

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

**FORM 10-K**

(Mark one)  
 **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE YEAR ENDED DECEMBER 31, 2018

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 1-12317

**NATIONAL OILWELL VARCO, INC.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction  
of incorporation or organization)

76-0475815  
(IRS Employer  
Identification No.)

7909 Parkwood Circle Drive  
Houston, Texas 77036-6565  
(Address of principal executive offices)

(713) 346-7500  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, par value \$.01  
(Title of Class)

New York Stock Exchange  
(Exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15 (d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an 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. (Check one):

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 13(1) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of voting and non-voting common stock held by non-affiliates of the registrant as of June 30, 2018 was \$16.6 billion. As of February 8, 2019, there were 383,433,346 shares of the Company's common stock (\$0.01 par value) outstanding.

**Documents Incorporated by Reference**

Portions of the Proxy Statement in connection with the 2019 Annual Meeting of Stockholders are incorporated in Part III of this report.

**ITEM 1. BUSINESS****General**

National Oilwell Varco, Inc. (“NOV” or the “Company”), a Delaware corporation incorporated in 1995, is a leading independent provider of equipment and technology to the upstream oil and gas industry. Over the course of its 156-year history, NOV and its predecessor companies have helped transform the way the industry develops oil and gas fields and improved the cost-effectiveness, efficiency, safety, and environmental impact of global oil and gas operations. Over the past few decades, the Company pioneered and refined key technologies that helped make frontier resources, such as unconventional and deepwater oil and gas, economically viable.

NOV owns an extensive proprietary technology portfolio, which the Company uses to support the industry’s full-field drilling, completion, and production needs. By leveraging its unmatched cross-segment capabilities, scope, and scale, NOV continues to develop and introduce technologies that further enhance oilfield economics, with particular focus on those technologies related to drilling automation, multistage completions, predictive analytics and condition-based maintenance, and improved deepwater project economics. Given the breadth and depth of the Company’s technology and product offerings, most oil and gas wells around the world see at least some piece of NOV equipment over the course of their lifetime.

NOV serves major-diversified, national, and independent service companies; contractors; and oil and gas operators in 65 countries around the world. The Company currently operates under three segments: Wellbore Technologies, Completion & Production Solutions, and Rig Technologies.

**Business Strategy and Competitive Strengths**

NOV’s primary business objective is to further enhance its position in the marketplace as a leading independent provider of technology and equipment to the upstream oil and gas industry. The Company intends to advance this objective and generate above-average returns on its capital over the long term by delivering technologies, equipment, and services that help lower the marginal cost of developing and producing oil and gas resources and by executing the following strategies that leverage the Company’s competitive strengths:

***Leverage NOV’s advantages of size, scope, scale, and position in the market***

NOV’s position as a leading independent provider of technology and equipment to the upstream oil and gas industry affords the Company several competitive advantages, as follows:

*Economies of scale in procurement and manufacturing.* NOV’s market leadership and global footprint, which spans almost every major oilfield market, provides the Company with economies of scale. NOV’s scope and scale have enabled it to develop a unique global supply chain, which provides the Company with the ability to procure materials from the lowest-cost sources of supply around the world. The Company’s global manufacturing footprint and flexibility to produce a diverse array of products also enables NOV to rapidly adapt to changes in demand, efficiently leverage manufacturing capacity that is near high-demand areas, and manufacture goods in the lowest-cost jurisdictions. The geographic diversity of NOV’s footprint also reduces potential volatility in the Company’s revenues from shifts in location of oilfield activity around the world, regional differences in hydrocarbon prices, and adverse weather and other events.

*Scope and scale for distribution and marketing.* As a leading independent provider of technology and equipment to the oilfield and with operations in 65 countries, NOV has developed an efficient global distribution network and relationships with virtually every oil and gas operator, service company, and contractor in the world. NOV uses its customer relationships and distribution capabilities to accelerate the commercialization of new products and technologies. NOV routinely develops technologies for use in the global marketplace. NOV’s infrastructure allows the Company to quickly penetrate the global marketplace and can create a first-mover advantage as customers prefer to standardize operations around certain products.

*Reputation, experience, and benefits of fleet standardization.* NOV's reputation and experience make its products a lower-risk purchasing decision for customers. The Company benefits from customer efforts to standardize training, maintenance, and spare parts. Standardized fleets of equipment are easier for customers to operate and maintain, resulting in reduced downtime, lower training costs, better safety, and reduced inventory stocking requirements. Customers may prefer to standardize on equipment from a well-capitalized market leader such as NOV. NOV has entered into long-term service agreements with several large offshore drilling contractors whereby NOV will employ big data analytics and condition monitoring to maximize uptime and reduce the customer's total cost of ownership for drill floor equipment.

*Large installed base of equipment.* As a leading original equipment manufacturer ("OEM") in the oilfield, NOV is in an excellent position to provide aftermarket support for the industry's largest installed base of equipment. Most oilfield services customers prefer OEM aftermarket support of their equipment, and many of their E&P customers demand it. Customers frequently encounter higher risk and cost when they purchase and use potentially incompatible products from different vendors, particularly where products must interact through complex interfaces, which are common sources of failures and unplanned costs. Additionally, certain past industry events increased the industry's risk profile with government regulatory bodies, who have shown a strong preference for service contractors maintaining critical equipment through the OEM.

*Digital products and technologies.* NOV's size and scale also provides for inherent competitive advantages in the areas of technology and innovation. NOV often develops technologies and solutions that involve multiple segments and businesses within the Company. Many such solutions could not be developed by smaller, less-diverse organizations, as an appropriate return on the cost of investment to develop certain technologies could not be achieved when applied to a more limited product offering. NOV's efforts in big data, predictive analytics, and associated sensor technologies is an example of one such area. NOV has invested considerable time and resources to develop its Max™ industrial platform, which enables large-scale collection, aggregation, and analytics of real-time equipment data. While the initial application of this platform was a predictive analytics and condition-based monitoring solution for subsea blowout preventers, the platform was designed to be the backbone of all big data products and services offered by the Company and to be used to monitor, analyze, and optimize many of the Company's own manufacturing operations.

***Employ a capital-light business model with the ability to quickly scale operations***

NOV's manufacturing operations are capital light and have low fixed-asset intensity. The Company's facilities require relatively low investment and maintenance expenditures versus the sales they enable. NOV manufactures a diverse array of products across its manufacturing infrastructure and drives efficiency improvements by shifting production runs to facilities where demand is highest—lowering shipping costs—or to facilities that have the lowest-cost operations. The Company also realizes the benefit of serving a customer base that requires technically complex equipment used in extremely harsh environments. Placing sophisticated tools in a bottomhole assembly at the end of drillpipe to precisely place a wellbore several miles into the earth, and then physically cracking open reservoir rock using large volumes of highly abrasive fluids pumped at extremely high pressures, is incredibly hard on equipment. This harsh operating environment creates recurring sales opportunities for replacement equipment and aftermarket sales and service.

NOV has organized its infrastructure to take advantage of the oil and gas industry's cyclical nature. As commodity prices rise, the oilfield typically enters an expansionary phase where large amounts of capital are deployed quickly and equipment orders increase in line. NOV maintains the ability to ramp up manufacturing capacity quickly to capture the value generated by up-cycles while meeting the demands of its customer base. During industry down-cycles, the Company focuses on improving internal efficiencies and advancing technological offerings. NOV's ability to continue, if not accelerate, pursuit of its technological initiatives throughout industry cycles enhances the Company's ability to drive long-term customer and shareholder value. The Company also outsources non-critical machining operations with lower tolerance requirements during times of increased activity levels and brings the machining operations back into Company-owned facilities during down-cycles to improve asset utilization and lower costs.

### ***Capitalize on and drive end-market fragmentation***

A key tenet of NOV's business model is to make its technologies and products available to all industry participants. To the extent NOV can provide equipment and technology that is as good, if not better than, products developed by service providers, it will prevent any one organization from having a proprietary advantage and therefore drive fragmentation. This fragmentation expands NOV's customer base and permits the Company to avoid customer concentration in most of its businesses. NOV has resisted the recent trend toward vertical integration, which has left the Company in an attractive and unique position in the marketplace as the only large-cap independent provider of technology and equipment to the oilfield service space. In the international markets, many countries are pursuing initiatives that drive local content and greater local employment in oilfield activity. These actions will likely prompt more local startup enterprises, further expanding the number of customers for NOV's equipment.

### ***Develop proprietary technologies and solutions that assist oil and gas operators in reducing their marginal cost of supply***

NOV strives to further develop its substantial technology portfolio and has a reputation for rapidly developing innovative solutions that assist its customers' pursuit of productivity gains. The Company is well positioned to leverage resources and introduce new breakthrough technologies, including digital products that enhance efficiencies and address industry needs, while generating strong returns. The Company's unmatched cross-business-unit capabilities and expertise uniquely position NOV to pioneer proprietary technologies across its business lines. For example, NOV's Wellbore Technologies and Rig Technologies segments jointly introduced closed-loop drilling technologies, which link data from the bottom of the well to the software controls of the drilling rig and use machine learning to drive greater efficiency. NOV works closely with customers to identify needs and its technical experts utilize internal research and development capabilities to develop value-added technologies.

### ***Employ a conservative capital structure with ample liquidity to capitalize on volatility associated with the oil and gas industry***

NOV maintains a conservative capital structure, with an investment grade credit rating and ample liquidity. The Company carefully manages its capital structure by continuously monitoring cash flow, capital spending, and debt capacity. Maintaining financial strength inspires confidence from customers who provide NOV with large purchase commitments that the Company delivers over multi-year timeframes. This provides NOV with the flexibility to execute its strategy, including advancing technological offerings, through industry volatility and commodity price cycles. The Company intends to maintain a conservative approach to managing its balance sheet to preserve operational and strategic flexibility.

## **Business Segment Overview**

**Wellbore Technologies** provides the critical technologies, equipment, and services required to maximize customer efficiencies and economics associated with oil and gas wells. The segment's offerings are provided through the following business units:

- *ReedHycalog* is a market-leading designer and manufacturer of drill-bit technology, a provider of borehole enlargement systems, and an independent supplier of directional drilling tools and optimization software and services. Distinguished by its industry-leading cutter technology, ReedHycalog's drill-bit offering features both fixed-cutter and roller-cone bits designed to improve drilling times and overall well efficiencies. ReedHycalog also manufactures tools that enable the precise placement of the wellbore within the desired reservoir location, including measurement-while-drilling tools and dynamic rotary steerable systems. ReedHycalog harnesses NOV's unique ability to link downhole tools and services with surface equipment to provide the world's first closed-loop drilling automation and optimization system, combining heuristic functions and machine-learning capabilities to transform drilling performance and operations.
- *Downhole* is a leading independent equipment supplier in the drilling and intervention segment of the industry, with engineering teams, manufacturing facilities, supply hubs and service centers situated in regions of oil and gas activity. With a constantly-evolving product portfolio that includes downhole drilling motors, agitator systems, as well as fishing and throtubing tools, the Downhole business unit's offerings enable its customers to achieve significant increases in efficiency, whether in drilling, workover or intervention operations.

- *WellSite Services* is a leading provider of solids control and waste management equipment and services, drilling and completion fluids, data acquisition and analytics, water management solutions, managed-pressure-drilling systems, and wellsite logistics solutions. WellSite Services manufactures, sells, and rents highly engineered solids control equipment and provides field services that improve customers' bottom lines by efficiently separating solids and reclaiming drilling fluids for re-use. After separating drill cuttings, WellSite Services provides waste management (both onsite and at centralized locations), including transport and storage. Additionally, WellSite Services provides high-performance drilling fluid and water management solutions with a network of experts that safely work at the wellsite to ensure that operators have the support they need to bring their wells in on-time and on-budget. MD Totco delivers real-time measurement and monitoring of critical parameters required to improve rig safety and efficiency. Access to data and analytics are provided to offsite locations and mobile applications, enabling company personnel to monitor drilling operations through a secure link. WellSite Services offers a diversified range of resources to help manage the full lifecycle of the wellsite from initial preparation to worksite abandonment, including generators, temperature-control equipment, portable lighting, and other wellsite accessories.
- *Tuboscope* is a leader in tubular coating and inspection services, servicing drill pipe and other oil country tubular goods ("OCTG") such as casing, production tubing, and line pipe. Backed by an 80-year track record, Tuboscope offers a fully integrated inspection, coating, and repair process that enables customers to be confident that their critical OCTG will behave as they should when needed. In addition, Tuboscope offers artificial lift rod solutions, line-pipe connection systems, and RFID technology for complete drillpipe lifecycle management.
- *Grant Prideco* is a leading manufacturer of premium drill-stem tubulars. With an integrated supply chain and a strong position in the competitive premium drillpipe connections, Grant Prideco offers one stop shopping for all drill stem needs. Armed with a product portfolio that ranges from the needs of the simplest vertical land well to the challenging needs of deepwater, extended-reach, high-pressure/high-temperature, and factory-drilling applications, Grant Prideco innovates with advanced metallurgical grades and connection technologies.
- *IntelliServ* is the only independent commercial provider of wired drillpipe complete with an associated telemetry network that utilizes real-time broadband data transmission to enable instantaneous two-way communication between the bottomhole assembly and surface control system. IntelliServ™ wired pipe enables significant rig time savings as surveys, downlinks, slide orientations, and other data-driven activities are performed in a matter of seconds versus minutes with conventional telemetry.

**Completion & Production Solutions** provides the critical technologies necessary to optimize the well completion process and production phase of a well's life cycle. Completion & Production Solutions business units include:

- *Intervention and Stimulation Equipment ("ISE")* engineers and manufactures capital equipment and consumables and provides aftermarket service and repair to oilfield pressure pumpers, coiled tubing operators, wireline service companies, and providers of well testing and flowback services. ISE manufactures and assembles all equipment used to execute hydraulic fracturing jobs with particularly strong positions in the higher-valued technologies and complex process equipment, such as hydration units, chemical additive systems, blenders, and control systems. In addition, the business unit produces essential consumable components that support pressure pumping spreads, including centrifugal pumps, fluid ends, valves, seats, and flowline equipment. The business unit also designs and manufactures equipment used to pump, mix, transport, and store cement used in the well construction process. ISE is a leading provider of coiled tubing units, control systems, pressure control equipment, injector heads, and coiled tubing itself. ISE also provides nitrogen equipment and snubbing units. The business unit designs and manufactures wireline products for electric and slickline line applications, including critical pressure control equipment like wireline lubricators. Additionally, ISE designs and manufactures equipment for

surface well-test and flowback operations. ISE supports its equipment offering by providing comprehensive repair, recertification and other support services through an unmatched global network of aftermarket service and repair facilities.

- *Fiber Glass Systems* is a market leader in the design, manufacture, and delivery of high-end composite piping systems, pressure vessels, and structures engineered to deliver customers with solutions to both corrosion and weight challenges across a wide array of applications. With manufacturing facilities spanning five continents and a sales and distribution network covering 40 countries, Fiber Glass Systems serves customers in the oil and gas, chemical, industrial, marine, offshore, subsea, fuel handling, and mining industries.
- *Process and Flow Technologies* provides integrated processing, production, and pumping equipment to customers in the oil and gas and industrial markets. For the production space they manufacture pumping technologies, including reciprocating, multistage, and progressive cavity pumps, as well as artificial lift support systems. For the midstream space they manufacture closures, transfer pumps, and valves. In the fluid processing space they design and manufacture integrated systems that provide water treatment, separation, sand management, hydrate inhibition, and gas processing for use both on and offshore. In the Industrial market they manufacture pumping, mixing, agitation equipment, and heat exchangers for general use in industrial end-markets. This equipment is supported by a global aftermarket service organization.
- *Subsea Production Systems* strives to improve subsea infrastructure through technical innovation that improves customer productivity and reduces cost. The business unit is one of only three global manufacturers of flexible subsea pipe systems, which are designed to operate under demanding offshore conditions around the world. Flexible pipes are highly engineered, complex structures that are helically wound and comprised of multiple unbonded layers of steel and composites, which allow them to withstand the demanding pressures and tensile loads required in deepwater production while remaining resistant to the fatigue induced by wave and tidal action. Subsea Production Systems also provides an assortment of critical equipment necessary for subsea production, such as subsea water injection systems, tie-in connector systems, subsea storage units, and other related equipment.
- *Floating Production Systems* offers a comprehensive technology suite geared towards improving offshore economics by providing cost-effective ways for operators to get their projects to first oil faster. Floating Production Systems offers turret mooring systems and topside process modules that are designed to minimize execution risk and maximize operability and crew safety. Floating Production Systems has the capability to partner with the operator from concept to redeployment as well as to simply operate as the equipment provider. NOV, along with alliance partners, offers complete technology, engineering, and product delivery capabilities to supply comprehensive topside solutions for FPSO projects.
- *XL Systems* provides integral and weld-on connectors for oil and gas applications, including conductor strings, surface casing, and liners, in sizes ranging from 16 to 72 inches in diameter. XL Systems is the sole provider of a proprietary line of wedge thread connections on large-bore pipe. In addition, XL Systems supplies connector products in which the threads are machined on high-strength forging material and then welded to pipe.
- *Completion Tools* offers a portfolio of differentiated completion tool products and solutions that address the most pressing needs of the global completions marketplace. The Completion Tools business' product portfolio is highlighted by proprietary technology like the Bulldog Frac Sleeve, which utilizes a coiled tubing annular frac system to isolate and stimulate stages while being lighter and easier to handle than other sleeves on the market. Other proprietary technologies include the BPS™ (Burst Port System) Multistage, the Bullmastiff™ Frac System, and i-Frac CEM™ ball-drop-activated multistage frac sleeve. The portfolio also includes liner hanger systems, sub-surface safety valves, and a variety of bridge plugs.

**Rig Technologies** is the global leader in the engineering, manufacturing, and support of advanced drilling equipment packages and related capital equipment necessary to drill oil and gas wells anywhere in the world. Rig Technologies includes:

- *Rig Equipment* designs, manufactures, and sells land rigs, complete offshore drilling packages, and drilling rig components designed to mechanize and automate many complex drilling rig processes. Rig Equipment's product portfolio includes many equipment designs that changed the way rigs are operated, including the TDS top drive drilling system and automated roughneck. As the oil and gas industry has pushed the boundaries of geology and engineering with the move into the ultra-deepwater and onshore unconventional plays, the Rig Equipment unit has met the increasing challenges of its customer base with constant improvements to both its land and offshore rig equipment offerings. An example of this is the recently introduced NOVOS<sup>TM</sup> control system that offers drilling process automation, which enables dramatic improvements in drilling efficiency, reliability, and performance. The business unit also provides comprehensive aftermarket products and services to maximize its customers' rig fleets' drilling uptime. Aftermarket offerings include spare parts, repair, and rentals as well as comprehensive remote equipment monitoring, technical support, field service, and customer training through an extensive network of aftermarket service and repair facilities strategically located in major areas of drilling operations around the world.
- *Marine Construction* designs, engineers, and manufactures heavy-lift cranes; a large range of knuckle-boom and lattice boom cranes, including active heave options; mooring, anchor, and deck handling machinery; a full range and models of jacking systems; and pipelay and construction systems. Marine Construction serves the oil and gas industry as well as other marine-based end markets.

See Note 15 to the Consolidated Financial Statements for financial information by segment and a geographical breakout of revenues and long-lived assets. We have also included a glossary of oilfield terms at the end of Item 1. "Business" of this Annual Report.

### **Overview of Oil and Gas Well-Construction Processes**

The well-construction process starts with an operator and its contractors designating a suitable drilling site and placing a drilling rig at the location. The rig's crew assembles the drill stem, which consists of drillpipe joints, specialized drilling components known as downhole tools, and a drill bit at the end. Modern rigs typically power the drill bit through a drilling motor, which is attached to the bottom of the drill stem and provides rotational force directly to the bit, or a top drive, a device suspended from the derrick that turns the entire drill stem. The evolution of drilling motors and top drives has facilitated operators' abilities to drill directionally and horizontally as opposed to being limited to the traditional vertical trajectory. The Company sells and rents drilling motors, agitators, drill bits, downhole tools and drill pipe through Wellbore Technologies, and sells top drives through Rig Technologies.

Heavy drilling fluids, or "drilling muds," are pumped down the drill stem and forced out through jets in the bit. The drilling mud returns to the surface through the space between the borehole wall and the drill stem, carrying with it the rock cuttings drilled out by the bit. The cuttings are removed from the mud by a solids control system (which can include shakers, centrifuges, and other specialized equipment) and disposed of in an environmentally sound manner. The solids control system permits the mud, which is often comprised of expensive compounds, to be continuously reused and re-circulated back into the hole. Rig Technologies sells the large "mud pumps" that are used to pump drilling mud through the drill stem, down, and back up the hole. Wellbore Technologies sells and rents solids control equipment and provides solids control, waste management and drilling fluids services.

Many operators internally coat the drill stem to improve its hydraulic efficiency and protect it from the corrosive fluids sometimes encountered during drilling; have hard-facing alloys applied to drillpipe joints, collars, and other components to protect tool joints and casing against wear; and inspect and assess the integrity of the drillpipe from time to time. Wellbore Technologies manufactures and sells drillpipe and provides coating, “hardfacing,” and drillpipe inspection and repair. As hole depth increases, additional joints of drillpipe are continuously added to the drill stem. When the bit becomes dull or the equipment at the bottom of the drill stem – including the drilling motors – otherwise requires servicing, the entire drill stem is pulled out of the hole and disassembled by disconnecting the joints of drillpipe. These are set aside or “racked,” the old bit is replaced or service is performed, and the drill stem is reassembled and lowered back into the hole (a process called “tripping”). During drilling and tripping operations, joints of drillpipe must be screwed together and tightened (“made up”), and loosened and unscrewed (“spun out”), a process that can create a considerable amount of stress on the pipe connections while also being quite time consuming. Rig Technologies provides drilling equipment to manipulate and maneuver the drillpipe in an efficient and safe manner, and Wellbore Technologies manufactures premium connections that are designed to reduce failure downhole and improve the rate of connection on the rig floor. When the hole has reached a specified depth, all the drillpipe is pulled out of the hole, and larger-diameter pipe known as casing is lowered into the hole and permanently cemented in place in order to protect against collapse and contamination of the hole. The casing is typically inspected before it is lowered into the hole, another service provided by Wellbore Technologies. Hole openers from Wellbore Technologies, which mount above the drill bits in the drill stem, open the tolerance of the hole to allow for easier and faster casing installation. Completion & Production Solutions manufactures cement mixing and pumping equipment that is used to cement the casing in place. The rig’s hoisting system raises and lowers the drill stem while drilling or tripping, and lowers casing into the wellbore. A conventional hoisting system is a block-and-tackle mechanism that works within the drilling rig’s derrick. The mechanism is lifted by a series of pulleys that are attached to the drawworks at the base of the derrick. Rig Technologies sells and installs drawworks and pipe hoisting-systems.

During the course of normal drilling operations, the drill stem passes through different geological formations that exhibit varying pressure characteristics. If this pressure is not contained, oil, gas, and/or water would flow out of these formations to the surface. Containing reservoir pressures is accomplished primarily by the circulation of heavy drilling muds and secondarily by blowout preventers (“BOPs”), should the mud prove inadequate. Drilling muds are carefully designed to exhibit certain qualities that optimize the drilling process. In addition to containing formation pressure, they must provide power to the drilling motor; carry drilled solids to the surface; protect the drilled formations from being damaged; and cool the drill bit. Achieving these objectives often requires a formulation specific to a given well, requires a high level of cleanliness for better bottomhole assembly, and can involve the use of expensive chemicals as well as natural materials, such as certain types of clay. The fluid itself is often oil or more expensive synthetic mud. Given the cost, it is highly desirable to reuse as much of the drilling mud as possible. Solids control equipment such as shale shakers, centrifuges, cuttings dryers, and mud cleaners help accomplish this objective. Wellbore Technologies provides drilling fluids and rents, sells, operates, and services solids control equipment. Rig Technologies manufactures pumps that power the flow of the mud and fluid downhole and back to the surface. Drilling muds are formulated based on expected drilling conditions. However, as the hole is drilled, the drill stem may encounter a high-pressure zone where the mud density is inadequate to maintain sufficient pressure. Should efforts to “weight up” the mud to contain such a pressure kick fail, a blowout could result, whereby reservoir fluids would flow uncontrolled into the well. A series of BOPs are positioned at the top of the well and, when activated, form tight seals that prevent the escape of fluids to the surface. Conventional BOPs prevent normal rig operations when closed so the BOPs are activated only if drilling mud and normal well control procedures cannot safely contain the pressure. Rig Technologies engineers and manufactures BOPs.

The operations of the rig and the condition of the drilling mud are closely monitored by various sensors, which measure operating parameters such as the weight on the rig’s hook, the incidence of pressure kicks, the operation of the drilling mud pumps, weight on bit, etc. Wellbore Technologies sells and rents drilling rig instrumentation packages that perform these monitoring functions as well as additional sensors that continuously collect downhole data that can be transmitted back to the surface via wired drill pipe. Wellbore Technologies’ also offers drilling optimization and automation software and services that utilize this downhole data to maximize drilling performance by mitigating vibrations, dynamic and impact loading, and stick-slip, which ensures longer bit runs, and reduces the number of necessary trips.



During drilling operations, the drilling rig and related equipment and tools are subject to severe stresses, pressures, and temperatures, as well as a corrosive environment, and require regular repair and maintenance. Rig Technologies supplies spare parts and can dispatch field service engineers with the expertise to quickly repair and maintain equipment, minimizing down time.

Once a well has been drilled, cased, and cemented, and the operator determines hydrocarbons are present in commercial quantities, the well is then completed, and sometimes stimulated. After the casing is cemented in place, the well undergoes one of several completion processes to open the bottom of the wellbore and allow hydrocarbons to flow from the reservoir and up the well to the surface. The most commonly used technique is known as perforation. The perforating process entails lowering a string of shaped charges to the desired depth in the well using an electric wireline unit and firing the charges to perforate the casing or liner. Wireline units are also used to perform logging operations and other intervention services. At this point, the operator may decide, based on well design and flow rate, to further enhance production by stimulating the well. Unconventional wells almost always require stimulation through multi-stage hydraulic fracturing, a process by which a fluid or slurry is pumped down the well by large pumping units. This causes the underground formation to crack or fracture, opening up space for hydrocarbons to flow more freely out of tight rock formations. A proppant is suspended in the fluid and lodges in the cracks, propping them open and allowing hydrocarbons to flow after the fluid is gone. A coiled tubing unit is often used to drill out bridge plugs that isolate the many stages needed to stimulate a horizontal well. A coiled tubing unit utilizes a large continuous length of steel tubing to enter and traverse long laterals and perform completion and well remediation operations. As drilling laterals have lengthened in recent years, many operators are electing to use larger high-specification well service rigs to assist in several phases of the completion phase by conveying tools downhole and drilling out completion plugs. Workover rigs are similar to drilling rigs in their capabilities to handle tubing but are usually smaller and somewhat less sophisticated. Completion & Production Solutions provides the essential equipment necessary for the entirety of the completion and stimulation process, designing and manufacturing coiled tubing units, wireline units, pressure pumping equipment, completion tools, snubbing units, nitrogen units, and treating iron. In addition, the well completion process creates a large amount of wear and tear on the equipment used, which creates healthy demand for Completion & Production Solutions' aftermarket services. The use of coiled tubing and wireline equipment typically requires the use of a BOP to ensure safety during operations. Completion & Production Solutions manufactures this well control equipment. Due to the corrosive nature of many produced fluids, production tubing is often inspected and coated, services offered by Wellbore Technologies. Increasingly, operators choose to use corrosion-resistant composite materials or alloys in the process, which are also sold by Completion & Production Solutions.

Once the well has been stimulated, it is usually ready to be capped with a production wellhead and linked up to a gathering system where it can begin producing and generating cash flow for the operator. This process is significantly more involved offshore, where pipes are often required to reach thousands of feet from the wellhead back to the surface, contending with tides, debris, and weather. The development of flexible pipe solved many of the issues associated with linking offshore wells back to their respective floating production, storage, and offloading vessels ("FPSOs"), which serve as gathering hubs, sometimes in some of the most remote areas of the world. Completion & Production Solutions is one of only three global manufacturers of flexible subsea pipe in addition to offering turret mooring systems and topside process modules for FPSOs.

Natural decline rates set in as a well ages, and workover procedures and other services may be necessary to extend its life and increase its production rate. Over time, downhole equipment, casing, or tubing may need to be serviced or replaced. When producing wells require anything from routine maintenance to major modifications and repair, a well servicing rig is typically needed. Workover rigs are used to disassemble the wellhead, tubing and other completion components of an existing well in order to stimulate or remediate the well. As a well continues to mature, its natural reservoir pressure may no longer be enough to force fluids to the surface. Artificial lift equipment is then typically installed, which adds energy to the fluid column in a wellbore using one of several types of pumps. In addition to reduced pressure, the water cut of a well's production tends to increase as the well ages, which typically requires the addition of water treatment and separation equipment. The Company offers a comprehensive range of workover rigs through Rig Technologies. Tubing and sucker rods removed from a well during a well remediation operation are often inspected to determine their suitability to be reused in the well, a service Wellbore Technologies provides. Completion & Production Solutions offers several types of artificial lift and related support systems as well as integrated systems that provide water treatment, separation, hydrate inhibition, and gas processing.

## **Markets and Competition**

The Company's customers are predominantly service companies and oil and gas companies. Products within Wellbore Technologies and Completion & Production Solutions are sold and rented worldwide through NOV's sales force and through commissioned representatives. Substantially all of Rig Technologies' capital equipment and spare parts sales, and a large portion of smaller pumps and parts sales, are made through NOV's direct sales force and distribution service centers. Sales to foreign oil companies are often made with or through representative arrangements.

The Company's competition consists primarily of publicly traded oilfield service and equipment companies and smaller independent equipment manufacturers.

The Company's foreign operations, which include significant operations in the Middle East, Africa and Latin America, Russia, the Far East, Canada and Europe are subject to the risks normally associated with conducting business in foreign countries, including foreign currency exchange risks and uncertain political and economic environments, which may limit or disrupt markets, restrict the movement of funds or result in the deprivation of contract rights or the taking of property without fair compensation. Government-owned petroleum companies located in some of the countries in which the Company operates have adopted policies (or are subject to governmental policies) giving preference to the purchase of goods and services from companies that are majority-owned by local nationals. As a result of such policies, the Company relies on joint ventures, license arrangements, and other business combinations with local nationals in these countries. See Note 15 to the Consolidated Financial Statements for information regarding geographic revenue information.

## **2018 Acquisitions and Other Investments**

During 2018, the Company completed a total of eight acquisitions and other investments for an aggregate cash investment of \$280 million, net of cash acquired.

## **Influence of Oil and Gas Activity Levels on the Company's Business**

The oil and gas industry has historically experienced significant volatility. Demand for the Company's products and services depends primarily upon the general level of activity in the oil and gas industry worldwide. Oil and gas activity is in turn heavily influenced by, among other factors, oil and gas prices worldwide. High levels of drilling and well remediation generally spurs demand for the Company's products and services. Additionally, high levels of oil and gas activity increase cash flows available for oil and gas companies, drilling contractors, oilfield service companies, and manufacturers of OCTG to invest in equipment that the Company sells.

See additional discussion on the current worldwide economic environment and related oil and gas activity levels in Item 1A. "Risk Factors" and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations."

## **Seasonal Nature of the Company's Business**

Historically, activity levels of some of the Company's segments have followed seasonal trends to some degree. Extremely harsh winter weather can reduce oilfield operations in far northern or high-altitude locations, including parts of Colorado, Canada, Russia and China, and the annual thaw (or "breakup") in Canada makes some unimproved roads inaccessible to heavy equipment during part of each second quarter. Both situations temporarily reduce demand for the Company's products and services in the effected geographic area, although revenues generally recover once conditions improve. Fluctuations in customer's activity levels caused by national or customary holiday seasons and annual budgetary cycles can also affect their spending levels with the Company, leading to both temporary local decreases and increases in sales. The Company anticipates that the seasonal trends described above will continue, however, there can be no guarantee that spending by the Company's customers will continue to follow patterns seen in the past.

## **Research and New Product Development and Intellectual Property**

The Company believes that it has been a leader in the development of new technology and equipment to enhance the safety and productivity of drilling and well servicing processes and that its sales and earnings have been dependent, in part, upon the successful introduction of new or improved products. Through its internal development programs and certain acquisitions, the Company has assembled an extensive array of technologies protected by a substantial number of trademarks, for both goods and services, patents, trade secrets, and other proprietary rights.

As of December 31, 2018, the Company held a substantial number of granted patents and pending patent applications worldwide, including US patents and US patent applications as well as patents and patent applications in a variety of other countries. Expiration dates of such patents range from 2020 to 2039. Additionally, the Company maintains a substantial number of trademarks for both goods and services and maintains a number of trade secrets.

