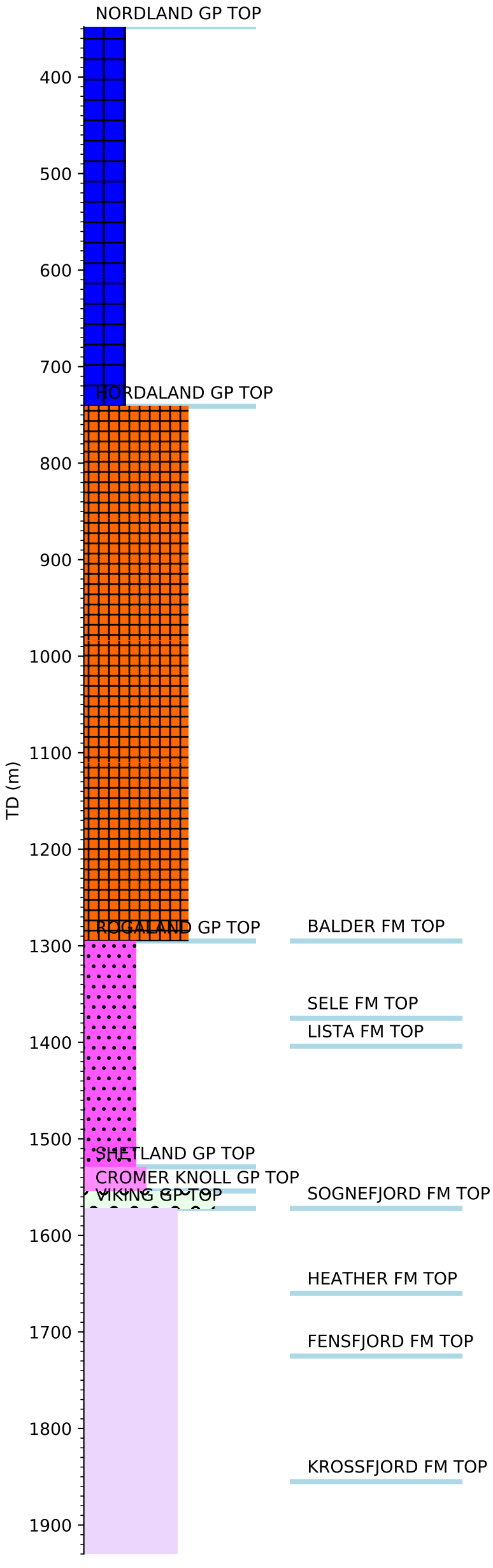
Groups

Formation Tops



Wellbore History

GENERAL

The well was drilled as part of the appraisal programme initiated for the southern part of the Troll West Gas province (TWGP-S). The objectives of the well were to provide geological, geophysical and petrophysical data for evaluation of the potential for a group of oil producers in TWGP-S; and to provide data on the Fensfjord and Krossfjord Formations to improve aquifer modelling. The well was further planned for later re-entry, either for sidetracking and completion as a horizontal producer, or for vertical recompletion for Sognefjord Formation reservoir monitoring.

OPERATIONS AND RESULTS

Well 31/5-5 was spudded with the semi-submersible installation West Delta on 30 December 1992 and drilled to a total depth at 1930 m in the Middle Jurassic Krossfjord Formation. The well was drilled with spud mud to 940 m and with KCl/brine from 940 m to TD.

The Sognefjord Formation was encountered from 1572 m to 1725 m, and was hydrocarbon bearing. Strong oil shows were recorded from 1573 m to1587.5 m, weaker oil shows were recorded below this depth down to 1650 m. The gas-oil contact was identified at 1573.5, and the oil-water contact was identified at 1585.5 m. From FMT pressure tests a gas gradient of 0.152 g/cc, an oil gradient of 0.825 g/cc, and a water gradient of 1.02 g/cc was defined. Twelve conventional cores were cut. The first ten were from 1555 m in the top of the Sognefjord Formation to1726 m, one meter into the Fensfjord Formation. Cores 11 and 12 were cut from 1835 m in the Fensfjord Formation to 1888 m in the Krossfjord Formation. FMT fluid samples were taken at 1583 m (two samples, both contained oil and gas), 1576.5 m (oil and gas), and at 1571 m (gas).

The well was temporarily plugged at 1450 m and 450 m using two 9 5/8" Baker type N1 bridge plugs and suspended as an oil and gas appraisal well on 11 February 1993.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 31/5-5