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Micropalaeontological Examination of
Cores from the Rolling Downs
Group in G.S.Q. Boreholes Surat
1, 2, and 3,
Queensland

by

G.R.J. Terpstra



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 It may not be published in any form or used in a company prospectus or statement without the permission in writing of the Director, Bureau of Mineral Resources, Geology & Geophysics.



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SUMMARY

Core samples have been examined from the G.S.Q. Surat Boreholes No.1, 2, and 3. A map ^(Fig. 1) showing the locations of those bores is attached. Microfaunas of ?Middle to Lower Albian and Aptian ages have been encountered. These are related to the stratigraphic units proposed by Reiser (in prep.) which have been indicated below.

RESULTS OF EXAMINATION

G.S.Q. Surat No.1.

Core 80' - 86'8" Shale (Surat Siltstone)

Astacolus sp.

Dentalina cf. hamiltonensis Ludbrook 1966.

Lenticula dalhousiensis Ludbrook 1966

Marginulinopsis sp.

Lingulina cf. malanila Ludbrook 1966

Saracenaria sp.

Ostracods sp. Molluscs fragments

Megaspores, Inoceramus prisms

Age: ?Middle to Lowermost Albian

Core 92' - 107'4" Shale (Surat Siltstone)

Dentalina sp.

Hyperammia sp.

Scaphopoda

Mollusc. fragments

Megaspores

Age: Lower Cretaceous

Core 118'10" Grey shale, silt and lignite (Surat Siltstone)

No microfossils

Core 123' Grey shale (Surat Siltstone)

Shell remains

Megaspores

Age: Lower Cretaceous

Core 355'6" - 367' Grey shale (Surat Siltstone)

Ammobaculites fisheri Crespín 1953

Ammobaculites succinctus Crespín 1963

Ammobaculites minimus Crespín 1953

Ammobaculites sp.

Textularia wilgunyaensis Crespín 1963

Trochammina minuta Crespín 1953

Verneuilinoides crespinae Ludbrook 1966

Shell fragments

Inoceramus sp. prisms

Age: Lower Albian to ?Upper Aptian

Core 371'6" - 374'9" Grey shale and silt (Surat Siltstone)

Trochammina sp.

Inoceramus prisms

Age: Lower Cretaceous

Core 379'5" - Grey shale with some glauconite*

Bigenerina loeblichae Crespín 1953

Gavelinella parvula (Crespín 1966)

Age: Aptian

Core 498' - Sandstone, shale and lignite (Coreena Member)

No microfossils

Core 551'2" Lignitic siltstone (Coreena Member)

No microfossils

* The occurrence of this fauna at 379'5" appears to be anomalous, and it is believed that the label of this sample should read 879'5" instead.

Core 660' - Shale and siltstone (Doncaster Member)

Ammobaculoides romaensis 1953

Bigenerina loeblichae Crespin 1953

Haplophragmoides sp.

Age: Aptian

Core 876' - 879'3" - Dark grey shale and pyritic mudstone
(Doncaster Member)

Ammobaculites succinctus Crespin 1963

Astacolus sp.

Bigenerina loeblichae Crespin 1953.

Haplophragmoides chapmani Crespin 1944.

Hyperammina sp.

Psammosphaera parva Crespin 1963

Saracenaria sp.

Age: Aptian

Core 925' - Dark grey shale and silt (Doncaster Member)

Astacolus cf. howchini Ludbrook 1966

Bigenerina loeblichae Crespin 1953

Mollusc fragments

Age: Aptian

Core 1000'4" - 1005'4" - Grey shale and siltstone (Doncaster
Member)

Ammobaculites succinctus Crespin 1963

Bigenerina loeblichae Crespin 1953

Dentalina sp.

Haplophragmoides chapmani Crespin 1944

Haplophragmoides sp.

? Pseudobolivina sp.

Textularia sp.

Trochammina sp.

Age: Aptian

G.S.Q. Surat No.2.

Core 150'7" Grey shale (Griman Creek Formation)

No foraminifera

No age determination

G.S.Q. Surat No.3.

Core 279' Silty grey shale with lignite (Griman Creek Formation)

No foraminifera

Megaspores

Age: Lower Cretaceous

Core 411'- Lignitic grey shale (Griman Creek Formation)

No foraminifera

Megaspores

Age: Lower Cretaceous

Core 814'5" Lignitic silty grey shale (Griman Creek Formation)

No foraminifera

Megaspores

Age: Lower Cretaceous

Core 1184'9" - Grey shale (Surat Siltstone)

Ammobaculites minimus Crespin 1953

Ammobaculites succinctus Crespin 1963

Textularia wilgunyaensis Crespin 1963

Trochammina sp.

Age: Lower Albian to ?Upper Aptian

AGE OF SAMPLES

G.S.Q. Surat No.1.

Twenty one core samples have been examined from ~~80~~⁸⁶ to 1005 feet 4 inches. This sequence is of Lower Cretaceous age.

