



Wellbore History

Block 6506/11 is situated on the north-western part of the Halten Terrace offshore Mid-Norway. The well 6506/11-8 was drilled to appraise the 6506/11-7 Morvin Discovery, approximately 10 km north of the Kristin field. The primary objective of the well was to prove extra recoverable oil in structure, explore potential better reservoir properties and reduce depth uncertainties. The primary target was Bathonian age sandstones in the Garn and Ile Formations. Potential targets in the Tofte and Tilje Formations were also investigated by this drilling.

OPERATIONS AND RESULTS

Appraisal well 6506/11-8 was spudded with the semi-submersible installation West Alpha on 24 March 2006 and drilled to TD at 4990 m in the early Jurassic Tilje Formation (extended from 4893 m, which was the planned TD of the well). No significant technical problems were encountered in the operations. The well was drilled with seawater and bentonite down to 2150 m, with Glydril water based mud (with glycols) from 2150 m to 4500 m, and with Paratherm oil based mud from 4500 m to TD. No shallow gas was observed by the ROV at the wellhead or by the MWD while drilling the 26" hole.

The well penetrated rocks of Quaternary, Tertiary, Cretaceous, and Jurassic age. Small gas peaks of up to 3.67% were observed in the lower Lange Sandstone Unit, similar to those observed in the 6506/11-7 well, indicating slight hydrocarbon charging. In the lower Lange Sandstones from 4449 m to 4479 m, very weak shows were observed. The well penetrated the Garn reservoir section at 4622.9 m and the Ile reservoir section at 4734.8 m, both formations shallower than prognosed. A HC discovery was proven both in the Garn and Ile Formations, but the MDT results suggested the formations to be tight. A MDT mini-DST was run in Tofte Formation and confirmed that it contained HC, but was very tight. The MDT data had insufficient resolution to assess gradients and fluid contacts. However, sufficient good pressure points were achieved to conclude that the pressure regime was the same as in the 6506/11-7 well for both the Garn and Ile Formation.

Eight cores with a total recovered length of 278 m were cut in the well; one was cut in the Spekk/Melke Formation and seven were cut in the Bathonian sandstones. Oil sampling was performed in the Garn (4679 and 4680.7 m), Ile (4773 m) and Tofte (4845.2 m) Formations. Water sampling was performed at 4692.5 m in the Garn Formation. A disappointing high level of contamination in the oil sampling was registered with 10 - 23 % contamination.

The well was permanently abandoned on 1 July 2006 as an oil appraisal.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6506/11-8