

PART 1. BASS BASIN OVERVIEW

1.0 INTRODUCTION

The Bass Basin is located in the Bass Strait between Tasmania and Victoria (see Figure 1.1). It is a northwest-southeast trending oval-shaped basin approximately 250 kilometres long by 125 kilometres wide and consists of Early Cretaceous to Late Tertiary age sediments. It is separated from the Gippsland Basin by Devonian age granitic rocks of the Bassian Rise and from the Torquay Embayment of the Otway Basin by the late uplifted (Miocene ?) King Island - Mornington Peninsula Ridge. To the southwest it is bounded by Precambrian rocks of the King Island Rise.

The basin lies wholly on the continental shelf in water depths ranging from 30 to 90 metres (Aguing, 1980).

The Bass Basin appears to have been first developed towards the close of the Late Jurassic during rift development which preceded continental separation. Sediments of the Otway Group were deposited during Early Cretaceous time within the early rift basin. Initiation of continental separation at the end of Early Cretaceous time resulted in a phase of crustal thinning and extensional normal block faulting (Fig. 1.2). Falvey's model (1974) of Atlantic-type continental margins suggests that during breakup, a pulse of uplift resulted in the development of an unconformity which is referred to as the "breakup uncon-