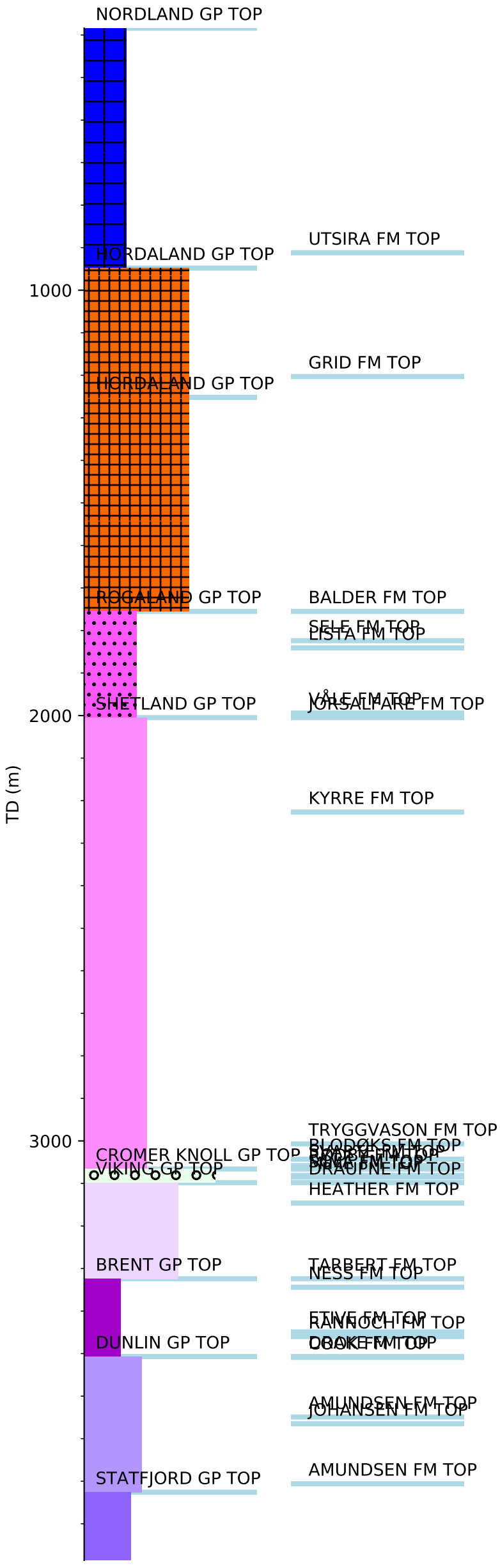

Wellbore History

GENERAL

Wildcat well is located on the Marflo Spur, ca 15 km west of the Fram and Vega discoveries. The main objective was to test the hydrocarbon potential of the Middle Jurassic Brent Group sandstones located in a rotated fault block. A secondary target was the Early Jurassic Cook Formation.

OPERATIONS AND RESULTS

Well 35/10-1 was spudded with the semi-submersible installation Deepsea Bergen on 1 August 1991 and drilled to TD at 3986 m in the Early Jurassic Statfjord Formation. A 9 7/8" pilot hole was drilled to 760 m where MWD indicated potential sand with shallow gas at 753 m. Pilot hole was therefore plugged back to 740 m before opening up to 26" and running 20" casing. Electric logs did not confirm gas in the sand layer. The 17 1/2" hole was drilled to 1895 m. The well started flowing (oil kick from 2 m thick Lista sand at 1892 m). The well was shut in and the drill pipe became stuck. The well was plugged back and sidetracked from kick-off point at 735 m. At 3326 m in the 8 1/2" hole the well started flowing (salt water kick from the Brent Group). The hole was plugged back and 7" liner was run with shoe at 3288 m. Further problems with lost circulation and gain caused by coal beds occurred at 3986 m. The well was plugged back and abandoned at this depth. Before logging, the well was plugged back to 3920 m; hence no electric logs were run beyond 3860 m. The well was drilled with seawater/hi-vis pills /CMC EHV down to 736 m and with Gyp/PAC mud from 736 m to 1895 m. At this point an IMCOSPOT/PIPELAX pill was added to free the stuck pipe, without success. From sidetrack at 735 m the well was drilled to 3040 m using Gyp/PAC mud, and from 3040 m to TD the well was drilled with AncoTemp/bentonite/causticised lignite.

A 2 meter thick sand layer from 1891 m to 1893 m in the Lista Formation, proved to be oil bearing (well kick, FMT sample at 1892 m). Both the Primary and secondary objectives proved to be water bearing, although low saturation of hydrocarbons were observed throughout the Brent Group. Log evaluation indicated water saturation of 50-100% in the Brent and Dunlin Groups. A well kick at 3325 m confirmed water in the top of the Brent Group (Tarbert Formation). In the Cook Formation, there was low saturation of hydrocarbons, but FMT pressure points indicated a possible gas-cap in the top, from 3525 m to 3543 m.

Oils shows were recorded in the sand from 1891 - 1893 m in the Lista Formation and in the Shetland Formation from 2011 m to 2140 m. Poor shows were observed in the sandy sequences of the Brent Group. Fair shows were recorded on the cores from 3602 m to 3658 m in the Dunlin Group and very poor shows were seen from 3658 m down to top Statfjord Formation at 3826 m.

A total of 257.2 m core was recovered in 19 conventional cores from 3329 m to 3657.7 m in the Brent and Dunlin Groups. FMT fluid sampling was performed after sidetracking. Samples were taken in the Lista Formation at 1892 m (ca 2 litre with 37 deg. API oil), and in the Cook Formation at 3536.5 m (leakage in sample chamber: only mud filtrate and formation water was recovered) and at 3598 m (mud filtrate and ca 13 l gas).

The well was permanently abandoned on 16 January 1992 as a minor oil discovery.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/10-1