

EARLIER FILES

LATER FILES

RECORDS DISPOSITION

FLOUNDER - 3

T.D. 8634.

LONG. 148 28 23

ESSE. WILDCAT.

544

OCEAN DIG. W. 30

IES	Run 1.	2"	968 - 2492
"	" 2	"	2457 - 8635.
"	" 1	5"	968 - 2492.
"	" 2	"	2457 - 8635.
BHCS/GR.	" 1	2"	968 - 2480.
B.H.C.S.	" 2	"	2457 - 8620.
B.H.C.S/G R.	" 1	5"	968 - 2480.
B.H.C.S.	" 2	"	2457 - 8620.
FDC.	" 1	2"	2457 - 8635.
"	" 1	5"	2457 - 8635.

FIT. " 1. Test N° 1, 2, 3. Plus 2 copies.

Cont. Dipmeter. " 1. 3 arm. 2458 - 8634.

Mud log. 1010' - 2450', 6950 - 8634 T.D.

Core Analysis 1 - 4. Plus 2 copies Exlog

sidewall core descriptions 6478 - 8600.

Micropaleontology report by D. J. Taylor.

Palynology report by L. E. Stover & A. D. Partridge. Plus Revision

Paleontology report by D. J. Taylor.

Core Description 2, 3 & 4.

Cores N° 1, 2, 3 & 4 shipped to Port Melbourne store.

Weekly reports.

Structure. Top of pay. Map

Time Depth Curve.

Completion Report 3 pages marked ✓ copy for release.

Cores 1 - 4 and cuttings 1090' - 8415' were received by B. M. R. 5/12/73.

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

WELL COMPLETION LOG (IES).

stratigraphic core 7201 - 7217.

{ Core No. 1. No description in files. Not included in well completion Log

E
S
D
E
E
E
E
E
E
E
C
G
C
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FLOUNDER-3

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COMPLETION REPORT

FLOUNDER 1

FLOUNDER 2

FLOUNDER 3 ✓

COMPLETION REPORT

FLOUNDER 1, FLOUNDER 2 & FLOUNDER 3.

GENERAL

	Flounder 1 Gippsland Basin, Vic.	Flounder 2 Gippsland Basin, Vic.	Flounder 3 Gippsland Basin, Vic.
<u>Location</u>			
Shot Point	5325	2074	142
Line	EG-67	EC-142	G69A-262
Lease	Vic. P-1	Vic. P-1	Vic. P-1
Latitude	38° 25' 29" S.	38° 19' 17" S.	38° 18' 58" S.
Longitude	148° 25' 52" E.	148° 26' 53" E.	148° 28' 23" E. 148°
<u>Elevation</u>	Rotary table above mean sea level		
	93'	99'	99'
<u>Water Depth</u>	287'	326'	363'
<u>Total Depth</u>	11,740'	9321'	8634'
<u>Spud Date</u>	19 July, 1968	18 February, 1969	24 April, 1969
<u>Completion Date</u>	11 October, 1968	24 March, 1969	14 May, 1969
<u>Well Status</u>	Flounder 1, 2 and 3 were abandoned as oil discoveries		
<u>Casing & Plugs</u>	See Completion Log		
<u>Cores</u>			
No. Cut	10	5	4
Total footage	260'	165'	80'
Feet recovered	232'	108'	58'
% recovery	89.3%	65.5%	72.5%
	(See Completion Log)		
<u>Electric Logs</u>	I.E.S. 898-11310'; Sonic 898-11300'; Dip- meter 980-10,007'; FDC 7800-8800'; MLL 8100- 8500', 9966-11,151'; GRH 7800-8800' Velocity Survey	I.E.S. 881-9391'; Sonic 881-9320'; FDC 2411-9319'; Dipmeter 2411-9320'	I.E.S. 968-8635' Sonic 968-8620' FDC 2457-8635.'
<u>Mud Logs</u>	Mud logging by Exploration Logging Company		
	955-11,740'	975-9321'	1010-8634'
<u>Tests:</u>	<u>Flounder 1</u>		
	15 wire line tests were run in Flounder 1 with 4 successful tests recovering gas and oil at 8296', 8314', 8330' and 8395'. Filtrate was recovered at 10,324' and five tight tests were		

run at 3971', 8212', 10,059', 10,956', and 11,097'. Mis-runs due to equipment failure occurred at 8217', 8296', 10,956', 11,097'.

One DST was run through perforations at 8314-15' and 8330-32'. In order to meet requirements for refinery tests, only seven barrels of congealed waxy oil of 46.7° API gravity and a 72° F pour point was recovered before the test was terminated.

Flounder 2

Five wireline tests were run in Flounder 2 with gas and oil, or gas and condensate being recovered at 7012', 7021', 8329'. Water was recovered at 9262' and an FIT at 7014' had no recovery.

Flounder 3

Two FIT's at 8399' and 8415' recovered gas and oil and one FIT at 8426' recovered filtrate.

(See Completion Log. for test details).



Structure

The structure on the top of the intra-Latrobe pay shows Flounder to be an east-west trending anticline. Apparent west dip of 4-5° is slightly steeper than seen in other intra-Latrobe fields.

At Flounder, one unconformity occurs at the top of the Marine Eocene Latrobe and another near the M. diversus - L. balmei boundary. A structure map at the top of the Latrobe has been made and is included in this report.

The intra-Latrobe reflection, on which the Top of Pay Structure Map was based originates from an interbedded coal-sand-shale sequence some 600 to 700' above the oil. No mappable reflection event is generated at the top of the braided stream sand which reservoirs the oil. Log correlations between the three wells indicate a thinning of this interbedded section to the east, but a thinning of the section between the lowest coal and the top of the pay to the west (see enclosures). Because of the necessity to obtain as accurate a structural picture as possible this situation presents two problems.

