W582

DEPT. NAT. RES & ENV
PE905174

Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

BATFISH - 1
WELL SUMMARY

GIPPSLAND BASIN OFFSHORE

1 Folio No	2 Referred to	3 Date	4 Clearing Officer's Initials	1 Folio No	2 Referred to	3 Date	4 Clearing Officer's Initials

FILE COVER INSTRUCTIONS FOR ACTION OFFICERS

(1) FOLIO NUMBERS: Each subject paper attached to a file is to be given a consecutive number by the attaching officer. Papers must not be removed from or attached to a file without approval.

(2) REFERRAL TO OTHER OFFICERS: When an Officer completes action on the file and further action is required by some other Officer, please initial Column (4) and on the next vacant line, enter the relevant folio number in Column (1), indicate to whom the file is to be forwarded in Column (2) and record the date in Column (3).

(3) BRING UP MARKINGS: When action on a file is required at a later date, the officer will initial Column (4) and, on the next vacant line, enter the relevant folio number in Column (1), then write "B/U" followed by the action officer's name in Column (2) and the date the file is required in Column (3).

(4) PUTAWAY MARKINGS: When ALL action on a file is completed the officer concerned will initial Column (4) and, on the next vacant line, write "P/A" in column (2).

REGISTRY MUST BE NOTIFIED OF ANY FILE MOVEMENTS BETWEEN OFFICERS

LOCATION

EARLIER FILES | LATER FILES | RECORDS DISPOSITION

SHOWS OF HYDROCARBON — 25-5-70 — 148 24 13

BATFISH — 1

T.D. 9761' — 582 — W.D. 223. K.B. ESSO Vic/L4. — GLOMAR III

I.E.S. Run 1. 2"&5". 2866 – 7973'
" " 2. 2"&5". 7954 – 9759.
" " 1&2. 2866 – 9759. Separate logs 2" and 5".
B.H.C.S./G.R. " 1&2. 2866 – 9760. " " 2" " 5".
" " " 1. 2"&5". 2866 – 7967.
B.H.C.S./CAL. " 2. 2"&5". 7954 – 9760.
F.D.C./G.R. " 1. 2"&5". 4500 (200 GR) – 7974.
" " " 2. 2"&5". 7954 – 9759.
" " " 1&2. 4500 (200 GR) – 9759. SEPERATE LOGS 2" AND 5".
C.D.M. " 1. 5 "and" 2". 2866 – 7970.
" " 2. 5 "&" 2". 7954 – 9756.
F.I.T. " 1. Tests 1 — 5.
CORE LAB'S MUDLOG. 2884 – 9761.
S.W.C. Descriptions 2884 – 7926.
" " 8214 – 9744.
Show Report by Core Lab.
Agnew Formation Interval Testing with Amerada Pressure Recorders.
Time Depth Curve + ½ SCALE FOR PLOTTING.
Completion Report B.
Cuttings 2884 – 9761.

REVISED PALYNOLOGICAL DATA SHEET.
S.W.C. Shot 110. Rec. 91. 2884' – 9744'.
No conventional cores taken.
Well completion log.
Palynology Report by P.R. Evens
" " " L.E. Stover & A.D. Partridge Plus Revised.
Palaeontology " " D. Taylor.
Structure Maps on Top of Latrobe and Paleocene Horizon.
Geologic Map of after Drilling Picture.
Cross Section " " " " .
Weekly Reports
Completion Reports
VITRINITE REFLECTANCE BY AMOCO. 220486

EXECU
Secretary
Deputy S
Executive
Executive
Executive
Executive
Executive
Executive
Executive
Executive
Executive
CORP
General M
Chief Fin
Manager
Director C
Director H
Director P
Director I
Director E
Manager
Manager
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MINER
Manager
Manager
Manager
Manager
Manager
Manager
PRIMA
SCIEN
Manager
Manager
Chief Vet
Director E
Director F
Director G
Director A

BATFISH-1

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ESSO STANDARD OIL (AUSTRALIA) LTD.

COMPLETION REPORT

WELL DATA RECORD

Date June 30,1970

LOCATION

WELL NAME	STATE	PERMIT or LICENCE	GEOLOGICAL BASIN	FIELD
BATFISH #1	VICTORIA	VIC./L-4	GIPPSLAND	NFWC

CO-ORDINATES	Lat.	Long.	X	Y	MAP PROJECTION	GEOGRAPHICAL DESCRIPTION
Surface	38°13'34"	148°24'13"	630,188	284 181	Australian Transverse Mercator	Offshore Vic. 3 miles South of Tuna 2
Bottom Hole						

ELEVATIONS & DEPTHS

ELEVATIONS	WATER DEPTH	TOTAL DEPTH	Avg Angle
Ground KB 31 FEET RT Braden Head Top Deck Platform	223 FEET	M.D. 9761 FEET T.V.D.	
	PLUG BACK DEPTH	REASONS FOR P.B.	
	505 FEET	ABANDONMENT	

DATES

MOVE IN	RIG UP	SPUDDED
5.4.70	5.4.70	6.4.70
RIG DOWN COMPLETE	**RIG RELEASED**	**PROD.UNIT - Start Rigging Up**
27.5.70	27.5.70	
PROD.UNIT - Rig Down Complete	**I.P. ESTABLISHED**	

MISCELLANEOUS

OPERATOR	PERMITTEE or LICENCEE	ESSO INTEREST	OTHER INTEREST
ESSO	ESSO	50%	Hematite Petroleum Pty.Ltd.

CONTRACTOR	RIG NAME	EQUIPMENT TYPE
GLOBAL MARINE	GLOMAR III	SHIPSHAPE DRILLING VESSEL

TOTAL RIG DAYS	DRILLING AFE NO.	COMPLETION NO.	TYPE COMPLETION
51.6	230-103		

LAHEE WELL CLASSIFICATION	Before Drilling	New Field Wildcat
	After Drilling	Abandoned with shows of hydrocarbon.

Recd 22-5-72

P.M. COONEY
Geologist

WELL BATFISH -1

II	INITIAL PRODUCTION TEST				
Date	WELL COMPLETION AS: Oil Well _____		Gas Well _____	Dry Hole _____	
Choke size, inch			Calculated P.I.		
Length of Test			Calculated A.O.F.		
Oil, BPD			Perforations		
Water, BPD			Shut-In BHP		
Gas, MCFD			Flowing BHP		
Gas Liquids, BPD			Shut-In Tubing Press		
Gas-Oil Ratio			Flowing-Tubing Press		
Gravity, API			Flowing Temperature		

III PERFORATING RECORD (Prod.test, Completion, DST, FIT)

INTERVAL	HPF	TOTAL SHOTS	SERV. CO.	DIFF. PRESS.	PERFORATION FLUID	SIZE AND TYPE GUN
FIT's at 6286 and 7035' were taken through casing.						

R.L. Wood
Engineer

WELL BATFISH #1

IV	CASING - LINER - TUBING RECORD						
Type	**Size**	**Weight**	**Grade**	**Thread**	**No. Joints**	**Amount**	**Depth**
Conductor	30"x20"	Pile Joint			1	38.68	
	20"	94#	H-40	Vetco	11	473.54	758
Surface	13-3/8"	54.5#	J-55	Butt.	67	2626.56	2866
Inter-mediate	9-5/8"	40#	N-80	Butt.	84	3282.79	
	9-5/8"	43.5#	N-80	Butt.	109	4431.21	7955
Note:	Pile Joint and 13-5/8" Wellhead removed prior to rig down.						

V	CEMENT RECORD		
String	20"	13-3/8"	9-5/8"
Type of Cement	1000 sx w/2% Gel plus 500 sx w/2% $CaCl_2$	1000 sx w/2% Gel plus 500 sx Neat	900 sx w/.5% HR-7
Number of FT^3	2200	2200	1080
Average weight of slurry	13.7/ 15.4	13.6/ 15.5	15.5
Cement Top	Sea Floor	Sea Floor (Calc.)	5550' (Calc.)
Casing Tested with	0	1500 psi	2000 psi
Number of Centralizers	0	5	25
Number of Scratchers	0	0	0
Stage Collar etc.	0	0	0
Remarks	Gel Prehydrated	Gel Prehydrated. Plug 164' off bottom.	Plug did not bump.

R.L. WOOD
Engineer

WELL BATFISH-1

VI SUBSURFACE COMPLETION EQUIPMENT

DATE COMPLETED _____

Schematic	Equipment Description	Length	Depth

WELL BATFISH #1

VII SAMPLES, CONVENTIONAL CORES, SW CORES

INTERVAL	TYPE	RECOVERED	INTERVAL	TYPE	RECOVERED
2884-9761	Cuttings	Sampled every 10			
2884-9744	Sidewall	Shot 110 Recovered 91			
No conventional cores taken.					

VIII WIRELINE LOGS AND SURVEYS (Incl. FIT)

Type & Scale	From To	Type & Scale	From	To
IES 2" and 5"	2866 - 9759			
FDC/GR "	2000 GR 4500 ~~3474~~ - 9759			
BHCS/GR "	2866 - 9760			
	~~GR to sea floor.~~			
CDM "	2866 - ~~7943~~ 9756			
Velocity Survey	3000 - 7756			
FIT (5)	6287, 7035, 8848, 9238, 9240.			

P.M. COONEY
Geologist

WELL BATFISH 1

IX	FORMATION TOPS/Zones					
NAME	Tops		Gross Interval (ft)	Net Pay (ft).		REMARKS
	M.D.	Sub-sea		Gas	Oil	
Gippsland Fm.	Sea Floor	-223				
			4516			
Top Latrobe Group	4770	-4739				
M. diversus	4770	-4739	1360			
Top L.balmei	6130	-6099		20	-	6270-6290
			1915	131	-	6870-7040
Top T. lilliei (Upper Cret.)	8045	-8014				

X GEOLOGIC ANALYSIS (Pre Drilling prognosis Vs actual results)

Pre-drill

Batfish 1 is located near the crest of an intra-Latrobe closure on the low side of a down-to-the-south growth fault. This well should test both the mid-Paleocene section which produces at Flounder and the T.lilliei section which produces at Tuna.

Age	Formation	Formation Top
	Water	212'
Miocene	Gippsland	-212'
Top Eocene	Latrobe Group	-4750'
Top mid-Paleocene Horizon		-7800'
Top Upper Cretaceous		-9000'

Depths from mean sea level; for drill depths add 31'.

Post-drill

Small accumulations of gas were encountered in the Paleocene at Batfish. Trapping mechanism in all probability is the juxtaposition of impermeable shales against the above mentioned gas bearing sands, across the fault located north of the well. These hydrocarbons are not considered significant.

P.M. COONEY
Geologist

WELL BATFISH #1

IX FORMATION TOPS/Zones

NAME	Tops M.D.	Tops Sub-sea	Gross Interval (ft)	Net Pay (ft). Gas	Net Pay (ft). Oil	REMARKS
Gippsland Fm.	Sea Floor	-223	4196			
Lakes Entrance Fm.	4450	-4419	320			
Top Latrobe Group	4770	-4739				
M. diversus (Flounder Fm.)	4770	-4739	1391			
Top L. balmei	6161	-6130		20	-	6270-6290
			1889	131		6870-7040
Top T. lilliei	8050	-8019				

X GEOLOGIC ANALYSIS (Pre Drilling prognosis Vs actual results)

Pre-drill Batfish 1 is located near the crest of an intra-Latrobe closure on the low side of a down-to-the-south growth fault. This well should test both the mid-Paleocene section which produces at Flounder and the T. lilliei section which produces at Tuna.

Age	Formation	Formation Top
	Water	212'
Miocene	Gippsland	-212'
Top Eocene	Latrobe Group	-4750'
Top Upper Cretaceous		-9000'

Depths from mean sea level; for drill depths add 31'

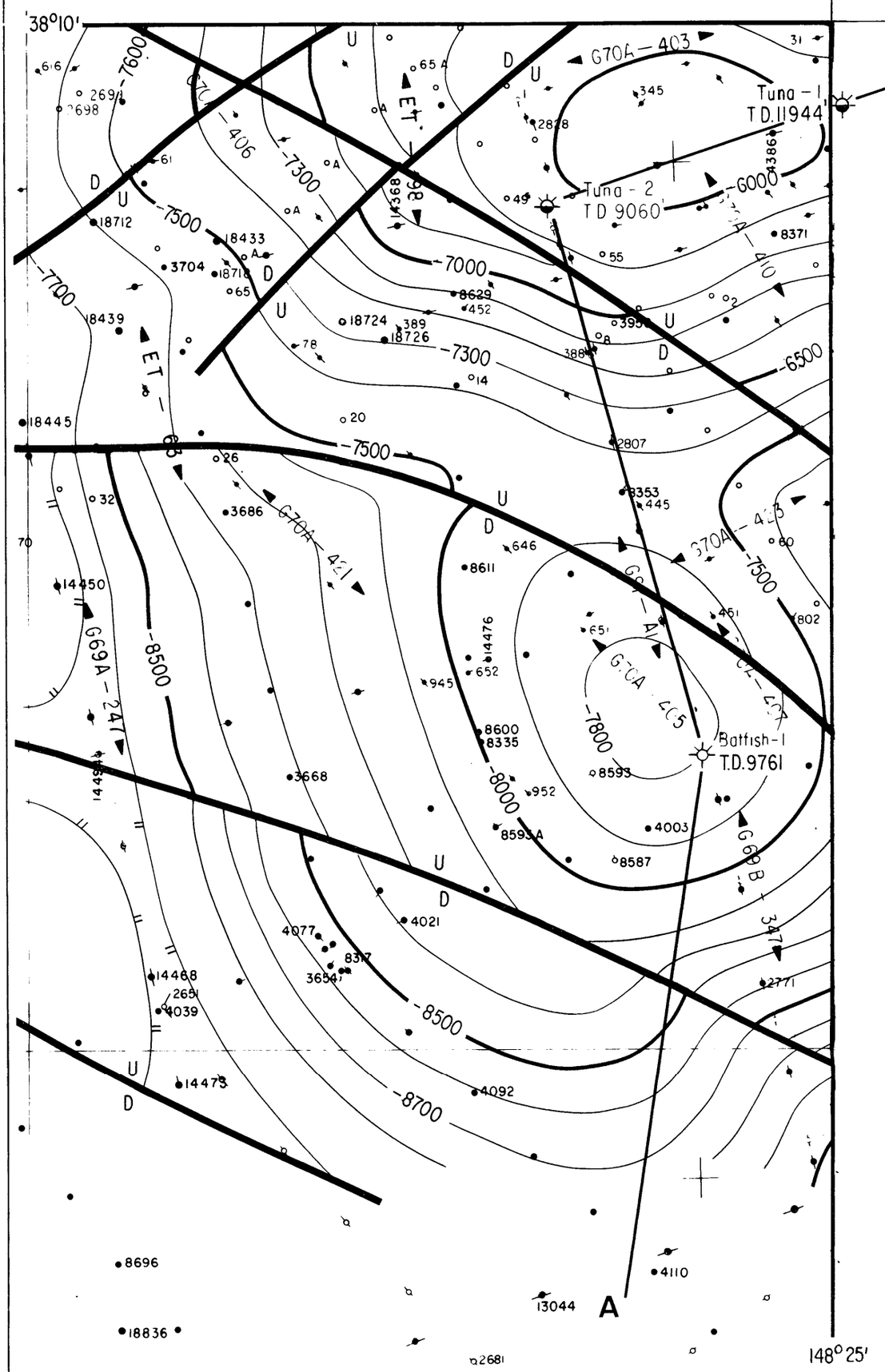
Post-drill Hydrocarbon accumulations, consisting of 20' of net wet gas between 6270'-6290' and 131' of net wet gas between 6870'-7040', were discovered in the Paleocene at this well. A number of small gas shows were recorded on the mud log below these zones but FIT recovery was very low, due to the extremely poor porosities and permeabilities of the sands in this interval.

The major gas zone occurs stratigraphically higher than the oil zones at Tuna to the north and Flounder to the south. The small gas shows discussed above occur in tight sands which are in the equivalent spore zone to the T-1 oil sand at Tuna. No shows were recorded in the section equivalent to the Flounder oil pay, although this section does contain a number of porous and permeable sand stringers at Batfish.

The trapping mechanism responsible for the major gas accumulation below 6870' is thought to be the juxtaposition of permeable sands against impermeable shales along the fault plane. This reservoir, as presently mapped, is of limited areal extent (1288 acres at the gas-water contact) and is estimated to contain 157 BCF wet gas-in-place. The accumulation is thus considered to be non-commercial.

WELL BATFISH-1

GEOLOGIC MAP OF AFTER DRILLING PICTURE



STRUCTURE CONTOUR MAP ON MID-PALEOCENE MARKER

SCALE 1 : 50,000

1 0 1

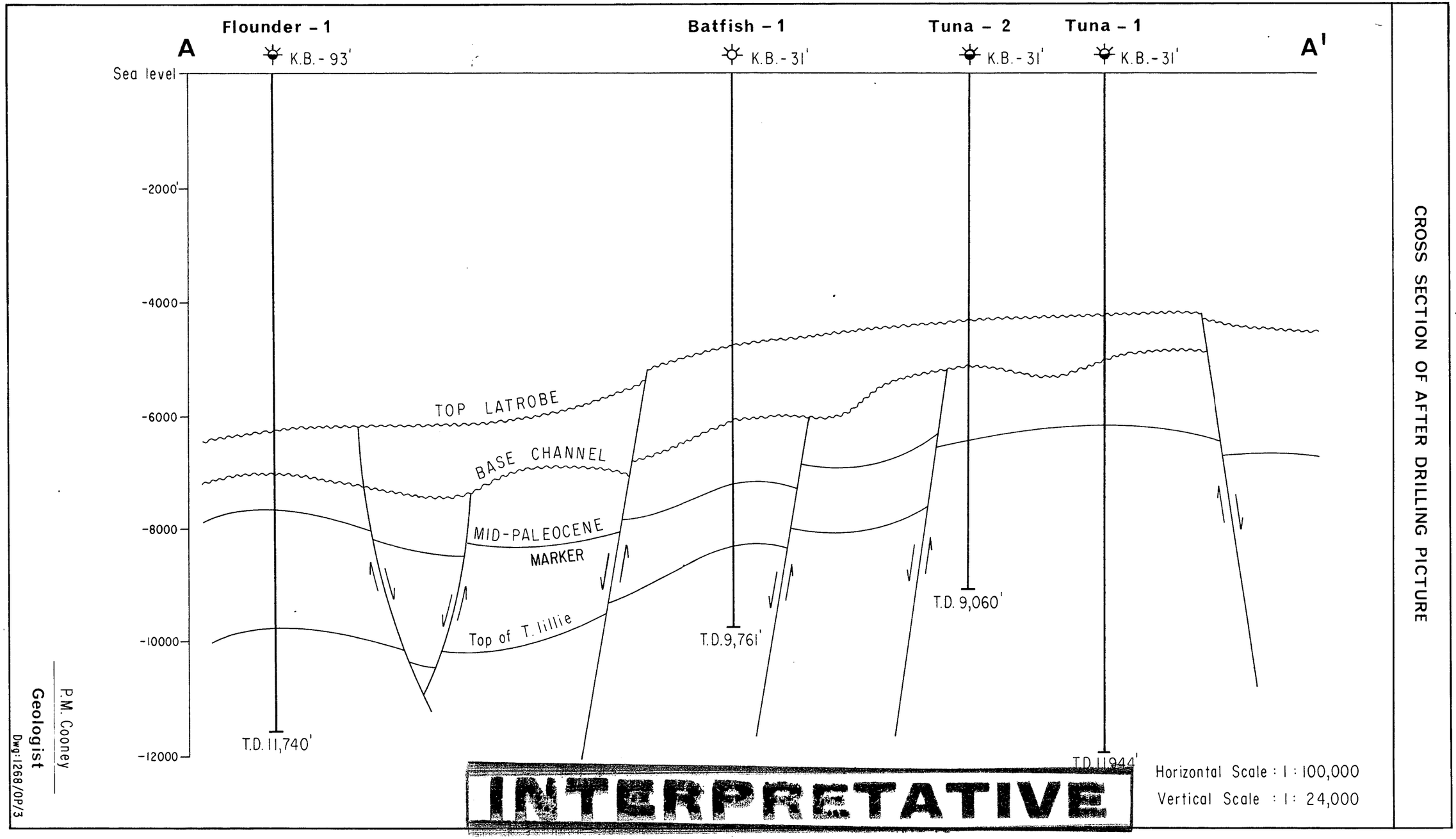
MILES

P.M. COONEY
Geologist

CONTOUR INTERVAL 100'

DATUM : SEA LEVEL

1268/OP/4


Flounder – 1
Batfish – 1
Tuna – 2
Tuna – 1
A
A'
K.B. - 93'
K.B. - 31'
K.B. - 31'
K.B. - 31'
Sea level
-2000'
-4000
-6000
-8000
-10000
-12000
TOP LATROBE
BASE CHANNEL
MID-PALEOCENE MARKER
Top of T. lillie
T.D. 11,740'
T.D. 9,761'
T.D. 9,060'
TD 11944'
INTERPRETATIVE
Horizontal Scale : 1 : 100,000
Vertical Scale : 1 : 24,000
CROSS SECTION OF AFTER DRILLING PICTURE
WELL: Batfish - 1
P.M. Cooney
Geologist
Dwg: 1268/OP/3

1.1 Summary Information and Assessment of Batfish-1.

File in Batfish-1

BATFISH

Assessed By: Geologist: G. Lindsay
Geophysicist: D. Schmidt
Date: February, 1984.

