



Wellbore History

GENERAL

Well 35/11-15 S is an exploration well in the Fram/Astero area west of the Sognefjord. The well should test the H-Nord prospect in PL090, a 3-way closure located immediately north of the Fram Vest field. The objectives of the well were test the presence and type of hydrocarbons in the Oxfordian Turbidites J56, J54, and J52, and the J45 Callovian Turbidites. The prognosed TD was 3250 m or sufficient depth below Callovian Sandstone to get conclusive data with logging tools. If hydrocarbons were present, the well would be side tracked below the 9 5/8" casing and cores would be cut through the hydrocarbon column in the parallel well bore. An extended wire line-logging program and possibly production testing would be performed in a discovery case. The well actually resulted in five different well tracks. The lithostratigraphy given on this fact page is based on T1, the stratigraphically deepest track.

OPERATIONS AND RESULTS

Well 35/11-15 S was spudded with the semi-submersible installation Transocean Winner on 1 April 2007 and drilled deviated to final TD in the T5 sidetrack at 3250 (2987 m TVD) in the Late Jurassic Heather Formation. The well was drilled as a deviated hole, with an angle of approximately 20 degrees through the reservoir section. After proving hydrocarbons in the target levels the T2 sidetrack kicked off from 2840 m below the 9 5/8" casing and drilled and cored to a total depth of 3213 m in the Heather Fm. A third sidetrack was decided to further appraise a thin oil zone in J56, seen in the T2 track. The two first attempts, T3 and T4, both with kick off at 2060 m were failures. T5 with kick off at 2163 m in T4 was successful. After reaching final TD in T5 severe hole problems occurred with the hole falling in/partially collapsing in the Cromer Knoll Group (2642 - 2660 m) and in the Draupne Formation (2860 - 2900 m). As a result no wire line logs were run below 2640 m in T5. The well was drilled with spud mud down to 467 m and with GLYDRIL KCl/polymer mud from 467 to TD in all well tracks.

Several Tertiary sands without formalised formation names were penetrated. Top Viking Group, Draupne Formation, was encountered at 2697 m (2685.9 m TVD) in T1 and at 2722 m (2684.8 m TVD) in T5. The T1 track proved gas in J56, but the sand development was poor in this location. Oil was proven in J52, and the free water level here was defined at 2941 m TVD. The sidetracked well 35/11-15 S T5 proved oil in J56 in a more favourable position, with well developed sandstones. A probable oil contact was seen at 2950 m TVD. No shows were reported above the Viking Group.

Two cores were cut in T2 from 2928 m to 2980.4 m. Three MDT fluid samples were acquired in T1: a gas sample at 2871.7 m, an oil sample at 2941.0 m, and a water sample at 2970.8 m.

The well was permanently abandoned on 1 July 2007 as an oil and gas discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/11-15 S