Firstly, the amplitude and frequency of the mapped reflection changes slightly due to the thickness variation in the interbedded section. A point of consistent reflection character was carefully picked and mapped over the whole field. This represented as close an approximation to true structural configuration as could be mapped taking into account the resolution available with this quality data. When tied back to the three wells this structural map matched Flounder 2 and 3 as correlated at the base of the interbedded section but in Flounder-1 was some 40' low to the same point. It was assumed that the log correlations were correct and the map was adjusted to compensate for this difference. This final adjusted map represented the structural configuration of the deepest coal.

Secondly, a simple isopach was constructed of the interval between the deepest coal and the top of the braided stream oil sand using the well data. This was then cross contoured with the adjusted structure map to obtain the Top of Pay Structure Map. Errors that exist in this structure map should not be of sufficient magnitude to be significant.

Stratigraphy

The age of the 11,350' of sediments penetrated in the Flounder field ranges from Upper Cretaceous to Miocene. The Miocene Gippsland Formation is composed chiefly of marl, calcarenite and micritic limestone. The Oligocene Lakes Entrance Formation is predominantly soft, light grey marl. Neither of these formations is of interest as no significant hydrocarbon shows were encountered in these horizons.

The 5415' of sediments below the base of the Oligocene penetrated by Flounder 1 are Early Eocene, Paleocene and Upper Cretaceous in age. The three Flounder wells, Turrum 1 and the two Tuna wells are unique when compared to other wells in Gippsland Basin, where the "Latrobe Complex" underlying the marine Lakes Entrance consists of continental type sediments. At Flounder the marine Lakes Entrance overlies a section of marine sediments upper diversus (Early Eocene) in age and equivalent in time to continental "Latrobe Complex" sediments in other parts of the basin. From regional studies now in progress in Gippsland Basin it appears, after deposition of the Lower M. diversus sediments uplift occurred in the Flounder - Tuna area and erosion by channeling removed the Lower M. diversus section and locally, some of the L. balmei sediments. This was followed by an encroachment of the seas depositing marine shales with local sand bodies, or in general, marine channel filling. In the Flounder area the marine section immediately below the base of the Lakes Entrance is referred to as the marine Eocene section or the M. diversus and the term "Latrobe Complex" is reserved for the normal continental section found elsewhere in the basin.

INTERPRETATIVE

Enclosures:

- Structure map Top of Latrobe (refer to Flounder-1)
- Structure map Top of Intra-Latrobe Pay (refer to Flounder-1)
- Structure Section Flounder Field (refer to Flounder-1)
- Stratigraphic Section Flounder Field (refer to Flounder-1)
- Completion Logs Flounder 1, Flounder 2, Flounder 3.
- Time Depth Curves Flounder 1, Flounder 2, Flounder 3

CONFIDENTIAL

COMPLETION DATA

FLOUNDER - 3

Water Depth: 363 ft.
Well T.D.: 8,634 ft.

Casing:

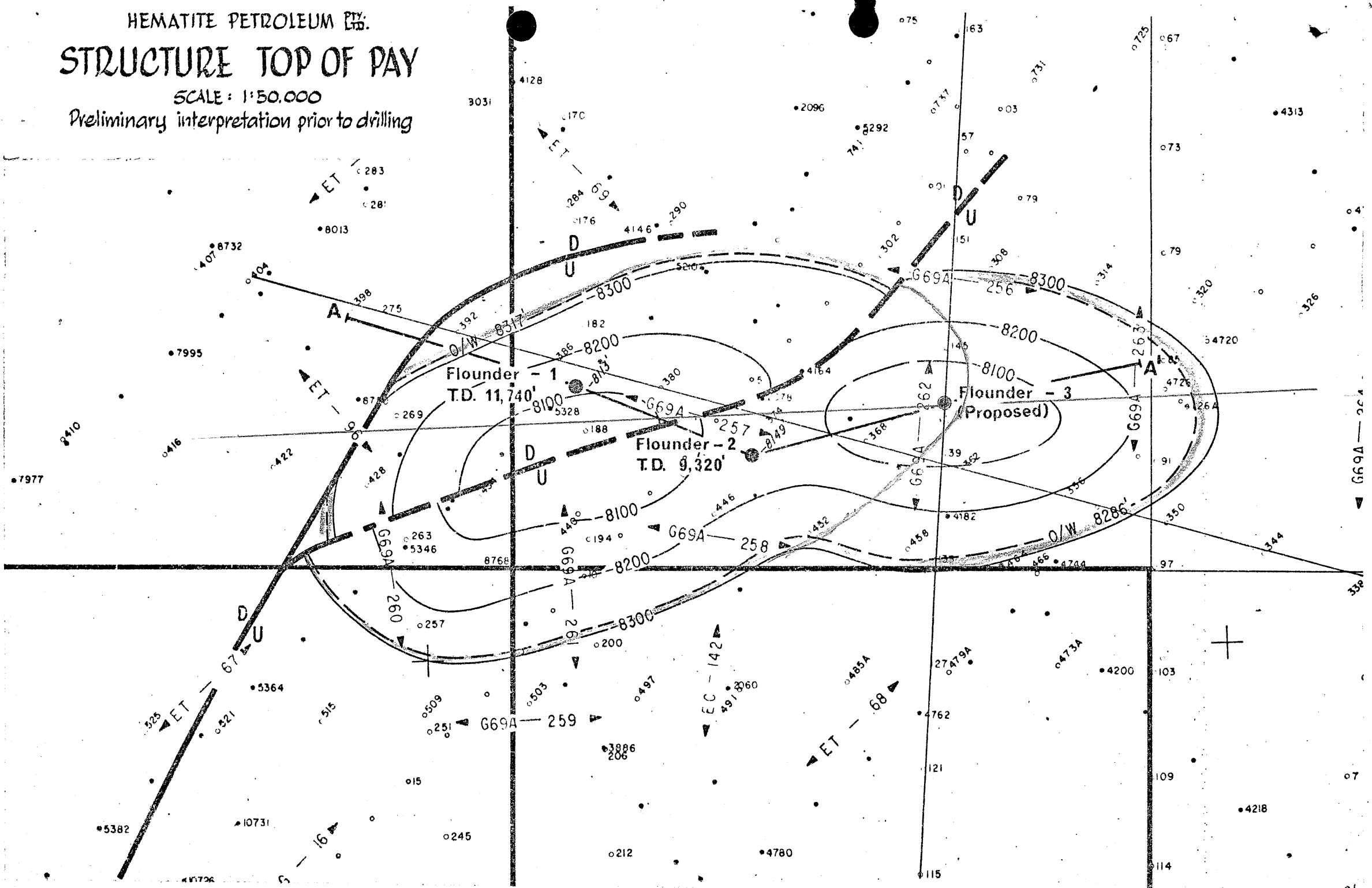
<u>Diameter</u>	<u>Setting Depth</u>
30"	579 ft.
20"	968 ft.
13 3/8"	2,457 ft.

