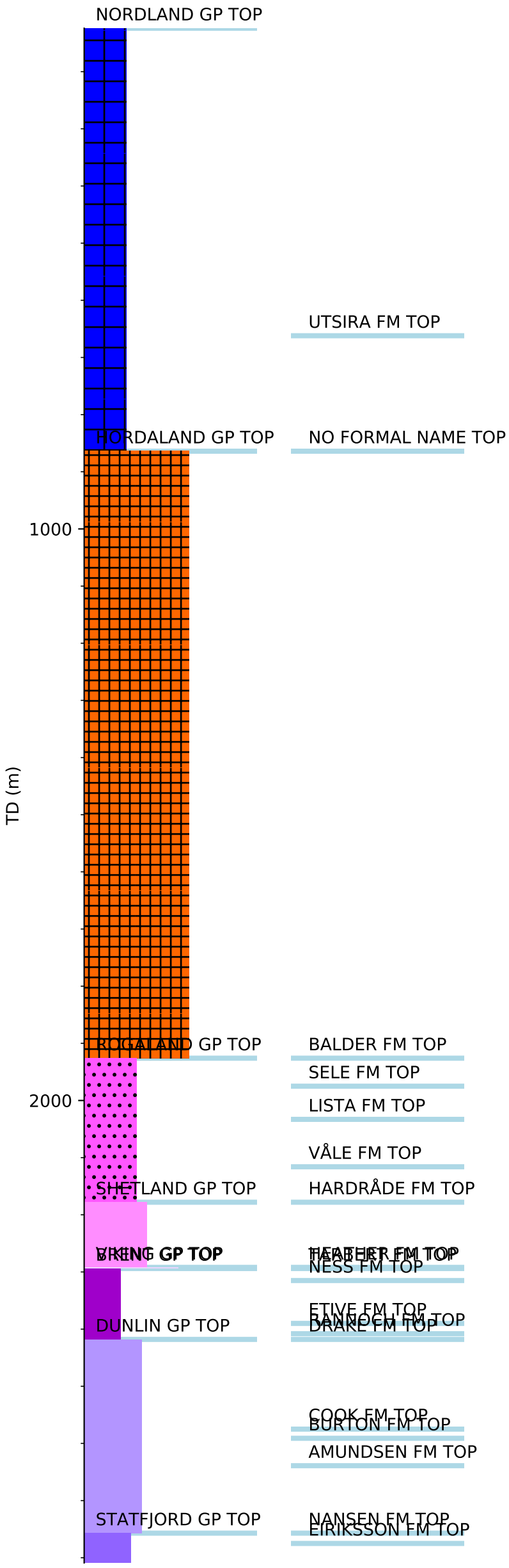

Wellbore History

GENERAL

Well 30/9-9 was drilled on the J-South structure in the Oseberg Sør Field complex in the North Sea. The first well on J-South, well 30/9-5 S some 3.5 km to the north, encountered a highly eroded Brent Group with gas shows in the Brent, a gas bearing Cook Formation and a water bearing Statfjord Group. The primary objective of well 30/9-9 was to prove oil in the Brent Group and the Cook Formation, and define the oil-water contact.

OPERATIONS AND RESULTS

Wildcat well 30/9-9 was spudded with the semi-submersible installation Polar Pioneer on 26 September 1989 and drilled to TD at 2809 m in the Early Jurassic Eiriksson Formation. No significant problem was encountered in the operations. The well was drilled with seawater and hi-vis pills down to 919 m and with KCl/polymer mud from 919 m to TD.

The Tarbert Formation and the uppermost part of the Ness Formation were found oil bearing down to 2319 m. The net pay was estimated to be 13.5 m and average water saturation calculated to 30.1%. Average porosity was 20.8%. The Ness Formation (2307 - 2412 m) was found oil bearing from 2391.5 to 2412.5 m. No oil water contact was proved, leaving oil down to base reservoir. The net pay was estimated to be 15.5 m and average water saturation calculated to 24.3%. Average porosity was 24.9%. RFT results showed no pressure communication between the hydrocarbon bearing intervals in the Tarbert and Ness Formations.

The Etive-Rannoch Formations and the Oseberg Formation were not present in the well, most likely due to faulting. The lower Jurassic Cook Formation and the Statfjord Group were found water bearing. Oil shows were described on claystones and sandstones from 2115 to 2175 m, throughout the Våle Formation. Shows were described on limestones in the interval 2250 to top Brent Group. These shows increased in strength downwards towards the oil-bearing reservoir. No shows are described below the deepest oil in the Ness Formation.

Seven cores were cut in the Middle Jurassic Brent Group in four intervals: 2291 - 2317 m, 2322 - 2327 m, 2347 - 2357 m and 2393 - 2427.5 m. RFT fluid samples were taken at 2295.5 m (gas, light oil and water) and at 2346 m (water)

The well was suspended on 6 November 1989. It was plugged and permanently abandoned on 16 August 2003. It is classified as an oil discovery.

TESTING

Two DST tests were performed in the well.

DST l tested the interval 2394.4 - 2409.4 m (Ness Formation). It flowed on average 946 Sm3 oil and 158000 Sm3 gas /day on a 19.05 mm choke. The GOR was 166 Sm3/Sm3, the oil gravity was 0.82 g/cm3 and the gas gravity 0.743 (air=l). The bottom hole temperature was 100°.4 C measured at 2349.34 m. The well produced 1.5% CO2 and 1.3 ppm H2S.

DST 2 tested the interval 2294.6 - 2310.6 (Tarbert Formation and uppermost part of Ness Formation). It flowed on average 966 Sm3/day oil and 158000 Sm3 gas on a 19.05mm choke. The GOR was 164 Sm3/Sm3, the oil gravity was 0.82 g/cc and the gas gravity 0.745 (air=l). The bottom hole temperature was 99.8°C measured at 2240.5 m. The well produced 1.6% C02 and 1.5 ppm H2S.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/9-9