DISCOVERY WELL: Batfish-1

Spud Date:	06/04/1970
Completion Date:	27/05/1970
Total Depth:	2975 metres
K.B. Height:	9.45 metres A.S.L.

LOCATION:

Licence:	VIC/L.4
Latitude:	38^{o} 13' 34"
Longitude:	148^{o} 24' 13"
Co-ordinates:	X = 622,857 mE
	Y = 5,768,150 mN
Water Depth:	68 metres

STRUCTURE

The Batfish field is an intra Latrobe Group faulted anticlinal nose lying about 6km to the SW of the Tuna Field. The field lies beneath the Tuna-Flounder Channel system and there is no top of Latrobe Group or base of channel closure.

The structure measures about 2km by 3km and is cut by a major NW-SE trending normal fault, up thrown to the north by about 150 metres. The fault cuts the structure about 1km north of the crest. Maximum height of fault independent closure is about 30 metres and fault dependent closure about 75 metres.

STRATIGRAPHY

Beneath the 412 metres thick Flounder Formation filling the Tuna-Flounder Channel, Batfish-1 intersected a conventional Latrobe Group sequence.

From the base of the channel to a depth of about 2120 mKB the Latrobe Group consists of interbedded sandstone, shale and coal. The proportion of sandstone decreases and the quality and thickness of the coal increases with depth. The lower most coal in the interval represents the Mid-Palaeocene seismic marker.

From 2120mKB to about 2260mKB, the strata consists of several thick sandstone and shale units. The interval overall represents a widespread marine transgression/regression. This interval is the stratigraphic equivalent of the Flounder field seal and reservoir.

From 2260mKB to T.D. the sequence consists of relatively thinly bedded sandstone, shale and coal. The coals are thinner and of a poorer quality than in the upper part of the Latrobe Group.

HYDROCARBONS

Two main gas bearing intervals were intersected in the Batfish-1 well. The upper and smaller zone between 1917.25mKB and 1911.50mKB and the major zone between 2095.00mKB and 2147.25mKB. The lower zone consists of five separate sandstones. Other hydrocarbon bearing sandstones were encountered but were either too thin to assess or reservoir properties were too poor.

Upper L. balmei Hydrocarbon Zone (1911.50mKB - 1917.75mKB)

The upper L.balmei zone consists of a single sandstone 11.00 metres thick. Batfish-1 intersected a gas/water contact in the sandstone at 1917.25mKB. The sandstone is within a fluvial sand-shale-coal interval. Current mapping suggests that this reservoir spills at the fault to the NE.

F.I.T. 2 at 1916mKB in Batfish-1 recovered 134.5 cubic feet of gas and 1505c.c. of 71.6^{o} API condensate.

Lower L. balmei Hydrocarbon Zone (2095.00mKB - 2147.25mKB)

The lower L.balmei zone comprises five separate sandstones. The upper three sandstones appear to be fluvial in origin while the lower two appear to be marine upper shoreface sandstones. The marine sandstones exhibit a higher porosity than the fluvial sandstones. Batfish-1 intersected a well defined gas-water contact in the lower most sandstone only. No water wet sandstones were seen between any of the gas sandstones and hence there is a strong possibility that all of the sandstones are in pressure communication. However, because of the lack of any pressure data to indicate column height, the possibility that each sand is a separate system must also be considered. If each sand is a separate system then they would appear to spill at the fault to the NE. If they belong to a single system then the fault must seal and the reservoir is full to the closing contour.

F.I.T. 1 at 2144mKB in Batfish-1 recovered 141.1 cubic feet of gas, 1370c.c. of 64° API condensate and 110c.c. of mud.

ASSESSMENT

Calculation of Parameters

Following the re-map of the Tuna-Batfish area (D. Schmidt, 1983) and a re-analysis of the Batfish-1 well logs (W. J. Mudge, 1983). It was considered necessary to reassess the Batfish field. The field was last assessed in 1979 by R. C. N. Thornton but did not include the Upper L.balmei zone.

a) Volumes

All volumes were calculated from the structure map on the Mid-Palaeocene Seismic Marker (Attachment 2).

Upper L. balmei Zone

Batfish-1 Well Intersections

Top of Sandstone	1911.50mKB
G.W.C.	1917.75mKB
Base of Sandstone	1922.50mKB

The volume was calculated assuming a sheet sandstone of 11 metres thickness. Maximum and minimum volumes were ±10% of the most likely volume.

Lower L. balmei Zone

Batfish-1 Well Intersections

Sandstone 1 and 2	Top	2095.00mKB
	Base	2103.50mKB
Sandstone 3	Top	2109.75mKB
	Base	2116.25mKB

Sandstone 4	Top	2119.75mKB
	Base	2126.75mKB
Sandstone 5	Top	2131.50mKB
	G.W.C.	2147.25mKB
	Base	2162.00mKB

Since it is uncertain whether the five sandstones are part of one fluid system or more than one system, the reservoir volumes for this zone were calculated, assuming sheet sandstones, as follows :-

Minimum Case - This assumes the zone consists of four reservoir systems with G.W.C.'s of 2103.50mKB, 2116.25mKB, 2126.75mKB and 2147.25mKB. The gross volume of each system was calculated and multiplied by a suitable net to gross where applicable. The net rock volumes were summed to provide a minimum case volume for the zone.

Maximum Case - This assumes that all the sandstones are part of a single reservoir system with a single G.W.C. at 2147.25mKB. The gross volume of each sandstone was calculated to this contact, multiplied by the appropriate net to gross and summed to provide a maximum case volume for the zone.

Most Likely Case - Having established the end members of the volume range, the most likely volume was taken to be the arithmetic mean of the maximum and minimum volumes.

b) Porosity

Average porosities were determined for the net sandstone in each zone. The maximum and minimum porosities are one standard deviation either side of the mean.

c) Water Saturation

Average Sw's were determined for the net sandstone in each zone. The maximum Sw's for the Upper *L. balmei* zone are one standard deviation either side of the mean and for the Lower *L. balmei* zone, plus and minus 30% of the mean.

d) Net to Gross

A net to gross was calculated for each sand where necessary. A net sand is defined as having greater than 10% porosity.

Reservoir Paramaters

Upper L.balmei Reservoir

	Min	ML	Max
Volume (hectare m)	1900	2112	2323
Porosity	.19	.23	.27
1-SW	.48	.63	.78
Net to Gross	-	1.00	-
Formation Volume Factor	-	0.92	-

Lower L.balmei Reservoir

Volume (hectare m)			
Sand 1 and 2	1943	-	4340
Sand 3	1246	-	2297
Sand 4	808	-	2241
Sand 5	5833	-	5833
Net to Gross			
Sand 1 and 2	-	.51	-
Sand 3	-	.85	-
Sand 4	-	1.00	-
Sand 5	-	1.00	-
Total Net Volume (hectare m)	8691	10465	12239
Porosity	.20	.24	.28
1-SW	.74	.80	.86
Formation Volume Factor	-	0.92	-

Hydrocarbons-in-Place

The reservoir parameters were multiplied using RISKIT to give the following results :-

GSCF (Wet Gas-in-place)

	P.95	P.50	P.05
Upper L.balmei Reservoir	17	21	25
Lower L.balmei Reservoir	116	138	163
TOTAL	133	159	188

ATTACHMENTS

1. Geological Cross section (Dwg. 2207/OP/1)
2. Structure Map - Mid Palaeocene Marker Dwg. (1809/OP/30)

G. A. LINDSAY
February, 1984.

0702L

2.0 LITHOLOGY:

CORE/CUTTINGS DESCRIPTION

2884-2890	90%	CEMENT.
	10%	Angular CALCITE grains - some yellow brown microcrystalline DOLOMITE.
2890-2920	80%	CEMENT.
	20%	Light grey dolomite cemented MARL, trace fossil fragments, glauconitic (angular).
2920-2950	20%	CEMENT.
	70%	MARL, light grey, dolomite, trace fossil fragments.
	10%	COAL, bright-black some very carbonaceous siltstone (origin unknown), conchoidal fracture (presumably foreign).
		Trace microcrystalline DOLOMITE, dark yellow-orange.
2950-2980	100%	MARL, light-very light grey, some very argillaceous. Some with small grains, glauconitic trace fossil fragments.
		Trace coal.
2980-3010		As above.
3010-3040		As above, no coal, trace large rounded-subrounded quartz grains.
3040-3070	100%	MARL, as above, (plus small discoidal forams).
3070-3100		As above, (plus small discoidal forams).
3100-3130		As above.
3130-3160		As above.
3160-3190		As above.
3190-3220		As above, trace crystalline calcite, some as coating. Also some dolomite.

3220-3250	80%	MARL, light grey-grey, very soft, trace fossil fragments, very argillaceous in places.
	20%	angular light brown grains of CALCITE, probably from fairly pure limestone, no fossil fragments, trace pyrite (round forams).
3250-3280	90%	MARL, as above, very argillaceous, grey.
	10%	LIMESTONE, as above.
3280-3310		As above, (forams plus bryzoans).
3310-3340		As above.
3340-3370	100%	MARL, CALCAREOUS MUDSTONE, increasing slightly in hardness, medium grey. Trace dolomite and pyrite. Trace limestone. Abundant forams, trace bryzoa, and pelecypods.
3370-3400	100%	MARL, as above.
3400-3430		As above.
3430-3460		As above, CALCAREOUS MUDSTONE.
3460-3490		As above, increasing in fossil material. Mainly forams, round, discoidal and elongate.
3490-3520		As above.
3520-3550		As above, CALCAREOUS MUDSTONE.
3550-3580		As above.
3580-3610		As above increasing in pyrite (disseminated).
3610-3640		As above.
3640-3670		As above.
3670-3700		As above.

3700-3730	As above, MARL-CALCAREOUS MUDSTONE, trace of pyritised bryzoans plus FORAMS.
3730-3760	As above.
3760-3790	As above, abundant forams.
3790-3820	As above.
3820-3850	As above, abundant pyrite - some free, some as pyritised organisms.
3850-3880	As above, becoming slightly more consolidated. Soft, white to light grey. Abundant pyrite and fossil debris.
3880-3910	As above.
3910-3940	As above.
3940-3970	As above.
3970-4000	As above, abundant organisms (forams).
4000-4020	As above, matrix so soft, cuttings are mainly calcareous organisms.
4020-4040	Light to dark grey MARL or CALCAREOUS MUDSTONE, some very argillaceous. Generally light, very soft matrix, large number calcareous organisms - some pyritised especially bryzoans. Calcareous forams.
4040-4060	As above.
4060-4080	As above.
4080-4100	As above.
4100-4120	As above, trace Glauconite.

4120-4140	CALCAREOUS MUDSTONE, soft, light grey to grey. Contains abundant silt sized calcareous organisms. Abundant forams and pyrite, trace glauconite.
4140-4160	As above.
4160-4180	As above.
4180-4200	As above.
4200-4220	As above.
4220-4240	As above.
4240-4260	As above, occasional quartz grains (angular to subangular).
4260-4280	As above.
4280-4300	As above, trace glauconite.
4300-4320	As above, increasing in hardness, Grey, abundant organisms, increase in fine opaques.
4320-4340	As above.
4340-4360	As above, trace MARL.
4360-4380	As above.
4380-4400	CALCAREOUS MUDSTONE, mid grey to grey, fairly soft calcareous cement-matrix. Occasional glauconitic grains. No pyrite. Fossils present (not abundant) - forams.
4400-4420	As above.
4420-4440	As above, colour grey to green grey, occasional quartz grains.

4440-4460		As above.
4460-4480		As above, trace Glauconite.
4480-4500		As above, light green to grey to medium grey. Trace glauconite. Trace pyrite.
4500-4520		As above.
4520-4540		As above.
4540-4560		As above.
4560-4580		As above.
4580-4600		As above, trace of skeletal limestone.
4600-4620		As above.
4620-4640		As above. Trace of pyrite and glauconite.
4640-4660		As above.
4660-4680		As above, abundant forams.
4680-4700		MUDSTONE, very slightly calcareous, very light green grey, soft to medium hard abundant scattered forams. Trace pyrite, rare spines.
4700-4710		MUDSTONE, as above.
4710-4720		MUDSTONE, as above.
4720-4730		MUDSTONE, as above with trace quartz unconsolidated coarse angular. No shows. Trace glauconite.
		TOP LATROBE 4726 (-4695).
4730-4740	70%	MUDSTONE, as above.
	30%	SANDSTONE, quartzose, unconsolidated, white to clear, fine to coarse occasionally granular, subrounded to subangular, moderately sorted. No shows. MUDSTONE glauconitic cavings?

4740-4750	70%	SANDSTONE, quartz grains, as above.
	30%	MUDSTONE, as above.
		Occasional PYRITE associated with quartz. No shows.
4750-4760	80%	SANDSTONE, as above.
	20%	MUDSTONE, as above. No shows.
4760-4770	100%	SANDSTONE, pyritic in part. Trace MUDSTONE.
4770-4780	90%	SANDSTONE, as above.
	10%	MUDSTONE, as above, slightly calcareous. Trace resin. No shows.
4780-4790	100%	SANDSTONE, as above with minor mudstone as above. No shows.
4790-4800	100%	SANDSTONE, as above, trace MUDSTONE, as above. No shows.
4800-4810	80%	SANDSTONE, as above.
	20%	MUDSTONE.
4810-4820	90%	SANDSTONE, as above.
	10%	MUDSTONE.
4820-4830	80%	SANDSTONE.
	20%	MUDSTONE, no shows.
4830-4840	70%	SANDSTONE, unconsolidated, clear to white, fine to coarse, occasionally granular predominantly medium grained. Angular to subrounded, moderately well sorted. Good porosity. No shows.
	30%	MUDSTONE, (probably cavings) as above.
4840-4850	50%	SANDSTONE, as above.
	50%	MUDSTONE, (approx. 20% cavings as above). Other 30% light grey silty, blocky, firm.
4850-4860	30%	SANDSTONE.
	70%	MUDSTONE, large proportion of cavings but mainly silty, light grey, blocky, medium to hard, as above. Forams (probably cavings).

4860-4870	20%	SANDSTONE, as above.
	80%	MUDSTONE, as above (again large proportion of cavings).
4870-4880	50%	SANDSTONE, as above.
	50%	MUDSTONE, as above.
4880-4890	60%	SANDSTONE, as above.
	40%	MUDSTONE, as above.
4890-4900	50%	SANDSTONE, as above,
	50%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, very light grey to speckled light brown. Soft to medium hard, sandy. No shows.
4900-4910	60%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above, wide range of colour, some yellowish to dark brown with black carbonaceous flecks. Faint white fluorescence but no cut.
4910-4920	60%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above.
4920-4930	60%	SANDSTONE, as above, pyrite common.
	30%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above. No shows.
4930-4940	60%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above. No shows.
4940-4950	60%	SANDSTONE.
	30%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above. No shows.
4950-4960	70%	SANDSTONE, as above.
	25%	MUDSTONE, as above.
	5%	DOLOMITIC SILTSTONE, as above. No shows.
4960-4970	60%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above. No shows.

4970-4980		As above.
4980-4990	70%	SANDSTONE, as above.
	20%	MUDSTONE, as above.
	10%	DOLOMITIC SILTSTONE, as above. No shows.
4990-5000	70%	SANDSTONE, as above, pyrite common.
	30%	MUDSTONE, as above, only minor dolomitic siltstone. No shows. Bulk of above 2 samples composed of cavings.
5000-5010		As above. No shows.
5010-5020		As above. No shows.
5020-5030		As above, but quartz grains finer and more rounded. No shows.
5030-5040		As above.
5040-5050		As above.
5050-5060	50%	SANDSTONE unconsolidated, very fine to coarse, as above.
	10%	SHALE, brown grey, very soft, carbonaceous, blocky.
	40%	MUDSTONE, cavings.
5060-5070		As above. No shows.
5070-5080		As above, pyrite common. Minor carbonaceous shale fragments. No shows.
5080-5090		As above.
5090-5100		As above.
5100-5110	60%	SANDSTONE, as above, but brown shale absent.
	40%	MUDSTONE, as above.
5110-5120	60%	MUDSTONE, as above.
	40%	SANDSTONE, as above.
		Minor carbonaceous SHALE fragments. No shows.

5120-5130	70%	MUDSTONE, as above.
	30%	SANDSTONE, as above.
		PYRITE, common, minor brown shale.
5130-5140	80%	MUDSTONE, as above.
	20%	SANDSTONE, as above. Minor brown shale, very soft.
5140-5150	70%	MUDSTONE, as above.
	20%	SANDSTONE, with minor brown shale and carbonaceous shale as well as pyrite.
5150-5160	50%	SANDSTONE, as above.
	50%	MUDSTONE, as above but softer, more blocky, with minor soft brown shale and pyrite.
5160-5170	70%	MUDSTONE, as above.
	30%	SANDSTONE, as above with minor pyrite and soft brown shale. (reverse drilling break).
5170-5180		As above.
5180-5190	80%	MUDSTONE, light grey to light green, soft to medium hard, flakey - blocky.
	20%	SANDSTONE, as above, and soft brown shale minor pyrite (marcasite?).
5190-5200	100%	MUDSTONE, as above with minor brown shale as above and occasional quartz grains.
5200-5210		As above, trace of pyrite.
5210-5220		As above, occasional quartz grains occur as inclusions in mudstone. No show.
5220-5270		As above.
5278		P.O.O.H. TO CHANGE BIT AT 06.15.

5270-5280	10%	SANDSTONE, unconsolidated, clear to white. Medium to coarse sand. No shows.
	10%	SHALE, brown, grey silty with occasional carbonaceous flecks.
	80%	MUDSTONE, cavings.
5280-5290	10%	SANDSTONE, unconsolidated, as above, in part light grey, fine to medium grained, dolomitic cement, sand, well sorted. Firm to moderate with poor visible porosity and permeability, faint yellow mineral fluorescence. No cut.
	20%	SHALE, brown grey, silty, scattered carbonaceous debris, firm blocky.
	70%	MUDSTONE.
5290-5300	100%	SANDSTONE, quartzose, unconsolidated, white to clear, medium to coarse, occasional granular, subangular to subrounded, moderately sorted. No shows. Trace dolomitic sandstone, as above, trace shale as above.
5300-5310		As above.
5310-5320		As above, occasional clusters of fine grains dolomitic sandstone with little if any porosity. No shows.
5320-5340		As above.
5340-5360		As above but coarse-granular, well sorted, excellent porosity.
5360-5370	70%	SANDSTONE, as above
	30%	MUDSTONE and SHALE, cavings.
5370-5380		As above, occasional dolomitic sandstone.
5380-5390	100%	SANDSTONE, as above. Few cavings, coarse grained, well sorted.
5390-5400		As above.