Cement Plugs:

<u>No. Sacks</u>	<u>Set At</u>	
260	8,456 ft.	8,224 (Tagged)
195	2,550 ft.	2,373 (Tagged)
80	600 ft.	500 (Circulated off)

* * *

HEMATITE PETROLEUM CO.
STRUCTURE TOP OF PAY
 SCALE: 1"=50,000
 Preliminary interpretation prior to drilling



Flounder - 1
 T.D. 11,740'

Flounder - 2
 T.D. 9,320'

Flounder - 3
 (Proposed)

ET - 67
 D
 U

G69A - 260

G69A - 258

ET - 68
 D
 U

O/W 8286'

G69A - 263

G69A - 264

EC - 142

5382

10731

245

212

4780

115

114

4218

01

PE603234

This is an enclosure indicator page.
The enclosure PE603234 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE603234 has the following characteristics:

ITEM_BARCODE = PE603234
CONTAINER_BARCODE = PE904927
NAME = Well Completion Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = COMPOSITE_LOG
DESCRIPTION = Flounder 3 Well Completion Log
REMARKS =
DATE_CREATED = 10/05/69
DATE_RECEIVED =
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = Schlumberger
CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE902861

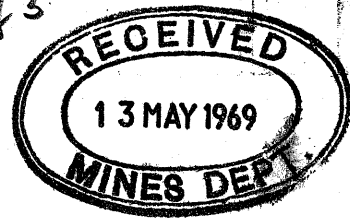
This is an enclosure indicator page.
The enclosure PE902861 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE902861 has the following characteristics:

ITEM_BARCODE = PE902861
CONTAINER_BARCODE = PE904927
NAME = Time Depth Curve
BASIN = GIPPSLAND
PERMIT =
TYPE = WELL
SUBTYPE = DIAGRAM
DESCRIPTION = Time Depth Curve
REMARKS =
DATE_CREATED =
DATE_RECEIVED =
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = ESSO
CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

2.0 CORE DESCRIPTIONS



ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 3

WELL: FLOUNDER - 3

Interval Cored 8382 - 8386 ft., Cut 4 ft., Recovered 3 1/4 ft., (81 %) Fm. LATROBE.

Bit Type C 8 , Bit Size 8 5/16 in., Desc. by A.P. Whittle. Date 8/5/69

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
<p>0 30</p>	<p>8382</p>	<p>★ ★</p>		<p>SANDY CONGLOMERATE. Lt gy vcg - pebbly. poorly sorted. hard. SR-R. w/ pebbles up to 1/2" long. Tight w/ dolio matrix giving orange-yellow mineral fluorescence. Tr pyrite V. Poor. P & P. Patchy spotted white fluorescence & blue white streaming cut. Petroliferous odour. ★</p>

REMARKS:

Pressure increased due to groove worn on crown of bit. POH



ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 4

WELL: FLOUNDER - 3.

Interval Cored 8390 - 8418 ft., Cut 28 ft., Recovered 15 ft., (54 %) Fm. Latrobe

Bit Type C 20 , Bit Size 8 5/16 in., Desc. by A.P. Whittle Date 9/5/69.

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0 10 20	8390			
	8400	★ ★ ★ ★ ★ ★	8390 - 8395	SANDSTONE lt gy m-vcg well sorted with occasional scattered pebbles (quartzose) up to 1/2" long. sa-R very hard. Tight with calcareous matrix giving a dark yellow mineral fluorescence. Slight petroliferous odour where have spotty pin point white fluorescence. 50% of interval having NO fluorescence at all. P & P poor.
	8410		8395 - 8401	SANDSTONE lt gy m-vcg well sorted sa-R Friable w/ calc matrix & some argillaceous material. Thin 1/4" shaley laminae, gy, with pyritic aggregates, interbedded with the sandstone at 8396-97. A tight hard streak 8396-96 1/2 as per 8390-95 with no show. Good petroliferous odour. Streaming blue-white cut & pin-point fluorescence. P & P Fair.
	8418		8401 - 8402	SANDSTONE AS ABOVE with no shows appears wet. May-be at OW contact.
			8402 - 8405	SANDSTONE lt gy m-cg well sorted sa-R very hard. Tight with calc xstalline matrix -> dk yellow mineral fluorescence. NO shows. P & P visibly poor
			8405 - 8418	NO RECOVERY

