

# OIL SERVICING COMPANIES MUST RETRENCH, INNOVATE TO SURVIVE

By Jonathan Bushnell, Director & Joseph D'Angelo, Partner, Carl Marks  
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In the past five years nonconventional U.S. oil production has increased more than six-fold and by the end of 2014 achieved the highest production levels of U.S. crude in 41 years. This explosive growth was fueled by the doubling of exploration and production (E&P) capex in extraction from shale or tight formations between 2008 and 2014, peaking at \$125 billion, and has changed the dynamics of the worldwide oil supply equation.

Last summer, as oil prices peaked at around \$115 per barrel, however, demand in Europe, Asia, and the U.S. began tapering off, due largely to weakening economies and the implementation of new efficiency measures. In November 2014, in response to declining demand and increasing supply (primarily from U.S. tight oil production), the Organization of Petroleum Exporting Countries (OPEC) announced its intention to protect market share rather than pricing by maintaining production levels. As a result of continuing oversupply, oil prices plummeted by more than 50 percent to about \$51 per barrel for West Texas Intermediate (WTI) by early July and eroded further to just under \$42 per barrel in August.

U.S. E&P companies hire numerous allies to assist in the extraction process, but they also deploy or conserve capital based on the current and projected commodity prices. Falling oil prices have led to a 60 percent reduction in the U.S. onshore oil rig count, from 1,609 in October 2014 to 843 in early July 2015, which indicates a huge falloff in drilling activity. E&P companies have also cut capex budgets by over 30 percent.



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For oilfield services companies, which are impacted more directly by the level of activity than they are by the price of the commodity, these are alarming trends. With activity down, layoffs are up. In the past six months, the four biggest U.S. oilfield services firms have cut a combined 50,000 jobs. The Market Vectors Oil Services Exchange Traded Fund, which tracks an index of 25 of the largest U.S.-listed, publicly traded oilfield services companies, is down more than 40 percent over the past year. Because this index reflects the country's largest service companies, one can assume that smaller middle market companies are faring far worse.

This article explores what onshore middle market oilfield services companies attempting to navigate this dangerous environment must do to survive in the near term and to thrive in the longer term in what pundits have labeled the new normal in the oil and gas industry.

#### Pricing Pressures

Unlike the U.S., most OPEC countries produce oil from conventional wells, which is far less costly than extracting oil from unconventional or tight formations. Extraction cost is based primarily on varying drilling costs due to geologic differences, i.e., the depth of the pay zone and the structure of the formation above the zone; harder rock takes longer to drill through (drilling contractors charge by the day rate or linear foot). Additional expense is required to fracture rock in tight formations, which

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requires millions of gallons of water, chemicals, and proppants (solid material used in fracking fluid to keep an induced hydraulic fracture open). Finally, there are varying completion, production, and delivery/transportation costs that are generally more expensive in the U.S. than in most OPEC countries.

As a result, many U.S. producers require a higher price per barrel of oil to turn a profit than do their OPEC competitors. In addition, U.S. E&P companies rely on reserve-based revolving loans (RBL), which are based on the collateral value of their proven energy reserves. The borrowing availability under these facilities is usually redetermined twice per year, in the spring and the fall, based on a pricing deck that forecasts the forward price of oil. Many producers face reduced availability under their RBL facilities as a result of falling oil prices, which will decrease the amount of capex available for new projects and further negatively affect their activity levels.

Typically, middle market oil industry suppliers and service providers do not own reserves or drilling rights; their assets include equipment, vehicles, people, customer relationships, and sometimes intellectual property. These companies typically use working capital to prepare for new project commitments, and the collection cycle could extend cash conversion to over 120 days. When utilization rates decrease, companies suffer the liquidity risks of stranded working capital in the form of wages, training

expenses, raw material and product costs, opportunity costs, and retention costs, among others.

