BASIC DATA

PETROFINA EXPLORATION AUSTRALIA S. A.

BASIC DATA

FINA

AYU - 1

WELL COMPLETION REPORT

VOLUME - 1

PETROFINA EXPLORATION AUSTRALIA S.A.

WELL COMPLETION REPORT AYU-1

VOLUME I

BASIC DATA

GL/90/043
AH/JMQ/PhL/NG/k1
29 May 1990

WELL COMPLETION REPORT AYU-1

BASIC DATA

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SUMMARY

Exploration well Ayu-1 is located in Licence VIC/P20 in the Gippsland Basin offshore Victoria, south-eastern Australia. The Joint Venture partners for the operation were:

Petrofina Exploration Australia S.A.	30%	(Operator)
Japex Gippsland Limited	30%	
Overseas Petroleum and Investment Corporation	30%	
Bridge Oil Limited	10%	

Ayu-1 was spudded on 30 January 1990 using the semi-submersible rig Zapata Arctic. It reached a total depth of 2750m (drillers) on 13 February 1990. No hydrocarbon zones were encountered and Ayu-1 was plugged and abandoned on 19 February 1990 as a dry well.

LOCATION MAP

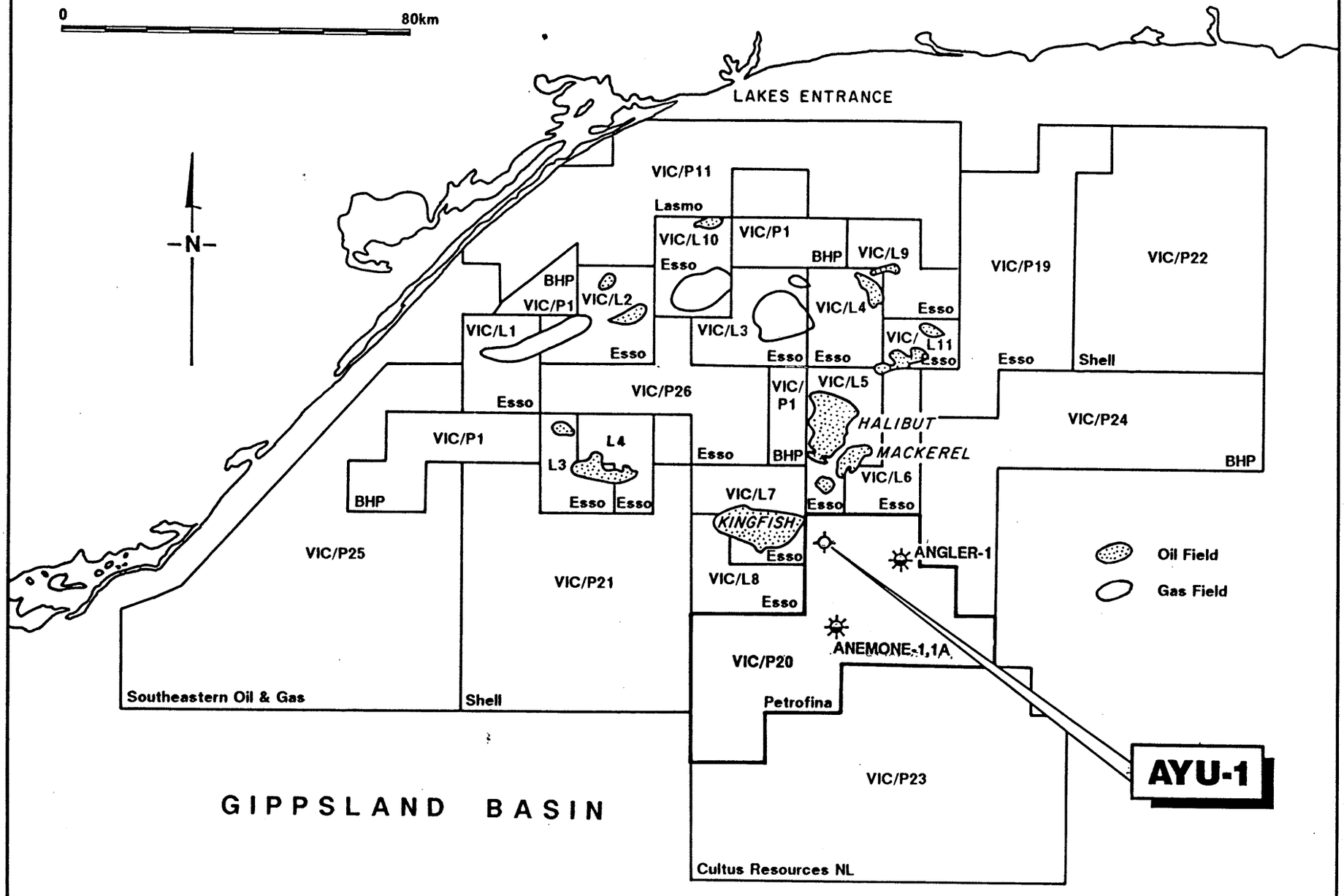


FIGURE 1

WELL DATA SUMMARY: AYU-1

Well:			Ayu-1
Permit:			VIC/P20, Gippsland Basin, Australia
Operator:			Petrofina Exploration Australia S.A.
Latitude:			38°36'35.02" S
Longitude:			148°17'02.66" E
UTM:	X	=	611,800.7 E
	Y	=	5,725,734.3 N
KBE:			28m
WD:			84m
Type of Rig:			Semi-Submersible
Name:			Zapata Arctic
Contractor:			Zapata Offshore Company
Spud Date:			30 January 1990
Date Reached TD:			13 February 1990
Date Plugged and Abandoned:			19 February 1990
Drilled Depth:			2750m (drillers)
			2740.5m (loggers)
Well Status:			Plugged and abandoned. Dry well.

GEOLOGICAL SAMPLING

CUTTINGS SAMPLES

Sample Type	No. of Sets	Addressee	Sample Interval
Washed and dried	3	PEXAUS	10,5*
	1	Japex, Tokyo	10,5*
	1	OPIC, Taiwan	10,5*
	1	Bridge Oil, Sydney	10,5*
	1	DITR, Melbourne	10,5*
	1	BMR, Canberra	10,5*
Unwashed	2	PEXAUS	10,5*
Canned Geochemical	1	Amdel	10**
	1	PSA, Brussels	10**

* 10m intervals from 570-2300m, 5m intervals from 2300-2750m

** from 2300-2750m

CUTTINGS DESCRIPTION
AYU-1

112-421m	Returns to seabed.
421-550m	Predominantly CALCARENITE: off white to light grey, soft to moderately hard, occasional to common fossil fragments, abundant calcite cement, blocky, with minor interbedded: MARL: light grey, soft, sticky, dispersive, silty in part, amorphous.
550-615m	Predominantly MARL: as above with minor interbedded: CALCARENITE: as above.
615-690m	CALCARENITE: light grey to off white, occasionally medium grey, firm to hard, sucrosic, occasional to common fossil fragments, blocky to amorphous.
690-790m	Predominantly MARL: light grey, soft, sticky as above with minor: CALCARENITE: as above.
790-1000m	Massive MARL: light grey, soft, sticky as above.
1000-1090m	Predominantly MARL: light grey, soft, sticky, as above with minor interbedded: CALCARENITE: light grey, light green grey, firm to moderately hard, very argillaceous, abundant calcite cement, abundant glauconite nodules, abundant fossil fragments, blocky.
1090-1156m	Predominantly MARL: light grey to olive grey, sticky, silty, amorphous with minor interbedded: CALCARENITE: light grey, soft to firm, very fine to fine grained, argillaceous, occasional fossils, trace lithics.
1156-1171m	Predominantly CALCARENITE: as above with minor: MARL: as above.

1171-1450m Interbedded MARL: light grey to light olive grey, soft, sticky, generally as above.
CALCARENITE: light grey to medium grey, mottled, buff, firm to moderately hard, very fine to fine grained, argillaceous in parts, trace glauconite, trace lithics, common fossils, dominantly blocky.

1450-1662m Predominantly CALCARENITE: as above with very minor:
MARL: as above.

1662-1737m Predominantly MARL: light grey, soft, sticky, dispersive, amorphous, with minor:
CALCARENITE: light to medium grey, light to medium brown, moderately hard, generally as above.

1737-2255m Massive CLAYSTONE: light grey, soft, sticky, very calcareous, marly in part, silty in part, amorphous.

2255-2480m Predominantly CLAYSTONE: as above, with minor:
SILTSTONE: medium grey, greenish grey, moderately hard, very argillaceous, slightly pyritic, trace lithics, subblocky, with minor:
SHALE: medium grey, moderately hard, brittle in parts, splintery in parts.

2480-2490m Interbedded SILTSTONE: as above with:
SANDSTONE: clear to light grey, green, fine to coarse, firm to loose, angular to subangular, poorly sorted, abundant glauconite, common pyrite, argillaceous, moderate porosity with no shows.

2490-2656m Massive SANDSTONE: light grey, clear, translucent, fine to very coarse, dominantly loose, subangular to subrounded, moderate to poorly sorted, trace lithics, trace glauconite, good porosity with no shows.

2656-2677m Predominantly SILTSTONE: medium grey, moderately hard to hard, argillaceous, grading to:
CLAYSTONE: in part, trace pyrite, dominantly blocky, with minor interbedded:
SANDSTONE: light grey, clear, translucent, loose, fine to coarse, dominantly medium, moderate porosity, no shows.

2677-2724m Predominantly SANDSTONE: as above with trace calcite cement, interbedded with minor:
SILTSTONE: light to medium grey, light grey brown, argillaceous, micromicaceous, firm to hard, carbonaceous in part, blocky.

2724-2750m Predominantly SILTSTONE: as above, with minor:
SANDSTONE: as above, and
Trace COAL: black, dark brown, argillaceous, micromicaceous, firm to hard, blocky, grading in part to carbonaceous
SILTSTONE: as above.

