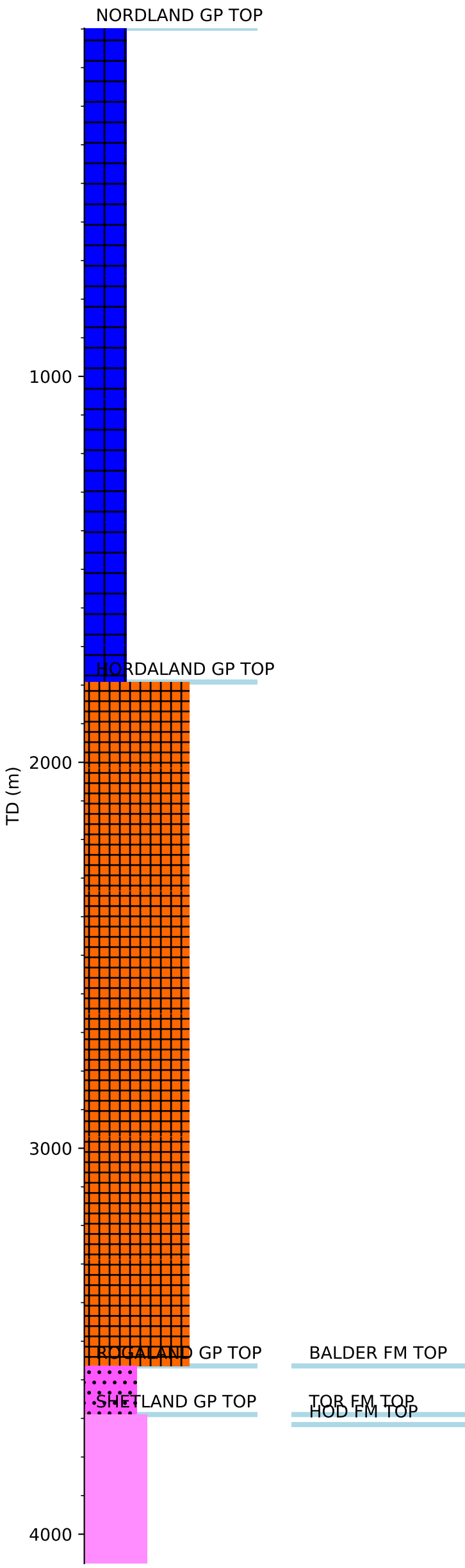
Groups

Formation Tops



Wellbore History

GENERAL

Well 2/11-6 S was drilled on the Lindesnes Ridge in the southern North Sea. The objective was to appraise the Hod discovery made by well 2/11-2 in 1974 (Hod West) and appraisal well 2/11-3 in 1977 (Hod East). The Hod structure is oil-bearing in Late Cretaceous chalks, the Hod and Tor formations. Well 2/11-6 S targeted the Hod East structure.

OPERATIONS AND RESULTS

Appraisal well 2/11-6 S was the first well to be drilled on a subsea template which was laid by the semi-submersible installation Sedco 703. It was then drilled with Sedco 703 through slot number W7 of the twelve slot templates, to TD at 3970 m (2905 m TVD) where the pipe got stuck. The pipe was shot off with top of the fish at 3669 m and a technical sidetrack 2/11-6 ST1 was kicked off from 3626 m. The sidetrack was drilled to the final TD at 4076 m (2980 m TVD). The initial well bore was drilled with seawater and hi-vis sweeps down to 1460 m, with Vertoil oil based mud from 1460 m to 3601 m, and with Oilfaze oil based mud from 3601 m to 3970 m. The 2/11-6 ST1 sidetrack was drilled with Vertoil oil based mud from kick-off to TD.

Well 2/11-6 drilled a nearly complete Tertiary section and penetrated top chalk at 3690 m (2732 m TVD). The sidetrack penetrated top of the chalk group at 3685 m (2729 m) with a slightly lower angle (50 deg) than in the initial well bore (55 deg). The chalk stratigraphy in the two well bores was very similar apart from the angle/depth shift. The well tested oil in the Tor / upper Hod formations and in the lower Hod Formation.

Seven conventional cores were cut from 3693 to 3741 m in the initial well bore before side tracking. The cores were cut in the Late Cretaceous Chalk. The total recovery was 34 m (71%). Due to the fish left in the hole no logs were run below 3790 m in the initial well bore. Logs were run to TD in the sidetrack, including the RFT tool, but no fluid samples were taken.

The well was suspended on 25 February 1982 as an oil appraisal well.

TESTING

Two Drill Stem Tests were performed.

DST 1 tested the interval 3875 - 3900 m (2851.7 - 2867.8 m TVD) in the Hod Formation. It produced 39650 Sm3 gas and 355 Sm3 oil /day through a 24/64" choke. The GOR was 108 Sm3/Sm3.

DST 2 tested the interval 3685 - 3735 m (2729.7 - 2761.8 m TVD) in the Tor Formation and the upper part of the Hod Formation. It produced 93450 Sm3 gas and 922 Sm3 oil /day through a 48/64" choke. The GOR was 101 Sm3/Sm3, the oil density was 0.871 g/cm3, and the gas gravity was 0.71 (air = 1). The down hole temperature, measured at 3609 m, was 104.4 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/11-6 S