Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

KINGFISH-3 (W513)

WELL SUMMARY REPORT

LOCATION

EARLIER FILES	LATER FILES	RECORDS DISPOSITION

PLUGGED & SUSPENDED.

SPUD. 2-2-68.
T.D.R. 28-2-68.

38° 35' 03"S
148° 06' 07"E

KINGFISH – 3.

ESSO. VIC/L4. T.D. 8299' 513 W.D. 243' K.B. 31'
GLOMAR III

I.E.S.	RUN 1.	776'-2450'.	SEP. LOGS 2" AND 5".
"	" 2.	2413'-8282'.	" " " " "
B.H.C.S.	" 1.	778'-2441'.	" " " " "
"	" 2.	2415'-8282'.	" " " " "
F.D.C.	" 1.	2416'-8282'	" " " " "
M.L.L.	" 1.	7300'-7800'	" " " " "
EPIT.N.	" 1.	7300'-7940'	" " " " "
G.R./N.	" 1. 5".	7320'-7980'.	
C.D.M.	" 2. 5" "and" 2".	2414'-8273'.	

FIT. RUNS 1 & 2. TESTS 1–6.
CORE LAB. MUDLOG. 2450'–8293'.
" " COMPLETION COREGRAPH. CORES 2–6.
CORE DESCRIPTIONS. 1–6.
VELOCITY SURVEY WITH T.D.C.
LITHOLOGY FROM GRAPHOLOGY REPORT.
WELL SUMMARY WITH LITHOLOGY.
CUTTINGS: 2450'–8270' IN STORE
CORES: 6 OFF. 1 IN 7019'-7049', and 5 IN 7460'–7623'. IN STORE.

MICROPALAEONTOLOGY REPORT BY D.J. TAYLOR.
PALYNOLOGY REPORT BY L.E. STOVER AND A.D. PARTRIDGE.
CORE LAB. SHOW REPORT.
DAILY AND WEEKLY REPORTS.
COMPLETION REPORT.
PALYNOLOGY REPORT REVISION BY. A.D PARTRIDGE.

[illegible]	CVO
Director Bureau of Animal Welfare	DBAW
Director Fisheries	DF
Director Quality Assurance	DQA
Director Agribusiness	DA

KINGFISH-3 (W513)

Well Summary Report

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Well Summary

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WELL SUMMARY.

CONFIDENTIAL

KINGFISH C-1 COMPLETION REPORT

ESSO KINGFISH C-1 WELL SUMMARY

Purpose of Well:

Step-out assessment well to assess the magnitude of the Kingfish structure and confirm the oil column 4.5 miles west-northwest of Kingfish B-1 well. Further to establish pay zone characteristics and the oil-water contact at that part of the structure.

Well Statistics:

Location:	Longitude 148° 06' 07"
	Latitude 38° 35' 03"
Elevation:	Rotary table 31' above mean sea level.
Water Depth:	243 feet.
Spudded:	February 2, 1968.
Completed:	March 5, 1968.
Well Status:	Plugged and suspended
Casing:	30" at 384 feet.
	20" at 733 feet.
	$13^3/8$" at 2414 feet.
Perforations:	None.
Plugs:	No. 1: 7650 - 7310 feet. Used 300 sacks Aust. N. cement at 15.4 lbs/gallon.
	No. 2: 2560 - 2240 feet. Used 385 sacks Aust. N. cement at 15 lbs/gallon.
	No. 3: 500 - 300 feet. Used 145 sacks cement at 14.9 lbs/gallon.
Cores:	Six cores.
	Core 1: 7019 - 7049 feet, and 5 cores in the interval 7460 - 7628 feet; cut 200 feet, recovered 138 feet 6 inches.

..../2

Mud Logs: Well logged by Core Laboratories from 2450 feet to total depth.

Electric Logs:

IES	:	776	-	8282 feet.
SGCR	:	778	-	8282 feet.
GRN	:	7320	-	7980 feet.
FDC	:	2416	-	8282 feet.
MLL	:	7300	-	7800 feet.
E N	:	7300	-	7940 feet.

Hydrocarbons:

Interval	Gross	Net	Type
7462-7608 ft.	146 ft.	116 ft.	Oil.

Testing:

Wireline Formation Tests:

Test 1 7617 feet : Recovered 17,700 cc's water (Salinity 6300 ppm); 100 cc's mud; also segregated chamber: 2250 cc's water (Salinity 11,800 ppm) S.I.P. 3400 psi.

Test 2 7600 feet : Recovered 4800 cc's oil, 48.5° A.P.I. at 79 feet. 6.9 c.ft. gas. 3000 cc's mud filtrate - 4300 ppm. Also two bombs 1650 cc's oil G.O.R. = 228. S.I.P. 3400 psi.

Test 3 7550 feet : Recovered 20,500 cc's water, 4000 ppm (mudfiltrate). S.I.P. 3400 psi.

Test 4 7576 feet : Packer seat failed.

Test 5 7481 feet : Recovered 290 cc's water, salinity 2456 ppm. S.I.P. = 3900 psi.

Test 6 7574 feet : Recovered 20,500 cc's water, 2576 ppm. S.I.P. 3350 psi. Also segregated chamber: recovered 1950 cc's water (2693 ppm).

..../3

Stratigraphic Table:

Age	Formation	Top RT	Subsea	Thickness
Miocene	Gippsland and younger.		- 243	4827
Oligocene	Lakes Entrance Fm.	5070	- 5039	2391
Eocene	Latrobe Valley	7461	- 7430	8381
	O.W.C.	7608	- 7577	
	T.D.	8299	- 8268	

JM:JHM
14.3.68

LITHOLOGY:

Gippsland Formation:

2450 - 3277 ft:	Mudstone: light grey, calcareous, slightly silty, fossiliferous.
3277 - 5150 ft:	Alternating: Mudstone: light grey, calcareous, fossiliferous. Limestone: grey, compacted, micritic, skeletal, partly argillaceous, carbonaceous.
5150 - 6670 ft:	Mudstone: olive grey to green grey, calcareous, fossiliferous, glauconitic.

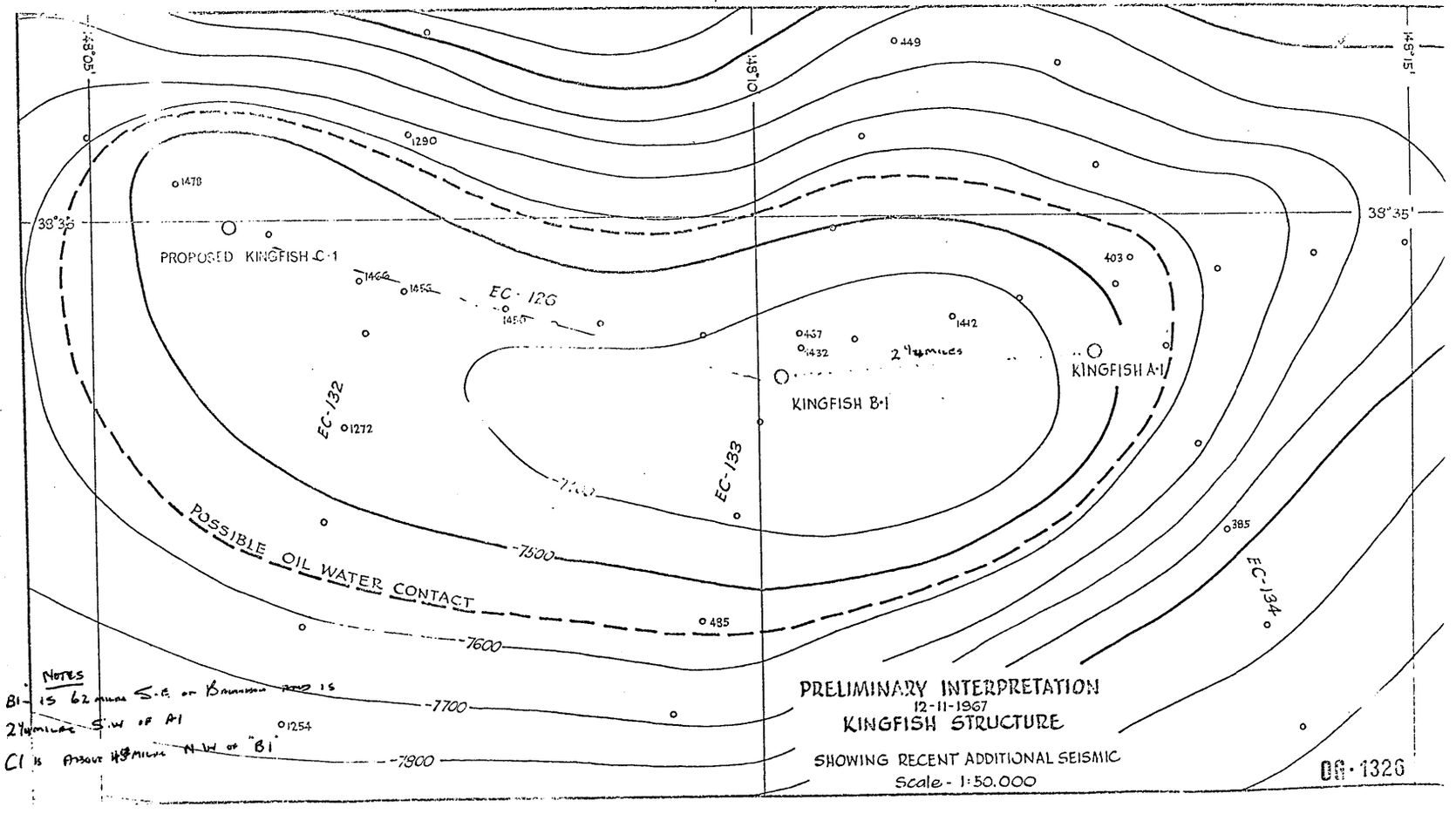
Lakes Entrance Formation:

6670 - 6820 ft:	Mudstone: as above.
6820 - 7049 ft:	Limestone: grey, argillaceous, minor silty or carbonaceous lenses and streaks.
7049 - 7450 ft:	Mudstone: grey green, traces of glauconite, pyrite and coal.
7450 - 7460 ft:	Quartz sand: medium to coarse grained, sub-angular to sub-rounded, faint scattered pin-point fluorescence.

