

FINA ET AL WILLOW LAKE

J-66

WELL NAME: Pina et al Willow Lake J-66
FIELD: _____ Area: _____
LOCATION: Unit: J Section: 66 Grid: 62-00-121-45
Latitude: 61-53-43 Longitude: 121-18-53
U.W.L.R.: 61.92861 --- 121.94805
U.W.I.: 300 J666200121450

Rig Release Date: _____
Status: _____
Information Release Date: _____

CHANGE OF NAME:

DATE RECEIVED	INDEX
7-12-70	Application for a Drilling Authority.
	Well Completion Data.
	Well History Report.
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	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
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	Battery Inspection Report.
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	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report
	Logs. Large scale..... Small scale.....



Drilling Authority No. 446
Date issued December 7, 1970

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

WELL COMPLETION DATA

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.

Well name and number **FINA ET AL WILLOW LAKE J-66**
Permit No. **4355** Lease No. _____
Imperial Oil Enterprises Ltd. Exploratory Licence No. **1674**
(Permitter, Licensee, Lessee)
Canadian Pine Oil Limited Exploratory Licence No. **1635**
(Operator)
Location: Unit **J** Section **66** Grid **62 62000' 121° 45'**
Latitude **61° 55' 43" N** Longitude **121° 56' 53" W**
From Established Reference Marker **3003666200171450**
Universal Well Location Reference **Latitude 61.92861° N Longitude 121.94805° W**

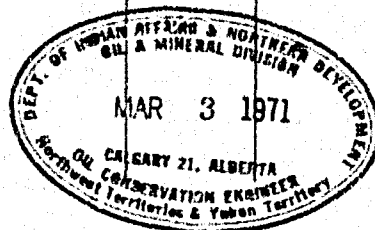
	DATE	DEPTH	Pool(s)
			Interval(s) open to production
Spudded	Jan. 6/71	150'	
Suspended			
Resumed Operations			
Finished Drilling	Jan. 21/71	2871' Dr. 2867' Log.	
Deepened			Elevation: Gr. 692' K.B. 705'
Complete (gas/oil)			Rig No. 12
Abandoned	Jan. 26/71	2871'	Drilling Contractor Commonwealth Drilling (Western)
Rig released	Jan. 26/71	2871'	Contractor's Business Licence No. 931 Limited

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
1. 9 5/8"	J55	40#	18 joints (587.72')	603'	500 sacks construction cement plus 2% CaCl ₂
2. 9 5/8"	K55	36#	1 joint (16.46')		
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec.	From	To	Rec.
Fort Simpson	10	+ 695	N/A					
Spence River	1176	- 471						
Hume	1260	- 555						
Arnica	1738	-1033						
Chinchaga	1863	-1158						
Basal Plastic	2516	-1811						
PreCambrian	2556	-1951						

			LOG RECORD			
			Run No.	Type of Log	From	To
Total Depth	2871	-2166	1	Sidewall Neutron Porosity	2865	602
			1	Dual Induction-Latero-log	2861	602
			1	Sonic	2865	602
			1	Formation Density	2865	602
			1	Lithology Overlay	2865	602



CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Acidizing, Fracing, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
Plug #1 Jan. 25	2325	2150	120 sacks cement. Plug down 12.45 p.m. Found plug at 2075'		N/A				N/A		
Plug #2 Jan. 25	650	550	100 sacks cement plus 2% CaCl ₂ . Plug down at 10.00 p.m. Found plug at 515'.								
Plug #3 Jan. 26 1971	Top of casing		5-sack cement plug. Plate welded to top of casing and a riser with marker was installed.								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.B.H.P.	F.S.I.B.H.P.	L.F.B.H.P.	F.F.B.H.P.	L.H.P.	F.H.P.	REMARKS
1	Jan. 23	Arnica	1600	1870	60	60	60	669	667	174	583	806	823	Strong air blow - decreased slowly. Recovered 1035' fluid (drilling mud).
2	Jan. 24	Chinchaga	2195	2280	60	60	90	959	932	44	65	1118	1102	Very weak air blow on main flow. Recovered 80' drilling mud.
3	Jan. 25	Arnica	1720	1870	40	60	110	728	726	132	548	876	878	Strong air blow - decreased in minutes. Recovered 976' (430' drilling mud, 546' salt-cut drilling mud.

ANALYSIS						PRESENT STATUS OF WELL		
Lab. No.	Sample	From	To	Source	Remarks	Oil		
933-1133	Water	1720	1870	D.S.T. #3 Tool # 534			(Interval.)	
						Gas		(Interval.)
						Dry	and Abandoned	
						Susp.		

CANADIAN KING OIL LIMITED

Company _____
 Signed by *J. G. Campbell* J. G. Campbell
 Title *Drilling Superintendent*
 Date *February 26, 1971*

Forms to be prepared in duplicate and forwarded to the Oil Conservation Engineer, Calgary, Alberta.



File No. 486
Drilling Authority No.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to abandon, to suspend drilling:

Name and number of well **FIDA ET AL WILLIAM LAKE J-66**
Location: Unit **J** Section **66** Grid **62°00' 121°45'**
Latitude **61°55'43" N** Longitude **121°56'53" W**
From Established Reference Marker **300366600021450**
Universal Well Location Reference **Latitude 61°55'43" N Longitude 121°56'53" W**
Permit No. **4355** Lease No. **-**

Imperial Oil Enterprises Ltd.
(Permitter, Licensee, Lessee)

Date of commencement of proposed program **January 25, 1971**

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at **N/A**
Gas at **N/A**
Water at **1720' - 1870' (DST #3)**
Total Depth **2871 Dr. 2867' Log.** Date of last operations **January 26, 1971**
Present condition of well **Dry and Abandoned**

CASING RECORD

Casing Size O.D. inches	Weight	Amount	Set At	Sacks of Cement and Additives	Amount Pulled
1. 9 5/8"	40#	18 joints	603'	500 sacks construction cement plus	
2.		(587.72')		2% CaCl₂	
3.					
4. 9 5/8"	36#	1 joint			
5.		(16.46')			

PROPOSED ABANDONMENT PROGRAM

No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	2385' - 2150'	Quinchaga	120	Feel
2	650' - 550'	Fort Simpson	100	
3	surface		5-sack	

The following logs have been run **Dual Induction-Laterolog; Sidewall Neutron Porosity;**
Other operations proposed **Sonic Log; Formation Density Log; Lithology Log.**

Commonwealth Drilling

Operations to be carried out by **(Western) Limited** Contractor Licence No. **931**
Address **706 Seventh Avenue South West** Address
Responsible Agent in field **J. A. Ankle**

Dated at **Calgary, Alberta** this **20** Day of **April** 19 **71**

Signed by **J.G. Campbell** Company **Canadian Pine Oil Limited**

Title **Drilling Superintendent** Operator's Exploratory Licence No. **1655** **January 2**

Note: The Oil Conservation Engineer's office must be notified before work is commenced. **1971**

B.H.J. P

(For OIL AND MINERAL DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

Confirming oral approval including 'Erecting a riser with name plate', given by **B.H.J. Thoms** on the **24th January 1971**.

Dated **21st April**, 19 **71**

De Blue
Oil Conservation Engineer

Drilling Authority No. 466

Project No.

File No.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application for a Drilling Authority

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill:—

Name and number of well FINA ET AL WILLOW LAKE J-66
Location: Unit J Section 66 Grid 62° 00' ; 121° - 45'.
Latitude 61° 55' 43" N Longitude 121° 56' 53" W
Unique Well Identifier 300J66200121A30
Universal Well Location Ref: Lat. 61.92861° N, Long. 121.94805° W.
Elevation: Ground 692' K.B. 704 feet above sea level.
Well is expected to produce from Manitowish formation at a depth
of about 1650 feet. Expected total final depth 2810
Area assigned to well
(For Oil Conservation Engineer's use only)

Permit No. 4355 Lease No. - Acreage 60,296
Permitter, licensee, or lessee Imperial Oil Enterprises Ltd.
Exploratory Licence No. 1674
Surface owned by Crown or Crown
(If alienated submit name and address of owner and occupant.)
Petroleum and natural-gas rights owned by Crown
We propose to use the following strings of casing, either cementing or landing them as indicated below:—

Casing Size O.D. (Inches)	Weight (Lb./Ft.)	Grade	New or Used	Estimated Depth	Scale of Cement
1. <u>9 5/8</u>	<u>36 & 40</u>	<u>K55</u>	<u>New & Used</u>	<u>600'</u>	<u>460</u>
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment Manitowish, Bonning and Cambrian.
Type "EK", 10" x 900 Series Hydril, Shaffer Type B, 10" x 900 Series,
Double End Hydraulic.

Well will be drilled with Rotary Rig No. 12 by Commonwealth Drilling (Western) Limited
(Drilling Contractor or company)

Responsible agent of applicant:— Contractor's Business Licence No. 931
At well J. Ankle At registered office J. G. Campbell
Address 9th Flr. 736-8 Ave. S.W. Address 9th Flr. 736-8 Ave. S.W. Calgary 2
It is understood that if changes become necessary, notice of the change of plan will be submitted.
Dated at Calgary, Alberta, this 7th day of December, 19 70
Signed by J. G. Campbell Company CANADIAN FINA OIL LIMITED
Title Drilling Superintendent Operator's Licence No. 1655
(For Oil and Mineral Division use only)

APPROVED

- This application has been examined and approved subject to the following conditions:—
1. Copies of this Drilling Authority shall be exhibited at the Drilling Rig in both the Dominion and the Drilling Permit's Office between start and stop release dates.
 2. The Company will submit to this office, on Tuesday of each week, the latest reports
- Dated 7th December 19 70 Please see over page.

Oil Conservation Engineer

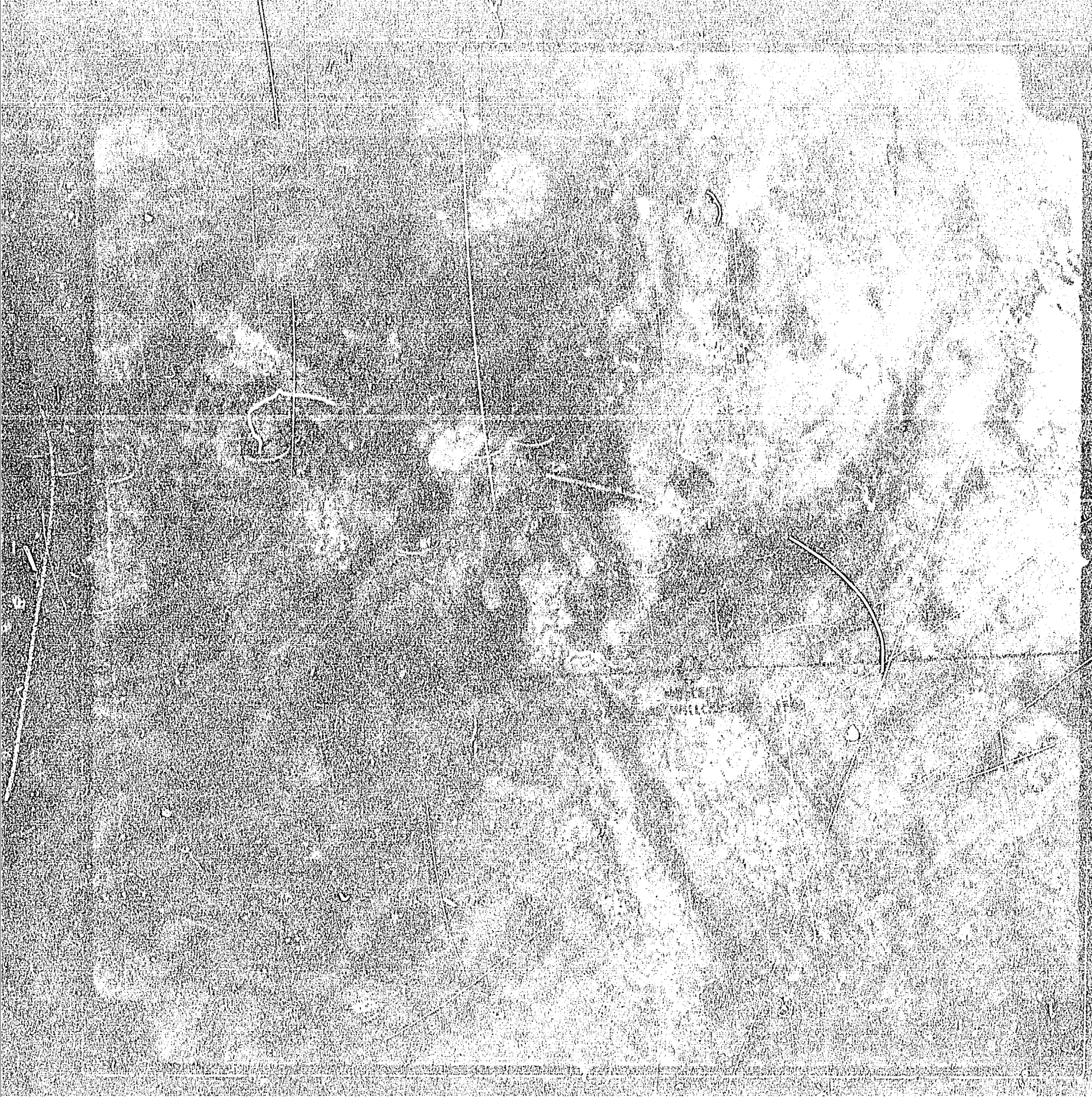
Forms to be submitted to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.

received by radio on the progress of the well.

3. During well drilling and testing operations, every effort shall be made to ensure that drilling fluids, chemicals and wastes shall be disposed of or contained in a manner that will prevent the contamination of adjacent vegetation and surface or sub-surface waters.
4. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
5. All further strings of casing are to receive the approval of the Oil Conservation Engineer prior to running.

Bert S. Thomas

B.H.J. Thomas, Oil, Conservation Engineer





SEismic LINE No. 15

WELLSITE

FINAL WILLOW LAKE J-66

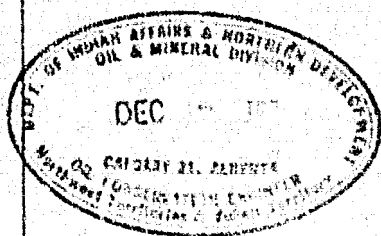
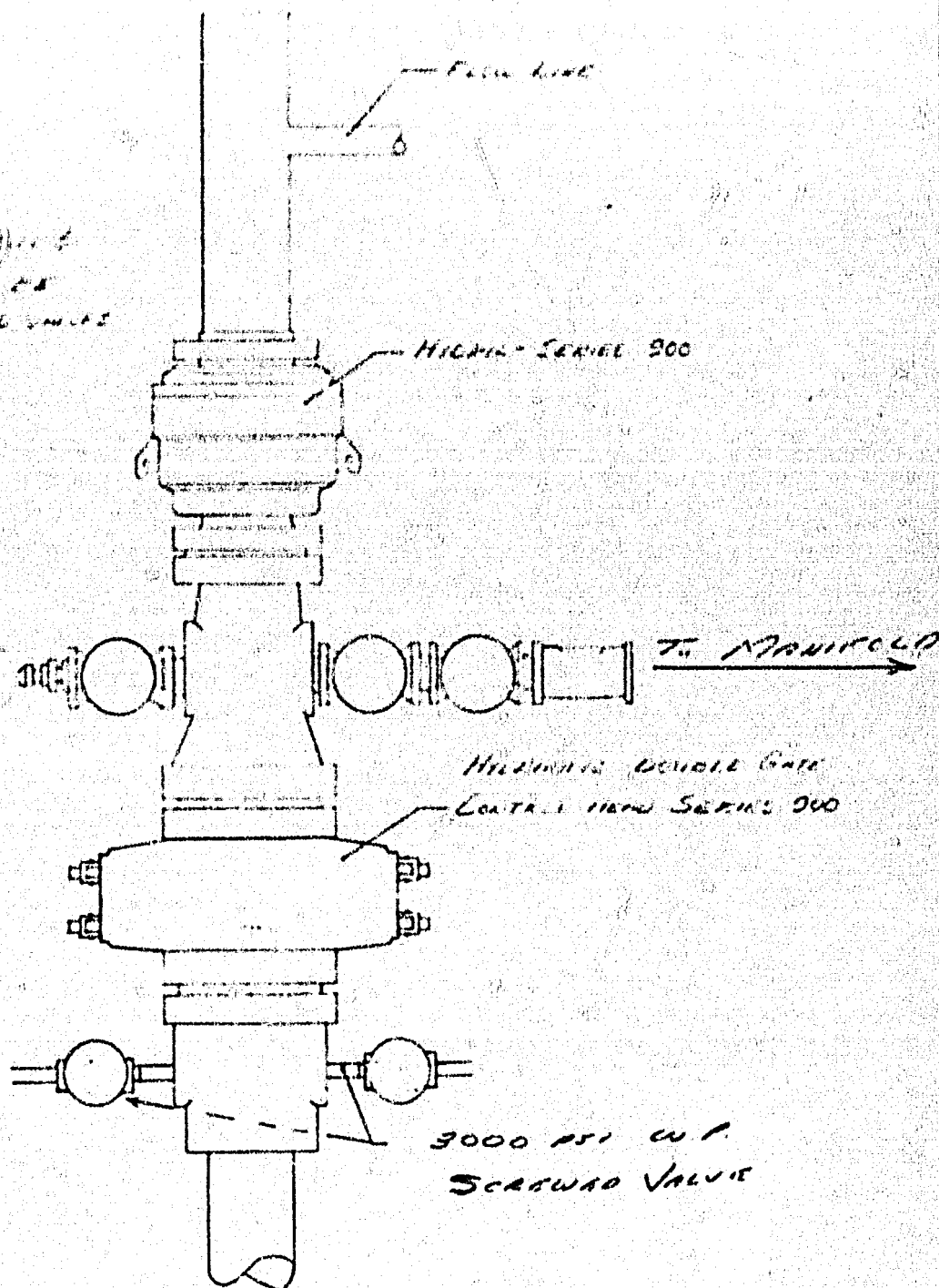
WELL NAME: FINA ET-AL WILLOW LAKE J-66

LOCATION: J, SECTION: 66, GRID: 62°00', 121°45'

LATITUDE: 61°55'43" LONGITUDE: 121°56'53"

UNIVERSAL WELL LOCATION REFERENCE, SEISMIC LINE No. 15, S.P. #95

THE 3000 PSI W.P. 3000 PSI W.P. 3000 PSI W.P. 3000 PSI W.P.



CANADIAN FINE OIL L.M.T.B.A.
 BLOW-OUT PREVENTER HOOK-UP
 FOR
 FINE AT AL WILLOW LAKE J-66
 AND
 FINE AT AL WILLOW LAKE L-59

Canadian Fine Oil Limited

WELL HEADS, MANIFOLDS

Connected to BOP Valves

2" X.H. SMIS Pipe
Welded to 2" - 900 ser. weld
neck flanges

2" - 900 Ser. - Flanged CHASE
2" - 900 Ser. - Flanged Valve

2" - 900 Ser.
Positive
Choke

2" - 900 Ser.
Flanged Tee

2" - 900 Ser.
Flanged Valve

2" - 900 Ser.
Flanged Tee

2" - 900 Ser.
Adj. Choke

2" - 900 Ser.
Flanged Steel
Valve

All 2" X.H. -
SMIS - pipe

2" - 900 Ser.
Comp. Flange

All 3000 PSI
Unions

All 2" - 3000
PSI F.S. Tees
and Crosses

2" XH SMIS Bull Plug can
be replaced by 2" 3000
PSI valves for installation
of added flare lines.

All 2" - 3000 PSI
thru. valves

To Flare Pit

To Mud Tanks

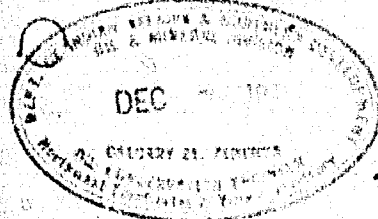
This manifold can be constructed of 2" or 3" or
a combination of 2" and 3" fittings.

FOR USE AT

FINA RT AL WILLOW LAKE J-66

AND

FINA RT AL WILLOW LAKE L-59



GEOLOGICAL PROGNOSIS AND PROGRAMME

WELL NAME:

Fina et al Willow Lake J-66 Line 15 Shot Point 95

LOCATION:

J-66, 62° - 00' 121° - 45'

CO-ORDINATES:

ELEVATION:

Ground: 692 feet (estimated)

Kelly Bushing: 704 feet (estimated)

OPERATOR:

Canadian Fina Oil Limited

PARTICIPATING
COMPANIES:

Canadian Fina Oil Limited

Canadian Superior Oil Ltd.

Imperial Oil Enterprises Ltd.

CostBenefit

50%

25%

50%

25%

0%

50%

SUPERVISION:

Geologist: Consultant

Drilling Supv: J. Ankle

CONTRACTORS:

Drilling: Commonwealth Drilling

Cementing: Halliburton Services Ltd.

Mud: International Drilling Fluids

Coring: Johnston Testers

Testing: Johnston Testers

Logging: Schlumberger of Canada

Core Analysis: Core Laboratories (Canada) Ltd. Edmonton

Gas Analysis: Core Laboratories (Canada) Ltd. Edmonton

Fluid Analysis: Core Laboratories (Canada) Ltd. Edmonton

OBJECTIVES:

Main: Manetoe formation

Secondary: Ronning formation, Cambrian sands.

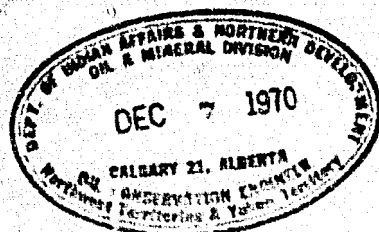
TOTAL DEPTH:

2810 feet, approximately

Approved by:

Operations Geologist

Drilling Superintendent



WELL NAME:

Fina et al Willow Lake J-66 Line 15 Shot Point 09

LOCATION:

J-66, 62° - 00' 121° - 45'
Tsd. __, Section __, Township __, Range __, W __ Meridian

KB ELEVATION:

704 feet (estimated)

GEOLOGICAL PROGNOSIS

GEOLOGICAL MARKER	DEPTH	SURSEA	MAXIMUM SHUT-IN PRESSURE
Drift	----	-----	
Simpson	164'	+ 540	
Spence River	1149'	- 445	
Hume	1249'	- 545	
Manetoe	1649'	- 945	
Chinchaga	1849'	-1145	
Ronning	2349'	-1645	1025 psi.
Basal Clastics	2399'	-1695	
Pre Cambrian	2799'	-2095	
TOTAL DEPTH	2810'	-2106	

From several different seismic calculations using different velocity and time values, and from regional geological computations, the top Hume could be up to 100 feet higher than indicated in this prognosis.

GEOLOGICAL PROGRAMME

SAMPLES

Ten foot washed and bottled samples are to be caught as follows:

From surface casing shoe to total depth.

The Conservation Board's requirements will be made known later.

DRILLING TIMES

The rig will be equipped with a mechanical time drilling device .

CORING

A 60 foot core of the Manetoe Dolomite formation should be taken immediately after recognition.

Coring of other prospective zones will depend on drill stem test results.

TESTING

A test will be run over the cored interval in the Manetoe formation. The
Running formation if porous, should be tested after 10 feet of porous section has
been penetrated. Other testing will be at the discretion of the wellsite geologist.

Cont'd.....

GEOLOGICAL PROGRAMME (cont'd)

LOGGING

- 1) Schlumberger - Dual Induction Laterolog from total depth to surface casing shoe 2" = 100 feet and 5" = 100 feet.
- 2) Schlumberger - BHC Sonic Log with Gamma Ray with Caliper from total depth to surface casing shoe 2" = 100 feet and 5" = 100 feet. This log is to be integrated.
- 3) Schlumberger - Compensated Formation Density Log from total depth to surface casing shoe 2" = 100 feet and 5" = 100 feet.
- 4) Schlumberger - Sidewall Neutron Porosity Log from total depth to surface casing shoe at 2" = 100 feet and 5" = 100 feet.
- 5) Schlumberger - Synergetic Log System to be constructed 5" = 100 feet.

SPECIAL INSTRUCTIONS

1) Mud cake and mud filtrate samples will be taken 1 hour, 1/2 hour and immediately on coming out of the hole for logging. The resistivities of the samples should be measured and marked on the logs. The resistivities of drill stem test recoveries should be measured and marked on the logs.

2) Cores, after completion of description, will be sent to Core Laboratories, Edmonton for analysis.

3) Seven (7) field prints of all logs are required, four (4) of these are to be marked in the usual manner. Three (3) unmarked sets and two (2) marked sets are to be forwarded to the Calgary office, as soon as possible. Two (2) marked sets are to be retained at the wellsite. Twelve (12) final prints of all logs are required.

4) Morning reports are to be called in to the Calgary office by 8:30 A.M.

5) Weekend calls to:

- | | |
|-------------------|------------|
| 1) A. M. Davidson | 249 - 5739 |
| 2) R. Morris | 249 - 7878 |
| 3) R. Thiers | 245 - 3866 |

690-11-4-

FINA et al WILLOW LAKE J-66

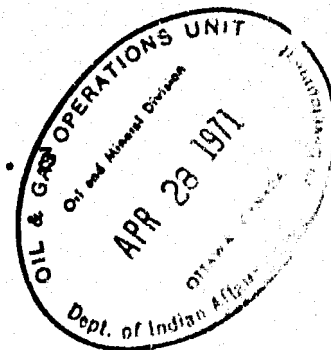
62°00' 121°45'

690-11-4-

FINA at #1 WILLOW LAKE J-66

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(c) Gas Analysis - none

(d) Oil Analysis - none

SECTION VI - Completion Summary

No completion attempted

FINA et al WILLOW LAKE J-66

SUMMARY OF WELL DATA

(a) Well Name and Number

Fina et al Willow Lake J-66

(b) Permittee, Licensee or Lessee

Imperial Oil Enterprises Ltd.

(c) Operator

Canadian Fina Oil Limited
736 Eighth Avenue S.W.
Calgary 2, Alberta

(d) Location

Unit J, Section 66, Grid 62° 00' 11" 45'
Latitude 61° 55' 43" N. Longitude 121° 56' 53" W.
Universal Well Location Reference: Lat. 61.92861°
Long. 121.94805°
Unique Well Identifier: 300J66 1214500

(e) Co-ordinates

Does not apply - not a development well

(f) Permit or Lease Number

Permit No. 4355

(g) Drilling Contractor

Commonwealth Drilling (Western) Ltd.
Rig No. 12 Make: Unit Model 34

(h) Drilling Authority

No. 466 Issued on the 7th December 1970.

(i) Classification

New field wildcat

(j) Elevations

Ground - 692 ft.

K.B. - 705 ft.

(k) Spud Date

January 6, 1971

(l) Completed Drilling

January 21, 1971

(m) Total Depth

2867 ft. Logger's

2871 ft. Driller's

(n) Well Status

Dry and abandoned

(o) Rig Release Date

January 26, 1971

(p) Hole Size

13-3/4 inch: 0-605 ft.

8-3/4 inch: 605-2871 ft. Total Depth

(q) Casing

9-5/8 inch, 40 lb. L T & C to 603 ft. K.B.

FINA et al WILLOW LAKE J-66FORMATION TOPS

<u>Formation</u>	<u>Sample Tops</u>		<u>Log Tops</u>	
	<u>Depth</u>	<u>Datum</u>	<u>Depth</u>	<u>Datum</u>
Ft. Simpson	20	+ 685		
Spence River	1145	- 440	1176	- 471
Hume	1262	- 557	1260	- 555
Arnica	1730	-1025	1738	-1033
Chinchaga	1870	-1165	1863	-1158
Basal Clastics	2520	-1815	2516	-1811
Precambrian	2660	-1953	2656	-1951

FINA et al WILLOW LAKE J-66SAMPLE DESCRIPTION

- 10 - 400 SHALE, medium gray, moderately soft; blocky and somewhat micro-micaceous. Minor thin interbeds SHALE, olive-brown. Trace arkosic SANDSTONE in upper 100 ft.
- 400 - 600 SHALE, as above, but interbeds olive-brown absent.
- 600 - 1080 SHALE, light-medium gray with greenish cast; soft, blocky and somewhat micro-micaceous; slightly calcareous in spots. Occasional thin bed of olive-brown SHALE.
- 1080 - 1140 SHALE, as above, with interbeds LIMESTONE, dark brown and dark gray, fine crystalline, argillaceous and siliceous.
- SPENCE RIVER: 1145 (fair fast drilling break)
- 1140 - 50 SHALE, green-gray, with minor SHALE (20% of sample), black.
- 1150 - 1260 SHALE, dark brown and black with abundant fine biotite. (increases from 30% to 90% of sample)
- HUME: 1262 (good slow drilling break)
- 1260 - 1300 LIMESTONE, predominantly dark brown, micro-crystalline, and argillaceous with resinous appearance. Grades to tan, dense, earthy and clean in places. Thin black bituminous beds. Some of dark brown is fine crystalline and dolomitic. Tight throughout.
- 1300 - 1360 LIMESTONE, predominantly tan, very fine crystalline, somewhat earthy. Minor interbeds dark brown, very fine crystalline; resinous and argillaceous. Both types dolomitic in places. Scattered white, coarse calcite crystals. Tight throughout.
- 1360 - 1410 LIMESTONE, predominantly dark brown, micro-very fine crystalline, slightly argillaceous. Minor tan, as above. Thin, black bituminous beds. Tight.
- 1410 - 50 As above, with dark brown becoming more argillaceous; slightly dolomitic; scattered white, medium-crystalline calcite as vug filling; trace brachiopods. Tight.

- 1450 - 80 As above, micro-crystalline tight to fine crystalline dolomitic, with poor inter-crystalline porosity.
- 1480 - 1540 LIMESTONE, interbedded dark brown (70%) and tan (30%). Dark brown is micro-crystalline to fine crystalline dolomitic; argillaceous. Tan is earthy, dense with some very fine-fine crystals. Poor inter-crystalline porosity in places. A few thin beds black SHALE.
- 1540 - 80 Predominantly DOLOMITE, dark brown, fine crystalline, semi-sucrosic, argillaceous and calcareous with poor inter-crystalline porosity. Minor LIMESTONE, dark brown and tan, micro-crystalline.
- 1580 - 90 LIMESTONE, mottled tan and dark brown; medium grained calcarenite with development of fine crystalline dolomite over much of area.
- 1590 - 1650 LIMESTONE, medium-dark brown, crypto-crystalline; argillaceous, hard and tight. Minor LIMESTONE, buff, dense chalk.
- 1650 - 80 LIMESTONE, light brown clean to dark brown argillaceous; micro-crystalline. Tight. Very fine crystalline and dolomitic with poor porosity in lower 10 ft.
- 1690 - 90 LIMESTONE, medium brown, crypto-crystalline; hard and tight.
- 1690 - 1700 DOLOMITE, light gray, very fine crystalline, slightly argillaceous; tight.
- 1700 - 20 LIMESTONE, light brown, crypto crystalline, hard and tight. Minor cream chalky.
- 1720 - 30 As above with minor dark green SHALE.
- 1730 - 70 DOLOMITE, medium brown, micro-very fine crystalline, hard, with few pieces clear, coarse crystalline. Tight.
- 1770 - 80 DOLOMITE, dark brown-black, very fine crystalline, bituminous. Minor clear, coarse dolomite crystals.
- 1780 - 90 DOLOMITE, mottled tan-dark brown, micro-very fine crystalline; clear crystals as above. No stain or fluorescence.
- 1790 - 1810 As above, grading to predominantly fine crystalline. Tan is semi-sucrosic with poor inter-crystalline porosity. A few small vugs.

- 1810 - 20 DOLOMITE, dark brown, micro-crystalline.
- 1820 - 50 DOLOMITE, mottled tan-dark brown, fine crystalline. Tan has poor inter-crystalline porosity, scattered large vugs with clear rhombs. Very minor light green SHALE.
- 1850 - 70 DOLOMITE, dark brown and tan, micro-crystalline, anhydritic.
- CHINCHAGA: 1870(±5) (no drilling break)
- 1870 - 90 ANHYDRITE, tan and gray, crypto-crystalline, dolomitic.
- 1890 - 1810 DOLOMITE, tan, micro-crystalline, anhydritic.
- 1910 - 30 ANHYDRITE, tan and gray, crypto-crystalline.
- 1930 - 50 DOLOMITE, mixture of tan earthy and dark brown resinous; micro-crystalline and anhydritic. Tight.
- 1950 - 80 ANHYDRITE, light-dark brown, micro-crystalline; mostly resinous with some siliceous, earthy, semi-sucrosic; dolomitic in places.
- 1980 - 2010 ANHYDRITE, as above, but non-dolomitic.
- 2010 - 20 DOLOMITE, brown, micro-very fine crystalline, resinous. Tight.
- 2020 - 2120 ANHYDRITE, light-dark brown resinous, crypto-micro crystalline; minor cream chalky. Thin interbeds DOLOMITE, as above in 2010-20, and ANHYDRITE, dark gray, argillaceous and siliceous.
- 2120 - 2200 ANHYDRITE, as above, but DOLOMITE absent.
- 2200 - 20 ANHYDRITE, dark gray, argillaceous and siliceous; hard.
- 2220 - 30 ANHYDRITE, tan-dark brown, micro-crystalline.
- 2230 - 40 ANHYDRITE, white, very fine crystalline, sucrosic, with larger brown crystals and specks bitumen. Poor inter-crystalline porosity.
- 2240 - 50 ANHYDRITE, dark brown, fine-medium crystalline, dolomitic; bitumen inclusions; well cemented and tight.
- 2250 - 60 DOLOMITE, dark brown, fine-medium crystalline, anhydritic; abundant bitumen inclusions. Fair vugular porosity in spots. No stain, fluorescence or cut.

