



## Wellbore History

### GENERAL

The main objective of well 6608/10-4 was to prove oil accumulation in the Middle Jurassic Sandstones in the Norne Northeast segment.

### OPERATIONS AND RESULTS

Wildcat well 6608/10-4 was spudded on 15 December 1993 with the semi-submersible installation "Ross Isle" and drilled to a total depth of 2800 m, in rocks of the Lower Jurassic Åre Formation. The well was drilled entirely water based with sea water and hi-vis pills to 818 m, and Gyp/PAC mud from 818 m to TD. Oil was encountered in the Middle Jurassic in the Melke Formation Sandstones and in the Garn Formation. One core was cut in the Cretaceous Nise Formation from 2091.0 m to 2095.5 m. Seven cores were cut in the interval from 2560.0 m in the Melke Formation to 2709 m in the Åre Formation. Core recovery varied between 92% and 100%. Segregated FMT samples were taken in the Melke, Garn, and Ile Formations. The Melke samples contained mainly mud filtrate with small amounts/traces of oil and gas, the Garn samples failed due to lost seal, while the Ile samples recovered only mud filtrate. The well was plugged and abandoned on 7 March 1994 as an oil and gas discovery.

### TESTING

Three drill stem tests were performed in the well. One test, DST 1, tested the Tofte Formation in the interval 2635 to 2640 m. The second test, DST 2, tested the Garn Formation in the interval 2566.2 to 2582.2 m. The Melke Formation was tested in two steps: DST 3A in the intervals 2484.5 - 2499 and 2504 - 2514 m, and DST 3B in the interval 2524 to 2531 in addition to intervals 3A. During DST 1 and DST 3A and 3B no formation fluid were produced to the surface. DST 3 proved that the Melke Formation was tight with oil in place. DST 2 produced a maximum of 900 Sm<sup>3</sup>/D of oil with a density of 858 kg/m<sup>3</sup> at standard conditions and 75000 Sm<sup>3</sup>/D of gas with a relative density of 0.648 (air = 1.0) through an 80/64" (31.75 mm) choke. Minifrac tests were performed at the end of DST 1 and DST 2. The fracture closing pressures are evaluated to be: DST 1 405 bar and DST 2 410 bar.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6608/10-4