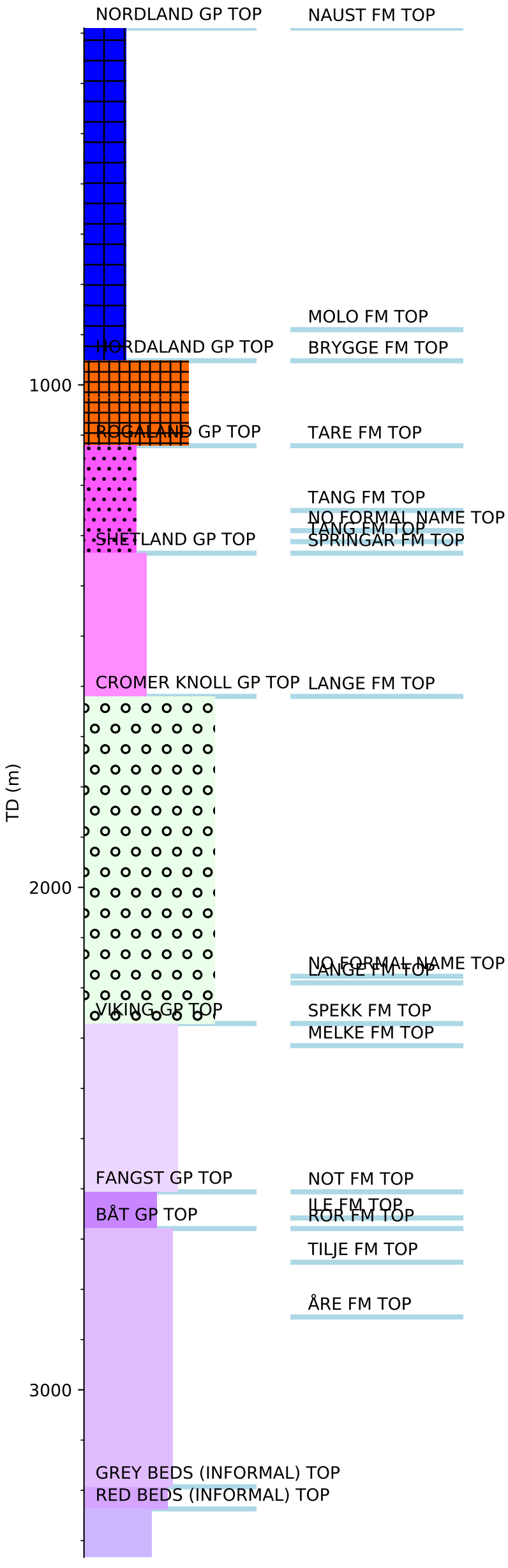

Wellbore History

GENERAL

Well 6610/7-1 is located in the Helgeland Basin outside Mid Norway and was drilled on a tilted fault block in the southeastern corner of the block. The purpose of this wildcat well was primarily to gather information about the hydrocarbon potential and stratigraphy of the Helgeland Basin. The main targets were sandstones of Middle to Lower Jurassic age.

The well is Reference Well for the Ror Formation.

OPERATIONS AND RESULTS

Wildcat well 6610/7-1 was spudded with the semi-submersible installation Nordraug on 18 April 1983 and drilled to TD at 3333 m in the Late Triassic sediments Red Beds. Operations were interrupted by a 10.5 days seamen's strike. No serious technical problems occurred during drilling. The well was drilled to 815 m using spud mud. From 815 m to 2115 m the well was drilled with gypsum/lignosulphonate mud, and from 2115 m to TD with gel/lignosulphonate/lignite mud.

The well was water bearing but hydrocarbon shows were observed on cores and cuttings in Early Jurassic sandstone beds from 2656 m to 2715 m. The Spekk Formation from 2271 m to 2315 m is a good to rich source rock with around 9 % TOC and potential for gas and oil. It is more gas-prone in the lower part. It has reached early oil window maturity in well position. The Åre Formation consists mainly of low-TOC sand with abundant seams of coals, carbargillites and organic-rich shales. The coals/carbargillites have TOC contents ranging 37 - 59 % and are quite liptinitic, containing kerogen type II/III-III with good potential for oil and gas generation locally and a rich overall potential for gas.

Four cores were cut, one from the Early Cretaceous sequence and three from the Early Jurassic sands. A segregated sample was taken at 2748 m. It contained mud filtrate.

The well was permanently abandoned on 19 June 1983 as a dry hole with oil shows in Early Jurassic sandstone.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6610/7-1