verify if such events have occurred or notify the Holders and may rely conclusively on such Officer's Certificate. The Trustee may provide a copy of such Officer's Certificate to any Holder of notes upon request.

There can be no assurance that the notes will ever achieve an Investment Grade Rating or that any such rating will be maintained.

Limitation on restricted payments

The Issuer will not, and will not permit any Restricted Subsidiary to, directly or indirectly:

(1) declare or pay any dividend or make any payment or distribution on account of the Issuer's or any Restricted Subsidiary's Equity Interests, including any dividend or distribution payable in connection with any merger or consolidation, other than:

(A) dividends or distributions by the Issuer payable in Equity Interests (other than Disqualified Stock) of the Issuer, or

(B) dividends or distributions by a Restricted Subsidiary so long as, in the case of any dividend or distribution payable on or in respect of any class or series of securities issued by a Subsidiary other than a Wholly-Owned Subsidiary, the Issuer or a Restricted Subsidiary receives at least its pro rata share of such dividend or distribution in accordance with its Equity Interests in such class or series of securities;

(2) purchase, redeem, defease or otherwise acquire or retire for value any Equity Interests of the Issuer or any direct or indirect parent company of the Issuer, including in connection with any merger or consolidation, in each case held by a person other than the Issuer or a Restricted Subsidiary;

(3) make any principal payment on, or redeem, repurchase, defease or otherwise acquire or retire for value in each case, prior to any scheduled repayment, sinking fund payment or maturity, any Subordinated Indebtedness of the Issuer or any Restricted Subsidiary, other than

(A) Indebtedness permitted under clauses (7) and (8) of the second paragraph of the covenant described under "—Limitation on incurrence of indebtedness and issuance of disqualified stock," or

(B) the purchase, repurchase or other acquisition of Subordinated Indebtedness purchased in anticipation of satisfying a sinking fund obligation, principal installment or final maturity, in each case due within one year of the date of purchase, repurchase or acquisition; or

(4) make any Restricted Investment

(all such payments and other actions set forth in clauses (1) through (4) above (other than any exception thereto) being collectively referred to as "Restricted Payments"), unless, at the time of such Restricted Payment:

(a) no Default shall have occurred and be continuing or would occur as a consequence thereof;

(b) immediately after giving effect to such transaction on a pro forma basis, the Issuer could incur $1.00 of additional Indebtedness under the provisions of the first paragraph of the covenant described under "—Limitation on incurrence of indebtedness and issuance of disqualified stock"; and

(c) such Restricted Payment, together with the aggregate amount of all other Restricted Payments made by the Issuer and the Restricted Subsidiaries after the Issue Date (including Restricted Payments permitted by clauses (1), (10) and (15) of the next succeeding paragraph, but excluding all other Restricted Payments permitted by the next succeeding paragraph), is less than the sum of (without duplication):

(1) 50% of the Consolidated Net Income of the Issuer for the period (taken as one accounting period) from the first day of the fiscal quarter during which the Effective Date occurs to the end of

the Issuer's most recently ended fiscal quarter for which annual or quarterly consolidated financial statements are available at the time of such Restricted Payment, or, in the case such Consolidated Net Income for such period is a deficit, minus 100% of such deficit, *plus*

(2) 100% of the aggregate net cash proceeds and the Fair Market Value of marketable securities or other property received by the Issuer, including in connection with any merger or consolidation, since immediately after the Issue Date (other than in connection with the Transactions) from the issue or sale of Equity Interests of the Issuer, but excluding cash proceeds and the Fair Market Value of marketable securities or other property received from the sale of Equity Interests to any employee, director, manager or consultant of the Issuer, any direct or indirect parent company of the Issuer and the Issuer's Subsidiaries after the Issue Date to the extent such amounts have been applied to Restricted Payments made in accordance with clause (4) of the next succeeding paragraph, and, to the extent such net cash proceeds are actually contributed to the Issuer, Equity Interests of any direct or indirect parent company of the Issuer (excluding contributions to the extent such amounts have been applied to Restricted Payments made in accordance with clause (3) of the next succeeding paragraph), provided that this clause (2) shall not include the proceeds from (a) Refunding Capital Stock (as defined below), (b) Equity Interests (or Indebtedness that has been converted or exchanged for Equity Interests) of the Issuer sold to a Restricted Subsidiary, the Issuer or any employee plan of the Issuer or any Restricted Subsidiary, as the case may be, or (c) Disqualified Stock (or Indebtedness that has been converted or exchanged into Disqualified Stock), *plus*

(3) the amount by which Indebtedness of the Issuer or the Restricted Subsidiaries is reduced on the Issuer's consolidated balance sheet upon the conversion or exchange subsequent to the Effective Date of any Indebtedness of the Issuer or the Restricted Subsidiaries (other than Indebtedness held by the Issuer or a Subsidiary of the Issuer) convertible or exchangeable for Capital Stock (other than Disqualified Stock) of the Issuer (less the amount of any cash, or the Fair Market Value of any other property, distributed by the Issuer upon such conversion or exchange); *plus*

(4) the aggregate amount equal to the net reduction in Investments resulting from (x) the sale or other disposition (other than to the Issuer or a Restricted Subsidiary) of Restricted Investments made by the Issuer and the Restricted Subsidiaries and repurchases and redemptions of such Restricted Investments from the Issuer and the Restricted Subsidiaries and repayments of loans or advances, and releases of guarantees, which constitute Restricted Investments made by the Issuer or its Restricted Subsidiaries, in each case, after the Issue Date, not to exceed in any such case the aggregate amount of Restricted Investments made by the Issuer or any Restricted Subsidiary after the Issue Date or (y) dividends, distributions, interest payments, return of capital, repayments of Investments or other transfers of assets to the Issuer or any Restricted Subsidiary from any Unrestricted Subsidiary, or the redesignation of any Unrestricted Subsidiary as a Restricted Subsidiary (valued in each case as provided in the definition of "Investment"), not to exceed in the case of any such Unrestricted Subsidiary the aggregate amount of Investments made by the Issuer or any Restricted Subsidiary in such Unrestricted Subsidiary after the Issue Date.

provided, however, that the calculation under the preceding clauses (1) through (4) shall not include any amounts attributable to, or arising in connection with, the Transactions.

The foregoing provisions will not prohibit:

(1) the payment of any dividend or distribution or the consummation of any irrevocable redemption within 60 days after the date of declaration thereof or the giving of such irrevocable notice, as applicable, if at the date of declaration or the giving of such notice such payment would have complied with the provisions of the Indenture;

(2) (a) the redemption, repurchase, retirement or other acquisition of any Equity Interests ("Retired Capital Stock") of the Issuer or any Restricted Subsidiary, or any Equity Interests of any direct or indirect parent company of the Issuer, in exchange for, or out of the proceeds of a sale (other than to a Restricted Subsidiary) made within 120 days of, Equity Interests of the Issuer or any direct or indirect parent company of the Issuer to the extent contributed to the Issuer (in each case, other than any Disqualified Stock) ("Refunding Capital Stock") and (b) if immediately prior to the retirement of Retired Capital Stock, the declaration and payment of dividends thereon was permitted under clause (6) of this paragraph, the declaration and payment of dividends on the Refunding Capital Stock in an aggregate amount per year no greater than the aggregate amount of dividends per annum that was declarable and payable on such Retired Capital Stock immediately prior to such retirement;

(3) the prepayment, exchange, redemption, defeasance, repurchase or other acquisition or retirement for value of Subordinated Indebtedness of the Issuer or a Restricted Subsidiary made in exchange for, or out of the proceeds of a sale made within 120 days of, new Indebtedness of the Issuer or a Restricted Subsidiary that is incurred in compliance with "—Limitation on incurrence of indebtedness and issuance of disqualified stock" so long as:

(A) the principal amount (or accreted value, if applicable) of such new Indebtedness does not exceed the principal amount of (or accreted value, if applicable), plus any accrued and unpaid interest on the Subordinated Indebtedness being so prepaid, exchanged, redeemed, defeased, repurchased, exchanged, acquired or retired for value, plus the amount of any premium (including reasonable tender premiums), defeasance costs and any reasonable fees and expenses incurred in connection with the issuance of such new Indebtedness,

(B) such new Indebtedness is subordinated to the notes or the applicable Guarantee at least to the same extent as such Subordinated Indebtedness so prepaid, exchanged, redeemed, defeased, repurchased, acquired or retired for value,

(C) such new Indebtedness has a final scheduled maturity date, or mandatory redemption date, as applicable equal to or later than the final scheduled maturity date, or mandatory redemption date, of the Subordinated Indebtedness being so prepaid, exchanged, redeemed, defeased, repurchased, exchanged, acquired or retired, and

(D) such new Indebtedness has a Weighted Average Life to Maturity equal to or greater than the remaining Weighted Average Life to Maturity of the Subordinated Indebtedness being so redeemed, defeased, repurchased, exchanged, acquired or retired;

(4) a Restricted Payment to pay for the repurchase, retirement, cancellation or other acquisition or retirement for value of Equity Interests (other than Disqualified Stock) of the Issuer or any direct or indirect parent company of the Issuer held by any future, present or former employee, director, manager or consultant of the Issuer, any of its Subsidiaries or any direct or indirect parent company of the Issuer pursuant to any management equity plan or stock option plan or any other management or employee benefit plan or agreement, or any stock subscription or stockholder agreement (including any principal and interest payable on any notes issued by the Issuer or any direct or indirect parent company of the Issuer in connection with such repurchase, retirement or other acquisition); provided, that the aggregate Restricted Payments made under this clause (4) do not exceed in any calendar year $10.0 million, with unused amounts in any calendar year being permitted to be carried forward to succeeding calendar years; provided, further, that such amount in any calendar year may be increased by an amount not to exceed:

(A) the cash proceeds from the sale of Equity Interests (other than Disqualified Stock) of the Issuer and, to the extent contributed to the Issuer, the cash proceeds from the sale of Equity Interests of any direct or indirect parent company of the Issuer, in each case to any future, present or former employees, directors, managers or consultants of the Issuer, any of its Subsidiaries or any direct or indirect parent company of the Issuer that occurs after the Issue Date, to the extent the cash proceeds from the sale of such Equity Interests have not otherwise been applied to the payment of Restricted Payments by virtue of clause (c) of the preceding paragraph, plus

(B) the cash proceeds of key man life insurance policies received by the Issuer and the Restricted Subsidiaries after the Issue Date, less

(C) the amount of any Restricted Payments previously made pursuant to clauses (A) and (B) of this clause (3); provided that the Issuer may elect to apply all or any portion of the aggregate increase contemplated by clauses (A) and (B) of this clause (4) in any calendar year);

and provided, further, that cancellation of Indebtedness owing to the Issuer or any Restricted Subsidiary from any future, present or former employees, directors, managers or consultants of the Issuer (or any permitted transferee thereof), any direct or indirect parent company of the Issuer or any Restricted Subsidiary in connection with a repurchase of Equity Interests of the Issuer or any direct or indirect parent company of the Issuer will not be deemed to constitute a Restricted Payment for purposes of this covenant or any other provision of the Indenture;

(5) the declaration and payment of dividends to holders of any class or series of Disqualified Stock of the Issuer or any Restricted Subsidiary or any class or series of preferred stock of any Restricted Subsidiary, in each case, issued in accordance with the covenant described under "— Limitation on incurrence of indebtedness and issuance of disqualified stock" to the extent such dividends are included in the definition of Fixed Charges;

(6) the declaration and payment of dividends on Refunding Capital Stock in excess of the dividends declarable and payable thereon pursuant to clause (2) of this paragraph provided that, for the most recently ended four full fiscal quarters for which internal financial statements are available (as determined in good faith by the Issuer) immediately preceding the date of the declaration of such dividends on Refunding Capital Stock, after giving effect to such issuance or declaration on a pro forma basis, the Issuer and the Restricted Subsidiaries on a consolidated basis would have had a Fixed Charge Coverage Ratio of at least 2.00 to 1.00;

(7) Investments in Unrestricted Subsidiaries having an aggregate Fair Market Value, taken together with all other Investments made pursuant to this clause (7) that are at the time outstanding (the amount at the time outstanding calculated without giving effect to the sale of an Unrestricted Subsidiary to the extent the proceeds of such sale do not consist of cash, Cash Equivalents or marketable securities), not to exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of such Investment (with the Fair Market Value of each Investment being measured at the time made and without giving effect to subsequent changes in value);

(8) payments made or expected to be made by the Issuer or any Restricted Subsidiary in respect of withholding or similar taxes payable upon exercise of Equity Interests by any future, present or former employee, director, manager or consultant and repurchases of Equity Interests deemed to occur upon exercise of stock options or warrants if such Equity Interests represent a portion of the exercise price of such options or warrants;

(9) [reserved];

(10) other Restricted Payments in an aggregate amount taken together with all other Restricted Payments made pursuant to this clause (10) not to exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of such Restricted Payment;

(11) [reserved];

(12) repurchases of Capital Stock deemed to occur upon the exercise, conversion or exchange of stock options, restricted stock, restricted stock units, warrants, other rights to acquire Capital Stock or other convertible or exchangeable securities if such Capital Stock represents all or portion of the exercise price thereof or withholding taxes payable with respect thereto;

(13) the repurchase, redemption or other acquisition for value of Equity Interests of the Issuer deemed to occur in connection with paying cash in lieu of fractional shares of such Equity Interests in connection with

a share dividend, distribution, share split, reverse share split, merger, consolidation, amalgamation or other business combination of the Issuer, or upon the exercise, conversion or exchange of any stock options, warrants, other rights to purchase Capital Stock or other convertible or exchangeable securities, in each case, permitted under the Indenture;

(14) the distribution, by dividend or otherwise, of shares of Capital Stock or other securities of, or Indebtedness owed to the Issuer or a Restricted Subsidiary by, Unrestricted Subsidiaries (other than Unrestricted Subsidiaries, the primary assets of which are cash or Cash Equivalents);

(15) any Restricted Payment; provided that on a pro forma basis after giving effect to such Restricted Payment the Consolidated Total Debt Ratio would be equal to or less than 2.00 to 1.00;

(16) payments or distributions to satisfy dissenters' rights, pursuant to or in connection with a consolidation, merger or transfer of assets that complies with "—Merger, consolidation or sale of all or substantially all assets"; and

(17) any Restricted Payments attributable to, or arising in connection with, (i) the Transactions and (ii) any other transactions pursuant to agreements or arrangements in effect on the Effective Date on substantially the terms described in the Offering Memorandum or any amendment, modification or supplement thereto or replacement thereof, as long as the terms of such agreement or arrangement, as so amended, modified, supplemented or replaced is not materially more disadvantageous to the Issuer and the Restricted Subsidiaries, taken as a whole, than the terms of such agreement or arrangement described in the Offering Memorandum.

provided that at the time of, and after giving effect to, any Restricted Payment permitted under clauses (6), (10), (14) and (15), no Default shall have occurred and be continuing.

As of the Effective Date, all of the Issuer's Subsidiaries were Restricted Subsidiaries, except for AMES, which was an Unrestricted Subsidiary. The Issuer will not permit any Unrestricted Subsidiary to become a Restricted Subsidiary except pursuant to the definition of "Unrestricted Subsidiary." For purposes of designating any Restricted Subsidiary as an Unrestricted Subsidiary, all outstanding Investments by the Issuer and the Restricted Subsidiaries (except to the extent repaid) in the Subsidiary so designated will be deemed to be Restricted Payments in an amount determined as set forth in the definition of "Investment." Such designation will be permitted only if a Restricted Payment in such amount would be permitted at such time, whether pursuant to the first paragraph of this covenant or under clauses (7), (10) or (15) of the second paragraph of this covenant, and if such Subsidiary otherwise meets the definition of an Unrestricted Subsidiary. Unrestricted Subsidiaries will not be subject to any of the restrictive covenants set forth in the Indenture.

Limitation on incurrence of indebtedness and issuance of disqualified stock

The Issuer will not, and will not permit any Restricted Subsidiary to, directly or indirectly, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable for, contingently or otherwise (collectively, "incur" and collectively, an "incurrence") any Indebtedness (including Acquired Indebtedness) and the Issuer will not issue any shares of Disqualified Stock and will not permit any Restricted Subsidiary to issue any shares of Disqualified Stock or, in the case of Restricted Subsidiaries that are not the Issuer or Guarantors, preferred stock; provided that the Issuer may incur Indebtedness (including Acquired Indebtedness) or issue shares of Disqualified Stock, and any Restricted Subsidiary may incur Indebtedness (including Acquired Indebtedness), issue shares of Disqualified Stock and issue shares of preferred stock, if, after giving effect thereto, the Fixed Charge Coverage Ratio of the Issuer and the Restricted Subsidiaries would be at least 2.00 to 1.00; provided, further, that the amount of Indebtedness, Disqualified Stock and preferred stock that may be incurred pursuant to the foregoing, together with any amounts incurred under clause (14)(x) of the following paragraph and Refinancing Indebtedness in respect of any of the foregoing, by Restricted Subsidiaries that are not the Issuer or Guarantors shall not exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of incurrence.

The foregoing limitations will not apply to:

(1) Indebtedness incurred pursuant to Credit Facilities by the Issuer or any Restricted Subsidiary and any Refinancing Indebtedness (having the meaning set forth in clause (13) below) in respect thereof; provided that immediately after giving effect to any such incurrence, the then-outstanding aggregate principal amount of all Indebtedness incurred under this clause (1) does not exceed at any one time (x) the greater of (i) $750.0 million and (ii) $550.0 million plus 10% of Consolidated Total Assets plus (y) an additional amount if, after giving pro forma effect to the incurrence of such additional amount and the application of net proceeds therefrom, the Consolidated Secured Debt Ratio is equal to or less than 1.50 to 1.00 plus (z) in the case of any refinancing of any Credit Facility or any portion thereof, the aggregate amount of fees, underwriting discounts, premiums and other costs and expenses incurred in connection with such refinancing; provided, that, for purposes of determining the amount of Indebtedness that may be incurred under clause (1)(y), all Indebtedness incurred under this clause (1) shall be treated as Secured Indebtedness;

(2) Indebtedness represented by the notes (including any Guarantee thereof, but excluding Indebtedness represented by Additional Notes, if any, or guarantees with respect thereto) and exchange notes issued in respect of such notes and any Guarantee thereof;

(3) Existing Indebtedness (other than Indebtedness described in clauses (1) and (2));

(4) Indebtedness (including Capitalized Lease Obligations), Disqualified Stock and preferred stock incurred by the Issuer or any Restricted Subsidiary, to finance the purchase, lease, construction, installation, repair, replacement or improvement of property (real or personal) or equipment that is used or useful in a Similar Business, including through the direct purchase of assets or the Capital Stock of any Person owning such assets, together with any Refinancing Indebtedness incurred to Refinance any Indebtedness, Disqualified Stock and preferred stock incurred pursuant to this clause (4), in an aggregate principal amount or liquidation preference which, when aggregated with the principal amount of all other Indebtedness, Disqualified Stock and preferred stock then outstanding and incurred pursuant to this clause (4), does not exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of incurrence; provided that such Indebtedness exists at the date of such purchase, lease, construction, installation, repair, replacement or improvement or is created within 270 days of the completion thereof;

(5) Indebtedness incurred by the Issuer or any Restricted Subsidiary constituting reimbursement obligations with respect to letters of credit, bankers' acceptances, bank guarantees, warehouse receipts or similar facilities issued or entered into in the ordinary course of business, including letters of credit in respect of workers' compensation claims, performance or surety bonds, health, disability or other employee benefits or property, casualty or liability insurance or self-insurance, or other Indebtedness with respect to reimbursement or indemnification obligations regarding workers' compensation claims, performance or surety bonds, health, disability or other employee benefits or property, casualty or liability insurance or self-insurance;

(6) Indebtedness arising from agreements of the Issuer or a Restricted Subsidiary providing for indemnification, adjustment of purchase price, earnout or similar obligations, in each case, incurred or assumed in connection with the acquisition or disposition of any business, assets or a Subsidiary, other than guarantees of Indebtedness incurred by any Person acquiring all or any portion of such business, assets or a Subsidiary for the purpose of financing such acquisition; provided that such Indebtedness is not reflected as Indebtedness on the balance sheet of the Issuer or any Restricted Subsidiary (contingent obligations referred to in a footnote to financial statements and not otherwise reflected on the balance sheet will not be deemed to be reflected on such balance sheet for purposes of this clause (6));

(7) Indebtedness (i) of the Issuer to a Restricted Subsidiary or (ii) of a Restricted Subsidiary owing to the Issuer or another Restricted Subsidiary; provided that if such Indebtedness is owing to a Restricted Subsidiary that is not the Issuer or a Guarantor, such Indebtedness is subordinated in right of payment to the notes; provided, further, that any subsequent issuance or transfer of any Capital Stock or any other event which results in any such Restricted Subsidiary to which such indebtedness is owed ceasing to be a

Restricted Subsidiary or any other subsequent transfer of any such Indebtedness (except to the Issuer or another Restricted Subsidiary) shall be deemed, in each case to be an incurrence of such Indebtedness not permitted by this clause;

(8) Indebtedness of any Foreign Subsidiary in an aggregate principal amount at any time outstanding not exceeding the greater of (x) $25.0 million and (y) 1.25% of Consolidated Total Assets at the time of incurrence;

(9) shares of preferred stock of a Restricted Subsidiary issued to the Issuer or another Restricted Subsidiary; provided that any subsequent issuance or transfer of any Capital Stock or any other event which results in any such Restricted Subsidiary ceasing to be a Restricted Subsidiary or any other subsequent transfer of any such shares of preferred stock (except to the Issuer or another Restricted Subsidiary) shall be deemed in each case to be an issuance of such shares of preferred stock not permitted by this clause;

(10) Hedging Obligations (excluding Hedging Obligations entered into for speculative purposes) for the purpose of limiting interest rate risk, exchange rate risk or commodity pricing risk;

(11) obligations in respect of self-insurance, performance, bid, appeal and surety bonds and completion guarantees and similar obligations provided by the Issuer or any Restricted Subsidiary or obligations in respect of letters of credit, bank guarantees or similar instruments related thereto, in each case, in the ordinary course of business;

(12) Indebtedness, Disqualified Stock or preferred stock of the Issuer or any Restricted Subsidiary not otherwise permitted hereunder in an aggregate principal amount or liquidation preference, which when aggregated with the principal amount and liquidation preference of all other Indebtedness, Disqualified Stock and preferred stock then outstanding and incurred pursuant to this clause (12), does not at any one time outstanding exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of incurrence;

(13) the incurrence or issuance by the Issuer or any Restricted Subsidiary of Indebtedness, Disqualified Stock or preferred stock which serves to Refinance within 90 days following the date of the incurrence or issuance thereof any Indebtedness, Disqualified Stock or preferred stock incurred as permitted under the first paragraph of this covenant and clauses (1), (2), (3) and (4) above, this clause (13) and clause (14) below or any Indebtedness, Disqualified Stock or preferred stock issued to so Refinance such Indebtedness, Disqualified Stock or preferred stock (the "Refinancing Indebtedness") prior to its respective maturity; provided that:

(1) such Refinancing Indebtedness has a Weighted Average Life to Maturity at the time such Refinancing Indebtedness is incurred which is not less than the remaining Weighted Average Life to Maturity of the Indebtedness, Disqualified Stock or preferred stock being Refinanced,

(2) to the extent such Refinancing Indebtedness Refinances (i) Indebtedness subordinated to the notes or any Guarantee of the notes, such Refinancing Indebtedness is subordinated to the notes or such Guarantee at least to the same extent as the Indebtedness being Refinanced or (ii) Disqualified Stock or preferred stock, such Refinancing Indebtedness must be Disqualified Stock or preferred stock, respectively,

(3) such Refinancing Indebtedness shall not include Indebtedness, Disqualified Stock or preferred stock of a Subsidiary of the Issuer or a Guarantor that Refinances Indebtedness, Disqualified Stock or preferred stock of the Issuer or a Guarantor;

(4) the principal amount (or accreted value, if applicable) of such Refinancing Indebtedness shall not exceed the principal amount (or accreted value, if applicable) of the Indebtedness, Disqualified Stock or preferred stock being Refinanced except by an amount no greater than accrued and unpaid interest with respect to such Indebtedness, Disqualified Stock or preferred stock and any reasonable fees, premium and expenses relating to such Refinancing; and

(5) such Refinancing Indebtedness has a final scheduled maturity date, or mandatory redemption date, as applicable equal to or later than the final scheduled maturity date, or mandatory redemption date, of the Indebtedness being Refinanced;

provided, further, that subclause (1) of this clause (13) will not apply to any refunding or refinancing of any Secured Indebtedness outstanding;

(14) Indebtedness, Disqualified Stock or preferred stock of (x) the Issuer or a Restricted Subsidiary incurred or issued to finance an acquisition (in aggregate principal amount not to exceed the purchase price of such acquisition) or (y) Persons that are acquired by the Issuer or any Restricted Subsidiary or merged into or consolidated with the Issuer or a Restricted Subsidiary in accordance with the terms of the Indenture (including designating an Unrestricted Subsidiary a Restricted Subsidiary) and any Refinancing Indebtedness with respect to any Indebtedness incurred pursuant to this clause (14); provided that after giving effect to such acquisition, merger or consolidation, either:

(1) the Issuer would be permitted to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the first paragraph of this covenant; or

(2) the Fixed Charge Coverage Ratio of the Issuer and the Restricted Subsidiaries is equal to or greater than immediately prior to such acquisition, merger or consolidation;

provided, further, that the amount of Indebtedness, Disqualified Stock and preferred stock that may be incurred pursuant to clause (14)(x), together with Refinancing Indebtedness in respect thereof and any amounts incurred under the first paragraph of this covenant, by Restricted Subsidiaries that are not Guarantors shall not exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of incurrence;

(15) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument drawn against insufficient funds in the ordinary course of business;

(16) Indebtedness of the Issuer or any Restricted Subsidiary supported by a letter of credit issued pursuant to any Credit Facility, in a principal amount not in excess of the stated amount of such letter of credit;

(17) (x) any guarantee by the Issuer or a Restricted Subsidiary of Indebtedness or other obligations of any Restricted Subsidiary so long as, in the case of a guarantee by a Restricted Subsidiary that is not a Guarantor, such Indebtedness could have been incurred directly by the Restricted Subsidiary providing such guarantee, or (y) any guarantee by a Restricted Subsidiary of Indebtedness of the Issuer, provided that such guarantee is incurred in accordance with the covenant described below under "—Note guarantees";

(18) Indebtedness of the Issuer or any of its Restricted Subsidiaries consisting of (i) the financing of insurance premiums or (ii) take or pay obligations contained in supply arrangements, in each case incurred in the ordinary course of business;

(19) Indebtedness of the Issuer or any of its Restricted Subsidiaries undertaken in connection with Cash Management Services and related activities with respect to any Subsidiary or joint venture in the ordinary course of business;

(20) Indebtedness issued by the Issuer or any of its Restricted Subsidiaries to future, current or former officers, directors, managers and employees thereof, their respective estates, spouses or former spouses, in each case to finance the purchase or redemption of Equity Interests of the Issuer or any direct or indirect parent company of the Issuer to the extent described in clause (4) of the second paragraph under the heading "—Limitation on restricted payments"; and

(21) Indebtedness of the Issuer or any of its Restricted Subsidiaries representing deferred compensation to officers, directors, managers and employees thereof incurred in the ordinary course of business.

For purposes of determining compliance with this covenant (a) in the event that an item of Indebtedness, Disqualified Stock or preferred stock (or any portion thereof) meets the criteria of more than one of the

categories of permitted Indebtedness, Disqualified Stock or preferred stock described in clauses (1) through (21) above or is entitled to be incurred pursuant to the first paragraph of this covenant, the Issuer, in its sole discretion, may divide, classify or later reclassify (based on circumstances existing on the date of such reclassification) such item of Indebtedness, Disqualified Stock or preferred stock (or any portion thereof) and will only be required to include the amount and type of such Indebtedness, Disqualified Stock or preferred stock in one of the above clauses or paragraphs; provided that all Indebtedness outstanding under the Senior Credit Facilities on the Effective Date after giving effect to the Transactions was treated as incurred on the Effective Date under clause (1) of the preceding paragraph; provided, further that the Issuer shall not be permitted to reclassify all or any portion of any Secured Indebtedness unless the Lien is also permitted to be incurred, and is incurred, with respect to such Secured Indebtedness as so reclassified; and (b) at the time of incurrence, the Issuer will be entitled to divide and classify an item of Indebtedness in more than one of the types of Indebtedness described in the first and second paragraph above.

Accrual of interest or dividends, the accretion of accreted value, the accretion or amortization of original issue discount and the payment of interest or dividends in the form of additional Indebtedness, Disqualified Stock or preferred stock will not be deemed to be an incurrence of Indebtedness, Disqualified Stock or preferred stock for purposes of this covenant. Any Refinancing Indebtedness and any Indebtedness incurred to refinance Indebtedness incurred pursuant to clauses (1) and (12) above shall be permitted to include additional Indebtedness, Disqualified Stock or preferred stock incurred to pay premiums (including reasonable tender premiums), defeasance costs, accrued and unpaid interest, fees and expenses in connection with such refinancing.

For purposes of determining compliance with any U.S. dollar-denominated restriction on the incurrence of Indebtedness, the U.S. dollar-equivalent principal amount of Indebtedness denominated in another currency shall be calculated based on the relevant currency exchange rate in effect on the date such Indebtedness was incurred, in the case of term debt, or first committed, in the case of revolving credit debt; provided that if such Indebtedness is incurred to Refinance other Indebtedness denominated in another currency, and such Refinancing would cause the applicable U.S. dollar-denominated restriction to be exceeded if calculated at the relevant currency exchange rate in effect on the date of such Refinancing, such U.S. dollar-denominated restriction shall be deemed not to have been exceeded so long as the principal amount of such Refinancing Indebtedness does not exceed (i) the principal amount of such Indebtedness being Refinanced plus (ii) the aggregate amount of fees, underwriting discounts, premiums and other costs and expenses incurred in connection with such Refinancing.

The principal amount of any Indebtedness incurred to Refinance other Indebtedness, if incurred in a different currency from the Indebtedness being Refinanced, shall be calculated based on the currency exchange rate applicable to the currencies in which such respective Indebtedness is denominated that is in effect on the date of such Refinancing.

The Indenture does not treat (1) unsecured Indebtedness as subordinated or junior to Secured Indebtedness merely because it is unsecured or (2) Senior Indebtedness as subordinated or junior to any other Senior Indebtedness merely because it has a junior priority with respect to the same collateral.

Liens

The Issuer will not, and will not permit the Issuer or any Guarantor to, directly or indirectly, create, incur, assume or suffer to exist any Lien (except Permitted Liens) that secures obligations under any Indebtedness or any related Guarantee on any asset or property of the Issuer or any Guarantor, or any income or profits therefrom, or assign or convey any right to receive income therefrom, unless the notes (or the related Guarantee in the case of Liens of a Guarantor) are equally and ratably secured with (or, in the event the Lien relates to Subordinated Indebtedness, are secured on a senior basis to) the obligations so secured.

Any Lien created for the benefit of the Holders of the notes pursuant to the preceding paragraph shall provide by its terms that such Lien shall be automatically and unconditionally released and discharged upon

(i) the release and discharge of the Lien that gave rise to the obligation to secure the notes (the "Initial Lien") or (ii) any sale, exchange or transfer to any Person not an Affiliate of the Issuer of the property or assets secured by the Initial Lien, or of all of the Capital Stock held by the Issuer or any Restricted Subsidiary in, or all or substantially all the assets of, any Guarantor creating such Initial Lien.

Merger, consolidation or sale of all or substantially all assets

The Issuer will not consolidate or merge with or into or wind up into (whether or not the Issuer is the surviving Person), or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of its properties or assets, in one or more related transactions, to any Person unless:

(1) the Issuer is the surviving Person or the Person formed by or surviving any such consolidation or merger (if other than the Issuer) or to which such sale, assignment, transfer, lease, conveyance or other disposition will have been made is a Person organized or existing under the laws of the United States, any state thereof or the District of Columbia (such Person, as the case may be, being herein called the "Successor Issuer"); provided that in the case where the surviving Person is not a corporation, a co-obligor of the notes is a corporation;

(2) the Successor Issuer, if other than the Issuer, expressly assumes all the obligations of the Issuer under the Indenture and the notes pursuant to supplemental indentures or other documents or instruments in form and substance reasonably satisfactory to the Trustee;

(3) immediately after such transaction, no Default exists;

(4) immediately after giving pro forma effect to such transaction and any related financing transactions, as if such transactions had occurred at the beginning of the Applicable Measurement Period,

(A) the Issuer would be permitted to incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test set forth in the first paragraph of the covenant described under "—Limitation on incurrence of indebtedness and issuance of disqualified stock" or

(B) the Fixed Charge Coverage Ratio for the Issuer and the Restricted Subsidiaries would be equal to or greater than the Fixed Charge Coverage Ratio for the Issuer and the Restricted Subsidiaries immediately prior to such transaction;

(5) each Guarantor, unless it is the other party to the transactions described above shall have by supplemental indenture confirmed that its Guarantee shall apply to such Person's obligations under the Indenture and the notes; and

(6) the Issuer shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that such consolidation, merger or transfer and such supplemental indentures, if any, comply with the Indenture and an Opinion of Counsel stating that the Indenture constitutes the legal, valid and binding obligation of the Issuer or Successor Issuer, as applicable.

The Successor Issuer will succeed to, and be substituted for, the Issuer under the Indenture and the notes and the Issuer will automatically be released and discharged from its obligations under the Indenture and the notes.

Notwithstanding the foregoing clauses (3) and (4) of the first paragraph of this covenant,

(a) any Restricted Subsidiary may consolidate with, merge into or sell, assign, transfer, lease, convey or otherwise dispose of all or part of its properties and assets to the Issuer or any Guarantor; and

(b) the Issuer may consolidate or merge with or into or transfer all or substantially all its properties and assets to an Affiliate incorporated or organized solely for the purpose of reincorporating or reorganizing the Issuer in another jurisdiction within the laws of the United States, any state thereof or the District of Columbia so long as the amount of Indebtedness of the Issuer and its Restricted Subsidiaries is not increased thereby.

Subject to certain limitations described in the Indenture governing release of a Guarantee upon the sale, disposition or transfer of a Guarantor, no Guarantor will, and the Issuer will not permit any such Guarantor to, consolidate or merge with or into or wind up into (whether or not such Guarantor is the surviving Person), or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of its properties or assets, in one or more related transactions, to any Person unless:

(A) (1) such Guarantor is the surviving Person or the Person formed by or surviving any such consolidation or merger (if other than such Guarantor) or to which such sale, assignment, transfer, lease, conveyance or other disposition will have been made is a Person organized or existing under the laws of the United States, any state thereof or the District of Columbia (such Person, as the case may be, being herein called the "Successor Person");

(2) the Successor Person, if other than such Guarantor, expressly assumes all the obligations of such Guarantor under the Indenture and such Guarantor's related Guarantee pursuant to supplemental indentures or other documents or instruments in form and substance reasonably satisfactory to the Trustee;

(3) immediately after such transaction, no Default exists; and

(4) the Issuer shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that such consolidation, merger or transfer and such supplemental indentures, if any, comply with the Indenture and an Opinion of Counsel stating that the Indenture and Guarantees, as applicable, constitute legal, valid and binding obligations of the applicable Guarantor, subject to customary exceptions; or

(B) the transaction is an Asset Sale that is made in compliance with the covenant described under "—Repurchase at the Option of Holders—Asset sales."

Subject to certain limitations described in the Indenture, the Successor Person will succeed to, and be substituted for, such Guarantor under the Indenture and such Guarantor's Guarantee and such Guarantor will automatically be released and discharged from its obligations under the Indenture and such Guarantor's Guarantee. Notwithstanding the foregoing, any Guarantor may (i) merge into or transfer all or part of its properties and assets to another Guarantor or the Issuer, (ii) merge with an Affiliate of the Issuer solely for the purpose of reincorporating or reorganizing the Guarantor under the laws of the United States, any state thereof or the District of Columbia so long as the amount of Indebtedness of the Issuer and its Restricted Subsidiaries is not increased thereby or (iii) convert into a Person organized or existing under the laws of a jurisdiction in the United States.

Transactions with affiliates

The Issuer will not, and will not permit any Restricted Subsidiary to, make any payment to, or sell, lease, transfer or otherwise dispose of any of its properties or assets to, or purchase any property or assets from, or enter into or make or amend any transaction, contract, agreement, understanding, loan, advance or guarantee with, or for the benefit of, any Affiliate of the Issuer (each of the foregoing, an "Affiliate Transaction") involving aggregate payments or consideration in excess of $10.0 million, unless:

(a) such Affiliate Transaction is on terms that are not materially less favorable to the Issuer or the relevant Restricted Subsidiary than those that would have been obtained in a comparable transaction by the Issuer or such Restricted Subsidiary with an unrelated Person on an arm's-length basis; and

(b) the Issuer delivers to the Trustee with respect to any Affiliate Transaction or series of related Affiliate Transactions involving aggregate payments or consideration in excess of $25.0 million, a resolution adopted by the majority of the board of directors of the Issuer approving such Affiliate Transaction and set forth in an Officer's Certificate certifying that such Affiliate Transaction complies with clause (a) above.

The foregoing provisions will not apply to the following:

(1) (a) transactions between or among the Issuer or any of the Restricted Subsidiaries or any entity that becomes a Restricted Subsidiary as a result of such transaction and (b) any merger or consolidation of the

Issuer or any direct or indirect parent of the Issuer; provided that such parent company shall have no material liabilities and no material assets other than cash, Cash Equivalents and the Capital Stock of the Issuer and such merger or consolidation is otherwise in compliance with the terms of the Indenture and effected for a bona fide business purpose;

(2) Restricted Payments permitted by the provisions of the Indenture described above under the covenant "—Limitation on restricted payments" and the definition of "Permitted Investments";

(3) the payment of reasonable and customary fees and compensation paid to, and indemnities and reimbursements and employment and severance arrangements provided on behalf of, or for the benefit of, former, current or future officers, directors, managers, employees or consultants of the Issuer, any direct or indirect parent company of the Issuer or any Restricted Subsidiary;

(4) transactions in which the Issuer or any Restricted Subsidiary, as the case may be, delivers to the Trustee a letter from an Independent Financial Advisor stating that such transaction is fair to the Issuer or such Restricted Subsidiary from a financial point of view or stating that the terms are not materially less favorable to the Issuer or its relevant Restricted Subsidiary than those that would have been obtained in a comparable transaction by the Issuer or such Restricted Subsidiary with an unrelated Person on an arm's-length basis;

(5) transactions pursuant to agreements or arrangements in effect on the Issue Date or, on substantially the terms described in the Offering Memorandum, the Effective Date or pursuant to the Spin-Off Documents (including the Transactions, all transactions in connection therewith (including but not limited to the financing thereof), and all fees and expenses paid or payable in connection with the Transactions) or any amendment, modification or supplement thereto or replacement thereof, as long as such agreement or arrangement, as so amended, modified, supplemented or replaced is not materially more disadvantageous to the Issuer and the Restricted Subsidiaries, taken as a whole, than the agreement or arrangement in existence on the Issue Date or, on substantially the terms described in the Offering Memorandum, the Effective Date or pursuant to the Spin-Off Documents;

(6) the existence of, or the performance by the Issuer or any Restricted Subsidiary of its obligations under the terms of, any stockholders agreement or the equivalent (including any registration rights agreement or purchase agreement related thereto) to which it is a party as of the Issue Date or the Effective Date (on substantially the terms described in the Offering Memorandum) and any similar agreements which it may enter into thereafter; provided that the existence of, or the performance by the Issuer or any Restricted Subsidiary of obligations under any future amendment to any such existing agreement or under any similar agreement entered into after the Issue Date or the Effective Date, as applicable, shall only be permitted by this clause (6) to the extent that the terms of any such amendment or new agreement are not otherwise disadvantageous to the Holders in any material respect when taken as a whole;

(7) any transaction in the ordinary course of business and otherwise in compliance with the terms of the Indenture that is fair to the Issuer and the Restricted Subsidiaries, in the reasonable determination of the board of directors of the Issuer or the senior management thereof, or is on terms at least as favorable as might reasonably have been obtained at such time from an unaffiliated party;

(8) the issuance or transfer of Equity Interests (other than Disqualified Stock) of the Issuer and the granting and performance of customary registration rights;

(9) sales, or participations therein or other transactions, in connection with any Supply Chain Financings;

(10) payments, loans, advances or guarantees (or cancellation of loans, advances or guarantees) to employees, directors, managers or consultants of the Issuer, any direct or indirect parent company of the Issuer or any Restricted Subsidiary and employment agreements, stock option plans and other similar arrangements with such employees, directors, manager or consultants which, in each case, are approved by the Issuer in good faith;

(11) payments to any future, current or former employee, director, manager, officer, manager or consultant of the Issuer, any of its Subsidiaries or any direct or indirect parent company of the Issuer pursuant to any

management equity plan or stock option plan or any other management or employee benefit plan or agreement or any stock subscription or stockholder agreement; and any employment and severance arrangements, stock option plans and other compensatory arrangements (and any successor plans thereto) and any supplemental executive retirement benefit plans or arrangements with any such employees, directors, officers, managers or consultants that are, in each case, approved by the Issuer in good faith;

(12) any transaction with a Person (other than an Unrestricted Subsidiary) which would constitute an Affiliate Transaction solely because the Issuer or a Restricted Subsidiary owns an Equity Interest in or otherwise controls such Person;

(13) any lease entered into between the Issuer or any Restricted Subsidiary, as lessee, and any Affiliate of the Issuer, as lessor, in the ordinary course of business;

(14) intellectual property licenses in the ordinary course of business;

(15) transactions between the Issuer or any of its Restricted Subsidiaries and any Person that would constitute an Affiliate Transaction solely because a director of such Person is also a director of the Issuer or any other direct or indirect parent of the Issuer; provided, however, that such director abstains from voting as a director of the Issuer or such direct or indirect parent of the Issuer, as the case may be, on any matter involving such other Person;

(16) pledges of Equity Interests of Unrestricted Subsidiaries; and

(17) transactions with joint ventures entered into in the ordinary course of business, or approved by a majority of the board of directors of the Issuer.

Dividend and other payment restrictions affecting restricted subsidiaries

The Issuer will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly, create or otherwise cause to exist or become effective any consensual encumbrance or consensual restriction on the ability of any such Restricted Subsidiary to:

(a) (1) pay dividends or make any other distributions to the Issuer or any Restricted Subsidiary on its Capital Stock; or

(2) pay any Indebtedness owed to the Issuer or any Restricted Subsidiary;

(b) make loans or advances to the Issuer or any Restricted Subsidiary; or

(c) sell, lease or transfer any of its properties or assets to the Issuer or any Restricted Subsidiary (it being understood that such transfers shall not include any type of transfer described in clause (a) or (b) above),

except (in each case) for such encumbrances or restrictions existing under or by reason of:

(1) contractual encumbrances or restrictions in effect on (i) the Issue Date or (ii) the Effective Date, if on substantially the terms described in the Offering Memorandum, including those arising under the Senior Credit Facilities, the Indenture, the notes and the Guarantees;

(2) purchase money obligations for property acquired in the ordinary course of business and Capitalized Lease Obligations that impose restrictions of the nature discussed in clause (c) above on the property so acquired;

(3) applicable law or any applicable rule, regulation or order;

(4) any agreement or other instrument of a Person acquired by or merged or consolidated with or into the Issuer or any Restricted Subsidiary, or of an Unrestricted Subsidiary that is designated a Restricted Subsidiary, or that is assumed in connection with the acquisition of assets from such Person, in each case that is in existence at the time of such transaction (but not created in contemplation thereof), which encumbrance or restriction is not applicable to any Person, or the properties or assets of any Person, other than the Person and its Subsidiaries, or the property or assets of the Person and its Subsidiaries, so acquired or designated;

(5) contracts for the sale of assets, including customary restrictions with respect to a Subsidiary of the Issuer pursuant to an agreement that has been entered into for the sale or disposition of all or substantially all of the Capital Stock or assets of such Subsidiary;

(6) Secured Indebtedness otherwise permitted to be incurred pursuant to the covenants described under "—Limitation on incurrence of indebtedness and issuance of disqualified stock" and "—Liens" that limit the right of the debtor to dispose of the assets securing such Indebtedness;

(7) restrictions on cash or other deposits or net worth imposed by customers, suppliers or landlords under contracts entered into in the ordinary course of business;

(8) other Indebtedness, Disqualified Stock or preferred stock of Restricted Subsidiaries permitted to be incurred subsequent to the Issue Date pursuant to the provisions of the covenant described under "—Limitation on incurrence of indebtedness and issuance of disqualified stock";

(9) customary provisions in partnership agreements, limited liability company organizational documents, joint venture agreements, stockholder agreements or other similar agreements or arrangements that restrict the disposition or distribution of ownership interests in or assets of such partnership, limited liability company, joint venture, corporation or similar Person;

(10) customary provisions contained in agreements and instruments, including but not limited to leases, sub-leases, licenses, sub-licenses or similar agreements, in each case, entered into in the ordinary course of business;

(11) that arises or is agreed to in the ordinary course of business and does not detract from the value of property or assets of the Issuer or any Restricted Subsidiary in any manner material to the Issuer or such Restricted Subsidiary;

(12) Hedging Obligations;

(13) restrictions created in connection with any Supply Chain Financings that, in the good faith determination of the board of directors of the Issuer, are necessary or advisable to effect such Supply Chain Financings;

(14) supermajority voting requirements existing under corporate charters, by-laws, stockholders agreements and similar documents and agreements; and

(15) any encumbrances or restrictions of the type referred to in clauses (a), (b) and (c) above imposed by any amendments, modifications, restatements, renewals, increases, supplements, refundings, replacements or refinancings of the contracts, instruments or obligations referred to in clauses (1) through (14) above; provided that such amendments, modifications, restatements, renewals, increases, supplements, refundings, replacements or refinancings are, in the good faith judgment of the Issuer's board of directors, no more restrictive in any material respect with respect to such encumbrance and other restrictions taken as a whole than those prior to such amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing.

For purposes of determining compliance with this covenant: (i) the priority of any preferred stock in receiving dividends or liquidating distributions prior to dividends or liquidating distributions being paid on common equity shall not be deemed a restriction on the ability to make distributions on Capital Stock and (ii) the subordination of loans or advances made to the Issuer or a Restricted Subsidiary to other Indebtedness incurred by the Issuer or any such Restricted Subsidiary shall not be deemed a restriction on the ability to make loans or advances.

Note guarantees

The Issuer will not permit any of its Restricted Subsidiaries, other than a Guarantor, to guarantee the payment of (i) the Senior Credit Facilities or (ii) any other capital markets debt securities of the Issuer or a

Guarantor in an aggregate principal amount that exceeds $50.0 million (other than Indebtedness payable to the Issuer or a Restricted Subsidiary) unless:

(a) such Restricted Subsidiary within 30 days executes and delivers a supplemental indenture substantially in the form provided as an exhibit to the Indenture providing for a Guarantee by such Restricted Subsidiary; provided that, if such Indebtedness is by its express terms subordinated in right of payment to the notes or such Guarantor's Guarantee of the notes, any such guarantee of such Restricted Subsidiary with respect to such Indebtedness shall be subordinated in right of payment to such Restricted Subsidiary's Guarantee with respect to the notes substantially to the same extent as such Indebtedness is subordinated to the notes; and

(b) such Restricted Subsidiary waives and will not in any manner whatsoever claim or take the benefit or advantage of, any rights of reimbursement, indemnity or subrogation or any other rights against the Issuer or any other Restricted Subsidiary as a result of any payment by such Restricted Subsidiary under its Guarantee;

provided that this covenant shall not be applicable to any guarantee of any Restricted Subsidiary that existed at the time such Person became a Restricted Subsidiary and was not incurred in connection with, or in contemplation of, such Person becoming a Restricted Subsidiary.

Reports and other information

The Indenture provides that, notwithstanding that the Issuer may not be required to be or remain subject to the reporting requirements of Section 13(a) or 15(d) of the Exchange Act, the Issuer will file with the SEC (unless such filing is not permitted under the Exchange Act or by the SEC), so long as the notes are outstanding, the annual reports, information, documents and other reports that the Issuer is required to file with the SEC pursuant to such Section 13(a) or 15(d) or would be so required to file if the Issuer were so subject.

Notwithstanding the foregoing, the Issuer will not be obligated to file such reports with the SEC if the SEC does not permit such filing, so long as the Issuer provides such information to the Trustee and the Holders by the date the Issuer would be required to file such information pursuant to the preceding paragraph. The requirements set forth in this paragraph and the preceding paragraph may be satisfied by delivering such information to the Trustee and posting copies of such information on a website (which may be nonpublic and may be maintained by the Issuer or a third party) to which access will be given to Holders.

Prior to the Effective Date, the Issuer was deemed to be in compliance with such reporting requirements by virtue of the filing of the Form 10 containing all the information, audit reports and exhibits required for such report.

Delivery of such reports, information and documents to the Trustee is for informational purposes only, and the Trustee's receipt thereof shall not constitute actual or constructive knowledge or notice of any information contained therein or determinable from information contained therein, including the Issuer's compliance with any of its covenants under the Indenture (as to which the Trustee is entitled to rely exclusively on Officer's Certificates). The Trustee will not be obligated to monitor or confirm, on a continuing basis or otherwise, the Issuer's compliance with this covenant or to determine whether such reports, information or documents have been posted on any website or filed with the SEC.

Events of Default and Remedies

The following events constitute Events of Default under the Indenture with respect to the notes:

(1) default in payment when due and payable, upon redemption, acceleration or otherwise, of principal of, or premium, if any, on the notes issued under the Indenture;

(2) default for 30 days or more in the payment when due of interest on or with respect to the notes issued under the Indenture;

(3) the failure to perform or comply with any of the provisions described under “Merger, consolidation and sales of all or substantially all assets”;

(4) failure by the Issuer or any Restricted Subsidiary for 60 days after the receipt of written notice given by the Trustee or the Holders of not less than 25% in principal amount of the notes then outstanding (with a copy to the Trustee) to comply with any of its obligations, covenants or agreements (other than a default referred to in clauses (1), (2) and (3) above) contained in the Indenture or the notes;

(5) default under any mortgage, indenture or instrument under which there is issued or by which there is secured or evidenced any Indebtedness for money borrowed by the Issuer or any Restricted Subsidiary or the payment of which is guaranteed by the Issuer or any Restricted Subsidiary, other than Indebtedness owed to the Issuer or any Restricted Subsidiary, whether such Indebtedness or guarantee now exists or is created after the issuance of the notes, if both:

(A) such default either results from the failure to pay any principal of such Indebtedness at its stated final maturity (after giving effect to any applicable grace periods) or relates to an obligation other than the obligation to pay principal of any such Indebtedness at its stated final maturity and results in the holder or holders of such Indebtedness causing such Indebtedness to become due prior to its stated maturity, and

(B) the principal amount of such Indebtedness, together with the principal amount of any other such Indebtedness in default for failure to pay principal at stated final maturity (after giving effect to any applicable grace periods), or the maturity of which has been so accelerated, aggregate $50.0 million or more at any one time outstanding;

(6) failure by the Issuer or any Significant Subsidiary to pay final judgments aggregating in excess of $50.0 million (net of amounts covered by insurance policies issued by reputable insurance companies), which final judgments remain unpaid, undischarged and unstayed for a period of more than 60 days after such judgment becomes final, and in the event such judgment is covered by insurance, an enforcement proceeding has been commenced by any creditor upon such judgment or decree which is not promptly stayed;

(7) certain events of bankruptcy or insolvency with respect to the Issuer or any Significant Subsidiary (or any group of Subsidiaries that together would constitute a Significant Subsidiary);

(8) the Guarantee of any Guarantor that is a Significant Subsidiary shall for any reason cease to be in full force (except as contemplated by the terms thereof or by the Indenture) and effect or be declared null and void or any responsible officer of any Guarantor that is a Significant Subsidiary denies that it has any further liability under its Guarantee or gives notice to such effect, other than by reason of the termination of the related Indenture or the release of any such Guarantee in accordance with the Indenture; or

(9) [reserved].

If any Event of Default (other than of a type specified in clause (7) above with respect to the Issuer) occurs and is continuing under the Indenture, the Trustee or the Holders of at least 25% in principal amount of the then outstanding notes issued under the Indenture may declare the principal, premium, if any, interest and any other monetary obligations on all the then outstanding notes issued under the Indenture to be due and payable immediately.

Upon the effectiveness of such declaration, such principal and interest will be due and payable immediately. Notwithstanding the foregoing, in the case of an Event of Default arising under clause (7) of the first paragraph of this section with respect to the Issuer, all outstanding notes will become due and payable without further action or notice. The Indenture provides that the Trustee may withhold from the Holders notice of any continuing Default or Event of Default, except a Default or Event of Default relating to the payment of principal, premium, if any, or interest, if it determines that withholding notice is in their interest.

The Indenture provides that the Holders of a majority in aggregate principal amount of the then outstanding notes issued thereunder by notice to the Trustee may on behalf of the Holders of all of the notes waive any existing Default or Event of Default and its consequences under the Indenture (except a continuing Default or Event of Default in the payment of interest on, premium, if any, or the principal of any such note held by a non-consenting Holder) and rescind any acceleration and its consequences with respect to the notes, provided such rescission would not conflict with any judgment of a court of competent jurisdiction and all amounts owing to the Trustee have been repaid.

In the event of any Event of Default specified in clause (5) above, such Event of Default and all consequences thereof (excluding any resulting payment default, other than as a result of acceleration of the notes) shall be annulled, waived and rescinded, automatically and without any action by the Trustee or the Holders, if within 20 days after such Event of Default arose,

(x) the Indebtedness or guarantee that is the basis for such Event of Default has been discharged, or

(y) the holders thereof have rescinded or waived the acceleration, notice or action (as the case may be) giving rise to such Event of Default, or

(z) if the default that is the basis for such Event of Default has been cured.

Subject to the provisions of the Indenture relating to the duties of the Trustee, in case an Event of Default occurs and is continuing, the Trustee will be under no obligation to exercise any of the rights or powers under the Indenture at the request or direction of any of the Holders of the notes unless such Holders have offered to the Trustee indemnity or security satisfactory to it against any loss, liability or expense. Except to enforce the right to receive payment of principal, premium (if any) or interest when due, no Holder of a note may pursue any remedy with respect to the Indenture or the notes unless:

(1) such Holder has previously given the Trustee notice that an Event of Default is continuing;

(2) Holders of at least 25% in principal amount of the outstanding notes have requested the Trustee to pursue the remedy;

(3) such Holders have offered the Trustee security or indemnity satisfactory to it against any loss, liability or expense;

(4) the Trustee has not complied with such request within 60 days after the receipt thereof and the offer of security or indemnity satisfactory to it against any loss, liability or expense; and

(5) Holders of a majority in principal amount of the outstanding notes have not given the Trustee a direction inconsistent with such request within such 60-day period.

Subject to certain restrictions, the Holders of a majority in principal amount of the outstanding notes are given the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or of exercising any trust or power conferred on the Trustee with respect to the notes. The Trustee, however, may refuse to follow any direction that conflicts with law or the Indenture or that the Trustee determines is unduly prejudicial to the rights of any other Holder of a note or that would involve the Trustee in personal liability.

If any Default occurs and is continuing and is known to a responsible officer of the Trustee, the Trustee will send notice of the Default to each Holder within 90 days after it occurs, unless the Default has been cured; provided that, except in the case of a default in the payment of the principal or interest on any note, the Trustee may withhold the notice if and so long as the trustee in good faith determines that withholding the notice is in the interest of the Holders.

The Indenture provides that the Issuer is required to deliver to the Trustee annually within 120 days following the end of the Issuer’s fiscal year a statement regarding compliance with the Indenture, and the Issuer

is required, within ten Business Days, upon becoming aware of any Default or Event of Default, to deliver to the Trustee a statement specifying such Default or Event of Default, its status and what actions the Issuer proposes to take with respect thereto.

No Personal Liability of Directors, Managers, Officers, Employees and Stockholders

No director, manager, officer, employee, incorporator or stockholder of the Issuer or any Guarantor or any of their parent companies, as such, shall have any liability for any obligations of the Issuer or the Guarantors under the notes, the Guarantees or the Indenture or for any claim based on, in respect of, or by reason of such obligations or their creation. Each Holder by accepting a note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the notes. Such waiver may not be effective to waive liabilities under the federal securities laws and it is the view of the SEC that such a waiver is against public policy.

Legal Defeasance and Covenant Defeasance

The obligations of the Issuer and the Guarantors under the Indenture and the notes will terminate (other than certain obligations) and will be released upon payment in full of all of the notes issued under the Indenture. The Issuer may, at its option and at any time, elect to have all of its obligations discharged with respect to the notes issued under the Indenture and have the Issuer's and each Guarantor's obligation discharged with respect to its Guarantee of the notes ("Legal Defeasance") and cure all then existing Events of Default except for

(1) the rights of Holders of notes issued under the Indenture to receive payments in respect of the principal of, premium, if any, and interest on the notes when such payments are due solely out of the trust created pursuant to the Indenture;

(2) the Issuer's obligations with respect to notes issued under the Indenture concerning issuing temporary notes, registration of such notes, mutilated, destroyed, lost or stolen notes and the maintenance of an office or agency for payment and money for security payments held in trust;

(3) the rights, powers, trusts, duties and immunities of the Trustee, and the Issuer's obligations in connection therewith; and

(4) the Legal Defeasance provisions of the Indenture.

In addition, the Issuer may, at its option and at any time, elect to have its obligations and those of each Guarantor released with respect to substantially all of the restrictive covenants that are described in the Indenture ("Covenant Defeasance") and thereafter any omission to comply with such obligations shall not constitute a Default with respect to the notes. In the event Covenant Defeasance occurs, certain events (not including bankruptcy, receivership, rehabilitation and insolvency events pertaining to the Issuer) described under "—Events of Default and Remedies" will no longer constitute an Event of Default with respect to the notes.

In order to exercise either Legal Defeasance or Covenant Defeasance with respect to the notes issued under the Indenture:

(1) the Issuer must irrevocably deposit with the Trustee, in trust, for the benefit of the Holders of the notes, cash (in U.S. dollars), Government Securities, or a combination thereof, in such amounts as will be sufficient, in the written opinion of a nationally recognized firm of independent public accountants delivered to the Trustee, to pay the principal of, premium, if any, and interest due on the notes issued under the Indenture on the stated maturity date or on the redemption date, as the case may be, of such principal, premium, if any, or interest on the notes and the Issuer must specify whether the notes are being defeased to maturity or to a particular redemption date; provided that upon any redemption that requires the payment of the Applicable Premium, the amount deposited will be sufficient for purposes of the Indenture to the extent that an amount is deposited with the Trustee equal to the Applicable Premium calculated as of the date of

the notice of redemption, with any deficit as of the date of redemption (any such amount, the "Applicable Premium Deficit") only required to be deposited with the Trustee on or prior to the date of redemption (it being understood that any Legal Defeasance or Covenant Defeasance shall be subject to the condition subsequent that such Applicable Premium Deficit is in fact paid); provided, further, that the Trustee shall have no liability whatsoever in the event that such Applicable Premium Deficit is not in fact paid after any Legal Defeasance or Covenant Defeasance. Any Applicable Premium Deficit will be set forth in an Officer's Certificate delivered to the Trustee simultaneously with the deposit of such Applicable Premium Deficit that confirms that such Applicable Premium Deficit will be applied toward such redemption;

(2) in the case of Legal Defeasance, the Issuer shall have delivered to the Trustee an Opinion of Counsel in the United States reasonably acceptable to the Trustee confirming that, subject to customary assumptions and exclusions,

(A) the Issuer has received from, or there has been published by, the United States Internal Revenue Service a ruling or

(B) since the issuance of the notes, there has been a change in the applicable U.S. federal income tax law,

in either case to the effect that, and based thereon such opinion of counsel in the United States shall confirm that, subject to customary assumptions and exclusions, the Holders of the notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such Legal Defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Legal Defeasance had not occurred;

(3) in the case of Covenant Defeasance, the Issuer shall have delivered to the Trustee an Opinion of Counsel in the United States reasonably acceptable to the Trustee confirming that, subject to customary assumptions and exclusions, the Holders of the notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such Covenant Defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Covenant Defeasance had not occurred;

(4) no Default (other than that resulting from borrowing funds to be applied to make such deposit and any similar and simultaneous deposit relating to other Indebtedness, and, in each case the granting of Liens in connection therewith) with respect to the notes shall have occurred and be continuing on the date of such deposit;

(5) such Legal Defeasance or Covenant Defeasance shall not result in a breach or violation of, or constitute a default under the Senior Credit Facilities or any other material agreement or instrument (other than the Indenture) to which, the Issuer or any Guarantor is a party or by which the Issuer or any Guarantor is bound (other than that resulting from borrowing funds to be applied to make such deposit and any similar and simultaneous deposit relating to other Indebtedness and, in each case, the granting of Liens in connection therewith);

(6) the Issuer shall have delivered to the Trustee an Officer's Certificate stating that the deposit was not made by the Issuer with the intent of defeating, hindering, delaying or defrauding any creditors of the Issuer or any Guarantor or others; and

(7) the Issuer shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel each stating that all conditions precedent provided for or relating to the Legal Defeasance or the Covenant Defeasance, as the case may be, have been complied with.

Satisfaction and Discharge

The Indenture will be discharged and will cease to be of further effect as to the notes issued thereunder, when either:

(a) all notes theretofore authenticated and delivered, except lost, stolen or destroyed notes which have been replaced or paid and notes for whose payment money has theretofore been deposited in trust, have been delivered to the Trustee for cancellation; or

(b) (1) all notes not theretofore delivered to such Trustee for cancellation have become due and payable by reason of the making of a notice of redemption or otherwise, will become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of the Issuer or any Guarantor has irrevocably deposited or caused to be deposited with such Trustee as trust funds in trust solely for the benefit of the Holders of the notes, cash in U.S. dollars, U.S. dollar-denominated Government Securities, or a combination thereof, in such amounts as will be sufficient, in the written opinion of a nationally recognized firm of independent public accountants delivered to the Trustee, without consideration of any reinvestment of interest to pay and discharge the entire indebtedness on notes not theretofore delivered to the Trustee for cancellation for principal, premium, if any, and accrued interest to the date of maturity or redemption; provided that upon any redemption that requires the payment of the Applicable Premium, the amount deposited will be sufficient for purposes of the Indenture to the extent that an amount is deposited with the Trustee equal to the Applicable Premium calculated as of the date of the notice of redemption, with any Applicable Premium Deficit only required to be deposited with the Trustee on or prior to the date of redemption (it being understood that any discharge shall be subject to the condition subsequent that such Applicable Premium Deficit is in fact paid); provided, further, that the Trustee shall have no liability whatsoever in the event that such Applicable Premium Deficit is not in fact paid after any discharge of the Indenture. Any Applicable Premium Deficit will be set forth in an Officer's Certificate delivered to the Trustee simultaneously with the deposit of such Applicable Premium Deficit that confirms that such Applicable Premium Deficit will be applied toward such redemption;

(2) no Default (other than that resulting from borrowing funds to be applied to make such deposit and any similar and simultaneous deposit relating to other Indebtedness and, in each case, the granting of Liens in connection therewith) with respect to the Indenture or the notes issued thereunder shall have occurred and be continuing on the date of such deposit or shall occur as a result of such deposit and such deposit will not result in a breach or violation of, or constitute a default under the Senior Credit Facilities or any other material agreement or instrument (other than the Indenture) to which the Issuer or any Guarantor is a party or by which the Issuer or any Guarantor is bound (other than that resulting from borrowing funds to be applied to make such deposit and any similar and simultaneous deposit relating to other Indebtedness and, in each case, the granting of Liens in connection therewith);

(3) the Issuer has paid or caused to be paid all sums payable by it under the Indenture; and

(4) the Issuer has delivered irrevocable written instructions to the Trustee under the Indenture to apply the deposited money toward the payment of the notes at maturity or the Redemption Date, as the case may be.

In addition, the Issuer must deliver an Officer's Certificate and an Opinion of Counsel to the Trustee stating that all conditions precedent to satisfaction and discharge have been satisfied.

Transfer and Exchange

A Holder may transfer or exchange notes in accordance with the Indenture. The Indenture requires a Holder, among other things, to furnish appropriate endorsements and transfer documents to the Issuer, Registrar and the Trustee, and the Issuer may require a Holder to pay any taxes and fees required by law or permitted by the Indenture. The Issuer is not required to transfer or exchange any note selected for redemption or tendered (and not withdrawn) for repurchase in connection with a Change of Control Offer, an Asset Sale Offer or other tender

offer. Also, the Issuer is not required to transfer or exchange any note for a period of 15 days before a selection of notes to be redeemed.

The transferor of any note shall provide or cause to be provided to the Trustee all information reasonably requested by the Trustee that is necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost basis reporting obligations under Section 6045 of the Internal Revenue Code of 1986. The Trustee may rely on information provided to it and shall have no responsibility to verify or ensure the accuracy of such information. In connection with any proposed exchange of a certificated note for a global note, the Issuer or the depositary shall provide or cause to be provided to the Trustee all information reasonably requested by the Trustee that is necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost basis reporting obligations under Section 6045 of the Internal Revenue Code of 1986. The Trustee may rely on information provided to it and shall have no responsibility to verify or ensure the accuracy of such information.

The registered Holder of a note will be treated as the owner of the note for all purposes.

Limited Condition Acquisitions

Notwithstanding anything to the contrary in the Indenture, when (a) determining compliance with any provision of the Indenture which requires the calculation of the Fixed Charge Coverage Ratio, the Consolidated Total Debt Ratio or the Consolidated Secured Debt Ratio, (b) determining compliance with any provision of the Indenture which requires that no Default or Event of Default has occurred, is continuing or would result therefrom or (c) testing availability under baskets set forth in the Indenture (including baskets measured as a percentage of Consolidated Total Assets), in each case in connection with a Limited Condition Acquisition, the date of determination of such ratio or other provisions, determination of whether any Default or Event of Default has occurred, is continuing or would result therefrom, determination of compliance with any representations or warranties or the availability under any baskets shall, at the option of the Issuer (the Issuer's election to exercise such option in connection with any Limited Condition Acquisition, an "LCA Election", which LCA Election may be in respect of one or more of clauses (a), (b) and (c) above), be deemed to be the date the definitive agreements (or other relevant definitive documentation) for such Limited Condition Acquisition are entered into (the "LCA Test Date"). If on a pro forma basis after giving effect to such Limited Condition Acquisition and the other transactions to be entered into in connection therewith (including any incurrence or issuance of Indebtedness, Disqualified Stock or preferred stock and the use of proceeds thereof), with such ratios and other provisions calculated as if such Limited Condition Acquisition or other transactions had occurred at the beginning of the most recently ended period prior to the LCA Test Date for which annual or quarterly consolidated financial statements of the Issuer are available (as determined in good faith by the Issuer), the Issuer could have taken such action on the relevant LCA Test Date in compliance with the applicable ratios or other provisions, such provisions shall be deemed to have been complied with, unless an Event of Default pursuant to clauses (1), (2) and (7) (solely with respect to the Issuer) under "—Events of default", shall be continuing on the date such Limited Condition Acquisition is consummated. For the avoidance of doubt, (i) if, following the LCA Test Date, any of such ratios or other provisions are exceeded or breached as a result of fluctuations in such ratio (including due to fluctuations any components of such ratio (including due to fluctuations of the target of any Limited Condition Acquisition)) or other provisions at or prior to the consummation of the relevant Limited Condition Acquisition, such ratios and other provisions will not be deemed to have been exceeded or failed to have been satisfied as a result of such fluctuations solely for purposes of determining whether the Limited Condition Acquisition is permitted hereunder and (ii) such ratios and compliance with such conditions shall not be tested at the time of consummation of such Limited Condition Acquisition, unless on such date an Event of Default pursuant to clauses (1), (2) and (7) (solely with respect to the Issuer) under "—Events of default" shall be continuing. If the Issuer has made an LCA Election for any Limited Condition Acquisition, then in connection with any subsequent calculation of any ratio, basket availability or compliance with any other provision hereunder on or following the relevant LCA Test Date and prior to the earliest of the date on which such Limited Condition Acquisition is consummated, the date that the definitive agreement for such Limited Condition

Acquisition is terminated or expires without consummation of such Limited Condition Acquisition, any such ratio, basket or compliance with any other provision hereunder shall be calculated on a pro forma basis assuming such Limited Condition Acquisition and other transactions in connection therewith (including any incurrence or issuance of Indebtedness, Disqualified Stock or preferred stock, and the use of proceeds thereof) had been consummated on the LCA Test Date.

Amendment, Supplement and Waiver

Except as provided in the next two succeeding paragraphs, the Indenture, the notes issued thereunder and any related Guarantee may be amended or supplemented with the consent of the Holders of at least a majority in principal amount of the notes then outstanding and issued under the Indenture, including consents obtained in connection with a purchase of, or tender offer or exchange offer for, the notes, and any existing Default or Event of Default or compliance with any provision of the Indenture or the notes issued thereunder may be waived with the consent of the Holders of a majority in principal amount of the then outstanding notes issued under the Indenture, other than notes beneficially owned by the Issuer or its Affiliates (including consents obtained in connection with a purchase of, or tender offer or exchange offer for, the notes).

The Indenture provides that, without the consent of each Holder of notes affected thereby, an amendment or waiver may not, with respect to any notes issued under the Indenture and held by a non-consenting Holder:

(1) reduce the principal amount of the notes whose Holders must consent to an amendment, supplement or waiver;

(2) reduce the principal of or change the fixed maturity of any such note or reduce the premium payable upon the redemption of any note or change the time at which any note may be redeemed as described under "—Optional Redemption";

(3) reduce the rate of or change the time for payment of interest on any such note;

(4) waive a Default or Event of Default in the payment of principal of or premium, if any, or interest on the notes issued under the Indenture, except a rescission of acceleration of the notes by the Holders of at least a majority in aggregate principal amount of the notes and a waiver of the payment default that resulted from such acceleration, or in respect of a covenant or provision contained in the Indenture or any guarantee which cannot be amended or modified without the consent of all Holders of the notes;

(5) make any such note payable in money other than that stated in the notes;

(6) make any change in the provisions of the Indenture relating to waivers of past Defaults or the rights of Holders of the notes to receive payments of principal of or premium, if any, or interest on the notes;

(7) make any change in these amendment and waiver provisions;

(8) impair the right of any Holder of the notes to receive payment of principal of, or interest on such Holder's notes on or after the due dates therefor or to institute suit for the enforcement of any payment on or with respect to such Holder's notes;

(9) make any change to or modify the ranking of any such note or related Guarantee that would adversely affect the Holders of the notes; or

(10) release any Guarantee by a Restricted Subsidiary not otherwise permitted to be released by the Indenture.

Notwithstanding the foregoing, without the consent of any Holder of the notes, the Issuer, any Guarantor (with respect to any amendment relating to its Guarantee) and the Trustee may amend or supplement the Indenture, the notes and any related Guarantee:

(1) to cure any ambiguity, omission, mistake, defect or inconsistency;

(2) to provide for uncertificated notes in addition to or in place of certificated notes;

(3) to comply with the covenant relating to mergers, consolidations and sales of assets;

(4) to provide for the assumption of the Issuer's or any Guarantor's obligations to Holders;

(5) to make any change that would provide any additional rights or benefits to the Holders of notes or that does not materially adversely affect the legal rights under the Indenture of any such Holder;

(6) to secure the notes and/or the related Guarantees or to add collateral thereto;

(7) to add covenants for the benefit of the Holders of notes or to surrender any right or power conferred upon the Issuer or any Guarantor;

(8) to evidence and provide for the acceptance and appointment under the Indenture of a successor Trustee or successor Paying Agent pursuant to the requirements thereof;

(9) to provide for the issuance of Additional Notes in accordance with the Indenture;

(10) to add a Guarantor or a parent guarantor under the Indenture provided that only the Issuer, the Trustee and the Guarantor or parent guarantor being added need to sign any such supplement or amendment;

(11) to conform the text of the Indenture, Guarantees or the notes to any provision of this "Description of the notes"; or

(12) to amend the provisions of the Indenture relating to the transfer and legending of notes as permitted by the Indenture, including, without limitation, to facilitate the issuance and administration of the notes; provided that (i) compliance with the Indenture as so amended would not result in notes being transferred in violation of the Securities Act or any applicable securities law and (ii) such amendment does not materially and adversely affect the rights of Holders to transfer notes.

The consent of the Holders is not necessary under the Indenture to approve the particular form of any proposed amendment. It is sufficient if such consent approves the substance of the proposed amendment.

Neither the Issuer nor any of its Restricted Subsidiaries may, directly or indirectly, pay or cause to be paid any consideration to or for the benefit of any Holder for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the Indenture or the notes unless such consideration is offered to be paid and is paid to all Holders that consent, waive or agree to amend in the time frame set forth in solicitation documents relating to such consent, waiver or amendment.

Notices

Notices given by publication will be deemed given on the first date on which publication is made; notices given by first-class mail, postage prepaid, will be deemed given five calendar days after mailing; notices sent by overnight delivery service will be deemed given when delivered; and notices given electronically will be deemed given when sent. Any notices required to be given to the holders of notes represented by global notes will be given to The Depository Trust Company.

Concerning the Trustee

The Indenture contains certain limitations in the Trust Indenture Act on the rights of the Trustee, should it become a creditor of the Issuer or any Guarantor, to obtain payment of claims in certain cases, or to realize on certain property received in respect of any such claim as security or otherwise. The Trustee is permitted to engage in other transactions with the Issuer and Guarantors; however, if it acquires any conflicting interest as defined in the Trust Indenture Act it must eliminate such conflict within 90 days, apply to the SEC for permission to continue or resign.

The Indenture provides that the Holders of a majority in principal amount of the outstanding notes issued thereunder will have the right to direct the time, method and place of conducting any proceeding for exercising

any remedy available to the Trustee, subject to certain exceptions. The Indenture provides that in case an Event of Default shall occur (which shall not be cured or waived), the Trustee will be required, in the exercise of its rights and powers vested in it by the Indenture, to use the degree of care of a prudent person would use in the conduct of his own affairs under the circumstances. Subject to such provisions, the Trustee is under no obligation to exercise any of its rights or powers under the Indenture at the request of any Holder of notes, unless such Holder shall have offered to the Trustee security and indemnity satisfactory to it against any loss, liability or expense.

The Trustee is an affiliate of Wells Fargo Securities, LLC, one of the initial purchasers of the outstanding notes.

Paying Agent and Registrar for the Notes

The Issuer will maintain one or more paying agents (each, a "Paying Agent") for the notes in the continental United States. The initial Paying Agent is the Trustee.

The Issuer will also maintain one or more registrars (each, a "Registrar") with offices in the continental United States. The Issuer will also maintain a transfer agent in the continental United States. The initial Registrar is the Trustee. The initial transfer agent is the Trustee. The Registrar and the transfer agent will maintain a register reflecting ownership of any notes in certificated, non-global form outstanding from time to time and will make payments on and facilitate transfer of such notes in certificated, non-global form on the behalf of the Issuer.

The Issuer may change the Paying Agents, the Registrars or the transfer agents without prior notice to the Holders.

Governing Law; Jury Trial Waiver

The Indenture, the notes and any Guarantee are, or will be, be governed by and construed in accordance with the laws of the State of New York.

The Indenture provides that the Issuer, the Guarantors and the Trustee, and each holder of a note by its acceptance thereof, irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to the Indenture, the notes or any transaction contemplated thereby.

Certain Definitions

Set forth below are certain defined terms used in the Indenture. For purposes of the Indenture, unless otherwise specifically indicated, the term "consolidated" with respect to any Person refers to such Person on a consolidated basis in accordance with GAAP, but excluding from such consolidation any Unrestricted Subsidiary as if such Unrestricted Subsidiary were not an Affiliate of such Person.

"Acquired Indebtedness" means, with respect to any specified Person, Indebtedness of any other Person existing at the time such other Person is merged with or into or became a Restricted Subsidiary of such specified Person, including Indebtedness incurred by such other Person in connection with, or in contemplation of, such other Person merging with or into or becoming a Restricted Subsidiary of such specified Person. Such Indebtedness will be deemed to have been incurred at the time such other Person is merged with or into or became a Restricted Subsidiary.

"Additional Assets" means (i) any property or assets (other than Indebtedness and Capital Stock) to be used by the Issuer or a Restricted Subsidiary in a Similar Business; (ii) the Capital Stock of a Person that is engaged in a Similar Business and becomes a Restricted Subsidiary as a result of the acquisition of such Capital Stock by the Issuer or another Restricted Subsidiary; or (iii) Capital Stock of any Person that at such time is a Restricted Subsidiary acquired from a third party.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling," "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by agreement or otherwise.

"Applicable Measurement Period" means the most recently ended four fiscal quarters immediately preceding the applicable date of determination for which internal financial statements are available (as determined in good faith by the Issuer).

"Applicable Premium" means, with respect to any note on any Redemption Date, the greater of:

(1) 1.0% of the principal amount of such note; and

(2) the excess, if any, of (a) the present value at such Redemption Date of (i) the redemption price of such note at May 1, 2021 (such redemption price being set forth in the table appearing above under the heading "—Optional Redemption"), plus (ii) all required interest payments due on such note through May 1, 2021 (excluding accrued but unpaid interest to the Redemption Date), computed using a discount rate equal to the Treasury Rate as of such Redemption Date plus 50 basis points; over (b) the principal amount of such note.

Calculation of the Applicable Premium will be made by the Issuer or on behalf of the Issuer by such Person as the Issuer shall designate; provided that such calculation or the correctness thereof shall not be a duty or obligation of the Trustee.

"Asset Sale" means

(1) the sale, conveyance, transfer or other disposition, whether in a single transaction or a series of related transactions, of property or assets (including by way of a Sale and Lease-Back Transaction) of the Issuer or any Restricted Subsidiary (each referred to in this definition as a "disposition"), or

(2) the issuance or sale of Equity Interests of any Restricted Subsidiary (other than preferred stock of Restricted Subsidiaries issued in compliance with the covenant described under "—Certain Covenants— Limitation on incurrence of indebtedness and issuance of disqualified stock"), whether in a single transaction or a series of related transactions,

in each case, other than:

(a) any disposition of (i) Cash Equivalents or Investment Grade Securities, (ii) obsolete, damaged, unnecessary, unsuitable or worn out equipment or immaterial assets or goods (or other assets) held for sale or no longer used in the ordinary course of business or (iii) Inventory or other assets in the ordinary course of business;

(b) the disposition of all or substantially all of the assets of the Issuer in a manner permitted pursuant to the provisions described above under "—Certain Covenants—Merger, consolidation or sale of all or substantially all assets" or any disposition that constitutes a Change of Control pursuant to the Indenture for which a Change of Control Offer is made;

(c) the making of any Restricted Payment or Permitted Investment that is permitted to be made, and is made, under the covenant described above under "—Certain Covenants—Limitation on restricted payments";

(d) any disposition of assets or issuance or sale of Equity Interests of any Restricted Subsidiary in any transaction or series of related transactions with an aggregate Fair Market Value of less than $30.0 million;

(e) any disposition of property or assets or issuance of securities to the Issuer or a Restricted Subsidiary;

(f) any exchange of like property (excluding any boot thereon) under Section 1031 of the Internal Revenue Code of 1986, or any comparable or successor provision, or any exchange of equipment to be used in a Similar Business;

(g) the lease, assignment, sub-lease, license or sub-license of any real or personal property in the ordinary course of business;

(h) any issuance, sale or pledge of Equity Interests in, or Indebtedness or other securities of, an Unrestricted Subsidiary;

(i) foreclosures, condemnation, eminent domain or any similar action on assets;

(j) sales of any Supply Chain Financing Obligations;

(k) any financing transaction with respect to property built or acquired by the Issuer or any Restricted Subsidiary after the Issue Date, including Sale and Lease Back Transactions;

(l) any surrender or waiver of contractual rights or the settlement, release or surrender of contractual rights or other litigation claims in the ordinary course of business;

(m) the sale, lease, assignment, license, sublease or discount of Inventory, equipment, accounts receivable, notes receivable or other current assets in the ordinary course of business or the conversion of accounts receivable to notes receivable or other dispositions of accounts receivable in connection with the collection or compromise thereof;

(n) the licensing or sub-licensing of intellectual property or other general intangibles in the ordinary course of business;

(o) the unwinding of any Hedging Obligations;

(p) sales, transfers and other dispositions of Investments in joint ventures to the extent required by, or made pursuant to, customary buy/sell arrangements between the joint venture parties set forth in joint venture arrangements and similar binding arrangements;

(q) the lapse or abandonment of intellectual property rights in the ordinary course of business, which in the reasonable good faith determination of the Issuer are not material to the conduct of the business of the Issuer and its Restricted Subsidiaries taken as a whole;

(r) the issuance of directors' qualifying shares and shares issued to foreign nationals or other third parties as required by applicable law; and

(s) any other disposition pursuant to the Spin-Off Documents on substantially the terms described in the Offering Memorandum.

"Asset Sale Offer" has the meaning set forth in the fourth paragraph under "—Repurchase at the Option of Holders—Asset sales."

"Below Investment Grade Ratings Event" means, with respect to the notes, that on any day during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by us of any Change of Control (or pending Change of Control) and ending 60 days following consummation of such Change of Control (which Trigger Period will be extended following consummation of a Change of Control for up to an additional 60 days for so long as any of the Rating Agencies has publicly announced that it is considering a possible ratings change), the notes do not have an Investment Grade Rating from both Rating Agencies. Unless both Rating Agencies are providing a rating for the notes at the commencement of any Trigger Period, the notes will be deemed not to have an Investment Grade Rating by both Rating Agencies during that Trigger Period.

"board of directors" means, for any Person, the board of directors or other governing body of such Person or, if such Person does not have such a board of directors or other governing body and is owned or managed by a single entity, the board of directors or other governing body of such entity, or, in either case, any committee thereof duly authorized to act on behalf of such board of directors or other governing body. Unless otherwise provided, "board of directors" means the board of directors of the Issuer.

"Board Resolution" means with respect to the Issuer, a duly adopted resolution of the board of directors of the Issuer or any committee thereof.

"Business Day" means each day which is not a Legal Holiday.

"Capital Stock" means:

(1) in the case of a corporation, corporate stock,

(2) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock,

(3) in the case of a partnership or limited liability company, partnership or membership interests (whether general or limited), and

(4) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person.

"Capitalized Lease Obligation" means, at the time any determination thereof is to be made, the amount of the liability in respect of a capital lease that would at such time be required to be capitalized and reflected as a liability on a balance sheet (excluding the footnotes thereto) in accordance with GAAP.

"Cash Equivalents" means:

(1) United States dollars,

(2) Canadian dollars,

(3) (a) euro, pounds sterling or any national currency of any participating member state in the European Union or, (b) local currencies held from time to time in the ordinary course of business,

(4) securities issued or directly and fully and unconditionally guaranteed or insured by (a) the United States government or any agency or instrumentality thereof, (b) any country that is a member state of the European Union or any agency or instrumentality thereof or (c) any foreign country recognized by the United States of America rated at least "A" by S&P or "A-1" by Moody's (or, in either case, the equivalent of such rating by such organization or, if no rating of S&P or Moody's then exists, the equivalent of such rating by any nationally recognized rating organization), the securities of which are unconditionally guaranteed as a full faith and credit obligation of such government,

(5) certificates of deposit, time deposits and dollar time deposits with maturities of one year or less from the date of acquisition, bankers' acceptances with maturities not exceeding one year, overnight bank deposits and money market deposits (or, with respect to foreign banks, similar instruments), in each case with (i) any lender under the Senior Credit Facilities or (ii) any commercial bank having capital and surplus of not less than $250.0 million in the case of U.S. banks and $100.0 million (or the U.S. dollar equivalent as of the date of determination) in the case of foreign banks,

(6) repurchase obligations for underlying securities of the types described in clauses (4) and (5) entered into with any financial institution meeting the qualifications specified in clause (5) above,

(7) commercial paper rated at least P-2 by Moody's or at least A-2 by S&P (or, if at any time neither Moody's nor S&P shall be rating such obligations, an equivalent rating from another Rating Agency) and in each case maturing within 24 months after the date of creation thereof,

(8) marketable short-term money market and similar securities having a rating of at least P-2 or A-2 from either Moody's or S&P, respectively (or, if at any time neither Moody's nor S&P shall be rating such obligations, an equivalent rating from another Rating Agency) and in each case maturing within 24 months after the date of creation thereof,

(9) investment funds investing 95% of their assets in securities of the types described in clauses (1) through (8) above and (10) through (12) below,

(10) readily marketable direct obligations issued by any state, commonwealth or territory of the United States of America or any political subdivision or taxing authority thereof having one of the two highest rating categories obtainable from either Moody's or S&P with maturities of 24 months or less from the date of acquisition,

(11) Indebtedness or preferred stock issued by Persons with a rating of "A" or higher from S&P or "A2" or higher from Moody's (or, if at any time neither Moody's nor S&P shall be rating such obligations, an equivalent rating from another Rating Agency) with maturities of 24 months or less from the date of acquisition,

(12) Investments with average maturities of 24 months or less from the date of acquisition in money market funds rated AAA- (or the equivalent thereof) or better by S&P or Aaa3 (or the equivalent thereof) or better by Moody's (or, if at any time neither Moody's nor S&P shall be rating such obligations, an equivalent rating from another Rating Agency), and

(13) in the case of Investments by any Restricted Subsidiary that is a Foreign Subsidiary, Investments of comparable tenor and credit quality to those described in the foregoing clauses (1) through (12) customarily utilized in countries in which such Foreign Subsidiary operates for cash management purposes.

Notwithstanding the foregoing, Cash Equivalents shall include amounts denominated in currencies other than those set forth in clauses (1) through (3) above; provided that such amounts are converted into any currency listed in clauses (1) through (3) as promptly as practicable and in any event within ten Business Days following the receipt of such amounts.

"Cash Management Services" means any of the following to the extent not constituting a line of credit (other than an overnight overdraft facility that is not in default): ACH transactions, treasury or cash management services, including, without limitation, controlled disbursement services, overdraft facilities, foreign exchange facilities, deposit and other accounts and merchant services.

"Change of Control" means the occurrence of any of the following after the Effective Date, in each case excluding any of the Transactions:

(1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of the Issuer and its Subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to the Issuer or one of its Subsidiaries;

(2) the consummation of any transaction (including any merger or consolidation or purchase of Capital Stock) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of the Issuer, or other Voting Stock into which the Voting Stock of the Issuer is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

(3) the Issuer consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, the Issuer, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of the Issuer or such other person is converted into or exchanged for cash, securities or other property, other than any such transaction where the shares of the Voting Stock of the Issuer outstanding

immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction; or

(4) the adoption of a plan relating to the liquidation or dissolution of the Issuer.

"Change of Control Repurchase Event" means the occurrence of both a Change of Control and a Below Investment Grade Ratings Event for the notes. Notwithstanding the foregoing, no Change of Control Repurchase Event will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Consolidated Depreciation and Amortization Expense" means, with respect to any Person for any period, the total amount of depreciation and amortization expense, including the amortization or write-off of financing costs and expenses and capitalized expenditures of such Person and its Restricted Subsidiaries, for such period on a consolidated basis and otherwise determined in accordance with GAAP.

"Consolidated Interest Expense" means, with respect to any Person for any period, the sum, without duplication, of:

(a) consolidated interest expense of such Person and its Restricted Subsidiaries for such period, to the extent such expense was deducted (and not added back) in computing Consolidated Net Income (including (i) amortization of original issue discount or premium resulting from the issuance of Indebtedness at less than or greater than par, as applicable, (ii) all commissions, discounts and other fees and charges owed with respect to letters of credit or bankers acceptances, (iii) non-cash interest payments (but excluding any non-cash interest expense attributable to the movement in the mark to market valuation of Indebtedness or derivative instruments pursuant to GAAP), (iv) the interest component of Capitalized Lease Obligations and (v) net payments, if any, pursuant to interest rate Hedging Obligations with respect to Indebtedness, and excluding (1) any one-time cash costs associated with breakage in respect interest rate Hedging Obligations with respect to Indebtedness, (2) penalties and interest relating to taxes, (3) accretion or accrual of discounted liabilities not constituting Indebtedness, (4) any expense resulting from the discounting of Indebtedness in connection with the application of recapitalization or purchase accounting, (5) amortization or "write-off" of deferred financing costs and expenses, (6) commissions, discounts, yield and other fees and charges (including any interest expense) related to any Supply Chain Financings and (7) any expensing of bridge, commitment and other financing fees related to the Transactions or any acquisitions after the Effective Date; plus

(b) consolidated capitalized interest of such Person and its Restricted Subsidiaries for such period, whether paid or accrued, less

(c) interest income for such period.

For purposes of this definition, interest on a Capitalized Lease Obligation shall be deemed to accrue at an interest rate reasonably determined by such Person to be the rate of interest implicit in such Capitalized Lease Obligation in accordance with GAAP.

"Consolidated Net Income" means, with respect to any Person for any period, the aggregate of the net income (loss), of such Person and its Restricted Subsidiaries for such period, on a consolidated basis and otherwise determined in accordance with GAAP and before any reduction in respect of preferred stock dividends on preferred stock issued by such Person (but not its Subsidiaries); provided that, without duplication,

(1) any after-tax effect of extraordinary, non-recurring or unusual gains or losses (less all fees and expenses relating thereto) or expenses (including relating to the Transactions), severance, relocation costs, curtailments or modifications to pension and post-retirement employee benefits plans, start-up, transition, integration and other restructuring and business optimization costs, charges, reserves or expenses (including related to acquisitions after the Issue Date and to the start-up, closure or consolidation of facilities), new product introductions, and one-time compensation charges shall be excluded,

(2) the net income (loss) for such period shall not include the cumulative effect of a change in accounting principles and changes as a result of adoption or modification of accounting policies during such period,

(3) any net after-tax gains or losses on disposal of disposed, abandoned, transferred, closed or discontinued operations shall be excluded,

(4) any after-tax effect of gains or losses (less all fees and expenses relating thereto) attributable to asset dispositions or abandonments other than in the ordinary course of business, as determined in good faith by the Issuer, shall be excluded,

(5) the net income (loss) for such period of any Person that is not a Restricted Subsidiary shall be excluded; provided that Consolidated Net Income of Issuer shall be increased by the amount of dividends or distributions or other payments that are actually paid in cash (or to the extent converted into cash or Cash Equivalents) to the referent Person or a Restricted Subsidiary thereof in respect of such period,

(6) solely for the purpose of determining the amount available for Restricted Payments under clause (c)(1) of the first paragraph of "—Certain Covenants—Limitation on restricted payments," the net income for such period of any Restricted Subsidiary (other than any Guarantor) shall be excluded to the extent the declaration or payment of dividends or similar distributions by that Restricted Subsidiary of its net income is not at the date of determination permitted without any prior governmental approval (which has not been obtained) or, directly or indirectly, by the operation of the terms of its charter or any agreement, instrument, judgment, decree, order, statute, rule, or governmental regulation applicable to that Restricted Subsidiary or its stockholders, unless such restriction with respect to the payment of dividends or similar distributions has been legally waived; provided that Consolidated Net Income of Issuer will be increased by the amount of dividends or other distributions or other payments actually paid in cash (or to the extent converted into cash) or Cash Equivalents to Issuer or a Restricted Subsidiary in respect of such period, to the extent not already included therein,

(7) effects of adjustments in any line item in such Person's consolidated financial statements in accordance with GAAP resulting from the application of purchase accounting, including in relation to the Transactions, or the amortization or write-off of any amounts thereof, net of taxes, shall be excluded,

(8) (i) any after-tax effect of income (loss) from the early extinguishment of Indebtedness or Hedging Obligations or other derivative instruments (including deferred financing costs written off and premiums paid), (ii) any non-cash income (or loss) related to currency gains or losses related to Indebtedness, intercompany balances and other balance sheet items and to Hedging Obligations pursuant to Financial Accounting Standards Codification No. 815—Derivatives and Hedging (formerly Financing Accounting Standards Board Statement No. 133) and its related pronouncements and interpretations (or any successor provision) and (iii) any non-cash expense, income or loss attributable to the movement in mark-to-market valuation of foreign currencies, Indebtedness or derivative instruments pursuant to GAAP, shall be excluded,

(9) any impairment charge, asset write-off or write-down pursuant to ASC 350 and ASC 360 (formerly Financial Accounting Standards Board Statement Nos. 142 and 144, respectively) and the amortization of intangibles arising pursuant to ASC 805 (formerly Financial Accounting Standards Board Statement No. 141) shall be excluded,

(10) (i) any non-cash compensation expense recorded from grants of stock appreciation or similar rights, phantom equity, stock options, restricted stock, units or other rights to officers, directors, managers or employees and (ii) non-cash income (loss) attributable to deferred compensation plans or trusts, shall be excluded,

(11) any fees and expenses incurred during such period, or any amortization thereof for such period, in connection with any acquisition, Investment, recapitalization, Asset Sale, issuance or repayment of Indebtedness, issuance of Equity Interests, refinancing transaction or amendment or modification of any debt instrument (in each case, including any such transaction consummated prior to the Issue Date and any

such transaction undertaken but not completed) and any charges or non-recurring merger costs incurred during such period as a result of any such transaction shall be excluded,

(12) accruals and reserves, contingent liabilities and any gains or losses on the settlement of any pre-existing contractual or non-contractual relationships that are established or adjusted within twelve months after the Effective Date that are so required to be established as a result of the Transactions in accordance with GAAP shall be excluded, and

(13) to the extent covered by insurance or indemnification and actually reimbursed, or, so long as the Issuer has made a determination that there exists reasonable evidence that such amount will in fact be reimbursed by the insurer or indemnifying party and only to the extent that such amount is (a) not denied by the applicable carrier or indemnifying party in writing within 180 days and (b) in fact reimbursed within 365 days of the date of such evidence (with a deduction for any amount so added back to the extent not so reimbursed within 365 days), losses and expenses with respect to liability or casualty events or business interruption shall be excluded.

Notwithstanding the foregoing, for the purpose of the covenant described under "—Certain Covenants— Limitation on restricted payments" only (other than clause (c)(4) thereof), there shall be excluded from Consolidated Net Income any income arising from any sale or other disposition of Restricted Investments made by the Issuer and the Restricted Subsidiaries, any repurchases and redemptions of Restricted Investments from the Issuer and the Restricted Subsidiaries, any repayments of loans and advances which constitute Restricted Investments by the Issuer or any Restricted Subsidiary, and any dividends, distributions, interest payments, return of capital, repayments or other transfers of assets to the Issuer or any Restricted Subsidiary from any Unrestricted Subsidiary, in each case only to the extent such amounts increase the amount of Restricted Payments permitted under such covenant pursuant to clause (c)(4) thereof.

"Consolidated Secured Debt Ratio" means, as of any date of determination, the ratio of (1) Consolidated Total Secured Indebtedness minus unrestricted cash and Cash Equivalents of the Issuer and the Restricted Subsidiaries, in each case, as of the end of the most recent fiscal period for which internal financial statements are available (as determined in good faith by the Issuer) immediately preceding the applicable date of determination to (2) EBITDA of the Issuer for the Applicable Measurement Period, with such pro forma adjustments to Consolidated Total Secured Indebtedness, Cash Equivalents and EBITDA as are appropriate and consistent with the pro forma adjustment provisions set forth in the definition of "Fixed Charge Coverage Ratio"; provided that, for purposes of the calculation of the Consolidated Secured Debt Ratio, in connection with (x) the incurrence of any Indebtedness pursuant to clause (1) of the second paragraph under "—Certain Covenants—Limitation on indebtedness and issuance of disqualified stock" or (y) the incurrence of any Lien pursuant to clause (20) of the definition of "Permitted Liens," the Issuer may elect, pursuant to an Officer's Certificate delivered to the Trustee, to treat all or any portion of the commitment under any Indebtedness which is to be incurred or secured by such Lien, as the case may be, as being incurred as of the applicable date of determination and any subsequent incurrence of Indebtedness under such commitment that was so treated shall not be deemed to be an incurrence of additional Indebtedness or an additional Lien at such subsequent time.

"Consolidated Total Assets" means, as of any date, the total assets of the Issuer and the Restricted Subsidiaries on a consolidated basis as of such date, determined in accordance with GAAP.

"Consolidated Total Debt Ratio" means, as of any date of determination, the ratio of (1) Consolidated Total Indebtedness minus unrestricted cash and Cash Equivalents of the Issuer and its Restricted Subsidiaries, in each case, as of the end of the most recent fiscal period for which internal financial statements are available (as determined in good faith by the Issuer) immediately preceding the date of determination to (2) EBITDA of the Issuer for the Applicable Measurement Period, with such pro forma adjustments to Consolidated Total Indebtedness, Cash Equivalents and EBITDA as are appropriate and consistent with the pro forma adjustment provisions set forth in the definition of "Fixed Charge Coverage Ratio"; provided that, for purposes of the calculation of the Consolidated Total Debt Ratio, in connection with the incurrence of any Indebtedness pursuant

to clause (1) of the second paragraph under "—Certain Covenants—Limitation on indebtedness and issuance of disqualified stock," the Issuer may elect, pursuant to an Officer's Certificate delivered to the Trustee, to treat all or any portion of the commitment under any Indebtedness which is to be incurred as being incurred as of the applicable date of determination and any subsequent incurrence of Indebtedness under such commitment that was so treated shall not be deemed to be an incurrence of additional Indebtedness at such subsequent time.

"Consolidated Total Indebtedness" means, as at any date of determination, an amount equal to the sum of (1) the aggregate amount of all outstanding Indebtedness of the Issuer and its Restricted Subsidiaries on a consolidated basis consisting of Indebtedness for borrowed money, Obligations in respect of Capitalized Lease Obligations and debt obligations evidenced by bonds, notes, debentures or similar instruments or letters of credit or bankers' acceptances (and excluding Hedging Obligations) and (2) the aggregate amount of all outstanding Disqualified Stock of the Issuer and the Restricted Subsidiaries and (without double-counting) all preferred stock of Restricted Subsidiaries that are not the Issuer or Guarantors, with the amount of such Disqualified Stock and preferred stock equal to the greater of their respective voluntary or involuntary liquidation preferences and their Maximum Fixed Repurchase Prices, in each case, determined on a consolidated basis in accordance with GAAP. For purposes hereof, the "Maximum Fixed Repurchase Price" of any Disqualified Stock or preferred stock means the maximum price, if any, at which such Disqualified Stock or preferred stock may be required to be redeemed or repurchased by the issuer thereof in accordance with its terms. For the avoidance of doubt, any commitments that the Issuer elects to treat as incurred hereunder pursuant to an Officer's Certificate delivered to the Trustee will be deemed an incurrence of Indebtedness on the date of such designation and will be deemed outstanding for all purposes hereunder.

"Consolidated Total Secured Indebtedness" means, as at any date of determination, the amount of Consolidated Total Indebtedness that is Secured Indebtedness as of such date.

"Credit Facilities" means, with respect to the Issuer or any Restricted Subsidiary, one or more debt facilities, including the Senior Credit Facilities, or other financing arrangements (including, without limitation, commercial paper facilities with banks or other institutional lenders or investors or indentures) providing for revolving credit loans, term loans, letters of credit or other long-term indebtedness, including any notes, mortgages, guarantees, collateral documents, instruments and agreements executed in connection therewith, and any amendments, supplements, modifications, extensions, renewals, restatements or refundings thereof and any indentures or credit facilities or commercial paper facilities with banks or other institutional lenders or investors that Refinance any part of the loans, notes or other securities, other credit facilities or commitments thereunder, including any such Refinancing facility or indenture that increases the amount permitted to be borrowed thereunder or alters the maturity thereof (provided that such increase in borrowings is permitted under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock") or adds Restricted Subsidiaries as additional borrowers or guarantors thereunder and whether by the same or any other agent, lender or group of lenders.

"Default" means any event that is, or with the passage of time or the giving of notice or both would be, an Event of Default.

"Designated Non-cash Consideration" means the Fair Market Value of non-cash consideration received by the Issuer or a Restricted Subsidiary in connection with an Asset Sale that is so designated as Designated Non-cash Consideration pursuant to an Officer's Certificate, setting forth the basis of such valuation, less the amount of cash or Cash Equivalents received in connection with a subsequent sale of or collection on such Designated Non-cash Consideration.

"Disqualified Stock" means, with respect to any Person, any Capital Stock of such Person which, by its terms, or by the terms of any security into which it is convertible or for which it is putable or exchangeable, or upon the happening of any event, matures or is mandatorily redeemable, other than as a result of a change of control, asset sale or casualty or condemnation event, pursuant to a sinking fund obligation or otherwise, or is convertible or

exchangeable for Indebtedness or redeemable at the option of the holder thereof, other than as a result of a change of control, asset sale or casualty or condemnation event, in whole or in part, in each case prior to the date 91 days after the earlier of the maturity date of the notes or the date the notes are no longer outstanding; provided that if such Capital Stock is issued to any plan for the benefit of employees of the Issuer or its Subsidiaries or by any such plan to such employees, such Capital Stock shall not constitute Disqualified Stock solely because it may be required to be repurchased by the Issuer or its Subsidiaries in order to satisfy applicable statutory or regulatory obligations.

"Dover" means Dover Corporation, a Delaware corporation, and, unless the context otherwise requires, its consolidated Subsidiaries, other than, for all periods following the Spin-off, the Issuer and its Subsidiaries.

"EBITDA" means, with respect to any Person for any period, the Consolidated Net Income of such Person for such period (1) increased (without duplication) by:

(a) provision for taxes based on income or profits or capital gains, including, without limitation, U.S. federal, state, non-U.S., franchise, excise, value added and similar taxes and foreign withholding taxes of such Person paid or accrued during such period, including any penalties and interest relating to such taxes or arising from any tax examinations deducted (and not added back) in computing Consolidated Net Income, *plus*

(b) Fixed Charges of such Person for such period (including (x) net losses on Hedging Obligations or other derivative instruments entered into for the purpose of hedging interest rate risk and (y) costs of surety bonds in connection with financing activities, in each case, to the extent included in Fixed Charges), together with items excluded from the definition of "Consolidated Interest Expense" pursuant to clauses (a)(2) through (a)(7) thereof, to the extent the same were deducted (and not added back) in calculating such Consolidated Net Income, *plus*

(c) Consolidated Depreciation and Amortization Expense of such Person for such period to the extent the same were deducted (and not added back) in computing Consolidated Net Income, *plus*

(d) any fees, expenses, charges or losses (other than depreciation or amortization expense) related to any Equity Offering or other capital markets transaction, acquisition, disposition, recapitalization or the incurrence of Indebtedness permitted to be incurred by the Indenture (including a refinancing thereof) (whether or not successful), including such fees, expenses, charges or losses related to (i) the Transactions and any transactions pursuant to the Spin-Off Documents, (ii) the offering of the notes and the Senior Credit Facilities and (iii) any amendment or other modification of the Spin-Off Documents, the notes, the Senior Credit Facilities or other Indebtedness and, in each case, deducted (and not added back) in computing Consolidated Net Income, *plus*

(e) any other non-cash charges, including any write-offs, write-downs, expenses, losses, impairments or items, to the extent the same were deducted (and not added back) in computing Consolidated Net Income (provided that if any such non-cash charges represent an accrual or reserve for potential cash items in any future period, the cash payment in respect thereof in such future period shall be deducted from EBITDA to such extent, and excluding amortization of a prepaid cash item that was paid in a prior period), *plus*

(f) any losses during such period resulting from the sale or disposition of any asset of the Issuer or any Restricted Subsidiary outside the ordinary course of business, *plus*

(g) the amount of net cost savings, operating expense reductions and synergies projected by the Issuer in good faith to be realized as a result of specified actions taken or to be taken (which cost savings, operating expense reductions or synergies shall be calculated on a pro forma basis as though such cost savings, operating expense reductions or synergies had been realized on the first day of such period), net of the amount of actual benefits realized during such period from such actions; provided that (A) such cost savings, operating expense reductions or synergies are reasonably identifiable and factually supportable, (B) such actions have been taken or are to be taken within 18 months after the date of determination to take

such action and (C) the aggregate amounts added to EBITDA pursuant to this clause (g) in any such period shall not exceed 10% of EBITDA for such period (calculated before giving effect to the adjustment set forth in this clause (g)), *plus*

(h) litigation costs and expenses for non-ordinary course litigation, *plus*

(i) non-cash compensation expense, *plus*

(j) any unrealized expenses or losses in respect of Hedging Obligations; and

(2) decreased (without duplication) by:

(a) any gains during such period resulting from the sale or disposition of any asset of the Issuer or any Restricted Subsidiary outside the ordinary course of business, *plus*

(b) any unrealized credits or gains in respect of Hedging Obligations.

"Employee Matters Agreement" means the Employee Matters Agreement, dated as of May 9, 2018, by and between Dover and the Issuer.

"Equity Interest" means Capital Stock and all warrants, options or other rights to acquire Capital Stock, but excluding any debt security that is convertible into, or exchangeable for, Capital Stock.

"Equity Offering" means any public or private sale of common equity or preferred stock of the Issuer or any direct or indirect parent company of the Issuer (excluding Disqualified Stock), other than

(1) public offerings with respect to the Issuer's or any of its direct or indirect parent company's common equity registered on Form S-8; and

(2) issuances to any Subsidiary of the Issuer or any employee benefit plan of the Issuer. "euro" means the single currency of participating member states of the EMU.

"Event of Default" has the meaning set forth under "—Events of Default and Remedies."

"Excess Proceeds" has the meaning set forth in the fourth paragraph under "—Repurchase at the Option of Holders—Asset sales."

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC promulgated thereunder.

"Existing Indebtedness" means Indebtedness of the Issuer or any Restricted Subsidiary in existence on the Issue Date or incurred pursuant to the Spin-Off Documents on substantially the terms described in the Offering Memorandum, plus interest accruing (or the accretion of discount) thereon.

"Fair Market Value" means, with respect to any Investment, asset or property, the fair market value of such Investment, asset or property, determined in good faith by senior management or the board of directors of the Issuer, whose determination will be conclusive for all purposes under the Indenture and the notes.

"Fixed Charge Coverage Ratio" means, with respect to any Person as of any applicable date of determination, the ratio of (1) EBITDA of such Person for the Applicable Measurement Period to (2) the Fixed Charges of such Person for such Applicable Measurement Period. In the event that the Issuer or any Restricted Subsidiary incurs, assumes, guarantees, redeems, retires or extinguishes any Indebtedness or issues or redeems Disqualified Stock subsequent to the commencement of the Applicable Measurement Period but on or prior to the applicable date of determination, then the Fixed Charge Coverage Ratio shall be calculated giving pro forma effect to such incurrence, assumption, guarantee, redemption, retirement or extinguishment of Indebtedness, or such issuance or redemption of Disqualified Stock (in each case, including a pro forma application of the net proceeds

therefrom), as if the same had occurred at the beginning of the Applicable Measurement Period; provided, however, that, for purposes of the calculation of the Fixed Charge Coverage Ratio, in connection with the incurrence of any Indebtedness pursuant to the first paragraph under "—Certain Covenants —Limitation on indebtedness and issuance of disqualified stock," the Issuer may elect, pursuant to an Officer's Certificate delivered to the Trustee, to treat all or any portion of the commitment under any Indebtedness which is to be incurred, as being incurred as of the applicable date of determination and any subsequent incurrence of Indebtedness under such commitment that was so treated shall not be deemed, for purposes of this calculation, to be an incurrence of additional Indebtedness.

For purposes of calculating the Fixed Charge Coverage Ratio, Investments, acquisitions, dispositions, mergers, consolidations and disposed operations (as determined in accordance with GAAP) that have been made by the Issuer or any Restricted Subsidiary during the Applicable Measurement Period or subsequent to such Applicable Measurement Period and on or prior to or simultaneously with the applicable date of determination shall be calculated on a pro forma basis assuming that all such Investments, acquisitions, dispositions, mergers, consolidations and disposed operations (and the change in any associated Fixed Charges and the change in EBITDA resulting therefrom) had occurred on the first day of the Applicable Measurement Period. If since the beginning of such period any Person (that subsequently became a Restricted Subsidiary or was merged with or into the Issuer or any Restricted Subsidiary since the beginning of such period) shall have made any Investment, acquisition, disposition, merger, consolidation or disposed operation that would have required adjustment pursuant to this definition, then the Fixed Charge Coverage Ratio shall be calculated giving pro forma effect thereto for such Applicable Measurement Period as if such Investment, acquisition, disposition, merger, consolidation or disposed operation had occurred at the beginning of the Applicable Measurement Period.

For purposes of this definition, whenever pro forma effect is to be given to a transaction, the pro forma calculations shall be made in good faith by a responsible financial or accounting officer of the Issuer (and may include, without duplication, cost savings and operating expense reductions resulting from such Investment, acquisition, merger or consolidation which is being given pro forma effect that have been or are expected to be realized (subject to compliance with the proviso to clause (g) of the definition of "EBITDA")). If any Indebtedness bears a floating rate of interest and is being given pro forma effect, the interest on such Indebtedness shall be calculated as if the rate in effect on the applicable date of determination had been the applicable rate for the entire period (taking into account for such entire period, any Hedging Obligation applicable to such Indebtedness with a remaining term of 12 months or longer, and in the case of any Hedging Obligation applicable to such Indebtedness with a remaining term of less than 12 months, taking into account such Hedging Obligation to the extent of its remaining term). Interest on a Capitalized Lease Obligation shall be deemed to accrue at an interest rate reasonably determined by a responsible financial or accounting officer of the Issuer to be the rate of interest implicit in such Capitalized Lease Obligation in accordance with GAAP. For purposes of making the computation referred to above, interest on any Indebtedness under any revolving credit facility computed on a pro forma basis shall be computed based upon (A) the average daily balance of such Indebtedness during the applicable period or (B) if such facility was created after the end of the applicable period, the average daily balance of such Indebtedness during the period from the date of creation of such facility to the date of determination; or, if lower, the maximum commitments under such revolving credit facility as of the applicable date of determination. Interest on Indebtedness that may optionally be determined at an interest rate based upon a factor of a prime or similar rate, a eurocurrency interbank offered rate, or other rate, shall be deemed to have been based upon the rate actually chosen, or, if none, then based upon such optional rate chosen as the Issuer may designate.

"Fixed Charges" means, with respect to any Person for any period, the sum of

(a) Consolidated Interest Expense of such Person for such period, and

(b) all cash dividend payments or other distributions paid (excluding items eliminated in consolidation) on any series of Disqualified Stock or preferred stock of the Issuer held by Persons other than the Issuer or a Restricted Subsidiary made during such period.

"Foreign Subsidiary" means, with respect to any Person, any Restricted Subsidiary of such Person that is not organized or existing under the laws of the United States, any state thereof or the District of Columbia and any Restricted Subsidiary of such Foreign Subsidiary.

"Form 10" means the registration statement on Form 10, originally filed by the Issuer with the SEC on March 26, 2018, as amended.

"GAAP" means generally accepted accounting principles in the United States which are in effect on the Issue Date.

"Government Securities" means direct obligations of, or obligations guaranteed by, the United States, a member state of the European Union or any agency or instrumentality thereof, and the payment for which such government pledges its full faith and credit, and shall also include a depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act), as custodian with respect to any such Government Securities or a specific payment of principal or interest on any such Government Securities held by such custodian for the account of the holder of such depositary receipt; provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Government Securities or the specific payment of principal of or interest on the Government Securities evidenced by such depositary receipt.

"guarantee" means a guarantee (other than by endorsement of negotiable instruments for collection in the ordinary course of business), direct or indirect, in any manner (including letters of credit and reimbursement agreements in respect thereof), of all or any part of any Indebtedness or other obligations.

"Guarantee" means the guarantee by any Guarantor of the Issuer's Obligations under the Indenture.

"Guarantor" means each Restricted Subsidiary that guarantees the notes under the Indenture.

"Hedging Obligations" means, with respect to any Person, the obligations of such Person under any interest rate swap agreement, interest rate cap agreement, interest rate collar agreement, commodity swap agreement, commodity cap agreement, commodity collar agreement, foreign exchange contract, currency swap agreement or similar agreement providing for the transfer or mitigation of interest rate, commodity price or currency risks either generally or under specific contingencies.

"Holder" means a registered holder of the notes.

"Indebtedness" means, with respect to any Person,

(1) any indebtedness (including principal and premium) of such Person, whether or not contingent,

(a) in respect of borrowed money,

(b) in respect of obligations evidenced by bonds, notes, debentures or similar instruments or letters of credit or bankers' acceptances (or, without double counting, reimbursement agreements in respect thereof),

(c) representing the balance, deferred and unpaid, of the purchase price of any property, except (i) any such balance that constitutes a trade payable or similar obligation to a trade creditor, in each case accrued in the ordinary course of business, and (ii) any earn-out obligation until such obligation, after 60 days of becoming due and payable, has not been paid and is reflected as a liability on the balance sheet of such Person in accordance with GAAP,

(d) representing Capitalized Lease Obligations, or

(e) representing any Hedging Obligations,

if and to the extent that any of the foregoing Indebtedness (other than letters of credit and Hedging Obligations) would appear as a liability upon a balance sheet (excluding the footnotes thereto) of such Person prepared in accordance with GAAP,

(2) to the extent not otherwise included, any obligation by such Person to be liable for, or to pay, as obligor, guarantor or otherwise, on the obligations of the type referred to in clause (1) of another Person (whether or not such items would appear upon the balance sheet of such obligor or guarantor), other than by endorsement of negotiable instruments for collection in the ordinary course of business, and

(3) to the extent not otherwise included, the obligations of the type referred to in clause (1) of another Person secured by a Lien on any assets owned by such Person, whether or not such Indebtedness is assumed by such Person; provided, however, that the amount of such Indebtedness will be the lesser of: (a) the Fair Market Value of such assets at such date of determination, and (b) the amount of such Indebtedness of such other Person;

provided that, notwithstanding the foregoing, (x) Indebtedness shall be deemed not to include any Supply Chain Financing Obligations (and, for the avoidance of doubt, any Supply Chain Financing Obligations shall be exempt from the limitations set forth under the heading "—Certain Covenants—Limitation on incurrence of indebtedness and incurrence of disqualified stock") and (y) except as otherwise provided herein, committed amounts under any debt facility shall not be deemed incurred Indebtedness except to the extent actually drawn thereunder.

"Independent Financial Advisor" means an accounting, appraisal or investment banking firm of nationally recognized standing that is, in the good faith judgment of the Issuer, not an Affiliate of the Issuer and qualified to perform the task for which it has been engaged.

"Initial Purchasers" means J.P. Morgan Securities LLC and the other initial purchasers named in the Offering Memorandum.

"Inventory" means goods held for sale or lease by a Person in the ordinary course of business, net of any reserve for goods that have been segregated by such Person to be returned to the applicable vendor for credit, as determined in accordance with GAAP.

"Investment Grade Rating" means a rating equal to or higher than Baa3 (or the equivalent) by Moody's and BBB– (or the equivalent) by S&P, or if the applicable securities are not then rated by Moody's or S&P an equivalent rating by any other Rating Agency.

"Investment Grade Securities" means

(1) securities issued or directly and fully guaranteed or insured by the United States government or any agency or instrumentality thereof (other than Cash Equivalents),

(2) debt securities or debt instruments with an Investment Grade Rating, but excluding any debt securities or instruments constituting loans or advances among the Issuer and its Subsidiaries,

(3) investments in any fund that invests exclusively in investments of the type described in clauses (1) and (2) which fund may also hold immaterial amounts of cash pending investment or distribution, and

(4) corresponding instruments in countries other than the United States customarily utilized for high- quality investments.

"Investments" means, with respect to any Person, all investments by such Person in other Persons (including Affiliates) in the form of loans (including guarantees), advances or capital contributions (excluding accounts receivable, trade credit, advances to customers, commission, travel and similar advances to officers, directors, managers, employees and consultants, in each case made in the ordinary course of business), purchases or other

acquisitions for consideration of Indebtedness, Equity Interests or other securities issued by any other Person and investments that are required by GAAP to be classified on the balance sheet (excluding the footnotes) of the Issuer in the same manner as the other investments included in this definition to the extent such transactions involve the transfer of cash or other property. For purposes of the definition of "Unrestricted Subsidiary" and the covenant described under "—Certain Covenants—Limitation on restricted payments,"

(1) "Investments" shall include the portion (proportionate to the Issuer's equity interest in such Subsidiary) of the Fair Market Value of the net assets of a Subsidiary of the Issuer at the time that such Subsidiary is designated an Unrestricted Subsidiary; provided that upon a redesignation of such Subsidiary as a Restricted Subsidiary, the Issuer shall be deemed to continue to have a permanent "Investment" in an Unrestricted Subsidiary in an amount (if positive) equal to

(x) the Issuer's "Investment" in such Subsidiary at the time of such redesignation less

(y) the portion (proportionate to the Issuer's equity interest in such Subsidiary) of the Fair Market Value of the net assets of such Subsidiary at the time of such redesignation; and

(2) any property transferred to or from an Unrestricted Subsidiary shall be valued at its Fair Market Value at the time of such transfer.

