

6 STRUCTURAL ANALYSIS

Much of the tectonic history of the Bass Basin has been described in the "Regional Geology" section. Therefore the following are specific observations from the recent mapping in T/25P.

6.1 Basement

Figure 6.1 (Enclosure 2) "Basement, Smoothed Time Structure Map (ms TWT)"

The smoothed basement map only provides an approximation to this dramatically structured horizon. The mapped horizon varies from shallow times of 300ms beyond the EVCN edge to over 4900ms in the depths of the Pelican Trough. This could mean dips approaching 15° for this horizon on the Southwest ramp. The Pelican Trough splits the T/25P Block in two, separating the Southwest Ramp and Poonboon Platform structural provinces. The Trough is deepest adjacent to the Clarke prospect and north of Narimba 1 and also a deep trough is apparent to the southeast. The later trough is significant as this southeastern area had often been labelled as being too distant from mature source. This could clearly be quite wrong and this area should be more fully evaluated. An interesting feature of the map is that it might show a basement high centred northeast of Pelican 3 giving credence to the existence of a large simple anticlinal dome south of Poonboon and named Veridian at shallower levels. A small Cretaceous trough may exist further to the northeast giving another opportunity for a source basin in this area. Further work is necessary to formalise these ideas.

In the Tarook area basement is an ambiguous pick as Early Cretaceous reflectors, quite high in amplitude, are prevalent. The contouring probably reflects a mispick, however there is a possible transfer zone there orientated NE-SW. Further evidence for this would be the intrusives at Tarook, Raoul and Clarke, the displacement of the axes of the Pelican and Yolla Troughs; and the notable uplifted appearance of Clarke. More seismic data, particularly strike lines, are necessary before transfer faults could be confidently interpreted.