Although the Company believes that this intellectual property has value, competitive products with different designs have been successfully developed and marketed by others. The Company considers the quality and timely delivery of its products, the service it provides to its customers, and the technical knowledge and skills of its personnel to be as important as its intellectual property in its ability to compete. While the Company stresses the importance of its research and development programs, the technical challenges and market uncertainties associated with the development and successful introduction of new products are such that there can be no assurance that the Company will realize future revenue from new products.

## **Manufacturing and Service Locations**

The manufacturing processes for the Company's products generally consist of machining, welding and fabrication, heat treating, assembly of manufactured and purchased components, and testing. Most equipment is manufactured primarily from alloy steel. The availability and price of alloy steel castings, forgings, purchased components, and bar stock is critical to the production and timing of shipments.

Wellbore Technologies designs, manufactures, rents, and sells a variety of equipment and technologies used to perform drilling operations, and offers services that optimize their performance, including: solids control and waste management equipment and services, drilling fluids, premium drillpipe, wired pipe, drilling optimization services, tubular inspection and coating services, instrumentation, downhole tools, and drill bits. Primary facilities are located in Houston, Conroe, Navasota, and Cedar Park, Texas; Veracruz, Mexico; and Dubai, UAE.

Completion & Production Solutions integrates technologies for well completions and oil and gas production. The segment designs, manufactures, and sells equipment and technologies needed for hydraulic fracture stimulation, including pressure pumping trucks, blenders, sanders, hydration units, injection units, flowline, and manifolds; well intervention, including coiled tubing units, coiled tubing, and wireline units and tools; cementing products for pumping, mixing, transport, and storage; onshore production, including fluid processing, composite pipe, surface transfer and progressive cavity pumps, and artificial lift systems; and offshore production, including floating production systems and subsea production technologies. Primary facilities are located in Houston, and Fort Worth, Texas; Tulsa, Oklahoma; Senai, Malaysia; Qingdao, Shandong, China; Kalundborg, Denmark; Superporto du Acu, Brazil; Manchester, England; and Aberdeenshire, Scotland, UK.

Rig Technologies provides drilling rig components, complete land drilling rigs, and offshore drilling equipment packages. Primary manufacturing facilities are located in Houston, Texas; Orange, California; New Iberia, Louisiana; Singapore; and Dubai, UAE.

## **Raw Materials**

The Company believes that materials and components used in its operations are generally available from multiple sources. The prices paid by the Company for its raw materials may be affected by, among other things, energy, steel, and other commodity prices; tariffs and duties on imported materials; and foreign currency exchange rates. The Company has experienced rising, declining, and stable prices for milled steel and standard grades in line with broader economic activity and has generally seen specialty alloy prices continue to rise, driven primarily by escalation in the price of the alloying agents. The Company has generally been successful in its effort to mitigate the financial impact of higher raw materials costs on its operations by applying surcharges to, and adjusting prices on, the products it sells.

Higher prices and lower availability of steel and other raw materials the Company uses in its business may adversely impact future periods.

## **Backlog**

The Company monitors its backlog of orders within its Completion & Production Solutions and Rig Technologies segments to guide its planning. Backlog includes orders which typically require more than three months to manufacture and deliver.

Backlog measurements are made on the basis of written orders that are firm, but may be defaulted upon by the customer in some instances. Most require reimbursement to the Company for costs incurred in such an event. There can be no assurance that the backlog amounts will ultimately be realized as revenue, or that the Company will earn a profit on backlog work. Backlog for Completion & Production Solutions at December 31, 2018, 2017 and 2016 was \$0.9 billion, \$1.1 billion and \$0.8 billion, respectively. Backlog for Rig Technologies at December 31, 2018, 2017 and 2016, was \$3.1 billion, \$1.9 billion and \$2.5 billion, respectively.

## **Employees**

At December 31, 2018, the Company had a total of 35,063 employees, of which 843 were temporary employees and 294 were subject to collective bargaining agreements in the U.S. Additionally, certain employees in various foreign locations are subject to collective bargaining agreements. Based upon the geographical diversification of these employees, we do not believe any risk of loss from employee strikes or other collective actions would be material to the conduct of our operations taken as a whole.

## **Available Information**

The Company's principal executive offices are located at 7909 Parkwood Circle Drive, Houston, Texas 77036. Its telephone number is (713) 346-7500. Further information about the Company's products and services can be found on its website at: <http://www.nov.com>. The Company's common stock is traded on the New York Stock Exchange under the symbol "NOV". The Company's annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all related amendments are available free of charge on the Investor Relations portion of the Company's website, [www.nov.com/investor](http://www.nov.com/investor), as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). The Company's Code of Ethics is also posted on its website.

## **ITEM 1A.RISK FACTORS**

*You should carefully consider the risks described below, in addition to other information contained or incorporated by reference herein. Realization of any of the following risks could have a material adverse effect on our business, financial condition, cash flows and results of operations.*

***We are dependent upon the level of activity in the oil and gas industry, which is volatile and has caused, and may cause future, fluctuations in our operating results.***

The oil and gas industry historically has experienced significant volatility. Demand for our products and services depends primarily upon the number of oil rigs in operation, the number of oil and gas wells being drilled, the depth and drilling conditions of these wells, the volume of production, the number of well completions, capital expenditures of other oilfield service companies and the level of workover activity. Drilling and workover activity can fluctuate significantly in a short period, particularly in the United States and Canada. The willingness of oil and gas operators to make capital expenditures to explore for and produce oil and natural gas and the willingness of oilfield service companies to invest in capital equipment will continue to be influenced by numerous factors over which we have no control, including the:

- current and anticipated future prices for oil and natural gas;
- volatility of prices for oil and natural gas;

- ability or willingness of the members of the Organization of Petroleum Exporting Countries (“OPEC”) and other countries, such as Russia, to maintain or influence price stability through voluntary production limits;
- Sanctions and other restrictions placed on certain oil producing countries, such as Russia, Iran, and Venezuela;
- level of production by non-OPEC countries including production from U.S. shale plays;
- level of excess production capacity;
- cost of exploring for and producing oil and gas;
- level of drilling activity and drilling rig dayrates;
- worldwide economic activity and associated demand for oil and gas;
- availability and access to potential hydrocarbon resources;
- national government political requirements;
- fluctuations in political conditions in the United States and abroad;
- currency exchange rate fluctuations and devaluations;
- development of alternate energy sources; and,
- environmental regulations.

Expectations for future oil and gas prices cause many shifts in the strategies and expenditure levels of oil and gas companies, drilling contractors, and other service companies, particularly with respect to decisions to purchase major capital equipment of the type we manufacture. Oil and gas prices, which are determined by the marketplace, may remain below a range that is acceptable to certain of our customers, which could continue the reduced demand for our products and have a material adverse effect on our financial condition, results of operations and cash flows.

***There are risks associated with certain contracts for our equipment.***

As of December 31, 2018, we had a backlog of capital equipment to be manufactured, assembled, tested and delivered by Completion & Production Solutions and Rig Technologies in the amount of \$0.9 billion and \$3.1 billion, respectively. The following factors, in addition to others not listed, could reduce our margins on these contracts, adversely impact completion of these contracts, adversely affect our position in the market or subject us to contractual penalties:

- financial challenges for consumers of our capital equipment;
- credit market conditions for consumers of our capital equipment;
- our failure to adequately estimate costs for making this equipment;
- our inability to deliver equipment that meets contracted technical requirements;
- our inability to maintain our quality standards during the design and manufacturing process;
- our inability to secure parts made by third party vendors at reasonable costs and within required timeframes;
- unexpected increases in the costs of raw materials;
- our inability to manage unexpected delays due to weather, shipyard access, labor shortages or other factors beyond our control; and,
- the imposition of tariffs or duties between countries, which could materially affect our global supply chain. For example, section 232 tariffs on steel may increase our costs, reduce margins or otherwise adversely affect the Company.

The Company's existing contracts for rig and production equipment generally carry significant down payment and progress billing terms favorable to the ultimate completion of these projects and the majority do not allow customers to cancel projects for convenience. However, unfavorable market conditions or financial difficulties experienced by our customers may result in cancellation of contracts or the delay or abandonment of projects. Any such developments could have a material adverse effect on our operating results and financial condition.

***Competition in our industry, including the introduction of new products and technologies by our competitors, as well as the expiration of the intellectual property rights protecting our products and technologies, could ultimately lead to lower revenue and earnings.***

The oilfield products and services industry is highly competitive. We compete with national, regional and foreign competitors in each of our current major product lines. Certain of these competitors may have greater financial, technical, manufacturing and marketing resources than us, and may be in a better competitive position. The following can each affect our revenue and earnings:

- price changes;
- improvements in the availability and delivery of products and services by our competitors;
- the introduction of new products and technologies by our competitors; and,
- the expiration of intellectual property rights protecting our products and technologies.

We are a leader in the development of new technology and equipment to enhance the safety and productivity of drilling and well servicing processes. If we are unable to maintain our technology leadership position, it could adversely affect our competitive advantage for certain products and services. Our revenues and operating results have been dependent, in part, upon the successful introduction of new or improved products. Through our internal development programs and acquisitions, we have assembled an extensive array of technologies protected by a substantial number of trade and service marks, patents, trade secrets, and other proprietary rights, some of which expire in the near future. The expiration of these rights could have a material adverse effect on our operating results. Furthermore, while the Company stresses the importance of its research and development programs, the technical challenges and market uncertainties associated with the development and successful introduction of new products are such that there can be no assurance that the Company will realize future revenue from new products.

The tools, techniques, methodologies, programs and components we use to provide our services may infringe upon the intellectual property rights of others. Infringement claims generally result in significant legal and other costs and may distract management from running our core business. Royalty payments under licenses from third parties, if available, would increase our costs. Additionally, developing non-infringing technologies would increase our costs. If a license were not available, we might not be able to continue providing a particular service or product, which could adversely affect our financial condition, results of operations and cash flows.

In addition, certain foreign jurisdictions and government-owned petroleum companies located in some of the countries in which we operate have adopted policies or regulations which may give local nationals in these countries competitive advantages. Actions taken by our competitors and changes in local policies, preferences or regulations could impact our ability to compete in certain markets and adversely affect our financial results.

***A significant portion of our revenue is derived from our non-United States operations, which exposes us to risks inherent in doing business in each of the over 65 countries in which we operate.***

Approximately 60% of our revenues in 2018 were derived from operations outside the United States (based on revenue destination). Our foreign operations include significant operations in every oil producing region in the world. Our revenues and operations are subject to the risks normally associated with conducting business in foreign countries, including:

- uncertain political, social and economic environments;
- social unrest, acts of terrorism, war and other armed conflict;

- trade and economic sanctions and other restrictions imposed by the United States, European Union or other countries;
- restrictions under the United States Foreign Corrupt Practices Act (“FCPA”) or similar legislation, as well as foreign anti-bribery and anti-corruption laws;
- confiscatory taxation, tax duties, complex and everchanging tax regimes or other adverse tax policies;
- exposure to expropriation of our assets and other actions by foreign governments;
- deprivation of contract rights;
- restrictions on the repatriation of income or capital;
- inflation; and,
- currency exchange rate fluctuations and devaluations.

***Our failure to comply with complex U.S. and foreign laws and regulations could have a material adverse effect on our business and our results of operations.***

Our ability to comply with various complex U.S. and foreign laws and regulations, such as the FCPA, the U.K. Bribery Act and other foreign anti-bribery and anti-corruption laws, as well as various trade control regulations, is dependent on the success of our ongoing compliance program, including our ability to continue to effectively supervise and train our employees to deter prohibited practices. These various laws and regulations can change frequently and significantly. We may become involved in a governmental investigation even if the Company has complied with these laws. If we fail to comply with applicable laws and regulation, we could be subject to investigations, sanctions and civil and criminal prosecution as well as fines and penalties, which could have a material adverse effect on our reputation and our business, financial condition, results of operations and cash flows. In addition, government disruptions could negatively impact our ability to conduct our business.

We are also required to comply with various complex U.S. and foreign tax laws, regulations and treaties. These laws, regulations and treaties can change frequently and significantly and it is reasonable to expect changes in the future. If we fail to comply with any of these tax laws, regulations or treaties, we could be subject to, among other things, civil and criminal prosecution, fines, penalties and confiscation of our assets, which could disrupt our ability to provide our products and services to our customers. Any of these events could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Further, in some instances, direct or indirect consumers of our products and services, entities providing financing for purchases of our products and services or members of the supply chain for our products and services may become involved in governmental investigations, internal investigations, political or other enforcement matters. In such circumstances, such investigations may adversely impact the ability of consumers of our products, entities providing financial support to such consumers or entities in the supply chain to timely perform their business plans or to timely perform under agreements with us. The Company could also become involved in investigations of consumers of our products at significant cost to the Company.

***We could be adversely affected if we fail to comply with any of the numerous federal, state and local laws, regulations and policies that govern environmental protection, zoning and other matters applicable to our businesses.***

Our businesses are subject to numerous federal, state and local laws, regulations and policies governing environmental protection, zoning and other matters. These laws and regulations have changed frequently in the past and it is reasonable to expect additional changes in the future. If existing regulatory requirements change, we may be required to make significant unanticipated capital and operating expenditures. We cannot assure you that our operations will continue to comply with future laws and regulations. Governmental authorities may seek to impose fines and penalties on us or to revoke or deny the issuance or renewal of operating permits for failure to comply with applicable laws and regulations. Under these circumstances, we might be required to reduce or cease operations or conduct site remediation or other corrective action which could adversely impact our operations and financial condition.

***Our businesses expose us to potential environmental, product or personal injury liability.***

Our businesses expose us to the risk that harmful substances may escape into the environment or a product could fail to perform or cause personal injury, which could result in:

- personal injury or loss of life;
- severe damage to or destruction of property; or,
- environmental damage and suspension of operations.

Our current and past activities, as well as the activities of our former divisions and subsidiaries, could result in our facing substantial environmental, regulatory and other litigation and liabilities. These could include the costs of cleanup of contaminated sites and site closure obligations. These liabilities could also be imposed on the basis of one or more of the following theories:

- negligence;
- strict liability;
- breach of contract with customers; or,
- as a result of our contractual agreement to indemnify our customers in the normal course of business, which is normally the case.

***We may not have adequate insurance for potential environmental, product or personal injury liabilities.***

While we maintain liability insurance, this insurance is subject to coverage limits. In addition, certain policies do not provide coverage for damages resulting from environmental contamination or may exclude coverage for other reasons. We face the following risks with respect to our insurance coverage:

- we may not be able to continue to obtain insurance on commercially reasonable terms;
- we may be faced with types of liabilities that will not be covered by our insurance;
- our insurance carriers may not be able to meet their obligations under the policies; or,
- the dollar amount of any liabilities may exceed our policy limits.

Even a partially uninsured claim, if successful and of significant size, could have a material adverse effect on our consolidated financial statements.

***The adoption of climate change legislation, restrictions on emissions of greenhouse gases, or other environmental regulations could increase our operating costs or reduce demand for our products.***

Environmental advocacy groups and regulatory agencies in the United States and other countries have been focusing considerable attention on the emissions of carbon dioxide, methane and other greenhouse gases and their potential role in climate change. The adoption of laws and regulations to implement controls of greenhouse gases, including the imposition of fees or taxes, could adversely impact our operations and financial condition. The U.S. Congress and other governments routinely consider legislation to control and reduce emissions of greenhouse gasses and other climate change related legislation, which could require significant reductions in emissions from oil and gas related operations. Additionally, recent concerns regarding the potential impact of hydraulic stimulation, or “fracking”, activities have resulted in government officials promulgating regulations to impose certain operational restrictions and disclosure requirements on oil and gas companies. Changes in the legal and regulatory environment could reduce oil and natural gas drilling activity and result in a corresponding decline in the demand for our products and services, which could adversely impact our operating results and financial condition.

***Cybersecurity risks and threats could adversely affect our business.***

We rely heavily on information systems to conduct our business. Any failure, interruption or breach in security of our information systems could result in failures or disruptions in our customer relationship management, general ledger systems and other systems. While we have policies and procedures designed to prevent or limit the effect of the failure, interruption or security breach of our information systems, there can be no assurance that any such failures, interruptions or security breaches will not occur or, if they do occur, that any breach or interruption will be sufficiently



limited. The occurrence of any failures, interruptions or security breaches of our information systems could damage our reputation, result in a loss of our intellectual property or other proprietary information, including customer data, result in a loss of customer business, subject us to additional regulatory scrutiny, or expose us to civil litigation and possible financial liability, any of which could have a material adverse effect on our financial position or results of operations.

***Local content requirements imposed in certain jurisdictions may increase the complexity of our operations and impact the demand for our services.***

A growing number of nations are requiring equipment providers and contractors to meet local content requirements or other local standards. To meet many of these local content and other requirements, we are required to attract and retain qualified local personnel. If we are unable to do so because the supply of qualified local personnel is constrained for any reason, the growth and profitability of our business may be adversely affected. In addition, our ability to work in certain jurisdictions is sometimes subject to our ability to successfully negotiate and agree upon acceptable joint venture agreements. The failure to reach acceptable agreements could adversely impact the Company's operations in certain countries. Additionally, we may share control of joint ventures with unaffiliated third parties. Differences in views, and disagreements, among joint venture parties may result in delayed decision making and disputes on important issues. In some instances, we could suffer a material adverse effect to the results of our joint ventures and our consolidated results of operations.

***Our ability to hire and retain qualified personnel at competitive cost could materially affect our operations and growth potential.***

Many of the products we sell, and related services that we provide, are complex and technologically advanced, which enable them to perform in challenging conditions. Our ability to succeed is, in part, dependent on our success in attracting and retaining qualified personnel to provide service and to design, manufacture, use, install and commission our products. A significant increase in wages paid by competitors, both within and outside the energy industry, for such highly skilled personnel could result in insufficient availability of skilled labor or increase our labor costs, or both. If the supply of skilled labor is constrained or our costs increase, our margins could decrease and our growth potential could be impaired.

***Severe weather conditions may adversely affect our operations.***

Our business may be materially affected by severe weather conditions in areas where we operate. This may entail the evacuation of personnel and stoppage of services. In addition, if particularly severe weather affects platforms or structures, this may result in a suspension of activities. Any of these events could adversely affect our financial condition, results of operations and cash flows.

***An impairment of goodwill or other indefinite lived intangible assets could reduce our earnings.***

The Company has approximately \$6.3 billion of goodwill and \$0.4 billion of other intangible assets with indefinite lives as of December 31, 2018. Generally accepted accounting principles require the Company to test goodwill and other indefinite lived intangible assets for impairment on an annual basis or whenever events or circumstances indicate they might be impaired. Events or circumstances which could indicate a potential impairment include (but are not limited to) a significant sustained reduction in worldwide oil and gas prices or drilling; a significant sustained reduction in profitability or cash flow of oil and gas companies or drilling contractors; a significant sustained reduction in capital investment by other oilfield service companies; or a significant increase in worldwide inventories of oil or gas. The timing and magnitude of any goodwill impairment charge, which could be material, would depend on the timing and severity of the event or events triggering the charge and would require a high degree of management judgment. If we were to determine that any of our remaining balance of goodwill or other indefinite lived intangible assets was impaired, we would record an immediate charge to earnings with a corresponding reduction in stockholders' equity; resulting in a possible increase in balance sheet leverage as measured by debt to total capitalization.

See additional discussion on "Goodwill and Other Indefinite – Lived Intangible Assets" in Critical Accounting Estimates of Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

*We have expanded and grown our businesses through acquisitions and continue to pursue a growth strategy but we cannot assure that attractive acquisitions will be available to us at reasonable prices or at all.*

We cannot assure that we will successfully integrate the operations and assets of any acquired business with our own or that our management will be able to manage effectively any new lines of business. Any inability on the part of management to integrate and manage acquired businesses and their assumed liabilities could adversely affect our business and financial performance. In addition, we may need to incur substantial indebtedness to finance future acquisitions. We cannot assure that we will be able to obtain this financing on terms acceptable to us or at all. Future acquisitions may result in increased depreciation and amortization expense, increased interest expense, increased financial leverage or decreased operating income for the Company, any of which could cause our business to suffer.

## GLOSSARY OF OILFIELD TERMS

(Sources: Company management; “A Dictionary for the Petroleum Industry,” The University of Texas at Austin, 2001.)

API	Abbr: American Petroleum Institute
Annular Blowout Preventer	A large valve, usually installed above the ram blowout preventers, that forms a seal in the annular space between the pipe and the wellbore or, if no pipe is present, in the wellbore itself.
Annulus	The open space around pipe in a wellbore through which fluids may pass.
Automatic Pipe Handling Systems (Automatic Pipe Racker)	A device used on a drilling rig to automatically remove and insert drill stem components from and into the hole. It replaces the need for a person to be in the derrick or mast when tripping pipe into or out of the hole.
Automatic Roughneck	A large, self-contained pipe-handling machine used by drilling crew members to make up and break out tubulars. The device combines a spinning wrench, torque wrench, and backup wrenches.
Beam pump	Surface pump that raise and lowers sucker rods continually, so as to operate a downhole pump.
Bit	The cutting or boring element used in drilling oil and gas wells. The bit consists of a cutting element and a circulating element. The cutting element is steel teeth, tungsten carbide buttons, industrial diamonds, or polycrystalline diamonds (“PDCs”). These teeth, buttons, or diamonds penetrate and gouge or scrape the formation to remove it. The circulating element permits the passage of drilling fluid and utilizes the hydraulic force of the fluid stream to improve drilling rates. In rotary drilling, several drill collars are joined to the bottom end of the drill pipe column, and the bit is attached to the end of the drill collars. Drill collars provide weight on the bit to keep it in firm contact with the bottom of the hole.
Blowout	An uncontrolled flow of gas, oil or other well fluids into the atmosphere. A blowout, or gusher, occurs when formation pressure exceeds the pressure applied to it by the column of drilling fluid. A kick warns of an impending blowout.
Blowout Preventer (BOP)	Series of valves installed at the wellhead while drilling to prevent the escape of pressurized fluids.
Blowout Preventer (BOP) Stack	The assembly of well-control equipment including preventers, spools, valves, and nipples connected to the top of the wellhead.
Borehole Enlargement (“BHE”)	The process of opening up or enlarging the internal diameter of the wellbore. This is typically done with under-reamers, reamers, or hole openers.

Bottomhole Assembly (“BHA”)	The lower portion of the drillstring including (if used): the bit, bit sub, mud motor, stabilizers, drillcollar, heavy-weight drillpipe, jarring devices, and crossovers for various thread forms.
Closed Loop Drilling Systems	A solids control system in which the drilling mud is reconditioned and recycled through the drilling process on the rig itself.
Coiled Tubing	A continuous string of flexible steel tubing, often hundreds or thousands of feet long, that is wound onto a reel, often dozens of feet in diameter. The reel is an integral part of the coiled tubing unit, which consists of several devices that ensure the tubing can be safely and efficiently inserted into the well from the surface. Because tubing can be lowered into a well without having to make up joints of tubing, running coiled tubing into the well is faster and less expensive than running conventional tubing. Rapid advances in the use of coiled tubing make it a popular way in which to run tubing into and out of a well. Also called reeled tubing.
Cuttings	Fragments of rock dislodged by the bit and brought to the surface in the drilling mud. Washed and dried cutting samples are analyzed by geologist to obtain information about the formations drilled.
Directional Well	Well drilled in an orientation other than vertical in order to access broader portions of the formation.
Drawworks	The hoisting mechanism on a drilling rig. It is essentially a large winch that spools off or takes in the drilling line and thus raises or lowers the drill stem and bit.
Drill Pipe Elevator (Elevator)	On conventional rotary rigs and top-drive rigs, hinged steel devices with manual operating handles that crew members latch onto a tool joint (or a sub). Since the elevators are directly connected to the traveling block, or to the integrated traveling block in the top drive, when the driller raises or lowers the block or the top-drive unit, the drill pipe is also raised or lowered.
Drilling jars	A percussion tool operated manually or hydraulically to deliver a heavy downward blow to free a stuck drill stem.
Drilling mud	A specially compounded liquid circulated through the wellbore during rotary drilling operations.
Drilling riser	A conduit used in offshore drilling through which the drill bit and other tools are passed from the rig on the water’s surface to the sea floor.
Drill stem	All members in the assembly used for rotary drilling from the swivel to the bit, including the Kelly, the drill pipe and tool joints, the drill collars, the stabilizers, and various specialty items.
Fiberglass-reinforced spoolable pipe	A spoolable glass fiber-reinforced epoxy composite tubular product for onshore oil and gas gathering and injection systems, with superior corrosion resistant properties and lower installed cost than steel.
Flexible pipe	A dynamic riser that connects subsea production equipment to a topside facility allowing for the flow of oil, gas, and/or water. Also used on the seafloor to tie wells and subsea equipment together.
Formation	A bed or deposit composed throughout of substantially the same kind of rock; often a lithologic unit. Each formation is given a name, frequently as a result of the study of the formation outcrop at the surface and sometimes based on fossils found in the formation.

FPSO	A Floating Production, Storage and Offloading vessel used to receive hydrocarbons from subsea wells, and then produce and store the hydrocarbons until they can be offloaded to a tanker or pipeline.
Hardbanding	A special wear-resistant material often applied to tool joints to prevent abrasive wear to the area when the pipe is being rotated downhole.
Hydraulic Fracturing	The process of creating fractures in a formation by pumping fluids, at high pressures, into the reservoir, which allows or enhances the flow of hydrocarbons.
Iron Roughneck	A floor-mounted combination of a spinning wrench and a torque wrench. The Iron Roughneck moves into position hydraulically and eliminates the manual handling involved with suspended individual tools.
Jack-up rig	A mobile bottom-supported offshore drilling structure with columnar or open-truss legs that support the deck and hull. When positioned over the drilling site, the bottoms of the legs penetrate the seafloor.
Jar	A mechanical device placed near the top of the drill stem which allows the driller to strike a very heavy blow upward or downward on stuck pipe.
Joint	1. In drilling, a single length (from 16 feet to 45 feet, or 5 meters to 14.5 meters, depending on its range length) of drill pipe, drill collar, casing or tubing that has threaded connections at both ends. Several joints screwed together constitute a stand of pipe. 2. In pipelining, a single length (usually 40 feet-12 meters) of pipe. 3. In sucker rod pumping, a single length of sucker rod that has threaded connections at both ends.
Kelly	The heavy steel tubular device, four-or six-sided, suspended from the swivel through the rotary table and connected to the top joint of drill pipe to turn the drill stem as the rotary table turns. It has a bored passageway that permits fluid to be circulated into the drill stem and up the annulus, or vice versa. Kellys manufactured to API specifications are available only in four-or six-sided versions, are either 40 or 54 feet (12 or 16 meters) long, and have diameters as small as 2.5 inches (6 centimeters) and as large as 6 inches (15 centimeters).
Kelly bushing	A special device placed around the kelly that mates with the kelly flats and fits into the master bushing of the rotary table. The kelly bushing is designed so that the kelly is free to move up or down through it. The bottom of the bushing may be shaped to fit the opening in the master bushing or it may have pins that fit into the master bushing. In either case, when the kelly bushing is inserted into the master bushing and the master bushing is turned, the kelly bushing also turns. Since the kelly bushing fits onto the kelly, the kelly turns, and since the kelly is made up to the drill stem, the drill stem turns. Also called the drive bushing.
Kelly spinner	A pneumatically operated device mounted on top of the kelly that, when actuated, causes the kelly to turn or spin. It is useful when the kelly or a joint of pipe attached to it must be spun up, that is, rotated rapidly for being made up.
Kick	An entry of water, gas, oil, or other formation fluid into the wellbore during drilling. It occurs because the pressure exerted by the column of drilling fluid is not great enough to overcome the pressure exerted by the fluids in the formation drilled. If prompt action is not taken to control the kick, or kill the well, a blowout may occur.
Making-up	1. To assemble and join parts to form a complete unit (e.g., to make up a string of drill pipe). 2. To screw together two threaded pieces. 3. To mix or prepare (e.g., to make up a tank of mud). 4. To compensate for (e.g., to make up for lost time).

Manual tongs (Tongs)	The large wrenches used for turning when making up or breaking out drill pipe, casing, tubing, or other pipe; variously called casing tongs, pipe tongs, and so forth, according to the specific use. Power tongs or power wrenches are pneumatically or hydraulically operated tools that serve to spin the pipe up tight and, in some instances to apply the final makeup torque.
Master bushing	A device that fits into the rotary table to accommodate the slips and drive the kelly bushing so that the rotating motion of the rotary table can be transmitted to the kelly. Also called rotary bushing.
Mooring system	The method by which a vessel or buoy is fixed to a certain position, whether permanently or temporarily.
Motion compensation equipment	Any device (such as a bumper sub or heave compensator) that serves to maintain constant weight on the bit in spite of vertical motion of a floating offshore drilling rig.
Mud pump	A large, high-pressure reciprocating pump used to circulate the mud on a drilling rig.
Plug gauging	The mechanical process of ensuring that the inside threads on a piece of drill pipe comply with API standards.
Pressure control equipment	Equipment used in: 1. The act of preventing the entry of formation fluids into a wellbore. 2. The act of controlling high pressures encountered in a well.
Pressure pumping	Pumping fluids into a well by applying pressure at the surface.
Ram blowout preventer	A blowout preventer that uses rams to seal off pressure on a hole that is with or without pipe. Also called a ram preventer.
Ring gauging	The mechanical process of ensuring that the outside threads on a piece of drill pipe comply with API standards.
Riser pipe	The pipe and special fitting used on floating offshore drilling rigs to establish a seal between the top of the wellbore, which is on the ocean floor, and the drilling equipment located above the surface of the water. A riser pipe serves as a guide for the drill stem from the drilling vessel to the wellhead and as a conductor for drilling fluid from the well to the vessel. The riser consists of several sections of pipe and includes special devices to compensate for any movement of the drilling rig caused by waves. Also called marine riser pipe, riser joint.
Rotary table	The principal piece of equipment in the rotary table assembly; a turning device used to impart rotational power to the drill stem while permitting vertical movement of the pipe for rotary drilling. The master bushing fits inside the opening of the rotary table; it turns the kelly bushing, which permits vertical movement of the kelly while the stem is turning.
Rotating blowout preventer (Rotating Head)	A sealing device used to close off the annular space around the kelly in drilling with pressure at the surface, usually installed above the main blowout preventers. A rotating head makes it possible to drill ahead even when there is pressure in the annulus that the weight of the drilling fluid is not overcoming; the head prevents the well from blowing out. It is used mainly in the drilling of formations that have low permeability. The rate of penetration through such formations is usually rapid.

Safety clamps	A clamp placed very tightly around a drill collar that is suspended in the rotary table by drill collar slips. Should the slips fail, the clamp is too large to go through the opening in the rotary table and therefore prevents the drill collar string from falling into the hole. Also called drill collar clamp.
Shale shaker	A piece of drilling rig equipment that uses a vibrating screen to remove cuttings from the circulating fluid in rotary drilling operations. The size of the openings in the screen should be selected carefully to be the smallest size possible to allow 100 per cent flow of the fluid. Also called a shaker.
Slim-hole completions (Slim-hole Drilling)	Drilling in which the size of the hole is smaller than the conventional hole diameter for a given depth. This decrease in hole size enables the operator to run smaller casing, thereby lessening the cost of completion.
Slips	Wedge-shaped pieces of metal with serrated inserts (dies) or other gripping elements, such as serrated buttons, that suspend the drill pipe or drill collars in the master bushing of the rotary table when it is necessary to disconnect the drill stem from the kelly or from the top-drive unit's drive shaft. Rotary slips fit around the drill pipe and wedge against the master bushing to support the pipe. Drill collar slips fit around a drill collar and wedge against the master bushing to support the drill collar. Power slips are pneumatically or hydraulically actuated devices that allow the crew to dispense with the manual handling of slips when making a connection.
Solids	See "Cuttings"
Spinning wrench	Air-powered or hydraulically powered wrench used to spin drill pipe in making or breaking connections.
Spinning-in	The rapid turning of the drill stem when one length of pipe is being joined to another. "Spinning-out" refers to separating the pipe.
Stand	The connected joints of pipe racked in the derrick or mast when making a trip. On a rig, the usual stand is about 90 feet (about 27 meters) long (three lengths of drill pipe screwed together), or a treble.
Steerable Technologies	Tools that allow for steering the BHA towards a target while rotating from surface.
String	The entire length of casing, tubing, sucker rods, or drill pipe run into a hole.
Sucker rod	A special steel pumping rod. Several rods screwed together make up the link between the pumping unit on the surface and the pump at the bottom of the well.
Tensioner	A system of devices installed on a floating offshore drilling rig to maintain a constant tension on the riser pipe, despite any vertical motion made by the rig. The guidelines must also be tensioned, so a separate tensioner system is provided for them.
Thermal desorption	The process of removing drilling mud from cuttings by applying heat directly to drill cuttings.
Tiebacks (Subsea)	A series of flowlines and pipes that connect numerous subsea wellheads to a single collection point.
Top drive	A device similar to a power swivel that is used in place of the rotary table to turn the drill stem. It also includes power tongs. Modern top drives combine the elevator, the tongs, the swivel, and the hook. Even though the rotary table assembly is not used to rotate the drill stem and bit, the top-drive system retains it to provide a place to set the slips to suspend the drill stem when drilling stops.

