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Micropalaeontological examination of samples
from bores Nos. 3855 and 3859 on the property
of W.L. Fennell, 70 miles north-east of Bourke

by

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MICROPALAEONTOLOGICAL EXAMINATION OF SAMPLES FROM
BORES NOS. 3855 AND 3859 ON THE PROPERTY OF W.L.FENNELL, 70 MILES
NORTHEAST OF BOURKE, NORTHERN NEW SOUTH WALES.

Report No. 1945/38.

BORE NO. 3855.

7-30 feet - Sandstone.

45 feet - Fawnish clay, with limonitic particles.

95 feet - Grey carbonaceous sandy shale.

158 feet - Grey carbonaceous shale with foraminifera (Ammobaculites sp., Spiroplectammia sp., Trochammia sp.,) and numerous radiolaria (Dictyomitra australis, Lithocyclus exilis, Stichocapsa pinguis, Stichocapsa sp., Cenosphaera sp., Spongodiscus sp.)

216 feet - Grey carbonaceous shale with glauconite, foraminifera rare (Spiroplectammia sp.,) and ostracod (Cytheropteron sp.)

276 feet - Similar to 216 feet, with foraminifera (Ammobaculites sp., Trochammia sp., Planulina cretacea) and radiolaria (Dictyomitra australis, Lithocyclus exilis, Stichocapsa sp.)

326 feet - Ditto, with foraminifera rare and indeterminate and numerous radiolaria (Dictyomitra australis, Lithocyclus exilis, Stichocapsa pinguis, Cenosphaera sp.).

376 feet - Ditto, with poorly preserved foraminifera (Spiroplectammia sp., cf. Arenobulimina).

404 feet - Glauconitic sandstone.

427 feet - Calcareous sandstone.

In Bore No. 3855 on W. L. Fennell's property, the typical grey carbonaceous shales and sandstone of the Lower Cretaceous are met with at 95 feet and persist down to 376 feet. These sediments contain poorly preserved foraminifera, together with numerous radiolaria. Radiolaria are persistent in the bores examined on Fennell's property. They are also associated with the foraminifera in bores on the properties of W. R. Johnston, P. A. McGirr, E. W. Langbrien and A. Holmes. It is hoped that these forms may be of some zonal value in the correlation of the various bore sections.

At 404 feet the bore passes into a glauconitic sandstone and the last sample to be examined at 427 feet is a calcareous sandstone.

BORE NO. 3859.

1 foot - Ironstone.

44-215 feet - Cream to whitish sandstone.

245-410 feet - Grey carbonaceous shale. No organisms present.

457 feet - Grey carbonaceous sandstone and shale, with glauconite.

498-733 feet - Grey carbonaceous shale, with foraminifera (Haplophragmoides sp., Ammobaculites australe, cf. Ammobaculites, Spiroplectamina sp., Verneuilina tricarinata, Arenobulimina puschi, Trochammina sp., Lagena laevis, Lenticulina grata, Anomalina rubiginosa, Planulina cretacea) and radiolaria (Cenosphaera sp., Lithocyclus exilis, Astrophacus sp.).

783-833 feet - Carbonaceous shale and sandstone.

883-915 feet - Glauconitic sandstone, carbonaceous shale and pyrite.

977 feet - Dark grey, carbonaceous shale with foraminifera (Lenticulina grata) and radiolaria (cf. Astrophacus).

In Bore No. 3859 on the property of W. L. Fennell, the typical grey carbonaceous sandstone and shale of the Lower Cretaceous represented in bore sections, occurs at 245 feet and persists down to 977 feet, the last sample received. A micro-fauna consisting of foraminifera and radiolaria is present. The foraminifera are poorly preserved, but the usual forms referable to the Lower Cretaceous can be recognised. Radiolaria, as in Bore No. 3855, are common.

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