SIDEWALL CORE DESCRIPTION

WELL: AYU-1	LOCATION: VIC/P20	GEOLOGIST: A. POMILIO
RUN NUMBER: 1	TYPE:	HOLE SIZE: 12¼"

DEPTH (m)	RECOVERY (inches)	LITHOLOGICAL DESCRIPTION	VISIBLE POROSITY	SHOWS
2730	1	SANDSTONE: light grey, clear in parts, friable to firm, fine to medium, moderately sorted, subangular to subrounded, common argillaceous matrix, common carbonaceous pyrite.	poor-fair	
2710	Lost			
2708	1	SANDSTONE: light grey, friable to moderately hard, dominantly fine, becoming fine to very fine, moderately sorted, subangular to subrounded, common argillaceous matrix, some glauconite, trace micaceous.	poor	
2700	1	GLAUCONITIC SANDSTONE grading to SILTSTONE dark green, greenish grey, moderately hard, fine to medium, quartz, glauconite, poorly sorted, argillaceous, silty, carbonaceous.	very poor/ tight	
2697.2m	1.4	GLAUCONITIC SANDSTONE: dark green, moderately hard, fine to medium, abundant glauconite, quartz, moderately to poorly sorted, subangular to subrounded, argillaceous, micaceous, carbonaceous.	very poor	
2668.5	1.1	SANDSTONE: light grey, clear, translucent, dominantly friable, fine to medium, dominantly medium, moderately sorted, subangular to subrounded, some argillaceous matrix, trace micaceous, trace glauconite.	fair	
2658	1.6	SANDSTONE: light grey, clear, translucent, friable, becoming loose to firm, dominantly medium, moderately to well sorted, dominantly subrounded, some argillaceous matrix, quartz.	moderate	
2643.5	1	SANDSTONE: as above.	moderate to good	
2629	2	SANDSTONE: medium grey, greenish grey, friable, fine to coarse, dominantly medium, subangular to subrounded, moderately sorted, quartz, glauconite, micaceous.	fair	
2626.3	Lost			
2617.8	1	SANDSTONE: light grey, clear, translucent, dominantly loose to friable, fine to very coarse, moderately sorted, subangular to subrounded, quartz, generally clean.	good	

SIDEWALL CORE DESCRIPTION

WELL: AYU-1	LOCATION: VIC/P20	GEOLOGIST: A. POMILIO
RUN NUMBER: 1	TYPE:	HOLE SIZE: 12¼"

DEPTH (m)	RECOVERY (inches)	LITHOLOGICAL DESCRIPTION	VISIBLE POROSITY	SHOWS
2575.8	1.2	SANDSTONE: light grey, clear, translucent, fine to medium, dominantly medium, loose to friable, well sorted, subangular to subrounded, quartz, clean.	moderate to good	
2560.8	1.5	SANDSTONE: medium grey, friable, fine to coarse, argillaceous, poorly sorted, quartz.	fair	
2552	0.8	SANDSTONE: medium grey, firm to moderately hard, very fine to medium, subangular to subrounded, poorly sorted, abundant argillaceous, glauconite.	poor	
2529	1	SANDSTONE: as above.	poor to fair	
2491.5	0.6	SANDSTONE: medium grey, brownish grey, firm, moderately hard, very fine, poorly sorted, very argillaceous, quartz, slightly calcareous, glauconite.	poor	
2490	1	ARGILLACEOUS SANDSTONE: light grey, cream, off-white, moderately firm to moderately hard, very fine to fine, poorly sorted, very argillaceous, glauconite.	very poor to tight	
2485	1	SANDSTONE: light medium grey, cream, moderately hard, very fine to fine, poorly sorted, argillaceous, silty, abundant calcarenite cement.	tight	
2482	1.3	SILTSTONE: medium grey, greenish grey, moderately hard, very argillaceous, calcarenite, very fine sandy.		
2476	Misfired			
2473	Broken Bullet (Lost)			
2451.5	1.8	CALCAREOUS CLAYSTONE: medium grey, hard.		
2394	2	CLAYSTONE: as above.		
2345	1.5	CLAYSTONE: medium grey, moderately hard to hard, silty in parts, very calcareous.		
2165	2	CLAYSTONE: as above.		

SIDEWALL CORE DESCRIPTION

WELL: AYU-1	LOCATION: VIC/P20	GEOLOGIST: A. POMILIO
RUN NUMBER: 1	TYPE:	HOLE SIZE: 12¼"

DEPTH (m)	RECOVERY (inches)	LITHOLOGICAL DESCRIPTION	VISIBLE POROSITY	SHOWS
2146	2	CLAYSTONE: as above.		
2125	Broken Bullet (Lost)	CLAYSTONE: medium to dark grey.		
1740	1	CLAYSTONE: medium grey, medium to dark grey, moderately hard, marly, grading to marl.		
1730	0.5	CLAYSTONE: as above.		

Attempted:	30
Misfired:	1
Empty:	2
Lost:	3
Recovered:	24

HYDROCARBON SHOWS
AYU-1

GAS READINGS (%)

DEPTH	C1	C2	C3	IC4	NC4
421-550m	nil	nil	nil	nil	nil
550-615m	nil	nil	nil	nil	nil
615-690m	nil	nil	nil	nil	nil
690-790m	nil	nil	nil	nil	nil
790-1000m	nil-0.07	nil	nil	nil	nil
1000-1090m	0.1-0.8	nil	nil	nil	nil
1090-1156m	0.02-0.1	nil	nil	nil	nil
1156-1171m	0.02-0.05	nil	nil	nil	nil
1171-1450m	Tr-0.09	nil	nil	nil	nil
1450-1662m	Tr-0.08	nil	nil	nil	nil
1662-1737m	Tr-0.03	nil	nil	nil	nil
1737-2255m	0.03-0.1	nil	nil	nil	nil
2255-2480m	0.01-0.1	nil	nil	nil	nil
2480-2490m	0.01-0.09	nil	nil	nil	nil
2490-2656m	0.01-0.2	nil	nil	nil	nil
2656-2677m	0.02-0.1	nil	nil	nil	nil
2677-2724m	Tr-0.08	nil	nil	nil	nil
2724-2750m	Tr-0.04	nil	nil	nil	nil

FLUORESCENCE

No hydrocarbon fluorescence was observed throughout the section drilled.

WIRELINE LOGS

SUITE NO.	LOG	INTERVAL
1	DLL/AR/GR/CAL/SP	1087-413m
2	(SUPERCOMBO)	
	DLT/MSFL/GR/SP/CAL/SON/LDT/CNT	2736-1076m
	VSP	2725-500m
	SHDT	2732-2450m
	CST	2730-1730m

MWD LOGS

HOLE SIZE	TOOLS (Teleco)	INTERVAL
17½"	Directional (D)	421-1090m
12¼"	Resistivity, Gamma Ray, Directional (RGD)	1090-2750m

APPENDIX 1

WELL COMPLETION REPORT

AYU-1

BASIC DATA

A P P E N D I X 1

MICROPALAEONTOLOGY

MICROPALAEONTOLOGICAL REPORT ON THE PETROFINA EXPLORATION AUSTRALIA S.A. AYU-1 WELL GIPPSLAND BASIN, AUSTRALIA

M. Apthorpe
Apthorpe Palaeontology Pty Ltd
35 Bailey Street,
TRIGG, WA, 6029

21 May 1990

PE905412

This is an enclosure indicator page.
The enclosure PE905412 is enclosed within the container PE902101 at this location in this document.

The enclosure PE905412 has the following characteristics:

ITEM_BARCODE	= PE905412
CONTAINER_BARCODE	= PE902101
NAME	= Ayu 1 Planktonic Forams abundance chart (encl 1)
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= DIAGRAM
DESCRIPTION	= Ayu 1 Planktonic Forams abundence chart (enclosure 1)
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	= 2/07/90
W_NO	= W1020
WELL_NAME	= Ayu-1
CONTRACTOR	= Petrofina Exploration Australia S.A
CLIENT_OP_CO	= Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)

PE905413

This is an enclosure indicator page.
The enclosure PE905413 is enclosed within the container PE902101 at this location in this document.

The enclosure PE905413 has the following characteristics:

ITEM_BARCODE	= PE905413
CONTAINER_BARCODE	= PE902101
NAME	= Ayu 1 Planktonic Forams abundance chart (encl 2)
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= DIAGRAM
DESCRIPTION	= Ayu 1 Planktonic Forams abundance chart (enclosure 2)
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	= 2/07/90
W_NO	= W1020
WELL_NAME	= Ayu-1
CONTRACTOR	= Petrofina Exploration Australia S.A
CLIENT_OP_CO	= Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 2

WELL COMPLETION REPORT

AYU-1

BASIC DATA

A P P E N D I X 2

PALYNOLOGY

PALYNOLOGY OF PETROFINA AYU-1, GIPPSLAND BASIN, AUSTRALIA

BY

ROGER MORGAN
BOX 161
MAITLAND 5573
SOUTH AUSTRALIA
PH (088) 322795
FAX (088) 322658
REF:DW.GIPP.AYU1

for PETROFINA EXPLORATION AUSTRALIA SA

APRIL 1990

II INTRODUCTION

Twenty five samples were submitted by Nick Grollmann of Petrofina for palynology. Raw data is presented in Appendix I.

The palynostratigraphic framework for the Cretaceous is most recently reviewed by Helby, Morgan and Partridge (1987). In the Tertiary, the zonal scheme was most recently published by Partridge (1976), but significant new data exists in privately circulated studies, in Harris (1985), Morgan (1988), and in Marshall and Partridge (1988). The zonal scheme used here is shown in Fig. 1 and is a combination of Helby, Morgan and Partridge (1987) and Partridge (1976). The data is easily discussed against this framework.

Organic maturity data was generated in the form of the Spore Colour Index and plotted on Fig. 2. The oil and gas windows follow the general consensus of geochemical literature. The oil window corresponds to spore colours of light-mid brown (2.7) to dark brown (3.6). This would correspond to Vitrinite Reflectance values of 0.6% to 1.3%. However, factors such as detailed kerogen type, basin type, basin history and heating curves all affect precise interpretation, and analytical machine-based maturity parameters are probably more reliable.

