



Wellbore History

GENERAL

Well 34/8-7 is located on the western flank of the Tampen Spur and is situated approximately 7.4 kilometres due east of well 34/8-4S, in the Visund prospect. This was the third exploration well to be drilled in the licence area. The primary objective of well 34/8-7 was to test the Jurassic Brent Group and Statfjord Formation in the hanging wall of the Visund Fault. The secondary objectives were to establish a good seismic to well correlation and to fulfil licence obligations.

OPERATIONS AND RESULTS

Exploration well 34/8-7 was spudded with the semi-submersible rig "Polar Pioneer" on 21 March 1992 and drilled to TD at 5460 m in the Triassic Hegre Group. The well was drilled with spud mud down to 1444 m and with KCl/PHPA/Polymer mud from 1444 m to 3288 m. From 3288 m the mud system was gradually changed to a HTHP (high temperature stable polymers) mud. Still, towards TD of the well it was evident that some of the chemical/polymers was decomposing and forming carbonates.

Conglomeratic density flow deposits (Intra Draupne Formation sandstone) were found in the upper part of the Draupne Formation. From a gross thickness of 134.5m, 5.75m of net sand were identified of which 5.25m were regarded as net pay. An average porosity value 9.4% and average Sw of 50.1% were computed for the pay section. A core cut in the Intra Draupne sandstone gave 5.2 % core porosity on average.

The primary objective Brent Group was encountered at 4632.5 m. The entire Brent Group was interpreted as being gas bearing. From a gross thickness of 134.5m, 36.5m of net sand were recognised with 36.5m of net pay. An average porosity of 9.8% and average Sw of 30.4% were determined. A core cut in the Brent Group, gave an average porosity of 9.9 %. The sandy member of Cook Formation was found to be gas bearing, but poor reservoir properties reduced the net pay to only 2.0 m with an average porosity of 8.3 % and average Sw of 36.1 %.

No net pay was identified in the Amundsen sand.

The Statfjord Formation came in at 5118 m. It was 88.5 m thick of which 22.5 m was net sand and 18.75 m was identified as net gas bearing pay. Cores cut in the Statfjord Formation gave an average core porosity of 7.1 % porosity.

A total of five cores were cut in isolated intervals throughout the well. Core number 1 was cut in the Intra Draupne Sandstone, core number 2 was cut in the Tarbert and Ness Formations, cores number 3 and 4 were cut in the Statfjord Formation, while core number 5 was cut in the Hegre Group. Attempts to take RFT pre-test in the Draupne equivalent conglomerate proved to be unsuccessful due to the tight nature of the Formation. Because of hole washouts and high down hole temperature and pressure anomalies, no RFT pressure measurements could be obtained in the Brent Group and Statfjord Formations.

After running the liner as part of preparing for drill stem testing, "Polar Pioneer" had to be released for other purposes. The well was therefore suspended on 16 July 1992 with the provision that testing of the reservoir zones would be performed at a later date. The well was re-entered (34/8-7 R) with the semi-submersible installation "Polar Pioneer" on 19 November 1992 for testing. It was permanently abandoned as a gas discovery on 10 February 1993.

TESTING

Well 34/8-7 R was tested in two intervals. In Test 1 in the Statfjord Formation (5117.8 m ? 5210.0 m) no production was achieved. Test 2 in the Brent Group (4671.7 m ? 4731.0 m) produced gas.