348001

WELL COMPLETION REPORT

MULLET #1

OR_341

CONTENTS

WELL SUMMARY
FORAM ZONULES
PALYNOLOGIC ZONES
SPECIMENS FROM GROPER #1 & MULLET #1
CORE DESCRIPTION
SIDEWALL CORE DESCRIPTIONS

APPENDIX A: RAW DATA REPORT
Application to Drill
Additional Particulars of Proposed Drilling Operation
Weekly Drilling Reports

ENCLOSURES

1. COMPLETION COREGRAPH
2 a. GRAPHOLOG
b. GRAPHOLOG
3 a. CONTINUOUS DIPMETER
b. CONTINUOUS DIPMETER
4. TIME DEPTH CURVE
5. BAROID PPM LOG
6 a. COMPENSATED FORMATION DENSITY LOG 2″
b. COMPENSATED FORMATION DENSITY LOG 5″
7 a. BOREHOLE COMPENSATED SONIC LOG – GAMMA RAY 2″
b. BOREHOLE COMPENSATED SONIC LOG – GAMMA RAY 5″
c. BOREHOLE COMPENSATED SONIC LOG – GAMMA RAY 5″
8 a. BOREHOLE COMPENSATED SONIC LOG 2″
b. BOREHOLE COMPENSATED SONIC LOG 5″
9 a. INDUCTION – ELECTRICAL LOG 2″ - 10 JAN 1969
b. INDUCTION – ELECTRICAL LOG 5″ - 10 JAN 1969
c. INDUCTION – ELECTRICAL LOG 2″ - 16 JAN 1969
d. INDUCTION – ELECTRICAL LOG 5″ - 16 JAN 1969
e. INDUCTION – ELECTRICAL LOG 2″ - 10 JAN 1969 + 16 JAN 1969
f. INDUCTION – ELECTRICAL LOG 5″ - 10 JAN 1969 + 16 JAN 1969

348003

DofM | S&A | CG | CC&M | D.S.M.E. | Registrar | E&IL
RECEIVED 3 - FEB 1969
ANSWERED DEPT. OF MINES
REF. NO.

MULLET 1 WELL SUMMARY

Type of Well: Exploratory Well.

Purpose of Well: Mullet 1 well was located in the southern part of the Gippsland Basin approximately 31 miles south-east of the Groper 1 and 41 miles south-southwest of Kingfish 3.

Mullet 1 was the second of a series of wells, to be drilled, to test for the possible entrapment of hydrocarbons along the southern depositional limits of the Latrobe Delta Formation. Groper 1 was the first well. Seismic mapping indicated that the Latrobe onlapped crystalline basement and was overlain by the Lakes Entrance Formation.

Prospective reservoir sands were anticipated in the Latrobe section which was mapped to be approximately 150 feet thick at the Mullet 1 site.

Well Statistics:

Status: Plugged and abandoned as a dry hole.

Location: Latitude 39° 13' 02" S
Longitude 147° 51' 22" E
Shot point 5997, Line EC156.

Elevation: Rotary table 31 feet above mean sea level.

Drilling Unit: Glomar III.

Water Depth: 175 feet.

Spud Date: January 9, 1969.

Completion Date: January 17, 1969.

Operation Time: 9 days.

Total Depth: 2463 feet.

Casing: 30" at 319 feet;
$13\frac{3}{8}$" at 1313 feet.

.../2

348004

Plugs: Plug No.1, 1204 to 1400 ft, 200 sacks cement;

Plug No.2, 400 to 600 ft, 150 sacks cement.

Mud Logging: Core Laboratories logged the well from 1338 to total depth.

Electric Logging:

IES	Run 1	317 to 1330 feet
	Run 2	1313 to 2456 feet
Sonic	Run 1	317 to 1330 feet
	Run 2	1313 to 2457 feet
FDC	Run 1	1313 to 2456 feet
CDM	Run 1	

Velocity Survey:

Coring: Three conventional cores were cut. Total footage cut was 85 feet and recovery was 50 feet or 59%.
45 sidewall cores were shot, with a recovery of 45 cores.

Core Analysis:

Depth	Hor.Perm.	Vert.Perm.	Porosity	Water	Oil
2425	151	21	27.8	62.9	0
2428	0.1	0.1	4.9	80.6	0
2440	0.1	0.1	4.8	69.6	0
2391	2.1	142	31.6	95.6	0
2394	123	218	33.0	86.4	0
2400	156	75	30.7	90.2	0
2406	366	275	35.5	85.4	0
2412	604	595	34.2	91.3	0
2418	138	138	38.5	89.9	0

Hydrocarbons: No hydrocarbons were encountered in the well.

Stratigraphy:

Formation	Age	Top(RT)	Subsea	Thickness
Water		31 ft	0	175 ft
Gippsland	Miocene and younger.	206 ft	- 175 ft	
Lakes Entrance.	Oligocene.	2035 ft	-2004 ft	1829 ft
Latrobe Delta.	Eocene.	2265 ft	-2234 ft	230 ft
Basement.	Devonian(?)	2420 ft	-2389 ft	43+ ft

.../3

348005

Lithology:

Gippsland Formation

206 - 2035 ft: Marl and skeletal Calcarenite.
Marl: light grey to white, medium to fine grains of glauconite, minor quartz, very soft, abundant fossil debris.
Calcarenite: light grey to white, mainly loose fossil debris with minor cemented patches; medium grained.

Lakes Entrance Formation

2035 - 2265 ft: Marl: light grey to buff, soft, puggy, trace of glauconite and fossils.

Latrobe Delta Formation

2265 - 2420 ft: Sandstone with minor shale.
Granite wash at base (2392 to 2420 ft).
Sandstone: white to clear, unconsolidated, fine to granular, well rounded to subrounded, moderate sorting, some glauconite, pyrite and carbonate cemented areas.
Shale: tan to grey, very silty, micaceous.
Granite wash: soft to crumbly, grey to red to grey-green, black and white mottled, quartz, rich abundant weathered feldspar, micaceous.

Basement

2420 ft to T.D.: Granite: grey to mottled black and white granite. Varies from hard to crumbly depending on weathering. Quartz rich, pink and white feldspar, biotite and trace pyrite.

MZ:JHM
23.1.69

348006

Form P 193 3/71

BASIN GIPPSLAND BASIN BY David TAYLOR

WELL NAME MULLET-1 DATE 20 April 1971 ELEV. +31'

Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
MIOCENE	A						
	Alternate						
	B				1198	1	
	Alternate						
	C	1240	1		1272	1	
	Alternate						
	D_1	1295	1				
	Alternate						
	D_2				1320	3	
	Alternate						
	E	1330	1		1380	3	
	Alternate						
	F	1399	1		1542	1	
	Alternate						
	G						
	Alternate						
	H_1						
	Alternate						
	H_2						
	Alternate						
OLIGOCENE	I_1						
	Alternate						
	I_2						
	Alternate						
	J_1	2243	1		2304	2	
	Alternate				2261	1	
	J_2						
	Alternate						
EOC.	K						
	Alternate						
	Pre K						

COMMENTS:

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

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

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

Date Revised _____

By _____

348007

BASIN GIPPSLAND DATE June 1971

WELL NAME MULLET -1 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	2356	1			.663	2386	1			.693
	P. asperopolus										
	U. M. diversus										
	L. M. diversus										
PALEO-CENE	L. balmei										
	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. 2483. (697)

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: I.E.Stover / A.D.Partridge DATE June 1971

DATA REVISED BY: Corrected; L.E.S. DATE Dec. 1971

Amdel Rpt. MP 2809/69 March 1969. 348008

Date March 1969.
Lib./File No. 61/45/0 (N26)
Please return to:—
ESSO STANDARD OIL (AUST.) LTD.
SOUTH-EASTERN BASIN LIBRARY

SPECIMENS FROM GROPER NO.1 AND MULLET NO.1

1. ROCK DESCRIPTIONS

Sample: Mullet No.1, 2470 ft: TS22659 (labelled 2417 ft on bag)

Rock Name:
Severely weathered granite.

Hand Specimen:
A very weathered, coarse-grained, pale orange-grey rock consisting of irregularly scattered quartz grains in clay.

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	30
Clay	65
Iron oxide	5

The rock consists of rather strained and irregular grains of quartz up to about 5 mm across in very irregularly distributed clay, some of which occurs in large, micaceous but deformed books. The distribution of the iron oxide is even more irregular, and has probably moved around within the rock during a late stage of weathering.

The clay occurring in the large micaceous books has probably been altered from mica, and the presence of the iron oxide suggests that at least some of the mica was biotite. The clay with less obvious structure has probably been altered from feldspar.

Features that might have shown definitely whether this rock is granite weathered in situ, such as the remains of myrmekitic intergrowths, are not present. However, the high proportion of clay, and its occurence in two clearly distinct types, indicates that the granite is quite likely to have been weathered in situ. The severe deformation undergone by the clay, and the strain shown by the quartz, could be explained as a result of the pressure of overburden on an easily deformed rock. There is no definite means of establishing that the rock has not been transported a small distance from its point of origin, but it is considered more likely to be a result of weathering virtually in situ.

