



Wellbore History

GENERAL

Well 15/9-4 was drilled on in the southeastern part of the Sleipner Vest area in the Viking Graben of the North Sea. Previously four wells had been drilled on the Sleipner Alpha structure in the north. Two of these showed significant gas-condensate accumulations (15/6-3 and 15/9-1) in the middle Jurassic while in the western part of the Alpha structure the sand had shaled out (15/9-3). In the northeast, the sand was penetrated below the hydrocarbon/water contact (15/6-5). The first well drilled on the Beta prospect (15/9-2) showed a significant gas-condensate column in the middle Jurassic sand. The primary objective for well 15/9-4 was to test possible hydrocarbons in Middle Jurassic sandstones in the southeast extending Delta structure.

OPERATIONS AND RESULTS

Well 15/9-4 was spudded with the semi-submersible installation Ross Rig on 4 April 1979 and drilled to TD at 3716 m in the Triassic Skagerrak Formation. Very few problems were encountered during drilling of this well, with the exception of lost circulation in the 26" interval. This problem was solved by pumping cement into the formation. The main problem arose only after drilling the 8 1/2" interval. The 7" liner was run and cemented successfully. When pressure was applied in order to test the liner lap, the 9 5/8" casing burst. The well was drilled with spud mud down to 415 m and with gel/lignosulphonate mud from 402 m to TD.

Top of the Middle Jurassic Vestland Group, Hugin Formation was penetrated at 3441 m. The section contained sandstones with good reservoir properties interbedded with some thin shale beds. The sandstones were hydrocarbon bearing with a gas-water contact at ca 3570 m, 7 m into the Sleipner Formation. Weak oil shows were described throughout the hydrocarbon-bearing reservoir down to 3582 m. Shows were not described in any other section of the well. The Triassic Skagerrak Formation was encountered at 3629 m with some small water bearing sand intervals.

Nine cores were cut in the interval 3457 to 3594.8 m in the Hugin and Sleipner formations. The core-log depth shift is reported as -2.5 m for all cores. Overall recovery was 132.1 m core (98.2%). An RFT fluid sample was taken at 3481 m. It contained gas, condensate, mud and water.

The well was permanently abandoned on 14 June 1979 as a gas/condensate appraisal well.

TESTING

The well was not production tested, due to technical problems.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 15/9-4