

represented almost entirely by the delta-plain and delta-front facies. Progradation of the latter proximal environments had progressed across the breadth of the basin, with only one northern zone of pro-deltaic sedimentation remaining (Albatross-1).

Cessation of Latrobe Group sedimentation was brought about by regional southward tilting of the basin about a persistent east/west axis. This resulted in Eocene submarine canyon erosion and deposition along north/south trends: The earliest such canyon is the Tuna-Flounder Channel, filled with Lower Eocene marine sandstones. The Marlin Channel lies immediately west of the latter, and is filled with Upper Eocene marine shales. An aforementioned possible post-Latrobe channel in the vicinity of Kingfish Field is filled with Eocene coarse sandstones.

Post-Latrobe submarine channel deposition was followed by regional uplift and deposition of the highly glauconitic Upper Eocene Gurnard Formation near mean sea level. Renewed uplift during Latest Eocene time resulted in erosion and local eradication of the Gurnard Formation.

The latter phase of uplift was induced by northwest-directed tectonic compression associated with opening of the Tasman Sea. The consequent northeast-trending Latest Eocene structural grain is indicated by the corresponding trends of preservation/absence of the Gurnard Formation. The northeast fold trend is locally evidenced by the Top Latrobe surface throughout the offshore Gippsland Basin.

Latest Oligocene

Oligocene deposits in the offshore Gippsland Basin include the Lakes Entrance Formation, an inner shelf calcareous shale/claystone unit, and the lowermost Gippsland Limestone, an open marine carbonate unit. The formational boundary between the latter formations is time-transgressive.

Paleogeographic reconstruction of the Latest Oligocene surface indicates the dominance of Lakes Entrance clastic deposition: only a relatively small east/west-trending zone of Gippsland Limestone deposition is represented, in