348009

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 2

WELL: Mullet-1

Interval Cored 2391-2426 ft., Cut 35 ft., Recovered 35 ft., (100 %) Fm. Weathered Granite

Bit Type C11, Bit Size 8 5/16 in., Desc. by H.L. & P.H. Date 1/15/69

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
2391				
95			2391-91½ (½) Shale, very soft, tan to grey, very silty, micaceous.	
2400			2391½-2412 (20½) Weathered granite-wash, soft to crumbly, grey with black and white mottling. Abundant weathered feldspar. Quartz-rich, fine to pebble size. Pyritic, scattered lithics. Mostly well-rounded quartz grains. Micaceous.	
05			2412-2418 (6) As above, mostly red to grey with black and white mottling.	
10			2418-2426 (8) As above, mostly dark grey to green-grey with red, black and white mottling.	
15			No show.	
20				
2426				

REMARKS:

5 cm

348010

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 3

WELL: MULLET - 1

Interval Cored 2426 - 2441 ft., Cut 15 ft., Recovered 15 ft., (100 %) Fm. GRANITE BASEMENT

Bit Type C20, Bit Size 8 5/16 in., Desc. by HL & PH Date JAN 15th '69

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
0 2426 0 4 8 12 16 30 35 40 2441			2426 - 2441	(15') Crystalline basement of grey to mottled black & white granite with irregular red staining in part. It varies from well indurated and hard to rather extensively sheared, weathered and crumbly. Fine fractures throughout show pale green alteration mineral, possibly illite. Overall, the rock is coarse grained with abundant quartz, and pink and white feldspars. There is also an abundance of dk green platey mafics probably biotite (? horneblende) The rock is slightly pyritic.
			At 2439' -	An area of fine grain crystalline igneous material intergrown with the coarse granite and having a greater predominance of mafics. It appears to be a later intrusion into, or reconstitution of the coarser granite and the grainsize suggests rapid cooling.
				No show

REMARKS:

5 cm

MULLET 1

SIDEWALL CORE DESCRIPTIONS

Run 1

Depth	Description
1330'	Marly, glauconitic sandstone; light grey-green; salt & pepper appearance; very fine grained, friable.
1312'	Sandy marl; light grey, quite soft and waxy with abundant fine grains of glauconite. Sparsely fossiliferous.
1295'	Silty-sandy marl; light grey, as above.
1272'	As above.
1250'	Very soft marl, or calcareous mudstone; light grey-green, abundant small forams and calcareous fossiliferous debris.
1240'	As above. Trace glauconite.
1198'	Silty marl; light grey-green, as above.
1150'	Marl; light grey-green, as above.
1100'	Silty marl; as above; fossiliferous hash and occasional bryozoal fragment.
1060'	Marly limestone; light grey, soft, occasional large calcareous fossiliferous fragments, very finely disseminated glauconite.
1330'	Sandy glauconitic marl; light grey, occasional large fossiliferous fragments, as above; soft.
1312'	Silty marl; light grey, disseminated glauconite; as above.
1295'	Silty glauconitic, calcareous mudstone; light grey-light grey-green, with fossiliferous debris as above; slightly harder than above.
1272'	Silty, calcareous mudstone; as above.
1250'	Calcareous mudstone; light grey-green, relatively well compacted, with abundant finely disseminated pyrite crystals. Minor trace carbonaceous flecks and fossiliferous (occasional robust foram.

MULLET 1

SIDEWALL CORE DESCRIPTIONS

Run 2

Depth	Rec.	Description
2386'	2"	Sandstone; grey, firm, with poorly sorted fine to granule size angular quartz grains, in estimated 40-50% fine clay matrix. Moving up in soil profile. No show.
2376'	2"	As above, with abundant pyrite.
2373'	3/4"	Sandstone; unconsolidated, very fine to fine grain; sub angular to sub rounded. No show.
2356'	1¼"	Sandstone; as above, except fine to coarse grained. No show.
2323'	3/4"	Sandstone; no shows; unconsolidated fine to coarse grained, sub angular to sub rounded; minor, slightly calcareous clay matrix.
2335'	1"	Sandstone; as at 2323'
2306'	1¼"	Sandstone; unconsolidated, fine to coarse grained, sub angular to sub rounded. No shows.
2304'	2"	Sandstone; unconsolidated, fine grained to pebble size - pebbles well rounded; glauconitic. No show.
2294'	2"	Sandstone; firm, mostly very fine grained, with scattered well rounded pebbles, very glauconitic, slightly micaceous. No shows.
2284'	2"	Siltstone; firm dark grey to green; abundant glauconite; calcareous, micaceous. No show.
2282'	1½"	As above at 2284'.
2274'	1¼"	As above at 2282' and 2284'
2265'	1/3-4"	As above, except fossiliferous and shaley. No show.
2261'	2"	As above at 2265' and with scattered white lime nodules.
2253'	2"	Mudstone; grey-green, very firm, very silty, glauconitic, calcareous, micaceous. No shows.
2243'	2"	As at 2253', fossiliferous. No shows.
2227'	2"	As at 2243' with white lime inclusions. No show.
2212'	2"	As above at 2227'
2193'	2"	As above at 2212'
2154'	2"	As above at 2193'
2100'	2"	As above at 2154'
2057'	2"	Siltstone; very firm, grey to green, abundant glauconite, very shaley, calcareous, fossiliferous, slightly micaceous. No show.
2027'	2"	Shale; hard, dark grey to green, waxy, calcareous, glauconitic, silty and micaceous.
2000'	2"	As above at 2027'. No show.
1911'	2"	Shale; hard,grey to green, very silty, very fossiliferous, calcareous.
1840'	2"	As above, at 1911'.

348013

1800' 2" Siltstone; firm, grey, very calcareous, fossiliferous, glauconitic, shaley. No show.

1642' 2" As above (1800') but slightly shaley.

1542' 2" Siltstone; as above (1800') but somewhat more shaley and is pyritic in part.

1397' 2" As above in 1542'.

348014

APPENDIX A - RAW DATA REPORT

348015

Hematite Petroleum Proprietary Limited

440 COLLINS STREET, MELBOURNE • POSTAL ADDRESS: G.P.O. BOX 2752Y, MELBOURNE, VIC. 3001 • TELEPHONE: 60 0331 • TELEGRAPH: "HEMEX" MELBOURNE

MAR:JHM:H

December 24, 1968.

The Designated Authority,
c/o Director of Mines,
Department of Mines,
G.P.O. Box 124B,
HOBART,
Tasmania, 7001.

Dear Sir,

E03/1 - Application to Drill ~~Groper 2~~ Muller 1 Well.

We herewith lodge application for permission to drill the Groper 2 Well in the Tasmanian T/4P area of the Gippsland Basin.

The following details are submitted for your consideration:

Programmed depth: 2700 feet or granite.

Rig: Glomar III.

Location: 31 miles south-east of Groper 1 and 41 miles SSW of Kingfish 3. This is approximately 32 miles north-east of Deal Island in the Kent Group.

Exploration Target:
The purpose of the well is to test possible stratigraphic entrapment along the southern depositional limits of the Latrobe Valley Formation where it pinches out against crystalline basement. Criteria which are considered important for the entrapment of hydrocarbons in this environment are:

.../2

(1) that the Latrobe consists of porous, permeable rocks;

(2) the underlying basement must be an effective bottom seal;

(3) the overlying Lakes Entrance Formation must provide an effective top seal.

Latrobe sediments pinch out against a basement high which flanks the Groper 2 on three sides.

Approximately 100 feet of Latrobe Valley Formation sediments are expected in the vicinity of Groper 2. Because of the location of this well on the south flank of the Gippsland Basin and far from subsurface control, the reservoir quality of the Latrobe Formation is unknown. The geological prognosis is as follows:

Depth (in feet)	Formation
0 - 175	Water.
175 - 2050	Gippsland Formation.
2050 - 2280	Lakes Entrance Formation.
2280 - 2425	Latrobe Valley Formation.
	? Granite.

Yours faithfully,

W.M. Lonie, General Manager.

Attach.

Additional Particulars of Proposed Drilling Operation:

Groper No.2.

Stratigraphic well.

Latitude 39° 13' 02"

Longitude 147° 51' 22"

X 575,281

Y 164,948 Zone 7

1 mile south of boundary of Vic/P2.

Rotary table 31 feet above sea level.

Water depth 175 feet.

Planned to spud 36-inch well at surface and to use 30-inch casing.

Method of drilling - rotary.

Coring: Significant hydrocarbon shows and in Latrobe Valley Formation with continuous coring from 2190 to 2430 feet and one core possibly at T.D.

Person in charge of drilling operation:

Mr L. Lipscombe,
Esso Exploration & Production Aust. Inc.,
380 Lonsdale Street,
Melbourne. Phone: 600401

Proposed logging details:
Before setting 13 3/8-inch casing: IES and possibly sonic log.
At T.D.: IES, FDCGR, Sonic, CDM and possibly GRN, MLL.
A velocity survey will be run.

.../2

348018

Provision for Formation Testing:

Subsurface samples will be taken using the F.I.T. tool on Glomar III.

Cuttings samples taken every 10 feet from bottom of $13^3/8$-inch casing to T.D., and side-wall cores will be taken.

Geological Supervision by:

Mr J.L. Elliott,
Esso Exploration & Production
Aust. Inc.,
71 - 79 Macquarie Street,
Sydney, N.S.W. Phone: 20557

Drilling contractor:

Global Marine Australasia Pty Ltd,
380 Lonsdale Street,
Melbourne.

MAR:JHM
24.12.68

348019

D of M | S&A | C.G. | CC&M | D.S.M.E. | Registrar | E&I.
RECEIVED 16 JAN 1969
ANSWERED DEPT. OF MINES
REF. NO.

HEMATITE PETROLEUM PROPRIETARY LIMITED

WEEKLY DRILLING REPORT

Tenement Number: T/P4.

Operator: Esso Standard Oil (Aust.) Ltd.

Well: Mullet 1.

Date of Report: January 13, 1969.

Drilling Unit: Glomar III.

Location: Latitude 39° 13' 02" S
Longitude 147° 51' 22" E

Rotary Table: 31 feet above sea level.

Water Depth: 175 feet.

Progress: At report date: 1338 feet
Previous: -
Progress: 1338 feet

Operations: Mullet 1 well was spudded on January 9, 1969. 30 inch casing was set at 319 feet and 13 3/8 inch at 1313 feet. Logs have been run to 1338 feet and currently the B.O.P. stack has been set and tested prior to drilling ahead.

Casing: 30 inch at 319 feet.
13 3/8 inch at 1313 feet.

Logs: Ran IES,
SGR,
SWC (15).

W.M. Lonie

W.M. Lonie, General Manager.

MZ:JHM
13.1.69

348020

HEMATITE PETROLEUM PROPRIETARY LIMITED

WEEKLY DRILLING REPORT

D of M | S & A | C G | CC & M | D.S.M.E. | Registrar | E & H
RECEIVED 3 - FEB 1969
ANSWERED DEPT. OF MINES
REF. NO.

Tenement Number: TP/4.

Operator: Esso Standard Oil (Aust.) Ltd.

Well: Mullet 1.

Date of Report: January 28, 1969 (final report).

Drilling Unit: Glomar III.

Location: Latitude 39° 13' 02" S
Longitude 147° 51' 22" E

Rotary Table: 31 feet above sea level.

Water Depth: 175 feet.

Progress: At Report Date: 2463 feet (T.D.)
Previous: 1338 feet
Progress: 1125 feet.

Operations:

Mullet 1 reached a total depth of 2463 feet in granite basement on January 16, 1969. The well was continuously cored from 2350 to 2441 feet, a total of 3 cores being cut. After running electric logs from 1313 feet to total depth, the well was plugged.

No hydrocarbons were encountered in Mullet No.1 and the well was abandoned on January 17 as a dry hole.

