



Wellbore History

GENERAL

Well 6507/7-10 was the third and last of the commitment wells to be drilled on PL 095. The well was located 200 km off the mid-Norwegian coast and approximately 7.5 km north of the Heidrun Field. The structure drilled was a graben down faulted from the Heidrun Field. The primary objective of well 6507/7-10 was to test the presence of commercial hydrocarbons in Middle Jurassic Fangst Group Sandstones. The Early Jurassic Tilje and Åre Formations were secondary objectives. Both Tilje and Åre formations would be encountered below the known hydrocarbon contacts observed within the Heidrun and Heidrun Nord Fields, and the potential for hydrocarbons in these formations would depend on fault seal for closure. TD was planned in Triassic strata or 4000 m.

OPERATIONS AND RESULTS

Wildcat well was spudded with the semi-submersible installation Arcade Frontier on 28 September 1993 and drilled to TD at 3309.5 m in the Triassic Grey Beds. The well was drilled with spud mud down to 1150 m and with KCl/polymer mud from 1150 m to TD.

A 56 m thick Fangst section (Garn, Not and Ile) was penetrated with top Fangst at 2507 m, 61 m below prognosed top. The BÅt group consisted of 42.5 m Ror Formation, 155 m Tilje Formation and 412 m of Åre Formation. Good sands with average log porosities from 24% to 29% were found in the Garn, Ile, Tilje, and Åre Formations. Unexpected Late Jurassic (Spekk and Melke) sections with thin sand zones with traces of hydrocarbons were penetrated. Apart from these shows all sands in the well were found 100% water wet. Geochemical analyses of an extract from 2477 m in the thin Melke Formation sand indicated that the hydrocarbons here were generated in a more mature source rock (%Ro = 0.75 - 0.80) than the in-situ shales at this level (Ro = 0.6%).

Three cores were cut with 85%, 80% and 100% recovery respectively. The two first cores were cut in the thin Late Jurassic sand zones (2448.5-2454.5 m and 2476.5-2481.0 m). The third core was cut in the Middle Jurassic Fangst Group (2525.0-2551.0 m). Weak to no shows were reported from all cores. A total of 20 FMT pressure tests were successfully obtained, the first pressure point was recorded at 2511 m in the Fangst Group and the last at 3280 m in the Triassic. A fluid sample was planned in the Late Jurassic to test out the shows encountered in the thin sand zones. It was however excluded since the density log indicated that the horizon was too tight to give any successful fluid sample. Otherwise no sample was considered and none were taken.

The well was permanently abandoned on 29 October as a well with shows.

TESTING

No drill stem test was performed in the well.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6507/7-10