Drilling Products & Services

US Industry Study with Forecasts for 2019 & 2024

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**Gains in demand will be driven by rising oil prices from recent steep declines, and by increasing adoption of higher value and more efficient products and services, especially those used in horizontal drilling.**

**US demand to rise 3% annually through 2019**

US demand for oil and gas drilling products and services is forecast to increase to $70.6 billion in 2019, reflecting average annual gains of 3.0 percent. While the low oil price environment that began in late 2014 will lead to sharp declines in drilling products and services demand in 2015, a recovery in drilling activity due to improving oil prices should allow demand to exceed 2014 levels within the next few years. Advances will be further supported by increasing adoption of higher value products and services, especially those used in horizontal drilling. However, greater growth will be limited by efficiency gains that will allow wells to be drilled more quickly, restraining growth in spending on contract drilling and other services tied to the number of days needed to drill a well.

**Lower oil prices to favor products & services that increase well efficiency**

In response to the challenging market conditions that took effect in late 2014 and early 2015, operators shifted their focus to minimizing costs while optimizing well productivity. This renewed emphasis on controlling expenditures resulted in a marked increase in drilling efficiency, allowing wells to be drilled more quickly and at lower cost. Improved drilling efficiency will continue to have a downward impact on overall spending on drilling products and services. However, some products will be impacted more than others. While contract drilling revenues per well will decline, products and services that can help reduce overall costs, including premium tubular goods, drill bits, and drilling fluids, will see healthy growth.

**Drilling fluids, tubular goods to see fastest gains**

Drilling fluids and tubular goods will see the fastest advances, driven both by overall growth in wells and footage drilled annually and by increasing market penetration for premium products in both segments. High performance water-based drilling fluids will continue to increase their share of the market in unconventional drilling where oil-based fluids have been traditionally chosen. Similarly, increased development of deeper and more challenging drilling environments -- including deepwater and tight oil and shale gas formations -- will drive adoption of higher value casing and drill pipe. There will be additional growth opportunities in some segments of other drilling product and service markets. These are expected to include higher value rig components and downhole equipment necessary for more effective horizontal drilling, such as top drives, mud pumps, and rotary steerable systems, which will also experience healthy increases through 2019.

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Demand for directional drilling control services is forecast to rise 6.5% annually through 2019 to $6.6 billion. Gains in this segment are expected to be among the fastest in the drilling services market, as directional drilling practices continue to improve and horizontal drilling makes up an even larger share of total US drilling activity. While the market will benefit from increasing use of more sophisticated and higher value equipment and software and an overall rising level of accuracy in wellbore placement, even faster gains will be held back by the time necessary to drill a well, as -- like contract drilling -- drilling services are often paid on a day rate basis.

Directional drilling control involves guiding the drill string to a specific path, generally as part of directional, horizontal, or reach drilling plan. Directional drilling has been an established offshore drilling technology for many years, but has only recently begun to emerge as a major service in land drilling concurrent with unconventional resource development. Directional drilling services are typically used in conjunction with measurement-while-drilling services, as MWD is highly beneficial in ensuring that the wellbore ends up at the desired location. In particular, drilling horizontally through challenging formations and into narrow productive zones requires high quality directional drilling control and all but necessitates the use of MWD equipment.

There are a number of ways in which a wellbore can be intentionally deviated from a vertical trajectory. The most basic method is the use of a downhole motor in combination with a bent sub and housing in the bottomhole assembly (BHA). With the use of a motor, the bit is turned by the hydraulic power of the drilling fluid. But the drill string itself does not rotate but rather slides in the hole. A section of the BHA points the bit at the desired angle and can

**TABLE V-6**

**SOUTHERN REGION DRILLING PRODUCTS & SERVICES DEMAND**

(million dollars)

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
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Source: The Freedonia Group, Inc.

