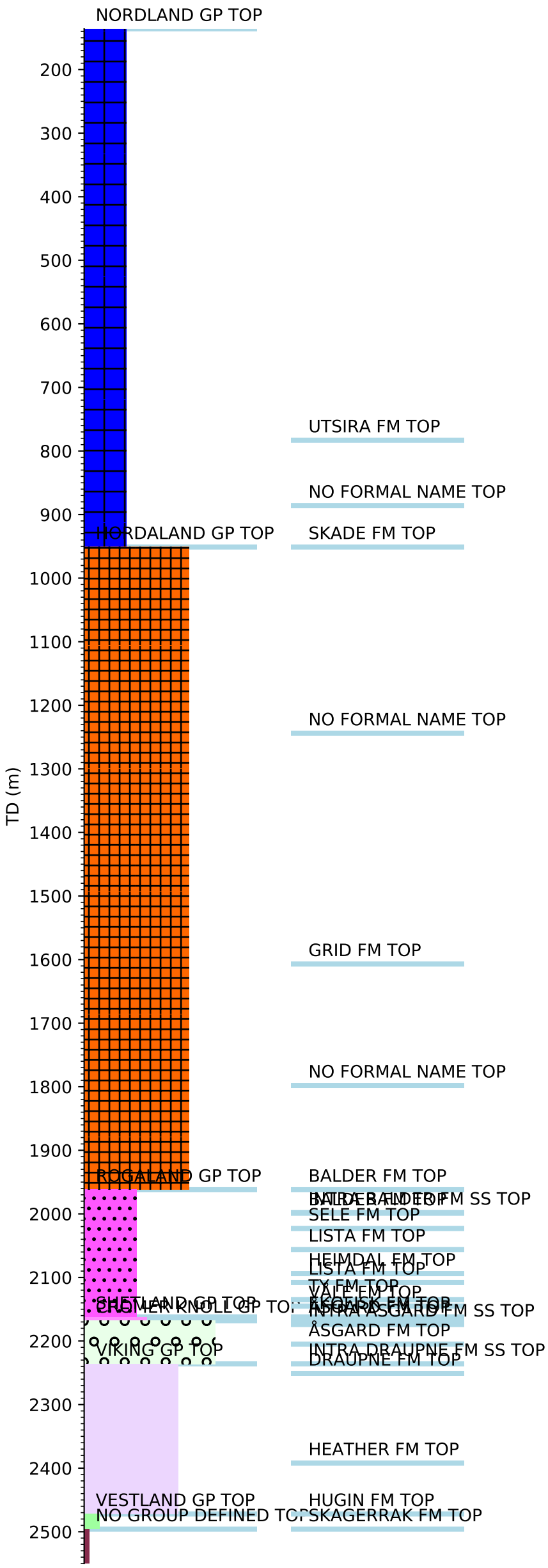

Wellbore History

GENERAL

Well 16/1-14 was drilled to explore the Jurassic Apollo Prospect situated south of the Draupne Discovery and down flank of the Luno Discovery. The well is located on the eastern margin of the South Viking Graben in the North Sea. The structure is situated between eastern part of the Gudrun Terrace and the western flank of the Utsira High. The primary objective was to test the Vestland Group, Hugin Formation sands and to verify communication with the 16/1-9 Draupne Discovery. A thickening and improving reservoir quality in the Hugin Formation, when compared to well 16/1-9 was expected towards the Apollo. Prospect.

OPERATIONS AND RESULTS

Well 16/1-14 was drilled with the semi-submersible installation Transocean Winner. First a 9 7/8" pilot hole was drilled to 606 m. This hole was abandoned due to shallow gas and it was named 16/1-U-6. Wildcat well 16/1-14 was spudded ca 15 m west of 16/1-U-6 on 26 September 2010 and drilled to TD at 2550 m in Late Triassic sediments of the Skagerrak Formation. As the Cretaceous to Eocene hydrocarbon bearing reservoirs were insufficiently logged and cored a sidetrack was decided. The 16/1-14 T2 sidetrack was made through a window in the 9 5/8" casing at 1800 m. The sidetrack was drilled to TD at 2295 m (2293.4 m TVD) in the Late Jurassic Draupne Formation. The well was drilled with seawater and hi-vis sweeps down to 378 m and with Glydril mud from 378 m to TD in both well tracks.

The primary objective of the well was not realised because the Hugin Formation was found to be dry. However, well 16/1-14 encountered oil in three levels, the Balder Formation, the Heimdal Formation and one in the Lower Cretaceous (Berriasian to Valangian) Åsgard Formation. Free water levels were estimated to be at 2004 m (1978 m TVD MSL) in the Paleocene (Balder-Heimdal) discovery and at 2181 m (2155 m TVD MSL) in the Lower Cretaceous Åsgard discovery. In well 16/1-14 several thin sands were encountered in the Lista Formation. The sands were oil-filled and displayed moderate properties from log analysis. However, no fluid gradients could be acquired from pressure-points. In the sidetrack, 16/1-14 T2, the corresponding sand intervals were found to be missing or to be thinner. In the Heimdal Formation 6.5 to 7 m net sand of good quality was interpreted from the logs. Oil was confirmed by sampling. In the Åsgard Formation, a 9 m interval of very good sand was oil filled. Mobilities derived from the MDT results showed up to 3500 mD/cp. A water filled Intra Draupne Formation sandstone was found 16 m thick in the primary well bore, but was only 4 m thick in the sidetrack, indicating a pinch-out of this sand towards the south-west. The primary target Hugin Formation came in at 2472 m; deeper than prognosed and water bearing. However, oil shows were recorded from 2472 m to 2495 m. Weak oil shows were also recorded in intervals in siltstones and claystones of the Draupne and Heather formations.

Three conventional cores were cut in the main wellbore from 2373 m to 2454.6 m, and four additional cores were cut in the sidetrack from 2052 m to 2101 m and from 2167 m to 2221.46 m. In 16/1-14 fluid scanning (LFA) confirmed oil at 2063.3 m, and at 2098.1 m, where 3 oil samples were acquired. A further MDT water sample was acquired at 2491.5 m. In the sidetrack MDT oil samples were acquired at 1998 m (Balder Formation), 2002.8 m (Balder Formation), 2102.2 m (Heimdal Member) and 2174 and 2178.8 m (Åsgard Formation). MDT water samples were acquired in the sidetrack at 2106 m (Heimdal Member) and 2188 m (Åsgard Formation).

The well was permanently abandoned on 30 November 2010 as an oil discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/1-14