Weatherford®

REAL RESULTS

SwageSet Liner-Top Packers Permanently Isolate Production Zones in Deep, North Sea Wells for Major Oil and Gas Provider

Weatherford provided a major oil and gas operator three SwageSet liner-top packers featuring patented SwageSet technology that consists of ridged-shaped elastomers bonded to an expandable metal ring. The proprietary packers provided a reliable, high-integrity seal in three separate offshore oil and gas producing wells in the North Sea.

Objectives

- Efficiently reach total depth with minimal operational incidents.
- Form a reliable seal between the liner OD and the host-casing ID in a deep, North Sea well.

Results

- The Weatherford polished-bore receptacle (PBR), SwageSet packer, and premium hydraulic-set rotating (WPHR) liner hanger were run to total depth without nonproductive time (NPT).
- A mechanical ball seat in the running string was used to provide the necessary pressure-tight chamber to hydraulically set the hanger.
- Set-down weight through the PBR set the SwageSet packer against the host-casing ID and a successful pressure-test was performed.
- A top-drive cement head and Sub-Surface Release™ plug system was quickly made up on the casing string for the cement job.
- Both liner-running and cementing operations were completed safely without incidents.

Value to Client

- The Weatherford SwageSet packers provided the client a permanent, annular-pressure barrier at the liner-top for three separate offshore wells.
- All three SwageSet packers were run, installed, and pressure-tested with no environmental or safety incidents, proving the reliability of SwageSet packer technology.
- In each well, the cement job was a success with isolation from the liner-top to the shoe, enabling the production zone to be drilled and completed.
- The successful liner and cementing operations provided the major oil and gas provider with a solution for future deep, offshore wells.

Location
Norway, North Sea

Well Type
Offshore, oil and gas production

First Well
Deviation: 90°
Casing: 9 5/8-in., 53.5 lb/ft, P-110
Liner: 7-in., 29.0 lb/ft, P-110
Total depth: 16,958 ft (5,168 m)
Casing shoe depth: 10,501 ft (3,200 m)
Top of liner depth: 10,328 ft (3,147 m)

Second Well
Deviation: 88°
Casing: 9 5/8-in., 53.5 lb/ft
Liner: 7-in., 29.0 lb/ft, 13Cr-80
Total depth: 13,779 ft (4,199 m)
Casing shoe depth: 10,998 ft (3,352 m)
Top of liner depth: 10,587 ft (3,227 m)

Third Well
Deviation: 31°
Casing: 9 5/8-in., 66.9 lb/ft
Liner: 7-in., 35.0 lb/ft, 13Cr-80
Total depth: 17,736 ft (5,405 m)
Casing shoe depth: 17,119 ft (5,217 m)
Top of liner depth: 16,896 ft (5,149 m)

Products/Services
- SwageSet liner-top packer
- WPHR liner hanger
- Top-drive cementing head
- Sub-surface release plug system
- Mechanical ball seat

Weatherford
Tor Jostein Gudmestad
Customer Supervisor
torjostein.gudmestad@eu.weatherford.com

