

1987/8

C. 4

BMR PUBLICATIONS COMPACTUS
(LENDING SECTION)



BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

RECORD

RECORD 1987/8

PETROLOGICAL AND PETROPHYSICAL DATA FROM MESOZOIC SANDSTONES OF
THE BUNDAMBA GROUP, CLARENCE-MORETON BASIN

P.S. Thompson

1987/8

C. 4

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

RECORD 1987/8

PETROLOGICAL AND PETROPHYSICAL DATA FROM MESOZOIC SANDSTONES OF
THE BUNDAMBA GROUP, CLARENCE-MORETON BASIN

P.S. Thompson



* R 8 7 0 0 8 0 1 *

TABLE OF CONTENTS

SUMMARY	1
INTRODUCTION	4
POINT COUNTING METHOD	4
POINT COUNT CATAGORIES	4
Quartz	4
Feldspar	5
Rock Fragments	6
Sedimentary Rock Fragments	6
Volcanic Rock Fragments	6
Carbonate rock Fragments	6
Chert	6
Metamorphic	7
Other	7
Cement	7
Quartz	7
Mud/clay	7
Carbonate	7
Other	7
Porosity	8
DATA BASE STRUCTURE	8
Thin Section Data	8
Petrophysical Data	10
BIBLIOGRAPHY OF OPEN FILE WELL COMPLETION REPORTS	11
DATA BASE	14
Thin Sections	15
Petrophysical Data	138
Part A. B.M.R. Data	138
Part B. Open File Well Data	149
Figure 1 Location of wells studied	3
Table 1 Table of point count categories	5
Table 2 Petrological Data Base Record Structure	9
Table 3 Well for which BMR Petrophysical data is presented	10

SUMMARY

This Record consists of a data base containing point count data from thin sections of sandstone samples from bore holes from the Clarence-Moreton Basin, a tabulated summary of petrophysical data from well completion reports held in B.M.R. and from files held in the Petroleum Technology laboratory in B.M.R. and a bibliography of reports and papers containing information on company and government drilling in the Clarence-Moreton Basin.

FIGURE 1
Key to Well Locations and references.

WELL	REFERENCE	No. of T.S.
1. Ipswich 19-22R	Gray (1975)	0
2. Overflow 1	Siller (1960)	1
3. Clifden 2	Burma Oil (1963)	0
4. Clifden 3	Burma Oil(1963)	13
5. Kyogle 1	Relph (1963)	14
6. Clifden 4		1
7. Sextonville 1	Perryman (1963)	8
8. Tullymorgan 1	Boisvert (1965)	6
9. Baylam 1	Patterson (1966a)	1
10. Lockrose 1	Patterson (1966b)	3
11. Hogarth 1	Hanlon (1968)	3
12. Hogarth 4		0
13. Ipswich 3	Gray (1975)	5
14. Ipswich 4	"	0
15. Ipswich 5	"	2
16. Ipswich 6	"	0
17. Ipswich 7	"	0
18. Ipswich 8	"	0
19. Ipswich 9	"	0
20. Ipswich 10	"	0
21. Ipswich 11	"	2
22. Ipswich 12	"	3
23. Ipswich 13	"	4
24. Ipswich 14	"	2
25. Ipswich 15	"	2
26. Millmerran 1	Meyers (1965a)	2
27. Cecil Plains South 1	Patterson & Muir (1966)	2
28. Cecil Plains 1	Lewis & Kyranis (1964)	7
29. Tipton 1	Meyers (1965b)	6
30. Yarrala 1	Meyers (1965c)	3
31. Kumbarilla 1	Lewis & Kyranis (1964b)	2
32. Durabilla 1	Phillips Petroleum (1962)	0
33. Kogan South 1	Green (1963)	4
34. Kogan 1	Kyranis (1963)	4
35. Jandowae South 1	Target Exploration (1972)	2
36. Zig Zag 1	Lewis & Kyranis (1964e)	1
37. Cecil Plains West 1	Meyers (1965d)	3
38. BMR Maclean 1	Wells & O'Brien (1985)	4
39. Ropeley 1		0
40. Tinker Creek 1		3

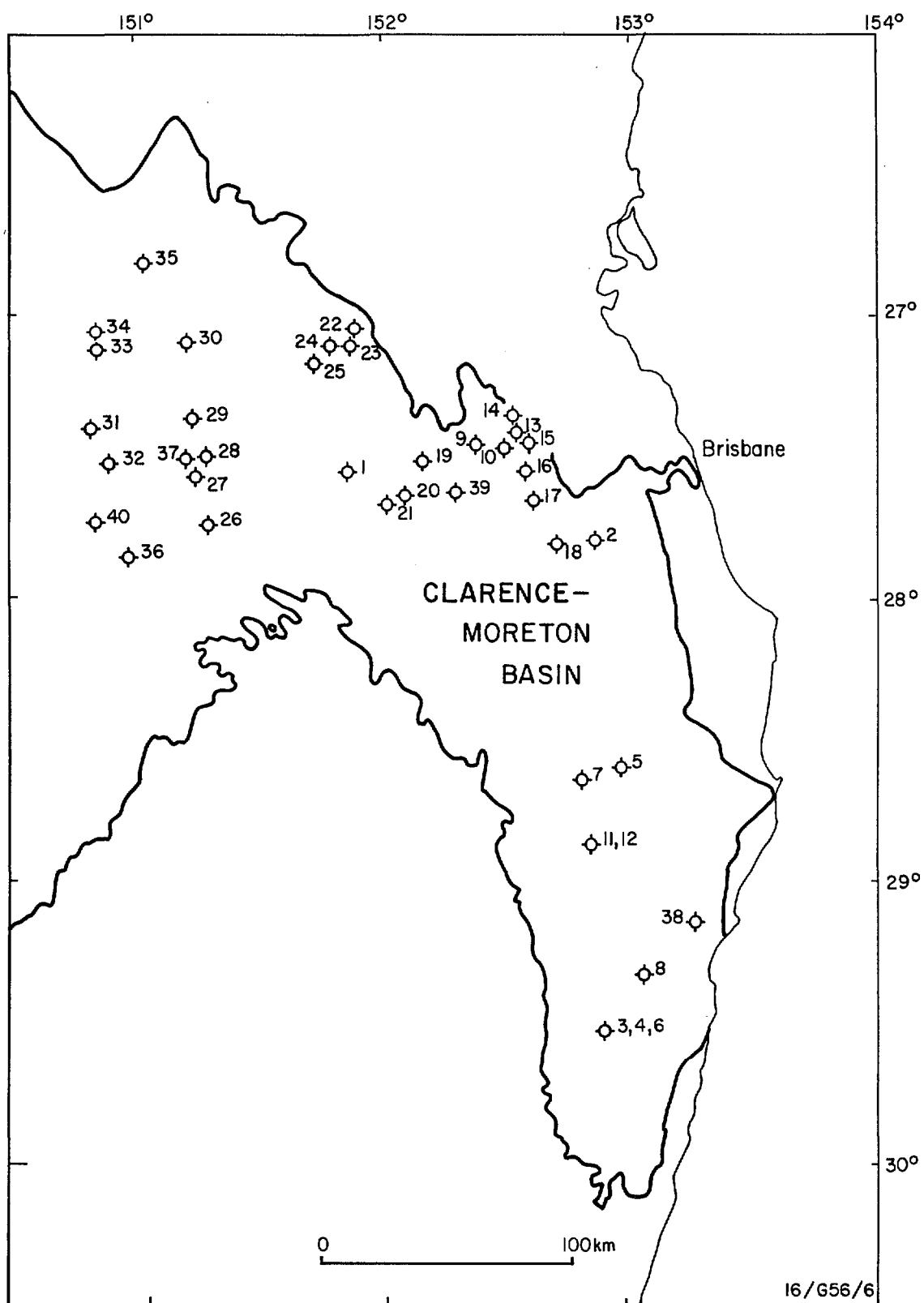


Figure 1. Location of wells studied

INTRODUCTION

The purpose of this Record is to tabulate basic petrological and petrophysical properties of the sandstones within the Bundamba Group of Triassic to Jurassic age in the Clarence-Moreton Basin. It is purely a data base. Interpretation of the data is continuing and will be published at a later date.

The location and names of the drill holes sampled and tested are shown on Figure 1. Samples used for the porosity, permeability, and density tests, and producing the thin sections, came from core obtained from petroleum and coal exploration and government stratigraphic drill holes. Data from some holes that are still confidential are not included in this Record though the hole locations are shown on Figure 1. The petrophysical tests were carried out by the Petroleum Technology Laboratory in the Bureau of Mineral Resources.

The final part of the Record is a bibliography of open file petroleum well completion reports and government stratigraphic drilling for the Clarence-Moreton Basin. The caption to Figure 1 makes reference to reports for each hole.

POINT COUNTING

A Swift Model F415C Automatic Point Counter was used to carry out the point counting exercise. This unit was set at 1/6 mm movement per count.

The point counting was conducted in two stages. In the first, quartz, feldspar and rock fragments and minor constituents were counted. A total of 500 point samples were counted. A percentage by volume of each constituent was calculated. A description and the criteria of the grain categories used are outlined in the following section.

The second stage of point counting was centred on the rock fragment component of the sandstones. A description of the categories used follows. A percentage by volume was again used when counting the rock fragments. A total of 200 counts were made, where possible. If less than 200 counts were made, the total number of the counts made is stated.

COUNTING CATEGORIES

The components of the sandstones are divided into the categories shown in Table 1.

QUARTZ

The quartz fraction of the framework was divided into two categories. Monocrystalline (Qm) and polycrystalline (Qp) were counted separately and recorded. The sum of Qm and Qp was then calculated and recorded. Chert in this instance is not counted in the polycrystalline quartz, but in the rock fragment section. This will be discussed later.

The quartz grains are generally subrounded to subangular, but some samples contain predominantly angular or rounded grains. The grainsize varied from fine to very coarse.

The quartz grains are mostly clear under plain polarized

TABLE 1
TABLE OF POINT COUNT CATEGORIES

Constituent.	/	Category.
Quartz.		Monocrystalline. Polycrystalline
Feldspar		Plagioclase. Alkali.
Rock Fragments		Chert. Sedimentary. (Ls) Volcanic. (Lv) Metamorphic. (Lm) Carbonate.
Other Fragments		Other.
Cement		Quartz. Mud / Clay. Carbonate. Other.
Pore Spaces		Porosity

light, but some milky quartz is occasionally seen. The grains also tend to be colourless, although a slight brown tinge is present in some of the lithic, more matrix-rich, samples. Parallel (straight) extinction of the quartz grains under crossed polarizers is prevalent though some grains display varying degrees of undulose extinction. Some quartz grains exhibit subgrain boundaries, but these are in the minority.

There are also inclusions present within the quartz grains. The number and density of the inclusions vary greatly, but as a general rule most of the quartz grains have only very few inclusions. Inclusions are notable along the grain boundaries where quartz overgrowths are present. Quartz overgrowths are discussed with other diagenetic minerals in the section on cements.

FELDSPARS

The feldspar fraction of the framework component is divided into two categories. Plagioclase and alkali feldspars were counted and recorded. The sum of the feldspar fraction is also recorded.

The feldspars were not stained prior to identification, which caused some difficulty in separating some of the alkali feldspars from the quartz. The presence or absence of twinning is the main basis for distinguishing between the two feldspar types. Some microcline feldspar is present. This, however, only constitutes a minor fraction of the alkali feldspars counted. The

plagioclase feldspars are generally finer grained than the quartz and alkali feldspars. The feldspars are also generally more angular than quartz.

Carbonate and argillaceous alteration of the feldspars is common, and many feldspar grains appear to have been partially dissolved. Many vacuoles are visible especially in the alkali feldspars. Most of the alteration appears to be associated with diagenesis.

ROCK FRAGMENTS

The rock fragment component of the sandstones includes sedimentary, volcanic, carbonate, chert, and metamorphic fragments. These were initially counted as one distinct group, so as to give a percentage of the total sandstone. Individual percentages of each rock fragment type have also been calculated.

Owing to the effects of diagenesis, the grain boundaries of some of the sedimentary and volcanic rock fragments are very indistinct and blend into the matrix. Hence, only those fragments with distinct grain boundaries were counted as rock fragments. The remainder were considered as part of the cement-matrix component. This resulted in some abnormally high cement-matrix (mud) counts being obtained.

Sedimentary Rock Fragments (Ls)

The sedimentary rock fragments consist mainly of fragments of mudstone, shale, and shale-like material. These are generally dark to light brown in plain polarized light, have darkish rims, and commonly exhibit high birefringence when viewed under crossed polarizers. The grainsize is variable and the grains are commonly better rounded than those of the quartz and feldspar fractions.

Volcanic Rock Fragments (Lv)

The volcanic fragments are very similar to the sedimentary rock fragments in grainsize, colour and rounding. They generally are internally fine grained and brownish to almost black. However, fine laths of plagioclase, rarely alkali feldspars and quartz can be seen within these fragments. The feldspars are particularly evident when viewed under crossed polarizers. The grainsize of the volcanic rock fragments varies from fine to very coarse. Again, they tend to be slightly better rounded than the quartz.

Carbonate

Carbonate rock fragments are relatively rare. They tend to be angular and fine grained. Dolomitic material is more common than limestone and exhibits rhombic shaped constituent crystals. No biogenic fragments are present.

Chert

The chert rock fragments are finer grained and slightly more angular than the quartz fraction. The grainsize of its constituent grains is the major factor in distinguishing it from the polycrystalline (metamorphic ?) quartz previously described. The chert is also generally darker under crossed polarizers. Chert is separated from the quartz fraction due to its different source. Chalcedonic quartz fragments are included in this category also.

Metamorphic Rock Fragments

Metamorphic rock fragments, other than polycrystalline quartz, are very rare. Where they are present they consist of internally very fine grains of quartz, feldspar (alkali) and mica and have a schistose texture.

OTHER

The category of "other" is used to count fragments or grains of material which did not fit into any of the above categories. Organic fragments and grains of various heavy minerals are placed into this category. Micaceous, also, included in this category. This is because of their variable source (metamorphic, igneous or volcanic).

CEMENT

The cement component of the sandstones is divided into four categories, quartz, mud / clay, carbonate and other.

Quartz Cement

Incipient to advanced quartz overgrowth cementation can be seen clearly within the studied samples. An increase in the percentage of quartz cementation usually reflects increased development of quartz overgrowths. The overgrowths generally give an angular appearance to the quartz grains. Inclusions are common around the grain boundaries, and, normally, there is optical continuity between the quartz grains and cement. Chert-like and chalcedonic cements are rare.

Mud-Clay Cementation

This is by far the most common form of cementation encountered. The mud-clay cement is light to dark brown viewed under plain polarized light and has moderate to high birefringence. This cement tends to coat the component grains and fill the pore spaces, almost completely. Rare quartz grains with a coating of clay and later quartz cementation (overgrowths) can be seen.

Much of the mud-clay cement present appears to result from the alteration of framework grains. In particular, rock fragments appear to have suffered from argillaceous alteration, so that samples with large amounts of rock fragments have larger percentages of matrix.

Carbonate Cement

Carbonate cementation is best seen in some of the coarser grained sandstones, although by no means confined to them. Apart from those samples in which it forms the major cement type, it is usually present as an accessory cement.

Calcite cement varies from being fine grained pore filling, and/or lining, to poikilotopic. The fine grained carbonate is more common where the carbonate fraction of the cement is low. Poikilotopic cements are present where carbonate is the predominant cement. The poikilotopic cement usually exhibits a very good cleavage. Patchy alteration to carbonate, particularly of feldspars, is also present.

Other

All other types of cement, which were not included in the

above categories are counted in this category. In the Bundamba Group sandstones, only brown, translucent haematite cements are present. These are generally reddish, or dark brown to black, almost opaque, and have low relief. Brown, translucent organic matter is also present in some matrix material.

POROSITY

The visible porosity of the sandstones was also counted. It is generally lower than the actual porosity obtained by petrophysical means.

DATA BASE STRUCTURE

The data in this Record is divided into two sections. The first records the thin section point count results and the second is a compilation of petrophysical analysis results.

THIN SECTION DATA BASE

The thin section data were entered into a data base on an Apple Macintosh microcomputer using the program DB Master. The data base record form is set out in Table 2. Forms for each thin section are presented in this record.

The record form is set out to give an indication of the percentages of each of the sandstones framework and matrix components as described above. It indicates, also, such characteristics as the grainsize and sphericity of the sands. The letter N indicates the number of points counted and is followed by its corresponding percentage of the total (eg N = 5 = 1%). With the exception of the rock fragments, fields F20 through to F24, the total of the samples counted is 500. Columns F20 to F24 indicate the number and percentage of each individual rock fragment component. A total of 200 rock fragments points were counted where possible.

TABLE 2

PETROLOGICAL DATA BASE RECORD STRUCTURE

SECTION IDENTIFICATION: K1

WELL NAME: F3

FORMATION: F4

DEPTH: F6

CORE: F7

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: F11

 POLYCRYSTALLINE: F12

 TOTAL QUARTZ: F13

COMMENTS:

FELDSPAR: PLAGIOCLASE: F16

 ALKALI: F17

 TOTAL FELDSPAR: F18

ROCK FRAGMENTS: CHERT: F20

 Lv VOLCANIC: F21

 Ls SEDIMENTARY: F22

 Lm METAMORPHIC: F23

 CARBONATE: F24

 TOTAL ROCK FRAGMENTS: F25

OTHERS: F26

COMMENTS: F27

CEMENT: QUARTZ: F29

 MUD/CLAY: F30

 CARBONATE: F31

 OTHER: F32

 TOTAL CEMENT: F33

COMMENTS: F34

POROSITY: F35

PETROPHYSICAL DATA

The petrophysical data base is in two parts. The first section (Part A) lists the porosity, permeability and density data, measured in cores. These tests were carried out by Mr.P. Duff of the Petroleum Technology Laboratory, Bureau of Mineral Resources, Geology and Geophysics, Canberra. Table 3 lists the wells tested and the number of samples from each. In addition to the petrophysical data, the depth, lithology, and formation of each sample tested is recorded.

In the second section (Part B) of the Petrophysical Data Base, permeability, porosity and some density data obtained from open file petroleum well completion reports is presented.

TABLE 3.

Wells for which B.M.R. petrophysical data is presented.

-----WELL-----No. of SAMPLES-----YEAR TESTED.

1. G.S.Q. Ipswich No.3.	30	1969
2. G.S.Q. Ipswich No.4.	18	1969
3. G.S.Q. Ipswich No.5.	33	1969
4. G.S.Q. Ipswich No.6.	20	1969
5. G.S.Q. Ipswich No.7.	16	1969
6. G.S.Q. Ipswich No.9.	31	1970
7. G.S.Q. Ipswich No.10.	27	1970
8. G.S.Q. Ipswich No.11.	27	1969
9. G.S.Q. Ipswich No.12.	25	1970
10. G.S.Q. Ipswich No.19.	38	1972
11. G.S.Q. Ipswich No.20R.	39	1972
12. B.M.R. Maclean No.1	14	1986
13. Sextonville No.1.	37	1964
14. Cecil Plains No.1.	9	1963
15. Hogarth No.1.	5	1963
16. Hogarth No.4.	6	1970
17. Lockrose No.1.	2	1976

BIBLIOGRAPHY OF WELL COMPLETION REPORTS

ALMOND, C.S., 1982 - Stratigraphic drilling report - GSQ Ipswich 26. Queensland Government Mining Journal, 83, 514-523.

BOISVERT, T.H., 1965 - Australia Cities Service Inc. Tullymorgan No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4147 (unpublished).

BURMA OIL, 1963 - Burma Oil Clifden No.3 well completion report. Bureau of Mineral Resources, Australia, File. 62/1310 (unpublished).

CRANFIELD, L.C., 1980 - Stratigraphic drilling report - GSQ Ipswich 23. Queensland Government Mining Journal, 81, 366-371.

CRANFIELD, L.C. & GREEN, P.M., 1983 - Compilation of formation intersections in departmental coal exploration bore (N.S. series) in the Ipswich Coalfields. Geological Survey of Queensland Record 1983/42.

ETHRIDGE, L.T., HAMILTON, D.S., McDONALD, I., McMINN, A.K. & SMYTHE, M., 1985 - Clarence-Moreton Basin stratigraphic drill hole, DM Pillar Valley DDH-1. Geological Survey of New South Wales, Quarterly Notes, 60, 5-22.

GRAY, A.R.G., 1975 - Bundamba Group - stratigraphic relationships and petroleum potential. Queensland Government Mining Journal, 76, 311-324.

GREEN, D.C., 1963 - Phillips - Sunray - Queensland American Kogan South No.1 well completion report. Bureau of Mineral Resources, Australia, File. 62/1304 (unpublished).

HANLON, F.N., 1968 - Clarence Oil Hogarth No.1 well completion report. Bureau of Mineral Resources, Australia, File. 68/2030 (unpublished).

KYRANIS, N. & PATTERSON, W.A., 1966 - Phillips - Sunray Swan Creek No.1 well completion report. Geological Survey of Queensland, Open File Report CR 1826 (unpublished).

KYRANIS, N., 1963 - Phillips - Sunray - Queensland American Kogan No.1 well completion report. Bureau of Mineral Resources, Australia, File. 62/1111 (unpublished).

LEWIS, J.H., & KYRANIS, N., 1964a - Phillips - Sunray Cecil Plains No.1 well completion report. Bureau of Mineral Resources, Australia, File. 63/1043 (unpublished).

LEWIS, J.H., & KYRANIS, N., 1964b - Phillips - Sunray Kumbarilla No.1 well completion report. Bureau of Mineral Resources, Australia, File. 63/1044 (unpublished).

LEWIS, J.H., & KYRANIS, N., 1964c - Phillips - Sunray - Queensland American Durabilla West No.1 well completion report. Bureau of Mineral Resources, Australia, File. 63/1024

(unpublished).

LEWIS, J.H., & KYRANIS, N., 1964d - Phillips - Sunray - Queensland American Waggaba No.1 well completion report. Bureau of Mineral Resources, Australia, File. 63/1032 (unpublished).

LEWIS, J.H. & KYRANIS, N., 1964e - Phillips - Sunray - Queensland American Zig Zag No.1 well completion report. Bureau of Mineral Resources, File. 63/1033.

McDONALD, I., 1979 - Grafton-Lismore drilling programme: basic data report. Geological Survey of New South Wales Report, GS 1978/278 (unpublished).

MELLINS, I., 1971 - Amalgamated Petroleum N.L. Horrane No.1 well completion report. Bureau of Mineral Resources, Australia, File. 70/782 (unpublished).

MEYERS, N.A., 1965 - Phillips - Sunray Cecil Plains West No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4146 (unpublished).

MEYERS, N.A., 1965 - Phillips - Sunray Millmerran No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4161 (unpublished).

MEYERS, N.A., 1965 - Phillips - Sunray Yarrala No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4134 (unpublished).

PATTERSON, W.A., 1966 - Phillips - Sunray Baylam No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4178 (unpublished).

PATTERSON, W.A., 1966 - Phillips - Sunray Lockrose No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4169 (unpublished).

PATTERSON, W.A., & MUIR, B.J., 1966 - Phillips - Sunray Cecil Plains West No.1 well completion report. Bureau of Mineral Resources, Australia, File. 65/4165 (unpublished).

PERRYMAN, J.C., 1963 - Mid-Eastern Oil N.L. Sextonville No.1 well completion report. Bureau of Mineral Resources, Australia, File. 63/1325 (unpublished).

PHILLIPS PETROLEUM., 1962 - Phillips - Sunray - Queensland American Durabilla No.1 well completion report. Bureau of Mineral Resources, Australia, File. 62/1105 (unpublished).

PHILLIPS PETROLEUM., 1965 - Phillips - Sunray Station Creek No.1 well completion report. Geological Survey of Queensland, Open File Report CR 1857 (unpublished).

PROJECT OIL EXPLORATION LTD., 1982 - Project Oil Exploration Ltd. Tamrookum Creek No.1 well completion report. Geological Survey of Queensland, Open File Report CR 9711 (unpublished).

