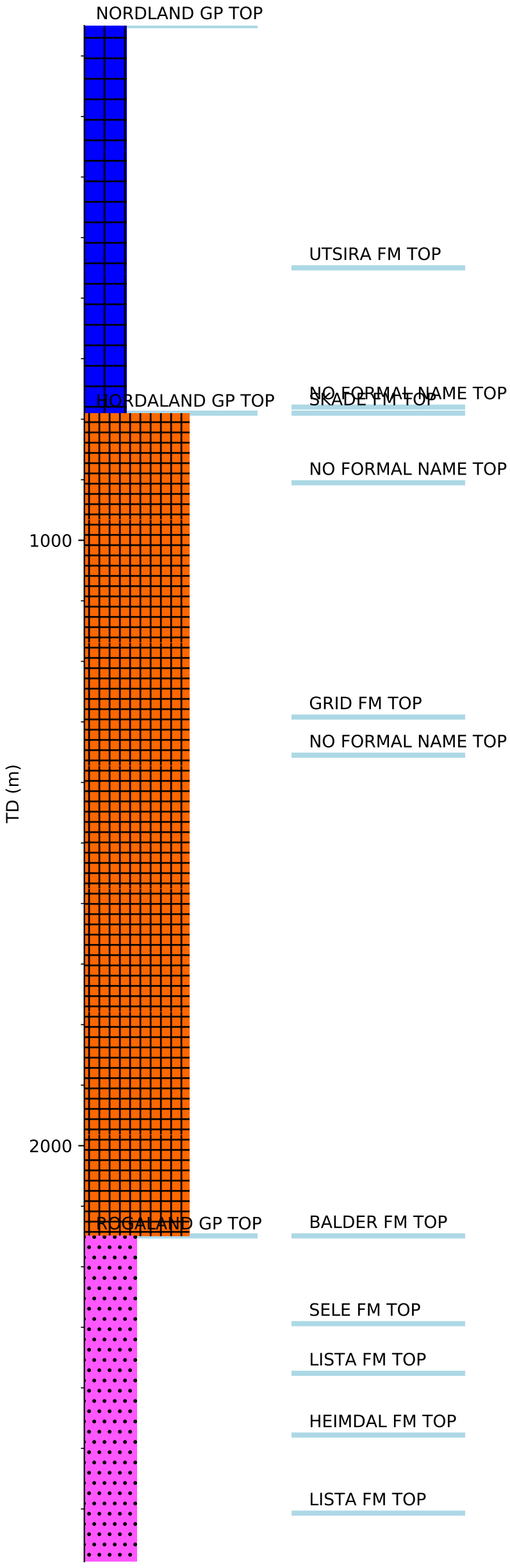
Groups

Formation Tops



Wellbore History

GENERAL

Well 25/8-9 is located East-Northeast of the Jotun Field. The two main objectives for drilling well 25/8-9 were to test the hydrocarbon potential of Early Palaeocene Heimdal Formation sandstones (Krap prospect) and secondly sandstones of the Middle Jurassic Hugin Formation. The well found oil in the Early Heimdal Formation and it was decided to sidetrack (25/8-9 A) to appraise and test the hydrocarbon potential in this discovery.

OPERATIONS AND RESULTS

Exploration well 25/8-9 was spudded with the semi-submersible installation "Byford Dolphin" on 5 January 1997 and drilled to TD at 2548 m in the Early Jurassic Amundsen Formation. The well was drilled with seawater and pre-hydrated bentonite sweeps down to 1110 m and with "Ancovert" oil based mud from 1110 m to TD.& No shallow gas or boulder beds were encountered in the uppermost well section. Well 25/8-9 penetrated mainly clays and claystones in the Nordland, Hordaland, and Rogaland groups with both the Utsira (694 m to 905 m) and Grid (1300.5 m to1345.0 m) Formation sandstones being present. Interbedded shales and thin Heimdal Formation sands were encountered between 2096 and 2189 m and hydrocarbons were found present in the uppermost reservoir section, however reservoir quality proved very poor. A FWL/OWC was not possible to define either from MDT (pressure) or logs, but an ODT at 2069 m TVD SS was established. Top Ty Formation was reached at 2228 m, consisting of upper clean sand divided by a shaly unit from a lower clean sandstone divided by a thin shale bed. It continued down to top Shetland Group at 2323 m. No hydrocarbons were found in the Ty Formation. The Shetland Group consisted mainly of chalk with the Cromer Knoll Group consisting of limestones interbedded with claystones and marls.

The Hugin Formation sandstones came in at 2432 m and were found to be water bearing. One core totalling 27 metres was cut in the interval 2098 m to 2126 m in the Heimdal Formation. Two cores totalling 50 metres were cut from 2440 m to 2490 m in the Hugin and Sleipner Formations, showing excellent reservoir parameters. Two MDT fluid samples were taken in the Heimdal Formation at 2097.9 m (oil) and 2110.8 m (water). PVT analysis showed the fluid was 99% formation oil and 1% oil phase filtrate in the oil sample. It was impossible to keep sample pressure above 2300 PSI due to tight formation. Pressure increased very slowly after chamber was filled.

After plugging back to 1107 m the geological sidetrack, well 25/8-9A, commenced on 29 January 1997. The sidetrack was kicked off at 1122 m and drilled to a total depth of 2687 m (2223 m TVD RKB) as prognosed, 49 metres (true vertical thickness) into sediments of the Late Paleocene Lower Lista Formation. The sidetrack was drilled oil-based ("ANCOVERT") from kick off to TD. The well penetrated mainly clays and claystones in the Hordaland and Rogaland groups with the Grid Formation sandstones being present from 1292 m to 1355.0 m. Interbedded shales and thin Heimdal Formation sands were encountered between 2478.0 m and 2607 m. Hydrocarbons (oil) were found present in the uppermost reservoir section, however, reservoir quality proved very poor. Two cores totalling 53.8 metres were cut in the interval 2495 m to 2551 m in the Heimdal Formation. Two MDT fluid samples were taken in the Heimdal Formation at 2492.1 m (oil) and 2508.3 m (water). Laboratory analysis indicated 20 - 25 % mud filtrate in the oil sample. Again, as in the primary wellbore, a FWL/OWC was not possible to define due to high shale/calcification content and tight formation. In this wellbore ODT was established at 2078 m TVD SS. Due to low productivity none of the wellbores were drill stem tested. Wellbore 25/8-9 was permanently plugged and abandoned as an oil discovery on 14 February 1997.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/8-9 A