



GENERAL

The 34/12-1 Afrodite well was drilled in the northern Viking Graben in the North Sea. The Afrodite structure is a horst block of Jurassic age bounded by north-south trending faults. The main purpose was to test the Middle Jurassic Brent Group and Cook sandstone of the Dunlin Group for hydrocarbons. The primary target was the Brent Group sandstones with the Cook sandstone as the secondary target. The well was classified as high temperature/high pressure (HTHP).

OPERATIONS AND RESULTS

Well 34/12-1 was spudded with the semi-submersible installation Transocean Leader on 30 April 2008 and drilled to TD at 4713 m in the Early Jurassic Cook Formation. A pilot hole was drilled prior to drilling the 26" hole to check for shallow gas. No shallow gas was encountered. The well was accidentally sidetracked at 1391m when drilling out a cement plug. The plug had been set as a barrier in the well to allow the BOP to be pulled for repair. The well was drilled with spud mud down to 1261 m, with Ultradril mud from 1261 m to 3210 m, and with Paratherm oil based mud from 3210 m to TD.

The primary target Brent Group was encountered at 4320.8 m. The Brent Group comprised 52 m of net pay gas condensate bearing sandstones of 13% average porosity. No HC water contact was found. The secondary target Cook sandstones encountered at 4740 m were water wet. High background gas and gas peaks were observed when drilling through the Brent Group. Shows on cuttings and side wall cores from the Brent Group and Cook Formation were very weak and indistinguishable from the cut due to oil based mud. The average permeability in the Brent Group reservoir was low with an average below 0.1 mD. The low permeability was mainly caused by the presence of illite.

No cores were cut in the well due to technical problems. MDT Pressure points showed that reservoir pressure is more than 30 bar higher in the Dunlin Group than in the Brent Group reservoir pressure, proving that there is no communication between the Brent Group and the Dunlin Sandstones. No fluid samples were taken on MDT.

The well was permanently abandoned on 30 April 2008 as a gas/condensate discovery.

TESTING

The Brent Group was perforated on the intervals 4321- 4330 m and 4346 - 4356 m. The total amount of fluids recovered at surface was 21.5 Sm3 of condensate, and the gas rate was in the range of 210000 - 230000 Sm3/day with a maximum reading of 293000 Sm3/day on a 40/64" choke. The GOR was 6600 Sm3/Sm3 and the oil density was 0.78 g/cm3. The reservoir temperature interpreted from the test was 150 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/12-1