The cores 80' to 86'8" contained apart from the foraminiferal microfauna also some Ostracoda. These have been examined by P.J. Jones and appear similar to those found in B.M.R. Scout Bore Surat No.1, Core 5, indicating an age of Middle Albian to Lowermost Albian, (Reference Appendix III, B.M.R. Record 1968/56).

The cores 355'6 to 367 feet contain a microfauna of possibly Lower Albian to ?Upper Aptian age.

The cores 379 to 1005'4" contain a microfauna of Aptian age. (See footnote on page 2).

G.S.Q. Surat No.2.

A core at 150'7" has been examined and no age determination can be given.

G.S.Q. Surat No.3.

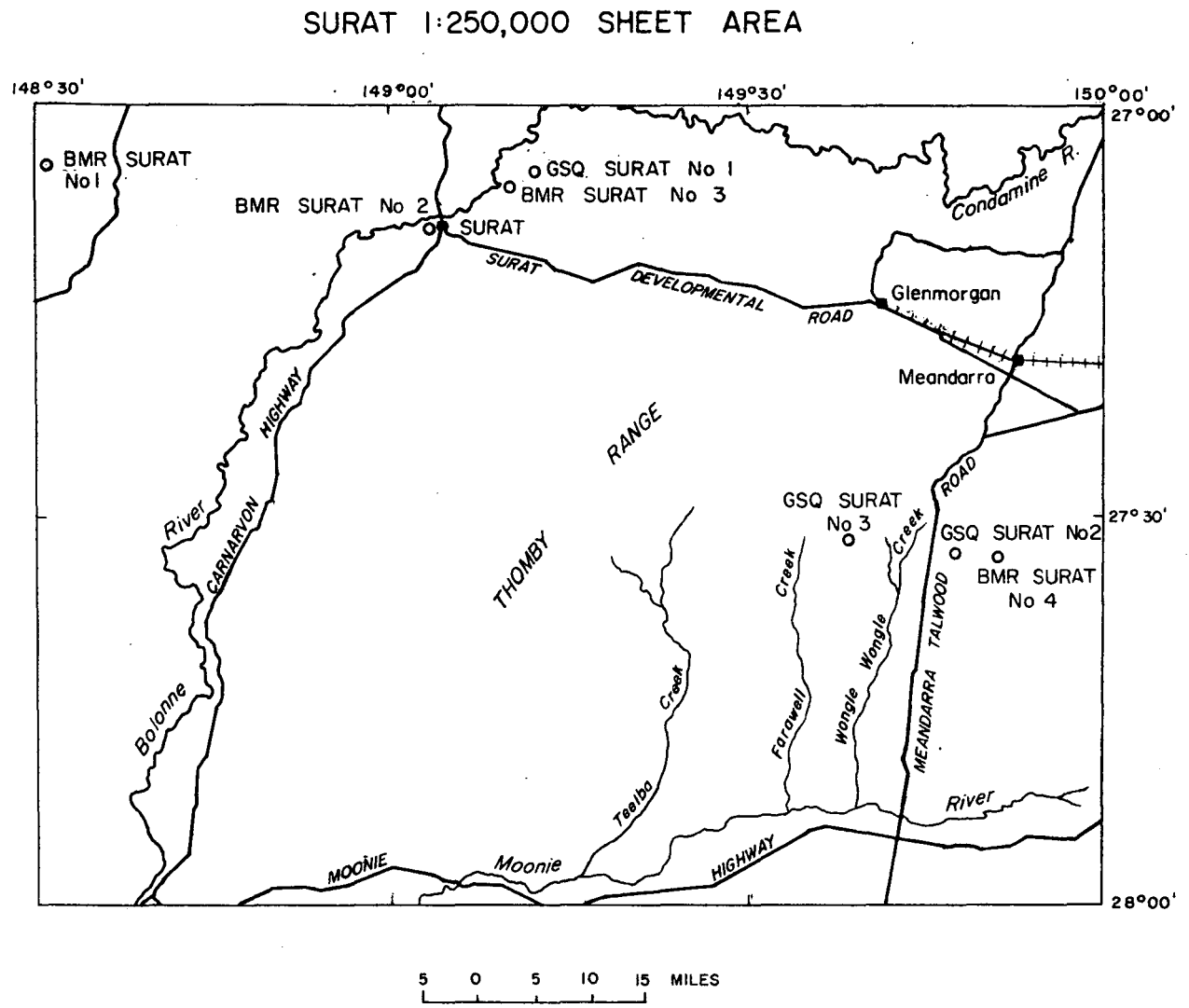
Cores examined between 279' and 814'5" contain Megaspores, indicating a Lower Cretaceous age for the bed penetrated. A core at 1184'9" contains a microfauna comparable with that encountered in G.S.Q. No.1 at 363-367 Feet (Lower Albian and ?Upper Aptian).

For the stratigraphical ranges of the species identified, reference is made to Dr. Crespín (1963) and Dr. Ludbrook (1966).

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Fig. 1



- Scout hole
- Town
- +++++ Railway
- Road