

NATIONAL OILWELL VARCO INC  
Form 10-K  
February 14, 2014  
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**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, 2013**

**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)

<b>Delaware</b> (State or other jurisdiction)	<b>76-0475815</b> (IRS Employer
of incorporation or organization)	Identification No.)
<b>7909 Parkwood Circle Drive, Houston, Texas 77036-6565</b>	

(Address of principal executive offices)

**(713) 346-7500**

(Registrant's telephone number, including area code)

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**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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company) Smaller Reporting Company

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 28, 2013 was \$29.5 billion. As of February 7, 2014, there were 428,526,178 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 2014 Annual Meeting of Stockholders are incorporated in Part III of this report.

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**FORM 10-K**

**PART I**

**ITEM 1. BUSINESS**

**General**

National Oilwell Varco, Inc. ( NOV or the Company ), a Delaware corporation incorporated in 1995, is a leading worldwide provider of equipment and components used in oil and gas drilling and production operations, oilfield services, and supply chain integration services to the upstream oil and gas industry. The Company conducts operations in over 1,235 locations across six continents.

The Company's principal executive offices are located at 7909 Parkwood Circle Drive, Houston, Texas 77036, its telephone number is (713) 346-7500, and its Internet website address is <http://www.nov.com>. The Company's annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and all amendments thereto, are available free of charge on its Internet website. These reports are posted on its website as soon as reasonably practicable after such reports are electronically filed with the Securities and Exchange Commission ( SEC ). The Company's Code of Ethics is also posted on its website.

The Company has a long tradition of pioneering innovations which improve the cost-effectiveness, efficiency, safety and environmental impact of oil and gas operations. The Company's common stock is traded on the New York Stock Exchange under the symbol NOV . The Company operates through three reporting segments: Rig Technology, Petroleum Services & Supplies, and Distribution & Transmission.

On September 24, 2013, the Company announced that its Board of Directors authorized Company management to move forward with exploration of a plan to spin-off the Company's distribution business from the remainder of the Company, creating two stand-alone, publicly traded corporations. The Company believes that the separation of the distribution business can be accomplished via a tax-efficient spin-off to Company shareholders.

*Rig Technology*

Our Rig Technology segment designs, manufactures, sells and services complete systems for the drilling, completion, and servicing of oil and gas wells. The segment offers a comprehensive line of highly-engineered equipment that automates complex well construction and management operations, such as offshore and onshore drilling rigs; derricks; pipe lifting, racking, rotating and assembly systems; rig instrumentation systems; blowout preventers; coiled tubing equipment and pressure pumping units; well workover rigs; wireline winches; wireline trucks; cranes; flexible pipe for offshore production applications; and turret mooring systems and other products for floating production, storage and offloading vessels ( FPSOs ) and other offshore vessels and terminals. Demand for Rig Technology products is primarily dependent on capital spending plans by drilling contractors, oilfield service companies, and oil and gas companies; and secondarily on the overall level of oilfield drilling activity, which drives demand for spare parts for the segment's large installed base of equipment. We have made strategic acquisitions and other investments during the past several years in an effort to expand our product offering and our global manufacturing, training and service capabilities, including adding additional operations in the United States, Canada, Norway, Denmark, the United Kingdom, Brazil, China, Belarus, India, Russia, the Netherlands, Singapore, South Korea, South Africa, and Angola.

*Petroleum Services & Supplies*

Our Petroleum Services & Supplies segment provides a variety of consumable goods and services used to drill, complete, remediate and workover oil and gas wells and service drill pipe, tubing, casing, flowlines and other oilfield tubular goods. The segment manufactures, rents and sells a variety of products and equipment used to perform drilling operations, including drill pipe, wired drill pipe, transfer pumps, valves, solids control systems, drilling motors, drilling fluids, drill bits, reamers and other downhole tools, and mud pump consumables. Demand for these services and supplies is determined principally by the level of oilfield drilling and workover activity by drilling contractors, oilfield service companies, major and independent oil and gas companies, and national oil companies. Oilfield tubular services include the provision of inspection and internal coating services and equipment for drill pipe, line pipe, tubing, casing and pipelines; and the design, manufacture and sale of coiled tubing pipe and advanced fiberglass composite pipe for application in highly corrosive environments. The segment sells its tubular goods and services to oil and gas companies; drilling contractors; pipe distributors, processors and manufacturers; and pipeline operators. This segment has benefited from several strategic acquisitions and other investments completed during the past few years, including additional operations in the United States, Canada, the United Kingdom, Brazil, China, Kazakhstan, Mexico, Russia, Argentina, India, Bolivia, the Netherlands, Singapore, Malaysia, Vietnam, Oman, and the United Arab Emirates.



**Table of Contents***Distribution & Transmission*

Our Distribution & Transmission segment provides pipe, maintenance, repair and operating supplies ( MRO ) and spare parts to drill sites and production locations, pipeline operations, processing plants, and industrial facilities worldwide. In addition to its comprehensive field location network, which supports land drilling operations throughout North America, the segment supports major land and offshore operations for all the major oil and gas producing regions throughout the world. The segment employs advanced information technologies to provide complete procurement, materials management and logistics services to its customers around the globe. The segment also has a global reach in oil and gas, waste water treatment, chemical, food and beverage, paper and pulp, mining, agriculture, and a variety of municipal markets and is a leading producer of water transmission pipe, fabricated steel products and specialized materials and products used in infrastructure projects. Demand for the segment's services is determined primarily by the level of drilling, servicing, and oil and gas production activities. It is also influenced by the domestic economy in general, housing starts and government policies. This segment has benefited from several strategic acquisitions and other investments completed around the world during the past few years, including the acquisition of the Wilson distribution business segment from Schlumberger Limited and CE Franklin Ltd. in Canada, both of which were completed in 2012, as well as additional operations in the United States, Canada, the United Kingdom, Kazakhstan, Singapore, Russia, and Malaysia.

The following table sets forth the contribution to our total revenues of our three operating segments (in millions):

	Years Ended December 31,		
	2013	2012	2011
Revenue:			
Rig Technology	\$ 11,716	\$ 10,107	\$ 7,788
Petroleum Services & Supplies	7,184	6,967	5,654
Distribution & Transmission	5,117	3,927	1,873
Eliminations	(1,148)	(960)	(657)
Total Revenue	\$ 22,869	\$ 20,041	\$ 14,658

See Note 15 to the Consolidated Financial Statements included in this Annual Report on Form 10-K for financial information by segment and a geographical breakout of revenues and long-lived assets. We have included a glossary of oilfield terms at the end of Item 1. Business of this Annual Report.

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

The oil and gas industry in which the Company participates has historically experienced significant volatility. Demand for the Company's services and products depends primarily upon the general level of activity in the oil and gas industry worldwide, including the number of drilling 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 and the level of well remediation activity. 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 activity generally spurs demand for the Company's products and services used to drill and remediate oil and gas wells. 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 oil country tubular goods ( OCTG ) to invest in capital equipment that the Company sells.

Beginning in early 2004, increasing oil and gas prices led to steadily rising levels of drilling activity throughout the world. Concerns about the long-term availability of oil and gas supply also began to build. Consequently, the worldwide rig count increased 11% in 2006, 2% in 2007, and 7% in 2008. As a result of higher cash flows realized by many of the Company's customers, as well as the long-term concerns about supply-demand imbalance and the need to replace aging equipment, market conditions for capital equipment purchases improved significantly between 2006 and 2007, resulting in higher backlogs for the Company at the end of 2008 compared to the end of 2006 and 2007. However, as a result of the financial crisis and significantly lower commodity prices, the worldwide drilling rig count declined 31% in 2009 and customers were far less willing to commit to major capital equipment purchases in 2009. As a result, our order rates were substantially lower in 2009. In 2010, as the financial crisis eased and oil prices recovered, order rates began to improve across a broad array of rig equipment, with a particular focus on continued build out of the deepwater fleet. Each year 2011, 2012 and 2013 saw a further improvement in order rates as commodity prices remained at levels supporting sustained capital spending by our customers. However, the global rig count decreased 3% in 2013 compared to 2012 after rising by 1.5% in 2012 compared to 2011. Backlog for the Company was approximately \$16.2 billion at December 31, 2013 compared to approximately \$11.9 billion and \$10.2 billion for December 31, 2012 and 2011, respectively.



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In 2011, 2012 and 2013, most of the Company's revenue from Rig Technology resulted from major capital expenditures of drilling contractors, well servicing companies, and oil companies on rig construction and refurbishment, and well servicing equipment. These capital expenditures are influenced by the amount of cash flow that contractors and service companies generate from drilling, completion, and remediation activity; as well as by the availability of financing, the outlook for future drilling and well servicing activity, and other factors. Generally, the Company believes the demand for capital equipment lags increases in the level of drilling activity. Most of the remainder of the Rig Technology segment's revenue is related to the sale of spare parts and consumables, the provision of equipment-repair services, and the rental of equipment, which the Company believes are generally determined directly by the level of drilling and well servicing activity.

The majority of the Company's revenue from Petroleum Services & Supplies is closely tied to drilling activity, although a portion is related to the sale of capital equipment to drilling contractors, which may somewhat lag the level of drilling activity. Portions of the segment's revenue that are not tied to drilling activity include (i) the sale of progressive cavity pumps and solids control equipment for use in industrial applications, and (ii) the sale of fiberglass and composite tubing to industrial customers and shipyards, which is generally unrelated to drilling or well remediation activity but may be tied somewhat to oil and gas prices.

The Company's revenue from Distribution & Transmission is almost entirely driven by drilling activity and oil and gas production activities, with the exception of sales of water pipelines, concrete and pole products which is tied to infrastructure spending. Drilling and well servicing activity can fluctuate significantly in a short period of time.

The willingness of oil and gas operators to make capital investments to explore for and produce oil and natural gas will continue to be influenced by numerous factors over which the Company has no control, including but not limited to: the ability of the members of the Organization of Petroleum Exporting Countries ( OPEC ) to maintain oil price stability through voluntary production limits of oil; the level of oil production by non-OPEC countries; supply and demand for oil and natural gas; general economic and political conditions; costs of exploration and production; the availability of new leases and concessions; access to external financing; and governmental regulations regarding, among other things, environmental protection, climate change, taxation, price controls and product allocations. The willingness of drilling contractors and well servicing companies to make capital expenditures for the type of specialized equipment the Company provides is also influenced by numerous factors over which the Company has no control, including: the general level of oil and gas well drilling and servicing; rig day-rates; access to external financing; outlook for future increases in well drilling and well remediation activity; steel prices and fabrication costs; and government regulations regarding, among other things, environmental protection, taxation, and price controls.

See additional discussion on 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.

### **Overview of Oil and Gas Well Drilling and Servicing Processes**

Oil and gas wells are usually drilled by drilling contractors using a drilling rig. A bit is attached to the end of a drill stem, which is assembled by the drilling rig and its crew from 30-foot joints of drill pipe and specialized drilling components known as downhole tools. Using the conventional rotary drilling method, the drill stem is turned from the rotary table of the drilling rig by torque applied to the kelly, which is screwed into the top of the drill stem. Increasingly, drilling is performed using a drilling motor, which is attached to the bottom of the drill stem and provides rotational force directly to the bit, and a top drive, a device suspended from the derrick that turns the entire drill stem, rather than such force being supplied by the rotary table. The use of drilling motors and top drives permits the drilling contractor to drill directionally, including horizontally. The Company sells and rents drilling motors, drill bits, downhole tools and drill pipe through its Petroleum Services & Supplies segment and sells and rents top drives through its Rig Technology segment.