Logging:
IES 1313 to 2456 feet
Sonic 1313 to 2457 feet
FDC 1313 to 2456 feet
The CDM was run and a Velocity Survey was also made.

Plugs: Plug No.1 1400 - 204 ft, using 200 sacks cement;

Plug No.2 600 to 400 feet, using 150 sacks cement.

W. M. Lonie

W.M. Lonie, General Manager.

MZ:JHM
30.1.69

348021

OR_341

ENCLOSURE 1

5 cm

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD. FILE NO. FL-115-19L

WELL MULLET 1 DATE JANUARY 1969 ENGRS. THM DJS

FIELD WILDCAT FORMATION LATROBE ELEV. 31' KB

~~COUNTY~~ AUSTRALIA STATE TAS. DRLG. FLD. FRESHWATER GEL CORES 2,3.

LOCATION OFFSHORE - GLOMAR III REMARKS 60' DIAMOND BARREL USED.

COMPLETION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

SAND SHALE LIMESTONE DOLOMITE CONGLOMERATE OOLITES CHERT ANHYDRITE

SAMPLE CHARACTERISTICS
F=Fractured L=Laminated FG; MG; CG=Type Grain Size S=Stylolitic V=Vuggy

PROBABLE PRODUCTION
O=Oil W=Water G=Gas T=Transitional

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY, MD. * = Horizontal Perm Plug	POROSITY %	RESIDUAL SATURATION % PORE SPACE OIL	RESIDUAL SATURATION % PORE SPACE TOTAL WATER	Gb	PERMEABILITY MILLIDARCYS 500 250	POROSITY PERCENT 20 10	TOTAL WATER PERCENT PORE SPACE 75 50 25	OIL SATURATION PERCENT PORE SPACE 25 50 75
		*								

NOTE: SAMPLE NO.1 WAS ANALYSED AFTER BEING LEFT EXPOSED TO ATMOSPHERE FOR APPROXIMATELY 12 HOURS.

1	2425	151.0	21.0	27.8	0	62.9	10.3	
2	2428	<0.1	<0.1	4.9	0	80.6	0.95	
3	2440	<0.1	<0.1	4.8	0	69,	61.42	

NOTE: SAMPLES 4 TO 9 INCLUSIVE WERE SELECTED FOR ANALYSES AFTER CORE HAD BEEN SLABBED AND SEALED IN PLASTIC TUBING. TIME OF ANALYSIS WAS APPROXIMATELY 28 HOURS AFTER CORE CAME OUT OF BARREL.

4	2391	2.1	142	31.6	0	95.6	1.4	
5	2394	123	218	33.0	0	86.4	4.5	
6	2400	156	75	30.7	0	90.2	3.1	
7	2406	366	275	35.5	0	85.4	5.2	
8	2412	604	595	34.2	0	91.3	3.0	
9	2418	138	138	38.5	0	89.9	3.9	

2425 2440 2390 2395 2400 2405 2410 2415

ENCLOSURE 2a

348022 OR-0341

CORE LAB Grapholog

CORE LABORATORIES, INC.

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD.
WELL MULLET 1
FIELD WILDCAT
COUNTY ~~VICTORIA~~ TAS STATE AUSTRALIA
LOCATION LAT: 39° 13' 02" S. ELEVATION 31' KB
LONG: 147° 51' 22" E.

DEPTH LOGGED FROM 1336' TO FT.
DATE LOGGED 13 JANUARY 1969
CREW CHIEF MIDDLETON FILE NO. FL-115-19L
DRLG. FLUID SEA WATER TO 1338' FT.
FRESH WATER GEL 1338' TO FT.

5 cm

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

LEGEND

ABBREVIATIONS

NB = NEW BIT
NCB = NEW CORE BIT
CO = CIRCULATED OUT
DST = DRILL STEM TEST
LAT = LOGGED AFTER TRIP
TG = TRIP GAS
NR = NO RETURNS
DS = DIRECTIONAL SURVEY
DC = DEPTH CORRECTION
DEPTHS CORRESPOND TO DRILL PIPE MEASUREMENTS MEASURED FROM KELLY BUSHING.

RESISTIVITY, OHM-METERS
Rm = MUD
Rmc = MUD CAKE
Rmf = MUD FILTRATE

MUD DATA
CK = CAKE THICKNESS 32nds
V = VISCOSITY API SECONDS
F = FILTRATE API CC'S
W = WEIGHT (LBS/US GAL)
S = SALINITY, ppm Cl NaCL

LITHOLOGY

SAND, SALT, COAL, MARL, CONG, CLAY, DOLOMITE, SHALE, ANHYDRITE OR GYPSUM, MUDSTONE, CHERT, GRANITE, LIMESTONE, CHALK, SILTSTONE, SKELETAL CALCARENITE

HYDROCARBON ANALYSIS

DRILLING RATE
MIN/FT ☒
FT/HR ☐
DRILLING =
REAMING =
CORING =

DRILLING ACTIVITY

LITHOLOGY

DEPTH

CHROMATOGRAPHIC
Drilling Mud Gas
Methane — • — Butane — 4 —
Ethane — 2 — Pentane — 5 —
Propane — 3 — Hexane + — 6+ —
Calibration:
½% Methane = 4800 PPM
½% Ethane = 5000 PPM
½% Propane = 4600 PPM
½% butane = 2800 PPM
PPM – THOUSANDS
0 5 25 75 15 30 50 150 250 375 500

OIL SHOW
Trace Poor Fair Good

HOT WIRE
CO_2
Drilling Mud Gas
H_2S
Drill Cuttings Gas
Calibration:
1% Methane = 50 UNITS
UNITS
5 10 20 40 70 100 150 200 250 300

REMARKS
FORMATION DESCRIPTION, MUD DATA, DRILL STEM TESTS, etc.

VERTICAL SCALE
2" = 100'

·5 1 2 4 6 8 12 16

NB NO.3
HTC X3A
12½"

NB 3

1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400

NOTE: 13¾" CASING SHOE AT 1313'. CEMENT TO 1336'.

1350'-1390'
MARL: GLAUCONITIC; LT GY-WHT, SPECKLED WITH MED-FN GRNS GLAUC, V/SOFT, ABUNDANT CALC FOSS DEBRIS; OCC MED-CRSE, WELL RND QTZ GRNS.

1390'-1860'
SKELETAL CALCARENITE: LT GY TO WH, MOSTLY LOOSE CALC FOSSIL DEBRIS, W/MINOR FN-MED GR, PARTLY CMTD AGGREGATES OF FOSS DEBRIS. TR GLAUC.
MARL: LT GY TO WH, SOFT AND PUGGY.
NOTE: ABUNDANT LOOSE QTZ GRNS, V/CRSE. ANGULAR AT 1620'

CARBIDE CHECK
DEPTH = 1737'
CARBIDE = 200 GM
HOT WIRE = 6 UNITS
P.H.D. = 700 PPM
LAG = 15 MIN/112 STK

1860'-2100'
MARL: LT GY TO WH, V/SOFT AND PUGGY.

2100'-2250'
MARL: LT GY-BUFF, V/SOFT, PUGGY, MINOR AMT LT GY GREEN. TR WH-BUFF GLAUC LIMEST AND CALCARENITE.

2250'-
SANDSTONE: WH-CLR, UNCONSOLIDATED, FN-GRAN QTZ GRNS, DOM V/CRSE-GRAN, WELL RND-SUB RND, MOD SORTED, FN GRN FRAGS W/CARBONATE CMT & GLAUC GRNS. SOME PYRITE XLYN AGGRTS

MUD DATA
DEPTH =
WT=10.9 V=37 F=17.6
CK=2 APV=12½ PV=12
YD=1 IG=<1 10G=5
PH=11.5 AL=0.45
NACL=2576 CA=0
RMF=1.53/76°F SD=1%
SOLIDS=11%

ENCLOSURE 26

CORE LAB Graphology

CORE LABORATORIES, INC.

348023 CR-0341

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD.
WELL MULLET 1
FIELD WILDCAT
COUNTY TASMANIA STATE AUSTRALIA
LOCATION LAT: 39° 13' 02" S. ELEVATION 31' KB
LONG: 147° 51' 22" E.

DEPTH LOGGED FROM 1338' TO 2463' FT
DATE LOGGED 13 JANUARY 1969
CREW CHIEF MIDDLETON FILE NO FL-115-19L
DRLG FLUID SEA WATER TO 1338' FT
FRESH WATER GEL 1338' TO 2463' FT

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

5 cm

LEGEND

ABBREVIATIONS

NB = NEW BIT
NCB = NEW CORE BIT
CO = CIRCULATED OUT
DST = DRILL STEM TEST
LAT = LOGGED AFTER TRIP
TG = TRIP GAS
NR = NO RETURNS
DS = DIRECTIONAL SURVEY
DC = DEPTH CORRECTION
DEPTHS CORRESPOND TO DRILL PIPE MEASUREMENTS MEASURED FROM KELLY BUSHING.

RESISTIVITY, OHM-METERS
Rm = MUD
Rmc = MUD CAKE
Rmf = MUD FILTRATE

MUD DATA
CK = CAKE THICKNESS 32nds
V = VISCOSITY API SECONDS
F = FILTRATE API CC'S
W = WEIGHT (LBS/US GAL)
S = SALINITY, ppm Cl NaCl

LITHOLOGY
SAND, SALT, COAL, MARL, COND, CLAY, DOLOMITE, SHALE, ANHYDRITE OR GYPSUM, MUDSTONE, CHERT, GRANITE, LIMESTONE, CHALK, SILTSTONE, SKELETAL CALCARENITE

DRILLING RATE
MIN/FT ☒
FT/HR ☐
DRILLING =
REAMING =
CORING =

DRILLING DATA: 0 1 2 4 6 8 12 16

LITHOLOGY

DEPTH

HYDROCARBON ANALYSIS

CHROMATOGRAPHIC
Drilling Mud Gas
Methane — 1 — Butane — 4
Ethane — 2 — Pentane — 5
Propane — 3 — Hexane + — 6+
Calibration
1% Methane = 4800 PPM
1% Ethane = 5000 PPM
1% Propane = 4600 PPM
1% Butane = 2800 PPM
PPM = THOUSANDS

OIL SHOW: FLUOR, CUT, RES

HOT WIRE
CO_2
Drilling Mud Gas
H_2S
Drill Cuttings Gas
Calibration
1% Methane = 50 UNITS
UNITS

GAS: TOTAL, C1, C2, C3, C4, C5

REMARKS
FORMATION DESCRIPTION, MUD DATA, DRILL STEM TESTS, etc.