The amount of any Investment outstanding at any time shall be the original cost of such Investment, reduced by any dividend, distribution, interest payment, return of capital, repayment or other amount received in cash by the Issuer or a Restricted Subsidiary in respect of such Investment to the extent such amounts do not increase any other baskets under the Indenture.

"Issue Date" means May 3, 2018.

"Legal Holiday" means a Saturday, a Sunday or a day on which commercial banking institutions are not required to be open in the State of New York.

"Lien" means, with respect to any asset, any mortgage, lien, pledge, hypothecation, charge, security interest, preference, priority or encumbrance of any kind in respect of such asset, whether or not filed, recorded or otherwise perfected under applicable law, including any conditional sale or other title retention agreement, any lease in the nature thereof, any option or other agreement to sell or give a security interest in and any filing of or agreement to give any financing statement under the Uniform Commercial Code (or equivalent statutes) of any jurisdiction; provided that in no event shall an operating lease be deemed to constitute a Lien.

"Limited Condition Acquisition" means any acquisition whose consummation is not conditioned on the availability of, or on obtaining, third party financing.

"Moody's" means Moody's Investors Service, Inc. and any successor to its rating agency business.

"Net Proceeds" means the aggregate cash proceeds and Fair Market Value of any Cash Equivalents received by the Issuer or a Restricted Subsidiary in respect of any Asset Sale (including any cash payments received by way of deferred payment of principal pursuant to a note or installment receivable or otherwise, but only as and when received), net of (i) the direct costs relating to such Asset Sale, including legal, accounting and investment banking fees, brokerage and sales commissions, any relocation expenses and other fees and expenses incurred as a result thereof, taxes paid or payable as a result thereof (including in connection with any repatriation of funds and after taking into account any available tax credits or deductions and any tax sharing arrangements), (ii) amounts required to be applied to the repayment of principal, premium, if any, and interest on Senior Indebtedness or Indebtedness of any Restricted Subsidiary required (other than pursuant to the second paragraph of "—Repurchase at the Option of Holders—Asset sales") to be paid as a result of such transaction, (iii) any costs associated with unwinding any related Hedging Obligations in connection with such transaction, (iv) all distributions and other payments required to be made to minority interest holders in Subsidiaries or joint ventures

as a result of such Asset Sale, or to any other Person (other than the Issuer or a Restricted Subsidiary) owning a beneficial interest in the assets disposed of in such Asset Sale and (v) any liabilities associated with the asset disposed of in such transaction and retained by the Issuer or any of its Restricted Subsidiaries after such sale or other disposition thereof, including pension and other post-employment benefit liabilities and liabilities related to environmental matters or against any indemnification obligations associated with such transaction.

"Obligations" means any principal, premiums, interest, penalties, fees, indemnifications, reimbursements (including reimbursement obligations with respect to letters of credit and banker's acceptances), damages and other liabilities, and guarantees of payment of such principal, premiums, interest, penalties, fees, indemnifications, reimbursements, damages and other liabilities, payable under the documentation governing any Indebtedness.

"Offering Memorandum" means the confidential offering memorandum, dated April 19, 2018, pursuant to which the outstanding notes were offered to potential purchasers.

"Officer" means, with respect to the Issuer or any other obligor upon the notes, the Chairman of the Board, the President, the Chief Executive Officer, the Chief Financial Officer, any Vice President, the Controller, the Treasurer, any Assistant Treasurer or the Secretary (a) of such Person or (b) if such Person is owned or managed by a single entity, of such entity, or any other individual designated as an "Officer" for the purposes of the Indenture by the board of directors of the Issuer.

"Officer's Certificate" means, with respect to the Issuer or any other obligor upon the notes, a certificate signed by one Officer of such Person and delivered to the Trustee.

"Opinion of Counsel" means a written opinion from legal counsel (which may be subject to customary assumptions, exclusions, limitations and exceptions). The counsel may be an employee of or counsel to the Issuer or other counsel reasonably acceptable to the Trustee.

"Permitted Asset Swap" means the concurrent purchase and sale or exchange of Related Business Assets or a combination of Related Business Assets and cash or Cash Equivalents between the Issuer or a Restricted Subsidiary and another Person; provided that any cash or Cash Equivalents received must be applied in accordance with the "Asset Sales" covenant.

"Permitted Investments" means:

(a) any Investment in the Issuer or any Restricted Subsidiary;

(b) any Investment in cash, Cash Equivalents or Investment Grade Securities;

(c) any Investment by the Issuer or any Restricted Subsidiary in a Person that is engaged in a Similar Business if as a result of such Investment

(1) such Person becomes a Restricted Subsidiary or

(2) such Person, in one transaction or a series of related transactions, is merged, consolidated or amalgamated with or into, or transfers or conveys substantially all of its assets to, or is liquidated into, the Issuer or a Restricted Subsidiary, and, in each case, any Investment held by such Person; provided that such Investment was not acquired by such Person in contemplation of such acquisition, merger, consolidation or transfer;

(d) any Investment in securities or other non-cash assets received in connection with an Asset Sale made pursuant to the provisions of "—Repurchase at the Option of Holders—Asset sales" or any other disposition of assets not constituting an Asset Sale;

(e) any Investment existing on the Effective Date and any Investment made pursuant to the Spin-Off Documents on substantially the terms described in the Offering Memorandum;

(f) any Investment acquired by the Issuer or any Restricted Subsidiary:

(1) (i) in exchange for any other Investment or accounts receivable held by the Issuer or any such Restricted Subsidiary in connection with or as a result of a bankruptcy, workout, reorganization or recapitalization of the issuer of such other Investment or accounts receivable or (ii) in settlement of delinquent accounts and disputes with customers and suppliers in the ordinary course of business,

(2) in satisfaction of judgments against other Persons, or

(3) as a result of a foreclosure by the Issuer or any Restricted Subsidiary with respect to any secured Investment or other transfer of title with respect to any secured Investment in default;

(g) Hedging Obligations permitted under clause (10) of the second paragraph of the covenant described in "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock";

(h) any Investment in a Similar Business having an aggregate Fair Market Value, taken together with all other Investments made pursuant to this clause (h) that are at that time outstanding, not to exceed the greater of (x) $50 million and (y) 2.5% of Consolidated Total Assets at the time of such Investment (with the Fair Market Value of each Investment being measured at the time made and without giving effect to subsequent changes in value); provided, however, that if any Investment pursuant to this clause (h) is made in any Person that is not a Restricted Subsidiary of the Issuer at the date of the making of such Investment and such Person becomes a Restricted Subsidiary after such date, such investment shall thereafter be deemed to have been made pursuant to clause (a) above and shall cease to have been made pursuant to this clause (h) for so long as such Person continues to be a Restricted Subsidiary;

(i) Investments the payment for which consists of Equity Interests of the Issuer (exclusive of Disqualified Stock); provided that such Equity Interests will not increase the amount available for Restricted Payments under clause (c) of the first paragraph under the covenant described in "—Certain Covenants—Limitation on restricted payments";

(j) (i) guarantees of Indebtedness permitted under the covenant described in "—Certain Covenants— Limitation on incurrence of indebtedness and issuance of disqualified stock" and (ii) guarantees of leases (other than Capital Lease Obligations) or of other obligations that do not constitute Indebtedness, in each case entered into in the ordinary course of business;

(k) any transaction to the extent it constitutes an Investment that is permitted and made in accordance with the provisions of the second paragraph of the covenant described under "—Certain Covenants— Transactions with affiliates" (except transactions described in clauses (2), (4), (7) and (12) of such paragraph);

(l) Investments consisting of purchases and acquisitions of Inventory, supplies, material or equipment, or other similar assets in the ordinary course of business, or the licensing or contribution of intellectual property pursuant to joint marketing arrangements with other Persons;

(m) additional Investments having an aggregate Fair Market Value, taken together with all other Investments made pursuant to this clause (m) that are at that time outstanding (without giving effect to the sale of an Unrestricted Subsidiary to the extent the proceeds of such sale do not consist of cash or marketable securities), not to exceed the greater of (x) $50.0 million and (y) 2.5% of Consolidated Total Assets at the time of such Investment (with the Fair Market Value of each Investment being measured at the time made and without giving effect to subsequent changes in value); provided, however, that if any Investment pursuant to this clause (m) is made in any Person that is not a Restricted Subsidiary of the Issuer at the date of the making of such Investment and such Person becomes a Restricted Subsidiary after such date, such investment shall thereafter be deemed to have been made pursuant to clause (a) above and shall cease to have been made pursuant to this clause (m) for so long as such Person continues to be a Restricted Subsidiary;

(n) Investments relating to any Subsidiary that, in the good faith determination of the board of directors of the Issuer, are necessary or advisable to effect a Supply Chain Financing;

(o) advances to, or guarantees of Indebtedness of, employees in the aggregate not to exceed at any one time outstanding $10.0 million;

(p) loans and advances to officers, directors, managers and employees for business-related travel expenses, moving expenses, payroll expenses and other similar expenses, in each case incurred in the ordinary course of business or consistent with past practices or to fund such Person's purchase of Equity Interests of the Issuer;

(q) advances, loans or extensions of trade credit in the ordinary course of business by the Issuer or any of the Restricted Subsidiaries;

(r) intercompany current liabilities owed to Unrestricted Subsidiaries or joint ventures incurred in the ordinary course of business in connection with the cash management operations of the Issuer and its Subsidiaries;

(s) Investments made in connection with the funding of contributions under any non-qualified retirement plan or similar employee compensation plan in an amount not to exceed the amount of compensation expense recognized by the Issuer and its Restricted Subsidiaries in connection with such plans;

(t) Investments of any Person existing at the time such Person becomes a Restricted Subsidiary or consolidates or merges with the Issuer or any Restricted Subsidiary so long as such Investments were not made in contemplation of such Person becoming a Restricted Subsidiary or of such consolidation or merger;

(u) Investments resulting from pledges or deposits described in clause (1) of the definition of the term "Permitted Liens";

(v) Investments that result solely from the receipt by the Issuer or any Restricted Subsidiary from any of its Subsidiaries of a dividend or other Restricted Payment in the form of Equity Interests, evidences of Indebtedness or other securities; and

(w) any other Investments if, on a pro forma basis after giving effect thereto including all related commitments for future Investments (and the principal amount of any Indebtedness that is assumed or otherwise incurred in connection with such Investment), the Consolidated Total Debt Ratio is less than 2.25 to 1.00.

"Permitted Liens" means, with respect to any Person:

(1) pledges, deposits or security by such Person (i) under workmen's compensation laws, unemployment insurance, employers' health tax, and other social security laws or similar legislation or other insurance related obligations (including, but not limited to, in respect of deductibles, self-insured retention amounts and premiums and adjustments thereto) or indemnification obligations of insurance carriers providing property, casualty or liability insurance, or good faith deposits in connection with bids, tenders, contracts (other than for the payment of Indebtedness) or leases to which such Person is a party, or deposits to secure public or statutory obligations of such Person or deposits of cash or U.S. government bonds to secure surety, stay, customs or appeal bonds to which such Person is a party, or deposits as security for contested taxes or import duties or for the payment of rent, performance and return-of-money bonds and other similar obligations (including those to secure health, safety and environmental obligations) and (ii) in respect of letters of credit, bank guarantees or similar instruments issued for the account of such Person in the ordinary course of business supporting obligations of such type, in each case incurred in the ordinary course of business;

(2) Liens imposed by law or regulation, such as carriers', warehousemen's, materialmen's, repairmen's, mechanics', contractors', landlords', architects' and other similar Liens, in each case for sums not yet overdue for a period of more than 30 days or being contested in good faith by appropriate proceedings or other Liens arising out of judgments or awards against such Person with respect to which such Person shall then be proceeding with an appeal or other proceedings for review if adequate reserves with respect thereto are maintained on the books of such Person in accordance with GAAP;

(3) Liens for taxes, assessments or other governmental charges not yet overdue for a period of more than 30 days or which are being contested in good faith by appropriate proceedings diligently conducted, if adequate reserves with respect thereto are maintained on the books of such Person in accordance with GAAP, or for property taxes on property such Person or one of its Subsidiaries has determined to abandon if the sole recourse for such tax, assessment, charge, levy or claim is to such property;

(4) Liens in favor of issuers of performance, surety, bid, indemnity, warranty, release, appeal or similar bonds or with respect to other regulatory requirements or letters of credit or bankers' acceptances issued, and completion guarantees provided for, in each case pursuant to the request of and for the account of such Person in the ordinary course of its business;

(5) Survey exceptions, encumbrances, ground leases, easements or reservations of, or rights of others for, licenses, rights-of-way, servitudes, sewers, electric lines, drains, telegraph and telephone and cable television lines, gas and oil pipelines and other similar purposes, or zoning, building codes or other restrictions (including, without limitation, defects or irregularities in title and similar encumbrances) as to the use of real properties or Liens incidental, to the conduct of the business of such Person or to the ownership of its properties which were not incurred in connection with Indebtedness and which do not in the aggregate materially adversely affect the value of said properties or materially impair their use in the operation of the business of such Person;

(6) Liens securing Indebtedness incurred pursuant to clause (1), (2), (4), (5), (8), (10), (11), (12), (15) and (18) of the second paragraph under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock"; provided, however, that, in the case of (a) clause (4), such Lien may not extend to any assets other than the assets acquired with the Indebtedness incurred pursuant to clause (4), and (b) clause (8), such Lien may not extend to any assets other than assets owned by the Foreign Subsidiary incurring such Indebtedness;

(7) Liens existing on the Issue Date or under the Spin-Off Documents (other than Liens incurred or to be incurred under the Senior Credit Facilities);

(8) Liens on property or shares of stock of a Person at the time such Person becomes a Subsidiary; provided such Liens are not created or incurred in connection with, or in contemplation of, such other Person becoming a Subsidiary; provided, further, however, that such Liens may not extend to any other property owned by the Issuer or any Guarantor (other than after-acquired property that is (a) affixed or incorporated into the property covered by such Lien, (b) subject to a Lien securing such Indebtedness, the terms of which Indebtedness require or include a pledge of after-acquired property and (c) the proceeds and products thereof);

(9) Liens on property at the time the Issuer or a Restricted Subsidiary acquired the property, including any acquisition by means of a merger or consolidation with or into the Issuer or any Restricted Subsidiary; provided that such Liens are not created or incurred in connection with, or in contemplation of, such acquisition, merger or consolidation; provided further, that the Liens may not extend to any other property owned by the Issuer or any Restricted Subsidiary;

(10) Liens securing Indebtedness or other obligations of the Issuer or a Restricted Subsidiary owing to the Issuer or another Restricted Subsidiary permitted to be incurred in accordance with the covenant described under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock";

(11) Liens securing Hedging Obligations and Cash Management Services incurred in compliance with the covenant described under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock";

(12) Liens on specific items of Inventory or other goods and proceeds of any Person securing such Person's obligations in respect of bankers' acceptances or trade letters of credit issued or created for the account of such Person to facilitate the purchase, shipment or storage of such Inventory or other goods;

(13) leases, subleases, licenses or sublicenses (including of intellectual property) to or from third parties granted in the ordinary course of business;

(14) Liens arising from Uniform Commercial Code (or equivalent statute) financing statement filings regarding operating leases or consignments entered into by the Issuer or any Restricted Subsidiary in the ordinary course of business;

(15) Liens in favor of the Issuer or any Guarantor;

(16) Liens on equipment of the Issuer or any Restricted Subsidiary granted in the ordinary course of business to the Issuer's or such Restricted Subsidiaries' client at which such equipment is located;

(17) [reserved];

(18) Liens to secure any refinancing, refunding, extension, renewal or replacement (or successive refinancing, refunding, extensions, renewals or replacements) as a whole, or in part, of any Indebtedness secured by any Lien referred to in clauses (6) (solely with respect to Liens securing Indebtedness incurred pursuant to clauses (2) or (4) of the second paragraph under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock"), (7), (8), (9), (10), (11), (18) and (20) of this definition of "Permitted Liens"; provided that (x) such new Lien shall be limited to all or part of the same property that secured the original Lien (plus accessions, additions and improvements on such property and after-acquired property that is (a) affixed or incorporated into the property covered by such Lien, (b) subject to a Lien securing such Indebtedness, the terms of which Indebtedness require or include a pledge of after-acquired property and (c) the proceeds and products thereof), and (y) the Indebtedness secured by such Lien at such time is not increased to any amount greater than the sum of (A) the outstanding principal amount or, if greater, committed amount of the Indebtedness described under clauses (6) (solely with respect to Liens securing Indebtedness incurred pursuant to clauses (2) or (4) of the second paragraph under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock"), (7), (8), (9), (10), (11), (18) and (20) at the time the original Lien became a Permitted Lien under the Indenture, and (B) an amount necessary to pay any fees and expenses, including premiums, and accrued and unpaid interest related to such refinancing, refunding, extension, renewal or replacement;

(19) deposits made or other security provided to secure liabilities to insurance carriers under insurance or self-insurance arrangements in the ordinary course of business;

(20) Liens to secure Indebtedness incurred pursuant to the covenant described under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock"; provided that (x) no Default shall have occurred and be continuing at the time of the incurrence of such Indebtedness or after giving effect thereto and (y) the Consolidated Secured Debt Ratio, calculated on a pro forma basis after giving effect to the incurrence of such Lien, the related Indebtedness and the application of net proceeds therefrom, would be no greater than 1.75 to 1.00;

(21) other Liens securing obligations incurred in the ordinary course of business which obligations at any one time outstanding do not exceed the greater of (x) $35.0 million and (y) 1.75% of Consolidated Total Assets at the time of incurrence;

(22) Liens arising out of judgments, decrees, orders or awards in respect of which the Issuer or any Restricted Subsidiary shall in good faith be prosecuting an appeal or proceedings for review, which appeal or proceedings shall not have been finally terminated, or if the period within which such appeal or proceedings may be initiated shall not have expired;

(23) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods in the ordinary course of business;

(24) Liens (i) of a collection bank arising under Section 4-210 of the Uniform Commercial Code or any comparable or successor provision on items in the course of collection, (ii) attaching to pooling, commodity trading accounts or other commodity brokerage accounts incurred in the ordinary course of business and (iii) in favor of banking or other financial institutions or electronic payment service providers arising as a matter of law encumbering deposits (including the right of set-off) and which are within the general parameters customary in the banking or finance industry;

(25) Liens deemed to exist in connection with repurchase agreements permitted under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock"; provided that such Liens do not extend to any assets other than those that are the subject of such repurchase agreement;

(26) Liens encumbering reasonable customary initial deposits and margin deposits and similar Liens attaching to commodity trading accounts or other brokerage accounts incurred in the ordinary course of business and not for speculative purposes;

(27) Liens that are contractual rights of set-off (i) relating to the establishment of depository relations with banks not given in connection with the issuance of Indebtedness, (ii) relating to pooled deposit or sweep accounts of the Issuer or any of its Restricted Subsidiaries to permit satisfaction of overdraft or similar obligations incurred in the ordinary course of business of the Issuer and its Restricted Subsidiaries or (iii) relating to purchase orders and other agreements entered into with customers of the Issuer or any of its Restricted Subsidiaries in the ordinary course of business;

(28) Liens solely on any cash earnest money deposits made by the Issuer or any of its Restricted Subsidiaries in connection with any letter of intent or purchase agreement permitted under the Indenture;

(29) the rights reserved or vested in any Person by the terms of any lease, license, franchise, grant or permit held by the Issuer or any of its Restricted Subsidiaries or by a statutory provision, to terminate any such lease, license, franchise, grant or permit, or to require annual or periodic payments as a condition to the continuance thereof;

(30) restrictive covenants affecting the use to which real property may be put; provided that the covenants are complied with;

(31) security given to a public utility or any municipality or governmental authority when required by such utility or authority in connection with the operations of that Person in the ordinary course of business;

(32) zoning by-laws and other land use restrictions, including, without limitation, site plan agreements, development agreements and contract zoning agreements;

(33) Liens arising out of conditional sale, title retention, consignment or similar arrangements for sale of goods entered into by the Issuer or any Restricted Subsidiary in the ordinary course of business;

(34) any Lien granted pursuant to a security agreement between the Issuer or any Restricted Subsidiary and a licensee of their intellectual property to secure the damages, if any, of such licensee resulting from the rejection by the Issuer or such Restricted Subsidiary of such licensee in a bankruptcy, reorganization or similar proceeding with respect to the Issuer or such Restricted Subsidiary; provided that such Liens do not cover any assets other than the intellectual property subject to such license;

(35) Liens on the Equity Interests of Unrestricted Subsidiaries;

(36) in the case of (A) any Restricted Subsidiary that is not a Wholly-Owned Subsidiary or (B) the Equity Interests in any Person that is not a Restricted Subsidiary, any encumbrance or restriction, including any put and call arrangements, related to Equity Interests in such Restricted Subsidiary or such other Person set forth in the organizational documents of such Restricted Subsidiary or such other Person or any related joint venture, stockholders' or similar agreement;

(37) Liens on property or assets used to defease or to irrevocably satisfy and discharge Indebtedness; *provided* that such defeasance or satisfaction and discharge is not prohibited by the Indenture;

(38) [reserved];

(39) Liens securing Supply Chain Financing Obligations in the aggregate not to exceed at any one time outstanding $40.0 million;

(40) Liens on property of the Issuer or a Restricted Subsidiary in favor of the United States of America or any State thereof, or any department, agency or instrumentality or political subdivision of the United States of America or any State thereof, to secure partial, progress, advance or other payments pursuant to any contract or statute;

(41) banker's liens, rights of set-off or similar rights and remedies as to deposit accounts or other funds maintained with depository institutions and securities accounts and other financial assets maintained with a securities intermediary; provided that such deposit accounts or funds and securities accounts or other financial assets are not established or deposited for the purpose of providing collateral for any Indebtedness;

(42) Liens in respect of any Sale and Lease-Back Transactions in the aggregate not to exceed at any one time outstanding $50.0 million; and

(43) in connection with the sale or transfer of any Equity Interests or other assets in a transaction permitted under the Indenture, customary rights and restrictions contained in agreements relating to such sale or transfer pending the completion thereof.

For purposes of determining compliance with this definition, (x) a Lien need not be incurred solely by reference to one category of Permitted Liens described in this definition but may be incurred under any combination of such categories (including in part under one such category and in part under any other such category), (y) in the event that a Lien (or any portion thereof) meets the criteria of one or more of such categories of Permitted Liens, the Issuer shall, in its sole discretion, classify or reclassify such Lien (or any portion thereof) in any manner that complies with this definition, and (z) in the event that a portion of Indebtedness secured by a Lien could be classified as secured in part pursuant to clause (20) above (giving effect to the incurrence of such portion of such Indebtedness), the Issuer, in its sole discretion, may classify such portion of such Indebtedness (and any Obligations in respect thereof) as having been secured pursuant to clause (20) above and thereafter the remainder of the Indebtedness as having been secured pursuant to one or more of the other clauses of this definition.

"Person" means any individual, corporation, limited liability company, partnership, joint venture, association, joint stock company, trust, unincorporated organization, government or any agency or political subdivision thereof or any other entity.

"preferred stock" means any Equity Interest with preferential rights of payment of dividends or upon liquidation, dissolution, or winding up.

"Rating Agencies" mean Moody's and S&P or if Moody's or S&P or both shall not make a rating on the notes publicly available, a nationally recognized statistical rating agency or agencies, as the case may be, selected by the Issuer which shall be substituted for Moody's or S&P or both, as the case may be.

"Refinance" means, in respect of any Indebtedness, Disqualified Stock or preferred stock, to refinance, extend, renew, refund, repay, prepay, purchase, redeem, defease or retire, or to issue other Indebtedness, Disqualified Stock or preferred stock in exchange or replacement for, such Indebtedness, Disqualified Stock or preferred stock, in whole or in part. "Refinanced" and "Refinancing" shall have correlative meanings.

"Related Business Assets" means assets (other than cash or Cash Equivalents) used or useful in a Similar Business; provided that any assets received by the Issuer or the Restricted Subsidiaries in exchange for assets transferred by the Issuer or a Restricted Subsidiary shall not be deemed to be Related Business Assets if they consist of Capital Stock of a Person, unless upon receipt of the Capital Stock of such Person, such Person would become a Restricted Subsidiary.

"Restricted Investment" means an Investment other than a Permitted Investment.

"Restricted Subsidiary" means, at any time, any direct or indirect Subsidiary of the Issuer (including any Foreign Subsidiary) that is not then an Unrestricted Subsidiary; provided that upon the occurrence of an Unrestricted Subsidiary ceasing to be an Unrestricted Subsidiary in accordance with the Indenture, such Subsidiary shall be included in the definition of "Restricted Subsidiary."

"S&P" means Standard & Poor's Ratings Services and any successor to its rating agency business.

"Sale and Lease-Back Transaction" means any arrangement with any Person providing for the leasing by the Issuer or any Restricted Subsidiary of any real or tangible personal property, which property has been or is to be sold or transferred by the Issuer or such Restricted Subsidiary to such Person in contemplation of such leasing.

"SEC" means the Securities and Exchange Commission.

"Secured Indebtedness" means any Indebtedness of the Issuer or any of its Restricted Subsidiaries secured by a Lien.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations of the SEC promulgated thereunder.

"Senior Credit Facilities" means the credit facilities provided under the Credit Agreement, dated as of May 9, 2018, among the Issuer, the lenders party thereto from time to time in their capacities as lenders thereunder, and JPMorgan Chase Bank, N.A., as administrative agent, including any notes, mortgages, guarantees, collateral documents, instruments and agreements executed in connection therewith, and any amendments, supplements, modifications, extensions, replacements, renewals, restatements, refundings or refinancings thereof and any one or more indentures or credit facilities or commercial paper facilities with banks or other institutional lenders or investors that extend, replace, refund, refinance, renew or defease any part of the loans, notes, other credit facilities or commitments thereunder, including any such replacement, refunding or refinancing facility or indenture that increases the amount borrowable thereunder or alters the maturity thereof or adds Restricted Subsidiaries as additional borrowers or guarantors thereunder and whether by the same or any other agent, lender or group of lenders.

"Senior Indebtedness" means with respect to any Person:

(1) Indebtedness of such Person, whether outstanding on the Issue Date or thereafter incurred, and

(2) all other Obligations of such Person (including interest accruing on or after the filing of any petition in bankruptcy or for reorganization relating to such Person whether or not post-filing interest is allowed in such proceeding) in respect of Indebtedness described in clause (1) above,

in the case of both clauses (1) and (2), to the extent permitted to be incurred under the terms of the Indenture, unless, in the case of clauses (1) and (2), in the instrument creating or evidencing the same or pursuant to which the same is outstanding, it is provided that such Indebtedness or other Obligations are subordinated in right of payment to the notes or the Guarantee of such Person, as the case may be; provided that Senior Indebtedness shall not include:

(1) any obligation of such Person to the Issuer or any Subsidiary of the Issuer;

(2) any liability for Federal, state, local or other taxes owed or owing by such Person;

(3) any accounts payable or other liability to trade creditors arising in the ordinary course of business;

(4) any Capital Stock;

(5) any Indebtedness or other Obligation of such Person which is subordinate or junior in any respect to any other Indebtedness or other Obligation of such Person; or

(6) that portion of any Indebtedness which at the time of incurrence is incurred in violation of the Indenture.

"Separation and Distribution Agreement" means the Separation and Distribution Agreement, dated as of May 9, 2018, by and between Dover and the Issuer.

"Significant Subsidiary" means any Restricted Subsidiary that would be a "significant subsidiary" as defined in Article 1, Rule 1- 02 of Regulation S-X, promulgated pursuant to the Securities Act, as such regulation is in effect on the Issue Date.

"Similar Business" means any business conducted or proposed to be conducted by the Issuer and the Restricted Subsidiaries on the Effective Date or any business that is similar, reasonably related, incidental or ancillary thereto or extensions, developments or expansions thereof.

"Spin-Off Documents" means the Separation and Distribution Agreement, the Transition Services Agreement, the Tax Matters Agreement and the Employee Matters Agreement, together with any other material agreements, instruments or other documents entered into in connection with any of the foregoing, each on substantially the terms described in the Offering Memorandum.

"Subordinated Indebtedness" means

(a) with respect to the Issuer, any Indebtedness of the Issuer which is by its terms subordinated in right of payment to the notes, and

(b) with respect to any Guarantor, any Indebtedness of such Guarantor which is by its terms subordinated in right of payment to the Guarantee of such Guarantor under the Indenture.

"Subsidiary" means, with respect to any Person,

(1) any corporation, association, or other business entity (other than a partnership, joint venture, limited liability company or similar entity) of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time of determination owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof; and

(2) any partnership, joint venture, limited liability company or similar entity of which:

(x) more than 50% of the capital accounts, distribution rights, total equity and voting interests or general or limited partnership interests, as the case may be, are owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof whether in the form of membership, general, special or limited partnership or otherwise; and

(y) such Person or any Restricted Subsidiary of such Person is a controlling general partner or otherwise controls such entity.

"Supply Chain Financing" means any agreement under which any bank, financial institution or other person may from time to time provide any financial accommodation to any of the Issuer or any Subsidiary in connection with trade payables of the Issuer or any Subsidiary, in each case issued for the benefit of any such bank, financial institution or such other person that has acquired such trade payables pursuant to "supply chain" or other similar financing for vendors and suppliers of the Issuer or any Subsidiaries, so long as (i) other than in the case of Supply Chain Financing Obligations, such Indebtedness is unsecured, (ii) the terms of such trade payables shall not have been extended in connection with the Supply Chain Financing and (iii) such Indebtedness represents amounts not in excess of those which the Issuer or any of its Subsidiaries would otherwise have been obligated to pay to its vendor or supplier in respect of the applicable trade payables.

"Supply Chain Financing Obligations" means obligations of the Issuer and its Subsidiaries including non-wholly owned Subsidiaries, if applicable, under or in respect of any Supply Chain Financing.

"Tax Matters Agreement" means the Tax Matters Agreement, dated as of May 9, 2018, by and between Dover and the Issuer.

"Transition Services Agreement" means the Transition Services Agreement, dated as of May 9, 2018, by and between Dover and the Issuer.

"Treasury Rate" means, as of any Redemption Date, the weekly average rounded to the nearest 1/100th of a percentage point (for the most recently completed week for which such information is available as of the date

that is two business days prior to the Redemption Date) of the yield to maturity of United States Treasury securities with a constant maturity (as compiled and published in Federal Reserve Statistical Release H.15 with respect to each applicable day during such week (or, if such Statistical Release is no longer published, any publicly available source of similar market data)) most nearly equal to the period from the Redemption Date to May 1, 2021; provided that if the period from the Redemption Date to May 1, 2021 is not equal to the constant maturity of a United States Treasury Security for which such a yield is given, the Treasury Rate shall be obtained by linear interpolation (calculated to the nearest one-twelfth of a year) from the weekly average yields of United States Treasury Securities for which such yields are given, except that if the period from the Redemption Date to May 1, 2021 is less than one year, the weekly average yield on actively traded United States Treasury securities adjusted to a constant maturity of one year will be used.

"Trust Indenture Act" means the Trust Indenture Act of 1939, as amended (15 U.S.C. §§ 77aaa-77bbbb), as in effect on the Issue Date and, to the extent required by law, as amended.

"Trustee" means Wells Fargo Bank, National Association until a successor replaces it and, thereafter, means the successor.

"Unrestricted Subsidiary" means:

(1) as of the Issue Date, AMES (subject to the right of the board of directors of the Issuer to designate AMES as a Restricted Subsidiary and thereafter to re-designate AMES as an Unrestricted Subsidiary from time to time, all as provided below),

(2) any Subsidiary of the Issuer which at the time of determination is an Unrestricted Subsidiary (as designated by the board of directors of the Issuer, as provided below) and

(3) any Subsidiary of an Unrestricted Subsidiary.

The board of directors of the Issuer may designate any Subsidiary of the Issuer (including any existing Subsidiary and any newly acquired or newly formed Subsidiary) to be an Unrestricted Subsidiary unless such Subsidiary or any of its Subsidiaries owns any Equity Interests or Indebtedness of, or owns or holds any Lien on, any property of, the Issuer or any Restricted Subsidiary (other than any Subsidiary of the Subsidiary to be so designated); provided that

(a) any Unrestricted Subsidiary must be an entity of which the Equity Interests entitled to cast at least a majority of the votes that may be cast by all Equity Interests having ordinary voting power for the election of directors or other governing body are owned, directly or indirectly, by the Issuer,

(b) such designation would be permitted by the covenant described under "—Certain Covenants—Limitation on restricted payments" and the definition of "Investments" and

(c) each of

(1) the Subsidiary to be so designated and

(2) its Subsidiaries has not at the time of designation, and does not thereafter, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable with respect to any Indebtedness pursuant to which the lender has recourse to any of the assets of the Issuer or any Restricted Subsidiary.

The board of directors of the Issuer may designate any Unrestricted Subsidiary (including without limitation, AMES) to be a Restricted Subsidiary; provided that, immediately after giving effect to such designation no Default shall have occurred and be continuing and either:

(1) the Issuer could incur at least $1.00 of additional Indebtedness pursuant to the Fixed Charge Coverage Ratio test described in the first paragraph under "—Certain Covenants—Limitation on incurrence of indebtedness and issuance of disqualified stock" or

(2) the Fixed Charge Coverage Ratio for the Issuer and the Restricted Subsidiaries would be equal to or greater than such ratio for the Issuer and the Restricted Subsidiaries immediately prior to such designation, in each case on a pro forma basis taking into account such designation.

Any such designation by the board of directors of the Issuer shall be notified by the Issuer to the Trustee by promptly filing with the Trustee a copy of the Board Resolution giving effect to such designation and an Officer's Certificate certifying that such designation complied with the foregoing provisions.

"Voting Stock" of any Person as of any date means the Capital Stock of such Person that is normally entitled to vote in the election of the board of directors of such Person.

"Weighted Average Life to Maturity" means, when applied to any Indebtedness, Disqualified Stock or preferred stock, as the case may be, at any date, the quotient obtained by dividing

(1) the sum of the products of the number of years from the date of determination to the date of each successive scheduled principal payment of such Indebtedness or redemption or similar payment with respect to such Disqualified Stock or preferred stock multiplied by the amount of such payment, by

(2) the sum of all such payments.

"Wholly-Owned Subsidiary" of any Person means a Subsidiary of such Person, 100% of the outstanding Capital Stock or other ownership interests of which (other than directors' qualifying shares) shall at the time be owned by such Person or by one or more Wholly-Owned Subsidiaries of such Person.

SUMMARY OF MATERIAL UNITED STATES FEDERAL INCOME TAX CONSEQUENCES

The following discussion summarizes material U.S. federal income tax consequences relating to the exchange of outstanding notes for exchange notes in the exchange offer. This summary addresses only the U.S. federal income tax consequences of the exchange of outstanding notes originally acquired at their initial offering for an amount of cash equal to their issue price and held as "capital assets" within the meaning of Section 1221 of the Code. This discussion does not address the issuance of any additional securities by us because no additional securities are contemplated by this prospectus. This discussion is based upon the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, and rulings, judicial decisions and administrative interpretations thereunder, all as of the date hereof and all of which are subject to change, possibly with retroactive effect, or subject to different interpretations.

This discussion does not address all U.S. federal income tax considerations that may be relevant to a particular holder in light of the holder's circumstances or to certain categories of investors that may be subject to special rules, such as banks and other financial institutions, regulated investment companies, real estate investment trusts, insurance companies, tax-exempt entities, dealers in securities or currencies, brokers, traders in securities that elect to use mark-to-market method of accounting for their securities holdings, persons who hold the notes through partnerships or other pass-through entities, controlled foreign corporations, passive foreign investment companies, U.S. expatriates, U.S. holders whose "functional currency" for U.S. federal income tax purposes is not the U.S. dollar or persons who hold the notes as part of a hedge, conversion transaction, straddle or other integrated transaction. In addition, this discussion does not address any U.S. federal gift tax, estate tax or alternative minimum tax consequences or any state, local, foreign or other tax consequences.

The exchange of outstanding notes for exchange notes in the exchange offer will not constitute a taxable exchange or other taxable event for U.S. federal income tax purposes. Consequently, you will not recognize gain or loss upon receipt of an exchange note, your holding period for the exchange note should include your holding period for the outstanding note exchanged therefor and your adjusted tax basis in the exchange note should be the same as your adjusted tax basis in the outstanding note immediately before the exchange.

The preceding discussion of material U.S. federal income tax consequences of the exchange offer is for general purposes only. It is not written to be, and it should not be construed to be, tax or legal advice to any holder. You should consult your own tax advisor as to the particular tax consequences to you of the exchange offer, including the effect and applicability of state, local or foreign tax laws or tax treaties and the possible effects of changes in the applicable tax laws, as well as the tax consequences of the ownership and disposition of outstanding notes or exchange notes.

PLAN OF DISTRIBUTION

Each broker-dealer that receives exchange notes for its own account pursuant to the exchange offer must acknowledge that it will deliver a prospectus in connection with any resale of such exchange notes. This prospectus, as it may be amended or supplemented from time to time, may be used by a broker-dealer in connection with resales of exchange notes received in exchange for outstanding notes where such outstanding notes were acquired as a result of market-making activities or other trading activities. We have agreed to keep effective the registration statement of which this prospectus is a part until 180 days after the completion of the exchange offer. In addition, all dealers effecting transactions in the exchange notes may be required to deliver a prospectus.

We will not receive any proceeds from any sale of exchange notes by broker-dealers. Exchange notes received by broker-dealers for their own account pursuant to the exchange offer may be sold from time to time in one or more transactions in the over-the-counter market, in negotiated transactions, through the writing of options on the exchange notes or a combination of such methods of resale, at market prices prevailing at the time of resale, at prices related to such prevailing market prices or at negotiated prices. Any such resale may be made directly to purchasers or through brokers or dealers who may receive compensation in the form of commissions or concessions from any such broker-dealer and/or the purchasers of any such exchange notes. Any broker-dealer that resells exchange notes that were received by it for its own account pursuant to the exchange offer and any broker or dealer that participates in a distribution of such exchange notes may be deemed to be an “underwriter” within the meaning of the Securities Act, and any profit of any such resale of exchange notes and any commission or concessions received by any such persons may be deemed to be underwriting compensation under the Securities Act. The letter of transmittal states that, by acknowledging that it will deliver and by delivering a prospectus, a broker-dealer will not be deemed to admit that it is an “underwriter” within the meaning of the Securities Act.

Subject to certain limitations set forth in the registration rights agreement, we have agreed to pay all expenses incident to our performance of or compliance with our obligations under the registration rights agreement with respect to the exchange offer (including the reasonable expenses of one counsel for the holders of the outstanding notes) other than commissions or concessions of any broker-dealers and will indemnify you (including any broker-dealers) against certain liabilities, including liabilities under the Securities Act.

LEGAL MATTERS

The validity and enforceability of the exchange notes will be passed upon for us by Baker & McKenzie LLP, Houston, Texas.

EXPERTS

The financial statements as of December 31, 2017 and 2016 and for each of the three years in the period ended December 31, 2017 included in this Prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

SEC POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

INDEX TO FINANCIAL STATEMENTS

Unaudited Condensed Consolidated Financial Statements of Apergy Corporation

Audited Combined Financial Statements of Apergy Corporation

APERGY CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(Unaudited)

(in thousands, except per share data)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017
Product revenue	$ 283,103	$ 235,848	$ 808,311	$ 679,837
Service revenue	20,471	16,149	62,014	46,163
Lease and other revenue	12,894	6,657	35,993	19,093
Total revenue	316,468	258,654	906,318	745,093
Cost of goods and services	202,734	173,880	594,605	500,329
Gross profit	113,734	84,774	311,713	244,764
Selling, general and administrative expense	69,022	54,828	194,568	162,359
Interest expense, net	10,584	79	16,813	199
Other expense, net	910	2,941	3,724	7,929
Income before income taxes	33,218	26,926	96,608	74,277
Provision for income taxes	7,723	8,241	24,324	22,973
Net income	25,495	18,685	72,284	51,304
Net income attributable to noncontrolling interest	232	264	295	860
Net income attributable to Apergy	$ 25,263	$ 18,421	$ 71,989	$ 50,444
Earnings per share attributable to Apergy: *				
Basic	$ 0.33	$ 0.24	$ 0.93	$ 0.65
Diluted	$ 0.33	$ 0.24	$ 0.93	$ 0.65
Weighted-average shares outstanding: *				
Basic	77,340	77,340	77,340	77,340
Diluted	77,569	77,890	77,742	77,890

* See Note 4 — Earnings Per Share.

The accompanying notes are an integral part of the condensed consolidated financial statements.

APERGY CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income	$25,495	$18,685	$72,284	$51,304
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments (1)	(515)	5,303	(9,080)	6,895
Pension and other post-retirement benefit plans:				
Net actuarial gain arising during period	—	—	170	—
Reclassification adjustment of net actuarial loss included in net income	86	67	181	199
Reclassification adjustment for settlement losses included in net income	353	—	353	—
Total pension and other post-retirement benefit plans (2)	439	67	704	199
Other comprehensive income (loss)	(76)	5,370	(8,376)	7,094
Comprehensive income	25,419	24,055	63,908	58,398
Comprehensive income attributable to noncontrolling interest	232	264	295	860
Comprehensive income attributable to Apergy	$25,187	$23,791	$63,613	$57,538

(1) Net of income tax (expense) benefit of nil for the three and nine months ended September 30, 2018 and 2017.
(2) Net of income tax (expense) benefit of $161 and $35 for the three months ended September 30, 2018 and 2017, respectively, and $123 and $102 for the nine months ended September 30, 2018 and 2017, respectively.

The accompanying notes are an integral part of the condensed consolidated financial statements.

APERGY CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

(in thousands)	September 30, 2018	December 31, 2017
Assets		
Cash and cash equivalents	$ 18,014	$ 23,712
Receivables, net of allowances of $5,454 in 2018 and $4,753 in 2017	277,926	202,024
Inventories, net	219,133	201,591
Prepaid expenses and other current assets	20,824	14,038
Total current assets	535,897	441,365
Property, plant and equipment, net	236,067	211,832
Goodwill	906,766	910,088
Intangible assets, net	297,397	338,510
Other non-current assets	7,229	2,980
Total assets	1,983,356	1,904,775
Liabilities and Equity		
Accounts payable	127,103	98,826
Accrued compensation and employee benefits	36,988	30,289
Accrued expenses and other current liabilities	53,054	21,950
Total current liabilities	217,145	151,065
Long-term debt	687,543	3,742
Deferred income taxes	93,138	96,985
Other long-term liabilities	20,770	12,949
Total liabilities	1,018,596	264,741
Stockholders' equity:		
Common stock (2.5 billion shares authorized, $0.01 par value) 2018 — 77.3 million shares issued and outstanding	773	—
Additional paid-in capital	967,044	—
Retained earnings	33,257	—
Net parent investment in Apergy	—	1,661,700
Accumulated other comprehensive loss	(38,527)	(26,415)
Total stockholders' equity	962,547	1,635,285
Noncontrolling interest	2,213	4,749
Total equity	964,760	1,640,034
Total liabilities and equity	$ 1,983,356	$ 1,904,775

The accompanying notes are an integral part of the condensed consolidated financial statements.

APERGY CORPORATION
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
(Unaudited)

	Common stock						
(in thousands)	Par Value	Capital in excess of par value	Retained Earnings	Net Parent Investment in Apergy	Accum. Other Comp. Loss	Non-controlling Interest	Total
December 31, 2017	$—	$ —	$ —	$1,661,700	$(26,415)	$ 4,749	$1,640,034
Cumulative effect of accounting changes (Note 2)	—	—	—	1,315	(1,315)	—	—
Net income	—	—	33,257	38,732		295	72,284
Other comprehensive loss	—	—	—	—	(8,376)	—	(8,376)
Net transfer to/from Dover	—	—	—	(736,549)	(2,421)	—	(738,970)
Reclassification of net parent investment in Apergy	—	965,198	—	(965,198)	—	—	—
Issuance of common stock	773	(773)	—	—	—	—	—
Stock-based compensation	—	2,619	—	—	—	—	2,619
Distributions to noncontrolling interest	—	—	—	—	—	(2,720)	(2,720)
Other	—	—	—	—	—	(111)	(111)
September 30, 2018	$773	$967,044	$33,257	$ —	$(38,527)	$ 2,213	$ 964,760

The accompanying notes are an integral part of the condensed consolidated financial statements.

APERGY CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(in thousands)	Nine Months Ended September 30, 2018	2017
Cash provided (required) by operating activities:		
Net income	$72,284	$51,304
Adjustments to reconcile net income to net cash provided (required) by operating activities:		
Depreciation	52,814	42,233
Amortization	38,863	40,190
Stock-based compensation	3,129	1,762
(Gain) loss on sale of fixed assets	194	(713)
Deferred income taxes	(4,674)	(17,503)
Other	5,138	(5,539)
Changes in operating assets and liabilities (net of effects of acquisitions and foreign exchange):		
Receivables	(79,533)	(62,203)
Inventories	(20,960)	(28,245)
Prepaid expenses and other current assets	(5,514)	(4,893)
Accounts payable	27,776	37,950
Accrued compensation and employee benefits	13,640	4,965
Accrued expenses and other current liabilities	24,602	2,927
Leased assets and other	(34,953)	(21,030)
Net cash provided by operating activities	92,806	41,205
Cash provided (required) by investing activities:		
Capital expenditures	(45,832)	(29,445)
Proceeds from sale of property, plant and equipment	970	2,616
Purchase price adjustments on acquisition	53	—
Net cash required by investing activities	(44,809)	(26,829)
Cash provided (required) by financing activities:		
Proceeds from long-term debt, net of discounts	713,963	—
Payment of debt issue costs	(16,006)	—
Repayment of long-term debt	(20,000)	—
Distributions to Dover Corporation, net	(728,857)	(19,220)
Distribution to noncontrolling interest	(2,720)	(1,212)
Net cash required by financing activities	(53,620)	(20,432)
Effect of exchange rate changes on cash and cash equivalents	(75)	3,476
Net decrease in cash and cash equivalents	(5,698)	(2,580)
Cash and cash equivalents at beginning of period	23,712	26,027
Cash and cash equivalents at end of period	$18,014	$23,447

The accompanying notes are an integral part of the condensed consolidated financial statements.

APERGY CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

NOTE 1 — BASIS OF PRESENTATION AND SEPARATION

Apergy Corporation ("Apergy") is a leading provider of highly engineered equipment and technologies that help companies drill for and produce oil and gas safely and efficiently around the world. Our products provide efficient functioning throughout the lifecycle of a well—from drilling to completion to production. We report our results of operations in the following reporting segments: Production & Automation Technologies and Drilling Technologies. Our Production & Automation Technologies segment offerings consist of artificial lift equipment and solutions, including rod pumping systems, electric submersible pump systems, progressive cavity pumps and drive systems and plunger lifts, as well as a full automation and digital offering consisting of equipment, software and Industrial Internet of Things solutions for downhole monitoring, wellsite productivity enhancement and asset integrity management. Our Drilling Technologies segment offering provides market leading polycrystalline diamond cutters and bearings that result in cost effective and efficient drilling.

Separation and Distribution

On April 18, 2018, the Dover Corporation ("Dover") Board of Directors approved the separation of entities conducting its upstream oil and gas energy business within Dover's Energy segment (the "Separation") into an independent, publicly traded company named Apergy Corporation. Apergy Corporation was incorporated in Delaware on October 10, 2017, under the name Wellsite Corporation and was renamed Apergy Corporation on February 2, 2018. Apergy Corporation was formed for the purpose of holding entities, assets and liabilities conducting Dover's upstream oil and gas business within Dover's Energy segment. In accordance with the separation and distribution agreement, the two companies were separated by Dover distributing to Dover's stockholders all 77,339,828 shares of common stock of Apergy on May 9, 2018. Each Dover shareholder received one share of Apergy stock for every two shares of Dover stock held at the close of business on the record date of April 30, 2018. In conjunction with the Separation, Dover received a private letter ruling from the Internal Revenue Service to the effect that, based on certain facts, assumptions, representations and undertakings set forth in the ruling, for U.S. federal income tax purposes, the distribution of Apergy common stock was not taxable to Dover or U.S. holders of Dover common stock, except in respect to cash received in lieu of fractional share interests. Following the Separation, Dover retained no ownership interest in Apergy, and each company, as of May 9, 2018, has separate public ownership, boards of directors and management. A registration statement on Form 10, as amended, describing the Separation was filed by Apergy with the U.S. Securities and Exchange Commission ("SEC") and was declared effective on April 19, 2018. On May 9, 2018, Apergy common stock began "regular-way" trading on the New York Stock Exchange under the "APY" symbol.

Tax Matters Agreement

On May 9, 2018, Apergy and Dover entered into a tax matters agreement which governs Apergy's and Dover's respective rights, responsibilities and obligations after the Separation with respect to tax liabilities (including taxes, if any incurred as a result of any failure of the Separation or certain related transactions to qualify for tax-free treatment for U.S. federal income tax purposes) and benefits, tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings and other tax matters. Neither party's obligations under the tax matters agreement will be limited in amount or subject to any cap.

Apergy also agreed to certain covenants that contain restrictions intended to preserve the tax-free status of the Separation and certain related transactions. Apergy and certain of its subsidiaries are barred from taking any action, or failing to take any action, where such action or failure to act may be expected to result in any increased tax liability or reduced tax attribute of Dover. In addition, during the time period ending two years after the date of the Separation, these covenants include specific restrictions on the ability of Apergy and certain of its subsidiaries to:

- issue or sell stock or other securities (including securities convertible into Apergy stock but excluding certain compensatory arrangements);

- cease to actively conduct its business or dispose of assets outside the ordinary course of business; and
- enter into certain other corporate transactions which could cause Apergy to undergo a 40% or greater change in its stock ownership.

Employee Matters Agreement

On May 9, 2018, Apergy and Dover entered into an employee matters agreement which governs the respective rights, responsibilities and obligations of the parties in connection with the Separation with respect to employee-related matters. The employee matters agreement provides for the allocation and treatment of assets and liabilities as applicable, arising out of incentive plans, retirement plans, and employee health and welfare benefit programs, in which Apergy's employees participated prior to the Separation, and the treatment of outstanding Dover incentive awards. In general, Apergy assumed liabilities related to its current and former employees incurred before the Separation. Dover retained liabilities accrued prior to the Separation related to certain Apergy participants in Dover's U.S. defined benefit pension plan. As a result of the Separation and effective May 15, 2018, outstanding Dover equity awards held by Apergy employees, other than Dover performance shares, converted into corresponding Apergy equity awards issued under the Apergy Corporation 2018 Equity and Cash Incentive Plan. Generally, each award is subject to the same terms and conditions as were in effect prior to the Separation. Immediately prior to the Separation, outstanding Dover performance shares held by Apergy employees that related to performance periods ending after the Separation were cancelled.

In connection with the Separation, we incurred an aggregate principal amount of $715 million of long-term debt, which consisted of a $415 million term loan facility and $300 million of senior notes. Net proceeds from the notes offering, together with borrowings under the term loan facility, were used to make a cash payment of $700 million to Dover and to pay fees and expenses incurred in connection with the Separation. See Note 8 — Debt for additional information.

Basis of Presentation

Prior to the Separation, our results of operations, financial position and cash flows were derived from the consolidated financial statements and accounting records of Dover and reflect the combined historical results of operations, financial position and cash flows of certain Dover entities conducting its upstream oil and gas energy business within Dover's Energy segment, including an allocated portion of Dover's corporate costs. These financial statements have been presented as if such businesses had been combined for all periods prior to the Separation. All intercompany transactions and accounts within Dover were eliminated. The assets and liabilities were reflected on a historical cost basis since all of the assets and liabilities presented were wholly owned by Dover and were transferred within the Dover consolidated group. The statements of income also include expense allocations for certain corporate functions historically performed by Dover and not allocated to its operating segments, including corporate executive management, human resources, information technology, facilities, tax, shared services, finance and legal, including the costs of salaries, benefits and other related costs. These expense allocations were based on direct usage or benefit where identifiable, with the remainder allocated on the basis of revenue, headcount or other measures. These pre-Separation combined financial statements may not include all of the actual expenses that would have been incurred had we been a stand-alone public company during the periods presented prior to the Separation and consequently may not reflect our results of operations, financial position and cash flows had we been a stand-alone public company during the periods presented prior to the Separation. Actual costs that would have been incurred if we had been a stand-alone public company would depend on a variety of factors, including organizational structure and strategic decisions made in various areas, including information technology and infrastructure.

Prior to the Separation, transactions between Apergy and Dover, with the exception of transactions discussed in Note 3 — Related Party Transactions, are reflected in the condensed combined balance sheet as of December 31, 2017, as part of "Net parent investment in Apergy" and in the condensed combined statements of cash flows as a financing activity in "Distributions to Dover Corporation, net." See Note 3 — Related Party Transactions for additional information.

No portion of Dover's third-party debt was historically held by an Apergy entity or was transferred to Apergy; therefore, no debt was included in the condensed combined balance sheet as of December 31, 2017, and no interest expense was presented in the condensed combined statement of income for the three and nine months ended September 30, 2017. Intercompany notes payable to Dover of $224.5 million as of December 31, 2017, were presented within "Net parent investment in Apergy" because the notes were not settled in cash. Accordingly, no interest expense related to intercompany debt was presented in the condensed combined statements of income for each of the periods presented prior to the Separation. Additionally, our U.S. cash was historically pooled to Dover through intercompany advances and consequently is not reflected on our condensed combined balance sheet as of December 31, 2017.

All financial information presented after the Separation represents the consolidated results of operations, financial position and cash flows of Apergy. Accordingly, our results of operations and cash flows consist of the consolidated results of Apergy from May 9, 2018 to September 30, 2018, and the combined results of operations and cash flows for periods prior to May 9, 2018. Our balance sheet as of September 30, 2018, reflects the consolidated balances of Apergy while the December 31, 2017, balance sheet reflects the combined balances of the Dover upstream oil and gas energy businesses that were transferred to Apergy. Our management believes the assumptions underlying these condensed consolidated financial statements, including the assumptions regarding the allocation of corporate expenses from Dover for periods prior to the Separation, are reasonable.

The legal transfer of the upstream oil and gas energy businesses from Dover to Apergy occurred on May 9, 2018; however, for ease of reference, and unless otherwise stated or the context otherwise requires, all references to "Apergy Corporation," "Apergy," "we," "us" or "our" refer (i) prior to the Separation, to the Apergy businesses, consisting of entities, assets and liabilities conducting the upstream oil and gas business within Dover's Energy segment and (ii) after the Separation, to Apergy Corporation and its consolidated subsidiaries.

Interim Financial Information

The accompanying unaudited condensed consolidated financial statements of Apergy have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") and pursuant to the rules and regulations of the SEC pertaining to interim financial information. As permitted under those rules, certain footnotes or other financial information that are normally required by GAAP have been condensed or omitted. Therefore, these financial statements should be read in conjunction with the audited combined financial statements, and notes thereto, in the Information Statement included in Amendment No. 1 to the Form 10 filed with the SEC on April 12, 2018.

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Although these estimates are based on management's best knowledge of current events and actions that we may undertake in the future, actual results may differ from our estimates. In the opinion of management, the accompanying unaudited condensed consolidated financial statements reflect all adjustments (consisting of normal recurring adjustments unless otherwise specified) necessary for a fair statement of our financial condition and results of operations as of and for the periods presented. Revenue, expenses, assets and liabilities can vary during each quarter of the year. Therefore, the results and trends in these financial statements may not be representative of the results that may be expected for the year ending December 31, 2018.

Reclassifications

Beginning in the first quarter of 2018, we changed our presentation of expenditures related to purchases of leased assets. Previously, these amounts were reported in the operating section of our cash flow statement as "other" in adjustments to reconcile net income but are now reported as changes in our operating assets and liabilities in the operating section of our cash flow statement as "leased assets and other." During the first quarter of 2018, we

changed our presentation of amortization expense primarily related to customer intangible assets. For the three and nine months ended September 30, 2017, we reclassified $11.0 million and $32.1 million of amortization expense previously reported as a component of “selling, general and administrative expense” to “cost of goods and services” on our condensed combined statements of income.

During the second quarter of 2018, we changed our presentation of capital lease obligations. As of December 31, 2017, we reclassified $3.7 million of capital lease obligations previously reported as “other long-term liabilities” to “long-term debt” on our condensed combined balance sheet.

Certain prior-year amounts have been reclassified to conform to the current year presentation. See Note 2 — New Accounting Standards for additional information.

NOTE 2 — NEW ACCOUNTING STANDARDS

Recently Adopted Accounting Standards

Effective January 1, 2018, we early adopted Financial Accounting Standards Board (“FASB”) Accounting Standards Update (“ASU”) No. 2018-02, “*Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.*” This update allows for the reclassification from accumulated other comprehensive income (“AOCI”) to equity for stranded deferred income tax effects resulting from the U.S. Tax Cuts and Jobs Act (“Tax Reform Act”). We elected to reclassify these stranded deferred income tax effects which amounted to $1.3 million. The stranded deferred income tax effects were specifically identified with our employee benefit plans and were the result of the reduction in the corporate income tax rate against the corresponding deferred income taxes in AOCI.

Effective January 1, 2018, we adopted ASU 2017-07, “*Compensation — Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.*” This update changes the income statement presentation of defined benefit and post-retirement benefit plan expense by requiring separation between operating expense (service cost component of net periodic benefit cost) and non-operating expense (all other components of net periodic benefit cost, including interest cost, amortization of prior service cost, curtailments and settlements, etc.). The operating expense component is reported with similar compensation costs while the non-operating components are reported in “other expense, net” in the condensed consolidated statements of income. The adoption of this update was not material to the periods presented. We utilized a practical expedient which allows an entity to use amounts previously disclosed in its pension and other post-retirement benefits disclosures for any prior period as the estimation basis for applying the required retrospective presentation requirements.

Effective January 1, 2018, we adopted ASU 2017-01, “*Business Combinations (Topic 805): Clarifying the Definition of a Business*” which clarifies the definition of a business and assists entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. Under this guidance, when substantially all of the fair value of gross assets acquired is concentrated in a single asset (or group of similar assets), the assets acquired would not represent a business. In addition, in order to be considered a business, an acquisition would have to include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create an output. The update also narrows the definition of outputs by more closely aligning it with how outputs are described in guidance for revenue recognition. The adoption of this ASU did not have a material impact on our financial statements.

Effective January 1, 2018, we adopted ASU 2016-15, “*Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments.”* The new update clarifies how certain cash receipts and cash payments should be presented and classified in the statement of cash flows. Specifically, the new update clarifies that when cash receipts and cash payments have aspects of more than one class of cash flows and cannot be separated, classification will depend on the predominant source or use. We adopted this guidance retrospectively.

For the nine months ended September 30, 2017, the impact of this adoption resulted in a $9.6 million increase in net cash provided by operating activities and a corresponding increase to net cash used by investing activities on our statement of cash flows related to cash expenditures for certain leased assets.

Effective January 1, 2018, we adopted ASU 2014-09, "*Revenue from Contracts with Customers (Topic 606).*" The update introduces a new five-step revenue recognition model in which an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The update also requires quantitative and qualitative disclosures to enable users to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. We applied the provisions of the ASU to contracts that were not completed as of January 1, 2018.

During the second half of 2015, Dover developed a project plan to implement ASU 2014-09, and as a subsidiary of Dover, we were included in Dover's implementation efforts. We completed the project plan and analyzed the ASU's impact on our contract portfolio, surveyed our businesses for our various revenue streams, completed contract reviews, and compared our historical accounting policies and practices to the requirements of the new guidance. We also evaluated the new disclosure requirements and identified and implemented appropriate changes to our business processes, systems and controls. We adopted the new guidance using the modified retrospective method and identified no cumulative effect adjustment to our total net investment balance as of January 1, 2018. The impact of adopting the new standard was not material to our financial statements for the three and nine months ended September 30, 2018.

We have applied the following practical expedients or elections under the new standard:

- We elected to omit disclosure of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.
- We applied the practical expedient to not capitalize costs to obtain contracts with a duration of one year or less, which are expensed and included within "cost of goods and services" in the condensed consolidated statements of income.
- We elected to use the practical expedient to not adjust the promised amount of consideration for the effects of a significant financing component if it is expected, at contract inception, that the period between when we transfer a promised good or service to a customer, and when the customer pays for that good or service, will be one year or less. Thus, we may not consider an advance payment to be a significant financing component, if it is received less than one year before product completion.
- We elected to exclude all taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected from a customer (e.g., sales, use, value added, and some excise taxes) from the determination of the transaction price. As a result, our accounting policy of reporting revenue net of these taxes was not changed under the new standard.
- We elected to account for shipping and handling activities performed after control of a good has been transferred to the customer as a contract fulfillment cost. As a result, our accounting policy related to shipping and handling was not changed under the new standard.

See Note 11 — Revenue for additional information.

Recently Issued Accounting Standards

In February 2016, the FASB issued ASU No. 2016-02, "*Leases (Topic 842).*" This update requires that a lessee recognize in the statement of financial position a liability for future lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term. For leases with a term of 12 months or less, a

lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. Similar to current guidance, the update continues to differentiate between finance leases and operating leases; however, this distinction now primarily relates to differences in the manner of expense recognition over time and in the classification of lease payments in the statement of cash flows. Additionally, lessors will be required to classify leases as sales-type, finance or operating, with classification affecting the pattern of income recognition. Classification for both lessees and lessors will be based on an assessment of whether risks and rewards as well as substantive control have been transferred through a lease contract. The guidance will be effective for us on January 1, 2019. Early adoption is permitted. We will adopt this standard on January 1, 2019, using the modified retrospective method, which will result in a cumulative catch-up adjustment to retained earnings.

After the Separation from Dover, we developed a project plan and established a cross-functional team to continue the process of implementing the new guidance, which included an evaluation of the work performed by Dover prior to the Separation. We made progress on our plan including gathering information on all leases, surveying our businesses, assessing our portolfio of leases and compiling a central repository of active leases. During the third quarter of 2018, we completed diagnostic reviews of certain sampled leases to support our policy elections. Additionally, we made significant progress configuring and implementing a new lease software system. We continue to evaluate our policy elections and considerations under the new lease guidance, including the potential use of practical expedients, and we are in the process of updating our internal control and business processes. As we continue to assess the impact the guidance will have on our financial statements and related disclosures, internal control over financial reporting and other business practices and processes, we expect to recognize right of use assets and liabilities for operating leases in our consolidated balance sheet upon adoption.

In June 2016, the FASB issued ASU 2016-13, "*Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*." The update amends the impairment model to utilize an expected loss methodology in place of the currently used incurred loss methodology, which may result in earlier recognition of losses related to financial instruments. The guidance will be effective for us on January 1, 2020. Early adoption is permitted for annual periods beginning after December 15, 2018. We do not expect the adoption of this ASU to have a material impact on our financial statements.

In August 2018, the FASB issued ASU 2018-15, "*Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract."* The amendments in this update align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this update. The amendments in this update are effective for interim and annual periods beginning on January 1, 2020, with early adoption permitted. The amendments in this update should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We are in the process of assessing the impacts of the guidance will have on our financial statements.

NOTE 3 — RELATED PARTY TRANSACTIONS

Dover Corporation

Prior to the Separation, Dover provided certain services including corporate executive management, human resources, information technology, facilities, tax, shared services, finance and legal services. Dover continues to provide us certain of these services on a temporary basis following the Separation under a transition services agreement. Under the transition services agreement, Apergy pays a fee to Dover for services utilized under the transition services agreement, which fee is generally intended to allow Dover to recover all of its direct and indirect costs generally without profit. Except as provided otherwise in the transition services agreement, or with

respect to specific services with other specified terms, the initial term of the transition services agreement will end on January 31, 2019, and the term may then be extended until May 9, 2019, or such other period set forth on the schedules thereto (subject to earlier termination under certain circumstances).

All financial information presented prior to the Separation does not include all the expenses that would have been incurred had Apergy been a stand-alone public company. The corporate expenses allocated by Dover to these financial statements were $4.7 million for the three months ended September 30, 2017, and $7.4 million and $16.5 million for the nine months ended September 30, 2018 and 2017, respectively, which were recorded in "selling, general and administrative expense" in the condensed consolidated statements of income.

For periods prior to the Separation, transactions between Apergy and Dover, with the exception of transactions discussed below with Dover's affiliates, are reflected in "net parent investment in Apergy" in the condensed combined balance sheet as of December 31, 2017, and in "distributions to Dover Corporation, net" in the statements of cash flows for the nine months ended September 30, 2018 and 2017, as a financing activity. Accounts receivable, accounts payable and revenues with Dover and its affiliates were not material for the periods presented. We recognized royalty expense of $2.5 million for the three months ended September 30, 2017, and $2.3 million and $7.4 million for the nine months ended September 30, 2018 and 2017, respectively, related to the use of Dover's intellectual property and patents which was included in "other expense, net" in the condensed consolidated statements of income. On April 1, 2018, patents and other intangibles owned by Dover related to our operations transferred to Apergy, and consequently, Apergy will no longer incur royalty charges related to these assets from Dover.

Noncontrolling Interest

For the nine months ended September 30, 2018 and 2017, we declared and paid $2.7 million and $1.2 million, respectively, of distributions to the noncontrolling interest holder in Norris Production Solutions Middle East LLC, a subsidiary in the Sultanate of Oman. We have a commission arrangement with our noncontrolling interest for 5% of certain annual product sales.

NOTE 4 — EARNINGS PER SHARE

On May 9, 2018, 77,339,828 shares of our common stock were distributed to Dover stockholders in conjunction with the Separation. See Note 1 — Basis Of Presentation And Separation for additional information. For comparative purposes, and to provide a more meaningful calculation of weighted-average shares outstanding, we have assumed the shares issued in conjunction with the Separation to be outstanding as of the beginning of each period prior to the Separation. In addition, we have assumed the potential dilutive securities outstanding as of May 8, 2018, were outstanding and fully dilutive in each of the periods prior to the Separation.

A reconciliation of the number of shares used for the basic and diluted earnings per share calculation was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except per share data)	2018	2017	2018	2017
Net income attributable to Apergy	$25,263	$18,421	$71,989	$50,444
Weighted-average number of shares outstanding	77,340	77,340	77,340	77,340
Dilutive effect of stock-based compensation	229	550	402	550
Total shares and dilutive securities	77,569	77,890	77,742	77,890
Basic earnings per share attributable to Apergy	$ 0.33	$ 0.24	$ 0.93	$ 0.65
Diluted earnings per share attributable to Apergy	$ 0.33	$ 0.24	$ 0.93	$ 0.65

NOTE 5 — INVENTORIES

Inventories consisted of the following:

(in thousands)	September 30, 2018	December 31, 2017
Raw materials	$ 48,735	$ 45,408
Work in progress	11,130	10,879
Finished goods	184,871	167,416
	244,736	223,703
LIFO and valuation adjustments	(25,603)	(22,112)
Inventories, net	$ 219,133	$ 201,591

NOTE 6 — PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consisted of the following:

(in thousands)	September 30, 2018	December 31, 2017
Land	$ 13,623	$ 13,557
Buildings and improvements	104,026	99,233
Machinery, equipment and other	501,148	446,261
	618,797	559,051
Accumulated depreciation	(382,730)	(347,219)
Property, plant and equipment, net	$ 236,067	$ 211,832

During the nine months ended September 30, 2018, we transferred $42.5 million of inventory to property, plant and equipment related to certain assets entering our lease program.

NOTE 7 — GOODWILL AND INTANGIBLE ASSETS

Goodwill

The carrying amount, including changes therein, of goodwill by reporting segment was as follows:

(in thousands)	Production & Automation Technologies	Drilling Technologies	Total
December 31, 2017	$ 808,952	$ 101,136	$910,088
Purchase price adjustment *	(53)	—	(53)
Foreign currency translation	(3,269)	—	(3,269)
September 30, 2018	$ 805,630	$ 101,136	$906,766

* Purchase price adjustment related to our 2017 acquisition of PCP Oil Tools S.A. and Ener Tools S.A.

Intangible Assets

The components of our definite- and indefinite-lived intangible assets were as follows:

(in thousands)	September 30, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Definite-lived intangible assets:						
Customer intangibles	$ 569,832	$ 309,355	$ 260,477	$ 572,415	$ 276,655	$ 295,760
Trademarks	36,307	20,648	15,659	36,312	17,821	18,491
Patents	38,514	22,959	15,555	38,679	20,449	18,230
Unpatented technologies	9,700	9,700	—	9,700	9,700	—
Drawings and manuals	3,047	2,163	884	3,067	2,109	958
Other	5,346	4,124	1,222	5,382	3,911	1,471
	662,746	368,949	293,797	665,555	330,645	334,910
Indefinite-lived intangible assets:						
Trademarks	3,600	—	3,600	3,600	—	3,600
Total	$ 666,346	$ 368,949	$ 297,397	$ 669,155	$ 330,645	$ 338,510

NOTE 8 — DEBT

Long-term debt consisted of the following:

(in thousands)	September 30, 2018	December 31, 2017
Revolving credit facility	$ —	$ —
Term loan facility	395,000	—
6.375% Senior Notes due 2026	300,000	—
Capital leases	4,337	3,742
Total	699,337	3,742
Net unamortized discounts and issuance costs	(11,794)	—
Total long-term debt	$ 687,543	$ 3,742

Senior Notes

On May 3, 2018, and in connection with the Separation, we completed the private placement of $300 million in aggregate principal amount of 6.375% senior notes due May 2026 (“Senior Notes”). Interest on the Senior Notes is payable semi-annually in arrears on May 1 and November 1 of each year, commencing on November 1, 2018. Net proceeds of $293.8 million from the offering were utilized to partially fund the $700 million cash payment to Dover at the Separation and to pay fees and expenses incurred in connection with the Separation.

The terms of the Senior Notes are governed by the indenture dated as of May 3, 2018, between Apergy and Wells Fargo Bank, N.A., as trustee, and are guaranteed, on a senior unsecured basis, by the subsidiary guarantors of our senior secured credit facilities as described below. At any time prior to May 1, 2021, we may redeem all or part of the Senior Notes at a redemption price equal to 100% of the principal amount of the Senior Notes redeemed plus a premium, as defined in the indenture, plus accrued and unpaid interest. Beginning on or after May 1, 2021, we may redeem the Senior Notes, in whole or in part, at certain tiered redemption prices as defined in the indenture, plus accrued and unpaid interest. The Senior Notes are our senior unsecured obligations. The Senior Notes rank equally in right of payment with our future and existing senior debt but are effectively subordinated to our future and existing debt to the extent of the assets securing such senior debt. The Senior Notes rank senior in right of payment to all of our future subordinated debt.

In connection with the private placement, we granted the initial purchasers of the Senior Notes certain registration rights under a registration right agreement. We have agreed for the benefit of the holders of the Senior Notes to use our commercially reasonable efforts to file and cause to be effective a registration statement with the SEC relating to a registered offer to exchange the Senior Notes for an issue of SEC-registered notes with terms identical in all material respects to the Senior Notes. Generally, we have one year from the issuance of the Senior Notes to complete the exchange offer. Should Apergy not complete its obligations under the registration rights agreement within a year, the annual interest rate on the Senior Notes will increase at different intervals based on the passage of time after one year.

Senior Secured Credit Facilities

On May 9, 2018, Apergy entered into a new credit agreement ("credit agreement") governing the terms of its new senior secured credit facilities, consisting of (i) a seven-year senior secured term loan B facility ("term loan facility") and (ii) a five-year senior secured revolving credit facility ("revolving credit facility," and together with the term loan facility, the "senior secured credit facilities"), with JPMorgan Chase Bank, N.A. as administrative agent. The net proceeds of the senior secured credit facilities were used (i) to pay fees and expenses in connection with the Separation, (ii) partially fund the cash payment to Dover and (iii) provide for working capital and other general corporate purposes. The senior secured credit facilities are jointly and severally guaranteed by Apergy and certain of Apergy's wholly owned U.S. subsidiaries ("guarantors"), on a senior secured basis, and are secured by substantially all tangible and intangible assets of Apergy and the guarantors, except for certain excluded assets.

At our election, outstanding borrowings under the senior secured credit facilities will accrue interest at a per annum rate of (i) LIBOR plus a margin or (ii) a base rate plus a margin. The senior secured credit facilities contain a number of customary covenants that, among other things, will limit or restrict the ability of Apergy and the restricted subsidiaries to, subject to certain qualifications and exceptions, perform certain activities which include, but are not limited to (i) incur additional indebtedness, (ii) make acquisitions and (iii) pay dividends or other payments in respect of our capital stock. Additionally, Apergy will be required to maintain (a) a minimum interest coverage ratio, as defined in the credit agreement, of 2.75 to 1.00 and (b) a maximum total leverage ratio, as defined in the credit agreement, of 4.00 to 1.00 through the fiscal quarter ending June 30, 2019, then 3.75 to 1.00 through the fiscal quarter ending June 30, 2020, then 3.50 to 1.00 thereafter.

Term Loan Facility. The term loan facility had an initial commitment of $415 million. The full amount of the term loan facility was funded on May 9, 2018. Amounts borrowed under the term loan facility that are repaid or prepaid may not be re-borrowed. The term loan facility matures in May 2025. Net proceeds of $408.7 million from the term loan facility were utilized to partially fund the cash payment to Dover at the Separation and to pay fees and expenses incurred in connection with the Separation.

The term loan is subject to mandatory amortization payments of 1.0% per annum of the initial commitment of $415 million paid quarterly. Additionally, subject to certain exceptions, the term loan facility is subject to mandatory prepayments, including the amount equal to: 100% of the net cash proceeds of all non-ordinary course asset sales subject to (i) reinvestment periods and (ii) step-downs to 75% and 50% based on certain leverage targets; and 50% of excess cash flow, as defined in the credit agreement, with step-downs to 25% and 0% based on certain leverage targets. Apergy may voluntarily prepay amounts outstanding under the term loan facility in whole or in part at any time without premium or penalty (other than during the six months following May 9, 2018, on the amount of loans prepaid or repaid in connection with a repricing transaction), as defined in the credit agreement.

Revolving Credit Facility. The revolving credit facility consists of a five-year senior secured facility with aggregate commitments in an amount equal to $250 million, of which up to $50 million is available for the issuance of letters of credit. Amounts repaid under the revolving credit facility may be re-borrowed. The revolving credit facility matures in May 2023.

NOTE 9 — ACCUMULATED OTHER COMPREHENSIVE LOSS

Accumulated other comprehensive loss consisted of the following:

(in thousands)	Foreign Currency Translation	Defined Pension and Other Post-Retirement Benefits	Accumulated Other Comprehensive Loss
December 31, 2017	$ (21,935)	$ (4,480)	$ (26,415)
Reclassification adjustment for cumulative effect of change in accounting principle	—	(1,315)	(1,315)
Net transfer from Dover Corporation	—	(2,421)	(2,421)
Other comprehensive income (loss) before reclassifications, net of tax	(9,080)	170	(8,910)
Reclassification adjustment for net losses (gains) included in net income, net of tax	—	534	534
Other comprehensive income (loss), net of tax	(9,080)	704	(8,376)
September 30, 2018	$ (31,015)	$ (7,512)	$ (38,527)

Reclassification adjustments from accumulated other comprehensive loss to net income related to defined pension and other post-retirement benefits consisted of the following:

(in thousands)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017	Affected line items on the condensed consolidated statements of income
Amortization of actuarial loss (1)	$ 116	$ 100	$ 243	$ 299	Other expense, net
Settlement loss (1)	484	—	484	—	Selling, general and administrative expense
Total before tax	600	100	727	299	Income before income taxes
Tax benefit	(161)	(35)	(192)	(102)	Provision for income taxes
	$439	$65	$535	$197	Net income

(1) These accumulated comprehensive loss components are included in the computation of net periodic benefit cost (See Note16—Employee Benefit Plans for additional information).

NOTE 10 — COMMITMENTS AND CONTINGENCIES

Guarantees and Indemnifications

We have provided indemnities in connection with sales of certain businesses and assets, including representations and warranties, covenants and related indemnities for environmental health and safety, tax and employment matters. We do not have any material liabilities recorded for these indemnifications and are not aware of any claims or other information that would give rise to material payments under such indemnities.

In connection with the Separation, we entered into agreements with Dover that govern the treatment between Dover and us of certain indemnification matters and litigation responsibility. Generally, the separation and distribution agreement provides for cross-indemnities principally designed to place financial responsibility for the obligations and liabilities of our business with us and to place financial responsibility for the obligations and liabilities of Dover's business with Dover. The separation and distribution agreement also establishes procedures for handling claims subject to indemnification and related matters. In addition, pursuant to the tax matters

agreement, we have agreed to indemnify Dover and its affiliates against any and all tax-related liabilities incurred by them relating to the Separation and/or certain related transactions to the extent caused by an acquisition of Apergy stock or assets or by any other action or failure to act undertaken by Apergy or its affiliates.

As of September 30, 2018 and December 31, 2017, we had $5.5 million and $8.1 million, respectively, of outstanding letters of credit, surety bonds and guarantees which expire at various dates through 2020. These financial instruments are primarily maintained as security for insurance, warranty and other performance obligations. Generally, we would only be liable for the amount of these letters of credit in the event of default in the performance of our obligations, the probability of which we believe is remote.

Litigation

We are a party to a number of legal proceedings incidental to our businesses. These proceedings primarily involve claims by private parties alleging injury arising out of use of our products, patent infringement, employment matters, and commercial disputes. Management and legal counsel review the probable outcome of such proceedings, the costs and expenses reasonably expected to be incurred and currently accrued to-date, and the availability and extent of insurance coverage. We have reserves for legal matters that are probable and estimable, and as of September 30, 2018 and December 31, 2017, these liabilities were not material. Management is unable to predict the ultimate outcome of these actions because of their inherent uncertainty. However, management believes that the most probable, ultimate resolution of these matters will not have a material adverse effect on our consolidated financial position, results of operations or cash flows.

NOTE 11 — REVENUE

Our revenue is substantially generated from product sales. For the nine months ended September 30, 2018, approximately 89% of our revenue was generated from product sales. Our remaining revenue was derived from services, leases and other, which represented approximately 7%, 3%, and 1%, respectively, of total revenue for the nine months ended September 30, 2018. Product revenue is derived from the sale of drilling and production equipment. Service revenue is earned as technical advisory assistance and field services related to our products are provided. Lease revenue is derived from month-to-month rental income of leased production equipment.

The majority of our revenue is short cycle in nature, with shipments occurring within a year from the customer order date. A small portion of our revenue is derived from contracts extending over one year. Our payment terms generally range between 30 to 90 days and vary by the location of our businesses and the types and volumes of products manufactured and sold, among other factors. Costs incurred to obtain a customer contract are generally not material to us.

Disaggregation of Revenue

Revenue disaggregated by end market in each of our reporting segments was as follows:

(in thousands)	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2018
Drilling Technologies	$ 75,254	$ 209,727
Production & Automation Technologies:		
Artificial lift	188,005	544,566
Digital products	31,114	85,347
Other production equipment	22,380	68,922
Intra-segment eliminations	(285)	(2,244)
	241,214	696,591
Total revenue	$ 316,468	$ 906,318

Revenue disaggregated by geography was as follows:

(in thousands)	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2018
United States	$ 252,747	$ 713,373
Canada	20,759	58,639
Middle East	13,645	40,091
Europe	7,625	27,805
Latin America	8,364	25,097
Asia-Pacific	3,715	13,900
Other	9,613	27,413
Total revenue	$ 316,468	$ 906,318

Performance Obligations

The majority of our contracts have a single performance obligation which represents, in most cases, the equipment or product sold to the customer. Some contracts include multiple performance obligations such as a product and the related installation, extended warranty and/or maintenance services. For contracts with multiple performance obligations, we allocate the transaction price to each performance obligation based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. We typically use observable prices to determine the stand-alone selling price of a performance obligation and utilize a cost plus margin approach when observable prices are not available.

Substantially all of our performance obligations are recognized at a point in time and are primarily related to our product revenue derived from the sale of drilling and production equipment. Revenue is recognized when control transfers to the customer upon shipment or completion of installation, testing, certification, or other substantive acceptance provisions required under the contract. Revenue is recognized over time for our service and lease offerings. Service revenue is recognized over time as we provide technical advisory assistance and field services related to our products.

Warranties

The majority of our contracts contain standard warranties in connection with the sale of a product to a customer which provide a customer assurance that the related product will function for a period of time as the parties intended. In addition to our standard warranties, we also offer extended warranties to our customers. Warranties provided as part of our product offerings are analyzed to determine whether they represent a distinct service, and if so, are recognized as service revenue over the related warranty period.

Remaining performance obligations

As of September 30, 2018, we did not have any contracts with an original length of greater than a year, from which revenue is expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied).

Contract balances

Contract assets and contract liabilities from contracts with customers were as follows:

(in thousands)	September 30, 2018	January 1, 2018
Contract assets	$ 3,475	$ 4,733
Contract liabilities — current	6,827	4,487

Contract assets primarily relate to our right to consideration for work completed but not billed at the reporting date and are recorded in "prepaid expenses and other current assets" on our condensed consolidated balance sheets. Contract assets are transferred to receivables when the right to consideration becomes unconditional. Contract liabilities relate to our obligation to transfer goods or services to a customer for which we have received advance consideration (or an amount of consideration is due) from the customer. Current contract liabilities are recorded in other "accrued expenses and other current liabilities" on our condensed consolidated balance sheets.

Critical Accounting Estimates

Estimates are used to determine the amount of variable consideration in contracts, the determination of the standalone selling price among separate performance obligations, as well as the determination of the measure of progress for contracts where revenue is recognized over time. Some contracts with customers include variable consideration primarily related to volume rebates. We estimate variable consideration at the most likely amount to determine the total consideration which we expect to be entitled. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and the determination of whether to include estimated amounts in the transaction price are largely based on an assessment of our anticipated performance and all information that is reasonably available.

NOTE 12 — RESTRUCTURING AND OTHER RELATED CHARGES

Restructuring and other related charges as classified in our condensed consolidated statements of income were as follows:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Cost of goods and services	$ (33)	$ (16)	$ 1,557	$ (17)
Selling, general and administrative expense	(6)	24	916	38
Total	$ (39)	$ 8	$ 2,473	$ 21

Restructuring and other related charges during 2018 were incurred in our Production & Automation Technologies segment. These charges reflect costs associated with exiting certain product lines and include severance and related benefit costs, early lease termination and other related charges. Our restructuring programs were designed to better align our costs and operations with current market conditions and include measures such as targeted facility consolidations, headcount reductions and other actions to further optimize our operations.

Our liability balances for restructuring and other exit activities were $1.5 million and $2.6 million as of September 30, 2018 and December 31, 2017, respectively, and primarily include ongoing lease commitment obligations for facilities closed in prior periods and employee severance and related benefits. Our restructuring initiatives are complete and our liability balances for restructuring and other exit activities are expected to be mostly settled by mid-2019.

NOTE 13 — INCOME TAXES

Prior to the Separation, our operations were historically included in Dover's U.S. combined federal and state income tax returns. For the periods prior to the Separation, income tax expense and deferred tax balances are presented in these condensed consolidated financial statements as if Apergy filed its own tax returns in each jurisdiction and include tax losses and tax credits that may not reflect tax positions taken by Dover. In many cases, tax losses and tax credits generated by Apergy through the date of the Separation were utilized by Dover. Income tax payable balances as of December 31, 2017, were classified within "net parent investment in Apergy" on the condensed combined balance sheet since Dover is legally liable for the tax.

Our income tax provision reflected effective tax rates of 23.2% and 30.6% for the three months ended September 30, 2018 and 2017, respectively, and 25.2% and 30.9% for the nine months ended September 30, 2018 and 2017, respectively. The year-over-year decrease in the effective tax rates was primarily due to the Tax Reform Act, which was enacted on December 22, 2017, and which reduced the U.S. corporate income tax rate from a maximum of 35% to 21%, effective January 1, 2018. This benefit was partially offset by tax on capital gains related to certain reorganizations of our subsidiaries as a result of the Separation.

We recognized provisional tax impacts related to deemed repatriated earnings and the benefit for the revaluation of deferred tax assets and liabilities in our combined financial statements for the year ended December 31, 2017. The provisions in the Tax Reform Act are broad and complex. As of September 30, 2018, we have not yet completed our accounting for the income tax effects of the Tax Reform Act but have made reasonable estimates of those effects on our existing deferred income tax balances and the one-time deemed repatriation tax. The final financial statement impact of the Tax Reform Act may differ from our estimates, possibly materially, due to, among other things, changes in interpretations of the Tax Reform Act, any legislative action to address questions that arise because of the Tax Reform Act, and changes in accounting standards for income taxes or related interpretations in response to the Tax Reform Act, or any updates or changes to estimates we have utilized to calculate the provisional impacts. The SEC has issued rules which allow for a measurement period of up to one year after the enactment date of the Tax Reform Act to finalize the recording of the related income tax impacts. We expect to finalize our analysis related to the Tax Reform Act by the end of the measurement period.

NOTE 14 — FAIR VALUE MEASUREMENTS

We had no outstanding derivative contracts as of September 30, 2018 and December 31, 2017. Other assets and liabilities measured at fair value on a recurring basis as of September 30, 2018 and December 31, 2017, were not significant; thus, no fair value disclosures are presented.

The fair value, based on Level 1 quoted market rates, of our Senior Notes was approximately $308.6 million at September 30, 2018, as compared to the $300 million face value of the debt. The fair value, based on Level 2 quoted market rates, of our term loan facility was approximately $397.0 million at September 30, 2018, as compared to the $395 million face value of the debt.

The carrying amounts of cash and cash equivalents, trade receivables, accounts payable, as well as amounts included in other current assets and other current liabilities that meet the definition of financial instruments, approximate fair value due to their short-term nature.

Credit Risk

By their nature, financial instruments involve risk, including credit risk, for non-performance by counterparties. Financial instruments that potentially subject us to credit risk primarily consist of trade receivables. We manage the credit risk on financial instruments by transacting only with what management believes are financially secure counterparties, requiring credit approvals and credit limits, and monitoring counterparties' financial condition. Our maximum exposure to credit loss in the event of non-performance by the counterparty is limited to the amount drawn and outstanding on the financial instrument. Allowances for losses on trade receivables are established based on collectability assessments.

NOTE 15 — EQUITY AND CASH INCENTIVE PROGRAM

Prior to the Separation, Dover granted share-based awards to its officers and other key employees, including certain Apergy individuals. All awards granted under the program consisted of Dover common shares and are not necessarily indicative of the results that Apergy would have experienced as a stand-alone public company for the periods presented prior to the Separation. Effective with the Separation, outstanding Dover share-based awards were converted to Apergy share-based awards, with the exception of outstanding Dover performance share awards that relate to performance periods ending after the Separation. Such performance share awards were cancelled effective with the Separation.

In connection with the Separation, the Board of Directors of Apergy adopted the Apergy Corporation 2018 Equity and Cash Incentive Plan ("2018 Plan"). The 2018 Plan was also approved by Dover in its capacity as the sole stockholder of Apergy at the time of adoption. A total of 6.5 million shares of common stock are reserved for issuance under the 2018 Plan, subject to customary adjustments arising from stock splits and other similar changes.

The 2018 Plan authorized the grant of stock options, stock-settled stock appreciation rights ("SARs"), restricted stock awards, restricted stock units, performance share awards, cash performance awards, directors' shares and deferred stock units. The Apergy Compensation Committee determines the exercise price for options and the base price of SARs, which may not be less than the fair market value of Apergy common stock on the date of grant. Generally, stock options or SARs vest after three years of service and expire at the end of ten years. Performance share awards vest if Apergy achieves certain pre-established performance targets based on specified performance criteria over a performance period of not less than three years.

In May 2018 and in connection with the Separation, 352 thousand restricted stock awards and 87 thousand performance shares were granted to employees.

Stock-based compensation expense is reported within "selling, general and administrative expense" in the condensed consolidated statements of income. Stock-based compensation expense relating to all stock-based incentive plans was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Stock-based compensation expense	$ 1,768	$ 630	$3,129	$1,762
Tax benefit	(421)	(219)	(717)	(611)
Stock-based compensation expense, net of tax	$ 1,347	$ 411	$2,412	$1,151

NOTE 16 — EMPLOYEE BENEFIT PLANS

Prior to the Separation, certain of our employees participated in defined benefit and non-qualified plans sponsored by Dover, which included participants of other Dover subsidiaries. Through the Separation date, we accounted for such plans as multi-employer benefit plans. A proportionate share of the cost associated with these plans is reflected in the condensed combined statements of income prior to the Separation.

Dover provided a defined benefit pension plan for its eligible U.S. employees and retirees ("U.S. Pension Plan"). As such, the portion of Apergy's liability associated with the U.S. Pension Plan is not reflected in the condensed combined balance sheet as of December 31, 2017, and was not recorded at the Separation as this obligation will be maintained and serviced by Dover. Shortly before the Separation, Apergy participants in the U.S. Pension Plan (other than Norris USW participants) fully vested in their benefits, and all participants ceased accruing benefits. In addition, Apergy did not assume any funding requirements or obligations related to the U.S. Pension Plan upon the Separation. Norris USW participants were moved to a new pension plan and continued to accrue benefits.

Dover also provided a defined benefit pension plan for its eligible salaried non-U.S. employees and retirees in Canada ("Canada Salaried Pension Plan"). As such, the portion of Apergy's liability associated with this non-U.S. plan is not reflected in our condensed combined balance sheet as of December 31, 2017, as this obligation was maintained and serviced by Dover. The Canada Salaried Pension Plan, including all assets and liabilities, was transferred to Apergy at the Separation. Shortly before the Separation, all non-Apergy participants in this plan ceased accruing benefits or were not permitted to make contributions, as applicable. The non-Apergy participants may elect a lump sum cash payment post Separation that will be the responsibility of Apergy and will be funded out of the plan assets.

Dover provided to certain U.S. management employees, through non-qualified plans, supplemental retirement benefits in excess of qualified plan limits imposed by federal tax law. As of January 1, 2018, Apergy participants in these non-qualified plans no longer accrued benefits nor were permitted to make contributions, as applicable. Apergy assumed the funding requirements and related obligations attributable to Apergy employees related to these non-qualified plans upon the Separation. The non-qualified plans are unfunded and contributions are made as benefits are paid.

At the Separation, we recognized $6.1 million of liabilities and $2.4 million of accumulated other comprehensive loss, net of tax, related to plans previously accounted for as multi-employer plans prior to the Separation.

Net Periodic Benefit Cost

Total net periodic benefit cost was $1.1 million and $1.2 million for the three months ended September 30, 2018 and 2017, respectively, and $2.9 million and $3.5 million for the nine months ended September 30, 2018 and 2017, respectively. Prior to the Separation, our net periodic benefit costs included total net periodic benefit costs associated with plans accounted for as single-employer plans and an allocation from Dover Corporation for plans accounted for as multi-employer plans. After the Separation, total net periodic benefit costs include all costs associated with plans that we sponsor, including plans that transferred to Apergy as discussed above.

Defined Contribution Retirement Plans

We also offer defined contribution retirement plans which cover the majority of our U.S. employees and employees in certain other countries. Expense relating to our defined contribution plans was $2.5 million and $2.1 million for the three months ended September 30, 2018 and 2017, respectively and $7.2 million and $6.1 million for the nine months ended September 30, 2018 and 2017, respectively.

NOTE 17 — SEGMENT INFORMATION

We report our results of operations in the following reporting segments: Production & Automation Technologies and Drilling Technologies. Segment revenue and segment operating profit were as follows:

(in thousands)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017
Segment revenue:				
Production & Automation Technologies	$241,214	$199,454	$696,591	$578,429
Drilling Technologies	75,254	59,200	209,727	166,664
Total revenue	$316,468	$258,654	$906,318	$745,093
Income before income taxes:				
Segment operating profit:				
Production & Automation Technologies	$ 24,257	$ 8,403	$ 57,957	$ 26,247
Drilling Technologies	26,209	20,420	71,738	55,067
Total segment operating profit	50,466	28,823	129,695	81,314
Corporate expense and other (1)	6,664	1,818	16,274	6,838
Interest expense, net	10,584	79	16,813	199
Income before income taxes	$ 33,218	$ 26,926	$ 96,608	$ 74,277

(1) Corporate expense includes costs not directly attributable or allocated to our reporting segments such as corporate executive management and other administrative functions, costs related to our Separation from Dover Corporation and the results attributable to our noncontrolling interest.

NOTE 18 — CONDENSED CONSOLIDATING FINANCIAL INFORMATION

On May 3, 2018, and in connection with the Separation, Apergy completed the issuance of $300 million of senior notes, the payment obligations of which are fully and unconditionally guaranteed by certain 100-percent-owned subsidiaries of Apergy on a joint and several basis. The following financial information presents the results of operations, financial position and cash flows for:

- Apergy Corporation (issuer)
- 100-percent-owned guarantor subsidiaries
- All other non-guarantor subsidiaries
- Adjustments necessary to present Apergy results on a consolidated basis.

This condensed consolidating financial information should be read in conjunction with the accompanying consolidated financial statements and notes.

(in thousands)	Three Months Ended September 30, 2018				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Product revenue	$ —	$250,549	$ 32,553	$ —	$283,102
Service revenue	—	13,757	6,714	—	20,471
Lease and other revenue	—	12,531	364	—	12,895
Related party revenue	—	5,944	4,853	(10,797)	—
Total revenue	—	282,781	44,484	(10,797)	316,468
Cost of goods and services	—	175,718	37,899	(10,883)	202,734
Gross profit	—	107,063	6,585	86	113,734
Selling, general and administrative expense	87	63,470	5,465	—	69,022
Interest expense, net	10,491	84	9	—	10,584
Other expense (income), net	—	(524)	1,434	—	910
Income (loss) before income taxes and equity in earnings of affiliates	(10,578)	44,033	(323)	86	33,218
Provision for (benefit from) income taxes	(2,575)	8,744	1,536	18	7,723
Income (loss) before equity in earnings of affiliates	(8,003)	35,289	(1,859)	68	25,495
Equity in earnings of affiliates	33,266	5,344	12,604	(51,214)	—
Net income	25,263	40,633	10,745	(51,146)	25,495
Net income attributable to noncontrolling interest	—	—	232	—	232
Net income attributable to Apergy	$ 25,263	$ 40,633	$ 10,513	$ (51,146)	$ 25,263
Comprehensive income attributable to Apergy	$ 25,187	$ 39,904	$ 11,166	$ (51,070)	$ 25,187

(in thousands)	Three Months Ended September 30, 2017				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Product revenue	$ —	$203,623	$ 32,225	$ —	$235,848
Service revenue	—	9,419	6,729	—	16,148
Lease and other revenue	—	6,296	351	—	6,647
Related party revenue	—	7,656	3,232	(10,877)	11
Total revenue	—	226,994	42,537	(10,877)	258,654
Cost of goods and services	—	148,389	36,261	(10,770)	173,880
Gross profit	—	78,605	6,276	(107)	84,774
Selling, general and administrative expense	—	50,448	4,380	—	54,828
Interest expense, net	—	78	1	—	79
Other expense, net	—	2,816	124	1	2,941
Income before income taxes and equity in earnings of affiliates	—	25,263	1,771	(108)	26,926
Provision for income taxes	—	7,938	340	(37)	8,241
Income before equity in earnings of affiliates	—	17,325	1,431	(71)	18,685
Equity in earnings of affiliates	18,421	2,435	3,006	(23,862)	—
Net income	18,421	19,760	4,437	(23,933)	18,685
Net income attributable to noncontrolling interest	—	—	264	—	264
Net income attributable to Apergy	$ 18,421	$ 19,760	$ 4,173	$ (23,933)	$ 18,421
Comprehensive income attributable to Apergy	$ 23,791	$ 20,195	$ 9,108	$ (29,303)	$ 23,791

(in thousands)	Nine Months Ended September 30, 2018				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Product revenue	$ —	$714,226	$ 94,084	$ —	$808,310
Service revenue	—	42,344	19,670	—	62,014
Lease and other revenue	—	34,855	1,139	—	35,994
Related party revenue	—	18,598	13,565	(32,163)	—
Total revenue	—	810,023	128,458	(32,163)	906,318
Cost of goods and services	—	515,005	111,142	(31,542)	594,605
Gross profit	—	295,018	17,316	(621)	311,713
Selling, general and administrative expense	1,588	176,733	16,247	—	194,568
Interest expense, net	16,494	288	32	(1)	16,813
Other expense, net	—	1,872	1,851	1	3,724
Income (loss) before income taxes and equity in earnings of affiliates	(18,082)	116,125	(814)	(621)	96,608
Provision for (benefit from) income taxes	(4,217)	24,076	4,595	(130)	24,324
Income (loss) before equity in earnings of affiliates	(13,865)	92,049	(5,409)	(491)	72,284
Equity in earnings of affiliates	85,854	18,811	37,568	(142,233)	—
Net income	71,989	110,860	32,159	(142,724)	72,284
Net income attributable to noncontrolling interest	—	—	295	—	295
Net income attributable to Apergy	$ 71,989	$110,860	$ 31,864	$ (142,724)	$ 71,989
Comprehensive income attributable to Apergy	$ 63,613	$110,214	$ 24,134	$ (134,348)	$ 63,613

(in thousands)	Nine Months Ended September 30, 2017				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Product revenue	$ —	$590,554	$ 89,283	$ —	$679,837
Service revenue	—	25,060	21,103	—	46,163
Lease and other revenue	—	17,501	1,573	—	19,074
Related party revenue	—	19,477	9,702	(29,160)	19
Total revenue	—	652,592	121,661	(29,160)	745,093
Cost of goods and services	—	425,792	103,259	(28,722)	500,329
Gross profit	—	226,800	18,402	(438)	244,764
Selling, general and administrative expense	—	149,145	13,214	—	162,359
Interest expense, net	—	196	3	—	199
Other expense, net	—	7,611	318	—	7,929
Income before income taxes and equity in earnings of affiliates	—	69,848	4,867	(438)	74,277
Provision for income taxes	—	22,726	400	(153)	22,973
Income before equity in earnings of affiliates	—	47,122	4,467	(285)	51,304
Equity in earnings of affiliates	50,444	5,579	5,446	(61,469)	—
Net income	50,444	52,701	9,913	(61,754)	51,304
Net income attributable to noncontrolling interest	—	—	860	—	860
Net income attributable to Apergy	$ 50,444	$ 52,701	$ 9,053	$ (61,754)	$ 50,444
Comprehensive income attributable to Apergy	$ 57,538	$ 53,055	$ 15,793	$ (68,848)	$ 57,538

(in thousands)	September 30, 2018				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Assets					
Cash and cash equivalents	$ 108	$ 8,308	$ 9,598	$ —	$ 18,014
Receivables	—	245,950	40,797	(8,821)	277,926
Inventories	—	189,536	31,146	(1,549)	219,133
Prepaid and other current assets	71	18,846	1,907	—	20,824
Total current assets	179	462,640	83,448	(10,370)	535,897
Property, plant and equipment, net	—	222,425	13,642	—	236,067
Goodwill	—	633,771	272,995	—	906,766
Advances due from affiliates	660,836	14,228	81,199	(756,263)	—
Intercompany notes receivable	—	1,394	4	(1,398)	—
Investment in subsidiaries	978,944	688,890	542,462	(2,210,296)	—
Intangible assets, net	—	207,694	89,703	—	297,397
Other assets and deferred charges	4,226	2,292	711	—	7,229
Total assets	1,644,185	2,233,334	1,084,164	(2,978,327)	1,983,356
Liabilities and Equity					
Accounts payable	30	113,497	22,397	(8,821)	127,103
Accrued compensation and employee benefits	—	31,619	5,369	—	36,988
Other accrued expenses	(3,811)	784,752	28,703	(756,590)	53,054
Total current liabilities	(3,781)	929,868	56,469	(765,411)	217,145
Intercompany notes payable	—	4	1,394	(1,398)	—
Long-term debt	683,206	4,321	16	—	687,543
Deferred income taxes	—	73,089	20,049	—	93,138
Other long-term liabilities	—	19,459	1,311	—	20,770
Total liabilities	679,425	1,026,741	79,239	(766,809)	1,018,596
Equity:					
Stockholders' capital	964,760	1,213,290	1,034,542	(2,211,518)	1,001,074
Accumulated other comprehensive loss	—	(6,697)	(31,830)	—	(38,527)
Total stockholders' equity	964,760	1,206,593	1,002,712	(2,211,518)	962,547
Noncontrolling interest	—	—	2,213	—	2,213
Total equity	964,760	1,206,593	1,004,925	(2,211,518)	964,760
Total liabilities and equity	$1,644,185	$2,233,334	$ 1,084,164	$ (2,978,327)	$1,983,356

(in thousands)	December 31, 2017				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Assets					
Cash and cash equivalents	$ —	$ 5,763	$ 17,949	$ —	$ 23,712
Receivables	—	171,363	34,335	(3,674)	202,024
Inventories	—	175,031	27,488	(928)	201,591
Prepaid and other current assets	—	11,990	2,048	—	14,038
Total current assets	—	364,147	81,820	(4,602)	441,365
Property, plant and equipment, net	—	195,579	16,253	—	211,832
Goodwill	—	633,734	276,354	—	910,088
Advances due from affiliates	—	10,299	60,109	(70,408)	—
Investment in subsidiaries	1,640,034	801,235	388,315	(2,829,584)	—
Intangible assets, net	—	234,795	103,715	—	338,510
Other assets and deferred charges	—	2,129	851	—	2,980
Total assets	1,640,034	2,241,918	927,417	(2,904,594)	1,904,775
Liabilities and Equity					
Accounts payable	—	83,864	18,636	(3,674)	98,826
Accrued compensation and employee benefits	—	24,875	5,414	—	30,289
Other accrued expenses	—	74,393	18,289	(70,732)	21,950
Total current liabilities	—	183,132	42,339	(74,406)	151,065
Deferred income taxes	—	75,075	21,910	—	96,985
Other liabilities	—	16,657	34	—	16,691
Equity:					
Parent Company investment in Apergy	1,640,034	1,971,790	880,064	(2,830,188)	1,661,700
Accumulated other comprehensive loss	—	(4,736)	(21,679)	—	(26,415)
Total Parent Company equity	1,640,034	1,967,054	858,385	(2,830,188)	1,635,285
Noncontrolling interest	—	—	4,749	—	4,749
Total equity	1,640,034	1,967,054	863,134	(2,830,188)	1,640,034
Total liabilities and equity	$1,640,034	$2,241,918	$927,417	$(2,904,594)	$1,904,775

(in thousands)	Nine Months Ended September 30, 2018				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Cash provided (required) by operating activities	$ (16,694)	$ 103,911	$ 6,588	$ (999)	$ 92,806
Cash provided (required) by investing activities:					
Capital expenditures	—	(43,746)	(2,086)	—	(45,832)
Proceeds from sale of property, plant, and equipment	—	938	32	—	970
Purchase price adjustments on acquisition	—	—	53	—	53
Net cash required by investing activities	—	(42,808)	(2,001)	—	(44,809)
Cash provided (required) by financing activities:					
Proceeds from long-term debt, net of discounts	713,963	—	—	—	713,963
Payment of debt issue costs	(16,006)	—	—	—	(16,006)
Repayment of long-term debt	(20,000)	—	—	—	(20,000)
Advances due to/(from) affiliates	(660,836)	677,999	(17,163)	—	—
Net transfers to Parent Company and intercompany distributions	(319)	(736,557)	7,020	999	(728,857)
Distributions to noncontrolling interest	—	—	(2,720)	—	(2,720)
Net cash provided (required) by financing activities	16,802	(58,558)	(12,863)	999	(53,620)
Effect of exchange rate changes on cash and cash equivalents	—	—	(75)	—	(75)
Net increase (decrease) in cash and cash equivalents	108	2,545	(8,351)	—	(5,698)
Cash and cash equivalents at beginning of period	—	5,763	17,949	—	23,712
Cash and cash equivalents at end of period	$ 108	$ 8,308	$ 9,598	$ —	$ 18,014

(in thousands)	Nine Months Ended September 30, 2017				
	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Cash provided by operating activities	$ —	$ 38,153	$ 2,899	$ 153	$ 41,205
Cash provided (required) by investing activities:					
Capital expenditures	—	(28,221)	(1,224)	—	(29,445)
Proceeds from sale of property, plant, and equipment	—	2,596	20	—	2,616
Net cash required by investing activities	—	(25,625)	(1,204)	—	(26,829)
Cash provided (required) by financing activities:					
Net transfers to Parent Company and intercompany distributions	—	(13,132)	(5,935)	(153)	(19,220)
Distributions to noncontrolling interest	—	—	(1,212)	—	(1,212)
Net cash required by financing activities	—	(13,132)	(7,147)	(153)	(20,432)
Effect of exchange rate changes on cash and cash equivalents	—	—	3,476	—	3,476
Net decrease in cash and cash equivalents	—	(604)	(1,976)	—	(2,580)
Cash and cash equivalents at beginning of period	—	3,730	22,297	—	26,027
Cash and cash equivalents at end of period	$ —	$ 3,126	$ 20,321	$ —	$ 23,447

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Apergy Corporation

Opinion on the Financial Statements

We have audited the accompanying combined balance sheets of Apergy Corporation (formerly known as Wellsite Corporation), which is comprised of the entities conducting the upstream oil and gas business within Dover Corporation's energy segment (collectively the "Company"), as of December 31, 2017 and 2016, and the related combined statements of income (loss), comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "combined financial statements"). In our opinion, the combined financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the combined financial statements, the Company changed the manner in which it accounts for certain cash receipts and cash payments in 2018.

Basis for Opinion

These combined financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's combined financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these combined financial statements in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the combined financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the combined financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the combined financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Houston, Texas
March 5, 2018, except for Note 20 and the change in the manner in which the Company accounts for certain cash receipts and cash payments discussed in Note 2 to the combined financial statements, as to which the date is November 14, 2018

We have served as the Company's auditor since 2017.

APERGY CORPORATION
COMBINED STATEMENTS OF INCOME (LOSS)
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Revenue	$1,009,591	$751,337	$1,076,680
Cost of goods and services	691,124	556,009	742,041
Gross profit	318,467	195,328	334,639
Selling, general and administrative expenses	219,517	205,409	245,723
Operating income (loss)	98,950	(10,081)	88,916
Other expense, net	9,666	8,753	11,651
Income (loss) before income taxes	89,284	(18,834)	77,265
Provision for (benefit from) income taxes	(22,284)	(8,043)	24,131
Net income (loss)	111,568	(10,791)	53,134
Net income attributable to noncontrolling interest	930	1,851	1,436
Net income (loss) attributable to Apergy	$ 110,638	$ (12,642)	$ 51,698

See Notes to Combined Financial Statements

APERGY CORPORATION
COMBINED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Net income (loss) attributable to Apergy	$110,638	$(12,642)	$ 51,698
Other comprehensive income (loss), net of tax			
Foreign currency translation gain (loss)	4,358	953	(11,691)
Pension and other post-retirement benefit plans:			
Actuarial gains (losses)	2,598	(123)	(485)
Prior service cost	—	—	(6)
Amortization of actuarial losses included in net periodic pension cost	257	234	221
Amortization of prior service costs included in net periodic pension cost	1	1	1
Total pension and other post-retirement benefit plans	2,856	112	(269)
Other comprehensive income (loss), net of tax	7,214	1,065	(11,960)
Comprehensive income (loss) attributable to Apergy	$117,852	$(11,577)	$ 39,738

See Notes to Combined Financial Statements

APERGY CORPORATION
COMBINED BALANCE SHEETS
(In thousands)

	Pro Forma shareholders' equity (unaudited)	December 31, 2017	December 31, 2016
Assets			
Current assets:			
Cash and cash equivalents		$ 23,712	$ 26,027
Receivables, net of allowances of $4,753 and $5,634		202,024	139,485
Inventories		201,591	184,558
Prepaid and other current assets		14,038	6,251
Total current assets		441,365	356,321
Property, plant and equipment, net		211,832	201,747
Goodwill		910,088	902,579
Intangible assets, net		338,510	386,817
Other assets and deferred charges		2,980	3,431
Total assets		$ 1,904,775	$ 1,850,895
Liabilities and Equity			
Current liabilities:			
Accounts payable		$ 98,826	$ 66,280
Accrued compensation and employee benefits		30,289	24,788
Other accrued expenses		21,950	21,626
Total current liabilities		151,065	112,694
Deferred income taxes		96,985	167,565
Other liabilities		16,691	19,283
Equity:			
Common Stock	774	—	—
Additional paid-in capital	948,337	—	—
Parent Company investment in Apergy	—	1,661,700	1,579,951
Accumulated other comprehensive loss	(30,495)	(26,415)	(33,629)
Total Parent Company equity	918,616	1,635,285	1,546,322
Noncontrolling interest	4,749	4,749	5,031
Total equity	923,365	1,640,034	1,551,353
Total liabilities and equity		$ 1,904,775	$ 1,850,895

See Notes to Combined Financial Statements

APERGY CORPORATION
COMBINED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Parent Company Investment	Accumulated Other Comprehensive (Loss) Income	Total Parent Company Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2014	$1,815,910	$ (22,734)	$1,793,176	$ 3,864	$1,797,040
Net income	51,698	—	51,698	1,436	53,134
Other comprehensive loss, net of tax	—	(11,960)	(11,960)	—	(11,960)
Net transfer to Parent Company	(193,049)	—	(193,049)	—	(193,049)
Other	—	—	—	(172)	(172)
Balance at December 31, 2015	1,674,559	(34,694)	1,639,865	5,128	1,644,993
Net income (loss)	(12,642)	—	(12,642)	1,851	(10,791)
Other comprehensive income, net of tax	—	1,065	1,065	—	1,065
Distributions declared and paid to noncontrolling interest	—	—	—	(1,727)	(1,727)
Net transfer to Parent Company	(81,966)	—	(81,966)	—	(81,966)
Other	—	—	—	(221)	(221)
Balance at December 31, 2016	1,579,951	(33,629)	1,546,322	5,031	1,551,353
Net income	110,638	—	110,638	930	111,568
Other comprehensive income, net of tax	—	7,214	7,214	—	7,214
Distributions declared and paid to noncontrolling interest	—	—	—	(1,212)	(1,212)
Net transfer to Parent Company	(28,889)	—	(28,889)	—	(28,889)
Balance at December 31, 2017	$1,661,700	$ (26,415)	$1,635,285	$ 4,749	$1,640,034

See Notes to Combined Financial Statements

APERGY CORPORATION
COMBINED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Operating Activities			
Net income (loss) attributable to Apergy	$110,638	$ (12,642)	$ 51,698
Adjustments to reconcile net income (loss) attributable to Apergy to cash from operating activities:			
Depreciation and amortization	111,879	112,055	119,992
Stock-based compensation	2,236	2,293	1,925
(Gain) loss on sale of fixed assets	(934)	(366)	1,463
Provision for losses on accounts receivable (net of recoveries)	954	2,941	2,154
Deferred income taxes	(73,433)	(19,994)	(20,270)
Employee benefit plan expense	1,064	1,128	1,114
Contributions to employee benefit plans	(1,876)	(2,649)	(2,667)
Other	(2,293)	701	8,392
Cash effect of changes in assets and liabilities (excluding effects of and foreign exchange):			
Receivables	(61,274)	26,898	74,825
Inventories	(14,204)	32,912	58,772
Prepaid and other current assets	(5,116)	3,156	(2,388)
Accounts payable	29,802	(9,874)	(32,123)
Accrued compensation and employee benefits	5,616	(2,122)	(17,772)
Leased assets and other, net	(26,142)	(4,728)	(29,444)
Net cash provided by operating activities	76,917	129,709	215,671
Investing Activities			
Additions to property, plant and equipment	(41,211)	(26,854)	(31,985)
Proceeds from sale of property, plant and equipment	3,547	2,526	7,884
Acquisition (net of cash and cash equivalents acquired)	(8,842)	—	—
Additions to intangible assets	—	(3,700)	(10,000)
Net cash used in investing activities	(46,506)	(28,028)	(34,101)
Financing Activities			
Change in borrowings, net	(599)	—	—
Distribution to noncontrolling interest	(1,212)	(1,727)	—
Net transfers to Parent Company	(31,192)	(84,254)	(194,977)
Net cash used in financing activities	(33,003)	(85,981)	(194,977)
Effect of exchange rate changes on cash and cash equivalents	277	(90)	(531)
Net (decrease) increase in cash and cash equivalents	(2,315)	15,610	(13,938)
Cash and cash equivalents at beginning of year	26,027	10,417	24,355
Cash and cash equivalents at end of year	$ 23,712	$ 26,027	$ 10,417
Supplemental information - cash paid during the year for:			
Income taxes	$ 8,698	$ 7,285	$ 7,808

See Notes to Combined Financial Statements

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

1. Basis of Presentation

On December 7, 2017, Dover ("Dover" or "Parent") announced that its Board of Directors had approved a plan to spin-off entities conducting its upstream oil and gas energy business within the Dover Energy segment. In February 2018, the name of those collective businesses was changed from Wellsite Corporation to Apergy Corporation ("Apergy" or "Company"). Upon completion of the spin-off, Apergy will be a stand-alone, publicly traded company that provides highly engineered products that help companies drill and produce oil and gas efficiently and safely.

The accompanying Combined Financial Statements have been prepared on a stand-alone basis and are derived from Dover's consolidated financial statements and accounting records. The Combined Financial Statements represent Apergy's financial position, results of operations and cash flows as its business was operated as part of Dover prior to the distribution, in conformity with U.S. generally accepted accounting principles.

All intercompany transactions between the Apergy entities have been eliminated. Transactions between Apergy and Dover, with the exception of transactions discussed in Note 3, are reflected in equity in the combined balance sheet as "Parent Company investment in Apergy" and in the combined statement of cash flows as a financing activity in "Net transfers (to) from Parent Company." See Note 3 — Related Party Transactions for additional information regarding related party transactions.

No portion of Dover's third-party debt was historically held by an Apergy entity or is transferring to Apergy; therefore, no amount was included in the Combined Balance Sheets at December 31, 2017 and December 31, 2016. Accordingly, no interest expense related to third-party debt was recorded in the Combined Statements of Income.

Intercompany notes payable to Dover of $224.5 million and $233.1 million at December 31, 2017 and 2016, respectively are classified within Parent Company investment in Apergy because the notes are not expected to be settled in cash. Accordingly, no interest expense was recorded in the Combined Statements of Income.

2. Summary of Significant Accounting Policies

Description of Business

Apergy is a leading provider of highly engineered technologies that help companies drill for and produce oil and gas efficiently and safely around the world. Its products include a full range of equipment and technologies that enable efficient drilling and safe and efficient production throughout the lifecycle of a well. Its principal products consist of artificial lift equipment and solutions, including electric submersible pump systems ("ESP"), rod pumping systems ("Rod Lift"), gas lift systems, progressive cavity pump systems ("PCP") and plunger lift systems, as well as polycrystalline diamond cutters ("PDCs") for drilling. The Company also provides a comprehensive automation offering consisting of equipment, software and Industrial Internet ("IIoT") solutions for downhole monitoring, wellsite productivity enhancement and asset integrity management. The Company reports two business segments: Production & Automation Technologies and Drilling Technologies. For additional information on the Company's segments, see Note 16 — Segment Information. In 2017, the Company acquired PCP Oil Tools S.A. and Ener Tools S.A., a supplier of progressive cavity pump products and services. This acquisition is part of the Production & Automation Technologies segment. Additionally, the Company did not make any acquisitions during the years ended December 31, 2016 and 2015.

Combined Financial Statement Presentation

The Combined Financial Statements have been derived from the consolidated financial statements and accounting records of Dover using the historical results of operations, and historical basis of assets and liabilities

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
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of Apergy and reflect Dover's net investment in Apergy. Historically, stand-alone financial statements have not been prepared for Apergy. Management believes the assumptions underlying the allocations included in the Combined Financial Statements are reasonable. However, the Combined Financial Statements may not necessarily reflect Apergy's results of operations, financial position and cash flows in the future, or what Apergy's results of operations, financial position and cash flows would have been had Apergy been a stand-alone company during the periods presented herein.

The Combined Financial Statements include the accounts of the Company. Intercompany accounts and transactions have been eliminated in consolidation. The results of operations of purchased businesses of Apergy are included from the date of acquisition.

The accompanying financial statements include allocations of costs that were incurred by Dover for functions such as corporate executive management, human resources, information technology, facilities, tax, shared services, finance and legal, including the costs of salaries, benefits and other related costs. The total costs allocated to the accompanying Combined Financial Statements for these functions totaled approximately $22,987, $19,459 and $20,852 for the years ended December 31, 2017, 2016 and 2015, respectively, and are included in Selling, general and administrative expenses within the Combined Statements of Income. These expenses have been allocated to Apergy based on direct usage or benefit where identifiable, with the remainder allocated on the basis of revenues, headcount, or other measures. As a stand-alone public company, Apergy's total costs related to such support functions may differ from the costs that were historically allocated to it from Dover. See Note 3 — Related Party Transactions for additional information regarding related party transactions.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the Combined Financial Statements and accompanying disclosures. These estimates may be adjusted due to changes in future economic, industry, or customer financial conditions, as well as changes in technology or demand. Estimates are used for, but not limited to, allowances for doubtful accounts receivable, net realizable value of inventories, restructuring reserves, warranty reserves, pension and post-retirement plans, stock-based compensation, useful lives for depreciation and amortization of long-lived assets, future cash flows associated with impairment testing for goodwill, indefinite-lived intangible assets and other long-lived assets, deferred tax assets, uncertain income tax positions and contingencies. Actual results may ultimately differ from estimates, although management does not believe such differences would materially affect the Combined Financial Statements in any individual year. Estimates and assumptions are periodically reviewed and the effects of revisions are reflected in the Combined Financial Statements in the period that they are determined.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, demand deposits and short-term investments which are highly liquid in nature and have original maturities at the time of purchase of three months or less. The carrying value of cash and cash equivalents approximate fair value.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at face amounts less an allowance for doubtful accounts. The allowance is an estimate based on historical collection experience, current economic and market conditions and a review of the current status of each customer's trade accounts receivable. Management evaluates the aging of the accounts

receivable balances and the financial condition of its customers to estimate the amount of accounts receivable that may not be collected in the future and records the appropriate provision.