The current price disruptions and lower land drilling activity are being caused by multiple competing variables, which makes predicting the ultimate depth and length of the current cycle is very difficult. Issues clouding industry forecasts include:

- A projected supply level increase from Iran as international sanctions are lifted under the recent multilateral nuclear settlement
- A continued Saudi strategy of maintaining production levels, in part to defend market share against the rapidly increasing supply of oil from U.S. land drilling
- Potentially flattening global demand caused by the slowdown in economic activity in Asia, as evidenced by the recent drop of the Chinese stock market
- A potential European economic slump caused by the Greek debt crisis

Regardless of future commodity pricing, it is clear that oil servicing companies need to practice financial prudence in the short term to survive and then provide value-added design and technical advances to prosper in the expected lower cost extraction environment going forward.

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## Immediate Response

When lenders are unsure about the timing of a cycle and their instincts tell them to expect a negative event, they sometimes resort to the "50 percent rule," which assumes that EBITDA will be 50 percent of projections and collateral is worth 50 percent of its previously appraised value. That might be fairly accurate with regard to a number of middle market businesses that ramped up for new drilling projects before oil prices dropped, especially in regions with higher production and transportation costs.

Companies that incurred debt that was supportable based on the high asset utilization and valuation rates they enjoyed at the time are the most vulnerable. Acting with urgency in three particular areas can increase liquidity, stabilize the situation, and provide time to figure out the restructuring options.

First, current liquidity must be addressed. In many cases, weekly cash flow is driven by recurring revenue and expenses of existing contracts and spending on resources to fulfill new or pending contracts and orders. Therefore, a review of the most significant customers and contracts, and the fully allocated expenses and profitability of a majority of the revenue, is required to determine if the business is making money on the precious revenue it has.

Second, a template for scrutinizing all pending and forecasted opportunities should be developed. This is necessary to ensure

that new revenue will result in profits. Expenses that are not directly attributable to or necessary to support the expected revenue must be challenged. As much as travel and entertainment are necessary parts of doing business in the oil patch, there is always some spending that is excessive and does not pass the cost/benefit test. Challenging the sales organization and verifying the sales pipeline are critical for making quick and consequential changes based on realistic revenue forecasts. Assessing the performance and contributions of sales representatives to weed out underperformers and recognize/reward/retain high performers is also important.

From there, it is critical to identify customer trends for products and solutions to make sure sales representatives are pitching the right value proposition and to review the asset inventory and utilization by region to ensure that sales efforts prioritize idle equipment that is locally available. If a new contract is signed that requires relocating equipment from one region to another, the transportation costs could exceed what the contract is worth. Another important way to avoid stranding working capital is to hold sales representatives accountable for pipeline forecasts and to perform continuous inspections on new project opportunities to make spending decisions based on achieving revenue and profit objectives.

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Third, and concurrently with evaluating liquidity and the revenue pipeline, a liquidation analysis should be prepared to show the low end of potential recoveries. The liquidation value of the assets will obviously influence potential restructuring options, constituents' decisions, and recovery outcomes. Of course, the assets are usually worth more if the going concern can be preserved. If the business has enough critical mass to remain a going concern, then a combination with a strategic buyer may be the best option. However, buyers may require a sale pursuant to U.S. Bankruptcy Code Section 363 to avoid certain liabilities. Sometimes buyers will acquire assets out of court, even from the lenders through Article 9 foreclosures or a sale of the debt. If it looks like the business cannot be turned around or acquired, an orderly liquidation may be inevitable.

## **New Technologies, Processes**

Companies that exercise financial prudence during the downturn will survive, but they then will have to make significant technical and process improvements to thrive in the new low-cost environment. Over the long term, the service companies that will outperform their peers will be those that invest in and develop new technologies and processes to improve efficiencies in drilling to drive down costs and/or provide technology and processes that improve production. As stated earlier, OPEC countries largely

extract their oil from lower cost conventional basins. To compete on price, U.S. onshore shale producers will either have to reduce drilling and production cost per well or increase the production amount per well to reduce the cost per barrel, or achieve a combination of both.

Drillers and producers rely on five basic strategies to increase productivity and lower costs: minimizing nonproductive time, working faster, working smarter, making better decisions, and tailoring rig design for purpose. Service companies that can engage early in the process to collaborate with their clients to drive down expenses in one or more of these categories will provide value-added service that will improve their long-term prospects. Total expenses can also be reduced by adopting some industry standardization, improving equipment designs, adding automation procedures, and building equipment with lower-cost materials or longer lasting composite materials. In short, every piece of U.S. onshore drilling and production technology, technique, and integration must be improved to compete on the global stage in the current price environment.

