



PE990356

Appendix 1

THE PALYNOLOGY

OF COBIA-1

GIPPSLAND BASIN

by

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THE PALYNOLOGY OF COBIA-1SUMMARY

The following spore-pollen zones are identified in Cobia-1:

<u>Zone</u>	<u>Depth in Feet</u>	<u>Age</u>
<u>Proteacidites tuberculatus</u>	7817	Early Oligocene
<u>Malvacipollis diversus</u>	7821 - 7882	Early Eocene
<u>Lygistepollenites balmei</u>	8012 - 8150	Paleocene

COMMENTS

The palynology does not indicate any time break between the L. balmei and Lower M. diversus Zones. The samples referred to the L. balmei Zone are from near the top of the zone, while the Lower M. diversus section appears to represent the oldest portion of the zone.

The L. balmei Zone is only identified in two samples. The presence of the dinoflagellate Wetzeliella homomorpha in both samples and the rare occurrence of Cupanieidites orthoteichus and Tricolporites paenestriatus in the higher sample at 8012 feet suggest that only the upper part of the zone has been penetrated.

The Malvacipollis diversus Zone contains assemblages which are fairly well preserved but are of low diversity. The assemblages are dominated by the pollen Proteacidites grandis but contain few other key species. The lack of other key forms indicates that the section in Cobia-1 represents the oldest portion of the M. diversus Zone. The sample at 7821 feet contains a good M. diversus Zone assemblage without the presence of any younger fossil to suggest that it could be a reworked assemblage. The palynology data therefore indicates that the unconformity at the top of the Latrobe Group in Cobia-1 is between the P. tuberculatus Zone at 7817 feet and the M. diversus Zone at 7821 feet.

The Proteacidites tuberculatus Zone is identified by the presence at 7817 feet of the spore Cyatheacidites annulatus, associated with Oligocene dinoflagellate.

SAMPLES EXAMINED

<u>Sample</u>	<u>Depth (in feet)</u>	<u>Zone</u>
SWC 19	7817 *	<u>P. tuberculatus</u>
SWC 18	7821 *	<u>M. diversus</u>
SWC 17	7830 *	<u>M. diversus</u>
SWC 16	7836 *	Indeterminant (Very poor preservation)
Core-1	7842 (Coal)	<u>M. diversus</u>
Core-1	7845½	<u>M. diversus</u>
Core-2	7876 *	<u>M. diversus</u>
SWC 13	7876 (Coal)	<u>M. diversus</u>
Core-3	7882 *	<u>M. diversus</u>
Core-3	7894	Barren
SWC 9	7912	Barren
SWC 8	7920	Barren
SWC 6	7960	Barren
SWC 5	8012	<u>L. balmei</u>
SWC 3	8150	<u>L. balmei</u>
SWC 1	8390	Barren

* Dinoflagellates present