Inventories

Inventories for the majority of the Company's subsidiaries, including all international subsidiaries, are stated at the lower of net realizable value, determined on the first-in, first-out (FIFO) basis, or cost. Other domestic inventories are stated at cost, determined on the last-in, first-out (LIFO) basis, which is less than market value. Under the LIFO method, the cost assigned to items sold is based on the cost of the most recent items purchased. As a result, the costs of the first items purchased remain in inventory and are used to value ending inventory. The excess of estimated current costs over LIFO carrying value, or LIFO reserve, was approximately $10.6 million and $9.4 million at December 31, 2017 and 2016, respectively. Under certain market conditions, estimates and judgments regarding the valuation of inventories are employed by us to properly value inventories.

Property, Plant and Equipment

Property, plant and equipment includes the historical cost of land, buildings, machinery and equipment, purchased software and significant improvements to existing plant and equipment or, in the case of acquisitions, a fair market value appraisal of assets. Expenditures for maintenance, repairs and minor renewals are expensed as incurred. When property or equipment is sold or otherwise disposed of, the related cost and accumulated depreciation is removed from the respective accounts and the gain or loss realized on disposition is reflected in earnings. The Company depreciates its assets on a straight-line basis over their estimated useful lives as follows: buildings and improvements 5 to 31.5 years; machinery and equipment 3 to 7 years; furniture and fixtures 3 to 7 years; vehicles 3 years; and software 3 to 10 years.

Derivative Financial Instruments

The Company uses derivative financial instruments to hedge its exposure to foreign currency exchange rate risk. The Company does not enter into derivative financial instruments for speculative purposes and has a portfolio of derivatives that is not material in value. Derivative financial instruments used for hedging purposes must be designated and effective as a hedge of the identified risk exposure at inception of the contract. For derivatives hedging the fair value of assets or liabilities, the changes in fair value of both the derivatives and of the hedged items are recorded in current earnings.

Goodwill, Other Intangible Assets and Long-Lived Assets

Goodwill represents the excess of purchase price over the fair value of net assets acquired. Goodwill and certain other intangible assets deemed to have indefinite lives (trademarks) are not amortized. For goodwill, impairment tests are required at least annually, or more frequently if events or circumstances indicate that it may be impaired, or when some portion but not all of a reporting unit is disposed. Historically, the Company was part of the Dover Energy operating segment. Based on its historical organizational structure, the Company identified two reporting units for which cash flows are determinable and to which goodwill may be allocated. Effective in the fourth quarter of 2017, the Company determined it is organized into a new segment structure discussed in Note 16 — Segment Information comprised of two reporting units, to which goodwill may be allocated.

The Company performs its goodwill impairment test annually in the fourth quarter at the reporting unit level. A quantitative test is used to determine existence of goodwill impairment and the amount of the impairment loss at the reporting unit level. The quantitative test compares the fair value of a reporting unit with its carrying amount,

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
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including goodwill. The Company uses an income-based valuation method, determining the present value of estimated future cash flows, to estimate the fair value of a reporting unit. If the fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. Factors used in the impairment analysis require significant judgment, and actual results may differ from assumed and estimated amounts. The Company uses its own market assumptions including internal projections of future cash flows, discount rates and other assumptions considered reasonable and inherent in the analysis. These forecasts are based on historical performance and future estimated results. The discount rates used in these analyses vary by reporting unit and are based on a capital asset pricing model and published relevant industry rates. The Company uses discount rates commensurate with the risks and uncertainties inherent to each reporting unit and in the internally developed forecasts. See Note 7 — Goodwill and Other Intangible Assets for further discussion of the Company's annual goodwill impairment test and results.

The Company uses an income-based valuation method to test its indefinite-lived intangible assets for impairment, at least annually. The fair value of the intangible asset is compared to its carrying value. This method uses the Company's own market assumptions considered reasonable and inherent in the analysis. Any excess of carrying value over the estimated fair value is recognized as an impairment loss. No impairment of indefinite-lived intangible assets was required for the years ended December 31, 2017, 2016 and 2015.

Other intangible assets with determinable lives consist primarily of customer intangibles, unpatented technologies, patents and trademarks. These other intangibles are amortized over their estimated useful lives, ranging from 5 to 15 years.

Long-lived assets (including definite-lived intangible assets) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, such as a significant sustained change in the business climate. If an indicator of impairment exists for any grouping of assets, an estimate of undiscounted future cash flows is produced and compared to its carrying value. If an asset is determined to be impaired, the loss is measured by the excess of the carrying amount of the asset over its fair value as determined by an estimate of discounted future cash flows.

Restructuring Accruals

From time to time, the Company takes actions to reduce headcount, close facilities, or otherwise exit operations. Such restructuring activities at an operation are recorded when management has committed to an exit or reorganization plan and when termination benefits are probable and can be reasonably estimated based on circumstances at the time the restructuring plan is approved by management or when termination benefits are communicated. Exit costs include future minimum lease payments on vacated facilities and other contractual terminations. In addition, asset impairments may be recorded as a result of an approved restructuring plan. The accrual of both severance and exit costs requires the use of estimates. Though the Company believes that its estimates accurately reflect the anticipated costs, actual results may differ from the original estimated amounts.

Noncontrolling interests

A noncontrolling interest represents the equity interest in a subsidiary that is not attributable, either directly or indirectly, to the Company and is reported as equity, separately from the Company's controlling interests. The noncontrolling interest relates to the Company's ownership interest in Norris Production Solutions Middle East LLC, a subsidiary company in the Sultanate of Oman with a local partner, where the Company is the majority

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owner at 60% and has the controlling financial interest. The outside investor's interests in this subsidiary company are included in noncontrolling interest in the Company's Combined Financial Statements.

Foreign Currency

Assets and liabilities of non-U.S. subsidiaries, where the functional currency is not the U.S. dollar, have been translated at year-end exchange rates and profit and loss accounts have been translated using weighted-average monthly exchange rates. Foreign currency translation gains and losses are included in the Combined Statements of Comprehensive Income as a component of Other comprehensive income (loss). Assets and liabilities of an entity that are denominated in currencies other than an entity's functional currency are re-measured into the functional currency using end of period exchange rates or historical rates where applicable to certain balances. Gains and losses related to these re-measurements are recorded within the Combined Statements of Income as a component of Other expense, net.

Revenue Recognition

Revenue is recognized when all of the following conditions are satisfied: a) persuasive evidence of an arrangement exists, b) price is fixed or determinable, c) collectability is reasonably assured and d) delivery has occurred or services have been rendered. The majority of the Company's revenue is generated through the manufacture and sale of a broad range of specialized products and components, with revenue recognized upon transfer of title and risk of loss, which is generally upon shipment. Certain product sales are recognized based on the percentage-of-completion method, which is based on the estimated costs to completion and represented 0.7%, 2.5% and 2.2% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. When necessary, provisions for estimated losses on these contracts are made in the period in which such losses are determined. The Company derives product revenue from the sale of software standalone products and software-enabled tangible products, which in the aggregate represented 8.1% of total revenue for year ended December 31, 2017 and 8.7% of total revenue for each of 2016 and 2015. Software product revenue is recorded when the software product is shipped to the customer or over the term of the contract. Service revenue represented 6.3%, 6.8% and 5.2% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively, and is recognized as the services are performed. Leasing revenue represented 1.9%, 2.7% and 2.6% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. Lease revenue is recognized ratably over the lease term and the leased asset is included in property, plant and equipment and depreciated to its estimated residual value over the lease term.

In limited cases, revenue arrangements with customers require delivery, installation, testing, or other acceptance provisions to be satisfied before revenue is recognized. The Company includes shipping costs billed to customers in revenue and the related shipping costs in cost of goods and services.

Stock-Based Compensation

The Company's employees have historically participated in Dover's stock-based compensation plans. Stock-based compensation has been allocated to the Company based on the awards and terms previously granted to the Company's employees. The principal awards issued under the stock-based compensation plans include stock options, stock-settled stock appreciation rights, restricted stock units and performance share awards. The cost of such awards is measured at the grant date based on the fair value of the award. At the time of grant, Dover estimates forfeitures, based on historical experience, in order to estimate the portion of the award that will ultimately vest. The value of the portion of the award that is expected to ultimately vest is recognized as expense on a straight-line basis, generally over the explicit service period of three years (except for retirement-eligible

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employees and retirees) and is included in Selling, general and administrative expenses in the Combined Statements of Income. Expense for awards granted to retirement-eligible employees is recorded over the period from the date of grant through the date the employee first becomes eligible to retire and is no longer required to provide service. See Note 12 — Equity and Cash Incentive Program for additional information related to stock-based compensation.

Employee Benefit Plans

Apergy participates in defined benefit plans and non-qualified supplemental retirement plans sponsored by Dover that are accounted for as multi-employer plans in the Combined Financial Statements. Apergy also sponsors a defined benefit plan and non-qualified plan. These plans are accounted for as single employer plans in the Combined Financial Statements. Apergy also offers a defined contribution plan. See Note 14 — Employee Benefit Plans and Non-Qualified Plans for additional information.

Income Taxes

The Company's operations have historically been included in Dover's consolidated federal tax return and certain combined state returns. The income tax expense in these Combined Financial Statements has been determined on a stand-alone return basis in accordance with Accounting Standards Codification ("ASC") 740 "Income Taxes," which requires the recognition of income taxes using the liability method. Under this method, the Company is assumed to have historically filed a return separate from Dover, reporting its taxable income or loss and paying applicable tax based on its separate taxable income and associated tax attributes in each tax jurisdiction. Income taxes payable at each balance sheet date computed under the stand-alone return basis are classified within Parent Company investment in Apergy since Dover is legally liable for the tax. Accordingly, changes in income taxes payable are recorded as a component of financing activities in the Combined Statements of Cash Flows. The calculation of income taxes on the separate return basis requires considerable judgment and the use of both estimates and allocations. As a result, the Company's effective tax rate and deferred tax balances will differ significantly from those in Dover's historic periods. Additionally, the Company's deferred tax balances as calculated on the separate return basis will differ from the deferred tax balances of Dover, if legally separated. See Note 11 — Income Taxes for additional information on the Company's income taxes and unrecognized tax benefits.

The U.S. bill commonly referred to as the Tax Cuts and Jobs Act ("Tax Reform Act"), which was enacted on December 22, 2017, significantly changes U.S. tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The Tax Reform Act permanently reduces the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018. The Tax Reform Act also provided for a one-time deemed repatriation of post-1986 undistributed foreign subsidiary earnings and profits through the year ended December 31, 2017. The Global Intangible Low-Taxed Income ("GILTI") provisions require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The Company expects that it will be subject to incremental U.S. tax on GILTI income beginning in 2018, due to expense allocations required by the U.S. foreign tax credit rules. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore has not provided any deferred tax impacts of GILTI in its combined financial statements for the year ended December 31, 2017.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain

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income tax effects of the Tax Reform Act. The Company has recognized the provisional tax impacts related to deemed repatriated earnings and the benefit for the revaluation of deferred tax assets and liabilities, and included these amounts in its combined financial statements for the year ended December 31, 2017. The final impact may differ from these provisional amounts, possibly materially, due to, among other things, additional analysis, changes in interpretations and assumptions the Company has made, additional regulatory guidance that may be issued, and actions the Company may take as a result of the Tax Reform Act. In accordance with SAB 118, the financial reporting impact of the Tax Reform Act will be completed in the fourth quarter of 2018.

Research and Development Costs

Research and development costs, including qualifying engineering costs, are expensed when incurred and amounted to $18,501, $16,511 and $19,255, in 2017, 2016 and 2015, respectively.

Advertising Costs

Advertising costs are expensed when incurred and amounted to $1,220, $825 and $1,604, in 2017, 2016 and 2015, respectively.

Risk, Retention, Insurance

Apergy was covered under Dover's insurance policies during the years ended December 31, 2017 and 2016. For both years ended December 31, 2017 and 2016, Dover self-insured its product and commercial general liability claims up to $5.0 million per occurrence and automobile liability claims up to $1.0 million per occurrence. For the years ended December 31, 2017 and 2016, Dover self-insured its workers' compensation claims up to $0.8 million per occurrence, respectively. Third-party insurance provides primary level coverage in excess of these amounts up to certain specified limits. In addition, Dover has excess liability insurance from third-party insurers on both an aggregate and an individual occurrence basis well in excess of the limits of the primary coverage. A worldwide program of property insurance covers Dover's owned and leased property and any business interruptions that may occur due to an insured hazard affecting those properties, subject to reasonable deductibles and aggregate limits. Dover's property and casualty insurance programs contain various deductibles that, based on Dover's experience, are typical and customary for a company of its size and risk profile. Apergy does not consider any of the deductibles under the Dover program to represent a material risk to Apergy. Dover generally maintains deductibles for claims and liabilities related primarily to workers' compensation, health and welfare claims, general commercial, product and automobile liability and property damage and business interruption resulting from certain events. Dover accrues for claim exposures that are probable of occurrence and can be reasonably estimated. As part of Dover's risk management program, insurance is maintained to transfer risk beyond the level of self-retention and provide protection on both an individual claim and annual aggregate basis.

Reclassifications

We changed our presentation of expenditures related to purchases of leased inventory. Previously, these amounts were reported in the operating section of our cash flow statement as "other" in adjustments to reconcile net income but are now reported as changes in our operating assets and liabilities in the operating section of our cash flow statement as "leased assets and other, net." We changed our presentation of amortization expense primarily related to customer intangible assets. For the years ended December 31, 2017, 2016 and 2015, we reclassified $42.9 million, $45.2 million and $48.3 million of amortization expense previously reported as a component of "selling, general and administrative expense" to "cost of goods and services" on our combined statements of income. Certain amounts in prior years have been reclassified to conform to the current year presentation.

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Recent Accounting Pronouncements

Recently Issued Accounting Standards

The following standards, issued by the Financial Accounting Standards Board ("FASB"), will, or are expected to, result in a change in practice and/or have a financial impact to the Company's Combined Financial Statements:

In March 2017, the FASB issued Accounting Standards Update ("ASU") 2017-07, Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-Retirement Benefit Cost. This ASU changes the income statement presentation of defined benefit and post-retirement benefit plan expense by requiring separation between operating expense (service cost component of net periodic benefit expense) and non-operating expense (all other components of net periodic benefit expense, including interest cost, amortization of prior service cost, curtailments and settlements, etc.). The operating expense component is reported with similar compensation costs while the non-operating components are reported outside of operating income. The guidance is effective for interim and annual periods for the Company on January 1, 2018. The adoption of this ASU did not have a material impact on its Combined Financial Statements.

In January 2017, the FASB issued ASU 2017-01, Business combinations (Topic 805): Clarifying the definition of a business, which clarifies the definition of a business and assists entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. Under this guidance, when substantially all of the fair value of gross assets acquired is concentrated in a single asset (or group of similar assets), the assets acquired would not represent a business. In addition, in order to be considered a business, an acquisition would have to include at a minimum an input and a substantive process that together significantly contribute to the ability to create an output. The amended guidance also narrows the definition of outputs by more closely aligning it with how outputs are described in FASB guidance for revenue recognition. This guidance is effective for interim and annual periods for the Company on January 1, 2018, with early adoption permitted. The adoption of this ASU did not have a material impact on its Combined Financial Statements.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which amends existing guidance to require lessees to recognize assets and liabilities on the balance sheet for the rights and obligations created by long-term leases and to disclose additional quantitative and qualitative information about leasing arrangements. This ASU also provides clarifications surrounding the presentation of the effects of leases in the income statement and statement of cash flows. This guidance will be effective for the Company on January 1, 2019.

After the Separation from Dover, we developed a project plan and established a cross-functional team to continue the process of implementing the new guidance, which included an evaluation of the work performed by Dover prior to the Separation. We made progress on our plan including gathering information on all leases, surveying our business, assessing our portfolio of leases and compiling a central repository of active leases. During the third quarter of 2018, we completed diagnostic reviews of certain sampled leases to support our policy elections. Additionally, we made significant progress configuring and implementing a new lease software system. We continue to evaluate our policy elections and considerations under the new lease guidance, including the potential use of practical expedients, and we are in the process of updating our internal control and business processes. As we continue to assess the impact the guidance will have on our financial statements and related disclosures, internal control over financial reporting and other business practices and processes, we expect to recognize right of use assets and liabilities for operating leases in our consolidated balance sheet upon adoption.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606). The guidance introduces a new five-step revenue recognition model in which an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to

which the entity expects to be entitled, in exchange for those goods or services. This ASU also requires disclosures sufficient to enable users to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, including qualitative and quantitative disclosures about contracts with customers, significant judgments and changes in judgments and assets recognized from the costs to obtain or fulfill a contract. This guidance is effective for the Company on January 1, 2018.

Dover commenced its assessment of ASU 2014-09 during the second half of 2015 and developed a project plan to guide the implementation, in which Apergy was included in the project plan. Dover has completed the project including analyzing the ASU's impact on Dover's contract portfolio, surveying Dover's businesses and discussing the various revenue streams, completing contract reviews, comparing its historical accounting policies and practices to the requirements of the new guidance, identifying potential differences from applying the requirements of the new guidance to its contracts and updating and providing training on its accounting policy. Dover has completed the process of evaluating controls and new disclosure requirements and identifying and implementing appropriate changes to its business processes and systems to support recognition and disclosure under the new guidance. The Company will adopt this new guidance using the modified retrospective method that will result in a cumulative effect adjustment, as of the date of adoption. The Company's adoption of this ASU did not have a material impact on its Combined Financial Statements.

Recently Adopted Accounting Standards

Effective January 1, 2018, we adopted ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments." The new update clarifies how certain cash receipts and cash payments should be presented and classified in the statement of cash flows. Specifically, the new update clarifies that when cash receipts and cash payments have aspects of more than one class of cash flows and cannot be separated, classification will depend on the predominant source or use. We adopted this guidance retrospectively. The impact of this adoption, as retrospectively applied, resulted in a $14.5 million, $1.1 million, and $7.8 million increase in net cash provided by operating activities and a corresponding increase to net cash used by investing activities during the years ended December 31, 2017, 2016 and 2015, respectively on our statement of cash flows related to cash expenditures for certain leased assets.

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. The amended guidance simplifies the accounting for goodwill impairment for all entities by eliminating the requirement to perform a hypothetical purchase price allocation. A goodwill impairment charge will now be recognized for the amount by which the carrying value of a reporting unit exceeds its fair value, not to exceed the carrying amount of goodwill. The Company early adopted this guidance on January 1, 2017 as its annual impairment test is performed after January 1, 2017. The adoption of this ASU did not have a material impact on the Company's Combined Financial Statements.

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 340): Simplifying the Measurement of Inventory. Under this guidance, entities utilizing the FIFO or average cost method should measure inventory at the lower of cost or net realizable value, whereas net realizable value is defined as the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. This ASU was effective for the Company on January 1, 2017. The adoption of this ASU did not have a material impact to the Company's Combined Financial Statements.

3. Related Party Transactions

Dover provides Apergy certain services, which include corporate executive management, human resources, information technology, facilities, tax, shared services, finance and legal services. Some of these services will continue to be provided to Apergy on a temporary basis following the distribution. The financial information in these Combined Financial Statements does not necessarily include all the expenses that would have been incurred had Apergy been a separate, stand-alone entity. As such, the financial information herein may not necessarily reflect the combined financial position, results of operations, and cash flows of Apergy in the future or what they would have been had Apergy been a separate, stand-alone entity during the periods presented. Management believes that the methods used to allocate expenses to Apergy are reasonable. The corporate expenses allocated to Apergy totaled $22,987, $19,459 and $20,852 for the years ended December 31, 2017, 2016 and 2015, respectively, which are recorded in selling, general and administrative expenses in the Combined Statements of Income. As a stand-alone public company, Apergy's total costs related to such support functions may differ from the costs that were historically allocated to it from Dover.

Transactions between Apergy and Dover, with the exception of transactions discussed below with Dover's affiliates, are reflected in equity in the Combined Balance Sheets as Parent Company investment in Apergy and in the Combined Statements of Cash Flows as a financing activity in Net transfers (to) from Parent Company.

At December 31, 2017 and 2016, the Company's outstanding accounts receivable and accounts payable balances with Dover and its affiliates were insignificant. These balances are included in receivables and accounts payable, respectively, on the Combined Balance Sheets. Intercompany revenues recorded from other Dover companies in the years ended December 31, 2017, 2016 and 2015, respectively, were insignificant.

The Company recorded royalty expense related to Apergy's use of Dover's intellectual property and patents amounting to $9.8 million, $7.4 million and $10.4 million in 2017, 2016 and 2015, respectively, included within Other expense, net in the Combined Statements of Income. Patents and intangibles owned by Dover related to Apergy will transfer to Apergy upon separation. Upon separation, no further royalty charges are expected to be incurred by Apergy from Dover. Additionally, in 2016 and 2015, Apergy purchased certain patents and copyrights from Dover company for $3.7 million and $10.0 million, respectively. The patents and copyrights are included in Apergy's intangibles balance and are being amortized.

The Company paid $1.2 million and $1.7 million in 2017 and 2016, respectively, for distributions declared to its noncontrolling interest holder in Norris Production Solutions Middle East LLC, a subsidiary company in the Sultanate of Oman and is included within the Combined Statement of Stockholders' Equity. The Company has a commission arrangement with its noncontrolling interest holder, for 5% of certain annual product sales. The commissions paid during 2017, 2016 and 2015, respectively, were not significant.

4. Acquisitions

2017

On October 2, 2017, the Company acquired 100% of the voting stock of PCP Oil Tools S.A. and Ener Tools S.A. ("PCP"), a supplier of progressive cavity pump products and services for total consideration of $8,842, net of cash acquired. This acquisition is a part of the Production & Automation Technologies segment and will broaden the Company's ability to supply Argentina with additional products to customers. The goodwill recorded as a result of this acquisition reflects the benefits expected to be derived from product line expansion and operational synergies. The Company recorded non-deductible goodwill of $5,053 and customer intangible assets of $4,538. The intangible assets are being amortized over 9 years.

The pro forma effects of this acquisition on the Company's operations were not material.

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5. Inventories

The components of inventories were as follows:

	December 31, 2017	December 31, 2016
Raw materials	$ 45,408	$ 45,209
Work in progress	10,879	10,321
Finished goods	167,416	153,040
Subtotal	223,703	208,570
Less reserves	(22,112)	(24,012)
Total	$ 201,591	$ 184,558

At December 31, 2017 and 2016, approximately 28% and 32%, respectively, of the Company's total inventories were accounted for using the LIFO method.

6. Property, Plant and Equipment, net

The components of property, plant and equipment, net were as follows:

	December 31, 2017	December 31, 2016
Land	$ 13,557	$ 14,636
Buildings and improvements	99,233	91,927
Machinery, equipment and other	446,261	396,505
Property, plant and equipment, gross	559,051	503,068
Total accumulated depreciation	(347,219)	(301,321)
Property, plant and equipment, net	$ 211,832	$ 201,747

Total depreciation expense was $58,178, $56,068 and $60,831 for the years ended December 31, 2017, 2016 and 2015, respectively.

7. Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying value of goodwill by operating segment were as follows:

	Production & Automation Technologies	Drilling Technologies	Total
Balance at December 31, 2015	$ 800,792	$ 101,136	$901,928
Foreign currency translation	651	—	651
Balance at December 31, 2016	801,443	101,136	902,579
Acquisitions	5,053	—	5,053
Foreign currency translation	2,456	—	2,456
Balance at December 31, 2017	$ 808,952	$ 101,136	$910,088

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Annual impairment testing

Historically, the Company was part of the Dover Energy operating segment. The Company performed its annual goodwill impairment test for its two historical reporting units (i) Drilling and Production, excluding a business component that will be retained by Dover ("D&P") and (ii) Dover Energy Automation ("DEA"), and found no impairment. For both reporting units, based upon the annual goodwill analyses performed by the Company as of October 1, 2017 and 2016, the fair values exceeded the carrying values, and no impairment was required. Beginning in the fourth quarter of 2017, the Company also performed its annual goodwill impairment testing based upon the new segment structure discussed in Note 16 — Segment Information. The Company performed goodwill impairment testing on its two new reporting units as of October 1, 2017: (i) Production & Automation Technologies ("P&AT") and (ii) Drilling Technologies ("DT"). For both reporting units, the fair values were substantially in excess of carrying values and no impairment was required.

The annual impairment test is performed using a discounted cash flow analysis as discussed in Note 2 — Summary of Significant Accounting Policies. The Company performed a quantitative goodwill impairment test for each of its reporting units, concluding that the fair values were in excess of their carrying values. As previously noted, the fair values of each of the Company's reporting units were determined using a discounted cash flow analysis which included management's assumptions as to future cash flows and long-term growth rates as of the date of the impairment test. The discount rates used in these analyses were based on a capital asset pricing model and published relevant industry rates. The Company used discount rates related to that historical period commensurate with the risks and uncertainties inherent to each reporting unit and in management's internally developed forecasts. Discount rates used in the Company's 2017 and 2016 valuations were 10.0% and 10.5%, respectively.

As of October 1, 2017, the goodwill balances for the D&P and DEA reporting units were $733,641 and $172,480, respectively. The D&P and DEA reporting units had fair values in excess of their carrying values of 90% and 233%, respectively. Under the new segment structure, as of October 1, 2017, the goodwill balances for the P&AT and DT reporting units were $804,985 and $101,136, respectively. The P&AT and DT reporting units had fair values in excess of their carrying values of 69% and 464%, respectively.

While the Company believes the assumptions used in the 2017 and 2016 impairment analyses are reasonable and representative of expected results, if market conditions worsen over an extended period of time, an impairment of goodwill or assets may occur. The Company will continue to monitor the long-term outlook and forecasts, including estimated future cash flows, for these businesses and the impact on the carrying value of goodwill and assets.

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Intangible Assets

The following table provides the gross carrying value and accumulated amortization for each major class of intangible assets:

	December 31, 2017			December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Amortized intangible assets:						
Customer Intangibles	$ 572,415	$ 276,655	$ 295,760	$ 566,602	$ 229,902	$ 336,700
Trademarks	36,312	17,821	18,491	36,296	14,013	22,283
Patents	38,679	20,449	18,230	38,106	16,662	21,444
Unpatented Technologies	9,700	9,700	—	9,700	9,700	—
Drawings & Manuals	3,067	2,109	958	3,001	1,942	1,059
Other	5,382	3,911	1,471	5,270	3,539	1,731
Total amortized intangibles	665,555	330,645	334,910	658,975	275,758	383,217
Unamortized intangible assets:						
Trademarks	3,600	—	3,600	3,600	—	3,600
Total intangible assets	$ 669,155	$ 330,645	$ 338,510	$ 662,575	$ 275,758	$ 386,817

The Company recorded $4,538 of acquired intangible assets in 2017. See Note 4 — Acquisitions.

Total amortization related to the Company's intangible assets was $53,701, $55,987 and $59,161 for the years ended December 31, 2017, 2016 and 2015, respectively. Estimated future amortization expense related to intangible assets held at December 31, 2017 is as follows:

	Estimated Amortization
2018	$ 52,357
2019	51,509
2020	50,059
2021	49,231
2022	47,683

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8. Other Accrued Expenses and Other Liabilities

The following table details the major components of Other accrued expenses (current):

	December 31, 2017	December 31, 2016
Unearned/deferred revenue	$ 4,487	$ 3,787
Warranty	2,978	4,568
Restructuring and exit costs	2,551	459
Taxes other than income	2,432	1,424
Accrued freight, travel and transportation	1,397	1,384
Short-term capital lease obligations	1,041	694
Accrued rebates	617	473
Other (none of which are individually significant)	6,447	8,837
Total other accrued expenses	$ 21,950	$ 21,626

The following table details the major components of Other liabilities (noncurrent):

	December 31, 2017	December 31, 2016
Defined benefit and other post-retirement benefit plans	$ 12,650	$ 16,510
Long-term capital lease obligations	3,742	1,919
Warranty	92	98
Other (none of which are individually significant)	207	756
Total other liabilities	$ 16,691	$ 19,283

Warranty

Estimated warranty program claims are provided for at the time of sale. Amounts provided for are based on historical costs, claims experience and adjusted for new claims. The changes in the carrying amount of product warranties were as follows:

	Years Ended December 31,		
	2017	2016	2015
Balance, beginning of year	$ 4,666	$ 4,421	$ 6,717
Provision for warranties	309	2,109	1,266
Settlements made	(1,896)	(1,518)	(3,168)
Other adjustments, including currency translation	(9)	(346)	(394)
Balance, end of year	$ 3,070	$ 4,666	$ 4,421

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9. Restructuring Activities

The Company initiated various restructuring programs and incurred severance and other restructuring costs by segment as follows:

	Years Ended December 31,		
	2017	2016	2015
Production & Automation Technologies	$6,921	$12,757	$18,750
Drilling Technologies	—	2,405	2,480
Total	$6,921	$15,162	$21,230

These amounts are classified in the Combined Statements of Income as follows:

Cost of goods and services	$6,332	$ 9,465	$ 9,095
Selling, general and administrative expenses	589	5,697	12,135
Total	$6,921	$15,162	$21,230

The restructuring charges of $6,921, $15,162 and $21,230 incurred during 2017, 2016 and 2015, respectively, included the following programs, which were substantially completed during those three years:

- The Production & Automation Technologies segment incurred restructuring charges of $6,921, $12,757 and $18,750 during 2017, 2016 and 2015, respectively, related to various programs across the segment, primarily focused on facility consolidations, exit of certain nonstrategic product lines and workforce reductions. The 2017 programs were initiated to continue to optimize our operations as the market recovered and the 2016 and 2015 programs were initiated to better align the cost base with the significantly lower demand environment.
- The Drilling Technologies segment recorded no restructuring charges during 2017. The segment recorded $2,405 and $2,480 in restructuring charges during 2016 and 2015, respectively, related to various programs across the segment, primarily focused on workforce reductions across various businesses to better align the cost base with the significantly lower demand environment.

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The following table details the Company's severance and other restructuring accrual activities:

	Severance	Exit	Total
Balance at December 31, 2014	$ 95	$ —	$ 95
Restructuring charges	9,366	11,864	21,230
Payments	(8,197)	(3,947)	(12,144)
Other, including foreign currency translation (1)	(100)	(7,194)	(7,294)
Balance at December 31, 2015	1,164	723	1,887
Restructuring charges	10,496	4,666	15,162
Payments	(11,235)	(2,410)	(13,645)
Other, including foreign currency translation (1)	(175)	(2,770)	(2,945)
Balance at December 31, 2016	$ 250	$ 209	$ 459
Restructuring charges	151	6,770	6,921
Payments	(400)	(978)	(1,378)
Other, including foreign currency translation (1)	(1)	(3,450)	(3,451)
Balance at December 31, 2017	$ —	$ 2,551	$ 2,551

(1) Other activity in exit reserves primarily represents the non-cash write-off of long-lived assets and inventory in connection with certain facility closures and exit of certain nonstrategic product lines.

The restructuring accrual balance at December 31, 2017 primarily reflects restructuring plans initiated during the year, as well as ongoing lease commitment obligations for facilities closed in prior periods.

Additional programs may be implemented during 2018 with related restructuring charges.

10. Fair Value Measurements

The Company had outstanding contracts as of December 31, 2017 and 2016 respectively, that were not designated as hedging instruments. These instruments are used to reduce the Company's exposure for operating receivables and payables that are denominated in non-functional currencies. Apergy's gains and losses on these contracts are recorded in Other expense, net in the Combined Statements of Income which were not material for the years ended December 31, 2017, 2016 and 2015.

Fair Value Measurements

Accounting Standards Codification ("ASC") 820, "Fair Value Measurements and Disclosures," establishes a hierarchy for measuring fair value. A financial instrument's categorization within the hierarchy is based on the lowest level of input that is significant to the fair value measurement. ASC 820 establishes three levels of inputs that may be used to measure fair value as follows:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs include inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in active markets for similar assets and liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of assets or liabilities.

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Level 3 inputs are unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2017 and 2016 were not significant and no tabular disclosures are presented.

In addition to fair value disclosure requirements related to financial instruments carried at fair value, accounting standards require disclosures regarding the fair value of all of the Company's financial instruments. The carrying values of cash equivalents, trade receivables and accounts payable are reasonable estimates of their fair values as of December 31, 2017 and 2016 due to the short-term nature of these instruments.

11. Income Taxes

The operations of Apergy have been historically included in Dover's U.S. combined federal and state income tax returns. Income tax expense and deferred tax balances are presented in these financial statements as if Apergy filed its own tax returns in each jurisdiction. These statements include tax losses and tax credits that may not reflect tax positions taken by Dover. In many cases, tax losses and tax credits generated by Apergy have been utilized by Dover.

Income taxes have been based on the following components of income (loss) before income taxes in the Combined Statements of Income:

	Years Ended December 31,		
	2017	2016	2015
Domestic	$66,852	$(25,926)	$61,670
Foreign	22,432	7,092	15,595
Total	$89,284	$(18,834)	$77,265

Income tax (benefit) expense relating to continuing operations for the years ended December 31, 2017 and 2016 is comprised of the following:

	Years Ended December 31,		
	2017	2016	2015
Current:			
U.S. federal	$ 42,312	$ 8,872	$ 40,415
State and local	4,230	1,995	(332)
Foreign	6,176	971	5,344
Total current	52,718	11,838	45,427
Deferred:			
U.S. federal	(73,544)	(19,161)	(23,135)
State and local	(1,361)	(771)	4,141
Foreign	(97)	51	(2,302)
Total deferred	(75,002)	(19,881)	(21,296)
Total (benefit) expense	$(22,284)	$ (8,043)	$ 24,131

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Differences between the effective income tax rate and the U.S. federal income statutory tax rate are as follows:

	Years Ended December 31,		
	2017	2016	2015
U.S. federal income tax rate	35.0%	35.0%	35.0%
State and local taxes, net of federal income tax benefit	2.1	(3.9)	3.1
Foreign operations tax effect	(2.8)	7.8	(3.1)
Research and experimentation tax credits	(0.7)	2.3	(0.7)
Domestic manufacturing deduction	(4.5)	6.2	(4.6)
Nondeductible expenses	0.7	(3.3)	1.0
ESOP dividends	(0.2)	2.9	(0.7)
Branch income	1.1	(2.9)	0.8
Changes due to the Tax Reform Act	(55.2)	—	—
Other	(0.5)	(1.4)	0.4
Effective tax rate from continuing operations	(25.0)%	42.7%	31.2%

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The tax effects of temporary differences that give rise to future deferred tax assets and liabilities are as follows:

	December 31, 2017	December 31, 2016
Deferred Tax Assets:		
Accrued compensation, principally post-retirement and other employee benefits	$ 4,568	$ 9,126
Accrued expenses, principally for state income taxes, interest and warranty	846	1,512
Net operating loss and other carryforwards	1,280	1,082
Accounts receivable, principally due to allowance for doubtful accounts	827	1,780
Long-term liabilities, principally warranty, environmental and exit cost	678	620
Other assets	132	459
Total gross deferred tax assets	8,331	14,579
Valuation allowance	(1,280)	(1,082)
Total deferred tax assets, net of valuation allowances	$ 7,051	$ 13,497
Deferred Tax Liabilities:		
Inventories, principally due to reserves for financial reporting purposes and capitalization for tax purposes	$ (3,687)	$ (4,754)
Intangible assets, principally due to different tax and financial reporting bases and amortization lives	(83,669)	(149,500)
Property, plant and equipment, principally due to differences in depreciation	(16,134)	(26,254)
Total gross deferred tax liabilities	(103,490)	(180,508)
Net deferred tax liability	$ (96,439)	$ (167,011)
Classified as follows in the Combined Balance Sheets:		
Other assets and deferred charges	$ 546	$ 554
Deferred income taxes	(96,985)	(167,565)
	$ (96,439)	$ (167,011)

As of December 31, 2017, the Company had non-U.S. loss carryforwards of $5.0 million. The entire balance of the non-U.S. losses as of December 31, 2017 is available to be carried forward, with $4.9 million of these losses beginning to expire during the years 2028 through 2038. The remaining $0.1 million is available to be carried forward indefinitely.

The Company maintains valuation allowances by jurisdiction against the deferred tax assets related to these carryforwards as utilization of these tax benefits is not assured for certain jurisdictions.

The Tax Reform Act, which was enacted on December 22, 2017, permanently reduces the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018. As a result of the reduction in the

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U.S. corporate income tax rate, the Company revalued its ending net deferred tax liabilities as of December 31, 2017 and recognized a provisional tax benefit of $53.2 million. The Tax Reform Act also imposed a tax for a one-time deemed repatriation of post-1986 unremitted foreign earnings and profits through the year ended December 31, 2017. The Company recorded a provisional tax expense related to the deemed repatriation of $3.9 million. The Company plans to make cash distributions to the U.S from non-U.S. subsidiaries of up to an estimated $6.0 million, which is not anticipated to result in any withholding tax expense. For purposes of the historical Combined Financial Statements, the Company's income tax expense and deferred tax balances have been estimated as if we filed income tax returns on a stand-alone basis separate from Dover. Income taxes payable at each balance sheet date computed under the stand-alone return basis are classified within Parent Company investment in Apergy since Dover is legally liable for the tax. As a stand-alone entity, our deferred taxes and effective tax rate may differ from those of Dover in the historical periods.

The GILTI provisions of the Tax Reform Act require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The Company expects that it will be subject to incremental U.S. tax on GILTI income beginning in 2018, due to expense allocations required by the U.S. foreign tax credit rules. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore has not provided any deferred tax impacts of GILTI in its combined financial statements for the year ended December 31, 2017.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Reform Act. In accordance with the SAB 118 guidance, the Company has recognized the provisional tax impacts related to deemed repatriated earnings and the benefit for the revaluation of deferred tax assets and liabilities in its combined financial statements for the year ended December 31, 2017. The final impact may differ from these provisional amounts, possibly materially, due to, among other things, issuance of additional regulatory guidance, changes in interpretations and assumptions the Company has made, and actions the Company may take as a result of the Tax Reform Act. In accordance with SAB 118 the financial reporting impact of the Tax Reform Act will be completed in the fourth quarter of 2018.

The Company files U.S., federal, state, local and foreign tax returns. The Company is routinely audited by the tax authorities in these jurisdictions, and a number of audits are currently underway. The Company is no longer subject to examinations of its federal income tax returns for years through 2013. All significant state, local and international matters have been concluded for years through 2012. The Company believes that all income tax uncertainties have been properly accounted. The Company has not recorded a liability for uncertain tax positions at December 31, 2017 and 2016.

12. Equity and Cash Incentive Program

Dover grants share-based awards to its officers and other key employees, including certain Apergy individuals. The following disclosures reflect the portion of Dover's program in which Apergy employees participate. All awards granted under the program consist of Dover common shares and are not necessarily indicative of the results that Apergy would have experienced as an independent, publicly-traded company for the periods presented. Effective as of the spin-off date, outstanding Dover share-based awards will be converted to Apergy share-based awards, with the exception of outstanding Dover performance share awards that relate to a performance period ending after the spin-off date, which will be canceled. As a result of this conversion, no additional compensation expense is expected.

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Dover's plan authorizes the granting stock options, stock-settled stock appreciation rights ("SARs"), restricted stock, and performance shares awards. The exercise price per share for SARs is equal to the closing price of Dover's stock on the New York Stock Exchange on the date of grant. The period for which SARs and stock options are exercisable is fixed by Dover's Compensation Committee at the time of grant. Generally, the stock options or SARs vest after three years of service and expire at the end of ten years. Performance share awards shall become vested if (1) Dover achieves certain specified internal metrics and (2) the employee remains continuously employed by Dover during the performance period. Partial vesting may occur after separation from service in the case of certain terminations not for cause and for retirements.

Stock-based compensation costs are reported within Selling, general and administrative expenses. The following table summarizes the Company's compensation expense relating to all stock-based incentive plans:

	Years Ended December 31,		
	2017	2016	2015
Pre-tax compensation expense	$2,236	$2,293	$1,925
Tax benefit	(774)	(787)	(658)
Total stock-based compensation expense, net of tax	$1,462	$1,506	$1,267

SARs and Stock Options

In 2017, 2016 and 2015, Dover issued SARs covering 82,240, 106,548 and 98,803 shares, respectively. Since 2006, Dover has only issued SARs. The fair value of each SAR granted was estimated on the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	2017	2016	2015
Risk-free interest rate	1.80%	1.05%	1.51%
Dividend yield	2.27%	3.09%	2.24%
Expected life (years)	4.6	4.6	5.1
Volatility	21.90%	26.17%	27.19%
Grant price	$79.28	$57.25	$73.28
Fair value at date of grant	$12.63	$ 9.25	$14.55

Expected volatilities are based on Dover's stock price history, including implied volatilities from traded options on Dover's stock. Dover uses historical data to estimate SAR exercise and employee termination patterns within the valuation model. The expected life of SARs granted is derived from the output of the option valuation model and represents the average period of time that SARs granted are expected to be outstanding. The interest rate for periods within the contractual life of the awards is based on the U.S. Treasury yield curve in effect at the time of grant.

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A summary of activity relating to SARs granted under the Dover plans for the year ended December 31, 2017 is as follows:

	SARs		
	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)
Outstanding at January 1, 2017	454,683	$ 63.69	
Granted	82,240	79.28	
Forfeited / expired	(32,944)	67.10	
Exercised	(116,908)	61.93	
Outstanding at December 31, 2017	387,071	67.17	6.7
Exercisable at December 31, 2017	157,078	$ 64.30	4.6

The following table summarizes information about outstanding SARs at December 31, 2017:

	SARs Outstanding				SARs Exercisable			
Range of Exercise Prices	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Life in Years	Aggregate Intrinsic Value	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Life in Years	Aggregate Intrinsic Value
$ 25.96 - $37.79	23,816	$ 37.79	2.1	$ 1,505	23,816	$ 37.79	2.1	$ 1,505
$ 40.54 - $58.69	125,469	$ 57.52	6.7	5,454	38,309	$ 58.14	3.6	1,642
$ 63.33 - $82.51	237,786	$ 75.21	7.2	6,130	94,953	$ 73.44	5.7	2,616
	387,071			$ 13,089	157,078			$ 5,763

Unrecognized compensation expense related to SARs not yet exercisable was $672 at December 31, 2017. This cost is expected to be recognized over a weighted average period of 1.7 years.

Other information regarding the exercise of SARs and stock options is listed below:

	2017	2016	2015
SARs			
Fair value of SARs that became exercisable	$1,239	$1,564	$1,356
Aggregate intrinsic value of SARs exercised	$2,787	$ 799	$1,874
Stock Options			
Cash received by Dover for exercise of stock options	$ —	$ —	$ 100
Aggregate intrinsic value of options exercised	$ —	$ —	$ 117

Performance Share Awards

Performance share awards granted are expensed over the three-year requisite performance and service period. Awards become vested if (1) Dover achieves certain specified internal metrics and (2) the employee remains continuously employed by the Company during the performance period. Partial vesting may occur after separation from service in the case of certain terminations not for cause and for retirements.

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In 2017, 2016 and 2015, Dover issued performance shares to Apergy's employees covering 4,162, 5,764 and 4,503 shares, respectively. The performance share awards granted in these years are considered performance condition awards as attainment is based on Dover's performance relative to established internal metrics. The fair value of these awards was determined using Dover's closing stock price on the date of grant. The expected attainment of the internal metrics for these awards is analyzed each reporting period, and the related expense is adjusted up or down based on expected attainment, if that attainment differs from previous estimates. The cumulative effect on current and prior periods of a change in attainment is recognized in compensation cost in the period of change.

The fair value and average attainment used in determining compensation cost of the performance shares issued in 2017, 2016 and 2015 are as follows for the year ended December 31, 2017:

	Performance shares		
	2017	2016	2015
Fair value per share at date of grant	$79.28	$57.25	$73.28
Average attainment rate reflected in expense	0.0%	0.0%	0.0%

A summary of activity for performance share awards for the year ended December 31, 2017 is as follows:

	Number of Shares	Weighted Average Grant-Date Fair Value
Unvested at January 1, 2017	10,267	$ 64.28
Granted	4,162	79.28
Vested	(4,503)	73.28
Unvested at December 31, 2017	9,926	$ 66.49

There is no unrecognized compensation expense related to unvested performance shares as of December 31, 2017. The weighted average number of years over which compensation expense may be recognized for unvested performance shares is 1.0 year.

Restricted Stock Units

Dover also has restricted stock units authorized for grant. Common stock of Dover may be granted at no cost to certain officers and key employees. In general, restrictions limit the sale or transfer of these shares during a two-or-three-year period, and restrictions lapse proportionately over the two-or-three-year period. Dover granted 25,557, 42,117 and 17,263 of restricted stock units in 2017, 2016 and 2015, respectively.

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A summary of activity for restricted stock units for the year ended December 31, 2017 is as follows:

	Number of Shares	Weighted Average Grant-Date Fair Value
Unvested at January 1, 2017	54,064	$ 61.68
Granted	25,557	79.28
Forfeited	(8,854)	64.07
Vested	(20,712)	64.85
Unvested at December 31, 2017	50,055	$ 68.91

Unrecognized compensation expense relating to unvested restricted stock as of December 31, 2017 was $2,060, which will be recognized over a weighted average period of 1.6 years.

13. Commitments and Contingent Liabilities

Lease Commitments

The Company leases certain facilities and equipment under operating leases, many of which contain renewal options. Total rental expense, net of insignificant sublease rental income, for all operating leases was $16,837, $17,936 and $16,992 for the years ended December 31, 2017, 2016 and 2015, respectively. Contingent rentals under the operating leases were not significant.

The aggregate future minimum lease payments for operating and capital leases as of December 31, 2017 are as follows:

	Operating	Capital
2018	$ 11,668	$2,232
2019	10,646	1,696
2020	7,639	181
2021	5,309	—
2022	4,625	—
Thereafter	5,105	—
Total	$ 44,992	$4,109

Guarantees

The Company has provided indemnities in connection with sales of certain businesses and assets, including representations and warranties and related indemnities for environmental, health and safety, tax and employment matters. The Company does not have any material liabilities recorded for these indemnifications and is not aware of any claims or other information that would give rise to material payments under such indemnities.

Letters of Credit

As of December 31, 2017 and 2016, the Company had approximately $8,100 and $16,045 outstanding in letters of credit and guarantees with financial institutions, which expire at various dates in 2018 through 2020. These

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letters of credit are primarily maintained as security for insurance, warranty and other performance obligations. In general, the Company would only be liable for the amount of these letters of credit in the event of default in the performance of the Company's obligations, the probability of which we believe is remote.

Litigation

The Company's environmental matters that are probable and estimable were insignificant at December 31, 2017 and 2016. The environmental matters relate to ongoing remedial activities performed in cooperation with regulatory authorities.

The Company and certain of its subsidiaries are also parties to a number of other legal proceedings incidental to their businesses. These proceedings primarily involve claims by private parties alleging injury arising out of use of the Company's products, patent infringement, employment matters and commercial disputes. Management and legal counsel, at least quarterly, review the probable outcome of such proceedings, the costs and expenses reasonably expected to be incurred and currently accrued to-date. The Company has reserves for other legal matters that are probable and estimable, and at December 31, 2017 and 2016, these reserves were not significant. While it is not possible at this time to predict the outcome of these legal actions, in the opinion of management, based on the aforementioned reviews, the Company is not currently involved in any legal proceedings which, individually or in the aggregate, could have a material effect on its financial position, results of operations, or cash flows.

14. Employee Benefit Plans and Non-Qualified Plans

Multiemployer Defined Benefit Plans and Non-Qualified Plans

Apergy participates in the following plans as though they are participants in a multi-employer plan with the other businesses of Dover. Accordingly, a proportionate share of the cost is reflected in the Combined Financial Statements.

Dover provides a defined benefit pension plan for its eligible U.S. employees and retirees (the "U.S. Pension Plan"). As such, the portion of Apergy's liability associated with this U.S. Pension Plan is not reflected in Apergy's Combined Balance Sheets and will not be recorded at the distribution date as this obligation will be maintained and serviced by Dover. Shortly before the spin-off date, Apergy participants in this the U.S. Pension Plan (other than Norris USW participants) will fully vest in their benefits, and all participants will cease accruing benefits. In addition, Apergy will not assume any funding requirements or obligations related to the defined benefit pension plan upon the distribution date. Norris USW participants will be moved to a new pension plan, and will continue to accrue benefits at Dover pre-spin, and Apergy post-spin.

Dover also provides an additional defined benefit pension plan for its eligible salaried non-U.S. employees and retirees in Canada. As such, the portion of Apergy's liability associated with this non-U.S. plan is not reflected in Apergy's Combined Balance Sheets as this obligation is being maintained and serviced by Dover. This plan, including all assets and liabilities, will be transferred to Apergy at the distribution date and will be recorded by Apergy at that point. Shortly before the spin-off date, all non-Apergy participants in this plan will cease accruing benefits or be permitted to make contributions, as applicable. The non-Apergy participants may elect a lump sum cash payment post separation that will be the responsibility of Apergy, will be funded out of the plan assets, and could also result in a non-cash settlement charge to earnings.

Dover provides to certain U.S. management employees, through non-qualified plans, supplemental retirement benefits in excess of qualified plan limits imposed by federal tax law. The benefit obligation attributed to Apergy

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employees for these non-qualified plans will be reflected in Apergy's Combined Balance Sheets as of the distribution date. As of the spin-off date, Apergy participants in these non-qualified plans will no longer accrue benefits or be permitted to make contributions, as applicable. In addition, Apergy will assume any funding requirements or obligations related to these plans upon the distribution date.

The table below summarizes the expenses recorded in the Apergy financial statements for the Dover plans in which Apergy participates.

	Years Ended December 31,		
	2017	2016	2015
Plan Name			
Dover U.S. Pension Plan	$3,922	$4,643	$4,783
Canada Salaried Pension Plan	554	1,615	513
Other non-qualified plans	108	121	123

No contributions were made by Dover to the U.S. Pension Plan in 2017, 2016 or 2015. No contribution is expected to be made in 2018. Contributions to the Canada Salaried Pension Plan totaled $1.8 million, $2.0 million, and $1.1 million in 2017, 2016 and 2015, respectively. Expected contributions in 2018 are $1.3 million. The non-qualified plans are unfunded and contributions are made as benefits are paid.

Single Employer Defined Benefit Plans

Apergy sponsors one defined benefit pension plan to certain hourly non-U.S. employees and retirees. The plan is closed to new participants; however, all active participants in these plans continue to accrue benefits. This plan is considered a direct obligation of Apergy and has been recorded within Apergy's Combined Financial Statements.

The Company sponsors non-qualified plans covering certain U.S. employees and retirees of the Company. The plans provide supplemental retirement benefits in excess of qualified plan limits imposed by federal tax law. The plans are closed to new hires and all benefits under the plans are frozen. The plans are considered direct obligations of Apergy and have been recorded within Apergy's Combined Financial Statements.

Apergy does not have any other post-retirement employee benefit plans other than those plans mentioned above.

Defined Contribution Plan

Apergy offers a defined contribution retirement plan which covers the majority of its U.S. employees, as well as employees in certain other countries. The Company's expense relating to defined contribution plans was $8,150, $6,446 and $7,247 for the years ended December 31, 2017, 2016 and 2015, respectively.

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Obligations and Funded Status

The following tables summarize the Combined Balance Sheets impact, including the benefit obligations, assets and funded status associated with the Company's single employer defined benefit plans at December 31, 2017 and 2016.

	Non-U.S. Qualified Defined Benefit Plan		Non-Qualified Supplemental Benefits Plan	
	2017	2016	2017	2016
Change in benefit obligation:				
Benefit obligation at beginning of year	$3,512	$3,139	$ 18,600	$ 20,313
Service cost	106	102	—	—
Interest cost	137	129	621	719
Benefits paid	(99)	(79)	(1,710)	(2,484)
Actuarial loss (gain)	(22)	170	(3,314)	52
Currency translation and other	247	51	—	—
Benefit obligation at end of year	3,881	3,512	14,197	18,600
Change in plan assets:				
Fair value of plan assets at beginning of year	3,391	3,056	—	—
Actual return on plan assets	290	198	—	—
Company contributions	166	165	1,710	2,484
Benefits paid	(99)	(79)	(1,710)	(2,484)
Currency translation and other	245	51	—	—
Fair value of plan assets at end of year	3,993	3,391	—	—
Funded (unfunded) status	$ 112	$ (121)	$(14,197)	$(18,600)
Amounts recognized in the Combined Balance Sheets consist of:				
Assets and Liabilities:				
Other assets and deferred charges	$ 112	$ —	$ —	$ —
Accrued compensation and employee benefits	—	—	(1,547)	(2,211)
Other liabilities	—	(121)	(12,650)	(16,389)
Total assets and liabilities	112	(121)	(14,197)	(18,600)
Accumulated Other Comprehensive Loss (Income):				
Net actuarial losses	1,449	1,632	6,078	9,721
Prior service cost	40	42	—	—
Net asset at transition, other	(20)	(21)	—	—
Deferred taxes	(397)	(446)	(2,670)	(3,592)
Total accumulated other comprehensive loss, net of tax	1,072	1,207	3,408	6,129
Net amount recognized at December 31,	$1,184	$1,086	$(10,789)	$(12,471)
Accumulated benefit obligations	$3,881	$3,512	$ 14,197	$ 18,600

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The Company's net funded (unfunded) status at December 31, 2017 and 2016 was an asset of $112 and a liability of $121, respectively, relating to the Company's defined pension benefit plan operated by the Company's businesses in Canada.

The accumulated benefit obligation for all defined benefit pension plans was $18,078 and $22,112 at December 31, 2017 and 2016, respectively. Pension plans with accumulated benefit obligations in excess of plan assets consist of the following at December 31, 2017 and 2016:

	2017	2016
Projected benefit obligation (PBO)	$—	$3,512
Accumulated benefit obligation (ABO)	—	3,512
Fair value of plan assets	—	3,391

Net Periodic Benefit Cost

Components of the net periodic benefit cost were as follows:

Defined Benefit Plans

	Non-U.S. Qualified Defined Benefit Plan			Non-Qualified Supplemental Benefits Plan		
	2017	2016	2015	2017	2016	2015
Service cost	$ 106	$ 102	$ 118	$—	$ —	$—
Interest cost	137	129	130	621	719	708
Expected return on plan assets	(198)	(186)	(184)	—	—	—
Amortization of:						
Prior service cost	2	2	2	—	—	—
Recognized actuarial loss	68	58	57	330	305	284
Transition obligation	(1)	(1)	(1)	—	—	—
Other	—	—	—	(1)	—	—
Total net periodic benefit cost	$ 114	$ 104	$ 122	$950	$1,024	$992

Amounts expected to be amortized from Accumulated other comprehensive income (loss) into net periodic benefit cost during 2018 are as follows:

	Non-U.S. Qualified Defined Benefit Plan	Non-Qualified Supplemental Benefits Plan
Amortization of:		
Prior service cost	$ 2	$ —
Recognized actuarial loss	55	205
Transition obligation	(1)	—
Total	$ 56	$ 205

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Assumptions

The Company determines actuarial assumptions on an annual basis. The weighted average assumptions used in determining the benefit obligations were as follows:

	Non-U.S. Qualified Defined Benefit Plan		Non-Qualified Supplemental Benefits Plan	
	2017	2016	2017	2016
Discount rate	3.50%	3.75%	3.35%	3.55%

The weighted average assumptions used in determining the net periodic benefit cost were as follows:

	Non-U.S. Qualified Defined Benefit Plan		Non-Qualified Supplemental Benefits Plan	
	2017	2016	2017	2016
Discount rate	3.75%	4.00%	3.55%	3.75%
Expected return on plan assets	5.50%	5.75%	na	na

The Company's discount rate assumption is determined by developing a yield curve based on high quality corporate bonds with maturities matching the plans' expected benefit payment streams. The plans' expected cash flows are then discounted by the resulting year-by-year spot rates.

Plan Assets

The primary financial objective of the plans is to secure participant retirement benefits. Accordingly, the key objective in the plans' financial management is to promote stability and, to the extent appropriate, growth in the funded status. Related and supporting financial objectives are established in conjunction with a review of current and projected plan financial requirements.

As it relates to the funded defined benefit pension plans, including those accounted for as multi-employer plans, the Company's funding policy is consistent with the funding requirements of the Employment Retirement Income Security Act ("ERISA") and applicable international laws. The Company is responsible for overseeing the management of the investments of the plans' assets and otherwise ensuring that the plans' investment programs are in compliance with ERISA, other relevant legislation and related plan documents. Where relevant, the Company has retained professional investment managers to manage the plans' assets and implement the investment process. The investment managers, in implementing their investment processes, have the authority and responsibility to select appropriate investments in the asset classes specified by the terms of their applicable prospectus or investment manager agreements with the plans.

The assets of the plans are invested to achieve an appropriate return for the plans consistent with a prudent level of risk. The asset return objective is to achieve, as a minimum over time, the passively managed return earned by market index funds, weighted in the proportions outlined by the asset class exposures identified in the plans' strategic allocation. The expected return on assets assumption used for pension expense is developed through analysis of historical market returns, statistical analysis, current market conditions and the past experience of plan asset investments. The Company's plans were expected to achieve rates of return on invested assets of 5.50% and 5.75% for 2017 and 2016, respectively.

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The Company's actual and target weighted average asset allocation for our non-U.S. Corporate Pension Plan was as follows:

	2017	2016	Current Target
Equity securities	61%	60%	60%
Fixed income	38%	39%	40%
Real estate and other	1%	1%	— %
Total	100%	100%	100%

The fair values of the non-U.S. pension plan assets by asset category within the fair value hierarchy (as defined in Note 10 — Fair Value Measurements) were as follows:

	Non-U.S. Qualified Defined Benefit Plan							
	December 31, 2017				December 31, 2016			
	Level 1	Level 2	Level 3	Total Fair Value	Level 1	Level 2	Level 3	Total Fair Value *
Mutual funds	$2,399	$1,594	$ —	$3,993	$2,104	$1,287	$ —	$3,391
Total	$2,399	$1,594	$ —	$3,993	$2,104	$1,287	$ —	$3,391

* A revision was made to the fair value leveling hierarchy in the above table as of December 31, 2016. The change was from level 2 to 1. The valuation techniques were unchanged and the amounts revised were not material to the prior annual period.

The Company had no level 3 Non-U.S. Plan assets at December 31, 2017 and 2016.

Mutual funds are categorized as either Level 1 or 2 depending on the nature of the observable inputs.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The availability of observable data is monitored by plan management to assess appropriate classification of financial instruments within the fair value hierarchy. Depending upon the availability of such inputs, specific securities may transfer between levels. In such instances, the transfer is reported at the end of the reporting period.

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Future Estimates

Benefit Payments

Estimated future benefit payments to retirees, which reflect expected future service, are as follows:

	Non-U.S. Qualified Defined Benefit Plan	Non-Qualified Supplemental Benefits Plan
2018	$ 86	$ 1,572
2019	94	1,472
2020	92	1,368
2021	100	1,261
2022	107	1,154
2023 - 2027	709	4,163

Contributions

In 2018, the Company expects to contribute approximately $0.2 million to its non-U.S. qualified plan.

15. Other Comprehensive Income (Loss)

The amounts recognized in Other comprehensive income (loss) were as follows:

Year Ended December 31, 2017	Pre-tax	Tax	Net of tax
Foreign currency translation adjustments	$ 4,358	$ —	$ 4,358
Pension and other post-retirement benefit plans	3,827	(971)	2,856
Total other comprehensive income (loss)	$ 8,185	$(971)	$ 7,214

Year Ended December 31, 2016	Pre-tax	Tax	Net of tax
Foreign currency translation adjustments	$ 953	$ —	$ 953
Pension and other post-retirement benefit plans	154	(42)	112
Total other comprehensive income (loss)	$ 1,107	$ (42)	$ 1,065

Year Ended December 31, 2015	Pre-tax	Tax	Net of tax
Foreign currency translation adjustments	$(11,691)	$ —	$(11,691)
Pension and other post-retirement benefit plans	(393)	124	(269)
Total other comprehensive (loss) income	$(12,084)	$ 124	$(11,960)

The components of Accumulated other comprehensive (loss) income are as follows:

	December 31, 2017	December 31, 2016
Cumulative foreign currency translation adjustments	$ (21,935)	$ (26,293)
Pension and other post-retirement benefit plans	(4,480)	(7,336)
	$ (26,415)	$ (33,629)

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Total Comprehensive income (loss) were as follows:

	Years Ended December 31,		
	2017	2016	2015
Net income (loss) attributable to Apergy	$110,638	$(12,642)	$ 51,698
Other comprehensive income (loss)	7,214	1,065	(11,960)
Comprehensive income (loss)	$117,852	$(11,577)	$ 39,738

Amounts reclassified from Accumulated other comprehensive income (loss) to income (loss) during the year ended December 31, 2017, 2016 and 2015 were as follows:

	Years Ended December 31,		
	2017	2016	2015
Pension and other post-retirement benefit plans:			
Amortization of actuarial losses and net transition obligation	$ 397	$ 362	$ 340
Amortization of prior service costs	2	2	2
Total before tax	399	364	342
Tax benefit	(141)	(129)	(120)
Net of tax	$ 258	$ 235	$ 222

The Company recognizes net periodic benefit cost, which includes amortization of net actuarial losses and prior service costs, in both Selling, general and administrative expenses and Cost of goods and services in the Combined Statements of Income, depending on the functional area of the underlying employees included in the plans.

16. Segment Information

Historically the Company was part of the Dover Energy operating segment. As the Company is transitioning to a stand-alone company, the Company's Chief Executive Officer, in his capacity as Chief Operating Decision Maker ("CODM"), evaluated how he views and measures the business performance. Based upon such evaluation, and effective during the fourth quarter of 2017, the Company determined it is organized into two operating segments, which are also its reportable segments, based on how the CODM analyzes performance, allocates capital and makes strategic and operational decisions. The CODM allocates resources to and evaluates the financial performance of each operating segment primarily based on revenues and segment earnings. The components of segment earnings were finalized in the fourth quarter 2017 in conjunction with the new segment structure to include the allocation of certain corporate expenses. The 2017, 2016 and 2015 segment results are presented on a comparable basis in accordance with the new segment structure. The segments were determined in accordance with FASB ASC Topic 280 — Segment Reporting and include i) Production & Automation Technologies and ii) Drilling Technologies. The segments are aligned around similar product applications serving Apergy's key end markets, to enhance focus on end market strategies.

- Production & Automation Technologies facilitates the efficient, safe and cost effective extraction of oil and gas. More specifically, Production & Automation Technologies designs, manufactures, markets and services a full range of artificial lift equipment, end-to-end digital automation solutions, as well as other production equipment. These products and technologies are all designed to lower production

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costs and optimize well efficiency for Apergy's customers. Production & Automation Technologies' products are sold under a collection of premier brands, which Apergy believes are recognized by customers as leaders in their market spaces, including Harbison-Fischer, Norris, Alberta Oil Tool, Oil Lift Technology, PCS Ferguson, Pro-Rod, Upco, Accelerated, Norriseal-Wellmark, Quartzdyne, Spirit, Theta, Timberline and Windrock.

- Drilling Technologies provides highly specialized products used in drilling oil and gas wells. Drilling Technologies designs, manufactures and markets polycrystalline diamond cutters ("PDCs") for use in oil and gas drill bits under the US Synthetic brand. Over 95% of its PDCs are custom designed to meet unique customer requirements and are finished to exact customer specification to ensure optimal performance. PDCs are utilized in both vertical and horizontal drilling and need to be replaced as they wear out during the drilling process.

Segment financial information and a reconciliation of segment results to combined results follows:

	Years Ended December 31,		
	2017	2016	2015
Revenue:			
Production & Automation Technologies	$ 781,938	$638,017	$ 912,383
Drilling Technologies	227,653	113,320	164,297
Total combined revenue	$1,009,591	$751,337	$1,076,680
Segment Income:			
Segment operating profit (loss) (1):			
Production & Automation Technologies (2)	$ 24,889	$ (21,687)	$ 58,446
Drilling Technologies	74,317	8,397	26,819
Total segment operating profit (loss)	99,206	(13,290)	85,265
Corporate expense / other (3)	(10,852)	(7,395)	(9,436)
Net income attributable to noncontrolling interest	930	1,851	1,436
Income (Loss) before income taxes	$ 89,284	$ (18,834)	$ 77,265
Depreciation and amortization:			
Production & Automation Technologies (4)	$ 99,929	$ 99,607	$ 103,612
Drilling Technologies (5)	11,950	12,448	16,380
Combined total	$ 111,879	$112,055	$ 119,992
Restructuring charges:			
Production & Automation Technologies	$ 6,921	$ 12,757	$ 18,750
Drilling Technologies	—	2,405	2,480
Combined total	$ 6,921	$ 15,162	$ 21,230
Capital expenditures:			
Production & Automation Technologies	$ 18,517	$ 21,588	$ 19,272
Drilling Technologies	8,171	4,137	4,945
Combined total	$ 26,688	$ 25,725	$ 24,217

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

(1) Segment operating profit (loss) includes certain corporate expenses that are allocated to the segments such as information technology, supply chain, and shared services based on direct benefit where identifiable or other methods which the Company believes to be a reasonable reflection of the utilization of services provided.

(2) Segment operating profit (loss) for Production & Automation Technologies excludes the net income attributable to noncontrolling interest.

(3) Corporate expenses include those costs not attributable to a particular business segment such as corporate executive management and other corporate administrative functions.

(4) Depreciation and amortization expense for Production & Automation Technologies includes acquisition-related depreciation and amortization of $57,426, $60,025 and $63,217 for the years ended December 31, 2017, 2016 and 2015, respectively.

(5) Depreciation and amortization expense for Drilling Technologies includes acquisition-related depreciation and amortization of $24, $115 and $3,010 for the years ended December 31, 2017, 2016 and 2015, respectively.

Total assets at December 31:	2017	2016
Production & Automation Technologies	$ 1,683,782	$ 1,659,711
Drilling Technologies	220,993	191,184
Combined total	$ 1,904,775	$ 1,850,895

Revenue classified by significant products and services were as follows:

	Years Ended December 31,		
	2017	2016	2015
Revenue:			
Artificial lift technologies	$ 601,412	$499,033	$ 693,311
Automation technologies	82,093	65,351	93,639
Other production equipment	103,564	75,182	126,870
Drilling technologies	227,653	113,320	164,297
Intercompany eliminations (5)	(5,131)	(1,549)	(1,437)
Combined total	$1,009,591	$751,337	$1,076,680

(5) Intercompany eliminations for the years ended December 31, 2017, 2016 and 2015 relate principally between the product groups automation technologies and artificial lift technologies.

Information concerning principal geographic areas is presented as follows:

	Revenue Years Ended December 31,			Long-Lived Assets At December 31,	
	2017	2016	2015	2017	2016
United States	$ 769,928	$559,266	$ 808,549	$ 198,178	$ 184,268
Middle East	48,899	54,767	69,951	5,189	8,417
Canada	79,186	54,714	64,961	7,587	8,214
Europe	28,112	19,935	34,970	—	—
Australia	23,667	18,177	47,811	681	619
Latin & South America	34,368	23,588	23,208	197	229
Other	25,431	20,890	27,230	—	—
Combined total	$1,009,591	$751,337	$1,076,680	$ 211,832	$ 201,747

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

Revenue is attributed to regions based on the location of the Company's direct customer, which in some instances is an intermediary and not necessarily the end user. Long-lived assets are comprised of net property, plant and equipment. These assets have been classified based on the geographic location of where they reside. The Company's businesses are based primarily in the United States of America, the Middle East and Canada.

For the years ended December 31, 2017, 2016, and 2015 there were no customers that accounted for more than 10% of total revenues.

17. Pro Forma Information (unaudited)

Pro forma shareholders' equity (unaudited) is based upon the Company's historical Parent Company equity as of December 31, 2017, and has been computed to give effect to the following pro forma adjustments:

- the expected transfer to Apergy, upon the spin-off, of certain pension and retirement benefit related balances that were not included in Apergy's historical combined financial statements;
- the distribution of $700.0 million from Apergy to Dover immediately prior to the distribution using proceeds from the incurrence of $702.5 million of new indebtedness in connection with the separation;
- expected tax liabilities for reimbursement to Dover under the tax matters agreement
- the reclassification of Dover's remaining net investment in Apergy to additional paid-in capital; and
- the distribution of approximately 77.4 million shares of Apergy's common stock at a par value of $0.01 per share

18. Subsequent Events (unaudited)

Separation from Dover Corporation

On April 18, 2018, the Dover Corporation Board of Directors approved the separation of entities conducting its upstream oil and gas energy business within Dover's Energy segment (the "Separation") into an independent, publicly traded company named Apergy Corporation. Apergy Corporation was incorporated in Delaware on October 10, 2017, under the name Wellsite Corporation and was renamed Apergy Corporation on February 2, 2018. Apergy Corporation was formed for the purpose of holding entities, assets and liabilities conducting Dover's upstream oil and gas business within Dover's Energy segment. In accordance with the separation and distribution agreement, the two companies were separated by Dover distributing to Dover's stockholders all 77,339,828 shares of common stock of Apergy on May 9, 2018. Each Dover shareholder received one share of Apergy stock for every two shares of Dover stock held at the close of business on the record date of April 30, 2018. In conjunction with the Separation, Dover received a private letter ruling from the Internal Revenue Service to the effect that, based on certain facts, assumptions, representations and undertakings set forth in the ruling, for U.S. federal income tax purposes, the distribution of Apergy common stock was not taxable to Dover or U.S. holders of Dover common stock, except in respect to cash received in lieu of fractional share interests. Following the Separation, Dover retained no ownership interest in Apergy, and each company, as of May 9, 2018, has separate public ownership, boards of directors and management.

In connection with the Separation and as described below, we incurred an aggregate principal amount of $715 million of long-term debt, which consisted of a $415 million term loan facility and $300 million of senior notes. Net proceeds from the notes offering, together with borrowings under the term loan facility, were used to make a cash payment of $700 million to Dover and to pay fees and expenses incurred in connection with the Separation.

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

Issuances of Debt

Senior Notes

On May 3, 2018, and in connection with the Separation, we completed the private placement of $300 million in aggregate principal amount of 6.375% senior notes due May 2026 ("Senior Notes"). Interest on the Senior Notes is payable semi-annually in arrears on May 1 and November 1 of each year, commencing on November 1, 2018. Net proceeds of $293.8 million from the offering were utilized to partially fund the $700 million cash payment to Dover at the Separation and to pay fees and expenses incurred in connection with the Separation.

In connection with the private placement, we granted the initial purchasers of the Senior Notes certain registration rights under a registration right agreement. We have agreed for the benefit of the holders of the Senior Notes to use our commercially reasonable efforts to file and cause to be effective a registration statement with the SEC relating to a registered offer to exchange the Senior Notes for an issue of SEC-registered notes with terms identical in all material respects to the Senior Notes. Generally, we have one year from the issuance of the Senior Notes to complete the exchange offer. Should Apergy not complete its obligations under the registration rights agreement within a year, the annual interest rate on the Senior Notes will increase at different intervals based on the passage of time after one year.

Senior Secured Credit Facilities

On May 9, 2018, Apergy entered into a credit agreement ("credit agreement") governing the terms of its new senior secured credit facilities, consisting of (i) a seven-year senior secured term loan B facility ("term loan facility") and (ii) a five-year senior secured revolving credit facility ("revolving credit facility," and together with the term loan facility, the "senior secured credit facilities"), with JPMorgan Chase Bank, N.A. as administrative agent. The net proceeds of the senior secured credit facilities were used (i) to pay fees and expenses in connection with the Separation, (ii) partially fund the cash payment to Dover and (iii) provide for working capital and other general corporate purposes. The senior secured credit facilities are jointly and severally guaranteed by Apergy and certain of Apergy's wholly owned U.S. subsidiaries ("guarantors"), on a senior secured basis, and are secured by substantially all tangible and intangible assets of Apergy and the guarantors, except for certain excluded assets.

19. Quarterly Information (Unaudited)

(in thousands, except per share data)	2017				2016			
	4th Qtr.	3rd Qtr.	2nd Qtr.	1st Qtr.	4th Qtr.	3rd Qtr.	2nd Qtr.	1st Qtr.
Revenue	$264,498	$258,654	$256,161	$230,278	$201,176	$185,455	$168,535	$196,171
Gross profit	73,703	84,774	84,630	75,360	61,012	47,254	32,610	54,452
Net income (loss)	60,264	18,685	19,033	13,586	4,167	(2,154)	(10,294)	(2,510)
Net income (loss) attributable to Apergy	60,194	18,421	18,754	13,269	3,769	(2,503)	(10,872)	(3,036)
Basic earnings per share (1)	$ 0.78	$ 0.24	$ 0.24	$ 0.17	$ 0.05	$ (0.03)	$ (0.14)	$ (0.04)
Diluted earnings per share (1)	$ 0.77	$ 0.24	$ 0.24	$ 0.17	$ 0.05	$ (0.03)	$ (0.14)	$ (0.04)

(1) On May 9, 2018, 77,339,828 shares of our common stock were distributed to Dover stockholders in conjunction with the Separation. For comparative purposes, we have assumed the shares issued in conjunction with the Separation to be outstanding as of the beginning of each period prior to the Separation. In addition, we have assumed the potential dilutive securities outstanding as of May 8, 2018, were outstanding and fully dilutive in each of the periods prior to the Separation.

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

20. Condensed Combining Financial Information

On May 3, 2018, and in connection with the Separation, Apergy completed the issuance of $300 million of senior notes, the payment obligations of which are fully and unconditionally guaranteed by certain 100-percent-owned subsidiaries of Apergy on a joint and several basis. The following financial information presents the results of operations, financial position and cash flows for:

- Apergy Corporation (issuer)
- 100-percent-owned guarantor subsidiaries
- All other non-guarantor subsidiaries
- Adjustments necessary to present Apergy results on a combined basis.

This condensed combining financial information should be read in conjunction with the accompanying combined financial statements and notes.

	Year Ended December 31, 2017				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Revenue	$ —	$881,187	$ 164,507	$ (36,103)	$1,009,591
Cost of goods and services	—	586,519	140,516	(35,911)	691,124
Gross profit	—	294,668	23,991	(192)	318,467
Selling, general and administrative expense	—	200,839	18,678	—	219,517
Operating income (loss)	—	93,829	5,313	(192)	98,950
Other expense, net	—	9,429	237	—	9,666
Income before income taxes and equity in earnings of affiliates	—	84,400	5,076	(192)	89,284
Benefit from income taxes	—	(10,680)	(11,537)	(67)	(22,284)
Income before equity in earnings of affiliates	—	95,080	16,613	(125)	111,568
Equity in earnings of affiliates	110,638	22,110	11,020	(143,768)	—
Net income	110,638	117,190	27,633	(143,893)	111,568
Net income attributable to noncontrolling interest	—	—	930	—	930
Net income attributable to Apergy	$ 110,638	$117,190	$ 26,703	$ (143,893)	$ 110,638
Comprehensive income attributable to Apergy	$ 117,852	$120,042	$ 31,065	$ (151,102)	$ 117,852

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	Year Ended December 31, 2016				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Revenue	$ —	$644,392	$ 142,614	$ (35,669)	$751,337
Cost of goods and services	—	459,465	132,350	(35,806)	556,009
Gross profit	—	184,927	10,264	137	195,328
Selling, general and administrative expense	—	183,892	21,517	—	205,409
Operating income (loss)	—	1,035	(11,253)	137	(10,081)
Other expense, net	—	8,550	203	0	8,753
Loss before income taxes and equity in earnings of affiliates	—	(7,515)	(11,456)	137	(18,834)
Benefit from income taxes	—	(2,750)	(5,341)	48	(8,043)
Loss before equity in losses of affiliates	—	(4,765)	(6,115)	89	(10,791)
Equity in losses of affiliates	(12,642)	(23,668)	(8,273)	44,583	—
Net loss	(12,642)	(28,433)	(14,388)	44,672	(10,791)
Net income attributable to noncontrolling interest	—	—	1,851	—	1,851
Net loss attributable to Apergy	$ (12,642)	$ (28,433)	$ (16,239)	$ 44,672	$ (12,642)
Comprehensive loss attributable to Apergy	$ (11,577)	$ (28,402)	$ (15,205)	$ 43,607	$ (11,577)

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	Year Ended December 31, 2015				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Revenue	$ —	$923,957	$ 192,682	$ (39,959)	$1,076,680
Cost of goods and services	—	604,715	177,504	(40,178)	742,041
Gross profit	—	319,242	15,178	219	334,639
Selling, general and administrative expense	—	220,897	24,826	—	245,723
Operating income (loss)	—	98,345	(9,648)	219	88,916
Other expense (income), net	—	10,606	(376)	1421	11,651
Income (loss) before income taxes and equity in earnings (losses) of affiliates	—	87,739	(9,272)	(1,202)	77,265
Provision for (benefit from) income taxes	—	29,485	(5,431)	77	24,131
Income (loss) before equity in earnings of affiliates	—	58,254	(3,841)	(1,279)	53,134
Equity in earnings (losses) of affiliates	51,698	(17,980)	2,762	(36,480)	—
Net income (loss)	51,698	40,274	(1,079)	(37,759)	53,134
Net income attributable to noncontrolling interest	—	—	1,436	—	1,436
Net income (loss) attributable to Apergy	$ 51,698	$ 40,274	$ (2,515)	$ (37,759)	$ 51,698
Comprehensive income (loss) attributable to Apergy	$ 39,738	$ 39,594	$ (13,795)	$ (25,799)	$ 39,738

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	December 31, 2017				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Assets					
Cash and cash equivalents	$ —	$ 5,763	$ 17,949	$ —	$ 23,712
Receivables	—	171,363	34,335	(3,674)	202,024
Inventories	—	175,031	27,488	(928)	201,591
Prepaid and other current assets	—	11,990	2,048	—	14,038
Total current assets	—	364,147	81,820	(4,602)	441,365
Property, plant and equipment, net	—	195,579	16,253	—	211,832
Goodwill	—	633,734	276,354	—	910,088
Advances due from affiliates	—	10,299	60,109	(70,408)	—
Investment in subsidiaries	1,640,034	801,235	388,315	(2,829,584)	—
Intangible assets, net	—	234,795	103,715	—	338,510
Other assets and deferred charges	—	2,129	851	—	2,980
Total assets	1,640,034	2,241,918	927,417	(2,904,594)	1,904,775
Liabilities and Equity					
Accounts payable	—	83,864	18,636	(3,674)	98,826
Accrued compensation and employee benefits	—	24,875	5,414	—	30,289
Other accrued expenses	—	74,393	18,289	(70,732)	21,950
Total current liabilities	—	183,132	42,339	(74,406)	151,065
Deferred income taxes	—	75,075	21,910	—	96,985
Other liabilities	—	16,657	34	—	16,691
Equity:					
Parent Company investment in Apergy	1,640,034	1,971,790	880,064	(2,830,188)	1,661,700
Accumulated other comprehensive loss	—	(4,736)	(21,679)	—	(26,415)
Total Parent Company equity	1,640,034	1,967,054	858,385	(2,830,188)	1,635,285
Noncontrolling interest	—	—	4,749	—	4,749
Total equity	1,640,034	1,967,054	863,134	(2,830,188)	1,640,034
Total liabilities and equity	$1,640,034	$2,241,918	$927,417	$(2,904,594)	$1,904,775

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	December 31, 2016				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Assets					
Cash and cash equivalents	$ —	$ 3,730	$ 22,297	$ —	$ 26,027
Receivables	—	116,340	29,511	(6,366)	139,485
Inventories	—	161,314	23,979	(735)	184,558
Prepaid and other current assets	—	4,090	2,161	—	6,251
Total current assets	—	285,474	77,948	(7,101)	356,321
Property, plant and equipment, net	—	180,292	21,455	—	201,747
Goodwill	—	633,734	268,845	—	902,579
Advances due from affiliates	—	10,464	64,521	(74,985)	—
Investment in subsidiaries	1,551,353	753,916	348,046	(2,653,315)	—
Intangible assets, net	—	273,127	113,690	—	386,817
Other assets and deferred charges	—	2,499	932	—	3,431
Total assets	1,551,353	2,139,506	895,437	(2,735,401)	1,850,895
Liabilities and Equity					
Accounts payable	—	53,195	19,451	(6,366)	66,280
Accrued compensation and employee benefits	—	20,450	4,338	—	24,788
Other accrued expenses	—	81,402	15,466	(75,242)	21,626
Total current liabilities	—	155,047	39,255	(81,608)	112,694
Deferred income taxes	—	125,490	42,075	—	167,565
Other liabilities	—	19,009	274	—	19,283
Equity:					
Parent Company investment in Apergy	1,551,353	1,847,548	834,843	(2,653,793)	1,579,951
Accumulated other comprehensive loss	—	(7,588)	(26,041)	—	(33,629)
Total Parent Company equity	1,551,353	1,839,960	808,802	(2,653,793)	1,546,322
Noncontrolling interest	—	—	5,031	—	5,031
Total equity	1,551,353	1,839,960	813,833	(2,653,793)	1,551,353
Total liabilities and equity	$1,551,353	$2,139,506	$895,437	$(2,735,401)	$1,850,895

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	Year Ended December 31, 2017				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Cash provided (required) by operating activities	$ —	$ 65,289	$ 11,561	$ 67	$ 76,917
Cash provided (required) by investing activities:					
Additions to property, plant and equipment	—	(39,565)	(1,646)	—	(41,211)
Proceeds from sale of property, plant, and equipment	—	3,433	114	—	3,547
Acquisition (net of cash and cash equivalents acquired)	—	—	(8,842)	—	(8,842)
Net cash required by investing activities	—	(36,132)	(10,374)	—	(46,506)
Cash provided (required) by financing activities:					
Change in borrowings, net	—	—	(599)	—	(599)
Distributions to noncontrolling interest	—	—	(1,212)	—	(1,212)
Net transfers to Parent Company and intercompany distributions	—	(27,124)	(4,001)	(67)	(31,192)
Net cash required by financing activities	—	(27,124)	(5,812)	(67)	(33,003)
Effect of exchange rate changes on cash and cash equivalents	—	—	277	—	277
Net increase (decrease) in cash and cash equivalents	—	2,033	(4,348)	—	(2,315)
Cash and cash equivalents at beginning of period	—	3,730	22,297	—	26,027
Cash and cash equivalents at end of period	$ —	$ 5,763	$ 17,949	$ —	$ 23,712

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	Year Ended December 31, 2016				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Cash provided by operating activities	$ —	$103,788	$ 25,979	$ (48)	$129,709
Cash provided (required) by investing activities:					
Additions to property, plant and equipment	—	(23,080)	(3,774)	—	(26,854)
Proceeds from sale of property, plant, and equipment	—	2,245	281	—	2,526
Additions to intangible assets	—	(3,700)	—	—	(3,700)
Net cash required by investing activities	—	(24,535)	(3,493)	—	(28,028)
Cash provided (required) by financing activities:					
Distributions to noncontrolling interest	—	—	(1,727)	—	(1,727)
Net transfers to Parent Company and intercompany distributions	—	(78,232)	(6,070)	48	(84,254)
Net cash required by financing activities	—	(78,232)	(7,797)	48	(85,981)
Effect of exchange rate changes on cash and cash equivalents	—	—	(90)	—	(90)
Net increase in cash and cash equivalents	—	1,011	14,599	—	15,610
Cash and cash equivalents at beginning of period	—	2,719	7,698	—	10,417
Cash and cash equivalents at end of period	$ —	$ 3,730	$ 22,297	$ —	$ 26,027

APERGY CORPORATION
NOTES TO COMBINED FINANCIAL STATEMENTS
(Amounts in thousands except share data and where otherwise indicated)

	Year Ended December 31, 2015				
(in thousands)	Apergy Corporation	Subsidiary guarantors	Subsidiary non-guarantors	Adjustments and eliminations	Total
Cash provided (required) by operating activities	$ —	$ 137,352	$ 79,817	$ (1,498)	$ 215,671
Cash provided (required) by investing activities:					
Additions to property, plant and equipment	—	(30,750)	(1,235)	—	(31,985)
Proceeds from sale of property, plant, and equipment	—	3,814	4,070	—	7,884
Additions to intangible assets	—	(10,000)	—	—	(10,000)
Net cash provided (required) by investing activities	—	(36,936)	2,835	—	(34,101)
Cash provided (required) by financing activities:					
Net transfers to Parent Company and intercompany distributions	—	(108,909)	(87,566)	1,498	(194,977)
Net cash provided by (required by) financing activities	—	(108,909)	(87,566)	1,498	(194,977)
Effect of exchange rate changes on cash and cash equivalents	—	—	(531)	—	(531)
Net decrease in cash and cash equivalents	—	(8,493)	(5,445)	—	(13,938)
Cash and cash equivalents at beginning of period	—	11,212	13,143	—	24,355
Cash and cash equivalents at end of period	$ —	$ 2,719	$ 7,698	$ —	$ 10,417

SCHEDULE II

VALUATION AND QUALIFYING ACCOUNTS
Years Ended December 31, 2017, 2016 and 2015
(In thousands)

Allowance for Doubtful Accounts	Balance at Beginning of Year	Charged to Cost and Expense (A)	Accounts Written Off	Other	Balance at End of Year
Year Ended December 31, 2017	$ 5,634	954	(1,882)	47	$ 4,753
Year Ended December 31, 2016	$ 4,431	2,941	(1,469)	(269)	$ 5,634
Year Ended December 31, 2015	$ 3,510	2,154	(1,159)	(74)	$ 4,431

(A) Net of recoveries on previously reserved or written-off balances.

Deferred Tax Valuation Allowance	Balance at Beginning of Year	Additions	Reductions	Other	Balance at End of Year
Year Ended December 31, 2017	$ 1,082	198	—	—	$ 1,280
Year Ended December 31, 2016	$ 64	1,018	—	—	$ 1,082
Year Ended December 31, 2015	$ 50	14	—	—	$ 64

LIFO Reserve	Balance at Beginning of Year	Charged to Cost and Expense	Reductions	Other	Balance at End of Year
Year Ended December 31, 2017	$ 9,381	1,175	—	—	$ 10,556
Year Ended December 31, 2016	$ 12,933	—	(3,552)	—	$ 9,381
Year Ended December 31, 2015	$ 15,214	—	(2,281)	—	$ 12,933

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Offer to Exchange

$300,000,000

6.375% Senior Notes due 2026

Apergy Corporation

PROSPECTUS

, 2018

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 20. Indemnification of Directors and Officers.

Delaware Registrants

Delaware Corporations

Delaware General Corporation Law

Under the Section 145 of the Delaware General Corporation Law (the "DGCL"), a corporation may indemnify any person who was or is a party, or is threatened to be made a party, to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding (i) if such person acted in good faith and in a manner that person reasonably believed to be in, or not opposed, to the best interests of the corporation and (ii) with respect to any criminal action or proceeding, if he or she had no reasonable cause to believe such conduct was unlawful. In actions brought by or in the right of the corporation, a corporation may indemnify such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner that person reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification may be made in respect of any claim, issue or matter as to which that person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all circumstances of the case, such person is fairly and reasonably entitled to indemnification for such expenses which the Court of Chancery or other such court shall deem proper. To the extent that such person has been successful on the merits or otherwise in defending any such action, suit or proceeding referred to above or any claim, issue or matter therein, he or she is entitled to indemnification for expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith. Any indemnifications are to be made by a majority vote of disinterested directors, even though less than quorum, by a committee of disinterested directors designated by a majority of such directors, if there are no such directors or if such directors so direct, by independent legal counsel in a written opinion or by the stockholders. The indemnification and advancement of expenses provided for or granted pursuant to Section 145 of the DGCL is not exclusive of any other rights of indemnification or advancement of expenses to which those seeking indemnification or advancement of expenses may be entitled, and a corporation may purchase and maintain insurance against liabilities asserted against any former or current, director, officer, employee or agent of the corporation, or a person who is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, whether or not the power to indemnify is provided by the statute.

Apergy Corporation

Apergy Corporation's amended and restated certificate of incorporation states that no director shall be personally liable to the company or any of its stockholders for monetary damages for actions taken as a director or officer of the company, or for serving at the company's request as a director or officer or another position at another corporation or enterprise, as the case may be, to the fullest extent permitted by the DGCL.

Apergy Corporation's bylaws state that the company must indemnify any current or former director or officer who was, or is threatened to be, made party to any threatened, pending or completed action, suit or

proceeding against expenses actually and reasonably incurred by such person, so long as he or she acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the company. Unless ordered by the court, indemnification of a current director or officer shall be made by either: (i) a majority vote of the directors not party to the proceeding, even though less than quorum; (ii) by a committee of directors designated by a majority vote of directors not party to the proceeding, even though less than quorum; (iii) if there are no such directors, or if directed by such directors, by independent legal counsel; or (iv) by the stockholders. The company shall indemnify and advance reasonable expenses to its directors and officers, subject to its receipt of an undertaking from the indemnified party. The company must indemnify and advance reasonable expenses to its directors and officers, subject to its receipt of an undertaking from the indemnified party. The bylaws expressly authorize each company to carry directors' and officers' insurance to protect each company, their directors, officers and certain employees. The indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which a person may be entitled.

Theta Oilfield Services, Inc., Norris Rods, Inc., US Synthetic Corporation and Apergy BMCS Acquisition Corp.

The certificates of incorporation of Theta Oilfield Services, Inc., Norris Rods, Inc., US Synthetic Corporation and Apergy BMCS Acquisition Corp. state that a director shall not be personally liable to their respective company or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted by the DGCL.

The bylaws of Theta Oilfield Services, Inc., Norris Rods, Inc., US Synthetic Corporation and Apergy BMCS Acquisition Corp. state that the companies must indemnify any current or former director or officer who was, or is threatened to be, made party to any "third party proceeding" or "corporate proceeding" against expenses actually and reasonably incurred by such person, so long as he or she acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the respective company. The companies must indemnify any current or former director or officer who has been successful on the merits or otherwise in defense of any such claim. Entitlement to indemnification shall be made by either: (i) a majority vote of the directors not party to the proceeding, even though less than quorum; (ii) by a committee of directors designated by a majority vote of directors not party to the proceeding; (iii) if there are no such directors, by independent legal counsel; or (iv) by the stockholders. The companies must also indemnify and advance reasonable expenses to their directors and officers, subject to the receipt of an undertaking from the indemnified party. The bylaws expressly authorize each company to carry directors' and officers' insurance to protect each company, their directors, officers and certain employees.

Norriseal-Wellmark, Inc. and Wellmark Holdings, Inc.

Norriseal-Wellmark, Inc. and Wellmark Holdings, Inc.'s certificates of incorporation state that the companies must indemnify their directors and officers against any threatened, pending or completed action, suit or proceeding. Such indemnification will be to the full extent permitted by the DGCL, and no director shall be liable to either company or their stockholders for monetary damages for breach of fiduciary duty.

Norriseal-Wellmark, Inc. and Wellmark Holdings, Inc.'s bylaws state that companies must indemnify any current or former director or officer who was, or is threatened to be, made party to any threatened, pending or completed action, suit or proceeding against expenses actually and reasonably incurred by such person, so long as he or she acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the respective company. The companies must indemnify any current or former director or officer who has been successful on the merits or otherwise in defense of any such claim. Entitlement to indemnification shall be made by either: (i) a majority vote of a quorum consisting of directors not party to the proceeding; (ii) by a committee of disinterested directors designated by a majority vote of a quorum of disinterested directors; (iii) if there are no such directors, or if directed by such disinterested directors, by independent legal counsel; or (iv) by the stockholders. The companies may indemnify and advance reasonable expenses to their directors and officers, subject to the receipt of an undertaking from the indemnified party. The bylaws expressly authorize each

company to carry directors' and officers' insurance to protect each company, their directors, officers and certain employees. The indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which a person may be entitled.

Quartzdyne, Inc.

Quartzdyne, Inc.'s certificate of incorporation states that the company must indemnify and hold harmless any director or officer against all expense, liability or loss, to the fullest extent authorized by the DGCL. The right to indemnification conferred is a contract right and shall include the right to be paid expenses incurred in defending any such proceeding in advance of its final disposition upon the delivery of an undertaking by such director or officer.

Quartzdyne, Inc.'s bylaws state that the company must indemnify any current or former director or officer who was, or is threatened to be, made party to any threatened, pending or completed action, suit or proceeding against expenses actually and reasonably incurred by such person, so long as he or she acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the company. The company must indemnify any current or former director or officer who has been successful on the merits or otherwise in defense of any such claim. Entitlement to indemnification shall be made by either: (i) unanimous vote of the directors who are not parties to such action, even though less than quorum; (ii) if there are no such directors, or if such directors direct, by independent legal counsel in a written opinion; or (iii) by the stockholders. The company may indemnify and advance reasonable expenses to its directors and officers, subject to its receipt of an undertaking from the indemnified party. The bylaws expressly authorize the company to carry directors' and officers' insurance to protect the company, its directors, officers and certain employees. The indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which a person may be entitled.

Apergy (Delaware) Formation, Inc., Apergy Funding Corporation and Apergy USA, Inc.

Apergy (Delaware) Formation, Inc., Apergy Funding Corporation and Apergy USA, Inc.'s certificates of incorporation state that a director shall not be personally liable to the respective company or its stockholders for monetary damages for breach of fiduciary duty as a director except for liability for (i) breach of duty of loyalty, (ii) acts or omissions not in good faith which involve intentional misconduct or knowing violation of law, (iii) actions pursuant to Section 174 of the DGCL or (iv) for any transaction from which the director received an improper benefit.

Apergy (Delaware) Formation, Inc., Apergy Funding Corporation and Apergy USA, Inc.'s bylaws state that the companies must indemnify any current or former director or officer who was, or is threatened to be, made party to any threatened, pending or completed action, suit or proceeding against expenses actually and reasonably incurred by such person, so long as he or she acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the respective company. Unless ordered by the court, indemnification of a current director or officer shall be made by either: (i) a majority vote of the directors not party to the proceeding, even though less than quorum; (ii) by a committee of directors designated by a majority vote of the directors not party to the proceeding, even though less than quorum; (iii) if there are no such directors, or if directed by such directors, by independent legal counsel; or (iv) by the stockholders. The companies may indemnify and advance reasonable expenses to their directors and officers, subject to the receipt of an undertaking from the indemnified party. The determination with respect to former directors or officers shall be made by any person having the authority to act on the matter on behalf of the company. Any director or officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the state for indemnification. The companies must indemnify and advance reasonable expenses to their directors and officers, subject to the receipt of an undertaking from the indemnified party. The bylaws expressly authorize each company to carry directors' and officers' insurance to protect the companies, their directors, officers and certain employees. The indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which a person may be entitled.

Spirit Global Energy Solutions, Inc.

Spirit Global Energy Solutions, Inc.'s certificate of incorporation states that a director of the company shall not be personally liable to the company or its stockholders for monetary damages for breach of fiduciary duty as a director except for liability for (i) breach of duty of loyalty, (ii) acts or omissions not in good faith which involve intentional misconduct or knowing violation of law, (iii) conduct pursuant to Section 174 of the DGCL or (iv) for any transaction from which the director received an improper benefit.

Spirit Global Energy Solutions, Inc.'s bylaws state that the company must indemnify any current or former director or officer who was, or is threatened to be, made party to any threatened, pending or completed action, suit or proceeding to the full extent and under the circumstances permitted by the DGCL. The right of indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which a person may be entitled.

PCS Ferguson, Inc.

PCS Ferguson, Inc.'s certificate of incorporation states that a director of the company shall not be personally liable to the company or its stockholders for monetary damages for breach of fiduciary duty as a director except for liability for (i) breach of duty of loyalty, (ii) acts or omissions not in good faith which involve intentional misconduct or knowing violation of law, (iii) conduct pursuant to Section 174 of the DGCL or (iv) any transaction from which the director received an improper benefit.

Harbison-Fischer, Inc.

Neither Harbison-Fischer, Inc.'s certificate of incorporation nor bylaws contain any provision related to indemnification of officers and directors.

Delaware Limited Liability Companies

Delaware Limited Liability Company Act

Section 18-303(a) of the Delaware Limited Liability Company Act (the "DLLCA") provides that, except as otherwise provided by the DLLCA, the debts, obligations and liabilities of a limited liability company, whether arising in contract, tort or otherwise, shall be solely the debts, obligations and liabilities of the limited liability company, and no member or manager of a limited liability company shall be obligated personally for any such debt, obligation or liability of the limited liability company solely by reason of being a member or acting as a manager of the limited liability company. Section 18-108 of the DLLCA states that subject to such standards and restrictions, if any, as set forth in its limited liability company agreement, a limited liability company may, and shall have the power to, indemnify and hold harmless any member or manager or other person from and against any and all claims and demands whatsoever.

Apergy Artificial Lift, LLC and Apergy Energy Automation, LLC

Apergy Artificial Lift, LLC and Apergy Energy Automation, LLC's certificates of formation state that, to the fullest extent permitted by applicable law, no member, manager, director or officer of either company shall be personally liable to the respective company or its members for monetary damages for an act or omission in such capacity.

Apergy Artificial Lift, LLC and Apergy Energy Automation, LLC's limited liability company agreements state that no member, director or officer of either company shall be liable in damages to the member of such company for any act or omission if the person's actions do not constitute willful misconduct, recklessness, a breach of loyalty, lack of good faith, knowing violation of law or a transaction from which he or she received an improper personal benefit. The companies shall also indemnify the member, director or officer so long as this standard is met. Such indemnification rights are not exclusive to any other right or remedy provided by law.

California Registrant

California General Corporation Law

Section 317 of the California General Corporation Law (the "CAGCL") authorizes a court to award, or a corporation to grant, indemnity to officers, directors and other agents for reasonable expenses incurred in connection with the defense or settlement of an action by or in the right of the corporation or in a proceeding by reason of the fact that the person is or was an officer, director, or agent of the corporation. Indemnity is available where the person party to a proceeding or action acted in good faith and in a manner reasonably believed to be in the best interests of the corporation and its shareholders and, with respect to criminal actions, had no reasonable cause to believe his conduct was unlawful. To the extent a corporation's officer, director or agent is successful on the merits in the defense of any proceeding or any claim, issue or related matter, that person shall be indemnified against expenses actually and reasonably incurred. Under Section 317 of the CAGCL, expenses incurred in defending any proceeding may be advanced by the corporation prior to the final disposition of the proceeding upon receipt of any undertaking by or on behalf of the officer, director, employee or agent to repay that amount if it is ultimately determined that the person is not entitled to be indemnified. Indemnifications are to be made by a majority vote of a quorum of disinterested directors, if such quorum is not obtainable, by independent legal counsel in a written opinion, by approval of the stockholders, not including those persons to be indemnified, or by the court in which such proceeding is or was pending upon application made by either the corporation, the agent, the attorney, or other person rendering services in connection with the defense. The indemnification provided by Section 317 is not exclusive of any other rights to which those seeking indemnification may be entitled.

Honetreat Company

Honetreat Company's bylaws state that the company shall indemnify any person who is or was a director or officer against a threatened or pending suit, action or proceeding so long as such person acted in good faith and reasonably believed (a) that his or her conduct was in the best interests of the corporation and (b) in all other cases, that his or her conduct was not opposed to the best interests of the company. Entitlement to indemnification shall be made by either: (i) a majority vote of a quorum consisting of directors not party to the proceeding; (ii) if no quorum can be obtained, a majority vote of a committee of the Board of Directors, designated to act in the matter by a majority vote of all directors, consisting solely of two or more disinterested directors; or (iii) by special legal counsel. If a person who would otherwise be entitled to indemnity is found liable on the basis that personal benefit was improperly received, then indemnification shall be limited to reasonable expenses actually incurred. If willful or intentional misconduct is found, no indemnification of any kind shall be made. Honetreat Company may indemnify and advance reasonable expenses to its directors and officers, subject to its receipt of an undertaking from the indemnified party. The bylaws expressly authorize the company to carry directors' and officers' insurance, and indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which a person may be entitled.

Oklahoma Registrant

Oklahoma General Corporation Act

Section 1031 of the Oklahoma General Corporation Act authorizes a court to award, or a corporation's board of directors to grant, indemnity under certain circumstances to directors, officers, employees or agents in connection with actions, suits or proceedings, by reason of the fact that the person is or was a director, officer, employee or agent, against expenses and liabilities incurred in such actions, suits or proceedings so long as they acted in good faith and in a manner the person reasonably believed to be in, or not opposed to, the best interests of such corporation, and with respect to any criminal action if they had no reasonable cause to believe their conduct was unlawful. With respect to suits by or in the right of the corporation, however, indemnification is generally limited to attorneys' fees and other expenses and is not available if such person is adjudged to be liable to such corporation unless the court determines that indemnification is appropriate. Expenses incurred by a

director or officer in defending a civil or criminal action, suit or proceeding may be paid by the corporation in advance of the final disposition of the action, suit or proceeding upon receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined that the person is not entitled to be indemnified by the corporation.

UPCO, Inc.

UPCO, Inc.'s restated and amended bylaws state that the company shall indemnify any current or former director or officer who is a party, or may be made party, to any threatened, pending or completed action, suit or proceeding if such director or officer acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the company. UPCO, Inc. must indemnify any current or former director or officer who has been successful on the merits or otherwise in defense of any such claim. Unless ordered by the court, entitlement to indemnification shall be authorized by either: (i) the board of directors by a majority vote of a quorum consisting of directors not party to the proceeding; (ii) if such quorum is not obtainable, or if a quorum of such directors so directs, by independent legal counsel; or (iii) the shareholders. The company may indemnify and advance reasonable expenses to its directors and officers, subject to its receipt of an undertaking from the indemnified party. The bylaws expressly authorize UPCO, Inc. to carry directors' and officers' insurance to protect the company, its directors, officers and certain employees. The indemnifications provided by or granted pursuant to the bylaws are not exclusive to other rights to which he or she may be entitled.

Oklahoma Limited Liability Company Act

Sections 18-2003 and 18-2017 of the Oklahoma Limited Liability Company Act (the "OKLLCA") provide that an Oklahoma limited liability company may indemnify and hold harmless any member or manager from and against any and all claims and demands whatsoever, except in the case of action or failure to act by the member, agent or employee which constitutes willful misconduct or recklessness, and subject to the standards and restrictions, if any, set forth in the articles of organization or operating agreement. The articles of organization or operating agreement of a Oklahoma limited liability company may eliminate or limit the personal liability of a member or manager for monetary damages for breach of any fiduciary duty and provide for indemnification of a member or manager for judgments, settlements, penalties, fines or expenses incurred in any proceeding because the person is or was a member or manager, except that any such provisions may not limit or eliminate the liability of a manager for: (1) any breach of the manager's duty of loyalty to the limited liability company or its members; (2) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; or (3) any transaction from which the manager derived an improper personal benefit.

Apergy ESP Systems, LLC

Apergy ESP Systems, LLC's articles of organization state that, to the fullest extent permitted by the OKLLCA, the members and managers of the company shall not be liable to the company or its members for monetary damages for breaches of fiduciary duty and shall be indemnified against such.

Apergy ESP Systems, LLC's amended and restated limited liability company operating agreement states that to the maximum extent permitted by law, no member, officer, director or other covered person will be liable for losses sustained or liabilities incurred as a result of an act or omission, including any breach of duty, until there is a final and non-appealable determination by a court of competent jurisdiction determining that such person (i) breached the duty of loyalty, (ii) committed an act or omission not in good faith or that involved intentional misconduct or knowing violation of law or (iii) derived an improper personal benefit. A party shall not be denied indemnification if the transaction was otherwise permitted by the operating agreement or authorized by the board. The company shall advance funds upon receipt of an unsecured undertaking by the party requesting indemnification.

Tennessee Registrant

Tennessee Business Corporation Act

Section 48-18-502 of the Tennessee Business Corporation Act ("TNBCA") provides that a corporation may indemnify an individual made a party to a proceeding because he or she is or was a director against liability incurred in the proceeding if: (1) he or she conducted himself or herself in good faith; (2) he or she reasonably believed (i) in the case of conduct in his or her official capacity with the corporation, that his or her conduct was in its best interests and (ii) in all other cases, that his or her conduct was at least not opposed to its best interests; and (3) in the case of any criminal proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Under the TNBCA, a corporation may pay for or reimburse the reasonable expenses incurred by a director who is a party to a proceeding in advance of the final disposition of the proceeding if: (1) the director furnishes the corporation a written affirmation of his or her good faith belief that he or she has met the standard of conduct described in the preceding sentence; (2) the director furnishes the corporation an undertaking, executed personally or on his or her behalf, to repay the advance if it is ultimately determined that he or she did not meet the standard of conduct; and (3) a determination is made that the facts then known to those making the determination would not preclude indemnification. Unless a corporation's articles of incorporation provide otherwise, the corporation may indemnify and advance expenses to an officer, employee or agent of the corporation who is not a director to the same extent as a director. A corporation may not indemnify a director (1) in connection with a proceeding by or in the right of the corporation in which the director was adjudged liable to the corporation or (2) in connection with any other proceeding charging improper personal benefit to him or her, whether or not involving action in his or her official capacity, in which he or she was adjudged liable on the basis that a personal benefit was improperly received by him or her. Unless limited by its articles of incorporation, a corporation must indemnify a director who was wholly successful, on the merits or otherwise, in the defense of any proceeding to which he or she was a party because he or she is or was a director or officer of the corporation against reasonable expenses incurred by him or her in connection with the proceeding. A corporation may also purchase and maintain on behalf of a director or officer insurance against liabilities incurred in such capacities, whether or not the corporation would have the power to indemnify him or her against the same liability under the statute.

Windrock, Inc.

Windrock, Inc.'s bylaws state that every person who is or was a director or officer of the company be indemnified against any and all liability and reasonable expense for actions taken as a director or officer or for serving at the company's request as a director or officer or another position at another corporation or enterprise, as the case may be. Windrock, Inc.'s by-laws provide that the company shall indemnify directors and officers in a proceeding if such officer or director has not been adjudged to be liable for negligence or misconduct and such person acted in good faith and in a manner reasonably believed to be in the best interests of the company. The indemnification shall be made at the discretion of the company, but only if either (a) the Board of Directors, acting by a quorum of uninterested directors, finds that the person has met the applicable standard of conduct or (b) independent legal counsel by written advice that such person has met the applicable standard. The bylaws also permit Windrock, Inc. to advance reasonable expenses to its directors and officers, subject to its receipt of an undertaking from the indemnified party as may be required under the TNBCA.

Texas Registrant

Texas Business Organization Code

Section 8.102 of the Texas Business Organization Code ("TBOC") authorizes a Texas enterprise to indemnify a governing person, former governing person or delegate who was, is or is threatened to be made a respondent in a proceeding if it is determined that the person (A) acted in good faith and (B) reasonably believed (i) in the case of conduct in his or her official capacity, that his or her conduct was in the corporation's best interests, (ii) in any other case, that his or her conduct was not opposed to the enterprise's best interests and

(iii) in the case of any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. A person may be indemnified under Section 8.102 against judgments and expenses that are reasonable and actually incurred by the person. If the person is found liable to the enterprise or is found liable on the basis that personal benefit was improperly received by him or her, the indemnification is limited to reasonable expenses actually incurred, does not include a judgment, penalty or fine, and an excise or similar tax and shall not be made in respect of any proceeding in which the person has been found liable for willful or intentional misconduct in the performance of his or her duty to the enterprise, breach of the his or her duty of loyalty owed to the enterprise or an act or omission not committed in good faith that constitutes a breach of a duty owed to the enterprise. A corporation is obligated under Section 8.051 of the TBOC to indemnify a governing person, former governing person or delegate against reasonable expenses incurred by him or her in connection with a proceeding in which he or she is named defendant or respondent because he or she is or was a governing person if he or she has been wholly successful, on the merits or otherwise, in the defense of the proceeding. Under Section 8.104 of the TBOC, an enterprise may indemnify and advance expenses to a governing person who was, is or is threatened to be made a respondent in a proceeding in advance of the final disposition of the proceeding (1) after the enterprise receives a written affirmation by the person of his or her good faith belief that he or she has met the standard of conduct necessary for indemnification and a written undertaking that he or she will repay the amount if the final determination is that he or she has not met that standard or that indemnification is prohibited or (2) if a provision in the governing documents of the enterprise, resolution of the owners, members or governing authority or if an agreement requires payment after the affirmation and undertaking in (1).

Accelerated Process Systems, Inc.

Neither Accelerated Process Systems, Inc.’s certificate of incorporation nor bylaws contain any provision related to indemnification of officers and directors.

Item 21. Exhibits and Financial Statement Schedules.

(a) Exhibits:

Exhibit No.	Exhibit Description	Incorporated by Reference		
		Form	Exhibit No.	Filing Date
2.1	Separation and Distribution Agreement, dated May 9, 2018, by and between Dover Corporation and Apergy Corporation.	8-K	2.1	May 11, 2018
3.1	Amended and Restated Certificate of Incorporation of Apergy Corporation.	8-K	3.1	May 11, 2018
3.2	Amended and Restated By-Laws of Apergy Corporation.	8-K	3.2	May 11, 2018
3.3*	Certificate of Incorporation of Accelerated Process Systems, Inc.			
3.4*	Bylaws of Accelerated Process Systems, Inc.			
3.5*	Certificate of Incorporation of Apergy (Delaware) Formation, Inc.			
3.6*	Bylaws of Apergy (Delaware) Formation, Inc.			
3.7*	Certificate of Formation of Apergy Artificial Lift, LLC.			
3.8*	Limited Liability Agreement of Apergy Artificial Lift, LLC.			
3.9*	Certificate of Incorporation of Apergy BMCS Acquisition Corp.			
3.10*	Bylaws of Apergy BMCS Acquisition Corp.			
3.11*	Certificate of Formation of Apergy Energy Automation, LLC.			
3.12*	Limited Liability Agreement of Apergy Energy Automation, LLC.			
3.13*	Certificate of Formation of Apergy ESP Systems, LLC.			
3.14*	Limited Liability Agreement of Apergy ESP Systems, LLC.			
3.15*	Certificate of Incorporation of Apergy Funding Corporation.			
3.16*	Bylaws of Apergy Funding Corporation.			
3.17*	Certificate of Incorporation of Apergy USA, Inc.			
3.18*	Bylaws of Apergy USA, Inc.			
3.19*	Certificate of Incorporation of Harbison-Fischer, Inc.			
3.20*	Bylaws of Harbison-Fischer, Inc.			
3.21*	Certificate of Incorporation of Honetreat Company			
3.22*	Bylaws of Honetreat Company			
3.23*	Certificate of Incorporation of Norris Rods, Inc.			
3.24*	Bylaws of Norris Rods, Inc.			
3.25*	Certificate of Incorporation of Norriseal-Wellmark, Inc.			
3.26*	Bylaws of Norriseal-Wellmark, Inc.			
3.27*	Certificate of Incorporation of PCS Ferguson, Inc.			
3.28*	Bylaws of PCS Ferguson, Inc.			
3.29*	Certificate of Incorporation of Quartzdyne, Inc.			
3.30*	Bylaws of Quartzdyne, Inc.			
3.31*	Certificate of Incorporation of Spirit Global Energy Solutions, Inc.			

3.32*	Bylaws of Spirit Global Energy Solutions, Inc.			
3.33*	Certificate of Incorporation of Theta Oilfield Services, Inc.			
3.34*	Bylaws of Theta Oilfield Services, Inc.			
3.35*	Articles of Incorporation of UPCO, Inc.			
3.36*	Restated and Amended Bylaws of UPCO, Inc.			
3.37*	Certificate of Incorporation of US Synthetic Corporation			
3.38*	Bylaws of US Synthetic Corporation			
3.39*	Certificate of Incorporation of Wellmark Holdings, Inc.			
3.40*	Bylaws of Wellmark Holdings, Inc.			
3.41*	Certificate of Incorporation of Windrock, Inc.			
3.42*	Bylaws of Windrock, Inc.			
4.1	Indenture, dated as of May 3, 2018, between Apergy Corporation, as Issuer, and Wells Fargo Bank, National Association, as Trustee.	8-K	4.1	May 7, 2018
4.2	Form of 6.375% Senior Notes due 2026 (included as Exhibit 1 to the Indenture filed as Exhibit 4.1).	8-K	4.2	May 7, 2018
4.3	Registration Rights Agreement, dated May 3, 2018, by and between Apergy Corporation and J.P. Morgan Securities LLC, for itself and on behalf of the several initial purchasers.	8-K	4.3	May 7, 2018
4.4	Effective Date Supplemental Indenture, dated as of May 9, 2018, among the Guarantors and Wells Fargo Bank, National Association, as Trustee.	8-K	4.1	May 11, 2018
5.1*	Opinion of Baker & McKenzie LLP			
10.1	Purchase Agreement, dated April 19, 2018, by and among Apergy Corporation and J.P. Morgan Securities LLC, for itself and on behalf of the several initial purchasers named therein.	8-K	10.1	April 25, 2018
10.2	Escrow Agreement, dated May 3, 2018, by and among Wells Fargo Bank, National Association, Apergy Corporation and JPMorgan Chase Bank, N.A.	8-K	10.1	May 7, 2018
10.3	Employee Matters Agreement, dated May 9, 2018, by and between Dover Corporation and Apergy Corporation.	8-K	10.1	May 11, 2018
10.4	Tax Matters Agreement, dated May 9, 2018, by and between Dover Corporation and Apergy Corporation.	8-K	10.2	May 11, 2018
10.5	Transition Services Agreement, dated May 9, 2018, by and between Dover Corporation and Apergy Corporation.	8-K	10.3	May 11, 2018
10.6	Credit Agreement, dated May 9, 2018, among Apergy Corporation, as borrower, the lenders and issuing banks party thereto and JPMorgan Chase Bank, N.A., as administrative agent.	8-K	10.4	May 11, 2018
10.7+	Apergy Corporation 2018 Equity and Cash Incentive Plan.	8-K	10.5	May 11, 2018
10.8+	Apergy Corporation Executive Officer Annual Incentive Plan.	8-K	10.6	May 11, 2018
10.9+	Apergy USA, Inc. Executive Deferred Compensation Plan.	8-K	10.7	May 11, 2018
10.10+	Apergy Corporation Executive Severance Plan.	8-K	10.8	May 11, 2018

10.11+	Apergy Corporation Senior Executive Change-in-Control Severance Plan.	8-K	10.9	May 11, 2018
10.12+	Form of award grant letter for restricted stock unit awards made under the Apergy Corporation 2018 Equity and Cash Incentive Plan.	8-K	10.10	May 11, 2018
10.13+	Form of award grant letter for performance share awards made under the Apergy Corporation 2018 Equity and Cash Incentive Plan.	8-K	10.11	May 11, 2018
21.1*	List of Subsidiaries.			
23.1*	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm.			
23.2*	Consent of Baker & McKenzie LLP (included in Exhibit 5.1 hereto).			
24.1*	Power of Attorney (included on the signature page hereto).			
25.1*	Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of Wells Fargo Bank, National Association.			
99.1*	Form of Letter of Transmittal.			
99.2*	Form of Letter to DTC Participants.			
99.3*	Form of Letter to Beneficial Owners.			
101.INS XBRL*	Instance Document.			
101.SCH XBRL*	Taxonomy Extension Schema Document.			
101.CAL XBRL*	Taxonomy Extension Calculation Linkbase Document.			
101.LAB XBRL*	Taxonomy Extension Labels Linkbase Document.			
101.PRE XBRL*	Taxonomy Extension Presentation Linkbase Document.			
101.DEF XBRL*	Taxonomy Extension Definition Linkbase Document.			

* Filed herewith.
\+ Denotes compensatory plan.

(b) The consolidated financial statement schedules are included in the audited financial statements or the notes thereto, or the unaudited interim financial statement or the notes thereto, included elsewhere herein.

Item 22. Undertakings.

