

WELL SUMMARY
WOODSIDE-1
(W441)

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APPENDIX 1.0

PE906914

This is an enclosure indicator page.
The enclosure PE906914 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE906914 has the following characteristics:

- ITEM_BARCODE = PE906914
- CONTAINER_BARCODE = PE905576
 - NAME = Well Card
 - BASIN = GIPPSLAND
 - PERMIT = PPL/174
 - TYPE = WELL
 - SUBTYPE = WELL_CARD
- DESCRIPTION = Well Card (from WCR) for Woodside-1
- REMARKS =
- DATE_CREATED = 8/12/55
- DATE_RECEIVED =
 - W_NO = W441
 - WELL_NAME = WOODSIDE-1
- CONTRACTOR =
- CLIENT_OP_CO = WOODSIDE (LAKES ENTRANCE) OIL CO PTY
LTD

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 2.0

174

MINES DEPARTMENT.

PETRO PROS. LICENCE

VICTORIA.

Mines (Petroleum) Act 1935. SECTION 45.

Record of Work at WOODSIDE No. 1 bore on

*Petroleum Prospecting Licence Number 174 during week

ending October 7th 1955.

DEPTH	DESCRIPTION OF STRATA
0 - 86'5"	Firm Sand.
86'5" - 221'6"	Clay Shells and Course Grit Sand.
221'6" - 513'	Sand. Blue Clay. Sandy Shale. Sand with Clay Traces.
513' - 580'	Sand with streaks of Clay.
580' - 800'	Coarse Sand with Bands of Conglomerate. Soft to medium hard Mudstone. Mudstone Blue.
800' - 860'	Mudstone and Sand. Hard Sandy Shale.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented. N.B.—The Act also requires the Minister to be notified immediately water, gas, or petroleum is encountered.)

13.3/8" Casing to 81'6" Cemented.
Cored at 292', 490' and 800'
9.5/8" Casing to 860' Cemented.

Signed Rees B. Withers

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. Legal Manager Coy.

Date 14/10 / 55.

* Strike out words not applicable.

Analyses of water, gas and oil should be submitted if available.

J. Thomas 5470/40.

copy for your files.

19.10.55

**EXTRACT FROM THE MINES (PETROLEUM) ACT 1935,
AS AMENDED BY THE MINES (PETROLEUM) ACT 1939.**

Section 19.—(1) The holder of a licence shall employ in drilling operations only such methods of drilling as are capable of yielding a core or other samples as is or are prescribed or is or are approved by the Minister.

(2) In the event of water associated with a petroleum deposit being encountered in the course of drilling operations, the holder of the licence shall immediately report the same in writing to the Minister and state the steps taken to deal with it.

(3) In the event of the continuance of drilling operations after water has been encountered as aforesaid, the holder of the licence shall shut off all water so encountered and take such other steps as may be prescribed.

(4) In the event of traces of petroleum, including natural gas, appearing during drilling operations, the holder of the licence shall immediately report the same to the Minister, and shall carry out such operations to test the extent and value of the occurrence of such petroleum as the Minister by notice in writing directs.

(5) In the event of preliminary tests indicating the probability of payable petroleum, the holder of the licence shall—

- (a) immediately report thereon to the Minister in writing; and
- (b) carry out thereafter such operations as may be necessary to test the value of the occurrence of such petroleum as may be approved by the Minister.

Section 45.—Every licensee and lessee shall keep a log, in the form prescribed by the Minister, of all the wells drilled by him showing the strata and character of the ground passed through by the drill, which log or a copy thereof shall from time to time be furnished to the Minister upon demand.

Section 48.—Every licensee and every lessee, unless in any case wholly or partially excused from so doing by the Minister, shall properly case each well with casing in accordance with the best approved methods, landing and effectually cementing one or more strings of the casing in clay or other water-impervious strata or formation between all water-bearing sands or strata and any underlying petroleum deposit, and generally shall take all such steps as are reasonably necessary for effectually shutting off all water overlying and underlying the petroleum deposits, and for effectually preventing any water from penetrating such petroleum deposits.

EXTRACT FROM THE MINES (PETROLEUM) ACT 1939.

Section 7 (6).—Every licensee shall—

- (a) retain for a period of not less than twelve months all cores obtained by drilling and representative samples of other specimens obtained from the land and, when so required by the Minister, forward the same to the Minister.

MINES DEPARTMENT.

VICTORIA.



Mines (Petroleum) Act 1935. SECTION 45.

Record of Work at WOODSIDE No. 1 bore on

*Petroleum Prospecting Licence Number 174 during week

ending October 14th, 19 55.

DEPTH	DESCRIPTION OF STRATA
860' - 960'	Hard Sandy Shale with stringers of brown sand.
960' - 1030'	Hard Sandy Shale.
1030' - 1126'	Sandstone with shell and grit with some clay.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented. N.B.—The Act also requires the Minister to be notified immediately water, gas, or petroleum is encountered.)

Cores taken at 920', 940', 1010' and 1105 ft.

Slight indications of gas from 1002 ft.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

Signed

Legal Manager

Rev. B. Wilson

Coy.

Date 18 / 10 / 1955

J. Thomas

Copy Retained for Learning Co. file

* Strike out words not applicable:

Analyses of water, gas and oil should be submitted if available.

19.10.55

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MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

Record of Work at ...WOODSIDE (LAKES ENTRANCE) OIL CO.. bore on
N.L. No. 1.

* Petroleum Prospecting Licence Number ...174... during week
* ~~Petroleum Prospecting Licence~~
ending ...October 22nd... 19.55.

DEPTH	DESCRIPTION OF STRATA
1126' - 1398'	Soft Sandstone.
1398' - 1577'	" "
1577' - 1705'	" Limestone.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.
SIGNED

LEGAL MANAGERRees. B. Withers..... COY.

W. Thomas

8/11/55

Date .7.../.11.../..55: .

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

4 of 11 14.

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. No. 1.
Record of Work at bore on

~~× Petroleum Mining Licence~~ ~~× Petroleum Mining Licence~~ Number174..... during week
ending ...October 29th..... 1955.

DEPTH	DESCRIPTION OF STRATA
1705' - 1879'	Limestone with grit.
1879' - 2225'	Limestone with dark green stringers.
2225' - 2347'	Hard Green Brown Shale and Firm Dry Blue Mudstone.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

SIGNED .WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

LEGAL MANAGER ..(Sgd..) Rees B. Withers.. COV.

R. Thomas
8.11.55

Date .7.../...11/...55. .

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. No. 1.
Record of Work at bore on

* Petroleum Prospecting Licence Number ..174..... during week
~~XXXXXX~~
ending5th November..... 1955.

DEPTH	DESCRIPTION OF STRATA
2347' - 2529'	Sandy Shale and Soft Mudstone.
2529' - 2559'	<i>at 2539 gas with petroliferous odor. (see notes ind.)</i> Hard Green Shale.
2559' - 3000'	Brown Coal turning to firm Black Coal.
3000' - 3202'	Silica Quartz with veins of Black Coal.
3202' - 3231'	White clay and sand.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

Indications of gas with a distinct petroliferous odour were encountered at 2539 feet.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.
SIGNED

LEGAL MANAGER ..Rees B. Withers..... COV.

Checked
Date ..10./..11./..55..

