

# Natural Resources and Environment



AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

# KINGFISH-2 (W512) WELL SUMMARY

Folio No	2 Referred to	3 Date	4 Clearing Officer's Initials	1 Folio No.	2 Referred to	3 Date	4 Clearing Officer's Initials
•							
•							
·							
•							
(a)							
decommons of a members of	•						
Martin and there are an analysis of							
Marchinella competición de secondo deservidos							
\$100 miles on a payment of	\$					•	
in the second se							
	S-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1						
-				L			<u> </u>

### FILE COVER INSTRUCTIONS FOR ACTION OFFICERS

- FOLIC NUMBERS Each subject paper attached to a file is to be given a consecutive number by the attaching officer Papers must not be removed from or attached to a file without approval.
- DEFENDANT COTHER OFFICERS: When an Officer completes action on the file and further action is required by some other Officer please initial Column 4 and on the next vacant line, enter the relevant folio number in Column (1), indicate to whom the file is to be towarded in Column (2) and record the date in
- (3) BRING UP MARKINGS: When action on a file is required at a later date, the officer will initial Column (4) and, on the next vacant line, enter the relevant folio number in Column (1), then write "B/U" followed by the action officer's name in Column (2) and the date the file is required in Column (3).
- (4) PUTAWAY MARKINGS: When ALL action on a file is completed the officer concerned will initial Column (4) and, on the next vacant line, write "P/A" in column (2).

REGISTRY MUST BE NOTIFIED OF ANY FILE MOVEMENTS BETWEEN OFFICERS

**EARLIER FILES** LATER FILES RECORDS DISPOSITION SNUD 28-11- 47. COMPLETED 30 1-68 T. D. 8 0.21". 198 101 KINGFISH-2 ESSO. STEPOUT WD 252' R7 GLIMAR III 766'-2430' Separate logs 2" and 5 Run 1: 5 " 3. Ċr 2397 - 8017 BHCS/GR. » / . 765 -2410 1. 2" "2, 2397 -8004 · 2 · BHCS FDC/GR 2" 2397 - 8010 4/. 7300 - 7800 GRN " 2" · 5 10 10 MLL · 2 · ~ 5° LL, 7300 -8100. Jesto 1-4. F.IT. ce / . . + 10 20 00 000 Core Lab. Mudlog. 2457-8021. Sent to store ■ Cores 1-8. Completion Coregraph. Cores 2-8. bre Let. Core Descriptions 1-8. love Lab. S. W.C. Cut 11. Rec. 6. ( seekly reports) no record of any Well Discovery Report. Velocity Survey with TDC Palaeontology Report by D. Laylor. i L. E. Stown + a. D. Partridge. Palynology Weekly Reports Well Summany weekerd copy only, Cuttingo recewed into store 15/10/74. 1400'-8020'. Palynology Report Revision by a D. Partidge. no com 766-8010.

# **KINGFISH-2 (W512)**

# **Well Summary Report**

## **Table of Contents**

**Well Summary** 

Lithology

Palynological and Palaeontological Material

**Velocity Survey** 

### **Enclosures**

Formation Tester and Recovery
Grapholog
Completion Coregraph
Time-Depth Curve

WELL SUMMARY

WELL DISCOVERY REPORT

RE-NAMED (AUG. 1968)

ESSO KINGFISH BI WELL SUMMARY INGFISH

Page 1 43

Purpose of Well:

Exploratory test, step-out well to Kingfish Al, Gippsland Basin. The well was drilled 2.5 miles west-southwest of Kingfish Al, near the crest of a large east-west trending anti-cline, mapped on top of the Latrobe Valley Formation. The anticipated reservoirs were sands developed in the Latrobe Valley Formation. New seismic shooting (after completion of Kingfish Al) indicated that the top of the Latrobe Valley Formation is higher in Kingfish Bl than in Al. A regional dip within the Latrobe Valley Formation, below the unconformity, suggested that the upper \$200 feet of the Latrobe Valley Formation in Kingfish Bl are younger than those in Kingfish Al.

### Well Statistics:

Type of Well: Step-out exploratory test.

<u>Location</u>: Latitude 38° 35' 57" Longitude 148° 10' 13"

Elevation: Rotary table at 31 feet above mean sea level.

Water Depth: 252 feet.

Spudded: November 28, 1967.

Completed: January 30, 1968.

Total Depth: 8,021 feet.

Well Status: Plugged and suspended.

Casing: 30" to 392 feet.
20" to 766 feet.
133/8" to 2397 feet.

Perforations: None.

Plugs:

1. 7650-7290 feet, using 190 sacks of Australian N. cement, at 14.5 lbs/gallon.

Displaced with 124 barrels of mud.

2. 2550-2290 feet, using 250 sacks Aust. N. cement, at 14.2 lbs/gal, displaced with 38 barrels of mud.

 510-310 feet, 130 sacks of Aust. N. cement, at 15 lbs/gallon.

Cores: 1 core at 5149-5177 feet; cut 28 feet, recovered 28 feet.

7 cores at 7401-7614 feet; cut 213 feet, recovered 207 feet.

Mud Log:

The well was logged by Core Laboratories

from 800 feet to T.D.

Electric Logs:

IES

8017 - 766 feet.

S

8002 - 766 feet.

**FDCGR** 

8006 - 2393 feet.

LL.7

8010 - 7300 feet.

MLL

7800 - 7300 feet.

GRN

7800 - 7300 feet.

CDM

8010 - 766 feet.

### Hydrocarbons:

### Wireline Formation Tests:

Test 1.

7607 feet.

Recovered 15750 ccs fluid,

15000 ccs of filtrate,

750 ccs of mud. Salinity 11120 ppm.

Test 2.

7591 feet.

Recovered: 18.78 cub. ft gas,

1,805 ccs fluids,

13,330 ccs oil, 48.50 A.P.I.

COR 235:1.

Test 3.

7513 feet.

Recovered: 400 ccs mud,

48 ccs filtrate.

Test 4.

7411 feet - Tool stuck and abandoned.

### LITHOLOGY

5835 - 6250 ft:

2457 - 3600 ft: (First samples.) Alternating marl and limestone. Marl: light grey, soft, puggy, abundant carbonaceous flecks. Limestone: light grey, micritic, skeletal. Mudstone: light brown. 3600 - 3820 ft: Siltstone: grey, calcareous, argillaceous. Limestone: micritic, skeletal. 3820 - 3920 ft: Limestone: buff, argillaceous, soft. 3920 - 4720 ft: Limestone: light grey, skeletal, micritic, 4720 - 5149 ft: detrital, fine grained, soft, friable, argillaceous. Limestone: Detrital, micritic, minor skeletal 5149 - 5177 ft: limestone, light grey brown, silty, argillaceous. Limestone: light grey to brown, very fine to 5177 - 5835 ft: fine grained, argillaceous, glauconitic.

6250 - 7364 ft: Mudstone: brown grey, grey green, calcareous, fossiliferous, glauconitic.

calcareous, fossiliferous.

Mudstone: brown grey, grey green, very

7364 - 7504 ft: Sandstone: grey white, mainly medium to coarse, (also fine to granular size), sub-rounded, well sorted, blue yellow fluorescence.

7504 - 7542 ft: Sandstone: light grey, very fine to fine grained, very argillaceous, grey to white clay matrix, micaceous, carbonaceous, fluorescence.

7542 - 7932 ft: Sandstone: light grey, medium grained, subangular, well sorted, unconsolidated, fluorescence.

7932 - 8021 (T.D.):

<u>Sandstone</u>: medium grained, sub-angular to well rounded, silty, argillaceous.

PROPCED ENGINEERING AND GEOLOGICAL DETAILS: These may be varied according to conditions encountered during drilling operations

(j)	Proposed	total depth	7800	ft.	•
(k)	Proposed	engineering de	tails of v	well	
Hole	Diameter	Casing Size	Settin	g Depth	
	36" 26" 17" 12"	30" 20" 13 <sup>3</sup> /8" 9 <sup>5</sup> /8"	350 750 2400 As requi	ft. ft.	Proposed top of cement  As in previous operations.
(1)	Proposed Type of	Logging detail	<u>s</u>		Intervals, to be logged
1. I		DM & possibly	sidewall.	2400	ft. $(13^{3/8}$ " casing depth).
2.	ES, SGR, F elocity su	DC, CDM, sidewarvey and possi	all, bly MLL, LL7.	7800	ft. (T.D.)
(m)	Outline be stati brief de	of testing equence of testing equence of testing equence of a constant of a constant estimation testing testin	ipment to ite or gements	tubing surfac C.B. Gas,(i	ne set packer in casing; 27/g. Otis double ball valve with extension to a Haliburton Head to a two-phase separator. f any), will be flared, liquid to separator.
(n)	Geologica undertak <del>i</del>	al supervision	will be	Esso S	ddoes and W.D. Laporte, Standard Oil (Aust.) Ltd., Macquarie Street, 7. 27-8371
(0)	Name and contracto	address of dri	lling		Marine Aust. Pty. Ltd., onsdale Street, arne.
(p)	Proposed of operat	date of commentions.	cement	Week o	commencing November 20, 1967.
			_		

I/we advise that I/we have noted Sections 25, 26 and 27 of the Regulations under the Petroleum Act, 1958, pertaining to compensation for drilling operations on private land, and the provisions in relation to safety and health of the Petroleum Act, the Mines Act and the Regulations under the Mines Act.

