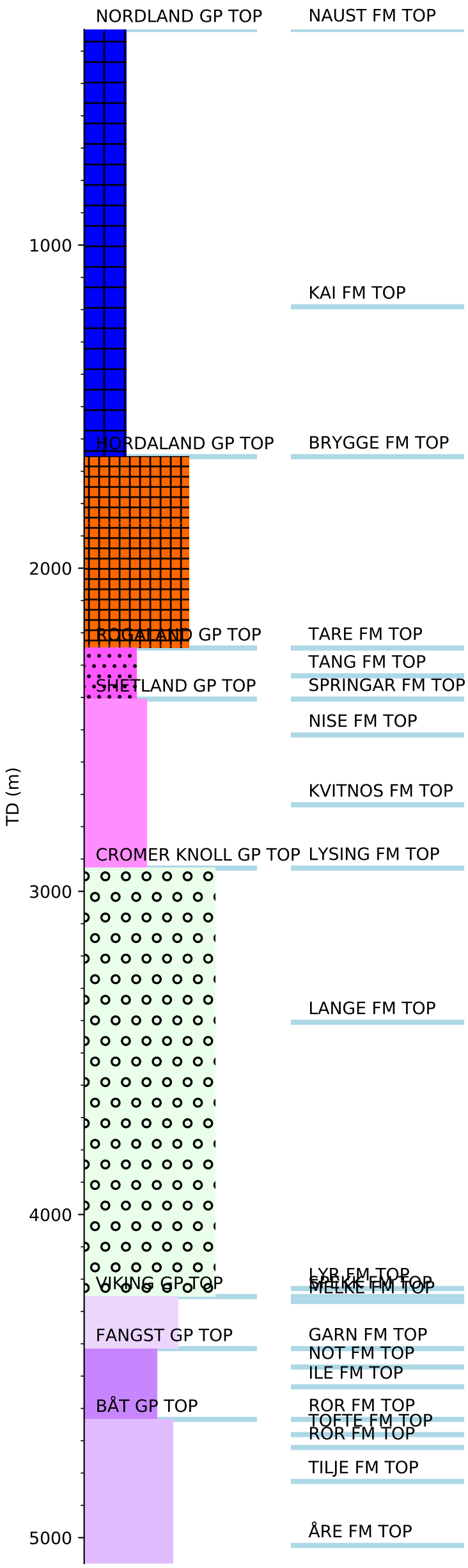

Wellbore History

GENERAL

Well 6406/9-1 is located in the southern Haltenbanken area, offshore Mid Norway. The well was drilled near the crest of the prospect structure, a rotated fault block. The primary objective of well 6406/9-1 was to test the hydrocarbon potential in the Middle to Early Jurassic reservoirs of the Garn, Ile, Ror/Tofte and Tilje Formations, and to production test possible hydrocarbon occurrences.

OPERATIONS AND RESULTS

Wildcat well 6406/9-1 was spudded with the semi-submersible installation Transocean Leader on 15 June 2004 and drilled to TD at 5080 m in Early Jurassic sediments of the Åre Formation. The well was a high temperature / high pressure well, with a formation temperature of ca 184 deg C at TD, according to DST and wire line measurements. The well was drilled with seawater and bentonite sweeps down to 1375 m, with Glydril mud from 1375 m to 2893 m, and with Paratherm oil based (paraffin base) mud from 2893 m to TD. Shallow gas was neither predicted nor encountered. Due to labour disputes and bad weather the well was not terminated until 2 June 2005.

The Jurassic Ile, Tofte, Tilje and Åre Formations were all found to be entirely gas bearing. The Garn Formation, a reservoir interval in some of the neighbouring wells, was found to be shaled out here. The presence of hydrocarbons was confirmed by RCI samples in the Ile, Tofte and Tilje. The discovery appeared to be a stacked reservoir sequence with up to 5 different compartments with small pressure differences between the formations. All reservoirs were intersected in Gas-Down-To situations. The total hydrocarbon column in-well was 492.5 m. The gas was significantly drier than expected when compared to other accumulations in the area. Reservoir quality was very variable with large sections of low/medium permeability, but also two distinct sands of exceedingly high quality.

A total of four cores were taken from the Early and Middle Jurassic intervals. The first core was taken from the upper part of the Ile Formation and is 13.44 m long. Operations were cut short because of jamming of the core, possibly due to junk in the hole. The second core was taken from the lower part of the Ile Formation and is 27.7 m long. A 26 m core was taken from the Tofte Formation as well as a 28.47 m core from the Lower Ror Formation. The RCI fluid samples sampled gas from four depths: 4625.5 m (Ile), 4682.1 m (Tofte), 4908.5 m (upper Tilje), and 5021.9 m (Tilje).

The well was permanently abandoned on 2 June 2005 as a gas discovery.

TESTING

Two full well tests were performed aimed at the most promising Formations: the lower Tilje and the lower Ile. The perforation intervals were limited and selected to include the two high quality sands.

DST 1 tested the interval 4989.2 - 5029.75 m in the lower Tilje Formation. It produced gas at a rate of 1410000 Sm3/day and with a condensate/gas ratio of less than 1.0E-6 Sm3/Sm3 (GOR > 1000000 Sm3/Sm3). The CO2 content was 7-8% (vol) and the H2S content was 20 - 30 ppm on average. DST 2 tested the interval 4619 - 4633.7 m in the lower Ile Formation. It produced gas at a rate of 770000 Sm3/day and with a condensate/gas ratio of ca 25E-6 Sm3/Sm3 (GOR ca 40000 Sm3/Sm3). The CO2 content was 7-8% (vol), and the H2S content was 15-18 ppm on average.

Maximum temperatures recorded were 182 and 172 deg C in DST 1 and DST 2, respectively.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6406/9-1