VERTICAL SCALE
2" = 100'

NB NO.3
HTC X3A
12¼

NB 3

NOTE: 13⅜" CASING SHOE AT 1313'. CEMENT TO 1336'.

1350'-1390'
MARL: GLAUCONITIC; LT GY-WHT, SPECKLED WITH MED-FN GRNS GLAUC, V/SOFT, ABUNDANT CALC FOSS DEBRIS; OCC MED-CRSE, WELL RND QTZ GRNS.

1390'-1860'
SKELETAL CALCARENITE: LT GY TO WH, MOSTLY LOOSE CALC FOSSIL DEBRIS, W/MINOR FN-MED GR, PARTLY CMTD AGGREGATES OF FOSS DEBRIS. TR GLAUC.
MARL: LT GY TO WH, SOFT AND PUGGY.
NOTE: ABUNDANT LOOSE QTZ GRNS, V/CRSE. ANGULAR AT 1620'

CARBIDE CHECK
DEPTH = 1737'
CARBIDE = 200 GM
HOT WIRE = 6 UNITS
P.H.D. = 700 PPM
LAG = 15 MIN/112 STK

1860'-2100'
MARL: LT GY TO WH, V/SOFT AND PUGGY.

2100'-2250'
MARL: LT GY-BUFF, V/SOFT, PUGGY, MINOR AMT LT GY GREEN. TR WH-BUFF GLAUC LIMEST AND CALCARENITE.

2250'-[illegible]
SANDSTONE: WH-CLR, UNCONSOLIDATED, FN-GRAN QTZ GRNS, COM V/CRSE-GRAN, WELL RND-SUB RND, MOD SORTED, FN GRN FRAGS W/CARBONATE CMT & GLAUC GRNS. SOME PYRITE XLYN AGGRTS

MUD DATA
DEPTH =
Wt=10.9 V=37 F=17.6
Ck=2 APV=12½ PV=12
YD=1 1G=<1 10G=5
pH=11.5 AL=0.45
NaCL=2576 Ca=0
Rmf=1.53/76° F Sd=1%
Solids=11%

2390'-2463'
GRANITE: GRADING FROM WEATHERED WASH GY W/BLK & WH MOTT SOFT-CRUMBLY, ABNDT WEATHERED FELDS, QTZ RICH, FN-PEBBLY; PYR SCATT LITHICS; TO; CRYSTALLINE BASEMT OF GY-MOTT BLK/WH GRANITE, FR WELL INDURATED AND HARD TO SHEARED WEATH'D AND CRUMBLY. QTZ IS ABNDT W/PINK AND WH FELDS AND BIOTITE.

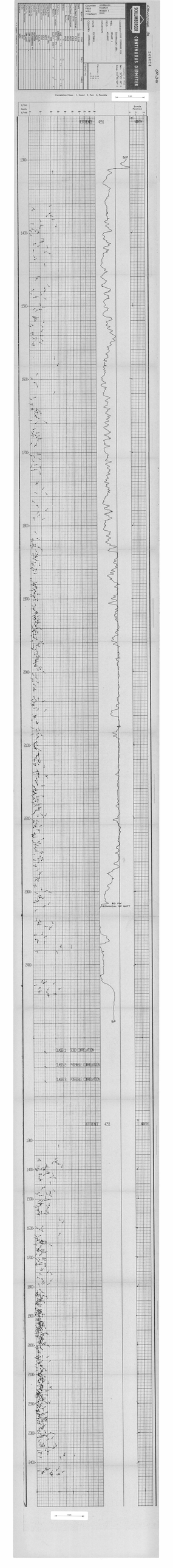
CORE NO.1
2350'-2385'
NO REC.

CORE NO.2
2391'-2426'
REC. 35'

CORE NO.3
2426'-2441'
REC. 15'

CHRIS C11
8¾/16
CR-J
RRB3
RR-1
CHRIS C22
CR-2
NB 4
T7 R2
1G
NB NO.4
HTC W7R-J

TOTAL DEPTH


SCHLUMBERGER
CONTINUOUS DIPMETER
COMPANY SCHLUMBERGER OIL
WELL
FIELD
COUNTY
STATE
LOCATION
Other Services
Date
Run No.
Depth-Driller
Depth-Logger
Bottom Logged Interval
Top Logged Interval
Type Fluid in Hole
Salinity, PPM Cl
Density
Level
Max. Rec. Temp. Deg. F
Operating Rig Time
Recorded By
Witnessed By
Correlation Class: 1, Good 2, Fair 3, Possible
RESISTIVITY
RESISTIVITY
Azimuth Positive
RESIDENT
RESIDENT
NORTH
NORTH
BIS PAP
PRECHANICAL TP SHIFT
CLASS 1 GOOD CORRELATION
CLASS 2 REASONABLE CORRELATION
CLASS 3 POSSIBLE CORRELATION

3480248

ENCLOSURE 36

OE-34

SCHLUMBERGER

CONTINUOUS DIPMETER

COUNTRY AUSTRALIA
FIELD WILDCAT
WELL MULLET 1
COMPANY ESSO

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD.
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE TASMANIA
Location

Other Services

Permanent Datum
Log Measured From
Drilling Measured From

Elev. K.B.
D.F.
G.L.

Ref. No.

Run No.	1	2nd
Depth	16, 169	
First Reading	2957	
Last Reading	1315	
Interval Measured	1130	
Casing Schlumberger	1315	
Casing Driller	1315	
Depth Reached	2957	
Bottom Driller	2965	
Mud Resistivity (Rm)	1.05 @ 104°F	
Truck No.	2035	
Recorded By	SLATTER	
Witness	LARAMORE	

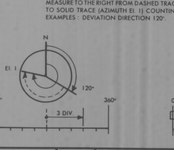
Ref. No. at Last Rdg. 2957 to 1315
Deviation Scale 5°
Magnetic Declination 12°E
Logging Speed 60'/ min.
Bit Size 12¼"
Caliper Scale 1:240 mm/Meter
Centralizer Type STERLING
Rm @ °F Rmf @ °F Rmc @ °F
Rm Rmf Rmc
Bowspr. Spring
Swivel Head
RCN
Pason No.
RCN
Cartridge DCM No. 83075
DCE No. 81372
Sonic No. 31162

REMARKS

5 cm

DIRECTION OF HOLE DEVIATION
REFERRED TO MAGNETIC NORTH

MEASURE TO THE RIGHT FROM D.ASHED TRACE (RELATIVE BEARING) TO SOLID TRACE (AZIMUTH EL 1) COUNTING 40° PER DIVISION.
EXAMPLES : DEVIATION DIRECTION 120°.



ANGLES

AZIMUTH ELECTRODE 1
FROM MAGNETIC NORTH

RELATIVE BEARING

HOLE DEVIATION

DEPTHS

CORRELATION CURVES

No 1
No 2
No 3

CALIPER

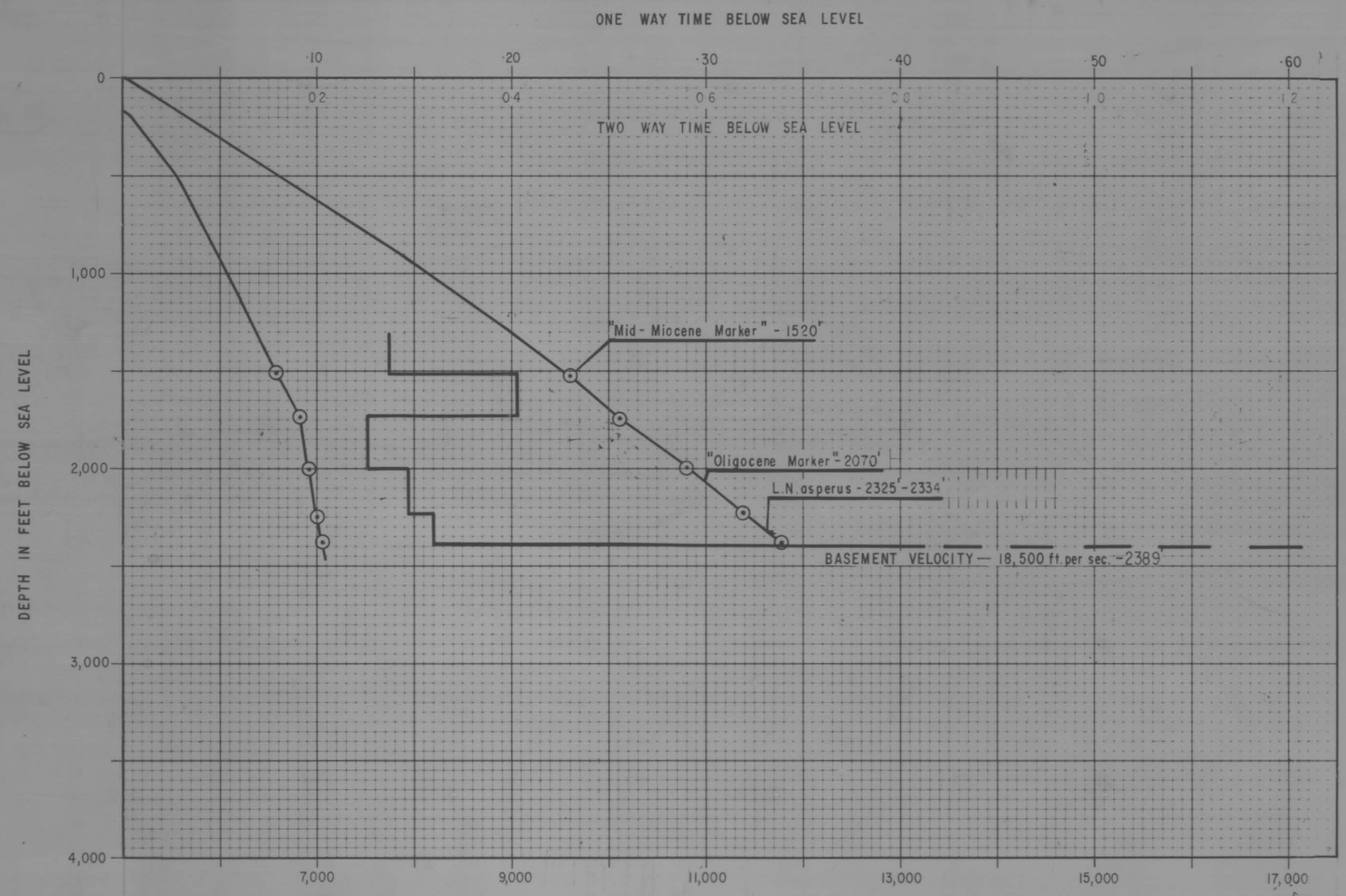
DIAMETER OF HOLE IN INCHES

16

1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2400
2300
2400

5 cm

ENCLOSURE 4



ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC.

