



Wellbore History

GENERAL

Well 6406/12-5 S was drilled to test the central part of the Boomerang prospect on the Halten Terrace in the Norwegian Sea. The primary objective was to establish the presence and volume of moveable hydrocarbons in Intra Spekk and Melk formation sandstones

OPERATIONS AND RESULTS

Wildcat well 6406/12-5 S was spudded with the semi-submersible installation Transocean Arctic on 22 September 2015 and drilled to TD at 4297 m (3734 m TVD) m in the Late Jurassic Melke Formation. After drilling top hole to 433 m a 9 7/8" pilot hole was drilled to 1134 m to investigate possible shallow gas intervals in the Nordland Group. No shallow gas or over-pressured water bearing zones were observed. In the 8 ½" section the string got stuck at 4107 m and after pulling free it was discovered that most of the bit body was lost in hole. Consequently, the hole was side-tracked from 3937 m and drilled without further significant problems to TD at 4297 m (3734 m TVD) in the Late Jurassic Melke Formation. The well was drilled with seawater and hi-vis pills down to 1225 m and with XP-07 oil-based mud from 1225 m to TD.

Top Spekk Formation was reached at 3741 m (3192.3 m TVD) and consisted of laminated mudstone overlying a thin sandstone with moderate reservoir quality resting on a 140 m thick unit of mainly silty to fine-grained sandstones with a shaly upper part. Top of the Melke Formation was reached at 3920.5 m (3347.8 m TVD) and is followed by 218 m TVD of intra Melke sandstones of moderate quality with top at 3962 m (3384.3 m TVD). Petrophysical interpretation showed that reservoir porosities in the intra Spekk and Melke sandstones were good ranging from 8 to 20 % with permeabilities of up to 1200 mD based on sidewall core analyses. The pressure data indicate communication across the Spekk and Melke Formations reservoirs with a near hydrostatic gradient. The only oil shows observed during drilling was cut fluorescence and residual fluorescent ring on cuttings in the interval 3966 to 3978 m in the uppermost part of the Intra-Melke sandstone.

No cores were cut. An MDT water sample was taken at 3965.5 m.

The well was permanently abandoned on 12 November 2017 as a dry well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6406/12-5 S