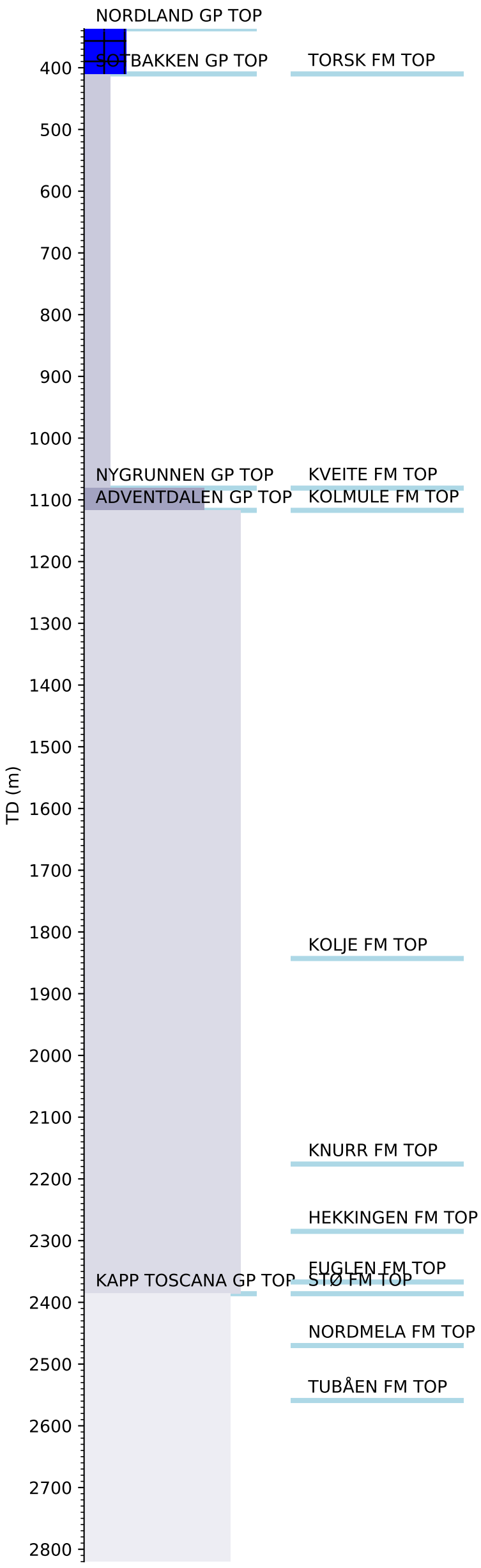

Wellbore History

GENERAL

Wildcat well 7120/6 1 was drilled in the middle eastern part of the block, on a structure comprising an east-west horst block extending into blocks 7121/4 and 7121/5 to the east, and with a central east west oriented fault at Middle Jurassic level. The primary objective of the well was to test Middle Jurassic sand sequences in the Stø Formation. A further objective was to evaluate geologic trends in stratigraphy, structure and reservoir development in a northerly direction in the Hammerfest Basin. The well was prognosed to be drilled into rocks of Triassic age

OPERATIONS AND RESULTS

The well was spudded with the semi submersible installation Treasure Scout 2 February 1985 and drilled to TD at 2820 m in Late Triassic rocks (Tubåen Formation). No significant problems occurred during drilling. It was drilled and tested in 90 days with only 4.4 days down time. Of these 3.2 days were wait-on-weather (WOW). The well was drilled with spud mud down to 815 m and with KCl/polymer mud from 815 m to TD.

The well encountered hydrocarbon bearing Jurassic sands of the Stø Formation from 2385.5 m to 2469.5 m. The interval from 2385.5 to 2427 m was gas bearing and from 2427 to 2443 m oil bearing. In the interval 2559 - 2800 m (Tubåen Formation), thin gas bearing sandstone stringers were encountered. This interval spanned the Jurassic-Triassic boundary, and in the lower intervals below 2660 m net pay was associated with thin interbedded coals. Weak oil shows were observed in claystones in the Cretaceous below 2176 m. Good oil shows in sandstones were recorded throughout the hydrocarbon bearing zone and down to 2500 m. Below this level oil shows were in general associated either with mud stones or with coal seams and fragments.

Geochemical studies indicated that the Tertiary and Cretaceous sediments were immature. Above 2300 m there were alternating poor source rocks for oil and gas and very good oil-prone source rocks. The top Jurassic interval from 2300 m to 2335 m there was rich oil potential source rocks, whilst below 2335 m there was rich potential for oil or for oil and gas. All indications are that there has been significant oil generation below 2320 m. Mature, good source rocks for gas with oil were present in the Tubåen Formation. Organic geochemical analyses also detected strong shows of a relatively waxy, medium gravity crude within the Stø and Nordmela Formation sandstones over the interval 2420 m to 2540 m. Geochemical fingerprinting indicated this oil to be compatible with the source facies present within the Tubåen Formation and the base of the Nordmela Formation.

A total of 12 consecutive cores were taken from 2371 m, above the main objective to a depth of 2565 m in the Tubåen Formation. A total of 63 pre-tests in three RFT runs were taken, of which 23 were either too tight or experienced seal failure. Three segregated samples were taken at 2430 m (32 °API oil, gas, and filtrate), 2427.3 m (gas and filtrate), and 2399.5 m (gas, filtrate and a small amount of 50 °API condensate). A total of 107 sidewall cores were recovered from 904 m down to 2811.5 m. Sidewall cores taken in the interval 2040 - 2368 m were taken especially to be used in a Jurassic Shale Geochemical study.

The well was permanently abandoned as an oil and gas appraisal on 2 May 1985.

TESTING

Four Drill Stem Tests (DST's) were carried out in the Stø Formation, one water, one oil, and two gas tests.

DST 1 perforated the interval: 2459 m to 2465 m and flowed 447 Sm3 water/day through an 80/64" choke.

DST 2 perforated the interval 2432.05 m to 2436.05 m and flowed 1526 Sm3 oil and 178400 Sm3 gas per day through an 80/64" choke. Oil gravity was 31.9 °AP and gas gravity was 0.705 (air = 1). GOR was 117 Sm3/Sm3.

DST 3 perforated the interval: 2418,35 m to 2424,35 m and gave no flow.

DST 4 perforated the interval 2386,4 m to 2401,4 m and flowed 1262930 Sm3 gas and 162 Sm3 condensate per day through a 1" choke. Condensate gravity was 57 °API and gas gravity was 0.695 (air = 1). GOR was 7780 Sm3/Sm3.