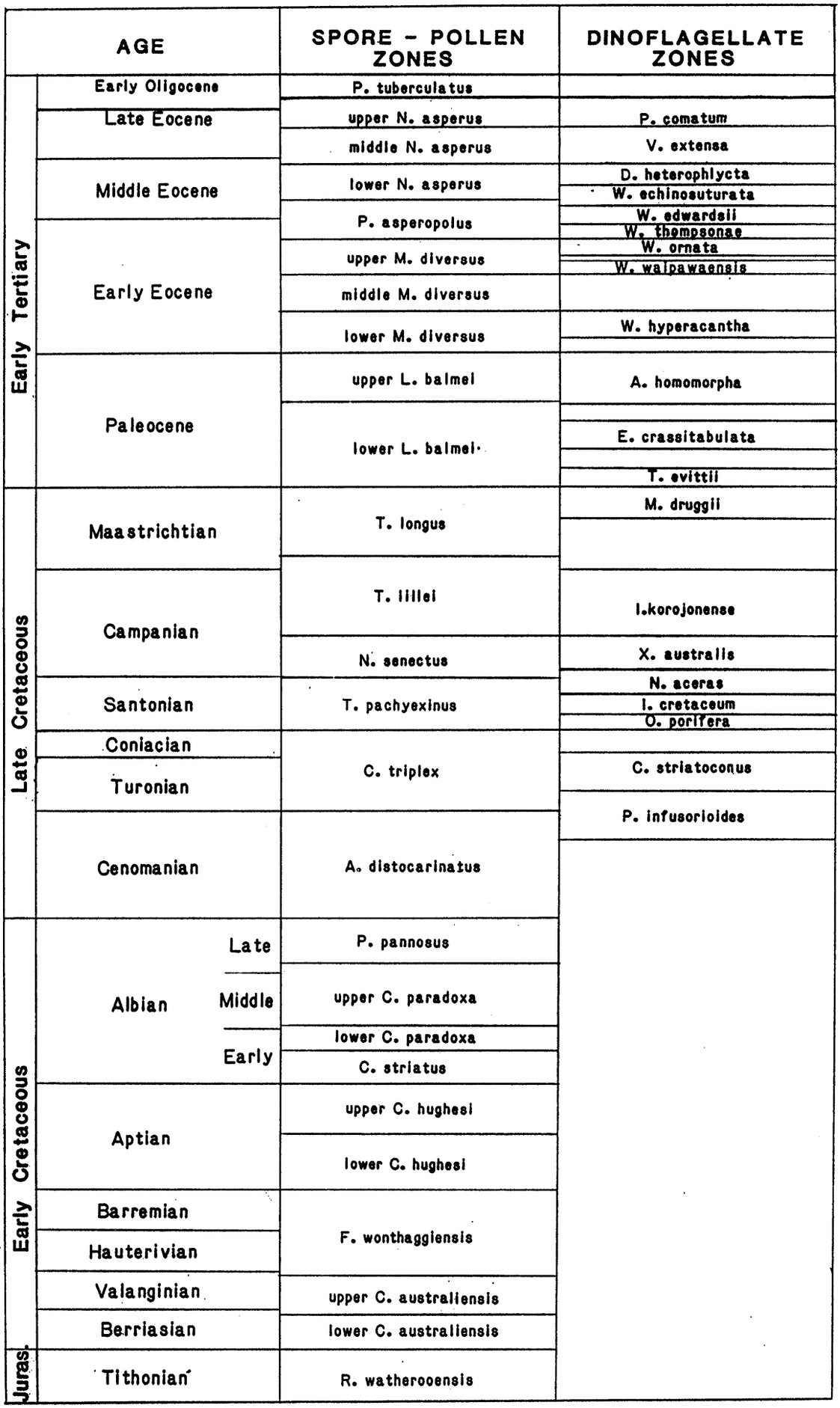


FIGURE 1 ZONATION FRAMEWORK

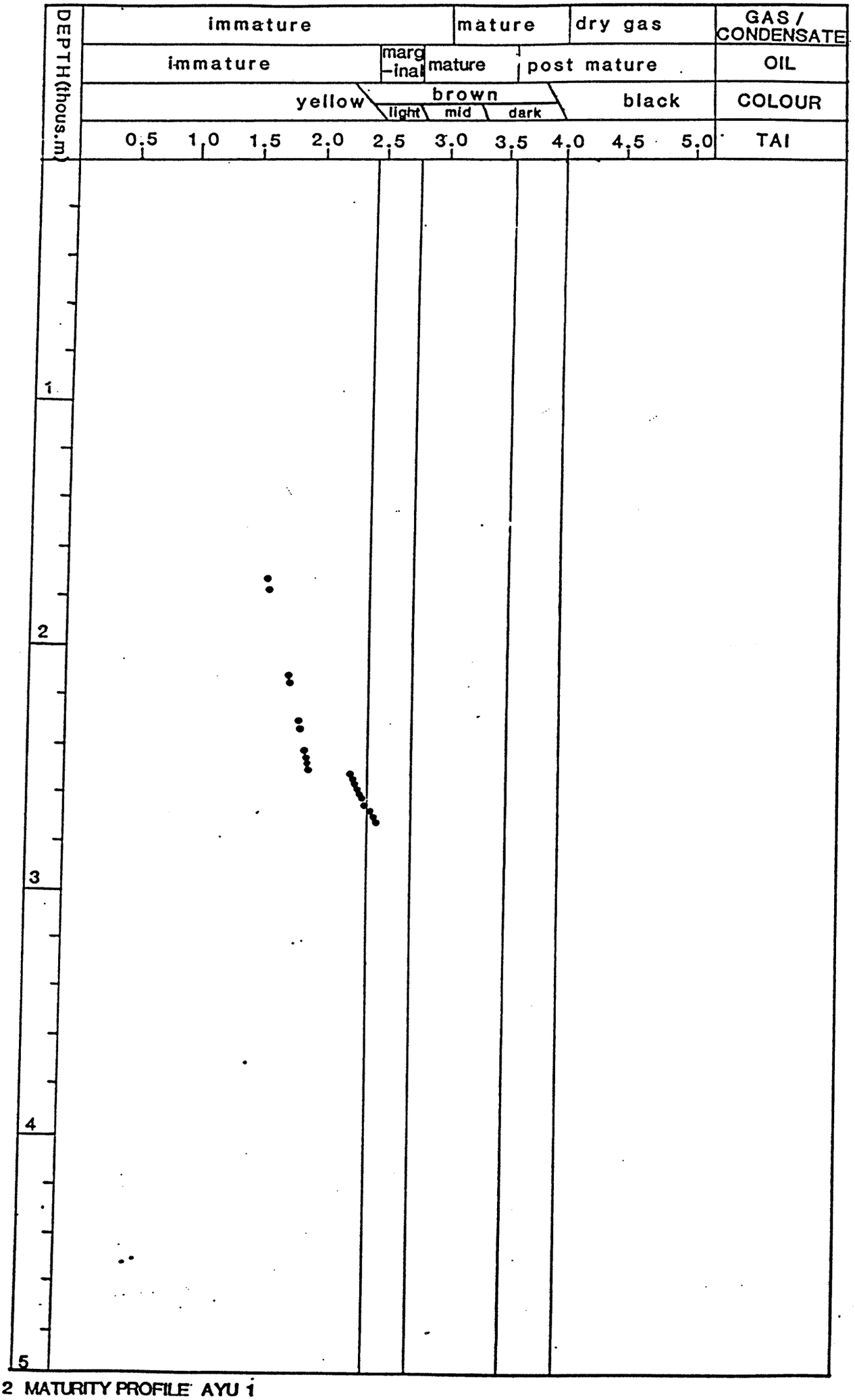


FIGURE 2 MATURITY PROFILE AYU 1

AYU#1

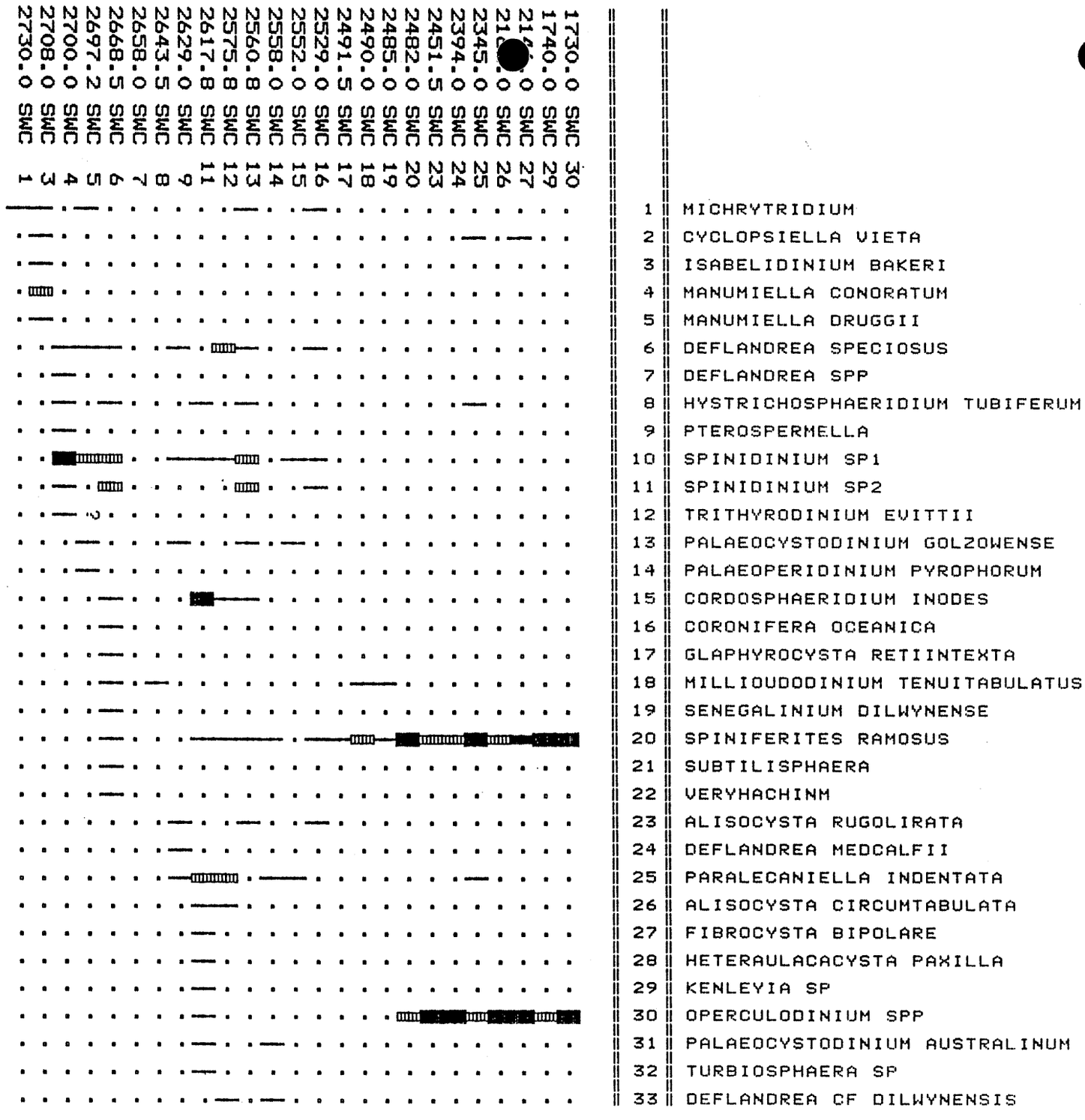
ROGER MORGAN : PALYNOLOGY CONSULTANT
BOX 161, MAITLAND, SOUTH AUSTRALIA, 5573
PHONE (088) 322795 FAX (088) 322658

