

MetalSkin® Openhole Liner Isolates Challenging Formation Interval, Saves 3-4 Days of Rig Time

Objectives

- Create a mechanical isolation barrier between the high-pressure Burgan shale formation and the loss-prone Shuaiba dolomite formation. The specialty casing that would typically perform this function was unavailable, and managing mud weights between the two intervals would likely lead to a severe to total loss situation.

Our Approach

- Weatherford deployed a well integrity team and conducted a pre-job analysis. They recommended installation of a MetalSkin solid expandable cased-hole liner at the interval, which would isolate the two formations and enable safe drilling to total depth (TD).
- They began by isolating the high-pressure Burgan shale. Tubular running services ran 9 5/8-in. casing to the top of the Shuaiba dolomite formation to a depth of 9,283 ft (2,829 m). The string was cemented in place with no losses and a quality cement bond.
- With the problematic Burgan shale isolated, the operator continued drilling with a lower mud weight for 710 ft (216 m) through the loss-prone Shuaiba formation to TD.
- To create a permanent barrier between the two formations, the team ran 710 ft (216 m) of 7 5/8- × 9 5/8-in. MetalSkin openhole liner to a depth of 9,893 ft (3,015 m) at 68° inclination. The string was hydraulically expanded and then cemented in place with a 100-ft (30-m) overlap with the parent 9 5/8-in. casing.
- By avoiding the costs of sidetracking the well, the operation saved 3 to 4 rig days valued at US \$650,000.

Value to Client

- The Weatherford MetalSkin system provided a permanent mechanical isolation barrier between the Burgan and Shuaiba formations.
- The operation saved 3 to 4 rig days valued at what US \$650,000 by avoiding the costs of sidetracking the well.



The Weatherford MetalSkin solid expandable system provided a permanent isolation barrier between two formations with different drilling characteristics.

LOCATION

Raudhtain Field, Kuwait

WELL TYPE

Onshore oil and gas development

PARENT CASING TYPE AND SIZE

9 5/8-in. 47 lb/ft L-80 BTC

LINER SETTING DEPTH

9,893 ft (3,015 m) at 68° inclination

PRODUCTS/SERVICES

- MetalSkin solid expandable liner
- Tubular running services
- Riptide® RFID drilling reamer
- Milling services



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