Latrobe Valley Formation:

7460 - 7610 ft:	Sandstone: grey, argillaceous, hard, firm, very fine to fine grained, sub-angular to sub-rounded, clay matrix.
7610 - 7628 ft:	Alternating: Shale: grey, hard. Quartzwacke: grey, very fine grained, firm, sub-angular to sub-rounded. Siltstone: grey, hard, carbonaceous.
7628 - 7750 ft:	Sandstone: argillaceous, fine grained.
7750 - 8299 ft:	Sandstone: medium grained, rounded to sub-rounded. Shale: dark brown to black, firm, fissile, micaceous, carbonaceous. Coal: conchoidal fractured, anthracitic.

. . . . . .

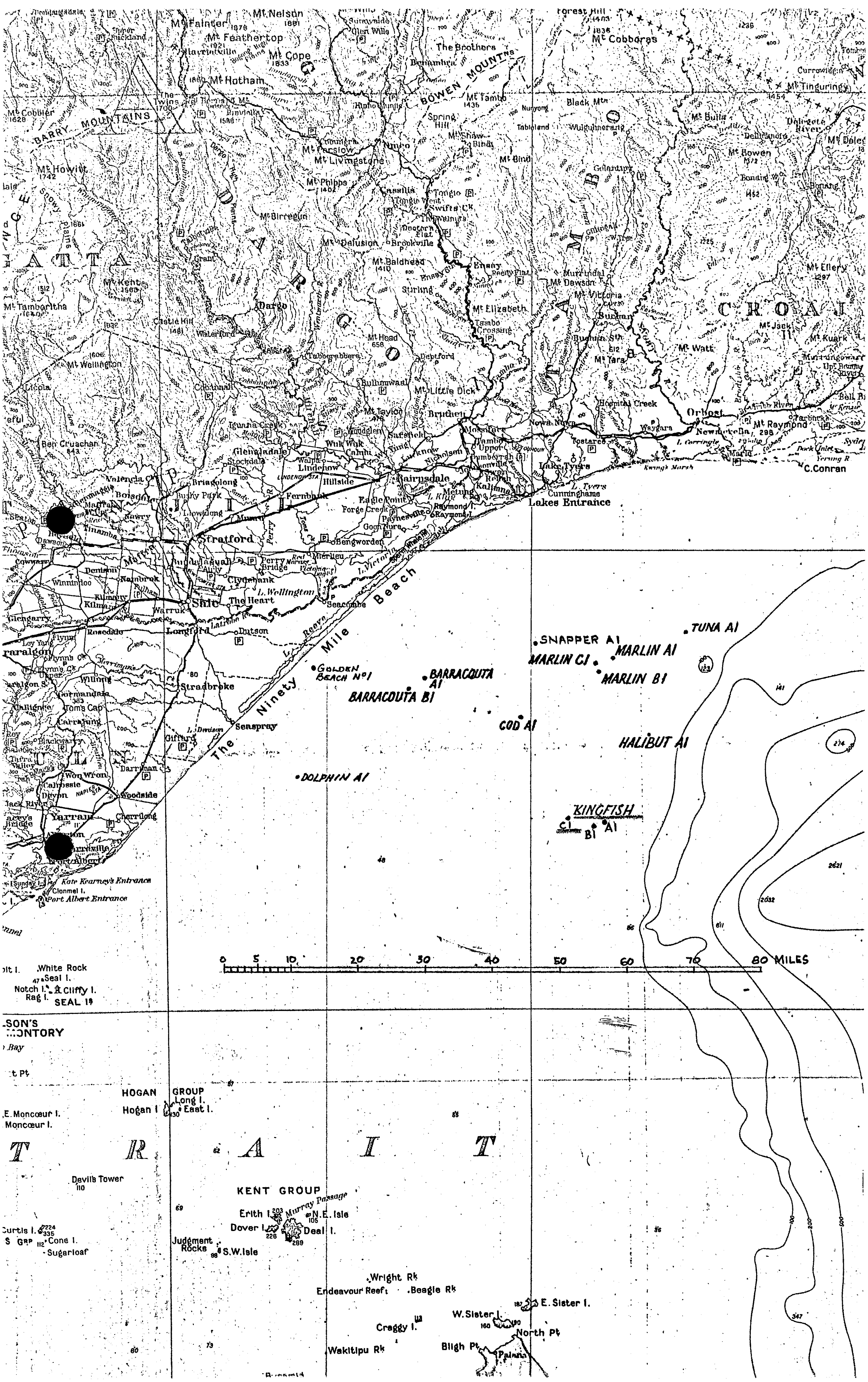


NOTES

B1 is 6 2 miles S.E. of Barracuda and is

2½ miles S.W. of A1

C1 is Approx 4¾ miles N.W. of "B1"



SNAPPER A1
TUNA A1
MARLIN A1
MARLIN C1
MARLIN B1
GOLDEN BEACH No1
BARRACOUTA A1
BARRACOUTA B1
COD A1
HALIBUT A1
DOLPHIN A1
KINGFISH C1 B1 A1
The Ninety Mile Beach
0 5 10 20 30 40 50 60 70 80 MILES
Lakes Entrance
Bairnsdale
Sale
Stratford
Orbost
C.Conran
HOGAN GROUP
KENT GROUP
BOWEN MOUNTAINS
BARRY MOUNTAINS

LITHOLOGY

1 OF 3 : HYDROCARBON REPORT

MUD, CORE AND CUTTINGS ANALYSIS

FOR

ESSO STANDARD OIL (AUST.) LTD.

ESSO KINGFISH C-1 WELL

STEPOUT

VICTORIA, AUSTRALIA

BY

CORE LABORATORIES AUSTRALIA (QLD) LTD.

CORE LABORATORIES AUSTRALIA (QLD) LTD.

Petroleum Reservoir Engineering

BRISBANE, AUSTRALIA

8th March, 1968

G.P.O. BOX 664K
CABLE: CORELAB
PHONE: 5-3222

RE-NAMED
(AUG. 1968)
KINGFISH 3

ESSO STANDARD OIL (AUST.) LTD.,
Box 4249, G. P. O.,
SYDNEY, NEW SOUTH WALES. 2001.

ATTENTION: MR. JOHN L. ELLIOTT.

SUBJECT: CORE, MUD AND CUTTINGS ANALYSIS,
KINGFISH C-1 WELL,
STEPOUT,
OFFSHORE - BASS STRAIT,
VICTORIA, AUSTRALIA.

GENTLEMEN:

A CORE LABORATORIES AUSTRALIA combination drill cuttings and core analysis unit was present at the site of the subject well during drilling operations from 2450 feet to the total depth of 8293 feet.

Using standard equipment, a Programmed Hydrocarbon Detector, and a Beckman GC-1 Gas Chromatograph, the drilling fluid was monitored continuously for Hydrocarbons, Hydrogen Sulfide, Carbon Dioxide and the drill cuttings were checked at regular intervals for gas and oil content and lithology. Shale Density determinations were made at regular intervals when applicable. All core analysis was performed by API standard procedures. The results of these operations are shown on the accompanying Grapholog and Coregraph. A description of cores recovered is given on Pages 2 through 3.

HYDROCARBON SHOWS:
Hydrocarbons were detected in one zone during the drilling of this Well. Details of this show are included on the attached Show Report No. 1 (Page 4).

CORE ANALYSIS:
Core Analysis of the Zone 7460 feet to 7615 indicated good reservoir conditions. Oil production is indicated, although some zones have marginal oil saturations.

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

Yours very truly,
CORE LABORATORIES AUSTRALIA (QLD) LTD.

Joe B McAdams

JOE B. MC ADAMS,
RESIDENT MANAGER.

SHOW REPORT
CL-403

CORE LABORATORIES, INC.