CLIENT: _____
WELL: AYU#1
FIELD/AREA: _____
SECTION: _____ TOWNSHIP: _____ RANGE: _____
COUNTY: _____ STATE: _____
KB ELEVATION: _____ TOTAL DEPTH: _____
ANALYST: ROGER MORGAN DATE: APRIL 90
NOTES: ALL DEPTHS IN METRES

RANGE CHART OF GRAPHIC ABUNDANCES BY LOWEST APPEARANCE: Dino, S/P

Key to Symbols

= Very Rare
= Rare
= Few
= Common
= Abundant
? = Questionably Present
. = Not Present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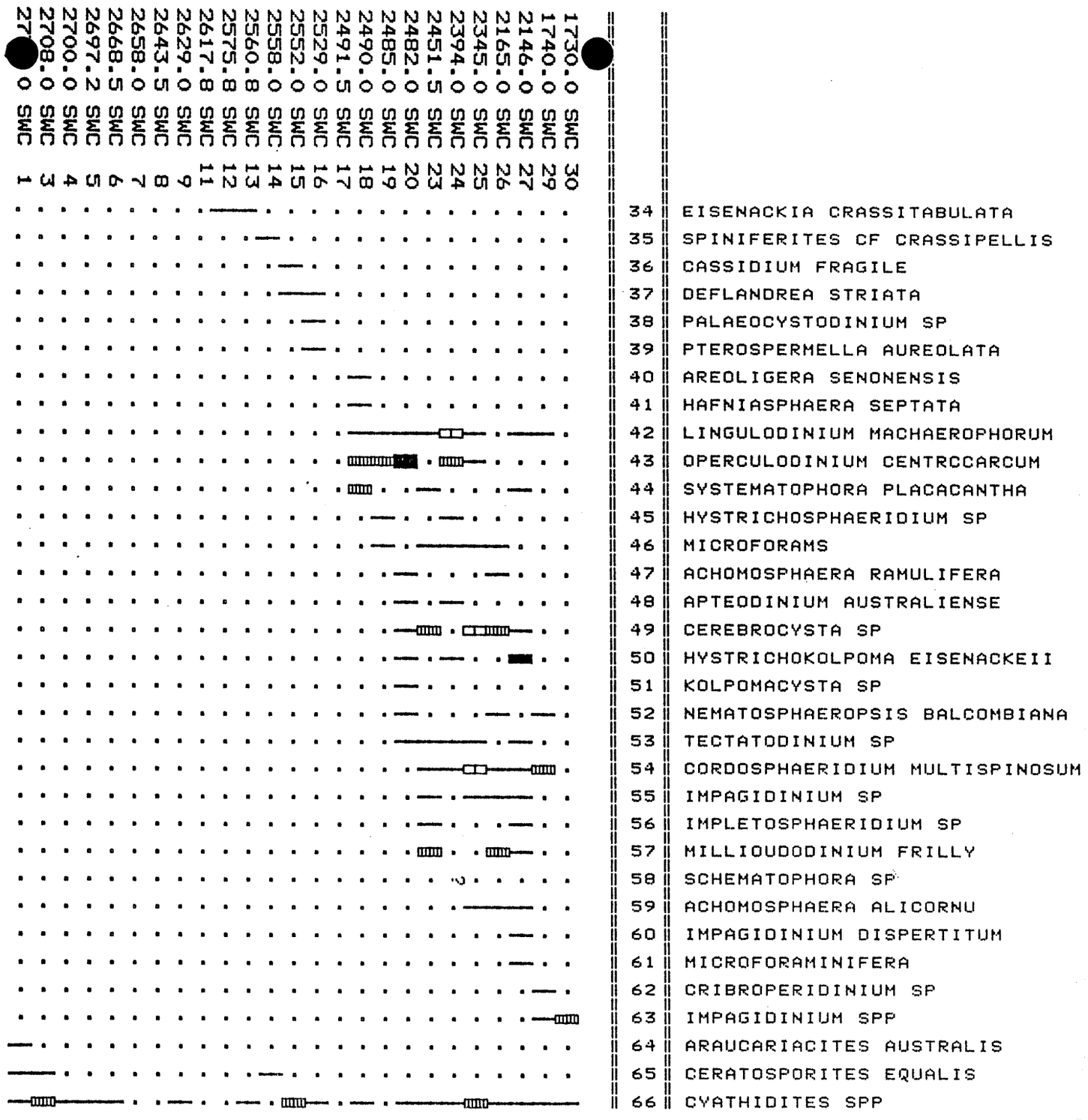
1740.0 SWC 29
2146.0 SWC 27
2345.0 SWC 25
2394.0 SWC 24
2451.5 SWC 23
2482.0 SWC 20
2485.0 SWC 19
2490.0 SWC 18
2491.5 SWC 17
2529.0 SWC 16
2552.0 SWC 15
2558.0 SWC 14
2560.8 SWC 13
2575.8 SWC 12
2617.8 SWC 11
2629.0 SWC 9
2643.5 SWC 8
2658.0 SWC 7
2668.5 SWC 6
2697.2 SWC 5
2700.0 SWC 4
2708.0 SWC 3
2730.0 SWC 1
1 MICHRYTRIDIUM
2 CYCLOPSIELLA VIETA
3 ISABELIDINIUM BAKERI
4 MANUMIELLA CONORATUM
5 MANUMIELLA DRUGGII
6 DEFLANDREA SPECIOSUS
7 DEFLANDREA SPP
8 HYSTRICHOSPHAERIDIUM TUBIFERUM
9 PTEROSPERMELLA
10 SPINIDINIUM SP1
11 SPINIDINIUM SP2
12 TRITHYRODINIUM EVITTII
13 PALAEOCYSTODINIUM GOLZOWENSE
14 PALAEOPERIDINIUM PYROPHORUM
15 CORDOSPHAERIDIUM INODES
16 CORONIFERA OCEANICA
17 GLAPHYROCYSTA RETIINTEXTA
18 MILLIOUDODINIUM TENUITABULATUS
19 SENEGALINIUM DILWYNENSE
20 SPINIFERITES RAMOSUS
21 SUBTILISPHAERA
22 VERYHACHINM
23 ALISOCYSTA RUGOLIRATA
24 DEFLANDREA MEDCALFII
25 PARALECANIELLA INDENTATA
26 ALISOCYSTA CIRCUMTABULATA
27 FIBROCYSTA BIPOLARE
28 HETERAULACACYSTA PAXILLA
29 KENLEYIA SP
30 OPERCULODINIUM SPP
31 PALAEOCYSTODINIUM AUSTRALINUM
32 TURBIOSPHAERA SP
33 DEFLANDREA CF DILWYNENSIS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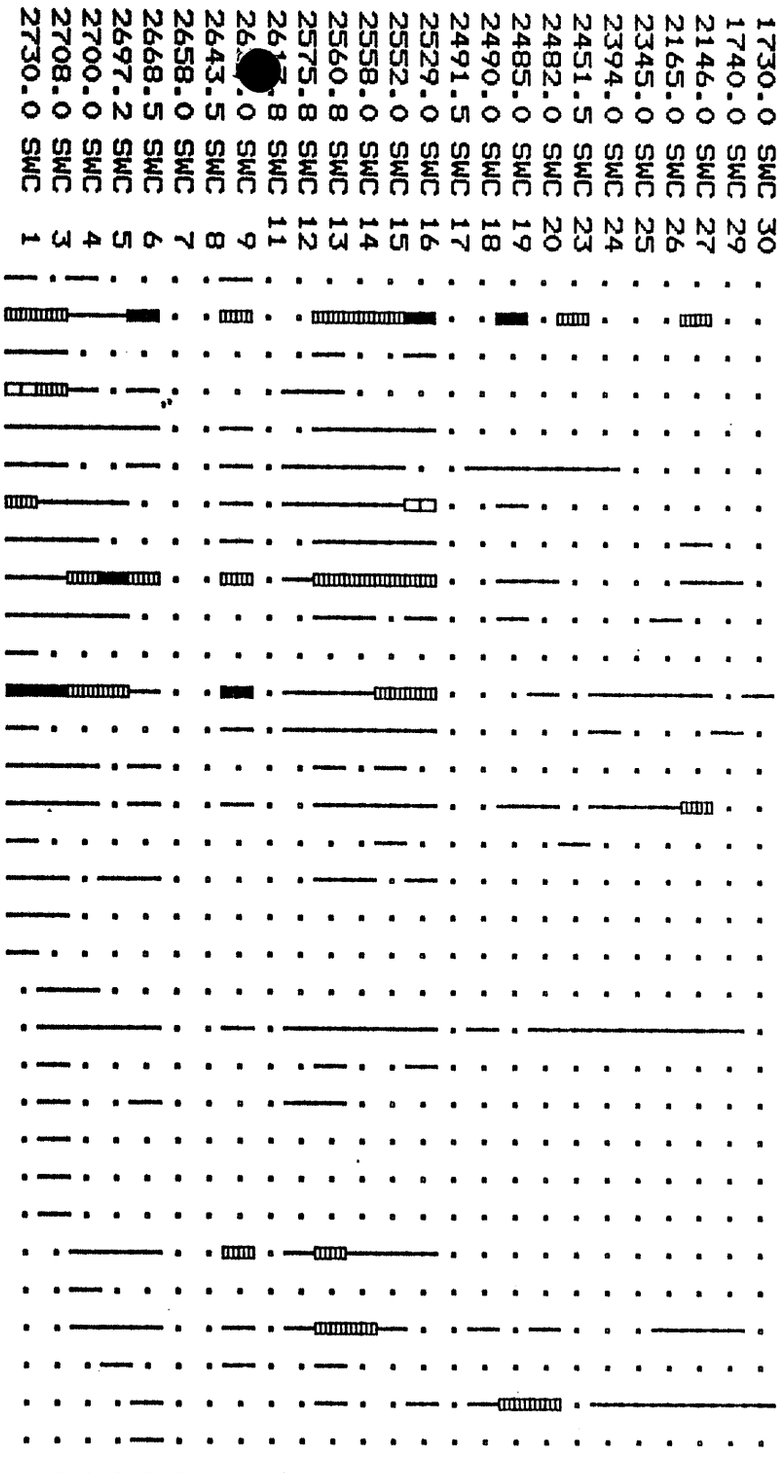
2394.0 SWC 24
2451.5 SWC 23
2482.0 SWC 20
2485.0 SWC 19
2490.0 SWC 18
2491.5 SWC 17
2529.0 SWC 16
2552.0 SWC 15
2558.0 SWC 14
2560.8 SWC 13
2575.8 SWC 12
2617.8 SWC 11
2629.0 SWC 9
2643.5 SWC 8
2658.0 SWC 7
2668.5 SWC 6
2697.2 SWC 5
2700.0 SWC 4
2708.0 SWC 3
2710.0 SWC 1
34 EISENACKIA CRASSITABULATA
35 SPINIFERITES CF CRASSIPELLIS
36 CASSIDIUM FRAGILE
37 DEFLANDREA STRIATA
38 PALAEOCYSTODINIUM SP
39 PTEROSPERMELLA AUREOLATA
40 AREOLIGERA SENONENSIS
41 HAFNIASPHAERA SEPTATA
42 LINGULODINIUM MACHAEROPHORUM
43 OPERCULODINIUM CENTRCCARCUM
44 SYSTEMATOPHORA PLACACANTHA
45 HYSTRICHOSPHAERIDIUM SP
46 MICROFORAMS
47 ACHOMOSPHAERA RAMULIFERA
48 APTEODINIUM AUSTRALIENSE
49 CEREBROCYSTA SP
50 HYSTRICHOKOLPOMA EISENACKEII
51 KOLPOMACYSTA SP
52 NEMATOSPHAEROPSIS BALCOMBIANA
53 TECTATODINIUM SP
54 CORDOSPHAERIDIUM MULTISPINOSUM
55 IMPAGIDINIUM SP
56 IMPLETOSPHAERIDIUM SP
57 MILLIOUDODINIUM FRILLY
58 SCHEMATOPHORA SP
59 ACHOMOSPHAERA ALICORNU
60 IMPAGIDINIUM DISPERTITUM
61 MICROFORAMINIFERA
62 CRIBROPERIDINIUM SP
63 IMPAGIDINIUM SPP
64 ARAUCARIACITES AUSTRALIS
65 CERATOSPORITES EQUALIS
66 CYATHIDITES SPP



