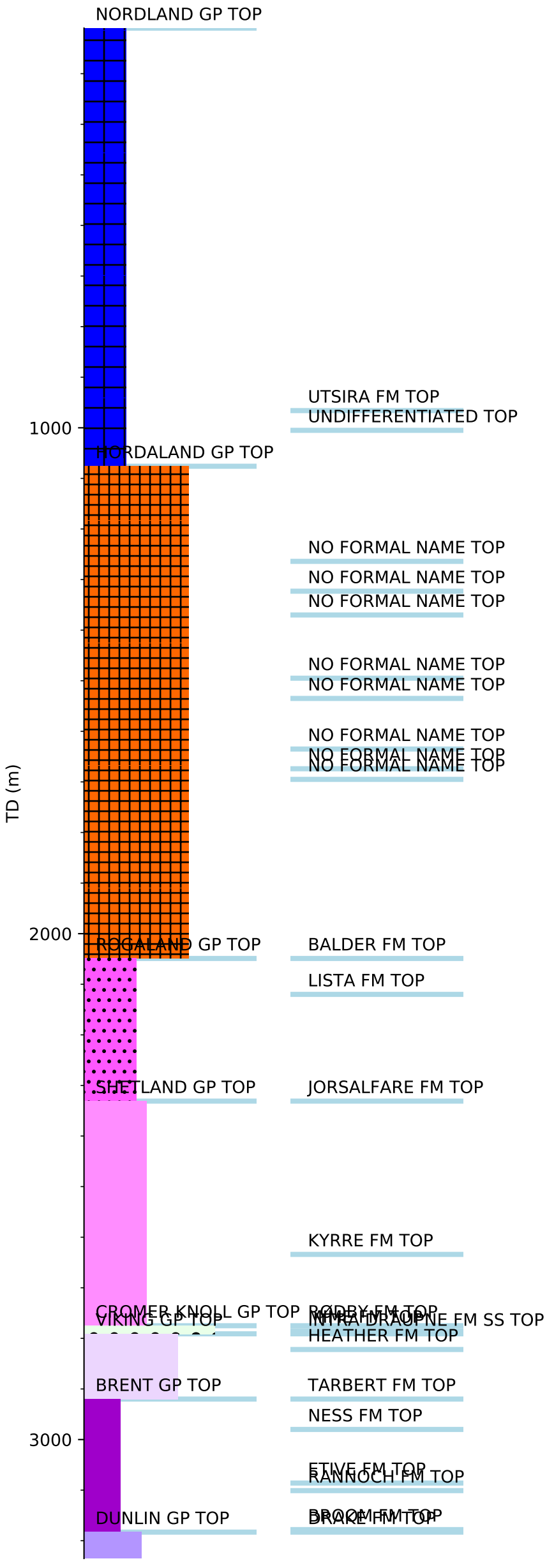
Groups

Formation Tops



Wellbore History

GENERAL

Well 34/7-25 S is located near the southern extension of the Tordis field and North of the Gullfaks field in the Tampen area in the Northern North Sea. The main objective of the well was to test the presence of sand and hydrocarbon in a Late Jurassic prospect (the Southern Triangle Upper Jurassic (STUJ) prospect). The STUJ prospect was defined between Base Cretaceous Unconformity (BCU) and a Base Draupne reflector. Secondary objectives were to obtain pressure measurements in the Brent Group, test presence of sand and hydrocarbons in the Cretaceous and in the Paleocene and prove migration route.

OPERATIONS AND RESULTS

Well 34/7-25 S was spudded with the semi-submersible installation Deepsea Bergen on 31 July 1996 and drilled to TD at 3235 m (2596 m TVD) in the Early Jurassic Drake Formation. No significant problems occurred during operations. The well was drilled with spud mud down to 1271 m and with oil based mud (Anco Vert) from 1271 m to TD. No shallow gas was encountered.

Well 34/7-25 S penetrated several sands in the interval from 1250 m to 1700 m within the Hordaland Group. Weak shows were described in the interval 2275 to 2295 m in the Lista Formation. The shows had no odour and no stain in the description, due to oil based mud. The Cretaceous section had only traces of thin sandstone beds in the Shetland Group. The well successfully encountered 27.5 m TVD oil bearing sandstones belonging to the Draupne Formation, with top at 2791 m (2193 m TVD). No OWC was proven. The uppermost 2 m was cemented and had the same log response as the limestone of the Cromer Knoll Group. The next 21 m (2195 - 2216 TVD) showed excellent reservoir properties with porosity around 30% and permeability between 6 and 7 Darcy. This upper massive sandstone was bioturbated and showed a coarsening up character. The lower part of the Draupne Formation comprised sandstones interbedded with more silty parts. This part of the formation had a very high gamma response due to a high content of uranium isotopes. The sand beds in this section had oil shows but petrophysical interpretation concluded that it had no HC saturation. The top Heather Formation was penetrated at 2822 m (2220.5 m TVD). Between the sandy Draupne Formation and the shaly Heather Formation there was an unconformity of Callovian - Volgian age. Pressure measurements in the Late Jurassic showed communication with the Tordis field.

Two cores were cut at 2805 to 2860.2 m within the Viking Group with close to 100 % overall recovery. No wire line fluid samples were taken since the main zone was going to be tested.

The well was permanently abandoned on 14 September 1996 as an oil discovery.

TESTING

The interval 2791 - 2816 m (2193.0 - 2214.6 m TVD) in the Intra Draupne Formation sand was perforated and tested. After the clean-up flow and build-up the well was opened for the 48 hour main flow period. The final flow rate was 1045 Sm3 oil and 102200 Sm3 gas/day through a 15.9 mm choke at a wellhead pressure of 124 bar and a GOR of 94 Sm3/m3 at separator conditions. The oil density was 0.844 g/cm3, and the gas gravity was 0.72 (air = 1). The maximum bottom hole temperature in the test was measured to 82 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/7-25 S