

DEPT. NAT. RES & ENV



PE902302

WELL COMPLETION REPORT

KINGFISH - 5

ESSO AUSTRALIA LTD.

June, 1974

WELL COMPLETION REPORT

KINGFISH-5

C.H. FORD,
JULY, 1974.

WELL COMPLETION REPORT

KINGFISH-5

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COMPLETION REPORT

I WELL DATA RECORD

Date JUNE 17, 1974.

LOCATION

WELL NAME KINGFISH-5	STATE VIC. OFFSHORE	PERMIT or LICENCE VIC L/7	GEOLOGICAL BASIN GIPPSLAND	FIELD KINGFISH
CO-ORDINATES Lat. Long. X Y Surface 38°34'45.210"S 608,145 5,729,170 Bottom Hole 148°14'29.616"E		MAP PROJECTION AMG ZONE 55	GEOGRAPHICAL DESCRIPTION 2.2 MILES NE KINGFISH-1 2.5 MILES SW BONITA-1A	
<u>ELEVATIONS & DEPTHS</u>				
ELEVATIONS Ground KB 32' RT Braden Head Top Deck Platform	WATER DEPTH 259' RING BACK DEPTH 350'	TOTAL DEPTH M.D. 8240' T.V.D. REASONS FOR P.B. ABANDONMENT	Avg.Angle STRAIGHT HOLE	
<u>MOVEMENT</u>				
MOVE IN MAY 15, 1974	RIG UP MAY 16, 1974	SPUDDED MAY 16, 1974.		
RIG DOWN COMPLETE JUNE 4, 1974	RIG RELEASED JUNE 5, 1974	PROD.UNIT - Start Rigging Up		
PROD.UNIT - Rig Down Complete		I.P. ESTABLISHED		
<u>MISCELLANEOUS</u>				
OPERATOR ESSO AUSTRALIA LTD.,	PERMITTEE or LICENCEE HEMATITE	ESSO INTEREST 50%	OTHER INTEREST 50% HEMATITE	
CONTRACTOR GLOBAL MARINE A/ASIA PTY.LTD	RIG NAME GLOMAR CONCEPTION	EQUIPMENT TYPE FLOATING DRILLING VESSEL		
TOTAL RIG DAYS 20.42	DRILLING AFE NO. 234-103	COMPLETION NO.	TYPE COMPLETION	
LAHEE WELL	Before Drilling	FIELD OUTPOST		
CLASSIFICATION	After Drilling	UNSUCCESSFUL OUTPOST		

Geologist

IV CASING - LINER - TUBING RECORD							
Type	Size	Weight	Grade	Thread	No. Joints	Amount	Depth
KB ELEVATION ABOVE CASING HEAD						282.00	282.00
	24" PILE JOINT					36.72	318.72
	20"	91.5#	X-52LP	CC X JV	1 joint	22.60	341.32
	20"	91.5#	X-52LP	JV	9 joints plus casing shoe	345.70	687.02
KB ELEVATION ABOVE HANGER							
	10-3/4"	40.5#	J-55	Butt	61 joints	2476.58	2764.58
	10-3/4"	40.5#	J-55	Butt	1 joint + float shoe & collar	46.00	2810.58

V CEMENT RECORD			
String	20"	10-3/4"	
Type of Cement	750 sx Aust N + 350 sx Aust N + 2% CaCl ₂	550 sx Aust N + 1% CaCl ₂	
Number of FT ³	1298	649	
Average weight of slurry	15.6 ppg	15.6 ppg	
Cement Top	sea floor	1399 (calc)	
Casing Tested with	—	1500 psi	
Number of Centralizers	7	10	
Number of Scratchers	—	—	
Stage Collar etc.	—	—	
Remarks	—	Formation tested to 14.0 ppg equipment	

WALTERS

 Engineer

WELL KINGFISH-5

VII SAMPLES, CONVENTIONAL CORES, SW CORES					
INTERVAL	TYPE	RECOVERED	INTERVAL	TYPE	RECOVERED
750-4650, 4710-5040	5 sets washed & dried samples & 1 sack unwashed cuttings	Every 30 feet	8193-4500	30 SWC's	26
4650-4710, 5040-6000, 6420-6440, 6640-6660, 7150-7170, 7660-8240	do	Every 20 feet	NO CONVENTIONAL CORES CUT		
6000-6420, 6440-6640, 6660-7100, 7170-7660	do	Every 10 feet			
4230-4389, 7100-7140		No cuttings recovered			
750-8240	Canned cuttings	Every 100 ft			

VIII WIRELINE LOGS AND SURVEYS (Incl. FIT)					
Type & Scale	From	To	Type & Scale	From	To
BHCS/GR 2" & 5"	2890-689	BHCS			
	2890-291	GR			
ISF/Sonic 2" & 5"	8244-2746				
CNT/FDC/GR/Cal 2"&5"	8244-2746				
HDT 10" = 100'	8244-7400				
Velocity Survey, 11 levels	8119-3210				
F.I.T. 1	7845				

Geologist

IX	FORMATION TOPS/Zones :					REMARKS	
	NAME	Tops		Gross: Interval (ft)	Net Pay (ft).		
		M.D.	Sub-sea		Gas		Oil
GIPPSLAND FM. (Recent to Miocene)	291	-259	5735				
LAKES ENTRANCE FMN	6026	-5994	1607				
GURNARD FM	7633	-7601	7				
LATROBE "COARSE CLASTICS"	7640	-7608	600+				
Mid <u>M. diversus</u> unconformity	7788	-7756					

X GEOLOGIC ANALYSIS (Pre Drilling prognosis vs actual results)

PRE-DRILL

Kingfish-5 was drilled on the basis of interpretation of the G73A seismic survey. A high velocity trend associated with the Miocene channels was extended over the Kingfish Field area rather than to the north of the structure. Thus, a north-east extension of the Kingfish Field was proposed. The area above the present oil-water contact (-7566') was increased, with the nose terminating at a major NW-SE trending fault, downthrown to the northeast.

It was anticipated that Kingfish-5 would intersect the high quality reservoir sands above the mid-M. diversus unconformity (as found in Mackerel-4, Bonita-1A and Kingfish-1) with some 190'± gross oil column.

POST DRILL

Kingfish-5 penetrated the top of the Latrobe Group at -7601', 221' low to prediction and 35' below the oil-water contact of the Kingfish Field. Lithological predictions were correct, with 141' of good reservoir sand being encountered between the top of the Latrobe and the Mid-M. diversus unconformity. While the high velocity trend associated with the Miocene channel was recognised, the inferred interval velocity for this section used in the pre-drill interpretation was too low. This variation in velocity resulted in an apparent Latrobe top surface that was too high. Despite the failure of Kingfish-5 to intersect oil-bearing sands, it did establish that the top of Latrobe is 200' higher than previously mapped. These results, combined with revised velocities, have been used to produce the new structure map for the top of the Latrobe for East Kingfish (Plate I). This map shows a significant extension of the Kingfish Field to the northeast.

C.H. FORD

Geologist

WELL COMPLETION REPORT

KINGFISH-5

APPENDIX 1

SSAMPLE DESCRIPTIONS

KINGFISH-5

DEPTH	%	DESCRIPTION
		20" casing to 686' 26" hole to 750'
750-780	90 10	Cement cavings Fossil fragments - forams, bryocoa, gastropods etc.
780-8100	70 30	Cement Fossil fragments, medium to coarse grained.
810-840	60 40	Cement Fossil fragments
840-870	50 50	Cement Fossils - forams - Elphidium, mostly bryozoa
870-900	40 60	Cement Fossils
900-930	30 70	Cement Fossils
930-960	30 70	Cement Fossils, as above with platy translucent aragonite (?) fossil remnants.
960-990	30 70	Cement Fossils, as above.
990-1020	20 80	Cement Fossils, as above, Elphidium, type forams, some well preserved bivalves.
1020-1050	10 90	Cement Fossils, mainly bryozoa, a few gastropod bivalves, and Elphidium forams, mainly white, some medium grey, some platy aragonite.
1050-1080	10 90	Cement Fossils - as above.
1080-1110	10 90	Cement Fossils, as above some textularid types.
1110-1140	10 90	Cement Fossils, as above, an occasional miliolines
1140-1170	20 80	Cement Fossils. Trace quartz, medium grained to well rounded.
1170-1200	20 80	Cement Fossils, fragments bryozoa etc and grey slightly calcareous altered fossil fragments.
1200-1230	10 90	Cement Fossils - as above.
1230-1260		As above
1260-1290	20 80	Cement Fossils, as above with abundant fine grained, subrounded to rounded quartz grains.
1290-1320	10 90	Cement cavings Fossil Fragments, forams, gastropods, brachiopods, etc and grey limestone replacing fragments.
1320-1350	40 60	Fossil fragments, as above, trace cement cavings. Very fine grained, light grey, non calcareous grains with some quartz

DEPTH	%	SAMPLE DESCRIPTION
1350-1380	50	Fossil fragments as above
	50	Calcilutite - Calcarenite, white coloured with some dark inclusions. Trace cement.
1380-1410	50	Fossils, as above.
	50	Calcilutite - calcarenite, as above. Trace quartz, well rounded clean, medium grained.
1410-1440	50	Fossils, as above.
	50	Calcilutite - calcarenite, as above
1440-1470	50	Fossils as above, rare ostracod.
	50	Calcilutite - calcarenite, as above
1470-1500		Fossils as above, with abundant cement cavings.
1500-1530		Fossils as above.
1530-1560		Fossils as above
1560-1590		Fossil fragments as above - cement caving still abundant
1590-1620	40	Fossils as above
	40	Calcilutite - calcarenite, as above
	20	Cement
1620-1650	30	Cement
	35	Fossils as above
	35	Calcilutite - calcarenite, as above.
1650-1680	35	Fossils, as above
	35	Calcilutite-calcarenite
	30	Cement
1680-1710	20	Cement
	40	Fossils, bryozoa dominant
	40	Calcilutite - calcarenite, white to grey.
1710-1740	20	Cement
	40	Fossils - as above
	40	Calcilutite - Calcarenite, as above
1740-1770	10	Cement
	60	Fossils, as above, mainly bryozoa
	30	Calcilutite - Calcarenite, as above
1770-1800	90	Fossils - as above, with abundant cement
	10	Calcarenite, as above, white to light grey, dark inclusions.
1800-1830	80	Fossil fragments - as above, trace cement.
	20	Calcarenite - as above
1830-1860		As above, abundant bryozoa.
1860-1890	60	Fossil, as above, trace cement.
	40	Calcarenite, white to light grey, with dark and black inclusions, moderate reaction to acid?
1890-1920	90	Fossil fragments.
	10	Calcarenite.
1920-1950	30	Fossil fragments.
	70	Calcarenite
1950-1980	50	Fossil Fragments as above
	50	Calcarenite, as above.
1980-2010	70	Fossil fragments, bryozoa dominant.
	20	Calcarenite

