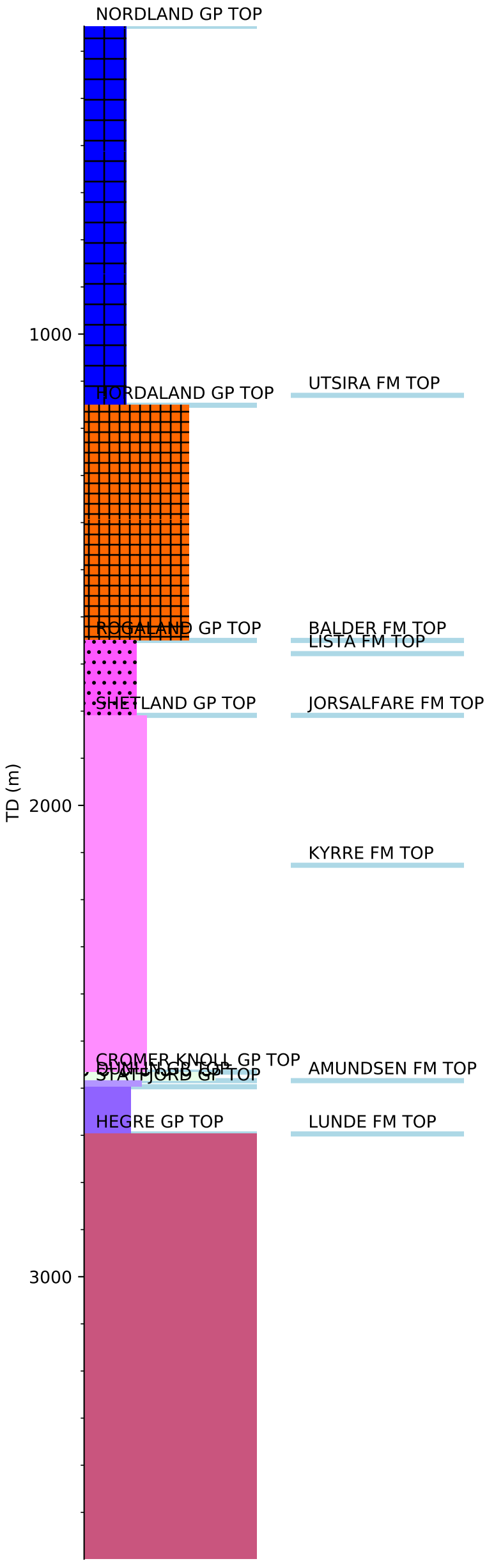
Groups

Formation Tops



Wellbore History

GENERAL

Well 34/4-2 is located in the northern North Sea, approximately 5 km west of the Snorre Field. The purpose of the well was to test the stratigraphic sequence below the Base Cretaceous Unconformity. The primary target was the Statfjord Formation, which was known from the license 037 area to contain porous sandstones of appreciable thicknesses.

The secondary target was possible Brent Group / Late Jurassic sands immediately below the Base Cretaceous unconformity. Thirdly, well 34/4-2 was a stratigraphic test of the Triassic deposits between the Statfjord Formation and the Middle to Late Triassic sequence penetrated in well 34/4-1.

OPERATIONS AND RESULTS

Wildcat well 34/4-2 was spudded with the semi-submersible installation Byford Dolphin on 6 March 1980 and drilled to TD at 3599 m in the Late Triassic Lunde Formation. No significant incidents occurred during operations, but the well developed as much as 20 deg deviation towards TD, giving a TVD RKB of 3571 m, 28 m less than measured depth. The well was drilled with spud mud down to 816 m, with gypsum/lignosulphonate mud from 816 m to 1975 m, and with lignosulphonate mud from 1975 m to TD.

The well penetrated Tertiary, Cretaceous, Jurassic and Triassic strata as required in the work programme for License 057. More than 900 m of Triassic deposits were penetrated in order to obtain stratigraphic information. The Statfjord Formation was eroded and the reservoir characteristics here were on large negative. The exception was the upper seven meter thick Eiriksson Member with a net/gross-value of 1.00 and an average porosity of 24.3%. The underlying Raude Member had a high clay content, which reduced prospectiveness to a N/G value of 0.18 and porosities only rarely exceeding 20%. The Jurassic sequence proved to be different from the expected with Dunlin Group claystones directly underlying Barremian limestones. Hence, no Brent/Late Jurassic sands were present.

No significant indications of hydrocarbons were established during the drilling of the well. Coriband processing of the Jurassic/Triassic sequences indicated a varying amount of residual hydrocarbons to be present from 2990 m, but geochemical study of these intervals showed that these readings most likely were incorrect. Oil shows were reported in limestone and sandstone stringers of the Shetland Group, giving yellow to white fluorescence, moderately fast streaming bluish white cut, occasionally crush cut. In the Jurassic to Triassic sequence, the only reported show was from a few limestone grains, in the interval 3249 - 3256 m, with golden yellow fluorescence and slow streaming, milky white cut.

One core was cut from the Dunlin Group and into the Eiriksson Member. No wire line fluid samples were taken. The bottom hole temperature at TD, from Horner corrected wire line temperatures, was 120 deg C.

The well was permanently abandoned on 24 May 1980 as a dry well.

TESTING

No production tests were performed as no significant hydrocarbon shows were encountered.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/4-2