RELPH, R.E., 1963 - Mid-Eastern Oil N.L. Kyogle No.1 well

completion report. Bureau of Mineral Resources, Australia, File. 63/1001 (unpublished).

SILLER, C.W., 1960 - Queensland American The Overflow No.1 well completion report. Bureau of Mineral Resources, Australia, File. 62/1037 (unpublished).

TARGET EXPLORATION PTY. LTD., 1972 - Target Exploration Pty. Ltd. Jandowae South No.1 well completion report. Bureau of Mineral Resources, Australia, File. 72/937 (unpublished).

TARGET EXPLORATION PTY. LTD., 1972 - Target Exploration Pty. Ltd. Jandowae West No.1 well completion report. Bureau of Mineral Resources, Australia, File. 72/937 (unpublished).

TARGET EXPLORATION PTY. LTD., 1972 - Target Exploration Pty. Ltd. Stockyard Creek No.1 well completion report. Bureau of Mineral Resources, Australia, File. 72/937 (unpublished).

WELLS, A.T., and O'BRIEN, P.E., 1985 - BMR Maclean No.1 Stratigraphic Drill Hole, Clarence Moreton Basin, well completion report. Bureau of Mineral Resources, Australia, Record. 1985/36 (unpublished).

THIN SECTION DATA BASE

SECTION IDENTIFICATION:84505028.8

WELL NAME: BAYLAM-1

FORMATION:HELIDON

DEPTH: 323.39

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=290=58.0%

POLYCRYSTALLINE:N=32=6.4%

TOTAL QUARTZ:N=64.4%

COMMENTS:COARSE GRAINED, ROUNDED QTZ OVERGROWTHS CAUSE SOME ANGULAR GRAINS

FELDSPAR: PLAGIOCLASE: -

ALKALI:N=14=2.8%

TOTAL FELDSPAR:N=2.8%

ROCK FRAGMENTS: CHERT:N=35=17.5%

Lv VOLCANIC:N=110=55.0%

Ls SEDIMENTARY:N=55=27.5%

Lm METAMORPHIC:-

CARBONATE:-

TOTAL ROCK FRAGMENTS:N=9=1.8%

OTHERS:N=2=0.4%

COMMENTS:

CEMENT:

QUARTZ:N=23=4.6%

MUD/CLAY:N=86=17.2%

CARBONATE:N=5=1.0%

OTHER: -

TOTAL CEMENT:N=22.8%

COMMENTS:

POROSITY:N=39=7.8%

SECTION IDENTIFICATION:84505012.9

WELL NAME: CECIL PLAINS 1

FORMATION:MARBURG FORMATION

DEPTH:681.23

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=244=48.8%

POLYCRYSTALLINE:N=6=1.2%

TOTAL QUARTZ:N=50.0%

COMMENTS:FINE GRAINED, ANGULAR TO SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=2=0.4%

ALKALI:N=65=13.0%

TOTAL FELDSPAR:N=13.4%

ROCK FRAGMENTS: CHERT:N=45=22.5%

Lv VOLCANIC:N=65=32.5%

Ls SEDIMENTARY:N=88=44.0%

METAMORPHIC: -

CARBONATE: -

TOTAL ROCK FRAGMENTS:N=62=12.4%

OTHERS:N=9=1.8%

COMMENTS:SOME MUSCOVITE.

CEMENT: QUARTZ:N=7=1.4%

MUD/CLAY:N=102=20.4%

CARBONATE:N=1=0.2%

OTHER: -

TOTAL CEMENT:N=22.0%

COMMENTS:

POROSITY:N=2=0.4%

SECTION IDENTIFICATION:84505013.9

WELL NAME: CECIL PLAINS 1

FORMATION:EVERGREEN (MARBURG)

DEPTH:973.23

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=151=30.2%

POLYCRYSTALLINE:N=10=2.0%

TOTAL QUARTZ:N=32.2%

COMMENTS:COARSE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: -

ALKALI:N=43=8.6%

TOTAL FELDSPAR:N=8.6%

ROCK FRAGMENTS: CHERT:N=20=10.0%

Lv VOLCANIC:N=87=43.5%

Ls SEDIMENTARY:N=93=46.5%

METAMORPHIC: -

CARBONATE: -

TOTAL ROCK FRAGMENTS:N=148=29.6%

OTHERS:N=7=1.4%

COMMENTS:

CEMENT:

QUARTZ:N=101=20.2%

MUD/CLAY:N=10=2.0%

CARBONATE:N=1=0.2

OTHER: -

TOTAL CEMENT:N=22.4%

COMMENTS:

POROSITY:N=29=5.8%

SECTION IDENTIFICATION:84505014.9

WELL NAME: CECIL PLAINS 1

FORMATION:EVERGREEN (MARBURG)

DEPTH:1121.66

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=123=24.6%
POLYCRYSTALLINE:N=7=1.4%
TOTAL QUARTZ:N=26.0%

COMMENTS:COARSE TO FINE GRAINED, SUBANGULAR TO ANGULAR

FELDSPAR: PLAGIOCLASE:N=10=2.0%
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=5.2%

ROCK FRAGMENTS: CHERT:N=28=14.0%
Lv VOLCANIC:N=74=37.0%
Ls SEDIMENTARY:N=96=48.0%
METAMORPHIC: -
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=189=37.8%

OTHERS:N=11=2.2%

COMMENTS:SOME MUSCOVITE AND BIOTITE, SOME HEAVY MINERALS?

CEMENT: QUARTZ:N=118=23.6%
MUD/CLAY:N=16=3.2%
CARBONATE:N=6=1.2%
OTHER: -
TOTAL CEMENT:N=28.0%

COMMENTS:

POROSITY:N=4=0.8%

SECTION IDENTIFICATION:84505015.9

WELL NAME: CECIL PLAINS 1

FORMATION:HELIDON SANDSTONE

DEPTH:1194.99

CORE: 4

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=302=60.4%
POLYCRYSTALLINE:N=19=3.8%
TOTAL QUARTZ:N=64.2%

COMMENTS:MEDIUM TO COARSE GRAINED, SUBANGULAR TO ANGULAR

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=43=8.6%
TOTAL FELDSPAR:N=8.6%

ROCK FRAGMENTS: CHERT:N=27=13.8%
Lv VOLCANIC:N=13=26.4%
Ls SEDIMENTARY:N=8=16.5%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=8=1.6%

ONLY 48 SAMPLES COUNTED

OTHERS:N=1=0.2%
COMMENTS:SOME MUSCOVITE

CEMENT: QUARTZ:N=47=9.4%
MUD/CLAY:N=11=2.2%
CARBONATE: -
OTHER: -
TOTAL CEMENT:N=11.6%

COMMENTS:

POROSITY:N=69=13.8%

SECTION IDENTIFICATION:84505016.9

WELL NAME: CECIL PLAINS 1

FORMATION:HELIDON SANDSTONE

DEPTH:1231.55

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=272=54.4%
POLYCRYSTALLINE:N=37=7.4%
TOTAL QUARTZ:N=61.8%

COMMENTS:COARSE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=55=11.0%
TOTAL FELDSPAR:N=11.0%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=7=1.4%

OTHERS: -

COMMENTS:VERY RARE MUSCOVITE

CEMENT: QUARTZ:N=30=6.0%
MUD/CLAY:N=10=2.0%
CARBONATE: -
OTHER: -
TOTAL CEMENT:N=8.0%

COMMENTS:

POROSITY:N=89=17.8%

SECTION IDENTIFICATION:84505019.9

WELL NAME: CECIL PLAINS 1

FORMATION:ABERDARE

DEPTH:1675.55

CORE: 9

MAJOR CONSTITUENTS:

W

QUARTZ: MONOCRYSTALLINE:N=1=0.2%
POLYCRYSTALLINE: -
TOTAL QUARTZ:N=0.2%

COMMENTS:

FELDSPAR: PLAGIOCLASE: -
ALKALI: -
TOTAL FELDSPAR: -

ROCK FRAGMENTS: CHERT:N=16=8.0%
Lv VOLCANIC:N=6=3.0%
Ls SEDIMENTARY:N=178=89.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=427=85.4%

OTHERS: -

COMMENTS:

CEMENT: QUARTZ:
MUD/CLAY:N=72=14.4%
CARBONATE: -
OTHER: -
TOTAL CEMENT:N=14.4%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION:84505112.9

WELL NAME: CECIL PLAINS SOUTH 1

FORMATION:HELIDON SANDSTONE

DEPTH: 915.46

CORE: 1

MAJOR CONSTITUENTS:

W

QUARTZ: MONOCRYSTALLINE:N=320=64.0%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=66.2%

COMMENTS:MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=13=2.6%
TOTAL FELDSPAR:N=2.6%

WOCK FRAGMENTS: CHERT:N=79=47.8%
Lv VOLCANIC:N=51=31.0%
Ls SEDIMENTARY:N=29=17.5%
Lm METAMORPHIC:N=2=1.3%
CARBONATE:N=4=2.4%
TOTAL ROCK FRAGMENTS:N=24=4.8%
ONLY 165 SAMPLES COUNTED.

OTHERS:N=4=0.8%
COMMENTS:

CEMENT: QUARTZ:N=48=9.6%
MUD/CLAY:N=15=3.0%
CARBONATE:N=2=0.4%
OTHER: -
TOTAL CEMENT:N=13.0%

COMMENTS:

POROSITY:N=63=12.6%

SECTION IDENTIFICATION:84505111.9

WELL NAME: CECIL PLAINS SOUTH 1

FORMATION:HELIDON SANDSTONE

DEPTH:913.61

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=248=49.6%
POLYCRYSTALLINE:N=90=18.0%
TOTAL QUARTZ:N=67.6%

COMMENTS:MEDIUM TO VERY COARSE GRAINED SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=5=1.0%
TOTAL FELDSPAR:N=1.0%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=3=0.6%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=18=3.6%
MUD/CLAY:N=96=19.2%
CARBONATE:N=9=1.8%
OTHER: -
TOTAL CEMENT:N=13.0%

COMMENTS:

POROSITY:N=30=6.0%

SECTION IDENTIFICATION:84505113.9

WELL NAME: CECIL PLAINS SOUTH 1

FORMATION:RACEVIEW

DEPTH:1008.67

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=28=5.6%
POLYCRYSTALLINE:N=3=0.6%
TOTAL QUARTZ:N=6.2%

COMMENTS:MEDIUM TO COARSE GRAINED SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=11=2.2%
ALKALI:N=10=2.0%
TOTAL FELDSPAR:N=4.2%

ROCK FRAGMENTS: CHERT:N=53=26.5%
Lv VOLCANIC:N=93=46.5%
Ls SEDIMENTARY:N=52=26.0%
Lm METAMORPHIC:-
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=345=69.0%

OTHERS:N=3=0.6%

COMMENTS:

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=10=2.0%
CARBONATE:N=73=14.6%
OTHER: -
TOTAL CEMENT:N=19.6%

COMMENTS:

POROSITY:N=1=0.2%

SECTION IDENTIFICATION:84505114.9

WELL NAME: CECIL PLAINS SOUTH 1

FORMATION:VOLCANICS

DEPTH:1101.94

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=6=1.2%
POLYCRYSTALLINE:N=42=8.4%
TOTAL QUARTZ:N=9.6%

COMMENTS:

FELDSPAR: PLAGIOCLASE:N=5=1.0%
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=4.2%

ROCK FRAGMENTS: CHERT:N=20=10.0%
Lv VOLCANIC:N=149=74.5%
Ls SEDIMENTARY:N=31=15.5%
Lm METAMORPHIC:-
CARBONATE:
TOTAL ROCK FRAGMENTS:N=324=64.8%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=22=4.4%
MUD/CLAY:N=26=5.2%
CARBONATE:N=55=11.0%
OTHER: -
TOTAL CEMENT:N=20.6%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION:84505098.9

WELL NAME: CECIL PLAINS WEST 1

FORMATION:EVERGREEN (MARBURG, GATTON SANDSTONE)

DEPTH:799.60

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=145=29.0%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=31.2%

COMMENTS:FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=20=4.0%
ALKALI:N=15=3.0%
TOTAL FELDSPAR:N=7.0%

ROCK FRAGMENTS: CHERT:N=26=13.0%
Lv VOLCANIC:N=108=54.0%
Ls SEDIMENTARY:N=66=33.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=94=18.8%

OTHERS:N=11=2.2%

COMMENTS:SOME MICA, MINERAL WITH HIGH RELIEF AND OPAQUE

CEMENT: QUARTZ:N=92=18.4%
MUD/CLAY:N=75=15.0%
CARBONATE:N=13=2.6%
OTHER: -
TOTAL CEMENT:N=36.0%

COMMENTS:

POROSITY:N=24=4.8%

SECTION IDENTIFICATION:84505099.9

WELL NAME: CECIL PLAINS WEST 1

FORMATION:EVERGREEN (MARBURG, GATTON SANDSTONE)

DEPTH:805.59

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=200=40.0%
POLYCRYSTALLINE:N=69=13.8%
TOTAL QUARTZ:N=53.8%

COMMENTS:MEDIUM TO COARSE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=2=0.4%
ALKALI:N=6=1.2%
TOTAL FELDSPAR:N=1.6%

ROCK FRAGMENTS: CHERT:N=27=13.5%
Lv VOLCANIC:N=73=36.5%
Ls SEDIMENTARY:N=100=50.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=74=14.8%

OTHERS:N=2=0.4%

COMMENTS:

CEMENT: QUARTZ:N=86=17.2%
MUD/CLAY:N=53=10.6%
CARBONATE:N=1=0.2%
OTHER: -
TOTAL CEMENT:N=28.0%

COMMENTS:

POROSITY:N=7=1.4%

SECTION IDENTIFICATION:84505100.9

WELL NAME: CECIL PLAINS WEST 1

FORMATION:CALAMIA (MARBURG FM.)

DEPTH:950.37

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=309=61.8%
POLYCRYSTALLINE:N=8=1.6%
TOTAL QUARTZ:N=63.4%

COMMENTS:FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=21=4.2%
TOTAL FELDSPAR:N=4.2%

ROCK FRAGMENTS: CHERT:N=33=52.4%
Lv VOLCANIC:N=12=19.0%
Ls SEDIMENTARY:N=15=23.8%
METAMORPHIC:N=1=1.6%
CARBONATE:N=2=3.2%
TOTAL ROCK FRAGMENTS:N=13=2.6%

ONLY 63 SAMPLES COUNTED

OTHERS:N=5=1.0%
COMMENTS:SOME MICA AND HEAVY MINERALS.

CEMENT: QUARTZ:N=73=14.6%
MUD/CLAY:N=32=6.4%
CARBONATE:
OTHER: -
TOTAL CEMENT:N=21.0%

COMMENTS:

POROSITY:N=39=7.8%

SECTION IDENTIFICATION:84505037.4

WELL NAME: CLIFDEN 2

FORMATION:GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:585.16

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=150=30.0%
POLYCRYSTALLINE:N=9=1.8%
TOTAL QUARTZ:N=31.8%

COMMENTS:FINE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=19=3.8%
ALKALI:N=42=8.4%
TOTAL FELDSPAR:N=12.2%

ROCK FRAGMENTS: CHERT:N=8=4.0%
Lv VOLCANIC:N=100=50.0%
Ls SEDIMENTARY:N=86=43.0%
METAMORPHIC: -
CARBONATE:N=6=3.0%
TOTAL ROCK FRAGMENTS:N=106=21.2%

OTHERS:N=16=3.2%
COMMENTS:

CEMENT: QUARTZ:N=103=20.6%
MUD/CLAY:N=31=6.2%
CARBONATE:N=22=4.4%
OTHER: -
TOTAL CEMENT:N=31.2%

COMMENTS:

POROSITY:N=2=0.4%

SECTION IDENTIFICATION:84505001.4

WELL NAME: CLIFDEN 3

FORMATION: MA MA CREEK MEMBER (MARBURG FM.)

DEPTH:298.70

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=140=28.0%
POLYCRYSTALLINE:N=9=1.8%
TOTAL QUARTZ:N=29.8%

COMMENTS: FINE TO MEDIUM GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=23=4.6%
TOTAL FELDSPAR:N=6.2%

ROCK FRAGMENTS: CHERT:N=17=8.5%
Lv VOLCANIC:N=111=55.5%
Ls SEDIMENTARY:N=69=34.5%
METAMORPHIC: -
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=102=20.4%

OTHERS:N=28=5.6%

COMMENTS: DARK BROWN - BLACK FLAKEY

CEMENT: QUARTZ:N=90=18.0%
MUD/CLAY:N=63=12.6%
CARBONATE:N=11=2.2%
OTHER: -
TOTAL CEMENT:N=32.8%

COMMENTS:

POROSITY: N=26=5.2%

SECTION IDENTIFICATION:84505006.4

WELL NAME: CLIFDEN 3

FORMATION: MA MA CREEK MEMBER (MARBURG FM.)

DEPTH:496.93

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=159=31.8%
POLYCRYSTALLINE:N=10=2.0%
TOTAL QUARTZ:N=33.8%

COMMENTS: FINE GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=19=3.8%
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=7.0%

ROCK FRAGMENTS: CHERT:N=10=5.0%
Lv VOLCANIC:N=114=57.0%
Ls SEDIMENTARY:N=63=31.5%
METAMORPHIC: -
CARBONATE:N=13=6.5%
TOTAL ROCK FRAGMENTS:N=77=15.4%

OTHERS:N=5=1.0%

COMMENTS:

CEMENT: QUARTZ:N=99=19.8%
MUD/CLAY:N=68=13.6%
CARBONATE:N=29=5.8%
OTHER: -
TOTAL CEMENT:N=39.2%

COMMENTS:

POROSITY:N=18=3.6%

SECTION IDENTIFICATION:84505007.4

WELL NAME: CLIFDEN 3

FORMATION: GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:584.67

CORE: 4

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=257=51.4%
POLYCRYSTALLINE:N=22=4.4%
TOTAL QUARTZ:N=55.8%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED RARE SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=27=5.4%
TOTAL FELDSPAR:N=7.0%

ROCK FRAGMENTS: CHERT:N=5=2.5%
Lv VOLCANIC:N=93=46.5%
Ls SEDIMENTARY:N=95=47.5%
METAMORPHIC: -
CARBONATE:N=7=3.5%
TOTAL ROCK FRAGMENTS:N=79=15.8%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=66=13.2%
MUD/CLAY:N=16=3.2%
CARBONATE:N=19=3.8%
OTHER: -
TOTAL CEMENT:N=20.2%

COMMENTS:

POROSITY:N=5=1.0%

SECTION IDENTIFICATION:84505008.4

WELL NAME: CLIFDEN 3

FORMATION: GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:674.90

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=114=22.8%
POLYCRYSTALLINE:N=28=5.6%
TOTAL QUARTZ:N=28.4%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=42=8.4%
TOTAL FELDSPAR:N=9.0%

ROCK FRAGMENTS: CHERT:N=11=5.5%
Lv VOLCANIC:N=119=59.5%
Ls SEDIMENTARY:N=62=31.0%
METAMORPHIC: -
CARBONATE:N=8=4.0%
TOTAL ROCK FRAGMENTS:N=121=24.2%

OTHERS:N=22=4.4%

COMMENTS:SOME OPAQUE MINERALS AND MICA

CEMENT: QUARTZ:N=103=20.6%
MUD/CLAY:N=52=10.4%
CARBONATE:N=15=3.0%
OTHER: -
TOTAL CEMENT:N=34.0%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION:84505009.4

WELL NAME: CLIFDEN 3

FORMATION: GATTON SANDSTONE

DEPTH:774.24

CORE: 6

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=167=33.4%
POLYCRYSTALLINE:N=31=6.2%
TOTAL QUARTZ:N=39.6%

COMMENTS: COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=3.2%

ROCK FRAGMENTS: CHERT:N=7=3.5%
Lv VOLCANIC:N=115=57.5%
Ls SEDIMENTARY:N=58=29.0%
METAMORPHIC: -
CARBONATE:N=20=10.0%
TOTAL ROCK FRAGMENTS:N=127=25.4%

OTHERS:N=7=1.4%

COMMENTS: MICA AND RARE HEAVY MINERALS

CEMENT: QUARTZ:N=56=11.2%
MUD/CLAY:N=27=5.4%
CARBONATE:N=44=8.8%
OTHER: -
TOTAL CEMENT:N=25.4%

COMMENTS:

POROSITY: N=25=5.0%

WELL NAME: CLIFDEN 3

FORMATION: GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:884.65

CORE: 8

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=157=31.4%
POLYCRYSTALLINE:N=8=1.6%
TOTAL QUARTZ:N=33.0%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=21=4.2%
ALKALI:N=42=8.4%
TOTAL FELDSPAR:N=12.6%

ROCK FRAGMENTS: CHERT:N=4=2.0%
Lv VOLCANIC:N=132=66.0%
Ls SEDIMENTARY:N=59=29.5%
METAMORPHIC: -
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=91=18.2%

OTHERS:N=3=0.6%

COMMENTS:

CEMENT: QUARTZ:N=71=14.2%
MUD/CLAY:N=91=18.2%
CARBONATE:N=9=1.8%
OTHER: -
TOTAL CEMENT:N=34.2%

COMMENTS:

POROSITY:N=7=1.4%

SECTION IDENTIFICATION:84505012.4

WELL NAME: CLIFDEN 3

FORMATION: GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:981.82

CORE: 9

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=143=28.6%
POLYCRYSTALLINE:N=13=2.6%
TOTAL QUARTZ:N=31.2%

COMMENTS: FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=13=2.6%
ALKALI:N=35=7.0%
TOTAL FELDSPAR:N=9.6%

ROCK FRAGMENTS: CHERT:N=15=7.5%
Lv VOLCANIC:N=109=54.5%
Ls SEDIMENTARY:N=68=34.0%
METAMORPHIC: -
CARBONATE:N=8=4.0%
TOTAL ROCK FRAGMENTS:N=94=18.8%

OTHERS:N=13=2.6%

COMMENTS: SOME DARK OPAQUE MINERALS AND MICAS

CEMENT: QUARTZ:N=98=19.6%
MUD/CLAY:N=70=14.0%
CARBONATE:N=11=2.2%
OTHER: -
TOTAL CEMENT:N=35.8%

COMMENTS:

POROSITY:N=10=2.0%

SECTION IDENTIFICATION:84505014.4

WELL NAME: CLIFDEN 3

FORMATION: GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:1067.49

CORE: 10

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=181=36.2%
POLYCRYSTALLINE:N=21=4.2%
TOTAL QUARTZ:N=40.4%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=18=3.6%
ALKALI:N=32=6.4%
TOTAL FELDSPAR:N=10.0%

ROCK FRAGMENTS: CHERT:N=10=5.0%
Lv VOLCANIC:N=108=54.0%
Ls SEDIMENTARY:N=71=35.5%
METAMORPHIC: -
CARBONATE:N=11=5.5%
TOTAL ROCK FRAGMENTS:N=79=15.8%

OTHERS:N=10=2.0%

COMMENTS: SOME DARK OPAQUE MINERALS AND MICAS

CEMENT: QUARTZ:N=45=9.0%
MUD/CLAY:N=28=5.6
CARBONATE:N=86=17.2%
OTHER: -
TOTAL CEMENT:N=31.8%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION:84505016.4

WELL NAME: CLIFDEN 3

FORMATION: RIPLEY ROAD SANDSTONE

DEPTH:1258.52

CORE: 12

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=173=34.6%
POLYCRYSTALLINE:N=18=3.6%
TOTAL QUARTZ:N=38.2%

COMMENTS: FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=19=3.8%
ALKALI:N=47=9.4%
TOTAL FELDSPAR:N=13.2%

ROCK FRAGMENTS: CHERT:N=11=5.5%
Lv VOLCANIC:N=96=48.0%
Ls SEDIMENTARY:N=89=44.5%
METAMORPHIC: -
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=67=13.4%

OTHERS:N=10=2.0%

COMMENTS: SOME DARK OPAQUE MINERALS WITH HIGH RELIEF

CEMENT: QUARTZ:N=64=12.8%
MUD/CLAY:N=22=4.4%
CARBONATE:N=80=16.0%
OTHER: -
TOTAL CEMENT:N=33.2%

COMMENTS:

POROSITY: -

SECTION IDENTIFICATION:84505017.4

WELL NAME: CLIFDEN 3

FORMATION: RIPLEY ROAD SANDSTONE

DEPTH:1349.11

CORE: 13

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=212=42.4%
POLYCRYSTALLINE:N=63=12.6%
TOTAL QUARTZ:N=55.0%

COMMENTS: COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=7=1.4%
TOTAL FELDSPAR:N=1.4%

ROCK FRAGMENTS: CHERT:N=31=15.5%
Lv VOLCANIC:N=113=56.5%
Ls SEDIMENTARY:N=42=21.0%
METAMORPHIC: -
CARBONATE:N=14=7.0%
TOTAL ROCK FRAGMENTS:N=119=23.8%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=18=3.6%
MUD/CLAY:N=1=0.2%
CARBONATE:N=79=15.8%
OTHER: -
TOTAL CEMENT:N=19.6%

COMMENTS:

POROSITY: -

SECTION IDENTIFICATION:84505018.4

WELL NAME: CLIFDEN 3

FORMATION: RACEVIEW

DEPTH: 1427.5

CORE: 14

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=185=37.0%
POLYCRYSTALLINE:N=17=3.4%
TOTAL QUARTZ:N=40.4%

COMMENTS:FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=10=2.0%
ALKALI:N=36=7.2%
TOTAL FELDSPAR:N=9.2%

ROCK FRAGMENTS: CHERT:N=20=10.0%
Lv VOLCANIC:N=75=37.5%
Ls SEDIMENTARY:N=95=47.5%
METAMORPHIC: -
CARBONATE:N=10=5.0%
TOTAL ROCK FRAGMENTS:N=47=9.4%

OTHERS:N=7=1.4%

COMMENTS:

CEMENT: QUARTZ:N=44=8.8%
MUD/CLAY:N=2=0.4%
CARBONATE:N=152=30.4%
OTHER: -
TOTAL CEMENT:N=39.6%

COMMENTS:

POROSITY: -

SECTION IDENTIFICATION:84505019.4

WELL NAME: CLIFDEN 3

FORMATION: LAYTONS RANGE CONGLOMERATE

DEPTH:1682.5

CORE: 17

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=36=7.2%
POLYCRYSTALLINE:N=18=3.6%
TOTAL QUARTZ:N=10.8%

COMMENTS: VERY COARSE GRAINED ROCK FRAGMENTS

FELDSPAR: PLAGIOCLASE:
ALKALI:
TOTAL FELDSPAR:

ROCK FRAGMENTS: CHERT:N=10=5.0%
Lv VOLCANIC:N=95=47.5%
Ls SEDIMENTARY:N=95=47.5%
METAMORPHIC: -
CARBONATE:
TOTAL ROCK FRAGMENTS:N=390=78.0%

OTHERS:N=1=0.2%
COMMENTS:DARK OPAQUE

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=4=0.8%
CARBONATE:N=33=6.6%
OTHER: -
TOTAL CEMENT:N=10.4%

COMMENTS:

POROSITY:N=2=0.4%

SECTION IDENTIFICATION:84505023.4

WELL NAME: CLIFDEN 3

FORMATION: NYMBODIA COAL MEASURES.

