



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