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REPORT ON TERTIARY STRATIGRAPHY IN CARR'SCREEK NO. 1 WELLby D. J. Taylor

Cores 1 to 5, side wall cores and rotary cuttings (to 4000 feet) have been examined from Arco - Woodside's Carr's Creek No. 1 Well.

The stratigraphy, partially based on foraminiferal content is outlined in drilled order. All stratigraphic names applied are those used by Carter (1963).

50 - 220 feet :

Brown gravels in a clayey matrix are present to 110 feet. From 110 to 190 feet consists of coarse sand and a little gravel. From 190 to 230 feet mica and dark brown coal fragments are present with gravels. This entire gravel and sand interval is unfossiliferous. This interval probably represents the Haunted Hills Gravels.

220 - 400 feet :

The gravelly marls in this interval contain abundant shell fragments and shallow water foraminiferal fauna. Foraminifera present include Elphidium imperatrix, E. pseudonodosum, Guttulina regina, Nonion victoriensis, and Triloculina tricultrata. This is a typical Kalimnan Stage fauna (Pliocene age) and this lithological interval is an equivalent of the Jemmys Point Formation.

400 - 530 feet :

There is a faunal change at 400 feet, but there is no lithological change till 430 feet where grey marls are present. This fauna consists of Astrononion australe, Baggina philipensis, Cibicides cygnorum, Bolivina alata, Notorotalia clathrata, Rosalina mitchelli and Valvulineria kalimnensis. This fauna is typical of the Tambo River Formation.

530 - 2000 feet :

A series of calcareous siltstones, marls and limestones.

The fauna in a side-wall core at 530 feet is nondescript consisting of species of Elphidium and Notorotalia. Planktonic foraminifera, including Orbulina universa, appears 100 feet below. Operculina victoriensis and Amphistigina lessonii first appear at 930 feet, accompanied by Cibicides brevoralis, Eponides repandus, and Parrellina craticulatifomis. Lepidocyclina howchini and Gypsina globulus were first noted at 1400 feet. Astrononion centroplax, Cibicides perforatus and Gyroldina zealandica appeared at 1700 feet.

This interval represents the Gippsland Limestone. The vertical distribution of the Foraminifera suggests that the Bairnsdalian Stage is represented between 530 and 930 feet; Balcombian Stage from 930 and 1400 feet; and Batesfordian Stage from 1400 to 1700 feet; and the Longfordian Stage from 1700 feet to 2000 feet. It is not possible to subdivide the Gippsland Limestone into its lithological members as slight lithological changes within the Formation are not constant.

2000 - 2270 feet :

Victoriella conoidea first appears at 2000 feet and is associated with Globigerina ampliapertura. These species and the other fauna present indicates the Janjukian Stage. However the lithology between 2000 feet and 2200 feet is identical with that above 2000 feet and should be included within the Gippsland Limestone. Micaceous, glauconitic marls are present from 2200 feet to 2270 feet and are typical of the upper member of the Lakes Entrance Formation. Although there is correspondence between the Lakes Entrance Formation and the interval representing the Janjukian Stage in the Lakes Entrance area, this is not so in the central part of the basin where the Gippsland Limestone commenced within and not at the top of the Janjukian Stage.

2270 feet - \_\_\_\_\_ :

A side wall core at 2270 feet was of a carbonaceous sand suggestive of the Latrobe Valley Formation, although the

rotary cuttings below this level were still of Lakes Entrance Formation lithology. No foraminifera were found below 2270 feet which suggest a pre-Janjukian age.

Depth	Australian Tertiary Stages (Carter, 1959)	Rock Units Formations (Carter, 1963)
50 - 230		Haunted Hills Gravels
230 - 400	Kalimnan	Jemmys Point
400 - 530	Mitchellian	Tambo River
530 - 930	Bairnsdalian	
930 - 1400	Balcombian	GIPPSLAND
1400 - 1700	Batesfordian	LIMESTONE
1700 - 2000	Longfordian	
2000 - 2200	Janjukian	
2200 - 2270	Janjukian	Lakes Entrance

#### REFERENCES

- Carter, A. N., 1959      Guide Foraminifera of the Tertiary Stages in Victoria. Vic. Min. & Geol. J., 6 (3), 48-54.
- Carter, A. N., 1963      Tertiary Foraminifera from the Gippsland, Victoria and their stratigraphic significance. Geol. Surv. Vic., Memoir 22, (in press).

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