

CASE STUDY



URO

OFFSHORE



DENMARK, HARALD EAST

URO ENSURES GOOD CEMENT COVERAGE IN HIGHLY DEVIATED CASING JOB

Region: Offshore Denmark

Location: Harald East

Country: Denmark

THE CHALLENGE

For TotalEnergies, a tight tolerance cement job was required in an exploration well in the North Sea. 9 5/8-in. casing was to be run inside 13 5/8-in. casing and an 11 3/4-in. liner.

The well had a 10.625-in. minimum restriction and a drift of 12 1/4 in. in open hole.

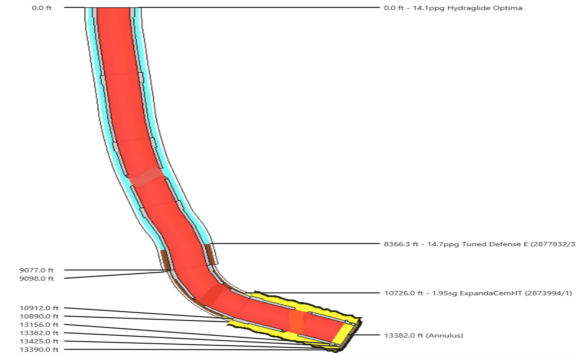
The operation involved a highly deviated well with a 66° inclination and a total depth (TD) of 13,382 ft and uncertain hole conditions after run in hole (RIH) with casing and start circulation.



THE SOLUTION

To ensure a successful casing run and cementing operation, the following measures were implemented by Halliburton:

- **Casing Design & Placement:** 99 UROS (9 5/8 x 12 1/4 in.) centralizers were used in conjunction with 188 slim stop collars (9 5/8 in.) with two centralizers every three joints to optimize casing placement.
- **Torque and Drag Simulations:** Rigorous simulations were performed to ensure the liner could be run in hole (RIH) safely.
- **Cementing Optimization:** iCem® service 3D was used to simulate displacement efficiency, ensuring >80% cement coverage across the cemented interval.



THE RESULT

The casing was successfully run to total depth within the parameters simulated, with no unexpected drag encountered. The cement job achieved the required coverage, securing well integrity and zonal isolation.

A successful Formation Integrity Test (FIT) confirmed that the cemented interval could withstand the expected downhole pressures. Additionally, a positive casing pressure test verified both well integrity and cement bond quality.

“ The UROS performed as simulated in this challenging tight tolerance well. ”

Senior Engineer, Halliburton