WELL COMPLETION REPORT

COMPLETION REPORT.

KINGFISH-4

CONFIDENTIAL

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WELL COMPLETION REPORT

KINGFISH-4

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G.A. SHORT,

January, 1974.

WELL COMPLETION REPORT

KINGFISH-4

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SECTION

APPENDICES

PLATES

COMPLETION REPORT

I WELL DATA RECORD

Date NOV 21, 1973

LOCATION

WELL NAME	STATE	PERMIT or LICENCE	GEOLOGICAL BASIN	FIELD
KINGFISH-4	VIC OFFSHORE	VIC L/7	GIPPSLAND	KINGFISH

CO-ORDINATES		MAP PROJECTION	GEOGRAPHICAL DESCRIPTION
Latitude: 38°35'55.200" S Longitude: 148°05'48.700"E Bottom Hole	X 595,515 metres Y 5,727,173 metres	AMG ZONE 55	1 mile south Kingfish-3

ELEVATIONS & DEPTHS

ELEVATIONS	WATER DEPTH	TOTAL DEPTH	Avg.Angle
KB 32' RT Braden Head Top Deck Platform	248'	M.D. 8232 T.V.D.	STRAIGHT HOLE
	PLUG BACK DEPTH	REASONS FOR P.B.	
	419'	ABANDONMENT	

DATES

MOVE IN	RIG UP	SPUDDED
24-10-73	25-10-73	25-10-73
RIG DOWN COMPLETE	RIG RELEASED	PROD.UNIT - Start Rigging Up
15-11-73	15-11-73	
PROD.UNIT - Rig Down Complete		I.P. ESTABLISHED

MISCELLANEOUS

OPERATOR	PERMITTEE or LICENCEE	ESSO INTEREST	OTHER INTEREST
ESSO	HEMATITE PETROLEUM	50%	HEMATITE 50%

CONTRACTOR	RIG NAME	EQUIPMENT TYPE
GLOBAL MARINE A/ASIA PTY. LTD.	GLOMAR CONCEPTION	FLOATING D/V

TOTAL RIG DAYS	DRILLING AFE NO.	COMPLETION NO.	TYPE COMPLETION
21.27	233-101		

LAHEE WELL CLASSIFICATION	Before Drilling	OUTPOST
	After Drilling	SUCCESSFUL OUTPOST (OIL)

G. SHORT

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

Engineer

IV CASING-LINER-TUBING RECORD

Type	Size	Weight	Grade	Thread	No. Joints	Amount	Depth
KB ELEVATION ABOVE CASING HEAD						275.00	275.00
20"/30" PILE JOINT						33.74	308.74
	20"	91.5#'	X-52 LP	JV	8 + Float Shoe	370.19	678.93
KB ELEVATION ABOVE HANGER						280.00	280.00
	10-3/4"	40.5#	J-55	Butt	58 Joints + Float Collar	2446.98	2726.98
	10-3/4"	40.5#	J-55	Butt	1 + Float Shoe	41.20	2768.18

V CEMENT RECORD

String	20"	10-3/4"	
Type of Cement	1100 sx Aust N + 350 sx Aust N + 2% $CaCl_2$	525 sx Aust N + 1% $CaCl_2$	
Number of FT^3	1711	620	
Average Weight of Slurry	15.6 ppg	15.6 ppg	
Cement Top	Sea Floor	1300'	
Casing Tested with		1500 psi	
Number of Centralizers	6	6	
Number of Scratchers			
Stage Collar, etc.			
Remarks		Formation held at 780 psi with 8.5 ppg mud equivalent to 13.9 ppg mud.	

D W. Oliver
Engineer

SUBSURFACE COMPLETION EQUIPMENT

DATE COMPLETED ____________

Schematic	Equipment Description	Length	Depth

NOT APPLICABLE

____
Engineer

WELL KINGFISH-4 Nov 21, 1973

VII SAMPLES, CONVENTIONAL CORES, SW CORES

INTERVAL	TYPE	RECOVERED	INTERVAL	TYPE	RECOVERED
720-7020 (30' intervals)	Cuttings		7572-7603	Conventional core	31'
7020-7260 (20' intervals)	Cuttings		7603-7621	"	18'
7260-8232 (10' intervals)	Cuttings (except while coring)		8234-2900	30 SWC's	29
7419-7424	Conventional core	0			
7424-7441	"	11'			
7441-7470	"	29'			
7470-7498	"	28'			
7498-7526	"	25'			
7526-7553	"	22'			
7553-7572	"	18'			

VIII WIRELINE LOGS AND SURVEYS Incl. FIT)

Type & Scale	From To	Type & Scale	From To
SLK/GR 2" & 5"	2794 - 678		
FDC/CNL/GR/Cal 2" & 5"	8236 - 7100 GR/cal 2610 & 2769 respectively		
ISF/SLK 2" & 5"	8230 - 2769		
Velocity Survey	10 levels		
FIT's 14 from	8203 to 7415		

G. SHORT
Geologist

IX FORMATION TOPS/Zones

NAME	Tops M.D.	Tops Sub-sea	Gross Interval (ft)	Net Pay (ft). Gas	Net Pay (ft). Oil	REMARKS
GIPPSLAND (Recent to Miocene)	280	- 248				
LAKES ENTRANCE FORMATION	7306	-7274				
GURNARD FORMATION	7340	-7308				
LATROBE COARSE CLASTICS (Eocene)	7409	-7375				
Mid M.diversus Unconformity	7548	-7516				
PALEOCENE*	7970	-7938				

* By correlation with Kingfish-3 Palynology picks unreliable due to malfunction on sidewall core equipment.

X GEOLOGIC ANALYSIS (Pre Drilling prognosis Vs actual results)

PRE-DRILL

Kingfish-4 was drilled to establish a sound geological basis on which to calculate the minimum oil reserves available in the Western end of the Kingfish field.

The greatest bulk of the Western portion of the Kingfish field is occupied by a sequence of marginal marine clastics, which have been subdivided into a number of reservoir units, designated M-1.2, M-1.3.1, M-1.3.2, and M-1.3.3. The M-1.1 represents a completely unknown section and Kingfish-4 was located to allow penetration of this unit, thus providing important stratigraphic and reservoir information. The internal geometry of this sequence of clastic sediments is very significant in reserve calculations and it was thought that Kingfish-4 would provide adequate information to resolve the problems existing in correlation of these reservoir units.

It was realised that Kingfish-4 would not solve the problems of the geometry of the top of the Latrobe "coarse clastics" in the extreme west of the field ("upper cycle/ lower cycle") but the effects of this variation were considered minor in comparison to the internal configuration of the field.

POST DRILL

Kingfish-4 penetrated the top of the Latrobe "coarse clastics" 24' high to prediction. Log correlation with Kingfish-3 indicates that the interval unit boundaries are also 20 to 80' higher than anticipated. Interpretation of the new data made it clear that Kingfish-4 was located directly along depositional strike from Kingfish-3, not somewhat down dip as anticipated, therefore no M-1.1 was penetrated and uncertainties in the internal correlations still persist, because no unique definition of the dip of the units was provided.

Geologist

The actual and predicted reservoir unit tops are:-

UNIT	PREDICTED	ACTUAL
M-1.1	-7400	Not Present
M-1.2	-7440	-7375
M-1.3.1	-7465	-7410
M-1.3.2	-7525	-7500
M-1.3.3	Not Present	Not Present
M-1.4	-7560	-7516
M-1.5	-7650	-7601
M-1.7		-7644

7583

The oil/water contact is recorded at -7557' (by log interpretation) with a possible transition zone in the lower 11' from -7546, having considerably higher water saturation than higher in the oil column.

