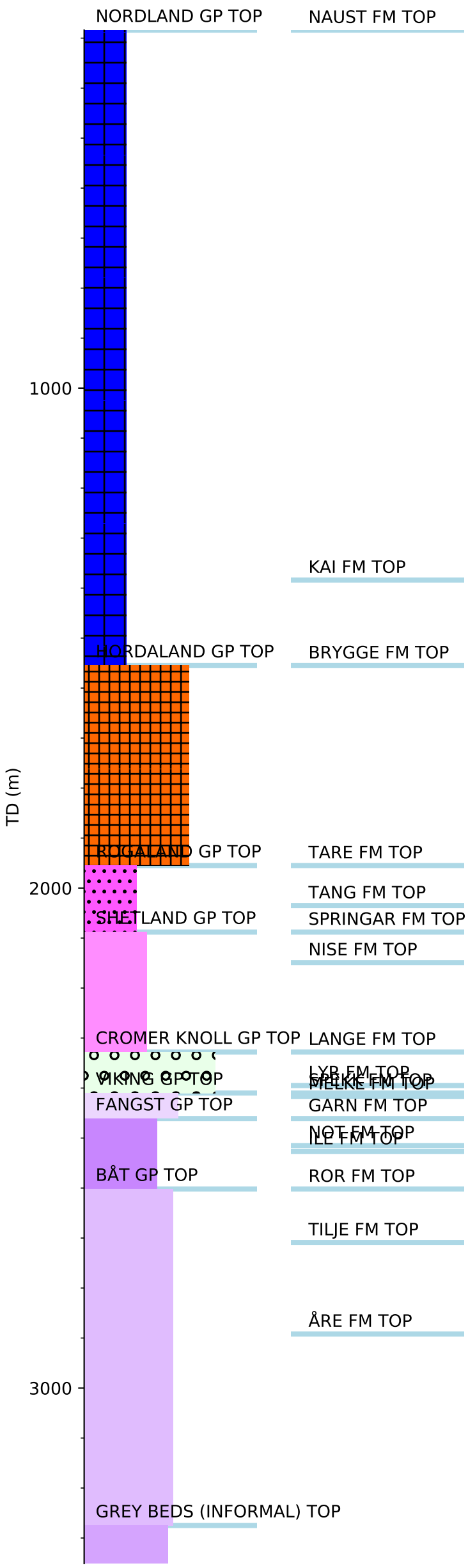

Wellbore History

GENERAL

Well 6407/2-2 is located east on the Halten Terrace off shore Mid Norway. The well tested the southern (Gamma) fault compartment of a horst with true vertical closure below the base Cretaceous level. The gas/condensate discovery well 6507/11-1 was located on the northern (Alpha) compartment of the same structure. The primary target of the well was the middle Jurassic sandstone; secondary target was Early Jurassic sandstone.

The well is Reference Well for the Melke Formation.

OPERATIONS AND RESULTS

Wildcat well 6407/2-2 was spudded with the semi-submersible installation Treasure Saga on 17 May 1983 and drilled to TD at 3351 m, 71 m into the Triassic Grey Beds. After drilling the 26" hole the well was observed flowing and the mud weight was corrected. No other major problems occurred during drilling. After having drilled out of 13 3/8" casing shoe a cement plug was set from 1960 m - 1995 m, and one from 340 m - 400 m, due to temporarily plugging and abandonment of the well caused by strike The strike was efficient (no drilling progress was obtained) for 13 days, from June 6th to June 19th. The well was drilled with spud mud down to 865 m, with gypsum/polymer mud from 865 m to 1995 m, and with lignosulphonate mud from 1995 m to TD.

The well proved mainly claystones down to the Middle Jurassic Sandstone. The Cainozoic with a total thickness of 1809 m overlies the Late Cretaceous where the topmost Maastrichtian is missing. Two hundred and forty meter of Late Cretaceous and 81.5 m of Early Cretaceous is preserved, separated by an unconformity ranging in age from Middle Santonian to Albian. High gas readings were experienced in the upper part of the Cretaceous together with heavier hydrocarbons detected for the first time in the well. A study of wire line logs, sidewalls cores and hole response indicate that the gas was overpressured, and trapped in a non-reservoir lithology. Base Cretaceous unconformity was encountered at 2409.5 m. The upper Jurassic was developed with 11.5 m of hot shales Spekk Formation and 39.5 m of silty claystones of the Melke Formation. As in other wells in the area, the Middle Jurassic Sandstone was divided by a shaly interval into an upper unit of very good reservoir properties (Garn Formation) and a lower unit of less good characteristics (Ile Formation). The upper unit was found to be gas bearing with a gas/water contact at 2516.5 m. All potential reservoir sequences below this depth were water bearing. The Åre Formation "Coal Unit" was 383 m thick and consisted of interbedded carbonaceous claystone/shale, fine sand and silt. It contained a total of 50 m of coals and shale layers.

Twelve cores were cut, all in the Middle Jurassic sequence. Segregated FMT samples were collected at 2486 m (gas), 2512.5 m (gas), 2539.5 m (water), and 2546 m (water).

The well was permanently abandoned on 31 July as a gas/condensate appraisal well on the Midgard Discovery.

TESTING

One drill stem test was carried out in the interval 2476 m to 2484 m in the gas bearing Middle Jurassic Garn Formation sandstone. The test produced 1000000 Sm3 gas /day on a 60/64" choke. The gas/oil ratio was ca 5900 Sm3/Sm3. The liquid petroleum had a density of 0.756 g/cm3 (55.6 deg API).

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6407/2-2