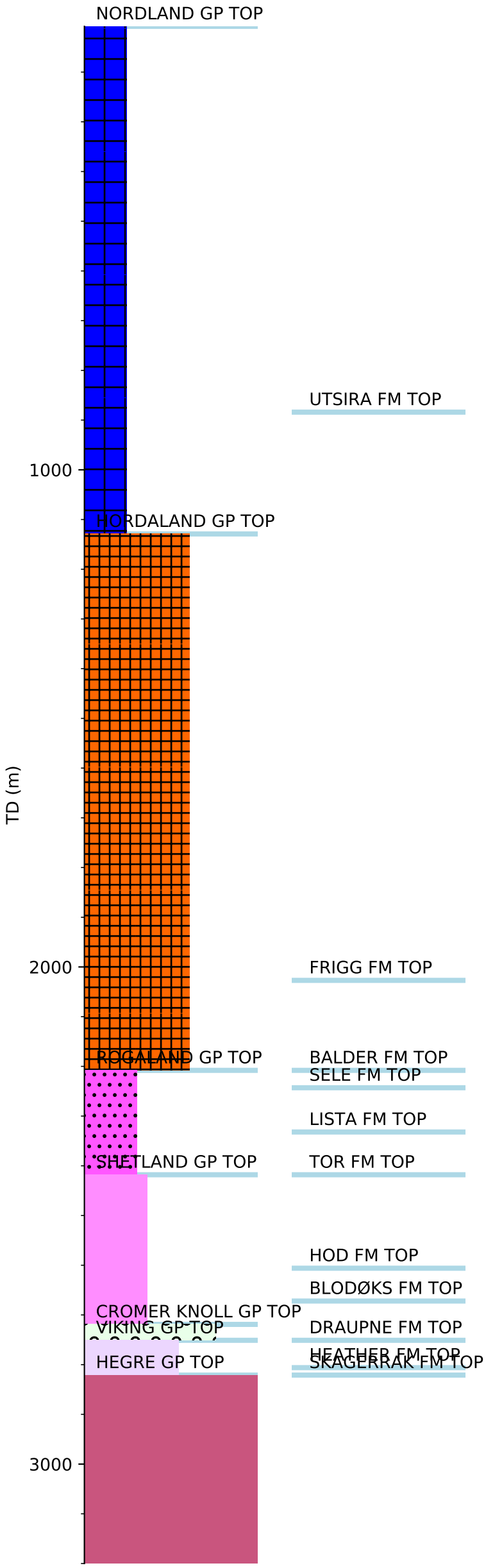
Groups

Formation Tops



Wellbore History

GENERAL

Well 15/9-15 was drilled south of the Sleipner Øst Field in the Viking Graben of the North Sea. The objectives were to test possible hydrocarbon accumulations in Paleocene and Mesozoic sandstones in the 15/9 My structure.

OPERATIONS AND RESULTS

Wildcat well 15/9-15 was spudded with the semi-submersible installation Ross Rig on 28 May 1982 and drilled to TD at 3200 m in the Triassic Skagerrak Formation. During drilling the 12 1/4" section, a significant volume of mud was lost at 2200 m. The thief zone was most probably in the Frigg sand. 3 days were spent locating the zone and pumping LCM pills. Otherwise no significant problem was encountered in the operations, which proceeded with little downtime. The well was drilled with spud mud down to 515 m and with gypsum/lignosulphonate mud from 515 m to TD.

The Paleocene sandstones were missing in this well. The Mesozoic sandstones were encountered at 2806. The upper part consisted of tight Melke Formation sandstones without shows. From 2821 m (top Skagerrak Formation) they were gas bearing down to a true gas/water contact at 2923 m. No oil shows were recorded outside of the hydrocarbon-bearing reservoir in this well.

Four cores were cut across the reservoir from 2805 m in the Heather Formation to 2878.2 m in the Skagerrak Formation. The core-to-log depth shift was 2.8 m for all four cores. RFT fluid samples were taken at 282.5 m (gas, condensate and mud filtrate), 2838.5 m (gas, condensate and mud filtrate), and at 2907 m (gas, condensate and mud filtrate) fluid samples were taken.

The well was permanently abandoned on 1 August 1982 as a gas and condensate discovery.

TESTING

Two Drill Stem Tests were performed.

DST 1 tested the interval 2880 m to 2890 m. It produced 298000 Sm3 gas and 155 Sm3 condensate through a 32/64” choke. The GOR was 1922 Sm3/Sm3, the condensate density was 0.760 g/cm3, and the gas gravity was 0.718 with 0.2% CO2. The maximum temperature was 106.8 °C.

DST 2 tested the interval 2830 m to 2850 m. It produced 293900 Sm3 gas and 124 Sm3 condensate through a 28/64” choke. The GOR was 2478 Sm3/Sm3, the condensate density was 0.757 g/cm3, and the gas gravity was 0.710 with 0.5% CO2. The maximum temperature was 105.7 °C.

Both Drill Stem Tests included a flow period with a three-step multirate drawdown test. Check the well completion report and well test report for further details, such as flow parameters for other choke sizes.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 15/9-15