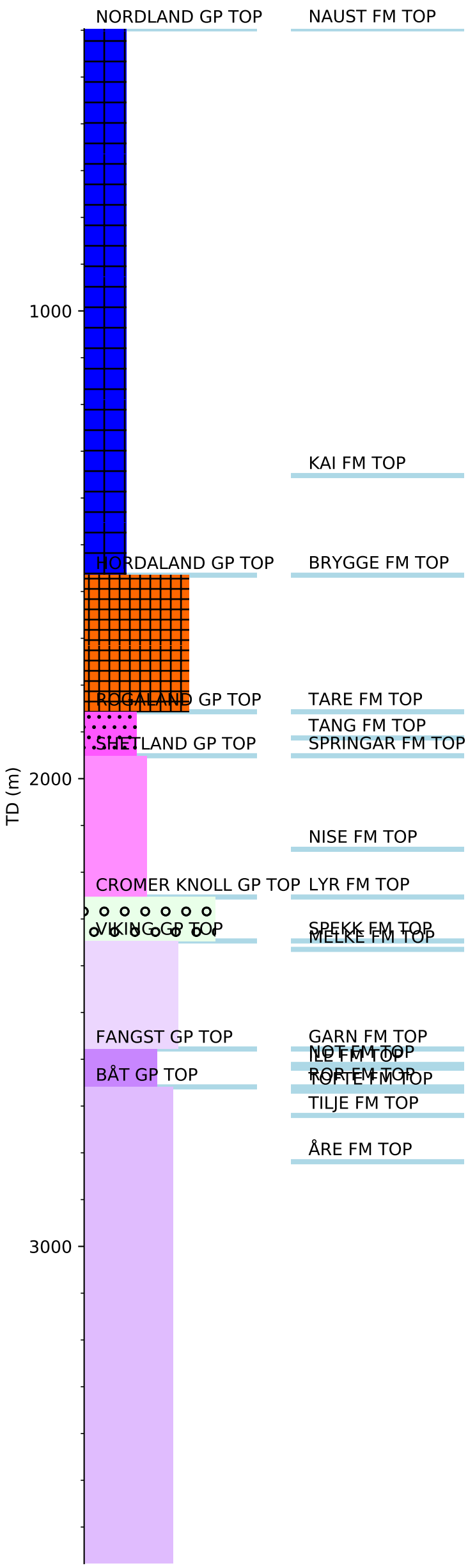

Wellbore History

GENERAL

Well 6608/10-2 is located on the Dønna Terrace offshore Mid Norway. The primary objective of the well was to test the hydrocarbon potential in the Middle Jurassic Fangst Group sandstones. Possible sandy equivalent to the Rogn Formation in the Viking Group was a secondary objective. The well was planned with TD at 3225 m with a commitment to drill into rocks of Triassic age.

OPERATIONS AND RESULTS

Wildcat well 6608/10-2 was spudded with the semi-submersible installation Ross Rig on 28 October 1991 and drilled to TD at 3678 m in Late Triassic rocks of the Åre Formation. Some problems with tight hole were experienced between 1800 and 2300 m in the 12 1/4" section. Due to presence of hydrocarbons and the commitment to drill to Triassic the well was extended both in time and depth compared to programme. Technical operations went smoothly with little down-time. The well was drilled with seawater and hi-vis pills down to 874 m, with gypsum/PAC mud from 874 m to 2576 m, and with Ancotemp/bentonite mud from 2576 m to TD.

Shows were observed in limestone in the interval 2160 ? 2271 m in the Cretaceous Nise and Lyr Formations. Oil and gas were encountered in the Båt and Fangst Groups (Lower- Middle Jurassic). From FMT data and electric logs the gas-oil contact was interpreted at 2605 m, and the oil-water contact at 2713.5 m. The Rogn Formation equivalent was not present in the well.

A total of 141.5 m core was recovered in six cores from the interval 2590 ? 2741 m in the Fangst and Båt Groups. Two FMT wire line samples were collected; a gas sample at 2583.2 m and an oil sample at 2650.5 m.

The well was permanently abandoned on 29 January 1992 as an oil and gas discovery.

TESTING

Four intervals were perforated and tested.

DST 1 tested the interval 2715 ? 2720 m in the in the lower Tofte Formation. The test produced 310 Sm3 water /day through a 2" choke. Maximum bottom hole temperature recorded in the test was 100 deg C.

DST 2 tested the interval 2673 ? 2695 m in the in the upper Tofte Formation. The test produced up to 1165 Sm3 oil and 108667 Sm3 gas /day through a 1.5" choke. The GOR in this flow was 93 Sm3/Sm3, the oil density was 0.856 g/cm3, the gas gravity was 0.65 (air =1), and the gas contained 1.8 % CO_2 and 4 ppm H_2S. Maximum bottom hole temperature recorded in the test was 98.4 deg C.

DST 3A tested the interval 2605 ? 2610 m in the in the lower Garn Formation. The production rate was measured to 33 Sm3 condensate and 582600 Sm3 gas/day through a 19.05 mm choke. The GOR was 17654 Sm3/Sm3. Maximum bottom hole temperature recorded in the test was 91.4 deg C.

DST 3B tested the interval 2590 - 2603 m in the in the Garn Formation. Maximum rates were recorded to 100 Sm3 condensate and 945000 Sm3 gas /day through a 38.1 mm choke. The GOR was 9450 Sm3/Sm3 in this flow, the condensate density was 0.783 g/cm3, the gas gravity was 0.645 (air = 1), and the gas contained 1.1 % CO_2 and 0.5 ppm H_2S. Maximum bottom hole temperature recorded in the test was 95.5 deg C

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6608/10-2