



EARLIER FILES

LATER FILES

RECORDS DISPOSITION

**BREAM-3**

SPUD. 12-11-69  
COMP. 10-1-70  
T.D. 11012'

566

38° 30'  
147° 46'  
W.D. 185' KB  
OCEAN DIGGERS

Esso Vic/Pi.

IES. RUN 1.	2310' - 6713'	SEPARATE LOGS 2" AND 5"
" " 2.	6667' - 11010'	" " " " " "
" " 1 & 2.	2310' - 11010'	" " " " " "
B.H.C.S./CAL. R.1.	2310' - 6700'	" " 2 1/2" 5"
" " " 2.	6667' - 11006'	" " " " " "
" " 1 & 2.	2310' - 11006'	" " " " " "
F.D.C./GR. R.1.	2310' - 6712'	" " " " " "
" " " 2.	6667' - 11007'	" " " " " "
" " 1 & 2.	2310' - 11007'	" " " " " "
C.D.M. R.1.	5" & 2". 2310' - 6704'	
" " 2.	" " " " 6667' - 11000'	
NEUTRON " 1.	5500' - 6707'	SEP. LOGS 2" AND 5"
M.L.L. " 1.	5500' - 6710'	" " " " " "
FIT. " 1.	TESTS 1-6.	+1c
" " 2.	" " 7-9, 11-14.	+1c

EXPLORATION LOGGING'S MUDLOG 674' - 11012'

CORE DESCRIPTIONS 1 - 4.

S.W.C. " " 2400' - 6700' } SHOT 50. REC. 39.  
" " " " 9255 - 10864 }

EXPLORATION LOGGING'S CORE ANALYSIS REPORT.

T.D.C.

N.M.

WELL SUMMARY

CUTTING IN STORE 674' - 6380'. 6450' - 11012'.

CORES " " NO. 1. 6335' - 6364' REC. 29'. NO. 2. 6396' - 6421' REC. 26'.  
NO. 3. 6445' - 6464' REC. 20'. NO. 4. 10833' - 10852' REC. 20'.

CORE ANALYSIS RESULTS CORES 1-4. B.M.R.

WELL COMPLETION LOG.

DAILY & WEEKLY REPORTS

STRUCTURE MAP TOP OF LATROBE GROUP.

MICROPALAEONTOLOGY REPORT BY D. TAYLOR.

PALYNOLOGY REPORT BY L.E. STOVER & A.D. PARTRIDGE. Plus Revision

" OF BREAM-3 & REVIEW OF BREAM-2 BY P.R. EVANS & R.D.M.

PALAEONTOLOGY REPORT.

PALYNOLOGICAL SHEET BY W.K. HARRIS

FILE

## TABLE OF CONTENTS

BREAM 3

W566

1. Well Summary
2. Lithology
3. Core Analysis Reports & Description
4. Palynology & Micropalaeontology

### Attachments

1. Structure Map: Top of La Trobe Group Coarse Clastics
2. Time Depth Curve
3. Well Completion Log
4. Exploration Logging Mud Log

BREAM 3 - WELL SUMMARY

TYPE OF WELL: Wildcat

PURPOSE OF WELL: The site of Bream 3 was chosen in order to test the hydrocarbon potential of the western upthrown block at the top of the Latrobe unconformity in the Bream structure, and also to confirm the Bream 2 oil and gas discovery.

STATUS: Plugged and abandoned.

LOCATION: Latitude: 38° 30' 47" South  
Longitude 147° 46" 15" East

LEASE: Vic/Pl.

RIG: "Ocean Digger"

ELEVATION: Rotary Table 93 feet above mean sea level.

WATER DEPTH: 185 feet.

SPUDED: 0915 hours, 16th November, 1969.

ABANDONED: 1500 hours, 10th January, 1970.

DRILLING TIME: 56 days.

TOTAL DEPTH: 11,012 feet.

CASING: 20" shoe set at 622 feet.  
9 5/8" shoe set at 6667 feet.

CEMENT PLUGS:

<u>Plug No.</u>	<u>Interval (ft.)</u>	<u>No. of Sacks</u>
1	9656-10,400	350 Top tagged
2	8863-9640	350 Top tagged
3	6285-6800	210 Top tagged
4	Bottomed at 750 feet.	54

CORES:

Four conventional cores were cut, with aggregate footage of 159 feet, and recovery of 95 feet (59%).

<u>Core No.</u>	<u>Interval (ft.)</u>	<u>Recovery</u>
1	6335-6395	29
2	6395-6444	26
3	6444-6469	20
4	10,832-10,857	20

50 S.W.C.'s were shot, and 39 recovered. A velocity survey was run.

#### CORE ANALYSIS:

Refer to Core Laboratories analysis.

#### MUDLOGS:

A continuous mudlog record was maintained by Exploration Logging Inc. in the interval 675 - 11,012 feet (T.D.). For analysis refer to drill data submitted at completion of the well.

#### ELECTRIC LOGGING:

<u>Log</u>	<u>Run</u>	<u>Interval (ft.)</u>
IES	1	2310-6713
IES	2	6667-11,010
FDC.GR	1	2310-6712
FDC.GR	2	6667-11,007
BHCS.SP	1	2310-6700
BHCS.SP	2	6667-11,006
CDM	1	2310-6707
CDM	2	6667-11,006
Neutron	1	5500-6707
MLL	1	5500-6700
FIT	Tests 7-14	
FIT	Tests 1-6	

#### TESTING:

A total of fourteen Formation Interval Tests were run eleven of which were successful. Details are as follows :-

F.I.T. No.1	6427 feet	- Recovered 8500 cc's. water, mainly filtrate, 0.85 cub.ft. gas.
F.I.T. No.2	6408 feet	- Recovered 15,000 cc's. oil, 51° A.P.1 @ 60° F, 81 cub.ft. gas. G.O.R. 860
F.I.T. No.3	6358 feet	- Recovered 135.4 cub.ft., gas, minor sand and mud.
F.I.T. No.4	6337 feet	- Recovered 135 cub. ft. gas.
F.I.T. No.5	6382 feet	- Recovered 10,000 cc's oil, 50° A.P.1 @ 60° F, 61.5 cub.ft.gas, G.O.R.980.
F.I.T. No.6	6433 feet	- Recovered 21,000 cc's water and 2.2 cub. ft. gas.
F.I.T. No.7	10,042 feet	- Recovered 0.1 cub.ft. gas, 6400 cc's filtrate 50 cc's mud.
F.I.T. No.8	9680 feet	- Recovered 0.3 cub.ft.gas, 11800 cc's filtrate, 50 cc's mud.
F.I.T. No.9	9638 feet	- Packer failed.

