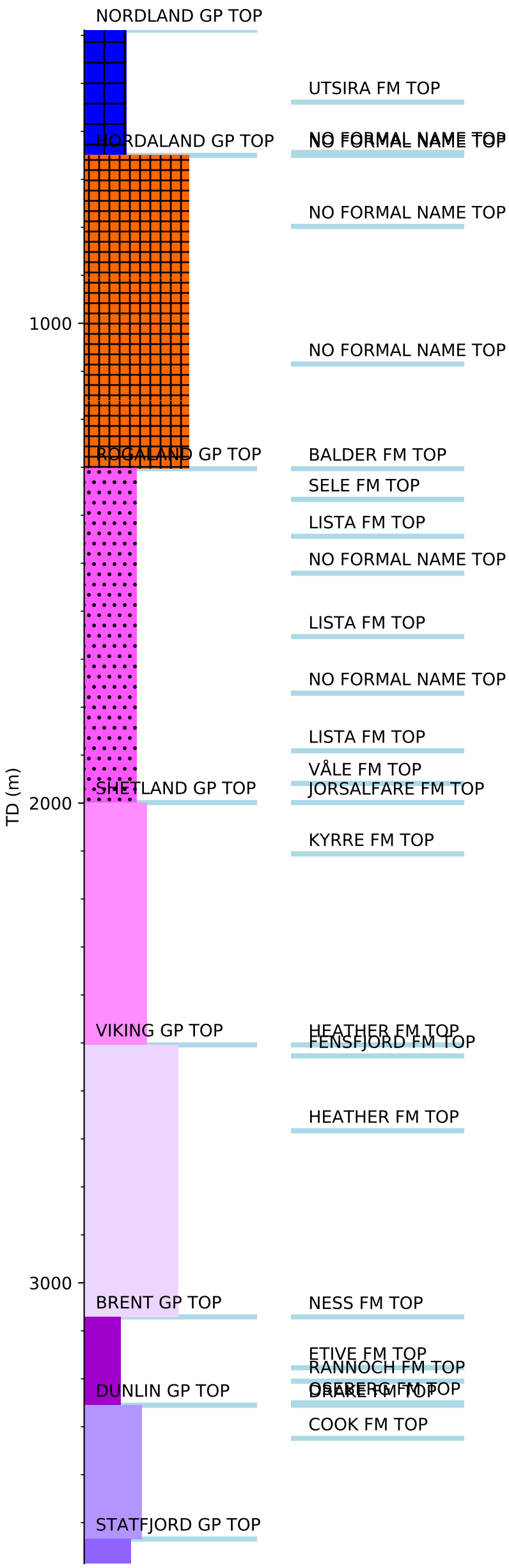

Wellbore History

GENERAL

Well 35/12-4 S was drilled on the Ryggsteinen Ridge/Uer Terrace structural elements in the Northern North Sea. The objective was to appraise the 35/12-2 Grosbeak discovery, a multi-level discovery, with hydrocarbons in the Sognefjord Formation (gas), in the Fensfjord Formation (oil) and in the Ness Formation (oil). The gas discovered in the Sognefjord Formation is deemed unproducible due to low permeabilities. Only the Fensfjord Formation and the Brent Group are appraisal targets. The majority of the volumes are expected to be located in the Brent Group. The Statfjord Formation was a tertiary objective.

OPERATIONS AND RESULTS

Appraisal well 35/12-4 S was spudded with the semi-submersible installation Songa Delta on 23 April 2011 and drilled to TD at 3585 m (2766 m TVD) in the Early Jurassic Statfjord Formation. No significant problem was encountered in the operations. The well was drilled with sea water and hi-vis sweeps down to 501 m, with Aquadril mud from 501 m to 1315 m, and with Carbosea oil based mud from 1315 m to TD.

Base Cretaceous unconformity/top Heather Formation was penetrated at 2503.5 m (2080 m TVD). A sharp increase in the NearBit Resistivity LWD tool and increased gas values were seen on penetrating the Fensfjord Formation at 2526.5 m (2095 m TVD). The sandstones had an average porosity of 24 % when using a 10 % porosity cut-off. A gross oil column of approximately 14 m TVD was found in the Fensfjord Formation with an OWC at 2552 m (2112 m TVD) based on the pressure gradients. On penetrating the top of the Ness Formation at 3070.5 m (2441 m TVD), an increase in background gas was noticed. The Ness sandstones had an average porosity of 21.7 %, when using a 10% porosity cut-off. A gross oil column of approximately 40 m TVD was found with OWC at 3135 m (2482 m TVD). The sandstones of the Statfjord Formation were water-bearing. These sandstones had an average porosity of 17.8% when using a 10% porosity cut-off. Weak shows were recorded in minor silty sandstone towards base of the Kyrre Formation and in minor loose sand in the Heather Formation. There were shows in the hydrocarbon bearing sections of the Fensfjord and Ness formations, but no shows below the OWC's.

Five conventional cores were cut, one in the Fensfjord Formation from 2529.5 m to 2564 m and four in the Ness Formation from 3076 m to 3151.5 m in the Ness Formation. Fluid samples were taken with the RCI tool. Twelve (12) x 700 cc sample bottles were filled at six (6) sampling stations: at 2539.9 (oil) and 2561.5 m (water) in the Fensfjord Formation, and at 3136.5 m (water), 3126.0 m (oil), 3104.4 m (oil), and 3086.7 m (oil) in the Ness Formation.

The well was permanently abandoned on 26 June 2011 as a gas and oil appraisal well.

TESTING

One drill stem test was carried out in the Ness Formation in the interval 3082 - 3127 m (2448 - 2477 m TVD). The test produced 69260 Sm3 gas and 767 Sm3 oil /day through a 44/64" choke in the main flow. The GOR was 90.4 Sm3/Sm3, the oil density was 0.806 g/cm3, and the gas gravity was 0.758 (air = 1). The maximum bottom hole temperature recorded in the main flow was 95.2 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/12-4 S