5 cm

MULLET-1

TIME DEPTH CURVE

CO-ORDINATES: 39° 13' 02" S
147° 51' 22" E

DATUM: SEA LEVEL — WATER DEPTH: 175'
AUTHOR: P. J. BIRMINGHAM
TO ACCOMPANY: MULLET-1 COMP. REPORT. — Revised: 1-9-71

LEGEND

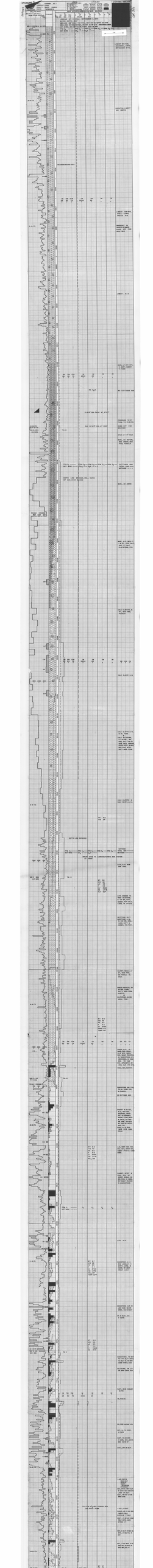
⊙ Check shots

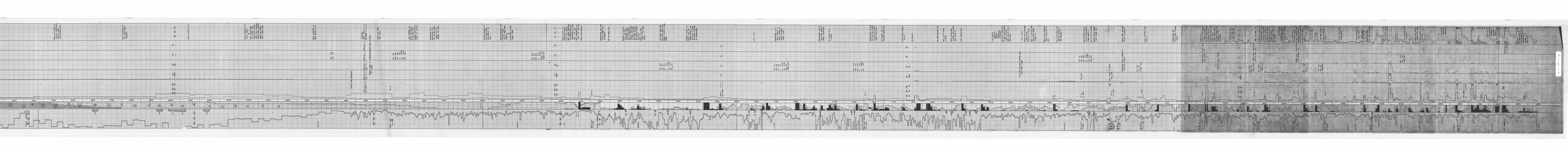
⊡ Points extrapolated from Sonic Log

Date of Completion: 19-1-69
K.B. 31'
T.D. 2463'

OR-341

DWG.1110/OP/1





ENCLOSURE 6a

348025

OR 341

SCHLUMBERGER

COMPENSATED FORMATION DENSITY LOG

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD

WELL MULLET 1

FIELD WILDCAT

COUNTRY AUSTRALIA STATE VIC

Location: LAT. 38° 19' 02" S LONG 147° 57' 22" E

Other Services:

Ref No.

Elev. K.B. DF GL 31

Permanent datum: M.S.L. Elev. 0 ft. Above Perm. Datum

Log Measured From: R.T. 31 ft. Above Perm. Datum

Drilling Measured From: R.T.

Run No. 1

Date Recorded 14-3-64

Last Reading 14-3-64

Driller Measured 7433

Logger Measured 7433

Casing Driller 13⅜ @ 1363

Casing Logger 1363

Depth Reached 7467

Bit Run 1

Type Fluid in Hole FRESH GYPSUM

Density / Viscosity 11.3 / 53

pH / Fluid Loss 8.4 / 3.6 CC/30 min.

Source Rm @ Meas. Temp. 1.04 @ 146 °F

Rmf @ Meas. Temp. 0.86 @ 146 °F

Rmc @ Meas. Temp. 1.25 @ 146 °F

Source of Rmf & Rmc MEASURED

Rm @ BHT 0.53 @ 220 °F

Time Since Circ. 5 HRS

Max. Rec. Temp. Deg. F 220

Equip. Location 5BEL 5426

Recorded By SEALY/GRIFFIN

Witnessed By LARKIN/MAHR

Bit No. 1

Size 12¼

Type

Serial No.

Size 13⅜

Wt. 54.5

Grade K-55

Set At 1363

Type Joint BUTT

Size 7

Wt. 23

Grade N-80

Set At 7463

Type Joint BUTT

Top Logged Int. 1363

Bottom Logged Int. 7467

Type Log DUAL INDUCTION LATEROLOG

Run No. 1

Background 40 cps

+ Test Source 440 cps

Galva Increase 100 div.

Sensitivity Tap

Calibration cps P: 400 P: 760 P: P: P: P:

Cal Source Adj. 1 P: 100 div. P: div. P: div.

Cal Source Adj. 2 P: 100 ΔP: 80 P: ΔP: P: ΔP:

Type of Log Liquid [X] Air [ ] Liquid [ ] Air [ ] Liquid [ ] Air [ ]

GR cps cps cps

FDC cps cps cps

div. div.

CALIBRATION DATA

	PCT- 1)	PCT-	PCT-
Type of Tool			
GR Sensitivity Tap	150		
Time Constant	2 sRCS		
Recording Speed	1800 sPh		
GR cartridge No	6211		
GR detector No	F995		
P.C.C. No	A 184		
P.G.D. No	D 179		
P.G.P. No	D 267		

RECORDING DATA

FOLD HERE

REMARKS: WLD USED. DISPLACEMENT 2!

5 cm

CALIPER
Inches

6 — 18

GAMMA RAY
API UNITS

GAMMA RAY ZERO 0
DIVISIONS TO LEFT OF THIS LINE

0 — 150

BIT SIZE

BULK DENSITY
Grams/cm³

2.0 — 2.5 — 3.0

DENSITY CORRECTION
Grams/cm³

− 0.25 — 0 — + 0.25

1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400

GAMMA RAY ZERO 0
DIVISIONS TO LEFT OF THIS LINE

0 — 150

GAMMA RAY
API UNITS

5 — 116

CALIPER
Inches

BIT SIZE

BULK DENSITY
Grams/cm³

2.0 — 2.5 — 3.0

DENSITY CORRECTION
Grams/cm³

− 0.25 — 0 — + 0.25

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD

WELL MULLET 1

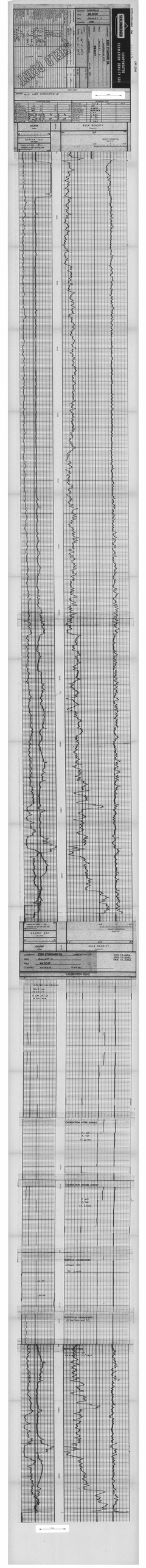
FIELD WILDCAT

COUNTRY AUSTRALIA STATE VIC

SCHL. F.R. 2456
SCHL. T.D. 2467
DRLR. T.D. 2467

CALIBRATION FILMS

5 cm


COMPUTED INTERPRETATION DISPLAY INC
COMPUTED INTERPRETATION DISPLAY INC
WELDCAT
WELDCAT
GAMMA RAY
BULK DENSITY
CALIBRATION PLAN
CALIBRATION LATER SURVEY
CALIBRATION BEFORE SURVEY
VERTICAL CROSSPLOT
VERTICAL VARIATIONS
NATURAL GAMMA RAY

ENCLOSURE 7a

2.18.92 OR.341

SCHLUMBERGER

BOREHOLE COMPENSATED SONIC LOG – GAMMA RAY

COUNTRY AUSTRALIA
FIELD WILDCAT
WELL MULLET 1
COMPANY ESSO

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

Location: Lat. 39° 13' 02" S Long. 147° 61' 22" E

Other Services:

Ref. No:

Permanent datum: MSL
Log Measured From: RT 31' Elev. 0
Drilling Measured From: RT 31' Ft. Above Perm. Datum

Elev.: K.B. 31'
D.F.
G.L.

Run No.	1
Depth-Driller	1340
Depth-Logger	1337
Bottom Logged Interval	1337
Top Logged Interval	300
Type Fluid in Hole	FRESH WATER GEL
Salinity, PPM Cl	4500
Density / Viscosity	9.5 / 65
pH / Fluid Loss	9.5 / 7.0
Source of Sample	MUD TANK
Rm @ Meas. Temp.	1.32 @ 70 °F
Rmf @ Meas. Temp.	@ °F
Rmc @ Meas. Temp.	@ °F
Source of Rmf and Rmc	CALC.
Rm @ BHT	1.04 @ 120 °F
Time Since Circ.	12 hrs.
Max. Rec. Temp.	120 °F
Equip. Location	2 hrs.
Recorded By	BSG C. ED SSM
Witnessed By	MR. SLATTER MR. NILSEN

Run No.	1
Date	10 JAN 1969
First Reading	1330
Last Reading	1337
Interval Measured	1037
Casing Schlumberger	3.17
Casing Driller	3.17
Casing Logged	1340
Bit Size	12¼"
Casing Size	9⅝"
Depth-Driller	1340
Depth-Logger	1337
Bottom Logged Interval	1337
Top Logged Interval	300
Type Fluid in Hole	FRESH WATER GEL
Salinity, PPM Cl	4500
Density / Viscosity	9.5 / 65
pH / Fluid Loss	9.5 / 7.0
Source of Sample	MUD TANK
Rm @ Meas. Temp.	1.32 @ 70 °F
Rmf @ Meas. Temp.	@ °F
Rmc @ Meas. Temp.	@ °F
Source of Rmf and Rmc	CALC.
Rm @ BHT	1.04 @ 120 °F
Time Since Circ.	12 hrs.
Max. Rec. Temp.	120 °F
Equip. Location	2 hrs.
Recorded By	BSG C. ED SSM
Witnessed By	MR. SLATTER MR. NILSEN

FIELD PRINT

FOLD HERE

REMARKS: NO WCD USED. DISPLACEMENT 2" THERMOMETER BROKEN

Velocity (Feet/sec.) = 1000.000 / Interval Transit Time (microsec. ft.)

