

## Downhole Power Tool (DHPT) and Flow-Release Mechanical (FRM) Spear Efficiently Applied Downhole Force To Free Cemented Casing and Enable Clean Sidetrack where Milling and Jarring were Not Possible Due to Associated Risk

### Objectives

- Enable sidetrack operations inside 13-3/8 in. casing by removing a cemented 9-5/8 in. casing string in offshore Qatar, where pilot milling and previous shallow-jarring attempts proved unsuccessful.
- Overcome additional associated risks that were further amplified due to limited platform workspace, surface-equipment fatigue, host-casing integrity concerns, increased HSE exposure, and additional downtime.
- The 9-5/8 in. casing had variable bond quality and multiple intervals, resisting conventional rig pull and previous jarring attempts. Rig overpull alone was insufficient to initiate movement across several sections.

### Our Approach

- Weatherford worked closely with the client to devise a strategy for recovering the cemented 9-5/8 in. casing while minimizing overall operational risk and time.
- The 11-1/4 in. downhole power tool (DHPT) combined with flow-release mechanical (FRM) spear with axial-load operated (ALO) valve was configured to generate high magnitude axial force—closing the string on demand without ball drops, reliably securing engagement of the casing fish.
- A segmented casing-recovery plan was implemented to isolate stuck intervals and optimize applied loads.
- Multiple casing sections were systematically engaged and freed using the DHPT.
- Maximum effective downhole pull reached 973,000 lbf, far exceeding available rig overpull.
- 185 ft of cemented 9-5/8 in. casing was successfully recovered, exposing the 13-3/8 in. casing at the required dept—allowing installation of the whipstock.

### Value to Customer

- Weatherford partnered closely with the operator, bringing the most comprehensive Intervention Services portfolio to deliver a fully integrated slot recovery and sidetrack solution.
- By combining local readiness in Qatar with deep technical collaboration, Weatherford engineered and executed a fit-for-purpose strategy that safely replaced conventional pilot milling and enabled efficient sidetrack preparation in 13-3/8 in. casing.



### Jobsite Specifications

#### LOCATION

Offshore Qatar

#### CASING SIZE

9-5/8 in. (244.5 mm)

#### SIDETRACK DEPTH

3,059 ft (284.2 m)

#### PRODUCTS/ SERVICES

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

The Weatherford DHPT applies extreme downhole force directly toward any stuck fish, such as casing, drill pipe, tubing, drilling BHAs, packers, and plugs. The system enhances safety and operational efficiency by eliminating high tensile forces from the workstring and rig surface equipment.

