SMITH BITS
A Schlumberger Company

Directional Casing-While-Drilling Technology Sets New World Record with Dubai Petroleum Establishment

Allegro CD service eliminates NPT and saves more than four days, offshore Dubai

Dubai Petroleum Establishment (DPE) used Allegro CD* directional casing-while-drilling service to eliminate NPT related to wellbore instability issues in reactive and unstable shales in offshore Dubai. The service helped DPE save costs compared with using the conventional solution, resulted in a time savings of four days, and set a new world record depth.

DPE's goal: optimize field development and avoid NPT incidents

DPE wanted to optimize field development of a thin oil rim within a steeply dipping interbedded reef buildup in the Aqam Field, offshore Dubai. Reactive and unstable shales presented significant drilling problems at high inclinations. Common NPT incidents included stuck pipe from unstable shales, hard reaming, and packoffs, requiring wiper trips before running the 9⅝-in casing.

Conventional solution

A conventional solution in the Middle East consists of isolating the unstable formation with an additional 7-in liner.

Schlumberger recommended directional casing-while-drilling

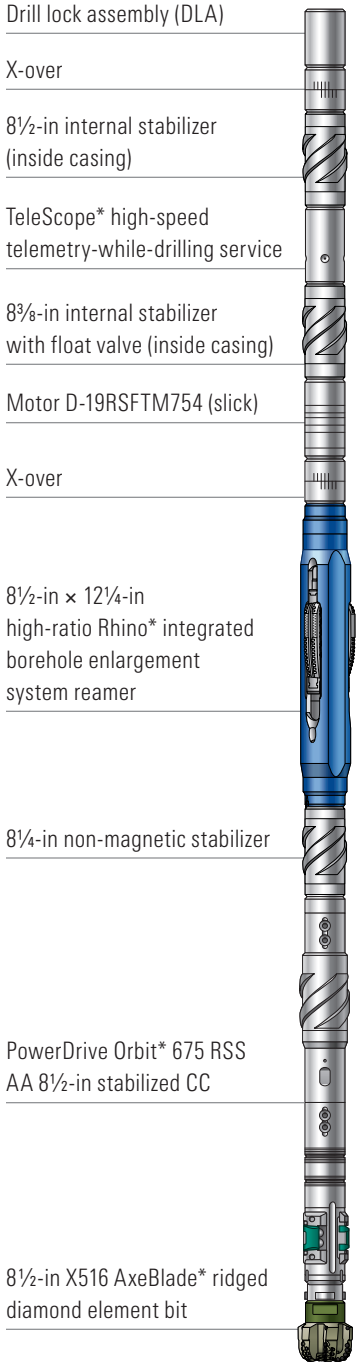
Allegro CD directional casing-while-drilling service is compatible with any retrievable directional-drilling BHA when the interval requires logging while drilling or directional drilling. The service improves well-construction performance, efficiency, and coordination while reducing wellbore instability, such as unstable shales.

DPE achieved record depth while reducing drilling days

Allegro CD service enabled DPE to drill through unstable shale on a high-inclination trajectory, minimizing the risk of stuck pipe and NPT. DPE landed the well within the target interval and minimized potential future requirements for scab liners or water shutoff treatments. The BHA drilled an interval longer than 1,200 ft, reaching the new world record depth of 12,481 ft-MD while meeting expectations for ROP and steerability of the directional BHA. The interval was successfully cemented after the directional BHA was retrieved.

The service eliminated the need for an additional interval to cover the problematic shale, saving more than four days, and it eliminated costs associated with the BHA becoming lost in hole.

The Allegro CD service enabled DPE to avoid NPT incidents related to wellbore instability.



Allegro CD service BHA.

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