

Plug Locator System Avoids a Wet Shoe For Proper Cementing Across Salt Layer, Saves 3 Days of Rig Time

Objectives

- Cement 14-in. casing in an 18 1/8-in. open hole of a deepwater, exploratory well.
- Prevent wet-shoe issues that result in poor annular isolation, require remedial squeeze cementing, and accrue additional rig time and costs.

Our Approach

- The operator selected the plug locator system because it had mitigated previous wet-shoe issues encountered in the Gulf of Mexico.
- The locator collar was connected at 876 ft (267m)—which equates to a length of approximately 22 casing joints or a well-fluid volume of 150 bbl (23.8 m³)—above the float collar to provide a better indication of the plug location during cement displacement.
- After the top and bottom plugs were launched, a pressure increase of 1,140 psi (7.9 MPa) was observed at the surface, which indicated that the top plug passed through the locator collar.
- The top plug bumped on the float collar at a pressure of 1,750 psi (12.1 MPa), and the pressure was increased and held at 2,250 psi (15.5 MPa) to test casing integrity.

Value to Client

- The plug locator system enabled the client to identify the status of cement displacement throughout the operation, to place cement in the proper annular areas for isolation, and to eliminate excessive drillout times caused by improper cement placement.
- The system prevented wet-shoe issues, which saved the client approximately 3 days of rig time for remediation operations.



The Weatherford plug locator system prevents a wet shoe and excessive cement drillout.

LOCATION

Campos Basin, Brazil

WELL TYPE

Offshore, deepwater, exploratory

FORMATION

Salt

HOLE SIZE

18-1/8 in.

CASING SIZE AND TYPE

14-in., 115-lb/ft HCQ-125

TEMPERATURE

212°F (100°C)

WATER DEPTH

9,058 ft (2,761 m)

MIXED STRING DEPTH

10,134 ft (3,089 m) for 14-in., 115-lb/ft and 13 5/8-in., 88.2-lb/ft HCQ-125 VAM

PRODUCTS/SERVICES

- 13 3/8- × 14-in. subsurface release (SSR) locator wiper plug
- 14-in. locator collar
- 14-in. autofill float equipment (L45WP float collar and L222W guide shoe)
- 14-in. centralizer sub