Operator ESSO STANDARD OIL (AUST.) LTD. No. 1
Well KINGFISH C-1 ~~Cobia~~ State VICTORIA CLA No. FL-115-14L
Date

DESCRIPTION OF SHOW:

Show Interval 7460 To 7611
Color of Flu Blue White Intensity of Flu Trace
% Sand-Lime in Sample 80 % of Sand-Lime w/Flu 100
Cut: Visual Nil Flu Instant Blue
Lithology of Section: SANDSTONE: Light grey, medium to coarse grained, sub angular to sub rounded, unconsolidated, moderate sorting.

GAS UNITS:

	HOT WIRE			P/H/D (CHROMATOGRAPH)					
M[illegible]	Hi	Lo	Mud	Methane C_1	Ethane (+) C_2 (+)	Ethane C_2	Propane C_3	Butane C_4	Pentane C_5
From:	5	-	From:	10	-				
To:	46	-	To:	44	-	22	34	26	8
Cuttings			Cuttings						
From:	0	0	From:	NOT RECORDED					
To:	140	120	To:						

ADDITIONAL INFORMATION:

Bit Condition — New ____ Worn X ____ Dull ____
Drilling Break — Yes ____ No X ____
Average Drilling Rate — Controlled Rate ____ Before Break 1.7 ____ During Break 1.5
Weight on Bit Changes — Increased ____ Decreased ____ No Change X
Circulated Out — Yes X No ____ Depth CO NOTE
Chloride Changes — Before 1640 After 2162

FL[illegible] EVALUATION:

Minor ____ Poor ____ Fair ____ Good X Remarks:
NOTE: Drilling and circulating in anticipation of hydrocarbon zone.

FINAL EVALUATION: (It is recognized that other information such as other shows, side wall samples, etc. are necessary for the best evaluation. Consequently, this final opinion will be given at the end of the job after this data is available.)
This appears to be a moderately good well although the marginal oil saturations in scattered zones may indicate early water cutting.

LITHOLOGY

2 OF 3: MUDLOGGING

Kingfish 3 Well

Lithology as given in Core Laboratories (Aust) (Qld) Ltd's "Graphology" report.

2450'-2510' **Marl**: blue grey, sli calc, sli fiss silty, v/fn grn, foss debris.

Sandstone: clr occ orange grn, med to fn grn, sub rnd ~~md~~ to rnd ~~md~~, loose, mod srtg frosted surfaces, occ fractured. Some chert and calcite grains.

(Graphic column shows approx 55% Ssst. & 45%Mst.)

2510'
~~2450~~'-3020' **Mudstone:** blue to olive gy argill w/very fine fossil debris.

Sandstone: section continues.

(No return 2570'-2600')

Note: Hole being drilled with sea water only, resulting in part sample returns and unusually high grs readings.

(Graphic column shows Sandstone % diminishing: about 50% to 2840,35% to 2900', 20% to 2990', & 10% to 3020)

3020'-3300' **Mudstone & Limestone:** Mudstone is lt gry to olive gry, calc soft to firm, sli glauc, silty, carb matter
Limestone is gry to lt brn, detrital, v glauc, argill w/minor quartz residue, foss.

Note Drilling with fresh water gel

(Graphic column shows limestone about 25% to 3260' & then 35%.)

3300'-3800' **Mudstone & Limestone:** Mudstone section continues.
Limestone is micritic buff gry, sl detrital, lt gry argill mtx, med hd to firm, sl micac, fn glauc grn acc.

(Graphic column shows limestone % increasing to 90% 3590'-3640' thus decreasing to 50% at 3800')

3800'-4460' **Mudstone & Limestone:** Mudstone is olive gy to gy, soft to firm, v calc, silty, fossil debris, glauc, sli carb.
Limestone is lt gy brn, micritic, granular, hd argill glauc, sli carb, some quartz grains, clear to frosted.

(Graphic column shows limestone continues to average 50% - 40% to ~~4190~~ 4190', 20%-30% to 4275', increase ~~revenue~~ to 80% at 4330', 80% to 4460')

4460'-5100' Mudstone & Limestone: Mudstone is grey green, soft, sli fissile, to glauc mica v/calc.

Limestone is buff to olive grey, micritic, granular, firm to mod hd, argill, to glauc mica, minor carb flecks. Tr loose qtrz grns.

(Graphic column shows limestone of 80% to 4730' then 100% to 5100' except 5% limestone 5040'-5050').

5100'-7460' Mudstone: Olive grey to lt brn gy, gy green, firm to occ soft, silty in part pyritic, sli glauc fossil, some quartz grains, clear to frosted, f to med gr.

(Graphic column shows limestone % decreasing from 100% at 5100 to 0% at 5210'.)

No returns 5830'-5860'.

Core No1 7019'-7049' Cut 30' Rec 30'.

7460' Sandstone

LITHOLOGY

3 OF 3 : CORE

DESCRIPTIONS OF CORE KINGFISH ~~C-1~~ -3 WELL

CORE NO. 1

7019 - 7049 Recovery 30'

MUDSTONE: Dark to greenish grey, moderately hard, very calcareous and approaches an agrillaceous limestone, laminated with thin lensoid and burrow-like structures, silt sized fossil debris found along lensoid faces. Bedding essentially flat but has some areas of churning in the vicinity of heavily concentrated worm burrows, horizontal and vertical fractures found throughout core. Neither odour nor fluorescence noted in core.

CORE NO. 2

7460 - 7484 Recovery 24'.

SANDSTONE: Medium to dark grey, moderately hard, predominantly fine to medium grained but with local intervals of pebble sized grains, sub angular to sub rounded, poor to fair sorting, abundant worm burrows with churning in areas of concentrated burrows, small amounts of coal, glauconite, pyrite, inclusions which contain carbonaceous matter, light grey clay cement. Oil bleeding from local intervals, patchy but good blue white fluorescence, good odour.

CORE NO. 3

7484 - 7508 Recovery 22'

7484 - 7506 SANDSTONE: Grey to dark grey, moderately hard to soft, predominantly very fine to fine grained but with local intervals of medium to granule sizes, sub angular to sub rounded with some frosting, moderately well sorted, essentially flat bedded but churned in the vicinity of heavily concentrated worm burrows, burrows infilled with coarser and cleaner varieties of sand, argillaceous to silty matrix, pyrite and mica. Poor spotty blue-white fluorescence in top of core which improves with depth and also improves in areas of churning. Oil bleeding from most of core while fair to good odour detected throughout interval.

7506 - 7508 NOT RECOVERED.

Descriptions of Cores.
KINGFISH - 3

CORE NO. 4

7508 - 7572'	Recovery 46'
7508 - 7554'	SANDSTONE: Light grey, moderately hard to soft, fine to medium grained with a few pebble bands, sub angular to sub rounded with some frosted grains, generally well sorted, horizontal thin laminae of carbonaceous matter, traces of pyrite and mica, carbonaceous matter becomes more concentrated in lower portions of core, silty to argillaceous matrix, blue-white fluorescence exhibited throughout core but is slightly spotty at local intervals, good odour and bleeding oil noted throughout core.
7554 - 7572'	NOT RECOVERED.

CORE NO. 5

7572 - 7606'	Recovery 1'6".
7572 - 7573'2"	SHALE: Dark grey, hard, interbedded with very thin laminations of very fine grained sand, pyrite, traces of mica and carbonaceous matter.
7573'2" - 7573'6"	SANDSTONE: Grey, hard, very fine to fine grained, sub angular to sub rounded with some frosted grains, well sorted, micaceous, traces of coal, light grey clay matrix. Neither fluorescence nor odour detected.
7573'6" - 7607'	NOT RECOVERED.

CORE NO. 6

7608 - 7628'	Recovery 15'
7608 - 7612'6"	SANDSTONE: Grey moderate hardness very fine grained, sub angular to sub rounded with some frosted grains, well sorted, 5° - 10° thin dark grey laminations, carbonaceous matter, traces of mica, light grey clay matrix. Good blue-white fluorescence and odour to 7611. Local intervals of bleeding oil.
7612'6" - 7614'	SHALE: Brownish grey, hard micro-micaceous.
7614 - 7615'	SANDSTONE: Grey, moderate hardness, very fine grained, sub angular to sub rounded with some frosted grains, well sorted, carbonaceous laminations, poorly developed cross bedding.
7615 - 7621'	SHALE: Brownish grey, hard, abundant worm burrows which are infilled with coarse grained light grey sand, carbonized plant remains, local coal bands.
7621 - 7623'	SILTSTONE: Grey, hard, laminated, micaceous, carbonaceous, worm burrows and churning, traces of pyrite, carbonized plant remains.
7623 - 7628'	NOT RECOVERED.