Continuous coring of the oil column and the large number of F.I.T.'s run provided data for a detailed analysis of the reservoir in this part of the field. Preliminary results indicate that reservoir quality decreases slightly from Kingfish-3 to 4.

In respect to the geophysical problem concerning the validity of the "upper" or "lower" cycle interpretation for the top of the Latrobe coarse clastics in the extreme western portion of Kingfish field, Kingfish-4, as expected did not resolve the problem due to its location being too far to the East with respect to the cycle split.

2nd Copy

Petroleum [redacted]nology Laboratory, Bureau of Mineral Resources [redacted]logy and Geophysics, Canberra

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. KINGFISH No 4

DATE ANALYSIS COMPLETED FEBRUARY 1974

Core No.	Sample Depth (feet)		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 tetrachloroethylene
	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
2	7424'	7425'	Slst;aren.	10.9	<0.1	<0.1	2.42	2.74	77	1.1	N.D.	Strong	Dull yellow	NIL
2	7428'9"	7429'11"	Sst;f.gr. silty	10.5	<0.1	0.26	2.41	2.70	72	3.8	N.D.	Trace	Nil	NIL
2	7431'8"	7432'11"	as above	14.8	N.D.	0.14	2.41	2.72	47	1.5	N.D.	Strong	Nil	Trace
3	7442'7"	7443'3"	Slst;shly, aren.	18.0	N.D.	2.9	2.20	2.68	43	2.8	N.D.	Trace	Blue-yellow	Good
3	7446'7"	7447'4"	Sst;f.gr.	26.1	N.D.	30	1.97	2.68	21.	8.4	N.D.	Very Strong	Light blue	Very Good
3	7453'5"	7454'4"	Sst;f.gr., carb,silty	15.9	1.4	3.3	2.30	2.74	37	7.0	N.D.	Strong	Dull yellow	Fair
3	7458'3"	7458'11"	Sst;v.f.gr. slty,carb.	16.1	2.4	3.1	2.26	2.70	52	3.0	N.D.	Fair	Light blue	Fair
3	7462'5"	7463'	Sst;f.gr., slty	9.8	<0.1	0.66	2.42	2.69	70	6.0	N.D.	Trace	Dull light blue	Good

Remarks: - Core No. 1 - No Sample

General File No. 62/399 72/2914
Well File No. _____

Petroleum [redacted]nology Laboratory, Bureau of Mineral Resources, [redacted]logy and Geophysics, Canberra

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	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
3	7468'1"	7468'8"	Sst;f.gr.	16.4	2.1	3.5	2.26	2.71	40	6.3	N.D.	Fair	Light blue	Very good
4	7470'11"	7471'7"	Sst;v.f.gr., slty	15.8	N.D.	7.5	2.25	2.66	44	8.5	N.D.	Fair	Bright blue	Very good
4	7474'9"	7475'6"	Sst;m.gr. to v.c.gr.	9.0	1.0	5.4	2.35	2.69	50	8.2	N.D.	Fair	Irregular blue	Fair
4	7478'11"	7479'6"	Sst;m.gr., slty	6.4	0.1	0.4	2.46	2.64	79	5.4	N.D.	Fair	Dull even light blue	Trace
4	7481'7"	7482'3"	Slst;shly, aren.	21.4	<0.1	<0.1	2.12	2.69	12	3.1	N.D.	Strong	Irregular yellow	Good
4	7487'3"	7488'3"	Sst;m.gr.	26.4	12	59	1.96	2.66	27	4.2	N.D.	Strong	Yellow to Light blue	Good
4	7492'8"	7493'6"	Sst;f.gr.	26.2	30	N.D.	2.06	2.67	31	8.0	N.D.	Strong	As above	Good
4	7496'7"	7497'4"	Sst;f.gr. to m.gr.	20.2	69	41	2.15	2.69	43	8.4	N.D	Strong	As above	Good

Remarks: -

General File No. ~~62/X306~~ 72/2914

Well File No. _____

Petroleum Technology Laboratory, Bureau of Mineral Resources, Geology and Geophysics, Canberra

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WELL NAME AND NO. KINGFISH NO 4

DATE ANALYSIS COMPLETED FEBRUARY 1974

Core No.	Sample Depth (feet)		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 Tetrachloroethyle
	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
5	7499'5"	7500'4"	Sst;f.gr., mic.	20.1	18	45	2.15	2.68	42	8.2	N.D.	Strong	Even bright light blue	Good
5	7504'8"	7505'8"	As above	19.1	5.6	15.0	2.17	2.67	19	8.5	N.D.	Strong	Even bright light blue	Good
5	7508'5"	7509'5"	As above, sl.carb.	19.5	1.2	6.7	2.17	2.68	14	4.2	N.D.	Strong	Dull even light blue	Fair
5	7512'2"	7512'7"	Sst;f.gr. mic.	17.0	5.8	0.27	2.20	2.66	23	7.6	N.D.	Strong	Even light blue	Fair
5	7514'9"	7515'6"	As above	20.4	18	43	2.14	2.64	16	1.6	N.D.	Fair	Even yellow	Trace
5	7520'1"	7520'11"	As above, carb	16.7	1.8	21	2.22	2.66	39	4.5	N.D.	Trace	Light blue	Fair
6	7427'7"	7428'7"	As above	23.1	162	133	2.05	2.66	13	6.4	N.D.	Fair	Dull yellow	Fair
6	7531'	7532'	Sst;f.gr. to c.gr,sl	y 15.9	1.4	14	2.24	2.66	15	5.3	N.D.	Trace	Very dull yellow	Trace

Remarks: -

General File No. ~~82/399~~ 72/2914

Well File No. _____

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Core No.	Sample Depth (feet)		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	
	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
6	7534'3"	7534'11"	Sst;f.gr., slty	19.4	20	4.6	2.12	2.62	24	8.3	N.D.	Trace	Dull light blue	Good
6	7539'6"	7540' 4"	Slst;aren., arg	9.9	0.1	0.48	2.39	2.65	49	9.6	N.D.	Trace	Dull yellow	Fair
6	7543'5"	7543'11"	Sst;f.gr., slty	15.5	0.20	6.7	2.28	2.71	33	1.1	N.D.	Nil	Nil	Nil
6	7545'11"	7546'9"	Slst;mic., aren.	10.9	<0.1	<0.1	2.47	2.76	23	1.6	N.D.	Trace	Nil	Trace
7	7556'9"	7557'6"	Sst;m.gr., slty	21.9	86	590	2.06	2.65	5.1	7.8	N.D.	Trace	Good even blue	Good
7	7562'8"	7563'5"	As above	24.2	60.6	770	2.03	2.66	0.34	5.8	N.D.	Fair	Dull even blue	Good
7	7568'1"	7568'11"	Slst. arg., aren	10.5	0.11	3.1	2.39	2.68	26	2.1	N.D.	Nil	Nil	Trace
7	7570'1"	7570'10"	Slst;aren.,	11.2	4.6	0.14	2.39	2.69	36	6.3	N.D.	Trace	Very dull blue	Trace

