

PALYNOLOGICAL SUMMARY OF FLINDERS-1

AGE	UNIT	SPORE-POLLEN ZONES	DEPTHS (mKB)
MIDDLE EOCENE	EASTERN VIEW	Lower <i>N. asperus</i>	1602
EOCENE		(Indeterminate)	(1702-2304)
EARLY EOCENE	COAL MEASURES	Lower <i>M. diversus</i>	2365.5-2417
PALEOCENE		Upper <i>L. balmei</i>	2461
PALEOCENE		Lower <i>L. balmei</i>	2504-2688.5

GEOLOGICAL COMMENTS

- The most notable feature of the sequence analysed by palynology in Flinders-1 is the carbonised interval between 1702-2304m. Assemblages from this interval could only be assigned a broad Eocene age. Although the sample at 1906m is no older than the Middle *M. diversus* it is most likely a zone or two younger. The thermal maturity of the kerogen, including the palynomorphs, through this section probably relates to heating associated with the igneous intrusion identified between 2207-2272m.

A similar thermally mature interval within the Eocene part of the Eastern View Coal Measures was recorded in Pipipa-1 drilled in 1982 to the west of the Pelican field to a T.D. (total depth) of 2115m. The carbonised interval in Pipipa-1 was analysed by palynology from 18 sidewall cores between 1668-2105m. None of the samples could be assigned to a zone but a very limited assemblage recorded at 1999m suggested an Eocene age no older than the Lower *M. diversus* Zone (Stacy, Partridge & Stevens, 1982).
- The deepest sample at 2688.5m analysed in Flinders-1 is no older than the Early Paleocene Lower *L. balmei* Zone. Although no index species for the Lower subdivision of the *L. balmei* Zone were recorded in the seven deepest samples they can be referred to this zone on their stratigraphic position below the confident identification of the Lower *L. balmei* Zone at 2504m.
- Although microplankton were recorded from a majority of samples only the shallowest at 1602m contained a suite of dinoflagellates which could be interpreted as indicating a marine incursion. Eight species were recorded with *Cordosphaeridium inodes* the commonest. Unfortunately the assemblage lacks the index species diagnostic of the Gippsland Basin zones of Partridge (1976). In the underlying samples the majority of specimens recorded were considered caved from higher levels in the well. Interpreted *insitu* forms principally comprised species typical of interbedded coal measure facies such as