- 2260 - 80 ANHYDRITE, dark gray, crypto-crystalline, argillaceous.
- 2260 - 90 DOLOMITE, tan, micro-very fine crystalline, anhydritic, tight. Relict oolitic or pelletoidal texture on some pieces.
- 2290 - 2360 ANHYDRITE, mostly dark gray, dirty (?); some tan; crypto-crystalline. Very minor white, very fine crystalline, sucrosic. Tight.
- 2360 - 2410 ANHYDRITE, tan-dark brown, crypto-crystalline, with thin beds of black with bituminous matter.
- 2410 - 20 DOLOMITE, tan, micro-crystalline, earthy.
- 2420 - 50 ANHYDRITE, as above, 2360-2410.
- 2450 - 60 DOLOMITE, as above, 2410-20.
- 2460 - 70 ANHYDRITE, as above.
- 2470 - 80 DOLOMITE, dark gray, micro-crystalline; scattered fossils.
- 2480 - 2510 ANHYDRITE, tan-dark brown and gray, crypto-crystalline; becoming fine-medium crystalline with sucrosic spots in lower 10 ft.
- 2510 - 20 ANHYDRITE, gray, with scattered clear quartz grains.
- BASAL CLASTICS: 2520 (no drilling break)
- 2520 - 40 SANDSTONE, white, fine-coarse grained, angular; grades from opaque, moderately friable to clear, vitreous, quartzitic. Tight.
- 2540 - 50 QUARTZITE, clear tan, coarse, vitreous crystals.
- 2550 - 60 QUARTZITE, clear maroon, with maroon shale or clay cement.
- 2560 - 90 QUARTZITE, as above, 2540-50, plus a few pieces white clay.
- 2590 - 2640 Predominantly QUARTZITE, clear to light red and purple; medium-coarse grained. Minor SHALE, brick red and purple, sandy, micaceous. Trace dark green and gray rock (weathered basic feldspar?).
- 2640 - 50 SHALE, maroon and purple, silty, hard.
- 2650 - 60 As above, 2590-2640.

- 2660 - 70 WEATHERED OR REWORKED IGNEOUS ROCK
 Maroon-purple; fine-coarse grained feldspars(?)
 in a dense, shale-like matrix; a few grains of
 quartz and green black mafic(?) minerals. All
 grains have frosted or satin-like appearance -
 no fresh crystal faces.
- 2670 - 90 Much as above but color change to dark purple and
 dark green, grading to black with mafic(?)
 minerals abundant.
- 2690 - 2720 Weathered crystalline rock with mixture of colors
 as above; no shale-like or mud matrix. Compos-
 ition estimated to be 50% feldspar, 30% mafic
 minerals and 20% quartz.
- 2720 - 70 Much as above, but predominantly maroon and
 containing less mafic minerals.
- 2770 - 2810 METASEDIMENT(?); maroon and purple with minor
 light green and light gray, micro-crystalline.
 Has appearance of a well indurated carbonate;
 siliceous in places; minor CLAY, mottled red
 and white. Trace only of mafic minerals.
- 2810 - 70 QUARTZITE, clear, colorless to light green;
 fine-coarse crystalline. Lower half has white,
 sucrosic, with poor porosity in places. Minor
 FELDSPAR, pale green and minor white clay.

TOTAL DEPTH: 2871

FINA et al WILLOW LAKE J-66

REPORT OF DRILL STEM TESTS

D.S.T. NO. 1: 1600-1870 ft. - Lower Hume and Arden Formations

Strong air blow on pre-flow; strong air blow on main flow, decreasing slowly.

Recovery: 1035 ft. mud

Times:

Pre-flow: 5 min.
Initial Shut In: 60 min.
Main Flow: 60 min.
Final Shut In: 60 min.

Pressures:

Initial Hydrostatic:	806 psi	Final Hydrostatic:	823 psi
Initial Shut In:	669 psi	Final Shut In:	669 psi
Initial Flow:	174 psi	Final Flow:	583 psi

D.S.T. NO. 2: 2195-2280 ft. - Chinshaga Formation

Very weak air blow on pre-flow; weak air blow on main flow.

Recovery: 80 ft. mud

Times:

Pre-flow: 5 min.
Initial Shut In: 60 min.
Main Flow: 60 min.
Final Shut In: 90 min.

Pressures:

Initial Hydrostatic:	1118 psi	Final Hydrostatic:	1102 psi
Initial Shut In:	959 psi	Final Shut In:	932 psi
Initial Flow:	44 psi	Final Flow:	65 psi

D.S.T. NO. 3: 1720-1870 - Arnica Formation

Strong air blow on pre-flow; strong air blow on main flow, decreasing throughout.

Recovery: 439 ft. mud plus 546 ft. salt water-cut mud.

Times:

Pre-flow: 5 min.
Initial Shut In: 60 min.
Main Flow: 40 min.
Final Shut In: 110 min.

Pressures:

Initial Hydrostatic:	876 psi	Final Hydrostatic:	878 psi
Initial Shut In:	728 psi	Final Shut In:	726 psi
Initial Flow:	132 psi	Final Flow:	548 psi

FINA et al WILLOT LAKE J-66

CASING RECORD

Ran 19 joints, 607 ft., of 9-5/8 inch, 40 lb.,
LT & C, R 2 & 3. Cemented at 603 ft. K.B. with 500
bags neat construction cement with 2% CaCl₂. Plug
down 10:20 A.M., January 9, 1971.

FINA et al WILLOW LAKE J-66BIT RECORD

<u>No.</u>	<u>Size</u> (<u>Ins.</u>)	<u>Make</u>	<u>Type</u>	<u>Serial No.</u>	<u>Depth Out</u>	<u>Feet</u>	<u>Hours</u>	<u>Date</u> (<u>1971</u>)
1A	13.75	Smith	DSJ	PT 250	605	605	33.25	Jan. 8
1	8.75	Smith	DTJ	DM 511	1265	660	19.75	Jan. 11
2	8.75	Smith	DGTHJ	DR 810	1365	100	19.5	Jan. 13
3	8.75	Smith	V2HJ	DV 481	1532	167	22.75	Jan. 14
4	8.75	Hughes Western	ODVJ	27691	1746	214	25.75	Jan. 15
5	8.75	Hughes Western	ODVJ	27695	1954	208	28.25	Jan. 16
6	8.75	Hughes Western	X55R	29143	2600	646	67.5	Jan. 19
7	8.75	Smith	5JS	FN 724	2871	271	33.25	Jan. 22

FINA et al WILLOW LAKE 3-66

MUD SUMMARY

<u>Hydro-Gel</u>	<u>Bicarbonate</u>	<u>Lime</u>	<u>Soda Ash</u>	<u>C.M.C.</u>	<u>DV 68</u>
25,900 lbs.	300 lbs.	100 lbs.	1000 lbs.	500 lbs.	8 gals.

FINA et al WILLOW LAKE J-66DEVIATION RECORD

<u>Depth</u>	<u>Deviation (degrees)</u>
60	1
90	1-1/4
120	1
143	1
170	1-1/4
199	7/8
227	1-1/4
256	1
287	1
318	1/2
349	1
381	1-1/4
412	1
444	1/2
475	1/2
506	1-3/4
538	1-3/4
570	3/4
600	1
680	1-1/2
740	1-3/4
804	1-1/2
865	1-1/4
929	1-1/8
990	2
1054	1-3/4
1117	1-3/4
1180	1-1/2
1243	1
1364	1-1/8
1530	1
1631	3/4
1746	1/2
1954	1
2165	1/2
2636	1/2

FINA et al WILLOW LAKE J-66

ABANDONMENT PLUGS

Plug No. 1: 2325-2150; 120 bags normal cement. Plug down at 12:45 p.m.; felt at 8:45 p.m., January 25, 1971; found at 2075 (75 ft. high).

Plug No. 2: 650-550 ft.; 100 bags normal cement plus 1 $\frac{1}{2}$ CaCl₂. Plug down 10:00 p.m., January 25; felt at 6:30 p.m., January 26, 1971; found at 515 (35 ft. high).
Plate was welded to top of the surface casing with an identification marker installed on a riser.
All measurements from K.R.

FINA at al WILLOW LAKE J-66

LOGS

Logs run January 22-23, 1971, by Schlumberger of Canada Ltd.

DILL or Dual Induction Laterolog

Surface casing (602) to 2861 ft. on scales 2 inches = 100 ft.
and 5 inches = 100 ft.

GSC or Gamma Sonic Calipers

Surface casing (602) to 2865 ft. on scales 2 inches = 100 ft.
and 5 inches = 100 ft.

SNP or Sidewall Neutron Porosity (with gamma and caliper)

Surface casing (602) to 2865 ft. on scales 2 inches = 100 ft.
and 5 inches = 100 ft.

FD or Formation Density (with gamma and caliper)

Surface casing (602) to 2865 ft. on scales 2 inches = 100 ft.
and 5 inches = 100 ft.

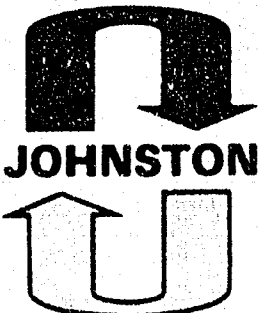
Lithology Overlay

602-2865 ft. on scale 5 inches = 100 ft. This log made as
combination of curves on FD and SNP logs.

All depths measured from K.B.

*Note: This log run using one transmitter only - in effect
giving it no bore hole compensation.

TECHNICAL REPORT

The logo for Johnston is positioned between the words 'REPORT' and 'RT'. It features a stylized 'J' shape formed by two thick, black arrows. One arrow points downwards and to the right, while the other points upwards and to the left, meeting at the top and bottom to form the vertical strokes of the 'J'. The word 'JOHNSTON' is written in a bold, sans-serif font across the middle of the 'J' shape.

JOHNSTON



JOHNSTON TESTERS

323 SOUTH AVENUE 12 - CALGARY 26, ALBERTA - T4M 1S5

A DIVISION OF SCHLUMBERGER CANADA LIMITED

TEST DATA				TOOL SEQUENCE		
Formation	Zone Thickness			Tool	Length	OD
Interval	1600	To	1870	To	2871	
Type of Test	OPEN HOLE, STRADLE, BYPASS					
Time Started in Hole	1445	Hrs	Tool Opened	1633	Hrs	
First Flow	5	Min	Initial Shut in	60	Min	
Second Flow	60	Min	Second Shut in		Min	
Third Flow		Min	Final Shut in	60	Min	
Pulled Loose At	1955	Hrs	Out of Hole	2330	Hrs	
Wt. Set on Packers	30,000	#	Pulled Loose Wt	25,000	#	
Description of Flow During Test: STRONG INITIAL PUFF. NO GAS TO SURFACE. STRONG SECOND FLOW, STEADY THROUGHOUT FLOW PERIOD.						
FLUID RECOVERY				Was Test Reverse Circulated		
Total Fluid Recovered				1035'		
Description of Fluid Recovered				1035' DRILLING FLUID		
GAS BLOW MEASUREMENT						
Measured With				D. Riser		
Type of Instrument						
Time	Stop Choke	Reading in inches	M Cubic Feet Day			
			NIL			
REMARKS				TEST SATISFACTORY		
RESISTIVITY				CHLORIDE CONTENT		
Recovery Water	6.8	77	720	ppm		
Mud Pit sample filtrate	6.8	77	720	ppm		
District	HIGH LEVEL Ticket No. D 04973			Date JANUARY 23, 1971		
Company	CANADIAN FINA OIL LIMITED			Test No. J.T. No. 1		
Well Name	FINA ET AL WILLOW LAKE			Address 736 - 8TH AVE. S.W.		
Number	J-66-61'55'43"N 121'46'53"W			CALGARY 2, ALBERTA		
Formation and Interval	1600 - 1870 DST#1			Province N.W.T.		
Distribution of Reports				Field WILDCAT		
				Co. Rep J. ANKLE		
				Technician J. JACOB		
B - CALGARY 1 - DATA CENTER (ENC)						

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JOHNSTON TESTERS

321 SOUTH AVENUE S.E. CALGARY 24 ALBERTA CAN. T2S 1T3

A DIVISION OF BENTLEY SYSTEMS CANADA LIMITED

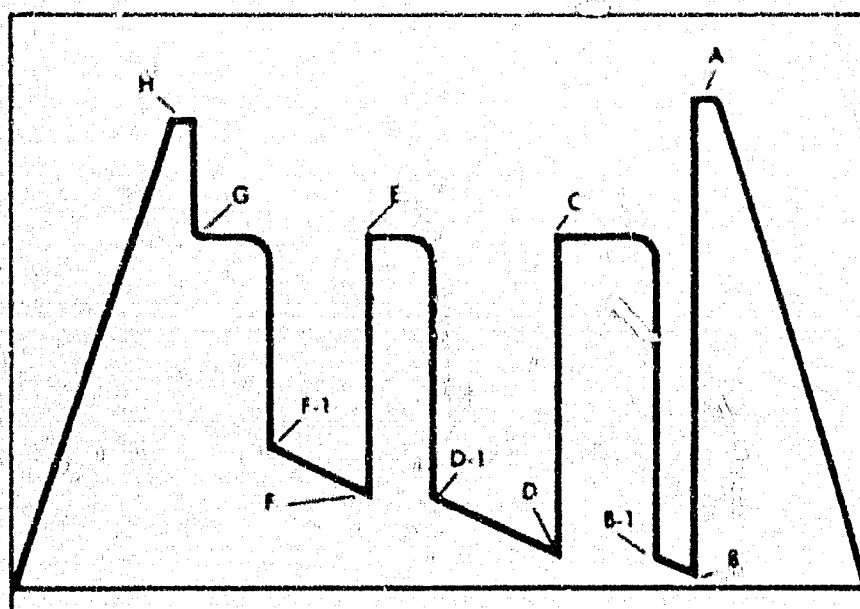
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS

FIELD
REPORT NO.

ASCOMER NO.

D 04973

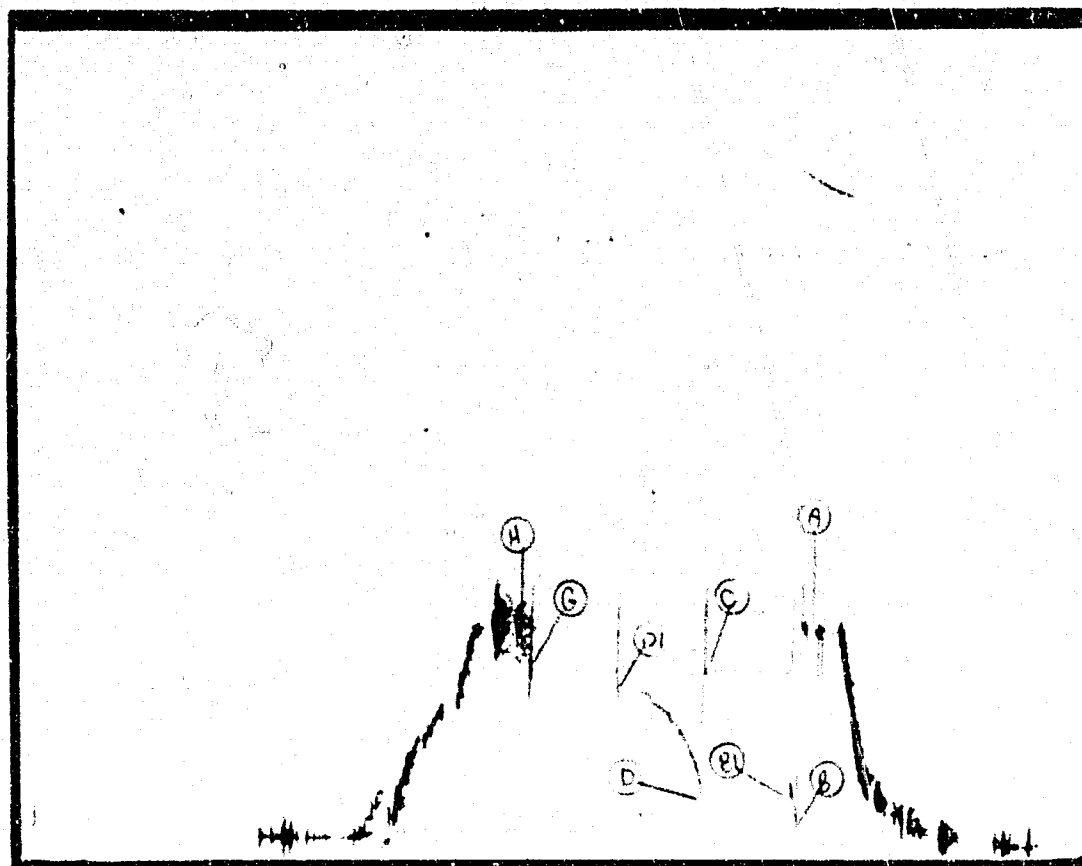
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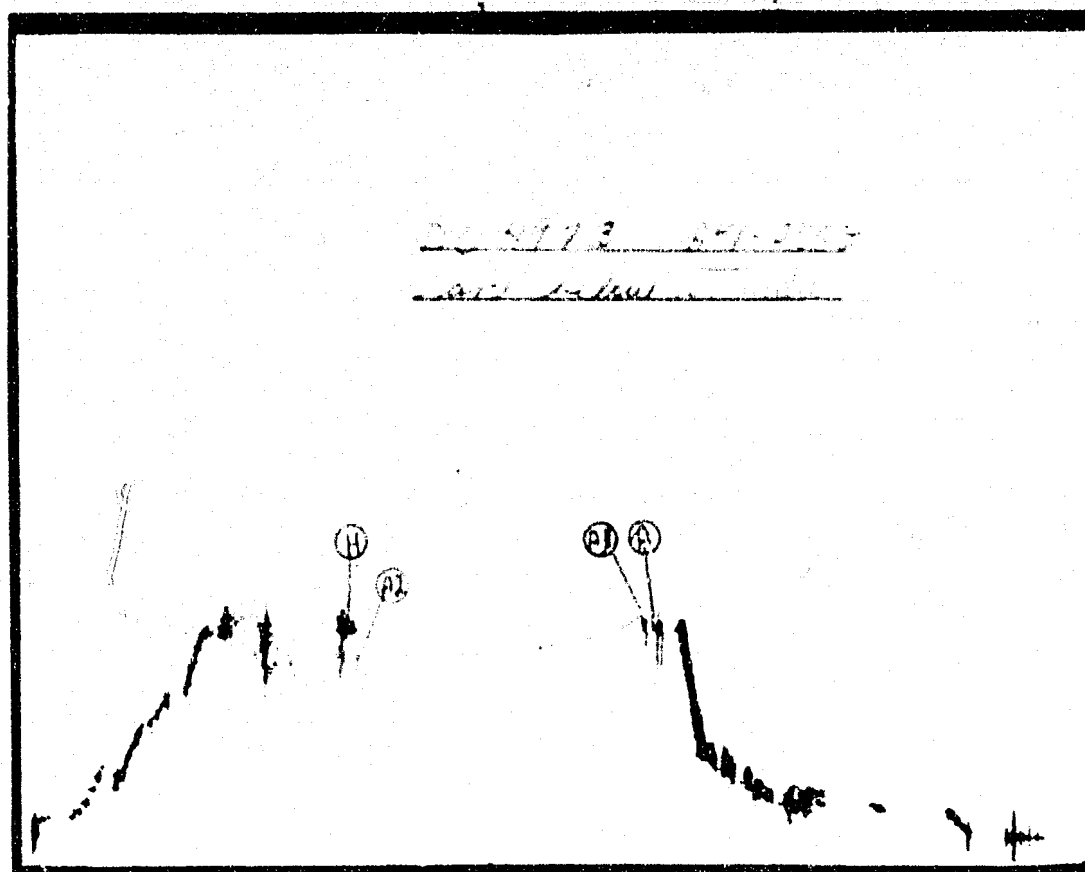
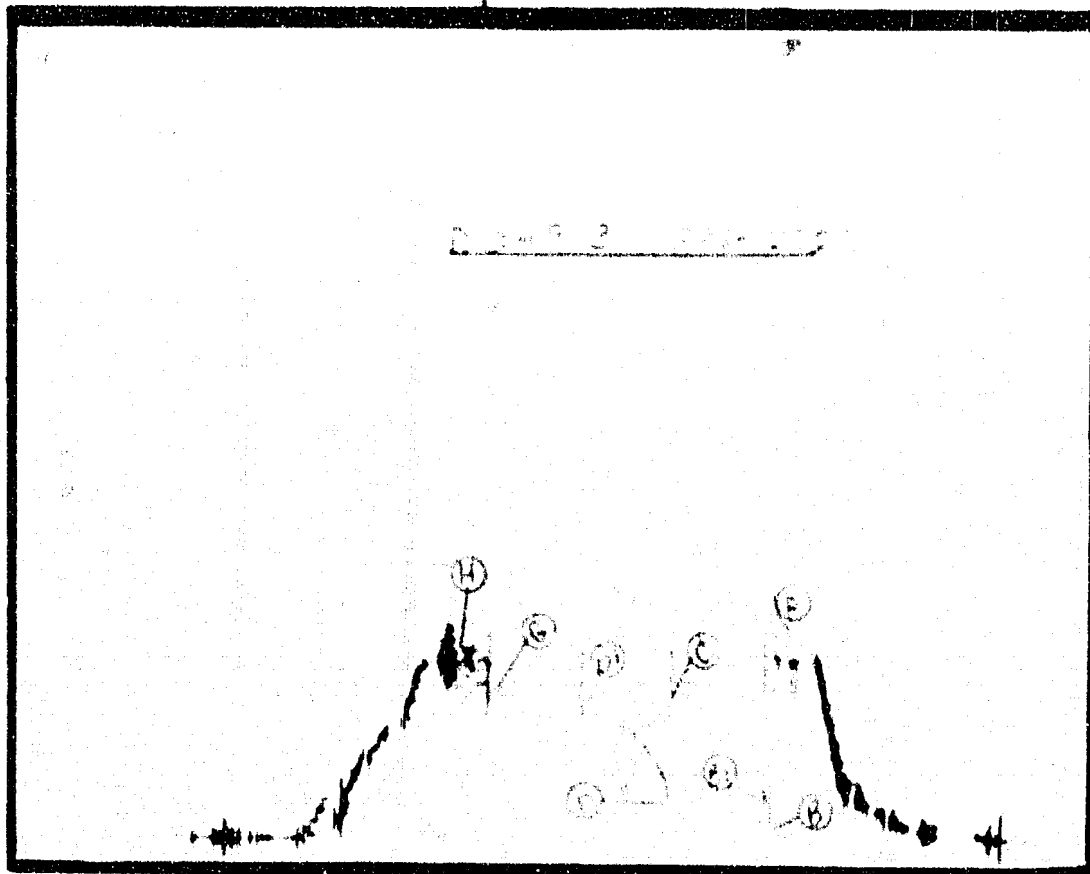


- A. Initial Hyd. Mud
- B. First Flow
- C. Initial Shut-In
- D. Second Flow
- E. Second Shut-In
- F. Third Flow
- G. Final Shut-In
- H. Final Hyd. Mud

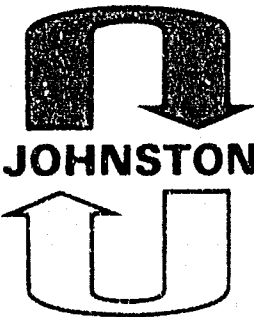
The following points are either fluctuating pressures or points indicating other packer settings (testing different zones).

A-1, A-2, A-3, etc. Initial Hyd. Pressures
Z — Special pressure points such as pumping pressures recorded for formation breakdown.





TECHNICAL REPORT

The logo for Johnston is positioned between the words 'REPORT' and 'ART'. It features a stylized 'J' shape formed by two thick, dark arrows. One arrow points downwards from the top, and the other points upwards from the bottom, meeting at the center. The word 'JOHNSTON' is printed in a bold, sans-serif font across the middle of the 'J' shape.

**JOHNSTON TESTERS**

321 SOUTH AVENUE E. S.W. CALGARY 24, ALBERTA CANADA T2S 1S1

A DIVISION OF THE JOHNSTON GROUP LIMITED

TEST DATA				TOOL SEQUENCE			
Formation	2195 to 2280			2871	P.O. SUB	1.00	0.0
Interval	2195			2280	D.P. SUB	.65	
Type of Test	OPEN HOLE, STRADDLE, BYPASS				MFF TOOL	9.20	
Time Started in Hole	0200	Min	Time Opened	0348	Min	BYPASS TOOL	2.95
First Flow	5	Min	Initial Shut in	60	Min	SUB	1.00
Second Flow	60	Min	Second Shut in		Min	JARS	6.25
Third Flow		Min	Third Shut in	90	Min	SUB	1.00
Pulled Loose @	0730	Min	Out of Hole	1100	Min	H. SUB	1.00
Wt Set on Packers	30,000	Lb	Packed Line Wt	15,000	Lb	SAFETY JOINT	1.73
Description of Flow During Test	NO INITIAL PUFF. POOR AIR BLOW. HELD STEADY, NO GAS TO SURFACE.				S.S. & PACKER	9.30	7 1/2"
					T.C. & PACKER	5.40	7 1/2"
					TOTAL	39.48	
FLUID RECOVERY					P. SUB	1.00	
Total Fluid Recovered				80'	PERFS	10.05	
Description of Fluid Recovered					R. SUB	1.00	
30' DRILLING FLUID.					RECORDER	5.95	
					RECORDER	6.00	
					SUB	1.00	
					DRILL COLLAR	56.02	
					SUB	1.00	
					P. SUB	3.00	
					TOTAL INTERVAL	85.02	
GAS BLOW MEASUREMENT					PACKER	3.40	7 1/2"
Measured With					PACKER	6.35	7 1/2"
Type of Instrument					RECORDER	6.05	
Time	Stop Choke	Reading	M. Cubic Feet Day		PERFS	6.00	
			NIL		SUB	1.00	
					DRILL PIPE	564.77	
					SUB	1.00	
					B.N. & PERF	2.00	
					TOTAL BELOW INTY	590.57	
					TOTAL LENGTH	715.07	
REMARKS TEST SATISFACTORY					Elevation	705 KB	692 GL
					Bottom Hole Choke Size	1/2"	
					Fluid Cushion Type	NIL	Amf
					MUD AND HOLE DATA		
					Mud Type	GEL	WL 20.0
					Filter Cake	2/32	Visc 55 Wt 9.9
					Time Taken	0800 HRS	
					Contractor	COMMONWEALTH DRLO	Rig No 12
					Drill Pipe Size	3 1/2 - 4 FH	
					Drill Collar Size	2 7/8" ID Length	530.03
					Main Hole Size	8 3/4"	
					Rat Hole Size		
RESISTIVITY					CHLORIDE CONTENT		
Recovery Water	6.8 %	77	720	ppm			
Mud Fil sample Filtrate	6.8 %	77	720	ppm			
District	HIGH LEVEL	Ticket No	B 04974	Date	JANUARY 24, 1971	Test No	2 JT No. 2
Company	CANADIAN FINA OIL LIMITED			Address	736 - 8TH AVE. S.W.		
Well Name	FINA ET AL WILLOW LAKE				CALGARY 2, ALBERTA		
Number	J-66-61°55'43"N121°46'53"W	Field	WILDCAT	Province	N.W.T.		
Formation		Co. Rep	J. ANKLE				
and Interval	2195 - 2280	Technician	J. JACOB				
Distribution of Reports							
8 - CALGARY		1 - DATA CENTER (ENC)					



D 04974		PRESSURE DATA			FLUID SAMPLE REPORT		
INSTRUMENT NO.		AKT-2593	AKT-2527	AKT-2563	Sample No.		
CAPACITY (mg)		3250	4000	4000	Type		
INSTRUMENT DEPTH		2207	2213	2290	Depth		
INSTRUMENT OPENING		OUTSIDE	OUTSIDE	OUTSIDE	Volume		
PRESSURE GRADIENT (psi/ft)							
WELL TEMP °F	93						
INITIAL HYDROSTATIC	A	1115#	1118#	1155#	Sample Pressure		
FIRST FLOW	B	38#	40#		plug at Surface		
	B-1	41#	42#	A1 1255#	Gravity API SG		
INITIAL SHUT-IN	C	955#	959#		Gas Oil Ratio		
SECOND FLOW	D	41#	44#	RAH BELOW	Cut Point		
	D-1	66#	65#	STRADDLE	Recovery		
SECOND SHUT-IN	E				Cut Pt Gas		
THIRD FLOW	F				cc Oil		
	F-1			A2 1148#	cc Water		
FINAL SHUT-IN	G	920#	932#		cc Mud		
FINAL HYDROSTATIC	H	1101#	1102#	1135#	Total Liquid cc		

REMARKS.

PRESSURE INCREMENTS

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JOHNSTON TESTERS

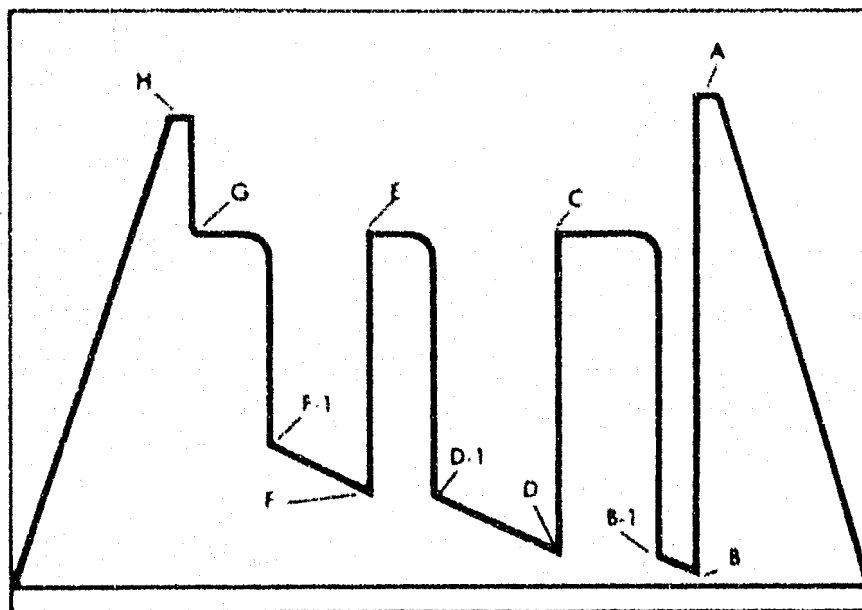
341 50TH AVENUE S.E. - CALGARY 24, ALBERTA - CANADA T2C 1E5

A DIVISION OF SCHLUMBERGER CANADA LIMITED

GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS

FIELD
REPORT NO.
D 04974

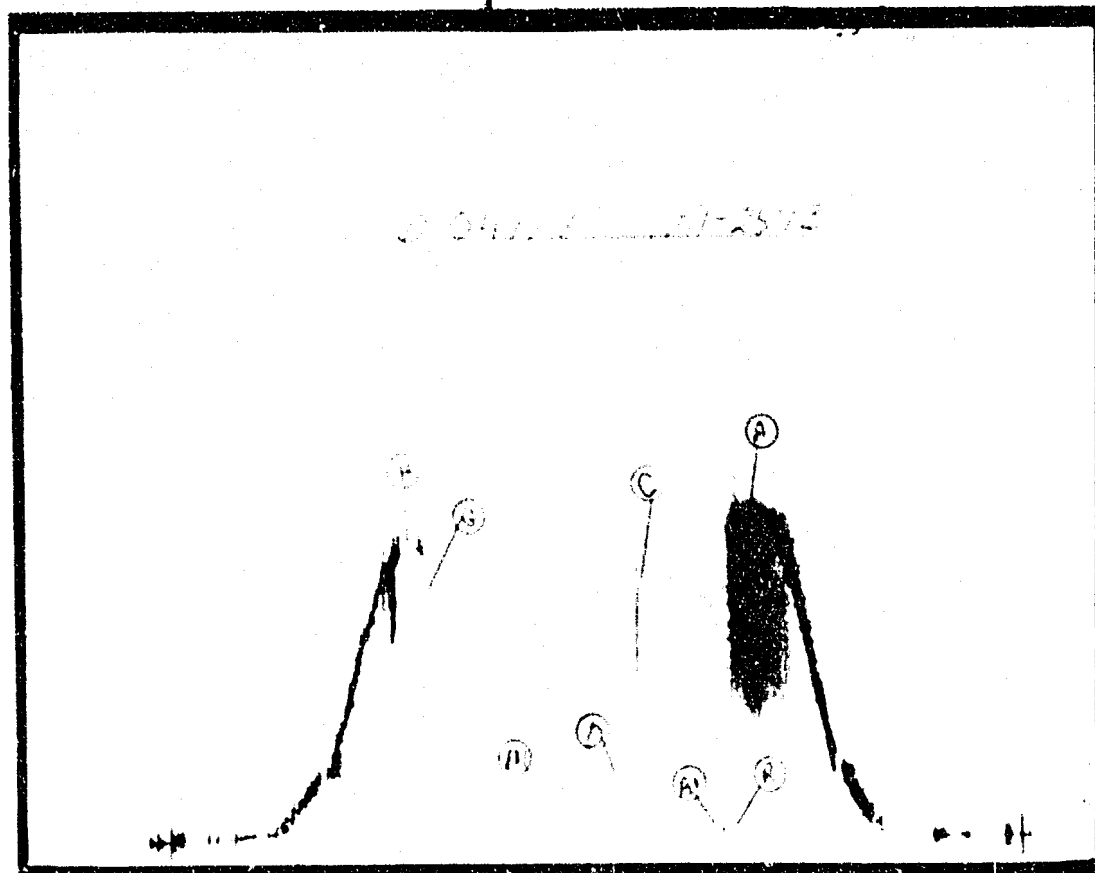
RECORDER NO.
AK1-2593

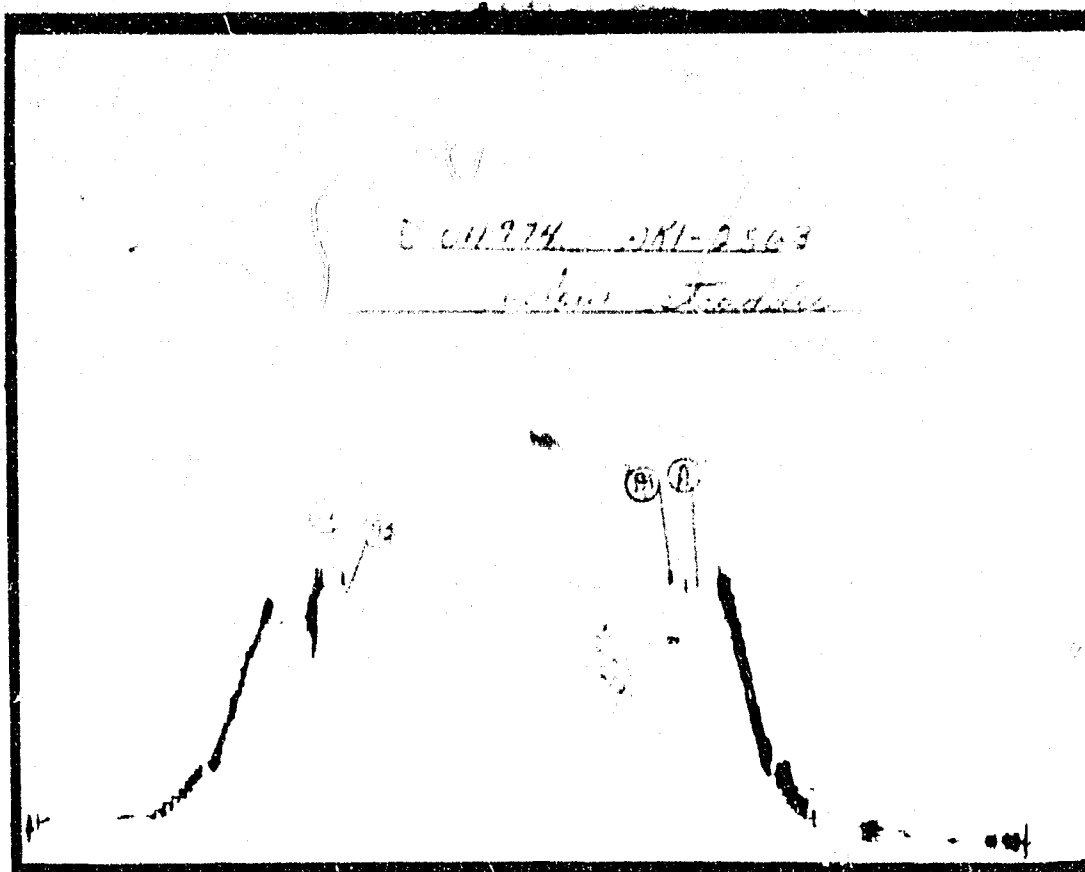
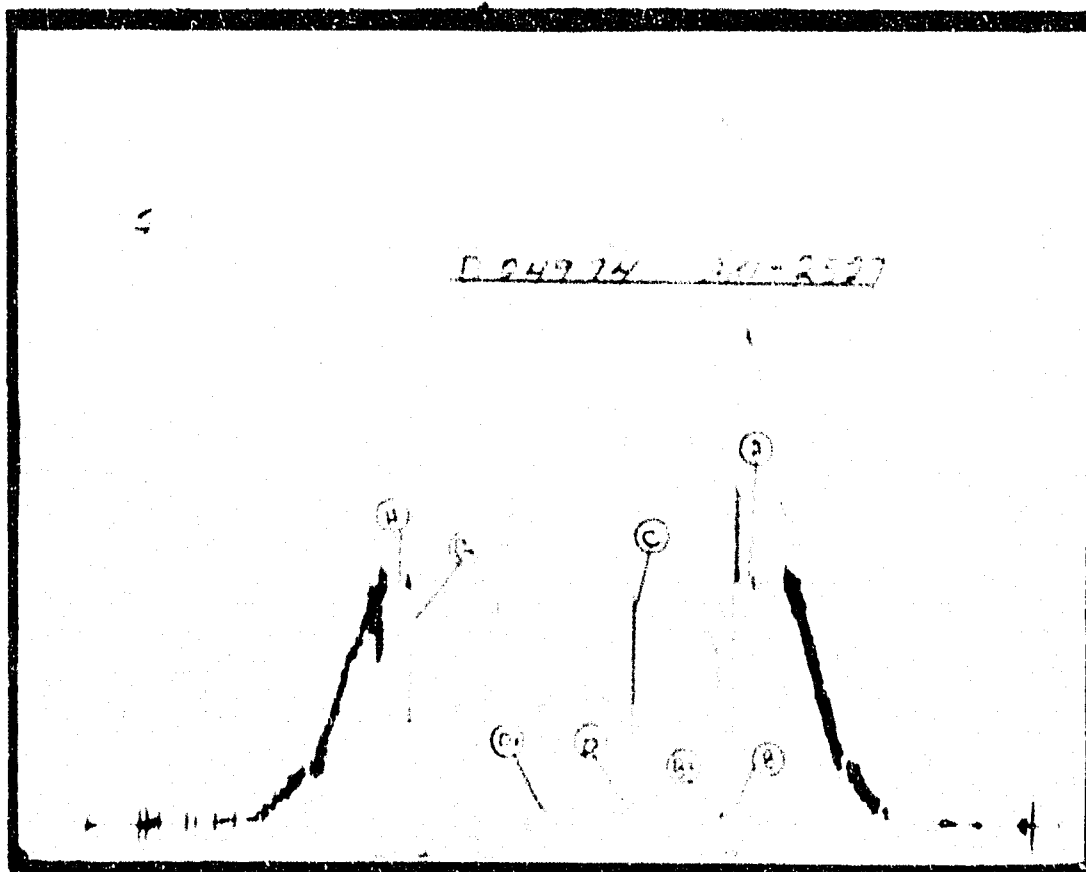


