



## Wellbore History

### GENERAL

Well 34/4-12 A (Lower Lunde Snorre) is a sidetrack to well 34/4-12 S, situated on the northern perimeter of the Snorre Field in the Northern North Sea. The surface location of the wells was chosen so as to reach two different prospects with a minimum of drilling and costs. The primary well 34/4-12 S targeted the Omega Nord prospect on a down faulted terrace northeast of the Snorre field while the 34/4-12 A sidetrack targeted the Lower Lunde Snorre prospect up-dip on the Snorre Fault Block itself. The main objective of the sidetrack was to prove oil in the Lower Lunde Member of the Triassic Lunde Formation. In addition the Middle Lunde Member was also expected to be penetrated by the well.

### OPERATIONS AND RESULTS

Well 34/4-12 A was kicked off at 1525 m from the primary well 34/4-12 S on 27 January 2010. It was drilled with the semi-submersible installation Ocean Vanguard to TD at 2761 m (2652 m TVD) in Late Triassic sediments of the Lunde Formation. No significant problem was encountered in the operations. The well was drilled with XP-07 oil based mud from kick-off to TD.

The well bore penetrated rocks of Tertiary, Cretaceous and Triassic age. The Jurassic was missing. The Lunde reservoir was encountered at 2563 m (2477 m TVD), which was 27 m TVD shallower than prognosed. Oil was proven in good quality reservoir sands within the Lunde Formation, from 2563 (2477 m TVD) down to an oil-water contact at 2668 m (2570 m TVD). The pressure data proved four slightly different pressure regimes separated by three pressure barriers. Good oil shows were recorded over the reservoir and continued under the OWC with the last show recorded at 2684 m (2580 m TVD). Otherwise no oil shows were reported from the well. The reservoir has a net to gross ratio of 0.31 in Middle Lunde Member and 0.48 in Lower Lunde Member. The total porosity in the Middle Lunde Member is 21% and it is 20% in the Lower Lunde Member. The Hydrocarbon saturation in the Middle Lunde Member is estimated to 63%, while it is 39% in the Lower Lunde Member.

A 54 m core was cut from 2590 to 2644 m within the reservoir, with 99.4% recovery. MDT fluid samples were taken at 2594.7 m (oil), 2642.5 m (oil), and at 2699.7 m (water). The samples were of good quality. Mud contamination in the oil samples was about 2.9 % and 6.4 %, respectively.

The well was permanently abandoned on 19 February 2010 as an oil discovery.

On 28 August 2017 the well was reclassified as an appraisal well for the discovery "34/4-1 SNORRE" from 1979.

### TESTING

No drill stem test was performed.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/4-12 A