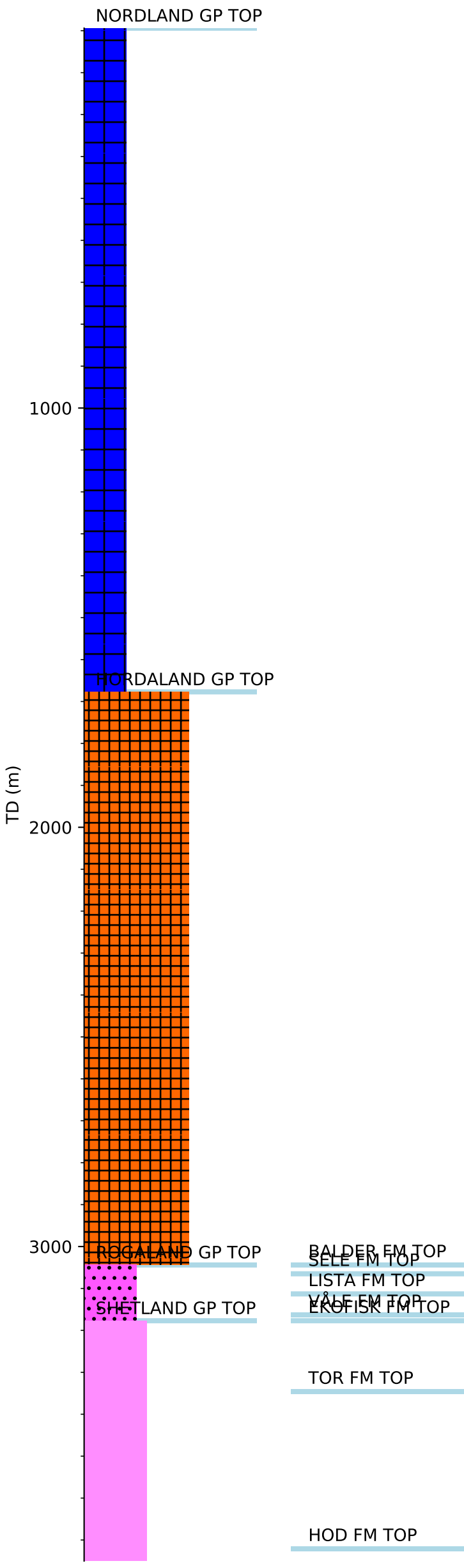
Groups

Formation Tops



Wellbore History

GENERAL

Well 2/8-15 was drilled to test the hydrocarbon potential of the "Noekken" prospect, a low stratigraphic Chalk structure northeast of Valhall, lying between the Mode and the Trud salt domes and the Balder nose to the north. The prospect area has been technically active, with reactivation of faults and movements of the salt (until late Tertiary). The main reservoir objective for the Nøkken prospect was within the Late Cretaceous Tor Formation, the main producing interval in the nearby Chalk fields. Secondary potential was identified within the Ekofisk Formation.

OPERATIONS AND RESULTS

Exploration well 2/8-15 was spudded with the semi-submersible installation "Vildkat Explorer" on 27 November 1995. A technical sidetrack of the well became necessary when a core head twisted off at 3360.5 m. The well was sidetracked at 3183 m and the new well bore was labelled 2/8-15 T2. Well 2/8-15 T2 was drilled to TD at 3750 m in the Late Cretaceous Hod Formation. The well was drilled with seawater/spud mud down to 1099 m, with "ANCO 2000" / KCl / Glycol mud from 1099 m to 2300 m, and with oil based "ANCO VERT" mud from 2300 m to TD.

Top chalk was penetrated at 3177 m. Many of the formation tops came in close to forecast and the three identified possible chalk reservoirs; i.e. the upper and lower Ekofisk leads and the Tor Formation were all found to contain fair to good porosity close to prognosis. Lack of hydrocarbons throughout the well was evident and the porous limestones were 100 % water wet. Pore pressures as determined from the MDT were exactly as prognosed. An MDT sample was attempted at 3407 m without success. A further attempt was made at 3314.5 m in order to get a quality formation water sample. About l litre of OBM distillate filtrate fraction was recovered. This was confirmed using chromatograph-fingerprinting analysis conducted by Geoquest Laboratories. However, virgin water samples were derived from the core enabling12 ion analysis and accurate determination of Rw.

Three orientated cores were cut in the well, all three in the Tor Formation. The first core point was 3360 m. This coring led to the sidetrack operation and only 0.5 m was recovered. Cores two and three were cut successfully (100 % recovery) in the interval 3386 m to 3438.5 m. Onshore geochemical analyses of two core chips at GEOLAB NOR showed that the OBM had invaded the cores. However, the extract from one of the core chips (3404.57 m) gave some weak peaks on the tail of the chromatogram, outside the range of the OBM fingerprint.

The well was permanently abandoned as a dry well on 9 January 1996.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/8-15