DEPTH:2213.56

CORE: 23

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=41=8.2%
POLYCRYSTALLINE:N=7=1.4%
TOTAL QUARTZ:N=9.6%

COMMENTS:

FELDSPAR: PLAGIOCLASE:
ALKALI:N=1=0.2%
TOTAL FELDSPAR:N=0.2%

ROCK FRAGMENTS: CHERT:N=131=65.5%
Lv VOLCANIC:N=40=20.0%
Ls SEDIMENTARY:N=25=12.5%
METAMORPHIC: -
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=365=73.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=7=1.4%
MUD/CLAY:N=78=15.6%
CARBONATE:N=1=0.2%
OTHER: -
TOTAL CEMENT:N=17.2%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION:84505038.4

WELL NAME: CLIFDEN 4

FORMATION: GATTON SANDSTONE MEMBER (MARBURG FM.)

DEPTH:758.95

CORE: 4

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=161=32.2%
POLYCRYSTALLINE:N=23=4.6%
TOTAL QUARTZ:N=36.8%

COMMENTS: FINE GRAINED SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=22=4.4%
ALKALI:N=49=9.8%
TOTAL FELDSPAR:N=14.2%

ROCK FRAGMENTS: CHERT:N=1=0.5%
Lv VOLCANIC:N=118=59.0%
Ls SEDIMENTARY:N=72=36.0%
METAMORPHIC: -
CARBONATE:N=9=4.5%
TOTAL ROCK FRAGMENTS:N=78=15.6%

OTHERS: N=4=0.8%

COMMENTS: HIGH RELIEF OPAQUE

CEMENT: QUARTZ:N=44=8.8%
MUD/CLAY:N=83=16.6%
CARBONATE:N=20=4.0%
OTHER: -
TOTAL CEMENT:N=29.4%

COMMENTS:

POROSITY: N=16= 3.2%

SECTION IDENTIFICATION:84505085.9

WELL NAME: DURABILLA 1

FORMATION: SPRINGBOK

DEPTH:291.08

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=203=40.6%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=42.8%

COMMENTS: FINE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:N=10=2.0%
ALKALI:N=15=3.0%
TOTAL FELDSPAR:N=5.0%

ROCK FRAGMENTS: CHERT:N=10=5.0%
Lv VOLCANIC:N=68=34.0%
Ls SEDIMENTARY:N=120=60.0%
METAMORPHIC: -
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=21=4.2%

OTHERS: N=3=0.6%
COMMENTS:

CEMENT: QUARTZ:N=5=1.0%
MUD/CLAY:N=159=31.8%
CARBONATE:N=2=0.4%
OTHER:N=2=0.4
TOTAL CEMENT:N=34.4%

COMMENTS:

POROSITY: N=65=13.0%

SECTION IDENTIFICATION:84505087.9

WELL NAME: DURABILLA 1

FORMATION: MARBURG FM. (HUTTON SANDSTONE.)

DEPTH:843.56

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=247=49.4%
POLYCRYSTALLINE:N=32=6.4%
TOTAL QUARTZ:N=55.8%

COMMENTS: MEDIUM TO FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=4.2%

ROCK FRAGMENTS: CHERT:N=28=14.0%
Lv VOLCANIC:N=79=39.5%
Ls SEDIMENTARY:N=88=44.0%
METAMORPHIC: -
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=5=1.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=8=1.6%
MUD/CLAY:N=150=30.0%
CARBONATE:N=10=2.0%
OTHER: -
TOTAL CEMENT:N=33.6%

COMMENTS:

POROSITY: N=27= 5.4%

SECTION IDENTIFICATION:84505088.9

WELL NAME: DURABILLA 1

FORMATION: MARBURG FM. (HUTTON SANDSTONE.)

DEPTH:1005.40

CORE: 4

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=207=41.4%
POLYCRYSTALLINE:N=36=7.2%
TOTAL QUARTZ:N=48.6%

COMMENTS: COARSE TO FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=11=2.2%
ALKALI:N=26=5.2%
TOTAL FELDSPAR:N=7.4%

ROCK FRAGMENTS: CHERT:N=25=12.5%
Lv VOLCANIC:N=58=29.0%
Ls SEDIMENTARY:N=114=57.0%
METAMORPHIC: -
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=13=2.6%

OTHERS: N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=7=1.4%
MUD/CLAY:N=177=35.4%
CARBONATE: -
OTHER: -
TOTAL CEMENT:N=36.8%

COMMENTS:

POROSITY: N=22= 4.4%

SECTION IDENTIFICATION:84505090.9

WELL NAME: DURABILLA 1

FORMATION: MARBURG FM. (HUTTON SANDSTONE.)

DEPTH:1061.18

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=170=34.0%
POLYCRYSTALLINE:N=26=5.2%
TOTAL QUARTZ:N=39.2%

COMMENTS: MEDIUM TO FINE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=13=2.6%
TOTAL FELDSPAR:N=4.2%

ROCK FRAGMENTS: CHERT:N=14=7.0%
Lv VOLCANIC:N=80=40.0%
Ls SEDIMENTARY:N=100=50.0%
METAMORPHIC: -
CARBONATE:N=6=3.0%
TOTAL ROCK FRAGMENTS:N=60=12.0%

OTHERS: N=2=0.4%

COMMENTS: SOME MICA

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=153=30.6%
CARBONATE:N=2=0.4%
OTHER: -
TOTAL CEMENT:N=33.4%

COMMENTS:

POROSITY: N=54=10.8%

SECTION IDENTIFICATION:84505091.9

WELL NAME: DURABILLA 1

FORMATION: MARBURG FM. (EVERGREEN)

DEPTH:1107.31 CORE: 6

W

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=173=34.6%
POLYCRYSTALLINE:N=47=9.4%
TOTAL QUARTZ:N=44.0%

COMMENTS: MEDIUM TO COARSE GRAINED

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=27=5.4%
TOTAL FELDSPAR:N=6.0%

ROCK FRAGMENTS: CHERT:N=5=2.5%
Lv VOLCANIC:N=110=55.0%
Ls SEDIMENTARY:N=76=38.0%
METAMORPHIC: -
CARBONATE:N=9=4.5%
TOTAL ROCK FRAGMENTS:N=36=7.2%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=184=36.8%
CARBONATE:N=2=0.4%
OTHER: -
TOTAL CEMENT:N=40.2%

COMMENTS:

POROSITY: N=13= 2.6%

SECTION IDENTIFICATION:84505061.6

WELL NAME: HOGARTH 1

FORMATION: MARBURG (GATTON SANDSTONE MEMBER)

DEPTH:1070.7

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=246=49.2%
POLYCRYSTALLINE:N=65=13.0%
TOTAL QUARTZ:N=62.2%

COMMENTS: COARSE MEDIUM GRAINED, SUBROUNDED TO ROUNDED

FELDSPAR: PLAGIOCLASE:N=2=0.4%
ALKALI:N=14=2.8%
TOTAL FELDSPAR:N=3.2%

ROCK FRAGMENTS: CHERT:N=37=18.5%
Lv VOLCANIC:N=85=42.5%
Ls SEDIMENTARY:N=61=30.5%
METAMORPHIC: -
CARBONATE:N=17=8.5%
TOTAL ROCK FRAGMENTS:N=20=4.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=5=1.0%
MUD/CLAY:N=110=22.0%
CARBONATE:N=10=2.0%
OTHER:
TOTAL CEMENT:N=25.0%

COMMENTS:

POROSITY: N=28=5.6%

SECTION IDENTIFICATION:84505062.6

WELL NAME: HOGARTH 1

FORMATION: MARBURG (GATTON SANDSTONE MEMBER)

DEPTH:1070.7

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=195=39.0%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=44.4%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=4.6%

ROCK FRAGMENTS: CHERT:N=26=13.0%
Lv VOLCANIC:N=76=38.0%
Ls SEDIMENTARY:N=84=42.0%
METAMORPHIC: -
CARBONATE:N=14=7.0%
TOTAL ROCK FRAGMENTS:N=26=5.2%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=6=1.2%
MUD/CLAY:N=137=27.4%
CARBONATE:N=17=3.4%
OTHER:
TOTAL CEMENT:N=32.0%

COMMENTS:

POROSITY: N=69=13.8%

SECTION IDENTIFICATION:84505063.6

WELL NAME: HOGARTH 1

FORMATION: MARBURG (GATTON SANDSTONE MEMBER)

DEPTH:1217.83

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=161=32.2%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=37.6%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=34=6.8%
TOTAL FELDSPAR:N=8.4%

ROCK FRAGMENTS: CHERT:N=6=3.0%
Lv VOLCANIC:N=104=52.0%
Ls SEDIMENTARY:N=84=42.0%
METAMORPHIC: -
CARBONATE:N=6=3.0%
TOTAL ROCK FRAGMENTS:N=52=10.4%

OTHERS: N=6=1.2%

COMMENTS: DARK OPAQUE

CEMENT: QUARTZ:N=3=0.6%
MUD/CLAY:N=129=25.8%
CARBONATE:N=62=12.4%
OTHER:N=14=2.8%
TOTAL CEMENT:N=41.6%

COMMENTS:

POROSITY: N=4=0.8%

SECTION IDENTIFICATION: 3 74 3

WELL NAME: IPSWICH 3

FORMATION: MARBURG FM (GATTON SANDSTONE MEMBER)

DEPTH: 22.63

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=103=20.6%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=22.8%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=11=2.2%
TOTAL FELDSPAR:N=2.8%

ROCK FRAGMENTS: CHERT:N=9=4.5%
Lv VOLCANIC:N=83=41.5%
Ls SEDIMENTARY:N=104=52.0%
Lm METAMORPHIC:
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=97=19.4%

OTHERS:N=3=0.6%

COMMENTS: ORGANIC MATERIAL ?

CEMENT: QUARTZ:N=10=2.0%
MUD/CLAY:N=80=16.0%
CARBONATE:N=150=30.0%
OTHER:
TOTAL CEMENT:N=48.0%

COMMENTS:

POROSITY:N=32=6.4%

SECTION IDENTIFICATION: 3 434 5

WELL NAME: IPSWICH 3

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 132.42

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=171=34.2%
POLYCRYSTALLINE:N=13=2.6%
TOTAL QUARTZ:N=36.8%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=16=3.2%
ALKALI:N=21=4.2%
TOTAL FELDSPAR:N=7.4%

ROCK FRAGMENTS: CHERT:N=21=10.5%
Lv VOLCANIC:N=96=48.0%
Ls SEDIMENTARY:N=70=35.0%
Lm METAMORPHIC:
CARBONATE:N=13=6.5%
TOTAL ROCK FRAGMENTS:N=60=12.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=14=2.8%
MUD/CLAY:N=125=25.0%
CARBONATE:N=72=14.4%
OTHER:
TOTAL CEMENT:N=42.2%

COMMENTS:

POROSITY:N=8=1.6%

SECTION IDENTIFICATION: 3 443 1

WELL NAME: IPSWICH 3

FORMATION: MARBURG FM.(GATTON SANDSTONE MEMBER)

DEPTH: 135.07

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=166=33.2%
POLYCRYSTALLINE:N=8=1.6%
TOTAL QUARTZ:N=34.8%

COMMENTS: MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=9=1.8%
ALKALI:N=34=6.8%
TOTAL FELDSPAR:N=8.6%

ROCK FRAGMENTS: CHERT:N=8=4.0%
Lv VOLCANIC:N=90=45.0%
Ls SEDIMENTARY:N=85=42.5%
Lm METAMORPHIC:N=1=0.5%
CARBONATE:N=16=8.0%
TOTAL ROCK FRAGMENTS:N=80=16.0%

OTHERS: N=3=0.6%
COMMENTS: SOME MICA

CEMENT: QUARTZ:N=23=4.6%
MUD/CLAY:N=88=17.6%
CARBONATE:N=76=15.2%
OTHER:
TOTAL CEMENT:N=37.4%

COMMENTS:

POROSITY:N=13=2.6%

SECTION IDENTIFICATION: 3 555 1

WELL NAME: IPSWICH 3

FORMATION: HELIDON SANDSTONE

DEPTH: 169.21

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=217=43.4%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=48.8%

COMMENTS: COARSE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=5=1.0%
ALKALI:N=17=3.4%
TOTAL FELDSPAR:N=4.4%

ROCK FRAGMENTS: CHERT:N=15=7.5%
Lv VOLCANIC:N=96=48.0%
Ls SEDIMENTARY:N=68=34.0%
Lm METAMORPHIC:
CARBONATE:N=21=10.5%
TOTAL ROCK FRAGMENTS:N=69=13.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=92=18.4%
CARBONATE:N=42=8.4%
OTHER:
TOTAL CEMENT:N=29.8%

COMMENTS:

POROSITY:N=16=3.2%

SECTION IDENTIFICATION: 3 714 4

WELL NAME: IPSWICH 3

FORMATION: MARBURG FM. (HELIDON SANDSTONE)

DEPTH: 217.73

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=201=40.2%
POLYCRYSTALLINE:N=33=6.6%
TOTAL QUARTZ:N=46.8%

COMMENTS: MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=5.6%

ROCK FRAGMENTS: CHERT:N=17=8.5%
Lv VOLCANIC:N=106=53.0%
Ls SEDIMENTARY:N=73=36.5%
Lm METAMORPHIC:
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=43=8.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=14=2.8%
MUD/CLAY:N=137=27.4%
CARBONATE:N=3=0.6%
OTHER:
TOTAL CEMENT:N=30.8%

COMMENTS:

POROSITY:N=41=8.2%

SECTION IDENTIFICATION: 5 146 11

WELL NAME: IPSWICH 5

FORMATION: MARBURG FM. (MA MA CK. MEMBER)

DEPTH: 45.70

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=93=18.6%
POLYCRYSTALLINE:N=22=4.4%
TOTAL QUARTZ:N=23.0%

COMMENTS: FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=25=5.0%
ALKALI:N=14=2.8%
TOTAL FELDSPAR:N=7.8%

ROCK FRAGMENTS: CHERT:N=9=4.5%
Lv VOLCANIC:N=97=48.5%
Ls SEDIMENTARY:N=93=46.5%
Lm METAMORPHIC:
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=106=21.2%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=123=24.6%
CARBONATE:N=74=14.8%
OTHER:
TOTAL CEMENT:N=41.8%

COMMENTS:

POROSITY:N=31=11.2%

SECTION IDENTIFICATION: 5 231 9

WELL NAME: IPSWICH 5

FORMATION: MARBURG FM. (MA MA CK. MEMBER)

DEPTH: 78.05

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=122=24.4%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=29.8%

COMMENTS: COARSE TO FINE GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=3=0.6%
TOTAL FELDSPAR:N=0.6%

ROCK FRAGMENTS: CHERT:N=96=48.0%
Lv VOLCANIC:N=40=20.0%
Ls SEDIMENTARY:N=61=30.5%
Lm METAMORPHIC:
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=196=39.2%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=5=1.0%
MUD/CLAY:N=90=18.0%
CARBONATE:N=1=0.2%
OTHER:
TOTAL CEMENT:N=19.2%

COMMENTS:

POROSITY:N=56=11.2%

SECTION IDENTIFICATION: 11 342 2

WELL NAME: IPSWICH 11

FORMATION: MARBURG FM. (HEIFER CK MEMBER)

DEPTH: 104.20

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=229=45.8%
POLYCRYSTALLINE:N=37=7.4%
TOTAL QUARTZ:N=53.2%

COMMENTS: COARSE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:N=5=1.0%
ALKALI:N=36=7.2%
TOTAL FELDSPAR:N=8.2%

ROCK FRAGMENTS: CHERT:N=20=18.6%
Lv VOLCANIC:N=23=21.4%
Ls SEDIMENTARY:N=45=42.0%
Lm METAMORPHIC:

CARBONATE:N=19=18.0% ONLY 107 SAMPLES COUNTED
TOTAL ROCK FRAGMENTS:N=34=6.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=54=10.8%
MUD/CLAY:N=18=3.6%
CARBONATE:
OTHER:
TOTAL CEMENT:N=14.4%

COMMENTS:

POROSITY:N=87=17.4%

SECTION IDENTIFICATION: 11 985 6

WELL NAME: IPSWICH 11

FORMATION: MARBURG FM. (MA MA CK. MEMBER)

DEPTH: 300.38

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=58=11.6%
POLYCRYSTALLINE:N=6=1.2%
TOTAL QUARTZ:N=12.8%

COMMENTS: FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=14=2.8%
TOTAL FELDSPAR:N=3.4%

ROCK FRAGMENTS: CHERT:N=4=2.0%
Lv VOLCANIC:N=40=20.0%
Ls SEDIMENTARY:N=148=74.0%
Lm METAMORPHIC:
CARBONATE:N=8=4.0%
TOTAL ROCK FRAGMENTS:N=94=18.8%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=1=0.2%
MUD/CLAY:N=169=33.8%
CARBONATE:N=34=6.8%
OTHER:N=113=22.6%
TOTAL CEMENT:N=63.4%

COMMENTS: OTHER - ORGANIC

POROSITY:N=7=1.4%

SECTION IDENTIFICATION: 168 4

WELL NAME: IPSWICH 12

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 51.31

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=167=33.4%
POLYCRYSTALLINE:N=13=2.6%
TOTAL QUARTZ:N=36.0%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=13=2.6%
ALKALI:N=29=5.8%
TOTAL FELDSPAR:N=8.4%

ROCK FRAGMENTS: CHERT:N=3=1.5%
Lv VOLCANIC:N=82=41.0%
Ls SEDIMENTARY:N=107=53.5%
Lm METAMORPHIC:
CARBONATE:N=8=4.0%
TOTAL ROCK FRAGMENTS:N=52=10.4%

OTHERS:N=3=0.6%

COMMENTS:

CEMENT: QUARTZ:N=7=1.4%
MUD/CLAY:N=183=36.6%
CARBONATE:N=6=1.2%
OTHER:
TOTAL CEMENT:N=39.2%

COMMENTS:

POROSITY:N=27=5.4%

SECTION IDENTIFICATION: 174 6

WELL NAME: IPSWICH 12

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 53.14

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=200=40.0%
POLYCRYSTALLINE:N=80=16.0%
TOTAL QUARTZ:N=56.0%

COMMENTS: COARSE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=4.8%

ROCK FRAGMENTS: CHERT:N=11=5.5%
Lv VOLCANIC:N=58=29.0%
Ls SEDIMENTARY:N=131=65.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=33=6.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=8=1.6%
MUD/CLAY:N=71=14.2%
CARBONATE:
OTHER:
TOTAL CEMENT:N=15.8%

COMMENTS:

POROSITY:N=84=16.8%

SECTION IDENTIFICATION: 396 4

WELL NAME: IPSWICH 12

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 120.80

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=227=45.4%
POLYCRYSTALLINE:N=34=6.8%
TOTAL QUARTZ:N=52.2%

COMMENTS: COARSE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=22=4.4%
TOTAL FELDSPAR:N=5.2%

ROCK FRAGMENTS: CHERT:N=15=7.5%
Lv VOLCANIC:N=74=37.0%
Ls SEDIMENTARY:N=111=55.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=21=4.2%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=6=1.2%
MUD/CLAY:N=88=17.6%
CARBONATE:
OTHER:
TOTAL CEMENT:N=18.8%

COMMENTS:

POROSITY:N=98=19.6%

SECTION IDENTIFICATION: 97

WELL NAME: IPSWICH 13

FORMATION: MARBURG FM.(MA MA CK. MEMBER)

DEPTH: 29.57

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=149=29.8%
POLYCRYSTALLINE:N=14=2.8%
TOTAL QUARTZ:N=32.6%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=11=2.2%
ALKALI:N=9=1.8%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:N=24=12.0%
Lv VOLCANIC:N=41=20.5%
Ls SEDIMENTARY:N=133=66.5%
Lm METAMORPHIC:
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=26=5.2%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=5=1.0%
MUD/CLAY:N=215=43.0%
CARBONATE:N=5=1.0%
OTHER:
TOTAL CEMENT:N=45.0%

COMMENTS:

POROSITY:N=65=13.0%

SECTION IDENTIFICATION: 266 6

WELL NAME: IPSWICH 13

FORMATION: MARBURG FM.(GATTON SANDSTONE MEMBER)

DEPTH: 81.23

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=118=23.6%
POLYCRYSTALLINE:N=65=13.0%
TOTAL QUARTZ:N=36.6%

COMMENTS: VERY COARSE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=25=5.0%
TOTAL FELDSPAR:N=5.0%

ROCK FRAGMENTS: CHERT:N=12=6.0%
Lv VOLCANIC:N=78=39.0%
Ls SEDIMENTARY:N=110=55.0%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=73=14.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=14=2.8%
MUD/CLAY:N=142=28.4%
CARBONATE:
OTHER:N=3=0.6%
TOTAL CEMENT:N=31.8%