- A. Initial Hyd. Mud
- B. First Flow
- C. Initial Shut-In
- D. Second Flow
- E. Second Shut-In
- F. Third Flow
- G. Final Shut-In
- H. Final Hyd. Mud

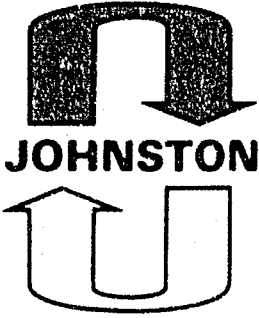
The following points are either fluctuating pressures or points indicating other packer settings (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- Z — Special pressure points such as pumping pressures recorded for formation breakdown.





TECHNICAL REPORT

The logo for Johnston is positioned between the words 'REP' and 'ORT' of the word 'REPORT'. It features a stylized 'J' shape formed by two thick, black arrows. One arrow points downwards from the top of the 'J', and the other points upwards from the bottom of the 'J'. The word 'JOHNSTON' is written in a bold, black, sans-serif font across the middle of the 'J' shape.

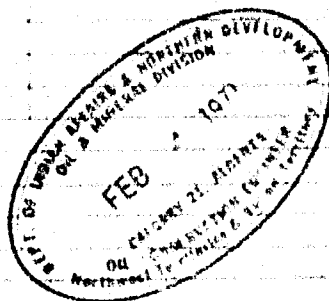


JOHNSTON TESTERS

221 NORTH AVENUE SE - CALGARY 24, ALBERTA - T2A 2S5 (254)

A DIVISION OF JOHNSTON & COMPANY LIMITED

TEST DATA				TOOL SEQUENCE		
Formation	Interval	Time	Depth	Tool	Length	OD
1720	1870	2871		P.O. SUB	1.00	
Type of Test: OPEN HOLE, STRADDLE, BYPASS				D.P. SUB	1.65	
Time Started in Hole: 2100				MFE TOOL	9.20	
First Flow: 5				BYPASS TOOL	2.95	
Second Flow: 40				SUB	1.00	
Third Flow: 110				JARS	6.25	
Pulled Loose At: 0307				SUB	1.00	
Wt. Section Packers: 30,000				H. SUB	1.00	
Description of Blow During Test: STRONG INITIAL PUFF, NO GAS TO SURFACE. STRONG AIR BLOW ON SECOND FLOW DECREASING TO NIL IN 80 MINUTES.				SAFETY JOINT	1.75	
				S.S. & PACKER	9.50	7 1/2"
				T.C. & PACKER	5.40	7 1/2"
				TOTAL	39.48	
FLUID RECOVERY				STUB	1.00	
Way Test Results Calculated: Yes				PERFS	19.95	
Total Fluid Recovered: 976'				R. SUB	1.00	
Description of Fluid Recovered:				RECORDER	6.05	
430' DRILLING FLUID				RECORDER	6.00	
546' SALT WATER CUT, DRILLING FLUID				SUB	1.00	
				DRILL COLLAR	111.11	
				SUB	1.00	
				P. STUB	3.00	
				TOTAL INTERVAL	150.11	
GAS BLOW MEASUREMENT				PACKER	3.55	7 1/2"
Measured With:				PACKER	6.40	7 1/2"
Type of Instrument:				RECORDER	5.95	
Time				PERFS	14.05	
Stroke				SUB	1.00	
Reading				DRILL PIPE	967.20	
M. Cubic Feet Day				SUB	1.00	
NIL				B.N. & PERF	2.00	
				TOTAL BELOW INTV	1000.95	
				TOTAL LENGTH	1190.54	
REMARKS: TEST SATISFACTORY				Elevation	705 KB 692 Q	
				Bottom Hole Choke Size	1/2"	
				Fluid Column Type	NIL	
				MUD AND HOLE DATA		
				Mud Type	GEL	WL 20.0
				Filter Cake	2/32	Visc 55
				Core Taken	0800 HRS	WI 9.9
				Contractor	COMMONWEALTH DRILLING Co. Ltd. Reg. No. 12	
				Drill Pipe Size	3 1/2 - 4 FH	
				Drill Collar Size	2 7/8" ID Length 530.03'	
				Main Hole Size	8 3/4"	
				Bit Hole Size		
RESISTIVITY				CHLORIDE CONTENT		
Recovery Water: .6				9,500 ppm		
Mud Filtrate: 6.8				720 ppm		
District: HIGH LEVEL Ticket No. D 04975				Date: JANUARY 24, 1971 Test No. 3 JT No. 3		
Company: CANADIAN FINA OIL LIMITED				Address: 736 - 8TH AVE, S.W.		
Well Name: FINA ET AL WILLOW LAKE				CALGARY 2, ALBERTA		
Number: J-66-61*55'43"N 121*46'53"W				P. Line: N.W.T.		
Formation and Interval: 1720 - 1870 DST#3				Field: WILDCAT		
Distribution of Reports:				Co. Rep: J. ANKLE		
				Technician: J. JACOB		
8 - CALGARY 1 - DATA CENTER (ENC)						



D 04975		PRESSURE DATA			FLUID SAMPLE REPORT	
INSTRUMENT NO.		AK1-2593	AK1-2527	AK1-2563	Sample No.	
CAPACITY - gals.		3250	4000	4000	Type	
INCLOSURE DEPTH		1742	1748	1880	Depth	
INSTRUMENT OPENING		OUTSIDE	OUTSIDE	OUTSIDE	Volume	
PRESSURE GRADIENT (psi/ft)					Sample Pressure	
WELL TEMP °F	90				psi at Surface	
INITIAL HYDROSTATIC	A	873#	876#	942#	Gravity	
FIRST FLOW	B	64#	64#		API wt	
	B-1	245#	251#	A1 1003#	Gas-Oil Ratio	
INITIAL SHUT-IN	C	726#	728#		Cust. Bbl	
SECOND FLOW	D	132#	132#	RAN BELOW	Recovery	
	D-1	547#	548#	STRADDLE	cu. ft. Gas	
SECOND SHUT-IN	E				cc. Oil	
THIRD FLOW	F				cc. Water	
	F-1			A2 812#	cc. Mud	
FINAL SHUT-IN	G	726#	726#		Total Liquid cc.	
FINAL HYDROSTATIC	H	877#	878#	945#		

REMARKS: MFE SAMPLE SENT TO CORE LAB, EDMONTON

PRESSURE INCREMENTS

[illegible]



JOHNSTON TESTERS

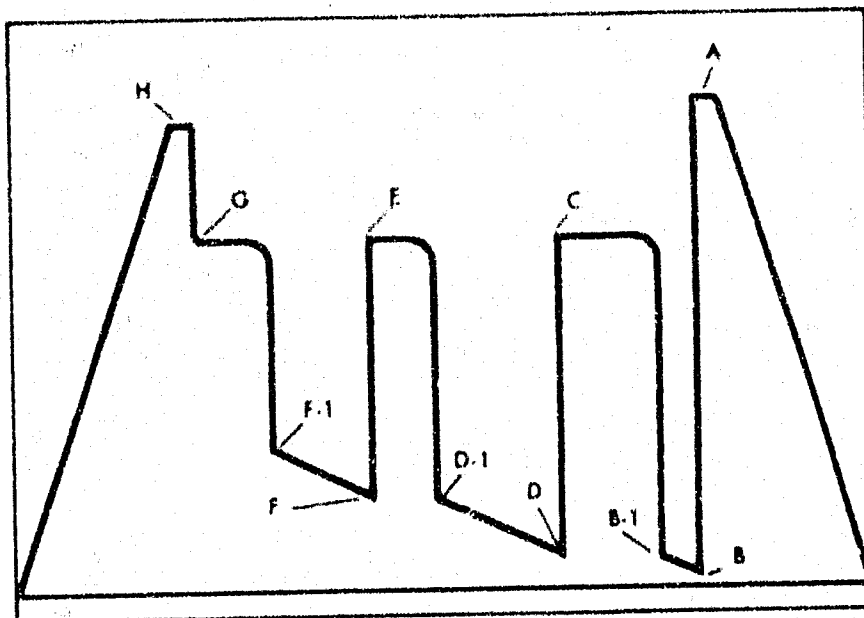
222 50TH AVENUE SE • CALGARY 24 ALBERTA • MC 255 1151

A DIVISION OF SCHLUMBERGER CANADA LIMITED

GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS

FIELD
REPORT NO
D 04975

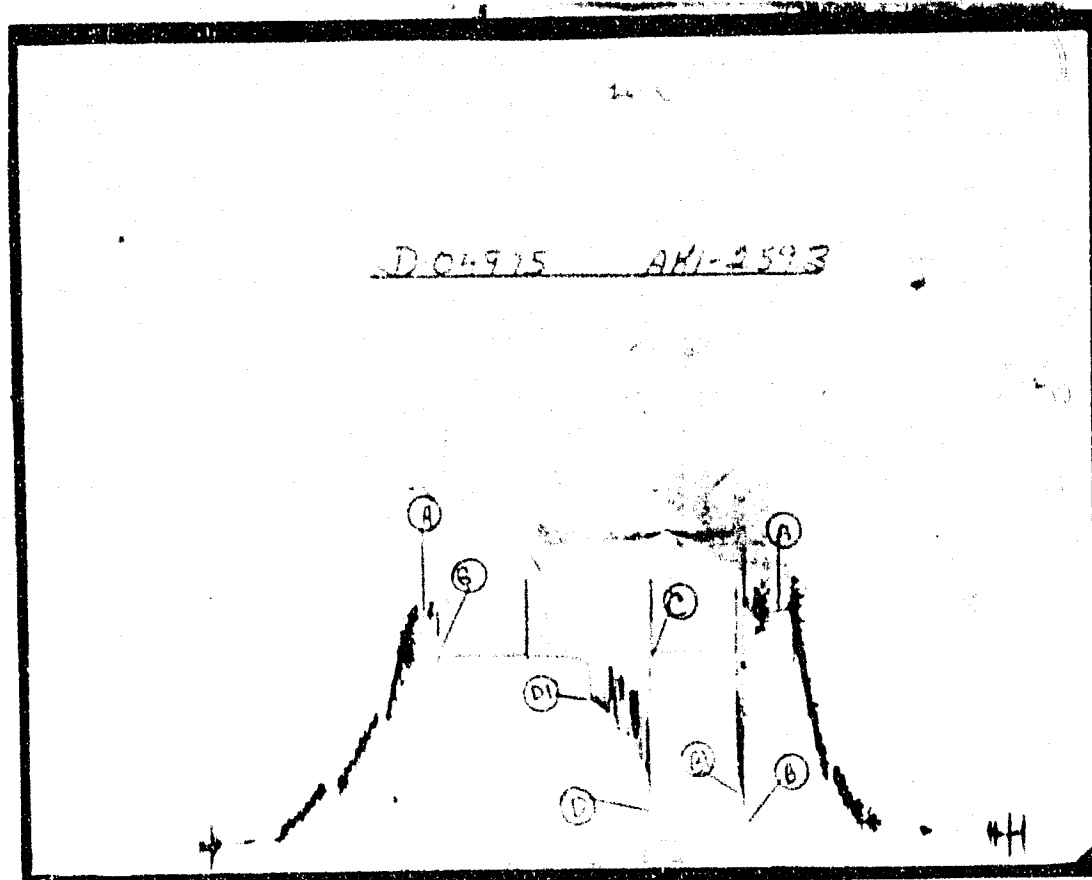
RECORDS NO
AKI-2593

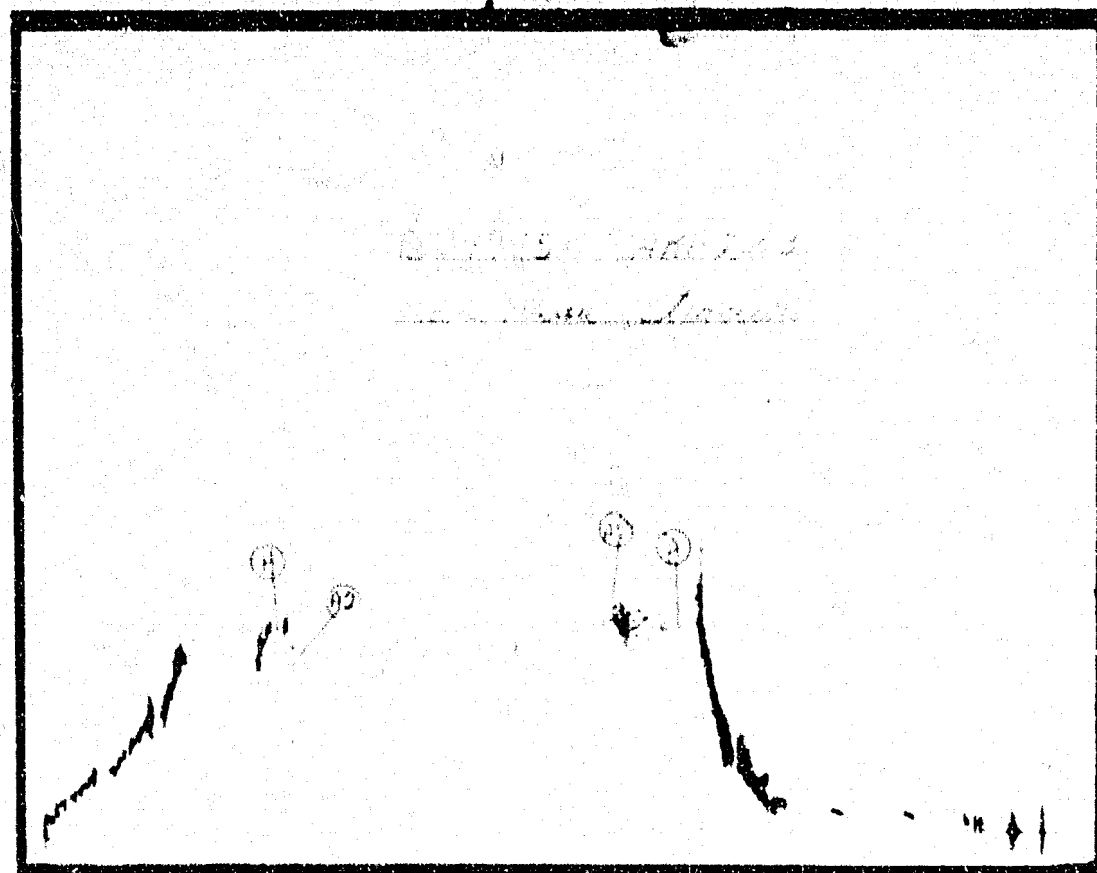
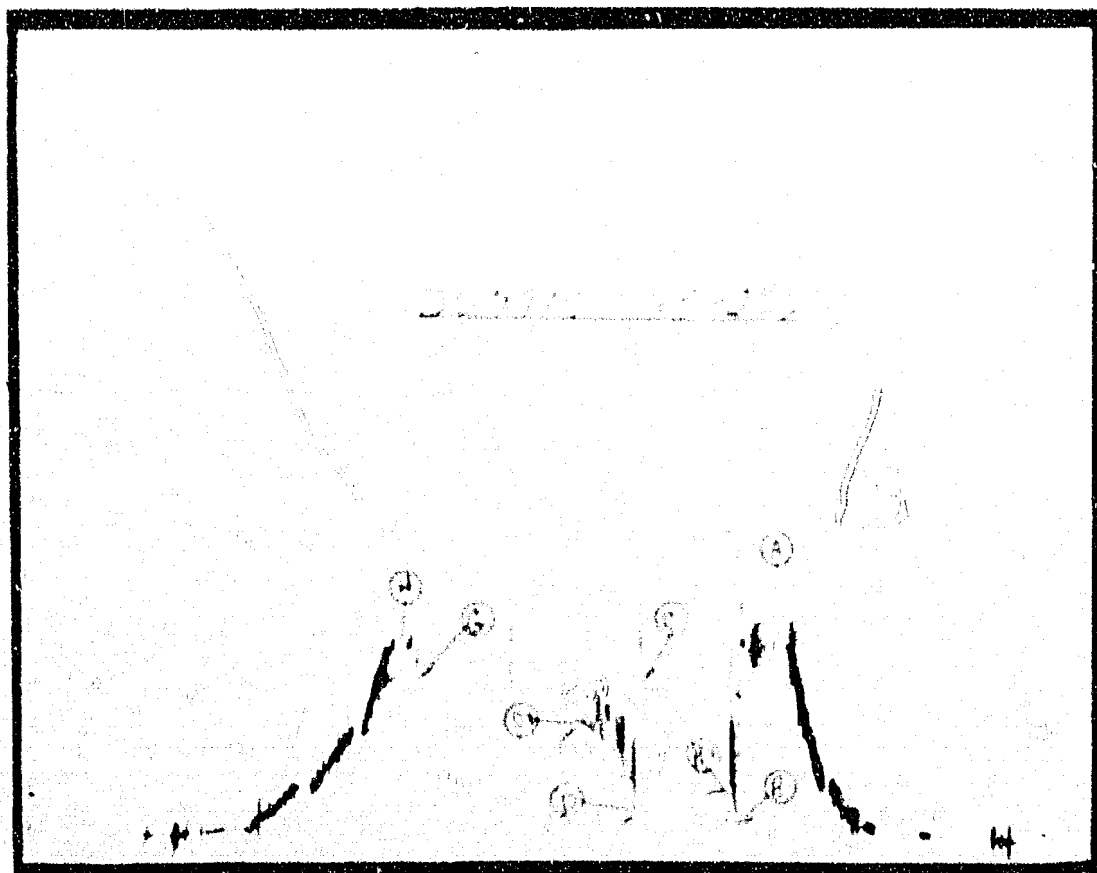


- A. Initial Hyd. Mud
- B. First Flow
- C. Initial Shut-In
- D. Second Flow
- E. Second Shut-In
- F. Third Flow
- G. Final Shut-In
- H. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- Z - Special pressure points such as pumping pressures recorded for formation breakdown.







CORE LABORATORIES - CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

WATER ANALYSIS



File 933-1133 Page 2 of 1

Company Canadaco Fina Oil Limited

Well Fina et al Willow Lake J-66 K.B. Grid
61° 51' 41" N.

Location 121° 46' 51" W. Field Willow Lake Province N.W.T.

Formation Interval

Sampled from DST #3 (Tool #534) by

Date sampled Date analyzed Feb. 9/71 Analyst All

Recovery Tool Recovery: 1700 ml Muddy Water

Mud type Water cushion

Resistivity 0.070 Ohm meters @ 70 °F Total Solids

Specific gravity 1.0826 @ 80°F Calculated 116,130 mg/liter

pH 6.3 H₂S Absent By evaporation @ 110°C mg/liter

Refractive Index 1.352 @ 70°F By evaporation @ 180°C mg/liter

At ignition mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO ₃	SO ₄	CO ₃	OH
41885	2637	221	Pres.	Abs.	-	-	65755	132	5500	Nil	Nil

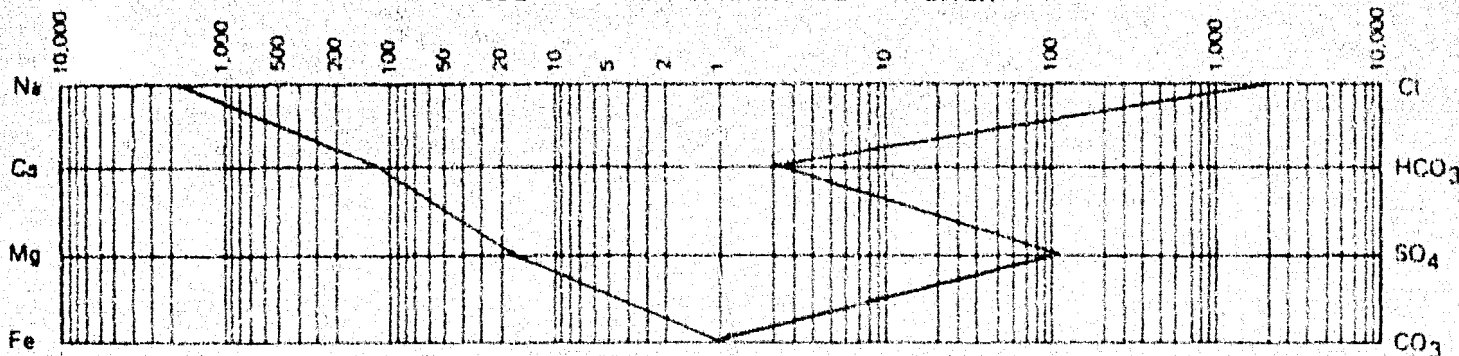
PER CENT CALCULATED SOLIDS

36.1	2.3	.2	Pres.	Abs.	-	-	56.6	.1	4.7	.0	.0
------	-----	----	-------	------	---	---	------	----	-----	----	----

MEQ PER LITER

1821.1	131.6	18.2	Pres.	Abs.	-	-	1854.3	2.2	114.4	.0	.0
--------	-------	------	-------	------	---	---	--------	-----	-------	----	----

LOGARITHMIC PATTERN MEQ PER LITER



113373. 41885.0

SCHLUMBERGER

SIDEWALL
NEUTRON POROSITY LOG

SCHLUMBERGER OF CANADA Calgary, Alberta

PROVINCE NORTHWEST TERRITORIES
FIELD WILDCAT
WELL FINA ET AL WILLOW LAKE
J-66
COMPANY CANADIAN FINA OIL LIMITED

COMPANY CANADIAN FINA OIL LIMITED

WELL FINA ET AL WILLOW LAKE

J-66

FIELD WILDCAT

PROVINCE NORTHWEST TERRITORIES

LOCATION 62° 00' N LAT
121° 45' W LONGOther Services: FDC-CR,
DIL, SL

Permanent Datum GL Elev. 692

Log Measured from KB 13 ft. Above Perm. Datum

ELEV. KB 705
CL 692
CR

Date 22 JAN 71

Run No. ONE

First Reading 2865

Last Reading 602

Feet Measured 2263

Depth Reached 2867

Bottom Driller 2871

Csg. SOC 602

Csg. Driller 603

Mud Nature CEL

Dens. Visc. 9.8 58

Mud pH 7.0

Water Loss 26.2

Res. 1.86

Ref. 55

BHT 1.43

Rmc 55

ppm-CL 1.33

Bil Size 8 3/4"

Equipment Type ND-H

Op. Rig Time 2 HRS

Tool No. 7636 RL

Recorded By SCHLUEP

Witness HORNEL

REMARKS 4 FEB 1971 CAL JP
Drilling Stopped 1800 / 21st : Circulation Stopped 0900 / 22nd : Tool on Bottom 1630 / 22nd : B.H.T. 102 °F
1st Run Service Order # 5405Panel No. D 251
Cartridge No. A 144
Sonde No. E 249
Detector No. A 252
SFT-116 No.
TOOL STICKING @ 2648'CALIBRATION: Gamma Ray
Background CPS 40 Test Source CPS 140 Galv. Deflection 10.0 Sens. Tap CAL
Neutron Environmental Cal.
Drawer In - CPS Before 110 After 105
Drawer Out - CPS Before 110 After 105
Panel Settings: Function Former Temp. Comp. Setting T.C. Mud Wt./Salinity Comp. set as per recorded value 9.8
LIMESTONE 101°F 2 from to from to from to
Neutron Auxiliary Cal. - CPS
Before
After

This interpretation represents our best judgment. Nevertheless since all interpretations are opinions based solely on inferences from electrical or other measurements, we cannot and do not guarantee the accuracy or correctness of any interpretation and shall not be liable or responsible for any loss, cost, damages, or expenses that may be incurred or sustained resulting from this or any other interpretation.

CALIPER
hole diameter in inches

6 7 8 9 10 11 12 13 14

GAMMA RAY
API UNITSSens. 150 T.C. 2
Zero 0 div. to left 150
150 300

DEPTHS

POROSITY (%)

LIMESTONE

30 20 10 0 -10

Casing

0700

0800

0900

1000

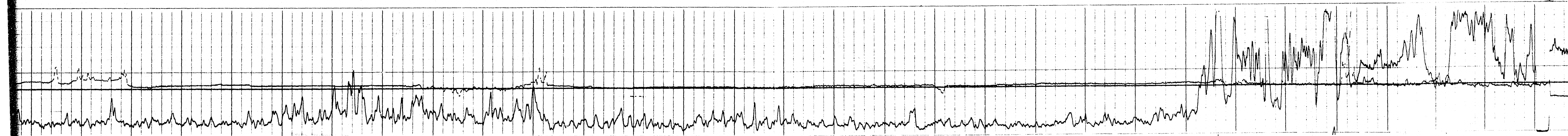
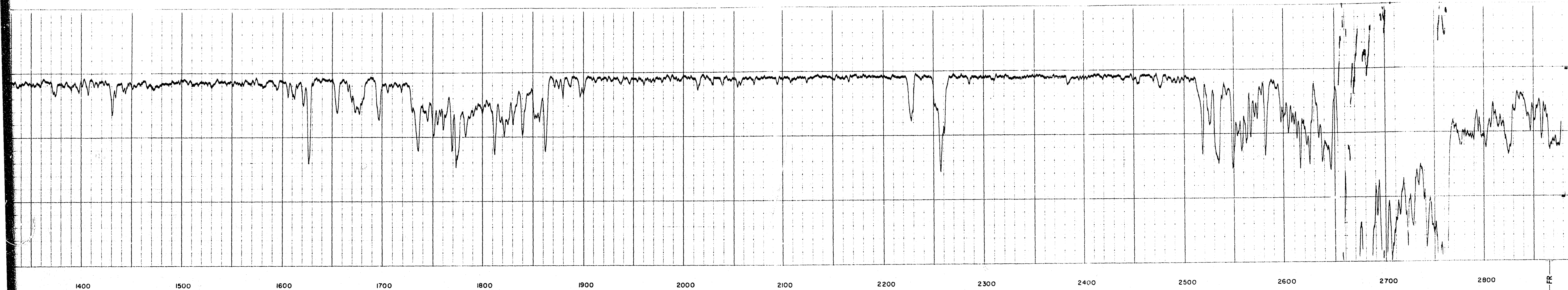
1100

1200

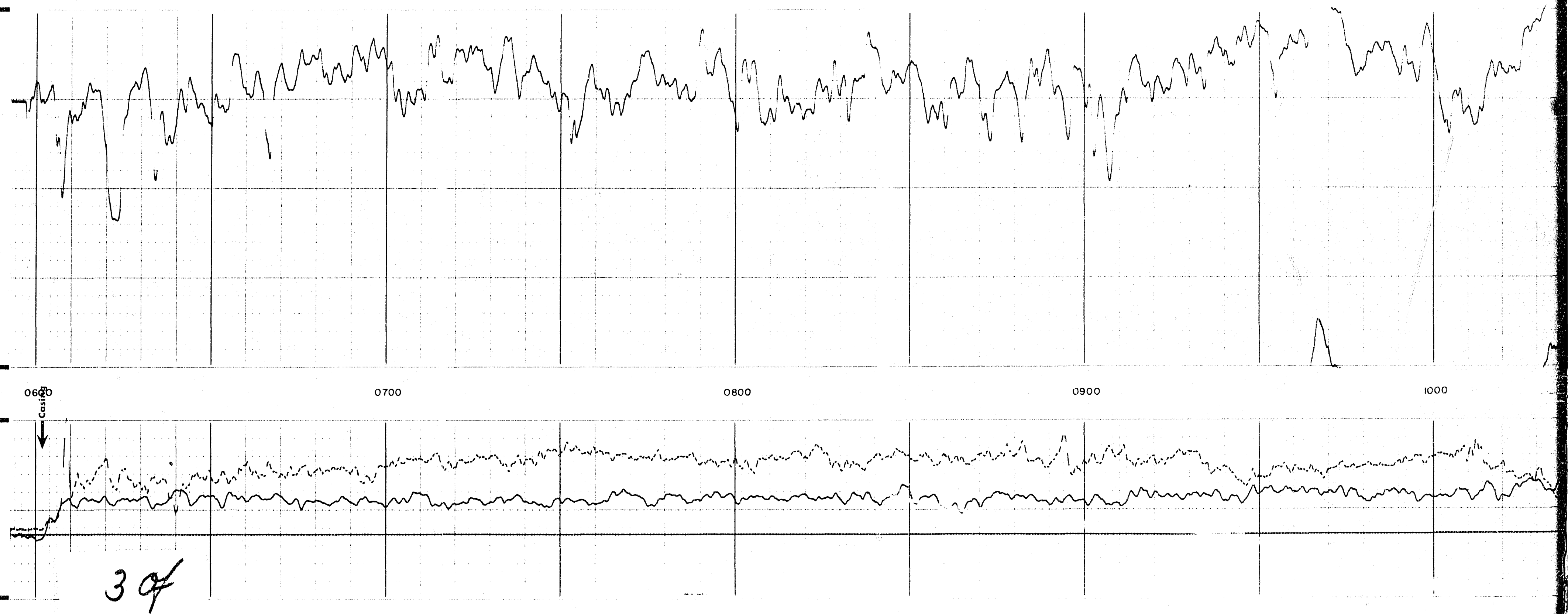
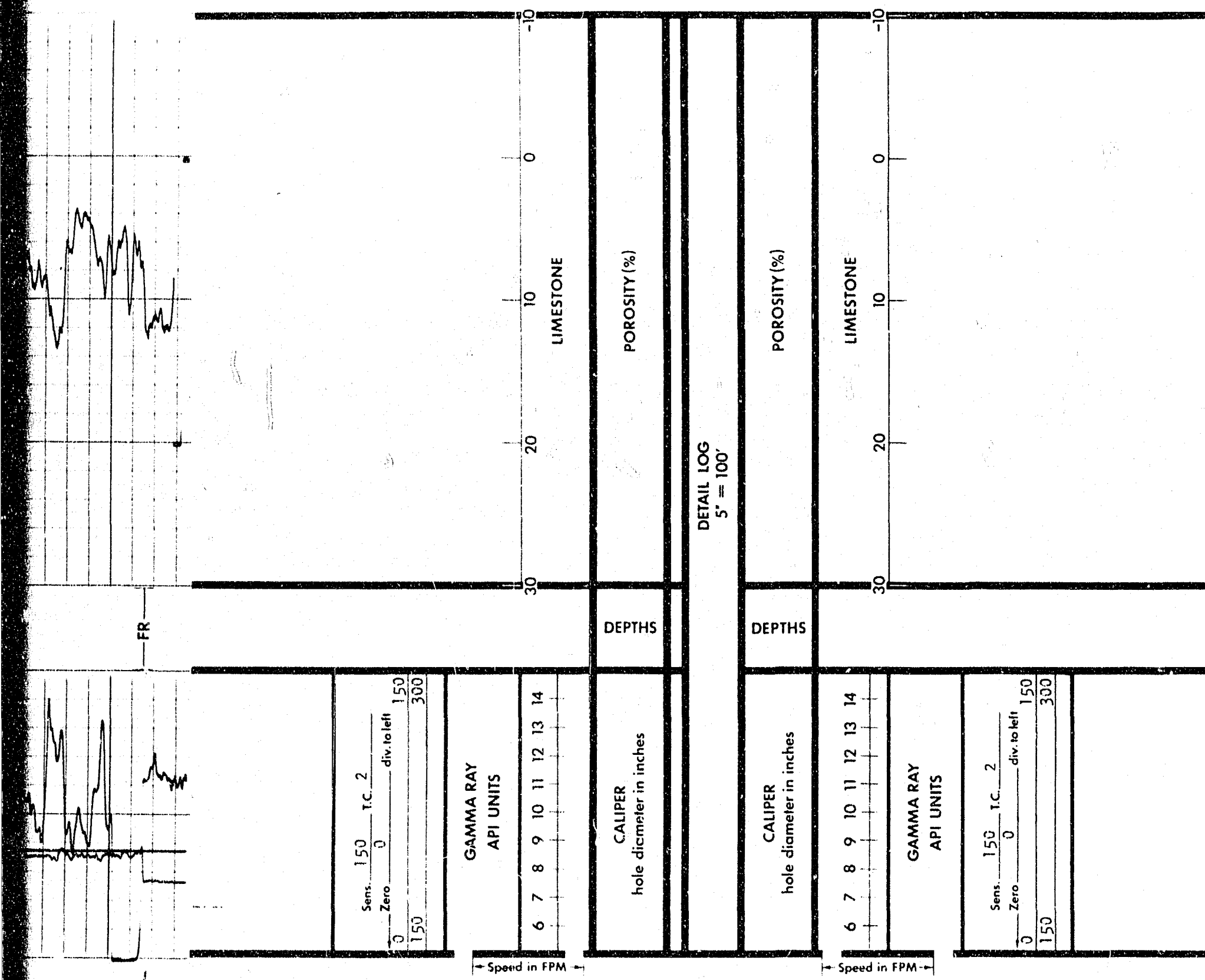
1300

