



## Wellbore History

### GENERAL

Wildcat well 6403/6-1 is located ca 80 km west-northwest of the 6405/7-1 Ellida oil discovery. It was drilled on the Edvarda structure, located along the Jan-Mayen Lineament in the transition zone between the Møre Basin in the south and the Vøring Basin in the north. The objective of the well was to verify the presence of hydrocarbons in reservoir formations of Campanian age in the Nise Formation and the Lysing member of the Kvitnos Formation. An additional objective was to test for the presence of reservoirs in Paleocene and Maastrichtian deposits.

### OPERATIONS AND RESULTS

Well 6406/3-1 was spudded on 10 April 2006 with the semi-submersible installation Eirik Raude and drilled to TD at 4120 m in the Late Cretaceous Kvitnos Formation. An 8 1/2" pilot hole, designated 6403/6-U-1, was spudded on 6 April 2006 and drilled to a total depth of 2400 m prior to drilling the main hole. The objective of the pilot hole was to detect for possibly overpressured sands in the shallow formations whilst secondarily, to get good logging data of the upper section. Both the pilot and the main holes were drilled without significant technical problems and within time budget.

The pilot 6403/6-U-1 was drilled with Seawater/Bentonite all through. The main hole was drilled with Seawater/CMC down to 2394 m, with the Ultradrill mud system from 2394 m to 2748 m, with Ultradrill DeepWater mud system (with hydrate inhibition) from 2748 m to 3177 m, and with Ultradrill mud from 3177 m to TD. The Ultradrill mud contains the "Ultrafree NS" agent, a Linear Alfa Olefin (LAO) component. Gas chromatographic analyses showed that it contained two (not one) major olefins in addition to many more organic compounds.

Well 6403/6-1 was spudded 44 m from the pilot hole location in 1721 m of water depth. The well was drilled vertically through Quaternary, Tertiary and Late Cretaceous formations to a total depth of 4120 m, in the Lysing member. The primary Nise Formation target was penetrated at 3047.5 m and consisted of interbedded sandstones, siltstones and shales. One core was cut from 3058 m to 3084.5 m. Extensive wire line data acquisition was performed, including MDT pressure testing and sidewall cores. No fluid samples were acquired due to the very tight nature of the sands. No shows were recorded while drilling, but traces of migrated hydrocarbons were interpreted from post-well organic geochemical analyses in an SWC at 3056.5 m in the uppermost Nise Formation. The secondary target, the Lysing member, was encountered at 4018 m, the base not being penetrated. This formation consisted of interbedded shales and sands with very poor reservoir properties. The coring criteria were not met, but an extensive wire line data acquisition program was performed. The reservoir quality was such that neither pre-tests nor fluid samples could be acquired. No shows were recorded.

The well was permanently abandoned on 23 July 2006 as a dry well.

### TESTING

No drill stem test was performed.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6403/6-1