- F.I.T. No.10 8484 feet - Tool malfunction
- F.I.T. No.11 8484 feet - Tool plugged.
- F.I.T. No.12 9624 feet - Recovered 0.1 cub. ft. gas, 50 cc's filtrate, 50 cc's mud.
- F.I.T. No.13 8487 feet - Recovered 103.3 cub. ft. gas, 600 cc's condensate, 6300 cc's filtrate, 50 cc's mud.
- F.I.T. No.14 7350 feet - Recovered 127.1 cub. ft. gas, 1200 cc's condensate, 1500 cc's filtrate, 50 cc's mud.

Interval (ft.)

- 5900-6200 - Mudstone, light grey to grey brown, moderately firm, calcareous, slightly pyritic and fossiliferous; Greensand, sandy, glauconitic, fine to coarse grained, low porosity and permeability with Siltstone, dark brown.
- 6200-6335 - Sandstone, fine to coarse grained, sub-angular to rounded, no fluorescence, with Coal.

CORE NO.1

- 6335 - 6335 feet  
3 inches - Sandstone, fine to medium grained, good porosity and permeability, no fluorescence.
- 6335 feet 3 inches  
- 6337 feet - Coal plus 6 inches Shale.
- 6337-6340 feet - Sandstone, as above, slight odour, no fluorescence.
- 6340-6342 feet - Interbedded Shale and thin Sandstone layers.
- 6342-6357 feet - Interbedded Sandstone and Siltstone
- 6357-6364 feet - Sandstone, medium to coarse grained, good porosity and permeability, strong odour, yellow to white fluorescence rapid cut.
- 6364-6395 feet - No recovery.

CORE No.2.

- 6395-6400 feet  
6 inches - Interbedded Shale and Sand fine grained.
- 6400 feet.6  
inches - 6421 ft. - Sandstone, with good yellow fluorescence throughout.
- 6421-6444 - No recovery.

CORE NO.3

- 6444-6464 feet - Sandstone, very fine grained, and Siltstone with 6" Sand at 6448 feet with strong odour, yellow brown fluorescence, yellow cut, darker appearance. Remainder has no fluorescence or cut.
- 6464-6469 feet - No recovery.
- 6469-6560 feet - Sand, medium grained to granular, sub-angular to rounded, unconsolidated, no fluorescence.
- 6560-6735 - Siltstone, dark brown, with interbedded Coal.
- 6735-6760 - Cement.
- 6760-8500 - Sandstone, white, fine to very fine grained, quartzose, sub-angular. Shale, dark brown, carbonaceous. Coal.
- 8500-9300 - Sandstone, white, medium to very coarse grained, unconsolidated, pyritic and Sand, very fine, friable. Shale, dark brown, carbonaceous, silty, firm. Coal, black, pyritic.
- 9300-9840 - Shale, brown, carbonaceous Sandstone, white, quartzose, fine to coarse grained with Sand, white, medium to coarse grained. Coal and Gilsonite.
- 9840-10,170 - Sandstone, white, fine to very coarse grained, slightly pyritic and Sand, white, fine to very coarse grained Shale, light to medium brown, carbonaceous. Coal.
- 10,170-10,410 - Sandstone, white, fine to very coarse grained, poorly sorted, clay matrix, patchy fluorescence. Siltstone, brown, carbonaceous Shale, light to medium brown, silty. Coal.
- 10,410-10,832 - Sandstone, white, fine to very coarse grained, clay matrix, some fluorescence, fair cut with blue-white colour, but very slow. Shale, silty, carbonaceous, micaceous. Coal, bleeding gas.

10,832-10,857

- Mainly Sandstone, light grey, fine to coarse-grained, calcareous, clay matrix, poorly sorted, tight appearance, bright gold mineral fluorescence, fair to poor cut, interbedded with thin shale beds.

10,857-11,012  
(T.D.)

- Sandstone, white, calcareous, clay matrix, bright gold fluorescence, blue-white colour, slow cut.  
Shale, silty carbonaceous, micaceous.  
Coal.



## 2. LITHOLOGY (SIDE WALL CORE DESCRIPTIONS)

## GENERAL CORE DESCRIPTIONS

WELL *BREAM-3*SERV. CO. *SCHLUMBERGER*DATE *29-11-69*LOG RIN NO. *1*GEOLOGIST *B. MCKAY*

REF. #

FIELD *LDCAT*STATE *VICTORIA Offshore*ATT. *30*REC. *29*

PAGE OF PAGES

NO.	DEPTH	REC.	LITHOLOGY	COLOR	DISS CLAY	CONS	CALC	ODOR	FIDO	FLUORESCENCE			CUT		CUT FLUOR.		SHOW	PROB. PROD.
										DIST	INT	COL	QUAN	COL	INT	COL		
1.	6700	3/4"	Interbedded siltstone & fine sandstone	br. gy		fm	v.sl.	—										
2	6628	1"	Mudstone	lt gy		mod fm	nil	nil										
3	6574	1"	"	lt gy		sft - mod fm	—	—										
4	6447	3/4"	Siltstone, some bedding traces	dk br.		sft - mod fm	v.sl.	nil										
5	6435	1"	F-m sandstone	gy		friable	—	—										
6	6425	3/4"	M-c sandstone	gy		uncons - friable	—	weak		moderate		yellow white	fair	blue white	weak-mod	blue wh.		
7	6420	3/4"	Silty sandstone, v.f. grained, traces of bedding	lt gy	silty matrix	mod fm	—	slight		fairly even	fairly strong	yellow white	fairly rapid	blue wh.	mod.	blue white		
8	6405	1"	Sandstone m-c	gy		friable	—	fairly strong		spotty - fairly even	mod.	yellow white	fairly rapid streaming wh.	blue wh.	mod.	blue white		
9	6375	3/4"	Silty sand.	br gy		mod fm	—	weak			mod. spotty	yellow white	V. weak/slow		weak	blue wh.		
10	6365	3/4"	Siltstone with qtz grains	dk br.		fairly sft	—	—				v. weak	—	nil				
11	6350	1/2"	Sandy siltstone	br	dirty silt matrix	friable	—	—				—	—					
12	6282	1 1/4"	V.f. sandstone	gy	sl. silty	uncons - friable	v.sl.	—					nil					
13	6215	1/2"	Siltstone	br. gy		sft - mod fm	slight	nil										
14	6196	1"	Glauconitic, st. pyritiz, sandy silty - reworked Ltrabe?	br. blk	blk silt	mod fm	sl.											
15	6100	1"	Sl. glauconitic siltstone	br		sft - mod fm	✓											
16	5968	1 1/2"	Glauc. sandstone, v.f-m	gy br	uncons silt	mod fm	nil	v.sl.										
17	5880	2 1/4"	Calc. siltstone	dk gy		Fm	Very											
18	5795	1"	Bedded glauc. siltst	gy gy		Fm	Very											
19	5500	N.R	No Recovery															
20	5300	2"	Calcareous mudstone - marl	gy		mod fm	✓	—										
21	5100	2 1/4"	"	"		"	"											
22	4800	1 1/2"	Marl	"		"	"											
23	4500	2 1/2"	Marl, v.f. grained	"		"	"											
24	4200	2"	"	"		"	"											
25	3900	1 1/2"	Marl, glauc. in part	gy gy		"	"											