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

Dr Thomas,
copy for your file *11.11.55*

6 of 11

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

Record of Work at WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. bore on
No. 1

* Petroleum Prospecting Licence Number ...174..... during week
* Petroleum Mineral Lease ending 11th November..... 1955.

DEPTH	DESCRIPTION OF STRATA
3231' - 3348'	Quartz with traces of coal.
3348' - 3542'	Quartz Hard Shale and Shells.
3542' - 3607'	Sandstone and hard shale formation impregnated with Iron Pyrites.
3607' - 3673'	Hard Green Sandstone.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

Show of Gas at 3650 feet.

SIGNED WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

LEGAL MANAGER Rees, B. Withers..... COY.

Date ..25./..11./..55. .

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

Record of Work at WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. bore on
No. 1

* Petroleum Prospecting Licence Number 174 during week
* Petroleum Mineral Lease ending 18th November 1955

DEPTH	DESCRIPTION OF STRATA
3673' - 3728'	Medium hard chocolate colored sandstone with blue con- cretions.
3728' - 3960'	Sandy shale various colors Blue, White, Green, Mustard, Brown.
3960' - 4063'	Sticky Shale to Hard Shale.
4063' - 4165'	Hard Green Sand to Shale with Sand Stone.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

Mudstream carrying quite a lot of color and definite showing of black fluid on mud pit. Peculiar formation 3720' - 3728'. Definite ring of color in test tube with ether.

SIGNED WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

LEGAL MANAGER Rees. B. Withers COY.

Date 25/11/55

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

Record of Work at WOODSIDE (LAKES ENTRANCE) OIL CO. No. 1 bore on

* Petroleum Prospecting Licence Number ... 174 ... during week
* Petroleum Mineral Lease ending 25th November, 1955.

DEPTH	DESCRIPTION OF STRATA
4165' - 4265'	Sandy Shale.
4265' - 4419'	Sandy Shale and Green Sandstone.
4419' - 4636'	Sandy Shale with hard bands blue shale.
4636' - 4814'	Soft to hard sandstone.
4814' - 4933'	Soft sandstone with hard streaks.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

SIGNED WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

LEGAL MANAGER Rees. B. Withers COY.

Date 30/11/55

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. No. 1.
Record of Work at bore on

* Petroleum Prospecting Licence Number ...174..... during week
* ~~Petroleum Prospecting Licence~~
ending2nd December,..... 1955.

DEPTH	DESCRIPTION OF STRATA
4933' - 5099'	Sandstone and shale.
5099' - 5234'	Soft sandstone and shale with hard streaks of black coal. Some quartz pebbles.
5234' - 5336'	Mudstone with hard green sandstone and hard blue shale.
5336' - 5447'	Sandy and hard shale with hard shell.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.
SIGNED

LEGAL MANAGER ..(Sgd..) Rees H. Withers.. CCY.

Date ..13../..12../..55.. .

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

MINES DEPARTMENT

VICTORIA

Mines (Petroleum) Act, 1935.
Section 45.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L. No. 1
Record of Work at bore on

* Petroleum Prospecting Licence Number 174 during week
~~* Petroleum Prospecting Licence~~
ending 9th. December..... 1955.

DEPTH	DESCRIPTION OF STRATA
5447' - 5501'	Sandy shale and hard green shale.
5501' - 5633'	Sandstone and sandy shale.
5633' - 5783'	Brown sandy shale and sand turning to hard sandstone.
5783' - 5871'	Sandstone, sand and hard sandy shale.

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and, if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

5830 feet - show of oil on mud stream, no gas.

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.
SIGNED

LEGAL MANAGER ..(Sgd..) Rees. B. Withers... COY.

Date ..13../.12../.55.. .

N.B. - The Act also requires the Minister to be notified immediately water, gas or petroleum is encountered.

Analyses of water, gas and oil should be submitted if available.

(C O P Y)

MINES DEPARTMENT
Victoria.

Mines (Petroleum) Act 1935, Section 45.

Record of Work at WOODSIDE (LAKES ENTRANCE) OIL CO. No. 1 bore on
Petroleum Prospecting Licence Number 174 during week ending
16th December 1954.

DEPTH	DESCRIPTION OF STRATA
5871' - 5950'	Coarse Sand showing white pebbles and limestone.
5950' - 5975'	Hard black micaceous shale with slight traces of lime.
5975' - 6008'	Shale.
Final Depth 6008 feet.	

Notes by Driller in Charge (State in notes whether water, gas or petroleum has been met with, and if so, give depth and nature of occurrence, also depth to which casing has been inserted and cemented.)

N.B. - The Act also requires the Minister to be notified immediately water, gas, or petroleum is encountered.)

Evidence of drilling into a 70 degree fault at 5975 ft.

Cement Plug in hole 60 ft. (900' - 840' level).

WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

Legal Manager REES B. WITHERS Coy.

Date 16/1/56.

APPENDIX 3.0

POST-MESOZOIC STRATIGRAPHY
IN WOODSIDE No. 1 WELL.

Location : Lat. 38°35'34" S, long. 146°56'10" E, Parish of Balloong.

Elevation : 20 ft. a.s.l. (ground), 30 ft. a.s.l. (K.B.)

T.D. : 5849 ft. (dr.), 5848 ft. (Schl.)

Date Commenced : 1955

LITHOLOGIC LOG. [Based ~~log~~ on samples]

* D.L. :
drillers log.

- 0 - 86'5" : "fine sand" (D.L.)*
- 86'5" - 221'6" : "clay, shells & coarse gritty sand" (D.L.)
- X
- 280 - 340 : greenish sandy marl (clayey stight), quite shelly
in parts.
- X
- 500 - 740 : loose, coarse sand & gravel.
- 740 - 910 : greenish grey shelly calcareous sand, slightly glauconitic
with specks of black carbonaceous material.
- 910 - 1010 : shelly, glauconitic sandy marl.
- 1010 - 1410 : yellow sandy limestone and minor beds of friable
yellow calcareous sand ^{both with} *Ditrupea* + bryozoa
log sd in more detail?
- 1410 - 1675 : yellowish white limestone + light grey marly limestone
both bryozoal, and slightly sandy.
- 1675 - 1715 : grey bryozoal marly limestone
- 1715 - 1910 : yellowish grey limestone and light grey marly
limestone.
- 1910 - 1995 : grey marly limestone
- 1995 - 2005 : yellowish white sandy limestone with common
Operculina.
- 2005 - 2210 : grey marly limestone & yellow grey limestone; beds
as for 1995 - 2005ft, at 2045 - 55ft & 2155 - 65ft.
- 2210 - 2330 : grey clayey marl and hard horizons of grey
marly limestone.
- 2330 - 2410 : yellowish grey puggy foraminiferal marl, partially
glauconitic and pyritic.
- ~~2410~~ 2410 - 2577 : lt. grey glauconitic sandy marly limestone, particularly
glauconitic, pyritic & sandy towards the base; thin
bed of brown sucrose ^{glanc.} dolomite at approx.
2550ft.