Torque wrench	Spinning wrench with a gauge for measuring the amount of torque being applied to the connection.
Trouble cost	Costs incurred as a result of unanticipated complications while drilling a well. These costs are often referred to as contingency costs during the planning phase of a well.
Turret	Mechanical device that allows a floating vessel to rotate around stationary flowlines, umbilicals, and other associated risers.
Well completion	1. The activities and methods of preparing a well for the production of oil and gas or for other purposes, such as injection; the method by which one or more flow paths for hydrocarbons are established between the reservoir and the surface. 2. The system of tubulars, packers, and other tools installed beneath the wellhead in the production casing; that is, the tool assembly that provides the hydrocarbon flow path or paths.
Wellhead	The termination point of a wellbore at surface level or subsea, often incorporating various valves and control instruments.
Well stimulation	Any of several operations used to increase the production of a well, such as acidizing or fracturing.
Well workover	The performance of one or more of a variety of remedial operations on a producing oil well to try to increase production. Examples of workover jobs are deepening, plugging back, pulling and resetting liners, and squeeze cementing.
Wellbore	A borehole; the hole drilled by the bit. A wellbore may have casing in it or it may be open (uncased); or part of it may be cased, and part of it may be open. Also called a borehole or hole.
Wireline	A slender, rodlike or threadlike piece of metal usually small in diameter, that is used for lowering special tools (such as logging sondes, perforating guns, and so forth) into the well. Also called slick line.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

## ITEM 2. PROPERTIES

The Company owned or leased approximately 620 facilities worldwide as of December 31, 2018, including the following principal manufacturing, service, distribution and administrative facilities:

Location	Description	Building Size (SqFt)	Property Size (Acres)	Owned / Leased	Lease Termination Date
<b>Wellbore Technologies:</b>					
Navasota, Texas	Manufacturing Facility & Administrative Offices	562,112	196	Owned	
Conroe, Texas	Manufacturing Facility of Drill Bits and Downhole Tools, Administrative & Sales Offices	410,623	35	Owned	
Houston, Texas	Sheldon Road Inspection Facility	319,365	192	Owned	
Veracruz, Mexico	Manufacturing Facility of Tool Joints, Warehouse & Administrative Offices	303,400	42	Owned	
Houston, Texas	Holmes Rd Complex: Manufacturing, Warehouse, Coating Manufacturing Plant & Corporate Office	300,000	50	Owned	
Cedar Park, Texas	Instrumentation Manufacturing Facility, Administrative & Sales Offices	215,778	34	Owned	
Dubai, UAE	Manufacturing Facility of Downhole Tools, Distribution Warehouse	184,492	8	Leased	1/29/2021
Conroe, Texas	Solids Control Manufacturing Facility, Warehouse, Administrative & Sales Offices, and Engineering Labs	153,750	42	Owned	
<b>Completion &amp; Production Solutions:</b>					
Senai, Malaysia	Manufacturing Facility of Fiber Glass Products	595,965	14	Owned*	10/31/2027
Kalundborg, Denmark	Flexibles Manufacturing, Warehouse, Shop & Administrative Offices	485,067	38	Owned	
Superporto do Acu, Brazil	Flexibles Manufacturing, Warehouse, Shop & Administrative Offices	464,885	30	Owned*	10/20/2031
Manchester, England	Manufacturing, Assembly & Testing of PC Pumps and Expendable Parts, Administrative & Sales Offices	464,000	28	Owned	
Houston, Texas	Manufacturing of Wireline and Pressure Performance Equipment, Warehouse and Administrative Offices	383,750	26	Leased	6/30/2041
Fort Worth, Texas	Coiled Tubing Manufacturing Facility, Warehouse, Administrative & Sales Offices	342,999	24	Owned	
Qingdao, Shandong, China	Manufacturing of fiber-reinforced tubular products	309,150	25	Leased	10/26/2036
Tulsa, Oklahoma	Manufacturing Facility of Pumps, Warehouse and Administrative & Sales Offices	222,625	10	Owned	
Kintore, Aberdeenshire, Scotland, UK	Manufacturing & Servicing of Elmar, ASEP and Anson Equipment	210,000	13	Leased	9/3/2037
Houston, Texas	Manufacturing of fiber-reinforced tubular products & Administrative Offices	130,873	6	Leased	4/30/2021
<b>Rig Technologies:</b>					
Houston, Texas	Bammel Facility, Repairs, Service, Aftermarket Parts, Administrative & Sales Offices	602,110	33	Leased	6/30/2028
Houston, Texas	Manufacturing Plant of Drilling Equipment	511,964	33	Leased	4/30/2020
Houston, Texas	West Little York Manufacturing Facility, Repairs, Service, Administrative & Sales Offices	483,450	34	Owned	
Orange, California	Manufacturing & Office Facility	338,337	9	Owned*	12/31/2020
New Iberia, Louisiana	Repair, Services and Spares facility	189,000	17	Leased	10/1/2025
Singapore	Manufacturing, Repairs, Service, Field Service/Training, Administrative & Sales Offices	133,659	4	Leased	1/5/2024
Dubai, UAE	Repair & Overhaul of Drilling Equipment, Warehouse & Sales Office	39,433	2	Owned	
<b>Corporate:</b>					
Houston, Texas	Corporate and Shared Administrative Offices	337,019	14	Leased	5/31/2037
Houston, Texas	Corporate and Shared Administrative Offices	441,029	3	Leased	1/31/2041

\*Building owned but land leased.

We own or lease approximately 342 repair and manufacturing facilities that refurbish and manufacture new equipment and parts, 114 service centers that provide inspection and equipment rental and 164 engineering, sales and administration facilities.



**ITEM 3. LEGAL PROCEEDINGS**

See Note 11 – Commitments and Contingencies (Part IV, Item 15 of this Form 10-K) for further discussion.

**ITEM 4. MINE SAFETY DISCLOSURES**

Information regarding mine safety and other regulatory actions at our mines is included in Exhibit 95 to this Form 10-K.

## PART II

### ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

#### *Market Information*

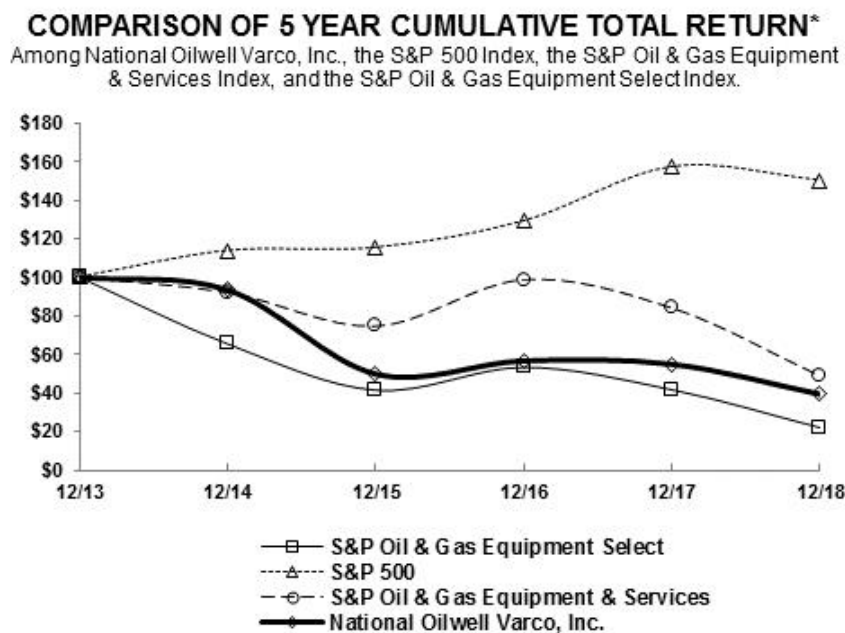
Our common stock is traded on the New York Stock Exchange (NYSE) under the symbol "NOV". As of February 8, 2019, there were 3,218 holders of record of our common stock. Many stockholders choose to own shares through brokerage accounts and other intermediaries rather than as holders of record (excluding individual participants in securities positions listing) so the actual number of stockholders is unknown but significantly higher.

Cash dividends declared were \$0.05 per quarter, aggregating \$76 million for each of the years ended December 31, 2018 and 2017. The declaration and payment of future dividends is at the discretion of the Company's Board of Directors and will be dependent upon the Company's results of operations, financial condition, capital requirements, future outlook and other factors deemed relevant by the Company's Board of Directors.

The information relating to our equity compensation plans required by Item 5. "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" is incorporated by reference to such information as set forth in Item 12. "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" contained herein.

## PERFORMANCE GRAPH

The graph below compares the cumulative total shareholder return on our common stock to the S&P 500 Index and the S&P Oil & Gas Equipment & Services Index. The total shareholder return assumes \$100 invested on December 31, 2013 in National Oilwell Varco, Inc., the S&P Oil & Gas Equipment Select Index, the S&P 500 Index and the S&P Oil & Gas Equipment & Services Index. It also assumes reinvestment of all dividends. The peer group is weighted based on the market capitalization of each company. The results shown in the graph below are not necessarily indicative of future performance.



\*\$100 invested on 12/31/13 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31.

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	12/13	12/14	12/15	12/16	12/17	12/18
<b>National Oilwell Varco, Inc.</b>	<b>100.00</b>	<b>93.44</b>	<b>49.83</b>	<b>56.76</b>	<b>54.93</b>	<b>39.40</b>
<b>S&amp;P 500</b>	<b>100.00</b>	<b>113.69</b>	<b>115.26</b>	<b>129.05</b>	<b>157.22</b>	<b>150.33</b>
<b>S&amp;P Oil &amp; Gas Equipment &amp; Services</b>	<b>100.00</b>	<b>92.20</b>	<b>74.91</b>	<b>98.83</b>	<b>84.32</b>	<b>49.36</b>
<b>S&amp;P Oil &amp; Gas Equipment Select</b>	<b>100.00</b>	<b>65.43</b>	<b>41.45</b>	<b>53.34</b>	<b>41.70</b>	<b>22.09</b>

This information shall not be deemed to be “soliciting material” or to be “filed” with the Commission or subject to Regulation 14A (17 CFR 240.14a-1-240.14a-104), other than as provided in Item 201(e) of Regulation S-K, or to the liabilities of section 18 of the Exchange Act (15 U.S.C. 78r).

In 2018, NOV determined that it should add the Oil & Gas Equipment and Services Select Index to benchmark its performance as it is comprised of approximately 40 companies, giving a more representative view of the industry. Whereas, the Oil & Gas and Equipment Services Index consists of a limited number of companies and is heavily weighted by one or two members.

**ITEM 6. SELECTED FINANCIAL DATA**

	Years Ended December 31,				
	2018	2017	2016	2015	2014
	(in millions, except per share data)				
<b>Operating Data:</b>					
Revenue	\$ 8,453	\$ 7,304	\$ 7,251	\$ 14,757	\$ 21,440
Operating profit (loss)	\$ 211	\$ (277)	\$ (2,411)	\$ (390)	\$ 3,613
Income (loss) before income taxes	\$ 41	\$ (392)	\$ (2,623)	\$ (589)	\$ 3,494
Income (loss) from continuing operations	\$ (22)	\$ (236)	\$ (2,416)	\$ (767)	\$ 2,455
Income from discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ 52
Net income (loss) attributable to Company	\$ (31)	\$ (237)	\$ (2,412)	\$ (769)	\$ 2,502
<b>Per share data:</b>					
<b>Basic:</b>					
Income (loss) from continuing operations	\$ (0.08)	\$ (0.63)	\$ (6.41)	\$ (1.99)	\$ 5.73
Income from discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ 0.12
Net income (loss) attributable to Company	\$ (0.08)	\$ (0.63)	\$ (6.41)	\$ (1.99)	\$ 5.85
<b>Diluted:</b>					
Income (loss) from continuing operations	\$ (0.08)	\$ (0.63)	\$ (6.41)	\$ (1.99)	\$ 5.70
Income from discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ 0.12
Net income (loss) attributable to Company	\$ (0.08)	\$ (0.63)	\$ (6.41)	\$ (1.99)	\$ 5.82
Cash dividends per share	\$ 0.20	\$ 0.20	\$ 0.61	\$ 1.84	\$ 1.64
<b>Other Data:</b>					
Depreciation and amortization	\$ 690	\$ 698	\$ 703	\$ 747	\$ 778
Capital expenditures	\$ 244	\$ 192	\$ 284	\$ 453	\$ 699
<b>Balance Sheet Data:</b>					
Working capital	\$ 4,938	\$ 4,863	\$ 4,829	\$ 7,552	\$ 8,788
Total assets	\$ 19,796	\$ 20,206	\$ 21,140	\$ 26,725	\$ 33,562
Long-term debt, less current maturities	\$ 2,704	\$ 2,706	\$ 2,708	\$ 3,928	\$ 3,014
Total Company stockholders' equity	\$ 13,819	\$ 14,094	\$ 13,940	\$ 16,383	\$ 20,692

**ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

**General Overview**

The Company is a leading independent provider of equipment and technology to the upstream oil and gas industry. With operations in approximately 620 locations across six continents, NOV designs, manufactures and services a comprehensive line of drilling and well servicing equipment; sells and rents drilling motors, specialized downhole tools, and rig instrumentation; performs inspection and internal coating of oilfield tubular products; provides drill cuttings separation, management and disposal systems and services; and provides expendables and spare parts used in conjunction with the Company’s large installed base of equipment. NOV also manufactures coiled tubing and high-pressure fiberglass and composite tubing, and sells and rents advanced in-line inspection equipment to makers of oil country tubular goods. The Company has a long tradition of pioneering innovations which improve the cost-effectiveness, efficiency, safety, and environmental impact of oil and gas operations.

NOV’s revenue and operating results are directly related to the level of worldwide oil and gas drilling and production activities and the profitability and cash flow of oil and gas companies and drilling contractors, which in turn are affected by current and anticipated prices of oil and gas. Oil and gas prices have been and are likely to continue to be volatile. See Item 1A. “Risk Factors”. The Company conducts its operations through three business segments: Wellbore Technologies, Completion & Production Solutions and Rig Technologies. See Item 1. “Business”, for a discussion of each of these business segments.

Unless indicated otherwise, results of operations are presented in accordance with accounting principles generally accepted in the United States (“GAAP”). Certain reclassifications have been made to the prior year financial statements in order for them to conform with the 2018 presentation. The Company discloses Adjusted EBITDA (defined as Operating Profit excluding Depreciation, Amortization and Other Items) in its periodic earnings press releases and other public disclosures to provide investors additional information about the results of ongoing operations. See Non-GAAP Financial Measures and Reconciliations in Results of Operations for an explanation of our use of non-GAAP financial measures and reconciliations to their corresponding measures calculated in accordance with GAAP.

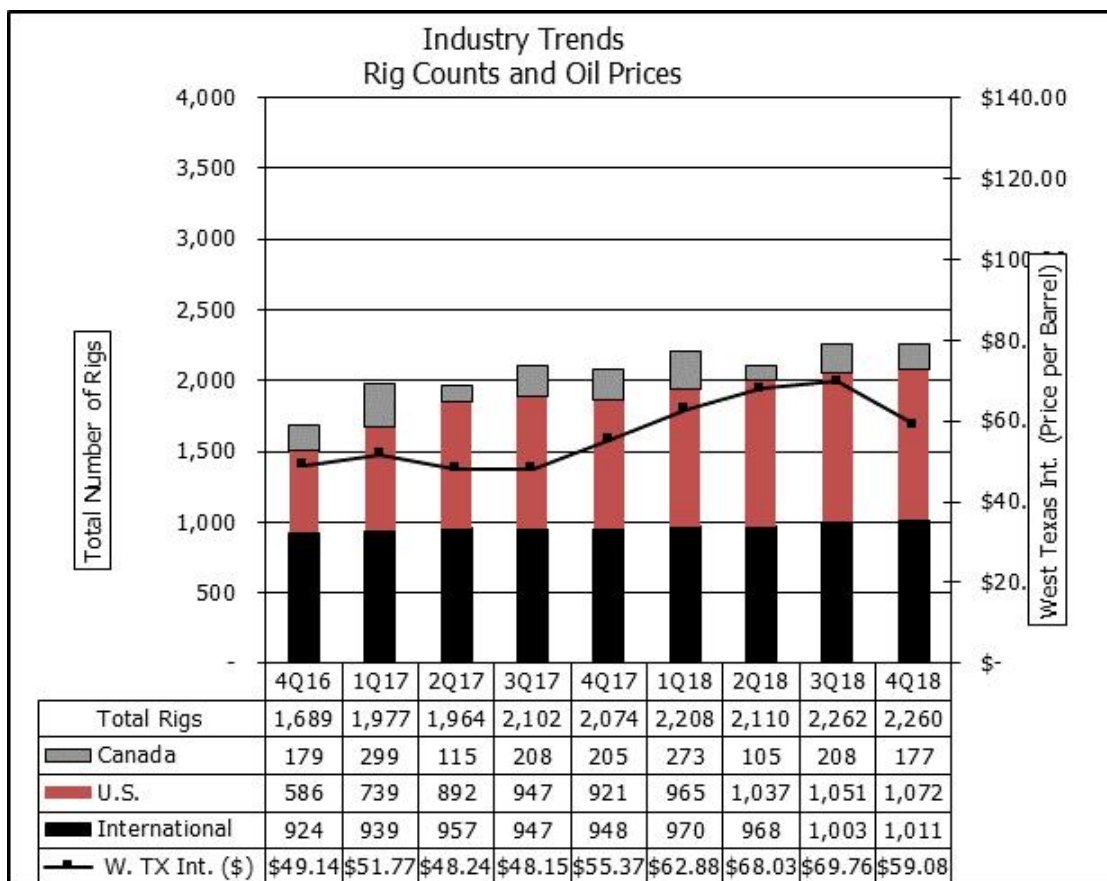
**Operating Environment Overview**

NOV’s results are dependent on, among other things, the level of worldwide oil and gas drilling, well remediation activity, the price of crude oil and natural gas, capital spending by exploration and production companies and drilling contractors, and worldwide oil and gas inventory levels. Key industry indicators for the past three years include the following:

	2018*	2017*	2016*	% increase (decrease)	
				2018 v 2017	2018 v 2016
<b>Active Drilling Rigs:</b>					
U.S.	1,031	875	510	17.8%	102.2%
Canada	191	207	128	(7.7%)	49.2%
International	988	947	956	4.3%	3.3%
Worldwide	2,210	2,029	1,594	8.9%	38.6%
<b>West Texas Intermediate</b>					
Crude Prices (per barrel)	\$ 64.94	\$ 50.88	\$ 43.15	27.6%	50.5%
Natural Gas Prices (\$/mmbtu)	\$ 3.13	\$ 2.96	\$ 2.49	5.7%	25.7%

\* Averages for the years indicated. See sources below.

The following table details the U.S., Canadian, and international rig activity and West Texas Intermediate Oil prices for the past nine quarters ended December 31, 2018 on a quarterly basis:



Source: Rig count: Baker Hughes, Inc. ([www.bakerhughes.com](http://www.bakerhughes.com)); West Texas Intermediate Crude Price: Department of Energy, Energy Information Administration ([www.eia.doe.gov](http://www.eia.doe.gov)).

The average price per barrel of West Texas Intermediate Crude was \$64.94 in 2018, an increase of 28% over the average price for 2017 of \$50.88 per barrel. The average natural gas price in 2018 was \$3.13 per mmbtu, an increase of six percent compared to the 2017 average of \$2.96 per mmbtu. Average rig activity worldwide increased nine percent for the full year in 2018 compared to 2017. The average crude oil price for the fourth quarter of 2018 was \$59.08 per barrel, and natural gas was \$3.77 per mmbtu.

At February 8, 2019, there were 1,289 rigs actively drilling in North America, compared to the fourth quarter average of 1,249 rigs, an increase of three percent. The price for West Texas Intermediate Crude Oil was \$52.72 per barrel at February 8, 2019, a decrease of 11% from the fourth quarter of 2018 average. The price for natural gas was \$2.58 per mmbtu at February 8, 2019, a decrease of 32% from the fourth quarter of 2018 average.

## EXECUTIVE SUMMARY

National Oilwell Varco, Inc. generated revenue of \$8.45 billion in 2018, an increase of 16% from the prior year as improving oil and gas prices resulted in increased drilling activity and demand for certain oilfield equipment and services. Average 2018 worldwide rig count (as measured by Baker Hughes) increased nine percent in comparison to 2017. The increase in activity led to increased revenues across all of the Company's segments.

For the year ended December 31, 2018, the Company reported an operating profit of \$211 million compared to an operating loss of \$277 million in 2017, and a net loss attributable to the Company of \$31 million, or \$0.08 per share compared to a net loss of \$237 million or \$0.63 per share during 2017.

For the fourth quarter ended December 31, 2018, revenue was \$2.40 billion, a \$244 million or 11% increase compared to the third quarter of 2018. The Company reported net income of \$12 million, or \$0.03 per fully diluted share, an increase of \$11 million, or \$0.03 per fully diluted share, from the third quarter of 2018. Compared to the fourth quarter of 2017, revenue increased \$429 million or 22%, and net income increased \$26 million.

During the fourth quarter of 2018, third quarter of 2018, and fourth quarter of 2017, pre-tax other items (severance, facility closures, asset impairments, write-downs, and other) were \$21 million, nil, and \$133 million, respectively. Excluding the other items from all periods, fourth quarter 2018 Adjusted EBITDA was \$279 million, compared to \$245 million in the third quarter of 2018 and \$197 million in the fourth quarter of 2017.

### Segment Performance

#### *Wellbore Technologies*

Wellbore Technologies generated revenues of \$884 million in the fourth quarter of 2018, an increase of four percent from the third quarter of 2018 and an increase of 24 percent from the fourth quarter of 2017. The segment's revenue growth continued to outpace domestic and global drilling activity levels, with sales increasing 4.5 percent in the U.S. and 2.1 percent in international markets. The segment's WellSite Services and Grant Prideco business units each posted double-digit percent sequential revenue increases supported by bookings of solids control equipment and drill pipe, which improved throughout the first three quarters of 2018. Operating profit was \$41 million, or 4.6 percent of sales. Adjusted EBITDA increased 15 percent sequentially and 45 percent from the prior year to \$155 million, or 17.5 percent of sales. An improved mix of business and higher volumes resulted in 54 percent sequential Adjusted EBITDA incrementals (the change in Adjusted EBITDA divided by the change in revenue).

#### *Completion & Production Solutions*

Completion & Production Solutions generated revenues of \$788 million in the fourth quarter of 2018, an increase of seven percent from the third quarter of 2018 and an increase of 14 percent from the fourth quarter of 2017. The sequential increase in revenue was the result of improved progress and deliveries on projects and continued growth in demand for coiled tubing and wireline equipment. Operating profit was \$64 million, or 8.1 percent of sales. Adjusted EBITDA increased 13 percent sequentially and 51 percent from the prior year to \$112 million, or 14.2 percent of sales. Anticipated resin supply shortages in the Company's Fiber Glass Systems business unit and holiday slowdowns impacted manufacturing plant absorption, limiting sequential Adjusted EBITDA incrementals to 25 percent.

New orders booked during the quarter were \$470 million, representing a book-to-bill of 103 percent when compared to the \$456 million of orders shipped from backlog. Backlog for capital equipment orders for Completion & Production Solutions at December 31, 2018 was \$894 million.

#### *Rig Technologies*

Rig Technologies generated revenues of \$804 million in the fourth quarter of 2018, an increase of 26 percent from the third quarter of 2018 and an increase of 31 percent from the fourth quarter of 2017. Better progress on projects, delivery of two land rigs, and improved aftermarket sales resulted in the sequential revenue increase. Operating profit was \$75 million, or 9.3 percent of sales. Adjusted EBITDA increased 31 percent sequentially and 46 percent from the prior year to \$102 million, or 12.7 percent of sales. Adjusted EBITDA leverage was limited to 14 percent due to a change in product mix.

New orders booked during the quarter totaled \$119 million, representing a book-to-bill of 30 percent when compared to the \$403 million of orders shipped from backlog. At December 31, 2018, backlog for capital equipment orders for Rig Technologies was \$3.1 billion.

## Oil & Gas Equipment and Services Market and Outlook

Technological advancements in oilfield equipment and services unlocked production from previously uneconomic formations which, combined with high commodity demand and prices, enabled and sustained an increase in global drilling activity that dramatically grew oil supplies from 2004 to 2014. In the second half of 2014 demand growth in Asia, Europe and the U.S. weakened while drilling activity remained strong and production continued to grow. As a result, inventories of crude and refined products increased, and the price of oil declined significantly during 2015, the beginning of a generational market downturn.

The Company aggressively sized its operations to the market and reduced operating expenses, while continuing to invest in developing and acquiring new products, technologies and operations that advanced longer term strategic goals. The Company successfully pivoted towards the industry's increased focus on onshore unconventional developments, while strategically maintaining a leading position in offshore equipment.

The market downturn stabilized during the second half of 2016. Through 2017 and into the first nine months of 2018, drilling activity increased for North America land, stabilized in international land markets, and remained depressed offshore. During the fourth quarter of 2018 oil prices declined sharply due to heavier than expected US shale production combined with market concerns about global growth, geopolitics (including trade wars) and interest rates. The average price of West Texas Intermediate Cushing Crude for the fourth quarter of 2018 was \$59.08 a barrel, but ended the year at \$45.15.

Despite a surge in December equipment deliveries that resulted in NOV's strong fourth quarter revenue, many customers have indicated a reduced spending outlook into the beginning of 2019. NOV's customer base has become much faster at reacting to market swings, and we believe the fourth quarter dip will lead to lower first quarter revenues across our segments, particularly in North America.

NOV's global customer base includes national oil companies, international oil companies, independent oil and gas companies, onshore and offshore drilling contractors and service companies and others whose strategies and reactions to low or volatile commodity prices vary. The timing and slope of revenue impacts from market changes will be different across its geographic regions and three operating segments. NOV's Wellbore Technologies segment and certain elements of its Completion & Production Solutions and Rig Technologies segments realize a faster response to changes in drilling activity, while its more capital equipment-oriented businesses tend to respond to increased drilling activity more slowly.

The Company anticipates that land drilling customers will reduce spending through the first part of 2019, then continue investing in NOV's equipment and services to enhance their competitiveness. North American pressure pumping customers will proceed cautiously in the face of lower well stimulation day rates. The Company remains optimistic regarding longer-term market fundamentals as existing oil and gas fields continue to deplete and numerous major projects to replenish supply have been deferred or canceled while global demand continues to grow. After a lower first quarter, there may be stronger activity in the second half of 2019, particularly if global growth, supply and demand balance, and geopolitical concerns ease.

NOV expects unconventional resources will continue to gain a greater share of global production, and the Company will continue to enhance its unconventional resource focused products and technologies, including advanced, automated drilling rigs; premium drillpipe and directional drilling technologies; hydraulic fracture stimulation equipment; and multistage completion tools. NOV expects big data and predictive analytics to improve uptime and operating efficiency, and the Company remains at the forefront of applying this promising technology to oilfield drilling and completion equipment. The Company has used the recent downturn to vigorously advance these strategic initiatives and is encouraged by its progress.



## Results of Operations

The following table summarizes the Company's revenue and operating profit (loss) by operating segment (in millions):

	Years Ended December 31,			% Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
<b>Revenue:</b>					
Wellbore Technologies	\$ 3,235	\$ 2,577	\$ 2,199	25.5%	17.2%
Completion & Production Solutions	2,931	2,672	2,241	9.7%	19.2%
Rig Technologies	2,575	2,252	3,110	14.3%	(27.6%)
Eliminations	(288)	(197)	(299)	46.2%	(34.1%)
Total Revenue	<u>\$ 8,453</u>	<u>\$ 7,304</u>	<u>\$ 7,251</u>	<u>15.7%</u>	<u>0.7%</u>
<b>Operating Profit (Loss):</b>					
Wellbore Technologies	\$ 131	\$ (102)	\$ (770)	(228.4%)	(86.8%)
Completion & Production Solutions	166	98	(266)	69.4%	(136.8%)
Rig Technologies	213	(14)	(1,033)	(1621.4%)	(98.6%)
Eliminations and corporate costs	(299)	(259)	(342)	15.4%	(24.3%)
Total Operating Profit (Loss)	<u>\$ 211</u>	<u>\$ (277)</u>	<u>\$ (2,411)</u>	<u>(176.2%)</u>	<u>(88.5%)</u>
<b>Operating Profit (Loss)%:</b>					
Wellbore Technologies	4.0%	(4.0%)	(35.0%)		
Completion & Production Solutions	5.7%	3.7%	(11.9%)		
Rig Technologies	8.3%	(0.6%)	(33.2%)		
Total Operating Profit (Loss) %	2.5%	(3.8%)	(33.3%)		

### Years Ended December 31, 2018 and December 31, 2017

#### Wellbore Technologies

Revenue from Wellbore Technologies for the year ended December 31, 2018 was \$3,235 million, an increase of \$658 million (25.5%) compared to the year ended December 31, 2017. The increase was due to an increase in global drilling activity and increased market share in certain product lines.

Operating profit from Wellbore Technologies was \$131 million for the year ended December 31, 2018, an increase of \$233 million compared to the year ended December 31, 2017. Operating profit percentage for 2018 was 4.0% compared to operating loss percentage 4.0% in 2017.

Included in operating profit are other items related to facility closures and inventory recoveries. Other items included in operating profit (loss) for Wellbore Technologies were \$21 million for the year ended December 31, 2018 and \$28 million for the year ended December 31, 2017.

#### Completion & Production Solutions

Revenue from Completion & Production Solutions for the year ended December 31, 2018 was \$2,931 million, an increase of \$259 million (9.7%) compared to the year ended December 31, 2017. The increase was due to improved progress and deliveries on projects and continued growth in demand for coiled tubing and wireline equipment and conductor pipe.

Operating profit from Completion & Production Solutions was \$166 million for the year ended December 31, 2018 compared to \$98 million for 2017, an increase of \$68 million (69.4%). Operating profit percentage increased to 5.7% from 3.7% in 2017.

There were no other items included in operating profit for Completion & Production Solutions for the year ended December 31, 2018 compared to \$33 million for the year ended December 31, 2017.

The Completion & Productions Solutions segment monitors its capital equipment backlog to plan its business. New orders are added to backlog only when the Company receives a firm written order for major completion and production

components or a signed contract related to a construction project. The capital equipment backlog was \$894 million at December 31, 2018, a decrease of \$172 million, or 16 percent from backlog of \$1,066 million at December 31, 2017. Numerous factors may affect the timing of revenue out of backlog. Considering these factors, the Company reasonably expects approximately \$0.8 billion of revenue out of backlog in 2019 and approximately \$122 million of revenue out of backlog in 2020 and thereafter. At December 31, 2018, approximately 58 percent of the capital equipment backlog was for offshore products and approximately 70 percent of the capital equipment backlog was destined for international markets.

#### *Rig Technologies*

Revenue from Rig Technologies for the year ended December 31, 2018 was \$2,575 million, an increase of \$323 million (14.3%) compared to the year ended December 31, 2017. The increase was due to better progress on projects and improved aftermarket sales.

Operating profit from Rig Technologies was \$213 million for the year ended December 31, 2018, an increase of \$227 million compared to 2017. Operating profit percentage for 2018 was 8.3% compared to an operating loss percentage of 0.6% in 2017.

Included in operating profit are other items related to severance and facility closures, and asset write-downs. Other items included in operating profit for Rig Technologies were \$6 million for the year ended December 31, 2018 and \$129 million for the year ended December 31, 2017.

The Rig Technologies segment monitors its capital equipment backlog to plan its business. New orders are added to backlog only when the Company receives a firm written order for major drilling rig components or a signed contract related to a construction project. The capital equipment backlog was \$3.1 billion at December 31, 2018, an increase of \$1.2 billion, or 63%, from backlog of \$1.9 billion at December 31, 2017. Numerous factors may affect the timing of revenue out of backlog. Considering these factors, the Company reasonably expects approximately \$0.8 billion of revenue out of backlog in 2019 and approximately \$2.3 billion of revenue out of backlog in 2020 and thereafter. At December 31, 2018, approximately 31% of the capital equipment backlog was for offshore products and approximately 90% of the capital equipment backlog was destined for international markets.

#### *Eliminations and corporate costs*

Eliminations and corporate costs were \$299 million for the year ended December 31, 2018 compared to \$259 million for the year ended December 31, 2017. This change is primarily due to an increase in intersegment sales. Sales from one segment to another generally are priced at estimated equivalent commercial selling prices; however, segments originating an external sale are credited with the full profit to the Company. Eliminations and corporate costs include intercompany transactions conducted between the three reporting segments that are eliminated in consolidation, as well as corporate costs not allocated to the segments. Intercompany transactions within each reporting segment are eliminated within each reporting segment.

