

1.5 Previous mapping

Amoco produced regional EVCM, Top Middle M.diversus & Palaeocene maps covering the entire permit (old boundaries) in 1985. The Bass 3 High was mapped by R. Smit in 1986 and the Aroo area by A. Waldron in 1991. The southern part of T/18P was the subject of a Geoquest mapping project in 1992 and was documented in February 1993 in the internal report "1992 Interpretation Project Southern T/18P, Northern T/25P and Western T/RL1, Bass Basin, Tasmania" by DJ Knowles. In this report Top EVCM, Upper M.diversus, Middle M.diversus and Lower L.balmei time structure maps were produced together with various interval maps. This Geoquest interpretation was refined following incorporation of the Rocky Cape and reprocessed data to produce the most recent mapping.

2 INTERPRETATION

2.1 Stratigraphic Control

The well distribution as seen in Figures 1.1 and 1.2 provides reasonable well control for the T/18P permit. Several wells failed to penetrate the Palaeocene, however, leaving only Aroo 1 and Bass 3 as control for this section within the Permit. Yolla 1, Nangkero 1, Poonboon 1, Flinders 1 and the Pelican wells provide Palaeocene control on the margins of T/18P.

All T/18P wells have detailed electric log suites, lithology and palynology descriptions. Synthetic seismograms were prepared using Geoquest SYNVIEW software on the geophysical workstations. A generalised stratigraphic table for the Bass Basin can be found in Fig 2.1; Well Information with Palynology in Appendix 1 and Checkshot Data in Appendix 2.

2.2 Interpretation Method

The seismic character below the robust top EVCM marker is monotonous and at times poorly correlatable. No significant events correspond with any of the relevant palynological zones, hence several events were used in an effort to constrain the interpretation to be more robust and geologically reasonable. Due to the highly variable character chasing individual events was fraught with pitfalls and was often misleading. Most of these interpretation dilemmas could be resolved with better seismic coverage.

In the areas where well control is reasonable it became obvious early in the interpretation that the palynological zonation is at times inconsistent, and often allows latitude as far as picking "time lines" between wells is concerned. For this reason horizon terminology should be considered generalised, each name reflecting an arbitrary allocation of the top within a zone of its possible location.

The data was interpreted on Geoquest software installed on a Sun Sparc 2 platform, which was upgraded to a Sparc 5 late in the interpretation.

The Rocky Cape data and the reprocessed lines contribute to some 4100km of migrated seismic data which have been interpreted in the T/18P region. Only the portion of this data particularly associated with the new data will be presented in this report. The interpreted horizons were loaded into the Sattlegger mapping system for analysis and presentation. Sattlegger grids and faults were loaded into the Petrosys package to produce high quality maps for this report.