

Within the interval, the planktonic foraminiferal faunas were numerically sparse with low specific diversity, suggesting very limited access to oceanic currents. The occurrence of benthonic foraminifera was sporadic both numerically and in specific diversity. Burrowing gastropods occur in two samples, suggesting a soft substrate. These gastropods were always infilled with pyrite and there was an abundance of other forms of biogenic pyrite. The gross aspect of the microfossil associations suggest deposition in shallow water (less than 90m paleodepth), in an anoxic substrate beneath normal salinity sea water.

This interval appears to be the equivalent of the Jan Juc Formation without any equivalents of the more sandy facies of the Angahook Formation being present in the sequence. Thus the Koorkah unit is more akin to the Bass No. 1 and No. 3 sequences than to Yolla-1 and Tilana-1 (refer Taylor, 1985, p.4).

#### LATE OLIGOCENE AND EARLY TO MID MIOCENE - TOP AT 680M

This is a bioclastic carbonate unit with continuous sedimentation from Zone No. 2 (Late Oligocene) to Zone D-2 (Mid Miocene). Micro faunas were sporadic in both numerical frequency and specific diversity, suggesting some restriction to oceanic circulation, though oxygenation and sea water salinities appeared to have been normal. Fragmentation of bryozoal, skeletal debris, indicates high energy transportation and deposition; especially towards the base of the sequence. Paleo-water depths probably did not exceed 120 metres.

#### MID MIOCENE AND YOUNGER - TOP SAMPLE AT 440M

The litho-facies of this unit was a bioclastic carbonate similar to the unit below, but the rich foraminiferal faunas denote a dramatic improvement in water circulation and availability of nutrients. The presence of the planktonic species *Globorotalia conica* and *G. miozea* at 600m is suggestive of an influx of oceanic water from the east (the Gippsland Basin) rather than from the west (the Otway Basin).

#### REFERENCE

TAYLOR, David, 1985 - The Foraminiferal Sequence in Tilana-1 - Bass Basin.

for: Amoco Australia Petroleum Company, October 30, 1985.