GAMMA RAY CALIBRATION DATA

Background	40	cps		cps	
+ Test Source	440	cps		cps	
Galva Increase	8.25	div.		div.	
Sensitivity Tap	400				

BHC SONIC RECORDING DATA

Centralizers			
Cartridge No.	SLC-B 63		
Sonde No.	SLS-A 70		
Panel No.	SLP-A 58		

GAMMA RAY RECORDING DATA

Run No.	1		
Fluid Level	FULL		
Sensitivity Tap	300		
Time Constant	2		
GR Panel No.	GNP-D 803		
GR cartridge No.	SGC-G 81		
GR detector No.	SGD-F 895		

GAMMA RAY
API UNITS

GAMMA RAY ZERO 0
DIVISIONS TO LEFT OF THIS LINE

0 150

DEPTHS

INTERVAL TRANSIT TIME
microseconds per foot
Spacing: 2 ft.

140 40 40
190 140

1 millisecond
Integrated Transit Time
10 milliseconds

5 cm

300
0400
0500
0600
0700
0800
0900
1000
1100
1200
1300

5 cm

10 milliseconds
Integrated Transit Time
1 millisecond

0 150

GAMMA RAY ZERO 0
DIVISIONS TO LEFT OF THIS LINE

GAMMA RAY
API UNITS

DEPTHS

INTERVAL TRANSIT TIME
microseconds per foot
Spacing: 2 ft.

140 40 40
190 140

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

SCHL. F.R. 1330
SCHL. T.D. 1340
DRLR. T.D. 1337

CALIBRATION FILMS

FIELD PRINT

COMPANY AUSTRALIA
WELL WILDCAT #1
FIELD
COUNTY ESSO

SCHLUMBERGER

BOREHOLE COMPENSATED SONIC LOG - GAMMA RAY

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD.
WELL WILDCAT
FIELD
COUNTY AUSTRALIA STATE WA

Permanent Datum: GROUND LEVEL
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

Elev.: K.B. 1222
D.F.
G.L. 1197

Date 17-12-62
Run No. ONE
Type Log SONIC GAMMA RAY
Depth-Driller 6000
Depth-Logger 6000
Bottom Logged Interval 5998
Top Logged Interval 1200
Type Fluid in Hole WATER BASE MUD
Salinity, PPM Cl 1000
Density 9.2
Level FULL
Max. Rec. Temp. Deg. F. 140
Operating Rig Time 24 HRS
Recorded By R. MCKAY
Witnessed By

Bit Size 12¼" 8½"
Type Bit
From 1200 5998
To 5998

Casing-Driller 13⅜" @ 1200
Casing-Logger
Bit Size 12¼"
Type Fluid in Hole WATER BASE MUD
Density 9.2
Viscosity 40
pH 9.5
Fluid Loss 5.6 ML
Source of Sample CIRC. SYSTEM
Rm @ Meas. Temp. .85 @ 80
Rmf @ Meas. Temp. .75 @ 80
Rmc @ Meas. Temp. 1.1 @ 80
Source of Rmf & Rmc MEASURED
Rm @ BHT .55 @ 140
Time Since Circ. 24 HRS
Time Since Circ.
Max. Rec. Temp. Deg. F. 140
Equip. Location KARRATHA
Recorded By R. MCKAY
Witnessed By

Velocity Velocity Record
Normal Travel Time Interval

GAMMA RAY
0 API Units 200
Gamma Ray (API) in Casing
Gamma Ray (API) in Open Hole

INTERVAL TRANSIT TIME
Microseconds per Foot
Spacing 2 ft.
240 40
Differential
Expanded Travel Time
Differential
240 40

5 sec

1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000
4100
4200
4300
4400
4500
4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000

BOREHOLE CALIBRATION BEFORE SURVEY

GAMMA RAY
0 API Units 200
Gamma Ray (API) in Casing
Gamma Ray (API) in Open Hole

INTERVAL TRANSIT TIME
Microseconds per Foot
Spacing 2 ft.
240 40
Differential
Expanded Travel Time
Differential
240 40

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL WILDCAT #1
FIELD
COUNTY AUSTRALIA STATE WA

SCALE 5" = 100'
SCALE 1" = 20'
DATE 17-12-62

CALIBRATION TRACE

BOREHOLE CALIBRATION AFTER SURVEY

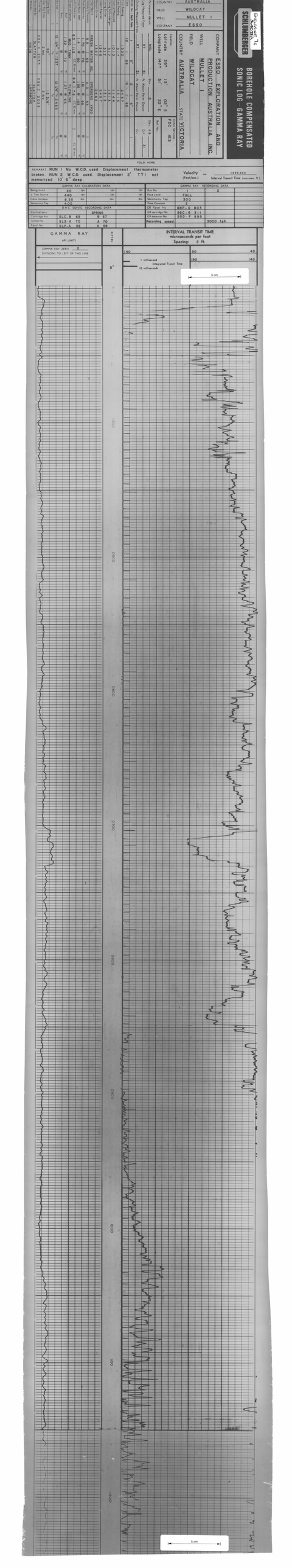
Sonic cal. calibrator

Sonic cal.

Gamma cal.

REPEAT SECTION

5 sec


SCHLUMBERGER
BOREHOLE COMPENSATED SONIC LOG GAMMA RAY
COMPANY ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC.
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA
STATE VICTORIA
COUNTRY AUSTRALIA
FIELD WILDCAT
WELL MULLET 1
COMPANY ESSO
Location Latitude 38° 13' 02" S Longitude 147° 51' 22" E
REMARKS: RUN 1 No W.C.D. used. Displacement thermometer broken RUN 2 W.C.D. used. Displacement 2' TTI not memorized 10' 6" deep.
Velocity (Feet/sec.) = 1000000 / Interval Transit Time (microsec. ft.)
GAMMA RAY CALIBRATION DATA
GAMMA RAY RECORDING DATA
BHC SONIC RECORDING DATA
GAMMA RAY
API UNITS
GAMMA RAY ZERO
DIVISIONS TO LEFT OF THIS LINE
INTERVAL TRANSIT TIME
microseconds per foot
Spacing: 2 ft.
1 millisecond
Integrated Transit Time
10 milliseconds
5 cm
5 cm

ENCLOSURE 8a

SCHLUMBERGER

BOREHOLE COMPENSATED SONIC LOG

COUNTRY AUSTRALIA
FIELD WILDCAT
WELL MULLET 1
COMPANY ESSO

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

Location: Lat 38° 13' 23" S, Long 147° 51' 22" E

Other Services:

Permanent Datum: R.T. Elev. 31 ft above Perm. Datum
Log Measured From: R.T. 31 ft above Perm. Datum
Drilling Measured From: R.T.

Run No.	2		
Depth-Driller	2465		
Depth-Logger	2463		
Bottom Logged Interval	2463		
Top Logged Interval	1313		
Type Fluid in Hole	GEL CHEM		
Salinity, Cl ppm	2400		
Density / Viscosity	9.6 / 52		
pH / Fluid Loss	10.5 / 6.0		
Mud Resistivity (ohm-m) @ Meas. Temp.	1.65 @ 70°F	@ °F	@ °F
Mud Resistivity (ohm-m) @ BHT	1.10 @ 90°F	@ °F	@ °F
Source of Sample	CIRC		
R_m @ Meas. Temp.	1.65 @ 70°F	@ °F	@ °F
R_mf @ Meas. Temp.	1.32 @ 70°F	@ °F	@ °F
R_mc @ Meas. Temp.	2.47 @ 70°F	@ °F	@ °F
Source R_mf / R_mc	CALC / CALC		
Rm @ BHT	1.10 @ 90°F	@ °F	@ °F
Time Since Circ.	12 HRS		
Max. Rec. Temp. Deg. F	90		
Equip. Location	838		
Recorded By	R. WATERS		
Witnessed By	MR. LARGARDE		

Run No.	1	2
Date	12-3-65	13-3-65
First Reading	2465	2463
Last Reading	1313	1313
Logged Interval	1152	1150
Casing Schlumberger	1313	1313
Casing Driller	1313	1313
Depth Reached	2465	2463
Bottom Hole Temp.	90°F	90°F
Density / Viscosity	9.6 / 52	9.6 / 52
pH / Fluid Loss	10.5 / 6.0	10.5 / 6.0
Source of Sample	CIRC	CIRC
R_m @ Meas. Temp.	1.65 @ 70°F	1.65 @ 70°F
R_mf @ Meas. Temp.	1.32 @ 70°F	1.32 @ 70°F
R_mc @ Meas. Temp.	2.47 @ 70°F	2.47 @ 70°F
Rm @ BHT	1.10 @ 90°F	1.10 @ 90°F
Time Since Circ.	12 HRS	12 HRS
Max. Rec. Temp. Deg. F	90	90
Equip. Location	838	838
Recorded By	R. WATERS	R. WATERS
Witnessed By	MR. LARGARDE	MR. LARGARDE

Bit Size: 1 — 12¼" / 12¼"
Casing Size: 1 — 9⅝" @ 1313' / 9⅝" @ 1313'
Type Fluid in Hole: 1 — GEL CHEM / GEL CHEM
Dens. Visc.: 1 — 9.6 52 / 9.6 52
pH Fluid Loss: 1 — 10.5 6.0 / 10.5 6.0
Source of Sample: 1 — CIRC / CIRC
R_m @ Meas. Temp.: 1 — 1.65 @ 70°F / 1.65 @ 70°F
R_mf @ Meas. Temp.: 1 — 1.32 @ 70°F / 1.32 @ 70°F
R_mc @ Meas. Temp.: 1 — 2.47 @ 70°F / 2.47 @ 70°F
Rm @ BHT: 1 — 1.10 @ 90°F / 1.10 @ 90°F
Time Since Circ.: 1 — 12 HRS / 12 HRS
Max. Rec. Temp. Deg. F: 1 — 90 / 90
Equip. Location: 1 — 838 / 838
Recorded By: 1 — R. WATERS / R. WATERS
Witnessed By: 1 — MR. LARGARDE / MR. LARGARDE