Yours faithfully,

Date 3/11/67

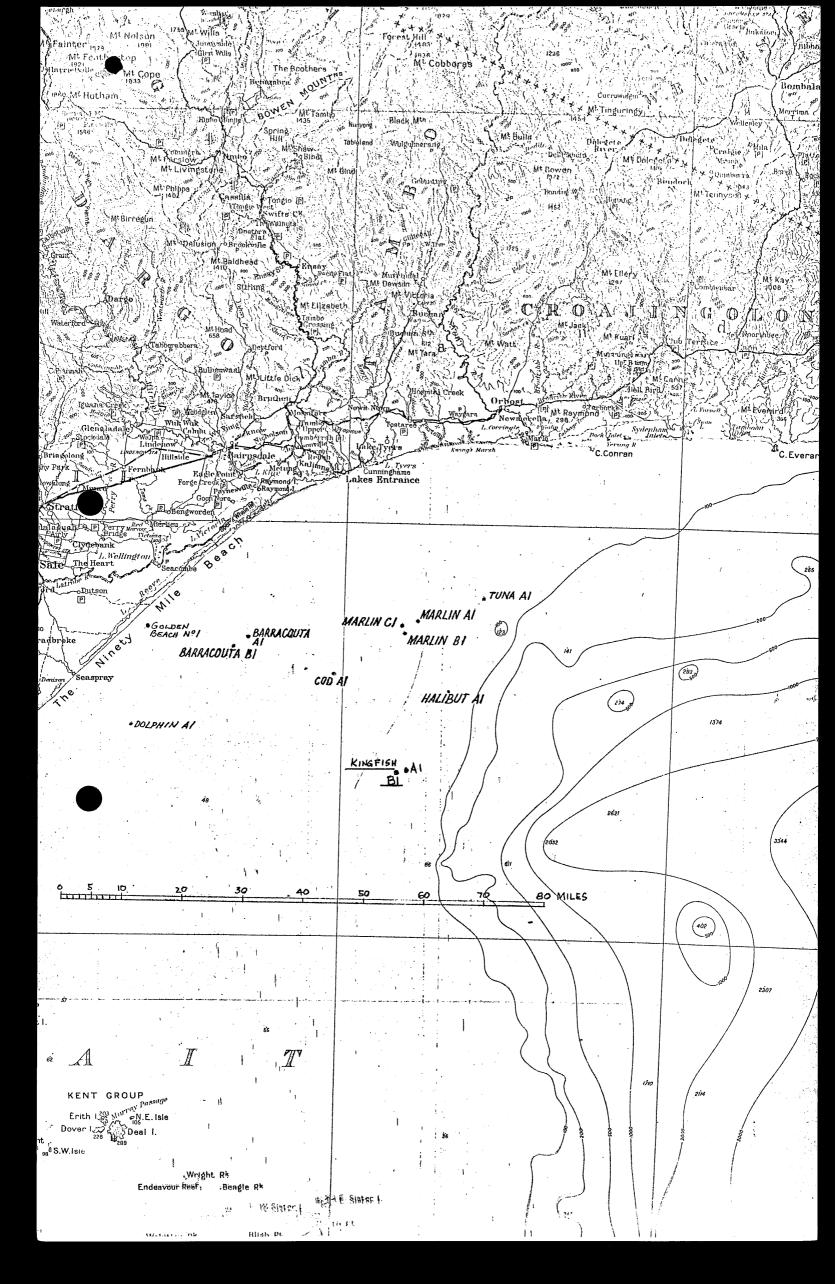
# APPLICATION FOR PERMISSION TO DRILL A WELL UNDER THE PETROLEUM ACT, 1958

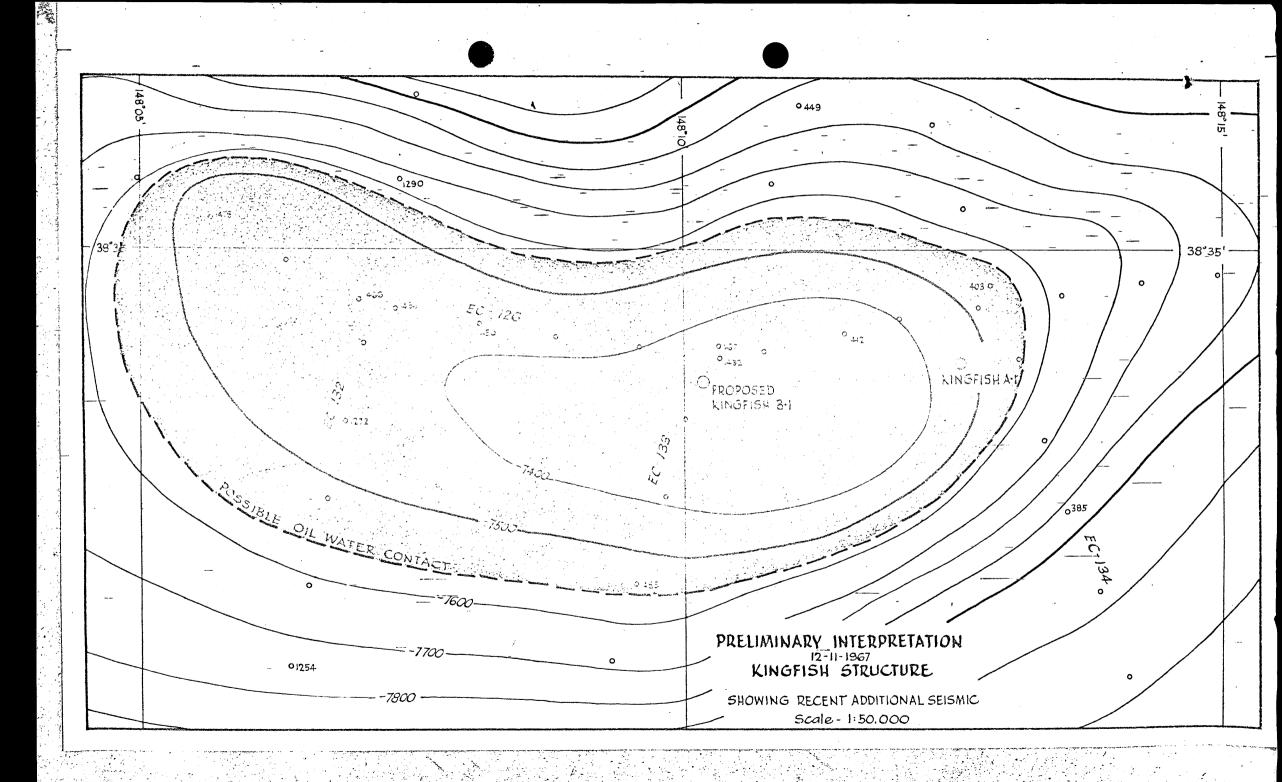
To the Honourable the Minister of Mines:

X/we Hematite Petroleum Pty.Ltd.being the holder/operator of Petroleum Exploration Permit/Petroleum Prospecting Licence No. hereby apply for your consent to drill a well for petroleum within the above area.

The following are the particulars of the proposed operation.

(a)	The name and number by which the well is to be known	Kingfish Bl.
(b)	Classification of well	Stratigraphie Trut Assessment Derrhopment Sierrice
(c)	The exact location of the proposed well	Latitude 148° 10' 13" Longitude 38° 35' 57" (accuracy ± 3 seconds of arc) Parish:
(d)	Distance from nearest tenement boundary	18 miles from P.P.L. No. 3 (Marlin). 7 miles from P.E.P. No. 39
(e)	Heights above sea level (This information may be submitted later)	Surface Level: 31' A.S.L. Derrick Floor: or Rotary Table: or Kelly Bushing:
	Include:- Water depth to offshore wells	250 ft.
(f)	Diameter of proposed well at surface	See (k) 36" well. 30" casing.
(g)	Method of drilling proposed and name and type of drilling rig	Rotary, using floating rig Glomar III.
(h)	The extent to which coring is intended	Two (2) for geological correlation. The hydrocarbon zone will be continuously cored.
(i)	Name, address and telephone number of person in charge of the drilling operation	W. Bohlmann, Esso Exploration & Production Aust. Inc., 380 Lonsdale Street.
		Melbourne. 67-9331.





LITHOLOGY

### MET, DOME AND CONTRACT MALVALS

PESO AT TRACE IN THE PLANE.

STREET

VICTORIA, AUSTRALIA

m

CORE LABORATIONES AUSTRALIA (QLD) LTD.

lage 1 of 5

### CORE LABORATORIES AUSTRALIA ( QLD) LTD.

Petroleum Reservoir Engineering BRISBANE. AUSTRALIA

1st March, 1968.

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

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

ATTENTION: MR. JOHN L. ELLIOTT.

RE-NAMED (AUG. 1968) KINGFISH 2

SUBJECT: CORE, MUD AND CUTTINGS ANALYSIS,

KINGFISH B-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 2457 feet to the total depth of 8021 feet.

Using standard equipment, a Programmed Hydrocarbon Detector, and a Beckman GC-1 Gas Chromatograph, the drilling fluid was monitored continuously for hydrocarbon content 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 4.

### 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.

### CORE ANALYSIS:

Core Analysis of the Zone 7411 feet to 7599 feet indicated excellent reservoir conditions with reasonably good oil saturations. Oil production is indicated.

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. MC ADAMS, RESIDENT MANAGER.

# DESCRIPTIONS OF CORE KINGFISH

### CORE NO. 1 5149 - 5177\*

Recovery 28'

LIMESTONE: Light to brownish grey, soft to firm, detrital to micritic with small amounts skeletal, small amounts of carbonaceous matter, locally argillaceous. Numerous irregular and discontinuous argillaceous laminae which are badly disrupted by heavy concentrations of worm burrows.

### CORE NO. 2 7401 - 7431.

Recovery 30'

SANDSTONE: Grey to pale brown, unconsolidated to very friable, fine to coarse grained by predominantly medium grained, scattered pebbles, sub-rounded and slightly frosted grains, generally flat bedded but with local intervals of cross bedding, very small amounts of white clay cement. Strong petroliferous odor with good blue-white fluorescence throughout core.

### CORE NO. 3 7431 - 7463°

Recovery 29'

7431 - 7460'

SANDSTONE: Grey, unconsolidated to friable, fine to very coarse grained with some pebble bands, rounded to sub-rounded, moderate sorting, locally frosted grains, white clay cement which increases with a decrease in grain size, traces of glauconite. Discontinuous and wavy, light to dark grey shale stringers found locally which exhibit worm burrows. Strong petroliferous odor and good blue-white fluorescence found throughout core.

7460 - 7463\*

NOT RECOVERED.

CORE NO. 4 7463 - 7493°

Recovery 30'

SANDSTONE: Light to medium grey, friable to firm, very fine to medium grained quartz with local coarse grained bands, rounded to sub-rounded, white clay cement which includes mica where concentration is heavier, local concentrations of pyrite aggregates, worm burrows at local intervals, rare leaf impressions. Strong petroliferous odor and good blue-white fluorescence with good cut found throughout core. Core bleeding at local intervals.

Kingfiels-2

CORE NO. 5
7493 - 7524\*

Recovery 31'

SANDSTONE: Light to dark grey, slightly friable to firm, very fine to fine grained with coarse grained and pebbly zones, sub-rounded, very argillaceous, white to light grey clay matrix, carbonaceous matter in the darker areas, pyrite and mica. Heavy concentrations of worm burrows removes bedding characteristics. Strong petroliferous odor and good blue-white fluorescence throughout core. Bleeding oil causes a yellow-brown stain.

CORE NO. 6 7524 - 7554\* 7524 - 7538\*

Recovery 30'

SANDSTONE: Light to medium grey, friable to firm, very fine to fine grained quartz sand with scattered pebbles, sub-rounded moderate to poor sorting, white to light brown clay cement, mica, plant remains, traces of glauconite, and rare feldspar. Bedding destroyed by

heavy concentrations of worm burrows.

7538 - 7540°

SHALE: Brown, firm slightly fissile, heavy concentrations of sand infilled worm burrows disturbs bedding.

7540 - 7554'

SANDSTONE: Light grey, unconsolidated to very friable, medium to pebble sized grains, sub-angular to sub-rounded, moderate to well sorted, little or no clay cement. Strong odor and good blue-white fluorescence found in sandy portions. Fluorescence becomes patchy in the shale band.

CORE NO. 7 7554 - 7584'

Recovery 30'

SANDSTONE: Light grey to medium grey, friable, medium to coarse grained with scattered concentrations of pebbles, rounded to sub-angular, frosted to clear or smoky, moderately to well sorted, small amounts of white to light grey clay cement, scattered pyrite aggregates, mica, traces of glauconite, rare worm burrows, little or no bedding characteristics. Strong petroliferous odor and good blue-white fluorescence throughout core.

Kinglish -2

CORE NO. 8 7584 - 7614' 7584 - 7611'

Recovery 27'

SANDSTONE: Light to medium grey, friable to firm, medium to granular sized quartz with local zones of very coarse to pebbly sizes, sub-angular to rounded, moderately to well sorted, white to medium grey clay cement, mica, traces of glauconite, rare worm

burrows. Coarse to pebble sized grain alignment suggests a sub-horizontal bedding. Strong petroliferous odor and good blue-white fluorescence is found above 7599 feet. Below this depth, the petroliferous odor is absent while the fluorescence

becomes patchy and then not present.

7611 - 7614°

NOT RECOVERED

SHOW ASPO	<b>FT</b>		C	ORE LAB	ORATORIE	S, INC.		ı. 1	
Operator			OIL (AUST.)	LTD.				ote 16	January 19
Nell	KINGFI	SH B-1	C	ounty	Stat	e		LA No. FL 1	15-13L
DESCRIPT	TON OF S			,			72	ingfish - 3	<b>.</b>
	val			To	7599	)	· · · · · · · · · · · · · · · · · · ·	_ /*	5/5
	U		-White						-
	me in Samp	ole90					. D1		
	of Section:		stone: Whit	e to ligh	t grey, med	lium to co	arse grain	ed,	
subround	ded. V/f	riable to	o unconsoli	dated, mo	<u>derate sort</u>	ing.			
GAS UNITS		WIRE					DMATOGRAPH	•	
	Hi	Lo	Mud	Methane C <sub>1</sub>	Ethane (+) C <sub>2</sub> (+)	Ethane C <sub>2</sub>	Propane C.	Butane C <sub>4</sub>	Pentane C <sub>s</sub>
From:	2		From:	10					
To:	60		To:	<b>1</b> 85		46	41	19	
Cuttings	<del> </del>		Cuttings		_	T	<b>-</b>		
From:	0	0	From:	Not re	corded				
To:	60	58	To:	Not re	corded				
	AL INFOR		Х		Worn		<b>5</b> II		
Bit Conditi Drilling Bro			X X	<del> </del>	No				
•	illing Rate	• -	ntrolled Rate_		Before Bree	ak 3.8	Durin	a Break 1.	0
•	3it Change	s Inc	reased		Decreased_	**	Durin	hange	X
Circulated			s X						<del></del>
Mači Nači	nanges	Ве	fore 368	30	After	3200			
D.D EV	ALUATIO	<b>4</b> :							
Ainor	Poor	FairG	ood X Rema	rks: * Unc	onsolidated	nature o	f sand at	shale shak	re <b>r</b>
							bserved in	cores.	
* Drill:	ing and	circulat:	ing <b>i</b> n <b>a</b> nti	cipation o	or nydrocar	don zone.			
	<i></i>				***				
						<del></del>		· · · · · · · · · · · · · · · · · · ·	······································
FINAL EV	ALUATION	l: (It is reco	gnized that of	her informatio	on such as other	er shows, sid	e wall sample	s, etc. are ne	cessary for t
			hi <b>s final opini</b> oil produc						
Core Ana	llysis i	ndicates	oil produc	tion from	the interv	al 7411 -	7599 feet		
					· · · · · · · · · · · · · · · · · · ·				
· · · · · · · · · · · · · · · · · · ·									
		·····							
			· · · · · · · · · · · · · · · · · · ·						
<del></del>									+
				<del></del>					
							<del></del>		
<del></del>					· <del></del>	<del>*************************************</del>	<del></del>	<del></del>	<del></del>

 $((\mathbf{v}_{\mathbf{v}},\mathbf{v}_{\mathbf{v}}), (\mathbf{v}_{\mathbf{v}},\mathbf{w}_{\mathbf{v}})) \in \Sigma$ 

PAGE 5 OF 5

KINGFISH Well. Spended 28/11/67. T.D. readed on. 30" of 390' : 20"d- 766': 133/8" d- 2393'. Water Depth 252 feet

T.D. Driller 80211 E. Loy.

