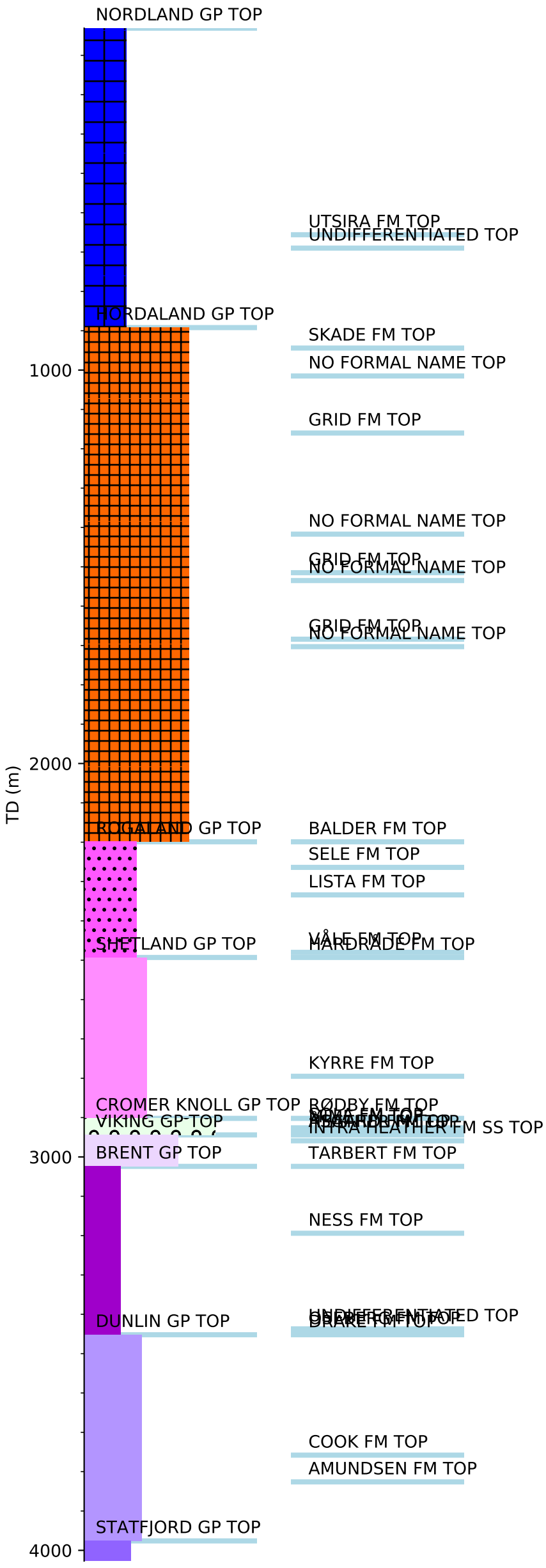

Wellbore History

GENERAL

The primary objective of the 30/9-13 S well was to prove hydrocarbon potential in the Tarbert Formation in the G-East prospect, south west of the Oseberg Field. The well should define fluid contacts in the prospect and test the sealing capacity of the eastern fault. The location was chosen to drill through untruncated Tarbert Formation, and it should leave a minimum of untested reserves up dip in order to establish the fluid contacts in the lower part of the Tarbert Formation.

As secondary objectives the well should test the resource potential within the Ness, Oseberg, Rannoch, Etive, Cook and Statfjord Formations. The well was planned deviated due to a very high amplitude reflection, resulting in a shallow gas

warning for a sand layer at 496 ± 10 m.

OPERATIONS AND RESULTS

Wildcat well 30/9-13 S was spudded with the semi-submersible installation Vildkat Explorer on 5 May 1991 and drilled to a total depth of 4027 m in Early Jurassic Statfjord Formation sandstone. The well was drilled with seawater and hi-vis pills down to 1030 m, with KCl/polymer mud from 1030 m to 3031 m, and with Thermadrill/KCl/polymer mud from 3031 m to TD. The well was drilled vertical to the 13 3/8" casing shoe and was kicked off from there using a steerable motor. A maximum inclination of 31 ° was obtained at 1434 m. At 1483 m the steerable system was pulled and a drop assembly was run in hole to continue drilling. Intra Heather Formation Sandstone was encountered at 2959 m in the 12 l/4" hole before the planned 9 5/8" casing point had been reached. The well was plugged back and casing was set above the hydrocarbon-bearing interval. On drilling out of the casing the well was sidetracked down to the top of the Heather Formation at 2963 m. The greater part of the Heather Formation proved to be sand with a total net gas column of 28.5 m. A total oil reservoir zone of 77 m with a 60 m net pay zone was identified. A Free Oil Level (FOL) was encountered in the Heather Formation and an Oil Water Contact (OWC) was interpreted from logs at 3101 m in the Tarbert

Formation. The Statfjord Formation consisted of water bearing moderately over pressured sandstones of low permeability. A total of 11 conventional cores were cut continuously from 2957 m through the Heather GOC and the Tarbert OWC down to 3154 m at the base of the Tarbert Formation. Wire line RFT fluid samples were taken at 3097.1 m in the Tarbert Formation (gas/water/mud filtrate), at 3025.6 m in base Heather Formation (gas/water/mud filtrate/trace of oil), at 3997.1 m in the Statfjord Formation (gas/water/mud filtrate), and at 4012.8 m in the Statfjord Formation (water and mud filtrate without any gas or oil). A total of 60 sidewall cores were attempted and 35 were recovered. The well was suspended as an oil and gas discovery on 11 October 1991.

TESTING

Tree DST tests were performed. Test 1 was performed in the interval 3086.5 m to 3094.5 m in middle Tarbert yielding a maximum flow rate of 792 Sm3/d oil and 120983 Sm3/d gas through a 19.05 mm choke. Test 2 was performed in the interval 3023.9 m to 3072.9 m in the upper Tarbert yielding a maximum flow rate of 535 Sm3/d oil and 107458 Sm3/d gas through a 19.05 mm choke. Test 3 was performed in the interval 2958.1 m to 2986.1 m in Intra Heather Sandstone and yielded 90 Sm3/d oil and 459552 Sm3/d gas through a 28.575 mm choke.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/9-13 S