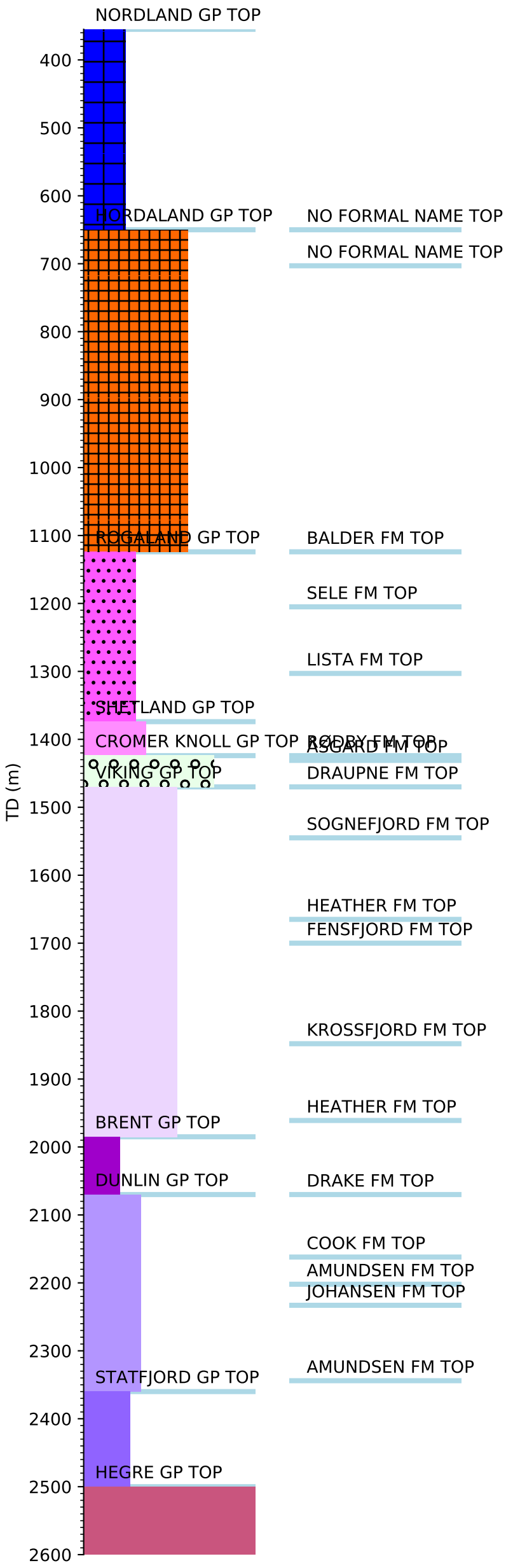

Wellbore History

GENERAL

Well 31/2-2 R is a re-entry of well 31/2-2, which was suspended due to rig repair after setting the 9 5/8" casing. The aim of the re-entry was to drill through the Jurassic and into the Triassic, and to conduct a drill stem test in the Late Jurassic oil and gas zones. The oil test was considered very important and should replace the abandoned test of the oil zone in well 31/2-1.

OPERATIONS AND RESULTS

Well 31/2-2 was re-entered (31/2-2 R) with the semi-submersible installation West Venture on 2 June 1980. The re-entry depth was 1857 m and new formation was drilled to TD at 2600 m in the Triassic Hegre Group. The testing phase was interrupted by a 31 days strike from 14 July 1980. The well was drilled with gel and lignosulphonate from the re-entry point to TD.

The well below re-entry depth consisted of well-developed Middle to Early Jurassic sequences (Brent and Dunlin Groups, Statfjord Formation) and 100 m of Triassic Hegre Group sediments before TD was reached.

After plugging the well it proved impossible to retrieve the Temporary Guide Base, which was left on the se floor, below the mud line in a crater. The well was permanently abandoned on 6 October 1980 as a gas and oil appraisal.

TESTING

A full production test was carried out over three intervals in order to test both the oil zone from 1579 m to 1591 m and the gas zone from 1544 m to 1579 m.

Test #1 from the interval 1586.5 m to 1588.5 m tested the oil zone, and a gravel pack completion and regular production string were used. A total of 42 days were spent on this test as it was of extreme importance to get this zone properly tested. A maximum flow rate of 132 Sm3 oil/day at a GOR of 53 Sm3/Sm3 was obtained during 24 hours after acid stimulation of the well, but it declined to 76 Sm3/day during the next days. At this point operations were interrupted for a month by the strike. After the strike a further test of the oil zone was conducted, using gas lift to improve the production rates. A rate of 223 Sm3 oil/day with a GOR of 231 Sm3/Sm3 including lift gas was obtained. After acidisation the production rate increased to some 397 Sm3 oil/day but then declined rapidly to some 214 Sm3 oil/day. The reported oil gravity was 25 deg API for all flows.

Test #2 of the more micaceous sand was performed over the interval from 1570 m to 1575 m without applying a gravel pack. The maximum flow obtained was 1500800 m3 gas/day. Condensate was produced at a rate of 4 bbl/MMSCF (0.0000224 Sm3 condensate/Sm3 gas). Condensate gravity was from 46.2 to 49.5 deg API.

Test #3 was in the cleaner gas sand, from 1553 m to 1562 m. It was performed with a gravel pack and maximum flow obtained was 1407300 m3 gas/day.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 31/2-2 R