During drilling, 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 drill cuttings drilled out by the bit. The drill 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 chemicals, to be continuously reused and re-circulated back into the hole.

Through its Rig Technology segment, the Company sells the large mud pumps that are used to pump drilling mud through the drill stem. Through its Petroleum Services & Supplies segment, the Company sells transfer pumps and mud pump consumables; 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 corrosive fluids sometimes encountered during drilling, and inspect and assess the integrity of the drill pipe from time to time. The Company provides drill pipe inspection and coating services, and applies hardbanding material to drill pipe to improve its wear characteristics. These services are provided through the Petroleum Services & Supplies segment. Additionally, the Petroleum Services & Supplies segment manufactures and sells drill pipe.





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As the hole depth increases, the kelly must be removed frequently so that additional 30-foot joints of drill pipe can be 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 drill pipe. 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 drill pipe must be screwed together and tightened (made up), and loosened and unscrewed (spun out). The Rig Technology segment provides drilling equipment to manipulate and maneuver the drill pipe in this manner. When the hole has reached certain depths, all of the drill pipe 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, a service the Petroleum Services & Supplies segment provides. The Rig Technology segment manufactures pressure pumping equipment that is used to cement the casing in place.

The raising and lowering of the drill stem while drilling or tripping, and the lowering of casing into the wellbore, is accomplished with the rig's hoisting system. A conventional hoisting system is a block and tackle mechanism that works within the drilling rig's derrick. The lifting of this mechanism is performed via a series of pulleys that are attached to the drawworks at the base of the derrick. The Rig Technology segment sells and installs drawworks and pipe hoisting systems. During the course of normal drilling operations, the drill stem passes through different geological formations, which exhibit varying pressure characteristics. If this pressure is not contained, oil, gas and/or water would flow out of these formations to the surface.

The two means of containing these reservoir pressures are (i) primarily the circulation of drilling muds while drilling and (ii) secondarily the use of blowout preventers (BOPs) should the mud prove inadequate in an emergency situation. The Rig Technology segment sells and services blowout preventers. Drilling muds are carefully designed to exhibit certain qualities that optimize the drilling process. In addition to containing formation pressure, they must (i) provide power to the drilling motor, (ii) carry drilled solids to the surface, (iii) protect the drilled formations from being damaged, and (iv) cool the drill bit. Achieving these objectives often requires a formulation specific to a given well 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 this expense, 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. The Petroleum Services & Supplies segment rents, sells, operates and services this equipment. 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 in order to contain such a pressure kick fail, a blowout could result, whereby reservoir fluids would flow uncontrolled into the well. To prevent blowouts to the surface of the well, a series of high-pressure valves known as blowout preventers are positioned at the top of the well and, when activated, form tight seals that prevent the escape of fluids. When closed, conventional BOPs prevent normal rig operations. Therefore, the BOPs are activated only if drilling mud and normal well control procedures cannot safely contain the pressure.

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, etc. Through its Rig Technology segment, the Company sells and rents drilling rig instrumentation packages that perform these monitoring functions.

During the drilling and completion of a well, there exists an ongoing need for various consumables and spare parts. While most of these items are small, in the aggregate they represent an important element of the process. Since it is impractical for each drilling location to have a full supply of these items, drilling contractors and well service companies tend to rely on third parties to stock and deliver these items. The Company provides this capability through its Distribution & Transmission segment, which stocks and sells spares and consumables made by third parties, as well as spares and consumables made by the Company.

After the well has reached its total depth and the final section of casing has been set, the drilling rig is moved off of the well and the well is prepared to begin producing oil or gas in a process known as well completion. Well completion usually involves installing production tubing concentrically in the casing. Due to the corrosive nature of many produced fluids, production tubing is often inspected and coated, services offered by the Petroleum Services & Supplies segment. Sometimes operators choose to use corrosion resistant composite materials, which the Company also offers through its Petroleum Services & Supplies segment, or corrosion-resistant alloys, or operators sometimes pump fluids into wells to inhibit corrosion.

From time to time, a producing well may undergo workover procedures to extend its life and increase its production rate. 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. Workover rigs are similar to drilling rigs in their capabilities to handle tubing, but are usually smaller and somewhat less sophisticated. The Company offers a comprehensive range of workover rigs through its Rig Technology segment. 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, which is a service the Petroleum Services & Supplies segment provides.



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Frequently, coiled tubing units or wireline units are used to accomplish certain well remediation operations or well completions. Coiled tubing is a recent advancement in petroleum technology consisting of a continuous length of reeled steel tubing which can be injected concentrically into the production tubing all the way to the bottom of most wells. It permits many operations to be performed without disassembling the production tubing, and without curtailing the production of the well. Wireline winch units are devices that utilize single-strand or multi-strand wires to perform well remediation operations, such as lowering tools and transmitting data to the surface. Through the Rig Technology segment, the Company sells and rents various types of coiled tubing equipment and wireline equipment and tools. The Company also manufactures and sells coiled tubing pipe through its Petroleum Services & Supplies segment.

### **Rig Technology**

The Company has a long tradition of pioneering innovations in drilling and well servicing equipment which improve the efficiency, safety, and cost of drilling and well servicing operations. The Rig Technology segment designs, manufactures and sells a wide variety of top drives, automated pipe handling systems, motion compensation systems, rig controls, BOPs, handling tools, drawworks, risers, rotary tables, mud pumps, cranes, drilling motors, turret mooring systems and other products for FPSOs and other offshore vessels and terminals, and other drilling equipment for both the onshore and offshore markets. Rig Technology also manufactures entire rig packages, both drilling and workover, in addition to well servicing equipment such as coiled tubing units, pressure pumping equipment, and wireline winches. The Rig Technology segment sells directly to drilling contractors, shipyards and other rig fabricators, well servicing companies, national oil companies, major and independent oil and gas companies, supply stores, and pipe-running service providers. Rig Technology rents and sells proprietary drilling rig instrumentation packages and control systems which monitor various processes throughout the drilling operation, under the name MD<sup>TM</sup> /Totco<sup>TM</sup> ( Instrumentation ). Demand for its products, several of which are described below, is strongly dependent upon capital spending plans by oil and gas companies and drilling contractors, and the level of oil and gas well drilling activity.

*Land Rig Packages.* The Company designs, manufactures, assembles, upgrades, and supplies equipment sets to a variety of land drilling rigs, including those specifically designed to operate in harsh environments such as the Arctic Circle and the desert. Our key land rig product names include the *Drake Rig*, *Ideal Rig* and *Rapid Rig*. The Company's recent rig packages are designed to be safer and fast moving, to utilize AC technology, and to reduce manpower required to operate a rig.

*Top Drives.* The TDS Top Drive Drilling System, originally introduced by the Company in 1982, significantly alters the traditional drilling process. The TDS rotates the drill stem from its top, rather than by the rotary table, with a large electric motor affixed to rails installed in the derrick that traverses the length of the derrick to the rig floor. Therefore, the TDS eliminates the use of the conventional rotary table for drilling. Components of the TDS also are used to connect additional joints of drill pipe to the drill stem during drilling operations, enabling drilling with three joints of drill pipe compared to traditionally drilling with one joint of drill pipe. Additionally, the TDS facilitates horizontal and extended reach drilling.

*Electric Rig Motors.* The Company has helped lead the application of AC motor technology in the oilfield industry. The Company buys motors from third parties and builds them in its own facilities and is further developing motor technology, including the introduction of permanent magnet motor technology to the industry. These permanent magnet motors are being used in top drives, cranes, mud pumps, winches, and drawworks.

*Rotary Equipment.* The alternative to using a TDS to rotate the drill stem is to use a rotary table, which rotates the pipe at the floor of the rig. Rig Technology produces rotary tables as well as kelly bushings and master bushings for most sizes of kellys and makes of rotary tables. In 1998, the Company introduced the Rotary Support Table for use on rigs with a TDS. The Rotary Support Table is used in concert with the TDS to completely eliminate the need for the larger conventional rotary table.

*Pipe Handling Systems.* Pipe racking systems are used to handle drill pipe, casing and tubing on a drilling rig. Vertical pipe racking systems move drill pipe and casing between the well and a storage ( racking ) area on the rig floor. Horizontal racking systems are used to handle tubulars while stored horizontally (for example, on the pipe deck of an offshore rig) and transport tubulars up to the rig floor and into a vertical position for use in the drilling process.

Vertical pipe racking systems are used predominantly on offshore rigs and are found on almost all floating rigs. Mechanical vertical pipe racking systems greatly reduce the manual effort involved in pipe handling. Pipe racking systems, introduced by the Company in 1985, provide a fully automated mechanism for handling and racking drill pipe during drilling and tripping operations, spinning and torquing drill pipe, and automatic hoisting and racking of disconnected joints of drill pipe. These functions can be integrated via computer controlled sequencing, and operated by a driller in an environmentally secure cabin. An important element of this system is the Iron Roughneck, which was originally introduced by the Company in 1976 and is an automated device that makes pipe connections on the rig floor and requires less direct involvement of rig floor personnel in potentially dangerous operations. The Automated Roughneck is an automated microprocessor-controlled version of the Iron Roughneck.



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Horizontal pipe transfer systems were introduced by the Company in 1993. They include the Pipe Deck Machine ( PDM ), which is used to manipulate and move tubulars while stored in a horizontal position; the Pipe Transfer Conveyor ( PTC ), which transports sections of pipe to the rig floor; and a Pickup Laydown System ( PLS ), which raises the pipe to a vertical position for transfer to a vertical racking system. These components may be employed separately, or incorporated together to form a complete horizontal racking system, known as the Pipe Transfer System ( PTS ).

*Pipe Handling Tools.* The Company's pipe handling tools are designed to enhance the safety, efficiency and reliability of pipe handling operations. Many of these tools have provided innovative methods of performing the designated task through mechanization of functions previously performed manually. The Rig Technology segment manufactures various tools used to grip, hold, raise, and lower pipe, and in the making up and breaking out of drill pipe, workstrings, casing and production tubulars including spinning wrenches, manual tongs, torque wrenches and kelly spinners.

*Mud Pumps.* Mud pumps are high pressure pumps located on the rig that force drilling mud down the drill pipe, through the drill bit, and up the space between the drill pipe and the drilled formation (the annulus) back to the surface. These pumps, which generate pressures of up to 7,500 psi, must therefore be capable of displacing drilling fluids several thousand feet down and back up the well bore. The conventional mud pump design, known as the triplex pump, uses three reciprocating pistons oriented horizontally. The Company has introduced the HEX Pump, which uses six pumping cylinders, versus the three used in the triplex pump. Along with other design features, the greater number of cylinders reduces pulsations (or surges) and increases the output available from a given footprint. Reduced pulsation is desirable where downhole measurement equipment is being used during the drilling process, as is often the case in directional drilling.

