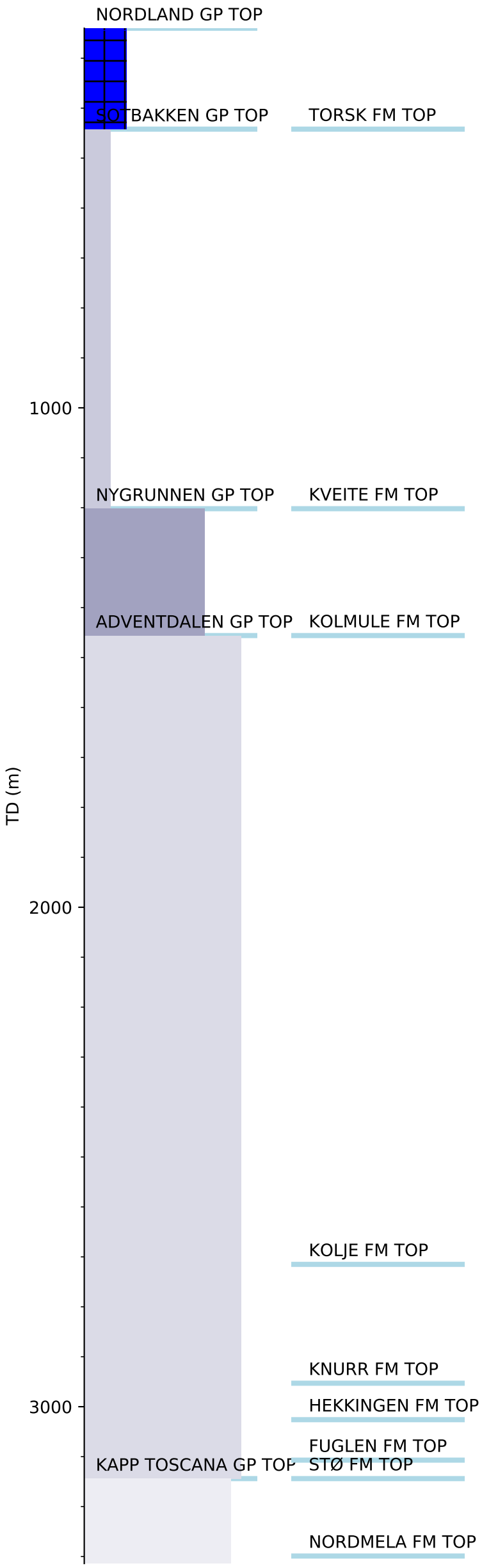

Wellbore History

GENERAL

The primary objective of wildcat 7119/12-3 was to test possible hydrocarbon accumulations in sandstones of Middle to Lower Jurassic age. Gas and condensate were discovered in the sandstone sequences. Planned TD was 3765 m.

OPERATIONS AND RESULTS

Exploration well 7119/12-3 was spudded with the semi-submersible installation Dyvi Delta on 20 may 1982 and drilled to TD at 3314 m in the Early Jurassic Nordmela Formation. A total of 121 days was spent on this well including testing and a 9.5 days seamen's strike. The time estimate was 106 days. No major problems occurred due to drilling. The well was drilled using spud mud down to 303 m, with gel/seawater from 303 m to 716 m, with gypsum/polymer from 716 m to 1618 m, and with gel/lignosulphonate from 1618 m to TD.

Hydrocarbon accumulations were discovered in sandstone sequences between 3144 - 3285 m in the Stø Formation. From log evaluation the interval contained 118 m net sand. The gas/water contact at 3285 m is based on the log evaluation. Due to very tight and hard formation only two RFT pressure points were obtained out of 16 attempts (seal failures). Organic geochemical analyses found only poor source rock potential in the well. Shales in the Late Jurassic Hekkingen Formation from 3026 m to 3107 m had high TOC levels in the range 3% to 9%. However, with Hydrogen Indexes only in the range 30 - 40 mg HC/g TOC in non-caved, high-TOC samples, these shales are gas prone, and can not produce any significant quantities of liquid hydrocarbons. The well is immature down to ca 2300 m and reaches oil window maturity at ca 3000 m. Three cores were cut in the sandstones of the Middle to Early Jurassic Stø Formation. The two first were cut in the interval 3145 m to 3154.85 m with 100 % recovery. The third was cut from 3250 m to 3267 m with 97 % recovery. One RFT segregated sample was taken at 3187 m. The 2 3/4 -gallon chamber was bled off on the rig. It had an opening pressure of 38.9 bar and contained 0.226 m3 of gas and 9.5 1 of mud filtrate with a condensate film on the top of the filtrate. The 1-gallon chamber was drained onshore and had an opening pressure of 54 bar at 17°C. It contained 22.2 1 of gas and 3.525 1 mud filtrate.

The well was permanently abandoned on 12 September 1983 as a gas/condensate discovery.

TESTING

One DST was performed. The interval from 3185 m to 3195 m in the Stø Formation was perforated and production tested. The test flowed 956 900 Sm3 /day of gas with 15.2 Sm3 /day of condensate through a 64/64" choke. The gas contained 12.4 % CO2. The permeability of the tested zone was estimated to 17.42 mD with an average porosity of 5.3 % and an average water saturation of 28.9 %. After the DST three runs with cased hole RFT was performed. The result from these was bad due to tight formation or sealing failures.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7119/12-3