

5. GEOLOGICAL SETTING

The Gippsland Basin consists of two platform areas and a deep east-west Central Basin (Figure 1). The Central Basin, which contains all the oil and gas fields discovered to date, opens and deepens towards the east, and is separated from the platform areas by faulted hingelines. The Northern Platform trends east-west and extends onshore. The Southern Platform impinges on the Victorian coastline to the north of the Bassian Rise, which separates the Gippsland Basin from the Bass Basin. Southeastwards, it merges into the shelf zone along the eastern continental margin. Permit T13P extends from the eastern part of the southern platform southward along the continental shelf. This shelf zone, where water depths are relatively shallow, covers 75 percent of the permit. The easternmost portion of the permit lies on or beyond the continental shelf break, in water depths of 100 to 1,000 metres.

6. GEOLOGY OF T13P AS RELATED TO CENTRAL GIPPSLAND BASIN

Sediments deposited in T13P were probably derived from Palaeozoic rocks and granites similar to those which provided the coarse-grained erosion products in the Central Basin. Permo-Triassic rocks have not been recognised in the Gippsland Basin, but they are present in eastern Tasmania, and they are known to contain small oil and gas accumulations elsewhere on the eastern side (Bowen Basin) of the Australian continent.

Lower Cretaceous Strzelecki Group rocks or equivalent, in which hydrocarbon shows have been found in the Otway Basin, are thin or absent on the platform/continental shelf, but are probably thick along the downfaulted continental margin in the eastern part of T13P.

Continental drift between Australia and New Zealand commenced in Upper Cretaceous time, followed by separation from Antarctica in