2457'- 2590': Mart, light-gray, soft, with some skelled limitions little quarty

2540'- 2610': Linestone, light-grey, shelitel micritic.

2610'- 3250': Mart, light-gry, soft, kuggy.

3250' - 3600' Timestone light brown - gry, micritic, skeletal Streaks of madstone, 3430'-3560'.

3600' - 3630': Mudstone

3630' - 3820': Siltatore, very calcareous, very angellaceous, light brown grey.

3820'- 8920': Limestone, micritic skeletal.

3930' - 4270': longillactour limiston, buff, soft.

4290' - 5149': Limestone skeletal, mientie, detrital light grey, fine granid, soft frish, argellacious.

5149'-5177' love No1, Rec 28' 100%.

Detrital, micrilie linestone, minor skelital micritic linestone, silly to very fine grained, light gry to brown. Numerous discontinuous larnina I dark angillacous limitione.

Timestone as above, 5177'-5835'

5835'-6380' Mudstone, medeuin blue-grey to grey-green, very calcareous + forsity.

6380' - 6768' Mudstone.

Muchston, grey-green, calcareous, forsiblever, scattered sond grains. 6768' - 6838'

6838' - 7372' Medstan, traa glacemit, tran medicin wars quants grains.

7370' - 7380' 8% Mudelove 10% Sandoline.

80% Sordston, 10% Mudeline. 7380' - 7390'

( Depth corretion 9' deducted for (7410' > 7401') 7390'-7401' Sendston. Love No 2 Rec 30' 100% 7401-7434

Sandston, light grey, fine to granule size grants, mainly medicin to Course grained; subargular to rounded; unoderately sorted; priable, very little matrix with minor mica + trace clay.

7431'- 7463' hom \$63. Rec 29'

Sandstone, light grey; fin It very worn grained, predominantly medium to warse, orcaise and public; subargular to well wounded, small amount of white clay matrix thin shall stringers less than I thick Encelled OHK.

Corelat.

Calibration: Chromatograph.

2% Melhon = 100 cm/s

1/2% Ellon = 100;

1/2% Propon = 85.

Het win. . 1% (1/4 = 20 unts.

Think B 1

Ryhd 31

7.463'-7493': love No 4. Rec 30'.

Sandstone, dank - light grey, fin to medium grained, very angitaceous abundant unica + psyntyied berrows, thin carbonaceous laminae. Jood porosity + permeability.

7493'- 7524': love No 5. Rec 31'.

Sandstone, light-clark grey, very fine - fine grained, with few scattered pebble bands, very orgillaceous, light-grey - while matrix abordant mica, carbonaceous plakes + prymite. Marsini, moderate he poor pomocily, poor permeabilit.

7524'-7554': Gom Nob. Res 30'.

14'. Sandston, light-median gray, very fine-fine grained, subangular to subrounded, from with white clay matrix, miaceous, carbonaceous, some lithic fragments, massin. Poor \$\psi\$ + 16.

2': Shale, Chocolate brown, firm

14': Sandstone, light grey, medium to pebble size quarty subangular to will rounded, well sorted, no matrix, unconsolidated, excellent \$4 K.

7554'-7584': Come No7. Rec 30'

Sandstone, medium to very coarse grained with seathered public, scattered papeles, brown mica, massive; clay matrix. Jood \$4 K

7584'-7614' Come N.8. Rec 27'

Sandstore, light-medicin gray, modern to granule quart grains, so at 7599' subargular to well rounded, well sorted; some white clay matrix, abundant mica + occasional glausonite (?).

Massine from to freath Very good & + good K.

7614'-7947': Sandstore, medium to warre quarts grains, subergular to wall rounded, clear frosted grains, trace wal.

7916' - 8021' Sandstone, losse quark grains, medium to very worse grained, angular to well rounded.

at 1950 Trace of sillstone + sills sandstone, light gray argitlaceous, very fine grained, schangeler quart. Total April (Buller) 8021 feet.

Logging Programme:

hog Runs

hog Runs

hoduchin Elichnich lag 1,2,3,

Sonia - Gamma Ray 1,

Continuous Dipmeter 1,2,

Sonia log 1,

Tornation Density - Gamma, 1,

Laterolog 7 1,

Michaelerolog 1,

Gamma ray Newton 1,

Velviely Survey Conducted.

Internal 2430': 2393-8010', 2393

766-2430': 2393-8010', 2393-8017'.

7661-24101:

766'-2405':2397'-8010'

2393'- 8002'

2393-8006

7300' - 8010'

7300'- 7800'

7300' - 7800'

Top of Tabrole Valley CM. 7364) Oil/Vale Contail- 7601!

Formalini Interval Tests

No1: at 7607'

Relovened 750 cc mud

15,000 CC filtrati

50 cc Formalion fluid of 11, 120 ppm ll.

N. 2: at 7591'

Recovered 18.78 auft-gas

1805 a. fluid in pressure bomb.

13,300 cc of Pil: 48.50 API Gra. at-70" F: Pour Paint 50-55" F.

1,600 ic mud + filliat.

bus / at Ratio :- 235:1 (approx.

No3: at 7513'

Reavend 400 a mud

48 ce of fillrate in intalin chamber

no oil rum.

How & Sampling pressure 100 lbs. No build up.

Phygad. 7650'-7290': 2550'-2290': 510'-310': Well Cop.

Krigfish B1. 38°35'57"5 148°10'13"E. ex Corelat. 2460'-2940'. Mart + limistine: Mart is buff to the gy, soft to from, granuler, foro, silt size debris, v/ Call Tr glancomit, To carle matter. Timestine is bell to the gry, shelital micritic to granular, soft to mod hard, fors, To glace and calcit, occ love of gons. 2940'-3250' Mart: buff to it gy soft sticky willy to carb matter, to Mudstone, It gy to It view gy, soft-Carl matter. Timestone: gry to beff gy micritic skelital mod hard forsit silly v/angill glave carb flicks to pyrite. Mudstone: (Marlstone) It bon gy, v/cale, silly, fors well cemented, mad hel glacionity carb matter. Limestone: It gy bon micrili skelital, r/argell, hel 3560-3640' well amented, fors glaucomit, som calit. (Barl) Limiston: buff to olin gy micritic skeletal v/angell from to 3920'mod hard w/ silt size delvis glave minor carb flecks and fine disseminated Joso frags to love gtz grns. Vote: Timedire section continuous strongfort. 4630'-4860': Mudetine: lt-gy-gy soft-firm forsil slicerly and mica 4790'-4910': Dolanit: med gy bom, cryptorla, v hd. 5030'- 5120': Mark: May, soft, br glanconit + cart. metter. 5149-417' Core No! Rec. 28' Timstone: detrital micritic, It gy bon sillsize delvis avgill w/minor skellat deposits. Some inegular lamina el desker and mon argill. Note: Innexton section continues throughout 5 580'-5650': Mudstom: It gy to mid gy soft- to fain W/ Cale, Carb. 5740'- 5900: Mudsline: med bon gy to gy, olivin green finish, cale fruit, firm, silly in part, shi carb, prysitis. mid-ligg silly cali soft. Modelim: med bon gy to gy alin green, pisite, cale forsil, firm, silly in part, shi carb, pyretic. 5900-Midster section continues throughout boot.

PALYNOLOGICAL AND PALAEONTOGICAL
MATERIAL

Samples examined include sediments of core 4 (7480, 7489 feet) and core 5 (7511, 7517 feet), which yielded abundant carbonaceous material consisting chiefly of wood fragments and rare spores and poller. Microplankton were not observed. grains.

### 7480 feet

Spores:

Pollen:

Gleicheniidites circinidites (Cockson)

Trilites tuberculiformis Cookson Proteacidites annularis Cookson

P. crassus Cookson P. dilwynensis Harris P. subscabratu: Couper

Podocarpidites ellipticus Cookson Phyllocladidites mawsonii Cocks n

### 7498 feet

Pollen:

Araucariacites australis Cockson Protescidites annularis Cookson

P. subscaeratus Couper

Tricolpites sp.

### 7511 feet

Spores:

Cyathidites australis Couper

Gleicheniidates circinidates (Cookson)

Pollen:

Proteacidites annularis Cookson

P. incurvatus Cookson P. subscabratus Couper

Phyllocladidites mawsonii Cookson Tricolporites microreticulatus Harris

Triorites harrisii Couper

### 7517 feet

Spores:

Baculatisporites comaumensis (Cookson)

Cyathidites australis Couper

Gleicheniidites circinidites (Cookson)

Pollen:

Dacrydiumites i'lorinii Cockson & Pike

Proteacidites crassus Cookson

P. dilwynensis Harris P. subscebratus Couper

The sparse microfloras are referred to the Eocene <u>Duplopollis</u> orthoteichus Assemblage on the basis of Proteacidites dilwynensis.

DATE

WELL NAME

KINGFISH -2

ELEVATION

+31 feet

DATE June 1971; Dec 1971

DATE Jan. 1975

AGE	PALYNOLOGIC		GHEST	4	τ	<u> </u>		EST I		<del> </del>	·
AGE	ZONES	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time	Preferred Depth	Rtg	Alternate Depth	Rtg.	2 wa time
,1G- ,10.	P. tuberculatus										
_	U. N. asperus										
	M. N. asperus										
	L. N. asperus										
NE	P. asperopolus										
EOCENE	U. M. diversus										
	M. M. diversus								,		
	L. M. diversus	7480	2				7537	1	1		
SNE	U. L. balmei	7980	3				7980	3			
PALEOCENE	L. <u>L. balmei</u>										
PAI	T. longus										
\$ 60°) \$	T. lilliei						·				
EOUS	N. senectus										
T E CREI ., LEOUS	C. trip./T.pach										
క	C. distocarin.										
	T. pannosus			·							,
EA	RLY CRETACEOUS										
PR	E-CRETACEOUS										<del></del>
COMM	ENTS: 7. D.	8021			·		L	l			
ente Signatura Signatura											
			<del></del>		<u> </u>						
		•					·			<del></del>	
RATI	NGS: 0; SWC or	CORE, EXCE	LLENT	CONFIDENCE	E, as	semblage	with zone	spec	ies of spo	ores,	
	1; SWC or		CONF	IDENCE, as	sembl	age with	zone spec	ies d	of spores a	and	
		or micropl			sembl	age with	non-diagno	ostic	spores, p	oller	n
		microplank SS, FAIR CC		NCE, assemi	blage	with zo	one species	of e	either spor	re and	i
	pollen	or micropl	ankto	n, or both			-diagnostic		•	13.	٠.
	micropl	ankton.		-							
NOTE	Also, if an er	try is giv	en a	3 or 4 con	fiden	ce ratir	ng, an alter				le.
	better confide								•	-	

DATA REVISED BY: A.D.P.
FORM No R 315 12/72

DATA RECORDED BY: LES. /AOP

WELL NAME KINGFISH - 2

ELEVATION

DATE

+31 feet.

