



Wellbore History

GENERAL

Well 7119/12-1 was the first exploration well to be drilled in the Barents Sea. It was placed on a horst block forming the upper part of the seismic closure 7119/12-1 Alpha structure. The well was designed to gather information about the hydrocarbon potential of the Troms I area, specifically to test hydrocarbon potential and reservoir rock quality of 7119/12-Alpha. The primary target was sandstone of middle Jurassic age. Secondary targets were Early Jurassic and Late Triassic sandstones. Planned TD was into rocks of probable Triassic age at an estimated depth of 3500 m.

OPERATIONS AND RESULTS

Wildcat well 7119/12-1 was spudded with the semi-submersible installation Ross Rig on 14 June 1980 and drilled to TD at 3088 m in Early Jurassic Stø Formation. Two major problems were encountered in the drilling phase of the well. The first one concerned boulders while drilling 36" hole, causing low ROP and the hole caving in. The second problem was the combination of junk in hole and a very hard, well-cemented sandstone at 2654 m causing heavy bit wear. On 13 July drilling was interrupted by a 38 days strike. Due to a late start-up and the strike, and as drilling season ended on 1 October, no test could be performed. The well was drilled with spud mud down to 615 m and with bentonite / lignosulphonate mud from 615 m to TD.

Top reservoir, Stø Formation, came in at 2658 m. Logs, RFT samples, and shows on cores and cuttings proved oil in the reservoir. The reservoir properties were however poor, with only 18,5 m net sand out of 430 m, and a moderate 13.6% average porosity in the net sand. Six RFT runs were conducted from 2658 m to TD. Out of a total of 73 pressure tests attempted only 15 pressure points were obtained due to tight formation. The pressure gradients obtained corresponded to 0.92 to 0.95 g/cc. Both logs and RFT showed that the OWC had not been reached. Repeat Formation Test (RFT) segregated fluid samples were collected at 2659 m, 2706 m, 2721 m, 2764 m, and 2775 m. All samples except the 1-gallon chamber from 2659 m were bled off on the rig at atmospheric pressure. On-rig analyses proved no or only traces of hydrocarbons in all samples. The 1-gallon sample from 2659 was opened and analyzed on-shore and contained mud filtrate with a film of hydrocarbons on top. Fourteen conventional cores were cut in the reservoir zone from 2667 m to 3002 m with a total of 164 meter recovered.

The well was permanently abandoned on 10 October 1980 as a well with oil shows.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7119/12-1