PALYNOLOGY & PALAEONTOLOGY

7655 feet (sidewall core) **KINGFISH – 3.**

Reasonably well preserved plant microfossils obtained from the sample include abundant cuticular material, low concentrations of spores and pollen grains, and rare microplankton. Species identified include:

Spores: Cyathidites australis Couper
C. splendens Harris
Gleicheniidites circinidites (Cookson)
Stereisporites antiquasporites (Wilson & Webster)

Pollen: Araucariacites australis Cookson
Nothofagidites emarcidus (Cookson)
Podocarpidites elliptieus Cookson
Proteacidites annularis Cookson
P. crassus Cookson
P. dilwynensis Harris
P. subscabratus Couper

Microplankton: Deflandrea dartmoria Cookson & Eisenack

7934 feet (sidewall core)

A residue containing abundant cuticular material and fairly preserved spores and pollen grains was extracted from the sample. Species identified include:

Spores: Baculatisporites comaumensis (Cookson)
Cyathidites splendens Harris
Gleicheniidites circinidites (Cookson)
Latrobosporites crassus Harris

Pollen: Araucariacites australis Cookson
Banksieaeidites sp.
Dacrydiumites elliptieus Harris (1 specimen only)
D. florinii Cookson & Pike
Myrtaceidites eugeniioides Cookson & Pike
Nothofagidites emarcidus (Cookson)
Phyllocladidites mawsonii Cookson
Podocarpidites elliptieus Cookson
Proteacidites annularis Cookson
P. crassus Cookson
P. incurvatus Cookson
P. subscabratus Couper
Triorites harrisii Couper

8005 feet (sidewall core)

Reasonably well preserved spores and pollen grains were extracted from the sample and include the following species:

Spores: Cyathidites minor Couper
C. splendens Harris
Gleicheniidites circinidites (Cookson)
Laevigatosporites ovatus Wilson & Webster
Trilites tuberculiformis Cookson

Pollen: Araucariacites australis Cookson
Cycadopites sp.
Dacrydiumites elliptieus Harris
Microcachryidites antarcticus Cookson
Nothofagidites emarcidus (Cookson)
N. cf. brachyspinulosus (Cookson)
Phyllocladidites mawsonii Cookson
P. reticulosaccatus Harris
Polycingulatisporites crassus Harris
Proteacidites crassus Cookson
P. incurvatus Cookson
P. subscabratus Couper
Podocarpidites elliptieus Harris

Stephanoporopollenites obscurus Harris
Tiliaepollenites notabilis Harris
Triorites harrisii Couper

Remanié: Trilobosporites trioreticulosus - Lower Cretaceous

8237 feet (sidewall core)

The fairly preserved microflora includes abundant spores and pollen grains and rare microplankton. Constituent species include:

Spores: Cyathidites australis Couper
C. minor Couper
Laevigatosporites ovatus Wilson & Webster
Gleicheniidites circinidites (Cookson)
Stereisporites antiquasporites (Wilson & Webster)

Pollen: Araucariacites australis Cookson
Dacrydiumites balmei Cookson
D. ellipticus Harris
Monosulcites praeminatus McIntyre
Nothofagidites emarcidus (Cookson)
N. cf. brachyspinulosus (Cookson)
Phyllocladidites mawsonii Cookson
P. reticulosaccatus Harris
Proteacidites subscabratus Couper
Stephanoporopollenites obscurus Harris
Triorites harrisii Couper

Microplankton: Epicephalopyxsis indentata Deflandre & Cookson

8260 feet (sidewall core)

Abundant poorly preserved and strongly compressed plant microfossils were extracted from the sample. The assemblage which is chiefly composed of spores and pollen grains also includes rare microplankton.

Spores: Cyathidites splendens Harris
Gleicheniidites circinidites (Cookson)
Stereisporites antiquasporites (Wilson & Webster)

Pollen: Dacrydiumites balmei Cookson
D. ellipticus Harris
D. florinii Cookson & Pike
Microcachryidites antarcticus Cookson
Nothofagidites emarcidus (Cookson)
Proteacidites subscabratus Couper
Phyllocladidites mawsonii Cookson
Stephanoporopollenites obscurus Harris
Tricolpites gillii Cookson
Triorites edwardsii Cookson & Pike f. tenuis Stover & Jones

Microplankton: Deflandrea sp.
Gingindinium tabulatum Cookson & Eisenack

BASIN GIPPSLAND BY D.J. TAYLOR

WELL NAME KINGFISH-3 DATE 20/4/71 ELEV. +31'

Foram Zonules

		Highest Data	Quality	2 way Time	Lowest Data	Quality	2 way Time
MIOCENE	A						
	Alternate						
	B						
	Alternate						
	C				2900	1	
	Alternate						
	D_1	2998	1		5000	1	
	Alternate	3064	0				
	D_2	5100	3		5200	0	
	Alternate	5200	0				
	E	5250	0		5400	3	
	Alternate						
	F	5506	0		6050	0	
	Alternate						
	G	6050	0		6250	0	
	Alternate						
	H_1	6300	3		6500	3	
	Alternate	6436	0				
	H_2	6595	2		7020	0	
	Alternate						
OLIGOCENE	I_1	7030	0		7204	0	
	Alternate						
	I_2						
	Alternate						
	J_1	7306	0		7379	2	
	Alternate						
	J_2						
	Alternate						
EOC.	K						
	Alternate						
	Pre K	7500	1		8260	2	

COMMENTS:

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

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

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

Date Revised 14/6/72

By DJT/AHP

BASIN GIPPSLAND DATE JUNE 1971.

WELL NAME KINGFISH - 3 ELEVATION + 31 feet.

AGE	PALYNOLOGIC ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg	Alternate Depth	Rtg	2 way time	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
MIOC.	T. bellus										
	P. tuberculatus										
EOCENE	U. N. asperus										
	L. N. asperus										
	P. asperopolus										
	U. M. diversus	7460	1				7482	1			
	L. M. diversus	7611	2	7620	1		7880	3	7635	2	
PALEOCENE	L. balmei	7900	4	7934	1		8260	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:

T.D. 9093 (1782)

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 & A.D. Partridge DATE JUNE 1971.

DATA REVIEWED BY: [illegible] DATE DEC. 1971

BASIN GIPPSLAND DATE

WELL NAME KINGFISH -3 ELEVATION +31 feet

AGE	PALYNOLOGIC ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
MIO.	P. tuberculatus										
EOCENE	U. N. asperus										
	M. N. asperus										
	L. N. asperus										
	P. asperopolus										
	U. M. diversus	7460	1				7482	1			
	M. M. diversus										
	L. M. diversus	7611	2	7620	1		7880	3	7635	2	
PALEOCENE	U. L. balmei	7900	3	7934	1		8260	1			
	L. L. balmei										
	T. longus										
LATE CRETACEOUS	T. lilliei										
	N. senectus										
	C. trip./T.pach.										
	C. distocarin.										
	T. pannosus										
EARLY CRETACEOUS											
PRE-CRETACEOUS T.D.		8293									

COMMENTS:

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./A.D.P. DATE June 1971; Dec. 1971

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

BASIN GIPPSLAND BY D.J. TAYLOR

WELL NAME KINGFISH-3 DATE 20/4/71 ELEV. +31'

Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
MIOCENE	A						
	Alternate						
	B						
	Alternate						
	C				2900	1	
	Alternate						
	D_1	2998	1		5000	1	
	Alternate	3064	0				
	D_2	5100	3		5200	0	
	Alternate	5200	0				
	E	5250	0		5400	3	
	Alternate						
	F	5506	0		6050	0	
	Alternate						
	G	6050	0		6250	0	
	Alternate						
	H_1	6300	3		6500	3	
	Alternate	6436	0				
	H_2	6595	2		7020	0	
	Alternate						
OLIGOCENE	I_1	7030	0		7204	0	
	Alternate						
	I_2						
	Alternate						
	J_1	7306	0		7379	2	
	Alternate						
	J_2						
	Alternate						
EOC.	K						
	Alternate						
	Pre K	7500	1		8260	2	

COMMENTS:

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

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

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

Date Revised 14/6/72

By DJT/ADP

BASIN GIPPSLAND DATE JUNE 1971.

WELL NAME KINGFISH - 3 ELEVATION + 31 feet.

AGE	PALYNOLOGIC ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg	Alternate Depth	Rtg	2 way time	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
MIOC.	T. bellus										
	P. tuberculatus										
EOCENE	U. N. asperus										
	L. N. asperus										
	P. asperopolus										
	U. M. diversus	7460	1				7482	1			
	L. M. diversus	7611	2	7620	1		7880	3	7635	2	
PALEO-CENE	L. balmei	7900	4	7934	1		8260	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:

T.D. 8093 (7892)

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 & A.D. Partridge DATE JUNE 1971.

DATA REVISED BY; CHECKED; L.E.S. DATE DEC. 1971

VELOCITY SURVEY

VELOCITY SURVEY

ESSO KINGFISH C-1

by
R.J. Steele

INTRODUCTION

Esso Australia contracted the United Geophysical Corporation to carry out a velocity survey on Kingfish C-1. Under the contract United furnished all necessary instrumentation and two personnel, a seismic observer and a marine shooter. A licenses shooting boat, "Wendy Maree", was supplied through Desma Engineering in Melbourne.

The velocity survey was carried out on February 29, 1968 when the well had reached T.D. at 8282 feet.

PROCEDURE

The sea was exceptionally calm throughout the survey and no operational difficulties were encountered. It was not considered necessary to use a T-bar as rig movements were slight and the well phone was effectively shielded from these movements by Schlumberger's compensators.

Buoys were set at approximately 1000 feet on either side of Glomar III in a line passing slightly west of the well-site (less than 30 feet). Charges were fired from the eastern sides of these buoys. Seven shots were fired on the northern side of the rig as the well-phone was lowered into the hole and six fired on the southern side at the same six depth positions as the well-phone was withdrawn from the hole. The charge size was 33-1/3 lbs. in every case.