5400-5410	50%	SANDSTONE, as above.
	50%	MUDSTONE, as above. Minor brown shale and dolomitic siltstone (cavings). No shows.
5410-5420	60%	SANDSTONE, as above.
	40%	MUDSTONE, etc. as above. No shows.
5420-5480	100%	medium to coarse grains of QUARTZ as above, well sorted. Minor cavings. No shows.
5480-5620	100%	SANDSTONE, as above. Trace MUDSTONE cavings, occasional trace dolomitic sandstone with faint yellow, mineral fluorescence.
5620-5630	90%	SANDSTONE, as above.
	10%	MUDSTONE, as above.
5630-5650	80%	SANDSTONE, as above.
	20%	MUDSTONE, as above.
5650-5660	80%	SANDSTONE, as above.
	20%	MUDSTONE, cavings, as above. Trace silty shale, brown grey with scattered carbonaceous flecks.
5660-5670	50%	SANDSTONE, as above.
	30%	MUDSTONE, cavings, as above.
	20%	CLAY, bentonitic, very light grey, soft, sticky, blocky, trace brown shale, as above.
5670-5680	50%	SANDSTONE, as above, medium to fine grained, subangular grains, well sorted.
	30%	MUDSTONE, as above. cavings?
	20%	BENTONITIC CLAY, Trace brown shale, as above. No shows.
5680-5690	70%	SANDSTONE, as above,medium to coarse grained, moderately well sorted.
	20%	MUDSTONE, as above.
	10%	SHALE, brown, as above. No shows.

5690-5700	80%	SANDSTONE, as above, coarse to granular.
	10%	MUDSTONE, as above.
	10%	SHALE, brown, as above. No shows.
5700-5710	80%	SANDSTONE, as above.
	20%	MUDSTONE, as above (cavings?)
		Trace brown SHALE, as above. No shows.
5710-5720	50%	SANDSTONE, as above.
	50%	MUDSTONE, as above.
		Trace brown SHALE, as above. No shows.
5720-5730	70%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
		Trace brown SHALE, as above, yellow mineral fluorescence (dolomite) common in sandstone.
5730-5750	50%	SANDSTONE, unconsolidated as above, in part dolomitic, with fine to medium grains, occasionally coarse, well sorted with dolomitic cement, trace pale faint yellow mineral fluorescence. No cut.
	50%	MUDSTONE.
5750-5760	20%	SANDSTONE, as above, pyritic in part.
	80%	MUDSTONE cavings.
5760-5770	10%	SANDSTONE as above.
	90%	MUDSTONE, cavings. Trace SHALE, silty brown grey, with scattered carbonaceous flecks. Slight trace PYRITE.
5770-5790	90%	MUDSTONE, cavings, minor soft brown SHALE, dolomitic SILTSTONE, quartz grains, old cement, trace pyrite, probably all cavings. No shows.
5790-5800		As above.
5800-5810		As above.
5810-5820	80%	MUDSTONE, as above.
	20%	SANDSTONE, quartz grains, as above, minor brown shale and siltstone, as above.

5820-5830	100%	MUDSTONE, as above. Trace brown SHALE and dolomitic SILTSTONE. No shows.
5830-5840	50%	MUDSTONE, as above.
	40%	QUARTZ grains, as above.
	10%	SILTY SANDSTONE, dolomitic, white to light brown, carbonaceous flecks and laminae, hard to very hard, very little visible porosity. No shows.
5840-5850	50%	MUDSTONE, as above.
	50%	SANDSTONE, as above.
		Minor silty dolomitic SANDSTONE, as above. No shows.
5850-5860	50%	SANDSTONE, as above. Trace pyrite.
	30%	MUDSTONE, as above. No shows.
	20%	SANDSTONE, Dolomitic silty, as above.
5860-5870		As above, minor soft, brown shale. No shows. Trace pyrite.
5870-5880	40%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
	30%	SANDSTONE, dolomitic silty, as above. Flakes of soft carbonaceous material common, trace soft brown shale (almost black with large amount of carbonaceous flakes), yellow mineral fluorescence from dolomite very common. No cut. No shows.
5880-5890	60%	MUDSTONE, as above.
	20%	SANDSTONE, as above.
	10%	SILTY DOLOMITIC SANDSTONE, as above.
	10%	SHALE, soft brown carbonaceous flecks.
5890-5900	80%	MUDSTONE, as above.
	10%	SHALE, soft brown, often very carbonaceous dark brown - almost black carbonaceous flakes common, minor quartz grains and silty dolomitic sandstone as above. No shows.
5900-5910		As above, trace PYRITE. No show.

5910-5920	50%	SANDSTONE, as above.
	40%	MUDSTONE.
	10%	SHALE, soft brown.
		Trace Dolomitic silty sandstone, pyrite, coal. No shows.
5920-5930	70%	SANDSTONE, quartzose, white to clear, coarse to granular, subangular to subrounded, well sorted, good porosity.
	20%	MUDSTONE, as above.
		Minor brown shale, as above, coal and pyrite. Trace resin and dolomitic silty sandstone as above. No shows.
5930-5940	90%	SANDSTONE, as above.
		Minor MUDSTONE, as above, brown SHALE, as above.
		Trace pyrite and dolomitic silty sandstone, as above.
		No shows.
5940-5960	70%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
		Minor brown shale, trace pyrite, soft white clay, coal and hard brown silty sandstone, as above. No shows.
5960-5970	80%	SANDSTONE, as above.
	20%	MUDSTONE, as above.
		Minor soft brown shale, trace brown silty sandstone, as above, very hard, trace coal, pyrite, dolomite cemented quartz grains, mineral fluorescence only.
5970-5980		As above, but no coal or silty sandstone, no show.
5980-5990	60%	SANDSTONE, as above.
	40%	MUDSTONE, as above.
		Minor soft brown shale, trace dolomitic silty sandstone, as above, coal, pyrite. No shows.
5990-6000	60%	SANDSTONE, as above.
	30%	MUDSTONE, as above.
	10%	SHALE, soft brown, as above.
		Trace pyrite, coal. No shows.

6000-6010		As above, trace dolomitic silty sandstone, trace dark grey, very hard rock (chert?). No visible grains, occasionally associated with quartz. Trace soft white shale. No shows.
6010-6020		As above, sample but proportions.
	70%	SANDSTONE, as above.
	20%	MUDSTONE, as above.
	10%	SHALE, soft brown, as above. No shows.
6020-6030	50%	SANDSTONE, as above.
	40%	MUDSTONE, as above.
	10%	SHALE, soft brown, as above. Trace pyrite, soft, white, shale (same as brown except for colour), dolomitic silty sandstone.
6030-6060	40%	SANDSTONE, as above.
	40%	MUDSTONE, as above.
	20%	SHALE, brown soft, as above.
		Trace pyrite, white, soft shale, as above. No shows.
6060-6080	50%	SANDSTONE, unconsolidated as above. No shows.
	40%	MUDSTONE, as above.
	10%	SHALE, as above. Trace pyrite.
6080-6090	20%	SANDSTONE, as above,
	10%	SHALE, as above,
	70%	MUDSTONE cavings.
6090-6100	90%	MUDSTONE, as above. No shows. Minor soft brown shale, as above and sandstone, as above.
6100-6110	90%	MUDSTONE, as above.
	10%	SHALE, soft brown, as above, trace sandstone, as above. No shows.
6110-6130	80%	MUDSTONE, cavings as above.
	20%	SHALE as above, trace coal, trace sandstone.
6130-6150		As above. No shows.

6150-6160	70%	SANDSTONE, as above. Trace pyrite.
	20%	MUDSTONE, as above.
	10%	SHALE, brown, as above. No shows.
6160-6180	90%	SANDSTONE, as above. No shows. Minor MUDSTONE as above and soft brown shale as above.
6180-6190	80%	SANDSTONE, as above, medium to coarse grained.
	20%	MUDSTONE, as above. Trace soft brown shale, as above, pyrite, coal. No shows.
6190-6200	60%	SANDSTONE, as above, trace pyrite associated with quartz grains.
	30%	MUDSTONE, as above.
	10%	SHALE, soft brown, as above. Trace coal. No shows.
6200-6210		As above.
6210-6220	40%	MUDSTONE, as above.
	30%	SANDSTONE, as above.
	30%	COAL, dark brown to black blocky angular fragments. 0.5-1 mm across, moderately hard to very hard, minor soft brown shale as above. No shows.
6220-6230	40%	MUDSTONE, as above.
	40%	COAL, as above.
	10%	SHALE, soft brown, as above.
	10%	SANDSTONE, as above. Trace pyrite. No shows.
6230-6250	60%	MUDSTONE, as above.
	20%	COAL, as above.
	10%	SHALE, soft brown, as above.
	10%	SANDSTONE, as above. Fine to medium grained. Trace soft white clay. No show. Proportion of fine sands probably much higher but being lost in washing through shaker.
6250-6270	70%	MUDSTONE, as above.
	10%	COAL, as above.
	10%	SHALE, soft brown, as above.
	10%	SANDSTONE, as above. No show.

6270-6300	30%	SANDSTONE, unconsolidated, medium to coarse, subangular to subrounded, well sorted. No shows in part as above.
	10%	COAL
	10%	SHALE, as above.
	50%	MUDSTONE, as above.
6300-6310	30%	COAL, as above.
	30%	MUDSTONE, as above.
	30%	SANDSTONE, as above.
		Minor soft, brown shale, and dolomitic silty sandstone, trace pyrite. No shows.
6310-6320	50%	MUDSTONE, as above.
	20%	SANDSTONE, as above. No shows.
	20%	SHALE, soft, brown, as above.
	10%	COAL, as above. Trace pyrite, dolomitic silty sandstone, as above.
6320-6330	80%	MUDSTONE, cavings.
	20%	SANDSTONE, unconsolidated, as above. Trace coal, trace shale.
6330-6340	80%	MUDSTONE.
	10%	SANDSTONE, as above.
	10%	SHALE, as above. Trace coal.
6340-6350	60%	MUDSTONE.
	20%	SANDSTONE, as above.
	20%	SHALE.
6350-6360	60%	COAL and carbonaceous SHALE.
	30%	MUDSTONE, as above.
		Minor sandstone and soft brown shale.
6360-6370	50%	MUDSTONE, as above.
	30%	SANDSTONE, as above.
	20%	COAL and carbonaceous SHALE. Trace resin, minor soft brown shale, dolomitic silty sandstone. No shows.

6370-6380	60%	MUDSTONE, as above.
	20%	SANDSTONE, as above.
	20%	SHALE, soft brown, silty, as above. Minor coal and carbonaceous shale. No shows.
6380-6390	60%	MUDSTONE, as above.
	20%	SHALE, soft brown, silty, as above.
	20%	COAL and carbonaceous SHALE. Minor sandstone. No shows. Trace resin.
6390-6410	80%	MUDSTONE, as above. Trace quartz.
	10%	COAL and carbonaceous SILTSTONE.
	10%	SHALE, soft, dark brown, very carbonaceous, silty, as above, but higher carbon content. No shows.
6410-6430		As above but white dolomitic silty sandstone with mineral fluorescence common. No shows. Trace pyrite.
6430-6440	90%	MUDSTONE, as above.
	10%	SHALE, as above.
		Trace sandstone, trace coal.
6440-6450	70%	MUDSTONE
	10%	SANDSTONE, unconsolidated, as above.
	20%	SHALE brown, grey, silty, carbonaceous, blocky, firm as above.
6450-6460	60%	MUDSTONE.
	20%	SANDSTONE, unconsolidated as above.
	10%	COAL.
	10%	SHALE, as above, in part grey black, very carbonaceous, blocky, firm.
6460-6480	60%	MUDSTONE, as above.
	20%	SHALE, soft, dark brown, as above.
	10%	COAL or carbonaceous SHALE, as above.
	10%	SANDSTONE, unconsolidated. No shows.

6480-6490	90%	COAL or carbonaceous SHALE, as above, minor brown shale.
	10%	MUDSTONE, as above. Occasional quartz grains. No shows. Coal sweating gas.
6490-6500	60%	SHALE, grey to light brown, dark brown, black, high content of carbonaceous material as flakes and layers, soft to moderately hard, blocky, fine grained, silty.
	30%	MUDSTONE, as above.
	10%	COAL and carbonaceous SHALE, occasional quartz grains. No shows.
6500-6510	10%	SANDSTONE as above.
	40%	SHALE, brown grey, silty, carbonaceous, blocky, firm.
	10%	SILTSTONE, light grey, moderately well indurated. No shows.
	40%	MUDSTONE, cavings, trace coal.
6510-6520	40%	COAL, as above (probably half carbonaceous shale)
	40%	MUDSTONE, as above.
	10%	SHALE, as above.
	10%	SANDSTONE, as above.
		Trace dolomitic siltstone. No shows.
6520-6530	80%	SHALE, carbonaceous, hard, brittle, blocky sweating gas.
	20%	COAL, vitreous lustre, conchoidal fracture, minor sandstone, as above and brown shale, as above, trace resin. No shows.
6530-6550	40%	SHALE, carbonaceous.
	20%	SANDSTONE, as above, trace pyrite associated with carbonaceous shale.
	20%	SHALE, soft brown.
	20%	MUDSTONE, no shows.
6550-6560	80%	SHALE, carbonaceous, as above.
	10%	COAL, as above, trace resin. No shows.
	10%	MUDSTONE, as above.
		Minor brown shale as above and occasional quartz grains.

6560-6580	30%	COAL, as above. Trace resin.
	20%	SHALE, carbonaceous.
	40%	MUDSTONE, as above.
	10%	SHALE, brown, occasional quartz grains. No shows.
6580-6590	40%	SANDSTONE, unconsolidated, medium to coarse, occasionally granular, subangular to subrounded, moderately well sorted. No shows.
	20%	COAL.
	20%	SHALE, grey black, very carbonaceous, silty, blocky.
	20%	MUDSTONE cavings.
6590-6600	20%	COAL.
	40%	SHALE, carbonaceous.
	20%	MUDSTONE, as above.
	10%	SHALE, brown
	10%	SANDSTONE. No shows.
6600-6610	60%	MUDSTONE, as above.
	20%	COAL.
	20%	SHALE, brown.
	10%	SANDSTONE. No shows.
6610-6620	30%	COAL.
	30%	SHALE, carbonaceous. No shows.
	10%	SANDSTONE, as above.
	10%	SHALE, brown.
	20%	MUDSTONE, as above.
6620-6630		As above but 20% SANDSTONE and 10% MUDSTONE.
6630-6640	50%	COAL.
	50%	SHALE, grey black, very carbonaceous, bleeding gas.
6640-6650	10%	MUDSTONE, as above.
	40%	COAL. No shows.
	50%	SHALE, carbonaceous, as above. Trace brown shale, carbonaceous shale bleeding gas.

6650-6670	40%	COAL.
	20%	SHALE, carbonaceous, as above. No shows.
	20%	MUDSTONE, as above.
	20%	SHALE, brown, as above. Occasional quartz grains.
6670-6680	50%	COAL.
	30%	SHALE, carbonaceous.
	10%	SHALE, brown.
	10%	MUDSTONE.
6680-6690	50%	COAL.
	40%	SHALE, carbonaceous, grey black.
	10%	SHALE, brown. Trace mudstone, trace sandstone.
6690-6730	40%	MUDSTONE, as above. No shows.
	40%	COAL.
	10%	SHALE, carbonaceous.
	10%	SHALE, brown. Trace dolomitic siltstone. Occasional quartz grains.
6730-6740	60%	COAL.
	40%	SHALE, carbonaceous, as above. No shows.
6740-6750	40%	COAL.
	30%	SHALE, carbonaceous.
	20%	SHALE, brown grey, silty with scattered carbonaceous debris.
	10%	MUDSTONE, cavings.
6750-6770	20%	COAL.
	20%	SHALE, grey black.
	20%	SHALE, brown grey.
	40%	MUDSTONE, cavings.
6770-6780	30%	COAL.
	20%	SHALE, grey black
	30%	SHALE, brown grey,
	20%	MUDSTONE, cavings.

6780-6790	20%	COAL.
	60%	SHALE, brown grey, grey black. silty and mica in part, firm.
	20%	MUDSTONE, as above. Trace light grey siltstone interlaminated with shale. No shows.
6790-6800	60%	SHALE, as above.
	30%	SHALE, dark grey.
	10%	MUDSTONE.
6800-6810	20%	COAL.
	20%	SHALE, grey black.
	20%	SHALE, brown
	40%	MUDSTONE.
6800-6830	70%	SHALE, brown grey, silty in part, carbonaceous, blocky.
	10%	COAL.
	20%	SHALE, black.
6830-6860	50%	MUDSTONE, as above. No shows.
	20%	SHALE, carbonaceous.
	10%	COAL.
	20%	SHALE, brown. Occasional quartz grains.
6860-6870		Almost 100% COAL. No shows.
		P.O.O.H. CHANGE BIT AT 6871.
6870-6880	60%	COAL.
	30%	MUDSTONE.
	10%	SHALE, brown as above. No shows.
6880-6910	50%	COAL.
	20%	SHALE, carbonaceous, as above.
	10%	SHALE, brown, as above.
	20%	MUDSTONE, as above. No shows. Coal bleeding gas.
6910-6920	30%	SANDSTONE, unconsolidated, medium to coarse grained, subangular to subrounded, well sorted. No shows.
	30%	COAL.
	20%	SHALE, brown grey.
	20%	MUDSTONE.

6920-6930	70%	SANDSTONE, unconsolidated, as above.
	20%	COAL.
	10%	SHALE, grey black, very carbonaceous.
6930-6940	40%	SANDSTONE.
	60%	COAL.
6940-6950		Almost 100% COAL. Trace MUDSTONE as above. and brown SHALE as above. No shows.
6950-6960	50%	COAL, trace pyrite.
	40%	SANDSTONE, as above. Trace brown shale, as above.
	10%	MUDSTONE. No show.
6960-6970	50%	SANDSTONE, as above.
	40%	COAL, as above.
	10%	SHALE, brown, as above. No shows.
6970-6980	40%	SANDSTONE, as above.
	30%	COAL.
	10%	SHALE, carbonaceous, as above.
	10%	SHALE, brown.
	10%	MUDSTONE, as above. No shows.
6980-6990	50%	COAL.
	20%	SHALE, carbonaceous, as above.
	30%	SANDSTONE, minor brown shale as above and mudstone as above. No shows.
6990-7000	40%	SANDSTONE, as above.
	10%	SHALE, brown as above.
	20%	COAL.
	30%	SHALE, carbonaceous. No show.
7000-7030	30%	MUDSTONE, as above.
	30%	SANDSTONE.
	30%	COAL and carbonaceous SHALE.
	10%	SHALE, brown. No shows.

