

only oil recovery in the basin. Also, Cormorant 1 intersected 248' of a late Tertiary igneous intrusive and the possible effects of this on maturity required modelling.

Few wells have penetrated the upper Cretaceous section, and only one has intersected the Otway Group. Hence the earliest (pre-Tertiary) basin history remains highly speculative within a framework that deposition probably commenced no earlier than the upper Jurassic (160 MMYBP).

Geohistory models for a frontier area can be extremely simple or become more complex when more variables are included. The available data limits the accuracy of geohistory analysis for the Bass Basin. For example, variables such as sea level change and compaction have not been incorporated. The models produced here should be used as a guide only.

#### 5.4.2 Paleotemperature Model

As previously discussed (5.3.2), one of the major potential sources of error in geohistory analysis is in estimating the paleotemperature history. The models presented here are considered as preliminary and experimental. The following simplified and general geological model is assumed as a basis for paleotemperature gradients.

- (a) Break up of the Australian/Antarctic plates occurred between 90-110 MMYBP (taken for convenience at 97.5 MMYBP, which is the Upper Cretaceous-Lower Cretaceous boundary). At this time the paleolatitude was high