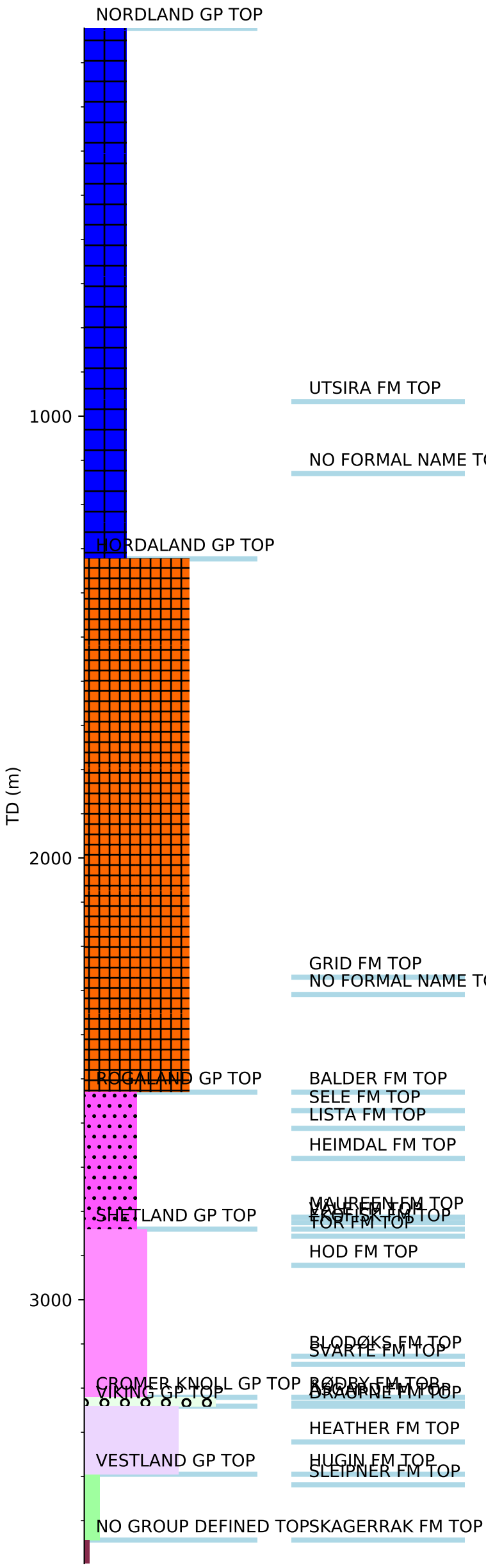
Groups

Formation Tops



Wellbore History

GENERAL

Exploration well 15/12-11 S was a joint operation of Production Licence 038 and 116. It was drilled in the northwestern area of block 15/12 and north of the Varg Field. Well 15/12-1 nearby to the northwest had shows in the Middle Jurassic Hugin Formation, but this was inconclusive with respect to moveable hydrocarbons. Block 15/12 is structurally located in the junction between the Jµren High to the southeast, the Ling Depression to the east, the Sleipner Terrace towards the north and the Witch Ground Graben to the west. The prospect was defined as a multi-target structure, situated on a rotated fault block. Primary targets were Tertiary sandstones of the Heimdal Formation in a genuine closure, in addition to sandstones of the Middle Jurassic Hugin Formation. Secondary high-risk targets were sandstones of Eocene, Late Jurassic and Triassic age.

OPERATIONS AND RESULTS

Exploration well 15/12-11 S was spudded with the semi-submersible drilling installation "Deepsea Bergen" on 10 April 1997 and drilled to TD at 3597 m (3464 m TVD RKB) in sandstones of the Triassic Skagerrak Formation. The well was drilled with seawater and hi-vis pills down to 407 m and with KCl / polymer / Glycol (ANCO 208) mud from 407 m to TD.

Sandstone was encountered in all of the possible prospective levels except in the Late Jurassic. The two primary targets however, were more silt/shale dominated than expected. The upper part of the Heimdal Formation, penetrated at 2680 m had a lower reservoir quality than expected. These distal parts of the formation were relatively shaly/silty. More massive and porous sand of the Heimdal Formation was penetrated deeper, but too deep with respect to a Maureen Field oil spill. The lower reservoir, the Hugin Formation was penetrated at 3395 m, and was slightly thicker than prognosed. The only indications of hydrocarbons observed during drilling of 15/12-11 S were weak shows in the Hegre and Vestland Groups and a very weak cut fluorescence on the core from the Heimdal Formation. The gas values stayed constantly low during drilling through the reservoirs. Some gas peaks were measured while drilling the Hugin Formation, but these were associated closely to coal layers. Both the Heimdal and Hugin Formations were proved water bearing through wire line logging.

A total of two cores were cut. The first coring recovered only 0.5 m from the Heimdal Formation (2724 m to 2724.5 m). The second coring recovered 18.6 m from the Hugin Formation (3399.4 m to 3418.0 m).

Pressure tests were carried out in the Middle Jurassic Hugin and Sleipner formations and in the Triassic Skagerrak Formation. No fluid sample was taken.

The well was permanently abandoned as a dry well with weak shows on 19 May 1997.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 15/12-11 S