

OIL & GAS

Getting Ready for the Next Drilling Growth Cycle

As we canter towards the start of the another growth cycle, successful operators will need to continue optimize operational expenditure and develop lean operating frameworks that incorporate the latest advancements in oilfield technologies, AI, and IoT.



Drilling and Completions in both the U.S and Canada will rebound hard over the next two years after falling equally hard in 2020 during the height of the pandemic.

With the U.S rig count rising steadily over 14 consecutive months, a trend that is expected to continue throughout 2022.

A key driver supporting the likely aggressive growth in drilling both onshore and offshore is that the demand for oil in 2022 will exceed 100 million barrels a day (EIA estimating 101.01 million b/d global oil demand for 2022), back to levels seen in 2019 before the Covid pandemic. There is always the counterargument that the growth and advancements in alternative energy – electric vehicles, wind and solar power – will rapidly curtail the need for conventional fossil fuels. Alternative energy advancements are well documented, front and center in much of today’s press and social media; however, alternative energy still only accounts for a small fraction of overall energy consumption. Continuing growth in fossil fuel consumption will be driven in large parts by the growing economies of China and India, offsetting expected growth in non-fossil fuel sources, particularly across European nations, likely to be the case for many years to come.

The decline in crude oil inventories also supports drilling activity growth in 2022. Along with the number of drilling rigs doubling over the past 12 months, crude oil inventories have gradually declined over the same period. Cushing, Oklahoma inventories have declined 42% this year, currently 26% below the historical 5-year average. OPEC producers have done well to hold agreed production cuts throughout the past two years; this will likely continue given that most OPEC members are enjoying the stability seen in oil prices throughout this year and likely to continue into next year. Oil price stability offers operators the ability to plan and budget with additional confidence, something we are currently seeing with many of our clients.

Most onshore producers have spent the last couple of years consolidating spend and conserving capital, learning to operate with considerably higher fiscal and operational discipline; this bodes well for the upcoming growth cycle.

Operators must optimize operational expenditure and develop lean operating frameworks that incorporate the latest advancements in oilfield technologies, AI, and IoT.

The same expectation is valid for drilling and completions operations. Before drilling activity was significantly curtailed, many of our clients had achieved meaningful drilling performance improvements across every aspect of the “Idea Generation-to-Put-On-Production” (IG2POP) process and value chain. Unfortunately, with the disruptions brought on by the Covid pandemic, and in some instances, significant changes in staffing, retirements and turnover, much of that knowledge and wisdom may no longer be as easily available to the organization. Even where the knowledge base is still intact, it will take time to get back to the pre-pandemic performance levels. Much of the discipline has likely dissipated, given the significant changes to working patterns, remote work, etc.

Staffing and resourcing challenges will be a significant hurdle as operators ramp up drilling activity, especially with rig crews, given that many low-skilled workers left the industry entirely, forced in part by the lack of activity over the past two years. Delivering previous levels of drilling performance will be a challenge as the rig operators have to train new people at the possible expense of drilling performance. Operators will also need to revisit and retool their core drilling processes, something that could potentially be overlooked given the desire to ramp up rapidly.

Operators must address several fundamental levers to deliver desired drilling objectives, including cost and operating performance levels.

Organizations at the height of the pandemic had little option other than to transition teams to remote work; something that has remained immensely popular with many employees. Some organizations have, begrudgingly, agreed to continue some optionality of remote work with their office-based staff, which has presented several ongoing challenges. To continue to optimize organizational structures and frameworks, there will be an urgent need to redefine and clarify certain organizational elements to support drilling and completions processes: including the redefinition of organizational hierarchies, roles & responsibilities, updated procedures, and the design of appropriate interfaces to link people across the operations, drilling and completions value chain.

In conjunction with organizational frameworks, operators must also update their Management Operating System, including KPIs, reports, planning and performance review meetings, RCA process and after-action reviews. The challenge is not necessarily in effort or skill required to update management systems and processes, rather ensuring robust implementation of management systems and processes. Most initiatives fail at the implementation phase, and not because organizations do not have the ability to design and develop optimal processes and systems.

AI and IoT have become a critical element in not only organizational frameworks and structures, but also in the optimization of processes and management systems. There is considerable value to be derived from ensuring that organizations are deploying and utilizing the appropriate AI and IoT platforms to deliver optimal performance across every element of their overall value chain. Getting the most out of these AI/IoT platforms requires organizations to ensure that their processes and systems are designed to optimize the technology. There are plenty of examples of companies deploying the technologies and then being dissatisfied with the outcomes. It is in nearly all instances, an issue of the systems and processes not being changed to reflect new work requirements. These AI/IoT platforms are inexpensive and fairly easy to deploy rapidly, the challenge is to ensure that you have the right platforms given that there are very few, if any, that we believe provide end-to-end optimization of the overall drilling and completions value chain. Our clients spend as much time choosing the appropriate platforms as we did to implement the AI/IoT platforms. Operators must be diligent and proactive in tackling these issues to ensure they take advantage of this next upcoming growth cycle.

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