

underlie the unconformity associated with the break-up. At Durroon 1 and along the margins of the basin, major tilted fault blocks and the unconformity associated with break-up are seismically recognisable (Figure 4.1).

Downwarping and recurrent faulting occurred during the Late Cretaceous and throughout the Tertiary with the north-west Tasmania - King Island ridge to the west, Tasmania to the south and the Bassian Rise to the east, provenancing sediment.

Two major episodes of Tertiary faulting are evident. The M. diversus unconformity is associated with one of these episodes. This unconformity is recognisable from seismic data in the Pelican area (Figure 4.2). The interval velocity G-log of this data also clearly indicates the presence and extent faulting prior to the deposition of the Lower N. asperus sediments (Figure 4.3). Interval velocity G-log's of data from portions of other lines would aid in determining the throw of faults associated with this unconformity.

The second major Tertiary episode of faulting occurred during the Miocene. Reactivation of earlier basement features occurred (Figures 4.4, 4.5, 4.6) and faults with a northeast-southwest orientation were created (Figure 4.7). Volcanic lavas and tuffs related to this episode of faulting are readily recognisable on seismic sections (Figure 4.8).