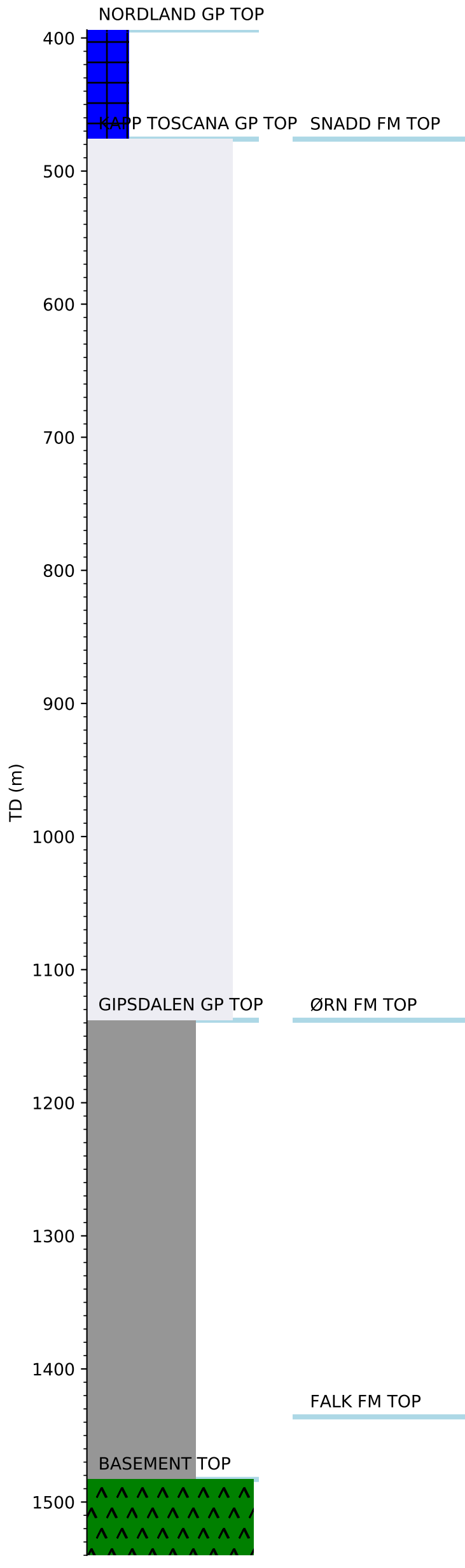
Groups

Formation Tops



Wellbore History

GENERAL

Well 7220/6-1 is located on the Loppa High in the Barents Sea. The primary objective was to test reservoir properties and moveable hydrocarbons in the Permian and Carboniferous carbonates and mixed carbonates and clastics of the Gipsdalen Group (A3 prospect). Secondary objective was to evaluate the Triassic (Carnian) interval (A1 Lead), a high-risk oil leg down-flank from a major gas anomaly. The gas anomaly would not be penetrated by the well.

OPERATIONS AND RESULTS

Wildcat well 7220/6-1 was spudded with the semi-submersible installation on 20 January 2005 and drilled to TD at 1540 m in pre-Carboniferous basement rock. The well was drilled with seawater and hi-vis pills down to 480 m, with Glydril mud from 480 m to 1130 m, with a water based bentonite mud (Drilplex) from 1130 m to 1428 m, and with Drilplex treated with Glydril from 1428 m to TD.

The main result of well 7220/6-1 was the confirmation of the prognosed reservoir levels and the source/migration concept. The actual depths within the Triassic and Palaeozoic sections were encountered somewhat shallower than the prognosis. None of the target formations contained economical amounts of hydrocarbons. Even though the well did not prove commercial hydrocarbons, residual hydrocarbons and good oil shows were obtained in carbonates of the Gipsdalen Group, Ørn Formation from 1138 m and down to 1430 m. The gross reservoir thickness and basic lithology were as prognosed, whereas the fracture density was less than expected. Some intervals in the Paleozoic section were indicated by the logs to be source rocks (high gamma ray readings). These were analysed geochemically and found to be non-source rocks (TOC from 0.27 to 0.69 %). The whole well was thermally immature/very early mature (vitrinite reflection in the range 0.4 - 0.6 %).

Three conventional cores were cut, covering the upper part of the Ørn Formation. The cores showed variable reservoir quality, but contained several zones with good reservoir quality and good oil shows. A total of 50 rotary sidewall cores were recovered from the well section. MDT water samples were taken at 1151.5m, 1184.5 m, 1338 m, and at 1377.1 m. Traces of oil (10 ml) was noted in the sample from 1184.5 m. The oil had, after 3 weeks exposure to atmospheric conditions, a measurable gravity of 29 deg API and was found to be mildly biodegraded.

The well was permanently abandoned on 29 March as a dry well with shows.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7220/6-1