COMMENTS: OTHER - ORGANIC

POROSITY:N=60=12.0%

SECTION IDENTIFICATION: 646 3

WELL NAME: IPSWICH 13

FORMATION: MARBURG FM. (CALAMIA MEMBER)

DEPTH: 196.98

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=48=9.6%
POLYCRYSTALLINE:N=5=1.0%
TOTAL QUARTZ:N=10.6%

COMMENTS: FINE GRAINED

FELDSPAR: PLAGIOCLASE:N=2=0.4%
ALKALI:N=9=1.8%
TOTAL FELDSPAR:N=2.2%

ROCK FRAGMENTS: CHERT:N=2=1.0%
Lv VOLCANIC:N=67=33.5%
Ls SEDIMENTARY:N=113=65.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=44=8.8%

OTHERS:N=6=1.2%

COMMENTS:MICA AND SOME ORGANIC MATERIAL

CEMENT: QUARTZ:N=1=0.2%
MUD/CLAY:N=273=54.6%
CARBONATE:N=4=0.8%
OTHER:
TOTAL CEMENT:N=55.6%

COMMENTS:

POROSITY:N=108=21.6%

SECTION IDENTIFICATION: 797 2

WELL NAME: IPSWICH 13

FORMATION: MARBURG

DEPTH: 242.97

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=156=31.2%
POLYCRYSTALLINE:N=15=3.0%
TOTAL QUARTZ:N=34.2%

COMMENTS: FINE GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=11=2.2%
TOTAL FELDSPAR:N=3.0%

ROCK FRAGMENTS: CHERT:N=8=4.0%
Lv VOLCANIC:N=14=7.0%
Ls SEDIMENTARY:N=175=87.5%
Lm METAMORPHIC:
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=25=5.0%

OTHERS:N=4=0.8%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=11=2.2%
MUD/CLAY:N=249=49.8%
CARBONATE:N=1=0.2%
OTHER:N=15=3.0%
TOTAL CEMENT:N=55.2%

COMMENTS:

POROSITY:N=11=2.2%

SECTION IDENTIFICATION: 475 11

WELL NAME: IPSWICH 14

FORMATION: MARBURG FM. (GATTON SANDSTONE)

DEPTH: 145.05

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=102=20.4%
POLYCRYSTALLINE:N=8=1.6%
TOTAL QUARTZ:N=22.0%

COMMENTS: VERY FINE GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=10=2.0%
TOTAL FELDSPAR:N=2.8%

ROCK FRAGMENTS: CHERT:N=9=4.5%
Lv VOLCANIC:N=21=10.5%
Ls SEDIMENTARY:N=169=84.5%
Lm METAMORPHIC:
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=42=8.4%

OTHERS:N=4=0.8%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=1=0.2%
MUD/CLAY:N=264=52.8%
CARBONATE:N=4=0.8%
OTHER:
TOTAL CEMENT:N=53.8%

COMMENTS:

POROSITY:N=61=12.2%

SECTION IDENTIFICATION: 541 10

WELL NAME: IPSWICH 14

FORMATION: MARBURG FM. (GATTON SANDSTONE)

DEPTH: 165.16

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=125=25.0%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=30.4%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR TO ANGULAR

FELDSPAR: PLAGIOCLASE:N=2=0.4%
ALKALI:N=11=2.2%
TOTAL FELDSPAR:N=2.6%

ROCK FRAGMENTS: CHERT:N=9=4.5%
Lv VOLCANIC:N=46=23.0%
Ls SEDIMENTARY:N=141=70.5%
Lm METAMORPHIC:
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=65=13.0%

OTHERS:N=1=0.2%

COMMENTS:

CEMENT: QUARTZ:N=7=1.4%
MUD/CLAY:N=236=47.2%
CARBONATE:N=4=0.8%
OTHER:N=6=1.2%
TOTAL CEMENT:N=50.6%

COMMENTS: OTHER - ORGANIC

POROSITY:N=16=3.2%

SECTION IDENTIFICATION: 273 6

WELL NAME: IPSWICH 15

FORMATION: MARBURG FM. (HEIFER CK. MEMBER)

DEPTH: 83.36

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=227=45.4%
POLYCRYSTALLINE:N=9=1.8%
TOTAL QUARTZ:N=47.2%

COMMENTS: FINE GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=8=1.6%
TOTAL FELDSPAR:N=1.8%

ROCK FRAGMENTS: CHERT:N=9=4.5%
Lv VOLCANIC:N=19=9.5%
Ls SEDIMENTARY:N=172=86.0%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=26=5.2%

OTHERS:N=1=0.2%

COMMENTS: ORGANIC

CEMENT: QUARTZ:N=4=0.8%
MUD/CLAY:N=205=41.0%
CARBONATE:N=5=1.0%
OTHER:N=5=1.0%
TOTAL CEMENT:N=43.8%

COMMENTS: OTHER - ORGANIC

POROSITY:N=9=1.8%

SECTION IDENTIFICATION: 630 7

WELL NAME: IPSWICH 15

FORMATION: MARBURG FM. (HEIFER CK. MEMBER)

DEPTH: 192.13

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=231=46.2%
POLYCRYSTALLINE:N=20=4.0%
TOTAL QUARTZ:N=50.2%

COMMENTS: MEDIUM TO COARSE GRAINED, ROUNDED TO SUBROUNDED SOME
SUBANGULAR

FELDSPAR: PLAGIOCLASE:
ALKALI:N=8=1.6%
TOTAL FELDSPAR:N=1.6%

ROCK FRAGMENTS: CHERT:N=15=7.5%
Lv VOLCANIC:N=40=20.0%
Ls SEDIMENTARY:N=132=66.0%
Lm METAMORPHIC:
CARBONATE:N=11=5.5%
TOTAL ROCK FRAGMENTS:N=20=4.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=28=5.6%
MUD/CLAY:N=86=17.2%
CARBONATE:N=1=0.2%
OTHER:N=5=1.0%
TOTAL CEMENT:N=24.0%

COMMENTS:

POROSITY:N=101=20.2%

SECTION IDENTIFICATION:84505059.9

WELL NAME: JANDOWAE SOUTH 1

FORMATION:MARBURG FM. (EVERGREEN)

DEPTH:578.62 CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=182=36.4%
POLYCRYSTALLINE:N=9=1.8%
TOTAL QUARTZ:N=38.2%

COMMENTS: FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=17=3.4%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:N=2=1.0%
Lv VOLCANIC:N=97=48.5%
Ls SEDIMENTARY:N=101=50.5%
METAMORPHIC: -
CARBONATE:
TOTAL ROCK FRAGMENTS:N=29=5.8%

OTHERS: N=9=1.8%

COMMENTS: MICA AND ORGANIC ??? MATERIAL

CEMENT: QUARTZ:N=18=3.6%
MUD/CLAY:N=198=39.6%
CARBONATE:N=23=4.6%
OTHER:
TOTAL CEMENT:N=47.8%

COMMENTS:

POROSITY: N=12=0.8%

SECTION IDENTIFICATION:84505060.9

WELL NAME: JANDOWAE SOUTH 1

FORMATION:MARBURG FM. (EVERGREEN)

DEPTH:579.11 CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=201=40.2%
POLYCRYSTALLINE:N=12=2.4%
TOTAL QUARTZ:N=42.6%

COMMENTS: FINE TO COARSE GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:N=94=47.0%
Ls SEDIMENTARY:N=106=53.0%
METAMORPHIC: -
CARBONATE:
TOTAL ROCK FRAGMENTS:N=52=10.4%

OTHERS: N=4=0.8%
COMMENTS: MICA AND ORGANIC ??? MATERIAL

CEMENT: QUARTZ:N=18=3.6%
MUD/CLAY:N=146=29.2%
CARBONATE:N=42=8.4%
OTHER:
TOTAL CEMENT:N=42.2%

COMMENTS:

POROSITY: N=5=1.0%

SECTION IDENTIFICATION:84505025.9

WELL NAME: KOGAN 1

FORMATION: WALLOON COAL MEASURES

DEPTH:379.93

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=100=20.0%
POLYCRYSTALLINE:N=12=2.4%
TOTAL QUARTZ:N=22.4%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=24=4.8%
TOTAL FELDSPAR:N=6.2%

ROCK FRAGMENTS: CHERT:N=57=28.5%
Lv VOLCANIC:N=98=49.0%
Ls SEDIMENTARY:N=45=22.5%
METAMORPHIC: -
CARBONATE:
TOTAL ROCK FRAGMENTS:N=22=4.4%

OTHERS: N=4=0.8%

COMMENTS: ORGANIC MATERIAL ?

CEMENT: QUARTZ:N=21=4.2%
MUD/CLAY:N=286=57.2%
CARBONATE:N=1=0.2%
OTHER:
TOTAL CEMENT:N=61.6%

COMMENTS:

POROSITY: N=23=4.6%

SECTION IDENTIFICATION:84505026.9

WELL NAME: KOGAN 1

FORMATION:MARBURG FM. (HUTTON SANDSTONE)

DEPTH:535.37

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=194=38.8%

POLYCRYSTALLINE:N=11=2.2%

TOTAL QUARTZ:N=41.0%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=7=1.4%

ALKALI:N=38=7.6%

TOTAL FELDSPAR:N=9.0%

ROCK FRAGMENTS: CHERT:N=21=14.3%

Lv VOLCANIC:N=31=21.0%

Ls SEDIMENTARY:N=94=64.0%

METAMORPHIC: -

CARBONATE:N=1=0.7%

TOTAL ROCK FRAGMENTS:N=8=1.6%

ONLY 147 SAMPLES COUNTED

OTHERS: N=1=0.2%

COMMENTS: ORGANIC MATERIAL ?

CEMENT:

QUARTZ:N=22=4.4%

MUD/CLAY:N=201=40.2%

CARBONATE:N=5=1.0%

OTHER:

TOTAL CEMENT:N=45.6%

COMMENTS:

POROSITY: N=13=2.6%

SECTION IDENTIFICATION:84505027.9

WELL NAME: KOGAN 1

FORMATION: EVERGREEN

DEPTH:887.76

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=168=33.6%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=39.0%

COMMENTS: FINE TO COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=19=3.8%
ALKALI:N=9=1.8%
TOTAL FELDSPAR:N=5.6%

ROCK FRAGMENTS: CHERT:N=25=12.5%
Lv VOLCANIC:N=92=46.0%
Ls SEDIMENTARY:N=82 41.0%
METAMORPHIC: -
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=36=7.2%

OTHERS: N=8=1.6%

COMMENTS:MICA, ORGANIC MATERIAL ? AND HEAVY MINERALS??

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=187=37.4%
CARBONATE:N=2=0.4%
OTHER:
TOTAL CEMENT:N=40.2%

COMMENTS:

POROSITY: N=32=6.4%

SECTION IDENTIFICATION:84505028.9

WELL NAME: KOGAN 1

FORMATION: HELIDON SANDSTONE

DEPTH:993.10

CORE: 4

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=303=60.6%
POLYCRYSTALLINE:N=4=0.8%
TOTAL QUARTZ:N=61.4%

COMMENTS: FINEGRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=8=1.6%
TOTAL FELDSPAR:N=1.8%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:

OTHERS: N=2=0.4%
COMMENTS:

CEMENT: QUARTZ:N=75=15.0%
MUD/CLAY:N=57=11.4%
CARBONATE:N=1=0.2%
OTHER:
TOTAL CEMENT:N=26.6%

COMMENTS:

POROSITY: N=49=9.8%

SECTION IDENTIFICATION:84505029.9

WELL NAME: KOGAN 1

FORMATION: HELIDON SANDSTONE

DEPTH:998.59

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=278=55.6%
POLYCRYSTALLINE:N=32=6.4%
TOTAL QUARTZ:N=62.0%

COMMENTS: COARSE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=9=1.8%
TOTAL FELDSPAR:N=1.8%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=8=1.6%
MUD/CLAY:N=82=16.4%
CARBONATE:
OTHER:
TOTAL CEMENT:N=18.0%

COMMENTS:

POROSITY: N=91=18.2%

SECTION IDENTIFICATION:84505030.9

WELL NAME: KOGAN 1

FORMATION: HELIDON SANDSTONE

DEPTH:1000.23

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=284=56.8%
POLYCRYSTALLINE:N=19=3.8%
TOTAL QUARTZ:N=60.6%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:
ALKALI:N=13=2.6%
TOTAL FELDSPAR:N=2.6%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS: N=3=0.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=32=6.4%
MUD/CLAY:N=23=4.6%
CARBONATE:
OTHER:
TOTAL CEMENT:N=11.0%

COMMENTS:

POROSITY: N=126=25.2%

SECTION IDENTIFICATION:84505053.9

WELL NAME: KOGAN SOUTH 1

FORMATION: MARBURG

DEPTH:934.56 CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=122=24.4%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=26.6%

COMMENTS: FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=14=2.8%
ALKALI:N=27=5.4%
TOTAL FELDSPAR:N=8.2%

ROCK FRAGMENTS: CHERT:N=4=2.0%
Lv VOLCANIC:N=91=45.5%
Ls SEDIMENTARY:N=103=51.5%
METAMORPHIC: -
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=20=4.0%

OTHERS:N=3=0.6%
COMMENTS: MICAS

CEMENT: QUARTZ:N=25=5.0%
MUD/CLAY:N=166=33.2%
CARBONATE:N=7=1.4
OTHER:
TOTAL CEMENT:N=39.6%

COMMENTS:

POROSITY: N=105=21.0%

SECTION IDENTIFICATION:84505054.9

WELL NAME: KOGAN SOUTH 1

FORMATION: MARBURG

DEPTH:965.99

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=171=34.2%
POLYCRYSTALLINE:N=15=3.0%
TOTAL QUARTZ:N=37.2%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=4.8%

ROCK FRAGMENTS: CHERT:N=8=4.0%
Lv VOLCANIC:N=73=36.5%
Ls SEDIMENTARY:N=118=59.0%
METAMORPHIC: -
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS: N=43=8.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=20=4.0%
MUD/CLAY:N=101=20.2%
CARBONATE:N=105=21.0%
OTHER:
TOTAL CEMENT:N=45.2%

COMMENTS:

POROSITY: N=21=4.2%

SECTION IDENTIFICATION:84505055.9

WELL NAME: KOGAN SOUTH 1

FORMATION: MARBURG

DEPTH:974.08

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=146=29.2%
POLYCRYSTALLINE:N=18=3.6%
TOTAL QUARTZ:N=32.8%

COMMENTS: FINE GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=16=3.2%
ALKALI:N=19=3.8%
TOTAL FELDSPAR:N=7.0%

ROCK FRAGMENTS: CHERT:N=7=3.5%
Lv VOLCANIC:N=79=39.5%
Ls SEDIMENTARY:N=109=54.5%
METAMORPHIC: -
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=26=5.2%

OTHERS:N=4=0.8%
COMMENTS: MICAS

CEMENT: QUARTZ:N=25=5.0%
MUD/CLAY:N=149=29.8%
CARBONATE:N=18=3.6%
OTHER:
TOTAL CEMENT:N=38.4%

COMMENTS:

POROSITY: N=79=15.8%

SECTION IDENTIFICATION:84505056.9

WELL NAME: KOGAN SOUTH 1

FORMATION: HELIDON SANDSTONE

DEPTH:1021.75

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=336=67.2%
POLYCRYSTALLINE:N=10=2.0%
TOTAL QUARTZ:N=69.2%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=10=2.0%
TOTAL FELDSPAR:N=2.0%

ROCK FRAGMENTS: CHERT:N=6=6.4%
Lv VOLCANIC:N=18=19.4%
Ls SEDIMENTARY:N=55=59.2%
METAMORPHIC: -
CARBONATE:N=14=15.5%

TOTAL ROCK FRAGMENTS:N=1=0.2% ONLY 93 SAMPLES COUNTED

OTHERS:N=2=0.2%

COMMENTS:

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=38=7.6%
CARBONATE:
OTHER:
TOTAL CEMENT:N=10.0%

COMMENTS:

POROSITY: N=91=18.2%

SECTION IDENTIFICATION:84505027.6

WELL NAME: KYOGLE 1

FORMATION: KANGAROO CREEK SANDSTONE

DEPTH:82.0 CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=269=53.8%
POLYCRYSTALLINE:N=26=5.2%
TOTAL QUARTZ:N=59.0

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED TO ROUNDED

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=25=5.0%
TOTAL FELDSPAR:N=6.4%

ROCK FRAGMENTS: CHERT:N=43=26.0%
Lv VOLCANIC:N=69=41.5%
Ls SEDIMENTARY:N=54=32.5%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=19=3.8%

ONLY 166 SAMPLES COUNTED

OTHERS:N=4=0.8%
COMMENTS:

CEMENT: QUARTZ:N=33=6.6%
MUD/CLAY:N=45=9.0%
CARBONATE:N=46=9.2%
OTHER:
TOTAL CEMENT:N=24.8%

COMMENTS:

POROSITY: N=26=5.2%

SECTION IDENTIFICATION:84505028.6

WELL NAME: KYOGLE 1

FORMATION: WALLOON COAL MEASURES

DEPTH:169.57 CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=39=7.8%
POLYCRYSTALLINE:N=10=2.0%
TOTAL QUARTZ:N=9.8%

COMMENTS: MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:N=16=3.2%
ALKALI:N=35=7.0%
TOTAL FELDSPAR:N=10.0%

ROCK FRAGMENTS: CHERT:N=4=2.0%
Lv VOLCANIC:N=150=75.0%
Ls SEDIMENTARY:N=46=23.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=125=25.0%

OTHERS:N=8=1.6%

COMMENTS:

CEMENT: QUARTZ:N=7=1.4%
MUD/CLAY:N=165=33.0%
CARBONATE: -
OTHER:
TOTAL CEMENT:N=34.4%

COMMENTS: FELDSPAR ALTERED TO CLAY ETC

POROSITY: N=95=19.0%

SECTION IDENTIFICATION:84505029.6

WELL NAME: KYOGLE 1

FORMATION: WALLOON COAL MEASURES

DEPTH:367.58 CORE: 4

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=47=9.4%
POLYCRYSTALLINE:N=22=4.4%
TOTAL QUARTZ:N=13.8%

COMMENTS: MEDIUM TO COARSE GRAINED

FELDSPAR: PLAGIOCLASE:N=12=2.4%
ALKALI:N=15=3.0%
TOTAL FELDSPAR:N=5.4%

ROCK FRAGMENTS: CHERT:N=14=7.0%
Lv VOLCANIC:N=86=43.0%
Ls SEDIMENTARY:N=100=50.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=159=31.8%

OTHERS:N=8=1.6%

COMMENTS:

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=200=40.0%
CARBONATE:N=20=4.0%
OTHER:
TOTAL CEMENT:N=46.4%

COMMENTS: SOME ALTERATION OF FELDSPARS TO CLAY

POROSITY: N=5=1.0%

SECTION IDENTIFICATION:84505030.6

WELL NAME: KYOGLE 1

FORMATION: WALLOON COAL MEASURES

DEPTH:481.95

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=47=9.4%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=14.8%

COMMENTS: MEDIUM TO COARSE GRAINED

FELDSPAR: PLAGIOCLASE:N=62=12.2%
ALKALI:N=64=12.8%
TOTAL FELDSPAR:N=25.2%

ROCK FRAGMENTS: CHERT:N=19=9.5%
Lv VOLCANIC:N=109=54.5%
Ls SEDIMENTARY:N=72=36.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=64=12.8%

OTHERS:N=10=2.0%

COMMENTS: DARK BROWN RED OPAQUE

CEMENT: QUARTZ:N=90=18.0%
MUD/CLAY:N=132=26.4%
CARBONATE:N=2=0.4%
OTHER:
TOTAL CEMENT:N=44.8%

COMMENTS: SOME ALTERATION OF FELDSPARS TO CLAY

POROSITY: N=2=0.4%

SECTION IDENTIFICATION:84505031.6

WELL NAME: KYOGLE 1

FORMATION: WALLOON COAL MEASURES

DEPTH:483.15

CORE: 5

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=4=0.8%
POLYCRYSTALLINE:N=51=10.2%
TOTAL QUARTZ:N=11.0%

COMMENTS: COARSE TO VERY COARSE GRAINED

FELDSPAR: PLAGIOCLASE:N=33=6.6%
ALKALI:N=7=1.4%
TOTAL FELDSPAR:N=8.0%

ROCK FRAGMENTS: CHERT:N=18=9.0%
Lv VOLCANIC:N=148=74.0%
Ls SEDIMENTARY:N=34=17.0%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=158=31.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=10=2.0%
MUD/CLAY:N=7=1.4%
CARBONATE:N=184=36.8%
OTHER:
TOTAL CEMENT:N=40.2%

COMMENTS: SOME ALTERATION OF FELDSPARS TO CLAY

POROSITY: N=46=9.2%

SECTION IDENTIFICATION:84505032.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM. (MA MA CK. MEMBER)

DEPTH:766.57

CORE: 8

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=125=25.0%
POLYCRYSTALLINE:N=38=7.6%
TOTAL QUARTZ:N=32.6%

COMMENTS: MEDIUM TO FINE GRAINED

FELDSPAR: PLAGIOCLASE:N=12=2.4%
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=5.6%

ROCK FRAGMENTS: CHERT:N=28=14.0%
Lv VOLCANIC:N=85=42.5%
Ls SEDIMENTARY:N=87=43.5%
METAMORPHIC: -
CARBONATE:
TOTAL ROCK FRAGMENTS:N=92=18.4%

OTHERS:N=3=0.6%

COMMENTS:

CEMENT: QUARTZ:N=22=4.4%
MUD/CLAY:N=111=22.2%
CARBONATE:N=71=14.2%
OTHER:
TOTAL CEMENT:N=40.8%

COMMENTS: SOME ALTERATION OF FELDSPARS

POROSITY: N=10=2.0%

SECTION IDENTIFICATION:84505033.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM (MA MA CK. MEMBER)

DEPTH:884.32 CORE: 10

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=186=37.2%
POLYCRYSTALLINE:N= 6=1.2%
TOTAL QUARTZ:N=38.4%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE: -
ALKALI:N=15=3.0%
TOTAL FELDSPAR:N=3.0%

ROCK FRAGMENTS: CHERT:N=26=13.0%
Lv VOLCANIC:N=35=17.5%
Ls SEDIMENTARY:N=135=67.5%
METAMORPHIC: -
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=43=8.6%

OTHERS:N=13=2.8%

COMMENTS: ORGANIC?, DARK HIGH RELIEF SOME OPAQUE, SOME MICA

CEMENT: QUARTZ:N=97=19.4%
MUD/CLAY:N=127=25.4%
CARBONATE:N=9=1.8%
OTHER:
TOTAL CEMENT:N=46.6%

COMMENTS: SOME ALTERATION OF FELDSPARS TO CLAY

POROSITY: N=3=0.6%

SECTION IDENTIFICATION:84505034.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM (GATTON SANDSTONE MEMBER)

DEPTH:1253.45

CORE: 13

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=100=20.0%
POLYCRYSTALLINE:N=37=7.4%
TOTAL QUARTZ:N=27.4

COMMENTS: COARSE TO FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=11=2.2%
TOTAL FELDSPAR:N=3.6%

ROCK FRAGMENTS: CHERT:N=26=13.0%
Lv VOLCANIC:N=131=65.5%
Ls SEDIMENTARY:N=42=21.0%
METAMORPHIC: -
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=145=29.0%

OTHERS:N=1=0.2%
COMMENTS:

CEMENT: QUARTZ:N=37=7.4%
MUD/CLAY:N=95=19.0%
CARBONATE:N=5=1.0%
OTHER:
TOTAL CEMENT:N=27.4%

COMMENTS:

POROSITY: N=62=12.4%

SECTION IDENTIFICATION:84505035.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH:1494.22

CORE: 15

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=105=21.0%
POLYCRYSTALLINE:N=19=3.8%
TOTAL QUARTZ:N=24.8%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=22=4.4%
ALKALI:N=31=6.2%
TOTAL FELDSPAR:N=10.6%