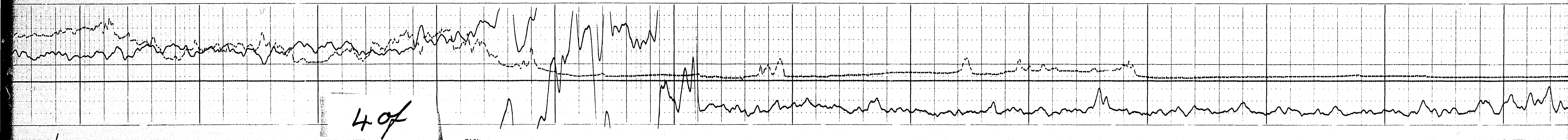
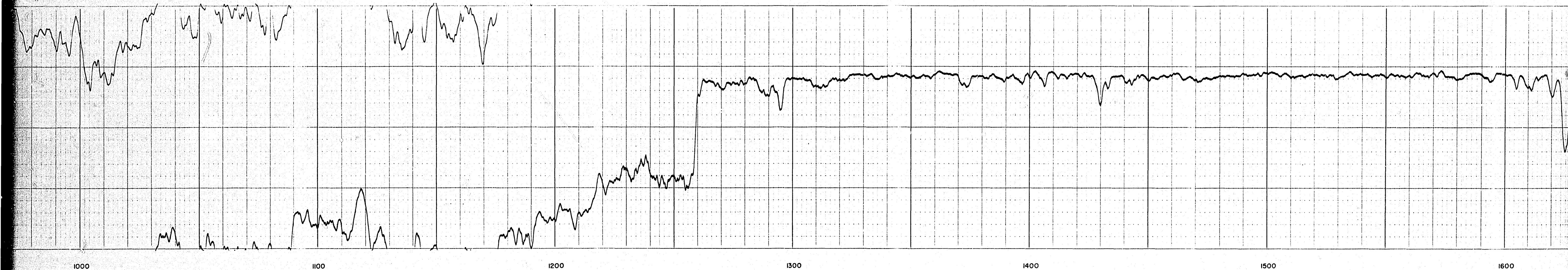
1400

1500

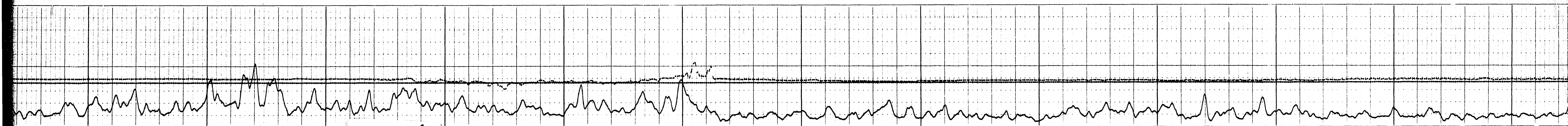
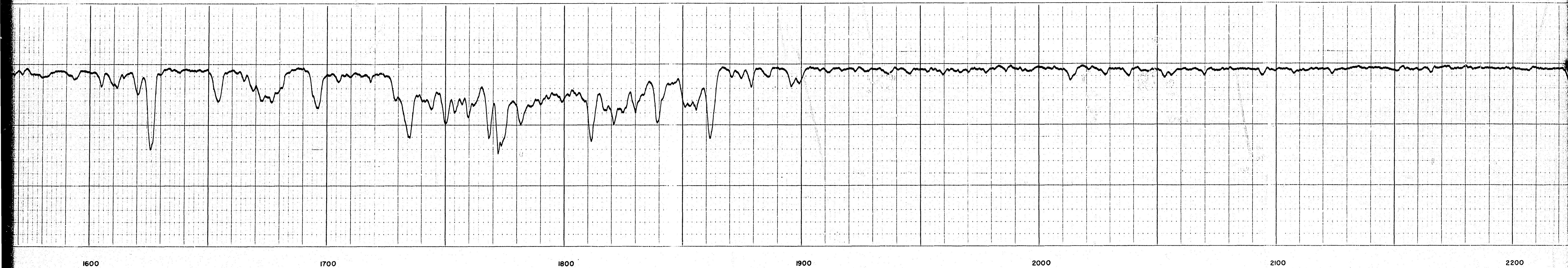


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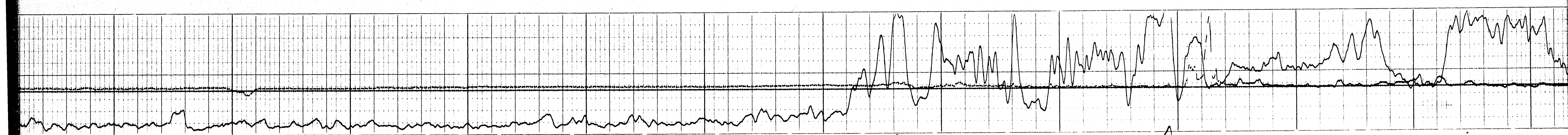
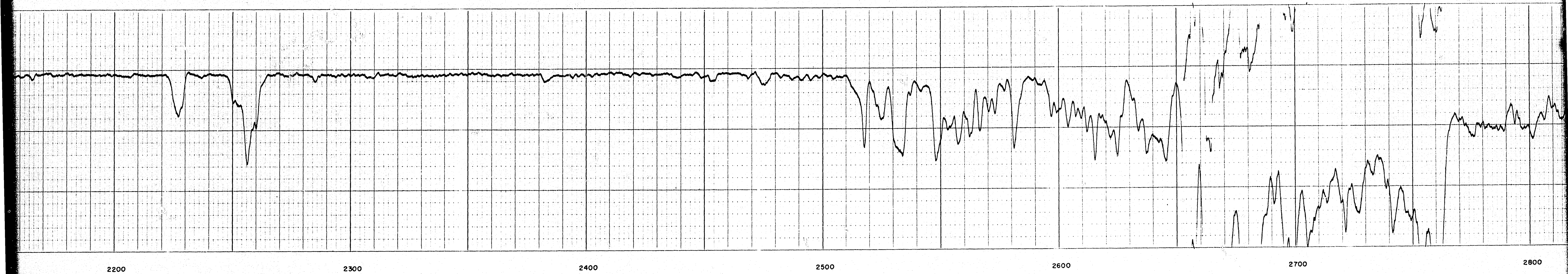




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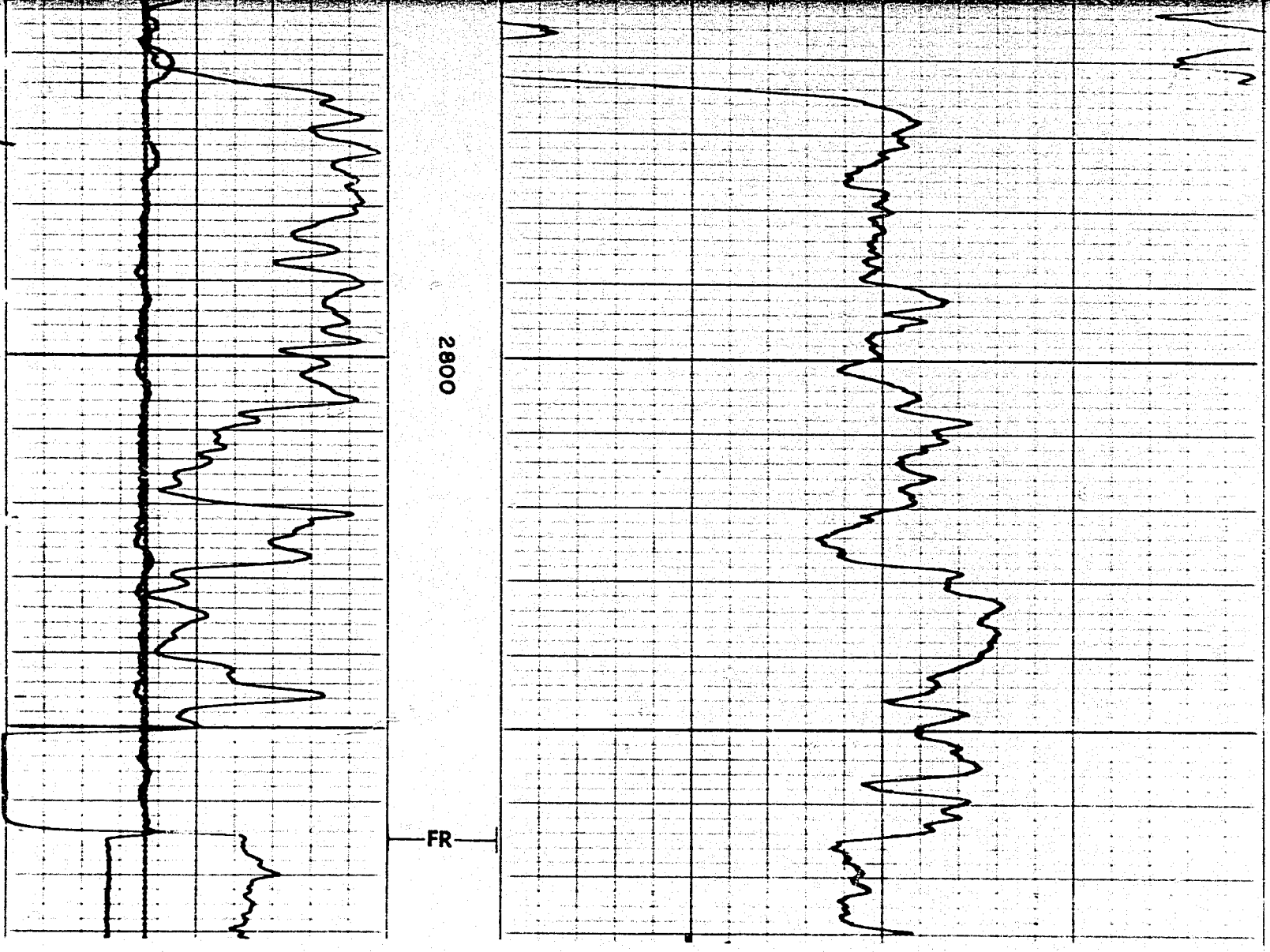


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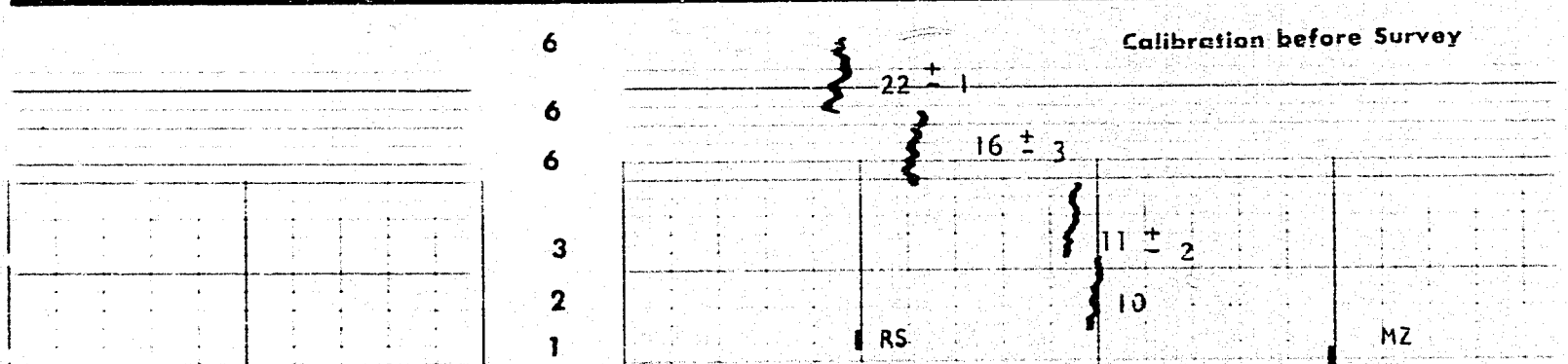
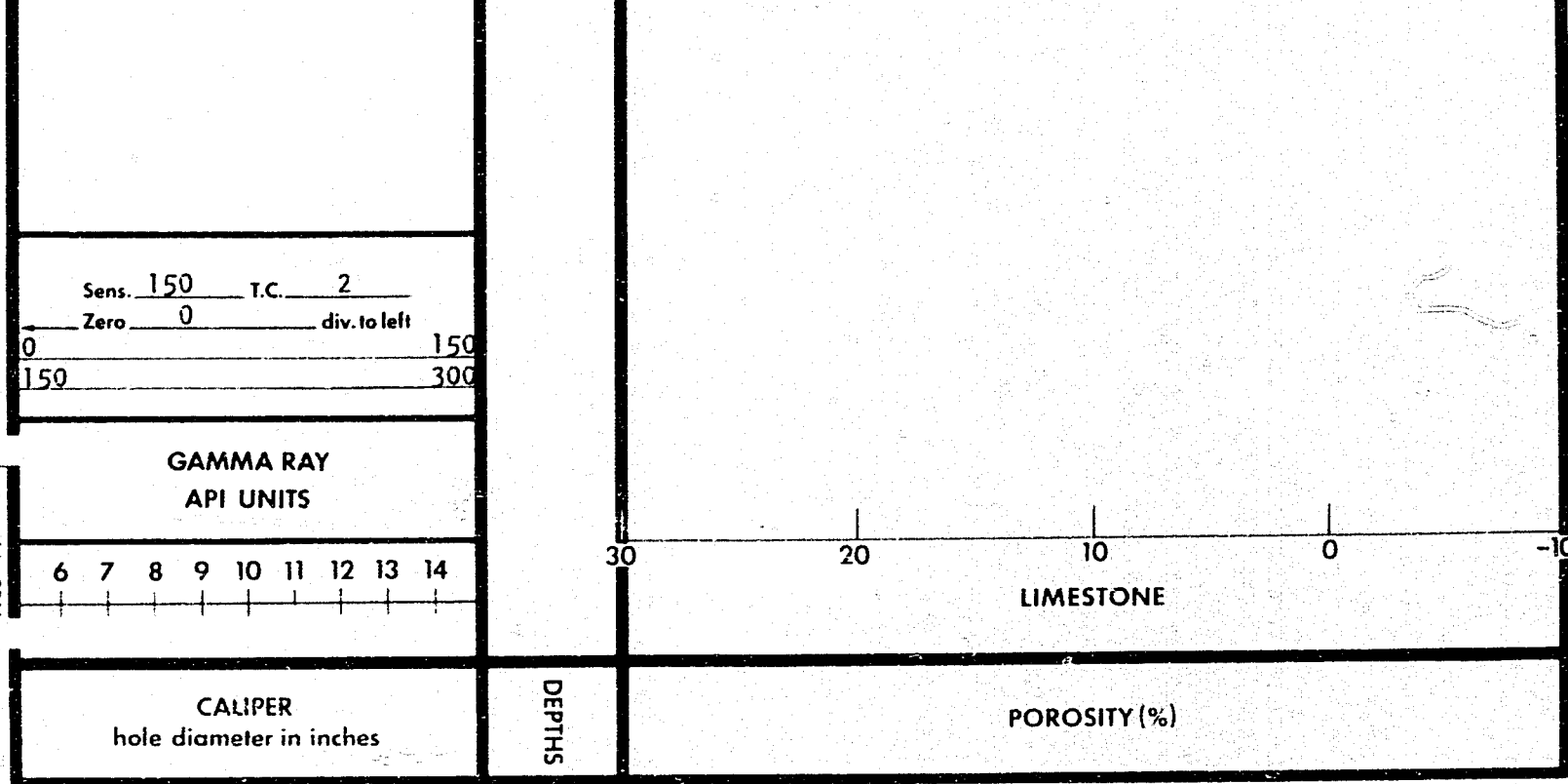
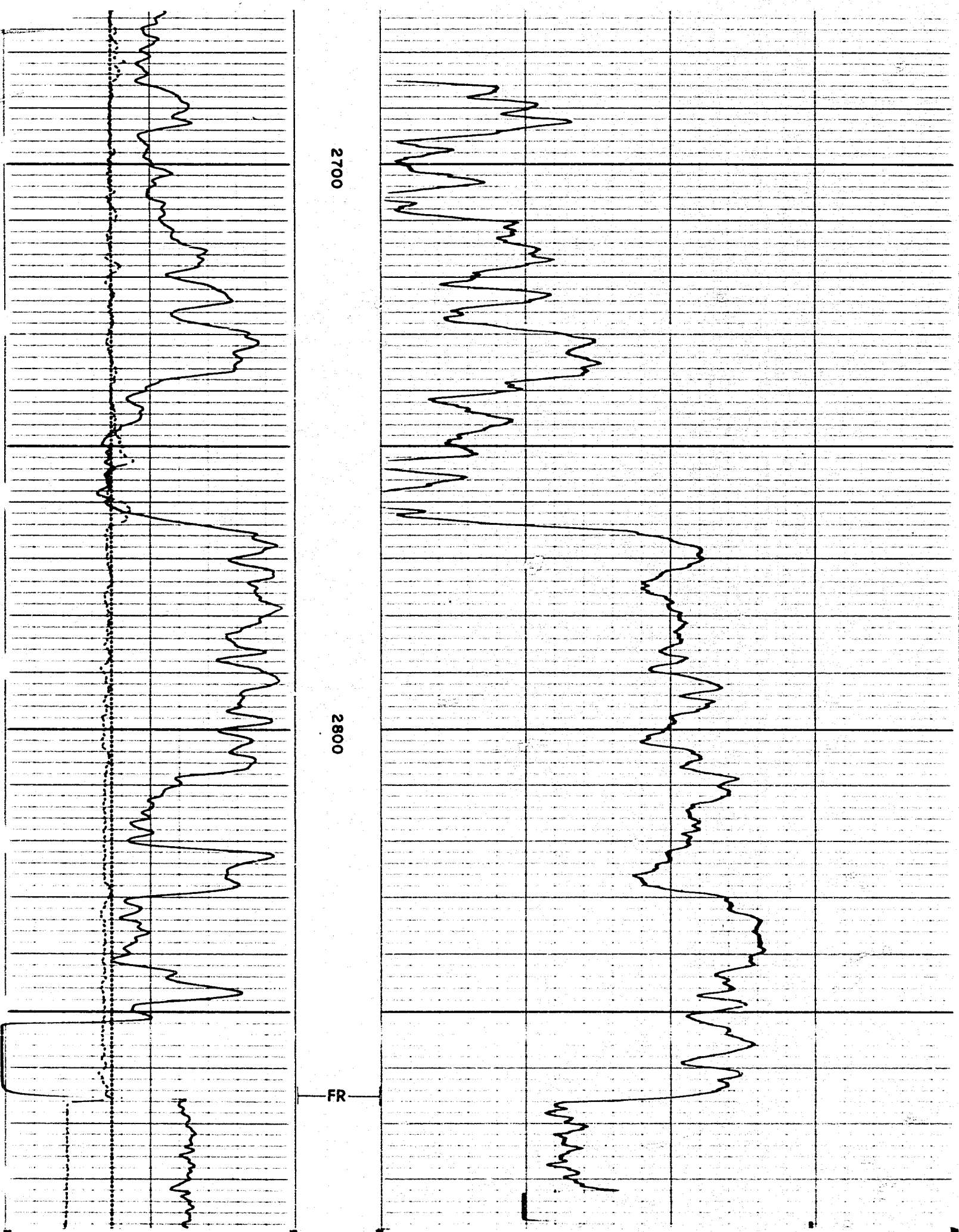


6 of

747



REPEAT SECTION



COMPANY	CANADIAN FINA OIL LIMITED
WELL	FINA ET AL WILLOW LAKE J-66
FIELD	WILDCAT PROVINCE NORTHWEST TERRITORIES



DUAL INDUCTION-LATEROLOG

SCHLUMBERGER OF CANADA Calgary, Alberta

PROVINCE	NORTHWEST TERRITORIES
FIELD	WILDCAT
WELL	FINA ET AL WILLOW LAKE
J-66	
COMPANY	CANADIAN FINA OIL LIMITED

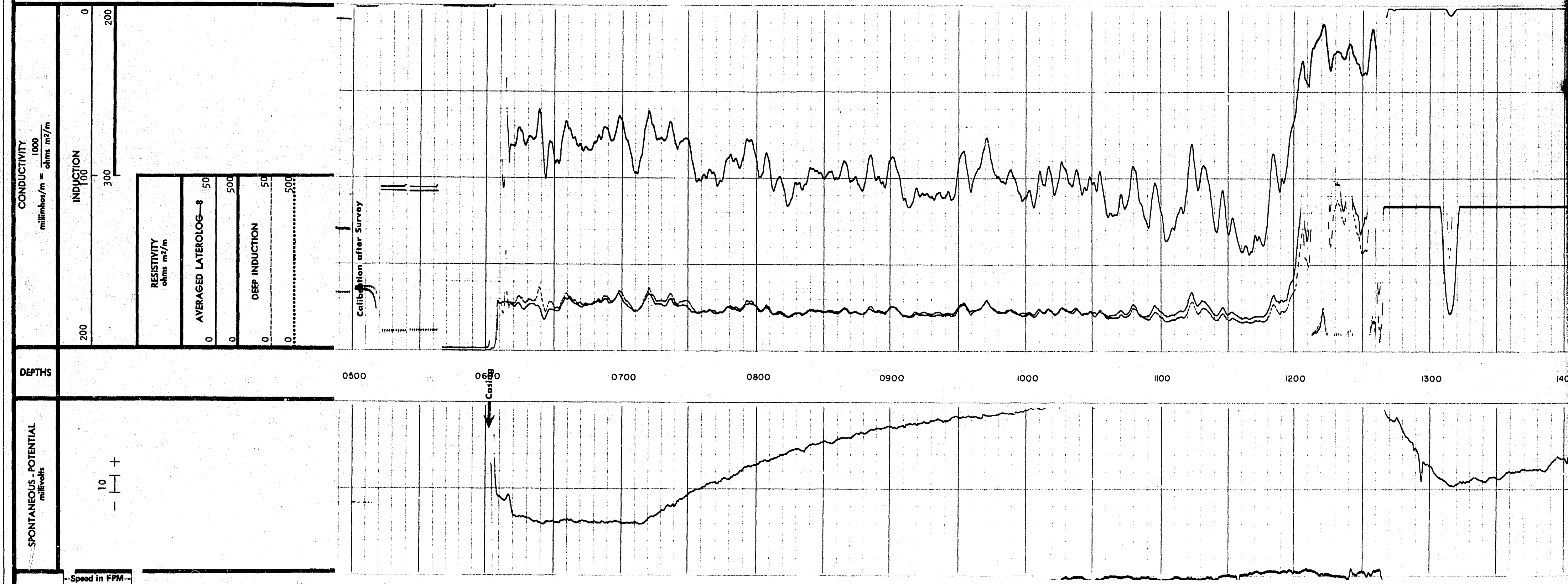
PROVINCE	NORTHWEST TERRITORIES
LOCATION	62° 00' N LAT 121° 45' W LONG
Permanent Datum	GL Elev. 692
Log Measured From	KB, 13 Ft. Above Perm. Datum
Other Services:	FDC-GR SNP-GR, SL
ELEV:	KB 705 GL 692 CBF

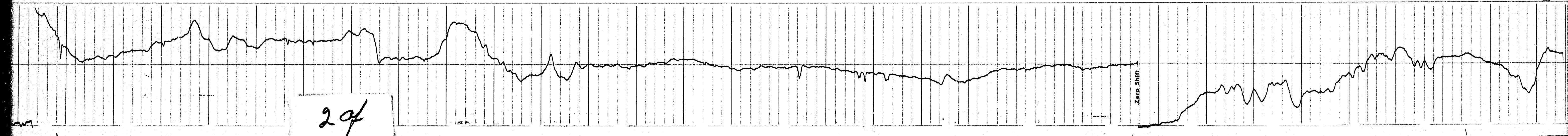
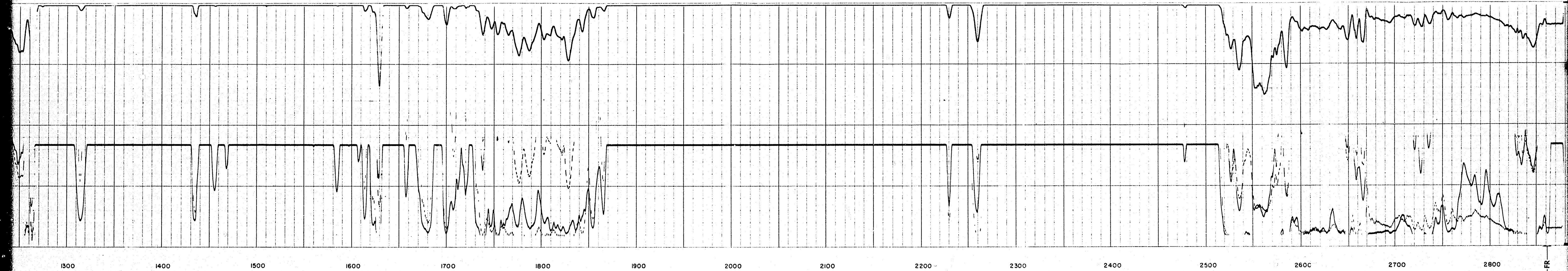
Date	22 JAN 71								
Run No.	ONE								
First Reading	2861								
Last Reading	602								
Feet Measured	2259								
Depth Reached	2867								
Bottom Driller	2871								
Csg. SOC	602								
Csg. Driller	603								
Mud Nature	GEL								
Dens. Visc.	9.8 58								
Mud pH	7.0								
Water Loss	26.2								
Res.	1.86 ● 55 °F	●	°F	●	°F	●	°F	●	°F
Rmf	● 101 °F	●	°F	●	°F	●	°F	●	°F
● BHT	1.43 ● 55 °F	●	°F	●	°F	●	°F	●	°F
Rmc	1.33 ● 55 °F	●	°F	●	°F	●	°F	●	°F
Source of Sample	CIRCULATED								
Bit Size	8 3/4"								
Opr. Rig Time	1 HR								
Truck No.	7636 RL								
Recorded By	SCHLUEP								
Witness	HOMMEL								