67 DACRYCARPITES AUSTRALIENSIS
68 FALCISPORITES SIMILIS
69 GAMBIERINA EDWARDSII
70 GAMBIERINA RUDATA
71 LYGISTEPOLLENITES BALMEI
72 LYGISTEPOLLENITES FLORINII
73 NOTHOFAGIDITES ENDURUS
74 PERIPOROPOLLENITES POLYORATUS
75 PHYLLOCLADIDITES MAWSONII
76 PODOSPORITES MICROSACCATUS
77 PROTEACIDITES SCABORATUS
78 PROTEACIDITES SP
79 RETITRILETES AUSTROCLAVATIDITES
80 STEREISPORITES (TRIPUNCTISPORIS) PUNCTATUS
81 STEREISPORITES ANTIQUISPORITES
82 STEREISPORITES REGIUM
83 TRICOLPITES GILLII
84 TRICOLPITES LONGUS
85 TRICOLPITES SABULOSUS
86 CAMEROZONOSPORITES OHAIENSIS
87 GLEICHENIIDITES CIRCINIDITES
88 HERKOSPORITES ELLIOTTII
89 MICROCACHRYIDITES ANTARCTICUS
90 TRICOLPITES CONFESSUS
91 TRICOLPITES WAIPARAENSIS
92 TRICOLPORITES LILLIEI
93 AUSTRALOPOLLIS OBSCURUS
94 CYATHIDITES GIGANTIS
95 DILWYNITES GRANULATUS
96 PHYLLOCLADIDITES VERRUCOSUS
97 HALORAGACIDITES HARRISII
98 LAEIGATOSPORITES
99 TRICOLPITES PHILLIPSII

100	NOTHOFAGIDITES BRACHYSPINULOSUS	
101	PEROTRILETES MORGANII	
102	TRICOLPITES SP	
103	TRICOLPORITES	
104	AMOSOPOLLIS CRUCIFORMIS	
105	CLAVIFERA TRIPLEX	
106	OSMUNDACIDITES WELLMANII	
107	DILWYNITES TUBERCULATUS	
108	CYATHIDITES SPLENDENS	
109	CYATHEACIDITES ANNULATUS	
110	NOTHOFAGIDITES EMARCIDUS/HETERUS	
111	NOTHOFAGIDITES FALCATUS	
112	TRILETES TUBERCULIFORMIS	
113	GRANODIPORITES NEBULOSUS	
114	RUGULATISPORITES MALLATUS	
115	POLYPODIISPORITES SPP	
116	BEAUPREADITES VERRUCOSUS	
117	NOTHOFAGIDITES ASPERUS	
118	DICTOPHYLLIDITES SPP	
119	BOTRYOCOCCUS	

1730.0	SWC	30
1740.0	SWC	29
2146.0	SWC	27
2165.0	SWC	26
2345.0	SWC	25
2394.0	SWC	24
2451.5	SWC	23
2482.0	SWC	20
2485.0	SWC	19
2490.0	SWC	18
2491.5	SWC	17
2529.0	SWC	16
2552.0	SWC	15
2558.0	SWC	14
2560.8	SWC	13
2575.8	SWC	12
2617.8	SWC	11
2629.0	SWC	9
2643.5	SWC	8
2658.0	SWC	7
2668.5	SWC	6
2697.2	SWC	5
2700.0	SWC	4
2708.0	SWC	3
2730.0	SWC	1

1730.0	SWC	30
1740.0	SWC	29
2146.0	SWC	27
2165.0	SWC	26
2345.0	SWC	25
2394.0	SWC	24
2451.5	SWC	23
2482.0	SWC	20
2485.0	SWC	19
2490.0	SWC	18
2491.5	SWC	17
2529.0	SWC	16
2552.0	SWC	15
2558.0	SWC	14
2560.8	SWC	13
2575.8	SWC	12
2617.8	SWC	11
2629.0	SWC	9
2643.5	SWC	8
2658.0	SWC	7
2668.5	SWC	6
2697.2	SWC	5
2700.0	SWC	4
2708.0	SWC	3
2730.0	SWC	1

SPECIES LOCATION INDEX

Index numbers are the columns in which species appear.

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59	ACHOMOSPHAERA ALICORNU
47	ACHOMOSPHAERA RAMULIFERA
26	ALISOCYSTA CIRCUMTABULATA
23	ALISOCYSTA RUGOLIRATA
104	AMOSOPOLLIS CRUCIFORMIS
48	APTEODINIUM AUSTRALIENSE
64	ARAUCARIACITES AUSTRALIS
40	AREOLIGERA SENONENSIS
93	AUSTRALOPOLLIS OBSCURUS
116	BEAUPREADITES VERRUCOSUS
119	BOTRYOCOCCUS
86	CAMEROZONOSPORITES OHAIENSIS
36	CASSIDIUM FRAGILE
65	CERATOSPORITES EQUALIS
49	CEREBROCYSTA SP
105	CLAVIFERA TRIPLEX
15	CORDOSPHAERIDIUM INODES
54	CORDOSPHAERIDIUM MULTISPINOSUM
16	CORONIFERA OCEANICA
62	CRIBROPERIDINIUM SP
109	CYATHEACIDITES ANNULATUS
94	CYATHIDITES GIGANTIS
108	CYATHIDITES SPLENDENS
66	CYATHIDITES SPP
2	CYCLOPSIELLA VIETA
67	DACRYCARPITES AUSTRALIENSIS
33	DEFLANDREA CF DILWYNENSIS
24	DEFLANDREA MEDCALFII
6	DEFLANDREA SPECIOSUS
7	DEFLANDREA SPP
37	DEFLANDREA STRIATA
118	DICTOPHYLLIDITES SPP
95	DILWYNITES GRANULATUS
107	DILWYNITES TUBERCULATUS
34	EISENACKIA CRASSITABULATA
68	FALCISPORITES SIMILIS
27	FIBROCYSTA BIPOLARE
69	GAMBIERINA EDWARDSII
70	GAMBIERINA RUDATA
17	GLAPHYROCYSTA RETIINTEXTA
87	GLEICHENIIDITES CIRCINIDITES
113	GRANODIPORITES NEBULOSUS
41	HAFNIASPHAERA SEPTATA
97	HALORAGACIDITES HARRISII
88	HERKOSPORITES ELLIOTTII
28	HETERAULACACYSTA PAXILLA
50	HYSTRICHOKOLPOMA EISENACKEII
45	HYSTRICHOSPHAERIDIUM SP
8	HYSTRICHOSPHAERIDIUM TUBIFERUM
60	IMPAGIDINIUM DISPERTITUM
55	IMPAGIDINIUM SP
63	IMPAGIDINIUM SPP
56	IMPLETOSPHAERIDIUM SP
3	ISABELIDINIUM BAKERI
29	KENLEYIA SP
51	KOLPOMACYSTA SP
98	LAEIGATOSPORITES
42	LINGULODINIUM MACHAEROPHORUM
71	LYGISTEPOLLENITES BALMEI

72	LYGISTEPOLLENITES FLORINII
4	MANUMIELLA CONORATUM
5	MANUMIELLA DRUGGII
1	MICHRYTRIDIUM
89	MICROCACHRYIDITES ANTARCTICUS
61	MICROFORAMINIFERA
46	MICROFORAMS
57	MILLIOUDODINIUM FRILLY
18	MILLIOUDODINIUM TENUITABULATUS
52	NEMATOSPHAEROPSIS BALCOMBIANA
117	NOTHOFAGIDITES ASPERUS
100	NOTHOFAGIDITES BRACHYSPINULOSUS
110	NOTHOFAGIDITES EMARCIDUS/HETERUS
73	NOTHOFAGIDITES ENDURUS
111	NOTHOFAGIDITES FALCATUS
43	OPERCULODINIUM CENTRCCARCUM
30	OPERCULODINIUM SPP
106	OSMUDACIDITES WELLMANII
31	PALAEOCYSTODINIUM AUSTRALINUM
13	PALAEOCYSTODINIUM GOLZOWENSE
38	PALAEOCYSTODINIUM SP
14	PALAEOPERIDINIUM PYROPHORUM
25	PARALECANIELLA INDENTATA
74	PERIPOROPOLLENITES POLYORATUS
101	PEROTRILETES MORGANII
75	PHYLLOCLADIDITES MAWSONII
96	PHYLLOCLADIDITES VERRUCOSUS
76	PODOSPORITES MICROSACCATUS
115	POLYPODIISPORITES SPP
77	PROTEACIDITES SCABORATUS
78	PROTEACIDITES SP
9	PTEROSPERMELLA
39	PTEROSPERMELLA AUREOLATA
79	RETITRILETES AUSTROCLAVATIDITES
114	RUGULATISPORITES MALLATUS
58	SCHEMATOPHORA SP
19	SENEGALINIUM DILWYNENSE
10	SPINIDINIUM SP1
11	SPINIDINIUM SP2
35	SPINIFERITES CF CRASSIPELLIS
20	SPINIFERITES RAMOSUS
80	STEREISPORITES (TRIPUNCTISPORIS) PUNCTATUS
81	STEREISPORITES ANTIQUISPORITES
82	STEREISPORITES REGIUM
21	SUBTILISPHAERA
44	SYSTEMATOPHORA PLACACANTHA
53	TECTATODINIUM SP
90	TRICOLPITES CONFESSUS
83	TRICOLPITES GILLII
84	TRICOLPITES LONGUS
99	TRICOLPITES PHILLIPSII
85	TRICOLPITES SABULOSUS
102	TRICOLPITES SP
91	TRICOLPITES WAIPARAENSIS
103	TRICOLPORITES
92	TRICOLPORITES LILLIEI
112	TRILETES TUBERCULIFORMIS
12	TRITHYRODINIUM EVITTII
32	TURBIOSPHAERA SP
22	VERYHACHINM

