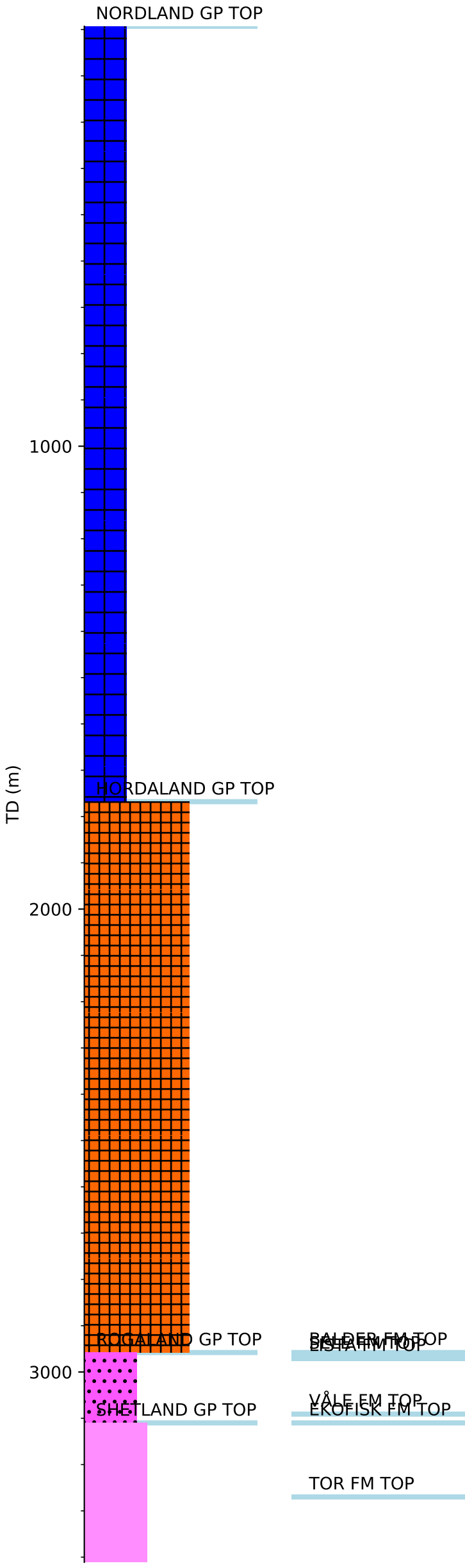
Groups

Formation Tops



Wellbore History

GENERAL

Well 2/4-6 (named 2/4-5X by operator Phillips) was drilled on a structure ca six km west off the Ekofisk discovery. The objective of the well was to test the Danian and Late Cretaceous limestone, which had proved oil productive in the other wells drilled within the block 2/4.

OPERATIONS AND RESULTS

Wildcat well 2/4-6 was spudded with the semi-submersible installation Neptune 7 on 28 August 1970 and drilled to TD at 3411 m in the Late Cretaceous Tor Formation. The well was drilled with sweater and hi-vis mud down to 585 m, with seawater/drill aid mud from 585 m to 3107 m, and with seawater lignosulphonate mud from 3107 m to TD.

The well penetrated a thick, nearly complete Tertiary succession consisting mostly of shales and claystones. A ca 50 m thick sandy sequence with gas shows was encountered at 2956 m in the uppermost Paleocene. Danian Limestone (Ekofisk Formation) was penetrated at 3110 m and Late Cretaceous limestone (Tor Formation) was encountered at 3270 m. A rich condensate and gas was tested from these formations

Five conventional cores were cut between 3120.5 and 3223.4 m in the Ekofisk Formation. No wire line fluid samples were taken.

The well was permanently abandoned on 10 December 1970 as a gas and condensate discovery

TESTING

Five drill stem tests through perforations of the 7" liner were carried out. The following results are maximum flow after acidization:

DST 1 tested the zone 3370 - 3374 m in the Tor Formation. It produced only water at a rate of 13 m3 /day. Bottom hole temperature (BHT) in the test was reported to be 136.7 deg C.

DST 2 tested the intervals 3271 - 3286 m and 3295 - 3310 m in the Tor Formation. This test flowed 568 Sm3 oil /day on a 1" choke. Oil gravity was 42.8 deg API and the GOR was 452 Sm3/Sm3. The BHT was reported to be 133.9 deg C.

DST 3 tested the interval 3243 - 3246 m in the lower Ekofisk Formation. It produced only water at a rate of 23 m3/day.

DST 4 tested the interval 3194 - 3216 m in the Ekofisk Formation. It flowed 609 Sm3 oil /day on a 1" choke. The oil gravity was 41.3 deg API and the GOR was 364 Sm3/Sm3. The BHT was reported to be 130 deg C.
DST 5 tested the interval 3124 - 3152 m in the Ekofisk Formation. It flowed 748 Sm3 oil /day on a 1" choke. The oil gravity was 44.6 deg API and the GOR was 539 Sm3/Sm3. The BHT was reported to be 129.4 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/4-6