RESULTS

A total of 13 shots were fired at 6 different levels. The records are included in the folder of this report and their quality is considered to be very good. However, when the records were analysed assuming a vertical well-hole, it was found that the T_{gd} of the repeated shots at all levels below -4154 feet were in disagreement with the T_{gd} of the original shots. Moreover, this discrepancy increased from 3 milliseconds at -5039 feet to 5 milliseconds at -8200 feet and the shots fired from the southern side of the rig consistently showed the longer T_{gd}.

The increasing discrepancy in the check shots with depth and the consistency in the sense of the disagreement suggested that the well-hole was deviated. The conventional analysis tacitly assumes that the well-hole is vertical so it was necessary to devise a formula without this restriction for analysing these velocity records. Such a formula is derived in an appendix accompanying this report.

Tabulated below are the velocities and one-way times obtained from the deviated well formula and they are compared with the averaged results of the conventional analysis of the velocity data.

	Deviated Hole Formula		Vertical Hole Formula	
			Av. N & S	
Depth rel S.L.	$\overline{V}$	$T_{(1)}$	$\overline{V}$	$T_{(1)}$
2959	-	-	7807	.379
4154	-	-	8530	.487
5039	8937	.564	8920	.565
6000	8925	.672	8915	.673
7429	9070	.819	9070	.819
8200	9273	.884	9265	.885

The velocities obtained from the deviated hole formula and the averaged results from the vertical hole formula show a close correspondence. The maximum difference in average velocity is 17 feet per second and the maximum difference in one-way time is 1 millisecond.

The velocity survey times obtained from both methods are compared with the integrated sonic times in an error tabulation sheet accompanying this report. The agreement is good.

CONCLUSION

The velocity survey was successful in tying the integrated sonic log to absolute time values.

7 March 1968

RE-NAMED
(AUG. 1968)
KINGFISH 3

VELOCITY SURVEY ERROR CHECK

KINGFISH C-1

STEELE & CRISS
February 29, 1968

Depth Rel.S.L.	Av. Vertical Travel Time (check shots)	Ti Check Shots (sec.)	Ti Sonic Log (sec.)	△ (Millisecs.)	Depth Interval (ft.)	Error (Microsec per ft.)
			V E R T I C A L H O L E A N A L Y S I S			
[illegible]59	.379	.108	.107	+ 1	1195	+ 1
4154	.487					
4154	.487	.078	.076	+ 2	885	+ 2
5039	.565					
5039	.565	.108	.106	+ 2	961	+ 2
6000	.673					
6000	.673	.146	.144	+ 2	1429	+ 1.5
7429	.819					
7429	.819	.066	.066	0	771	0
8200	.885					
			D E V I A T E D H O L E A N A L Y S I S			
4154	.487	.077	.076	+ 1	885	+ 1
5039	.564					
5039	.564	.108	.106	+ 2	961	+ 2
6000	.672					
6000	.672	.147	.144	+ 3	1429	+ 2
7429	.819					
7429	.819	.065	.066	- 1	771	- 1
8200	.884					

4 of 11

Shothole information - Elevation, Distance & Direction from Well

B ✳ 1000' ✕ 1000' ✳ A → N

Company: ESSO EXPLORATION AUSTRALIA INC.

Well: Kingfish C-1

Elevation (Derrick Floor): 31'

Total Depth: 8300

LOCATION

Coordinates: 38°35'03"S 148°06'07"E

Section, Township, Range

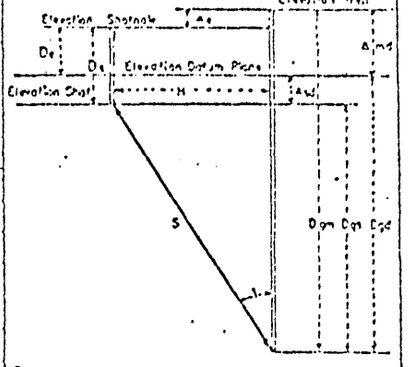
County

Area or Field: Gippsland Basin, Victoria

DATUM: Sea Level

Record Number	Shothole Number	Time of Shot	Dgm	Ds	tus	tr	T Reading	T Quality	T Grade	Dgs	H	TAN i	Cos i	Tgs	Δsd	Δsd/V	Tgd	Tgd Average	Dgd	ΔDgd	ΔTgd	Vi Interval Velocity	Va Average Velocity
1	A	10.40am	2990	5	.001	.247	.410	U	G	2954	1235	.4194	.9222	.3781	5	.001	.379						
1A	A	10.45am	2990	5	.001	.250	.411	D	VG	2954	1250	.4232	.9208	.3784	5	.001	.379	.379	2959				7807
12	B	12.50pm	2990	5	.001	.231	.405	D	G	2954	1155	.3910	.9316	.3773	5	.001	.378						
																				1195	.108	11065	
2	A	10.55am	4185	5	.001	.246	.508	D	G	4149	1230	.2965	.9587	.4870	5	.001	.488	.487	4154				8530
11	B	12.40pm	4185	5	.001	.233	.505	D	G	4149	1165	.2808	.9629	.4863	5	.001	.487						
																				885	.078	11346	
3	A	11.10am	5070	5	.001	.246	.579	D	VG	5034	1230	.2443	.9714	.5624	5	.001	.563	.565	5039				8920
10	B	12.30pm	5070	5	.001	.230	.579	D	G	5034	1150	.2284	.9749	.5645	5	.001	.566						
																				961	.108	8898	
4	A	11.20am	6031	5	.001	.241	.683	D	G	5995	1205	.2010	.9806	.6697	5	.001	.671	.673	6000				8915
9	B	12.15pm	6031	5	.001	.224	.686	D	G	5995	1120	.1868	.9830	.6743	5	.001	.675						
																				1429	.146	9788	
5	A	11.30am	7460	5	.001	.244	.827	D	G	7424	1220	.1643	.9868	.8161	5	.001	.817	.819	7429				9070
8	B	12.05pm	7460	5	.001	.229	.831	D	G	7424	1145	.1542	.9883	.8213	5	.001	.822						
																				771	.066	11680	
6	A	11.45am	8231	5	.001	.240	.891	D	G	8195	1200	.1464	.9894	.8816	5	.001	.883	.885	8200				9265
7	B	11.50am	8231	5	.001	.236	.896	D	G	8195	1180	.1440	.9898	.8869	5	.001	.888						

RE-NAMED (AUG. 1968) KINGFISH 3



Dgm = Geophone depth measured from well elevation

Dgs = " " " " shot "

Dgd = " " " " datum "

Ds = Depth of shot

De = Shothole elevation to datum plane

H = Horizontal distance from well to shotpoint

S = Straight line travel path from shot to well geophone

tus = Uphole time at shotpoint

T = Observed time from shotpoint to well geophone

tr = " " " to reference geophone

Δe = Difference in elevation between well & shotpoint.

Δsd = " " " " shot & datum plane

Δsd = Ds - De

Dgs = Dgm - Dgt Δe ; $\tan i = \frac{H}{Dgs}$

Tgs = cos i ; T = Vert. travel time from shot elev to geophone

Tgd = $Tgs \pm \frac{\Delta sd}{V}$ " " " " datum plane " "

Dgd = Dgm - Δmd

Vi = Interval velocity = $\frac{\Delta Dgd}{\Delta Tgd}$

Va = Average " = $\frac{Dgd}{Tgd}$

Surveyed by: UGC

Date: 29 February 1968

Weathering Data:

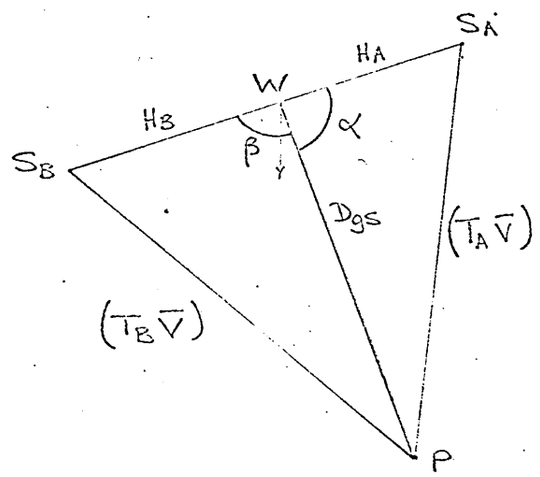
Casing Record -2384'

A FORMULA FOR ANALYSING VELOCITY DATA FROM DEVIATED WELLS

The conventional analysis of the Kingfish C-1 velocity survey data indicated that the well-hole had an apparent deviation from the vertical of about 1^{o}. These notes summarize the derivation of the formula that was used to obtain vertical average velocity from the velocity survey data in spite of this deviation of the well-hole.

The analysis of velocity survey data from a deviated hole is simple when the shot positions and the well-site are collinear. In this case the shots, the well-site and the well-phone lie in the same plane and for a deviated well this plane is, in general, not vertical. This situation is illustrated in figure (1).

