



EvoLube[®] G Significantly Outperforms Competitor's Lubricant in Lea County, New Mexico

Substantial reductions in off-bottom torque, days on well, and money spent on additional product allowed the operator to see considerable savings in both time and money.

CHALLENGE	SOLUTION	RESULT
<ul style="list-style-type: none"> • Maintain torque and drag comparable to OBM • A lubricant that performs at lower concentrations when experiencing heavy seepage or high dilution rates 	<ul style="list-style-type: none"> • Newpark's EvoLube[®] G - Drilling Performance Enhancer 	<ul style="list-style-type: none"> • Reduced torque by 35% • Reduced days on well by an estimated 40% (5 days) • Reduced loss mud and product addition cost by an estimated 30-40%

OVERVIEW

An operator was experiencing high torque while drilling an extended-reach lateral in Lea County, New Mexico.

The formations being drilled were typical of having a high rate of seepage and were abrasive in nature. To combat this problem, a cut brine water-based fluid was selected for the wells, with plans to incorporate a competitor-supplied lubricant to combat friction.

CHALLENGE

Heavy seepage, and a high rate of dilution made it difficult to maintain the competitor lubricant at a concentration high enough to sustain torque and drag within an acceptable range, which also negatively impacted ROP. This led to an increase in rig time, lost fluid, and product addition rates.

Due to a lack of performance and difficulty maintaining sufficient ROP, the onsite drilling consultants requested an alternative to their current lubricant.

SOLUTION

Based on previous success as well as a familiarity with Newpark Fluids Systems' EvoLube G, the onsite drilling consultants and Newpark's Technical team proposed an alternative lubricant.

EvoLube G is an effective performance enhancer for all water-based systems and is ideal for high-temperature applications due to its greater than 400°F (204°C) thermal stability. In addition, EvoLube G has proven to be an effective lubricant in various types of water-based drilling fluids and can typically be used successfully at a lower concentration than other lubricants currently on the market.

The lab and field data support the benefits of using EvoLube G in concentrations as low as 1%-2%.



In this instance, the operator chose to add and maintain a concentration of 3% (v/v).

RESULTS

Immediately upon introducing EvoLube G to the current system, the operator noticed a 35% reduction in off-bottom torque from 25Kft/lbs to 16Kft/lbs.

The p/u decreased by \approx 200Klbs and the slack-off increased from near 0 to \approx 105Klbs, allowing drilling to resume, extending rotating time an additional 24 hours.

In addition, there was a noticeable increase in ROP. During the previous tour, while using a competitor's lubricant, the rig drilled 606' of lateral. During the 1st tour of drilling while using EvoLube G, the rig drilled over 1500' of lateral.

These performance improvements allowed the operator to return to their desired drilling parameters and helped contribute to saving a potential of five drilling days per well. The time saved also reduced their pumping time and losses.

By reducing the overall losses per well, an estimated additional savings of 30-40% was seen due to a decrease in product additions associated with building additional volume.