DEPTH	%	SAMPLE DESCRIPTION
1980-2010 continued		Trace quartz, well rounded, clear, medium grained.
2010-2040	50 50	Fossil fragments, as above. Calcarenite, as above.
2040-2070	40 60	Calcarenite, as above Fossil fragments, as above.
2070-2100	80 20	Fossil fragments, trace cement. Calcarenite.
2100-2130	80 20	Fossil fragments, trace cement Calcarenite.
2130-2160	60 40	Fossil fragments, bryozoa, gastropods etc. trace cement Calcarenite
2160-2190	50 50	Fossil fragments, as above with trace cement Calcarenite, light grey, moderate reaction to acid, dark inclusions, silty. Trace <u>marl</u> ; light grey, very soft
2190-2220	60 40	Fossil Calcarenite
2220-2250	50 50	Fossil Calcarenite. Trace marl.
2250-2280	70 30	Fossil Calcarenite
2280-2310		As above
2310-2340		As above
2340-2370	60 40	Fossil, as above with large number of platy cleavage fragments. Calcarenite, light grey, few dark inclusions. Trace cement cavings.
2370-2400		As above
2400-2430	40 60	Fossil Calcarenite, as above, very silty.
2430-2460	A	As above.
2460-2490		As above, abundant bryozoa.
2490-2520		As above
2520-2550		Fossil fragments and cement cavings - connection.
2550-2580	10 90	Fossil fragments, bryozoa, gastropods. Calcarenite, light grey, few inclusions, silty. Trace cement.
2580-2610		As above
2610-2640	20 80	Fossils, as above, with cement cavings Calcarenite, as above, very silty.
2640-2670		As above with trace glauconitic calcareous grains.
2670-2700		As above, calcarenite has large non calcareous part (light grey, silty).
2700-2730	10	Fossils as above with some subrounded to rounded clear and frosted

DEPTH	%	SAMPLE DESCRIPTION
2700-2730 continued	90	fine to medium grained, quartz grains. Calcilutite, calcarenite, light grey to grey, silty, some dark inclusions. Some glauconitic grains.
2730-2760	10	Fossils, as above.
	90	Calcilutite/Calcarenite, as above, with quartz grains as above and trace very soft brown mud.
2760-2790		As above.
2790-2820	10	Fossil fragments, bivalve, bryozoa, gastropod etc.
	90	Calcilutite/Calcarenite - as above, with subangular quartz grains.
		POH to run logs and set casing. 10-3/4" casing set at 2811'.
2820-2850	40	Fossils - bryozoa, bivalves.
	60	Cement
2850-2880	40	Fossil fragments, bryozoa, foraminifera, dolomitic in part.
	60	Cement
2880-2910	20	Fossil fragments, bryozoa, forams, bivalves, dolomitic in part.
	80	Cement.
2910-2940	10	Fossil fragments, as above
	90	Cement
2940-2970	20	Fossil fragments, as above
	80	Cement
2970-3000	10	Fossil fragments, as above
	90	Cement
3000-3030	10	Fossil fragments, as above.
	20	<u>Marl</u> , light grey, very soft, calcareous and some brown very soft mud.
	70	Cement cavings.
3030-3060	10	Fossil
	10	<u>Marl</u>
	80	Cement
3060-3090	10	Fossil
	20	<u>Marl</u>
	70	Cement
3090-3120		As above
3120-3150		As above
3150-3180		As above, marl, glauconitic in places
3180-3210	10	Fossil fragments.
	30	<u>Marl</u> , light grey, very soft, glauconitic in places and trace brown mud.
	60	Cement
3210-2340	10	Fossil Fragments
	30	Marl, light grey, silty, very soft, glauconitic, carbonaceous.
	10	Light grey, moderately firm, glauconitic micrite.
	50	Cement
3240-3270	10	Fossils
	20	Marl,
	20	Micrite
	50	Cement

DEPTH	%	SAMPLE DESCRIPTION
3270-3300	20	Fossil fragments, bryozoa etc.
	40	Micrite, moderately soft to moderately firm, glauconitic, light grey. Some soft marl, few subrounded, fine to medium grained clear quartz.
	40	Cement
3300-3330	10	Fossil Fragments, bryozoa, foraminifera, different type? Anphistegina.
	30	Micrite as above
	10	<u>Marl</u> , as above
	50	Cement
3330-3360	10	Fossil Fragments, as above
	40	Micrite, as above.
	10	<u>Marl</u> , as above
	40	Cement
3360-3390	60	Micrite, moderately firm, light grey, glauconitic in part.
	40	Cement
		Trace <u>Marl</u> , very soft, light grey
		Trace fossil fragments, bryozoa, forams.
		Trace chert, light grey, hard, has white inclusions? a flint nodule in part.
3400-3420	10	Fossil and <u>marl</u>
	90	Cement, connection just before.
3420-3450		As above
3450-3480		As above
3480-3510	20	<u>Marl</u> as above
	20	Sandstone, subangular, fine to medium grained quartz, trace feldspar (microcline).
	60	Cement
3510-3540	10	<u>Marl</u> , light grey, soft.
	40	Micrite, light grey, fine grained, calcareous, moderately hard, glauconitic
	50	Cement, trace quartz, trace fossil fragments
3540-3570	10	<u>Marl</u> as above
	40	Micrite
	50	Cement. Trace fossil fragments
3570-3600	10	<u>Marl</u> , as above
	60	Micrite as above
	30	Cement, as above
		Trace quartz
		Trace fossil fragments
3600-3630	10	<u>Marl</u> as above
	70	Micrite, as above
	20	Cement
3630-3660	10	<u>Marl</u> , as above
	80	Micrite, as above, silty in part
	10	Cement
3660-3690	10	<u>Marl</u> , as above
	90	Micrite, as above, becoming very silty in part
		Trace cement
3690-3720	10	<u>Marl</u> , as above
	90	Micrite as above, very silty
		POH at 3727' - WASHOUT
3720-3750	10	<u>Marl</u> , as above
	60	<u>Siltstone</u> , light grey, moderately hard, calcareous, glauconitic, fine grained
	30	Micrite, light grey, soft to moderately hard, very calcareous, glauconitic, fine grained.
		Trace fossil fragments

DEPTH	%	SAMPLE DESCRIPTION
3750-3780	Trace	Marl as above
	10	<u>Sandstone</u> , very fine grained, glauconitic, light grey to white, hard, calcareous.
	70	<u>Siltstone</u> , as above
	20	Micrite
3780-3810	10	Cement, trace fossil fragments, bryozoa forams.
	30	<u>Sandstone</u> , very fine grained, glauconitic, calcareous, quartzose, light grey to white.
	50	<u>Siltstone</u> , fine grained, glauconitic, medium grey, calcareous, hard.
	10	Micrite, soft to hard, very calcareous, glauconitic, medium grey.
3810-3840	10	<u>Marl</u> , very soft, light grey, calcareous, glauconitic
	20	<u>Sandstone</u> , as above
	60	<u>Siltstone</u> , as above
	10	Micrite, as above, trace fossil fragments, bryozoa, forams.
3840-3870	30	<u>Marl</u> , as above
	10	<u>Sandstone</u> , as above
	60	<u>Siltstone</u> , as above
		Trace Micrite, as above
3870-3900	40	<u>Marl</u> , as above
	60	<u>Siltstone</u> , as above
3900-3930		As above with trace fossils and hard, grey <u>limestone</u>
3930-3960	20	<u>Marl</u> , light grey, very soft.
	80	<u>Siltstone</u> , grey, moderately hard
3960-3990	20	<u>Marl</u> , probably more marl but washed away
	80	<u>Siltstone</u>
3990-4020		As above with trace fossils
4020-4050		As above
4050-4080	10	<u>Marl</u> , light grey, very soft, silty
	90	<u>Siltstone</u> , as above, becoming fissile
		Trace fossils
4080-4110	40	Fossil fragments, bryozoa, echinoid? forams.
	60	<u>Siltstone</u>
		Traces fine to medium grained, subrounded quartz and marl
4110-4140	10	<u>Sandstone</u> , subangular to subrounded quartz, medium grained
	10	<u>Marl</u> , as above
	30	<u>Fossil fragments</u>
	50	<u>Siltstone</u>
		Trace dark grey hard <u>limestone</u>
4140-4170	20	<u>Marl</u> , light grey, very soft.
	80	<u>Siltstone</u> , grey, calcareous, moderately hard, carbonaceous.
		Trace quartz, fossils
4170-4200		Trace fossils
	80	<u>Siltstone</u> , as above, glauconitic, becoming fissile at times, some soft soft light grey <u>marl</u>
	20	Cement
4200 -4230	100	<u>Siltstone</u> , calcareous, soft, medium grey, some light grey <u>marl</u> , very friable
		NO SAMPLES TO 4389'.
		Representative sample of interval: <u>Siltstone</u> , some glauconite, carbonaceous occasional hint of layering, calcareous, medium grey, moderately hard, some fossils, and hard, buff coloured <u>limestone</u> .
		POH @ 4389' to check string and new bit.

DEPTH	%	DESCRIPTION
-4390	100	<u>Siltstone</u> , calcareous, glauconitic, medium grey, moderately hard Trace fossil fragments Trace cement
4390-4410	100	<u>Siltstone</u> , as above, fissile in places, some medium grained quartz. Trace quartz, angular to coarse Trace fossil fragments
4410-4440	10 90	<u>Marl</u> , light grey, glauconitic, very soft <u>Siltstone</u> , as above, medium grey Trace fossil fragments
4440-4470	10 90	<u>Marl</u> as above <u>Siltstone</u> , light grey to medium grey, fissile, some layering? due to glauconite.
4470-4500	100	<u>Siltstone</u> , as above Trace <u>Marl</u> , very glauconitic, as above Trace quartz, medium to coarse, clear, angular, friable in part.

TWIST OFF AT 4516' --- POH

DEPTH	%	SAMPLE DESCRIPTION
4500-4530	100	<u>Limestone</u> , micritic, light brown, very fine to sandy, trace angular, clear, coarse grained quartz, fossil fragments
4530-4560	100	<u>Limestone</u> , micritic, light brown to light grey, trace interlaminated <u>sandstone</u> , very fine, subrounded to rounded, quartzose
4560-4590	100	<u>Limestone</u> , micritic, light brown to light grey, interlaminated <u>sandstone</u> very fine as above.
4590-4620	100	Micritic <u>Limestone</u> , silty, as above
4620-4650	100	Micritic <u>Siltstone</u> , light brown to light grey, fairly soft. Trace foram, coarse quartz.
4650-4670	100	Micritic <u>siltstone</u> , light brown to light grey, fairly soft, trace fossil, coarse quartz. WOW for 32 hrs.
4670-4690	100	<u>Micrite</u> - calcareous <u>Siltstone</u> , light brown to light grey, as above Trace <u>siltstone</u> , brown, <u>Coal</u> .
4690-4710	100	<u>Micrite</u> - calcareous <u>siltstone</u> , as above, carbonaceous. Trace light grey-green, very soft <u>sandstone</u> lithic, angular, very calcareous
4710-4740	70 30	Calcareous <u>siltstone</u> - <u>micrite</u> , as above, medium hard to soft, <u>Silty mudstone</u> , light grey, calcareous, very soft, similar composition as siltstone above only increased amount of kaolin matrix.
4740-4770	90 10	<u>Siltstone</u> , light brown to light grey, very calcareous, moderately hard, trace interlaminated <u>sandstone</u> , very fine, subrounded to rounded, quartzose. <u>Mudstone</u> , light grey, very calcareous, very soft.
4770-4800	90 10	<u>Siltstone</u> , light brown - light grey, very calcareous, as above <u>Mudstone</u> , light grey, very calcareous, soft, as above
4800-4830	80 20	<u>Siltstone</u> , light brown - light grey, calcareous, moderately hard, as above <u>Mudstone</u> , light grey, very calcareous, soft, as above
4830-4860	80 20	<u>Siltstone</u> , light brown to light grey, calcareous, moderately hard, as above. <u>Mudstone</u> , light grey, very calcareous, soft, as above.
4860-4890	80 20	<u>Siltstone</u> , light brown to light grey, calcareous, moderately hard, as above <u>Mudstone</u> , light grey, very calcareous, very soft, as above.
4890-4920	80 20	<u>Siltstone</u> , calcareous, as above. <u>Mudstone</u> , calcareous, as above.
4920-4950	80 20	<u>Siltstone</u> , calcareous, as above. <u>Mudstone</u> , calcareous, as above.
4950-4980	90 10	<u>Siltstone</u> , calcareous, as above <u>Mudstone</u> , calcareous, as above.
4980-5010	100	<u>Siltstone</u> , calcareous, light brown to mid grey, hard, as above
5010-5040	100	<u>Siltstone</u> , calcareous, light brown to mid grey, hard, as above
5040-5060	90 10	<u>Siltstone</u> , calcareous, light brown to mid grey, hard as above, fossiliferous <u>Mudstone</u> , calcareous, light grey, as above
5060-5080	90 10	<u>Siltstone</u> , calcareous, light brown to mid grey, as above. <u>Mudstone</u> , calcareous, light grey, as above
5080-5100	90 10	<u>Siltstone</u> , calcareous, light brown to medium grey, hard, as above <u>Mudstone</u> , calcareous, light grey, as above

