

Wellbore History

GENERAL

Well 7119/12-2 is located in the Troms I area in the southwestern part of the Hammmerfest Basin. It was designed to test possible hydrocarbon accumulations in a seismic closure (Zeta-structure) in the southeastern part of the block. The primary objective of the well was sandstones of Middle Jurassic age. Secondary objectives were clastics of lower Jurassic and Upper Triassic age.

OPERATIONS AND RESULTS

Wildcat well 7119/12-2 was spudded with the semi-submersible installation Ross Rig on 16 April 1981 and drilled to TD at 1902 m in the Late Triassic Fruholmen Formation. Boulder clays in the top 36" hole caused low rate of penetration and considerable difficulties in setting the 30" casing. Gas sands were encountered in the interval from 404-410 m. The 20" casing was set above this sands instead of the planned setting depth at 600 m. Due to high gas readings and increasing pore pressure, the drilling below 20" casing could not continue to planned 13 3/8" casing depth. Hence a 16" liner was set at 590 m. While underreaming below the liner, the underreamer failed to close and consequently could not be pulled to surface. The underreamer was left in the hole and the well sidetracked at 1215 m. The well was plugged back and the BOP-stack pulled when gas bubbles were observed coming out of the wellhead. To cure this problem the BOP-stack was installed again and previously set cement plugs drilled out to 275 m. A packer was set inside the 20" casing at 273 m and no more gas was seen coming from the well head. The well was then plugged back and abandoned. The well was drilled with spud mud down to 394 m and with gel/lignosulphonate/seawater from 394 m to TD.

Middle Jurassic to Late Triassic sandstones with good reservoir properties were encountered from 1372 m to TD. Drill cuttings and extensive coring had oil shows throughout, but RFT pressure gradients as well as logs and DST proved 100% water saturation. The oil shows therefore proves residual oil. A segregated sample was taken at 1617.5 m. Both chambers were checked at surface and found to contain formation water contaminated by mud filtrate. The 2 3/4-gallon chamber had an opening pressure of 200 psig, less than 1 cuft of gas was bled off. The 1-gallon chamber had an opening pressure just slightly above zero and no gas was bled off. A total of 20 conventional cores were cut in Middle to Early Jurassic. Six were cut in the interval 1378.5 m to 1433.5 m and 14 in the interval 1473 m to 1690.5 m.

Well 7119/12-2 was permanently abandoned on 26 June 1981 as a dry with oil shows.

TESTING

A standard drill stem test was performed from the interval 1395 m to 1415 m in the upper part (Stø Formation) of the Middle Jurasssic sandstones. The test flowed 33 barrels of water of which 22 barrels were estimated to be formation fluid. The remaining being cushion water.