



### Wellbore History

**GENERAL**

Well 6406/2-6 was the third wildcat drilled in the PL 199 licence. The well was drilled on the southern part of the "C structure" in the southwestern part of block 6406/2, south of the Kristin Field and southwest of the 6406/2-1 Lavrans discovery on Haltenbanken. The C structure is an easterly dipping, rotated fault block, down faulted relative to the Lavrans structure and with structural similarities. The main objective of well 6406/2-6 was to test the hydrocarbon potential of the C structure within the Early and Middle Jurassic Fangst and Bât Group sandstones. Late Cretaceous Lysing and Lange sandstones were secondary targets for the well.

**OPERATIONS AND RESULTS**

Wildcat well 6406/2-6 was spudded by the semi-submersible installation "Deepsea Bergen" on 25 August 1998 and drilled to 5263 m, 58 m into the Early Jurassic Åre Formation. The well was a "High Pressure High Temperature" well with max down hole temperature of 177 deg C and max pressure gradient of 1.95 g/cc in top Garn Formation (4479 m TVD RKB). Shallow gas was not encountered and operations went without major problems. The well was drilled with seawater and hi-vis pills down to 1413 m, KCl mud with glycol additive (3 - 5 % Glydril MC) from 1413 m to 2760 m, and oil based mud from 2760 m to TD. Hydrocarbons were proven in Ile and Tofte Formations, and there where good hydrocarbon indications in the Garn and Lange Formations. The main result of well 6406/2-6 was the Ragnfrid discovery with gas/condensate in Ile and Tofte Formations as proven by fluid samples and good indications of hydrocarbons in upper part of Garn Formation and in Lower Lange sandstones. No hydrocarbon fluid samples were obtained from the latter units due to poor reservoir quality. The Tilje and Åre Formations appeared to be water bearing in the well position. The Tofte Formation has good to excellent reservoir properties, Ile properties are fair to good, Garn has poor to moderate reservoir properties except for a good zone in the middle part, and the Lange sandy intervals seem to have low permeabilities. One core (27m) was cut in the Garn Formation. Four MDT samples were taken in the hydrocarbon bearing Ile and Tofte Formations. One of these was recovered from 4737.4 m in the Tofte Formation; the other three were recovered from 4622.2 m in the Ile Formation. All four samples were heavily contaminated with oil-based mud. In addition to these, MDT water samples were collected from the Garn, Ile, and Tofte Formations. The well was suspended as a gas and condensate discovery on 7 November 1998.

**TESTING**

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6406/2-6