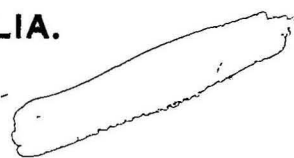


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COMMONWEALTH OF AUSTRALIA.



DEPARTMENT OF NATIONAL DEVELOPMENT.
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS.

RECORDS.

1958/9

MICROPALAEONTOLOGY OF SAMPLES FROM KAUFANA

No. 1 WELL, PAPUA

by

D.J. BELFORD

MICROPALAEONTOLOGY OF SAMPLES FROM

KAUFANA No.1 WELL, PAPUA.

RECORDS 1958/9

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D.J. Belford.

Samples of cuttings from the Papuan Apinaipi Petroleum Company's Kaufana No.1 Well were forwarded by Mines Administration Pty.Ltd. This well, which was subsidized by the Commonwealth of Australia, was begun during December 1957 in the Tubu area. Permit 22, Papua. The cuttings were taken between the depths of 40 feet and 3,348 feet; two samples of core No.1 between the depths of 3,215 and 3,227 feet were also received.

40 feet - 50 feet

Foraminifera rare.

Globigerinoides trilobus
Globigerina sp.
Globorotalia menardii
Anomalina glabrata

90 feet to 100 feet

Foraminifera common.

Orbulina universa
Globigerinoides trilobus
G.sacculiferus
Globorotalia menardii
Epistomina elegans
Triloculina tricarinata
Textularia agglutinans
Operculina sp.cf. O.gaimardii
Rotalia beccarii
Bulimina ovata
Trifarina bradyi
Cassidulina laevigata
C.subglobosa
C.oblonga
Astrononion sp.
Nonion incisum
Anomalina balthica
Sphaeroidinella seminulina
Discorbis sp.

These two samples are regarded as Pliocene in age, and the base of the Pliocene is placed between the depths of 100 feet and 140 feet.

140 feet - 150 feet

Abundant smaller foraminifera.

Orbulina universa
Globigerinoides trilobus
G.sacculiferus
Globigerina subcretacea
G.bulloides
Globigerinella aequilateralis
Globorotalia menardii
G.scitula
Pulleniatina obliquiloculata
Sphaeroidinella seminulina
Bolivina tortuosa
Loxostomum amygdalaeforme
Siphogenerina striata
Cassidulina laevigata
C.subglobosa
C.oblonga
Astrononion sp.
Rotalia beccarii
Anomalina glabrata
Sphaeroidina bulloides
Uvigerina gemmaeformis

Bolivina quadrilatera
Epistomina elegans
Nonion incisum
Gyroidinoides soldanii
Siphonodosaria lepidula
Reussella spinulosa
Virgulina pauciloculata
Anomalina glabrata
Siphogenerina zitteli
Bulimina ovata
Buliminella sp.
Siphonina tubulosa

190 feet - 200 feet

Frequent smaller foraminifera.

Globigerinoides trilobus
G. sacculiferus
Globigerina subcretacea
Globorotalia menardii
Pulleniatina obliquiloculata
Cibicides pseudoungerianus
Eponides margaritiferus
Siphonodosaria insecta
Siphogenerina indica
S. zitteli
Uvigerina gemmaeformis

235 feet - 250 feet

Abundant smaller foraminifera.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerina subcretacea
G. bulloides
Globorotalia menardii
Pulleniatina obliquiloculata
Bolivina dilatata
B. tortuosa
B. quadrilatera
Bulimina ovata
Uvigerina gemmaeformis
Anomalina glabrata
A. balthica
Astrononion sp.
Pullenia bulloides
Cassidulina laevigata
C. subglobosa
Sphaeroidina bulloides
Epistomina elegans
Reussella spinulosa
Trifarina bradyi
Rotalia beccarii

290 feet - 300 feet

Abundant smaller foraminifera.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerina subcretacea
Globorotalia menardii
Pulleniatina obliquiloculata
Eponides margaritiferus
Pseudoclavulina sp.
Operculinella venosa
Operculina ammonoides

Siphonodosaria lepidula
Bolivina tortuosa
Bulimina ovata
Uvigerina gemmaeformis
Siphogenerina indica
Astrononion sp.
Cassidulina laevigata
Sphaeroidina bulloides
Rotalia beccarii
Anomalina glabrata

340 feet - 350 feet. Abundant smaller foraminifera, rare
larger foraminifera.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerina bulloides
Globigerinella aequilateralis
Globorotalia menardii
G. scitula
Operculina ammonoides
O. bartschi
Elphidium craticulatum
Amphistegina lessonii
Pseudoclavulina sp.
Bathysiphon sp.
Sphaeroidina bulloides
Nodosaria arundinea
Siphonodosaria insecta
S. lepidula
Virgulina pauciloculata
Plectofrondicularia interrupta
Bolivina tortuosa
B. dilatata
B. quadrilatera
Loxostomun amygdalaeforme
Siphogenerina striata
Uvigerina gemmaeformis
Anomalina glabrata
Nonion incisum
Astrononion sp.
Ceratobulimina pacifica
Cassidulina laevigata
C. subglobosa
C. oblonga
Reussella spinulosa
Gyroidinoides soldanii
Epistomina elegans
Bulimina ovata
Rotalia beccarii
Lepidocyclina (Multilepidina) cf. luxurians