Remarks: -

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	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
8	7574'8"	7575'2"	Sst;m.gr. to c.gr.	25.0	34 4	1650	2.00	2.65	25	5.6	N.D.	Good	Pale light blue	Very good
8	7579'6"	7580'3"	Sst;f.gr., sl.mic.	18.4	9.3	78	2.18	2.67	34	10.6	N.D.	Good	Pale blue white	Very good
8	7583'4"	7584'4"	Sst;f.gr.	19.9	171	173	2.15	2.68	10	2.7	N.D.	Trace	Dull blue	Trace
8	7588'6"	7589'3"	Sst;f.gr., slty	15.5	11	112	2.13	2.64	4.8	10.5	N.D.	Fair	Dull blue	Fair
8	7592'10"	7593'7"	Sst;v.f.gr, slty	22.7	67	236	2.07	2.68	25	0.5	N.D.	Nil	Very dull blue	Nil
8	7597'6"	7598'3"	As above	20.5	23	94	2.13	2.67	24	2.8	N.D.	Fair	Nil	Trace
9	7604'11"	7606'	Sh;mic., carb	12.7	<0.1	N.D.	2.46	2.80	16	0.4	N.D.	Fair	Nil	Nil
9	7610'	7610'6"	Sst;m.gr., slty	22.4	1.8	181	2.07	2.69	0.3	Nil	N.D.	Nil	Nil	Nil

Remarks: -

General File No. ~~XXXXXX~~ 72/2914

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	From	To			V	H	Dry Bulk	Apparent Grain	Water	Oil				
9	9614'	9615'	Sh; black	10.5	N.D.	<0.1	2.48	2.77	53	3.1	N.D.	Trace	Nil	Nil
9	9619'3"	9620'2"	Slst;carb.,aren	11.0	N.D.	<0.1	2.41	2.71	56	2.7	N.D.	Fair	Nil	Nil

Remarks: -

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KINGFISH-4

SAMPLE DESCRIPTIONS

WELL COMPLETION REPORT

KINGFISH-4

CORE DESCRIPTIONS

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 1

WELL: KINGFISH-4

Interval Cored 7419 – 7424 ft., Cut 5 ft., Recovered 0 ft., (0 %) Fm. LATROBE

Bit Type C-22 FD, Bit Size 8 17/32 x 4 in., Desc. by BLACK + MAUGHAN Date 2/11/73

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
19 0				
				NO RECOVERY
12 MIN/FT				PROBABLY UNCONSOLIDATED SAND
24				

REMARKS: CORE HEAD HIT CLOSED BLIND RAMS ON WAY IN HOLE. DAMAGED FACE OF CORE HEAD

ESSO STANDARD OIL (AUSTRALIA) LTD.

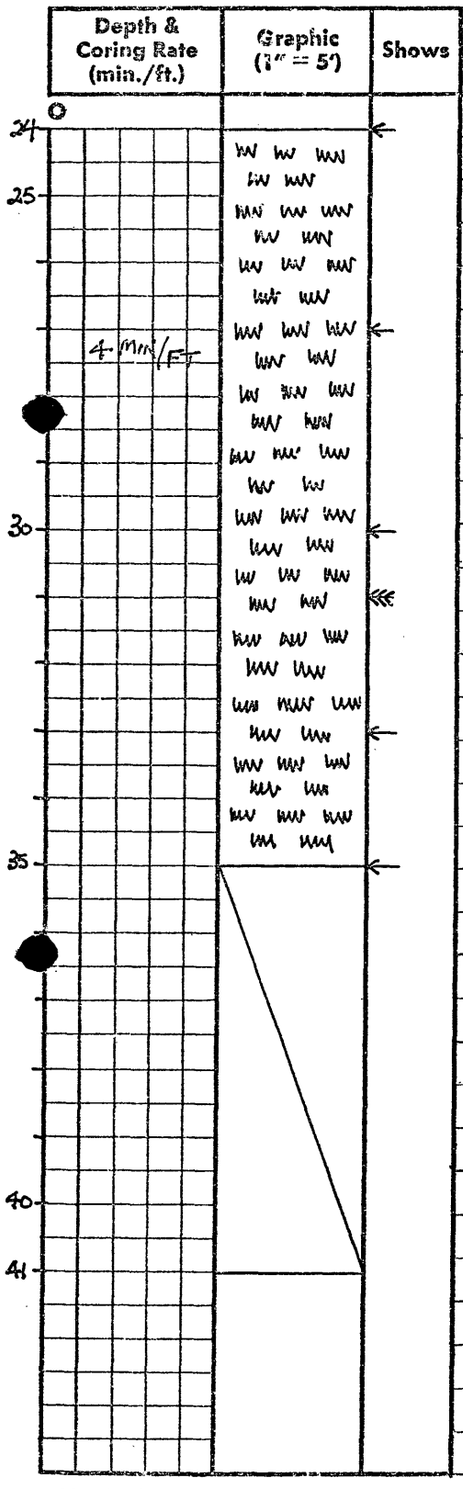
CORE DESCRIPTION

Core No. 2

WELL: KINGFISH - 4

Interval Cored 7424 - 7441 ft., Cut 17 ft., Recovered 11 ft., (65 %) Fm. LATROBE

Bit Type C-22 FD, Bit Size 8 15/32 x 4 in., Desc. by BLACK + MAUGHAN Date 2/11/73



Interval (ft.)	Descriptive Lithology
7424 - 35'	SILTSTONE - DK. GR. WITH SOME V.F. GR. ROUNDED QTZ. GRAINS, V. FIRM, F. MICACEOUS, SHALEY IN PLACES, HIGHLY DISTURBED BEDDING, ABUNDANT WORM BURROWS. FEW SCATTERED SMALL CARBONACEOUS PIECES. V. FEW SCATTERED ½" to 2" ZONES WITH YELLOW WHITE FLUOR, GOOD CUT.
7435 - 41'	NO RECOVERY

REMARKS:

← CORE CHIPS FOR PALEO

⋘ POR. ≠ PERM. PLUG

ESSO STANDARD OIL (AUSTRALIA) LTD.

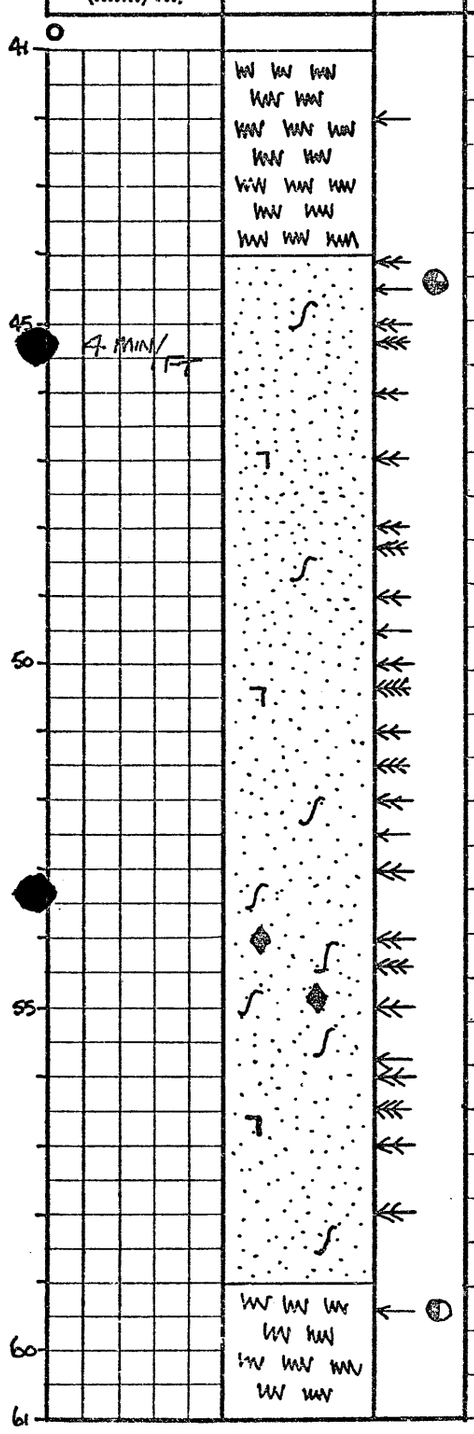
CORE DESCRIPTION

Core No. 3
PAGE 1 of 2

WELL: KINGFISH - 4

Interval Cored 7441 - 7470 ft., Cut 29 ft., Recovered 29 ft., (100 %) Fm. LATROBE

