



Wellbore History

GENERAL

Well 15/12-18 S is located between the Sleipner Øst and Varg fields in the North Sea. The well was designed to test three prospects in different stratigraphic intervals, referred to as Grid (Eocene), Storskrymten (Paleocene) and Grytkollen (Triassic Hugin/Skagerrak Formation). The Storskrymten reservoir was the primary objective of the three. If hydrocarbons were discovered bore, a sidetrack would be evaluated to prove the vertical extension of the column. All prospects were based on up doming effects along the main migration routes from the Maureen area.

OPERATIONS AND RESULTS

Well 15/12-18 S was spudded with the jack-up installation Mærsk Giant on 5 September 2007 and drilled to TD at 3520 m (3310 m TVD) in the Late Permian Zechstein Group. It was drilled vertical down to 1700 m, building angle up to ca 35 deg at ca 2550 m. The deviation was kept within 36 to 24 deg for the remaining well path down to TD. The drilling operation was executed with several down-hole problems. Major delays were due to logging problems and lost circulation in the Cretaceous. The well was drilled with seawater down to 474 m, with KCl/polymer mud from 474 m to 1173 m, with mineral oil -based mud (Carbo-Sea) from 1173 m to 2773 m, and with Enviromul oil based mud from 2773 m to TD.

Twenty-two m of Grid sandstones were found water bearing. The Paleocene Ty Formation at 2670 m (2589 m TVD) was found hydrocarbon bearing. The OWC was from pressure data set to 2687.5 m (2602.5 m TVD). From the resistivity logs, however, the OWC would be set at 2691 m (2605.8 m TVD). This gives a vertical oil column of 16.8 m. Shows were recorded down to 2722 m. After evaluation of the Ty Formation reservoir, drilling continued into Hugin Formation at 3420 m (3219 m TVD), where 9 m of sandstone was encountered, but with no hydrocarbons. Shows were recorded on limestone at 2960 to 2970 m, in marl/claystone in the interval 3053 to 3175 m, and in shales of the Draupne and Heather Formations from 3270 to 3320 m.

No core was cut. Oil was sampled during the MDT runs at depths of 2671.9 m and 2683.6 m. Water was sampled at 2705 m. A mini-DST was attempted but aborted due to packer problems.

The well was completed on 7 November 2007 as an oil discovery. A side track (15/12-18 A) was initiated to appraise the discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 15/12-18 S