(a) Each of the undersigned registrants hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total

dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) that, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) that, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, if the registrants are subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; p*rovided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) that, for the purpose of determining liability of the registrants under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

each of the undersigned registrants undertake that in a primary offering of securities of the undersigned registrants pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrants will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned registrants relating to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrants or used or referred to by the undersigned registrants;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrants or its securities provided by or on behalf of the undersigned registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned registrants to the purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrants pursuant to the foregoing provisions, or otherwise, the registrants have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrants of expenses incurred or paid by a director, officer or controlling person of the registrants in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in

connection with the securities being registered, the registrants will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

(c) The undersigned registrants hereby undertake to respond to requests for information that is incorporated by reference into the prospectus pursuant to Items 4, 10(b), 11, or 13 of this Form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(d) The undersigned registrants hereby undertake to supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY CORPORATION

By: /s/ Sivasankaran Somasundaram
Name: Sivasankaran Somasundaram
Title: President and Chief Executive Officer

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	President, Chief Executive Officer and Director (principal executive officer)
/s/ Jay A. Nutt Jay A. Nutt	Senior Vice President and Chief Financial Officer (principal financial officer and principal accounting officer)
/s/ Daniel W. Rabun Daniel W. Rabun	Director
/s/ Stephen M. Todd Stephen M. Todd	Director
/s/ Stephen K. Wagner Stephen K. Wagner	Director
/s/ Gary P. Luquette Gary P. Luquette	Director
/s/ Kenneth M. Fisher Kenneth M. Fisher	Director
/s/ Mamatha Chamarthi Mamatha Chamarthi	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

ACCELERATED PROCESS SYSTEMS, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY (DELAWARE) FORMATION, INC.

By: /s/ Julia Wright
Name: Julia Wright
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Julia Wright Julia Wright	President and Director (principal executive officer)
/s/ David Skipper David Skipper	Treasurer, Assistant Secretary and Director (principal financial officer and principal accounting officer)
/s/ Jay A. Nutt Jay A. Nutt	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY FUNDING CORPORATION

By: /s/ Julia Wright
Name: Julia Wright
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Julia Wright Julia Wright	President and Director (principal executive officer)
/s/ David Skipper David Skipper	Treasurer, Assistant Secretary and Director (principal financial officer and principal accounting officer)
/s/ Jay A. Nutt Jay A. Nutt	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY USA, INC.

By: /s/ Sivasankaran Somasundaram
Name: Sivasankaran Somasundaram
Title: President and Chief Executive Officer

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	President and Chief Executive Officer (principal executive officer)
/s/ David Skipper David Skipper	Treasurer, Assistant Secretary and Director (principal financial officer and principal accounting officer)
/s/ Jay A. Nutt Jay A. Nutt	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY BMCS ACQUISITION CORP.

By: /s/ Robert K. Galloway
Name: Robert K. Galloway
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Robert K. Galloway Robert K. Galloway	President and Director (principal executive officer)
/s/ Curtis Stucki Curtis Stucki	Vice President, Treasurer, Assistant Secretary and Director (principal financial officer and principal accounting officer)
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY ARTIFICIAL LIFT, LLC

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY ESP SYSTEMS, LLC

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Manager (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Manager
/s/ Julia Wright Julia Wright	Manager

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

APERGY ENERGY AUTOMATION, LLC

By: /s/ Syed Raza
Name: Syed Raza
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Syed Raza Syed Raza	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

HARBISON-FISCHER, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

HONETREAT COMPANY

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

NORRIS RODS, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

NORRISEAL-WELLMARK, INC.

By: /s/ Syed Raza
Name: Syed Raza
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Syed Raza Syed Raza	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

PCS FERGUSON, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

QUARTZDYNE, INC.

By: /s/ Syed Raza
Name: Syed Raza
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Syed Raza Syed Raza	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

THETA OILFIELD SERVICES, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

UPCO, INC.

By: /s/ Paul E. Mahoney
Name: Paul E. Mahoney
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Paul E. Mahoney Paul E. Mahoney	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

US SYNTHETIC CORPORATION

By: /s/ Robert K. Galloway
Name: Robert K. Galloway
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Robert K. Galloway Robert K. Galloway	President and Director (principal executive officer)
/s/ Curtis Stucki Curtis Stucki	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

WELLMARK HOLDINGS, INC.

By: /s/ Syed Raza
Name: Syed Raza
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Syed Raza Syed Raza	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on November 14, 2018.

WINDROCK, INC.

By: /s/ Syed Raza
Name: Syed Raza
Title: President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jay A. Nutt and Julia Wright and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933 (and further amendments, including post-effective amendments thereto), and to file the same with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities on November 14, 2018.

Signature	Title
/s/ Syed Raza Syed Raza	President and Director (principal executive officer)
/s/ Carine Baerlocher Carine Baerlocher	Vice President, Treasurer and Assistant Secretary (principal financial officer and principal accounting officer)
/s/ Sivasankaran Somasundaram Sivasankaran Somasundaram	Director
/s/ Julia Wright Julia Wright	Director

Exhibit 3.3

ARTICLES OF INCORPORATION

OF

PRODUCTS FABRICATION, INC.

ARTICLE ONE

The name of the corporation is Products Fabrication, Inc.

ARTICLE TWO

The period of its duration is perpetual.

ARTICLE THREE

The purpose of which the corporation is organized is the transaction of any or all lawful business for which corporations may be incorporated under the Texas Business Corporation Act.

ARTICLE FOUR

The aggregate number of shares which the corporation shall have the authority to issue is One Hundred Thousand (100,000) of no par value.

ARTICLE FIVE

The corporation will not commence business until it has received for the issuance of shares consideration of the value of One Thousand Dollars ($1,000.00) consisting of money, labor done or property actually received.

ARTICLE SIX

The street address of its initial registered office is 6214 Nyoka, Houston, Texas 77041, and the name of its initial registered agent at such address is Tim Burke.

ARTICLE SEVEN

The number of directors constituting the initial board of directors is three (3), and the names and addresses of the persons who are to serve as directors until the first annual meeting of the shareholders or until their successors are elected and qualified are:

Tim Burke
6214 Nyoka
Houston, Texas 77041

Marvin Card
6630 Roxburgh, Suite 175
Houston, Texas 77041

Grady Ingle, Jr.
6630 Roxburgh, Suite 175
Houston, Texas 77041

ARTICLE EIGHT

The name and address of the incorporator is:

Tim Burke
6214 Nyoka
Houston, Texas 77041

/s/ Tim Burke

THE STATE OF TEXAS)
)
COUNTY OF HARRIS)

BEFORE ME, a Notary Public, on this day personally appeared Tim Burke, known to me to be the person whose name is subscribed to the foregoing document and, being by me first duly sworn, declared that the statements therein are true and correct.

GIVE UNDER MY HAND AND SEAL OF OFFICE ON THIS 10th day of November, 1988.

/s/ Grady Ingle

Notary Public - and for
The State of Texas

ARTICLES OF MERGER

of

TRILOGY VENTURES, LLC
a Delaware limited liability company

into

PRODUCTS FABRICATION, INC.,
a Texas corporation

Pursuant to the provisions of Article 5.04 of the Texas Business Corporation Act, the undersigned domestic corporation and foreign limited liability company certify the following Articles of Merger adopted for the purpose of effecting a merger in accordance with the provisions of the Texas Business Corporation Act.

1. The name of each of the entities that are a party to the Agreement and Plan of Merger and the laws under which they are organized are:

Name of Corporation	State
Trilogy Ventures, LLC	Delaware
Products Fabrication, Inc.	Texas

2. An Agreement and Plan of Merger was approved and adopted in accordance with the provisions of Article 5.03 of the Texas Business Corporation Act providing for the combination of Trilogy Ventures, LLC and Products Fabrication, Inc., and resulting in Products Fabrication, Inc. being the sole surviving corporation of the merger ("Surviving Entity").

3. An executed copy of the Agreement and Plan of Merger is on file at the principal place of business of the Surviving Entity, located at 1602 Mooney Rd., Houston, TX 77093, and a copy of the Agreement and Plan of Merger will be furnished by such entity, on written request and without cost, to any shareholder of each domestic corporation that is a party to or created by the Agreement and Plan of Merger and to any creditor or obligee of the parties to the merger at the time of the merger if such obligation is then outstanding.

4. No Amendments to the Articles of Incorporation of the Surviving Entity are to be effected by the merger.

5. As to the undersigned domestic corporation, the approval of whose shareholders is required, the number of outstanding shares of each class or series of stock of such corporation entitled to vote with other shares or as a class, on the Agreement and Plan of Merger are as follows:

Name of Corporation	Number of Shares Outstanding	Class or Series	Number of Shares Entitled to Vote as a Series or Class
Products Fabrication, Inc.	60,000	Common	-0-

6. As to the undersigned domestic corporation, the approval of whose shareholders is required, the number of shares, not entitled to vote only as a class, voted for and against the Agreement and Plan of Merger, respectively, and, if the shares of any class or series are entitled to vote as a class, the number of shares of each such class or series voted for and against the Agreement and Plan of Merger, are as follows:

Name of Corporation	Total Voted For	Total Voted Against	Class	Number of Shares Entitled to Vote as a Class or Series: Voted For	Number of Shares Entitled to Vote as a Class or Series: Voted Against
Products Fabrication, Inc.	60,000	-0-	Common		

7. The Agreement and Plan of Merger and the performance of its terms were duly authorized by all action required by the laws under which each foreign corporation or other entity that is a party to the merger was incorporated or organized and by its constituent documents.

8. The Surviving Entity will be responsible for the payment of all fees and franchise taxes of Trilogy Ventures, LLC as required by law and will be obligated to pay such fees and franchise taxes if the same are not timely paid.

9. The merger will become effective upon filing.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have executed and delivered these Articles of Merger as of this 11th day of March, 2009

TRILOGY VENTURES, LLC

By: /s/ Brad Goebel
Name: Brad Goebel
Title: President

PRODUCTS FABRICATION, INC.

By: /s/ David Zachariah
Name: David Zachariah
Title: Vice President

ARTICLES OF AMENDMENT

TO THE

ARTICLES OF INCORPORATION

OF

PRODUCTS FABRICATION, INC.

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act, Products Fabrication, Inc., a Texas corporation (the "Corporation"), hereby adopts the following Articles of Amendment to the Articles of Incorporation of the Corporation.

ARTICLE ONE

The name of the Corporation is Products Fabrication, Inc.

ARTICLE TWO

Article Four of the Articles of Incorporation of the Corporation is hereby amended and restated in its entirety to read as follows:

"ARTICLE FOUR

Capital Stock. The total number of shares of capital stock which the corporation shall have authority to issue is one hundred one thousand (101,000) shares of capital stock, classified as (i) one hundred thousand (100,000) shares of Class A Voting Common Stock, no par value ("Class A Voting Common Stock") and (ii) one thousand (1,000) shares of Class B Non-Voting Common Stock, no par value ("Class B Non-Voting Common Stock").

The designations and the powers, preferences, rights, qualifications, limitations, and restrictions of the Class A Voting Common Stock and the Class B Non-Voting Common Stock (collectively, the "Common Stock") are as follows:

1. Class A Voting Common Stock.

(a) Number of Shares. The corporation shall have the authority to issue one hundred thousand (100,000) shares of Class A Voting Common Stock.

(b) Dividends. The holders of the Class A Voting Common Stock shall be entitled to receive such dividends (payable in cash, stock or otherwise) as may be declared thereon by the Board of Directors at any time and from time to time out of any funds of the corporation legally available therefor.

(c) Voting Rights. The holders of the shares of the Class A Voting Common Stock shall be entitled to vote upon all matters submitted to a vote of the shareholders of the corporation and shall be entitled to one vote for each share of Class A Voting Common Stock held.

(d) Liquidation Rights. In the event of any voluntary or involuntary liquidation, dissolution, or winding-up of the corporation, the holders of shares of Common Stock shall be entitled to receive all of the remaining assets of the corporation available for distribution to its shareholders, ratably in proportion to the number of shares of Common Stock held by them, regardless of whether such shares are shares of Class A Voting Common Stock or Class B Non-Voting Common Stock.

2. Class B Non-Voting Common Stock.

(a) Number of Shares. The corporation shall have the authority to issue one thousand (1,000) shares of Class B Non-Voting Common Stock.

(b) Dividends. The holders of the Class B Non-Voting Common Stock shall not be entitled to receive dividends (whether in cash, stock or other property) from the corporation; provided, however, the holders of the Class B Non-Voting Common Stock shall be entitled to receive distributions from the corporation upon the liquidation, dissolution, or winding-up of the corporation as provided in Section 2(d) below.

(c) Voting Rights. Except as required by law, the holders of shares of Class B Non-Voting Common Stock shall not be entitled to vote on matters submitted to a vote of the shareholders of the corporation.

(d) Liquidation Rights. In the event of any voluntary or involuntary liquidation, dissolution, or winding-up of the corporation, the holders of shares of Common Stock shall be entitled to receive all of the remaining assets of the corporation available for distribution to its shareholders, ratably in proportion to the number of shares of Common Stock held by them, regardless of whether such shares are shares of Class A Voting Common Stock or Class B Non-Voting Common Stock."

ARTICLE THREE

The amendments made by these Articles of Amendment have been effected in conformity with the provisions of the Texas Business Corporation Act. The holder of all of the shares outstanding and entitled to vote on said amendments has signed a consent in writing adopting said amendment.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand this 2nd day of September, 2009.

PRODUCTS FABRICATION, INC.

By: /s/ Brad Goebel
Brad Goebel, President

CERTIFICATE OF AMENDMENT

TO THE

ARTICLES OF INCORPORATION

OF

PRODUCTS FABRICATION, INC.

Pursuant to the provisions of Sections 3.051 to 3.056 and Section 21.052 to 21.055 of the Texas Business Organizations Code (the "*TBOC*"), Products Fabrication, Inc., a Texas corporation (the "*Corporation*"), hereby adopts the following Certificate of Amendment to the Articles of Incorporation of the Corporation.

Article 1 - Entity Information

The name of the filing entity is Products Fabrication, Inc. The filing entity is a for-profit corporation. The file number issued to the filing entity by the secretary of state is 109549500 and the date of formation of the entity is November 22, 1988.

Article 2 - Amendments

Article One of the Articles of Incorporation of the Corporation is hereby amended to read in its entirety as follows:

"The name of the corporation is Accelerated Production Systems, Inc."

Article 3 - Statement of Approval

The amendment to the Articles of Incorporation has been approved in the manner required by the TBOC and by the governing documents of the entity.

Article 4 - Effectiveness of Filing

This document becomes effective when the document is filed by the secretary of state.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment to the Articles of Incorporation as of the 10th day of December, 2012.

By. /s/ Brad Goebel
Brad Goebel, President

CERTIFICATE OF MERGER

OF

CHALLENGER PROCESS SYSTEMS CO.
(a Delaware corporation)

INTO

ACCELERATED PRODUCTION SYSTEMS, INC.
(a Texas corporation)

*** * * * * * * ***

Pursuant to Chapter 10 of the Business Organizations Code of the State of Texas, the undersigned parties submit this certificate of merger and hereby certify the following information relating to the merger of Challenger Process Systems Co., a Delaware corporation, with and into the Accelerated Production Systems, Inc., a Texas corporation:

FIRST: That the name, organizational form and state of incorporation of each of the constituent corporations of the merger are as follows:

NAME	ORGANIZATIONAL FORM	STATE OF ORGANIZATION	SURVIVING CORPORATION
Challenger Process Systems Co.	Foreign corporation	Delaware	No
Accelerated Production Systems, Inc.	For profit corporation	Texas	Yes

SECOND: That an Agreement and Plan of Merger has been approved, adopted, executed and acknowledged by each of the constituent corporations in accordance with the requirements of Chapter 10 of the Business Organizations Code of the State of Texas.

THIRD: That the surviving corporation of the merger is Accelerated Production Systems, Inc., a Texas corporation.

FOURTH: That the certificate of formation of Accelerated Production Systems, Inc. shall be the certificate of formation of the surviving corporation until amended in accordance with applicable law, and the only amendment to the certificate of formation to be effected by the merger contemplated herein is that, effective as of the effective time of the merger, Article One thereof shall be amended and replaced in its entirety by the following:

“The name of the corporation is Accelerated Process Systems, Inc.”

FIFTH: That a signed Agreement and Plan of Merger is on file at the principal place of business of the surviving corporation, the address of which is 24310 Tomball Parkway, Tomball, Texas 77375.

SIXTH: That a copy of the Agreement and Plan of Merger will be, on written request, furnished without cost by the surviving corporation to any owner or member of any domestic entity that is a party to the Agreement and Plan of Merger.

SEVENTH: That the Agreement and Plan of Merger has been approved by each of the constituent corporations as required by the laws of the jurisdiction of formation of each of the constituent corporations and the governing documents of each of the constituent corporations.

EIGHTH: No new domestic corporation or other entity will be created pursuant to this Agreement and Plan of Merger.

NINTH: In lieu of providing a tax certificate, the surviving corporation will be liable for the payment of the required franchise taxes.

TENTH: That this document becomes effective at a later date, which is not more than ninety (90) days after the date of signing. The delayed effective date is January 1, 2016.

[*Signatures appear on following page.*]

IN WITNESS WHEREOF, this Certificate of Merger has been duly executed as of the 15th day of December, 2015 by a duly authorized officer of each of the constituent corporations.

CHALLENGER PROCESS SYSTEMS CO., a Delaware corporation

By: /s/ Paul Mahoney
Name: Paul Mahoney
Title: President

ACCELERATED PRODUCTION SYSTEMS, INC., a Texas corporation

By: /s/ David Martin
Name: David Martin
Title: President

Exhibit 3.4

BY-LAWS

The By-laws adopted at the organization meeting should be here inserted. The following outlines the principal subjects to be covered:

Article I.	Name of corporation, principal place of business and corporate seal.
Article II.	Corporate powers and purposes.
Article III.	Capital stock with sections designating the amount, number of shares and value per share; voting rights; form of certificates and method of signing same, and procedure in case of lost certificates.
Article IV.	Officers and directors.
Article V.	Authority and duties of officers and directors.
Article VI.	Fiscal year of corporation.
Article VII.	Meetings of stockholders and directors with sections fixing date of annual meetings, notice required for calling same, provision as to meetings upon waiver of notice and requirements for a quorum.
Article VIII.	Amendment of By-laws providing method of amendment either by vote of the stockholders representing a majority or some other designated proportion of the outstanding shares at any stockholders' meeting or at any special meeting when notice of proposed amendment has been given in the notice of the meeting.

(Note: In the event of subsequent amendment, alteration or repeal of By-laws, a marginal notation should be made by the Secretary opposite the By-law affected referring to the date of the meeting taking such action).

BY-LAWS

OF

PRODUCTS FABRICATION, INC.

ARTICLE I OFFICES

The principal office of the corporation in the State of Texas shall be located in the City of Houston, County of Harris. The corporation may have such other offices, either within or without the State of Texas, as the Board of Directors may designate or as the business of the corporation may require from time to time.

ARTICLE II SHAREHOLDERS

SECTION 1 Annual Meeting. The annual meeting of the shareholders shall be held on the third Wednesday in the month of February in each year, beginning with the year 1989, at the hour of 10:00 o'clock A.M., for the purpose of electing Directors and for the transaction of such other business as may come before the meeting. If the day fixed for the annual meeting shall be a legal holiday in the State of Texas, such meeting shall be held on the next succeeding business day. If the election of Directors shall not be held on the day designated herein for any annual meeting of the shareholders, or at any adjournment thereof, the Board of Directors shall cause the election to be held at a special meeting of the shareholders as soon thereafter as conveniently may be.

SECTION 2 Special Meetings. Special meetings of the shareholders, for any purpose or purposes, unless otherwise prescribed by statute, may be called by the President or by the Board of Directors, and shall be called by the President at the request of holders of not less than 31 per cent of all the outstanding shares of the corporation entitled to vote at the meeting.

SECTION 3 Place of Meeting. The Board of Directors may designate any place, either within or without the State of Texas unless otherwise prescribed by statute, as the place of meeting for any annual meeting or for any special meeting called by the Board of Directors. A waiver of notice signed by all shareholders entitled to vote at a meeting may designate any place, either within or without the State of Texas, unless otherwise prescribed by statute, as the place for the holding of such meeting. If no designation is made, or if a special meeting be otherwise called, the place of meeting shall be the principal office of the corporation in the State of Texas.

SECTION 4 Notice of Meeting. Written notice stating the place, day and hour of the meeting and, in case of special meeting, the purpose or purposes for which the meeting is called, shall unless otherwise prescribed by statute, be delivered not less than 30 days nor more than 60 days before the date of the meeting, either personally or by mail, by or at the direction of the President, or the Secretary, or the persons calling the meeting, to each shareholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, addressed to the shareholder at his address as it appears on the stock transfer books of the corporation, with postage thereon prepaid.

SECTION 5 Closing of Transfer Books or Fixing of Record Date. For the purpose of determining shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment thereof, or shareholders entitled to receive payment of any dividend, or in order to make a determination of shareholders for any other proper purpose, the Board of Directors of the corporation may provide that the stock transfer books shall be closed for a stated period but not to exceed, in any case, 90 days. If the stock transfer books shall be closed for the purpose of determining shareholders entitled to notice of or to vote at a meeting of shareholders, such books shall be closed for at least 60 days immediately preceding such meeting. In lieu of closing the stock transfer books, the Board of Directors may fix in advance a date as the record date for any such determination of shareholders, such date in any case to be not more than 60 days and, in case of a meeting of shareholders, not less

than 30 days prior to the date on which the particular action, requiring such determination of shareholders is to be taken. If the stock transfer books are not closed and no record date is fixed for the determination of shareholders, or shareholders entitled to receive payment of a dividend, the date on which notice of the meeting is mailed or the date on which the resolution of the Board of Directors declaring such dividend is adopted, as the case may be, shall be the record date for such determination of shareholders. When a determination of stockholders entitled to vote at any meeting of shareholders has been made as provided in this section, such determination shall apply to any adjournment thereof.

SECTION 6 Voting Lists. The officer or agent having charge of the stock transfer books for shares of the corporation shall make a complete list of the shareholders entitled to vote at each meeting of shareholders or any adjournment thereof, arranged in alphabetical order, with the address of and the number of shares held by each. Such list shall be produced and kept open at the time and place of the meeting and shall be subject to the inspection of any shareholder during the whole time of the meeting for the purposes thereof.

SECTION 7 Quorum. A majority of the outstanding shares of the corporation entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of shareholders. If less than a majority of the outstanding shares are represented at a meeting, a majority of the shares so represented may adjourn the meeting from time to time without further notice. At such adjourned meeting at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally noticed. The shareholders present at a duly organized meeting may continue to transact business until adjournment, notwithstanding the withdrawal of enough shareholders to leave less than a quorum.

SECTION 8 Proxies. At all meetings of shareholders, a shareholder may vote in person or by proxy executed in writing by shareholder or by his duly authorized attorney in fact. Such proxy shall be filed with the secretary of the corporation before or at the time of the meeting. No proxy shall be valid after sixty (60) days from the date of its execution, unless otherwise provided in the proxy.

SECTION 9 Voting of Shares. Subject to the provisions of Section 12 of this Article II, each outstanding share entitled to vote shall be entitled to one vote upon each matter submitted to a vote at a meeting of shareholders.

SECTION 10 Voting of Shares by Certain Holders. Shares standing in the name of another corporation may be voted by such officer, agent or proxy as the by-laws of such corporation may prescribe, or in the absence of such provision, as the board of directors of such corporation may determine.

Shares held by an administrator, executor, guardian or conservator may be voted by him, either in person or by proxy, without a transfer of such shares into his name. Shares standing in the name of a trustee may be voted by him, either in person or by proxy, but no trustee shall be entitled to vote shares held by him without a transfer of such shares into his name.

Shares standing in the name of a receiver may be voted by such receiver, and shares held by or under the control of a receiver may be voted by such receiver without the transfer thereof into his name if authority so to do be contained in an appropriate order of the court by which such receiver was appointed.

A shareholder whose shares are pledged shall be entitled to vote such shares until the shares have been transferred into the name of the pledgee, and thereafter the pledgee shall be entitled to vote the shares so transferred.

Shares of its own stock belonging to the corporation shall not be voted, directly or indirectly, at any meeting, and shall not be counted in determining the total number of outstanding shares at any given time.

SECTION 11 Informal Action by Shareholders. Unless otherwise provided by law, any action required to be taken at a meeting of the shareholders, or any other action which may be taken at a meeting of the shareholders, may be taken without a meeting if a consent in writing setting forth the action so taken, shall be signed by all of the shareholders entitled to vote with respect to the subject matter thereof.

SECTION 12 Cumulative Voting. Unless otherwise provided by law, at each election for Directors every shareholder entitled to vote at such election shall have the right to vote, in person or by proxy, the number of shares owned by him for as many persons as there are Directors to be elected and for a many persons as there are Directors to be elected and for whose election he has a right to vote, or to cumulate his votes by giving one candidate as many votes as the number of his shares shall equal, or by distributing such votes on the same principle among any number of candidates.

ARTICLE III BOARD OF DIRECTORS

SECTION 1 General Powers. The business and affairs of the corporation shall be managed by its Board of Directors.

SECTION 2 Number, Tenure and Qualifications. The number of directors of the corporation shall be three. Each director shall hold office until the next annual meeting of shareholders and until his successor shall have been elected and qualified.

SECTION 3 Regular Meetings. A regular meeting of the Board of Directors shall be held without other notice than this by-law immediately after, and at the same place as, the annual meeting of shareholders. The Board of Directors may provide, by resolution, the time and place for the holding of additional regular meetings without other notice than such resolution.

SECTION 4 Special Meetings. Special meetings of the Board of Directors may be called by or at the request of the President or any director. The person of persons authorized to call special meetings of the Board of Directors may fix the place for holding any special meeting of the Board of Directors called by them.

SECTION 5 Notice. Notice of any special meeting shall be given at least 5 days previously thereto by written notice delivered personally or mailed to each director at his business address, or by telegram. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail so addressed, with postage thereon prepaid. If notice be given by telegram, such notice shall be deemed to be delivered when the telegram is delivered to the telegraph company. Any director may waive notice of any meeting. The attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

SECTION 6 Quorum. A majority of the number of directors fixed by Section 2 of this Article III shall constitute a quorum for the transaction of business at any meeting of the Board of Directors, but if less than such majority is present at a meeting, a majority of the directors present may adjourn the meeting from time to time without further notice.

SECTION 7 Manner of Acting. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

SECTION 8 Action Without A Meeting. Any action that may be taken by the Board of Directors at a meeting may be taken without a meeting if a consent in writing, setting forth the action so to be taken, shall be signed before such action by all of the Directors.

SECTION 9 Vacancies. Any vacancy occurring in the Board of Directors may be filled by the affirmative vote of a majority of the remaining directors though less than a quorum of the Board of Directors, unless otherwise provided by law. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office. Any directorship to be filled by reason of an increase in the number of directors may be filled by election by the Board of Directors for a term of office continuing only until the next election of Directors by the shareholders.

SECTION 10 Compensation. By resolution of the Board of Directors, each Director may be paid his expenses, if any, of attendance at each meeting of the Board of Directors, and may be paid a stated salary as director or a fixed sum for attendance at each meeting of the Board of Directors or both. No such payment shall preclude any director from serving the corporation in any other capacity and receiving compensation therefor.

SECTION 11 Presumption of Assent. A director of the corporation who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action taken unless his dissent shall be entered in the minutes of the meeting or unless he shall file his written dissent to such action with the person acting as the secretary of the meeting before the adjournment thereof or shall forward such dissent by registered mail to the Secretary of the corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a Director who voted in favor of such action.

ARTICLE IV OFFICERS

SECTION 1 Number. The officers of the corporation shall be a President, an Executive Vice-President, and a Secretary/Treasurer, each of whom shall be elected by the Board of Directors. Such other officers and assistant officers as may be deemed necessary may be elected or appointed by the Board of Directors.

SECTION 2 Election and Term of Office. The officers of the corporation to be elected by the Board of Directors shall be elected annually by the Board of Directors at the first meeting of the Board of Directors held after each annual meeting of the shareholders. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. Each officer shall hold office until his successor shall have been duly elected and shall have qualified or until his death or until he shall resign or shall have been removed in the manner hereinafter provided.

SECTION 3 Removal. Any officer or agent may be removed by the Board of Directors whenever in its judgment, the best interests of the corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment of an office or agent shall not of itself create contract rights.

SECTION 4 Vacancies. A vacancy in any office because of death, resignation, removal, disqualification or otherwise, may be filled by the Board of Directors for the unexpired portion of the term.

SECTION 5 President. The President shall be the principal executive officer of the corporation and, subject to the control of the Board of Directors, shall in general supervise and control all of the business and affairs of the corporation. He shall, when present, preside at all meetings of the shareholders and of the Board of Directors. He may sign, with the Secretary or any other proper officer of the corporation thereunto authorized by the Board of Directors, certificates for the shares of the corporation, any deeds, mortgages, bonds, contracts, or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these By-Laws to some other officer or agent of the corporation, or shall be required by law to be otherwise signed or executed; and in general shall perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.

SECTION 6 Executive Vice-President. In the absence of the President or in event of his death, inability or refusal to act, the Executive Vice-President shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. The Executive Vice-President shall perform such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

SECTION 7 Secretary. The Secretary shall: (a) keep the minutes of the proceedings of the shareholders and of the Board of Directors in one or more books provided for that purpose; (b) see that all notices are duly given in accordance with the provisions of these By-Laws or as required by law; (c) be custodian of the corporate records and of the seal of the corporation and see that the seal of the corporation is affixed to all documents the execution of which on behalf of the corporation under its seal is duly authorized; (d) keep a register of the postoffice address of each shareholder which shall be furnished to the Secretary by such shareholder; (e) sign with the President, certificates for shares of the corporation, the issuance of which shall have authorized by resolution of the Board of Directors; (f) have general charge of the stock transfer books of the corporation; and (g) in general perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

SECTION 8 Treasurer. The Treasurer shall: (a) have charge and custody of and be responsible for all funds and securities of the corporation; (b) receive and give receipts for moneys due and payable to the corporation from any source whatsoever, and deposit all such moneys in the name of the corporation in such banks, trust companies or other depositaries as shall be selected in accordance with the provisions of Article V of these By-Laws; and (c) in general perform all of the duties incident to the office of Treasurer and such other duties as form time to time may be assigned to him by the President or by the Board of Directors. If required by the Board of Directors, the Treasurer shall give a bond for the faithful discharge of his duties in such sum and with such surety of sureties as the Board of Directors shall determine.

SECTION 9 Salaries. The salaries of the officers shall be fixed from time to time by the Board of Directors and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the corporation.

ARTICLE V CONTRACTS, LOANS, CHECKS AND DEPOSITS

SECTION 1 Contracts. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances.

SECTION 2 Loans. No loans shall be contracted on behalf of the corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances.

SECTION 3 Checks, drafts, etc. All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the corporation, shall be signed by such officer or officers, agent or agents of the corporation and in such manner as shall from time to time be determined by resolution of the Board of Directors.

SECTION 4 Deposits. All funds Of the corporation not otherwise employed shall be deposited from time to time to the credit of the corporation in such banks, trust companies or other depositaries as the Board of Directors may select.

ARTICLE VI CERTIFICATES FOR SHARES AND THEIR TRANSFER

SECTION 1 Certificates for Shares. Certificates representing shares of the corporation shall be in such form as shall be determined by the Board of Directors, Such certificates shall be signed by the President and by the Secretary or by such other officers authorized by law and by the Board of Directors so to do, and sealed with the corporate seal. All certificates for shares shall be consecutively numbered or otherwise identified. The name

and address of the person to whom the shares represented thereby are issued, with the number of shares and date of issue, shall be entered on the stock transfer books of the corporation. All certificates surrendered to the corporation for transfer shall be canceled and no new certificate shall be issued until the former certificate for a like number of shares shall have been surrendered and canceled, except that in case of a lost, destroyed or mutilated certificate a new one may be issued therefor upon such terms and indemnity to the corporation as the Board of Directors may prescribe.

SECTION 2 Transfer of Shares. Transfer of shares of the corporation shall be made only on the stock transfer books of the corporation by the holder of record thereof or by his legal representative, who shall furnish proper evidence of authority to transfer, or by his attorney thereunto authorized by power of attorney duly executed and filed with the Secretary of the corporation, and on surrender for cancellation of the certificate for such shares. The person in whose name shares stand on the books of the corporation shall be deemed by the corporation to be the owner thereof for all purposes.

ARTICLE VII FISCAL YEAR

The fiscal year of the corporation shall begin on the first day of January and end on the 31st day of December in each year.

ARTICLE VIII DIVIDENDS

The Board of Directors may from time to time declare, and the corporation may pay, dividends on its outstanding shares in the manner and upon the terms and conditions provided by law and its articles of incorporation.

ARTICLE IX CORPORATE SEAL

The Board of Directors shall provide a corporate seal which shall be circular in form and shall have inscribed thereon the name of the corporation, “Houston, Texas” as the place of incorporation, and the words, “Corporate Seal,” or an image of the Lone Star of Texas.

ARTICLE X WAIVER OF NOTICE

Unless otherwise provided by law, whenever any notice is required to be given to any shareholder or director of the corporation under the provisions of these By-Laws or under the provisions of the articles of incorporation or under the provisions of the Business Corporate Act, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

ARTICLE XI AMENDMENTS

These By-Laws by be altered, amended or repealed and new By-Laws may be adopted by the Board of Directors at any regular or special meeting of the Board of Directors.

AMENDMENT TO BYLAWS OF
PRODUCTS FABRICATION, INC.

The following provision was amended by action of the Directors by unanimous written consent in lieu of a special meeting on August 30, 2002:

That Article III, Section 2 of the Bylaws of this Corporation be amended and it is hereby amended to read as follows:

"Section 2. Number, Tenure and Qualifications. The number of Directors of the Corporation shall be one (1). Each Director shall hold office until the next annual meeting of shareholders and until his successor shall have been elected and qualified."

Signed the 30th day of August, 2002.

/s/ Timothy L. Burke
Timothy L. Burke, Director

/s/ Mike Burke
Mike Burke, Director

/s/ Kathy Payne, Director
Kathy Payne, Director

Exhibit 3.5

CERTIFICATE OF INCORPORATION
OF
WELLSITE (DELAWARE) FORMATION, INC.

FIRST: The name of the Corporation is Wellsite (Delaware) Formation, Inc. (hereinafter the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at that address is Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware as set forth in Title 8 of the Delaware Code (the "GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) of which the Corporation shall have authority to issue nine hundred (900) shares of Common Stock, each having a par value of one cent ($0.01), and one hundred (100) shares of Preferred Stock, each having a par value of one cent ($0.01).

The Board of Directors is expressly authorized to provide for the issuance of all or any shares of the Preferred Stock in one or more classes or series, and to fix for each such class or series such voting powers, full or limited, or no voting powers, and such distinctive designations, preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such class or series and as may be permitted by the GCL, including, without limitation, the authority to provide that any such class or series may be (i) subject to redemption at such time or times and at such price or prices; (ii) entitled to receive dividends (which may be cumulative or non-cumulative) at such rates, on such conditions, and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or any other series; (iii) entitled to such rights upon the dissolution of, or upon any distribution of the assets of, the Corporation; or (iv) convertible into, or exchangeable for, shares of any other class or classes of stock, or of any other series of the same or any other class or classes of stock, of the Corporation at such price or prices or at such rates of exchange and with such adjustments; all as may be stated in such resolution or resolutions.

FIFTH: The name and mailing address of the Sole Incorporator is as follows:

Name	Address
Eve Salamon	Baker & McKenzie LLP 452 Fifth Avenue New York, New York 10018

SIXTH: The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

(1) The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(2) The directors shall have concurrent power with the stockholders to make, alter, amend, change, add to or repeal the Bylaws of the Corporation.

(3) The number of directors of the Corporation shall be as from time to time fixed by, or in the manner provided in, the Bylaws of the Corporation. Election of directors need not be by written ballot unless the Bylaws so provide.

(4) No director shall be personally liable to the Corporation or any of its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. Any repeal or modification of this Article SIXTH by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification with respect to acts or omissions occurring prior to such repeal or modification.

(5) In addition to the powers and authority hereinbefore or by statute expressly conferred upon them, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, subject, nevertheless, to the provisions of the GCL, this Certificate of Incorporation, and any Bylaws adopted by the stockholders; provided, however, that no Bylaws hereafter adopted by the stockholders shall invalidate any prior act of the directors which would have been valid if such Bylaws had not been adopted.

SEVENTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the GCL) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

EIGHTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

[Remainder of this page left intentionally blank]

I, THE UNDERSIGNED, being the Sole Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the GCL, do make this Certificate, hereby declaring and certifying that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 13th day of October, 2017.

/s/ Eve Salamon
Eve Salamon
Sole Incorporator

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
WELLSITE (DELAWARE) FORMATION, INC.

Pursuant to Section 242
of the General Corporation Law of the State of Delaware

Wellsite (Delaware) Formation, Inc. a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify that:

1. The Certificate of Incorporation of the Corporation is hereby amended by deleting Article First thereof and inserting the following in lieu thereof:

"FIRST: The name of the Corporation is Apergy (Delaware) Formation, Inc. (hereinafter the "Corporation")."

2. The foregoing amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

[Signature Page Follows]

IN WITNESS WHEREOF, Wellsite (Delaware) Formation, Inc. has caused this Certificate to be executed by its duly authorized officer on the 8th day of February, 2018.

WELLSITE (DELAWARE) FORMATION, INC.

By: /s/ Matthew S. Gaudette
Name: Matthew S. Gaudette
Office: Vice President and Chief Financial Officer

BY-LAWS

OF

WELLSITE (DELAWARE) FORMATION, INC.

A Delaware Corporation

Effective October 13, 2017

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BY-LAWS
OF
WELLSITE (DELAWARE) FORMATION, INC.
(hereinafter called the "Corporation")

ARTICLE I

OFFICES

Section 1.1 Registered Office. The registered office of the Corporation shall be in the City of Wilmington, New Castle County, State of Delaware.

Section 1.2 Other Offices. The Corporation may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 2.1 Place of Meetings. Meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors.

Section 2.2 Annual Meetings. The Annual Meeting of Stockholders for the election of directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors. Any other proper business may be transacted at the Annual Meeting of Stockholders.

Section 2.3 Special Meetings. Unless otherwise required by law or by the certificate of incorporation of the Corporation, as amended and restated from time to time (the "Certificate of Incorporation"), Special Meetings of Stockholders, for any purpose or purposes, may be called by either (i) the Chairman, if there be one, or (ii) the President, (iii) any Vice President, if there be one, (iv) the Secretary or (v) any Assistant Secretary, if there be one, and shall be called by any such officer at the request in writing of (i) the Board of Directors, (ii) a committee of the Board of Directors that has been duly designated by the Board of Directors and whose powers and authority include the power to call such meetings or (iii) stockholders owning a majority of the capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. At a Special Meeting of Stockholders, only such business shall be conducted as shall be specified in the notice of meeting (or any supplement thereto).

Section 2.4 Notice. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a Special Meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, written notice of any meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to notice of and to vote at such meeting.

Section 2.5 Adjournments. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting in accordance with the requirements of Section 4 hereof shall be given to each stockholder of record entitled to notice of and to vote at the meeting.

Section 2.6 Quorum. Unless otherwise required by applicable law or the Certificate of Incorporation, the holders of a majority of the Corporation's capital stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, in the manner provided in Section 5 hereof, until a quorum shall be present or represented.

Section 2.7 Voting. Unless otherwise required by law, the Certificate of Incorporation or these By-Laws or permitted by the rules of any stock exchange on which the Corporation's shares are listed and traded, any question brought before any meeting of the stockholders, other than the election of directors, shall be decided by the vote of the holders of a majority of the total number of votes of the Corporation's capital stock represented at the meeting and entitled to vote on such question, voting as a single class. Unless otherwise provided in the Certificate of Incorporation, and subject to Section 11(a) of this Article II, each stockholder represented at a meeting of the stockholders shall be entitled to cast one (1) vote for each share of the capital stock entitled to vote thereat held by such stockholder. Such votes may be cast in person or by proxy as provided in Section 8 of this Article II. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of the stockholders, in such officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot.

Section 2.8 Proxies. Each stockholder entitled to vote at a meeting of the stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder as proxy, but no such proxy shall be voted upon after three years from its date, unless such proxy provides for a longer period. Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(i) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(ii) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a telegram or cablegram to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such telegram or cablegram, provided that any such telegram or cablegram must either set forth or be submitted with information from which it can be determined that the telegram or cablegram was authorized by the stockholder. If it is determined that such telegrams or cablegrams are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information on which they relied.

Any copy, facsimile telecommunication or other reliable reproduction of the writing, telegram or cablegram authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing, telegram or cablegram for any and all purposes for which the original writing, telegram or cablegram could be used; provided, however, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing, telegram or cablegram.

Section 2.9 Consent of Stockholders in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any Annual or Special Meeting of Stockholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section 9 to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided above in this Section 9.

Section 2.10 List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of the stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting (i) either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 2.11 Record Date.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by applicable law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 2.12 Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 10 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders.

Section 2.13 Conduct of Meetings. The Board of Directors of the Corporation may adopt by resolution such rules and regulations for the conduct of any meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) the determination of when the polls shall open and close for any given matter to be voted on at the meeting; (iii) rules and procedures for maintaining order at the meeting and the safety of those present; (iv) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (v) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (vi) limitations on the time allotted to questions or comments by participants.

ARTICLE III

DIRECTORS

Section 3.1 Number and Election of Directors. The Board of Directors shall consist of not less than one nor more than fifteen members, the exact number of which shall initially be fixed by the Incorporator and thereafter from time to time by the Board of Directors. Except as provided in Section 2 of this Article III, directors shall be elected by a plurality of the votes cast at each Annual Meeting of Stockholders and each director so elected shall hold office until the next Annual Meeting of Stockholders and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation or removal. Directors need not be stockholders.

Section 3.2 Vacancies. Unless otherwise required by law or the Certificate of Incorporation, vacancies on the Board of Directors or any committee thereof arising through death, resignation, removal, an increase in the number of directors constituting the Board of Directors or such committee or otherwise may be filled only by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. The directors so chosen shall, in the case of the Board of Directors, hold office until the next annual election and until their successors are duly elected and qualified, or until their earlier death, resignation or removal and, in the case of any committee of the Board of Directors, shall hold office until their successors are duly appointed by the Board of Directors or until their earlier death, resignation or removal.

Section 3.3 Duties and Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-Laws required to be exercised or done by the stockholders.

Section 3.4 Meetings. The Board of Directors and any committee thereof may hold meetings, both regular and special, either within or without the State of Delaware. Regular meetings of the Board of Directors or any committee thereof may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors or such committee, respectively. Special meetings of the Board of Directors may be called by the Chairman, if there be one, the President, or by any director. Special meetings of any committee of the Board of Directors may be called by the chairman of such committee, if there be one, the President, or any director serving on such committee. Notice thereof stating the place, date and hour of the meeting shall be given to each director (or, in the case of a committee, to each member of such committee) either by mail not less than forty-eight (48) hours before the date of the meeting, by telephone or telegram on twenty-four (24) hours' notice, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

Section 3.5 Organization. At each meeting of the Board of Directors or any committee thereof, the Chairman of the Board of Directors or the chairman of such committee, as the case may be, or, in his or her absence or if there be none, a director chosen by a majority of the directors present, shall act as chairman. Except as provided below, the Secretary of the Corporation shall act as secretary at each meeting of the Board of Directors and of each committee thereof. In case the Secretary shall be absent from any meeting of the Board of Directors or of any committee thereof, an Assistant Secretary shall perform the duties of secretary at such meeting; and in the absence from any such meeting of the Secretary and all the Assistant Secretaries, the chairman of the meeting may appoint any person to act as secretary of the meeting. Notwithstanding the foregoing, the members of each committee of the Board of Directors may appoint any person to act as secretary of any meeting of such committee and the Secretary or any Assistant Secretary of the Corporation may, but need not if such committee so elects, serve in such capacity.

Section 3.6 Resignations and Removals of Directors. Any director of the Corporation may resign from the Board of Directors or any committee thereof at any time, by giving notice in writing to the Chairman of the Board of Directors, if there be one, the President or the Secretary of the Corporation and, in the case of a committee, to the chairman of such committee, if there be one. Such resignation shall take effect at the time therein specified or, if no time is specified, immediately; and, unless otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective. Except as otherwise required by applicable law and subject to the rights, if any, of the holders of shares of preferred stock then outstanding, any director or the entire Board of Directors may be removed from office at any time by the affirmative vote of the holders of at least a majority in voting power of the issued and outstanding capital stock of the Corporation entitled to vote in the election of directors. Any director serving on a committee of the Board of Directors may be removed from such committee at any time by the Board of Directors.

Section 3.7 Quorum. Except as otherwise required by law, the Certificate of Incorporation or the rules and regulations of any securities exchange or quotation system on which the Corporation's securities are listed or quoted for trading, at all meetings of the Board of Directors or any committee thereof, a majority of the entire Board of Directors or a majority of the directors constituting such committee, as the case may be, shall constitute a quorum for the transaction of business and the act of a majority of the directors or committee members present at any meeting at which there is a quorum shall be the act of the Board of Directors or such committee, as applicable. If a quorum shall not be present at any meeting of the Board of Directors or any committee thereof, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

Section 3.8 Actions of the Board by Written Consent. Unless otherwise provided in the Certificate of Incorporation or these By-Laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all the members of the Board of Directors or such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or such committee.

Section 3.9 Meetings by Means of Conference Telephone. Unless otherwise provided in the Certificate of Incorporation or these By-Laws, members of the Board of Directors of the Corporation, or any committee thereof, may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 3.9 shall constitute presence in person at such meeting.

Section 3.10 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. Each member of a committee must meet the requirements for membership, if any, imposed by applicable law and the rules and regulations of any securities exchange or quotation system on which the securities of the Corporation are listed or quoted for trading. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of any such committee. Subject to the rules and regulations of any securities exchange or quotation system on which the securities of the Corporation are listed or quoted for trading, in the absence or disqualification of a member of a committee, and in the absence of a designation by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another qualified member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Any committee, to the extent permitted by law and provided in the resolution establishing such committee, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Each committee shall keep regular minutes and report to the Board of Directors when required. Notwithstanding anything to the contrary contained in this Article III, the resolution of the Board of Directors establishing any committee of the Board of Directors and/or the charter of any such committee may establish requirements or procedures relating to the governance and/or operation of such committee that are different from, or in addition to, those set forth in these By-Laws and, to the extent that there is any inconsistency between these By-Laws and any such resolution or charter, the terms of such resolution or charter shall be controlling.

Section 3.11 Compensation. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary for service as director, payable in cash or securities. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for service as committee members.

Section 3.12 Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because any such director’s or officer’s vote is counted for such purpose if: (i) the material facts as to the director’s or officer’s relationship or interest and as to the contract or transaction are disclosed or are known to the

Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (ii) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (iii) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

ARTICLE IV

OFFICERS

Section 4.1 General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, a Secretary and a Treasurer. The Board of Directors, in its discretion, also may choose a Chairman of the Board of Directors (who must be a director) and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law, the Certificate of Incorporation or these By- Laws. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

Section 4.2 Election. The Board of Directors, at its first meeting held after each Annual Meeting of Stockholders (or action by written consent of stockholders in lieu of the Annual Meeting of Stockholders), shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each officer of the Corporation shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal. Any officer elected by the Board of Directors may be removed at any time by the Board of Directors. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors. The salaries of all officers of the Corporation shall be fixed by the Board of Directors.

Section 4.3 Voting Securities Owned by the Corporation. Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the President or any Vice President or any other officer authorized to do so by the Board of Directors and any such officer may, in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

Section 4.4 Chairman of the Board of Directors. The Chairman of the Board of Directors, if there be one, shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall be the Chief Executive Officer of the Corporation, unless the Board of Directors designates the President as the Chief Executive Officer, and, except where by law the signature of the President is required, the Chairman of the Board of Directors shall possess the same power as the President to sign all contracts, certificates and other instruments of the Corporation which may be authorized by the Board of Directors. During the absence or disability of the President, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the President. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may from time to time be assigned by these By-Laws or by the Board of Directors.

Section 4.5 President. The President shall, subject to the control of the Board of Directors and, if there be one, the Chairman of the Board of Directors, have general supervision of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. The President shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these By-Laws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and, provided the President is also a director, the Board of Directors. If there be no Chairman of the Board of Directors, or if the Board of Directors shall otherwise designate, the President shall be the Chief Executive Officer of the Corporation. The President shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such officer by these By-Laws or by the Board of Directors.

Section 4.6 Vice Presidents. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act (and if there be no Chairman of the Board of Directors), the Vice President, or the Vice Presidents if there are more than one (in the order designated by the Board of Directors), shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 4.7 Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings thereat in a book or books to be kept for that purpose; the Secretary shall also perform like duties for committees of the Board of Directors when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors, the Chairman of the Board of Directors or the President, under whose supervision the Secretary shall be. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and special meetings of the Board of Directors, and if there be no Assistant Secretary, then either the Board of Directors or the President may choose another officer to cause such notice to be given. The Secretary shall have custody of the seal of the Corporation and the Secretary or any Assistant Secretary, if there be one, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary or by the signature of any such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest to the affixing by such officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be.

Section 4.8 Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all transactions as Treasurer and of the financial condition of the Corporation. If required by the Board of Directors, the Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of the Treasurer and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation.

Section 4.9 Assistant Secretaries. Assistant Secretaries, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Secretary, and in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, shall perform the duties of the Secretary, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Secretary.

Section 4.10 Assistant Treasurers. Assistant Treasurers, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Treasurer, and in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, shall perform the duties of the Treasurer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Treasurer. If required by the Board of Directors, an Assistant Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors fort he faithful performance of the duties of the office of Assistant Treasurer and for the restoration to the Corporation, in case of the Assistant Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Assistant Treasurer's possession or under the Assistant Treasurer's control belonging to the Corporation.

Section 4.11 Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V

STOCK

Section 5.1 Form of Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate signed by, or in the name of the Corporation (i) by the Chairman of the Board of Directors, or the President or a Vice President and (ii) by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation, certifying the number of shares owned by such stockholder in the Corporation.

Section 5.2 Signatures. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Section 5.3 Lost Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issuance of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or such owner's legal representative, to advertise the same in such manner as the Board of Directors shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate.

Section 5.4 Transfers. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these By-Laws. Transfers of stock shall be made on the books of the Corporation only by the person named in the certificate or by such person's attorney lawfully constituted in writing and upon the surrender of the certificate therefor, properly endorsed for transfer and payment of all necessary transfer taxes; provided, however, that such surrender and endorsement or payment of taxes shall not be required in any case in which the officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or Assistant Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

Section 5.5 Dividend Record Date. In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 5.6 Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

Section 5.7 Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agencies and registry offices or agencies at such place or places as may be determined from time to time by the Board of Directors.

ARTICLE VI

NOTICES

Section 6.1 Notices. Whenever written notice is required by law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, such notice may be given by mail, addressed to such director, member of a committee or stockholder, at such person's address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Written notice may also be given personally, by telegram, telex or cable or electronic transmission, provided that in the case of notice to stockholders, the stockholder to receive the notice has consented to the form of electronic transmission.

Section 6.2 Waivers of Notice. Whenever any notice is required by applicable law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, a waiver thereof in writing, signed by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Attendance of a person at a meeting, present in person or represented by proxy, shall constitute a waiver of notice of such meeting, except where the person attends the meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any Annual or Special Meeting of Stockholders or any regular or special meeting of the directors or members of a committee of directors need be specified in any written waiver of notice unless so required by law, the Certificate of Incorporation or these By-Laws.

ARTICLE VII

GENERAL PROVISIONS

Section 7.1 Dividends. Dividends upon the capital stock of the Corporation, subject to the requirements of the General Corporation Law of the State of Delaware (the "DGCL") and the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 8 of Article III hereof), and may be paid in cash, in property, or in shares of the Corporation's capital stock. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for purchasing any of the shares of capital stock, warrants, rights, options, bonds, debentures, notes, scrip or other securities or evidences of indebtedness of the Corporation, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve.

Section 7.2 Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 7.3 Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 7.4 Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE VIII

INDEMNIFICATION

Section 8.1 Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

Section 8.2 Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer

of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 8.3 Authorization of Indemnification. Any indemnification under this Article VIII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (i) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (iv) by the stockholders. Such determination shall be made, with respect to former directors and officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

Section 8.4 Good Faith Defined. For purposes of any determination under Section 3 of this Article VIII, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be.

Section 8.5 Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 3 of this Article VIII, and notwithstanding the absence of any determination thereunder, any director or officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VIII. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VIII nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the director or officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

Section 8.6 Expenses Payable in Advance. Expenses (including attorneys' fees) incurred by a director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VIII. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

Section 8.7 Non-exclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these By-Laws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and Section 2 of this Article VIII shall be made to the fullest extent permitted by law. The provisions of this Article VIII shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VIII but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise.

Section 8.8 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VIII.

Section 8.9 Certain Definitions. For purposes of this Article VIII, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term "another enterprise" as used in this Article VIII shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VIII, references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VIII.

Section 8.10 Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 8.11 Limitation on Indemnification. Notwithstanding anything contained in this Article VIII to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VIII), the Corporation shall not be obligated to indemnify any director or officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors of the Corporation.

Section 8.12 Indemnification of Employees and Agents. The Corporation may, to the extent authorized from time to time by the Board of Directors, provide rights to indemnification and to the advancement of expenses to employees and agents of the Corporation similar to those conferred in this Article VIII to directors and officers of the Corporation.

ARTICLE IX

AMENDMENTS

Section 9.1 Amendments. These By-Laws may be altered, amended or repealed, in whole or in part, or new By-Laws may be adopted by the stockholders or by the Board of Directors; provided, however, that notice of such alteration, amendment, repeal or adoption of new By-Laws be contained in the notice of such meeting of the stockholders or Board of Directors, as the case may be. All such amendments must be approved by either the holders of a majority of the outstanding capital stock entitled to vote thereon or by a majority of the entire Board of Directors then in office.

Section 9.2 Entire Board of Directors. As used in this Article IX and in these By-Laws generally, the term “entire Board of Directors” means the total number of directors which the Corporation would have if there were no vacancies.

* * *

Adopted as of: October 13, 2017

Last Amended as of: N/A

Exhibit 3.7

CERTIFICATE OF FORMATION

OF

DOVER ARTIFICIAL LIFT, LLC

The undersigned, acting as organizer of a limited liability company under the Delaware Limited Liability Company Act, as amended (the "Act"), does hereby adopt the following Certificate of Formation for such limited liability company:

ARTICLE ONE

The name of the limited liability company is Dover Artificial Lift, LLC (the "Company").

ARTICLE TWO

The period of the Company's duration shall commence on the date of filing of this Certificate and be perpetual, unless the Company dissolves in accordance with the terms of its limited liability company agreement.

ARTICLE THREE

The purpose of the Company is to perform any activities that lawfully may be conducted by a limited liability company organized pursuant to the Act.

ARTICLE FOUR

The address of the initial registered office of the Company is 2711 Centerville Road, Suite 400, Wilmington, New Castle County, Delaware 19808, and the name of its initial registered agent at such address is Corporation Service Company.

ARTICLE FIVE

To the fullest extent permitted by applicable law, no member, manager, director or officer of the Company shall be personally liable to the Company or its members for monetary damages for an act or omission in such capacity.

Future amendments of applicable law may enlarge, but shall not diminish, the limitation on the personal liability of a member, manager, director or officer. Similarly, any repeal or amendment of this Article, or the adoption of any other provision of this Certificate of Formation inconsistent with this Article, by the members of the Company shall be prospective only and shall not adversely affect any limitation on the personal liability existing at the time of such repeal, amendment or adoption of an inconsistent provision.

ARTICLE SIX

The name of the organizer of the Company is Christopher R. Wilson, whose address is 4000 One Williams Center, Tulsa, Oklahoma 74172-0148.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation on the 31st day of October, 2014.

/s/ Christopher R. Wilson
Christopher R. Wilson, Organizer

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT

Dover Artificial Lift, LLC, a limited liability company duly formed and existing under the Limited Liability Company Act of the State of Delaware (the "Company"), does hereby certify that:

1. The Certificate of Formation of the Company is hereby amended by deleting Article One thereof and inserting the following in lieu thereof:

"The name of the limited liability company is Apergy Artificial Lift, LLC (the "Company")."

(Signature page follows)

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment on the 1st day of May, 2018.

By: /s/ Anthony K. Kosinski
Name: Anthony K. Kosinski
Title: Vice President

(*Signature Page to Certificate of Amendment (DAL LLC)*)

Exhibit 3.8

LIMITED LIABILITY COMPANY AGREEMENT

THIS LIMITED LIABILITY COMPANY AGREEMENT (this "Agreement") of Dover Artificial Lift, LLC (the "Company"), effective as of October 31, 2014 (the "Effective Date"), is entered into by Dover Energy, Inc., as the sole member of the Company (the "Member").

WHEREAS, the Company was formed as a limited liability company on the Effective Date by the filing of a Certificate of Formation with the Secretary of State of the State of Delaware pursuant to and in accordance with the Delaware Limited Liability Company Act, as amended from time to time (the "Act"); and

WHEREAS, the Member agrees that the membership in and management of the Company shall be governed by the terms set forth herein.

NOW, THEREFORE, the Member agrees as follows:

1. Name. The name of the Company is "Dover Artificial Lift, LLC".

2. Purpose. The purpose of the Company is to engage in any lawful act or activity for which limited liability companies may be formed under the Act and to engage in any and all activities necessary or incidental thereto.

3. Principal Office; Registered Agent.

(a) Principal Office. The location of the principal office of the Company shall be 3005 Highland Parkway, Suite 200, Downers Grove, Illinois 60515, or such other location as the Member may from time to time designate.

(b) Registered Agent. The registered agent of the Company for service of process in the State of Delaware and the registered office of the Company in the State of Delaware shall be that person (or entity) and location reflected in the Certificate of Formation. In the event that the registered agent ceases to act as such for any reason or the registered office shall change, the Member shall promptly designate a replacement registered agent or file a notice of change of address, as the case may be, in the manner provided by law.

4. Members.

(a) Name and Address of Member. The name and address of the Member are as follows:

Name	Address
Dover Energy, Inc.	3005 Highland Parkway, Suite 200 Downers Grove, Illinois 60515

(b) Additional Members. One or more additional members may be admitted to the Company with the consent of the Member. Prior to the admission of any such additional members to the Company, the Member shall amend this Agreement to make such changes as the Member shall determine to reflect the fact that the Company shall have such additional members. Each additional member shall execute and deliver a supplement or counterpart to this Agreement, as necessary.

(c) Interest. Unless one or more additional members are admitted to the Company in accordance with Section 4(b), the Member shall hold all of the Interest. As used herein, the term "Interest" shall mean a membership interest in the Company as provided in this Agreement and under the Act and includes any and all rights and benefits to which the holder thereof may be provided under this Agreement, together with all obligations of such holder to comply with the terms and provisions of this Agreement.

(d) Transfer of Interest. The Member may Transfer all or any part of the Interest. As used herein, the term "Transfer" includes a sale, assignment, gift, pledge, encumbrance, mortgage, exchange, merger or any other disposition.

(e) Certificates. The Company will not issue any certificates to evidence ownership of the Interest.

5. Management.

(a) Board of Directors. The business and affairs of the Company shall be managed and governed in all respects by a board of directors (each member of such board of directors, a "Director", and collectively, the "Board of Directors"). The Board of Directors shall be appointed by, and shall be subject to removal by, the Member. The initial Board of Directors shall consist of three Directors as follows: Sivasankaran "Soma" Somasundaram, Matthew E. West and Paul Mahoney. The Board of Directors shall have all the rights, powers, duties and obligations of a "manager" under the Act.

(b) Officers; Delegation of Authority. The Board of Directors may, from time to time, designate individuals (who need not be a Director) to serve as officers of the Company (each, an "Officer"). The Officers may, but need not, include a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries and a Treasurer. Any two or more offices may be held by the same person. Each Officer designated hereunder shall devote such time to the Company's business as he or she deems necessary to manage and supervise Company business and affairs in an efficient manner.

(i) President. The President shall be the chief executive officer of the Company and, subject to the control and direction of the Board of Directors, shall in general supervise and control all of the business and affairs of the Company and perform all duties and exercise all powers usually appertaining to the office of the chief executive officer, subject to the provisions of applicable law and this Agreement. The President may sign any contracts or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by this Agreement to some other Officer or agent of the Company, or shall be required by law to be otherwise signed and executed.

(ii) Vice Presidents. The Vice Presidents, in the order of their seniority, shall perform the duties and exercise the powers of the President in the event of the President's absence or disability, or at the direction of the President at any time (including with respect to signing any contracts or other instruments as set forth in Section 5(b)(i)), unless otherwise determined by the President or the Board of Directors.

(iii) Secretary; Assistant Secretaries. The Secretary shall keep and account for all books, documents, papers and records of the Company except those for which some other Officer or agent is properly accountable and have authority to attest to the signatures of the President or Vice Presidents and shall generally perform all duties usually appertaining to the office of secretary of a corporation. Any Assistant Secretary shall, at the request of the Secretary or in his or her absence or disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties as the Board of Directors, the President or the Secretary shall prescribe.

(iv) Treasurer. The Treasurer shall have custody of the Company's funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Company and shall deposit all moneys and other valuable effects in the name and to the credit of the Company in such depositories as may be designated by the Board of Directors or the President. The Treasurer shall further disburse the funds of the Company as may be ordered by the Board of Directors, and shall render to the President and the Board of Directors, when the President or the Board of Directors so require, an account of all transactions performed by the Treasurer and of the financial condition of the Company.

(v) Other Officers. Any other Officer appointed by the Board of Directors shall have such authority and responsibilities as the Board of Directors or the President may delegate to such Officer from time to time.

Any such Officer shall act pursuant to such delegated authority until such Officer is removed by the Board of Directors. Any action taken by an Officer designated by the Board of Directors pursuant to authority delegated to such Officer shall constitute the act of and serve to bind the Company. Persons dealing with the Company are entitled to rely conclusively on the power and authority of any Officer set forth in this Agreement and any instrument designating such Officer and the authority delegated to him or her.

6. Indemnification. No Member, Director or Officer of the Company shall be liable in damages to the Member or the Company for any act or omission to act if such conduct does not constitute willful misconduct, recklessness, a breach of loyalty, lack of good faith, knowing violation of law, or a transaction from which such person or entity derived an improper personal benefit. In any action or proceeding in which any Member, Director or Officer is a party by virtue of such person's or entity's status as the Member, a Director or an Officer, the Company shall, solely from the Company's assets, indemnify the Member, Director or Officer against all liabilities incurred by such person or entity in connection therewith, so long as such person's or entity's act or omission does not constitute willful misconduct, recklessness, a breach of loyalty, lack of good faith, knowing violation of law, or a transaction from which such person or entity derived an improper personal benefit. These indemnification rights shall be in addition to any other rights and remedies to which the Member, Director or Officer shall be entitled under the Act or other applicable law.

7. Term. The term of the Company shall be perpetual unless the Company is dissolved and terminated in accordance with Section 11.

8. Initial Capital Contributions. The Member hereby agrees to contribute to the Company such cash, property or services as determined by the Member.

9. Tax Status; Income and Deductions.

(a) Tax Status. As long as the Company has only one member, it is the intention of the Company and the Member that the Company be treated as a disregarded entity for federal and all relevant state tax purposes. All provisions of this Agreement are to be construed so as to preserve the Company's tax status as a disregarded entity.

(b) Income and Deductions. All items of income, gain, loss, deduction and credit of the Company (including, without limitation, items not subject to federal or state income tax) shall be treated for federal and all relevant state income tax purposes as items of income, gain, loss, deduction and credit of the Member.

10. Distributions. Distributions shall be made to the Member at the times and in the amounts determined by the Member.

11. Dissolution; Liquidation.

(a) The Company shall dissolve and its affairs shall be wound up upon the first to occur of the following: (i) the written consent of the Member, or (ii) any other event or circumstance giving rise to the dissolution of the Company under Section 18-801 of the Act, unless the Company's existence is continued pursuant to the Act.

(b) Upon dissolution of the Company, the Company shall immediately commence to wind up its affairs and the Member shall promptly liquidate the business of the Company. During the period of the winding up of the affairs of the Company, the rights and obligations of the Member under this Agreement shall continue.

(c) In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied as follows: (i) first, to creditors, to the extent otherwise permitted by law, in satisfaction of liabilities of the Company (whether by payment or the making of reasonable provision for payment thereof), and (ii) thereafter, to the Member.

(d) Upon the completion of the winding up of the Company, the Member shall file a certificate of cancellation in accordance with the Act.

12. Miscellaneous.

(a) Amendments. Amendments to this Agreement may be made only with the written consent of the Member.

(b) Governing Law. This Agreement shall be governed by the laws of the State of Delaware without regard to its conflict of laws rules.

(c) Entire Agreement. This Agreement sets forth the entire limited liability company agreement of the Company.

(d) Severability. In the event that any provision of this Agreement shall be declared to be invalid, illegal or unenforceable, such provision shall survive to the extent it is not so declared, and the validity, legality and enforceability of the other provisions hereof shall not in any way be affected or impaired thereby, unless such action would substantially impair the benefits to any party of the remaining provisions of this Agreement.

(e) Headings. All headings used in this Agreement are for convenience only and shall not be considered in construing or interpreting any provision of this Agreement.

(f) Execution. This Agreement and any amendments hereto, to the extent delivered by means of a facsimile machine or electronic mail, will be treated in all manner and respects as an original agreement and will be considered to have the same binding legal effect as if it were the original signed version thereof delivered in person.

[Signature appears on following page.]

IN WITNESS WHEREOF, the Member has executed this Agreement to be effective as of the Effective Date.

DOVER ENERGY, INC.

By: /s/ Matthew E. West
Name: Matthew E. West
Title: VP, Treasurer & Secretary

Exhibit 3.9

CERTIFICATE OF INCORPORATION

OF

DOVER BMCS ACQUISITION CORP.

1. **Name**. The name of the Corporation is Dover BMCS Acquisition Corp.

2. **Registered Agent and Address**. The address of the Corporation's registered office in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, New Castle County, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

3. **Purpose**. The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

4. **Powers and Privileges**. In furtherance of the objects and purposes of the Corporation, the Corporation shall have all the powers and privileges granted by the General Corporation Law of the State of Delaware, by any other law, or by this Certificate of Incorporation, including without limitation the power to borrow or raise money and otherwise contract indebtedness for any of the purposes of the Corporation; to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or nonnegotiable instruments and evidences of indebtedness; to secure the payment of any of the foregoing and of the interest thereon by mortgage, pledge, assignment, deed of trust or lien of or upon any or all of the property of the Corporation (real, personal or mixed), whether at the time owned or thereafter acquired; and to sell, pledge or otherwise dispose of such bonds or other obligations of the Corporation for its corporate purposes.

5. **Capitalization**. The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock, having a par value of One Dollar ($1.00) per share.

6. **Incorporator**. The name and mailing address of the Incorporator are as follows:

NAME	MAILING ADDRESS
Kathryn J. Kindell	Conner & Winters, LLP 4000 One Williams Center Tulsa, OK 74172-0148

7. **Board of Directors**. The powers of the Incorporator shall terminate upon the election of a Board of Directors of the Corporation. The number of members of the Board of Directors of the Corporation shall initially be one and shall thereafter be as set forth in the Bylaws.

8. **Duration**. The Corporation is to have perpetual existence.

9. **Limited Liability**. The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatsoever.

10. **Authority of the Board of Directors**. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the Corporation is expressly authorized:

(a) To make, alter or repeal the Bylaws of the Corporation;

(b) To authorize and cause to be executed mortgages and liens upon the real and personal property of the Corporation; and

(c) To set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purposes and to abolish any such reserve in the manner in which it was created.

11. **General**. Meetings of the stockholders may be held within or outside the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) within or outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation. Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

12. **Amendment**. The Corporation reserves the right to amend, alter, change or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

13. **Compromise or Arrangement**. Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them, and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware, on the application in a summary way of the Corporation or of any creditor or shareholder thereof, or on the application of any receiver or receivers appointed for the Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under the provisions of Section 279 of Title 8 of the Delaware Code, may order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, to be summoned in such manner as the court directs. If a majority in number representing three-fourths (3/4ths) in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as a consequence of such compromise or arrangement, the compromise or arrangement and the reorganization shall, if sanctioned by the court to which the application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders of the Corporation, as the case may be, and also on the Corporation.

14. **Liability of Directors**. To the fullest extent permitted by the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. No amendment to or repeal of this Article 14 shall apply to, or have any effect on, the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

THE UNDERSIGNED, being the Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, does make this Certificate, hereby declaring and certifying that this is his act and deed and the facts herein stated are true, and accordingly has hereunto set his hand this 18th day of September, 2007.

/s/ Kathryn J. Kindell
Kathryn J. Kindell

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

DOVER BMCS ACQUISITION CORP.

Pursuant to Section 242
of the General Corporation Law of the State of Delaware

Dover BMCS Acquisition Corp. a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify that:

1. The Certificate of Incorporation of the Corporation is hereby amended by deleting Article 1 thereof and inserting the following in lieu thereof:

"1. **Name**. The name of the Corporation is Apergy BMCS Acquisition Corp."

2. The foregoing amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

(Signature page follows)

IN WITNESS WHEREOF, Dover BMCS Acquisition Corp. has caused this Certificate to be executed by its duly authorized officer on the 1st day of May, 2018.

Dover BMCS Acquisition Corp

By: /s/ Anthony K. Kosinski
Name: Anthony K. Kosinski
Title: Vice President

(*Signature Page to Certificate of Amendment (Dover BMCS)*)

Exhibit 3.10

BYLAWS

OF

DOVER BMCS ACQUISITION CORP.

(a Delaware Corporation)

BYLAWS OF

DOVER BMCS ACQUISITION CORP.

(a Delaware Corporation)

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BYLAWS

OF

DOVER BMCS ACQUISITION CORP.

(a Delaware Corporation)

ARTICLE I

Offices and Fiscal Year

SECTION 1.01 Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware, until otherwise established by a vote of a majority of the Board of Directors in office, and a statement of such change is filed in the manner provided by statute. (Secs. 131, 133)

SECTION 1.02 Other Offices. The Corporation may also have offices at such other places within or without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation requires. (Sec. 141)

SECTION 1.03 Fiscal Year. The fiscal year of the Corporation shall be the calendar year unless otherwise fixed by resolution of the Board of Directors.

ARTICLE II

Meetings of Stockholders

SECTION 2.01 Place of Meeting. All meetings of the Stockholders of the Corporation shall be held at the registered office of the Corporation or at the principal office of the Corporation or at such other place within or without the State of Delaware as shall be designated by the Board of Directors in the notice of such meeting. (Sec. 211(a))

SECTION 2.02 Annual Meeting. Unless directors are elected by written consent in lieu of an annual meeting as permitted by this Section 2.02, an annual meeting of the Stockholders of the Corporation, for the election of Directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held in each year on the first Thursday in May (commencing in 2008) at 10:00 a.m. If such day is a legal holiday, the annual meeting shall be held on the following business day. If the annual meeting is not held on such date, the Board of Directors by majority vote shall cause a meeting to be held as soon thereafter as convenient. Stockholders may, unless the certificate of incorporation otherwise provides, act by written consent to elect Directors; provided, however, that if the consent is less than unanimous, the action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which the Directors could be elected at an annual meeting held at the effective time of the action are vacant and are filled by the action. Any other proper business may be transacted at the annual meeting. (Sec. 211(b), (c))

SECTION 2.03 Special Meetings. Special meetings of the Stockholders of the Corporation may be called at any time by the President, Chairman of the Board, or a majority of the Board of Directors, for any purpose or purposes for which meetings may be lawfully called. At any time, upon written request of any person or persons who have duly called a special meeting, which written request shall state the purpose or purposes of the meeting, it shall be the duty of the President to fix the date of the meeting to be held at such date and time as the President may fix, not less than 10 nor more than 60 days after the receipt of the request, and to give due notice thereof. If the President shall neglect or refuse to fix the time and date of such meeting and give notice thereof, the person or persons calling the meeting may do so. (Sec. 211(d))

SECTION 2.04 Notice of Meetings. Written notice of the place, date and hour of every meeting of the Stockholders, whether annual or special, shall be given by the Chairman of the Board, the President, a Vice President, the Secretary or an Assistant Secretary of the Corporation to each Stockholder of record having voting power with respect to the business to be transacted at such meeting not less than 10 nor more than 60 days before the date of the meeting. Each notice of a special meeting shall state the purpose or purposes for which the meeting is being called. Any meeting at which all Stockholders having voting power with respect to the business to be transacted thereat are present, either in person or by proxy, shall be a valid meeting for the transaction of business, notwithstanding that notice has not been given as hereinabove provided. (Sec. 222)

SECTION 2.05 Quorum, Manner of Acting and Adjournment. The holders of a majority of the stock issued and outstanding (not including treasury shares) and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the Stockholders for the transaction of business except as otherwise provided by statute, by the certificate of incorporation or by these bylaws. If, however, a quorum shall not be present or represented at any meeting of the Stockholders, the Stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At any such adjourned meeting, at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each Stockholder of record having voting power with respect to the business to be transacted at such meeting. When a quorum is present at any meeting, the vote of the holders of the majority of the stock having voting power with respect to a question present in person or represented by proxy shall decide any such question brought before such meeting, unless the question is one upon which, by express provision of the applicable statute or these bylaws, a different vote is required in which case such express provision shall govern and control the decision on such question. Except upon those questions governed by the aforesaid express provisions, the Stockholders present in person or by proxy at a duly organized meeting can continue to do business until adjournment, notwithstanding withdrawal of enough Stockholders to leave less than a quorum. (Sec. 216, 222)

SECTION 2.06 Organization. At every meeting of the Stockholders, the President or, in the absence of the President, one of the following persons present in the order stated: Chairman of the Board, if any, a chairman designated by the Board of Directors, or a chairman chosen by the Stockholders, shall act as chairman, and the Secretary, or, in his or her absence, an Assistant Secretary or a person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 2.07 Voting; Proxies. Except as provided in the certificate of incorporation or in a resolution adopted by the Board of Directors pursuant to Section 151 of the General Corporation Law of the State of Delaware and subject to Section 213 of such Law, each Stockholder shall at every meeting of the Stockholders be entitled to one vote in person or by proxy for each share of capital stock having voting power held by such Stockholder. In order to be valid, any such proxy shall be executed and delivered in accordance with the requirements of the Delaware General Corporation Law. No proxy shall be voted after three years from its date, unless the proxy provides for a longer period. Each proxy shall be executed in writing by the Stockholder or by his or her duly authorized attorney-in-fact and filed with the Secretary of the Corporation or the secretary of the meeting prior to being voted. A proxy, unless coupled with an interest, shall be revocable at will, notwithstanding any other agreement or any provision in the proxy to the contrary, but the revocation of a proxy shall not be effective until notice thereof has been given to the Secretary of the Corporation. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with

which it is coupled is an interest in the stock itself or an interest in the Corporation generally. A proxy shall not be revoked by the death or incapacity of the maker unless, before the vote is counted or the authority is exercised, written notice of such death or incapacity is given to the Secretary of the Corporation. (Sec. 212)

SECTION 2.08 Consent of Stockholders in Lieu of Meeting. Any action required to be taken at any annual or special meeting of Stockholders of the Corporation, or any action which may be taken at any annual or special meeting of the Stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each Stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days after the earliest dated consent delivered in the manner required herein to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those Stockholders who have not consented in writing. (Sec. 228)

SECTION 2.09 Voting Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least 10 days before every meeting of Stockholders, a complete list of the Stockholders entitled to vote at the meeting. The list shall be arranged in alphabetical order and show the address of each Stockholder and the number of shares registered in the name of each Stockholder. The list shall be open to the examination of any Stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any Stockholder who is present. (Sec. 219(a))

ARTICLE III

Board of Directors

SECTION 3.01 Powers. The Board of Directors shall have full power to manage the business and affairs of the Corporation; and all powers of the Corporation, except those specifically reserved or granted to the Stockholders by statute, the certificate of incorporation or these bylaws, are hereby granted to and vested in the Board of Directors. (Sec. 141(a))

SECTION 3.02 Number and Term of Office. The Board of Directors shall consist of such number of Directors, not less than one or more than seven, as may be determined from time to time by resolution of the Board of Directors. Unless and until so determined otherwise, the Board of Directors shall consist of one member. Each Director shall serve until the next annual election and until his or her successor shall have been elected and shall qualify, except in the event of his or her death, resignation or removal. All Directors of the Corporation shall be natural persons of full age, but need not be residents of Delaware or Stockholders of the Corporation. (Sec. 141(b))

SECTION 3.03 Resignations. Any Director of the Corporation may resign at any time by giving written notice to the President or the Secretary of the Corporation. Resignations shall become effective upon receipt or at such later time as shall be specified therein and, unless otherwise specified therein, the acceptance of a resignation shall not be necessary to make it effective. (Secs. 141(b), 223)

SECTION 3.04 Vacancies and Newly-Created Directorships. Vacancies and newly-created Directorships resulting from any increase in the authorized number of Directors may be filled by a majority vote of the Directors then in office, though less than a quorum, or by a sole remaining Director. Each Director so chosen shall hold office until the next annual election and until his or her successor shall have been duly elected and shall qualify, unless such Director dies, resigns or is removed prior to such time. If at any time, by reason of death or resignation or other cause, the Corporation should have no Directors in office, then an election of Directors may be held by the Stockholders or in the manner provided by statute. (Sec. 223)

SECTION 3.05 Organization. At every meeting of the Board of Directors, the Chairman of the Board, if any, or, in the case of a vacancy in the office or absence of the Chairman of the Board, the President or, in his or her absence, a chairman chosen by a majority of the Directors present, shall preside, and the Secretary or, in his or her absence, an Assistant Secretary or any person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 3.06 Place of Meeting. The Board of Directors may hold its meetings, both regular and special, at such place or places within or without the State of Delaware as the Board of Directors may from time to time appoint, or as may be designated in the notice calling the meeting. (Sec. 141(g))

SECTION 3.07 Organization Meeting. The first meeting of each newly-elected Board of Directors shall, unless otherwise specified by the President of the Corporation, be held immediately after and at the same place as, the annual meeting of Stockholders. Notice of such meeting to the newly-elected Directors shall not be necessary in order legally to constitute the meeting, provided a quorum shall be present. (Sec. 141)

SECTION 3.08 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be designated from time to time by resolution of the Board of Directors. If the date fixed for any regular meeting be a legal holiday under the laws of the State where such meeting is to be held, then the same shall be held on the next succeeding business day, not a Saturday, or at such other time as may be determined by resolution of the Board of Directors. At such meetings, the Directors shall transact such business as may properly be brought before the meeting. (Sec. 141)

SECTION 3.09 Special Meetings. Special meetings of the Board of Directors shall be held whenever called by the Chairman of the Board, if any, the President or by two or more of the Directors. Notice of each such meeting shall be given to each Director by telephone, telegram, facsimile, in writing or in person at least 24 hours (in the case of notice by telephone or in person) or 48 hours (in the case of notice by telegram or facsimile) or five days (in the case of notice by mail) before the time at which the meeting is to be held. Each such notice shall state the time and place of the meeting to be so held. Except as otherwise specifically provided in these bylaws, no notice of the objects or purposes of any special meeting of the Board of Directors need be given, and, unless otherwise indicated in the notice thereof, any and all business may be transacted at any special meeting. (Sec. 141)

SECTION 3.10 Conference Telephone Meetings. One or more Directors may participate in a meeting of the Board, or of a committee of the Board, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear or otherwise communicate with each other. Participation in a meeting pursuant to this section shall constitute presence in person at such meeting. (Sec. 141(i))

SECTION 3.11 Quorum, Manner of Acting and Adjournment. At all meetings of the Board a majority of the Directors shall constitute a quorum for the transaction of business. The vote of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except on additions, amendments, repeal or any changes whatsoever in the bylaws or the adoption of new bylaws with respect to any of which the affirmative votes of at least a majority of the members of the Board of Directors shall be necessary for the adoption of such changes and except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. (Sec. 141(b))

SECTION 3.12 Committees. The Board of Directors may, by resolution adopted by a majority of the whole Board, designate an executive committee, an audit committee, a compensation committee and/or one or more other committees, each committee to consist of one or more Directors of the Corporation. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member, and the alternate or alternates, if any, designated for such member, of any committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another Director to act at the meeting in the place of any such absent or disqualified member. A majority of the members of any committee, as at the time constituted, shall be necessary to constitute a quorum thereof, and the act of a majority of the members of any committee who are present at any meeting thereof at which a quorum is present shall be the act of such committee. Any vacancy in any committee shall be filled by vote of a majority of the Directors at the time in office. (Sec. 141(c))

Any such committee, to the extent provided in the resolution establishing such committee, shall have and may exercise all the power and authority of the Board of Directors in the management of the business and affairs of the Corporation, except that no such committee shall have the authority of the Board of Directors (a) to approve or recommend to the Stockholders any action or matter expressly required by the Delaware General Corporation Law to be submitted to the Stockholders for approval; (b) to adopt, amend, or repeal any bylaw of the Corporation; (c) to fill vacancies in the Board of Directors or any committee, including any directorship to be filled by reason of an increase in the number of Directors; (d) to elect or remove officers or members of any committee; (e) to fix the compensation of any member of a committee; (f) to alter or repeal any resolution of the Board of Directors which provides for any of the foregoing or which by its terms provides that it shall not be so amendable or repealable; or (g) to declare a dividend or to authorize the issuance of shares of the Corporation. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors. Each committee so formed shall fix the time and place of its meetings and its own rules of procedure and shall keep regular minutes of its meetings and report from time to time to the Board of Directors. (Sec. 141(c))

SECTION 3.13 Consent of Directors in Lieu of Meeting. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board or the committee consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or the committee. (Sec. 141(f))

SECTION 3.14 Presumption of Assent. A Director who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action unless such Director’s dissent shall be entered in the minutes of the meeting or unless such Director shall file his or her written dissent to such action with the person acting as secretary of the meeting before the adjournment thereof or unless such Director shall forward such dissent by registered mail to the Secretary of the Corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a Director who voted in favor of such action.

SECTION 3.15 Compensation of Directors. Unless otherwise restricted by the certificate of incorporation, the Board of Directors shall have the authority to fix the compensation of Directors. The Directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as Director. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings. (Sec. 141(h))

SECTION 3.16 Removal of Directors. Except as otherwise provided in the certificate of incorporation or the General Corporation Law of the State of Delaware, any Director may be removed from office, with or without cause, at any time by the holders of a majority of the shares then entitled to vote at any election of Directors, at any annual or special meeting of the Stockholders. (Sec. 141(k))

ARTICLE IV

Notices - Waivers

SECTION 4.01 Notice, What Constitutes. Whenever, under the provisions of the statutes of Delaware or the certificate of incorporation or of these bylaws, notice is required to be given to any Director or Stockholder, such notice may be given in writing, by mail, addressed to such Director or Stockholder, at the address of such Director or Stockholder as it appears on the records of the Corporation, with postage thereon prepaid. Notice given in accordance with this provision shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to Directors of special meetings must be given in accordance with Section 3.09 of Article III hereof. (Sec. 222(b))

SECTION 4.02 Waivers of Notice. Whenever any notice is required to be given under the provisions of the certificate of incorporation, these bylaws, or by statute, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Stockholders, Directors, or members of a committee of Directors need be specified in any written waiver of notice of such meeting unless so required by the certificate of incorporation or these bylaws. Attendance by a person, either in person or by proxy, at any meeting, shall constitute a waiver of notice of such meeting, except where a person attends a meeting for the express purpose of objecting to the transaction of any business because the meeting was not lawfully called or convened. (Sec. 229)

ARTICLE V

Officers

SECTION 5.01 Number, Qualifications and Designation. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, Secretary and such other officers as may be elected in accordance with the provisions of Section 5.03 of this Article. One person may hold more than one office. Officers may be, but need not be, Directors or Stockholders of the Corporation. (Sec. 142)

SECTION 5.02 Election and Term of Office. The officers of the Corporation, except those elected by delegated authority pursuant to Section 5.03 of this Article, shall be elected annually by the Board of Directors, and each such officer shall hold his or her office until such officer’s successor shall have been elected and shall qualify, or until his or her earlier death, resignation or removal. Any officer may resign at any time upon written notice to the Corporation or may be removed, with or without cause, by the Board of Directors. (Sec. 142)

SECTION 5.03 Other Officers, Committees and Agents. The Board of Directors may from time to time elect such other officers, including without limitation a Chairman of the Board of Directors, a Vice Chairman of the Board of Directors, a Treasurer and one or more Vice Presidents, Assistant Secretaries and Assistant Treasurers, and appoint such committees, employees and other agents as it deems necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as are provided in these bylaws, or as the Board of Directors may from time to time determine. The Board of Directors may delegate to any officer or committee the power to elect subordinate officers and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents. (Sec. 142)

SECTION 5.04 Chairman of the Board and Vice Chairman. The Chairman of the Board of Directors, if any, shall preside at all meetings of the Board of Directors and shall perform such other duties as may be prescribed by the Board of Directors from time to time. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The Vice Chairman, if any, shall, at the request of the Chairman or in his or her absence or disability, perform the duties and exercise the powers of the Chairman, and shall perform such other duties as the Board of Directors shall prescribe.

SECTION 5.05 President. The President shall preside at all meetings of the Stockholders and, if there is no Chairman or Vice Chairman of the Board, or in their absence, all meetings of the Board of Directors. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The President may employ all agents and employees of the Corporation and may discharge any such agent or employee, and, in general, shall perform all duties incident to the office of President, and such other duties as from time to time may be assigned to him or her by the Board of Directors.

SECTION 5.06 Chief Executive Officer. The Board of Directors shall assign the duties of the Chief Executive Officer of the Corporation to either the Chairman of the Board of Directors or the President. Such duties shall include the authority and powers necessary for the general management of the business, properties, activities and policies of the Corporation, subject, however, to the control of the Board of Directors.

SECTION 5.07 Chief Operating Officer. The Board of Directors shall assign the duties of the Chief Operating Officer of the Corporation to the Chairman of the Board of Directors, the President or any other officer of the Corporation. Such duties shall include the authority necessary for the active management and general supervision of the everyday business of the Corporation and the duty to see that all orders and policies of the Chief Executive Officer and the Board of Directors are carried into effect. The Chief Operating Officer shall appoint and remove, employ and discharge, and fix the compensation of all employees and agents of the Corporation, other than the duly elected officers, subject to the approval of the Board of Directors. At the request of the Chief Executive Officer, or in his or her absence or disability, the Chief Operating Officer shall exercise all the powers and discharge all the duties of the Chief Executive Officer.

SECTION 5.08 Chief Financial Officer. The Board of Directors may assign the duties of Chief Financial Officer of the Corporation to any officer of the Corporation. Such duties shall include the active management and supervision of the financial and accounting affairs of the Corporation.

SECTION 5.09 Vice Presidents. Any Vice President shall, at the request of the President or in his absence or disability, perform the duties and exercise the powers of the President and such other duties as may from time to time be assigned by the Board of Directors or by the President. At the discretion of the Board of Directors, one or more Vice Presidents may be designated as an Executive Vice President or Senior Vice President.

SECTION 5.10 Secretary and Assistant Secretaries. The Secretary shall attend all meetings of the Stockholders and of the Board of Directors and shall record the proceedings of the Stockholders and of the Directors and of committees of the Board in a book or books to be kept for that purpose; see that notices are given and records and reports properly kept and filed by the Corporation as required by law; and, in general, perform all duties incident to the office of Secretary, and such other duties as may from time to time be assigned to him by the Board of Directors or the President. Any Assistant Secretary shall, at the request of the Secretary or in his or her absence or disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties as the Board of Directors, the President or the Secretary shall prescribe.

SECTION 5.11 Treasurer and Assistant Treasurers. The Treasurer, if any, shall have or provide for the custody of the funds or other property of the Corporation. Whenever so required by the Board of Directors or the President, the Treasurer shall render an account showing his or her transactions as Treasurer and the financial condition of the Corporation. In general, the Treasurer shall discharge such other duties as may from time to time be assigned to him or her by the Board of Directors or the President. Any Assistant Treasurer shall, at the request of the Treasurer or in his or her absence or disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties as the Board of Directors, the President or the Treasurer shall prescribe.

SECTION 5.12 Officers' Bonds. No officer of the Corporation need provide a bond to guarantee the faithful discharge of his or her duties unless the Board of Directors shall by resolution so require a bond, in which event such officer shall give the Corporation a bond (which shall be renewed if and as required) in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of his or her office. (Sec. 142(c))

SECTION 5.13 Compensation. The compensation of the officers and agents of the Corporation elected by the Board of Directors shall be fixed from time to time by the Board of Directors. Any employment contract, whether for an officer, agent or employee, if expressly approved or specifically authorized by the Board of Directors, may fix a term of employment, and any such contract, but only if so approved or authorized, shall be valid and binding upon the Corporation in accordance with the terms thereof; provided, however, this provision shall not limit or restrict in any way the right of the Corporation at any time in its discretion (which right is hereby expressly reserved) to remove from office, discharge or terminate the employment or otherwise dispense with the services of any such officer, agent or employee, as provided in these bylaws, prior to the expiration of the term of employment under any such contract, provided only that the Corporation shall not thereby be relieved of any continuing liability for salary or other compensation provided for in such contract. (Sec. 141(a))

SECTION 5.14 Action with Respect to Securities of Other Corporations. Unless otherwise directed by the Board of Directors, the Chairman of the Board of Directors, if any, the President or any Vice President of the Corporation shall have power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of security holders, or with respect to any action of security holders, of any other Corporation in which the Corporation may hold securities and shall have power to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities in such other Corporation.

ARTICLE VI

Capital Stock

SECTION 6.01 Issuance. The Directors may, at any time and from time to time, if all of the shares of capital stock which the Corporation is authorized by its certificate of incorporation to issue have not been issued, subscribed for, or otherwise committed to be issued, issue or take subscriptions for additional shares of its capital stock up to the amount authorized in its certificate of incorporation. Unless otherwise provided by the certificate of incorporation or these bylaws, the Board of Directors may provide by resolution that some or all of any or all classes and series of the shares of capital stock of the Corporation shall be uncertificated shares, provided that

such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. The stock certificates of the Corporation shall be numbered and registered in the stock ledger and transfer books of the Corporation as they are issued. The Board of Directors may also appoint one or more transfer agents and/or registrars for its stock of any class or classes and for the transfer and registration of certificates representing the same and may require stock certificates to be countersigned by one or more of them. They shall be signed by the Chairman or Vice Chairman of the Board of Directors or the President or a Vice President and attested by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer. Any or all of the signatures upon such certificate may be a facsimile, engraved or printed. In case any officer, transfer agent or registrar who has signed, or whose facsimile, engraved or printed signature has been placed upon, any share certificate shall have ceased to be such officer, transfer agent or registrar, before the certificate is issued, it may be issued with the same effect as if he or she were such officer, transfer agent or registrar at the date of its issue. (Secs. 158, 161)

SECTION 6.02 Regulations Regarding Certificates. Except as otherwise provided by law, the Board of Directors shall have the power and authority to make all such rules and regulations as it may deem expedient concerning the issuance, transfer and registration or the replacement of certificates for shares of capital stock of the Corporation. (Sec. 161)

SECTION 6.03 Stock Certificates. Stock certificates of the Corporation shall be in such form as is provided by statute and approved by the Board of Directors. The stock record books and the blank stock certificate books shall be kept by the Secretary of the Corporation or by any agency designated by the Board of Directors for that purpose. (Sec. 158)

SECTION 6.04 Lost, Stolen, Destroyed or Mutilated Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or such owner's legal representative, to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed. (Sec. 167)

SECTION 6.05 Record Holder of Shares. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

SECTION 6.06 Determination of Stockholders of Record for Voting at Meetings. In order that the Corporation may determine the Stockholders entitled to notice of or to vote at any meeting of Stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action. If no record date is fixed by the Board of Directors, the record date for determining Stockholders entitled to notice of or to vote at a meeting of Stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of Stockholders of record entitled to notice of or to vote at a meeting of Stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting. (Sec. 213(a))

SECTION 6.07 Determination of Stockholders of Record for Dividends and Distributions. In order that the Corporation may determine the Stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the Stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining Stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. (Sec. 213(c))

SECTION 6.08 Determination of Stockholders of Record for Written Consent. In order that the Corporation may determine the Stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by statute, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to a Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors, when prior action by the Board of Directors is required by statute, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action. (Sec. 213(b))

ARTICLE VII

Indemnification of Officers, Directors, Employees and Agents

SECTION 7.01 Indemnification in Third Party Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "third party proceeding" (which shall include, for purposes of this Article VII, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the Corporation) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, judgments, fines, and amounts paid in settlement, actually and reasonably incurred by such person in connection with such third party proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal third party proceeding, had no reasonable cause to believe such conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal third party proceeding, had reasonable cause to believe that such conduct was unlawful. (Sec. 145)

SECTION 7.02 Indemnification in Corporate Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "corporate proceeding" (which shall mean, for purposes of this Article VII, any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor) by reason of the fact that such person is or was a Director or

officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection with the defense or settlement of a corporate proceeding if the person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation, unless and only to the extent that the court in which the corporate proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. (Sec. 145(b))

SECTION 7.03 Mandatory Indemnification. To the extent that a present or former Director or officer of the Corporation has been successful on the merits or otherwise in defense of any third party or corporate proceeding referred to in Section 7.01 or 7.02 above or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection therewith. (Sec. 145(c))

SECTION 7.04 Determination of Entitlement to Indemnification. Any indemnification under Section 7.01, 7.02 or 7.03 of this Article VII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of a present or former Director or officer of the Corporation is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 7.01, 7.02 or 7.03 of this Article VII. This determination shall be made, with respect to a person who is a Director or officer at the time of the determination:

(a) By a majority vote of the Directors who are not parties to the third party or corporate proceeding, even though less than a quorum;

(b) By a committee of Directors designated by a majority vote of Directors, even though less than a quorum;

(c) If there are no such Directors, or if such Directors so direct, by independent legal counsel in a written opinion; or

(d) By the Stockholders. (Sec. 145(d))

SECTION 7.05 Burden of Proof. In the event a claim for indemnification by any person who was or is a party or is threatened to be made a party to any third party or corporate proceeding is denied by the Corporation (except for a claim by a person described in Section 7.08 hereof), the Corporation shall, in any subsequent legal proceedings relating to such denial, have the burden of proving that indemnification was not required under Section 7.01, 7.02 or 7.03 of this Article VII, without regard to Section 7.04 hereof, or under any other agreement or undertaking between the Corporation and such person, or was not permitted under applicable law.

SECTION 7.06 Advancing Expenses. Expenses incurred by a Director or officer or former Director or officer in defending a third party or corporate proceeding shall be paid by the Corporation in advance of the final disposition of such third party or corporate proceeding upon receipt of an undertaking by or on behalf of the Director or officer or former Director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VII. Expenses incurred by other employees and agents may be so paid upon the terms and conditions, if any, as the Corporation deems appropriate. (Sec. 145(e))

SECTION 7.07 Employee Benefit Plans. For purposes of this Article VII, references to "other enterprises" shall include, but are not limited to, employee benefit plans; references to "fines" shall include, but are not limited to, any excise taxes assessed on a person with respect to an employee benefit plan; references to "serving at the request of the Corporation" shall include, but are not limited to, any service as a Director, officer, employee or agent of the Corporation which imposes duties on, or involves service by, the Director, officer, employee or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation." (Sec. 145(i))

SECTION 7.08 Employees and Agents. The Corporation may, but is not required to, indemnify any employee or agent of the Corporation who is not also a Director or officer of the Corporation if the determining group as specified in Section 7.04 determines that indemnification is proper in the specific case. (Sec. 145)

SECTION 7.09 Scope of Article. The indemnification and advancement of expenses, as authorized by this Article VII, shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of Stockholders or disinterested Directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding an office. (Sec. 145(f))

SECTION 7.10 Reliance on Provisions. Each person who shall act as a Director or officer of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall be deemed to be doing so in reliance upon rights of indemnification provided by this Article VII, and the provisions of this Article VII shall be deemed a contract between the Corporation and such person.

SECTION 7.11 Insurance. The Corporation shall have the power to, but shall not be obligated to, purchase and maintain insurance on behalf of any person who is or was a Director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Article VII. (Sec. 145(g))

SECTION 7.12 Rights Continue. The indemnification and advancement of expenses provided by or granted pursuant to this Article VII, unless otherwise provided when authorized or ratified, shall continue as to a person who has ceased to be a Director, officer, employee or agent of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, and shall inure to the benefit of the heirs, executors and administrators of such a person. (Sec. 145(j))

ARTICLE VIII

General Provisions

SECTION 8.01 Dividends. Subject to the provisions of the certificate of incorporation, if any, dividends upon the capital stock of the Corporation may be declared by the Board of Directors at any regular or special meeting in accordance with law. Dividends may be paid in cash, in property, or in shares of the capital stock of the Corporation, subject to the provisions of the certificate of incorporation. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, thinks proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Board of Directors shall think conducive to the interest of the Corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created. (Secs. 170, 171, 173)

SECTION 8.02 Contracts. Except as otherwise provided in these bylaws, the Chairman of the Board of Directors, the President or a Vice President of the Corporation shall sign, in the name and on behalf of the Corporation, all deeds, bonds, contracts, mortgages and other instruments, the execution of which shall be authorized by the Board of Directors; provided, however, that the Board of Directors may authorize any other officer or officers or any agent or agents of the Corporation to sign, in the name and on behalf of the Corporation, any such deed, bond, contract, mortgage or other instrument. Such authority may be general or confined to specific instances. Except as so authorized by the Board of Directors, and except in the ordinary course of business, no officer, agent or employee of the Corporation shall have power or authority to bind the Corporation by any contract or engagement or to pledge, sell or otherwise dispose of its credit or any of its property or to render it pecuniarily liable in any amount in excess of $10,000. (Secs. 141, 142)

SECTION 8.03 Checks. All checks, notes, bills of exchange or other orders in writing shall be signed by such person or persons as the Board of Directors may from time to time designate. (Secs. 141, 142)

SECTION 8.04 Amendment of Bylaws. These bylaws may be altered, amended or repealed or new bylaws may be adopted by the Stockholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the certificate of incorporation, at any regular or special meeting of the Stockholders or of the Board of Directors, if notice of such alteration, amendment, repeal or adoption of new bylaws be contained in the notice of such special meeting. (Sec. 109)

Approved by the Board of Directors as of the 18th day of September, 2007.

CERTIFICATE OF FORMATION

OF

DOVER ENERGY AUTOMATION, LLC

The undersigned, acting as organizer of a limited liability company under the Delaware Limited Liability Company Act, as amended (the "Act"), does hereby adopt the following Certificate of Formation for such limited liability company:

ARTICLE ONE

The name of the limited liability company is Dover Energy Automation, LLC (the "Company").

ARTICLE TWO

The period of the Company's duration shall commence on the date of filing of this Certificate and be perpetual, unless the Company dissolves in accordance with the terms of its limited liability company agreement.

ARTICLE THREE

The purpose of the Company is to perform any activities that lawfully may be conducted by a limited liability company organized pursuant to the Act.

ARTICLE FOUR

The address of the initial registered office of the Company is 2711 Centerville Road, Suite 400, Wilmington, New Castle County, Delaware 19808, and the name of its initial registered agent at such address is Corporation Service Company.

ARTICLE FIVE

To the fullest extent permitted by applicable law, no member, manager, director or officer of the Company shall be personally liable to the Company or its members for monetary damages for an act or omission in such capacity.

Future amendments of applicable law may enlarge, but shall not diminish, the limitation on the personal liability of a member, manager, director or officer. Similarly, any repeal or amendment of this Article, or the adoption of any other provision of this Certificate of Formation inconsistent with this Article, by the members of the Company shall be prospective only and shall not adversely affect any limitation on the personal liability existing at the time of such repeal, amendment or adoption of an inconsistent provision.

ARTICLE SIX

The name of the organizer of the Company is Christopher R. Wilson, whose address is 4000 One Williams Center, Tulsa, Oklahoma 74172-0148.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation on the 12th day of May, 2014.

/s/ Christopher R. Wilson
Christopher R. Wilson, Organizer

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT

Dover Energy Automation, LLC, a limited liability company duly formed and existing under the Limited Liability Company Act of the State of Delaware (the "Company"), does hereby certify that:

1. The Certificate of Formation of the Company is hereby amended by deleting Article One thereof and inserting the following in lieu thereof:

"The name of the limited liability company is Apergy Energy Automation, LLC (the "Company")."

(Signature page follows)

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment on the 1st day of May, 2018.

By: /s/ Anthony K. Kosinski
Name: Anthony K. Kosinski
Title: Vice President

(Signature Page to Certificate of Amendment (DEA))

LIMITED LIABILITY COMPANY AGREEMENT

THIS LIMITED LIABILITY COMPANY AGREEMENT (this "Agreement") of Dover Energy Automation, LLC (the "Company"), effective as of May 12, 2014 (the "Effective Date"), is entered into by Dover Energy, Inc., as the sole member of the Company (the "Member").

WHEREAS, the Company was formed as a limited liability company on the Effective Date by the filing of a Certificate of Formation with the Secretary of State of the State of Delaware pursuant to and in accordance with the Delaware Limited Liability Company Act, as amended from time to time (the "Act"); and

WHEREAS, the Member agrees that the membership in and management of the Company shall be governed by the terms set forth herein.

NOW, THEREFORE, the Member agrees as follows:

1. Name. The name of the Company is "Dover Energy Automation, LLC".

2. Purpose. The purpose of the Company is to engage in any lawful act or activity for which limited liability companies may be formed under the Act and to engage in any and all activities necessary or incidental thereto.

3. Principal Office; Registered Agent.

(a) Principal Office. The location of the principal office of the Company shall be 3005 Highland Parkway, Suite 200, Downers Grove, Illinois 60515, or such other location as the Member may from time to time designate.

(b) Registered Agent. The registered agent of the Company for service of process in the State of Delaware and the registered office of the Company in the State of Delaware shall be that person (or entity) and location reflected in the Certificate of Formation. In the event that the registered agent ceases to act as such for any reason or the registered office shall change, the Member shall promptly designate a replacement registered agent or file a notice of change of address, as the case may be, in the manner provided by law.

4. Members.

(a) Name and Address of Member. The name and address of the Member are as follows:

Name	Address
Dover Energy, Inc.	3005 Highland Parkway, Suite 200 Downers Grove, Illinois 60515

(b) Additional Members. One or more additional members may be admitted to the Company with the consent of the Member. Prior to the admission of any such additional members to the Company, the Member shall amend this Agreement to make such changes as the Member shall determine to reflect the fact that the Company shall have such additional members. Each additional member shall execute and deliver a supplement or counterpart to this Agreement, as necessary.

(c) Interest. Unless one or more additional members are admitted to the Company in accordance with Section 4(b), the Member shall hold all of the Interest. As used herein, the term "Interest" shall mean a membership interest in the Company as provided in this Agreement and under the Act and includes any and all rights and benefits to which the holder thereof may be provided under this Agreement, together with all obligations of such holder to comply with the terms and provisions of this Agreement.

(d) Transfer of Interest. The Member may Transfer all or any part of the Interest. As used herein, the term "Transfer" includes a sale, assignment, gift, pledge, encumbrance, mortgage, exchange, merger or any other disposition.

(e) Certificates. The Company will not issue any certificates to evidence ownership of the Interest.

5. Management.

(a) Board of Directors. The business and affairs of the Company shall be managed and governed in all respects by a board of directors (each member of such board of directors, a "Director", and collectively, the "Board of Directors"). The Board of Directors shall be appointed by, and shall be subject to removal by, the Member. The initial Board of Directors shall consist of four Directors as follows: Sivasankaran "Soma" Somasundaram, Matthew E. West, Don D. Suh and Marcelie Tucker, Jr. The Board of Directors shall have all the rights, powers, duties and obligations of a "manager" under the Act.

(b) Officers; Delegation of Authority. The Board of Directors may, from time to time, designate individuals (who need not be a Director) to serve as officers of the Company (each, an "Officer"). The Officers may, but need not, include a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries and a Treasurer. Any two or more offices may be held by the same person. Each Officer designated hereunder shall devote such time to the Company's business as he or she deems necessary to manage and supervise Company business and affairs in an efficient manner.

(i) President. The President shall be the chief executive officer of the Company and, subject to the control and direction of the Board of Directors, shall in general supervise and control all of the business and affairs of the Company and perform all duties and exercise all powers usually appertaining to the office of the chief executive officer, subject to the provisions of applicable law and this Agreement. The President may sign any contracts or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by this Agreement to some other Officer or agent of the Company, or shall be required by law to be otherwise signed and executed.

(ii) Vice Presidents. The Vice Presidents, in the order of their seniority, shall perform the duties and exercise the powers of the President in the event of the President's absence or disability, or at the direction of the President at any time (including with respect to signing any contracts or other instruments as set forth in Section 5(b)(i)), unless otherwise determined by the President or the Board of Directors.

(iii) Secretary; Assistant Secretaries. The Secretary shall keep and account for all books, documents, papers and records of the Company except those for which some other Officer or agent is properly accountable and have authority to attest to the signatures of the President or Vice Presidents and shall generally perform all duties usually appertaining to the office of secretary of a corporation. Any Assistant Secretary shall, at the request of the Secretary or in his or her absence or disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties as the Board of Directors, the President or the Secretary shall prescribe.

(iv) Treasurer. The Treasurer shall have custody of the Company's funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Company and shall deposit all moneys and other valuable effects in the name and to the credit of the Company in such depositories as may be designated by the Board of Directors or the President. The Treasurer shall further disburse the funds of the Company as may be ordered by the Board of Directors, and shall render to the President and the Board of Directors, when the President or the Board of Directors so require, an account of all transactions performed by the Treasurer and of the financial condition of the Company.

(v) Other Officers. Any other Officer appointed by the Board of Directors shall have such authority and responsibilities as the Board of Directors or the President may delegate to such Officer from time to time.

Any such Officer shall act pursuant to such delegated authority until such Officer is removed by the Board of Directors. Any action taken by an Officer designated by the Board of Directors pursuant to authority delegated to such Officer shall constitute the act of and serve to bind the Company. Persons dealing with the Company are entitled to rely conclusively on the power and authority of any Officer set forth in this Agreement and any instrument designating such Officer and the authority delegated to him or her.

6. Indemnification. No Member, Director or Officer of the Company shall be liable in damages to the Member or the Company for any act or omission to act if such conduct does not constitute willful misconduct, recklessness, a breach of loyalty, lack of good faith, knowing violation of law, or a transaction from which such person or entity derived an improper personal benefit. In any action or proceeding in which any Member, Director or Officer is a party by virtue of such person's or entity's status as the Member, a Director or an Officer, the Company shall, solely from the Company's assets, indemnify the Member, Director or Officer against all liabilities incurred by such person or entity in connection therewith, so long as such person's or entity's act or omission does not constitute willful misconduct, recklessness, a breach of loyalty, lack of good faith, knowing violation of law, or a transaction from which such person or entity derived an improper personal benefit. These indemnification rights shall be in addition to any other rights and remedies to which the Member, Director or Officer shall be entitled under the Act or other applicable law.

7. Term. The term of the Company shall be perpetual unless the Company is dissolved and terminated in accordance with Section 11.

8. Initial Capital Contributions. The Member hereby agrees to contribute to the Company such cash, property or services as determined by the Member.

9. Tax Status; Income and Deductions.

(a) Tax Status. As long as the Company has only one member, it is the intention of the Company and the Member that the Company be treated as a disregarded entity for federal and all relevant state tax purposes. All provisions of this Agreement are to be construed so as to preserve the Company's tax status as a disregarded entity.

(b) Income and Deductions. All items of income, gain, loss, deduction and credit of the Company (including, without limitation, items not subject to federal or state income tax) shall be treated for federal and all relevant state income tax purposes as items of income, gain, loss, deduction and credit of the Member.

10. Distributions. Distributions shall be made to the Member at the times and in the amounts determined by the Member.

11. Dissolution; Liquidation.

(a) The Company shall dissolve and its affairs shall be wound up upon the first to occur of the following: (i) the written consent of the Member, or (ii) any other event or circumstance giving rise to the dissolution of the Company under Section 18-801 of the Act, unless the Company's existence is continued pursuant to the Act.

(b) Upon dissolution of the Company, the Company shall immediately commence to wind up its affairs and the Member shall promptly liquidate the business of the Company. During the period of the winding up of the affairs of the Company, the rights and obligations of the Member under this Agreement shall continue.

(c) In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied as follows: (i) first, to creditors, to the extent otherwise permitted by law, in satisfaction of liabilities of the Company (whether by payment or the making of reasonable provision for payment thereof), and (ii) thereafter, to the Member.

(d) Upon the completion of the winding up of the Company, the Member shall file a certificate of cancellation in accordance with the Act.

12. Miscellaneous.

(a) Amendments. Amendments to this Agreement may be made only with the written consent of the Member.

(b) Governing Law. This Agreement shall be governed by the laws of the State of Delaware without regard to its conflict of laws rules.

(c) Entire Agreement. This Agreement sets forth the entire limited liability company agreement of the Company.

(d) Severability. In the event that any provision of this Agreement shall be declared to be invalid, illegal or unenforceable, such provision shall survive to the extent it is not so declared, and the validity, legality and enforceability of the other provisions hereof shall not in any way be affected or impaired thereby, unless such action would substantially impair the benefits to any party of the remaining provisions of this Agreement.

(e) Headings. All headings used in this Agreement are for convenience only and shall not be considered in construing or interpreting any provision of this Agreement.

(f) Execution. This Agreement and any amendments hereto, to the extent delivered by means of a facsimile machine or electronic mail, will be treated in all manner and respects as an original agreement and will be considered to have the same binding legal effect as if it were the original signed version thereof delivered in person.

[Signature appears on following page.]

IN WITNESS WHEREOF, the Member has executed this Agreement to be effective as of the Effective Date.

DOVER ENERGY, INC.

By: /s/ Matthew E. West
Name: Matthew E. West
Title: VP, Treasurer & Secretary

ARTICLES OF ORGANIZATION
OF
DYNAFLO, LLC

a Limited Liability Company

ARTICLE I

The name of the limited liability company is Dynaflo, LLC.

ARTICLE II

The Company shall have perpetual existence, beginning from the date of filing of these Articles of Organization with the Secretary of State of the State of Oklahoma.

ARTICLE III

The purpose of the Company is to engage in any lawful act or activity for which limited liability companies may be organized under the Oklahoma Limited Liability Company Act, as now in effect or hereafter amended (the "Act").

ARTICLE IV

The street address of the Company's principal place of business in the State of Oklahoma is:

732 E Indiana Avenue, Kiefer, OK 74041

The name and street address of the Company's resident agent in the State of Oklahoma is:

Ira E. Rongey, Jr.
732 E Indiana Avenue, Kiefer, OK 74041

ARTICLE V

The management of the Company shall be vested in a manager or managers who shall have continuing exclusive authority to make management decisions necessary to the conduct of the business for which the Company is formed. No member of the Company shall have the authority to bind the Company unless such member is also a manager of the Company or except as provided in the Company's Operating Agreement.

ARTICLE VI

To the fullest extent permitted by the Act, members and managers of the Company (i) shall not be liable to the Company or its members for monetary damages on account of breaches of fiduciary duty and (ii) shall be indemnified. No amendment or repeal of this Article shall apply to or have any effect on the liability or alleged liability of any member or manager for or with respect to any acts or omissions of such member or manager occurring prior to such amendment or repeal.

ARTICLE VII

Additional members may be admitted to the Company only upon the consent of members of the Company whose capital contributions, as such term is defined in the Act, equal a majority of the capital contributions of all of the Company's members and upon such terms and conditions as may be determined by such members. A member of the Company may assign or transfer his membership interest; however, an assignee or transferee shall not become a substitute member and shall not acquire all of the attributes of membership in the Company unless all of the remaining members of the Company consent in writing to the assignment or transfer.

ARTICLE VIII

The Company shall be dissolved upon the death, resignation, expulsion, bankruptcy, or dissolution of one of its members or upon the occurrence of any other event which terminates the continued membership of one of its members, either under the Act, these Articles of Organization or otherwise, unless the business of the Company is continued by the consent in writing of all of the remaining members of the Company; provided, however, that the Company may not be so continued unless there are at least two remaining members.

THE UNDERSIGNED does hereby certify, make and acknowledge these Articles of Organization this 24th day of September, 2010.

/s/ Sean McIntosh

Sean McIntosh
401453 W 2900 Road
Ramona, OK 74061

AMENDED
ARTICLES OF ORGANIZATION
(Oklahoma Limited Liability Company)

I hereby execute the following articles for the purpose of amending the articles of organization of an Oklahoma limited liability company pursuant to the provisions of Title 18, Section 2011:

1. A) *Name of the limited liability company*:

Dynaflo, LLC

B) **AS AMENDED**: Name of the limited liability company:

(**Note:** The new name **shall** contain either the words **limited liability company** or **limited company** or the abbreviations **LLC**, **LC**, **L.L.C.** or **L.C.** The word **limited** may be abbreviated as **Ltd.** and the word **company** may be abbreviated as **Co.**)

2. **Date** of filing of its original articles of organization: September 24. 2010

3. **AS AMENDED**: Street address of the principal place of business, wherever located:

Street address	**City**	**State**	**Zip Code**

(P.O. BOXES ARE NOT ACCEPTABLE)

4. **E-MAIL** address of the primary contact for the registered business:

lgardner@dynafloals.com

- Notice of the Annual Certificate will **ONLY** be sent to the limited liability company at its last known electronic mail address of record.

5. **AS AMENDED**: **NAME** and street address of the registered agent for service of process in the state of Oklahoma:

- The registered agent **shall** be the limited liability company itself, an individual resident of Oklahoma, **or** a domestic or qualified foreign corporation, limited liability company, or limited partnership.

Oklahoma

Name	**Street address**	**City**	**State**	**Zip Code**

(P.O. BOXES ARE NOT ACCEPTABLE)

6. **AS AMENDED**: Term of existence:_____

- You may state **perpetual**, a set number of years, or a future effective expiration date. Perpetual means continuous.

7. Set forth clearly any and all amendments to the articles of organization:

Articles VII and VIII of the articles of organization of the limited liability company are hereby deleted in their entirety.

The amended articles of organization must be signed by a manager of the limited liability company.

- Signature of Manager: /s/ Sean McIntosh Dated: June 27, 2013
- Printed Name: Sean McIntosh

AMENDED
ARTICLES OF ORGANIZATION
(Oklahoma Limited Liability Company)

I hereby execute the following articles for the purpose of amending the articles of organization of an Oklahoma limited liability company pursuant to the provisions of Title 18, Section 2011:

1. A) Name of the limited liability company:

Dynaflo, LLC

B) **AS AMENDED**: Name of the limited liability company:

Accelerated Artificial Lift Systems, LLC

(**Note:** The new name **shall** contain either the words **limited liability company** or **limited company** or the abbreviations **LLC**, **LC**, **L.L.C.** or **L.C.** The word limited may be abbreviated as **Ltd.** and the word **company** may be abbreviated as **Co.**)

2. **Date** of filing of its original articles of organization: September 24, 2010

3. **AS AMENDED**: Street address of the principal place of business, wherever located:

2002 Timberloch Place, Ste 500	The Woodlands	Texas	77380
Street address	**City**	**State**	**Zip Code**

(P.O. BOXES ARE NOT ACCEPTABLE)

4. **E-MAIL** address of the primary contact for the registered business:

chris.ruffner@acceleratedproduction.com

- Notice of the Annual Certificate will **ONLY** be sent to the limited liability company at its last known electronic mail address of record.

5. **AS AMENDED**: **NAME** and street address of the registered agent for service of process in the state of Oklahoma:

   - The registered agent **shall** be the limited liability company itself, an individual resident of Oklahoma, **or** a domestic or qualified foreign corporation, limited liability company, or limited partnership.

			Oklahoma	
Name	**Street address**	**City**	**State**	**Zip Code**

(P.O. BOXES ARE NOT ACCEPTABLE)

6. **AS AMENDED**: Term of existence:_____

- You may state **perpetual**, a set number of years, or a future effective expiration date. Perpetual means continuous.

7. Set forth clearly any and all amendments to the articles of organization:

The amended articles of organization must be signed by a manager of the limited liability company.

- Signature of Manager: /s/ Brad Goebel Dated: May 12, 2014
- Printed Name: Brad Goebel

ARTICLES OF MERGER

OF

FIVE STAR EQUIPMENT, L.L.C.
an Oklahoma limited liability company

WITH AND INTO

ACCELERATED ARTIFICIAL LIFT SYSTEMS, LLC
an Oklahoma limited liability company

The undersigned, Accelerated Artificial Lift Systems, LLC, does hereby certify:

FIRST: That the name and state of formation of each of the constituent limited liability companies are as follows:

NAME	STATE OF FORMATION
Five Star Equipment, L.L.C.	Oklahoma
Accelerated Artificial Lift Systems, LLC	Oklahoma

SECOND: That an Agreement and Plan of Merger dated July 24, 2015 by and between the constituent limited liability companies has been approved and executed by each of the constituent limited liability companies in accordance with the requirements of Section 2054 of the Oklahoma Limited Liability Company Act.

THIRD: That the name of the surviving limited liability company of the merger is Accelerated Artificial Lift Systems, LLC, an Oklahoma limited liability company.

FOURTH: That the merger shall be effective on August 1, 2015 at 12:01 a.m. Central Time.