- 2577 - 2830 : brown coal, with minor brown ligneous clay.
 2830 - 2840 : coarse sand, with brown coal chips.
 2840 - 2875 : brown coal.
 2875 - 2920 : coarse gravelly sand (loose) with minor coal beds.
 2920 - 2940 : largely brown coal.
 2940 - 2970 : coarse gravelly sand.
 2970 - 2995 : largely brown coal.
 2995 - 3015 : gravelly sand with minor coal.
 3015 - 3035 : ~~gravelly sand~~ largely brown coal & brown ligneous clay.
 3035 - 3055 : gravelly sand, with minor coal.
 3055 - 3075 : largely brown coal.
 3075 - 3505 : gravelly sand with minor coal beds (eg. 3280 - 90ft.)
 3505 - 3590 : hard, partially weathered, red basalt.
 3590 - 3675 : hard & dense grey basalt, partially reddish.
 3675 - 3745 : red brown clay (or 'earth')
 3745 - 3780 : fresh basalt.
 3780 - 3840 : loose coarse sand, partially gravelly.
 3840 - 3910 : tight brown-grey clay, with minor ^{bn.} coal beds.
 3910 - 3935 : gravelly sand.
 3935 - : grey mudstone, etc.

STRATIGRAPHY.

0 - ~~740~~⁷⁴⁰ feet: Upper Pliocene to Recent.

The majority of these beds, if not all, belong to equivalents of the Bushy Park Beds. It is very difficult to say whether or not the marine facies (represented by samples from 280 to 340ft) is a Jemmys Pt. Formation equivalent. It ~~is~~ is definitely either Kalimian or younger. Microfaunas include Ammonia beccarii, and Elphidium discoidale, also miliolids — all typical shallow water species. Traces of Nonion victoriense appear also, while pelagic (Globigerina sp.) are rare. The fauna here also contains molluscan fragments, ostracods, and rare echinoid spines.

740 - 1010 feet : Jemmy's Pt. / Tambo River Formation.

Marine beds below 740 ft. contain the highest occurrences of Ditrupea bryozoa (typically Cellaria sp.) & are typical of the youngest marine beds in the areas to the east (Seaspray, Well. Pk., etc.). Ammonia beccarii is not recognised, but Nonion victoriense is quite common, together with Astrononion australe, Cancris curvulus, Cibicides cygnorum, Elphidium spp. — including E. imperatrix & E. pseudonodosum, Guttulina regina, Valvulinera kaliminensis, also miliolids & lagenids. Pelagics (e.g. G. bulloides sp.) are rare. Remains of mollusca, ostracoda & seduloidea are noted, also.

Between 910 and 1050 feet, a poor microfauna contains Elphidium spp. — including E. parri, Nonion victoriense, Notorotalia clathrata, and lagenids. Mollusca, Ditrupea and bryozoa occur also, but none of them are common. This interval could tentatively be referred to as the Tambo River Formation, and that above the Jemmy's Point Formation.

1010 - 2330 feet : Gippsland Limestone.

An approximate subdivision is as follows :-

1010 - 1675 ft. : Bairnsdalian / Balcombian.

The sandy limestones and calcareous sands contain limited microfaunas which are rather worn. Operculina victoriensis occurs at and below 1280 ft, where it is particularly abundant. Elphidium parri occurs also. Amphistegina lessonii was recorded in cores at 1330-48 ft & 1405 ft, but does not become common until below the latter.

1675 - 1715 ft. : Batesfordian.

Samples contain Lepidocyclus howchini, common Amphistegina lessonii, minor Operculina victoriensis, and occasional Globigerinoides bisphera and Globigerina bulloides sp.

The Lepidocyclus beds are thus particularly restricted here.

1715 - 2330 ft. : Longfordian.

The microfaunas in this interval contain Astrononion centroplex, Cibicides perforatus, and limited pelagics — slightly more common towards the base — which include Globigerina apertura & G. woodi.

2330 - 2577 feet : Lakes Entrance Formation.

Microfaunas in the upper puggy marls represent Fu.5, and ~~consist of~~ include Elphidium crespinae, Gyrogonia zelandica, and Globigerina ampliapertura enapertura.

The basal cores of marl, which are closely associated with the underlying coal measures, contain Fu.4 species — Globigerina ampliapertura ampliapertura as well as G. ampl. enapertura, Globigerina linaperta (or G. cf. linaperta), Globorotalia testatigosa, Spirobolivina emmendorferi (syn. Bolivina crespinae), etc.

2577 - 3935 feet : Latrobe Valley Coal Measures

The whole sequence ^{appears to be} non-marine.

The interval from 2577 to 3505 ft. represents the Upper Latrobe Valley C.M. From 3505 to 3780 ft is the Thorpdale Volcanics, and from 3780 to 3935 ft the Childers Fm., both of the Lower Latrobe Valley C.M.

Below 3935 feet : Strozdecki Group.

A non-marine sequence of Mesozoic age.

CHARACTERISTICS OF THE LAKES ENTRANCE FORMATION.

The top of the formation was picked on:

- i. lithology
- ii. microfaunas
- iii. e-log,

although the definition was not outstanding in any of them.

~~The following trends~~

Passing downwards, the puggy marls change to coarser-grained more crystalline ^{light grey} marls; contain grains of quartz and of glauconite. These marls (or marly limestones) are softer and more clayey towards the top, & the glauconite content is rather low. The 'marls' become more crystalline (and probably dolomitic) downwards, & the glauconite content increases, as does the quartz content.

At approx. 2480 feet there appears a narrow bed on the e-log which corresponds to a ^{cuttings} sample containing a very high proportion of coarse quartz sand, many of the grains having a greenish tinge

WOODSIDE No. 1

CORES

300-19

* qn. clay washed off [sandy clay "or s. mudstone"]
 * sand residue: quartz, qn. sh. mica, glauc. (uncomm)
 (sub-ang. fine) || frags. of black lustrous material.
 coloured qns. (? fclsp).
 * shell frags., clear pinkish ostracods (single valve), ech. spines (*), forams. (rel. common).

820

* qn. clayey sand
 * sand residue, inc. quartz (uncommon), glauc., carb., shell chips.
 * mollusca - ^{small} gastropods (typ. Turr) spet. frags (eq. ? Ostracods)
Ditrupe, Cellaria, forams & ostracods.

860

* residue mostly shell material, minor glauc. quartz.
 * bryozoa typically "urchin-shaped"; mollusca more varied
Ditrupe (not abundant), forams & ostracods.

926

mostly organic debris, minor fine sub-angular sand
 * ^{large} forams, Ditrupe, bryozoa (rare) shell frags all rather worn.

1105

predominantly sand: ^{sub-ang to ang} quartz, also bn. qns (? fclsp), uncomm.
 qn. mica, glauc., ilmenite.
 * Ditrupe common, virt. the only fossil type.

1290

as above, but calcite cement v. dominant.
 * Ditrupe, also minor bryozoa, Operculina (etc)

1330-48

^{quartz} sand & calcite cement
 * fauna more common: forams ostrac., Ditrupe, ech. spines, etc.

1467

minor quartz sand, mostly ~~inorganic~~ organic fragments.
 * bryozoa, also forams, ech. spines

Woods, No. 1

CORES

Contd.