DEPTH	%	SAMPLE DESCRIPTION
		5115' POH N.B. HTC XDG
5115	90	<u>Siltstone</u> , calcareous, light brown to medium grey. moderately hard as above
	10	<u>Mudstone</u> , calcareous, light grey, as above.
5115-5120	90	<u>Siltstone</u> , calcareous, light brown-medium grey, moderately hard, carbonaceous, as above
	10	<u>Mudstone</u> , calcareous, light grey, carbonaceous as above
5120-5140	90	<u>Siltstone</u> , calcareous, light brown to medium grained, moderately hard as above.
	10	<u>Mudstone</u> , silty, calcareous, light grey as above.
5140-5160	95	<u>Siltstone</u> , calcareous, light brown-medium grey as above
	5	<u>Mudstone</u> , calcareous light grey, as above.
5160-5180	90	<u>Siltstone</u> , calcareous light brown to medium grey, moderately hard Carbonaceous, as above.
	10	<u>Mudstone</u> , silty, calcareous, light grey as above
5180-5200	90	<u>Siltstone</u> , calcareous, as above
	10	<u>Mudstone</u> , silty, as above
5200-5220	90	<u>Siltstone</u> , calcareous, light brown as above.
	10	<u>Mudstone</u> , shale, silty, calcareous, light grey, laminated, as above
5220-5240	90	<u>Siltstone</u> , light brown to medium grey, as above
	10	<u>Mudstone</u> , shale, silty, calcareous, light grey, laminated, as above
5240-5260	90	<u>Siltstone</u> , calcareous, light brown to medium grey, moderately hard, carbonaceous, as above
	10	<u>Mudstone-Shale</u> , silty, calcareous, very soft, laminated, as above
5260-5280	95	<u>Siltstone</u> , calcareous, light brown to medium grey, moderately hard, carbonaceous. Trace <u>Coal</u>
	5	<u>Mudstone-Shale</u> silty, calcareous, very soft, laminated, as above
5280-5300	90	<u>Siltstone</u> , calcareous, light brown to medium grey, moderately hard, carbonaceous
	10	<u>Mudstone to Siltstone</u> , calcareous, very soft, as above
5300-5320	90	<u>Siltstone</u> , calcareous, light brown to medium grey, moderately hard, carbonaceous
	10	<u>Mudstone to Siltstone</u> , calcareous, soft, as above
5320-5340	90	<u>Siltstone</u> , light brown to medium grey, calcareous, moderately hard, slightly carbonaceous, as above
	10	<u>Mudstone</u> , light grey, calcareous, soft, as above
5356		WOW 60hrs. 30 mins. on bottom 14.05. 28-5-74
5340-5360	100	<u>Siltstone</u> , light brown to medium grey, calcareous, moderately hard, as above
5360-5380	80	<u>Siltstone</u> , light brown to medium grey, calcareous, moderately hard, carbonaceous, as above
	20	<u>Mudstone</u> , light grey, silty, calcareous, soft
5380-5400	90	<u>Siltstone</u> , light brown to medium grey, calcareous, moderately hard, carbonaceous, as above
	10	<u>Mudstone</u> , light grey, silty, soft, calcareous
5400-5420	90	<u>Siltstone</u> , light brown to medium grey, calcareous, soft-moderately hard, carbonaceous, as above
	10	<u>Mudstone to Siltstone</u> , light grey, calcareous, soft

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DEPTH	%	SAMPLE DESCRIPTION
5420-5440	80	<u>Siltstone</u> , light brown to grey, calcareous, moderately hard, small bit of carbon & no cut.
	20	<u>Mudstone</u> , light grey, calcareous, very soft, no cut, small foraminifera (Traces) unichambered, calcareous
5440-5460	100	<u>Siltstone</u> , light brown to medium grey, calcareous, moderately hard to moderately soft, slightly carbonaceous
5460-5480	100	<u>Siltstone</u> , as above
5480-5500	100	<u>Siltstone</u> , as above
5500-5520	100	<u>Siltstone</u> , as above, slightly increasingly carbonaceous content
5520-5540	100	<u>Siltstone</u> , brown to medium grey, calcareous, moderately hard, slightly carbonaceous
5540-5560	100	<u>Siltstone</u> , as above
5560-5580	90	<u>Siltstone</u> , as above
	10	<u>Mudstone</u> , light grey, calcareous, soft, as above
5580-5600	80	<u>Siltstone</u> , as above
	20	<u>Mudstone</u> , light grey, as above
5600-5620	80	<u>Siltstone</u> , as above
	20	<u>Mudstone</u> , as above
5620-5640	70	<u>Siltstone</u> , as above
	30	<u>Mudstone</u> , as above
5640-5660	80	<u>Siltstone</u> , moderately hard, as above
	20	<u>Mudstone</u> , grey to calcareous, soft, as above
5660-5680	90	<u>Siltstone</u> , grey to brown, as above
	10	<u>Mudstone</u> , as above
5680-5700	100	<u>Siltstone</u> , light brown to light grey, calcareous. Trace carbonaceous moderately soft to moderately hard, lithic Trace <u>Mudstone</u> , light grey, very soft, calcareous, kaolinitic
5700-5720	100	<u>Siltstone</u> , light brown to light grey, as above with carbonaceous fragments Trace <u>Mudstone</u> , light grey, very soft, calcareous
5720-5740	100	<u>Siltstone</u> , light brown to light grey, as above Trace <u>Mudstone</u> , as above
5740-5760	100	<u>Siltstone</u> , light brown to light grey increasingly light grey, calcareous, light brown, moderately hard, light grey moderately soft. Trace carbonaceous, lithic
5760-5780	100	<u>Siltstone</u> , light brown to light grey (10%), calcareous, moderately hard. Trace carbon, lithic
5780-5800	100	<u>Siltstone</u> , light brown to light grey (40%) calcareous moderately hard. Trace carbon, lithic, chlorite
5800-5820	100	<u>Siltstone</u> , light brown to light grey (40% slightly softer) calcareous. Trace carbon, lithic, chlorite, apple green, semi-translucent, very fine grained, angular to rounded
5820-5840	100	<u>Siltstone</u> , light brown to light grey (90%), calcareous. Trace carbon (as above) grey softer than brown, note green particles in siltstone as above

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DEPTH	%	SAMPLE DESCRIPTION
5840-5860	100	<u>Siltstone</u> , light brown (60%) light grey (40%), calcareous. Trace carbon, lithic moderately hard
5860-5880	100	<u>Siltstone</u> , light brown (50%), light grey (50% softer), calcareous. Trace lithic light grey, trace very fine glauconite, micromicaceous
5880-5900	100	<u>Siltstone</u> , light brown to light grey, calcareous, lithic, moderately hard. Trace glauconite, micromica
5900-5920	100	<u>Siltstone</u> , light brown to light grey (80%) calcareous, moderately hard. Trace glauconite, dark green, very fine
5920-5940	100	<u>Siltstone</u> , light brown (70%), light grey (30%) calcareous, lithic. Trace glauconite
5940-5960	100	<u>Siltstone</u> , light brown (60%) light grey (40%) calcareous, lithic. Trace glauconite
5960-5980	100	<u>Siltstone</u> , light brown (70%) light grey (30%) calcareous, lithic, glauconitic moderately hard. Strong trace <u>mudstone</u> , light grey, very soft, with kaolin matrix, silty
5980-6000	100	<u>Siltstone</u> , light brown to light grey, calcareous, silty, moderately hard to hard glauconite, quartzose (very finely sorted, subrounded, up to 20%)
6000-6010	100	<u>Siltstone</u> , glauconitic, calcareous, quartzose, as above. Trace <u>mudstone</u> , light grey, calcareous (? rock flow)
6010-6020	100	<u>Siltstone</u> , as above, trace <u>mudstone</u> , as above
6020-6030	50	<u>Siltstone</u> , light brown (10%), light grey (40%), calcareous, moderately hard (light brown) to soft (light grey), slightly glauconitic, grading to
	50	<u>Mudstone</u> , light grey, calcareous, very soft, marl
		Trace <u>Coal-lignite</u> to carbonaceous shale - probably <u>formation</u> , may be CC16
6030-6040	70	<u>Siltstone</u> , light brown (40%) - light grey (30%), calcareous, slightly glauconitic soft to moderately hard, as above, grading to
	30	<u>Mudstone</u> , light grey, calcareous, as above
		Trace <u>Coal</u> - carbonaceous shale, as above
6040-6050	80	<u>Mudstone-Marl</u> , as above
	20	<u>Siltstone</u> , as above
		Trace <u>Siltstone</u> , as above
6050-6060	90	<u>Mudstone-Marl</u> , as above
	10	<u>Siltstone</u> , soft to medium, as above
6060-6070	90	<u>Mudstone-Marl</u> , as above
	10	<u>Siltstone</u> , soft to medium, as above
6070-6080	70	<u>Mudstone-Marl</u> , as above
	30	<u>Siltstone</u> , soft to moderately hard, as above
6080-6090	90	<u>Siltstone</u> , soft to moderately hard, as above
	10	<u>Mudstone-Marl</u> , as above. Trace fossils, pyritic
6090-6100	90	<u>Siltstone</u> , soft to moderately hard, as above
	10	<u>Mudstone-Marl</u> , as above. Trace fossils, pyritic
6110-6120	50	<u>Siltstone</u> , soft to moderately hard, as above
	50	<u>Mudstone-Marl</u> , as above. Trace fossils, pyritic
6120-6130	90	<u>Siltstone</u> , soft to moderately hard, as above
	10	<u>Mudstone-Marl</u> , as above