Page 1 of 3

WELL CORE DESCRIPTIONS

WELL

BREAM-3

SERV. CO. SCHLUMBERGER

DATE 29-11-69

LOG RUN NO. 1

GEOLOGIST B. McKay

REF. #

FIELD

STATE VICTORIA

ATT. 30 RET. 29

PAGE 2 OF 2 PAGES

NO.	DEPTH	REC.	LITHOLOGY	COLOR	DISS.		CALC.	ODOR	FIDO	FLUORESCENCE			CUT FLUOR.		SHOW	PROB. PROD.
					CLAY	CONS.				DIST.	INT.	COL.	QUAN.	COL.		
26	3600	1 1/2"	Marl	gy		mod fm	very									
27	3300	1 1/2"	Marl	gy		fairly fm	✓									
28	3000	1 1/4"	"	lt-dk gy		mod fm	✓									
29	2700	1 1/4"	Marl	lt gy		sft	very									
30	2400	2"	Marl	"		"	"									

2/3

2/3

## SIDEWALL CORE DESCRIPTIONS

WELL BREAM 3

SERV. CO. SCHL.

DATE 1-9-70

LOG RUN NO. 2

BASIC

GEOLOGIST

FEW 3/3

REF. #

FIELD

STATE

ATT.

REC.

PAGE 1 OF 1 PAGES

NO.	DEP.	REC.	LITHOLOGY	COLOR	DISS CLAY	CONS	CALC	ODOR	FIDO	FLUORESCENCE			CUT		CUT FLUOR.		SHOW	PROB. PROD.
										DIST	INT	COL	QUAN	COL	INT	COL		
1	10964	1	SH, SDY, MICAC, LORSE	GY														Palynology
2	10,165	1/2	SH, FIRM, CARB, MICAC	GY-BRN														SAMPLE
3	10,365	3/4	A.P.															"
4	10,322	3/4	SH, SOFT, SLI MICAC	GY														"
5	10,068	3/4	SH, FIRM, CARB, MICAC	GY-BRN														"
6	9813	3/4	SH, SOFT AA	GY														"
7	9606	1	AA															"
8	9578	1	AA															"
9	9302	3/4	SS, UFG, MICAC, ORG	GY														"
10	9255	1	SH, FIRM, CARB, MICAC	GY-BRN														"

a/w

### 3. CORE ANALYSIS & DESCRIPTION

CORE ANALYSIS RESULTS

NOTE: (i) Unless otherwise stated, porosities and permeabilities were determined on two plugs (V&H) cut vertically and horizontally to the axis of the core. Ruska porosimeter and permeameter were used with air and dry nitrogen as the saturating and flowing media respectively. (ii) Oil and water saturations were determined using Soxhlet type apparatus. (iii) Acetone test precipitates are recorded as Neg., Trace, Fair, Strong or Very Strong.

WELL NAME AND NO. Bream No.3

DATE ANALYSIS COMPLETED November 11, 1975

Core No.	Sample Depth		Lithology	Average Effective Porosity two plugs (% Bulk Vol.)	Absolute Permeability (Millidarcy)		Average Density (gm/cc.)		Fluid Saturation (% pore space)		Core Water Salinity (p.p.m. NaCl)	Acetone Test	Fluorescence of freshly broken core	Sample "cut" in tetrachlorethylene
	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
1	6338'11"	6339'11"	Sst; m.gr. sl. carb.	22.0	16	108	2.07	2.66	4	2.0	N.D.	Nil	Nil	Nil
1	6345'0"	6346'0"	Sst; c.gr. arg. carb.	14.9	N.D.	N.D.	2.25	2.65	28	5.2	N.D.	Trace	Nil	Nil
1	6351'10"	6352'5"	Sst, f.gr. carb.	24.3	27	197	2.01	2.64	3	0.9	N.D.	Nil	Nil	Nil
1	6354'11"	6356'0"	as above	30.7	323	597	1.87	2.65	2	0.7	N.D.	Trace	Nil	Nil
1	6361'0"	6361'4"	Sst; f.gr. to m.gr.	26.0	977	574	1.98	2.66	0.3	2.9	N.D.	Nil	Nil	Trace
2	6404'2"	6405'0"	Sst; f.gr. mic.	27.7	905	985	1.93	2.65	1	5.2	N.D.	Trace	Trace dull even yellow	Trace
2	6410'2"	6411'1"	Sst; f.gr. arg. mic.	24.2	84	318	2.03	2.67	2	3.7	N.D.	Nil	Nil	Nil
2	6414'11"	6415'10"	Sst; m.gr. mic.	26.8	923	1170	1.95	2.64	0.7	2.5	N.D.	Trace	Trace dull even yellow	Trace

Remarks: -

General File No. 74/1076  
Well File No. \_\_\_\_\_

Page 1 of 2

CORE ANALYSIS RESULTS

NOTE: (i) Unless otherwise stated, porosities and permeabilities were determined on two plugs (V&H) cut vertically and horizontally to the axis of the core. Ruska porosimeter and permeameter were used with air and dry nitrogen as the saturating and flowing media respectively. (ii) Oil and water saturations were determined using Soxhlet type apparatus. (iii) Acetone test precipitates are recorded as Neg., Trace, Fair, Strong or Very Strong.