Bit Type C-22 FD, Bit Size 8 15/32 x 4 in., Desc. by BLACK + MAUGHAN Date 3/11/73



Interval (ft.)	Descriptive Lithology
7441 - 44'	SILTSTONE - DK. GR. AND DK. BRN., FIRM, FINELY MICACEOUS, BURROWED, HIGHLY DISTORTED BEDDING
7444 - 59'	SANDSTONE - LT. GR., F. GRAINED S.R. QTZ., SUGARY TEXTURE, WELL SORTED, RANGING FIRM TO MODERATELY FRIABLE, TRACE GLAUCONITE, TRACE FINE MICA. NO APPARENT BEDDING. GOOD EVEN YLLW WH FLUOR AND CUT. POOR TO FAIR POROSITY AND PERM.
7453 - 56'	SANDSTONE - AS ABOVE BUT INCREASE IN GLAUCONITE AND PYRITE. MUCH FIRMER THAN ABOVE.
7459 - 69'	SILTSTONE - DK. GR., V. MICAC, HORIZONTALLY LAMINATED, WITH HORIZ. FRACTURE, EVEN UNDISTURBED BEDDING. FEW THIN (½" to 2") ZONES WITH YELLOW WH. FLUOR, BLEEDING OIL.

REMARKS:

← CORE CHIP
⇐ 4" WAX PACKED SAMPLE
⇐⇐ POR & PERM PLUG
⇐⇐⇐ SIMULATED OVERBURDEN ANALYSIS SAMPLE

ESSO STANDARD OIL (AUSTRALIA) LTD.

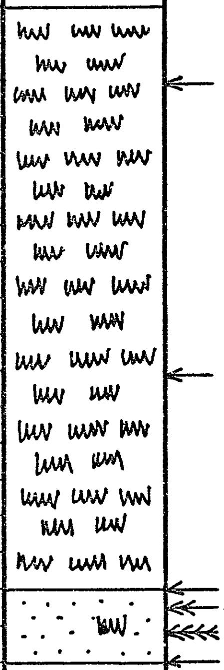
CORE DESCRIPTION

Core No. 3
PAGE 2 of 2

WELL: KINGFISH - 4

Interval Cored 7441 – 7470 ft., Cut 29 ft., Recovered 29 ft., (100 %) Fm. LATROBE

Bit Type C-22 FD, Bit Size $8\frac{15}{32}$ x 4 in., Desc. by BLACK + MAUGHAN Date 3/11/73

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0				
61				
65				
		●	7469-70'	SANDSTONE – DK. GR. V. CSE. RND QTZ, WITH MATRIX OF SILTSTONE & V.F.G. SST. HARD, TIGHT, POOR POR & PERM. TRACE GLAUCONITE, SOME PYRITE. SHARP CONTACT WITH SILTSTONE ABOVE. SPOTTY FLUOR WITH FAIR CUT
70				

REMARKS:

ESSO STANDARD OIL (AUSTRALIA) LTD.

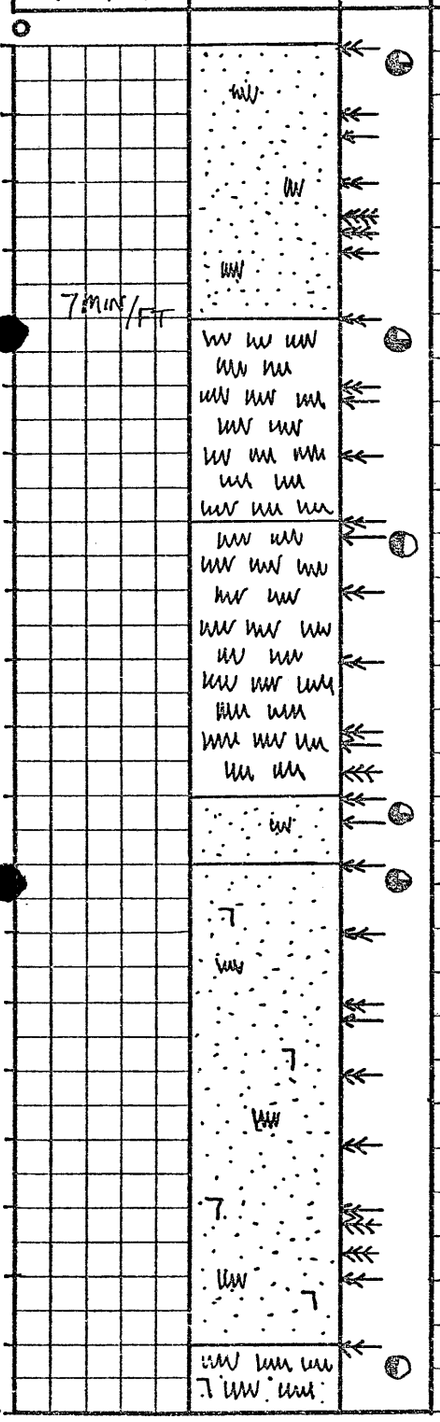
CORE DESCRIPTION

Core No. 4

WELL: KINGFISH-4

Interval Cored 7470 - 7498 ft., Cut 28 ft., Recovered 28 ft., (100 %) Fm. LATROBE

Bit Type C-22 FD, Bit Size 8 15/32 x 4 in., Desc. by BLACK + MAUGHAN Date 3/11/73



Interval (ft.)	Descriptive Lithology
7470 - 74'	SANDSTONE - DK. GR, V. CSE RND QTZ GRAINS IN MATRIX OF F. GR. SST. + SILTSTONE. HARD, TIGHT, INDURATED, WITH POOR POR. + PERM SPOTTY YLLW WH. FLUOR WITH GOOD CUT
7474 - 77'	SILTSTONE - GR HARD, TIGHT, HIGHLY BURROWED WITH SST. FILLED BURROWS. POOR POR. + PERM. SPOTTY YLLW WH FLUOR WITH GOOD CUT
7477 - 81'	SILTSTONE - DK. GR BURROWED BUT LESS SO THAN ABOVE, SOME HORIZONTAL BEDDING, HARD, TIGHT, POOR POR. + PERM. SCATTERED YLLW WH FLUOR
7481 - 82'	SANDSTONE - DK. GR V. CSE RND QTZ IN MATRIX OF F. GR. SILTY SST, HARD, TIGHT, POOR POR. + PERM. SPOTTY FLUOR WITH GOOD CUT
7482 - 89'	SANDSTONE - LT. GR., F. GR., FIRM TO MOD. FRIABLE, SILTY, MICAC. SOME BURROWING IN FEW ZONES WITH CSE S.R QTZ AS ABOVE. FAIR TO POOR POR. + PERM. GOOD EVEN YLLW WH. FLUOR + CUT
7489 - 92'	SILTSTONE - GR. FIRM, HIGHLY BURROWED, DISTURBED BEDDING, SDY, F. MICAC. SPOTTY YLLW. WH. FLUOR