ROCK FRAGMENTS: CHERT:N=11=5.5%
Lv VOLCANIC:N=108=54.0%
Ls SEDIMENTARY:N=81=40.5%
METAMORPHIC: -
CARBONATE:
TOTAL ROCK FRAGMENTS:N=125=25.0%

OTHERS:N=3=0.6%
COMMENTS:

CEMENT: QUARTZ:N=10=2.0%
MUD/CLAY:N=141=28.2%
CARBONATE:N=32=6.4%
OTHER:
TOTAL CEMENT:N=36.6%

COMMENTS:

POROSITY: N=12=2.4%

SECTION IDENTIFICATION:84505036.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM (GATTON SANDSTONE MEMBER)

DEPTH:1494.83

CORE: 15

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=137=27.4%
POLYCRYSTALLINE:N=36=7.2%
TOTAL QUARTZ:N=34.6%

COMMENTS: COARSE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:N=18=3.6%
ALKALI:N=53=10.6%
TOTAL FELDSPAR:N=14.2%

ROCK FRAGMENTS: CHERT:N=9=4.5%
Lv VOLCANIC:N=113=56.5%
Ls SEDIMENTARY:N=77=38.5%
METAMORPHIC: -
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=85=17.0%

OTHERS:N=1=0.2%

COMMENTS:

CEMENT: QUARTZ:N=36=7.2%
MUD/CLAY:N=129=25.8%
CARBONATE:N=2=0.4%
OTHER:
TOTAL CEMENT:N=33.4%

COMMENTS: SOME FELDSPARS ALTERED TO CLAY

POROSITY: N=3=0.6%

SECTION IDENTIFICATION:84505038.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM.(GATTON SANDSTONE MEMBER)

DEPTH:1669.13

CORE: 18

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=162=32.4%
POLYCRYSTALLINE:N=35=7.0%
TOTAL QUARTZ:N=39.4%

COMMENTS: FINE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=23=4.6%
ALKALI:N=43=8.6%
TOTAL FELDSPAR:N=13.2%

ROCK FRAGMENTS: CHERT:N=30=15.0%
Lv VOLCANIC:N=119=59.5%
Ls SEDIMENTARY:N=51=25.5%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=46=9.2%

OTHERS:N=2=0.4%

COMMENTS:

CEMENT: QUARTZ:N=17=3.4%
MUD/CLAY:N=154=30.8%
CARBONATE:N=16=3.2%
OTHER:
TOTAL CEMENT:N=37.4%

COMMENTS:

POROSITY: N=2=0.4%

SECTION IDENTIFICATION:84505039.6

WELL NAME: KYOGLE 1

FORMATION:MARBURG FM (GATTON SANDSTONE MEMBER)

DEPTH:1738.67

CORE: 19

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=148=29.6%
POLYCRYSTALLINE:N=40=8.0%
TOTAL QUARTZ:N=37.6

COMMENTS: COARSE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=45=9.0%
TOTAL FELDSPAR:N=9.8%

ROCK FRAGMENTS: CHERT:N=42=21.0%
Lv VOLCANIC:N=113=56.5%
Ls SEDIMENTARY:N=45=22.5%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=64=12.8%

OTHERS:N=1=0.2%

COMMENTS:

CEMENT: QUARTZ:N=28=5.6%
MUD/CLAY:N=130=26.0%
CARBONATE:N=35=7.0%
OTHER:
TOTAL CEMENT:N=38.6%

COMMENTS:

POROSITY: N=5=1.0%

SECTION IDENTIFICATION:84505040.6

WELL NAME: KYOGLE 1

FORMATION: RIPLEY ROAD SANDSTONE

DEPTH:2036.14

CORE: 23

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=222=44.4%
POLYCRYSTALLINE:N=23=4.6%
TOTAL QUARTZ:N=49.0%

COMMENTS: COARSE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=6=1.2%
TOTAL FELDSPAR:N=1.2%

ROCK FRAGMENTS: CHERT:N=56=28.0%
Lv VOLCANIC:N=73=36.5%
Ls SEDIMENTARY:N=71=35.5%
METAMORPHIC: -
CARBONATE: -
TOTAL ROCK FRAGMENTS:N=36=7.2%

OTHERS:N=2=0.4%

COMMENTS:

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=134=26.8%
CARBONATE:N=60=12.0%
OTHER:
TOTAL CEMENT:N=41.8%

COMMENTS:

POROSITY: N=2=0.4%

SECTION IDENTIFICATION:84505041.6

WELL NAME: KYOGLE 1

FORMATION: IPSWICH COAL MEASURES (RACEVIEW?)

DEPTH:2041.52

CORE: 24

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=255=51.0%
POLYCRYSTALLINE:N=34=6.8%
TOTAL QUARTZ:N=57.8

COMMENTS:

FELDSPAR: PLAGIOCLASE:
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=3.2%

ROCK FRAGMENTS: CHERT:N=40=20.0%
Lv VOLCANIC:N=89=44.5%
Ls SEDIMENTARY:N=69=34.5%
METAMORPHIC: -
CARBONATE:N=2=1.0
TOTAL ROCK FRAGMENTS:N=30=6.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=74=14.8%
MUD/CLAY:N=61=12.2%
CARBONATE:N=14=2.8%
OTHER:
TOTAL CEMENT:N=29.8%

COMMENTS:

POROSITY: N=16=3.2%

SECTION IDENTIFICATION:84505115.9

WELL NAME: KUMBARILLA 1

FORMATION:MARBURG FM.(HUTTON SANDSTONE)

DEPTH:898.70

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=251=50.2%
POLYCRYSTALLINE:N=47=9.4%
TOTAL QUARTZ:N=59.6%

COMMENTS: COARSE TO FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=35=7.0%
TOTAL FELDSPAR:N=7.2%

ROCK FRAGMENTS: CHERT:N=33=16.5%
Lv VOLCANIC:N=64=32.0%
Ls SEDIMENTARY:N=92=46.0%
METAMORPHIC: -
CARBONATE:N=11=5.5%
TOTAL ROCK FRAGMENTS:N=5=1.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=9=1.8%
MUD/CLAY:N=123=24.6%
CARBONATE:N=9=1.8%
OTHER:
TOTAL CEMENT:N=28.2%

COMMENTS:

POROSITY: N=20=4.0%

SECTION IDENTIFICATION:84505116.9

WELL NAME: KUMBARILLA 1

FORMATION:MARBURG FM. (EVERGREEN)

DEPTH:1177.59

CORE: 2

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=203=40.6%
POLYCRYSTALLINE:N=28=5.6%
TOTAL QUARTZ:N=46.2%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR SOME SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=26=5.2%
TOTAL FELDSPAR:N=5.4%

ROCK FRAGMENTS: CHERT:N=21=10.5%
Lv VOLCANIC:N=68=34.0%
Ls SEDIMENTARY:N=108=54.0%
METAMORPHIC: -
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=14=7.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=8=1.6%
MUD/CLAY:N=200=40.0%
CARBONATE:N=3=0.6%
OTHER:
TOTAL CEMENT:N=42.2%

COMMENTS:

POROSITY: N=17=3.4%

SECTION IDENTIFICATION:84505022.8

WELL NAME: LOCKROSE 1

FORMATION: HELIDON SANDSTONE

DEPTH:257.45 CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=194=38.8%
POLYCRYSTALLINE:N=28=5.6%
TOTAL QUARTZ:N=44.4%

COMMENTS: FINE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=5=1.0%
ALKALI:N=28=5.6%
TOTAL FELDSPAR:N=6.6%

ROCK FRAGMENTS: CHERT:N=26=13.0%
Lv VOLCANIC:N=78=39.0%
Ls SEDIMENTARY:N=89=44.5%
METAMORPHIC:N=1=0.0%
CARBONATE:N=6=3.0%
TOTAL ROCK FRAGMENTS:N=29=5.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=10=2.0%
MUD/CLAY:N=123=24.6%
CARBONATE:N=40=8.0%
OTHER:
TOTAL CEMENT:N=34.6%

COMMENTS:

POROSITY: N=43=8.6%

SECTION IDENTIFICATION:84505024.8

WELL NAME: LOCKROSE 1

FORMATION: HELIDON SANDSTONE

DEPTH:467.47

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=259=51.8%
POLYCRYSTALLINE:N=8=1.8%
TOTAL QUARTZ:N=53.6%

COMMENTS: MEDIUM TO COARSE GRAINED GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=5=1.0%
ALKALI:N=32=6.4%
TOTAL FELDSPAR:N=7.4%

ROCK FRAGMENTS: CHERT:N=20=10.0%
Lv VOLCANIC:N=100=50.0%
Ls SEDIMENTARY:N=75=37.5%
METAMORPHIC:N=2=1.0%
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=25=5.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=10=2.0%
MUD/CLAY:N=104=20.8%
CARBONATE:N=10=2.0%
OTHER:
TOTAL CEMENT:N=24.8%

COMMENTS:

POROSITY: N=46=9.2%



* R 8 7 0 0 8 0 2 *

SECTION IDENTIFICATION:84505025.8

WELL NAME: LOCKROSE 1

FORMATION: HELIDON SANDSTONE

DEPTH:469.08

CORE: 3

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=256=51.2%
POLYCRYSTALLINE:N=18=3.6%
TOTAL QUARTZ:N=54.8%

COMMENTS: MEDIUM TO COARSE GRAINED GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=2=0.4%
ALKALI:N=26=5.2%
TOTAL FELDSPAR:N=5.6%

ROCK FRAGMENTS: CHERT:N=34=17.0%
Lv VOLCANIC:N=69=34.5%
Ls SEDIMENTARY:N=93=46.5%
METAMORPHIC:N=2=1.0%
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=32=6.4%

OTHERS:N=6=1.2%

COMMENTS:ORGANIC MATERIAL?

CEMENT: QUARTZ:N=9=1.8%
MUD/CLAY:N=115=23.0%
CARBONATE:N=10=2.0%
OTHER:
TOTAL CEMENT:N=26.8%

COMMENTS:

POROSITY: N=26=5.2%

SECTION IDENTIFICATION: 407 / 37

WELL NAME: MACLEAN 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 407.37

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE: N=120=24.0%
POLYCRYSTALLINE: N=37=7.4%
TOTAL QUARTZ: N=31.4%

COMMENTS: VERY COARSE TO FINE GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI: N=4=0.8%
TOTAL FELDSPAR: N=0.8%

ROCK FRAGMENTS: CHERT: N=24=12.0%
Lv VOLCANIC: N=67=33.5%
Ls SEDIMENTARY: N=79=39.5%
METAMORPHIC:
CARBONATE: N=30=15.5%
TOTAL ROCK FRAGMENTS: N=174=34.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ: N=4=0.8%
MUD/CLAY: N=32=6.4%
CARBONATE: N=119=23.8%
OTHER:
TOTAL CEMENT: N=31.0%

COMMENTS:

POROSITY: N=10=2.0%

SECTION IDENTIFICATION: 413 / 28

WELL NAME: MACLEAN 1

FORMATION: MARBURG (GATTON SANDSTONE MEMBER)

DEPTH: 413.28

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE: N=148=29.6%
POLYCRYSTALLINE: N=14=2.8%
TOTAL QUARTZ: N=32.4%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: N=14=2.8%
ALKALI: N=49=9.8%
TOTAL FELDSPAR: N=12.6%

ROCK FRAGMENTS: CHERT: N=9=4.5%
Lv VOLCANIC: N=77=38.5%
Ls SEDIMENTARY: N=109=54.5%
METAMORPHIC:
CARBONATE: N=5=2.5%
TOTAL ROCK FRAGMENTS: N=83=16.6%

OTHERS: N=1=0.6

COMMENTS: MICA

CEMENT: QUARTZ: N=5=1.0%
MUD/CLAY: N=175=35.0%
CARBONATE: N=5=1.0%
OTHER:
TOTAL CEMENT: N=37.0%

COMMENTS:

POROSITY: N=6=1.2%

SECTION IDENTIFICATION: 517 / 80

WELL NAME: MACLEAN 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 517.80

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE: N=233=46.6%
POLYCRYSTALLINE: N=36=7.2%
TOTAL QUARTZ: N=53.8%

COMMENTS: MEDIUM TO COARSE GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI: N=5=1.0%
TOTAL FELDSPAR: N=1.0%

ROCK FRAGMENTS: CHERT: N=3=1.5%
Lv VOLCANIC: N=71=35.5%
Ls SEDIMENTARY: N=124=62.0%
METAMORPHIC:
CARBONATE: N=2=1.0%
TOTAL ROCK FRAGMENTS: N=70=14.0%

OTHERS: N=13=2.6

COMMENTS: HIGH RELIEF, OPAQUE UNDER X POLARS, SOME BLACK OPAQUE ORGANIC MATERIAL

CEMENT: QUARTZ:
MUD/CLAY: N=20=4.0%
CARBONATE: N=123=24.6%
OTHER:
TOTAL CEMENT: N=28.6%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION: 557 / 00

WELL NAME: MACLEAN 1

FORMATION: MARBURG (CALAMIA MEMBER)

DEPTH: 557.00

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE: N=215=43.0%
POLYCRYSTALLINE: N=43=8.6%
TOTAL QUARTZ: N=51.6%

COMMENTS: COARSE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED

FELDSPAR: PLAGIOCLASE: N=5=1.0%
ALKALI: N=12=2.4%
TOTAL FELDSPAR: N=3.4%

ROCK FRAGMENTS: CHERT: N=3=1.5%
Lv VOLCANIC: N=75=37.5%
Ls SEDIMENTARY: N=110=55.0%
METAMORPHIC:
CARBONATE: N=12=6.0%
TOTAL ROCK FRAGMENTS: N=47=9.4%

OTHERS: N=2=0.4

COMMENTS: HIGH RELIEF, OPAQUE UNDER X POLARS

CEMENT: QUARTZ: N=105=21.0%
MUD/CLAY: N=53=10.6%
CARBONATE: N=5=1.0%
OTHER:
TOTAL CEMENT: N=32.6%

COMMENTS:

POROSITY: N=13=2.6%

SECTION IDENTIFICATION:84505010.9

WELL NAME: MILLMERRAN 1

FORMATION: MARBURG FM.

DEPTH:511.45

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=189=37.8%
POLYCRYSTALLINE:N=19=3.8%
TOTAL QUARTZ:N=41.6%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=9=1.8%
ALKALI:N=32=6.4%
TOTAL FELDSPAR:N=8.2%

ROCK FRAGMENTS: CHERT:N=18=9.0%
Lv VOLCANIC:N=122=61.0%
Ls SEDIMENTARY:N=59=29.5%
METAMORPHIC:
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=21=4.2%

OTHERS:N=4=0.8%
COMMENTS:SOME MICA

CEMENT: QUARTZ:N=20=4.0%
MUD/CLAY:N=167=33.4%
CARBONATE:N=4=0.8%
OTHER:
TOTAL CEMENT:N=38.2%

COMMENTS:ALTERED ROCK FRAGMENTS

POROSITY:N=35=7.0%

SECTION IDENTIFICATION:84505011.9

WELL NAME: MILLMERRAN 1

FORMATION: MARBURG

DEPTH:513 88

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=134=26.8%
POLYCRYSTALLINE:N=26=5.2%
TOTAL QUARTZ:N=32.0%

COMMENTS: MEDIUM TO FINE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=12=2.4%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=6.4%

ROCK FRAGMENTS: CHERT:N=32=16.0%
Lv VOLCANIC:N=118=59.0%
Ls SEDIMENTARY:N=48=24.0%
METAMORPHIC:
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=24=4.8%

OTHERS:N=39=7.8%

COMMENTS:MICA AND A LARGE FRAGMENT OF ORGANIC MATERIAL??

CEMENT: QUARTZ:N=13=2.6%
MUD/CLAY:N=136=27.2%
CARBONATE:N=7=1.4%
OTHER:
TOTAL CEMENT:N=31.2%

COMMENTS:ALTERED ROCK FRAGMENTS NO DISTINCT GRAINS

POROSITY:N=89=17.8%

SECTION IDENTIFICATION:84505001.8

WELL NAME: THE OVERFLOW 1

FORMATION: RIPLEY RD. SANDSTONE.

DEPTH:64.62

CORE: 1

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=240=48.0%
POLYCRYSTALLINE:N=7=1.4%
TOTAL QUARTZ:N=49.4%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED TO ROUNDED

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=19=3.8%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:N=29=14.5%
Lv VOLCANIC:N=82=41.0%
Ls SEDIMENTARY:N=87=43.5%
METAMORPHIC:
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=14=2.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=114=22.8%
MUD/CLAY:N=65=13.0%
CARBONATE:N=9=1.8%
OTHER:
TOTAL CEMENT:N=37.6%

COMMENTS:

POROSITY:N=31=6.2%

SECTION IDENTIFICATION:84505052.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:221.93

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=172=34.4%
POLYCRYSTALLINE:N=34=6.8%
TOTAL QUARTZ:N=41.2%

COMMENTS: MEDIUM TO FINE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=18=3.6%
TOTAL FELDSPAR:N=5.2%

ROCK FRAGMENTS: CHERT:N=39=19.5%
Lv VOLCANIC:N=77=38.5%
Ls SEDIMENTARY:N=77=38.5%
METAMORPHIC:
CARBONATE:N=7=3.5%
TOTAL ROCK FRAGMENTS:N=53=10.6%

OTHERS:

COMMENTS:

CEMENT: QUARTZ:N=10=2.0%
MUD/CLAY:N=104=20.8%
CARBONATE:N=79=15.8%
OTHER:N=4=0.8%
TOTAL CEMENT:N=39.4%

COMMENTS: ORGANIC?

POROSITY:N=18=3.6%

SECTION IDENTIFICATION:84505051.8

WELL NAME: ROPELEY 1

FORMATION: MARBURG

DEPTH:228.00

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=164=32.8%
POLYCRYSTALLINE:N=34=6.8%
TOTAL QUARTZ:N=39.6%

COMMENTS: FINE TO MEDIUM GRAINED, TO SUBROUNDED AND SOME SUBANULAR

FELDSPAR: PLAGIOCLASE:N=6=1.2%
ALKALI:N=33=6.6%
TOTAL FELDSPAR:N=7.8%

ROCK FRAGMENTS: CHERT:N=36=18.0%
Lv VOLCANIC:N=55=27.5%
Ls SEDIMENTARY:N=99=49.5%
METAMORPHIC:N=5=2.5%
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=50=10.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=9=1.8%
MUD/CLAY:N=193=38.6%
CARBONATE:N=5=1.0%
OTHER:N=3=0.6%
TOTAL CEMENT:N=42.0%

COMMENTS: OTHER - ORGANIC

POROSITY:N=3=0.6%

SECTION IDENTIFICATION:84505050.8

WELL NAME: ROPELEY 1

FORMATION: MARBURG

DEPTH:261.60

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=183=36.6%
POLYCRYSTALLINE:N=23=4.6%
TOTAL QUARTZ:N=41.2%

COMMENTS: FINE TO MEDIUM GRAINED, ROUNDED TO SUBROUNDED AND SOME
SUBANULAR

FELDSPAR: PLAGIOCLASE:N=9=1.8%
ALKALI:N=20=4.0%
TOTAL FELDSPAR:N=5.8%

ROCK FRAGMENTS: CHERT:N=41=20.5%
Lv VOLCANIC:N=63=31.5%
Ls SEDIMENTARY:N=79=39.5%
METAMORPHIC:N=3=1.5%
CARBONATE:N=14=7.0%
TOTAL ROCK FRAGMENTS:N=41=8.2%

OTHERS: N=2=0.4%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=159=31.8%
CARBONATE:N=22=4.4%
OTHER:N=1=0.2%
TOTAL CEMENT:N=38.8%

COMMENTS:

POROSITY:N=28=5.6%

SECTION IDENTIFICATION:84505049.8

WELL NAME: ROPELEY 1

FORMATION: MARBURG

DEPTH:309.29

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=55=11.0%
POLYCRYSTALLINE:N=3=0.6%
TOTAL QUARTZ:N=11.6%

COMMENTS: FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=8=1.6%
TOTAL FELDSPAR:N=1.8%

ROCK FRAGMENTS: CHERT:N=32=16.0%
Lv VOLCANIC:
Ls SEDIMENTARY:N=161=80.5%
METAMORPHIC:N=5=2.5%
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=143=28.6%

OTHERS: N=5=1.0%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=7=1.4%
MUD/CLAY:N=66=13.2%
CARBONATE:N=133=26.6%
OTHER:N=15=3.0%
TOTAL CEMENT:N=44.2%

COMMENTS:OTHER - ORGANIC ??

POROSITY:N=64=12.8%

SSECTION IDENTIFICATION:84505047.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:342.07

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=179=35.8%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=41.2%

COMMENTS: COARSE TO FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=9=1.8%
ALKALI:N=15=3.0%
TOTAL FELDSPAR:N=4.8%

ROCK FRAGMENTS: CHERT:N=22=11.0%
Lv VOLCANIC:N=68=34.0%
Ls SEDIMENTARY:N=102=51.0%
METAMORPHIC:N=4=2.0%
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=57=11.4%

OTHERS: N=2=0.4%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=12=20.4%
MUD/CLAY:N=146=29.2%
CARBONATE:N=35=7.0%
OTHER:N=4=0.8%
TOTAL CEMENT:N=39.4%

COMMENTS:

POROSITY:N=14=2.8%

SECTION IDENTIFICATION:84505048.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:359.22

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=207=41.4%
POLYCRYSTALLINE:N=9=1.8%
TOTAL QUARTZ:N=43.2%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=9=1.8%
ALKALI:N=25=5.0%
TOTAL FELDSPAR:N=6.8%

ROCK FRAGMENTS: CHERT:N=31=15.5%
Lv VOLCANIC:N=33=16.5%
Ls SEDIMENTARY:N=123=61.5%
METAMORPHIC:N=5=2.5%
CARBONATE:N=8=4.0%
TOTAL ROCK FRAGMENTS:N=32=6.4%

OTHERS: N=1=0.2%
COMMENTS: MICA

CEMENT: QUARTZ:N=19=3.8%
MUD/CLAY:N=137=27.4%
CARBONATE:N=22=4.4%
OTHER:N=9=1.8%
TOTAL CEMENT:N=37.4%

COMMENTS:

POROSITY:N=30=6.0%

SECTION IDENTIFICATION:84505046.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:382.87

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=174=34.8%
POLYCRYSTALLINE:N=20=4.0%
TOTAL QUARTZ:N=38.8%

COMMENTS: MEDIUM TO FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=22=4.4%
TOTAL FELDSPAR:N=5.8%

ROCK FRAGMENTS: CHERT:N=31=15.5%
Lv VOLCANIC:N=50=25.0%
Ls SEDIMENTARY:N=108=54.0%
METAMORPHIC:N=6=3.0%
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=66=13.2%

OTHERS: N=1=0.2%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=2=0.4%
MUD/CLAY:N=194=38.8%
CARBONATE:N=11=2.2%
OTHER:
TOTAL CEMENT:N=41.4%

COMMENTS:

POROSITY:N=3=0.6%

SECTION IDENTIFICATION:84505045.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:395.5

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=179=35.8%
POLYCRYSTALLINE:N=19=3.8%
TOTAL QUARTZ:N=39.6%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=9=1.8%
ALKALI:N=27=5.4%
TOTAL FELDSPAR:N=7.2%

ROCK FRAGMENTS: CHERT:N=36=18.0%
Lv VOLCANIC:N=14=7.0%
Ls SEDIMENTARY:N=134=67.0%
METAMORPHIC:N=2=1.0%
CARBONATE:N=14=7.0%
TOTAL ROCK FRAGMENTS:N=38=7.6%

OTHERS:

COMMENTS:

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=168=33.6%
CARBONATE:N=45=9.0%
OTHER:N=1=0.2%
TOTAL CEMENT:N=45.2%

COMMENTS:

POROSITY:N=2=0.4%

SECTION IDENTIFICATION:84505044.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:437.56

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=252=50.4%
POLYCRYSTALLINE:N=25=5.0%
TOTAL QUARTZ:N=55.4%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=21=4.2%
TOTAL FELDSPAR:N=5.0%

ROCK FRAGMENTS: CHERT:N=27=13.5%
Lv VOLCANIC:N=16=8.0%
Ls SEDIMENTARY:N=140=70.0%
METAMORPHIC:N=6=3.0%
CARBONATE:N=11=5.5%
TOTAL ROCK FRAGMENTS:N=31=6.2%

OTHERS:N=2=0.4%

COMMENTS: ORGANIC MATERIAL?