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DEPTH	%	SAMPLE DESCRIPTION
6130-6140	100	<u>Siltstone</u> , mid grey, slightly calcareous, sub-fissile, but soft, as above Trace <u>Mudstone-Marl</u> , as above
6140-6150	50	<u>Siltstone</u> , as above
	50	<u>Mudstone-Marl</u> , as above
6150-6160	70	<u>Siltstone</u> , as above
	30	<u>Mudstone-Marl</u> , as above
6160-6170	80	<u>Siltstone</u> , as above
	20	<u>Mudstone-Marl</u> , as above
6170-6180	70	<u>Siltstone</u> , as above
	30	<u>Mudstone-Marl</u> , as above. Fossils
6180-6190	50	<u>Siltstone</u> , as above
	50	<u>Mudstone-Marl</u> , as above
6190-6200	90	<u>Siltstone</u> , medium grey, slight to moderately calcareous, soft (70%) to hard (5%)
	10	<u>Mudstone-Marl</u> , light grey, calcareous, very soft Trace <u>Siltstone</u> , light brown, hard, slightly glauconitic, slightly carbonaceous calcareous. Trace <u>Siltstone</u> , tan, calcareous, quartzose, (sandy, subrounded, 10% glauconitic, siliceous, very hard
6200-6210	70	<u>Siltstone</u> , medium grey, soft, as above
	30	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u>
6210-6220	70	<u>Siltstone</u> , as above
	30	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u> (forams, bryozoa - forams 75% plank.) some pyritic
6220-6230	30	<u>Siltstone</u> , as above
	65	<u>Marl-Mudstone</u> , as above
	5	<u>Siltstone</u> , medium grey, non-fissile, moderately hard, pyritic, fossils, moderate hard, pyritic, fossils (forams, etc., as above)
6230-6240	40	<u>Siltstone</u> , as above
	55	<u>Marl-Mudstone</u> , as above
	5	<u>Siltstone</u> , pyritic, as above
6240-6250	70	<u>Siltstone</u> , light grey to medium grey, calcareous, fossils.
	30	<u>Marl-Mudstone</u> , very calcareous, very soft, sandy, with well rounded quartz grains and small lines of pyritic nodules. Trace <u>Coal</u> , small rounded fragments
6250-6260	90	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft, sandy well rounded quartz grains white and smokey, pyritic nodules, coal grains
	10	<u>Siltstone</u> , grey, calcareous Trace <u>glauconite</u>
6260-6270	70	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft, sandy, well rounded quartz grains, pyrite nodules, coal grains
	30	<u>Siltstone</u> , grey, calcareous, soft, grading to mudstone
6270-6280	80	<u>Marl-Mudstone</u> , very calcareous, light grey, very soft, sandy, well rounded, quartz grains, pyrite nodules, rounded fragments of coal
	20	<u>Siltstone-Mudstone</u> , light to medium grey, fossil in places

DEPTH	%	SAMPLE DESCRIPTION
6280-6290	70	<u>Marl-Mudstone</u> , very calcareous, light grey, very soft, sandy, rounded quartz grains, pyrite nodules, carbonaceous, round coal fragments
	30	<u>Siltstone</u> , grey, sandy, rounded quartz grains, pyrite nodules
6290-6300	70	<u>Siltstone-Mudstone</u> , grey sandy, with rounded quartz grains
	30	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft, sandy, well rounded quartz grains, rounded coal fragments
6300-6310	80	<u>Marl-Mudstone</u> , very calcareous, light grey, very soft, sandy, rounded quartz
	20	<u>Siltstone-Mudstone</u> , very calcareous, sandy, soft
6310-6320	90	<u>Marl-Mudstone</u> , very calcareous, light grey, very soft, sandy rounded quartz, round coal fragments
	10	<u>Siltstone-Mudstone</u> , grey, calcareous, soft
6320-6330	90	<u>Marl-Mudstone</u> , light grey, very soft, very calcareous, sandy rounded quartz, pyrite nodules
	10	<u>Mudstone-Siltstone</u> , grey, soft, calcareous
6330-6340	90	<u>Marl-Mudstone</u> , light grey, very calcareous, sandy rounded quartz, rounded coal fragments
	10	<u>Siltstone-Mudstone</u> , grey, calcareous, soft, sandy. Trace pyrite
6340-6350	90	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft, sandy
	10	<u>Siltstone-Mudstone</u> , grey calcareous. Trace pyrite
6350-6360	70	<u>Marl-Mudstone</u> , light grey, calcareous, very soft, rare coal fragments
	30	<u>Siltstone-Mudstone</u> , grey, calcareous. Trace pyrite
6360-6370	80	<u>Marl-Mudstone</u> , light grey, calcareous, very soft, fossiliferous (echinoid spines)
	20	<u>Siltstone-Mudstone</u> , grey, calcareous. Trace pyrite. Quartz fine sand
6370-6380	70	<u>Marl-Mudstone</u> , light grey, calcareous, fossiliferous, coal fragments, angular, very soft
	30	<u>Siltstone-Mudstone</u> , grey, calcareous, trace pyrite, moderately soft, quartz fine sand
380-6390	90	<u>Marl-Mudstone</u> , light grey, calcareous, fossiliferous, angular coal fragments, very soft
	10	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, quartz sand fine
6390-6400	60	<u>Marl-Mudstone</u> , light grey, calcareous, fossiliferous, coal fragments, very soft
	40	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, trace pyrite, quartz sand
6400-6410	60	<u>Marl-Mudstone</u> , light grey, calcareous, fossiliferous, coal fragments angular, very soft
	40	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, as above. Quartz sand rare
6410-6420	70	<u>Marl-Mudstone</u> , light grey, calcareous, fossiliferous, coal fragments, very soft
	30	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, fine silt sized Quartz weathered pyrite?
6420-6440	90	<u>Marl-Mudstone</u> , light grey, calcareous, fossiliferous, very soft, coal fragments angular
	10	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, weathered pyrite specks. Quartz
6440-6450	70	<u>Marl-Mudstone</u> , light grey, calcareous, very soft, fossiliferous, angular coal fragments
	30	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, rounded Quartz sand

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DEPTH	%	SAMPLE DESCRIPTION
6450-6460	60	<u>Marl-Mudstone</u> , light grey, calcareous, very soft, fossiliferous, angular coal fragments
	40	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, Rounded quartz sand
6460-6470	60	<u>Marl-Mudstone</u> , light grey, calcareous, very soft, fossiliferous angular coal fragments and pyrite
	40	<u>Siltstone-Mudstone</u> , grey, calcareous, soft, rounded quartz sand
6470-6480	80	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft, fossiliferous, quartz sand rounded occasionally, pyrite, angular coal fragments
	20	<u>Siltstone-Mudstone</u> , grey, calcareous, moderately soft, quartz sand rounded occasionally
6480-6490	90	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft, sandy, rounded quartz, disseminated, very fine, crystalline pyrite as well as nodules. Forams
	10	<u>Siltstone-Mudstone</u> , grey, calcareous, soft
6490-6500	70	<u>Mudstone-Marl</u> , light grey, very calcareous, very soft
	30	<u>Siltstone</u> , medium grey, slightly calcareous, moderately soft, sub-fissile. Trace forams and minor other fossil fragments
		Trace <u>pyrite</u> (Trace Coal)
6500-6510	80	<u>Siltstone</u> , as above
	20	<u>Mudstone</u> , as above
		Trace (heavy) <u>fossil</u> , mainly planktonic forams Trace <u>pyrite</u>
6510-6520	80	<u>Siltstone</u> , as above, but occasional grading to olive green
	20	<u>Mudstone</u> , as above
		Trace <u>Fossil</u> , as above Trace (heavy) <u>pyrite</u> , large aggregates and chips
6520-6530	90	<u>Siltstone</u> , as above, green becoming 50% of sample, and green chips more elongate
	10	<u>Mudstone</u> , as above Strong trace <u>fossil</u> , strong trace <u>pyrite</u>
6530-6540	60	<u>Siltstone</u> , as above
	40	<u>Mudstone</u> , as above Trace <u>fossil</u> , trace <u>pyrite</u> , trace <u>dolomite</u> , tan, very hard
6540-6550	60	<u>Siltstone</u> , medium grey to dark green, slightly calcareous; moderately soft, rarely slightly micaceous, rarely sandy (very fine, subrounded), fossil, sub-fissile
	40	<u>Mudstone</u> , light grey, very calcareous, very soft Strong trace <u>fossils</u> , mostly planktonic forams, partly pyritic. Trace <u>pyrite</u>
6550-6560	60	<u>Siltstone</u> , as above
	40	<u>Mudstone</u> , as above Trace <u>fossils</u>
6560-6570	50	<u>Siltstone</u> , as above
	50	<u>Mudstone</u> , as above Trace <u>fossils</u>
6570-6580	60	<u>Siltstone</u> , as above
	40	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u>
6580-6590	70	<u>Siltstone</u> , as above
	30	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u> (benth forams, ostracodes, but mostly planktonics)

DEPTH	%	SAMPLE DESCRIPTION
6590-6600	80	<u>Siltstone</u> , medium grey to olive green, slightly calcareous, moderately soft, sub-fissile, fossils, rarely slightly micaceous
	20	<u>Mudstone-Marl</u> , light grey, very calcareous, very soft Trace <u>dolomite</u> , tan, saccharoidal, very hard Strong trace <u>fossils</u> , mainly planktonic forams Slight trace <u>quartz</u> , moderately sorted, angular to subangular, clear
6600-6610	60	<u>Siltstone</u> , as above
	40	<u>Mudstone-Marl</u> , as above Slight trace <u>fossil</u> , trace <u>pyrite</u>
6610-6620	90	<u>Siltstone</u> , as above
	10	<u>Mudstone-Marl</u> , as above Slight trace <u>fossil</u> , as above, trace <u>pyrite</u>
6620-6630	60	<u>Siltstone</u> , as above
	40	<u>Mudstone-Marl</u> , as above Trace <u>pyrite</u> , slight trace <u>fossil</u>
6630-6640	80	<u>Siltstone</u> , as above
	20	<u>Mudstone-Marl</u> , as above Strong trace <u>pyrite</u> , trace <u>fossils</u> , slight trace <u>dolomite</u> , as above
*6640-6660	80	<u>Siltstone</u> , medium grey to olive green, slightly calcareous, moderately soft, sub-fissile, fossils:
	20	<u>Mudstone-Marl</u> , light grey, very calcareous Slight trace <u>dolomite</u> , tan, very hard; slight trace <u>fossils</u> , planktonic forams
6660-6670	90	<u>Siltstone</u> , as above, mainly medium grey
	10	<u>Mudstone-Marl</u> , as above Strong trace <u>fossils</u> , trace <u>pyrite</u> , slight trace <u>dolomite</u>
6670-6680	90	<u>Siltstone</u> , as above, medium grey
	10	<u>Mudstone-Marl</u> , as above Strong trace <u>fossils</u> , slight trace <u>pyrite</u>
6680-6690	90	<u>Siltstone</u> , as above
	10	<u>Mudstone-Marl</u> , as above
6690-6700	70	<u>Siltstone</u> , medium grey (rarely olive green), moderately calcareous, moderately soft, sub-fissile, fossils (planktonic forams)
	30	<u>Mudstone-Marl</u> , light grey, very calcareous, very soft Strong trace <u>planktonic forams and other minor fossils</u> Trace <u>dolomite</u> , tan, very hard; trace <u>pyrite</u>
6700-6710	80	<u>Siltstone</u> , as above, pyritic
	20	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u> , trace <u>pyrite</u> , trace <u>dolomite</u>
6710-6720	70	<u>Siltstone</u> , as above
	30	<u>Mudstone-Marl</u> , as above Strong trace <u>fossils</u> , trace <u>pyrite</u> , slight trace <u>dolomite</u>
6720-6730	80	<u>Siltstone</u> , as above
	15	<u>Mudstone-Marl</u>
	5	<u>Fossils</u> , mainly planktonic forams (95%) Trace <u>pyrite</u>
6730-6740	95	<u>Siltstone</u> , as above
	5	<u>Mudstone-Marl</u> , as above Trace <u>dolomite</u> , trace <u>pyrite</u> , trace <u>fossils</u>

