



## Wellbore History

### GENERAL

Well 25/5-2 was designed to drill the Frøy structure, which is a NNE-SSW tilted Jurassic fault block located in the northeastern corner of block 25/5. The main objectives of the well were to prove the Southward continuity and extension of the Middle Jurassic reservoir, to determine the OWC in the Frøy Field, to test the productivity in the oil zone, and to test the injectivity in the water zone. The northern extension of the Frøy structure was drilled in 1977 by well 25/2-6 in a down dip position and proved limited oil shows in the Statfjord Formation. Wells 25/5-1 and 25/5-1 A were drilled in 1987 in the central part of the structure, and found oil in the Vestland Group sandstones.

### OPERATIONS AND RESULTS

Wildcat well 25/5-2 was spudded with the semi-submersible rig West Vanguard on 18 April 1989 and completed 4 July 1989 at a depth of 3304 m in the Early Jurassic Drake Formation. Drilling went without problems to 2300 m where the bit became stuck after a wiper trip, and the string was backed off at 2231 m. A technical sidetrack was started from 2103 m. The string entered into the old hole, and a second sidetrack was started from 2070 m. Below the 9 5/8" casing at 3066 m BSX mud, based on seawater with added NaCl and polymers, was used. The MWD measurements showed no indication of shallow gas. The Vestland Group, Hugin Formation, came in at 3186 m, 67 m deeper than expected. Hydrocarbons were encountered at the top reservoir with the oil water contact at 3198 m (3176 m TVD MSL), which is 50 m deeper than the estimated OWC in well 25/5-1 A. Still, RFT Pressure measurements in the oil column indicate pressure communication with the oil column in well 25/5-1. A total of 4 cores were cut down to 3226 m. The well was plugged and abandoned as an oil appraisal well.

### TESTING

Two drill stem tests where performed. Test 1 was a production and injection test in the Middle Vestland Group water zone from 3222 m to 3228 m. In the first attempt, DST 1A, scaling precipitated and blocked the jet pump when seawater came in contact with formation water. In the second attempt, DST 1B, injection was achieved using treated seawater. Test 2 was a production test at the oil/water contact in the interval 3196 m to 3201 m. This interval produced water and oil at maximum rates 56 m3/day and 202 Sm3/day, respectively. The oil was produced with a GOR of 168 Sm3/Sm3.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/5-2