

OLIGOCENE:- 2310 - 2550.

A distinct change in planktonic content is noted in rotary cuttings at and below 2310 feet. This is confirmed in the side wall core at 2412 feet where Globigerina euapertura is present, instead of the G. apertura and G. woodi association of the side wall core at 2225 feet which contains a typical lowermost Miocene (Zonule H) fauna. The orange, iron-rich, calcarenite of side wall core at 2440 feet and rotary cuttings below 2410 feet, contain a poor fauna which includes the index "Janjukian Stage" benthonic species Victoriella conoidea (refer Carter, 1964).

At the base of the orange calcarenite facies, at 2460 feet the cuttings are of grey marl and contain a rich planktonic fauna with abundant uvigerinid element (nos. 50 - 52). The highest appearance, in combination, of Globigerina angioporoides, Cassigerinella chipolensis Chiloquembelina cubensis and Guembelitra sp. (distribution nos. 12 & 20 - 22) indicates Zonule J. This is confirmed by side wall core at 2508 feet which contains the above species as well as transition morphotypes between Globigerina ampliapertura and G. euapertura as well as transitions between G. linaperta and G. angioporoides. The presence of Bolivina pontis in the side wall core is significant. The whole aspect of the fauna between 2460 and 2550 feet is that it is low in Zonule J and has a strong upper Eocene aspect. The absence of Globorotalia testarugosa and Bolivina anastomosa may also be of significance as these species are present at the top of Zonule J in the Gippsland Basin (= base of Lakes Entrance marl) and in the Bass Basin. Generally speaking the change from Zonule J to Zonule I faunas is abrupt and without species overlap in the Prawn section. This is not merely due to the abrupt litho-facies change as Chiloquembelina cubensis and Globigerina angioporoides persists into the base of the orange calcarenite facies (i.e. the Clifton Formation) in some sections in the Port Campbell Embayment of the Otway Basin; e.g. Narrawaturk-2. Also Guembelitra sp. and Cassigerinella chipo-