



Wellbore History

GENERAL

Well 30/6-3 was drilled on the Alpha structure situated in the south-western part of block 30/6. The objective of the well was to penetrate sandstones of Middle Jurassic age and to evaluate their possible content of hydrocarbons.

OPERATIONS AND RESULTS

Appraisal well 30/6-3 was spudded with the semi-submersible installation Deepsea Saga on 16 December 1979 and drilled to TD at 2940 m, 56 m into the Statfjord formation. No significant problem was encountered in the operations, but 13.5 days were lost due to bad weather. The well was drilled with spud mud down to 1757 m and with chrome lignosulphonate/bentonite mud from 1757 m to TD.

Oil shows were recorded in claystone/siltstone cuttings at 1993 to 2023 m, in siltstone cuttings at 2095 m, and in limestone cuttings from 2253 m to 2296 m and 2317 m to 2350 m. Top Brent Group came in at 2421 m. It consisted of sandstone interbedded with shale and coals with a main reservoir sand from 2480 to 2513 m. Gas/condensate was proven all through the reservoir. The hydrocarbon/water contact could not be defined, but the presence of hydrocarbons down to the base of the reservoir indicated the contact to be located down flank on the structure. The sandstones of Early Jurassic age ("Intra Dunlin Sand" and the Statfjord Group) were water bearing.

Four cores were cut in the interval from 2421 to 2458 m. An RFT fluid sample was taken at 2499 m. FIT fluid samples were taken at 2279 m (traces of gas), 2422 m (gas), 2451 m (small amounts of 32.6 deg API oil), and 2463 m (gas).

The well was permanently abandoned on 7 March 1980 as a gas/condensate appraisal.

TESTING

Two drill stem tests were conducted.

DST1 tested the interval 2501 to 2511 m and produced 157 Sm³ oil and 495500 Sm³ gas /day through a 44/64" choke. The GOR was 3170 Sm³/Sm³, the oil gravity was 59.3 deg API, and the gas gravity was 0.657 (air = 1). The down hole flowing temperature was 97.8 deg C.

DST2 tested the interval 2421 m to 2432 m and produced 88 Sm³ oil and 280300 Sm³ gas /day through 48/64" and 20/64" chokes in parallel. The GOR was the same as in DST1, the oil gravity was 65.0 deg API, and the gas gravity was 0.645 (air = 1). The down hole flowing temperature was 83.9 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/6-3