REMARKS:

2.1 SIDE WALL CORE DESCRIPTIONS



SIDEWALL CORE DESCRIPTIONS

FLOUNDER-3

A.P. Whittle
12/5/69

CST-1

DEPTH	No.	RECOVERY	LITHOLOGY
8600	1	1"	<u>Siltstone</u> , grey-white soft, micaceous, argillaceous
8511	2	3/4"	<u>Shale</u> , grey-black, soft micaceous in part, argillaceous, slightly silty.
8430	3	1/2"	<u>Sandstone</u> , white, fine-medium grained, firm-hard, with calcareous cement and argillaceous matrix. Well sorted with trace mica.
8420		N/R	
8413	5	FRAGMENTS	<u>Sandstone</u> , white-grey, fine to medium grained, well sorted, subangular to rounded, slightly calcareous, with argillaceous matrix. Good porosity and permeability. White fluorescence good blue-white, streaming cut. No odour.
8408)		
)		
8388	)	N/R	
)		
8384)		
)		
8300	9	1"	<u>Shale</u> , black, soft, slightly calcareous, silty, very glauconitic,
8190	10	1/2"	<u>Shale</u> , black soft, slightly calcareous, silty micaceous.
8122	11	1"	<u>Shale</u> as above
7993 1/2	12	1/2"	<u>Siltstone</u> , sandy grey firm, rare medium grained, quartz grains, subangular-subrounded, laminated in part.
7803'	13	1/2"	<u>Sandstone</u> , shattered by shot - white, fine to medium grained, with argillaceous matrix.
7730'	14		<u>Shale</u> , black, calcareous, micaceous, very finely laminated.
7619	15	1"	<u>Coal</u> , black brittle.
7608	16	1/2"	<u>Siltstone</u> , grey, firm, slightly calcareous, micaceous.
7568	17	N/R	
7562	18	1/2"	<u>Shale</u> , dark grey, hard calcareous, micaceous, silty.
7506 1/2	19	1"	<u>Shale</u> , grey, black, firm calcareous, micaceous, silty, argillaceous.
7506	20	3/4"	<u>Shale</u> , as above, slightly laminated in part.

FLOUNDER-3 Sidewall Core Descriptions cont'd

CST-1

DEPTH	No.	RECOVERY	LITHOLOGY
7472	21	1"	<u>Shale</u> , as above.
7440	22	3/4"	<u>Shale</u> , as above, with occasional medium grained, subangular to subrounded, quartz grains.
7280	23	1 1/2"	<u>Shaley Siltstone</u> , interlaminated <u>Silt</u> , grey, with trace pyrite, <u>Shale</u> , black firm.
7278	24	1"	<u>Shaley Siltstone</u> .
7230	25	1-3/4"	<u>Mudstone</u> , grey-brown, firm, micaceous, calcareous.
7228	26	1 1/2"	<u>Mudstone</u> , grey-brown, firm, silty in part, calcareous.
7180'	27	1 1/2"	<u>Mudstone</u> , as above, and laminated.
7178	28	1 1/2"	<u>Mudstone</u> , as above.
7130'	29	2"	<u>Mudstone</u> , as above.
7128'	30	N/R	

SIDEWALL CORE DESCRIPTIONFLOUNDER-3

CST 2

A.P. Whittle
12/5/69

DEPTH	No.	RECOVERY	LITHOLOGY
7080	1	N/R	
7078	2	N/R	
7030	3	N/R	
7028	4	1½"	<u>Mudstone</u> , grey-brown, calcareous, micaceous, firm.
6980	5	N/R	
6978	6	N/R	
6930	7	1½"	<u>Mudstone</u> as above laminated.
6928	8	1½"	<u>Mudstone</u> , as above, laminated.
6880	9	1½"	<u>Mudstone</u> , as above, slightly fossiliferous.
6878	10	1½"	<u>Mudstone</u> , as above.
6830	11	1½"	<u>Mudstone</u> , trace glauconitic, as above.
6828	12	1½"	<u>Mudstone</u> , as above, slightly fossiliferous.
6780	13	1-3/4"	<u>Mudstone</u> , as above, highly micaceous.
6778	14	1½"	<u>Mudstone</u> , as above.
6730	15	1½"	<u>Mudstone</u> , as above.
6728'	16	1½"	<u>Mudstone</u> , as above.
6680	17	1½"	<u>Mudstone</u> , as above.
6678	18	1"	<u>Siltstone</u> , white-grey, glauconitic, pyritic, with interlaminated mudstone as above.
6637	19	1½"	SAMPLE AS ABOVE.
6635	20	1½"	<u>Mudstone</u> , grey-brown, firm, calcareous, micaceous, with trace glauconite.
6580	21	1½"	<u>Mudstone</u> , as above, with interbedded grey siltstone
6578	22	1½"	<u>Siltstone</u> , grey, calcareous, with interbedded mudstone as above.
6565	23	N/R	
6555	24	1½"	<u>Mudstone</u> , as above, non calcareous
6552	25	N/R	
6543	26	1-3/4"	<u>Marl</u> , grey, very glauconitic, trace mica.

BLUNDER-3 Sidewall Core Descriptions cont'd

CST-2

DEPTH	No.	RECOVERY	LITHOLOGY
6530	27	2"	<u>Marl</u> , dark grey, firm
6528	28	1-3/4"	<u>Marl</u> , as above, with trace mica.
6480	29	1 1/2"	<u>Marl</u> , as above.