FIFTH: That the Agreement and Plan of Merger is on file at 3005 Highland Parkway, Suite 200, Downers Grove, Illinois 60515, which is a place of business of the surviving limited liability company.

SIXTH: That a copy of the Agreement and Plan of Merger will be furnished by the surviving limited liability company, upon request and without cost, to any member of any domestic limited liability company or any person holding an interest in any other business entity which is to merge or consolidate.

SEVENTH: That the Amended Articles of Organization of Accelerated Artificial Lift Systems, LLC, as in effect immediately prior to the merger, shall continue to be the articles of organization of the surviving limited liability company.

[*Signature appears on following page.*]

IN WITNESS WHEREOF, said surviving limited liability company has caused this instrument to be signed by an authorized manager, this 24th day of July, 2015.

ACCELERATED ARTIFICIAL LIFT SYSTEMS, LLC

By: /s/ Paul Mahoney
Paul Mahoney
Manager

ARTICLES OF AMENDMENT TO
AMENDED ARTICLES OF ORGANIZATION
OF
ACCELERATED ARTIFICIAL LIFT SYSTEMS, LLC

TO: OKLAHOMA SECRETARY OF STATE
2300 N. Lincoln Blvd., Room 101, State Capitol
Oklahoma City, Oklahoma 73105-4897
(405) 522-4560

THIS IS TO CERTIFY THAT:

The Amended Articles of Organization of Accelerated Artificial Lift Systems, LLC, an Oklahoma limited liability company, filed with the Oklahoma Secretary of State's Office on May 13, 2014 (the "Articles"), are hereby amended by deleting in its entirety Section 1.B thereof and inserting the following in lieu thereof:

"B) **AS AMENDED**: Name of the limited liability company:

Dover Artificial Lift Systems, LLC"

In all other respects, the Articles remain unchanged and in full force and effect.

[*Signature appears on following page.*]

IN WITNESS WHEREOF, the undersigned has executed these Articles of Amendment on behalf of the Company this 3rd day of August, 2015.

By: /s/ Paul Mahoney
Paul Mahoney, Manager

ARTICLES OF AMENDMENT TO
AMENDED ARTICLES OF ORGANIZATION
OF
DOVER ARTIFICIAL LIFT SYSTEMS, LLC

Dover Artificial Lift Systems, LLC, a limited liability company duly formed and existing under the Limited Liability Company Act of the State of Oklahoma (the "Company"), does hereby certify that:

The Amended Articles of Organization (the "Articles") of the Company, filed with the Oklahoma Secretary of State's Office on August 3, 2015, are hereby amended by deleting Section 1.B thereof and inserting the following in lieu thereof:

"B) **As Amended**: Name of the limited liability company: Apergy ESP Systems, LLC"

In all other respects the Articles remain unchanged and in full force and effect.

(*Signature page follows*)

IN WITNESS WHEREOF, the undersigned has executed these Articles of Amendment on behalf of the Company on the 1st day of May, 2018.

By: /s/ Anthony K. Kosinski
Name: Anthony K. Kosinski
Title: Vice President

(*Signature Page to Amended Certificate (DAL Systems)*)

Exhibit 3.14

DYNAFLO, LLC

Amended and Restated

Limited Liability Company Operating Agreement

THE LIMITED LIABILITY COMPANY INTERESTS EVIDENCED BY THIS AGREEMENT HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "***SECURITIES ACT***") OR UNDER THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR ANY OTHER JURISDICTION. SUCH LIMITED LIABILITY COMPANY INTERESTS ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE, AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT IN COMPLIANCE WITH THE SECURITIES ACT AND APPLICABLE STATE OR OTHER SECURITIES LAWS, PURSUANT TO REGISTRATION THEREUNDER OR EXEMPTION THEREFROM. IN ADDITION, TRANSFER OR OTHER DISPOSITION OF SUCH LIMITED LIABILITY COMPANY INTERESTS IS FURTHER RESTRICTED AS PROVIDED IN THIS AGREEMENT. PURCHASERS OF LIMITED LIABILITY COMPANY INTERESTS SHOULD BE AWARE THAT THEY WILL BE REQUIRED TO BEAR THE FINANCIAL RISKS OF THEIR INVESTMENT FOR AN INDEFINITE PERIOD OF TIME.

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DYNAFLO, LLC

AMENDED AND RESTATED
LIMITED LIABILITY COMPANY OPERATING AGREEMENT

This Amended and Restated Limited Liability Company Operating Agreement (this "***Agreement***") of DYNAFLO, LLC (the "***Company***"), executed on October 23, 2013, and effective as of June 27, 2013 (the "***Effective Date***"), is adopted, executed and agreed to, for good and valuable consideration, by Accelerated Companies, LLC, a Delaware limited liability company (the "***Sole Member***").

RECITALS

A. Effective June 27, 2013, the Sole Member acquired all of the outstanding membership interests of the Company pursuant to that certain Contribution and Distribution Agreement dated June 27, 2013 by and among the Sole Member, Trilogy Production Equipment, LLC and the former members of the Company.

B. The Sole Member desires to amend and restate the Operating Agreement of the Company dated effective as of September 28, 2010 in its entirety and to adopt this Agreement in order to provide for the regulation and management of the Company and to set forth the respective rights, duties and obligations of the Members (as herein defined) as set forth herein.

NOW, THEREFORE, in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledge, the parties hereto agree as follows:

ARTICLE 1
ORGANIZATIONAL MATTERS

1.1 Continuation of the Company. Dynaflo, LLC is a limited liability company organized under the provisions of the Oklahoma Limited Liability Company Act, as amended from time to time (the "***Act***"). The Articles of Organization (the "***Articles of Organization***") were filed on September 28, 2010 with the Secretary of the State of Oklahoma. The Sole Member hereby continues the Company in accordance with the Act.

1.2 Name. The name of the limited liability company is "Dynaflo, LLC."

1.3 Registered Office and Agent in Delaware. The registered office of the Company required by the Act to be maintained in the State of Oklahoma is 1833 South Morgan Road, Oklahoma City, Oklahoma 73128, or such other place as the Board (as herein defined) may designate in the manner provided by law. The registered agent for service of process is The Corporation Company, or such other person as the Board may designate in the manner provided by law.

1.4 Purposes. The purpose of the Company is to engage in any business, purpose or activity that may be lawfully carried on by a limited liability company formed under the Act.

1.5 Sole Member.

(a) The Sole Member is the sole Member of the Company. The business or mailing address of the Sole Member is 2002 Timberloch Place, Suite 500, The Woodlands, Texas 77380.

(b) One or more additional persons or entities may be admitted as a member to the Company with the consent of the Board (any such person or entity, together with the Sole Member, being referred to individually as a "Member" and collectively as the "Members"). Prior to the admission of any such additional Members to the Company, the Sole Member shall amend this Agreement to make such changes as the Board and the Sole Member shall determine to reflect the fact that the Company shall have such additional Members. Each additional Member shall execute and deliver a supplement or counterpart to this Agreement, as necessary.

(c) The Company may, but is not required to, issue certificates to Members to evidence ownership of the membership interests of the Company.

1.6 Term. The Company commenced its existence on the effective date of the filing of the Articles of Organization and shall have a perpetual existence until it is dissolved and terminated by the affirmative action of the Sole Member.

ARTICLE 2
MANAGEMENT

2.1 Management by the Board of Managers. Except as set forth herein, the management, control and operation of the business and affairs of the Company shall be vested exclusively with a board of managers of the Company (the "***Board***" and each member of the Board, a "***Manager***"). In addition to the powers now or hereafter granted to a manager of a limited liability company under the Act or that are granted to the Board under any provision of this Agreement, the Board shall have full power and authority, except as otherwise expressly provided in this Agreement, to manage and conduct the business and affairs of the Company and to make all decisions affecting the business and to take all actions as it deems necessary, advisable or appropriate to accomplish the purposes of the Company.

2.2 Number and Term of Office of Managers.

(a) The initial number of Managers constituting the full Board shall be three (3). The number of Managers may be increased or decreased from time to time by the Board.

(b) Each Manager shall be elected at any annual or any special meeting of the Sole Member. Each Manager elected shall hold office until his successor shall be elected at a meeting of the Sole Member and shall qualify, or until his earlier death, resignation, or removal. As of the Effective Date, the Managers of the Board shall be Brad Goebel, Mitch Ulrey and David Zachariah. Managers need not be Members or residents of the State of Oklahoma.

2.3 Removal; Vacancies; and Resignation of Managers. Any Manager may be removed, either with or without cause, by the Sole Member. Any vacancy occurring in the Board may be filled in accordance with Section 2.2(b) by appointment of the Sole Member. Any Manager may resign at any time. Such resignation shall be made in writing and shall take effect at the time specified therein, or if no time is specified, at the time of its receipt by the remaining Managers. The acceptance of a resignation shall not be necessary to make it effective, unless expressly so provided in the resignation.

2.4 Meetings of Board.

(a) Each Manager shall have one vote. Unless otherwise required by law or provided in the Articles of Organization or this Agreement, a majority of the Managers in office, either present (in person or by teleconference) or represented by proxy, shall constitute a quorum for the transaction of business at a meeting of the Board. If a quorum is present, the act of a majority of the Managers in office shall be necessary for the adoption of any resolution or approval of any action by the Board.

(b) Meetings of the Board may be held at such place or places as shall be determined from time to time by resolution of the Board. At all meetings of the Board, a Manager selected by the Board shall preside and business shall be transacted in such order as shall from time to time be determined by such Manager. Any Manager may propose any business to be transacted or matter to be acted upon by the Board at any meeting of the Board. Attendance of a Manager at a meeting (including by telephone) shall constitute a waiver of notice of such meeting, except where such Manager attends a meeting for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened and notifies the other Managers at such meeting of such purpose of objecting.

(c) Regular meetings of the Board shall be held at such times and places as shall be designated from time to time by resolution of the Board. Notice of such regular meetings shall be given by electronic transmission (including by facsimile or electronic mail), telephone or written notice at least 24 hours in advance of such meetings.

(d) Special meetings of the Board may be called by any Manager on notice to each other Manager. Such notice shall state the purpose or purposes of, or the business to be transacted at, such meeting. Notice of such special meetings shall be given at least 24 hours in advance of such meetings either in person or by electronic transmission (including by facsimile or electronic mail), telephone or written notice, if hand delivered (otherwise, written notice sent less than three (3) days prior to the meeting shall be given by national courier service or U.S. Postal Service).

2.5 Committees. The Board may designate one or more committees, each such committee consisting of one or more Managers. Any such designated committee shall have and may exercise such of the powers and authority of the Board in the management of the business and affairs of the Company as may be provided in such resolution. In addition, such committee or committees shall have such other limitations of authority as may be determined from time to time by resolution of the Board. Any committee designated in accordance with this Section 2.5 shall keep regular minutes of its proceedings and report the same to the Board when requested, shall fix its own rules or procedures, and shall meet at such times and at such place or places as may be provided by such rules or procedures, or by resolution of such committee or Board. At every meeting of any such committee, the presence of a majority of all the members thereof shall constitute a quorum, and the act of a majority of the members shall be necessary' for the adoption of any resolution or approval of any action by such committee.

2.6 Action by Written Consent or Telephone Conference. Any action of the Board (or any committee thereof) or the Managers permitted or required by the Act, the Articles of Organization or this Agreement to be taken at a meeting of the Board (or any committee thereof) may be taken without a meeting, without prior notice, and without a vote if a consent in writing, setting forth the action to be taken, is signed by those Managers having not less than the minimum number of votes that would be necessary to take the action at a meeting at which all Managers entitled to vote on the action were present and voted. Prompt notice (within three (3) days) of the taking of any action by the Board without a meeting by less than unanimous written consent shall be given to those Managers who did not consent in writing to the action. Subject to the requirements of the Act, the Articles of Organization or this Agreement for notice of meetings, Managers may participate in and hold a meeting of the Board (or any committee thereof) by means of a conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in such meeting shall constitute attendance and presence in person at such meeting, except where a person participates in the meeting for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

2.7 Officers.

(a) Generally. The Board may, from time to time, appoint certain agents of the Company (who shall be referred to herein as be referred to as "Officers'' of the Company) to act on behalf and in the name of the Company with such authority as may be delegated to such Officers by the Board. Unless otherwise provided by resolution of the Board, the Officers shall have the titles, power, authority and duties described below in this Section 2.7. Any such Officer shall act pursuant to such delegated authority until such Officer is removed by the Board. Any action taken by an Officer designated by the Board pursuant to authority delegated to such Officer shall constitute the act of and serve to bind the Company. Persons dealing with the Company are entitled to rely conclusively on the power and authority of any Officer and any instrument designating such Officer and the authority delegated to him or her.

(b) Number, Titles and Term of Office. The Officers of the Company may include any one or more of the following: a Chief Executive Officer, a President, one or more Vice Presidents (any one or more of whom may be designated Executive Vice President or Senior Vice President), a Chief Financial Officer, a Secretary and such other Officers as the Board may from time to time determine. Each Officer shall hold office until his successor shall be duly elected and shall qualify or until his death or until he shall resign or shall have been removed in the manner hereinafter provided. Any number of offices may be held by the same person. No Officer need be a resident of the State of Oklahoma or a member of the Company.

(c) Salaries. The salaries or other compensation, if any, of the Officers shall be fixed from time to time by the Board.

(d) Removal. Any Officer elected or appointed by the Board may, subject to any contractual obligations of the Company with respect to such Officer, be removed, either with or without cause, by the Board; *provided*, *however*, that such removal shall be without prejudice to the contractual rights, if any, of the person so removed. Election or appointment of an Officer shall not of itself create contractual rights.

(e) Vacancies. Any vacancy occurring in any office of the Company may be filled by the Board.

(f) Powers and Duties of the Chief Executive Officer. The Chief Executive Officer shall be the chief executive officer of the Company unless the Board designates another Officer as the chief executive officer. Subject to the control of the Board and the other terms of this Agreement, the chief executive officer shall have general executive charge, management and control of the properties, business and operations of the Company with all such powers as may be reasonably incident to such responsibilities; and may agree upon and execute all leases, contracts, evidences of indebtedness and other obligations in the name of the Company; and he shall have such other powers and duties as may be assigned to him from time to time by the Board.

(g) Powers and Duties of the President. Unless otherwise determined by the Board, the President shall have the authority to agree upon and execute all leases, contracts, evidences of indebtedness and other obligations in the name of the Company; and the President shall have such other powers and duties as may be assigned to him from time to time by the Board. In the absence of a designated Chief Executive Officer, the President shall perform the duties of the Chief Executive Officer and when so acting shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer.

(h) Vice Presidents. Each Vice President shall perform such duties and have such powers as the Board may from time to time prescribe. In addition, in the absence of the Chief Executive Officer and President, or in the event of their inability or refusal to act, a Vice President designated by the Board or, in the absence of such designation, the Vice President who is present and who is senior in terms of time as a Vice President of the Company, shall perform the duties of the Chief Executive Officer and when so acting shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer.

(i) Chief Financial Officer. The Chief Financial Officer shall have responsibility for the custody and control of all the funds and securities of the Company, and he shall have such other powers and duties as may be prescribed from time to time by the Board. He shall perform all acts incident to the position of Chief Financial Officer, subject to the control of the Chief Executive Officer and the Board; the Chief Financial Officer shall, if required by the Board, give such bond for the faithful discharge of his duties in such form as the Board may require.

(j) Treasurers. Each Treasurer (if any) shall have the usual powers and duties pertaining to his office, together with such other powers and duties as may be prescribed from time to time by the Chief Financial Officer, the Chief Executive Officer or the Board. The Treasurers shall exercise the powers of the Chief Financial Officer during the Chief Financial Officer's absence or inability or refusal to act.

(k) Secretary. The Secretary shall keep the minutes of the Board and Members in books provided for such purpose; he shall attend to the giving and serving of all notices; he may in the name of the Company affix the seal (if any) of the Company to all contracts of the Company and attest thereto; he shall have charge of the membership transfer books and membership ledgers, and such other books and papers as the Board may direct, all of which shall at all reasonable times be open to inspection by the Board and Members upon application at the office of the Company during business hours; he shall have such other powers and duties as may be prescribed from time to time by the Board; and he shall in general perform all acts incident to the office of Secretary, subject to the control of the Chief Executive Officer and the Board.

(l) Assistant Secretaries. Each Assistant Secretary (if any) shall have the usual powers and duties pertaining to his office, together with such other powers and duties as may be prescribed from time to time by the Chief Executive Officer, the Board or the Secretary. The Assistant Secretaries shall exercise the powers of the Secretary during the Secretary's absence or inability or refusal to act.

(m) Action with Respect to Securities of Other Companies. Unless otherwise determined by the Board, the Chief Executive Officer shall have the power to vote and to otherwise act on behalf of the Company, in person or by proxy, at any meeting of security holders of any other company, or with respect to any action of security holders thereof, in which the Company may hold securities and otherwise to exercise any and all rights and powers that the Company may possess by reason of its ownership of securities in such other company.

ARTICLE 3
CAPITAL CONTRIBUTIONS; MEMBERSHIP INTERESTS

3.1 Membership Interests. As of the Effective Date, the Sole Member owns 100% of the membership interests in the Company.

3.2 Additional Contributions. The Sole Member is not required to make any additional capital contributions to the Company. The Sole Member shall not have any obligation to restore any negative balance in any capital account maintained for such Member in accordance with applicable law and regulations promulgated under or in connection with the Internal Revenue Code of 1986, as amended (the "***Code***"), upon liquidation or dissolution of the Company.

3.3 Liability of Sole Member. Except as otherwise provided in this Agreement or by applicable law, the Sole Member shall not be required to contribute to the capital of, or to loan any funds to, the Company and the Sole Member shall not be liable for the debts, liabilities or obligations of the Company.

ARTICLE 4
TAX STATUS; ALLOCATIONS; DISTRIBUTIONS

4.1 Tax Status; Allocations. It is the intention of the Company and the Sole Member that the Company be treated as a corporation for U.S. federal income tax purposes, in accordance with the rules of Treasury Regulation Section 301.7701-3, and all relevant state income tax purposes and neither the Company nor the Sole Member shall take any action or make any election which is inconsistent with such tax treatment. All provisions of this Agreement are to be construed so as to preserve the Company's tax status as a corporation. All income and expense shall be allocated under the rules of the Code as it applies to corporations.

4.2 Distributions. The Company shall make all cash or other property distributions only to the Sole Member, at such times and in such amounts as determined by the Board.

ARTICLE 5
RELATIONSHIPS; INDEMNIFICATION

5.1 Duties of the Sole Member, Managers and Officers.

(a) To the fullest extent permitted by applicable law and notwithstanding any provision of this Agreement to the contrary, the Sole Member shall not have any duty, fiduciary' or otherwise, to the Company or any other person in connection with the business and affairs of the Company or any consent or approval given or withheld pursuant to this Agreement; provided, that the foregoing shall not limit or eliminate any liability relating to the duty of loyalty or the obligation of good faith and fair dealing as provided by the Act.

(b) To the fullest extent permitted by applicable law and notwithstanding any other provision of this Agreement to the contrary, no Manager or Officer, in such person's capacity as a Manager or Officer, as applicable, shall have any duty, fiduciary or otherwise, to the Company, the Sole Member or any other person in connection with the business and affairs of the Company; provided, that the foregoing shall not limit or eliminate any liability relating to the duty of loyalty or the obligation of good faith and fair dealing as provided by the Act.

5.2 Liability and Indemnification.

(a) To the maximum extent permitted by applicable law, no Covered Person will be liable to the Company, the Sole Member or any other person for losses sustained or liabilities incurred as a result of any act or omission, including any breach of a duty (fiduciary or otherwise), that such Covered Person may have taken or omitted with respect to the Company, the Sole Member, or such other person, unless there has been a final and non-appealable judgment entered by a court of competent jurisdiction determining that, in respect of such reliance, action or inaction, such Covered Person (i) breached the Covered Person's duty of loyalty to the Company or its Members, (ii) any such act or omission was not in good faith or involved an intentional misconduct or a knowing violation of law, or (iii) any such act or omission involved a transaction from which the Covered Person derived an improper personal benefit.

(b) Each Covered Person shall be indemnified and held harmless by the Company (but only to the extent of the Company's assets), to the fullest extent permitted by applicable law, from and against any and all losses, liabilities and expenses (including taxes; penalties; judgments; fines; amounts paid or to be paid in settlement; costs of investigation and preparations; and reasonable fees, expenses and disbursements of attorneys (as incurred), whether or not the dispute or proceeding involves the Company, the Sole Member or any Officer) incurred or suffered by any such Covered Person in connection with the activities of the Company or its subsidiaries; *provided that*, such Covered Person shall not be so indemnified and held harmless if there has been a final and non-appealable judgment entered by a court of competent jurisdiction determining that, in respect of the matter for which such Covered Person is seeking indemnification or seeking to be held harmless hereunder, such Covered Person (i) breached the Covered Person's duty of loyalty to the Company or its Members, (ii) any such act or omission was not in good faith or involved an intentional misconduct or a knowing violation of law, or (iii) any such act or omission involved a transaction from which the Covered Person derived an improper personal benefit. A Covered Person shall not be denied indemnification in whole or in part under this Section 5.2(b) because such Covered Person had an interest in the transaction with respect to which the indemnification applies if the transaction was otherwise permitted by the terms of this Agreement or otherwise authorized by the Board.

(c) The rights to indemnification and advancement of expenses provided by this Section 5.2 shall be in addition to any other rights to which a Covered Person may be entitled under any agreement, as a matter of law or otherwise, both as to actions in such Covered Person's capacity as a Covered Person hereunder and as to actions in any other capacity, and shall continue as to a Covered Person who has ceased to serve in such capacity as a Covered Person and shall inure to the benefit of the heirs, successors, assigns and administrators of such Covered Person.

(d) No amendment or repeal of the provisions of this Section 5.2 which adversely affects the rights of any Covered Person under this Section 5.2 with respect to the acts or omissions of such Covered Person at any time prior to such amendment or repeal shall apply to such Covered Person without the written consent of such Covered Person.

(e) A Covered Person shall be fully protected in relying in good faith, and shall incur no liability in acting or refraining from acting, upon the records of the Company and upon such resolutions, certificates, instruments, information, opinions, reports, statements, notices, requests, consents, orders, bonds, debentures, signatures or writings reasonably believed by it to be genuine and presented to the Company by any Officer or other person as to matters the Covered Person reasonably believes are within the professional or expert competence of such Officer or other person and who has been selected with reasonable care by or on behalf of the Company, including such documents, certificates, information, opinions, reports or statements as to the value and amount of the assets, liabilities, income, loss or any other facts pertinent to the existence and amount of assets from which distributions to the Sole Member might properly be paid, in each case, unless there has been a final and non-appealable judgment entered by a court of competent jurisdiction determining that, in respect of such reliance, action or inaction, such Covered Person (i) breached the Covered Person's duty of loyalty to the Company or its Members, (ii) any such act or omission was not in good faith or involved an intentional misconduct or a knowing violation of law, or (iii) any such act or omission involved a transaction from which the Covered Person derived an improper personal benefit.

(f) The Company shall advance funds to the Covered Person upon receipt of an unsecured undertaking by such Covered Person to repay any such advances if it is subsequently determined by a court of competent jurisdiction that indemnification for such expenses is not permitted by law or authorized by this Agreement. Each Covered Person may consult with outside legal counsel approved by the Company, which approval shall not be unreasonably withheld, and any action or omission taken or suffered reasonably and in good faith in reliance and accordance with the written opinion or advice of such counsel will be conclusive evidence that such action or omission was not a violation of such Covered Person's duty of loyalty or the obligation of good faith and fair dealing provided by the Act. Unless there is a specific finding that the Covered Person's actions constituted a violation of such Covered Person's duty of loyalty or the obligation of good faith and fair dealing provided by the Act (or where such a finding is an essential element of a judgment or order), the termination of any action, suit or proceeding by judgment, order or settlement, or upon a plea of *nolo contendere* or its equivalent, will not, of itself, create a presumption for the purposes of this Section 5.2(f) as to whether or not the Covered Person committed a violation of any such duty of loyalty or the obligation of good faith and fair dealing provided by the Act.

(g) Any indemnification pursuant to this Article 5 shall be payable only from the assets of the Company and shall in no event cause the Sole Member to incur any personal liability or result in any liability of the Sole Member to any third party.

(h) For purposes of this ARTICLE 5, the following terms shall have the meanings set forth below:

"Covered Person" means any Member Covered Person, Manager Covered Person and any Officer Covered Person.

"Member Covered Person" means (i) the Sole Member, (ii) each current and former officer, director, liquidator, partner, equity holder, manager and member of the Sole Member, (iii) each current and former Affiliate of the Sole Member (other than the Company and its subsidiaries) and each of their respective officers, directors, liquidators, partners, equity holder, managers and members, and (iv) any representatives, agents or employees of any person identified in clauses (i)-(iii) of this definition who the Sole Member expressly designates as a Member Covered Person in a written resolution.

"Manager Covered Person" means (i) each current and former Manager (solely in such person's capacity as a Manager) and (ii) each person not identified in clause (i) of this definition who is or was a director or manager of any subsidiary of the Company and who the Board expressly designates as a Manager Covered Person in a written resolution.

"Officer Covered Person" means (i) each current and former Officer (solely in such person's capacity as an Officer) and (ii) each person not identified in clause (i) of this definition who is or was an officer or employee of any subsidiary of the Company and who the Board expressly designates as an Officer Covered Person in a written resolution.

ARTICLE 6
MEETING OF MEMBERS

6.1 Member Vote; Meetings. For situations where the approval of the Members is required by applicable law or this Agreement, or where the Board elects to have the Members decide a particular matter, such action will be taken, except as otherwise provided in Section 6.8 below, at a duly called meeting of the Members in accordance with the provisions of this ARTICLE 6. Meetings of the Members for any purpose hereunder shall be at such places as may be designated by the Board and stated in the notice of the meeting. Only business within the purpose or purposes described in the notice of meeting delivered to the Members in accordance with Section 6.2 may be conducted at a meeting of Members.

6.2 Notice of Meeting. Written or printed notice of all meetings of the Members stating the place, date and time of the meeting and the purpose or purposes for which the meeting is called shall be delivered not less than ten (10) nor more than thirty (30) days before the date of the meeting to each Member entitled to vote at such meeting; *provided, that* no such notice shall be required with respect to any meeting of the Members to the extent the Sole Member is the sole Member.

6.3 Record Dates. For the purpose of determining Members entitled to notice of or to vote at any meeting of Members or any adjournment thereof, the Board may fix in advance a record date, which date shall not be less than ten (10) nor more than thirty (30) days prior to the date of the meeting. In addition, whenever action by the Members is proposed to be taken by consent in writing without a meeting of the Members, the Board may fix a record date for the purpose of determining the Members entitled to consent to that action, which record date shall not precede, and shall not be more than ten (10) days after, the date upon which the resolution fixing the record date is adopted by the Board. If no record date has been fixed by the Board for the purpose of determining the Members entitled to consent in writing to any action, the record date for determining the Members entitled to consent to that action shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Company.

6.4 Quorum. The presence, in person or represented by proxy, of the Members whose aggregate membership interests exceed fifty percent (50%) of the total membership interests of the Company (a "***Majority in Interest***") shall constitute a quorum for the purpose of considering any matter at a meeting of the Members. If a meeting of the Members cannot be organized because a quorum shall not be present or represented, the Members entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time until a quorum shall be present or represented. When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting at which a quorum shall be present or represented, the Members may transact any business which might have been transacted at the original meeting.

6.5 Voting. Unless otherwise required by law or this Agreement, any matter brought before a meeting of the Members shall be decided by such Members holding a Majority in Interest at a meeting at which a quorum is present.

6.6 Conduct of Meetings of the Members. At each meeting of the Members, the Chief Executive Officer or, in his absence, a chairman chosen by the Board, shall preside and act as chairman of the meeting. The Secretary or, in his absence, a person whom the chairman of such meeting shall appoint, shall act as secretary of such meeting and keep the minutes thereof. The Board may adopt such rules and regulations as it determines are reasonably necessary or appropriate in connection with the organization and conduct of any meeting of the Members.

6.7 Proxies. Each Member entitled to vote at a meeting of the Members may authorize another person or persons to act for him by proxy with respect to any membership interest owned by such Member, but no such proxy shall be voted or acted upon after three (3) years from its grant date. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power.

6.8 Written Consent. Any action required or permitted to be taken at any meeting of the Members may be taken without a meeting, without prior notice, and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by those Members owning membership interests having not less than the minimum voting powder that would be necessary to take such action at a meeting at which all Members were present and voted. Every written consent shall bear the date of signature of each Member that signs the consent.

6.9 Telephonic Meetings. Members may participate in and hold a meeting by means of conference telephone or similar communications equipment by means of which all Members participating in the meeting can hear each other, and participation in such meeting shall constitute attendance and presence in person at such meeting.

ARTICLE 7
DISSOLUTION

7.1 Dissolution. The Company shall be dissolved upon the occurrence of any of the following events;

(i) any event which would make unlawful under the laws of Oklahoma the continuing existence of the Company;

(ii) a written instrument executed by the Sole Member at such time, if any, as the Sole Member may elect; or

(iii) the entry of a decree of judicial dissolution of the Company under Section 2038 of the Act.

7.2 Distribution Upon Dissolution. Upon dissolution of the Company, the affairs of the Company shall be immediately wound up in accordance with the Act and the Board shall promptly liquidate the business of the Company. During the period of winding up the affairs of the Company, the rights and obligations of the Board under this Agreement shall continue. The fair market value of the assets of the Company (other than cash) shall be determined by the Board. In the event of dissolution, the Company shall conduct only such activities as are necessary to windup its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the following manner and order: (i) first, to the claims of all creditors of the Company, to the extent permitted by law, in satisfaction of liabilities of the Company (whether by payment or the making of reasonable provision for payment thereof) and (ii) thereafter, to the Sole Member.

7.3 Cancellation.

(a) Upon the completion of the winding up of the Company, the Board shall cause Articles of Dissolution to be filed in accordance with the Act.

ARTICLE 8
BOOKS AND RECORDS

8.1 Books and Records. The Company shall keep accurate books and records of accounts. The calendar year ending December 31 shall be the accounting year of the Company. The Sole Member shall be permitted access to all books and records of the Company at the principal office of the Company during business hours.

ARTICLE 9
GOVERNING LAW

9.1 Governing Law. This Agreement will be governed by, and construed in accordance with, the laws of the State of Oklahoma, without regard to the conflict of laws rules of such state.

ARTICLE 10
MISCELLANEOUS PROVISIONS

10.1 Notices. Any notice, demand or communication required or permitted to be given by any provision of this Agreement shall be deemed to have been sufficiently given or served for all purposes if (a) delivered personally to the party or to an officer of the party to whom the same is directed or (b) sent by registered or certified mail, postage and charges prepaid, addressed to the party's address as it appears in the Company's records, as appropriate. Except as otherwise provided herein, any notice given pursuant to clause (a) of this Section 10.1 shall be deemed to have been given on the day of delivery and any notice given pursuant to clause (b) of this Section 10.1 shall be deemed to have been given three (3) days after the date on which the same was deposited in a regularly maintained receptacle for the deposit of United States mail.

10.2 Headings and Sections. The headings in this Agreement are inserted for convenience only and are in no way intended to describe, interpret, define, or limit the scope, extent or intent of this Agreement or any provision hereof. Unless the context requires otherwise, all references in this Agreement to Sections or Articles shall be deemed to mean and refer to Sections or Articles of this Agreement.

10.3 Amendment of Articles of Organization and Agreement. Except as otherwise expressly set forth in this Agreement, the Articles of Organization of the Company and this Agreement may be amended, supplemented or restated only by a written instrument executed and delivered by the Sole Member.

10.4 Numbers and Gender. Where the context so indicates, the masculine shall include feminine and neuter, and the neuter shall include the masculine and feminine, the singular shall include the plural and any reference to a "person" shall mean a natural person or a corporation, limited liability company, association, partnership, joint venture, estate, trust or any other entity.

10.5 Binding Effect. Except as herein otherwise provided to the contrary, this Agreement shall be binding upon and inure to the benefit of the Sole Member and its successors and permitted assigns.

10.6 Severability. In the event that any provision of this Agreement shall be declared to be invalid, illegal or unenforceable, such provision shall survive to the extent it is not so declared, and the validity, legality and enforceability of the other provisions hereof shall not in any way be affected or impaired thereby, unless such action would substantially impair the benefits to any party of the remaining provisions of this Agreement.

10.7 Entire Agreement. This Agreement embodies the complete agreement and understanding among the parties relating to the Company and supersedes and pre-empts any prior understandings or agreements including, without limitation, the Operating Agreement dated effective as of September 28, 2010.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned, being the sole member of the Company, has executed this Agreement effective as of the date first set forth above.

SOLE MEMBER:

ACCELERATED COMPANIES, LLC, a Delaware limited liability company

By: /s/ Brad Goebel
Brad Goebel, Chief Executive Officer

Signature Page to Amended and Restated Limited Liability Company Operating Agreement

Exhibit 3.15

CERTIFICATE OF INCORPORATION
OF
WELLSITE FUNDING CORPORATION

FIRST: The name of the Corporation is Wellsite Funding Corporation (hereinafter the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at that address is Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware as set forth in Title 8 of the Delaware Code (the "GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) of which the Corporation shall have authority to issue nine hundred (900) shares of Common Stock, each having a par value of one cent ($0.01), and one hundred (100) shares of Preferred Stock, each having a par value of one cent ($0.01).

The Board of Directors is expressly authorized to provide for the issuance of all or any shares of the Preferred Stock in one or more classes or series, and to fix for each such class or series such voting powers, full or limited, or no voting powers, and such distinctive designations, preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such class or series and as may be permitted by the GCL, including, without limitation, the authority to provide that any such class or series may be (i) subject to redemption at such time or times and at such price or prices; (ii) entitled to receive dividends (which may be cumulative or non-cumulative) at such rates, on such conditions, and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or any other series; (iii) entitled to such rights upon the dissolution of, or upon any distribution of the assets of, the Corporation; or (iv) convertible into, or exchangeable for, shares of any other class or classes of stock, or of any other series of the same or any other class or classes of stock, of the Corporation at such price or prices or at such rates of exchange and with such adjustments; all as may be stated in such resolution or resolutions.

FIFTH: The name and mailing address of the Sole Incorporator is as follows:

Name	Address
Eve Salamon	Baker & McKenzie LLP 452 Fifth Avenue New York, New York 10018

SIXTH: The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

(1) The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(2) The directors shall have concurrent power with the stockholders to make, alter, amend, change, add to or repeal the Bylaws of the Corporation.

(3) The number of directors of the Corporation shall be as from time to time fixed by, or in the manner provided in, the Bylaws of the Corporation. Election of directors need not be by written ballot unless the Bylaws so provide.

(4) No director shall be personally liable to the Corporation or any of its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. Any repeal or modification of this Article SIXTH by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification with respect to acts or omissions occurring prior to such repeal or modification.

(5) In addition to the powers and authority hereinbefore or by statute expressly conferred upon them, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, subject, nevertheless, to the provisions of the GCL, this Certificate of Incorporation, and any Bylaws adopted by the stockholders; provided, however, that no Bylaws hereafter adopted by the stockholders shall invalidate any prior act of the directors which would have been valid if such Bylaws had not been adopted.

SEVENTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the GCL) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

EIGHTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

[*Remainder of this page left intentionally blank*]

I, THE UNDERSIGNED, being the Sole Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the GCL, do make this Certificate, hereby declaring and certifying that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 13th day of October, 2017.

/s/ Eve Salamon

Eve Salamon
Sole Incorporator

CERTIFICATE OF AMENDMENT OF
CERTIFICATE OF INCORPORATION OF
WELLSITE FUNDING CORPORATION

Pursuant to Section 242
of the General Corporation Law of the State of Delaware

Wellsite Funding Corporation, a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify that:

1. The Certificate of Incorporation of the Corporation is hereby amended by deleting Article First thereof and inserting the following in lieu thereof:

"FIRST: The name of the Corporation is Apergy Funding Corporation (hereinafter the "Corporation")."

2. The foregoing amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

[*Signature Page Follows*]

IN WITNESS WHEREOF, Wellsite Funding Corporation has caused this Certificate to be executed by its duly authorized officer on the 8th day of February, 2018.

WELLSITE FUNDING CORPORATION

By: /s/ Matthew S. Gaudette
Name: Matthew S. Gaudette
Office: Vice President and Chief Financial Officer

Exhibit 3.16

BY-LAWS

OF

APERGY FUNDING CORPORATION

A Delaware Corporation

Effective February 8, 2018

TABLE OF CONTENTS

BY-LAWS
OF
APERGY FUNDING CORPORATION
(hereinafter called the "Corporation")

ARTICLE I

OFFICES

Section 1.1 Registered Office. The registered office of the Corporation shall be in the City of Wilmington, New Castle County, State of Delaware.

Section 1.2 Other Offices. The Corporation may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 2.1 Place of Meetings. Meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors.

Section 2.2 Annual Meetings. The Annual Meeting of Stockholders for the election of directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors. Any other proper business may be transacted at the Annual Meeting of Stockholders.

Section 2.3 Special Meetings. Unless otherwise required by law or by the certificate of incorporation of the Corporation, as amended and restated from time to time (the "Certificate of Incorporation"), Special Meetings of Stockholders, for any purpose or purposes, may be called by either (i) the Chairman, if there be one, or (ii) the President, (iii) any Vice President, if there be one, (iv) the Secretary or (v) any Assistant Secretary, if there be one, and shall be called by any such officer at the request in writing of (i) the Board of Directors, (ii) a committee of the Board of Directors that has been duly designated by the Board of Directors and whose powers and authority include the power to call such meetings or (iii) stockholders owning a majority of the capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. At a Special Meeting of Stockholders, only such business shall be conducted as shall be specified in the notice of meeting (or any supplement thereto).

Section 2.4 Notice. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a Special Meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, written notice of any meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to notice of and to vote at such meeting.

Section 2.5 Adjournments. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting in accordance with the requirements of Section 4 hereof shall be given to each stockholder of record entitled to notice of and to vote at the meeting.

Section 2.6 Quorum. Unless otherwise required by applicable law or the Certificate of Incorporation, the holders of a majority of the Corporation's capital stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, in the manner provided in Section 5 hereof, until a quorum shall be present or represented.

Section 2.7 Voting. Unless otherwise required by law, the Certificate of Incorporation or these By-Laws or permitted by the rules of any stock exchange on which the Corporation's shares are listed and traded, any question brought before any meeting of the stockholders, other than the election of directors, shall be decided by the vote of the holders of a majority of the total number of votes of the Corporation's capital stock represented at the meeting and entitled to vote on such question, voting as a single class. Unless otherwise provided in the Certificate of Incorporation, and subject to Section 11(a) of this Article II, each stockholder represented at a meeting of the stockholders shall be entitled to cast one (1) vote for each share of the capital stock entitled to vote thereat held by such stockholder. Such votes may be cast in person or by proxy as provided in Section 8 of this Article II. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of the stockholders, in such officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot.

Section 2.8 Proxies. Each stockholder entitled to vote at a meeting of the stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder as proxy, but no such proxy shall be voted upon after three years from its date, unless such proxy provides for a longer period. Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(i) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(ii) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a telegram or cablegram to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such telegram or cablegram, provided that any such telegram or cablegram must either set forth or be submitted with information from which it can be determined that the telegram or cablegram was authorized by the stockholder. If it is determined that such telegrams or cablegrams are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information on which they relied.

Any copy, facsimile telecommunication or other reliable reproduction of the writing, telegram or cablegram authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing, telegram or cablegram for any and all purposes for which the original writing, telegram or cablegram could be used; provided, however, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing, telegram or cablegram.

Section 2.9 Consent of Stockholders in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any Annual or Special Meeting of Stockholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section 9 to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided above in this Section 9.

Section 2.10 List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of the stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting (i) either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 2.11 Record Date.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by applicable law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 2.12 Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 10 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders.

Section 2.13 Conduct of Meetings. The Board of Directors of the Corporation may adopt by resolution such rules and regulations for the conduct of any meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) the determination of when the polls shall open and close for any given matter to be voted on at the meeting; (iii) rules and procedures for maintaining order at the meeting and the safety of those present; (iv) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (v) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (vi) limitations on the time allotted to questions or comments by participants.

ARTICLE III

DIRECTORS

Section 3.1 Number and Election of Directors. The Board of Directors shall consist of not less than one nor more than fifteen members, the exact number of which shall initially be fixed by the Incorporator and thereafter from time to time by the Board of Directors. Except as provided in Section 2 of this Article III, directors shall be elected by a plurality of the votes cast at each Annual Meeting of Stockholders and each director so elected shall hold office until the next Annual Meeting of Stockholders and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation or removal. Directors need not be stockholders.

Section 3.2 Vacancies. Unless otherwise required by law or the Certificate of Incorporation, vacancies on the Board of Directors or any committee thereof arising through death, resignation, removal, an increase in the number of directors constituting the Board of Directors or such committee or otherwise may be filled only by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. The directors so chosen shall, in the case of the Board of Directors, hold office until the next annual election and until their successors are duly elected and qualified, or until their earlier death, resignation or removal and, in the case of any committee of the Board of Directors, shall hold office until their successors are duly appointed by the Board of Directors or until their earlier death, resignation or removal.

Section 3.3 Duties and Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-Laws required to be exercised or done by the stockholders.

Section 3.4 Meetings. The Board of Directors and any committee thereof may hold meetings, both regular and special, either within or without the State of Delaware. Regular meetings of the Board of Directors or any committee thereof may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors or such committee, respectively. Special meetings of the Board of Directors may be called by the Chairman, if there be one, the President, or by any director. Special meetings of any committee of the Board of Directors may be called by the chairman of such committee, if there be one, the President, or any director serving on such committee. Notice thereof stating the place, date and hour of the meeting shall be given to each director (or, in the case of a committee, to each member of such committee) either by mail not less than forty-eight (48) hours before the date of the meeting, by telephone or telegram on twenty-four (24) hours' notice, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

Section 3.5 Organization. At each meeting of the Board of Directors or any committee thereof, the Chairman of the Board of Directors or the chairman of such committee, as the case may be, or, in his or her absence or if there be none, a director chosen by a majority of the directors present, shall act as chairman. Except as provided below, the Secretary of the Corporation shall act as secretary at each meeting of the Board of Directors and of each committee thereof. In case the Secretary shall be absent from any meeting of the Board of Directors or of any committee thereof, an Assistant Secretary shall perform the duties of secretary at such meeting; and in the absence from any such meeting of the Secretary and all the Assistant Secretaries, the chairman of the meeting may appoint any person to act as secretary of the meeting. Notwithstanding the foregoing, the members of each committee of the Board of Directors may appoint any person to act as secretary of any meeting of such committee and the Secretary or any Assistant Secretary of the Corporation may, but need not if such committee so elects, serve in such capacity.

Section 3.6 Resignations and Removals of Directors. Any director of the Corporation may resign from the Board of Directors or any committee thereof at any time, by giving notice in writing to the Chairman of the Board of Directors, if there be one, the President or the Secretary of the Corporation and, in the case of a committee, to the chairman of such committee, if there be one. Such resignation shall take effect at the time therein specified or, if no time is specified, immediately; and, unless otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective. Except as otherwise required by applicable law and subject to the rights, if any, of the holders of shares of preferred stock then outstanding, any director or the entire Board of Directors may be removed from office at any time by the affirmative vote of the holders of at least a majority in voting power of the issued and outstanding capital stock of the Corporation entitled to vote in the election of directors. Any director serving on a committee of the Board of Directors may be removed from such committee at any time by the Board of Directors.

Section 3.7 Quorum. Except as otherwise required by law, the Certificate of Incorporation or the rules and regulations of any securities exchange or quotation system on which the Corporation's securities are listed or quoted for trading, at all meetings of the Board of Directors or any committee thereof, a majority of the entire Board of Directors or a majority of the directors constituting such committee, as the case may be, shall constitute a quorum for the transaction of business and the act of a majority of the directors or committee members present at any meeting at which there is a quorum shall be the act of the Board of Directors or such

committee, as applicable. If a quorum shall not be present at any meeting of the Board of Directors or any committee thereof, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

Section 3.8 Actions of the Board by Written Consent. Unless otherwise provided in the Certificate of Incorporation or these By-Laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all the members of the Board of Directors or such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or such committee.

Section 3.9 Meetings by Means of Conference Telephone. Unless otherwise provided in the Certificate of Incorporation or these By-Laws, members of the Board of Directors of the Corporation, or any committee thereof, may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 3.9 shall constitute presence in person at such meeting.

Section 3.10 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. Each member of a committee must meet the requirements for membership, if any, imposed by applicable law and the rules and regulations of any securities exchange or quotation system on which the securities of the Corporation are listed or quoted for trading. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of any such committee. Subject to the rules and regulations of any securities exchange or quotation system on which the securities of the Corporation are listed or quoted for trading, in the absence or disqualification of a member of a committee, and in the absence of a designation by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another qualified member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Any committee, to the extent permitted by law and provided in the resolution establishing such committee, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Each committee shall keep regular minutes and report to the Board of Directors when required. Notwithstanding anything to the contrary contained in this Article III, the resolution of the Board of Directors establishing any committee of the Board of Directors and/or the charter of any such committee may establish requirements or procedures relating to the governance and/or operation of such committee that are different from, or in addition to, those set forth in these By-Laws and, to the extent that there is any inconsistency between these By-Laws and any such resolution or charter, the terms of such resolution or charter shall be controlling.

Section 3.11 Compensation. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary for service as director, payable in cash or securities. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for service as committee members.

Section 3.12 Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because any such director’s or officer’s vote is counted for such purpose if: (i) the material

facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (ii) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (iii) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

ARTICLE IV

OFFICERS

Section 4.1 General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, a Secretary and a Treasurer. The Board of Directors, in its discretion, also may choose a Chairman of the Board of Directors (who must be a director) and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law, the Certificate of Incorporation or these By- Laws. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

Section 4.2 Election. The Board of Directors, at its first meeting held after each Annual Meeting of Stockholders (or action by written consent of stockholders in lieu of the Annual Meeting of Stockholders), shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each officer of the Corporation shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal. Any officer elected by the Board of Directors may be removed at any time by the Board of Directors. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors. The salaries of all officers of the Corporation shall be fixed by the Board of Directors.

Section 4.3 Voting Securities Owned by the Corporation. Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the President or any Vice President or any other officer authorized to do so by the Board of Directors and any such officer may, in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

Section 4.4 Chairman of the Board of Directors. The Chairman of the Board of Directors, if there be one, shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall be the Chief Executive Officer of the Corporation, unless the Board of Directors designates the President as the Chief Executive Officer, and, except where by law the signature of the President is required, the Chairman of the Board of Directors shall possess the same power as the President to sign all contracts, certificates and other instruments of the Corporation which may be authorized by the Board of Directors. During the absence or disability of the President, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the President. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may from time to time be assigned by these By-Laws or by the Board of Directors.

Section 4.5 President. The President shall, subject to the control of the Board of Directors and, if there be one, the Chairman of the Board of Directors, have general supervision of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. The President shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these By-Laws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and, provided the President is also a director, the Board of Directors. If there be no Chairman of the Board of Directors, or if the Board of Directors shall otherwise designate, the President shall be the Chief Executive Officer of the Corporation. The President shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such officer by these By-Laws or by the Board of Directors.

Section 4.6 Vice Presidents. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act (and if there be no Chairman of the Board of Directors), the Vice President, or the Vice Presidents if there are more than one (in the order designated by the Board of Directors), shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 4.7 Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings thereat in a book or books to be kept for that purpose; the Secretary shall also perform like duties for committees of the Board of Directors when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors, the Chairman of the Board of Directors or the President, under whose supervision the Secretary shall be. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and special meetings of the Board of Directors, and if there be no Assistant Secretary, then either the Board of Directors or the President may choose another officer to cause such notice to be given. The Secretary shall have custody of the seal of the Corporation and the Secretary or any Assistant Secretary, if there be one, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary or by the signature of any such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest to the affixing by such officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be.

Section 4.8 Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all transactions as Treasurer and of the financial condition of the Corporation. If required by the Board of Directors, the Treasurer shall give the Corporation a bond in such sum

and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of the Treasurer and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation.

Section 4.9 Assistant Secretaries. Assistant Secretaries, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Secretary, and in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, shall perform the duties of the Secretary, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Secretary.

Section 4.10 Assistant Treasurers. Assistant Treasurers, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Treasurer, and in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, shall perform the duties of the Treasurer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Treasurer. If required by the Board of Directors, an Assistant Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of Assistant Treasurer and for the restoration to the Corporation, in case of the Assistant Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Assistant Treasurer's possession or under the Assistant Treasurer's control belonging to the Corporation.

Section 4.11 Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V

STOCK

Section 5.1 Form of Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate signed by, or in the name of the Corporation (i) by the Chairman of the Board of Directors, or the President or a Vice President and (ii) by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation, certifying the number of shares owned by such stockholder in the Corporation.

Section 5.2 Signatures. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Section 5.3 Lost Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issuance of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or such owner's legal representative, to advertise the same in such manner as the Board of Directors shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate.

Section 5.4 Transfers. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these By-Laws. Transfers of stock shall be made on the books of the Corporation only by the person named in the certificate or by such person's attorney lawfully constituted in writing and upon the surrender of the certificate therefor, properly endorsed for transfer and payment of all necessary transfer taxes; provided, however, that such surrender and endorsement or payment of taxes shall not be required in any case in which the officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled", with the date of cancellation, by the Secretary or Assistant Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

Section 5.5 Dividend Record Date. In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 5.6 Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

Section 5.7 Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agencies and registry offices or agencies at such place or places as may be determined from time to time by the Board of Directors.

ARTICLE VI

NOTICES

Section 6.1 Notices. Whenever written notice is required by law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, such notice may be given by mail, addressed to such director, member of a committee or stockholder, at such person's address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Written notice may also be given personally, by telegram, telex or cable or electronic transmission, provided that in the case of notice to stockholders, the stockholder to receive the notice has consented to the form of electronic transmission.

Section 6.2 Waivers of Notice. Whenever any notice is required by applicable law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, a waiver thereof in writing, signed by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Attendance of a person at a meeting, present in person or represented by proxy, shall constitute a waiver of notice of such meeting, except where the person attends the meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any Annual or Special Meeting of Stockholders or any regular or special meeting of the directors or members of a committee of directors need be specified in any written waiver of notice unless so required by law, the Certificate of Incorporation or these By-Laws.

ARTICLE VII

GENERAL PROVISIONS

Section 7.1 Dividends. Dividends upon the capital stock of the Corporation, subject to the requirements of the General Corporation Law of the State of Delaware (the "DGCL") and the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 8 of Article III hereof), and may be paid in cash, in property, or in shares of the Corporation's capital stock. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for purchasing any of the shares of capital stock, warrants, rights, options, bonds, debentures, notes, scrip or other securities or evidences of indebtedness of the Corporation, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve.

Section 7.2 Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 7.3 Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 7.4 Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE VIII

INDEMNIFICATION

Section 8.1 Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

Section 8.2 Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 8.3 Authorization of Indemnification. Any indemnification under this Article VIII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (i) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (iv) by the stockholders. Such determination shall be made, with respect to former directors and officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

Section 8.4 Good Faith Defined. For purposes of any determination under Section 3 of this Article VIII, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be.

Section 8.5 Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 3 of this Article VIII, and notwithstanding the absence of any determination thereunder, any director or officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VIII. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or officer is proper in the circumstances because such person has

met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VIII nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the director or officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

Section 8.6 Expenses Payable in Advance. Expenses (including attorneys' fees) incurred by a director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VIII. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

Section 8.7 Nonexclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these By-Laws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and Section 2 of this Article VIII shall be made to the fullest extent permitted by law. The provisions of this Article VIII shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VIII but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise.

Section 8.8 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VIII.

Section 8.9 Certain Definitions. For purposes of this Article VIII, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term "another enterprise" as used in this Article VIII shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VIII, references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VIII.

Section 8.10 Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 8.11 Limitation on Indemnification. Notwithstanding anything contained in this Article VIII to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VIII), the Corporation shall not be obligated to indemnify any director or officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors of the Corporation.

Section 8.12 Indemnification of Employees and Agents. The Corporation may, to the extent authorized from time to time by the Board of Directors, provide rights to indemnification and to the advancement of expenses to employees and agents of the Corporation similar to those conferred in this Article VIII to directors and officers of the Corporation.

ARTICLE IX

AMENDMENTS

Section 9.1 Amendments. These By-Laws may be altered, amended or repealed, in whole or in part, or new By-Laws may be adopted by the stockholders or by the Board of Directors; provided, however, that notice of such alteration, amendment, repeal or adoption of new By-Laws be contained in the notice of such meeting of the stockholders or Board of Directors, as the case may be. All such amendments must be approved by either the holders of a majority of the outstanding capital stock entitled to vote thereon or by a majority of the entire Board of Directors then in office.

Section 9.2 Entire Board of Directors. As used in this Article IX and in these By-Laws generally, the term “entire Board of Directors” means the total number of directors which the Corporation would have if there were no vacancies.

* * *

Adopted as of: February 8, 2018

Last Amended as of: N/A

Exhibit 3.17

CERTIFICATE OF INCORPORATION
OF
WELLSITE USA, INC.

FIRST: The name of the Corporation is Wellsite USA, Inc. (hereinafter the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at that address is Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware as set forth in Title 8 of the Delaware Code (the "GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) of which the Corporation shall have authority to issue nine hundred (900) shares of Common Stock, each having a par value of one cent ($0.01), and one hundred (100) shares of Preferred Stock, each having a par value of one cent ($0.01).

The Board of Directors is expressly authorized to provide for the issuance of all or any shares of the Preferred Stock in one or more classes or series, and to fix for each such class or series such voting powers, full or limited, or no voting powers, and such distinctive designations, preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such class or series and as may be permitted by the GCL, including, without limitation, the authority to provide that any such class or series may be (i) subject to redemption at such time or times and at such price or prices; (ii) entitled to receive dividends (which may be cumulative or non-cumulative) at such rates, on such conditions, and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or any other series; (iii) entitled to such rights upon the dissolution of, or upon any distribution of the assets of, the Corporation; or (iv) convertible into, or exchangeable for, shares of any other class or classes of stock, or of any other series of the same or any other class or classes of stock, of the Corporation at such price or prices or at such rates of exchange and with such adjustments; all as may be stated in such resolution or resolutions.

FIFTH: The name and mailing address of the Sole Incorporator is as follows:

Name	Address
Eve Salamon	Baker & McKenzie LLP 452 Fifth Avenue New York, New York 10018

SIXTH: The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

(1) The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(2) The directors shall have concurrent power with the stockholders to make, alter, amend, change, add to or repeal the Bylaws of the Corporation.

(3) The number of directors of the Corporation shall be as from time to time fixed by, or in the manner provided in, the Bylaws of the Corporation. Election of directors need not be by written ballot unless the Bylaws so provide.

(4) No director shall be personally liable to the Corporation or any of its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. Any repeal or modification of this Article SIXTH by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification with respect to acts or omissions occurring prior to such repeal or modification.

(5) In addition to the powers and authority hereinbefore or by statute expressly conferred upon them, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, subject, nevertheless, to the provisions of the GCL, this Certificate of Incorporation, and any Bylaws adopted by the stockholders; provided, however, that no Bylaws hereafter adopted by the stockholders shall invalidate any prior act of the directors which would have been valid if such Bylaws had not been adopted.

SEVENTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the GCL) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

EIGHTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

[*Remainder of this page left intentionally blank*]

I, THE UNDERSIGNED, being the Sole Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the GCL, do make this Certificate, hereby declaring and certifying that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 10th day of October, 2017.

/s/ Eve Salamon

Eve Salamon
Sole Incorporator

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
WELLSITE USA, INC.

Pursuant to Section 242
of the General Corporation Law of the State of Delaware

Wellsite USA, Inc. a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify that:

1. The Certificate of Incorporation of the Corporation is hereby amended by deleting Article First thereof and inserting the following in lieu thereof:

"FIRST: The name of the Corporation is Apergy USA, Inc. (hereinafter the "Corporation")."

2. The foregoing amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

[*Signature Page Follows*]

IN WITNESS WHEREOF, Wellsite USA, Inc. has caused this Certificate to be executed by its duly authorized officer on the 8th day of February, 2018.

WELLSITE USA, INC.

By: /s/ Matthew S. Gaudette
Name: Matthew S. Gaudette
Office: Vice President and Chief Financial Officer

Exhibit 3.18

BY-LAWS

OF

APERGY USA, INC.

A Delaware Corporation

Effective February 8, 2018

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OF
APERGY USA, INC.
(hereinafter called the "Corporation")

ARTICLE I

OFFICES

Section 1.1 Registered Office. The registered office of the Corporation shall be in the City of Wilmington, New Castle County, State of Delaware.

Section 1.2 Other Offices. The Corporation may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 2.1 Place of Meetings. Meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors.

Section 2.2 Annual Meetings. The Annual Meeting of Stockholders for the election of directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors. Any other proper business may be transacted at the Annual Meeting of Stockholders.

Section 2.3 Special Meetings. Unless otherwise required by law or by the certificate of incorporation of the Corporation, as amended and restated from time to time (the "Certificate of Incorporation"), Special Meetings of Stockholders, for any purpose or purposes, may be called by either (i) the Chairman, if there be one, or (ii) the President, (iii) any Vice President, if there be one, (iv) the Secretary or (v) any Assistant Secretary, if there be one, and shall be called by any such officer at the request in writing of (i) the Board of Directors, (ii) a committee of the Board of Directors that has been duly designated by the Board of Directors and whose powers and authority include the power to call such meetings or (iii) stockholders owning a majority of the capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. At a Special Meeting of Stockholders, only such business shall be conducted as shall be specified in the notice of meeting (or any supplement thereto).

Section 2.4 Notice. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a Special Meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, written notice of any meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to notice of and to vote at such meeting.

Section 2.5 Adjournments. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the

original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting in accordance with the requirements of Section 4 hereof shall be given to each stockholder of record entitled to notice of and to vote at the meeting.

Section 2.6 Quorum. Unless otherwise required by applicable law or the Certificate of Incorporation, the holders of a majority of the Corporation's capital stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, in the manner provided in Section 5 hereof, until a quorum shall be present or represented.

Section 2.7 Voting. Unless otherwise required by law, the Certificate of Incorporation or these By-Laws or permitted by the rules of any stock exchange on which the Corporation's shares are listed and traded, any question brought before any meeting of the stockholders, other than the election of directors, shall be decided by the vote of the holders of a majority of the total number of votes of the Corporation's capital stock represented at the meeting and entitled to vote on such question, voting as a single class. Unless otherwise provided in the Certificate of Incorporation, and subject to Section 11(a) of this Article II, each stockholder represented at a meeting of the stockholders shall be entitled to cast one (1) vote for each share of the capital stock

entitled to vote thereat held by such stockholder. Such votes may be cast in person or by proxy as provided in Section 8 of this Article II. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of the stockholders, in such officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot.

Section 2.8 Proxies. Each stockholder entitled to vote at a meeting of the stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder as proxy, but no such proxy shall be voted upon after three years from its date, unless such proxy provides for a longer period. Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(i) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(ii) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a telegram or cablegram to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person

who will be the holder of the proxy to receive such telegram or cablegram, provided that any such telegram or cablegram must either set forth or be submitted with information from which it can be determined that the telegram or cablegram was authorized by the stockholder. If it is determined that such telegrams or cablegrams are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information on which they relied.

Any copy, facsimile telecommunication or other reliable reproduction of the writing, telegram or cablegram authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing, telegram or cablegram for any and all purposes for which the original writing, telegram or cablegram could be used; provided, however, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing, telegram or cablegram.

Section 2.9 Consent of Stockholders in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any Annual or Special Meeting of Stockholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of

the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section 9 to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided above in this Section 9.

Section 2.10 List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of the stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting (i) either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 2.11 Record Date.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by applicable law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 2.12 Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 10 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders.

Section 2.13 Conduct of Meetings. The Board of Directors of the Corporation may adopt by resolution such rules and regulations for the conduct of any meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) the determination of when the polls shall open and close for any given matter to be voted on at the meeting; (iii) rules and procedures for maintaining order at the meeting and the safety of those present; (iv) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (v) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (vi) limitations on the time allotted to questions or comments by participants.

ARTICLE III

DIRECTORS

Section 3.1 Number and Election of Directors. The Board of Directors shall consist of not less than one nor more than fifteen members, the exact number of which shall initially be fixed by the Incorporator and thereafter from time to time by the Board of Directors. Except as provided in Section 2 of this Article III, directors shall be elected by a plurality of the votes cast at each Annual Meeting of Stockholders and each director so elected shall hold office until the next Annual Meeting of Stockholders and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation or removal. Directors need not be stockholders.

Section 3.2 Vacancies. Unless otherwise required by law or the Certificate of Incorporation, vacancies on the Board of Directors or any committee thereof arising through death, resignation, removal, an increase in the number of directors constituting the Board of Directors or such committee or otherwise may be filled only by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. The directors so chosen shall, in the case of the Board of Directors, hold office until the next annual election and until their successors are duly elected and qualified, or until their earlier death, resignation or removal and, in the case of any committee of the Board of Directors, shall hold office until their successors are duly appointed by the Board of Directors or until their earlier death, resignation or removal.

Section 3.3 Duties and Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-Laws required to be exercised or done by the stockholders.

Section 3.4 Meetings. The Board of Directors and any committee thereof may hold meetings, both regular and special, either within or without the State of Delaware. Regular meetings of the Board of Directors or any committee thereof may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors or such committee, respectively. Special meetings of the Board of Directors may be called by the Chairman, if there be one, the President, or by any director. Special meetings of any committee of the Board of Directors may be called by the chairman of such committee, if there be one, the President, or any director serving on such committee. Notice thereof stating the place, date and hour of the meeting shall be given to each director (or, in the case of a committee, to each member of such committee) either by mail not less than forty-eight (48) hours before the date of the meeting, by telephone or telegram on twenty-four (24) hours' notice, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

Section 3.5 Organization. At each meeting of the Board of Directors or any committee thereof, the Chairman of the Board of Directors or the chairman of such committee, as the case may be, or, in his or her absence or if there be none, a director chosen by a majority of the directors present, shall act as chairman. Except as provided below, the Secretary of the Corporation shall act as secretary at each meeting of the Board of Directors and of each committee thereof. In case the Secretary shall be absent from any meeting of the Board of Directors or of any committee thereof, an Assistant Secretary shall perform the duties of secretary at such meeting; and in the absence from any such meeting of the Secretary and all the Assistant Secretaries, the chairman of the meeting may appoint any person to act as secretary of the meeting. Notwithstanding the foregoing, the members of each committee of the Board of Directors may appoint any person to act as secretary of any meeting of such committee and the Secretary or any Assistant Secretary of the Corporation may, but need not if such committee so elects, serve in such capacity.

Section 3.6 Resignations and Removals of Directors. Any director of the Corporation may resign from the Board of Directors or any committee thereof at any time, by giving notice in writing to the Chairman of the Board of Directors, if there be one, the President or the Secretary of the Corporation and, in the case of a committee, to the chairman of such committee, if there be one. Such resignation shall take effect at the time therein specified or, if no time is specified, immediately; and, unless otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective. Except as otherwise required by applicable law and subject to the rights, if any, of the holders of shares of preferred stock then outstanding, any director or the entire Board of Directors may be removed from office at any time by the affirmative vote of the holders of at least a majority in voting power of the issued and outstanding capital stock of the Corporation entitled to vote in the election of directors. Any director serving on a committee of the Board of Directors may be removed from such committee at any time by the Board of Directors.

Section 3.7 Quorum. Except as otherwise required by law, the Certificate of Incorporation or the rules and regulations of any securities exchange or quotation system on which the Corporation's securities are listed or quoted for trading, at all meetings of the Board of Directors or any committee thereof, a majority of the entire Board of Directors or a majority of the directors constituting such committee, as the case may be, shall constitute a quorum for the transaction of business and the act of a majority

of the directors or committee members present at any meeting at which there is a quorum shall be the act of the Board of Directors or such committee, as applicable. If a quorum shall not be present at any meeting of the Board of Directors or any committee thereof, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

Section 3.8 Actions of the Board by Written Consent. Unless otherwise provided in the Certificate of Incorporation or these By-Laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all the members of the Board of Directors or such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or such committee.

Section 3.9 Meetings by Means of Conference Telephone. Unless otherwise provided in the Certificate of Incorporation or these By-Laws, members of the Board of Directors of the Corporation, or any committee thereof, may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 3.9 shall constitute presence in person at such meeting.

Section 3.10 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. Each member of a committee must meet the requirements for membership, if any, imposed by applicable law and the rules and regulations of any securities exchange or quotation system on which the securities of the Corporation are listed or quoted for trading. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of any such committee. Subject to the rules and regulations of any securities exchange or quotation system on which the securities of the Corporation are listed or quoted for trading, in the absence or disqualification of a member of a committee, and in the absence of a designation by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another qualified member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Any committee, to the extent permitted by law and provided in the resolution establishing such committee, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Each committee shall keep regular minutes and report to the Board of Directors when required. Notwithstanding anything to the contrary contained in this Article III, the resolution of the Board of Directors establishing any committee of the Board of Directors and/or the charter of any such committee may establish requirements or procedures relating to the governance and/or operation of such committee that are different from, or in addition to, those set forth in these By-Laws and, to the extent that there is any inconsistency between these By-Laws and any such resolution or charter, the terms of such resolution or charter shall be controlling.

Section 3.11 Compensation. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary for service as director, payable in cash or securities. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for service as committee members.

Section 3.12 Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because any such director's or officer's vote is counted for such purpose if: (i) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (ii) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the

stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (iii) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

ARTICLE IV

OFFICERS

Section 4.1 General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, a Secretary and a Treasurer. The Board of Directors, in its discretion, also may choose a Chairman of the Board of Directors (who must be a director) and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law, the Certificate of Incorporation or these By-Laws. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

Section 4.2 Election. The Board of Directors, at its first meeting held after each Annual Meeting of Stockholders (or action by written consent of stockholders in lieu of the Annual Meeting of Stockholders), shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each officer of the Corporation shall hold office until such officer’s successor is elected and

qualified, or until such officer's earlier death, resignation or removal. Any officer elected by the Board of Directors may be removed at any time by the Board of Directors. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors. The salaries of all officers of the Corporation shall be fixed by the Board of Directors.

Section 4.3 Voting Securities Owned by the Corporation. Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the President or any Vice President or any other officer authorized to do so by the Board of Directors and any such officer may, in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

Section 4.4 Chairman of the Board of Directors. The Chairman of the Board of Directors, if there be one, shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall be the Chief Executive Officer of the Corporation, unless the Board of Directors designates the President as the Chief Executive Officer, and, except where by law the signature of the President is required, the Chairman of the Board of Directors shall possess the same

power as the President to sign all contracts, certificates and other instruments of the Corporation which may be authorized by the Board of Directors. During the absence or disability of the President, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the President. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may from time to time be assigned by these By-Laws or by the Board of Directors.

Section 4.5 President. The President shall, subject to the control of the Board of Directors and, if there be one, the Chairman of the Board of Directors, have general supervision of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. The President shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these By-Laws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and, provided the President is also a director, the Board of Directors. If there be no Chairman of the Board of Directors, or if the Board of Directors shall otherwise designate, the President shall be the Chief Executive Officer of the Corporation. The President shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such officer by these By-Laws or by the Board of Directors.

Section 4.6 Vice Presidents. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act (and if there be no Chairman of the Board of Directors), the Vice President, or the Vice Presidents if there are more than one (in the order designated by the Board of Directors), shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 4.7 Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings thereat in a book or books to be kept for that purpose; the Secretary shall also perform like duties for committees of the Board of Directors when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors, the Chairman of the Board of Directors or the President, under whose supervision the Secretary shall be. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and special meetings of the Board of Directors, and if there be no Assistant Secretary, then either the Board of Directors or the President may choose another officer to cause such notice to be given.

The Secretary shall have custody of the seal of the Corporation and the Secretary or any Assistant Secretary, if there be one, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary or by the signature of any such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest to the affixing by such officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be.

Section 4.8 Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all transactions as Treasurer and of the financial condition of the Corporation. If required by the Board of Directors, the Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of the Treasurer and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation.

Section 4.9 Assistant Secretaries. Assistant Secretaries, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Secretary, and in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, shall perform the duties of the Secretary, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Secretary.

Section 4.10 Assistant Treasurers. Assistant Treasurers, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Treasurer, and in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, shall perform the duties of the Treasurer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Treasurer. If required by the Board of Directors, an Assistant Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of Assistant Treasurer and for the restoration to the Corporation, in case of the Assistant Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Assistant Treasurer's possession or under the Assistant Treasurer's control belonging to the Corporation.

Section 4.11 Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V

STOCK

Section 5.1 Form of Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate signed by, or in the name of the Corporation (i) by the Chairman of the Board of Directors, or the President or a Vice President and (ii) by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation, certifying the number of shares owned by such stockholder in the Corporation.

Section 5.2 Signatures. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Section 5.3 Lost Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issuance of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such

lost, stolen or destroyed certificate, or such owner's legal representative, to advertise the same in such manner as the Board of Directors shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate.

Section 5.4 Transfers. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these By-Laws. Transfers of stock shall be made on the books of the Corporation only by the person named in the certificate or by such person's attorney lawfully constituted in writing and upon the surrender of the certificate therefor, properly endorsed for transfer and payment of all necessary transfer taxes; provided, however, that such surrender and endorsement or payment of taxes shall not be required in any case in which the officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or Assistant Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

Section 5.5 Dividend Record Date. In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not

precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 5.6 Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

Section 5.7 Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agencies and registry offices or agencies at such place or places as may be determined from time to time by the Board of Directors.

ARTICLE VI

NOTICES

Section 6.1 Notices. Whenever written notice is required by law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, such notice may be given by mail, addressed to such director, member of a committee or stockholder, at such person’s address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be

deemed to be given at the time when the same shall be deposited in the United States mail. Written notice may also be given personally, by telegram, telex or cable or electronic transmission, provided that in the case of notice to stockholders, the stockholder to receive the notice has consented to the form of electronic transmission.

Section 6.2 Waivers of Notice. Whenever any notice is required by applicable law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, a waiver thereof in writing, signed by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Attendance of a person at a meeting, present in person or represented by proxy, shall constitute a waiver of notice of such meeting, except where the person attends the meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any Annual or Special Meeting of Stockholders or any regular or special meeting of the directors or members of a committee of directors need be specified in any written waiver of notice unless so required by law, the Certificate of Incorporation or these By-Laws.

ARTICLE VII

GENERAL PROVISIONS

Section 7.1 Dividends. Dividends upon the capital stock of the Corporation, subject to the requirements of the General Corporation Law of the State of Delaware (the "DGCL") and the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 8

of Article III hereof), and may be paid in cash, in property, or in shares of the Corporation's capital stock. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for purchasing any of the shares of capital stock, warrants, rights, options, bonds, debentures, notes, scrip or other securities or evidences of indebtedness of the Corporation, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve.

Section 7.2 Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 7.3 Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 7.4 Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE VIII

INDEMNIFICATION

Section 8.1 Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

Section 8.2 Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation

serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 8.3 Authorization of Indemnification. Any indemnification under this Article VIII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (i) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (iv) by the stockholders.

Such determination shall be made, with respect to former directors and officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

Section 8.4 Good Faith Defined. For purposes of any determination under Section 3 of this Article VIII, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be.

Section 8.5 Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 3 of this Article VIII, and notwithstanding the absence of any determination thereunder, any director or officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VIII. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VIII nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the director or officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

Section 8.6 Expenses Payable in Advance. Expenses (including attorneys' fees) incurred by a director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VIII. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

Section 8.7 Nonexclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these By-Laws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and Section 2 of this Article VIII shall be made to the fullest extent permitted by law. The provisions of this Article VIII shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VIII but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise.

Section 8.8 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VIII.

Section 8.9 Certain Definitions. For purposes of this Article VIII, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term "another enterprise" as used in this Article VIII shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VIII, references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VIII.

Section 8.10 Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 8.11 Limitation on Indemnification. Notwithstanding anything contained in this Article VIII to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VIII), the Corporation shall not be obligated to indemnify any director or officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors of the Corporation.

Section 8.12 Indemnification of Employees and Agents. The Corporation may, to the extent authorized from time to time by the Board of Directors, provide rights to indemnification and to the advancement of expenses to employees and agents of the Corporation similar to those conferred in this Article VIII to directors and officers of the Corporation.

ARTICLE IX

AMENDMENTS

Section 9.1 Amendments. These By-Laws may be altered, amended or repealed, in whole or in part, or new By-Laws may be adopted by the stockholders or by the Board of Directors; provided, however, that notice of such alteration, amendment, repeal or adoption of new By-Laws be contained in the notice of such meeting of the stockholders or Board of Directors, as the case may be. All such amendments must be approved by either the holders of a majority of the outstanding capital stock entitled to vote thereon or by a majority of the entire Board of Directors then in office.

Section 9.2 Entire Board of Directors. As used in this Article IX and in these By-Laws generally, the term “entire Board of Directors” means the total number of directors which the Corporation would have if there were no vacancies.

* * *

Adopted as of: February 8, 2018

Last Amended as of: N/A

Exhibit 3.19

STATE OF DELAWARE
CERTIFICATE OF INCORPORATION
A CLOSE CORPORATION

First: The name of the corporation is HARBISON-FISCHER, INC.

Second: The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, County of New Castle. The name of the registered agent is The Corporation Trust Company.

Third: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

Fourth: The amount of the total stock of this corporation that it is authorized to issue is Five Thousand (5,000) shares with a par value of $0.10 per share. Twenty-Five hundred (2,500) of the authorized shares shall be designated as Class A Common Stock, and Twenty-Five Hundred (2,500) of the authorized shares shall be designated as Class B Common Stock. The two classes of common stock shall be identical in all respects, except that the holder of Class B Common Stock shall have voting power only as may be authorized by this Certificate of Incorporation or by law. Except as so authorized, the holders of Class A Common Stock shall have full voting power for all purposes to the exclusion of the holders of Class B Common Stock.

Fifth: The name and mailing address of the incorporator are as follows:

James L. Stripling
801 Cherry Street, Unit 46
Fort Worth, Texas 76102

Sixth: All of the corporation's issued stock, exclusive of treasury shares, shall be held of record by not more than thirty (30) persons.

Seventh: All of the issued stock of all classes shall be subject to one or more of the restrictions on transfer permitted by Section 202 of the General Corporation Law.

Eighth: The corporation shall make no offering of any of its stock of any class which would constitute a "public offering" within the meaning of the United States Securities Act of 1933, as it may be amended from time to time.

Ninth: The affirmative vote of the holders of at least two-thirds (2/3) of the outstanding shares of each class of authorized shares shall be required in the following cases, and in each such case the holders of Class B Common Stock shall have voting rights:

(a) Any merger involving the corporation, other than a merger referred to in Section 251(f) of the Delaware General Corporation Law.

(b) The sale, lease, or other transfer of substantially all of the assets of the corporation.

(c) The dissolution of the corporation.

(d) Any amendment to the Certificate of Incorporation, except that holders of Class B Common Stock shall be entitled to vote as a class upon a proposed amendment only to the extent permitted by Section 242(b)(2) of the Delaware General Corporation Law.

Tenth: The name and mailing address of each person who is to serve as a director until the first annual meeting of the shareholders or until a successor is elected and qualified, are as follows:

C. K. Fischer	P.O. Box 2477 Fort Worth, Texas 76113-2477
Jill A. Fischer	P.O. Box 2477 Fort Worth, Texas 76113-2477
C. K. Fischer, Jr.	P.O. Box 2477 Fort Worth, Texas 76113-2477
David G. Fischer	P.O. Box 2477 Fort Worth, Texas 76113-2477
Teresa Fischer Howard	P.O. Box 2477 Fort Worth, Texas 76113-2477
Patrick N. Fischer	P.O. Box 2477 Fort Worth, Texas 76113-2477

Eleventh: The written consent of the corporation shall be required for any transfer of shares, except for transfers to any of the following persons or entities:

(a) Any person who is, as of the date the Certificate of Incorporation is filed, a partner of HARBISON-FISCHER, L. P., a Delaware limited partnership.

(b) Any person who is a spouse, ancestor, descendant, sibling, or descendant of a sibling of a person referred to in (a) or of a person who is the beneficiary of a trust that is a partner of HARBISON-FISCHER, L. P.

(c) Any trust all the beneficiaries of which are persons referred to in (a) or (b).

(d) Any charitable organization described in Section 170(c) of the Internal Revenue Code of 1986, as amended.

I, **The Undersigned**, for the purpose of forming a corporation under the laws of the State of Delaware, do make, file and record this Certificate, and do certify that the facts herein stated are true, and I have accordingly hereunto set my hand this 22nd day of June, 2007.

/s/ James L. Stripling

James L. Stripling, Incorporator

CONSENT TO USE OF NAME

HARBISON-FISCHER, L. P., a Delaware limited partnership, hereby consents to the use of the name "HARBISON-FISCHER, INC." by a Delaware corporation of that name.

Dated: June 20, 2007

HARBISON-FISCHER, L. P.

By: Harbison-Fischer Holdings, L.L.C.
General Partner

By: /s/ David G. Fischer
David G. Fischer, President

STATE OF DELAWARE
CERTIFICATE OF MERGER OF
DOMESTIC LIMITED LIABILITY COMPANY
INTO A
DOMESTIC CORPORATION

Pursuant to Title 8, Section 264(c) of the Delaware General Corporation Law and Title 6, Section 18-209 of the Delaware Limited Liability Company Act, the undersigned corporation executed the following Certificate of Merger.

FIRST: The name of the surviving corporation is HARBISON-FISCHER, INC., a Delaware Corporation, and the name of the limited liability company being merged into this surviving corporation is HARBISON-FISCHER HOLDINGS, L.L.C.

SECOND: The Agreement of Merger has been approved, adopted, certified, executed and acknowledged by the surviving corporation and the merging limited liability company.

THIRD: The name of the surviving corporation is HARBISON-FISCHER, INC.

FOURTH: The merger is to become effective at the close of business on June 29, 2007.

FIFTH: The Agreement of Merger is on file at 901 Crowley Road, Crowley, Texas 76036, the place of business of the surviving corporation.

SIXTH: A copy of the Agreement of Merger will be furnished by the corporation on request, without cost, to any stockholder of any constituent corporation or member of any constituent limited liability company.

SEVENTH: The Certificate of Incorporation of the surviving corporation shall be its Certificate of Incorporation.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by an authorized officer, the 25th day of June, 2007.

HARBISON-FISCHER, INC.

By: /s/ David G. Fischer
David G. Fischer, President

STATE OF DELAWARE
CERTIFICATE OF MERGER OF
DOMESTIC LIMITED PARTNERSHIP
INTO A
DOMESTIC CORPORATION

Pursuant to Title 8, Section 263(a) of the Delaware General Corporation Law and Title 6, Section 17-211 of the Delaware Limited Partnership Act, the undersigned corporation executed the following Certificate of Merger:

FIRST: The name of the surviving corporation is HARBISON-FISCHER, INC., a Delaware Corporation, and the name of the limited partnership being merged into this surviving corporation is HARBISON-FISCHER, L. P.

SECOND: The Agreement of Merger has been approved, adopted, certified, executed and acknowledged by the surviving corporation and the merging limited partnership.

THIRD: The name of the surviving corporation is HARBISON-FISCHER, INC.

FOURTH: The merger is to become effective at the close of business on June 30, 2007.

FIFTH: The Agreement of Merger is on file at 901 Crowley Street, Crowley, Texas 76036, the place of business of the surviving corporation.

SIXTH: A copy of the Agreement of Merger will be furnished by the corporation on request, without cost, to any stockholder of any constituent corporation or partner of any constituent limited partnership.

SEVENTH: The Certificate of Incorporation of the surviving corporation shall be its Certificate of Incorporation.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by an authorized officer, the day of June, 2007.

HARBISON-FISCHER, INC.

By: /s/ David G. Fischer
David G. Fischer, President

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT OF
CERTIFICATE OF INCORPORATION OF
HARBISON-FISCHER, INC.

The corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware does hereby certify:

FIRST: That pursuant to a unanimous consent of the Board of Directors of HARBISON-FISCHER, INC. resolutions were duly adopted setting forth a proposed amendment of the Certificate of Incorporation of said corporation, declaring said amendment to be advisable and calling a meeting of the stockholders of said corporation entitled to vote thereon for consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that Article Fourth of the Certificate of Incorporation of the corporation be amended to read as follows:

"**Fourth**: The amount of the total stock of this corporation that it is authorized to issue is Five Thousand (5,000) shares with a par value of $0.10 per share. Twenty-Five hundred (2,500) of the authorized shares shall be designated as Class A Common Stock, and Twenty-Five Hundred (2,500) of the authorized shares shall be designated as Class B Common Stock. The two classes of common stock shall be identical in all respects, except that the holders of Class B Common Stock shall have voting power only as may be authorized by this Certificate of Incorporation or by law. Except as so authorized, the holders of Class A Common Stock shall have full voting power for all purposes to the exclusion of the holders of Class B Common Stock.

In the event any shares of Class A Common stock are transferred, either voluntarily or involuntarily, to any person or entity other than a Permitted Transferee, then and in such event the holders of Class B Common Stock shall have full voting power for all purposes equal to that of the holders of Class A Common Stock.

The term "Permitted Transferee" means any of the following:

(a) A shareholder of the corporation;

(b) Any person who is a spouse, ancestor, descendant, sibling, or descendant of a sibling of a person referred to in (a) or of a person who is the beneficiary of a trust that is a shareholder of the corporation; or

(c) Any trust all the beneficiaries of which are persons referred to in (a) or (b)."

SECOND: That thereafter, pursuant to resolution of its Board of Directors, the amendment was presented to the holder of all of the shares of the Corporation entitled to vote on the amendment, and the holder of all of such shares executed a consent approving the amendment in accordance with Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said corporation has caused this certificate to be signed this 17th day of April, 2009.

HARBISON-FISCHER, INC.

By: /s/ David G. Fischer
David G. Fischer, President

Exhibit 3.20

BYLAWS

OF

HARBISON-FISCHER, INC.

ARTICLE I

OFFICES

Section 1. The registered office of the corporation shall be at Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware, and the name of the registered agent of the corporation at such address shall be The Corporation Trust Company.

Section 2. The corporation may also have offices at such other places both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

MEETINGS OF SHAREHOLDERS

Section 1. Meetings of shareholders shall be held at the registered office of the corporation or at such other place, within or without the State of Delaware, as may be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. An annual meeting of the shareholders, for the purpose of electing directors and transacting such other business as may properly be brought before the meeting, shall be held on the fourth Tuesday of March of each year. Unless otherwise stated in a notice of the meeting, or waiver of such notice, the annual meeting of the shareholders shall be held at 10:00 a.m. at the registered office of the corporation.

Section 3. Failure to hold the annual meeting at the designated time shall not work a dissolution of the corporation. In the event the Board of Directors fails to call the annual meeting at the designated time, any shareholder may make demand that such meeting be held within a reasonable time. Such demand shall be made in writing by certified mail directed to any officer of the corporation. The annual meeting shall thereafter be called within sixty (60) days following such demand.

Section 4. Special meetings of the shareholders for any purpose or purposes may be called by the President, the Board of Directors, or the holders of not less than one-tenth of all the shares entitled to vote at the meeting. No business other than that specified in the notice of meeting shall be transacted at a special meeting.

Section 5.

(a) Written or printed notice stating the place, day, and hour of the meeting, and in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten (10) nor more than sixty (60) days before the date of the meeting, either personally or by mail, by or at the direction of the President, the Secretary, or the officer or person or persons calling the meeting, to each shareholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail addressed to the shareholder at his address as it appears on the stock transfer books of the corporation, with postage thereon prepaid.

(b) Notice may be waived in writing signed by the person or persons entitled to such notice. Such waiver may be executed at any time before or after the holding of such meeting. Attendance at a meeting shall constitute a waiver of notice, except where the person attends for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 6. For the purpose of determining shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment thereof, the record date shall be the date on which notice of the meeting is mailed.

Section 7. The officer or agent having charge of the corporation's stock transfer books shall make, at least ten (10) and not more than sixty (60) days before each meeting of shareholders, a complete list of the shareholders entitled to vote at such meeting or any adjournment thereof. Such list shall be arranged in alphabetical order, with the address of and the number of shares held by each, which list, for a period of ten (10) days prior to such meeting, shall be kept on file at the registered office of the corporation and shall be subject to inspection by any shareholder at any time during usual business hours. Such list shall also be produced and kept open at the time and place of the meeting and shall be subject to the inspection of any shareholder during the whole time of the meeting. The original stock transfer books shall be prima facie evidence as to who are the shareholders entitled to examine such list or transfer books and to vote at any meeting of shareholders.

Section 8. The holders of a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of shareholders. If a quorum shall not be present or represented at any meeting of the shareholders, the shareholders entitled to vote, represented in person or by proxy, shall have power to adjourn the meeting from time to time without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented any business may be transacted which might have been transacted at the original meeting.

Section 9. At a meeting at which a quorum is present, the vote of the holders of a majority of the shares represented in person or by proxy shall decide any question brought before the meeting, unless the question is one upon which the vote of a greater number is required by law, the Certificate of Incorporation, or these Bylaws. The shareholders present or represented at a meeting at which a quorum is present may continue to transact business until adjournment, notwithstanding the withdrawal of enough shareholders to leave less than a quorum.

Section 10.

(a) Each outstanding share, regardless of class, be entitled to one vote on each matter submitted to vote of a meeting of shareholders, expect to the extent that the voting rights of the shares of any class or classes are limited or denied by the Certificate of Incorporation.

(b) Treasury shares, shares of stock owned by another corporation the majority of the voting stock of which is owned or controlled by this corporation, and shares of stock held by this corporation in a fiduciary capacity shall not be voted, directly or indirectly, at any meeting and shall not be counted in determining the total number of outstanding shares at any given time.

(c) A shareholder may vote either in person or by proxy executed in writing by the shareholder or by his duly authorized attorney in fact. No proxy shall be valid after three (3) years from the date of its execution unless otherwise provided in the proxy. Each proxy shall be filed with the Secretary prior to or at the commencement of the meeting.

Section 11. At any meeting of the shareholders, a shareholder may attend by telephone, radio, television, or similar means of communication which permits him to participate in the meeting, and a shareholder so attending shall be deemed present at the meeting for all purposes including the determination of whether a quorum is present.

Section 12. Any action required by law to be taken at a meeting of the shareholders of the corporation, or any action which may be taken at a meeting of the shareholders, may be taken without a meeting, without prior notice, and without a vote, if a consent in writing setting forth the actions taken shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to the corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

Every written consent shall bear the date of signature of each stockholder or member who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty days of the earliest dated consent delivered in the manner required by this Section to the corporation, written consents signed by a sufficient number of holders or members to take action are delivered to the corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to the corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

ARTICLE III

DIRECTORS

Section 1. The business and affairs of the corporation shall be managed by its Board of Directors.

Section 2. The number of directors shall be one or more. The number of directors may be increased or decreased from time to time by amendment to these Bylaws, but no decrease shall have the effect of shortening the term of any incumbent director. A director need not be a shareholder or a resident of the State of Delaware.

Section 3. At the first annual meeting of shareholders and at each annual meeting thereafter, the shareholders shall elect directors to hold office until the next succeeding annual meeting. Each director shall hold office for the term for which he is elected and until his successor shall be elected and shall qualify.

Section 4. At each election for directors, each shareholder entitled to vote shall have the right to vote, in person or by proxy, the number of shares owned by him for as many persons as there are directors to be elected and for whose election he has a right to vote.

Section 5. Any director may be removed either for cause or without cause at a special meeting of shareholders called for that purpose. Removal shall be accomplished by the affirmative vote of a majority in number of shares of shareholders represented in person or by proxy at such meeting which are entitled to vote for the election of such director. However, unless the entire Board is removed, no individual director shall be removed without cause if the votes of a sufficient number of shares are cast against his removal, which if cumulatively voted at an election of the entire Board, would be sufficient to elect one or more directors.

Section 6. A vacancy on the Board of Directors caused by death, resignation, retirement, disqualification, removal from office, or otherwise, may be filled either (1) by appointment at the next regular meeting of the Board of Directors by a majority of the directors then in office, though less than a quorum, or (2) by election at a special meeting of shareholders called for that purpose. Each successor director shall be elected or appointed for the unexpired term of his predecessor in office and shall serve until his successor shall be elected and shall qualify. Any directorship to be filled by reason of an increase in the number of directors shall be filled by election at an annual meeting of shareholders or at a special meeting of shareholder called for that purpose.

Section 7. The Board of Directors, by resolution adopted by a majority of the Board of Directors, may designate two or more directors to constitute an executive committee, which committee, to the extent provided in such resolution, shall have and may exercise all of the authority of the Board of Directors in the business and affairs of the corporation except where action of the Board of Directors is specified by the Delaware Corporation Law or other applicable law, but the designation of such committee and the delegation thereto of authority shall not operate to relieve the Board of Directors, or any member thereof, of any responsibility imposed upon it or him by law. The executive committee shall keep regular minutes of its proceedings and report the same to the Board when required by the Board.

Section 8. Directors, as such, shall not receive any salary for their services, but, by resolution of the Board a fixed sum, plus expenses of attendance, if any, may be paid for attendance at each regular or special meeting of the Board. Nothing herein shall be construed to preclude any director from serving the corporation in any other capacity and receiving compensation therefor. Members of the executive committee may, by resolution of the Board of Directors, be allowed like compensation for attending committee meetings.

ARTICLE IV

MEETINGS OF DIRECTORS

Section 1. The directors of the corporation may hold regular or special meetings either within or without the State of Delaware.

Section 2. A regular meeting of the Board of Directors shall be held without other notice than this Bylaw immediately after and at the same place as the annual meeting of shareholders. The Board of Directors may provide, by resolution, the time and place for the holding of additional regular meetings without other notice than such resolution.

Section 3. Special meetings of the Board of Directors may be called by or at the request of the President or any director. Notice of the call of a special meeting shall be in writing and delivered for transmission to each of the directors not later than during the third day immediately preceding the day for which such meeting is called. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail addressed to the director at his address as it appears in the records of the corporation with postage thereon paid. Neither the business proposed to be transacted nor the purpose of any special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

Section 4. Notice of any special meeting may be waived in writing signed by the person or persons entitled to such notice. Such waiver may be executed at any time before or after the holding of such meeting. Attendance of a director at a special meeting shall constitute a waiver of notice of such special meeting, except where a director attends for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 5. A majority of the number of directors shall constitute a quorum for the transaction of business. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors unless otherwise specifically required by law or these Bylaws. If a quorum is not present at any meeting of directors, the directors present may adjourn the meeting from time to time, without notice other an announcement at the meeting, until a quorum is present.

Section 6. At any meeting of the Board, a member may attend by telephone, radio, television, or similar means of communication which permits him to participate in the meeting, and a director so attending shall be deemed present at the meeting for all purposes including the determination of whether a quorum is present.

Section 7. Any action required or permitted to be taken at a meeting of the Board of Directors or any executive committee may be taken without a meeting if a consent in writing setting forth the actions so taken shall be signed by all of the members of the Board of Directors or executive committee, as the case may be. Such consent shall have the same force and effect as a unanimous vote at a meeting, and may be stated as such in any document or instrument filed with the Secretary of State.

ARTICLE V

OFFICERS

Section 1. The officers of the corporation shall be elected by the directors and shall be a Chairman/Chief Executive Officer, a President/Chief Operating Officer, a Senior Vice President, a Vice President of Finance, a Vice President of Administrative Services, and a Secretary. The Board of Directors may also choose additional vice presidents and one or more assistant secretaries and assistant treasurers. Any two or more offices may be held by the same person.

Section 2. The officers of the corporation shall be elected annually by the Board of Directors at the first meeting of the Board of Directors held after each annual meeting of shareholders. Vacancies or new offices shall be filled at any meeting of the Board to serve until the next election of officers. Each officer shall hold office until his successor has been elected and qualified, or until the death, resignation, or removal of the officer.

Section 3. The Board of Directors may appoint such other officers and agents as it deems necessary. Such officers and agents shall be appointed for such terms and shall exercise such powers and perform such duties as may be determined from time to time by the Board.

Section 4. The salaries of all officers and agents of the corporation shall be fixed by the Board of Directors.

Section 5. Any officer or agent elected or appointed by the Board of Directors, or member of the executive committee, may be removed at any time by the affirmative vote of a majority of the whole Board of Directors. Such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment shall not of itself create any contract right.

Section 6. The Chairman shall preside at all meetings of the shareholders and Board of Directors, and shall be an ex officio member of all standing and special committees.

Section 7. The President/Chief Operating Officer shall be the primary executive officer of the corporation and, subject to the direction of the Board of Directors, shall supervise and control the business and affairs of the corporation. He shall see that all orders and resolutions of the Board are carried into effect, and shall perform such other duties as the Board of Directors may prescribe. He shall be an ex officio member of all standing and special committees.

Section 8. In the absence of the President or in the event of his inability or refusal to act, the Senior Vice President shall perform the duties of the President, and when so acting, shall have all the powers of, and be subject to all the restrictions upon, the President. Each vice president shall also have such powers and perform such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

Section 9. The Secretary shall attend all meetings of the shareholders and of the Board of Directors. He shall keep a true and complete record of the proceedings, including all votes and resolutions presented at these meetings, in a book to be kept for that purpose. He shall be custodian of the records and of the seal of the corporation, and shall affix the same to documents, the execution of which is duly authorized. He shall give or cause to be given all notices required by law or by these Bylaws. He shall also perform such other duties as may be prescribed by the Board of Directors or President.

Section 10.

(a) The Vice President of Finance shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements of the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the Board of Directors.

(b) The Vice President of Finance shall disburse the funds of the corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and directors, at the regular meetings of the Board or whenever they may require it, an account of all his transactions as Vice President of Finance and of the financial condition of the corporation. The Vice President of Finance shall also perform such other duties as may be prescribed by the Board of Directors or the President.

(c) If required by the Board of Directors, the Vice President of Finance shall give the corporation a bond in such form, in such sum, and with such surety or sureties as shall be satisfactory to the Board for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death, resignation, retirement, or removal from office, of all books, papers, vouchers, money, and other property of whatever kind in his possession or under his control belonging to the corporation.

Section 11. In the absence of the Secretary or Vice President of Finance, an assistant secretary or assistant Vice President of Finance, respectively, shall perform the duties of the Secretary or Vice President of Finance. Assistant Vice Presidents of Finance may be required to give bond in the form described in Section 10(c) of these Bylaws. In general, the assistant secretaries and assistant Vice Presidents of Finance shall have such powers and perform such duties as the Secretary or Vice President of Finance, respectively, or the Board of Directors or President may prescribe. The Board of Directors may also transfer the powers or duties of any officer to any other officer or agent provided that a majority of the full Board of Directors concurs.

ARTICLE VI

SHARE CERTIFICATES

Section 1. Certificates in such form as may be determined by the Board of Directors shall be issued for all shares to which shareholders are entitled. Such certificates shall be consecutively numbered and shall be entered in the books of the corporation as they are issued. Each certificate shall state on the face thereof the holder’s name, the number and class of shares, and the par value of such shares or a statement that such shares are without par value. They shall be signed by the President or a Vice President, and the Secretary or an assistant secretary, and may be sealed with the seal of the corporation or a facsimile thereof. If any certificate is countersigned by a transfer agent, other than the corporation or an employee of the corporation, the signature of any such officer may be facsimile.

Section 2. The Board of Directors may direct a new certificate representing shares to be issued, in place of any certificate theretofore issued by the corporation alleged to have been lost or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate to be lost or destroyed. Before authorizing the issuance of a new certificate, the Board of Directors, in its discretion, may require the owner of such lost or destroyed certificate, or his legal representative, to advertise the same in such manner as it may require and/or give the corporation a bond in such form, in such sum, and with such surety or sureties as it may direct to indemnify the corporation against any claims that may be made with respect to said certificate.

Section 3. Shares of stock shall be transferable on the books of the corporation only by the holder thereof in person or by his duly authorized attorney. Upon surrender to the corporation or the transfer agent of the corporation of a certificate representing shares duly endorsed or accompanied by proper evidence of succession, assignment, or authority to transfer, the corporation or the transfer agent of the corporation shall issue a new certificate and record the transaction upon its books.

Section 4. The corporation may treat the holder of record of any share or shares of stock as the holder in fact thereof, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by law.

Section 5. Subscriptions for shares shall be paid in full at such time, or in such installments and at such times, as shall be determined by the Board of Directors. Calls for payment on subscriptions shall be uniform as to all shares of the same class. The Board of Directors may forfeit any subscription and the amount paid thereon if the corporation is solvent and any amount due as a result of a call remains unpaid for a period of twenty (20) days after written demand has been made therefor. If mailed, such letter demand shall be deemed to be made when deposited in the United States mail in a sealed envelope addressed to the subscriber at his last post office address known to the corporation, with postage thereon prepaid.

ARTICLE VII

MISCELLANEOUS PROVISIONS

Section 1. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances.

Section 2. No loans shall be contracted on behalf of the corporation, and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances. The corporation shall make no loans secured by a lien on its own shares.

Section 3. There may be created by resolution of the Board of Directors out of the earned surplus of the corporation such reserve or reserves as the directors from time to time in their discretion, think proper to provide for contingencies, or to equalize dividends, or to repair or maintain any property of the corporation, or for such other purpose as the directors shall think beneficial to the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 4. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 5. The fiscal year of the corporation shall be fixed by the Board of Directors.

Section 6. The Board of Directors shall provide a corporate seal which shall be in the form of a circle and shall have inscribed thereon the name of the corporation.

Section 7. Dividends upon the outstanding shares of the corporation may be declared by the Board of Directors at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the corporation, subject to the provisions of law and the Certificate of Incorporation. The Board of Directors may fix in advance a record date for the purpose of determining shareholders entitled to receive payment of any dividend. The record date may not be more than fifty (50) days prior to the payment date of such dividend. In lieu of setting a record date, the Board of Directors may close the stock transfer books for a period of not more than fifty (50) days prior to the payment date of such dividend. In the absence of any action by the Board of Directors, the date upon which the Board of Directors adopts the resolution declaring such dividend shall be the record date for determining the persons entitled to receive the dividend.

Section 8. Any shareholder, upon written demand stating the purpose thereof, shall have the right to examine, in person or by agent or attorney, at any reasonable time or times, for any proper purpose, the books and records of account, minutes, and record of shareholders of the corporation. Such person shall have the right to make extracts therefrom.

ARTICLE VIII

AMENDMENTS

Section 1. These Bylaws may be altered, amended, or repealed at any meeting of the shareholders at which a quorum is present, by the affirmative vote of a majority of the shares present at the such meeting, provided notice of the proposed alteration, amendment, or repeal be contained in the notice of such meeting, or provided that all shareholders waive such notice or consent to such action by the shareholders without a meeting, as allowed by other provisions of these Bylaws. These Bylaws may also be altered, amended, or repealed by the Board of Directors at any meeting, provided notice of the proposed alteration, amendment, or repeal be contained in the notice of such meeting or provided that all directors waive such notice or consent to such action by the Board of Directors without a meeting, as allowed by other provisions of these Bylaws.

Section 2. The Board of Directors may alter, amend, or repeal Bylaws adopted by the shareholders.

Exhibit 3.21

ARTICLES OF INCORPORATION

OF

HONETREAT COMPANY

ARTICLE I

The name of this corporation is HONETREAT COMPANY.

ARTICLE II

The specific business in which the corporation is primarily to engage is the business of heating and honing of seam tubes.

ARTICLE III

The general purposes for which this corporation is formed are:

(a) To engage in any one or more other businesses or transactions which the board of directors of this corporation may from time to time authorize or approve, whether related or unrelated to the business described in ARTICLE II above or to any other business then or theretofore done by this corporation;

(b) To exercise any and all rights, and powers which a corporation may now or hereafter exercise;

(c) To act as principal, agent, joint venturer, partner or in any other capacity which may be authorized or approved by the board of directors of this corporation; and

(d) To transact business in the State of California or in any other jurisdiction of the United States of America or elsewhere in the world.

The foregoing statement of purposes shall be construed as a statement of both purposes and powers, and the purposes and powers in each clause shall, except where otherwise expressed, be in nowise limited or restricted by reference to or inference from the terms or provisions of any other clause, but shall be regarded as independent purposes and powers.

ARTICLE IV

The county in the State of California where the principal office for the transaction of the business of this corporation is to be located is Orange County.

ARTICLE V

This corporation is authorized to issue only one class of shares of stock; the total number of said shares shall be two hundred (200), of the aggregate par value of Two Hundred Thousand Dollars ($200,000.00), and of the par value of One Thousand Dollars ($1,000.00) per share.

ARTICLE VI

The number of directors of the corporation shall be five (5). The names and addresses of the persons who are appointed to act as the first directors of this corporation are:

Vera H. Reilly	[Redacted]
A. Gordon Satterla, Jr.	[Redacted]
Laurence L. Langstaff	[Redacted]
A. Jack Moodie	[Redacted]
Lester J. Yocum	[Redacted]

ARTICLE VII

All other provisions for the regulation of the affairs of the corporation shall be as specified in the By-Laws of the corporation from time to time.

IN WITNESS WHEREOF, for the purposes of forming this corporation under the laws of the State of California, the undersigned, constituting the incorporators of this corporation and the first directors thereof, have executed these Articles this 27th day of January, 1961.

/s/ Vera H. Reilly
Vera H. Reilly

/s/ A. Gordon Satterla, Jr.
A. Gordon Satterla, Jr.

/s/ Laurence L. Langstaff
Laurence L. Langstaff

/s/ A. Jack Moodie
A. Jack Moodie

/s/ Lester J. Yocum
Lester J. Yocum

CERTIFICATE OF AMENDMENT

OF

ARTICLES OF INCORPORATION OF

HONETREAT COMPANY
A California Corporation

A. GORDON SATTERLA, JR., and JUNE A. PRICE, certify that:

1. They are the president and secretary, respectively, of HONETREAT COMPANY, a California Corporation.

2. The following amendment to the articles of incorporation of the corporation has been approved by the Board of Directors and Shareholders of the Corporation:

"ARTICLE V

"This corporation is authorized to issue only one class of shares of stock; the total number of said shares shall be 20,000, of the aggregate par value of $200,000.00, and of the par value of $10.00 per share. Upon the effective date hereof, each outstanding share of stock with a par value of $1,000.00 per share is hereby reclassified and reconstituted as 100 shares of stock with a par value of $10.00 per share."

3. The amendment was approved by the required vote of shareholders in accordance with Section 902 of the California Corporations Code. The total number of outstanding shares entitled to vote with respect to the amendment was 100, the favorable vote of a majority of such shares is required to approve the amendment, and the number of such shares voting in favor of the amendment exceeded the required vote.

Executed at Brea, California, this 8th day of May, 1980.

/s/ A. Gordon Satterla, Jr.
A. Gordon Satterla, Jr., President

/s/ June A. Price
June A. Price, Secretary

AGREEMENT OF MERGER

This Agreement of Merger is entered into between HONETREAT COMPANY (Survivor), a California Corporation, and G & L SUPPLY CO., INC. (Disappearing), a New Mexico Corporation, the constituent corporations in this merger.

A. The issued and outstanding stock of Disappearing consists of 12,500 common shares.

B. The issued and outstanding stock of Survivor consists of 4,400 common shares.

C. The parties intend by this agreement to set forth the terms and conditions of "Reorganization" under Section 368(a)(1)(A) of the Internal Revenue Code of 1954, as amended.

Therefore, the parties agree as follows:

(1) Survivor and Disappearing agree that Survivor and Disappearing shall, on the effective date of the merger stated in this agreement, be merged into a single corporation, Survivor, and that the terms and conditions of the merger are as stated in this agreement. On the effective date of the merger, the separate existence of Disappearing shall cease, and Survivor, as the surviving corporation, shall succeed, without other transfer, to all the rights and property of Disappearing, and shall be subject to all of the debts and liabilities of Disappearing in the same manner as if Survivor had itself incurred them.

(2) The Articles of Incorporation of Survivor in effect on the effective date of the merger shall continue in effect until altered or amended as provided by this agreement or by law. The Bylaws of Survivor shall not be altered by this agreement. The officers and Board of Directors of Survivor shall not be altered by this agreement.

(3) The shares of Survivor outstanding on the effective date shall not be changed or converted as a result of the merger, but shall remain outstanding as shares of Survivor. On the effective date, each 23.06273 issued and outstanding common shares of Disappearing shall be converted into one common share of Survivor.

(4) An executed counterpart of this Agreement of Merger and Officer's Certificates of each of the constituent corporations shall be filed in the Offices of the Secretary of State of the State of California and the State of New Mexico.

(5) No application for permit regarding this merger is being filed with the California Department of Corporations, inasmuch as there are no shareholders of Survivor or Disappearing who have addresses in the State of California; therefore, this merger is exempt (pursuant to Sec. 25103(c) of the Corporations Code) from the requirement of Sec. 25120 of the California Corporations Code.

IN WITNESS WHEREOF, Survivor and Disappearing, as duly authorized by the respective Boards of Directors, have caused this Agreement of Merger to be executed this 30th day of June, 1981.

HONETREAT COMPANY

By /s/ A. Gordon Satterla, Jr.
President

By /s/ June A. Price
Secretary

G & L SUPPLY CO., INC.

By /s/ Laurence L. Langstaff
President

By /s/ June A. Price
Secretary

CERTIFICATE OF AMENDMENT

OF

ARTICLES OF INCORPORATION OF

HONETREAT COMPANY
A California Corporation

A. GORDON SATTERLA, JR., and JUNE A. PRICE, certify that:

1. They are the President and Secretary, respectively, of HONETREAT COMPANY, a California Corporation.

2. The following amendment to the Articles of Incorporation of the corporation has been approved by the Board of Directors and Shareholders of the Corporation:

"ARTICLE V

This corporation is authorized to issue only one class of shares of stock; the total number of said shares shall be 200,000, of the aggregate par value of $200,000.00, and of the par value of $1,00 per share. Upon the effective date hereof, each outstanding share of stock with a par value of $10.00 per share is hereby reclassified and reconstituted as 10 shares of stock with a par value of $1.00 per share,"

3. The amendment was approved by the required vote of shareholders in accordance with Section 902 of the California Corporations Code. The total number of outstanding shares entitled to vote with respect to the amendment was 5299, the favorable vote of a majority of such shares is required to approve the amendment, and the number of such shares voting in favor of the amendment exceeded the required vote.

Executed at Clovis, New Mexico, this 18th day of October, 1983.

/s/ A. Gordon Satterla, Jr.
A. Gordon Satterla, Jr., President

(SEAL)

/s/ June A. Price
June A. Price, Secretary

BYLAWS

OF

HONETREAT COMPANY

ARTICLE I

OFFICES

Section 1. The registered office of the corporation shall be at 915 L Street, Sacramento, California, and the name of the registered agent of the corporation at such address shall be CT Corporation System.

Section 2. The corporation may also have offices at such other places both within and without the State of California as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

MEETINGS OF SHAREHOLDERS

Section 1. Meetings of shareholders shall be held at the registered office of the corporation or at such other place, within or without the State of California, as may be stated in the notice of the meeting or in a duty executed waiver of notice thereof.

Section 2. An annual meeting of the shareholders, for the purpose of electing directors and transacting such other business as may properly be brought before the meeting, shall be held on the fourth Tuesday of March of each year. Unless otherwise stated in a notice of the meeting, or waiver of such notice, the annual meeting of the shareholders shall be held at 10:00 a.m. at the registered office of the corporation.

Section 3. Failure to hold the annual meeting at the designated time shall not work a dissolution of the corporation. In the event the Board of Directors fails to call the annual meeting at the designated time, any shareholder may make demand that such meeting be held within a reasonable time. Such demand shall be made in writing by certified mail directed to any officer of the corporation. The annual meeting shall thereafter be called within sixty (60) days following such demand.

Section 4. Special meetings of the shareholders for any purpose or purposes may be called by the President, the Board of Directors, or the holders of not less than one-tenth of all the shares entitled to vote at the meeting. No business other than that specified in the notice of meeting shell be transacted at a special meeting.

Section 5.

(a) Written or printed notice stating the place, day, and hour of the meeting, and in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten (10) nor more than sixty (60) days before the date of the meeting, either personally or by mail, by or at the direction of the President, the Secretary, or the officer or person or persons calling the meeting, to each shareholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail addressed to the shareholder at his address as it appears on the stock transfer books of the corporation, with postage thereon prepaid.

(b) Notice may be waived in writing signed by the person or persons entitled to such notice. Such waiver may be executed at any time before or after the holding of such meeting. Attendance at a meeting shall constitute a waiver of notice, except where the person attends for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 6. For the purpose of determining shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment thereof, the record date shall be the date on which notice of the meeting is mailed.

Section 7. The officer or agent having charge of the corporation's stock transfer books shall make, at least ten (10) days before each meeting of shareholders, a complete list of the shareholders entitled to vote at such meeting or any adjournment thereof. Such list shall be arranged in alphabetical order, with the address of and the number of shares held by each, which list, for a period of ten (10) days prior to such meeting, shall be kept on file at the registered office of the corporation and shall be subject to inspection by any shareholder at any time during usual business hours. Such list shall also be produced and kept open at the time and place of the meeting and shall be subject to the inspection of any shareholder during the whole time of the meeting. The original stock transfer books shall be prima facie evidence as to who are the shareholders entitled to examine such list or transfer books and to vote at any meeting of shareholders.

Section 8. The holders of a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of shareholders. If a quorum shall not be present or represented at any meeting of the shareholders, the shareholders entitled to vote, represented in person or by proxy, shall have power to adjourn the meeting from time to time without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented any business may be transacted which might have been transacted at the original meeting.

Section 9. At a meeting at which a quorum is present, the vote of the holders of a majority of the shares represented in person or by proxy shall decide any question brought before the meeting, unless the question is one upon which the vote of a greater number is required by law, the Articles of Incorporation, or these Bylaws. The shareholders present or represented at a meeting at which a quorum is present may continue to transact business until adjournment, notwithstanding the withdrawal of enough shareholders to leave less than a quorum.

Section 10.

(a) Each outstanding share, regardless of class, shall be entitled to one vote on each matter submitted to vote of a meeting of shareholders, expect to the extent that the voting rights of the shares of any class or classes are limited or denied by the Articles of Incorporation.

(b) Treasury shares, shares of stock owned by another corporation the majority of the voting stock of which is owned or controlled by this corporation, and shares of stock held by this corporation in a fiduciary capacity shall not be voted, directly or indirectly, at any meeting and shall not be counted in determining the total number of outstanding shares at any given time.

(c) A shareholder may vote either in person or by proxy executed in writing by the shareholder or by his duly authorized attorney in fact. No proxy shall be valid after eleven (11) months from the date of its execution unless otherwise provided in the proxy. Each proxy shall be filed with the Secretary prior to or at the commencement of the meeting.

Section 11. At any meeting of the shareholders, a shareholder may attend by telephone, radio, television, or similar means of communication which permits him to participate in the meeting, and a shareholder so attending shall be deemed present at the meeting for all purposes including the determination of whether a quorum is present.

Section 12. Any action required by law to be taken at a meeting of the shareholders of the corporation, or any action which may be taken at a meeting of the shareholders, may be taken without a meeting if a consent in writing setting forth the actions taken shall be signed by all of the shareholders entitled to vote with respect to the subject thereof. Such consent shall have the same force and effect as a unanimous vote of shareholders and may be stated as such in any articles or document filed with the Secretary of State.

ARTICLE III

DIRECTORS

Section 1. The business and affairs of the corporation shall be managed by its Board of Directors.

Section 2. The number of directors shall be three (3). The number of directors may be increased or decreased from time to time by amendment to these Bylaws, but no decrease shall have the effect of shortening the term of any incumbent director. A director need not be a shareholder or a resident of the State of California.

Section 3. At the first annual meeting of shareholders and at each annual meeting thereafter, the shareholders shall elect directors to hold office until the next succeeding annual meeting. Each director shall hold office for the term for which he is elected and until his successor shall be elected and shall qualify.

Section 4. At each election for directors, each shareholder entitled to vote shall have the right to vote, in person or by proxy, the number of shares owned by him for as many persons as there are directors to be elected and for whose election he has a right to vote.

Section 5. Any director may be removed either for cause or without cause at a special meeting called for that purpose. Removal shall be accomplished by the affirmative vote of a majority in number of shares of shareholders represented in person or by proxy at such meeting which are entitled to vote for the election of such director. However, unless the entire Board is removed, no individual director shall be removed without cause if the votes of a sufficient number of shares are cast against his removal, which if cumulatively voted at an election of the entire Board, would be sufficient to elect one or more directors.

Section 6. A vacancy on the Board of Directors caused by death, resignation, retirement, disqualification, removal from office, or otherwise, may be filled either (1). by appointment at the next regular meeting of the Board of Directors by a majority of the directors then in office, though less than a quorum, or (2) by election at a special meeting of shareholders called for that purpose. Each successor director shall be elected or appointed for the unexpired term of his predecessor in office and shall serve until his successor shall be elected and shall qualify. Any directorship to be filled by reason of an increase in the number of directors shall be filled by election at an annual meeting of shareholders or at a special meeting of shareholder called for that purpose.

Section 7. The Board of Directors, by resolution adopted by a majority of the Board of Directors, may designate two or more directors to constitute an executive committee, which committee, to the extent provided in such resolution, shall have and may exercise all of the authority of the Board of Directors in the business and affairs of the corporation except where action of the Board of Directors is specified by the California Corporations Code or other applicable law, but the designation of such committee and the delegation thereto of authority shall not operate to relieve the Board of Directors, or any member thereof, of any responsibility imposed upon it or him by law. The executive committee shall keep regular minutes of its proceedings and report the same to the Board when required by the Board.

Section 8. Directors, as such, shall not receive any salary for their services, but, by resolution of the Board a fixed sum, plus expenses of attendance, if any, may be paid for attendance at each regular or special meeting of the Board. Nothing herein shall be construed to preclude any director from serving the corporation in any other capacity and receiving compensation therefor. Members of the executive committee may, by resolution of the Board of Directors, be allowed like compensation for attending committee meetings.

ARTICLE IV

MEETINGS OF DIRECTORS

Section 1. The directors of the corporation may hold regular or special meetings either within or without the State of California.

Section 2. A regular meeting of the Board of Directors shall be held without other notice than this Bylaw immediately after and at the same place as the annual meeting of shareholders. The Board of Directors may provide, by resolution, the time and place for the holding of additional regular meetings without other notice than such resolution.

Section 3. Special meetings of the Board of Directors may be called by or at the request of the President or any director. Notice of the call of a special meeting shall be in writing and delivered for transmission to each of the directors not later than during the third day immediately preceding the day for which such meeting is called. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail addressed to the director at his address as it appears in the records of the corporation with postage thereon paid. Neither the business proposed to be transacted nor the purpose of any special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

Section 4. Notice of any special meeting may be waived in writing signed by the person or persons entitled to such notice. Such waiver may be executed at any time before or after the holding of such meeting. Attendance of a director at a special meeting shall constitute a waiver of notice of such special meeting, except where a director attends for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 5. A majority of the number of directors shall constitute a quorum for the transaction of business. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors unless otherwise specifically required by law or these Bylaws. If a quorum is not present at any meeting of directors, the directors present may adjourn the meeting from time to time, without notice other an announcement at the meeting, until a quorum is present.

Section 6. At any meeting of the Board, a member may attend by telephone, radio, television, or similar means of communication which permits him to participate in the meeting, and a director so attending shall be deemed present at the meeting for all purposes including the determination of whether a quorum is present.

Section 7. Any action required or permitted to be taken at a meeting of the Board of Directors or any executive committee may be taken without a meeting if a consent in writing setting forth the actions so taken shall be signed by all of the members of the Board of Directors or executive committee, as the case may be. Such consent shall have the same force and effect as a unanimous vote at a meeting, and may be stated as such in any document or instrument filed with the Secretary of State.

ARTICLE V

OFFICERS

Section 1. The officers of the corporation shall be elected by the directors and shall be a President, a Vice President, a Secretary, and a Chief Financial Officer. The Board of Directors may also choose additional vice presidents and one or more assistant secretaries and assistant Chief Financial Officers. Any two or more offices may be held by the same person.

Section 2. The officers of the corporation shall be elected annually by the Board of Directors at the first meeting of the Board of Directors held after each annual meeting of shareholders. Vacancies or new offices shall be filled at any meeting of the Board to serve until the next election of officers. Each officer shall hold office until his successor has been elected and qualified, or until the death, resignation, or removal of the officer.

Section 3. The Board of Directors may appoint such other officers and agents as it deems necessary. Such officers and agents shall be appointed for such terms and shall exercise such powers and perform such duties as may be determined from time to time by the Board.

Section 4. The salaries of all officers and agents of the corporation shall be fixed by the Board of Directors.

Section 5. Any officer or agent elected or appointed by the Board of Directors, or member of the executive committee, may be removed at any time by the affirmative vote of a majority of the whole Board of Directors. Such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment shall not of itself create any contract rig hi.

