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COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS

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Mineral Resources Survey.

Census Building,
A.C.T.

31st July, 1942.

INTERIM REPORT ON SAMPLES FROM THE NELSON BORE.
PH. GLENELG, WESTERN VICTORIA.

The Nelson Bore, which is still in progress and is being drilled with the Commonwealth Rotary plant in collaboration with the Victorian Mines Department, has now reached the depth of 3746 feet, with no indication that the basement rock will soon be reached. Unfortunately no bore in Western Victoria or south-eastern South Australia has been drilled to bedrock, consequently no suggestion can be made as to the possible depth at which it will be met in the present bore.

The deepest bore in the area to be palaeontologically examined is Knight's Dome, No.2, Mt. Gambier, South Australia, which reached the depth of 2013 feet, drilling ceasing in carbonaceous sands.

The following stratigraphical stages are represented in the bore:-

"B1" Stage - 108 feet down to 348 feet.
Janjukian - 368 feet down to 976 feet.
Anglesian - 989 feet down to 3746 feet (last sample received).

From 108 feet down to 348 feet, the beds consist of whitish to grey, bryozoa marls and limestones, interbedded with flinty material. The foraminiferal and bryozoa assemblages are similar to those recorded from "B1" stage in the Gippeland basin. The presence of flints is characteristic of the area, being similar to those found around Mt. Gambier.

The sediments from 368 feet down to 976 feet are included in the Janjukian and consist of bryozoa marls, and hard limestones, passing downwards into glauconitic sandstone, which forms the base of the stage. The faunal content of the marls and limestones is strongly bryozoa, but typical foraminifera including Ammodiscus sp., Cyclammina incisa, and Victoriella plebe are well represented. The characteristic bryozoa of the area, Aspidostoma airenensis, is also present.

The glauconitic sandstone, which occurs from 953 feet down to 976 feet resembles that of Lakes Entrance area, Gippeland, in consisting chiefly of green to brown glauconite grains, ovoid pellets of brown glauconite and quartz grains coated with limonitic material. But fossils are few, a few foraminifera such as Cyclammina incisa and occasional fragments of bryozoa being recorded.

At 989 feet the bore passes into the Anglesian stage and at 3746 feet is still in that stage. The beds consist chiefly of dark to light grey, carbonaceous and micaceous sandstones, with some pyrite. No lignitic bands occur as in the Gippeland boring. Foraminifera are present in many samples above 3244 feet.

feet down to 3244 feet, the beds are typically Anglesean, consisting of carbonaceous material, quartz grains and numerous tests of the characteristic foraminifer, Cyclammina. The beds below 3244 feet are fairly hard.

(Irene Crespin)
Commonwealth Palaeontologist.