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DEPTH	%	SAMPLE DESCRIPTION
6740-6750	90	<u>Siltstone</u> , medium grey to olive green, moderately calcareous, moderately soft, subfissile, slightly fossiliferous, slightly pyritic
	10	<u>Mudstone-Marl</u> , light grey, very calcareous, very soft Strong trace <u>fossils</u> (planktonic forams); trace <u>pyrite</u>
6750-6760	90	<u>Siltstone</u> , medium to dark grey, as above
	10	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u> , as above
6760-6770	90	<u>Siltstone</u> , medium to dark grey, as above
	10	<u>Mudstone-Marl</u> , as above Slight trace <u>fossil</u> ; slight trace <u>pyrite</u>
6770-6780	80	<u>Siltstone</u> , as above
	20	<u>Mudstone-Marl</u> , as above Strong trace <u>fossils</u>
6780-6790	70	<u>Siltstone</u> , as above, quite fossiliferous
	30	<u>Mudstone-Marl</u> , as above Strong trace <u>fossils</u> ; trace <u>pyrite</u>
6790-6800	80	<u>Siltstone</u> , medium to dark grey (to olive green), slightly calcareous, moderately soft, subfissile, fossiliferous, pyritic, very rare lithic grains
	20	<u>Mudstone-Marl</u> , light grey, very calcareous, very soft Trace <u>planktonic forams</u> ; trace <u>pyrite</u>
6800-6810	80	<u>Siltstone</u> , as above
	20	<u>Mudstone-Marl</u> , as above Trace <u>fossils</u>
6810-6820	70	<u>Siltstone</u> , as above
	20	<u>Mudstone-Marl</u> , as above
	10	<u>Fossils</u> (planktonic forams = 95%)
6820-6830	90	<u>Siltstone</u> , as above
	10	<u>Mudstone-Marl</u> , as above Strong trace <u>fossil</u>
6830-6840	80	<u>Siltstone</u> , as above
	20	<u>Mudstone-Marl</u> , as above Trace <u>fossil</u>
6840-6850	90	<u>Siltstone</u> , medium grey, moderately calcareous, fossiliferous, moderately soft, subfissile, very very slightly carbonaceous
	10	<u>Marl-Mudstone</u> , light grey, very calcareous, very soft Trace <u>fossils</u> , planktonic forams
6850-6860	90	<u>Siltstone</u> , as above
	10	<u>Mudstone-Marl</u> , as above Very slight trace <u>glauconite in siltstone</u> , as above, (faecal pellets), trace <u>fossil</u>
6860-6870	90	<u>Siltstone</u> , as above
	10	<u>Mudstone-Marl</u> , as above Trace <u>pyrite</u>
6870-6880	90	<u>Siltstone</u> , as above
	10	<u>Mudstone-Marl</u> , as above Very slight trace <u>fossil</u> (planktonic forams); trace <u>pyrite</u>
6880-6890	95	<u>Siltstone</u> , as above
	5	<u>Mudstone-Marl</u> , as above Trace <u>fossil</u> ; trace <u>pyrite</u>

SAMPLE DESCRIPTIONS

KINGFISH-5

S. Benedek/S. Giles
25/5/74

DEPTH	%	SAMPLE DESCRIPTION
6890-6900	95 5	<u>Siltstone</u> , as above, slightly darker grey <u>Mudstone-Marl</u> , as above Trace <u>pyrite</u>
6900-6910	90 10	<u>Siltstone</u> , medium grey to olive grey, slightly to moderately calcareous, moderately soft, sub-fissile, platy to splintery fracture, fossiliferous <u>Mudstone-Marl</u> , light grey, very calcareous, very soft Trace <u>pyrite</u> ; trace <u>fossils</u> (planktonic forams)
6910-6920	90 10	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>fossil</u>
6920-6930	70 30	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>fossil</u> ; trace <u>pyrite</u>
6930-6940	90 10	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>fossil</u> ; trace <u>pyrite</u> , trace <u>dolomite</u> , tan, very hard, as before
6940-6950	80 20	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>fossil</u> ; trace <u>pyrite</u>
6950-6960	90 10	<u>Siltstone</u> , medium grey to olive green, moderately soft, moderately calcareous, sub-fissile, fossiliferous, rarely slightly micaceous <u>Mudstone-Marl</u> , light grey, very soft, very calcareous Trace <u>fossil</u> (planktonic forams)
6960-6970	90 10	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>fossil</u>
6970-6980	90 10	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>Sandstone</u> , very silty (<u>Siltstone</u> , very sandy) buff, moderately soft, sand grains very fine to fine, subrounded, calcareous Trace <u>pyrite</u> , very slight trace <u>fossil</u>
6980-6990	90 10	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above Trace <u>Sandstone</u> , silty, buff, as above
6990-7000	85 10 5	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above <u>Sandstone</u> , silty, buff, as above Trace <u>pyrite</u>
7000-7010	90 10	<u>Siltstone</u> , medium grey to dark green, moderately calcareous, moderately soft, sub-fissile, platy, fossils, occasional pyrite <u>Mudstone-Marl</u> , light grey, very soft, very calcareous Trace <u>Sandstone</u> , silty, buff-grey, sand very fine to fine, subrounded grains, just floating, calcareous, moderately soft. Trace <u>pyrite</u> , trace <u>fossil</u> (planktonic forams)
7010-7020	90 5 5	<u>Siltstone</u> , as above <u>Mudstone-Marl</u> , as above <u>Sandstone</u> , as above Slight trace <u>fossils</u>
7020-7030	95 5	<u>Siltstone</u> , as above, becoming slightly sandy and slightly carbonaceous <u>Mudstone-Marl</u> trace <u>fossils</u>

SAMPLE DESCRIPTIONS

KINGFISH-5

S. Benedek/S. Giles
25/5/74

DEPTH	%	SAMPLE DESCRIPTION
7030-7040	95	<u>Siltstone</u> , as above
	5	<u>Mudstone-Marl</u> , as above
		Trace <u>Sandstone</u> , silty, as above; trace <u>fossils</u> ; trace <u>pyrite</u>
7040-7050	95	<u>Siltstone</u> , medium grey to dark green, moderately calcareous, moderately soft, platy, fossiliferous, slightly pyritic, occasionally sandy (very fine, subrounded)
	5	<u>Mudstone-Marl</u> , (light grey, very soft, very calcareous)
7050-7060	100	<u>Siltstone</u> , medium grey, sandy, calcareous, soft, forams Trace <u>Siltstone</u> , very fine sandstone, light grey, soft, very argillaceous
7060-7070	100	<u>Siltstone</u> , medium grey to olive green, moderately calcareous, moderately soft, platy, fossils (planktonic forams), slightly pyritic, occasionally sandy (very fine, subrounded) Trace <u>pyrite</u> ; trace <u>fossils</u> (planktonic forams)
7070-7080	100	<u>Siltstone</u> , as above
7080-7090	100	<u>Siltstone</u> , as above Trace <u>fossils</u>
7100-7100	100	<u>Siltstone</u> , as above <u>POH 7149' N.B.</u> NO SAMPLES 7100-7140 FORMATION FRACTURED DUE TO TIGHT HOLE. ABUNDANT CAVINGS PRODUCED BETWEEN 5000' and 7150'
7150	100	<u>Siltstone</u> , medium grey, moderately soft to moderately hard, moderately calcareous, fossils (planktonic forams), rarely micaceous, rarely sandy (very fine, subrounded) Occasionally sub-fissile - platy fracture Trace <u>pyrite</u> (aggregates)
7150-7170	100	<u>Siltstone</u> , as above, slight increase in sandy aggregates. Trace <u>pyrite</u>
7170-7180	100	<u>Siltstone</u> , as above Trace <u>pyrite</u> ; trace <u>Sandstone</u> , buff, very fine, very argillaceous-silty, calcareous, moderately soft, 1 aggregate shows probable burrow (sandstone) within siltstone
7180-7190	100	<u>Siltstone</u> , as above Trace <u>siltstone</u> , <u>glauconitic</u> - otherwise as above, glauconite as pellets and generally more fossiliferous
7190-7200	100	<u>Siltstone</u> , medium grey, moderately soft, slightly calcareous, pyritic, fossils (planktonic forams), rarely sandy (very fine, subrounded), subfissile, platy fracture, as above. Trace <u>pyrite</u> , trace <u>glauconite</u>
7200-7210	100	<u>Siltstone</u> , as above Trace <u>Sandstone</u> , buff, argillaceous, as above. Very slight trace <u>sand</u> , medium to coarse, angular, unconsolidated grains
7210-7220	100	<u>Siltstone</u> , as above Strong trace <u>sandstone</u> , buff, argillaceous, very fine to fine, subrounded, calcareous, moderately soft to moderately hard. Trace <u>pyrite</u> , trace <u>fossils</u> ; very slight trace <u>quartz sand</u> , medium, angular grains
7220-7230	100	<u>Siltstone</u> , grey grading to mudstone, micro micaceous, moderately soft, common foraminifera. Trace <u>pyrite</u> , trace <u>sandstone</u> , cream very fine, very argillaceous

DEPTH	%	SAMPLE DESCRIPTION
7230-7240	90	<u>Siltstone</u> , as above
	10	<u>Mudstone</u> , light grey, very soft, moderately calcareous, abundant pyrite aggregates. Strong trace <u>Sandstone</u> , buff, argillaceous, as above
7240-7250	80	<u>Siltstone</u> , as above
	20	<u>Mudstone</u> , as above Trace <u>Sandstone</u> , buff, as above
		C.O. @ 7252' - drilling break from mudstone, no shows
7250-7260	100	<u>Siltstone</u> , as above Trace <u>mudstone</u> , as above; trace <u>sandstone</u> , buff, as above; trace <u>pyrite</u> , trace <u>fossils</u>
7260-7270	100	<u>Siltstone</u> , grey, fossiliferous, Trace <u>pyrite</u> ; trace <u>siltstone</u> , buff
7270-7280	100	<u>Siltstone</u> , grey, fossiliferous, trace pyrite Trace <u>sand</u> , rounded, fine to medium grains
7280-7290	100	<u>Siltstone</u> , as above Trace <u>fossils</u> , slight trace quartz grains, medium to finely sorted, trace <u>pyrite</u>
7290-7300	100	<u>Siltstone</u> , medium grey, moderately calcareous, moderately soft, slightly fossiliferous, occasionally pyritic, rarely micaceous, platy fracture, occasionally sandy (grains very fine-fine, subrounded, floating) Trace <u>mudstone</u> , light grey, very soft, calcareous; trace <u>pyrite</u> , trace <u>fossiliferous</u> , mainly benth forams, especially arenaceous and miliolids
7300-7310	100	<u>Siltstone</u> , as above trace <u>siltstone</u> , buff, soft, calcareous, featureless
7310-7320	100	<u>Siltstone</u> , as above Trace <u>Siltstone</u> , buff, as above
7320-7330	100	<u>Siltstone</u> , as above Trace <u>siltstone</u> , buff, as above, trace <u>fossils</u> ; trace <u>pyrite</u>
7330-7340	100	<u>Siltstone</u> , as above, occasionally becoming sandy. Strong trace <u>pyrite</u> ; trace <u>fossils</u>
7340-7350	90	<u>Siltstone</u> , medium grey, calcareous, fossils, moderately soft, platy fracture pyritic, trace as above but green (and mottled medium grey to green)
	10	<u>Mudstone</u> , light grey, very soft, very calcareous Trace <u>fossils</u> , trace <u>pyrite</u>
7350-7360	100	<u>Siltstone</u> , medium grey, as above Trace <u>pyrite</u>
7360-7370	100	<u>Siltstone</u> , as above Trace <u>fossils</u>
7370-7380	100	<u>Siltstone</u> , as above Strong trace <u>mudstone</u> , as above, trace <u>fossils</u>
7380-7390	100	<u>Siltstone</u> , as above Trace <u>mudstone</u> , trace <u>fossils</u> , trace <u>pyrite</u>
7390-7400	100	<u>Siltstone</u> , medium grey, moderately calcareous, moderately soft, rarely micaceous trace <u>pyrite</u> , trace <u>fossils</u>
7400-7410	100	<u>Siltstone</u> , medium grey, moderately soft, pyritic, trace glauconite Trace <u>sandstone</u> , buff, very fine, argillaceous