Section 6. The President shall be the Chief Executive Officer of the corporation and, subject to the direction of the Board of Directors, shall supervise and control the business and affairs of the corporation. He shall preside at all meetings of the shareholders and of the Board of Directors. He shall see that all orders and resolutions of the Board are carried into effect, and shall perform such other duties as the Board of Directors may prescribe.

Section 7. In the absence of the President or in the event of his inability or refusal to act, the Vice President (or in the event there be more than one vice president, the vice presidents in the order designated, or in the absence of any designation, then in the order of their election) shall perform the duties of the President, and when so acting, shall have all the powers of, and be subject to all the restrictions upon, the President. Each vice president shall also have such powers and perform such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

Section 8. The Secretary shall attend all meetings of the shareholders and of the Board of Directors. He shall keep a true and complete record of the proceedings, including all votes and resolutions presented at these meetings, in a book to be kept for that purpose. He shall be custodian of the records and of the seal of the corporation, and shall affix the same to documents, the execution of which is duly authorized. He shall give or cause to be given all notices required by law or by these Bylaws. He shall also perform such other duties as may be prescribed by the Board of Directors or President.

Section 9.

(a) The Chief Financial Officer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements of the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the Board of Directors.

(b) The Chief Financial Officer shall disburse the funds of the corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and directors, at the regular meetings of the Board or whenever they may require it, an account of all his transactions as Chief Financial Officer and of the financial condition of the corporation. The Chief Financial Officer shall also perform such other duties as may be prescribed by the Board of Directors or the President.

(c) If required by the Board of Directors, the Chief Financial Officer shall give the corporation a bond in such form, in such sum, and with such surety or sureties as shall be satisfactory to the Board for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death, resignation, retirement, or removal from office, of all books, papers, vouchers, money, and other property of whatever kind in his possession or under his control belonging to the corporation.

Section 10. In the absence of the Secretary or Chief Financial Officer, an assistant secretary or assistant Chief Financial Officer, respectively, shall perform the duties of the Secretary or Chief Financial Officer. Assistant Chief Financial Officers may be required to give bond in the form described in Section 9(c) of these Bylaws. In general, the assistant secretaries and assistant Chief Financial Officers shall have such powers and perform such duties as the Chief Financial Officer or Secretary, respectively, or the Board of Directors or President may prescribe. The Board of Directors may also transfer the powers or duties of any officer to any other officer or agent provided that a majority of the full Board of Directors concurs.

ARTICLE VI

SHARE CERTIFICATES

Section 1. Certificates in such form as may be determined by the Board of Directors shall be issued for all shares to which shareholders are entitled. Such certificates shall be consecutively numbered and shall be entered in the books of the corporation as they are issued. Each certificate shall state on the face thereof the holder's name, the number and class of shares, and the par value of such shares or a statement that such shares are without par value. They shall be signed by the President or a Vice President, and the Secretary or an assistant secretary, and may be sealed with the seal of the corporation or a facsimile thereof. If any certificate is countersigned by a transfer agent, other than the corporation or an employee of the corporation, the signature of any such officer may be facsimile.

Section 2. The Board of Directors may direct a new certificate representing shares to be issued, in place of any certificate theretofore issued by the corporation alleged to have been lost or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate to be lost or destroyed. Before authorizing the issuance of a new certificate, the Board of Directors, in its discretion, may require the owner of such lost or destroyed certificate, or his legal representative, to advertise the same in such manner as it may require and/or give the corporation a bond in such form, in such sum, and with such surety or sureties as it may direct to indemnify the corporation against any claims that may be made with respect to said certificate.

Section 3. Shares of stock shall be transferable on the books of the corporation only by the holder thereof in person or by his duly authorized attorney. Upon surrender to the corporation or the transfer agent of the corporation of a certificate representing shares duly endorsed or accompanied by proper evidence of succession, assignment, or authority to transfer, the corporation or the transfer agent of the corporation shall issue a new certificate and record the transaction upon its books.

Section 4. The corporation may treat the holder of record of any share or shares of stock as the holder in fact thereof, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by law.

Section 5. Subscriptions for shares shall be paid in full at such time, or in such installments and at such times, as shall be determined by the Board of Directors. Calls for payment on subscriptions shall be uniform as to all shares of the same class. The Board of Directors may forfeit any subscription and the amount paid thereon if the corporation is solvent and any amount due as a result of a call remains unpaid for a period of twenty (20) days after written demand has been made therefor. If mailed, such letter demand shall be deemed to be made when deposited in the United States mail in a sealed envelope addressed to the subscriber at his last post office address known to the corporation, with postage thereon prepaid.

ARTICLE VII

MISCELLANEOUS PROVISIONS

Section 1. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances.

Section 2. No loans shall be contracted on behalf of the corporation, and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances. The corporation shall make no loans secured by a lien on its own shares.

Section 3. There may be created by resolution of the Board of Directors out of the earned surplus of the corporation such reserve or reserves as the directors from time to time, in their discretion, think proper to provide for contingencies, or to equalize dividends, or to repair or maintain any property of the corporation, or for such other purpose as the directors shall think beneficial to the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 4. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 5. The fiscal year of the corporation shall be fixed by the Board of Directors.

Section 6. The Board of Directors shall provide a corporate seal which shall be in the form of a circle and shall have inscribed thereon the name of the corporation.

Section 7. Dividends upon the outstanding shares of the corporation may be declared by the Board of Directors at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the corporation, subject to the provisions of law and the Articles of Incorporation. The Board of Directors may fix in determining shareholders entitled to receive payment of any dividend. The record date may not be more than fifty (50) days prior to the payment date of such dividend. In lieu of setting a record date, the Board of Directors may close the stock transfer books for a period of not more than fifty (50) days prior to the payment date of such dividend. In the absence of any action by the Board of Directors, the date upon which the Board of Directors adopts the resolution declaring such dividend shall be the record date for determining the persons entitled to receive the dividend.

Section 8. Any person who shall have been a shareholder of record for at least six (6) months immediately preceding his demand, or who shall be the owner of record of at least five percent (5%) of all the outstanding shares of the corporation, upon written demand stating the purpose thereof, shall have the right to examine, in person or by agent or attorney, at any reasonable time or times, for any proper purpose, the books and records of account, minutes, and record of shareholders of the corporation. Such person shall have the right to make extracts therefrom.

ARTICLE VIII

INDEMNITY

Section 1. To the extent provided in the following paragraphs, the corporation shall indemnify any person who is or was a director or an officer of the corporation, and may indemnify any person who is or was an employee or agent of the corporation and any person who serves or served at the corporation's request as an officer, director, agent, (including any person appointed by the corporation to act on any of the corporation's committees), employee, partner, or director of another corporation or of a partnership, joint venture, trust, or other enterprise.

Section 2. In case of a threatened or pending suit, action, or proceeding (whether civil, criminal, administrative, or investigative) against a person named in Section 1 above by reason of such person's holding a position named in such Section 1, the corporation may (or, in the case of a director or officer of the corporation, shall) indemnify such person if such person satisfied the standard contained in Section 3, for amounts actually and reasonably incurred by such person in connection with the defense or settlement of the suit as expenses (including court costs and attorney's fees), amounts paid in settlement, judgments, and fines.

Section 3. A person named in Section 1 above may be indemnified only if it is determined in accordance with Section 4 below that such person:

(1) acted in good faith in the transaction which is the subject of the suit; and

(2) reasonably believed:

(a) if acting in his or her official capacity as an officer, Director, agent, or employee of the corporation, that his or her conduct was in the best interests of the corporation; and

(b) in all other cases, that his or her conduct was not opposed to the best interests of the corporation.

(3) in the case of any criminal proceeding, had no reasonable cause to believe that his or her conduct was unlawful.

The termination of a proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent will not be determinative, of itself, that such person failed to satisfy the standard contained in this Section 3.

Section 4. A determination that the standard of Section 3 above has been satisfied must be made:

(1) by a majority vote of a quorum consisting of Directors who at the time of the vote are not named defendants or respondents in the proceedings; or

(2) if such quorum cannot be obtained, by a majority vote of a committee of the Board of Directors, designated to act in the matter by a majority vote of all Directors, consisting solely of two or more Directors who at the time of the vote are not named defendants or respondents in the proceeding; or

(3) by special legal counsel selected by the Board of Directors or a committee of the Board by vote as set forth in subsections (1) or (2) above, or, if such a quorum cannot be obtained and such a committee cannot be established, by a majority vote of all Directors.

Section 5. Authorization of indemnification and determination as to reasonableness of expenses must be made in the same manner as the determination that indemnification is permissible. If the determination that indemnification is permissible is made by special legal counsel, authorization of indemnification and determination as to reasonableness of expenses must be made in the manner specified by Section 4(3) above for the selection of special legal counsel.

Section 6. Notwithstanding the foregoing, if any person who would otherwise be entitled to indemnity is found liable to the corporation or is found liable on the basis that personal benefit was improperly received by such person, whether or not the benefit resulted from an action taken in his official capacity, then indemnification shall be limited to reasonable expenses actually incurred by the person in connection with the proceeding, except that if the person is also found liable for willful or intentional misconduct in the performance of his duty to the corporation, then no indemnification of any kind shall be made with respect to the proceeding. A person shall be deemed to have been found liable in respect of any claim, issue, or matter only after he shall have been so adjudged by a court of competent jurisdiction after exhaustion of all appeals therefrom.

Section 7. The corporation may reimburse or pay in advance any reasonable expenses (including court costs and attorneys' fees) which may become subject to indemnification under Sections 1 through 6 above, and without the determination specified in Section 4 above, but only after the person to receive the payment (i) signs a written affirmation of his or her good faith belief that he or she has met the standard of conduct necessary for indemnification under Section 3, and (ii) undertakes in writing to repay such advances if it is ultimately determined that he has not met the standard set forth in Section 3 or that indemnification is prohibited by Section 6. The written undertaking required by this Section must be an unlimited general obligation of the person but need not be secured. It may be accepted without reference to financial ability to make repayment.

Section 8. The corporation shall pay or reimburse expenses incurred by a director or officer of the corporation in connection with his appearing as a witness or other participation in a proceeding at a time when he is not a named defendant or respondent in the proceeding.

Section 9. The indemnification provided by this Article VIII will not be exclusive of any other rights to which a person may be entitled by law, bylaw, agreement, vote of disinterested directors, or otherwise.

Section 10. The indemnification and advance payment provided by this Article VIII will continue as to a person who has ceased to hold a position named in Section 1 above and will inure to such person's heirs, executors, and administrators.

Section 11. The corporation may purchase and maintain insurance on behalf of any person who holds or has held any position named in Section 1 above against any liability incurred by such person in any such position, or arising out of such person's status as such, whether or not the corporation would have power to indemnify such parson against such liability under this Article IX.

Section 12. Indemnification payments and advance payments made under this Article IX shall be reported in writing to the Directors of the corporation at the next notice or waiver of notice of annual meeting, or within twelve months, whichever is sooner.

ARTICLE IX

AMENDMENTS

Section 1. These Bylaws may be altered, amended, or repealed at any meeting of the shareholders at which a quorum is present, by the affirmative vote of a majority of the shares present at the such meeting, provided notice of the proposed alteration, amendment, or repeal be contained in the notice of such meeting, or provided that all shareholders waive such notice or consent to such action by the shareholders without a meeting, as allowed by other provisions of these Bylaws. These Bylaws may also be altered, amended, or repealed by the Board of Directors at any meeting, provided notice of the proposed alteration, amendment, or repeal be contained in the notice of such meeting or provided that all directors waive such notice, or consent to such action by the Board of Directors without a meeting, as allowed by other provisions of these Bylaws.

Section 2. The Board of Directors may alter, amend, or repeal Bylaws adopted by the shareholders.

CERTIFICATE OF INCORPORATION

OF

FLEXBAR, INC.

1. **Name**. The name of the Corporation is Flexbar, Inc.

2. **Registered Agent and Address**. The address of the Corporation's registered office in the State of Delaware is 2711 Centerville Road, Suite 400, in the City of Wilmington, County of New Castle, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

3. **Purpose**. The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

4. **Powers and Privileges**. In furtherance of the objects and purposes of the Corporation, the Corporation shall have all the powers and privileges granted by the General Corporation Law of the State of Delaware, by any other law, or by this Certificate of Incorporation, including without limitation the power to borrow or raise money and otherwise contract indebtedness for any of the purposes of the Corporation; to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidences of indebtedness; to secure the payment of any of the foregoing and of the interest thereon by mortgage, pledge, assignment, deed of trust or lien of or upon any or all of the property of the Corporation (real, personal or mixed), whether at the time owned or thereafter acquired; and to sell, pledge or otherwise dispose of such bonds or other obligations of the Corporation for its corporate purposes.

5. **Capitalization**. The total number of shares of stock which the Corporation shall have authority to issue is 10,000 shares of common stock, having a par value of $1 per share.

6. **Incorporator**. The name and mailing address of the Incorporator are as follows:

NAME	MAILING ADDRESS
R. Kevin Redwine	Conner & Winters, P.C. 3700 First Place Tower 15 East Fifth Street Tulsa, Oklahoma 74103-4344

7. **Board of Directors**. The powers of the Incorporator shall terminate upon the election of a Board of Directors of the Corporation. The number of members of the Board of Directors of the Corporation shall initially be four, and shall thereafter be as set forth in the Bylaws.

8. **Duration**. The Corporation is to have perpetual existence.

9. **Limited Liability**. The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatsoever.

10. **Authority of the Board of Directors**. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the Corporation is expressly authorized:

(a) To make, alter or repeal the Bylaws of the Corporation;

(b) To authorize and cause to be executed mortgages and liens upon the real and personal property of the Corporation; and

(c) To set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purposes and to abolish any such reserve in the manner in which it was created.

11. **General**. Meetings of the stockholders may be held within or outside the State of Delaware, as the Bylaws may provide. The books of the Corporation maybe kept (subject to any provision contained in the statutes) within or outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation. Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

12. **Amendment**. The Corporation reserves the right to amend; alter, change or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

13. **Compromise or Arrangement**. Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware, on the application in a summary way of the Corporation or of any creditor or shareholder thereof, or on the application of any receiver or receivers appointed for the Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under the provisions of Section 279 of Title 8 of the Delaware Code, may order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case maybe, to be summoned in such manner as the court directs. If a majority in number representing three-fourths (3/4ths) in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as a consequence of such compromise or arrangement, the compromise or arrangement and the reorganization shall, if sanctioned by the court to which the application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders of the Corporation, as the case may be, and also on the Corporation.

14. **Liability of Directors**. To the fullest extent permitted by the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. No amendment to or repeal of this Article 14 shall apply to, or have any effect on, the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

THE UNDERSIGNED, being the Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation law of the State of Delaware does make this Certificate, hereby declaring and certifying that this is his act and deed and the facts herein stated are true, and accordingly has hereunto set his band this 1st day of September, 2004.

/s/ R. Kevin Redwine

R. Kevin Redwine, Incorporator

CERTIFICATE OF MERGER
of

ALLEN & BENNETT, INC.
a Nevada corporation

and

FLEXBAR, INC.,
a Delaware corporation

In lieu of filing an executed agreement of merger, it is hereby certified as follows:

1. The name and state of incorporation of each of the constituent corporations are:

Name of Corporation	State of Incorporation
Allen & Bennett Inc.	Nevada
Flexbar, Inc.	Delaware

2. An Agreement and Plan of Merger has been approved, adopted, certified, executed, and acknowledged by each of the constituent corporations in accordance with the provisions of Section 252(c) of the General Corporation Law of the State of Delaware, to wit, by Allen & Bennett, Inc., in accordance with the laws of the State of Nevada, and by Flexbar, Inc., in the same manner as is provided in Section 251 of the General Corporation Law of the State of Delaware.

3. The name of the surviving corporation in the merger herein certified is Flexbar, Inc. which will continue its existence as the arriving corporation under its present name upon the effective date of the merger pursuant to the provisions of the General Corporation Law of the State of Delaware.

4. The Certificate of Incorporation of Flexbar, as now in force and effect shall continue to be the certificate of Incorporation of the surviving corporation until amended and changed pursuant to the provisions of the General Corporation Law of the State of Delaware.

5. The executed Agreement and Plan of Merger is on file at the principal place of business of the surviving corporation at 825 W. 68th, Odessa, Texas 79764.

6. A copy of the executed Agreement Plan of Merger will be furnished by the surviving corporation upon request, and without cost, to any stockholder of any constituent corporation.

7. The authorized capital stock of Allen & Bennett., consists of one hundred thousand (100,000) shares, par value $1.00 per share.

DATED: Sept. 1, 2004.

Allen & Bennett, Inc., a Nevada corporation

By: /s/ Donald W. Bennett
Name: Donald W. Bennett
Its: President

Flexbar, Inc., a Delaware corporation

By: /s/ Ben Townsend
Name: Ben Townsend
Its: Assistant Secretary

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
FLEXBAR, INC.

Flexbar, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), docs hereby certify as follows:

FIRST: That the Board of Directors of the Corporation adopted the following resolution proposing and declaring advisable an amendment to the Certificate of Incorporation of the Corporation:

RESOLVED, that the Board of Directors of the Corporation deems and declares it advisable that the Certificate of Incorporation of Flexbar, Inc. be amended by deleting and replacing Section 1 thereof so that, as amended, Section 1 thereof shall be and read as follows:

1. **Name**. The name of the Corporation is Norris Rods, Inc.

SECOND: That such amendment to the Certificate of Incorporation of the Corporation was duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment of the Certificate of Incorporation to be executed by its officer thereunto duly authorized as of December 2, 2014.

FLEXBAR, INC.

By: /s/ James McIntyre
James McIntyre
Assistant Secretary

BYLAWS

of

FLEXBAR, INC.
(a Delaware Corporation)

ARTICLE I
Offices and Fiscal Year

SECTION 1.01 Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware, until otherwise established by a vote of a majority of the Board of Directors in office, and a statement of such change is filed in the manner provided by statute. (Secs. 131, 133)

SECTION 1.02 Other Offices. The Corporation may also have offices at such other places within or without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation requires. (Sec. 141)

SECTION 1.03 Fiscal Year. The fiscal year of the Corporation shall be the calendar year unless otherwise fixed by resolution of the Board of Directors.

ARTICLE II
Meetings of Stockholders

SECTION 2.01 Place of Meeting. All meetings of the Stockholders of the Corporation shall be held at the registered office of the Corporation or at the principal office of the Corporation or at such other place within or without the State of Delaware as shall be designated by the Board of Directors in the notice of such meeting. (Sec. 211(a))

SECTION 2.02 Annual Meeting. Unless directors are elected by written consent in lieu of an annual meeting as permitted by this Section 2.02, an annual meeting of the Stockholders of the Corporation, for the election of Directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held in each year on the first Tuesday in May (commencing in 2005) at 10:00 a.m. If such day is a legal holiday, the annual meeting shall be held on the following business day. If the annual meeting is not held on such date, the Board of Directors by majority vote shall cause a meeting to be held as soon thereafter as convenient. Stockholders may, unless the certificate of incorporation otherwise provides, act by written consent to elect Directors; provided, however, that if the consent is less than unanimous, the action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which the Directors could be elected at an annual meeting held at the effective time of the action are vacant and are filled by the action. Any other proper business may be transacted at the annual meeting. (Sec. 211(b), (c))

SECTION 2.03 Special Meetings. Special meetings of the Stockholders of the Corporation may be called at any time by the President, Chairman of the Board, or a majority of the Board of Directors, for any purpose or purposes for which meetings may be lawfully called. At any time, upon written request of any person or persons who have duly called a special meeting, which written request shall state the purpose or purposes of the meeting, it shall be the duty of the President to fix the date of the meeting to be held at such date and time as the President may fix, not less than 10 nor more than 60 days after the receipt of the request, and to give due notice thereof. If the President shall neglect or refuse to fix the time and date of such meeting and give notice thereof, the person or persons calling the meeting may do so. (Sec. 211(d))

SECTION 2.04 Notice of Meetings. Written notice of the place, date and hour of every meeting of the Stockholders, whether annual or special, shall be given by the Chairman of the Board, the President, a Vice President, the Secretary or an Assistant Secretary of the Corporation to each Stockholder of record having voting power with respect to the business to be transacted at such meeting not less than 10 nor more than 60 days before the date of the meeting. Each notice of a special meeting shall state the purpose or purposes for which the meeting is being called. Any meeting at which all Stockholders having voting power with respect to the business to be transacted thereat are present, either in person or by proxy, shall be a valid meeting for the transaction of business, notwithstanding that notice has not been given as hereinabove provided. (Sec. 222)

SECTION 2.05 Quorum, Manner of Acting and Adjournment. The holders of a majority of the stock issued and outstanding (not including treasury shares) and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the Stockholders for the transaction of business except as otherwise provided by statute, by the certificate of incorporation or by these bylaws. If, however, a quorum shall not be present or represented at any meeting of the Stockholders, the Stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At any such adjourned meeting, at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each Stockholder of record having voting power with respect to the business to be transacted at such meeting. When a quorum is present at any meeting, the vote of the holders of the majority of the stock having voting power with respect to a question present in person or represented by proxy shall decide any such question brought before such meeting, unless the question is one upon which, by express provision of the applicable statute or these bylaws, a different vote is required in which case such express provision shall govern and control the decision on such question. Except upon those questions governed by the aforesaid express provisions, the Stockholders present in person or by proxy at a duly organized meeting can continue to do business until adjournment, notwithstanding withdrawal of enough Stockholders to leave less than a quorum. (Sec. 216, 222)

SECTION 2.06 Organization. At every meeting of the Stockholders, the President or, in the absence of the President, one of the following persons present in the order stated: Chairman of the Board, if any, a chairman designated by the Board of Directors, or a chairman chosen by the Stockholders, shall act as chairman, and the Secretary, or, in his or her absence, an Assistant Secretary or a person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 2.07 Voting; Proxies. Except as provided in the certificate of incorporation or in a resolution adopted by the Board of Directors pursuant to Section 151 of the General Corporation Law of the State of Delaware and subject to Section 213 of such Law, each Stockholder shall at every meeting of the Stockholders be entitled to one vote in person or by proxy for each share of capital stock having voting power held by such Stockholder. In order to be valid, any such proxy shall be executed and delivered in accordance with the requirements of the Delaware General Corporation Law. No proxy shall be voted after three years from its date, unless the proxy provides for a longer period. Each proxy shall be executed in writing by the Stockholder or by his or her duly authorized attorney-in-fact and filed with the Secretary of the Corporation or the secretary of the meeting prior to being voted. A proxy, unless coupled with an interest, shall be revocable at will, notwithstanding any other agreement or any provision in the proxy to the contrary, but the revocation of a proxy shall not be effective until notice thereof has been given to the Secretary of the Corporation. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. A proxy shall not be revoked by the death or incapacity of the maker unless, before the vote is counted or the authority is exercised, written notice of such death or incapacity is given to the Secretary of the Corporation. (Sec. 212)

SECTION 2.08 Consent of Stockholders in Lieu of Meeting. Any action required to be taken at any annual or special meeting of Stockholders of the Corporation, or any action which may be taken at any annual or special meeting of the Stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each Stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days after the earliest dated consent delivered in the manner required herein to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those Stockholders who have not consented in writing. (Sec. 228)

SECTION 2.09 Voting Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least 10 days before every meeting of Stockholders, a complete list of the Stockholders entitled to vote at the meeting. The list shall be arranged in alphabetical order and show the address of each Stockholder and the number of shares registered in the name of each Stockholder. The list shall be open to the examination of any Stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any Stockholder who is present. (Sec. 219(a))

ARTICLE III
Board of Directors

SECTION 3.01 Powers. The Board of Directors shall have full power to manage the business and affairs of the Corporation; and all powers of the Corporation, except those specifically reserved or granted to the Stockholders by statute, the certificate of incorporation or these bylaws, are hereby granted to and vested in the Board of Directors. (Sec. 141(a))

SECTION 3.02 Number and Term of Office. The Board of Directors shall consist of such number of Directors, not less than one nor more than seven as may be determined from time to time by resolution of the Board of Directors. Unless and until so determined otherwise, the Board of Directors shall consist of four members. Each Director shall serve until the next annual election and until his or her successor shall have been elected and shall qualify, except in the event of his or her death, resignation or removal. All Directors of the Corporation shall be natural persons of full age, but need not be residents of Delaware or Stockholders of the Corporation. (Sec. 141(b))

SECTION 3.03 Resignations. Any Director of the Corporation may resign at any time by giving written notice to the President or the Secretary of the Corporation. Resignations shall become effective upon receipt or at such later time as shall be specified therein and, unless otherwise specified therein, the acceptance of a resignation shall not be necessary to make it effective. (Secs. 141(b), 223)

SECTION 3.04 Vacancies and Newly-Created Directorships. Vacancies and newly-created Directorships resulting from any increase in the authorized number of Directors may be filled by a majority vote of the Directors then in office, though less than a quorum, or by a sole remaining Director. Each Director so chosen shall hold office until the next annual election and until his or her successor shall have been duly elected and shall qualify, unless such Director dies, resigns or is removed prior to such time. If at any time, by reason of death or resignation or other cause, the Corporation should have no Directors in office, then an election of Directors may be held by the Stockholders or in the manner provided by statute. (Sec. 223)

SECTION 3.05 Organization. At every meeting of the Board of Directors, the Chairman of the Board, if any, or, in the case of a vacancy in the office or absence of the Chairman of the Board, the President or, in his or her absence, a chairman chosen by a majority of the Directors present, shall preside, and the Secretary or, in his or her absence, an Assistant Secretary or any person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 3.06 Place of Meeting. The Board of Directors may hold its meetings, both regular and special, at such place or places within or without the State of Delaware as the Board of Directors may from time to time appoint, or as may be designated in the notice calling the meeting. (Sec. 141(g))

SECTION 3.07 Organization Meeting. The first meeting of each newly-elected Board of Directors shall, unless otherwise specified by the President of the Corporation, be held immediately after and at the same place as, the annual meeting of Stockholders. Notice of such meeting to the newly-elected Directors shall not be necessary in order legally to constitute the meeting, provided a quorum shall be present. (Sec. 141)

SECTION 3.08 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be designated from time to time by resolution of the Board of Directors. If the date fixed for any regular meeting be a legal holiday under the laws of the State where such meeting is to be held, then the same shall be held on the next succeeding business day, not a Saturday, or at such other time as may be determined by resolution of the Board of Directors. At such meetings, the Directors shall transact such business as may properly be brought before the meeting. (Sec. 141)

SECTION 3.09 Special Meetings. Special meetings of the Board of Directors shall be held whenever called by the Chairman of the Board, if any, the President or by two or more of the Directors. Notice of each such meeting shall be given to each Director by telephone, telegram, facsimile, in writing or in person at least 24 hours (in the case of notice by telephone or in person) or 48 hours (in the case of notice by telegram or facsimile) or five days (in the case of notice by mail) before the time at which the meeting is to be held. Each such notice shall state the time and place of the meeting to be so held. Except as otherwise specifically provided in these bylaws, no notice of the objects or purposes of any special meeting of the Board of Directors need be given, and, unless otherwise indicated in the notice thereof, any and all business may be transacted at any special meeting. (Sec. 141)

SECTION 3.10 Conference Telephone Meetings. One or more Directors may participate in a meeting of the Board, or of a committee of the Board, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear or otherwise communicate with each other. Participation in a meeting pursuant to this section shall constitute presence in person at such meeting. (Sec. 141(i))

SECTION 3.11 Quorum, Manner of Acting and Adjournment. At all meetings of the Board a majority of the Directors shall constitute a quorum for the transaction of business. The vote of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except on additions, amendments, repeal or any changes whatsoever in the bylaws or the adoption of new bylaws with respect to any of which the affirmative votes of at least a majority of the members of the Board of Directors shall be necessary for the adoption of such changes and except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. (Sec. 141(b))

SECTION 3.12 Committees. The Board of Directors may, by resolution adopted by a majority of the whole Board, designate an executive committee, an audit committee, a compensation committee and/or one or more other committees, each committee to consist of one or more Directors of the Corporation. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member, and the alternate or alternates, if any, designated for such member, of any committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another Director to act at the meeting in the place of any such absent or disqualified member. A majority of the members of any committee, as at the time constituted, shall be necessary to constitute a quorum thereof, and the act of a majority of the members of any committee who are present at any meeting thereof at which a quorum is present shall be the act of such committee. Any vacancy in any committee shall be filled by vote of a majority of the Directors at the time in office. (Sec. 141(c))

Any such committee, to the extent provided in the resolution establishing such committee, shall have and may exercise all the power and authority of the Board of Directors in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers which may require it, except that no such committee shall have the authority of the Board of Directors (a) to approve or recommend to the Stockholders any action or matter expressly required by the Delaware General Corporation Law to be submitted to the Stockholders for approval; (b) to adopt, amend, or repeal any bylaw of the Corporation; (c) to fill vacancies in the Board of Directors or any committee, including any directorship to be filled by reason of an increase in the number of Directors; (d) to elect or remove officers or members of any committee; (e) to fix the compensation of any member of a committee; (f) to alter or repeal any resolution of the Board of Directors which provides for any of the foregoing or which by its terms provides that it shall not be so amendable or repeatable; or (g) to declare a dividend or to authorize the issuance of shares of the Corporation. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors. Each committee so formed shall fix the time and place of its meetings and its own rules of procedure and shall keep regular minutes of its meetings and report from time to time to the Board of Directors. (Sec. 141(c))

SECTION 3.13 Consent of Directors in Lieu of Meeting. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board or the committee consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or the committee. (Sec. 141(f))

SECTION 3.14 Presumption of Assent. A Director who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action unless such Director's dissent shall be entered in the minutes of the meeting or unless such Director shall file his or her written dissent to such action with the person acting as secretary of the meeting before the adjournment thereof or unless such Director shall forward such dissent by registered mail to the Secretary of the Corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a Director who voted in favor of such action.

SECTION 3.15 Compensation of Directors. Unless otherwise restricted by the certificate of incorporation, the Board of Directors shall have the authority to fix the compensation of Directors. The Directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as Director. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings. (Sec. 141(h))

SECTION 3.16 Removal of Directors. Except as otherwise provided in the certificate of incorporation or the General Corporation Law of the State of Delaware, any Director may be removed from office, with or without cause, at any time by the holders of a majority of the shares then entitled to vote at any election of Directors, at any annual or special meeting of the Stockholders. (Sec. 141(k))

ARTICLE IV
Notices—Waivers

SECTION 4.01 Notice, What Constitutes. Whenever, under the provisions of the statutes of Delaware or the certificate of incorporation or of these bylaws, notice is required to be given to any Director or Stockholder, such notice may be given in writing, by mail, addressed to such Director or Stockholder, at the address of such Director or Stockholder as it appears on the records of the Corporation, with postage thereon prepaid. Notice given in accordance with this provision shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to Directors of special meetings must be given in accordance with Section 3.09 of Article III hereof. (Sec. 222(b))

SECTION 4.02 Waivers of Notice. Whenever any notice is required to be given under the provisions of the certificate of incorporation, these bylaws, or by statute, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Stockholders, Directors, or members of a committee of Directors need be specified in any written waiver of notice of such meeting unless so required by the certificate of incorporation or these bylaws. Attendance by a person, either in person or by proxy, at any meeting, shall constitute a waiver of notice of such meeting, except where a person attends a meeting for the express purpose of objecting to the transaction of any business because the meeting was not lawfully called or convened. (Sec. 229)

ARTICLE V
Officers

SECTION 5.01 Number, Qualifications and Designation. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, Secretary and such other officers as may be elected in accordance with the provisions of Section 5.03 of this Article. One person may hold more than one office. Officers may be, but need not be, Directors or Stockholders of the Corporation. (Sec. 142)

SECTION 5.02 Election and Term of Office. The officers of the Corporation, except those elected by delegated authority pursuant to Section 5.03 of this Article, shall be elected annually by the Board of Directors, and each such officer shall hold his or her office until such officer's successor shall have been elected and shall qualify, or until his or her earlier death, resignation or removal. Any officer may resign at any time upon written notice to the Corporation or may be removed, with or without cause, by the Board of Directors. (Sec. 142)

SECTION 5.03 Other Officers, Committees and Agents. The Board of Directors may from time to time elect such other officers, including without limitation a Chairman of the Board of Directors, a Vice Chairman of the Board of Directors, a Treasurer and one or more Vice Presidents, Assistant Secretaries and Assistant Treasurers, and appoint such committees, employees and other agents as it deems necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as are provided in these bylaws, or as the Board of Directors may from time to time determine. The Board of Directors may delegate to any officer or committee the power to elect subordinate officers and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents. (Sec. 142)

SECTION 5.04 Chairman of the Board and Vice Chairman. The Chairman of the Board of Directors, if any, shall preside at all meetings of the Board of Directors and shall perform such other duties as may be prescribed by the Board of Directors from time to time. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The Vice Chairman, if any, shall, at the request of the Chairman or in his or her absence or disability, perform the duties and exercise the powers of the Chairman, and shall perform such other duties as the Board of Directors shall prescribe.

SECTION 5.05 President. The President shall preside at all meetings of the Stockholders and, if there is no Chairman or Vice Chairman of the Board, or in their absence, all meetings of the Board of Directors. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The President may employ all agents and employees of the Corporation and may discharge any such agent or employee, and, in general, shall perform all duties incident to the office of President, and such other duties as from time to time may be assigned to him or her by the Board of Directors.

SECTION 5.06 Chief Executive Officer. The Board of Directors shall assign the duties of the Chief Executive Officer of the Corporation to either the Chairman of the Board of Directors or the President. Such duties shall include the authority and powers necessary for the general management of the business, properties, activities and policies of the Corporation, subject, however, to the control of the Board of Directors.

SECTION 5.07 Chief Operating Officer. The Board of Directors shall assign the duties of the Chief Operating Officer of the Corporation to the Chairman of the Board of Directors, the President or any other officer of the Corporation. Such duties shall include the authority necessary for the active management and general supervision of the everyday business of the Corporation and the duty to see that all orders and policies of the Chief Executive Officer and the Board of Directors are carried into effect. The Chief Operating Officer shall appoint and remove, employ and discharge, and fix the compensation of all employees and agents of the Corporation, other than the duly elected officers, subject to the approval of the Board of Directors. At the request of the Chief Executive Officer, or in his or her absence or disability, the Chief Operating Officer shall exercise all the powers and discharge all the duties of the Chief Executive Officer.

SECTION 5.08 Chief Financial Officer. The Board of Directors may assign the duties of Chief Financial Officer of the Corporation to any officer of the Corporation. Such duties shall include the active management and supervision of the financial and accounting affairs of the Corporation.

SECTION 5.09 Vice Presidents. Any Vice President shall, at the request of the President or in his absence or disability, perform the duties and exercise the powers of the President and such other duties as may from time to time be assigned by the Board of Directors or by the President. At the discretion of the Board of Directors, one or more Vice Presidents may be designated as an Executive Vice President or Senior Vice President.

SECTION 5.10 Secretary and Assistant Secretaries. The Secretary shall attend all meetings of the Stockholders and of the Board of Directors and shall record the proceedings of the Stockholders and of the Directors and of committees of the Board in a book or books to be kept for that purpose; see that notices are given and records and reports properly kept and filed by the Corporation as required by law; be the custodian of the seal of the Corporation and see that it is affixed to all documents to be executed on behalf of the Corporation under its seal; and, in general, perform all duties incident to the office of Secretary, and such other duties as may from time

to time be assigned to him by the Board of Directors or the President. Any Assistant Secretary shall, at the request of the Secretary or in his or her absence or disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties as the Board of Directors, the President or the Secretary shall prescribe.

SECTION 5.11 Treasurer and Assistant Treasurers. The Treasurer, if any, shall have or provide for the custody of the funds or other property of the Corporation. Whenever so required by the Board of Directors or the President, the Treasurer shall render an account showing his or her transactions as Treasurer and the financial condition of the Corporation. In general, the Treasurer shall discharge such other duties as may from time to time be assigned to him or her by the Board of Directors or the President. Any Assistant Treasurer shall, at the request of the Treasurer or in his or her absence or disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties as the Board of Directors, the President or the Treasurer shall prescribe.

SECTION 5.12 Officers' Bonds. No officer of the Corporation need provide a bond to guarantee the faithful discharge of his or her duties unless the Board of Directors shall by resolution so require a bond, in which event such officer shall give the Corporation a bond (which shall be renewed if and as required) in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of his or her office. (Sec. 142(c))

SECTION 5.13 Compensation. The compensation of the officers and agents of the Corporation elected by the Board of Directors shall be fixed from time to time by the Board of Directors. Any employment contract, whether for an officer, agent or employee, if expressly approved or specifically authorized by the Board of Directors, may fix a term of employment, and any such contract, but only if so approved or authorized, shall be valid and binding upon the Corporation in accordance with the terms thereof; provided, however, this provision shall not limit or restrict in any way the right of the Corporation at any time in its discretion (which right is hereby expressly reserved) to remove from office, discharge or terminate the employment or otherwise dispense with the services of any such officer, agent or employee, as provided in these bylaws, prior to the expiration of the term of employment under any such contract, provided only that the Corporation shall not thereby be relieved of any continuing liability for salary or other compensation provided for in such contract. (Sec. 141(a))

SECTION 5.14 Action with Respect to Securities of Other Corporations. Unless otherwise directed by the Board of Directors, the Chairman of the Board of Directors, if any, the President or any Vice President of the Corporation shall have power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of security holders, or with respect to any action of security holders, of any other Corporation in which the Corporation may hold securities and shall have power to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities in such other Corporation.

ARTICLE VI
Capital Stock

SECTION 6.01 Issuance. The Directors may, at any time and from time to time, if all of the shares of capital stock which the Corporation is authorized by its certificate of incorporation to issue have not been issued, subscribed for, or otherwise committed to be issued, issue or take subscriptions for additional shares of its capital stock up to the amount authorized in its certificate of incorporation. Unless otherwise provided by the certificate of incorporation or these bylaws, the Board of Directors may provide by resolution that some or all of any or all classes and series of the shares of capital stock of the Corporation shall be uncertificated shares, provided that such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. The stock certificates of the Corporation shall be numbered and registered in the stock ledger and transfer books of the Corporation as they are issued. The Board of Directors may also appoint one or more transfer agents and/or registrars for its stock of any class or classes and for the transfer and registration of certificates representing the same and may require stock certificates to be countersigned by one or more of them. They shall be signed by the Chairman or Vice Chairman of the Board of Directors or the President or a Vice

President and attested by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer, and shall bear the corporate seal, which may be a facsimile, engraved or printed signature. Any or all of the signatures upon such certificate may be a facsimile, engraved or printed. In case any officer, transfer agent or registrar who has signed, or whose facsimile, engraved or printed signature has been placed upon, any share certificate shall have ceased to be such officer, transfer agent or registrar, before the certificate is issued, it may be issued with the same effect as if he or she were such officer, transfer agent or registrar at the date of its issue. (Secs. 158, 161)

SECTION 6.02 Regulations Regarding Certificates. Except as otherwise provided by law, the Board of Directors shall have the power and authority to make all such rules and regulations as it may deem expedient concerning the issuance, transfer and registration or the replacement of certificates for shares of capital stock of the Corporation. (Sec. 161)

SECTION 6.03 Stock Certificates. Stock certificates of the Corporation shall be in such form as is provided by statute and approved by the Board of Directors. The stock record books and the blank stock certificate books shall be kept by the Secretary of the Corporation or by any agency designated by the Board of Directors for that purpose. (Sec. 158)

SECTION 6.04 Lost, Stolen, Destroyed or Mutilated Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or such owner's legal representative, to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed. (Sec. 167)

SECTION 6.05 Record Holder of Shares. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

SECTION 6.06 Determination of Stockholders of Record for Voting at Meetings. In order that the Corporation may determine the Stockholders entitled to notice of or to vote at any meeting of Stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action. If no record date is fixed by the Board of Directors, the record date for determining Stockholders entitled to notice of or to vote at a meeting of Stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of Stockholders of record entitled to notice of or to vote at a meeting of Stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting. (Sec. 213(a))

SECTION 6.07 Determination of Stockholders of Record for Dividends and Distributions. In order that the Corporation may determine the Stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the Stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining Stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. (Sec. 213(c))

SECTION 6.08 Determination of Stockholders of Record for Written Consent. In order that the Corporation may determine the Stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by statute, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to a Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors, when prior action by the Board of Directors is required by statute, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action. (Sec. 213(b))

ARTICLE VII
Indemnification of Officers, Directors, Employees and Agents

SECTION 7.01 Indemnification in Third Party Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "third party proceeding" (which shall include, for purposes of this Article VII, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the Corporation) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, judgments, fines, and amounts paid in settlement, actually and reasonably incurred by such person in connection with such third party proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal third party proceeding, had no reasonable cause to believe such conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal third party proceeding, had reasonable cause to believe that such conduct was unlawful. (Sec. 145)

SECTION 7.02 Indemnification in Corporate Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "corporate proceeding" (which shall mean, for purposes of this Article VII, any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection with the defense or settlement of a corporate proceeding if the person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the

Corporation, unless and only to the extent that the court in which the corporate proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. (Sec. 145(b))

SECTION 7.03 Mandatory Indemnification. To the extent that a present or former Director or officer of the Corporation has been successful on the merits or otherwise in defense of any third party or corporate proceeding referred to in Section 7.01 or 7.02 above or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection therewith. (Sec. 145(c))

SECTION 7.04 Determination of Entitlement to Indemnification. Any indemnification under Section 7.01, 7.02 or 7.03 of this Article VII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of a present or former Director or officer of the Corporation is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 7.01, 7.02 or 7.03 of this Article VII. This determination shall be made, with respect to a person who is a Director or officer at the time of the determination:

(a) By a majority vote of the Directors who are not parties to the third party or corporate proceeding, even though less than a quorum;

(b) By a committee of Directors designated by a majority vote of Directors, even though less than a quorum;

(c) If there are no such Directors, or if such Directors so direct, by independent legal counsel in a written opinion; or

(d) By the Stockholders. (Sec. 145(d))

SECTION 7.05 Burden of Proof. In the event a claim for indemnification by any person who was or is a party or is threatened to be made a party to any third party or corporate proceeding is denied by the Corporation (except for a claim by a person described in Section 7.08 hereof), the Corporation shall, in any subsequent legal proceedings relating to such denial, have the burden of proving that indemnification was not required under Section 7.01, 7.02 or 7.03 of this Article VII, without regard to Section 7.04 hereof, or under any other agreement or undertaking between the Corporation and such person, or was not permitted under applicable law.

SECTION 7.06 Advancing Expenses. Expenses incurred by a Director or officer or former Director or officer in defending a third party or corporate proceeding shall be paid by the Corporation in advance of the final disposition of such third party or corporate proceeding upon receipt of an undertaking by or on behalf of the Director or officer or former Director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VII. Expenses incurred by other employees and agents may be so paid upon the terms and conditions, if any, as the Corporation deems appropriate. (Sec. 145(e))

SECTION 7.07 Employee Benefit Plans. For purposes of this Article VII, references to "other enterprises" shall include, but are not limited to, employee benefit plans; references to "fines" shall include, but are not limited to, any excise taxes assessed on a person with respect to an employee benefit plan; references to "serving at the request of the Corporation" shall include, but are not limited to, any service as a Director, officer, employee or agent of the Corporation which imposes duties on, or involves service by, the Director, officer, employee or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation." (Sec. 145(i))

SECTION 7.08 Employees and Agents. The Corporation may, but is not required to, indemnify any employee or agent of the Corporation who is not also a Director or officer of the Corporation if the determining group as specified in Section 7.04 determines that indemnification is proper in the specific case. (Sec. 145)

SECTION 7.09 Scope of Article. The indemnification and advancement of expenses, as authorized by this Article VII, shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of Stockholders or disinterested Directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding an office. (Sec. 145(f))

SECTION 7.10 Reliance on Provisions. Each person who shall act as a Director or officer of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall be deemed to be doing so in reliance upon rights of indemnification provided by this Article VII, and the provisions of this Article VII shall be deemed a contract between the Corporation and such person.

SECTION 7.11 Insurance. The Corporation shall have the power to, but shall not be obligated to, purchase and maintain insurance on behalf of any person who is or was a Director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Article VII. (Sec. 145(g))

SECTION 7.12 Rights Continue. The indemnification and advancement of expenses provided by or granted pursuant to this Article VII, unless otherwise provided when authorized or ratified, shall continue as to a person who has ceased to be a Director, officer, employee or agent of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, and shall inure to the benefit of the heirs, executors and administrators of such a person. (Sec. 145(j))

ARTICLE VIII
General Provisions

SECTION 8.01 Dividends. Subject to the provisions of the certificate of incorporation, if any, dividends upon the capital stock of the Corporation may be declared by the Board of Directors at any regular or special meeting in accordance with law. Dividends may be paid in cash, in property, or in shares of the capital stock of the Corporation, subject to the provisions of the certificate of incorporation. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, thinks proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Board of Directors shall think conducive to the interest of the Corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created. (Secs. 170, 171, 173)

SECTION 8.02 Contracts. Except as otherwise provided in these bylaws, the Chairman of the Board of Directors, the President or a Vice President of the Corporation shall sign, in the name and on behalf of the Corporation, all deeds, bonds, contracts, mortgages and other instruments, the execution of which shall be authorized by the Board of Directors; provided, however, that the Board of Directors may authorize any other

officer or officers or any agent or agents of the Corporation to sign, in the name and on behalf of the Corporation, any such deed, bond, contract, mortgage or other instrument. Such authority may be general or confined to specific instances. Except as so authorized by the Board of Directors, and except in the ordinary course of business, no officer, agent or employee of the Corporation shall have power or authority to bind the Corporation by any contract or engagement or to pledge, sell or otherwise dispose of its credit or any of its property or to render it pecuniarily liable in any amount in excess of $10,000. (Secs. 141, 142)

SECTION 8.03 Checks. All checks, notes, bills of exchange or other orders in writing shall be signed by such person or persons as the Board of Directors may from time to time designate. (Secs. 141, 142)

SECTION 8.04 Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the state of its incorporation. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced. (Sec. 122)

SECTION 8.05 Amendment of Bylaws. These bylaws may be altered, amended or repealed or new bylaws may be adopted by the Stockholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the certificate of incorporation, at any regular or special meeting of the Stockholders or of the Board of Directors, if notice of such alteration, amendment, repeal or adoption of new bylaws be contained in the notice of such special meeting. (Sec. 109)

Approved by the Board of Directors as of the 25th day of October, 2004.

Exhibit 3.25

CERTIFICATE OF CONVERSION

FROM LIMITED LIABILITY COMPANY TO CORPORATION

OF

THE WELLMARK COMPANY, L.L.C.

1. The converting entity was formed in the State of Oklahoma on June 26, 2002, and its name immediately prior to the filing of this Certificate of Conversion from Limited Liability Company to Corporation is The WellMark Company, L.L.C.

2. The name of the corporation resulting from the conversion hereunder, as set forth in the Certificate of Incorporation being filed simultaneously herewith, is The WellMark Company, Inc.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Conversion from Limited Liability Company to Corporation on the 20th day of November, 2012.

THE WELLMARK COMPANY, L.L.C.

By: WellMark Holdings, Inc., Manager

By: /s/ Mark A. Brown
Mark A. Brown, Vice President

CERTIFICATE OF INCORPORATION

OF

THE WELLMARK COMPANY, INC.

ARTICLE I
NAME

The name of the corporation is The WellMark Company, Inc. (the "Corporation").

ARTICLE II
REGISTERED OFFICE

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, Wilmington, New Castle County, Delaware 19801, and the name of its registered agent at that address is The Corporation Trust Company.

ARTICLE III
PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "DGCL").

ARTICLE IV
AUTHORIZED CAPITAL STOCK

The total number of shares of stock that the Corporation shall have authority to issue is five thousand (5,000) shares of Common Stock, par value $0.01 per share.

ARTICLE V
BOARD POWER REGARDING BYLAWS

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind the bylaws of the Corporation.

ARTICLE VI
ELECTION OF DIRECTORS

Elections of directors need not be by written ballot unless the bylaws of the Corporation shall so provide.

ARTICLE VII
INDEMNIFICATION; LIMITATION OF DIRECTOR LIABILITY

7.1 Indemnification. The Corporation shall indemnify its directors, officers, employees and agents, or persons serving at the request of the Corporation as a director, officer, employee or agent of another corporation or entity, where such person is made party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal or administrative, by reason of the fact that the person is or was a director, officer, employee or agent of the Corporation or serving in such capacity in another corporation or entity at the request of the Corporation, in each case to the fullest extent permitted by Section 145 of the DGCL as the same exists or may hereafter be amended.

7.2 Limitation of Liability. To the fullest extent permitted by the DGCL as the same exists or may hereafter be amended, a director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

7.3 Amendments. If the DGCL is amended after the date of the filing of this Certificate of Incorporation to authorize corporate action further eliminating or limiting the personal liability of directors or permitting indemnification to a fuller extent, then the liability of a director of the Corporation shall be eliminated or limited, and indemnification shall be extended, in each case to the fullest extent permitted by the DGCL, as so amended from time to time. No repeal or modification of this Article VII by the stockholders shall adversely affect any right or protection of a director of the Corporation existing by virtue of this Article VII at the time of such repeal or modification.

ARTICLE VIII
CORPORATE POWER

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred on stockholders herein are granted subject to this reservation.

ARTICLE IX
EXCLUSIVE FORUM FOR CERTAIN ACTIONS OR PROCEEDINGS

Unless and until the Board of Directors approves the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any stockholder, director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation arising pursuant to any provision of the DGCL, this Certificate of Incorporation or the Corporation's bylaws, (iv) any action asserting a claim against the Corporation governed by the internal affairs doctrine, or (v) any action or proceeding including any of the foregoing claims or actions (whether by joinder or otherwise).

ARTICLE X
INCORPORATOR

The name and mailing address of the incorporator of the Corporation are Katherine E. Duplay, c/o Bartlit Beck Herman Palenchar & Scott LLP, 1899 Wynkoop Street, 8th Floor, Denver, Colorado 80202.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Incorporation on the 20th day of November, 2012.

/s/ Katherine E. Duplay
Katherine E. Duplay, Sole Incorporator

CERTIFICATE OF CORRECTION

The WellMark Company, Inc., a Delaware corporation (the "Corporation"), hereby certifies as follows:

1. A Certificate of Conversion converting The WellMark Company, L.L.C., an Oklahoma limited liability company, to the Corporation was filed with the Delaware Secretary of State on November 20, 2012 (the "Certificate of Conversion"), but incorrectly stated the formation date of the converting entity.

2. Section 1 of the Certificate of Conversion is hereby corrected to read as follows:

"1. The converting entity was formed in the State of Oklahoma on March 19, 1981, and its name immediately prior to the filing of this Certificate of Conversion from Limited Liability Company to Corporation is The WellMark Company, L.L.C."

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Correction on the 26th day of February, 2013.

THE WELLMARK COMPANY, INC.

By: /s/ Mark A. Brown
Mark A. Brown, Vice President

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
THE WELLMARK COMPANY, INC.

The WellMark Company, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify as follows:

FIRST: That the Board of Directors of the Corporation adopted the following resolution proposing and declaring advisable an amendment to the Certificate of Incorporation of the Corporation:

RESOLVED, that the Board of Directors of the Corporation deems and declares it advisable that the Certificate of Incorporation of The WellMark Company, Inc. be amended by deleting and replacing Article 1 thereof so that, as amended, Article 1 thereof shall be and read as follows:

ARTICLE 1
NAME

The name of the corporation is Norriseal-WellMark, Inc. (the "Corporation").

SECOND: That such amendment to the Certificate of Incorporation of the Corporation was duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment of the Certificate of Incorporation to be executed by its officer thereunto duly authorized as of December 2 , 2014.

THE WELLMARK COMPANY, INC.

By: /s/ John Miller
John Miller
Treasurer

BYLAWS
OF
THE WELLMARK COMPANY, INC.

ARTICLE I
Offices and Agent

1. *Principal Office*. The principal office of the Corporation may be located within or outside the State of Delaware, as designated by the Board of Directors (the "Board of Directors" or "Board"). The Corporation may have other offices and places of business at such places within or outside the State of Delaware as shall be determined by the directors.

2. *Registered Office.* The registered office of the Corporation shall be fixed in the Corporation's Certificate of Incorporation, as the same may be amended from time to time.

ARTICLE II
Meetings of Stockholders

1. *Annual Meetings.* The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on such date and at such time as determined by resolution of the Board of Directors. If, at the place of the meeting, this date shall fall upon a legal holiday, then such meeting shall be held on the next succeeding business day at the same hour. If no annual meeting is held in accordance with the foregoing provisions, the Board of Directors shall cause the meeting to be held as soon thereafter as convenient. If no annual meeting is held in accordance with the foregoing provisions, a special meeting may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these Bylaws to the annual meeting of stockholders shall be deemed to refer to such special meeting.

2. *Special Meetings*. Special meetings of the stockholders of the Corporation may be called for any purpose at any time by the President, shall be called by the Secretary if directed by the Board of Directors, and shall be called by the President upon the written request of holders of shares entitled to cast not less than ten percent (10%) of the votes entitled to notice of and to vote at such special meeting. Such written request shall specify the purpose or purposes of, and a proposed date for, the meeting and shall be delivered to the President. Upon receipt of such written request, the President shall fix a date and time for such meeting, which date shall be within ten (10) business days of the proposed date specified in the written request.

3. *Place of Meetings*. All meetings of stockholders of the Corporation shall be held within or outside the State of Delaware as may be designated by the Board of Directors or the President, or, if not designated, at the registered office of the Corporation.

4. *Notice of Meeting*. Except as otherwise provided in these Bylaws or the General Corporation Law of the State of Delaware (the "Delaware Corporation Law"), written notice of any meeting of stockholders stating the place, date and hour of the meeting and, in the case of a special meeting, the purpose for which the meeting is called, shall be delivered personally, by mail or by electronic transmission to each stockholder of record entitled to vote at such meeting not less than ten (10) nor more than sixty (60) days before the date of the meeting, by or at the direction of the Board of Directors, the President or the Secretary. If mailed, such notice shall be deemed to be delivered as to any stockholder of record when deposited in the United States mail addressed to the stockholder at his address as it appears on the stock transfer books of the Corporation, with postage prepaid. If sent by electronic transmission, such notice shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice; (ii) if by electronic mail, when directed to

an electronic mail address at which the stockholder has consented to receive notice; (iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and (iv) if by any other form of electronic transmission, when directed to the stockholder. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given, and stating the manner of such notice, shall in the absence of fraud be prima facie evidence of the facts stated therein. When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

5. *Waiver of Notice*. Any stockholder, either before or after any stockholders' meeting, may waive in writing notice of the meeting, and his waiver shall be deemed the equivalent of giving notice. Attendance at a meeting by a stockholder shall constitute a waiver of notice, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

6. *Fixing of Record Date*. For the purpose of determining the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors of the Corporation may fix, in advance, a record date which shall be not more than sixty (60) days nor less than ten (10) days prior to the date of such meeting, nor more than sixty (60) days prior to any other action. If no record date is fixed, the record date for determining the stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. The record date for determining the stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first written consent is expressed. The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of stockholders of record entitled to notice of or vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

7. *Stockholders' List.* The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting, (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present.

8. *Proxies.* A stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for him by proxy. No proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period.

9. *Voting Rights.* Each stockholder shall have one vote for each share of stock entitled to vote held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided in the Certificate of Incorporation.

Persons holding stock in a fiduciary capacity shall be entitled to vote the shares so held. Persons whose stock is pledged shall be entitled to vote, unless in the transfer by the pledger on the books of the Corporation he has expressly empowered the pledgee to vote thereon, in which case only the pledgee, or his proxy, may represent such stock and vote thereon.

If shares having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary of the Corporation is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (i) if only one votes, his act binds all; (ii) if more than one vote, the act of the majority so voting binds all; and (iii) if more than one vote, but the vote is evenly split on any particular matter, each fraction may vote the securities in question proportionately, or any person voting the shares or a beneficiary, if any, may apply to the Court of Chancery or any court of competent jurisdiction in the State of Delaware to appoint an additional person to act with the persons so voting the shares. The shares shall then be voted as determined by a majority of such persons and the person appointed by the Court. If a tenancy is held in unequal interests, a majority or even-split for the purpose of this subsection shall be a majority or even-split in interest.

10. *Quorum and Required Vote.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws:

(a) the holders of a majority of the shares entitled to vote at the meeting, present in person or by proxy, shall constitute a quorum for the transaction of business; and

(b) if a quorum is present, the affirmative vote of a majority of the shares present or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders (except with respect to elections of directors, which shall be determined by plurality), and, if there are two or more classes of stock entitled to vote as separate classes, then, in the case of each such class, the affirmative vote of a majority of the shares of that class present or represented by proxy at the meeting shall be the vote of such class.

11. *Informal Action By Stockholders*. Except as otherwise provided in the Certificate of Incorporation, any action required by the provisions of the Delaware Corporation Law to be taken or any action which may be taken at a stockholders' meeting may be taken without a meeting, without prior notice and without a vote, if a consent in writing or by electronic transmission, setting forth the action so taken, shall be signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous consent shall be given to those stockholders who have not consented in writing. Any action taken pursuant to such written consent of the stockholders shall have the same force and effect as if taken by the stockholders at a meeting thereof.

ARTICLE III
Board of Directors

1. *Number, Qualifications and Term of Office*. Except as otherwise provided in the Certificate of Incorporation or the Delaware Corporation Law, the business and affairs of the Corporation shall be managed by or under the direction of a Board of Directors consisting of one or more members. Directors need not be stockholders of the Corporation. The number of directors which shall constitute the full Board of Directors may

be increased or decreased from time to time by resolution of the Board, subject to the provisions of the Certificate of Incorporation. Except as otherwise provided in the Certificate of Incorporation, each director shall be elected at each annual meeting of stockholders and shall hold such office until the next annual meeting of stockholders and until his successor shall be elected and shall qualify. No decrease in the number of directors shall have the effect of shortening the term of any incumbent director.

2. *Vacancies*. Unless and until filled by the stockholders of the Corporation, any vacancy in the Board of Directors, however occurring, including a vacancy resulting from an enlargement of the Board, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office, and a director chosen to fill a position resulting from an increase in the number of directors shall hold office until the next annual meeting of stockholders and until his successor is elected and qualified, or until his earlier death, resignation or removal.

3. *Resignation*. Any director may resign by delivering his written resignation to the Corporation at its principal office addressed to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

4. *Removal*. Except as otherwise provided in the Certificate of Incorporation or the Delaware Corporation Law, any director or the entire Board of Directors may be removed with or without cause by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that whenever the holders of any class or series of stock are entitled to elect one or more directors by the provisions of the Corporation's Certificate of Incorporation, such director or directors may only be removed by the holders of a majority of the outstanding shares of such class or series of stock.

5. *Compensation*. Directors may be paid such compensation for their services and such reimbursements for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

ARTICLE IV
Meetings of the Board

1. *Place of Meetings*. The regular or special meetings of the Board of Directors or any committee designated by the Board shall be held at the principal office of the Corporation or at any other place within or outside the State of Delaware that a majority of the Board of Directors or any such committee, as the case may be, may designate from time to time by resolution.

2. *Regular Meetings*. The Board of Directors shall meet each year immediately after and at the same place as the annual meeting of the stockholders for the purpose of electing officers and transacting such other business as may come before the meeting. The Board of Directors or any committee designated by the Board may provide, by resolution, for the holding of additional regular meetings within or outside the State of Delaware without notice of the time and place of such meeting other than such resolution; provided that any director who is absent when such resolution is made shall be given notice of said resolution.

3. *Special Meetings.* Special meetings of the Board of Directors or any committee designated by the Board may be held at any time and place, within or outside the State of Delaware, designated in a call by the Chairman of the Board, if any, by the President or by a majority of the members of the Board of Directors or any such committee, as the case may be.

4. *Notice of Special Meetings*. Except as otherwise provided by these Bylaws or the laws of the State of Delaware, written notice of each special meeting of the Board of Directors or any committee thereof setting forth the time and place of the meeting shall be given to each director by the Secretary or by the officer or director calling the meeting not less than three (3) days prior to the time fixed for the meeting, in the case of notices given by United States mail, or not less than twenty-four (24) hours prior to the time fixed for the meeting, in the case of notices given in any other manner permitted hereunder. Notice of special meetings may be either given personally, by telephone, or by sending a copy of the notice through the United States mail or by telegram, telex, telecopy or other form of electronic transmission, charges prepaid, to the address of each director appearing on the books of the Corporation. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail so addressed, with postage prepaid thereon. If notice is given by telegram, telex, telecopy or other form of electronic transmission, such notice shall be deemed to be delivered when sent. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

5. *Waiver of Notice*. A director may waive, in writing, notice of any special meeting of the Board of Directors or any committee thereof, either before, at, or after the meeting, and his waiver shall be deemed the equivalent of giving notice. By attending or participating in a regular or special meeting, a director waives any required notice of such meeting unless the director, at the beginning of the meeting, objects to the holding of the meeting or the transacting of business at the meeting.

6. *Quorum and Action at Meeting.* At meetings of the Board of Directors or any committee designated by the Board, a majority of the directors then in office, or a majority of the members of any such committee, as the case may be, shall constitute a quorum for the transaction of business; provided, however, that in no case shall less than one-third (1/3) of the total number of directors or committee members constitute a quorum. If a quorum is present, the act of the majority of directors in attendance shall be the act of the Board of Directors or any committee thereof, as the case may be, unless the act of a greater number is required by these Bylaws, the Certificate of Incorporation or the Delaware Corporation Law. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn that meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

7. *Presumption of Assent.* A director who is present at a meeting of the Board or a committee thereof when action is taken is deemed to have assented to the action taken unless: (i) he objects at the beginning of such meeting to the holding of the meeting or the transacting of business at the meeting; (ii) he contemporaneously requests that his dissent from the action taken be entered in the minutes of such meeting; or (iii) he gives written notice of his dissent to the presiding officer of such meeting before its adjournment or to the Secretary of the Corporation immediately after adjournment of such meeting. The right of dissent as to a specific action taken at a meeting of a Board or a committee thereof is not available to a director who votes in favor of such action.

8. *Committees*. The Board of Directors may, by a resolution passed by a majority of the whole Board of Directors, designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of the absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of the Delaware Corporation Law, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all such papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee (i) may create one or more subcommittees, each subcommittee to consist of one or more members

of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee, and (ii) may make rules for the conduct of its business, but, unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these Bylaws for the Board of Directors.

9. *Informal Action by Directors.* Except as otherwise provided in the Certificate of Incorporation, any action required or permitted by the Delaware Corporation Law to be taken at any meeting of the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent to the action in writing or by electronic transmission, and the written consents and electronic transmissions are filed with the minutes of proceedings of the Board or committee.

10. *Telephonic Meetings*. Directors or members of any committee designated by the Board may participate in a meeting of the Board or committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Such participation shall constitute presence in person at the meeting.

ARTICLE V
Officers and Agents

1. *Enumeration, Election and Term*. The officers of the Corporation shall consist of a President, a Secretary, a Treasurer and such other officers with such other titles as may be deemed necessary or desirable by the Board of Directors, including one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries and a Chairman of the Board. Any number of offices may be held by the same person and no officer need be a stockholder or a resident of the State of Delaware. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, each officer shall hold office until his successor is elected and qualified or until his earlier death, resignation or removal. The officers of the Corporation shall be elected annually by the Board of Directors at the first meeting of the Board held after each annual meeting of the stockholders.

2. *General Duties*. All officers and agents of the Corporation, as between themselves and the Corporation, shall have such authority and shall perform such duties in the management of the Corporation as may be provided in these Bylaws or as may be determined by resolution of the Board of Directors not inconsistent with these Bylaws. In all cases where the duties of any officer, agent or employee are not prescribed by the Bylaws or by the Board of Directors, such officer, agent or employee shall follow the orders and instructions of the President.

3. *Vacancies*. The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave any vacancy unfilled for such period as it may determine. The officer so selected shall hold office until his successor is elected and qualified or until his earlier death, resignation or removal.

4. *Compensation.* The Board of Directors from time to time shall fix the compensation of the officers of the Corporation. The compensation of other agents and employees of the Corporation may be fixed by the Board of Directors, or by any committee designated by the Board or by an officer to whom that function has been delegated by the Board.

5. *Resignation and Removal*. Any officer may resign by delivering his written resignation to the Corporation at its principal office addressed to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. Any officer or agent of the Corporation may be removed, with or without cause, by a vote of the majority of the members of the Board of Directors whenever in its judgment the best interests of the Corporation may be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment of an officer or an agent shall not of itself create contract rights.

6. *Chairman of the Board*. The Chairman of the Board, if any, shall preside as chairman at meetings of the stockholders and the Board of Directors. He shall, in addition, have such other duties as the Board may prescribe that he perform. At the request of the President, the Chairman of the Board may, in the case of the President's absence or inability to act, temporarily act in his place. In the case of death of the President or in the case of his absence or inability to act without having designated the Chairman of the Board to act temporarily in his place, the Chairman of the Board shall perform the duties of the President, unless the Board of Directors, by resolution, provides otherwise. If the Chairman of the Board shall be unable to act in place of the President, the Vice Presidents may exercise such powers and perform such duties as are provided in Section 8 below.

7. *President*. The President shall be the chief executive officer of the Corporation and shall have general supervision of the business of the Corporation. In the event the position of Chairman of the Board shall not be occupied or the Chairman shall be absent or otherwise unable to act, the President shall preside at meetings of the stockholders (and of the directors, if he is a member of the Board of Directors) and shall discharge the duties of the presiding officer. At each annual meeting of the stockholders, the President shall give a report of the business of the Corporation for the preceding fiscal year and shall perform whatever other duties the Board of Directors may from time to time prescribe.

8. *Vice Presidents*. Each Vice President shall have such powers and perform such duties as the Board of Directors may from to time prescribe or as the President may from time to time delegate to him. At the request of the President, in the case of the President's absence or inability to act, any Vice President may temporarily act in his place. In the case of the death of the President, or in the case of his absence or inability to act without having designated a Vice President or Vice Presidents to act temporarily in his place, the Board of Directors, by resolution, may designate a Vice President or Vice Presidents to perform the duties of the President. If no such designation shall be made, the Chairman of the Board, if any, shall exercise such powers and perform such duties, but if the Corporation has no Chairman of the Board, or if the Chairman is unable to act in place of the President, all of the Vice Presidents may exercise such powers and perform such duties.

9. *Secretary*. The Secretary shall keep or cause to be kept, in books provided for that purpose, the minutes of the meetings of the stockholders, executive committee, if any, and any other committees, and of the Board of Directors; shall see that all notices are duly given in accordance with the provisions of these Bylaws and as required by law; shall be custodian of the records and of the seal of the Corporation and see that the seal is affixed to all documents, the execution of which on behalf of the Corporation under its seal is duly authorized and in accordance with the provisions of these Bylaws; and, in general, shall perform all duties incident to the office of Secretary and such other duties as may, from time to time, be assigned to him by the Board of Directors or by the President. In the absence of the Secretary or his inability to act, the Assistant Secretaries, if any, shall act with the same powers and shall be subject to the same restrictions as are applicable to the Secretary.

10. *Treasurer*. The Treasurer shall have custody of corporate funds and securities. He shall keep full and accurate accounts of receipts and disbursements and shall deposit all corporate monies and other valuable effects in the name and to the credit of the Corporation in the depository or depositories of the Corporation, and shall render an account of his transactions as Treasurer and of the financial condition of the Corporation to the President and/or the Board of Directors upon request. Such power given to the Treasurer to deposit and disburse funds shall not, however, preclude any other officer or employee of the Corporation from also depositing and disbursing funds when authorized to do so by the Board of Directors. The Treasurer shall, if required by the Board of Directors, give the Corporation a bond in such amount and with such surety or sureties as may be ordered by the Board of Directors for the faithful performance of the duties of his office. The Treasurer shall have such other powers and perform such other duties as may from time to time be prescribed by the Board of Directors or the President. In the absence of the Treasurer or his inability to act, the Assistant Treasurers, if any, shall act with the same authority and shall be subject to the same restrictions as arc applicable to the Treasurer.

11. *Delegation of Duties*. Whenever an officer is absent, or whenever, for any reason, the Board of Directors may deem it desirable, the Board may delegate the powers and duties of an officer to any other officer or officers or to any director or directors.

ARTICLE VI
Indemnification of Officers, Directors and Others

1. *Indemnification: Third Party Actions*. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that he is or was a director or officer of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent or another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

2. *Indemnification: Derivative Actions*. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he is or was a director or officer of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent or another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

3. *Mandatory Indemnification*. To the extent that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article VI or in defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

4. *Authorization for Indemnification.* Any indemnification under Sections 1 and 2 of this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in Sections 1 and 2 of this Article VI. Such determination shall be made, with respect to a person who is a director or officer of the Corporation at the time of such determination, (i) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding, or (ii) by a committee of disinterested directors designated by a majority vote of a quorum of the disinterested directors, or (iii) if there arc no such disinterested directors, or if such disinterested directors so direct, by independent legal counsel in a written opinion, or (iv) by the stockholders.

5. *Advance Payment of Expenses*. Expenses (including attorneys' fees) incurred by an officer or director in defending a civil, criminal, administrative or investigative action, suit or proceeding may be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of the director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Corporation as authorized in this Article VI. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

6. *Non-Exclusive*. The indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue, unless otherwise provided when authorized or ratified, as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

7. *Insurance.* The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of this Article VI.

8. *Definitions*. For purposes of this Article VI, the following terms shall have the following meanings:

(a) references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued;

(b) references to "other enterprises" shall include employee benefit plans;

(c) references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan;

(d) references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and

(e) a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VI.

ARTICLE VII
Capital Stock

1. *Certificates of Stock.* The shares of the Corporation shall be represented by certificates; provided that the Board of Directors of the Corporation may, by resolution, provide that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Notwithstanding the adoption of such a resolution by the Board of Directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the Corporation by the Chairman of the Board, the President or a Vice President, and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary, representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

2. *Issuance of Stock*. Unless otherwise voted by the stockholders and subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the Corporation or the whole or any part of any unissued balance of the authorized capital stock of the Corporation held in its treasury may be issued, sold, transferred or otherwise disposed of by resolution of the Board of Directors in such manner, for such consideration and on such terms as the Board of Directors may determine. Consideration for such shares of capital stock shall be expressed in dollars, and shall not be less than the par value or stated value therefor, as the case may be. The par value for shares, if any, shall be stated in the Certificate of Incorporation, and the stated value for shares, if any, shall be fixed from time to time by the Board of Directors.

3. *Lost Certificates*. The Board of Directors may direct a new certificate to be issued in place of any previously issued certificate alleged to have been destroyed or lost if the owner makes an affidavit or affirmation of that fact and produces such evidence of loss or destruction as the Board may require. The Board, in its discretion, may as a condition precedent to the issuance of a new certificate require the owner to give the Corporation a bond as indemnity against any claim that may be made against the Corporation relating to the allegedly destroyed or lost certificate.

4. *Transfer of Shares*. Subject to applicable law, shares of stock of the Corporation may be transferred on its books upon the surrender to the Corporation or its transfer agent of the certificates representing such shares, if any, duly endorsed or accompanied by a written assignment or power of attorney duly executed and with such proof of authority or authenticity of signature as the Corporation or its transfer agent may reasonably require. In that event, the surrendered certificates shall be cancelled, new certificates issued to the persons entitled to them, if any, and the transaction recorded on the books of the Corporation.

5. *Registered Stockholders*. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of the State of Delaware.

6. *Stock Ledger*. An appropriate stock journal and ledger shall be kept by the Secretary or such registrars or transfer agents as the directors by resolution may appoint in which all transactions in the shares of stock of the Corporation shall be recorded.

7. *Restriction on Transfer of Shares*. Notice of any restriction on the transfer of the stock of the Corporation shall be placed on each certificate of stock issued or in the case of uncertificated shares contained in the notice sent to the registered owner of such shares in accordance with the provisions of the Delaware Corporation Law.

ARTICLE VIII
Dividends

Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the Corporation's capital stock, subject to the provisions of the Certificate of Incorporation. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the directors shall think in the best interests of the Corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE IX
Voting of Securities Owned by the Corporation

All stock and other securities of other business entities held by the Corporation for itself or for other parties in any capacity shall be voted, and all proxies with respect thereto shall be executed, by the person or persons authorized to do so by resolution of the Board of Directors, or in the absence of such authorization, by the Chairman of the Board, the President or a Vice President.

ARTICLE X
Seal and Fiscal Year

1. *Seal*. The Board of Directors may adopt a corporate seal, which shall be in the form of a circle and shall have inscribed thereon the name of the Corporation and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced.

2. *Fiscal Year*. The fiscal year of the Corporation shall be determined by the Board of Directors and set forth in the minutes of the directors. Said fiscal year may be changed from time to time by the Board of Directors in its discretion.

ARTICLE XI
Amendments

Subject to repeal or change by action of the stockholders, the Board of Directors may amend, supplement or repeal these Bylaws or adopt new Bylaws, and all such changes shall affect and be binding upon the holders of all shares heretofore as well as hereafter authorized, subscribed for or offered.

ARTICLE XII
Miscellaneous

1. *Gender*. Whenever required by the context, the singular shall include the plural, the plural the singular, and one gender shall include all genders.

2. *Invalid Provision*. The invalidity or unenforceability of any particular provision of these Bylaws shall not affect the other provisions herein, and these Bylaws shall be construed in all respects as if such invalid or unenforceable provision was omitted.

3. *Governing Law*. These Bylaws shall be governed by and construed in accordance with the laws of the State of Delaware.

Exhibit 3.27

CERTIFICATE OF INCORPORATION

OF

PRODUCTION CONTROL SERVICES GROUP, INC.

A STOCK CORPORATION

I, the undersigned, for the purpose of incorporating and organizing a corporation under the General Corporation Law of the State of Delaware, do hereby certify as follows:

FIRST: The name of the corporation (the "Corporation") is:

Production Control Services Group, Inc.

SECOND: The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of the Corporation's registered agent at such address is The Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares which the Corporation shall have authority to issue is 200,000, which shall consist of (i) 170,000 shares of Class A Common Stock, with par value of $.01 per share (the "Class A Common Stock"), and (ii) 30,000 shares of Class B Common Stock, with par value of $.01 per share (the "Class B Common Stock").

Express Terms of Class A and Class B Common Stock.

1. General. The powers, preferences and rights of the Class A Common Stock and Class B Common Stock and the qualifications, limitations and restrictions thereof, shall in all respects be identical (including, without limitation, the right to receive dividends), except as otherwise required by law or as expressly provided in this Certificate of Incorporation.

2. Voting.

(a) Each stockholder of the Corporation shall be entitled to one vote for each share of Class A Common Stock standing in such stockholder's name on the books of the Corporation on all matters presented to stockholders for their vote, consent, waiver, release or other action.

(b) The holders of shares of Class B Common Stock shall not be entitled to vote on any matter submitted to stockholders for their vote, consent, waiver, release or other action except as otherwise required by law.

3. Merger, Consolidation, Combination or Dissolution of the Corporation. In the event of merger, consolidation or combination of the Corporation with another entity (whether or not the Corporation is the surviving entity) or in the event of dissolution of the Corporation, holders of shares of Class B Common Stock shall be entitled to receive in respect of each share of Class B Common Stock the same indebtedness, other securities, cash, rights, or any other property, or any combination of shares, evidence of indebtedness, securities, cash, rights or any other property, as holders of shares of Class A Common Stock shall be entitled to receive in respect to each share, except that any common stock that holders of shares of Class B Common Stock shall be entitled to receive in any such event may have terms substantially similar to those of the Class B Common Stock as set forth in this Article Fourth.

4. Splits or Combinations of Stock. If the Corporation shall in any manner split, subdivide or combine the outstanding Class A Common Stock or Class B Common Stock, the outstanding shares of the other such class shall be proportionately split, subdivided or combined in the same manner and on the same basis as the outstanding shares of the class that has been split, subdivided or combined.

5. Change in Number of Authorized Class B Stock. The number of shares of authorized Class B Common Stock may be increased or decreased (but not below the number then outstanding) by the affirmative vote of the holders of a majority of the aggregate number of outstanding Class A Common Stock entitled to vote in the election of Directors voting as a single class.

FIFTH: Elections of directors need not be by written ballot except and to the extent provided in the by-laws of the Corporation.

SIXTH: To the full extent permitted by the General Corporation Law of the State of Delaware or any other applicable laws presently or hereafter in effect, no director of the Corporation shall be personally liable to the Corporation or its stockholders for or with respect to any acts or omissions in the performance of his or her duties as a director of the Corporation. Any repeal or modification of this Article Sixth shall not adversely affect any right or protection of a director of the Corporation existing immediately prior to such repeal or modification.

SEVENTH: Each person who is or was or had agreed to become a director or officer of the Corporation, or each such person who is or was serving or who had agreed to serve at the request of the Board of Directors or an officer of the Corporation as an employee or agent of the Corporation or as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise (including the heirs, executors, administrators or estate of such person), shall be indemnified by the Corporation to the full extent permitted by the General Corporation Law of the State of Delaware or any other applicable laws as presently or hereafter in effect. Without limiting the generality or the effect of the foregoing, the Corporation may enter into one or more agreements with any person which provide for indemnification greater or different than that provided in this Article. Any repeal or modification of this Article Seventh shall not adversely affect any right or protection existing hereunder immediately prior to such repeal or modification.

EIGHTH: The Corporation shall indemnify each person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that he is or was or had agreed to become a director or officer of the Corporation, or each such person who is or was serving or had agreed to serve at the request of the Board of Directors or an officer of the Corporation as an employee or agent of the Corporation or as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise (including the heirs, executors, administrators or estate of such person) (all such persons being referred to hereafter as an “Indemnitee”), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or on his behalf in connection with such action, suit or proceeding and any appeal therefrom, if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful. Notwithstanding anything to the contrary in this Article, the Corporation shall not indemnify an Indemnitee seeking indemnification in connection

with a proceeding (or part thereof) initiated by the Indemnitee unless the initiation thereof was approved by the Board of Directors of the Corporation. Notwithstanding anything to the contrary in this Article, the Corporation shall not indemnify an Indemnitee to the extent such Indemnitee is reimbursed from the proceeds of insurance, and in the event the Corporation makes any indemnification payments to an Indemnitee and such Indemnitee is subsequently reimbursed from the proceeds of insurance, such Indemnitee shall promptly refund such indemnification payments to the Corporation to the extent of such insurance reimbursement.

NINTH: In furtherance and not in limitation of the rights, powers, privileges, and discretionary authority granted or conferred by the General Corporation Law of the State of Delaware or other statutes or laws of the State of Delaware, the Board of Directors is expressly authorized to make, alter, amend or repeal the by-laws of the Corporation, without any action on the part of the stockholders, but the stockholders may make additional by-laws and may alter, amend or repeal any by-law whether adopted by them or otherwise. The Corporation may in its by-laws confer powers upon its Board of Directors in addition to the foregoing and in addition to the powers and authorities expressly conferred upon the Board of Directors by applicable law.

TENTH: The Corporation reserves the right at any time and from time to time to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted, in the manner now or hereafter prescribed herein or by applicable law; and all rights, preferences and privileges of whatsoever nature conferred upon stockholders, directors or any other persons whomsoever by and pursuant to this Certificate of Incorporation in its present form or as hereafter amended are granted subject to this reservation.

ELEVENTH: The name and mailing address of the incorporator is:

Béla Schwartz
c/o The Riverside Company
Rockefeller Center
630 Fifth Avenue, Suite 1530
New York, NY 10111

IN WITNESS WHEREOF, I the undersigned, being the incorporator hereinabove named, do hereby execute this Certificate of Incorporation this 25th day of September, 2000.

/s/ Béla Schwartz
Béla Schwartz

CERTIFICATE OF MERGER

MERGING

PCS MERGER SUB, INC.,
a Delaware corporation

WITH AND INTO

PRODUCTION CONTROL SERVICES GROUP, INC.,
a Delaware corporation

Pursuant to Title 8, Section 251(c) of the Delaware General Corporation Law (the "DGCL"), the undersigned corporation hereby certifies as follows:

FIRST: That the name and state of incorporation of each of the constituent corporations of the merger is as follows:

Name	State of Incorporation
PCS Merger Sub, Inc.	Delaware
Production Control Services Group, Inc.	Delaware

SECOND: That an Agreement and Plan of Merger by and between PCS Merger Sub, Inc., a Delaware corporation ("Merger Sub") and Production Control Services Group, Inc., a Delaware corporation ("PCSG"), dated as of June 1, 2004 (the "Merger Agreement"), has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with Section 251 of the DGCL.

THIRD: That the name of the surviving corporation of the merger will be "Production Control Services Group, Inc."

FOURTH: That the Certificate of Incorporation attached hereto as Exhibit A shall be the Certificate of Incorporation of the surviving corporation.

FIFTH: That the executed Merger Agreement is on file at c/o FMR Corp., 82 Devonshire Street, Boston, Massachusetts 02109, an office of the surviving corporation.

SIXTH: That a copy of the Merger Agreement will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: That this Certificate of Merger shall be effective upon filing with the Secretary of State of the State of Delaware.

IN WITNESS WHEREOF, Production Control Services Group, Inc. has caused this Certificate to be signed by an authorized officer as of the 1st day of June, 2004.

PRODUCTION CONTROL SERVICES GROUP, INC.

By: /s/ Karen R. Pajarillo
Name: Karen R. Pajarillo
Title: Vice President

Exhibit A

CERTIFICATE OF INCORPORATION

of

Production Control Services Group, Inc.

FIRST. The name of the Corporation is Production Control Services, Inc.

SECOND. The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD. The name of nature of the business and purposes to be conducted or promoted by the Corporation are to engage in any lawful business or activity for which corporations may be organized under General Corporation Law of the State of Delaware.

FOURTH. The total number of shares of capital stock which the Corporation shall have authority to issue is 1,000 shares of common stock with $1.00 par value per share.

FIFTH. The Board of Directors of the corporation is authorized to make, alter, or repeal the by-laws of the Corporation. Elections of directors need not be by ballot.

SIXTH. No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director; provided, however, that a director of the Corporation shall be liable (i) for breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or knowing violation of law, (iii) under Section 174 of Title 8 of the Delaware Code relating to the General Corporation Law of the State of Delaware, or (iv) for any transaction from which the director derived an improper personal benefit.

SEVENTH. The Corporation shall, to the extent required, and may, to the extent permitted, by Section 145 of the General Corporation Law of the State of Delaware, as amended from time to time, indemnify and reimburse all persons whom it may indemnify and reimburse pursuant thereto. Notwithstanding the foregoing, all indemnification provided for in this article shall not be deemed exclusive of any other rights to which those entitled to receive indemnification or reimbursement hereunder may be entitled under any by-law of the Corporation, agreement, vote of stockholders or disinterested directors or otherwise.

EIGHTH. The Corporation reserves the right to amend, alter, change, or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by applicable law, and all rights conferred upon stockholders herein are granted subject to this reservation.

CERTIFICATE OF CORRECTION FILED TO CORRECT
A CERTAIN ERROR IN THE CERTIFICATE OF MERGER
OF
PCS MERGER SUB, INC.
WITH AND INTO
PRODUCTION CONTROL SERVICES GROUP, INC.

FILED IN THE OFFICE OF THE SECRETARY OF STATE
OF DELAWARE ON JUNE 1, 2004

Production Control Services, Inc., corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

1. The name of the corporation is Production Control Services, Inc.

2. That a Certificate of Merger (the "Certificate") was filed with the Secretary of State of Delaware on June 1, 2004 and that said Certificate requires correction as permitted by Section 103 of the General Corporation Law of the State of Delaware.

3. The inaccuracy or defect of said Certificate to be corrected is as follows:

The name of the corporation surviving the merger will be "Production Control Services Group, Inc." The name of the corporation is currently Production Control Services, Inc.

4. Article First of the Exhibit A of the Certificate is corrected to read as follows:

The name of the corporation is "Production Control Services Group, Inc."

IN WITNESS WHEREOF, Production Control Services, Inc. has caused this Certificate to be signed by an authorize officer as of this 1st day of June, 2004.

PRODUCTION CONTROL SERVICES GROUP, INC.

By: /s/ Patrick Riordan
Name: Patrick Riordan
Title: Secretary

CERTIFICATE OF MERGER

MERGING

PRODUCTION CONTROL SERVICES, INC.,
a Colorado corporation

WITH AND INTO

PRODUCTION CONTROL SERVICES GROUP, INC.,
a Delaware corporation

Pursuant to Title 8, Section 252(c) of the Delaware General Corporation Law (the "DGCL"), the undersigned corporation hereby certifies as follows:

FIRST: That Production Control Services Group, Inc. ("PCSG") was incorporated on the 25th day of September, 2000 pursuant to the General Corporation Law of the State of Delaware.

SECOND: That PCSG owns all of the outstanding shares of Common stock of Production Control Services, Inc. ("PCS"), a corporation incorporated on the 2nd day of October, 1985 pursuant to the Colorado Corporate Code.

THIRD: That an Agreement and Plan of Merger by and between Production Control Services, Inc., a Colorado corporation ("PCS") and Production Control Services Group, Inc., a Delaware corporation ("PCSG"), dated as of June 2, 2004 (the "Merger Agreement"), has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with Section 252 of the DGCL. PCSG shall be the corporation surviving the merger. That the name of the surviving corporation of the merger will be "Production Control Services, Inc."

FOURTH: That the Certificate of Incorporation attached hereto as Exhibit A shall be the Certificate of Incorporation, as amended, of the surviving corporation.

FIFTH: That the executed Merger Agreement is on file at c/o FMR Corp., 82 Devonshire Street, Boston, Massachusetts 02109, an office of the surviving corporation.

SIXTH: That a copy of the Merger Agreement will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: The authorized capital stock of PCS consists of 50,000 shares of common stock without par value.

EIGHTH: That this Certificate of Merger shall be effective upon filing with the Secretary of State of the State of Delaware.

IN WITNESS WHEREOF, Production Control Services Group, Inc., a Delaware corporation, has caused this Certificate to be signed by an authorized officer as of the 2nd day of June, 2004.

PRODUCTION CONTROL SERVICES GROUP, INC.

By: /s/ David B. Wilson
Name: David B. Wilson
Title: President

Exhibit A

CERTIFICATE OF INCORPORATION

of

Production Control Services, Inc.

FIRST: The name of the Corporation is Production Control Services, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The name of nature of the business and purposes to be conducted or promoted by the Corporation are to engage in any lawful business or activity for which corporations may be organized under General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of capital stock which the Corporation shall have authority to issue is 1,000 shares of common stock with $1.00 par value per share.

FIFTH: The Board of Directors of the corporation is authorized to make, alter, or repeal the by-laws of the Corporation. Elections of directors need not be by ballot.

SIXTH: No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director; provided, however, that a director of the Corporation shall be liable (i) for breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or knowing violation of law, (iii) under Section 174 of Title 8 of the Delaware Code relating to the General Corporation Law of the State of Delaware, or (iv) for any transaction from which the director derived an improper personal benefit.

SEVENTH: The Corporation shall, to the extent required, and may, to the extent permitted, by Section 145 of the General Corporation Law of the State of Delaware, as amended from time to time, indemnify and reimburse all persons whom it may indemnify and reimburse pursuant thereto. Notwithstanding the foregoing, all indemnification provided for in this article shall not be deemed exclusive of any other rights to which those entitled to receive indemnification or reimbursement hereunder may be entitled under any by-law of the Corporation, agreement, vote of stockholders or disinterested directors or otherwise.

EIGHTH: The Corporation reserves the right to amend, alter, change, or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by applicable law, and all rights conferred upon stockholders herein are granted subject to this reservation.

CERTIFICATE OF AMENDMENT
TO THE
CERTIFICATE OF INCORPORATION
OF
PRODUCTION CONTROL SERVICES, INC.

Production Control Services, Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is Production Control Services, Inc. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of Delaware on September 25, 2000 (the Certificate of Incorporation is hereinafter referred to as the "Charter").

2. This Certificate of Amendment (the "Certificate of Amendment") amends the Charter. This Certificate of Amendment was duly adopted by the Board of Directors of the Corporation in accordance with the provisions of Sections 242 of the General Corporation Law of the State of Delaware (the "DGCL"), and was duly adopted by the written consent of the stockholders of the Corporation in accordance with the applicable provisions of Sections 228 and 242 of the DGCL.

3. The resolutions setting forth the amendment set forth in this Certificate of Amendment are as follows:

RESOLVED: That Article FOURTH of the Charter be, and hereby is, amended and restated in its entirety to read as follows:

4. The total number of shares of capital stock which the Corporation shall have authority to issue is 1,000 shares of common stock with $0.01 par value per share.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to the Certificate of Incorporation to be signed by this 5th day of January, 2007.

PRODUCTION CONTROL SERVICES, INC.

By: /s/ Patrick Riordan
Name: Patrick Riordan
Title: Vice President

CERTIFICATE OF MERGER OF
DOMESTIC CORPORATION AND
FOREIGN LIMITED LIABILITY COMPANY

Pursuant to Title 8, Section 264(c) of the Delaware General Corporation Law, the undersigned corporation executed the following Certificate of Merger;

FIRST: The name of the surviving corporation is Production Control Services, Inc., a Delaware corporation, and the name of the limited liability company being merged into this surviving corporation is Opti-Flow, L.L.C., a Louisiana limited liability company,

SECOND: The Agreement of Merger has been approved, adopted, certified, executed and acknowledged by the surviving corporation and the merging limited liability company.

THIRD: The name of the surviving corporation is Production Control Services, Inc.

FOURTH: The merger is to become effective upon filing.

FIFTH: The Agreement of Merger is on file at 3771 Eureka Way, Frederick, Colorado 80516.

SIXTH: A copy of the Agreement of Merger will be furnished by the corporation on request, without cost, to any stockholder of any constituent corporation or member of any constituent limited liability company.

SEVENTH: The Certificate of Incorporation of the surviving corporation shall be its Certificate of Incorporation.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by an authorized officer, the 29th day of February, 2008.

PRODUCTION CONTROL SERVICES, INC.

By: /s/ Jeffrey L. Giacomino
Name: Jeffrey L. Giacomino
Title: President

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
PRODUCTION CONTROL SERVICES, INC.

(Pursuant to Section 242 of the
General Corporation Law of the State of Delaware)

Production Control Services, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "**Corporation**"), does hereby certify:

FIRST: That the board of directors of the Corporation (the "**Board of Directors**"), by the unanimous written consent of its members filed with the minutes of the Board of Directors, adopted the following resolution proposing and declaring advisable an amendment to the Certificate of Incorporation of the Corporation:

RESOLVED, that the Board of Directors deems and declares it advisable that the Certificate of Incorporation be amended by deleting and replacing the first Article thereof so that, as amended, the first Article shall be read in its entirety as follows:

"FIRST. The name of the Corporation is PCS Ferguson, Inc."

SECOND: That, in lieu of a special meeting and vote of the sole stockholder of the Corporation (the "**Sole Stockholder**"), the Sole Stockholder has given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware (the "**DGCL**").

THIRD: That said amendment was duly adopted in accordance with the provisions of Sections 228 and 242 of the DGCL.

[*Signature page follows*]

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by Dan Newman, its President, this 1st day of July, 2013.

By: /s/ Dan Newman
Name: Dan Newman
Title: President

[Signature Page—Certificate of Amendment (COI) (PCS Name Change)]

CERTIFICATE OF MERGER

OF

ACCELERATED PRODUCTION SERVICES, INC.
(a Delaware corporation)

INTO

PCS FERGUSON, INC.
(a Delaware corporation)

* * * * * * * *

The undersigned corporation, organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the name and state of incorporation of each of the constituent corporations of the merger are as follows:

NAME	STATE OF INCORPORATION
Accelerated Production Services, Inc.	Delaware
PCS Ferguson, Inc.	Delaware

SECOND: That an Agreement and Plan of Merger has been approved, adopted, executed and acknowledged by each of the constituent corporations in accordance with the requirements of Section 251 of the General Corporation Law of the State of Delaware.

THIRD: That the name of the surviving corporation of the merger is PCS Ferguson, Inc., a Delaware corporation.

FOURTH: That the certificate of incorporation of PCS Ferguson, Inc., as in effect immediately prior to the merger, shall be the certificate of incorporation of the surviving corporation until amended in accordance with applicable law.

FIFTH: That the executed Agreement and Plan of Merger is on file at an office of the surviving corporation, the address of which is 3771 Eureka Way, Frederick, Colorado 80516.

SIXTH: That a copy of the Agreement and Plan of Merger will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: That the merger shall be effective as of September 1, 2017 at 12:01 a.m. Eastern Time.

[Signature appears on following page.]

IN WITNESS WHEREOF, this Certificate of Merger has been duly executed as of the 31st day of August, 2017 by a duly authorized officer of the surviving corporation.

PCS FERGUSON, INC., a Delaware

By: /s/ Paul Mahoney
Name: Paul Mahoney
Title: President

Signature Page to Certificate of Merger

Exhibit 3.28

PRODUCTION CONTROL SERVICES GROUP, INC.

BY-LAWS

PRODUCTION CONTROL SERVICES GROUP, INC.

BY-LAWS

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BY-LAWS

ARTICLE I

MEETINGS OF STOCKHOLDERS

Section 1. Time and Place of Meetings. All meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, within or without the State of Delaware, as may be designated by the Board of Directors, or by the Chairman of the Board, the President or the Secretary in the absence of a designation by the Board of Directors, and stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual Meeting. An annual meeting of the stockholders, commencing with the year 2001, shall be held on the 15th in April if not a legal holiday, and if a legal holiday, then on the next business day following, at 10:00 a.m., or at such other date and time as shall be designated from time to time by the Board of Directors, at which meeting the stockholders shall elect by a plurality vote the directors to succeed those whose terms expire and shall transact such other business as may properly be brought before the meeting.

Section 3. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by law or by Certificate of Incorporation, may be called by the Board of Directors, the Chairman of the Board or the President.

Section 4. Notice of Meetings. Written notice of every meeting of the stockholders, stating the place, date and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting to each stockholder entitled to vote at such meeting, except as otherwise provided herein or by law. When a meeting is adjourned to another place, date or time, written notice need not be given of the adjourned meeting if the place, date and time thereof are announced at the meeting at which the adjournment is taken; provided, however, that if the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, written notice of the place, date and time of the adjourned meeting shall be given in conformity herewith. At any adjourned meeting, any business may be transacted which might have been transacted at the original meeting.

Section 5. Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by law or by the Certificate of Incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented.

Section 6. Voting. Except as otherwise provided by law or by the Certificate of Incorporation, each stockholder shall be entitled at every meeting of the stockholders to one vote for each share of stock having voting power standing in the name of such stockholder on the books of the Corporation on the record date for the meeting and such votes may be cast either in person or by written proxy. Every proxy must be duly executed and filed with the Secretary of the Corporation. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with the Secretary of the Corporation. The vote upon any question brought before a meeting of the stockholders may be by voice vote, unless the holders of a majority of the outstanding shares of all classes of stock entitled to vote thereon present in person or by proxy at such meeting

shall so determine. When a quorum is present at any meeting, the vote of the holders of a majority of the stock that has voting power present in person or represented by proxy shall decide any question properly brought before such meeting, unless the question is one upon which by express provision of law, the Certificate of Incorporation or these by-laws, a different vote is required, in which case such express provision shall govern and control the decision of such question.

ARTICLE II

DIRECTORS

Section 1. Powers. The business and affairs of the Corporation shall be managed by or under the direction of its Board of Directors, which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by law or by the Certificate of Incorporation directed or required to be exercised or done by the stockholders.

Section 2. Number and Term of Office. The Board of Directors shall consist of two or more members. The number of directors shall be fixed by resolution of the Board of Directors or by the stockholders at the annual meeting or a special meeting. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 3 of this Article, and each director elected shall hold office until his successor is elected and qualified, except as required by law. Any decrease in the authorized number of directors shall not be effective until the expiration of the term of the directors then in office, unless, at the time of such decrease, there shall be vacancies on the Board which are being eliminated by such decrease.

Section 3. Vacancies and New Directorships. Vacancies and newly created directorships resulting from any increase in the authorized number of directors which occur between annual meetings of the stockholders may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so elected shall hold office until the next annual meeting of the stockholders and until their successors are elected and qualified, except as required by law.

Section 4. Regular Meetings. Regular meetings of the Board of Directors may be held without notice immediately after the annual meeting of the stockholders and at such other time and place as shall from time to time be determined by the Board of Directors.

Section 5. Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board or the President on one day's written notice to each director by whom such notice is not waived, given either personally or by mail or telegram, and shall be called by the President or the Secretary in like manner and on like notice on the written request of any two directors.

Section 6. Quorum. At all meetings of the Board of Directors, a majority of the total number of directors then in office shall constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn the meeting from time to time to another place, time or date, without notice other than announcement at the meeting, until a quorum shall be present.

Section 7. Written Action. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes or proceedings of the Board or Committee.

Section 8. Participation in Meetings by Conference Telephone. Members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any such committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 9. Committees. The Board of Directors may, by resolution passed by a majority of the whole Board, designate one or more committees, each committee to consist of one or more of the directors of the Corporation and each to have such lawfully delegable powers and duties as the Board may confer. Each such committee shall serve at the pleasure of the Board of Directors. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Except as otherwise provided by law, any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Any committee or committees so designated by the Board shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors, Unless otherwise prescribed by the Board of Directors, a majority of the members of the committee shall constitute a quorum for the transaction of business, and the act of a majority of the members present at a meeting at which there is a quorum shall be the act of such committee. Each committee shall prescribe its own rules for calling and holding meetings and its method of procedure, subject to any rules prescribed by the Board of Directors, and shall keep a written record of all actions taken by it.

Section 10. Compensation. The Board of Directors may establish such compensation for, and reimbursement of the expenses of, directors for attendance at meetings of the Board of Directors or committees, or for other services by directors to the Corporation, as the Board of Directors may determine.

Section 11. Rules. The Board of Directors may adopt such special rules and regulations for the conduct of their meetings and the management of the affairs of the Corporation as they may deem proper, not inconsistent with law or these by-laws.

ARTICLE III

NOTICES

Section 1. Generally. Whenever by law or under the provisions of the Certificate of Incorporation or these by-laws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to directors may also be given by telegram or telephone.

Section 2. Waivers. Whenever any notice is required to be given by law or under the provisions of the Certificate of Incorporation or these by-laws, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to such notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

ARTICLE IV

OFFICERS

Section 1. Generally. The officers of the Corporation shall be elected by the Board of Directors and shall consist of a President, a Secretary and a Treasurer. The Board of Directors may also elect such other officers as the board deems desirable. Any number of offices may be held by the same person.

Section 2. Compensation. The compensation of all officers and agents of the Corporation who are also directors of the Corporation shall be fixed by the Board of Directors. The Board of Directors may delegate the power to fix the compensation of other officers and agents of the Corporation to an officer of the Corporation.

Section 3. Succession. The officers of the Corporation shall hold office until their successors are elected and qualified. Any officer elected or appointed by the Board of Directors may be removed at any time by the affirmative vote of a majority of the directors. Any vacancy occurring in any office of the Corporation may be filled by the Board of Directors.

Section 4. Authority and Duties. Each of the officers of the Corporation shall have such authority and shall perform such duties as are customarily incident to their respective offices, or as may be specified from time to time by the Board of Directors in a resolution which is not inconsistent with these by-laws.

Section 5. Execution of Documents and Action with Respect to Securities of Other Corporations. The President shall have and is hereby given, full power and authority, except as otherwise required by law or directed by the Board of Directors, (a) to execute, on behalf of the Corporation, all duly authorized contracts, agreements, deeds, conveyances or other obligations of the Corporation, applications, consents, proxies and other powers of attorney, and other documents and instruments, and (b) to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of stockholders, members, partners or other equity holders (or with respect to any action of such stockholders, members, partners or other equity holders) of any other corporation, limited liability company, partnership or other entity in which the Corporation may hold securities and otherwise to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities. In addition, the President may delegate to other officers, employees and agents of the Corporation the power and authority to take any action which the President is authorized to take under this Section 5, with such limitations as the President may specify; such authority so delegated by the President shall not be re-delegated by the person to whom such execution authority has been delegated.

ARTICLE V

STOCK

Section 1. Certificates. Certificates representing shares of stock of the Corporation shall be in such form as shall be determined by the Board of Directors, subject to applicable legal requirements. Such certificates shall be numbered and their issuance recorded in the books of the Corporation, and such certificate shall exhibit the holder’s name and the number of shares and shall be signed by, or in the name of the Corporation by the Chairman or Vice-Chairman of the Board or the President or Vice-President and the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer of the Corporation. Any or all of the signatures upon such certificates may be facsimiles, engraved or printed.

Section 2. Transfer. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue, or to cause its transfer agent to issue, a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 3. Lost, Stolen or Destroyed Certificates. The Secretary may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed upon the making of an affidavit of that fact, satisfactory to the Secretary, by the person claiming the certificate of stock to be lost, stolen or destroyed. As a condition precedent to the issuance of a new certificate or certificates the Secretary may require the owner of such lost, stolen or destroyed certificate or certificates to give the Corporation a bond in such sum and with such surety or sureties as the Secretary may direct as indemnity against any claims that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed or the issuance of the new certificate.

Section 4. Record Date.

(a) In order that the Corporation is able to determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty nor less than ten days before the date of such meeting. If no record is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than ten days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a Corporation’s registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

(c) In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

ARTICLE VI

GENERAL PROVISIONS

Section 1. Fiscal Year. The fiscal year of the Corporation shall be fixed from time to time by the Board of Directors.

Section 2. Corporate Seal. The Board of Directors may adopt a corporate seal and use the same by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

Section 3. Reliance upon Books, Reports and Records. Each director, each member of a committee designated by the Board of Directors, and each officer of the Corporation will, in the performance of his or her duties, be fully protected in relying in good faith upon the records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of the Corporation's officers or employees, or committees of the Board of Directors, or by any other person as to matters the director, committee member or officer believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

Section 4. Time Periods. In applying any provision of these by-laws which requires that an act be done or not be done a specified number of days prior to an event or that an act be done during a period of a specified number of days prior to an event, calendar days shall be used, the day of the doing of the act shall be excluded and the day of the event shall be included.

Section 5. Dividends. The Board of Directors may from time to time declare and the Corporation may pay dividends upon its outstanding shares of capital stock, in the manner and upon the terms and conditions provided by law and the Certificate of Incorporation.

ARTICLE VII

AMENDMENTS

Section 1. Amendments. These by-laws may be altered, amended or repealed, or new by-laws may be adopted, by the stockholders or by the Board of Directors.

Exhibit 3.29

CERTIFICATE OF INCORPORATION

OF

QUARTZDYNE, INC.

The undersigned, in order to form a corporation pursuant to the provisions of the General Corporation Law of Delaware, does hereby certify as follows:

1. The name of the Corporation is:

Quartzdyne, Inc.

2. The address of the Corporation's registered office in the State of Delaware is 9 East Lockerman Street, the City of Dover, County of Kent, and the name of the registered agent thereat is National Registered Agents, Inc.

3. The nature of the business of the corporation and the purposes to be conducted or promoted by it are as follows:

(a) to acquire all or any part of the stock or other securities, goodwill, rights, property or assets of any kind and to undertake to assume all or any part of the obligations or liabilities of any corporation, association, partnership, syndicate, entity, or person located in or organized under the laws of any state, territory or possession of the United States of America or any foreign country, and to pay for the same in cash, stock, bonds, debentures, notes, or other securities, secured or unsecured, of this or any other corporation or otherwise, in any manner permitted by law, and to conduct in any lawful manner all or any part of any business so required.

(b) to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

4. The total number of shares of all classes of stock which the corporation shall have authority to issue is 1,000 shares of common stock and shall have a par value of $1.00 per share.

5. The name and mailing address of the sole incorporator is as follows:

Name	Mailing Address
Jeremiah T. Mulligan	101 Park Avenue 35th Floor New York, New York 10178

6. The number of directors of the corporation shall be such as from time to time may be fixed by, or in the manner provided in, the By-Laws, but in no case shall the number be less than the minimum number authorized by the laws of Delaware. Directors need not be stockholders. The election of directors need not be by ballot.

7. The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation or any amendment thereto in the manner now or hereafter prescribed by statute, and all rights conferred on the stockholder hereunder are granted subject to this reservation.

8. A director of the Corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, as the same exists or hereafter may be amended, or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law hereafter is amended to authorize the further elimination or limitation of the liability of directors, than the liability of a director of the corporation, in addition to the limitations on personal liability provided herein, shall be limited to the fullest extent permitted by the amended Delaware General Corporation Law. Any repeal or modification of this paragraph by the Stockholders of the corporation shall be prospective only, and shall not adversely affect any limitation on the personal liability of a director of the corporation existing at the time of such repeal or modification.

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of December, 1997.

/s/ Jeremiah T. Mulligan
Sole Incorporator

Exhibit 3.30

BY-LAWS

of

QUARTZDYNE, INC.

ARTICLE I

Offices

1. The corporation may have offices at such places within or without the State of Delaware as the board of directors may from time to time determine or as the business of the corporation may require.

ARTICLE II

Stockholders' Meetings

1. Place of all meetings.

(a) All meetings of stockholders for the election of directors shall be held at the principal office of the corporation in Delaware unless otherwise determined by the board of directors in accordance with the laws of Delaware, or unless otherwise consented to by a waiver of notice or other document signed by all the stockholders entitled to vote thereon.

(b) All Meetings of stockholders, other than for the election of directors, shall be held at such place or places in or outside the State of Delaware as the board of directors may from time to time determine or as may be designated in the notice of meeting or waiver of notice thereof, subject to any provisions of the laws of Delaware.

2. Annual meeting of stockholders. The annual meeting of stockholders shall be held each year on the last Tuesday in the fourth month following the close of the fiscal year commencing at some time between 10 A.M. and 3 P.M. if not a legal holiday, and, if a legal holiday, then on the day following at the same time. In the event that such annual meeting is not held as herein provided for, the annual meeting may be held as soon thereafter as conveniently may be. Such subsequent meeting shall be called in the same manner as hereinafter provided for special meetings of stockholders. Written notice of the time and place of the annual meeting shall be given by mail to each stockholder entitled to vote at least ten days prior to the date thereof, unless waived as provided by Article IX of these By-laws.

3. Social meetings of stockholders. Special meetings of stockholders may be called at any time by order of the board of directors or the executive committee and shall be called by the president or secretary at the written request of the holders of 25% of the shares of stock then outstanding and entitled to vote, stating the purpose or purposes thereof. Notice of all such meetings of the stockholders, stating the time, place, and the purposes thereof shall be given by mail as soon as possible to each stockholder entitled to vote thereat at his last known address or by delivering the same personally at least five days before the meeting.

Meetings of the stockholders may be held at any time without notice when all of the stockholders entitled to vote thereat are represented in person or by proxy.

4. Voting at stockholders' meetings. At all meetings of the stockholders, each stockholder entitled to vote shall be entitled to one vote for each share of stock standing on record in his name, subject to any restrictions or qualifications set forth in the Certificate of Incorporation or any amendment thereto.

5. Quorum at stockholders' meetings. At any stockholders' meeting, a majority of the stock outstanding and entitled to vote thereat represented in person or by proxy shall constitute a quorum, but a smaller interest may adjourn any meeting from time to time, and the meeting may be held as adjourned without further notice. When a quorum is present at any meeting, a majority in interest of the stock entitled to vote represented thereat shall decide any question brought before such meeting unless the question is one upon which, by express provision of law or of the Certificate of Incorporation or of these By-laws, a different vote is required, in which case such express provision shall govern.

6. List of stockholders to be filed, etc. At least ten days before every election of directors, a complete list of the stockholders entitled to vote at the election, arranged in alphabetical order, shall be prepared by the secretary. Such list shall be open at the place where such election is to be held for ten days, subject to examination by any stockholder, and shall be produced and kept at the time and place of election during the whole time thereof and subject to the inspection of any stockholder who may be present. Upon the willful neglect or refusal of the directors to produce such a list at any election, they shall be ineligible to any office at such election. The original or duplicate stock ledger shall be the only evidence as to who are the stockholders entitled to examine such list or the books of this corporation or to vote in person or by proxy at such election. The original or duplicate stock ledger containing the names and addresses of the stockholders and the number of shares held by them respectively shall, at all times during the usual hours of business, be open to the examination of every stockholder at the corporation's principal office or place of business in Delaware.

ARTICLE III

Board of Directors

1. Number and qualification. A board of directors shall be elected at each annual meeting of stockholders, or at a special meeting held in lieu thereof as above provided, who shall serve until the election and qualification of their successors. The number of directors shall be such as may be determined by the incorporators or from time to time by the stockholders or by the board of directors, but in no event shall the number be less than three. In case of any increase in the number of directors between elections by the stockholders, the additional directorships shall be considered vacancies and shall be filled in the manner prescribed in Article V of these By-laws. Directors need not be stockholders.

2. Powers of directors. The board of directors shall have the entire management of the affairs of the corporation and is hereby vested with all the powers possessed by the corporation itself so far as this delegation of authority is not inconsistent with the laws of the State of Delaware, with the Certificate of Incorporation, or with these By-laws. The board of directors shall have authority from time to time to set apart out of any assets of the corporation otherwise available for dividends a reserve or reserves as working capital, or for any other proper purpose or purposes, and to abolish or add to any such reserve or reserves from time to time as the board may deem to be in the interests of the corporation; and the board shall likewise have power, subject to the provisions of the Certificate of Incorporation, to determine in its discretion what part of the earned surplus and/or net assets of the corporation in excess of such reserve or reserves shall be declared in dividends and paid to the stockholders of the corporation.

3. Compensation of directors. The board of directors may from time to time by resolution authorize the payment of fees or compensation to the directors for services as such to the corporation, including, but not limited to, fees and traveling expenses for attendance at all meetings of the board or of the executive or other committees, and determine the amount of such fees and compensation. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity and receiving compensation therefor.

4. Directors' meetings. Meetings of the board of directors may be held either within or outside the State of Delaware. A quorum shall be one-third the number of directors, but not less than two directors.

The board of directors elected at any stockholders' meeting shall at the close of that meeting, without further notice if a quorum of directors be then present, or as soon thereafter as may be convenient, hold a meeting for the election of officers and the transaction of any other business. At such meeting they shall elect a president, one or more vice presidents, a secretary and a treasurer, and such other officers as they may deem proper, none of whom except the president need be members of the board of directors.

The board of directors may from time to time provide for the holding of regular meetings with or without notice and may fix the times and places at which such meetings are to be held. Meetings other than regular meetings may be called at any time by the president and must be called by the president or by the secretary upon the written request of any director.

Notice of each meeting, other than a regular meeting (unless required by the board of directors), shall be given to each director by mailing the same to each director at his residence or business address at least two days before the meeting or by delivering the same to him personally or by telephone or telegraph to him at least one day before the meeting unless, in case of exigency, the president or secretary shall prescribe a shorter notice to be given personally or by telephone, telegraph, cable or wireless to all or any one or more of the directors at their respective residences or places of business.

Notice of all meetings shall state the time and place of such meeting, but need not state the purposes thereof unless otherwise required by statute, the Certificate of Incorporation, the By-laws, or the board of directors.

5. Executive committee. The board of directors may provide for an executive committee of two or more directors and shall elect the members thereof to serve during the pleasure of the board and may designate one of such members to act as chairman. The board shall have the power at any time to change the membership of the committee, to fill vacancies in it, or to dissolve it.

During the intervals between the meetings of the board of directors, the executive committee shall possess and may exercise any or all of the powers of the board of directors in the management of the business and affairs of the corporation to the extent authorized by resolution adopted by a majority of the entire board of directors.

The executive committee may determine its rules of procedure and the notice to be give n of its meetings, and it may appoint such committees and assistants as it shall from time to time deem necessary. A majority of the members of the committee shall constitute a quorum.

6. Other committees. The board of directors by resolution may provide for such other standing or special committees as it deems desirable and may discontinue the same at its pleasure. Each such committee shall have the powers and perform such duties, not inconsistent with law, as may be assigned to it by the board of directors.

ARTICLE IV

Officers

1. Titles and election. The officers of this corporation shall be a president, one or more vice presidents, a secretary and a treasurer who shall be elected at the annual meeting of the board of directors and who shall hold office until the election and qualification of their successors. Any person may hold more than one office if the duties thereof can be consistently performed by the same person, and to the extent permitted by law.

The board of directors, in its discretion, may at any time elect or appoint a chairman of the board of directors, who shall be a director, and one or more vice presidents, assistant secretaries and assistant treasurers and such other officers or agents as it may deem advisable, all of whom shall hold office at the pleasure of the board and shall have such authority and shall perform such duties as the board shall prescribe from time to time.

The board of directors may require any officer, agent or employee to give bond for the faithful performance of his duties in such form and with such sureties as the board may require.

2. Duties. Subject to such extension, limitations, and other provisions as the board of directors or the By-laws may from time to time prescribe, the following officers shall have the following powers and duties:

(a) Chairman of the Board. The chairman of the Board (hereinafter sometimes called the "Chairman"), if appointed by the board of directors, shall be the chief executive officer of the corporation, and when present shall preside at all meetings of the stockholders, the board of directors and the Executive Committee. Subject to the control of the board of directors and the Executive Committee, the Chairman shall have general supervision of the business, affairs and property of the corporation and over its officers, and shall have such other powers and perform such other duties as the board of directors or Executive Committee may prescribe from time to time.

(b) President. The president shall be the senior executive officer of the corporation ranking next below the Chairman, and shall be in charge of the general management of the operations of the corporation and of its officers, subject to the supervision of the Chairman and to the control of the board of directors and Executive Committee. In the absence or inability to act of the Chairman, the president shall preside at all meetings of the stockholders and the board of directors and shall have and perform all the powers and duties of the Chairman, subject to the control of the board of directors and the Executive Committee. The Chairman, president or a vice president, unless some other person is authorized by the board of directors or Executive Committee, shall sign all certificates representing shares of stock of the corporation and all bonds, deeds and contracts of the corporation. In general, the president shall exercise the powers and authority and perform all the duties commonly incident to the office of president and not delegated to the Chairman and shall have such other powers and perform such other duties as may be assigned to him from time to time by the board of directors or Executive Committee. The same individual may be elected or appointed Chairman of the Board and President.

(c) Vice President. The vice president or vice presidents shall perform such duties as may be assigned to them by the board of directors and, in the absence or disability of the president, the vice presidents in order of seniority shall exercise all powers and duties pertaining to the office of president.

(d) Secretary. The secretary shall keep the minutes of all meetings of stockholders and of the board of directors, give and serve all notices, attend to such correspondence as may be assigned to him, keep in safe custody the seal of the corporation, and affix such seal to all such instruments properly executed as may require it, and shall have such other duties and powers as the board of directors shall prescribe from time to time.

(e) Treasurer. The treasurer, subject to the order of the board of directors, shall have the care and custody of the moneys, funds, valuable papers and documents of the corporation (other than his own bond, if any, which shall be in the custody of the president), and shall have and exercise, under the supervision of the board of directors, all the powers and duties commonly incident to his office. He shall deposit all funds of the corporation in such bank or banks, trust company or trust companies, or with such firm or firms doing a banking business as the board of directors shall designate. He may endorse for deposit or collection all checks, notes, etc., payable to the corporation or to its order. He shall keep accurate books of account of the corporation's transactions, which shall be the property of the corporation, and, together with all its property in his possession, shall be subject at all times to the inspection and control of the board of directors. The treasurer shall be subject in every way to the order of the board of directors, and shall render to the board of directors and/or the president of the corporation, whenever they may require it, an account of all his transactions and of the financial condition of the corporation.

3. Delegation of authority. The board of directors or the executive committee may at any time delegate the powers and duties of any officer for the time being to any other officer, director or employee.

4. Salaries. The salaries of all officers shall be fixed by the board of directors or the executive committee, and the fact that any officer is a director shall not preclude him from receiving a salary or from voting upon the resolution providing the same.

ARTICLE V

Resignations, Removals and Vacancies

1. Resignations. Any director, officer, or agent may resign at any time by giving written notice thereof to the board of directors, the president, or the secretary. Any such resignation shall take effect at the time specified therein or, if the time be not specified, upon receipt there of; and unless otherwise specified therein, the acceptance of any resignation shall not be necessary to make it effective.

2. Removals. The stockholders at any meeting called for the purposes may, by vote of the majority of the issued and outstanding shares of stock entitled to vote, remove from office, with or without cause, any director, and elect his successor. The board of directors, by a majority vote of the total number of directors at a meeting called for such purpose, may remove from office any officer of the corporation with or without cause. The board may delegate the powers and duties for the time being of any officer to any other officer or to any director.

3. Vacancies. When the office of any director or officer becomes vacant, whether by reason of increase in the number of directors or otherwise, the remaining director or directors, although less than a quorum, may elect a successor for such office who shall hold the same for the unexpired term, or the directors may reduce their number by the number of such vacancies in the board, provided such reduction shall not reduce the board to less than three.