- 1527 : sandy lst., sand mic. qz., glauc, br. qns (→ sl. yellowish colour).
 * fauna poor, appears restricted to Elph., parr. + Diphyra frags.
- 1645 : white sandy lst., sand mic. specks of glauc., qn. mica, silmenite.
 * fauna poor, only few molluscan fragments
- 1695 : grey marl / marly lst.
 * pred. organic fragments (shaly), traces of glauc.
 * bryozoa, Amphistegia, etc.
- 1705 : as above, bryozoa quite common.
- 1905-15 : rex^{2d} limestone
 * minor sand (mic. glauc.), most ordary. calcite conq. fragments
 * bryozoa (not abundant).
- 22 : rex^{3d} limestone
 * abundant sparry calcite, organic fragments worn & poorly preserved.
 * bryozoa (not abundant).
-
- 2310 (cuttings) : qy. marl, disseminated pyrite common, occasional harder lumps of rex^{2d} material (sparry calcite)
 * forams, sponge spicules, ^{rare} poorly preserved bryozoa.

WOODSIDE WELL No 1

STRATIGRAPHIC COLUMN

Descriptions are of

Except where otherwise indicated, screen samples.
Cores and bit samples are mentioned as such.

- 280-285. Sandy clay with shell fragments
- 285-300. Quartz gravel shell beds
- 300. Bit sample: Micaceous sandy clay.
- 300-319. Core.-
Top: Dark gray, micaceous, sandy clay.
Middle: Massive sandy clay with well-preserved gastropods.
Bottom: Silt and sandy silt with many shells.
- 319-340. Shell bed.
- 500-530. Coarse, shelly quartz sand.
- 600-620. Fine quartz gravel.
- 700-740. fine, shelly quartz gravel.
- 740-770. very fine gravel with large shells.
- 770-780. fine gravel with shell fragments.
- 789. coarse, sandy shell bed.
- 795. clay with fewer shell fragments.
- 800. fine quartz gravel with some shells.
- 800-820. Core.-
Top: Fine quartz sand. Some gravel grains and shell fragments.
Bottom: Fine silty sand with embedded shell fragments
- 820. Coarse quartz sand with Turritella.
- 825. gravel with rolled shells.
- 835. Shells, quartz gravel, clay pebbles.
- 840-860. Core.- Fine silty sand. Shell fragments at the base.
- 865. shell bed with quartz gravel.
- 900-920. Core.- Carbonaceous silty sand.
- 940-960. Core.- Fine silty sand with scaphopods.
- 965. white sandy marl.
- 970. Red and white well rolled quartz grains embedded in marly cement: sandy marl.
- 980. Friable marly limestone and marl.
- 990. Sandy glauconitic limestone with Ditrupea.
- 1000-1002. Calcareous sand. Some grains large, embedded in marl.
- 1010-1030. Core.- Very calcareous yellow sand.
- 1040-1080. Ditrupea and polyzoal marl.
- 1080-1100. Ditrupea marl mixed with well rolled sand grains.
- 1105-1126. Core.- Calcareous yellow quartz sand. Some large, well rolled grains
- 1126. Ditrupea marl mixed with well rolled sand grains.
- 1135-1185. Ditrupea marl.
- 1195-1225. Richly fossiliferous Ditrupea marl.
- 1225-1255. Richly fossiliferous Ditrupea marl.
- 1265-1320. highly foraminiferal polyzoal marl.
- 1290. Bit sample: Ditrupea marl with scattered sand grains.
- 1304-1307. Core.-
Top: Calcareous yellow quartz sand with marl cement and scattered polyzoa.
Bottom: medium to coarse calcareous quartz sand.
- 1310-1323. Core.-
Top: Fine-grained quartz sand.
Middle: Fine-grained yellow calcareous sand.
Bottom: Medium-grained, calcareous yellow sand.
Mixture of polyzoa and red sand (contaminated)
- 1323-1325. Core.- Very fine marly yellow sand.
- 1325-1335. Core.- Yellow, very marly quartz sand. (contaminated)
- 1340-1348. Polyzoal marl.
- 1358-1390. Core.- Grayish-yellow sandy marl.
- 1390-1398. Bit sample: Grayish-green polyzoal marl (contaminat
- 1407.

- 1400-1408. Core.-
 Top: Greenish-gray polyzoal marl.
 middle: yellowish-gray polyzoal marl.
 bottom: Gray polyzoal marl.
1410. Soft polyzoal limestone or marl.
 1420. Marly polyzoal limestone.
 1430. Soft, marly polyzoal limestone.
 1440. Foraminiferal and polyzoal marl & marly lstone.
 1450. Fine-grained fossiliferous polyzoal marl.
 1450-1467. Core.-
 Top: Ditrupe filled yellow friable marlstone,
 passing downward into polyzoal marl.
 Middle: Yellow polyzoal marl passing down into
 Gray, fossiliferous polyzoal limestone. Then,
 into yellow Ditrupe & polyzoal limestone.
 Bottom: Fossiliferous greenish-gray soft marly
 polyzoal limestone with, at the base of the
 core, some very fine complete Polyzoa of several
 species in a marly, green limestone, becoming
 yellowish towards the bottom.
1480. Fine-grained polyzoal limestone.
 1490. Fossiliferous polyzoal limestone or marl.
 1500. Very fossiliferous polyz. lstone or marl.
 1517. Fine-grained fossiliferous polyzoal marl.
 1517-1537. Core.- Fine-grained polyzoal white marl. Sandy.
 1537. White polyzoal limestone (contaminated)
 1545. Highly fossiliferous coarse, white polyz. lst.
 1555. As above.
 1565. As above.
 1575. Fine-grained white polyzoal limestone.
 1577-1585. Core.-
 Friable, marly polyzoal limestone, white to
 greenish-gray, passing up downward into yellow
 friable polyzoal marlstone and marl.
 White polyzoal marlstone (contaminated)
 As above.
 As above.
 White polyzoal limestone.
 As above (contaminated with red sand)
Core.- Friable, white marly limestone.
 Coarse, white polyzoal limestone (contaminated)
 As above.
Core.- Coarse, gray polyzoal limestone contain-
 ing in the middle part well-preserved polyzoa
 and bottoming in hard, fine-grained marlstone.
 Very fossiliferous, coarse, polyzoal limest.
 Coarse polyzoal limestone.
 Coarse, cherty polyzoal limestone (contaminated)
 As above.
 Coarse polyzoal limestone.
 As above.
 As above.
 Polyzoal lst with occasional dark inclusions.
 As above with many such inclusions.
- 1585-1590. Foraminiferal polyzoal limestone.
 1600-1610. Coarse foraminiferal polyzoal lstone.
 1620-1630. As above.
 1635. As above.
 1640. As above.
 1643-1650. Core.- Friable, white marly limestone.
 1650-1660. Coarse, white polyzoal limestone (contaminated)
 1670-1680. As above.
 1695-1705. Core.- Coarse, gray polyzoal limestone contain-
 ing in the middle part well-preserved polyzoa
 and bottoming in hard, fine-grained marlstone.
 Very fossiliferous, coarse, polyzoal limest.
 Coarse polyzoal limestone.
 Coarse, cherty polyzoal limestone (contaminated)
 As above.
 Coarse polyzoal limestone.
 As above.
 As above.
 Polyzoal lst with occasional dark inclusions.
 As above with many such inclusions.
1715. Foraminiferal polyzoal limestone.
 1725. Coarse foraminiferal polyzoal lstone.
 1735. As above.
 1745. As above.
 1755. As above.
 1765-75. As above.
 1785. As above.
 1795. Polyzoal lst with occasional dark inclusions.
 1805. As above with many such inclusions.
1815. Foraminiferal polyzoal limestone.
 1825. Coarse foraminiferal polyzoal lstone.
 1835. As above.
 1845. As above.
 1865. As above.
 1861. Mixture of red sand with rolled grains of
 polyzoal limestone.
 Coarse polyzoal limestone.
 Soft polyzoal marlstone.
 White marlstone or marl.
1875. Core.-
 Top: Soft polyzoal limestone passing down to
 marlstone.
 Middle: Rather soft white polyzoal marlstone
 interbedded with white marl.
1890.
 1900.
 1905-1915.

