

Haynesville Shale: RHE-USE saves operator an estimated \$163,282

The Situation

The operator was prepared to drill a well in Caddo, LA where low-gravity solids (LGS) had previously presented a host of expensive problems. In offset wells, the operator had to contend with the enormous costs and potential environmental liabilities associated with hauling large volumes of contaminated cuttings to distant disposal sites. In addition, the inability to remove LGS restricted drilling performance, further increasing well construction costs.

The Solution

Solids control/waste management specialists from M-I SWACO, A Schlumberger Company, recommended the operator employ their new-generation RHE-USE¹ process to completely remove LGS to enhance drilling efficiency and reduce disposal costs. The patent-pending, chemically-enhanced technology had previously field-proven its capacity to optimize drilling while delivering cuttings suitable for onsite disposal. With operator approval, the process was used in a 5,049-ft (1,539 m) interval from 10,768 to 15,817 ft TD (3,282-4,821 m).

The Results

By using the RHE-USE process, the operator saved an estimated \$163,282, including the recovery of 1,045 bbl of reusable oil-base drilling fluid through the use of dual MEERKAT¹ drying shakers. Total dilution amounted to 537 bbl of diesel, water and barite.

In comparison, at the 100% dilution rate previously required, up to 18,517 bbl would have been consumed to maintain 2.9% LGS. In addition, the 5,049-ft interval was drilled in 12 days with generated hole volume of approximately 275.2 bbl based on a 6¾ -in. bit and 10% washout. Removing the bulk of the LGS concentration also reduced friction appreciably, thereby lowering downhole mud temperature by 20 to 30°. Less abrasion meant the downhole motor and bit could drill longer without tripping for maintenance.





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