ARTICLE VI

Capital Stock

1. Certificates of stock. Every stockholder shall be entitled to a certificate or certificates for shares of the capital stock of the corporation in such form as may be prescribed by the board of directors, duly numbered and setting forth the number and kind of shares represented thereby. Such certificates shall be signed by the president or a vice president and by the treasurer or an assistant treasurer or by the secretary or an assistant secretary. Any of such signatures and the corporate seal affixed to any stock certificate may be in facsimile.

In case any officer who has signed, or whose facsimile signature has been used on a certificate, has ceased to be an officer before the certificate has been delivered, such certificate may nevertheless be adopted and issued and delivered by the corporation, or its transfer agent, as though the officer who signed such certificate or certificates, or whose facsimile signature or signatures shall have been used thereon, had not ceased to be such officer of the corporation.

2. Transfer of stock. Shares of the capital stock of the corporation shall be transferable only upon the books of the corporation by the holder in person or by attorney duly authorized and upon the surrender of the certificate or certificates properly assigned and endorsed. If the corporation has a transfer agent or agents or transfer clerk and registrar of transfers acting on its behalf, the signature of any officer or representative thereof may be in facsimile.

The board of directors may appoint a transfer agent and one or more co-transfer agents and a registrar of transfer and may make all such rules and regulations as it deems expedient concerning the issue, transfer and registration of shares of stock. The transfer books shall be closed for such a period as the board shall direct previous to and on the day of the annual or any special meeting of the stockholders and may also be closed by the board for such period as may be advisable for dividend purposes, and during such time no stock shall be transferable.

3. Transfer books. The board of directors, in lieu of closing the stock transfer books as aforesaid, may fix in advance a date, not exceeding fifty days preceding the date of any meeting of stockholders, or the date for the payment of any dividend, or the date for the allotment of rights, or the date when any change or conversion or exchange of capital stock shall come into effect, as a record date for the determination of the stockholders entitled to notice of and to vote at any such meeting, or entitled to receive payment of any such dividend, or any such allotment of rights, or to exercise the rights in respect to any such change, conversion or exchange of capital stock, and in such case only stockholders of record on the date so fixed shall be entitled to such notice of and vote at such meeting or to receive payment of such dividend, or allotment or rights, or exercise such rights, as the case may be, notwithstanding any transfer of any stock on the books of the corporation after any such record date fixed as aforesaid.

4. Lost certificates. In case of loss or mutilation or destruction of a certificate of stock of this corporation, a duplicate certificate may be issued upon such terms as the board of directors may determine.

ARTICLE VII

Fiscal Year, Bank Deposits, Checks, etc.

1. Fiscal year. The fiscal year of the corporation will commence on t he first day of January of each year or at such other time as the board of directors may designate.

2. Bank deposits, checks, etc. The funds of the corporation shall be deposited in the name of the corporation in such banks or trust companies as the board of directors may from time to time designate.

All checks, drafts, notes or other obligations for the payment of money shall be signed by such persons as the board of directors from time to time by resolution may direct or authorize.

ARTICLE VIII

Books and Records

1. Place of keeping books. Unless otherwise expressly required by the laws of Delaware, the books and records of this corporation may be kept outside of the State of Delaware at such place or places as may be designated from time to time by the board of directors.

2. Examination of books. Except as otherwise provided in the Certificate of Incorporation or in these By- laws, the board of directors shall have power to determine from time to time whether and to what extent and at what times and places and under what conditions and regulations the accounts, records and books of this corporation, or any of them, shall be open to the inspection of the stockholders, and no stockholder shall have any right to inspect any account or book or document of this corporation except as prescribed by statute or authorized by express resolution of the stockholders or of the board of directors.

ARTICLE IX

Notices

1. Requirements of notice. Whenever notice is required to be given by statute or by these By-laws, it shall not mean personal notice unless so specified, but such notice may be given in writing by depositing the same in a post office or letter box, postpaid and addressed to the person to whom such notice is directed at the address of such person on the records of the corporation, and such notice shall be deemed given at the time when the same shall be thus mailed.

2. Waivers. Any stockholder, director or officer may, in writing or by telegram or cable, at any time waive any notice or other formality required by statute or these By-laws. Such waiver of notice, whether given before or after any meeting, shall be deemed equivalent to notice. Presence of a stockholder either in person or by proxy at any stockholders' meeting and presence of any director at any meeting of the board of directors shall constitute a waiver of such notice as may be required by any statute or these By-laws.

ARTICLE X

Seal

The corporate seal of the corporation shall consist of two concentric circles between which shall be the name of the corporation and in the center of which shall be inscribed "Corporate Seal, Delaware."

ARTICLE XI

Powers of Attorney

The board of directors may authorize one or more of the officers of the corporation to execute powers of attorney delegating to named representatives or agents power to represent or act on behalf of the corporation, with or without power of substitution.

ARTICLE XII

Indemnification of Directors and Officers

1. Definitions. As used in this article, the term "person" means any past, present or future director or officer of the corporation or a designated officer of an operating division of the corporation.

2. Indemnification granted. The corporation shall indemnify, to the full extent and under the circumstances permitted by the Delaware General Corporation Law in effect from time to time, any person as defined above, made or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative by reason of the fact that he is or was a director, officer of the corporation or designated officer of an operating division of the corporation, or is or was an employee or agent of the corporation, or is or was serving at the specific request of the corporation as a director, officer, employee or agent of another company or other enterprise in which the corporation should own, directly or indirectly, an equity interest or of which it may be a creditor.

This right of indemnification shall not be deemed exclusive of any other rights to which a person indemnified herein may be entitled by By-law, agreement, vote of stockholders or disinterested directors or otherwise, and shall continue as to a person who has ceased to be a director, officer, designated officer, employee or agent and shall inure to the benefit of the heirs, executors, administrators and other legal representatives of such person. It is not intended that the provisions of this article be applicable to, and they are not to be construed as granting indemnity with respect to, matters as to which indemnification would be in contravention of the laws of Delaware or of the United States of America whether as a matter of public policy or pursuant to statutory provision.

3. Miscellaneous. The Board of Directors may also on behalf of the corporation grant indemnification to any individual other than a person defined herein to such extent and in such manner as the Board in its sole discretion may from time to time and at any time determine.

ARTICLE XIII

Amendments

These By-laws may be amended or repealed at any meeting of stockholders or at any meeting of the board of directors by a majority vote of the directors then in office, provided the notice of such meeting thereof shall contain a statement of the substance of the proposed amendment or repeal.

CERTIFICATE OF INCORPORATION
OF
SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

FIRST: The name of the corporation is Spirit Global Energy Solutions, Inc. (the "Corporation").

SECOND: The address of the Corporation's registered office in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, County of New Castle, Wilmington, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purpose to be conducted or promoted by the Corporation is to engage in the oil and gas and wind power business and in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The aggregate number of shares which the Corporation shall have authority to issue is Ten Million (10,000,000), of the par value of $.01 each, to be designated "Common Stock".

FIFTH: The name of the incorporator of the Corporation is Gerry J. Weisenfels and the mailing address of such incorporator is 300 N. Marienfeld, Suite 700, Midland, Texas 79701.

SIXTH: The following provisions are inserted for the management of the business and for the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

(a) Management. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) Number of Directors. The number of directors of the Corporation shall be not less than one nor more than eleven as fixed from time to time by or pursuant to the Bylaws of the Corporation. Each director shall hold office until his or her successor is elected and qualifies or until his or her earlier resignation or removal. Election of directors need not be by written ballot unless the Bylaws of the Corporation so provide.

(c) Initial Director. The name and mailing address of the person who is to serve as director until the first annual meeting of the holders of capital stock of the Corporation or until his successor is elected and qualifies are:

Name:	Mailing Address:
John Matthew Raglin Suite 113 Midland, Texas 79707	3323 North Midland Drive

SEVENTH: (a) Elimination of Certain Liability of Directors. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of duty as a director. Without limiting the foregoing in any respect, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of

duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended. Any repeal or modification of this provision shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

(b) Indemnification and Insurance.

(i) Right to Indemnification. (A) Each person who was or is made a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director or officer of the Corporation, or serves, in any capacity, any corporation, partnership or other entity in which the Corporation has a partnership or other interest, including without limitation service with respect to employee benefit plans, whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than said law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including without limitation attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith and such indemnification shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of his or her heirs, executors and administrators; and (B) the Corporation shall indemnify and hold harmless in such manner any person designated by the Board of Directors, or any committee thereof, as a person subject to this indemnification provision, and who was or is made a party or is threatened to be made a party to a proceeding by reason of the fact that he, she or a person of whom he or she is the legal representative, is or was serving at the request of the Board of Directors of the Corporation as a director, officer, employee or agent of another corporation or a partnership, joint venture, trust or other enterprise whether such request is made before or after the acts taken or allegedly taken or events occurring or allegedly occurring which give rise to such proceeding; provided, however, that, except as provided in subsection (b)(ii) of this Article SEVENTH, the Corporation shall indemnify any such person seeking indemnification pursuant to this subsection (i) in connection with a proceeding (or part thereof) initiated by such person only if such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation. The right to indemnification conferred herein shall be a contract right based upon an offer from the Corporation which shall be deemed to have been made to a person subject to clause (A) of this subsection (i) on the date hereof and to a person subject to clause (B) of this subsection (i) on the date designated by the Board of Directors, shall be deemed to be accepted by such person's service or continued service as a director or officer of the Corporation for any period after the offer is made and shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition; provided, however, that if the Delaware General Corporation Law requires, the payment of such expenses incurred by a director or officer in his or her capacity as the director or officer (and not in any other capacity in which

service was or is rendered by such person while a director or officer, including without limitation service to an employee benefit plan) in advance of the final disposition of a proceeding, shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified under this subsection (i) or otherwise. The Corporation may, by action of its Board of Directors, provide indemnification to employees or agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

(ii) Right of Claimant to Bring Suit. If a claim under Section (b)(i) of this Article SEVENTH is not paid in full by the Corporation within 30 days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall be entitled to be paid also the expense of prosecuting such claim. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending any proceeding in advance of its final disposition where the required undertaking, if any is required, has been tendered to the Corporation) that the claimant has not met the standards of conduct which make it permissible under the Delaware General Corporation Law for the Corporation to indemnify the claimant for the amount claimed. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he or she has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the claimant has not met such applicable standard of conduct, shall, in and of itself, be a defense to the action or create a presumption that the claimant has not met the applicable standard of conduct.

(iii) Non-exclusivity of Rights. The right to indemnification and the payment of expenses incurred in defending a proceeding in advance of its final disposition conferred in this Section (b) shall not be exclusive of any right which any person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, by-law, agreement, vote of stockholders or disinterested directors or otherwise.

(iv) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any such expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the Delaware General Corporation Law.

(v) Severability. If any subsection of this Section (b) shall be deemed to be invalid or ineffective in any proceedings, the remaining subsections hereof shall not be affected and shall remain in full force and effect.

EIGHTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

[Signature Page to Follow]

IN WITNESS WHEREOF, the undersigned, being the incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, does hereby make and file this Certificate of Incorporation, hereby declaring and certifying that the facts herein stated are true, and accordingly has hereunto set the incorporator's hand this 18th day of August, 2008.

/s/ Gerry J. Weisenfels
Gerry J. Weisenfels
Incorporator

CERTIFICATE OF AMENDMENT TO THE
CERTIFICATE OF INCORPORATION
OF
SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

Spirit Global Energy Solutions, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***Corporation***"), does hereby certify that:

The amendment to the Corporation's Certificate of Incorporation set forth in the following resolution was duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware:

"RESOLVED, that the Certificate of Incorporation of the Corporation be amended by striking Article FOURTH in its entirety and replacing therefor:

'FOURTH: The aggregate number of shares which the Corporation shall have authority to issue is One Hundred fifty Million (150,000,000), of the par value of $.01 each, to be designated "Common Stock".'"

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by its duly authorized officer this 15th day of July, 2011.

SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

By: /s/ John M. Raglin
John M. Raglin, President

CERTIFICATE OF MERGER OF

SPIRIT GLOBAL ACQUISITION CO. LLC
a Delaware limited liability company

WITH AND INTO

SPIRIT GLOBAL ENERGY SOLUTIONS, INC.
a Delaware corporation

The undersigned, Spirit Global Energy Solutions, Inc., does hereby certify:

FIRST: That the name and state of incorporation or formation of each of the constituent entities of the merger are as follows:

NAME	**STATE OF INCORPORATION OR FORMATION**
Spirit Global Energy Solutions, Inc.	Delaware
Spirit Global Acquisition Co. LLC	Delaware

SECOND: That an Agreement and Plan of Merger dated September 20, 2013, by and between the constituent entities has been approved, adopted, certified, executed and acknowledged by each of the constituent entities in accordance with the requirements of Section 264 of the General Corporation Law of the State of Delaware and Section 18-209 of the Delaware Limited Liability Company Act.

THIRD: That the name of the surviving corporation of the merger is Spirit Global Energy Solutions, Inc., a Delaware corporation.

FOURTH: That the Certificate of Incorporation of the surviving corporation, as in effect immediately prior to the merger, shall be the Certificate of Incorporation of the surviving corporation.

FIFTH: That this Certificate of Merger shall be effective at the time this Certificate of Merger shall have been filed in the office of the Secretary of State of the State of Delaware.

SIXTH: That the executed Agreement and Plan of Merger is on file at the principal office of the surviving corporation at 3406 South State Highway 349, Midland, Texas 79706.

SEVENTH: That a copy of the Agreement and Plan of Merger will be furnished by the surviving corporation, on request and without cost, to any member of any constituent limited liability company or any stockholder of any constituent corporation.

IN WITNESS WHEREOF, said surviving corporation has caused this Certificate of Merger to be signed by an authorized officer, this 20th day of September, 2013.

SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

By: /s/ Daniel A. Newman
Name: Daniel A. Newman
Title: President

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

(Pursuant to Section 242 of the
General Corporation Law of the State of Delaware)

Spirit Global Energy Solutions, Inc., a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the "**Corporation**"), does hereby certify:

FIRST: That the board of directors of the Corporation (the "**Board of Directors**"), by the unanimous written consent of its members filed with the minutes of the Board of Directors, adopted the following resolutions proposing and declaring advisable an amendment to the Certificate of Incorporation of the Corporation:

RESOLVED, that the Certificate of Incorporation be amended by deleting and replacing the fourth Article thereof, so that, as amended, the fourth Article shall be and read in its entirety as follows:

"FOURTH: The aggregate number of shares which the Corporation shall have authority to issue is fifteen thousand (15,000), of the par value of $0.01 each, to be designated "Common Stock".

Upon the filing and effectiveness (the "Effective Time") pursuant to the Delaware General Corporation Law of this Certificate of Amendment to the Certificate of Incorporation of the Corporation, each ten thousand (10,000) shares of Common Stock issued and outstanding immediately prior to the Effective Time shall, automatically and without any action on the part of the holder thereof, be combined and converted into one (1) share of Common Stock (the "Reverse Stock Split"). Fractional shares may be issued in connection with the Reverse Stock Split. Each certificate that immediately prior to the Effective Time represented shares of Common Stock ("Old Certificates"), shall thereafter represent that number of shares of Common Stock into which the shares of Common Stock represented by the Old Certificate shall have been combined."

SECOND: That, in lieu of a special meeting and vote of the sole stockholder of the Corporation (the "**Sole Stockholder**"), the Sole Stockholder has given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware (the "**DGCL**").

THIRD: That said amendment was duly adopted in accordance with the applicable provisions of Sections 228 and 242 of the DGCL.

FOURTH: That this Certificate of Amendment of the Certificate of Incorporation of Spirit Global Energy Solutions, Inc. shall be effective upon filing with the Secretary of State of the State of Delaware.

[Signature page follows]

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by Paul Mahoney, its President, this 18th day of December, 2014.

By: /s/ Paul Mahoney
Name: Paul Mahoney
Title: President

[Signature Page - Certificate of Amendment (COI) (SGES Reverse Stock Split)]

BYLAWS

OF

SPIRIT GLOBAL ENERGY SOLUTIONS, INC.

ARTICLE ONE

OFFICES

Section 1. Registered Office. The registered office of Spirit Global Energy Solutions, Inc. (hereinafter called the "Corporation") in the State of Delaware shall be at The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, County of Newcastle, Wilmington, Delaware 19801, and the registered agent in charge thereof shall be The Corporation Trust Company.

Section 2. Other Offices. The Corporation may also have an office or offices, and keep the books and records of the Corporation, except as may otherwise be required by law, at such other place or places, either within or without the State of Delaware, as the Board of Directors may from time to time determine or the business of the Corporation may require.

ARTICLE TWO

STOCKHOLDERS' MEETINGS

Section 1. Place of Meetings. All meetings of the stockholders for the election of directors shall be at such place as may be fixed from time to time by the Board of Directors, or at such other place either within or without the State of Delaware as shall be designated from time to time by the Board of Directors and stated in the notice of the meeting. Meetings of stockholders for any other purpose may be held at such time and place, within or without the State of Delaware, as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual Meetings. Annual meetings of stockholders, commencing with the year 2009, shall be held on such date and at such time as shall be designated from time to time by the Board of Directors and stated in the notice of the meeting, at which they shall elect, by a plurality vote, a Board of Directors and transact such other business as may properly be brought before the meeting.

Section 3. Notice of Annual Meeting. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each stockholder entitled to vote at such meeting not less than ten nor more than fifty days before the date of the meeting.

Section 4. Stockholders List. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten days before each annual meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 5. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation, may be called by the chairman of the board and shall be called by the chairman of the board, president or secretary at the request in writing of a majority of the Board of Directors, or at the request in writing of stockholders owning at least a majority in amount of the entire capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 6. Notice of Special Meetings. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not less than ten nor more than sixty days before the date of the meeting, to each stockholder entitled to vote at such meeting.

Section 7. Business at Special Meetings. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice.

Section 8. Quorum. The holders of at least a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting, at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 9. Required Vote. When a quorum is present at any meeting, the vote of the holders of at least a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which by express provision of the statutes or of the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control the decision of such question.

Section 10. Voting; Proxies. Each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy for each share of the capital stock having voting power held by such stockholder, but no proxy shall be voted on after three years from its date, unless the proxy provides for a longer period.

Section 11. Consent in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action which is required or is permitted to be taken at any annual or special meeting of stockholders of the Corporation may be taken without a meeting without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meeting of stockholders are recorded. Delivery made to a corporation’s registered office shall be by hand or by certified or registered mail return receipt requested.

ARTICLE THREE

BOARD OF DIRECTORS

Section 1. Number and Qualifications. The Board of Directors shall initially consist of one director. The number of directors may be changed by resolution adopted by the Board from time to time; provided, however, that the Board shall not be less than one nor more than eleven and no decrease in the number of directors constituting the Board shall have the effect of shortening the term of any incumbent director. The directors need not be stockholders or residents of the State of Delaware.

Section 2. Vacancies. Subject to any agreement then-binding on the Corporation and/or its stockholders, vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual meeting of stockholders and until their successors are duty elected and shall qualify, unless sooner displaced. If there are no directors in office then an election of directors may be held in the manner provided by statute. If, at the time of filling any vacancy or any newly created directorship, the directors then in office shall constitute less than a majority of the whole board (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least twenty-five percent of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office.

Section 3. Management of the Corporation. The business and affairs of the Corporation shall be managed by its Board of Directors, which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute, the Certificate of Incorporation or these Bylaws directed or required to be exercised or done by the stockholders.

Section 4. Place of Meetings. The Board of Directors of the Corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 5. Initial Board Meetings. The first meeting of each newly elected Board of Directors shall be held immediately following and at the same place as the annual meeting of stockholders and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present. In the event such meeting is not held at such time and place, the meeting may be held at such time and place as shall be specified in a notice given as hereinafter provided for special meetings of the Board of Directors, or as shall be specified in a written waiver signed by all of the directors.

Section 6. Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and at such place as shall from time to time be determined by the board.

Section 7. Special Meetings. Special meetings of the Board of Directors may be called by the chairman of the Board on twenty-four hour notice to each director, either personally or by mail or by telegram; special meetings shall be called by the chairman of the board, president or secretary in like manner and on like notice on the written request of any director.

Section 8. Quorum of and Action by Directors. At all meetings of the Board of Directors at least a majority of the directors shall constitute a quorum for the transaction of business and the act of at least a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, unless the act of a greater number is required by statute, the Certificate of Incorporation or these Bylaws, in which case the act of such greater number shall be requisite to constitute the act of the Board. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 9. Action Without a Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the board or committee.

Section 10. Telephone Meetings. The members of the Board of Directors or any committee thereof may participate in a meeting of such board or committee utilizing conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other and such participation shall constitute presence in person at such meeting.

Section 11. Committees. The Board of Directors may, by resolution passed by the affirmative vote of at least a majority of the number of directors fixed by these Bylaws, designate one or more committees, each committee to consist of two or more of the directors of the Corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in the resolution, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the Corporation. and may authorize the seal of the Corporation, if there shall be one, to be affixed to all papers which may require it; provided, however, that in the absence or disqualification of any member of such committee or committees the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors.

Section 12. Committee Meetings. Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors when required.

ARTICLE FOUR

NOTICES

Section 1. Manner of Giving Notice. Whenever, under the provisions of the statutes or of the Certificate of Incorporation or of these Bylaws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given three days after the time when the same shall be deposited in the United States mail Notice to directors may also be given by prepaid telegram.

Section 2. Waiver of Notice. Whenever any notice is required to be given under the provisions of the statutes or of the Certificate of Incorporation or of these Bylaws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE FIVE

OFFICERS, EMPLOYEES AND AGENTS; POWERS AND DUTIES

Section 1. Elected Officers. The elected officers of the Corporation shall be a President, a Secretary and a Treasurer and may also include a Chairman of the Board, one or more Vice Presidents as may be determined from time to time by the Board (and in case of each such Vice President, with such descriptive title, if any, as the Board of Directors shall deem appropriate). None of the elected officers, with the exception of the Chairman of the Board, need be a member of the Board of Directors.

Section 2. Election. So far as is practicable, all elected officers shall be elected by the Board of Directors at its first meeting after each annual meeting of stockholders.

Section 3. Appointive Officers. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and assistant officers and agents (none of whom need be a member of the Board) as it shall from time to time deem necessary, who shall exercise such powers and perform such duties as shall be set forth in these Bylaws or determined from time to time by the Board.

Section 4. Two or More Offices. Any two or more offices may be held by the same person.

Section 5. Compensation. The compensation of all officers of the Corporation shall be fixed from time to time by the Board of Directors.

Section 6. Term of Office; Removal; Filling of Vacancies. Each elected officer of the Corporation shall hold office until his successor is chosen and qualified in his stead or until his earlier death, resignation, retirement, disqualification or removal from office. Each appointive officer shall hold office at the pleasure of the Board of Directors without the necessity of periodic reappointment. Any officer or agent elected or appointed by the Board of Directors may be removed at any time by the Board of Directors whenever in its judgment the best interests of the Corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment of an officer or agent shall not of itself create contract rights. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

Section 7. Chairman of the Board. The Chairman of the Board, if one is elected, shall preside when present at meetings of the stockholders and of the Board of Directors and shall advise and counsel the President and the other officers of the Corporation and shall exercise such powers and perform such duties as shall be assigned to or required of him from time to time by the Board of Directors.

Section 8. President. The President, subject to the control and direction of the Board of Directors, shall be the chief executive officer of the Corporation, shall, in general, supervise and control all of the business and affairs of the Corporation and shall perform all duties and exercise all powers usually appertaining to the office of the chief executive officer, subject to the provisions of applicable law and these Bylaws. The President may sign, with a secretary or any other proper officer of the Corporation thereunto authorized by the Board of Directors, any contracts or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these Bylaws to some other officer or agent of the Corporation, or shall be required by law to be otherwise signed and executed.

Section 9. Vice Presidents. Each Vice President shall generally assist the President and, subject to the provisions of these Bylaws, shall have such powers and perform such duties and services as shall from time to time be prescribed or delegated by the President or the Board of Directors.

Section 10. Secretary. The Secretary shall see that notice is given of all meetings of the stockholders and special meetings of the Board of Directors and shall keep and attest true records of all proceedings at all meetings thereof. The Secretary shall (a) have charge of the corporate seal, if there shall be one, and have authority to attest any and all instruments or writings to which the same may be affixed; (b) keep and account for all books, documents, papers and records of the Corporation except those for which some other officer or agent is properly accountable; and (c) have authority to sign stock certificates and shall generally perform all duties usually appertaining to the office of secretary of a corporation. In the event of the absence or disability of the Secretary, his or her duties shall be performed and his or her powers may be exercised by the Assistant Secretaries in the order of their seniority, unless otherwise determined by the Secretary, the President or the Board of Directors.

Section 11. Assistant Secretaries. Each Assistant Secretary shall generally assist the Secretary and, subject to the provisions of these Bylaws, shall have such powers and perform such duties and services as shall from time to time be prescribed or delegated by the Secretary, the President or the Board of Directors.

Section 12. Treasurer. The Treasurer shall be the chief accounting and financial officer of the Corporation and. subject to the provisions of these Bylaws, shall have active control of and shall be responsible for all matters pertaining to the accounts and finances of the Corporation. The Treasurer shall audit all payrolls and vouchers of the Corporation and shall direct the manner of certifying the same; shall supervise the manner of keeping all vouchers for payments by the Corporation and all other documents relating to such payments; shall receive, audit and consolidate all operating and financial statements of the Corporation and its various departments; shall have supervision of the books of account of the Corporation, their arrangement and classification; shall supervise the accounting and auditing practices of the Corporation and shall have charge of all matters relating to taxation. Subject to the provisions of these Bylaws, the Treasurer shall have the care and custody of all monies, funds and securities of the Corporation; shall deposit or cause to be deposited all such funds in and with such depositories as the Board of Directors shall from time to time direct or as shall be selected in accordance with procedures established by the Board of Directors; shall advise upon all terms of credit granted by the Corporation; shall be responsible for the collection of all its accounts and shall cause to be kept full and accurate accounts of all receipts and disbursements of the Corporation. The Treasurer shall have the power to endorse for deposit or collection or otherwise, all checks, drafts, notes, bills of exchange and other commercial paper payable to the Corporation and to give proper receipts or discharges for all payments to the Corporation. The Treasurer shall generally perform all duties usually appertaining to the office of treasurer of a corporation. In the event of the absence or disability of the Treasurer, his or her duties shall be performed and his or her powers may be exercised by the Assistant Treasurers in the order of their seniority, unless otherwise determined by the Treasurer, the President or the Board of Directors.

Section 13. Assistant Treasurers. Each Assistant Treasurer shall generally assist the Treasurer and, subject to the provisions of these Bylaws, shall have such powers and perform such duties and services as shall from time to time be prescribed or delegated by the Treasurer, the President or the Board of Directors.

Section 14. Additional Powers and Duties. In addition to the foregoing especially enumerated duties, services and powers, the several elected and appointed officers of the Corporation shall perform such other duties and services and exercise such further powers as may be provided by statute, the Certificate of Incorporation or these Bylaws, or as the Board of Directors may from time to time determine or subject to the provisions of these Bylaws, as may be assigned to them by any competent superior officer.

ARTICLE SIX

SHARES AND TRANSFERS OF SHARES

Section 1. Share Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate, signed by, or in the name of, the Corporation, by the president or a vice president and the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the Corporation, certifying the number of shares owned by him in the Corporation.

Section 2. Signatures. Where a certificate is countersigned (a) by a transfer agent other than the Corporation or its employee, or (b) by a registrar other than the Corporation or its employee, any other signature on the certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

Section 3. Lost Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that tact by the person claiming the certificate of stock to be Lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or his legal representative, to advertise the same in such manner as it shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

Section 4. Transfers of Stock. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 5. Fixing Record Date. In order that the Corporation may determine the stockholders entitled to notice of and to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of stockholders of record entitled to notice of and to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 6. Registered Stockholders. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE SEVEN
INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS

Section 1. Third Party Actions. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including without limitation attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner that such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

Section 2. Derivative Actions. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the tact that such person is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including without limitation attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery of Delaware or such other court shall deem proper.

Section 3. Determination of Indemnification. Any indemnification under Section 1 or 2 of this Article Seven (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the director, officer, employee or agent is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or 2 of this Article Seven. Such determination shall be made (i) by unanimous vote of the directors who are not parties to such action, suit or proceeding, even though Jess than a quorum, or (ii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (iii) by the stockholders.

Section 4. Right to Indemnification. Notwithstanding the other provisions of this Article Seven, to the extent that a director, officer, employee or agent of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Section 1 or 2 of this Article Seven, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including without limitation attorneys' fees) actually and reasonably incurred by such person in connection therewith.

Section 5. Advancement of Expenses. The Corporation shall pay the expenses (including without limitation attorneys' fees) incurred in defending any civil, criminal, administrative or investigative action, suit or proceeding in advance of the final disposition of such action, suit or proceeding, provided, however, that the payment of expenses incurred by a director, officer, employee or agent in advance of the final disposition of the action, suit or proceeding shall be made only upon receipt of an undertaking by or on behalf of the director, officer, employee or agent to repay all amounts advanced if it should be ultimately determined that such person is not entitled to be indemnified under this Article Seven or otherwise.

Section 6. Indemnification and Advancement of Expenses Not Exclusive. The indemnification and advancement of expenses provided by, or granted pursuant to the other Sections of this Article Seven shall not be deemed exclusive of any other rights to which any person seeking indemnification may be entitled under any law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. All rights to indemnification under this Article Seven shall be deemed to be provided by a contract between the Corporation and the director, officer, employee or agent who served in such capacity at any time while these Bylaws and other relevant provisions of the Delaware General Corporation Law and other applicable law, if any, are in effect. Any repeal or modification thereof shall not affect any rights or obligations then existing.

Section 7. Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the applicable provisions of the Delaware General Corporation Law.

Section 8. Definitions of Certain Terms. For purposes of this Article Seven, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including without limitation any constituent of a constituent) absorbed in a consolidation or merger that, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article Seven with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued.

For purposes of this Article Seven, references to "other enterprise" shall include employee benefit plans; references to "fines" shall include any excise tax assessed on a person with respect to any employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation that imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article Seven.

Section 9. Continuation and Successors. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article Seven shall continue as to a person who has ceased to be a director, offices, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

ARTICLE EIGHT

MISCELLANEOUS

Section 1. Interested Directors and Officers; Quorum. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because his or their votes are counted for such purpose, if (i) the material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the board or the committee, and the board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (ii) the material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (iii) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the board, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the board or of a committee which authorizes the contract or transaction.

Section 2. Dividends. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation.

Section 3. Reserves. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the directors shall think conducive to the interest of the Corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 4. Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 5. Seal. The seal of the Corporation, if there shall be one, shall be in such form as may be adopted and approved from time to time by the Board of Directors. The seal may be used by causing it, or a facsimile thereof, to be impressed, affixed, imprinted or in any manner reproduced.

Section 6. Loans and Guaranties. The Corporation may lend money to, guaranty obligations of and otherwise assist its directors, officers and employees if the Board of Directors determines that such a loan, guaranty or assistance reasonably may be expected to benefit, directly or indirectly, the Corporation.

ARTICLE NINE

AMENDMENTS

The provisions of these Bylaws set forth in this Article Nine may be amended or repealed, or new Bylaws which replace such provisions may be adopted, only by the affirmative vote of holders of at least a majority of the shares represented at any annual or special meeting of the stockholders called for that purpose and at which a quorum exists, or by written consent of the stockholders. Any provision of these Bylaws not described in the preceding sentence may be amended or repealed, or new Bylaws which replace such provisions may be adopted, by the affirmative vote of a majority of the number of directors then comprising the Board of Directors or by unanimous written consent of all the directors, unless (a) by statute or the Certificate of Incorporation the power is reserved exclusively to the stockholders in whole or in part, or (b) the stockholders in amending, repealing or adopting a particular Bylaw expressly provide that the Board of Directors may not amend or repeal that Bylaw.

Approved by the Board of Directors as of August 18, 2008.

Exhibit 3.33

CERTIFICATE OF INCORPORATION

OF

THETA OILFIELD SERVICES, INC.

1. **Name**. The name of the Corporation is Theta Oilfield Services, Inc.

2. **Registered Agent and Address**. The address of the Corporation's registered office in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, New Castle County, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

3. **Purpose**. The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

4. **Powers and Privileges**. In furtherance of the objects and purposes of the Corporation, the Corporation shall have all the powers and privileges granted by the General Corporation Law of the State of Delaware, by any other law, or by this Certificate of Incorporation, including without limitation the power to borrow or raise money and otherwise contract indebtedness for any of the purposes of the Corporation; to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidences of indebtedness; to secure the payment of any of the foregoing and of the interest thereon by mortgage, pledge, assignment, deed of trust or lien of or upon any or all of the property of the Corporation (real, personal or mixed), whether at the time owned or thereafter acquired; and to sell, pledge or otherwise dispose of such bonds or other obligations of the Corporation for its corporate purposes.

5. **Capitalization**. The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock, having a par value of One Dollar ($1.00) per share.

6. **Incorporator**. The name and mailing address of the Incorporator are as follows:

NAME	MAILING ADDRESS
R. Kevin Redwine	Conner & Winters, LLP 4000 One Williams Center Tulsa, OK 74172-0148

7. **Board of Directors**. The powers of the Incorporator shall terminate upon the election of a Board of Directors of the Corporation. The number of members of the Board of Directors of the Corporation shall initially be three and shall thereafter be as set forth in the Bylaws.

8. **Duration**. The Corporation is to have perpetual existence.

9. **Limited Liability**. The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatsoever.

10. **Authority of the Board of Directors**. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the Corporation is expressly authorized:

(a) To make, alter or repeal the Bylaws of the Corporation;

(b) To authorize and cause to be executed mortgages and liens upon the real and personal property of the Corporation; and

(c) To set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purposes and to abolish any such reserve in the manner in which it was created.

11. **General**. Meetings of the stockholders may be held within or outside the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) within or outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation. Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

12. **Amendment**. The Corporation reserves the right to amend, alter, change or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

13. **Compromise or Arrangement**. Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware, on the application in a summary way of the Corporation or of any creditor or shareholder thereof, or on the application of any receiver or receivers appointed for the Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under the provisions of Section 279 of Title 8 of the Delaware Code, may order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, to be summoned in such manner as the court directs. If a majority in number representing three-fourths (3/4ths) in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as a consequence of such compromise or arrangement, the compromise or arrangement and the reorganization shall, if sanctioned by the court to which the application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders of the Corporation, as the case may be, and also on the Corporation.

14. **Liability of Directors**. To the fullest extent permitted by the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. No amendment to or repeal of this Article 14 shall apply to, or have any effect on, the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

THE UNDERSIGNED, being the Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, does make this Certificate, hereby declaring and certifying that this is his act and deed and the facts herein stated are true, and accordingly has hereunto set his hand this 20th day of February, 2007.

/s/ R. Kevin Redwine

R. Kevin Redwine

BYLAWS

of

THETA OILFIELD SERVICES, INC.
(a Delaware Corporation)

ARTICLE I
Offices and Fiscal Year

SECTION 1.01. Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware, until otherwise established by a vote of a majority of the Board of Directors in office, and a statement of such change is filed in the manner provided by statute. (Secs. 131, 133)

SECTION 1.02. Other Offices. The Corporation may also have offices at such other places within or without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation requires. (Sec. 141)

SECTION 1.03. Fiscal Year. The fiscal year of the Corporation shall be the calendar year unless otherwise fixed by resolution of the Board of Directors.

ARTICLE II
Meetings of Stockholders

SECTION 2.01. Place of Meeting. All meetings of the Stockholders of the Corporation shall be held at the registered office of the Corporation or at the principal office of the Corporation or at such other place within or without the State of Delaware as shall be designated by the Board of Directors in the notice of such meeting. (Sec. 211(a))

SECTION 2.02. Annual Meeting. Unless directors are elected by written consent in lieu of an annual meeting as permitted by this Section 2.02, an annual meeting of the Stockholders of the Corporation, for the election of Directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held in each year on the first Tuesday in May (commencing in 2007) at 10:00 a.m. If such day is a legal holiday, the annual meeting shall be held on the following business day. If the annual meeting is not held on such date, the Board of Directors by majority vote shall cause a meeting to be held as soon thereafter as convenient. Stockholders may, unless the certificate of incorporation otherwise provides, act by written consent to elect Directors; provided, however, that if the consent is less than unanimous, the action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which the Directors could be elected at an annual meeting held at the effective time of the action are vacant and are filled by the action. Any other proper business may be transacted at the annual meeting. (Sec. 211(b), (c))

SECTION 2.03. Special Meetings. Special meetings of the Stockholders of the Corporation may be called at any time by the President, Chairman of the Board, or a majority of the Board of Directors, for any purpose or purposes for which meetings may be lawfully called. At any time, upon written request of any person or persons who have duly called a special meeting, which written request shall state the purpose or purposes of the meeting, it shall be the duty of the President to fix the date of the meeting to be held at such date and time as the President may fix, not less than 10 nor more than 60 days after the receipt of the request, and to give due notice thereof. If the President shall neglect or refuse to fix the time and date of such meeting and give notice thereof, the person or persons calling the meeting may do so. (Sec. 211(d))

SECTION 2.04. Notice of Meetings. Written notice of the place, date and hour of every meeting of the Stockholders, whether annual or special, shall be given by the Chairman of the Board, the President, a Vice President, the Secretary or an Assistant Secretary of the Corporation to each Stockholder of record having voting power with respect to the business to be transacted at such meeting not less than 10 nor more than 60 days before the date of the meeting. Each notice of a special meeting shall state the purpose or purposes for which the meeting is being called. Any meeting at which all Stockholders having voting power with respect to the business to be transacted thereat are present, either in person or by proxy, shall be a valid meeting for the transaction of business, notwithstanding that notice has not been given as hereinabove provided. (Sec. 222)

SECTION 2.05. Quorum, Manner of Acting and Adjournment. The holders of a majority of the stock issued and outstanding (not including treasury shares) and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the Stockholders for the transaction of business except as otherwise provided by statute, by the certificate of incorporation or by these bylaws. If, however, a quorum shall not be present or represented at any meeting of the Stockholders, the Stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At any such adjourned meeting, at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each Stockholder of record having voting power with respect to the business to be transacted at such meeting. When a quorum is present at any meeting, the vote of the holders of the majority of the stock having voting power with respect to a question present in person or represented by proxy shall decide any such question brought before such meeting, unless the question is one upon which, by express provision of the applicable statute or these bylaws, a different vote is required in which case such express provision shall govern and control the decision on such question. Except upon those questions governed by the aforesaid express provisions, the Stockholders present in person or by proxy at a duly organized meeting can continue to do business until adjournment, notwithstanding withdrawal of enough Stockholders to leave less than a quorum. (Sec. 216, 222)

SECTION 2.06. Organization. At every meeting of the Stockholders, the President or, in the absence of the President, one of the following persons present in the order stated: Chairman of the Board, if any, a chairman designated by the Board of Directors, or a chairman chosen by the Stockholders, shall act as chairman, and the Secretary, or, in his or her absence, an Assistant Secretary or a person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 2.07. Voting; Proxies. Except as provided in the certificate of incorporation or in a resolution adopted by the Board of Directors pursuant to Section 151 of the General Corporation Law of the State of Delaware and subject to Section 213 of such Law, each Stockholder shall at every meeting of the Stockholders be entitled to one vote in person or by proxy for each share of capital stock having voting power held by such Stockholder. In order to be valid, any such proxy shall be executed and delivered in accordance with the requirements of the Delaware General Corporation Law. No proxy shall be voted after three years from its date, unless the proxy provides for a longer period. Each proxy shall be executed in writing by the Stockholder or by his or her duly authorized attorney-in-fact and filed with the Secretary of the Corporation or the secretary of the meeting prior to being voted. A proxy, unless coupled with an interest, shall be revocable at will, notwithstanding any other agreement or any provision in the proxy to the contrary, but the revocation of a proxy shall not be effective until notice thereof has been given to the Secretary of the Corporation. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. A proxy shall not be revoked by the death or incapacity of the maker unless, before the vote is counted or the authority is exercised, written notice of such death or incapacity is given to the Secretary of the Corporation. (Sec. 212)

SECTION 2.08. Consent of Stockholders in Lieu of Meeting. Any action required to be taken at any annual or special meeting of Stockholders of the Corporation, or any action which may be taken at any annual or special meeting of the Stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each Stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days after the earliest dated consent delivered in the manner required herein to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those Stockholders who have not consented in writing. (Sec. 228)

SECTION 2.09. Voting Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least 10 days before every meeting of Stockholders, a complete list of the Stockholders entitled to vote at the meeting. The list shall be arranged in alphabetical order and show the address of each Stockholder and the number of shares registered in the name of each Stockholder. The list shall be open to the examination of any Stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any Stockholder who is present. (Sec. 219(a))

ARTICLE III
Board of Directors

SECTION 3.01. Powers. The Board of Directors shall have full power to manage the business and affairs of the Corporation; and all powers of the Corporation, except those specifically reserved or granted to the Stockholders by statute, the certificate of incorporation or these bylaws, are hereby granted to and vested in the Board of Directors. (Sec. 141(a))

SECTION 3.02. Number and Term of Office. The Board of Directors shall consist of such number of Directors, not less than one nor more than seven as may be determined from time to time by resolution of the Board of Directors. Unless and until so determined otherwise, the Board of Directors shall consist of three members. Each Director shall serve until the next annual election and until his or her successor shall have been elected and shall qualify, except in the event of his or her death, resignation or removal. All Directors of the Corporation shall be natural persons of full age, but need not be residents of Delaware or Stockholders of the Corporation. (Sec. 141(b))

SECTION 3.03. Resignations. Any Director of the Corporation may resign at any time by giving written notice to the President or the Secretary of the Corporation. Resignations shall become effective upon receipt or at such later time as shall be specified therein and, unless otherwise specified therein, the acceptance of a resignation shall not be necessary to make it effective. (Secs. 141(b), 223)

SECTION 3.04. Vacancies and Newly-Created Directorships. Vacancies and newly-created Directorships resulting from any increase in the authorized number of Directors may be filled by a majority vote of the Directors then in office, though less than a quorum, or by a sole remaining Director. Each Director so chosen shall hold office until the next annual election and until his or her successor shall have been duly elected and shall qualify, unless such Director dies, resigns or is removed prior to such time. If at any time, by reason of death or resignation or other cause, the Corporation should have no Directors in office, then an election of Directors may be held by the Stockholders or in the manner provided by statute. (Sec. 223)

SECTION 3.05. Organization. At every meeting of the Board of Directors, the Chairman of the Board, if any, or, in the case of a vacancy in the office or absence of the Chairman of the Board, the President or, in his or her absence, a chairman chosen by a majority of the Directors present, shall preside, and the Secretary or, in his or her absence, an Assistant Secretary or any person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 3.06. Place of Meeting. The Board of Directors may hold its meetings, both regular and special, at such place or places within or without the State of Delaware as the Board of Directors may from time to time appoint, or as may be designated in the notice calling the meeting. (Sec. 141(g))

SECTION 3.07. Organization Meeting. The first meeting of each newly-elected Board of Directors shall, unless otherwise specified by the President of the Corporation, be held immediately after and at the same place as, the annual meeting of Stockholders. Notice of such meeting to the newly-elected Directors shall not be necessary in order legally to constitute the meeting, provided a quorum shall be present. (Sec. 141)

SECTION 3.08. Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be designated from time to time by resolution of the Board of Directors. If the date fixed for any regular meeting be a legal holiday under the laws of the State where such meeting is to be held, then the same shall be held on the next succeeding business day, not a Saturday, or at such other time as may be determined by resolution of the Board of Directors. At such meetings, the Directors shall transact such business as may properly be brought before the meeting. (Sec. 141)

SECTION 3.09. Special Meetings. Special meetings of the Board of Directors shall be held whenever called by the Chairman of the Board, if any, the President or by two or more of the Directors. Notice of each such meeting shall be given to each Director by telephone, telegram, facsimile, in writing or in person at least 24 hours (in the case of notice by telephone or in person) or 48 hours (in the case of notice by telegram or facsimile) or five days (in the case of notice by mail) before the time at which the meeting is to be held. Each such notice shall state the time and place of the meeting to be so held. Except as otherwise specifically provided in these bylaws, no notice of the objects or purposes of any special meeting of the Board of Directors need be given, and, unless otherwise indicated in the notice thereof, any and all business may be transacted at any special meeting. (Sec. 141).

SECTION 3.10. Conference Telephone Meetings. One or more Directors may participate in a meeting of the Board, or of a committee of the Board, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear or otherwise communicate with each other. Participation in a meeting pursuant to this section shall constitute presence in person at such meeting. (Sec. 141(i))

SECTION 3.11. Quorum, Manner of Acting and Adjournment. At all meetings of the Board a majority of the Directors shall constitute a quorum for the transaction of business. The vote of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except on additions, amendments, repeal or any changes whatsoever in the bylaws or the adoption of new bylaws with respect to any of which the affirmative votes of at least a majority of the members of the Board of Directors shall be necessary for the adoption of such changes and except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. (Sec. 14 l(b))

SECTION 3.12. Committees. The Board of Directors may, by resolution adopted by a majority of the whole Board, designate an executive committee, an audit committee, a compensation committee and/or one or more other committees, each committee to consist of one or more Directors of the Corporation. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member, and the alternate or alternates, if any, designated for such member, of any committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another Director to act at the meeting in the place of any such absent or disqualified member. A majority of the members of any committee, as at the time constituted, shall be necessary to constitute a quorum thereof, and the act of a majority of the members of any committee who are present at any meeting thereof at which a quorum is present shall be the act of such committee. Any vacancy in any committee shall be filled by vote of a majority of the Directors at the time in office. (Sec. 14 l(c))

Any such committee, to the extent provided in the resolution establishing such committee, shall have and may exercise all the power and authority of the Board of Directors in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers which may require it, except that no such committee shall have the authority of the Board of Directors (a) to approve or recommend to the Stockholders any action or matter expressly required by the Delaware General Corporation Law to be submitted to the Stockholders for approval; (b) to adopt, amend, or repeal any bylaw of the Corporation; (c) to fill vacancies in the Board of Directors or any committee, including any directorship to be filled by reason of an increase in the number of Directors; (d) to elect or remove officers or members of any committee; (e) to fix the compensation of any member of a committee; (f) to alter or repeal any resolution of the Board of Directors which provides for any of the foregoing or which by its terms provides that it shall not be so amendable or repeatable; or (g) to declare a dividend or to authorize the issuance of shares of the Corporation. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors. Each committee so formed shall fix the time and place of its meetings and its own rules of procedure and shall keep regular minutes of its meetings and report from time to time to the Board of Directors. (Sec. 141(c))

SECTION 3.13. Consent of Directors in Lieu of Meeting. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board or the committee consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or the committee. (Sec. 141(f))

SECTION 3.14. Presumption of Assent. A Director who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action unless such Director’s dissent shall be entered in the minutes of the meeting or unless such Director shall file his or her written dissent to such action with the person acting as secretary of the meeting before the adjournment thereof or unless such Director shall forward such dissent by registered mail to the Secretary of the Corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a Director who voted in favor of such action.

SECTION 3.15. Compensation of Directors. Unless otherwise restricted by the certificate of incorporation, the Board of Directors shall have the authority to fix the compensation of Directors. The Directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as Director. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings. (Sec. 141(h))

SECTION 3.16. Removal of Directors. Except as otherwise provided in the certificate of incorporation or the General Corporation Law of the State of Delaware, any Director may be removed from office, with or without cause, at any time by the holders of a majority of the shares then entitled to vote at any election of Directors, at any annual or special meeting of the Stockholders. (Sec. 141(k))

ARTICLE IV
Notices - Waivers

SECTION 4.01. Notice, What Constitutes. Whenever, under the provisions of the statutes of Delaware or the certificate of incorporation or of these bylaws, notice is required to be given to any Director or Stockholder, such notice may be given in writing, by mail, addressed to such Director or Stockholder, at the address of such Director or Stockholder as it appears on the records of the Corporation, with postage thereon prepaid. Notice given in accordance with this provision shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to Directors of special meetings must be given in accordance with Section 3.09 of Article III hereof. (Sec. 222(b))

SECTION 4.02. Waivers of Notice. Whenever any notice is required to be given under the provisions of the certificate of incorporation, these bylaws, or by statute, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Stockholders, Directors, or members of a committee of Directors need be specified in any written waiver of notice of such meeting unless so required by the certificate of incorporation or these bylaws. Attendance by a person, either in person or by proxy, at any meeting, shall constitute a waiver of notice of such meeting, except where a person attends a meeting for the express purpose of objecting to the transaction of any business because the meeting was not lawfully called or convened. (Sec. 229)

ARTICLE V
Officers

SECTION 5.01. Number, Qualifications and Designation. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, Secretary and such other officers as may be elected in accordance with the provisions of Section 5.03 of this Article. One person may hold more than one office. Officers may be, but need not be, Directors or Stockholders of the Corporation. (Sec. 142)

SECTION 5.02. Election and Term of Office. The officers of the Corporation, except those elected by delegated authority pursuant to Section 5.03 of this Article, shall be elected annually by the Board of Directors, and each such officer shall hold his or her office until such officer's successor shall have been elected and shall qualify, or until his or her earlier death, resignation or removal. Any officer may resign at any time upon written notice to the Corporation or may be removed, with or without cause, by the Board of Directors. (Sec. 142)

SECTION 5.03. Other Officers, Committees and Agents. The Board of Directors may from time to time elect such other officers, including without limitation a Chairman of the Board of Directors, a Vice Chairman of the Board of Directors, a Treasurer and one or more Vice Presidents, Assistant Secretaries and Assistant Treasurers, and appoint such committees, employees and other agents as it deems necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as are provided in these bylaws, or as the Board of Directors may from time to time determine. The Board of Directors may delegate to any officer or committee the power to elect subordinate officers and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents. (Sec. 142)

SECTION 5.04. Chairman of the Board and Vice Chairman. The Chairman of the Board of Directors, if any, shall preside at all meetings of the Board of Directors and shall perform such other duties as may be prescribed by the Board of Directors from time to time. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The Vice Chairman, if any, shall, at the request of the Chairman or in his or her absence or disability, perform the duties and exercise the powers of the Chairman, and shall perform such other duties as the Board of Directors shall prescribe.

SECTION 5.05. President. The President shall preside at all meetings of the Stockholders and, if there is no Chairman or Vice Chairman of the Board, or in their absence, all meetings of the Board of Directors. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The President may employ all agents and employees of the Corporation and may discharge any such agent or employee, and, in general, shall perform all duties incident to the office of President, and such other duties as from time to time may be assigned to him or her by the Board of Directors.

SECTION 5.06. Chief Executive Officer. The Board of Directors shall assign the duties of the Chief Executive Officer of the Corporation to either the Chairman of the Board of Directors or the President. Such duties shall include the authority and powers necessary for the general management of the business, properties, activities and policies of the Corporation, subject, however, to the control of the Board of Directors.

SECTION 5.07. Chief Operating Officer. The Board of Directors shall assign the duties of the Chief Operating Officer of the Corporation to the Chairman of the Board of Directors, the President or any other officer of the Corporation. Such duties shall include the authority necessary for the active management and general supervision of the everyday business of the Corporation and the duty to see that all orders and policies of the Chief Executive Officer and the Board of Directors are carried into effect. The Chief Operating Officer shall appoint and remove, employ and discharge, and fix the compensation of all employees and agents of the Corporation, other than the duly elected officers, subject to the approval of the Board of Directors. At the request of the Chief Executive Officer, or in his or her absence or disability, the Chief Operating Officer shall exercise all the powers and discharge all the duties of the Chief Executive Officer.

SECTION 5.08. Chief Financial Officer. The Board of Directors may assign the duties of Chief Financial Officer of the Corporation to any officer of the Corporation. Such duties shall include the active management and supervision of the financial and accounting affairs of the Corporation.

SECTION 5.09. Vice Presidents. Any Vice President shall, at the request of the President or in his absence or disability, perform the duties and exercise the powers of the President and such other duties as may from time to time be assigned by the Board of Directors or by the President. At the discretion of the Board of Directors, one or more Vice Presidents may be designated as an Executive Vice President or Senior Vice President.

SECTION 5.10. Secretary and Assistant Secretaries. The Secretary shall attend all meetings of the Stockholders and of the Board of Directors and shall record the proceedings of the Stockholders and of the Directors and of committees of the Board in a book or books to be kept for that purpose; see that notices are given and records and reports properly kept and filed by the Corporation as required by law; be the custodian of the seal of the Corporation and see that it is affixed to all documents to be executed on behalf of the Corporation under its seal; and, in general, perform all duties incident to the office of Secretary, and such other duties as may from time

to time be assigned to him by the Board of Directors or the President. Any Assistant Secretary shall, at the request of the Secretary or in his or her absence or disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties as the Board of Directors, the President or the Secretary shall prescribe.

SECTION 5.11. Treasurer and Assistant Treasurers. The Treasurer, if any, shall have or provide for the custody of the funds or other property of the Corporation. Whenever so required by the Board of Directors or the President, the Treasurer shall render an account showing his or her transactions as Treasurer and the financial condition of the Corporation. In general, the Treasurer shall discharge such other duties as may from time to time be assigned to him or her by the Board of Directors or the President. Any Assistant Treasurer shall, at the request of the Treasurer or in his or her absence or disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties as the Board of Directors, the President or the Treasurer shall prescribe.

SECTION 5.12. Officers' Bonds. No officer of the Corporation need provide a bond to guarantee the faithful discharge of his or her duties unless the Board of Directors shall by resolution so require a bond, in which event such officer shall give the Corporation a bond (which shall be renewed if and as required) in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of his or her office. (Sec. 142(c))

SECTION 5.13. Compensation. The compensation of the officers and agents of the Corporation elected by the Board of Directors shall be fixed from time to time by the Board of Directors. Any employment contract, whether for an officer, agent or employee, if expressly approved or specifically authorized by the Board of Directors, may fix a term of employment, and any such contract, but only if so approved or authorized, shall be valid and binding upon the Corporation in accordance with the terms thereof; provided, however, this provision shall not limit or restrict in any way the right of the Corporation at any time in its discretion (which right is hereby expressly reserved) to remove from office, discharge or terminate the employment or otherwise dispense with the services of any such officer, agent or employee, as provided in these bylaws, prior to the expiration of the term of employment under any such contract, provided only that the Corporation shall not thereby be relieved of any continuing liability for salary or other compensation provided for in such contract. (Sec. 141(a))

SECTION 5.14. Action with Respect to Securities of Other Corporations. Unless otherwise directed by the Board of Directors, the Chairman of the Board of Directors, if any, the President or any Vice President of the Corporation shall have power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of security holders, or with respect to any action of security holders, of any other Corporation in which the Corporation may hold securities and shall have power to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities in such other Corporation.

ARTICLE VI
Capital Stock

SECTION 6.01. Issuance. The Directors may, at any time and from time to time, if all of the shares of capital stock which the Corporation is authorized by its certificate of incorporation to issue have not been issued, subscribed for, or otherwise committed to be issued, issue or take subscriptions for additional shares of its capital stock up to the amount authorized in its certificate of incorporation. Unless otherwise provided by the certificate of incorporation or these bylaws, the Board of Directors may provide by resolution that some or all of any or all classes and series of the shares of capital stock of the Corporation shall be uncertificated shares, provided that such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. The stock certificates of the Corporation shall be numbered and registered in the stock ledger and transfer books of the Corporation as they are issued. The Board of Directors may also appoint one or more transfer agents and/or registrars for its stock of any class or classes and for the transfer and registration of certificates representing the same and may require stock certificates to be countersigned by one or more of them. They shall be signed by the Chairman or Vice Chairman of the Board of Directors or the President or a Vice

President and attested by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer, and shall bear the corporate seal, which may be a facsimile, engraved or printed signature. Any or all of the signatures upon such certificate may be a facsimile, engraved or printed. In case any officer, transfer agent or registrar who has signed, or whose facsimile, engraved or printed signature has been placed upon, any share certificate shall have ceased to be such officer, transfer agent or registrar, before the certificate is issued, it may be issued with the same effect as if he or she were such officer, transfer agent or registrar at the date of its issue. (Secs. 158, 161)

SECTION 6.02. Regulations Regarding Certificates. Except as otherwise provided by law, the Board of Directors shall have the power and authority to make all such rules and regulations as it may deem expedient concerning the issuance, transfer and registration or the replacement of certificates for shares of capital stock of the Corporation. (Sec. 161)

SECTION 6.03. Stock Certificates. Stock certificates of the Corporation shall be in such form as is provided by statute and approved by the Board of Directors. The stock record books and the blank stock certificate books shall be kept by the Secretary of the Corporation or by any agency designated by the Board of Directors for that purpose. (Sec. 158)

SECTION 6.04. Lost, Stolen, Destroyed or Mutilated Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates heretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or such owner's legal representative, to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed. (Sec. 167)

SECTION 6.05. Record Holder of Shares. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

SECTION 6.06. Determination of Stockholders of Record for Voting at Meetings. In order that the Corporation may determine the Stockholders entitled to notice of or to vote at any meeting of Stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action. If no record date is fixed by the Board of Directors, the record date for determining Stockholders entitled to notice of or to vote at a meeting of Stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of Stockholders of record entitled to notice of or to vote at a meeting of Stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting. (Sec. 213(a))

SECTION 6.07. Determination of Stockholders of Record for Dividends and Distributions. In order that the Corporation may determine the Stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the Stockholders entitled to exercise any rights in respect of any change,

conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining Stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. (Sec. 213(c))

SECTION 6.08. Determination of Stockholders of Record for Written Consent. In order that the Corporation may determine the Stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by statute, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by deli very to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to a Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors, when prior action by the Board of Directors is required by statute, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action. (Sec. 213(b))

ARTICLE VII
Indemnification of Officers, Directors, Employees and Agents

SECTION 7.01. Indemnification in Third Party Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "third party proceeding" (which shall include, for purposes of this Article VII, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the Corporation) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, judgments, fines, and amounts paid in settlement, actually and reasonably incurred by such person in connection with such third party proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal third party proceeding, had no reasonable cause to believe such conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of no lo contendere or its equivalent shall not, of itself, create a presumption that the person reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal third party proceeding, had reasonable cause to believe that such conduct was unlawful. (Sec. 145)

SECTION 7.02. Indemnification in Corporate Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "corporate proceeding" (which shall mean, for purposes of this Article VII, any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection with the defense or settlement of a corporate proceeding if the person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the

Corporation, unless and only to the extent that the court in which the corporate proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. (Sec. 145(b))

SECTION 7.03. Mandatory Indemnification. To the extent that a present or former Director or officer of the Corporation has been successful on the merits or otherwise in defense of any third party or corporate proceeding referred to in Section 7.01 or 7.02 above or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection therewith. (Sec. 145(c))

SECTION 7.04. Determination of Entitlement to Indemnification. Any indemnification under Section 7.01, 7.02 or 7.03 of this Article VII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of a present or former Director or officer of the Corporation is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 7.01, 7.02 or 7.03 of this Article VII. This determination shall be made, with respect to a person who is a Director or officer at the time of the determination:

(a) By a majority vote of the Directors who are not parties to the third party or corporate proceeding, even though less than a quorum;

(b) By a committee of Directors designated by a majority vote of Directors, even though less than a quorum;

(c) If there are no such Directors, or if such Directors so direct, by independent legal counsel in a written opinion; or

(d) By the Stockholders. (Sec. 145(d))

SECTION 7.05. Burden of Proof. In the event a claim for indemnification by any person who was or is a party or is threatened to be made a party to any third party or corporate proceeding is denied by the Corporation (except for a claim by a person described in Section 7.08 hereof), the Corporation shall, in any subsequent legal proceedings relating to such denial, have the burden of proving that indemnification was not required under Section 7.01, 7.02 or 7.03 of this Article VII, without regard to Section 7.04 hereof, or under any other agreement or undertaking between the Corporation and such person, or was not permitted under applicable law.

SECTION 7.06. Advancing Expenses. Expenses incurred by a Director or officer or former Director or officer in defending a third party or corporate proceeding shall be paid by the Corporation in advance of the final disposition of such third party or corporate proceeding upon receipt of an undertaking by or on behalf of the Director or officer or former Director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VII. Expenses incurred by other employees and agents may be so paid upon the terms and conditions, if any, as the Corporation deems appropriate. (Sec. 145(e))

SECTION 7.07. Employee Benefit Plans. For purposes of this Article VII, references to "other enterprises" shall include, but are not limited to, employee benefit plans; references to "fines" shall include, but are not limited to, any excise taxes assessed on a person with respect to an employee benefit plan; references to "serving at the request of the Corporation" shall include, but are not limited to, any service as a Director, officer, employee or agent of the Corporation which imposes duties on, or involves service by, the Director, officer, employee or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation." (Sec. 145(i))

SECTION 7.08. Employees and Agents. The Corporation may, but is not required to, indemnify any employee or agent of the Corporation who is not also a Director or officer of the Corporation if the determining group as specified in Section 7.04 determines that indemnification is proper in the specific case. (Sec. 145).

SECTION 7.09. Scope of Article. The indemnification and advancement of expenses, as authorized by this Article VII, shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of Stockholders or disinterested Directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding an office. (Sec. 145(f))

SECTION 7.10. Reliance on Provisions. Each person who shall act as a Director or officer of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall be deemed to be doing so in reliance upon rights of indemnification provided by this Article VII, and the provisions of this Article VII shall be deemed a contract between the Corporation and such person.

SECTION 7.11. Insurance. The Corporation shall have the power to, but shall not be obligated to, purchase and maintain insurance on behalf of any person who is or was a Director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this. Article VII. (Sec. 145(g))

SECTION 7.12. Rights Continue. The indemnification and advancement of expenses provided by or granted pursuant to this Article VII, unless otherwise provided when authorized or ratified, shall continue as to a person who has ceased to be a Director, officer, employee or agent of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, and shall inure to the benefit of the heirs, executors and administrators of such a person. (Sec. 145(j))

ARTICLE VIII
General Provisions

SECTION 8.01. Dividends. Subject to the provisions of the certificate of incorporation, if any, dividends upon the capital stock of the Corporation may be declared by the Board of Directors at any regular or special meeting in accordance with law. Dividends may be paid in cash, in property, or in shares of the capital stock of the Corporation, subject to the provisions of the certificate of incorporation. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, thinks proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Board of Directors shall think conducive to the interest of the Corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created. (Secs. 170, 171, 173)

SECTION 8.02. Contracts. Except as otherwise provided in these bylaws, the Chairman of the Board of Directors, the President or a Vice President of the Corporation shall sign, in the name and on behalf of the Corporation, all deeds, bonds, contracts, mortgages and other instruments, the execution of which shall be authorized by the Board of Directors; provided, however, that the Board of Directors may authorize any other

officer or officers or any agent or agents of the Corporation to sign, in the name and on behalf of the Corporation, any such deed, bond, contract, mortgage or other instrument. Such authority may be general or confined to specific instances. Except as so authorized by the Board of Directors, and except in the ordinary course of business, no officer, agent or employee of the Corporation shall have power or authority to bind the Corporation by any contract or engagement or to pledge, sell or otherwise dispose of its credit or any of its property or to render it pecuniarily liable in any amount in excess of $10,000. (Secs. 141, 142)

SECTION 8.03. Checks. All checks, notes, bills of exchange or other orders in writing shall be signed by such person or persons as the Board of Directors may from time to time designate. (Secs. 141, 142)

SECTION 8.04. Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation and the state of its incorporation. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced. (Sec. 122)

SECTION 8.05. Amendment of Bylaws. These bylaws may be altered, amended or repealed or new bylaws may be adopted by the Stockholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the certificate of incorporation, at any regular or special meeting of the Stockholders or of the Board of Directors, if notice of such alteration, amendment, repeal or adoption of new bylaws be contained in the notice of such special meeting. (Sec. 109)

Approved by the Board of Directors as of the 23rd day of February, 2007.

Exhibit 3.35

ARTICLES OF INCORPORATION

KNOW ALL MEN BY THESE PRESENTS: We, the undersigned incorporators:

Lowry McKee	4137-D So. Harvard, Tulsa, OK 74135
Robert W. Bowker	4137-D So. Harvard, Tulsa, OK 74135
Charles McKee	4137-D So. Harvard, Tulsa, OK 74135

being persons legally competent to enter into contracts, do hereby voluntarily associate ourselves together for the purpose of forming a corporation under "The Business Corporation Act" of the State of Oklahoma, and we do hereby adopt the following Articles of Incorporation:

ARTICLE ONE

The name of the corporation is:

UPCO, INC.

ARTICLE TWO

The address of its registered office in the State of Oklahoma is 4137-D South Harvard Avenue, Tulsa, Oklahoma 74135, and the name of its registered agent is Lowry McKee, and his address is 4137-D South Harvard Avenue, Tulsa, Oklahoma 74135.

ARTICLE THREE

The duration of this corporation is perpetual.

ARTICLE FOUR

The purposes for which this corporation is formed are:

(a) To manufacture, buy, sell and generally deal in oil field equipment.

(b) To do each and every thing necessary, suitable or convenient for the accomplishment of the purposes enumerated, and to have and enjoy each and every one of the general powers permitted to the corporation by the laws of the State of Oklahoma, and to perform any other act or thing under the laws of the State of Oklahoma pertaining to a private corporation and not inconsistent therewith.

ARTICLE FIVE

The amount of capital stock which the corporation shall have authority to allot is One Hundred Thousand Dollars ($100,000.00) divided into Ten Million (10,000,000) shares of common stock of One Cent (l¢) each.

ARTICLE SIX

The amount of stated capital with which the corporation will begin business is Five Thousand One Hundred Dollars ($5,100.00) which has been fully paid in.

ARTICLE SEVEN

The number of shares to be allotted by the corporation before it shall begin business is Five Hundred Ten Thousand (510,000), and the consideration to be received shall consist of Five Thousand One Hundred Dollars ($5,100.00) cash.

ARTICLE EIGHT

The number of directors to be elected at the first meeting of the shareholders is Three (3).

/s/ Lowry McKee
Lowry McKee

/s/ Robert W. Bowker
Robert W. Bowker

/s/ Charles McKee
Charles McKee

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

BEFORE ME, a Notary Public in and for said County and State, on this 16th day of November, 1982, personally appeared LOWRY McKEE, ROBERT W. BOWKER and CHARLES McKEE, to me known to be the identical persons who executed the foregoing Articles of Incorporation, and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year above written.

/s/
Notary Public

My Commission expires:

_____

AMENDED ARTICLES OF INCORPORATION

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

TO THE SECRETARY OF STATE, STATE OF OKLAHOMA:

We, the undersigned, being persons legally competent to amend the Articles of Incorporation pursuant to the provisions of the Business Corporation Act of the State of Oklahoma, as amended, do hereby execute the following Amendment to the Articles of Incorporation, and do further affirm that the Amendment was adopted in the manner prescribed by law, by UPCO, INC., an Oklahoma corporation.

ARTICLE II

A. As Filed:

The address of its registered office in the State of Oklahoma is: 4137 -D South Harvard Avenue, Tulsa, Oklahoma 74135, and the name of its registered agent is: Lowry McKee, and his address is 4137-D South Harvard Avenue, Tulsa, Oklahoma 74135.

B. As Amended:

The address of its registered office in the State of Oklahoma is: 715 Atlas Life Building, Tulsa, Oklahoma 74103, and the name of its registered agent is: Donald B. Atkins, and his address is: 715 Atlas Life Building, Tulsa, Oklahoma 74103.

All other provisions of the Articles of Incorporation remain in full force and effect.

Said Amendment was proposed by resolution of the Board of Directors on October 11, 1984.

The Amendment was adopted by a vote of the Stockholders in accordance with the provisions of Title 18, Section 1.153 of the Business Corporation Act of the State of Oklahoma, at a meeting held on October 11, 1984. Personal notice was given to the Stockholders and the Stockholders were present at said meeting. The number of shares voted for such amendment was 600,000. The number of shares voted against the amendment was 0.

UPCO, INC.

By /s/ David M. Pearcy
President

ATTEST:

/s/ Betty L. Pearcy

Secretary

(SEAL)

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

Before me, the undersigned, a Notary Public in and for said County and State, on this 3rd day of December, 1984, personally appeared David M. Pearcy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President, and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such Corporation, for the uses and purposes therein set forth

Given under my hand and seal this day and year last above written.

/s/
Notary Public

My Commission Expires:

11-7-86

Exhibit 3.36

RESTATED AND AMENDED
BY-LAWS
OF
UPCO, INC.

ARTICLE I
OFFICES

The Registered Office of the Corporation shall be in the City of Claremore, County of Rogers, State of Oklahoma. The Corporation may also have offices at such other places, both within and without the State of Oklahoma, as the Board of Directors may from time to time determine or the business of the Corporation may require.

ARTICLE II
SHAREHOLDERS

Section 1. Meetings of Shareholders. All meetings of the Shareholders of the Corporation, for any purpose, shall be held at such place within or without the State of Oklahoma as shall be designated from time to time by the Board of Directors and stated in the notice of the meeting.

Section 2. Annual Meeting. The annual meeting of Shareholders shall be held on the second Tuesday of October at 10:00 a.m., or at such other date and time as shall be designated from time to time by the Board of Directors and stated in the notice of the meeting, at which the Shareholders shall elect, by majority vote, a Board of Directors and transact such other business as may properly be brought before the meeting.

Section 3. Notice of Annual Meeting. Written notice of the annual meeting stating the location, date and hour of the meeting shall be given to each Shareholder entitled to vote at such meeting not less than ten nor more than sixty days before the date of the meeting.

Section 4. Special Meetings. Special meetings of the Shareholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation, may be called by the Chairman of the Board, President or Secretary at the request in writing of a majority of the Board of Directors, or at the request in writing of Shareholders owning a majority in amount of the entire capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 5. Notice of Special Meeting. Written notice of a special meeting stating the location, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given to each Shareholder entitled to vote thereat, not less than ten nor more than sixty days before the date of the meeting.

Section 6. Closing of Transfer Books and Fixing Record Date. The Officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten days before every annual meeting of Shareholders, a complete list of the Shareholders entitled to vote at the Meeting, arranged in alphabetical order, and showing the address of each shareholder and the number of shares registered in the name of each Shareholder. Such list shall be open to the examination of any Shareholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the Meeting during the whole time thereof, and may be inspected by any Shareholder who is present.

Section 7. Limitation on Business Transacted. Business transacted at any special Meeting of Shareholders shall be limited to the purposes stated in the notice.

Section 8. Quorum. The holders of the majority of the shares issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all Meetings of the Shareholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum shall not be present or represented at any Meeting of the Shareholders, the Share-holders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each Shareholder of record entitled to vote at the meeting.

Section 9. Vote Required. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the statutes or of the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control the decision of such question.

Section 10. Voting. Unless otherwise provided in the Certificate of Incorporation, each Shareholder shall, at every Meeting of the Shareholders, be entitled to one vote in person or by proxy for each share of the capital stock having voting power held by such Shareholder, but no proxy shall be voted on after three years from its date, unless the proxy provides for a longer period.

Section 11. Action by Consent. Any action required to be taken or which may be taken at any annual or Special Meeting of the Shareholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action by the Shareholders without a meeting by less than unanimous written consent shall be given to those Shareholders who have not consented in writing.

ARTICLE III
DIRECTORS

Section 1. General Powers. The business of the Corporation shall be managed by or under the direction of its Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these Bylaws directed or required to be exercised or done by the Shareholders.

Section 2. Number of Directors. The number of Directors of this Corporation shall be not less than three (3) nor more than five (5). Thereafter, within the limits above specified, the number of Directors shall be determined by resolution of the Board of Directors or by the Shareholders at an annual or special meeting. The Directors shall be elected at the Annual Meeting of the Shareholders, except as provided in Section 3 of this Article, and each Director elected shall hold office until his successor is elected and qualified or until removed. Directors need not be either Shareholders or residents of the State of Oklahoma.

Section 3. Vacancies. Vacancies and newly created directorships resulting from any increase in the authorized number of Directors may be filled by a majority of the Directors then in office, though less than a quorum, or by a sole remaining Director, and the Directors so chosen shall hold office until the next annual election or until their successors are duly elected and qualified, unless sooner displaced. If there are no Directors in office, then an election of Directors may be held in the manner provided by law.

Section 4. Meetings of Directors. The Board of Directors of the Corporation may hold meetings, both regular and special, either within or without the State of Oklahoma.

Section 5. Annual Meeting. Regular meetings of the Board of Directors may be held at such time and place as shall be determined by the Board of Directors and if so determined, no notice thereof need be given. At least five (5) days notice of all regular meetings shall be given stating the time, date and location of such meeting as well as the business to be conducted thereat.

Section 6. Special Meetings. Special meetings of the board may be called by the president on three days' notice to each Director, either personally or by mail or by telegram. Special meetings shall be called by the Chairman of the Board, any Vice Chairman of the Board, the President, any Vice-President or the Secretary in like manner and on like notice on the written request of two Directors unless the board consists of less than three Directors in which case special meetings shall be called by the Chairman of the Board, any Vice Chairman of the Board, the President, any Vice-President or the Secretary in like manner and on like notice on the written request of only one Director. Notice of such meetings shall state the place, date, hour, and business to be conducted at such meeting.

Section 7. Quorum. Two members of the Board of Directors as constituted for the time being shall constitute a quorum for the transaction of business. When a quorum is present at any meeting, a majority of the members present thereat shall decide any question brought before such meeting, except as otherwise provided by law or by these Bylaws. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 8. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any Committee thereof may be taken without a meeting, if all members of the Board or Committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or Committee.

Section 9. Participation in Meeting by Conference Telephone. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any Committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any Committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 10. Committees of the Board of Directors. The Board of Directors, by a vote of the majority of all members of the Board of Directors, may from time to time designate committees of the Board of Directors, each committee to consist of two (2) or more of the directors, to serve at the pleasure of the Board of Directors. Any committee so designated may exercise such power and authority of the Board of Directors as the resolution so designating the committee shall provide. In the absence or disqualification of any member of any committee, the member or members of the committee present at the meeting and not disqualified from voting, whether or not he or they constitute a quorum, may by unanimous vote appoint another member of the Board of Directors to act at the meeting in the place of the absent or disqualified member.

Such committee or committees shall have the name or names as may be determined from time to time by resolution adopted by the Board of Directors.

Section 11. Conduct of Business. Each committee may determine the procedural rules for meeting and conducting business and shall act in accordance therewith, except as otherwise provided herein or required by law. One-third of the members shall constitute a quorum unless the committee shall consist of two (2) members, in which event one (1) member shall constitute a quorum. All matters shall be determined by a majority vote of the members present. Action may be taken by any committee without a meeting if all members thereof consent thereto in writing, and the writing or writings are filed with the minutes of the proceeding of such committee. All committees shall keep regular minutes of their proceedings and report the same to the Board of Directors when required.

Section 12. Executive Committee. This Corporation may have an Executive Committee composed of directors of this Corporation consisting of three members appointed by the Board of Directors. This committee shall be designated the "Executive Committee". Members of the Executive Committee shall serve until terminated by the Board of Directors or their position is vacated by death or resignation. Except as otherwise provided by law, the Executive Committee shall have and may exercise all powers of the Board of Directors and the management of the business and affairs of the Corporation shall be conducted by the Executive Committee between meetings of the Board of Directors as if such actions were regularly adopted and exercised by the Board of Directors.

Section 13. Salaries and Expenses of Directors. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, the Board of Directors shall have the authority to fix the compensation of Directors. The Directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as Director. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings.

Section 14. Removal of Directors. Unless otherwise restricted by the Certificate of Incorporation or Bylaws, any Director or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of shares entitled to vote at a regular or Special Meeting of Shareholders.

ARTICLE IV
NOTICES

Section 1. Forms of Notice. Whenever, under the provisions of the statutes or of the Certificate of Incorporation or of these Bylaws, notice is required to be given to any Director or Shareholder, it shall not be construed to mean personal notice. Such notice may be given in writing, by mail, addressed to such Director or Shareholder, at such person's address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to Directors may also be given by telegram and, in such case, shall be deemed given when delivered to the sending telegram office.

Section 2. Waiver. Whenever any notice is required to be given under the provisions of the statutes or of the Certificate of Incorporation or of these Bylaws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V
OFFICERS

Section 1. General. The Officers of the Corporation shall be chosen by the Board of Directors and shall, at a minimum, consist of a president and a secretary. The Board of Directors may also choose additional officers, including a chairman of the board, a vice chairman of the board, one or more vice-presidents, a treasurer, and one or more assistant secretaries and assistant treasurers. Any number of offices may be held by the same person, unless the Certificate of Incorporation or these Bylaws otherwise provide.

Section 2. Election of Officers. The Board of Directors at its first meeting and after each Annual Meeting of Shareholders shall choose, at a minimum, a President and a Secretary.

Section 3. Other Officers. The Board of Directors may appoint such other Officers and agents as it shall deem necessary who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board.

Section 4. Salaries. The salaries of all Officers and agent of the Corporation shall be fixed by the Board of Directors.

Section 5. Term of Office. The Officers of the Corporation shall hold office until their successors are chosen and qualify. Any Officer elected or appointed by the Board of Directors may be removed at any time by the affirmative vote of a majority of the Board of Directors. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors.

Section 6. The Chairman of the Board. The Chairman of the Board, or, in the absence of the Chairman, a Vice-Chairman of the Board of Directors, if chosen, shall preside at all meetings of the Board of Directors, and shall perform such other duties and have such other powers as the Board of Directors may from time to time prescribe.

Section 7. The President. The President shall be the Chief Executive Officer of the Corporation, shall preside at all meetings of the Shareholders and the Board of Directors, shall have general and active management of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. The President shall execute bonds, mortgages and other contracts requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except where the signing and execution thereof shall be expressly delegated by the Board of Directors to some other Officer or Agent of the Corporation.

Section 8. The Vice-President. In the absence of the President or in the event of the President's inability or refusal to act, the Vice-President (or in the event there be more than one Vice-President, the Vice-Presidents in the order designated by the Directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. The Vice-Presidents shall perform such other duties and have such other powers as the Board of Directors may from time to time prescribe.

Section 9. The Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the Shareholders and record all the proceedings of the meetings of the Corporation and of the Board of Directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. The Secretary shall give, or cause to be given, notice of all meetings of the Shareholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors or the President, under whose supervision he shall be. The Secretary shall have custody of the corporate seal of the Corporation and the Secretary, or an Assistant Secretary, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the Secretary's signature or by the signature of such Assistant Secretary. The Board of Directors may give general authority to any other Officer to affix the seal of the Corporation and to attest the affixing by such persons's signature.

Section 10. The Assistant Secretary. The Assistant Secretary, or if there be more than one, the Assistant Secretaries in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election) shall, in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, perform the duties and exercise the powers of the Secretary and shall perform such other duties and have such other powers as the Board of Directors may from time to time prescribe.

Section 11. The Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors.

Section 12. Reports. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all the Treasurer's transactions as Treasurer and of the financial condition of the Corporation.

Section 13. Bond. The Treasurer, if required by the Board of Directors, shall give the Corporation a bond (which shall be renewed at such intervals as the Board requires) in such sum and with surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the Treasurer's office and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation.

Section 14. The Assistant Treasurer. The Assistant Treasurer, or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election) shall, in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, perform the duties and exercise the powers of the Treasurer and shall perform such other duties and have such other powers as the Board of Directors may from time to time prescribe.

ARTICLE VI
CERTIFICATES FOR SHARES; TRANSFER; RECORD DATE AND REGISTERED SHAREHOLDERS

Section 1. Stock Certificates. The shares of the Corporation shall be represented by a certificate or certificates. Certificates shall be signed by, or in the name of the Corporation by, the Chairman or Vice-Chairman of the Board of Directors, or the President or a Vice-President and the Treasurer of an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation.

Section 2. Facsimile Signatures. Any or all of the signatures on a certificate may be facsimile. In case any Officer, Transfer Agent or Registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such Officer, Transfer Agent or Registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person was such Officer, Transfer Agent or Registrar at the date of issue.

Section 3. Lost Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates or certificated shares, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or such person's legal representative, to advertise the same in such manner as it shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claims that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

Section 4. Transfer of Stock. Subject to transfer restrictions permitted by the General Corporation Law of the State of Oklahoma and restrictions on transfer imposed by the Corporation to prevent possible violations of federal and state securities laws, upon surrender to the Corporation or the Transfer Agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 5. Fixing Record Date. In order that the Corporation may determine the Shareholders entitled to notice of or to vote at any meeting of Shareholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty nor less then ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of Shareholders of record entitled to notice of or to vote at a meeting of Shareholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 6. Registered Shareholders. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares for all purposes, including, without limitation, the right to receive dividends and to vote on all issues submitted to a vote of Shareholders, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Oklahoma.

ARTICLE VII
GENERAL PROVISIONS

Section 1. Dividends. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation.

Section 2. Reserve. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Directors shall think conducive to the interest of the Corporation, and the Directors may modify or abolish any such reserve in the manner in which it was created.

Section 3. Annual Statement. The Board of Directors shall present at each annual meeting, and at any special meeting of the Shareholders when called for by vote of the Shareholders, a full and clear statement of the business and condition of the Corporation.

Section 4. Checks or Demands for Money. All checks or demands for money and notes of the Corporation shall be signed by such Officer or Officers or such other person or persons as the Board of Directors may from time to time designate.

Section 5. Fiscal Year. The fiscal year of the Corporation shall be as set by resolution of the Board of Directors.

Section 6. Seal. The corporate seal shall have inscribed thereon the name of the Corporation and, may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

Section 7. Books of Account. The Corporation’s Books of Account and other records shall be kept at its principal place of business.

ARTICLE VIII
INDEMNIFICATION OF OFFICERS,
DIRECTORS, EMPLOYEES AND AGENTS

Section 1. Indemnification: Actions other than by the Corporation. The corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation, by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of the corporation, partnership, joint venture, trust or other enterprise, against expenses, including attorneys' fees, judgments, fines, and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

Section 2. Indemnification: Actions by the Corporation. The corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses, including attorneys' fees, actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper.

Section 3. Expenses and Attorneys' Fees. To the extent that a director, officer, employee or agent of the corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsection 8.1 or 8.2 of this Article VIII, or in defense of any claim, issue or matter therein, he shall be indemnified against expenses, including attorneys' fees, actually and reasonably incurred by him in connection therewith.

Section 4. Authorization of Indemnification. Any indemnification under the provisions of subsection 8.1 or 8.2 of this Article VIII, unless ordered by a court, shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in subsection 8.1 or 8.2 of this Article VIII. Such determination shall be made:

(1) by the board of directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding; or

(2) if such a quorum is not obtainable, or, even if obtainable a quorum of disinterested directors so directs, by independent legal counsel in a written opinion; or

(3) by the shareholders.

Section 5. Advance Indemnification. Expenses incurred by an officer or director in defending a civil or criminal action, suit or proceeding may be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the corporation as authorized by the provisions of this Article VIII. Such expenses incurred by other employees and agents may be so paid upon such terms and conditions, if any, as the board of directors deems appropriate.

Section 6. Non-Exclusive Indemnification. The indemnification provided by or granted pursuant to the other provisions in this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office.

Section 7. Insurance. The corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of this Article VIII.

Section 8. Constituent Corporation. For purposes of this Article VIII, references to “the corporation” shall include without limitation, in addition to this corporation, any constituent corporation, including any constituent of a constituent, absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

Section 9. Other Enterprises. For purposes of this Article VIII, references to “other enterprises” shall include without limitation employee benefit plans; references to “fines” shall include without limitation any excise taxes assessed on a person with respect to an employee benefit plan; and references to “serving at the request of the corporation” shall include without limitation any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services, by such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner “not opposed to the best interests of the corporation” as referred to in this Article VIII.

Section 10. Continuation. The indemnification and advancement of expenses provided by, or granted pursuant to this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

ARTICLE IX
AMENDMENTS

Section 1. These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the Shareholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the Certificate of Incorporation at any regular meeting of the Shareholders or of the Board of Directors or any Special Meeting of the Shareholders or of the Board of Directors if notice of such alteration, amendment, repeal or

adoption of new Bylaws be contained in the notice of such special meeting. If the power to adopt, amend or repeal Bylaws is conferred upon the Board of Directors by the Certificate of Incorporation, it shall not divest or limit the power of the Shareholders to adopt, amend or repeal the Bylaws.

APPROVED and RATIFIED this 8th day of November, 1991.

UPCO, Inc.

ATTEST:
[seal]

By: /s/ David M. Pearcy
David M. Pearcy, President

By: /s/ Robert H. Duenner, Jr.
Robert H. Duenner, Jr., Secretary

CERTIFICATE OF INCORPORATION

OF

US SYNTHETIC CORPORATION

1. **Name**. The name of the Corporation is US Synthetic Corporation.

2. **Registered Agent and Address**. The address of the Corporation's registered office in the State of Delaware is 2711 Centerville Road, Suite 400, in the City of Wilmington, County of New Castle, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

3. **Purpose**. The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

4. **Powers and Privileges**. In furtherance of the objects and purposes of the Corporation, the Corporation shall have all the powers and privileges granted by the General Corporation Law of the State of Delaware, by any other law, or by this Certificate of Incorporation, including without limitation the power to borrow or raise money and otherwise contract indebtedness for any of the purposes of the Corporation; to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidences of indebtedness; to secure the payment of any of the foregoing and of the interest thereon by mortgage, pledge, assignment, deed of trust or lien of or upon any or all of the property of the Corporation (real, personal or mixed), whether at the time owned or thereafter acquired; and to sell, pledge or otherwise dispose of such bonds or other obligations of the Corporation for its corporate purposes.

5. **Capitalization**. The total number of shares of stock which the Corporation shall have authority to issue is 10,000 shares of common stock, having a par value of $1 per share.

6. **Incorporator**. The name and mailing address of the Incorporator are as follows:

NAME	MAILING ADDRESS
R. Kevin Redwine	Conner & Winters, P.C. 3700 First Place Tower 15 East Fifth Street Tulsa, Oklahoma 74103-4344

7. **Board of Directors**. The powers of the Incorporator shall terminate upon the election of a Board of Directors of the Corporation. The number of members of the Board of Directors of the Corporation shall initially be five, and shall thereafter be as set forth in the Bylaws.

8. **Duration**. The Corporation is to have perpetual existence.

9. **Limited Liability**. The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatsoever.

10. **Authority of the Board of Directors**. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the Corporation is expressly authorized:

(a) To make, alter or repeal the Bylaws of the Corporation;

(b) To authorize and cause to be executed mortgages and liens upon the real and personal property of the Corporation; and

(c) To set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purposes and to abolish any such reserve in the manner in which it was created.

11. **General**. Meetings of the stockholders may be held within or outside the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) within or outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation. Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

12. **Amendment**. The Corporation reserves the right to amend, alter, change or repeal any provisions contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

13. **Compromise or Arrangement**. Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware, on the application in a summary way of the Corporation or of any creditor or shareholder thereof, or on the application of any receiver or receivers appointed for the Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under the provisions of Section 279 of Title 8 of the Delaware Code, may order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, to be summoned in such manner as the court directs. If a majority in number representing three-fourths (3/4ths) in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as a consequence of such compromise or arrangement, the compromise or arrangement and the reorganization shall, if sanctioned by the court to which the application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders of the Corporation, as the case maybe, and also on the Corporation.

14. **Liability of Directors**. To the fullest extent permitted by the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. No amendment to or repeal of this Article 14 shall apply to, or have any effect on, the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

THE UNDERSIGNED, being the Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, does make this Certificate, hereby declaring and certifying that this is his act and deed and the facts herein stated are true, and accordingly has hereunto set his hand this 27th day of December, 2004.

/s/ R. Kevin Redwine

R. Kevin Redwine, Incorporator

CERTIFICATE OF MERGER

OF

US SYNTHETIC CORPORATION,
a Utah corporation

AND

US SYNTHETIC HOLDINGS CORPORATION,
a Utah corporation

WITH AND INTO

US SYNTHETIC CORPORATION,
a Delaware corporation

(Pursuant to Title 8, Section 252 of the General Corporation Law of Delaware)

The undersigned corporation organized and existing under and by virtue of the General Corporation Law of Delaware ("DGCL"),

DOES HEREBY CERTIFY:

FIRST: That the name and jurisdiction of incorporation/organization of each of the constituent corporations of the merger are as follows:

NAME	STATE OF INCORPORATION
US Synthetic Corporation	Utah
US Synthetic Holdings Corporation	Utah
US Synthetic Corporation	Delaware

SECOND: That the Plan and Agreement of Merger between the parties to the merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the requirements of Section 252 of the DGCL.

THIRD: That the name of the surviving corporation of the merger is US Synthetic Corporation, a Delaware corporation (the "Surviving Corporation").

FOURTH: That the Certificate of Incorporation of US Synthetic Corporation, a Delaware corporation, which will survive the merger, as in effect on the effective date of the merger, shall be the Certificate of Incorporation of the Surviving Corporation.

FIFTH: That the executed Plan and Agreement of Merger is on file at the principal office of the Surviving Corporation the address of which is 1260 South 1600 West, Orem, Utah 84058.

SIXTH: That a copy of the Plan and Agreement of Merger will be furnished by the Surviving Corporation, on request and without cost, to any stockholder of any of the constituent corporations.

SEVENTH: That the authorized capital stock of each foreign corporation which is a party to the merger is as follows:

CORPORATION	CLASS	NUMBER OF SHARES	PAR VALUE
US Synthetic Holdings Corporation, a Utah Corporation	Class A Common	150,000	$ 0.01
	Class L Common	50,000	$ 0.01
	Preferred	5,000	$ 0.01
US Synthetic Corporation, a Utah Corporation	Common	50,000	$ 0.01
US Synthetic Corporation, a Delaware corporation	Common	10,000	$ 1.00

EIGHTH: That this Certificate of Merger shall be effective on December 31, 2004.

IN WITNESS WHEREOF, this Certificate has been duly executed this 28th day of December, 2004.

US SYNTHETIC CORPORATION,
a Delaware corporation

By: /s/ Loren R. Armstrong
Loren R. Armstrong, Vice President

BYLAWS

of

US SYNTHETIC CORPORATION
(a Delaware corporation)

ARTICLE I
Offices and Fiscal Year

Section 1.01. Registered Office. The Registered office of US Synthetic Corporation, a Delaware corporation (the "Corporation") shall be in the City of Wilmington, Country of New Castle, State of Delaware, until otherwise established by a vote of majority of the Board of Directors in office, and a statement of such change is filed in the manner provided by statute. (Sec. 131, 133)

Section 1.02. Other Offices. The corporation may also have offices at such other places within or without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation requires. (Sec. 141)

Section 1.03. Fiscal Year. The fiscal year of the Corporation shall be the calendar year unless otherwise fixed by resolution of the Board of Directors.

ARTICLE II
Meetings of Stockholders

Section 2.01. Place of Meeting. All meetings of the Stockholders of the Corporation shall be held at the registered office of the Corporation or at the principal office of the Corporation or at such other place within or without the State of Delaware as shall be designated by the Board of Directors in the notice of such meeting. (Sec. 211(a))

Section 2.02. Annual Meeting. Unless directors are elected by written consent in lieu of an annual meeting as permitted by this Section 2.02, an annual meeting of the Stockholders of the Corporation, for the election of Directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held in each year on the first Tuesday in May (commencing in 2005) at 10:00 am. If such day is legal holiday, the annual meeting shall be held on the following business day. If the annual meeting is not held on such date, the Board of Directors by majority vote shall cause a meeting to be held as soon thereafter as convenient. Stockholders may, unless the certificate of incorporation otherwise provides, act by written consent to elect Directors; provided, however, that if the consent is less than unanimous, the action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which the Directors could be elected at an annual meeting held at the effective time of the action are vacant and are filled by the action. Any other proper business may be transacted at the annual meeting. (Sec. 211(b), (c))

Section 2.03. Special Meetings. Special meeting of the Stockholders of the Corporation may be called at any time by the President, Chairman of the Board, or a majority of the Board of Directors, for any purpose or purposes for which meetings may be lawfully called. At any time, upon written request of any person or persons who have duly called a special meeting, which written request shall state the purpose or purposes of the meeting, it shall be the duty of the President to fix the date of the meeting to be held at such date and time as the President may fix, not less than 10 nor more than 60 days after the receipt of the request, and to give due notice thereof. If the President shall neglect or refuse to fix the time and date of such meeting and give notice thereof, the person or persons calling the meeting may do so. (Sec. 211(d))

Section 2.04. Notice of Meetings. Written notice of the place, date and hour of every meeting of the Stockholders, whether annual or special, shall be given by the Chairman of the Board, the President, a Vice President, the Secretary or an Assistant Secretary of the Corporation to each Stockholder of record having voting power with respect to the business to be transacted at such meeting not less than 10 nor more than 60 days before the date of the meeting. Each notice of a special meeting shall state the purpose or purposes for which the meeting is being called. Any meeting at which all Stockholders having voting power with respect to the business to be transacted thereat are present, either in person or by proxy, shall be a valid meeting for the transaction of business, notwithstanding that notice has not been given as hereinabove provided (Sec. 222)

Section 2.05. Quorum, Manner of Acting and Adjournment. The holders of a majority of the stock issued and outstanding (not including treasury shares) and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the Stockholders for the transaction of business except as otherwise provided by statute, by the certificate of incorporation or by these bylaws. If, however, a quorum shall not be present or represented at any meeting of the Stockholders, the Stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than the announcement at the meeting, until a quorum shall be present or represented. At any such adjourned meeting, at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each Stockholder of record having voting power with respect to the business to be transacted at such meeting. When a quorum is present at any meeting, the vote of the holders of the majority of the stock having voting power with respect to a question present in person or represented by proxy shall decide any such question brought before such meeting, unless the question is one upon which, by express provision of the applicable statute or these bylaws, a different vote is required in which case such express provision shall govern and control the decision on such question. Except upon those questions governed by the aforesaid express provisions, the Stockholders present in person or by proxy at a duly organized meeting can continue to do business until adjournment, notwithstanding withdrawal of enough Stockholders to leave less than a quorum. (Sec. 216, 222)

Section 2.06. Organization. At every meeting of the Stockholders, the President or, in the absence of the President, one of the following persons present in the order stated: Chairman of the Board, if any, a chairman designated by the Board of Directors, or a chairman chosen by the Stockholders, shall act as a chairman and the Secretary, or, in his or her absence, an Assistant Secretary or a person appointed by the chairman of the meeting, shall act as secretary of the meeting.

Section 2.07. Voting; Proxies. Except as provided in the certificate if incorporation or in a resolution adopted by the Board of Directors pursuant to Section 151 of the General Corporation Law of the State of Delaware and subject to Section 213 of such Law, each Stockholder shall at every meeting of the Stockholders be entitled to one vote in person or by proxy for each share of capital stock having voting power held by such Stockholder. In order to be valid, any such proxy shall be executed and delivered in accordance with the requirements of the Delaware General Corporation Law. No proxy shall be voted after three years from its date, unless the proxy provides for a longer period. Each proxy shall be executed in writing by the Stockholder or by his or her duly authorized attorney-in-fact and filed with the Secretary of the Corporation or the secretary of the meeting prior to being voted. A proxy, unless coupled with an interest, shall be revocable at will, notwithstanding any other agreement or any provision in the proxy to the contrary, but the revocation of a proxy shall not be effective until notice thereof has been given to the Secretary of the Corporation. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. A proxy shall not be revoked by the death or incapacity of the maker unless, before the vote is counted or the authority is exercised, written notice such of such death or incapacity is given to the Secretary of the Corporation. (Sec. 212)

Section 2.08. Consent of Stockholders in Lieu of Meeting. Any action required to be taken at any annual or special meeting of Stockholders of the Corporation, or any action which may be taken at any annual or special meeting of the Stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each Stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days after the earliest dated consent delivered in the manner required herein to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those Stockholders who have not consented in writing. (Sec. 228)

Section 2.09. Voting Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least 10 days before every meeting of Stockholders, a complete list of the Shareholders entitled to vote at the meeting. The list shall be arranged in alphabetical order and show the address of each Stockholder and the number of shares registered in the name of each Stockholder. The list shall be open to the examination of any Stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any Stockholder who is present. (Sec. 219(a))

ARTICLE III
Board of Directors

Section 3.01. Powers. The Board of Directors shall have full power to manage the business and affairs of the Corporation; and all powers of the Corporation, except those specifically reserved or granted to the Stockholders by statute, the certificate of incorporation or these bylaws, are hereby granted to and vested in the Board of Directors. (Sec. 141(a))

Section 3.02. Number and Term of Office. The Board of Directors shall consist of such number of Directors, not less than one nor more than seven as may be determined from time to time by resolution of the Board of Directors. Unless and until so determined otherwise, the Board of Directors shall consist of five members. Each Director shall serve until the next annual election and until his or her successor shall have been elected and shall qualify, except in the event of his or her death, resignation or removal. All Directors of the Corporation shall be natural persons of full age, but need not to be residents of Delaware or Stockholders of the Corporation. (Sec. 141(b))

Section 3.03. Resignations. Any Director of the Corporation may resign at any time by giving written notice to the President or the Secretary of the Corporation. Resignations shall become effective upon receipt or at such later time as shall be specified therein and, unless otherwise specified therein, the acceptance of a resignation shall not be necessary to make it effective. (Sec. 141(b), 223)

Section 3.04. Vacancies and Newly-Created Directorships. Vacancies and newly-created Directorships resulting from any increase in the authorized number of Directors may be filled by a majority vote of the Directors then in office, though less than a quorum, or by a sole remaining Director. Each Director so chosen shall hold office until the next annual election and until his or her successor shall have been duly elected and shall qualify, unless such Director dies, resigns or is removed prior to such time. If at any time, by reason of death or resignation or other cause, the Corporation should have no Directors in office, then an election of Directors may be held by the Stockholders or in the manner provided by statute. (Sec. 223)

Section 3.05. Organization. At every meeting of the Board of Directors, the Chairman of the Board, if any, or, in the case of a vacancy in the office or absence of the Chairman of the Board, the President or, in his or her absence, a chairman chosen by a majority of the Directors present, shall preside, and the Secretary or, in his or her absence, an Assistant Secretary or any person appointed by the chairman of the meeting, shall act as secretary of the meeting.

Section 3.06. Place of Meeting. The Board of Directors may hold its meetings, both regular and special, at such place or places within or without the State of Delaware as the Board of Directors may from time to time appoint, or as may be designated in the notice calling the meeting. (Sec. 141(g))

Section 3.07. Organization Meeting. The first meeting of each newly-elected Board of Directors shall, unless otherwise specified by the President of the Corporation, be held immediately after and at the same place as, the annual meeting of Stockholders. Notice of such meeting to the newly-elected Directors shall not be necessary in order legally to constitute the meeting, provided a quorum shall be present. (Sec. 141)

Section 3.08. Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be designated from time to time by resolution of the Board of Directors. If the date fixed for any regular meeting be a legal holiday under the laws of the State where such meeting is to be held, then the same shall be held on the next succeeding business day, not a Saturday, or at such other time as may be determined by resolution of the Board of Directors. At such meetings, the Directors shall transact such business as may properly be brought before the meeting. (Sec. 141)

Section 3.09. Special Meetings. Special meetings of the Board of Directors shall be held whenever called by the Chairman of the Board, if any, the President or by two or more of the Directors. Notice of each such meeting shall be given to each Director by telephone, telegram, facsimile, in writing or in person at least 24 hours (in the case of notice by telephone or in person) or 48 hours (in the case of notice by telegram or facsimile) or five days (in the case of notice by mail) before the time at which the meeting is to be held. Each such notice shall state the time and place of the meeting to be so held. Except as otherwise specifically provided in these bylaws, no notice of the objects or purposes of any special meeting of the Board of Directors need be given, and, unless otherwise indicated in the notice thereof, any and all business may be transacted at any special meeting. (Sec. 141)

Section 3.10. Conference Telephone Meetings. One or more Directors may participate in a meeting of the Board, or of a committee of the Board, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear or otherwise communicate with each other. Participation in a meeting pursuant to this section shall constitute presence in person at such meeting. (Sec. 141(i))

Section 3.11. Quorum, Manner of Acting and Adjournment. At all meetings of the Board a majority of the Directors shall constitute a quorum for the transaction of business. The vote of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except on additions, amendments, repeal or any changes whatsoever in the bylaws or the adoption of new bylaws with respect to any of which the affirmative votes of at least a majority of the members of the Board of Directors shall be necessary for the adoption of such changes and except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. (Sec. 141(b))

Section 3.12. Committees. The Board of Directors may, by resolution adopted by a majority of the whole Board, designate an executive committee, an audit committee, a compensation committee and/or one or more other committees, each committee to consist of one or more Directors of the Corporation. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member, and the alternate or alternates, if any, designated for such member, of any committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another Director to act at the meeting in the place of any such absent or disqualified member. A majority of the members of any committee, as at the time constituted, shall be necessary to constitute a quorum thereof, and the act of a majority of the members of any committee who are present at any meeting thereof at which a quorum is present shall be the act of such committee. Any vacancy in any committee shall be filled by vote of a majority of the Directors at the time in office. (Sec. 141(c))

Any such committee, to the extent provided in the resolution establishing such committee, shall have and may exercise all the power and authority of the Board of Directors in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers which may require it, except that no such committee shall have the authority of the Board of Directors (a) to approve or recommend to the Stockholders any action or matter expressly required by the Delaware General Corporation Law to be submitted to the Stockholders for approval; (b) to adopt, amend, or repeal any bylaw of the Corporation; (c) to fill vacancies in the Board of Directors or any committee, including any directorship to be filled by reason of an increase in the number of Directors; (d) to elect or remove officers or members of any committee; (e) to fix the compensation of any member of a committee; (f) to alter or repeal any resolution of the Board of Directors which provides for any of the foregoing or which by its terms provides that it shall not be so amendable or repealable; or (g) to declare a dividend or to authorize the issuance of shares of the Corporation. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors. Each committee so formed shall fix the time and place of its meetings and its own rules of procedure and shall keep regular minutes of its meetings and report from time to time to the Board of Directors. (Sec. 141(c))

Section 3.13. Consent of Directors in Lieu of Meeting. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board or the committee consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or the committee. (Sec. 141(f))

Section 3.14. Presumption of Assent. A Director who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action unless such Director's dissent shall be entered in the minutes of the meeting or unless such Director shall file his or her written dissent to such action with the person acting as secretary of the meeting before the adjournment thereof or unless such Director shall forward such dissent by registered mail to the secretary of the Corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a Director who voted in favor of such action.

Section 3.15. Compensation of Directors. Unless otherwise restricted by the certificate of incorporation, the Board of Directors shall have the authority to fix the compensation of Directors. The Directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as Director. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings. (Sec. 141(h))

Section 3.16. Removal of Directors. Except as otherwise provided in the certificate of incorporation or the General Corporation Law of the State of Delaware, any Director may be removed from office, with or without cause, at any time by the holders of a majority of the shares then entitled to vote at any election of Directors, at any annual or special meeting of the Stockholders. (Sec. 141(k))

ARTICLE IV
Notices - Waivers

Section 4.01. Notice, What Constitutes. Whenever, under the provisions of the statutes of Delaware or the certificate of incorporation or of these bylaws, notice is required to be given to any Director or Stockholder, such notice may be given in writing, by mail, addressed to such Director or Stockholder, at the address of such Director or Stockholder as it appears on the records of the Corporation, with postage thereon prepaid. Notice given in accordance with this provision shall be deemed to be given at the time when the same shall be deposited in the United States mail. Notice to Directors of special meetings must be given in accordance with Section 3.09 of Article III hereof. (Sec. 222(b))

Section 4.02. Waivers of Notice. Whenever any notice is required to be given under the provisions of the certificate of incorporation, these bylaws, or by statute, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Stockholders, Directors, or members of a committee of Directors need be specified in any written waiver of notice of such meeting unless so required by the certificate of incorporation or these bylaws. Attendance by a person, either in person or by proxy, at any meeting, shall constitute a waiver of notice of such meeting, except where a person attends a meeting for the express purpose of objecting to the transaction of any business because the meeting was not lawfully called or convened. (Sec. 229)

ARTICLE V
Officers

Section 5.01. Number, Qualifications, and Designation. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, Secretary and such other officers as may be elected in accordance with the provisions of Section 5.03 of this Article. One person may hold more than one office. Officers may be, but need not be, Directors or Stockholders of the Corporation. (Sec. 142)

Section 5.02. Election and Term of Office. The officers of the Corporation, except those elected by delegated authority pursuant to Section 5.03 of this Article, shall be elected annually by the Board of Directors, and each such officer shall hold his or her office until such officer's successor shall have been elected and shall qualify, or until his or her earlier death, resignation or removal. Any officer may resign at any time upon written notice to the Corporation or may be removed, with or without cause, by the Board of Directors. (Sec. 142)

Section 5.03. Other Officers, Committees and Agents. The Board of Directors may from time to time elect such other officers, including without limitation a Chairman of the Board of Directors, a Vice Chairman of the Board of Directors, a Treasurer and one or more Vice Presidents, Assistant Secretaries and Assistant Treasurers, and appoint such committees, employees and other agents as it deems necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as are provided in these bylaws, or as the Board of Directors may from time to time determine. The Board of Directors may delegate to any officer or committee the power to elect subordinate officers and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents. (Sec. 142)

Section 5.04. Chairman of the Board and Vice Chairman. The Chairman of the Board of Directors, if any, shall preside at all meetings of the Board of Directors and shall perform such other duties as may be prescribed by the Board of Directors from time to time. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The Vice Chairman, if any, shall, at the request of the Chairman or in his or her absence or disability, perform the duties and exercise the powers of the Chairman, and shall preform such other duties as the Board of Directors shall prescribe.

Section 5.05. President. The President shall preside at all meetings of the Stockholders and, if there is no Chairman or Vice Chairman of the Board, or in their absence, all meetings of the Board of Directors. He or she may sign and deliver on behalf of the Corporation any deeds, mortgages, bonds, contracts, certificates, powers of attorney and other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these bylaws to some other officer or agent of the Corporation or shall be required by law to be otherwise signed or executed. The President may employ all agents and employees of the Corporation and may discharge any such agent or employee, and, in general, shall perform all duties incident to the office of President, and such other duties as from time to time may be assigned to him or her by the Board of Directors.

Section 5.06. Chief Executive Officer. The Board of Directors shall assign the duties of the Chief Executive Officer of the Corporation to either the Chairman of the Board of Directors or the President. Such duties shall include the authority and powers necessary for the general management of the business, properties, activities and policies of the Corporation, subject, however, to the control of the Board of Directors.

Section 5.07. Chief Operating Officer. The Board of Directors shall assign the duties of the Chief Operating Officer of the Corporation to the Chairman of the Board of Directors, the President or any other officer of the Corporation. Such duties shall include the authority necessary for the active management and general supervision of the everyday business of the Corporation and the duty to see that all orders and policies of the Chief Executive Officer and the Board of Directors are carried into effect. The Chief Operating Officer shall appoint and remove, employ and discharge, and fix the compensation of all employees and agents of the Corporation, other than the duly elected officers, subject to the approval of the Board of Directors. At the request of the Chief Executive Officer, or in his or her absence or disability, the Chief Operating Officer shall exercise all the powers and discharge all the duties of the Chief Executive Officer.

Section 5.08. Chief Financial Officer. The Board of Directors may assign the duties of Chief Financial Officer of the Corporation to any officer of the Corporation. Such duties shall include the active management and supervision of the financial and accounting affairs of the Corporation.

Section 5.09. Vice Presidents. Any Vice President shall, at the request of the President or in his absence or disability, perform the duties and exercise the powers of the President and such other duties as may from time to time be assigned by the Board of Directors or by the President. At the discretion of the Board of Directors, one or more Vice Presidents may be designated as an Executive Vice President or Senior Vice President.

Section 5.10. Secretary and Assistant Secretaries. The Secretary shall attend all meetings of the Stockholders and of the Board of Directors and shall record the proceedings of the Stockholders and of the Directors and of committees of the Board in a book or books to be kept for that purpose; see that notices are given and records and reports properly kept and filed by the Corporation as required by law; be the custodian of the seal of the Corporation and see that it is affixed to all documents to be executed on behalf of the Corporation under its seal; and, in general, perform all duties incident to the office of Secretary, and such other duties as may from time to time be assigned to him by the Board of Directors or the President. Any Assistant Secretary shall, at the request of the Secretary or in his or her absence or disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties as the Board of Directors, the President or the Secretary shall prescribe.

Section 5.11. Treasurer and Assistant Treasurers. The Treasurer, if any, shall have or provide for the custody of the funds or other property of the Corporation. Whenever so required by the Board of Directors or the President, the Treasurer shall render an account showing his or her transactions as Treasurer and the financial condition of the Corporation. In general, the Treasurer shall discharge such other duties as may from time to time be assigned to him or her by the Board of Directors or the President. Any Assistant Treasurer shall, at the request of the Treasurer or in his or her absence or disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties as the Board of Directors, the President or the Treasurer shall prescribe.

Section 5.12. Officers' Bonds. No officer of the Corporation need provide a bond to guarantee the faithful discharge of his or her duties unless the Board of Directors shall by resolution so require a bond, in which event such officer shall give the Corporation a bond (which shall be renewed if and as required) in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of his or her office. (Sec. 142(c))

Section 5.13. Compensation. The compensation of the officers and agents of the Corporation elected by the Board of Directors shall be fixed from time to time by the Board of Directors. Any employment contract, whether for an officer, agent or employee, if expressly approved or specifically authorized by the Board of Directors, may fix a term of employment, and any such contract, but only if so approved or authorized, shall be valid and binding upon the Corporation in accordance with the terms thereof; provided, however, this provision shall not limit or restrict in any way the right of the Corporation at any time in its discretion (which right is hereby expressly reserved) to remove from office, discharge or terminate the employment or otherwise dispense with the services of any such officer, agent or employee, as provided in these bylaws, prior to the expiration of the term of employment under any such contract, provided only that the Corporation shall not thereby be relived of any continuing liability for salary or other compensation provided for in such contract. (Sec. 141(a))

Section 5.14. Action with Respect to Securities of Other Corporations. Unless otherwise directed by the Board of Directors, the Chairman of the Board of Directors, if any, the President or any Vice President of the Corporation shall have power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of security holders, or with respect to any action of security holders, of any other Corporation in which the Corporation may hold securities and shall have power to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities in such other Corporation.

ARTICLE VI
Capital Stock

Section 6.01. Issuance. The Directors may, at any time and from time to time, if all of the shares of capital stock which the Corporation is authorized by its certificate of incorporation to issue have not been issued, subscribed for, or otherwise committed to be issued, issue or take subscriptions for additional shares of its capital stock up to the amount authorized in its certificate of incorporation. Unless otherwise provided by the certificate of incorporation or these bylaws, the Board of Directors may provide by resolution that some or all of any or all classes and series of the shares of capital stock of the Corporation shall be uncertified shares, provided that such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. The stock certificates of the Corporation shall be numbered and registered in the stock ledger and transfer books of the Corporation as they are issued. The Board of Directors may also appoint one or more transfer agents and/or registrars for its stock of any class or classes and for the transfer and registration of certificates representing the same and may require stock certificates to be countersigned by one or more of them. They shall be signed by the Chairman or Vice Chairman of the Board of Directors or the President or a Vice President and attested by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer, and

shall bear the corporate seal, which may be a facsimile, engraved or printed signature. Any or all of the signatures upon such certificate may be a facsimile, engraved or printed. In case any officer, transfer agent or registrar who has signed, or whose facsimile, engraved or printed signature has been placed upon, any share certificate shall have ceased to be such officer, transfer agent or registrar, before the certificate is issued, it may be issued with the same effect as if he or she were such officer, transfer agent or registrar at the date of its issue. (Sec. 158, 161)

Section 6.02. Regulations Regarding Certificates. Except as otherwise provided by law, the Board of Directors shall have the power and authority to make all such rules and regulations as it may deem expedient concerning the issuance, transfer and registration or the replacement of certificates for shares of capital stock of the Corporation. (Sec. 161)

Section 6.03. Stock Certificates. Stock certificates of the Corporation shall be in such form as is provided by statute and approved by the Board of Directors. The stock record books and the blank stock certificate books shall be kept by the Secretary of the Corporation or by any agency designated by the Board of Directors for that purpose. (Sec. 158)

Section 6.04. Lost, Stolen, Destroyed, or Mutilated Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or such owner's legal representative, to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen or destroyed. (Sec. 167)

Section 6.05. Record Holder of Shares. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

Section 6.06. Determination of Stockholders of Record for Voting at Meetings. In order that the Corporation may determine the Stockholders entitled to notice of or to vote at any meeting of Stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action. If no record date is fixed by the Board of Directors, the record date for determining Stockholders entitled to notice of or to vote at a meeting of Stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of Stockholders of record entitled to notice of or to vote at a meeting of Stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting. (Sec. 213(a))

Section 6.07. Determination of Stockholders of Record for Dividends and Distributions. In order that the Corporation may determine the Stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the Stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date,

which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining Stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. (Sec. 213(c))

Section 6.08. Determination of Stockholders of Record for Written Consent. In order that the Corporation may determine the Stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by statute, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded. Delivery made to a Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors, when prior action by the Board of Directors is required by statute, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action. (Sec. 213(b))

ARTICLE VII
Indemnification of Officers, Directors, Employees and Agents

Section 7.01. Indemnification in Third Party Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "third party proceeding" (which shall include, for purposes of this Article VII, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the Corporation) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, judgments, fines, and amounts paid in settlement, actually and reasonably incurred by such person in connection with such third party proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal third party proceeding, had no reasonable cause to believe such conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal third party proceeding, had reasonable cause to believe that such conduct was unlawful. (Sec. 145)

Section 7.02. Indemnification in Corporate Proceedings. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any "corporate proceeding" (which shall mean, for purposes of this Article VII, any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgement in its favor) by reason of the fact that such person is or was a Director or officer of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection with the defense or settlement of a corporate proceeding if the person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation, unless and only to the extent that the court in which the corporate proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. (Sec. 145(b))

Section 7.03. Mandatory Indemnification. To the extent that a present or former Director or officer of the Corporation has been successful on the merits or otherwise in defense of any third party or corporate proceeding referred to in Section 7.01 or 7.02 above or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses, including without limitation attorneys' fees, actually and reasonably incurred by such person in connection therewith. (Sec. 145(c))

Section 7.04. Determination of Entitlement to Indemnification. Any indemnification under Section 7.01, 7.02 or 7.03 of this Article VII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of a present or former Director or officer of the Corporation is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 7.01, 7.02 or 7.03 of this Article VII. This determination shall be made, with respect to a person who is a Director or officer at the time of the determination:

(a) By majority vote of the Directors who are not parties to the third party or corporate proceeding, even though less than a quorum;

(b) By a committee of Directors designated by a majority vote of Directors, even though less than a quorum;

(c) If there are no such Directors, or if such Directors so direct, by independent legal counsel in a written opinion; or

(d) By the Stockholders. (Sec. 145(d))

Section 7.05. Burden of Proof. In the event a claim for indemnification by any person who was or is a party or is threatened to be made a party to any third party or corporate proceeding is denied by the Corporation (except for a claim by a person described in Section 7.08 hereof), the Corporation shall, in any subsequent legal proceedings relating to such denial, have the burden of proving that indemnification was not required under Section 7.01, 7.02 or 7.03 of this Article VII, without regard to Section 7.04 hereof, or under any other agreement or undertaking between the Corporation and such person, or was not permitted under applicable law.

Section 7.06. Advancing Expenses. Expenses incurred by a Director or officer or former Director or officer in defending a third party or corporate proceeding shall be paid by the Corporation in advance of the final disposition of such third party or corporate proceeding upon receipt of an undertaking by or on behalf of the Director or officer or former Director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VII. Expenses incurred by other employees and agents may be so paid upon the terms and conditions, if any, as the Corporation deems appropriate. (Sec. 145(e))

Section 7.07. Employee Benefit Plans. For purposes of this Article VII, references to "other enterprises" shall include, but are not limited to, employee benefit plans; references to "fines" shall include, but are not limited to, any excise taxes assessed on a person with respect to an employee benefit plan; references to "serving at the request of the Corporation" shall include, but are not limited to, any service as a Director, officer, employee or agent of the Corporation which imposes duties on, or involves service by, the Director, officer, employee or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation." (Sec. 145(i))

Section 7.08. Employees and Agents. The Corporation may, but is not required to, indemnify any employee or agent of the corporation who is not also a Director or officer of the Corporation if the determining group as specified in Section 7.04 determines that indemnification is proper in the specific case. (Sec. 145)

Section 7.09. Scope of Article. The indemnification and advancement of expenses, as authorized by this Article VII, shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of Stockholders or disinterested Directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding an office. (Sec. 145(f))

Section 7.10. Reliance on Provisions. Each person who shall act as a Director or officer of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall be deemed to be doing so in reliance upon rights of indemnification provided by this Article VII, and the provisions of this Article VII shall be deemed a contract between the Corporation and such person.