*Hoisting Systems.* Hoisting systems are used to raise or lower the drill stem while drilling or tripping, and to lower casing into the wellbore. The drawworks is the heart of the hoisting system. It is a large winch that spools off or takes in the drilling line, which is in turn connected to the drill stem at the top of the derrick. The drawworks also plays an important role in keeping the weight on the drill bit at a desired level. This task is particularly challenging on offshore drilling rigs, which are subject to wave motion. To address this, the Company has introduced the AHD Active Heave Drilling Drawworks. The AHD Drawworks uses computer-controlled motors to compensate for the motion experienced in offshore drilling operations.

*Cranes.* The Company provides a comprehensive range of crane solutions, with purpose-built products for all segments of the oil and gas industry as well as many other markets. The Company encompasses a broad collection of brand names with international recognition, and includes a large staff of engineers specializing in the design of cranes and related equipment. The product range extends from small cargo-handling cranes to the world's largest marine cranes. In all, the Company provides over twenty crane product lines that include standard model configurations as well as custom-engineered and specialty cranes.

*Motion Compensation Systems.* Traditionally, motion compensation equipment is located on top of the drilling rig and serves to stabilize the bit on the bottom of the hole, increasing drilling effectiveness of floating offshore rigs by compensating for wave and wind action. The AHD Drawworks, discussed above, was introduced to eliminate weight and improve safety, removing the compensator from the top of the rig and integrating it into the drawworks system. In addition to the AHD Drawworks, the Company has introduced an Active Heave Compensation ( AHC ) System that goes beyond the capabilities of the AHD Drawworks to handle the most severe weather. Additionally, the Company's tensioning systems provide continuous axial tension to the marine riser pipe (larger diameter pipe which connects floating drilling rigs to the well on the ocean floor) and guide lines on floating drilling rigs, tension leg platforms and jack-up drilling rigs.

*Blowout Preventers (BOPs).* BOPs are devices used to seal the space between the drill pipe and the borehole and, if necessary, to also shear the drill pipe itself to prevent blowouts (uncontrolled flows of formation fluids and gases to the surface). The Rig Technology segment manufactures a wide array of BOPs used in various applications from deepwater offshore vessels to land rigs. Ram and annular BOPs are back-up devices that are activated only if other techniques for controlling pressure in the wellbore are inadequate. When closed, these devices prevent normal rig drilling operations. Ram BOPs seal the wellbore by hydraulically closing rams (thick heavy blocks of steel) against each other across the wellbore. Specially designed packers seal around specific sizes of pipe in the wellbore, shear pipe in the wellbore or close off an open hole. Annular BOPs seal the wellbore by hydraulically closing a rubber packing unit around the drill pipe or kelly or by sealing against itself if nothing is in the hole.

In 1998, the Company introduced the NXT™ ram type BOP which eliminates door bolts, providing significant weight, rig-time, and space savings. Its unique features make subsea operation more efficient through faster ram configuration changes. In 2004, the Company introduced the LXT™ ram type of BOP, which features many of the design elements of the NXT™, but is targeted at the land market. Over the past 5 years considerable focus has been placed on robustness and reliability in the fundamental design of the equipment with extensive testing being performed in the new R&D facility opened in 2012. In 2013, the Company acquired the T3 BOP product line further expanding its market offering of reliable, field proven designs for land based drilling applications.



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The ShearMax™ line of low force BOP shear rams released in 2010 add substantial tubular shearing capability to the Company's line of pressure control equipment, including the capability to shear large drill pipe tool joints, previously unheard of in the industry. This innovative shear blade design utilizes patented Puncture Technology to reduce the shearing pressures 50% or more and in some cases as much as five times lower. The ShearMax Blind shear provides a shear-and-seal design for drill pipe, while the Casing and TJC shears address casing up to 16" OD and most tool joints up to 2" wall thickness, respectively.

*Derricks and Substructures.* Drilling activities are carried out from a drilling rig. A drilling rig consists of one or two derricks; the substructure that supports the derrick(s); and the rig package, which consists of the various pieces of equipment discussed above. Rig Technology designs, fabricates and services derricks used in both onshore and offshore applications, and substructures used in onshore applications. The Rig Technology segment also works with shipyards in the fabrication of substructures for offshore drilling rigs.

*Instrumentation.* The Company's Instrumentation business provides drilling rig operators real time measurement and monitoring of critical parameters required to improve rig safety and efficiency. In 1999, the Company introduced its RigSense™ Wellsite Information System, which combines leading hardware and software technologies into an integrated drilling rig package. Access of drilling data is provided to offsite locations, enabling company personnel to monitor drilling operations from an office environment, through a secure link. Systems are both sold and rented, and are comprised of hazardous area sensors placed throughout the rig to measure critical drilling parameters; all networked back to a central command station for review, recording and interpretation. The Company offers unique business integration services to directly integrate information into business applications that improves accuracy and assists drilling contractors in managing their drilling business. Reports on drilling activities and processes are now provided from the rig site as a part of the DrillSuite business solution to allow contractors to streamline administration by eliminating manual entry of data, promotes accurate payroll processing and invoicing, and includes asset tracking and preventive maintenance management through its RigMS solution. The real time information provided also allows the Company to advance the drilling process using advanced drilling algorithms and electronic controls such as our Wildcat Auto Drilling System for better execution of the well plan, enhanced rates of penetration, reduced program costs, and improved wellbore quality. Complementing the Company's surface solutions is a portfolio of Down-Hole Instrumentation (DHI) products for both straight-hole and directional markets. Key advancements in this area include the introduction of the Company's time saving E-Totco Electronic Drift Recorder, which serves as an electronic equivalent to the traditional mechanical drift tool that the Company has offered since 1929.

*Coiled Tubing Equipment.* Coiled tubing consists of flexible steel tubing manufactured in a continuous string and spooled on a reel. It can extend several thousand feet in length and is run in and out of the wellbore at a high rate of speed by a hydraulically operated coiled tubing unit. A coiled tubing unit is typically mounted on a truck, semi-trailer or skid (steel frames on which portable equipment is mounted to facilitate handling with cranes for offshore use) and consists of a hydraulically operated tubing reel or drum, an injector head which pushes or pulls the tubing in or out of the wellbore, and various power and control systems. Coiled tubing is typically used with sophisticated pressure control equipment which permits the operator to perform workover operations on a live well. The Rig Technology segment manufactures and sells both coiled tubing units and the ancillary pressure control equipment used in these operations. Through its acquisition of Rolligon in late 2006, the Company enhanced its portfolio by adding additional pressure pumping and coiled tubing equipment products.

Currently, most coiled tubing units are used in well remediation and completion applications. The Company believes that advances in the manufacturing process of coiled tubing, tubing fatigue protection and the capability to manufacture larger diameter and increased wall thickness coiled tubing strings have resulted in increased uses and applications for coiled tubing products. For example, some well operators are now using coiled tubing in drilling applications such as slim hole re-entries of existing wells. The Company engineered and manufactured the first coiled tubing units built specifically for coiled tubing drilling in 1996.

Generally, the Rig Technology segment supplies customers with the equipment and components necessary to use coiled tubing, which the customers typically purchase separately. The Rig Technology segment's coiled tubing product line consists of coiled tubing units, coiled tubing pressure control equipment, pressure pumping equipment, snubbing units (which are units that force tubulars into a well when pressure is contained within the wellbore), nitrogen pumping equipment and cementing, stimulation, fracturing and blending equipment.

*Wireline Equipment.* The Company's wireline products include wireline drum units, which consist of a spool or drum of wireline cable, mounted in a mobile vehicle or skid, which works in conjunction with a source of power (an engine mounted in the vehicle or within a separate power pack skid). The wireline drum unit is used to spool wireline cable into or out of a well, in order to perform surveys inside the well, sample fluids from the bottom of the well, retrieve or replace components from inside the well, or to perform other well remediation or survey operations. The wireline used may be slick line, which is conventional single-strand steel cable used to convey tools in or out of the well, or electric line, which contains an imbedded single-conductor or multi-conductor electrical line which permits communication between the surface and electronic instruments attached to the end of the wireline at the bottom of the well.





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Wireline units are usually used in conjunction with a variety of other pressure control equipment which permit safe access into wells while they are flowing and under pressure at the surface. The Company engineers and manufactures a broad range of pressure control equipment for wireline operations, including wireline blowout preventers, strippers, packers, lubricators and grease injection units. Additionally, the Company makes wireline rigging equipment such as mast trucks.

*Stimulation Equipment.* The Company's stimulation products include fracturing pumps, acid units, frac blenders, combo units, hydration, chemical additive systems as well as services and parts. The Company acquired Enerflow Industries, Inc. ( Enerflow ) in May 2012. Enerflow operates out of facilities in Calgary, AB, Tulsa, OK and Houston, TX. Enerflow produces frac pumpers (including truck, trailer, and skid mounted units) as well as cementing units, acidizing units, nitrogen units, and small amounts of well servicing rigs, integrated mud systems and coiled tubing equipment.

*Turret Mooring Systems.* The Company acquired Advanced Production and Loading PLC ( APL ), in December 2010. APL, based in Norway, designs and manufactures turret mooring systems and other products for FPSOs and other offshore vessels and terminals. A turret mooring system consists of a geostatic part attached to the seabed and a rotating part integrated in the hull of the FPSO, which are connected and allow the ship to weathervane (rotate) around the turret.

*Flexible Pipe Systems.* The Company acquired NKT Flexibles I/S ( NKT ) in April 2012. NKT designs and manufactures flexible pipe products and systems for the offshore oil and gas industry, including products associated with FPSO's and other offshore vessels, as well as subsea production systems including flow-lines and flexible risers.

*Facilities.* The Company's Rig Technology segment conducts manufacturing operations at major facilities in Houston, Galena Park, Sugar Land, Conroe, Cedar Park, Anderson, Fort Worth and Pampa, Texas; Duncan, Oklahoma; Orange, California; Edmonton, Canada; Aberdeen, Scotland; Kristiansand, Stavanger and Arendal, Norway; Etten-Leur and Groot-Ammers, the Netherlands; Carquefou, France; Singapore; Shanghai, China; Dubai, UAE; and Ulsan, South Korea. For a more detailed listing of significant facilities see Item 2. Properties. The Rig Technology segment maintains sales and service offices in most major oilfield markets, either directly or through agents.

*Customers and Competition.* Rig Technology sells directly to drilling contractors, rig fabricators, well servicing companies, pressure pumping companies, national oil companies, major and independent oil and gas companies, and also through distribution companies. Demand for its products is strongly dependent upon capital spending plans by oil and gas companies and drilling contractors, and the level of oil and gas well drilling activity.

The products of the Rig Technology segment are sold in highly competitive markets and its sales and earnings can be affected by competitive actions such as price changes, new product development, or improved availability and delivery. The segment's primary competitors are Aker Solutions; American Electric Technologies; American Block; AXON Energy Products; Bentec (a division of Abbot Group); Bomco; Canrig (a division of Nabors Industries); Cavins Oil Well Tools; Cameron International; Coflexip (a division of Technip); Den-Con Tool Company; Forum Energy Technologies; General Electric; Global Energy Services; Hitec Products; Honghua; Huisman; Liebherr; Parveen Industries; Pason Systems; Omron Corporation; Rolls Royce; Siemens; Stewart & Stevenson; Soilmec and Drillmec (a part of the Trevi Group); Seatrax; Tesco Corporation; Wärtsilä and Weatherford International. Management believes that the principal competitive factors affecting its Rig Technology segment are performance, quality, reputation, customer service, availability of spare parts and consumables, breadth of product line and price.