390 feet - 400 feet Abundant smaller foraminifera

Globigerinoides trilobus
Globigerina bulloides
Globigerinella aequilateralis
Elphidium craticulatum
E. advenum
Eponides berthelotianus
Pseudoclavulina sp.
Amphistegina lessonii
Operculinella venosa
Operculina bartschi

Uvigerina gemmaeformis
Bolivina quadrilatera
Nonion incisum
Cassidulina laevigata
C. subglobosa
Pullenia bulloides
Rotalia beccarii
Siphogenerina striata
Anomalina glabrata
Epistomina elegans
Siphonodosaria lepidula
Alveolinella quoyi
Gyroidinoides soldanii

440 feet - 450 feet

Abundant smaller foraminifera.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerinella aequilateralis
Globorotalia menardii
Bolivina alata
B. dilatata
Siphogenerina striata
S. indica
Uvigerina schwageri
Siphonodosaria lepidula
S. insecta
Gyroidinoides soldanii
Plectofrondicularia interrupta
Virgulina pauciloculata
Trifarina bradyi
Ceratobulimina pacifica
Astrononion sp.
Sphaeroidina bulloides
Epistomina elegans
Cassidulina laevigata
Bulimina ovata
Alveolinella quoyi
Elphidium craticulatum
Frondicularia sp.

490 feet - 500 feet.

Abundant smaller foraminifera, very
rare larger foraminifera.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerina subcretacea
Globorotalia menardii
Cibicides pseudoungerianus
Planulina wuellerstorfi
Pseudoclavulina sp.
Epistomina elegans
Sphaeroidina bulloides
Sphaeroidinella seminulina
Uvigerina schwageri
Operculina ammonoides
Bolivina dilatata
B. quadrilatera
Siphogenerina striata
S. zitteli
Trifarina bradyi
Astrononion sp.
Siphonodosaria lepidula
Cassidulina laevigata

C. subglobosa
C. oblonga
Pleurostomella alternans
Nonion incisum
Nodosaria arundinea
Lepidocyclina (Multilepidina) cf. luxurians

540 feet - 550 feet.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerina bulloides
G. subcretacea
Globigerinella aequilateralis
Globorotalia menardii
G. scitula
Sphaeroidinella seminulina
Bolivina alata
B. dilatata
B. quadrilatera
Planulina wuellerstorfi
Nodosaria arundinea
Uvigerina schwageri
Sphaeroidina bulloides
Siphogenerina striata
S. zittlei
Bulimina ovata
Trifarina bradyi
Siphonodosaria lepidula
Pleurostomella alternans
Cassidulina laevigata
C. subglobosa
Nonion incisum
Gyroidinoides soldanii
Astrononion sp.
Ceratobulimina pacifica

590 feet - 600 feet.

Abundant smaller foraminifera.

Orbulina universa
Globigerinoides trilobus
G. sacculiferus
Globigerina subcretacea
Globorotalia menardii
Sphaeroidina bulloides
Epistomina elegans
Cibicides pseudoungerianus
Bolivina dilatata
B. quadrilatera
Bulimina ovata
Uvigerina schwageri
Planulina wuellerstorfi
Siphogenerina striata
S. zitteli
Pulleniatina obliquiloculata
Nonion incisum
Astrononion sp.
Trifarina bradyi
Epistomina elegans
Cassidulina laevigata
C. subglobosa
Gyroidinoides soldanii

The assemblage occurring in the beds from 140 feet to 600 feet is regarded as that of the "Orbulina zone", and the beds are placed in the "f3" stage, that is, Middle Miocene. To the writer's knowledge, this is the first record of the subgenus Multilepidina from the Tubu area; this subgenus of Lepidocyclina occurs in other localities in Papua in "f1-2" and "f3" stages.

Between 600 feet and 640 feet there is an abrupt change in the foraminiferal assemblage. The abundant calcareous smaller foraminifera disappear, and are replaced by a poor fauna of mainly arenaceous forms. This assemblage continues with little change to 3,348 feet. Forms recorded over the interval 640 feet - 3,348 feet are:-

Bathysiphon sp.
?Haplophragmoides sp.
Trochammina sp.
Globigerina sp.
Arenaceous indeterminate forms.

No comparable fauna is known from adjacent sections, and in the absence of any distinctive larger foraminifera, it is not possible to give any precise age determination or correlation. Arenaceous indeterminate forms have not previously been recorded above the Chiria Formation, which on Yule Island is of "f1-2" age, and it is possible that the well entered equivalents of this formation between the depths of 600 feet and 640 feet. This does not necessarily mean that the boundary between the "f1-2" and "f3" stages also occurs between 600 feet and 640 feet; with the available evidence, it is not possible to fix this boundary. In the opinion of the writer, the well ended at 3,348 feet in Chiria Formation equivalents of "f1-2" age, that is, the upper part of the Lower Miocene.