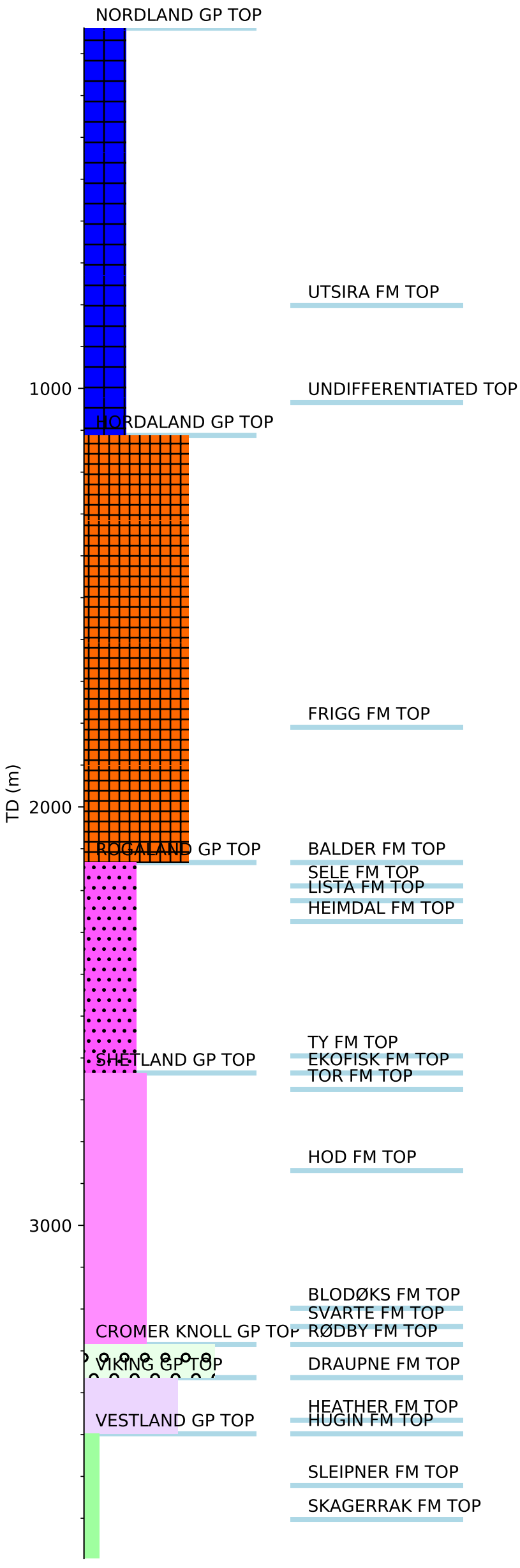
Groups

Formation Tops



Wellbore History

GENERAL

Well was drilled on the northwestern part of the Sleipner Vest structure in the Viking Graben of the North Sea. The objective was to test hydrocarbons in the “Alpha structure” of the Sleipner field. The target was Middle Jurassic sandstones.

OPERATIONS AND RESULTS

Appraisal well 15/9-3 was spudded with the semi-submersible installation Ross Rig on 17 December 1978 and drilled to TD at 3796 m in the Triassic Skagerrak Formation. Many problems were encountered in the operations. When drilling the 26" interval, the circulation was lost several times. Pumping lost circulation material pills and cement into the formation solved this. The main problem arose when drilling the 8 1/2” interval. At 3375 m on top of Upper Jurassic, an abnormally pressured impermeable zone was penetrated. Due to a series of technical problems that followed this incident, the well was finally plugged back and sidetracked from 1213 m. Furthermore, the well was drilled in the wintertime and the cold was quite severe. Because of this, the hydraulic control system for the BOP stack froze on one occasion. Functional problems with the BOP pods were experienced, consequently, the time and cost estimates, were seriously exceeded. The well was drilled with spud mud down to 402 m, with gel/lignosulphonate from 402 m to 2680 m and with gel/lignosulphonate/lignite mud from 2680 m to TD.

The Middle Jurassic Vestland Group, top Hugin Formation, was encountered at 3498 m. Well 15/9-3 proved very poor reservoir qualities in these strata and the well was hence not production tested. A cluster of RFT pressure data points suggested a light hydrocarbon gradient of 0.11 - 0.25 psi/ft. between 3600 m and 3612 m. Between 3650 m and 3682 m a good "heavier" hydrocarbon gradient of 0.35 psi/ft. was established. This indicates a hydrocarbon/water contact approximately at 3682 m. Very weak spotted shows were described over this section and down to 3709 m.

Four cores were cut from the interval 3511 to 3580 m in the Hugin Formation. RFT fluid-sampling chambers recovered six samples, all containing mud filtrate with minor amounts of gas.

The well was permanently abandoned on 3 April 1981 and was classified as dry with shows.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 15/9-3