

Wellbore History

GENERAL

Appraisal well 34/11-3 was drilled on the 34/11-1 Kvitebj ørn Discovery in the Northern North Sea. The primary objective was to confirm hydrocarbon reserves in the Brent Group in this discovery. Secondary objective was to test the Early Jurassic Statfjord and Cook Formations. A third objective was to investigate properties of the Lista Formation of the Rogaland Group, which had significant shows in 34/11-1.

OPERATIONS AND RESULTS

Well 34/11-3 was spudded with the semi-submersible installation Deepsea Trym on 1 August 1996 and drilled to TD at 4482 m in the Early Jurassic Statfjord Formation. When drilling 8 1/2" hole at 4032 m a kick situation was experienced. A total of 23.8 days was spent before the operation could be continued. After drilling to TD problems occurred with the BOP connector. A cement plug was set and the well suspended for repairs of the connector. When drilling out the cement plug the well was unintentionally sidetracked at 4009 m. 34/11-3T2 was drilled to final TD at 4230 m (4234 m loggers depth). The well was drilled with bentonite and seawater down to 1115 m, with ANCO-2000 mud from 1115 m to 3985 m, and with ANCO THERM mud from 3985 m to TD (including sidetrack).

No shows were observed in cuttings from the Rogaland Group, but in core 1 thin sandstone laminae with weak shows were observed. The top of the Brent Group was penetrated 14.5 m shallower than prognosed, and was proven to be gas/condensate bearing down to 4196.2 m. No GWC was found. No visual shows were observed in the Cook Formation.

In the Statfjord Formation, weak shows were seen, and a weak HC odour from the core was noted.

All conventional cores were cut in the original hole while all reservoir logging was performed in the sidetrack. Only MWD logs exist from the lower part of the original hole. A total of 101.8 m conventional core was recovered in 12 cores. Core 1 was cut from 2027 m to 2035.6 m in the Lista Formation, cores 2 - 11 were cut in the interval 4040 m to 4183 m in the Brent Group, and core 12 was cut from 4480 m to 4480.3 m at final TD. An FMT segregated fluid sample was taken at 4044.6 m (gas, filtrate, and 0.5 I condensate), and two MDT fluid samples were taken at 4044.5 m, and 4144.7 m. The 1-gallon MDT sample chambers contained only small volumes of mud, filtrate, some solids and hydrocarbons, the 450 cc chambers were sent to PVT lab.

The well was permanently abandoned on 16 January 1997 as a gas/condensate appraisal well.

TESTING

No drill stem test was performed