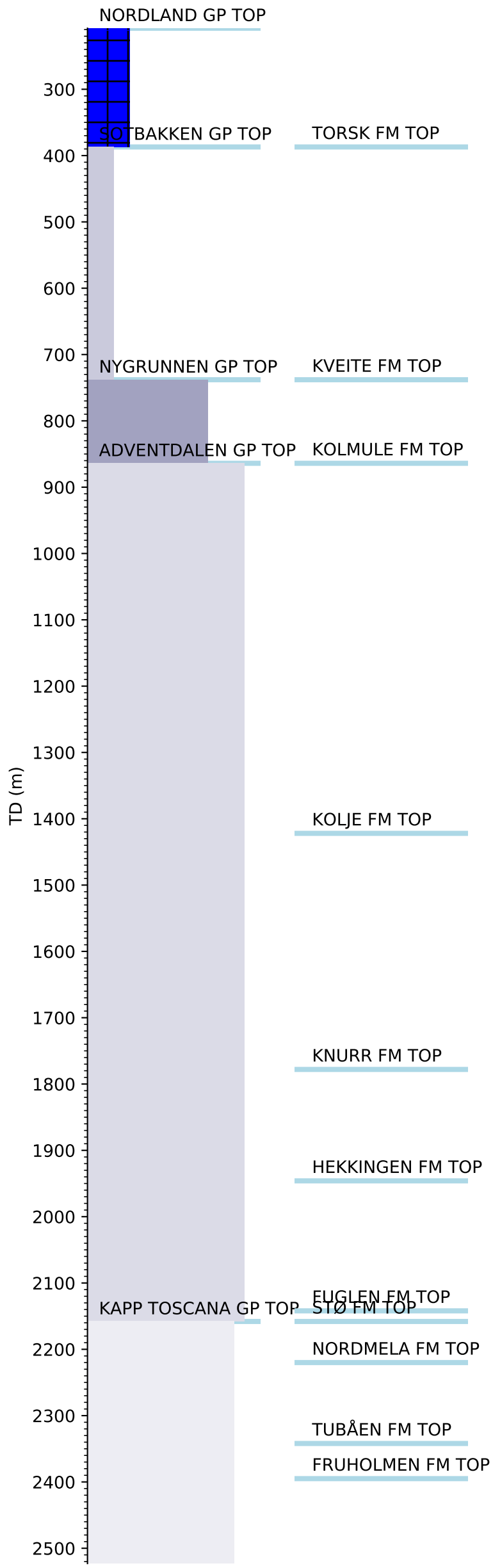

Wellbore History

GENERAL

Well 7120/12-3 is located in the Hammerfest Basin, south of the Snøhvit area. The primary objective was to test a sandstone reservoir of Middle to Early Jurassic age on a structure (Alke North) separate from the Alke Structure tested in well 7120/12-1 and 7120/12-2. A secondary objective was to test Middle Triassic sandstones, providing the Jurassic reservoir proved a gas column greater than 60 m. The well was planned to be drilled to 2498 + 30 m or to 3312 +100 m if the Jurassic test was positive.

OPERATIONS AND RESULTS

Wildcat well 7120/12-3 was spudded with the semi-submersible installation on 16 March 1983 and drilled to TD at 2523 m in the Late Triassic Fruholmen Formation. Swelling shales and some tight hole problems occurred in the 17 1/2" section; otherwise no significant problems were encountered during drilling. The well was drilled using seawater / bentonite / hi-vis pills down to 605 m and with a gypsum / polymer mud from 605 m to TD.

The Middle to Early Jurassic sandstone reservoir was found gas bearing from 2157.5 to 2182.5 m (upper part of Stø Formation) where the gas/water contact was established. The reservoir consisted of very fine to fine, relatively homogeneous and clean sandstones made up of clear quartz with traces of mica, glauconite and carbonaceous material. From wire line logs the net pay was calculated to be 24 m, with an average porosity of 17 % and an average water saturation of 17 %. Traces of very weak shows were described from cuttings and sidewall cores between 1945 m to 2148.5 m in shales of the Late Jurassic Hekkingen and Fuglen Formation, reflecting the high organic content of these shales. Direct shows were only seen in the lower part of the gas-bearing reservoir from 2170 m to 2182.5 m. They appeared on sandstones as traces of dull yellow fluorescence with weak slow streaming dull yellow to white crush cut, no stain or residue were detected. Very weak shows were detected in shales from 2260 m (cuttings) and 2505,5 m (side wall core).

One core was taken in the water zone in the Stø Formation from 2195 to 2213 m. The recovery was 100 %, and the lithology was fine to very fine-grained sandstones, moderately silica cemented with irregular argillaceous laminae. RFT pressure recordings and sampling were successfully performed over the reservoir interval. The gas gradient was found to be 0.029 bar/m equivalent to a density of 0.29 g/cm3. The underlying water gradient was 0.109 bar/m corresponding to a density of 1.12 g/cm3. Three RFT segregated samples were taken, at 2160 m, 2172.5 m, and 2178.5 m, all recovered dry gas and minor amounts of water/mud filtrate.

Due to the small gas column in the Jurassic the well was not deepened to test the Middle Triassic sandstones. It was permanently abandoned as a gas discovery on 5 May 1983.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7120/12-3