

BOREMAX® High Performance, Inhibitive Fresh Water Fluid System Economically Drills Monobore Well in STACK Play

HPWBM SUCCESSFULLY REPLACES OBM WITHOUT SACRIFICING PERFORMANCE

OKLAHOMA, UNITED STATES

CHALLENGE

- » Drill and case a monobore well in STACK play
- » Utilize water-based mud to save cost on diesel compared to offset wells
- » Provide similar performance as offset wells that used oil-based mud

SOLUTION

- » BOREMAX high-performance water-based mud (HPWBM) system – to replace the region's reliance on traditional OBM
- » Lab testing – to determine if product concentration and makeup would provide sufficient inhibition

RESULTS

- » Successfully drilled to total depth (TD) and cased well with no issues – despite leaving BOREMAX system in 11,000' of open hole for 9 days without being circulated

OVERVIEW

In response to the rising cost of diesel used in drilling fluids consistently increasing AFE, an operator sought an alternative type of fluid system to drive down their overall cost, while providing the same performance as oil-based mud (OBM). Before moving forward with planning several monobore wells in the STACK play located in Central Oklahoma, they needed to prove the viability of switching to water-based mud (WBM).



CHALLENGE

The STACK, derived from Sooner Trend (oil field), Anadarko (basin), and Canadian and Kingfisher (counties), is aptly named, as there are multiple stacked formations being targeted for oil and gas production. Baroid was asked to provide a high-performance drilling fluid for this challenging play that would offer better cost control than traditional diesel used in OBM, while still providing the same results as OBM offset wells. Another distinctive challenge was the innovative monobore well design, which aims to drill a single-diameter hole all the way from the surface casing to total depth.

SOLUTION

After pre-well planning with local and regional Baroid management, the BOREMAX HPWBM system was presented to the operator as a potential solution. It had been previously used in the area on three-string wells with success, but never in a highly difficult, monobore well attempt. A customized BOREMAX HPWBM was formulated based on lab testing, as well as offset usage of the fluid system, to ensure the efficacy of its inhibitive capabilities.

RESULTS

Due to unforeseen rig issues, the BOREMAX system was ultimately put through stress testing not before seen. Even with the stress on the mud system, as well as the wellbore, BOREMAX HPWBM results were outstanding, contributing to the delivery of a monobore well at performance levels equal to OBM.

Notwithstanding 9 days of downtime related to the unexpected rig issues, the well was successfully drilled and cased; thus, proving the viability of this customized HPWBM solution for continued use in the operator's monobore drilling program.

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