560



# PALYNOLOGY OF BONITA -1, GIPPSLAND BASIN

by

P.R. Evans

Palyn.Rept. 1970/11

May 1970.

## INTRODUCTION

A series of sidewall cores from Bonita -1 covering virtually the entire interval of the Latrobe complex penetrated by the well was received for examination during November 1969. The following notes summarize the results of analysis.

## SUMMARY

| Sample | Depth(ft.) | Age | Zone |
|---|---|---|---|
| SWC 33 | 8046 | Paleocene | 1. M. diversus |
| " 31 | 8146 | " | " |
| " 29 | 8278* | " | L. balmei |
| " 28 | 8365* | " | " |
| " 24 | 8814 | " | " |
| " 18 | 9478* | " | " |
| " 16 | 9502* | " | " |
| " 14 | 9612 | " | lower L. balmei |
| " 13 | 9703 | " | " |
| " 12 | 9833 | " | " |
| " 11 | 9986* | " | " |
| " 5 | 10269* | " | ? " |

## COMMENT

The lower M. diversus Zone is characterized by abundant dinoflagellates. Rare dinoflagellates are present in samples marked (*), at the top of the L. balmei Zone. Their presence at 8814 feet is indeterminate because of insufficient yield. Adequate yields were obtained at 9612-9833 feet where it may be assumed dinoflagellates are absent.

The greensand, sampled at 9502 feet, contained a poor assemblage of spores, pollen and dinoflagellates but was found to yield relatively abundant nannoplankton which are good indicators of saline, either marine or estuarine environments. Samples at 8278, 8365 and 9478 feet were also tested for nannoplankton but yielded none.

Whereas most of the section is readily allocated to the L. balmei Zone, evidence suggests that horizons between 9612 and 9986 feet are referrable to basal sections of the L. balmei Zone and that assignment of the deepest sample at 10,269 feet to the balmei Zone may be questionable.

Although key fossils are absent the bulk of the fairly small residue suggests a balmei age is preferable.

The sample at 10,269 feet is remarkable for a content of Deflandreid dinoflagellate of unknown designation. They match neither Cretaceous nor Tertiary forms of the genus which have been described so far.