WOODSIDE No.1

3.
7

1905-1915 (cont'd)	Bottom: White polyzoal marl and soft marlst.
1925.	White marl.
1935.	Polyzoal limestone.
1945.	Polyzoal marl (<u>Operculina</u> ?)
1955.	Polyzoal limestone.
1965-75	As above.
1985.	Marl.
1995.	Foraminiferal limestone (<u>Operculina</u> ?)
2005.	Polyzoal limestone.
2015.	Marl.
2025.	Polyzoal limestone.
2035.	As above.
2045-2055.	As above.
2065-2085.	As above.
2095.	Polyzoal marl.
2105.	Finely glauconitic polyzoal lst.
2115.	Polyzoal limestone.
2125.	As above.
2135-2165.	As above.
2175.	White marl.
2185.	Polyzoal limestone.
2195.-2205.	Fossiliferous marly limestone.
2215.	Very white marl.
2225-2228.	<u>Core.</u> - Fine-grained polyzoal limestone with bands of gray marl.
2230.	Whitish-gray marl.
2240.	Crystalline white limestone.
2250.	White limestone.
2260.	Fossiliferous white crystalline limestone.
2270.	White marl.
2280.	Grayish-white marl.
2290-2300.	White marl.
2310. Gray marlstone.	Gray Marl.
2320.	Grayish-white marl.
2330.	Gray marlstone.
2340.	Slightly glauconitic gray marl.
2350.	Whitish-gray marl.
2360.	White marl with rolled quartz grains.
2370.	Glauconitic foraminiferal marl.
2380-2390.	White marl.
2400-2450.	Glauconitic foraminiferal marl.
2460-2480.	Glauconitic foraminiferal marl with occasional grains of quartz sand.
2490-2510.	Highly glauconitic marl; some calcite.
2520-2556.	<u>Petroliferous Core.</u> -
2555-2577.	Top: Brown-stained, strongly oil smelling petroliferous marl. The marl is green, very glauconitic but with no permeability and low porosity. Diffuse oil stains. Bottom: Core displays contact of marine, oil stained and glauconitic marl above, and brown coal below. The contact shows the marl penetrating downward into a system of sun-cracked crevices in the coal which the marl fills. This contact denotes exposure of coal prior to marine transgression.

Below this level a lag becomes apparent between screen sample depths as indicated by drilling pipe lengths and depths as witnessed by the electric log. From 5 feet, this lag progressively increases with depth to over 35 feet.

Drill pipe figures continue to be shown in the left column. Where possible, corrections to true depth are given in the right-hand column and intermediate depths should be corrected accordingly from these figures.

WOODSIDE No 1.

4.
7

(2580-2590)		Oil-stained and crude smelling brown coal.
(2610)		100% brown coal.
(2620)		As above.
(2630-2840)		As above.
(2850)	2835	50% brown coal and 50% very coarse, gravelly, conglomeratic sand (pebbles up to $\frac{3}{4}$ inch)
(2870)	2855	100% brown coal.
(2880)		100% brown coal.
(2890)		100% brown coal.
(2900-2920)	2885-2905	50/50 brown coal and very coarse, conglomeratic sand (pebbles up to $\frac{3}{4}$ inch).
(2930-2940)		90% medium-coarse quartz gravelly sand.
(2950-2960)		$\frac{3}{4}$ good brown coal in very large chips and $\frac{1}{4}$ very coarse gravelly sand.
(2970)		95% very coarse gravelly sand of milky quartz ($\frac{1}{2}$ in. pebbles) & 5% brown coal.
(2980)		$\frac{1}{2}$ medium-coarse quartz gravelly sand and $\frac{1}{2}$ brown coal.
(2990)	2975	85% pure brown coal; gravel up to $\frac{1}{2}$ in.
(3000-3010)		50/50 brown coal & coarse gravel.
(3020)		Coarse gravelly quartz sand. Coal traces.
(3030)		50/50 coal & medium-coarse qu. sand.
(3050-3060)		50/50 br. coal and gravel of quartz & metamorphic rocks.
(3070-3090)	3040-3060	99% brown coal. Isolated quartz grains.
(3100-3150)	3070-3125	50/50 mixture of medium ($\frac{1}{2}$ in.) sand & very coarse ($\frac{1}{4}$ - $\frac{1}{2}$ in.) pebbles wh. quartz.
3160-3210)		Very coarse gravelly sand. Coal traces.
(3220-3280)		70% coarse sand ($\frac{1}{2}$ in pebbles) & 30% coal.
(3280-3290)		Coarse gravelly quartz sand with some metam. rock pebbles and traces of coal.
(3400-3410)	3380-3390	Appreciable amount of brown coal with coarse ($\frac{1}{2}$ in.) pebbles of milky quartz.
(3420-3480)		Poorly graded & somewhat finer qu. sand.
(3490-3510)		Coarse, gravelly quartz sand ($\frac{3}{8}$ - $\frac{1}{2}$).
(3550-3590)		$\frac{1}{2}$ sample: mixture purple basalt and brown coal; other half: milky qu. gravel ($\frac{1}{2}$ in.)
(3600-3630)	3570-3600	Unweathered basalt with about 30% brown coal and 60% coarse sand for the rest.
<u>3602-3607</u>	<u>3602-3607</u>	<u>Core.- Dense blue basalt.</u>
3650)	3680	Wine-coloured to fresh blue basalt.
(3675)		Purple to wine coloured basalt.
(3680)		Blue basalt with chips of wine coloured b.
(3690)		Mixture of weathered & unweath. basalt.
(3695)		Wine-coloured <u>red earth</u> with green pellets.
(3695-3700)		<u>Very red earth</u> with chips of weathered b.: <u>Weathered basaltic soil.</u>
(3710)		<u>Scarlet basaltic soil.</u> chips of weath. bas.
(3720)		<u>Red earth</u> with chips of weathered basalt.
<u>3720-3728</u>	<u>3720-3728</u>	<u>Core.-</u> Top: <u>Pure red clay soil.</u> bottom: Very weathered basalt grading upward into red soil.
3728.	3728.	Very weathered basalt with some chips of little weathered rock.
(3730)		Very weathered, wine-coloured basalt.
(3740)		Mostly brown coal. About one third purple weathered basalt.
(3750)		Mostly basalt as above. Some coal & gravel.
(3760)		Weathered purple basalt.
(3770)		As above.
(3780)		Fresh Older Basalt.
(3790)		As above.
(3800)	3780.	Pea-sized or smaller Qu. and Met. Rock and Red soil & very weathered basalt.
(3810)		

WOODSIDE No 1.

5.