## **Petroleum Services & Supplies**

The Company provides a broad range of support equipment, spare parts, consumables and services through the Petroleum Services & Supplies segment. Petroleum Services & Supplies segment sells directly and provides a variety of tubular services, composite tubing, and coiled tubing to oil and gas producers, national oil companies, drilling contractors, well servicing companies, and tubular processors, manufacturers and distributors. These include inspection and reclamation services for drill pipe, casing, production tubing, sucker rods and line pipe at drilling and workover rig locations, at yards owned by its customers, at steel mills and processing facilities that manufacture tubular goods, and at facilities which it owns. The Company also provides internal coating of tubular goods at several coating plants worldwide and through licensees in certain locations. Additionally, the Company designs, manufactures and sells high pressure fiberglass and composite tubulars for use in corrosive applications and coiled tubing for use in well servicing applications and connections for large diameter conductor pipe.

The Company's customers rely on tubular inspection services to avoid failure of tubing, casing, flowlines, pipelines and drill pipe. Such tubular failures are expensive and in some cases catastrophic. The Company's customers rely on internal coatings of tubular goods to prolong the useful lives of tubulars and to increase the volumetric throughput of in-service tubular goods. The Company's customers sometimes use fiberglass or composite tubulars in lieu of conventional steel tubulars, due to the corrosion-resistant properties of fiberglass and other composite materials.

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Tubular inspection and coating services are used most frequently in operations in high-temperature, deep, corrosive oil and gas environments. In selecting a provider of tubular inspection and tubular coating services, oil and gas operators consider such factors as reputation, experience, technology of products offered, reliability and price.

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The Petroleum Services & Supplies segment also provides products and services that are used in the course of drilling oil and gas wells. The NOV Downhole business sells and rents bits, drilling motors and specialized downhole tools that are incorporated into the drill stem during drilling operations, and are also used during fishing, well intervention, re-entry, and well completion operations. The Wellsite Services business provides products and services such as drilling fluids, highly-engineered solids control equipment, waste handling and treatment, completion fluids, power generation equipment, and other ancillary well site equipment and services. Wellsite Services is also engaged in barium sulfate ( barite ) mining operations in the State of Nevada. Barite is an inert powder material used as the primary weighting agent in drilling fluids. Additionally, efficient separation of drill cuttings enables the re-use of often costly drilling fluids. The Pumps & Expendables business provides centrifugal, reciprocating, and progressing cavity pumps and pump expendables ( Pumps & Expendables ) into the global oil and gas and industrial markets.

*Solids Control and Waste Management.* The Company is engaged in the provision of highly-engineered equipment, products and services which separate and manage drill cuttings produced by the drilling process ( Solids Control ). Drill cuttings are usually contaminated with petroleum or drilling fluids, and must be disposed of in an environmentally sound manner.

*Fluids Services.* The Company acquired the Spirit group of companies in May 2009 ( Spirit ) and Ambar in January 2010. Both are engaged in the provision of drilling fluids, completion fluids and other related services. This division is also engaged in barite mining operations. Drilling fluids are designed and used to maintain well bore stability while drilling, control downhole pressure, drill bit lubrication, and as a drill cuttings displacement medium. Completion fluids are used to clean the well bore and stimulate production.

*Portable Power.* The acquisition of Welch Sales and Service, Inc. in 2008 placed Wellsite Services in the power generation and temperature control business. The Portable Power division provides rental equipment for use in the upstream oil and gas industry, refinery and petrochemical, construction, events, disaster relief and other industries.

*Tubular Coating.* The Company develops, manufactures and applies its proprietary tubular coatings, known as Tube-Kote® coatings, to new and used tubulars. Tubular coatings help prevent corrosion of tubulars by providing a tough plastic shield to isolate steel from corrosive oilfield fluids such as CO<sub>2</sub>, H<sub>2</sub>S and brine. Delaying or preventing corrosion extends the life of existing tubulars, reduces the frequency of well remediation and reduces expensive interruptions in production. In addition, coatings are designed to increase the fluid flow rate through tubulars by decreasing or eliminating paraffin and scale build-up, which can reduce or block oil flow in producing wells. The smooth inner surfaces of coated tubulars often increase the fluid through-put on certain high-rate oil and gas wells by reducing friction and turbulence. The Company's reputation for supplying quality internal coatings is an important factor in its business, since the failure of coatings can lead to expensive production delays and premature tubular failure. In 2005, the Company created a 60%-owned joint venture in China with the Huabei Petroleum Administration Bureau, which coats Chinese produced drill pipe using the Company's proprietary coatings. In 2007, the joint venture opened a second coating plant in Jiangyin City, China.

In addition to the Company's TR™ coatings, it also has complementary corrosion control products and services including TK Liners, Tubo-Wrap, and KC-IPC Connections. TK Liners are fiberglass-reinforced tubes which are inserted into steel line pipe. This safeguards the pipe against corrosion and extends the life of the pipeline. In conjunction with the Thru-Kote™ connection system customers can weld a sleeve for a continuous fiberglass lined pipeline. Tubo-Wrap is a high performance external coating that protects the pipe during installation and from corrosion once the pipeline is in place. KC-IPC Connections use a modified American Petroleum Institute ( API ) coupling to create a gas-tight seal that prevents corrosion and turbulence in the critical connections of tubulars while protecting the internal plastic coating at the highly loaded contact points.

*Tubular Inspection.* Newly manufactured pipe sometimes contains serious defects that are not detected at the mill. In addition, pipe can be damaged in transit and during handling prior to use at the well site. As a result, exploration and production companies often have new tubulars inspected before they are placed in service to reduce the risk of tubular failures during drilling, completion, or production of oil and gas wells. Used tubulars are inspected by the Company to detect service-induced flaws after the tubulars are removed from operation. Used drill pipe and used tubing inspection programs allow operators to replace defective lengths, thereby prolonging the life of the remaining pipe and saving the customer the cost of unnecessary tubular replacements and expenses related to tubular failures.

Tubular inspection services employ all major non-destructive inspection techniques, including electromagnetic, ultrasonic, magnetic flux leakage and gamma ray. These inspection services are provided both by mobile units which work at the wellhead as used tubing is removed from a well, and at fixed site tubular inspection locations. The Company provides an ultrasonic inspection service for detecting potential fatigue cracks in the end area of used drill pipe, the portion of the pipe that traditionally has been the most difficult to inspect. Tubular inspection facilities also offer a wide range of related services, such as API thread inspection, ring and plug gauging, and a complete line of reclamation services necessary to return tubulars to useful service, including tubular cleaning and straightening, hydrostatic testing and re-threading.



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In addition, the Company applies hardbanding material to drill pipe, to enhance its wear characteristics and reduce downhole casing wear as a result of the drilling process. In 2002, the Company introduced its proprietary line of hardbanding material, TCS 8000. The Company also cleans, straightens, inspects and coats sucker rods at 11 facilities throughout the Western Hemisphere. Additionally, new sucker rods are inspected before they are placed into service, to avoid premature failure, which can cause the oil well operator to have to pull and replace the sucker rod.

*Machining Services.* In 2005, the Company acquired Turner Oilfield Services and expanded our product offering into thread repair, tool joint rebuilding and sub manufacturing. Since then the Company has made strategic acquisitions of Hendershot and Mid-South and has expanded its machining services internally to develop a one-stop-shop concept for its drill pipe customers. Thread repair services include rotary shouldered and premium connections. The Company is licensed to perform thread repair services for API and proprietary connections. Tool joint rebuilding is a unique process to restore worn drill pipe tool joints, drill collars and heavy weight drill pipe to the original specifications to extend the service life of those assets. The Company manufactures downhole tools and is API licensed for this process in several locations.

In November 2009, the Company acquired South Seas Inspection (S) Pte. Ltd., ( SSI ) and certain assets of its Brazilian affiliate. SSI provides a wide array of oilfield services including rig and derrick construction, derrick inspection and maintenance, drops surveys and load testing at the rig through the use of rope access technicians. This acquisition adds multiple new services and allows the Company to grow this business by leveraging existing relationships and infrastructure. These operations are based out of Singapore with branch offices in Baku, Azerbaijan and Aktau, Kazakhstan as well as a representative office in Vietnam. The highly trained workforce is completely mobile and provides these services worldwide.

*Mill Systems and Sales.* The Company engineers and fabricates inspection equipment for steel mills, which it sells and rents. The equipment is used for quality control purposes to detect defects in the pipe during the high-speed manufacturing process. Each piece of mill inspection equipment is designed to customer specifications and is installed and serviced by the Company.

*Drill Pipe Products.* As a result of its April 2008 acquisition of Grant Prideco, the Company manufactures and sells a variety of drill stem products used for the drilling of oil and gas wells. The principal products sold by Drill Pipe Products are: (i) drill pipe, (ii) drill collars and heavyweight drill pipe and (iii) drill stem accessories including tool joints. Drill pipe is the principal tool, other than the rig, required for the drilling of an oil or gas well. Its primary purpose is to connect the above-surface drilling rig to the drill bit. A drilling rig will typically have an inventory of 10,000 to 30,000 feet of drill pipe depending on the size and service requirements of the rig. Joints of drill pipe are connected to each other with a welded-on tool joint to form what is commonly referred to as the drill string or drill stem.

When a drilling rig is operating, motors mounted on the rig rotate the drill pipe and drill bit. In addition to connecting the drilling rig to the drill bit, drill pipe provides a mechanism to steer the drill bit and serves as a conduit for drilling fluids and cuttings. Drill pipe is a capital good that can be used for the drilling of multiple wells. Once a well is completed, the drill pipe may be used again and again to drill other wells until the drill pipe becomes damaged or wears out.

In recent years, the depth and complexity of the wells customers drill, as well as the specifications and requirements of the drill pipe they purchase, have substantially increased. A majority of the drill pipe sold is required to meet specifications exceeding minimum API standards. The Company offers a broad line of premium drilling products designed for the offshore, international and domestic drilling markets. The Company's premium drilling products include its proprietary lines of XT<sup>TM</sup> and TurboTorque<sup>TM</sup> connections and large diameter drill pipe that delivers hydraulic performance superior to standard sizes.

Drill collars are used in the drilling process to place weight on the drill bit for better control and penetration. Drill collars are located directly above the drill bit and are manufactured from a solid steel bar to provide necessary weight.

Heavyweight drill pipe is a thick-walled seamless tubular product that is less rigid than a drill collar. Heavyweight drill pipe provides a gradual transition between the heavier drill collar and the lighter drill pipe.

The Company also provides subs, pup joints (short and odd-sized tubular products) and other drill stem accessories. These products all perform special functions within the drill string as part of the drilling process.

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*NOV IntelliServ.* NOV IntelliServ is a joint venture between the Company and Schlumberger, Ltd. in which the Company holds a 55% interest and maintains operational control. NOV IntelliServ provides wellbore data transmission services that enable high-speed communication up and down the drill string throughout drilling and completion operations that are undertaken during the construction of oil and gas wells. NOV IntelliServ's core product, The IntelliSEM Broadband Network, was commercialized in February 2006 and incorporates various proprietary mechanical and electrical components into the Company's premium drilling tubulars to enable data transmission rates that are currently up to 20,000 times faster than mud pulse, the current industry standard. The IntelliServ Broadband Network also permits virtually unlimited real-time actuation of drilling tools and sensors at the bottom of the drill string, a process that conventionally requires the time consuming return of tools to the surface. NOV IntelliServ offers its products and services on a rental basis to oil and gas operators.

