



Wellbore History

GENERAL

Wildcat well 2/1-7 was drilled on a structure in the centre of the block. The primary target was Rothliegendes sandstone in a large fault bounded structure mapped at base Zechstein Group level. A secondary objective was Late Jurassic Ula Formation sandstone in an extension of the 2/1-3 Gyda discovery. In the 2/1-3 well two sequences of Ula Formation sandstone had been encountered, and the upper of the two had been oil-bearing

OPERATIONS AND RESULTS

Wildcat well 2/1-7 was spudded with the 3-leg jack installation Glomar Moray Firth 1 on 6 September 1984 and drilled to TD at 5464 m in the Permian Rotliegende Group. Pumping lost circulation material, without changing the mud weight, stopped loss of mud at 1710 m. Top chalk came in at 3190 m. This whole sequence was drilled with turbine. At 3746 m the drill string got stuck, and the tight interval was located between 2600-2900 m. The string was freed by circulating acidic mud. Full circulation was maintained during this whole operation. While pulling out to change bit at 5077 m the drill string was lost in the hole. At the same time 170 bbls of mud was lost. One reason for this mud loss could be the "piston effect" caused by the drill string falling down the hole. The pipe was fished out piece by piece, and the stabilisers above the bit were milled out. At 5081 m the drill string was screwed off 300 m above the bit. Fishing was successful and drilling continued. Drilling was stopped at 5113 a to perform pressure test. During this operation, before reliable results were obtained, the RFT-tool got stuck in the hole. After extensive fishing the operator decided to plug back and sidetrack the hole. The technical sidetrack was kicked off at 5092 m, and drilled to 5119 m. Problems at this depth made another sidetrack necessary, and the hole was plugged back to 4747 m. The new sidetrack was kicked off from 5080 m and drilled to a TD of 5464 m, which made this hole 4 m short of being the deepest hole so far drilled in the Norwegian Sector. The well was drilled water based with KCl/polymer mud below 760 m, converting to a salt saturated mud from 4340 m. At 4238 m a diesel pill was used in the mud to free stuck pipe.

The upper Ula sand, found oil bearing in the 2/1-3 well, was absent in the well. This confirmed the seismic mapping which picked the sub crop of the "2/1-3 Sand" beneath the base Mandal Formation to the north of the 2/1-7 well location. A 37 m thick Ula Formation water bearing sandstone was penetrated further down in the Late Jurassic, at 4024 m. The primary objective, Rotliegende sand in the bottom of the well, showed good reservoir qualities, but was also water bearing. There were no significant hydrocarbon shows in any section of the well. The well severely downgraded the prospectivity of the Rotliegende sandstone, and was thought to be dry due to absence of Carboniferous source rocks. Four cores were cut in the Rotliegende sandstone, three of which cover the interval 5115.05 - 5127.0 m, and one between 5147.0 - 5165.0 m. No wire line fluid samples were obtained in the well.

The well was permanently abandoned on 6 March 1985 as a dry well.

TESTING

No drill stem test was performed in the well.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/1-7