



## Wellbore History

### GENERAL

Appraisal well 31/6-8 was drilled in the south-west corner of the Troll East gas province, 50 m due north of well 31/6-7, which was junked and abandoned for technical reasons. The main objectives were to determine the lateral extent of the reservoir, to determine the fluid contacts in the Sognefjord Formation, and to obtain the best possible seismic correlation within the reservoir from well 31/6-1. In addition, an elaborate testing program was planned to obtain a number of reservoir engineering parameters.

### OPERATIONS AND RESULTS

Well 31/6-8 was spudded with the semi-submersible installation Treasure Seeker on 14 April 1985 and drilled to TD at Drilling the well proceeded without significant problems. The interval down to setting depth for 20" casing was not logged, as this interval was considered covered by logs from well 31/6-7. The well was drilled with spud mud down to 700 m, with KCl Polymer mud from 700 m to 1465 m, and with "drill in fluid" (NaCl, polymers, and CaCO<sub>3</sub>) from 1465 m to TD. An 8 m<sup>3</sup> Imcospot/Pipelax pill was spotted at 2054 m to free the pipe, which was stuck.

The Sognefjord Formation (1507-1661 m) was found gas bearing from 1507 m to 1573.5 m and oil bearing from 1573.5 to 1578.5 m where the oil/water contact was found. The oil zone was determined from petrophysical evaluation, core plug saturations and segregated sample recoveries. The hydrocarbon-bearing reservoir consisted of predominantly very fine to fine grained sandstones with some interbedded siltstones. The gross hydrocarbon column was 71.5 m and the net pay calculated to 67 m with an average porosity of 33% and average water saturation of 16.2 %. No hydrocarbon indications were recorded above 1507 m or below 1579 m.

Twelve cores were cut in the Late to Middle Jurassic Sognefjord and Heather Formations from 1489 m to 1700 m (148 m total recovery). FMT segregated samples were taken at 1573.2 m (0.7 Sm<sup>3</sup> gas, 0.5 l water/filtrate, and 6 l oil in 2.75 gallon chamber) and at 1578.8 m (0.1 Sm<sup>3</sup> gas, 0.5 l oil, and 9.8 l water/filtrate in 2.75 gallon chamber).

The well was temporarily suspended 25 may 1985, and subsequently re-entered for testing 20 July 1985.

### TESTING

No drill stem test was performed

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 31/6-8