SIDEWALL CORE DESCRIPTIONS

FLOUNDER-3

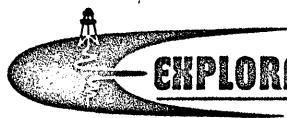
CST-3

A.P. Whittle
12/5/69

DEPTH	No.	RECOVERY	LITHOLOGY
8420	1	3/4"	<u>Sandstone</u> , grey, fine-medium grained, subangular to subrounded, well sorted, with calcareous matrix, with trace pyrite.
8408	2	FRAGMENTS	<u>Sandstone</u> , as above with patchy, spotted, blue-white fluorescence, blue-white cut. No odour.
8388	3	N/R	
8384	4	N/R	
7568	5	N/R	
7080	6	1 1/2"	<u>Mudstone</u> , dark grey, silty, calcareous, micaceous.
7078	7	3/4"	<u>Mudstone</u> , as above.
7030	8	1"	<u>Mudstone</u> , dark brown, micaceous calcareous.
6980	9	1 1/2"	<u>Mudstone</u> , grey-brown, laminated in part, calcareous.
6978	10	1 1/2"	<u>Mudstone</u> , as above.
6565	11	1"	<u>Mudstone</u> , as above.
6552	12	3/4"	<u>Mudstone</u> , as above.
6478	13	1-3/4"	<u>Marl</u> , dark grey soft fossiliferous

2.2 CORE ANALYSIS REPORT / RESULTS





EXPLORATION LOGGING OF AUSTRALIA, INC.

A Geological-Engineering Service

PERTH ADDRESS: 69 GREAT EASTERN HIGHWAY, VICTORIA PARK, WESTERN AUSTRALIA
PHONE: 61 4437 CABLE: EXLOGG. PERTH

CORE ANALYSIS REPORT

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

DATE MAY 9, 1969
DEPTH 8390 FT TO 8418 FT
GEO-ENGINEER CRAIG; ALBERT

REMARKS RECOVERED 15 FEET SANDSTONE: LIGHT GREY, MEDIUM TO VERY COARSE GRAIN, FIRM TO VERY HARD (SOME FRIABLE), DOLOMITIC MATRIX, SPOTTY, WHITE FLUORESCENCE; SLOW, WEAK CUT.

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

TABULAR DATA

ANALYSIS GRAPH

SAMPLE NUMBER	CORE #4 DEPTH FEET	AIR PERM. MD.	POROSITY PERCENT	FLUID SATURATION % PORE VOLUME		GRAVITY OIL 'API	TOTAL CL' G/G	REMARKS	PERMEABILITY MD. ○—○		WATER SATURATION % PORE ○—○							
				OIL	WATER				600	200	100	80	60	40	20	0		
								POROSITY % x—x		OIL SATURATION % PORE x—x								
								40	30	20	10	0	0	20	40	60	80	100
1	8391	4	8.6	TR	27			SS										
2	8392	0	6.1	TR	32			SS										
3	8393	0	5.7	TR	27			SS										
4	8394	0	5.0	TR	49			SS										
5	8395	55	13.8	TR	26			SS										
6	8396	1	7.6	TR	87			SS										
7	8397	776	24.2	1	46			SS										
8	8398	855	19.2	TR	57			SS										
9	8399	123	17.0	TR	68			SS										
10	8400	99	14.0	TR	92			SS										
11	8401	98	13.2	TR	88			SS										
12	8402	320	23.0	TR	84			SS										
13	8403	1610	25.0	TR	66			SS										
14	8404	1450	22.3	TR	63			SS										
15	8405	74	11.4	0	55			SS										

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.

Flounder No 3

DATE ANALYSIS COMPLETED 31 December 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	7211'0"	7212'0"	Sst; arg.	14.6	ND	ND	2.34	2.74	62	Trace	ND	N11	N11	N11
2	8350'0"	8351'0"	Sst; f.gr. v. slty.	14.8	ND	4.4	2.30	2.70	34	N11	ND	Trace	N11	N11
2	8360'11"	8361'8"	Sst; v.f.gr. slty.	15.8	0.93	3.3	2.29	2.71	36	N11	ND	fair	N11	N11
2	8375'9"	8376'9"	Sst; m.gr. to c.gr.	6.3	1.3	1.0	2.53	2.70	3	trace	ND	Trace	Dull irreg. yellow	N11
3	8383'0"	8384'0"	Sst; m.gr. to v.c.gr.	3.6	<0.1	0.15	2.61	2.70	1	N11	ND	N11	Bright irreg. yellow	N11
3	8385'0"	8386'0"	Sst; f.gr. to c.gr.	3.6	0.17	0.47	2.60	2.69	3	N11	ND	N11	Trace dull yellow	N11
4	8394'0"	8395'0"	Sst; f.gr. to v.c.gr.	6.2	3.6	1.9	2.51	2.69	10	Trace	ND	Fair	N11	N11
4	8397'2"	8397'11"	Sst; c.gr. slty	18.0	391	135	2.17	2.64	4	Trace	ND	Trace	N11	N11

Remarks: -

General File No. ~~62/1000~~ 74/1076
Well File No. _____

182

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. Flounder No 3

DATE ANALYSIS COMPLETED 31 December 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				
4	8401'11"	8401'10"	Sst; c.gr. slty	15.4	160	290	2.26	2.66	7	Trace	ND	Trace	N11	N11
4	8403'10"	8404'10"	Sst; c.gr. sl.sltty	18.8	413	476	2.19	2.70	2	N11	ND	N11	N11	N11