7030-7040	50%	MUDSTONE, as above.
	20%	COAL.
	20%	SHALE, brown as above.
	10%	SANDSTONE, as above. Trace pyrite, resin. No show.
7040-7050	50%	MUDSTONE, as above.
	20%	SHALE, carbonaceous as above.
	10%	COAL.
	20%	SHALE, brown, as above. Occasional quartz grains. No shows.
7050-7060	30%	SHALE, carbonaceous, as above.
	20%	COAL.
	30%	MUDSTONE as above.
	20%	SHALE, brown, occasionally quartz grains. Trace dolomitic siltstone as above. No shows.
7060-7070	40%	MUDSTONE, as above.
	20%	COAL.
	20%	SHALE, carbonaceous, as above.
	20%	SHALE, brown, as above. Trace dolomitic siltstone as above. No show.
7070-7090	30%	SHALE, brown grey, carbonaceous debris scattered, blocky.
	10%	SHALE, grey black, very carbonaceous.
	10%	COAL.
	50%	MUDSTONE, trace sandstone fine to medium grains sand, well sorted, dolomitic, moderate with trace mineral fluorescence only. No cut.
7090-7100	30%	SHALE, brown grey as above.
	30%	SHALE, grey black as above.
	30%	COAL.
	10%	MUDSTONE, trace sandstone, unconsolidated.
7100-7110	10%	SANDSTONE, unconsolidated.
	20%	COAL.
	20%	SHALE, grey black.
	30%	SHALE, brown
	20%	MUDSTONE.

7110-7130	40%	SANDSTONE, unconsolidated.
	20%	COAL.
	10%	SHALE, grey black
	20%	SHALE, brown grey
	10%	MUDSTONE.
7130-7180	10%	SANDSTONE, unconsolidated.
	20%	COAL.
	20%	SHALE, grey black.
	40%	SHALE, brown grey
	10%	MUDSTONE.
7180-7190	30%	MUDSTONE, as above.
	30%	SHALE, carbonaceous.
	10%	COAL.
	30%	SHALE, brown grey, as above. Occasional quartz grains. No shows.
7190-7200	30%	SHALE, carbonaceous
	30%	COAL.
	30%	SHALE, dark brown
	10%	MUDSTONE, as above. Coals sweating gas. No shows.
7200-7210	60%	SHALE, dark brown, large amount of contained carbonaceous material.
	20%	SHALE, carbonaceous.
	10%	COAL.
	10%	MUDSTONE, as above. Trace pyrite, occasional quartz grains. No shows.
7210-7230	30%	SHALE, dark brown, as above.
	20%	SHALE, carbonaceous
	20%	COAL.
	30%	MUDSTONE, as above. Occasional quartz grain. No shows.
7230-7260	20%	COAL.
	20%	SHALE, carbonaceous as above.
	30%	SHALE, dark brown.
	30%	MUDSTONE, as above. No show.

7260-7270	40%	MUDSTONE.
	20%	COAL.
	20%	SHALE, carbonaceous.
	20%	SHALE, dark brown, as above. No show. Occasional quartz grains, trace pyrite.
7270-7290	10%	COAL.
	30%	SHALE, dark grey, very carbonaceous, blocky.
	40%	SHALE, brown grey, silty in part, scattered carbonaceous debris.
	20%	MUDSTONE, cavings.
7290-7300	30%	COAL.
	20%	SHALE, grey black
	20%	SHALE, brown grey
	30%	MUDSTONE.
7300-7310	50%	MUDSTONE, as above.
	20%	SHALE, carbonaceous.
	10%	COAL.
	10%	SHALE, brown.
	10%	SANDSTONE, as above. No shows.
7310-7320	70%	SHALE, light grey in part silty and micaceous, soft and sticky.
	20%	COAL.
	10%	MUDSTONE, as above. Trace sandstone, unconsolidated. No shows.
7320-7330	30%	COAL.
	10%	MUDSTONE, as above.
	10%	SHALE, dark brown
	50%	SHALE, white to light grey as above, occasional quartz grains. No shows.
7330-7350	50%	COAL.
	40%	SHALE, white, as above.
	10%	SHALE, dark brown. Minor mudstone and white Siltstone. No shows.

7350-7360	40%	COAL.
	40%	SHALE, carbonaceous.
	10%	SHALE, brown, as above.
	10%	MUDSTONE, as above. Trace white shale as above. No shows.
7360-7370	20%	COAL.
	20%	SHALE, carbonaceous.
	40%	SHALE, white as above.
	20%	SHALE, brown, as above. No shows. Occasional quartz grains. Trace pyrite. Minor MUDSTONE as above, cavings.
7370-7380	40%	COAL.
	40%	SHALE, carbonaceous
	10%	SHALE, brown, as above.
	10%	MUDSTONE, as above (Lakes Entrance cavings) Minor white SHALE, as above. No shows.
7380-7390	30%	COAL.
	30%	SHALE, carbonaceous
	20%	SHALE, brown, as above.
	10%	SHALE, white, as above.
	10%	MUDSTONE, as above. No shows.
7390-7400	10%	COAL.
	10%	SILTSTONE, white to very light grey, sandy with very fine quartz grains scattered; firm, argillaceous. No shows.
	50%	SHALE, brown grey with scattered carbonaceous debris in part grey black.
	30%	MUDSTONE.
7400-7410	20%	COAL.
	30%	SHALE, carbonaceous
	20%	SILTSTONE, white, white to clear fine quartz grains with dolomitic cement, firm to hard, poor porosity, mineral fluorescence only.
	10%	MUDSTONE, as above.
	10%	SHALE, brown, as above.
	10%	SHALE, white as above.

7410-7420	50%	SHALE, carbonaceous
	20%	COAL.
	20%	SHALE, brown, as above.
	10%	MUDSTONE, as above. Trace dolomitic Siltstone as above. No shows.
7420-7430	20%	COAL.
	20%	SHALE, carbonaceous.
	20%	SHALE, brown.
	30%	MUDSTONE.
	10%	SHALE, white, as above. No shows. Occasional quartz grains.
7430-7450	40%	MUDSTONE, as above (cavings).
	10%	COAL.
	20%	SHALE, carbonaceous.
	20%	SHALE, brown, as above.
	10%	SHALE, white, as above. Occasional quartz grains. Trace pyrite.
7450-7470	30%	COAL.
	30%	SHALE, as above.
	30%	MUDSTONE.
	10%	SILTSTONE.
7470-7480	20%	SANDSTONE, unconsolidated, medium to coarse, occasionally granular, subangular to subrounded, moderately well sorted, fair porosity.
	20%	COAL.
	30%	SHALE, as above.
	30%	MUDSTONE, trace Siltstone, very glauconitic, pyritic, brown with grain mottling, firm. No shows.
7480-7510	30%	MUDSTONE, as above (cavings).
	30%	SHALE, brown as above.
	20%	COAL.
	10%	SHALE, carbonaceous, as above.
	10%	SHALE, white as above. Minor unconsolidated sandstone. No shows. Trace amber. Trace dolomitic Siltstone, as above.

7510-7520	30%	MUDSTONE, as above.
	20%	COAL.
	20%	SHALE, carbonaceous.
	30%	SHALE, brown, as above. No show. Trace pyrite.
7520-7540	50%	COAL.
	10%	SHALE, white.
	20%	SHALE, brown, as above.
	20%	MUDSTONE, as above. Trace pyrite. No shows.
7540-7550	20%	SANDSTONE, unconsolidated, medium to coarse, subangular to subrounded, moderately well sorted, good porosity. No shows.
	20%	COAL.
	30%	SHALE.
	30%	MUDSTONE.
7550-7560	70%	COAL, black, bright, conchoidal fractured (probably some cavings).
	30%	SILTSTONE. 20% light brown, very soft,some opaques. 10% dark brown, very carbonaceous. Trace sandstone, subangular to subrounded, clear to white quartz.
7560-7570	30%	COAL, as above.
	70%	SILTSTONE. 50% light brown, as above. 20% SHALE, very carbonaceous, dark brown, hard. Trace SANDSTONE, as above, some with pyrite, and glauconite.
7570-7580	20%	COAL, as above, some slight fluorescence.
	60%	SILTSTONE. 30% light brown very soft 30% hard, dark brown, some very carbonaceous.
	20%	SANDSTONE, angular to subrounded, generally milky, some clear trace pyrite and glauconite.

7580-7590	30%	COAL.
	50%	SILTSTONE.
		30% light brown, very soft, as above.
		20% dark brown, as above.
	20%	SANDSTONE, as above.
7590-7600	10%	COAL, as above.
	50%	SILTSTONE.
		40% light brown, very soft.
		10% dark brown, some carbonaceous stringers, some fine sand granules.
	40%	SANDSTONE, subangular to subrounded, clear to milky, trace pyrite.
7600-7610	10%	COAL, as above.
	40%	SILTSTONE.
		20% light brown, as above.
		20% dark brown, as above.
	50%	SANDSTONE, as above.
7610-7620	10%	COAL, bleeding gas.
	80%	SILTSTONE.
		30% light brown, as above.
		50% dark brown, very carbonaceous - coal.
	10%	SANDSTONE, as above.
7620-7630	20%	COAL.
	70%	SILTSTONE.
		50% light brown to white, as above.
		20% dark brown to very carbonaceous.
	10%	SANDSTONE, as above, trace pyrite.
7630-7640	10%	COAL, black bright conchoidal, fractured, trace pyrite.
	80%	SILTSTONE.
		50% light grey to white, very soft.
		30% dark brown to very carbonaceous, some stringers.
	10%	SANDSTONE. clear and milky, subangular to subrounded, trace glauconite and pyrite.

7640-7650	10%	COAL, as above.
	40%	SILTSTONE.
		20% light.
		20% dark.
	50%	SANDSTONE, as above, trace pyrite.
7650-7660	20%	COAL, as above.
	60%	SILTSTONE.
		40% light grey to white, very soft, some slightly calcareous (possibly cavings as rare forams present).
		20% dark brown, very carbonaceous.
	20%	SANDSTONE, as above, trace pyrite.
7660-7670	30%	COAL, as above.
	70%	SILTSTONE.
		50% light grey to white, very soft to hard (to shale)
		20% dark brown with carbonaceous stringers.
		Trace sandstone and pyrite.
7670-7680	10%	COAL, as above.
	90%	SILTSTONE.
		70% light grey green to white, very soft to hard, some with calcareous organisms, round (forams?), cavings.
		20% dark brown, as above.
		Trace sandstone, some glauconite and pyritic.
7680-7690	10%	COAL, bleeding gas.
	90%	SILTSTONE, as above.
		Trace sandstone, some glauconitic and pyritic.
7690-7700	30%	COAL, as above.
	70%	SILTSTONE.
		40% light green to grey.
		30% dark, carbonaceous stringers.
7700-7710	80%	COAL, as above, bleeding gas.
	20%	SILTSTONE.
		10% light green grey to white, very soft to soft.
		10% dark brown. occasional carbonaceous stringers, some pyritic.

7710-7720	20%	COAL, as above.
	80%	SILTSTONE.
		60% light green grey to white, very soft; some with forams (cavings?).
		20% dark, carbonaceous, pyritic.
		NEW BIT.
7720-7730	20%	COAL.
	80%	SILTSTONE.
		50% light green to grey, as above.
		30% dark brown, with carbonaceous stringers, very hard.
		Trace SANDSTONE.
7730-7740	20%	COAL.
	80%	SILTSTONE, as above.
7740-7750	20%	COAL.
	40%	SILTSTONE, generally light grey to white, very soft.
	40%	SHALE, hard, light brown to dark brown, some very carbonaceous (stringers).
		Trace cavings (calcareous Siltstone with forams).
7750-7760		As above.
7760-7770	20%	COAL, as above.
	50%	SILTSTONE, as above.
	30%	SHALE, as above.
		Trace sandstone and pyrite.
7770-7780	20%	COAL, bright, black, conchoidal fractured.
	40%	SILTSTONE, white to light grey and buff, very soft, argillaceous to calcareous cement.
	40%	SHALE, dark to light brown, occasional carbonaceous stringers, very hard.
		Trace SANDSTONE and pyrite.
7780-7790	10%	COAL, as above.
	50%	SILTSTONE, as above.
	40%	SHALE, as above.
		Trace cavings. No sandstone.

7790-7800	10%	COAL, as above.
	70%	SILTSTONE, as above.
	20%	SHALE, as above, trace sandstone and pyrite.
7800-7810	10%	COAL, as above.
	60%	SILTSTONE, generally light white to grey. Some granular coarse grained Siltstone, very hard, granular.
	30%	SHALE, as above.
		Trace SANDSTONE and pyrite.
7810-7820	30%	COAL, as above.
	40%	SILTSTONE, as above.
	30%	SHALE, as above.
7820-7830	10%	COAL, as above.
	70%	SILTSTONE, as above.
	20%	SHALE, as above.
		Trace SANDSTONE and pyrite.
7830-7840	80%	SILTSTONE, as above.
	20%	SHALE, as above.
		Trace of coal and quartz grains.
7840-7850	70%	SILTSTONE, as above.
	10%	SHALE, as above.
	20%	SANDSTONE, subangular to subrounded, clear to milky white, quartz grains. Low Porosity and Permeability. No shows. Pyrite.
7850-7860	70%	SILTSTONE, light brown to white, very soft calcareous cement, some granular, coarse grained Siltstone.
	30%	SHALE, dark brown, some very hard, often platy. Some very carbonaceous (stringers).
		Trace quartz grains and pyrite.
7860-7870	50%	SILTSTONE, as above.
	50%	SHALE, as above and including some light grey to light brown very hard.
		Trace quartz grains, cavings and pyrite.

7870-7880	10%	COAL.
	60%	SILTSTONE, as above.
	30%	SHALE, as above.
		Trace sandstone, subangular to subrounded, milky to clear quartz grains. Trace pyrite.
7880-7890	70%	SILTSTONE, as above.
	30%	SHALE, as above.
		Trace subrounded to rounded, clear quartz grains - cavings including calcareous mudstone containing organisms.
7890-7900	20%	COAL.
	50%	SILTSTONE, as above.
	30%	SHALE.
		Trace cavings and sandstone, some pyrite.
7900-7910	70%	SILTSTONE, light grey to white to dark grey, very soft, slightly calcareous cement.
	30%	SHALE, as above.
		Trace sandstone, pyrite and cavings.
7910-7920	90%	SILTSTONE, as above.
	10%	SHALE, as above.
		Trace sandstone grains and pyrite.
7920-7930	80%	SILTSTONE, as above.
	20%	SHALE, as above.
		Trace coal.
7930-7940	70%	SILTSTONE, as above.
	30%	SHALE, as above. Trace coal.
		DEPTH CORRECTION. AFTER LOGGING THE REVISED DRILLERS DEPTH WAS 7987 (PREVIOUSLY T.D. WAS 7941).
7980-7990	100%	CEMENT, trace quartz grains, coal and cavings.

7990-8000	80%	CEMENT.
	10%	SILTSTONE and SHALE, Siltstone, light grey to white, very soft. Shale, dark brown, some carbonaceous, hard.
	10%	SANDSTONE, subrounded quartz grains to some with clay, orange stained.
8000-8010	50%	CEMENT.
	10%	COAL.
	30%	SHALE, as above.
	10%	SILTSTONE, as above.
8010-8020	50%	CEMENT, as above.
8020-8030	30%	CEMENT.
	20%	COAL.
	40%	SILTSTONE, mainly carbonaceous.
	10%	SHALE, as above.
8030-8040	40%	CEMENT.
	20%	COAL, some bleeding gas.
	30%	SHALE, some very carbonaceous and bleeding gas.
	10%	SILTSTONE.
		Trace Sandstone.
8040-8050	10%	CEMENT.
	50%	SILTSTONE, light brown to white, soft argillaceous.
	40%	SANDSTONE, fine-grained, granular, dolomitic cemented, poor Porosity and Permeability.
8050-8060	40%	CEMENT.
	10%	COAL.
	40%	SHALE, generally fine carbonaceous, quite hard.
	10%	SILTSTONE, as above.
8060-8070	20%	CEMENT.
	20%	COAL, some bleeding gas.
	40%	SHALE, as above.
	20%	SILTSTONE, as above.

8070-8080	20%	CEMENT.
	40%	COAL.
	30%	SILTSTONE, very carbonaceous to shale.
	10%	SANDSTONE, some individual subrounded quartz grains to coarse grains plus coarse grains of fine grained granular dolomitic cemented sandstone.
8080-8090	10%	CEMENT.
	20%	COAL.
	50%	SILTSTONE, light brown
	10%	SHALE, generally very carbonaceous.
	10%	SANDSTONE, as above.
8090-8100	20%	CEMENT.
	20%	COAL, as above.
	30%	SHALE, generally very carbonaceous as above.
	20%	SILTSTONE.
	10%	SANDSTONE, as above.
8100-8110	10%	CEMENT.
	10%	COAL.
	40%	SHALE to SILTSTONE, very carbonaceous
	30%	SILTSTONE, light brown to grey, quite soft.
	10%	SANDSTONE, subrounded quartz - trace pyrite.
8110-8120	20%	COAL, black, vitreous, subconchoidal.
	40%	CEMENT, (cavings)
	40%	SILTSTONE, light grey to light brown, variable carbonaceous content. Trip sample.
8120-8130	20%	COAL, as above.
	80%	SILTSTONE, very carbonaceous.
		Trace loose sand grains.
8130-8140	20%	COAL.
	10%	CEMENT.
	70%	SILTSTONE, light grey and very carbonaceous (2 types).
		Trace sandstone, light grey, poorly sorted fine to medium sandstone, slightly pyritic.

8140-8150	10%	COAL, as above.
	20%	CEMENT.
	70%	SILTSTONE, as above.
		Trace sandstone, as above with dolomitic fluorescence.
8150-8160	10%	COAL, as above.
	20%	CEMENT, as above.
	60%	SILTSTONE, as above.
	10%	SANDSTONE, as above, increasingly pyritic.
8160-8170		As above.
8170-8180	100%	COAL, black conchoidal. Trace Siltstone and sandstone as above.
8180-8190	50%	COAL, as above.
	50%	SILTSTONE, very carbonaceous (minor % of light grey and light brown Siltstone).
		Trace sandstone, as above.
8190-8200		As above.
8200-8210	20%	COAL, as above.
	40%	SHALE, carbonaceous.
	40%	SILTSTONE, as above. Trace sandstone, as above.
8210-8220	20%	COAL, as above.
	10%	CEMENT.
	60%	SILTSTONE, as above.
	10%	SANDSTONE, pyritised, medium and loose quartz grains up to granule grade.
8220-8230	20%	COAL, as above.
	30%	CEMENT.
	50%	SILTSTONE, light grey and light brown, as above.
		Trace loose quartz grains.
8230-8240	30%	COAL, as above.
	20%	SHALE, carbonaceous.
	40%	SILTSTONE, as above.
	10%	SANDSTONE, pyritic and dolomitic.

8240-8250	80%	COAL.
	10%	CEMENT.
	10%	SILTSTONE, as above. Trace sandstone, as above.
8250-8260	70%	COAL, as above.
	10%	CEMENT.
	10%	SANDSTONE, as above (loose grains)
	10%	SILTSTONE, as above.
8260-8270	20%	COAL.
	30%	CEMENT.
	50%	SILTSTONE, as above.
8270-8280	70%	COAL, as above.
	10%	CEMENT.
	10%	SANDSTONE, as above (loose grains)
	10%	SILTSTONE.
8280-8290	10%	COAL.
	20%	SHALE, carbonaceous
	60%	SILTSTONE, as above and very carbonaceous in part.
	10%	SANDSTONE, as above.
8290-8300	20%	COAL.
	10%	SHALE, carbonaceous
	70%	SILTSTONE, carbonaceous. Trace sandstone, as above.
8300-8310		As above.
8310-8320	20%	COAL.
	10%	SHALE, carbonaceous
	70%	SILTSTONE, light grey and light brown - minor carbonaceous Siltstone.
8320-8330		As above.
8330-8340		As above.
8340-8350		As above.
8350-8360		As above.

