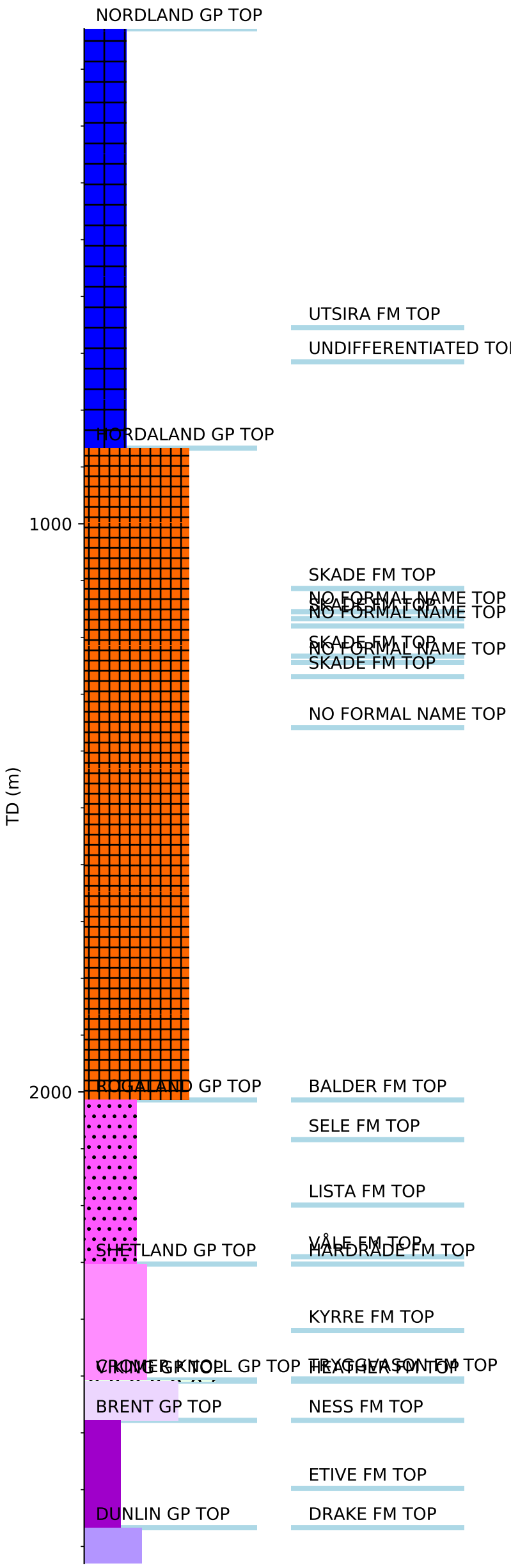

Wellbore History

GENERAL

The wildcat 30/9-2 was planned as the first well on the Gamma structure in block 30/9. Well 30/6-9 had previously penetrated the structure but this well failed to encounter the oil/water contact. The primary objectives of 30/9-2 were to verify the reserve estimate for the main part of the gamma structure and penetrate the oil/water contact in the lower part of the Brent Group. Additional objectives were to obtain core material from the oil zone in the Etive Formation and perform a water injection test in this, obtain information on the quality of the reservoir in the water zone and stratigraphical information on the southern part of the Gamma structure.& The well was temporarily abandoned for about one year and then re-entered for an extended test.

OPERATIONS AND RESULTS

Wildcat well 30/9-2 was spudded with the semi-submersible installation "Nortrym" on 1 April 1983 and drilled to a total depth of 2830 m in the Early Jurassic Dunlin Group. The well was drilled using water-based mud down to the 12 1/4" hole at 1715 m. The 12 1/4" hole was drilled to TD using oil based mud ("ENVIROMUL" and "IL 2832 oil" as oil base). While running the 13 3/8" casing, this got stuck at 1334 m. The casing was worked free using diesel in the mud and the casing was set at 1680 m. After drilling the 12 1/4" hole to 2203 m the drill pipe got stuck with the bit at 2170 m. Several unsuccessful attempts were made to free the pipe. The drill pipe was then backed off and the well was cemented back and sidetracked from 1482.5 m.

The Brent Group sandstones (2578-2767 m) RKB were hydrocarbon bearing down to 2737m where an oil/water contact was encountered within the Etive Formation sandstones (2698-2767m).& No additional hydrocarbon bearing reservoirs were encountered by this well. Poor hydrocarbon shows reported from Upper Cretaceous limestones were considered uninteresting. The Ness Formation (2578-2698 m) consisted of very fine to coarse-grained sandstones with interbedded shales, coals and occasional siltstones.& The Etive Formation consisted of very fine to predominantly medium grained homogeneous sandstones with pebble beds in the upper part.& The sandstones were locally micaceous and carbonaceous and contained stringers with abundant calcareous cement.& Twelve conventional cores were cut continuously from 2591 m near the top of the Ness Formation and down into the top of the Drake Formation shales at 2777 m. FMT pressure recordings and sampling were performed in the well.& Samples of oil and gas were obtained from the FMT samples at 2599.5 m (Ness Formation) and 2728 m (Etive Formation).& Samples of water/filtrate were obtained from the samples at 2639.5 m (Ness Formation) and 2755 m (Etive Formation).

The well was temporarily abandoned as an oil and gas appraisal on 12 July 1983. The well was re-entered as 30/9-2 R on 1 June 1986 for a test production. The re-entry was formally completed on 7 July, and subsequently re-classified to 30/9-T-2 for the test production.&

TESTING

Four DST's were performed in the well, two in the Etive Formation (DST1 from 2738 m to 2737 m and DST2 from 2704 m to 2728 m) and two in the Ness Formation (DST3 2685 m to 2693 m and DST4 from 2595 m to 2604 m). The DST performed in the lower part of the Etive Formation was a combined production and injection test, which produced water. The other DST's produced oil and gas.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/9-2