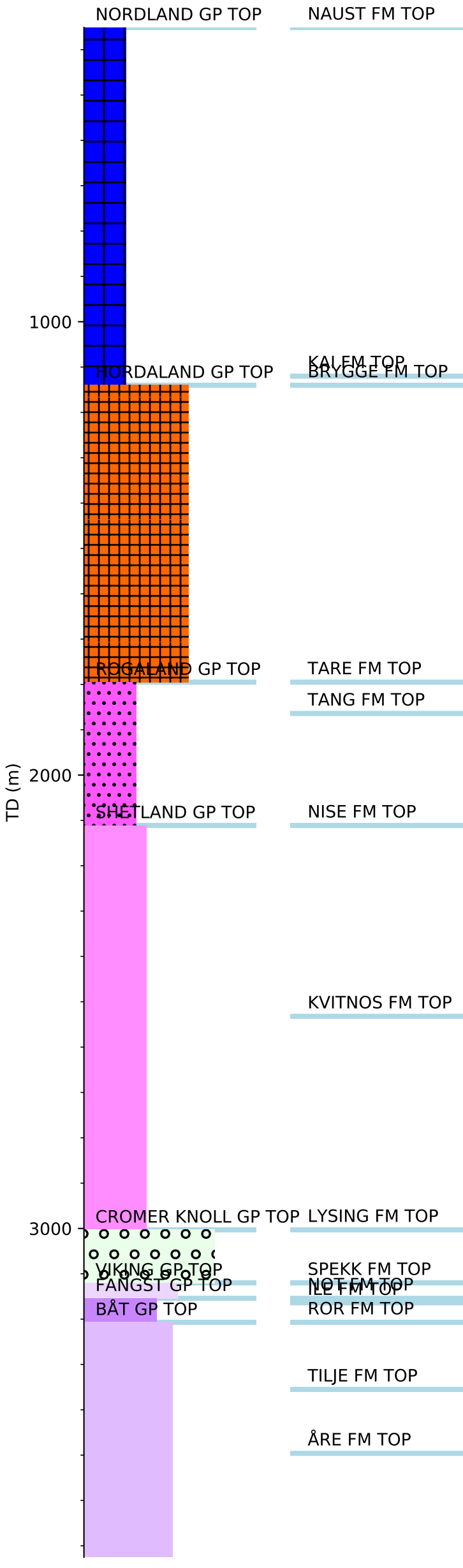
Groups

Formation Tops



Wellbore History

GENERAL

The Njord Field is situated in the southern part of the Haltenbanken area in a down faulted position relative to the Trøndelag Platform and the Frøya High. Oil had been encountered in previous wells on Njord in the Ile, Tilje, and Åre Formations. Well 6407/7-5 is located on the North II fault segment on the North Flank of the Njord structure. The main objectives for the well were to test the resource potential of the Northern Flank, to clarify the number of production and injection wells needed for development, and to verify the reservoir quality and the sealing potential of faults. The pore pressure gradient was expected to be maximum 1.54 rd in the reservoir. Shallow gas warnings were given for 6 levels down to 650 m. Planned TD was 3725 m

OPERATIONS AND RESULTS

Well 6407/7-5 was spudded with the semi-submersible installation Transocean 8 on 15 February 1991 and drilled to TD at 3725 m in Early Jurassic sediments of the Åre Formation. After coring the interval 3168 - 3215m the drilling assembly got stuck when running in the hole. Fishing the drilling assembly failed and the well was subsequently plugged back and side tracked from 3080 m. Indications of shallow gas were found in two of the six warned levels. The well was drilled with spud mud down to 1112 m and with KCl/polymer mud from 1112 m to TD.

The reservoir sandstones of the Ile, Ror and Tilje Formations were found to be water bearing. RFT pressures and one segregated sample indicated very poor permeabilities in the sandstone intervals tested. From the data it was not possible to determine whether pressure communication exists between 6407/7-5 and 6407/7-3.

Sporadic oil shows were recorded on sandstone stringers in the Nise Formation below 2267 m. Weak oil shows were recorded on claystones, limestones and sandstones of the Lysing Formation between 3000 - 3084 m. This interval also had high gas readings with gas peaks up to 10%. Some oil shows were seen on sandstones from 3163.5 to 3274 m in the Ile and Ror Formations. The deepest recorded show while drilling was at 3360 m in the Tilje Formation. Organic geochemical analyses confirmed that migrated hydrocarbons were present in the Cromer Knoll Group, and the Ile and Tilje Formations.

A total of five conventional cores were cut in the well. Fifteen side wall cores were attempted and 5 were recovered. The RFT sample at 3412.8 m recovered only mud filtrate.

The well was permanently abandoned on 15 February 1991 as a dry well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6407/7-5