#### *Other income (expense), net*

Other income (expense), net were expenses of \$99 million for the year ended December 31, 2018 compared to expenses of \$33 million for the year ended December 31, 2017. The increase in expense was primarily due to higher foreign exchange losses for 2018.

#### *Provision for income taxes*

The effective tax rate for the year ended December 31, 2018 was 153.7%, compared to 39.8% for 2017. For the year ended December 31, 2018, valuation allowances established on foreign tax credits generated during the year resulted in a higher effective tax rate than the U.S. statutory rate. For the year ended December 31, 2017, the revaluation of net deferred tax liabilities in the U.S. partially offset by valuation allowances established on foreign tax credits generated during the year, when applied to losses resulted in a higher effective tax rate than the U.S. statutory rate.

## **Years Ended December 31, 2017 and December 31, 2016**

### *Wellbore Technologies*

Revenue from Wellbore Technologies for the year ended December 31, 2017 was \$2,577 million, an increase of \$378 million (17.2%) compared to the year ended December 31, 2016. The increase was due to higher drilling activity.

Operating loss from Wellbore Technologies was \$102 million for the year ended December 31, 2017, a decrease of \$668 million (86.8%) compared to the year ended December 31, 2016. Operating loss percentage decreased to 4.0% from 35.0% in 2016. Operating loss decreased due to higher drilling activity in 2017.

Included in operating profit are other items related to costs associated with a Voluntary Early Retirement Plan established by the Company during the first quarter of 2016, costs related to severance and facility closures, and asset write-downs. Other items included in operating profit for Wellbore Technologies were \$28 million for the year ended December 31, 2017 and \$476 million for the year ended December 31, 2016.

### *Completion & Production Solutions*

Revenue from Completion & Production Solutions for the year ended December 31, 2017 was \$2,672 million, an increase of \$431 million (19.2%) compared to the year ended December 31, 2016. The increase was due to higher market activity.

Operating profit (loss) from Completion & Production Solutions was \$98 million for the year ended December 31, 2017 compared to (\$266) million for 2016, an increase of \$364 million (136.8%). Operating profit (loss) percentage increased to 3.7% from (11.9)% in 2016. This increase was due to an overall increase in market activity.

Included in operating profit are other items related to costs associated with a Voluntary Early Retirement Plan established by the Company during the first quarter of 2016; costs related to severance and facility closures; items related to acquisitions, such as transaction costs, the amortization of backlog and inventory that was stepped up to fair value during purchase accounting; and asset write-downs. Other items included in operating profit for Completion & Production Solutions were \$33 million for the year ended December 31, 2017 and \$274 million for the year ended December 31, 2016.

The Completion & Productions Solutions segment monitors its capital equipment backlog to plan its business. New orders are added to backlog only when the Company receives a firm written order for major completion and production components or a signed contract related to a construction project. The capital equipment backlog was \$1,066 million at December 31, 2017, an increase of \$248 million, or 30% from backlog of \$818 million at December 31, 2016. Numerous factors may affect the timing of revenue out of backlog. Considering these factors, the Company reasonably expects approximately \$953 million of revenue out of backlog in 2018 and approximately \$113 million of revenue out of backlog in 2019 and thereafter. At December 31, 2017, approximately 59% of the capital equipment backlog was for offshore products and approximately 73% of the capital equipment backlog was destined for international markets.

### *Rig Technologies*

Revenue from Rig Technologies for the year ended December 31, 2017 was \$2,252 million, a decrease of \$858 million (27.6%) compared to the year ended December 31, 2016. The decrease was due to lower volumes in all areas.

Operating loss from Rig Technologies was \$14 million for the year ended December 31, 2017, an improvement of \$1,019 million (98.6%) compared to 2016. Operating loss percentage decreased to 0.6%, from 33.2% in 2016. Operating loss decreased primarily due to a \$972 million impairment charge incurred on the carrying value of goodwill during the third quarter of 2016 that did not repeat in 2017, partially offset by lower volumes.

Included in operating profit are other items related to costs associated with a Voluntary Early Retirement Plan established by the Company during the first quarter of 2016, costs related to severance and facility closures, and asset write-downs, including the impairment charge mentioned above. Other items included in operating profit for Rig

Technologies were \$129 million for the year ended December 31, 2017 and \$1,255 million for the year ended December 31, 2016.

The Rig Technologies segment monitors its capital equipment backlog to plan its business. New orders are added to backlog only when the Company receives a firm written order for major drilling rig components or a signed contract related to a construction project. The capital equipment backlog was \$1.9 billion at December 31, 2017, a decrease of \$0.6 billion, or 24%, from backlog of \$2.5 billion at December 31, 2016. Numerous factors may affect the timing of revenue out of backlog. Considering these factors, the Company reasonably expects approximately \$0.8 billion of revenue out of backlog in 2018 and approximately \$1.1 billion of revenue out of backlog in 2019 and thereafter. At December 31, 2017, approximately 78% of the capital equipment backlog was for offshore products and approximately 81% of the capital equipment backlog was destined for international markets.

#### *Eliminations and corporate costs*

Eliminations and corporate costs in operating loss were \$259 million for the year ended December 31, 2017 compared to \$342 million for the year ended December 31, 2016. This change is primarily due to lower intersegment sales. Sales from one segment to another generally are priced at estimated equivalent commercial selling prices; however, segments originating an external sale are credited with the full profit to the Company. Eliminations and corporate costs include intercompany transactions conducted between the three reporting segments that are eliminated in consolidation, as well as corporate costs not allocated to the segments. Intercompany transactions within each reporting segment are eliminated within each reporting segment.

#### *Other income (expense), net*

Other income (expense), net were expenses of \$33 million for the year ended December 31, 2017 compared to expenses of \$101 million for the year ended December 31, 2016. The decrease was primarily due to lower asset disposals.

#### *Provision for income taxes*

The effective tax rate for the year ended December 31, 2017 was 39.8%, compared to 7.9% for 2016. For the year ended December 31, 2017, the revaluation of net deferred tax liabilities in the U.S. partially offset by valuation allowances established on foreign tax credits generated during the year, when applied to losses resulted in a higher effective tax rate than the U.S. statutory rate. For the year ended December 31, 2016, the impairment of goodwill not deductible for tax purposes, lower tax rates on losses incurred in foreign jurisdictions, and the establishment of valuation allowances, when applied to losses resulted in a lower effective tax rate than the U.S. statutory rate.

#### *Non-GAAP Financial Measures and Reconciliations*

The Company discloses Adjusted EBITDA (defined as Operating Profit excluding Depreciation, Amortization and, when applicable, Other Items) in its periodic earnings press releases and other public disclosures to provide investors additional information about the results of ongoing operations. The Company uses Adjusted EBITDA internally to evaluate and manage the business. Adjusted EBITDA is not intended to replace GAAP financial measures, such as Net Income. Other items in the three and twelve months ended December 31, 2018 were \$21 and \$9 million, pre-tax, respectively, primarily from the adjustment of certain accruals, restructure charges, and severance payments. Other items in 2017 consisted primarily of restructure charges for inventory write-downs, facility closures and severance payments.

The following tables set forth the reconciliation of Adjusted EBITDA to its most comparable GAAP financial measure (in millions):

	Three Months Ended			Years Ended	
	December 31,		September 30,	December 31,	
	2018	2017	2018	2018	2017
<b>Operating profit (loss):</b>					
Wellbore Technologies	\$ 41	\$ (21)	\$ 40	\$ 131	\$ (102)
Completion & Production Solutions	64	19	46	166	98
Rig Technologies	75	(51)	58	213	(14)
Eliminations and corporate costs	(93)	(58)	(71)	(299)	(259)
<b>Total operating profit (loss)</b>	<b>\$ 87</b>	<b>\$ (111)</b>	<b>\$ 73</b>	<b>\$ 211</b>	<b>\$ (277)</b>
<b>Other items:</b>					
Wellbore Technologies	\$ 24	\$ 32	\$ —	\$ 21	\$ 28
Completion & Production Solutions	(3)	1	—	—	33
Rig Technologies	—	100	—	6	129
Corporate	—	—	—	(18)	—
<b>Total other items</b>	<b>\$ 21</b>	<b>\$ 133</b>	<b>\$ —</b>	<b>\$ 9</b>	<b>\$ 190</b>
<b>Depreciation &amp; amortization:</b>					
Wellbore Technologies	\$ 90	\$ 96	\$ 95	\$ 374	\$ 379
Completion & Production Solutions	51	54	53	212	215
Rig Technologies	27	21	20	90	88
Corporate	3	4	4	14	16
<b>Total depreciation &amp; amortization</b>	<b>\$ 171</b>	<b>\$ 175</b>	<b>\$ 172</b>	<b>\$ 690</b>	<b>\$ 698</b>
<b>Adjusted EBITDA:</b>					
Wellbore Technologies	\$ 155	\$ 107	\$ 135	\$ 526	\$ 305
Completion & Production Solutions	112	74	99	378	346
Rig Technologies	102	70	78	309	203
Eliminations and corporate costs	(90)	(54)	(67)	(303)	(243)
<b>Total adjusted EBITDA</b>	<b>\$ 279</b>	<b>\$ 197</b>	<b>\$ 245</b>	<b>\$ 910</b>	<b>\$ 611</b>
<b>Reconciliation of Adjusted EBITDA:</b>					
GAAP net income (loss) attributable to Company	\$ 12	\$ (14)	\$ 1	\$ (31)	\$ (237)
Noncontrolling interests	3	(1)	3	9	1
Provision (benefit) for income taxes	26	(123)	29	63	(156)
Interest expense	22	25	24	93	102
Interest income	(7)	(6)	(6)	(25)	(25)
Equity (income) loss in unconsolidated affiliate	2	1	2	3	5
Other (income) expense, net	29	7	20	99	33
Depreciation and amortization	171	175	172	690	698
Other items	21	133	-	9	190
<b>Total Adjusted EBITDA</b>	<b>\$ 279</b>	<b>\$ 197</b>	<b>\$ 245</b>	<b>\$ 910</b>	<b>\$ 611</b>

## Liquidity and Capital Resources

The Company assesses liquidity in terms of its ability to generate cash to fund operating, investing and financing activities. The Company remains in a strong financial position, with resources available to reinvest in existing businesses, strategic acquisitions and capital expenditures to meet short- and long-term objectives. The Company believes that cash on hand, cash generated from expected results of operations and amounts available under its revolving credit facility will be sufficient to fund operations, anticipated working capital needs and other cash requirements including capital expenditures, debt and interest payments and dividend payments for the foreseeable future.

At December 31, 2018, the Company had cash and cash equivalents of \$1,427 million, and total debt of \$2,711 million. At December 31, 2017, cash and cash equivalents were \$1,437 million and total debt was \$2,712 million. As of December 31, 2018, approximately \$979 million of the \$1,427 million of cash and cash equivalents was held by our foreign subsidiaries and the earnings associated with this cash were subject to U.S. taxation under the Act defined in Note 14 to the Consolidated Financial Statements. If opportunities to invest in the U.S. are greater than available cash balances that are not subject to income tax, rather than repatriating cash, the Company may choose to borrow against its revolving credit facility or utilize its commercial paper program.

On June 27, 2017, the Company entered into a new \$3.0 billion credit agreement evidencing a five-year unsecured revolving credit facility, which expires on June 27, 2022, with a syndicate of financial institutions. This new credit facility replaced the Company's previous \$4.5 billion revolving credit facility. The Company has the right to increase the aggregate commitments under this new agreement to an aggregate amount of up to \$4.0 billion upon the consent of only those lenders holding any such increase. Interest under the new multicurrency facility is based upon LIBOR, NIBOR or CDOR plus 1.125% subject to a ratings-based grid or the U.S. prime rate. The new credit facility contains a financial covenant regarding maximum debt-to-capitalization ratio of 60%. As of December 31, 2018, the Company was in compliance with a debt-to-capitalization ratio of 16.3%.

On November 29, 2017, the Company repaid in its entirety the \$500 million of its 1.35% unsecured Senior Notes using available cash balances.

The Company's outstanding debt at December 31, 2018 was \$2,711 million and consisted of \$1,394 million in 2.60% Senior Notes, \$1,088 million in 3.95% Senior Notes, no commercial paper borrowings, and other debt of \$229 million. The Company was in compliance with all covenants at December 31, 2018.

At December 31, 2018, there were no commercial paper borrowings supported by the \$3.0 billion credit facility and no outstanding letters of credit issued under the credit facility, resulting in \$3.0 billion of funds available under this revolving credit facility.

The Company had \$480 million of outstanding letters of credit at December 31, 2018 that are under various bilateral letter of credit facilities. Letters of credit are issued as bid bonds, advanced payment bonds and performance bonds. The following table summarizes our net cash provided by operating activities, net cash used in investing activities and net cash used in financing activities for the periods presented (in millions):

	Years Ended December 31,		
	2018	2017	2016
Net cash provided by operating activities	\$ 521	\$ 832	\$ 960
Net cash used in investing activities	(457)	(245)	(488)
Net cash used in financing activities	(30)	(595)	(1,141)

### ***Operating Activities***

*2018 vs 2017.* Net cash provided by operating activities was \$521 million in 2018 compared to \$832 million in 2017. Before changes in operating assets and liabilities, net of acquisitions, cash was provided primarily by net loss from operations of \$22 million plus non-cash charges of \$779 million and \$3 million in equity loss in unconsolidated affiliates.

The change in operating assets and liabilities in 2018 compared to the same period in 2017 was primarily due to declines in inventory and contract assets. Net changes in operating assets and liabilities, net of acquisitions, used \$400 million of cash in 2018 compared to cash provided of \$448 million in the same period in 2017.

From time to time, we participate in factoring arrangements to sell accounts receivable to third-party financial institutions. In 2018, we sold accounts receivable of \$248 million at a cost of approximately \$2 million, receiving cash proceeds totaling \$246 million. Our factoring transactions in 2018 were recognized as sales, and the proceeds are included as operating cash flows in our Consolidated Statements of Cash Flows. We did not factor any receivables during the fourth quarter 2018.

*2017 vs 2016.* Net cash provided by operating activities was \$832 million in 2017 compared to net cash provided by operating activities of \$960 million in 2016. Before changes in operating assets and liabilities, net of acquisitions, cash was provided by operations in 2017 primarily from operating activities that generated earnings before non-cash charges of \$379 million and \$5 million in equity loss in unconsolidated affiliates.

Net changes in operating assets and liabilities, net of acquisitions, provided \$448 million of cash in 2017 compared to \$1,044 million provided in 2016. The decrease in cash provided in 2017 compared to 2016 was primarily due to declines in cash provided by accounts receivable, inventory and costs in excess of billings, partially offset by declines in cash used by accrued liabilities and billings in excess of costs and by accounts payable providing cash in 2017 compared to using cash in 2016.

### ***Investing Activities***

*2018 vs 2017.* Net cash used in investing activities was \$457 million in 2018 compared to \$245 million in 2017. The increase in net cash used in investing activities was primarily the result of increased acquisitions and capital expenditures in 2018 compared to 2017. The Company used \$280 million during 2018 for acquisitions compared to \$86 million in 2017 and \$244 million for capital expenditures during 2018, compared to \$192 million in 2017.

*2017 vs 2016.* Net cash used in investing activities was \$245 million in 2017 compared to net cash used in investing activities of \$488 million in 2016. The decrease in net cash used in investing activities was primarily the result of decreased acquisitions and capital expenditures in 2017 compared to 2016. The Company used \$86 million during 2017 for acquisitions compared to \$230 million in 2016 and \$192 million for capital expenditures during 2017, compared to \$284 million in 2016.

### ***Financing Activities***

*2018 vs 2017.* Net cash used in financing activities was \$30 million in 2018 compared to \$595 million in 2017. This decrease was primarily the result of lower debt payments in 2018 compared to 2017.

*2017 vs 2016.* Net cash used in financing activities was \$595 million in 2017 compared to \$1,141 million in 2016. This decrease was primarily the result of \$506 million of debt payments in 2017 compared to \$900 million used to make payments on net commercial paper borrowings in 2016. In addition, the Company decreased its dividend to \$76 million during 2017 compared to \$230 million in 2016.

### ***Other***

The effect of the change in exchange rates on cash was an increase (decrease) of (\$44) million, \$37 million and (\$3) million for the years ended December 31, 2018, 2017 and 2016, respectively.

We believe that cash on hand, cash generated from operations and amounts available under our credit facilities and from other sources of debt will be sufficient to fund operations, working capital needs, capital expenditure requirements, dividends and financing obligations.

We intend to pursue additional acquisition candidates, but the timing, size or success of any acquisition effort and the related potential capital commitments cannot be predicted. We continue to expect to fund future cash acquisitions primarily with cash flow from operations and borrowings, including the unborrowed portion of the revolving credit facility or new debt issuances, but may also issue additional equity either directly or in connection with acquisitions. There can be no assurance that additional financing for acquisitions will be available at terms acceptable to us.

A summary of the Company's outstanding contractual obligations at December 31, 2018 is as follows (in millions):

	Total	Payment Due by Period			
		Less than 1 Year	1-3 Years	4-5 Years	After 5 Years
<b>Contractual Obligations:</b>					
Total debt	\$ 2,711	\$ 7	\$ 14	\$ 1,410	\$ 1,280
Operating leases	732	126	194	119	293
Total Contractual Obligations	<u>\$ 3,443</u>	<u>\$ 133</u>	<u>\$ 208</u>	<u>\$ 1,529</u>	<u>\$ 1,573</u>
<b>Commercial Commitments:</b>					
Standby letters of credit	\$ 480	\$ 357	\$ 95	\$ 17	\$ 11

As of December 31, 2018, the Company had \$98 million of unrecognized tax benefits. This represents the tax benefits associated with various tax positions taken, or expected to be taken, on domestic and international tax returns that have not been recognized in our financial statements due to uncertainty regarding their resolution. Due to the uncertainty of the timing of future cash flows associated with these unrecognized tax benefits, we are unable to make reasonably reliable estimates of the period of cash settlement, if any, with the respective taxing authorities. Accordingly, unrecognized tax benefits have been excluded from the contractual obligations table above. For further information related to unrecognized tax benefits, see Note 14 to the Consolidated Financial Statements.

### Critical Accounting Policies and Estimates

In preparing the financial statements, we make assumptions, estimates and judgments that affect the amounts reported. We periodically evaluate our estimates and judgments that are most critical in nature which are related to revenue recognition under long-term construction contracts; allowance for doubtful accounts; inventory reserves; impairments of long-lived assets (excluding goodwill and other indefinite-lived intangible assets); impairment of goodwill and other indefinite-lived intangible assets; purchase price allocation of acquisitions; service and product warranties and income taxes. Our estimates are based on historical experience and on our future expectations that we believe are reasonable. The combination of these factors forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results are likely to differ from our current estimates and those differences may be material.

#### Revenue Recognition

The majority of the Company's revenue streams record revenue at a point in time when a performance obligation has been satisfied by transferring control of promised goods or services to a customer. Products and services are sold or rented based upon a fixed or determinable price and do not generally include significant post-delivery obligations. Payment terms and conditions vary by contract type. We have elected to apply the practical expedient that does not require an adjustment for a financing component if, at contract inception, the period between when we transfer the promised goods or service to the customer and when the customer pays for the goods or service is one year or less. Shipping and handling costs are recognized when incurred and are treated as costs to fulfill the original performance obligation.

Revenue is often generated from contracts that include multiple performance obligations. Using significant judgement, the Company considers the degree of customization, integration and interdependency of the related products and services when assessing distinct performance obligations within one contract. Stand-alone selling price ("SSP") for each distinct performance obligation is generally determined using the price at which the products and services would be sold separately to the customer. Discounts, when provided, are allocated based on the relative SSP of the various products and services.



For revenue that is not recognized at a point in time, the Company follows accounting guidance for revenue recognized over time, as follows:

#### *Revenue Recognition under Long-term Construction Contracts*

Revenue is recognized over-time for certain long-term construction contracts in the Completion & Production Solutions and Rig Technologies segments. These contracts include custom designs for customer-specific applications that are unique and require significant engineering efforts. Revenue is recognized as work progresses on each contract. Right to payment is enforceable for performance completed to date, including a reasonable profit.

We generally use the cost-to-cost (input) measure of progress for our contracts because it best depicts the transfer of assets to the customer which occurs as we incur costs. Under the cost-to-cost measure of progress, progress towards completion of each contract is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. These costs include labor, materials, subcontractors' costs, and other direct costs. Any expected losses on a project are recorded in full in the period in which the loss becomes probable.

These long-term construction contracts generally include a significant service of integrating a complex set of tasks and components into a single project or capability, so are accounted for as one performance obligation.

Estimating total revenue and cost at completion of long-term construction contracts is complex, subject to many variables and requires significant judgment. It is common for our long-term contracts to contain late delivery fees, work performance guarantees, and other provisions that can either increase or decrease the transaction price. We estimate variable consideration as the most likely amount we expect to receive. We include variable consideration in the estimated transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur, or when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based on an assessment of our anticipated performance and historical, current and forecasted information that is reasonably available to us. Net revenue recognized from performance obligations satisfied in previous periods was \$65 million for the year ended December 31, 2018 primarily due to change orders.

#### *Service and Repair Work*

For service and repair contracts, revenue is recognized over time. We generally use the output method to measure progress on service contracts due to the manner in which the customer receives and derives value from the services provided. For repair contracts, we generally use the cost-to-cost measure of progress because it best depicts the transfer of assets to the customer.

#### *Remaining Performance Obligations*

Remaining performance obligations represent the transaction price of firm orders for all revenue streams for which work has not been performed on contracts with an original expected duration of one year or more. We do not disclose the remaining performance obligations of royalty contracts, service contracts for which there is a right to invoice, and short-term contracts that are expected to have a duration of one year or less.

As of December 31, 2018, the aggregate amount of the transaction price allocated to remaining performance obligations was \$1,813 million. The Company expects to recognize approximately \$887 million in revenue for the remaining performance obligations in 2019 and \$926 million in 2020 and thereafter.

#### *Costs to Obtain and Fulfill a Contract*

We recognize an asset for the incremental costs of obtaining a contract, such as sales commissions, with a customer when we expect the benefit of those costs to be longer than one year. Costs to fulfill a contract, such as set-up and mobilization costs, are also capitalized when we expect to recover those costs. These contract costs are deferred and amortized over the period of contract performance. Total capitalized costs to obtain and fulfill a contract and the related amortization were immaterial during the periods presented and are included in other current and long-term

assets on our consolidated balance sheets. We apply the practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less.

#### *Allowance for Doubtful Accounts*

The determination of the collectability of amounts due from customer accounts requires the Company to make judgments regarding future events and trends. Allowances for doubtful accounts are determined based on a continuous process of assessing the Company's portfolio on an individual customer basis taking into account current market conditions and trends. This process consists of a thorough review of historical collection experience, current aging status of the customer accounts, and financial condition of the Company's customers. Based on a review of these factors, the Company will establish or adjust allowances for specific customers. A substantial portion of the Company's revenue comes from international oil companies, international shipyards, international oilfield service companies, and government-owned or government-controlled oil companies. Therefore, the Company has significant receivables in many foreign jurisdictions. If worldwide oil and gas drilling activity or changes in economic conditions in foreign jurisdictions deteriorate, the creditworthiness of the Company's customers could also deteriorate and they may be unable to pay these receivables, and additional allowances could be required. At December 31, 2018 and 2017, allowance for bad debts totaled \$161 million and \$187 million, or 7.1% and 8.5% of gross accounts receivable, respectively.

Historically, the Company's charge-offs and provisions for the allowance for doubtful accounts have been immaterial to the Company's consolidated financial statements. However, because of the risk factors mentioned above, changes in estimates could become material in future periods.

#### *Inventory Reserves*

Inventory is carried at the lower of cost or estimated net realizable value. The Company determines reserves for inventory based on historical usage of inventory on-hand, assumptions about future demand and market conditions, and estimates about potential alternative uses, which are limited. The Company's inventory consists of finished goods, spare parts, work in process, and raw materials to support ongoing manufacturing operations and the Company's large installed base of highly specialized oilfield equipment. The Company's estimated carrying value of inventory depends upon demand largely driven by levels of oil and gas well drilling and remediation activity, which depends in turn upon oil and gas prices, the general outlook for economic growth worldwide, available financing for the Company's customers, political stability and governmental regulation in major oil and gas producing areas, and the potential obsolescence of various types of equipment we sell, among other factors.

The Company evaluates inventory quarterly using the best information available at the time to inform our assumptions and estimates about future demand and resulting sales volumes, and recognizes reserves as necessary to properly state inventory. The historically severe oil-industry downturn that started in late 2014 began to stabilize during the second half of 2016, and showed early signs of improvement in many areas in the fourth quarter of 2016 and the first quarter of 2017, before declining slightly in the second quarter of 2017. The fourth quarter of 2017 saw improvement in oil prices. These signs of improvement, including conversations with customers about their plans, as well as inquiries and orders for products, provided the Company information with which to assess and adjust assumptions about future demand and market conditions. We saw clear evidence that a market recovery will favor newer technology and the most efficient equipment, and that certain products across our portfolio, for both land and offshore environments, were less likely to be successful going forward as our customers find footing in their newly competitive landscape.

Based on an update of our assumptions at each point in time related to estimates of future demand, during 2018, 2017, and 2016 we recorded charges for additions to inventory reserves of \$49 million, \$114 million, and \$606 million, respectively, consisting primarily of obsolete and surplus inventories. At December 31, 2018 and 2017, inventory reserves totaled \$644 million and \$800 million, or 17.7% and 21.0% of gross inventory, respectively.

Throughout the downturn the Company has continued to invest in developing and advancing products and technologies, contributing to the obsolescence of certain older products in a dramatically-shifted and more highly competitive recovering market, but also ensuring that the portfolio of products and services offered by the Company will meet customer needs in 2019 and beyond.

We will continue to assess our inventory levels and inventory offerings for our customers, which could require the Company to record additional allowances to reduce the value of its inventory. Such changes in our estimates or assumptions could be material under weaker market conditions or outlook.

#### *Impairment of Long-Lived Assets (Excluding Goodwill and Other Indefinite-Lived Intangible Assets)*

Long-lived assets, which include property, plant and equipment and identified intangible assets, comprise a significant amount of the Company's total assets. The Company makes judgments and estimates in conjunction with the carrying value of these assets, including amounts to be capitalized, depreciation and amortization methods and estimated useful lives.

The carrying values of these assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable. An impairment loss is recorded in the period in which it is determined that the carrying amount is not recoverable based on estimated future undiscounted cash flows. We estimate the fair value of these intangible and fixed assets using an income approach. This requires the Company to make long-term forecasts of its future revenues and costs related to the assets subject to review. These forecasts require assumptions about demand for the Company's products and services, future market conditions and technological developments. The forecasts are dependent upon assumptions regarding oil and gas prices, the general outlook for economic growth worldwide, available financing for the Company's customers, political stability in major oil and gas producing areas, and the potential obsolescence of various types of equipment we sell, among other factors. The financial and credit market volatility directly impacts our fair value measurement through our income forecast. Changes to these assumptions, including, but not limited to: sustained declines in worldwide rig counts below current analysts' forecasts, collapse of spot and futures prices for oil and gas, significant deterioration of external financing for our customers, higher risk premiums or higher cost of equity, or any other significant adverse economic news could require a provision for impairment in a future period.

#### *Goodwill and Other Indefinite-Lived Intangible Assets*

The Company has approximately \$6.3 billion of goodwill and \$0.4 billion of other intangible assets with indefinite lives as of December 31, 2018. Generally accepted accounting principles require the Company to test goodwill and other indefinite-lived intangible assets for impairment at least annually or more frequently whenever events or circumstances occur indicating that goodwill or other indefinite-lived intangible assets might be impaired. Events or circumstances which could indicate a potential impairment include (but are not limited to) a significant sustained reduction in worldwide oil and gas prices or drilling; a significant sustained reduction in profitability or cash flow of oil and gas companies or drilling contractors; a sustained reduction in the market capitalization of the Company; a significant sustained reduction in capital investment by drilling companies and oil and gas companies; or a significant sustained increase in worldwide inventories of oil or gas.

The discounted cash flow is based on management's forecast of operating performance for each reporting unit. The two main assumptions used in measuring goodwill impairment, which bear the risk of change and could impact the Company's goodwill impairment analysis, include the cash flow from operations from each of the Company's individual reporting units and the weighted average cost of capital. The starting point for each of the reporting unit's cash flow from operations is the detailed annual plan or updated forecast. Cash flows beyond the specific operating plans were estimated using a terminal value calculation, which incorporated historical and forecasted financial cyclical trends for each reporting unit and considered long-term earnings growth rates. The financial and credit market volatility directly impacts our fair value measurement through our weighted average cost of capital that we use to determine our discount rate. During times of volatility, significant judgment must be applied to determine whether credit changes are a short-term or long-term trend.

While the Company primarily uses the discounted cash flow method to assess fair value, the Company uses the comparable companies and representative transaction methods to validate the discounted cash flow analysis and further support management's expectations, where possible. The valuation techniques used in the annual test were consistent with those used during previous testing. The inputs used in the annual test were updated for current market conditions and forecasts.

During the third quarter of 2016, market factors indicated a more prolonged downturn associated with newbuild offshore drilling rigs, and we reduced our forecast accordingly, which indicated a goodwill impairment in the Rig Offshore reporting unit was possible. Based on the Company's step one interim goodwill impairment analysis as of

July 1, 2016, the Rig Offshore reporting unit had a calculated fair value below its carrying value, and required a step two analysis, which compares the implied fair value of goodwill of a reporting unit to the carrying value of goodwill for the reporting unit. The implied fair value of goodwill is determined by deducting the fair value of a reporting unit's identifiable assets and liabilities from the fair value of that reporting unit as a whole. Consistent with the step one analysis, fair value of the assets and liabilities was determined in accordance with ASC Topic 820. Based on the step two analysis performed for the Rig Offshore reporting unit, the Company recorded a \$972 million write-down of goodwill during the third quarter of 2016.

On July 1, 2017, the Company's Wellbore Technologies segment reorganized three of its reporting units, moving various operations between them. The goodwill impairment analyses performed prior to and subsequent to the restructuring of the three reporting units, concluded that the calculated fair values of these reporting units were substantially in excess of their carrying value. The restructuring had no effect on Wellbore Technologies consolidated financial position and results of operations.

The Company combined its Rig Systems and Rig Aftermarket reporting units into two different reporting units, Rig Equipment and Marine Construction, under a segment called Rig Technologies, effective October 1, 2017. The restructuring better aligns operations with the current and anticipated market environments, reduces administrative burden, and eliminates reported intercompany transactions between Rig Technologies' capital equipment and aftermarket operations. The Company tested the Rig Systems and Rig Aftermarket reporting units for impairment prior to combining, and the two, new reporting units under the Rig Technologies segment for impairment after combining, and concluded all fair values of the reporting units were substantially in excess of their carrying values.

In 2017, based on the Company's annual impairment test performed as of October 1, the calculated fair values for all of the Company's reporting units were substantially in excess of the respective reporting unit's carrying value. Additionally, the fair value for all of the Company's intangible assets with indefinite lives were substantially in excess of the respective asset carrying values.

In 2018, based on the annual impairment test, the calculated fair values for all of the Company's reporting units were substantially in excess of the respective reporting unit's carrying value with the exception of the Company's Floating Production Systems business unit. Further deterioration in the offshore turret mooring systems and topside process modules market could lead to an impairment. This business unit has approximately \$277 million in goodwill.

#### *Purchase Price Allocation of Acquisitions*

The Company allocates the purchase price of an acquired business to its identifiable assets and liabilities based on estimated fair values. The excess of the purchase price over the amount allocated to the assets and liabilities, if any, is recorded as goodwill. The Company uses all available information to estimate fair values including quoted market prices, the carrying value of acquired assets, and widely accepted valuation techniques such as discounted cash flows. The Company engages third-party appraisal firms to assist in fair value determination of inventories, identifiable intangible assets, and any other significant assets or liabilities when appropriate. The judgments made in determining the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, could materially impact the Company's results of operations.

#### *Service and Product Warranties*

The Company provides service and warranty policies on certain of its products. The Company accrues liabilities under service and warranty policies based upon specific claims and a review of historical warranty and service claim experience. Adjustments are made to accruals as claim data and historical experience change. In addition, the Company incurs discretionary costs to service its products in connection with product performance issues and recognizes them when they are incurred. At December 31, 2018 and 2017, service and product warranty accruals totaled \$105 million and \$135 million, respectively.

#### *Income Taxes*

The Company is U.S. registered and is subject to income taxes in the U.S. The Company operates through various subsidiaries in a number of countries throughout the world. Income taxes have been recorded based upon the tax laws and rates of the countries in which the Company operates and income is earned.

