

Wellbore History

GENERAL

Well 34/10-33 C is a sidetrack from appraisal well 34/10-33 B on the Gullfaks South Discovery. The B sidetrack was drilled to perform a long-period test from a horizontal well through the upper part of the Brent Group, as part of the development of the Gullfaks South discovery. As the test in the B sidetrack failed the C-sidetrack was drilled with the same main objectives, but this sidetrack was not to be drilled horizontally. The test should provide information about requirement for pressure support during oil production, pressure communication in the gas cap during production, treatment of oil with high wax content, and it should collect liquid samples from the reservoir. Secondary objectives for the C sidetrack was to penetrate a complete Rannoch formation down flanks from well 34/10-33 and to establish the oil/water contact in the lower part of the pressure regime (Etive/Rannoch formations).

OPERATIONS AND RESULTS

The well 34/10-33 B was abandoned and an EZSV set at 3280 metres. Appraisal well 34/10-33 C was kicked off on 10 July 1989 through the 9 5/8" casing from a Packstock tool set at 3279 metres in the Tarbert Formation. The well bore was drilled with the semi-submersible installation Deepsea Bergen to TD at 3752 m (3587 m TVD) in the Early Jurassic Drake Formation. No significant problems occurred while drilling this well. The well was drilled with Interdrill NT oil based mud from kick-off to TD.

FMT pressure points defined a gas/oil contact at 3302 m (3242 m TVD MSL) +/- 5 m and an oil/water contact at 3604 m (3460 m TVD MSL) +/- 20 m. Logs and sidewall cores indicated oil down to 3617 m (3467 m TVD MSL). Further shows evaluation from cuttings is uncertain due to oil based mud. The FMT measurements proved a pressure barrier within the interval 3521 - 3550 m (3398 - 3418 TVD MSL) in the Ness Formation.

Twenty-three sidewall cores were retrieved, but no conventional cores were cut in this well. An FMT wire line fluid sample was taken at 3641 m (3483 m TVD MSL) below OWC in the water zone.

After long-term testing the well was suspended on 16 September 1989 as an oil and gas appraisal well.

TESTING

A long-term test was conducted, producing a total of 60 000 Sm3 oil. During the test, from 1 August up to 16 September, the well was classified as test well under the name 34/10-T-33 C.