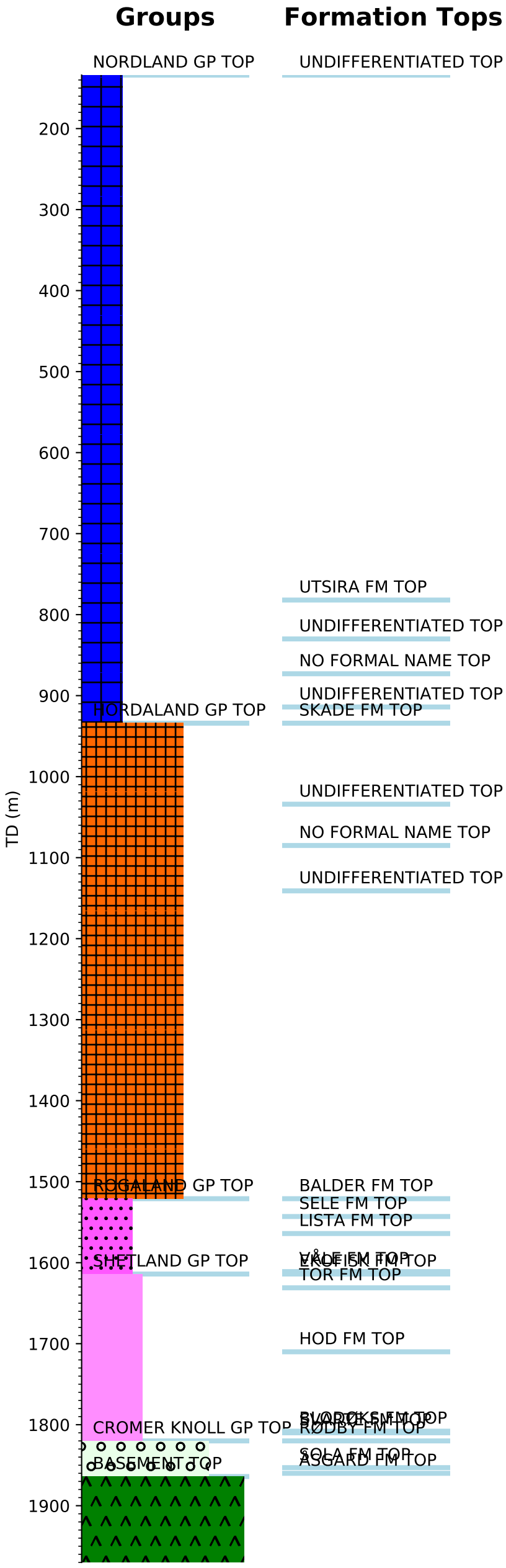

Wellbore History

GENERAL

Well 16/2-18 S was drilled on the Cliffhanger North prospect west of the Johan Sverdrup Field on the Utsira High in the North Sea. The main objective was to prove hydrocarbons in the Late Jurassic intra-Draupne Formation sandstones and to verify the reservoir quality, fluid property, lateral extension and possible communication with the Johan Sverdrup discovery. The secondary objective of the well was to explore the hydrocarbon potential and reservoir properties in fractured and weathered granitic Basement.

OPERATIONS AND RESULTS

Wildcat well 16/2-18 S was spudded with the semi-submersible installation Ocean Vanguard on 5 July 2013 and drilled to TD at 1970 m in fractured granitic basement rock. The well was drilled with a slightly deviated well path with the purpose of avoiding a prognosed shallow gas anomaly. A 9 7/8" pilot hole was drilled from 201 m to 455 m to check for shallow gas. No shallow gas was seen. No significant problem was encountered in the operations. The well was drilled with seawater and hi-vis sweeps down to 855 m and with KCl/Polymer/Glycol mud from 855 m to TD.

The Intra-Draupne Formation sandstone reservoir was not present at the well location; hence the primary objective of the well was not met. The secondary objective, however, was met by proving oil in weathered and fractured granitic Basement, which was encountered at 1864 m. An oil column of ca 15 m was estimated but no oil/water contact was established. Pressure data showed the discovery to be 2.6 bar higher and with a different oil gradient than in the Johan Sverdrup Field, and thus not in communication. However pressure and sampling data from the 16/2-4 Ragnarrok basement discovery has shown that the 16/2-18 S basement discovery is in communication, making 16/2-18 S well an appraisal of the Ragnarrok discovery. From the combined pressure data for these two wells the gas oil contact for the Ragnarrok discovery is found to be at ca 1862 m (1840 m MSL).

Shows were observed in the upper part of the Shetland Group and in the Basement. The uppermost Shetland Group (Ekofisk Formation) also had high gas readings.

An extensive sample and data acquisition programme was conducted in the upper part of the Basement. Four cores were drilled, but the first core was lost in the hole. Cores 2 - 4 recovered 19.9 m between 1855.5 m in the Åsgard Formation and 1876 m in the Basement. Three dual packer mini-DST’s were performed showing limited production properties. Fluid samples were taken at 1866.2 m (gas, oil, and mud) and 1875.1 m (oil).

The well was permanently abandoned on 8 August 2013 as an oil appraisal.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/2-18 S