

PELICAN FIELD

The Pelican Field is a sub-economic gas-condensate accumulation located in the central part of T91-2, in water depths of approximately 77m and 65 kilometres from the Tasmanian coastal town of Burnie. The Pelican Field was discovered in 1970 by ESSO with the drilling of Pelican 1. Subsequently, Pelican 2 (ESSO) and 4 (Hematite) were drilled to appraise the field. Pelican 3 as previously mentioned is not considered to be located on the Pelican structure. Pelican 5 (Amoco) was the final well drilled on the structure in 1985, and the only one which was cased and tested through perforations. Further details of the well results were described in the Chapter "Previous Exploration" and are summarised on Enclosure 8.

Structurally, the Pelican Field is located over the deepest part of the Pelican Trough. The Pelican structure is a "collapsed" anticline, which is divided into several compartments by faults. The structural complexity makes mapping using the existing two dimensional seismic difficult.

The hydrocarbon accumulation at Pelican Field is located in reservoirs belonging to the Late Cretaceous, Palaeocene and Early Eocene part of the EVC. Testing at Pelican 5 has established that only the Early Eocene (lower to middle *M. diversus* reservoirs have enough permeability to produce hydrocarbons at near economic rates (Pelican 5 flowed gas at 5.3 MMCFD with 302-441 BCPD and 662-705 BWPD on a 3/4" choke). The Early Eocene sequence can be correlated between the Pelican Field wells with reasonable confidence, using coal seams and shale beds as marker units. Such a correlation is displayed in Enclosure 8, and it allows subdivision of the Pelican zone into a series of packages A to H. As can be seen from Enclosure 8 this subdivision can be taken further to allow correlation of individual sandstone beds between the wells, also with reasonable confidence. The most laterally continuous and thickest of the sandstones is located in the F unit, and prior to disappointing test results at Pelican 5 this sandstone carried a significant proportion of the reserves that were then being estimated for the field.

Reserve calculations for the Pelican Field are difficult because mapping of the structure at the various reservoir levels is unreliable and only one of the wells on the structure has been subjected to testing through casing. Log analysis of the reservoir zones is also difficult because of the poor resistivity contrast between hydrocarbon and water bearing zones, and because the formation water resistivity varies between reservoirs. An attempt to resolve some of the questions relating to test, core and log data is included as Appendix 3.