



Wellbore History

GENERAL

This well was drilled in two phases, a primary well bore 25/10-4, and a re-entry well bore 25/10-4 R. The well was drilled in the western part of the Balder Field in the North Sea. The primary objective was to establish the presence of a thick accumulation of Paleocene oil sand, and evaluate sand-shale distribution and reservoir quality. The top of the reservoir was anticipated to be at 1698 m subsea. As a secondary high-risk objective, the well was to be drilled to 2700 m to test for the presence of hydrocarbons in the Permian. This test was necessary as any hydrocarbons present could critically affect the design and location of a possible production platform.

OPERATIONS AND RESULTS

Appraisal well 25/10-4 was spudded with the semi-submersible installation Glomar Biscay II on 8 December 1980 and drilled to TD at 2348 m in the Late Permian Zechstein Group where the well was suspended due at 18 January 1981 due to a pressing need for the rig to drill other Balder Field delineation wells, combined with unexpected delays in the 25/10-4 well progress as a result of lost circulation. The re-entry commenced on 29 May 1981 and deepened the well to 2550 m in a massive unconsolidated sand of Permian/ Carboniferous age. The top hole down to 30" casing depth at 214 m was drilled with seawater. Below 214 m the well, including the re-entry well, was drilled with seawater/gels/lignosulphonate.

The main oil sand of Paleocene age was encountered between 1759.5 m and 1784.0 m. The net oil sand was 22 m thick. The Triassic section had several thin and oil-bearing sandstones not detected before in the area. A wire line FIT in one of these sands proved live oil. In total these sandstones made up 21 m net sand but the accumulation was considered insignificant. Cuttings from 2130 m (Early Jurassic) through Permian Zechstein and the upper part of the Permian/Carboniferous unconsolidated sandstone contained traces/shows of hydrocarbons.

No cores were cut. A wire line FIT at 2226 m in a thin Triassic sandstone recovered 7500 cm3 oil with some mud.

The well was permanently abandoned on 13 June 1981 as an oil appraisal well.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 25/10-4 R