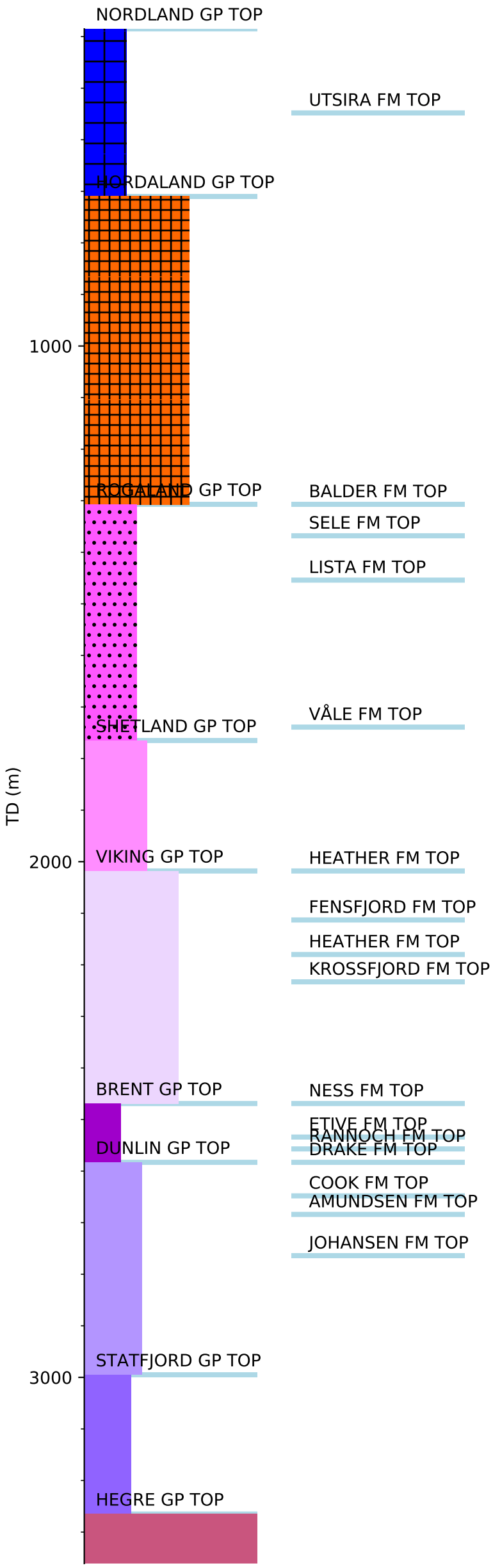

Wellbore History

GENERAL

Wildcat well 35/11-1 was drilled on the "A" structure close to the border between Block 35/11 and Block 35/12, and ca 25 km north of the Troll Field. Its primary objective was to assess the hydrocarbon potential in Middle to Upper Jurassic strata on the "A" structure that straddles the border between Block 35/11 and the unlicensed Block 35/12. Sands of Lower Jurassic age were regarded as secondary objectives. Planned TD was into the Triassic.

OPERATIONS AND RESULTS

A total of 317 pockmarks were identified in the area from the site survey. The average density was estimated to 20 per square kilometre. The average depth of these was 1-2 m, though some were of greater depth. None of the pockmarks were seen to be active.

Wildcat well 35/11-1 was spudded with the semi-submersible installation on 23 May 1984 and drilled to TD at 3361 m, approximately 100 meters into in the Triassic Hegre Group. The 36" hole section was drilled through boulder beds causing the bit to build angle. Because of high deviation the well was re-spudded. After drilling the 26" hole, the well flowed several times. Although the well would not stay static, it was decided to run the 20" casing in an attempt to seal off the water flow. This resulted in the 20" casing parting at the wellhead, but was successfully recovered. After reaming some tight spots the 20" casing was set and cement was squeezed to seabed to stop the water flow in annulus. Some tight spots were experienced in the 17 1/2" and 12 1/4" hole sections. Lost circulation occurred at 2439 m, due to this the 9 5/8" casing was run. The well was drilled with gelled seawater spotted with hi-vis pills down to 1015 m and with KCl/polymer mud from 1015 m to TD.

Top Jurassic was encountered at 2018 m. The 451 meter thick Viking Group was dominated by argillaceous material, but water-wet arenaceous sections with a net reservoir thickness of 78 m were found scattered throughout. Average porosity in the reservoir sections is 20.6 %. Top Brent Group was penetrated at 2469 meters. Interbedded coals, clays and thin sands dominated the Ness Formation. The Etive Formation and large parts of the Dunlin Group were mainly arenaceous. The gross thickness is 502.5 meters. The net reservoir thickness between the top Brent Group and the Statfjord Formation is 255.2 m with an average porosity of 17.2%. The Early Jurassic to Triassic section consisted to a great extent of sandy intervals. The net reservoir section was 209 m meters over a gross interval of 384 m. The average porosity was 13.7%.

The background gas increased dramatically at 2018 m at Top Viking Group with 8.1 % methane, 0.3 % ethane, and 0.15 % propane, dropping rapidly to normal background levels at 2030 m. No significant shows were recorded on cuttings, sidewall cores or conventional cores in the well. From the logs as all sands had high water saturations, and RFT pressure data from the Jurassic sands showed water gradients. One core was recovered in the Brent Group in the interval from 2552.8 to 2562 m. One RFT run was performed in the Late Jurassic and one in the Middle to Early Jurassic. Formation pressures were recorded from permeable zones, and a sample of the formation fluids were recovered in both runs. The two samples, one taken at 2113 the other at 2535 m, both contained formation water contaminated by a potassium chloride based mud filtrate.

The well was permanently abandoned on 6 August 1984 as a dry hole.

TESTING

No drill stem test was performed.

ml>

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/11-1