3 FEB 1971 CAL JP

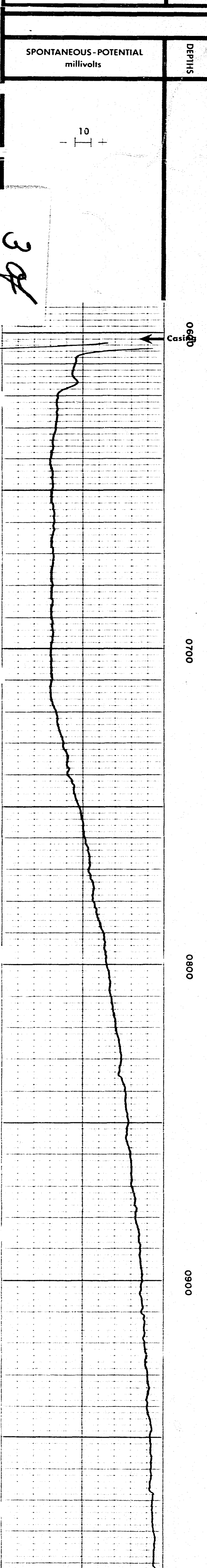
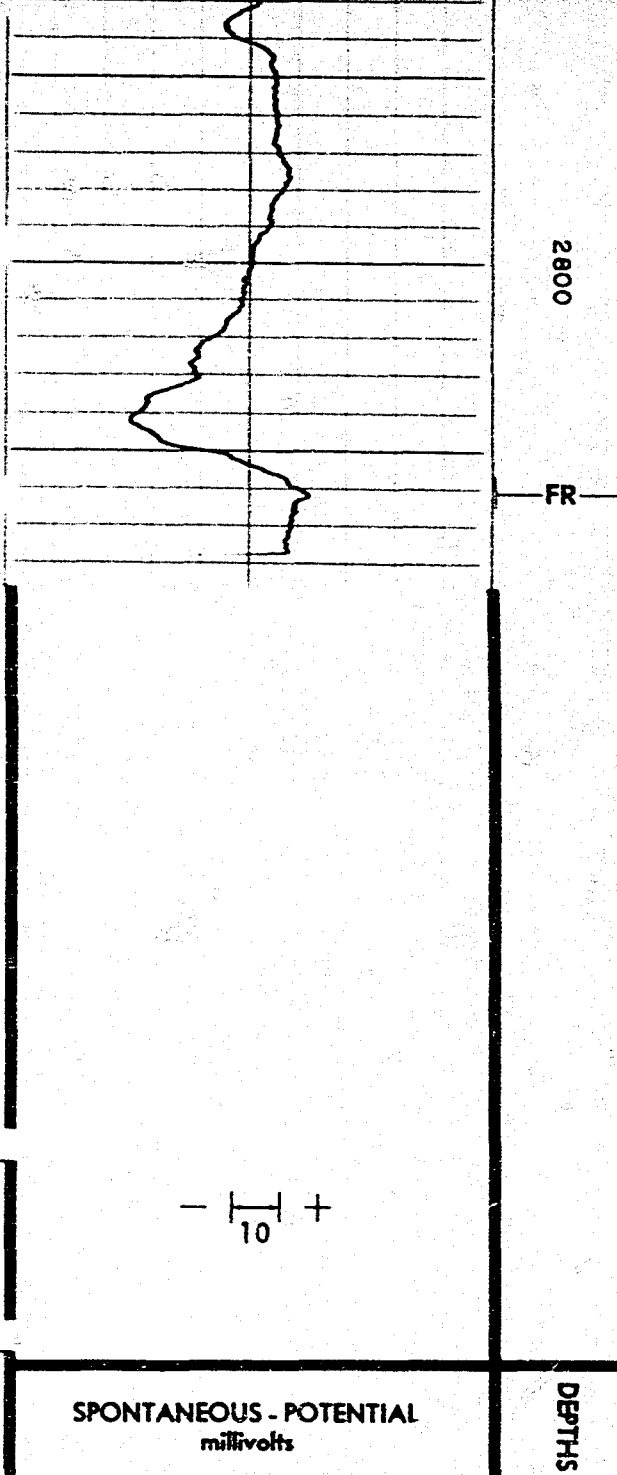
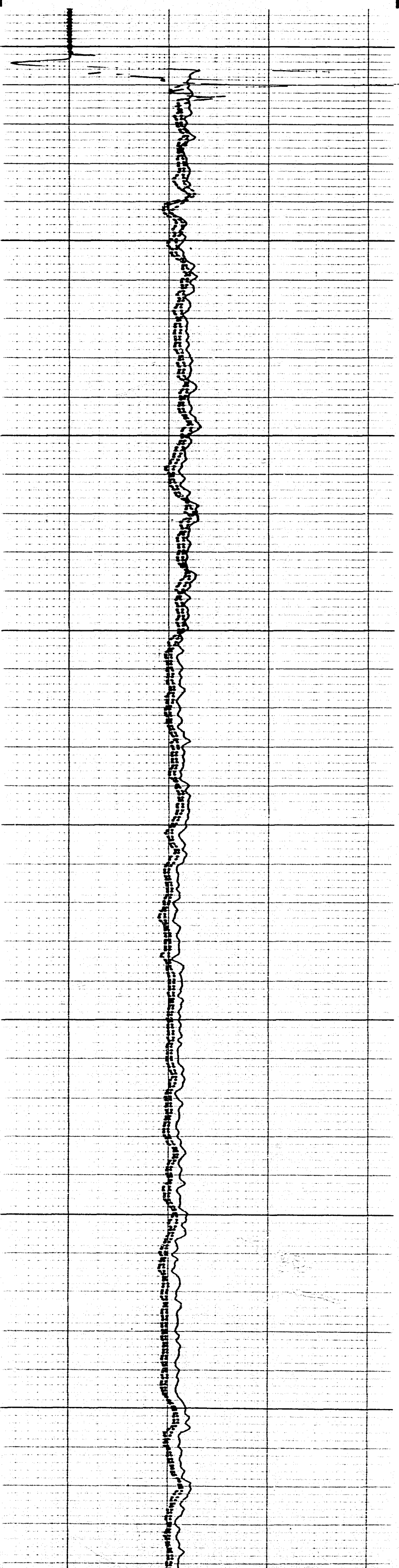
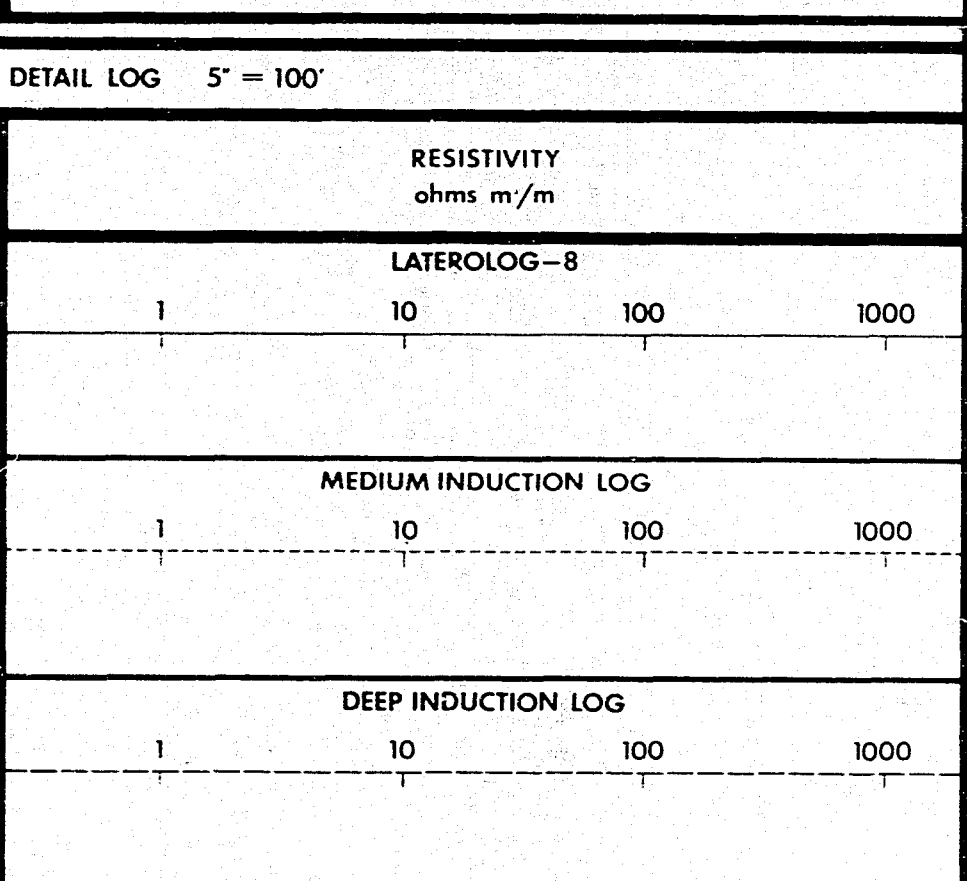
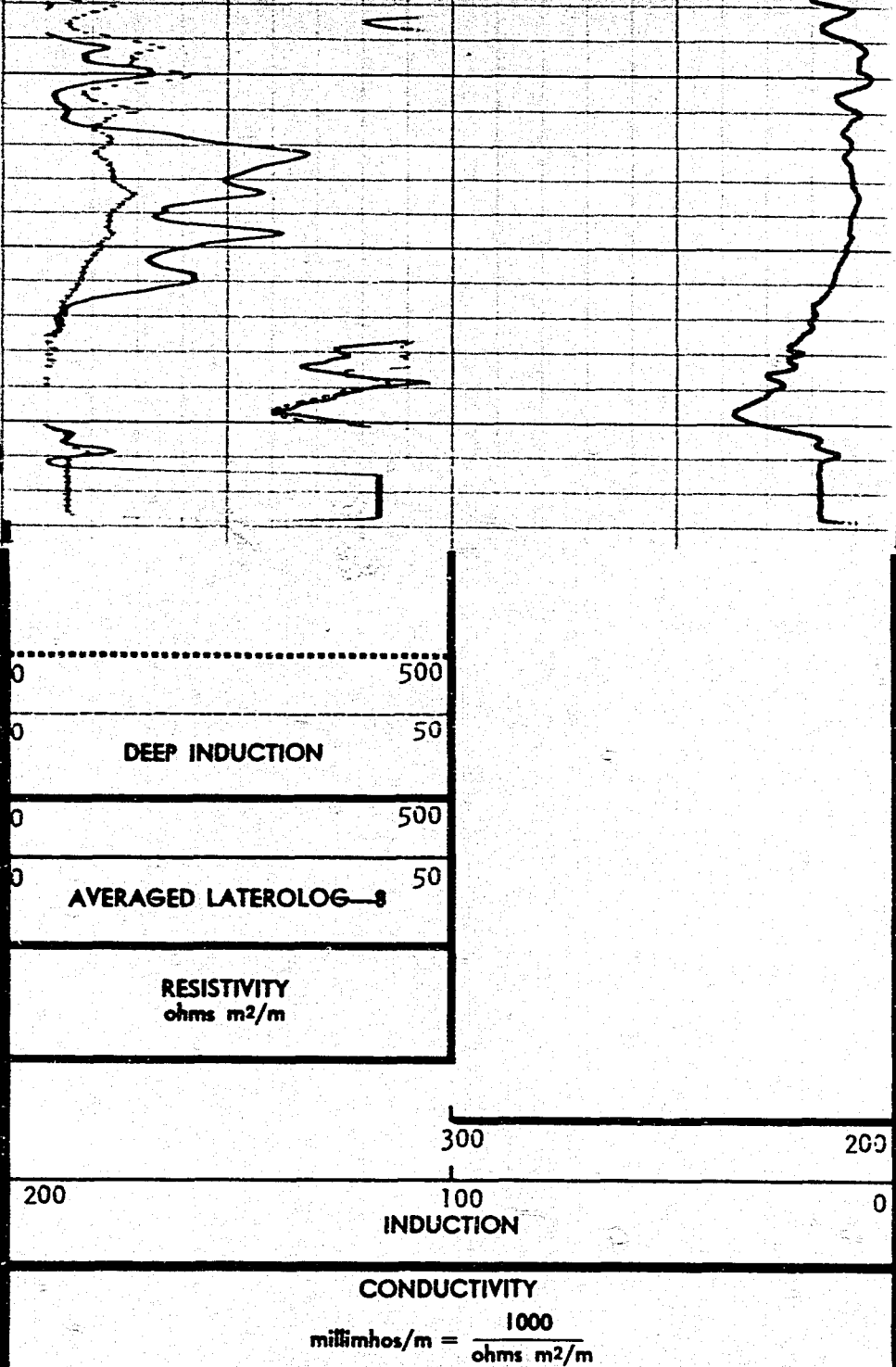
REMARKS						1st Run Service Order #		B.H.T.
3 FEB 1971	CAL	JF				0100	/ 23rd	
Pull-ins Stopped	1800	/ 2 st	0900	/ 22nd	* Tool on Bottom			
					* Corrosion Stopped			

Stand Off = N 96
Cartridge No. C 159
Panel No. B 79
Sonde No. HMPB 271
IAP-D No. 2
SND





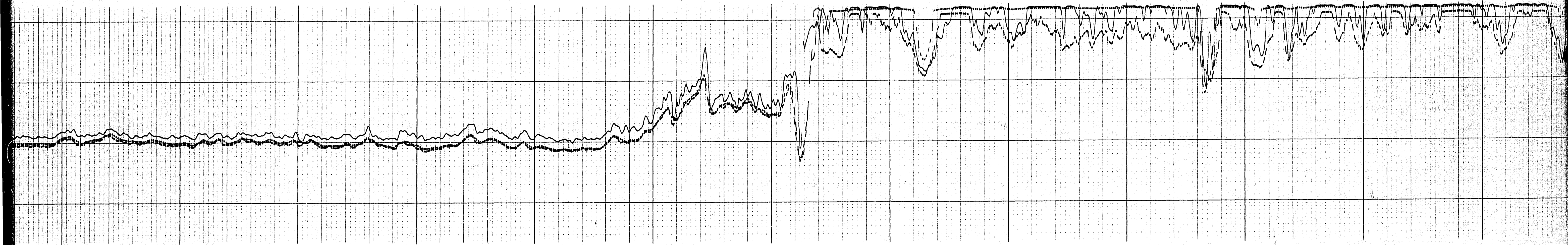
2 of



Speed in FPM

Speed in FPM

304



1000

1100

1200

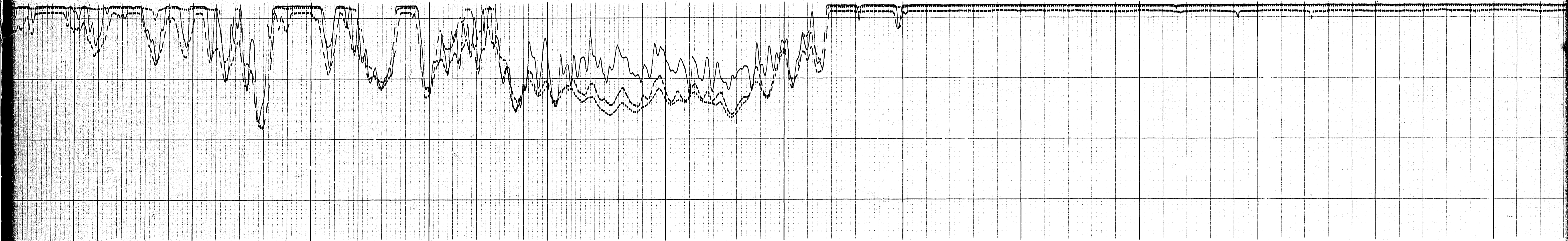
1300

1400

1500



1202



1600

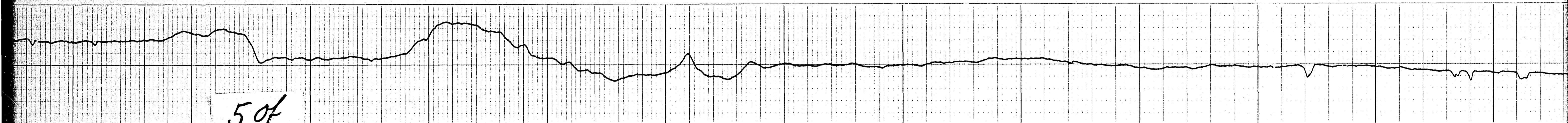
1700

1800

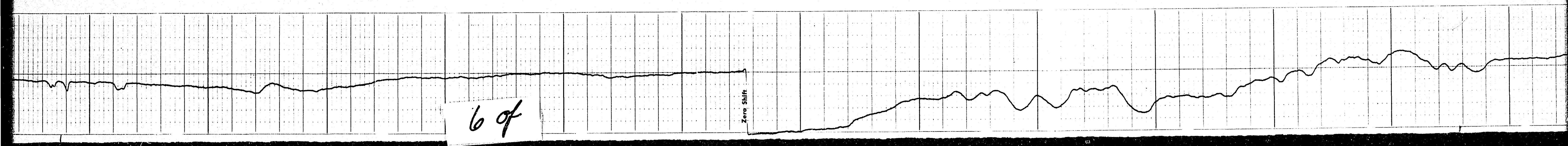
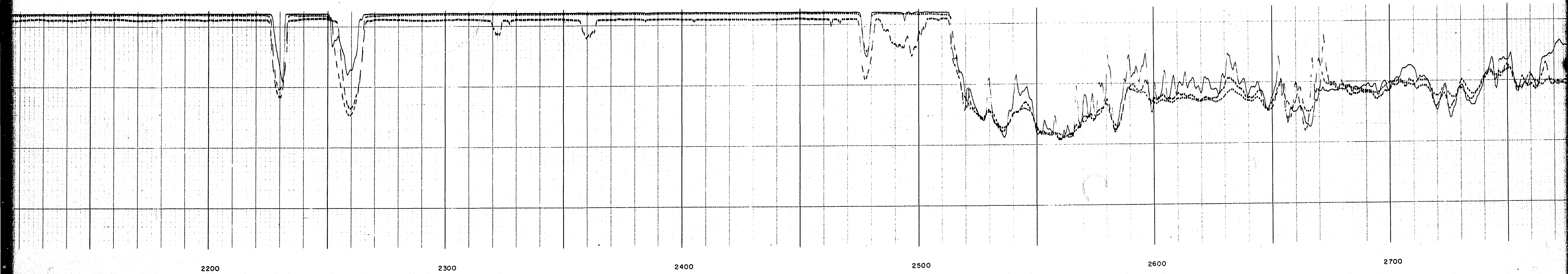
1900

2000

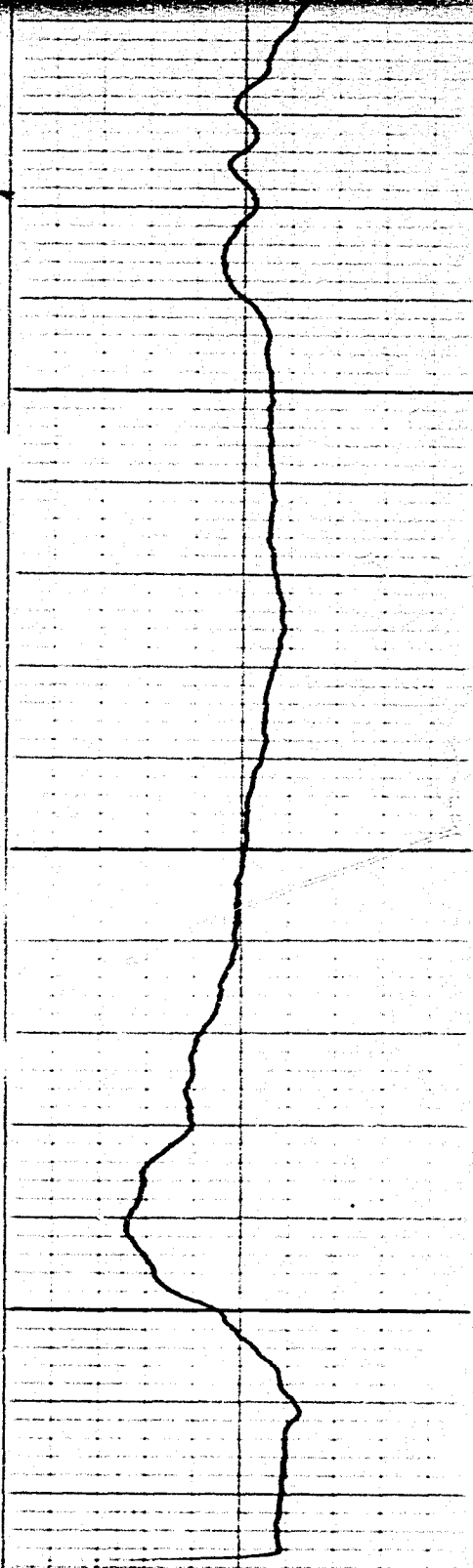
2100



5 of

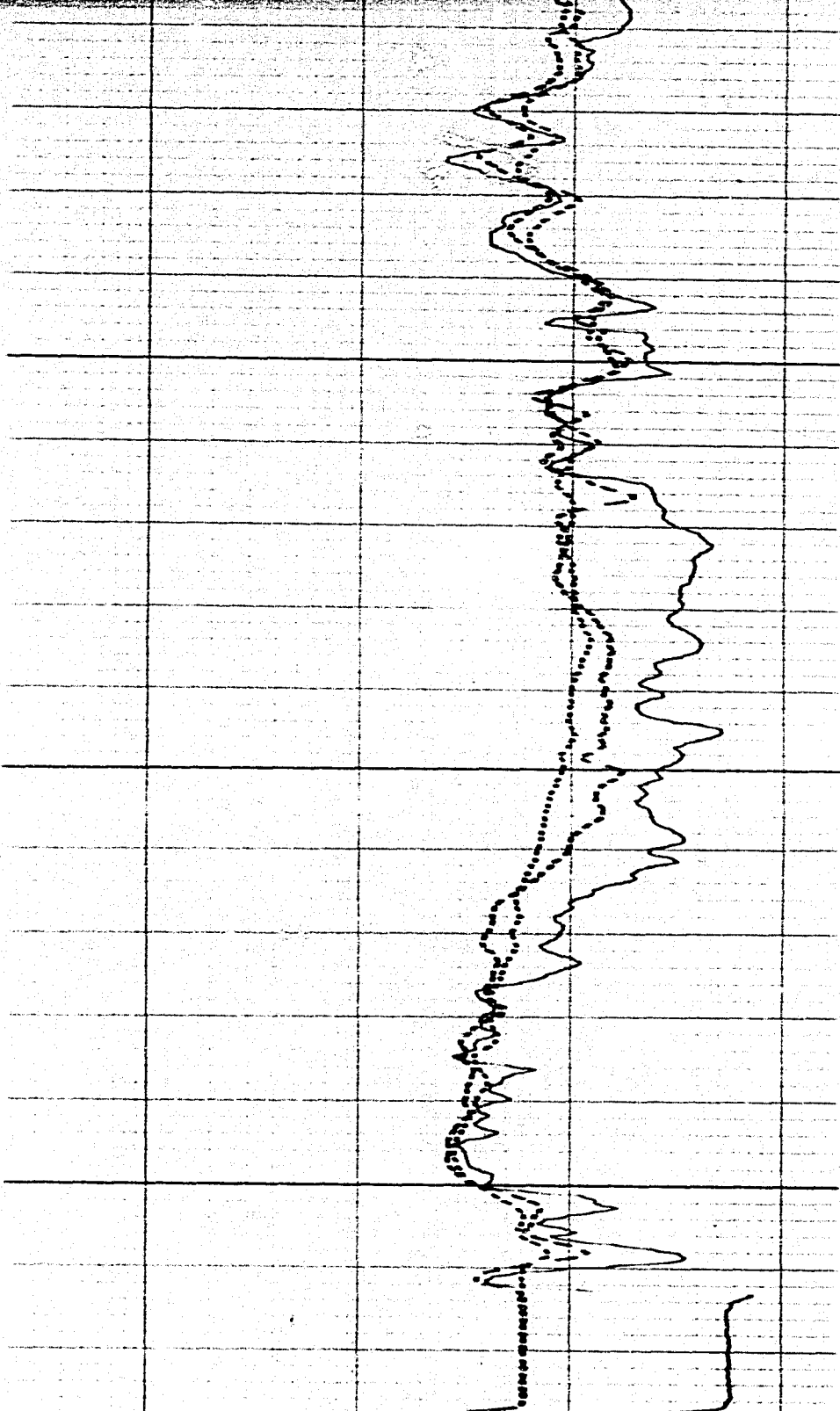


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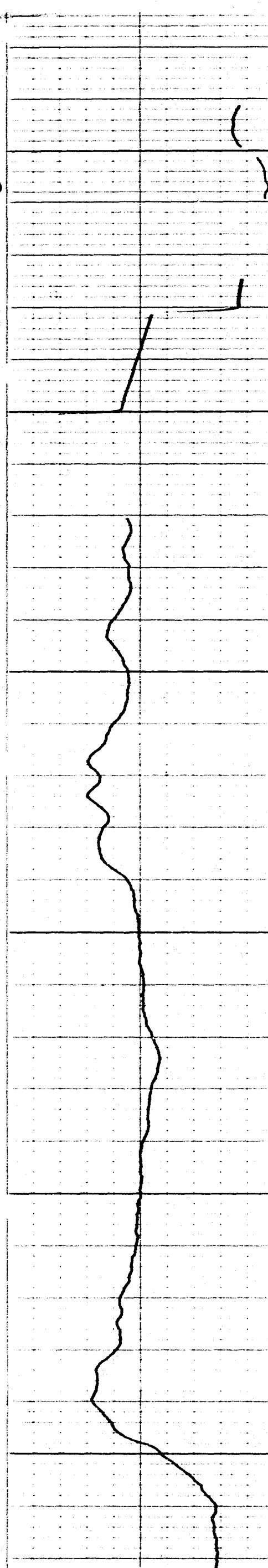


2800

FR



REPEAT SECTION

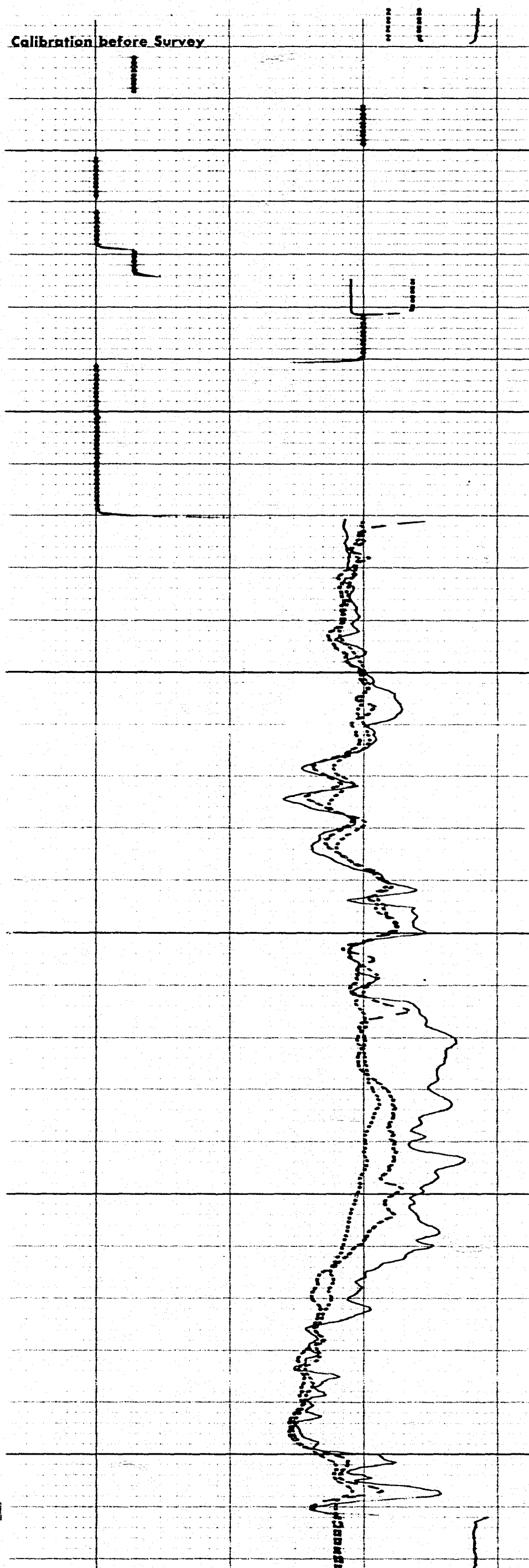


2600

2700

2800

FR



1 10 100 1000

DEEP INDUCTION LOG

1 10 100 1000

MEDIUM INDUCTION LOG

1 10 100 1000

LATEROLOG-8

SPONTANEOUS-POTENTIAL
millivolts

DEPTHS

RESISTIVITY
ohms m/m

COMPANY CANADIAN FINA OIL LIMITED

WELL FINA ET AL WILLOW LAKE J-66

FIELD WILDCAT

PROVINCE NORTHWEST TERRITORIES



SCHLUMBERGER

LITHOLOGY OVERLAY

SCHLUMBERGER OF CANADA

Calgary, Alberta

PROVINCE NORTHWEST TERRITORIES
FIELD WILDCAT
WELL FINA ET AL WILLOW LAKE
J-66
COMPANY CANADIAN FINA OIL LIMITED

COMPANY CANADIAN FINA OIL LIMITED

WELL FINA ET AL WILLOW LAKE

FIELD J-66

PROVINCE NORTHWEST TERRITORIES

LOCATION 62° 00' N LAT
121° 45' W LONGOther Services: FDC-GR,
SNP-GR, DIL, SLPermanent Datum GL Elev. 692
Log Measured From KB 13 Ft. Above Perm. DatumELEV. KB 705
GL 692
GRF

Date 22 JAN 71

Run No. ONE

First Reading 2865

Last Reading 602

Feet Measured 2263

Depth Reached 2867

Bottom Diller 2871

Csg. SOC 602

Csg. Diller 603

Mud Nature GEL

Dens. 9.8

Mud Visc. 58

Mud pH 7.0

Water Loss 26.2

Res. 1.86 @ 55 °F

" " @ BHT

Res. 1.43 @ 55 °F

" " @ 55 °F

Res. 1.33 @ 55 °F

Res. 1.33 @ 55 °F

Res. 1.33 @ 55 °F

Res. 1.33 @ 55 °F

Res. 1.33 @ 55 °F

Res. 1.33 @ 55 °F

Res. 1.33 @ 55 °F

4 FEB 1971 CAL IP

REMARKS:

PURPOSE

The porosity overlay is designed to identify lithology in a matrix comprised of more than one mineral. This information makes possible a more accurate porosity determination.

METHOD

The SNP log is recorded assuming a limestone matrix, with a duplicate curve recorded twelve porosity units to the right. The duplicate curve is referred to as the "Dolomite Limit". Bulk density from the FDC log is converted to limestone porosity and is superimposed on the SNP log.

INTERPRETATION

1) Limestone - Dolomite

- a) Limestone. $\Phi_{FDC} = \Phi_{SNP}$. Porosities are read directly.
b) Dolomite. $\Phi_{FDC} = \Phi_{SNP} - 12$. SNP curve readings are converted to porosity using the dolomite scaler.
c) Limestone - Dolomite matrix. $\Phi_{SNP} > \Phi_{FDC} > \Phi_{SNP} - 12$. Percentage of dolomite is interpolated from the relative displacement of Φ_{FDC} from the Φ_{SNP} line toward the dolomite limit line. Porosity is calculated by plotting the Φ_{SNP} and the percent dolomite on the dolomite scaler.

2) Other minerals

When minerals other than limestone and dolomite are present, interpretation is made using chart CP-1 of the interpretation manual.

Minerals can be identified according to the accompanying table:

LITHOLOGY IDENTIFICATION SUMMARY

A—Liquid Filled Pores

Additional requirements

- Limestone $\Phi_{FDC} = \Phi_{SNP}$
Dolomite $\Phi_{FDC} = \Phi_{SNP} - 12$
Sand $\Phi_{FDC} = \Phi_{SNP} + 6$

B—No Porosity

- Salt $\Phi_{FDC} = \Phi_{SNP} + 39.5$
Gypsum $\Phi_{FDC} = \Phi_{SNP} - 28$
Anhydrite $\Phi_{FDC} = \Phi_{SNP} - 16$
Sulphur $\Phi_{FDC} = \Phi_{SNP} + 40$
Shale $\Phi_{FDC} = \Phi_{SNP} - N$

Φ_{SNP}	Φ_{FDC}	ΔT_{SONIC}
4	43.5	67
49	21	52.5
-1	-17	50
0	40	122

(N is variable - confirm with gamma ray)

COLOR LEGEND

- ☐ Sand
☐ Shale
☐ Limestone
☐ Dolomite
☐ Anhydrite
☐ Salt

Remarks:

CALIPER
hole diameter in inches

6 7 8 9 10 11 12 13 14

GAMMA RAY
API UNITS

Sens. 150 T.C. 2

Zero 0 div. to left

150 300

DEPTHS

DOLOMITE POROSITY

24 20 16 12 8 4 0

% DOLOMITE

CORRECTED LIMESTONE POROSITY

24 20 16 12 8 4 0

MUD CAKE THICKNESS (INCHES)

LOG DERIVED LIMESTONE POROSITY — SNP

0600

0700

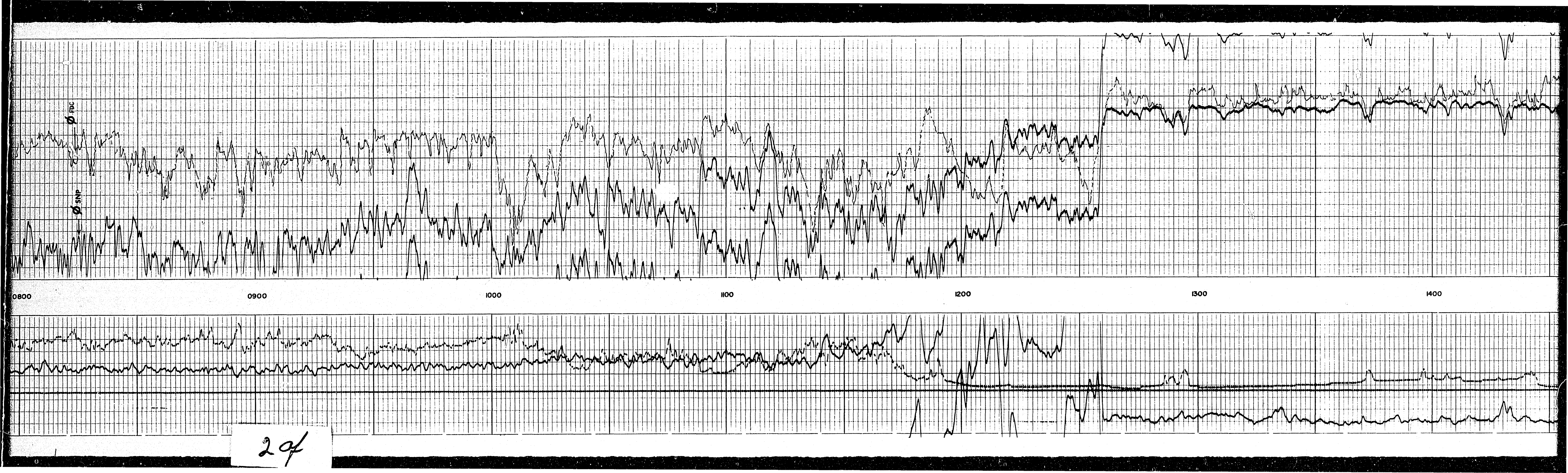
0800

FDC

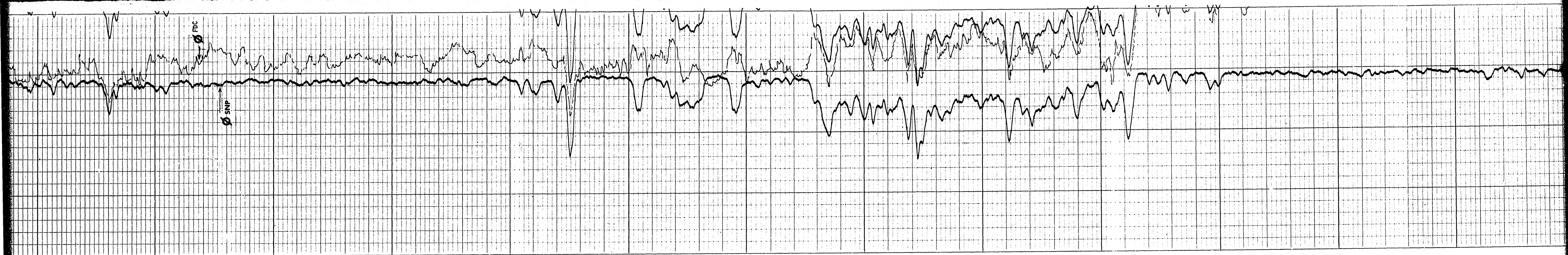
SNP

SNP

FDC



29



1400

1500

1600

1700

1800

1900

2000

3 of



2000

2100

2200

2300

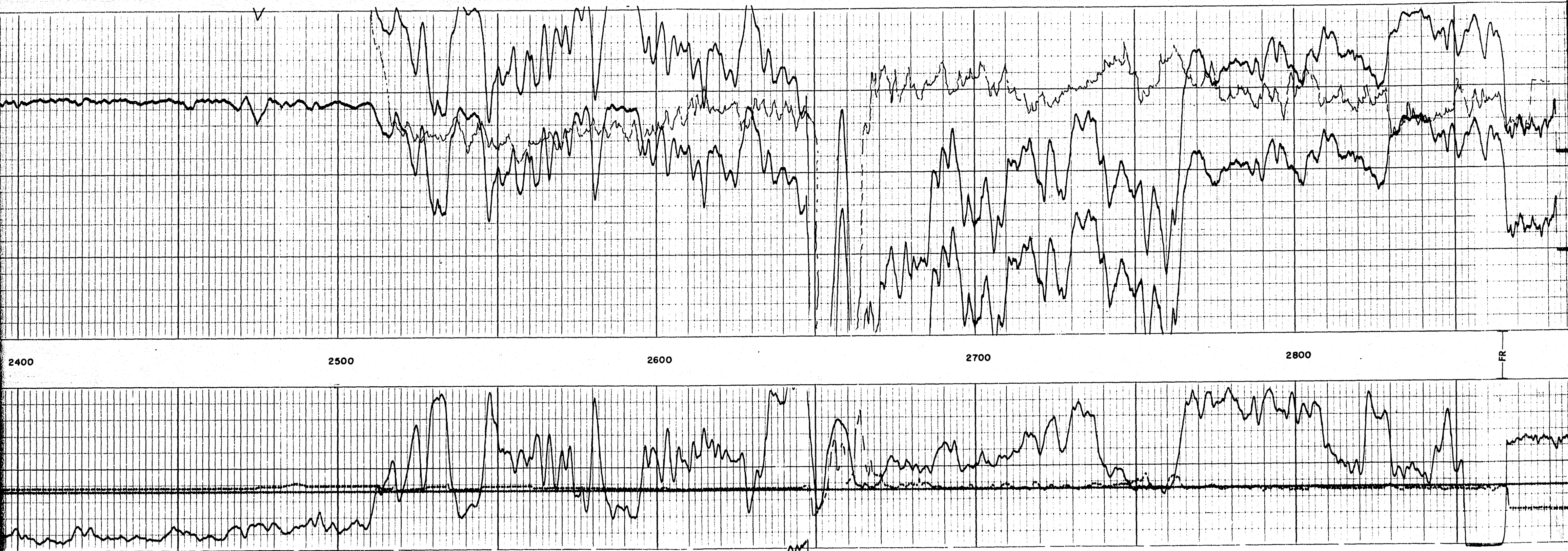
2400

2500

2600



4 of



2400

2500

2600

2700

2800

FR

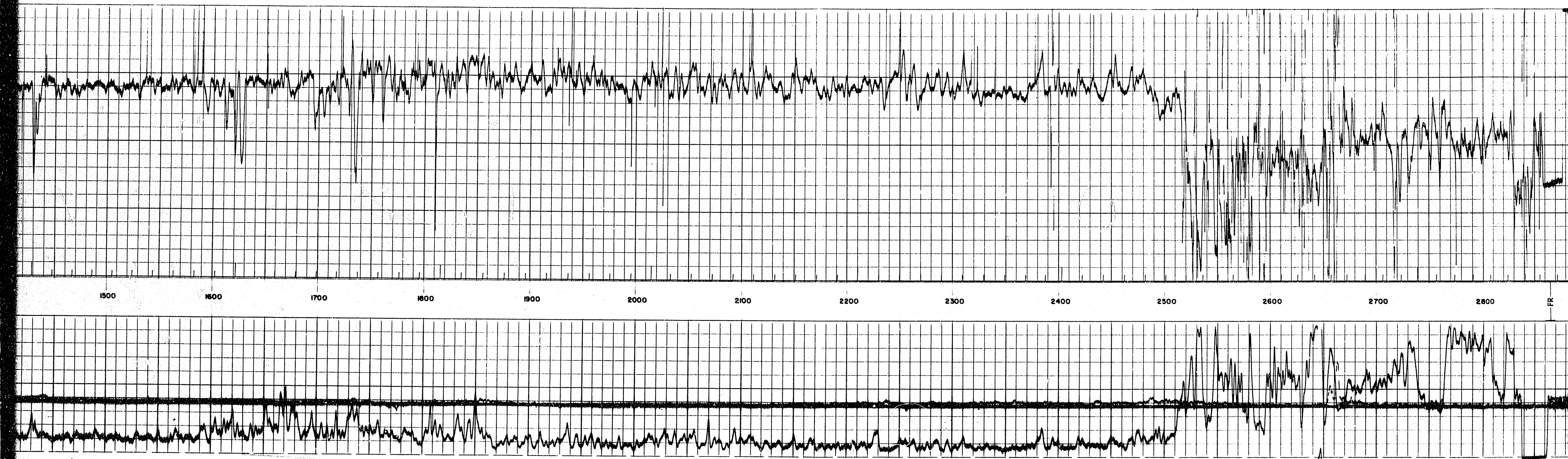
505

COMPANY CANADIAN FINA OIL LIMITED

SCHLUMBERGER

WELL FINA ET AL WILLOW LAKE J-66

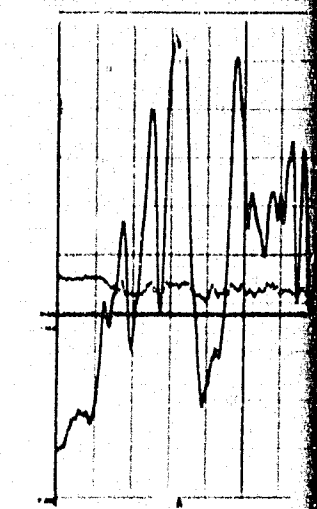
FIELD WILDCAT PROVINCE NORTHWEST TERRITORIES



