



## Wellbore History

### GENERAL

Well 16/7-10 was drilled on the Theta Prospect in the South Viking Graben in the North Sea, close to the Sleipner field. The prospect was seen as a possible extension of the 16/7-2 discovery in the Ty Formation. The main target was Ty Formation turbidite sands.

### OPERATIONS AND RESULTS

The semi-submersible installation Ocean Vanguard drilled this well. A 8 1/2" pilot hole 16/7-U-1 was drilled to 610.5 m prior to the main well due to shallow gas warning. At this depth a substantial amount of shallow gas was detected with the ROV sonar. The pilot hole was plugged back. Wildcat well 16/7-10 was spudded on 9 July 2011, 16 m away from the pilot hole. After intermediate wire line logging in the 12 1/4" section, it was not possible to get the 9 5/8" liner to section TD. A technical side-track (16/7-10 T2) was performed from the 16/7-10 well, with a kick-off point at 1916 m, and drilled to final TD at 2514 m in the Late Cretaceous Tor Formation. The well was drilled with sea water and sweeps down to 503 m, with Performadril mud from 503 m to 1151 m, and with XP-07 #14 oil based mud from 1151 m to TD.

Rocks of Quaternary, Tertiary and Cretaceous age were penetrated. The Ty Formation was encountered with Good reservoir sand at 2348.5 m (2347.5 m TVD), 35.5 m deeper than prognosed. Results of the Theta NE well showed a considerably reduced hydrocarbon column relative to prognosis (2 m gross HC bearing interval vs. 36 m expected). The GWC was found to be at 2349 m (2328 m TVD MSL), the same as encountered at 16/7-2, supporting pressure communication between the two wells. Reservoir parameters were also similar, with Ty Formation 115 m gross reservoir interval, 88 % Net to Gross and 27 % porosity. Hydrocarbon saturation was estimated to 51 %. No oil shows were reported from the well. The use of oil based mud obscured visible shows analysis below 1151 m

No conventional cores were cut in the well. MDT wire line fluid samples were taken in the Ty Formation at 2348.6 m (2347.6 m TVD; gas/condensate with ca 3% hydrocarbon contamination from mud) and 2383.0 m (2382 m TVD; water).

The well was permanently abandoned on 13 September 2011 as a minor gas discovery.

### TESTING

No drill stem test was performed.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 16/7-10