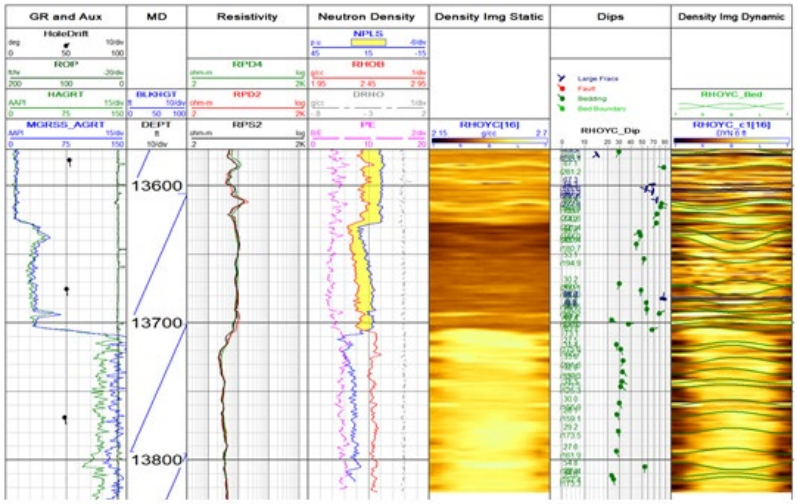
Magnus® RSS, LWD Services Provided High-Quality Data While Drilling Complex Sidetrack Well in the North Sea



Using the azimuthal density and thermal neutron porosity tool, Weatherford experts provided a final real-time model to assess a formation bed-dip relative to the well path trajectory from 13,000 to 14,000 ft (3,962 to 4,267 m) MD.

Objectives

- Navigate a challenging directional profile with anti-collision from a busy platform.
- Acquire all LWD data including azimuthal dip-picking.

Our Approach

- Weatherford experts recommended an integral solution, including the 675 Magnus rotary steerable system (RSS).
- The LWD team deployed the PressureWave formation tester and the following sensors: AZD, TNP, MFR, BAP, and total gamma.
- The well profile was S-shaped with 3 to 4°/100 ft (30 m) dogleg severity (DLS) requirement for turn and build/drop, with the maximum inclination building to 60°.
- Drilling parameters were managed in real time to optimize drilling performance, with 24/7 operational support by the Weatherford Real-Time Operations Centre (RTOC) and monitored in the real-time viewer as part of the CENTRO platform.

Value to Customer

- Real-time bed dip-picking helped to position the well and make a decision on the trajectory plan. Some potential fractures were also identified, and confirmed by losses, which may have compromised borehole stability and drilling activity.

LOCATION
North Sea, United Kingdom

WELL TYPE
Offshore, production

HOLE SIZE AND ANGLE
8-1/2 in., S-shape

TOTAL FOOTAGE DRILLED
2,963 ft (903 m)

PRODUCTS/SERVICES

- Magnus RSS
- IDS™ integrated directional sonde
- MFR™ multi-frequency resistivity
- HEL™ hostile-environment-logging measurement-while-drilling system
- BAP™ bore and annular pressure sensor
- HAGR™ high-temperature azimuthal gamma ray tool
- TVM™ true-vibration monitor sensor
- AZD™ azimuthal density sensor
- TNP™ thermal neutron porosity sensor
- PressureWave™ Formation Tester
- CENTRO™ Well Construction Optimization Platform
- Drilling Engineering services

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