APPENDIX 3

WELL COMPLETION REPORT

AYU-1

BASIC DATA

A P P E N D I X 3

VELOCITY SURVEY

SCHLUMBERGER

GEOPHYSICAL AIRGUN REPORT

COMPANY : PETROFINA EXP. AUST. S.A.
WELL : AYU #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-56561

LONG DEFINITIONS

GLOBAL

- KB - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL
- SRD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL
- EKB - ELEVATION OF KELLY BUSHING
- GL - ELEVATION OF USERS REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
- VELHYD - VELOCITY OF THE MEDIUM BETWEEN THE SOURCE AND THE HYDROPHONE
- VELSUR - VELOCITY OF THE MEDIUM BETWEEN THE SOURCE AND THE SRD

MATRIX

- GUNELZ - SOURCE ELEVATION ABOVE SRD (ONE FOR THE WHOLE JOB; OR ONE PER SHOT)
- GUNEWZ - SOURCE DISTANCE FROM THE BOREHOLE AXIS IN EW DIRECTION (CF. GUNELZ)
- GUNNSZ - SOURCE DISTANCE FROM THE BOREHOLE AXIS IN NS DIRECTION (CF. GUNELZ)
- HYDELZ - HYDROPHONE ELEVATION ABOVE SRD (CF. GUNELZ)
- HYDEWZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN EW DIRECTION (CF GUNELZ)
- HYDNSZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN NS DIRECTION (CF GUNELZ)
- TRTHYD - TRAVEL TIME FROM THE HYDROPHONE TO THE SOURCE
- TRTSRD - TRAVEL TIME FROM THE SOURCE TO THE SRD
- DEVWEL - DEVIATED WELL DATA PER SHOT : MEAS. DEPTH, VERT. DEPTH, EW, NS

SAMPLED

- SHOT.GSH - SHOT NUMBER
- DKB.GSH - MEASURED DEPTH FROM KELLY-BUSHING
- DSRD.GSH - DEPTH FROM SRD
- DGL.GSH - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USERS REFERENCE)
- TIMO.GSH - MEASURED TRAVEL TIME FROM HYDROPHONE TO GEOPHONE
- TIMV.GSH - VERTICAL TRAVEL TIME FROM THE SOURCE TO THE GEOPHONE
- THTM.GSH - SHOT TIME (WST)
- AVGV.GSH - AVERAGE SEISMIC VELOCITY
- DELZ.GSH - DEPTH INTERVAL BETWEEN SUCCESSIVE SHOTS
- DELT.GSH - TRAVEL TIME INTERVAL BETWEEN SUCCESSIVE SHOTS
- INTV.GSH - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	: 28.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	: 0	M
ELEVATION OF KELLY BUSHI	EKB	: 28.0000	M
ELEV OF GL AB. SRD(WST)	GL	: -24.0000	M
VEL SOURCE-HYDRO(WST)	VELHYD	: 1480.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	: 1480.00	M/S

(MATRIX PARAMETERS)

	SOURCE ELV M	SOURCE Ew M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1	-5.00	32.26	-41.29	-10.00	32.26	-41.29

	TRT HYD-SC MS	TRT SC-SRD MS
1	3.38	3.38

	MD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1	112.00	112.00	84.00	0	0
2	500.00	500.00	472.00	0	0
3	600.04	600.04	572.04	0	0
4	625.04	625.04	597.04	0	0
5	650.05	650.05	622.05	0	0
6	675.00	675.00	647.00	0	0
7	700.00	700.00	672.00	0	0
8	725.04	725.04	697.04	0	0
9	750.00	750.00	722.00	0	0
10	775.01	775.01	747.01	0	0
11	800.00	800.00	772.00	0	0
12	825.00	825.00	797.00	0	0
13	850.00	850.00	822.00	0	0
14	874.99	874.99	846.99	0	0
15	900.00	900.00	872.00	0	0
16	925.00	925.00	897.00	0	0
17	950.00	950.00	922.00	0	0
18	975.00	975.00	947.00	0	0
19	1000.00	1000.00	972.00	0	0
20	1025.00	1025.00	997.00	0	0
21	1050.00	1050.00	1022.00	0	0
22	1075.04	1075.04	1047.04	0	0
23	1100.00	1100.00	1072.00	0	0
24	1125.00	1125.00	1097.00	0	0
25	1150.01	1150.01	1122.01	0	0
26	1175.00	1175.00	1147.00	0	0
27	1200.04	1200.04	1172.04	0	0
28	1225.04	1225.04	1197.04	0	0
29	1249.98	1249.98	1221.98	0	0
30	1275.00	1275.00	1247.00	0	0
31	1300.00	1300.00	1272.00	0	0
32	1325.00	1325.00	1297.00	0	0
33	350.00	1350.00	1322.00	0	0

34	1375.01	1375.01	1347.01	0	0
35	1400.00	1400.00	1372.00	0	0
36	1425.00	1425.00	1397.00	0	0
37	1449.99	1449.99	1421.99	0	0
38	1474.99	1474.99	1446.99	0	0
39	1500.00	1500.00	1472.00	0	0
40	1525.00	1525.00	1497.00	0	0
41	1550.00	1550.00	1522.00	0	0
42	1574.99	1574.99	1546.99	0	0
43	1599.99	1599.99	1571.99	0	0
44	1625.01	1625.01	1597.01	0	0
45	1650.00	1650.00	1622.00	0	0
46	1675.00	1675.00	1647.00	0	0
47	1699.99	1699.99	1671.99	0	0
48	1724.98	1724.98	1696.98	0	0
49	1750.00	1750.00	1722.00	0	0
50	1775.00	1775.00	1747.00	0	0
51	1800.00	1800.00	1772.00	0	0
52	1825.00	1825.00	1797.00	0	0
53	1850.00	1850.00	1822.00	0	0
54	1875.01	1875.01	1847.01	0	0
55	1900.00	1900.00	1872.00	0	0
56	1925.00	1925.00	1897.00	0	0
57	1950.00	1950.00	1922.00	0	0
58	1975.01	1975.01	1947.01	0	0
59	2000.01	2000.01	1972.01	0	0
60	2025.00	2025.00	1997.00	0	0
61	2050.00	2050.00	2022.00	0	0
62	2074.99	2074.99	2046.99	0	0
63	2100.01	2100.01	2072.01	0	0
64	2125.00	2125.00	2097.00	0	0
65	2150.00	2150.00	2122.00	0	0
66	2175.04	2175.04	2147.04	0	0
67	2199.98	2199.98	2171.98	0	0
68	2225.00	2225.00	2197.00	0	0
69	2250.00	2250.00	2222.00	0	0
70	2275.00	2275.00	2247.00	0	0
71	2299.99	2299.99	2271.99	0	0
72	2325.00	2325.00	2297.00	0	0
73	2350.00	2350.00	2322.00	0	0
74	2375.00	2375.00	2347.00	0	0
75	2400.00	2400.00	2372.00	0	0
76	2424.99	2424.99	2396.99	0	0
77	2449.98	2449.98	2421.98	0	0
78	2475.00	2475.00	2447.00	0	0
79	2500.00	2500.00	2472.00	0	0
80	2525.00	2525.00	2497.00	0	0
81	2550.00	2550.00	2522.00	0	0
82	2575.00	2575.00	2547.00	0	0
83	2600.00	2600.00	2572.00	0	0
84	2625.00	2625.00	2597.00	0	0
85	2649.99	2649.99	2621.99	0	0
86	2674.98	2674.98	2646.98	0	0

87	2700.00	2700.00	2672.00	0	0
88	2725.00	2725.00	2697.00	0	0

COMPANY : PETROFINA EXP. AUST. S.A. WELL : AYU #1

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
1	112.00	84.00	0	60.69	53.39	56.77	1480			
2	500.00	472.00	388.00	234.82	236.71	240.09	1966	388.00	183.33	2116
3	600.04	572.04	488.04	273.43	275.63	279.01	2050	100.04	38.92	2570
4	625.04	597.04	513.04	282.79	285.05	288.43	2070	25.00	9.42	2654
5	650.05	622.05	538.05	290.83	293.15	296.53	2098	25.01	8.10	3088
6	675.00	647.00	563.00	299.37	301.75	305.12	2120	24.95	8.59	2904
7	700.00	672.00	588.00	308.22	310.64	314.02	2140	25.00	8.90	2810
8	725.04	697.04	613.04	316.80	319.26	322.64	2160	25.04	8.62	2904
9	750.00	722.00	638.00	325.69	328.19	331.57	2178	24.96	8.93	2795
10	775.01	747.01	663.01	333.83	336.37	339.75	2199	25.01	8.18	3058
11	800.00	772.00	688.00	342.91	345.48	348.86	2213	24.99	9.11	2742
12	825.00	797.00	713.00	351.66	354.26	357.64	2228	25.00	8.78	2847
13	850.00	822.00	738.00	360.57	363.20	366.58	2242	25.00	8.94	2797
14	874.99	846.99	762.99	369.39	372.05	375.43	2256	24.99	8.85	2825
15	900.00	872.00	788.00	377.78	380.46	383.84	2272	25.01	8.42	2972
16	925.00	897.00	813.00	386.56	389.27	392.65	2285	25.00	8.80	2840
17	950.00	922.00	838.00	394.73	397.46	400.84	2300	25.00	8.19	3051
18	975.00	947.00	863.00	403.30	406.05	409.43	2313	25.00	8.59	2910
19	1000.00	972.00	888.00	411.93	414.70	418.08	2325	25.00	8.65	2890
20	1025.00	997.00	913.00	420.23	423.02	426.40	2338	25.00	8.32	3005
21	1050.00	1022.00	938.00	428.55	431.36	434.73	2351	25.00	8.34	2999
22	1075.04	1047.04	963.04	435.78	438.60	441.98	2369	25.04	7.25	3455
23	1100.00	1072.00	988.00	443.16	446.00	449.38	2386	24.96	7.40	3374
24	1125.00	1097.00	1013.00	450.64	453.50	456.88	2401	25.00	7.50	3335

