



Wellbore History

GENERAL

Well 6506/11-9 S tested the Cooper Prospect on the Halten Terrace in the Norwegian Sea between the Morvin and Smørbukk Fields. The primary objective of the well was to test the hydrocarbon potential of the Middle and Early

Jurassic Fangst and Båt Groups, specifically the Garn and Ile Formations. The Early Cretaceous Lysing and Intra Lange Formations were regarded as secondary targets.

OPERATIONS AND RESULTS

Wildcat well 6506/11-9 S was spudded with the semi-submersible installation West Alpha on 9 May 2012 and drilled to TD at 5330 m (4972 m TVD) in the Early Jurassic Åre Formation. The well path assumes an 'S' shape and the surface location was purposely offset from the target to avoid locating the rig in an area of cold-water corals. The well was drilled with KCl water based mud down to 1170 m, with Versatec oil based mud from 1170 m to 2130 m, and with Versatherm oil based mud from 2130 m to TD.

Hydrocarbon recognition was partly masked by oil based mud but significant heavy hydrocarbon gases and moderate to strong shows were observed in the relatively thin, interbedded sandstones of the Lysing Formation between 3516 and 3594 m. Hydrocarbon shows were observed also in Intra-Lange sands. The reservoirs in both Lysing and Lange was fragmented, with a low reservoir nett to gross ratio. The Garn Formation was encountered at 4716 m. Good hydrocarbon shows were encountered in the Garn Formation and on the cores in the Upper Ile Formation down to 4828 m, but pervasive secondary silica cementation resulted in extensive permeability destruction in the Garn Formation. The Tofte and Tilje Formations were interpreted as being water wet.

Two conventional cores were cut sequentially in the Garn and underlying Not Formations. A further three cores were taken in the Ile Formation, based on indeterminate shows. One core was cut in the Tilje Formation, based on hydrocarbon shows that were subsequently interpreted as being due to recirculated hydrocarbons from the overlying oil bearing horizon. MDT fluid samples were taken at 4765 m (contaminated oil), 4767 m (oil, water and filtrate), 4831 m (water), and 5246.7 m (water).

The well was permanently abandoned on 3 September 2012 on as a dry well with shows.

TESTING

The 7" liner was perforated over the entire Garn Formation from 4718 m to 4780 m and an attempt was made to perform a DST. The well failed to flow during the DST and the decision was made to abandon further testing, due to tight reservoir.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6506/11-9 S