8360-8370		As above.
8370-8380	20%	COAL, as above.
	80%	SILTSTONE, dark grey and carbonaceous.
		Trace sandstone, as above.
8380-8390	10%	COAL, as above.
	90%	SILTSTONE, dark grey and black (carbonaceous).
		Trace sandstone, as above.
8390-8400	20%	COAL, as above.
	80%	SILTSTONE, dark grey and carbonaceous.
		Trace sandstone, as above.
8400-8410	60%	COAL, as above.
	40%	SILTSTONE, very carbonaceous. Trace Sandstone, as above.
8410-8420	30%	COAL, as above.
	70%	SILTSTONE, dark grey to black carbonaceous.
		Trace sandstone, as above.
8420-8430	60%	COAL, as above.
	40%	SILTSTONE, very carbonaceous. Trace Sandstone, as above.
8430-8440	30%	COAL, as above.
	70%	SILTSTONE, dark grey to black carbonaceous.
		Trace sandstone, as above.
8440-8450	20%	COAL, as above.
	30%	SHALE, carbonaceous as above.
	50%	SILTSTONE, carbonaceous as above.
		Trace sandstone, as above.
8450-8460		As above.
8460-8470		As above, plus trace of sandstone.

8470-8480	40%	COAL, as above.
	20%	SHALE, carbonaceous, as above.
	30%	SILTSTONE, carbonaceous and light grey.
	10%	CEMENT cavings.
		Trace Sandstone, as above.
8480-8490	50%	COAL, as above.
	50%	SILTSTONE, as above.
8490-8500	60%	COAL, as above.
	40%	SILTSTONE, as above. Trip sample
8500-8510	30%	COAL, as above.
	60%	SILTSTONE, light grey, light brown and carbonaceous.
	10%	SANDSTONE, as above.
		DEPTH CORRECTION - DRILLERS ERROR.
8520-8530	10%	COAL, as above.
	10%	SHALE, carbonaceous as above.
	60%	SILTSTONE, light brown to carbonaceous as above.
	20%	SANDSTONE, as above.
8530-8540	20%	COAL, as above.
	80%	SILTSTONE, carbonaceous, trace Sandstone as above.
8540-8550	10%	COAL, as above.
	80%	SILTSTONE, carbonaceous, as above.
	10%	SANDSTONE, as above.
8550-8560	90%	COAL, black, blocky, cavings.
	10%	SHALE, brown grey to medium grey, carbonaceous, flecks, laminae.
		Trace sandstone, light grey, very fine to fine grained quartz and lithics.
		(Trace metal and mud additives?).

8560-8570	20%	COAL, as above.
	75%	SHALE, brown grey to medium grey, carbonaceous as above, grades to 25% siltstone, argillaceous, carbonaceous.
	5%	SANDSTONE, light grey to white, quartz-lithic, fine to very fine, trace medium grained, moderate sorting, tight (trace metal also very poor fluorescence from pipe dope?)
8570-8580	10%	COAL, as above.
	85%	SHALE, light to medium brown grey, carbonaceous to very carbonaceous, silty as above, grades to brown to grey and light to medium grey siltstone, argillaceous 25%.
	5%	SANDSTONE, light grey to white, quarz lithic, subangular to angular, fine to very fine grained traces medium to coarse subangular to angular grains, trace carbonaceous flecks; consolidated, tight. (trace metal also woody mud additive).
8580-8590	75%	COAL, black, bulky, conchoidal fracture.
	25%	SHALE, brown grey to very dark brown grey, carbonaceous flecks and laminae minor brown grey to grey siltstone, argillaceous.
		Trace SANDSTONE, as above.
8590-8600	50%	COAL, as above.
	50%	SHALE, medium brown grey to grey, carbonaceous flecks, laminae, silty. Grades to 20% siltstone, argillaceous, carbonaceous.
		Trace sandstone, as above. Trace metal.
8600-8610	60%	COAL, black, blocky, conchoidal fracture, trace smooth to slickenside surfaces, trace very dark grey to black carbonaceous shale.
	40%	SHALE, medium brown grey to medium grey, carbonaceous flecks, laminae, silty grades to siltstone, brown grey, argillaceous, carbonaceous.
		Trace SANDSTONE, (Trace metal in sample).

8610-8620	90%	COAL, as above.
	10%	SHALE, as above.
8620-8630	20%	COAL.
	75%	SHALE, brown grey to grey, carbonaceous, silty grades to 20% siltstone, medium grey to brown grey, argillaceous carbonaceous.
	5%	SANDSTONE, light grey to white, quartz to lithic, fine to very fine grained, cemented subrounded to subangular, moderately sorted, tight. (trace metal in sample).
8630-8640	20%	COAL, as above.
	50%	SHALE, brown grey, carbonaceous, flecks and laminae, trace silty.
	20%	SILTSTONE, light medium grey; trace carbonaceous, sandy.
	10%	SANDSTONE, light grey to white, fine to very fine grained as above. Trace occasional coarse grain.
8640-8650	100%	COAL, black, blocky.
8650-8660	40%	COAL, as above.
	55%	SHALE, brown grey to grey, carbonaceous, silty to siltstone, argillaceous and carbonaceous.
	5%	SANDSTONE, light grey to white, fine to very fine grained, trace very fine to silty carbonaceous, cemented.
8660-8670	70%	COAL, as above.
	20%	SHALE-SILTSTONE, as above.
	10%	SANDSTONE, as above, mainly very fine to silty, light grey, trace carbonaceous.
8670-8680	40%	COAL.
	60%	SHALE, brown grey to dark grey, blockish, carbonaceous, flecks and laminae, silty grades to 10% SILTSTONE. Trace SANDSTONE, only occasional chip.

8680-8690	20%	COAL, black, blocky, conchoidal fracture.
	75%	SHALE, brown grey to grey, carbonaceous to very carbonaceous, flecks and laminae, silty to siltstone, grey brown, argillaceous, carbonaceous 20%.
	5%	SANDSTONE, light grey to white, quartz to lithic, fine to very fine, silty, trace medium to coarse grains, subrounded, cemented, tight.
8690-8700	70%	COAL, as above.
	30%	SHALE, as above.
		Trace SANDSTONE, trace metal, mud additive and pipe dope.
8700-8710	50%	COAL, black, blocky, conchoidal fracture.
	45%	SHALE, grey to brown, carbonaceous, silty.
	5%	SANDSTONE, light grey to white, very fine to medium grain, quartz to lithic, cemented. Trace metal and pipe dope.
8710-8720	60%	COAL, as above.
	35%	SHALE, silty, micaceous, carbonaceous.
	5%	SANDSTONE, as above, occasional coarse grains quartz. Trace metal and pipe dope.
8720-8730	60%	COAL, as above.
	35%	SHALE, silty, as above.
	5%	SANDSTONE, as above.
8730-8740	40%	COAL, as above.
	60%	SHALE, silty, as above.
		Trace SANDSTONE.
8740-8750	40%	COAL, as above.
	55%	SHALE, silty, as above.
	5%	SANDSTONE, as above.
8750-8760	50%	COAL, as above.
	45%	SHALE, silty, as above.
	5%	SANDSTONE, light grey to white, very fine to medium grain, quartz, cemented, trace clay. Trace metal, mud additive and pipe dope.

8760-8770	20%	COAL, black, blocky, conchoidal fracture.
	80%	SHALE, light to dark grey, carbonaceous, micaceous, silty grades to SILTSTONE (30%).
		Trace SANDSTONE, pipe dope.
8770-8780	10%	COAL, as above.
	85%	SHALE, silty as above, grades to SILTSTONE (30%).
	5%	SANDSTONE, white to glassy, fine to medium grain, occasional coarse grains, quartz, pyrite, tight.
8780-8790	5%	COAL, as above.
	75%	SILTSTONE, light brown to medium grey, carbonaceous, micaceous, grades to silty shale (20%).
	20%	SANDSTONE, light grey to white, very fine to fine grained, some medium grain, occasional coarse grain, quartz, lithics, pyrite, tight.
8790-8800	80%	SILTSTONE, as above.
	20%	SANDSTONE, as above. calcareous forams.
		Trace COAL, black.
8800-8810	75%	SILTSTONE, grey to grey brown, argillaceous grades to 30% carbonaceous shale, brown grey.
	10%	SANDSTONE, light grey to white, quartz to lithic, fine to very fine, silty, traces coarse grains. trace carbonaceous. Tight, cement clay and silica.
	15%	COAL, black, blocky.
8810-8820	60%	SHALE, brown grey to grey, carbonaceous, flecks laminae of coal, silty traces argillaceous siltstone.
	40%	COAL, as above.
		Trace SANDSTONE, as above.
8820-8830	50%	SILTSTONE, brown to grey, carbonaceous, grades to silty shale.
	50%	COAL, as above.
		Trace SANDSTONE, as above, pipe dope.
8830-8840	40%	SILTSTONE, as above.
	60%	COAL, as above.
		Trace SANDSTONE, pipe dope as above.

8840-8850		Circ. sample - 8846.
	70%	SILTSTONE, brown to grey, carbonaceous laminae and flecks, micaceous.
	20%	COAL, black, conchoidal fracture.
	10%	SANDSTONE, light grey to white, glassy, very fine to fine, occasional coarse grain, tight.
		Trace metal and pipe dope.
8850-8860	60%	SILTSTONE, as above.
	30%	COAL, as above.
	10%	SANDSTONE, as above.
		Trace metal and pipe dope.
8860-8870	60%	SILTSTONE, as above.
	30%	COAL, as above.
	10%	SANDSTONE, light grey to glassy, very fine to medium grain, occasional coarse grain, quartz, pyrite, clay and silica cemented.
8870-8880	50%	SANDSTONE, white to glassy, medium to coarse grain, quartz, angular to subangular, coaly laminae.
	20%	COAL, as above.
	30%	SILTSTONE, as above.
8880-8890	20%	SANDSTONE, white to glassy, medium to coarse grain as above.
	20%	COAL, as above.
	60%	SILTSTONE, brown to grey, carbonaceous, micaceous.
8890-8900	60%	SILTSTONE, brown to grey, carbonaceous, micaceous.
	20%	COAL, black, blocky, conchoidal fracture.
	10%	SANDSTONE, white to glassy, very fine to fine grained and medium to coarse grained, quartz, pyritic, clay and silica cemented.
8900-8910	40%	SILTSTONE, as above.
	30%	COAL, as above.
	30%	SANDSTONE, white to glassy, mainly medium grained, occasional coarse grains, quartz, silica cemented, tight.
		Trace pipe dope and metal.

8910-8920	60%	COAL, as above.
	20%	SILTSTONE, as above.
	20%	SANDSTONE, as above.
8920-8930	10%	SANDSTONE, dolomitic, quartzose, very light grey, very hard, fine to medium grained, subangular; moderate to well sorted, with trace biotite, minor clay matrix; poor porosity and permeability. No shows.
	30%	SILTSTONE, carbonaceous, light brown, friable. No shows.
	30%	SHALE, carbonaceous, medium brown, firm, with fine discont. carbonaceous laminae.
	30%	COAL, black, rectangular, conchoidal fractured; bleeding gas.
8930-8940	30%	SANDSTONE, quartzose, argillaceous, dolomitic, micaceous, carbonaceous, very light grey, very hard to friable, very fine to coarse grained, predominantly fine to medium; angular to rounded; medium sorted, poor porosity and permeability. No shows.
	20%	SILTSTONE, carbonaceous, noncalcareous, argillaceous, mica, buff, very friable, no shows.
	40%	SHALE, silty, carbonaceous, medium brown.
	10%	COAL, black, bleeding gas.
8940-8950	10%	SANDSTONE, as above. No shows.
	70%	SHALE, very silty in part, carbonaceous, noncalcareous, medium brown.
	20%	COAL, as above.
8950-8960	10%	SANDSTONE, quartzose, dolomitic, very light grey, very hard, angular, medium sorted, fine to medium grained, poor porosity and permeability. No shows.
	70%	SHALE, very silty, carbonaceous, medium brown, firm.
	20%	COAL, black, slight gas bleed.
8960-8970	60%	SILTSTONE, sandy, noncalcareous, carbonaceous, mica, medium to dark brown, moderately hard. No shows.
	40%	COAL, black, trace of amber, slight gas bleed, pyritic. Trace of dolomite, sandstone and carbonaceous shale.

8970-8980	20%	SILTSTONE, as above.
	20%	SHALE, as above.
	60%	COAL, black vitreous conchoidal.
8980-8990		No sample. Very slow drill rate.
8990-9000	30%	SANDSTONE, as above.
	50%	SILTSTONE, shaley as above.
	20%	COAL.
9000-9010	80%	SANDSTONE, quartzose, very dolomitic, pyritic, very light grey, very hard, fine to very coarse grained, angular to rounded predominantly angular to angular, poor sorted, grains very strongly cemented by dolomite and pyrite and are commonly fractured by bit, poor porosity, some grains show evidence of pressure solution (i.e. concave surfaces), weak yellow fluorescence (dolomitic), no cut.
	20%	SILTSTONE, as above.
		Trace of shale and coal probably cavings.
		NOTE: Circulated 9000-9010. Very marked drilling break and decrease in shale density but D.B. may be due to increase in carbonaceous material.
9010-9020	80%	SANDSTONE, as above.
	20%	SILTSTONE, argillaceous, mica, carbonaceous, light to medium brown, friable.
9020-9030	10%	SANDSTONE, as above.
	30%	SILTSTONE, carbonaceous, mica; medium brown, friable.
	50%	SHALE, carbonaceous, silty, medium to dark brown, firm.
	10%	COAL.
9030-9040	10%	SANDSTONE, as above.
	60%	SILTSTONE, as above.
	20%	SHALE, as above.
	10%	COAL.
9040-9050	20%	SANDSTONE, very fine to medium grained, as above.
	50%	SILTSTONE, shaley.
	30%	COAL.

9050-9060	10%	SANDSTONE, very fine to medium grained, as above, golden yellow, fluorescence, no cut.
	30%	SILTSTONE, carbonaceous, mica, argillaceous, light to medium brown, friable.
	50%	SHALE, silty, carbonaceous, light to medium brown, firm.
	10%	COAL, black with occasional trace of amber, bleeding gas.
9060-9070	20%	SILTSTONE, sandy to shaley, light to medium brown.
	80%	COAL, black, vitreous, bleeding gas, with occasional trace of amber.
9070-9080	30%	SANDSTONE, quartzose, carbonaceous, argillaceous, very light grey, medium to hard, very fine to fine grained, angular to rounded, moderately sorted, moderate porosity. No shows.
	20%	SILTSTONE, as above.
	40%	SHALE, very silty, carbonaceous, medium brown, firm.
	10%	COAL, as above.
9080-9090	40%	SANDSTONE, as above, but dolomite with occasional yellow fluorescence. No cut.
	20%	SILTSTONE, as above.
	20%	SHALE, carbonaceous, as above.
	20%	COAL, black, vitreous, bleeding gas.
9090-9100	30%	SANDSTONE, dolomite, argillaceous, carbonaceous, very light grey, moderately hard to very hard, very fine to medium grained, angular to round, moderately sorted, scattered yellow fluorescence that disappears after soaking in acid. No cut. Poor to moderate porosity.
	40%	SILTSTONE, carbonaceous, light to medium brown, friable. No shows.
	20%	SHALE, carbonaceous, as above.
	10%	COAL, black, bleeding gas, probably cavings.

9100-9110	60%	SANDSTONE, dolomite, argillaceous, carbonaceous, mica, pyritic, very light to light grey, medium to very hard, very fine to fine grained with occasional medium grain, angular to round, moderately sorted, scattered fairly strong yellow fluorescence (very spotty on grains) disappears after soaking in acid. No cut, poor to moderate porosity.
	20%	SILTSTONE, as above.
	10%	SHALE, carbonaceous, as above.
	10%	COAL, bleeding gas, probably cavings.
9110-9120	30%	SANDSTONE, carbonaceous, pyritic, dolomite, mica, argillaceous, as above.
	30%	SILTSTONE, carbonaceous, mica, argillaceous; light to medium brown, friable. No shows.
	40%	SHALE, carbonaceous, medium brown, bleeding gas, Coal cavings.
9120-9130	40%	SANDSTONE, 2 types, very fine to medium grain and medium to coarse grain.
	30%	SILTSTONE, as above.
	20%	SHALE, as above.
	10%	COAL, probably cavings.
9130-9140	90%	SANDSTONE, quartzose, dolomite, pyritic, very light grey, as loose grains, most grains fractured by bit, medium to very course, moderately to well sorted, slight evidence of pressure solution, moderate yellow fluorescence, no cut, porosity probably poor to fair.
	10%	SHALE, with coal.
9140-9150	10%	SANDSTONE, as above.
	30%	SILTSTONE.
	50%	SHALE.
	10%	COAL.
9150-9160	30%	SANDSTONE, as above. No shows.
	40%	SHALE, very silty, carbonaceous, medium brown, firm.
	30%	COAL, as above.

9160-9170	60%	SANDSTONE, quartz, dolomite, carbonaceous in part, very light to light grey, hard, very fine to medium predominantly very fine to fine grained, angular to round, moderately to well sorted, yellow mineral fluorescence, no cut, poor to moderate porosity.
	30%	SHALE, as above.
	10%	COAL, as above.
9170-9180	N.B. @ 9181', 10' sample left in hole. This sample slightly contaminated.	
	50%	SILTSTONE, shaley, medium brown, friable, mica.
	50%	COAL, black.
9180-9190	20%	SILTSTONE, as above.
	50%	SHALE, carbonaceous, medium brown, firm.
	30%	COAL.
9190-9200	70%	SILTSTONE, sandy in part, carbonaceous, mica, dolomitic in part, light grey to medium brown, interlaminated with coal and shale.
	30%	SHALE, carbonaceous, medium brown.
		Trace of coal and dolomite sand.
9200-9210	60%	SANDSTONE, quartz, dolomite, carbonaceous, argillaceous, pyritic, light grey, friable to hard, very fine to medium, angular to round, moderately sorted, spotty yellow fluorescence (mineral), no cut, poor to moderate porosity.
	30%	SILTSTONE, shaley, medium light brown, carbonaceous, friable. No shows.
	10%	COAL, probably very thin beds of coal.
9210-9220	50%	SANDSTONE, as above. Note: scattered white clay with occasional quartz grains with strong bluish fluorescence, crush cut.
	30%	SILTSTONE, shaley, light to medium brown, friable. No shows.
	20%	COAL, bleeding gas.

9220-9230	60%	SANDSTONE, as above, very fine to medium grain, spotty yellow fluorescence, mineral, no cut, poor to moderate porosity, carbonaceous.
	30%	SHALE, silty, carbonaceous.
	10%	COAL.
		Trace dolomite.
9230-9240	40%	SANDSTONE, as above.
	20%	SILTSTONE, light to medium brown, carbonaceous, friable.
	20%	SHALE, carbonaceous, medium brown, firm.
	20%	COAL, black, vitreous, conchoidal fracture.
9240-9250		As above.
9250-9260	20%	SANDSTONE, slightly dolomitic, carbonaceous, light grey, moderately hard; very fine to medium grain, angular to round, moderately sorted, yellow mineral fluorescence, no cut, poor to moderate porosity.
	70%	SILTSTONE, very shaley in part; carbonaceous; mica, light to medium brown; friable.
	10%	COAL, interbedded with siltstone.
9260-9270	10%	SANDSTONE, as above.
	90%	SILTSTONE, very shaley in part, carbonaceous, mica, pyritic, medium brown, moderately hard to friable. No shows.
		Trace coal and shale.
9270-9280	20%	SANDSTONE, quartz, dolomite, argillaceous, light grey, hard, very fine to fine grain, moderately well sorted, yellow mineral fluorescence, poor porosity.
	20%	SILTSTONE, as above.
	60%	SHALE, carbonaceous,dark brown, firm.
9280-9290	80%	SILTSTONE, as above.
	20%	SHALE, as above.
		Trace dolomitic sandstone and coal.
9290-9300	100%	SILTSTONE, very shaley in part, mica, carbonaceous, light to dark brown, friable.
		Trace of coal and sandstone.

