



Wellbore History

GENERAL

Well 7225/3-2 was drilled on the Norvarg Dome on the Bjarmeland Platform in the Barents Sea. The objective of the well was to appraise the 7225/3-1 Norvarg gas discovery. Primary target was channel sandstones in the Kobbe Formation. Triassic sandstones within the Carnian section and the Upper Snadd Formation as well as Jurassic sandstones in the Stø Formation were secondary targets.

OPERATIONS AND RESULTS

Appraisal well 7225/3-2 was spudded with the semi-submersible installation Leiv Eiriksson on 29 April 2013 and drilled to TD at 2210 m in the Early Triassic Klappmyss Formation. During drilling operations of the 26" hole section at 500 m the drill string parted. The fish was successfully retrieved. After this, the hole packed off at 525 m and 535 m in the 26" section. Most of the NPT in the well were related to these events. Further operation proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 554 m, with Glydril water based mud from 554 m to 1073 m, and with a water based mud from 1073 m to TD.

Three main gas-filled reservoir layers were encountered in the Kobbe Formation. Channel A with top at 1590 m had a thickness of 18.7 m, a NTG of 76% and an average porosity and water saturation of 17% and 40% respectively. Channel D with top at 1775 m had a thickness of 33.1 m, a NTG of 51% and an average porosity and water saturation of 13% and 44% respectively. A third sandstone, "Anomaly 2", with top at 1909.6 m had a thickness of 18.3 m, a NTG of 89% and an average porosity and water saturation of 13% and 48% respectively. All three had gas-down-to contacts. The secondary targets were water-wet. Shows (fluorescence and cut) were described on sandstones in the Kobbe Formation between 1550 m and 1950 m.

Four 54 m core barrels were cut in the Kobbe Formation, with very low ROP, from 1553 to 1610 m (two cores) and from 1727 to 1757 m (two cores). While the recovery of last two cores was 100%, the first two gave respectively 86.1 and 76.4% recovery. MDT fluid samples were taken at 1600.7 m (dry gas), 1778.31 m (filtrate + gas), 1788.59 m (filtrate), 1913.01 m (filtrate + gas + oil?), and 1923.64 m (filtrate + gas + oil?).

The well was permanently abandoned on 7 August 2013 as a gas appraisal.

TESTING

Two Drill Stem Tests were performed in two channel sandstones in the Kobbe Formation

DST 1 tested 207.33 m of perforations from 1725.05 to 1932.38 m. It produced 28500 Sm³ gas/day through a 40/64" choke. The maximum temperature in the test, measured during the clean-up flow was 54.9 °C.

DST 2 tested 23 m of perforation from 1587.5 to 1610.5 m. It produced 167400 Sm³ gas/day through a 36/64" choke. The maximum temperature in the test, measured at end of build-up after the clean-up flow was 48.6 °C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7225/3-2