

ABSTRACT:

The Bass Basin is the southernmost of the three sedimentary areas which were formed by the breakdown over the Palaeozoic belt between mainland Australia and Tasmania. Perhaps because of its southern position the Bass area was not affected by the basin-forming movement during Mesozoic. It is purely a Tertiary basin.

The basin is elongated northwest-southeast, measuring about 160 x 80 miles. Within this area a maximum of 13,000 feet of Tertiary accumulated which can be divided into four stratigraphic units, each overlapping considerably the older unit.

The basin was subsiding actively during the interval in which Units I and II were being deposited. This is manifest from the steep attitude of the northeast and southwest flanks and by the manner in which the two units pinched out within the confines of the silled basin.

After deposition of these lower two units the flanks of the basin became stabilized. Subsidence from then on continued as a gentle sag extending beyond the limits of the original basin. The upper two units total about 4,500 feet of marine sediments, presumably deposited in shallow water.

With regard to likely sources of hydrocarbons, Units I and II represent the more important portion of the section because of the silled environment and the appreciable thicknesses they attained in the central part of the basin.

The upper 1,000 feet of Unit II contains reefal build-ups out in the basin, and more extensive reefal bodies are developed on the shelf at the edge of the hinge zone. Below the reefal build-ups out in the basin, the unit is believed to be made up essentially of marls, shales and sands.