

The Mesozoic is considered to have been deposited in an elongated basin that subsided without major pauses or prominent tectonic disturbances. The floor of the basin appears to have been irregular, with some of the larger basement topographic features (Pretty Hill, Beachport, Kalangadoo) remaining as islands through most of the lower half of the Mesozoic. At least 20,000 feet of sediments accumulated.

The tectonic framework of the basin became stabilized and subsidence ended. During the period between end of subsidence and beginning of Tertiary deposition, major events took place, in somewhat the following order:

- (1) Epeirogenic uplift and erosion, with the east and west extremities of the south flank receiving additional uplift of local nature, presumably associated with the framework of the basin itself. The north side appears to be quite regular and to have been affected only by regional uplift. Erosion was extensive and the area of the basin at least was practically levelled. It remained as land until Tertiary time. The erosional debris was apparently carried far to the south and deposited in the ocean basin beyond the surveyed area.
- (2) The margin between the continental block and the ocean deep, although not related tectonically to the basin, was developed.
- (3) Fault or fold movements in the offshore area that may be dated as pre-Tertiary are scarce. The one example at hand is the fold-like feature in the eastern part of South Australia seen on SS-25 to SS-27. Although it could have been formed during the hiatus period, it seems more likely that it developed at an earlier date while the basin was tectonically mobile.

The first sediments of the Tertiary basin were deposited on a well-levelled surface with slight southward tilting. Subsidence, on a regional scale, was gentle and the sea shallow. The sediments were derived from

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