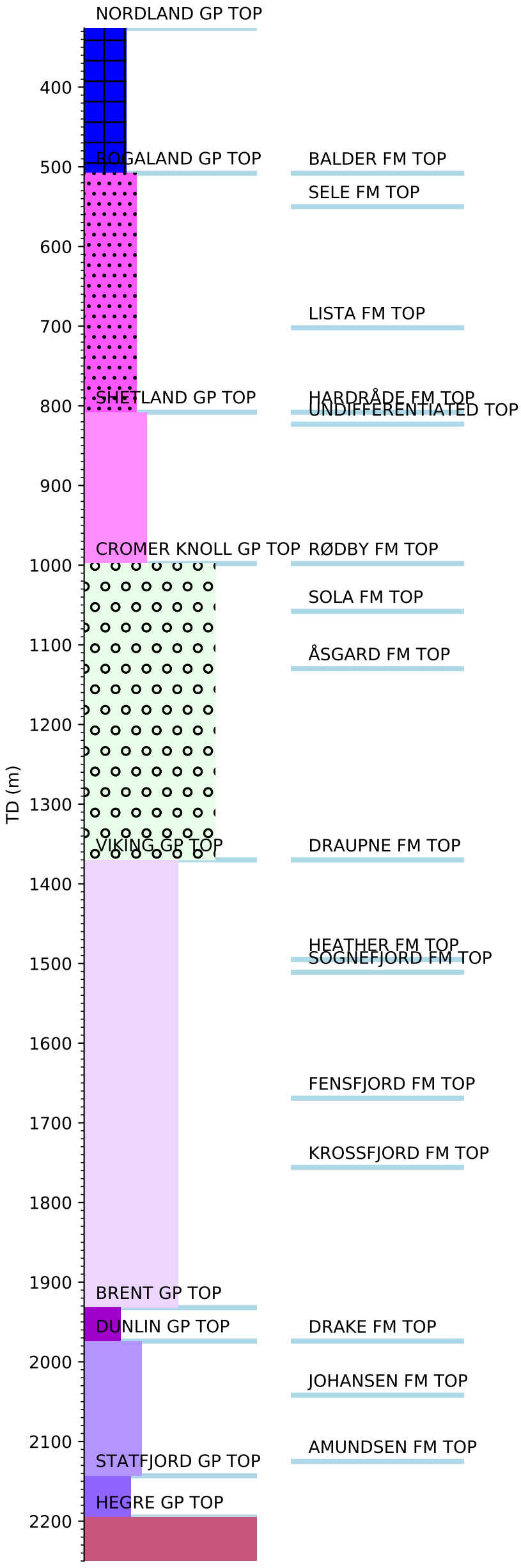
Groups

Formation Tops



Wellbore History

GENERAL

The primary objective of the wildcat 31/6-3 was to assess possible hydrocarbon accumulations in the sands and sandstones of the Late Jurassic Sognefjord Formation. The target was prospect C, a structural trap in the southeastern corner of block 31/6 extending into the adjacent blocks 31/9, 32/4 and 32/7. The well was located on the apex of prospect C. The secondary objective of the well was to obtain Sedimentological data for the Sognefjord Formation sandstones in the well location. The well was planned to reach total depth at ca 2200 m, approximately 100 m into the Triassic.

OPERATIONS AND RESULTS

The well was spudded with the semi-submersible installation Nortrym on 1 November 1983. Repositioning of the rig had to be done due to anchoring problems. At 1950 m the drill string was hung off. Problems when attempting to retrieve the drill string resulted in pulling of BOP. When running in hole after 7 days, 10 m of fill was found. No other major problems occurred during drilling and the well reached planned TD at 2250 m in the Triassic Hegre Group. The well was drilled with seawater and hi-vis pills down to 618 m and with KCl/Polymer mud from 618 m to TD.

The well encountered water-bearing sandstones in the Late/Middle Jurassic Sognefjord Formation as well as in the lower lying sandstones. No oil shows were noted on cores, sidewall cores or cuttings in any section of the well. Gas readings were low or nil throughout except for a 2.6% methane reading in a shallow sand unit at 414 m. The Sognefjord Formation sandstones (1511-1647 m) are very fine to fine, occasionally medium grained, micaceous, occasionally carbonaceous and slightly argillaceous. In places the sandstones grade into siltstones. They are well to moderately sorted and have fair visible porosity. The underlying Sognefjord, Fensfjord, and Krossfjord Formations (1647-1931.5m) are dominated by fine to medium, locally very fine or coarse grained sandstones which are often calcite cemented and have a fair visible porosity. Occasional interbeds of siltstone are also present together with some stringers of limestone, in the upper part yellow brown and very hard, becoming light grey and softer further down. The log evaluation gave a net sand thickness of 382,75 m out of a gross thickness of 420,5 m for the interval (1511 m to 1931.5 m) with an average porosity of 21.0% and an average water saturation of 96.1% (cut-off values used in the calculations were: 0<0,12, VSH>0,40). Eighteen FMT pressure test were performed over the interval 1513,5 m to 2146 m. From the pressure tests a water gradient of 0.1012 bar/m (1.033 g/cc) was calculated. A total of twelve cores were cut in the well. The cores recovered most of the Heather and Sognefjord Formations, and 25 m from the upper part of Fensfjord Formatio. No fluid samples were taken in the well.

The well was permanently abandoned as a dry well on 26 December 1983.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 31/6-3