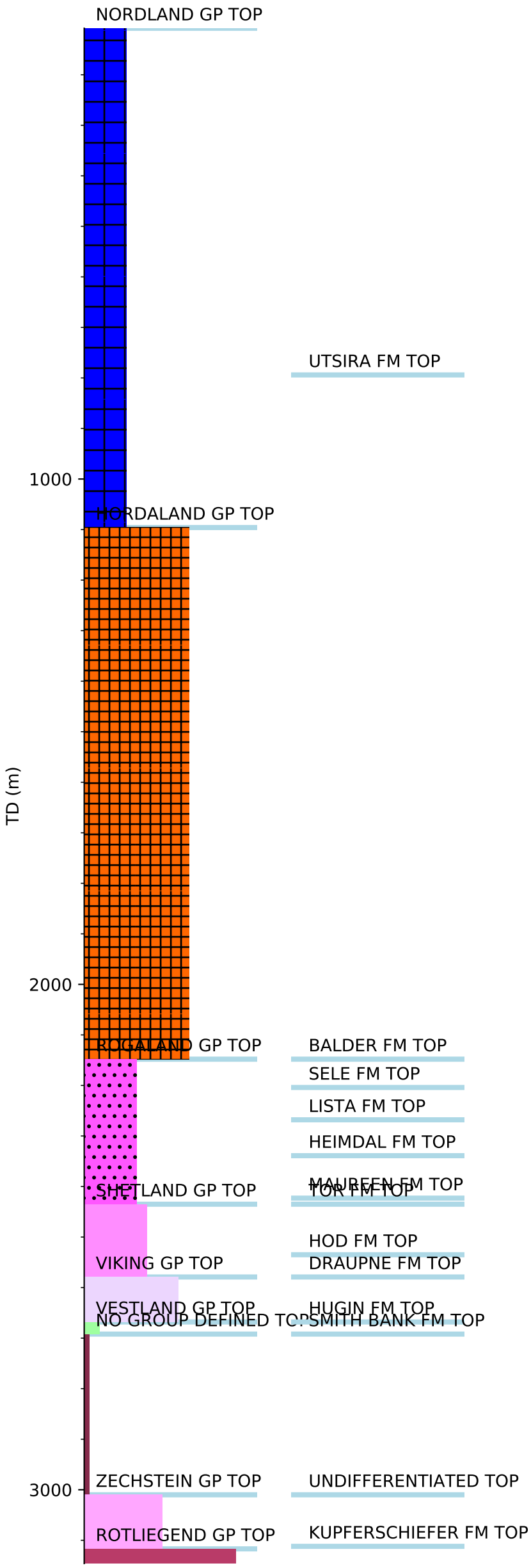

Wellbore History

GENERAL

The 16/7-2 well was drilled on the western flank of the Utsira High in the North Sea. The primary objective was to test the presence of a stratigraphic trap in Paleocene sandstones. Secondary objectives were to test the Mesozoic structure for possible Triassic sands, and also to test the Zechstein carbonate and Rotliegendes sandstone plays. The well was the first to be drilled in connection with the 6th. License Round awards.

OPERATIONS AND RESULTS

Well 16/7-2 was spudded with the semi-submersible installation Glomar Biscay II on 11 January 1982 and drilled to TD at 3146 m in Early Permian, Rotliegendes Group sediments. Drilling of the 36" and 26" holes went forth without any specific problems. While cementing the 20" casing, the cement slurry was overdisplaced. A remedial squeeze job was necessary. Problems also occurred when logging the 12 1/4" section due to tight hole. In the 8 1/2" inch section problems with the BOP choke valve/controls led to close to 9 days lost time, a major reason for the 38% non-productive time in this well. The well was drilled with seawater gel down to 171 m, and with lignite/lignosulphonate mud from 171 m to TD.

Top Lista Formation was encountered at 2268 m and contained 9.5 m net of gas from 2292 m in thin sandstone intervals, interbedded with shales. The average porosity is 22% and average water saturation is 47% in the net sand. The Heimdal Formation sandstones were massive, of very good reservoir quality, and contained 13.5 m of net gas sand in a gross gas sand interval of 13.5 m down to the gas/water contact at 2352 m. The average porosity is 26% and average water saturation is 34%. The well was drilled on the crest of a structurally limited trap and the gas accumulation is not connected to the 15/9 Paleocene Gamma discovery. In the Jurassic, 19 m of water wet Hugin Formation sand was encountered. The Zechstein dolomites and Rotliegendes sandstones were also water wet and of poor reservoir quality. The well also penetrated a 5 m thick sequence of the Permian Kupferschiefer at 3112 m.

Three cores were taken in the Lista and Heimdal Formations from 2300 m to 2376 m. A fourth core core was taken from 2675 m to 2693 m in the Middle Jurassic Hugin Formation. MFT fluid samples were taken at 2680.5 m (content: mud filtrate), 2313 m (mud filtrate), and 2341 m (gas condensate; single flash to stock tank conditions gave GOR = 3042 Sm3/Sm3 and liquid gravity = 48.3 deg API).

The well was permanently abandoned on 30 March 1982 as a gas discovery.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/7-2