REMARKS:

← CORE CHIP

⇐ 4" WAX PACKED SAMPLE

⇐ POR + PERM PLUG

⇐⇐ SIMULATED OVERBURDEN ANALYSIS SAMPLE

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 4
PAGE 2 of 2

WELL: KINGFISH -4

Interval Cored 7470 - 7498 ft., Cut 28 ft., Recovered 28 ft., (100 %) Fm. LATROBE

Bit Type C-22 FD, Bit Size 8 15/32 x 4 in., Desc. by BLACK + MAUGHAN Date 3/11/73

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
90				
			7492 - 97'	SANDSTONE - LT. BRN-WH. F.GR. WELL SORTED, FAIR POR + PERM. MOD. FRIABLE SOME HORIZONTAL BEDDING, SUGARY TEXTURE GOOD EVEN YLLW. WH. FLUOR. WITH GOOD CUT
7 MIN/FT				
95				
			7497 - 98'	SANDSTONE - AS ABOVE BUT WITH A FEW THIN DK. GR. HORIZONTAL SILTSONE LAMINAE.
98				

REMARKS:

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 5

WELL: KINGFISH-4

Interval Cored 7498-7526 ft., Cut 28 ft., Recovered 25 ft., (93 %) Fm. LATROBE

Bit Type C-22, Bit Size 4×8 15/32 in., Desc. by G. SHORT Date 7th NOV. 73

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0 2 4 6 8				
7498			7498-7520	Sandstone, lrgy silty, fine grained, qtzose, ang to subang, v. micaceous, fairly abundant intergranular clay, becomes faintly laminated in basal half, with minor small scale cross bedding at 7516'. Minor burrowing. bioturbation, becoming sli. more common towards the base. Bright even strong blue fluorescence with instant streaming white cut & strong petroliferous odour with a faint trace H_2S - probably due to pyrite in basal shaley section
7500				
7505				
7510				
7515				
7520			7520-7522·8'	Shaley Siltstone, gy, firm to hard, well laminated, but with servere bioturbation. Minor small carb inclusions, pyritic. No fluor or cut.
7525			7522·8-7523'	Sandstone wh, medium to coarse grained, qtzose, subangular to rounded, mod well sorted, friable, excellent ϕ'k, oil stain, odour, fluor & cut. It appears very likley that the basal part of this sand was lost.
7526			7523'-7526	No Recovery.
				ENVIRONMENT. — appears to be typical shoreface, burrowed, minor carb fragments, laminations & tr cross bedding.

REMARKS: Top 4" of ever foot wax packed for EPRCo

7503·5, 7509·5, 7517·5 Samples taken for Barcia ϕ'k determin.

7498·5, 7509·5, 7518·5, 7521·5 - samples taken for paleo

7500·5, 7518·5 - samples taken for overburden determin.

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

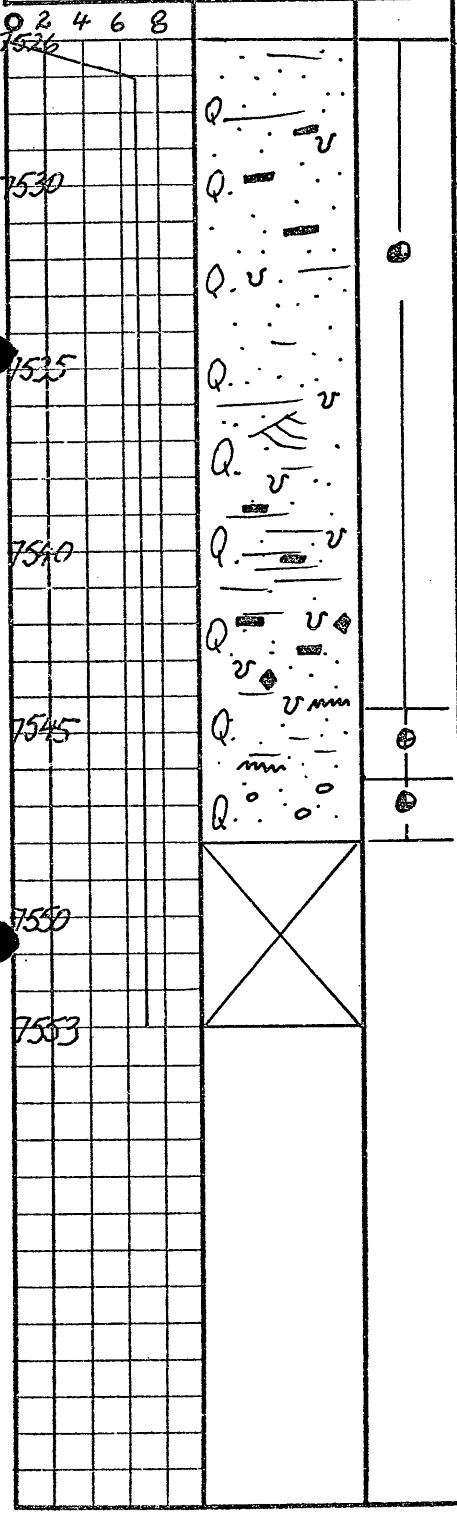
Core No. 6

WELL: KINGFISH - 4

Interval Cored 7526-53 ft., Cut 27 ft., Recovered 22 ft., (81 %) Fm. LATROBE

Bit Type C-22, Bit Size 4 x 8 15/32 in., Desc. by SHORT/EDWARDS Date 8th Nov-73

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology



7526-7546.5' Sandstone, gy, v. fine to fine grained with very minor med to coarse grains. V. silty in part, especially towards base, angular to subrounded, mod well sorted, qtzose, abundant minor carb. inclusions & rare carb. stringers. Abundant burrows - some quite large - possibly bivalves, but numerous small worm burrows. Minor pyrite, especially concentrated on fossil plant material (sli. H_2S odour). Rare cross bedding.

Good even strong blue fluorescence with instant streaming white cut, strong petroliferous odour. Fluorescence becomes spotty in basal 2' with only about 5% of rock fluorescing. (Sand near v. shaley & tight)

7546.5-7548. Sandstone gy, medium to pebble grain size, subangular to rounded, v qtzose, fairly poorly sorted, with minor shaley laminae good φ & k good fluor, cut & odour.

7548-7553 No recovery.

REMARKS: Top 4" each foot wax packed for EPRlo

7531.5', 7546.5' - samples taken for overburden analysis

7529.5', 7530.5', 7537.5', 7546.5, 7547.5' Samples taken for Baroid φ, K, Sw determinations.

7529.5, 7533.5, 7540.5, 7545.5 samples taken for paleo

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 7

WELL: KINGFISH-4

Interval Cored 7553-7572 ft., Cut 19 ft., Recovered 18 ft., (95 %) Fm. LATROBE

Bit Type C-22, Bit Size 4 x 8 15/32 in., Desc. by G. SHORT. Date 8th NOV 73.

