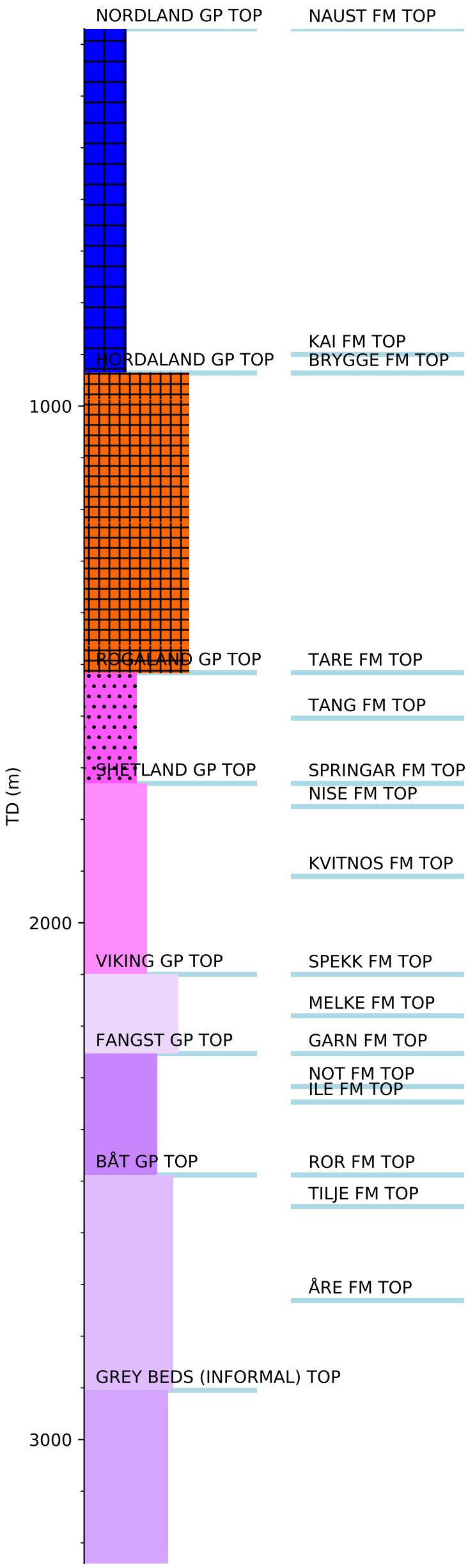

Wellbore History

GENERAL

Well 6407/8-5 S and the sidetrack 6407/8-5 A were drilled on the Gygrid prospect situated 7 km west of the Draugen Field in the Norwegian Sea. The main objectives of the wells were to prove hydrocarbons in the Upper and Lower Åre Formation. A secondary objective was to test the prospectivity of the Late Jurassic Rogn Formation. The structure was expected to be gas filled with a thin oil leg. Total Depth of the wells was planned 100 m TVD under prognosed HC/water contact in the Åre Formation or maximum 2308 m TVD RKB in both S and A wells.

OPERATIONS AND RESULTS

Wildcat well 6407/8-5 S was spudded with the semi-submersible installation West Alpha on 2 May 2009 and drilled to TD at 3240 m (2368.7 m TVD) in the Triassic Grey Beds. The well was drilled vertical down to 1375 m, building angle to ca 70 deg at 2170 m, and keeping ca 70 deg from 2170 m to TD. It was drilled with Seawater/WBM down to 926 m and with Versatec oil base mud from 926 m to TD.

The well penetrated rocks of Quaternary, Tertiary, Cretaceous, Jurassic, and Triassic age. Contrary to the pre-drill interpretation a full Jurassic stratigraphy was encountered, with the Viking Group coming in at 2100 m (1979.2 m TVD), the Fangst Group (Garn Formation) at 2252.5 m (2035.5 m TVD), and the Båt Group at 2487.5 m (2114.5 m TVD). The Spekk and Melke Formation contained several thin sandstones, but no massive Rogn Formation. Instead the Ile Formation at 2346.5 m (2067 m TVD) and the Tilje Formation at 2549 m (2135.3 m TVD) proved to be the main reservoirs, with oil proven in the Tilje Formation. No gas cap was seen. A Tilje ODT was encountered at approximately 2148 m TVD with water up to approximately 2151 m TVD. In addition, a thin gas zone was encountered in a condensed Garn Formation. Weak oil shows were recorded on cuttings from 2152 to 2350 m in the Viking and Fangst Groups, and from 2549 to 2565 m in the Tilje Formation.

The well penetrated a seismic flat spot that proved to be in the Tilje Formation and not in the Åre Formation as it was prognosed to be. Due to the unexpected geology in the well the hydrocarbon bearing zone was penetrated too far down flank on the structure, missing the prognosed gas cap. The planned down-dip Åre sidetrack was thus re-designed to enter the structure a bit higher than the S well and then to turn upwards to investigate top Tilje in a structurally higher position. No cores were cut in the well. MDT fluid samples were taken in the Tilje Formation at 2551.5 m (oil), at 2583 m (oil) and at 3169 m (water).

The well was permanently abandoned on 26 May 2009 as an oil discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6407/8-5 S