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Micropaleontological report on samples from
bores in the Western Port Basin, with comments
on the biostratigraphy.

During the last few years samples from a number of bores in the Western Port Basin (French Island 7, Tyabb 22, Lang Lang 28, Pakenham 35, Yallock 7 and a private bore near Tooradin) have been examined micropaleontologically by the writer. The resulting information is compiled in this report at the request of B.R. Thompson.

The French Island 7 and Tyabb 22 bore sections were examined in greater detail than the other subsurface sequences, and brief lithologic logs are given for these bores.

French Island 7

- 0'-2' Soil
- 2'-23' grey and brown sand, clayey sand and sandy clay.
- 23'-40' dark grey to black carbonaceous clay
- 40'-55' grey ligneous silt
- 55'-115' grey and dark grey carbonaceous sand and clayey sand.
- 115'-300' dark yellowish brown calcareous sand and sandy marl.
- 300-305' brown coal
- 305'-355' grey tuffaceous clay and sand, and carbonaceous silty clay.
- 355'-415' (T.D.) Paleozoic mudstone.

The interval between 115' and 300' represents the Sherwood Marl. Two samples from this interval (115'-133' and 133'-300') have been available for micropaleontological examination. As noted already by K.J. Reed (unpublished report 1960/131, both samples contain Orbulina suturalis, indicating Carter's Faunal Unit 10 and Balcombian age.

Tyabb 22

- 0' - 78' reddish brown, yellowish brown and brownish grey sand, clayey sand and silt.
- 78' - 90' brownish grey clayey sandy silt
- 90' - 158' light olive grey silty marl
- 158' - 177' dark yellowish brown fine to coarse calcareous sand.
- 177'-181' black coal
- 181' - 195(T.D.) brownish grey sandstone.

The interval between 90' and 177' represents the Sherwood Marl. The following samples were examined micropaleontologically:

- 80' - 85' no identifiable fossils; glauconite molds and pellets present
- 90' - 95' mostly lagenid forams; very rare Orbulina suturalis

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- 155'-160' O. suturalis
- 158'-164' Globigerinoides bisphericus, G. trilobus
- 164'-177' very rare G. bisphericus

The strata between 90' and 158' are regarded as Balcombian in age. The beds between 158' and 177' are very probably Batesfordian (Carter's Faunal Unit 9).

Long Lang 23

Samples examined micropaleontologically:

- 200'-205' O. suturalis
- 235'-240' G. bisphericus; a few G. glomerosus
- 260'-265' very rare forams
- 275'-285' no forams observed

The strata between 200' and 240' may be regarded as Batesfordian to Balcombian in age.

Palenham 35

The two samples examined (150'-155' and 160'-165') contain almost exclusively lagenid and polymorphinid forams, not enabling age determination.

Yallock 7

A sample from core No.2 (567'-583') contains a few G. trilobus, indicating an age not older than Carter's Faunal Unit 7 (Longfordian)

Private bore 2 miles west of Tooradin on Highway

Sample 180' -200' contains few distinctive planktonic forams; probably Balcombian age is represented.

Comments

The Sherwood Marl outcrops only at Flinders, where it is represented by bryozoal limestone containing Lepidocyclina. This forams species, indicating Batesfordian age, has also been recorded by W.J. Parr (see J.J. Jenkin, 1962, Underground Water Investigation Report No.5, p.14) from the Sherwood Marl subsurface at Cardinia.

Thus the Sherwood Marl may be regarded as Batesfordian to Balcombian in age. However, few adequately sampled subsurface sections have been available for detailed examination, and the formation may prove to be, at least locally, slightly older or younger than the presently accepted age range.

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