DEPTH	%	SAMPLE DESCRIPTION
7410-7420	100	<u>Siltstone</u> , grey moderately soft, fossiliferous, pyritic, large proportion is probably caving
7420-7430	100	<u>Siltstone</u> , grey, moderately soft, fossiliferous, calcareous, pyrite Trace <u>Sandstone</u> , buff, very fine, argillaceous
7430-7440	100	<u>Siltstone</u> , grey, moderately soft, fossiliferous, calcareous, pyrite Trace <u>one grain Sandstone</u> , light brown, calcareous, glauconitic
7440-7450	100	<u>Siltstone</u> , grey, moderately soft, fossiliferous, calcareous Trace <u>Sandstone</u> , light brown, very fine grained, calcareous, slightly pyritic
7450-7460	100	<u>Siltstone</u> , grey, moderately soft, calcareous Trace <u>Sandstone</u> , light brown, very fine, friable, calcareous. Trace <u>glauconite</u>
7460-7470	100	<u>Siltstone</u> , grey, moderately soft, calcareous, pyritic
7470-7480	100	<u>Siltstone</u> , grey, moderately soft, calcareous, fossiliferous
7480-7490	100	<u>Siltstone-Mudstone</u> , grey, moderately soft, calcareous Trace <u>Sandstone</u> , light brown to buff, very fine grained, friable, calcareous
7490-7500	100	<u>Siltstone-Mudstone</u> , grey, moderately soft, calcareous Trace <u>Sandstone</u> , light brown to buff, soft, calcareous, very fine grained, tight
7500-7510	100	<u>Siltstone</u> , grey, moderately soft, calcareous, pyritic Trace <u>Sandstone</u> , light brown to buff, friable, calcareous
7510-7520	100	<u>Siltstone-Mudstone</u> , grey soft, calcareous Trace <u>Sandstone</u> , light brown-buff, friable, very fine
7520-7530	100	<u>Siltstone-Mudstone</u> , grey, soft, calcareous
7530-7540	100	<u>Siltstone</u> , trace dolomite, grey, soft, calcareous, long slivers indicating large amount of caving is still in the sample
7540-7550	100	<u>Siltstone-Mudstone</u> , grey, soft, calcareous Trace <u>sandstone</u> , light brown to buff, friable, very fine, tight, calcareous
7550-7560	100	<u>Siltstone-Mudstone</u> , grey, moderately soft, calcareous, fossiliferous
7560-7570	100	<u>Siltstone-Mudstone</u> , grey, moderately soft, calcareous, fossiliferous
7570-7580	100	<u>Siltstone-Mudstone</u> , as above
7580-7590	100	<u>Siltstone-Mudstone</u> , as above
		CIRCULATE SAMPLE 7655' APPROXIMATELY 15' INTO DRILLING BREAK 18-10, 1-6-74
7590-7600	100	<u>Siltstone-Mudstone</u> , as above, pyrite - the samples contain large proportion of long slivers of siltstone indicating cavings
7600-7610	100	<u>Siltstone-Mudstone</u> , grey, calcareous, fossiliferous
7610-7620	100	<u>Siltstone-Mudstone</u> , as above Trace <u>sand</u> , fine loose
7620-7630	100	<u>Siltstone-Mudstone</u> , grey calcareous, fossiliferous
7630-7640	80 20	<u>Sand</u> , quartz, white, loose, rounded, trace glauconite, pyrite, no shows <u>Siltstone-Mudstone</u> , as above
7640-7650	70 30	<u>Quartz</u> , medium to fine to coarse grained, angular to rounded, glauconitic <u>Siltstone-Mudstone</u> , as above

DEPTH	%	SAMPLE DESCRIPTION
7650-7660	80	<u>Quartz sand, coarse, frosted white, rounded, well sorted, trace glauconite or angular sandsize black coal</u>
	20	<u>Siltstone-Mudstone, grey calcareous, fossiliferous - cavings</u>
7660-7680	100	<u>Quartz sand, coarse-medium sized, frosted white, rounded, well sorted, trace glauconite and angular sandsize black coal</u>
7680-7700	100	<u>Quartz sand, as above</u>
7700-7720	100	<u>Quartz sand, as above</u>
7720-7740	10	<u>Quartz sand, coarse sized, frosted white, rounded, well sorted, trace angular black coal</u>
7740-7760	100	<u>Quartz sand, as above</u>
7760-7780	100	<u>Quartz sand, medium sand size to coarse, frosted white, rounded, well sorted</u> Trace <u>angular black coal</u>
7780-7800	100	<u>Quartz sand, medium to coarse, unconsolidated, subangular-rounded well sorted</u> Trace <u>angular black coal</u>
7800-7820	100	<u>Quartz sand, as above</u>
7820-7840	100	<u>Quartz sand, as above</u>
7840-7860	90	<u>Quartz sand, medium to coarse, unconsolidated, subangular to rounded, well sorted</u>
	10	<u>Siltstone-Mudstone, grey, calcareous, fossiliferous</u>
7860-7880	90	<u>Quartz sand, unconsolidated, medium to coarse sand, subangular to rounded, well sorted</u>
	10	<u>Siltstone-Mudstone, grey, calcareous, fossiliferous</u>
7880-7900	90	<u>Quartz sand, medium to coarse grained, unconsolidated, frosted white, well sorted</u> Trace <u>angular black coal</u>
	10	<u>Siltstone-Mudstone, grey, calcareous, fossiliferous</u>
		POH 7898' NB 10 XDV
7900-7920	100	<u>Sandstone, white, coarse to very coarse, quartzose, medium to granule (sub-angular to angular) to rounded, fairly sorted, grey grains frosted and chipped</u>
7920-7940	100	<u>Sandstone, white, as above</u>
7940-7960	100	<u>Sandstone, white, coarse to very coarse, as above. Trace pyrite incorporated with sandstone, very slight trace glauconite (with sandstone)</u>
7960-7980	100	<u>Sandstone, white, coarse to very coarse, as above</u> Trace <u>Siltstone, medium brown, carbonaceous, moderately hard, non-calcareous (first Latrobe Group shale)</u>
7980-8000	100	<u>Sand, unconsolidated, quartz, clear to white, coarse, fairly sorted, rounded to minor sub-angular, rare lithic grains are commonly pyrite coated, some others are pyrite frosted as well.</u>
8000-8020	100	<u>Sandstone, white, coarse to very coarse, quartzose, grains medium to granular subangular to angular to rounded, fairly sorted, rare lithics, rare pyrite frosting, rare pyrite. Frosting and chipping and some larger grains</u>
8020-8040	100	<u>Sandstone, as above</u> Trace <u>Siltstone, off white, fine argilleous, slightly glauconitic, soft, tight non-calcareous</u>
8040-8060	100	<u>Sandstone, as above</u> Trace <u>pyrite, increasing cavings</u>

1.6.74

DEPTH	%	SAMPLE DESCRIPTION
8060-8080	100	<u>Sandstone</u> , as above Trace <u>Siltstone</u> , light brown, moderately soft, very sandy (very fine, sub-rounded)
8080-8100	100	<u>Sandstone</u> , white, coarse to very coarse, quartzose, medium to granule grains, moderately sorted, subangular to subrounded Trace <u>Siltstone</u> , light brown, carbonaceous, micaceous (Latrobe Group) 30% cavings
8100-8120	100	<u>Sandstone</u> , as above, generally coarse Trace <u>pyrite</u> 10% cavings
8120-8140	100	<u>Sandstone</u> , as above, coarse Trace <u>Siltstone</u> , medium brown, carbonaceous, moderately soft, non-calcareous 10% cavings
8140-8160	100	<u>Sandstone</u> , as above Trace <u>Siltstone</u> , as above 20% cavings
8160-8180	100	<u>Sandstone</u> , as above 20% cavings
180-8200	100	<u>Sandstone</u> , coarse to very coarse, white quartzose, medium to granular grains, subrounded to rounded, fair to good sorting, common pyrite 30% cavings
8200-8220	100	<u>Sandstone</u> , coarse to very coarse, as above 40% cavings
8220-8240	100	<u>Sandstone</u> , coarse to very coarse, as above 40% cavings
		T.D.

WELL COMPLETION REPORT

KINGFISH-5

APPENDIX 2

WELLSIDE CORE DESCRIPTIONS

SIDEWALL CORE DESCRIPTION KINGFISH-5

CORE NO.	DEPTH	RECOVERY	DESCRIPTION
1	8193	½" (25%)	<u>Sandstone</u> , medium grey, very fine to fine grained, silty argillaceous, moderately sorted, angular to subangular, slightly micaceous. No show.
2	8075	¾" (37%)	<u>Sandstone</u> , medium grey, medium grained, glauconitic, slightly micaceous, slightly pyritic, slightly calcareous moderately sorted, subangular to subrounded. No shows. Chromatog: Trace of C ₁
3	7780	¾" (37%)	<u>Sandstone</u> , white, fine to coarse grained, predominantly medium grained, slightly argillaceous, slightly glauconitic, very friable, poorly sorted, subangular to rounded. No shows. Chromatog: Trace C ₁
4	7635	1" (50%)	<u>Sandstone</u> , white, fine to coarse grained, few granules of quartz and lithic fragments, clumps of pyrite and glauconite, slightly argillaceous. Sand poorly sorted, subangular to rounded. No show. Chromatog: Trace C ₁
	7625	N.R.	Pulled off
6	7450	1" (50%)	<u>Marl</u> , medium grey, slightly silty, slightly micaceous, firm, homogeneous. Chromatog: 300 units C ₁
7	7300	N.R.	Pulled off
8	7165	1½" (75%)	<u>Marl</u> , dark grey, slightly silty, slightly micaceous, very firm, homogeneous. Chromatog: 4500 C ₁ , 100 C ₂ , trace C ₃ , trace C ₄ .
9	7137	1½" (75%)	<u>Marl</u> , dark grey, slightly silty, very slightly micaceous, fossiliferous (?forams), very firm, homogeneous
10	7010	1½" (75%)	<u>Marl</u> , dark grey, slightly micaceous, fossiliferous (?forams), very firm, interbedded laminae of light brown siltstone.
11	6856	1" (50%)	<u>Marl</u> , medium grey, silty, very slightly micaceous, fossiliferous (?forams), firm, homogeneous
12	6780	1" (50%)	<u>Marl</u> , light grey, silty, very slightly sandy, very slightly glauconitic, firm, homogeneous
13	6695	1¼" (62%)	<u>Marl</u> , light grey, silty, slightly micaceous, soft, fossiliferous (?forams), homogeneous
14	6550	1¼" (62%)	<u>Marl</u> , light grey, silty, slightly micaceous, soft, homogeneous
15	6370	¾" (37%)	<u>Marl</u> , light grey, silty, slightly micaceous, slightly pyritic, firm, homogeneous
16	6330	¾" (37%)	<u>Marl</u> , light grey, silty, slightly micaceous, soft, gradational into light grey calcareous siltstone
17	6250	1" (50%)	<u>Marl</u> , light grey, silty, slightly micaceous, fossiliferous (?forams), soft, homogeneous
18	6165	½" (25%)	<u>Marl</u> , brownish-grey, silty, very slightly sandy, soft, heavily coated with mud
19	6050	¾" (37%)	<u>Marl</u> , medium grey, slightly silty, slightly micaceous, pyritic, firm, homogeneous