Over the last decade, tight oil production efficiency has been enhanced through various improvements in technology and drilling designs, including the use of drilling pads or locations that house wellheads for a number of horizontally drilled wells.

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According to the U.S. Energy Information Agency (EIA), "the benefit of a drilling pad is that operators can drill multiple wells in a shorter time than they might with just one well per site. Moving a drilling rig between two well sites previously involved disassembling the rig and reassembling it at the new location ('rigging down' and 'rigging up') even if the new location was only a few yards away. Today, a drilling pad may have five to ten wells, which are horizontally drilled in different directions, spaced fairly close together at the surface... Concentrating the wellheads also helps the producer reduce costs associated with managing the resources above-ground and moving the production to market."

Similar meaningful breakthroughs will be required in the near future if U.S. onshore oil companies are going to be able to reduce extraction costs to economically viable levels. One of the lessons of the past century from the U.S. auto and other manufacturing industries is that automated mechanisms are cheaper and more consistently productive than human workers and that making decisions based on consistent data improves outcomes. Labor costs are also one of the major expenses for a drilling operation. Reducing headcount and total labor hours translates to lower cost per barrel. Improvements in automation can reduce overhead, improve safety, simplify process planning, and reduce nonproductive downtime.

Two visible examples of automated processes are self-erecting rigs that do not need additional cranes and manpower, and automated and robotic pipe handling systems that improve safety by reducing human exposure and error while simultaneously increasing the pipe product lifespan. The hidden and potentially greatest benefit of automation, however, is the precise data that can be produced by consistent processes continually repeated. Accurate, consistent, and timely data enable operators to improve their analytical and real-time diagnostic capabilities before and during the drilling phase.

Drilling operations are complex and diverse across various basins. Critical decisions that impact cost and output include the identification of optimal wellhole location, selection of rig type, and choice of equipment based on downhole geologic and temperature variances. The collection of consistent data and enhanced software/big data analytics are considered one of the most significant tools to future efficiency. Using new fiber-optic sensors and real-time software calculations, drillers can make faster and more informed decisions about conditions thousands of feet below ground. This will help prevent equipment failures, reduce time requirements, and improve the accuracy of drilling operations to maximize production before and after the fracturing process.

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An EIA analysis of average Bakken (North Dakota, Montana, and Canada), Eagle Ford (South Texas), and Marcellus (New York, Pennsylvania, West Virginia, and Ohio) well-related expenses found that total costs per horizontal well can vary between \$6.5 million and \$9 million. However, the cost of the production phase typically exceeds the cost of drilling the well. Therefore, production gains may outperform returns from drilling efficiency.

New and improved downhole sensors can determine the depth of each fracturing job to help plan the spacing of wells more accurately and verify that no significant section of the shale is overlooked. Research is also being conducted into "waterless" fracking that uses chemical compounds or foam, which could reduce water treatment costs and improve the length and width of rock fractures, resulting in additional oil extraction.

Large service and production companies are also reportedly experimenting with new composite sand materials and different chemical and water combinations to increase production and varying the depths of fracture points to extract the maximum amount of oil from each well. Although most middle market service companies do not have the sizable research and development

(R&D) budgets of their larger competitors, they do have the advantage of being more nimble and able to adapt and implement improvements faster throughout their organizations. Middle market companies should also have better internal communications to share the best drilling and fracking techniques.

## Adapting to the New Normal

Former Saudi Oil Minister Sheik Ahmed Zaki Yamani once warned his OPEC colleagues, "The Stone Age didn't end because we ran out of stones. It ended because we invented bronze tools, which were more productive."

The oil industry is in the midst of a structural change. To survive in this environment, it is critical that middle market services companies immediately exercise strict financial prudence and boost operational efficiencies to increase productivity. To thrive in the long term, they must adapt by creating new value-added services, leveraging technology, developing new data analytics, collaborating with clients, and providing more efficient and innovative solutions to reduce extraction costs and improve production.