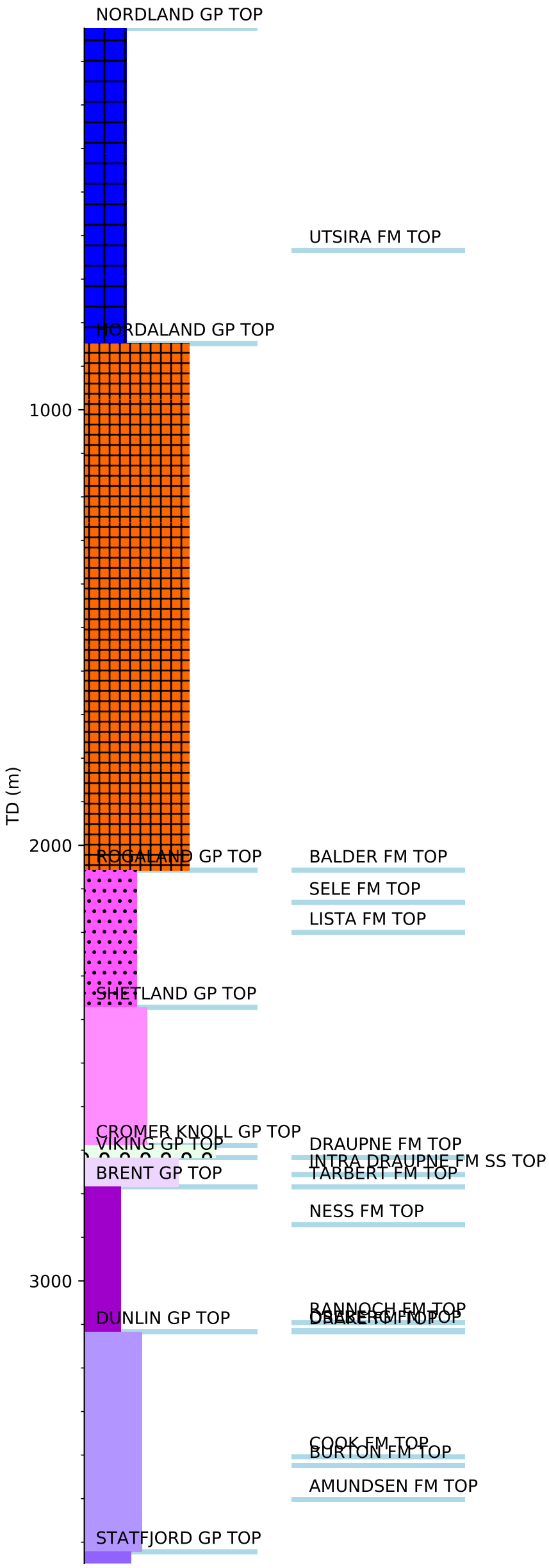

Wellbore History

GENERAL

Well 30/9-10 was drilled in the Omega South segment on the Oseberg Fault Block in the North Sea. The primary objective was to test the hydrocarbon potential in the Tarbert Formation. Secondary objectives were to test the Cook Formation and the Statfjord Group.

OPERATIONS AND RESULTS

Wildcat well was spudded with the semi-submersible installation Vildkat on 31 July 1990 and drilled to TD at 3649 m in the Early Jurassic Statfjord Group. An 8 1/2" pilot hole was drilled from 210 to 350 m to check a possible shallow gas zone at 329 m. No gas was encountered. No significant problem was encountered in the operations. The well was drilled with spud mud down to 1059 m and with KCl/polymer mud from 1059 m to TD.

The Draupne Formation was encountered at 2717 m and Intra Draupne Formation sandstone was penetrated from 2756 m to top Tarbert Formation at 2783 m. The Draupne Formation sandstone and the Upper Tarbert Formation were found to be oil bearing from 2756 - 2833 m. Poor to moderate oil shows continued down to 2858 m. No oil shows were recorded below this depth or above top Draupne Formation. The Middle Tarbert is poor or tight, and non-moveable hydrocarbons were present in the Lower Tarbert, which are interpreted from core analysis to be residual oil. The net pay was determined to be 55 m, with an average water saturation of 36.4% and average porosity of 17.5%. RFT data defines an oil gradient through Draupne and Upper Tarbert sandstones, which intersects with the Lower Tarbert water gradient at 2833 m in the Middle Tarbert. However, it is uncertain whether the oil gradient in the Upper Tarbert and the water gradient of the Lower Tarbert belong to the same pressure system. Consequently an oil-water contact was not proven in the well. The Cook Formation and the Statfjord Group were found water bearing with no shows.

Three cores were cut from 2725 m to 2732.5 m in the Draupne Formation. Poor recovery was obtained in these cores. Another four cores were cut from 2747 m in the Draupne Formation, through Intra Draupne Formation sandstone, the Tarbert Formation, and to 2894.5 m in the Ness Formation. Good recovery was obtained in these cores. RFT fluid samples were taken at 2775 m (oil, gas and water/filtrate) and 2822 m (oil, gas and water/filtrate).

The well was suspended on 21 September 1990 as an oil discovery.

TESTING

Two drill stem tests were performed.

DST 1A tested the interval 2757 - 2776 m in Intra Draupne Formation sandstones. It produced oil and gas at average rates of 379 Sm3/day and 42100 Sm3/day respectively on a 15.9 mm choke. The GOR was 111 Sm3/Sm3, with oil gravity 0.861 g/cc and gas gravity 0.754 (air =1). The flowing well head pressure was 43.6 bars and the bottom hole temperature 107.0 degrees C. The well produced 0.8% CO2 and no H2S.

DST 1B tested the intervals 2757.0 - 2776.0 m Intra Draupne Formation sandstones and 2779.7 - 2824.7 m in upper Tarbert Formation. Oil flowed at an average rate of 986 Sm3/day and gas flowed at an average rate of 84800 Sm3/day on a 19.1 mm choke. The GOR was 86 Sm3/Sm3, with oil gravity 0.861 g/cc and gas gravity 0.754 (air=l). The flowing well head pressure was 80.8 bars and the bottom hole temperature 108.4 degrees C. The well produced 0.6% CO2 and no H2S.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/9-10