



Wellbore History

GENERAL

The objectives of well 16/1-5 were to prove hydrocarbon reserves in the Upper Jurassic (Oxfordian - Ryazanian) shallow marine sandstone as well as in the Middle Jurassic shallow to marginal marine sandstone. The well was also planned to provide a good stratigraphic tie to the Paleocene interval and test the possibility for Paleocene sands. A high amplitude at around 2070 ms TWT was also meant to be clarified with this well. The objective of the 16/1-5A sidetrack was to prove hydrocarbon reserves in an Upper Jurassic shallow marine sandstone, up-dip from the hydrocarbon shows that were recorded in well 16/1-5.

OPERATIONS AND RESULTS

The main well, 16/1-5, was spudded and drilled with a water based mud to a total depth of 2460 m RKB. Both the Upper Jurassic sandstone, the Heather Formation "Sandstone Unit", and the Middle Jurassic Hugin Formation were encountered. Both sandstone sequences were water bearing, but oil shows were recorded in the upper 3 meters of the Heather Formation. A good stratigraphic tie to the Paleocene interval was established by the well, but no Paleocene sands were encountered. The high amplitude, observed on the seismic data at approximately 2070 ms TWT, most probably stems from the acoustic impedance contrast between the Heather sandstone - siltstone boundary and/or the Heather - Hugin boundary. No Permian sediments were encountered, with a stratigraphic succession going directly from Jurassic sediments into the Basement. Well 16/1-5 was terminated 194.5 m TVD into the Basement. Three cores were cut in the interval 2023 to 2066 m RKB in the Heather Formation. An FMT sample from 2024.5 m contained formation water and filtrate. The well was classified as dry. The sidetrack, 1671-5 A, was kicked off at 1440 m RKB and a 8 1/2" hole section was drilled to a total depth of 2150 m with no casing strings run. Oil based mud was used from kick off to TD. The well encountered the Heather Formation "Sandstone Unit" close to prognosis. Moderate hydrocarbon shows were recorded in the thin, Cretaceous limestone sequence above the Heather Formation as well as in the upper 8 meters of the Heather Formation sandstone. The sidetrack was terminated 24 m TVD into the Heather Formation where a core was cut from 2123 m RKB to TD. No wire line logs were run and the well was permanently plugged and abandoned.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/1-5 A