The Company's annual tax provision is based on taxable income, statutory rates and tax planning opportunities available in the various jurisdictions in which it operates. The determination and evaluation of the annual tax provision and tax positions involves the interpretation of the tax laws in the various jurisdictions in which the Company operates. It requires significant judgment and the use of estimates and assumptions regarding significant future events such as the amount, timing and character of income, deductions and tax credits. Changes in tax laws, regulations, and treaties, foreign currency exchange restrictions or the Company's level of operations or profitability in each jurisdiction could impact the tax liability in any given year. The Company also operates in many jurisdictions where the tax laws relating to the pricing of transactions between related parties are open to interpretation, which could potentially result in aggressive tax authorities asserting additional tax liabilities with no offsetting tax recovery in other countries.

The Company maintains liabilities for estimated tax exposures in jurisdictions of operation. The annual tax provision includes the impact of income tax provisions and benefits for changes to liabilities that the Company considers appropriate, as well as related interest. Tax exposure items primarily include potential challenges to intercompany pricing and certain operating expenses that may not be deductible in foreign jurisdictions. These exposures are resolved primarily through the settlement of audits within these tax jurisdictions or by judicial means. The Company is subject to audits by federal, state and foreign jurisdictions which may result in proposed assessments. The Company believes that an appropriate liability has been established for estimated exposures under the guidance in ASC Topic 740 "Income Taxes" ("ASC Topic 740"). However, actual results may differ materially from these estimates. The Company reviews these liabilities quarterly and to the extent audits or other events result in an adjustment to the liability accrued for a prior year, the effect will be recognized in the period of the event.

The Company currently has recorded valuation allowances that the Company intends to maintain until it is more likely than not the deferred tax assets will be realized. Income tax expense recorded in the future will be reduced to the extent of decreases in the Company's valuation allowances. The realization of remaining deferred tax assets is primarily dependent on future taxable income. Any reduction in future taxable income including but not limited to any future restructuring activities may require that the Company record an additional valuation allowance against deferred tax assets. An increase in the valuation allowance would result in additional income tax expense in such period and could have a significant impact on future earnings.

The Company has not provided for deferred taxes on the unremitted earnings of certain subsidiaries that are permanently reinvested. Should the Company make a distribution from the unremitted earnings of these subsidiaries, the Company may be required to record additional taxes. Unremitted earnings of these subsidiaries were \$3,254 million at December 31, 2018. The Company makes a determination each period whether to permanently reinvest these earnings. If, as a result of these reassessments, the Company distributes these earnings in the future, additional tax liabilities would result.

### **Recently Issued and Recently Adopted Accounting Standards**

See Note 2 – Summary of Significant Accounting Policies (Part IV, Item 15 of this Form 10-K) for further discussion.

### **Forward-Looking Statements**

Some of the information in this document contains, or has incorporated by reference, forward-looking statements. Statements that are not historical facts, including statements about our beliefs and expectations, are forward-looking statements. Forward-looking statements typically are identified by use of terms such as "may," "will," "expect," "anticipate," "estimate," and similar words, although some forward-looking statements are expressed differently. All statements herein regarding expected merger synergies are forward looking statements. You should be aware that our actual results could differ materially from results anticipated in the forward-looking statements due to a number of factors, including but not limited to changes in oil and gas prices, customer demand for our products and worldwide economic activity. You should also consider carefully the statements under "Risk Factors" which address additional factors that could cause our actual results to differ from those set forth in the forward-looking statements. Given these uncertainties, current or prospective investors are cautioned not to place undue reliance on any such forward-looking statements. We undertake no obligation to update any such factors or forward-looking statements to reflect future events or developments.

## **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We are exposed to changes in foreign currency exchange rates and interest rates. Additional information concerning each of these matters follows:

### *Foreign Currency Exchange Rates*

We have extensive operations in foreign countries. The net assets and liabilities of these operations are exposed to changes in foreign currency exchange rates, although such fluctuations generally do not affect income since their functional currency is typically the local currency. These operations also have net assets and liabilities not denominated in the functional currency, which exposes us to changes in foreign currency exchange rates that impact income. During the years ended December 31, 2018, 2017 and 2016, the Company reported foreign currency losses of \$52 million, \$3 million and \$10 million, respectively. Gains and losses are primarily due to exchange rate fluctuations related to monetary asset balances denominated in currencies other than the functional currency and adjustments to our hedged positions as a result of changes in foreign currency exchange rates. Currency fluctuations may create losses in future periods to the extent we maintain net assets and liabilities not denominated in the functional currency of our subsidiaries using the local currency as their functional currency.

Some of our revenues in foreign countries are denominated in U.S. dollars, and therefore, changes in foreign currency exchange rates impact our earnings to the extent that costs associated with those U.S. dollar revenues are denominated in the local currency. Similarly, some of our revenues are denominated in foreign currencies, but have associated U.S. dollar costs, which also give rise to foreign currency exchange rate exposure. In order to mitigate that risk, we may utilize foreign currency forward contracts to better match the currency of our revenues and associated costs. We do not use foreign currency forward contracts for trading or speculative purposes.

The Company had other financial market risk sensitive instruments denominated in foreign currencies for transactional exposures totaling \$24 million and translation exposures totaling \$157 million as of December 31, 2018, excluding trade receivables and payables, which approximate fair value. These market risk sensitive instruments consisted of cash balances and overdraft facilities. The Company estimates that a hypothetical 10% movement of all applicable foreign currency exchange rates on the transactional exposures financial market risk sensitive instruments could affect net income by \$2 million and the translational exposures financial market risk sensitive instruments could affect the future fair value by \$16 million.

The counterparties to forward contracts are major financial institutions. The credit ratings and concentration of risk of these financial institutions are monitored on a continuing basis. In the event that the counterparties fail to meet the terms of a foreign currency contract, our exposure is limited to the foreign currency rate differential.

### *Interest Rate Risk*

At December 31, 2018, long term borrowings consisted of \$1,394 million in 2.60% Senior Notes and \$1,088 million in 3.95% Senior Notes, no commercial paper borrowings and no borrowings against our revolving credit facility. Occasionally a portion of borrowings under our credit facility could be denominated in multiple currencies which could expose us to market risk with exchange rate movements. These instruments carry interest at a pre-agreed upon percentage point spread from either LIBOR, NIBOR or CDOR, or at the U.S. prime rate. Under our credit facility, we may, at our option, fix the interest rate for certain borrowings based on a spread over LIBOR, NIBOR or CDOR for 30 days to six months. Our objective is to maintain a portion of our debt in variable rate borrowings for the flexibility obtained regarding early repayment without penalties and lower overall cost as compared with fixed-rate borrowings.

## **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

Attached hereto and a part of this report are financial statements and supplementary data listed in Item 15. "Exhibits and Financial Statement Schedules."

## **ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.**

None.

**ITEM 9A. CONTROLS AND PROCEDURES**

(i) Evaluation of disclosure controls and procedures

As required by SEC Rule 13a-15(b), we have evaluated, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed by the Company in reports that it files under the Exchange Act is accumulated and communicated to the Company's management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. Our principal executive officer and principal financial officer have concluded that our current disclosure controls and procedures were effective as of December 31, 2018 at the reasonable assurance level.

Pursuant to section 302 of the Sarbanes-Oxley Act of 2002, our Chief Executive Officer and Chief Financial Officer have provided certain certifications to the Securities and Exchange Commission. These certifications are included herein as Exhibits 31.1 and 31.2.

(ii) Internal Control Over Financial Reporting

(a) Management's annual report on internal control over financial reporting.

The Company's management report on internal control over financial reporting is set forth in this annual report on Page 52 and is incorporated herein by reference.

(b) Changes in internal control

There were no changes in the Company's internal control over financial reporting that occurred during the Company's last fiscal quarter covered by this report that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

**ITEM 9B. OTHER INFORMATION**

None.

## PART III

### ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Incorporated by reference to the definitive Proxy Statement for the 2019 Annual Meeting of Stockholders.

### ITEM 11. EXECUTIVE COMPENSATION

Incorporated by reference to the definitive Proxy Statement for the 2019 Annual Meeting of Stockholders.

### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Incorporated by reference to the definitive Proxy Statement for the 2019 Annual Meeting of Stockholders.

Securities Authorized for Issuance Under Equity Compensation Plans.

The following table sets forth information as of our fiscal year ended December 31, 2018, with respect to compensation plans under which our common stock may be issued:

Plan Category	Number of securities to be issued upon exercise of warrants and rights (a)	Weighted-average exercise price of outstanding rights (b)	Number of securities remaining available for equity compensation plans (excluding securities reflected in column (a)) ('c') (1)
Equity compensation plans approved by security holders	21,009,508	\$ 54.13	17,705,830
Equity compensation plans not approved by security holders	—	—	—
Total	21,009,508	\$ 54.13	17,705,830

(1) Shares could be issued through equity instruments other than stock options, warrants or rights.

### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Incorporated by reference to the definitive Proxy Statement for the 2019 Annual Meeting of Stockholders.

### ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Incorporated by reference to the definitive Proxy Statement for the 2019 Annual Meeting of Stockholders.



PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Financial Statements and Exhibits

(1) Financial Statements

The following financial statements are presented in response to Part II, Item 8:

	<u>Page</u>
<a href="#">Consolidated Balance Sheets</a>	55
<a href="#">Consolidated Statements of Income (Loss)</a>	56
<a href="#">Consolidated Statements of Comprehensive Income (Loss)</a>	57
<a href="#">Consolidated Statements of Cash Flows</a>	58
<a href="#">Consolidated Statements of Stockholders' Equity</a>	59
<a href="#">Notes to Consolidated Financial Statements</a>	60

(2) Financial Statement Schedule

<a href="#">Schedule II – Valuation and Qualifying Accounts</a>	90
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All schedules, other than Schedule II, are omitted because they are not applicable, not required or the information is included in the financial statements or notes thereto.

(3) Exhibits

3.1	<a href="#">Fifth Amended and Restated Certificate of Incorporation of National Oilwell Varco, Inc. (Exhibit 3.1)(1)</a>
3.2	<a href="#">Amended and Restated By-laws of National Oilwell Varco, Inc. (Exhibit 3.1)(2)</a>
10.1	<a href="#">Credit Agreement, dated as of June 27, 2017, among National Oilwell Varco, Inc., the financial institutions signatory thereto, including Wells Fargo Bank, N.A., in its capacity, among others, as Administrative Agent, Co-Lead Arranger and Joint Book Runner. (Exhibit 10.1)(3)</a>
10.2	<a href="#">National Oilwell Varco Long-Term Incentive Plan, as amended and restated. (4)*</a>
10.3	<a href="#">Form of Employee Stock Option Agreement. (Exhibit 10.1)(5)</a>
10.4	<a href="#">Form of Non-Employee Director Stock Option Agreement. (Exhibit 10.2)(5)</a>
10.5	<a href="#">Form of Performance-Based Restricted Stock. (18 Month) Agreement (Exhibit 10.1)(6)</a>
10.6	<a href="#">Form of Performance-Based Restricted Stock. (36 Month) Agreement (Exhibit 10.2)(6)</a>
10.7	<a href="#">Form of Performance Award Agreement (Exhibit 10.1)(7)</a>
10.8	<a href="#">Form of Executive Employment Agreement. (Exhibit 10.1)(8)</a>
10.9	<a href="#">Form of Executive Severance Agreement. (Exhibit 10.2)(8)</a>
10.10	<a href="#">Form of Employee Nonqualified Stock Option Grant Agreement (9)</a>
10.11	<a href="#">Form of Restricted Stock Agreement (9)</a>
10.12	<a href="#">Form of Performance Award Agreement (9)</a>
21.1	<a href="#">Subsidiaries of the Registrant</a>
23.1	<a href="#">Consent of Ernst &amp; Young LLP.</a>
24.1	Power of Attorney. (included on signature page hereto)
31.1	<a href="#">Certification pursuant to Rule 13a-14a and Rule 15d-14(a) of the Securities and Exchange Act, as amended.</a>

- 31.2 [Certification pursuant to Rule 13a-14a and Rule 15d-14\(a\) of the Securities and Exchange Act, as amended.](#)
- 32.1 [Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 32.2 [Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 95 [Mine Safety Information pursuant to section 1503 of the Dodd-Frank Act.](#)
- 101 The following materials from our Annual Report on Form 10-K for the period ended December 31, 2018 formatted in eXtensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Income, (iii) Consolidated Statements of Cash Flows, and (iv) Notes to the Consolidated Financial Statements, tagged as block text. (10)

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\* Compensatory plan or arrangement for management or others.

- (1) Filed as an Exhibit to our Quarterly Report on Form 10-Q filed on August 5, 2011.
- (2) Filed as an Exhibit to our Current Report on Form 8-K filed on August 11, 2017.
- (3) Filed as an Exhibit to our Current Report on Form 8-K filed on June 28, 2017
- (4) Filed as Appendix I to our Proxy Statement filed on March 30, 2018.
- (5) Filed as an Exhibit to our Current Report on Form 8-K filed on February 23, 2006.
- (6) Filed as an Exhibit to our Current Report on Form 8-K filed on March 27, 2007.
- (7) Filed as an Exhibit to our Current Report on Form 8-K filed on March 27, 2013.
- (8) Filed as an Exhibit to our Current Report on Form 8-K filed on November 21, 2017.
- (9) Filed as an Exhibit to our Current Report on Form 8-K filed on February 26, 2016.
- (10) As provided in Rule 406T of Regulation S-T, this information is furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934.

We hereby undertake, pursuant to Regulation S-K, Item 601(b), paragraph (4) (iii), to furnish to the U.S. Securities and Exchange Commission, upon request, all constituent instruments defining the rights of holders of our long-term debt not filed herewith.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NATIONAL OILWELL VARCO, INC.

Dated: February 14, 2019

By: /s/ CLAY C. WILLIAMS  
Clay C. Williams  
Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Each person whose signature appears below in so signing, constitutes and appoints Clay C. Williams and Jose A. Bayardo, and each of them acting alone, his/her true and lawful attorney-in-fact and agent, with full power of substitution, for him/her and in his/her name, place and stead, in any and all capacities, to execute and cause to be filed with the Securities and Exchange Commission any and all amendments to this report, and in each case to file the same, with all exhibits thereto and other documents in connection therewith, and hereby ratifies and confirms all that said attorney-in-fact or his/her substitute or substitutes may do or cause to be done by virtue hereof.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ CLAY C. WILLIAMS Clay C. Williams	Chairman, President and Chief Executive Officer	February 14, 2019
/s/ JOSE A. BAYARDO Jose A. Bayardo	Senior Vice President and Chief Financial Officer	February 14, 2019
/s/ SCOTT K. DUFF Scott K. Duff	Vice President, Corporate Controller and Chief Accounting Officer	February 14, 2019
/s/ GREG L. ARMSTRONG Greg L. Armstrong	Director	February 14, 2019
/s/ MARCELA E. DONADIO Marcela E. Donadio	Director	February 14, 2019
/s/ BEN A. GUILL Ben A. Guill	Director	February 14, 2019
/s/ JAMES T. HACKETT James T. Hackett	Director	February 14, 2019
/s/ DAVID D. HARRISON David D. Harrison	Director	February 14, 2019
/s/ ERIC L. MATTSON Eric L. Mattson	Director	February 14, 2019
/s/ MELODY B. MEYER Melody B. Meyer	Director	February 14, 2019
/s/ WILLIAM R. THOMAS William R. Thomas	Director	February 14, 2019

## MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

National Oilwell Varco, Inc.’s management is responsible for establishing and maintaining adequate internal control over financial reporting. National Oilwell Varco, Inc.’s internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Management has used the 2013 framework set forth in the report entitled “Internal Control—Integrated Framework” published by the Committee of Sponsoring Organizations (“COSO”) of the Treadway Commission to evaluate the effectiveness of the Company’s internal control over financial reporting. Management has concluded that the Company’s internal control over financial reporting was effective as of December 31, 2018.

The effectiveness of our internal control over financial reporting as of December 31, 2018, has been audited by Ernst & Young LLP, the independent registered public accounting firm which also has audited the Company’s Consolidated Financial Statements included in this Annual Report on Form 10-K.

/s/ Clay C. Williams

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Clay C. Williams  
Chairman, President and Chief Executive Officer

/s/ Jose A. Bayardo

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Jose A. Bayardo  
Senior Vice President and Chief Financial Officer

Houston, Texas  
February 14, 2019

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of National Oilwell Varco, Inc.

### Opinion on Internal Control over Financial Reporting

We have audited National Oilwell Varco, Inc.'s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, National Oilwell Varco, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2018 consolidated financial statements of the Company and our report dated February 14, 2019, expressed an unqualified opinion thereon.

### Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Houston, Texas  
February 14, 2019

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of National Oilwell Varco, Inc.

### Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of National Oilwell Varco, Inc. (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of income (loss), comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at Item 15(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 14, 2019, expressed an unqualified opinion thereon.

### Basis of Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the 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 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since at least 1995, but we are unable to determine the specific year.

Houston, Texas  
February 14, 2019

**NATIONAL OILWELL VARCO, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
(In millions, except share data)

	December 31,	
	2018	2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 1,427	\$ 1,437
Receivables, net	2,101	2,015
Inventories, net	2,986	3,003
Contract assets	565	495
Prepaid and other current assets	200	267
Total current assets	7,279	7,217
Property, plant and equipment, net	2,797	3,002
Deferred income taxes	11	13
Goodwill	6,264	6,227
Intangibles, net	3,020	3,301
Investment in unconsolidated affiliates	301	309
Other assets	124	137
Total assets	<u>\$ 19,796</u>	<u>\$ 20,206</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 722	\$ 510
Accrued liabilities	1,088	1,238
Contract liabilities	458	519
Current portion of long-term debt and short-term borrowings	7	6
Accrued income taxes	66	81
Total current liabilities	2,341	2,354
Long-term debt	2,704	2,706
Deferred income taxes	564	677
Other liabilities	298	309
Total liabilities	5,907	6,046
Commitments and contingencies		
Stockholders' equity:		
Common stock - par value \$.01; 1 billion shares authorized; 383,426,654 and 380,104,970 shares issued and outstanding at December 31, 2018 and December 31, 2017	4	4
Additional paid-in capital	8,390	8,234
Accumulated other comprehensive loss	(1,437)	(1,110)
Retained earnings	6,862	6,966
Total Company stockholders' equity	13,819	14,094
Noncontrolling interests	70	66
Total stockholders' equity	13,889	14,160
Total liabilities and stockholders' equity	<u>\$ 19,796</u>	<u>\$ 20,206</u>

The accompanying notes are an integral part of these statements.

**NATIONAL OILWELL VARCO, INC.**  
**CONSOLIDATED STATEMENTS OF INCOME (LOSS)**  
(In millions, except per share data)

	Years Ended December 31,		
	2018	2017	2016
Revenue			
Sales	\$ 5,699	\$ 4,948	\$ 5,351
Services	1,612	1,472	1,296
Rental	1,142	884	604
Total	<u>8,453</u>	<u>7,304</u>	<u>7,251</u>
Cost of revenue			
Sales	4,883	4,499	5,671
Services	1,257	1,127	835
Rental	869	786	846
Total	<u>7,009</u>	<u>6,412</u>	<u>7,352</u>
Gross profit (loss)	1,444	892	(101)
Selling, general and administrative	1,233	1,169	1,338
Goodwill and intangible asset impairment	—	—	972
Operating profit (loss)	211	(277)	(2,411)
Interest and financial costs	(93)	(102)	(105)
Interest income	25	25	15
Equity loss in unconsolidated affiliates	(3)	(5)	(21)
Other expense, net	(99)	(33)	(101)
Income (loss) before income taxes	41	(392)	(2,623)
Provision (benefit) for income taxes	63	(156)	(207)
Net loss	(22)	(236)	(2,416)
Net income (loss) attributable to noncontrolling interests	9	1	(4)
Net loss attributable to Company	<u>\$ (31)</u>	<u>\$ (237)</u>	<u>\$ (2,412)</u>
Net loss attributable to Company per share:			
Basic	<u>\$ (0.08)</u>	<u>\$ (0.63)</u>	<u>\$ (6.41)</u>
Diluted	<u>\$ (0.08)</u>	<u>\$ (0.63)</u>	<u>\$ (6.41)</u>
Cash dividends per share	<u>\$ 0.20</u>	<u>\$ 0.20</u>	<u>\$ 0.61</u>
Weighted average shares outstanding:			
Basic	<u>378</u>	<u>377</u>	<u>376</u>
Diluted	<u>378</u>	<u>377</u>	<u>376</u>

The accompanying notes are an integral part of these statements.



**NATIONAL OILWELL VARCO, INC.**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
(In millions)

	Years Ended December 31,		
	2018	2017	2016
Net loss	\$ (22)	\$ (236)	\$ (2,416)
Other comprehensive income (loss):			
Currency translation adjustments	(292)	272	(97)
Derivative financial instruments, net of tax	(21)	46	166
Change in defined benefit plans, net of tax	(14)	24	32
Comprehensive income (loss)	(349)	106	(2,315)
Net income (loss) attributable to noncontrolling interests	9	1	(4)
Comprehensive income (loss) attributable to Company	<u>\$ (358)</u>	<u>\$ 105</u>	<u>\$ (2,311)</u>

The accompanying notes are an integral part of these statements.

**NATIONAL OILWELL VARCO, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In millions)

	Years Ended December 31,		
	2018	2017	2016
<b>Cash flows from operating activities:</b>			
Net loss	\$ (22)	\$ (236)	\$ (2,416)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	690	698	703
Deferred income taxes	(63)	(341)	(198)
Stock-based compensation	110	124	107
Excess tax benefit from stock-based compensation	—	—	7
Equity (income) loss in unconsolidated affiliates	3	5	21
Dividend from unconsolidated affiliate	—	—	6
Goodwill and intangible asset impairment	—	—	972
Provision for inventory losses	49	114	606
Other, net	(7)	20	108
Change in operating assets and liabilities, net of acquisitions:			
Receivables	(72)	72	845
Inventories	(7)	229	782
Contract assets	(68)	170	646
Prepaid and other current assets	67	130	102
Accounts payable	196	86	(243)
Accrued liabilities	(186)	(130)	(773)
Contract liabilities	(62)	(160)	(366)
Income taxes payable	(15)	(44)	(146)
Other assets/liabilities, net	(92)	95	197
Net cash provided by operating activities	<u>521</u>	<u>832</u>	<u>960</u>
<b>Cash flows from investing activities:</b>			
Purchases of property, plant and equipment	(244)	(192)	(284)
Business acquisitions, net of cash acquired	(280)	(86)	(230)
Other, net	67	33	26
Net cash used in investing activities	<u>(457)</u>	<u>(245)</u>	<u>(488)</u>
<b>Cash flows from financing activities:</b>			
Borrowings against lines of credit and other debt	—	—	3,972
Payments against lines of credit and other debt	(8)	(506)	(4,872)
Cash dividends paid	(76)	(76)	(230)
Activity under stock incentive plans	54	(3)	4
Excess tax benefit from stock-based compensation	—	—	(7)
Other	—	(10)	(8)
Net cash used in financing activities	<u>(30)</u>	<u>(595)</u>	<u>(1,141)</u>
Effect of exchange rates on cash	(44)	37	(3)
Increase (decrease) in cash and cash equivalents	(10)	29	(672)
Cash and cash equivalents, beginning of period	1,437	1,408	2,080
Cash and cash equivalents, end of period	<u>\$ 1,427</u>	<u>\$ 1,437</u>	<u>\$ 1,408</u>
<b>Supplemental disclosures of cash flow information:</b>			
Cash payments during the period for:			
Interest	\$ 90	\$ 97	\$ 101
Income taxes	\$ 64	\$ 50	\$ 181

The accompanying notes are an integral part of these statements.

**NATIONAL OILWELL VARCO, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
(In millions)

	Shares Outstanding	Common Stock	Additional Paid in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Loss)	Total Company Stockholders' Equity	Noncontrolling Interests	Total Stockholders' Equity
Balance at December 31, 2015	376	\$ 4	\$ 8,005	\$ (1,553)	\$ 9,927	\$ 16,383	\$ 77	\$ 16,460
Net income (loss)	—	—	—	—	(2,412)	(2,412)	(4)	(2,416)
Other comprehensive income (loss), net	—	—	—	101	—	101	—	101
Cash dividends, \$0.61 per common share	—	—	—	—	(230)	(230)	—	(230)
Noncontrolling interest	—	—	—	—	—	—	(10)	(10)
Stock-based compensation	—	—	87	—	—	87	—	87
Common stock issued	2	—	4	—	—	4	—	4
Stock issued in acquisition	1	—	18	—	—	18	—	18
Withholding taxes	—	—	(4)	—	—	(4)	—	(4)
Excess tax benefit from stock-based compensation	—	—	(7)	—	—	(7)	—	(7)
Balance at December 31, 2016	379	\$ 4	\$ 8,103	\$ (1,452)	\$ 7,285	\$ 13,940	\$ 63	\$ 14,003
Net income (loss)	—	—	—	—	(237)	(237)	1	(236)
Other comprehensive income (loss), net	—	—	—	342	—	342	—	342
Cash dividends, \$0.20 per common share	—	—	—	—	(76)	(76)	—	(76)
Adoption of new accounting standards	—	—	1	—	(6)	(5)	—	(5)
Noncontrolling interest	—	—	—	—	—	—	2	2
Stock-based compensation on tender offer	—	—	20	—	—	20	—	20
Stock-based compensation	—	—	105	—	—	105	—	105
Common stock issued	1	—	13	—	—	13	—	13
Withholding taxes	—	—	(8)	—	—	(8)	—	(8)
Balance at December 31, 2017	380	\$ 4	\$ 8,234	\$ (1,110)	\$ 6,966	\$ 14,094	\$ 66	\$ 14,160
Net loss	—	—	—	—	(31)	(31)	9	(22)
Other comprehensive loss, net	—	—	—	(327)	—	(327)	—	(327)
Cash dividends, \$0.20 per common share	—	—	—	—	(76)	(76)	—	(76)
Adoption of new accounting standards	—	—	—	—	3	3	—	3
Noncontrolling interest	—	—	—	—	—	—	(5)	(5)
Stock-based compensation on tender offer	—	—	—	—	—	—	—	—
Stock-based compensation	—	—	110	—	—	110	—	110
Common stock issued	3	—	54	—	—	54	—	54
Withholding taxes	—	—	(8)	—	—	(8)	—	(8)
Balance at December 31, 2018	383	\$ 4	\$ 8,390	\$ (1,437)	\$ 6,862	\$ 13,819	\$ 70	\$ 13,889

The accompanying notes are an integral part of these statements.

**NATIONAL OILWELL VARCO, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Organization and Basis of Presentation**

*Nature of Business*

We design, construct, manufacture and sell comprehensive systems, components, and products used in oil and gas drilling and production, provide oilfield services and supplies, and distribute products and provide supply chain integration services to the upstream oil and gas industry. Our revenues and operating results are directly related to the level of worldwide oil and gas drilling and production activities and the profitability and cash flow of oil and gas companies, drilling contractors and oilfield service companies, which in turn are affected by current and anticipated prices of oil and gas. Oil and gas prices have been, and are likely to continue to be, volatile.

*Basis of Consolidation*

The accompanying Consolidated Financial Statements include the accounts of National Oilwell Varco, Inc. and its consolidated subsidiaries. Certain reclassifications have been made to the prior year financial statements in order for them to conform with the 2018 presentation. All significant intercompany transactions and balances have been eliminated in consolidation. Investments that are not wholly-owned, but where we exercise control, are fully consolidated with the equity held by minority owners and their portion of net income (loss) reflected as noncontrolling interests in the accompanying consolidated financial statements. Investments in unconsolidated affiliates, over which we exercise significant influence, but not control, are accounted for by the equity method.

**2. Summary of Significant Accounting Policies**

*Fair Value of Financial Instruments*

The carrying amounts of financial instruments including cash and cash equivalents, receivables, and payables approximated fair value because of the relatively short maturity of these instruments. Cash equivalents include only those investments having a maturity date of three months or less at the time of purchase.

*Derivative Financial Instruments*

The Company records all derivative financial instruments at their fair value in its Consolidated Balance Sheet. Except for certain non-designated hedges discussed below, all derivative financial instruments that the Company holds are designated as cash flow hedges and are highly effective in offsetting movements in the underlying risks. Such arrangements typically have terms between two and 24 months, but may have longer terms depending on the underlying cash flows being hedged, typically related to the projects in our backlog.

*Inventories*

Inventories are stated at the lower of cost or estimated net realizable value using the first-in, first-out or average cost methods. Inventories consist of raw materials and supplies, work-in-process and finished goods and purchased products. The Company determines reserves for inventory based on historical usage of inventory on-hand, assumptions about future demand and market conditions, and estimates about potential alternative uses, which are limited. The Company evaluates inventory quarterly using the best information available at the time to inform our assumptions and estimates about future demand and resulting sales volumes, and recognizes reserves as necessary to properly state inventory.

Based on an update of our assumptions at each point in time related to estimates of future demand, we recorded charges for additions to inventory reserves of \$49 million, \$114 million, and \$606 million for the years ended December 31, 2018, 2017, and 2016, respectively, consisting primarily of obsolete and surplus inventories. At December 31, 2018 and 2017, inventory reserves totaled \$644 million and \$800 million, or 17.7% and 21.0% of gross inventory, respectively.

### *Property, Plant and Equipment*

Property, plant and equipment are recorded at cost. Expenditures for major improvements that extend the lives of property and equipment are capitalized while minor replacements, maintenance and repairs are charged to operations as incurred. Disposals are removed at cost less accumulated depreciation with any resulting gain or loss reflected in operations. Depreciation is provided using the straight-line method over the estimated useful lives of individual items. Depreciation expense, which includes the amortization of assets recorded under capital leases, was \$349 million, \$359 million and \$370 million for the years ended December 31, 2018, 2017 and 2016, respectively. Accumulated depreciation of \$2,687 million as of December 31, 2018 included accumulated depreciation of \$30 million for capital leases. The estimated useful lives of the major classes of property, plant and equipment are included in Note 5 to the consolidated financial statements.

We record impairment losses on long-lived assets used in operations when events and circumstances indicate that the assets are impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. The carrying value of assets used in operations that are not recoverable is reduced to fair value if lower than carrying value. In determining the fair market value of the assets, we consider market trends and recent transactions involving sales of similar assets, or when not available, discounted cash flow analysis. Impairments of long-lived assets were \$21 million, \$10 million and \$54 million for the years ended December 31, 2018, 2017 and 2016, respectively.

### *Acquisitions and Investments*

Acquisitions of businesses are accounted for using the acquisition method of accounting, and the financial statements include the results of the acquired operations from the respective dates of acquisition.

The purchase price of the acquired entities is preliminarily allocated to the net assets acquired and liabilities assumed based on the estimated fair value at the dates of acquisition, with any excess of cost over the fair value of net assets acquired, including intangibles, recognized as goodwill. Subsequent changes to preliminary amounts are made prospectively.

The Company paid cash of \$280 million, \$86 million and \$230 million for acquisitions for the years ended December 31, 2018, 2017 and 2016, respectively. These acquisitions did not have a material effect on the Company's operating results, cash flows or financial position

### *Foreign Currency*

Certain foreign operations, including our operations in Norway, use the U.S. dollar as the functional currency. The functional currency for most of our foreign operations is the local currency. The cumulative effects of translating the balance sheet accounts from the functional currency into the U.S. dollar at current exchange rates are included in accumulated other comprehensive income (loss). Revenues and expenses are translated at average exchange rates in effect during the period. Accordingly, financial statements of these foreign subsidiaries are remeasured to U.S. dollars for consolidation purposes using current rates of exchange for monetary assets and liabilities and historical rates of exchange for nonmonetary assets and related elements of expense. Revenue and expense elements are remeasured at rates that approximate the rates in effect on the transaction dates. For all operations, gains or losses from remeasuring foreign currency transactions into the functional currency are included in income. Net foreign currency transaction losses were \$52 million, \$3 million and \$10 million for the years ending December 31, 2018, 2017 and 2016, respectively, and are included in other income (expense) in the accompanying statement of income.

### *Revenue Recognition*

The majority of the Company's revenue streams record revenue at a point in time when a performance obligation has been satisfied by transferring control of promised goods or services to a customer. Products and services are sold or rented based upon a fixed or determinable price and do not generally include right of return or other significant post-delivery obligations. Revenue is recognized net of any taxes collected from customers, which are subsequently remitted to governmental authorities. Payment terms and conditions vary by contract type. We have elected to apply the practical expedient that does not require an adjustment for a financing component if, at contract inception, the period between when we transfer the promised goods or service to the customer and when the customer pays for the

goods or service is one year or less. Shipping and handling costs are recognized when incurred and are treated as costs to fulfill the original performance obligation instead of as a separate performance obligation.

Revenue is often generated from contracts that include multiple performance obligations. Using significant judgement, the Company considers the degree of customization, integration and interdependency of the related products and services when assessing distinct performance obligations within one contract. Stand-alone selling price (“SSP”) for each distinct performance obligation is generally determined using the price at which the products and services would be sold separately to the customer. Discounts, when provided, are allocated based on the relative SSP of the various products and services.

