



## Wellbore History

### GENERAL

Wildcat well 7121/4-2 was drilled on a structure separate from and North of the Snøhvit Field in the Hammerfest Basin. The main objective was to test possible hydrocarbon accumulations in Middle to Early Jurassic sandstones. Prognosed TD was at 2800 m in rocks of Triassic age.

### OPERATIONS AND RESULTS

Wildcat well 7121/4-2 was spudded with the semi-submersible installation West Vanguard on and drilled to TD at 2800 m in the Late Triassic Fruholmen Formation. Drilling proceeded without significant problems to 2460 m, in the middle of an Oxfordian shale, where cavings caused some tight spot problems while setting casing. Rough weather caused some delay in the drilling schedule. The well was drilled with bentonite spud mud down to 417 m, with pre-hydrated bentonite from 417 m to 900 m, with gypsum/lignosulphonate from 900 m to 2455 m, and with lignosulphonate from 2455 m to TD.

Reservoir top, Stø Formation, was encountered at 2480 m. RFT tests, samples and log responses indicated gas down to a gas/water contact at 2517 m. The gas zone consists of an interbedded sandstone/shale sequence with fair/poor reservoir properties. Fluorescence and cut was recorded throughout the cored section, which included the reservoir section. In addition oil stain was seen on a core from 2541.5 m to 2551 m. There was also a small gas zone at 2701.5 m to 2705 m in the Tubåen Formation. Chromatographic analysis showed a significantly drier gas here than in the main reservoir. Triassic, Rhaetian age sandstone was encountered from 2737 m to TD. Basement was not seen. Seven cores were cut in from 2463 m in the Fuglen Formation to 2597.5 m in the Nordmela Formation. The recovery was 134.3 m. Segregated RFT samples were taken at 2485.5 m (gas/mud filtrate and water/trace condensate), 2516 m (gas/mud filtrate/water), 2526 m (mud filtrate/water/trace gas), and at 2701.7 m (gas with small amount of mud filtrate and water).

The well was permanently abandoned as a gas and condensate discovery on 14 April 1985

### TESTING

One drill stem test was performed. The interval 2484 m to 2493 m was perforated and production tested. During the main flow period the test flowed 866900 Sm<sup>3</sup> gas and 77.5 Sm<sup>3</sup> condensate pr day through a 24.5 mm choke. This gives a GOR of 11186 Sm<sup>3</sup>/Sm<sup>3</sup>. Condensate density was 0.769 g/cm<sup>3</sup>. The CO<sub>2</sub> and H<sub>2</sub>S contents in the gas were measured to 3.0 % and 1.7 ppm, respectively.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7121/4-2