



Wellbore History

GENERAL

Well 6608/10-8 was drilled in the Nordland II area on the Stur structure, ca 3 km north east of the Norne Field. Geologically the structure is part of the Dønna Terrace. The primary objective of the well was to prove hydrocarbons in sandstones of the Middle to Early Jurassic Garn, Ile, Tofte, and Åre Formations. The hydrocarbon potential of the Melke Formation of Late Jurassic age was considered as secondary objective.

OPERATIONS AND RESULTS

Exploration well 6608/10-8 was spudded with the semi-submersible installation Stena Don on 29 December 2001 and drilled to TD at 2652 m (2626 m TVD MSL) in the Early Jurassic Åre Formation. The well was drilled with seawater down to 1315 m, and with Aquadril (KCl / polymer / glycol mud) from 1315 m to TD. No shallow gas was encountered and drilling went without significant technical difficulties.

Top Melke sandstone came in at 2224 m, top Not sandstone at 2348 m, top Ile Formation at 2389 m, top Tilje Formation at 2391 m, and top Åre Formation at 2402.5 m. Oil was encountered in sandstones of the Melke, Not, Ile, Tilje, and Åre Formations. An OWC was found at 2483.7 m (2458.1 m TVD MSL) in the Åre Formation, based on petrophysical interpretation. Wire line MDT pressure measurements were not useful for establishing the OWC. The oil was verified by shows and laboratory analyses of cores, logs, and fluid samples. Oil samples were taken on wire line in all oil bearing reservoir zones in the well. Good oil shows were reported from 2226 m down to 2486 m. The composition of the oil samples from the Not and Åre Formations was very similar to that of the oil on the Norne Field.

Seven cores were cut in the Melke, Not, Ile, Tilje, and Åre Formations, recovering a total of 94.1 m. Coring in Åre proved difficult due to a heterogeneous sand/shale lithology. Three MDT runs were performed. Forty-six pressure points were taken in the first. In the second oil samples were taken in the Not Formation at 2407.5 m MSL, in the Tilje Formation at 2439.5 m MSL, and in the Åre Formation at 2351.5 m MSL. The third run was conducted with dual packer in the Melke Formation and a "Mini-DST" was carried out. Oil samples were taken at 2271 m MSL. All samples were of good quality. Results from the testing proved pressure depletion in the Middle and Lower Jurassic section as a result of the production on the Norne Field. The Not Formation showed the largest pressure depletion. The degree of pressure depletion varied between the different sand stone layers in the reservoir, making it difficult to establish fluid gradients. The most reliable gradients are assumed to be those established by PVT analyses. The Melke Formation sandstones did not exhibit pressure depletion.

The well bore was plugged back to 10 m into the 13 3/8" casing and prepared for side-tracking. Well bore 6608/10-8 was abandoned as an oil discovery on 12 April 2002.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6608/10-8