COMPANY : PETROFINA EXP. AUST. S.A. WELL : AYU #1

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
25	1150.01	1122.01	1038.01	457.66	460.53	463.91	2419	25.01	7.04	3555
26	1175.00	1147.00	1063.00	464.70	467.59	470.96	2435	24.99	7.05	3542
27	1200.04	1172.04	1088.04	471.25	474.15	477.53	2454	25.04	6.56	3815
28	1225.04	1197.04	1113.04	478.39	481.30	484.68	2470	25.00	7.15	3495
29	1249.98	1221.98	1137.98	485.03	487.96	491.33	2487	24.94	6.65	3749
30	1275.00	1247.00	1163.00	491.63	494.57	497.95	2504	25.02	6.61	3734
31	1300.00	1272.00	1188.00	498.24	501.19	504.57	2521	25.00	6.62	3776
32	1325.00	1297.00	1213.00	505.08	508.04	511.42	2536	25.00	6.85	3649
33	1350.00	1322.00	1238.00	511.54	514.51	517.89	2553	25.00	6.47	3864
34	1375.01	1347.01	1263.01	518.29	521.27	524.65	2567	25.01	6.76	3700
35	1400.00	1372.00	1288.00	524.35	527.34	530.72	2585	24.99	6.07	4117
36	1425.00	1397.00	1313.00	530.71	533.71	537.09	2601	25.00	6.37	3925
37	1449.99	1421.99	1337.99	536.61	539.62	543.00	2619	24.99	5.91	4229
38	1474.99	1446.99	1362.99	542.71	545.73	549.11	2635	25.00	6.11	4093
39	1500.00	1472.00	1388.00	549.22	552.25	555.62	2649	25.01	6.52	3837
40	1525.00	1497.00	1413.00	554.89	557.92	561.30	2667	25.00	5.68	4403
41	1550.00	1522.00	1438.00	560.92	563.96	567.34	2683	25.00	6.04	4141
42	1574.99	1546.99	1462.99	565.99	569.04	572.42	2703	24.99	5.08	4921
43	1599.99	1571.99	1487.99	572.87	575.93	579.30	2714	25.00	6.89	3630
44	1625.01	1597.01	1513.01	578.40	581.46	584.84	2731	25.02	5.54	4519
45	1650.00	1622.00	1538.00	583.64	586.71	590.09	2749	24.99	5.25	4763
46	1675.00	1647.00	1563.00	589.32	592.40	595.78	2764	25.00	5.69	4396
47	1699.99	1671.99	1587.99	595.21	598.29	601.67	2779	24.99	5.90	4238
48	1724.98	1696.98	1612.98	600.22	603.31	606.69	2797	24.99	5.02	4982

COMPANY : PETROFINA EXP. AUST. S.A. WELL : AYU #1

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
49	1750.00	1722.00	1638.00	606.53	609.62	613.00	2809	25.02	6.32	3962
50	1775.00	1747.00	1663.00	614.14	617.24	620.62	2815	25.00	7.61	3283
51	1800.00	1772.00	1688.00	621.81	624.91	628.29	2820	25.00	7.67	3258
52	1825.00	1797.00	1713.00	629.62	632.73	636.11	2825	25.00	7.81	3199
53	1850.00	1822.00	1738.00	637.63	640.74	644.12	2829	25.00	8.01	3120
54	1875.01	1847.01	1763.01	645.69	648.81	652.18	2832	25.01	8.06	3101
55	1900.00	1872.00	1738.00	653.64	656.76	660.14	2836	24.99	7.95	3142
56	1925.00	1897.00	1813.00	661.60	664.72	668.10	2839	25.00	7.96	3139
57	1950.00	1922.00	1838.00	669.32	672.45	675.83	2844	25.00	7.72	3237
58	1975.01	1947.01	1863.01	677.25	680.38	683.76	2848	25.01	7.93	3152
59	2000.01	1972.01	1888.01	685.38	688.51	691.89	2850	25.00	8.13	3074
60	2025.00	1997.00	1913.00	693.70	696.84	700.22	2852	24.99	8.32	3002
61	2050.00	2022.00	1938.00	702.36	705.50	708.88	2852	25.00	8.66	2886
62	2074.99	2046.99	1962.99	711.33	714.47	717.85	2852	24.99	8.97	2785
63	2100.01	2072.01	1988.01	720.32	723.47	726.84	2851	25.02	8.99	2782
64	2125.00	2097.00	2013.00	729.76	732.91	736.29	2848	24.99	9.44	2647
65	2150.00	2122.00	2038.00	737.69	740.84	744.22	2851	25.00	7.93	3151
66	2175.04	2147.04	2063.04	746.71	749.86	753.24	2850	25.04	9.02	2775
67	2199.98	2171.98	2087.98	755.75	758.91	762.28	2849	24.94	9.04	2758
68	2225.00	2197.00	2113.00	763.72	766.88	770.26	2852	25.02	7.97	3138
69	2250.00	2222.00	2138.00	772.64	775.80	779.18	2852	25.00	8.92	2802
70	2275.00	2247.00	2163.00	782.48	785.64	789.02	2848	25.00	9.84	2540
71	2299.99	2271.99	2187.99	790.33	793.50	796.87	2851	24.99	7.85	3182
72	2325.00	2297.00	2213.00	798.35	801.52	804.90	2854	25.01	8.02	3117

COMPANY : PETROFINA EXP. AUST. S.A. WELL : AYU #1 PAGE 3

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
73	2350.00	2322.00	2238.00	806.60	809.77	813.15	2856	25.00	8.25	3029
74	2375.00	2347.00	2263.00	813.97	817.14	820.52	2860	25.00	7.37	3391
75	2400.00	2372.00	2288.00	822.16	825.34	828.71	2862	25.00	8.19	3052
76	2424.99	2396.99	2312.99	829.90	833.08	836.46	2866	24.99	7.74	3223
77	2449.98	2421.98	2337.98	838.37	841.55	844.93	2866	24.99	8.47	2950
78	2475.00	2447.00	2363.00	845.52	848.70	852.08	2872	25.02	7.15	3498
79	2500.00	2472.00	2388.00	853.71	856.90	860.27	2874	25.00	8.19	3052
80	2525.00	2497.00	2413.00	859.53	862.72	866.10	2883	25.00	5.82	4294
81	2550.00	2522.00	2438.00	868.46	871.65	875.03	2882	25.00	8.93	2799
82	2575.00	2547.00	2463.00	874.22	877.41	880.79	2892	25.00	5.76	4338
83	2600.00	2572.00	2488.00	881.03	884.22	887.60	2898	25.00	6.81	3670
84	2625.00	2597.00	2513.00	886.99	890.19	893.56	2906	25.00	5.96	4193
85	2649.99	2621.99	2537.99	892.74	895.94	899.32	2916	24.99	5.75	4344
86	2674.98	2646.98	2562.98	899.96	903.16	906.54	2920	24.99	7.22	3460
87	2700.00	2672.00	2588.00	906.87	910.07	913.45	2925	25.02	6.91	3620
88	2725.00	2697.00	2613.00	913.28	916.48	919.86	2932	25.00	6.41	3899

PE600965

This is an enclosure indicator page.
The enclosure PE600965 is enclosed within the container PE902101 at this location in this document.

The enclosure PE600965 has the following characteristics:

ITEM_BARCODE	= PE600965
CONTAINER_BARCODE	= PE902101
NAME	= Geogram (Synthetic Seismogram)
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAPH
DESCRIPTION	= Geogram (Synthetic Seismogram) 35 Hertz zero phase Ricker Wavelet. Enclosure from appendix 3 of WCR volume 1.
REMARKS	=
DATE_CREATED	= 24/02/1990
DATE_RECEIVED	= 02/07/1990
W_NO	= W1020
WELL_NAME	= Ayu-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Petrofina Exploration Australia S.A.

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 4

WELL COMPLETION REPORT

AYU-1

BASIC DATA

A P P E N D I X 4

GEOCHEMISTRY

TABLE 1

AMDEL CORE SERVICES

Rock-Eval Pyrolysis

23/03/90

Client: PETROFINA EXPLORATION AUSTRALIA S.A.