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
2 4 6 8 10				
7553	Q		7553-7567.4	Sandstone lt gy, m-c grained with some pebbles, a-r, mod well sorted but with some clay in the interstices, vgtz ose, minor muscovite flakes. fairly good ϕ & k from 7563-65.0 dominantly coarse to v coarse, with pebbles quite common, fairly well rounded. Some frosted. Many carb inclusions throughout. Burrowing & bioturbation very common. Good fluorescence & cut, petroliferous odour
7535	Q			
7560	Q			
7565	Q			
7570	Q		7567.4-7571	Laminated very fine sand & shaley siltstone, gy & light gy, severe bioturbation abundant carbonaceous inclusions & plant remains, often quite large. No fluor.
7572			7571-7572	No Recovery

REMARKS:

Over burden analysis 7563.5'

Paleo 7562.5', 7558.5', 7554.5', 7570'

Conventional ϕ & k determinations 7563.5', 7566.5', 7564.5', 7560.5', 7558.5', 7553.5'

EPRG Top 4" of each foot to & including 7567

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

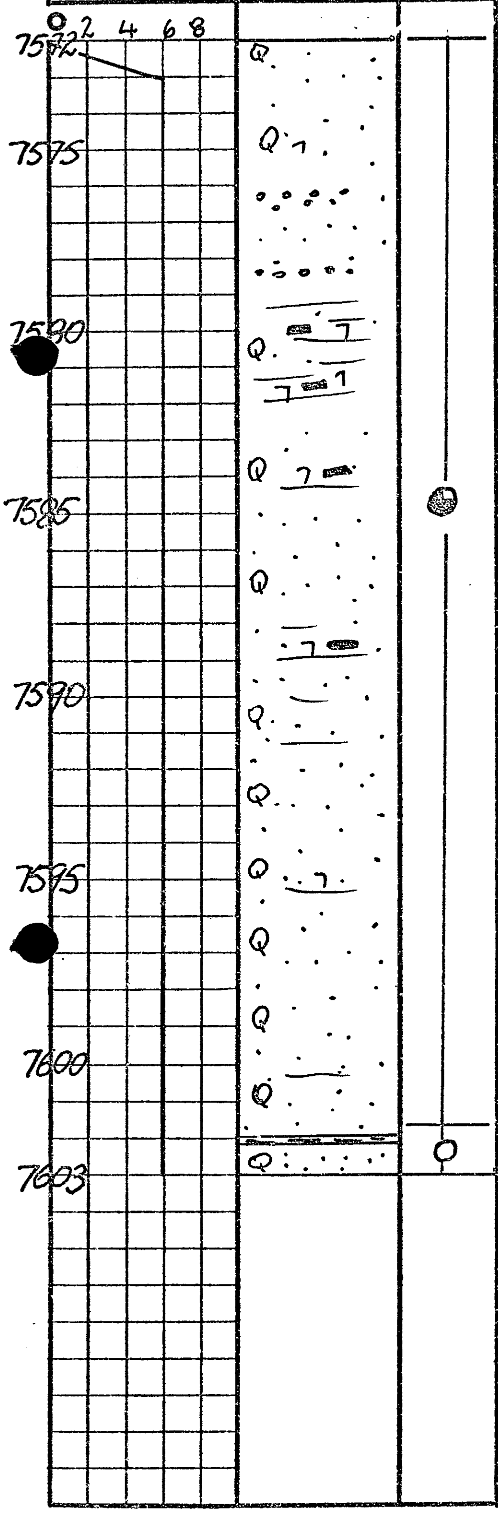
Core No. 8

WELL: KINGFISH - 4

Interval Cored 7572-7603 ft., Cut 31 ft., Recovered 31 ft., (100 %) Fm. LATROBE

Bit Type C-20, Bit Size 4 x 8 15/32 in., Desc. by G. SHORT Date 9th Nov-73

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology



Sandstone light gy, medium to coarse grained, fairly poorly sorted, sa. - s.r., good porosity & permiability, good fluorescence, cut & petroliferous odour

becomes slightly finer grained in parts, generally massive but with occasional very fine coaly laminae, these laminae are v. micaceous & sli shaley. Occasional pebbly bands

Shale gy firm subfissile silty

O.W.C. 7601'8'

REMARKS: paleo samples 7602½', 7589½', 7583½', 7573½'
core lab overburden determination, 7577½', 7594½'
EPR Co Samples tot-foot

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 9

WELL: KINGFISH 4

Interval Cored 7603-7621 ft., Cut 18 ft., Recovered 18 ft., (100 %) Fm. LATROBE

Bit Type C-22, Bit Size 4×8 15/32 in., Desc. by EDWARDS/SHORT Date 9th Nov. 1973

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0 2 4 6 8 10				
7603			7603-05	Shale, gy, hard, dense, subfissile, sli sideritic, micac., moderately carbonaceous.
05			7606-06'1"	Coal, black, firm, brittle, interbanded vitrain & claro-durain, heavily pyritic in part.
			7606'1"-07	Sandstone, f-m with rare isolated coarse gr. a tos' silty, poorly sorted with several small carb. shaley laminae
10			7607-7610'2"	Siltstone, gy, abundant fine dk gy carb laminae with many fossil plant frags, shaley in part. Severe bioturbation
			7610'2"-610'8"	Shale, gy, firm, subfissile, carb, pyritic.
15			7610'8"-7612	Sandstone lt gy, fine grained, sa-sr, fairly well sorted with several carb laminae, & rare thin shaley partings. Minor burrowing. Fair φ & K, becomes shaley towards base
20			7612-7616	Shale gy, subfissile, firm, sli carb, silty in parts. bioturbation common
7621			7616-7616'5"	Coal. a.a. shaley.
			7616'5"-7621	Sandstone, gy, fine grained, a-sr, fairly poorly sorted, with clay in interstices, numerous carb & thin shaley laminae. Some minor bioturbation

REMARKS: Overburden analysis 7620 Baroid φ & K determ.s 7610', 7611.5, 7616.5, 7619
Paleo Samples 7610, 7613, 7616, 7604

KINGFISH-4 PALYNOLGY AND PALAEONTOLOGY

Results of age determination based on spore pollen and forams from sidewall cores appear to be completely unreliable due to a probable malfunction of the sidewall equipment, therefore, at this stage, no palynology or palaeontology, or sidewall core descriptions are included in the report.

PALYNOLOGICAL DETERMINATIONS FOR KINGFISH-4, GIPPSLAND BASIN, AUSTRALIA

Lewis E. Stover

Stratigraphic Geology Division

~~Paleontology~~

Report 1974/04

EPR. 8ES.74

February 1974

PALYNOLOGICAL DETERMINATIONS FOR KINGFISH-4, GIPPSLAND BASIN, AUSTRALIA

Lewis E. Stover

SUMMARY

7408'-7413'	Upper *M. diversus*	Early Eocene
7424'-7616'	Lower *M. diversus*	Early Eocene
7630'-8198'	*L. balmei*	Paleocene

Spore-pollen zone determinations for the Kingfish-4 well are based on palynomorph assemblages from six conventional and 18 sidewall cores. In general, the preservation of the spore-pollen and dinoflagellates is fair to poor although occasional well preserved specimens are present in some samples. Dinoflagellates occur consistently in assemblages from 7408 to 7796 feet and also at 8107 and 8184 feet. Recycled pre-Tertiary palynomorphs were not observed in Kingfish-4 assemblages.