WELL NAME AND NO. Bream No.3

DATE ANALYSIS COMPLETED November 11, 1975

Core No.	Sample Depth		Lithology	Average Effective Porosity two plugs (% Bulk Vol.)	Absolute Permeability (Millidarcy)		Average Density (gm/cc.)		Fluid Saturation (% pore space)		Core Water Salinity (p.p.m. NaCl)	Acetone Test	Fluorescence of freshly broken core	Sample "cut" in tetrachlorethylene
	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
2	6417'8"	6418'7"	Sst; f.gr. carb. slty	22.1	10	37	2.11	2.69	4	2.8	N.D.	N11	N11	N11
3	6458'0"	6459'0"	Sst; v.f.gr. carb. slty	22.0	14	38	2.08	2.66	9	8.3	N.D.	N11	Bright spotted yellow	N11
4	10,835'0"	10,835'10"	Sst; m.gr. arg.	18.0	6.8	3.6	2.19	2.66	1	N11	N.D.	N11	Bright spotted yellow	N11
4	10,846'2"	10,847'0"	Sst; m.gr. to c.gr.	2.0	0.11	3.8*	2.64	2.69	6	N11	N.D.	N11		N11

Remarks: - \* Fractured

General File No. 74/1076  
Well File No. \_\_\_\_\_

9/12



## EXPLORATION LOGGING OF AUSTRALIA, INC.

A Geological-Engineering Service

PERTH ADDRESS 69 GREAT EASTERN HIGHWAY VICTORIA PARK WESTERN AUSTRALIA  
PHONE 81 4437 CABLE EXLOGS PERTH

## CORE ANALYSIS REPORT

COMPANY ESSO-BHP  
 WELL BREAM #3  
 LOCATION/FIELD OFFSHORE/GIPPSLAND BASIN  
 COUNTY \_\_\_\_\_ STATE VICTORIA  
 COUNTRY AUSTRALIA

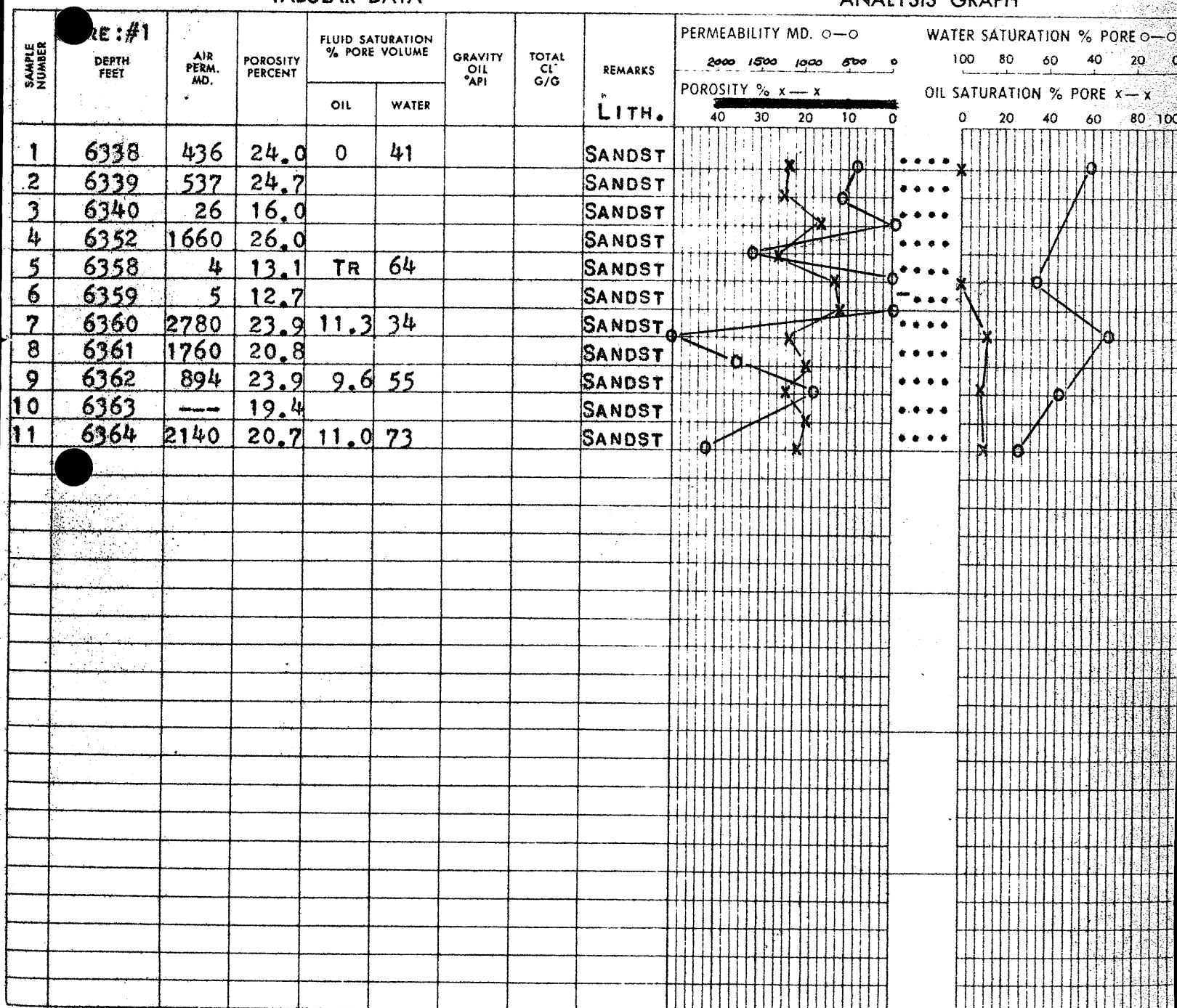
DATE Nov. 25, 1969  
 DEPTH 6335 FT TO 6395 FT  
 GEO-ENGINEER CRAIG; WEARE

