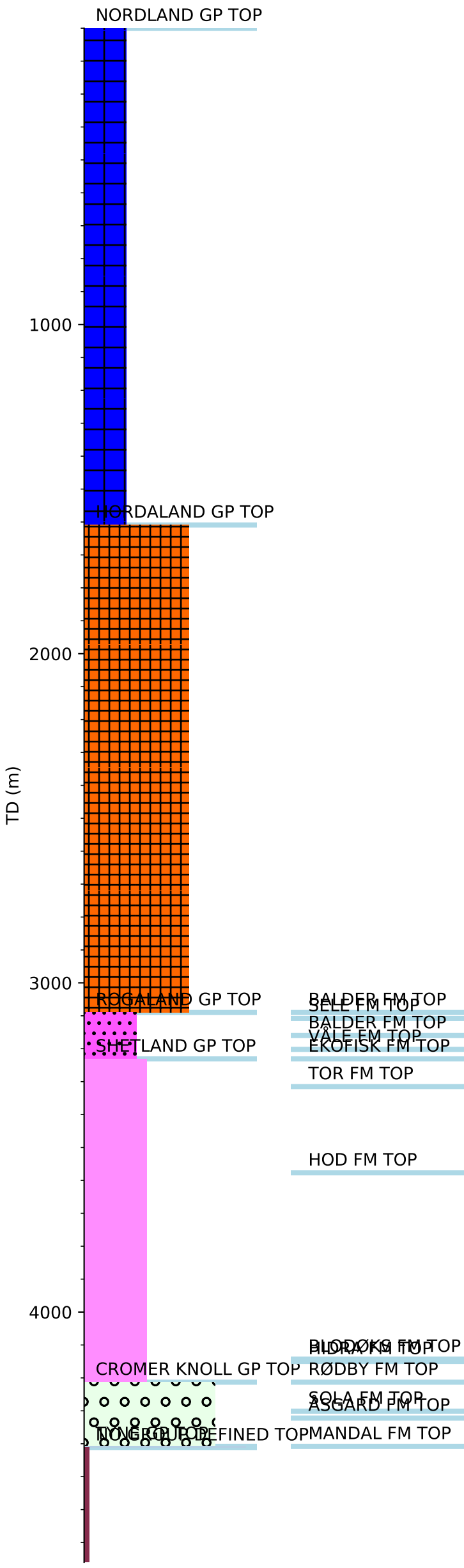

Wellbore History

GENERAL

Well 2/7-23 S was the fourth well drilled on the South Eldfisk (Embla) Field, which consists of a faulted structural high of assumed Palaeozoic sediments and volcanics. The structure is located on the eastern boundary of the Grensen Nose, a prominent faulted terrace marking the western edge of the Central Graben. The purpose of the well was to test the northward extension of the hydrocarbon bearing sandstones discovered in the 2/7-9 well in 1974 and confirmed by tests in the 2/7-20 and 2/7-21 S wells. If reservoir was proven, the intent was to complete the well in a manner suitable for a later tie-back to a production facility, where it would provide a third drainage point for future field development of the Embla Field.

OPERATIONS AND RESULTS

Appraisal well 2/7-23 S was spudded with the semi-submersible installation West Delta on 15 May 1990 and drilled to TD at 4760 m in indeterminate pre-Jurassic sandstone. The well was drilled from the third slot in a three-slot temporary template located over the 2/7-20 well. The 2/7-23 S well was deviated to a target location at the Base Cretaceous level 1227 m north of the wellhead. Shallow gas was encountered at 593 m and caused some operational problems. The drilling went on without significant problems to TD, but during preparations for testing the drill string got stuck. Attempts to work the pipe free met with no success and the pipe had to be cut. The remainder of the drill string could not be retrieved and it was decided to abandon the well without testing. The well was drilled using KCL/Soltex/Aktaflo-S water based drilling fluid down to the 9 5/8" casing depth at 4229 m. Below this point and for the remainder of the well Enviromul oil based mud was used.

The well penetrated 4 m of Late Jurassic shale (Mandal Formation) at 4408 m. The target pre-Jurassic reservoir sands were encountered at 4412 m, 74 m TVD deeper than prognosed. The reservoir was oil-bearing. No distinct oil-water contact was seen, but from electric logs and RFT pressure data an oil column of ca 200 m can be inferred.

Hydrocarbon shows were recorded between 1524 - 1645.9 m in base Nordland / top Hordaland Group as moderate to good dull yellow-brown fluorescence in the cuttings. Oil shows were also recorded in the Shetland Group, with peak shows at 3254 m in the Ekofisk Formation, at 3323 m in the Tor Formation, and at 3625.6 m, 3886.5 m, and at 3973 - 3977.6 m in the Hod Formation. Below 4229 m true oil shows could not be distinguished from the oil based mud

An attempted coring in the Early Cretaceous did not recover any core. Twenty cores were cut in the reservoir section with a total core recovery of 273 m. No wire line fluid samples were taken.

The well was suspended on 21 November 1990 as an oil appraisal well.

TESTING

Due to technical problems no DST tests were performed in this well.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/7-23 S