



Wellbore History

GENERAL

Well 34/10-47 S was drilled in the southeastern part of the Tampen Spur area 3 - 4 km north of the Gullveig Field and about 5 km west of Gullfaks. The main objective of well 34/10-47 S was to investigate the hydrocarbon potential in sandstones in the Late Jurassic Aurora prospect and secondary to investigate the hydrocarbon potential of the Middle Jurassic Brent Group in prospect Dolly, segment N7. The N7 structure is a rotated fault block and the trap is defined by a protrusion on the main fault. The third objective was to sidetrack into the underlying Statfjord Formation in N7 (well 34/10-47 A).

OPERATIONS

The wildcat well34/10-47 S was spudded on 22 September 2002 with the semi-submersible installation Deepsea Trym and drilled deviated through the Middle Jurassic Rannoch Formation as the stratigraphically oldest sediments in the well path to the final TD at 4027 m (2445.2 m TVD RKB) in the Late Cretaceous Shetland Group. The well was first lost due to stuck pipe a few metres into the Brent reservoir at 2880 m MD. A technical sidetrack was therefore performed from 2428 m MD in the lower part of the Shetland Group. The sidetrack was drilled to TD without significant problems. The well was drilled with CMC/seawater down to 725 m, with Glydril (water based with glycol) mud from 725 m to 1939 m, and with Versavert OBM from 1939 m to TD. No shallow gas was registered neither on gas readings or resistivity logs. In the 17 1/2" section the real time log had some missing parts due to high ROP. Gamma ray values are 5-6 times higher than expected but in some intervals the GR reads lower values due to influence from the KCl-mud.

The main target of the well 34/10-47 S, the Aurora prospect, proved to be non-existing. Well 34/10-47 S continued and drilled into the Brent prospect (secondary objective) in the N7 segment and penetrated a 65 m thick hydrocarbon column in the Brent Group. The discovery was oil and it was documented different oil-water contacts in the upper and lower Brent Group. Total hydrocarbon column is estimated to be 150 m TVD. Pressure testing showed that the hydrocarbon filled part of the Brent reservoir in well 34/10-47 S is depleted with 29-57 bars. One wire line log run was performed to acquire formation pressure and fluid samples. Eleven fluid samples were collected in the reservoir and the samples consisted mainly of oil. Four of the samples were analysed offshore. The average oil density (reservoir conditions) measured was 0.688 g/ccm and average Bo was 1.383. In the Tarbert Formation the formation pressure points give a gradient of 0.0664 bar/m i.e. an oil density at reservoir conditions of 0.677 g/cm³. No coring was performed in the well.

Well 34/10-47 S was plugged 2 November 2002 as an oil discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/10-47 S