REMARKS CUT 60FT; RECOVERED 29FT: SANDSTONE,  
FINE TO COARSE GRAIN, GREY TO GREY/BROWN,  
FRIABLE TO MOD. HARD; THIN INTERBEDS SHALE  
& SANDY SILTSTONE. IN BOTTOM 7FT: BLUE/WHITE/  
YELLOW FLUOR. AND FAST CUT; STRONG ODOR

..... SAND  
 - - - - SILTY SAND  
 - - - - SILTST.  
 - - - - SHALE  
 □□□□ LIME  
 ○○○○ CONGL.  
 □  
 □

TABULAR DATA

## ANALYSIS GRAPH











## EXPLORATION LOGGING OF AUSTRALIA, INC.

A Geological-Engineering Service

PERTH ADDRESS 69 GREAT EASTERN HIGHWAY VICTORIA PARK WESTERN AUSTRALIA  
PHONE 61 4437 CABLE LOGG PERTH

## CORE ANALYSIS REPORT

COMPANY ESSO-BHP  
 WELL BREAM #3  
 LOCATION/FIELD OFFSHORE/GIPPSLAND BASIN  
 COUNTY STATE VICTORIA  
 COUNTRY AUSTRALIA

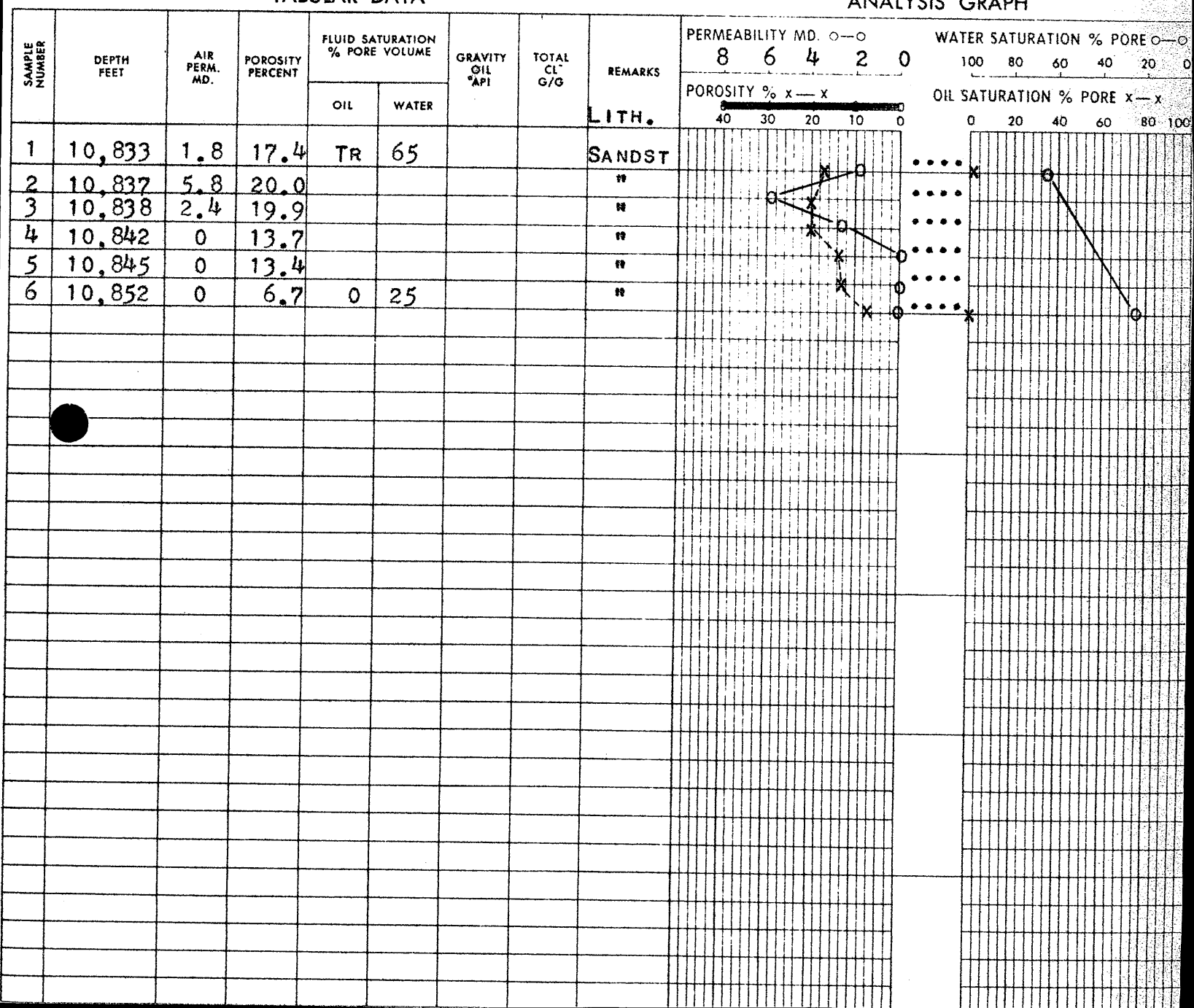
DATE JAN. 4, 1970  
 DEPTH 10,832 FT TO 10,857 FT  
 GEO-ENGINEER WEARE/CRAIG  
 CORE: #4

REMARKS CUT 25 FT; RECOVERED 20 FT; SANDSTONE, LIGHT  
GREY, FINE TO GRANULE, CLEAR TO FROSTED  
QUARTZ, POORLY TO WELL SORTED. SOME LAMINAE  
& INTERBEDS OF CARBONACEOUS SHALE. MINERAL  
FIBR; POOR-FAIR CUT

..... SAND  
 - - - - SILTY SAND  
 - - - - SILTST.  
 - - - - SHALE  
 □□□□ LIME  
 □□□□ CONGL.  
 □  
 □

## TABULAR DATA

## ANALYSIS GRAPH



CORE DESCRIPTION

1/6

Core No. 1

WELL: BREAM - 3

Interval Cored 6335 - 95 ft., Cut 60 ft., Recovered 29 ft., ( 48 %) Fm. LATROBE

Bit Type CHRISTENSEN C-20, Bit Size 8 5/16 in., Desc. by Bruce McKay Date 25-11-69