*Voest-Alpine Tubulars ( VAT ).* VAT is a joint venture between the Company and the Austrian based Voestalpine Group. The Company has a 50.01% investment in the joint venture which is located in Kindberg, Austria. VAT owns a tubular mill with an annual capacity of approximately 380,000 metric tons and is the primary supplier of green tubes for our U.S. based production. In addition to producing green tubes, VAT produces seamless tubular products for the OCTG market and non-OCTG products used in the automotive, petrochemical, construction, mining, tunneling and transportation industries.

VAT is accounted for under the equity-method of accounting due to the minority owner having substantive participating rights. Under a limited partnership operating agreement the Company has no rights to unilaterally take any action with respect to its investment and the day to day operations of VAT are under the direction of a Management Board, whose members are determined principally by the minority owner. The Management Board is responsible for planning, production, sales and general personal matters, which represent substantive participating rights that overcome the presumption that the Company should consolidate its 50.01% investment.

*Fiberglass & Composite Tubulars.* When compared to conventional carbon steel and even corrosion-resistant alloys, resin-impregnated fiberglass and other modern plastic composites often exhibit superior resistance to corrosion. Some producers manage the corrosive fluids sometimes found in oil and gas fields by utilizing composite or fiberglass tubing, casing and line pipe in the operations of their fields. In 1997, the Company acquired Fiber Glass Systems, a leading provider of high pressure fiberglass tubulars used in oilfield applications, to further serve the tubular corrosion prevention needs of its customers. Fiber Glass Systems has manufactured fiberglass pipe since 1968 under the name Star™, and was the first manufacturer of high-pressure fiberglass pipe to be licensed by the API in 1992. Through further acquisitions and investments in technologies, the Company has extended its fiberglass and composite tubing offering into industrial and marine applications, in addition to its oilfield market.

In 2011, the Company acquired Ameron International Corporation ( Ameron ) which allowed it to expand its Fiberglass & Composite Tubulars business. See Note 4 to the Consolidated Financial Statements for information regarding acquisitions made by the Company in 2011. Ameron's Fiberglass-Composite Pipe business, which is now part of the Company's Fiber Glass Systems business, develops, manufactures and markets filament-wound and molded fiberglass pipe and fittings. These products are used by a wide range of process industries, including industrial, petroleum, chemical processing and petrochemical industries, and for service station piping systems, but predominantly aboard marine vessels, FPSOs and offshore oil platforms, and are marketed as an alternative to metallic piping systems which ultimately fail under corrosive operating conditions.

In 2012, the Company acquired Fiberspar Corporation ( Fiberspar ). See Note 4 to the Consolidated Financial Statements for information regarding acquisitions made by the Company in 2012. Fiberspar, which is now part of the Company's Fiber Glass Systems business, manufactures and sells fiberglass-reinforced spoolable pipe to the oil and gas industry. This fiberglass-reinforced spoolable pipe provides a reliable, corrosion-resistant, cost-effective solution for tubulars used during the production and transportation of oil and gas. Fiberspar has manufacturing plants in Houston, TX and Johnstown, Colorado, with 17 deployment centers (stocking locations) for its products in the U.S., Canada and Australia.

*Coiled Tubing.* Coiled tubing provides a number of significant functional advantages over the principal alternatives of conventional drill pipe and workover pipe. Coiled tubing allows faster tripping, since the coiled tubing can be reeled quickly on and off a drum and in and out of a wellbore. In addition, the small size of the coiled tubing unit compared to an average workover rig or drilling rig reduces preparation time at the well site. Coiled tubing permits a variety of workover and other operations to be performed without having to pull the existing production tubing from the well and allows ease of operation in horizontal or highly deviated wells. Thus, operations using coiled tubing can be performed much more quickly and, in many instances, at a significantly lower cost. Finally, use of coiled tubing generally allows continuous production of the well, eliminating the need to temporarily stop the flow of hydrocarbons. As a result, the economics of a workover are improved because the well can continue to produce hydrocarbons and thus produce revenues while the well treatments are occurring. Continuous production also reduces the risk of formation damage which can occur when the flow of fluids is stopped or isolated. Under normal operating conditions, the coiled tubing string must be replaced every three to four months. The Company designs, manufactures, and sells coiled tubing under the Quality Tubing brand name at its mill in Houston, Texas.



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*NOV Downhole.* The NOV Downhole business unit combines a wide array of drilling and intervention tool product lines with the drill bit, coring services, borehole enlargement and drilling dynamics/drilling optimization service lines previously consolidated within the ReedHycalog business unit of Grant Prideco.

The broad spectrum of bottom hole assembly ( BHA ) components offered by NOV Downhole is unique within the industry and is the result of the Company s strategic consolidation of several key acquisitions, including: NQL Energy Services, Inc., a leading manufacturer and provider of downhole drilling tools; Gammaloy Holdings, L.P., a manufacturer and provider of non-magnetic drill collars and other related products; Robbins & Myers, a manufacturer and provider of power section, and the ReedHycalog, Corion, and Andergauge business units of Grant Prideco, a global leader in the design, manufacture and provision of drill bits, variable gauge stabilizers, hydraulically and mechanically actuated under-reamers, specialty coring services and downhole vibration mitigation services.

NOV Downhole manufactures fixed cutter and roller cone drill bits and services its customer base through a technical sales and marketing network in virtually every significant oil and gas producing region of the world. It provides fixed-cutter bit technology under various brand names including Seeker directional drill bits, Fusetek hybrid drill bits, DuraDiamond impregnated bits and Titan Ultra aimed at larger bit applications. One of its most important fixed cutter drill bit innovations is a patented manufacturing process that has significantly enhanced the capability of polycrystalline diamond (PDC) cutters. The TReX , Raptor , Duraforce XD and Helios family of cutter technologies increase abrasion resistance (wear life) and thermal abrasion resistance without sacrificing impact resistance (toughness). This technology provides a diamond surface that maintains a sharp, low-wear cutting edge, producing drilling results that exceed conventional standards for PDC bit performance. The Company licenses its manufacturing process to most other providers of PDC bits.

The Company produces roller-cone bits for a wide variety of oil, gas and geothermal drilling applications. Roller-cone bits consist of three rotating cones that have cutting elements, which penetrate the formation through a crushing action as the cones rotate in conjunction with the rotation of the drill pipe or drive system. This cutting mechanism is more suitable than that of fixed cutter bits when drilling large holes, very soft shales, harder formations, or where the geology is changing. NOV Downhole manufactures roller-cone bits with milled teeth for soft formations and with tungsten carbide inserts for harder formations. It also manufactures a unique patented line of bits using a powder-metal forging technology, sold under the brand TuffCutter . It markets its roller-cone products and technology globally under various brand names including RockForce , Titan and TuffCutter.

NOV Downhole designs, manufactures and services a wide array of downhole motors used in straight hole, directional, slim hole, and coiled tubing drilling applications. These motors are sold or leased under the NOV Downhole brand name. The Company also maintains a wide variety of motor power sections, including its proprietary PowerPlus and HemiDril and Robbins and Myers ERT rotors and stators which it incorporates into its own motors as well as sells to third parties. Downhole drilling motors utilize hydraulic horsepower from the drilling fluid pumped down the drill stem to develop torque at the bit. Motors are capable of achieving higher rotary velocities than can generally be achieved using conventional surface rotary equipment. Motors are often used in conjunction with high speed PDC bits to improve rates of penetration.

A key growth segment interlinked with the drilling motor business is Power Sections. NOV Downhole is one of the largest Power Section providers globally with the broadest portfolio of technology enabling drilling efficiency advances for every market segment. Our global Power Section manufacturing and supply footprint enables improved asset utilization for our customers by shortening service deliveries times. The Power Section Product Line sells products (rotors and stators) and services (relines for stators and re-surfacing for rotors) to 3rd party customers and the NOV Downhole motor rental fleet. This is offered for both Conventional and ERT Power Sections.

With the natural evolution of mature fields around the world, NOV Downhole is well positioned to address the sustained growth of Intervention and Well Workovers with a comprehensive offering of industry leading Bowen Brand Fishing and Thru-Tubing Tools. We sell and rent Fishing and Thru-Tubing tools to perform retrieval of stuck tools, remove debris, mill bridge plugs and other devices, cut and retrieve tubing and casing, manipulate well flow control devices and much more. Our recently launched TERRAFORCE combination Coiled Tubing Milling Jar is proving to be one of our most successful product launches although that can be largely attributed to plug milling work in hydraulically fractured wells.



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With the unparalleled growth we have seen in the unconventional hydrocarbons segment over the last decade, the need for our customers to be able to work the BHA to bottom in long horizontal sections has proved to be crucial. This is why we have seen unheralded growth and phenomenal demand for NOV's AGITATOR axial oscillation tool, most notably in the North American shale plays. The AGITATOR oscillation tool gently oscillates the Bottom Hole Assembly to significantly improve weight transfer and reduce friction. This improves weight transfer and reduces stick-slip in all modes of drilling, but especially when oriented drilling with a steerable motor. The AGITATOR oscillation tool provides BHA excitement to improve weight transfer to the bit. Extends the boundaries of extended reach and horizontal drilling with motors. The AGITATOR tool has also been similarly successful when deployed on Coiled Tubing to enable optimum weight-on-tool perform post-fracturing milling and well cleanout work. Additionally a new application of Fishing-with-AGITATOR and associated tools is now proliferating worldwide with very high levels of success, the attributes of the AGITATOR (i.e. low impact, high frequency,) ideally compliments the high impact low frequency of traditional fishing jars.

NOV Downhole also manufactures and sells drilling jars, shock tools, bumper subs and a range of other conventional drilling tools such as non-magnetic drill collars. Drilling jars are placed in the drill string, where they can be used to generate a sudden, jarring motion to free the drill string should it become stuck in the wellbore during the drilling process. This jarring motion is generated using hydraulic and/or mechanical force provided at the surface.

Through its Coring Services business line, NOV Downhole offers coring solutions that enable the extraction of actual rock samples from a drilled well bore and allow geologists to examine the formations at the surface. One of the coring services utilized is the Company's unique Corion Express system which allows the customer to drill and core a well without tripping pipe. Corion Express utilizes wireline retrievable drilling and coring elements which allow the system to transform from a drilling assembly to a coring assembly and also to wireline retrieve the geological core. This capability enables customers to save significant time and expense during the drilling and coring process.

NOV Downhole manufactures, sells and rents electronic tools (eTools) to provide directional and drilling dynamics data to the drilling service companies and O&G Operators while they are drilling a well. Directional Sensors, Steering Tools, Magnetic Multi-shot Tools and Electromagnetic Measurement-While-Drilling Systems are produced by NOV Downhole. These directional eTools, provide a downhole measurement of the azimuth (Magnetic North), well inclination and tool face measurements and store the data in memory or utilize a telemetry pathway (mud pulse, conductive wireline, electromagnetic or Intelliserv Wired Drill Pipe) to transmit the downhole data to the surface. The drilling dynamics tools measures downhole vibration, weight, torque, pressure, temperature, bending and rotational speed and either stores the data in memory or utilizes a telemetry pathway to get the downhole data to the surface. At the surface this data is analyzed and utilized to optimize the well trajectory and to improve the drilling rate-of-penetration by minimizing the bottom hole assembly vibration and by optimizing the drilling weight, torque and RPM.