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=76=15.2%
CARBONATE:N=53=10.6%
OTHER:
TOTAL CEMENT:N=28.8%

COMMENTS:

POROSITY:N=21=4.2%

SECTION IDENTIFICATION:84505043.8

WELL NAME: ROPELEY 1

FORMATION: HELIDON SANDSTONE

DEPTH:465.25

CORE:

MAJOR CONSTITUENTS:

QUARTZ: MONOCRYSTALLINE:N=218=43.6%
POLYCRYSTALLINE:N=30=6.0%
TOTAL QUARTZ:N=49.6%

COMMENTS: FINE GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=1=0.2%
ALKALI:N=19=3.8%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:N=12=6.0%
Lv VOLCANIC:N=104=52.0%
Ls SEDIMENTARY:N=7=3.5%
METAMORPHIC:
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=31=6.2%

OTHERS:N=2=0.4%

COMMENTS:

CEMENT: QUARTZ:N=8=1.6%
MUD/CLAY:N=105=21.0%
CARBONATE:N=78=15.6%
OTHER:
TOTAL CEMENT:N=38.2%

COMMENTS:

POROSITY:N=8=1.6%

SECTION IDENTIFICATION: 84505001.6

WELL NAME: SEXTONVILLE 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 721.8

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=151=30.2%
POLYCRYSTALLINE:N=27=5.4%
TOTAL QUARTZ:N=35.6%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=20=4.0%
ALKALI:N=46=9.2%
TOTAL FELDSPAR:N=13.2%

ROCK FRAGMENTS: CHERT:N=24=12.0%
Lv VOLCANIC:N=127=63.5%
Ls SEDIMENTARY:N=47=23.5%
Lm METAMORPHIC:
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=68=13.6%

OTHERS:N=22=4.4%

COMMENTS:SOME MICA, HIGH RELIEF DARK RED - BROWN OCASSIONALLY
OPAQUE MINERAL

CEMENT: QUARTZ:N=52=10.4%
MUD/CLAY:N=60=12.0%
CARBONATE:N=10=2.0%
OTHER:N=39=7.8%
TOTAL CEMENT:N=32.2%

COMMENTS: OTHER DARK RED BROWN SEMI OPAQUE - Fe ?

POROSITY:N=5=1.0%

SECTION IDENTIFICATION: 84505002.6

WELL NAME: SEXTONVILLE 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 806.4

CORE: 2

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: N=183=36.6%
POLYCRYSTALLINE: N=36=7.2%
TOTAL QUARTZ: N=43.8%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: N=11=2.2%
ALKALI: N=31=6.2%
TOTAL FELDSPAR: N=8.4%

ROCK FRAGMENTS: CHERT: N=8=4.0%
Lv VOLCANIC: N=114=57.0%
Ls SEDIMENTARY: N=76=38.0%
Lm METAMORPHIC:
CARBONATE: N=2=1.0%
TOTAL ROCK FRAGMENTS: N=112=22.4%

OTHERS: N=13=2.6%

COMMENTS: HIGH RELIEF DARK RED - BROWN OCCASSIONALLY OPAQUE MINERAL

CEMENT: QUARTZ: N=42=8.4%
MUD/CLAY: N=45=9.0%
CARBONATE: N=5=1.0%
OTHER: N=10=2.0%
TOTAL CEMENT: N=20.4%

COMMENTS: OTHER DARK RED BROWN SEMI OPAQUE - Fe ?

POROSITY: N=12=2.4%

SECTION IDENTIFICATION: 84505003.6

WELL NAME: SEXTONVILLE 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH: 933.6

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: N=148=29.6%
POLYCRYSTALLINE: N=18=3.6%
TOTAL QUARTZ: N=33.2%

COMMENTS: MEDIUM TO FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: N=14=2.8%
ALKALI: N=25=5.0%
TOTAL FELDSPAR: N=7.8%

ROCK FRAGMENTS: CHERT: N=10=5.0%
Lv VOLCANIC: N=119=59.5%
Ls SEDIMENTARY: N=70=35.0%
Lm METAMORPHIC:
CARBONATE: N=1=0.5%
TOTAL ROCK FRAGMENTS: N=72=14.4%

OTHERS: N=16=3.2%

COMMENTS: DARK RED - BROWN OCCASIONALLY OPAQUE MINERAL AND MICA

CEMENT: QUARTZ: N=23=4.6%
MUD/CLAY: N=48=9.6%
CARBONATE: N=99=19.8%
OTHER: N=4=0.8%
TOTAL CEMENT: N=34.8%

COMMENTS:

POROSITY: N=33=6.6%

SECTION IDENTIFICATION: 84505004.6

WELL NAME: SEXTONVILLE 1

FORMATION: RIPLEY ROAD SANDSTONE

DEPTH: 1177.4

CORE: 6

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=204=40.8%
POLYCRYSTALLINE:N=48=9.6%
TOTAL QUARTZ:N=50.4%

COMMENTS: COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=19=3.8%
TOTAL FELDSPAR:N=4.4%

ROCK FRAGMENTS: CHERT:N=14=7.0%
Lv VOLCANIC:N=85=42.5%
Ls SEDIMENTARY:N=99=49.5%
Lm METAMORPHIC:
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=69=13.8%

OTHERS:N=6=1.2%

COMMENTS: MICA AND A RED - BROWN SEMI OPAQUE MINERAL

CEMENT: QUARTZ:N=59=11.8%
MUD/CLAY:N=62=12.4%
CARBONATE:N=17=3.4%
OTHER:N=4=0.8%
TOTAL CEMENT:N=28.4%

COMMENTS:

POROSITY:N=9=1.8%

SECTION IDENTIFICATION: 84505005.6

WELL NAME: SEXTONVILLE 1

FORMATION: RIPLEY ROAD SANDSTONE

DEPTH: 1178.1

CORE: 6

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=194=38.8%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=41.0%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=15=3.0%
TOTAL FELDSPAR:N=4.6%

ROCK FRAGMENTS: CHERT:N=26=13.0%
Lv VOLCANIC:N=107=53.5%
Ls SEDIMENTARY:N=66=33.0%
Lm METAMORPHIC:
CARBONATE:N=1=0.5%
TOTAL ROCK FRAGMENTS:N=61=12.2%

OTHERS:N=6=1.2%

COMMENTS:

CEMENT: QUARTZ:N=57=11.4%
MUD/CLAY:N=44=8.8%
CARBONATE:N=44=18.8%
OTHER:N=1=0.2%
TOTAL CEMENT:N=39.2%

COMMENTS:

POROSITY:N=9=1.8%

SECTION IDENTIFICATION: 84505006.6

WELL NAME: SEXTONVILLE 1

FORMATION: RACEVIEW

DEPTH: 1331.5

CORE: 7

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=91=18.2%
POLYCRYSTALLINE:N=6=1.2%
TOTAL QUARTZ:N=19.4%

COMMENTS: FINE GRAINED, SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=14=2.8%
TOTAL FELDSPAR:N=3.6%

ROCK FRAGMENTS: CHERT:N=2=1.0%
Lv VOLCANIC:N=44=22.0%
Ls SEDIMENTARY:N=140=70.0%
Lm METAMORPHIC:
CARBONATE:N=14=7.0%
TOTAL ROCK FRAGMENTS:N=24=4.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=17=3.4%
MUD/CLAY:N=323=64.6%
CARBONATE:N=5=1.0%
OTHER:
TOTAL CEMENT:N=69.0%

COMMENTS:

POROSITY:N=16=3.2%

SECTION IDENTIFICATION: 84505007.6

WELL NAME: SEXTONVILLE 1

FORMATION: RACEVIEW

DEPTH: 1333.5

CORE: 8

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=117=23.4%
POLYCRYSTALLINE:N=13=2.6%
TOTAL QUARTZ:N=26.0%

COMMENTS: FINE TO COARSE GRAINED, SUBROUNDED SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=6=1.2%
ALKALI:N=14=2.8%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:N=19=10.3%
Lv VOLCANIC:N=97=52.8%
Ls SEDIMENTARY:N=59=32.0%
Lm METAMORPHIC:
CARBONATE:N=9=4.9%
TOTAL ROCK FRAGMENTS:N=38=7.6%

ONLY 184 SAMPLES COUNTED

OTHERS:N=3=0.6%
COMMENTS:

CEMENT: QUARTZ:N=34=6.8%
MUD/CLAY:N=268=53.6%
CARBONATE:N=6=1.2%
OTHER:N=1=0.2%
TOTAL CEMENT:N=61.8%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION: 84505008.6

WELL NAME: SEXTONVILLE 1

FORMATION: LAYTONS RANGE CONGLOMERATE

DEPTH: 1739.6

CORE: 12

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=211=42.2%
POLYCRYSTALLINE:N=41=8.2%
TOTAL QUARTZ:N=50.4%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED SUBANGULAR

FELDSPAR: PLAGIOCLASE:
ALKALI:N=19=3.8%
TOTAL FELDSPAR:N=3.8%

ROCK FRAGMENTS: CHERT:N=16=8.0%
Lv VOLCANIC:N=92=46.0%
Ls SEDIMENTARY:N=73=36.5%
Lm METAMORPHIC:
CARBONATE:N=19=9.5%
TOTAL ROCK FRAGMENTS:N=35=7.0%

OTHERS:N=8=1.6%

COMMENTS:

CEMENT: QUARTZ:N=57=11.4%
MUD/CLAY:N=37=7.4%
CARBONATE:N=89=17.8%
OTHER:N=2=0.4%
TOTAL CEMENT:N=37.0%

COMMENTS:

POROSITY:N=1=0.2%

SECTION IDENTIFICATION: 84505021.9

WELL NAME: TINKER CREEK 1

FORMATION: MARBURG FM. (HUTTON SANDSTONE)

DEPTH: 853.54

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: N=243=48.6%
POLYCRYSTALLINE: N=13=2.6%
TOTAL QUARTZ: N=51.2%

COMMENTS: FINE SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE: N=5=1.0%
ALKALI: N=10=2.0%
TOTAL FELDSPAR: N=3.0%

ROCK FRAGMENTS: CHERT: N=20=23.5%
Lv VOLCANIC: N=20=23.5%
Ls SEDIMENTARY: N=45=53.0%
Lm METAMORPHIC:

CARBONATE:
TOTAL ROCK FRAGMENTS: N=6=1.2%

ONLY 85 SAMPLES COUNTED

OTHERS: N=1=0.2%
COMMENTS:

CEMENT: QUARTZ: N=13=2.6%
MUD/CLAY: N=201=40.2%
CARBONATE: N=1=0.2%
OTHER:
TOTAL CEMENT: N=43.0%

COMMENTS:

POROSITY: N=7=1.4%

SECTION IDENTIFICATION: 84505023.9

WELL NAME: TINKER CREEK 1

FORMATION: HELIDON SANDSTONE

DEPTH:1225.51

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=214=42.8%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=45.0%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=5=1.0%
ALKALI:N=28=5.6%
TOTAL FELDSPAR:N=6.6%

ROCK FRAGMENTS: CHERT:N=59=31.4%
Lv VOLCANIC:N=36=19.1%
Ls SEDIMENTARY:N=93=49.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=8=1.6%

ONLY 188 SAMPLES COUNTED

OTHERS:N=2=0.4%
COMMENTS:

CEMENT: QUARTZ:N=18=3.6%
MUD/CLAY:N=213=42.6%
CARBONATE:N=1=0.2%
OTHER:
TOTAL CEMENT:N=46.4%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION: 84505024.9

WELL NAME: TINKER CREEK 1

FORMATION: HELIDON SANDSTONE

DEPTH:1270.26

CORE: 4

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=254=50.8%
POLYCRYSTALLINE:N=17=3.4%
TOTAL QUARTZ:N=54.2%

COMMENTS: COARSE TO MEDIUM GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=17=3.4%
TOTAL FELDSPAR:N=3.4%

ROCK FRAGMENTS: CHERT:N=86=43.0%
Lv VOLCANIC:N=21=10.5%
Ls SEDIMENTARY:N=91=45.5%
Lm METAMORPHIC:
CARBONATE:N=2=1.0%
TOTAL ROCK FRAGMENTS:N=29=5.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=13=2.6%
MUD/CLAY:N=96=19.2%
CARBONATE:N=73=14.6%
OTHER:
TOTAL CEMENT:N=36.4%

COMMENTS:

POROSITY:N=1=0.2%

SECTION IDENTIFICATION: 84505065.9

WELL NAME: TIPTON 1

FORMATION: MARBURG FM. (HUTTON SANDSTONE)

DEPTH: 704.45

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: N=224=44.8%
POLYCRYSTALLINE: N=14=2.8%
TOTAL QUARTZ: N=47.6%

COMMENTS: FINE GRAINED, ANGULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE: N=3=0.6%
ALKALI: N=15=3.0%
TOTAL FELDSPAR: N=3.6%

ROCK FRAGMENTS: CHERT: N=10=5.0%
Lv VOLCANIC: N=67=33.5%
Ls SEDIMENTARY: N=120=60.0%
Lm METAMORPHIC:
CARBONATE: N=3=1.5%
TOTAL ROCK FRAGMENTS: N=16=3.2%

OTHERS: N=2=0.4%
COMMENTS:

CEMENT: QUARTZ: N=13=2.6%
MUD/CLAY: N=177=35.4%
CARBONATE: N=5=1.0%
OTHER:
TOTAL CEMENT: N=38.0%

COMMENTS:

POROSITY: N=31=6.2%

SECTION IDENTIFICATION: 84505066.9

WELL NAME: TIPTON 1

FORMATION: MARBURG FM. (EVERGREEN)

DEPTH: 883.72

CORE: 2

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=208=41.6%
POLYCRYSTALLINE:N=10=2.0%
TOTAL QUARTZ:N=41.6%

COMMENTS: FINE TO COARSE GRAINED, SUBANULAR TO ROUNDED

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=27=5.4%
TOTAL FELDSPAR:N=6.0%

ROCK FRAGMENTS: CHERT:N=14=7.0%
Lv VOLCANIC:N=82=41.0%
Ls SEDIMENTARY:N=101=50.5%
Lm METAMORPHIC:
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=18=3.6%

OTHERS: N=2=0.4%
COMMENTS:

CEMENT: QUARTZ:N=9=1.8%
MUD/CLAY:N=159=31.8%
CARBONATE:N=3=0.6%
OTHER:
TOTAL CEMENT:N=34.2%

COMMENTS:

POROSITY:N=61=12.2%

SECTION IDENTIFICATION: 84505067.9

WELL NAME: TIPTON 1

FORMATION: MARBURG FM. (EVBERGREEN)

DEPTH: 883.99

CORE: 2

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=183=36.6%
POLYCRYSTALLINE:N=11=2.2%
TOTAL QUARTZ:N=38.8%

COMMENTS: FINE GRAINED, ANULAR TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=3=0.6%
ALKALI:N=18=3.6%
TOTAL FELDSPAR:N=4.2%

ROCK FRAGMENTS: CHERT:N=7=3.5%
Lv VOLCANIC:N=88=44.0%
Ls SEDIMENTARY:N=100=50.0%
Lm METAMORPHIC:
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=32=6.4%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=5=1.0%
MUD/CLAY:N=186=37.2%
CARBONATE:N=7=1.4%
OTHER:
TOTAL CEMENT:N=39.6%

COMMENTS:

POROSITY:N=55=11.0%

SECTION IDENTIFICATION: 84505068.9

WELL NAME: TIPTON 1

FORMATION: MARBURG FM. (EVERGREEN)

DEPTH: 969.52

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: N=148=29.6%
POLYCRYSTALLINE: N=14=2.8%
TOTAL QUARTZ: N=32.4%

COMMENTS: FINE TO MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED

FELDSPAR: PLAGIOCLASE: N=8=1.6%
ALKALI: N=24=4.8%
TOTAL FELDSPAR: N=6.4%

ROCK FRAGMENTS: CHERT: N=2=1.0%
Lv VOLCANIC: N=89=44.5%
Ls SEDIMENTARY: N=109=51.5%
Lm METAMORPHIC:
CARBONATE: N=6=3.0%
TOTAL ROCK FRAGMENTS: N=13=2.6%

OTHERS: N=6=1.2%

COMMENTS: MICA AND SOME ORGANIC MATERIAL ??

CEMENT: QUARTZ: N=35=7.0%
MUD/CLAY: N=207=41.4%
CARBONATE: N=16=3.2%
OTHER:
TOTAL CEMENT: N=51.6%

COMMENTS:

POROSITY: N=29=5.8%

SECTION IDENTIFICATION: 84505069.9

WELL NAME: TIPTON 1

FORMATION: MARBURG FM. (EVERGREEN)

DEPTH: 971.26

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=162=32.4%
POLYCRYSTALLINE:N=18=3.6%
TOTAL QUARTZ:N=36.0%

COMMENTS: FINE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=17=3.4%
TOTAL FELDSPAR:N=4.8%

ROCK FRAGMENTS: CHERT:N=6=3.0%
Lv VOLCANIC:N=68=34.0%
Ls SEDIMENTARY:N=121=60.5%
Lm METAMORPHIC:
CARBONATE:N=5=2.5%
TOTAL ROCK FRAGMENTS:N=34=6.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=26=5.2%
MUD/CLAY:N=134=26.8%
CARBONATE:N=83=16.6%
OTHER:
TOTAL CEMENT:N=48.6%

COMMENTS:

POROSITY:N=19=3.8%

SECTION IDENTIFICATION: 84505070.9

WELL NAME: TIPTON 1

FORMATION: HELIDON SANDSTONE

DEPTH:1037.34

CORE: 4

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=273=54.6%
POLYCRYSTALLINE:N=39=7.8%
TOTAL QUARTZ:N=62.4%

COMMENTS: MEDIUM TO VERY COARSE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:
ALKALI:N=18=3.6%
TOTAL FELDSPAR:N=3.6%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:N=6=19.3%
Ls SEDIMENTARY:N=25=80.7%
Lm METAMORPHIC:

CARBONATE:
TOTAL ROCK FRAGMENTS:N=3=0.6%

ONLY 31 SAMPLES COUNTED

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=38=7.6%
MUD/CLAY:N=56=11.2%
CARBONATE:N=1=0.2%
OTHER:
TOTAL CEMENT:N=19.0%

COMMENTS:

POROSITY:N=72=14.4%

SECTION IDENTIFICATION: 84505003.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (MA MA CK. MEMBER)

DEPTH: 684.78

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=141=28.2%
POLYCRYSTALLINE:N=28=5.6%
TOTAL QUARTZ:N=33.8%

COMMENTS: FINE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=25=5.0%
TOTAL FELDSPAR:N=6.4%

ROCK FRAGMENTS: CHERT:N=59=29.5%
Lv VOLCANIC:N=83=41.5%
Ls SEDIMENTARY:N=58=29.0%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=91=18.2%

OTHERS: N=6=1.2%
COMMENTS: ORGANIC

CEMENT: QUARTZ:N=21=4.2%
MUD/CLAY:N=57=11.4%
CARBONATE:N=38=7.6%
OTHER:N=77=15.4%
TOTAL CEMENT:N=38.6%

COMMENTS: OTHER - ORGANIC ??

POROSITY:N=9=1.8%

SECTION IDENTIFICATION: 84505005.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (MA MA CK. MEMBER)

DEPTH: 687.76

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE: N=175=35.0%
POLYCRYSTALLINE: N=28=5.6%
TOTAL QUARTZ: N=40.6%

COMMENTS: FINE TO MEDIUM GRAINED

FELDSPAR: PLAGIOCLASE: N=8=1.6%
ALKALI: N=22=4.4%
TOTAL FELDSPAR: N=6.0%

ROCK FRAGMENTS: CHERT: N=36=18.0%
Lv VOLCANIC: N=116=58.0%
Ls SEDIMENTARY: N=35=17.5%
Lm METAMORPHIC:
CARBONATE: N=13=6.5%
TOTAL ROCK FRAGMENTS: N=55=11.0%

OTHERS: N=17=3.4%

COMMENTS: SOME MICA, PLUS DARK COLOURED MINERALS WITH HIGH RELIEF

CEMENT: QUARTZ: N=20=4.0%
MUD/CLAY: N=7=1.4%
CARBONATE: N=141=28.2%
OTHER: N=27=5.4%
TOTAL CEMENT: N=39.0%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION: 84505009.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH:1224.08

CORE: 6

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=125=25.0%
POLYCRYSTALLINE:N=20=4.0%
TOTAL QUARTZ:N=29.0%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=26=5.2%
ALKALI:N=61=12.2%
TOTAL FELDSPAR:N=17.4%

ROCK FRAGMENTS: CHERT:N=21=10.5%
Lv VOLCANIC:N=145=72.5%
Ls SEDIMENTARY:N=34=17.0%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=163=32.6%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=38=7.6%
MUD/CLAY:N=64=12.8%
CARBONATE:N=2=0.4%
OTHER:
TOTAL CEMENT:N=20.8%

COMMENTS:

POROSITY:N=1=0.2%

SECTION IDENTIFICATION: 84505010.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH:1403.71

CORE: 7

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=156=31.2%
POLYCRYSTALLINE:N=23=4.6%
TOTAL QUARTZ:N=35.8%

COMMENTS: FINE TO MEDIUM GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=44=8.8%
ALKALI:N=51=10.2%
TOTAL FELDSPAR:N=19.0%

ROCK FRAGMENTS: CHERT:N=27=13.5%
Lv VOLCANIC:N=110=55.0%
Ls SEDIMENTARY:N=55=27.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=76=15.2%

OTHERS: N=9=1.8%

COMMENTS: SOME MICA PLUS HEAVY MINERALS

CEMENT: QUARTZ:N=46=9.2%
MUD/CLAY:N=75=15.0%
CARBONATE:N=19=3.8%
OTHER:
TOTAL CEMENT:N=28.0%

COMMENTS:

POROSITY:N=1=0.2%

SECTION IDENTIFICATION: 84505011.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH:1559.54

CORE: 8

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=179=35.8%
POLYCRYSTALLINE:N=16=3.2%
TOTAL QUARTZ:N=39.0%

COMMENTS: FINE GRAINED

FELDSPAR: PLAGIOCLASE:N=29=5.8%
ALKALI:N=46=9.2%
TOTAL FELDSPAR:N=15.0%

ROCK FRAGMENTS: CHERT:N=24=12.0%
Lv VOLCANIC:N=133=66.5%
Ls SEDIMENTARY:N=43=21.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=84=16.8%

OTHERS: N=9=1.8%
COMMENTS:

CEMENT: QUARTZ:N=66=13.2%
MUD/CLAY:N=31=6.2%
CARBONATE:N=38=7.6%
OTHER:
TOTAL CEMENT:N=27.0%

COMMENTS:

POROSITY:N=2=0.4%

SECTION IDENTIFICATION: 84505012.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (GATTON SANDSTONE MEMBER)

DEPTH:1654.27

CORE: 9

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=216=43.2%
POLYCRYSTALLINE:N=24=4.8%
TOTAL QUARTZ:N=48.0%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED RARE ROUNDED

FELDSPAR: PLAGIOCLASE:N=21=4.2%
ALKALI:N=27=5.4%
TOTAL FELDSPAR:N=9.6%

ROCK FRAGMENTS: CHERT:N=33=16.5%
Lv VOLCANIC:N=112=56.0%
Ls SEDIMENTARY:N=55=27.5%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=66=13.2%

OTHERS: N=5=1.0%

COMMENTS: SOME MICA PLUS DARK OPAQUE MINERAL WITH HIGH RELIEF

CEMENT: QUARTZ:N=38=7.6%
MUD/CLAY:N=40=8.0%
CARBONATE:N=62=12.4%
OTHER:
TOTAL CEMENT:N=28.0%

COMMENTS:

POROSITY:N=1=0.2%

SECTION IDENTIFICATION: 84505014.3

WELL NAME: TULLYMORGAN 1

FORMATION: MARBURG FM. (CALAMIA MEMBER)

DEPTH:1829.96

CORE: 10

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=209=41.8%
POLYCRYSTALLINE:N=31=6.2%
TOTAL QUARTZ:N=48.0%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=8=1.6%
ALKALI:N=40=8.0%
TOTAL FELDSPAR:N=9.6%

ROCK FRAGMENTS: CHERT:N=19=9.5%
Lv VOLCANIC:N=125=62.5%
Ls SEDIMENTARY:N=56=28.0%
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=69=13.8%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=68=13.6%
MUD/CLAY:N=65=13.0%
CARBONATE:N=10=2.0%
OTHER:
TOTAL CEMENT:N=28.6%

COMMENTS:

POROSITY:

SECTION IDENTIFICATION: 84505040.9

WELL NAME: YARRALA 1

FORMATION: HELIDON SANDSTONE

DEPTH: 694.94

CORE: 2

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=192=38.4%
POLYCRYSTALLINE:N=51=10.2%
TOTAL QUARTZ:N=48.6%

COMMENTS: MEDIUM TO COARSE GRAINED, SUBROUNDED TO ROUNDED

FELDSPAR: PLAGIOCLASE:N=7=1.4%
ALKALI:N=28=5.6%
TOTAL FELDSPAR:N=7.0%

ROCK FRAGMENTS: CHERT:N=40=20.0%
Lv VOLCANIC:N=94=47.0%
Ls SEDIMENTARY:N=61=30.5%
Lm METAMORPHIC:N=2=1.0%
CARBONATE:N=3=1.5%
TOTAL ROCK FRAGMENTS:N=57=11.4%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=18=3.6%
MUD/CLAY:N=74=14.8%
CARBONATE:N=54=10.8%
OTHER:
TOTAL CEMENT:N=29.2%

COMMENTS: APPEARS MORE CARBONACEOUS THAN INDICATED BY THE POINT
COUNT

POROSITY:N=19=3.8%

SECTION IDENTIFICATION: 84505041.9

WELL NAME: YARRALA 1

FORMATION: HELIDON SANDSTONE

DEPTH: 798.33

CORE: 3

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=352=70.4%
POLYCRYSTALLINE:N=10=2.0%
TOTAL QUARTZ:N=72.4%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:
ALKALI:N=3=0.6%
TOTAL FELDSPAR:N=0.6%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=2=0.4%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=31=6.2%
MUD/CLAY:N=18=3.6%
CARBONATE:N=1=0.2%
OTHER:
TOTAL CEMENT:N=10.0%

COMMENTS:

POROSITY:N=81=16.2%

SECTION IDENTIFICATION: 84505042.9

WELL NAME: YARRALA 1

FORMATION: RACEVIEW

DEPTH: 854.05

CORE: 4

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=231=46.2%
POLYCRYSTALLINE:N=53=10.6%
TOTAL QUARTZ:N=56.8%

COMMENTS: VERY COARSE GRAINED, SUBROUNDED

FELDSPAR: PLAGIOCLASE:N=20=4.0%
ALKALI:N=86=17.2%
TOTAL FELDSPAR:N=21.2%

ROCK FRAGMENTS: CHERT:
Lv VOLCANIC:
Ls SEDIMENTARY:
Lm METAMORPHIC:
CARBONATE:
TOTAL ROCK FRAGMENTS:N=5=1.0%

OTHERS:
COMMENTS:

CEMENT: QUARTZ:N=15=3.0%
MUD/CLAY:N=76=15.2%
CARBONATE:N=6=1.2%
OTHER:
TOTAL CEMENT:N=19.4%

COMMENTS:

POROSITY:N=8=1.6%

SECTION IDENTIFICATION: 84505020.9

WELL NAME: ZIG ZAG 1

FORMATION: MARBURG FM. (HUTTON SANDSTONE)

DEPTH: 598.47

CORE: 1

MAJOR CONSTITUENTS.

QUARTZ. MONOCRYSTALLINE:N=245=49.0%
POLYCRYSTALLINE:N=34=6.8%
TOTAL QUARTZ:N=55.8%

COMMENTS: FINE GRAINED, SUBROUNDED TO SUBANGULAR

FELDSPAR: PLAGIOCLASE:N=4=0.8%
ALKALI:N=16=3.2%
TOTAL FELDSPAR:N=4.0%

ROCK FRAGMENTS: CHERT:N=15=7.5%
Lv VOLCANIC:N=49=24.5%
Ls SEDIMENTARY:N=132=66.0%
Lm METAMORPHIC:
CARBONATE:N=4=2.0%
TOTAL ROCK FRAGMENTS:N=10=2.0%

OTHERS:N=8=1.6%

COMMENTS:ORGANIC MATERIAL AND MICA

CEMENT: QUARTZ:N=12=2.4%
MUD/CLAY:N=134=26.8%
CARBONATE:N=8=1.6%
OTHER:
TOTAL CEMENT:N=30.8%

COMMENTS:

POROSITY:N=36=7.2%

PETROPHYSICAL DATA.

Results of Permeability, Porosity and Density
Tests of sediments of the Clarence-Moreton Basin

PART A. B.M.R. DATA.

Note: Unless otherwise stated, porosities and permeabilities were determined on two plugs (V & H) cut vertically and horizontally to the axis of the cores. Permeabilities were determined using dry nitrogen and porosities were obtained by saturating with helium.

Includes analyses on the Marburg Formation
Raceview Formation
Helidon Sandstone
Ripley Road Sandstone
Walloon Coal Measures
Woogaroo Subgroup
Ipswich Coal Measures
Toogoolawah Group

WELL:Ipswich 3.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
28' 3"	1	Cgr.Sst	2.64	3	11	19
62' 2"	2	Mgr.Sst	2.66	0.8	12	17
103' 0"	3	Fgr.Sst	2.69	<0.1	<0.1	13
157' 5.5"	4	Fgr.Sst	2.66	<0.1	<0.1	15
187' 9"	5	Fgr.Sst	2.70	vp}D	<0.1	15
228' 7"	6	Mgr.Sst	2.67	0.7	0.8	17
269' 5"	7	M-Fgr.Sst	2.71	<0.1	<0.1	10
309' 6"	8	- ? -	2.71	2	2	18
350' 2"	9	Fgr.Sst	2.74	<0.01	<0.01	15
390' 7"	10	Mgr.Sst	2.67	3	7	17
431' 0.5"	11	Mgr.Sst	2.68	13	10	18
471' 7"	12	Fgr.Sst	2.72	<0.01	<0.01	14
508' 5"	13	Fgr.Sst	2.72	<0.01	<0.01	14
548' 6"	14	M-Fgr.Sst	2.68	<0.01	<0.01	13
588' 10"	15	M-Fgr.Sst	2.68	<0.01	<0.01	14
631' 1"	16	F-Cgr.Sst	2.78	<0.01	<0.01	11
671' 5.5"	17	Fgr.Sst	2.72	<0.01	<0.01	10
709' 2"	18	Mgr.Sst	2.64	<0.01	0.8	13 ff
748' 7"	19	M-Fgr.Sst	2.69	<0.01	<0.01	12
789' 2"	20	Mgr.Sst	2.69	<0.01	<0.01	11 ff
829' 4"	21	Silts.+ Mdst	2.73	<0.01	<0.01	7
867' 6"	22	Mgr.Sst	2.67	3	10	17 ff
908' 6.5"	23	Cgr.Sst	2.67	-	2	17
949' 0"	24	Mgr.Sst	2.68	<0.01	0.7	15
990' 4"	25	Mgr.Sst	2.69	<0.01	<0.01	15
1030' 9"	26	F-Mgr.Sst	2.67	0.7	1.0	16
1071' 0"	27	Mgr.Sst	2.68	<0.01	<0.01	12
1116' 11"	28	Mgr.Sst	2.71	<0.01	<0.01	13
1158' 10"	29	Mgr.Sst	2.66	11	12	19 ff
1198' 4"	30	Mgr.Sst	2.69	<0.01	<0.01	13 ff

ff = Faint fluorescence noted.

Samples 1 to 13 Marburg Formation. Samples 14 to 30 Helidon Sandstone.

WELL:Ipswich 4.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
96' 10"	1	Mgr.Sst	2.67	1.0	2.0	17
157' 5"	2	Mgr.Sst	2.70	<0.01	0.7	17
205' 2"	3	Cgr.Sst	2.65	880	2640	20
274' 4"	4	Mgr.Sst	2.72	<0.01	<0.01	16
335' 6"	5	Mgr.Sst	2.72	<0.01	<0.01	16
465' 8"	6	F-Mgr.Sst	2.75	<0.01	<0.01	15
464' 6"	7	Mgr.Sst	2.68	1.0	0.6	16
525' 6"	8	Mgr.Sst	2.72	<0.01	<0.01	15
585' 6"	9	Cgr.Sst	2.68	3.0	29	16 ff
635' 11"	10	Mgr.Sst	2.72	<0.01	<0.01	8 ff
689' 0"	11	Congl + Mudst.	2.68	1.0	0.6	16
754' 4"	12	F-Mgr.Sst	2.68	<0.01	0.6	14

Ipswich 4. Cont.

Depth(ft).	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
824' 6"	13	C-Mgr.Sst	2.65	128	582	18 ff
883' 11"	14	M-Cgr.Sst	2.65	52	12	17 ff
941' 11"	15	Mgr.Sst	2.68	<0.01	<0.01	11
1031' 2"	16	Mgr.Sst	2.67	<0.01	<0.01	8 ff
1107' 4"	17	Mgr.Sst	2.70	<0.01	<0.01	8
1164' 0"	18	Mgr.Sst	2.65	<0.01	<0.01	11

ff = Faint flouresance

Samples 1 to 15 Ripley Road Sandstone. Samples 16 to 18 Raceview Formation.

WELL:Ipswich 5.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
46' 4"	1	Mgr.Sst	2.68	<0.1	<0.1	11
82' 0"	2	Fgr.Sst	2.67	0.83	1.7	15
111' 10"	3	F-VFgr.Sst	2.70	<0.1	<0.1	15
195' 6"	4	F-VFgr.Sst	2.69	<0.1	<0.1	11
271' 6"	5	Silts + Mudst.	2.70	<0.1	<0.1	14
304' 3"	6	Mgr.Sst	2.65	<0.1	<0.1	15
334' 0"	7	Cgr.Sst	2.65	<0.1	<0.1	10
361' 0"	8	VCgr.Sst + Pebs	2.65	<0.1	<0.1	14
392' 8"	9	M-Cgr.Sst	2.66	255	345	24
420' 5"	10	C-Mgr.Sst	2.72	<0.1	<0.1	19
457' 2"	11	Mgr.Sst	2.70	<0.1	<0.1	17
486' 3"	12	M-Cgr.Sst	2.67	<0.1	23	20
514' 8"	13	Cgr.Sst	2.68	536	488	24
544' 5"	14	M-Fgr.Sst	2.66	30	45	21
574' 7"	15	Fgr.Sst	2.67	1.5	15	19
614' 6"	16	M-Fgr.Sst	2.65	<0.1	1.5	15
664' 3"	17	Cgr.Sst	2.71	0.93	1.7	19
722' 1"	18	Cgr.Sst	2.67	<0.01	<0.01	16
754' 9"	19	Mgr.Sst	2.65	<0.01	<0.01	15
784' 7"	20	M-Fgr.Sst	2.68	<0.01	<0.01	15
814' 2"	21	C-VCgr.Sst	2.74	1.3	1.7	18
844' 4"	22	C-VCgr.Sst	2.70	78	104	21
874' 0"	23	M-Cgr.Sst	2.78	<0.1	<0.1	16
903' 10"	24	Mgr.Sst	2.72	<0.1	1.1	18
933' 9"	25	Mgr.Sst	2.71	0.93	1.2	18
964' 0"	26	Fgr.Sst	2.68	1.8	2.0	20
1005' 7"	27	Fgr.Sst	2.66	<0.1	<0.1	16
1035' 5"	28	VFgr.Sst	2.65	<0.1	<0.1	14
1065' 3"	29	Fgr.Sst	2.67	<0.1	<0.1	12
1095' 3"	30	Fgr.Sst	2.68	0.92	1.2	20
1135' 2"	31	Fgr.Sst	2.72	<0.1	<0.1	18
1163' 6"	32	Fgr.Sst	2.68	52	340	23
1198' 9"	33	Fgr.Sst	2.67	8	43	22

Samples 1 to 33 Marburg Formation.

WELL:Ipswich 6.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md)		Porosity (%)
				(V)	(H)	
90' 10"	1	Fgr.Sst	2.67	715	1126	29
125' 9"	2	F-VFgr.Sst	2.88	<0.1	<0.1	22
206' 3"	3	F-VFgr.Sst	2.72	<0.1	<0.1	20
273' 0"	4	Fgr.Sst	2.82	<0.1	<0.1	19
358' 8"	5	Fgr.Sst	2.75	<0.1	<0.1	13
482' 8"	6	Cgr.Sst	2.70	11	12	24
535' 4"	7	Mgr.Sst	2.66	21	26	22
546' 6"	8	M-Fgr.Sst	2.68	1.9	1.9	20
574' 0"	9	Mudst.	2.70	<0.1	1.9	19
601' 10"	10	Cgr.Sst	2.69	<0.1	<0.1	5
635' 2"	11	Fgr.Sst	2.74	<0.1	<0.1	14
665' 3"	12	F-VFgr.Sst	2.75	<0.1	<0.1	16
691' 3"	13	Fgr.Sst	2.67	5	1.8	19
725' 8"	14	Cgr.Sst	2.67	89	353	17
816' 0"	15	Mgr.Sst	2.70	<0.1	<0.1	13
844' 6"	16	Cgr.Sst	2.69	<0.1	<0.1	10
875' 4"	17	Cgr.Sst	2.67	102	175	22
927' 7"	18	Fgr.Sst	2.76	<0.1	<0.1	17
978' 6"	19	Fgr.Sst + Mudst	2.75	<0.1	<0.1	15
1016' 6"	20	Mgr.Sst	2.75	<0.1	<0.1	16

Samples 1 to 20 Marburg Formation.

WELL:Ipswich 7.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md)		Porosity (%)
				(V)	(H)	
74' 6"	1	Cgr.Sst	2.74	5.6	12	24
103' 10"	2	Cgr.Sst	2.74	27	22	25
133' 7"	3	M-Fgr.Sst	2.74	0.9	3.2	26
163' 0"	4	Fgr.Sst	2.70	<0.1	<0.1	20
266' 0"	5	Mgr.Sst	2.66	<0.1	<0.1	16
318' 4"	6	Mgr.Sst	2.67	1.8	6.8	18
385' 7"	7	Fgr.Sst	2.68	1.9	6.8	18
414' 2"	8	Cgr.Sst	2.71	<0.1	85	16
445' 0"	9	Fgr.Sst	2.73	<0.1	<0.1	5.9
552' 2"	10	Mgr.Sst	2.70	<0.1	<0.1	15
602' 3"	11	Coal/Mgr.Sst	2.69	<0.1	<0.1	17
745' 0"	12	Mgr.Sst	2.71	<0.1	1.4	12
815' 8"	13	Fgr.Sst/Siltst.	2.90	<0.1	<0.1	13
845' 10"	14	M-Cgr.Sst	2.88	7.1	7.7	16
876' 7"	15	Cgr.Sst	2.67	0.7	1.8	14
918' 0"	16	VFgr.Sst	2.72	<0.1	6.7	14

Samples 1 to 12 Walloon Coal Measures. Samples 13 to 16 Marburg Formation.

WELL:Ipswich 9.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
27' 0"	1	Fgr.Sst	2.68	<0.1	<0.1	11
60' 6"	2	Mgr.Sst	2.75	0.70	0.81	14
91' 6"	3	Mgr.Sst	2.74	<0.1	<0.1	15
117' 4"	4	Cgr.Sst	2.63	7.3	34	14
146' 9"	5	Mgr.Sst	2.63	155*	26*	14
176' 9"	6	Cgr.Sst	2.71	1.0	1.2	18
206' 9"	7	M-Cgr.Sst	2.71	4.9	9.5	16
246' 2"	8	Mgr.Sst	2.64	865	8925	24
274' 10"	9	Mgr.Sst	2.85	<0.1	<0.1	18
305' 6"	10	Mgr.Sst	2.72	<0.1	<0.1	11
334' 6"	11	Cgr.Sst	2.68	<0.1	<0.1	11
374' 6"	12	Mgr.Sst	2.71	4.7	19	18
403' 4"	13	Mgr.Sst	2.75	<0.1	<0.1	14
443' 3"	14	Cgr.Sst	2.69	<0.1	<0.1	9
473' 0"	15	Mgr.Sst	2.73	<0.1	<0.1	16
503' 5"	16	Cgr.Sst	2.72	<0.1	<0.1	14
542' 6"	17	Mgr.Sst	2.75	<0.1	<0.1	12
572' 8"	18	Cgr.Sst	2.77	<0.1	<0.1	14
602' 8"	19	Cgr.Sst	2.72	<0.1	<0.1	11
632' 10"	20	Mgr.Sst	2.73	<0.1	<0.1	9
664' 8"	21	Cgr.Sst	2.73	<0.1	<0.1	14
689' 2"	22	VCgr.Sst	2.66	1.1	1.7	16
724' 1"	23	VCgr.Sst	2.64	20	106	14
754' 10"	24	Cgr.Sst	2.66	<0.1	0.7	12
784' 8"	25	VCgr.Sst	2.64	1.6	16	15
813' 9"	26	M-Cgr.Sst	2.65	<0.1	0.97	15
844' 0"	27	VCgr.Sst	2.64	1.3	1.9	12
873' 4"	28	VCgr.Sst	2.66	0.81	1.3	16
912' 9"	29	Mgr.Sst	2.67	<0.1	<0.1	4.2
944' 8"	30	Cgr/Pebbly.Sst	2.66	0.74	1.7	16
974' 11"	31	Cgr.Sst	2.66	<0.1	1.0	10

* Sample fractured.

Samples 1 to 3 Marburg Formation. Samples 4 to 31 Helidon Sandstone.

WELL:Ipswich 10.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
142' 6"	1	Mgr.Sst	2.77	<0.1	<0.1	14
172' 5"	2	Mgr.Sst	2.75	0.50	1.1	15
202' 5"	3	Mgr.Sst	2.73	1.0	2.2	19
231' 7"	4	Cgr.Sst	2.82	<0.1	<0.1	16
259' 9"	5	Cgr.Sst	2.75	<0.1	<0.1	16
292' 3"	6	M-Cgr.Sst	2.69	<0.1	5.8	18
322' 5"	7	M-Cgr.Sst	2.66	<0.1	<0.1	16
356' 2"	8	Cgr.Sst	2.69	145	425	19
392' 2"	9	M-Fgr.Sst	2.68	13*	12	11
410' 3"	10	M-Fgr.Sst	2.70	<0.1	<0.1	15
440' 4"	11	M-Fgr.Sst	2.69	<0.1	<0.1	15

WELL:Ipswich 10. Cont.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
470' 4"	12	Mgr.Sst	2.72	<0.1	<0.1	12
500' 0"	13	M-Cgr.Sst	2.68	<0.1	<0.1	14
530' 0"	14	Mgr.Sst	2.73	<0.1	<0.1	15
560' 0"	15	Cgr.Sst	2.60	<0.1	<0.1	14
591' 2'	16	M-Cgr.Sst	2.68	<0.1	<0.1	12
621' 8"	17	Mgr.Sst	2.67	<0.1	<0.1	11
650' 6"	18	Cgr.Sst	2.70	<0.1	<0.1	15
683' 0"	19	M-Fgr.Sst	2.78	<0.1	<0.1	14
717' 6"	20	C-Mgr.Sst	2.69	<0.1	<0.1	12
755' 0"	21	Cgr.Sst	2.68	<0.1	<0.1	16
787' 0"	22	M-Cgr.Sst	2.70	<0.1	<0.1	14
823' 0"	23	M-Cgr.Sst	2.70	<0.1	<0.1	13
863' 6"	24	Mgr.Sst	2.70	<0.1	<0.1	9
902' 0"	25	Fgr.Sst	2.67	<0.1	<0.1	8
930' 10"	26	M-Fgr.Sst	2.69	<0.1	<0.1	8
959' 0"	27	Fgr.Sst	2.66	<0.1	<0.1	3

* Sample fractured.

Samples 1 to 8 Marburg Formation. Samples 9 to 27 Helidon Sandstone.

WELL:Ipswich 11.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md) (V)	Permeability(md) (H)	Porosity (%)
150' 11"	1	M-Fgr.Sst	2.82	<0.1	1.7	15
176' 3"	2	Mgr.Sst	2.64	14	27	22
195' 0"	3	Cgr.Sst	2.69	447*	964*	22
222' 2"	4	Fgr.Sst	2.66	55	67	21
247' 3'	5	Mgr.Sst	2.66	36	109	23
277' 10"	6	Mgr.Sst	2.64	326	957	25
305' 6"	7	Mgr.Sst	2.66	42	87	22
331' 0'	8	M-Fgr.Sst	2.64	755	1324	24
358' 5'	9	M-Fgr.Sst	2.69	1.4	<0.1	22
390' 9"	10	Mgr.Sst	2.64	332	760	24
412' 3"	11	Mgr.Sst	2.71	0.71	<0.1	16
443' 1"	12	Fgr.Sst	2.72	<0.1	<0.1	9
482' 7"	13	M-Fgr.Sst	2.68	<0.1	<0.1	15
516' 8"	14	Mgr.Sst+Siltst	2.70	<0.1	<0.1	11
554' 6"	15	Mgr.Sst	2.69	52	306	22
585' 4"	16	Cgr.Sst	2.65	949	1926	23
605' 4"	17	Mgr.Sst	2.69	<0.1	<0.1	18
634' 3"	18	Cgr.Sst	2.64	1705	2995	26
664' 0"	19	Cgr.Sst	2.71	7.8	33	19
680' 8"	20	Cgr.Sst	2.66	30	1	17
721' 8"	21	C-VCgr.Sst	2.71	202	122	20
774' 5"	22	Mgr.Sst	2.69	<0.1	<0.1	13
804' 3"	23	F-VFgr.Sst+ Silts.	2.67	<0.01	<0.01	13
832' 6"	24	VFgr.Sst	2.66	<0.01	<0.01	13
864' 0"	25	Cgr.Sst	2.64	22	54	22
892' 2"	26	Cgr.Sst	2.65	2.8	6.4	20
941' 5"	27	Mgr.Sst	2.71	<0.1	<0.1	19

* Fractured Sample.
Samples 1 to 27 Marburg Formation.

WELL:Ipswich 12.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md)		Porosity
				(V)	(H)	(%)
55' 8"	1	Cgr.Sst	2.71	0.71	0.84	20
90' 5"	2	Fgr.Sst+Siltst	2.70	<0.1	<0.1	13
117' 11"	3	M-Fgr.Sst	2.69	1.8	5.2	20
146' 11"	4	Cgr.Sst	2.67	85	111	23
171' 7"	5	Mgr.Sst	2.66	205	478	24
241' 5"	6	Fgr.Sst	2.74	<0.1	<0.1	20
270' 4"	7	Mudst+Siltst	2.71	<0.1	<0.1	13
305' 10"	8	Fgr.Sst	2.75	<0.1	<0.1	15
334' 10"	9	M-Cgr.Sst	2.67	21	22	21
362' 0"	10	Mgr.Sst	2.64	4.6	13	20
390' 9"	11	Fgr.Sst	2.70	0.86	1.1	19
422' 11"	12	Fgr.Sst	2.68	<0.1	<0.1	16
497' 3"	13	Fgr.Sst+Mudst	2.70	<0.1	<0.1	6.6
531' 2"	14	VFgr.Sst	2.63	6.7	16	17
556' 0"	15	C-Mgr.Sst	2.63	83	491	.23
597' 10"	16	Cgr.Sst	2.63	442	172	21
621' 4"	17	C-VCgr.Sst	2.64	1031	1717	21
656' 0"	18	Mgr.Sst	2.66	0.64	2.8	17
684' 6"	19	Cgr.Sst+Mudst	2.63	5.6	19	16
786' 4"	20	Cgr.Sst	2.66	<0.1	<0.1	5.6
880' 9"	21	M-Cgr.Sst	2.68	<0.1	<0.1	9.1
912' 8"	22	M-Fgr.Sst	2.94	<0.1	<0.1	14
962' 6"	23	Congl.	2.63	<0.1	0.86	16
994' 5"	24	Congl.	2.64	<0.1	<0.1	14
1024' 4"	25	Congl.	2.69	<0.1	<0.1	7.9

Samples 1 to 12 Marburg Formation. Samples 13 to 25 Woogaroo Subgroup.