DISCUSSION

Upper *Malvacipollis diversus* Zone

Assemblages from SWC 18 at 7408 feet and SWC 7413 feet are assigned to this zone with low confidence ratings mainly because of the very sparse and rather poorly preserved assemblages recovered from these samples. The shallower sidewall core has mostly incomplete dinoflagellate specimens and rare spore-pollen; the deeper core has rare spore-pollen and even rarer dinoflagellates.

Among the spore-pollen the presence of *Nothofagidites deminutus*, *Myrtaceidites tenuis* and *Proteacidites pachypolus* indicate the samples are no older than Upper *M. diversus*, but they could be younger. The dinoflagellates, particularly the types of *Wetzeliella (W. homomorpha, W. hyperacantha, W. articulata)* in association with *Homotryblium tasmaniense* support the Upper *M. diversus* assignment, especially since the types of *Wetzeliella (W. thompsonae, W. edwardsii)* known to occur in the *P. asperopolus* zone were not seen in the Kingfish-4 samples.

Species identified from sidewall cores 17 and 18 are:

Spore-Pollen

Dilwynites granulatus
Haloragacidites harrisii
Helcisporites astrus
Lygistepollenites florinii
Nothofagidites emarcidus
N. deminutus
N. brachyspinulosus
Malvacipollis subtilis
Myrtaceidites parvus
M. tenuis
Proteacidites annularis
P. pachypolus
Simplicepollis meridianus
Tricolporites paenestriatus

Microplankton

Achomosphaera sp.
Cleistosphaeridium sp.
Cordosphaeridium sp.
Deflandrea sp.
Epicephalopyxis indentata
Exochosphaeridium sp.
Homotryblium tasmaniense
Hystrichokolpoma eisenackii
Operculodinium centrocarpum
Spinidinium sp.
Spiniferites sp.
Wetzeliella articulata
W. homomorpha
W. hyperacantha

Lower *Malvacipollis diversus* Zone

Samples from conventional cores 2, 3, 4, 5, 6, 8 and 9 between 7424 and 7616 feet are placed in the Lower *M. diversus* zone. Within this interval spore-pollen are consistently more abundant than dinoflagellates. Fairly well preserved and rather diverse spore-pollen assemblages were recovered from cores 2 and 4 at 7424 and 7478 feet, and assemblages with low species diversity were obtained from cores 5 to 9 between 7521.5 and 7616 feet. In the deeper cores the most conspicuous species is *Proteacidites grandis* and although other Proteaceous pollen are sparse to common, poor preservation precludes identification at the species level for a majority of specimens. Dinoflagellates, which occur throughout the Lower *M. diversus* zone, are for the most part rare, poorly preserved and poorly represented in terms of the number of species present.

Assignment of samples from cores 2 through 9 to the Lower *M. diversus* zone is based on spore-pollen of which the following species were identified.

Anacolosidites sp.
Banksieaeidites arcuatus
Bysmapollis emaciatus?
Cupanieidites orthoteichus
Dilwynites granulatus
Haloragacidites harrisii
Ilexpollenites anguloclavatus
Ischyosporites gremius
I. irregularis
Polycolpites esobalteus
Proteacidites adenanthoides
P. annularis
P. grandis
P. incurvatus
P. leightonii
P. ornatus
P. reticuloscabratus
P. tuberculiformis?

Lygistepollenites florinii
Nothofagidites emarcidus/heterus
N. flemingii
Malvacipollis diversus
M. sublilis
Myrtaceidites parvus
Periporopollenites demarcetus
P. polyoratus
Phyllocladidites mawsonii
Rugulatisporites mallatus
Schizocolpus marlinensis
Schizocolpus sp.
Simplicepollis meridianus
Stereisporites punctatus
Tricolpites gillii
T. phillipsii
Tricolporites moultonii
Verrucosisporites kopukuensis

Microplankton from the Lower *M. diversus* zone are:

Cyclonephelium sp.
Deflandrea pachyceros?
Deflandrea sp.
Epicephalopyxis indentata
Spinidinium sp.
Wetzeliella homomorpha

Lygistepollenites balmei Zone

Palynomorph assemblages from sidewall cores 16 to 3 covering the interval from 7630 to 8189 feet are assigned to the *L. balmei* zone. Spore-pollen from nearly all of the samples are poorly preserved, especially those from cores below 8000 feet, in which the surface features of many specimens have been destroyed because of imbedment by minute pyrite crystals. Consequently, specific and in some examples, even generic identifications are uncertain. The identification of the key species such as *Lygistepollenites balmei, Polycolpites longstonii* and *Tetracolporites textus*, however, are firm and reliable.

Dinoflagellate specimens are fairly common at 7630 and 7796 feet, and in each sample a single species is represented. At 7796 feet, the specimens are of the short spined variety of *Wetzeliella homomorpha*, whereas at 7630 feet they are of the same as the *Deflandrea sp.* in the Lower *M. diversus* zone. Rare microplankton are also present in assemblages from 8107 and 8184 feet.

Spore-pollen identified from the *L. balmei* zone are:

Dilwynites granulatus
Haloragacidites harrisii
Lygistepollenites balmei
Malvacipollis diversus
Nothofagidites emarcidus
N. flemingii
Periporopollenites polyoratus
Phyllocladidites mawsonii
P. reticulosaccatus
Polycolpites langstonii
Proteacidites adenanthoides
P. annularis
P. grandis
P. parvus
Simplicepollis meridianus
Tetracolporites textus
Tricolpites gillii
T. phillipsii

Misplaced Samples

Sidewall core 22: This sample is reportedly from a depth of 6956 feet which on log character places it in the post-Latrobe part of the section (Oligocene Lakes Entrance Formation). However, a more or less typical Latrobe Lower *M. diversus* (Early Eocene) spore-pollen assemblage was obtained rom the core. Additionally, the associated microplankton indicate an Early Eocene age for the assemblage. Based on palynological evidence, the sample is definitely out-of-place.

Sidewall core 20: The residue from this core supposedly from 7340 feet consists of carbonized debris and abundant plant tissue with the latter represented principally by cuticular material. Palynomorphs are very rare and not well preserved so that specific attribution is impossible for most of the Proteaceous pollen. Nearly all of the dinoflagellate specimens are incomplete. Comparison of the general nature and preservational condition of the residue with others from Kingfish-4 samples indicates that sidewall 20 is from the *L. balmei* interval. Single specimen occurrence of *Polycolpites langstonii* and *Lygistepollenites balmei* reinforce this interpretation.

CONCLUSIONS

The Latrobe section between 7408 and 8198 feet in Kingfish-4 contains palynomorph assemblages indicative of the Early Eocene Upper and Lower *M. diversus* zones and the Paleocene *L. balmei* zone. Dinoflagellates are much less numerous than spore-pollen and occur throughout the *M. diversus* zones and sporadically in the *L. balmei* zone. Spore-pollen diversity is relatively low, which in all probability reflects the generally fair to poor preservation of most assemblages. However, the overall character of the palynomorphs is not dissimilar from other assemblages recovered from the Kingfish area.