AGE	PALYNULOGIC	arter of handre. Afternoon and thereto obtained	III	GHEST DATA		ne amperingy registries, yas obses version	r grant glenger i regele et fri generation velkjen terrengije uitske str	Ţ	OWEST DAT	Ā	erana parama appro industriano, der et martinarili antiere in
The second section of the second	ZONES			Alternate Depth			Preferred Depth		Alternate Depth		2 way time
į .;	T. bellus	Company of the Compan				- Company Comp			Language Control of the Control of t		Palakoni kajakonika
MIOC.	P. tuberculatus	Secure alter y car and reproduce details or scale of relative	CONTRACTOR OF	-regulation was - Price to the service of personal superstant CS Wild Service			A STATE OF THE PROPERTY OF THE	en ober underleitungen	en de en de en	for manufactures.	and the second of the second section (C.)
method (fr. 0) also	U. N. asperus	The second second regulation of the second s	ne la Giblinane meter	made Pr. n. 421. Il mittodi en et made de detallacione produte man		Cars Common accomm			THE PERSON OF TH		on complete proportion of the complete of the
ENEOCEME.	L. N. asperus	An advance of the second section of the section of		19 - 1984-1985-1985-1985-1985-1985-1985-1985-1985		, agenteri , arcora, e in, nasemblada de a co	Current and the second		ummidumma, part von middenagens Redestagenage (a.e.)	TO LONG TO LANGE TO SERVICE SE	. A Branch Alexandra established "Percyal & Sav
	P. asperopolus	The considering and the constitution of the co		s vallegendutum (levidudethridans ygastiunum ps. colu. Nes		THE PROPERTY STATES AND		The PARTY AT A JAME AND A	eringgan kaspanink, dan samoning sebegan pagangan sasar		Marchine Allen Principal and Prop. 40 dec.
	U. M. diversus	un anno sequenciamberrangene. Se tim thi a	***************************************	nau o matologica (nel 1980), restrato de las esperados estas, esce		ASSESSED - MODERNAME, AS ASSESSED	Anna - Sar anna - Chillia Sheedhalach (1966 - Nicolathain San ann	~ · · · · · · · · · · · · · · · · · · ·	nann managazatan dinastranjuration astida an idolo	THE BURNEYS A	entermontamenten (* 10 m. t. 12) i de
	L. M. diversus	7480	2	ang arts. , a , prijinan meritjara (Bijinans), salah and diselah salah s		Mjou	7537	1	udingendenta. And opis us gradustrus list u	and englesements prom	
ALEO- CENE	L. balmei	7980	3	rilian / Pri rilimanenggi / Kishinda Pi Gurim Pri / Heft et Leninus	e sal madela ton tan-	1.68%	7990	3	a administratura (1997 - Parliferado 200 administrato (1900)	a mile speciment literac	ere have parties and an area wen
AL	T. longus	- maja tilu tah kalibijag administra menakan Nadabisebuah		enervisioni pri est 1931 militarioja ustranta Nacionale (1930) della e			CONTROL BY CONTROL BY THE CONTROL OF	**************************************	nte i i individuale estanti qualeri indigi titografi. Si ricia accidentica	وه من المحاصفة حرصات ال	ntrome re dat besteskapskipskyrise r
ا من جوید	T. lilliei	,	*************	and area of the character with states of the property and are	masky, grande rymne	ing-ta- aggreent va age-g		marin Pad Abadimanjus	milen kan Prilan in milen eka Padra kan pendapat i Spanisa i		anama terrisa tinduskan aserakan diga andi aya
EOUS	N. senectus	en in proceedings, Philippens and an Emphison of Fig. 27 (1) and mentioned by the		и домография общества и отворого солуч	~~************************************	AND THE PERSON NAMED OF TH		dure que u das au	acute remarket annie og king og k <u>er</u> cionspakersking. I	emple "planting to emple	adelphinesis 74 f delle dimension perc, ni ens
LATE CRETACEOUS	C. trip./T.pach.	am um diversi sur a amous sum estat gresse uspecatu m man.		· POLYTONY MONTH OF LA SAFLE SEE MANAGEMENT OF THE SAFLE SAFLESS					and the second second second second second second	ver blird - 1°3d vljev sas, v	andana magalantsal ni yakunan yu un zi yi
Ωį	C. distocarin.	namendalahkilikan sadi ariga melaju u kina magi 45 kilik saling bilip gelagi i disak sad		and works of publishing a suppositive of publishing and suppositive and suppos				nga da umpi girakan ing	ann i Alberton, amartin da republica anno cabbarren esperant	TOPMAN LONG UICE SAMES AND	var ugsveige de ger armenderheiten en synde
POL SAFETHER LITTERSHIP LAND	T. pannosus	The second secon	and out one of the out-	na Amazadh a Thannag ambhir iaga ga thanna an ann an air an		-				COTTONERS SOUTHWATER	nel i altrida (Alfrida Mellin tropa francis (Alfrida)
)	C. paradoxa	·····································		emmeration — de sign are de la homestation i -sheatone. Address standar charact		Share and the sh		72.00		nt Subsym <del>iner</del> Elenty	uranisminant auruphismatuaksi. Pisi Tiyon d
ous	C. striatus			en James VIII - Laberro Greaz - Laberro Great - Argent Congress Angles Congress Angles Angles Angles Angles An						alugilly hallusiders / Paligue Are	त्रोबसर त्यां त्याचारीयांशिकायां है के विश्वते त्याच
EARLY RETACEOUS	U. C. hughesii	- принятнями ст. Протрагу "наседност, фут т.р.» з з здагудария		AMERICAN STATE OF THE STATE OF		acamer a confession and agreem a	CONTRACTOR	- Anna		rhad sa codertir dan sister e c	em dalamaja ku ku muhembar (4 ° 26 ° ° ° 2
H H	L. C. hughesii			er Thanker i Shiring a tha de d'Albana ann an Thanker a tha an agus ann a	THE WORLD STATE OF		The stand date time 1300 have been as the standard and st		no flational i securitation the Superimannia in Augustian of	- Marie Barra Barra (n. 1944)	marrier and of the country and the sections
	C. stylosus	umajin umum - oʻgʻonquaquin quundigisuna, qad a virri qasi inqui iyuna d		THE COMMENT AND THE COMMENTAL AND ASSESSMENT OF THE COMMENT AND ASSESSMENT OF THE COMMENT OF THE			Antonio metes sententi interio sententi sententi sententi sententi sententi sententi sententi sententi sentent		er fer fan útstêreksútt, telder, augstrútssútter Egerlegis engri á		n vi alget when their their 14374
Pre-	Cretaceous	n e protes de trans per sumanimo se prepara esta suma pueda sumano e e e e e e e e e e e e e e e e e e e		-coloniar amininti din estanzialista (in coloni, terrapi ada estano, ada e tra			narat variation, valva e e parti amendroppi, représ enve		AND THE PROPERTY OF THE PROPER		THE STATE OF THE PROPERTY OF THE STATE OF TH
COMM	ENTS: Top of Love	er M. divers	us l	based on re	port	by M.I	E.Detimann	, and	should be	e reg	arded

RATINGS:

- O; 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.
- SWC or CORE, POOR CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.
- CUTTINGS, FAIR CONFILENCE, assemblage with zone species of either spores and pollen or microplankton, or both.
- 4; CUTTINGS, HO 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 altereste depth with a better confidence rating abould be entered, if possible.

DATE	RECORDED	BY:	L.E. Stover & A.D. Partridge.	DATE	JUNE	1971.	ganderspank profession registrate principal district file in communicate and
DATA	REVISED E	SY:	CHECKED; L.E.S.	DATE	DEG.		

WELL NAME <u>KINGFISH-Z</u>

ELEV. 73/ DATE 20 April 1971

Foram Zouules

Western Co	RM ZOUULES	•	1 5	: 13		1 .	3
g man a constrainten	gge gazalanin menin bort oz katendakanin az katendakan ka	Highest Data	quality	2 Way Time	Lowest Data	Quality	2 Way
Y September	A management of an annual contract	erang palamang algebras aparapangan ber dari dari dari dari dari dari dari dar		ļ	1100	13	CONTRACTOR CONTRACTOR
	Alternate	/200	3		1600	13	
-	B Alternate	er a senimen se senimen a communicación de communicación de communicación de communicación de communicación de Communicación de communicación		<b></b>	man der son returne von de service de l'en returne de returne de l'en returne de l'en de l'en returne de l'en		-
*************	C Alternate	20	1.1			13.	o de come consessor de la cons
	Comments to a day on a street state of the s	3000			5/00	13	Na Article Common
	D. and which the property of the control of the con	A CONTRACTOR OF THE CONTRACTOR	TO THE OWNER OF THE PARTY OF TH	-	ADMINISTRAÇÃO ESTA ESTA ESTA ESTA A ESTA ESTA ESTA ES		
	D2 Alternate	5200	12		en franket, entil derotte statistiske fa 250 - 200 f.m. 100 och mediateksin och me	A John Contract	ALL STREET, ST
mirrormenonicina 2.1	Alternation of the control of the co	inner of a fill the table in the content of the table in t Sign approved the table is used in table in the trip table in the table in the table is a fill of table in table in the table in	A STORY THE PROPERTY WAS TO			13	The same of the sa
MIOCENE	Alterial and a second and a sec	・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・	Martin Strategic Control		CHOTHE CONTINUES, CONTINUES CHARLES AND ACTUAL AREA. THE CHARLES		for a second second second
N.	G Alternate		-		(明めからないとなった。) 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」 「明めからないとなった。」		Anterior de contraction de miso
	[-] "COMPANIENCE AND ADDRESS HALL WAS DONE FOR ANY AND THE	6000			的对抗,更多的 化二氢甲基 电电子 医电子性性神经病的 "他们的一个人的现在分词是不是不是不是不是不是不是不是不是不是不是,我们们们们们们们们们们们们们们们们们	major som resorter	
	H Alternate	i gon dann eig ar id erjoon , general retisaler is his han rannest i april			CECTOMER ROADERS SETEMBER SETEMBER DETERMINENT DE SETEMBER DE SETEMBER DE SETEMBER DE SETEMBER DE SETEMBER DE S	-	
	H <sub>2</sub> Alternate	er senduningam. Persentang salah alah 12 manggaran ber				13	
	II Alternate	TILOO TILOO SEEDIMENTE			commission de commission de commission de la commission de	Carl Secretary and Secretary	
ENE	I Alternate	在100mm			Alberger-wordens absorber vido repaire colois anny alberges, elektro	Color Many Charleson in	
OLICOCENE	1 Alternate	7350		-Marian Marian Marian	b Transfer Experience Conference (E.g.) on Alife Strate Strate Conference (E.g.)	1/	der anderschafter grand
OE.	J <sub>2</sub> Alternate	・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・			ala militari herrindi dipamangan organ ya kulon galen Edifusion E. Secusiologia ya Iyabidi Edifundi di Manada, Produktiri dano militari 17. Jiliku ni di Yunuk dibi ya militari a kulon kulon inga kulon	A COM BOOK	***************************************
EOC	K Alternate	na anana a familia familia ananana ana	12	THE CO. SECTIONS SALES AND	reserved and the second	1	TO COMPTENDED WE ALSO
DG DG	Pre K	· · · · · · · · · · · · · · · · · · ·			A NO COMMITTE COMP COMPANIENTE PROPERTIES PROPERTIES PROPERTIES PROPERTIES PROPERTIES PROPERTIES PROPERTIES P		***************************************

COMMENTS	۰
COMMENTS	2

Note: If highest or lowest data is a 3 or 4, then am 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.

O	SMC	OT	Core	***	Complete	assemblage	(verv	high	Confidencel
---	-----	----	------	-----	----------	------------	-------	------	-------------

Dat	re.	Re	VÍC	ed	 **	Gara Steam cadys	· *** -*** ·
Ву	eas v	******	· · · · · · · · · · · · · · · · · · ·	. 100 TO 10 To 10	 T. SPH (Manager) / 22	······································	i dan samura

<sup>1</sup> SWC or Core - Almost complete assemblage (high confidence).
2 SWC or Core - Close to comple change but able to inverpret (low confidence).
3 Guttings - Complete assemblage (low confidence).

<sup>-</sup> Incomplete assemblage, next to uninterprotable or SWC with depth suspicion (very low confidence). 4 Cattings

VELOCITY SURVEY

VELOCITY SURVEY

EXTEND SPREAD VELOCITY SURVEY

ESSO KINGFISH 2 - 2

GIPPSLAND BASIN, VICTORIA

Ву

R.J. Black P.J. Birmingham P.E. Towey

RE-NAMED (AUG. 1968) KINGFISH 2

### A. INTRODUCTION

Esso (Australia) contracted United Geophysical Company to conduct an extended spread velocity survey concurrent with the regular velocity survey of the Kingfish B-1, on the 23rd January, 1968. The purpose of the extended spread survey was to measure the slant travel path times from the surface to the principal geological formations for horizontal spread distances from 1000 feet to 7500 feet. From this measurement any discrepancies of the horizontal component to the vertical component of velocity can be determined.