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0 10 6335			6335 - 6335 1/4	SANDSTONE (3") f-v c., poorly sorted, subang-r, pyr, good por/perm, fairly strong odour, no fluor
40			6335 1/4 - 37	COAL (1 3/4') blk, shiny, fractured underlain by 6" SHALE, silty with fine slightly wavy, fairly continuous parallel laminae
45			6337 - 6340	SANDSTONE, gy-br gy, f-m with some granules and thin coarse layers, subang-r, mod. sorted, contains thin wavy, shaly, carbonaceous stringers which become more common towards the base where they are disrupted by burrowing. Good por/perm, slight odour, no fluor.
50			6340 - 6342	Interbedded SHALE and fine SANDSTONE strongly burrowed at top, burrows infilled with clean m.-c sand. Shale laminae very wavy - some ripple marks. Sand interbeds thicker at base.
55		sl. odour	6342 - 6351	SANDY SILTSTONE, sand filled burrows and m.-v.c. qtz grains in silty shale matrix. Some thin coal beds. Becomes quite sandy in parts: some wavy shale laminae with i'bedded sands at base.
60			6351 - 6354 1/2	SANDSTONE, f-m, gy, small burrows, carbonaceous, fair por/perm, sl. odour, no fluor.
65			6354 1/2 - 6355	COAL, silty
70			6355 - 6356 1/2	SHALE, br gy, v. carbonaceous, coaly streaks
75			6356 1/2 - 59	SHALY SANDSTONE, m.-v.c., burrowed, with wavy shale laminae common, silty. Fluor. at
			6359 - 6364	SANDSTONE, m.-v.c., poorly sorted, subang-r, v. good por, perm. v. strong petroliferous odour, yellow-white fluor, rapid cut.
			6364 - 95	no recovery

REMARKS: PALYNOLOGY SAMPLES --- 6350 6356

WAXED SAMPLE 6364

Analyses 6338, 39, 40, 52, 58, 59, 60, 6, 62, 64

First oil at 6356 1/2

ESSO STANDARD OIL (AUSTRALIA) LTD.

## CORE DESCRIPTION

Core No. 1 (cont'd)

WELL: BREAM-3

Interval Cored                      ft., Cut                      ft., Recovered                      ft., (                      %) Fm.

Bit Type                      , Bit Size                      in., Desc. by                      Date

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0	6375			
			6364 - 95	No recovery
	80			
	85			
	90			
	95			

REMARKS:

CORE DESCRIPTION

3/6

Core No. 2

WELL: BREAM-3

Interval Cored 6395-6447 ft., Cut 40 ft., Recovered 26 ft., (53%) Fm. LATROBE

Bit Type CHRISTENSEN C-20, Bit Size 8 5/16 in., Desc. by Bruce McKay Date 25-11-69

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0				
6395			6395 - 6400	SANDSTONE m-v c, poor-mod. sorting, subang. subr, some thin shale laminae, burrowed in part, very good per perm, friable, petroliferous odour, white fluor.
6400			6400 - 6406	SANDSTONE, f-m, fair-good sorting, carbonaceous streaks, good per perm, slight odour, good fluor.
6405			6406 - 6410	SANDSTONE, brgy, v.f-c, poorly sorted, abundant carbonaceous and shaly streaks with wavy parallel fairly continuous laminae, burrowed, disrupted laminae at top. Weak fluor, v. sl. odour.
6410			6410 - 5'2"	SANDSTONE, v. shaly in part, dipping shale laminae at top (up to 20°), v. wavy, disrupted. Carbonaceous, f-m grained with qtz pebbles at base. Per perm fair to good, slight odour, bright fluor.
6415			6415'2" - 6420'8"	INTERBEDDED SHALE/SANDSTONE tending to shaly SANDSTONE at base. Some cross bedded shale laminae at base, fairly continuous at top, dipping laminae up to 5°, v. carbonaceous
6420			6420'2" - 21'	INTERBEDDED SHALE SANDSTONE: low per, v. micaceous, non-calc cement
6425			6421-44	No recovery
6430				
6435				

REMARKS: PALYNOLOGY SAMPLE 6418  
 WAXED SAMPLE 6398'2 6411  
 Bit dulled.

**CORE DESCRIPTION**

Core No. *2 cont'd*

WELL: *BREAM - 3*

Interval Cored ..... ft., Cut ..... ft., Recovered ..... ft., ( ..... %) Fr.  
 Bit Type ....., Bit Size ..... in., Desc. by ..... Date .....

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.) Descriptive Lithology
<p>0</p> <p>64.35</p> <p>40</p> <p>64.44</p>			

REMARKS:

.....  
 .....  
 .....



CORE DESCRIPTION

5/6

Core No. 3

WELL: BREAM-3

Interval Cored 6444-6469 ft., Cut 25 ft., Recovered 20 ft., ( 80 %) Fm. LATROBE

Bit Type CHRISTENSEN C-22 Bit Size 8 5/16 in., Desc. by Bruce McKay Date 26-11-69

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
6444			6444-48	SILTSTONE - c. gy, v. carbonaceous, some fine disseminated pyrite aggregates, v. c. qtz gr embedded in silty shale matrix, some v. thin f. ss. beds essentially flat parallel laminae, sl. wavy, some small scale cross bedding.
50			6448-48 1/2	SANDSTONE c. pebble qtz detritus, subang. subr. in micaceous silty matrix, friable to fairly firm, strong odour, brown stain, yellowish floor, v. e. w. s. cleavage cut.
55			6448 1/2-455	SILTSTONE with v. thinly intercalated silty sand beds. Coaly in part, structures on small scale, scour marks, cross bedding, disrupted bedding (coaly at 4550). 3" m. sand with 1/2" qtz at 4552 1/2 - 4553.
60			6455-50	SILTSTONE, burrowed with i' bedded f. sandstone and 30% m-c qtz gr. randomly embedded.
65			6456-61	INTERBEDDED SILTSTONE and SILTY SANDSTONE, strongly burrowed in part, carbonaceous silt laminae disrupted, no floor
6469			6461-64	FINELY INTERCALATED SILTSTONE, SANDSTONE sl. burrowed, small scale sedimentary features. C. sand right at base 5.2", no floor, no floor
			6464-69	No recovery

REMARKS:

Very high torque.

Pyrite not uncommon throughout core

Last oil at 6448 1/2.



