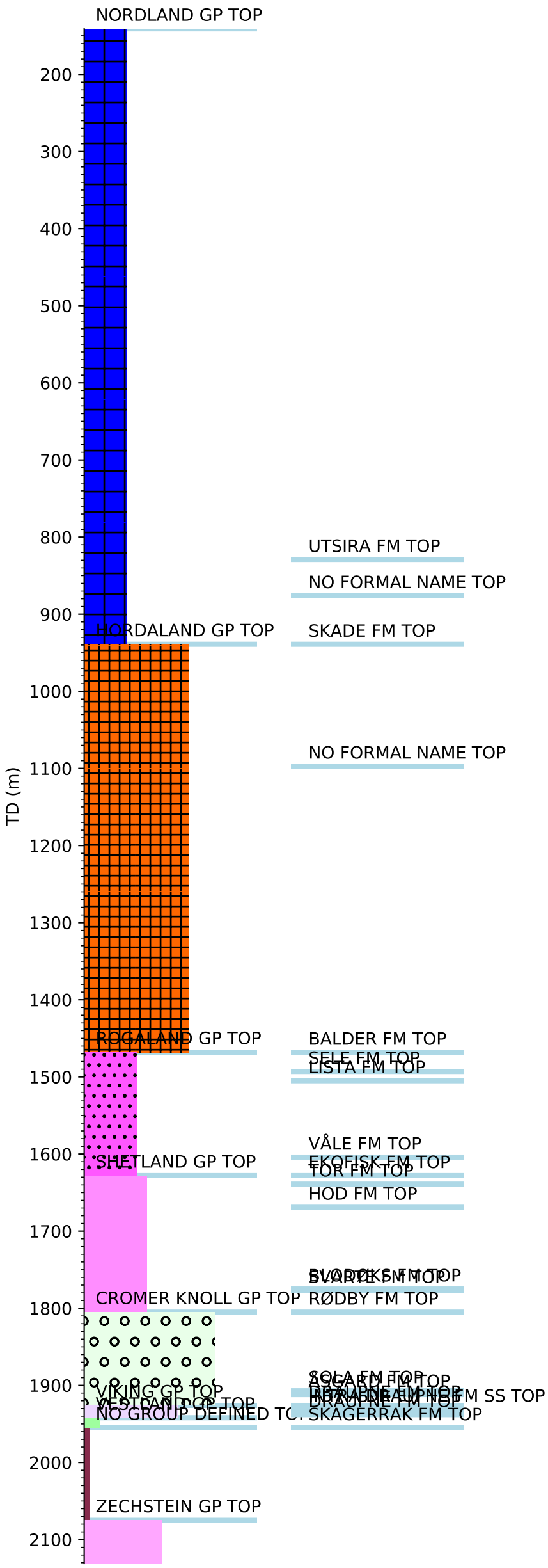
Groups

Formation Tops



Wellbore History

GENERAL

Well 16/2-6 was drilled on the Avaldsnes prospect on the Utsira High in the North Sea. The primary objective was to prove oil in Jurassic and pre-Jurassic sandstone in the Karmsund Graben. The secondary objective was to prove oil in the Paleocene Ty Formation Sandstone. Planned TD was 50 m into solid basement rock.

OPERATIONS AND RESULTS

Wildcat well 16/2-6 was spudded with the semi-submersible installation Transocean Winner on 20 July 2010 and drilled to TD at 2131 m. The well encountered severe loss problems in the Zechstein Group and a technical sidetrack was drilled (well 16/2-6 T2) through the reservoir. The sidetrack was kicked off from 1830 m and drilled to 2131 m where severe losses again were experienced and the well was completed without reaching its planned TD. All wire line logging and a DST were performed in the sidetrack. The well was drilled with seawater and hi-vis pills down to 748 m and with Glydril WBM (3- 5% glycol) from 748 m to TD.

No Ty Formation sand was seen in the well. Top Viking Group, Draupne Formation was encountered at 1925.5 m (1927.5 m in sidetrack) and top of the Draupne reservoir sand came in at 1931 m (1931 m in sidetrack). The top of the reservoir consists of an 8 m thick, coarse to very coarse, sand. Underlying this is finer grained sand laminated with shale. A reworked calcareous formation lies on top of the Triassic. Pressure points, MDT sampling and DST results confirmed the presence of oil in the reservoir with an oil-water contact at 1948.6 m. Residual oil was found down to 1966 m. In addition to the main reservoir section, oil was sampled in calcareous slumps with vuggy porosity between the Jurassic sandstone and the Triassic. Apart from this there were no shows of hydrocarbons reported elsewhere in the well bores.

Three conventional cores were cut from 5 m into the Draupne sandstone, through the Middle Jurassic Vestland Group down to 1961.5 m in the Late Triassic Skagerrak Formation. MDT fluid samples were taken at 1933.2 m (oil), 1936.0 m (oil), 1945.2 m (oil), 1948 m (oil and water), 1953 m (water), and at 1962.5 m (water and oil).

The well was permanently abandoned on 20 September 2010 on as an oil discovery.

TESTING

A drill stem test was performed from the interval 1931.8 m to 1938.1 m. The test flowed 786 Sm3 oil and 18700 Sm3 through a 52/64" choke. At single stage separation The GOR was 39.6 Sm3/Sm3, the oil density was 0.891 g/cm3, and the gas gravity was 1.012 (air = 1). The maximum DST temperature was 82.7 deg C. The interpretation of the DST indicated a continuous reservoir without barriers in a radius of 2-3 km with extremely good flow characteristics.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/2-6