

to the northwest was over stepped by the sea. At the same time the marine influence was increasing in the Otway and Gippsland Basins. Widespread marine marls, limestones and clays were deposited in the Oligocene and Miocene. Marine carbonate shelf conditions prevail to the present day. Volcanism in the latest Tertiary gave rise to intrusives and extrusives in the upper section.

STRUCTURE

The Early Cretaceous fault geometry recognized from the BMR data demands significant crustal extension, in contrast to the largely vertical movements previously proposed. The faults are planar, with shallow to moderate dips (generally to SSW), and they produce tilts of the basement surface of up to 40 degrees. This "domino-style" rotational faulting resulted from a SSW-NNE upper crustal extension of 50% to 70%. The section shows the tilt blocks and their associated half-graben. The map illustrates the short strike extent of the normal faults, due to disruption along NNE-trending, dextral transverse faults. There is not necessarily a simple strike-slip displacement across these transverse faults (the heavily drawn fault near the basin centre is a good example), and they may therefore have essentially the same kinematic style and geometry as oceanic transform