



Weatherford®

REAL RESULTS

Rotating Full-Bore Cement Head Reduces Surface Casing NPT by 6+ Hours in a North Sea Well

Objectives

- Reduce non-productive time (NPT) while cementing the surface casing strings in a North Sea well.

Our Approach

- The client experienced about 4 hours of NPT per surface casing string while preparing to cement. The NPT is caused by the time required to open and close the mudline hanger-running-tool circulation ports using a standard cement head after primary cementing. This operation, while time-consuming, was the shortest solution available to prevent cement hardening inside the mudline hanger suspension once the top cement plug was bumped.
- Weatherford deployed a full-bore rotating cement head for the 13 3/8-in. and a 9 5/8-in. casing strings. The tools arrived pre-loaded with cement plugs, which reduced rig-up time and negated the need to build a scaffold for a man-riding operation. This feature also enhanced operational safety by removing personnel from the critical path.
- The tool, which uses remote-controlled pin pullers, enabled a static cementing operation. Once the crew bumped the top cement plug, they used the rig top drive, connected to the cement head, and rotated the landing string. This procedure—enabled by the 500 metric-ton lifting capacity and 45,000 ft/lb (61,012 Nm) torque-transfer capacity of the tool—opened the circulation ports on the mudline hanger-running-tool.
- The cement head then transitioned from cementing to circulating operations. Once the mudline hanger was cleared of all cementation material, the crew rotated the landing string in the reverse direction to close the circulating mud ports and enable a casing string pressure test.
- The tool reduced NPT in each well by at least 3 hours.

Value to Client

- Weatherford full-bore rotating cement head technology enabled a successful cement job on both surface casing strings. The team reduced NPT in the two-well exploration campaign by 6 hours.
- By eliminating the need for a man-riding operation, the tool enhanced operational safety and negated the additional time needed to build a scaffold.
- The tool arrived pre-loaded with cement plugs, which required only 40 minutes of rig-up time per job.



The Weatherford full-bore rotating cement head reduced three-fourths of the NPT experienced while setting surface casing strings.

Location

North Sea, Dutch Sector

Well Type

Offshore, exploration

Number of Casing Strings in Campaign

2

Surface Casing Size / Orientation

13 3/8-in. casing shoe at 30°
9 5/8-in. casing shoe at 70°

Surface Casing Length

13 3/8-in. – 3,412 ft (1,040 m)
9 5/8-in. – 4,754 ft (1,449 m)

Products/Services

- Full-bore rotating cement head (13 3/8-in.)

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