SIDEWALL CORE DESCRIPTION KINGFISH-5

CORE NO.	DEPTH	RECOVERY	DESCRIPTION
20	6000	1" (50%)	<u>Marly Siltstone</u> , very light grey, slightly sandy, slightly glauconitic, very soft, heavily coated with mud
21	5850	1" (50%)	<u>Marly Siltstone</u> , very light grey, very sandy, slightly glauconitic, slightly pyritic, poorly sorted, subrounded quartzose and lithic grains, very soft
22	5700	3/4" (37%)	<u>Marly Siltstone</u> , very light grey, sandy, glauconitic, quartzose, moderately sorted, subangular to subrounded, grains, very soft.
23	5550	3/4" (37%)	<u>Marly Siltstone</u> , light grey, slightly sandy, slightly ? carbonaceous, very slightly glauconitic, very soft, heavily coated with mud
24	5400	1/2" (25%)	<u>Marly Siltstone</u> , light grey, slightly sandy, slightly carbonaceous (flecks), soft, heavily coated with mud
25	5250	1/2" (25%)	<u>Marly Siltstone</u> , light grey, slightly sandy, soft, heavily coated with mud
26	5100	N.R.	
27	4950	3/4" (37%)	<u>Marly Siltstone</u> , light grey, slightly sandy, carbonaceous flecks, soft, heavily coated with mud
28	4800	3/4" (37%)	<u>Marly Siltstone</u> , light grey, slightly sandy, few ? carbonaceous flecks, very soft, heavily coated with mud
29	4650	1" (50%)	<u>Marly Siltstone</u> , light grey, very slightly sandy, very soft, heavily coated with mud
30	4500	N.R.	

WELL COMPLETION REPORT

KINGFISH-5

APPENDIX 3

PALAEONTOLOGICAL REPORT

Twenty three side wall cores were examined between the interval 7635' and 4650'. No fauna was found in the side wall core at 7635' and side wall cores at 4650' and 6570' contained sparse, indeterminate faunas.

OLIGOCENE to EARLY MIOCENE - 7450' to 6695'.

The oldest fauna represented typically Zone J-1 at 7450'. This was succeeded by faunas of Zone I-1 without the presence of I-2; the absence of I-2 is consistent with other sequence on the Kingfish structure. The Oligo-Miocene boundary fauna of Zone H-2 is a cool temperate "Novozealandic" one without any tropical elements, yet quite diagnostic of this biostratigraphic interval. Therefore the Oligocene was deposited between 7450' and 7137' and the Oligo-Miocene transition (= H-2) between 7010 and 6780'. The sample at 6695' contained a very immature multi-apertured globigerinid that could either be designated Globigerina woodi connecta or Globigerinoides trilobus. As the latter classification is favoured the side wall core is placed within Zone G but at the boundary with Zone H-1. Although benthonic foraminifera are sparse in this Oligocene to early Miocene globigerinid ooze (Planktonic % above 98% in all samples), it will be seen from the benthonic distribution sheet that it contains a fauna distinct from the benthos higher stratigraphically; in fact there are only 5 species in common. The total assemblage, both specifically and statistically suggests a continental rise deposit.

POSSIBLE MISSING SECTION in vicinity of 6695' to 6550'.

On the planktonic distribution chart there is discordance in specific ranges between 6695' and 6550', with only 3 species extending across and beyond this interval; the initial appearance of Globigerinoides trilobus is at 6550' and is noted above as a very early form taxonomically distinct from those above. Normally one would expect a number of morphotypic transitions between the fauna of 6695' and 6550'. It is assumed that much of Zone G and all of Zones F & E are absent. Abrieviation of the biostratigraphic interval cannot be dismissed, but a failure to recognise Zones F & G were recorded by Taylor for Kingfish-1 and Kingfish-2, whilst Zones F & G occupied 750' in Kingfish-3, 500' in Kingfish B-1 and at least 300' in Kingfish A-1. In Kingfish-5 most of G and all of F and G would have to have been abrieviated into 145'. The discordance of benthonic faunas between 6695' and 6550' has often been recorded only at a generic level and this has considerable environmental significance. A similar benthonic taxonomic discordance has been recored in Kingfish-1 and Kingfish-2 where the absence of a biostratigraphic interval was suspected. Scouring or slumping may have removed Zone G to E sediment.

LATE MIOCENE (= mid Miocene) - 6550' to 4800' to 4650' to ?.

The earliest appearance of Orbulina universa was at 6550' which marks the base of Zone D-2. This is deeper than in Kingfish-1 where the species appeared at 5600'. But in Kingfish -1 the pentultimate forms appeared at 5820' marking the base of Zone E and the base of the late Miocene. Zone D-2 extends up to 6050' and the planktonic fauna is most diverse at 6165'. The faunas are dominantly planktonic and it is suggested that pelagic sediment was beginning to fill the scour which is suspected on evidence cited above. Faunas at and above 6000' represent Zone

numerical

D-1 with both ~~numerical~~ and specific sparsity. Both the planktonic and benthonic elements are shape and size sorted. The average diameter is .25mm. and the shape tends towards the spherical or lenticular. The benthonic species are a mixture of shelf and slope inhabitants. It is assumed that deposition was the result of high energy outer shelf and down slope currents. These sediments rapidly filled in the scour. Diagenesis of specimens between 6000' and 4650' is obviously, to the extent that specimens at 4650' could not be distinguished, even at a generic level.

BASIN GIPPSLANDBY David TaylorWELL NAME KINGFISH-5DATE 3-7-74

ELEV. _____

Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
MIOCENE	A	Alternate					
	B	Alternate					
	C	Alternate					
	D ₁	4650 Alternate 4950	2 0		6000	1	
	D ₂	6050 Alternate	0		6550	1	
	E	Alternate					
	F	Alternate					
	G	6695** Alternate	1		6695**		
	H ₁	Alternate					
	H ₂	6780 Alternate	1		7010	0	
OLIGOCENE	I ₁	7137 Alternate	1		7165	1	
	I ₂	Alternate					
	J ₁	7450 Alternate	0		7450	0	
	J ₂	Alternate					
EOC.	K	Alternate					
	Pre K						

S.W.C. 7635' + no fauna found. S.W.C.'s at 4650' & 6370' contained indeterminate faunas.

** S.W.C. at 6780 is at base of G and hard to distinguish from H-1

COMMENTS: There is a possible missing section between 6550' and 6695' with Zones E & F absent due to scouring.

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 _____

WELL COMPLETION REPORT

KINGFISH-5

APPENDIX 4

PALYNOLOGICAL REPORT

PALYNOLOGICAL DETERMINATIONS FOR KINGFISH-5,
GIPPSLAND BASIN, AUSTRALIA

Lewis E. Stover

SUMMARY

Of the three samples submitted from Kingfish, those from 8075 and 8193 feet contain palynomorphs indicative of the L. balmei spore-pollen zone. Recycled Early Cretaceous spores are present at 8193 feet. The palynological preparation from 7780 feet is barren.

ANALYSES

SWC 1 at 8193 feet

Age: Paleocene
Zone: L. balmei, confidence rating 0
Environment: Marginal marine
Kerogen Rating: 1+, immature

The residue from sidewall core 1 contains abundant cuticular and other organic debris together with relatively sparse spore-pollen and rare dinoflagellates. Recycled Early Cretaceous spores are present also.

SWC 2 at 8075 feet

Age: Paleocene
Zone: L. balmei, confidence rating 0
Environment: Marginal Marine
Kerogen rating: 1+, immature

The residue from sidewall core 2 is relatively free of cuticular material with most of the organic debris consisting of fragmented, dark, angular pieces of probably woody material. Spore-pollen are abundant, fairly diverse, fair to well preserved. Dinoflagellates are not only rare but are generally less well preserved than the spore-pollen. No recycled forms were observed.

SWC 3 at 7780 feet

Palynological preparation barren; kerogen preparation with insufficient organic material to permit analyses.

BASIN GIPPSLAND

DATE 2nd copy

WELL NAME KINGFISH - 5

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
Eocene	<u>P. tuberculatus</u>										
	<u>U. N. asperus</u>										
	<u>M. N. asperus</u>										
	<u>L. N. asperus</u>										
	<u>P. asperopolus</u>										
	<u>U. M. diversus</u>										
	<u>M. M. diversus</u>										
	<u>L. M. diversus</u>										
Paleocene	<u>L. L. balmei</u>	8075	1				8193	1			
	<u>L. L. balmei</u>										
	<u>T. longus</u>										
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											
CRETACEOUS											

COMMENTS: The *Wetz. homomorpha* Dinoflagellate Zone occurs at 8075'
Only 3 samples were examined. The other sample at 7780' is barren

- 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 July 1974.

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

WELL COMPLETION REPORT

KINGFISH-5

APPENDIX 5

F.I.T. RESULTS

F.I.T. 1 @ 7845'

Initial Hydrostatic Pressure	4096.7 p.s.i.
Sampling Pressure	3371.3 p.s.i.
Shut-in Pressure	3371.3 p.s.i.
Final Hydrostatic Pressure	4086.3 p.s.i.
Sampling Time	16 mins.

Recovered :

9,500 cc Water; 18,700 ppm Cl^- ; 50 ppm NO_3^- ; Rrf 0.26 @ 70°F.

No Segregator

Temperatures : 188°/190°F

WELL COMPLETION REPORT

KINGFISH-5

APPENDIX 6

WELL LOG ANALYSIS REPORT

TO WELL FILE
cc. W.W. FRASER (2), C.N. CURNOW

OPERATOR ESSO AUSTRALIA LTD.,

WELL KINGFISH #5

DATE July 4, 1974.

