



Wellbore History

GENERAL

Well 30/11-7 A is a sidetrack from well 30/11-7 on the eastern flank of the Central Viking Graben, NE of the Frigg Field in the North Sea. The main well 30/11-7 discovered gas and condensate in the Middle Jurassic Ness Formation. Due to intra Heather erosion and/or faulting, the upper part of the Brent Group, the Tarbert Formation, was missing in the main well. The objectives of the sidetrack was to verify the quality and presence of the Tarbert Formation within structural closure, and to confirm the gas/water contact that was estimated from the main well pressure data.

OPERATIONS AND RESULTS

Appraisal well 30/11-7 A was kicked off from 30/11-7 at 2846 m in the Jorsalfare Formation, on 2 April 2009. It was drilled to 4250 m (4136.9 m TVD) in the Middle Jurassic Ness Formation using the semi-submersible installation Transocean Leader. No significant problems were encountered in the operations. The well was drilled with Versatec oil based mud from kick-off to TD.

The Viking Group was encountered at 3831.5 m (3762 m TVD) and consisted of a 175 m thick Heather Formation sequence. The top of the reservoir was penetrated at 4007 m (3915.3 m TVD) in a position located 300 m from the main well at top reservoir level. The well proved a gas/condensate filled Tarbert Formation. The Gas-Water Contact is estimated to be at 4086 m (3986.5 m TVD), 18 m TVD above top Ness Formation, based on pressure gradients. The pressure measurements in the contact area are few due to poor reservoir quality; hence the exact contact is uncertain. The result from the pressure measurements proves no communication between the reservoir in the main well and in the sidetrack. The gas/condensate in the sidetrack Tarbert Formation compartment is somewhat richer than in the main well Ness Formation compartment. Some fluorescence was observed on the cores, but the oil based mud is likely to give some fluorescence and origin of the fluorescence is uncertain.

Five cores were cut in the interval 4022 to 4123 m in the Tarbert Formation. Core no 1 from 4022 to 4039 m recovered only 0.9 m core, otherwise the recovery was 98 - 100%. The MDT tool was run for pressure points and fluid samples. Gas was sampled at 4009.5 m and 4047.0 m using the Quicksilver probe, and at 4077.5 m using dual packer. An attempt to sample at the GWC failed due to tight formation. Water was sampled at 4185 m in the Tarbert Formation using dual packer.

The well was permanently abandoned on 25 May 2009 as a gas/condensate appraisal well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/11-7 A