

PALYNOLOGICAL REPORT

by

Mr. John Douglas
Department of Mines, Victoria.

Reports dated 23/3/62 and 28/6/62.

Core samples from Wellington Park No. 1 bore were treated by the hydrofluoric acid - Schulze's solution method, and residues examined for acid insoluble microfossils.

Assemblages isolated are tabulated below :

<u>Age</u>	<u>Depth*</u>	<u>Microfossils</u>
	3142'	Largely devoid of plant reproductive bodies
	3220'	" " " " "
	3354'	" " " " "
Tertiary	3410'	" " " " "
	3523'	" " " " "
	3654'	" " " " "
	3738' - 3739'	Protocacidites sp. Netholagus sp.
UNCONFORMITY		
	3817' - 3826'	Cicatricosisperites sp. Styxisperites sp. Osmundacidites sp. bisaccate gymnosperms, etc.
	4336' - 4340'	Barren
	5301' - 5306'	None isolated
	6310' - 6312'	Lycopodiumsperites muetreclavatidites, gymnosperm pollen
Lower	6320' - 6323'	Largely barren
Cretaceous	6853' - 6855'	" "
	7379' - 7380'	" "
	7935' - 7937'	" "
	7943' - 7945'	" "
	8407' - 8411'	Cirratriadites sp. Cyathidites sp., etc.

<u>Age</u>	<u>Depth</u>	<u>Microfossils</u>
Lower Cretaceous	9506' - 9512'	Largely barren
	10,004' - 10,006'	" "
	10,540' - 10,543'	" "
	11,236' - 11,237'	" "
	11,239' - 11,241'	Trilete sporomorphs of undetermined affinities, conifer pollens, etc.
	11,972' - 11,974'	Barren

The boundary between Mesozoic and Tertiary deposits lies between the 3738-3738 ft. and 3817-3826 ft. samplings. Proteacidites and Nothofagus sp. are not entirely restricted to the Tertiary in Victoria, and have been recorded from Upper Cretaceous sediments, but the presence of these species and the absence of any Cretaceous forms is sufficient evidence to establish the 3738-3739 beds in the Tertiary.

The Cicatricesporites microflora is typical of the lower beds of the Upper Cretaceous and Lower Cretaceous in western Victoria.

As no Cretaceous microplankton were isolated, Upper or Lower Cretaceous marine beds do not appear to have been penetrated, and the 3817-3826 ft. horizon is presumed to be portion of the Lower Cretaceous non marine sequence known from outcrop further west.

The determination of "Lower Cretaceous" age for cores below 3817-3826 feet remains unaltered after the new samplings. Samplings between 6320 ft. and 11,236 ft. were largely barren. A few sporomorphs and conifer pollens at 11,239-41 feet, although of little diagnostic value, indicate that these deepest beds are still Lower Cretaceous in age.

* Depths from 3124 feet to 3654 feet represent side-wall cores, remainder are conventional cores.

