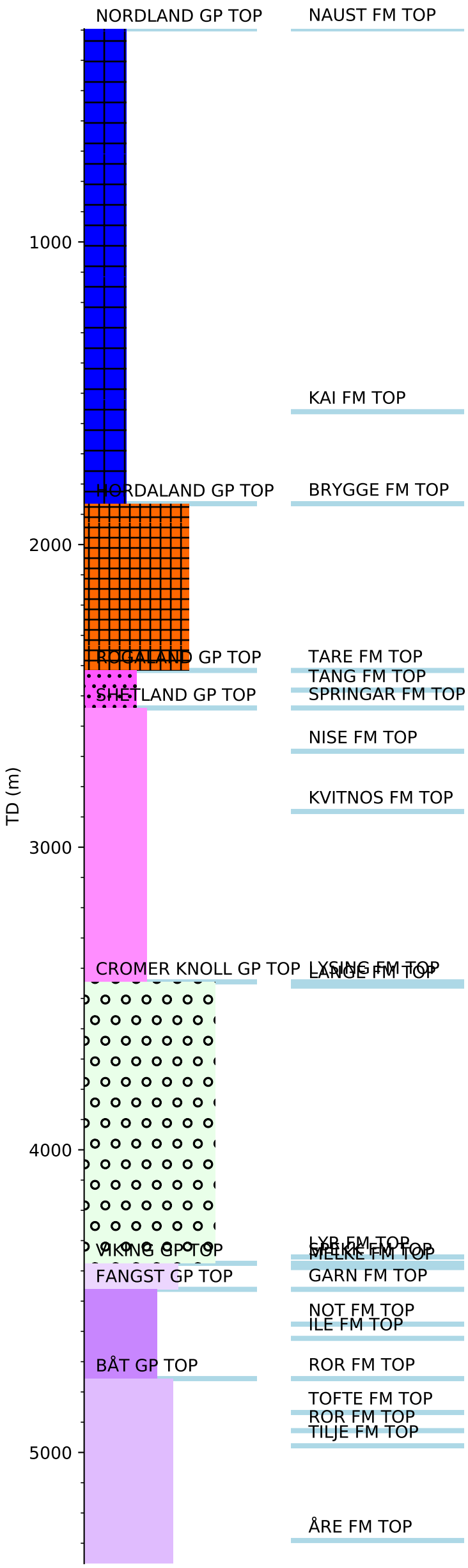

Wellbore History

GENERAL

Well 6406/2-2 was drilled on the B structure (Lavrans discovery) in the eastern part of the block, south of an east-west trending cross fault. The discovery well 6406/2-1 had previously been drilled on the northern segment of the B structure. The cross fault was suspected to act as a pressure barrier between the two segments, causing variation in fluid types. The main objective of well 6406/2-2 was to prove hydrocarbons and verify fluid contacts in the southern segment, which seemed to differ from the northern segment in both the nature and intensity of the seismic amplitudes. An additional objective was to investigate any differences in reservoir development between the two segments.

OPERATIONS AND RESULTS

Appraisal well 6406/2-2 was spudded 12 December 1995 with the semi-submersible installation "Ross Rig" and TD was reached at 5367 m (5351 mTVD) 12 February 1996 in the Åre Formation. The well was drilled water based with bentonite down to 1272 m, with KCl and glycol (ANCO 208) from 1272 to 2858 m, and with oil-based mud from 2858 m to TD. The formation tops were drilled in accordance with the prognosis, and the lithologies drilled were largely similar to those reported from 6406/2-1. The Jurassic succession was encountered 5-100 m deeper than in well 6406/2-1, due to the lower structural position of well 6406/2-2. As in well 6406/2-1, well 6406/2-2 proved the presence of thick reservoir sandstones in the Garn, Ile, Tofte and Tilje Formations. In addition, an 8 m thick sand was drilled in the lower part of the Ror Formation. The reservoir quality showed large variations, with generally poor porosity in the Garn Formation, good porosity in parts of the Ile Formation, generally good porosity in the Tofte Formation, and zones with good porosity especially in the lower part of the Tilje Formation. Other parts of the Ile and Tilje Formations, as well as the sandstone beds in the upper part of the Åre Formation, were tight as a result of silica cementing. Sandy intervals within the Cromer Knoll Group proved to contain thin beds of impure sandstone with poor reservoir quality. As in well 6406/2-1, the reservoir quality of the Jurassic sandstone intervals is highly variable, with zones of good porosity both in the Ile, Tofte, Tilje Formations, and the lower part of the Ror Formation. Twelve cores were obtained from the Garn, Ile, Tofte, Lower Ror and Tilje Formations. A total of 410,2 m was drilled, of which 408,65 m was recovered. Formation multi tester (FMT) samples containing hydrocarbons were obtained from the Ile, Tofte and intra Lower Ror sands. All FMT samples were contaminated with oil-based mud. The rig operations were terminated 27 March 1996 after two production tests and the well was suspended as a gas/condensate appraisal well.

TESTING

Two production tests were performed in the Tofte Formation and the lower part of the Ile Formation. DST 2 gave maximum rates of 1021 000 Sm3/day gas and 557 Sm3/day condensate through a 68/64" choke. The average separator GOR during the 40/64" choke period m DST 2 was 2050 Sm3 /Sm3 at separator conditions of about 41.5 bar and 30 deg C, which is lower than in well 6406/2-1. Hydrocarbons were proven down to 4745 m in the Ile Formation, and down to 4927 m in the Tofte Formation.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6406/2-2