

Halliburton delivering 145 wells to Eastern Hemisphere operator on time, on budget and safely

Halliburton successfully completed almost half the wells ahead of schedule with no lost-time safety incidents and has been awarded additional work



OVERVIEW

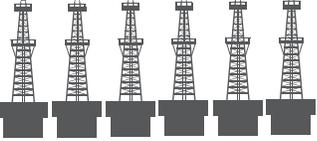
To help accelerate production without increasing costs, an Eastern Hemisphere operator tendered the construction of 145 wells to four companies on a lump sum, turnkey basis. In 2010, Halliburton was awarded the project, the first of its kind for this operator. Halliburton provides project management, rigs, and well services. Two and a half years into the five-year contract, Halliburton is ahead of schedule.

Halliburton reviewed data from offset wells, established parameters to reduce nonproductive time (NPT), optimized drilling, and established risk management protocols. All this helped Halliburton reduce NPT from 15 percent at the start of the project to currently 6.5 percent, and complete the first 71 wells with no lost time due to safety incidents. Halliburton has completed the equivalent of 16 additional wells that were not part of the initial contract. The operator has recently approached Halliburton regarding expanding the scope of the contract as a result of this mutual success.

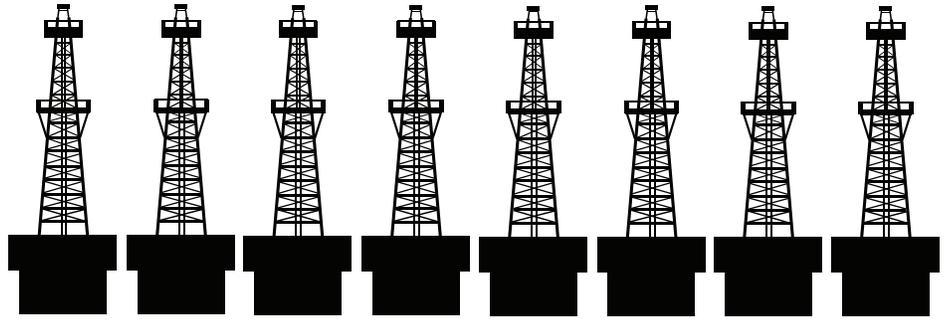
CHALLENGE	SOLUTION
<p>Time lost during drilling</p> <p>To fulfill its contract, Halliburton had to find a way to decrease NPT. Most of the Halliburton group had never worked in this area before, and were working with unfamiliar crews. As a result, the average NPT was 15 percent when the project began.</p>	<p>Cross-cultural collaboration</p> <p>To reduce lost time without compromising safety, Halliburton Project Management led daily meetings that identified and resolved potential challenges to minimize lost time. NPT dropped from 15 percent to 6.5 percent despite the fact that crews spoke three different languages.</p>
<p>Finding opportunities for improvement</p> <p>By developing programs to track performance, Halliburton learned that the first sections of wells in this field often experienced severe lost returns. Through extensive data analysis, Halliburton also identified frequent problems in other stages that were costing precious drilling time.</p>	<p>Drilling optimization</p> <p>After thorough historical analysis of processes, Halliburton found unique combinations of technologies that could help remedy these challenges. By experimenting with new combinations of directional drilling, muds, bits, cement and more, Halliburton improved drilling performance dramatically.</p>
<p>Managing risk</p> <p>Because this was the first contract of its kind for this operator and involved 145 wells, Halliburton's financial exposure was high. That placed a premium on managing risk closely and intelligently.</p>	<p>Risk assessment reduced NPT and safety issues</p> <p>Early on, Halliburton Project Management performed a thorough risk assessment and categorized potential challenges. Any item related to NPT or safety was deemed unacceptable risk and Halliburton developed programs to help mitigate those risks. NPT was reduced 57 percent.</p>



YEAR 1 2 EXTRA WELLS



YEAR 2 6 EXTRA WELLS



YEAR 3 8 EXTRA WELLS

Halliburton has delivered 71 out of the 145 contracted wells in just two and a half years. In year one, Halliburton also delivered the equivalent of two extra wells above the 25 mandated by contract. In year two, Halliburton delivered the equivalent of six extra wells above the 30 mandated. And in year three, Halliburton is on track to deliver the equivalent of eight above contracted amount.



