COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT BUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS

RECORDS:

1953/86



BMR PUBLICATIONS COMPACTUS
(NON-LENDING-SECTION)

MICROPALAEONTOLOGICAL EXAMINATION OF CORES FROM BWR.

I.S.C., ST. HELIERS. N.S.W.

bу

I. CRESPIN.

The information contained in this report has been obtained by the Department of National Development, as part of the policy of the Commonwealth Government, to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus without the permission in writing of the Director, Bureau of Mineral Resources, Geology and Geophysics.

MICROPALAEONTOLOGICAL EXAMINATION OF CORE SAMPLES FROM HOLE NO. BMR 1 S.C. ST. HELIER'S NEAR

MUSWELLBROOK. N.S.W.

PAMPHLET NON RECORDER 953/86

Core samples from the above bore were received for examination from the depth of 64'10" down to 275'5". The beds through which the bore passed were very hard but foraminifera and ostracoda were obtained by crushing and bryozoa were present on the fractured surfaces of one core sample. A detailed list of the microfauna found in the beds is given below.

64'10"-68'10" -

Foraminifera - Frondicularia woodwardi

Hyperamminoides acicula

Thuramminoides sp. aff. T. sphaeroidalis

Trochammina sp. aff. T. arenosa

Crinoidea -Crinoid ossicles

Ostracoda -Basslerella australe

93'8" -

Foraminifera -Frondicularia woodwardi

Frondicularia sp. aff. F.fissico

Hyperamminoides acicula

Microkellinella aequivalvis Ostracoda -

Form indeterminate

106'6" -

Frondicularia woodwardi (common) Foraminifera -

Trochammina sp.

Indeterminate Ostracoda -

BMR PUBLICATIONS COMPACTUS (NON-LENDING-SECTION)

108 '6" -

Foraminifera # Dentalina cf. grayi Frondicularia parri

Frondicularia woodwardi

Ostracoda' -Basslerella australae

115'0" -

Foraminifera .

Frondicularia sp. aff. F. excavata Frondicularia woodwardi Hyperamminoides acicula

Nodosaria sp.

Ostracoda -Microkellinella aequivalvis

Forms indeterminate

134'9" -

Foraminifera - Frondicularia woodwardi

Crinoidea -Crinoid stems

135'6" -

Foraminifera - Ammodiscus cf. nitidus Frondicularia sp. aff. F. excavata

cf. Trochamminoides anceps

138

Foraminifera - Ammodiscus cf. nitidus

Dentalina grayi

Frondicularia sp. aff. excavata Frondicularia woodwardi Hyperamminoides acicula Thuramminoides sp. aff. T.sphaeroidalis

Bryozoa -

Fenestella dispersa

Ostracoda -

Healdia chapmani

227'6" -

Brachiopoda -

Productid spines

274 5"

Brachiopoda - Productid shells indeterminate.

Notes on the Samples.

The assemblage of foraminifera found in these samples is regarded as belonging to the Branxton stage. This age is confirmed by the presence of the fenestellid bryozoan Fenestella dispersa Crockford, which was described from the Ulladulla Mudstones. The specimens at 138 feet in the bore at St. Helier's were sent to Mrs. Joan Beattie (nee Crockford) for identification and from her investigations of the Permian Bryozoa in New South Wales, she considers that the presence of fenestellid bryozoa is indicative of a pre-Mulbring age.

Amongst the interesting foraminifera are those which show affinities with Frondicularia fissicostata (Cushman and Waters) and F. excavata (Cushman and Waters) (Journ.Pal.vol. 2, (4), 1928) from the Upper Pennsylvanian and Lower Permian of Texas. The specimens of Thuramminoides have affinities with T. sphaeroidalis described by Mrs. Plummer from the Pennsylvanian of Texas (Univ. Texas Publ. 4401, 1945). This species is recorded from the Wandagee Beds in Western Australia.

Befause of the absence of the petrologists from Canberra the mineralogical samples have not yet been examined.

9 Cuspin

(I. Crespin)