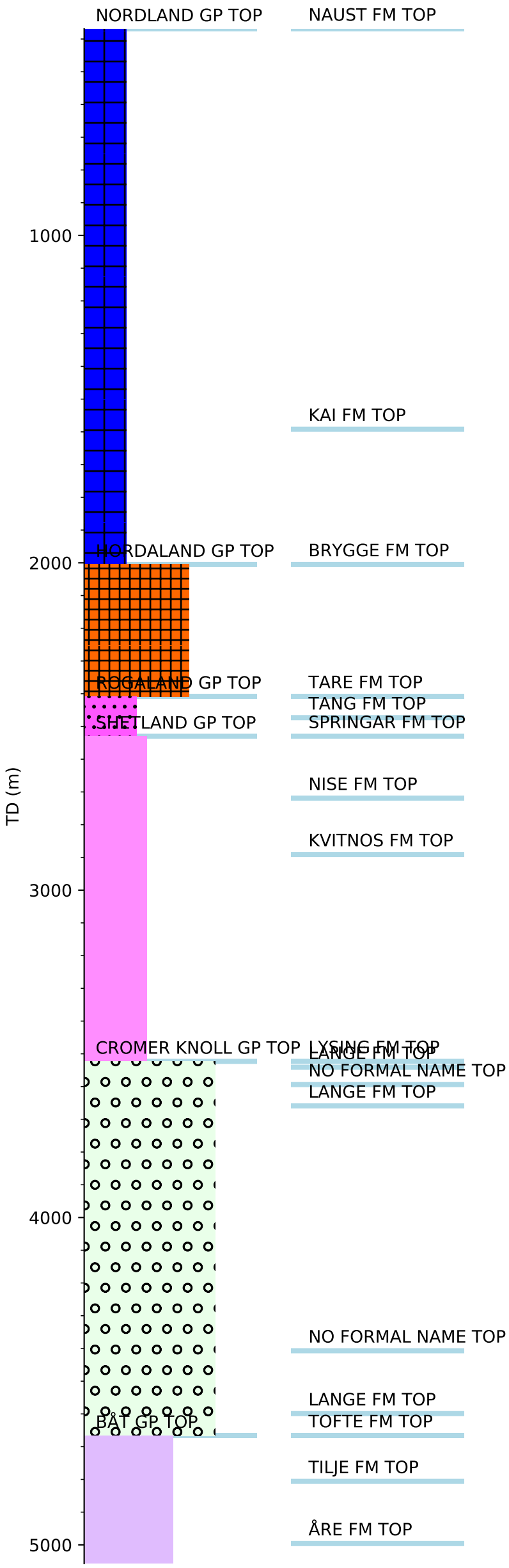

Wellbore History

GENERAL

Well 6406/1-1 was drilled on the Northern segment of the Erlend structure in the Norwegian Sea. The main objective was to test the hydrocarbon potential of the Early Jurassic Tofte and Tilje Formations. Planned TD was 50 m into the Åre Formation.

OPERATIONS AND RESULTS

Wildcat well 6406/1-1 was spudded with the semi-submersible installation Transocean Arctic on 5 April 2001 and drilled to TD at 5057 m in the Early Jurassic sediments of the Åre Formation. The well was drilled using seawater/bentonite to 1443 m, a Glydril mud system through the 17 1/2" section (to 3016 m) and Versapro oil-based mud through the 12 1/4" and 8 1/2" sections to TD.

The well confirmed that the reservoir in this segment is the Tofte and the Tilje formations. The Tofte formation is a dominantly tidal influenced fan/bread delta sandstone unit. The Tilje formation is a more heterogeneous tidal sand/shale formation. Due to almost complete core coverage of the Tofte formation, the petrophysical evaluations are based upon core measurements of porosity and permeability. For the Tilje formation there is no core measurements except some sidewall cores, which gives more uncertainty. Both the Tofte and the Tilje formation have good reservoir quality due to medium to coarse-grained sandstone, extensive chlorite coating and pyrobitumen.

The upper part of Tofte (18m) was found to be gas/condensate filled and the lower part of the Tofte and the Tilje formations were water-bearing. Logs and pressure data gave a gas/water contact (FWL) at 4684.0 m (4659.7 m TVD MSL). Organic geochemical analyses indicated oil stain throughout much of the Tofte sand interval and minor oil stain could also be present in the Tilje and Åre Formation sands. The use of oil-based mud precluded quantification and characterisation of these stains. The well was found thermally immature for hydrocarbon generation to a depth of approximately 3200 m, early mature to approximately 3800 m, mature for oil generation from to approximately 4400 m, and mature for light oil/condensate and wet gas generation below 4400 m. The best source rocks in the well position were found in claystones of the Tilje Formation. These are predominantly gas prone. The Spekk Formation is not present in the well.

Seven conventional cores were cut in the Tofte reservoir from 4666 m in the condensate zone to 4791 m in the water zone. MDT samples were taken in the Tofte Formation at 4679.8 m in the condensate zone, at 4685 m just below the GWC, and at 4780.2 m in the water zone.

The well was permanently abandoned on 10 June 2001 as a gas/condensate discovery well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6406/1-1