



**Wellbore History**

**GENERAL**

The objectives of drilling the Sturlason 35/1-1 well were to test the hydrocarbon potential of the Jurassic Cook and Statfjord Formations and the Triassic Lunde Formation in the Marflo Ridge structural complex located northeast of the Tampen Spur. The well location was designed to test a significant hydrocarbon column height that would potentially spill into additional fault blocks without leaving commercial reserves up dip. The location should further, if possible, evaluate Paleocene potential without compromising the Mesozoic target.

**OPERATIONS AND RESULTS**

Exploration well 35/1-1 was spudded with the semi-submersible installation Deepsea Bergen on 28 May 2002 and drilled to TD at 4540 m.

Site survey and gravity coring showed that the shallow geology at the well site consists of soft, silty clay down to 16-18 meters below the seabed. A flat topography is interspersed by frequent pockmarks (seabed depressions). These pockmarks are up to 100 meters in diameter and up to 5 meters deep and are scattered throughout the survey area. The closest pockmark is 50 m south of the 35/1-1 location. Pockmarks are believed to have formed as a result of fluid or gas escape originating in or beneath the soft surface sediments.

The well was drilled with seawater and bentonite sweeps down to 878 m, with KCl brine/Glydril from 878 m to 2245 m, and with Versaport oil based mud from 2245 m to TD No shallow high-pressured water pocket was encountered in the 35/1-1 drilling operation.

No producible hydrocarbons were encountered in the well. The well did not encounter any potential reservoir in the Paleocene interval. All three potential reservoir intervals were evaluated by MWD/LWD log and open hole wire line data. In the 8 1/2" hole section sidewall cores were collected and one run was performed using Schlumbergers Modular Formation Dynamics Tester (MDT) for pressure measurements and fluid sampling. The MDT tool was configured with 2 x 1 gallon chambers and 6 x 450 cc bottles for pressurized samples. Fluid samples were collected at 4043.12 in the Cook Formation, and at 4471 m and 4322.27 in the Statfjord Formation. The CPI made from the wire line log data indicated the presence of small amounts of residual hydrocarbons. Additionally, the sidewall cores and MDT samples contained traces of hydrocarbons. However, geochemical analyses showed that only the MDT sample from the Cook Formation contained trace hydrocarbons that could represent migrated petroleum. The hydrocarbons in the other samples were from the oil-based mud. It should also be noted that the potassium in the KCL/Glycol mud system masked the natural gamma ray readings of the formation in the 17 1/2" section and affected the CDR resistivity resulting in a useless LWD log. Conventional cores were not cut not in this well.

The well was permanently abandoned on 18 July 2002 as a dry hole.

**TESTING**

No drill stem test was performed

**LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/1-1**