### (1) Instruments

- a) SSC Model GCE 101 Pressure Sensitive Well Geophone.
- b) Model 1-27 United Refraction Amplifier with nickel-cadmium power supply.
- c) G.S.I. Marine Water Break Amplifier.
- d) Electro-tech ER-62 standard 25 trace camera.
- e) Two F-M Transceivers
  - (i) PYE "Premier" Type MFV-516
  - (ii) AWA "Carphone"
- f) One 70 Volt Blaster.
- (2) <u>Personnel</u> One Marine Shooter, one Instrument Operator and one Geophysical Supervisor.
- (3) One Licensed Shooting Boat "Wendy Maree"

### B. SURVEY PROCEDURES

Weather was good during the survey. All recording equipment functioned properly.

(1) The orientation of Glomar III was NE to SW during the survey. Buoys were positioned at distances of 1000, 2500, 4000, 5500, and 7500 feet on either side of the ship along a line passing NW to SE at an asimuth of 2950 through the well site. Exact shot offset distances were obtained from water time arrivals recorded at the well by a specially designed amplifier. Two geophones positioned in the moonpool were used at the well for water arrivals. The conventional survey with shots at 1000 feet offset was completed prior to the extended spread survey.

### (2) Shot Size

Two shots of 100 lbs., forty-six shots of 50 lbs. each.

### (3) Well Geophone Positioning

All depth measurements were made using the Schlumberger depth indicator. The marine riser was disconnected and lowered to the top of casing to reduce rig noise. The cable was clamped with a T-bar device to de-couple the rig movement.

### (4) Recording

The survey records consist of 6 traces. Traces 1 to 3 recorded the well geophone break at 3 different levels. Traces 4 and 5 recorded the water arrivals at the water break phones. The time break was recorded on trace 6.

### (5) Time of Survey

The first charge was shot at 9.40 am and the last shot at 6.40 pm for a total time of 8 hours 27 minutes. The conventional survey required 2 hours 37 minutes and the extended spread survey required 5 hours 50 minutes.

### C. RESULTS

For the conventional survey, a total of sixteen shots were fired at eight geological levels, eight from the NW 1000 foot buoy as the well phone was lowered, and eight from the SE 1000 foot buoy as the well phone was raised in the hole. Results are tabulated in Table no. 1.

For the extended spread survey, a total of thirty-two shots were fired at seven geological levels, fourteen from the 2500 foot buoys, ten from the 4000 foot buoys, six from the 5500 foot buoys, and two from the 7500 foot buoys. Results are tabulated in Tables No.2, 3 and 4.

The quality of the records is good. Time breaks, water breaks and well phone breaks are considered to be reliable. All records are included in the folder of this report.

The final check-shot times for offset distance of 1000 feet and the integrated sonic times from the CVL log are compared in Table No. 5 and the averaged values are compared in Table No. 6. Time differences did not exceed plus or minus one millisecond. Offset distances based on water travel times averaged 1132 feet for the check shots.

The extended spread corrected times for buoy offset distances of 2500, 4000, 5500, and 7500 feet are compared with the integrated sonic times in Table No.5 in terms of time differences and percentage error for the northwest and southeast offsets. Common offset times were then averaged and listed in Table No. 6 for comparison with the integrated sonic times. Differences in averaged times varied from approximately six milliseconds for the 2500 feet offsets to thirty-seven milliseconds for the 7500 feet offsets.

Measured average offset distances based on water travel times are listed below:

	Dist	ances in Feet			
NW	1154	<b>2</b> 748	4237	5710	<b>7</b> 825
SE	1109	2625	4337	5880	7675
NW-SE Average	1132	<b>2</b> 687	4287	5795	<b>7</b> 750

### D. CONCLUSION

Since the record quality is good, the integrated CVL can be considered accurately tied to the 1000 foot check shots (See Table No.6, columns 2 through 5).

The extended spread survey shows an increase of velocity with increasing offset distances from a depth of 3000 feet. Tabulations are shown in Tables 2, 3, 4 and 5. This would indicate a horizontal component of velocity increasing directly with increase of offset distance at the Kingfish B-1 location.

In terms of percentages as shown in Table 6, the percent of error for averaged values at the top of the Latrobe (Dgm 7329) increases with offset from a minimum of 0.13 percent at 1000 feet to a maximum of 4.68 percent at 7500 feet. The maximum percent of error for values not averaged was 5.19 (See Table No.5).

A comparison of the Latrobe Velocity in Tables No.1, 2, 3 and 4, for buoy offsets of 1000, 4000, 5500, and 7500 feet, show corresponding velocities of 9289, 9360, 9420, and 9746 feet per second. All tabulations are based on straight line calculations.

TABLE NO. 1 CHECK SHOTS Shothole Intermution - Elevation, Distance & Direction from Viell LOCATION Company Elevation |Total Death Derrick Floor 360 350145711 ESSO STANDARD OIL · Section, Tornahio, Ronge State Area or field AUSTRALIA INC. 8020 | 1480 101 13" KINGFISH B.1 31' DATUM : Sealevel Victoria Kingfish Number Destroy Time of Shot Asd Asd Tes A Ded | ATed | Interval. Reading Party Grade Election Statuste A. Velocity ! Velocity 5 .001 .216 .406 D G 2995 1080 09:40 3031 .361 .941 .382 5 .001 .383 .382 13000 7853 Elevation Ortan Proce 12:17 3031 .001 ·208 · 402 D G 2995 1040 5 .001 .347 .945 .380 Elevation State 497 046 10804 Top |Channel 10:00 5 .001 .229 .449 D G 3528 3492 1145 .328 .950 .427 .001 .428 .428 3497 8171 703 lo60 11717 5 .001 .233 .505 D G D 27 D21 C20 10:10 4231 4195 1165 .278 .963 486 5 .001 .487 .488 4200 8607 12:05 4231 5 .001 .214 .504 D G 4195 1070 5 4001 .489 .255 .969 488 11732 657 056 10:20 5 .001.233 ,558 D G 4852 1165 4888 .240 .972 | .542 5 .001 .543 .544 4857 8928 .001-215 .556 D G 4852 1075 11:55 4888 .222 .976 .543 .001 .544 Dam & Goophone dipth measured from well starution 740 064 11563 5 .001.228 .619 D | G | 5592 1140 10:25 .204 .980 .607 5 001 .608 Base Channel .608 5597 D 11 = 4 4 4 datum 4 9206 11:40 .001 :220 : 619 D G 5592 1100 5628 .197 .981 607 5 601 608 Do a Depth of shot 615 066 9318 De a Shorhole elevation to dalum plane Lake Entrance 10:30 5 .001 .237 .685 D F 6243 6207 1185 .191 .982 001 674 6212 .674 9217 H a Hartsonial distance from well to sharpuint 5 .001.223 .683 D F 11:.30 .180 .984 6207 1115 .001 .673 S . w Straight like travel path from shot to will graphic 1117 1115 9713 ive x Uphale time of shotpoint .001.228 .798 D G 7324 1140 10:50 7360 .155 .988 T - 2 Observed time from shotpoint to well geochone. .788 5 m1 3789 .789 | 7329 9289 5 .001 238 .798 D G 7324 1190 11:15 fe x \* \* to reference gacchona 7360 .162 .987 788ء 5 .001 J 789 621 053 11717 Ac a Difference in elevation between well & enorpoint. 11:00 5 .001 .242 .851 D G 7945 1210 7981 ,152 .989 .842 5 .001 . 843 .. 842 7950 9442 A10 . D1-D. 11:08 .001.235 .849 D G 7945 1175 7981 .148 .989 | .840 5 .001 .841 Das + Dan - Det Ar; tonl + H Tas v cas : To Vert, travel time from but alor to generate Tod Tost Alder . . dolum plane. Dad + Dan - And  $V_1$  = Interval velocity =  $\frac{\Delta O_{3d}}{\Delta T_{3d}}$ RE-NAMED (AUG. 1968) KIESH2 Cating Record

(59)

The hate evera sy			,	Trida der Brasser und aufbaben se	<del></del>			TAB	LE N	0. 2		EXTEND	ED :	SPREA	/D			•			į	1	e,
	Shoth	ole information	on - Ele	votion, O	istance (	Direction from			ompon.			Y/eII				tion Total	Dept				LOCATI		,
										DARL	[L	.•		•	Koarrick	Floor .		Coord	dinates	· 5 • c	tion, Torns	ship, Ronge State Area or Field.	
	_,l	<u> </u>	·	· 		·L		AUST	RALI.	A INC.	Y	KINGFI	SH	B.1	31	. 802	20			DAT	<sub>UM</sub> . Sea	a level	
1	Time of Shot	Dgm	D's			Reading 12:	burity Grade	Dgs	ਸ	TAN I	Cos i	, e2T	Δ 5 6	Asc V	· Tgđ	T çd Average	Dgd	Δοςσ	ΔTgd	Vi Interval		Elevation Wa	",
7 SE	-	3031	5	001	.558	.509 1	D 2	2995	2790	.931,	.732	.373	5	.001	.374		3000		<u> </u>		Velocity -7979	0: 1	A ma
8 NW		3031	5_	001	512	.496	D 2	2995	2560	.855	.760	.377	5		378			- 497	.046	10804		Claration Chart manual And	-i -
8 SE	·	3528		007	545	.530		3492	2725	780	.789	.418	-		/10	/ 00	2,07	477	- 040	10004	-		
7 NW	·	3528	-		518	·	_	3492·			.803	-	5  -	.001		.422	3497		<del> </del>	-	8287		
				- 001	710			1472	2390	./42	.003	.423	5	.001	.424			703	.060	11717	}		
SE		4231		-,	. 545		) 4	4195	2725	.649	.839	.481	5	.001	.482	.482	4200		-	-	-8714	S Dan Can	Cae
<u> </u>		4231	5_	001	523	.567 I	<u> </u>	4195	2615	.623	.849	.481	5	.001	.482			- 657	.056	11732	-		
2 SE		4888	5	001	.540	.617 1		4852	2700	556	.874	-530	-				1055	-	-		-		
+ NW		4888			.521			4852			.881		5	.001		.538	4857	-			9028	Ogm = Goophone digit measured from well c'erasi	
														1001		· <del></del>		740	.064	11385	]	Dor = 4 shot -	91
SE		5628			549			5592			.898	.603	5	.001	.604	.602	5597				9282	Dyl = datum .	
D   NW		5628	5	001	.5 <u>3</u> 0	.663 I	$\frac{9}{1-\frac{5}{1}}$	5592	2650	.474	.904	.599	5	.001	.600			615	.065	9609	}	Da a Depth of shot	
B   SE		6243	5	.001	. 540	.728 I	$\frac{1}{6}$	5207	2700	434	.917	.668	5	001	.669	667	6212	-		·	0070	De a Shortale elevation to dolum plane	7
NM_ [6		6243	5	-	.526			207			.921	.664	5	.001		.007	0212	-			9313	H = Hartrantal distance from well to shatulint S = Straight line transl path from shat to wall gea	7
										•		.004	<del> </del>	.001	.005	<del></del>		1117	.116	9629	}	Tue * Uphale time" at the toolog	13
SE		7360	·		.570			7324			.932	.784	5.	.001	.785	.783	7329	}	<del></del>	·	9360	T = Conserved time from shatpoint to well geographe.	E
NW _ NW	*	7360	_5_	.001	.545	.832 I	$ - - \frac{7}{2}$	7324 2	2725	.372	.937	.780	5	.001	.781			.}	]	<del> </del>	-	As a Difference in devotion between wall A motori	nt.   1
		-					-					<u> </u>				•			<del> </del>		}	And the state dutum	sume .
															<del>-</del>	*	<del> </del>	-			}	Ogs = Don- Det As; ton 1 2 H	į
										3E-1	IAA	ED									-	Tgs v cos i Ta Vert, travel time from such afew to get	c~~
-		-				·			! -			l				•		}	-	Ì		Tgd a TgstAC-+ • • datum plane.	•   .
									(	LUG	<u>, 19</u>	968							İ		ļ	Dad = Dan - Amd	l i
									1/				7			İ						VI = Interval velocity = ADad ATal	
												<del>)   </del>	6								}	Vo a Average a D 03	
-								),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									/			<u> </u>		Surveyed by:	. 1
																		}				Dotes	
																		<b></b>	·	<u> </u>	ļ	Neathering Data :	
																						. x.	. 0
																						Cosing Record 6	- PA
																							2
7												•	• .						•			· ·	
	,		•		•.	·							,			•	•			· ( <	2,0)	and the second of the second o	******
	•							•						.,			. •						