2 of

REPEAT SECTION

2500

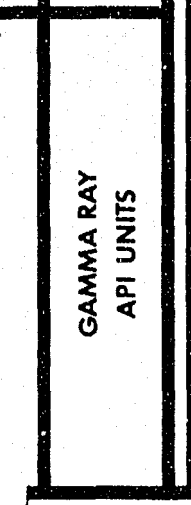
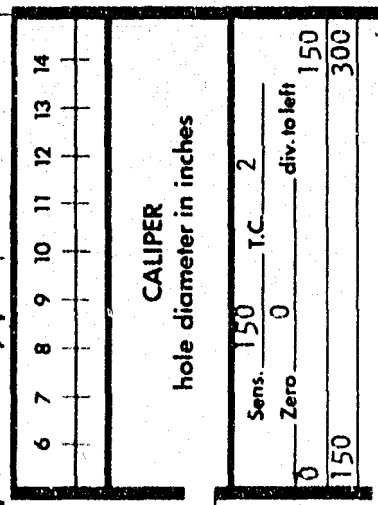
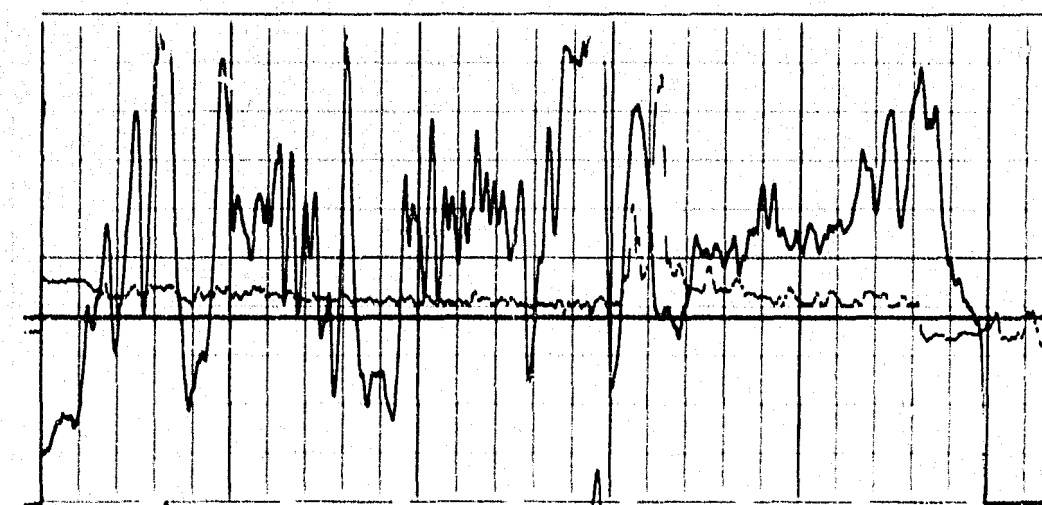


REPEAT SECTION

2500

2600

2700



Speed in FPM

6 7 8 9 10 11 12 13 14

CALIPER
hole diameter in inches

Sens. 150 T.C. 2
Zero 0 div. to left 150
0 150 300

GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot

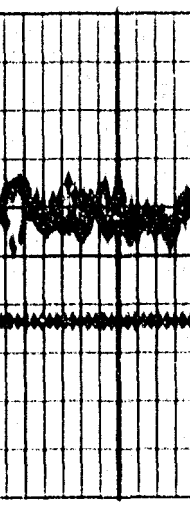
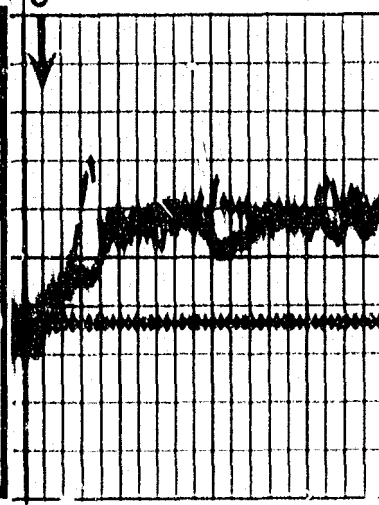
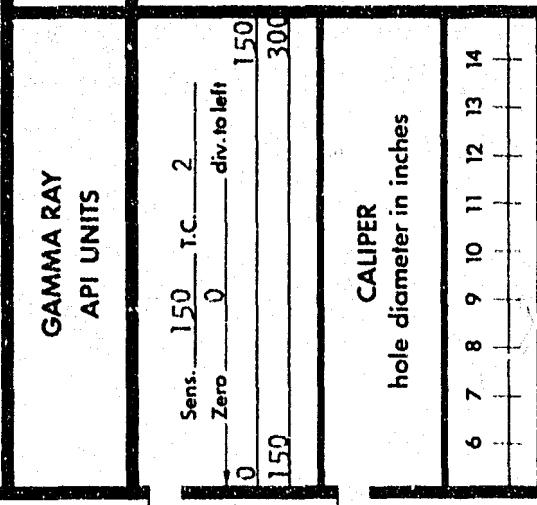
120 100 60 40

DETAIL LOG
5' = 100'

2500

2600

2700



Speed in FPM

6 7 8 9 10 11 12 13 14

CALIPER
hole diameter in inches

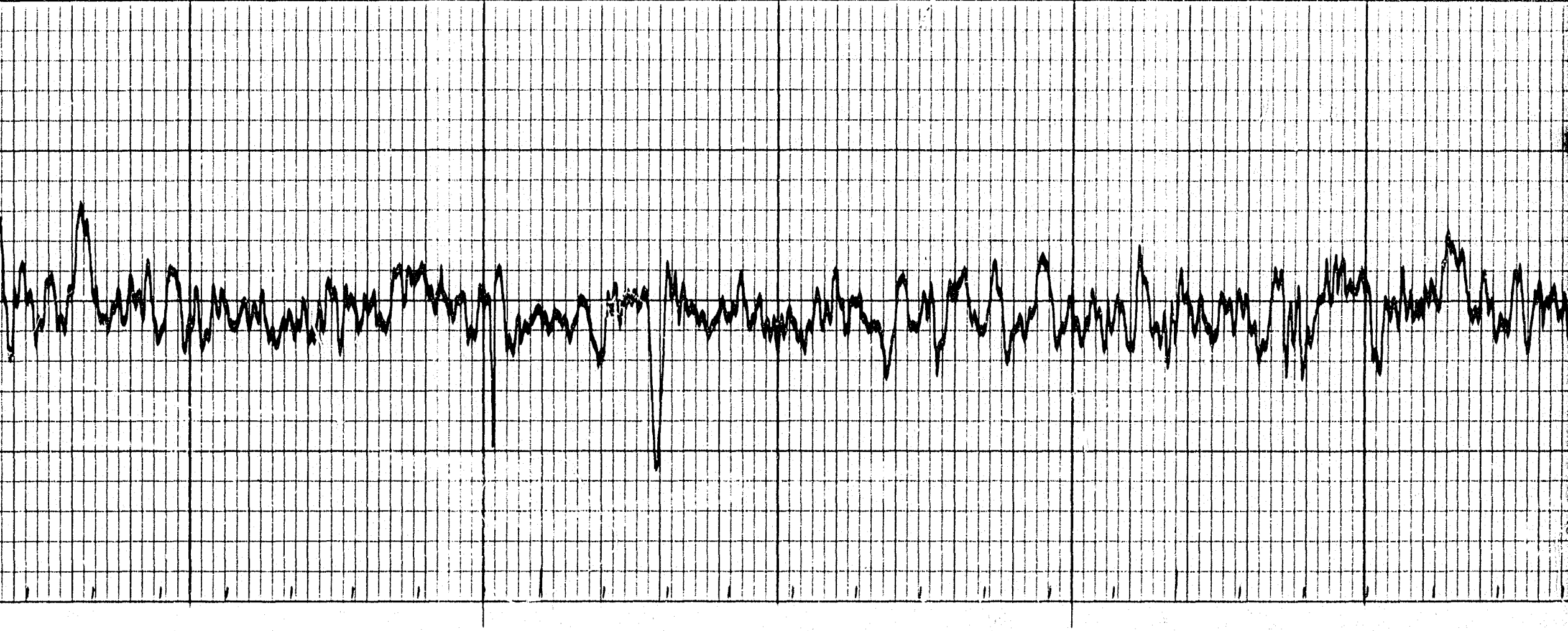
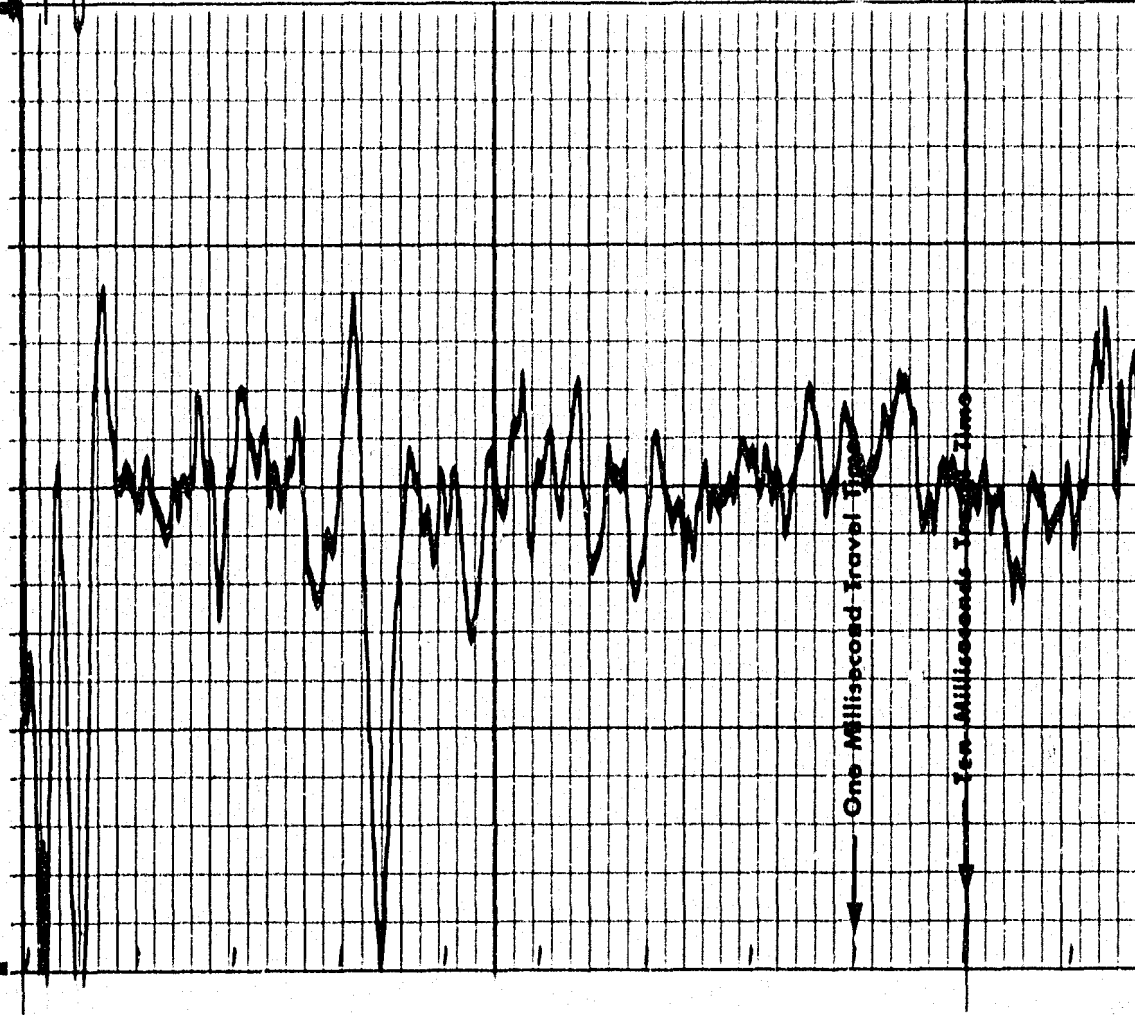
Sens. 150 T.C. 2
Zero 0 div. to left 150
0 150 300

GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot

140 90 40 140

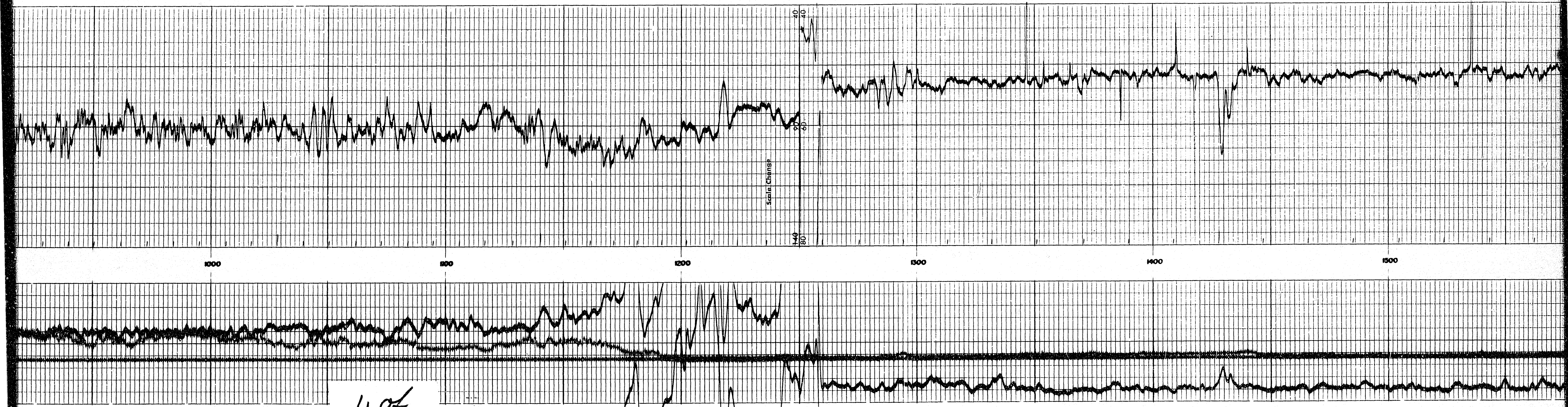


0700 0800 0900

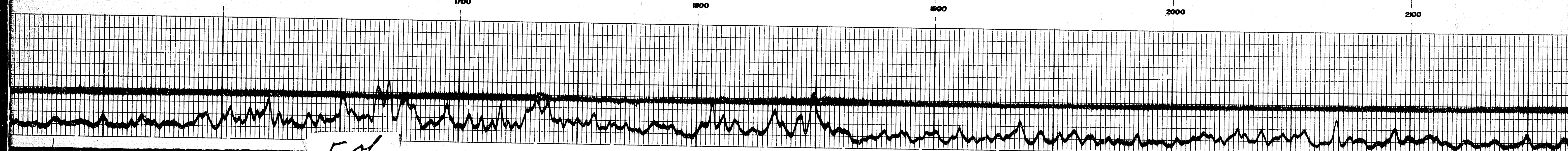
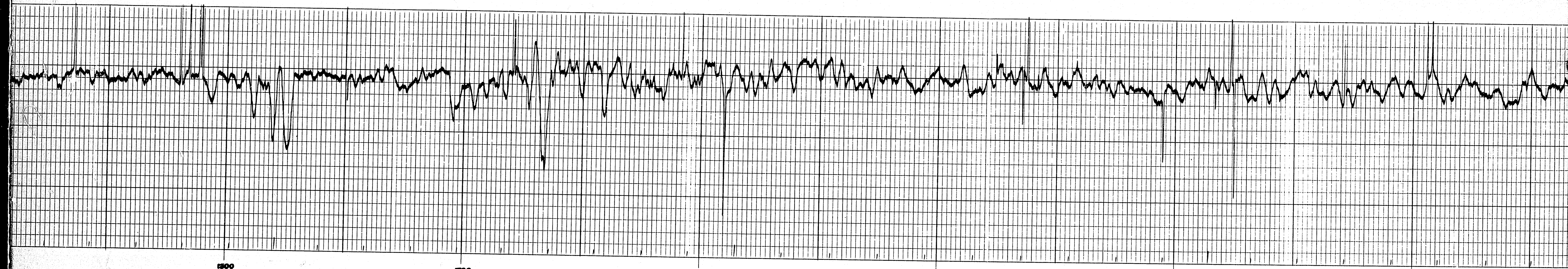
SONIC
INTERVAL TRANSIT TIME
microseconds per foot

140 90 40 140

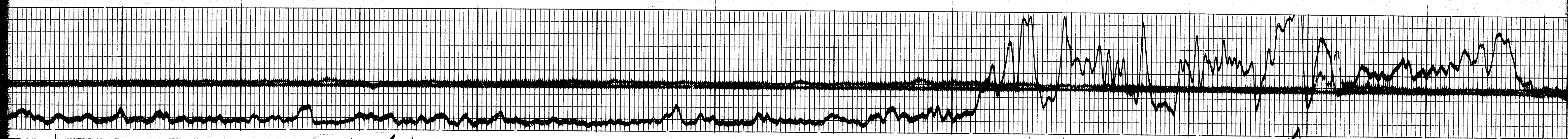
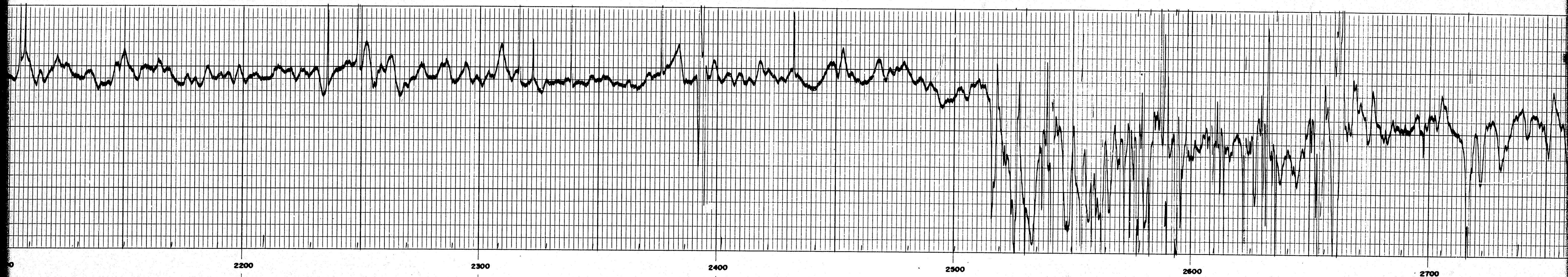
One Millisecond Travel Time
Ten Milliseconds Travel Time



