



**Wellbore History**

**GENERAL**

Well 7120/12-5 was drilled on the Lunde prospect next to the 7120/12-3Alke North discovery in the Hammerfest Basin of the Barents Sea. The main targets were the Stø Formation sandstones in the top of the Kapp Toscana Group, Intra Carnian sandstones of the Snadd Formation and Kobbe Formation sandstones. These formations were expected to be gas bearing.

**OPERATIONS AND RESULTS**

Wildcat well 7120/12-5 was drilled with the semi-submersible installation Polar Pioneer. Drilling started on 3 January 2010 with a 9 7/8" pilot hole 51.5 m from the main well position to check for shallow gas. No shallow gas was observed. The rig was then moved to the planned position, where it was spudded and drilling commenced to 1761 m where the initial 16" hole was abandoned owing to hole instability. A new 16" hole was sidetracked from 533 m and drilling then proceeded without significant problems to final TD at 3630 m in the Middle Triassic Kobbe Formation. The well was drilled with Seawater and hi-vis sweeps down to 510 m, with K-Format mud from 510 m to 1761 m in the primary well bore and to 1591 m in sidetrack, and with KCl/GEM/Polymer mud from 1591 m to TD.

Sandstones of reservoir quality were penetrated in all three targets, but all were found to be water wet. Based on 12 valid XPT-MDT pressure points a water gradient of 0.101 bar/m was established from the Stø Formation at 2150 m to the Snadd Fm (Intra Carnian sand) at 3100 m. The Stø Formation was encountered at 2165 m, 26.5 m higher than originally prognosed. The Stø sandstones were generally very fine to fine, well sorted and poorly cemented with occasional kaolinite matrix. Top Snadd Formation was encountered at 2582 m with the secondary target Intra Carnian sandstones at 3175 to 3197.5 m, 163m deeper than prognosed. These sands were interbedded with thin siltstones and were generally fine to medium grained, well sorted, poorly cemented with moderate inferred porosity. The Kobbe Formation came in at 3572 m, 163 m deeper than prognosed. The Kobbe sandstones were interbedded with claystone and were very fine to occasionally fine, well sorted and commonly well cemented with poor inferred porosity.

Shows were absent from the well apart from background mineral fluorescence. Low gas values were recorded throughout the well with the highest, short lived peak of 10.45% recorded on penetrating the Stø sandstones. After the initial peak gas values rapidly fell back to background levels below 1%.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 3 January 2011 as a dry well.

**TESTING**

No drill stem test was performed.

**LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7120/12-5**