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PRELIMINARY NOTE ON THE PALYNOLOGY OF MAGELLAN CORFIELD NO.1 BORE, QUEENSLAND

by

P.R. Evans

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SUMMARY

A palynological examination of the lower section of the Corfield No. 1 indicates that Lower Cretaceous, Lower Jurassic and (?Lower) Triassic sediments were penetrated by the bore, the equivalents of which have been recognized subsurface in the Roma area.

INTRODUCTION

During May and June, 1960, Magellan Petroleum Corporation, with financial aid of the Commonwealth Government, deepened the new waterbore at Corfield (Lat. 21°42'46" South Long. 143°22'30" East), a village on the railway between Winton and Hughenden, northern Queensland, to examine the stratigraphy of that section of the Artesian Basin. The bore was extended by 2,726 the company from the existing depth of ~~2630~~ feet to a total depth of 4507 feet; it entered granite at 4488 feet.

Four cores were cut within the sedimentary section, from each of which a sample was taken for palynological examination. Cuttings from 2630 feet were also examined to determine the age of the highest sediments in the subsidized section, immediately below casing.

RESULTS

Cuttings 2630-2640 feet. (MFP 1209)

Baltisphaeridium spp.
Dingodinium cerviculum
Hystrichosphaera furcata
Micrhystridium sp. nov.
Cyathidites minor
Sphagnumsporites australiensis
Microreticulatisporites telatus
Neoraistrickia truncatus
Baculatisporites comaumensis
Pilosisporites notensis
Ischyosporites punctatus
Lycopodiumsporites austroclavidites
Polypodiaceaedites sp. nov.
Microcachryidites antarcticus

Probable Age: Lower Cretaceous (Aptian)

Core 1, 2892-2902 feet (MFP 1166)*

Classopollis torosus
Baculatisporites comaumensis
Tsugaepollenites dampieri (fairly common)
Inaperturopollenites turbatus
I. cf. reedi
Leiotriletes directus
Lycopodiumsporites spp. nov.
Annulispora sp. nov.
Cingulati sp. nov.
Pityosporites spp.
Sphagnumsporites sp.
Cyathidites minor

Probable Age: Lower-Middle Jurassic.

Core 2, 3389-3399 feet (MFP 1167)

Classopollis torosus (approx. 50% total specimen abundance)
Leiotriletes directus
Lycopodiumsporites cf. rosewoodensis
Lycopodiumsporites spp. nov.
Annulispora sp.
Pityosporites sp.
"Pteruchipollenites" sp.

Probable Age: Lower Jurassic.

Core 3, 3930 - 3940 feet (MFP 1168).

Barren.

Core 4, 4262 - 4276 feet (Sandstone - MFP 1169; coal - MFP 1170).

Only the coal was productive.

L. directus
Podocarpidites sp.
"Pteruchipollenites" spp.
Striatites spp. nov.

Probable Age: (?Lower) Triassic.

COMMENTS

The age determinations are based on recent work in the Roma area of the Artesian Basin and the Sydney Basin. The Cretaceous assemblage can be allocated to a basal zone in the marine sequence which has been identified recently across the western side of the Artesian Basin. The assemblages from cores 1 and 2 compare with ones within the subsurface "Bundamba Sandstone" at Roma (as defined by Reeves, 1947). The assemblage of core 2 is especially typical of a basal section of Reeves' formation.

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* Registered sample number in B.M.R. palaeontological collection.

The Triassic assemblage of core 4 has no certain equivalent in Reeve's charts, but it is similar to ones which are known in the middle of the Narrabeen Group of the Sydney Basin.

REFERENCE

REEVES, F., 1947 - Geology of Roma district, Queensland, Australia. B.A.A.P.G. 31 (8), 1341-1371.