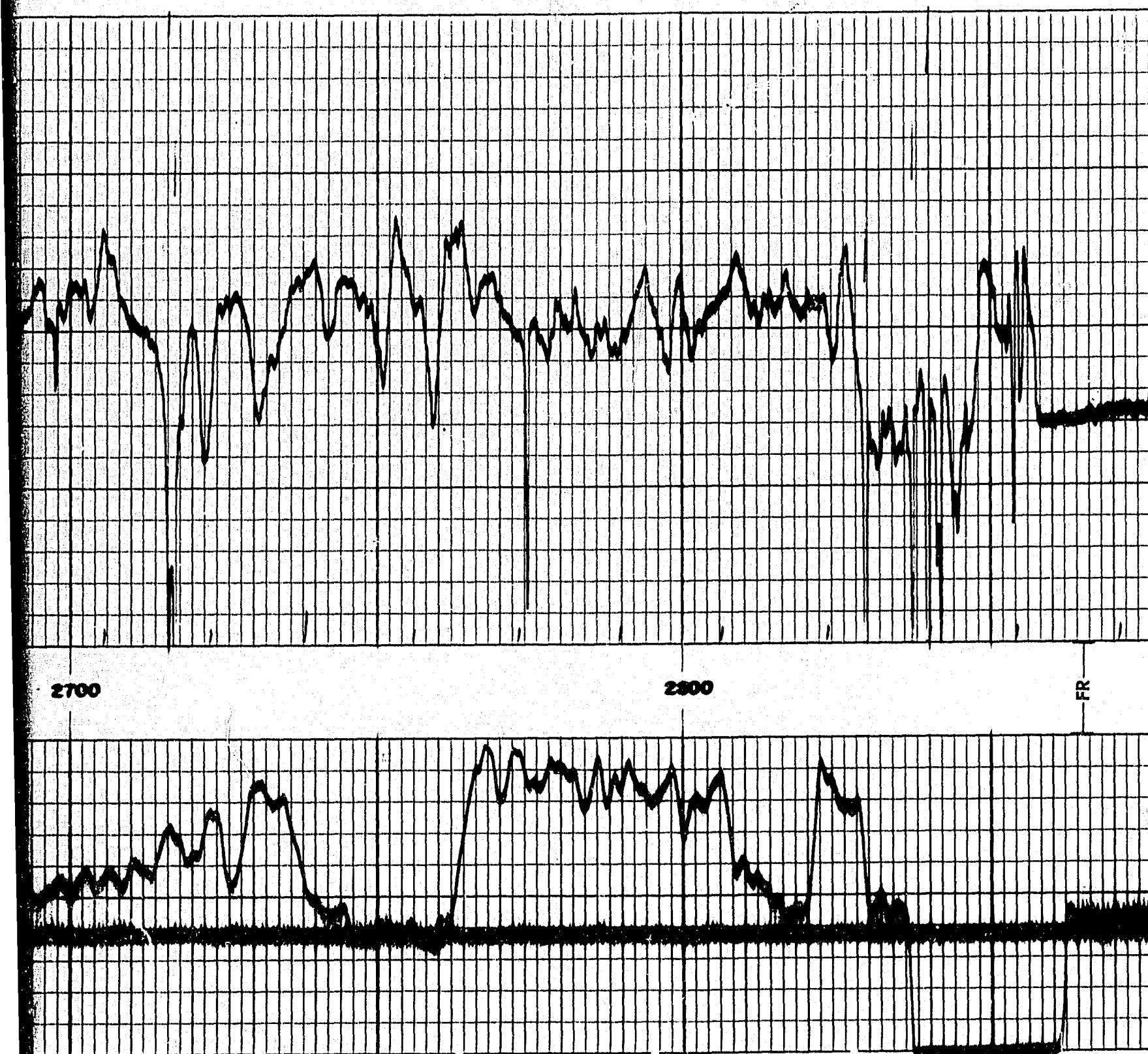
4 of



5 of

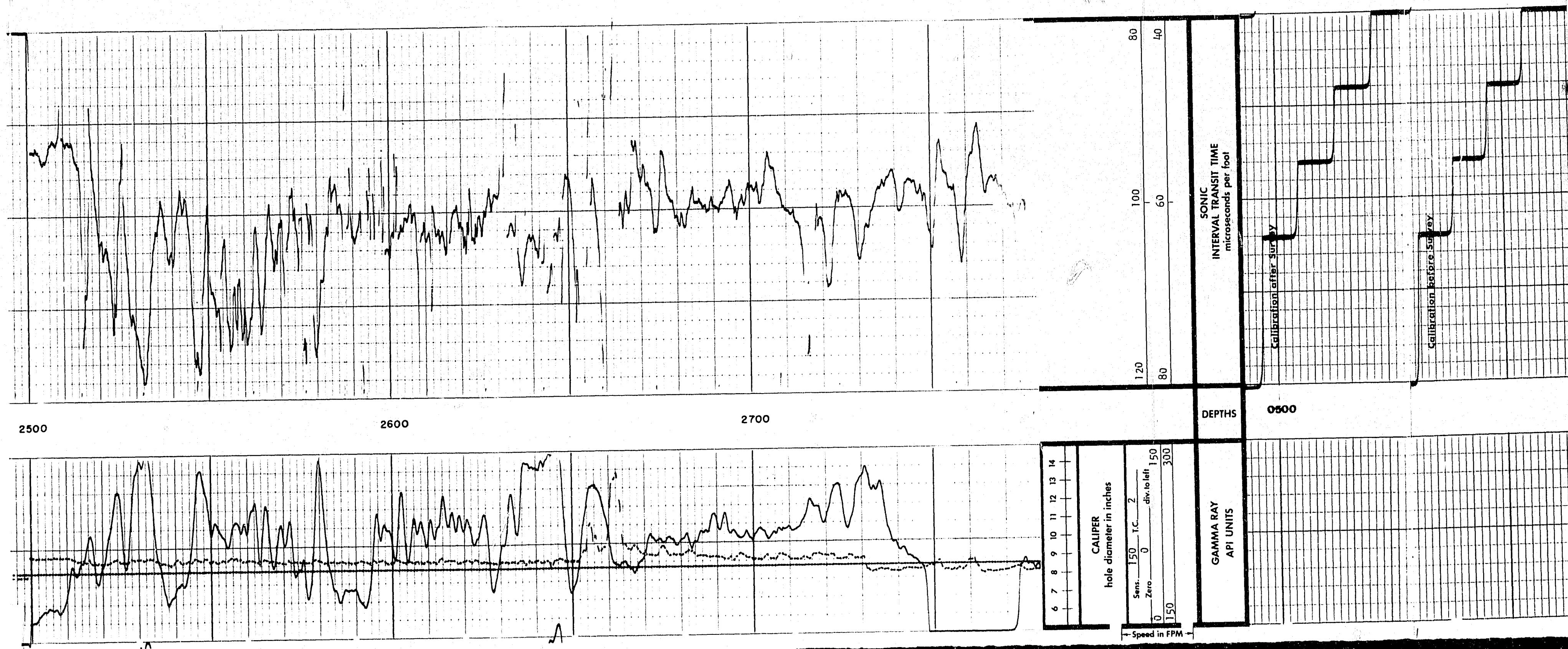


1. 24



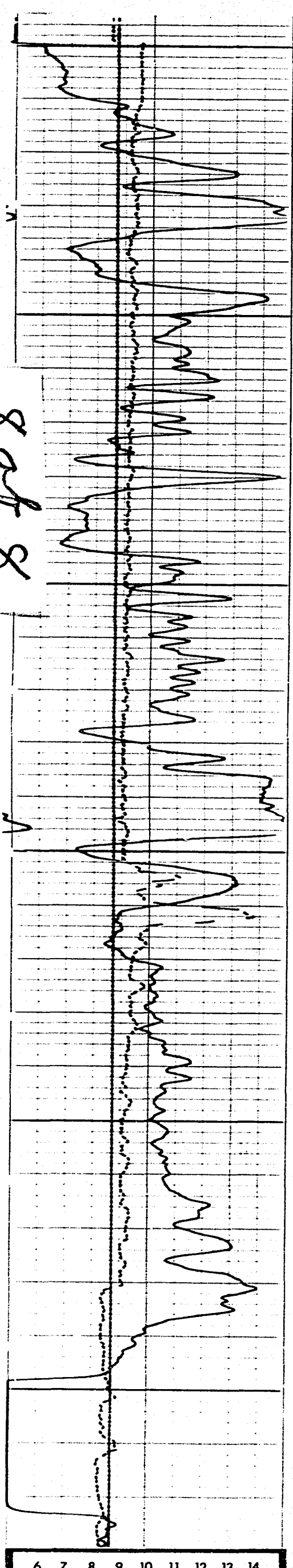
704

REPEAT SECTION

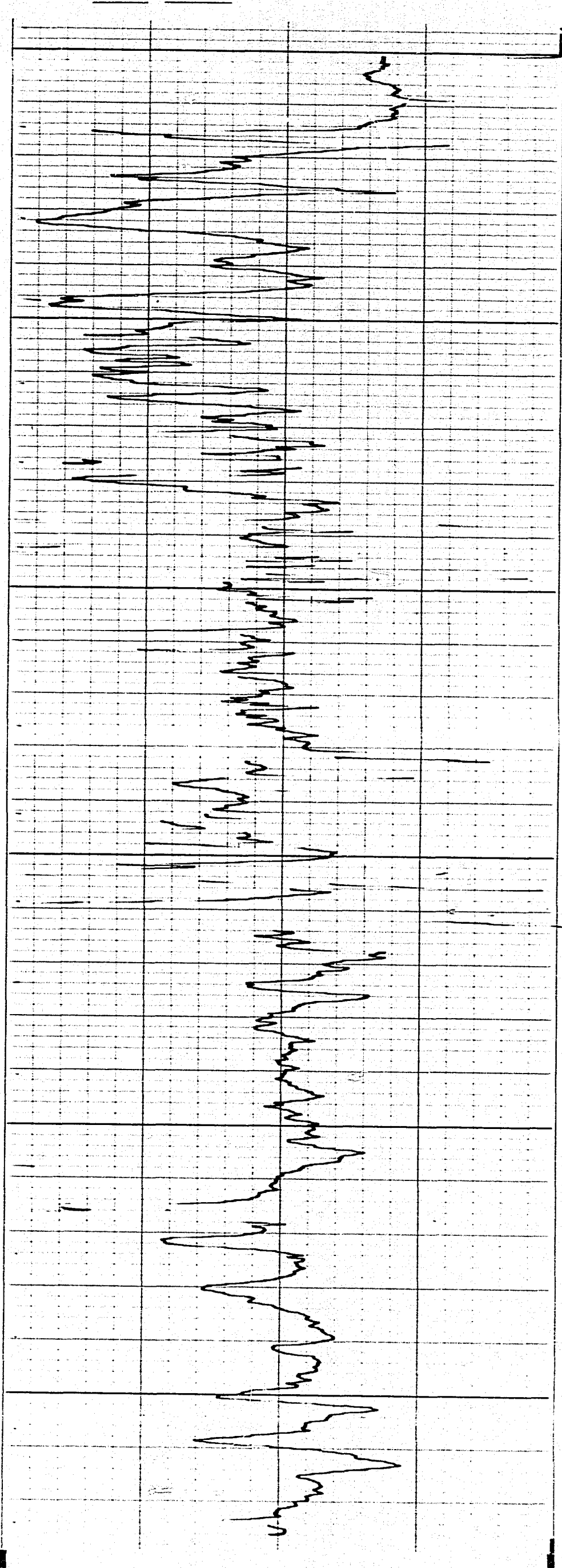


REPEAT SECTION

8 of 8



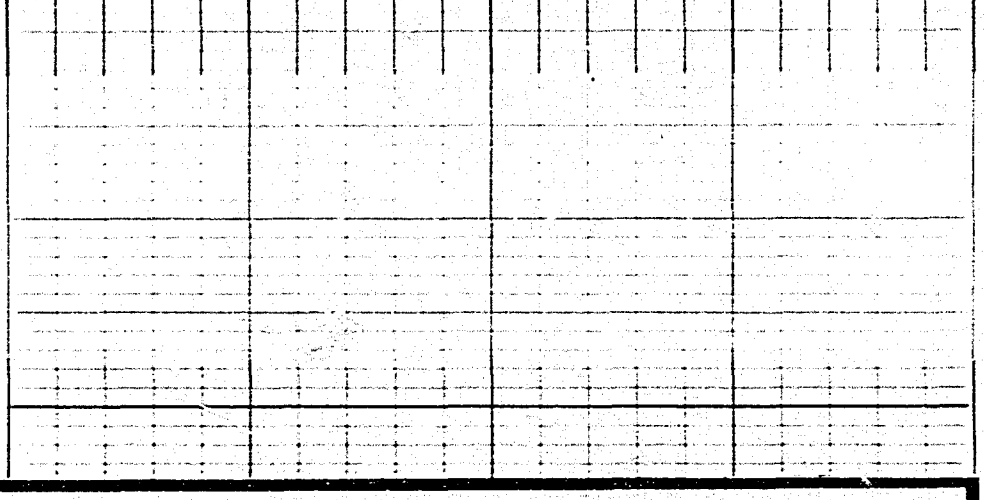
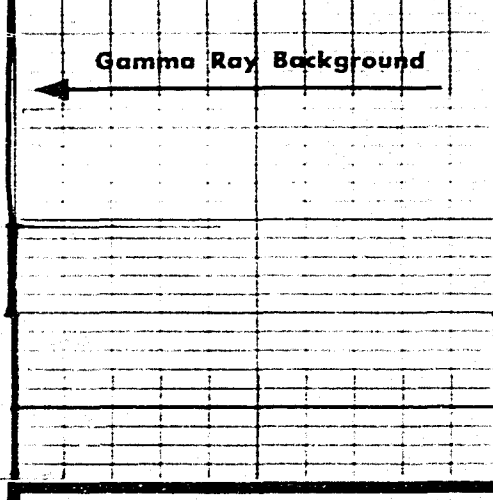
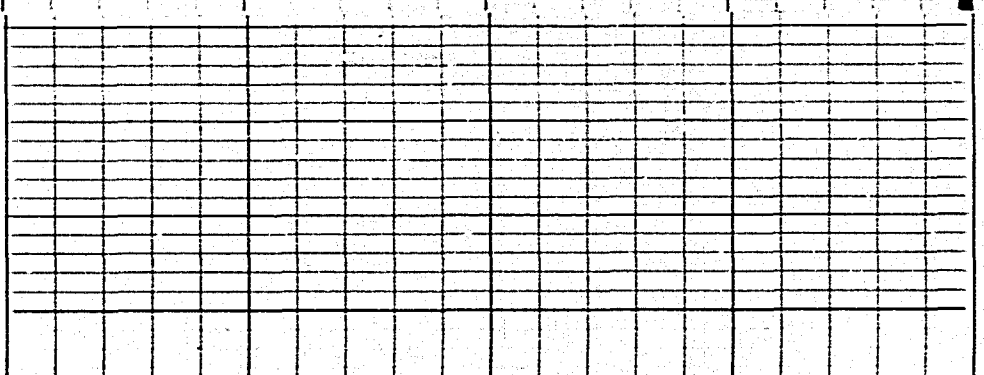
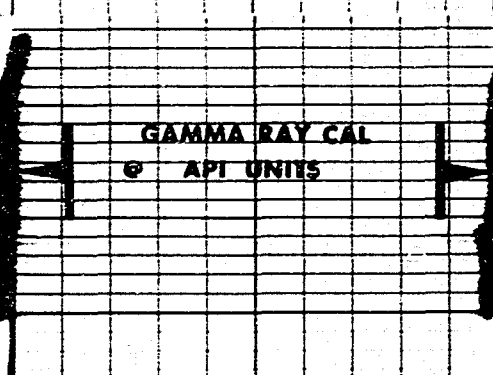
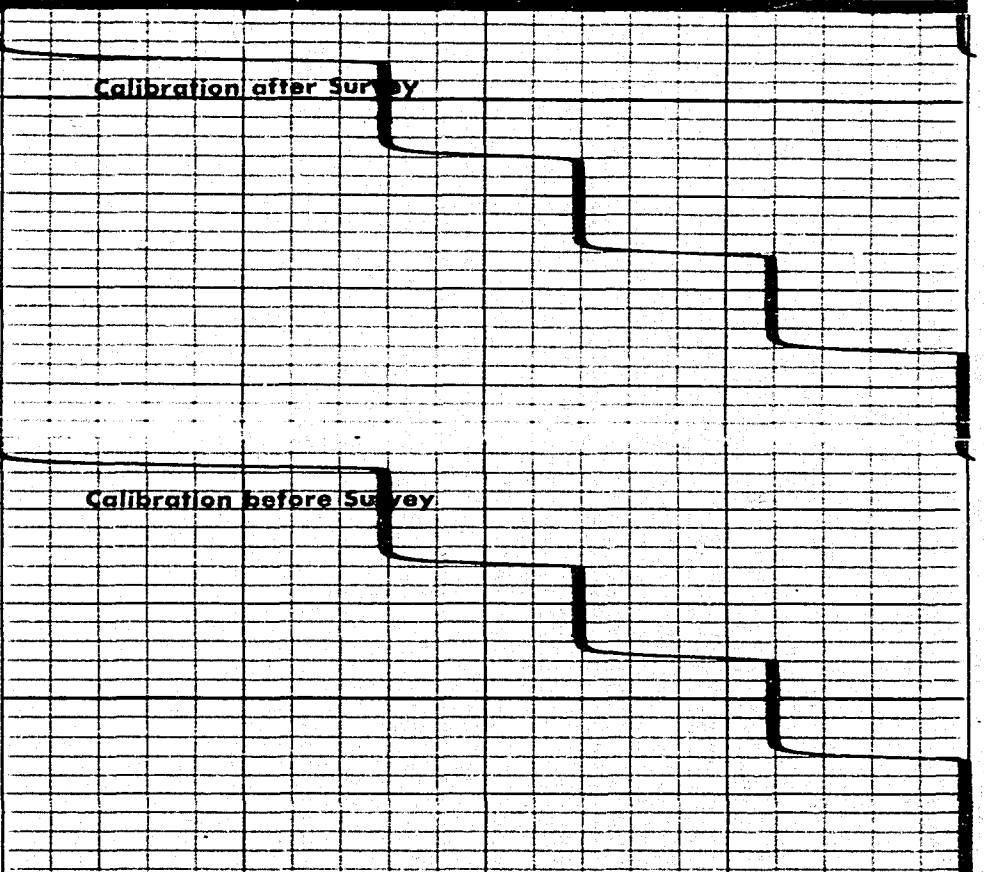
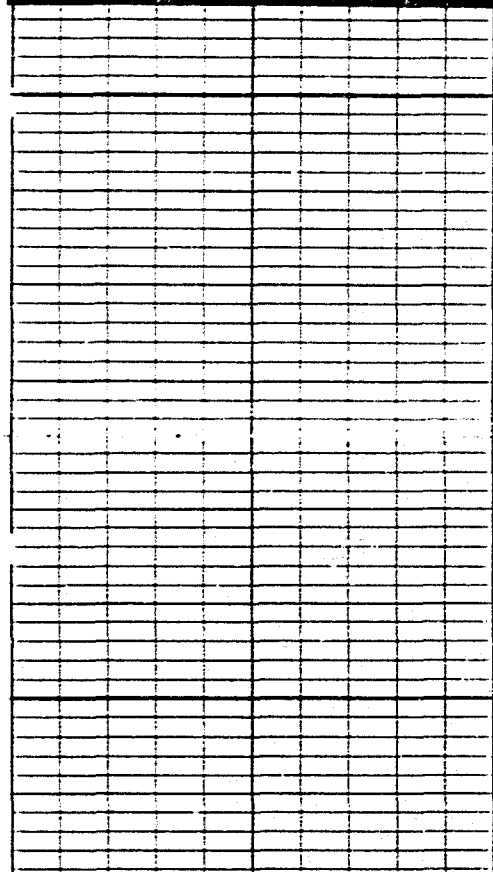
6	7	8	9	10	11	12	13	14
CALIPER								
hole diameter in inches								
Sens.	150			T.C.	2			
Zero	0			div. to left	150			
0	150			300				



GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot



COMPANY	CANADIAN FINA OIL LIMITED
WELL	FINA ET AL WILLOW LAKE J-66
FIELD	WILDCAT PROVINCE NORTHWEST TERRITORIES



SCHLUMBERGER

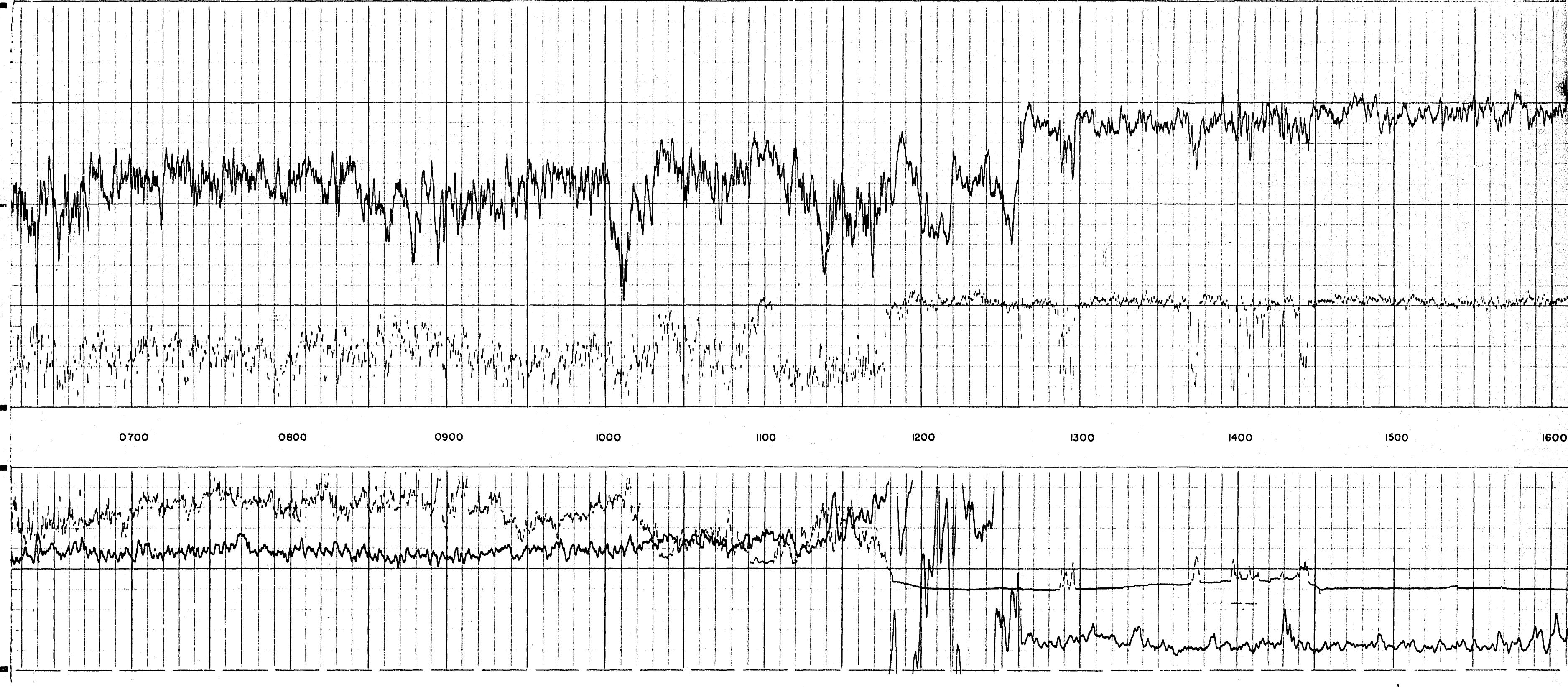
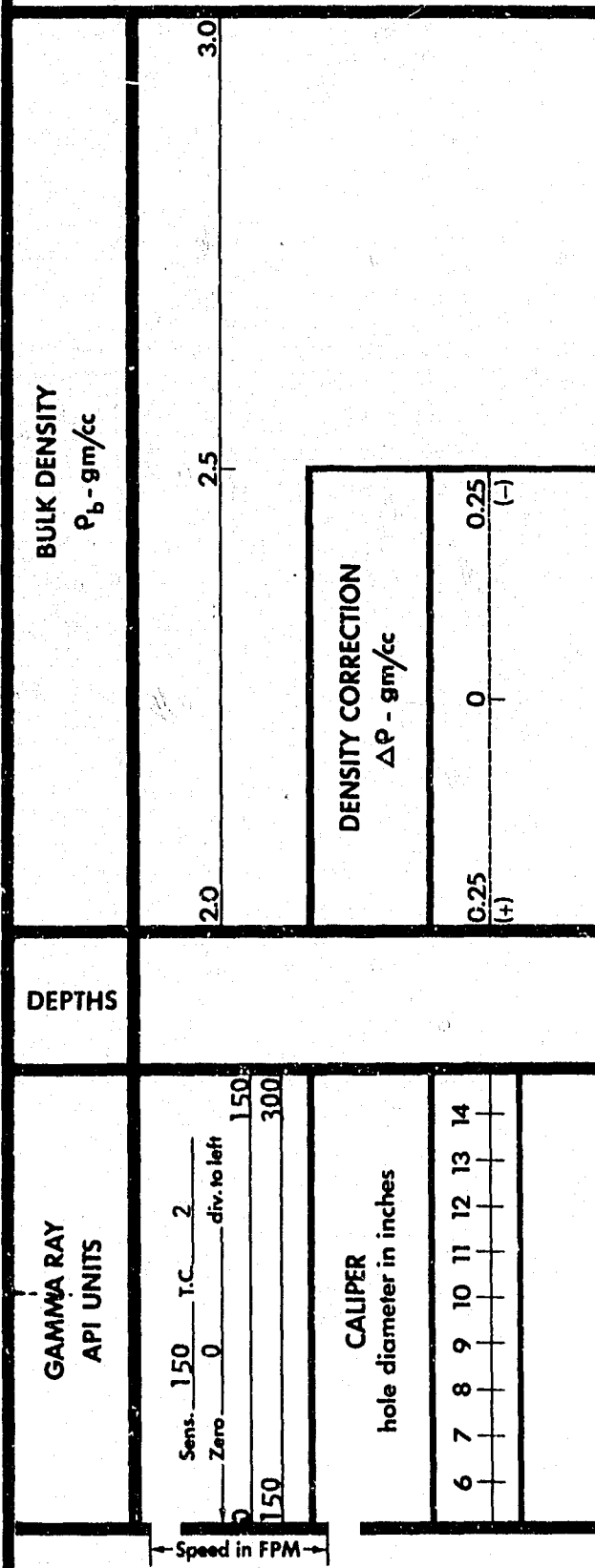
COMPENSATED
FORMATION DENSITY LOG
SCHLUMBERGER OF CANADA Calgary Alberta

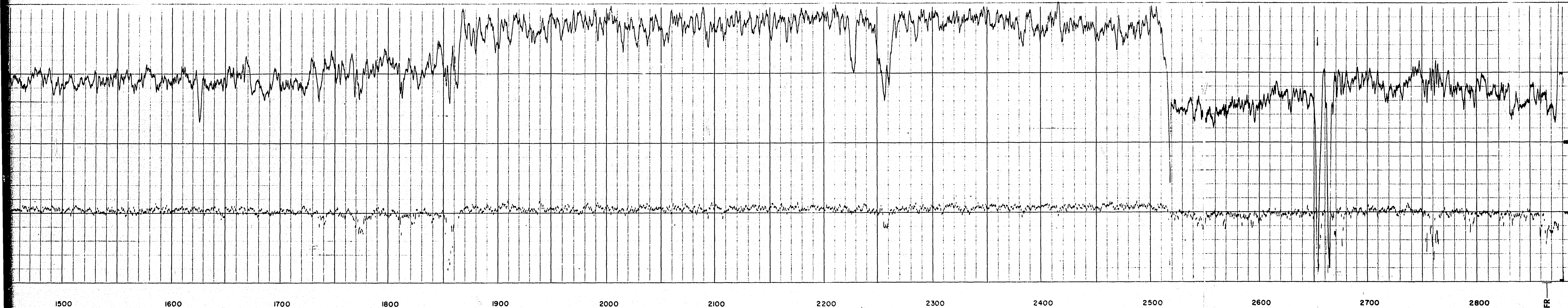
PROVINCE	NORTHWEST TERRITORIES	COMPANY	CANADIAN FINA OIL LIMITED
FIELD	WILDCAT	WELL	FINA ET AL WILLOW LAKE
WELL	J-66	FIELD	WILDCAT
COMPANY	CANADIAN FINA OIL LIMITED	PROVINCE	NORTHWEST TERRITORIES
LOCATION	62° 00' N LAT 121° 45' W LONG	Other Services: SNP-GR, DIL,SL	
Permanent Datum	GL Elev. 692	ELEV: KB 705	
Log Measured From	KB 13 Ft. Above Perm. Datum	GL 692	
		CBF	

Date	22 JAN 71				
Run No.	ONE				
First Reading	2865				
Last Reading	602				
Feet Measured	2263				
Depth Reached	2867				
Bottom Driller	2871				
Csg. SOC	602				
Csg. Driller	603				
Mud Nature	GEL				
Dens. Visc.	9.8 58				
Mud pH	7.0				
Water Loss	25.2				
Res.	1.86 @ 55 °F	@	°F	@	°F
Rmf	@ 101 °F	@	°F	@	°F
@ BHT	1.43 @ 55 °F	@	°F	@	°F
Rmc	1.33 @ 55 °F	@	°F	@	°F
ppm-CL					
Bit Size	8 3/4"				
Source to Detector					
Spacing	16"				
Equipment Type	PGT-D				
Opr. Rig Time	2 HRS				
Truck No.	7636 RL				
Recorded By	SCHLUEP				
Witness	HOMMEL				

4 FEB 1971 CAL JP
REMARKS
Drilling Stopped 1800 / 21st : Circulation Stopped 0900 / 22nd : Tool on Bottom 1930 / 22nd : B.H.T.

STICKY HOLE @ 2648'

Panel No. D 251
Cartridge No. A 177
Sonde No. E 249
Detector No. D 144CALIBRATION: Background CPS 40
Gamma Ray 145
Test Source CPS 145
Galvanometer Deflection Div. 10.0
Panel Sens. Tap for Cal. CAL-150



1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800

DENSITY CORRECTION
 $\Delta\rho - \text{gm/cc}$

(+) 0.25 0 (-) 0.25

2.0 2.5 3.0

BULK DENSITY
 $\rho_b - \text{gm/cc}$

DEPTHS

CALIPER
hole diameter in inches

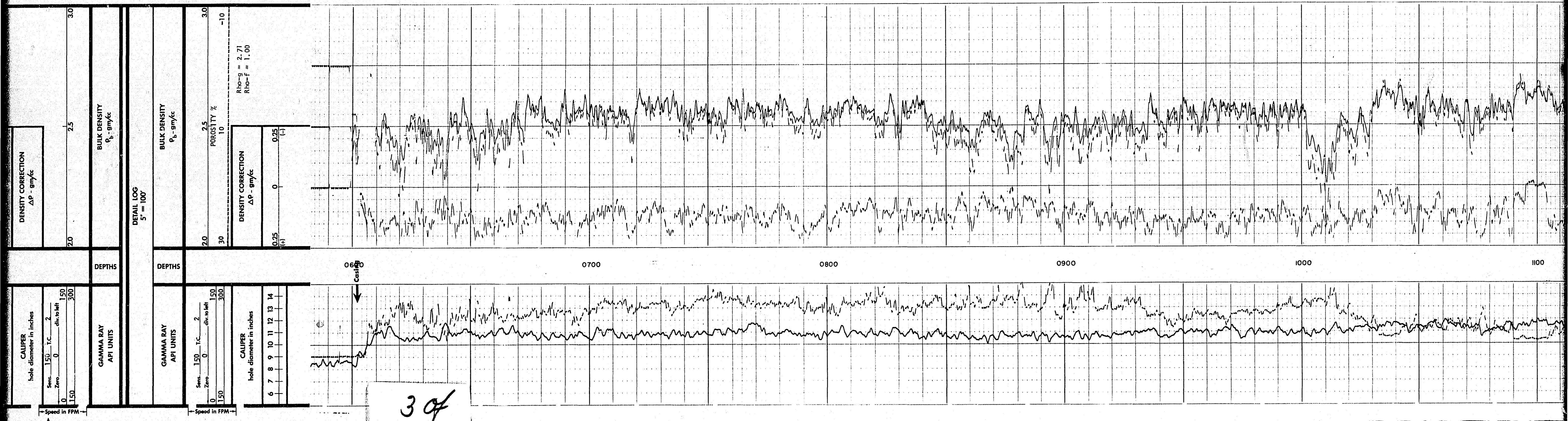
6 7 8 9 10 11 12 13 14

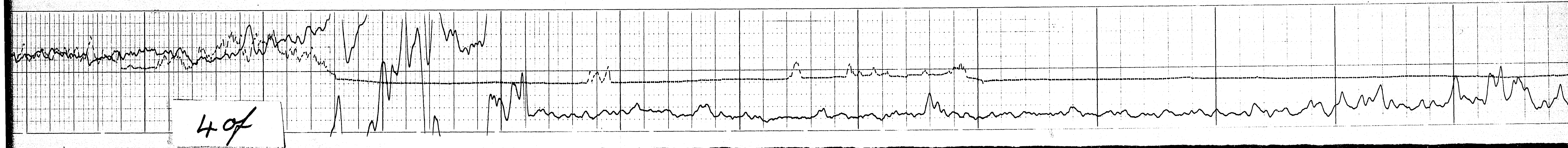
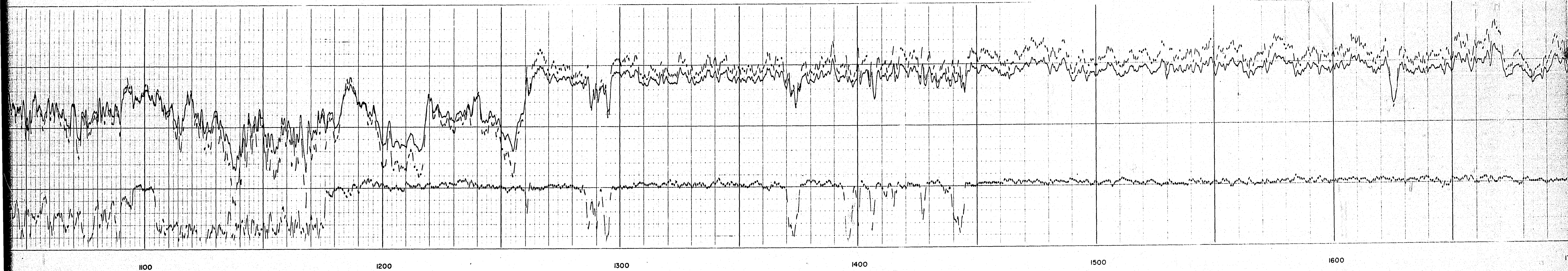
Sens. 150 T.C. 2
Zero 0 div. to left
150 300

GAMMA RAY
API UNITS

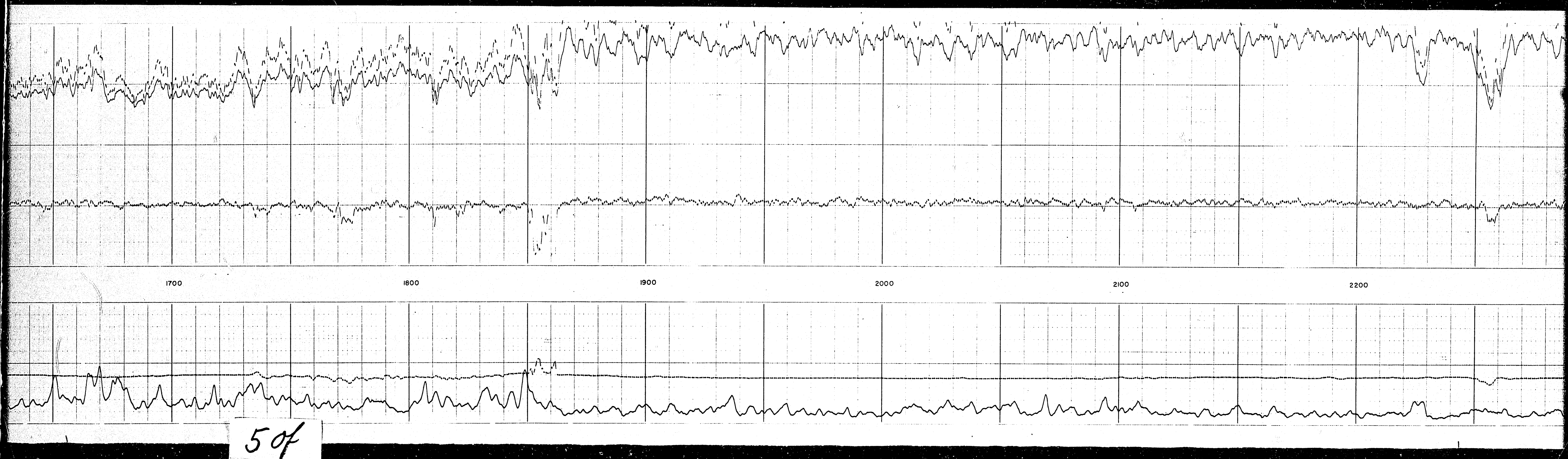
DETAIL LOG
5' = 100'

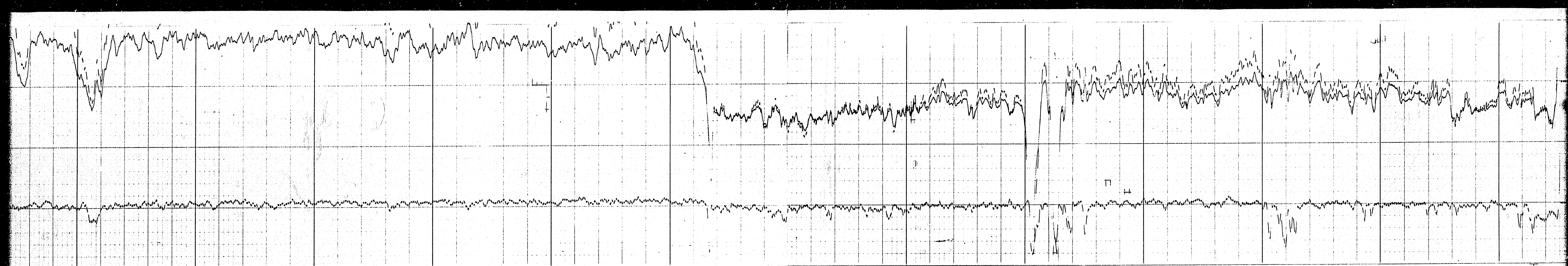
29





4 of





2300

2400

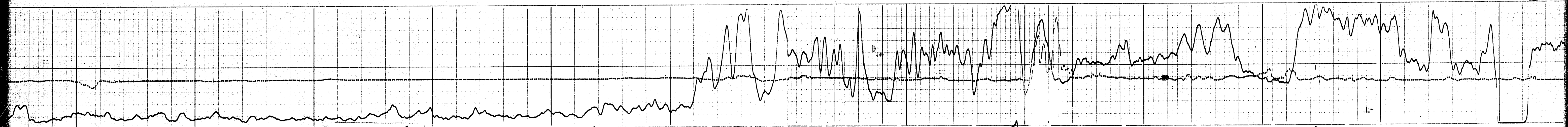
2500

2600

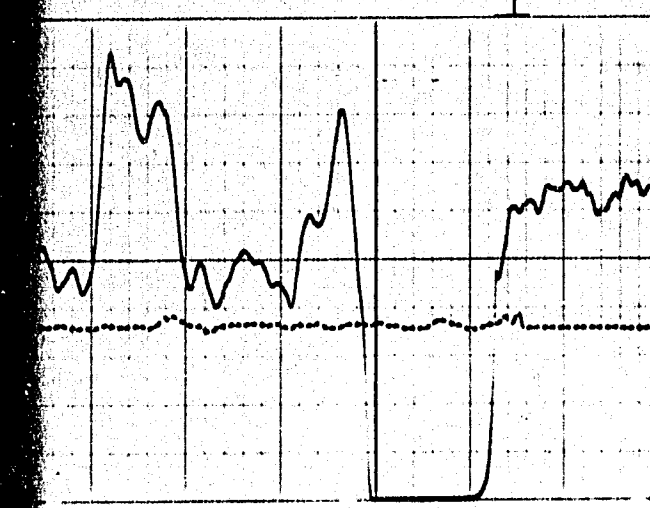
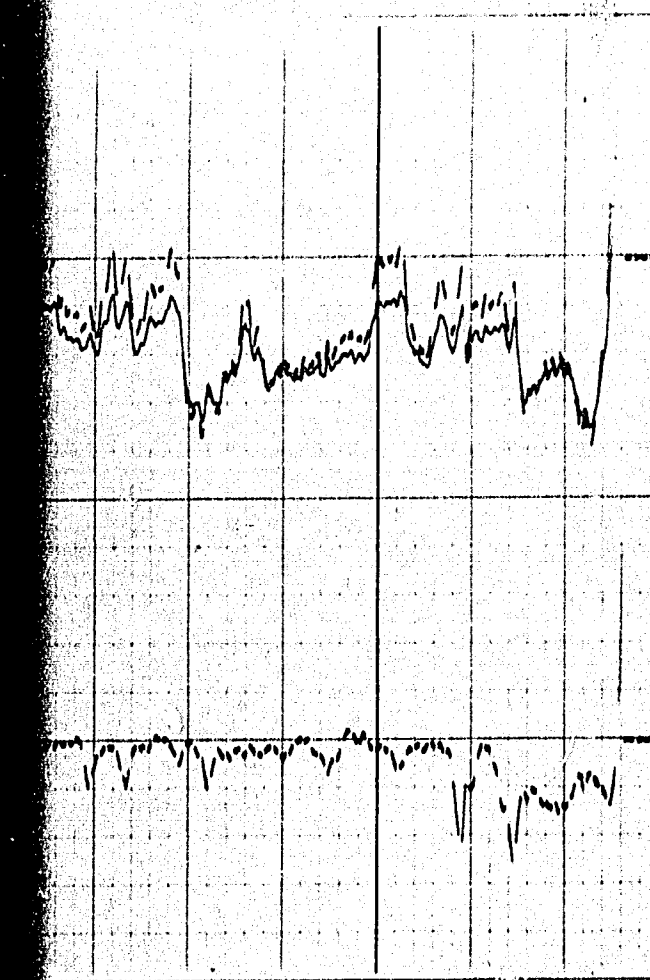
2700

2800

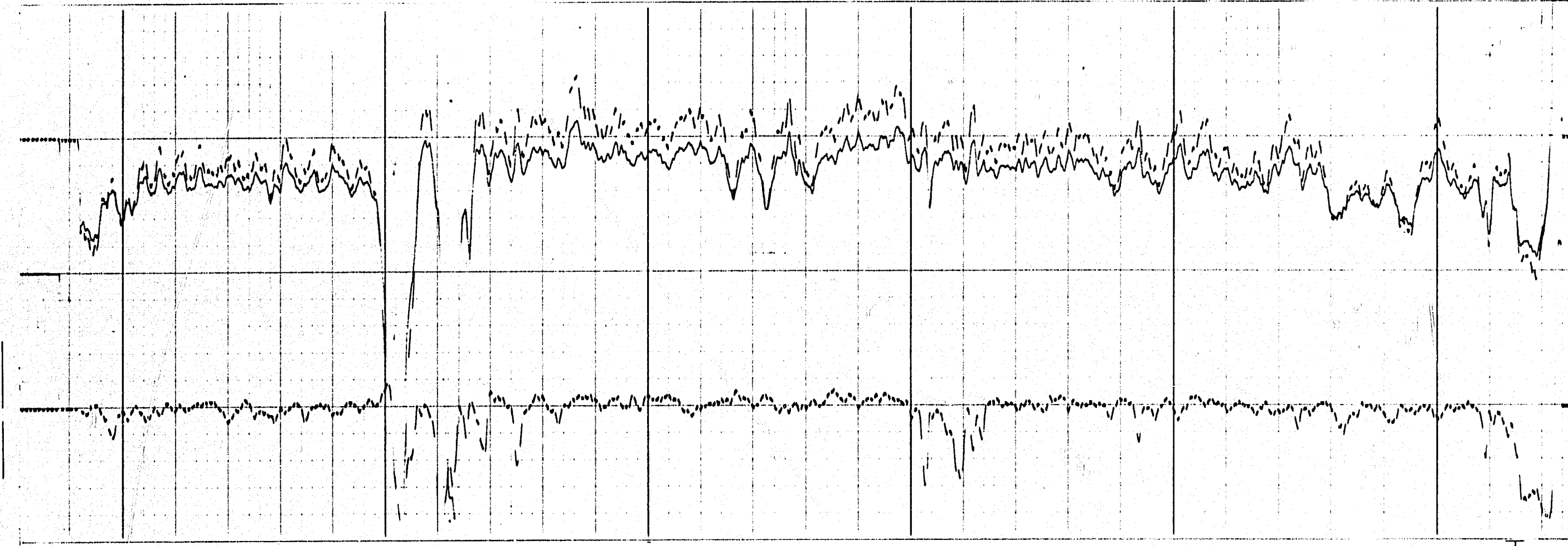
FR



6 of



REPEAT SECTION

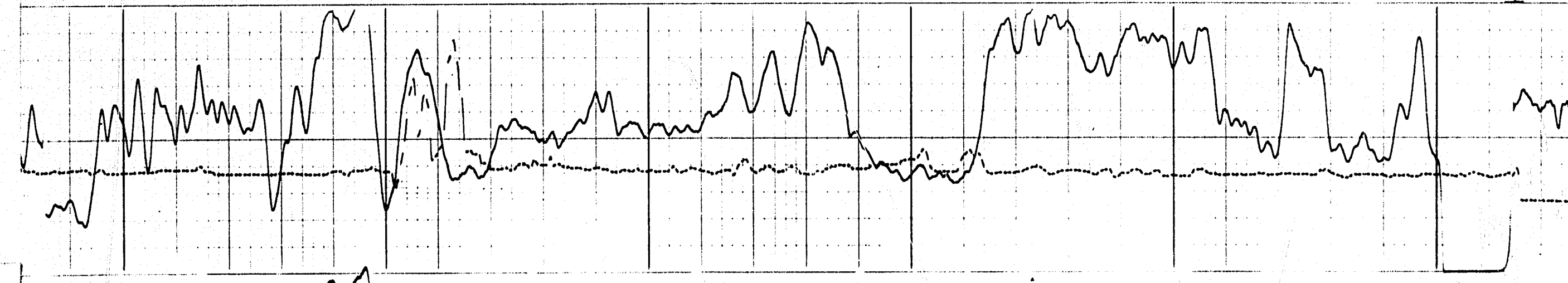


2600

2700

2800

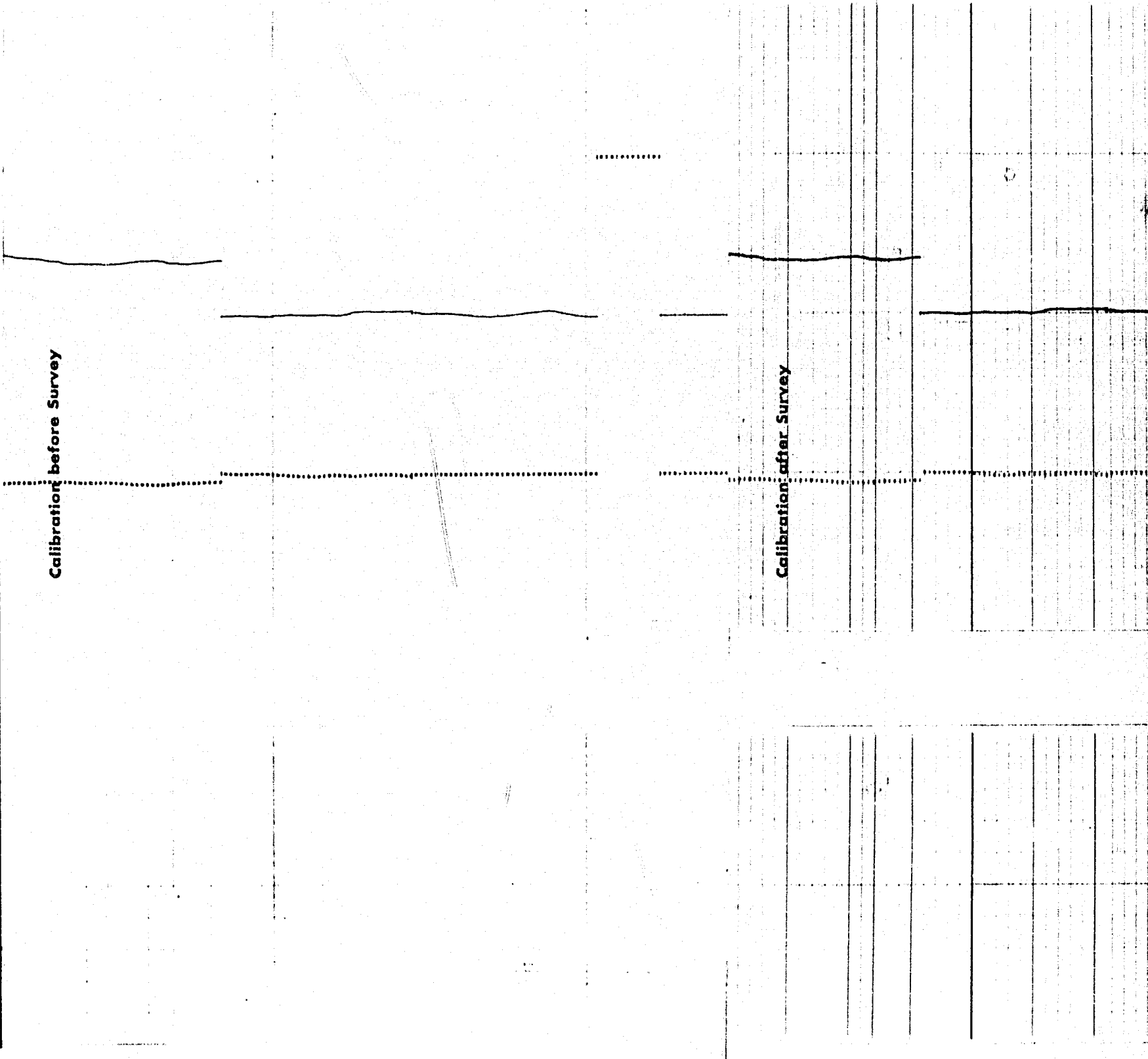
FR



6 7 8 9 10 11 12 13 14		CALIPER hole diameter in inches		DENSITY CORRECTION ΔP - gm/cc		Rho-g = 2.71 Rho-f = 1.00	
0 150 300		Sens. 150 t.c. 2 Zero 0 div. to left		30 10 POROSITY %		-10	
0 150 300		150 300		2.0 2.5 POROSITY %		3.0	
DEPTHS		GAMMA RAY API UNITS		BULK DENSITY ρ_b - gm/cc			