Section 7.11. Insurance. The Corporation shall have the power to, but shall not be obligated to, purchase and maintain insurance on behalf of any person who is or was a Director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Article VII. (Sec. 145(g))

Section 7.12. Rights Continue. The indemnification and advancement of expenses provided by or granted pursuant to this Article VII, unless otherwise provided when authorized or ratified, shall continue as to a person who has ceased to be a Director, officer, employee or agent of the Corporation, or a person serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, and shall inure to the benefit of the heirs, executors and administrators of such a person. (Sec. 145(j))

ARTICLE VIII
General Provisions

Section 8.01. Dividends. Subject to the provisions of the certificate of incorporation, if any, dividends upon the capital stock of the Corporation may be declared by the Board of Directors at any regular or special meeting in accordance with law. Dividends may be paid in cash, in property, or in shares of the capital stock of the Corporation, subject to the provisions of the certificate of incorporation. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, thinks proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Board of Directors shall think conducive to the interest of the Corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created. (Sec. 170, 171, 173)

Section 8.02. Contracts. Except as otherwise provided in these bylaws, the Chairman of the Board of Directors, the President or a Vice President of the Corporation shall sign, in the name and on behalf of the Corporation, all deeds, bonds, contracts, mortgages and other instruments, the execution of which shall be authorized by the Board of Directors; provided, however, that the Board of Directors may authorize any other officer or officers or any agent or agents of the Corporation to sign, in the name and on behalf of the Corporation, any such deed, bond, contract, mortgage or other instrument. Such authority may be general or confined to specific instances. Except as so authorized by the Board of Directors, and except in the ordinary course of business, no officer, agent or employee of the Corporation shall have power or authority to bind the Corporation by any contract or engagement or to pledge, sell or otherwise dispose of its credit or any of its property or to render it pecuniarily liable in any amount in excess of $10,000. (Sec. 141, 142)

Section 8.03. Checks. All checks, notes, bills of exchange or other orders in writing shall be signed by such person or persons as the Board of Directors may from time to time designate. (Sec. 141, 142)

Section 8.04. Corporate Seal. The Corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the state of its incorporation. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced. (Sec. 122)

Section 8.05. Amendment of Bylaws. These bylaws may be altered, amended or repealed or new bylaws may be adopted by the Stockholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the certificate of incorporation, at any regular or special meeting of the Stockholders or of the Board of Directors, if notice of such alteration, amendment, repeal or adoption of new bylaws be contained in the notice of such special meeting. (Sec. 109)

Approved by the Board of Directors as of the 28th day of December, 2004.

CERTIFICATE OF INCORPORATION

OF

WELLMARK HOLDINGS, INC.

ARTICLE I
NAME

The name of the corporation is WellMark Holdings, Inc. (the "Corporation").

ARTICLE II
REGISTERED OFFICE

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, Wilmington, New Castle County, Delaware 19801, and the name of its registered agent at that address is The Corporation Trust Company.

ARTICLE III
PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "DGCL").

ARTICLE IV
AUTHORIZED CAPITAL STOCK

4.1 Authorized Shares. The total number of shares of stock that the Corporation shall have authority to issue is five thousand (5,000) shares, consisting of (i) two thousand five hundred (2,500) shares of Common Stock, par value $0.01 per share (the "Common Stock") and (ii) two thousand five hundred (2,500) shares of Series A Preferred Stock, par value $0.01 per share (the "Series A Preferred Stock" and, together with the Common Stock, the "Capital Stock").

4.2 Series A Preferred Stock. The Series A Preferred Stock shall have the powers, preferences and rights, with the qualifications, limitations and restrictions thereof, set forth in this Section 4.2.

4.2.1 Definitions. For purposes of this Section 4.2, the following definitions shall apply:

"Junior Securities" means any of the Corporation's equity securities other than the Series A Preferred Stock.

"Original Issue Price" means $9,900.00 per share of Series A Preferred Stock (as adjusted for any stock splits, stock dividends, recapitalizations or the like with respect to the Series A Preferred Stock).

"Qualified IPO" means the sale of the Corporation's shares of Common Stock pursuant to a firm commitment underwritten public offering.

4.2.2 Dividends. The holders of then-outstanding shares of Series A Preferred Stock shall be entitled to receive cumulative dividends, which shall accumulate on each such share of Series A Preferred Stock from the date such share was originally issued by the Corporation, whether or not declared or paid, out of any assets legally available therefore, prior and in preference to any declaration or payment of any dividend to the holders of Junior Securities (other than a stock dividend or other distribution declared and paid on the Common

Stock that is payable in shares of Common Stock), at the rate of eight percent (8%) of the Original Issue Price per annum. All cumulative dividends payable pursuant to this Section 4.2.2 with respect to shares of Series A Preferred Stock shall be paid, at the option of the Company in the sole discretion of its Board of Directors, in either cash or additional shares of Series A Preferred Stock valued at the Original Issue Price per share ("Additional Shares"). Cumulative dividends on the Series A Preferred Stock will accrue but payments shall be deferred until:

(a) such time as the Corporation's Board of Directors declares the same, in its sole discretion, when, as and if declared, out of funds legally available therefor; or

(b) such time as the Corporation is obligated to pay such dividends pursuant to the provisions of Section 4.2.4 below in connection with a liquidation, dissolution and winding up of the Corporation or consummation of a Qualified IPO.

No interest shall accrue on accumulated dividends. The Corporation shall, no later than the time that accumulated dividends are payable pursuant to this Section 4.2.2, authorize for issuance the full number of shares of Series A Preferred Stock issuable in payment of such accumulated dividends, as applicable. Each holder of shares of Series A Preferred Stock shall, by virtue of such holder's acceptance of a stock certificate evidencing Series A Preferred Stock, be deemed to have consented to and approved, for purposes of Section 242 of the Delaware General Corporation Law, any amendment to the Corporation's Certificate of Incorporation approved by the Corporation's Board of Directors to increase the number of authorized shares of Series A Preferred Stock to enable the Corporation to comply with the immediately preceding sentence. All shares of Series A Preferred Stock issuable in payment of accumulated dividends shall, when issued, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges.

4.2.3 Voting Rights. The holders of shares of Series A Preferred Stock shall be entitled to notice of all stockholders' meetings in accordance with the Corporation's bylaws, and except as otherwise required by law, the holders of shares of Series A Preferred Stock shall be entitled to vote on all matters submitted to the stockholders for a vote together with the holders of the Common Stock voting together as a single class, with each share of Common Stock entitled to one vote per share and each share of Series A Preferred Stock entitled to one vote per share.

4.2.4 Liquidation. Upon any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, each holder of a then-outstanding share of Series A Preferred Stock shall be entitled to receive, out of the funds and assets that may be legally distributed to the Corporation's stockholders (the "Available Funds and Assets"), before any distribution or payment is made upon any Junior Securities, an amount per share of Series A Preferred Stock equal to the Original Issue Price. If there are any Available Funds and Assets remaining after the distribution (or the setting aside for payment or distribution) to the holders of shares of Series A Preferred Stock of their full preferential amounts described in the immediately preceding sentence, then all such remaining Available Funds and Assets shall be distributed to the holders of the Series A Preferred Stock in payment of all accrued or declared but unpaid dividends on the Series A Preferred Stock, and holders of Additional Shares issued in payment of accumulated dividends on the Series A Preferred Stock shall be entitled to receive all payments with respect to such Additional Shares to which holders of outstanding shares of Series A Preferred Stock are entitled pursuant to this Section 4.2.4. If there are any Available Funds and Assets remaining after the distribution (or the setting aside for payment or distribution) to the holders of shares of Series A Preferred Stock of the full amount of accrued or declared but unpaid dividends on the Series A Preferred Stock described in the immediately preceding sentence, then all such remaining Available Funds and Assets shall be distributed among the holders of the then-outstanding shares of Common Stock pro rata according to the number of shares of Common Stock held by each holder thereof.

If upon any such liquidation, dissolution or winding up of the Corporation, the Corporation's assets to be distributed among the holders of shares of Series A Preferred Stock are insufficient to permit payment to such holders of the aggregate Original Issue Price which they are entitled to be paid, then the entire assets to be distributed shall be distributed ratably among such holders based upon the aggregate Original Issue Price of the shares of Series A Preferred Stock held by each such holder. If upon any such liquidation, dissolution or winding up of the Corporation, the Corporation's assets to be distributed among the holders of shares of Series A Preferred Stock are sufficient to permit payment to such holders of the aggregate Original Issue Price which they are entitled to be paid, but are insufficient to permit payment to such holders of the aggregate accrued or declared but unpaid dividends on the Series A Preferred Stock (including any Additional Shares) which they are entitled to be paid, then the entire excess assets to be distributed (after payment of such aggregate Original Issue Price) shall be distributed ratably among such holders based upon the aggregate accrued or declared but unpaid dividends on the shares of Series A Preferred Stock (including any Additional Shares) held by each such holder. The Corporation shall mail written notice of such liquidation, dissolution or winding up to each record holder of shares of Series A Preferred Stock at least ten days prior to the earlier of (i) the effective date of such liquidation, dissolution or winding up, or (ii) any payment date pursuant to this Section 4.2.4. Such notice shall describe in reasonable detail the terms and anticipated date of consummation of such liquidation, dissolution or winding up.

For purposes of this Section 4.2.4, consummation of a Qualified IPO shall be deemed to be a liquidation, dissolution and winding up of the Corporation, and, in such event, the holders of shares of Series A Preferred Stock shall be entitled to receive, in exchange for the cancellation of their shares of Series A Preferred Stock, payment of an amount equal to the amounts payable with respect to shares of Series A Preferred Stock upon a liquidation, dissolution or winding up, as provided in this Section 4.2.4.

Whenever a distribution provided for in this Section 4.2.4 is payable in property other than cash, the value of such distribution shall be the fair market value of such consideration as determined in good faith by the Board of Directors as of the date of such distribution.

4.2.5 No Redemption. Shares of Series A Preferred Stock shall not be redeemable by the Corporation.

4.2.6 No Conversion. Shares of Series A Preferred Stock shall not be convertible into any other securities of the Corporation or otherwise.

4.3 Common Stock. The following is a statement of the relative powers, preferences and participating, optional or other special rights, and the qualifications, limitations and restrictions of the Common Stock of the Corporation:

4.3.1 Amendments to this Certificate of Incorporation. Except as otherwise provided by law, the provisions of this Certificate of Incorporation shall not be modified, revised, altered or amended, repealed or rescinded in whole or in part, without the approval of a majority of the votes entitled to be cast by the holders of Capital Stock voting together as a single class; provided, however, that with respect to any proposed modification, revision, alteration or amendment, repeal or rescission of the provisions of this Certificate of Incorporation which would alter or change the powers, preferences or special rights of the Series A Preferred Stock, whether pursuant to an amendment adopted pursuant to Section 242 of the DGCL or whether by merger, consolidation or otherwise, the approval of a majority of the votes entitled to be cast by the holders of Series A Preferred Stock, voting separately as a class, shall be obtained in addition to the approval of a majority of the votes entitled to be cast by the holders of Capital Stock voting together as a single class as herein provided.

4.3.2 Voting Rights. Each stockholder of record shall have one vote for each share of Capital Stock which is outstanding in his, her or its name on the books of the Corporation and which is entitled to vote. In the election of directors, each stockholder shall be entitled to cast for any one candidate no greater number of votes than the number of shares of Capital Stock held by such stockholder; no stockholder shall be entitled to cumulate votes on behalf of any candidate. Holders of Capital Stock of the Corporation shall not have preemptive rights.

4.4 Record Holders. The Corporation shall be entitled to treat the person or entity in whose name any share (or fractional share) of its stock is registered as the owner thereof for all purposes and shall not be bound to recognize any equitable or other claim to, or interest in, such share on the part of any other person or entity, whether or not the Corporation shall have notice thereof, except as expressly provided by applicable law.

ARTICLE V
BOARD POWER REGARDING BYLAWS

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind the bylaws of the Corporation.

ARTICLE VI
ELECTION OF DIRECTORS

Elections of directors need not be by written ballot unless the bylaws of the Corporation shall so provide.

ARTICLE VII
INDEMNIFICATION; LIMITATION OF DIRECTOR LIABILITY

7.1 Indemnification. The Corporation shall indemnify its directors, officers, employees and agents, or persons serving at the request of the Corporation as a director, officer, employee or agent of another corporation or entity, where such person is made party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal or administrative, by reason of the fact that the person is or was a director, officer, employee or agent of the Corporation or serving in such capacity in another corporation or entity at the request of the Corporation, in each case to the fullest extent permitted by Section 145 of the DGCL as the same exists or may hereafter be amended.

7.2 Limitation of Liability. To the fullest extent permitted by the DGCL as the same exists or may hereafter be amended, a director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

7.3 Amendments. If the DGCL is amended after the date of the filing of this Certificate of Incorporation to authorize corporate action further eliminating or limiting the personal liability of directors or permitting indemnification to a fuller extent, then the liability of a director of the Corporation shall be eliminated or limited, and indemnification shall be extended, in each case to the fullest extent permitted by the DGCL, as so amended from time to time. No repeal or modification of this Article VII by the stockholders shall adversely affect any right or protection of a director of the Corporation existing by virtue of this Article VII at the time of such repeal or modification.

ARTICLE VIII
CORPORATE POWER

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred on stockholders herein are granted subject to this reservation.

ARTICLE IX
EXCLUSIVE FORUM FOR CERTAIN ACTIONS OR PROCEEDINGS

Unless and until the Board of Directors approves the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any stockholder, director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation arising pursuant to any provision of the DGCL, this Certificate of Incorporation or the Corporation's bylaws, (iv) any action asserting a claim against the Corporation governed by the internal affairs doctrine, or (v) any action or proceeding including any of the foregoing claims or actions (whether by joinder or otherwise).

ARTICLE X
INCORPORATOR

The name and mailing address of the incorporator of the Corporation are Katherine E. Duplay, c/o Bartlit Beck Herman Palenchar & Scott LLP, 1899 Wynkoop Street, 8th Floor, Denver, Colorado 80202.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Incorporation on the 22nd day of October, 2012.

/s/ Katherine E. Duplay
Katherine E. Duplay, Sole Incorporator

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

WELLMARK HOLDINGS, INC.

WellMark Holdings, Inc., a Delaware corporation (the "Corporation"), hereby certifies as follows:

1. Section 4.1 of the Certificate of Incorporation of the Corporation is hereby amended and restated in its entirety to read as follows:

"4.1 Authorized Shares. The total number of shares of stock that the Corporation shall have authority to issue is ten thousand (10,000) shares, consisting of (i) five thousand (5,000) shares of Common Stock, par value $0.01 per share (the "Common Stock") and (ii) five thousand (5,000) shares of Series A Preferred Stock, par value $0.01 per share (the "Series A Preferred Stock" and, together with the Common Stock, the "Capital Stock")."

2. The Corporation has not received any payment for any of its stock, and the foregoing amendment has been duly adopted in accordance with the provisions of Section 241 of the Delaware General Corporation Law.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment on the 20th day of November, 2012.

WELLMARK HOLDINGS, INC.

By: /s/ Katherine E. Duplay
Katherine E. Duplay, Sole Incorporator

BYLAWS
OF
WELLMARK HOLDINGS, INC.

ARTICLE I
Offices and Agent

1. *Principal Office.* The principal office of the Corporation may be located within or outside the State of Delaware, as designated by the Board of Directors (the "Board of Directors" or "Board"). The Corporation may have other offices and places of business at such places within or outside the State of Delaware as shall be determined by the directors.

2. *Registered Office.* The registered office of the Corporation shall be fixed in the Corporation's Certificate of Incorporation, as the same may be amended from time to time.

ARTICLE II
Meetings of Stockholders

1. *Annual Meetings.* The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on such date and at such time as determined by resolution of the Board of Directors. If, at the place of the meeting, this date shall fall upon a legal holiday, then such meeting shall be held on the next succeeding business day at the same hour. If no annual meeting is held in accordance with the foregoing provisions, the Board of Directors shall cause the meeting to be held as soon thereafter as convenient. If no annual meeting is held in accordance with the foregoing provisions, a special meeting may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these Bylaws to the annual meeting of stockholders shall be deemed to refer to such special meeting.

2. *Special Meetings.* Special meetings of the stockholders of the Corporation may be called for any purpose at any time by the President, shall be called by the Secretary if directed by the Board of Directors, and shall be called by the President upon the written request of holders of shares entitled to cast not less than ten percent (10%) of the votes entitled to notice of and to vote at such special meeting. Such written request shall specify the purpose or purposes of, and a proposed date for, the meeting and shall be delivered to the President. Upon receipt of such written request, the President shall fix a date and time for such meeting, which date shall be within ten (10) business days of the proposed date specified in the written request.

3. *Place of Meetings.* All meetings of stockholders of the Corporation shall be held within or outside the State of Delaware as may be designated by the Board of Directors or the President, or, if not designated, at the registered office of the Corporation.

4. *Notice of Meeting.* Except as otherwise provided in these Bylaws or the General Corporation Law of the State of Delaware (the "Delaware Corporation Law"), written notice of any meeting of stockholders stating the place, date and hour of the meeting and, in the case of a special meeting, the purpose for which the meeting is called, shall be delivered personally, by mail or by electronic transmission to each stockholder of record entitled to vote at such meeting not less than ten (10) nor more than sixty (60) days before the date of the meeting, by or at the direction of the Board of Directors, the President or the Secretary. If mailed, such notice shall be deemed to be delivered as to any stockholder of record when deposited in the United States mail addressed to the stockholder at his address as it appears on the stock transfer books of the Corporation, with postage prepaid. If sent by electronic transmission, such notice shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice; (ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate

notice; and (iv) if by any other form of electronic transmission, when directed to the stockholder. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given, and stating the manner of such notice, shall in the absence of fraud be prima facie evidence of the facts stated therein. When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

5. *Waiver of Notice.* Any stockholder, either before or after any stockholders' meeting, may waive in writing notice of the meeting, and his waiver shall be deemed the equivalent of giving notice. Attendance at a meeting by a stockholder shall constitute a waiver of notice, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

6. *Fixing of Record Date.* For the purpose of determining the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors of the Corporation may fix, in advance, a record date which shall be not more than sixty (60) days nor less than ten (10) days prior to the date of such meeting, nor more than sixty (60) days prior to any other action. If no record date is fixed, the record date for determining the stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. The record date for determining the stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first written consent is expressed. The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of stockholders of record entitled to notice of or vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

7. *Stockholders' List.* The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting, (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present.

8. *Proxies.* A stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for him by proxy. No proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period.

9. *Voting Rights.* Each stockholder shall have one vote for each share of stock entitled to vote held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided in the Certificate of Incorporation.

Persons holding stock in a fiduciary capacity shall be entitled to vote the shares so held. Persons whose stock is pledged shall be entitled to vote, unless in the transfer by the pledger on the books of the Corporation he has expressly empowered the pledgee to vote thereon, in which case only the pledgee, or his proxy, may represent such stock and vote thereon.

If shares having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary of the Corporation is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (i) if only one votes, his act binds all; (ii) if more than one vote, the act of the majority so voting binds all; and (iii) if more than one vote, but the vote is evenly split on any particular matter, each fraction may vote the securities in question proportionately, or any person voting the shares or a beneficiary, if any, may apply to the Court of Chancery or any court of competent jurisdiction in the State of Delaware to appoint an additional person to act with the persons so voting the shares. The shares shall then be voted as determined by a majority of such persons and the person appointed by the Court. If a tenancy is held in unequal interests, a majority or even-split for the purpose of this subsection shall be a majority or even-split in interest.

10. *Quorum and Required Vote.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws:

(a) the holders of a majority of the shares entitled to vote at the meeting, present in person or by proxy, shall constitute a quorum for the transaction of business; and

(b) if a quorum is present, the affirmative vote of a majority of the shares present or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders (except with respect to elections of directors, which shall be determined by plurality), and, if there are two or more classes of stock entitled to vote as separate classes, then, in the case of each such class, the affirmative vote of a majority of the shares of that class present or represented by proxy at the meeting shall be the vote of such class.

11. *Informal Action By Stockholders.* Except as otherwise provided in the Certificate of Incorporation, any action required by the provisions of the Delaware Corporation Law to be taken or any action which may be taken at a stockholders' meeting may be taken without a meeting, without prior notice and without a vote, if a consent in writing or by electronic transmission, setting forth the action so taken, shall be signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous consent shall be given to those stockholders who have not consented in writing. Any action taken pursuant to such written consent of the stockholders shall have the same force and effect as if taken by the stockholders at a meeting thereof.

ARTICLE III
Board of Directors

1. *Number, Qualifications and Term of Office.* Except as otherwise provided in the Certificate of Incorporation or the Delaware Corporation Law, the business and affairs of the Corporation shall be managed by or under the direction of a Board of Directors consisting of one or more members. Directors need not be stockholders of the Corporation. The number of directors which shall constitute the full Board of Directors may be increased or decreased from time to time by resolution of the Board, subject to the provisions of the Certificate of Incorporation. Except as otherwise provided in the Certificate of Incorporation, each director shall be elected at each annual meeting of stockholders and shall hold such office until the next annual meeting of stockholders and until his successor shall be elected and shall qualify. No decrease in the number of directors shall have the effect of shortening the term of any incumbent director.

2. *Vacancies.* Unless and until filled by the stockholders of the Corporation, any vacancy in the Board of Directors, however occurring, including a vacancy resulting from an enlargement of the Board, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office, and a director chosen to fill a position resulting from an increase in the number of directors shall hold office until the next annual meeting of stockholders and until his successor is elected and qualified, or until his earlier death, resignation or removal.

3. *Resignation.* Any director may resign by delivering his written resignation to the Corporation at its principal office addressed to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

4. *Removal.* Except as otherwise provided in the Certificate of Incorporation or the Delaware Corporation Law, any director or the entire Board of Directors may be removed with or without cause by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that whenever the holders of any class or series of stock are entitled to elect one or more directors by the provisions of the Corporation's Certificate of Incorporation, such director or directors may only be removed by the holders of a majority of the outstanding shares of such class or series of stock.

5. *Compensation.* Directors may be paid such compensation for their services and such reimbursements for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

ARTICLE IV
Meetings of the Board

1. *Place of Meetings.* The regular or special meetings of the Board of Directors or any committee designated by the Board shall be held at the principal office of the Corporation or at any other place within or outside the State of Delaware that a majority of the Board of Directors or any such committee, as the case may be, may designate from time to time by resolution.

2. *Regular Meetings.* The Board of Directors shall meet each year immediately after and at the same place as the annual meeting of the stockholders for the purpose of electing officers and transacting such other business as may come before the meeting. The Board of Directors or any committee designated by the Board may provide, by resolution, for the holding of additional regular meetings within or outside the State of Delaware without notice of the time and place of such meeting other than such resolution; provided that any director who is absent when such resolution is made shall be given notice of said resolution.

3. *Special Meetings.* Special meetings of the Board of Directors or any committee designated by the Board may be held at any time and place, within or outside the State of Delaware, designated in a call by the Chairman of the Board, if any, by the President or by a majority of the members of the Board of Directors or any such committee, as the case may be.

4. *Notice of Special Meetings.* Except as otherwise provided by these Bylaws or the laws of the State of Delaware, written notice of each special meeting of the Board of Directors or any committee thereof setting forth the time and place of the meeting shall be given to each director by the Secretary or by the officer or director calling the meeting not less than three (3) days prior to the time fixed for the meeting, in the case of notices given by United States mail, or not less than twenty-four (24) hours prior to the time fixed for the meeting, in the case of notices given in any other manner permitted hereunder. Notice of special meetings may be either given personally, by telephone, or by sending a copy of the notice through the United States mail or by telegram, telex, telecopy or other form of electronic transmission, charges prepaid, to the address of each director appearing on the books of the Corporation. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail so addressed, with postage prepaid thereon. If notice is given by telegram, telex, telecopy or other form of electronic transmission, such notice shall be deemed to be delivered when sent. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

5. *Waiver of Notice.* A director may waive, in writing, notice of any special meeting of the Board of Directors or any committee thereof, either before, at, or after the meeting, and his waiver shall be deemed the equivalent of giving notice. By attending or participating in a regular or special meeting, a director waives any required notice of such meeting unless the director, at the beginning of the meeting, objects to the holding of the meeting or the transacting of business at the meeting.

6. *Quorum and Action at Meeting.* At meetings of the Board of Directors or any committee designated by the Board, a majority of the directors then in office, or a majority of the members of any such committee, as the case may be, shall constitute a quorum for the transaction of business; provided, however, that in no case shall less than one-third (1/3) of the total number of directors or committee members constitute a quorum. If a quorum is present, the act of the majority of directors in attendance shall be the act of the Board of Directors or any committee thereof, as the case may be, unless the act of a greater number is required by these Bylaws, the Certificate of Incorporation or the Delaware Corporation Law. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn that meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

7. *Presumption of Assent.* A director who is present at a meeting of the Board or a committee thereof when action is taken is deemed to have assented to the action taken unless: (i) he objects at the beginning of such meeting to the holding of the meeting or the transacting of business at the meeting; (ii) he contemporaneously requests that his dissent from the action taken be entered in the minutes of such meeting; or (iii) he gives written notice of his dissent to the presiding officer of such meeting before its adjournment or to the Secretary of the Corporation immediately after adjournment of such meeting. The right of dissent as to a specific action taken at a meeting of a Board or a committee thereof is not available to a director who votes in favor of such action.

8. *Committees.* The Board of Directors may, by a resolution passed by a majority of the whole Board of Directors, designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of the absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of the Delaware Corporation Law, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all such papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee (i) may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee, and (ii) may make rules for the conduct of its business, but, unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these Bylaws for the Board of Directors.

9. *Informal Action by Directors.* Except as otherwise provided in the Certificate of Incorporation, any action required or permitted by the Delaware Corporation Law to be taken at any meeting of the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent to the action in writing or by electronic transmission, and the written consents and electronic transmissions are filed with the minutes of proceedings of the Board or committee.

10. *Telephonic Meetings.* Directors or members of any committee designated by the Board may participate in a meeting of the Board or committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Such participation shall constitute presence in person at the meeting.

ARTICLE V
Officers and Agents

1. *Enumeration, Election and Term.* The officers of the Corporation shall consist of a President, a Secretary, a Treasurer and such other officers with such other titles as may be deemed necessary or desirable by the Board of Directors, including one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries and a Chairman of the Board. Any number of offices may be held by the same person and no officer need be a stockholder or a resident of the State of Delaware. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, each officer shall hold office until his successor is elected and qualified or until his earlier death, resignation or removal. The officers of the Corporation shall be elected annually by the Board of Directors at the first meeting of the Board held after each annual meeting of the stockholders.

2. *General Duties.* All officers and agents of the Corporation, as between themselves and the Corporation, shall have such authority and shall perform such duties in the management of the Corporation as may be provided in these Bylaws or as may be determined by resolution of the Board of Directors not inconsistent with these Bylaws. In all cases where the duties of any officer, agent or employee are not prescribed by the Bylaws or by the Board of Directors, such officer, agent or employee shall follow the orders and instructions of the President.

3. *Vacancies.* The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave any vacancy unfilled for such period as it may determine. The officer so selected shall hold office until his successor is elected and qualified or until his earlier death, resignation or removal.

4. *Compensation.* The Board of Directors from time to time shall fix the compensation of the officers of the Corporation. The compensation of other agents and employees of the Corporation may be fixed by the Board of Directors, or by any committee designated by the Board or by an officer to whom that function has been delegated by the Board.

5. *Resignation and Removal.* Any officer may resign by delivering his written resignation to the Corporation at its principal office addressed to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. Any officer or agent of the Corporation may be removed, with or without cause, by a vote of the majority of the members of the Board of Directors whenever in its judgment the best interests of the Corporation may be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment of an officer or an agent shall not of itself create contract rights.

6. *Chairman of the Board.* The Chairman of the Board, if any, shall preside as chairman at meetings of the stockholders and the Board of Directors. He shall, in addition, have such other duties as the Board may prescribe that he perform. At the request of the President, the Chairman of the Board may, in the case of the President’s absence or inability to act, temporarily act in his place. In the case of death of the President or in the case of his absence or inability to act without having designated the Chairman of the Board to act temporarily in his place, the Chairman of the Board shall perform the duties of the President, unless the Board of Directors, by resolution, provides otherwise. If the Chairman of the Board shall be unable to act in place of the President, the Vice Presidents may exercise such powers and perform such duties as are provided in Section 8 below.

7. *President.* The President shall be the chief executive officer of the Corporation and shall have general supervision of the business of the Corporation. In the event the position of Chairman of the Board shall not be occupied or the Chairman shall be absent or otherwise unable to act, the President shall preside at meetings of the stockholders (and of the directors, if he is a member of the Board of Directors) and shall discharge the duties of the presiding officer. At each annual meeting of the stockholders, the President shall give a report of the business of the Corporation for the preceding fiscal year and shall perform whatever other duties the Board of Directors may from time to time prescribe.

8. *Vice Presidents.* Each Vice President shall have such powers and perform such duties as the Board of Directors may from to time prescribe or as the President may from time to time delegate to him. At the request of the President, in the case of the President's absence or inability to act, any Vice President may temporarily act in his place. In the case of the death of the President, or in the case of his absence or inability to act without having designated a Vice President or Vice Presidents to act temporarily in his place, the Board of Directors, by resolution, may designate a Vice President or Vice Presidents to perform the duties of the President. If no such designation shall be made, the Chairman of the Board, if any, shall exercise such powers and perform such duties, but if the Corporation has no Chairman of the Board, or if the Chairman is unable to act in place of the President, all of the Vice Presidents may exercise such powers and perform such duties.

9. *Secretary.* The Secretary shall keep or cause to be kept, in books provided for that purpose, the minutes of the meetings of the stockholders, executive committee, if any, and any other committees, and of the Board of Directors; shall see that all notices are duly given in accordance with the provisions of these Bylaws and as required by law; shall be custodian of the records and of the seal of the Corporation and see that the seal is affixed to all documents, the execution of which on behalf of the Corporation under its seal is duly authorized and in accordance with the provisions of these Bylaws; and, in general, shall perform all duties incident to the office of Secretary and such other duties as may, from time to time, be assigned to him by the Board of Directors or by the President. In the absence of the Secretary or his inability to act, the Assistant Secretaries, if any, shall act with the same powers and shall be subject to the same restrictions as are applicable to the Secretary.

10. *Treasurer.* The Treasurer shall have custody of corporate funds and securities. He shall keep full and accurate accounts of receipts and disbursements and shall deposit all corporate monies and other valuable effects in the name and to the credit of the Corporation in the depository or depositories of the Corporation, and shall render an account of his transactions as Treasurer and of the financial condition of the Corporation to the President and/or the Board of Directors upon request. Such power given to the Treasurer to deposit and disburse funds shall not, however, preclude any other officer or employee of the Corporation from also depositing and disbursing funds when authorized to do so by the Board of Directors. The Treasurer shall, if required by the Board of Directors, give the Corporation a bond in such amount and with such surety or sureties as may be ordered by the Board of Directors for the faithful performance of the duties of his office. The Treasurer shall have such other powers and perform such other duties as may from time to time be prescribed by the Board of Directors or the President. In the absence of the Treasurer or his inability to act, the Assistant Treasurers, if any, shall act with the same authority and shall be subject to the same restrictions as are applicable to the Treasurer.

11. *Delegation of Duties.* Whenever an officer is absent, or whenever, for any reason, the Board of Directors may deem it desirable, the Board may delegate the powers and duties of an officer to any other officer or officers or to any director or directors.

ARTICLE VI
Indemnification of Officers, Directors and Others

1. *Indemnification: Third Party Actions.* The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that he is or was a director or officer of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent or another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable

cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

2. *Indemnification: Derivative Actions.* The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he is or was a director or officer of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent or another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

3. *Mandatory Indemnification.* To the extent that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article VI or in defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

4. *Authorization for Indemnification.* Any indemnification under Sections 1 and 2 of this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in Sections 1 and 2 of this Article VI. Such determination shall be made, with respect to a person who is a director or officer of the Corporation at the time of such determination, (i) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding, or (ii) by a committee of disinterested directors designated by a majority vote of a quorum of the disinterested directors, or (iii) if there are no such disinterested directors, or if such disinterested directors so direct, by independent legal counsel in a written opinion, or (iv) by the stockholders.

5. *Advance Payment of Expenses.* Expenses (including attorneys' fees) incurred by an officer or director in defending a civil, criminal, administrative or investigative action, suit or proceeding may be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of the director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Corporation as authorized in this Article VI. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

6. *Non-Exclusive.* The indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue, unless otherwise provided when authorized or ratified, as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

7. *Insurance.* The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of this Article VI.

8. *Definitions.* For purposes of this Article VI, the following terms shall have the following meanings:

(a) references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued;

(b) references to "other enterprises" shall include employee benefit plans;

(c) references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan;

(d) references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and

(e) a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VI.

ARTICLE VII
Capital Stock

1. *Certificates of Stock.* The shares of the Corporation shall be represented by certificates; provided that the Board of Directors of the Corporation may, by resolution, provide that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Notwithstanding the adoption of such a resolution by the Board of Directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the Corporation by the Chairman of the Board, the President or a Vice President, and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary, representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

2. *Issuance of Stock.* Unless otherwise voted by the stockholders and subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the Corporation or the whole or any part of any unissued balance of the authorized capital stock of the Corporation held in its treasury may be issued, sold, transferred or otherwise disposed of by resolution of the Board of Directors in such manner, for such consideration and on such terms as the Board of Directors may determine. Consideration for such shares of capital stock shall be expressed in dollars and shall not be less than the par value or stated value therefor, as the case may be. The par value for shares, if any, shall be stated in the Certificate of Incorporation, and the stated value for shares, if any, shall be fixed from time to time by the Board of Directors.

3. *Lost Certificates.* The Board of Directors may direct a new certificate to be issued in place of any previously issued certificate alleged to have been destroyed or lost if the owner makes an affidavit or affirmation of that fact and produces such evidence of loss or destruction as the Board may require. The Board, in its discretion, may as a condition precedent to the issuance of a new certificate require the owner to give the Corporation a bond as indemnity against any claim that may be made against the Corporation relating to the allegedly destroyed or lost certificate.

4. *Transfer of Shares.* Subject to applicable law, shares of stock of the Corporation may be transferred on its books upon the surrender to the Corporation or its transfer agent of the certificates representing such shares, if any, duly endorsed or accompanied by a written assignment or power of attorney duly executed and with such proof of authority or authenticity of signature as the Corporation or its transfer agent may reasonably require. In that event, the surrendered certificates shall be cancelled, new certificates issued to the persons entitled to them, if any, and the transaction recorded on the books of the Corporation.

5. *Registered Stockholders.* The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of the State of Delaware.

6. *Stock Ledger.* An appropriate stock journal and ledger shall be kept by the Secretary or such registrars or transfer agents as the directors by resolution may appoint in which all transactions in the shares of stock of the Corporation shall be recorded.

7. *Restriction on Transfer of Shares.* Notice of any restriction on the transfer of the stock of the Corporation shall be placed on each certificate of stock issued or in the case of uncertificated shares contained in the notice sent to the registered owner of such shares in accordance with the provisions of the Delaware Corporation Law.

ARTICLE VIII
Dividends

Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the Corporation's capital stock, subject to the provisions of the Certificate of Incorporation. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the directors shall think in the best interests of the Corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE IX
Voting of Securities Owned by the Corporation

All stock and other securities of other business entities held by the Corporation for itself or for other parties in any capacity shall be voted, and all proxies with respect thereto shall be executed, by the person or persons authorized to do so by resolution of the Board of Directors, or in the absence of such authorization, by the Chairman of the Board, the President or a Vice President.

ARTICLE X
Seal and Fiscal Year

1. *Seal.* The Board of Directors may adopt a corporate seal, which shall be in the form of a circle and shall have inscribed thereon the name of the Corporation and the words “Corporate Seal, Delaware”. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced.

2. *Fiscal Year.* The fiscal year of the Corporation shall be determined by the Board of Directors and set forth in the minutes of the directors. Said fiscal year may be changed from time to time by the Board of Directors in its discretion.

ARTICLE XI
Amendments

Subject to repeal or change by action of the stockholders, the Board of Directors may amend, supplement or repeal these Bylaws or adopt new Bylaws, and all such changes shall affect and be binding upon the holders of all shares heretofore as well as hereafter authorized, subscribed for or offered.

ARTICLE XII
Miscellaneous

1. *Gender.* Whenever required by the context, the singular shall include the plural, the plural the singular, and one gender shall include all genders.

2. *Invalid Provision.* The invalidity or unenforceability of any particular provision of these Bylaws shall not affect the other provisions herein, and these Bylaws shall be construed in all respects as if such invalid or unenforceable provision was omitted.

3. *Governing Law.* These Bylaws shall be governed by and construed in accordance with the laws of the State of Delaware.

Exhibit 3.41

CERTIFICATE OF INCORPORATION

OF

WINDROCK, INC.

The undersigned, in order to form a corporation pursuant to the Tennessee Business Corporation Act, hereby adopts the following charter for the above listed corporation:

1. The name of the corporation is:

WINDROCK, INC.

2. The number of shares that the corporation is authorized to issue is as follows: 2,000 shares of common stock without par value.

3. (a) The complete street address (including Zip Code) of the corporation's initial registered office is:

835 Innovation DriveKnoxville, TN 37932 (Knox County).

(b) The name of its initial registered agent at the office listed above is: Ronnie D. Moore.

4. The name and address (including Zip Code) of the Incorporator is:

Ronnie D. Moore
835 Innovation Drive
Knoxville, TN 37932

5. The complete address (including Zip Code) of the corporation's principal office is: 835 Innovation Drive, Knoxville, TN 37932.

6. The corporation is for profit. The names of the initial directors are: James F. Kirkpatrick, Jr., Ronnie D. Moore, Kenneth R. Piety, and Ronald Canada.

7. No director may be sued by the corporation or its shareholders for breach of their fiduciary duty to the corporation, provided, however, that this provision shall not absolve a director from a breach of their duty of loyalty, for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, or for distributions in violation of TCA § 48-18-304.

8. The corporation elects to have preemptive rights as described in TCA § 48-16-301(b).

9. The corporation will indemnify its directors, officers, employees and agents to the maximum extent permitted by §§ 48-18-501 through 48-18-507, inclusive, of Tennessee Code Annotated.

10. No fractional shares of the corporation will be issued or transferred on the records of the corporation.

Dated at Knoxville, Tennessee, this 15th day of December, 1989.

/s/ Ronnie D. Moore

Ronnie D. Moore
Incorporator

ARTICLES OF AMENDMENT
TO THE CHARTER OF
WINDROCK, INC.

TO THE TENNESSEE SECRETARY OF STATE:

Pursuant to the provisions of § 48-20-106 of the Tennessee Business Corporation Act, the undersigned corporation adopts the following Articles of Amendment to its Charter.

1. The name of the corporation is Windrock, Inc.

2. The text of the Amendment adopted is as follows:

"The number of shares that the corporation is authorized to issue is as follows:

100,000 shares of common stock without par value."

3. The Amendment was duly adopted by joint resolution of the Board of Directors and Shareholders at a specially called meeting on August 5, 1996.

DATED this 8th day of August, 1996.

WINDROCK, INC.

/s/ William A. Griffith
William A. Griffith, Secretary

Exhibit 3.42

BY-LAWS

OF

WINDROCK, INC.

ARTICLE I

Offices

Section 1. The principal office of this corporation shall be located at 835 Innovation Drive, Knoxville, Tennessee 37932 (Knox County).

Section 2. The corporation may also have offices at such other places within or without the State of Tennessee as the business of the corporation may require.

ARTICLE II

Seal

This corporation does not adopt a seal. The signature of the President of the corporation, attested to by the Secretary of the corporation, shall be sufficient to bind the corporation.

ARTICLE III

Stockholders Meetings

Section 1. The Annual Meeting of the stockholders shall be held upon the date fixed by the Board of Directors. Such meetings may be held at the offices of the corporation or at any other place within or without the State of Tennessee as designated from time to time by the directors and stated in the notice of the meeting.

Section 2. Special meetings of the stockholders may be called at any time by the Board of Directors, the President, or by the Secretary upon the written request of stockholders owning at least twenty-five percent (25%) of all of the shares outstanding and entitled to vote.

Special meetings may be held at the offices of the corporation or at any other place within or without the State of Tennessee. Business transacted at all special meetings shall be confined to the objects stated in the notice of or call therefor.

Section 3. Written or printed notice stating the place, day and hour of any stockholders meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called and the person or persons calling the meeting, shall be delivered either personally or by mail to each shareholder entitled to vote at the meeting by the Secretary at the direction of the President, Board of Directors, or the holders of not less than twenty-five percent (25%) of all the shares entitled to vote at such meeting. Such notice shall be delivered not less than ten (10) nor more than sixty (60) days before the date of the meeting.

Section 4. A majority of the outstanding shares of the corporation entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of shareholders. After a quorum has been established, the withdrawal of any shareholder after the commencement of the meeting shall not void the quorum. If, however,

such majority is not present or represented at any meeting of the stockholders, those who do attend may adjourn the meeting until the requisite amount of voting stock shall be represented by shareholders who are present in person or by proxy. At such adjourned meeting at which the requisite amount of voting stock is represented, any business may be transacted which might have been transacted at the meeting originally called. Every meeting of the stockholders may adjourn from time to time until its business is completed.

Section 5. At all meetings of shareholders, a shareholder may vote by proxy executed in writing by the shareholder or by his duly authorized attorney-in-fact. Such proxy shall be filed with the Secretary of the corporation before or at the time of the meeting.

Section 6. Subject to the provisions of Section 5 of this ARTICLE III, each stockholder shall have one (1) vote for each share of stock registered in his or her name on the books of the corporation. All questions shall be decided by the vote of the stockholders who hold a majority of the stock represented at the meeting unless a greater number is required by statute, in which case the minimum number of votes required by statute for the taking of the particular action shall be required.

Section 7. There shall be kept a record of the proceeding of all meetings of the stockholders which shall be verified by the signatures of the President or other person presiding at the meeting and the Secretary or Acting Secretary for the meeting.

Section 8. Unless otherwise provided by law, any action required to be taken at a meeting of the shareholders, or any other action which may be taken at a meeting of the shareholders, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the shareholders entitled to vote with respect to the subject matter thereof.

ARTICLE IV

Board of Directors

Section 1. The business, property and affairs of the corporation shall be managed and controlled by the Board of Directors, and such Board may exercise all powers of the corporation and do such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-Laws directed or required to be exercised or done by the stockholders.

The Board of Directors shall consist of not less than three (3) nor more than five (5) persons who need not be stockholders of the corporation. In the event there are fewer than three (3) stockholders, the number of directors may be less than three (3), but not less than the number of stockholders of record. Each director shall be elected for a term not to exceed three (3) years and until his successor shall be elected and qualified. The directors shall be elected at each Annual Meeting of the stockholders.

Section 2. A majority of the Board shall constitute a quorum and may conduct all of the business which the Board is empowered to conduct.

Section 3. The Annual Meeting of the directors shall be held without notice each year immediately following the Annual Meeting of the stockholders as determined pursuant to ARTICLE III, Section 1, hereof.

Section 4. The stockholders may, at any meeting called for such purpose, remove any director and fill the vacancy until the next Annual Meeting. If a vacancy occurs in the Board from any cause other than removal by the stockholders, such vacancy may be filled by the Board until the next Annual Meeting of the stockholders.

Section 5. Special Meetings of the Board of Directors may be called by the Chairman of the Board, the President, or by any two (2) directors.

Special meetings of the Board of Directors must be preceded by at least two (2) days notice of the date, time, and place of the meeting. Attendance of a director at a meeting shall constitute of waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

Section 6. The Board of Directors shall keep a record of its proceedings, which shall be verified by the signatures of the Chairman and Secretary of the meeting. The Board of Directors will also cause regular and correct books of account to be kept for the corporation.

Section 7. Each director shall have on (1) vote at meetings of the Board of Directors regardless of the number of shares of stock, if any, he may own.

Section 8. No salary shall be paid to directors for their services as directors, but the Board may by resolution authorize the payment of a fixed sum and expenses for attendance at any regular or special meeting of the Board.

ARTICLE V

Officers

Section 1. The officers of the corporation shall be:

(a) The President, who shall be the active executive officer of the corporation and, subject to the supervision of the Board of Directors, shall have general and active management of the business of the corporation and shall see that all orders and resolutions of the Board are carried into effect. The chairman shall preside at all meetings of the stockholders and Board of Directors.

The President shall have the general powers and duties customarily vested in the office of the President, including the signing of all documents on behalf of the corporation, and shall also do and perform such other duties as from time to time may be assigned to the President by the Board of Directors.

(b) The Secretary, who shall keep the Minutes of all meetings of the Board of Directors and stockholders. The Secretary shall give such notices to the directors and stockholders as may be required by these By-Laws. The Secretary shall have charge of all books, papers, contracts and documents belonging to the corporation except those pertaining to the office of the Treasurer. The Secretary shall keep, or cause to be kept, a record showing the name and address, from time to time, of each stockholder of the corporation. The Secretary shall perform such other duties as may from time to time be assigned to the Secretary by the Board of Directors.

(c) The Treasurer, who shall have custody of the corporate funds and securities, shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation, and shall deposit all monies and other valuable effects in the name and to the credit of the corporation. The Treasurer shall disburse the funds of the corporation as may be ordered by the Board, taking proper vouchers for such disbursement, and shall render to the President and the Board of Directors, at the regular meetings of the Board or whenever they may require it, an account of all of the Treasurer’s transactions as Treasurer and of the financial condition of the corporation.

Section 2. All of the officers of this corporation shall be under the supervision of the Board of Directors and the Board of Directors may designate additional powers and duties for any or all of such officers.

Section 3. The officers of this corporation shall be elected by the Board of Directors at each annual Meeting and shall hold office for one (1) year and thereafter until his or her successor has been elected or appointed an qualified. Any officer may be removed whenever in the judgement of the Board of Directors the best interests of the corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any of the person so removed. Election or appointment of an officer shall not of itself create contract rights. Any vacancy which may occur in any office shall be filled by the Board of Directors.

Section 4. The Board of Directors may appoint such other officers and agents as it shall deem necessary, including Vice Presidents, Assistant Secretaries and Assistant Treasurers, and shall designate the powers and duties of such officers and/or agents. Any of such officers and/or agents may be removed at any time by the Board Of Directors.

Section 5. Officers need not be stockholders or directors of the corporation.

Section 6. The Board of Directors shall from time to time fix the salaries of the officers and agents of this corporation and shall authorize the appropriate corporate officers to enter into contracts of employment with the officers and agents of this corporation.

Section 7. As many as two (2) offices of this corporation may be held by the same person, except that the offices of President and Secretary shall not be held by the same person at the same time.

ARTICLE VI

Stock

Section 1. The certificates of stock of the corporation shall be numbered and shall be entered on the books of the corporation as they are issued. They shall exhibit the holder’s name and number of shares, shall be signed by the President and Secretary.

Section 2. No shares shall be offered or issued without the approval of the Board of Directors which shall be entered in the Minutes. The person in whose name shares of stock stand on the books of the corporation shall be deemed the owner thereof so far as the corporation is concerned.

Section 3. Any person claiming a certificate of stock to be lost or destroyed shall make an affidavit of that fact, and give the corporation a bond in such sum as the directors may require, not exceeding double the value of the stock, to indemnify the corporation against loss or liability on account of the alleged loss of any such certificate. In addition, the Board of Directors may in its discretion, require that advertisement be made for the lost certificate in such manner as it may direct. A new certificate of the same tenor and for the same number of shares as the one alleged to be lost or destroyed may be issued upon compliance with the foregoing provisions. It may be issued without requiring any bond when, in the judgment of the directors, it will be safe and proper so to do.

Section 4. It shall be within the power of the Board of Directors to designate a day for the closing of the stock transfer books of the corporation prior to any regular or special meeting of the stockholders.

ARTICLE VII

Dividends

Section 1. The Board of Directors may from time to time declare, and the corporation may pay, dividends on its outstanding shares, in cash, property, or its own shares, except when the corporation is insolvent or when the payment thereof would render the corporation insolvent.

Section 2. No dividend may be declared or paid which violates the statutes of the State of Tennessee pertaining to corporate dividends.

ARTICLE VIII

Fiscal Year

This corporation shall conduct its financial operations on a calendar year basis.

ARTICLE IX

Indemnification of Directors, Officers and Employees

Section 1. General. Every person (and the heirs and legal representatives of such person) who is or was a director, officer or employee of the corporation or of any other corporation which he or she serves or served as such at the request of the corporation and of which the corporation directly or indirectly is or was a stockholder or creditor, or in which, or in the stocks, bonds, securities, or other obligations of which, it is or was in any way interested, may in accordance with Section 2 of this ARTICLE IX be indemnified by the corporation against any and all liability and reasonable expense that may be incurred by him in connection with or resulting from any claim, action, suit, or other proceeding (whether brought by or in the right of the corporation or such other corporation or otherwise), civil, criminal, administrative, or investigative, including any appeal relating thereto, in which he or she may become involved, as a party or otherwise, by reason of being or having been a director, officer, or employee of the corporation or such other corporation, or by reason of any action taken or not taken in the capacity as such director, officer, or employee, whether or not he or she continues to be such at the time such liability or expense is incurred, provided (a) in the case of a claim, action, suit, or other proceeding brought by or in the right of the corporation to procure a judgment in its favor, that such person has not been adjudged to be liable for negligence or misconduct in the performance of their duty to the corporation; and (b) such person acted in good faith for a purpose which they reasonably believed to be in the best interest of the corporation or such other corporation, as the case may be, and, in addition, in any criminal action or proceeding had no reasonable cause to believe that their conduct was unlawful. Indemnification pursuant to this ARTICLE IX, however, shall (i) not include any amount payable by such person to the corporation in satisfaction of any judgement or settlement, and (ii) be reduced by the amount of any other' indemnification or reimbursement of such person in respect of the liability and expense with respect to which indemnification is claimed. As used in this ARTICLE IX, the terms "liability" and "expense" shall include, but shall not be limited to, counsel fees and disbursement and amount of judgements, fine, or penalties against, and amounts paid in settlement by, such person. The termination of any claim, action, suit, or other proceeding, by judgment, order, settlement (whether with or without court approval), or conviction or upon a plea of guilty or of nolo contendere, or its equivalent, shall not create a presumption that such person did not meet the standards of conduct set forth in this paragraph.

Section 2. Determination of Entitlement to Indemnification. Every person (and the heirs and legal representatives of such person) referred to in Section 1 of this ARTICLE IX, who has been wholly successful, on the merits, with respect to any claim, action, suit, or other proceeding of the character described in said Section 1 shall be entitled to indemnification as provided in said Section 1 as of right. Except as provided in the preceding sentence, any indemnification under said Section 1 shall be made at the discretion of the corporation, but only if either (a) the Board of Directors, acting by a quorum consisting of directors who are not parties to (or who have been wholly successful with respect to) such claim, action, suit, or other proceeding, shall find that such person has met the standards of conduct set forth in said Section 1, or (b) independent legal counsel (who may be regular counsel or the corporation) shall deliver to the corporation their written advice that, in their opinion, such person has met such standards.

Section 3. Advancement of Expenses. Expenses incurred with respect to any claim, suit, or other proceeding of the character described in Section 1 of this ARTICLE IX may be advanced by the corporation prior to the final disposition thereof upon receipt of an undertaking by or on behalf of the recipient to repay such amount unless it shall ultimately be determined that he or she is entitled to indemnification under this ARTICLE IX.

Section 4. Rights not Exclusive. The rights of indemnification provided in the ARTICLE IX shall be in addition to any rights to which any person (or the heirs or legal representatives of such person) referred to in Section 1 of this ARTICLE IX may otherwise be entitled by contract or as a matter of law and shall be available whether or not the claim asserted against such person is based on matters which antedate the adoption of this ARTICLE IX.

ARTICLE X

Waiver of Notice

Unless otherwise provided by law, whenever any notice is required to be given to any shareholder or director of the corporation under the provisions of these By-Laws or under the provisions of the Articles of Incorporation, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

ARTICLE XI

Amendments

These By-Laws may be amended or repealed by the corporation’s Board of Directors.

Exhibit 5.1

Baker & McKenzie LLP

Bank of America Center
700 Louisiana, Suite 3000
Houston, Texas 77002
United States

Tel: +1 713 427 5000
Fax: +1 713 427 5099
www.bakermckenzie.com

November 14, 2018

Apergy Corporation
12445 Technology Forest Blvd
Building 4, 12th Floor
The Woodlands, Texas 77381

Ladies and Gentlemen,

As set forth in the Registration Statement on Form S-4 (as it may be amended from time to time, the "Registration Statement") filed with the Securities and Exchange Commission (the "Commission") by Apergy Corporation, a Delaware corporation (the "Company"), and the Subsidiary Guarantors (as defined herein), as co-registrants, under the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration under the Securities Act of $300,000,000 aggregate principal amount of the Company's 6.375% Senior Notes due 2026 (the "Exchange Notes"), which will be fully and unconditionally guaranteed by (i) certain subsidiaries of the Company incorporated or formed pursuant to the laws of the States of California, Delaware or Texas (the "Opinion Guarantors" and, together with the Company, the "Opinion Parties") and listed on Schedule I hereto and (ii) certain other subsidiaries of the Company listed on Schedule II hereto (together with the Opinion Guarantors, the "Subsidiary Guarantors") to the extent set forth in the Indenture (as defined herein) (collectively, the "Subsidiary Guarantees" and, together with the Exchange Notes, the "Exchange Securities"), to be offered by the Company in exchange (the "Exchange Offer") for a like principal amount of the Company's issued and outstanding 6.375% Senior Notes due 2026 (the "Outstanding Notes") and the related guarantees by the Subsidiary Guarantors, we are passing upon certain legal matters in connection with the Exchange Securities by the Company and the Subsidiary Guarantors, as applicable. The Exchange Securities are to be issued under the Indenture, dated as of May 3, 2018 (the "Original Indenture"), between the Issuer and Wells Fargo Bank, National Association, as trustee (the "Trustee"), as amended and supplemented by the Effective Date Supplemental Indenture, dated as of May 9, 2018, among the Subsidiary Guarantors and the Trustee (the "First Supplemental Indenture" and the Original Indenture, as amended and supplemented by the First Supplemental Indenture, the "Indenture").

In connection therewith, we have examined originals or copies certified or otherwise identified to our satisfaction of (i) the Registration Statement, (ii) the Indenture, (iii) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated By-Laws, as amended to date, (iv) the certificate of incorporation, certificate of formation, articles of organization or other formation document, as applicable, of each of the Opinion Guarantors, (v) the by-laws, limited liability company agreement, operating agreement or other governing document, as applicable, in each case as amended and in effect on the date hereof, of each of the Opinion Guarantors, (vi) the

form of Exchange Notes, (vii) resolutions of the board of directors or members, as applicable, of each of the Opinion Parties and (viii) such other corporate records, agreements, documents and instruments and certificates or comparable documents of public officials and officers and representatives of the Opinion Parties as we have deemed necessary or appropriate for the expression of the opinions contained herein. As to any facts material to our opinion, we have made no independent investigation of such facts and have relied, to the extent that we deem such reliance proper, upon certificates of public officials and officers or other representatives of the Opinion Parties.

In rendering the opinions set forth below, we have assumed that (i) the signatures on all documents examined by us are genuine and that all documents submitted to us as originals are authentic and that all documents submitted to us as certified or photostatic copies conform to the originals thereof, (ii) each natural person signing any document reviewed by us had the legal capacity to do so, (iii) each person signing in a representative capacity (other than on behalf of the Opinion Parties) any document reviewed by us had authority to sign in such capacity and (iv) each of the Indenture and the Exchange Notes has been duly authorized, executed and delivered by the parties thereto (other than the Opinion Parties) in substantially the form reviewed by us and represents a legal, valid and binding obligation of such parties (except with respect to the Opinion Parties, to the extent covered in our opinions below). We also have assumed that (a) prior to the commencement of the Exchange Offer, the Registration Statement will have become effective under the Securities Act and the Indenture will have been qualified under the Trust Indenture Act of 1939, as amended, and (b) the Exchange Notes will have been duly executed, authenticated and delivered in accordance with the provisions of the Indenture and issued in exchange for Outstanding Notes pursuant to, and in accordance with the terms of, the Exchange Offer as contemplated in the Registration Statement.

Based upon and subject to the limitations, exceptions, qualifications and assumptions set forth herein, we are of the opinion that the Exchange Notes and the Subsidiary Guarantees, when issued, will constitute legal, valid and binding obligations of the Company and the Subsidiary Guarantors, respectively, enforceable against the Company and the Subsidiary Guarantors, respectively, in accordance with their terms, except as that enforcement is subject to (i) any applicable bankruptcy, insolvency, reorganization, arrangement, moratorium, fraudulent transfer or conveyance or other laws relating to or affecting creditors' rights generally, (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding or at law) and the discretion of the court before which any proceeding therefor may be brought and (iii) any implied covenants of good faith and fair dealing.

The opinions set forth above are limited in all respects to matters of law of the State of New York, the California Corporations Code, the Delaware General Corporation Law, the Delaware Limited Liability Company Act, the Texas Business Organizations Code and applicable federal law and no opinion is expressed herein as to any matters governed by any other laws. This opinion is limited to the specific issues addressed herein, and no opinion may be inferred or implied beyond the opinions expressly stated

herein. We assume no obligation to revise or supplement this opinion or advise you of any changes in any matter set forth herein after the effective date of the Registration Statement. We hereby consent to the filing of this opinion of counsel as Exhibit 5.1 to the Registration Statement. We also consent to the reference to our Firm under the heading “Legal Matters” in the prospectus forming a part of the Registration Statement. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Baker & McKenzie LLP

Baker & McKenzie LLP

Schedule I

Accelerated Process Systems, Inc.	Texas
Apergy (Delaware) Formation, Inc.	Delaware
Apergy Artificial Lift, LLC	Delaware
Apergy BMCS Acquisition Corp.	Delaware
Apergy Energy Automation, LLC	Delaware
Apergy Funding Corporation	Delaware
Apergy USA, Inc.	Delaware
Harbison-Fischer, Inc.	Delaware
Honetreat Company	California
Norris Rods, Inc.	Delaware
Norriseal-Wellmark, Inc.	Delaware
PCS Ferguson, Inc.	Delaware
Quartzdyne, Inc.	Delaware
Spirit Global Energy Solutions, Inc.	Delaware
Theta Oilfield Services, Inc.	Delaware
US Synthetic Corporation	Delaware
Wellmark Holdings, Inc.	Delaware

Schedule II

Apergy ESP Systems, LLC	Oklahoma
UPCO, Inc.	Oklahoma
Windrock, Inc.	Tennessee

Exhibit 21.1

Apergy Corporation Subsidiaries

Subsidiary	Jurisdiction of Formation
Accelerated Companies, LLC	Delaware
Accelerated Process Systems, Inc.	Texas
Accelerated Production Systems Ltd.	UK
Apergy Artificial Lift S.A.	Argentina
Apergy Artificial Lift Pty Ltd.	Australia
Apergy BMCS Acquisition Corp.	Delaware
Apergy Canada ULC	British Columbia
Apergy Artificial Lift de México, S.A. de C.V.	Mexico
Apergy Artificial Lift International, LLC	Delaware
Apergy Artificial Lift, LLC	Delaware
Apergy ESP Systems, LLC	Oklahoma
Apergy (Delaware) Formation, Inc.	Delaware
Apergy Energy Automation, LLC	Delaware
Apergy Funding Corporation	Delaware
Apergy Energy India Private Limited	India
Apergy International Operations, Inc.	Delaware
Apergy Luxembourg S.a.r.l.	Luxembourg
Apergy Middle East LLC	Oman
Apergy Middle East Services LLC	Oman
Apergy Minority Luxembourg S.a.r.l.	Luxembourg
Apergy PCS Holding LLC	Delaware
Apergy UK Limited	UK
Apergy USA, Inc.	Delaware
Apergy S.A.	Argentina
Dover Energy (Kenya) Limited	Kenya
Ener Tools SA	Argentina
Harbison-Fischer, Inc.	Delaware
Honetreat Company	California
Norris Rods, Inc.	Delaware
Norriseal-Wellmark, Inc.	Delaware
NPS Services, Inc.	Delaware
Oil Lift Technology Inc.	British Columbia
Oil Lift Technology, Inc.	New Mexico
Oil Lift Technology SAS	Colombia
PCS Ferguson Canada Inc.	Alberta
PCS Ferguson, Inc.	Delaware
Products Flange and Supply, Inc.	Texas
Pro-Rod Inc.	Alberta
Pro-Rod USA, Inc.	Delaware
Quartzdyne, Inc.	Delaware
Spirit Global Energy Solutions, Inc.	Delaware
Spirits Global Energy Solutions Canada, Ltd.	Alberta
Theta Oilfield Services, Inc.	Delaware
UAC Corporation	Delaware
UPCO, Inc.	Oklahoma
US Synthetic Corporation	Delaware
Wellmark Holdings, Inc.	Delaware
Windrock, Inc.	Tennessee

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the use in this Registration Statement on Form S-4 of Apergy Corporation of our report dated March 5, 2018, except for Note 20 and the change in the manner in which the Company accounts for certain cash receipts and cash payments discussed in Note 2 to the combined financial statements, as to which the date is November 14, 2018, relating to the financial statements and financial statement schedule of Apergy Corporation (formerly known as Wellsite Corporation), which appears in this Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP
Houston, Texas
November 14, 2018

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM T-1

STATEMENT OF ELIGIBILITY
UNDER THE TRUST INDENTURE ACT OF 1939 OF A
CORPORATION DESIGNATED TO ACT AS TRUSTEE

☐ **CHECK IF AN APPLICATION TO DETERMINE ELIGIBILITY OF A TRUSTEE PURSUANT TO SECTION 305(b) (2)**

WELLS FARGO BANK, NATIONAL ASSOCIATION

(Exact name of trustee as specified in its charter)

A National Banking Association **(Jurisdiction of incorporation or organization if not a U.S. national bank)**	**94-1347393** **(I.R.S. Employer Identification No.)**
101 North Phillips Avenue **Sioux Falls, South Dakota** **(Address of principal executive offices)**	**57104** **(Zip code)**

Wells Fargo & Company
Law Department, Trust Section
MAC N9305-175
Sixth Street and Marquette Avenue, 17th Floor
Minneapolis, Minnesota 55479
(612) 667-4608
(Name, address and telephone number of agent for service)

APERGY CORPORATION
(Exact name of obligor as specified in its charter)

DELAWARE **(State or other jurisdiction of incorporation or organization)**	**82-3066826** **(I.R.S. Employer Identification No.)**
2445 Technology Forest Blvd **Building 4, 12th Floor** **The Woodlands, Texas** **(Address of principal executive offices)**	**77381** **(Zip code)**

6.375% Senior Notes due 2026
(Title of the indenture securities)

Guarantors

Name of Additional Registrant*	State or Other Jurisdiction of Incorporation or Formation	I.R.S. Employer Identification Number
Accelerated Process Systems, Inc.	Texas	76-0264303
Apergy (Delaware) Formation, Inc.	Delaware	82-3110663
Apergy Artificial Lift, LLC	Delaware	47-2609671
Apergy BMCS Acquisition Corp.	Delaware	26-2254713
Apergy Energy Automation, LLC	Delaware	46-5648391
Apergy ESP Systems, LLC	Oklahoma	27-3714367
Apergy Funding Corporation	Delaware	82-3110990
Apergy USA, Inc.	Delaware	82-3066935
Harbison-Fischer, Inc.	Delaware	75-0861442
Honetreat Company	California	95-2122549
Norris Rods, Inc.	Delaware	75-2751426
Norriseal-Wellmark, Inc.	Delaware	73-1121398
PCS Ferguson, Inc.	Delaware	13-4137030
Quartzdyne, Inc.	Delaware	74-2861968
Spirit Global Energy Solutions, Inc.	Delaware	26-3199867
Theta Oilfield Services, Inc.	Delaware	20-8725451
UPCO, Inc.	Oklahoma	73-1165601
US Synthetic Corporation	Delaware	87-0342600
Wellmark Holdings, Inc.	Delaware	46-1355894
Windrock, Inc.	Tennessee	62-1422184

Item 1. General Information. Furnish the following information as to the trustee:

(a) Name and address of each examining or supervising authority to which it is subject.

Comptroller of the Currency
Treasury Department
Washington, D.C.

Federal Deposit Insurance Corporation
Washington, D.C.

Federal Reserve Bank of San Francisco
San Francisco, California 94120

(b) Whether it is authorized to exercise corporate trust powers.

The trustee is authorized to exercise corporate trust powers.

Item 2. Affiliations with Obligor. If the obligor is an affiliate of the trustee, describe each such affiliation.

None with respect to the trustee.

No responses are included for Items 3-14 of this Form T-1 because the obligor is not in default as provided under Item 13.

Item 15. Foreign Trustee. Not applicable.

Item 16. List of Exhibits. List below all exhibits filed as a part of this Statement of Eligibility.

Exhibit 1.	A copy of the Articles of Association of the trustee now in effect.*
Exhibit 2.	A copy of the Comptroller of the Currency Certificate of Corporate Existence and Fiduciary Powers for Wells Fargo Bank, National Association, dated June 27, 2012.**
Exhibit 3.	A copy of the Comptroller of the Currency Certification of Fiduciary Powers for Wells Fargo Bank, National Association, dated December 21, 2011. **
Exhibit 4.	Copy of By-laws of the trustee as now in effect.***
Exhibit 5.	Not applicable.
Exhibit 6.	The consent of the trustee required by Section 321(b) of the Act.
Exhibit 7.	A copy of the latest report of condition of the trustee published pursuant to law or the requirements of its supervising or examining authority.
Exhibit 8.	Not applicable.
Exhibit 9.	Not applicable.

* Incorporated by reference to the exhibit of the same number to the trustee's Form T-1 filed as exhibit 25 to the Form S-4 dated December 30, 2005 of file number 333-130784-06.

** Incorporated by reference to the exhibit of the same number to the trustee's Form T-1 filed as exhibit 25 to the Form S-3 dated January 23, 2013 of file number 333-186155.

*** Incorporated by reference to the exhibit of the same number to the trustee's Form T-1 filed as exhibit 25 to the Form S-4 dated May 26, 2005 of file number 333-125274.

SIGNATURE

Pursuant to the requirements of the Trust Indenture Act of 1939, as amended, the trustee, Wells Fargo Bank, National Association, a national banking association organized and existing under the laws of the United States of America, has duly caused this statement of eligibility to be signed on its behalf by the undersigned, thereunto duly authorized, all in the City of Dallas and State of Texas on the 29th day of October 2018

WELLS FARGO BANK, NATIONAL ASSOCIATION

John C. Stohlmann
Vice President

EXHIBIT 6

October 29, 2018

Securities and Exchange Commission
Washington, D.C. 20549

Gentlemen:

In accordance with Section 321(b) of the Trust Indenture Act of 1939, as amended, the undersigned hereby consents that reports of examination of the undersigned made by Federal, State, Territorial, or District authorities authorized to make such examination may be furnished by such authorities to the Securities and Exchange Commission upon its request therefor.

Very truly yours,

WELLS FARGO BANK, NATIONAL ASSOCIATION

John C. Stohlmann
Vice President

Exhibit 7

Consolidated Report of Condition of

Wells Fargo Bank National Association
of 101 North Phillips Avenue, Sioux Falls, SD 57104
And Foreign and Domestic Subsidiaries,
at the close of business June 30, 2018, filed in accordance with 12 U.S.C. §161 for National Banks.

		Dollar Amounts In Millions
ASSETS		
Cash and balances due from depository institutions:		
Noninterest-bearing balances and currency and coin		$ 19,803
Interest-bearing balances		143,123
Securities:		
Held-to-maturity securities		144,098
Available-for-sale securities		250,007
Equity Securities with readily determinable fair value not held for trading		94
Federal funds sold and securities purchased under agreements to resell:		
Federal funds sold in domestic offices		79
Securities purchased under agreements to resell		34,203
Loans and lease financing receivables:		
Loans and leases held for sale		13,308
Loans and leases, net of unearned income	918,993	
LESS: Allowance for loan and lease losses	9,864	
Loans and leases, net of unearned income and allowance		909,129
Trading Assets		44,974
Premises and fixed assets (including capitalized leases)		8,073
Other real estate owned		502
Investments in unconsolidated subsidiaries and associated companies		12,118
Direct and indirect investments in real estate ventures		163
Intangible assets		40,514
Other assets		54,889
Total assets		$ 1,675,077
LIABILITIES		
Deposits:		
In domestic offices		$ 1,269,998
Noninterest-bearing	415,406	
Interest-bearing	854,592	
In foreign offices, Edge and Agreement subsidiaries, and IBFs		52,292
Noninterest-bearing	897	
Interest-bearing	51,395	
Federal funds purchased and securities sold under agreements to repurchase:		
Federal funds purchased in domestic offices		8,421
Securities sold under agreements to repurchase		6,394

	Dollar Amounts In Millions
Trading liabilities	11,024
Other borrowed money	
(includes mortgage indebtedness and obligations under capitalized leases)	116,305
Subordinated notes and debentures	11,749
Other liabilities	34,525
Total liabilities	$ 1,510,708
EQUITY CAPITAL	
Perpetual preferred stock and related surplus	0
Common stock	519
Surplus (exclude all surplus related to preferred stock)	112,567
Retained earnings	54,424
Accumulated other comprehensive income	-3,482
Other equity capital components	0
Total bank equity capital	164,028
Noncontrolling (minority) interests in consolidated subsidiaries	341
Total equity capital	164,369
Total liabilities, and equity capital	$ 1,675,077

I, John R. Shrewsberry, Sr. EVP & CFO of the above-named bank do hereby declare that this Report of Condition has been prepared in conformance with the instructions issued by the appropriate Federal regulatory authority and is true to the best of my knowledge and belief.

John R. Shrewsberry
Sr. EVP & CFO

We, the undersigned directors, attest to the correctness of this Report of Condition and declare that it has been examined by us and to the best of our knowledge and belief has been prepared in conformance with the instructions issued by the appropriate Federal regulatory authority and is true and correct.

Directors

Enrique Hernandez, Jr
Federico F. Pena
James Quigley

Exhibit 99.1

APERGY CORPORATION

LETTER OF TRANSMITTAL

OFFER TO EXCHANGE

$300,000,000 AGGREGATE PRINCIPAL AMOUNT OF ITS 6.375% SENIOR NOTES DUE 2026 AND THE RELATED SUBSIDIARY GUARANTEES, WHICH HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, FOR ANY AND ALL OF ITS OUTSTANDING 6.375% SENIOR NOTES DUE 2026 AND THE RELATED SUBSIDIARY GUARANTEES

THE EXCHANGE OFFER WILL EXPIRE AT 11:59 P.M., NEW YORK CITY TIME, ON , (THE "EXPIRATION DATE") UNLESS THE OFFER IS EXTENDED. TENDERS MAY BE WITHDRAWN PRIOR TO 11:59 P.M., NEW YORK CITY TIME, ON THE EXPIRATION DATE

The Exchange Agent for the Exchange Offer is:

WELLS FARGO BANK, NATIONAL ASSOCIATION

By Mail, Overnight Courier or Hand Delivery:
Wells Fargo Bank, National Association
Corporate Trust Operations
MAC N9300-070
600 South Fourth Street
Minneapolis, Minnesota 55402

By Facsimile Transmission (eligible institutions only):
1-877-407-4679
To Confirm by Telephone:
1-800-344-5128

DELIVERY OF THIS LETTER OF TRANSMITTAL TO AN ADDRESS OTHER THAN AS SET FORTH ABOVE, OR TRANSMISSION OF THIS LETTER OF TRANSMITTAL VIA FACSIMILE TRANSMISSION TO A NUMBER OTHER THAN AS SET FORTH ABOVE WILL NOT CONSTITUTE A VALID DELIVERY. THE INSTRUCTIONS ACCOMPANYING THIS LETTER OF TRANSMITTAL SHOULD BE READ CAREFULLY BEFORE THIS LETTER OF TRANSMITTAL IS COMPLETED.

The undersigned acknowledges receipt of the Prospectus dated , 2018 (as it may be amended or supplemented from time to time, the "Prospectus") of Apergy Corporation, a Delaware corporation (the "Company"), and this Letter of Transmittal (the "Letter of Transmittal"), which together constitute the Company's offer (the "Exchange Offer") to exchange $300,000,000 aggregate principal amount of 6.375% Senior Notes due 2026 and the related subsidiary guarantees (the "Exchange Notes"), which have been registered under the Securities Act of 1933, as amended (the "Securities Act"), for any and all of its outstanding 6.375% Senior Notes due 2026 and the related subsidiary guarantees (the "Outstanding Notes").

Holders of Outstanding Notes should complete this Letter of Transmittal either if Outstanding Notes are to be forwarded herewith or if tenders of Outstanding Notes are to be made by book-entry transfer to an account maintained by the Exchange Agent at the book-entry transfer facility specified by the holder pursuant to the procedures set forth in "The Exchange Offer—Book-Entry Delivery Procedures" and "The Exchange Offer—Procedures for Tendering Outstanding Notes" in the Prospectus and an "Agent's Message" is not delivered. If tender is being made by book-entry transfer, the holder must have an Agent's Message delivered in lieu of this Letter of Transmittal.

For each Outstanding Note accepted for exchange, the holder of such Outstanding Note will receive an Exchange Note having a principal amount equal to that of the surrendered Outstanding Note. The Exchange Notes will accrue interest at a rate of 6.375% per annum, payable on May 1 and November 1 of each year.

Unless the context otherwise requires, the term "holder" for purposes of this Letter of Transmittal means any person in whose name Outstanding Notes are registered or any other person who has obtained a properly completed bond power from the registered holder or any person whose Outstanding Notes are held of record by The Depository Trust Company ("DTC").

Capitalized terms used but not defined herein shall have the same meaning given them in the Prospectus.

YOUR BANK OR BROKER CAN ASSIST YOU IN COMPLETING THIS FORM. THE INSTRUCTIONS INCLUDED WITH THIS LETTER OF TRANSMITTAL MUST BE FOLLOWED. QUESTIONS AND REQUESTS FOR ASSISTANCE OR FOR ADDITIONAL COPIES OF THE PROSPECTUS AND THIS LETTER OF TRANSMITTAL MAY BE DIRECTED TO THE EXCHANGE AGENT, WHOSE ADDRESS AND TELEPHONE NUMBER APPEAR ON THE FRONT PAGE OF THIS LETTER OF TRANSMITTAL.

The undersigned has completed the appropriate boxes below and signed this Letter of Transmittal to indicate the action that the undersigned desires to take with respect to the Exchange Offer.

PLEASE READ THE ENTIRE LETTER OF TRANSMITTAL AND THE PROSPECTUS CAREFULLY BEFORE CHECKING ANY BOX BELOW.

List below the Outstanding Notes to which this Letter of Transmittal relates. If the space provided below is inadequate, the certificate numbers and aggregate principal amounts of Outstanding Notes should be listed on a separate signed schedule affixed hereto.

All Tendering Holders Complete Box 1:

Box 1*

Description of Outstanding Notes Tendered Herewith				
Name(s) and Address(es) of Registered Holder(s) (Please Fill in, if Blank, Exactly as Name(s) Appear(s) on Certificate(s))		**Certificate or Registration Number(s) of Outstanding Notes****	**Aggregate Principal Amount Represented by Outstanding Notes**	**Aggregate Principal Amount of Outstanding Notes Being Tendered*****
	Total:			

* If the space provided is inadequate, list the certificate numbers and principal amount of Outstanding Notes on a separate signed schedule and attach the list to this Letter of Transmittal.
** Need not be completed by book-entry holders.
*** All tenders must be in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof. Unless otherwise indicated in this column, the holder will be deemed to have tendered the full aggregate principal amount represented by such Outstanding Notes. See instruction 2.

Box 2
Book-Entry Transfer

☐ CHECK HERE IF TENDERED OUTSTANDING NOTES ARE BEING DELIVERED BY BOOK-ENTRY TRANSFER MADE TO THE ACCOUNT MAINTAINED BY THE EXCHANGE AGENT AND COMPLETE THE FOLLOWING:

Name of Tendering Institution:_____

Account Number:_____

Transaction Code Number:_____

Holders of Outstanding Notes that are tendering by book-entry transfer to the Exchange Agent's account at DTC can execute the tender through DTC's Automated Tender Offer Program ("ATOP"). DTC participants that are accepting the Exchange Offer must transmit their acceptances to DTC, which will verify the acceptance and execute a book-entry delivery to the Exchange Agent's account at DTC. DTC will then send a computer-generated message (an "Agent's Message") to the Exchange Agent for its acceptance in which the holder of the Outstanding Notes acknowledges and agrees to be bound by the terms of, and makes the representations and warranties contained in, this Letter of Transmittal, and the DTC participant confirms on behalf of itself and the beneficial owners of such Outstanding Notes all provisions of this Letter of Transmittal (including any representations and warranties) applicable to it and such beneficial owner as fully as if it had completed the information required herein and executed and transmitted this Letter of Transmittal to the Exchange Agent. Each DTC participant transmitting an acceptance of the Exchange Offer through the ATOP procedures will be deemed to have agreed to be bound by the terms of this Letter of Transmittal. Delivery of an Agent's Message by DTC will satisfy the terms of the Exchange Offer as to execution and delivery of a Letter of Transmittal by the participant identified in the Agent's Message.

Box 3
Return of Non-Exchanged Outstanding Notes
Tendered by Book-Entry Transfer

☐ CHECK HERE IF OUTSTANDING NOTES TENDERED BY BOOK-ENTRY TRANSFER AND NON-EXCHANGED OUTSTANDING NOTES ARE TO BE RETURNED BY CREDITING THE ACCOUNT NUMBER SET FORTH ABOVE.

Box 4
Participating Broker-Dealer

☐ CHECK HERE IF YOU ARE A BROKER-DEALER WHO ACQUIRED THE OUTSTANDING NOTES FOR YOUR OWN ACCOUNT AS A RESULT OF MARKET-MAKING OR OTHER TRADING ACTIVITIES AND WISH TO RECEIVE TEN (10) ADDITIONAL COPIES OF THE PROSPECTUS AND OF ANY AMENDMENTS OR SUPPLEMENTS THERETO.

Name:_____

Address:_____

If the undersigned is not a broker-dealer, the undersigned represents that it is not an affiliate of the Company within the meaning of Rule 405 under the Securities Act, it is acquiring the Exchange Notes in the ordinary course of business and is not engaged in, and does not intend to engage in, and has no arrangement or understanding with any person to participate in, a distribution of the Exchange Notes. If the undersigned is a broker-dealer that will receive Exchange Notes for its own account in exchange for Outstanding Notes that were acquired as a result of market-making activities or other trading activities, the undersigned acknowledges that it will deliver a prospectus meeting the requirements of the Securities Act in connection with any resale or transfer of such Exchange Notes; however, by so acknowledging and by delivering a prospectus, the undersigned will not be deemed to admit that it is an “underwriter” within the meaning of the Securities Act. A broker-dealer may not participate in the Exchange Offer with respect to Outstanding Notes acquired other than as a result of market-making activities or other trading activities. Any broker-dealer who purchased Outstanding Notes from the Company to resell pursuant to Rule 144A under the Securities Act or any other available exemption under the Securities Act must comply with the registration and prospectus delivery requirements under the Securities Act.

PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY

Ladies and Gentlemen:

Upon the terms and subject to the conditions of the Exchange Offer, the undersigned hereby tenders to the Company the aggregate principal amount of the Outstanding Notes indicated above. Subject to, and effective upon, the acceptance for exchange of all or any portion of the Outstanding Notes tendered herewith in accordance with the terms and conditions of the Exchange Offer (including, if the Exchange Offer is extended or amended, the terms and conditions of any such extension or amendment), the undersigned hereby exchanges, assigns and transfers to, or upon the order of, the Company all right, title and interest in and to such Outstanding Notes as are being tendered herewith.

The undersigned hereby irrevocably constitutes and appoints the Exchange Agent as its true and lawful agent and attorney-in-fact of the undersigned (with full knowledge that the Exchange Agent also acts as the agent of the Company, in connection with the Exchange Offer) with respect to the tendered Outstanding Notes, with full power of substitution and resubstitution (such power of attorney being deemed an irrevocable power coupled with an interest) to (a) deliver certificates representing such Outstanding Notes, or transfer ownership of such Outstanding Notes on the account books maintained by the book-entry transfer facility specified by the holder(s) of the Outstanding Notes, together, in each such case, with all accompanying evidences of transfer and authenticity to, or upon the order of, the Company, (b) present and deliver such Outstanding Notes for transfer on the books of the Company and (c) receive all benefits or otherwise exercise all rights and incidents of beneficial ownership of such Outstanding Notes, all in accordance with the terms of the Exchange Offer.

The undersigned hereby represents and warrants that (a) the undersigned has full power and authority to tender, exchange, assign and transfer the Outstanding Notes tendered hereby, (b) when such tendered Outstanding Notes are accepted for exchange, the Company will acquire good and unencumbered title thereto, free and clear of all liens, restrictions, charges and encumbrances and (c) the Outstanding Notes tendered for exchange are not subject to any adverse claims or proxies when accepted by the Company. The undersigned hereby further represents that any Exchange Notes acquired in exchange for Outstanding Notes tendered hereby will have been acquired in the ordinary course of business of the person receiving such Exchange Notes, whether or not such person is the undersigned, that neither the holder of such Outstanding Notes nor any such other person is engaged in or intends to engage in, nor has an arrangement or understanding with any person to participate in, the distribution (within the meaning of the Securities Act) of such Exchange Notes, and that neither the holder of such Outstanding Notes nor any such other person is an “affiliate,” as such term is defined in Rule 405 under the Securities Act, of the Company. If the undersigned is a broker-dealer that will receive the Exchange Notes for its own account in exchange for the Outstanding Notes, it represents that (1) the Outstanding Notes to be exchanged for the Exchange Notes were acquired by it as a result of market-making activities or other trading activities and (2) acknowledges that it will deliver a prospectus in connection with any resale or transfer of such Exchange Notes; however, by so acknowledging and by delivering a prospectus, the undersigned will not be deemed to admit that it is an “underwriter” within the meaning of the Securities Act.

The undersigned also acknowledges that the Exchange Offer is being made based on the Company’s understanding of an interpretation by the staff of the Securities and Exchange Commission (the “SEC”) as set forth in no-action letters issued to third parties, including *Morgan Stanley & Co. Incorporated* (available June 5, 1991), *Exxon Capital Holdings Corporation* (available May 13, 1988), as interpreted in the SEC’s letter to *Shearman & Sterling*, dated July 2, 1993, or similar no-action letters, that the Exchange Notes issued in exchange for the Outstanding Notes pursuant to the Exchange Offer may be offered for resale, resold and otherwise transferred by each holder thereof (other than a broker-dealer who acquires such Exchange Notes directly from the Company for resale pursuant to Rule 144A under the Securities Act or any other available exemption under the Securities Act or any such holder that is an “affiliate” of the Company within the meaning of Rule 405 under the Securities Act), without compliance with the registration and prospectus delivery provisions of the Securities Act, provided that such Exchange Notes are acquired in the ordinary course of such holder’s business and such holder is not engaged in, and does not intend to engage in, a distribution of such Exchange Notes and has no arrangement or understanding with any person to participate in the distribution of such Exchange Notes. If a holder of the Outstanding Notes is an affiliate of the Company, is not acquiring the Exchange Notes in the ordinary course of its business, is engaged in or intends to engage in a distribution of the Exchange Notes or has any arrangement or understanding with respect to the distribution of the Exchange Notes to be acquired pursuant to the Exchange Offer, such holder (a) may not rely on the applicable interpretations of the staff of the SEC and (b) must comply with the registration and prospectus delivery requirements of the Securities Act in connection with any secondary resale transaction.

The undersigned will, upon request, execute and deliver any additional documents deemed by the Company or the Exchange Agent to be necessary or desirable to complete the exchange, assignment and transfer of the tendered Outstanding Notes or transfer ownership of such Outstanding Notes on the account books maintained by the book-entry transfer facility. The undersigned further agrees that acceptance of any and all validly tendered Outstanding Notes by the Company and the issuance of Exchange Notes, in exchange therefor shall constitute performance in full by the Company of its obligations under the Registration Rights Agreement, dated May 3, 2018, between the Company and J.P. Morgan Securities LLC, as representatives of the initial purchasers (the "Registration Rights Agreement"), and that the Company shall have no further obligations or liabilities thereunder except as provided in Section 5 (Indemnification and Contribution) of such agreement. The undersigned will comply with its obligations under the Registration Rights Agreement.

The Exchange Offer is subject to certain conditions as set forth in the Prospectus under the caption "The Exchange Offer—Conditions to the Exchange Offer." The undersigned recognizes that as a result of these conditions (which may be waived, in whole or in part, by the Company), as more particularly set forth in the Prospectus, the Company may not be required to exchange any of the Outstanding Notes tendered hereby and, in such event, the Outstanding Notes not exchanged will be returned to the undersigned at the address shown above, promptly following the expiration or termination of the Exchange Offer. In addition, the Company may amend the Exchange Offer at any time prior to the Expiration Date if any of the conditions set forth under "The Exchange Offer—Conditions to the Exchange Offer" occur.

All authority herein conferred or agreed to be conferred in this Letter of Transmittal shall survive the death or incapacity of the undersigned and every obligation of the undersigned hereunder shall be binding upon the successors, assigns, heirs, administrators, trustees in bankruptcy and legal representatives of the undersigned. Tendered Outstanding Notes may be withdrawn at any time prior to the Expiration Date in accordance with the procedures set forth in the terms of this Letter of Transmittal.

Unless otherwise indicated herein in the box entitled "Special Registration Instructions" below, please deliver the Exchange Notes (and, if applicable, substitute certificates representing the Outstanding Notes for any Outstanding Notes not exchanged) in the name of the undersigned or, in the case of a book-entry delivery of the Outstanding Notes, please credit the account indicated above. Similarly, unless otherwise indicated under the box entitled "Special Delivery Instructions" below, please send the Exchange Notes (and, if applicable, substitute certificates representing the Outstanding Notes for any Outstanding Notes not exchanged) to the undersigned at the address shown above in the box entitled "Description of Outstanding Notes Tendered Herewith."

THE UNDERSIGNED, BY COMPLETING THE BOX ENTITLED "DESCRIPTION OF OUTSTANDING NOTES TENDERED HEREWITH" ABOVE AND SIGNING THIS LETTER, WILL BE DEEMED TO HAVE TENDERED THE OUTSTANDING NOTES AS SET FORTH IN SUCH BOX.

Box 5

SPECIAL REGISTRATION INSTRUCTIONS

(See Instructions 4 and 5)

To be completed ONLY if certificates for the Outstanding Notes not tendered and/or certificates for the Exchange Notes are to be issued in the name of someone other than the registered holder(s) of the Outstanding Notes whose name(s) appear(s) above.

Issue: ☐ Outstanding Notes not tendered to:

☐ Exchange Notes to:

Name(s): _____

_____

(Please Print or Type)

Address: _____

_____

(Include Zip Code)

Daytime Area Code and Telephone Number: _____

Taxpayer Identification or Social Security Number: _____

Box 6

SPECIAL DELIVERY INSTRUCTIONS

(See Instructions 4 and 5)

To be completed ONLY if certificates for the Outstanding Notes not tendered and/or certificates for the Exchange Notes are to be sent in the name of someone other than the registered holder(s) of the Outstanding Notes whose name(s) appear(s) above.

Send: ☐ Outstanding Notes not tendered to:

☐ Exchange Notes to:

Name(s): _____

_____

(Please Print or Type)

Address: _____

_____

_____

_____

(Include Zip Code)

Daytime Area Code and Telephone Number: _____

Taxpayer Identification or Social Security Number: _____

Box 7

TENDERING HOLDER(S) SIGN HERE
(Complete accompanying IRS Form W-9)

Must be signed by the registered holder(s) (which term, for the purposes described herein, shall include the book-entry transfer facility whose name appears on a security listing as the owner of the Outstanding Notes) of the Outstanding Notes exactly as their name(s) appear(s) on the Outstanding Notes hereby tendered or by any person(s) authorized to become the registered holder(s) by properly completed bond powers or endorsements and documents transmitted herewith. If signature is by a trustee, executor, administrator, guardian, attorney-in-fact, officer of a corporation or other person acting in a fiduciary or representative capacity, please set forth the full title of such person. See Instruction 4.

_____

(Signature(s) of Holder(s))

Date: _____

Name(s): _____

_____

(Please Type or Print)

Capacity (full title): _____

Address: _____

_____

(Including Zip Code)

Daytime Area Code and Telephone Number: _____

Taxpayer Identification or Social Security Number: _____

GUARANTEE OF SIGNATURE(S)
(If Required — See Instruction 4)

Authorized Signature: _____

Date: _____

Name: _____

Title: _____

Name of Firm: _____

Address of Firm: _____

_____

_____

(Include Zip Code)

Area Code and Telephone Number: _____

Taxpayer Identification or Social Security Number: _____

INSTRUCTIONS
FORMING PART OF THE TERMS AND CONDITIONS OF THE EXCHANGE OFFER

General

Please do not send certificates for Outstanding Notes directly to the Company. Your certificates for Outstanding Notes, together with your signed and completed Letter of Transmittal and any required supporting documents, should be mailed or otherwise delivered to the Exchange Agent at the address set forth on the first page hereof. The method of delivery of Outstanding Notes, this Letter of Transmittal and all other required documents is at your sole option and risk and the delivery will be deemed made only when actually received by the Exchange Agent. If delivery is by mail, registered mail with return receipt requested, properly insured, or overnight or hand delivery service is recommended. In all cases, sufficient time should be allowed to ensure timely delivery.

1. Delivery of this Letter of Transmittal and Certificates. A holder of Outstanding Notes (which term, for the purposes described herein, shall include the book-entry transfer facility whose name appears on a security listing as the owner of the Outstanding Notes) may tender the same by (i) properly completing and signing this Letter of Transmittal or a facsimile hereof (all references in the Prospectus to the Letter of Transmittal shall be deemed to include a facsimile thereof) and delivering the same, together with the certificate or certificates, if applicable, representing the Outstanding Notes being tendered and any required signature guarantees and any other documents required by this Letter of Transmittal, to the Exchange Agent at its address set forth above on or prior to the Expiration Date or (ii) complying with the procedure for book-entry transfer described below.

No alternative, conditional, irregular or contingent tenders will be accepted. Each tendering holder, by execution of this Letter of Transmittal (or facsimile thereof), shall waive any right to receive notice of the acceptance of the Outstanding Notes for exchange.

2. Partial Tenders; Withdrawals. Tenders of Outstanding Notes will be accepted only in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof. If less than the entire principal amount of Outstanding Notes evidenced by a submitted certificate is tendered, the tendering holder(s) must fill in the aggregate principal amount of Outstanding Notes tendered in the column entitled “Description of Outstanding Notes Tendered Herewith” in Box 1 above. A newly issued certificate for the Outstanding Notes submitted but not tendered will be sent to such holder promptly after the Expiration Date, unless otherwise provided in the appropriate box on this Letter of Transmittal. All Outstanding Notes delivered to the Exchange Agent will be deemed to have been tendered in full unless otherwise clearly indicated. Outstanding Notes tendered pursuant to the Exchange Offer may be withdrawn at any time prior to the Expiration Date, after which tenders of Outstanding Notes are irrevocable.

To be effective with respect to the tender of Outstanding Notes, a written notice of withdrawal (which may be by facsimile or letter) must: (i) be received by the Exchange Agent at the address for the Exchange Agent set forth above before the Company notifies the Exchange Agent that it has accepted the tender of Outstanding Notes pursuant to the Exchange Offer; (ii) specify the name of the person who tendered the Outstanding Notes to be withdrawn; (iii) identify the Outstanding Notes to be withdrawn (including the principal amount of such Outstanding Notes, or, if applicable, the certificate numbers shown on the particular certificates evidencing such Outstanding Notes and the principal amount of Outstanding Notes represented by such certificates); (iv) include a statement that such holder is withdrawing its election to have such Outstanding Notes exchanged; (v) specify the name in which any such Outstanding Notes are to be registered, if different from that of the withdrawing holder; and (vi) be signed by the holder in the same manner as the original signature on this Letter of Transmittal (including any required signature guarantee). The Exchange Agent will return the properly withdrawn Outstanding Notes promptly following receipt of notice of withdrawal. If Outstanding Notes have been tendered pursuant to the procedure for book-entry transfer, any notice of withdrawal must specify the name and number of the account at the book-entry transfer facility to be credited with the withdrawn Outstanding Notes or otherwise comply with the book-entry transfer facility’s procedures. All questions as to the validity, form and eligibility of notices of withdrawals, including time of receipt, will be determined by the Company, and such determination will be final and binding on all parties.

Any Outstanding Notes so withdrawn will be deemed not to have been validly tendered for exchange for purposes of the Exchange Offer. Any Outstanding Notes which have been tendered for exchange but which are not accepted for exchange for any reason will be returned to the holder thereof without cost to such holder (or, in the case of Outstanding Notes tendered by book-entry transfer into the Exchange Agent's account at the book entry transfer facility pursuant to the book-entry transfer procedures described above, such Outstanding Notes will be credited to an account with such book-entry transfer facility specified by the holder) promptly after withdrawal, rejection of tender or termination of the Exchange Offer. Properly withdrawn Outstanding Notes may be retendered by following one of the procedures described under the caption "The Exchange Offer—Procedures for Tendering Outstanding Notes" in the Prospectus at any time prior to the Expiration Date.

Neither the Company, the Guarantors, any affiliate or assigns of the Company, the Exchange Agent nor any other person will be under any duty to give any notification of any irregularities in any notice of withdrawal or incur any liability for failure to give such notification (even if such notice is given to other persons).

3. Beneficial Owner Instructions. Only a holder of Outstanding Notes (i.e., a person in whose name Outstanding Notes are registered on the books of the registrar or, in the case of Outstanding Notes held through book-entry, such book-entry transfer facility specified by the holder), or the legal representative or attorney-in-fact of a holder, may execute and deliver this Letter of Transmittal. Any beneficial owner of Outstanding Notes who wishes to accept the Exchange Offer must arrange promptly for the appropriate holder to execute and deliver this Letter of Transmittal on his or her behalf through the execution and delivery to the appropriate holder of the "Instructions to Registered Holder from Beneficial Owner" form accompanying this Letter of Transmittal.

4. Signature on this Letter of Transmittal; Written Instruments and Endorsements; Guarantee of Signatures. If this Letter of Transmittal is signed by the registered holder(s) (which term, for the purposes described herein, shall include the book-entry transfer facility whose name appears on a security listing as the owner of the Outstanding Notes) of the Outstanding Notes tendered hereby, the signature must correspond exactly with the name(s) as written on the face of the certificates (or on such security listing) without alteration, addition, enlargement or any change whatsoever.

If any of the Outstanding Notes tendered hereby are owned of record by two or more joint owners, all such owners must sign this Letter of Transmittal.

If a number of Outstanding Notes registered in different names are tendered, it will be necessary to complete, sign and submit as many separate copies of this Letter of Transmittal (or facsimiles thereof) as there are different registrations of Outstanding Notes.

When this Letter of Transmittal is signed by the registered holder(s) of Outstanding Notes (which term, for the purposes described herein, shall include the book-entry transfer facility whose name appears on a security listing as the owner of the Outstanding Notes) listed and tendered hereby, no endorsements of certificates or separate written instruments of transfer or exchange are required. If, however, this Letter of Transmittal is signed by a person other than the registered holder(s) of the Outstanding Notes listed or the Exchange Notes are to be issued, or any untendered Outstanding Notes are to be reissued, to a person other than the registered holder(s) of the Outstanding Notes, such Outstanding Notes must be endorsed or accompanied by separate written instruments of transfer or exchange in form satisfactory to the Company and duly executed by the registered holder, in each case signed exactly as the name or names of the registered holder(s) appear(s) on the Outstanding Notes and the signatures on such certificates must be guaranteed by an Eligible Guarantor Institution. If this Letter of Transmittal, any certificates or separate written instruments of transfer or exchange are signed by trustees, executors, administrators, guardians, attorneys-in-fact, officers of corporations or others acting in a fiduciary or representative capacity, such persons should so indicate when signing, and, unless waived by the Company, submit proper evidence satisfactory to the Company, in its sole discretion, of such persons' authority to so act.

Endorsements on certificates for the Outstanding Notes or signatures on bond powers required by this Instruction 4 must be guaranteed by a member firm of a registered national securities exchange or of the National Association of Securities Dealers, Inc., a commercial bank or trust company having an office or correspondent in the United States or another "eligible guarantor institution" within the meaning of Rule 17Ad-15 under the Securities Exchange Act of 1934, as amended (an "Eligible Guarantor Institution").

Signatures on this Letter of Transmittal must be guaranteed by an Eligible Guarantor Institution, unless Outstanding Notes are tendered: (i) by a registered holder (which term, for the purposes described herein, shall include the book-entry transfer facility whose name appears on a security listing as the owner of the Outstanding Notes) who has not completed the box entitled "Special Registration Instructions" or "Special Delivery Instructions" on this Letter of Transmittal; or (ii) for the account of an Eligible Guarantor Institution.

5. Special Registration and Delivery Instructions. Tendering holders should indicate, in the applicable Box 5 or Box 6, the name and address in/to which the Exchange Notes and/or certificates for Outstanding Notes not exchanged are to be issued or sent, if different from the name(s) and address(es) of the person signing this Letter of Transmittal. In the case of issuance in a different name, the tax identification number or social security number of the person named must also be indicated. A holder tendering the Outstanding Notes by book-entry transfer may request that the Outstanding Notes not exchanged be credited to such account maintained at the book-entry transfer facility as such holder may designate. See Box 3.

If no such instructions are given, the Exchange Notes (and any Outstanding Notes not tendered or not accepted) will be issued in the name of and sent to the holder signing this Letter of Transmittal or deposited into such holder's account at the applicable book-entry transfer facility.

6. Taxpayer Identification Number and Backup Withholding. Under current U.S. federal income tax law, the Exchange Agent may be required under the backup withholding rules to withhold a portion of any payments made to certain holders of the Outstanding Notes (or other payees) under the Exchange Offer. To avoid such backup withholding (currently imposed at a rate of 24%), each tendering holder that is a "United States person" for U.S. federal income tax purposes must timely provide the Exchange Agent with such tendering holder's correct taxpayer identification number ("TIN") on Internal Revenue Service ("IRS") Form W-9 that accompanies this Letter of Transmittal or otherwise establish a basis for exemption from backup withholding. If a tendering holder is an individual who is a U.S. citizen or resident, the TIN is generally his or her social security number. If the Exchange Agent is not provided with the correct TIN, a penalty may be imposed by the IRS and/or payments made with respect to Outstanding Notes exchanged under the Exchange Offer may be subject to backup withholding. Failure to comply truthfully with the backup withholding requirements, if done willfully, may also result in the imposition of criminal fines and penalties. See the attached IRS Form W-9 for additional information.

Certain tendering holders (generally including, among others, corporations and certain foreign persons) are exempt from these backup withholding requirements. Exempt tendering holders that are "United States persons" for U.S federal income tax purposes should furnish their TIN, provide the applicable codes in the box labeled "Exemptions," and sign under penalties of perjury, date, and send the IRS Form W-9 to the Exchange Agent. Tendering holders that are not "United States persons" for U.S. federal income tax purposes, including entities, may qualify as exempt recipients by submitting to the Exchange Agent a properly completed IRS Form W-8BEN or W-8BEN-E (or other applicable IRS Form), signed under penalties of perjury, attesting to such tendering holder's foreign status. The applicable IRS Form W-8 can be obtained from the Exchange Agent or downloaded from the IRS's website at *http://www.irs.gov*.

If backup withholding applies, the Exchange Agent is required to withhold on any payments made to the tendering holders (or other payees). Backup withholding is not an additional tax. A tendering holder subject to the backup withholding rules may be allowed a credit of the amount withheld against such tendering holder's U.S. federal income tax liability, and, if backup withholding results in an overpayment of tax, such tendering holder may be entitled to a refund, provided the requisite information is correctly furnished to the IRS in a timely manner.

The Company reserves the right in its sole discretion to take all necessary or appropriate measures to comply with its respective obligations regarding backup withholding.

7. Transfer Taxes. Holders who tender their Outstanding Notes for exchange will not be obligated to pay any transfer taxes in connection therewith. If, however, Exchange Notes are to be delivered to, or are to be issued in the name of, any person other than the registered holder of the Outstanding Notes tendered, or if a transfer tax is

imposed for any reason other than on the exchange of Outstanding Notes in connection with the Exchange Offer, then the amount of any such transfer taxes (whether imposed on the registered holder or any other persons) will be payable by the tendering holder. If satisfactory evidence of payment of such taxes or exemption therefrom is not submitted with this Letter of Transmittal, the amount of such transfer taxes will be billed directly to such tendering holder.

Except as provided in this Instruction 7, it will not be necessary for transfer tax stamps to be affixed to the Outstanding Notes listed in this Letter of Transmittal.

8. Waiver of Conditions. The Company reserves the absolute right to waive, in whole or in part, any of the conditions to the Exchange Offer set forth in the Prospectus.

9. Mutilated, Lost, Stolen or Destroyed Securities. Any holder whose Outstanding Notes have been mutilated, lost, stolen or destroyed, should promptly contact the Exchange Agent at the address set forth on the first page hereof for further instructions. The holder will then be instructed as to the steps that must be taken in order to replace the certificate(s). This Letter of Transmittal and related documents cannot be processed until the procedures for replacing lost, destroyed or stolen certificate(s) have been completed.

10. No Conditional Tenders; No Notice of Irregularities. No alternative, conditional, irregular or contingent tenders will be accepted. All tendering holders, by execution of this Letter of Transmittal, shall waive any right to receive notice of the acceptance of their Outstanding Notes for exchange. The Company reserves the right, in its reasonable judgment, to waive any defects, irregularities or conditions of tender as to particular Outstanding Notes. The Company's interpretation of the terms and conditions of the Exchange Offer (including the instructions in this Letter of Transmittal) will be final and binding on all parties. Unless waived, any defects or irregularities in connection with tenders of Outstanding Notes must be cured within such time as the Company shall determine. Although the Company intends to notify holders of defects or irregularities with respect to tenders of Outstanding Notes, neither the Company, the subsidiary guarantors of the Exchange Notes, the Exchange Agent nor any other person is under any obligation to give such notice nor shall they incur any liability for failure to give such notification. Tenders of Outstanding Notes will not be deemed to have been made until such defects or irregularities have been cured or waived. Any Outstanding Notes received by the Exchange Agent that are not properly tendered and as to which the defects or irregularities have not been cured or waived will be returned by the Exchange Agent to the tendering holder promptly following the Expiration Date.

11. Requests for Assistance or Additional Copies. Questions relating to the procedure for tendering, as well as requests for additional copies of the Prospectus and this Letter of Transmittal, may be directed to the Exchange Agent at the address and telephone number set forth on the first page hereof.

IMPORTANT: THIS LETTER OF TRANSMITTAL OR A FACSIMILE OR COPY THEREOF (TOGETHER WITH CERTIFICATES OF OUTSTANDING NOTES OR CONFIRMATION OF BOOK-ENTRY TRANSFER AND ALL OTHER REQUIRED DOCUMENTS) MUST BE RECEIVED BY THE EXCHANGE AGENT ON OR PRIOR TO THE EXPIRATION DATE.

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

		–							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** ▶ **Date** ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding, or

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting,* later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.

2. The treaty article addressing the income.

3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.

4. The type and amount of income that qualifies for the exemption from tax.

5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,

2. You do not certify your TIN when required (see the instructions for Part II for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code,* later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships,* earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code,* later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2—The United States or any of its agencies or instrumentalities

3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities

5—A corporation

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7—A futures commission merchant registered with the Commodity Futures Trading Commission

8—A real estate investment trust

9—An entity registered at all times during the tax year under the Investment Company Act of 1940

10—A common trust fund operated by a bank under section 584(a)

11—A financial institution

12—A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 5[2]
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

[1] See Form 1099-MISC, Miscellaneous Income, and its instructions.

[2] However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester,* later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.SSA.gov*. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/Businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. Go to *www.irs.gov/Forms* to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to *www.irs.gov/OrderForms* to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code,* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account[1]
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor[2]
5. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee[1] The actual owner[1]
6. Sole proprietorship or disregarded entity owned by an individual	The owner[3]
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	**Give name and EIN of:**
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity[4]
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov*. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at *spam@uce.gov* or report them at *www.ftc.gov/complaint*. You can contact the FTC at *www.ftc.gov/idtheft* or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see *www.IdentityTheft.gov* and Pub. 5027.

Visit *www.irs.gov/IdentityTheft* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

Exhibit 99.2

APERGY CORPORATION

OFFER TO EXCHANGE

$300,000,000 AGGREGATE PRINCIPAL AMOUNT OF ITS 6.375% SENIOR NOTES DUE 2026 AND THE RELATED SUBSIDIARY GUARANTEES, WHICH HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, FOR ANY AND ALL OF ITS OUTSTANDING 6.375% SENIOR NOTES DUE 2026 AND THE RELATED SUBSIDIARY GUARANTEES

, 2018

To Brokers, Dealers, Commercial Banks, Trust Companies and other Nominees:

As described in the enclosed Prospectus, dated , 2018 (as the same may be amended or supplemented from time to time, the "Prospectus"), and Letter of Transmittal (the "Letter of Transmittal"), Apergy Corporation (the "Company") is offering to exchange (the "Exchange Offer") up to $300,000,000 aggregate principal amount of 6.375% Senior Notes due 2026 and related subsidiary guarantees (the "Exchange Notes"), which have been registered under the Securities Act of 1933, as amended (the "Securities Act"), for any and all of its outstanding 6.375% Senior Notes due 2026 and related subsidiary guarantees (the "Outstanding Notes") in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof upon the terms and subject to the conditions of the enclosed Prospectus and Letter of Transmittal. The terms of the Exchange Notes are identical in all material respects (including principal amount, interest rate and maturity) to the terms of the Outstanding Notes for which they may be exchanged pursuant to the Exchange Offer, except that the Exchange Notes are freely transferable by holders thereof. The Company will accept for exchange any and all Outstanding Notes properly tendered according to the terms of the Prospectus and the Letter of Transmittal. Consummation of the Exchange Offer is subject to certain conditions described in the Prospectus.

WE URGE YOU TO PROMPTLY CONTACT YOUR CLIENTS FOR WHOM YOU HOLD OUTSTANDING NOTES REGISTERED IN YOUR NAME OR IN THE NAME OF YOUR NOMINEE. PLEASE BRING THE EXCHANGE OFFER TO THEIR ATTENTION AS PROMPTLY AS POSSIBLE.

Enclosed are copies of the following documents:

1. The Prospectus;
2. The Letter of Transmittal for your use in connection with the tender of Outstanding Notes and for the information of your clients; and
3. A form of letter, including a letter of instructions to a registered holder from a beneficial owner, which you may use to correspond with your clients for whose accounts you hold Outstanding Notes that are registered in your name or the name of your nominee, with space provided for obtaining such clients' instructions regarding the Exchange Offer.

Your prompt action is requested. Please note that the Exchange Offer will expire at 11:59 P.M., New York City time, on , (the "Expiration Date"), unless the Company otherwise extends the Exchange Offer. The Exchange Offer is not conditioned upon any minimum number of Outstanding Notes being tendered.

To participate in the Exchange Offer, certificates for Outstanding Notes, together with a duly executed and properly completed Letter of Transmittal or facsimile thereof, or a timely confirmation of a book-entry transfer of such Outstanding Notes into the account of Wells Fargo Bank, National Association (the "Exchange Agent"), at the book-entry transfer facility, with any required signature guarantees, and any other required documents, must be received by the Exchange Agent by the Expiration Date as indicated in the Prospectus and the Letter of Transmittal.

Pursuant to the Letter of Transmittal, each holder of the Outstanding Notes will represent to the Company that (a) any Exchange Notes acquired in exchange for Outstanding Notes tendered hereby will have been acquired in the ordinary course of business of the person receiving such Exchange Notes, whether or not the holder, (b) neither the holder of such Outstanding Notes nor any such other person is engaged in or intends to engage in, nor has an arrangement or understanding with any person to participate in, the distribution of such Exchange Notes and (c) if the holder of such Outstanding Notes or any such other person is an "affiliate," as such term is defined in

Rule 405 under the Securities Act, of the Company, is not acquiring the Exchange Notes in the ordinary course of its business, is engaged in or intends to engage in a distribution of the Exchange Notes or has any arrangement or understanding with respect to the distribution of the Exchange Notes to be acquired pursuant to the Exchange Offer, such holder will acknowledge that (i) it may not rely on the applicable interpretations of the staff of the SEC and (ii) it must comply with the registration and prospectus delivery requirements of the Securities Act in connection with any secondary resale transaction.

If the holder is a broker-dealer that will receive the Exchange Notes for its own account in exchange for the Outstanding Notes, it will represent that the Outstanding Notes to be exchanged for the Exchange Notes were acquired by it as a result of market-making activities or other trading activities and will acknowledge that it will deliver a prospectus in connection with any resale or transfer of such Exchange Notes; however, by so acknowledging and by delivering a prospectus, the broker-dealer will not be deemed to admit that it is an "underwriter" within the meaning of the Securities Act.

The enclosed letter to clients contains an authorization by the beneficial owners of the Outstanding Notes for you to make the foregoing representations.

The Company will not pay any fees or commissions to any broker or dealer or to any other persons (other than the Exchange Agent) in connection with the solicitation of tenders of the Outstanding Notes pursuant to the Exchange Offer. However, the Company will pay or cause to be paid any transfer taxes, if any, applicable to the tender of the Outstanding Notes to it or its order, except as otherwise provided in the Prospectus and Letter of Transmittal.

Any inquiries you may have with respect to the Exchange Offer should be addressed to the Exchange Agent at its address and telephone number set forth in the enclosed Prospectus and Letter of Transmittal. Additional copies of the enclosed materials may be obtained from the Exchange Agent.

Very truly yours,

APERGY CORPORATION

NOTHING CONTAINED HEREIN OR IN THE ENCLOSED DOCUMENTS SHALL CONSTITUTE YOU OR ANY OTHER PERSON AS AN AGENT OF THE COMPANY OR THE EXCHANGE AGENT, OR AUTHORIZE YOU OR ANY OTHER PERSON TO USE ANY DOCUMENT OR MAKE ANY STATEMENTS ON BEHALF OF EITHER OF THEM IN CONNECTION WITH THE EXCHANGE OFFER, OTHER THAN THE DOCUMENTS ENCLOSED HEREWITH AND THE STATEMENTS EXPRESSLY CONTAINED THEREIN.

Exhibit 99.3

APERGY CORPORATION

OFFER TO EXCHANGE

$300,000,000 AGGREGATE PRINCIPAL AMOUNT OF ITS 6.375% SENIOR NOTES DUE 2026 AND THE RELATED SUBSIDIARY GUARANTEES, WHICH HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, FOR ANY AND ALL OF ITS OUTSTANDING 6.375% SENIOR NOTES DUE 2026 AND THE RELATED SUBSIDIARY GUARANTEES

, 2018

To Our Clients:

Enclosed for your consideration are a Prospectus, dated , 2018 (as the same may be amended or supplemented from time to time, the "Prospectus"), and a Letter of Transmittal (the "Letter of Transmittal"), relating to the offer by Apergy Corporation (the "Company") to exchange (the "Exchange Offer") up to $300,000,000 aggregate principal amount of 6.375% Senior Notes due 2026 and related subsidiary guarantees (the "Exchange Notes"), which have been registered under the Securities Act of 1933, as amended (the "Securities Act"), for any and all of its outstanding 6.375% Senior Notes due 2026 and related subsidiary guarantees (the "Outstanding Notes") in minimum denominations of $2,000 and integral multiples of $1,000 in excess thereof upon the terms and subject to the conditions of the enclosed Prospectus and Letter of Transmittal. The terms of the Exchange Notes are identical in all material respects (including principal amount, interest rate and maturity) to the terms of the Outstanding Notes for which they may be exchanged pursuant to the Exchange Offer, except that the Exchange Notes are freely transferable by holders thereof, upon the terms and subject to the conditions of the enclosed Prospectus and the related Letter of Transmittal. The Company will accept for exchange any and all Outstanding Notes properly tendered according to the terms of the Prospectus and the Letter of Transmittal. Consummation of the Exchange Offer is subject to certain conditions described in the Prospectus.

PLEASE NOTE THAT THE EXCHANGE OFFER WILL EXPIRE AT 11:59 P.M., NEW YORK CITY TIME, ON , (THE "EXPIRATION DATE"), UNLESS THE COMPANY EXTENDS THE EXCHANGE OFFER.

The enclosed materials are being forwarded to you as the beneficial owner of the Outstanding Notes held by us for your account but not registered in your name. A tender of such Outstanding Notes may only be made by us as the registered holder and pursuant to your instructions. Therefore, the Company urges beneficial owners of Outstanding Notes registered in the name of a broker, dealer, commercial bank, trust company or other nominee to contact such registered holder promptly if such beneficial owners wish to tender their Outstanding Notes in the Exchange Offer.

Accordingly, we request instructions as to whether you wish to tender any or all such Outstanding Notes held by us for your account, pursuant to the terms and conditions set forth in the enclosed Prospectus and Letter of Transmittal. If you have any questions regarding the terms of the Exchange Offer, please direct your questions to Wells Fargo Bank, National Association, the exchange agent for the Exchange Offer (the "Exchange Agent"). If you wish to have us tender any or all of your Outstanding Notes, please so instruct us by completing, signing and returning to us the "Instructions to Registered Holder from Beneficial Owner" form that appears below. We urge you to read the Prospectus and the Letter of Transmittal carefully before instructing us as to whether or not to tender your Outstanding Notes. If you require assistance, you should consult your financial, tax or other professional advisors. Holders who wish to participate in the Exchange Offer are asked to respond promptly by completing and returning the enclosed Letter of Transmittal and all other required documentation to the Exchange Agent.

The accompanying Letter of Transmittal is furnished to you for your information only and may not be used by you to tender Outstanding Notes held by us and registered in our name for your account or benefit.

If we do not receive written instructions in accordance with the below and the procedures presented in the Prospectus and the Letter of Transmittal, we will not tender any of the Outstanding Notes on your account.

INSTRUCTIONS TO REGISTERED HOLDER FROM BENEFICIAL OWNER

The undersigned beneficial owner acknowledges receipt of your letter and the accompanying Prospectus dated , 2018 (as the same may be amended or supplemented from time to time, the "Prospectus"), and a Letter of Transmittal (the "Letter of Transmittal"), relating to the offer (the "Exchange Offer") by Apergy Corporation (the "Company") to exchange up to $300,000,000 aggregate principal amount of 6.375% Senior Notes due 2026 and related subsidiary guarantees (the "Exchange Notes"), which have been registered under the Securities Act of 1933, as amended (the "Securities Act"), for any and all of its outstanding 6.375% Senior Notes due 2026 and related subsidiary guarantees (the "Outstanding Notes"), upon the terms and subject to the conditions set forth in the Prospectus and the Letter of Transmittal. Capitalized terms used but not defined herein have the meanings ascribed to them in the Prospectus.

This will instruct you, the registered holder, to tender the principal amount of the Outstanding Notes indicated below held by you for the account of the undersigned, upon the terms and subject to the conditions set forth in the Prospectus and the Letter of Transmittal.

Principal Amount Held for Account Holder(s)	**Principal Amount to be Tendered***

* Unless otherwise indicated, the entire principal amount held for the account of the undersigned will be tendered.

You are hereby authorized to make, on behalf of the undersigned (and the undersigned, by its signature below, hereby makes to you), the representations and warranties contained in the Letter of Transmittal that are to be made with respect to the undersigned as a beneficial owner of the Outstanding Notes, including but not limited to the representations that (a) the Exchange Notes acquired in exchange for the Outstanding Notes pursuant to the Exchange Offer are being acquired in the ordinary course of business of the person receiving such Exchange Notes, whether or not the undersigned, (b) the undersigned is not engaged in, and does not intend to engage in, and has no arrangement or understanding with any person to participate in, a distribution of Exchange Notes and (c) the undersigned is not an "affiliate," as defined in Rule 405 under the Securities Act, of the Company. If the undersigned is a broker-dealer that will receive the Exchange Notes for its own account in exchange for the Outstanding Notes, representations and warranties made by the undersigned include that (a) the Outstanding Notes to be exchanged for the Exchange Notes were acquired by it as a result of market-making activities or other trading activities and (b) it will deliver a prospectus in connection with any resale or transfer of such Exchange Notes. If the undersigned is an affiliate of the Company, is not acquiring the Exchange Notes in the ordinary course of its business, is engaged in or intends to engage in a distribution of the Exchange Notes or has any arrangement or understanding with respect to the distribution of the Exchange Notes to be acquired pursuant to the Exchange Offer, the undersigned acknowledges that it may not rely on the applicable interpretations of the staff of the Securities and Exchange Commission relating to exemptions from the registration and prospectus delivery requirements of the Securities Act and must comply with such requirements in connection with any secondary resale transaction.

SIGN HERE

Dated: _____

Signature(s): _____

Print Name(s): _____

Address: _____

_____

(Please include Zip Code)

Telephone Number _____

(Please include Area Code)

Tax Identification Number or Social Security Number: _____

My Account Number With You: _____