



## Wellbore History

### GENERAL

Well 30/9-3 was drilled on the Gamma West structure on the Oseberg Fault Block in the northern North Sea. The primary objective was to find hydrocarbon accumulations in the Middle Jurassic Brent Group. Secondary objective was to find additional hydrocarbon accumulations in the Early Jurassic. Planned TD was ca 75 m below a possible intra Triassic marker to a depth of 4188 +/- 100 m

### OPERATIONS AND RESULTS

Wildcat well 30/9-3 was spudded with the semi-submersible installation Nortrym on 31 December 1983. The well was drilled to a depth of 3113 m into Drake Formation shales where the pipe got stuck and parted when pulling out of hole for logging. The fish was not recovered and no wire line logs were recorded below 1713.5 m due to fish in hole. All lithostratigraphic interpretation below this point is therefore based on cuttings description, core description, chromatograph data and ROP information. A sidetrack was decided to complete the well programme. The well was drilled with spud mud down to 625 m and with Invermul/EZmul Oil Based Mud from 625 m to TD.

The Brent Group (2712-3045 m) consisted of a 259 m thick Ness Formation (2712 - 2971 m) made up of sandstones with stringers of shale, siltstone and coal and 74 m of Etive Formation (2971 - 3045m) sandstones. Based on chromatograph analysis on hydrocarbon samples extracted from core samples a GOC was found at ca 2734 m and an OWC at ca 2815 m, both located in the Ness Formation. From core and chromatograph data the Ness Formation had a gross pay of 103 m. The net gas pay was estimated to 22 m and the net oil pay to 36 m giving a total net pay of 58 m (cut off values porosity < 12%, permeability < 1 mD). The average porosity was calculated from cores to 22.5 % and average horizontal permeability to 1090 mD. Oil shows were recorded in Maastrichtian limestone in the upper part of the Shetland Group.

Fifteen cores were cut in the well, all in the Brent Group, twelve in the Ness Formation and three in the Etive Formation. No wire line fluid samples were taken.

The well was plugged back for sidetracking on 26 February as an oil discovery.

### TESTING

No drill stem test was performed.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/9-3