

the Bream-Kingfish area. This suggests a mainly inner-shelfal paleo-environmental regime at this time. In the south-central portion of the basin, the Lakes Entrance deposits are relatively silty to sandy (Moray-1 and Pike-1) and, toward the southeastern limit of well control, the basal Lakes Entrance consists of a glauconitic greensand member (Pisces-1 and Helios-1).

#### Middle Miocene

Subsidence and continued marine incursion are evidenced by the predominance of open marine Gippsland Limestone deposition by Mid-Miocene time. Local submarine channel deposition is exemplified by the Kingfish Channel; it is likely that such channels are numerous about the basin.

There are several broad areas representing continued inner-shelfal Lakes Entrance clastic deposition; these areas may reflect broad residual or rejuvenated structural highs inherited from the previous (Latest Eocene) northwest/southeast compressional episode.

As in the Latest Oligocene paleoenvironmental model, areas representing a relatively silty to sandy facies of Lakes Entrance deposition occur in the southern portion of the basin. In Moray-1, the Mid-Miocene Lakes Entrance Formation is described as silty, and in Bluebone-1 it is described as consisting predominantly of argillaceous glauconitic sandstone (61 meters in thickness) with high porosities.

At Mid-Miocene level, the Gippsland Limestone has been described as loose calcarenite (143 meters thick) in Mullet-1.