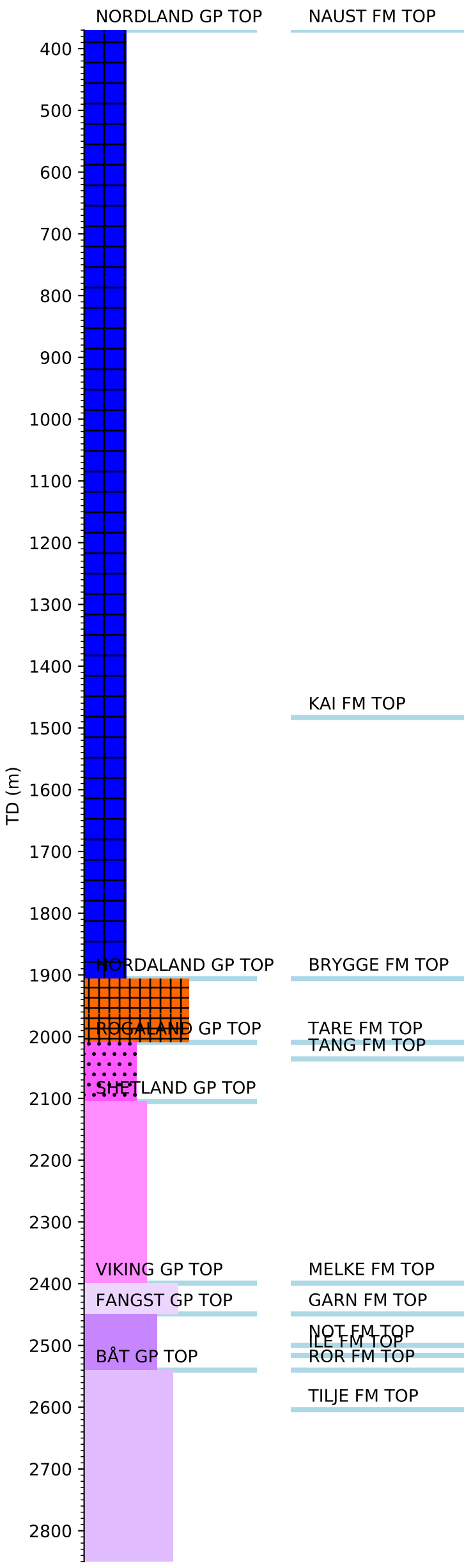

Wellbore History

Wellbore history

GENERAL

Appraisal well 6507/7-4 was drilled in the northern part of the Haltenbanken area, some 190 km west of the Norwegian coast. It was drilled to evaluate the "B" prospect in the intensely faulted zone that lies at the intersection of the Nordland Ridge in the northeast and the Halten Terrace in the south. The prospect was in a southward plunging horst block formed by a Late Jurassic tensional fault system. Well 6507/7-4 was drilled in a down dip position relative to discovery well 6507/7-2 and the prime objective was to establish the oil/water contact in sandstones of the Middle Jurassic Tomma Formation.

OPERATIONS AND RESULTS

Well 6507/7-4 was spudded with the semi-submersible installation Nortrym on 6 November 1985 and drilled to TD at 2850 m in the Early Jurassic Tilje Formation. Due to adverse weather conditions in the first week of operations spudding of the well was made difficult, and 4.5 days were lost as WOW in this phase. Swelling clays (gumbo) caused some problems in the 17 1/2" section. The upper part of the core barrel in core no 3 ruptured, unfortunately exactly in the section around OWC. Otherwise operations proceeded without significant problems. The well was drilled with sea water and gel sweeps down to 1021 m and with gypsum/polymer mud from 1021 m to TD.

The Tomma Formation sandstones (Garn Formation) was prognosed at 2455 m, and encountered at 2449 m. The Garn Formation was found oil bearing. Oil shows were observed on core no 1 from 2444.5 m (driller's depth) down to 2490.7 m. It was described as a uniform strong yellow show with even white cut down to 2463 m when the show became more patchy with streaming cut. When retrieving core no 3 the upper part from 2491 to 2503.6 m of the core barrel ruptured so that the amount and sequence of recovery in this section was made uncertain. But shows were seen in this section and was confirmed by electric logs, DST and very good RFT pressure data, which gave an O/W contact at 2498 m. No oil show was seen below 2503.6 m driller's depth (2509.1 m logger's depth).

Twelve cores were cut from 2435 m down to 2766.40 m with 98.2% recovery. A water sample was taken on wire line at 2525 m.

The well was permanently abandoned on 13 January 1986 as an oil and gas appraisal well.

TESTING

Three drill stem tests were undertaken, all of them testing the oil-bearing sands of the Tomma Formation (Garn Formation). The intervals perforated were 2494-2499 m (DST 1), 2470-2477 m (DST 2) and 2449-2465 m (DST 3). At stabilized conditions with a 152/64 inch choke the maximum production was 6504 BOPD (1032 Sm3 oil/day) with an oil gravity of 29 deg API. Associated gas production was 3217 MCFGPD (91100 Sm3 gas/day) with a gravity of 0.696 at 60 deg F. The average DST temperatures at mid perforation were: 88.6 deg C (DST 1), 87.7 deg C (DST 2), and 87.2 deg C (DST 3).

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6507/7-4