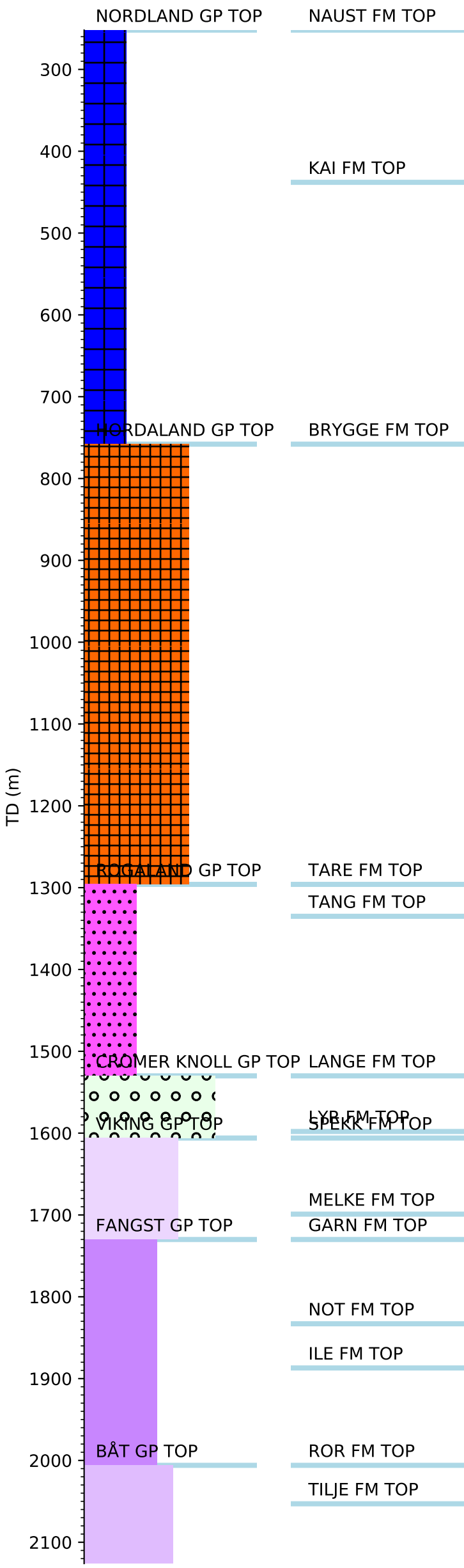

Wellbore History

GENERAL

Wildcat well 6407/9-8 was drilled on the Husmus East structure, situated east of the Draugen Field on the edge of the Trøndelag Platform on the Mid Norwegian Continental Shelf. The principal objective of the well was to test the hydrocarbon potential of the Late Jurassic Rogn Formation in a dip closure trap. Secondary objective was to test the potential for gas storage in the Rogn Formation and in the middle Jurassic Garn Formation. The well was also drilled to acquire additional stratigraphic information on the reservoir development of the Middle and Early Jurassic Ile and Tilje Formation.

OPERATIONS AND RESULTS

Well 6407/9-8 was spudded with the semi-submersible installation West Vanguard on 14 August 1992 and drilled to TD at 2126 m in the Early Jurassic Tilje Formation. Operations went without significant problems. The well was drilled with seawater and bentonite down to 1120 m, with polymer/gypsum mud from 1120 m to 1582 m, and with KCl/polymer mud from 1582 m to TD.

No potential reservoir zones were found above the Viking Group, which was penetrated from 1606.5 m to 1730 m. The Rogn Formation vas poorly developed as a thin (<1 m), well-cemented silty to very fine sandstone facies with low porosity and permeability. A well-developed Garn Formation in a sand facies vas encountered, with high porosities and permeabilities. The well vas terminated in sandstone of the Tilje Formation after penetration of Ile Formation sandstone. Both the Garn Formation and the Ile Formations appeared to be suitable for gas injection. The well was entirely water wet all through. This was evident from electrical logs, pressure gradients, and lack of shows on cores and cuttings. Post-well geochemical analyses of cores and cuttings confirmed general lack of migrated hydrocarbons. A total of seven cores were cut in the well with 105.95 m recovered. Cores 1 to 5 were cut from 1605 m to 1685 m in the Spekk and Rogn Formations. Cores 6 and 7 were cut from 1723 m to 1760.5 m in the Melke and Garn Formations. A dense FMT pressure-sampling programme confirmed a water-wet reservoir with a pressure gradient close to the theoretical gradient for the established Draugen Formation water. A number of attempts were made to take water samples at depths of 1731.5 m (Garn) and 1940 m (Ile). Some degree of filtrate contamination vas noted.

The well was classified as dry and was suspended on 23 September 1992 as a possible future development well for the Draugen Field. It was re-entered on 14 August and taken in use as a gas injector

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6407/9-8