FIGURE (1)



In figure (1)

W = well-site (5' below S.L.)
P = well-phone
S_A = position of shot A (5' below S.L.)
S_B = position of shot B
H_A = horizontal offset of shot A from well-site
H_B = horizontal offset of shot B from well-site
Dgs = distance along well-hole from shot elevation to well-phone (assumed to be a straight line)
T_A = slant time from shot A to well-phone
T_B = slant time from shot B to well-phone
$\bar{V}$ = average velocity to well-phone

Consider $\triangle S_A YP$ and $\triangle S_B YP$

From Cosine Rule

$$(\bar{V}T_A)^2 = (H_A)^2 + (Dgs)^2 - 2(H_A)(Dgs)\cos\alpha \qquad \text{——————(1)}$$

$$(\bar{V}T_B)^2 = (H_B)2 + (Dgs)^2 - 2(H_B)(Dgs)\cos\beta \qquad \text{——————(2)}$$

If shots A and B are fired from opposite sides of the well-site,

$\alpha + \beta = 180$ (because S_A, W, S_B are collinear)

thus $\cos\beta = -\cos\alpha$

Substituting in equation (2) gives:

$$(\bar{V}T_A)^2 = (H_A)^2 + (Dgs)^2 - 2(H_A)(Dgs)\cos\alpha \qquad \text{——————(1)}$$

$$(\bar{V}T_B)^2 = (H_B)^2 + (Dgs)^2 + 2(H_B)(Dgs)\cos\alpha \qquad \text{——————(3)}$$

Simplifying by addition gives:

$$(\bar{V})^2 = \left(\frac{\left[H_A H_B + (Dgs)^2\right]\left[H_A + H_B\right]}{H_A(T_B^2) + H_B(T_A^2)} \right) \qquad (4)$$

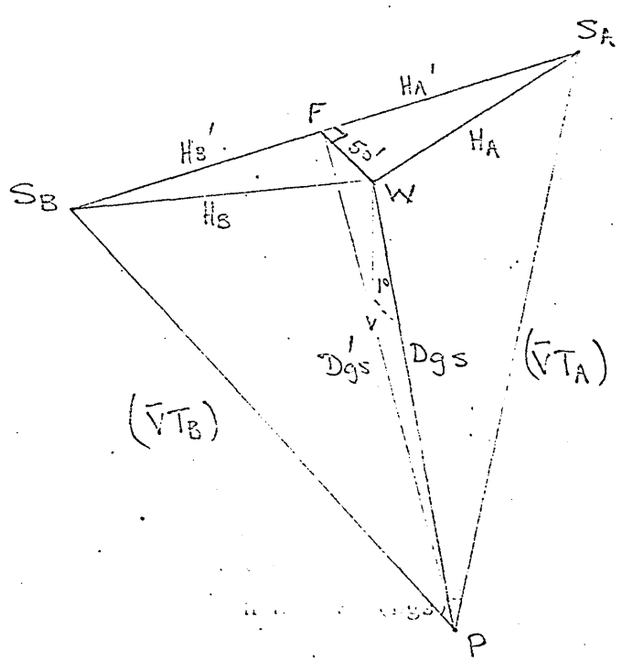
This equation allows the average velocity from shot depth (5' below S.L.) to well-phone to be evaluated.

NOTE: In practice the 2 shots and the well site will seldom be precisely collinear. It would be unlikely, however, that the line joining the two shots would pass further than 50' from the well-site.

Lets consider the effect of such a 50' displacement in the formula (4).

From figure (2) it can be seen that it is now $\triangle S_A FP$ and $\triangle S_B FP$ that are coplanar and should be used in the formula.

FIGURE (2)



The diagram shows that H_A', H_B' and Dgs' should replace H_A, H_B and Dgs. in formula(4).

Where

$$(H'_A)^2 = (H_A + 50)(H_A - 50)$$
$$(H'_B)^2 = (H_B + 50)(H_B - 50)$$
$$Dgs' \backsim Dgs + 50 \sin 1^\circ \quad \text{(when well-hole deviated by } 1^\circ \text{ in)}$$
$$\backsim Dgs + 0.8' \quad \text{(the sense shown in diagram (2))}$$

Substitute typical data into formula (4) (based on figure (1)) -

$H_A = 1225$
$H_B = 1140$
$Dgs = 7424$ ——— $\bar{V} = 9072'/s$
$T_A = .827$
$T_B = .831$

whereas substituting same basic data into formula (4) (based on figure (2)) -

$H_A' = 1224$
$H_B' = 1139$
$Dgs' = 7425$ ——— $\bar{V} = 9069'/s$
$T_A = .827$
$T_B = .831$

It can be seen that when the line joining the two shots passes 50' from the well-site the error in velocity introduced by assuming the shots and well-site are collinear is only 3 feet per second.

Such a difference is trivial and indicates that for practical purposes the observed values of H_A, H_B and Dgs can be used for the velocity analysis of slightly deviated holes.

R.J. STEELE
March 8, 1968

UGCC - 5A

UNITED GEOPHYSICAL COMPANY, S.A.

RE-NAMED (AUG. 1968) KINGFISH 3

OBSERVER'S REPORT Date [illegible] Time Left Town .... Time Arrived Field .... Sheet No. .... Of ....

Seismograph Party No. [illegible] Base [illegible] Province [illegible] Prospect [illegible]

Truck No. Inst. Series No. [illegible] Type Geo. [illegible] Geo. Group /Trace Wind Weather

LINE AND SHOT POINT No.		BEARING TOP	BEARING BOTTOM	SPREAD	GROUP SEP'ATION	RECORD No.	TAPE No.	FILTER	CHARGE	DEPTH	TIME	REMARKS	
1	N			2990					[illegible]	56	[illegible]	[illegible]	[illegible]
2	N			4185							[illegible]		[illegible]
3	N			[illegible]							[illegible]	[illegible]	[illegible]
4	N			[illegible]							[illegible]	[illegible]	[illegible]
5	N			[illegible]							[illegible]	[illegible]	[illegible]
6	N			5231							[illegible]	[illegible]	[illegible]
7	S			5231							[illegible]	[illegible]	[illegible]
8	S			[illegible]							[illegible]	40	56
9	S			[illegible]							[illegible]	[illegible]	[illegible]
10	S			[illegible]							[illegible]	[illegible]	[illegible]
11	S			4185							[illegible]	48	[illegible]
12	S			2990							[illegible]	[illegible]	[illegible]
TOTALS									[illegible]				

HOLES PROFILES FIELD CONDITIONS RECORDS DYNAMITE

Distribution .... Time Left Field .... Time Arrived Town .... Signed [illegible] OBSERVER

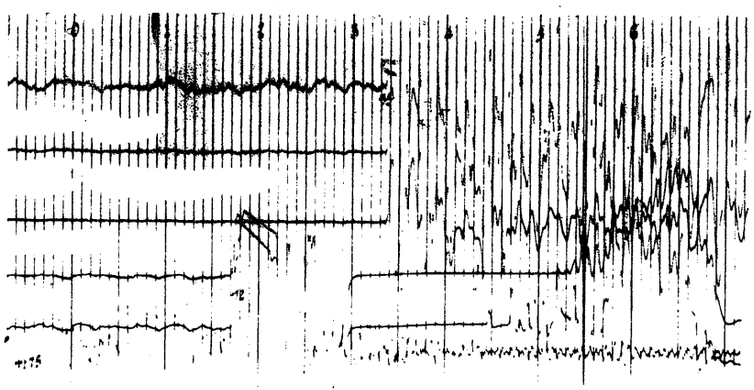
ORIGINAL — To Client
DUPLICATE — Party File .... Wind .... Weather ....
TRIPLICATE — Supervisor PARTY CHIEF/MGR.
QUADRUPLICATE — Remains in Book

REPORT ALL ACCIDENTS, HOWEVE[R S]LIGHT

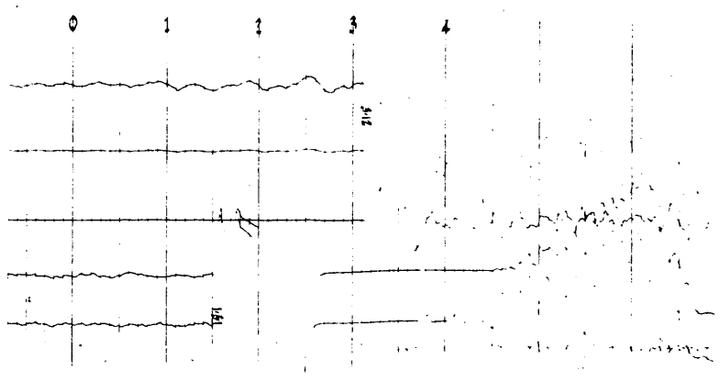
ESSO Kingfish-3

Well Velocity Records

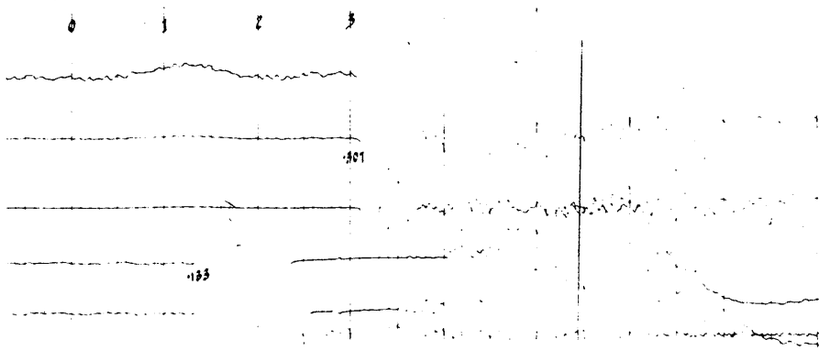
SHOT :- 1
OFFSET :- 1000' N.
DEPTH OF GEOPHONE :- 2990'
CHARGE :- 33 CC @ 5'
TIME :- 10.40



