

CLAYSEAL[®] PLUS Shale Stabilizer Saves Operator US\$150,000

SOLUTION HELPS MINIMIZE SWELLING CLAY, SHORTEN TRIP TIME

CHICHIMENE FIELD, COLOMBIA

CHALLENGE

Avoid wellbore instability issues, such as reactive clay causing excessive trip time and stuck pipe incidents

SOLUTION

Optimize the water-based fluid by using CLAYSEAL[®] PLUS shale stabilizer

RESULTS

Halliburton solution shortened trip time, saving operator US\$150,000 in rig time

OVERVIEW

While drilling in the Chichimene field, the operator continually encountered wellbore instability issues in the 12¼-in. interval. The operator challenged the Halliburton Baroid team to provide a solution.

CHALLENGE

The operator's wellbore instability issues included clay swelling, washout above shale intervals, and high MBT values (clay concentration) at the end of the section, resulting in prolonged tripping time, backreaming, and occasional stuck pipe incidents - adding up to 120 hours of nonproductive time.

SOLUTION

Before starting the project, Baroid engineers (including a Baroid Global Technical Advisor) performed in-depth analyses of information from offset wells, lab tests, operational practices, a geomechanical study, and operational results in prior drilling campaigns.

The Baroid team proposed and implemented a drilling fluid treated with CLAYSEAL[®] PLUS shale stabilizer to provide effective inhibition. The team also worked with the operator to identify opportunities for improvement in operational practices.

RESULTS

The inhibitive CLAYSEAL PLUS water-based fluid delivered improvements in hole quality and better hole cleaning.

The operator observed a significant reduction in tripping time, down from 45 hours on previous wells. The estimated value in saved rig time was approximately US\$150,000.

MUD SYSTEM FORMULATION

Products	Concentration (lb/bbl)
BORE-PLUS™	1.0–1.5
POLYAC PLUS™	1.5–2.0
PAXCEL LV/HV	0.5–1.0
BARAZAN [®] D PLUS	1.25–1.75
CLAYSEAL [®] PLUS	6.0–7.0
BARACARB [®] DF 25,50	15.0–20.0
BARACARB [®] DF 5	10.0
BARO-TROL [®] PLUS	5.0–6.0
CAUSTIC SODA	0.5–0.75
LIME	0.5–1.0
GLUTARALDEHYDE	1.0–1.25

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