



Wellbore History

GENERAL

Well 34/4-11 was drilled north of the Snorre Field and ca two km northwest of the 34/4-10 R Brent oil discovery in the Marulk Basin in the Northern North Sea. The primary objective was to drill and evaluate the Beta central fault terrace to the northwest of 34/4-10 R. The Beta central fault terrace is situated on the same general structure as in 34/4-10 R, but on a different fault block. Secondary objectives were to evaluate the petroleum potential in the Early Jurassic Dunlin Group and Statfjord Formation.

OPERATIONS AND RESULTS

Wildcat well 34/4-11 was spudded with the semi-submersible installation Songa Delta on 13 October 2009 and drilled to TD at 4327 m in Late Triassic sediments of the Lunde Formation. No significant problems were encountered in the operations. The well was drilled with seawater and hi-vis pills down to 1340 m, with Aqua-Drill mud containing 3.5 - 4.0 % glycol from 1340 m to 2293 m, and with Carbo-Sea oil based mud from 2293 m to TD.

A 51 m thick Brent Group (primary target) was encountered at 3969 m (3938.7m TVD MSL), 18.7 m TVD deep to prognosis. The Brent Group was oil-bearing, but reservoir quality was poor with only 7 m net. The poor reservoir properties resulted in no successful RCI pretests. The Dunlin Group was present as a marginal siltstone facies from 4020 to 4131 m. The Statfjord Formation came in at 4131 m (4100.7 m TVD MSL) with sandstones with oil shows and drill gas peaks with a full C1-C5 chromatograph breakdown. The Statfjord Formation was seen to be an interbedded sequence of sandstone, siltstone and claystone. The Statfjord reservoir was oil bearing down-to at least 4215.7 m (4185.3 m TVD MSL). Petrophysical analyses proved 85 m gross and 22.4 m net oil bearing Statfjord reservoir with moderate quality sandstones with average porosity 19% and average water saturation of 0.38. There was a definite water-up-to at 4301.9 m (4271.5m TVD MSL).The RCI tool recorded two separate oil gradients within the Statfjord Formation oil zone with a reservoir pressure of 11291 psia at 4103.3 m TVD MSL. The underlying logged Statfjord water reservoir had very poor quality sandstones. No shows were recorded above Brent Group level.

Two cores were cut 3976 to 4012 m in the Brent Group with 100% recovery. The wire line logging was very successful with full log data acquired, including 9 x PVT, 6 x single phase and 2 x large volume (10 litre) oil samples from two sampling depths in the Statfjord Formation (4200.3 m and 4162.3 m) and 33 rotary side wall cores. The oil sample at 4162 m was analysed to contain 38.2 deg API oil at reservoir pressure of 11291 psia. However the water bearing basal Statfjord section was of too poor quality sandstones and no water sample was obtained.

The well was permanently abandoned on 10 January 2010 as an oil discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/4-11