

## **Wellbore History**

## **GENERAL**

Wildcat well 6610/3-1 is located ca 80 km southwest of the Røst Island in the Lofoten archipelago of Northern Norway. The main objective was to test the hydrocarbon potential in the Early Jurassic (Tilje Formation) sandstones. A secondary objective was to test the possibility of development of sandy fans from Early Tertiary (Paleocene) to Early Cretaceous.

## **OPERATIONS AND RESULTS**

Wildcat well 6610/3-1 was spudded with the semi-submersible installation Deepsea Bergen on 29 October 1992 and drilled to TD at 3126 m in the Late Cretaceous, Lange Formation. Caving bridges caused wire line tools to hang-up and the severe weather conditions magnified the hole stability problems by the rig being disconnected several times. Due to long periods of wait on weather and upcoming drilling restrictions the decision was made to temporarily plug and abandon. No logs exist from seabed to 402 m. The intervals 402 m to 919 m and 2877.5 m to 3126 m were logged with MWD only. The well was drilled with seawater and hi-vis pills down to 938 m and with gypsum/pac mud from 938 m to TD

The well encountered sandy fans of Paleocene and Late Cretaceous age. Shows were recorded in Intra Nise Sandstone at 2282 m to 2320 m, in Lysing sandstone from 2661 m to 2680 m, and in thin limestone stringers in the Lange Formation at 3073 m and at 3167 m. FMT pressure points gave water gradients in all reservoir sequences. Organic geochemical analyses confirm good, scattered oil shows in Intra Nise sandstone from 2293.75 m to 2309.45 m. The shows were characterised as severely biodegraded stains in an irregular pattern with no obvious relation to lithology. The other shows recorded while drilling were not confirmed by these analyses, but they revealed an additional weak show on a sample from an intra Tang Formation sandstone at 1675 m as well as a trace of oil in the FMT water sample from 1645 m. The thin claystones encountered in the Top Intra-Nise Sandstone exhibit the best source rock potential in the well. These claystones contain dominantly terrigenous organic matter, with fair to good potential, for generation of light oil, or gas/condensate. Maturity indicators showed that the well was immature down to ca 2600 m to 2700 m, and in the early oil window from this level to TD.

Eight conventional cores were cut in the well bore. Two of these were cut in intra Tang Formation sandstones, three in intra-Nise Formation sandstones, and three in Lysing Formation sandstones. Segregated formation fluid samples were taken with the FMT tool at 1645 m and at 2664 m. Both contained water and mud filtrate.

The well was suspended on 17 February 1993 as a well with shows.

## **TESTING**

No drill stem test was conducted in this well bore.