Casing-Recovery Solutions Deploys DHPT and FRM Spear

Efficiently Recovers Cemented Casing from Conductor–Enables Slot Recovery while Eliminating Jarring and Milling

Objectives

- Recover 1,083 ft (330 m) of 13-3/8 in. (339.7 mm) from inside 26-in. (660.4 mm) conductor casing for an offshore Qatar operator.
- Expose a 604-ft (184-m) openhole section to facilitate a new sidetrack and eliminate the need for drilling a new well.
- A cement bond log showed the 13-3/8 in. casing was partially cemented, with sections close to surface with a good bond to the 26-in. conductor.
- Maintain integrity of the rig and conductor by avoiding conventional techniques, such as jarring and/or pilot milling.

Our Approach

- Weatherford worked closely with the operator to devise a strategy for recovering the cemented 13-3/8 in. while minimizing risk to the conductor or surface equipment.
- Initial attempts to washover the casing were unsuccessful due to the casing being fully eccentric inside the conductor, halting progress at 251 ft (76.4 m). Subsequently, the 13-3/8 in. casing was cut at 1,083 ft and an attempt was made to recover it with 350,000 lbs (158,757 kg) of rig overpull, but this effort failed.
- Further strategic cuts were made in the 13-3/8 in. casing. Despite these efforts, the rig was still unable to recover the casing using the maximum available overpull of 350,000 pounds.
- Instead of following the conventional jarring/milling approach, Weatherford deployed the Downhole Power Tool (DHPT) system to recover the upper section of casing from 95 to 288 ft (29 to 88 m).
- After engaging the 13-3/8 in. casing with the Flow-Release Mechanical (FRM) Spear, the DHPT was activated, applying an effective downhole overpull of 450,000 lbs (204,117 kg). After seven activations of the DHPT, which moved the casing 21 ft (6.4 m), the casing was sufficiently freed to be recovered to the surface using the rig.
- The DHPT had to apply an overpull of 620,000 lbs (281,227 kg) to move the second section inside the conductor from 289 to 324.8 ft (88 to 99 m). Subsequent sections were recovered using rig pull alone.

Value to Customer

- Opting to use the DHPT helped the operator avoid a risky pilot-milling operation and shallow jarring, ensuring conductor integrity was maintained. Risk to surface equipment and associated drop hazards from jarring operations were also eliminated.
- The FRM Spear proved to be reliable at releasing downhole and at surface, despite being subjected to high overpulls. Ultimately, the slot recovery was performed more safely and efficiently, as compared with traditional methods.

The Weatherford DHPT facilitates application of extreme forces downhole directly into any type of stuck fish, such as casing, drill pipe, tubing, drilling BHAs, packers, and plugs. The system enhances safety and operations efficiency by running the tool downhole, thereby eliminating all tensile forces off the workstring and rig surface equipment.

LOCATION
Offshore Qatar

WELL TYPE
Slot Recovery

CASING SIZE
13-3/8 in. (339.7 mm)

DEPTH OF SIDETRACK
(1082.68 ft) 330 m

PRODUCTS/SERVICES
- Casing-Recovery Solutions
- Downhole Power Tool (DHPT)
- Flow-Release Mechanical (FRM) Spear
- Intervention Services

Weatherford®