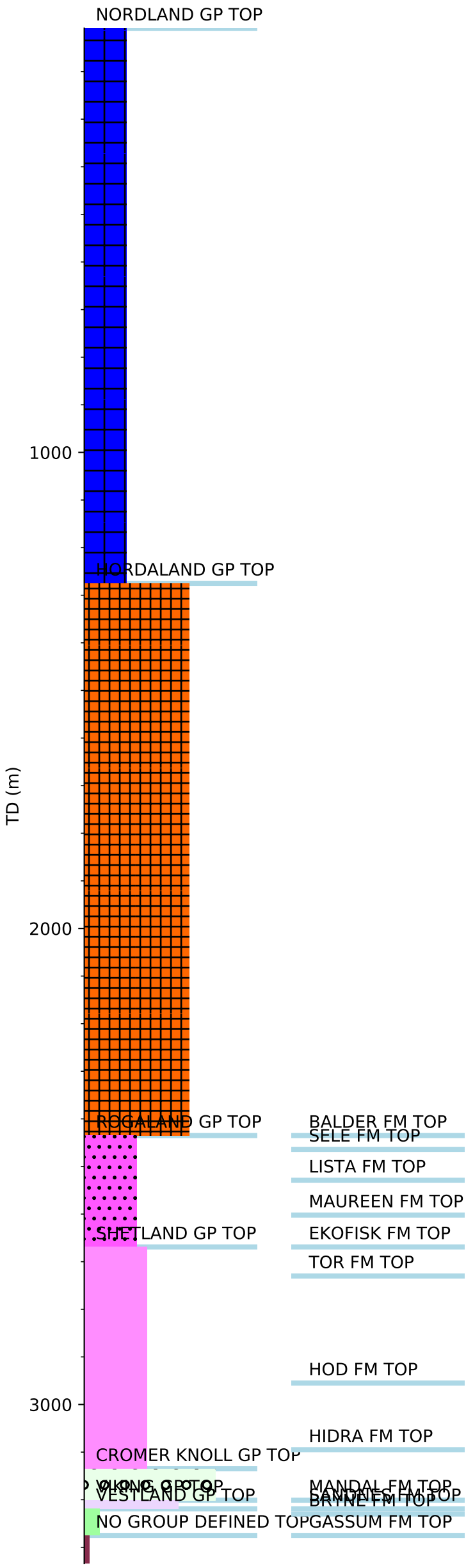
Groups

Formation Tops



Wellbore History

Well 7/8-1 was drilled on an anticlinal structure in the westernmost part of the Norwegian-Danish Basin and marginal to the northern slope of the Central Through. The anticline was interpreted as a salt-induced structure with closure at top Paleocene and top Cretaceous, and these horizons were defined as the main objectives of the well. The well should be drilled into Permian salt with prognosed top at 3261 m (10700 ft).

OPERATIONS AND RESULTS

Wildcat well 7/8-1 was spudded with the semi-submersible installation Ocean Viking on 31 August 1968 and drilled to TD at 3334 m in Triassic sediments of the Gassum Formation. The well did not reach the planned TD in Permian salt.

Drilling went without significant problems down to 1981 m. From this depth on, several drilling problems arose. After the casing had parted at two places the well had to be sidetracked from 1831 m. This hole was then drilled to 3334 m, which is recorded as TD for the well. At this depth the well kicked and the mud density was increased from 12.3 ppg to 12.8 ppg. While circulating, the hole gave up mud and sloughing finally caused the pipe to stick. After having backed off the drill pipe and displaced the hole with 14.0 ppg mud, a high pressure was observed on the drill pipe and the mud system density was increased to 14.3 ppg. Several mud conditioning operations were necessary until the well seemed dead. After recovering 2650 m of drill pipe out of the hole the well was plugged from 2657 m to 2469 m and displaced with 14.7 ppg mud. A second sidetracked hole was then drilled from 2538 m to 3316 m where the final logs were run. The operations were also delayed significantly by severe weather conditions in December and January. The well was drilled with seawater and high viscosity pills down to 1166 m, and with a saturated salt water mud from 1166 m to TD. Below 1920 m the mud contained from 2 - 6 % oil.

Both objective formations were encountered. However, both were thinner than expected and no hydrocarbon bearing sections were encountered. Only very few, spotted shows were reported from the well: Two shows in Late Cretaceous chalk (at 2770 m and 2828.5 m) and in the Triassic Gassum Formation sand at 3283 - 3316 m. The sand had good porosity and flowed water at high rates when tested.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 5 February 1969 as a dry well.

TESTING

Four drill stem tests were made in well 7/8-1, in the sidetracked hole at. The formation tests produced no oil or gas. The deepest test, DST 1 at 3230 - 3316 m in the Bryne and Gassum Formations flowed water at a rate of 5000 BPD (795 Sm3/day). DST 2 was conducted in Danian chalk at 2679 - 2702 m and gave no formation fluid to surface, but 3.6 m3 of water was reversed out. DST 3 (2529 - 2543 m) and DST 4 (2489 - 2507 m) in Late Paleocene gave only small quantities of reversed-out mud-cut water.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7/8-1