



Wellbore History

GENERAL

Well 35/9-8 was drilled to appraise the 35/9-7 Skarfjell discovery on the Ryggsteinen Ridge north of the Troll Field in the North Sea. The main objective was to prove additional oil reserves in the Late Jurassic Intra-Heather Formation sandstones.

OPERATIONS AND RESULTS

Appraisal well 35/9-8 was spudded with the semi-submersible installation Transocean Arctic on 1 February 2013 and drilled to TD at 3256 m in the Middle Jurassic Rannoch Formation. Operations proceeded without significant problems; the main cause for lost rig time was bad weather (155 hrs WOW). The well was drilled with seawater and hi-vis pills down to 461 m, with KCl/Polymer mud from 461 m to 895 m, and with Performadril water based mud from 895 m to TD.

The main target Intra Heather Formation Sandstone 2 (IH2) came in at 2740 m, 79 m high to prognosis. The gross thickness was found to be 135 m, which is much thicker than expected. Net/gross for the total IH2 unit is 0.62 with an average porosity of 17.8 %. The IH2 was oil bearing with the oil-water contact at 2806 m. Oil shows were described on cores down to 2830 m. The deeper Intra-Heather Formation sandstone (IH1), penetrated in 35/9-7, was not present at this location. The Middle Jurassic Brent Group section penetrated by the well was water bearing. No shows were described in the well outside of the IH2 sandstones.

A total of 140 m core was cut in six cores in IH2, from 2744 to 2884 m. The average recovery was 95.8 %and no core-log depth correction was required. RCI fluid samples were taken at 2770.5 m (oil), 2782.3 m (oil), 2793.4 m (oil), 2826 m (water+oil), and 2839.8 m (water).

The well was permanently abandoned on 11 April 2013 as an oil appraisal.

TESTING

A Drill Stem Test was performed in the Intra-Heather Formation sandstone from the interval 2776 to 2789 m. The test produced at maximum flow rate 300 Sm3 oil and 53400 Sm3 gas /day through 26/64" choke. H2S content was 0.6 ppm and the CO2 content was 1.6%.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/9-8