

SUMMARY

Paleontological analyses were done on Koorkah-1 samples from 440m-1600m to define the foraminiferal zones in the Torquay Group, Jan Juc Formation and the Demons Bluff Formation. The results indicate probable continuous deposition from Early Oligocene through Middle Miocene and younger (?) time. The interval from 1420-1600 meters was barren of foraminifera.

INTRODUCTION

Twenty intervals of ditch cutting samples were examined between 440m and 1600m in Koorkah-1. Unlike Yolla-1 and Tilana-1, mud contamination was prevalent in Koorkah-1; note microfossil occurrences marked with an asterisk (*) on Tables 2 and 3. For instance, *Orbulina universa* was present some 600m to 800m below its assumed in situ position (refer Table 2).

A summary of the Koorkah-1 sequence is given as Table 1; whilst factual data on distribution of planktonic and benthonic foraminifera is presented on Tables 2 and 3.

A brief discussion of the sequence, in ascending stratigraphic order is given below, with correlation to other Bass Basin sequences.

? LATE EOCENE? - TOP APPROXIMATING 1420M

No planktonic foraminifera were found in this unit. Therefore the Late Eocene age is purely by inference and similarity with other Late Eocene sediments of the Bass Basin which do contain Late Eocene planktonic faunas (for example, Tilana-1).

The microfossil assemblages were dominated by pyritic tubes and other forms of biogenic pyrite as well as grey, fine textured specimens of *Haplophragmoides* spp; the arenaceous benthonic foraminifera which can tolerate anoxic conditions and fluctuating water salinities. This interval in Koorkah is a typical expression of the Demons Bluff Formation in the Bass Basin.

EARLY TO LATE OLIGOCENE - TOP APPROXIMATING 1240M

This unit embraces assemblages which represent the Planktonic Foraminiferal Zones J-2, J-1 and I-1. Although Zone I-2 could not be identified, it was probably present, especially as *Globorotalia testarugosa* (which does not extend up into Zone I-1), was associated with a definite Zone I-1 assemblage in Koorkah (refer Table 2). Therefore sedimentation was probably continuous during the Oligocene in Koorkah and the sequence was more akin to the Bass No.1, No.2 and No.3 sequences than to Yolla-1 and Tilana-1 where the Oligocene hiatus occurred (refer Taylor, 1985, diagram on page 4).