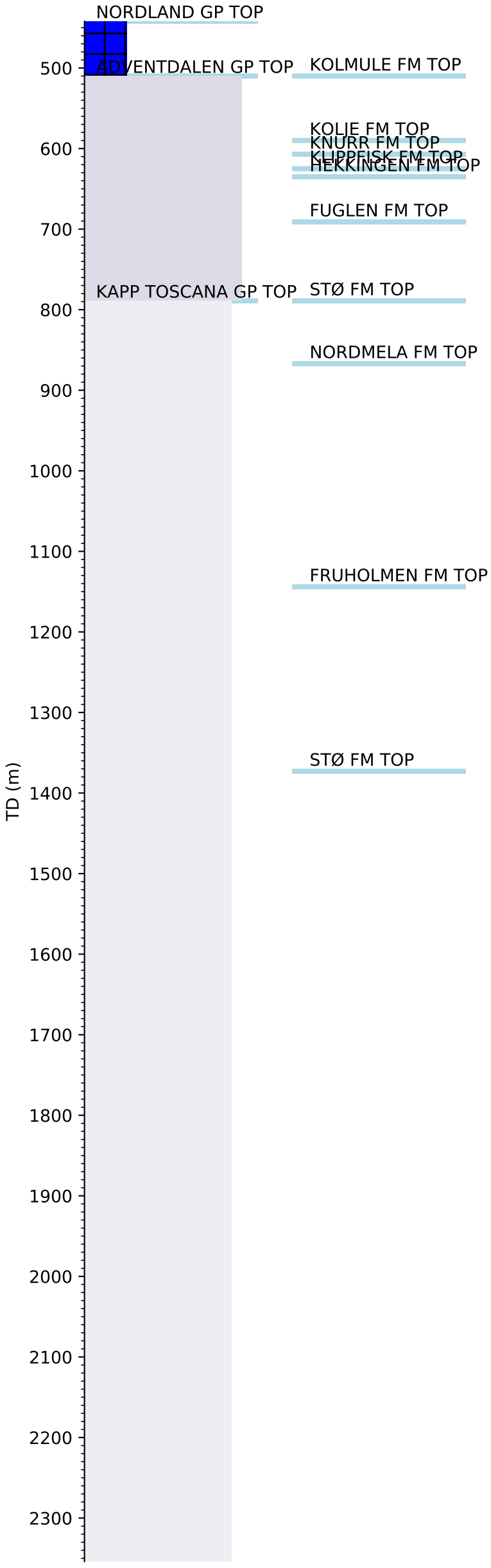

Wellbore History

Wellbore history

GENERAL

Well 7324/7-3 S was drilled to appraise the 7324/8-1 Wisting discovery. The objective was to drill horizontally through the Central South and Central West segments in order test the Stø and Fruholmen reservoirs by performing a DST. The well is the first horizontal well of this shallow depth drilled in the Barents Sea and has a well path from vertical to horizontal during 270m of argillaceous overburden.

OPERATIONS AND RESULTS

Appraisal well 7324/7-3 S was spudded with the semi-submersible installation Transocean Spitsbergen on 15 January 2016 and drilled to TD at 2354 m (713 m TVD) in the Middle Jurassic Stø Formation. The well was drilled vertical down to ca 490 m and horizontal (90° deviated towards northeast) from ca 932 m (716 m TVD). Severe mud losses were experienced during drilling of the horizontal section, mainly related to faults and fracture zones, all cured with LCM material. Otherwise, no significant problem was encountered in the operations. The well was drilled with Bentonite sweeps/KCl mud down to 509 m, with EMS 4600 oil based mud from 509 m to 1238 m, and with seawater/Duotec NS mud from 1238 m to TD.

The reservoirs of Mid-Jurassic to Late Triassic Stø/Nordmela/Fruholmen formations were oil filled, both in the Central South and Central West segment. The well penetrated the sandy Stø/Nordmela Formation in the Central South segment, before entering the Fruholmen Formation in an uplifted horst block, and finally re-entering the Stø Fomation in the Central West segment. All formations penetrated in the horizontal section were oil filled, including the Fruholmen Formation in the horst block. No oil-water contact or free water level was penetrated as the well was planned to stay in the oil-bearing parts of the Realgrunnen Formation. From the Geosphere tool that was used for geosteering in the 8 1/2" section a Free Water Level between 697 and 700 m TVD MSL.

No cores were cut. An MDT oil samples was taken at 803 m.

The well was permanently abandoned on 14 April 2016 as an oil appraisal well.

TESTING

A drill stem test from the horizontally drilled Stø Formation was performed. The main flow produced 487 Sm3 oil and 35055 Sm3 of associated gas /day through a 64/64" choke. The corresponding gas/oil ratio is 72 Sm3/Sm3. The oil density was 0.839 g/cm3 and the gas gravity was 0.72 (air = 1). Maximum production rates were 762 Sm3 of oil and 48310 Sm3 of associated gas /day through a 104/64-inch nozzle opening. The formation temperature measured at 1736.85 m (718.21m TVD) was 17.8 °C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7324/7-3 S