NOV Downhole offers a wide variety of industry leading technologies to enable customers to enlarge the diameter of a drilled hole below a restriction (typically a casing string) via its Borehole Enlargement business line. Borehole enlargement services are typically utilized in deep water drilling where customers wish to maximize the size of each successive casing string in order to preserve a relatively large completion hole size through which to produce hydrocarbons from the reservoir. Borehole enlargement is also employed where customers wish to reduce the fluid velocity and pressure within the well-bore annulus to reduce the risk of formation erosion or accidental fracture. Borehole Enlargement provides bi-centered drill bits, expandable reamers (marketed under the AnderReamer brand name) and associated equipment along with well-site service technicians who deliver 24 hour support during hole enlargement operations.

The Integrated Solutions & Optimization group combines two initiatives to add more value to the NOV Downhole portfolio the ADS expertise in downhole vibration measurement analysis, and the Strategic Integrated Solution methodology for establishing a systems approach to solving client challenges. This high performing Team uses optimization tools and personnel to establish value differentiation between NOV Downhole products and those of the competition. The focus is on the client needs and buying habits, with the intent of maximizing our participation in the current market and being the preferred supplier in a down market. This approach can be utilized strategically within conventional districts to grow revenue / market share, but also is a key foundation for the overall Tiered Solutions strategy where we start to supply solutions to drilling challenges, not just tools.

The Performance Drilling and Directional product lines within NOV Downhole, focus on technologies that can be used in the BHA in order to increase performance via higher Rates of Penetration (ROP), deliver a smoother borehole, and / or reduce shock and vibration. Technologies include the V-Stab vibration damping tool, and the FluidHammer drilling tool which delivers higher ROP in harder drilling formations. This group also develops Rotary Steerable Systems such as the Vertical Drilling Tool (VDT) which is used to drill vertical holes autonomously and the Lateral Drilling Tool (LDT) to improve extended reach drilling.

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NOV Downhole Managed Pressure Drilling (MPD) is a newly formed team to support the drilling challenges of our customers and further safety and efficiency to the industry by offering an array of products from NOV Downhole and as well as other business segments of NOV. MPD utilizes specialty equipment and support services to enable improved kick detection and as well broaden the obtainable reserves of many clients by using chokes, manifolds, rotating control devices, continuous circulation systems, downhole sensors and optimized control systems. Applications of the technology are in use within the shale gas fields to ultra-deep-water and expanding rapidly.

*Pumps & Expendables.* The Company's Pumps & Expendables business designs, manufactures, and sells pumps that are used in oil and gas drilling operations, well service operations, production applications, as well as industrial applications. These pumps include reciprocating positive displacement and centrifugal pumps. High pressure mud pumps are sold within the Rig Technology segment. These pumps are sold as individual units and unitized packages with drivers, controls and piping. The Company also manufactures fluid end expendables (liners, valves, pistons, and plungers), fluid end modules and a complete line of dies and inserts for pipe handling. The Company offers popular industry brand names like Wheatley, Gaso, and Omega reciprocating pumps, Halco Centrifugal Pumps, Petroleum Expendable Products (PEP), and Phoenix Energy Products.

The Company also manufactures a line of commodity and high end valves, chokes, wellhead, and flow line equipment used in both production, pipeline, and drilling applications. Additionally, these products are used to manufacture frac trees and manifolds which are both rented and sold, fabrication of choke and kill, standpipe, cement, and production manifolds. The Company manufactures its products in Houston, Odessa and Marble Falls, Texas; Tulsa and McAlester, Oklahoma; Scott, Louisiana; Newcastle, England, Edinburgh, Scotland, Pune, India, and Buenos Aires, Argentina.

The company manufactures production process equipment such as heater treaters, tanks, pressure vessels, produced water treatment, and sand handling equipment. This is used in both onshore and offshore applications. This equipment is manufactured in Montrose, Scotland, Harvey, Louisiana, Odessa and San Angelo, Texas.

*XL Systems.* The Company's XL Systems product line offers the customer an integrated package of large-bore tubular products and services for offshore wells. This product line includes the Company's proprietary line of wedge thread marine connections on large-bore tubulars and related engineering and design services. The Company provides this product line for drive pipe, jet strings and conductor casing. The Company also offers weld-on connections and service personnel in connection with the installation of these products. In 2007, the Company completed development of its high-strength Viper weld-on connector to permit the Company to penetrate traditional markets that do not require the enhanced performance of its proprietary wedge-thread design.

*Customers and Competition.* Customers for the Petroleum Services & Supplies tubular products and services include major and independent oil and gas companies, national oil companies, drilling and workover contractors, oilfield equipment and product distributors and other manufacturers, oilfield service companies, steel mills, and other industrial companies. The Company's competitors in tubular services include, among others, Baker Hughes; Drill Pipe Masters; Frank's International; Future Pipe; Halliburton; Hanwei; Hilong; Patterson Tubular Services; Precision Tube (a division of Tenaris); ShawCor; Schlumberger; Superior Energy Services; Texas Steel Conversion; Vallourec & Mannesmann and Weatherford International. In addition, the Company competes with a number of smaller regional competitors in tubular inspection. Certain foreign jurisdictions and government-owned petroleum companies located in some of the countries in which the Company operates have adopted policies or regulations that may give local nationals in these countries certain competitive advantages. Within the Company's corrosion control products, certain substitutes such as non-metallic tubulars, corrosion inhibitors, corrosion resistant alloys, cathodic protection systems, and non-metallic liner systems also compete with the Company's products. Management believes that the principal competitive factors affecting this business are performance, quality, reputation, customer service, availability of products, spare parts and consumables, breadth of product line and price.

The primary customers for drilling products and services offered by the Petroleum Services & Supplies segment include drilling contractors, well servicing companies, major and independent oil and gas companies, and national oil companies. Competitors in drilling services include Aggreko; Baker Hughes; Cameron International; Circor International; Corpro (a division of ALS); Halliburton; Hunting; Derrick Equipment Company; Fluid Systems; FMC Technologies; Forum Energy Technologies; Logan Oil Tools; Newpark Resources; Schoeller Bleckmann; Step OilTools; Varel; Ulterra Drilling Technologies; Roper Industries; Schlumberger; Southwest Oilfield Products and Weir Group. There are also large number of regional competitors and the Petroleum Services & Supplies segment sells its drilling products and services into highly competitive markets. Management believes that on-site support is becoming an important competitive element in this market, and that the principal competitive factors affecting the business are performance, quality, reputation, customer service, product availability and technology, breadth of product line and price.

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### **Distribution & Transmission**

*Distribution Services (NOV Wilson).* The Distribution Services business unit is a market leader in the provision of supply chain management services to drilling contractors, exploration and production, pipeline operators and downstream energy processors companies around the world. Through its network of approximately 400 branch locations worldwide, this business unit stocks and sells oilfield products including pipe, consumable maintenance, repair and operating supplies, valves, fittings, flanges and spare parts, all of which are needed throughout the drilling, completion and production process, midstream infrastructure development as well as refining and petrochemical businesses. The supplies and equipment stocked by our branches are customized to meet changing and varied local customer demands.

The Distribution Services business unit also provides one-stop-shop value propositions within the oil and gas exploration and production market in targeted areas of artificial lift, measurement and controls, valving and actuation, and flow optimization. Additionally, Distribution provides warehouse management, vendor integration and various inventory management services. Through focused effort, the business unit has built expertise in providing applications engineering, systems and parts integration, optimization solutions, and after-sales service and support.

Distribution Services supply chain solutions for customers include outsourcing the functions of procurement, inventory and warehouse management, logistics, business process, and performance metrics reporting. This solution allows the business unit to leverage the flexible infrastructure of its SAP ERP system to streamline the acquisition process from requisition to procurement to payment, by digitally managing approval routing and workflow, and by providing robust reporting functionality.

With its recent acquisitions, more than 80% of Distribution Services segment's sales were in the United States and Canada. The remainder comes from key international markets in Latin America, the North Sea, Middle East, Africa and the Far East. The Distribution Services business unit has now expanded into oilfields in over 20 countries. Approximately 10% of its revenue is from the resale of goods manufactured by other segments within the Company. The balance is from the sale of goods manufactured by third parties.

Distribution Services increases revenue and enhances customer alliances by continuously expanding product and service solutions and creating differentiated value propositions. The business unit leverages its extensive purchasing power to reduce the cost of goods. It is strategically and selectively expanding its sourcing network into low cost countries globally.

*Transmission.* The Transmission business unit supplies products and services used in the construction of water pipelines, lining, progressing cavity pumps, grinders, filters, and screens used in industrial applications, and artificial lift equipment and solutions used for increased oil and gas production.

Within the Transmission business unit the Infrastructure Products business manufactures concrete cylinder pipe, prestressed concrete cylinder pipe, steel pipe and reinforced concrete pipe for water transmission, storm and industrial waste water and sewage collection. Products are marketed directly using the Company's own personnel, typically through competitive bidding. The Company competes with several other manufacturers and also with alternative products such as ductile iron, plastic, and clay pipe; but ordinarily these other materials do not offer the full diameter range produced by the Company. This business unit also includes the manufacturing of polyvinyl chloride and polyethylene sheet lining for the protection of concrete pipe and cast-in-place concrete structures from the corrosive effects of sewer gases, acids and industrial chemicals.

The Infrastructure Products group also supplies ready-mix concrete, crushed and sized basaltic aggregates, dune sand and concrete pipe, primarily to the construction industry in Hawaii. Ample raw materials for the aggregates and concrete products are typically available locally in Hawaii, and the business has exclusive rights to quarries containing many years' reserves. The Infrastructure Products group also manufactures and markets concrete and steel poles for highway, street and outdoor area lighting and for traffic signals across the U.S. Within its market, there are competitors for each of the business unit's products. Sales of poles are nationwide, but with a stronger concentration in the western and southeastern U.S. The marketing of poles is handled by the business' own sales force and by outside sales agents. Competition for poles is mainly based on price and quality, but with some consideration for service and delivery.

Within the Transmission business unit, the Mono business serves its customers in various industrial and oil and gas markets by design, manufacturing and distributing key products including progressing cavity pumps, grinders, screens, filters, well-head drives, hydraulic pumping units, rod pumps, plunger lift systems and production automation systems and engineering related systems solutions. This business is highly diversified through its presence in oil and gas and industrial markets, which include waste water treatment, mining, chemical processing, paper and pulp, agriculture, food and beverage, among others. The Mono business supports its international market and customer base through a mixed channel to market model, which includes both direct sales and separate distribution partnership relationships and through National Oilwell Varco's own network of supply branches. Mono is strengthening its offering by adding new artificial lift technologies, as well as measurement and controls competencies. The 2013 acquisition of Robbins & Myers included the addition of the Moyno product line to the Mono business,

expanding the progressive cavity pump product line. Additionally, the acquisition expanded the business to include industrial mixing equipment, including mixers, agitators, and heat exchangers.

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As part of the Robbins & Myers acquisition, the Transmission business unit also increased its product offerings to include glass lined reactor and storage vessels for use in the chemical, pharmaceutical, and agrichemical markets.

