

MetalSkin Monobore Openhole Liner System Isolates Severe Losses in an HPHT Development Well

Objectives

- Install a 14 1/2-in. tieback shoe assembly on a 13 5/8-in. casing string to allow a casing extension with a MetalSkin monobore openhole liner (MMOL) system. The tieback shoe will facilitate running of the MMOL system if severe losses are encountered when drilling the open hole.
- Deploy the MMOL system to isolate the loss zone and prevent slimming of the well to allow drillout with a 12 1/4-in. drilling assembly.

Our Approach

- A 14 1/2-in. MetalSkin tieback shoe was deployed on the intermediate casing string and successfully cemented in place. The casing was tested to 4,000 psi (27.58 MPa), and the mud weight was increased to 17.0 lb/gal before beginning to drill the 12 1/4-in. hole section.
- Severe losses were encountered in the 12 1/4-in. section. Drilling continued through the loss zone and the section was underreamed to 14-1/2 in.
- The Weatherford MMOL system was run to a total depth of 10,488 ft (3,197 m) at 1 m/min to prevent further losses. Cement displacement and liner expansion operations were conducted successfully with a pressure-test of 500 psi (3.45 MPa) to confirm seal integrity at the liner overlap.
- The monobore system was milled out and the 12 1/4-in. open hole was extended and cased with a 10-in. × 13 5/8-in. liner.

Value to Customer

- The Weatherford MMOL tieback shoe enabled the client to install the 11 3/4-in. contingency expandable liner system when losses were encountered while drilling the 12 1/4-in. open hole.
- The installation of the Weatherford MMOL system enabled the client to isolate the lost-circulation zone and continue drilling the 12 1/4-in. open hole. The system provided sufficient annular bypass for cementing the 10-in. liner at planned depth without incurring further losses.



The Weatherford MMOL system was successfully run as a contingency solution in an offshore well in Vietnam. The Weatherford MMOL tieback shoe enabled a liner to be installed when severe losses were encountered during drilling.

LOCATION

Vietnam

WELL TYPE

Offshore producer

FORMATION TYPE

Sandstone and claystone

HOLE SIZE

12-1/4 in.

PARENT CASING

13 5/8-in., 88.5 lb/ft, Q125, TSH 523

EXPANDABLE LINER

11 3/4-in., 71 lb/ft, VM50

TIEBACK SHOE

14 1/2-in., 65 lb/ft, P-110

PRODUCTS/SERVICES

- MMOL expansion system
- MMOL tieback shoe
- Expandable centralizer subs

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