



## Wellbore History

### GENERAL

Well 6407/5-1 was situated in Gimsan Basin, on the eastern limits of the Halten Terrace adjacent to the Trøndelag Platform. The primary target for the well was an Early Cretaceous stratigraphic play, which had been interpreted seismically as a submarine fan deposit.

### OPERATIONS AND RESULTS

Wildcat well 6407/5-1 was spudded with Wilh. Wilhelmsen A/S semi-submersible rig Treasure Scout on 11 December 1987 and drilled to TD at 4306 m in the Middle Jurassic Garn Formation. The well was drilled with seawater and hi-vis pills down to 1025 m, with seawater/gel/lignosulphonate mud from 1025 m to 2053, and with seawater/polymer mud from 2053 m to TD. Drilling proceeded without significant problems. No shallow gas was encountered.

The well penetrated the Early Cretaceous at 2920.5 m, (prognosed at 2980 m) and a thick argillaceous sequence was drilled. There were no indications of sand in Early Cretaceous, or in Late Jurassic. Seismics showed a wedge (the prospect), but there was no sand present. An exotic section of Early Cretaceous and Late Jurassic claystones is present within the Early Cretaceous over the interval 3605 m to 3655 m. The logs showed two well-defined hot shales that have not been observed before. This section was interpreted as a displaced gravity slide block. The Early Cretaceous sediments below consist of argillaceous lithologies, again with no reservoir development.

Minor weak shows occurred in thin sandstone units over the interval 2370 to 2600 m in the Lange Formation. Weak shows were also recorded in the shales of the displaced slide block, in the Spekk Formation, and in the Melke Formation. The sandstones of the Garn Formation also had weak shows, but without visible stain. The Garn sandstones had porosity less than 6 %, and there were no noticed closures at Garn level. The Late Jurassic Spekk shales showed good development in the well position with a thickness of 247 m, and geochemical analyses showed very good source potential with total organic carbon in the range 1 % to 8 %. However, the geochemistry also indicated that the organic matter in Spekk in the area is less oil prone and more gas prone than is usual for this formation. Two cores were cut, one from 3964 m to 3973.1 m in the Late Jurassic Spekk Formation shales, and the second from 4206 m to 4224 m in the Middle Jurassic Garn Formation sandstone. Attempts to obtain RFT measurements and samples were unsuccessful due to tight formation. Consequently it was decided not to perform further tests.

The well was plugged and abandoned on 4 March 1988 as a dry well with shows.

### TESTING

No drill stem test was performed

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6407/5-1