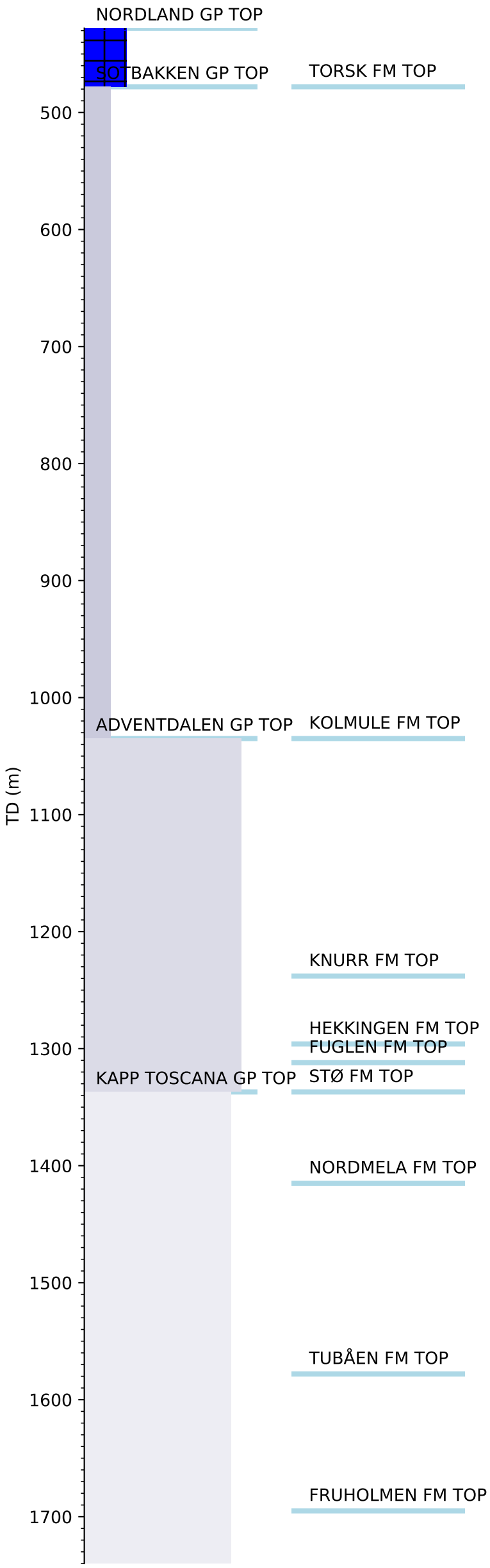
Groups

Formation Tops



Wellbore History

GENERAL

Well 7220/5-1 was drilled to appraise the 7220/8-1 Skrugard Discovery in the Bjarmøyrenna Fault complex west of the Loppa High in the Barents Sea. The Skrugard structure is divided into three segments by erosion features, making saddle points that separate the three gas-oil contacts. The discovery well 7220/8-1 is located in the southern segment, while the appraisal well 7220/5-1 is located in the middle segment. The appraisal well is located approximately 3 km to the North of the Skrugard discovery well. The main objectives of well 7220/5-1were to prove gas and oil volumes in the Skrugard middle segment and communication between the middle and southern segments. This implied proving the exact depths of the gas-oil-contact and oil-water-contact and collecting fluid sampling from the reservoir. Another objective was to perform an extended leak-off test or similar in the cap seal and in the reservoir and to core and analyse the cap seal and reservoir.

OPERATIONS AND RESULTS

Prior to the main bore a 9 5/8" pilot hole (7220/5-U-1) was drilled down to 875 m MD RT to check for shallow gas. This was approximately the setting depth of the 9 5/8" casing. No shallow gas was observed. Appraisal well 7220/5-1 was spudded with the semi-submersible installation Transocean Barents on 27 January 2012 and drilled to TD at 1740 m in the Late Triassic Fruholmen Formation. No significant problem was encountered in the operations. The well was drilled with seawater and hi-vis pills down to 898 m and with KCl/Polymer/Glycol mud from 898 m to TD.

The well penetrated Tertiary and Cretaceous Claystones and Sandstones, as well as Late Jurassic Claystones above the Reservoir. Top reservoir, Stø Formation sandstone, was encountered at 1337 m. In the Reservoir, the well penetrated Sandstones of Jurassic age within the Stø, Nordmela and Tubåen Formations, and Triassic age sandstones within the Fruholmen Formation. A 28 m thick gas column and a 47 m thick oil column were proven in the primary target of the Stø Formation. Results from the well indicate that two flat-spots seen on seismic represent the gas-oil contact (GOC) at 1365 m and the oil-water contact (OWC) at 1412 m. Oil shows continued down to 1419 m. No oil shows were recorded below this depth or above top Stø Formation.

Eight cores were cut in the well. The first was cut from 1175 m to 1183 m in shales of the Kolmule Formation with 86% recovery. This core was preserved in oil. The other 7 cores were cut from 1322 m to 1624 m with very good recovery. They comprise the Fuglen Formation shales, the Fuglen/Stø boundary, the Stø Formation including the contacts, the Nordmela Formation, and the upper 46 m of the Tubåen Formation. MDT fluid samples were taken at 1351.8 m (gas), 1381 m (HC), 1404 m (oil), 1428.1 m (water, and 1611 m (water).

The well was permanently abandoned on 24 March as an oil and gas appraisal well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7220/5-1