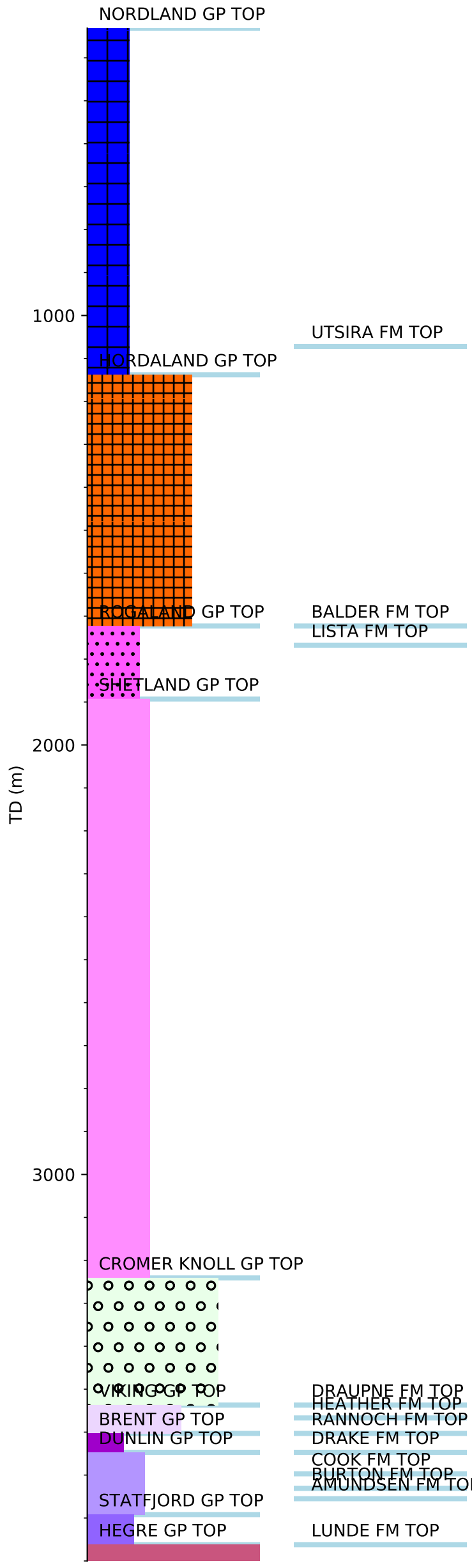
Groups

Formation Tops



Wellbore History

GENERAL

Well 33/6-1 is located in the Marulk Basin northwest of the Snorre Field in the southeastern sector of block 33/6. The location was selected on the crestal area of the most attractive feature in the licence: a fault bounded, tilted block. The closure was considered dependent upon the sealing properties of the NE-SW fault to the south of the prospect. The primary objective of the well was to test the Middle-Early Jurassic Brent-Statfjord reservoirs. Planned TD was in the Late Triassic Hegre Group

OPERATIONS AND RESULTS

Exploration well 33/6-1 was spudded on April 9, 1979 in 306 m water depth, the deepest drilling location to that date. Semi-submersible installation Fernstar was used to drill the well. Due to soft bottom conditions and problems with stabilizing the temporary guide base on the sea floor the well was re-spudded twice, the last and successful attempt on April 15. The well reached TD at 3900 m in the Early Jurassic Statfjord Formation. The well was drilled with seawater and pre-hydrated bentonite down 434 m, with seawater/HPD polymer/bentonite from 434 m to 695 m, with KCl/Dextrid/seawater from 695 m to 1690 m, and with lignosulphonate/fresh water from 1690 m to TD.

The most significant horizons, the top of the Paleocene Seismic Marker and top Cretaceous, came in 13 meters lower and 37,5 meters higher than expected, respectively. The pre-Cretaceous section deviated significantly from prognosis. This was caused by a very crude depth conversion model due to lack of well control in the area and a much thinner Brent thickness than prognosed. All pre-Cretaceous targets were found however. The Late Kimmerian unconformity was encountered 133.5 m high to prognosis. The Late Jurassic shale was 65.5 m thick, 35 meters thicker than prognosed and consisted of 30 m of Draupne Formation plus 35.5 m of Heather Formation.

The primary target Brent Group was penetrated at 3603 m, 97 meters higher than prognosed, and only 44 m thick versus the expected 155 m. The Brent reservoir was water wet. This was evident on the logs and was confirmed by no shows on the cuttings, mud, or on core. The Dunlin Group came in at 3647.5 m, 297 m higher than prognosed, and was 144.5 m thick compared to the expected 265 m

The secondary target Statfjord Formation was encountered at 3792 m, 328 m higher than prognosed and was 70 m thick, 10 meters more than predicted. The Statfjord reservoir was water wet. Again this was evident on the logs and was confirmed by no shows on the cuttings, mud, or on core.á

Two cores were cut. The first core was cut from 3607 m to 3616 m in the Brent Group and the second from 3802 m to 3807 m in the Statfjord Formation. No fluid samples were taken in this well.

The well was permanently abandoned on 6 July 1979 as a dry well

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 33/6-1