



Wellbore History

GENERAL

Well 25/2-11 was the second well to be drilled on the East Frigg Gamma structure in the Viking Graben. Seismic anomalies indicated shallow gas in the area. The well was primarily designed to test the reservoir productivity of the Frigg Formation. Secondly to test for possible gas accumulation in Late Oligocene sands which might represent a continuation of the gas-bearing sands encountered in the 25/2-10 well, which due to technical problems had to be abandoned without logging and testing. TD was prognosed to be 2075 m, the Frigg Formation at 1930 m and the Oligocene sands at 1005 m.

OPERATIONS AND RESULTS

Appraisal well 25/2-11 was spudded 20 February 1987 by Golar-Nor offshore semi-submersible rig Nordtrym and drilled to TD at 2075 m in rocks of Eocene age. Due to the seismic anomalies that indicated shallow gas, the well was spudded 100 m north of the original location.

Hard calcite cemented sands were encountered in Miocene where unconsolidated sands were prognosed. This caused 17 extra days of drilling, under-reaming and sidetracking. Top Oligocene was penetrated 20 m below prognosed depth, and top Frigg formation came 20 m below prognosis. Both targets proved to be hydrocarbon bearing. The main hydrocarbon-bearing reservoir encountered in Oligocene was a sand-lense at 1105.5 - 1111.5 m (1079.8 - 1085.8 MSL). Post-well gas chromatographic analyses of core chip extracts from Oligocene (1051 m and 1107 m) showed extensively biodegraded oil. The Frigg Formation oil/water contact was encountered at 1975 m, and gas/oil contact at 1960 m.

Coring commenced from 1950 m to 1986 m with 50% recovery. Three runs to sample the oil from the Oligocene reservoir interval 1105.5 m to 1111.5 m were made by RFT through casing. No hydrocarbons were recovered. A RFT sample from 1967 m in the Frigg Formation recovered mud filtrate with traces of oil.

The well was plugged and abandoned on 10 may 1987 as a gas and oil appraisal.

TESTING

The instability of shales on top of the Frigg formation excluded open hole testing, and a 7" liner had to be set and perforated for testing purposes. Three DSTs were attempted in the interval 1950 m to 1955 m. The two first did not produce but DST3 was successful, producing at maximum 666000 Sm3 gas /day with a 64/64 choke and WHP = 60 bar.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/2-11