Remarks: -

General File No. 624399 74/1076
Well File No. _____

282

3.0 PALYNOLOGY

BASIN GIPPSLAND

DATE _____

WELL NAME FLOUNDER -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
Eocene	<u>P. tuberculatus</u>	6480	1				6530	1			
	<u>U. N. asperus</u>										
	<u>M. N. asperus</u>										
	<u>L. N. asperus</u>										
	<u>P. asperopolus</u>	6555	0				6680	0			
	<u>U. M. diversus</u>	6780	0				7280	0			
	<u>M. M. diversus</u>										
	<u>L. M. diversus</u>										
Paleocene	<u>U. L. balmei</u>	7472	2				7608	2			
	<u>L. L. balmei</u>										
	<u>T. longus</u>	8350	0				8379	0			
Cretaceous	<u>T. lilliei</u>										
	<u>N. senectus</u>										
	<u>C. trip./T.pach.</u>										
	<u>C. distocarin.</u>										
	<u>T. pannosus</u>										
EARLY CRETACEOUS											
PRE-CRETACEOUS											

COMMENTS: DINOFLAGELLATE ZONES
Wetz. edwardsii 6555 (1) - 6580 (2)
Wetz. thompsonae 6637 (1) - 6680 (1)
Wetz. ornata 6830 (1) - 7028 (2)
Wetz. waiparaensis 7130 (1) - 7280 (1)
Defl. druggii 8350 (1) - 8379 (1)

- 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./A.D.P. DATE June 1971 & Dec. 1971.

DATA REVISED BY: A.D.P. DATE Jan. 1975.

BASIN

GIPPSLAND

DATE

June 1971

WELL NAME

FLOUNDER -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.
MIOC.	<u>T. bellus</u>									
	<u>P. tuberculatus</u>	6480 ⁶⁰⁵⁷	1			1.954	6530 ⁶²¹	1		1.464
EOCENE	<u>U. N. asperus</u>									
	<u>L. N. asperus</u>									
	<u>P. asperopolus</u>	6555 ⁶⁰⁵⁴	0			1.970	6680 ⁵⁴¹	0		1.495
	<u>U. M. diversus</u>	6780 ⁶⁰⁵	0			1.510	7280 ⁷²¹	0		1.600
	<u>L. M. diversus</u>									
	<u>L. balmei</u>	7472 ⁵⁷⁵	1			1.634	7608 ⁵⁰¹	2		1.656
PALEO-CENE	<u>T. longus</u>	8350 ⁸²⁵¹	2			1.785	8379 ⁸²⁵⁰	2		1.790
	<u>T. lilliei</u>									
LATE CRETACEOUS	<u>N. senectus</u>									
	<u>C. trip./T. pach.</u>									
	<u>C. distocarin.</u>									
	<u>T. pannosus</u>									
	<u>C. paradoxa</u>									
EARLY CRETACEOUS	<u>C. striatus</u>									
	<u>U. C. hughesii</u>									
	<u>L. C. hughesii</u>									
	<u>C. stylosus</u>									
Pre-Cretaceous										

COMMENTS:

T.D. 8634' (1.950)

- RATINGS: 0; SWC or CORE, EXCELLENT CONFIDENCE, assemblage with zone species of spore 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, 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 / A.D. Partridge

DATE June 1971.

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

DATE Dec 1971

BASIN GIPPSLAND BASIN

BY David TAYLOR

WELL NAME FLOUNDER-3

DATE 19 April 1971 ELEV. +99'

Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time	
MIOCENE	A	Alternate						
	B	Alternate						
	C	Alternate						
	D ₁	Alternate						
	D ₂	Alternate			6100	3		
	E	Alternate	6200	3	6450	3		
	F	Alternate						
	G	Alternate						
	H ₁	Alternate						
	H ₂	Alternate						
	CLIGOCENE	I ₁	Alternate					
		I ₂	Alternate					
J ₁		Alternate	6470	3	6528	1		
J ₂		Alternate	6470	1				
ECC.	K	Alternate						
	Pre K		6552	2	7178	2		

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 _____

DTJ

	6000	6250	6500	6750	7000	7250	7500
PLANKTONICS							
1.Orbulina universa	| | |	|	.	.	.	.	.
2.O. suturalis	.	.	.	.	.	.	.
3.Globigerina apertura	| | |	|	|	|	|	|	|
4.G. woodi	| | |	|	|	|	|	|	|
5.Globigerinoides bisphericus	.	.	.	.	.	.	.
6.G. trilobus	.	.	.	.	.	.	.
7.G. glomerosa glomerosa	.	.	.	.	.	.	.
8.Globorotalia miozea	| | |	|	|	|	|	|	|
9.G. praescitula	.	.	.	.	.	.	.
10.G. conica	.	.	.	.	.	.	.
11.G. peripheroronda	.	.	.	.	.	.	.
12.Globigerinoides glomerosa curva	.	.	.	.	.	.	.
13.Globoquadrina dehiscens			.	.	.	.	.
14.Globigerina angiporoides					.	|	|
15.G. cuapertura					|	|	|
16.Globorotalia extans					.	.	.
17.Globigerina linaperta					.	?	.
18.Truncorotaloides collactea						.	.
depth	6200	6470	6552				
ZONE	D	E	J	LOWER EOCENE			

INTERPRETATIVE

4.0 SOUTH CHANNEL MAPPING REPORT

TABLE: 1 DEPTH TO MAPPED HORIZONS

DEPTH (MSS) 14 JUN 1988

"SOUTH CHANNEL
MAPPING REPORT"
BY ESSO. (D GARRAD)

