



Wellbore History

GENERAL

Exploration well 25/5-5 is located a few km east-southeast of the Heimdal field. The objective was the turbiditic sands of the Heimdal Formation, which is the reservoir for the Heimdal gas field. The Jotun oil discovery (8 km south) and a minor oil discovery on 25/4-2 (5 km north-northwest) are also in Heimdal turbiditic sands. The prognosed TD of the well was 2600 m in the Ty / Våle Formations in case of a discovery, or 2250 m in the Heimdal Formation, in case of a dry well. The chosen location was on the highest structural point of the 25/5-5 closure. Oil with a possible gas cap was the anticipated reservoir fluid

OPERATIONS AND RESULTS

Wildcat well 25/5-5 was spudded with the semi-submersible installation Vildkat Explorer on 27 October 1995 and drilled to TD at 2600 m in the Paleocene Våle Formation. No significant operational problems were encountered in this well and TD was reached in less than 9 days after spud. The well was drilled with seawater and hi-vis pills down to 1206 m and with Safemul oil based mud from 1206 m to TD. Due to the choice of OBM system, the 8 1/2" diameter was drilled in preference to 12 1/4" to minimize mud and cuttings volumes.

Top Heimdal Formation was found at 2158.5 m, 13 m above prognosis. The formation was 334 m thick. The reservoir was oil-bearing, with an OWC at 2176.3 m. There was no recognised gas cap. As prognosed, the reservoir properties were very good. Two cores were cut from 2162.5 m to 2199.75 m in sandstone of the Heimdal Formation. The cored interval was hydrocarbon bearing, with the OWC clearly defined on the lower core. The MDT tool was run to obtain pressure and fluid samples from the reservoir. Pressure depletion from production of the Heimdal Field was confirmed. From the pressure plot some vertical barrier effects were evident in the deeper part of the aquifer zone, below 2206 m. In the upper part of the Heimdal Sand, however, no pressure barriers could be seen. Four sample bottles from 2172.1 m were transported onshore for transfer to PVT bottles. It was confirmed that the sample quality was satisfactory. Two samples from 2160.5 and 2161.6 m plugged during filling, probably due to sand production. To check for hydrocarbon fluid the samples were drained on the rig.

The well was permanently abandoned on 23 November 1995 as an oil discovery.

TESTING

One test was performed in the interval 2158.50 - 2169.50 m in the reservoir. The test produced 428 m3 / day of oil and 15578 m3 /day of gas on 96/64" choke. The GOR was 36.4 m3/m3 with a wellhead pressure of 8.9 bars. The API gravity was near 35 deg.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/5-5