



Wellbore History

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GENERAL

Well 36/7-4 was drilled to test the Cara prospect ca 5 km northeast of the Gjøa Field in the North Sea. The primary objective was to test for hydrocarbons in the Early Cretaceous Agat Formation.

OPERATIONS AND RESULTS

Wildcat well 36/7-4 was spudded with the semi-submersible installation Transocean Arctic on 18 July 2016 and drilled to TD at 2726 m in the Early Cretaceous Åsgard Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis sweeps down to 587 m and with KCl/glycol mud from 587 m to TD.

Well 36/7-4 successfully penetrated 118.1 of hydrocarbon-bearing Agat Formation sandstone reservoir before reaching a final TD of 2726 m in the Åsgard Formation. The well proved a 51.7 m gas column in good quality reservoir, with a GOC at 2479.2 m. Oil was proven down to close to the base of the Agat sandstone at 2544.4 m, but the reservoir below 2492 m is of reduced quality with low permeability and poor production potential. No oil-water contact (OWC) was seen, neither from pressures, nor on logs or core.

Three cores were cut from 2437 to 2555 m in the Agat Formation, including the Agat Formation basal conglomerates. MDT fluid samples were taken at 2440 m (gas), 2458.13 m (gas), 2484.03 m (oil), 2488 m (oil), 2536.61 m (oil), and 2544.4 m (oil/water).

The well was permanently abandoned on 26 September 2016 as an oil and gas discovery.

TESTING

A drill stem test was conducted from the gas column in the interval 2428 to 2470 m.

Very good overall reservoir properties were proven. The maximum gas rate achieved was 1240000 Sm³/day, through a 72/64" fixed choke. The gas gravity was 0.6378 (air = 1). The condensate had a density of 0.801 g/cm³ (45.2 °API). The Gas/Condensate Ratio was 15592 Sm³/Sm³. The gas had 0.5% CO₂ and 0.2 ppm H₂S. Measurements at the end of the main shut-in periods (up to 72 hrs) gave the most representative formation temperatures. The temperature at the gas-oil contact is estimated to 80.0 °C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 36/7-4