

## V.2 GEOLOGICAL FRAMEWORK

It is widely accepted that Bass Basin is a complex failed rift of Cretaceous age which originated as a result of Mesozoic NNE to SSW lithospheric extension and spreading of Australian and Antarctic plates. Onset of Bass Basin rifting was not synchronous: in the "main" Bass Basin, rifting was largely during the early Cretaceous [10], but in the southeastern portion of the Bass Basin (what is here called Durroon Sub-Basin) we interpret that the main extensional rifting event was in Late Cretaceous. The extensional stage was followed by a Late Cretaceous to Pliocene thermal subsidence (sag) stage and a late stage of Cenozoic wrenching which overprinted earlier structures.

The geology of the Bass Basin has been extensively discussed by Robinson, 74 [15], Brown 76 [6], Davidson, 84 [7] and Etheridge 85 [10].

The stratigraphic sub-division of the sediments can be described as follows: a Lower Cretaceous section is related to Otway Group; the Upper Cretaceous to Eocene sediments, which are called EVCM, generally unconformably overlay the Lower Cretaceous sediments. The EVCM are overlain by Upper Eocene Demon's Bluff Formation, which, in turn, is conformably overlain by the marine Oligocene - Pliocene Torquary Group. Intrusive and extrusive igneous rocks occur throughout the Bass Basin and range in age from Cretaceous to Miocene.