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DEPARTMENT OF NATIONAL DEVELOPMENT  
BUREAU OF MINERAL RESOURCES  
GEOLOGY AND GEOPHYSICS

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1948/11

MICROPALAEONTOLOGICAL EXAMINATION OF SAMPLES FROM BORES  
NOS. 2, 10 AND 22, ROBE. SOUTH AUSTRALIA

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by

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MICROPALAEONTOLOGICAL EXAMINATION OF SAMPLES FROM BORES

Nos. 2, 10 and 22, ROBE, SOUTH AUSTRALIA.

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Bore No. 2.

20'6"-31'4". Grey shelly sand with worn foraminifera.

Foraminifera: Cibicides refulgens, Discorbis dimidiata.

31'4"-31'7". Light to dark grey carbonaceous slay with foraminifera, sponge spicules, mollusca (Coxiella, Bulinus) and ostracoda.

Foraminifera: Quinqueloculina seminulum, Q. sp., Triloculina tricarinata, Bolivina sp., Bulimina pupoides, Streblus beccarii, Discorbis dimidiata, Elphidium crispum, E. sp.

Ostracoda: Cypris mytiloides, Cypris sydneya, Candonacypris assimilis.

33'4"-34'7". Greyish travertine with Coxiella and Bulinus.

34'7"-35'. Whitish travertinous sandstone with calcareous algae, minute foraminifera and siliceous sponge spicules.

Plantae: Lithothamnium ramosissimum.

Foraminifera: Discorbis dimidiata, Anomalinella cf. rostrata, Cibicides sp., Elphidium argenteum, E. spp.

NOTE ON THE SAMPLES.

The sample from 20 feet 6 inches down to 31 feet 4 inches is a calcareous sand of Sub-Recent age, and is typical of recent shoreline sands found along the Southeastern Coast of Australia at the present day.

From 31 feet 4 inches down to 31 feet 7 inches, the bore is in a brackish water deposit of Pleistocene age. The clay contains a few foraminifera, typical brackish to freshwater mollusca and numerous brackish to freshwater thin-shelled ostracoda.

Foraminifera are not common in the sample, the most abundant species being Streblus beccarii which is found not only in marine deposits but also under brackish water conditions. Species of Quinqueloculina, Bulimina and Elphidium have been recorded from brackish water deposits and may have been floated in at high tide.

The mollusca and ostracoda are typical of brackish and freshwater deposits. The ostracoda are very common and have very thin-shelled carapaces. Three of the species Cypris mytiloides, C. sydneya and Candonacypris assimilis were recorded from freshwater swamps at Boneo, west of Cape Schanck, Victoria. Further species will be determined later and included in a note on this interesting deposit.

The sample at 33 feet 4 inches down to 34 feet 7 inches is a travertine containing freshwater shells such as Coxiella and Bulinus, and that at 34 feet 7 inches down to 35 feet is a travertinous sandstone, containing a few minute foraminifera.

The age of the samples from 31 feet 4 inches down to 35 feet is Pleistocene.

29'-31'1". Grey calcareous sand with worn foraminifera.

Foraminifera: Triloculina tricarinata, Uvigerina sp., Cibicides refulgens, Elphidium argenteum.

31'1"-31'10". Calcareous sandstone with foraminifera, mollusca and ostracoda.

Foraminifera: Quinqueloculina seminulum, Q. vulgaris, Triloculina tricarinata, Cassidulina subglobosa, Rectobolivina digitata, Lagena sulcata, Globigerinoides trilobus, Globorotalia mendardii, Discorbis turbo, Anomalina sp., Streblus beccarii, Elphidium crispum, E. argenteum, E. macellum, E. sp.

Ostracoda: Krithe producta, Cythere melobesioides.

32'3"-32'5". Travertine containing freshwater to brackish water mollusca (Coxiella, Bulinus).

35'-35'7". Grey calcareous sandstone with very worn foraminifera.

Foraminifera: Sigmoilina australis, Lenticulina rotulata, Sigmoidella kagaensis, Discorbis dimidiata, Streblus beccarii, Nonion sp., Elphidium crispum, E. cf. argenteum, E. sp.

36'4"-38'3". Calcareous sandstone with foraminifera.

Foraminifera: Quinqueloculina crassa var. subcuneata, Q. ammophila, Q. subpolygona, Q. seminulum, Triloculina trigonula, T. striatotrigonula, Sigmoidella kagaensis, Cibicides sp., Heronallenia lingulata, Discorbis cycloclypeus, D. globularis, Eponides repandus, Elphidium crispum, E. macellum, E. cf. advenum.

Ostracoda: Loxoconcha australis, Cythere demissa.

38'3"-39'6". Whitish bryozoal limestone with foraminifera, numerous rather poorly preserved bryozoa and ostracoda.

Foraminifera: Textularia abbreviata, T. sagittula, T. sp., Ammobaculites sp., Clavulinoides szabo var. victoriensis, Ehrenbergina serrata, Bolivina victoriana, Cassidulina subglobosa, Dentalina soluta, D. obliqua, D. sp., Lenticulina rotulata, L. articulata, Sigmolophina subregularis, Sigmoidella kagaensis, S. elegantissima, Guttulina irregularis, Globigerina bulloides, Globigerinoides trilobus, Pullenia quinqueloba, Anomalina glabrata, Cibicides sp., C. lobatulus, Gypsinina globulus, Gyroldina soldanii, cf. Notorotalia howchini, Eponides repandus, E. concentricus, Elphidium adelaidensis, E. subinflatum, E. cf. howchini, Operculina victoriensis.

Ostracoda: Bythocypris tumefacta.

#### NOTES ON THE SAMPLES.

Samples from 29 feet down to 31 feet 10 inches consist of unconsolidated sands and are Sub-Recent in age. The small worn foraminifera and mollusca are typical of those found in shoreline deposits along the Southeastern Coast of Australia, at the present time. They can be correlated with the sample at 20 feet 6 inches down to 31 feet 4 inches in No. 2 Bore, Robe.

Samples from 32 feet 3 inches down to 38 feet 3 inches are Pleistocene in age. The sample at 32 feet 3 inches down to 32 feet 5 inches is a travertine containing brackish to freshwater shells such as Bulinus and Coxiella and can be correlated with that at 33 feet 4 inches down to 34 feet 7 inches in No. 2 Bore. This

type of rock frequently covers the marine Tertiary rocks of South Australia. The samples at 35 feet down to 35 feet 7 inches and at 36 feet 4 inches down to 38 feet 3 inches are calcareous sandstone containing poorly preserved foraminifera.

At 38 feet 3 inches down to 39 feet 6 inches the bore is in bryozoal limestone of Middle Miocene age, which is similar to that of many of the limestones which outcrop in the south-eastern part of South Australia. The assemblage of foraminifera, which includes Operculina victoriensis, and Clavulinoides szaboi var. victoriensis, is similar to that found at the base of the Balcombian Stage in Victoria.

Bore No. 22.

28'1"-29'. Calcareous travertinous sandstone, almost flinty in parts and containing a few minute foraminifera.

Foraminifera: Sigmoidella elegantissima, Elphidium crispum, E.sp.

NOTE ON THE SAMPLE.

Only one sample was submitted from Bore No. 22. The age of the bed is Pleistocene and it can be correlated with that at 34 feet 7 inches down to 35 feet in Bore No. 2.

25th February, 1948.

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