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REPORT ON MICRO-EXAMINATION OF A CORE SAMPLE FROM CAPE RANGE NO. 1 WELL,
SHOT-HOLE CANYON, EXMOUTH GULF, WESTERN AUSTRALIA

by

Irene Crespin

CONFIDENTIAL.

REPORT ON MICRO-EXAMINATION OF A CORE SAMPLE FROM
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Records No. 1954/52.

On 28th September, 1954, West Australian Petroleum Pty. Ltd. forwarded a short length of core from a depth of about 3,880 feet in Cape Range Well No. 1. In hand specimen the rock is dark brownish grey in colour and is dense and tough. Fragments of wood and of a pelecypod shell are present.

A micro-palaeontological examination of the rock yielded interesting information as to the age of the beds the well penetrated at this depth. Thin sections of the rock and of the fragment of wood were cut, and portions of the rock was crushed in the hope of finding micro-fossils.

The thin sections showed the rock to have a fine-grained brown sideritic matrix in which quartz, pyrite, glauconite, prisms of ?Inoceramus, radiolaria and foraminifera were cemented. Thin sections of the fragments of wood showed similar composition suggesting that the wood was possibly decayed at the time of deposition and became infilled with sediment. Possible annular rings can be seen in the sections but as no structural detail is preserved the genus of the wood cannot be determined. Radiolaria are common in the matrix and are represented chiefly by the genus Spongodiscus.

Crushings of the rock yielded an interesting assemblage of foraminifera of Lower Cretaceous age. It is dominated by arenaceous tests which are usually crushed or deflated, a condition of preservation characteristic of arenaceous foraminifera in Lower Cretaceous deposits. However, moderately well preserved tests of calcareous forms belonging almost entirely to the Family Lagenidae are also present.

The foraminifera recognised are as follows:-

Ammodiscus sp.
Ammodiscus australe (Howchin)
Ammodiscus minimus Crespin
Bathysiphon sp.
Dentalina sp.
Dentalinopsis sp.
Enantiodentalina sp.
Epistomina sp.
Globigerina planispira Tappan
Globulina exserta (Berthelin) (common)
Haplophragmoides cf. charmani Crespin
Haplophragmoides dickinsoni Crespin
Haplophragmoides sp.
Lenticulina australiensis Crespin
Marginalina aff. marraensis Crespin.
Marginalina sp.
Nodosaria sp.
Pseudoglandulina sp.

Robulus warregoensis Crespin
Robulus spp.
Sarscenaris sp.
aff. Sphaeroidina (pyritic)
Spiroplectammina cushmani Crespin
Spiroplectammina ozelli Crespin
Spiroplectammina sp.
Trochammina cf. depressa (Lozo) (common)
Trochammina cf. ruggatti Crespin
Trochammina sp.
Verneuilina howchini Crespin

The above assemblage of determinable species is typical of the Lower Cretaceous deposits of the Great Artesian Basin (Crespin, 1953). Some of the species have also been found in the basal part of the Gearle Siltstone in the Rough Range No. 1 Bore (see confidential report by Crespin and Belford, Records No. 1954/18) but certain species found in beds of that Formation have not been found in the present material and seem to be restricted to the basal Gearle which is regarded as basal Upper Cretaceous in age. The above assemblage has not so far been found in surface material examined for microfaunas in the Carnarvon Basin.

Canberra.

October, 1954.