



**Wellbore History**

**GENERAL**

Well 6507/3-7 Idun Nord was drilled on the Eastern side of the Dønna Terrace in the Norwegian Sea, just north of the 6507/3-3 Idun Discovery. The main objective of the well was to prove hydrocarbons in the Middle Jurassic Fangst Group (Garn, Not and Ile Formation sandstones) and in the Early Jurassic Båt Group (Tilje and Åre Formation sandstones). A secondary target for the well was to test the hydrocarbon potential of the Cretaceous Intra Lange Formation sandstones.

**OPERATIONS AND RESULTS**

Prior to spudding the main well, a 9 7/8" pilot hole 6507/3-U-2 was drilled approximately 15m east of this main wellbore 6507/3-7 location, to check for presence of shallow gas. No shallow gas was observed by the ROV at the wellhead and there were no indication on LWD, but the LWD confirmed thin water filled sands at 578 m, 648 m, 791 m, and 1142 m. Wildcat well 6507/3-7 was spudded with the semi-submersible installation Ocean Vanguard on 2 June 2009 and drilled to TD at 3855 m in the Early Jurassic Åre Formation. No LWD logs were run in the 36" and 26" sections of the main well bore. After drilling 3.5 m of the 8 1/2" section below the 9 5/8" shoe, a kick occurred. The pore pressure prognosis indicated 1.09 g/cm3 at top of the reservoir. The shut in well pressure estimated a pore pressure of 1.39 g/cm3. The kick was circulated out by driller's method and the mud weight increased from 1.25 g/cm3 to 1.45 g/cm3. The well was drilled with spud mud and hi-vis sweeps down to 1203 m, with Performadrill WBM from 1203 m to 2205 m, with Enviromul OBM (yellow class) from 2205 m to 3540 m, and with Performadrill WBM from 3540 m to TD.

6507/3-7 penetrated rocks of Quaternary, Tertiary, Cretaceous and Jurassic age. Top Garn Formation was encountered at 3545 m, top Not Formation at 3580 m, while the Early Jurassic Tilje Formation was encountered at 3687 m. The presence of gas bearing sandstones was proven in the Garn and Not Formations. The reservoir permeability ranged from 1240 md in Garn Formation to 1 - 7 md in Not Formation. The porosity in the Garn Formation was 16 - 20 %, while in the Not Formatio it was 12 - 19 %. No gas/water contact was proven in the well, but from logs and formation pressure there is gas down to at least 3597 m and water up to at least 3622 m. The only significant shows in the well were seen on the cores from the reservoir. Apart from elevated gas readings and a minor show on one cutting sample from 2904 m no hydrocarbon indications were seen in the secondary target Lange Formation sandstones.

Two cores were cut. Core one was cut at 3546 - 3600 m (3546 m - 3601.4 m is marked depth on the core) in the Garn and Not Formations, core 2 was cut at 3600 ? 3654 m (3601.4 m - 3654 m is marked depth on the core) in the Not, Ile and Ror Formations. MDT fluid samples were taken at 3546.5 m in the Garn Formation (gas), at 3596 m in the Not Formation (gas and water), and at 3702 m in the Tilje Formation (water). Pressure points were taken in Garn, Not, Ile, Ror, Tilje and Åre. There is a 1 m difference between MWD/LWD depth and wire line logging depth in the 8 1/2" section.

The well was permanently abandoned on 22 July 2009 as a gas discovery.

**TESTING**

No drill stem test was performed.

**LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6507/3-7**