For revenue that is not recognized at a point in time, the Company follows accounting guidance for revenue recognized over time, as follows:

#### *Revenue Recognition under Long-term Construction Contracts*

Revenue is recognized over-time for certain long-term construction contracts in the Completion & Production Solutions and Rig Technologies segments. These contracts include custom designs for customer-specific applications that are unique and require significant engineering efforts. Revenue is recognized as work progresses on each contract. Right to payment is enforceable for performance completed to date, including a reasonable profit.

Because of control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. We generally use the cost-to-cost (input) measure of progress for our contracts because it best depicts the transfer of assets to the customer which occurs as we incur costs. Under the cost-to-cost measure of progress, progress towards completion of each contract is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. These costs include labor, materials, subcontractors’ costs, and other direct costs. Any expected losses on a project are recorded in full in the period in which the loss becomes probable.

These long-term construction contracts generally include a significant service of integrating a complex set of tasks and components into a single project or capability, so are accounted for as one performance obligation.

Estimating total revenue and cost at completion of long-term construction contracts is complex, subject to many variables and requires significant judgment. It is common for our long-term contracts to contain late delivery fees, work performance guarantees, and other provisions that can either increase or decrease the transaction price. We estimate variable consideration as the most likely amount we expect to receive. We include variable consideration in the estimated transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur, or when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based on an assessment of our anticipated performance and historical, current and forecasted information that is reasonably available to us. Net revenue recognized from performance obligations satisfied in previous periods was \$65 million for the year ended December 31, 2018 primarily due to change orders.

#### *Service and Repair Work*

For service and repair contracts, revenue is recognized over time. We generally use the output method to measure progress on service contracts due to the manner in which the customer receives and derives value from the services provided. For repair contracts, we generally use the cost-to-cost measure of progress because it best depicts the transfer of assets to the customer.

#### *Remaining Performance Obligations*

Remaining performance obligations represent the transaction price of firm orders for all revenue streams for which work has not been performed on contracts with an original expected duration of one year or more. We do not disclose the remaining performance obligations of royalty contracts, service contracts for which there is a right to invoice, and short-term contracts that are expected to have a duration of one year or less.

As of December 31, 2018, the aggregate amount of the transaction price allocated to remaining performance obligations was \$1,813 million. The Company expects to recognize approximately \$887 million in revenue for the

remaining performance obligations in 2019 and \$926 million in 2020 and thereafter.

#### *Costs to Obtain and Fulfill a Contract*

We recognize an asset for the incremental costs of obtaining a contract, such as sales commissions, with a customer when we expect the benefit of those costs to be longer than one year. Costs to fulfill a contract, such as set-up and mobilization costs, are also capitalized when we expect to recover those costs. These contract costs are deferred and amortized over the period of contract performance. Total capitalized costs to obtain and fulfill a contract and the related amortization were immaterial during the periods presented and are included in other current and long-term assets on our consolidated balance sheets. We apply the practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less.

#### *Service and Product Warranties*

The Company provides service and warranty policies on certain of its products. The Company accrues liabilities under service and warranty policies based upon specific claims and a review of historical warranty and service claim experience. Adjustments are made to accruals as claim data and historical experience change. In addition, the Company incurs discretionary costs to service its products in connection with product performance issues and accrues for them when they are encountered. The Company monitors the actual cost of performing these discretionary services and adjusts the accrual based on the most current information available.

The changes in the carrying amount of service and product warranties are as follows (in millions):

Balance at December 31, 2016	\$	172
Net provisions for warranties issued during the year		46
Amounts incurred		(86)
Currency translation adjustments		3
Balance at December 31, 2017	\$	135
Net provisions for warranties issued during the year		38
Amounts incurred		(67)
Currency translation adjustments		(1)
Balance at December 31, 2018	\$	105

#### *Income Taxes*

The liability method is used to account for income taxes. Deferred tax assets and liabilities are determined based on differences between the financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates that will be in effect when the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to amounts which are more likely than not to be realized.

#### *Concentration of Credit Risk*

We grant credit to our customers, which operate primarily in the oil and gas industry. Concentrations of credit risk are limited because we have a large number of geographically diverse customers, thus spreading trade credit risk. We control credit risk through credit evaluations, credit limits and monitoring procedures. We perform periodic credit evaluations of our customers' financial condition and generally do not require collateral, but may require letters of credit for certain international sales. Credit losses are provided for in the financial statements. Allowances for doubtful accounts are determined based on a continuous process of assessing the Company's portfolio on an individual customer basis taking into account current market conditions and trends. This process consists of a thorough review of historical collection experience, current aging status of the customer accounts, and financial condition of the Company's customers. Based on a review of these factors, the Company will establish or adjust allowances for specific customers. Accounts receivable are net of allowances for doubtful accounts of approximately \$161 million and \$187 million at December 31, 2018 and 2017, respectively.

### *Stock-Based Compensation*

Compensation expense for the Company's stock-based compensation plans is measured using the fair value method. The fair value of stock option grants and restricted stock is amortized to expense using the straight-line method over the shorter of the vesting period or the remaining employee service period.

The Company provides compensation benefits to employees and non-employee directors under share-based payment arrangements, including various employee stock option plans.

### *Environmental Liabilities*

When environmental assessments or remediations are probable and the costs can be reasonably estimated, remediation liabilities are recorded on an undiscounted basis and are adjusted as further information develops or circumstances change.

### *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 reported and contingent amounts of assets and liabilities as of the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Such estimates include but are not limited to, estimated losses on accounts receivable, estimated costs and related margins of projects accounted for over time, estimated realizable value on excess and obsolete inventory, contingencies, estimated liabilities for litigation exposures and liquidated damages, estimated warranty costs, estimates related to pension accounting, estimates related to the fair value of reporting units for purposes of assessing goodwill and other indefinite-lived intangible assets for impairment and estimates related to deferred tax assets and liabilities, including valuation allowances on deferred tax assets. Actual results could differ from those estimates.

### *Contingencies*

The Company accrues for costs relating to litigation claims and other contingent matters, including liquidated damage liabilities, when such liabilities become probable and reasonably estimable. In circumstances where the most likely outcome of a contingency can be reasonably estimated, we accrue a liability for that amount. Where the most likely outcome cannot be estimated, a range of potential losses is established and if no one amount in that range is more likely than others, the low end of the range is accrued. Such estimates may be based on advice from third parties or on management's judgment, as appropriate. Revisions to contingent liabilities are reflected in income in the period in which different facts or information become known or circumstances change that affect the Company's previous judgments with respect to the likelihood or amount of loss. Amounts paid upon the ultimate resolution of contingent liabilities may be materially different from previous estimates and could require adjustments to the estimated reserves to be recognized in the period such new information becomes known.



### Net Loss Attributable to Company Per Share

The following table sets forth the computation of weighted average basic and diluted shares outstanding (in millions, except per share data):

	Years Ended December 31,		
	2018	2017	2016
<b>Numerator:</b>			
Net loss attributable to Company	\$ (31)	\$ (237)	\$ (2,412)
<b>Denominator:</b>			
Basic—weighted average common shares outstanding	378	377	376
Dilutive effect of employee stock options and other unvested stock awards	—	—	—
Diluted outstanding shares	378	377	376
Basic loss attributable to Company per share	\$ (0.08)	\$ (0.63)	\$ (6.41)
Diluted loss attributable to Company per share	\$ (0.08)	\$ (0.63)	\$ (6.41)
Cash dividends per share	\$ 0.20	\$ 0.20	\$ 0.61

Net loss attributable to Company allocated to participating securities was immaterial for the years ended December 31, 2018, 2017 and 2016 and therefore not excluded from net loss attributable to Company per share calculation. The Company had stock options outstanding that were anti-dilutive totaling 20 million, 12 million, and 14 million at December 31, 2018, 2017 and 2016, respectively.

### Recently Adopted Accounting Standards

In March 2017, the FASB issued Accounting Standard Update No. 2017-07 “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost” (ASU 2017-07). This update requires that an employer report the service cost component in the same line item as other compensation costs and separately from other components of net benefit cost. ASU 2017-07 is effective for fiscal periods beginning after December 15, 2017, and for interim periods within those fiscal years. The Company adopted this update on January 1, 2018 with no material impact.

In August 2016, the FASB issued Accounting Standard Update No. 2016-15 “Classification of Certain Cash Receipts and Cash Payments” (ASU 2016-15). This update amends Accounting Standard Codification Topic No. 230 “Statement of Cash Flows” and provides guidance and clarification on presentation of certain cash flow issues. ASU No. 2016-15 is effective for fiscal years beginning after December 15, 2017, and for interim periods within those fiscal years. The Company adopted this update on January 1, 2018 with no material impact.

In May 2014, the FASB issued Accounting Standard Update No. 2014-09, “Revenue from Contracts with Customers” (ASU 2014-09), which supersedes the revenue recognition requirements in FASB ASC Topic 605, “Revenue Recognition,” and most industry-specific guidance. This ASU proscribes a five-step model for determining when and how revenue is recognized. Under the model, an entity will recognize revenue to depict the transfer of goods or services to a customer at an amount reflecting the consideration it expects to receive in exchange for those goods or services. ASU 2014-09 is effective for fiscal periods beginning after December 15, 2017. The Company adopted this update on January 1, 2018, using the modified retrospective approach, in which an immaterial cumulative effect adjustment was made to retained earnings. The adoption of ASU 2014-09 did not have a material impact on the Company’s consolidated financial position, results of operations, equity or cash flows as of the adoption date or for the year ended December 31, 2018.

### Recently Issued Accounting Standards

In August 2017, the FASB issued Accounting Standard Update No. 2017-12 “Derivatives and Hedging – Targeted Improvements to Accounting for Hedging Activities” (ASU 2017-12). This update improves the financial reporting of hedging relationships and simplifies the application of the hedge accounting guidance. ASU 2017-12 is effective for fiscal periods beginning after December 15, 2018, and for interim periods within those fiscal years. Early adoption

is permitted in any interim period after issuance of ASU 2017-12. The Company will adopt ASU No. 2017-12 effective January 1, 2019 with an immaterial effect on its consolidated financial position and results of operations.

In February 2016, the FASB issued ASC Topic 842, "Leases" (ASC Topic 842), which supersedes the lease requirements in ASC Topic No. 840 "Leases" and most industry-specific guidance. This update increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. ASC Topic 842 is effective for fiscal years beginning after December 15, 2018, and for interim periods within those fiscal years.

The Company's internal team, assisted by an accounting and consulting firm, has implemented and is testing new software, processes, procedures and controls to correctly account for leases under the new requirements. We currently estimate implementing ASC Topic 842 in the first quarter of 2019 will gross-up the Company's balance sheet with additional assets and liabilities in the range of approximately \$500 to \$650 million. Implementing the new standard will not affect the Company's compliance with the debt-to-capitalization covenant of our \$3 billion revolving credit facility (see Note 8) because that agreement grandfathers the prior treatment of operating leases for purposes of the calculation.

### 3. Derivative Financial Instruments

The Company is exposed to certain risks relating to its ongoing business operations. The primary risk managed by using derivative instruments is foreign currency exchange rate risk. Forward contracts against various foreign currencies are entered into to manage the foreign currency exchange rate risk on forecasted revenues and expenses denominated in currencies other than the functional currency of the operating unit (cash flow hedge). Other forward exchange contracts against various foreign currencies are entered into to manage the foreign currency exchange rate risk associated with certain firm commitments denominated in currencies other than the functional currency of the operating unit (fair value hedge). In addition, the Company will enter into non-designated forward contracts against various foreign currencies to manage the foreign currency exchange rate risk on recognized nonfunctional currency monetary accounts (non-designated hedge).

At December 31, 2018, the Company has determined that the fair value of its derivative financial instruments representing assets of \$6 million and liabilities of \$36 million (currency related derivatives) are determined using level 2 inputs (inputs other than quoted prices in active markets for identical assets and liabilities that are observable either directly or indirectly for substantially the full term of the asset or liability) in the fair value hierarchy as the fair value is based on publicly available foreign exchange and interest rates at each financial reporting date. At December 31, 2018, the net fair value of the Company's foreign currency forward contracts totaled a net liability of \$30 million.

At December 31, 2018, the Company's financial instruments do not contain any credit-risk-related or other contingent features that could cause accelerated payments when the Company's financial instruments are in net liability positions. We do not use derivative financial instruments for trading or speculative purposes.

#### *Cash Flow Hedging Strategy*

To protect against the volatility of forecasted foreign currency cash flows resulting from forecasted revenues and expenses, the Company has instituted a cash flow hedging program. The Company hedges portions of its forecasted revenues and expenses denominated in nonfunctional currencies with forward contracts. When the U.S. dollar strengthens against the foreign currencies, the decrease in present value of future foreign currency revenues and expenses is offset by gains in the fair value of the forward contracts designated as hedges. Conversely, when the U.S. dollar weakens, the increase in the present value of future foreign currency cash flows is offset by losses in the fair value of the forward contracts.

For derivative instruments that are designated and qualify as a cash flow hedge (i.e., hedging the exposure to variability in expected future cash flows that is subject to a particular currency risk), the effective portion of the gain or loss on the derivative instrument is reported as a component of Other Comprehensive Income (Loss) and reclassified into earnings in the same line item associated with the forecasted transaction and in the same period or periods during which the hedged transaction affects earnings (e.g., in "revenues" when the hedged transactions are cash flows associated with forecasted revenues). The remaining gain or loss on the derivative instrument in excess of the cumulative change in the present value of future cash flows of the hedged item, if any (i.e., the ineffective portion), or hedge components excluded from the assessment of effectiveness, is recognized in the Consolidated Statements of

Income (Loss) during the current period.

The Company had the following outstanding foreign currency forward contracts that were entered into to hedge nonfunctional currency cash flows from forecasted revenues and expenses (in millions):

Foreign Currency	Currency Denomination			
	December 31, 2018		December 31, 2017	
Norwegian Krone	NOK	4,118	NOK	4,013
Japanese Yen	JPY	121	JPY	982
U.S. Dollar	USD	96	USD	163
Euro	EUR	71	EUR	120
Danish Krone	DKK	14	DKK	30
British Pound Sterling	GBP	9	GBP	11

#### *Non-designated Hedging Strategy*

The Company enters into forward exchange contracts to hedge certain nonfunctional currency monetary accounts. The purpose of the Company's foreign currency hedging activities is to protect the Company from risk that the eventual U.S. dollar equivalent cash flows from the nonfunctional currency monetary accounts will be adversely affected by changes in the exchange rates.

For derivative instruments that are non-designated, the gain or loss on the derivative instrument subject to the hedged risk (i.e., nonfunctional currency monetary accounts) is recognized in other income (expense), net in the Consolidated Statement of Income (Loss).

The Company had the following outstanding foreign currency forward contracts that hedge the fair value of nonfunctional currency monetary accounts (in millions):

Foreign Currency	Currency Denomination			
	December 31, 2018		December 31, 2017	
Norwegian Krone	NOK	1,111	NOK	1,734
U.S. Dollar	USD	535	USD	463
Mexican Peso	MXN	204	MXN	—
South African Rand	ZAR	124	ZAR	150
Euro	EUR	101	EUR	99
Danish Krone	DKK	21	DKK	15
British Pound Sterling	GBP	3	GBP	3
Russian Ruble	RUB	—	RUB	2,699

The Company has the following fair values of its derivative instruments and their balance sheet classifications (in millions):

	Fair Values of Derivative Instruments (In millions)					
	Asset Derivatives			Liability Derivatives		
	Balance Sheet Location	Fair Value December 31,		Balance Sheet Location	Fair Value December 31,	
	2018	2017		2018	2017	
<b>Derivatives designated as hedging instruments under ASC Topic 815</b>						
Foreign exchange contracts	Prepaid and other current assets	\$ 2	\$ 13	Accrued liabilities	\$ 17	\$ 3
Foreign exchange contracts	Other Assets	—	8	Other Liabilities	11	2
<b>Total derivatives designated as hedging instruments under ASC Topic 815</b>		<u>\$ 2</u>	<u>\$ 21</u>		<u>\$ 28</u>	<u>\$ 5</u>
<b>Derivatives not designated as hedging instruments under ASC Topic 815</b>						
Foreign exchange contracts	Prepaid and other current assets	\$ 4	\$ 10	Accrued liabilities	\$ 6	\$ 5
Foreign exchange contracts	Other Assets	—	2	Other Liabilities	2	1
<b>Total derivatives not designated as hedging instruments under ASC Topic 815</b>		<u>\$ 4</u>	<u>\$ 12</u>		<u>\$ 8</u>	<u>\$ 6</u>
<b>Total derivatives</b>		<u>\$ 6</u>	<u>\$ 33</u>		<u>\$ 36</u>	<u>\$ 11</u>

**The Effect of Derivative Instruments on the Consolidated Statements of Income (Loss) (\$ in millions)**

Derivatives Designated as Hedging Instruments under ASC Topic 815	Amount of Gain (Loss) Recognized in OCI on Derivatives (Effective Portion) (a)		Location of Gain (Loss) Reclassified from Accumulated OCI into Income (Effective Portion)	Amount of Gain (Loss) Reclassified from Accumulated OCI into Income (Effective Portion)		Location of Gain (Loss) Recognized in Income on Derivatives (Ineffective Portion and Amount Excluded from Effectiveness Testing)	Amount of Gain (Loss) Recognized in Income on Derivatives (Ineffective Portion and Amount Excluded from Effectiveness Testing) (b)	
	Years Ended December 31,			Years Ended December 31,			Years Ended December 31,	
	2018	2017		2018	2017		2018	2017
Foreign exchange contracts	(25)	56	Revenue	(2)	8	Cost of revenue	2	7
			Cost of revenue	4	(19)	Other income (expense), net	(9)	2
<b>Total</b>	<u>(25)</u>	<u>56</u>		<u>2</u>	<u>(11)</u>		<u>(7)</u>	<u>9</u>
<b>Derivatives Not Designated as Hedging Instruments under ASC Topic 815</b>								
			Location of Gain (Loss) Recognized in Income on Derivatives	Amount of Gain (Loss) Recognized in Income on Derivatives				
				Years Ended December 31,				
Foreign exchange contracts			Other income (expense), net	2018	2017			
<b>Total</b>				(30)	58			
				(30)	58			

**4. Inventories, net**

Inventories consist of (in millions):

	December 31,	
	2018	2017
Raw materials and supplies	\$ 614	\$ 656
Work in process	501	513
Finished goods and purchased products	1,871	1,834
<b>Total</b>	<u>\$ 2,986</u>	<u>\$ 3,003</u>

## 5. Property, Plant and Equipment, net

Property, plant and equipment consist of (in millions):

	Estimated Useful Lives	December 31,	
		2018	2017
Land		\$ 227	\$ 252
Buildings and improvements	5-35 Years	1,271	1,340
Operating equipment	3-15 Years	3,140	3,169
Rental equipment	3-12 Years	597	581
Capital leases	20-24 Years	249	219
		5,484	5,561
Less: Accumulated Depreciation		(2,687)	(2,559)
		<u>\$ 2,797</u>	<u>\$ 3,002</u>

## 6. Goodwill and Intangible Assets

### Intangible Assets

The Company has approximately \$6.3 billion of goodwill and \$3.0 billion of identified intangible assets at December 31, 2018.

Goodwill is identified by segment as follows (in millions):

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Total
Balance at December 31, 2016	\$ 2,874	\$ 2,058	\$ 1,135	\$ 6,067
Goodwill acquired and adjusted during period	37	41	11	89
Currency translation adjustments	45	23	3	71
Balance at December 31, 2017	\$ 2,956	\$ 2,122	\$ 1,149	\$ 6,227
Goodwill acquired and adjusted during period	64	(33)	71	102
Currency translation adjustments	(9)	(48)	(8)	(65)
Balance at December 31, 2018 (1)	<u>\$ 3,011</u>	<u>\$ 2,041</u>	<u>\$ 1,212</u>	<u>\$ 6,264</u>

(1) Accumulated goodwill impairment was \$2,457 million as of December 31, 2018.

Identified intangible assets with determinable lives consist primarily of customer relationships, trademarks, trade names, patents, and technical drawings acquired in acquisitions, and are being amortized in a manner consistent with the underlying cash flows over the estimated useful lives of 2-30 years. Amortization expense of identified intangibles is expected to be approximately \$336 million, \$319 million, \$308 million, \$302 million, and \$280 million for the next five years. Included in intangible assets are \$383 million of indefinite-lived trade names.

The net book values of identified intangible assets are identified by segment as follows (in millions):

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Total
Balance at December 31, 2016	\$ 2,064	\$ 1,191	\$ 275	\$ 3,530
Additions to intangible assets	18	41	2	61
Amortization	(208)	(108)	(23)	(339)
Currency translation adjustments	9	36	4	49
Balance at December 31, 2017	\$ 1,883	\$ 1,160	\$ 258	\$ 3,301
Additions to intangible assets	41	3	55	99
Amortization	(201)	(111)	(29)	(341)
Currency translation adjustments	12	(47)	(4)	(39)
Balance at December 31, 2018	\$ 1,735	\$ 1,005	\$ 280	\$ 3,020

Identified intangible assets by major classification consist of the following (in millions):

	Gross	Accumulated Amortization	Net Book Value
December 31, 2017:			
Customer relationships	\$ 4,074	\$ (2,118)	\$ 1,956
Trademarks	885	(317)	568
Patents	602	(384)	218
Indefinite-lived trade names	384	—	384
Other	499	(324)	175
Total identified intangibles	\$ 6,444	\$ (3,143)	\$ 3,301
December 31, 2018:			
Customer relationships	\$ 4,078	\$ (2,352)	\$ 1,726
Trademarks	891	(341)	550
Patents	661	(414)	247
Indefinite-lived trade names	383	—	383
Other	491	(377)	114
Total identified intangibles	\$ 6,504	\$ (3,484)	\$ 3,020

Goodwill represents the excess of cost over the fair value of net assets acquired. Goodwill and intangibles with indefinite lives are not amortized. Goodwill is assigned to the reporting units that are expected to benefit from the synergies of a business combination. The recoverability of goodwill and indefinite-lived intangibles is assessed annually, or more frequently as needed when events or changes have occurred that would suggest an impairment of carrying value, by determining whether the fair values of the applicable reporting units exceed their carrying values.

The impairment analysis compares the reporting unit's carrying value to the respective fair value. Fair value of the reporting unit is determined using significant unobservable inputs, or level 3 in the fair value hierarchy. These inputs are based on internal management estimates, forecasts and judgments, using discounted cash flow.

The discounted cash flow is based on management's forecast of operating performance for the reporting unit. The two main assumptions used in measuring goodwill impairment, which bear the risk of change and could impact the Company's goodwill impairment analysis, include the cash flow from operations from each reporting unit and its weighted average cost of capital. The starting point for each of the reporting unit's cash flow from operations is the detailed annual plan or updated forecast. Cash flows beyond the updated forecasted operating plans were estimated using a terminal value calculation, which incorporated historical and forecasted financial cyclical trends for each reporting unit and considered long-term earnings growth rates. The financial and credit market volatility directly impacts our fair value measurement through our weighted average cost of capital that we use to determine our discount rate. During times of volatility, significant judgment must be applied to determine whether credit changes are a short-term or long-term trend.

In 2018, based on the annual impairment test, the calculated fair values for all of the Company's reporting units were substantially in excess of the respective reporting unit's carrying value with the exception of the Company's Floating Production Systems business unit. Further deterioration in the offshore turret mooring systems and topside process modules market could lead to an impairment. This business unit has approximately \$277 million in goodwill.

In July 2016, as a result of market indicators identified in the third quarter, the Company completed a step one impairment analysis for its Rig Offshore reporting unit and calculated a fair value below its carrying value requiring a step two analysis. The analysis compares the implied fair value of goodwill of a reporting unit to the carrying value of goodwill for the reporting unit. The implied fair value of goodwill is determined by deducting the fair value of a reporting unit's identifiable assets and liabilities from the fair value of that reporting unit as a whole. Based on the step two analysis performed for the Rig Offshore reporting unit, the Company recorded a \$972 million write-down of goodwill during the third quarter.

Management reviews finite-lived intangibles for indicators of impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Cash flows expected to be generated by the finite-lived intangibles are estimated over the intangible asset's useful life based on updated projections on an undiscounted basis. If the evaluation indicates that the carrying value of the finite-lived intangible asset may not be recoverable, the potential impairment is measured at fair value.

## 7. Accrued Liabilities

Accrued liabilities consist of (in millions):

	December 31,	
	2018	2017
Vendor costs	\$ 127	\$ 150
Compensation	331	345
Taxes (non income)	124	152
Warranty	105	135
Insurance	55	74
Fair value of derivatives	23	8
Commissions	34	58
Interest	7	7
Other	282	309
Total	<u>\$ 1,088</u>	<u>\$ 1,238</u>

## 8. Debt

Debt consists of (in millions):

	December 31,	
	2018	2017
\$1.4 billion in Senior Notes, interest at 2.60% payable semiannually, principal due on December 1, 2022	1,394	1,392
\$1.1 billion in Senior Notes, interest at 3.95% payable semiannually, principal due on December 1, 2042	1,088	1,088
Capital Leases and other debt	229	232
Total debt	<u>2,711</u>	<u>2,712</u>
Less current portion	7	6
Long-term debt	<u>\$ 2,704</u>	<u>\$ 2,706</u>

Principal payments of debt and capital leases for years subsequent to 2018 are as follows (in millions):

2019	\$	7
2020		7
2021		7
2022		1,402
2023		8
Thereafter		1,280
	\$	<u>2,711</u>

See Note 11 for additional details on future lease payments specific to capital leases.

On June 27, 2017, the Company entered into a new \$3.0 billion credit agreement evidencing a five-year unsecured revolving credit facility, which expires on June 27, 2022, with a syndicate of financial institutions. This new credit facility replaced the Company's previous \$4.5 billion revolving credit facility. The Company has the right to increase the aggregate commitments under this new agreement to an aggregate amount of up to \$4.0 billion upon the consent of only those lenders holding any such increase. Interest under the new multicurrency facility is based upon LIBOR, NIBOR or CDOR plus 1.125% subject to a ratings-based grid or the U.S. prime rate. The new credit facility contains a financial covenant regarding maximum debt-to-capitalization ratio of 60%. As of December 31, 2018, the Company was in compliance with a debt-to-capitalization ratio of 16.3%.

On November 29, 2017, the Company repaid in its entirety the \$500 million of its 1.35% unsecured Senior Notes using available cash balances.

The Company has a commercial paper program under which borrowings are classified as long-term since the program is supported by the \$3.0 billion, five-year credit facility. At December 31, 2018, there were no commercial paper borrowings, and there were no outstanding letters of credit issued under the credit facility, resulting in \$3.0 billion of funds available under this credit facility.

The Company had \$480 million of outstanding letters of credit at December 31, 2018, primarily in the U.S. and Norway, that are under various bilateral committed letter of credit facilities. Letters of credit are issued as bid bonds, advanced payment bonds and performance bonds.

At December 31, 2018 and 2017, the fair value of the Company's unsecured Senior Notes approximated \$2,211 million and \$2,346 million, respectively. The fair value of the Company's debt is estimated using Level 2 inputs in the fair value hierarchy and is based on quoted prices for those or similar instruments. At December 31, 2018 and 2017, the carrying value of the Company's unsecured Senior Notes approximated \$2,482 million and \$2,480 million, respectively.

## 9. Employee Benefit Plans

We have benefit plans covering substantially all of our employees. Defined-contribution benefit plans cover most of the U.S. and Canadian employees, and benefits are based on years of service, a percentage of current earnings and matching of employee contributions. We also have defined contribution plans in Norway and the United Kingdom. For the years ended December 31, 2018, 2017 and 2016, expenses for defined-contribution plans were \$68 million, \$64 million, and \$66 million, respectively, and all funding is current.

Certain retired or terminated employees of predecessor or acquired companies participate in a defined benefit plan in the United States. Approximately 43 employees represented by certain collective bargaining agreements continue to accrue benefits under the plan. In addition, approximately 1,694 U.S. retirees and spouses participate in defined benefit health care plans of predecessor or acquired companies that provide postretirement medical and life insurance benefits. Except for two locations represented by certain collective bargaining agreements, active employees are ineligible to participate in any of these U.S. defined benefit plans. Active employees based in the United Kingdom are ineligible to participate in any defined benefit plans.

During 2016, the Company settled its Norway defined benefit plan and transferred all participants to the defined-contribution plan. The impact on the defined benefit plans is reflected in the table below.



Net periodic benefit cost for our defined benefit plans aggregated (\$3) million, \$1 million and \$5 million for the years ended December 31, 2018, 2017 and 2016, respectively.

The change in benefit obligation, plan assets and the funded status of the defined benefit pension plans in the United States, United Kingdom, Norway, Germany and the Netherlands and defined postretirement plans in the United States, using a measurement date of December 31, 2018 and 2017, is as follows (in millions):

At year end	Pension benefits		Postretirement benefits	
	2018	2017	2018	2017
Benefit obligation at beginning of year	\$ 633	\$ 622	\$ 62	\$ 92
Service cost	1	1	—	—
Interest cost	18	20	2	3
Actuarial loss (gain)	(24)	6	(8)	(17)
Benefits paid	(40)	(31)	(13)	(14)
Participants contributions	—	—	2	2
Exchange rate loss (gain)	(15)	30	—	—
Plan amendments	4	—	—	—
Curtailments	—	—	—	(4)
Settlements	(2)	(15)	—	—
Benefit obligation at end of year	\$ 575	\$ 633	\$ 45	\$ 62
Fair value of plan assets at beginning of year	\$ 588	\$ 543	\$ —	\$ —
Actual return	(21)	57	—	—
Benefits paid	(40)	(31)	(13)	(14)
Company contributions	5	11	11	12
Participants contributions	—	—	2	2
Exchange rate gain (loss)	(13)	24	—	—
Settlements	(2)	(15)	—	—
Other	—	(1)	—	—
Fair value of plan assets at end of year	\$ 517	\$ 588	\$ —	\$ —
Funded status	\$ (58)	\$ (45)	\$ (45)	\$ (62)
Accumulated benefit obligation at end of year	\$ 572	\$ 630		

Liabilities associated with the funded status of the defined benefit pension plans are included in the balances of accrued liabilities and other liabilities in the Consolidated Balance Sheet.

#### Defined Benefit Pension Plans

Assumed long-term rates of return on plan assets, discount rates and rates of compensation increases vary for the different plans according to the local economic conditions. The assumption rates used for benefit obligations are as follows:

	Years Ended December 31,	
	2018	2017
Discount rate:		
United States plan	3.90% - 4.20%	3.00% - 3.60%
International plans	1.80% - 2.90%	1.80% - 2.40%
Salary increase:		
United States plan	N/A	N/A
International plans	1.80% - 3.40%	1.80% - 3.30%

The assumption rates used for net periodic benefit costs are as follows:

	Years Ended December 31,		
	2018	2017	2016
<b>Discount rate:</b>			
United States plan	3.00% - 3.60%	3.10% - 4.00%	3.20% - 4.20%
International plans	1.80% - 2.40%	1.80% - 2.80%	2.20% - 3.70%
<b>Salary increase:</b>			
United States plan	N/A	N/A	N/A
International plans	1.80% - 3.30%	1.80% - 3.50%	2.00% - 4.20%
<b>Expected return on assets:</b>			
United States plan	5.60%	5.60%	5.60%
International plans	1.80% - 4.00%	1.80% - 3.00%	1.80% - 3.00%

In determining the overall expected long-term rate of return for plan assets, the Company takes into consideration the historical experience as well as future expectations of the asset mix involved. As different investments yield different returns, each asset category is reviewed individually and then weighted for significance in relation to the total portfolio.

The majority of our plans have projected benefit obligations in excess of plan assets.

The Company expects to pay future benefit amounts on its defined benefit plans of approximately \$33 million for each of the next five years and aggregate payments of \$319 million.

#### *Plan Assets*

The Company and its investment advisers collaboratively reviewed market opportunities using historic and statistical data, as well as the actuarial valuation reports for the plans, to ensure that the levels of acceptable return and risk are well-defined and monitored. Currently, the Company's management believes that there are no significant concentrations of risk associated with plan assets. Our pension investment strategy worldwide prohibits a direct investment in our own stock.

