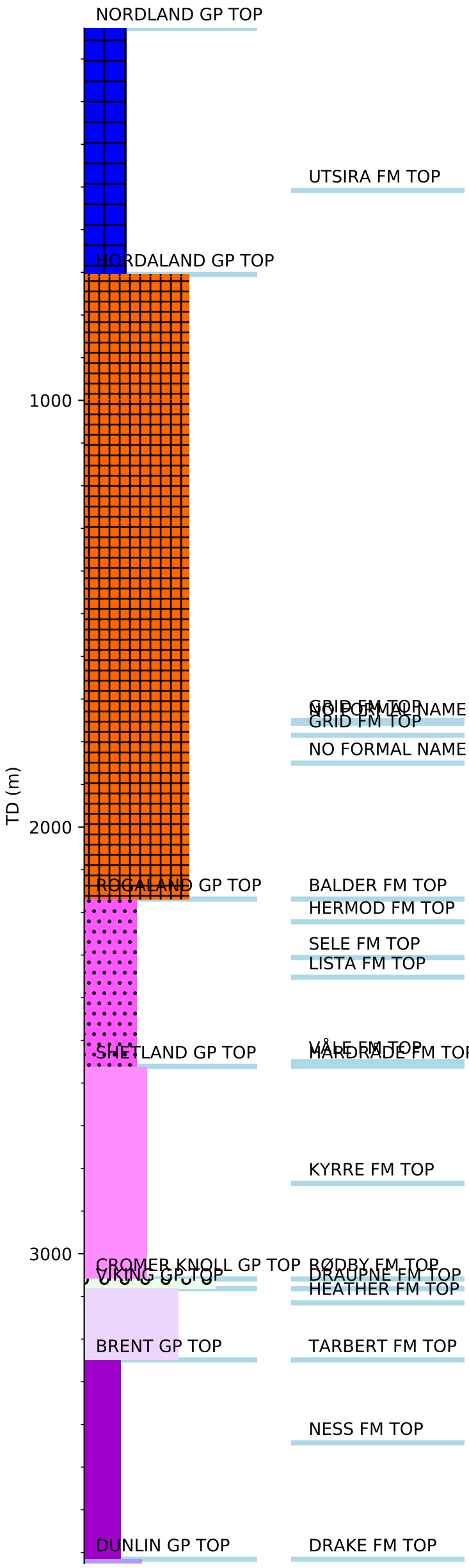

Wellbore History

GENERAL

Well 30/11-5 is located in the Viking Graben in the North Sea, between the Oseberg Field area and the Frigg Field area. The objective of the well was to test the presence of hydrocarbons in Middle Jurassic Brent Group sandstones in the "Steinbit" prospect, a fault-dependent structure in Block 30/11.

OPERATIONS AND RESULTS

Wildcat well 30/11-5 was spudded with the semi-submersible installation Maersk Jutlander on 5 December 1996 and drilled to TD at 3726 m in the Early Jurassic Drake Formation. A boulder bed in the top hole from 160 m to 180 m caused some difficulties with entering the 30" surface conductor casing. The GST (geosteering motor with resistivity at the bit) failed in the 8 1/2" section, and was substituted with a MWD/CDR configured in rotary mode to bring the resistivity sensor as close to the bit as possible. The well was drilled with seawater and bentonite hi-vis pills down to 1430 m, and with sodium silicate (Barasilc) mud from 1430 m to 3098 m. From 3098 m to TD the Barasilc mud was gradually replaced with KCl/polymer mud. The Barasilc mud consists of soluble silicates and KCl/polymer based fluid.

The well found the Middle Jurassic Tarbert and Ness Formations within prognosis ranges, with good porosities. A total of 19.2 m net oil pay distributed in several thin intervals was encountered in the well, overlying water-bearing sandstones. Two OWC's were placed at 3366 m and at 3432 m. Evaluation of the RFT data from well 30/11-5 shows different reservoir pressures between the wells 30/11-5 and the wells 30/11-3 and -4 to the south and 30/9-16 to the north. The pore pressures are also different between the various Tarbert reservoirs within 30/11-5, although the data remain in a hydrostatic pressure regime.

Oil shows on cuttings were described as follows: 3249 - 3310 m, on siltstone, limestone, and coal: weak blue white fluorescence with a slow white cut. Some mineral fluorescence in the limestone streaks; 3417 - 3438 m on clean, fine to medium sandstone: traces of blue white direct fluorescence, no cut and no residual fluorescence.

The criterion for coring was based on real-time resistivity reading from the GST, and when this tool did not work and other real-time criteria (poor shows, low gas readings) were not met, the planned 18 m core in Tarbert and Ness was omitted. The RFT tool acquired 13 good pressure points to evaluate pressure gradients. No fluid samples were taken.

The well was permanently abandoned on 9 January 1997 as a minor oil discovery.

TESTING

No drill stem test was performed in the well.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/11-5