9300-9310	10%	SANDSTONE, as above.
	60%	SILTSTONE, very shaley in part, carbonaceous; light to medium brown.
	20%	SHALE, carbonaceous.
	10%	COAL.
9310-9320	10%	SANDSTONE, dolomitic, quartz, very light grey, hard, very fine to fine. No shows.
	60%	SILTSTONE, argillaceous, light grey, friable, massive.
	30%	SHALE, carbonaceous, dark brown, finely laminated, firm.
9320-9330	40%	SANDSTONE, argillaceous, quartz, very light grey, friable to hard, very fine to fine, moderately to well sorted, moderate porosity, no shows.
	40%	SILTSTONE, as above.
	20%	SHALE, as above.
9330-9340	10%	SANDSTONE, as above. No shows.
	30%	SILTSTONE, argillaceous, light grey to light brown, friable massive.
	40%	SHALE, carbonaceous, dark brown; finely laminated, firm.
	20%	COAL: black, vitreous, conchoidal fracture, no gas bleed.
9340-9350	10%	SANDSTONE, as above. No shows.
	20%	SILTSTONE, as above.
	40%	SHALE, as above.
	30%	COAL, as above.
9350-9360	20%	SANDSTONE, quartz, argillaceous, pyritic, very light grey, friable, very fine to medium grain, moderately sorted, angular to rounded; clay matrix, pyritic cement in part, poor to moderate porosity, no shows.
	30%	SILTSTONE, argillaceous, carbonaceous, mica, light brown, friable.
	40%	SHALE, very carbonaceous, dark brown, firm to hard, laminated.
	10%	COAL, black, vitreous, conchoidal fracture, no gas bleed.

9360-9370	20%	SANDSTONE, quartz, argillaceous, very light grey, friable, very fine to medium grain, angular to round, very spotty scattered bluish white fluorescence; crush cut, no stain, poor to moderate porosity.
	30%	SILTSTONE, as above.
	50%	SHALE, carbonaceous, trace coal.
9375-9380	Note:	Drilling break over approx. 4' from 8m/ft to 2 min/ft. 15 units on H.W. C1-C3. Sample taken from screen:
	10%	SANDSTONE, with spotty bluish to white fluorescence on scattered grains, crush yellow to white cut, no stain. Remainder of sample carbonaceous siltstone and shale with coal.
9370-9380	20%	SANDSTONE, quartz, argillaceous, very light grey, friable, very fine to medium, angular to rounded, moderately sorted, clay matrix, spotty bluish white fluorescence on scattered grain (approx. 20% grains show fluorescence), crush cut, no stain, moderate porosity.
	40%	SILTSTONE, carbonaceous, argillaceous, medium brown, friable, massive. No shows.
	30%	SHALE, carbonaceous, noncalcareous, dark brown, massive.
	10%	COAL, black, vitreous, conchoidal, fractured, no gas bleed.
9380-9390	10%	SANDSTONE, as above. No shows.
	60%	SHALE, carbonaceous, dark brown, bleeding gas.
	30%	COAL.
9390-9400	20%	SANDSTONE, very fine to medium grain, trace of fluorescence and cut, Sandstone is quartz and clay choked.
	20%	SILTSTONE, carbonaceous, light brown, friable massive.
	60%	SHALE, carbonaceous, medium to dark brown, massive.

9400-9410	30%	SANDSTONE, as above. No shows.
	40%	SILTSTONE, shaley, as above.
	30%	SHALE, carbonaceous.
9410-9420	10%	SANDSTONE, as above.
	50%	SILTSTONE, as above.
	30%	SHALE, as above.
	10%	COAL.
9420-9430	10%	SANDSTONE, dolomitic, very light grey, hard, very fine to medium grain, yellow fluorescence, disappears after soaking in acid, no cut, poor porosity.
	20%	SILTSTONE, argillaceous, carbonaceous in part, buff, massive.
	50%	SHALE, very carbonaceous, dark brown, bleeding gas.
	20%	COAL, black, vitreous, conchoidal, bleeding gas.
9435'	GRAB SAMPLE FROM SCREEN:	
	40%	SANDSTONE, dolomitic, yellow fluorescence, no cut.
	40%	SHALE, very carbonaceous, bleeding gas (strong)
	20%	COAL, bleeding gas.
9430-9440	10%	SANDSTONE, dolomitic or argillaceous, very light grey, hard, very fine to medium grain, moderately sorted, angular to round, yellow mineral fluorescence, with occasional black to white fluorescence (only on few grains in sample), very spotty, very faint crush cut, no stain, poor to medium porosity.
	60%	SHALE, silty in part, very carbonaceous, medium to dark brown, fairly strong gas bleed.
	30%	COAL, black, bleeding gas.
9440-9450	40%	SANDSTONE, as above. Yellow mineral fluorescence, rare grains with black to white fluorescence, very spotty, crush cut very weak, no stain.
	30%	SHALE, carbonaceous, dark brown
	30%	COAL, strong gas bleed.

9450-9460	30%	SANDSTONE, dolomitic, quartz, very fine to medium grains, moderately sorted, yellow mineral fluorescence (disappears after soaking in acid), no cut, poor porosity.
	40%	SHALE, as above.
	30%	COAL, as above.
9460-9470	60%	SILTSTONE, as above.
	20%	SHALE.
	20%	COAL.
9470-9480	70%	SILTSTONE, as above.
	30%	SHALE.
		Trace Sandstone. No shows.
9480-9490	10%	SANDSTONE, dolomitic and argillaceous, quartz, carbonaceous mica, light grey, very hard, very fine to medium grain, angular to rounded, moderately sorted, rare yellow fluorescence, no cut, high percentage of matrix material mainly clay, poor porosity.
	20%	SILTSTONE, carbonaceous, argillaceous, medium brown, friable, massive.
	70%	SHALE, carbonaceous, dark brown, massive. Trace coal.
9490-9500	10%	SANDSTONE, as above. No shows.
	50%	SILTSTONE, as above.
	40%	SHALE, as above.
9500-9510	30%	SILTSTONE, as above. No shows.
	50%	SHALE, as above.
	20%	COAL, as above.
9510-9520	60%	SHALE, very carbonaceous, medium to dark brown, firm, laminated, bleeding gas.
	40%	COAL, black, vitreous, bleeding gas.
		Trace sand and siltstone. No shows.

9520-9530	40%	SANDSTONE, argillaceous, quartz, carbonaceous, mica, light grey, very hard, very fine to fine grain, no shows, poor porosity.
	40%	SILTSTONE, carbonaceous, mica, light to medium brown, friable, massive, no shows.
	20%	SHALE, carbonaceous, dark brown, firm, massive.
9530-9540		NO SAMPLE - DEPTH CORRECTION.
9540-9560		Drillers depth correction +19'. Pulled out of hole at 9541' for new bit. Driller measured pipe on way out because of uncertainty in pipe tally. Corrected depth 9560'. No sample from 9540-9560'.
9560-9570	30%	SILTSTONE, as above.
	70%	SHALE, as above. Trace Sandstone and coal.
9570-9580	10%	SANDSTONE, argillaceous; light grey, hard, very fine to medium grain, angular to rounded, moderately sorted, poor porosity. No shows.
	90%	SHALE, very silty in part; carbonaceous, light to dark brown, very fine carbonaceous laminae locally, but predominantly massive. Trace of coal.
9580-9590	30%	SANDSTONE, as above. No shows.
	20%	SILTSTONE, argillaceous, carbonaceous, light to medium brown, friable, massive. No shows.
	50%	SHALE, as above.
9590-9600	40%	SANDSTONE, argillaceous; trace light green mineral (glauconite?), carbonaceous, light grey, hard; very fine to medium grain, angular to rounded, moderately sorted, poor to moderate porosity. No shows.
	20%	SILTSTONE, as above.
	40%	SHALE, as above. Trace coal.

9600-9610	40%	SANDSTONE, argillaceous, dolomite in part, light grey, hard, very fine to medium grain, angular to rounded, moderately sorted, yellow mineral fluorescence, no cut, poor to moderate porosity.
	30%	SILTSTONE, argillaceous, carbonaceous, mica, light to medium brown, friable.
	30%	SHALE, silty carbonaceous, dark brown, medium to hard, laminated with thin coal laminae in part.
		Trace coal.
9615-9620		Drilling break over 5' 9615-9620. Interpreted as SANDSTONE, argillaceous, fine to medium grain, angular to rounded, very spotty faint bluish fluorescence, very weak pale yellow cut, poor porosity, sandy clay choked.
		NOTE: Slight show.
		HW 38, C1 6100, C2 1400 C3 700, C4 trace.
9610-9620	50%	SANDSTONE, as described 9615-9620, slight show.
	20%	SILTSTONE, as above.
	20%	SHALE, as above bleeding gas.
	10%	COAL, black, bleeding gas.
9620-9630	40%	SANDSTONE, as above; very spotty, pale blue fluorescence, very weak, slow pale yellow cut, clay choked.
	20%	SILTSTONE, as above.
	40%	SHALE, as above, trace coal cavings.
		NOTE: Sandstone could be cavings from above as drill rate does not indicate Sandstone.
9630-9640	10%	SANDSTONE, no shows.
	40%	SILTSTONE, argillaceous, carbonaceous; mica, light to medium brown, friable, massive, no shows.
	50%	SHALE, silty, carbonaceous, medium to dark brown, massive to laminated. Trace coal cavings?
9640-9650	30%	SANDSTONE, as above. No shows.
	50%	SILTSTONE, as above.
	20%	SHALE, as above, trace coal cavings?

9650-9660	50%	SANDSTONE, as above. No shows.
	30%	SILTSTONE, as above. No shows.
	20%	SHALE, as above. Trace coal cavings?
9660-9670	20%	SANDSTONE, as above. No shows.
	60%	SILTSTONE, as above.
	20%	SHALE, as above.
9673-9675	70%	SANDSTONE, argillaceous, carbonaceous, light grey, hard, very fine to medium grain, angular to rounded, very spotty weak blue fluorescence, weak yellow cut, poor porosity.
	20%	SHALE, very carbonaceous, strong gas bleed on occasional pieces.
	10%	COAL, black bit.
9670-9680	20%	SANDSTONE, argillaceous, light grey, hard, very fine to medium grain, moderately sorted, angular to rounded, clay matrix, low porosity, very spotty blue fluorescence on occasional grains, very weak cut.
	40%	SILTSTONE, as above.
	20%	SHALE, carbonaceous, medium to dark brown, laminated to massive.
	10%	COAL, black slight gas bleed.
9680-9690	10%	SANDSTONE, as above. No shows.
	70%	SILTSTONE, as above.
	20%	SHALE, as above.
9690-9700	20%	SANDSTONE, as above, no shows.
	20%	SILTSTONE, as above.
	60%	SHALE, as above.
		Coal cavings.
9703-9705		Slight mud log gas show. Grab sample.
	100%	SANDSTONE, slight dolomite; argillaceous, pyritic, carbonaceous, light grey, friable to hard; very fine to fine grain, moderately to well sorted, angular to rounded, occasional very weak yellow mineral fluorescence, no cut, poor to fair porosity. HW: 24 units (background HW 1-2 units).

9700-9710	80%	SANDSTONE, slight dolomite, argillaceous, pyritic, carbonaceous, light grey friable to hard, very fine to fine grain, moderately to well sorted, angular to rounded, very spotty weak bluish fluorescence on occasional grains, very weak slow yellow cut, poor to moderate porosity.
	20%	SILTSTONE, shaley, carbonaceous, light to dark brown.
9710-9720	50%	SANDSTONE, as above but no shows.
	30%	SILTSTONE, carbonaceous, mica, light brown, friable.
	20%	SHALE, carbonaceous, medium to dark brown, massive. Trace coal cavings?
9720-9730	80%	SANDSTONE, as above. No shows.
	20%	SILTSTONE, shaley, carbonaceous, mica, light to medium brown.
9730-9740	80%	SANDSTONE, argillaceous, pyritic, light grey, friable to hard, very fine to coarse grain, angular to rounded, poorly sorted, spotty weak blue fluorescence on occasional fine grains, weak cut, no sign of pressure sol. on coarse grains, moderate porosity (clay choked).
	20%	SILTSTONE, shaly, carbonaceous, mica, light to medium brown, massive.
		P.O.O.H. for new bit at 9758'. 2200 hrs 16/5/70. Bad weather came up - the riser broke in two about 106' below KB. Began drilling at 1530 hours 19/5/70.
9740-9750	30%	SANDSTONE, as above. No shows.
	40%	SILTSTONE, as above.
	30%	SHALE, carbonaceous, medium to dark brown, massive.
9750-9760		Gas high 75 units H.W. Circulate mud at reduced pump strokes.
9750-9760	10%	SANDSTONE, as above. No shows.
	50%	SILTSTONE, as above.
	40%	SHALE, as above.
9760-9661		Circulate and condition mud from 1700 hrs on 19/5/70 to 0930 hr 20/5/70. Pull out of hole to log.

2.1 Side Wall Core Descriptions

VMD.

SIDEWALL CORE DESCRIPTIONS

WELL BATFISH-1 | SERV.CO. SCHLUMBERGER | DATE 16-[illegible]-70 | LOG RUN NO. 1 | GEOLOGIST

REF.# | FIELD WILDCAT GIPPS. | STATE VICTORIA | ATT. | REC. | PAGE 1 OF 3 PAGES

NO.	DEPTH	REC	LITHOLOGY	COLOR	CLAY	CONS	CALC	ODOR	FIDO	FLUORESENCE DIST	FLUORESENCE INT	FLUORESENCE COL	CUT QUAN	CUT COL	CUT FLUOR. INT	CUT FLUOR. COL	SHOW	PROB. PROD.
1	7926	1/3	shale	grey	✓	firm												
2	7890	3/4	shale	grey	✓	firm												
3	7806	1/2	shale	grey	✓	firm												
4	7527	3/4	shale	grey	✓	firm												
5	7429	1/2	shale	grey	✓	firm												
6	7190	1/4	sandstone	lt. grey		soft												
7	7060	3/4	sandstone	lt. grey		friable												
8	7008	—	no recovery															
9	6966	1/2	sandstone	lt. grey		friable												
10	6938	—	no recovery															
11	6922	1/2	sandstone	lt. grey		friable												
12	6896	1/2	slightly cal. sandstone	grey		friable												
13	6874	1/2	sandstone	lt. grey		friable												
14	6740	3/4	shale	brown	✓	firm												
15	6728	3/4	sandstone	lt. grey		friable												
16	6580	1/2	shale	brown	✓	firm												
17	6517	1/2	shale	grey	✓	firm												
18	6463	1/2	clay banded sandstone	grey	✓	friable												
19	6410	1/2	shale	brown	✓	firm												
20	6380	1/2	shale	brown	✓	firm												
21	6351	1/2	shale	brown	✓	firm												
22	6333	1/2	shale	dk. brown	✓	firm												
23	6309	1/2	silty shale	brown	✓	firm												
24	6254	—	no recovery.															
25	6186	1/4	granular sandstone	grey		friable	dolomitic											

SIDEWALL CORE DESCRIPTIONS

WELL BATFISH -1 | SERV. CO. SCHLUMBERGER | DATE 24-4-80 | LOG RUN NO. 1 | GEOLOGIST T. DAWKINS

REF. # | FIELD WILDCAT. GIPPS. | STATE VICTORIA. | ATT. REC. | PAGE 2 OF 3 PAGES

NO.	DEPTH	REC	LITHOLOGY	COLOR	CLAY	CONS	CALC	ODOR	FIDO	FLUORESENCE DIST	FLUORESENCE INT	FLUORESENCE COL	CUT QUAN	CUT COL	CUT FLUOR. INT	CUT FLUOR. COL	SHOW	PROB. PROD.
26	6102	1"	shaley sandstone	grey	✓	friable												
27	6022	½	silty shale	brown	✓	firm												
28	5956	½	sandstone	lt. grey		friable												
29	5856	½	sandstone	lt grey		friable												
30	5698	¾	sandy shale	lt brown	✓	friable												
1a	7910	½"	Shale	grey	✓	firm												
2a	7653	½"	Siltstone	lt grey	✓	soft												
3a	7332	½"	Shale	dk grey	✓	firm												
4a	7000	½"	Silty sandstone	lt brn	✓	soft												
5a			No recovery.															
6a	5526	1"	Fine grained sandstone	lt grey	✓	hard fair												
7a	5396	1"	Siltstone	dk brn	✓	firm												
8a	5230	1"	Siltstone	grey brn	✓	firm												
9a	5054	½"	Siltstone with fine sand lenses	"	✓	"												
10a	4914	½"	Fine grained sandstone	lt grey	✓	firm												
11a	4807	1"	Med. grained sandstone.	lt grey	✓	soft												
12a	4778	¾"	Fine grained sandstone	lt brn grey	✓	soft												
13a	4768	2"	Siltstone	lt grey	✓	hard	✓											
14a	4765	1¾"	Siltstone	dk grey	✓	hard	✓											
15a			No recovery															
16a	4736	2"	Siltstone (calc)	lt grey	✓	hard	✓											9%
17a	4690	1½	Siltstone (calc)	lt grey	✓	"	✓											
18a	4641	1¾	Siltstone (calc)	dk grey	✓	"	✓											
19a	4596	1½"	Siltstone (calc)	lgrn grey	✓	"	✓											

SIDEWALL CORE DESCRIPTIONS

WELL BATFISH #1 | SCHLUMBERGER SERV.CO. | 24-4-70 DATE | 1 LOG RUN NO. | A. J. RICE GEOLOGIST

REF. # | OFFSHORE FIELD GIPPSLAND | STATE VICTORIA | ATT. REC. | PAGE 3 OF 3 PAGE

NO.	DEPTH	REC	LITHOLOGY	COLOR	DISS CLAY	CONS	CALC	ODOR	FIDO	FLUORESCENCE DIST	FLUORESCENCE INT	FLUORESCENCE COL	CUT QUAN	CUT COL	CUT FLUOR. INT	CUT FLUOR. COL	SHOW	PROB. PROD.
20a	4550'	1½"	Siltstone (dolomitic)	dk grey	✓	firm	✓											
21a		1¾"	Siltstone (dolomitic)	"	✓	"	✓											
22a	4300	1¾"	Siltstone (calc & dol)	"	✓	"	✓											
23a	4100	1½"	Siltstone (")	"	✓	"	✓											
24a	3900	1½"	Siltstone (Calc)	lt grey	✓	"	✓											
25a	3700	2½"	Siltstone (")	"	✓	"	✓											
26a	3500	1¾"	Siltstone (")	"	✓	"	✓											
27a	3300	1½"	Siltstone (")	"	✓	"	✓											
28a	3100	1½"	Siltstone (")	"	✓	"	✓											
29a	2900	1½"	Siltstone (")	"	✓	"	✓											
30a	2554	1½"	Siltstone (")	"	✓	"	✓											

	Depth	Rec.	Descriptions
			Run #1
1.	9744	1/2"	Sandstone - med.grained, quartzose, slightly micaceous, rounded, mid sorting, spotty fluorescence. Slight cut.
2.	9717	3/4"	Sandstone - med. grained, quartzose, pyritic, slightly micaceous, rounded to sub rounded, fair sorting, spotty fluorescence. No cut.
3.	9712	3/4"	Sandstone - as in 9717 (slightly carbonaceous).
4.	9702	1/2"	Sandstone - as in 9712.
5.	9688	3/4"	Shale - dark brown, slightly micaceous.
6.	9638		NO RECOVERY - mud cake.
7.	9610	1/2"	Sandstone - med. grained, quartzose, micaceous. Carbonaceous, dolomitic, sub rounded, med. sorting, spotty fluorescence and min. fluorescence. Slight cut.
8.	9480		NO RECOVERY - mud cake.
9.	9468	1¼"	Sandstone - med. to fine grained quartzose, well sorted. Rounded to sub rounded. Spotty fluorescence. Slight cut.
10.	9306		MISFIRE
11.	9252		NO RECOVERY - mud cake.
12.	9237	3/4"	Sandstone - med. grained, quartzose, round to sub rounded, good sorting. Strong yellow-white fluorescence and moderate pale blue-white cut.
13.	9203		MISFIRE.
14.	9158	1/2"	Sandstone - med. grained, quartzose, round to sub rounded. Good sorting, slightly carbonaceous. Strong fluorescence and moderate pale yellow-white cut.
15.	9135	1/2"	Sandstone - as in 9158. Strong fluorescence and weak mod. pale yellow-white cut.
16.	9065		MISFIRE.
17.	9040		Sandstone - as in 9134 - carbonaceous. Strong fluorescence and weak-moderate pale blue-white cut.
18.	9026		Sandstone - as in 9134 - strong fluorescence and weak-moderate pale blue-white cut.
19.	8974		MISFIRE.
20.	8898		NO RECOVERY - mud cake.
21.	8848		Sandstone - med. grained, quartzose, sub rounded to rounded, fair sorting - strong fluorescence and moderate pale yellow-white cut.
22.	8807		MISFIRE.
23.	8654		MISFIRE.
24.	8602		NO RECOVERY - mud cake.
25.	8560		MISFIRE.