NPT
REDUCED
15% to 6.5%

While averaging 15 percent at the beginning of the project, Halliburton has reduced NPT to just 6.5 percent. This has helped increase the number of wells drilled annually.



Halliburton has met and exceeded its commitment to the operator to employ locally, with a local employment rate of 40 percent. Halliburton trains all local employees and has trained some to become well site supervisors.



ZERO LOST TIME
DUE TO SAFETY INCIDENTS

The Halliburton project management team achieved goals without sacrificing safety, even with some language barriers to overcome. During the two and half years of the contract, there has not been any lost time due to safety incidents.

Halliburton successfully completed 71 of 145 planned wells ahead of schedule with no lost-time safety incidents and has been awarded additional work



Operator searched for turnkey well construction contractor

An Eastern Hemisphere operator, looking for a way to accelerate production and reduce costs, sought outside help in the development of one of the largest oilfields in the world. The operator wanted to drill 145 wells in the field and needed a partner to manage the overall project, drill and complete the wells. The operator would supply tubular goods and wellheads, but the chosen project management team would provide rigs, all other services and personnel required. This was the first time this operator had put out a tender for a lump sum, turnkey project like this.

Halliburton put together an aggressive bid to secure the five-year contract and committed to hiring locally. Halliburton has met and exceeded its commitment to the operator, with a local employment rate of 40 percent. Halliburton trains all local employees and has trained some to become well site supervisors.

Team put in place to drill 145 wells in five years

As soon as the operator awarded the contract, Halliburton Project Management put together a team that included drilling supervisors, project managers, superintendents and specialists in numerous oilfield disciplines. While many of these people had worked in the region, most had never worked in this country. Halliburton held daily planning meetings to ensure everyone had the same goals as drilling began. Halliburton took data from offset wells and used the Halliburton Management System for Project Management to initiate, plan, execute, monitor and control, and close out each well.

The 145-well project included three different types of wells: vertical evaluators, water injectors, and horizontal producers. The vertical wells were for geological control and to collect data for reservoir development. The horizontal wells averaged 7,000 to 11,000 feet measured depth and were all open hole completions. Some were single lateral and others were multi-laterals. These different types of wells required different programs, equipment and strategies.

Efficiencies and collaboration reduce NPT

With 145 wells to drill in a five-year period, reducing NPT without compromising safety was the first priority. Halliburton averaged 15 percent NPT at the beginning of the project. Over time, Halliburton has reduced NPT to just 6.5 percent, a 57 percent reduction. The reduction in NPT has helped Halliburton increase the number of wells drilled annually. In the first year alone, Halliburton was able to deliver the equivalent of two extra wells above the 25 contracted. In the second year Halliburton delivered six above the 30 contracted for that year. Halliburton is on track to deliver the equivalent of eight extra wells in the third year of the contract.

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Halliburton delivers wells ahead of schedule

Halliburton is well on its way to meeting and exceeding its goals and those of the operator. Approximately halfway through the five-year contract, Halliburton has successfully delivered the equivalent of 88 wells. Thanks to excellent coordination and efficiency, Halliburton has stayed ahead of schedule throughout the entire project. Halliburton's team of engineers, supervisors and managers work closely with the operator and communicate daily to assess risk and help ensure the wells are drilled and completed on schedule. This level of commitment has helped ensure the operator receives quality service throughout the project.



Communication helps with risk assessment and reduces safety risks

Collaboration and communication within Halliburton and with the operator have been critical to the success of the project, especially when dealing with geological challenges like lost returns in the upper sections of the well. Lost returns could have resulted in the collapse of the borehole or made it impossible to set casing. Halliburton and the operator worked together to identify the potential risks and develop plans to mitigate associated lost time.

The Halliburton project management team has also achieved its goals without sacrificing safety, even with some language barriers to overcome. In two and half years there has not been any lost time due to safety incidents.



Success led to contract extension and other services

In just two and half years, Halliburton has exceeded the expectations of this Eastern Hemisphere operator. Halliburton provided all of the technology and services necessary to deliver the wells. This included directional drilling, drill bits, mud, wireline and slickline, cementing and more. In addition, Halliburton provided extra services, such as coring and logging operations. The operator is pleased with the work to date and recently requested Halliburton provide two additional rigs and extended Halliburton's contract.