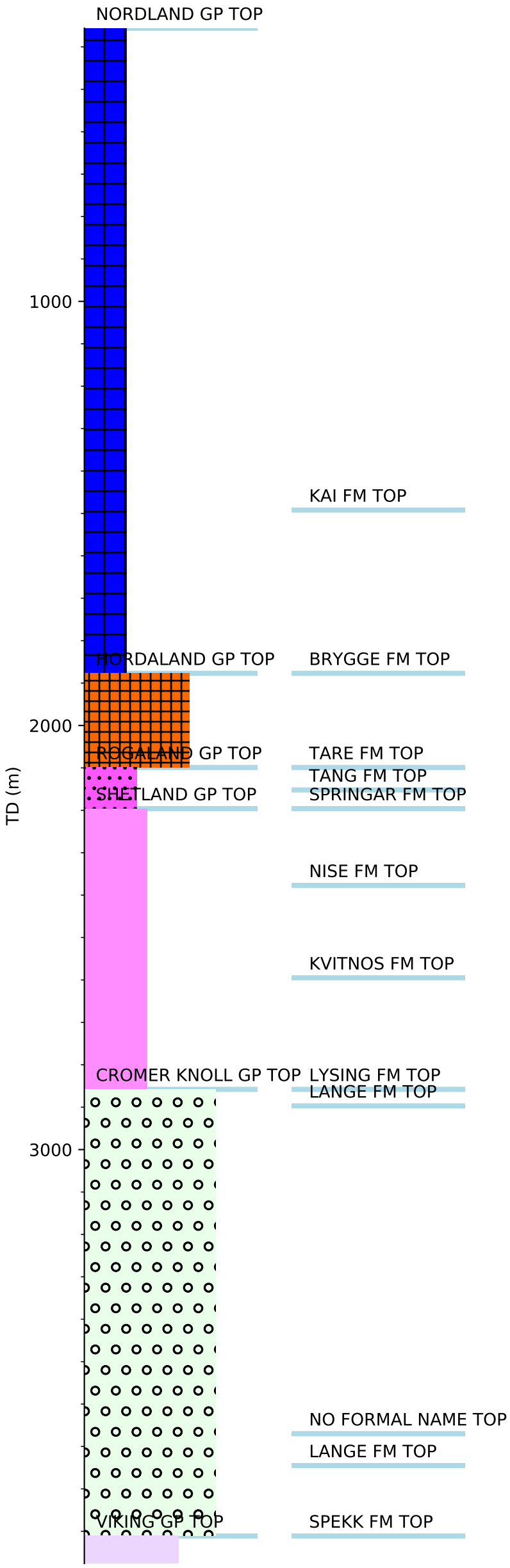
## Groups

## Formation Tops




## Wellbore History

GENERAL

Exploration well 6507/7-12 is located in the northern part of the Haltenbanken area, approximately 190 nautical miles west of the Norwegian coast. The block lies on the western flank of a series of NNE-SSW faults, which separate the Dønna Terrace from the Nordland Ridge/Trøndelag Platform to the east. The prospect is in the northern part of block 6507/7 and lies in an Early Cretaceous mini-basin developed in the hanging wall of the Revfallet Fault complex. The well was drilled to test a stratigraphic closure in an anticipated sand prone wedge of Albian age (Lower Cretaceous). The well was drilled in a location planned to test the minimum economic field size in terms of a tie-back to the Heidrun TLP. If hydrocarbons were present, the well would be tested through wire line logging and possible DST to determine hydrocarbon phase and deliverability. Secondary targets were in the Aptian, "Lange B" sands and in the Lysing Formation, also to be evaluated by drilling and wire line logging. Planned total depth for the well was ca. 20 meters into the Upper Jurassic Spekk Formation, prognosed at 3908 m RKB.

OPERATIONS AND RESULTS

Exploration well 6507/7-12 was spudded on 17 July 1999 with the semi-submersible installation, "Mærsk Jutlander" and drilled to TD at 3976 m in the Late Jurassic Spekk Formation. The well was drilled with seawater and high viscosity sweeps down to 1316 m, with "BARASILC" water based silicate KCl mud from 1316 m to 2508 m, and with Baroid "Environmul& oil based mud from 2508 m to TD. Porous sands were encountered at all prospective intervals, at depths 70-80 m deeper than prognosed. The wedges previously believed to be of Albian and Aptian were found to be of Aptian and Barremian age, respectively, and sand thickness within the wedges were thinner than anticipated. Oil (3.88 m "net pay" based on wire line data) was found in the Aptian sandstones. However, it was not a commercial success due to lack of permeability, identified from MDT pressure tests. Thin-section analysis from sidewall cores confirmed lack of permeability. Log data showed that shales in this section have totally different acoustic properties than shales above and could be confused with sand. Oil shows in the Early Cretaceous porous zones were mainly faint and weak based on fluorescence cut using acetone as solvent. The secondary objective in Lysing Formation was a 40 m sand with both porosity and permeability, but was drilled outside closure and was clearly water wet. A MDT water sample from Lysing sandstone was taken with a one-gallon chamber at a depth of 2869.8 m MD. The filling was aborted after 2,5 litres due to slow flow of water.
Later analysis showed the sample to be contaminated by mud filtrate and with no oil content. Some CO2 and methane-gas were reported from the sample. No conventional cores were cut. The well was permanently plugged and abandoned as a dry well with oil shows on 12 August 1999.

TESTING

No drill stem test was performed.

# LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6507/7-12