



Wellbore History

GENERAL

The 6406/12-3 S, 6406/12-3 A, and 6406/12-3 B wellbores were drilled in concert on the Pil and Bue prospects in the southern end of the Halten Terrace in the Norwegian Sea. The 6406/12-3 S was the first well to be drilled. It was designed to test a seismic data anomaly and a flat spot recognised in the Pil prospect, at Late Jurassic level.

OPERATIONS AND RESULTS

Wildcat well 6406/12-3 S was spudded with the semi-submersible installation Transocean Arctic on 21 January 2014 and drilled to TD at 4001 m (3762 m TVD) in the Late Jurassic Melke Formation. A 9 7/8" pilot hole was drilled from 418 to 1246 to check for shallow gas. No shallow gas was seen. Due to deteriorating hole conditions in the 8 1/2" section it was decided to set 7" liner early, at 3839 m, and continue the well as an unplanned 6" hole to TD. Otherwise, no significant problem was encountered in the operations. The well was drilled with seawater and sweeps down to 1246 m and with XP-07 oil based mud from 1246 m to TD.

Contrary to prognosis, there were no Rogn Formation sandstones in the well. Instead, the well encountered Intra Melke Formation sandstones at 3514 m (3276.5 m TVD). These sandstones had good to excellent reservoir quality and contained a 227 m TVD gross hydrocarbon column. The hydrocarbons in the reservoir zone consisted of a 93 TVD m thick gas cap overlying a 134 TVD m oil leg in. The GOC is located at 3608 m (3370 m TVD) and the OWC at 3742 m (3504 m TVD). Pressure data indicated a single gas gradient over an oil leg. Below the OWC, the well penetrated a further thick high net to gross reservoir package of Intra Melke sandstones with a continuous water gradient.

Five 54 m consecutive cores were cut in the interval 3524 to 3732 m with 100% overall recovery. RCX fluid samples were taken at 3579.1 m (gas), 3620.3 m (oil), 3641.7 m (oil) and 3758.5 m (water).

The well was permanently abandoned on 26 April 2014 as an oil and gas discovery.

TESTING

One Drill Stem Test was conducted from perforations in the interval 3637.3 to 3724.5 m. The test produced oil at a rate of 1017 Sm3/day through a 56/64" choke. The GOR was 160 Sm3/Sm3 and the measured oil density was 0.850g/cm3 (36 °API).

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6406/12-3 S