SeaShield® Model 7875 DS RCD
Enables Efficient Transitions Between Drilling Phases With Zero NPT

Objectives

- Deliver a reliable rotating control device (RCD) in a well with instability and losses because of depleted zones. Previous RCDs used by the operator failed because of hydraulic pressure losses in the locking mechanism, which resulted in the bearing assembly unlatching and releasing the sealing elements. This caused wellbore pressure losses and an unintentional pressure release at the rig floor.
- Enable the passage of large-outside-diameter (OD) tools through the RCD.
- Enhance drilling efficiency by eliminating additional rig-up and rig-down times associated with transitioning between drilling phases.

Our Approach

- Weatherford deployed the SeaShield Model 7875 docking station (DS) RCD because of its efficient design. Previous RCDs used by the operator had a 13 5/8-in. pass-through that required rig-down and rig-up operations for the entire assembly each time large-OD tools were run downhole. The SeaShield RCD required only the simple removal of its integral sealed bearing assembly to achieve an 18 3/4-in. pass-through and to accommodate large-OD tools.
- The upgraded design of the SeaShield RCD included a different-style locking mechanism than the type used previously with other RCDs, which prevented the sealing elements from releasing.

Value to Client

- The SeaShield RCD enabled highly efficient transitions between conventional drilling, managed pressure drilling, and casing-running phases because the operator only had to remove the integral sealed bearing assembly each time large-OD tools were run downhole. Without having to stop repeatedly to rig-up and rig-down, the operator saved significant rig time and costs.
- By avoiding extra rig-up and rig-down operations, as well as the potential for the RCD to fail, the operator reduced safety risks to the rig crew.
- To date, the operator has incurred zero nonproductive time (NPT) using the SeaShield RCD.

The SeaShield Model 7875 DS RCD requires only the removal of the integral sealed bearing assembly to run large-OD tools, which reduces transition time between drilling phases.

LOCATION
Equatorial Guinea

WELL TYPE
Directional, oil

HOLE SIZE
Section A:12-1/4 in.
Section B: 8-1/2 in.

DEPTH OF SECTIONS A AND B
7,476 ft (2,279 m)

MUD TYPE
Low-toxicity mineral oil

AVERAGE MUD WEIGHT
Section A: 11.5 lb/gal(1,377.7 kg/m^3)
Section B: 9.6 lb/gal (1,150.1 kg/m^3)

AVERAGE ECD DURING DRILLING
Section A: 12.5 lb/gal (1,497.5 kg/m^3)
Section B: 11.3 lb/gal (1,353.7 kg/m^3)

AVERAGE BACKPRESSURE DURING DRILLING, CONNECTIONS, AND TRIPPING
Section A: 230 psi (1.6 MPa)
Section B: 307.5 psi (2.1 MPa)

PRODUCTS/SERVICES
SeaShield Model 7875 DS RCD

Weatherford®