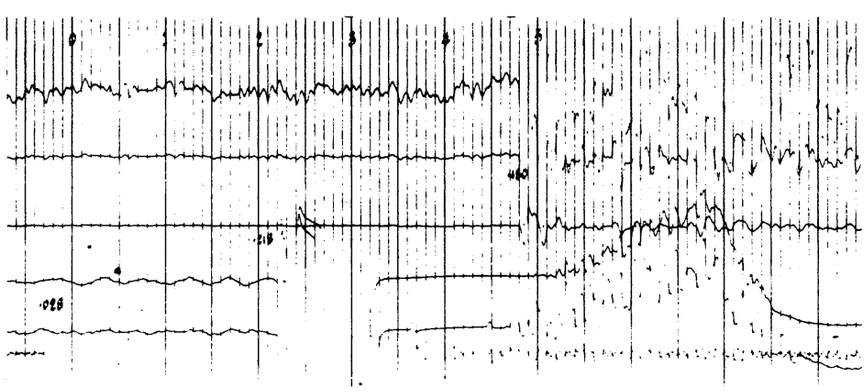
SHOT :- 1A
OFFSET :- 1000' N.
DEPTH OF GEOPHONE :- 2990
CHARGE :- 33 CC @ 5'
TIME :- 10.45



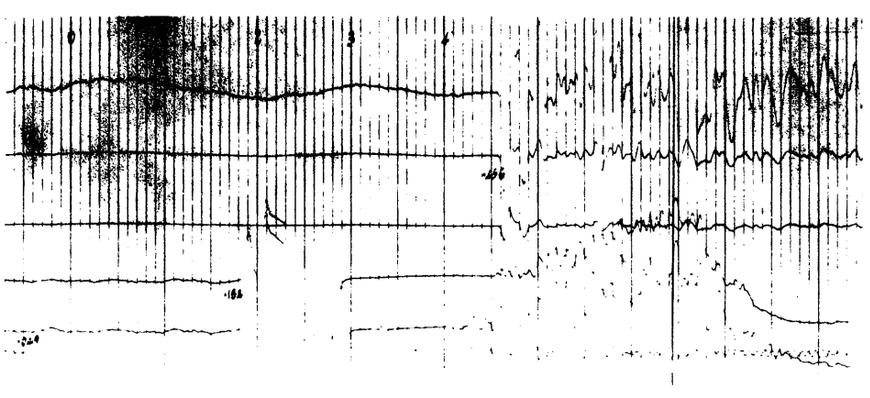
SHOT :- 12
OFFSET :- 1000' S.
DEPTH OF GEOPHONE :- 2990'
CHARGE :- 33 CC @ 5'
TIME :- 12.50



SHOT :- 2
OFFSET :- 1000' N
DEPTH OF GEOPHONE :- 4185'
CHARGE :- 33 CC @ 5'
TIME :- 10.55



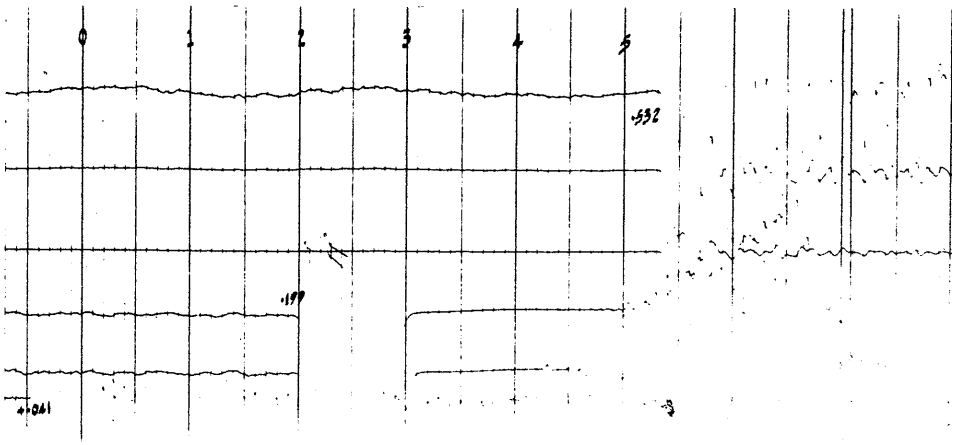
SHOT :- 11
OFFSET :- 1000' S.
DEPTH OF GEOPHONE :- 4185'
CHARGE :- 33 CC @ 5'
TIME :- 12.40



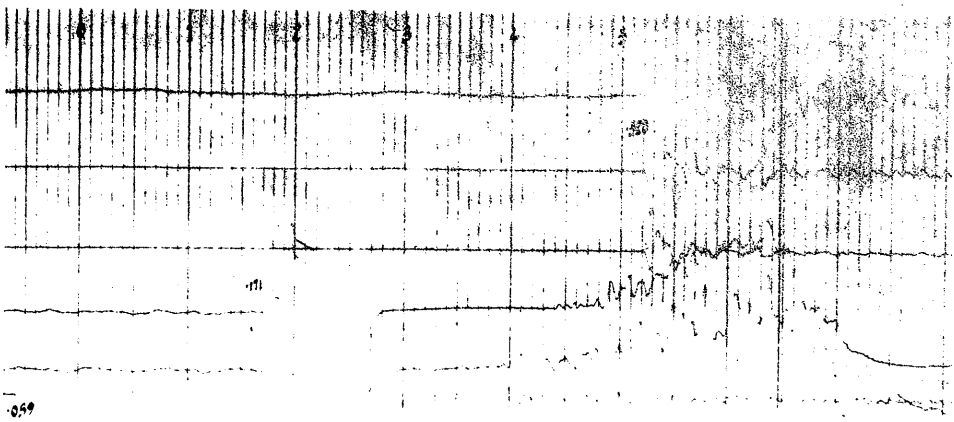
ESSO Kingfish-3

Well Velocity Records

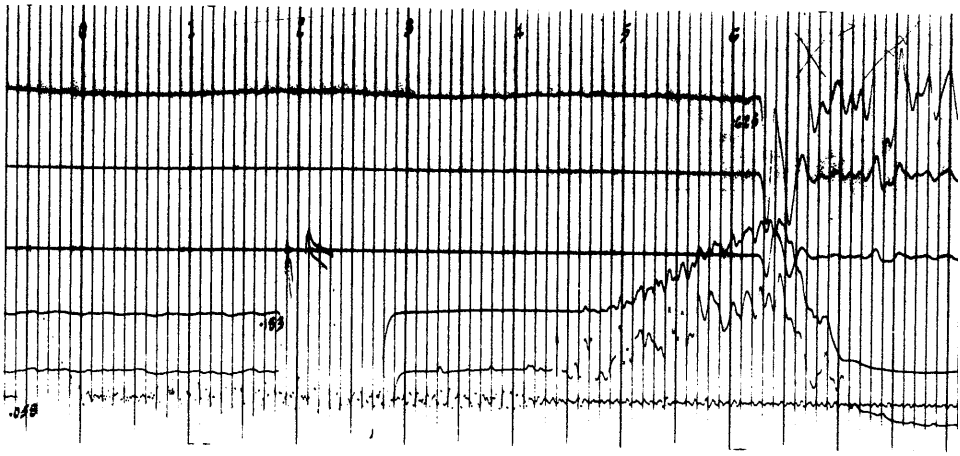
SHOT :- 3
OFFSET :- 1000' N.
DEPTH OF GEOPHONE :- 5070'
CHARGE :- 33.66 @ 5'
TIME :- 11·10



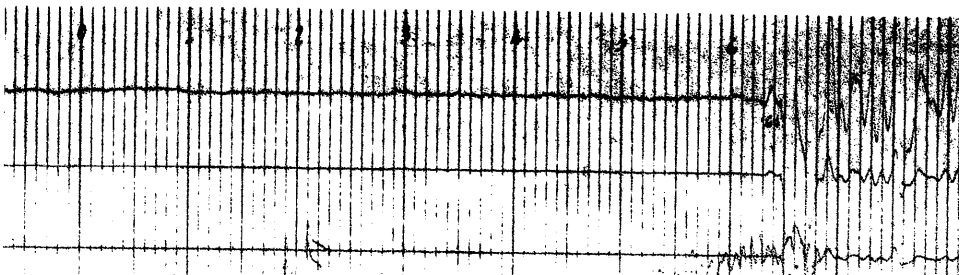
SHOT :- 10
OFFSET :- 1000' S.
DEPTH OF GEOPHONE :- 5070'
CHARGE :- 33.66 @ 5'
TIME :- 12·30