14 JUN 1988

Doc. 2927L/10

HORIZON	CODE	EAST									
		TERAGLIN-1	HALIBUT-1	PILOTFISH-1A	HALIBUT-1	FLOUNDER-1	FLOUNDER-2	FLOUNDER-3	FLOUNDER-6	MACKERAL-1	MACKERAL-3
Water bottom	0001	79	85	206	72	87	99	111	93	98	100
Miocene unit	1000	nl	684	nl	497	615	628	820	218	556	nl
" " "	1200	nl	827	1179	748	719	806	1040	817	826	863
" " "	1520	996	1015	1436	1066	848	879	1233	889	1210	1182
" " "	1300	1077	1121	1565	1186	927	940	t	956	1396	1371
" " "	1350	1302	1501	1619	1587	1136	1193	1288	1213	np	np
" " "	1400	1583	1791	1914	np	1287	1348	t	1369	np	np
" " "	1450	1732	1919	2153	np	1393	1436	1457	1427	np	np
Base of Limestone	1500	2024	1968	2352	1758	1603	1702	1718	1630	1661	1770
Lakes Entrance Fm	1600	2114	2146	2520	2058	1787	1813	1829	1853	2139	2145
" " "	1700	2279	2284	2622	2173	np	np	-	np	2297	2304
Top of Latrobe	2000	2400	2374	2894	2275	1899	1938	1967	1907	2376	2368
Base Marlin Chan.	2100	2406	nt	2904	nt	nt	nt	nt	nt	t	t
61Ma Unconformity	2610	2647	np	t	2840	t	t	t	t	2751	np
63Ma Unconformity	2680	2842	np		3032	2400	2408	2407	2368	2885	np
68Ma Unconformity	2680	2974	np		np	2540	2536	2544	2745	2956	np
<u>Intra-I. Longus</u>											
Seismic Marker	2710	3281	np	3122	np	2791	np	np	np	np	np

NOTE: nl - not logged
 np - not penetrated
 t - truncated

APPENDIX 1

RAYVNMO MODELLING

14 JUN 1988

The RAYVNMO program uses interval thickness and interval velocity pairs to perform raytracing. The program assumes a simple layercake model, and therefore gives no indication of dip effects and raypath distortions that may be inherent in the real data. An anisotropy factor may be included in any layer. Cable parameters are input according to the parameters used by the particular seismic survey being matched.

Results of the RAYVNMO raytracing are given in the following table.

An anisotropy factor (k) of 1.0 was used in the Lakes Entrance Formation (between 1500 and 2000).

WELL NAME	TERAGLIN-1			EAST HALIBUT-1			PILOTFISH-1A			
	HORIZON Code	Z above	VINT above	VNMO	Z above	VINT above	VNMO	Z above	VINT above	VNMO
	0001	79	1480	1480	85	1480	1480	206	1480	1480
	1000				599	2303	2209			
	1200				143	2860	2338	973	2446	2263
	1250	917	2490	2404	188	3159	2484	257	3253	2429
	1300	81	3115	2460	106	3072	2526	129	3685	2522
	1350	225	3571	2648	380	3707	2790	54	3724	2555
	1400	281	3512	2777	290	3625	2900	295	3734	2704
	1450	149	3634	2837	128	4000	2961	239	3464	2772
	1500	292	3539	2923	49	3500	2973	199	3184	2817
	1600	90	3333	2942	178	3236	2996	168	3111	2812
	1700	165	2973	2950	138	3000	3000	102	2615	2831
	2000	121	3361	2969	90	3214	3011	272	3126	2849

* TABLE CONTINUED OVER.

APPENDIX 1 CONTINUED

14 JUN 1938

WELL NAME HORIZON Code	MACKEREL-1			MACKEREL-3		
	Z above	VINT above	VNMO	Z above	VINT above	VNMO
0001	98	1480	1480	100	1480	1480
1000	458	2195	2091			
1200	270	2784	2329	762	2490	2371
1250	384	2833	2449	319	2774	2468
1350						
1400						
1450						
1500	265	3581	2718	399	3746	2830
1600	478	3274	2844	375	3318	2915
1700	158	2926	2854	159	3057	2931
2000	79	2981	2862	64	3047	2934

APPENDIX 1 CONTINUED

Doc. 29271./14

14 JUN 1988

WELL NAME HORIZON Code	HALIBUT-1			FLOUNDER-1			FLOUNDER-2			FLOUNDER-3			FLOUNDER-6		
	Z above	VINT above	VNMO	Z above	VINT above	VNMO	Z above	VINT above	VNMO	Z above	VINT above	VNMO	Z above	VINT above	VNMO
0001	72	1480	1480	88	1480	1480	99	1480	1480	111	1480	1480	93	1480	1480
1000	426	2201	2123	527	2234	2149	528	2211	2111	709	2419	2301	524	2185	2094
1200	252	3231	2573	167	2738	2305	178	2871	2311	220	3142	2499	199	2745	2271
1250	317	3202	2695	66	3000	2373	73	3174	2387	193	3477	2640	72	3200	2368
1300	120	3076	2719	79	3038	2421	62	3100	2423				67	3116	2406
1350	401	3713	2932	209	3190	2544	252	3252	2564	55	3235	2658	257	3294	2563
1400				151	3471	2641	155	3299	2634			156	3319	2613	
1450				106	3365	2683	88	3385	2670	169	3347	2718	58	3412	2657
1500	171	3842	3007	210	3043	2715	266	3148	2730	261	3089	2759	203	3147	2705
1600	300	3209	3040	184	319	2755	111	3171	2757	111	3041	2776	223	3186	2762
1700	105	3134	3047												
2000	111	3083	3053	112	3200	2782	125	3205	2787	138	2968	2785	54	3176	2774

