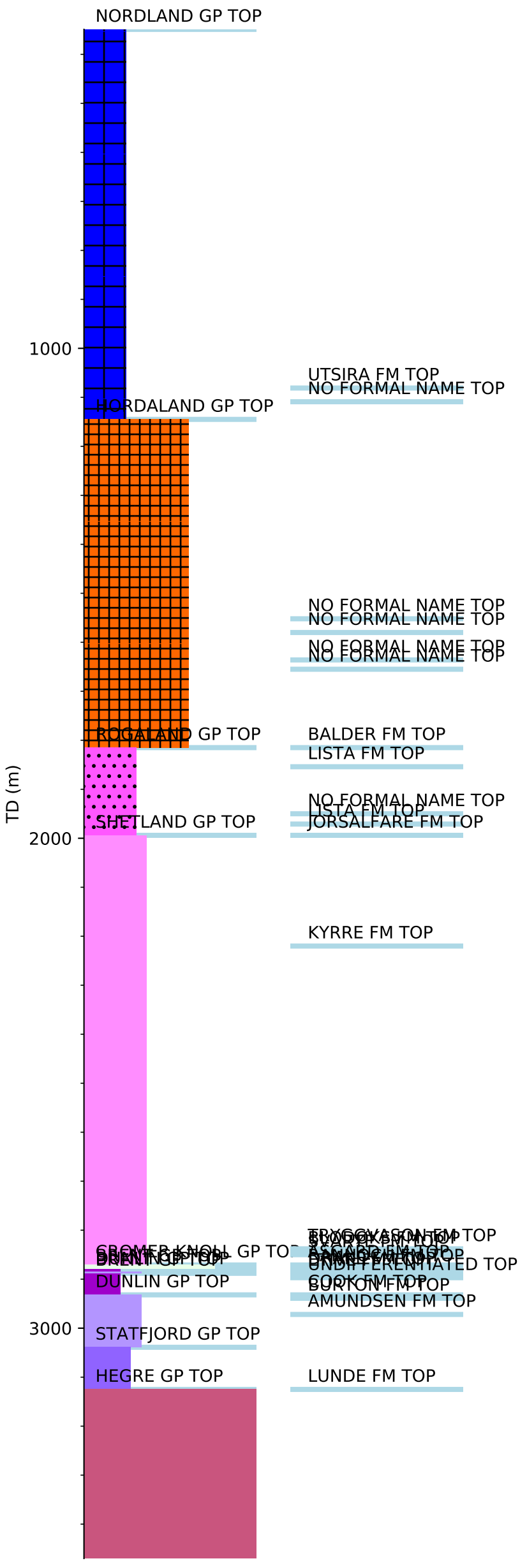

Wellbore History

GENERAL

Well 34/8-10 S was drilled to appraise the 34/8-1 Visund discovery on Tampen Spur in the Northern North Sea. The objectives were to confirm the presence of mobile hydrocarbons and the pressure regime in the SI segment (Statfjord Formation); to confirm the absence of free gas cap and also pressure regime and fluid composition in the NI segment (BrentGroup); to improve stratigraphic control of base Cretaceous, the A-Central Fault, top Statfjord and top Lunde; and to characterise the Lunde B/C aquifer and pressure regime.

OPERATIONS AND RESULTS

Appraisal well 34/8-10 S was spudded with the semi-submersible installation Polar Pioneer on 28 September 1993 and drilled to TD at 3470 m (3316 m TVD) in the Late Triassic Lunde Formation. The well was drilled with an angle of 37 degrees through the reservoir to achieve the objectives. It was drilled with seawater and hi-vis pills down to 1358 m, and with Anco 2000 glycol mud from 1358 m to TD.

The well penetrated oil-bearing sandstones in all the potential reservoirs: Brent-NI, Amundsen-SI, Statfjord-SI and Lunde-SI. The Brent Group was penetrated at 2879.5 m in a heavily faulted area. It was represented by the Rannoch Formation from 2879.5 to 2885 m and by Etive Formation from 2888 to 2896.5 m with a fault slice identified as Drake Formation in between (2885-2888 m). A gross reservoir thickness of 14 m was defined, giving a net pay of 10 m. The pressure in the Brent Group was found to be higher than previously documented, and in addition the oil was of a lighter composition. No free gas cap was found in the Brent sandstones.

The Amundsen Sandstone was not expected to be penetrated as the well was planned to cut the A-Central fault very close to the Statfjord Formation. However, the well showed that top Statfjord was about 20 m deeper and the A-Central fault about 50 m further to the east than prognosed. The Amundsen Sandstone member was encountered from 2993 m to 3006 m. Core and wire line log data confirm this unit as oil-bearing with a gross reservoir thickness of 12.5m giving a net pay of 11.5m.

Good oil shows were observed in the Rannoch and Etive Formations from 2877 to 2893m. Poor to moderate shows were seen from 2919 to 3018 m on sandstones of Dunlin Group. Good to very good shows were observed in the Statfjord Formation from 3036 - 3122 m. Poor to moderate shows were seen in the Lunde A and B/C sandstones from 3141 to 3256 m (ODT) and below 3255 m residual shows were observed. The Statfjord Formation was encountered at 3038.5 m, and was cored all through. Wire line logs and core data show the presence of oil in Statfjord sandstones with a net thickness of sand of 60 m and a net pay of 56.5 m

Lunde A Formation was penetrated from 3125 to 3243 m and Lunde B/C from 3243 m to TD. Core and wire line data proved Lunde to be oil-bearing down to 3256 m (ODT) in this well with a net sand thickness of 52.5 m and a net pay of 8.5 m.

All in all, 203 m core was cut in 23 cores at different intervals throughout the well. MDT fluid samples were taken at 1951.8 m, 2891.5 m, 3002.8 m, and at 3255.0 m

The well was permanently abandoned on 9.December 1993 as an oil appraisal well.

TESTING

A production test (Test no 1) was performed in the intervals 3039 - 3052 m and 3062-3087.5 m (2983 - 3021 m TVD all across) in the Statfjord Formation sandstones. A 5 day main flow period produced 1180 Sm3 oil and 414000 Sm3 gas/day with a FWHP of 210.4 bar and a GOR of 350 Sm3/Sm3 through a 44/64" fixed choke with an average permeability of 1370 mD. The density of oil was recorded as 0.82 g/cc, while the gas gravity was 0.71 (air=1). 1.4% CO2 and 6 ppm H2S. The temperature measured in the flow was114 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/8-10 S