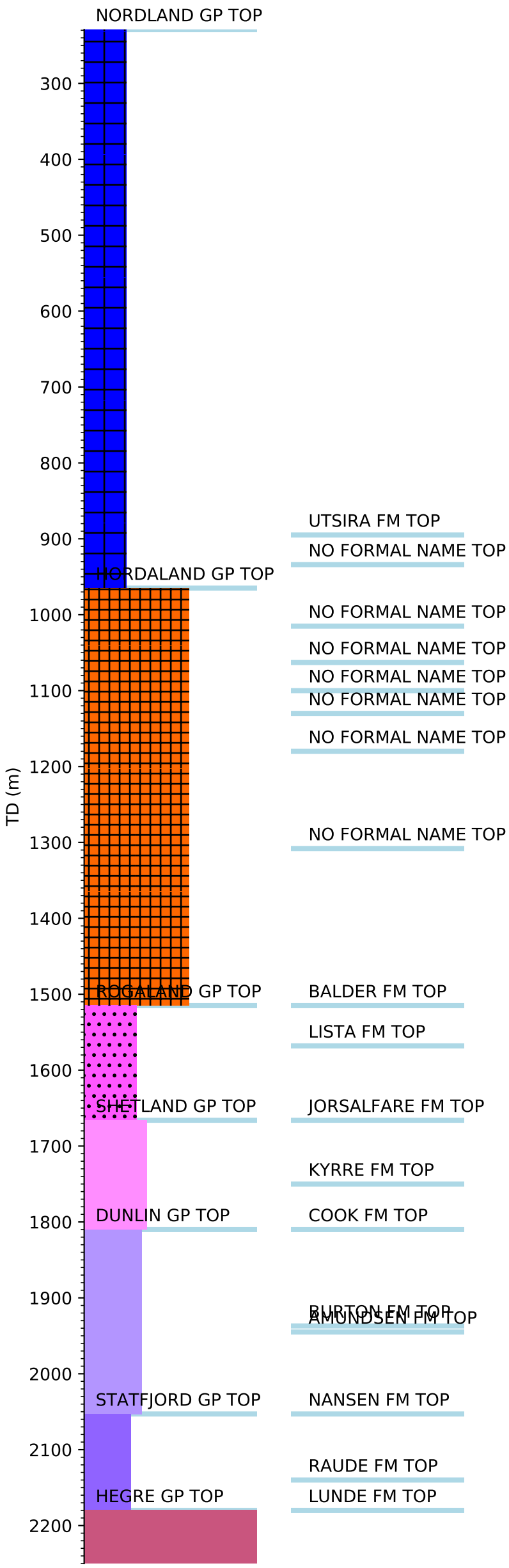
Groups

Formation Tops



Wellbore History

GENERAL

Well 34/10-7 was drilled on the eastern segment of the Gullfaks Field. The primary objective was to test sandstones of Middle Jurassic age. Secondary objective was sandstones of Early Jurassic age: the Cook and the Statfjord Formations.

OPERATIONS AND RESULTS

Appraisal well 34/10 7 was spudded with the semi-submersible installation Ross Rig on 7 January 1980 and drilled to TD at 2550 m in the Late Triassic Lunde Formation. Two major problems were encountered during drilling. The first one concerned water sensitive clays which caused difficulties when underreaming the hole for both the 16" liner and the 13 3/8" casing. The second problem was the leak off test below the 9 5/8" casing shoe. While circulating prior the second leak off test the formation broke down. Four cement squeezes were required before a proper formation test was obtained. The well was drilled with spud mud down to 845 m and with gel/lignosulphonate mud from 845 m to TD.

Weak to good oil shows were recorded from 1320 m in the lower Hordaland Group and downwards, mostly in limestone. Strong shows with live oil in the mud were recorded between 1380 and 1415 m. Oil shows of variable strength continued all the way down through the Hordaland, Rogaland and Shetland Groups. The Shetland Group was found resting directly on the Early Jurassic Cook Formation sandstone at 1810 m. Oil was found in sandstones of the Cook and Statfjord Formations. No oil/water contact was observed in the Cook Formation. In the Statfjord Formation an oil water contact was found at 2066 m.

A total 53.2 m core (67% recovery) was recovered in 5 cores in the interval from 1813 m to 1892 m. A sixth core was taken with 100% recovery from 1942 to 1949 m. RFT fluid samples were taken at 1821 m in the Cook Formation and at 2055 m in the Statfjord Formation.

The well was suspended on 23 March 1980 as an oil appraisal well.

TESTING

One drill stem test was performed from perforation at 1858 - 1856 m in the Cook Formation. The test produced 471 Sm3 oil and 59200 Sm3 gas /day through a 40/64" choke. The GOR was 126 Sm3/Sm3, the oil density was 0.832 g/cm3, and the gas gravity was 0.68 (air = 1) with 0.5% CO2. The maximum temperature at perforation depth was 77.7 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/10-7