Elev.: K.B. 31 ft, D.F. ft, G.L. ft

FOLD HERE

REMARKS: WGR USED. DISPLACEMENT 2'. TTI NOT MEASURED 10'6" DEEP

Velocity (Feet/sec.) = 1 000 000 / Interval Transit Time (microsec. ft)

RECORDING DATA	
RUN No.	2
Recording Speed	3000 S.P.M.
Centralizers	6 PRUVS

EQUIPMENT DATA	
RUN No.	2
Cartridge No.	B 69
Sonde No.	A 76
Panel No.	A 68

SPONTANEOUS POTENTIAL millivolts

CALIPER Inches

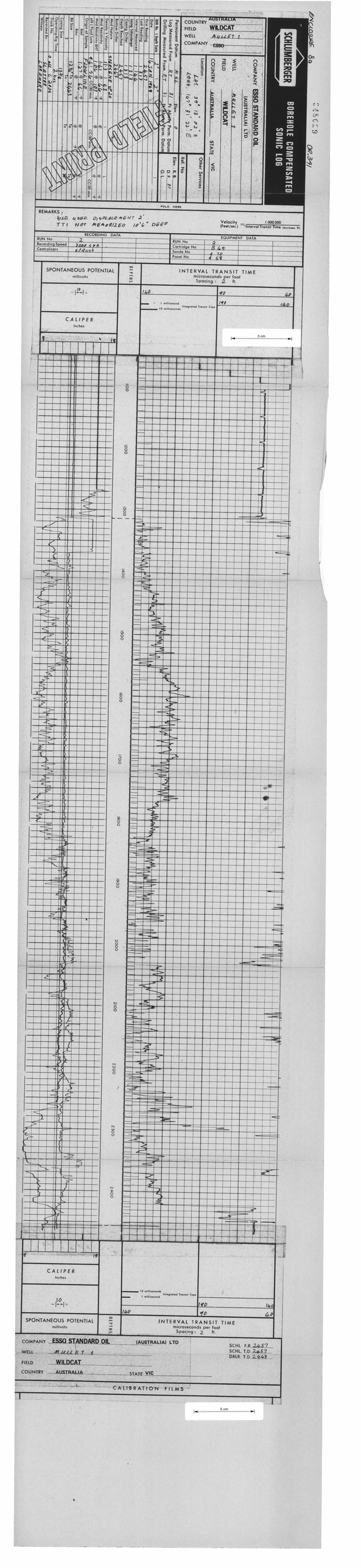
BIT SIZE

INTERVAL TRANSIT TIME microseconds per foot Spacing: 2 ft.

1 millisecond / 10 milliseconds Integrated Transit Time

140 40 / 140 40

5 cm



CALIPER Inches

SPONTANEOUS POTENTIAL millivolts

BIT SIZE

INTERVAL TRANSIT TIME microseconds per foot Spacing: 2 ft.

10 milliseconds / 1 millisecond Integrated Transit Time

140 40 / 140 40

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

SCHL. F.R. 2457
SCHL. T.D. 2457
DRLR. T.D. 2463

CALIBRATION FILMS

5 cm

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD.
WELL WILDCAT No. 1
FIELD WILDCAT
COUNTY
STATE VIC.
COUNTRY AUSTRALIA
PERMANENT DATUM
ELEV.: K.B. 0 FT.
LOG MEASURED FROM K.B. 0 FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM K.B.
DATE 7-12-57
RUN NO. ONE
TYPE LOG SONIC
DEPTH-DRILLER 7,000 FT.
DEPTH-LOGGER 7,000 FT.
BTM. LOG INTERVAL 7,000 FT.
TOP LOG INTERVAL 0 FT.
CASING-DRILLER 13⅜" @ 1,000 FT.
CASING-LOGGER 1,000 FT.
BIT SIZE 12¼"
TYPE FLUID IN HOLE GEL-CHEM
DENS. 10.0 LB/GAL
VISC. 50 SEC
PH 10.5
FLUID LOSS 6.0 CC
SOURCE OF SAMPLE CIRCULATED
RM @ MEAS. TEMP. 0.25 @ 120°F
RMF @ MEAS. TEMP. 0.20 @ 120°F
RM @ BHT 0.12 @ 150°F
TIME CIRC. 12 HRS.
TIME SINCE CIRC. 12 HRS.
MAX. REC. TEMP. 150°F
EQUIP. NO. & LOCATION 1 & 2 VIC.
RECORDED BY HUTCHINSON
WITNESSED BY MR. HOLLOWAY
REMARKS: MUD WAS DISPLACED 1½ TYI WAY BEHIND 8⅝" CSG.

SCHLUMBERGER
RECORDED SUBSURFACE SURVEY
SONIC LOG

FIELD PRINT

SPONTANEOUS POTENTIAL
millivolts
CALIPER
Inches
INTERVAL TRANSIT TIME
Travel time in μ sec
Scale 1" = 100 ft

SCHLUMBERGER SONIC LOG CALIBRATION (AFTER SURVEY)

SPONTANEOUS POTENTIAL
CALIPER
INTERVAL TRANSIT TIME

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD.
WELL WILDCAT No. 1
FIELD WILDCAT
COUNTY
STATE VIC.
COUNTRY AUSTRALIA

SCH. 14 DAILY
SCH. 15 DAILY
SCH. 15 DAILY

"CALIBRATION" FILMS

SCHLUMBERGER SONIC LOG CALIBRATION (BEFORE SURVEY)

1 cm

ENCLOSURE 9a

SCHLUMBERGER INDUCTION-ELECTRICAL LOG

348031 OR.341

COUNTRY	AUSTRALIA
FIELD	WILDCAT
WELL	MULLET 1
COMPANY	ESSO

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

Location: LAT. 39° 13' 02.5" LONG. 147° 51' 22" E

Other Services:

Ref. No.

Permanent Datum: MSL Elev.: 0
Log Measured From: RT 31 Ft. Above Perm. Datum
Drilling Measured From: RT 31 Ft. Above Perm. Datum

Elev.: K.B. D.F. 31 G.L.

Date	10 JAN 1969		
First Reading	1339		
Last Reading	317		
Interval Measured	1022		
Casing Schlumberger	317		
Casing Driller	317		
Depth Reached	1340		
Bottom Driller	1337		
Mud Nature	FRESH WATER GEL		
Density Viscosity	9.5	65	
Mud Resistivity	1.70 @ 70 °F	@ °F	@ °F
Mud Resist. BHT	1.4 @ 80 °F	@ °F	@ °F
pH Fluid Loss	8.5	11.5 CC/30 min.	CC/30 min.
Origin of Sample	MUD TANK		
Rmf	1.32 @ 70 °F	@ °F	@ °F
Rmc	@ °F	@ °F	@ °F
Bit Size 1	12 1/4" To 1337	To	To
Bit Size 2	To	To	To
Casing Size	10"		
Opr. Rig Time	2 HRS		
Truck No.	OSU C 2035		
Recorded By	SLATTER		
Witness	NIXON		

FOLD HERE

REMARKS: NO. W.C.O. DISPLACEMENT 2'

5 cm

LOGGING DATA				EQUIPMENT DATA			
Run No.	1			Run No.	1		
Type of Sonde	6PF40			Panel	H 733		
S. N. Spacing	16"			Cartridge	F 711		
Stand-off	1 1/2"			Sonde	M 581		
S. B. R.	1			Test Loop	C 782		

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos - m²/m = 1000/ohms - m2/m
-10+		16" NORMAL: 0 4; 0 20; 0	INDUCTION: 1000 0; 2000 1000; 3000 2000
		INDUCTION: 0 20; 0	



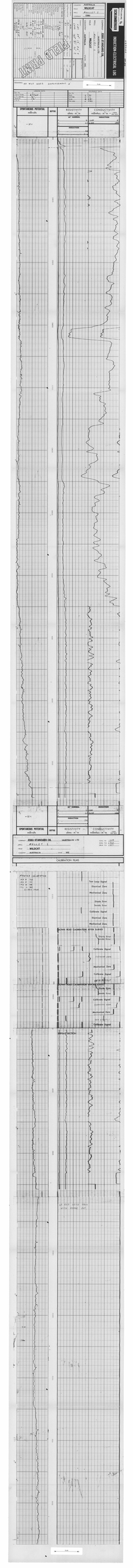
SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos - m²/m = 1000/ohms - m2/m
-10+		16" NORMAL: 0 4; 0 20; 0	INDUCTION: 1000 0; 2000 1000
		INDUCTION: 0 20; 0	

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

SCHL. F.R. 1339
SCHL. T.D. 1340
DRLR. T.D. 1337

5 cm

CALIBRATION FILMS



SCHLUMBERGER
INDUCTION-ELECTRICAL LOG
FIELD PRINT
WELLCAT
WELLCAT
SPONTANEOUS POTENTIAL millivolts
RESISTIVITY ohms m²/m
CONDUCTIVITY millimhos/m² m = (mm)
CALIBRATION FILMS

ENCLOSURE 9c 349033 (OR-34)

SCHLUMBERGER — **INDUCTION-ELECTRICAL LOG**

COUNTRY AUSTRALIA
FIELD WILDCAT
WELL MULLET 1
COMPANY ESSO

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

Location: LAT. 34° 13' 02.5" S, LONG. 141° 41' 22.6" E

Permanent datum: A.H.D.
Log Measured from: R.T. 24 ft. Above Perm. Datum
Drilling Measured from: R.T.

Elev.: K.B. 24' D.F. G.L.

