



Wellbore History

GENERAL

Wildcat well 30/6-16 was drilled on the Theta structure, immediately northwest of the main Oseberg Alpha North structure. The main objective of the well was to prove hydrocarbons in the Statfjord Formation. Planned TD was ca 3150 m or ca 225 m into the Statfjord Formation.

OPERATIONS AND RESULTS

Wildcat well 30/6-16 was spudded with the semi-submersible installation Treasure scout on 9 November 1984 and drilled to TD at 3300 m in the Triassic Hegre Group. Drilling proceeded without significant problems. The well was drilled with spud mud down to 613 m and with KCl/polymer mud from 613 m to TD.

Good oil shows were reported on dolomite and limestone beds and stringers from 1993 to 2333 m in the Rogaland and Shetland groups. From 2605 to 2853 (Shetland Group) good oil shows were recorded in sandstones and siltstones as well as in limestones. The Brent Group was encountered at 2856 m and consisted of 12 m Etive Formation only. The Etive Formation was found to be oil bearing over the entire interval. The net pay was 6.3 m with average log porosity of 19.1%. Also the 26 m thick Cook Formation with top at 2920 m was oil bearing all through. Net pay here was 12.6 m with average log porosity of 19.0%. No oil/water contacts could be established. The Statfjord Formation had weak shows in the top 10 m, but was found to be water bearing. RFT pressure recordings and sampling were recorded in 5 runs. Different pressure regimes were proved for the Etive Formation, the Cook Formation and the Statfjord Group.

Four cores were cut in the Etive and Drake Formations (2856 - 2909 m), two in the Cook and Amundsen/Burton formations (2923 - 2949 m) and one in the Statfjord Formation (2982 - 2990 m). RFT fluid samples were taken at 2857 m (oil, gas and water), 2929.5 m (water, gas and some oil) and 3194.5 m (water).

The well was permanently abandoned on 21 January 1985 as an oil discovery.

TESTING

Two Drill Stem Tests were performed. Overall test data indicated severe depletion effects in both reservoirs.

DST 1 tested the interval: 2919.6 - 2943.6 m in the Cook Formation. The average production was 183 Sm³ oil and 25500 Sm³ gas /day through a 36/64" choke. GOR was 139 Sm³/Sm³. Oil gravity was 29 deg API and gas gravity was 0.747 (rel. to air) with 2.4 % CO₂ and no H₂S. The bottom hole temperature in the test was 113.3 deg C.

DST 2 tested the interval: 2855-2868 m in the Etive Formation. The average production was 685 Sm³ oil and 125000 Sm³ gas /day through a 68/64" choke. GOR was 182 Sm³/Sm³. Oil gravity was 36 deg API and gas gravity was 0.76 (rel. to air) with 2.3% CO₂ and no H₂S. The bottom hole temperature in the test was 113.4 deg C.

A rapid decrease in production rate and well head pressure in the Etive Formation test indicate that the reservoir is of very limited size.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/6-16