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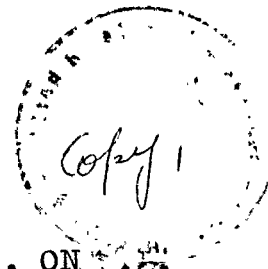
Micro-examination of samples
from Bore No.3831, on W.H. Fennel's
property, 70 miles north-east of
Bourke, Northern N.S.W.

by

I. Crespin

DEPARTMENT OF SUPPLY & SHIPPING

MINERAL RESOURCES SURVEY



MICRO-EXAMINATION OF SAMPLES FROM BORE NO. 3831, ON
W.L.FENNELL'S PROPERTY, 70 MILES NORTHEAST OF
BOURKE, NORTHERN NEW SOUTH WALES.

(Report No. 1945/20)

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- 6 - 85 feet - Quartz sand with some ironstaining.
- 100-112 feet - Fine-grained, cream coloured sandstone.
- 139 feet - Chalky sandstone. No fossils.
- 170 feet - Sandy shale, with ? foraminifera.
- 223 feet - Chalky rock, with glauconite and limonitic particles.
- 237 feet - Fawnish shale, with some ironstaining and foraminifera, many tests too altered for determination (Cibicides lobatulus, Gyroidina cf. globosa).
- 287 feet - Carbonaceous shale, with glauconite and siderite.
- 337 feet - Grey, micaceous shale, with a few carbonaceous particles, abundant grains of glauconite and siderite, and a few poorly preserved foraminifera (Trochammina sp., Ammobaculites sp.).
- 387 feet - Grey, sandy, carbonaceous shale with a few foraminifera (Bathysiphon sp., Trochammina sp.), and radiolaria (Porodiscus, Cenosphaera).
- 427 feet - Grey, carbonaceous shale, with numerous glauconite grains and a small arenaceous foraminifera (Ammodiscus cf. cretacea, Haplophragmoides sp., Ammobaculites sp., Trochammina sp.).
- 477 feet - Grey shale, with glauconite and siderite. No fossils.
- 499 feet - Greyish sandstone, with glauconite, mica, and carbonaceous particles.
- 522 feet - Grey, carbonaceous shale. No fossils.
- 565 feet - Grey, carbonaceous shale and fine-grained sandstone, with foraminifera (cf. Crithionina, Hyperamminoides sp., cf. Ammobaculites, Bigenerina sp., cf. Trochammina, Dentalina sp., Lenticulina warregoensis, L. grata), radiolaria (Cenosphaera) and ostracoda (cf. Polycope, cf. Cytheridea).
- 615 feet - Grey, carbonaceous shale. No fossils.
- 665 feet - Grey sandstone, with foraminifera (Ammobaculites sp., Trochammina parvula, Lagena laevis, Anomalina rubiginosa, Planulina cretacea).
- 710 feet - Grey, carbonaceous shale, with a few foraminifera (Haplophragmoides sp., cf. Marssonella, cf. Ammobaculites, Planulina cretacea).
- 765 feet - Grey, carbonaceous sandstone. No fossils.

Bore No. 3831, on W.L. Fennell's property, N.E. of Bourke.

- 823-873 feet - Grey, carbonaceous shale, with patches of glauconite, foraminifera (Trochammina parvula, Lenticulina grata) and fragments of pelecypoda indeterminate.
- 937 feet - Grey, carbonaceous shale with plant remains indeterminate and foraminifera (Lenticulina spp.).
- 940 feet - Brownish sandstone.
- 963 feet - Grey sandstone with foraminifera (Ammobaculites sp.) and fragments of pelecypoda.
- 973 feet - Carbonaceous shale and sandstone with fragments of pelecypoda indeterminate.
- 981 feet - Sandstone.
- 990 feet - Brown, carbonaceous shale with plant remains indeterminate and fragments of pelecypoda.
- 1000 feet - Quartz grains with fragments of greenish rock.
- 1018 feet - Very fine-grained sandstone.
- 1022-1118 feet - Green to chocolate coloured, altered shale, with fragments of ironstone.

- Notes on the Samples -

Bore No. 3831 on W.F. Fennell's property is situated about 30 miles northeast of Langbrien's bores.

The samples from 6 feet down to 112 feet consist of sand and sandstone and are Pleistocene to Recent in age.

From 139 feet down to 237 feet, the sediments consist of chalky sandstones passing into fawnish shale. Foraminifera are present and for the most part, the tests are too altered for determination. Two species in the sample at 232 feet are well preserved. It is suggested that the beds belong to the Upper Cretaceous.

At 287 feet, the bore passes into carbonaceous shales and sandstones characteristic of the Lower Cretaceous in this area. These sediments continue down to 990 feet. A typical micro-fauna is present the assemblage consisting of foraminifera, radiolaria and ostracoda. Fragments of pelecypoda indeterminate are also recorded. The tests of the foraminifera are not well preserved. Arenaceous genera, as usual, predominate throughout, hyaline forms not being recorded until 565 feet. Grains of glauconite and siderite are common in the samples from 287 feet down to 477 feet and are especially abundant in the samples immediately below the probable Upper Cretaceous ones, that is from 287 feet down to 477 feet.

It is suggested that the bore passes out of the Lower Cretaceous below 990 feet. There is no indication as to the age of the beds from 1,000 feet to 1,118 feet, as they are non-fossiliferous.

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