

Case study: Dimmit County, Texas

LATIDRILL significantly reduced fluid costs in Eagle Ford shale play

Two wells in the Eagle Ford shale play were drilled consecutively by an operator. The wells were similar in true vertical depth and measured depth (MD), with comparable casing programs. In an effort to reduce overall fluid-related costs, the operator drilled one of the two wells using the Baker Hughes **LATIDRILL™ high-performance water-based fluid system**.

The LATIDRILL system consists of three core products that work together—**LATIBASE™ multifunctional additive**, **LATIMAGIC™ wellbore stabilizer and lubricant**, and **LATIRATE™ rate of penetration (ROP) enhancer**. Because the system uses fewer products, it is faster, easier, and more efficient to use.

The first well was drilled with a traditional oil-based mud (OBM) to 13,507 ft (4117 m) MD with a maximum inclination of 91.7°. The well was drilled in 23 days. The second well, drilled using the LATIDRILL fluid system, was drilled to 13,994 ft (4265 m) MD with a maximum inclination of 91.5°. The second well was drilled in 14 days.

Although downhole losses were not seen on either well, both experienced minor issues running production casing that required some washing of the casing in order to set it on bottom. This was likely due to frictional forces as opposed to borehole stability.

Although product costs increased slightly using the LATIDRILL system, implementing it on the second well resulted in significant cost savings for the operator. The total fluid cost—liquid mud, base fluid, transportation, and produce—was reduced by \$110,400 USD, with base fluid cost reductions of \$127,700 USD, and transportation cost reductions of \$27,450 USD. The total cost per foot drilled was reduced by USD 8.56 per foot drilled. Using the LATIDRILL system, the operator is expected to reduce costs per rig by approximately \$1.5 million USD annually.

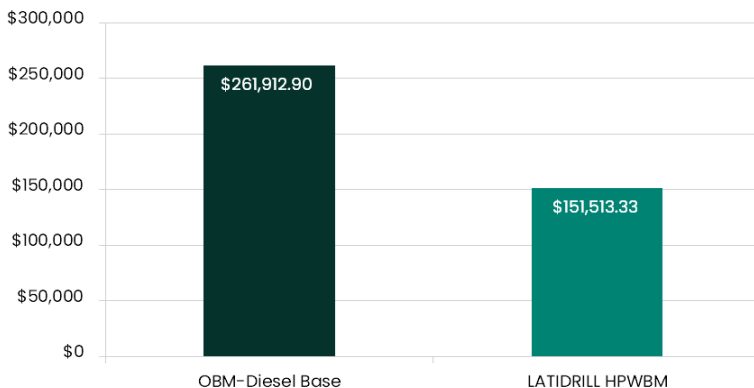
Health, safety, and environmental (HSE) impacts were also managed by reducing the road time for loads delivered to the LATIDRILL well, minimizing the possibility of motor vehicle-related incidents.

Challenges

- Transportation costs of traditional OBM
- HSE concerns relating to transportation of the OBM used

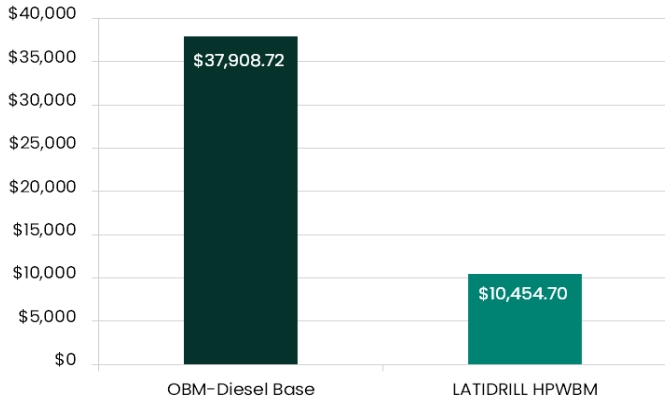
Results

- Reduced overall fluid-related costs by \$110,400 USD
- Eliminated costly base fluid
- Reduced the cost of transporting fluids to the wellsite
- Improved HSE metrics
- Avoided downhole losses
- Maintained wellbore stability

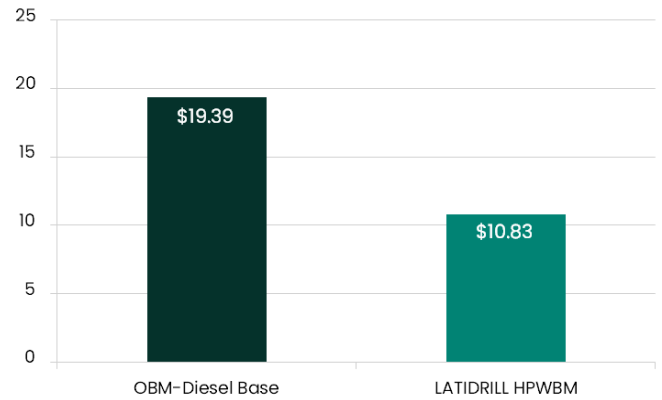


Total Mud Cost-Product, Base Fluid, and Transportation

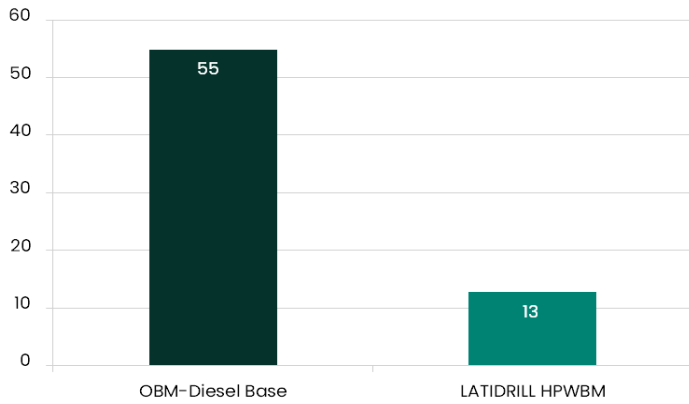
Transportation Cost



Total Cost/Ft



44,000-lbm Loads Delivered



Baker Hughes reduced total fluid costs by \$110,400 USD using the LATIDRILL system's three-product approach.