



Wellbore History

GENERAL

Well 33/12-8 S is situated in the Tampen Spur area and the structure is a rotated fault block on the southern part of the Beta Ridge. The purpose of the wildcat well 33/12-8 S was to evaluate the potential for hydrocarbons in the "Dole" prospect (Skinfaks segment N3) of the Middle Jurassic Brent Group and the Early Jurassic Statfjord Group. A secondary objective was to identify the hydrocarbon contact in the Brent Group. A sidetrack from 13 3/8" shoe into the N2-segment ("Ole") was considered in case of a positive hydrocarbon finding in the Middle Jurassic Brent Group.

OPERATIONS AND RESULTS

Wildcat well 33/12-8 S was spudded on 26 March 2002 with the semi-submersible installation Borgland Dolphin and drilled to TD at 3750 m (3380.7 m TVD RKB) in the Statfjord Formation, Eriksson Member. The well was drilled with CMC/seawater above 26" hole/20" casing. The 17 1/2" section was drilled with Glydril MC, a water-based KCl mud with glycol additive. Versavert OBM was used below the 13 3/8" casing at 2066 m.

The drilling progress was slow in the uppermost 36" section because of cuttings falling into the hole. In the following 26" section boulders were encountered around 478 m and 489 m and followed up with backreaming. Prognosed sand with potential shallow gas was encountered at 450 m. Gamma ray and resistivity showed water filled sand. Further drilling in the 17 1/2" and 8 1/2" section went well, with exception of the Shetland Group, which was significantly slower to drill due to marl/calcareous claystone. The well proved an approximately 81 m TVD thick hydrocarbon column in Tarbert and Upper Ness Formations. The discovery was oil with a gas cap. Lower part of Ness Formation and Etive Formation was water filled. A five meters column with oil (TVD) was in addition encountered in the Statfjord Formation. The stratigraphic column in the N3 segment was found 30-50 m deeper than originally mapped. The oil-water contact in Ness came in as prognosed in depth, but shallow compared to the relative shift of the structure.

Ten fluid samples were collected in the Brent Group. Oil was found in the samples from depth 2914 m. Gas/condensate was found in the rest of the samples at depths 2864, 2845, 2815.5, and 2830 m. The oil samples were contaminated by 2.8-3.3 percent, and the gas/condensate samples suffered 9 to 40 percent contamination. No coring was performed in the well.

Pressure testing showed that the hydrocarbon filled part of the upper Brent reservoir (N3) is depleted with 20-30 Bars. The pressure at top of the prognosed reservoir (2625 m TVD MSL) is estimated to be 359 Bar based on MDT-pressure tests in the drilled part of the reservoir, corresponding to 1.39 g/cm³ EMW. No pressure tests were taken in the Statfjord Formation. After displacing the well from oilbased mud to treated seawater the well was permanently plugged and abandoned as an oil and gas discovery on 26 of April 2002.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 33/12-8 S