The following table sets forth by level, within the fair value hierarchy, the Plan's assets carried at fair value (in millions):

	Fair Value Measurements			
	Total	Level 1	Level 2	Level 3
<b>December 31, 2017:</b>				
Equity securities	\$ 161	\$ —	\$ 161	\$ —
Bonds	284	—	284	—
Other (insurance contracts)	143	—	82	61
<b>Total Fair Value Measurements</b>	<b>\$ 588</b>	<b>\$ —</b>	<b>\$ 527</b>	<b>\$ 61</b>
<b>December 31, 2018:</b>				
Equity securities	\$ 140	\$ —	\$ 140	\$ —
Bonds	209	—	209	—
Other (insurance contracts)	168	—	113	55
<b>Total Fair Value Measurements</b>	<b>\$ 517</b>	<b>\$ —</b>	<b>\$ 462</b>	<b>\$ 55</b>

Level 3 inputs are unobservable (i.e., supported by little or no market activity). Level 3 inputs include management's own judgement about the assumptions that market participants would use in pricing the asset or liability (including

assumptions about risk). The following table sets forth a summary of changes in the fair value of the Plan's Level 3 assets (in millions):

	<b>Level 3 Plan Assets</b>
Balance at December 31, 2016	<u>\$ 53</u>
Actual return on plan assets still held at reporting date	2
Purchases, sales and settlements	(1)
Currency translation adjustments	7
Balance at December 31, 2017	<u>\$ 61</u>
Actual return on plan assets still held at reporting date	(1)
Purchases, sales and settlements	(2)
Currency translation adjustments	(3)
Balance at December 31, 2018	<u>\$ 55</u>

#### 10. Accumulated Other Comprehensive Income (Loss)

The components of accumulated other comprehensive income (loss) are as follows (in millions):

	<b>Currency Translation Adjustments</b>	<b>Derivative Financial Instruments, Net of Tax</b>	<b>Defined Benefit Plans, Net of Tax</b>	<b>Total</b>
Balance at December 31, 2015	<u>\$ (1,279)</u>	<u>\$ (205)</u>	<u>\$ (69)</u>	<u>\$ (1,553)</u>
Accumulated other comprehensive income (loss) before reclassifications	(97)	32	35	(30)
Amounts reclassified from accumulated other comprehensive income (loss)	—	134	(3)	131
Balance at December 31, 2016	<u>\$ (1,376)</u>	<u>\$ (39)</u>	<u>\$ (37)</u>	<u>\$ (1,452)</u>
Accumulated other comprehensive income (loss) before reclassifications	272	41	25	338
Amounts reclassified from accumulated other comprehensive income (loss)	—	5	(1)	4
Balance at December 31, 2017	<u>\$ (1,104)</u>	<u>\$ 7</u>	<u>\$ (13)</u>	<u>\$ (1,110)</u>
Accumulated other comprehensive income (loss) before reclassifications	(298)	(19)	(13)	(330)
Amounts reclassified from accumulated other comprehensive income (loss)	6	(2)	(1)	3
Balance at December 31, 2018	<u>\$ (1,396)</u>	<u>\$ (14)</u>	<u>\$ (27)</u>	<u>\$ (1,437)</u>

The components of amounts reclassified from accumulated other comprehensive income (loss) are as follows (in millions):

	Years Ended December 31,											
	2018				2017				2016			
	Currency Translation Adjustments	Derivative Financial Instruments	Defined Benefit Plans	Total	Currency Translation Adjustments	Derivative Financial Instruments	Defined Benefit Plans	Total	Currency Translation Adjustments	Derivative Financial Instruments	Defined Benefit Plans	Total
Revenue	\$ —	\$ 2	\$ —	\$ 2	\$ —	\$ (8)	\$ —	(8)	\$ —	\$ (5)	\$ —	\$ (5)
Cost of revenue	—	(6)	—	(6)	—	12	—	12	—	191	—	191
Selling, general, and administrative	—	—	(1)	(1)	—	—	(1)	(1)	—	—	—	(5)
Other income (expense), net	6	—	—	6	—	—	—	—	—	—	—	—
Tax effect	—	2	—	2	—	1	—	1	—	(52)	2	(50)
	<u>\$ 6</u>	<u>\$ (2)</u>	<u>\$ (1)</u>	<u>\$ 3</u>	<u>\$ —</u>	<u>\$ 5</u>	<u>\$ (1)</u>	<u>\$ 4</u>	<u>\$ —</u>	<u>\$ 134</u>	<u>\$ (3)</u>	<u>\$ 131</u>

The Company's reporting currency is the U.S. dollar. A majority of the Company's international entities in which there is a substantial investment have the local currency as their functional currency. As a result, currency translation adjustments resulting from the process of translating the entities' financial statements into the reporting currency are reported in other comprehensive income or (loss). For the years ended December 31, 2018 and 2016, a majority of these local currencies weakened against the U.S. dollar, while for the year ended December 31, 2017, a majority of these local currencies strengthened against the U.S. dollar. Other comprehensive income (loss) was (\$298) million, \$272 million and (\$97) million for the years ended December 31, 2018, 2017 and 2016, respectively. Due to the sale of a non-core industrial business, \$6 million of currency translation losses were reclassified from accumulated other comprehensive income (loss) into other income (expense), net in the Consolidated Statements of Income (Loss) for the year ended December 31, 2018.

The effect of changes in the fair values of derivatives designated as cash flow hedges are accumulated in other comprehensive income (loss), net of tax, until the underlying transactions to which they are designed to hedge are realized. The movement in other comprehensive income (loss) from period to period will be the result of the combination of changes in fair value for open derivatives and the outflow of other comprehensive income (loss) related to cumulative changes in the fair value of derivatives that have settled in the current or prior periods. The accumulated effect was other comprehensive income (loss) of (\$21) million (net of \$2 million tax), \$46 million (net of \$13 million tax) and \$166 million (net of \$65 million tax) for the years ended December 31, 2018, 2017 and 2016.

## 11. Commitments and Contingencies

Our business is affected both directly and indirectly by governmental laws and regulations relating to the oilfield service industry in general, as well as by environmental and safety regulations that specifically apply to our business. We have not incurred material unreserved costs in connection with our compliance with such laws. However, there can be no assurance that other developments, such as new environmental laws, regulations and enforcement policies may not result in additional, presently unquantifiable, costs or liabilities to us.

The Company is involved in various other claims, internal investigations, regulatory agency audits and pending or threatened legal actions involving a variety of matters. In many instances, the Company maintains insurance that covers claims arising from risks associated with the business activities of the Company, including claims for premises liability, product liability and other such claims. The Company carries substantial insurance to cover such risks above a self-insured retention. The Company believes, and the Company's experience has been, that such insurance has been sufficient to cover such risks. See Item 1A. Risk Factors.

The Company is also a party to claims, threatened and actual litigation, and private arbitration arising from ordinary day to day business activities, in which parties assert claims against the Company for a broad spectrum of potential liabilities, including: individual employment law claims, collective actions under federal employment laws, intellectual property claims, including alleged patent infringement, and/or misappropriation of trade secrets, premises liability claims, personal injuries arising from allegedly defective products, alleged improper payments under anti-corruption and anti-bribery laws and other commercial claims seeking recovery for alleged actual or exemplary damages. For many such contingent claims, the Company's insurance coverage is inapplicable or an exclusion to

coverage may apply. In such instances, settlement or other resolution of such contingent claims could have a material financial or reputational impact on the Company.

As of December 31, 2018, the Company recorded reserves in an amount believed to be sufficient for contingent liabilities representing all contingencies believed to be probable. The Company has also assessed the potential for additional losses above the amounts accrued as well as potential losses for matters that are not probable but are reasonably possible. The total potential loss on these matters cannot be determined; however, in our opinion, any ultimate liability, to the extent not otherwise provided for and except for the specific cases referred to above, will not materially affect our financial position, cash flow or results of operations. These estimated liabilities are based on the Company's assessment of the nature of these matters, their progress toward resolution, the advice of legal counsel and outside experts as well as management's intention and experience. Of course, because of uncertainty and risk inherent to litigation and arbitration, the actual liabilities incurred may exceed our estimated liabilities and reserves, which could have a material financial or reputational impact on the Company.

Further, in some instances, direct or indirect consumers of our products and services, entities providing financing for purchases of our products and services or members of the supply chain for our products and services have become involved in governmental investigations, internal investigations, political or other enforcement matters. In such circumstances, such investigations may adversely impact the ability of consumers of our products, entities providing financial support to such consumers or entities in the supply chain to timely perform their business plans or to timely perform under agreements with us. We may also become involved in these investigations, at substantial cost to the Company.

The on-going, publicly disclosed investigations in Brazil may continue to adversely impact our shipyard customers, their customers, entities providing financing for our shipyard customers and/or entities in the supply chain. We have executed settlements with several shipyard customers since December 28, 2015 concerning contracts for the supply of drilling equipment packages for 16 drillship construction projects in Brazil (collectively the "Supply Contracts"). Pursuant to the terms of the settlements, the Supply Contracts have been terminated. We did not take a charge as a result of the settlement and, on a net basis, there was no change to our prior estimates on our Brazil contracts impacting income. Though there have not been any material developments in some time, the situation in Brazil involves political and judicial uncertainty and could develop in ways that are presently unknown or unforeseen.

The Company leases certain facilities and equipment under operating leases that expire at various dates through 2041. These leases generally contain renewal options and require the lessee to pay maintenance, insurance, taxes and other operating expenses in addition to the minimum annual rentals. Rental expense related to operating leases approximated \$212 million, \$209 million, and \$246 million in 2018, 2017 and 2016, respectively.

Future minimum lease commitments under capital leases and noncancellable operating leases with initial or remaining terms of one year or more at December 31, 2018, are payable as follows (in millions):

	<b>Capital Lease Payments</b>	<b>Operating Lease Payments</b>
2019	\$ 15	\$ 126
2020	15	106
2021	15	88
2022	15	68
2023	15	51
Thereafter	262	293
<b>Total future lease commitments</b>	<b>\$ 337</b>	<b>\$ 732</b>

## 12. Common Stock

National Oilwell Varco has authorized 1 billion shares of \$0.01 par value common stock. The Company also has authorized 10 million shares of \$0.01 par value preferred stock, none of which is issued or outstanding.

Cash dividends aggregated \$76 million for each of the years ended December 31, 2018 and 2017. The declaration and payment of future dividends is at the discretion of the Company's Board of Directors and will be dependent upon the

Company's results of operations, financial condition, capital requirements and other factors deemed relevant by the Company's Board of Directors.

Total compensation cost that has been charged against income for all share-based compensation arrangements was \$110 million, \$124 million and \$107 million for 2018, 2017 and 2016, respectively. The total income tax benefit recognized in the consolidated statements of income for all share-based compensation arrangements was \$16 million, \$24 million and \$30 million for 2018, 2017 and 2016, respectively.

The Company has a stock-based compensation plan known as the National Oilwell Varco, Inc. Long-Term Incentive Plan (the "Plan"). The Plan provides for the granting of stock options, performance-based share awards, restricted stock, phantom shares, stock payments and stock appreciation rights ("SARs"). The number of shares authorized under the Plan is 69.4 million. The Plan is subject to a fungible ratio concept, such that the issuance of stock options and SARs reduces the number of available shares under the Plan on a 1-for-1 basis, and the issuance of other awards reduces the number of available shares under the Plan on a 3-for-1 basis.

The Company's other stock-based compensation plan, known as the National Oilwell Varco, Inc. 2018 Long-Term Incentive Plan (the "2018 Plan"), was approved by shareholders on May 11, 2018. The 2018 Plan provides for the granting of stock options, restricted stock, restricted stock units, performance awards, phantom shares, stock appreciation rights, stock payments and substitute awards. The number of shares authorized under the 2018 Plan is 17.8 million. The 2018 Plan is also subject to a fungible ratio concept, such that the issuance of stock options and SARs reduces the number of available shares under the 2015 Plan on a 1-for-1 basis, and the issuance of other awards reduces the number of available shares under the 2018 Plan on a 2.5-for-1 basis. At December 31, 2018, approximately 17.7 million shares were available for future grants.

### Stock Options

Options granted under our stock option plan generally vest over a three-year period starting one year from the date of grant and expire ten years from the date of grant. The purchase price of options granted may not be less than the closing market price of National Oilwell Varco common stock on the date of grant.

We also have an inactive stock option plan that was acquired in connection with the acquisition of Grant Prideco in 2008. We converted the outstanding stock options under this plan to options to acquire our common stock and no further options are being issued under this plan. Stock option information summarized below includes amounts for the National Oilwell Varco Long-Term Incentive Plan and stock plans of acquired companies. Options outstanding at December 31, 2018 under the stock option plans have exercise prices between \$23.94 and \$77.99 per share, and expire at various dates from February 21, 2019 to February 29, 2028.

The following summarizes options activity:

	Years Ended December 31,					
	2018		2017		2016	
	Number of Shares	Average Exercise Price	Number of Shares	Average Exercise Price	Number of Shares	Average Exercise Price
Shares under option at beginning of year	22,472,047	\$ 48.99	17,439,060	\$ 54.08	15,430,307	\$ 59.50
Granted	1,610,599	35.09	6,961,041	36.51	3,672,411	28.26
Forfeited	(1,318,380)	57.56	(1,482,531)	55.22	(1,517,065)	49.95
Exercised	(1,754,758)	44.12	(445,523)	29.83	(146,593)	28.53
Shares under option at end of year	<u>21,009,508</u>	<u>\$ 48.88</u>	<u>22,472,047</u>	<u>\$ 48.99</u>	<u>17,439,060</u>	<u>\$ 54.08</u>
Exercisable at end of year	<u>15,223,029</u>	<u>\$ 54.13</u>	<u>14,309,944</u>	<u>\$ 55.00</u>	<u>9,828,897</u>	<u>\$ 61.56</u>

The following summarizes information about stock options outstanding at December 31, 2018:

Range of Exercise Price	Weighted-Avg Remaining Contractual Life	Options Outstanding		Options Exercisable	
		Shares	Weighted-Avg Exercise Price	Shares	Weighted-Avg Exercise Price
\$23.94 - \$55.00	6.81	15,179,485	\$ 40.68	9,393,006	\$ 44.14
\$55.01 - \$70.00	4.69	3,658,652	66.82	3,658,652	66.82
\$70.01 - \$77.99	2.69	2,171,371	75.95	2,171,371	75.95
Total	6.01	21,009,508	\$ 48.88	15,223,029	\$ 54.13

The weighted-average fair value of options granted during 2018, 2017 and 2016, was approximately \$10.01, \$9.68 and \$6.44 per share, respectively, as determined using the Black-Scholes option-pricing model. The total intrinsic value of options exercised during 2018 and 2017 was \$54 million and \$13 million, respectively.

The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise activity. The use of the Black Scholes model requires the use of actual employee exercise activity data and the use of a number of complex assumptions including expected volatility, risk-free interest rate, expected dividends and expected term.

Valuation Assumptions:	Years Ended December 31,		
	2018	2017	2016
Expected volatility	31.8%	36.1%	48.6%
Risk-free interest rate	2.7%	2.2%	1.2%
Expected dividend yield	0.6%	0.6%	6.5%
Expected term (in years)	4.3	3.0	3.0

The Company used the actual volatility for traded options for the past 10 years prior to option date as the expected volatility assumption required in the Black Scholes model.

The risk-free interest rate assumption is based upon observed interest rates appropriate for the term of our employee stock options. The dividend yield assumption is based on the history and expectation of dividend payouts. The estimated expected term is based on actual employee exercise activity for the past ten years. Forfeitures are accounted for as they occur.

The following summary presents information regarding outstanding options at December 31, 2018 and changes during 2017 with regard to options under all stock option plans:

	Shares	Weighted-Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2017	22,472,047	\$ 48.99	6.66	\$ 34,186,368
Granted	1,610,599	\$ 35.09		
Forfeited	(1,318,380)	\$ 57.56		
Exercised	(1,754,758)	\$ 44.12		
Outstanding at December 31, 2018	21,009,508	\$ 48.88	6.01	\$ 458,576
Exercisable at December 31, 2018	15,223,029	\$ 54.13	5.24	\$ 458,576

At December 31, 2018, total unrecognized compensation cost related to nonvested stock options was \$25 million. This cost is expected to be recognized over a weighted-average period of three years. The total fair value of stock options vested in 2018, 2017 and 2016 was approximately \$26 million, \$70 million and \$61 million, respectively. Cash received from option exercises for 2018, 2017 and 2016 was \$54 million, \$13 million and \$4 million, respectively. The actual tax benefit (expense) realized for the tax deductions from option exercises totaled \$2 million, (2) million, and \$nil for 2018, 2017 and 2016, respectively.

#### Stock Appreciation Rights

On December 20, 2017, the Company made a tender offer to exchange SARs issued to certain employees on February 24, 2016 (“2016 SARs”) for cash, amended SARs, and new stock options. The transaction was structured to provide the employees an equal long-term incentive compensation value, while alleviating volatility in the Company’s earnings caused by required mark-to-market accounting on outstanding SARs. Of the outstanding 2016 SARs, 94.75% were exchanged resulting in a total cash payment of \$14 million and granting of 3,613,707 new stock options on the exchange date with an exercise price of \$34.32 and a fair value of \$8.47, with vesting matched to the exchanged 2016 SARs.

The following summary presents information regarding outstanding SARs:

	Year Ended December 31,			
	2018		2017	
	Number of Shares	Average Exercise Price	Number of Shares	Average Exercise Price
Shares under SARs at beginning of year	1,493,689	\$ 28.41	4,341,740	\$ 28.32
Granted	14,228	35.09	14,400	38.86
Forfeited	(83,124)	28.32	(283,822)	28.35
Exercised	(25,491)	42.61	(2,578,629)	34.72
Shares under SARs at end of year	<u>1,399,302</u>	<u>\$ 28.49</u>	<u>1,493,689</u>	<u>\$ 28.41</u>
Exercisable at end of year	<u>165,755</u>	<u>\$ 28.57</u>	<u>75,102</u>	<u>\$ 28.33</u>

The expense recognized in 2018, 2017, and 2016 was nil, \$8 million, and \$20 million, respectively. There was no liability for cash-settled SARs at December 31, 2018.

#### Restricted Shares

The Company issues restricted stock awards and restricted stock units to officers and key employees in addition to stock options. On February 28, 2018, the Company granted 2,391,933 shares of restricted stock and restricted stock units with a fair value of \$35.09 per share; and performance share awards to senior management employees with potential payouts varying from zero to 449,532 shares. The restricted stock and restricted stock units vest in three equal annual installments commencing on the first anniversary of the date of grant. The performance share awards can be earned based on performance against established goals over a three-year performance period. The performance share awards are based entirely on a TSR (total shareholder return) goal. Performance against the TSR goal is determined by comparing the performance of the Company’s TSR with the TSR performance of the members of the OSX (Oil Service Sector) index for the three-year performance period.

On May 11, 2018, the Company granted 35,432 restricted stock awards under the 2018 Plan with a fair value of \$40.65 per share. The awards were granted to non-employee members of the board of directors and vest on the first anniversary of the grant date.



The following summary presents information regarding outstanding restricted shares:

	Years Ended December 31,					
	2018		2017		2016	
	Number of Units	Weighted-Average Grant Date Fair Value	Number of Units	Weighted-Average Grant Date Fair Value	Number of Units	Weighted-Average Grant Date Fair Value
Nonvested at beginning of year	4,889,678	\$ 37.04	4,563,983	\$ 41.10	1,969,250	\$ 61.53
Granted	2,657,115	35.17	1,738,589	38.74	3,384,325	31.59
Vested	(1,242,682)	34.86	(1,018,206)	34.84	(565,202)	29.32
Forfeited	(389,251)	57.56	(394,688)	55.22	(224,390)	49.95
Nonvested at end of year	<u>5,914,860</u>	<u>\$ 34.41</u>	<u>4,889,678</u>	<u>\$ 37.04</u>	<u>4,563,983</u>	<u>\$ 41.10</u>

The weighted-average grant day fair value of restricted stock awards and restricted stock units granted during the years ended 2018, 2017 and 2016 was \$35.17, \$38.74 and \$31.59 per share, respectively. There were 1,242,682, 1,018,206 and 565,202 restricted stock awards that vested during 2018, 2017 and 2016, respectively. At December 31, 2018, there was approximately \$108 million of unrecognized compensation cost related to nonvested restricted stock awards and restricted stock units, which is expected to be recognized over a weighted-average period of two years.

### 13. Revenue

#### *Disaggregation of Revenue*

The following tables disaggregate our revenue by destinations, as we believe it best depicts how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. In the tables below, North America includes only the U.S. and Canada (in millions):

	Year Ended December 31, 2018				
	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Eliminations	Total
North America	\$ 1,817	\$ 1,302	\$ 663	\$ —	\$ 3,782
International	1,345	1,543	1,783	—	4,671
Eliminations	73	86	129	(288)	—
	<u>\$ 3,235</u>	<u>\$ 2,931</u>	<u>\$ 2,575</u>	<u>\$ (288)</u>	<u>\$ 8,453</u>
Land	\$ 2,683	\$ 1,985	\$ 854	\$ —	\$ 5,522
Offshore	479	860	1,592	—	2,931
Eliminations	73	86	129	(288)	—
	<u>\$ 3,235</u>	<u>\$ 2,931</u>	<u>\$ 2,575</u>	<u>\$ (288)</u>	<u>\$ 8,453</u>

**Year Ended December 31, 2017**

	<b>Wellbore Technologies</b>	<b>Completion &amp; Production Solutions</b>	<b>Rig Technologies</b>	<b>Eliminations</b>	<b>Total</b>
North America	\$ 1,408	\$ 1,093	\$ 545	\$ —	\$ 3,046
International	1,116	1,528	1,614	—	4,258
Eliminations	53	51	93	(197)	—
	<u>\$ 2,577</u>	<u>\$ 2,672</u>	<u>\$ 2,252</u>	<u>\$ (197)</u>	<u>\$ 7,304</u>
Land	\$ 2,047	\$ 1,752	\$ 740	\$ —	\$ 4,539
Offshore	477	869	1,419	—	2,765
Eliminations	53	51	93	(197)	—
	<u>\$ 2,577</u>	<u>\$ 2,672</u>	<u>\$ 2,252</u>	<u>\$ (197)</u>	<u>\$ 7,304</u>

**Year Ended December 31, 2016**

	<b>Wellbore Technologies</b>	<b>Completion &amp; Production Solutions</b>	<b>Rig Technologies</b>	<b>Eliminations</b>	<b>Total</b>
North America	\$ 925	\$ 793	\$ 460	\$ —	\$ 2,178
International	1,104	1,404	2,565	—	5,073
Eliminations	170	44	85	(299)	—
	<u>\$ 2,199</u>	<u>\$ 2,241</u>	<u>\$ 3,110</u>	<u>\$ (299)</u>	<u>\$ 7,251</u>
Land	\$ 1,497	\$ 1,342	\$ 819	\$ —	\$ 3,658
Offshore	532	855	2,206	—	3,593
Eliminations	170	44	85	(299)	—
	<u>\$ 2,199</u>	<u>\$ 2,241</u>	<u>\$ 3,110</u>	<u>\$ (299)</u>	<u>\$ 7,251</u>

The Company did not have any customers with revenues greater than 10% of total revenue for the years ended December 31, 2018, 2017, or 2016.

*Contract Assets and Liabilities*

Contract assets include unbilled amounts resulting from sales under long-term contracts when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not only subject to the passage of time. There were no impairment losses recorded on contract assets for the years ending December 31, 2018 and 2017.

Contract liabilities consist of advance payments, billings in excess of revenue recognized and deferred revenue. For the balance at December 31, 2017, we reclassified \$240 million of advance payments and deferred revenue from accrued liabilities to contract liabilities to conform with the 2018 presentation.

The changes in the carrying amount of contract assets and contract liabilities are as follows (in millions):

<i>Contract Assets</i>	
Balance at December 31, 2017	\$ 495
Additions and Milestone Billings	(948)
Revenue Recognized	1,094
Currency translation adjustments and other	(76)
Balance at December 31, 2018	<u>\$ 565</u>

<i>Contract Liabilities</i>	
Balance at December 31, 2017	\$ 519
Additions and Milestone Billings	861
Revenue Recognized	(798)
Currency translation adjustments and other	(124)
Balance at December 31, 2018	<u>\$ 458</u>

#### 14. Income Taxes

The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduced the U.S. federal corporate tax rate from 35% to 21%, effective January 1, 2018. We recognized an income tax benefit of \$242 million in the year ended December 31, 2017 associated with the revaluation of our net deferred tax liability. The one-time Transition Tax, Global Intangible Low Taxed Income ("GILTI"), Foreign Derived Intangible Income ("FDII"), Base Erosion and Anti-Abuse Tax ("BEAT") and IRC Section 163(j) interest limitation do not impact our cash taxes or total tax expense for the years ended December 31, 2018 and 2017, respectively.

The accounting for the initial impact of the Act is complete. SAB 118 provided for a one-year period to complete the accounting for this expansive new law. Final accounting did not have a material impact to cash tax or total tax expense, but the finalization of the transition tax inclusions in our 2017 and 2018 tax returns, along with recording the impact of tax regulations released in 2018, impacted our foreign tax credit carryforward position. However, our excess foreign tax credits carry a full valuation allowance as we currently estimate that they will expire unutilized. Accordingly, the true-ups only impact the total foreign tax credits recorded and related valuation allowance and do not impact the income tax provision on a net basis. The movement in the valuation allowance during 2018 included the impact of our foreign tax credit carryover position in response to new treasury regulations and finalization of our transition tax calculations.

The domestic and foreign components of income (loss) before income taxes were as follows (in millions):

	Years Ended December 31,		
	2018	2017	2016
Domestic	\$ (168)	\$ (470)	\$ (2,095)
Foreign	209	78	(528)
	<u>\$ 41</u>	<u>\$ (392)</u>	<u>\$ (2,623)</u>

The components of the provision for income taxes consisted of (in millions):

	Years Ended December 31,		
	2018	2017	2016
Current:			
Federal	\$ (5)	\$ 23	\$ (79)
State	(3)	1	(4)
Foreign	134	161	74
Total current income tax provision	<u>126</u>	<u>185</u>	<u>(9)</u>
Deferred:			
Federal	11	(332)	(132)
State	-	(2)	(7)
Foreign	(74)	(7)	(59)
Total deferred income tax provision	<u>(63)</u>	<u>(341)</u>	<u>(198)</u>
Total income tax provision	<u>\$ 63</u>	<u>\$ (156)</u>	<u>\$ (207)</u>

The difference between the effective tax rate reflected in the provision for income taxes and the U.S. federal statutory rate was as follows (in millions):

	Years Ended December 31,		
	2018	2017	2016
Federal income tax at U.S. statutory rate	\$ 9	\$ (137)	\$ (918)
Foreign income tax rate differential	(3)	(21)	32
Goodwill impairment	—	—	271
Nondeductible expenses	20	38	30
Foreign dividends, net of foreign tax credits	27	(132)	(25)
Tax rate change on timing differences	(7)	(245)	(8)
Change in uncertain tax positions	(5)	81	11
Prior years taxes	(13)	(26)	(29)
Tax impact on foreign exchange	(3)	5	(4)
Change in deferred tax valuation allowance	49	280	476
State income taxes - net of federal benefit	(3)	(1)	(10)
Tax exempt income	(5)	-	(7)
Income tax credits	(3)	(4)	-
Other	—	6	(26)
<b>Total income tax provision</b>	<b>\$ 63</b>	<b>\$ (156)</b>	<b>\$ (207)</b>

The effective tax rate for the year ended December 31, 2018 was 153.7%, compared to 39.8% for 2017. For the year ended December 31, 2018, valuation allowances established on deferred tax assets and tax due on foreign income not offset by foreign tax credits resulted in a higher effective tax rate than the U.S. statutory rate. For the year ended December 31, 2017, the revaluation of net deferred tax liabilities in the U.S. partially offset by valuation allowances established on foreign tax credits generated during the year, when applied to losses resulted in a higher effective tax rate than the U.S. statutory rate.

Significant components of our deferred tax assets and liabilities were as follows (in millions):

	December 31,	
	2018	2017
<b>Deferred tax assets:</b>		
Allowances and operating liabilities	\$ 293	\$ 355
Net operating loss carryforwards	182	182
Postretirement benefits	30	31
Tax credit carryforwards	768	1,002
Other	95	78
Valuation allowance	(955)	(1,202)
<b>Total deferred tax assets</b>	<b>413</b>	<b>446</b>
<b>Deferred tax liabilities:</b>		
Tax over book depreciation	139	174
Intangible assets	688	716
Deferred income	70	111
Accrued tax on unremitted earnings	17	17
Other	52	92
<b>Total deferred tax liabilities</b>	<b>966</b>	<b>1,110</b>
<b>Net deferred tax liability</b>	<b>\$ 553</b>	<b>\$ 664</b>

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in millions):

	2018	2017	2016
Unrecognized tax benefit at beginning of year	\$ 132	\$ 78	\$ 46
Gross increase for current period tax positions	15	10	3
Gross increase for tax positions in prior years	31	64	65
Gross decrease for tax positions in prior years	(10)	(14)	(21)
Settlements	(69)	—	(3)
Lapse of statute of limitations	(1)	(6)	(12)
Unrecognized tax benefit at end of year	<u>\$ 98</u>	<u>\$ 132</u>	<u>\$ 78</u>

The balance of unrecognized tax benefits at December 31, 2018, 2017 and 2016 was \$98 million, \$132 million and \$78 million, respectively. For the year ended December 31, 2018, the settlement of a foreign jurisdiction audit resulted in a \$69 million decrease in uncertain tax provisions. Accruals related to foreign jurisdiction audits of prior years resulted in uncertain tax position increases of \$64 million and \$65 million in 2017 and 2016.

Substantially all of the unrecognized tax benefits, if ultimately realized, would be recorded as a benefit to the effective tax rate. The Company anticipates that it is reasonably possible that the amount of unrecognized tax benefits may decrease by up to \$7 million in the next twelve months due to settlements and conclusions of tax examinations. To the extent penalties and interest would be assessed on any underpayment of income tax, such accrued amounts have been classified as a component of income tax expense in the financial statements consistent with the Company's policy. For the years ended December 31, 2018, 2017 and 2016, we recorded income tax expense of nil, \$17 million and \$10 million, respectively, for interest and penalty related to unrecognized tax benefits. As of December 31, 2018 and 2017, the Company had accrued \$12 million and \$32 million, respectively, of interest and penalty relating to unrecognized tax benefits.

The Company is subject to taxation in the United States, various states and foreign jurisdictions. The Company has significant operations in the United States, Norway, Canada, the United Kingdom, the Netherlands, France and Denmark. Tax years that remain subject to examination by major tax jurisdictions vary by legal entity, but are generally open in the U.S. for tax years ending after 2013 and outside the U.S. for tax years ending after 2010.

Net operating loss carryforwards by jurisdiction and expiration as of December 31, 2018 were as follows (in millions):

	Federal	State	Foreign	Total
2019 - 2021 Expiration	\$ 6	\$ 2	\$ 51	\$ 59
2022 - 2033 Expiration	16	20	142	178
2034 - 2038 Expiration	12	122	94	228
Unlimited Expiration	—	—	428	428
Total Net Operating Loss (NOL)	<u>\$ 34</u>	<u>\$ 144</u>	<u>\$ 715</u>	<u>\$ 893</u>
Tax Effected NOL	\$ 7	\$ 8	\$ 167	\$ 182
Valuation Allowance (VA)	(6)	(8)	(140)	(154)
Tax Effected NOL Net of VA	<u>\$ 1</u>	<u>\$ —</u>	<u>\$ 27</u>	<u>\$ 28</u>

The Company has \$766 million of excess foreign tax credits in the United States as of December 31, 2018, of which \$10 million, \$141 million, \$286 million, \$142 million, and \$187 million will expire in 2020, 2022, 2026, 2027, and 2028, respectively. As of December 31, 2018, the Company has remaining tax-deductible goodwill of \$133 million, resulting from acquisitions. The amortization of this goodwill is deductible over various periods ranging up to 12 years.

Undistributed earnings of certain of the Company's foreign subsidiaries amounted to \$3,254 million at December 31, 2018. These earnings are considered to be indefinitely reinvested and no provision for U.S. federal and state income taxes has been made. Distribution of these earnings in the form of dividends or otherwise could result in incremental U.S. federal and state taxes at statutory rates and withholding taxes payable in various foreign countries.

## 15. Business Segments. and Geographic Areas

The Company's operations are organized into three operating segments: Wellbore Technologies, Completion & Production Solutions and Rig Technologies.

### *Wellbore Technologies*

The Company's Wellbore Technologies segment designs, manufactures, rents, and sells a variety of equipment and technologies used to perform drilling operations, and offers services that optimize their performance, including: solids control and waste management equipment and services; drilling fluids; portable power generation; premium drill pipe; wired pipe; drilling optimization and automation services; tubular inspection, repair and coating services; rope access inspection; instrumentation; measuring and monitoring; downhole and fishing tools; steerable technologies; hole openers; and drill bits.

Wellbore Technologies focuses on oil and gas companies and supports drilling contractors, oilfield service companies, and oilfield equipment rental companies. Demand for the segment's products and services depends on the level of oilfield drilling activity by oil and gas companies, drilling contractors, and oilfield service companies.

### *Completion & Production Solutions*

The Company's Completion & Production Solutions segment integrates technologies for well completions and oil and gas production. The segment designs, manufactures, and sells equipment and technologies needed for hydraulic fracture stimulation, including pressure pumping trucks, blenders, sanders, hydration units, injection units, flowline, and manifolds; well intervention, including coiled tubing units, coiled tubing, and wireline units, BOPs, and tools; onshore production, including fluid processing systems, composite pipe, surface transfer and progressive cavity pumps, and artificial lift systems; and, offshore production, including fluid processing systems, floating production systems, subsea production technologies, and connectors for conductor pipe.

