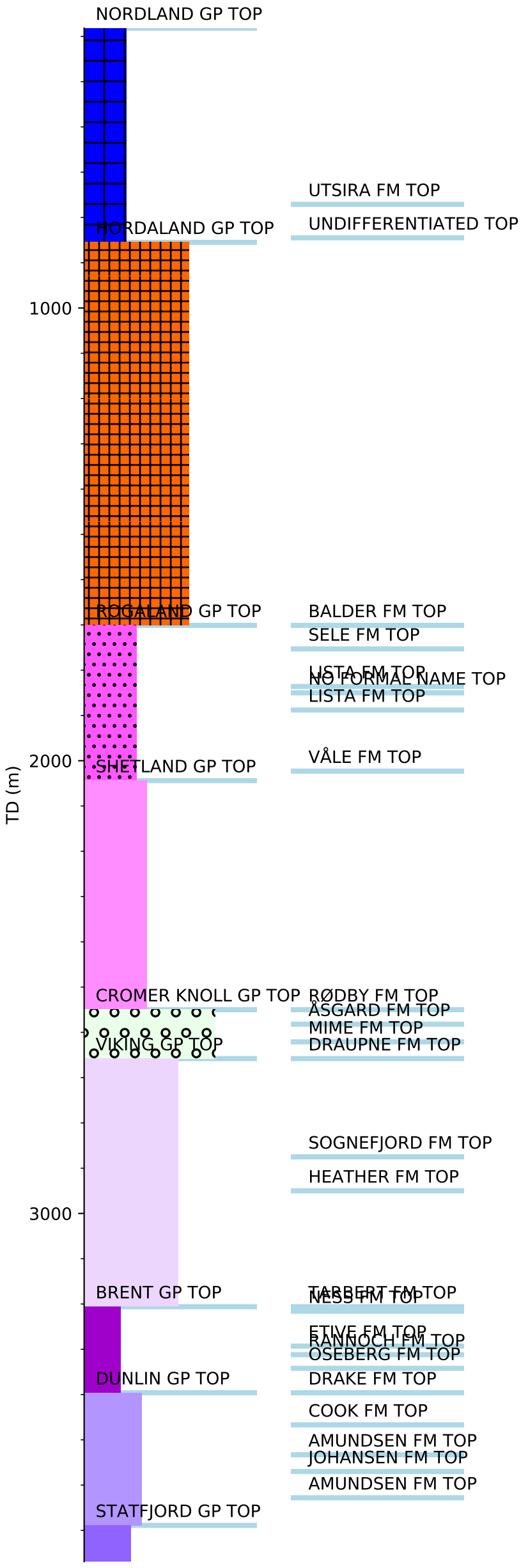

Wellbore History

GENERAL

Well 35/11-5 was drilled on the "D" West prospect on the northwestern part of the Horda Platform, and ca 18 km north of the Troll Field. The primary objective for 35/11-5 was the Middle Jurassic Brent Group. Reservoirs were expected in the Tarbert, Ness, Etive, and Oseberg Formations. Secondary there was a possibility for reservoir development in the Late Jurassic Sognefjord Formation. Similar sands are the main reservoir in the Troll area, and were expected to be well developed in the eastern part of the block. No shallow gas warnings were given. Boulders might be encountered in the interval 395 - 532 m. The well was planned to be drilled to a total depth of 3678 m.

OPERATIONS AND RESULTS

Wildcat well 35/11-5 was spudded with the semi-submersible installation Sovereign Explorer on 27 June 1991 and drilled to TD at 3769 m in the Early Jurassic Statfjord Formation. The well reached a depth of 1118 m before technical problems caused the well to be plugged back and sidetracked. Further problems in the sidetrack caused the well to be abandoned and re-spudded on 18 July 1991, 50 m northwest of the original location. The first well bore was drilled with seawater and hi-vis pills. The second and final well bore was drilled with seawater and hi-vis pills to 1010 m, and with KCl/polymer mud from 1010 m to TD

Water bearing sandstones were drilled in Palaeocene. The Draupne Formation was penetrated at 2657.5 m. The Sognefjord Formation came in at 2875 m and consisted predominantly of claystones with some sandstone interbeds. Shows were observed in cuttings, and RFT samples recovered contained oil and gas. However, reservoir quality of the sandstones was generally poor and there was less than 5 m of net pay. In the Middle Jurassic Brent Group, shows were observed in cores from 3208 m down to 3305 m. Light oil/condensate and gas was recovered from an RFT sample taken at 3214 m. Reservoir quality was however poor with only 5.4 m of net pay in the Tarbert Formation. Establishing the gas/-condensate-water contact was also difficult because of the poor porosity and permeability throughout the Brent Group. However, there were indications that hydrocarbons could be present below the base of the Tarbert Formation at 3216 m.

Organic geochemistry show that the 217 m thick Draupne Formation contain mainly type II kerogen and has a rich potential for oil and gas. The deeper Heather Formation, with similar thickness, also has a rich potential for oil and gas but has a more variable source potential with kerogen type II to III. Various maturity indicators as well as weak shows recorded during drilling show that the Draupne shales are effectively immature for petroleum expulsion in the well position. Heather probably has reached sufficient thermal maturity to have generated and expelled some of its potential. Consistent with the shows record while drilling no migrant hydrocarbons were found by these analyses above base Cretaceous.

A total of seven cores were cut in the interval 3215 m to 3356 m within the Brent Group, recovering a total of 124.6 m core. A total of 240 sidewall cores were attempted in 4 runs, and 150 were recovered. One RFT sample was taken at 2888.5 m in the Sognefjord Formation (gas, 5.7 litre 34.1° API oil, and mud filtrate) and two in the Tarbert Formation at 3213.5 m (gas, mud filtrate, and good trace of light oil), and at 3214 m (gas, mud filtrate and 1.3 litre 42.3° API oil)

The well was permanently abandoned on 3 November 1991 as a minor oil and gas/condensate discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/11-5