	7	Shothole	e kiforinutio	or - Elev	utica Di	stoner f	Direction	from V	750	1				TABLE	NO.	3	EXT	ENDED	SPRĘAD		***************************************		,		1,	•
			•						····	ESSO		0.010 A INC.	77.	. Well INGFISI	н в-	.1	E1ev 10e//16	rotion Toto	100	Coord	inates				Areo or Field	
rd Chamala Ed Marker	Time o	of Shot	Dgm	Ds.	tus	tr	Reading	T	'Stace	Dgs	н	TAN I	Cor i	Tgs	Δ 5 d	Asd	Tgd	7 93	Dyd	A D g d	ΔΤςδ	V;	Vo Average		Elemtion We	ril .
) SE			4231	5	.001	853	.670			4195	4265	1.017	701	470			.471	.469	· <del>  </del>	-	<u> </u>	Yelocity	Velocity	*   E.A	. 11	
NW .		<del></del>	4231	5		.887				4195	4435	1.057	.687	.466			.467	,409	4200	-			8955	(	Pare	
SE			1000			:0.5.6								T	1	_		- <del></del>	·	657	.059	11136		Elevation Shart		
SE			4888	5			.702			4852			.752				.529	.528	4857	-		ļ	9199			
1.1			4000		.001	.020	.090	עןי		4852	4140	.853	.761	. 525	2	1001	.526			1						:
SE	,	<del></del> .	5628	5	001	8/1/	.746	- D		5592	4220	755	70.0		<u> </u>	-				740	.062	11935		5	Dyn On	
NM			5628	5	.001	.859	.742	g		5592		768	.798	.588	$\frac{1}{5}$	1001	.590	.590	5597	-		<del></del> -	9486			
							-				1233	.,,00	. 175	700	-	1001	.309	ļ- <u>-</u>		615	.068	9044	-	_	ماما	:
SE			6243	5	.001	.835	.798	D		6207	4175	.673	.830	€662	5	001	.663	.658	6212				9441	· .		:
WI_			6243	5	.001	.919	81	1 D		6207	4595	.740	.804	. 652	5	001	.653	·					}	Dem # Gaaphone dapth measur	_ان_ان_ان	_ł_
								-						·				1		1,117	0.120	9308	}	Dos 4 4 4 4	* shot *	'n
SE			7360 7360	5	.001	.855	.901 .894	$-\frac{D}{D}$	· .	7324			.864				.779.	.778	7329	}		ļ <u>.</u>	9420		* datum *	
1-11/1	<del></del>		7300	3.	.001	.844	.894	D		7324	4220	.576	.867	•775	5	.001	.776				<u> </u>	ļ	.	Da a Depth of shot		
							<del></del>			<del></del>													-[	De a Snarhate elevation to d	atum plane	
				,				-	-						·	-	ļ							H = Hartzantal distance fro		
							<del></del>	1							<del> </del>		<u> </u>	ļ		}			·	S = Strotcht line travel pork		<b>ን</b> ጎን
		j.								•				:	<del>-</del> -									T * Observed time from sharps		
														•									}	tr = + + to refer	nse gasphona	
																	•						}	Δe * Difference in elevation bu		
											R	E-N	AM	ヒリ						·			ļ	016 - D1-D1	# shot & dutuming	12:0
							·	-	-		-/5	JUG	-10	(82)	ļ								ļ ———	Das = Dan - Det Ar: ton	i e <u>H</u>	
								-	-						4 6									Tou v cos i Ta Vert, travel ties		
								-	-		X		FIS		7			·						Tad a TastAlder	* datum plane •	•
							******			<del></del>		<u>t</u> . i			Territoria di 10									Dad x Dan - Amd	•	
	·																							VI * Interval veracity = \(\frac{\Delta \gamma}{\Delta \gamma} \frac{\Delta \gamma}{\Delta \gamma} \frac{\Delta \gamma}{\Delta} \gamma \frac{\Delta \gamma}{\Delta} \gamma \frac{\Delta \gamma}{\Delta} \gamma \frac{\Delta \gamma}{\Delta} \gamma \frac{\Delta \gamma}{\Delta} \gamma \frac{\Delta \gamma}{\Delta \gamma} \fr	•	
-					-																			Vo Aurros V D 11	•	٠
						-			_ _										/			· .		Surveyed by:	••••••	•••
									_  _										/		:			Date:	· · · · · · · · · · · · · · · · · · ·	
	******************																							heathering Data :	· . i	
															.				}				<del></del> .			
			• • • • • • •	• • • •	· ; ·					-	-											[		·*/	•	
										• • • • • • • • • • • • • • • • • • • •	- <b>-</b> j											{	· ·	Casing Record ()		
									لــــ		!-						<u>-</u> -		<u> </u>					<u> </u>	<u> </u>	_
			٠,												٠.		•			•		. يەسىمو	, , , , , , , , , , , , , , , , , , ,	•	• •	
,	,	•			•			•	•			•					•		·, ·			$\cdot$ ( $\Diamond$		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	• •
	•						•			<u> </u>	<u>.</u> .			`			. •	• .					•	• • • • • • • • • • • • • • • • • • •		

<b></b>		Shornol	le Informati	no: = Flav	za tian	Distance			- 11		TA	ABLE NO	. 4	Е	XTEN	DED	SPREAL	) .		•				. ,			· · · · · · · · · · · · · · · · · · ·
					Market Sea	·	: G Dire	crion fro	om Well	- 1	Compo EXP TRAL		N KI	. Well NGFISH	B-1	•	Elevo	Floor		Coordi	notes	· S•c	LOCATI	10 N ship, Ronge	County	Area or Field	d /
	Nomober T	ime of Shot	Dym	Ds	tu	s tr	-	Y		Des	н	TAN I	Ces i	Tgs	Asd	630	Tgd					DAT Vi	UM:	1	·		
 2 <u>5</u> .	SE		5628	5	.00	   1		835	Chinity Stod		5690							T od Average	Dyd	ΔOgd	Δīgd	Interval Yelocity	Average	Elegation S	21006	Elemilon	-W-11
12_	.NW		5628	5_	.00	11.1	71.	.836	D			1.018 1.047	.701 .691	.585 .578	-	.001 .001		.583	559.7				9600_		Elevation Datum		a ma
6	SE .	<del></del>	6243	-		_	_	1	- 1					.570		.00				615	.066	9318		Elevation Stati	н	aud .	
26 37	NW		6243	5	.00	$\frac{1}{1}$	74	.882 .884	$\frac{D}{D}$		5665 5870		.739				.652	.648	6212		·		9572	-			
										- 0207	. 5670	.946	.726	.642	5	.001	.643	-	<u> </u>	1,117	.118	9466					
31	SE	, - Le s'enstitution de la companie de	7360					979		7324	5775	. 789	. 785	.769	5	001	.770	.767					9555	-	5	سو ۵	On Cse
<u>5</u> .	MM _		7360	5	.00	11.18	<u>83</u>	.980	D _	7324	5915	.808	.778	.762	<del></del>	.001	. 763						2222	-			
2	SE		7360	5	.00	11.53	35 1.	092	<u>D</u>	732/	76.75	1.048	(00	. 750										-		7	
6	NW		73 60	5	.00	11.56	d5 1.	094	D	7324	7825	$\frac{1.048}{1.068}$	.690		5.	001	.754	.752	7329			<del></del>	9746			<u>i_</u>	<u>i_i_</u> ,
						-										-	. 143						}	Digm # Gauphone			i
						-																	}	D91 * *		* shot s	
											-										···			Da & Dopin of		0319M	
															-							<del></del>		De & Sharhate			
-		<u>-</u>																~		•				H = Harisonial			
						-				ļ						-				•				S = Stealght to		her of tode mo	£ 20,000
	_ _								-	<del></del>	-			<u></u>  -	_									T = Observed	ine from shotpoi	nt to well grouph or	. 2
· -  - ·									-			PE	\   \	ME			<b>}</b>	-						fr x • Λe = Difference	n to referen		ooint.
-   -					· ~ <del></del>		j					- 1	i.	1	1	-				·				A16.		• Pol S date	
-   -								- -	_		.	A	JG.	196	3)						•			D21 = D21 - D1	t A e : ton i	ę H	-
							<del>:</del>					<u> </u>	100	+ -		_	·							Top v cos : Ta	Vert, travel time	Dis from stat alov to (	ge sehone
-									1					134	-2			·						Tgd = Tgt AL	· · ·		
- -	-											And the second second												Opd = Opn = Am			
-								_ _	-				·	•						· .				Vo = Average	* D 41		
											<b>-</b> - -										.				TgJ		
															·	_ _	·		<u>'</u>					Surveyed by:			1
									-  -									·						Weathering Date			
-	-							_ _	-						<del> -</del>	_ -								•	. • •	. 1	Om.
	-			.					-																. ×_		0
			-						+										-					Casing Record	- 6		-4º
	•																		<u></u>						·0		· 500.

TABLE NC 5 PERCENT ERROR

. % Slant time Slant time At Depth in ft \(\Sigma\) Times Slant time \(\triant\) % Slant time △·t |Slant time| At Error m.s. Error (X=7675') m.s. Error (X=5880') Error(X=2625') m.s. Error (X-4337') From S.L. CV.L.Survey (X=1109') 0.374 - 7 1.84 0.383 + 2 .52 0.381 3000 0.419 -10 2.33 0.428 .23 3500 0.429 0.487 .41 0.482 - 7 1.43 0.471 -18 3.68 0.489 - 2 4200 -15 2.76 0.74 0.544 0.543 0.540 - 4 0.529 4857 • - 1 .18 2.96 0.587 3.45 0.49 - 3 0.590 -18 -215597 0.608 0.608 0 0 0.605 2.97 0.654 0.669 - 5 0.74 -11 1.63 -20 0.674 0.674 0 0 0.663 6212 1.39 -36 4.56 0.785 - 5 0.63 -11 0.770 -20 2.53 0.754 0.779 0.789 - 1 .13 7329 0.790 (X=5710') (X=7825')(X=4237') (X=1154')(X=2748')0.378 - 3 0.79 0.381 0.381 0 0 3000 KINGRISH 0.424 - 5 1.17 0.429 3500 -12 2.45 0.489 0.489 0.482 - 7 1.43 0.467 4200 0 72 -18 3.31 0.544 - 8 1.47 0.526 4857 0.544 0 0.536 4.77 -19 3.13 0.579 -29 - 8 1.32 0.589 5597 0.608 0.608 0 0.600 4.60 -21 3.12 0.643 -31 6212 0.673 1 .15 0.665 - 9 1.34 0.653 0.674 5.19 1.77 0.763 3.42 0.749 -41 0.776 -14 -27 - 9 1.14 7329 0.790 0.789 .13 0.781 0