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(3820)		Ungraded quartz gravel and gravelly sand with many pea-sized & occ. bean-s. pebb.
(3830)		Ungraded qu. gravelly sd. up to pea size.
(3840)		As above. Some metam rocks and basalt.
(3850)		Mixed gravelly sand of very uneven grade.
(3855)		Lentil sized qu. gravel with bean s. pebb.
3860)		Pea-s. milky quartz gravel.
(3870)	3845	Brown coal and fine gravelly sand.
(3880)		Fine quartz gravel.
(3890)		Fine clear quartz gravel.
(3900)		As above.
(3910)		As above.
(3920)		Lentil-sized qu. grav. w. some br. coal and basalt.
(3930)	3900	Brown coal, some Jurassic (Mesozoic) chips and quartz pebbles.
(3940-3960)		Well-rolled pebbles of quartz from pea to bean-sized. Clay, mudstone, claystone, basalt and brown coal chips.
(3970-3990)	3935-3965	Mesozoic claystone, conchoidally fractured.
(4000)-(4020)		Carbonaceous soft claystone as above.
(4030-4060)		Coarse sandstone interbedded w. mudstone.
(4070)		Sdst. gray, feldspathic. very dense.
(4080)		Coarse sdst interbedded with mdst.
(4090)		Coarse sandstone.
<u>4098-4108</u>	<u>4098-4108</u>	50/50 sandstone-mudstone series. <u>Core.-</u> Top: very coarse dark gray-green feldsp. sandstone. Massive, no visible dip. Bottom: coarse to medium-grained feldsp. sandstone.
(4110)		Coarse to med.-gr. feldsp. sdstone.
(4120)		Mudstone & very coarse arkosic sandstone.
(4130)		Mudstone and <u>calcite fault plane filling</u> .
(4140)		Mudstone, carbonaceous matter and flat chips of <u>basalt</u> . (vein fill?)
(4150)		Mudstone.
(4160)		Mudstone, some fine sandst. & carbon. matter
(4170)		Coarse, gray feldspathic sandstone.
(4200)		50/50 mudst. & coarse sandstone.
(4220)		Coarse feldspathic sandstone: arkose.
(4230)		Med. to coarse sdst & mdstone 50/50
(4240)		Coarse feldspathic sandstone.
(4270)		Mudstone with some arkose. Slight contam.
(4280)		Mudstone with black coal and some basalt.
(4290)		Mudstone.
(4300)		Arkosic sdstone, mudstone & contam. br. coal.
(4310)		As above.
(4320)	4290	Very coarse arkose.
(4330)		Coarse gray-green arkose and sandstone.
(4340)		As above.
(4350)		Foreign cave-in material: Brown coal, marl etc. & Jurassic arkose; Mudstone, sdstone.
(4360)		Mudstone with streaks of sdstone. Contam.
(4370)		Fine to med.-gr. sandst. & mudst., some black coal. Sdst.-mudst. 50/50.
(4380)		Coarse to med-gr. arkose with large flat chips of <u>basalt</u> (fault-plane fill?)
(4390)		As above.
(4400)		Coarse arkose, <u>fault-vein calcite</u> , Older basalt flat chips and occ. mudstone.
(4410)		Coarse arkose streaked with black coal. Occ. mudstone streaks.
(4430)		<u>Strongly crude petroleum smelling</u> 50/50 arkose & mudstone. Dark yellow chloroform reaction.
(4450)		Coarse, gray-green arkose.

WOODSIDE No 1.

(4470)		Coarse, gray-green arkose as above.
(4480)		Coarse to med- grained felsp. sdstone.
(4490-4510)		As above.
(4520-4540)		As above.
(4550)		As above.
(4600-4630)		Medium to fine-grained feldspathic sdst.
(4640-4660)		Fine-grained feldspathic sandstone.
(4670-4690)	4650-4660	Mudstone with some fine-gr. sdst. and black coal.
(4700-4710)		Very fine-grained sdstone with green vein-calcite. Mudstone with cracks filled with pink calcite.
(4710-4720)		75% very fine-gr. sdst., 25% mudstone.
(4730-4740)		Coarse and med -gr. arkose with veins of pink calcite.
4750-4770)		50/50 sdst. & mudst. <u>with black coal.</u>
(4780-4790)		As above.
(4800-4825)		As above.
(4830-4850)		As above.
(4860-4880)		50/50 sdst. & mudst. with black coal.
(4860-4880)		As above with black coal and one large chip of older basalt.
(4890- 4900)		Med.-gr. gray feldsp. sdst. & black coal.
(4905-4910)		As above. No coal.
(4915-4933)	<u>4915-4933</u>	<u>Core.-</u> Top: Green, med. to coarse arkose Middle: Green, med.-gr. feldspathic sdst. with poorly preserved leaves. Bottom: As above, showing 10° to 15° dip. Large, poorly preserved plants. Mudstone with black coal. Contaminated 50/50 mudstone-sdstone . Sandston with traces of mdst. Med.-gr. Mudstone with traces of sandstone. Mudstone with some black coal. Mudstone with streaks of fine-gr. arkose and grains of black coal. 50/50 sdst-mdst. with black coal. <u>Mostly black coal in lumps up to one inch thick. Some mdst. & sdst.</u> Slump material of brown coal and basalt. <u>Interesting inclusions of brown coal within weathered basalt not recorded above.</u> Mudstone and some black coal. 100% medium grained arkose. 75% sanstone and arkose, 25% mudstone. There is one shell fragment (<u>Unio?</u>) 50/50 black coal and mudstone. The coal is in streaks $\frac{1}{2}$ inch or less. Mostly mudstone with coal as above. <u>Bit sample:</u> Mudstone & Black coal. Carbonaceous mudstone. Sdst.-streaked mudstone. 50/50 mudstone and fine-gr. sdstone. 50/50 sdst. & mudst. with coal. Mudstone with occ. streaks of black coal about one third very fine-gr. sdstone. Mudstone with black coal. <u>Bit Sample:</u> 50/50 coarse arkose & mudst. with carbonaceous matter. Med.-gr. arkose with streaks of mudst. and black coal. Coal in sandstone. 50/50 mudst. and sandstone. Mudstone with a few chips of arkose. Red hematite nodules. Mostly fine-gr. sdst with mudstone.
4950-4960)		
(4960-4980)		
(4990-5010)		
(5020-5025)		
(5030-5050)		
(5060-5070)		
(5080-5090)		
(5110-5130)		
("5131")		
(5140)- (5160)		
(5170-5200)		
(5210-5250)		
(5240-5260)	5220-5225	
5274-5290)		
<u>5292</u>	<u>5292</u>	
(5300-5330)		
(5340-5360)		
(5370-5380)		
(5390-5400)		
(5410-5420)		
(5430-5440)		
<u>5456</u>	<u>5456</u>	
(5500-5510)		
(5520-5530)		
(5540-5550)		
(5560-5570)		

WOODSIDE No 1.

7.
7

(5580-5590)

Mudstone and shale. Occ. fine-gr. sandstone and some coal.

(5600-5610)

As above. Some Tertiary contamination.

5620-5630)

Mostly mudstone and claystone.

(5640-5650)

As above. Occ. sdstone chips.

(5660-5670)

As above.

(5680-5690)

50/50 mudstone & fine-gr. sandstone.

(5700-5710)

As above. Slight contamination.

(5720-5730)

Slump material: Tertiary rocks.

5769- 5772

5769-5772

Core.-

Top: Mudstone and shale with calcite-filled cracks, slickensided along the cracks. Carbonaceous streaks about 1/2 inch thick. Dip: 25°-30°.

