

DEVELOPMENT OF THE BASIN:

The original surface of the basin appears to have been somewhat irregular topographically, although under the deeper area neither the pattern of the irregularities nor their amplitude is now clearly outlined. Near the shelf, however, the surface is fairly regular, as though having been extensively planed off when upper Tertiary spread over it.

Subsidence is considered to have commenced, in accordance with Gippsland and Otway basins, in the early part of the Tertiary. In a broad and simplified sense, it evolved through a well-developed sequence of four sedimentary units that represent individual stages of subsidence. Each seems to have been followed by a pause and readjustment in the framework of the basin. Thus each unit assumed a wider area of deposition in an overlapping relationship with the previous sedimentary unit. Probably there were fluctuations or minor pauses within the units, but the prominent changes are manifest on the edge of the basin by overlaps and elsewhere by wedging against highs of the underlying unit.

The steep attitude of the northeast and southwest flanks shown in Figs. 11, 12 and 15 illustrate the amount of active subsidence that took place along a pronounced tectonic trend prevailing from the beginning of the basin to about the middle of Unit II. This represents the first and main stage in the development of the basin, during which time its sediments were deposited under silled conditions.

Subsequently, through upper Unit II, the framework of the original basin became stabilized and inactive. Subsidence continued through upper Tertiary, but on a more regional scale. However,