N.W. OFFSETS

S.E. OFFSETS

TABLE NO. 6

### PERCENT ERROR OF AVERAGE TIMES

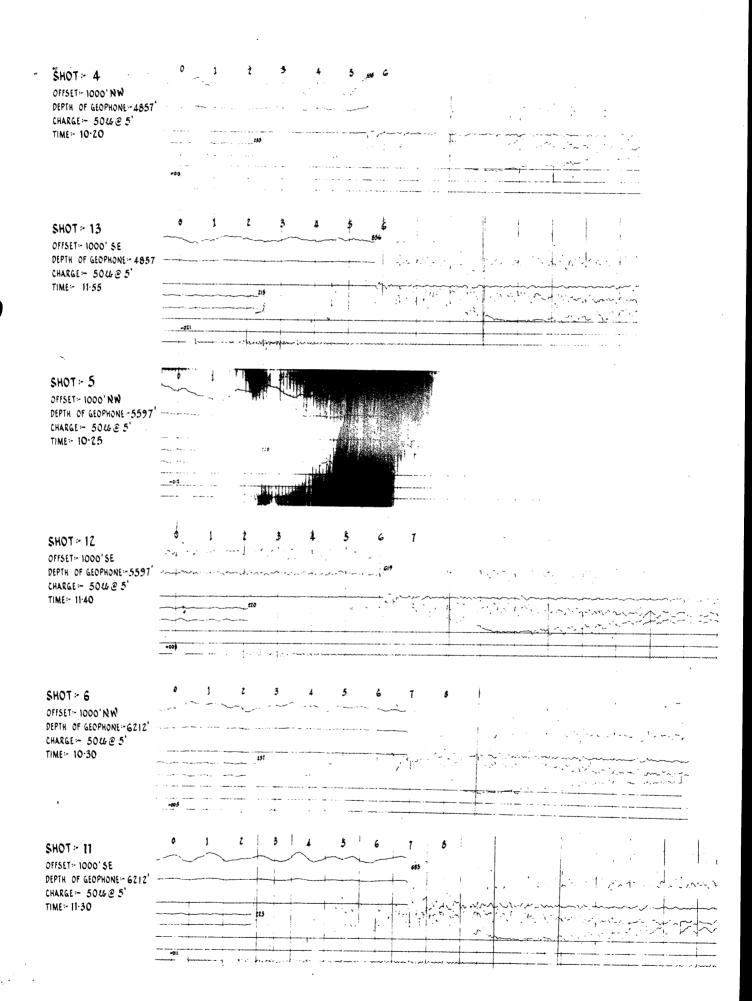
Depth in ft	∑ Times	Slant time	Δt	%	Slant time	Δt	%	Slant time	∆t	%	Slant time	Δt	%	Slant time	Δt	+
From S.L.	CVL Survey	(X=1132')	ms	Error	(X=2687')	ms	Error	(X=4287')	ms		(X=5795')					Err
3000	0.381	0.382	+1	0.26	0.376											
3500	0.429	0.428	_1_	0.23	0.422											,
4200	0.489	0.488	-1	0.20	0.482	-7	1.43	0.469	-20	4.09						
4857 ·	0.544	0.544	0	0	0.538	<b>-</b> 6	1.10	0.528	-16	2.94						
5597	0.608	0.608	0	Ω	0.603	-5	82	0.590	-18	2.96	0.583	<b>-</b> 25	4.11			
6212	0.674	0.674	0	0	0.667	-7	1.04	0.658	-16	2.37	0.649	-25	3.71			
7329	0.790	0.789	-1	0.13	0.783	-7	0.88	0.778 .	-12	1.52	0.767	-23	2.91	0.752	-37	4.
	de estados de la companya del companya de la companya del companya de la companya del companya de la companya de la companya de la companya del companya de la companya dela companya de la companya dela companya dela companya de la															
•																
			-													KING
		·	Carricon de Laboratoria de Laborator			-										T/4H.
															Charles and a second	'n
				•												
						-Dr. Market				•						8
					· ·											B

0

SHOT: 1	0 1 2 3 4 5
OFFSET= 1000' NW DEPTH OF GEOPHONE= 3000' CHARGE = 504 @ 5'	en en en en en en en en en en en en en e
TIME:- 9.40	
	-est
SHOT > 16  OFFSET: 1000' SE  DEPTH OF GEOPHONE: 3000'	0 1 2 3 4 5
CHARGE: 504 @ 5' TIME: 12-17	.005
	-a)
SHOT = 2  OFFSET = 1000' N N  DEPTH OF GEOPHONE = 3497'  CHARGE == 50425'	
TIME:- 10:00	-019
SHOT = 3 OFFSET= 1000' NW DEPTH OF GEOPHONE= 4200' CHARGE = 50425'	
SHOT = 3 OFFSET= 1000' NW DEPTH OF GEOPHONE= 4200'	0 1 2 3 4 5 6
SHOT = 3  OFFSET: 1000' NW  DEPTH OF GEOPHONE: 4200' CHARGE = 50425' TIME: 10:10  SHOT = 14  OFFSET: 1000'5E	0 1 2 3 4 5 6
SHOT = 3  OFFSET: 1000' NW  DEPTH OF GEOPHONE: 4200' CHARGE = 50425' TIME: 10:10	0 1 2 3 4 5 6 

# ESSO Kingfish-2

Well Velocity Records

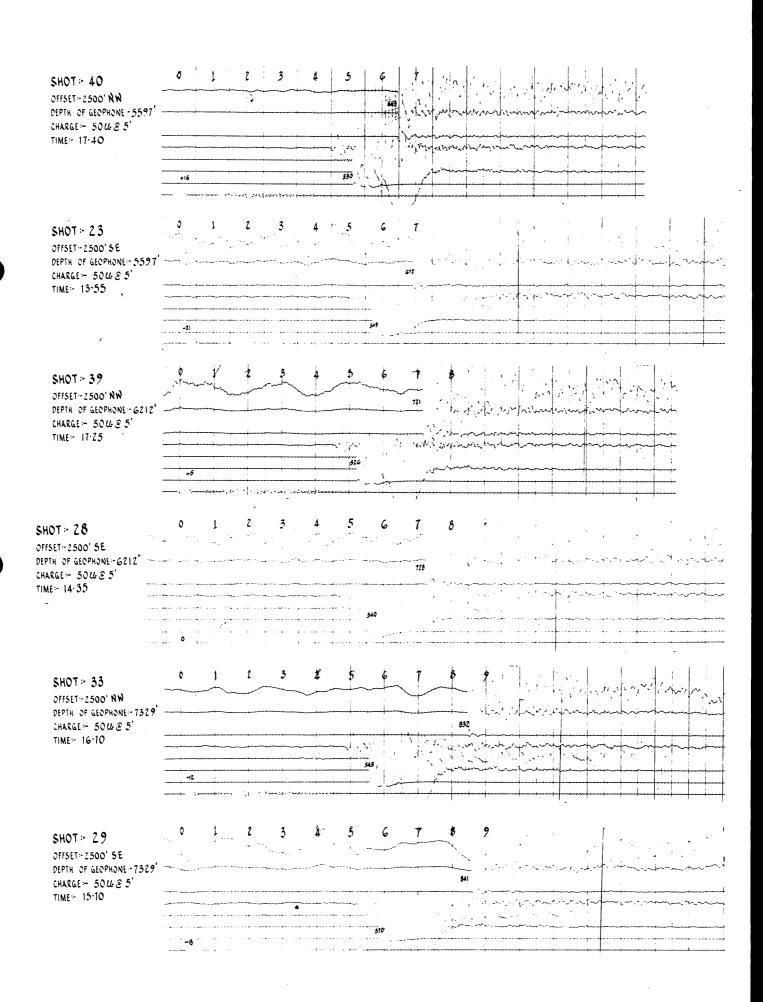


SHOT = 7	0 1 2 3 4 5 6 7 8 9
OFFSET= 1000' NW	the second of the second of the second of the second of the second of the second of the second of the second of
DEPTH OF GEOPHONE 7329	
CHARGE: 50425	and the state of the state of the state of the state of the state of the state of the state of the state of the
TIME: 10:50	and the second of the second o
Time 10 50	The second secon
	and the second of the second o
	No. 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (
	0 1 2 3 4 5 6 7 8 9
SHOT : 10	110
offset:- 1000'se	
DEPTH OF GEOPHONE-7329"	and the second control of the second control
Charge = 506€5'	
TIME: 11:15	180 State of the s
	The state of the s
	-102
`	
SHOT = 8	0 1 2 3 4 5 6 7 8 9
offset - 1000'NW	and the second of the second o
DEPTH OF GEOPHONE - 7950	
CHARGE: 50425'	
TIME:- 11-00	
	The second section is the second section of the second section in the second section is the second section of the second section of the second section is the second section of the second section of the second section of the second section of the section of the second section of the section of t
	the state of the s
	-otf
SHOT: 9	0 1 2 3 4 5 6 7 8 9
SHOT = 9	0 1 2 3 4 5 6 7 8 9
OFFSET: 1000' SE	
OFFSET: 1000' SE DEPTH OF GEOPHONE: 7950'	
OFFSET: 1000' 5E DEPTH OF GEOPHONE: 7950' CHARGE: 50425'	
OFFSET: 1000' SE DEPTH OF GEOPHONE: 7950'	
OFFSET: 1000' 5E DEPTH OF GEOPHONE: 7950' CHARGE: 50425'	
OFFSET: 1000' 5E DEPTH OF GEOPHONE: 7950' CHARGE: 50425'	
OFFSET: 1000' 5E DEPTH OF GEOPHONE: 7950' CHARGE: 50425'	
OFFSET: 1000' 5E DEPTH OF GEOPHONE: 7950' CHARGE: 50425'	
OFFSET: 1000' 5E DEPTH OF GEOPHONE: 7950' CHARGE: 50425'	
OFFSET: 1000'SE DEPTH OF GEOPHONE-7950' CHARGE: 50625' TIME: 11:08	-54
OFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08	
OFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 5046 5' TIME: 11-08  SHOT: 48 OFFSET: 2500' RW	-54
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 5046 5' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000'	-54
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	-54
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 5046 5' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000'	
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	135 The state of t
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	135 The state of t
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	135 The state of t
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE: 3000' CHARGE: 50425'	15
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' RW DEPTH OF GEOPHONE-3000' CHARGE: 50425' TIME: 18:40	135 The state of t
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17	1
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17 OFFSET: 2500' SE	1
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17 OFFSET: 2500' SE DEPTH OF GEOPHONE-3031'	1
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17 OFFSET: 2500' SE DEPTH OF GEOPHONE -3031' CHARGE: 50425'	1
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17 OFFSET: 2500' SE DEPTH OF GEOPHONE-3031'	1
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17 OFFSET: 2500' SE DEPTH OF GEOPHONE -3031' CHARGE: 50425'	1
CFFSET: 1000' SE DEPTH OF GEOPHONE-7950' CHARGE: 50425' TIME: 11:08  SHOT: 48 OFFSET: 2500' NN DEPTH OF GEOPHONE: 3000' CHARGE: 50425' TIME: 18:40  SHOT: 17 OFFSET: 2500' SE DEPTH OF GEOPHONE -3031' CHARGE: 50425'	1

SHOT: 47	0	1	2	3	4	5	6							•	
offset:-2500' NW		و دراه	. د اسلمین		•_^~~~~	527	1		**						
DEPTH OF GEOPHONE: 3497' CHARGE: 50425'			************				= 1, 10°	11 1-	r education of				in ternio		· , , , , , , , , , , , , , , , , , , ,
TIME:- 18-30						<del></del>	_ ^	, ,,		محمد ادرمناهمورد	ر مرده از در مردد. مردد سارد از مردد از	مىلىرىدۇرى دىمىرىمىدەرە		~~~	~~~~ ~~~~
					~			•	ر در م دید در پ	بداد المام المام	~~~	~~~			
	0				****	518	سيند .	<del></del>							
				or and the	The second second										
SHOT = 18 OFFSET=2500' SE	0	j	2	3	. 4	5	6	1							
DEPTH OF GEOPHONE:- CHARGE:- 50425'							530				• .'				
TIME: 13:20				•	•		•						• • • • •		
							545				٠., .	• .			
	-50						•							•	
		1	,			_		_							
SHOT = 45	~`~.^		<u> </u>	3 ~~~~	4	5	<b>.</b>	7					, i		
OFFSET=2500' NN DEPTH OF GEOPHONE=							561	r	ing the second		بالمرابرة			مصاور ۱ مصاور	مراجع المراجع المعرفية
Charge:- 50 G & 5'					<u> </u>		\	:	****			· 1 · · · ·	······································		
TIME: 18-13									May Break	May in	ما ممکن آوروار		~~·.		~~~~
	-214						23		والمراد بالمرا				~~~		·
							_`	·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
														٠.	
SHOT : 19	ø	1	2	3	4	5	6	7							
OFFSET:-2500'SE		•		•											
DEPTH OF GEOPHONE -4200' CHARGE - 50425'	•						575			٠.					
TIME: 13:30															وينجيون ومستودي وو
														*	el i la el el religiose
	· -{4			•			545							•	
									•						
SHOT: 44	· •	〕 ~~~	2	<u> </u>	4	5	<u>6</u>	7	( ,	_	1,0	: .		10 mg/s	
OFFSET: 2500' NW DEPTH OF GEOPHONE: 4857'							60	1	of respect		ر الله الدوائية				٠
Charge:- 506€5'												- ( - ( - ( - ( - ( - ( - ( - ( - ( - (	. ,	20-04 21	0 .<   \\ 0 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \
TIME:- 18-08						·	700	. ,	المعتادة المعادلة المعتادة المعادلة	الرحة ادار ال	~~~	~~~~	$\sim\sim$	·+~~~	
	-48						521		j.,,,,,,,,	~~~~~		~~~~			
			- , 14	(),px) p + + + + + 1 m	7 2 , a N/47 . N	·~ ~~	لب <sub>+</sub> م <del>ند</del>		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				·············		
									<i>.</i> .	•					,
SHOT = 22	o,	1	Z	3	4	5	6	7							
OFFSETH 2500' SE						•	•								
DEPTH OF GEOPHONE 4857 CHARGE - 50625			•	• • • • • •	•. ••		617	. •	* *	•	•	*•			.' •. •.
TIME:- 13-50	دون د ۱۰۰۰ د اوداد صده د														الهوالاريسور والأمار الأواد الأواد الأواد الأواد الأواد الأواد الأواد الأواد الأواد الأواد الأواد الأواد الأواد
										,					No. of the second second
	*19 .		•				540					• •			
									4						

