



regressed to approximately its present position in mid-Pliocene, and terrestrial deposits ranging in age from Upper Pliocene to Recent were deposited in the coastal area on the mainland.

Commercial hydrocarbon deposits have been found in the western off-shore part of the basin in the Latrobe Valley sandstone members, and good shows occur in the Upper Cretaceous-Paleocene (?) sands. The Lakes Entrance shales, which also serve as cap rock, probably are the primary source rocks. Other possible source deposits are coal and shale beds within or below the early Latrobe Valley formation.

Traps found to date are structural closures or combined uplift and erosional features, wherein part of the closure is influenced by relief on the buried topographic surface at the top of the Latrobe Valley unit. The structural and stratigraphic history of the basin indicates strong possibilities of fault and stratigraphic traps. Bald-headed basement highs where the Latrobe Valley formation has been eroded and subsequently overlapped by the Lakes Entrance shales present interesting stratigraphic trapping possibilities.

The presence of linear features referred to as submarine canyons has been established in previous seismic work in the west adjoining area to Magellan's tenements. One known canyon trends NW-SE to the east of the Marlin No 1 well (Refer enclosure 3). Another is located west of and parallel to the western boundary of T/LP. (Refer enclosure 5). These are thought to be Eocene and/or Oligocene channels subsequently filled with Oligocene and Miocene marine deposits. Although the two presently known submarine canyons appear not to enter PEP 63 or T/LP, others may exist that do.