*Customers and Competition.* The primary customers for Distribution Services include drilling contractors, well servicing companies, major and independent oil and gas companies, national oil companies, refineries, pipeline operators, downstream energy processors, manufacturing companies and industrial companies. Customers for Transmission include local, state and federal agencies, developers, general contractors, major and independent oil and gas companies, waste water treatment plants, underground mines, paper mills, pharmaceutical companies, chemical companies and other industrial companies. Competitors for Distribution Services include Apex Distribution (now part of Russel Metals); Bell Supply; Caterpillar Logistics; Edgen Murray (now a part of Sumitomo); Ferguson Enterprises; Grainger; MRC Global; MSC Industrial Supply; WESCO International and a number of large regional and product-specific competitors. Competitors for Transmission include Northwestern Pipe Company; West Coast Pipe Company and a number of regional competitors (in water pipelines), Valmont; Skycast and Stresscrete and number of regional competitors (in pole products), DeDietrich; Thaletec, 3V Tech and a number of regional competitors (in glass-lined equipment) and Dover; Lufkin Industries (now a part of General Electric); Kudu; Netzsch; PCM and Weatherford International and other regional and industry focused competitors (in pumps and mixers).

**2013 Acquisitions and Other Investments**

On February 20, 2013, the Company completed its acquisition of all of the shares of Robbins & Myers ( R&M ), Inc., a U.S.-based designer and manufacturer of products and systems for the oil and gas industry. Under the merger agreement for this transaction, R&M shareholders received \$60.00 in cash for each common share for an aggregate purchase price of \$2,378 million, net of cash acquired.

The Company has included the financial results of R&M in its consolidated financial statements as of the date of acquisition with components of the R&M operations included in the Company's Rig Technology, Petroleum Services & Supplies and Distribution & Transmission segments. The Company believes the acquisition of R&M will advance its strategic goal of providing a broader selection of products and services to its customers.

During 2013, in addition to Robbins & Myers, the Company made the following acquisitions:

Acquisition	Form	Operating Segment	Date of Transaction
Fidmash	Stock*	Petroleum Services & Supplies	April 2013
Novmash	Stock*	Petroleum Services & Supplies	April 2013
Itasco Precision Ltd.	Stock	Rig Technology	April 2013
BBJ Tools Inc.	Asset	Petroleum Services & Supplies	June 2013
Moyno de Mexico S.A. de C.V.	Stock*	Distribution & Transmission	August 2013

\* Purchased the remaining portion of joint venture.

The Company paid an aggregate purchase price of \$2,397 million, net of cash acquired for acquisitions in 2013.

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

Historically, the level of some of the Company's segments have followed seasonal trends to some degree. In general, the Rig Technology segment has not experienced significant seasonal fluctuation although orders for new equipment and aftermarket spare parts may be modestly affected by holiday schedules. There can be no guarantee that seasonal effects will not influence future sales in this segment.

In Canada, the Petroleum Services & Supplies segment has typically realized high first quarter activity levels, as operators take advantage of the winter freeze to gain access to remote drilling and production areas. In past years, certain Canadian businesses within Petroleum Services & Supplies and Distribution & Transmission have declined during the second quarter due to warming weather conditions which resulted in thawing, softer ground, difficulty accessing drill sites, and road bans that curtailed drilling activity ( Canadian Breakup ). However, these segments have typically rebounded in the third and fourth quarter. Petroleum Services & Supplies activity in both the U.S. and Canada sometimes increases during the third quarter and then peaks in the fourth quarter as operators spend the remaining drilling and/or production capital budgets for that year. Petroleum Services & Supplies revenues in the Rocky Mountain region sometimes decline in the late fourth quarter or early first quarter due to harsh winter weather. The segment's fiberglass and composite tubulars business in China has typically declined in the first quarter due to the impact of weather on manufacturing and installation operations, and due to business slowdowns associated with the Chinese New Year.

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 or that spending by other customers will remain the same as in prior years.

### **Marketing and Distribution Network**

Substantially all of our Rig Technology capital equipment and spare parts sales, and a large portion of our smaller pumps and parts sales, are made through our direct sales force and distribution service centers. Sales to foreign oil companies are often made with or through agent or representative arrangements. Products within Petroleum Service & Supplies are rented and sold worldwide through our own sales force and through commissioned representatives. Distribution & Transmission sales are made directly through our network of distribution service centers.

The Rig Technology segment's customers include drilling contractors, shipyards and other rig fabricators, well servicing companies, pressure pumpers, national oil companies, major and independent oil and gas companies, supply stores, and pipe-running service providers. Demand for its products is strongly dependent upon capital spending plans by oil and gas companies and drilling contractors, and the level of oil and gas well drilling activity. Rig Technology purchases can represent significant capital expenditures, and are often sold as part of a rig fabrication or major rig refurbishment package. Sometimes these packages cover multiple rigs, and often the Company bids jointly with other related product and services providers, such as rig fabrication yards and rig design firms.

The Petroleum Services & Supplies segment's customers for tubular services include major and independent oil and gas companies, national oil companies, oilfield equipment and product distributors and manufacturers, drilling and workover contractors, oilfield service companies, pressure pumpers, pipeline operators, pipe mills, manufacturers and processors, and other industrial companies. Certain tubular inspection and tubular coating products and services often are incorporated as a part of a tubular package sold by tubular supply stores to end users. The Company primarily has direct operations in the international marketplace, but operates through agents in certain markets.

The Petroleum Services & Supplies segment's customers for drilling services are predominantly major and independent oil and gas companies, national oil companies, drilling contractors, well servicing companies, providers of drilling fluids, and other oilfield service companies. This segment operates sales and distribution facilities at strategic locations worldwide to service areas with high drilling activity. Strategically located service and engineering facilities provide specialty repair and maintenance services to customers. Sales of capital equipment are sometimes made through rig fabricators, and often are bid as part of a rig fabrication package or rig refurbishment package. Sometimes these packages cover multiple rigs, and often the Company bids jointly with other related service providers.

The Distribution & Transmission segment's distribution services sales are made through our network of distribution service centers. Customers for our products and services include drilling and other service contractors, exploration and production companies, supply companies and nationally owned or controlled drilling and production companies. The Distribution & Transmission segment's customers for transmission products and services primarily include local, state and federal agencies, developers and general contractors.

The Company's foreign operations, which include significant operations in Canada, Europe, the Far East, the Middle East, Africa and Latin America, 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



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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. In addition, political considerations may disrupt the commercial relationship between the Company and such government-owned petroleum companies. Although the Company has not experienced any material problems in foreign countries arising from nationalistic policies, political instability, economic instability or currency restrictions, there can be no assurance that such a problem will not arise in the future. See Note 15 to the Consolidated Financial Statements for information regarding geographic revenue information.

**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 trade and service marks, patents, trade secrets, and other proprietary rights.

As of December 31, 2013, the Company held a substantial number of United States patents and had several patent applications pending. As of this date, the Company also had foreign patents and patent applications pending relating to inventions covered by the United States patents. Additionally, the Company maintains a substantial number of trade and service marks and maintains a number of trade secrets. Expiration dates of such patents range from 2014 to 2033. The Company does not expect significant adverse effects as patents expire.

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 revenues from new products.

**Engineering and Manufacturing**

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. Primary manufacturing facilities for the Rig Technology segment are located in Houston, Galena Park, Sugar Land, Conroe, Cedar Park, Anderson, San Angelo, Fort Worth and Pampa, Texas; Duncan, Oklahoma; Orange, California; Edmonton, Canada; Aberdeen, Scotland; Kristiansand, Stavanger and Arendal, Norway; Etten-Leur and Groot-Ammers, the Netherlands; Carquefou, France; Kalundborg and Brøndby, Denmark; Singapore; Shanghai, China; Dubai, UAE; Ulsan, South Korea; Port Elizabeth and Cape Town, South Africa; and Luanda, Angola.

The Petroleum Services & Supplies segment manufactures or assembles the equipment and products which it rents and sells to customers, and which it uses in providing services. Downhole tools are manufactured at facilities in Houston, Texas; Manchester, England; Dubai, UAE; Macaé, Brazil and Singapore. Drill Bits are manufactured at facilities in Conroe, Texas; Stonehouse, U.K; and Jurong, Singapore. Drill Stem technology development and drill pipe are manufactured at facilities in Navasota, Texas; Veracruz, Mexico; Jurong, Singapore; and Baimi Town, Jiangyan and Jiangsu, China. Solids control equipment and screens are manufactured at facilities in Houston and Conroe, Texas; New Iberia, Louisiana; Aberdeen, Scotland; Trinidad; Shah Alam and Puncak Alam, Malaysia; and Macaé, Brazil. Pumps are manufactured at facilities in Houston, Odessa and Marble Falls, Texas; McAlester and Tulsa, Oklahoma; Manchester and Newcastle, England; Melbourne, Australia; and Buenos Aires, Argentina. NOV IntelliServ manufactures and assembles equipment in Provo, Utah. The Company manufactures tubular inspection equipment and tools at its Houston, Texas facility for resale, and renovates and repairs equipment at its manufacturing facilities in Houston, Texas; Celle, Germany; Singapore; and Aberdeen, Scotland. Fiberglass and composite tubulars and fittings are manufactured at facilities in San Antonio, Burkburnett and Mineral Wells, Texas; Little Rock, Arkansas; Tulsa, Oklahoma; Wichita, Kansas; Geldermalsen, the Netherlands; Betim, Brazil; Johor, Malaysia; Singapore and Harbin and Suzhou, China, while tubular coatings are manufactured in its Houston, Texas facility, or through restricted sale agreements with third party manufacturers. Certain of the Company's manufacturing facilities and certain of the Company's products have various certifications, including, ISO 9001, API, APEX and ASME.



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### **Raw Materials**

The Company believes that materials and components used in its servicing and manufacturing operations and purchased for sales 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. Since 2006 the Company has experienced rising, declining and stable prices for mild steel and standard grades in line with broader economic activity and has generally seen specialty alloy prices continued 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. Furthermore, the Company continued to expand its supply base starting in 2006 throughout the world to address its customers needs. In 2012 and 2013, the Company witnessed flat to slight increases in steel pricing which was somewhat mitigated by improved sourcing and supply chain practices. The Company anticipates flat to moderate increases in steel pricing in 2014. 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 Rig Technology segment to guide its planning. Backlog includes orders greater than \$250,000 for most items and orders for wireline units in excess of \$75,000, and which require more than three months to manufacture and deliver.

Backlog measurements are made on the basis of written orders which 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 equipment at December 31, 2013, 2012 and 2011, was \$16.2 billion, \$11.9 billion and \$10.2 billion, respectively.

### **Employees**

At December 31, 2013, the Company had a total of 63,779 employees, of which 8,796 were temporary employees. Approximately 1,167 employees in the U.S. are subject to collective bargaining agreements. Additionally, certain of the Company's employees in various foreign locations are subject to collective bargaining agreements. The Company believes its relationship with its employees is good.

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**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.*

The oil and gas industry historically has experienced significant volatility. Demand for our services and products 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 of time, 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 ability of the members of the Organization of Petroleum Exporting Countries, or OPEC, to maintain price stability through voluntary production limits, the level of production by non-OPEC countries and worldwide demand for oil and gas;

level of production from known reserves;

cost of exploring for and producing oil and gas;

level of drilling activity and drilling rig dayrates;

worldwide economic activity;

national government political requirements;

development of alternate energy sources; and

environmental regulations.

