



Wellbore History

GENERAL

Well 7321/9-1 was drilled on a rotated fault block on the southern margin of the Fingerdjupet Sub-basin in the Bjørnøya East area. The main objective was to test the hydrocarbon potential of the structure, with Late Triassic to Middle Jurassic sandstones as primary target horizon with Early Cretaceous and Triassic (Snadd Formation) sandstones as secondary targets. The wildcat well should also gather as much geological information as possible regarding reservoir, source and cap rock intervals. The well was positioned so that it should avoid faults that could disturb the seismic tie and at the same time would leave a minimum of untested potential up-dip from the well location.

OPERATIONS AND RESULTS

Wildcat well 7321/9-1 was spudded with the semi-submersible rig Ross Rig 25 October 1988 and drilled to TD at 1800 m in the Late Triassic Snadd Formation. Drilling proceeded to TD without any significant problems, but on the way out of the hole the string got stuck at 1501 m. After several unsuccessful attempts, the string was shot off at 1377 m. As a result of this, and because LWD logs were run only to 1507 m (Baroid "Recorded Lithology Logging" -tool, RLL), the hole below 1507 m was not logged. There were also mechanical problems during plugging. In total as much as 40% of the rig time was thus classified as down time. The well was drilled with seawater and hi-vis sweeps down to 680 m and with KCl / polymer mud from 680 m to TD. There was no shallow gas in the hole.

The secondary target, a prognosed sandstone above the Barremian unconformity, was not developed. Instead of a reservoir sandstone a new possible source rock with high organic content was encountered in the Barremian interval from 961 m to 986 m. The primary target reservoir interval (Stø, Nordmela and Fruholmen Formations) was penetrated at 1378.8 m. Approx. 116 m of reservoir rock was found with 35.8 m net sand. The reservoirs were water bearing with only weak indications of hydrocarbons. The prognosed Triassic target in the Snadd Formation did not contain hydrocarbon shows nor significant gas. On this basis it was interpreted as water bearing.

Shows were recorded on cuttings from claystones in several intervals from 920 m down to 1500 m. Shows were also recorded in sandstones in the cores in the interval 1373 m to 1398 m and on cuttings from the interval 1730 m to 1750 m.

Two cores were cut in the interval 1365 - 1398.2 m, through lower part of the Hekkingen Formation, throughout the Fuglen Formation and most of the Stø Formation. Nineteen attempts of RFT pressure testing were done with only one good measurement at 1359 m. The formation pressure here was measured to be 0.83 SG. No fluid samples were taken. From approximately 1000 m to 670 m the quality of the MSFL and sonic logs was bad due to severe washout of the hole.

The well was permanently abandoned on 28 November 1988 as dry with minor shows in the Cretaceous and Jurassic.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7321/9-1