CORE DESCRIPTION

Core No. 4

WELL: BREAM 3

Interval Cored 10,832 - 57 ft., Cut 25 ft., Recovered 20 ft., (80%) Fr. LATROBE (U.K.)

Bit Type CHRIS. C-20, Bit Size 7 3/4" in., Desc. by FEM Date 4-1-70

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
10 5 0		FL + CUT	10,832-34	SS, LT GY, F-M, PREDOM. CL. R. & FROSTED SUBROD. RDD. QZ GRAINS WITH APPROX 5% WH FELDSPAR & TR. DK. GY. CHERT IN A WH CLAY MATRIX, TR. PYRITIC & MUSCOVITE, IRREG., MOSTLY DISCONT. SH LAMINAE WITH CURRENT RIPPLES NEAR BASE.
35		"	10,834-34.5	SS AA, U.F-F INTERLAM. WITH DIC BRN CARBON. SH., SOME CURRENT RIPPLES.
40		"	10,834.5-36.5	VERY IRREG. 3"-4" BEDS OF SH AA & SS AA, M-CSE, SLUMP STRUCTURE.
45		"	10,836.5-38.5	SS AA, UPPER 4" IS UCSE-GRANULE, REMAINDER IS M-UCSE, F.W SORTED
50		"	10,838.5-39	SH AA, TWO 1/2" LAYERS WITH QZ GRANULES AND LT BRN SH FRAGS.
55		"	10,839-39.5	INTERLAM. SH & FG SS AA, CURRENT RIPPLES
		"	10,839.5-41	SS AA, F-M, DISCONT. SUB-PARALLEL SH LAMINAE
		"	10,841-43	SS AA, FG, 1"-2" BEDS ALTERNATING WITH 1/2"-1" INTERLAM. SH & SS AA, SCATTERED GRANULES OF QZ, CURRENT RIPPLES
		"	10,843-45	SAME AS UNIT ABOVE, BUT SS BEDS ARE 4"-6"
		"	10,845-48	SS AA, FG AT BASE WITH IRREG. DISCONT. SH LAMINAE, CURRENT RIPPLES, GRADDES UP TO M-CSE WITH SOME GRANULES.
		"	10,848-51.7	ALTERNAT. 4"-6" BEDS OF M-CSE SS AA WITH SOME GRANULES AND CSE-GRANULE SS AA, OCCASION. THIN IRREG CARBON. SH LAMINAE, CLAY MATRIX IS SHL. CALCIFEROUS.
		"	10,851.7-52	SH, DK BRN, CARBON, SHL MICAS, VERY FIRM WITH IRREG QZ GRANULE LAYERS AND SCATTERED SS BLEBS.
		"	10,852-57	No RECOVERY.

REMARKS:

4. PALYNOLOGY & MICROPAL.

# INTERPRETATIVE

Palynology of Bream-3 and Review of Bream-2

By

P.R. Evans & Robin D. Mulholland

Palyn. Rept. 1970/5

March, 1970.

INTRODUCTION

Sidewall cores and cuttings from Bream No. 3 were examined during December 1969 and February 1970.

Whereas a close match with the sequence in Bream No. 2 through the N. goniatus and upper M. diversus was obtained, the better data from around the top of the T. lillieii Zone in Bream No. 3 necessitated revision of the L. balmei/T. lillieii boundary in Bream No. 2 (Palyn.Rept. 1969/7). Revision is based on direct comparison of assemblages, separation from T. lillieii of a species in Bream No. 2, swc 10, 9430 feet which had previously been assigned to lillieii, and examination of previously unreported assemblage from swc 8, 9585 feet.

The following summary lists determinations from both Bream No. 2 and Bream No. 3. Documents concerning Bream 2 based on Palyn. Rept. 1969/7 should be corrected accordingly.

SUMMARY

<u>Zone</u>	<u>BREAM-2</u>		<u>BREAM-3</u>	
	<u>Sample</u>	<u>Depth (ft.)</u>	<u>Sample</u>	<u>Depth (ft.)</u>
<u>N. asperus</u>	core 2	6138	swc 13	6215
	" 7	6298	" 10	6365
	" 8	6340	" 4	6447
	swc 8	6377	" 3	6574
	" 5	6519½	" 2	6628
<u>P. asperopolus</u>	swc 2	6652	swc 1	6700
Upper <u>M. diversus</u>	swc 29	6965		
	" 27	7142		
<u>M. diversus</u> undiff.	swc 24	7422		
<u>M. diversus</u> or <u>L. balmei</u>	swc 23	7612		
<u>L. balmei</u>	swc 22	7675		
	" 20	7932		
	" 19	8082		
	" 16	8320		
	" 15	8442		
	" 16	9248	swc 10	9255
	" 12	9260	" 8	9578
	" 10	9430	" 7	9606
	" 8	9585	" 6	9873
			" 5	10068.
Indeterminate	swc 2	9989		
<u>T. lillieii</u>	swc 8	9991	swc 4	10322
	" 11	10262	" 3	10365
	" 5	10520	" 2	10665
	" 7	10522	core	10852
	core 14	10643	swc 1	10964

INTERPRETATIVE

BASIN GIPPSLAND BASINBY David Taylor

Form R193 3/71

WELL NAME BREAM -3DATE 19/4/71ELEV. +99'

## Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
MIOCENE	A	Alternate					
	B	Alternate					
	C	2400	3		3200	3	
	D	3300	3		3600	1	
	D <sub>1</sub>	Alternate			3650	3	
	D <sub>2</sub>	Alternate	3700	3	4300	3	
	E	Alternate	4400	3	4700	3	
	F	Alternate	4800	0	4950	3	
	G	Alternate	5000	3	5200	3	
		Alternate	5100	1			
	H <sub>1</sub>	Alternate	5300	1			
	H <sub>2</sub>	Alternate			5600	3	
OLIGOCENE	I <sub>1</sub>	Alternate	5700	3	5750	4	
	I <sub>2</sub>	Alternate					
	J <sub>1</sub>	Alternate	5780	4			
	J <sub>2</sub>	Alternate	5795	1	6100	2	
EOC.	K	Alternate					
	Pre K						

## 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 \_\_\_\_\_

BASIN

GIPPSLAND

DATE

JUNE 1971.

WELL NAME BREAM - 3.

