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MICROPALAEONTOLOGICAL EXAMINATION OF SAMPLES FROM ARCO-WOODSIDE'S WELLINGTON PARK NO.1 WELL.

Cores and side wall cores as well as rotary cuttings, were examined from the interval 750 feet to 1200 feet in Wellington Park No.1 Well.

Mesozoic:- No Mesozoic Foraminifera or other Mesozoic fauna were found in the samples examined. It is assumed that marine Mesozoic sediments are not present in any part of the drilled section.

Tertiary:- No Tertiary Foraminifera were found in any cores or side wall cores. Difficulty was enccuntered in ascertaining the biostratigraphic sequence on rotary cuttings, as the foraminiferal biostratigraphic schemes of Carter (1959 & 1962) and Jenkins (1960) on the earliest appearances (first appearance up the sequence) However Carter (1962) lists the Foraminifera which characterise the various rock units. Therefore it is assumed if certain species are present in a sample and those species characterise a rock unit, then that sample is from that rock unit.

The characteristic faunal content down the sequence is as follows.

? to 950 feet:- Orbulina universa, Biorbulina bilobata, Globorotalia menardii miotumida and Triloculina tricultata. This fauna indicates that Carter's faunal unit 11 is present and this faunal unit is within the Bairnsdalian Stage. Therefore the top member of the Gippsland Limestone must be present above 950 feet. The Tambo River Formation could also be present but it contains a much poorer pelagic fauna than the one present at 960 feet. The pelagic fauna of this interval corresponds with the pelagic fauna above 600 feet in the Lakes Entrance Oil Shaft (refer Jenkins, 1960).

950 feet to 1920 feet:- Amphistegina lessonii occurs in abundance below 950 feet and is associated with Operculina victoriensis and Lepidoclina howchini below 1200 feet. These species are present within Carter's faunal units 10 and 9. Faunal unit 10 suggests Balcombian Stage, whilst 9 suggests the Batesfordian Stage. As the Batesfordian is characterised by L.howchini it would appear that this stage is present below 1200 feet. It is difficult to draw a boundary between the two Stages in this section with the available samples, but both stages are definitely present.

1920 feet to 2150 feet:- The appearance of Astrononion centroplax (sensu stricto) is taken as the top of the Longfordian Stage. The three faunal units within this stage cannot be differentiated because they are based on the first appearances of species up the sequence. On faunal evidence the base of the Gippsland Limestone is placed at 2150 feet.

2150 feet to 2360 feet:- The first appearance of Victorella conoidea (= "V.plecta") is the first indication of the Janjukian Stage and is the characteristic species of the Lakes Entrance Formation. It should be noted that the green sands at the top of the Lakes Entrance Formation are not present in this section.

2360 feet to ? :- There are no first appearances of species below 2360 feet. The Eocene pelagic species Globigerina linaperta, Globigerinoides index and Mantkenina alabamensis are absent from all samples examined. It is believed that there was no marine sedimentation in the Lake Wellington area before the Oligocene (Janjukian Stage).

The top of the Latrobe Valley Coal Measure is placed at 2360 feet (approx.) on lithological grounds. Carter (1962) considers that this Formation does not contain Foraminifera.

The marine Tertiary sequence in Wellington Park No.1 Well is tabulated below.

Depth	Faunal Units (Carter 1959)	Aust.Stages (Carter 1959)	Rock Units (Carter 1962) Formation	Member
		Mitchellian	Tambo River.	
? to 950'	11	Bairnsdalian		Bairnsdale Lst.
950' to 1900'	10 & 9	Balcombian & Batesfordian	GIPPSLAND LIMESTONE	Wuk Wuk Marls & Glencoe Lst.
1900' to 2150'	8 to 6	Longfordian		Longford Lst
2150' to 2360'	5	Janjukian	LAKES ENTRANCE	

Conclusion:

The Marine Tertiary sequence appears to be typical of the Miocene and Oligocene sediments of the Gippsland Basin. The foraminifera indicate that a full section of Gippsland Limestone is present. It should be noted that the four members of the Gippsland Limestone are delineated on faunal content, thus may only be equivalents with regard to lithology. The absence of the greensands suggests that the Lakes Entrance Formation may not be fully developed.

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