



**Wellbore History**

**GENERAL**

Well 16/1-18 was drilled to appraise the Edvard Grieg Field on the Utsira High in the North Sea. The objective of the well was to delineate the southeastern part of the Edvard Grieg Field in order to optimise the drainage strategy and to determine the best possible location of production wells in this area.

**OPERATIONS AND RESULTS**

A 9 7/8" pilot hole was drilled from seabed to 620 m to check for shallow gas. No shallow gas was seen. Appraisal well 16/1-18 was spudded with the semi-submersible installation Island Innovator on 24 February 2014 and drilled to TD at 2391 m in granitic basement rock. No significant problem was encountered in the operations. The well was drilled with spud mud down to 613 m and Aqua-Drill mud from 613 m to TD.

No Jurassic sediments were penetrated in the well. BCU / Top Triassic, Hegre Group was encountered at 1894 m. A 62-metre gross oil column was found in conglomerate sandstone of the Hegre Group, where the top 43 metres have very good reservoir properties and the lower 19 metres have good reservoir quality. The oil/water contact was not encountered. Pressure points proved an oil gradient with the same density oil as in the rest of the Edvard Grieg Field, with an ODT at 1956 m. Oil shows were described on cores down to 1986 m. There were no shows above top reservoir level.

A total of 95.6 m core was recovered in eight cores from the interval 1886 to 1986 m. MDT fluid samples were taken at 1894.9 m (oil), 1921.4 m (oil), 1954.5 m (oil), and 1967.4 m (water).

The well was permanently abandoned on 14 May 2014 as an oil appraisal well.

**TESTING**

One DST was conducted in a 13-metre interval from 1938.9 to 1959.6 m in the lower part of the oil column in reservoir of good quality. The main flow in the test produced 135 Sm<sup>3</sup> oil and 12000 Sm<sup>3</sup> gas /day through a 28/64" choke and showed good flow properties from the entire oil zone. The GOR was 88 Sm<sup>3</sup>/Sm<sup>3</sup>, the oil gravity was 0.83 g/cm<sup>3</sup>, and the gas gravity was 0.66 (air = 1). The temperature profile for the test extrapolated to an initial top reservoir temperature of 80.1 °C at 1938.9 m.

**LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/1-18**