Completion & Production Solutions supports service companies and oil and gas companies. Demand for the segment's products depends on the level of oilfield completions and workover activity by oilfield service companies and drilling contractors, and capital spending plans by oil and gas companies and oilfield service companies.

### *Rig Technologies*

The Company's Rig Technologies segment makes and supports the capital equipment and integrated systems needed to drill oil and gas wells on land and offshore as well as other marine-based markets, including offshore wind vessels. The segment designs, manufactures and sells land rigs, offshore drilling equipment packages, including installation and commissioning services, and drilling rig components that mechanize and automate the drilling process and rig functionality. Equipment and technologies in Rig Technologies include: substructures, derricks, and masts; cranes; jacking systems; pipe lifting, racking, rotating, and assembly systems; fluid transfer technologies, such as mud pumps; pressure control equipment, including blowout preventers; power transmission systems, including drives and generators; rig instrumentation and control systems; mooring, anchor, and deck handling machinery; and pipelay and construction systems. The segment also provides spare parts, repair, and rentals as well as comprehensive remote equipment monitoring, technical support, field service, and customer training through an extensive network of aftermarket service and repair facilities strategically located in major areas of drilling operations around the world.

Rig Technologies supports land and offshore drillers. Demand for the segment's products depends on drilling contractors' and oil and gas companies' capital spending plans, specifically capital expenditures on rig construction and refurbishment; and secondarily on the overall level of oilfield drilling activity, which drives demand for spare parts, service, and repair for the segment's large installed base of equipment.

*Geographic Areas:*

The following table presents consolidated revenues by country based on sales destination of the products or services (in millions):

	Years Ended December 31,		
	2018	2017	2016
United States	\$ 3,480	\$ 2,760	\$ 1,961
Saudi Arabia	444	310	258
Brazil	415	498	242
Norway	368	295	339
Singapore	321	188	340
United Kingdom	309	279	299
Canada	302	286	217
United Arab Emirates	248	223	334
China	231	298	557
South Korea	169	261	495
Other Countries	2,166	1,906	2,209
Total	<u>\$ 8,453</u>	<u>\$ 7,304</u>	<u>\$ 7,251</u>

The following table presents long-lived assets by country based on the location (in millions):

	December 31,	
	2018	2017
United States	\$ 1,603	\$ 1,675
Brazil	217	269
United Kingdom	125	140
Denmark	119	128
South Korea	91	97
Canada	79	84
Russia	69	90
United Arab Emirates	60	65
Mexico	48	71
Singapore	47	59
Other Countries	339	324
Total	<u>\$ 2,797</u>	<u>\$ 3,002</u>

*Business Segments:*

The following table presents selected financial data by business segment (in millions):

	<b>Wellbore Technologies</b>	<b>Completion &amp; Production Solutions</b>	<b>Rig Technologies</b>	<b>Eliminations and corporate costs (1)</b>	<b>Total</b>
<b>December 31, 2018</b>					
Revenue	\$ 3,235	\$ 2,931	\$ 2,575	\$ (288)	\$ 8,453
Operating profit (loss)	131	166	213	(299)	211
Capital expenditures	135	87	17	5	244
Depreciation and amortization	374	212	90	14	690
Goodwill	3,011	2,041	1,212	—	6,264
Total assets	7,929	6,233	3,906	1,728	19,796
<b>December 31, 2017</b>					
Revenue	\$ 2,577	\$ 2,672	\$ 2,252	\$ (197)	\$ 7,304
Operating profit (loss)	(102)	98	(14)	(259)	(277)
Capital expenditures	99	69	16	8	192
Depreciation and amortization	379	215	88	16	698
Goodwill	2,956	2,122	1,149	—	6,227
Total assets	7,848	5,782	4,625	1,951	20,206
<b>December 31, 2016</b>					
Revenue	\$ 2,199	\$ 2,241	\$ 3,110	\$ (299)	\$ 7,251
Operating profit (loss)	(770)	(266)	(1,033)	(342)	(2,411)
Capital expenditures	124	61	24	75	284
Depreciation and amortization	384	209	94	16	703
Goodwill	2,874	2,058	1,135	—	6,067
Total assets	7,911	5,765	5,327	2,137	21,140

- (1) Sales from one segment to another generally are priced at estimated equivalent commercial selling prices; however, segments originating an external sale are credited with the full profit to the Company. Eliminations and corporate costs include intercompany transactions conducted between the three reporting segments that are eliminated in consolidation, as well as corporate costs not allocated to the segments. Intercompany transactions within each reporting segment are eliminated within each reporting segment. Also included in the eliminations and corporate costs column are capital expenditures and total assets related to corporate. Corporate assets consist primarily of cash and fixed assets.



## 16. Quarterly Financial Data (Unaudited)

Summarized quarterly results, were as follows (in millions, except per share data):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Year ended December 31, 2018				
Revenue	\$ 1,795	\$ 2,106	\$ 2,154	\$ 2,398
Gross profit	287	355	393	409
Net profit (loss) attributable to Company	(68)	24	1	12
Net profit (loss) attributable to Company per basic share	(0.18)	0.06	0.00	0.03
Net profit (loss) attributable to Company per diluted share	(0.18)	0.06	0.00	0.03
Cash dividends per share	0.05	0.05	0.05	0.05
Year ended December 31, 2017				
Revenue	\$ 1,741	\$ 1,759	\$ 1,835	\$ 1,969
Gross profit (loss)	209	231	285	167
Net loss attributable to Company	(122)	(75)	(26)	(14)
Net loss attributable to Company per basic share	(0.32)	(0.20)	(0.07)	(0.04)
Net loss attributable to Company per diluted share	(0.32)	(0.20)	(0.07)	(0.04)
Cash dividends per share	0.05	0.05	0.05	0.05

**SCHEDULE II**  
**NATIONAL OILWELL VARCO, INC.**  
**VALUATION AND QUALIFYING ACCOUNTS**  
**Years Ended December 31, 2018, 2017 and 2016**  
**(in millions)**

	Balance beginning of year	Additions (Deductions) charged to costs and expenses	Charge off's and other	Balance end of year
<b>Allowance for doubtful accounts:</b>				
2018	\$ 187	\$ 17	\$ (43)	\$ 161
2017	209	6	(28)	187
2016	159	52	(2)	209
<b>Reserve for excess and obsolete inventories:</b>				
2018	\$ 800	\$ 49	\$ (205)	\$ 644
2017	1,017	114	(331)	800
2016	500	606	(89)	1,017
<b>Valuation allowance for deferred tax assets:</b>				
2018	\$ 1,202	\$ 49	\$ (296)	\$ 955
2017	544	280	378	1,202
2016	63	476	5	544
<b>Warranty reserve:</b>				
2018	\$ 135	\$ 38	\$ (68)	\$ 105
2017	172	46	(83)	135
2016	244	50	(122)	172

## SUBSIDIARIES OF THE REGISTRANT

<u>Name</u>	<u>State or Country of Incorporation</u>
Ackerman Holdings C.V.	Netherlands
Ackerman Holdings GP LLC	United States
Ackerman International Holland B.V.	Netherlands
Advanced Wirecloth, LLC	United States
AG Holding UK	United Kingdom
Aggregate Plant Products Co.	United States
Algoa Oil & Pipeline Services Proprietary Limited	South Africa
American Pipe and Construction International	United States
Ameron Holdings Pte. Ltd.	Singapore
Ameron International Corporation	United States
Ameron Pole Products LLC	United States
Ameron Polyplaster Industria E Comercio de Tubos Ltda.	Brazil
Ameron Singapore Holding, LLC	United States
Ameron Singapore Poly Holdings Pte. Ltd.	Singapore
Ameron Trading Holdings Pte. Ltd.	Singapore
Andergauge Limited	United Kingdom
Andergauge Redback, LLC	United States
Andergauge USA, Inc.	United States
APL do Brasil Ltda.	Brazil
APL France SAS	France
APL Management Pte Ltd	Singapore
APL Norway AS	Norway
APL Technology AS	Norway
Arabian Land Rig Manufacturing Company	Saudi Arabia
ASEP Group Holding B.V.	Netherlands
ASEP Otomotiv Sanayi Ticaret Ltd.	Turkey
Aswan National Oilwell Varco LLC	United Arab Emirates
Axiom Process Limited	United Kingdom
Big Red Tubulars Limited	Virgin Islands, British
Bondstrand Ltd.	Saudi Arabia
Bowen Downhole LLC	United States
Bowen Downhole, Inc.	United States
Brandt Energy Environmental, L.P.	United States
Brandt Interests, Inc.	United States
Brandt Oilfield Services (M) Sdn. Bhd.	Malaysia
C.M.A. Canavera S.R.L.	Italy
Camco Drilling Group Limited	United Kingdom
Chemineer, Inc.	United States
CJSC Fidmash	Belarus
CJSC Novmash	Belarus
Coil Services Middle East LLC	United Arab Emirates
Cooperatie Intelliserv Holding U.A.	Netherlands
Cooperatie NOV NL U.A.	Netherlands
CSI Inspection, LLC	United States
Danco AS	Norway
Devin International, Inc.	United States
Dreco Canada L.P.	Canada
Dreco DHT Holding B.V.	Netherlands

<b>Name</b>	<b>State or Country of Incorporation</b>
Dreco DHT, Inc.	United States
Dreco Eastern Europe ULC	Canada
Dreco Energy Holding B.V.	Netherlands
Dreco Energy NL Cooperatief U.A.	Netherlands
Dreco Energy Services ULC	Canada
Dreco International Holdings ULC	Canada
Dreco LLC	United States
E.C. Motors, Inc.	United States
Elmar Far East Pty Ltd	Australia
Enerpro de Mexico, S.A. de C.V.	Mexico
Environmental Procedures LLC	United States
Fiber Glass System (Suzhou) Co. Ltd.	China
Fiber Glass Systems (Qingdao) Composite Piping Co., Ltd.	China
Fiber Glass Systems Holdings, LLC	United States
Fiber Glass Systems Oman L.L.C.	Oman
Fiber Glass Systems, L.P.	United States
Fiber Glass Trading (Shanghai) Co. Ltd.	China
Fiberspar Australia Pty. Ltd.	Australia
Fiberspar Corporation	United States
Fiberspar Linepipe Canada Ltd.	Canada
FidService, LLC	Russian Federation
Fjords Processing (Shanghai) Co., Ltd.	China
Fjords Processing 1 AS	Norway
Fjords Processing Australia Pty Ltd	Australia
Fjords Processing Canada ULC	Canada
Fjords Processing Colombia S.A.S.	Colombia
Fjords Processing France SAS	France
Fjords Processing Korea Co. Ltd.	Korea, Republic of
Fjords Processing Limited	United Kingdom
Fjords Processing Middle East DMCC	United Arab Emirates
Fjords Processing UK Ltd.	United Kingdom
Fryma S.a.r.l.	France
German Oil Tools (Middle East) FZE	United Arab Emirates
GOT German Oil Tools GmbH	Germany
GP USA Holding, LLC	United States
GPEX, L.P.	United States
Grant Prideco (Jiangsu) Drilling Products Co., Ltd	China
Grant Prideco (Singapore) Pte Ltd	Singapore
Grant Prideco AB TCA Holding LLC	United States
Grant Prideco de Venezuela, S.A.	Venezuela, Bolivarian Republic of
Grant Prideco European Holding, LLC	United States
Grant Prideco Finance, LLC	United States
Grant Prideco Holding, LLC	United States
Grant Prideco III C. V.	Netherlands
Grant Prideco Jersey Limited	Jersey Island
Grant Prideco Mauritius Limited	Mauritius
Grant Prideco Netherlands B.V.	Netherlands
Grant Prideco PC Composites Holdings, LLC	United States
Grant Prideco USA, LLC	United States
Grant Prideco, Inc.	United States
Grant Prideco, L.P.	United States
Grant Prideco, S. de R.L. de C.V.	Mexico

<b>Name</b>	<b>State or Country of Incorporation</b>
Greystone Technologies Pty. Ltd.	Australia
GustoMSC B.V.	Netherlands
GustoMSC Midco B.V.	Netherlands
GustoMSC Projects 1 B.V.	Netherlands
GustoMSC Projects 2 B.V.	Netherlands
GustoMSC Resources B.V.	Netherlands
GustoMSC U.S., Inc.	United States
Hebei Huayouyiji Tuboscope Coating Co., Ltd.	China
Hitec AS	Norway
Hydralift AmClyde, Inc.	United States
Hydralift France SAS	France
Hydralift Holdings UK Limited	United Kingdom
Hydra-Rig, Inc.	United States
Inspecciones y Pruebas No Destructivas, S. de R.L. de C.V.	Mexico
Intellipipe, Inc.	United States
Intelliserv GP Holdings LLC	United States
Intelliserv International Holding, Ltd	Cayman Islands
Intelliserv Mexico, S. de R.L. de C.V.	Mexico
IntelliServ Norway AS	Norway
Intelliserv, Inc.	United States
Intelliserv, LLC	United States
Interval LLC	Russian Federation
JiangYin Tuboscope Tubular Development Co., Ltd	China
MDT OFS Inc.	United States
Merpro Americas, Inc.	United States
Merpro Group Limited	United Kingdom
Merpro Products Limited	United Kingdom
Merpro Tortek Limited	United Kingdom
Midsund Bruk AS	Norway
Mono Group Pension Trustees Limited	United Kingdom
Mono Pumps New Zealand Company	New Zealand
Monoflo NOV S.A.I.C.	Argentina
Moyno de Mexico, S.A. de C.V.	Mexico
Moyno, Inc.	United States
Mustang Capital Corp.	United States
National Oilwell (U.K.) Limited	United Kingdom
National Oilwell Algeria	Algeria
National Oilwell de Venezuela, C.A.	Venezuela, Bolivarian Republic of
National Oilwell DHT, L.P.	United States
National Oilwell Middle East Company	Canada
National Oilwell Services de Mexico, S.A. de C.V.	Mexico
National Oilwell Varco (Beijing) Investment Management Co. Ltd.	China
National Oilwell Varco (Thailand) Ltd.	Thailand
National Oilwell Varco Algeria EURL	Algeria
National Oilwell Varco Almansoori Services	United Arab Emirates
National Oilwell Varco Bahrain WLL	Bahrain
National Oilwell Varco Belgium SA	Belgium
National Oilwell Varco de Bolivia S.R.L.	Bolivia
National Oilwell Varco de Chile - Servicios Limitada	Chile
National Oilwell Varco Denmark I/S	Denmark
National Oilwell Varco do Brasil Ltda.	Brazil
National Oilwell Varco Egypt LLC	Egypt

<b>Name</b>	<b>State or Country of Incorporation</b>
National Oilwell Varco Eurasia, LLC	Russian Federation
National Oilwell Varco Guatemala, Limitada	Guatemala
National Oilwell Varco Guyana Inc.	Guyana
National Oilwell Varco Holdings LLC	United States
National Oilwell Varco Hungary Limited Liability Company	Hungary
National Oilwell Varco Korea Co., Ltd.	Korea, Republic of
National Oilwell Varco Mexico, S.A de C.V.	Mexico
National Oilwell Varco MSW S.A.	Argentina
National Oilwell Varco Muscat L.L.C.	Oman
National Oilwell Varco Norway AS	Norway
National Oilwell Varco Peru S.R.L.	Peru
National Oilwell Varco Petroleum Equipment (Shanghai) Co., Ltd.	China
National Oilwell Varco Poland Sp.z.o.o.	Poland
National Oilwell Varco Pte. Ltd.	Singapore
National Oilwell Varco Rig Equipment Trading (Shanghai) Co., Ltd.	China
National Oilwell Varco Romania S.R.L.	Romania
National Oilwell Varco Sdn Bhd	Brunei Darussalam
National Oilwell Varco Solutions, S.A. de C.V.	Mexico
National Oilwell Varco UK Limited	United Kingdom
National Oilwell Varco Ukraine LLC	Ukraine
National Oilwell Varco, Inc.	United States
National Oilwell Varco, L.P.	United States
National-Oilwell Pte. Ltd.	Singapore
National-Oilwell Pty. Ltd.	Australia
New Holland Cooperatief U.A.	Netherlands
NOCL Holding B.V.	Netherlands
NOV - Oil Services Angola, LDA.	Angola
NOV (Asia), Inc.	Mauritius
NOV (Barbados) Holding SRL	Barbados
NOV (Barbados) SRL	Barbados
NOV (Caymans), Ltd.	Cayman Islands
NOV (Malaysia) Sdn. Bhd.	Malaysia
NOV Africa Pty Ltd	South Africa
NOV APL Limited	Cyprus
NOV ASEP Elmar Mexico, S.de R.L. de C.V.	Mexico
NOV Australia Pty Ltd	Australia
NOV Azerbaijan LLC	United States
NOV Brandt Europe France	France
NOV Brandt Oilfield Services Middle East LLC	United Arab Emirates
NOV Completion and Production Solutions Korea Ltd.	Korea, Republic of
NOV Completion Tools AS	Norway
NOV Completion Tools LLC	Russian Federation
NOV Condor, LLC	United States
NOV CV1 GP LLC	United States
NOV CV2 GP LLC	United States
NOV Denmark Cooperatief U.A.	Netherlands
NOV DH de Mexico, S. de R.L. de C.V.	Mexico
NOV DHT Canada Holding ULC	Canada
NOV Downhole Argentina, LLC	United States
NOV Downhole Bolivia S.R.L.	Bolivia
NOV Downhole Colombia, LLC	United States
NOV Downhole Comercialização de Equipamentos para Petroleo Ltda.	Brazil

<b>Name</b>	<b>State or Country of Incorporation</b>
NOV Downhole Congo, LLC	United States
NOV Downhole Eurasia Limited	United Kingdom
NOV Downhole Europe B.V.	Netherlands
NOV Downhole Germany GmbH	Germany
NOV Downhole Italia S.R.L.	Italy
NOV Downhole Kazakhstan, LLC	United States
NOV Downhole Malaysia Sdn. Bhd.	Malaysia
NOV Downhole Pty Ltd	Australia
NOV Downhole Thailand, LLC	United States
NOV Dresco GP LLC	United States
NOV EAST B.V.	Netherlands
NOV Elmar (Middle East) Limited	United Kingdom
NOV Elmar NL B.V.	Netherlands
NOV Elmar Pte. Ltd.	Singapore
NOV Enerflow ULC	Canada
NOV EU Acquisition SNC	France
NOV Eurasia Holding LLC	United States
NOV European Holding LLC	United States
NOV Expatriate Services, Inc.	United States
NOV Far East B.V.	Netherlands
NOV FGS Malaysia Sdn Bhd	Malaysia
NOV FGS Singapore (Pte.) Ltd	Singapore
NOV Fiber Glass Systems B.V.	Netherlands
NOV Fiber Glass Systems Fabricacao De Tubos E Conexoes Ltda	Brazil
NOV Flexibles Equipamentos E Servicos Ltda.	Brazil
NOV Flexibles Holding ApS	Denmark
NOV Floating Production AS	Norway
NOV Fluid Control B.V.	Netherlands
NOV Gabon SARL	Gabon
NOV GEO GP LLC	United States
NOV GEO LP1 C.V.	Netherlands
NOV GEO LP2 C.V.	Netherlands
NOV Germany Holding GmbH	Germany
NOV Ghana Limited	Ghana
NOV GP Holding, L.P.	United States
NOV GP Sub LLC	United States
NOV GP1 Holding LLC	United States
NOV Grant Prideco Drilling Products Middle East FZE	United Arab Emirates
NOV Grant Prideco L.L.C.	United Arab Emirates
NOV Holding Danmark ApS	Denmark
NOV Holding Germany GmbH & Co KG	Germany
NOV Holding Germany Management GmbH	Germany
NOV Holdings B.V.	Netherlands
NOV Hydra Rig Pte. Ltd	Singapore
NOV India Private Limited	India
NOV Intelliserv UK Limited	United Kingdom
NOV International Holding B.V.	Netherlands
NOV International Holdings C.V.	Netherlands
NOV International Holdings GP LLC	United States
NOV Intervention and Stimulation Equipment – Aftermarket Comércio de Equipamentos e Serviços Ltda.	Brazil
NOV Kenya Limited	Kenya

<b>Name</b>	<b>State or Country of Incorporation</b>
NOV Kostroma LLC	Russian Federation
NOV Mexico Holding LLC	United States
NOV Middle East FZCO	United Arab Emirates
NOV Mission Products UK Limited	United Kingdom
NOV Mozambique Limitada	Mozambique
NOV Netherlands Finance Holding C.V.	Netherlands
NOV Netherlands Finance Holding LLC	United States
NOV North America I/P, LLC	United States
NOV Norway 1 Holding LLC	United States
NOV Oil & Gas Services Uganda Limited	Uganda, Republic of
NOV Oil and Gas Services Ghana Limited	Ghana
NOV Oil and Gas Services Namibia (Proprietary) Limited	Namibia
NOV Oil and Gas Services Nigeria Limited	Nigeria
NOV Oil and Gas Services South Africa (Pty) Limited	South Africa
NOV Oilfield Services Tanzania Limited	Tanzania, United Republic of
NOV Oilfield Services Vostok LLC	Russian Federation
NOV Oilfield Solutions Ltd.	Nigeria
NOV Park I B.V.	Netherlands
NOV Park II B.V.	Netherlands
NOV Process & Flow Technologies AS	Norway
NOV Process & Flow Technologies Malaysia Sdn. Bhd.	Malaysia
NOV Process & Flow Technologies Pte. Ltd.	Singapore
NOV Process & Flow Technologies UK Limited	United Kingdom
NOV Process & Flow Technologies US, Inc.	United States
NOV Rig Solutions Pte. Ltd.	Singapore
NOV Rigstore, Inc.	United States
NOV Romania, LLC	United States
NOV Saudi Arabia Co. Ltd.	Saudi Arabia
NOV Saudi Arabia Trading Co.	Saudi Arabia
NOV Services Ltd.	Cayman Islands
NOV Servicios de Personal Mexico, S. de R.L. de C.V.	Mexico
NOV Subsea Products AS	Norway
NOV Tuboscope Italia S.R.L.	Italy
NOV Tuboscope Middle East LLC	United Arab Emirates
NOV Tuboscope NL B.V.	Netherlands
NOV Tubulars and Connectors Ltd.	Nigeria
NOV TV2 LLC	United States
NOV TVI LLC	United States
NOV UK (Angola Acquisitions) Limited	United Kingdom
NOV UK Finance Limited	United Kingdom
NOV UK Holdings Limited	United Kingdom
NOV UK Korea LP	United Kingdom
NOV Wellbore Technologies Norway LLC	United States
NOV Wellsite Services Germany GmbH	Germany
NOV West B.V.	Netherlands
NOV Worldwide C.V.	Netherlands
NOV-BLM SAS	France
NOVM Holding LLC	United States
NOW Downhole Tools, Inc.	United States
NOW International LLC	United States
NOW Nova Scotia Holdings LLC	United States
NOW Oilfield Services II, LLC	United States



<b>Name</b>	<b>State or Country of Incorporation</b>
NOW Oilfield Services, LLC	United States
NQL (US) LLC	United States
NQL Energy Services US, Inc.	United States
NQL Holland B.V.	Netherlands
Pesaka Inspection Services SDN.BHD.	Malaysia
Pipex Limited	United Kingdom
Pipex PX Limited	United Kingdom
Pipex Structural Composites Limited	United Kingdom
Pridecomex Holding, S. de R.L. de C.V.	Mexico
Pridecomex TA Industries, LLC	United States
Procon Engineering Ltd.	United Kingdom
Profab Engineering Pte. Ltd.	Singapore
Profab Services Pte Ltd	Singapore
PT Fjords Processing Indonesia	Indonesia
PT H-Tech Oilfield Equipment	Indonesia
PT National Oilwell Varco	Indonesia
PT NOV Oilfield Services	Indonesia
PT PROFAB INDONESIA	Indonesia
Quality Tubing FSC	Virgin Islands, British
R&M C.V.	Netherlands
R&M Canada Cooperatief U.A.	Netherlands
R&M Canada Holding B.V.	Netherlands
R&M Energy Systems Australia Pty Ltd.	Australia
R&M Energy Systems de Argentina S.A.	Argentina
R&M Energy Systems de Venezuela, C.A.	Venezuela, Bolivarian Republic of
R&M Environmental Strategies, Inc.	United States
R&M Singapore Holding LLC	United States
R&M UK Holding LLC	United States
RE.MAC.UT. S.r.l.	Italy
ReedHycalog Angola, LLC	United States
ReedHycalog Cameroon, LLC	United States
ReedHycalog CIS, LLC	United States
ReedHycalog Coring Services International, Inc.	United States
ReedHycalog International Holding, LLC	United States
ReedHycalog UK Limited	United Kingdom
ReedHycalog, L.P.	United States
ReedHycalog, LLC	United States
RHI Holding LLC	United States
Robannic Overseas Finance A.V.V.	Aruba
Robbins & Myers (Suzhou) Process Equipment Company Limited	China
Robbins & Myers B.V.	Netherlands
Robbins & Myers Foundation	United States
Robbins & Myers GP LLC	United States
Robbins & Myers Holdings UK Limited	United Kingdom
Robbins & Myers Holdings, LLC	United States
Robbins & Myers Italia S.R.L.	Italy
Robbins & Myers N.V.	Curacao
Robbins & Myers, Inc.	United States
Rodic, S.A. de C.V.	Mexico
Romaco S.a.r.l.	France
Screen Manufacturing Company Unlimited	Trinidad and Tobago
Seabox AS	Norway

<b>Name</b>	<b>State or Country of Incorporation</b>
Slip Clutch Systems Limited	United Kingdom
Smart Drilling GmbH	Germany
Soil Recovery A/S	Denmark
Star Fiberglass Harbin Co., Ltd.	China
STAR Sudamtex Tubulares S.A.	Venezuela, Bolivarian Republic of
STB H2O TUNISIE	Tunisia
Subseaflex Holding ApS	Denmark
T-3 Energy Preferred Industries Mexico, S. de R.L. de C.V.	Mexico
T-3 Energy Services Cayman Holdings, Ltd.	Cayman Islands
T-3 Energy Services Cayman, Ltd.	Cayman Islands
T-3 Energy Services India Private Limited	India
T-3 Energy Services International, Inc.	United States
T-3 Energy Services Mexico, S. de R.L. de C.V.	Mexico
T-3 Energy Services, LLC	United States
T-3 Investment Corporation IV	United States
T-3 Mexican Holdings, Inc.	United States
Telluride Insurance Limited	Bermuda
Tianjin Grant Prideco TPCO Oilfield Drilling Products Co., Ltd.	China
Tianjin Grant TPCO Drilling Tools Company Limited	China
TracID, Inc.	United States
Tube-Kote, Inc.	United States
Tubo-FGS, L.L.C.	United States
Tuboscope & Co. LLC	Oman
Tuboscope (Holding U.S.) LLC	United States
Tuboscope Brandt de Venezuela, S.A.	Venezuela, Bolivarian Republic of
Tuboscope Norge AS	Norway
Tuboscope Pipeline Services Inc.	United States
Tuboscope Services, L.L.C.	United States
Tuboscope Vetco (Deutschland) GmbH	Germany
Tuboscope Vetco (France) SAS	France
Tuboscope Vetco (Österreich) GmbH	Austria
Tuboscope Vetco Canada ULC	Canada
Tuboscope Vetco Capital Limited	United Kingdom
Tuboscope Vetco de Argentina S.A.	Argentina
Tuboscope Vetco Moscow CJSC	Russian Federation
Tubular Coatings Solutions Ltd.	Saudi Arabia
Tucom Composites Polyester Sanayi Ticaret Ltd.	Turkey
TVI Holdings, L.L.C.	United States
Vallourec Drilling Oil Equipment Manufacturing L.L.C.	United Arab Emirates
Varco BJ B.V.	Netherlands
Varco Canada ULC	Canada
Varco CIS, LLC	Russian Federation
Varco I/P, Inc.	United States
Varco Internacional do Brasil Equipamentos E Servicos Ltda.	Brazil
Varco Internacional de Venezuela, C.A.	Venezuela, Bolivarian Republic of
Varco US Finance, Inc.	United States
Varco US Holdings LLC	United States
Varco, L.P.	United States
Vetco Coating GmbH	Germany
Vetco Enterprise GmbH	Switzerland
Vetco Pipeline Services, Inc.	United States
Vetco Saudi Arabia Ltd.	Saudi Arabia

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<b>Name</b>	<b>State or Country of Incorporation</b>
Visible Assets, Inc.	United States
voestalpine Middle East Free Zone Establishment	United Arab Emirates
voestalpine Tubulars Corporation	United States
voestalpine Tubulars GmbH	Austria
voestalpine Tubulars GmbH & Co KG	Austria
Woolley, Inc.	United States
XL Systems Antilles, N.V.	Curacao
XL Systems Europe B.V.	Netherlands
XL Systems International, Inc.	United States
XL Systems, L.P.	United States

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in the following Registration Statements of National Oilwell Varco, Inc. and in each related Prospectus:

<b>Form</b>	<b>Description</b>
S-8	National-Oilwell, Inc. Stock Award and Long Term Incentive Plan, Value Appreciation and Incentive Plan A and Value Appreciation and Incentive Plan B (No. 333-15859)
S-8	National-Oilwell Retirement and Thrift Plan (No. 333-36359)
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-123310)
S-8	National Oilwell Varco, Inc. Employee Stock Purchase Plan (No. 333-123301)
S-8	Varco International Inc. 2003 Equity Participation Plan; Stock Option Plan for Non-Employee Directors, as amended; Varco International, Inc. 1990 Stock Option Plan; 1994 Directors' Stock Option Plan; Varco International, Inc. 401(k)/Profit Sharing Plan (No. 333-123287)
S-8	Varco International, Inc. Deferred Compensation Plan (No. 333-123286)
S-8	National-Oilwell, Inc. Amended and Restated Stock Award and Long-Term Incentive Stock Plan (No. 333-118721)
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-159333)
S-3	Registration Statement on Form S-3 for the registration of debt securities (No. 333-208014)
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-188818)
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-211537)
S-8	National Oilwell Varco, Inc. 2018 Long-Term Incentive Plan (No. 333-224892)

of our reports dated February 14, 2019, with respect to the consolidated financial statements and schedule of National Oilwell Varco, Inc., and the effectiveness of internal control over financial reporting of National Oilwell Varco, Inc., included in this Annual Report (Form 10-K) of National Oilwell Varco, Inc. for the year ended December 31, 2018.

/s/ ERNST & YOUNG LLP  
Houston, Texas

February 14, 2019

## CERTIFICATION

I, Clay C. Williams, certify that:

1. I have reviewed this annual report on Form 10-K of National Oilwell Varco, Inc. for the fiscal year ended December 31, 2018;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 14, 2019

By: /s/ Clay C. Williams

Clay C. Williams

Chairman, President and Chief Executive Officer

## CERTIFICATION

I, Jose A. Bayardo, certify that:

1. I have reviewed this annual report on Form 10-K of National Oilwell Varco, Inc. for the fiscal year ended December 31, 2018;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 14, 2019

By: /s/ Jose A. Bayardo

Jose A. Bayardo

Senior Vice President and Chief Financial Officer

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Annual Report of National Oilwell Varco, Inc. (the "Company") on Form 10-K for the year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Clay C. Williams, Chairman, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 14, 2019

By: /s/ Clay C. Williams

Clay C. Williams

Chairman, President and Chief Executive Officer

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Annual Report of National Oilwell Varco, Inc. (the "Company") on Form 10-K for the year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jose A. Bayardo, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 14, 2019

By: /s/ Jose A. Bayardo

Jose A. Bayardo

Senior Vice President and Chief Financial Officer



Mine Safety Disclosures

Our mines are operated subject to the regulation of the Federal Mine Safety and Health Administration (“MSHA”), under the Federal Mine Safety and Health Act of 1977 (the “Mine Act”). The following mine safety data is provided pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”).

As required by the reporting requirements of the Dodd-Frank Act, as amended, the table below presents the following information for the year ended December 31, 2018. (in whole dollars) (Unaudited)

Mine	Section 104 S&S Citations	Section 104(b) Orders	Section 104(d) Citations and Orders	Section 110(b)(2) Violations	Section 107(a) Orders	Total Dollar Value of MSHA Assessments Proposed	Total Number of Mining Related Fatalities	Received Notice of Pattern of Violations Under Section 104(e)	Received Notice of Potential to have Patterns Under Section 104(e)	Legal Actions Pending as of Last Day of Period	Legal Actions Initiated During Period	Legal Actions Resolved During Period
Dry Creek (26-02646)	—	—	—	—	—	\$ —	—	no	no	—	—	—
Osino Barite Mill (26-02724)	—	—	—	—	—	\$ —	—	no	no	—	—	—