Other Services:

Date	14.JAN.1966		
Run No.	2		
Depth-Driller	2463		
Depth-Logger	2462		
Bottom Logged Interval	2462		
Top Logged Interval	1143		
Type Fluid in Hole	SEA WATER GEL		
Salinity, PPM Cl	26,000		
Density	9.1		
Level	FULL		
Max. Rec. Temp. Deg. F.	66		
Operating Rig Time	6 HRS		
Recorded By	LARSEN		
Witnessed By	MR. CHANNING		

Run No.	1		
Bit From	1143		
To	2463		
Size	12¼"		
Type	HTC		
Mud Type	FLOW LINE		
Density	9.4 LB/GAL		
Viscosity	41 SEC		
pH	9.6		
Fluid Loss	6.6 CC/30 min		
Source of Sample	FLOW LINE		
Rm @ Meas. Temp.	1.63 @ 66 °F		
Rmf @ Meas. Temp.	1.01 @ 66 °F		
Rmc @ Meas. Temp.	2.46 @ 66 °F		
Source of Rmf & Rmc	CORR.		
Rm @ BHT	1.63 @ 66 °F		
Time Since Circ.	6 HRS		
Max. Rec. Temp.	66 °F		
Equip. Location	2463		
Recorded By	LARSEN		
Witnessed By	MR. CHANNING		

FOLD HERE

REMARKS: WCD USED. DISPLACEMENT 2 S.P. SHIFT AT 2315 OF 20 MV

5 cm

LOGGING DATA			EQUIPMENT DATA			
Run No.	2		Run No.	1		
Type of Sonde	LEFAH		Panel	H		
S. N. Spacing	16"		Cartridge	F 707		
Stand-off	1½"		Sonde	A 681		
S. B. R.	1		Test Loop	C 782		

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos - m²/m = 1000/ohms-m²/m
-10+		16" NORMAL 0–4–20–200	INDUCTION 1000–0–2000–1000
		INDUCTION 0–20–200	

1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400

MECHANICAL S.P. SHIFT OF 20 MV

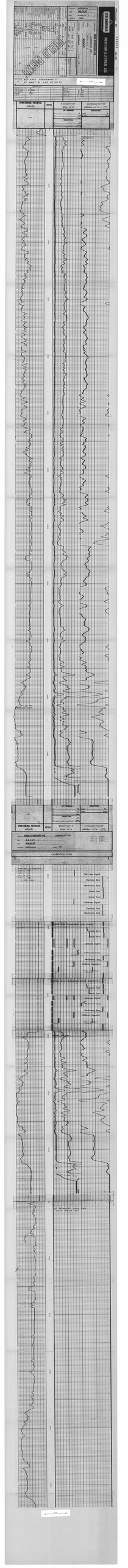
SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos - m²/m = 1000/ohms-m²/m
-10+		16" NORMAL 0–4–20–200	INDUCTION 1000–0–2000–1000
		INDUCTION 0–20–200	

COMPANY ESSO STANDARD OIL (AUSTRALIA) LTD
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VIC

SCHL. F.B. 2466
SCHL. T.D. 2467
DRLR. T.D. 2463

CALIBRATION FILMS

5 cm



Schlumberger
INDUCTION ELECTRICAL LOG
RELOG
RELOG
SPONTANEOUS POTENTIAL
RESISTIVITY
CONDUCTIVITY
CALIBRATION TEMP

SCHLUMBERGER

INDUCTION-ELECTRICAL LOG

COMPANY ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VICTORIA

Location: Latitude 38° 13' 02" S, Longitude 147° 51' 22" E

Permanent Datum: M.S.L. Elev. 0
Log Measured From: K.B. 30 ft. Above Perm. Datum
Drilling Measured From: K.B.

Date: 12-3-64
Run No.: ONE
Depth-Driller: 2463
Depth-Logger: 2463
Bottom Logged Interval: 2463
Top Logged Interval: 1300
Type Fluid in Hole: WATER GEL
Salinity, P.P.M. Cl: 3500
Density: 9.2
Viscosity: 43
Fluid Loss: 8.8 cc/30 min
Source of Sample: FLOWLINE
R_m @ Meas. Temp.: .53 @ 68°F
R_mf @ Meas. Temp.: .43 @ 68°F
R_mc @ Meas. Temp.: .75 @ 68°F
Source: R_mf: CALC. R_mc: CALC.
R_m @ BHT: .33 @ 120°F
Time Circulation Stopped: 0230
Time Logger on Bottom: 0600
Maximum Recorded Temp.: 120°F
Equipment No. and Location: 1332 SALE
Recorded By: R. WEBB
Witnessed By: MR. MOORE

Run No.: ONE
Bit Size: 8 3/4"
Type Fluid in Hole: WATER GEL
Salinity, P.P.M. Cl: 3500
Density: 9.2
Viscosity: 43
Fluid Loss: 8.8 cc/30 min
Source of Sample: FLOWLINE
R_m @ Meas. Temp.: .53 @ 68°F
R_mf @ Meas. Temp.: .43 @ 68°F
R_mc @ Meas. Temp.: .75 @ 68°F
Source: R_mf: CALC. R_mc: CALC.
R_m @ BHT: .33 @ 120°F
Time Circulation Stopped: 0230
Time Logger on Bottom: 0600
Maximum Recorded Temp.: 120°F
Equipment No. and Location: 1332 SALE
Recorded By: R. WEBB
Witnessed By: MR. MOORE

Run No.: TWO
Bit Size: 8 3/4"
Type Fluid in Hole: WATER GEL
Salinity, P.P.M. Cl: 3500
Density: 9.2
Viscosity: 43
Fluid Loss: 8.8 cc/30 min
Source of Sample: FLOWLINE
R_m @ Meas. Temp.: .53 @ 68°F
R_mf @ Meas. Temp.: .43 @ 68°F
R_mc @ Meas. Temp.: .75 @ 68°F
Source: R_mf: CALC. R_mc: CALC.
R_m @ BHT: .33 @ 120°F
Time Circulation Stopped: 0230
Time Logger on Bottom: 0600
Maximum Recorded Temp.: 120°F
Equipment No. and Location: 1332 SALE
Recorded By: R. WEBB
Witnessed By: MR. MOORE

Run No.: THREE
Bit Size: 8 3/4"
Type Fluid in Hole: WATER GEL
Salinity, P.P.M. Cl: 3500
Density: 9.2
Viscosity: 43
Fluid Loss: 8.8 cc/30 min
Source of Sample: FLOWLINE
R_m @ Meas. Temp.: .53 @ 68°F
R_mf @ Meas. Temp.: .43 @ 68°F
R_mc @ Meas. Temp.: .75 @ 68°F
Source: R_mf: CALC. R_mc: CALC.
R_m @ BHT: .33 @ 120°F
Time Circulation Stopped: 0230
Time Logger on Bottom: 0600
Maximum Recorded Temp.: 120°F
Equipment No. and Location: 1332 SALE
Recorded By: R. WEBB
Witnessed By: MR. MOORE

Run No.: FOUR
Bit Size: 8 3/4"
Type Fluid in Hole: WATER GEL
Salinity, P.P.M. Cl: 3500
Density: 9.2
Viscosity: 43
Fluid Loss: 8.8 cc/30 min
Source of Sample: FLOWLINE
R_m @ Meas. Temp.: .53 @ 68°F
R_mf @ Meas. Temp.: .43 @ 68°F
R_mc @ Meas. Temp.: .75 @ 68°F
Source: R_mf: CALC. R_mc: CALC.
R_m @ BHT: .33 @ 120°F
Time Circulation Stopped: 0230
Time Logger on Bottom: 0600
Maximum Recorded Temp.: 120°F
Equipment No. and Location: 1332 SALE
Recorded By: R. WEBB
Witnessed By: MR. MOORE

FOLD HERE

REMARKS: RUN 1. No W.C.D. Displacement 2'
RUN 2. W.C.D. used. Displacement 2' S.P. shift of 20mv.

LOGGING DATA		
Run No.	1	2
Type of Sonde	6FF40	6FF40
S.P. Spacing	10'	10'
Stand-off	1 1/2"	1 1/2"
S. B. S.	1'	1'

EQUIPMENT DATA		
Run No.		
Panel	H 733	H
Cartridge	F 711	F 727
Sonde	M 581	M 581
Test Loop	C 782	C 782

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos - m²/m
- 100 +	2"	16" NORMAL: 4 1000 0; 8 500 2000; 16 1000 2000	INDUCTION: 1000 0; 2000 1000; 2000 2000
5 cm		INDUCTION: 0 2000	

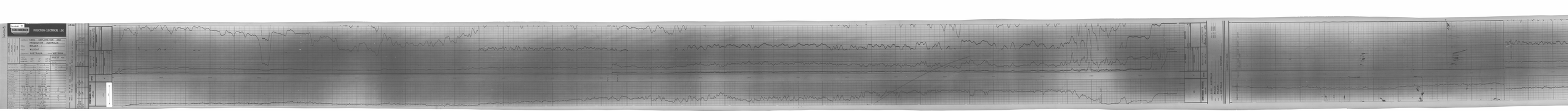
RUN 1
RUN 2
MECHANICAL S.P. SHIFT OF 20 MV

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos - m²/m
- 100 +	2"	16" NORMAL: 4 1000 0; 8 500 2000; 16 1000 2000	INDUCTION: 1000 0; 2000 1000; 2000 2000
		INDUCTION: 0 2000	

COMPANY ESSO AUSTRALIA
WELL MULLET 1
FIELD WILDCAT
COUNTRY AUSTRALIA STATE VICTORIA

SCHL. FR 2456
SCHL. TO 2457
DRLR. TO 2463

5 cm


SCHLUMBERGER
INDUCTION ELECTRICAL LOG
ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC.
WELL
BULLEAT
AUSTRALIA
VICTORIA
COMPANY
WELL
FIELD
COUNTY
STATE OR PROVINCE
LOCATION
OTHER SERVICES
PERMANENT DATUM
ELEV.
LOG MEASURED FROM
DRILLING MEASURED FROM
DATE
RUN NO.
DEPTH-DRILLER
DEPTH-LOGGER
BTM. LOG INTERVAL
TOP LOG INTERVAL
CASING-DRILLER
CASING-LOGGER
BIT SIZE
TYPE FLUID IN HOLE
DENS.
VISC.
PH
FLUID LOSS
SOURCE OF SAMPLE
RM @ MEAS. TEMP.
RMF @ MEAS. TEMP.
RMC @ MEAS. TEMP.
SOURCE OF RMF
SOURCE OF RMC
RM @ BHT
TIME SINCE CIRC.
MAX. REC. TEMP.
EQUIP. LOCATION
RECORDED BY
WITNESSED BY
RUN NO.
BOREHOLE RECORD
CASING RECORD
LOGGING DISTANCE
SCALE CHANGES
REMARKS
RIG NAME
TYPE OF RIG
TYPE OF DRILLING
MAX. HOLE DEVIATION
MAX. DEPTH DEVIATION
TYPE OF LOG
TYPE OF LOG
TYPE OF LOG

