



## Wellbore History

### GENERAL

Well 16/2-20 S was drilled on the Torvastad prospect north of the Johan Sverdrup Field on the Utsira High in the North Sea. The primary objective was to investigate the Jurassic - Early Cretaceous sequence with respect to reservoir facies, hydrocarbons, free water level, pressure communication with the Johan Sverdrup Field, and seismic interpretations and depth conversion.

### OPERATIONS AND RESULTS

Wildcat well 16/2-20 S was spudded with the semi-submersible installation Island Innovator on 30 September 2013 and drilled to TD at 2150 m (2098 m TVD) m, 36 m into granitic basement. A 9 7/8" pilot hole was drilled from

seabed to 720 m RKB to check for shallow gas. No shallow gas was observed. The well was drilled deviated due to a ridge on the seafloor that could cause instability for the wellhead and BOP. The well path is vertical down to ca 730 m, deviated with a sail angel of ca 23 ° from 730 to 1900 m, and vertical from 1900 m to TD. The well was drilled with seawater and hi-vis sweeps down to 720 m and with Aquadril mud from 720 m to TD.

An unusual, 21 m thick age-equivalent to the Draupne Formation (Volgian to Ryazanian age) was encountered at 2006.3 m (1954.6 m TVD). It consists of a condensed section at base, a thin shale section, and a 16.6 m thick spiculitic sandstone/siltstone on top. The porosity of these sediments is relatively high, but permeability is very low. Underlying this sequence, at 2027 m (1975.5 m TVD) the well penetrated a 10 m sequence of sandstones belonging to the Statfjord Group, a 77 m sequence of sandstones, limestone and mudstones belonging to the Skagerrak Formation and a 20 m thick Smith Bank Formation resting on the granitic basement. Good oil shows were described in the Statfjord Group.

A total of 52.5 m core was recovered in four cores from the interval 2001 to 2055 m. The core to log depth shifts are -2.34 m, -2.12 m, -1.3 m, and -1.3 m for cores 1 to 4, respectively. RCX fluid samples were taken at 2012.5 m (water), 2026.7 m (one sample with water and one with water and a fraction of oil), and at 2031.3 m (water).

The well was permanently abandoned on 21 November 2013 as a dry well with shows.

### TESTING

No drill stem test was performed.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/2-20 S