CASE HISTORY

WelSAVER™ Restores Circulation and Enables Successful Drilling to Total Depth in Eagle Ford Well

Location: Frio County, Texas, USA
Application: Lost circulation control while drilling
Product: WelSAVER™ Advanced Multi-Modal Bridging Technology

Challenge

- Fluid losses reached approximately 45 bbl/hr during drilling
- Weak formation encountered at 8,700 feet in the Eagle Ford formation in the intermediate and lateral interval
- Risk of increased nonproductive time and drilling interruptions
- Operator required a solution capable of maintaining circulation while drilling to total depth

Solution

- Implemented WelSAVER multi-modal bridging technology
- Custom sweep designed with 15 lb/bbl concentration
- 25 bbl treatment volume tailored for fracture sealing
- Particle size distribution optimized for effective bridging
- Compatible with the existing drilling fluid system

Results

- Fluid losses effectively controlled across the interval
- Drilling progressed to total depth in a single run
- Zero nonproductive time attributed to fluid losses
- Wellbore stability maintained throughout drilling

CHALLENGE

While drilling the 8½ in. section of a well in the Eagle Ford Basin, an operator encountered a predicted weak formation interval at approximately 8,700 ft that resulted in elevated drilling fluid losses. Loss rates quickly escalated to approximately 45 barrels per hour, threatening drilling efficiency and increasing the risk of nonproductive time. Maintaining circulation was essential to continue drilling the lateral to total depth in a single run while preserving wellbore stability and avoiding costly interruptions. Without effective loss control, the operation risked stalled drilling progress, additional remedial treatments, and increased rig time. A reliable solution was required to quickly mitigate fluid losses, stabilize the wellbore, and maintain drilling efficiency.

SOLUTION

WelDril recommended incorporating WelSAVER™ advanced multi-modal bridging technology to mitigate fluid losses and stabilize the wellbore during drilling operations.

WelSAVER is engineered with a wide, multi-modal particle size distribution designed to bridge and seal fractures, vugs, and permeable zones across a broad range of formation apertures. This engineered particle blend promotes rapid mechanical sealing while maintaining circulation and supporting wellbore stability under variable loss conditions.

To address the loss interval, the WelDril engineering team designed a custom lost circulation sweep consisting of 15 lb/bbl of WelSAVER mixed with 25 barrels of drilling fluid. The sweep was engineered to optimize fracture sealing and fluid retention within the formation.

The drilling program maintained a fluid weight of approximately 10.4 ppg, allowing the treatment to be deployed without introducing wellbore instability.

WELDRIL

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RESULTS

The WelSAVER treatment successfully controlled the fluid losses and stabilized the wellbore, allowing drilling operations to continue efficiently. Multiple sweeps were pumped while drilling progressed, and circulation was maintained throughout the interval. The well was successfully drilled to total depth in a single run, eliminating the need for additional remedial operations.

Operational performance indicated effective sealing of the loss pathways and improved wellbore stability across the interval. The operator successfully landed and isolated the production casing with zero recorded nonproductive time associated with lost circulation events.