## ESSO Kingfish - 2

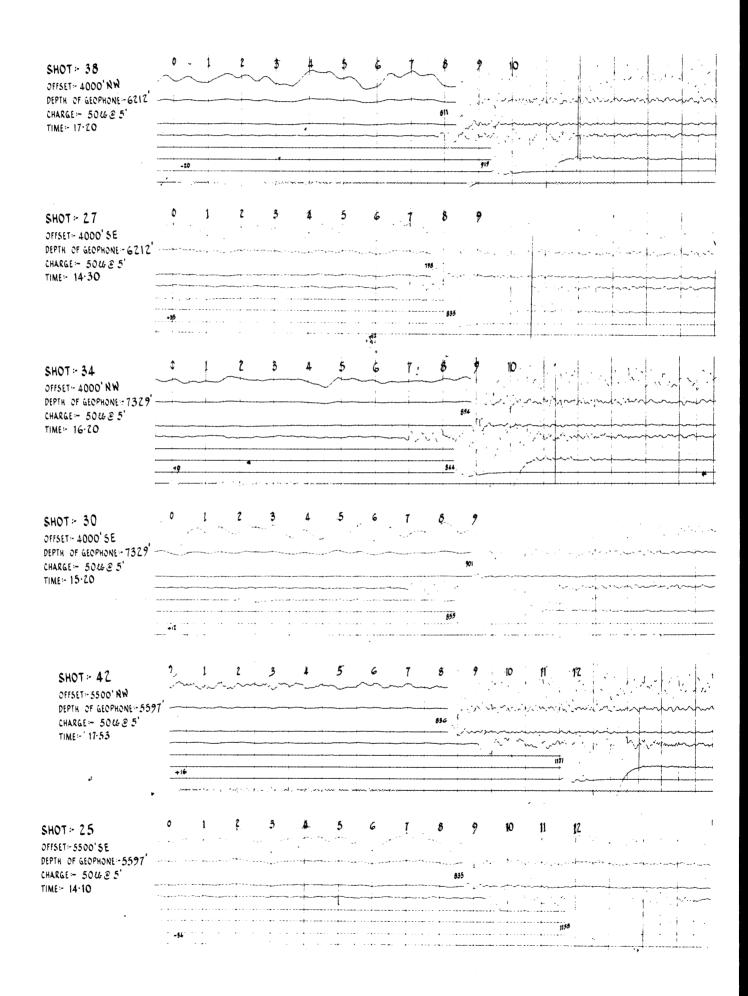
Well Velocity Records



SHOT: 46 OFFSET: 4000' NW DEPTH OF GEOPHONE - 4200'	•	1	ž .	3	4	5	6~~	7	<b>.</b> 8	<b>,</b>	/	in and a second	in the second	ا این این	e Tertim	(May 2)	.) \ r:r.~'
CHARGE - 504 € 5' TIME - 18.25					······································			<b>618 '</b> \y~~	پېمبريس		~~~		· 		~~~	· ~~~~	~~~
									1,70	·'.— .			محمديم العادوا	~~~~~~	-مــــ <sup>م</sup> ــــــ	~~~	
	+9									887	سيند						
SHOT = 20 OFFSET-2500' SE	0	1	l	3	4	5	6	7	8	9		10		· ·		Julie 19	
DEPTH OF GEOPHONE: 4200 CHARGE: 50425 TIME: 13:35	***************************************		**************************************					610					دیم دیما سیست	************************		·	بدر در در. <del>سندست</del> بمام به دن
	-96							• • • • • • • • • • • • • • • • • • • •		85	<b>5</b> 			·			
SHOT = 43 OFFSET = 4000' RW	<b>,</b>	1	2	_3	4	<b>5</b> ~~	6	7	\$	9							
DEPTH OF GEOPHONE - 4857 CHARGE = 50425 TIME = 18.00									~.~  ~!~~			ر از این دو. میرویز جرمد مرویز این اگر		(	در دور در این مردمیدی سیمیسی		~.~~ ~~~
	•	or provided in the second				· /vImask			828	: \_ 							
SHOT : 21 OFFSET - 4000' SE	<b>3</b>	1 .	2	3 .	4	5	6		5	9			•				
DEPTH OF GEOPHONE - 4857 CHARGE :- 504 @ 5' TIME :- 13:40							*	702	د میدد د					e projeti i se Geografia	,		
	-50			•				•		650	•						
SHOT :- 41  OFFSET:- 4000' RN  DEPTH OF GEOPHONE:-5597'	0	1	2	<i>3</i> ~~	4 ~~~~~	5 ^	<b>.</b> ^~~	7	`	9	• :	1 1			ad b		r
CHARGE: 50425' TIME: 17:48								742		المدسمة المدان إداء المدان إداء		laritani.	به ۱۳۸۸ میراند که مسیحت مارین ۱۳۸۸ میراند	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	\ \ \	~~~·	مہدہ 
	-14		- k	1.4.2.1	someon ope					859				······		~	
SHOT = 24	٥	1	۲,	3	4	5	6	7	8	9	,	ю					
OFFSET: 4000' SE  DEPTH OF GEOPHONE - 5597'  CHARGE: 50685'  TIME: 14:03	• • • • • • • • • • • • • • • • • • • •		·		• .			746	•			•					
inter 14 Co										842					****		

# ESSO Kingfish-2

Well Velocity Records



SHOT = 37 offset=5500' NW	,	<u> </u>	<b>2</b> ~~.	3	,	5	6	<b>.</b>	8	<b>9</b>	10	11	12	,			
DEPTH OF GEOPHONE-6212' CHARGE:- 50425' TIME:- 17-05										554	المساورة	erije. Metat	د از این این در این در این در این در این در این در این در این در این در این در این در این در این در این در این	**************************************	اربودي. مهمان ما		^
	-9											• · · · · · · · · · · · · · · · · · · ·	m4				,~ 
SHOT : 26  OFFSET - 5500' SE  DEPTH OF GEOPHONE - 6212'	0	1	ż	3	4	5	6	٠ ٢	8	9	10	ń	12			***************************************	
CHARGE - 50W @ 5' TIME: 14-25		• • • • • • • • • • • • • • • • • • • •		•	• • •					902			1195		· · · · · · · · · · · · · · · · · · ·		
	-20		-	:							٠			•			
SHOT = 35  OFFSET=5500' NN  DEPTH OF GEOPHONE=7329'  CHARGE = 504 @ 5'	~	1	2	<u>3</u> 	4	5	6		8	7	10	<b>11</b>	12	13	<b>14.</b> ,		ال ب
TIME:- 16-35	-50							~~~		~~~		7.27 - 1; 	183		· ".	.""	) ; —
SHOT = 31  OFFSET=5500'SE  DEPTH OF GEOPHONE=7329'  CHARGE = 50425'  TIME=15:25	· · · · · · · · · · · · · · · · · · ·	1	2	<b>3</b>	4	<b>5</b>	<b>4</b>	7	<b>5</b>	9	10	11					
IIME- 15-23	-18 ·											115					
SHOT = 36 OFFSET = 7500' NW DEPTH OF GEOPHONE = 7329'	0	* ^ ^	,	3	4	5	**	7	*	9,-	10	11 	112	13	14	15 T	<b>1</b> 1
CHARGE ~ 100 € 5' TIME ~ 16.45	-10											1094	رو مهن مهدر مهن دراه	And the second	, , , , , , , , , , , , , , , , , , ,	1565	
SHOT = 32 OFFSET-7500' SE DEPTH OF GEOPHONE-7329' CHARGE = 100 & 5' TIME = 15-40	¢	1	ì	3	4	5	6	7	8	9	10	11	12	13	<b>j4</b>	15	K
	-14															1535	

This is an enclosure indicator page. The enclosure PE906029 is enclosed within the container PE906028 at this location in this document.

The enclosure PE906029 has the following characteristics:

ITEM\_BARCODE = PE906029
CONTAINER\_BARCODE = PE906028

NAME = Formation Tester Report

BASIN = GIPPSLAND PERMIT = PEP 38 TYPE = WELL

SUBTYPE = DRILL\_RPT

DESCRIPTION = Formation Tester and Recovery Report

and data

REMARKS =

DATE\_CREATED = DATE\_RECEIVED = 31/08/1968

 $W_NO = W512$ 

WELL\_NAME = KINGFISH-2 CONTRACTOR = SCHLUMBERGER

CLIENT\_OP\_CO = ESSO AUSTRALIA LIMITED

This is an enclosure indicator page. The enclosure PE604527 is enclosed within the container PE906028 at this location in this document.

The enclosure PE604527 has the following characteristics:

ITEM\_BARCODE = PE604527
CONTAINER\_BARCODE = PE906028

NAME = Grapholog/Mud Log

BASIN = GIPPSLAND PERMIT = PEP/38

TYPE = WELL SUBTYPE = MUD\_LOG

DESCRIPTION = Grapholog/Mud Log (enclosure from Well

Summary) for Kingfish-2

REMARKS =

DATE\_CREATED = 22/01/68

DATE\_RECEIVED =

 $W_NO = W512$ 

WELL\_NAME = KINGFISH-2

CONTRACTOR = CORE LABORATORIES

CLIENT\_OP\_CO = ESSO STANDARD OIL (AUSTRALIA)LTD

This is an enclosure indicator page. The enclosure PE902896 is enclosed within the container PE906028 at this location in this document.

The enclosure PE902896 has the following characteristics:

ITEM\_BARCODE = PE902896
CONTAINER\_BARCODE = PE906028

NAME = Completion Coregraph

BASIN = GIPPSLAND

PERMIT =

TYPE = WELL SUBTYPE = WELL\_LOG

DESCRIPTION = Completion Coregraph (Enclosure from

Well Summary) for Kingfish-2

REMARKS =

DATE\_CREATED = 20/01/68 DATE\_RECEIVED = 31/08/68

 $W_NO = W512$ 

WELL\_NAME = Kingfish-2

CONTRACTOR = CORE LABORATORIES

 $CLIENT_OP_CO = ESSO$ 

This is an enclosure indicator page.

The enclosure PE902897 is enclosed within the container PE906028 at this location in this document.

The enclosure PE902897 has the following characteristics:

ITEM\_BARCODE = PE902897
CONTAINER\_BARCODE = PE906028

NAME = Kingfish TimeDepth Curve

BASIN = GIPPSLAND

PERMIT =

TYPE = WELL

SUBTYPE = VELOCITY\_CHART

DESCRIPTION = Kingfish TimeDepth Curve (enclosure

from Well Summary) for Kingfish-2

REMARKS =

DATE CREATED =

DATE\_RECEIVED = 31/08/68

 $W_NO = W512$ 

WELL\_NAME = Kingfish-2

CONTRACTOR = ESSO CLIENT\_OP\_CO = ESSO

This is an enclosure indicator page. The enclosure PE604688 is enclosed within the container PE906028 at this location in this document.

The enclosure PE604688 has the following characteristics:

ITEM\_BARCODE = PE604688
CONTAINER\_BARCODE = PE906028

NAME = Induction Electrical Log

BASIN = GIPPSLAND BASIN

PERMIT = PEP/38 TYPE = WELL

SUBTYPE = WELL\_LOG

DESCRIPTION = Induction Electrical log, run-1, (from

Well Summary) for Kingfish-2

REMARKS =

 $DATE\_CREATED = 31/12/67$ 

DATE\_RECEIVED =

 $W_NO = W512$ 

WELL\_NAME = KINGFISH-2 CONTRACTOR = SCHLUMBERGER

 $CLIENT_OP_CO = ESSO$ 

This is an enclosure indicator page. The enclosure PE604689 is enclosed within the container PE906028 at this location in this document.

The enclosure PE604689 has the following characteristics:

ITEM\_BARCODE = PE604689
CONTAINER\_BARCODE = PE906028

NAME = Induction Electrical Log

BASIN = GIPPSLAND BASIN

PERMIT = PEP/38

TYPE = WELL

SUBTYPE = WELL\_LOG

DESCRIPTION = Induction Electrical log, run-2, (from

Well Summary) for Kingfish-2

REMARKS =

 $DATE\_CREATED = 23/01/68$ 

DATE\_RECEIVED =

 $W_NO = W512$ 

WELL\_NAME = KINGFISH-2 CONTRACTOR = SCHLUMBERGER

 $CLIENT_OP_CO = ESSO$