



Wellbore History

GENERAL

Well 7120/6-2 S is an appraisal well on the Snøhvit Field in the Hammerfest Basin in the Barents Sea. The primary objective for the well was to prove that there are 36 MSm3 oil in place in the best reservoir zones where the oil is producible, in the Stø 2 and Stø 1 Formations. The well was also to confirm that the oil-water contact is located in the clean quartz sandstone at Stø 2 level in the Stø Formation. In addition, the assumed good quality and the thickening of the reservoir that was expected in the western part of the Snøhvit Field would be proven. A secondary objective for this well was to prove larger gas volumes in the western part of the Snøhvit Field than was calculated earlier.

OPERATIONS AND RESULTS

Well 7120/6-2 S was spudded with the semi-submersible installation Polar Pioneer on 14 June 2007 and drilled to TD at 3242 m (3035 m TVD) in the Late Triassic Snadd formation. It was designed as an S-well in order to avoid shallow gas in the area and maintain stratigraphic/seismic control while drilling. The well started to build inclination from 470 m and reached maximum inclination of 32 deg in the interval ca 1600 to 2000 m in the 12 1/4" section. The hole packed of several times in the 17 1/2" section. This caused no significant delay in the drilling progress, but no logs were run in this section, from 932 - 1259 m. Formation tops in this section are based on the prognosis. No shallow gas was expected, and no shallow gas was observed. The well was drilled with sea water and bentonite down to 1259 m and with FORMPRO mud from 1259 m to TD.

The observed stratigraphy was well within the uncertainties given in the prognosis, with the exception of the Hekkingen Formation which was 16.5 m shallower than anticipated. Generally the difference from prognosis to result was within +/- 6.5 m and there were no trends in the discrepancies. The Stø Formation (target reservoir) was encountered at 2564 m (2371 m TVD RKB). The gas-oil contact was found at 2626 m (2429.6 m TVD RKB) and the oil-water contact at 2637 m (2440.3 m TVD RKB), both contacts at Stø 2 level. However, the oil rim was thinner than expected, only 10.7 m thick in this area. The in-place oil volume in the western part of the Snøhvit Field called Main Oil Province was reduced from 36 MSm3 to 26 MSm3. These oil reserves were proven to be too small to be of economic interest. Weak shows were recorded on the cores below OWC and down to the base of the Stø Formation at 2678 m. No hydrocarbons were identified in the Snadd Formation and no shows were reported above the Stø Formation reservoir.

Two cores were cut from 2566.5 to 2683.0 m in the Stø Formation and 5 m into to Nordmela Formation. MDT gas, water and oil samples were collected at 13 depths in the Stø Formation. A water sample was also collected in the Tubåen Formation at 2802 m.

The well was suspended on 22 July 2007 as a possible future injector for formation water or CO2. It is classified as an oil and gas appraisal well.

TESTING

No drill stem test was performed.

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LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7120/6-2 S