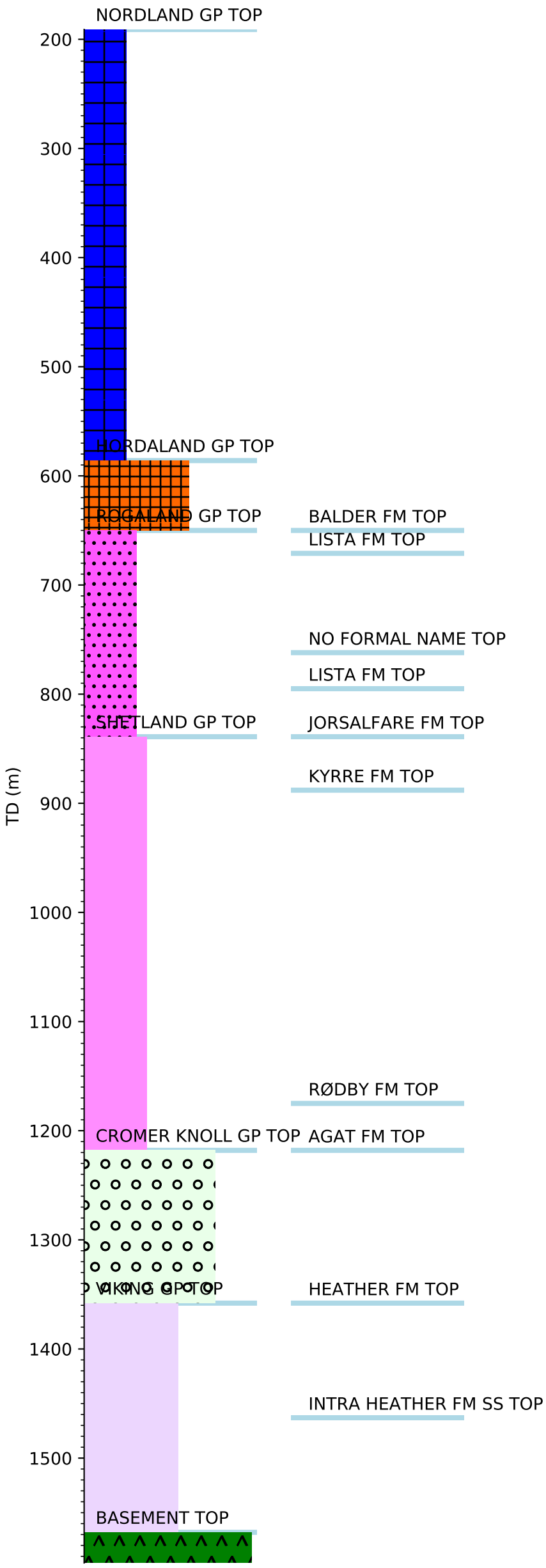

Wellbore History

GENERAL

Block 36/1 was the most northern and shoreward block to be released by the Norwegian Government at the time well 36/1-1 was drilled. The eastern boundary of the Block 36/1 is only 20 km from near-shore islands and, at the closest point, approximately 26 km from the mainland. Wildcat well 36/1-1 is located northeast of the Agat Discovery, on the eastern side of the Norwegian Trench. The main objective and target was Middle Jurassic sands.

OPERATIONS AND RESULTS

Exploratory Well 36/1-1 was spudded with the semi-submersible installation Dyvi Alpha on 9 May 1975 and drilled to a total depth of 1596 meters in metamorphic gneiss. The well was drilled without any serious drilling problems. The mud used was a water based salt-water gel /Milben mud down to 515 m, adding lignosulphonate and CMC from 515 m to TD.

Sands were encountered in the Early Cretaceous interval from 1219 m to 1359 m. The target Middle Jurassic sandstones were encountered at 1463 m and extended down to top basement at 1568 m. Coal seams were found between 1500 m to 1548 m. No hydrocarbon bearing formations were encountered in the well. Minor quantities of hydrocarbon were recorded in the Cretaceous and Middle Jurassic sections but there were no major shows. It was assumed that the structure on which 36/1-1 was drilled is not an effective trap. Possibly the shales overlying the Middle Jurassic sandstones are too poorly compacted to constitute effective seals. Also, the major easterly bounding fault may bring sands of the Cretaceous against the Middle Jurassic, thus destroying the effectiveness of the trap. One 6.1 m (80 % recovery) conventional core was cut at TD. No fluid sampling was attempted on wire line.

The well was permanently abandoned as dry on 14 June 1975.

TESTING

Two drill stem tests were conducted in the Middle Jurassic: DST 1 from 1549.6 m to 1556 m and DST 2 from 1489.6 m to 1496.6 m. No fluid reached the surface in either test. Gas samples were taken from the test string above the water cushion, which was displaced some distance upwards by inflowing mud filtrate and formation fluids. Analyses of these showed maximum 190 ppm methane in the samples from DST 1 and maximum 130 ppm methane with traces of C2+ in DST 2.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 36/1-1