**CHART VI-1**

**US DRILLING PRODUCTS & SERVICES MARKET SHARE, 2014**

($60.8 billion)

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COMPANY PROFILES

GEO Drilling Fluids Incorporated
1431 Union Avenue
Bakersfield, CA 93305
661-325-5919
http://www.geodf.com

Annual Sales: $40 million (estimated)
Employment: 120 (estimated)
Key Products: drilling fluids, oilfield fluid additives, and raw materials used in the formulation of drilling fluids

GEO Drilling Fluids is a privately held manufacturer and supplier of oil- and water-based fluids and additives for the oil, gas, and geothermal industries. The Company maintains chemical mixing and warehouse facilities in Bakersfield and Woodland, California; and Belfield, North Dakota. In addition, GEO Drilling Fluids’ Industrial Minerals Company subsidiary (Sacramento, California) specializes in the production of clays and minerals for the ceramic industry.

The Company participates in the US drilling products and services industry via the manufacture and sale of oil- and water-based drilling fluids, specialty additives, and raw materials. Drilling fluids made by GEO Drilling Fluids include PETRODRILL oil-based drilling fluids, many of which are formulated using the Company’s LVT 200 low-viscosity base oil; and POLYTEK+ one-sack drilling fluids. These fluids are specified for use in a wide range of oilfield drilling applications.

Specialty additives manufactured by GEO Drilling Fluids are formulated to modify the physical properties of drilling fluids. Products in this category include MUL TREAT dispersants and wetting agents, MUL I primary emulsifiers and high-temperature stabilizers, and MUL THIK bentonite-based viscosifiers and gellants used in PETRODRILL.
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Related Studies

Proppants in North America
This study analyzes the proppant industry in the United States and Canada. It presents historical demand data (2004, 2009 and 2014) and forecasts (2019 and 2024) by proppant type (e.g., raw sand, coated sand, bauxite-based ceramic, clay-based ceramic, coated ceramics), region, state and province. The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players. #3302 September 2015 $5300

World Oilfield Chemicals
World demand for oilfield chemicals is forecast to increase 6.0 percent annually to $33 billion in 2019. North America will remain by far the dominant market, while Asia/Pacific and Africa/Mideast markets grow the fastest from small bases. Drilling fluids will continue to account for the largest share of demand and will grow at a healthy pace. This study analyzes the $25 billion world oilfield chemical industry, with forecasts for 2019 and 2024 by product, world region, and for 25 countries. The study also evaluates company market share and profiles industry players. #3249 March 2015 $6400

World Upstream Oil & Gas Outlook
World upstream oil and gas activity will remain at a high level, with annual wells drilled increasing to over 115,000 in 2018. While recent crude oil price drops may limit drilling in the volatile North American market, world activity should continue to grow as many lower cost or highly productive wells remain profitable. This study analyzes activity in the 103,400-well world upstream oil and gas industry, with forecasts for 2018 and 2023 by indicator, world region, and for 16 countries. The study also considers market environment factors and profiles industry participants. #3197 December 2014 $6200

Well Stimulation Materials
US demand for well stimulation materials will climb 10.6 percent annually to $15.2 billion in 2018. Efforts to improve well productivity and develop unconventional resources will continue to change the product mix. Proppants are the largest material type but a variety of chemicals and other products will see strong gains. Texas will remain a key market. This study analyzes the $9.2 billion US well stimulation materials industry, with forecasts for 2018 and 2023 by product and regional market. The study also evaluates company market shares and profiles industry players. #3160 June 2014 $5300

Shale Gas & Tight Oil: Products & Services
US demand for shale gas and tight oil products and services is forecast to rise 3.5 percent annually to $98 billion in 2017. Stimulation materials will be the fastest growing products, while completion and production will pace the services sector. The Permian basin will remain the largest play, while the Eagle Ford Shale will grow the fastest. This study analyzes the $82.2 billion US shale gas and tight oil product and service industry, with forecasts for 2017 and 2022 by product, service, US region and play. The study also evaluates company market share and profiles industry players. #3112 February 2014 $5200

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