



Wellbore History

GENERAL

Well 31/2-19 S is located in the Troll West area some few kilometres to the northwest of the Troll Field. It was drilled to test the hydrocarbon potential of the "S-structure". The primary targets were the Jurassic Sognefjord and Fensfjord Formations, and the Brent Group. Secondary targets were the Paleocene (Lista Formation), the Dunlin Group and the Statfjord Formation.

OPERATIONS AND RESULTS

Exploration well 31/2-19 S was spudded with the semi-submersible installation "West Vanguard" on 8 May and drilled to TD at 4114 m (3669 m TVD RKB) in the Early Jurassic Statfjord Formation. The well was drilled with seawater and hi-vis bentonite sweeps down to 1316 m and with KCl/PHPA polymer mud from 1316 m to TD.

The well encountered 131 m of Intra Lista Formation sandstone, and a 30-40 m sandy interval of poor reservoir quality in the Cretaceous Rødby Formation. Two of the primary prospective levels, the Sognefjord and Fensfjord Formations of the Viking Group were not deposited; instead more than 700 m with the distal Heather formation was penetrated. The Brent Group and Dunlin Group sandstones, and the Statfjord Formation were encountered according to the prognosis. The well was found to be dry (no moveable hydrocarbons) with only weak hydrocarbon shows observed in the Intra Lista Formation sandstone and in sandstones of the Viking and Brent Groups.

Five cores were cut, two of them in the Lista Formation, the third in the Rødby Formation, and the last two ones in the Heater Formation. Pressure points were obtained by the HP gauge of the RFT tool. In the Lista Sandstone, a water gradient of 0.99 g/cc was found. In the Cretaceous, no gradient could be defined due to only tight points. In the Brent Group (the Ness and Etive formation equivalents) a water gradient of 1.01 g/cc was found. In the Dunlin Group three good RFT points were achieved. The two deepest ones (in the Amundsen Formation) indicated a water gradient of 0.98 g/cc. No fluid samples were taken. The well was permanently abandoned on 13 July as a dry well with weak shows.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 31/2-19 S