SAMPLES STUDIED

Sample and Depth	Zone	Comment
SWC 22 6956'	Lower *M. diversus*	Misplaced
SWC 20 7340'	*L. balmei*	Misplaced
SWC 18 7408'	Upper *M. diversus*	Mainly dinoflagellates
SWC 17 7413'	Upper *M. diversus*	Very sparse assemblage
Core 2 7424'	Lower *M. diversus*	Sparse dinoflagellates
Core 3 7459'	Indeterminate	
Core 4 7478'	Lower *M. diversus*	Rare dinoflagellates
Core 5 7521.5'	Lower *M. diversus*	Rare dinoflagellates
Core 6 7545.5'	Lower *M. diversus*	Rare dinoflagellates
Core 8 7602.5'	Lower *M. diversus*	Rare dinoflagellates
Core 9 7616'	Lower *M. diversus*	Rare dinoflagellates
SWC 16 7630'	*L. balmei*	Frequent dinoflagellates
SWC 14 7796'	*L. balmei*	Frequent dinoflagellates
SWC 13 7810'	Indeterminate	Barren
SWC 12 7840'	*L. balmei*	
SWC 11 7870'	Indeterminate	No zone species
SWC 10 7880'	*L. balmei*	
SWC 9 7928'	Indeterminate	No zone species
SWC 8 7965'	*L. balmei*	
SWC 6 8107'	*L. balmei*	Rare dinoflagellates
SWC 4 8184'	*L. balmei*	Rare dinoflagellates
SWC 3 8198'	*L. balmei*	
SWC 2 8217'	Indeterminate	No zone species

BASIN Gippsland DATE January 1974

WELL NAME Kingfish-4 ELEVATION +32'(KB), +31'(DF)

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
OLIGO-MIOC.	T. bellus										
	P. tuberculatus										
EOCENE	U. N. asperus										
	L. N. asperus										
	P. asperopolus										
	U. M. diversus	7408	2				7413	2			
	L. M. diversus	7421	1				7616	1			
PALEO-CENE	L. balmei	7630	1				8198	1			
	T. longus										
LATE CRETACEOUS	T. lilliei										
	N. senectus										
	C. trip./T.pach.										
	C. distocarin.										
	T. pannosus										
EARLY CRETACEOUS	C. paradoxa										
	C. striatus										
	U. C. hughesii										
	L. C. hughesii										
	C. stylosus										
Pre-Cretaceous											

COMMENTS: *L. balmei* assemblages below 8000' very poorly preserved; those from 7800' to 8000' with low species diversity.

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 DATE January 1974

DATA REVISED BY: _____ DATE _____

BASIN GIPPSLAND DATE

WELL NAME KINGFISH - 4 ELEVATION +32 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
OLIGO-MIOCENE	P. tuberculatus										
EOCENE	U. N. asperus										
	M. N. asperus										
	L. N. asperus										
	P. asperopolus										
	U. M. diversus	7408	2				7413	2			
	M. M. diversus										
	L. M. diversus	7421.	1				7616	1			
PALEOCENE	U. L. balmei	~~7430~~ 7630	1				8198	2			
	L. L. balmei										
	T. longus										
LATE CRETACEOUS	T. lilliei										
	N. senectus										
	C. trip./T.pach.										
	C. distocarin.										
	T. pannosus										
EARLY CRETACEOUS											
PRE-CRETACEOUS											

COMMENTS: Wetz. homomorpha Dinoflagellate Zone occurs at 7796' to 8184'

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: L.E.S. DATE Jan. 1974.

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

FORM No R 315 12/72

PE601441

This is an enclosure indicator page.
The enclosure PE601441 is enclosed within the container PE902324 at this location in this document.

The enclosure PE601441 has the following characteristics:

ITEM_BARCODE	= PE601441
CONTAINER_BARCODE	= PE902324
NAME	= Well Completion Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= COMPLETION_LOG
DESCRIPTION	= Well Completion Log (plate 3 of WCR) for Kingfish-4
REMARKS	=
DATE_CREATED	= 15/11/1973
DATE_RECEIVED	=
W_NO	= W675
WELL_NAME	= Kingfish-4
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902325

This is an enclosure indicator page.
The enclosure PE902325 is enclosed within the container PE902324 at this location in this document.

The enclosure PE902325 has the following characteristics:

ITEM_BARCODE	= PE902325
CONTAINER_BARCODE	= PE902324
NAME	= Kingfish Field Structure Cross Section
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= CROSS_SECTION
DESCRIPTION	= Kingfish Field Structure Cross Section, plate 2 of WCR
REMARKS	=
DATE_CREATED	= 31/01/1974
DATE_RECEIVED	=
W_NO	= W675
WELL_NAME	= Kingfish-4
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902326

This is an enclosure indicator page.
The enclosure PE902326 is enclosed within the container PE902324 at this location in this document.

The enclosure PE902326 has the following characteristics:

ITEM_BARCODE	= PE902326
CONTAINER_BARCODE	= PE902324
NAME	= Structure Map Top of M-1 Reservoit Post Kingfish 4 Low Cycle
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= SEISMIC
SUBTYPE	= HRZN_CONTR_MAP
DESCRIPTION	= Structure Map Top of M-1 Reservoir Post Kingfish 4 Low Cycle, plate 1 of WCR
REMARKS	=
DATE_CREATED	= 31/01/1974
DATE_RECEIVED	=
W_NO	= W675
WELL_NAME	= Kingfish-4
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE906033

This is an enclosure indicator page.
The enclosure PE906033 is enclosed within the container PE902324 at this location in this document.

The enclosure PE906033 has the following characteristics:

ITEM_BARCODE	PE906033
CONTAINER_BARCODE	PE902324
NAME	Time-Depth Curve
BASIN	GIPPSLAND
PERMIT	VIC/L7
TYPE	WELL
SUBTYPE	VELOCITY_CHART
DESCRIPTION	Time-Depth Curve for Kingfish-4 (plate 4 in WCR)
REMARKS	
DATE_CREATED	13/11/1973
DATE_RECEIVED	
W_NO	W675
WELL_NAME	KINGFISH-4
CONTRACTOR	
CLIENT_OP_CO	ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603379

This is an enclosure indicator page.
The enclosure PE603379 is enclosed within the container PE902324 at this location in this document.

The enclosure PE603379 has the following characteristics:

ITEM_BARCODE	= PE603379
CONTAINER_BARCODE	= PE902324
NAME	= Hydrocarbon Analysis Log (Mud Log)
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Hydrocarbon Analysis log (Mud Log) containing drilling rate lithology and cuttings analysis, plate 5 for Kingfish-4 (W675)
REMARKS	=
DATE_CREATED	= 10/11/1973
DATE_RECEIVED	=
W_NO	= W675
WELL_NAME	= KINGFISH-4
CONTRACTOR	= BAROID
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906035

This is an enclosure indicator page.
The enclosure PE906035 is enclosed within the container PE902324 at this location in this document.

The enclosure PE906035 has the following characteristics:

ITEM_BARCODE	= PE906035
CONTAINER_BARCODE	= PE902324
NAME	= Drilling Rate and Gas Content
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= MONTAGE
DESCRIPTION	= ADT Log containing drilling rate total gas and shale density for Kingfish-4
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W675
WELL_NAME	= KINGFISH-4
CONTRACTOR	= BAROID
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906034

This is an enclosure indicator page.
The enclosure PE906034 is enclosed within the container PE902324 at this location in this document.

The enclosure PE906034 has the following characteristics:

ITEM_BARCODE	= PE906034
CONTAINER_BARCODE	= PE902324
NAME	= Formation Tester Report
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= FIT
DESCRIPTION	= Formation Tester and Recovery Report and data (plate 6 of WCR) for Kingfish-4
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W675
WELL_NAME	= KINGFISH-4
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)