595

	Depth	Rec.	Descriptions
26.	8561-66	3/4"	Shale - dark grey and carbonaceous.
27.	8446	1"	Coal - black, bithuminuous, vitreous
28.	8348		MISFIRE.
29.	8213		NO RECOVERY - mud cake.
30.	8038	1¼"	Shale - grey
			Run #2
31.	9644	0	No recovery.
32.	9306	0	Mud cake.
33.	9253	½"	Sandstone: quartzose, argillaceous, light grey; very fine - med. grained; mod. sorted, subangular; clay matrix; no show. disintegrate readily in water.
34.	9204	½"	Shale; very carbonaceous; dark brown; hard; fissile, with thin coal laminae.
35.	9067	1/2"	Shale; dolomitic; medium grey; hard; fissile, barren; massive. Breaks up in acid.
36.	8976	1/2"	Shale; very carbonaceous; dolomitic; dark brown; hard; fissile; very thin discont. coal laminae.
37.	8963	1/4"	Siltstone: Very argillaceous; calcareous; medium grey; friable; disintegrate readily in acid.
38.	8903	1/4"	Sandstone: clay choked; light grey; friable; very fine - fine grained; subangular-subrounded; mod. sorted; No show.
39.	8757	1/2"	Sandstone: clay choked; calcareous; light grey; friable; very fine-coarse grained; predominantly very fine-medium; poor sorting; angular - rounded; very spotty yellow blue fluorescence; weak blue crush cut; no stain.
40.	8804	0	Mud cake.
41.	8743	1/2"	Shale: very carbonaceous; non calcareous; dark brown; hard; fissile, very thin coal laminae.
42.	8656	0	Mud cake.
43.	8604	3/4"	Shale: dolomitic; med.grey; hard; massive; barren.
44.	8562	1/2"	Shale: very carbonaceous, slightly dolomitic; dark brown; hard; massive; fissile.
45.	8504	1/2"	Shale: carbonaceous; slightly calcareous; med. brown; hard; fissile.
46.	8490	1/2"	Sandstone: carbonaceous; quartzose, slightly argillaceous; light grey; friable; very fine-fine grained; well sorted; angular-subangular; interbedded with coal; no show.
47.	8464	1/2"	Shale: very silty; calcareous; carbonaceous; light grey brown; soft.
48.	8402	1/2"	Shale: slightly silty; slightly calcareous; med.dark grey; hard; fissile.
49.	8350	1/2"	Sandstone:clay choked; very light grey; friable, very fine grained; angular-rounded; med.-well sorted; no show; very thin discont. carbonaceous laminae.
50.	8214	0	NO RECOVERY

3.0 Mud and Cuttings Analysis

(including Mud Log)

W582 Basic Data.

MUD AND CUTTINGS ANALYSIS

FOR

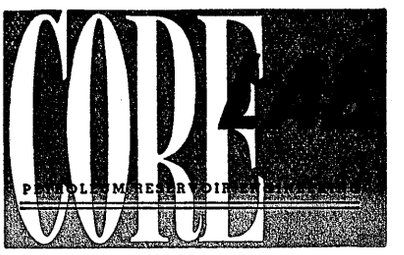
ESSO STANDARD OIL (AUSTRALIA) LTD.

BATFISH NO. 1 WELL

WILDCAT

GIPPSLAND BASIN

VICTORIA, AUSTRALIA



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

June 25, 1970

Esso Standard Oil (Australia) Ltd.
G.P.O. Box 4249
Sydney, New South Wales 2001

Attention: Mr. A. C. Pierce

Subject: Mud and Cuttings Analysis
Batfish No. 1 Well
Wildcat
Gippsland Basin
Victoria, Australia

Gentlemen:

A Core Laboratories Australia combination drill cuttings and core analysis unit was present at the site of the subject well during drilling operations from 2884 to the total depth of 9761 feet.

Using standard equipment plus a Programmed Hydrocarbon Detector, Beckman chromatograph and shale density kit, the drilling fluid was monitored continuously for hydrocarbon content and the drill cuttings were checked at regular intervals for gas and oil content and lithology. The results of these operations are shown on the accompanying Grapholog.

Hydrocarbon Shows

Hydrocarbons were detected in one zone during the drilling of this well. Details of these shows are included on the attached Show Report No. 1.

We sincerely appreciate this opportunity to have been of service, and trust that the information furnished in this report and during drilling operations has assisted in the evaluation of this well.

Very truly yours,

Core Laboratories Australia Ltd.

Gene Jackman

Gene Jackman (GJ)
Resident Manager

GJ:dl
12 cc. - Addressee

SHOW REPORT
CL-108A

CORE LABORATORIES AUSTRALIA LTD.

No. 1
Operator ESSO STANDARD OIL (AUS) LTD. Date APRIL 17, 1970
Well BATFISH -1 AUSTRALIA State VICTORIA CLA No. FL-155-24L

DESCRIPTION OF SHOW:

Show Interval 6210' To 7000'
Color of Flu ____ Intensity of Flu ____
% Sand-Lime in Sample 20-30% % of Sand-Lime w/Flu NIL
Cut: Visual NO CUT Flu NO FLU
Lithology of Section: SANDSTONE, UNCONSOL, WH-CLR, MED-CRSE GR, SUBANG-SUBRNDED.
SHALE, LT BRN GY, SOFT-FIRM, SILTY IN PART.

GAS UNITS:

	HOT WIRE			P/H/D (CHROMATOGRAPH)					
Mud	Hi	Lo	Mud	Methane C_1	Ethane (+) C_2 (+)	Ethane C_2	Propane C_3	Butane C_4	Pentane C_5
From:	8	-	From:	1700	500	-	200	-	-
To:	90	-	To:	11750	6300	-	3700	2800	700
Cuttings			Cuttings						
From:	1	-	From:			NOT MEASURED			
To:	10	-	To:			NOT MEASURED			

ADDITIONAL INFORMATION:

Bit Condition — New X — Worn ____ — Dull ____
Drilling Break — Yes ____ — No X
Average Drilling Rate — Controlled Rate ____ — Before Break ____ — During Break ____
Weight on Bit Changes — Increased ____ — Decreased ____ — No Change X
Circulated Out — Yes ____ — No X — Depth CO ____
Chloride Changes — Before ____ — After ____

MUD EVALUATION:

Miner ____ Poor ____ Fair ____ Good ____ Remarks: GAS DETECTOR INDICATED HEAVY HYDROCARBONS, BUT NO FLU WAS OBSERVED IN SAMPLES.

FINAL EVALUATION: (It is recognized that other information such as other shows, side wall samples, etc. are necessary for the best evaluation. Consequently, this final opinion will be given at the end of the job after this data is available.)

PE905175

This is an enclosure indicator page.
The enclosure PE905175 is enclosed within the container PE905174 at this location in this document.

The enclosure PE905175 has the following characteristics:

ITEM_BARCODE	= PE905175
CONTAINER_BARCODE	= PE905174
NAME	= Formation Tester Recovery Data
BASIN	= GIPPSLAND
PERMIT	= VIC/L4
TYPE	= WELL
SUBTYPE	= FIT
DESCRIPTION	= Batfish-1 Formation Tester Recovery Data: Formation Interval Test (F.I.T.) Data, with test numbers 1-5. From section 6.0 of Well Summary Folder.
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Esso Standard Oil (Australia) Ltd.

(Inserted by DNRE - Vic Govt Mines Dept)

PE604146

This is an enclosure indicator page.
The enclosure PE604146 is enclosed within the container PE905174 at this location in this document.

The enclosure PE604146 has the following characteristics:

ITEM_BARCODE	= PE604146
CONTAINER_BARCODE	= PE905174
NAME	= Batfish-1 Grapholog (Mud Log)
BASIN	= GIPPSLAND
PERMIT	= VIC/L4
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Batfish-1 Grapholog (Mud Log). From section 3.0 of Well Summary Folder.
REMARKS	=
DATE_CREATED	= 19/05/1970
DATE_RECEIVED	=
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= Core Laboratories, Inc.
CLIENT_OP_CO	= Esso Standard Oil (Australia) Ltd.

(Inserted by DNRE - Vic Govt Mines Dept)

4.0 PALYNOLOGY

R.I.P

INTERPRETATIVE

PALYNOLOGY OF BATFISH-1
GIPPSLAND BASIN

by

P.R. Evans

Palyn. Rept. 1970/30

July, 1970.

INTRODUCTION

Samples from Batfish-1 were examined on a routine basis during April - June 1970. The well's position between Tuna to the north and Flounder to the south and within the region of the "Flounder channel" lead to specific interest in:

1. The age of sediments overlying the "channel fill".

2. The thickness, age and dinoflagellate content of the "channel fill".

3. The position of the top of the lilliei Zone.

The following report outlines the results of this study. Other reports relevant to the biostratigraphy of the region around Batfish and in preparation are a review of the Tuna field (Palyn. Rept. 1970/29), of the Flounder field (1970/31) and a review of correlations between Tuna, Batfish, Flounder and Trevally (1970/32).

COMMENT

The samples at 4765 and 4768 feet from the Oligocene foram unit J yielded abundant dinoflagellates and a specimen of the spore C. annulata which is confined to Oligocene and younger strata on-shore.

Sidewall cores from 4778 and 4844 feet were cut from a sandy section overlying the more typical "channel fill", but yielded insufficient fossils to indicate an age. The residues differed from the overlying Oligocene in lacking dinoflagellates.

The twelve samples of sidewall cores and cuttings from the upper M. diversus Zone, which is equated with the Eocene "channel fill" contained various proportions of dinoflagellates, but none in abundance and none with species of Wetzeliella which were identified in Flounder to the south and Tuna to the north. The cuttings taken at 50 feet intervals between 5110 and 5260 feet were examined on the premise that the section thus covered resembled the zone with W. thompsonae in Flounder-1. Although dinoflagellates were seen, the zone fossils have not yet been detected.

Previous analysis of the Flounder wells showed a marked increase of T. Lorrisii in proportion to Nothofagidites and to the remainder of the assemblage within and towards the top of the W. thompsonae dinoflagellate zone. Counts of these forms taken from sidewall cores only showed such an increase at 5230 and 5004 feet. However, the underlying samples at 5396 and 5530 feet gave unsatisfactory yields for such analysis and not until 5690 feet where the ratio has reverted to about 1:1 was a satisfactory count possible. Very tentatively, therefore, the W. thompsonae Zone or its non-dinoflagellate-bearing equivalent may occur at about 5200-5300 feet.

The base of the diversus Zone is taken to 6022 feet with confidence and to 6102 feet with some uncertainty. The sidewall core at 6102 feet yielded very few fossils, none diagnostic of the upper diversus Zone, but several indicative of the diversus Zone in general were present. It is only assumed that the sample is from the upper diversus Zone.

Subdivision of the balmei Zone has not been attempted in detail, although the numerous samples available from the zone, both processed and unprocessed, make Batfish a useful section for further study of the zone.

Common dinoflagellates were noted at 6760 feet and rare ones at 7926 feet.

The top of the lilliei Zone is chosen on the basis of parameters used in the Tuna region (Palyn. Rept. 1970/29). However, it cannot be defined to a closer interval than the 362 feet between 8040 and 8402 feet. The basal sample at 9691 feet is probably close to the base of the lilliei Zone, but cannot be placed in that zone with certainty.

SUMMARY OF DETERMINATIONS

Sample	Depth(ft.)	Age	Zone
swc 14a	4765	Oligocene	Unit J
swc 13a	4768	"	"
swc 12a	4778	Indet.	
swc 10a	4844	"	
swc 9a	5004	Eocene	U. M. diversus
Cutt.	5110	"	"
"	5160	"	"
"	5210	"	"
swc 8a	5230	"	"
Cutt.	5260	"	"
swc 7a	5396	"	"
" 6a	5530	"	"
" 30	5690	"	"
" 29	5856	"	"
" 28	5956	"	"
" 27	6022	"	"
" 26	6102	"	"
" 23	6309	Paleocene	L. balmei
" 21	6351	"	"
" 19	6410	"	"
" 18	6462	"	"
" 17	6517	"	"
" 16	6580	"	"
" 14	6740	"	"
" 4a	7000	"	"
" 3a	7332	"	"
" 5	7439	"	"
" 4	7527	"	"
" 2a	7653	"	"
" 3	7806	"	"
" 2	7890)*	"	"
" 1a	7910)		
" 1	7926	"	"
" 30	8040	"	"
Cutt.	8100	Indeterminate	
Cutt.	8320	"	
Swc 8	8402	Upper Cretaceous	T. Lilliei
" 47	8464	"	"
" 45	8504	"	"
Cutt.	8520	"	"
swc 44	8562	"	"
" 43	8604	"	"
" 37	8963	"	"
" 36	8976	"	"
" 35	9067	"	"
" 5	9691	"	T. lilliei or N. senectus

* Combined sample.

BASIN GIPPSLAND DATE

WELL NAME BATFISH -1 ELEVATION +31 feet

AGE	PALYNOLOGIC ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
MIOC.	T. bellus										
MIOC.	P. tuberculatus	4765	1				4768	1			
EOCENE	U. N. asperus										
EOCENE	L. N. asperus										
EOCENE	P. asperopolus										
EOCENE	U. M. diversus	5004	1				6022	1	6102	2	
EOCENE	L. M. diversus										
PALEO-CENE	L. balmei	6309	1				6580	1			
PALEO-CENE	T. longus	7332	2	7439	1		8040	1			
LATE CRETACEOUS	T. lilliei	8402	1				9067	1			
LATE CRETACEOUS	N. senectus										
LATE CRETACEOUS	C. trip./T.pach.										
LATE CRETACEOUS	C. distocarin.										
LATE CRETACEOUS	T. pannosus										
EARLY CRETACEOUS	C. paradoxa										
EARLY CRETACEOUS	C. striatus										
EARLY CRETACEOUS	U. C. hughesii										
EARLY CRETACEOUS	L. C. hughesii										
EARLY CRETACEOUS	C. stylosus										
Pre-Cretaceous											

COMMENTS:

T.D. 9761 (2.0/8)

RATINGS:
0; SWC or CORE, EXCELLENT CONFIDENCE, assemblage with zone species of spores, pollen and microplankton.
1; SWC or CORE, GOOD CONFIDENCE, assemblage with zone species of spores and pollen or microplankton.
2; SWC or CORE, POOR CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.
3; CUTTINGS, FAIR CONFIDENCE, assemblage with zone species of either spores and pollen or microplankton, or both.
4; CUTTINGS, NO CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.

NOTE: If a sample cannot be assigned to one particular zone, then no entry should be made. Also, if an entry is given a 3 or 4 confidence rating, an alternate depth with a better confidence rating should be entered, if possible.

DATE RECORDED BY: L.E.S./A.D.P. DATE June 1973

DATA REVISED BY: L.E.S. DATE Dec. 1971

FORM No. [illegible]

BASIN GIPPSLAND DATE

WELL NAME BATFISH-1 ELEVATION +31 FEET

AGE	PALYNOLOGIC ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
MIO.	P. tuberculatus	4765	1				4768	1			
EOCENE	U. N. asperus										
	M. N. asperus										
	L. N. asperus										
	P. asperopolus	5004	1				5698	1			
	U. M. diversus	5956	1				6102	1			
	M. M. diversus										
	L. M. diversus										
PALEOCENE	U. L. balmei										
	L. L. balmei	6309	1				6740	1			
	T. longus	7332	1				8040	1			
CRETACEOUS	T. lilliei	8402	1				9067	1			
	N. senectus										
	C. trip./T.pach.										
	C. distocarin.										
	T. pannosus										
EARLY CRETACEOUS											
PRE-CRETACEOUS	T.D.	9761									

COMMENTS: Eisenackia crassitabulata Dinoflagellate Zone 6309'(2)
None of the Wetzeliella Zones can be indentified within the Flounder Fm. in this well.

RATINGS:
0; SWC or CORE, EXCELLENT CONFIDENCE, assemblage with zone species of spores, pollen and microplankton.
1; SWC or CORE, GOOD CONFIDENCE, assemblage with zone species of spores and pollen or microplankton.
2; SWC or CORE, POOR CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.
3; CUTTINGS, FAIR CONFIDENCE, assemblage with zone species of either spore and pollen or microplankton, or both.
4; CUTTINGS, NO CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.

NOTE: If a sample cannot be assigned to one particular zone, then no entry should be made. Also, if an entry is given a 3 or 4 confidence rating, an alternate depth with a better confidence rating should be entered, if possible.

DATA RECORDED BY: LES/ADP DATE June 1971; Dec 1971.

DATA REVISED BY: ADP DATE Jan. 1975.

FORM No R 315 12/72

PALYNOLOGY DATA SHEET

BASIN: GIPPSLAND ELEVATION: KB: +31 ft GL: 211 ft

WELL NAME: BATFISH-1 REVISED. TOTAL DEPTH: 9761 feet

AGE	PALYNOLOGICAL ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time	Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time
NEOGENE	*T. pleistocenicus*										
	M. lipsis										
	C. bifurcatus										
	T. bellus										
PALEOGENE	*P. tuberculatus*	4765	1				4768	1			
	Upper *N. asperus*										
	Mid *N. asperus*										
	Lower *N. asperus*										
	P. asperopolus	5004	1				5698	1			
	Upper *M. diversus*	5956	1				6102	1			
	Mid *M. diversus*										
	Lower *M. diversus*										
	Upper *L. balmei*										
	Lower *L. balmei*	6309	1				6740	2			
LATE CRETACEOUS	Upper *T. longus*	7332	1				8040	1			
	Lower *T. longus*	8100	2	8402	1		8562	1			
	T. lilliei	8604	2				9691	2			
	N. senectus										
	T. apoxyexinus										
	P. mawsonii										
	A. distocarinatus										
EARLY CRET.	*P. pannosus*										
	C. paradoxa										
	C. striatus										
	C. hughesi										
	F. wonthaggiensis										
	C. australiensis										

COMMENTS: Eisenackia crassitabulata Dinoflagellate Zone 6309' (2)

Depths in feet.

CONFIDENCE RATING:

0: SWC or Core, Excellent Confidence, assemblage with zone species of spores, pollen and microplankton.

1: SWC or Core, Good Confidence, assemblage with zone species of spores and pollen or microplankton.

2: SWC or Core, Poor Confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

3: Cuttings, Fair Confidence, assemblage with zone species of either spores and pollen or microplankton, or both.

