1942/18

19th January, 1942.

REPORT ON W.R.JOHNSTON'S BORE, 4 MILES SOUTH-EAST OF LILA SPRINGS NO.1 BORE AND 6 MILES NORTH-WEST OF WARRALEENA NO.4 BORE NEAR BOURKE, NORTH-WEST NEW SOUTH WALES

Received from Water Conservation & Irrigation Commission on 8/12/41.

650-675 feet - Grey, sandy shale. No fossils.

700 feet - Ditto, with fragments of sandstone. Washings - fragments of carbonaceous shale, sandstone, quartz grains, radiolaria (Acanthosphaera sp.), foraminifera (Haplophragmoidea cf.rugosa, H.sp., Ammobaculites spp., cf.Ataxophragmium, Ammobaculites sp., Spiroplectammina sp., Lenticulina cf.discrepans, Gyroidina depressa) and ostracoda (Cytheropteron cf.concentricum).

725 feet - Ditto, with abundant quartz grains, also radiolaria (Porodiscus sp.), foraminifera (Pelosina sp., Haplophragmoides sp., Ammobaculites aff.taylorensis, Lioterella sp., Marginulina grata, M.sp., Lenticulina cf. discrepans, Anomalina rubiginosa), and ostracoda (Cytheropteron cf.concentricum).

750 feet - Dark grey, carbonaceous shale, with quartz grains and Haplophragmoides sp.

775 feet - Ditto, with plant remains indeterminate.

800 feet - Ditto, with radiolaria (cf.Porodiscus), foraminifera (Hyperammina sp., Haplophragmoides spp., Ammobaculites sp., Dentalina cf.mogapolitana, Lenticulina cf.discrepans, Anomalina rubiginosa) and ostracoda (Cytheropteronnconcentricum).

825 feet - Bluish-grey, carbonaceous shale, with quartz grains, pyrites and foraminifera (Haplophragmoides sp., cf.Hyperammina, Marginulina bullata).

850-875 feet - Dark grey, carbonaceous shale. No foraminifera.

900 feet - Grey shale with foraminifera (Spiroplectammina sp., Trochammina sp., Lagena apiculata) and ostracoda (Cytheropteron concentricum).

925 feet - Greenish-grey, sandy shale with Trochammina inflata, T.sp., and Eponides sp.

950 feet - Grey, sandy, carbonaceous shale with foraminifera (cf.Ammobaculites, Textularia sp., Trochammina inflata, Marginulina grata, Gyroidina depressa).

975 feet - Grey shale. No foraminifera.

1000 feet - Ditto, with abundant quartz grains, also glauconite and Trochammina cf.inflata.

1025 feet - Dark grey shale with carbonaceous fragments, abundant quartz grains, foraminifera (Trochammina cf.inflata, Marginulina bullata, Globulina cf.lacrima), bivalve shell indet., and ostracoda (Bythocypris sp., Cytheropteron sp., Cyprina sp., Cytheroia cf.ornatissima var.radiata).

1050 feet - Ditto, with foraminifera (Lagena cf.simplex, Lenticulina cf. discrepans), ostracoda (Cytheropteron sp. aff.umbonatum) and seed pod indeterminate.

1075 feet - Ditto. Washings - chiefly fragments of shale, with foraminifera rare (cf.Trochammina, Marginulina cf.texasensis, Cibicides cf.prominens).

1100 feet - Dark grey, carbonaceous shale with fragments of greenish limestone, quartz grains and foraminifera (Pelosina sp., Haplophragmoides sp., Ammobaculites sp., Spiroplectammina sp., Trochammina sp.).

1125-1150 feet - Grey, carbonaceous shale with plant remains indeterminate. No foraminifera.

1175 feet - Ditto, with coal particles, fragments of whitish limestone and pelecypoda indeterminate, and foraminifera(cf.Placopsilina, cf.Haplophragmoides, cf.Ammobaculites, Trochammina cf.inflata, T.sp., Bolivina sp., Marginulina grata, Globulina cf.lacrima), and ? seed pod.

1178-1181 feet - Grey shale with quartz grains and coal particles, also cf.Marginulina at 1178 feet.

1200 feet - Grey shale. Washings - almost entirely quartz grains, with occasional fragments of fawn coloured carbonaceous shale. No foraminifera.

1225 feet - Ditto, with plant remains indeterminate and seed pods.

1229 feet - Grey, sandy shale, consisting chiefly of fine, angular quartz grains with fawn coloured, carbonaceous shale, and a little glauconite.

1262 feet - Greenish-grey sandstone with glauconite.

This series of samples from 650 down to 1262 feet from W.R.Johnston's Bore, near Bourke, is in continuation of that reported upon on 13th November, 1941.

The samples from 650 feet down to 1181 feet consist of shales and sandy shales containing radiolaria, foraminifera and ostracoda. Amongst the foraminifera typical Cretaceous species present including Lenticulina cf.discrepans, Marginulina bullata, M.grata and Anomalina rubiginosa. One form, Trochammina inflata, ranges from Jurassic to Recent. Amongst the ostracoda, Cytheridea concentricum is persistent, while at 1025 feet there is an entirely new assemblage, of which no specific determination could be made.

From 1200 feet down to 1229 feet the grey, carbonaceous shales are replaced by a fine-grained, fawn coloured shale with numerous fine plant remains including seed pods indeterminate, with foraminifera and ostracoda absent. It is possible that the bore has passed from the Lower Cretaceous into the Jurassic at about 1200 feet.

No age can be suggested for the greenish-grey sandstone with glauconite at 1262 feet. No plant remains or foraminifera present.

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