ELEVATION + 99 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.	<u>T. bellus</u>										
	<u>P. tuberculatus</u>										
Eocene	<u>U. N. asperus</u>										
	<u>L. N. asperus</u>	6215	1			1501	6447	1			1482
	<u>P. asperopolus</u>	6700	1			1400	6700	1			1400
	<u>U. M. diversus</u>										
	<u>L. M. diversus</u>										
LEO-CENE	<u>L. balmei</u>	9255	2			2058	9255	2			2058
	<u>T. longus</u>	9578	2			2007	10068	2			2007
LATE CRETACEOUS	<u>T. lilliei</u>	10322	2			2212	10964	1			2312
	<u>N. senectus</u>										
	<u>C. trip./T.pach.</u>										
	<u>C. distocarin.</u>										
	<u>T. pannosus</u>										
	<u>C. paradoxa</u>										
	<u>C. striatus</u>										
EARLY CRETACEOUS	<u>U. C. hughesii</u>										
	<u>L. C. hughesii</u>										
	<u>C. stylosus</u>										
Pre-Cretaceous											

COMMENTS: 'T.D. 11012' (9.335)

- 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. Stover &amp; A.D. Partridge.

DATE JUNE 1971.

DATA REVISED BY: CHECKED; L.E.S.

DATE DEC. 1971

WELL NAME: BREAM # 3

W566

DEPTH (FT)	SAMPLE TYPE	PRESER-VATION	DIVERSITY	SPORE/POLLEN ZONE	DINOFLAGELLATE ZONE	CONFIDENCE LEVEL	ENVIRONMENT
6215	SWC 13	Fair	Moderate	M. diversus	Indet	4	Marginal marine
6365	SWC 10	Fair	Moderate	M. diversus	Indet	4	?Marginal marine
6447	SWC 4	Fair	Moderate	M. diversus	Indet	3	Marginal marine
6547	SWC 3	Poor	Low	Indet	-	-	-
6628	SWC 2	Barren	-	-	-	-	-
6700	SWC 1	Fair	V. Low	? P asperopolus	-	3	-
9255	SWC 10	V. Poor	Low	No younger than L. balmei	-	-	Non-marine
9578	SWC 8	V. Poor	Low	No younger than L. balmei	-	-	Non-marine
9606	SWC 7	V. Poor	Low	No younger than L. balmei	-	-	Non-marine
9873	SWC 6	Barren	-	-	-	-	-
10068	SWC 5	V.V. Poor	Low	No younger than L. balmei	-	-	Non-marine
10322	SWC 4	V. Poor	Low	T. lilliei/T. longus	-	-	Non-marine
10365	SWC 3	V.V. Poor	Low	T. lilliei/T. longus	-	-	Non-marine
10665	SWC 2	V.V. Poor	Low	?T. lilliei	-	3	Non-marine
10852	Core	V.V. Poor	Low	No older than N. senectus	-	-	Non-marine
10964	SWC 1	Barren	-	-	-	-	-

OIL and GAS DIVISION

- 3 FEB 1983

BY W. R. HARRIS

For AQUITAIN, PHILLIPS, SHELL.

PE902833

This is an enclosure indicator page.  
The enclosure PE902833 is enclosed within the  
container PE903930 at this location in this  
document.

The enclosure PE902833 has the following characteristics:

ITEM\_BARCODE = PE902833  
CONTAINER\_BARCODE = PE903930  
NAME = Structure Map Top of Latrobe Group -  
Coarse Clastics  
BASIN = GIIPPSLAND  
PERMIT =  
TYPE = WELL  
SUBTYPE = MAP  
DESCRIPTION = Structure Map Top of Latrobe Group -  
Coarse Clastics for Bream 3  
REMARKS =  
DATE\_CREATED = 31/08/1970  
DATE\_RECEIVED =  
W\_NO = W566  
WELL\_NAME = Bream-3  
CONTRACTOR = ESSO  
CLIENT\_OP\_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)



PE902834

This is an enclosure indicator page.  
The enclosure PE902834 is enclosed within the  
container PE903930 at this location in this  
document.

The enclosure PE902834 has the following characteristics:

ITEM\_BARCODE = PE902834  
CONTAINER\_BARCODE = PE903930  
    NAME = Time Depth Curve  
    BASIN = GIIPPSLAND  
    PERMIT =  
    TYPE = WELL  
    SUBTYPE = VELOCITY\_CHART  
    DESCRIPTION = Time Depth Curve  
    REMARKS =  
    DATE\_CREATED = 30/08/1971  
    DATE\_RECEIVED =  
    W\_NO = W566  
    WELL\_NAME = Bream-3  
    CONTRACTOR = ESSO  
    CLIENT\_OP\_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601484

This is an enclosure indicator page.  
The enclosure PE601484 is enclosed within the  
container PE903930 at this location in this  
document.

The enclosure PE601484 has the following characteristics:

ITEM\_BARCODE = PE601484  
CONTAINER\_BARCODE = PE903930  
NAME = Well Completion Log Bream 3  
BASIN = GIIPPSLAND  
PERMIT =  
TYPE = WELL  
SUBTYPE = COMPLETION\_LOG  
DESCRIPTION = Well Completion Log Bream 3  
REMARKS =  
DATE\_CREATED = 05/01/1970  
DATE\_RECEIVED =  
W\_NO = W566  
WELL\_NAME = Bream-3  
CONTRACTOR = ESSO  
CLIENT\_OP\_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE602728

This is an enclosure indicator page.  
The enclosure PE602728 is enclosed within the  
container PE903930 at this location in this  
document.

The enclosure PE602728 has the following characteristics:

ITEM\_BARCODE = PE602728  
CONTAINER\_BARCODE = PE903930  
NAME = Bream 3 Mud Log  
BASIN = GIPPSLAND  
PERMIT = VIC/P1  
TYPE = WELL  
SUBTYPE = MUD\_LOG  
DESCRIPTION = Bream 3 Mud Log. From Well Summary  
REMARKS =  
DATE\_CREATED = 18/11/69  
DATE\_RECEIVED =  
W\_NO = W566  
WELL\_NAME = Bream-3  
CONTRACTOR = Exploration Logging Inc  
CLIENT\_OP\_CO = Esso Exploration and Production  
Australia Inc

(Inserted by DNRE - Vic Govt Mines Dept)