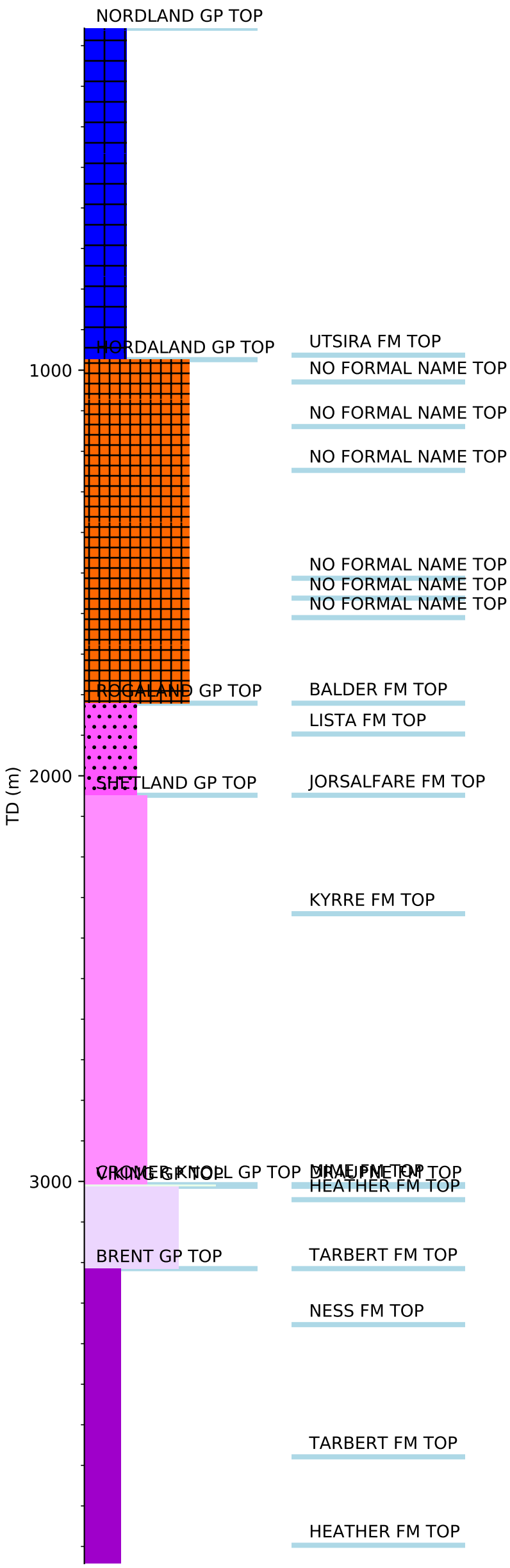

Wellbore History

GENERAL

Well 34/10-33 B is a sidetrack from the vertical appraisal well 34/10-33 on the Gullfaks South structure. It was the first horizontal well ever drilled on the Norwegian continental shelf. The main purpose of the well was to perform a long period test from a horizontal well through the upper part of the Brent Group. The well should provide important production data and the results from the well should be used to calibrate the simulation model for the reservoir and also to update the geological model for this part of the Brent Group.

OPERATIONS AND RESULTS

Appraisal well was sidetracked 27 April 1989 from the vertical at 1840 m, just below the 13 3/8" casing shoe. The well was drilled with the semi-submersible installation Deepsea Bergen to TD at 3942 m in the Late Jurassic Heather Formation. The well bore was drilled with gel/lignosulphonate mud from kick-off to 1864 m and with Interdrill NT oil based mud from 1864 m to TD. The hole was approximately horizontal in the interval 3670 - 3942 m. During setting of the 7" liner for testing of the hydrocarbon zone, the pipe got stuck and broke between the extension pipe and drill string. Fishing was unsuccessful, and the planned test was therefore not possible. Plugging was performed, and Statoil informed NPD and the partners about the alternatives for future operations. After evaluation of FMT data, it was decided to go for a new sidetrack, 34/10-33 C.

The formation tops came in close to the prognosis. The Brent Group, top Tarbert Formation was encountered at 3215 m. Sandstones of the Brent Group contained oil and gas. Due to lateral pressure barriers the Tarbert Formation proved to be water bearing in the horizontal part of the well bore, although good oil shows were described on cores and well site samples up to 3816 m.

Three cores were cut in the intervals 3742 - 3751 m, 3785 - 3790 m, and 3850.5 - 3860 m in the Tarbert Formation. Two runs with the FMT tool on drill string was performed in the horizontal part of the well. In addition, five tests behind the 9 5/8" casing was performed with CHFT (Cased Hole Formation Tester). One segregated fluid sample was taken with FMT at 3892 m (1 litre water and 8 litres oil/filtrate). Two segregated fluid samples were taken with CHFT at 3299.5 m (3.2 Sm3 gas, 0.9 litre fluid) and at 3335.0 m (2.4 Sm3 gas and 1.1 litre fluid).

The well was plugged back and abandoned on 10 July 1989 for the sidetrack 34/10-33 C.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/10-33 B