WELL:Ipswich 19.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity
			(B)	(G)	(V)	(H)	(%)
104' 10"	1	VF-Mgr.Sst	2.14	2.49	9	11	14.1
114' 4"	2	VF-Mgr.Sst	1.87	2.50	395	777	25.4
125' 7"	3	Siltst	2.10	2.55	23	8.0	17.6
132' 6"	4	Fgr.Sst	2.11	2.54	3.8	6.8	16.8
139' 10"	5	F-Mgr.Sst	2.22	2.58	46	437	14.1
172' 11"	6	Fgr.Sst	2.15	2.58	1.3	2.1	16.4
187' 8"	7	Fgr.Sst	2.18	2.61	0.12	0.19	16.5
237' 0"	8	Fgr.Sst	2.26	2.57	<0.1	<0.1	11.9
299' 7"	9	Mgr.Sst	2.03	2.52	50	136	19.4
333' 2"	10	Fgr.Sst	2.18	2.61	0.38	0.44	16.4
361' 0"	11	VFgr.Sst	2.13	2.78	0.71	0.33	23.1
438' 10"	12	Mgr.Sst	2.02	2.69	44	255	25.0
445' 9"	13	Mgr.Sst	1.98	2.67	312	477	26.0
500' 0"	14	M-Fgr.Sst	2.38	2.83	28	3.5	16.2
554' 7"	15	VF-Fgr.Sst	2.02	2.67	10	198	24.0

Ipswich 19. Cont.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity
			(B)	(G)	(V)	(H)	(%)
568' 0"	16	VFgr.Sst	2.29	2.71	<0.1	0.38	15.6
569' 7"	17	VFgr.Sst	2.26	2.63	0.14	0.16	14.2
597' 4"	18	C-VCgr.Sst	2.09	2.70	525	174	22.7
640' 5"	19	VFgr.Sst	2.14	2.69	0.66	3.6	20.1
664' 6"	20	F-Cgr.Sst	2.09	2.66	3.1	52	21.6
673' 2"	21	Congl.	2.32	2.85	86	18	18.7
699' 4"	22	Fgr.Sst	1.97	2.63	700	59	25.3
745' 6"	23	F-Mgr.Sst	2.13	2.68	2.4	25	20.3
789' 6"	24	Fgr.Sst	2.06	2.64	16	5.6	21.7
818' 4"	25	M-Cgr.Sst	2.09	2.65	184	93	21.3
837' 0"	26	F-Mgr.Sst	2.21	2.65	31	5.7	16.7
847' 4"	27	Fgr.Sst	2.09	2.67	0.47	28	21.7
890' 9"	28	Mgr.Sst	2.01	2.65	383	226	24.3
899' 1"	29	C-VCgr.Sst	2.09	2.67	45	71	21.7
916' 3"	30	VFgr.Sst	2.27	2.55	3.2	76	11.1
950' 5"	31	Vfgr.Sst	2.30	2.56	<0.1	0.16	10.1
964' 0"	32	VFgr.Sst	2.55	2.62	<0.1	<0.1	2.6
985' 0"	33	VF-Fgr.Sst	2.23	2.64	<0.1	0.34	15.5
1001' 6"	34	M-Cgr.Sst	2.10	2.63	19	25	20.0
1019' 8"	35	Fgr.Sst	2.22	2.62	0.21	0.48	15.1
1041' 0"	36	F-Cgr.Sst	2.15	2.64	2.5	4.6	18.5
1064' 0"	37	VFgr.Sst	2.35	2.59	0.13	1.2	9.5
1140' 6"	38	VFgr.Sst	2.31	2.62	0.24	0.27	11.7

Samples 1 to 11 Walloon coal Measures. Samples 12 to 38 Marburg Formation.

WELL:Ipswich 20R.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity
			(B)	(G)	(V)	(H)	(%)
1118' 0"	1	Fgr.Sst	2.35	2.09	<0.1	0.15	12.6
1139' 0"	2	VFgr.Sst	2.23	2.72	2.1	1.4	17.9
1163' 0"	3	Fgr.Sst	2.37	2.74	0.42	0.45	13.7
1266' 0"	4	Mgr.Sst	2.32	2.69	0.24	0.30	13.2
1295' 2"	5	F-Mgr.Sst	2.20	2.66	0.74	0.93	17.3
1327' 9"	6	VCgr.Sst	2.00	2.68	498	1345	28.4
1364' 10"	7	M-Cgr.Sst	2.05	2.80	25	24	26.3
1420' 11"	8	VCgr.Sst	2.43	2.66	0.11	0.10	8.8
1450' 0"	9	M-Cgr.Sst	2.48	2.68	<0.10	<0.10	7.6
1461' 3"	10	Cgr.Sst	2.23	2.66	1.2	1.2	16.1
1486' 3"	11	Fgr.Sst	2.24	2.74	0.12	0.17	18.4
1504' 11"	12	M-Cgr.Sst	2.30	2.67	0.27	0.31	14.1
1550' 10"	13	F-Mgr.Sst	2.44	2.66	0.20	0.11	8.3
1578' 5"	14	F-Mgr.Sst	2.27	2.63	0.59	3.4	13.7
1605' 5"	15	Siltst.	2.31	2.63	0.13	1.7	12.2
1626' 0"	16	Fgr.Sst	2.28	2.55	4.7	5.4	10.8
1641' 6"	17	Mgr.Sst	2.34	2.62	0.45	2.0	11.0
1663' 9"	18	Mgr.Sst	2.34	2.63	1.8	1.1	11.0
1684' 0"	19	F-Cgr.Sst	2.31	2.65	0.23	0.62	12.8
1714' 0"	20	M-Cgr.Sst	2.34	2.64	1.4	0.27	11.4
1732' 10"	21	F-Mgr.Sst	2.33	2.64	0.27	2.0	11.6

WELL:Ipswich 20R. Cont.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity (%)
			(B)	(G)	(V)	(H)	
1733' 6"	22	Fgr.Sst	2.46	2.63	0.10	0.10	6.6
1809' 10"	23	Fgr.Sst	2.48	2.66	0.10	<0.10	6.6
1834' 4"	24	VFgr.Sst	2.43	2.69	0.10	<0.10	9.5
1865' 10"	25	Fgr.Sst	2.42	2.65	<0.10	0.10	8.4
1913' 6"	26	Mgr.Sst	1.85	2.64	259	884	30.0
1944' 10"	27	Mgr.Sst	2.15	2.68	4.8	27	18.9
1974' 5"	28	F-Mgr.Sst	1.89	2.69	240	204	29.8
1994' 5"	29	F-Mgr.Sst	2.39	2.67	<0.1	0.11	10.5
2004' 5"	30	F-VCgr.Sst	2.21	2.63	13	7.1	16.0

Samples 1 to 22 Marburg Formation. Samples 23 to 30 Helidon Sandstone.

WELL:Ipswich 21R.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity (%)
			(B)	(G)	(V)	(H)	
1879' 9"	1	Fgr.Sst	2.54	2.79	<0.10	0.12	8.9
1909' 7"	2	Mgr.Sst	2.06	2.64	2.3	1.1	21.8
1929' 8"	3	F-Mgr.Sst	2.35	2.69	<0.10	0.11	12.5
1959' 6"	4	M-VCgr.Sst	2.02	2.65	168	371	23.9
1978' 0"	5	M-VCgr.Sst	2.24	2.67	32	5.5	16.2
2010' 6"	6	M-VCgr.Sst	2.04	2.66	498	463	23.4
2044' 0"	7	M-Cgr.Sst	2.03	2.65	162	2302	23.4
2064' 8"	8	M-VCgr.Sst	2.07	2.64	2025	6027	21.9
2080' 4"	9	VCgr.Sst	2.22	2.66	181	1502	16.9

Samples 1 to 9 Helidon Sandstone.

WELL:Cecil Plains No.1.

Depth.(ft)	Core.	Lithology.	Density.	Permeability(md)		Porosity (%)
				(V)	(H)	
2228'-2241'	1	F-VFgr.Sst	-I.S.-	-I.S.-	-I.S.-	-I.S.-
3193'-3208'	2	F-Mgr.Sst	2.74	71	210	26 tf
3637'	3	F-Cgr.Sst	2.80	<0.1	<0.1	13 tf
3914'	4	F-Cgr.Sst	2.74	257	1505	23
3920'	4	F-Cgr.Sst	2.74	218	1828	24
4040'	5	F-VCgr.Sst	2.75	583	2009	24
4047'	5	F-VCgr.Sst	2.73	20	1491	18
4175'	6	Shale	2.71	<0.1	<0.1	7 tf
4650'	7	Congl.	2.68	<0.1	<0.1	9 byf
5034'	8	Congl.	2.88	<0.1	<0.1	11 yfp
5500'	9	Congl.	2.87	<0.1	<0.1	14

tf = Trace fluorescence. byf = Bright yellow fluorescence. yfp = Yellow fluorescence in mudstone pebble.

Cores 1 to 3 Marburg Formation. Cores 4 and 5 Helidon Sandstone. Cores 7 to 9 Aberdare or Ipswich Coal Measures.

WELL:Hogarth No.1.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md)		Porosity (%)
				(V)	(H)	
2059'	1	F-VFgr.Sst	2.81	<0.1	<0.1	13
3515'	2	M-VCgr.Sst	2.67	8.7	12	13
3521'	3	F-VCgr.Sst	2.66	<0.1	<0.1	5.2
3994'	4	F-VCgr.Sst	2.63	17*	2.1	10
3995'	5	F-VCgr.Sst	2.57	1.2	37	7.3

* = Sample fractured.

WELL:Hogarth No.4.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md)		Porosity (%)
				(V)	(H)	
3532'	1	F-Mgr.Sst+Mudst	2.76	<0.1	<0.1	6.7
3541'	2	F-Mgr.Sst+Mudst	2.75	<0.1	<0.1	13
3545'	3	F-Mgr.Sst	2.91	0.1	0.11	17
3546'	4	F-Mgr.Sst	2.68	3.7	44	17
3548'	5	F-Mgr.Sst	2.67	8.4	23	16
3550'	6	F-Mgr.Sst	2.66	1.9	54	14 #

= Traces of residual bituminous material.

WELL:Lockrose No.1.

Depth.(ft)	Sample.	Lithology.	Density.	Permeability(md)		Porosity (%)
				(V)	(H)	
3999'	11	Congl.	2.7	<0.1	<0.1	7
4325'	12	Congl.	2.68	<0.1	10	11

Samples 11 and 12 from the Toogoolawah Formation.
Oil extracted from 4325' occupied 5% of the pore space

WELL:Sextonville No.1.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity (%)
			(B)	(G)	(V)	(H)	
2806'	1	VCgr.Sst	-	Insufficient Sample			ff
2808'	2	VCgr.Sst	-	Insufficient Sample			ff
2810'	3	VCgr.Sst	2.04	2.74	N.D.	N.D.	26 ff
2985'	4	Sst	-	Insufficient Sample			t
3365'	5	Sst	2.08	2.67	N.D.	9	22 ft
3370'	6	Sst	2.09	2.72	N.D.	25	23 ft
3372'	7	Sst	2.08	2.70	N.D.	13	23 ft
3524'	8	Sst	2.12	2.72	N.D.	9	22 ft
3526'	9	Sst	2.13	2.73	N.D.	31	22 ff
3567'	10	Mudst	-	Insufficient Sample			ff
3876'	11	Sst	-	2.71	N.D.	7	19 ft
3894'	12	Sst	-	2.72	N.D.	6	21 ft
3898'	13	Sst	-	2.69	N.D.	59	21

WELL:Sextonville No.1. Cont.

Depth.(ft)	Sample.	Lithology.	Density.		Permeability(md)		Porosity	
			(B)	(G)	(V)	(H)	(%)	
3926'	14	Sst	-	2.64	N.D.	18	17	t
3928'	15	Sst	-	2.64	N.D.	52	20	
3930'	16	Sst	-	2.65	N.D.	23	21	ft
3932'	17	Sst	-	2.66	N.D.	43	22	ft
3962'A	18	Sst	-	2.68	N.D.	10	23	ft
3962'B	19	Sst	-	2.69	N.D.	19	22	ft
4012'	20	Sst	-	2.72	N.D.	60	22	ft
4014'	21	Sst	-	2.63	N.D.	19	19	ft
4016'	22	Sst	-	2.69	N.D.	22	21	ft
4018'	23	Sst	-	2.67	N.D.	26	21	ft
4020'	24	Sst	-	2.68	N.D.	38	21	ft
4038'	25	Sst	-	2.74	N.D.	6	21	ft
4054'	26	Sst	-	Insufficient Sample				
4141'	27	Fgr.Sst?	-	2.68	N.D.	14	21	ft
4142'	28	Fgr.Sst?	-	Insufficient Sample				
4151'	29	Sst	-	2.67	N.D.	68	22	ft
4154'	30	Sst	-	2.70	N.D.	20	24	ft
4155'	31	Sst	-	2.63	N.D.	286	26	ft
4156'	32	Sst	-	2.69	N.D.	6	21	ft
4157'	33	Sst	-	No Sample			28	
4158'	34	Sst	-	2.67	N.D.	52	27	vft
4159'	35	Sst	-	No Sample			28	
4160'	36	Sst	-	2.69	N.D.	4	19	vft
4201'	37	Sst	-	Insufficient Sample				

ff = Fiar flouresance. ft = Faint trace. vft = Very faint trace.
t = Trace.

WELL:BMR Maclean No.1.

Depth(M)	Sample.	Lithology.	Density.		Permeability(md)		Porosity	
			(B)	(G)	(V)	(H)	(%)	
165.1	1		2.59	2.73	<0.01	<0.01	5.0	
174.2	2		2.47	2.72	0.04	0.06	9.2	
193.5	3		2.46	2.73	1.7	1.5	9.7	
333.5	4		2.49	2.66	0.02	0.02	6.5	
345.5	5		2.46	2.68	0.06	0.06	8.0	
471.5	6		2.50	2.72	0.05	0.07	8.1	
474.0	7		2.32	2.70	0.15	0.11	14.4	
553.0	8		2.41	2.70	0.11	0.11	10.9	
556.5	9		2.44	2.73	0.12	0.08	10.9	
650.7	10		2.62	2.74	0.02	0.01	4.7	
653.0	11		2.66	2.74	<0.01	<0.01	3.3	
654.0	12		2.57	2.72	0.03	0.05	5.8	
657.0	13		2.66	2.73	<0.01	<0.01	2.4	
663.5	14		2.51	2.72	0.11	0.19	7.4	

PART B. WELL COMPLETION REPORT DATA
Porosity, Permeability,
and some Density.

CORE ANALYSIS RESULTS FROM WELL COMPLETION REPORTS.

Cecil Plains 1.

Depth.(ft)	Permeability.(md)	Porosity.(%)
3198.5	1.1	27.6
3635.0	0.1	7.9
3913.1	4510.0	19.6
3917.8	2410.0	24.4
4039.0	39.0	13.9
4045.5	940.0	21.6
4049.0	550.0	19.7

Core Analyses by Core Laboratories Dallas Texas.

Cecil Plains West. No.1.

Depth.(ft)	Core.	Sample.	Permeability(md).		Porosity(%)	
			(V)	(H)	(V)	(H)
2599	1	1	<0.1		11.8	
2601		2	0.2		8.2	
2603		3	0.3		11.5	
2605		4	1.35		2.1	
2607		5	2.1		14.65	
2609		6	0.2		7.95	
2611		7	0.6		11.5	
2613		8	1.35		14.95	
2615		9	0.8		11.36	
2617		10	1.3		13.80	
2619		11	2.4		15.7	
2621		12	4.2		16.35	
2623		13	4.9		16.95	
2625		14	1.35		14.55	
2627		15	2.2		14.35	
2629		16	49.0		20.35	
2631		17	160.0		19.5	
2633		18	150.0		19.30	
2635		19	4.9		17.05	
2637		20	3.4		12.7	
2639		21	13.5		17.7	
2641		22	2.4		8.55	
2643		23	5	7.5	15.25	17.05
2645		24	15	19	16.75	16.75
2647		25	3	5	13.3	12.9
2649		26	10	9.2	16.0	15.75
2651		27	4.9	5.5	15.05	15.90
2653		28	11.2	5.9	14.4	14.5
3118	2	30	600	97	17.5	16.45
3120		31	233	495	17.15	18.65
3333	3	32	<0.1	<0.1	NIL	NIL
3335		33	1.4	1.35	11.9	11.6
3338		34	<0.1	0.22	8	19.4

Core Analyses by Geoservices.

Cecil Plains South No.1.

Depth.(ft)	Core Sample.		Permeability(md)		Porosity(%)	
			(V)	(H)	(V)	(H)
2997	1	1	1000	3600	21.20	24.46
3000'2"		2	4	40	16.86	19.44
3004		3	85	60	19.43	19.28
3008'9"		4	1.9	220	13.09	14.11

Core Analyses by Geoservices.

Clifden No.3.

Depth.(ft)	Core	Permeability(md)	Porosity(%)
1918.3	4	25.0	11.3
2210.5	5	0.1	4.7
2535.4	6	7.0	9.3
2565.3	7	0.4	2.0
2901.0	8	0.4	9.7
3230.8	9	0.4	6.8
3503.5	10	0.3	3.9
4128.4	12	0.1	0.5
4425.0	13	1.0	4.1
5220.0	16	0.1	0.8

Core Analyses by Core Laboritries.

Kyogle No.1.

Depth.(ft)	Sample	Density		Permeability(md).	Porosity(%)
		(B)	(G)		
7200	1	1.95	2.69	N.D.	28
6980	2	2.07	2.74	9	25
6970	3	2.12	2.78	8	23
6915	4	1.87	2.77	N.D.	32
6670	7	2.12	2.72	19	22
6660	8	2.03	2.77	20	27
6650	9	1.96	2.80	56	30
6635	10	2.04	2.76	49	26
6620	11	2.16	2.80	4	23
6610	12	2.11	2.77	23	24
6600	13	2.07	2.77	57	25
6585	14	1.98	2.81	6	29
6585	15	1.98	2.77	N.D.	28
5576	16	1.93	2.73	37	31
5563	17	1.93	2.73	174	29
4402	19	2.18	2.78	12	22
3798	20	2.03	2.74	N.D.	26
3775	21	2.24	2.74	N.D.	20
3287	23	2.38	2.86	N.D.	17
3740	22	-	-	-	-
2770	25	-	-	-	27
2770	26	-	-	26	24

Samples Analysed by the B.M.R.

Yarrala No.1.

Depth.(ft)	Core.	Sample.	Permeability(md).	Porosity(%)
1804	1	20	0.54	17.3
1806		21	<0.1	13
2280	2	13	6.75	22.3
2282		12	11.8	17.4
2284		11	62	20.35
2286		9	95	22.5
2288		10	87	20.2
2619	3	1	340	18.9
2621		2	335	15.9
2623		3	159	17.9
2625		4	17.9	18.7
2627		5	19.3	19.3
2800	4	6	40	15.1
2802		7	3.95	12.45
2804		8	<0.1	7.9
2805' 10"		14	0.83	9.7
2808		15	<0.1	7.3
2809' 6"		16	1.9	11.1
2811' 2"		17	0.88	9.6
2813' 5"		18	6.33	13.6
2815' 2"		19	0.73	6.5

Core Analyses by Geosciences.

Baylam No.1.

Depth.(ft)	Sample	Permeability(md).	Porosity(%)
2302	1	<0.1	15.8
2398	2	2.8	22.7
2437	3	7.2	6.8
2438	4	45.0	14.7
2442	5	0.2	7.3
2282	6	<0.1	20

Samples Analyses By Core Laboratories Aust. Pty. Ltd.

Kogan No.1.

Depth.(ft)	Core.	Sample.	Permeability(md).	Porosity(%)
3258.3	4	1	75	19.1
3272.9	5	1	43	21.8
3274.7		2	-	22.3
3276.5		3	-	19.0
3278.5		4	-	17.8
3280.8		5	115	17.9
3281.7		6	288	21.5

Core Analyses by Core Laboratories.

Lockrose No.1.

Depth.(ft)	Sample	Permeability(md).	Porosity(%)
4323' 2"	1	1.8	11.6
4323' 7"	2	3.8	10.77
4325	3	1.0	10.6
Core Analysis by Geosevices.			

Durabilla No.1.

Depth.(ft)	Permeability(md).	Porosity(%)
3764	5.2	19.1
3839	11.0	23.4
3847	37.8	25.2
4085	38.0	21.4
4134	26.9	23.4
4145	53.0	22.4
4268	23.8	22.9
4250	21.7	27.4
4370	83.7	27.8
Core Analyses By Core Laboratories Inc. Texas		

Tullymorgan No.1.

Depth.(ft)	Core.	Sample.	Permeability(md).	Porosity(%)
2275	2	1	0.1	7.2
2276		2	0.1	8.3
2278.8		3	0.1	8.3
4014.4	6	4	0.1	2.5
4020.6		5	0.1	2.2
4606.6	7	6	0.1	5.5
5122.6	8	7	0.1	1.8
5427.8	9	8	0.3	5.0
5434.5		9	0.1	6.1
6003.0	10	10	0.1	4.8
Core Analyses by Core Laboratories Inc.				

Kogan South No.1.

Depth.(ft)	Core.	Sample.	Density.	Permeability(md).	Porosity(%)
3332' 1"	5	1	2.36	40.5	20.4
3333' 3"		2	2.29	32.2	22.3
3335' 10"		3	2.43	161.0	23.8
3336' 5"		4	2.01	234.0	22.4
3340' 3"		5	2.12	264.0	22.2
3342' 3"		6	2.04	674.0	23.4

Kogan South No.1 cont.

Depth.(ft)	Core.	Sample.	Density.	Permeability(md).	Porosity(%)
3343' 6"	6	7	2.29	2150.0	23.8
3346' 7"		8	2.20	2240.0	23.7
3350' 6"		9	2.34	553.0	20.5
3342' 6"		10	1.94	493.0	24.8
3353' 11"		11	2.52	2500.0	25.0
3356' 11"		12	2.22	2230.0	24.3
3358' 7"		13	2.32	2340.0	26.1

Core Analyses by Core Laboratories Aust. Ltd.

Durabilla No.1.

Depth.(ft)	Core.	Permeability(md)		Porosity(%)	
		(V)	(H)	(V)	(H)
1760' 1" - 6"	1	NIL	3	10	14
2485' 3" - 8"	2	NIL	3	21	21
2767' 3" - 8"	3	4	112	19	23
3298' 4" - 8"	4	NIL	NIL	20	19
3481' 3" - 7"	5	N.D.	N.D.	23	28
3632' 7" - 3633'	6	NIL	NIL	26	25
3636' 3" - 8"	7	Carbonaceous Coal Bands			
3986' 0" - 6"	11	NIL	NIL	7	5
4306' 6" - 4307' 1"	12	Silicified Conglomerate			
4318' 2" - 7"	13	As	Above.		
4321' 2" - 8"	14	As	Above.		
4335' 11" - 4336' 5"	15	As	Above.		

Core Analyses By B.M.R.
