



Wellbore History

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GENERAL

Well 35/11-20 A is a geological sidetrack to the 35/11-20 S Antares well, which discovered oil in Oxfordian age Intra-Heather Formation sandstone. The sidetrack was planned to appraise the presence of HC-filled Upper Jurassic Early-Middle Oxfordian sandstone (Orion prospect) with appropriate thickness and quality to be commercially exploited. Secondary target was to prove the presence of HC-filled Brent and Cook formations.

OPERATIONS AND RESULTS

Appraisal well 35/11-20 A was kicked off from the main bore (35/11-20S) at 1815 m in the Shetland Group on 14 July 2016. It was drilled with the semi-submersible installation Borgland Dolphin. Drilling operations proceeded without significant problems, but intermediate logging of the Orion reservoir was aborted as the cable broke at surface and was lost in hole. Fishing was unsuccessful and it was decided to plug back and sidetrack to reach the secondary objective. Final TD for well 35/11-20 A became 3973 m (3319 m TVD) m in Callovian age sediments in the Heather Formation. The well was drilled with Innovert oil based mud from kick-off to TD.

35/11-20A encountered top primary target Oxfordian sandstone at 3869 m (3233 m TVD). The reservoir was 27 m TVD thick, which is thinner than in the main bore, but had much better reservoir quality, characterized by an average porosity of 18% and 64% Net-to-Gross. The top 8 m TVD were found oil bearing with a possible OWC at around 3878 m (3241 m TVD).

Two cores were cut: core 1 from 3870 to 3898.5 m and core 2 from 3898.5 m to 3973 m. Core recoveries were 99% and 100%. The MDT tool was run to collect pressures and fluid samples. The fluid sampling confirmed that both oil & water phases are mobile, but unfortunately, all downhole fluid samples were lost down hole in the incident with the wireline cable.

Well bore 35/11-20 A plugged back and abandoned on 7 August 2016 as an oil appraisal well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 35/11-20 A