



Wellbore History

GENERAL

Well 16/4-2 was the second well on the block and last commitment well for license 087. The well is located in a central position on the structure, close to the western border of the block. The main target was sands of Middle Eocene age supposed to be present within a mounded seismic sequence that constitutes the eastern part of the Alpha prospect in the Sleipner Field. The primary objective of the well was to prove oil in the Eocene sandstones. Secondary objectives were to confirm the seismic interpretation and the geological model for the Eocene sand; to test a possible small closure at top Heimdal Formation level; to obtain additional information on migration paths in the area; to confirm the seismic interpretation of the basal Cretaceous/ Late Jurassic sequence; and to test the hydrocarbon potential of possible Late Jurassic sand accumulations. Shallow gas could be expected at 537 m. This corresponds to the level of the blowout in well 16/4-1. A possible shallow gas content could occur in a thin sand layer at 685 m, which was correlated from well 16/4-1.

OPERATIONS AND RESULTS

Wildcat well 16/4-2 was spudded with the semi-submersible installation Vildkat Explorer 29 June 1990 and drilled to 3117 m in Intra Draupne Formation sandstones. No shallow gas was encountered in the well; the gas zones were drilled with riser and mud weight 1.22 rd to control the gas. The well was drilled with seawater and hi-vis pills down to 1710 m and with KCl Polymer mud from 1710 m to TD. Drilling went without any significant problems apart from the 13 3/8" casing getting stuck at 1450 m. To resolve this problem diesel EZ pills were used in the well bore. This affected gas readings throughout the well below 1710 m and gave some spuriously high readings. The 13 3/8" casing shoe was finally set at 1683 m, and the casing cemented. The Eocene Grid formation sandstone came in at 1913 m, approximately 88 m deeper than prognosed. No hydrocarbons were recorded. The Heimdal formation sandstone came in at 2415 m, approximately 110 m deeper than prognosed. No hydrocarbons were recorded. Late Jurassic sands (Intra Draupne Formation) were also developed, but no hydrocarbons were recorded. The only hydrocarbons observed were some weak shows in claystones of the Draupne Formation. One core was cut in the interval from 1920 to 1927 m in the Grid Formation with 88.6 % recovery. A total of 60 sidewall cores were attempted in one run from 1750 to 3113 m, whereof 50 were recovered. No fluid samples were taken. The well was permanently plugged and abandoned 29 July 1990 as a dry well.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/4-2