STATE VICTORIA

ELEV. 32'KB

DEPTH INTERVAL	POROSITY ESTIMATE	WATER SAT. ESTIMATE	REMARKS
7640-44 (4)	18 -19.2	100	
7644-48 (4)	19.7-20.6	100	
7648-57 (9)	13.7-14.9	100	
7657-60 (3)	17.7-19	100	
7660-65 (5)	14.9-16	100	
7665-73 (8)	19.4-20.8	100	
7673-76 (3)	22.2-23.6	100	
7676-81 (5)	20 -21.5	100	
7681-84 (3)	13.7-14.9	100	
7684-7712 (28)	18.6-19.8	100	
7712-16 (4)	15.5-16.6	100	
7716-34 (18)	17.1-18.3	100	
7716-46 (12)	19.4-20.8	100	
7716-51 (5)	13.7-14.9	100	
7751-56 (5)	16.6-17.7	100	
7756-63 (7)	17.1-18.3	100	
7763-69 (6)	10.2-11.4	100	
7769-75 (6)	13.1-14.3	100	
7790-95 (5)	21.5-22.9	100	
7795-97 (2)	18.3-19.5	100	
7797-7804 (7)	22.9-24.3	100	
7804-09 (5)	25.6-26.8	100	
7809-17 (8)	21.8-23.2	100	
7817-31 (14)	25.6-26.8	100	
7831-34 (3)	22.2-23.6	100	
7834-41 (7)	25.6-26.8	100	
7841-48 (7)	27.5-28.7	100	
7848-52 (4)	24.3-25.6	100	
7852-65 (13)	22.9-24.3	100	
7865-94 (29)	25.6-26.8	100	
7894-99 (5)	24.3-25.6	100	
7899-7909 (10)	25 -26.2	100	
ISF DEPTHS			

TESTS:

FORMATION:

LATROBE

LOGS:

ISF-SCT, CNL-FDC-GR

COMMENTS:

R.B. King
R.B. KING

BY

PE902303

This is an enclosure indicator page.
The enclosure PE902303 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE902303 has the following characteristics:

- ITEM_BARCODE = PE902303
- CONTAINER_BARCODE = PE902302
 - NAME = Geological Cross Section A-A'
 - BASIN = GIPPSLAND
 - PERMIT = VIC/L7
 - TYPE = WELL
 - SUBTYPE = CROSS_SECTION
- DESCRIPTION = Geological Cross Section A-A' (plate 2
of WCR) for Kingfish-5
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
 - W_NO = W681
 - WELL_NAME = Kingfish-5
 - CONTRACTOR = ESSO
 - CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902304

This is an enclosure indicator page.
The enclosure PE902304 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE902304 has the following characteristics:

- ITEM_BARCODE = PE902304
- CONTAINER_BARCODE = PE902302
 - NAME = Structure Map Top of Latrobe Group
 - BASIN = GIPPSLAND
 - PERMIT = VIC/L7
 - TYPE = SEISMIC
 - SUBTYPE = HRZN_CONTR_MAP
- DESCRIPTION = Structure Map Top of Latrobe Group
(plate 1 of WCR) for Kingfish-5
- REMARKS =
- DATE_CREATED = 31/08/1974
- DATE_RECEIVED =
- W_NO = W681
- WELL_NAME = Kingfish-5
- CONTRACTOR = ESSO
- CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601433

This is an enclosure indicator page.
The enclosure PE601433 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE601433 has the following characteristics:

ITEM_BARCODE = PE601433
CONTAINER_BARCODE = PE902302
 NAME = Well Completion Log
 BASIN = GIPPSLAND
 PERMIT = VIC/L7
 TYPE = WELL
 SUBTYPE = COMPLETION_LOG
 DESCRIPTION = Well Completion Log (plate 3 of WCR)
 for Kingfish-5
 REMARKS =
 DATE_CREATED = 05/06/1974
 DATE_RECEIVED =
 W_NO = W681
 WELL_NAME = Kingfish-5
 CONTRACTOR = ESSO
 CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902305

This is an enclosure indicator page.
The enclosure PE902305 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE902305 has the following characteristics:

- ITEM_BARCODE = PE902305
- CONTAINER_BARCODE = PE902302
- NAME = Time Depth Curve
- BASIN = GIPPSLAND
- PERMIT = VIC/L7
- TYPE = WELL
- SUBTYPE = VELOCITY_CHART
- DESCRIPTION = Time Depth Curve (plate 4 of WCR) for
Kingfish-5
- REMARKS =
- DATE_CREATED = 03/06/1974
- DATE_RECEIVED =
- W_NO = W681
- WELL_NAME = Kingfish-5
- CONTRACTOR = ESSO
- CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601966

This is an enclosure indicator page.
The enclosure PE601966 is enclosed within the
container PE903333 at this location in this
document.

The enclosure PE601966 has the following characteristics:

ITEM_BARCODE = PE601966
CONTAINER_BARCODE = PE902302
NAME = Kingfish 6 bariod Well log
BASIN = GIPPSLAND
PERMIT = VIC/L7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Kingfish 6 Bariod well log, page 1 of
25 (enclosure from WCR) for Kingfish-5
REMARKS =
DATE_CREATED = 2/06/74
DATE_RECEIVED =
W_NO = W683
WELL_NAME = Kingfish 6
CONTRACTOR = Bariod Well Logging Services
CLIENT_OP_CO = Esso Australia Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE603482

This is an enclosure indicator page.
The enclosure PE603482 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603482 has the following characteristics:

ITEM_BARCODE = PE603482
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 2 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603483

This is an enclosure indicator page.
The enclosure PE603483 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603483 has the following characteristics:

ITEM_BARCODE = PE603483
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 3 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603484

This is an enclosure indicator page.
The enclosure PE603484 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603484 has the following characteristics:

ITEM_BARCODE = PE603484
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 4 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603485

This is an enclosure indicator page.
The enclosure PE603485 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603485 has the following characteristics:

- ITEM_BARCODE = PE603485
- CONTAINER_BARCODE = PE902302
- NAME = Kingfish 5 Mud Log
- BASIN = GIPPSLAND
- PERMIT = VIC L/7
- TYPE = WELL
- SUBTYPE = MUD_LOG
- DESCRIPTION = Mud Log for Kingfish-5 5 of 25
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
- W_NO = W702
- WELL_NAME = KINGFISH-5
- CONTRACTOR = BAROID
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603486

This is an enclosure indicator page.
The enclosure PE603486 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603486 has the following characteristics:

ITEM_BARCODE = PE603486
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 6 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603487

This is an enclosure indicator page.
The enclosure PE603487 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603487 has the following characteristics:

- ITEM_BARCODE = PE603487
- CONTAINER_BARCODE = PE902302
- NAME = Kingfish 5 Mud Log
- BASIN = GIPPSLAND
- PERMIT = VIC L/7
- TYPE = WELL
- SUBTYPE = MUD_LOG
- DESCRIPTION = Mud Log for Kingfish-5 7 of 25
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
- W_NO = W702
- WELL_NAME = KINGFISH-5
- CONTRACTOR = BAROID
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603488

This is an enclosure indicator page.
The enclosure PE603488 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603488 has the following characteristics:

ITEM_BARCODE = PE603488
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 8 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603489

This is an enclosure indicator page.
The enclosure PE603489 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603489 has the following characteristics:

ITEM_BARCODE = PE603489
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 9 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603490

This is an enclosure indicator page.
The enclosure PE603490 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603490 has the following characteristics:

ITEM_BARCODE = PE603490
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 10 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603491

This is an enclosure indicator page.
The enclosure PE603491 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603491 has the following characteristics:

ITEM_BARCODE = PE603491
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 11 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603492

This is an enclosure indicator page.
The enclosure PE603492 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603492 has the following characteristics:

ITEM_BARCODE = PE603492
CONTAINER_BARCODE = PE902302
 NAME = Kingfish 5 Mud Log
 BASIN = GIPPSLAND
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 12 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
 W_NO = W702
 WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603493

This is an enclosure indicator page.
The enclosure PE603493 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603493 has the following characteristics:

- ITEM_BARCODE = PE603493
- CONTAINER_BARCODE = PE902302
- NAME = Kingfish 5 Mud Log
- BASIN = GIPPSLAND
- PERMIT = VIC L/7
- TYPE = WELL
- SUBTYPE = MUD_LOG
- DESCRIPTION = Mud Log for Kingfish-5 13 of 25
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
- W_NO = W702
- WELL_NAME = KINGFISH-5
- CONTRACTOR = BAROID
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603494

This is an enclosure indicator page.
The enclosure PE603494 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603494 has the following characteristics:

ITEM_BARCODE = PE603494
CONTAINER_BARCODE = PE902302
 NAME = Kingfish 5 Mud Log
 BASIN = GIPPSLAND
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 14 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
 W_NO = W702
 WELL_NAME = KINGFISH-5
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603495

This is an enclosure indicator page.
The enclosure PE603495 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603495 has the following characteristics:

ITEM_BARCODE = PE603495
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 15 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603496

This is an enclosure indicator page.
The enclosure PE603496 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603496 has the following characteristics:

ITEM_BARCODE = PE603496
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 16 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603497

This is an enclosure indicator page.
The enclosure PE603497 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603497 has the following characteristics:

ITEM_BARCODE = PE603497
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 17 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603498

This is an enclosure indicator page.
The enclosure PE603498 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603498 has the following characteristics:

- ITEM_BARCODE = PE603498
- CONTAINER_BARCODE = PE902302
- NAME = Kingfish 5 Mud Log
- BASIN = GIPPSLAND
- PERMIT = VIC L/7
- TYPE = WELL
- SUBTYPE = MUD_LOG
- DESCRIPTION = Mud Log for Kingfish-5 18 of 25
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
- W_NO = W702
- WELL_NAME = KINGFISH-5
- CONTRACTOR = BAROID
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603499

This is an enclosure indicator page.
The enclosure PE603499 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603499 has the following characteristics:

ITEM_BARCODE = PE603499
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 19 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603500

This is an enclosure indicator page.
The enclosure PE603500 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603500 has the following characteristics:

ITEM_BARCODE = PE603500
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 20 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603501

This is an enclosure indicator page.
The enclosure PE603501 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603501 has the following characteristics:

ITEM_BARCODE = PE603501
CONTAINER_BARCODE = PE902302
NAME = Kingfish 5 Mud Log
BASIN = GIPPSLAND
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 21 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
W_NO = W702
WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603502

This is an enclosure indicator page.
The enclosure PE603502 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603502 has the following characteristics:

ITEM_BARCODE = PE603502
CONTAINER_BARCODE = PE902302
 NAME = Kingfish 5 Mud Log
 BASIN = GIPPSLAND
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = MUD_LOG
 DESCRIPTION = Mud Log for Kingfish-5 22 of 25
 REMARKS =
 DATE_CREATED = 31/07/1974
 DATE_RECEIVED =
 W_NO = W702
 WELL_NAME = KINGFISH-5
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603503

This is an enclosure indicator page.
The enclosure PE603503 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603503 has the following characteristics:

- ITEM_BARCODE = PE603503
- CONTAINER_BARCODE = PE902302
- NAME = Kingfish 5 Mud Log
- BASIN = GIPPSLAND
- PERMIT = VIC L/7
- TYPE = WELL
- SUBTYPE = MUD_LOG
- DESCRIPTION = Mud Log for Kingfish-5 23 of 25
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
- W_NO = W702
- WELL_NAME = KINGFISH-5
- CONTRACTOR = BAROID
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603504

This is an enclosure indicator page.
The enclosure PE603504 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603504 has the following characteristics:

- ITEM_BARCODE = PE603504
- CONTAINER_BARCODE = PE902302
- NAME = Kingfish 5 Mud Log
- BASIN = GIPPSLAND
- PERMIT = VIC L/7
- TYPE = WELL
- SUBTYPE = MUD_LOG
- DESCRIPTION = Mud Log for Kingfish-5 24 of 25
- REMARKS =
- DATE_CREATED = 31/07/1974
- DATE_RECEIVED =
- W_NO = W702
- WELL_NAME = KINGFISH-5
- CONTRACTOR = BAROID
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603505

This is an enclosure indicator page.
The enclosure PE603505 is enclosed within the
container PE902302 at this location in this
document.

The enclosure PE603505 has the following characteristics:

ITEM_BARCODE = PE603505
CONTAINER_BARCODE = PE902302
 NAME = Kingfish 5 Mud Log
 BASIN = GIPPSLAND
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log for Kingfish-5 25 of 25
REMARKS =
DATE_CREATED = 31/07/1974
DATE_RECEIVED =
 W_NO = W702
 WELL_NAME = KINGFISH-5
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)