



Wellbore History

GENERAL

Well 6707/10-3 S was drilled to test the Ivory prospect, approximately 20 km northeast of the Aasta Hansteen Field on the Nyk High in the Norwegian Sea. The primary objectives were to test the Kvitnos Formation (Delfin Member) and the deeper Lysing Formation.

OPERATIONS AND RESULTS

Prior to drilling the main bore, a pilot hole 6707/10-U-1 was drilled at a distance of 53.6 m to the SW of the main bore position. The pilot hole was drilled to 2200 m. No shallow gas was observed. Two Ooze layers were penetrated at 1595-1612 m and 1775-1787 m.

Wildcat well 6707/10-3 S was spudded with the drill ship West Navigator on 7 October 2014 and drilled to TD at 4789 m in the Early Jurassic Lange Formation. Inclination was built from 3.28° at 2224 m to 39.35° 2798 m and held at approximately that angle until final well TD. No significant problem was encountered during drilling to TD, but when during plug and abandon, a sudden deterioration in weather and a rapid change in wind direction caused the drillship to be forced 70 m off location. The automatic emergency disconnect sequence was activated and the shear rams sheared the cement stinger, dropping a total of 2789 m of drill pipe in the well. Ten days WOW followed before weather allowed operations to be resumed. Due to further upcoming weather, it was decided to leave the fish in the hole and commence with plug and abandon. The well was drilled with seawater and hi-vis sweeps down to 2196 m and with Versatec oil based mud from 2196 m to TD.

Top of the Kvitnos Formation target (Delfin Member) was encountered at 3318 m. Significant dry gas values were recorded in the uppermost 12 m of the Delfin 2 Member and a GWC was identified at 3339 m (3201.6 m TVD). The Lysing Formation was identified at 4321 m, 150 m higher than forecasted. A faint hydrocarbon odour was noted in parts of the cores from the Kvitnos reservoir. No shows were described on the core from the Lysing Formation. Otherwise, there were no shows above the OBM used in the well.

Three conventional cores were cut over the interval 3332 m to 3463 m in the Kvitnos Formation (Delfin Member) and one 27 m core was cut in the Lysing Formation, over the interval 4333 m to 4360 m. MDT fluid samples were collected at 3323.2 m (gas), 3331.5 m (gas), and 3387 m (water). The water depth at the well location was 1421 m and a seabed temperature of -1°C was measured during operations. This created a significant cooling effect on mud temperatures, as measured by LWD tools.

The well was permanently abandoned on 29 December 2014 as a gas discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6707/10-3 S