

Trapping geometrics in the Palaeocene are set up by reactivated Cretaceous faults. This reactivation occurred mostly during the *M.diversus* deposition where faults accommodated sediments by growth. Miocene deformations have enhanced several of the structures. In addition drape over a Cretaceous high was the mechanism for generating the Veridian culmination. As mentioned in the "Regional Geology" section the Palaeocene is believed to be structurally quiescent. As a result its deposition occurred uniformly over a widespread area, although thickening into the Cretaceous depocentres and thinning onto the Cretaceous highs occurs. This is not quantified in this report as a Late Cretaceous reflector which could be used for isochrons was not mapped.

Mapped Palaeocene varies from 1200ms to 2600ms deep on the seismic data. Poor data quality prevents mapping the Palaeocene southwest of the Flinders-Hunter trend. Lack of migrated data and a wide seismic grid prevents a significant amount of the eastern portion of T/25P from being interpreted confidently.

6.3 Lower *M.diversus*

Figure 6.4 (Enclosure 4) "Top Lower *M.diversus*, Time Structure Map (ms TWT)"

Figure 6.5 (Enclosure 5) "Isochron of Lower *M.diversus*"

The lower *M.diversus* maps characteristics are very similar to the Palaeocene, but naturally relief decreases with reduced structural maturity. Prominent structures seen on the Palaeocene map persist on this horizon. The lower *M.diversus* has been mapped over a similar area to the Palaeocene and varies from 1400 to 2400ms deep on the seismic data.

Several interesting observations can be made on the isochron thickness of the lower *M.diversus*. Firstly the prominence of the Pelican Trough deposition of this unit is quite marked. Interestingly thinning occurs over the Pelican Field indicating that the structure has been quite long-lived. The fact that this thinning also occurs over the Hilliard, Tourville and Actaeon terraces (Figure 11.1) may have enhanced the prospectivity of these structures if early structuring is determined to be important for hydrocarbon trapping. The isochron map also shows that the Bass 3 and Poonboon 1