



Wellbore History

GENERAL

Well 30/8-3 was drilled just west of the Oseberg Sør Field in the North Sea. The primary objective of the well was the deltaic sands of the Tarbert Formation in the Brent Group. Draupne Formation wedge sand was a secondary objective. Furthermore, the well was placed in a position that should penetrate across the "A-East 1/A-East 3 fault zone in order to get cores and pressure data to evaluate fault seal capacity.

OPERATIONS AND RESULTS

Wildcat well 30/8-3 was spudded with the semi-submersible installation West Vanguard on 13 November 1997 and drilled to TD at 3720 m in the Early Jurassic Drake Formation. Due to shallow gas warnings a 9 7/8" pilot hole was drilled from 214 to 440 m. No gas was observed, and the hole opened up to 17 1/2". The non-productive rig time was 35% of the total for this well. WOW caused 4 days down time. Down hole motor and bit was lost in the 121/4" section. Fishing took ca 10 hours. Unstable hole conditions with mud losses and gains were experienced in the interval 3263 to 3284 m. The hole was sealed off by squeezing cement into the formation and this cured the problem. There were also problems with the TD logging due to tight/sticky hole, lost MDT tool, and erratic signals from the tool causing ca 2.5 days fishing and repairs. The well was drilled with spud mud down to 1588 m, and with KCl/Polymer mud from 1588 m to 3720 m.

There were no indications of reservoir deposits in the Viking Group section. The Tarbert 2 reservoir was penetrated at 3333.0 m, one meter deeper than prognosed. A total of 64.5 m net reservoir was calculated between 3333 m and 3419 m, giving a net to gross ratio of 0.75, somewhat higher than expected. The Tarbert 2 reservoir was dry, with very weak shows of hydrocarbons. A Petroleum Geochemistry study concluded that there were no indications of migrated hydrocarbons within the Tarbert 2 reservoir section. The reservoir properties were moderately good. The average porosity was 17.3 %, slightly higher than prognosed. The majority of the permeability measurements were between 1 mD and 100 mD. The Ness Formation channels, 18 m net, contained gas/condensates. No fluid contacts could be established.

Well 30/8-3 showed about 20 bar overpressure in Tarbert 2, indicating a main pressure barrier between the A-Main and the A-East structures.

Two cores were cut from 3342 to 3435 m in the Tarbert 2 reservoir section. A third core was cut from 3531 to 3559 m to cover a prognosed fault. From FMS data it was later observed that the fault cut the well in a deeper position, between 3645 m and 3659 m. Two MDT fluid samples were collected from 3601.7 m and 3635.3 m.

The well was permanently abandoned on 5 January 1998 as a gas/condensate discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/8-3