SHOT :- 4
OFFSET :- 1000' N.
DEPTH OF GEOPHONE :- 6031
CHARGE :- 33.66 @ 5'
TIME :- 11·20



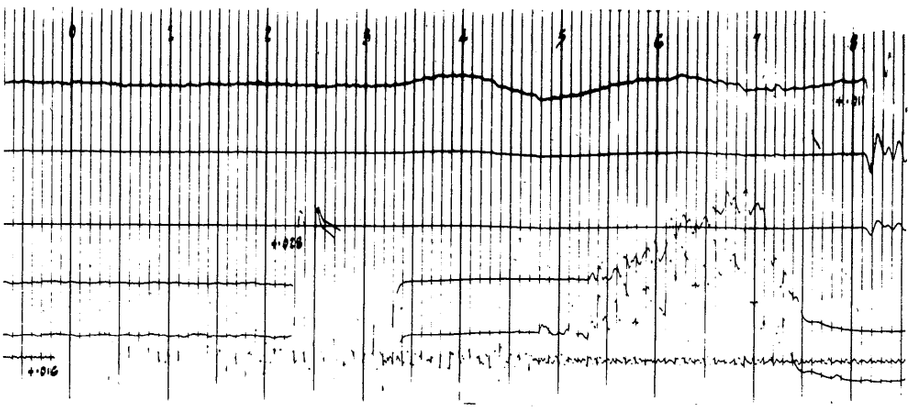
SHOT :- 9
OFFSET :- 1000' S.
DEPTH OF GEOPHONE :- 6031'
CHARGE :- 33.66 @ 5'
TIME :- 12·15



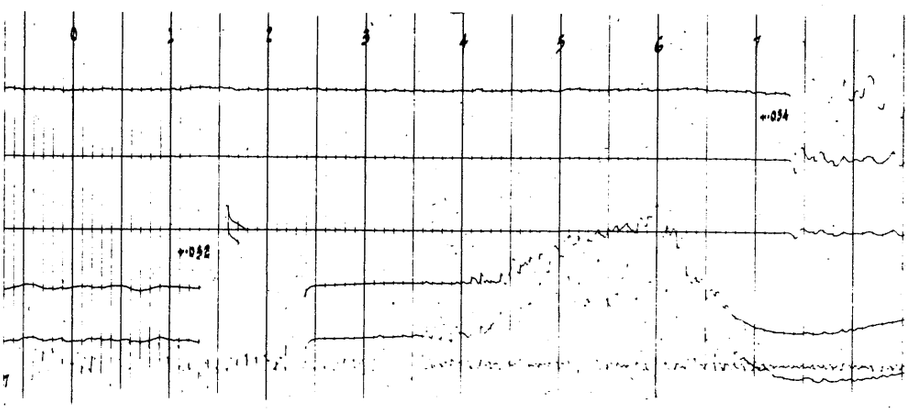
ESSO Kingfish -3

Well Velocity Records

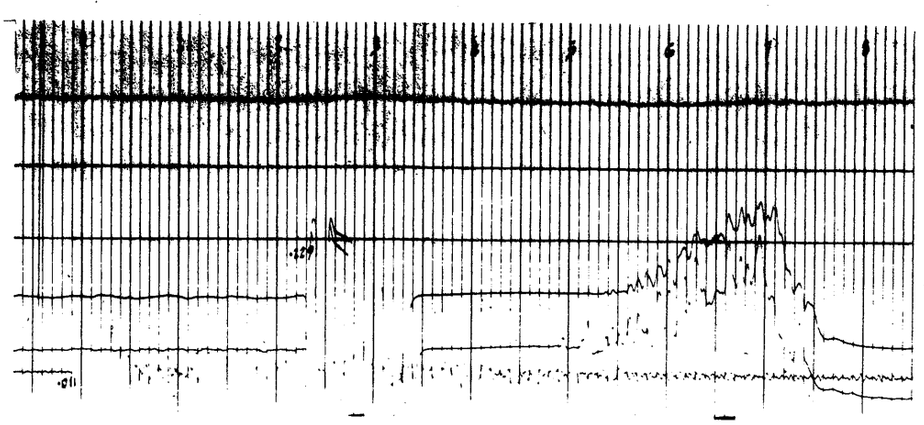
SHOT :- 5
OFFSET :- 1000' N.
DEPTH OF GEOPHONE :- 7460'
CHARGE :- 33 lbs @ 5'
TIME :- 11·30



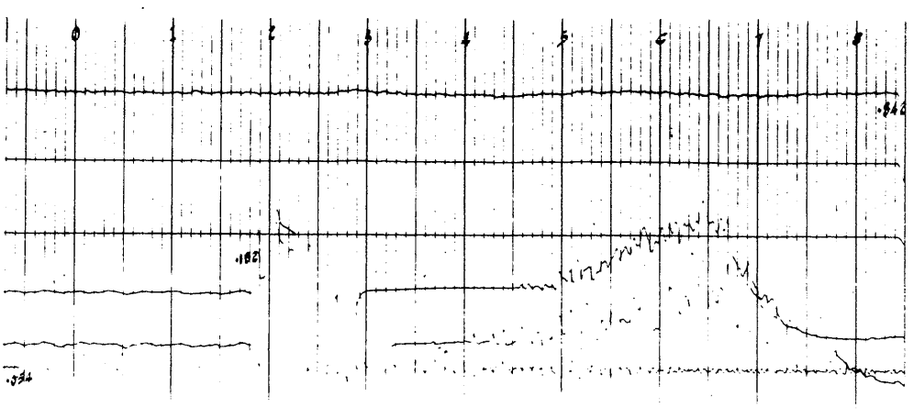
SHOT :- 8
OFFSET :- 1000' S.
DEPTH OF GEOPHONE :- 7460'
CHARGE :- 33 lbs @ 5'
TIME :- 12·05



SHOT :- 6
OFFSET :- 1000' N.
DEPTH OF GEOPHONE :- 8231'
CHARGE :- 33 lbs @ 5'
TIME :- 11·45



SHOT :- 7
OFFSET :- 1000' S.
DEPTH OF GEOPHONE :- 8231'
CHARGE :- 33 lbs @ 5'
TIME :- 11·50



PE601507

This is an enclosure indicator page.
The enclosure PE601507 is enclosed within the container PE906030 at this location in this document.

The enclosure PE601507 has the following characteristics:

ITEM_BARCODE	= PE601507
CONTAINER_BARCODE	= PE906030
NAME	= Corelab Grapholog (Mud Log)
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Corelab Grapholog Core Laboratories(enclosure to Well Summary) for Kingfish-3
REMARKS	=
DATE_CREATED	= 28/02/1968
DATE_RECEIVED	= 31/08/1968
W_NO	= W513
WELL_NAME	= Kingfish-3
CONTRACTOR	= CORE LABORATORIES
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE603378

This is an enclosure indicator page.
The enclosure PE603378 is enclosed within the container PE906030 at this location in this document.

The enclosure PE603378 has the following characteristics:

ITEM_BARCODE	= PE603378
CONTAINER_BARCODE	= PE906030
NAME	= Well Completion Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= COMPLETION_LOG
DESCRIPTION	= Well Completion Log containing Spontaneous Potential Resistivity and Conductivity readings (enclosure from Well Summary) for Kingfish-3
REMARKS	=
DATE_CREATED	= 05/03/1968
DATE_RECEIVED	=
W_NO	= W513
WELL_NAME	= KINGFISH-3
CONTRACTOR	=
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE902893

This is an enclosure indicator page.
The enclosure PE902893 is enclosed within the container PE906030 at this location in this document.

The enclosure PE902893 has the following characteristics:

ITEM_BARCODE	= PE902893
CONTAINER_BARCODE	= PE906030
NAME	= Completion Coregraph
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Completion Corgraph (enclosure from Well Summary) Core Laboratories, for Kingfish-3
REMARKS	=
DATE_CREATED	= 25/02/1968
DATE_RECEIVED	=
W_NO	= W513
WELL_NAME	= Kingfish-3
CONTRACTOR	= Corelab inc.
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE906032

This is an enclosure indicator page.
The enclosure PE906032 is enclosed within the container PE906030 at this location in this document.

The enclosure PE906032 has the following characteristics:

ITEM_BARCODE	= PE906032
CONTAINER_BARCODE	= PE906030
NAME	= Time-Depth Curve
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Time-Depth Curve for Kingfish-3 in Well Summary Report
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W513
WELL_NAME	= KINGFISH-3
CONTRACTOR	=
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE906031

This is an enclosure indicator page.
The enclosure PE906031 is enclosed within the container PE906030 at this location in this document.

The enclosure PE906031 has the following characteristics:

ITEM_BARCODE	= PE906031
CONTAINER_BARCODE	= PE906030
NAME	= Formation Tester Report
BASIN	= GIPPSLAND
PERMIT	= VIC/L7
TYPE	= WELL
SUBTYPE	= FIT
DESCRIPTION	= Formation Tester and Recovery Report and data (enclosure from ell Summary) for Kingfish-3
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W513
WELL_NAME	= KINGFISH-3
CONTRACTOR	= SCHLUMBERGER
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)