Middle: Medium-grained arkosic sdst.

Bottom: As above with scattered coal.

(5780-5790)

Med.-gr. feldsp. sdst. with some mudst. contaminated with Tertiary rocks.

(5800)

Med.-gr. sdst. contaminated as above.

(5810)

Mudstone, sdstone and black coal.

(5820)

As above.

(5830)

As above.

(5830-5920)

As above, sandstone predominating.

(5930)

Coarse sandstone. One lump mudstone.

(5940)

As above. Occ. mudstone and black coal.

(5950-5955

5950-5955

Core.-

Top: Fine-grained carbonaceous mudst., Dip: 20°-25°-30°, streaks of carb. matter, cracked, slickensided, conjugate cracks filled with pink calcite.

Middle: As above, faulted slickensided in the extreme.

Bottom: Fine-grained carbonaceous sandstone & mudstone. with irregular streaks of black coal. Dip: 25°. Fault hases at 60° dip.

(5960-5990)

Mudstone with occasional sandstone.

Much faulted in a conjugate calcite-

-filled pattern. Carbonaceous matter.

(5995)

Hard Jurassic mudstone.

(6000)

As above.

6000S

Hard Mudstone as above, with much calcite fault-filling material. Continuation of the fault-zone. Extremely shattered rock chips.

FINIS.

Woodside No.1 Core descriptions by Well-site Geologist-P.W.Bollen.
1956

Cores of Jurassic 'Arkose' section.

4098'-4108'

- Top;
- 2'5" Gray med-coarse grained arkose with occasional inclusions of quartz grit.
- 6" Calcareous arkose, medium-coarse grained.
- 2' Gray, med-coarse grained arkose.

4915'-4933'

- Top.
- 7' Coarse to medium grained gray-greenish arkose with occasional bands and strands of coal, scattered mud pellets, grit size pieces of quartz scattered irregularly.
- 7" Arkose as above with bands of calcite at angle of 60 degrees to diameter of core, quartz grit present.
- 3'9" Arkose as at top of core

5769'-5779'

- Top.
- 13" Gray siltstone with specks of coal.
- 6" Gray arkose, med-coarse grained with calcite at angle of 60 degrees to diam of core.
- 6'6" Gray med-coarse grained arkose occasional bands of calcite & few specks of coal.

5950'-5955'

- Top.
- 5' Laminated siltstone and shale with specks of coal and some bands of coal, calcite veins at angle of 50 degrees to diam of core and slickensided at same angle.

APPENDIX 4.0

OIL AND GAS OCCURRENCES IN WOODSIDE NO. 1 and 2 WELLS

The following data was obtained from lithologic logs and drilling reports of the Woodside wells. Oil and gas shows indicated on drilling reports are labelled "D.R".

WOODSIDE NO. 1.

<u>Depth</u>	<u>Description of Show</u>
1002'	Slight gas indication (D.R.)
2539'	Gas indication. Petroliferous odour (D.R.)
2556' - 2577'	Diffuse oil stains in marl. Marl, green, very glauconitic, no permeability and low porosity, oil smell. Immediately overlies Latrobe Valley Coal Measures
3650'	Gas Show (D.R.)
3720' - 3728'	Oil Show? (D.R.)
* 4400'	Arkose and mudstone, strongly smelling of crude petroleum. Dark yellow chloroform reaction.
5830'	Oil show in mud stream. No Gas (D.R.)

WOODSIDE NO. 2.

980' - 1000'	Gas Show and slight show of oil (D.R.)
1310' - 1500'	Oil show reported in this interval (D.R.)
1310' - 1350'	Oil show in sandy marl. Sandy marl, cream coloured, stained brown, containing large quartz grains. Foraminifera, scaphopods and Ditrupa. Oil described in Chemical Laboratory Report 50/52 - 56 of 10/2/56.
1966' - 1980'	Top of core showed brown oil sand (D.R.)
2493' - 2511'	Indications of oil in top section of core (D.R.)
3104'	After drilling through coal series mud became saturated with oil and coal and showed considerable gas constantly (D.R.)
3170'	Large flow of gas encountered with colour in mudstream (D.R.)
4962'	Positive chloroform test.
5022' - 5032'	Gas Show (D.R.)
5120' - 5290'	Light oil and paraffin in samples (D.R.)
5235' - 5266'	Gas Show (D.R.)
5351' - 5600'	Gas and oil show in mudstream continuous (D.R.)
5600'	Strongly stained sample with free viscous green oil strongly smelling of crude petroleum. Sample 70% arkose, 30% shaly mudstone with a few $\frac{1}{8}$ " bands of black coal. Chemical analysis of hydrocarbon in Chemical Laboratory Report 271/272/56 of 6/4/56.
(5635-5640 BOUTAK.)	
6067' - 6088'	Oil sand (D.R.)

PERFORATION TESTS - WOODSIDE NO. 2.

Perforation tests were carried out by Lane Wells Ltd. with negative results. Well ~~beds~~^{was} cased to 6104' with 6 $\frac{5}{8}$ " Casing.

TEST 1.

Perforated interval 1310' - 1345'. Plug set at 1428'
Packer set at 1305'. Test first gave mud mixed with water, then slightly brackish water and finally freshwater.

TEST 2.

Perforated interval 5582' - 5618'. Plug set at 5657'
Packer set at 5570'. Nothing recovered from formation.

Reports on Oil Samples (Chemical Lab. Reports)

Samples 50 - 52/56 of 10/2/56

Oil from the 1310 - 1350 level in Woodside Well No. 2.
Dark brown to black crude oil of S.G. 0.92 - 0.93.
This oil is described as a heavy crude oil free from gasoline, kerosine and other light fractions of a mixed paraffinic asphaltic base.

Samples 271 - 272/56 of 6/4/56

Oil from 5635' - 5640' level in Woodside Well No. 2.
This oil is described as a crude oil which in the 5640 level contains approximately 20% of light, low boiling point fractions of mixed paraffin - asphalt base, is of softening point 40 - 50° c and contains some sulphur.

PE603968

This is an enclosure indicator page.
The enclosure PE603968 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE603968 has the following characteristics:

ITEM_BARCODE = PE603968
CONTAINER_BARCODE = PE905576
 NAME = Electric Well Log
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = WELL_LOG
DESCRIPTION = Electric Well Log (from WCR) for
 Woodside-1
REMARKS =
DATE_CREATED = 8/12/55
DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
CONTRACTOR = OIL DRILLING AND EXPLORATION LTD
CLIENT_OP_CO = WOODSIDE (LAKES ENTRANCE) OIL COMPANY
 N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

PE603969

This is an enclosure indicator page.
The enclosure PE603969 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE603969 has the following characteristics:

ITEM_BARCODE = PE603969
CONTAINER_BARCODE = PE905576
 NAME = Well Completion Log
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = COMPLETION_LOG
 DESCRIPTION = Well Completion Log Log (from WCR) for
 Woodside-1
 REMARKS =
 DATE_CREATED =
 DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
 CONTRACTOR = ,
 CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905565

This is an enclosure indicator page.
The enclosure PE905565 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905565 has the following characteristics:

ITEM_BARCODE = PE905565
CONTAINER_BARCODE = PE905576
 NAME = Cross-section of Woodside Bores 1-3
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = CROSS_SECTION
 DESCRIPTION = Cross-section of Woodside Bores (from
 WCR) for Woodside-1
 REMARKS =
 DATE_CREATED =
 DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
 CONTRACTOR =
 CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905566

This is an enclosure indicator page.
The enclosure PE905566 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905566 has the following characteristics:

- ITEM_BARCODE = PE905566
- CONTAINER_BARCODE = PE905576
 - NAME = Stratigraphic Correlation of Woodside
Bores 1-3
 - BASIN = GIPPSLAND
 - PERMIT = PPL/174
 - TYPE = WELL
 - SUBTYPE = CROSS_SECTION
- DESCRIPTION = Geological Cross-section of Bores
1-3, Woodside Parishes of Balloong and
St. Margaret (from WCR) for Woodside-1
- REMARKS =
- DATE_CREATED = 18/12/56
- DATE_RECEIVED =
- W_NO = W441
- WELL_NAME = WOODSIDE-1
- CONTRACTOR =
- CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

6.0 ATTACHMENTS

6.1. Production Records

6.2. Locality Map.

6.3. X-section A-A'

6.4. X-section B-B'

6.5. Sand Member Map.

6.6. Structure Map.

6.7. Sand Member Isopach

6.8. Glauconite Isopach.

PE905567

This is an enclosure indicator page.
The enclosure PE905567 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905567 has the following characteristics:

ITEM_BARCODE = PE905567
CONTAINER_BARCODE = PE905576
 NAME = Production Records (sheet 1 of 2)
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = PROD_RPT
 DESCRIPTION = Well Production Records (attachment 1
 from WCR) for Woodside-1
 REMARKS =
 DATE_CREATED =
 DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
 CONTRACTOR =
 CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905568

This is an enclosure indicator page.
The enclosure PE905568 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905568 has the following characteristics:

ITEM_BARCODE = PE905568
CONTAINER_BARCODE = PE905576
 NAME = Production Records (sheet 2 of 2)
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = PROD_RPT
DESCRIPTION = Well Production Records (attachment 1
 from WCR) for Woodside-1
REMARKS =
DATE_CREATED =
DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905569

This is an enclosure indicator page.
The enclosure PE905569 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905569 has the following characteristics:

ITEM_BARCODE = PE905569
CONTAINER_BARCODE = PE905576
 NAME = Lakes Entrance feild Locality Map
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = GENERAL
 SUBTYPE = PROSPECT_MAP
DESCRIPTION = Lakes Entrance feild Locality Map
 (attachment 2 from WCR) for Woodside-1
REMARKS =
DATE_CREATED = 7/01/86
DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905570

This is an enclosure indicator page.
The enclosure PE905570 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905570 has the following characteristics:

ITEM_BARCODE = PE905570
CONTAINER_BARCODE = PE905576
 NAME = Structural Cross-section Map
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = CROSS_SECTION
DESCRIPTION = Glauconite Sand Member, Structural
 Cross-section A-A' (attachment 3 from
 WCR) for Woodside-1
REMARKS =
DATE_CREATED = 9/01/86
DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905571

This is an enclosure indicator page.
The enclosure PE905571 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905571 has the following characteristics:

ITEM_BARCODE = PE905571
CONTAINER_BARCODE = PE905576
 NAME = Structural Cross-section Map
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = WELL
 SUBTYPE = CROSS_SECTION
 DESCRIPTION = Glauconite Sand Member, Structural
 Cross-section B-B' (attachment 4 from
 WCR) for Woodside-1
 REMARKS =
 DATE_CREATED = 9/01/86
 DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
 CONTRACTOR =
 CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905572

This is an enclosure indicator page.
The enclosure PE905572 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905572 has the following characteristics:

ITEM_BARCODE = PE905572
CONTAINER_BARCODE = PE905576
 NAME = Glauconite Sand Member Structure Map
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = SEISMIC
 SUBTYPE = HRZN_CONTR_MAP
DESCRIPTION = Glauconite Sand Member Structure
Map(attachment 5 from WCR) for
Woodside-1
REMARKS =
DATE_CREATED = 7/01/86
DATE_RECEIVED =
 W_NO = W441
WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905573

This is an enclosure indicator page.
The enclosure PE905573 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905573 has the following characteristics:

ITEM_BARCODE = PE905573
CONTAINER_BARCODE = PE905576
NAME = Glauconite Sand Member Structure Map
BASIN = GIPPSLAND
PERMIT = PPL/174
TYPE = SEISMIC
SUBTYPE = HRZN_CONTR_MAP
DESCRIPTION = Glauconite Sand Member Structure
Map(attachment 6 from WCR) for
Woodside-1
REMARKS =
DATE_CREATED = 7/01/86
DATE_RECEIVED =
W_NO = W441
WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905574

This is an enclosure indicator page.
The enclosure PE905574 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905574 has the following characteristics:

ITEM_BARCODE = PE905574
CONTAINER_BARCODE = PE905576
 NAME = Glauconite Sand Member Isopach Map
 BASIN = GIPPSLAND
 PERMIT = PPL/174
 TYPE = SEISMIC
 SUBTYPE = ISOPACH_MAP
DESCRIPTION = Glauconite Sand Member Isopach Map
 (attachment 7 from WCR) for Woodside-1
REMARKS =
DATE_CREATED = 7/01/86
DATE_RECEIVED =
 W_NO = W441
 WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE905575

This is an enclosure indicator page.
The enclosure PE905575 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE905575 has the following characteristics:

ITEM_BARCODE = PE905575
CONTAINER_BARCODE = PE905576
NAME = Glauconite Sand Member Isopach Map
BASIN = GIPPSLAND
PERMIT = PPL/174
TYPE = SEISMIC
SUBTYPE = ISOPACH_MAP
DESCRIPTION = Glauconite Sand Member Isopach Map
(attachment 8 from WCR) for Woodside-1
REMARKS =
DATE_CREATED = 8/01/86
DATE_RECEIVED =
W_NO = W441
WELL_NAME = WOODSIDE-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

PE906846

This is an enclosure indicator page.
The enclosure PE906846 is enclosed within the
container PE905576 at this location in this
document.

The enclosure PE906846 has the following characteristics:

ITEM_BARCODE = PE906846
CONTAINER_BARCODE = PE905576
 NAME = WOODSIDE-1 Lithological Column
 BASIN = GIPPSLAND
 ONSHORE? = Y
 DATA_TYPE = WELL
 DATA_SUB_TYPE = LITHOLOGY_LOG
 DESCRIPTION = Lithological Log (enclosure from WCR)
 for WOODSIDE-1. NOTE! This item was
 previously incorrectly placed in
 WOODSIDE-2 Well Summary.
 REMARKS = PERMIT: PPL/174PAGES: 1
 DATE_WRITTEN = 28-SEP-1955
 DATE_PROCESSED =
 DATE_RECEIVED = 17-MAR-1986
 RECEIVED_FROM = Woodside Oil NL
 WELL_NAME = WOODSIDE-1
 CONTRACTOR =
 AUTHOR = D.Thomas
 ORIGINATOR = Woodside Oil NL
 TOP_DEPTH =
 BOTTOM_DEPTH =
 ROW_CREATED_BY = xls_fh11

(Inserted by DNRE - Vic Govt Mines Dept)