4: Cuttings, No Confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

NOTE: If an entry is given a 3 or 4 confidence rating, an alternative depth with a better confidence rating should be entered, if possible. If a sample cannot be assigned to one particular zone, then no entry should be made, unless a range of zones is given where the highest possible limit will appear in one zone and the lowest possible

Form R 193 3/71

BASIN GIPPSLAND BASIN BY David TAYLOR

WELL NAME BATFISH-1 DATE 16 April 1971 ELEV. +31'

Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
MIOCENE	A	Alternate			1060	3	
	B	1100	3		2100	3	
		Alternate			2200	3	
	C	2200	3		3300	2	
		Alternate					
	D_1	3400	3		3750	3	
		Alternate					
	D_2	3820	3		4100	1	
		Alternate					
	E	4190	3		4500	1	
		Alternate 4300	2				
	F	4360	1		4541	0	
		Alternate					
	G	4690	0		4750	3	
		Alternate			4736	0	
	H_1	Alternate					
	H_2	Alternate					
OLIGOCENE	I_1	Alternate					
	I_2	Alternate					
	J_1	4763	0		4768	4	
		Alternate					
	J_2	Alternate					
EOC.	K	5100	4		5230	4	
		Alternate					
	Pre K	5396	4		5396	4	

COMMENTS:

Note: If highest or lowest data is a 3 or 4, then an alternate 0, 1, 2 highest or lowest data will be filled in if control is available.

If a sample cannot be interpreted to be one zonule, as apart from the other, no entry should be made.

0 SWC or Core - Complete assemblage (very high confidence).
1 SWC or Core - Almost complete assemblage (high confidence).
2 SWC or Core - Close to zonule change but able to interpret (low confidence).
3 Cuttings - Complete assemblage (low confidence).
4 Cuttings - Incomplete assemblage, next to uninterpretable or SWC with depth suspicion (very low confidence).

Date Revised _____

By _____

5.0 VITRINITE REFLECTANCE MEASUREMENTS

Jack Dawn

Oil & Gas

RECD 22.4.86 KGO

Amoco Australia Petroleum Company
(Inc. in Delaware, U.S.A., with Limited Liability — Registered as a Foreign Company in Tasmania)

15 Blue Street, North Sydney
P.O. Box 126, North Sydney 2060
Phone (02) 957 4500
Telex AA23359
Facsimile (02) 922 4886

April 16, 1986

The Director of Mines,
Department of Minerals and Energy,
East Tower, Princes Gate,
151 Flinders Street,
Melbourne. Vic. 3000

Dear Sir,

Re: Gippsland Basin Vitrinite Reflectance Measurements
MISC-AUP-141-L-310-SCB

In 1985 Amoco Australia Petroleum Company collected core and cutting samples from thirteen Gippsland Basin wells for vitrinite reflectance determinations. The following attachments are a summary of the work.

Yours faithfully,

BATFISH-1

S.C. Bane

S.C. Bane
Exploration Manager

SCB/lrc

Attach.

Depth (ft)	Mean Maximum Reflectance (%)	Standard Deviation	Range	Number of Determinations
ALBACORE -1				
9380&9390	0.42	0.04	0.31-0.48	42
9720&2730	0.46	0.06	0.36-0.59	36
10070	0.46	0.04	0.36-0.55	39
10320	0.47	0.04	0.38-0.54	34
BARRACOUTA-3				
7310-7320	0.54	0.05	0.46-0.63	35
8590	0.60	0.08	0.43-0.71	35
9100-9120	0.62	0.10	0.41-0.80	41
9330-9360	0.64	0.10	0.43-0.93	36
9540-9560	0.73	0.05	0.63-0.84	33
BATFISH-1				
7560-7570	0.61	0.05	0.53-0.69	34
8170-8180	0.64	0.05	0.56-0.75	34
8640-8650	0.69	0.05	0.55-0.81	31
9170-9190	0.76	0.04	0.66-0.81	28
9430-9450	0.76	0.05	0.69-0.90	41
BONITA-1A				
9780-9790	0.54	0.06	0.46-0.68	36
10050	0.56	0.05	0.47-0.64	36
10280-10290	0.55	0.04	0.47-0.64	47
BREAM-2				
8070-8090	0.63	0.05	0.52-0.70	39
8380-8390	0.67	0.06	0.53-0.80	41
8933-8944	0.73	0.05	0.62-0.85	43
9730-9750	0.83	0.07	0.71-0.98	38
10638-10641	0.88	0.11	0.62-1.13	42

Depth (ft)	Mean Maximum Reflectance (%)	Standard Deviation	Range	Number of Determinations
COD-1				
7100-7120	0.63	0.06	0.53-0.81	41
8333-8339	0.59	0.05	0.47-0.67	34
9030-9060	0.75	0.06	0.61-0.85	32
9460-9470	0.77	0.06	0.61-0.86	41
FLOUNDER-1				
7430	0.44	0.05	0.36-0.56	39
8783-8795	0.64	0.04	0.56-0.77	36
9140	0.61	0.06	0.52-0.77	42
10395-10400	0.72	0.06	0.58-0.80	34
11350-11356	0.90	0.05	0.76-0.97	36
11676-11682	0.90	0.07	0.78-1.04	44
HALIBUT-1				
7888-7891	0.49	0.07	0.37-0.67	39
8450-8460	0.54	0.04	0.47-0.61	31
9250-9260	0.57	0.06	0.46-0.66	43
9630-9640	0.61	0.04	0.54-0.69	35
9870-9880	0.63	0.06	0.47-0.75	52
MACKEREL-1				
8760-8780	0.63	0.05	0.52-0.71	31
9630-9650	0.66	0.05	0.69-0.76	25
9870-9890	0.65	0.02	0.60-0.73	28

Depth (ft)	Mean Maximum Reflectance (%)	Standard Deviation	Range	Number of Determinations
MARLIN-1				
7070-7080	0.65	0.08	0.52-0.80	32
7497-7501	0.65	0.04	0.54-0.72	38
7780-7800	0.67	0.09	0.47-0.88	39
8230-8240	0.71	0.07	0.64-0.79	4
8455-8461	0.70	0.06	0.56-0.79	32
NANNYGAI-1				
7760-7670	0.052	0.07	0.39-0.65	33
8320-8340	0.50	0.05	0.42-0.65	32
9450-9470	0.64	0.04	0.57-0.71	35
9860-9880	0.64	0.06	0.51-0.75	31
SALMON-1				
7670-7690	0.50	0.06	0.38-0.64	35
8030-8050	0.56	0.05	0.45-0.67	37
8860	0.60	0.05	0.45-0.67	33
9250-9260	0.64	0.06	0.54-0.79	36
9856-9862	0.80	0.05	0.68-0.87	37
SNAPPER-1				
7280-7300	0.56	0.06	0.43-0.69	37
7754-7760	0.56	0.09	0.38-0.73	38
9254-9257	0.68	0.03	0.60-0.72	33
9900-9903	0.86	0.10	0.62-0.96	17
10140-10200	0.81	0.10	0.58-1.01	31
10495-10507	0.99	0.06	0.81-1.06	35

6.0 Formation Interval Test (F.I.T)

Data

BATFISH-1 W582 Page 1 of 4 VMD (2)

Basic Data.

R. D. AGNEW (VIC.) PTY. LTD.
582 ST. KILDA ROAD
MELBOURNE, VICTORIA 3004

PHONES: MEL 51 9702
51 9724

SALE 3607

ESSO STANDARD OIL (AUST) LTD. BATFISH NO. 1

FORMATION INTERVAL TESTING: MAY 19, 1970 THROUGH MAY 24, 1970
REPORTING RESULTS OBTAINED WITH AMERADA PRESSURE RECORDERS
OPERATOR FOR AGNEW: DEREK CLAUSON SERVICE ENGINEER.
SCHLUMBERGER "FORMATION INTERVAL TESTER".
RIG: GLOMAR III.

CLAUSON'S REPORT

MAY 18, 1970

1500 HOURS DEPART WEST SALE AIRPORT
1545 HOURS ARRIVE GLOMAR III AND STANDBY

MAY 19, 1970

0001 2400 STANDBY
RIG ACTIVITY: RERUNNING RISER - RUN IN HOLE AND CIRCULATE

MAY 20, 1970

0001 2400 HOURS STANDBY
RIG ACTIVITY: CIRCULATING-PULL OUT OF HOLE TO LOG-RECEIVED GALE WARNINGS-RUN IN HOLE AND HANG OFF PIPE-WAIT ON WEATHER.

MAY 21, 1970

0001 2400 HOURS STANDBY
RIG ACTIVITY: WAITING ON WEATHER-RUN TO BOTTOM AND CIRCULATE TO CONDITION MUD-PULL OUT OF HOLE-COMMENCE LOGGING.

MAY 22, 1970

0001 2400 HOURS STANDBY
RIG ACTIVITY: LOGGING-COMPENSATING LINE PARTED-SCHLUMBERGER LINE PARTED. FISHING FOR CABLE-RETRIEVE CABLE AND WAIT FOR NEW SPOOL.

MAY 23, 1970

0001 1800 HOURS STANDBY
RIG ACTIVITY: LOGGING
1800 2230 HOURS RUNNING F.I.T. NUMBER 1 & 2.

ESSO STANDARD OIL (AUST) LTD. BATFISH NO. 1

FIT TESTING: MAY 19, 1970 THROUGH MAY 24, 1970

F.I.T. TEST NO. 1 @ 7035'KB 10,250 PSI ELEMENT NO. 3972-N

TIME	FUNCTION	PSIG
1810 HRS	ENGAGE STYLUS	
1824 HRS	START IN HOLE	
1915 HRS	SET PACKER AND OPEN TOOL	
1916 HRS	TOOL FULL	3150
1917 HRS		3150
1920 HRS		3150
1930 HRS		3150
1933½ HRS		3150
1933½ HRS	OPEN SEGREGATOR	
1934 HRS		3125
1935 HRS		3125
1936 HRS		3125
1936 HRS	SEAL SEGREGATOR	
1937 HRS	SHUT IN PRESSURE - UNSEAT TOOL	3140
1939 HRS	HYDROSTATIC PRESSURE	3985
2020 HRS	DISENGAGE STYLUS-	

F.I.T TEST NO. 2 @ 6286'KB 10,250 PSI ELEMENT NO. 3972-N

TIME	FUNCTION	PSIG
2040 HRS	ENGAGE STYLUS	
2045 HRS	START IN HOLE	
2153 HRS	SET PACKER AND OPEN TOOL	
2153½ HRS	FILLING	2770
2154 HRS	TOOL FULL	2780
2155 HRS		2780
2200 HRS		2780
2205 HRS		2780
2208 HRS		2780
2208 HRS	OPEN SEGREGATOR FOR ONE MINUTE	
2208½ HRS		2760
2209 HRS		2765
2209 HRS	SEAL SEGREGATOR	
2210 HRS	SHUT IN PRESSURE	2780
2211 HRS	UNSEAT TOOL	
2213 HRS	HYDROSTATIC PRESSURE	3505
2250 HRS	DISENGAGE STYLUS	

2300 2400 HOURS RUNNING C.S.T.

MAY 24, 1970

0130 FINISH RUNNING C.S.T. AND RIG UP FOR F.I.T. NO. 3

ESSO STANDARD OIL (AUST) LTD. BATFISH NO. 1

FIT TESTING: MAY 19, 1970 THROUGH MAY 24, 1970

F.I.T. TEST NO. 3 @ 9240'KB — 10,250 PSI ELEMENT NO. 3972-N

TIME	FUNCTION	PSIG
0146 HRS	ENGAGE STYLUS ON 10,250 ELEMENT	
0151 HRS	ENGAGE STYLUS ON 10,350 ELEMENT	
0215 HRS	START IN HOLE	

NOTE: PACKER DID NOT SEAL RESULTING IN A MUD RUN. PRESSURE LINE IN SCHLUMBERGER ADAPTER SUB WAS BLOCKED AND NO PRESSURE WAS RECORDEDON 10,350 PSI ELEMENT.

HYDROSTATIC PRESSURE 5129

F.I.T. TEST NO. 4 @ 9238'KB

NOTE: NO PRESSURES DURING THIS TEST CAN NOT BE QUOTED AS THE STYLUS ON THE 10,250 PSI ELEMENT WAS TWISTED WHEN THE SHAPE CHARGE WAS FIRED. THE FLOWLINE TO THE 10,350 PSI ELEMENT WAS BLOCKED OR THE INSTRUMENT WAS MALFUNCTIONING AND NO PRESSURES CAN BE QUOTED.

F.I.T. TEST NO. 5 @ 8850'KB — 10,250 PSI ELEMENT NO. 3972-N

TIME	FUNCTION	PSIG
0928 HRS	ENGAGE 10,250 STYLUS	
0929 HRS	ENGAGE 10,350 STYLUS	
0945 HRS	START IN HOLE	
1030 HRS	(APPROX) SET PACKER AND OPEN TOOL	
1031 HRS	FILLING TOOL	693
1032 HRS		1545
1033 HRS		1410
1033 HRS	FIRE SHAPE CHARGE	
1034 HRS		3535
1035 HRS		3480
1036 HRS		3460
1040 HRS		3430
1041 HRS	TOOL FULL-START BUILDUP	3915
1042 HRS		3920
1046 HRS		3920
1046 HRS	SHUT IN TOOL	
1047 HRS		3950
1048 HRS		3950
1048½ HRS	UNSEAT TOOL AND START OUT OF HOLE	
	HYDROSTATIC PRESSURE	4920
1212 HRS	DISENGAGE STYLUS	

NOTE: 10,350 PSI ELEMENT AGAIN DID NOT RECORD PRESSURES CORRECTLY.

ESSO STANDARD OIL (AUST) LTD. BATFISH NO. 1

FIT TESTING: MAY 19, 1970 THROUGH MAY 24, 1970

F.I.T. TEST NO. 5 @ 8850'KB (CONTINUED)

TIME	FUNCTION
1615 HRS	DEPART GLOMAR III
1700 HRS	ARRIVE WEST SALE AIRPORT.

BY: DEREK CLAUSON

ESSO STANDARD OIL (AUST.) LTD.

Exploration Department

Weekly Drilling Report

Week Ending May 29, 1970.

Well: Batfish-1

Lease: Victoria L4.

Location: 148° 24' 13" E
38° 13' 34" S

Spud: April 6, 1970.

Plugged & Abandoned: May 27, 1970.

Total Depth: 9761'

Operations during Week: Ran electric logs; set plugs; abandoned hole.

Electric Logs: Run 1 at 7924'
Run 2 at 9761'

IES	9759-7954'
GR-FDC	9759-7954'
BHCS-SP	9760-7954'
CDM	9759-7954'

CST (2 guns) Shot 50, Recovered 30 between 9744-8038'.

FIT 1: 7035 (through casing)

Recovered 141.1 cu.ft. gas
1480 cc condensate (64° API @ 60°F)
50 cc sand
Sampling pressure - 3200 psi
Final Shut-in-pressure 3200 psi

FIT 2: 6286.5 (through casing)

Recovered 134.5 cu.ft. gas
1520 cc condensate (71° API@ 60°F)
50 cc sand
Sampling pressure - 2850 psi
Final Shut-in-pressure - 2850 psi

FIT 3: 9240 (open hole)

Seal failure.

FIT 4: 9238 (open hole)

Recovered 0.9 cu.ft. gas
scum of oil.
20,000 cc water (mud filtrate)
150 cc mud
200 cc sand
Sampling pressure - 3700 psi
Final Shut-in-pressure - 4300 psi

FIT 5: 8850 (open hole)

Recovered 0.9 cu.ft. gas
scum of oil
20,000 cc mud filtrate
150 cc mud
150 cc sand
Sampling pressure - 3700 psi
Final Shut-in-pressure - 4000 psi

Plugs:

No.	Interval	Cement
1	9761-9300'	235 sacks + 0.5% D-13
2	8005-7715'(tagged)	125 " + 0.4% HR_4
3	7085-6850'(tagged)	80 " + 0.4% HR_4
4	6337-6128'(tagged)	80 " + 0.4% HR_4
5	805-505'	110 sacks neat

All subsurface and well head equipment cut at or below mudline.

Remarks:

Glomar-III departed location at 0500 hrs. on May 27, having plugged and abandoned Batfish-1 as a gas/condensate discovery.

Bruce McKay

B.G. McKay

BGMcK/af

7.0 ENCLOSURES.

7.1 Structure Map Mid Palaeocene Marker
7.2 Structure Map On Top of Latrobe and Palaeocene Horizon
7.3 Geological Cross Section A-A'
7.4 Time Depth Curve
7.5 Well Completion Log

PE902815

This is an enclosure indicator page.
The enclosure PE902815 is enclosed within the container PE905174 at this location in this document.

The enclosure PE902815 has the following characteristics:

ITEM_BARCODE	= PE902815
CONTAINER_BARCODE	= PE905174
NAME	= Geological Cross Section A-A'
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= CROSS_SECTION
DESCRIPTION	= Geological Cross Section A-A' (enclosure 7.3 from Well Summary Folder) for Batfish-1
REMARKS	=
DATE_CREATED	= 28/02/1984
DATE_RECEIVED	= 02/03/1984
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE905176

This is an enclosure indicator page.
The enclosure PE905176 is enclosed within the container PE905174 at this location in this document.

The enclosure PE905176 has the following characteristics:

ITEM_BARCODE	= PE905176
CONTAINER_BARCODE	= PE905174
NAME	= Batfish-1 Structure Map
BASIN	= GIPPSLAND
PERMIT	= VIC/L4
TYPE	= SEISMIC
SUBTYPE	= HRZN_CONTR_MAP
DESCRIPTION	= Batfish-1 Structure Maps on Top of Latrobe and Paleocene Horizon. Enclosure 7.2 from Well Summary Folder.
REMARKS	=
DATE_CREATED	= 31/03/1970
DATE_RECEIVED	=
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= Esso Exploration and Production Australia Inc.
CLIENT_OP_CO	= Esso Standard Oil (Australia) Ltd.

(Inserted by DNRE - Vic Govt Mines Dept)

PE902816

This is an enclosure indicator page.
The enclosure PE902816 is enclosed within the container PE905174 at this location in this document.

The enclosure PE902816 has the following characteristics:

ITEM_BARCODE	= PE902816
CONTAINER_BARCODE	= PE905174
NAME	= Structure Map Mid Paleocene Marker
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= HRZN_CNTR-MAP
DESCRIPTION	= Structure Map Mid Paleocene Marker (enclosure 7.1 of Well Summary Folder) for Batfish-1
REMARKS	=
DATE_CREATED	= 31/08/1981
DATE_RECEIVED	= 02/03/1984
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE602720

This is an enclosure indicator page.
The enclosure PE602720 is enclosed within the container PE905174 at this location in this document.

The enclosure PE602720 has the following characteristics:

ITEM_BARCODE	= PE602720
CONTAINER_BARCODE	= PE905174
NAME	= Batfish 1 Well Completion Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L4
TYPE	= WELL
SUBTYPE	= COMPLETION_LOG
DESCRIPTION	= Batfish 1 Well Completion Log (enclosure 7.5 of Well Summary Folder) for Batfish-1
REMARKS	=
DATE_CREATED	= 27/05/70
DATE_RECEIVED	=
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= Esso
CLIENT_OP_CO	= Esso Exploration and Production Australia Inc

(Inserted by DNRE - Vic Govt Mines Dept)

PE905177

This is an enclosure indicator page.
The enclosure PE905177 is enclosed within the container PE905174 at this location in this document.

The enclosure PE905177 has the following characteristics:

ITEM_BARCODE	= PE905177
CONTAINER_BARCODE	= PE905174
NAME	= Time Depth Curve
BASIN	= GIPPSLAND
PERMIT	= VIC/L4
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Batfish-1 Time Depth Curve. Enclosure 7.4 from Well Summary Folder.
REMARKS	=
DATE_CREATED	= 27/08/1971
DATE_RECEIVED	=
W_NO	= W582
WELL_NAME	= Batfish-1
CONTRACTOR	= Esso Exploration and Production Australia Inc.
CLIENT_OP_CO	= Esso Standard Oil (Australia) Ltd.

(Inserted by DNRE - Vic Govt Mines Dept)