

Wellbore History

GENERAL

Well 6506/11-10 was drilled to test the Hades and Iris prospects on the western margin of the Halten Terrace on the eastern flank of the Sklinna Ridge in the Norwegian Sea. The primary objective (Hades) was to test the hydrocarbon potential in Early Cretaceous intra-Lange Formation sandstones (Breiflabb Sandstone Member in the NORLEX stratigraphy). Secondary objective (Iris) was to test the hydrocarbon potential in the Middle Jurassic Garn Formation.

OPERATIONS AND RESULTS

Wildcat well 6506/11-10 was spudded with the semi-submersible installation Deepsea Bergen on 28 November 2017. A 36" section was drilled first, followed by a 9 7/8" pilot hole to 1407 m to check for shallow gas. Then the 26" section was drilled before the BOP and riser was installed with 20" casing at 1409 m. Final TD was set at 4536 m in the Early Jurassic Ror Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1428 m, with Glydril mud from 1428 m to 2652 m, and with Rheguard oil-based mud from 2652 m to TD.

The primary objective intra-Lange Formation sandstone was penetrated from 3933 to 3976 m. It consists of interlayered sandstones and claystones with an 8 m massive sandstone on top and was found gas-filled from top to a gas-down-to contact at 3968 m. Relatively high resistivities and sampling of water with oil at 3998.3 m indicate some hydrocarbon saturation also below 3968 m. The secondary objective Garn Formation was encountered at 4223 m and was gas-bearing down to a gas-water contact at 4318 m. This reservoir can be divided in two units: an upper fine-grained micaceous and cemented unit and a coarser grained, highly porous and permeable unit below 4292 m. This unit have permeabilities reaching 24 Darcy. Oil shows in the well were weak and questionable due to masking by the oil-based mud.

Three cores were cut in the well. Core 1 was cut from 3942 to 3970 m in the intra-Lange sandstone with 92.2% recovery. Core 2 was cut from 4231 to 4246 m in the Garn Formation with 65.4% recovery. Core 3 was cut from 4313 to 4341 m in the Garn Formation with 65.2% recovery. MDT fluid samples were taken at 3940 m (gas), 3944 (gas), 3998.3 m (water with oil), 4051.2 m (water), 4295.7 m (gas), 4305.4 (gas), and at 4380.3 m (water with oil)

The well was permanently abandoned on 17 April 2018 as a gas/condensate discovery.

TESTING

No drill stem test was performed.