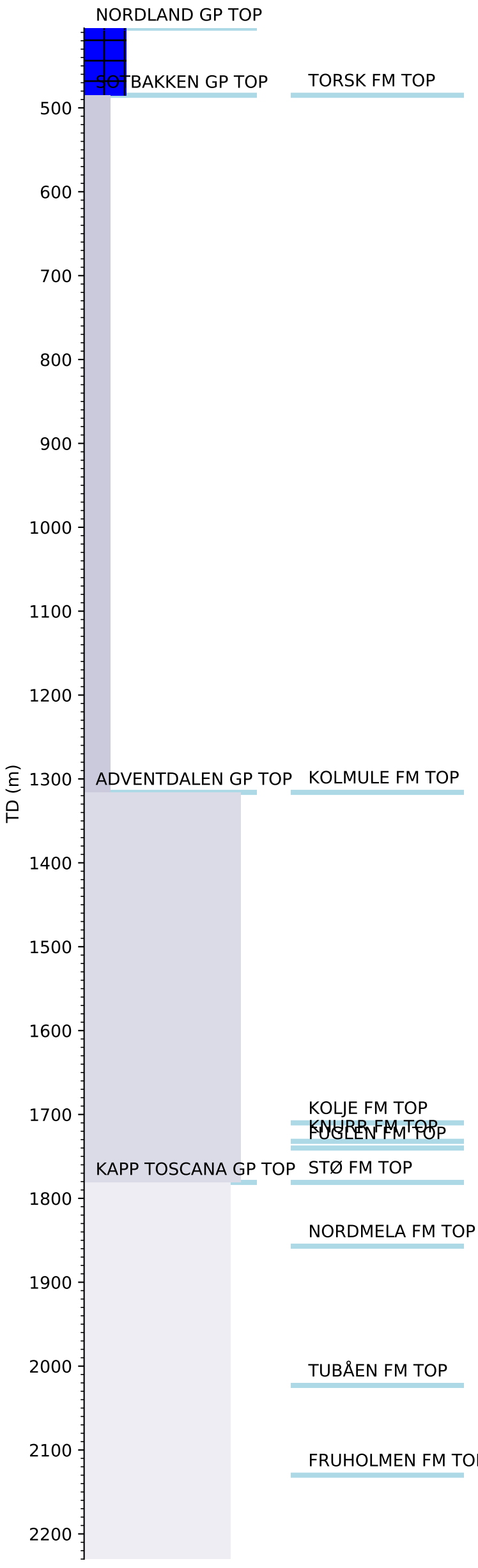
Groups

Formation Tops



Wellbore History

GENERAL

Well 7220/7-1 was drilled southwest of the 7220/8-1 Skrugard discovery and west of the Loppa High in the Barents Sea. The targeted Havis fault block is one of several rotated fault blocks in the licence, and a part of the Bjørnøyrenna Fault Complex. The primary objective was to test the hydrocarbon potential in the Stø, Nordmela and Tubåen Formations, all of Jurassic age. Secondary objectives were to test the presence and quality of sandstones in the lower Triassic Fruholmen Formation, as well as to collect data needed for field development purposes. A clear flat event was observed in the seismic at 1960 m. Seismic data also indicated flat events at 1830 m and 2105 m.

OPERATIONS AND RESULTS

A pilot hole was drilled on the spud location with seawater and returns to seafloor down to 1050 m (the planned setting depth for 13 3/8” casing). No shallow gas was encountered. Well 7220/7-1 was spudded with the semi-submersible installation Transocean Barents on 5 December 2011 and drilled to TD at 2230 m in the Late Triassic Fruholmen Formation. No significant problem was encountered in the operations. The well was drilled with seawater and hi-vis/bentonite sweeps down to 1060 m, with KCl/GEM/polymer mud from 1060 m to 1746 m, and with low sulphate KCl/GEM/polymer mud from 1746 m to TD.

Well 7220/7-1 penetrated sediments ranging in age from Recent to Triassic. Below the glacio-marine Quaternary section at 485 m, an 831 m thick Tertiary sequence and a 424 m thick Cretaceous sequence were drilled to Top Jurassic (Fuglen Formation) at 1740 m. Top of target reservoir Stø Formation was encountered at 1781 m. The reservoir was gas bearing to the gas-oil-contact (GOC) at 1828 m, and oil bearing to the oil-water-contact (OWC) at 1956 m. Residual hydrocarbons was encountered below the OWC down to approximately 2121 m. No shows were recorded below this depth or above top reservoir. Results from the well thus indicate that flat-events seen on seismic at 1820 m and 1960 m, and 2105 m represent the GOC, the OWC, and a paleo-OWC, respectively. The Fruholmen Formation was penetrated at 2130 m, which was 7 m shallower than prognosed.

Two short cores were cut in the overburden in the Kolmule and Kolje formations for field development purposes. A further seven cores were cut from 1785.5 m to 2120.5 m in the Stø, Nordmela and Tubåen Formations, covering the hydrocarbon zone and the water zone below, which is expected to be hydrocarbon-bearing up-flank on the structure. The core depths were ca 1 - 2 m deeper than the logger depths for all cores. Extensive wire line logging was performed. MDT fluid samples were taken at 1793 m (gas), 1837 m (oil), 1894 m (oil), 1927 m (oil), 1971 m (water), and 2063 m (water).

The well was permanently abandoned on 24 January 2012 as an oil and gas discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7220/7-1