



Wellbore History

GENERAL

Well 34/11-5 S is located on the Kvitebjørn Field in the Northern North Sea, east of the Gullfaks Field. It was the first exploration well drilled from the fixed Kvitebjørn platform. The primary target for the well was to prove hydrocarbons in segment 8 in the Valemon Area. Secondary targets for the well were to clarify the extension of the Kvitebjørn Field, verify seismic interpretation at the top Brent pick, and to check for possible depletion of Valemon through the Kvitebjørn production.

OPERATIONS AND RESULTS

Appraisal well 34/11-5 S was drilled from slot A3 on the fixed installation on the Kvitebjørn Field. The well starts from 1274 m (top of 17 1/2" section) in development well 34/11-A-3 and was drilled to TD at 7380 m (4432 m TVD RKB), 10 m into the Early Jurassic Drake Formation. Inclination started off with ca 20 deg at 1274 m and increased to 65 deg at ca 3000 m and from there it was kept in the range 50 to maximum 70 deg. The well was drilled without any hole stability problems. It was drilled from 1274 m to 6681 m with oil based XP07 mud, and with water based Cs/K-formate mud through the 8 1/2" section from 6681 m to TD.

The Base Cretaceous Unconformity (BCU) was penetrated 39 m TVD deeper than prognosed and the Viking Group was 86 m thicker than prognosed. Hence the top of the Brent Group was encountered 124 m TVD deeper than prognosed, but the thickness of the reservoir was only 2 m TVD thinner than prognosed. The reservoir quality was similar to exploration well 34/11-4 T2 on the Valemon Field. Hydrocarbons were proven in the Tarbert Formation, with an interpreted GWC at 4261 m TVD RKB, which is 20 m deeper than in nearby exploration wells. The pressure measurements indicated that segment 8 is a separate pressure system without communication to the Kvitebjørn production. The reservoir pressure in well 34/11-5 S was in-between Valemon and Kvitebjørn pressures.

No cores were cut. The modular dynamic tester was run to sample HC in the Tarbert Fm. Sampling was performed at 7101.5 m MD RKB / 4257 m TVD RKB (corrected for stretch in drill pipe) in the lower part of the Tarbert Fm after cleaning up for 6 hrs. The formation pressure was 790.7 bar, formation temperature was 156.8 deg C and the mobility was 14.6 mD/cP. MDT chamber no MPSR 166 contained 10 ml oil in addition to mud filtrate and formation water. Analysis of the oil indicated similar gas/condensates as in the Kvitebjørn Field.

The well was plugged back on 03 July 2006 as a gas/condensate appraisal well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/11-5 S