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MICROPALAEONTOLOGICAL EXAMINATION OF SAMPLES FROM
FRAZER RIVER NO.1 WELL, DAMPIER LAND,
WESTERN AUSTRALIA.

by

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Seven cores and twenty-eight samples of cuttings from Frazer River No.1 Well, were submitted by West Australian Petroleum Pty. Ltd. for examination. All samples were small due to poor recovery. The residue of all samples after washing, consisted almost entirely of quartz grains, with rounded grains in the coarser fraction and fine angular grains in the finer one.

Foraminifera were found in the cuttings from 40 feet down to 190 feet and in Core No.1 at 195-204 feet. Cores Nos. 3, 4, 5, 7, 8 and 9 and cuttings from 190 feet down to 300 feet contained no foraminifera but some carbonaceous remains were present. Arenaceous tests only were present in the cuttings from 40 feet down to 170 feet and all species were referable to Lower Cretaceous forms. In cuttings at 170-180 feet and 180-190 feet and in Core No.1 at 195-204 feet, however, numerous calcareous forms belonging to the family Lagenidae were present in association with arenaceous tests. The genera consisted of Lenticulina, Lagena, Robulus, Marginulina and Vaginulinopsis and the species represented are most probably new. It is suggested that the samples from 170 feet down to 204 feet, belong to the basal Lower Cretaceous (Neocomian) or may represent passage beds between the basal Lower Cretaceous and Uppermost Jurassic. No Jurassic species have been determined but reference literature on both the Neocomian and the uppermost Jurassic foraminifera is exceedingly scarce. Two forms at least have been found in samples from Cape Range No.1 Test Well between the depth of 3,880 feet and 5,200 feet, these beds being regarded as probable passage beds between the basal Lower Cretaceous and uppermost Jurassic. The detailed examination of the Cape Range foraminifera is now in progress.

In comparing the foraminiferal assemblage in the present bore with that found in Frazer River S-1 Structure Hole, reported upon 13.9.55, in the five samples submitted, from 438 feet down to 677 feet, only arenaceous foraminifera described from the Lower Cretaceous were recorded. The species and their mode of preservation were identical with those found in Frazer River No.1 Well between 40 feet and 170 feet. The numerous glauconitic casts of Radiolaria present in S-1 Structure Hole were missing in No.1 Well.

A brief description of the samples is as follows:

20-40 feet (cuttings) - Ochreous silty sandstone.

20-50 feet (cuttings) - Similar to 20-40 feet with a few poorly preserved arenaceous foraminifera.

50-80 feet (cuttings) - Similar to 20-40 feet with a few poorly preserved arenaceous foraminifera too poorly preserved for determination.

80-100 feet (cuttings) - Similar to above with a few poorly preserved foraminifera.

Ammodiscus gaultinus Reuss
Haplophragmoides cf. chapmani Crespin
Trochammina raggatti Crespin

100-110 feet (cuttings) - Grey silty sandstone with arenaceous foraminifera.

Ammodiscus gaultinus Reuss
Hyperammina sp.
Spiroplectammina cushmani Crespin
Trochammina raggatti Crespin

100-130 feet (cuttings) - Similar to 100-110 feet with arenaceous foraminifera too poorly preserved for determination.

130-150 feet (cuttings) - Similar to 100-110 feet with pyrite common and arenaceous foraminifera, many tests indeterminate.

Trochammina raggatti Crespin
Verneuilina howchini Crespin

150-170 feet (cuttings) - Greenish grey, silty sandstone with indeterminate arenaceous foraminifera.

170-180 feet (cuttings) - Similar to above with numerous foraminifera, both arenaceous and calcareous species, and a fragment of an ostracod.

Lenticulina spp.
Marginulina sp. (Striate)
Reophax sp.
Robulus spp.
Saracenaria sp. aff. frankei Ten Dam
Spiroplectammina sp.
Vaginulinopsis sp. (striate species)

180-190 feet (cuttings) - Similar to above with numerous tests of calcareous foraminifera, many poorly preserved.

Lagena apiculata Reuss
Lagena laevis Montfort
Lagena sulcata (W. & B.)
Lenticulina australiensis Crespin
Lenticulina spp.
Marssonella sp. nov.
Marginulina sp. (striate)
Spiroplectammina sp.
Vaginulinopsis sp. (striate)

190-200 feet (cuttings) - Similar to above. No foraminifera.

195-204 feet (Core No.1) - Silty sandstone with fragments of limonitic material and poorly preserved arenaceous and calcareous tests of foraminifera.

Lenticulina sp.
Robulus sp. aff. gaultinus Berthelin
Spiroplectammina cushmani Crespin
Spiroplectammina cf. edgelli Crespin
Trochammina sp.

309-318 (Core No. 3) - Silty sandstone with mica flakes and some carbonaceous material. No foraminifera.

400-409 feet (Core No.4) - Silty sandstone with carbonaceous remains.

(b) Carbonaceous, micaceous, silty sandstone with aggregates of pyrite. No foraminifera.

493-502 feet (Core No.5) - Sandstone with carbonaceous remains. No foraminifera.

600-609 feet (Core No.7) - Sandstone carbonaceous, silty sandstone. No foraminifera.

609-618 feet (Core No.8) - Silty sandstone. No foraminifera.

700-709 feet (Core No.9) - Silty sandstone. No foraminifera.