Well: AYU-1

Depth (m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
2400									0.34		
2410	432	0.01	0.06	0.48	0.07	0.14	0.13	0.00	0.41	15	116
2415									0.34		
2420									0.34		
2430	420	0.05	0.29	0.35	0.34	0.15	0.83	0.02	0.33	85	106
2440									0.34		
2450	422	0.01	0.11	0.34	0.12	0.08	0.32	0.01	0.31	35	110
2460									0.32		
2470									0.23		
2480									0.14		
2490									0.11		
2500									0.07		
2510									0.08		
2520									0.15		
2530									0.05		
2540									0.09		
2550									0.18		
2560									0.15		
2570									0.18		
2580									0.03		
2590									0.06		
2600									0.04		
2610									0.09		
2620									0.08		
2630									0.05		
2640									0.07		
2650									0.23		
2670									0.17		
2680	425	0.14	2.28	0.73	2.42	0.06	3.13	0.20	0.90	253	81
2690	420	0.05	0.44	0.45	0.49	0.10	0.98	0.04	0.41	107	109
2700									0.15		
2710	424	0.07	0.53	0.49	0.60	0.12	1.09	0.05	0.40	132	122
2720	424	0.21	2.92	1.24	3.13	0.07	2.35	0.26	1.32	221	94
2730	424	0.12	2.35	0.80	2.47	0.05	2.93	0.20	0.90	261	89
2740	422	1.71	30.61	7.77	32.32	0.05	3.94	2.69	10.50	291	74

TABLE 2

SUMMARY OF VITRINITE REFLECTANCE MEASUREMENT, AYU -1

Depth (m)	Mean Maximum Reflectance	Standard Deviation	Range	Number of Determinations
1700	0.28	0.04	0.20 - 0.33	6
1750	0.31	0.06	0.24 - 0.43	10
1800	0.34	0.05	0.23 - 0.41	16
1850	0.33	0.03	0.24 - 0.40	17
1900	0.33	0.03	0.28 - 0.40	15
1950	-	-	-	-
2000	0.32	0.01	0.32 - 0.33	3
2050	0.35	0.04	0.30 - 0.40	5
2100	0.41	0.06	0.30 - 0.47	6
2150	0.45	0.02	0.43 - 0.47	2
2200	-	-	-	-
2250	0.39	0.05	0.32 - 0.48	9
2300	0.41	0.04	0.36 - 0.45	2
2350	-	-	-	-
2410	0.44	0.02	0.42 - 0.46	2
2450	0.45	0.04	0.41 - 0.55	8
2470	0.49	0.03	0.45 - 0.54	8
2550	-	-	-	-
2600	0.47	0.01	0.46 - 0.48	3
2660	0.47	0.01	0.45 - 0.49	3
2680	0.49	0.11	0.39 - 0.67	4
2740	0.54	0.04	0.39 - 0.54	4

TABLE 3

PERCENTAGE OF VITRINITE, INERTINITE AND EXINITE IN DISPERSED ORGANIC MATTER

Depth	Percentage of Vitrinite	Inertinite	Exinite
1700	5-10	75-80	15
1750	5	80	15
1800	<5	90	5-10
1850	<5	90	5-10
1900	10	80-85	5-10
1950	10	80-85	5-10
2000	<5	85-90	5-10
2050	5-10	85	5-10
2100	<5	90	5
2150	<5	90	5
2200	<5	90	5
2250	<5	90	5
2300	<5	90	5
2350	<5	90	5
2410	<5	90	5
2450	<5	90	<5
2470	<5	85	10
2550	<5	85	10
2600	<5	85	10
2660	<5	90	5
2680	<5	90	5
2740	50	35-40	10-15

TABLE 4

ORGANIC MATTER TYPE AND ABUNDANCE, AYU -1

Depth (m)	Estimated Volume of DOM	Exinites	Exinite Macerals
1700	<0.5	Ra-Vr	lama, lipto, phyto, bmite, ??oil
1750	<0.5	Ra-Vr	lipto, lama, bmite, phyto
1800	~0.5	Ra-Vr	lipto, lama
1850	~0.5	Ra-Vr	lipto, phyto
1900	~0.5	Ra-Vr	lipto
1950	<0.5	Ra-Vr	lipto, lama
2000	~0.5	Ra-Vr	lipto
2050	~0.5	Ra	lipto, lama, phyto
2100	<0.5	Ra	lipto, phyto
2150	<0.5	Vr	lipto, phyto
2200	<0.5	Vr	lipto
2250	<0.5	Vr	lipto
2300	<0.5	Vr	lipto, lama
2350	<0.5	Vr	lipto, phyto
2410	~0.5	Vr	lipto, spo
2450	<0.5	Vr	lipto
2470	<0.5	Vr	lipto
2550	<0.5	Vr	lipto, cut
2600	<0.5	Vr-Tr	lipto
2660	<0.5	Vr-Tr	lipto
2680	<0.5	Vr	lipto, spo, phyto
2740	3-5	Ra	spo, cut, lipto, res, phyto

TABLE 5

EXINITE MACERAL ABUNDANCE AND FLUORESCENCE CHARACTERISTICS, AYU -1

Depth (m)	Exinite Macerals	Lithology/Comments
1700	lama(Vr;m0-dB), lipto(Vr;mY-m0), phyto(Vr-Tr;iY-d0), bmite(Vr-Tr;m0) ??oil(Tr;iY)	Carbonate rich silty shale; some exinite is oxidised
1750	lipto(Vr;mY-m0), lama(Vr-Tr;mY), bmite (Vr-Tr;m0-d0),phyto(Tr;mY)	Shale; exinite as above
1800	lipto(Ra-Vr;mY-m0),lama(Vr;m0-dB)	Shale; exinite as above
1850	lipto(Ra-Vr;mY-d0),phyto(Tr;mY-m0)	Shale; exinite as above
1900	lipto(Ra-Vr;mY-dB)	Shale; exinite is oxidised
1950	lipto(Vr-mY-dB),lama(Tr;mY-m0)	Shale; exinite as above
2000	lipto(Ra-Vr;m0-dB)	Shale; exinite as above
2050	lipto(Ra;m0-d0),lama(Vr;m0-d0), phyto(Tr;m0-d0)	Shale; exinite as above
2100	lipto(Ra-Vr;mY-d0),phyto(Tr;mY)	Shale; exinite as above
2150	lipto(Vr;mY-d0),phyto(Tr;iY)	Shale; exinite as above
2200	lipto(Vr;mY-dB)	Shale; exinite as above
2250	lipto(Vr;m0-dB)	Shale; exinite as above
2300	lipto(Vr;mY-dB), lama(Tr;m0)	Shale; some exinite is oxidised
2350	lipto(Vr;mY-dB), phyto(Tr;d0-dB)	Shale; most exinite is oxidised
2410	lipto(Vr;d0-dB), spo(Tr;m0)	Shale; exinite is oxidised
2450	lipto(Vr;d0-dB)	Shale; exinite as above
2470	lipto(Vr;d0)	Shale; exinite as above
2550	lipto(Vr;d0-dB), cut(Tr;m0)	Chiefly sandstone, <5% shale; most exinite is oxidised
2600	lipto(Vr-Tr;d0)	Chiefly sandstone, ~5% shale; exinite as above
2660	lipto(Vr-Tr;d0)	Chiefly sandstone, ~5% shale; exinite as above
2680	lipto(Vr;m0-d0), spo(Tr;m0) phyto(Tr;m0)	Chiefly sandstone, ~5% shale, exinite as above
2740	spo(Ra;m0), cut(Ra;m0), lipto (Ra;m0-d0), res(Vr;iYG-iG),phyto (Tr;iY)	Chiefly sandstone, ~5% coal and shale. Coals are cavings

APPENDIX 2

HISTOGRAM PLOTS OF VITRINITE REFLECTANCE MEASUREMENTS

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 1700 m

Sorted List

0.20
0.26
0.28
0.28
0.32
0.33

Number of values= 6

Mean of values 0.28
Standard Deviation 0.04

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

20-22 *
23-25
26-28 *
29-31 **
32-34 **

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 1750 m

Sorted List

0.24
0.25
0.25
0.27
0.28
0.30
0.31
0.33
0.39
0.43

Number of values= 10

Mean of values 0.31
Standard Deviation 0.06

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

24-26	***
27-29	**
30-32	**
33-35	*
36-38	
39-41	*
42-44	*

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 1800 m

Sorted List

0.23	0.35
0.30	0.35
0.30	0.37
0.30	0.40
0.30	0.41
0.32	0.41
0.33	
0.33	
0.33	
0.33	

Number of values= 16

Mean of values 0.34
Standard Deviation 0.05

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

23-25	*
26-28	
29-31	****
32-34	*****
35-37	***
38-40	*
41-43	**

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 1850 m

Sorted List

0.24	0.34
0.30	0.35
0.31	0.35
0.31	0.35
0.32	0.35
0.32	0.35
0.32	0.40
0.32	
0.33	
0.34	

Number of values= 17

Mean of values 0.33
Standard Deviation 0.03

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

24-26	*
27-29	
30-32	*******
33-35	********
36-38	
39-41	*

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 1900 m

Sorted List

0.28	0.35
0.31	0.35
0.31	0.37
0.31	0.37
0.31	0.40
0.31	
0.33	
0.33	
0.33	
0.34	

Number of values= 15

Mean of values 0.33
Standard Deviation 0.03

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

28-30	*
31-33	********
34-36	***
37-39	**
40-42	*

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2000 m

Sorted List

0.32
0.32
0.33

Number of values= 3

Mean of values 0.32
Standard Deviation 0.00

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

32-34 ***

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2050 m

Sorted List

0.30
0.32
0.35
0.37
0.40

Number of values= 5

Mean of values 0.35
Standard Deviation 0.04

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

30-32 **
33-35 *
36-38 *
39-41 *

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2100 m

Sorted List

0.30
0.38
0.38
0.43
0.47
0.47

Number of values= 6

Mean of values 0.41
Standard Deviation 0.06

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

30-32 *
33-35
36-38 **
39-41
42-44 *
45-47 **

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2150 m

Sorted List

0.43
0.47

Number of values= 2

Mean of values 0.45
Standard Deviation 0.02

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

43-45 *
46-48 *

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2250 m

Sorted List

0.32
0.33
0.34
0.37
0.39
0.40
0.43
0.43
0.48

Number of values= 9

Mean of values 0.39
Standard Deviation 0.05

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

32-34	***
35-37	*
38-40	**
41-43	**
44-46	
47-49	*

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2300 m

Sorted List

0.36
0.45

Number of values= 2

Mean of values 0.41
Standard Deviation 0.04

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

36-38 *
39-41
42-44
45-47 *

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2410 m

Sorted List

0.42
0.44
0.46

Number of values= 3

Mean of values 0.44
Standard Deviation 0.02

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

42-44 **
45-47 *

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2450 m

Sorted List

0.41
0.42
0.43
0.43
0.44
0.44
0.44
0.55

Number of values= 8

Mean of values 0.45
Standard Deviation 0.04

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

41-43 ****
44-46 ***
47-49
50-52
53-55

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2470 m

Sorted List

0.45
0.45
0.46
0.49
0.50
0.50
0.51
0.54

Number of values= 8

Mean of values 0.49
Standard Deviation 0.03

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

45-47	***
48-50	***
51-53	*
54-56	*

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2680 m

Sorted List

0.39
0.41
0.47
0.67

Number of values= 4

Mean of values 0.49
Standard Deviation 0.11

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

39-41	**
42-44	
45-47	*
48-50	
51-53	
54-56	
57-59	
60-62	
63-65	
66-68	*

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2600 m

Sorted List

0.46
0.47
0.48

Number of values= 3

Mean of values 0.47
Standard Deviation 0.01

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

46-48 ***

VITRINITE REFLECTANCE VALUES

Well Name: AYU-1
Depth: 2660 m

Sorted List

0.45
0.47
0.49

Number of values= 3

Mean of values 0.47
Standard Deviation 0.02

HISTOGRAM OF VALUES
Reflectance values multiplied by 100

45-47 **
48-50 *