



Engineered combination of ProppFix™ wellbore strengthening additive and X-Prima™ LCM Cut Fluid Losses by 50% in Depleted Austin Chalk

Planned lost circulation remediation strategy based on extensive testing regains circulation to put drilling back on track.

CHALLENGE	SOLUTION	RESULT
<ul style="list-style-type: none"> Minimize anticipated high fluid losses while drilling depleted Austin Chalk with a water-based drilling fluid system 	<ul style="list-style-type: none"> Evaluation of different remediation solutions prior to drilling Engineered blend of proprietary ProppFIX™ and X-Prima™ lost circulation materials 	<ul style="list-style-type: none"> Regained circulation to complete drilling operations 50% less fluid lost compared to previous wells

OVERVIEW

An operator was anticipating high fluid losses to occur while drilling a depleted Austin Chalk in the Eagle Ford. The strategy for this area includes prevention, wellbore isolation, frac-tip isolation, mitigation and remediation of losses. The application of preemptive background lost circulation material was deemed inefficient for this well, so the use of remediation for lost circulation events was the provided plan.

CHALLENGE

While drilling laterally and sliding with a 9.5 lbm/gal (1,138 kg/m³) Evolution® water-based drilling fluid system, the operator experienced total fluid loss as anticipated. Circulation needed to be regained to continue drilling.

SOLUTION

Prior to the drilling application, specialist testing took place at Newpark Technology Center to evaluate fluid losses within the Austin Chalk core and to devise an effective remediation solution. Conventional in-house testing had produced excellent results, but validation required more demanding tests.

Different components were evaluated and selected based on individual characteristics and contributions to the function and performance of each blends. Based on these tests, the operational team developed a lost circulation slurry mix of ProppFIX™ wellbore strengthening additive and X-Prima™ high fluid loss squeeze. The X-Prima™ squeeze is a specialist, high-solids formulation lost circulation material (LCM) featuring a proprietary blend of granular and fibrous materials for use in severe loss applications.



RESULTS

The blend of ProppFIX additive and X-Prima squeeze in a 75 lbm/bbl (214 kg/m³) slurry effectively mediated losses in this extremely difficult and deteriorating wellbore. Fluid losses were reduced by more than 50% on average compared to prior wells. With circulation regained, the operator continued drilling operations as planned.