

PE990709

1965/30

START

D.J. TAYLOR

GEOLOGICAL SURVEY OF VICTORIA - UNPUBLISHED
REPORT 30/1965.

REPORT OF MARINE FAUNAS FROM TARWIN MEADOWS
NO. 1 WELL.

Cores and cuttings were submitted from Alliance Oil Development's Tarwin Meadows No. 1 Well. The sample datum was 30 ft. this being the elevation of the rotary table above sea level (ground level = 25 ft.)

Sediment bearing marine fauna was first intersected at 30 ft. within a silty sand. This fauna was present in cuttings for 130 ft. below its initial appearance, but these occurrences were probably due to caving or mud contamination. No other fauna was reported from the section.

The fauna consists of predominantly foraminifera, with some gastropods, ostracods, bryozoal fragments and adherent coiled worm tubes.

Foraminifera:- Ammonia beccarii is the dominant form, with Elphidium spp. (including E. advenum and E. pseudonodosum) and miliolids common. Planktonic species are present (approx. 5%) and include Globigerina bulloides G. subcretacea and Globorotalia inflata. Rarer species include Patellinella inconspica and Trifarina bradyi.

The faunal aspect is similar to that living at present off the Victorian coast line. The planktonic fauna suggests direct communication with oceanic currents, and thus the depositional site was in the vicinity of an open shore line and not in a narrow embayment. A. beccarii indicates near-shore conditions.

Gastropods:- The gastropods include Charisma josephi, Notosetra cf. N. atkinsoni and Lodderia lodderia, which are listed and illustrated by Vallentine (1965) from a near shore Quaternary deposit at Port Fairy (Western Victoria). As is the case of the foraminifera, the preservation of the gastropods is near perfect with the retention of delicate ornamentation and traces of shell colouration.

Age:- The close similarities to living foraminiferal faunas and comparison with the Port Fairy Quaternary molluscan faunas, together with the excellent state of shell preservation suggests these faunas to be of recent origin. The Port Fairy deposits are post "Newer Basalt" and thus are obviously Quaternary. Therefore the Tarwin Meadows fauna is considered as being of Quaternary age.

Similar foraminiferal and molluscan faunas are present within 100 ft. of the surface along the Gippsland coastline. These Gippsland Quaternary faunas are specifically distinct and stratigraphically above the Pliocene Jemmys Point Formation.

Reference:

VALLENTINE, J.W., 1965. Quaternary mollusca from Port Fairy, Victoria, Australia, and their palaeoecological implications. Proc. Roy. Soc. Vict., 78 (1): 15-73.

David Taylor.

David J. Taylor.

5.8.65.