



Wellbore History

GENERAL

Exploration well 25/1-6 is located 12 km southwards of the 25/1-1 well and 6 km south of the Frigg Field boundary. The main objective was a Paleocene seismic structure underlined by a strong discontinuous flat seismic event.

Geological correlations and geophysical studies indicated a detritic sand body belonging to the Heimdal formation. The Cod or Heimdal clay layer could be the closure of this structure. The structurally closed Frigg, Cod, and Danian Sands, and Late Cretaceous chalk were secondary objectives.

OPERATIONS AND RESULTS

Well 25/6-1 was spudded with the semi-submersible installation Pentagone 84 on 26 January 1978 after spending 10 days on the location waiting on weather. No significant problems were encountered during the drilling to TD at 2895 m in Late Cretaceous limestone. The well was drilled with spud mud to 192 m, with CMC/Bentonite from 192 m to 468 m, and with Lignosulfonate/Dextrid mud from 468 m to TD.

The first interval of interest was the Eocene Frigg Formation from 2107 m to 2150. This interval turned out to be shaly with thin sand layers up to 3 meter thick only. Some oil shows were recorded in the sands. In the lower part of the Frigg Formation a core was taken with four thin interbeds of sandstones medium to fine grained and weakly cemented. These sandstones were fluorescent (light yellow) and gave a fluorescent, light yellow extract. Massive Heimdal Formation sand was encountered from 2249 m to 2563 m. The unit has good reservoir characteristics with translucent fine to coarse, subrounded to subangular, mostly well-sorted sand. The porosity of the sandy levels varies from 20 to 25% and net sand thickness is about 226 m. The unit was water bearing. No shows were encountered during the drilling or on the lab. The lower part (2675 m to 2799 m) of the Danian sequence (Ty Formation) was composed of many intercalations of sandy levels and shaly beds. The sandy intervals had poor porosity except from 2752 m to 2758 m and from 2786 m to 2799 m where it reached 15%. The considered "flat event" was due to a velocity contrast between the shales and hard sandstone beds, which marked a lithological change within the Danian formations. The Late Cretaceous chalky limestones were encountered at 2799 m. They were tight (porosity about 5%) and without any shows. No fluid samples were taken in the well. The well was permanently abandoned as dry on 18 March 1978.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/1-6