



Weatherford®

REAL RESULTS

Weatherford Successfully Drills Algerian Well with Highly Overbalanced Pressure, Sets Area Record for Lowest NPT

Objectives

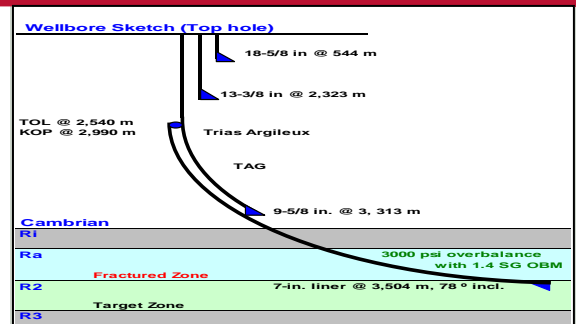
- Drill an 8 3/8-in. hole for a horizontal well in the build-up section of a Cambrian R2 formation. The hole had to be drilled to a 78° deviation through shale and a low-pressure, fractured sandstone reservoir before the 7-in. liner could be set. The mud weight required to control the shale would create a 3,000-psi (20.7-MPa) overbalance in the fractured zone with an elevated risk of mud losses and stuck pipe.

Results

- Weatherford drilled the fractured zone without any losses, using a 1.4 specific gravity mud weight. The 7-in. liner was then successfully run and cemented.
- Improved 8 3/8-in. drilling performance made it possible to drill the well's curved section in one run, establishing a new record for rate of penetration. Records were also set in the 12 1/4-in. and 16-in. sections.

Value to Client

- The well was completed with just 3% nonproductive time (NPT)—one of the lowest NPTs ever recorded in the Hassi Messaoud area and significantly better than the original target of 8% NPT.
- The drilling strategy used in the 8 3/8-in. hole will permit isolation of gas in the fractured reservoir from the lower target zone. It will also enable the isolation of injected gas from oil production in future wells, which is expected to enhance production rates.



Weatherford enabled the successful drilling of this Algerian well with highly overbalanced pressure and an elevated risk of mud losses and stuck pipe. The drilling strategy used will help to improve oil production and enhance reservoir management.

Location

Hassi Messaoud, Algeria

Formation

Cambrian R2

Well Type

Horizontal producer

Hole Size and Angle

8-3/8 in., 78°

Liner

7-in. P-110 N-VAM

Setting Depth

11,496 ft (3,504 m)

Products/Services

Integrated drilling services:

- Project management
- Drilling engineering
- Programming
- Bit selection and drilling
- Mud rheology optimization
- Performance analysis