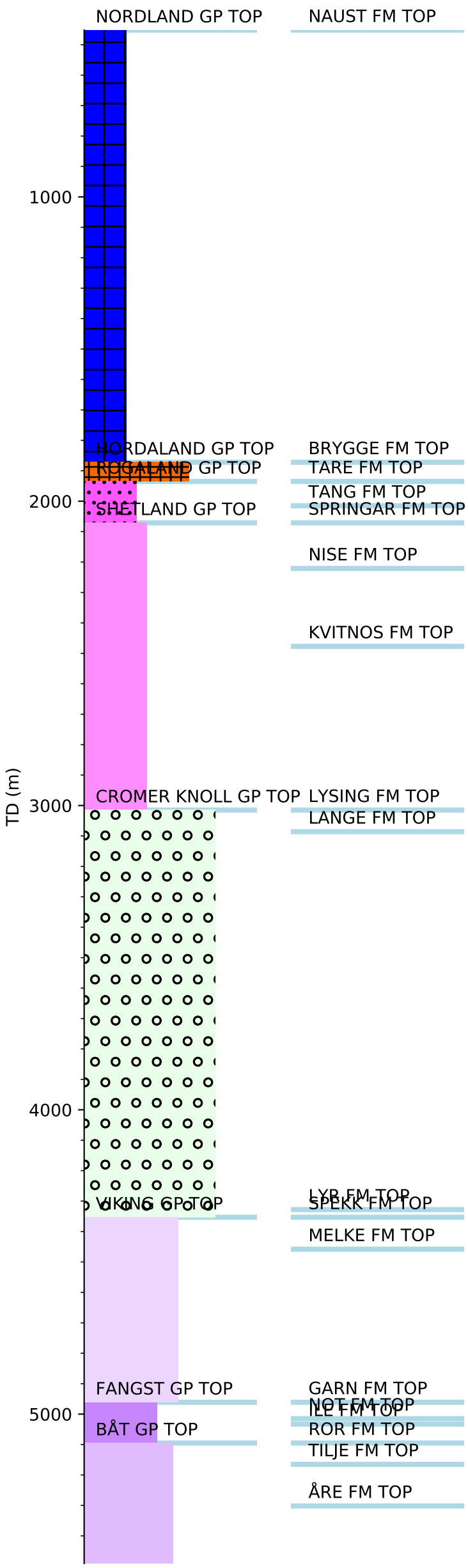
Groups

Formation Tops



Wellbore History

GENERAL

PL 211 covers blocks 6506/6 and 6507/4 off-shore Norway, approximately 300 km northwest of Trondheim. Well 6506/6-1, designated as High Temperature High Pressure well, was drilled by Mobil as the first commitment well for the licence. Well 6506/6-1 was drilled in the southeastern part of Block 6506/6. The primary objective of the well was to test the hydrocarbon potential of the Bella-Donna prospect, which straddles the southern parts of blocks 6506/6 and 6507/4. A faulted, 4-way dip closed dome, with prognosed 500m of vertical closure in the Jurassic Fangst and Båt Group Sandstones was the primary objective of the well. The secondary objective was to assess the Cretaceous prospectivity.

OPERATIONS AND RESULTS

Wildcat well 6506/6-1 was drilled with the semi-submersible installation "West Alpha". A 9 7/8" pilot hole was spudded on 7 July 2000 and drilled to 1425 m to check for the presence of shallow gas. No shallow gas was found.

The final well was spudded on 9 July 2000 and reached TD at 5491.0 m in the Early Jurassic Åre Formation. The well was drilled with seawater and bentonite down to 1437 m, with water based KCl/Glycol mud from 1437 m to 2794 m, and with mineral oil based mud (Versapro) from 2794 m to TD. The sandstones of the Middle Jurassic Fangst Group were found to be extremely hard and abrasive and diamond impregnated bits were required to complete the section.

The geology of the well was very much as prognosed, although the tops generally came in higher than expected. No shows were observed in the sandstones of the Cretaceous Lysing, Lange and Lyr Formations.

The well penetrated a significant thickness of porous and permeable sandstone in the Middle Jurassic Ile and Lower Jurassic Tilje Formations. Hydrocarbons recovered from both indicate a dry gas containing 10% CO2. Petrophysical analysis indicates that lower reservoir quality Middle Jurassic Garn Formation and Lower Jurassic Upper Åre Formation sandstones are also gas charged. No water sand in the Jurassic section could be identified. Very minor oil shows were observed in the sandstones of the Middle and Lower Jurassic Fangst and Båt Groups. However, some of these could be attributed to contamination by the oil-based mud. Petrophysical and FMT sample analyses indicated that the formation fluid was dry gas, which would not have yielded either good fluorescence or cut. Gas levels, because of the overbalance, were generally very low. One core was cut in sandstones of the Garn Formation and two further cores were cut in the Tilje Formation. Three FMT hydrocarbon samples were collected from 5035.5 m in the Ile Formation and 5169 m and 5267.5 m in the Tilje Formation.

The well was plugged and abandoned as a gas discovery on 6 December 2000.

TESTING

Preparations were made to perform a DST in the 8 1/2" hole. However, after setting and cementing liner, gas detected during circulations indicated leak from somewhere behind the liner. It proved impossible to find the leak or seal the liner and a decision was made to abandon the test.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6506/6-1