



Wellbore History

GENERAL

The wildcat 7117/9-1 was the first well to be drilled in the western part of the Troms I area. It is located on the western margin of the Tromsø Basin close to the Senja High. The primary objectives of the well were to test two possible sandstone reservoirs of assumed Late Cretaceous age. Flat spots indicating fluid contacts were noted in each of these two target horizons. A secondary objective was to test sandstones of assumed Middle to Early Jurassic age. Planned TD was 2500 m in sediments of Triassic age.

OPERATIONS AND RESULTS

The location survey showed the area to be covered with iceberg scars with depths from 1 m to 10 m. The dominant direction of these scars is ENE-WSW and most of them are filled with sand and silt. The quaternary sediments were about 280 m thick and layered in three main zones. There were no indications of shallow gas in the area.

Exploration well 7117/9-1 was spudded with the semi-submersible installation Treasure Scout on 20 April 1982. Due to excessive hole deviation while drilling to 303 m the rig had to be moved to respud the well on 24 April. In this attempt high torque in extremely hard top layers caused the drill string to twist off at 299 m. The third hole was spudded on 30 April. The drilling progressed without further problems. The last section was drilled with 8 3/8" bit and the well reached TD at 3200 m in Early Cretaceous (Middle Albian to ?Aptian) clay stone. The well was drilled with seawater and hi-vis pills down to 348 m, with seawater/bentonite from 348 m to 817 m, and with gypsum / lignosulphonate from 817 m to 1220 m. From 1220 m the mud was changed to a gel lignosulphonate system as the reactive clays disappeared and the rest of the well was drilled with this mud system.

The more shallow of the two Late Cretaceous target reservoirs was found to be a low velocity clay stone interval of Paleocene age, between 1277 m and 1328.5 m. The flat spot (at 1.4 sec TWT) could be due to horizontal bands of amorphous silica (chert) within the claystones, as seen in the core cut between 1355 m and 1370 m. The deepest of the Late Cretaceous targets turned out to be a Paleocene clay stone interval without reservoir properties. The flat spot (at 1.7 sec TWT) was not seen on wire line logs or as a change in lithology. It may reflect a similar feature as the one at 1.4 sec, but no core was taken in this interval to support this. The secondary objective interpreted as Middle to Early Jurassic sediments were found to be Cretaceous silty claystones at 1903 m, dated as Cenomanian to Albian. Three sandstone intervals were encountered in the upper part of the well. Thin Pliocene sandstone beds, 2-4 m thick were encountered in the interval 840-870 m. 11 m thick Pliocene sandstone was penetrated between 1026-1037 m. In Oligocene to Eocene a net sandstone thickness of 46 m was encountered in the interval 1139 m to 1196 m. These sandstones were all water bearing and no structural closure was mapped at these levels. The seismic reflector originally interpreted as top Jurassic proved to be an unconformity at base Paleocene level and is seen on logs at 1809 m. Another unconformity, at Cenomanian level, is evident on the logs at 1875 m.

In a few cuttings samples between 2310 and 2475 m (Cenomanian ? Albian) traces of very poor shows were reported from siltstones and rare sandstones. These shows were described as generally no direct fluorescence except for a trace of yellow white fluorescence at 2395 m and 2408 m, trace to 20% slow to fast streaming, bluish white to yellow white fluorescence cut. No visible cut or residue was detected. There was no increase in ditch gas recordings associated with these shows, which are rated very poor. One core was cut from 1355 m to 1370 m. No fluid sample was taken.

The well was permanently abandoned on 16 July 1982 as a dry hole.

TESTING

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7117/9-1