



Wellbore History

GENERAL

Well 25/2-12 was the second hole drilled on an NNESSV-oriented structural height in the northwestern part of the block. Well 25/2-4, which was drilled in 1975 in a more down flank position, found a 21 m gas column and a 48 m oil column in the Vestland Group. The Statfjord Formation was water bearing in 25/2-4, but its position was not optimal on the structure with regards to the Jurassic prospects.

The main objective of well 25/2-12 was to examine the Statfjord Formation higher up on the structure than 25/4-2, including getting more information about the oil and gas discovery in the Vestland Group.

OPERATIONS AND RESULTS

Appraisal well 25/2-12 was spudded 17 July 1988 by Smedvig semi-submersible rig West Vanguard and completed 13 November 1988 at a depth of 4103 m in the Late Jurassic Statfjord Formation. A 17 1/2" pilot hole was drilled from 197- 907 m and then opened to 26". Sand layers were encountered at 214 m and 259 m RKB, and MWD measurements showed no indication of shallow gas. Drilling proceeded without any significant problems down to 1366 m where metamorphic gravel plugged the bit so that it had to be changed. During clean-up of the hole, mud was lost to the sand formation at 890 m to 1000 m. "Lost circulation material" (LCM) was pumped into the well to isolate it. The well was in periods unstable.

The Frigg Formation was water bearing. The gas readings were at times very high (up to 80 %). There was danger of losing the mud in Turonian limestone. Some fractures were observed higher up in the section. There were traces of gas in the limestone. Top Vestland Group came in at 3685.5 m, 112 m deeper than prognosed. The reason for this was assumed to be that the top of the Vestland Group had been faulted. The fluid contact was set to 3701 m. Analysis of this showed that it was a condensate column of 15 m. A total of five cores were cut. Core 1 was a "junk core". Cores 2 & 3 were cut in the Vestland Group and core 4 in the Dunlin Group. Core 5 was for geochemical studies. Core 5 was cut in the Statfjord Formation. RFT fluid sampling at 3697.2 m gave recovered 3.5 l mud filtrate, 1.1 l condensate/oil, and 1.8 Sm3 gas.

When the Statfjord Formation was found water bearing, the NPD permitted EAN to change TD from 4225 m (Triassic) to 4100 m (113 m into the Statfjord Formation). It was plugged and abandoned as a gas/condensate appraisal.

TESTING

One DST test was attempted in the interval 3685.5 m to 3690.5 m, but had to be stopped due to large sand production.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/2-12