



Wellbore History

Wildcat well 6306/5-1 was drilled ca 190 km West of the town Trondheim, on the Klakk Fault Complex, which forms the border between the Frøya High and the Møre Basin. The two main objectives were to test the hydrocarbon potential of two Palaeocene prospects: the Eirikson prospect and the Nansen prospect. When drilled these prospects were prognosed as the Heimdal Formation sandstone and a new informal "Skalmen Formation sandstone", respectively. Only the Skalmen Formation was confirmed by the well. Later this formation has been encountered in other wells in the area as the (informal) Egga Formation.

OPERATIONS AND RESULTS

Wildcat well 6306/5-1 was spudded with the semi-submersible installation Deepsea Trym on 8 June 1997. Operations went without significant problems down to the 8 1/2" section. This section was drilled from 1300 m to 1751 m, top of the Egga reservoir. This was found to be significantly over pressured and a large gain was taken. The well was shut-in and steps were taken to kill the well. The operation was complicated by the discovery that the pipe was stuck. The string was finally cut at 1477 m, and a cement plug was set to be used as kick-off plug for a sidetrack around the fish. The sidetrack was kicked off at 1365 m and drilled to TD at 2050 m in the Late Cretaceous Kvitnos Formation without further problems. The well was drilled with bentonite and seawater down to 1001 m and with ANCO 2000 mud from 1001 m to TD.

No shallow gas or boulder beds were encountered in the uppermost well section. The well penetrated mainly clays and claystones in the Nordland, Hordaland and Rogaland groups with minor sands developed and limestone stringers present. The prognosed Heimdal Formation sands were not present. Top Egga sand was reached at 1751 m and was 12 m thick. The lithology of the Egga sand was mainly a clean sandstone divided in two by a calcareous clay stone. Top of the Egga reservoir was re-penetrated in the sidetrack at 1750 m, consisting of an upper clean sand, a shaly unit, and a thin lower sandstone bed that continued down to top Shetland Group at 1762 m. The Shetland Group consisted mainly of claystone and siltstone with minor dolomites. There were no oil shows recorded in this well. Post well organic geochemical analysis indicated mainly biogenic gas down to approximately 1650 m. Below this depth the gas was a mixture of migrated thermogenic and shallow generated biogenic/diagenetic gas. Hydrogen Index (HI) suggested fair gas and oil prone shales present in both the lower Hordaland Group and lower Tang Formation. All Formations penetrated were however immature in well position. One conventional core was cut in the Early Palaeocene Egga reservoir sand from 1757 m to 1775 m. Only 5.1 m (28.3%) was recovered. Two segregated MDT samples were taken in the Egga sand at 1755.8 m (1728.1 m TVDSS). The contents were water, mud filtrate and gas.

The well was permanently abandoned on as a minor gas discovery.

TESTING

No drill stem test was performed in the well.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6306/5-1