TABLE CONTINUED OVER

TABLE 2. WELL TWO-WAY-TIMES AND LAGS TO LATROBE HORIZONS

14 JUN 1968

14 JUN 1968
Doc. 2927L/11

HORIZON	TOP OF LATROBE (2000)			61MA (2610)			65MA (2635)			68MA (2680)			INTRA-T. LONGUS (2710)		
	DEPTH (MSS)	TRUE TWT	LAG (TWT)	DEPTH (MSS)	TRUE TWT	LAG (TWT)	DEPTH (MSS)	TRUE TWT	LAG (TWT)	DEPTH (MSS)	TRUE TWT	LAG (TWT)	DEPTH (MSS)	TRUE TWT	LAT (TWT)
TERAGLIN-1	2400	1.700	24	2647	1.828	25	2842	1932	23	2974	1.994	31	3281	2.143	24
EAST HALIBUT-1	2374	1.662	5	np	-	-	np	-	-	np	-	-	np	-	-
PILOTFISH-1A	2894	2.146	18	t	-	-	t	-	-	-	-	-	3122	2.265	25
HALIBUT-1	2275	1.602	7	2.840	1.906	14	3032	2.002		np	-	-	np	-	-
FLOUNDER-1	1899	1.439	20	t	-	-	2400	1.734		2510	1.793	30	2791	1.947	30
FLOUNDER-2	1938	1.472	20	t	-	-	2408	1.746		2536	1.812	20	np	-	-
FLOUNDER-3	1967	1.468	15	t	-	-	2407	1.726		2544	1.806	24	np	-	-
FLOUNDER-6	1907	1.451	28	t	-	-	2368	1.711		2474	1.769	31	np	-	-
MACKEREL-1	2376	1.716	21	2751	1.916	22	2885	1.982		2956	2.02	28	np	-	-
MACKEREL-3	2368	1.696	-8*	np	-	-	np	-	-	np	-	-	np	-	-

* The anomalous lag at Mackerel-3 may be due to poor checkshot data. To avoid creating an anomalous trend on the Vavg map seismic time (lagged) was used to calculate Vavg at Mackerel-3

TABLE 3: VELOCITIES AND CONVERSION FACTORS TO TOP OF LATROBE GROUP

14 JUN '088

<u>WELL</u>	<u>VNMO</u>	<u>VAVG</u>	<u>CF</u>
Teraglin-1	2995	2823	0.9426
East Halibut-1	3019	2857	0.9463
Polotfish-1A	2855	2697	0.9447
Halibut-1	3010	2840	0.9435
Flounder-1	2775	2639	0.9510
Flounder-2	2772	2633	0.9500
Flounder-3	2717	2680	0.9513
Flounder-6	2780	2628	0.9426
Mackerel-1	2930	2775	0.9471
Mackerel-3	2970	2835	0.9545

5.0 F.I.T. DATA

PE904928

This is an enclosure indicator page.
The enclosure PE904928 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE904928 has the following characteristics:

ITEM_BARCODE = PE904928
CONTAINER_BARCODE = PE904927
NAME = Flounder 3 F.I.T. Data
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = FIT
DESCRIPTION = Flounder 3 Formation Interval Test
(F.I.T.) Data
REMARKS =
DATE_CREATED =
DATE_RECEIVED =
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = Schlumberger
CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

6.0 ENCLOSURES



PE601496

This is an enclosure indicator page.
The enclosure PE601496 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE601496 has the following characteristics:

ITEM_BARCODE = PE601496
CONTAINER_BARCODE = PE904927
NAME = Exploration Logging Inc. Mud Log
BASIN = GIPPSLAND
PERMIT =
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Exploration Logging Inc. Mud Log
REMARKS =
DATE_CREATED = 27/04/1969
DATE_RECEIVED = 01/05/1969
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = ESSO
CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE603235

This is an enclosure indicator page.
The enclosure PE603235 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE603235 has the following characteristics:

ITEM_BARCODE = PE603235
CONTAINER_BARCODE = PE904927
NAME = Flounder 3 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Flounder 3 Mud Log. Page 1 of 4
REMARKS =
DATE_CREATED =
DATE_RECEIVED = 13/05/69
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = Exploration Logging INC.
CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603236

This is an enclosure indicator page.
The enclosure PE603236 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE603236 has the following characteristics:

ITEM_BARCODE = PE603236
CONTAINER_BARCODE = PE904927
NAME = Flounder 3 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Flounder 3 Mud Log. Page 2 of 4
REMARKS =
DATE_CREATED =
DATE_RECEIVED = 13/05/69
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = Exploration Logging INC.
CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603237

This is an enclosure indicator page.
The enclosure PE603237 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE603237 has the following characteristics:

ITEM_BARCODE = PE603237
CONTAINER_BARCODE = PE904927
 NAME = Flounder 3 Mud Log
 BASIN = GIPPSLAND
 PERMIT = VIC/P1
 TYPE = WELL
 SUBTYPE = MUD_LOG
DESCRIPTION = Flounder 3 Mud Log. Page 3 of 4
REMARKS =
DATE_CREATED =
DATE_RECEIVED = 13/05/69
 W_NO = W544
 WELL_NAME = Flounder-3
CONTRACTOR = Exploration Logging INC.
CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603238

This is an enclosure indicator page.
The enclosure PE603238 is enclosed within the
container PE904927 at this location in this
document.

The enclosure PE603238 has the following characteristics:

ITEM_BARCODE = PE603238
CONTAINER_BARCODE = PE904927
NAME = Flounder 3 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC/P1
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Flounder 3 Mud Log. Page 4 of 4
REMARKS =
DATE_CREATED =
DATE_RECEIVED = 13/05/69
W_NO = W544
WELL_NAME = Flounder-3
CONTRACTOR = Exploration Logging INC.
CLIENT_OP_CO = Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)