If there is a significant reduction in demand for drilling services, in cash flows of drilling contractors, well servicing companies, or production companies or in drilling or well servicing rig utilization rates, then demand for the products and services of the Company will decline.

*Volatile oil and gas prices affect demand for our products.*

Oil and gas prices have been volatile since 1972. In general, oil prices approximated \$18-\$22 per barrel from 1991 through 1997, experienced a decline into the low teens in 1998 and 1999, and have generally ranged between \$25-\$100 per barrel since 2000. In 2008, oil prices were extremely volatile – oil prices rose to \$147 per barrel in July 2008 only to fall into the \$35-\$45 per barrel range in December 2008. Oil prices then recovered since 2009, and rose to \$85 per barrel by the end of 2010. Oil prices remained flat in the \$90-\$100 per barrel range through 2012 and 2013. Domestic spot gas prices generally ranged between \$1.80-\$2.60 per mmbtu of gas from 1991 through 1999 then experienced spikes into the \$10 range in 2001 and 2003. Prices generally ranged between \$4.50-\$12.00 per mmbtu during 2005-2008. During 2009 through 2011, spot gas prices generally stabilized, dropping into the \$3.00-\$4.50 per mmbtu range, but declined below \$3.00 late in 2011 and throughout much of 2012 before increasing slightly above \$3.00 in late 2012. During 2013, prices continued to rise and remained steady in the \$3.00-\$4.50 per mmbtu range ending the year over \$4.00 per mmbtu.

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Expectations for future oil and gas prices cause many shifts in the strategies and expenditure levels of oil and gas companies and drilling contractors, 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 fall below a range that is acceptable to our customers, which could reduce demand for our products.

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### ***Worldwide financial and credit crisis could have a negative effect on our operating results and financial condition.***

Events in 2008 and 2009 constrained credit markets and sparked a serious global banking crisis. The slowdown in worldwide economic activity caused by the global recession reduced demand for energy and resulted in lower oil and natural gas prices. Any prolonged reduction in oil and natural gas prices will 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. Furthermore, many of our customers access the credit markets to finance their oil and natural gas drilling activity. If the recent crisis and recession reduce the availability of credit to our customers, they may reduce their drilling and production expenditures, thereby decreasing demand for our products and services. Any such reduction in spending by our customers could adversely impact our operating results and financial condition.

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

As of December 31, 2013, we had a backlog of approximately \$16.2 billion of drilling equipment to be manufactured, assembled, tested and delivered by our Rig Technology segment. The following factors, in addition to others not listed, could reduce our margins on these contracts, adversely affect our position in the market or subject us to contractual penalties:

our failure to adequately estimate costs for making this drilling 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; and

our inability to manage unexpected delays due to weather, shipyard access, labor shortages or other factors beyond our control. The Company's existing contracts for rig 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 could ultimately lead to lower revenues 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 competitive actions can each affect our revenues and earnings:

price changes;

new product and technology introductions; and

improvements in availability and delivery.

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. Competition in our industry could lead to lower revenues and earnings.

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*We have aggressively expanded our businesses and intend to maintain an aggressive growth strategy.*

We have aggressively expanded and grown our businesses during the past several years, through acquisitions and investment in internal growth. We anticipate that we will continue to pursue an aggressive growth strategy but we cannot assure you that attractive acquisitions will be available to us at reasonable prices or at all. In addition, we cannot assure you 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 the increased size of the Company or operate 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 you 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.

*Our operating results have fluctuated during recent years and these fluctuations may continue.*

We have experienced fluctuations in quarterly operating results in the past. We cannot assure that we will realize earnings growth or that earnings in any particular quarter will not fall short of either a prior fiscal quarter or investors' expectations. The following factors, in addition to others not listed, may affect our quarterly operating results in the future:

fluctuations in the oil and gas industry;

competition;

the ability to service the debt obligations of the Company;

the ability to identify strategic acquisitions at reasonable prices;

the ability to manage and control operating costs of the Company;

fluctuations in political and economic conditions in the United States and abroad; and

the ability to protect our intellectual property rights.

***There are risks associated with our presence in international markets, including political or economic instability, currency restrictions, and trade and economic sanctions.***

Approximately 65% of our revenues in 2013 were derived from operations outside the United States (based on revenue destination). Our foreign operations include significant operations in Canada, Europe, the Middle East, Africa, Southeast Asia, Latin America and other international markets. Our revenues and operations are subject to the risks normally associated with conducting business in foreign countries, including 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 we operate 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 these policies, we may rely on joint ventures, license arrangements and other business combinations with local nationals in these countries. In addition, political considerations may disrupt the commercial relationships between us and government-owned petroleum companies.

Our operations outside the United States could also expose us to trade and economic sanctions or other restrictions imposed by the United States or other governments or organizations. The U.S. Department of Justice ( DOJ ), the U.S. Securities and Exchange Commission and other federal

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agencies and authorities have a broad range of civil and criminal penalties they may seek to impose against corporations and individuals for violations of trading sanctions laws, the Foreign Corrupt Practices Act and other federal statutes. Under trading sanctions laws, the DOJ may seek to impose modifications to business practices, including cessation of business activities in sanctioned countries, and modifications to compliance programs, which may increase compliance costs. If any of the risks described above materialize, it could adversely impact our operating results and financial condition.

We have received federal grand jury subpoenas and subsequent inquiries from governmental agencies requesting records related to our compliance with export trade laws and regulations. We have cooperated fully with agents from the Department of Justice, the Bureau of Industry and Security, the Office of Foreign Assets Control, and U.S. Immigration and Customs Enforcement in responding to the inquiries. We have also cooperated with an informal inquiry from the Securities and Exchange Commission in connection with the inquiries previously made by the aforementioned federal agencies. We have conducted our own internal review of this matter. At the conclusion of our internal review in the fourth quarter of 2009, we identified possible areas of concern and discussed these areas of concern with the relevant agencies. We are currently negotiating a potential resolution with the agencies involved related to these matters. We currently anticipate that any administrative fine or penalty agreed to as part of a resolution would be within established accruals, and would not have a material effect on our financial position or results of operations. To the extent a resolution is not negotiated as anticipated, we cannot predict the timing or effect that any resulting government actions may have on our financial position or results of operations.

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***The results of our operations are subject to market risk from changes in foreign currency exchange rates.***

We earn revenues, pay expenses, purchase assets and incur liabilities in countries using currencies other than the U.S. dollar, including, but not limited to, the Canadian dollar, the Euro, the British pound sterling, the Norwegian krone and the South Korean won. Approximately 65% of our 2013 revenue was derived from sales outside the United States. Because our Consolidated Financial Statements are presented in U.S. dollars, we must translate revenues and expenses into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Thus, increases or decreases in the value of the U.S. dollar against other currencies in which our operations are conducted will affect our revenues and operating income. Because of the geographic diversity of our operations, weaknesses in some currencies might be offset by strengths in others over time. We use derivative financial instruments to mitigate our net exposure to currency exchange fluctuations. We had forward contracts with a notional amount of \$4,537 million (with a fair value of a net asset of \$19 million) as of December 31, 2013, to reduce the impact of foreign currency exchange rate movements. We are also subject to risks that the counterparties to these contracts fail to meet the terms of our foreign currency contracts. We cannot assure you that fluctuations in foreign currency exchange rates would not affect our financial results.

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

The Company has approximately \$9.0 billion of goodwill and \$0.6 billion of other intangible assets with indefinite lives as of December 31, 2013. 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 occur indicating that goodwill might be impaired. Events or circumstances which could indicate a potential impairment include (but are not limited to) a significant reduction in worldwide oil and gas prices or drilling; a significant reduction in profitability or cash flow of oil and gas companies or drilling contractors; a significant reduction in worldwide well remediation activity; a significant 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 an 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 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 liability.***

Our businesses expose us to the risk that harmful substances may escape into the environment, which could result in:

personal injury or loss of life;

severe damage to or destruction of property; or

environmental damage and suspension of operations.





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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 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 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. 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 or regulations restricting emissions of greenhouse gases 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 is currently working on legislation to control and reduce emissions of greenhouse gases in the United States, which includes establishing cap-and-trade programs. In addition to the pending climate legislation, the U.S. Environmental Protection Agency has proposed regulations that would require permits for and reductions in greenhouse gas emissions for certain facilities, and may issue final rules this year. These 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.

***We had revenues of approximately 10% of total revenue from one of our customers during the years ended December 31, 2013, 2012 and 2011.***

The loss of this customer (Samsung Heavy Industries) or a significant reduction in its purchases could adversely affect our future revenues and earnings. Samsung Heavy Industries is a shipyard acting as a general contractor for its customers, who are drillship owners and drilling

contractors. This shipyard's customers have specified that the Company's drilling equipment be installed on their drillships and have required the shipyard to issue contracts to the Company.

***Our information systems may experience an interruption or breach in security.***

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 they will be adequately addressed. The occurrence of any failures, interruptions or security breaches of the our information systems could damage our reputation, 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.

**Risks associated with the separation of our distribution business.**

Our planned separation of our distribution business, under the name NOW Inc., is subject to a number of risks, including the following:

*Risk of Non-Consummation.* Although we expect to distribute 100% of the shares of NOW Inc. common stock to NOV stockholders in the first half of 2014, the distribution remains subject to various conditions, including, but not limited to: (i) the SEC having declared effective NOW Inc.'s registration statement on Form 10 and (ii) the receipt of tax opinions to the effect that the distribution, together with certain related transactions, will qualify as tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended (the Code). There can be no assurance that any or all of the conditions will be met and that the distribution will be completed in the manner currently contemplated, or at all. In addition, the fulfillment of the conditions does not create any obligations on our part to effect the distribution, and our board of directors has reserved the right, in its sole discretion, to abandon, modify, or change the terms of the distribution.

*Risks of Not Obtaining Benefits from the Separation.* NOV and NOW Inc. may not realize some or all of the benefits we expect from the separation in the time frame currently contemplated, or at all.

*Risks Relating to Less Diversification.* If the distribution is completed, our diversification of revenue sources will diminish due to the separation of NOW Inc. from our other businesses, and it is possible that our results of operations, cash flows, working capital and financing requirements may be subject to increased volatility as a result.

*Risks Relating to Taxes.* The IRS no longer issues private letter rulings regarding whether or not a spin-off transaction qualifies for tax-free treatment under Section 355 of the Code. Notwithstanding the tax opinions we are to receive from our legal and tax advisors that the distribution of 100% of the shares of NOW Inc. common stock will qualify as tax-free under such section of the Code, the IRS could determine on audit that the distribution should be treated as a taxable transaction, including as a result of a significant change in stock or asset ownership after the distribution. If the distribution ultimately is determined to be taxable, we and/or our stockholders that are subject to U.S. federal income tax could incur significant U.S. federal income tax liabilities.

**Table of Contents****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. Most bits used in rotary drilling are roller cone bits, but diamond bits are also used extensively.
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.
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.

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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.
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.

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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 returns. 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 to 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. Compare break out. 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.

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Riser	A pipe through which liquids travel upward.
Riser pipe	The pipe and special fitting used on floating offshore drilling rigs to established 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 or 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.
Shaker	See Shale Shaker
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.

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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.