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SUNDAY ISLAND-1.

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TERTIARY PALYNOLOGY OF
WELLS AND BORES IN CORNER
INLET SECTOR, ONSHORE
GIPPSLAND BASIN.

by

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INTRODUCTION:

Twenty-one samples were examined from five coal bores and two petroleum wells in the south-west corner of the onshore Gippsland Basin. The results from the analysis of the samples is presented on the Summary Table, while the spore-pollen species identified in the samples are plotted on the two accompanying Distribution Charts. Discussion of geologically significant conclusions that can be drawn from this data is presented below:

GEOLOGICAL COMMENTS:

1. The coals referred to the Triporopollenites bellus Zone of Stover and Partridge (1973) and sampled in the bores Alberton East-1 at 308 feet, Alberton West-167 at 421 feet, Gippsland-2 at 600-610 feet, and Sunday Island-1 at 625 to 645 feet correlate with the Yallourn Seam in the Latrobe Valley.
2. The Upper subdivision of the Triporopollenites bellus Zone overlying these coals is distinguished by the presence of Haloragacidites amolus, Stephanocolpites oblatum Martin, common occurrence of Monosulcites waitakiensis and conspicuous occurrence of Cyperaceae and grass pollen. This unit correlates with the Lower Boisdale Beds in Wurruk Wurruk-1 (see Partridge 1971) and probably with the post-Yallourn Seam Clays. It is stressed that this unit is older than the Jemmy's Point Formation. None of the samples examined can be correlated with the Jemmy's Point Formation. They are all older. It is pointed out that referring the unit above the youngest coals to the Boisdale Beds and saying it is older than the Jemmy's Point Formation reverses the stratigraphic order given by Jenkin (1968).
3. The coals referred to the Lower T. bellus Zone all have rather low diversity assemblages. However, the species composition and species abundances are all very similar. This is the reason they can be confidently assigned to the same zone.
4. The coal at the top of core-3 (1370-85 feet) in Sunday Island-1 contained a T. bellus Zone assemblage and is virtually indistinguishable from the sample from core-1. Since core-3 had very low recovery (20%) and the coal at the top of the core is described as having numerous fracture planes, it is suggested that this coal has caved from higher in the hole. The sample from the bottom of core-3 gave a Middle N. asperus Zone age which is more consistent with the known geology.

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5. The SWC-14 at 1025 feet in Sunday Island-1 was potentially contaminated with drilling mud which could not be cleaned from the sample. A Middle N. asperus Zone age is given to the sample based on presence of Triorites magnificus, Santalumidites cainozoicus, Proteacidites adenantoides, Tricolpites phillipsii and Agloroidia qualumis. If these species are discounted as contamination, which seems unlikely, the next most likely age assignment is to the Upper N. asperus Zone based on frequent occurrence of Proteacidites stipplatus. If the sample is contaminated it is difficult to explain absence of key indicator species from the I. bellus Zone which occurs higher in the hole.
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S U M M A R Y T A B L E

WELL OR BORE	SAMPLE	DEPTH (in feet)	LITHOLOGY	ZONE	CONFIDENCE RATING	AGE	COMMENTS
ALBERTON EAST-1	CORE	211	CARB. SILTST.	UPPER <u>T. BELLUS</u>	1	MIDDLE-LATE MIOCENE	-
	CORE	240	SHALE	UPPER <u>T. BELLUS</u>	0	MIDDLE-LATE MIOCENE	RARE DINOFLAGELLATES PRESENT
	CORE	308	COAL	LOWER <u>T. BELLUS</u>	2	MIDDLE-MIOCENE	-
	CORE	534	CLAYSTONE	<u>P. TUBERCULATUS</u>	1	OLIGOCENE-EARLY MIOCENE	-
ALBERTON EAST-2	CORE	380-85	SILTSTONE	UPPER <u>T. BELLUS</u>	0	MIDDLE-LATE MIOCENE	RARE DINOFLAGELLATES PRESENT
	CORE	440-45	SILTSTONE	<u>T. BELLUS</u>	1	MIDDLE-LATE MIOCENE	RARE DINOFLAGELLATES PRESENT
ALBERTON WEST-142	CORE	58	SILTSTONE	<u>T. BELLUS</u>	1	MIDDLE-LATE MIOCENE	RARE DINOFLAGELLATES PRESENT
ALBERTON WEST-167	CORE-1	381	CARB. SILTST.	UPPER <u>T. BELLUS</u>	0	MIDDLE-LATE MIOCENE	
	CORE-2	421	COAL	LOWER <u>T. BELLUS</u>	2	MIDDLE MIOCENE	
	CORE-8	703	CARB. SILTST.	<u>P. TUBERCULATUS</u>	2	OLIGOCENE-EARLY MIOCENE	
ALBERTON WEST-168	CORE-1	133	COAL	<u>P. TUBERCULATUS</u>	2	OLIGOCENE-EARLY MIOCENE	
	CORE-7	442	COAL	UPPER <u>N. ASPERUS</u>	0	EARLY OLIGOCENE	COMMON <u>PROTEACIDITES STIPPLATUS</u>
	CORE-8	508	COAL	MIDDLE <u>N. ASPERUS</u>	0	LATE EOCENE	COMMON <u>TRIORITES MAGNIFICUS</u>
FROM LAKES							
GIPPSLAND-2	CUTTINGS	500-10	COAL	INDETERMINANT			VIRTUALLY BARREN
	CUTTINGS	600-10	COAL	LOWER <u>T. BELLUS</u>	1	MIDDLE MIOCENE	-
SUNDAY ISLAND-1	CORE-1	625-45	COAL	LOWER <u>T. BELLUS</u>	1	MIDDLE MIOCENE	-
	SWC-14	1025	-	MIDDLE <u>N. ASPERUS</u>	2	LATE EOCENE	POSSIBLY CONTAMINATED
	CORE-3	1370-85(TOP)	COAL	LOWER <u>T. BELLUS</u>	1	MIDDLE MIOCENE	CAVED FROM ABOVE
	CORE-3	1370-85(BOTTOM)	-	MIDDLE <u>N. ASPERUS</u>	2	LATE EOCENE	-
	SWC-7	1460	COAL	MIDDLE <u>N. ASPERUS</u>	0	LATE EOCENE	COMMON <u>T. MAGNIFICUS</u>
	SWC-2	1610	WHITE CLAY	MIDDLE <u>N. ASPERUS</u>	2	LATE EOCENE	

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