$\rho_{ho-g} = 2.71$
 $\rho_{ho-f} = 1.00$

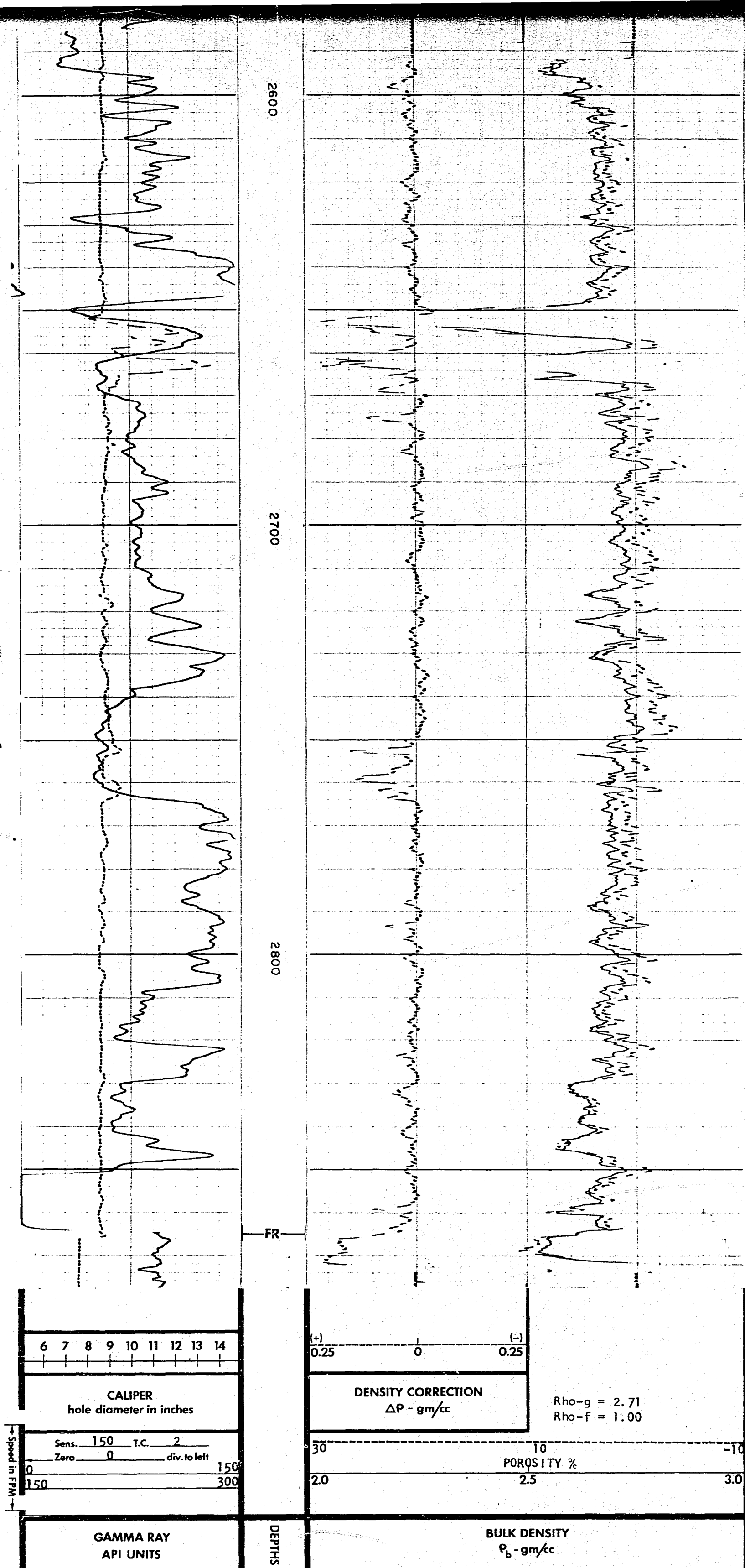
Calibration before Survey



Calibration after Survey

7 of

8 of 8



Calibration before Survey

Calibration after Survey

COMPANY CANADIAN FINA OIL LIMITED

WELL FINA ET AL WILLOW LAKE J-66

FIELD WILDCAT PROVINCE NORTHWEST TERRITORIES

SCHLUMBERGER

DAILY DRILLING LOG
DIRECTIONS TO
WELL

SHIP NO.	LOCATION	ESD	SEC	TWP	RGE	W	DATE	IP	
	SINATRAL WILLOW LAKE						11-26	177	
MAILING POINT	SHIPPING POINT	MILES MOVED	ROAD CONDITIONS	DAYS FROM SPED					

[illegible]

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELLRIG NO. 12 LOCATION FINN ETAL MILLER LANE SEC. TWP. RGE. DATE 12-25-71
MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS DAYS FROM SPUD

From	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME		
																START	STOP	INTVL.
TESTING (EST #) BIG SERVO. 12 12 12																		
FULL FANGLI AVER + L. ROAD CRR 5 15																		
TESTING HEAD + CHICKSANDS 2 30 2 30 1/4																		
FULL CUT (1000' FLUID RECOVERY) 2 30 2 30 1/2																		
BROKE OUT PACKER + LAY DOWN 5 00 7 00 2																		
FULL TAIL PIPE 7 00 8 00 1/4																		
FIRE DRILLER'S SIGNATURE John Robinson																		
BIG SERVICE 8 00 8 15 1/4																		
Run Collar in + LAY DOWN 8 15 10 30 2 1/4																		
Run in open END 10 30 12 00 1 1/2																		
Circ 12 00 12 15 1/4																		
Run Plug #1 12 15 12 45 1/2																		
Hoist PIPE 12 45 1 30 1/4																		
W.O.C 1 30 4 00 2 1/2																		
FIRE DRILLER'S SIGNATURE H. R. P. P.																		
W.O.C 4 00 4 15 1/4																		
LUN IN (FELT PLUG NO 1) 4 15 4 45 1/2																		
LUN CUT TO RUN Plug No 2 4 45 5 15 1/2																		
LUN PLUG NO 2 5 15 10 00 1/4																		
W.O.C 10 00 12 00 2																		
FIRE DRILLER'S SIGNATURE																		
B.O.P. Tested Elapsed Time Pressure Packing & Seal Inspected Date Crown-a-matic Chk d Fuel on Hand 12.01 a.m. gals CASING REPORT RAN ITS CSG RENTAL EQUIPMENT ON HAND TRANSFER IT																		
Hydrol Fuel Rex d Today (add) gals																		
Pipe Rams TOTAL gals TO FB USED SAY CEM																		
Blind Rams Fuel on Hand 11.59 p.m. (deduct) gals PLUS FLUG DOWN A.M. P.M. DAYS FROM SPUD: TOTAL COMPANY TIME HRS TOTAL CONTRACTOR'S TIME HRS																		
FOTCO RING ON BIT 24 Hrs. Fire Pump Chk d FUEL USED gals CEMENT RETURNS - (YES/NO) EQUIPMENT CHANGES																		
Approved by Operator's Representative Approved by Toolpusher																		

CONSERVATION BOARD COPY

COM 42858

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG 140

LSD

SEC

INDEX

R G B

Y

DATE _____

13

MAILING
POINT

SHIPPING
POINT

MILES
 MOVED

ROAD
CONDITIONSDAYS FROM
SPUD[illegible]

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO

LO

L.

1000

2

1

44

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5 E C

1

Figure 1

DATA

...

2

11

DAILY DRILL
DIRECTIONS TO
WELL

MAILING POINT

SHIPPING
POINT

MILES
MOVEDROAD
CONDITIONS

DAYS FROM
SPUD

TOUR MIDNIGHT TO 8 A.M.	From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles DRILL COLLARS No. O.D. I.D. Length Air Wt. Sub. Wt. C.B. Ft. Ft. up on Kelly																	REMARKS			TIME		
																					START STOP INTVL		
	B No. Size Type Jct./W.C. Serial No. Wgt. R.P.M. Drilled or Cored Hrs. Roomed Hrs. Pump No. Pump Pressure S.P.M. Table Torque T. B. G.																	Log at 1000 ft			12 12 12		
	1 RR 8 3/4 SIS 12 1/2 12 1/2 12 1/2																	TRIP OUT 12 1/2 12 1/2			12 12 12		
	S																	R.A. 12 1/2 12 1/2			12 12 12		
	M.U.D. 12 mn. 2 a.m. 4 a.m. 6 a.m. PUMP 12 mn. 2 a.m. 4 a.m. 6 a.m. PUMP 12 mn. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS Next Oil Change																	Run in			4 12 12		
	WEIGHT 9.7 No. 1 PRES-SURE No. 2 PRES-SURE																	Circ & Coll Mus To Test			5 8 2 1/2		
	VISCOSITY 52 MODEL S.F.W. MODEL S.F.W.																						
	GEL LINER SIZE LINER SIZE																						
	W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS At Feet Degrees																	RESERVE					
ADDITIVES: CM.C. = 100 165 GENERAL: CHANGED OIL + FUEL FILTER IN ALL CIM MOTORS																	Temp. Water						
Drilling Line Record Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																	FIRE			DRILLER'S SIGNATURE			
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles DRILL COLLARS No. O.D. I.D. Length Air Wt. Sub. Wt. C.B. Ft. Ft. up on Kelly																	Circ & Coll Mus To Test			800 900 1			
B No. Size Type Jct./W.C. Serial No. Wgt. R.P.M. Drilled or Cored Hrs. Roomed Hrs. Pump No. Pump Pressure S.P.M. Table Torque T. B. G.																	HOIST To Test			900 10 30 1 1/2			
1 RR 8 3/4 SIS 12 1/2 12 1/2 12 1/2																	STRAP in 1000 ft of pipe To Test			10 30 11 30 1			
M.U.D. 8 a.m. 10 a.m. 12 noon 2 p.m. PUMP 8 a.m. 10 a.m. 12 noon 2 p.m. PUMP 8 a.m. 10 a.m. 12 noon 2 p.m. MOTOR HOURS Next Oil Change																	MAKE UP Testing Tool Run in			11 30			
WEIGHT 9.9 No. 1 PRES-SURE No. 2 PRES-SURE																	W/4 STAND of collar and			245 3 1/2			
VISCOSITY 55 MODEL S.F.W. MODEL S.F.W.																	MAKE UP MORE Testing TOOLS			245 900 1 1/2			
GEL LINER SIZE LINER SIZE																	Run in HOLE						
W.L. 20 F.C. 1/2 pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS At Feet Degrees																	FIRE			DRILLER'S SIGNATURE			
ADDITIVES: Gel 200 GENERAL:																	Temp. Water						
Drilling Line Record Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																	MAKE UP HENDER & CHICK SAND			400 430 1/2			
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles DRILL COLLARS No. O.D. I.D. Length Air Wt. Sub. Wt. C.B. Ft. Ft. up on Kelly																	Testing			430 7 45 2 1/2			
B No. Size Type Jct./W.C. Serial No. Wgt. R.P.M. Drilled or Cored Hrs. Roomed Hrs. Pump No. Pump Pressure S.P.M. Table Torque T. B. G.																	FULL COLLAR LOSS & BREAK			7 1/2			
1																	OFF HAND & CHICK SAND			8 1/2 1/2			
M.U.D. 4 p.m. 6 p.m. 8 p.m. 10 p.m. PUMP 4 p.m. 6 p.m. 8 p.m. 10 p.m. PUMP 4 p.m. 6 p.m. 8 p.m. 10 p.m. MOTOR HOURS Next Oil Change																	HOIST (LOSS' FLUID Recovery)			10 10 2 1/2			
WEIGHT No. 1 PRES-SURE No. 2 PRES-SURE																	BREAK DOWN PACKER			10 12 1 1/2			
VISCOSITY MODEL S.F.W. MODEL S.F.W.																							
GEL LINER SIZE LINER SIZE																							
W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS At Feet Degrees																	DST 1-1600-1870 SHUT IN 60 & 60						
ADDITIVES: GENERAL:																	OPEN 5-60. REC 1035' DPK & PAID						
Drilling Line Record Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																	IFP-47 IFP 565 151P-662 IFP 665						
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles DRILL COLLARS No. O.D. I.D. Length Air Wt. Sub. Wt. C.B. Ft. Ft. up on Kelly																	FIRE HP-802			DRILLER'S SIGNATURE			
B.O.P. Tested Elapsed Time Pressure Packing & Seal Inspected Date Crown & male Chk d. Fuel on Hand 12.01 a.m. gals. CASING REPORT RAN ITS CSG RENTAL EQUIPMENT ON HAND TRANSFER #																							
Mudbit Pipe Rams Blind Rams																	TO KB USED SAY CEM						
TOTAL Fuel on Hand 11.59 a.m. (actual) gals. PLUS PLUG DOWN A.M. P.M. DAYS FROM SPUD. TOTAL COMPANY TIME HRS. TOTAL CONTRACTOR'S TIME HRS.																							
FUEL USED gals. CEMENT RETURNS (YES, NO) EQUIPMENT CHANGES																							
TOTCO RING ON BIT = Boiler Operated: 24 Hrs. Fire Pump Chk d.																	Approved by Operator's Representative						
																	Approved by Toolpusher						

COM 42855

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO

LOCATION

Handwritten: *Handwritten text, possibly a signature or name.*

SE

TMV

RG

1

DA

12

MAILING
POINT

SHIPPING
POINT

MILES
MOVEDROAD
CONDITION:

DAYS FROM
SPED

From		Footage		To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly						
B	No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Drilled or Cored	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T	B	G					
S	7	8 1/4	SS	1/2 W 1/2	FN 724												K	U	N				
M.U.D.	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	9.8	9.8	9.8	9.8	No. 1 PRES-SURE					No. 2 PRES-SURE													
VISCOSITY	60	60	60	58	MODEL S.P.M.					MODEL S.P.M.													
GEL					LINER SIZE					LINER SIZE													
W.L.	21.2	F.C.	2.82	pH.	70	DESILTER: Hours Op:	U. Flow:	O. Flow:	SURVEYS	At Feet	Degrees												
ADDITIVES:	GENERAL:																						
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool	Weather	Water	Bbls.							
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly								
2871	TD							9	7		62283		720										
No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Drilled or Cored	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T	B	G						
8	8 1/4	SS	1/2 W 1/2	FN 724																			
M.U.D.	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT					No. 1 PRES-SURE					No. 2 PRES-SURE													
VISCOSITY					MODEL S.P.M.					MODEL S.P.M.													
GEL					LINER SIZE					LINER SIZE													
W.L.	F.C.	pH.	DESILTER: Hours Op:	U. Flow:	O. Flow:	SURVEYS	At Feet	Degrees															
ADDITIVES:	GENERAL:																						
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool	Weather	Water	Bbls.							
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly								
No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Drilled or Cored	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T	B	G						
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT					No. 1 PRES-SURE					No. 2 PRES-SURE													
VISCOSITY					MODEL S.P.M.					MODEL S.P.M.													
GEL					LINER SIZE					LINER SIZE													
W.L.	F.C.	pH.	DESILTER: Hours Op:	U. Flow:	O. Flow:	SURVEYS	At Feet	Degrees															
ADDITIVES:	GENERAL:																						
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool	Weather	Water	Bbls.							
B.O.P.	Tested	Elapsed Time	Pressure	Packing & Seal Inspected Date	Crown-a-matic Chkd.	Fuel on Hand 12.31 a.m.	gals.	CASING REPORT	RAN	JTS	CSG	RENTAL EQUIPMENT ON HAND	TRANSFER #										
Hydril					Pig Savers Chkd.	Fuel Rec'd today (add)	gals.	TO	KB. USED	SAY	CEM												
Pipe Rams					Kelly Co's Chkd.	Fuel on Hand 11.59 p.m. (deduct)	gals.	PLUS	PLUG DOWN	A.M. P.M.	DAYS FROM SPUD.	TOTAL COMPANY TIME	TOTAL CONTRACTOR'S TIME										
Blind Rams					Fine Equip Chkd.	FUEL USED	gals.	CEMENT RETURNS - (YES/NO)	EQUIPMENT CHANGES	Approved by Operator's Representative	Approved by Toolpusher												
TOTCO RING ON BIT = Boiler Operated: 24 Hrs																							

REMARKS
BIG SERVICE CHECK FOR
KEND PAID TO LOG WAIT
ON LOG TRUCK.

RESERVE - 2"
BIG TANK - 3"

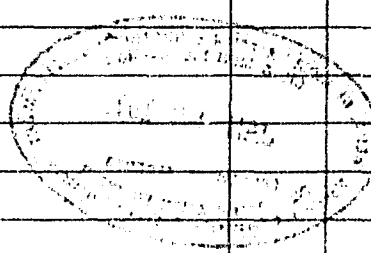
FIRE
CIRC wait on Log TRUCK
Big SERVICE to BOPS
SURVEY
STRAP cut To Log
Big To Log
Logging

FIRE
Loging

FIRE
DRILLER'S SIGNATURE

FIRE
DRILLER'S SIGNATURE

FIRE
DRILLER'S SIGNATURE



DAILY DRILLING LOG
DIRECTIONS TO
WELL

	From		Footage		T.		Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Spongs	Singles	DRILL COLLARS	No.	C.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME			
	No.	Size	Type	Jets/W.C.	Serial No.	Wat.	R.P.H.	Drilled	Hrs.	Reamed		Hrs.	Pump No.	Pump Pressure	S.P.A.	Torque	T.	B.	G.		START	STOP	INVT	
TOURMIS	2741	47	2788	7 1/4	72	2219.68						4	4	2 1/2	100.00		7.20		2			12 ⁰⁰	2 ³⁰	2 ⁴⁵
B	No.	Size	Type	Jets/W.C.	Serial No.	Wat.	R.P.H.	Drilled	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.A.	Torque	T.	B.	G.			DRILL			
I	7	8 1/4	SSS	1/4 1/2	FW 734	30	45	#188	30			1	750	64							R.G. SERR + CHACK BOP?	2 ⁴⁵	5 ⁰⁰	7 ¹⁵
T																								
S																					DRILL	5 ⁰⁰	6 ⁰⁰	6 ¹⁵

MUD	12 mn.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 mn.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 mn.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS	Next Oil Change						
WEIGHT	96	96	96	96	No. 1 PRES. SURE	225	250	250	250	No. 2 PRES. SURE	225	250	250	250	1							
VISCOSITY	40	40	40	42	MODEL S.P.M.	64	64	64	64	MODEL S.P.M.	64	64	64	64	2							
GEL					LINER SIZE	3 1/2	14			LINER SIZE	3 1/2	14			3							
W.L.	16.6	F.C.	2.32	pH.	7.2	DESILTER, Hours Cp:		U. Flow:		O. Flow:		SURVEYS										
ADDITIVES:						GENERAL:						At Feet	Degrees									
																Weather	Water:					
																Temp.						
																RESERVE - 2' 6"		FUEL				

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Feet Left on Spool			
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Feet up on Kelly	
2794	67	2855	7 1/4	73m	37	2312.70		14	6		522.83				28	
No.	Size	Type	Joint W.C.	Serial No.	Wt.	R.P.M.	Drilled or Casing	Hrs.	Leamed	Hrs.	Depth Feet	Pressure P.S.I.	Temp. Fahrenheit	Y	B	U
1	9 3/4	REG	5000	101738	30	45	259	37 1/2			300	60	100	100		

PUMP	8 a.m.				10 a.m.				12 noon				2 p.m.				PUMP	8 a.m.				10 a.m.				12 noon				2 p.m.				MOTOR HOUR	Next Oil Change
	WEIGHT	9.8	9.7	9.6	9.7	No. 1	PRES. SUPE	750	750	750	750	No. 2	PRES. SUPE	750	750	750		750																	
VISCOSITY	43	41	40	40	MODEL	P.P.M.	64	✓	✓	✓	YODEL	S.P.M.	250	✓	✓	✓	✓																		
GEL					300	LINER SIZE	5 1/2	X 14			250	LINER SIZE	5 1/2	X 15																					
W.	22.6	P.C.	432	pH	8.0	DESILTER: Hours Op:	U. Flow:	O. Flow:	SURVEYS																										
ADD:	YES	GENERAL:														At Feet	Degrees																		
Weather															Water																				

Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool	Bbls.	Temp.	Remarks		
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stand	Singles	DRILL COLLARS	N.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	FIRES nil		
2855	16	2871	24	73M	2312	70		14	7	2 1/2	522.83	7.20		7	DRILLER'S SIGNATURE			
No.	Size	Type	Wt. (N.C.)	Serial No.	Wt.	S.P.A.	Drilled or Core	Hrs.	Reamed	No.	Pump No.	Pump Pressure	S.P.A.	Table Torque	T	S	C	
7	8 3/4	536	44.6	724	30	45	271	90				250	60		K	U	N	
CIRC To Log & COND mud																400	615	2 1/2
WAIT ON LOG TRUCK.																6'5	12	5 1/4

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change	
	WEIGHT	9.7	9.7	9.8		9.8	No. 1	PRES. SURE	750		750	750	750	No. 2			PRES. SURE
VISCOSITY	43	43	45	60	MODEL	S.P.M.	64	64	64	64	MODEL	S.P.M.	64	64	64	64	
GEL					SIZE	5/8 X 1 1/2					SIZE	5/8 X 1 1/2					
W.L.	F.C.	pH.	DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees				
ADDITIVES:	GEL = 3500				GENERAL:												
																Weather	Water

H T	Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Site	Temp.	Bbls.	Ft. Left on Spool	FIRES		DRILLER'S SIGNATURE				
	B.O.P.	Tested	Elapsed Time	Pres- sure	Packing & Seal Inspected Date	Crownomatic Chk'd	Fuel on Hand 12:01 a.m.	gals.	CASING REPORT				RAN	ITS	CSG	RENTAL EQUIPMENT ON HAND			TRANSFER #				
	Hydril					Rig Savers Chk'd	Fuel Used Today (add)	gals.															
	Pipe Rams.					Kelly Cok Chk'd	TOTAL	gals.	TO				KB. USED	SAX	CEM								
	Blind Rams.					Fire Equip Chk'd	Fuel on Hand 11:59 p.m. (deduct)	gals.	PLUS				FLUG DOWN	A.M. P.M.	DAYS FROM SPUD.		TOTAL COMPANY TIME	HRS.	TOTAL CONTRACTOR TIME	HRS.			
TOTCO RING ON BIT #			Boiler Operated 241		Hrs.		FUEL USED	gals.	CEMENT RETURNS - (Y./S./NO)				EQUIPMENT CHARGES										

Approved by Operator's Representative	<i>[Signature]</i>
Approved by Toolpusher	<i>[Signature]</i>

DAILY DRILLING LOG
DIRECTIONS TO
WELL

FIG NO 15

LOCATION Field Pt. Wilson, Lang

LSD

SE

TV

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2

19

MAILING
POINT

SHIPPING
POINT

MILES
MOVEDROAD
CONDITIONS

DAYS FROM
SOLD

[illegible]

COM 42852

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELL

FIG NO 12

LOCATION

FINA ETAL WILLOW A ME

LSD

SEC

TWP

RGE

N

DATE

JAN 19

12 21

MAILING
POINTSHIPPING
POINTMILES
MOVEDROAD
CONDITIONSDAYS FROM
SPUD

TOUR	From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME		
																		START	STOP	INTV
1	2434	70	2504	7 3/4	59	1139	82		14	6	2 1/8	522	83	720		6	DRILL 8 3/4" HOPE	12 45	12 45	1 1/2
2	6	8 3/4	853A	7 1/2	29143	30	45	350	56								RIG SERVICE & B.O.P. ✓	1 15	1 30	1 1/4
3																	DRILL	1 30	8 25	6 1/2
M.U.D. 12 mn. 2 a.m. 4 a.m. 6 a.m. PUMP 12 mn. 2 a.m. 4 a.m. 6 a.m. PUMP 12 mn. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS Next Oil Change WEIGHT 9.4 9.4 9.1 9.5 No. 1 PRE-SURE 750 750 750 750 No. 2 PRE-SURE 750 750 750 750 VISCOSITY 42 40 32 40 MODEL 64 64 64 64 MODEL 64 64 64 64 GEL 350 LINER SIZE 5 1/2 X 11 1/2 W.L. 12.4 F.C. 1.0 pH. 7.0 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS At Feet Degrees 4 ADDITIVES: D.E. = 500.165 GENERAL: C.M.C. = 50.165 Weather Temp. 8bbs.																				
Drilling Line Record Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																				
4	2504	63	2571	7 3/4	62	2000	76		14	6	2 1/8	522	82	720		2	DRILL	8 45	8 45	1 1/2
5	6	8 3/4	853A	7 1/2	29143	30	45	350	56								RIG SERV + CHECK ROP	8 45	8 45	1 1/4
6																	DRILL	8 45	4 00	7 1/2
M.U.D. 8 a.m. 10 a.m. 12 noon 2 p.m. PUMP 8 a.m. 10 a.m. 12 noon 2 p.m. PUMP 8 a.m. 10 a.m. 12 noon 2 p.m. MOTOR HOURS Next Oil Change WEIGHT 9.5 9.5 9.6 9.7 No. 1 PRE-SURE 750 775 775 775 No. 2 PRE-SURE 775 775 775 775 VISCOSITY 38 42 42 43 MODEL 64 64 64 64 MODEL 64 64 64 64 GEL 350 LINER SIZE 5 1/2 X 14 1/2 W.L. 13.6 F.C. 2/32 pH. 7.0 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS At Feet Degrees 4 ADDITIVES: D.E. = 500.165 GENERAL: Channel along production zone 2600 Mississauga Weather Temp. 8bbs.																				
Drilling Line Record Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																				
7	2571	29	2600	3 3/4	5270	207	131		14	6	2 1/8	522	82	720		4	DRILL	4 15	4 15	1 1/4
8	6	8 3/4	853A	7 1/2	29143	30	45	350	56								RIG SERV + CHECK ROP	4 15	4 15	1 1/4
9	7	8 3/4	853A	7 1/2	29143	30	45	350	56								DRILL	4 15	8 00	3 45
M.U.D. 4 p.m. 6 p.m. 8 p.m. 10 p.m. PUMP 4 p.m. 6 p.m. 8 p.m. 10 p.m. PUMP 4 p.m. 6 p.m. 8 p.m. 10 p.m. MOTOR HOURS Next Oil Change WEIGHT 9.8 9.4 No. 1 PRE-SURE 750 750 No. 2 PRE-SURE 750 750 VISCOSITY 44 45 MODEL 64 64 MODEL 64 64 GEL 350 LINER SIZE 5 1/2 X 14 1/2 W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS At Feet Degrees 4 ADDITIVES: GENERAL: 2600 Mississauga Weather Temp. 8bbs.																				
Drilling Line Record Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																				
B.O.P. Tested Elapsed Time Pressure Packing & Seal Inspected Date Crown-a-matic Chk'd. Fuel on Hand 12 01 a.m. gals CASING REPORT RAN ITS CSG RENTAL EQUIPMENT ON HAND TRANSFER IT Hydrit R/a Snipers Chk'd. Fuel Rec'd Today (add) gals Pipe Rams Kelly Cock Chk'd. TOTAL gals TO KB. USED SAX CEM Blind Rams Fuel on Hand 11 59 p.m. (drain) gals PLUS FLUG DOWN A.M. P.M. DAYS FROM SPUD: TOTCO RING ON BIT # Boiler Operated: 24 Hrs Fire Equip. Chk'd. FUEL USED gals CEMENT RETURNS - (YES, NO) EQUIPMENT CHANGES Approved by Operator's Representative Approved by Toolpusher																				

DAILY DRILLING LOG
DIRECTIONS TO
WELL

MAILING
POINT—

SHIPPING
POINT

MILES
MOVEDROAD
CONDITIONSDAYS FROM
SPUD_____

LOG															REMARKS															TIME		
2203 83 2286 7 1/4 57 1720 32															Drill 8 1/4" Hole															START	STOP	INTVL
No. 6 8 1/4 2286 7 1/4 57 1720 32															RIG SERVICE & BOP'S															2 1/2	2 1/2	1/4
															Drill															2 1/2	8 1/2	3 1/2
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 45 9.3 No. 1 PRE-SURE 700 700 700 700 No. 2 PRE-SURE																																
VISCOSITY 75 42 MODEL S.P.M. 67 67 67 67 MODEL S.P.M.																																
GEL 100 LINER SIZE 5 1/2 x 14 7.0 LINER SIZE 5 1/2 x 15																																
W.L. 16.5 F.C. pH. 7 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																																
ADDITIVES: 55L #500 lbs GENERAL: CMC #50 lbs																																
Drilling Line Record																																
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles																																
2286 74 2360 7 1/4 58 1814 63																																
No. 6 8 1/4 2360 7 1/4 58 1814 63																																
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 96 96 95 9.5 No. 1 PRE-SURE 700 700 700 700 No. 2 PRE-SURE																																
VISCOSITY 38 40 38 43 MODEL S.P.M. 67 67 67 67 MODEL S.P.M.																																
GEL 100 LINER SIZE 5 1/2 x 14 7.0 LINER SIZE 5 1/2 x 15																																
W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																																
ADDITIVES: 55L #500 lbs GENERAL: CMC #50 lbs																																
Drilling Line Record																																
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles																																
2360 74 2434 7 1/4 58 1877 41																																
No. 6 8 1/4 2434 7 1/4 58 1877 41																																
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 95 95 94 9.4 No. 1 PRE-SURE 700 700 700 700 No. 2 PRE-SURE																																
VISCOSITY 43 42 40 42 MODEL S.P.M. 67 67 67 67 MODEL S.P.M.																																
GEL 100 LINER SIZE 5 1/2 x 14 7.0 LINER SIZE 5 1/2 x 15																																
W.L. 12.8 F.C. pH. 7.1 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																																
ADDITIVES: 55L #500 lbs GENERAL: Change stand packing on 10/10/80																																
Drilling Line Record																																
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles																																
2434 74 2508 7 1/4 58 1941 41																																
No. 6 8 1/4 2508 7 1/4 58 1941 41																																
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 95 95 94 9.4 No. 1 PRE-SURE 700 700 700 700 No. 2 PRE-SURE																																
VISCOSITY 43 42 40 42 MODEL S.P.M. 67 67 67 67 MODEL S.P.M.																																
GEL 100 LINER SIZE 5 1/2 x 14 7.0 LINER SIZE 5 1/2 x 15																																
W.L. 12.8 F.C. pH. 7.1 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																																
ADDITIVES: 55L #500 lbs GENERAL: Change stand packing on 10/10/80																																
Drilling Line Record																																
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles																																
2508 74 2582 7 1/4 58 2005 41																																
No. 6 8 1/4 2582 7 1/4 58 2005 41																																
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 95 95 94 9.4 No. 1 PRE-SURE 700 700 700 700 No. 2 PRE-SURE																																
VISCOSITY 43 42 40 42 MODEL S.P.M. 67 67 67 67 MODEL S.P.M.																																
GEL 100 LINER SIZE 5 1/2 x 14 7.0 LINER SIZE 5 1/2 x 15																																
W.L. 12.8 F.C. pH. 7.1 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																																
ADDITIVES: 55L #500 lbs GENERAL: Change stand packing on 10/10/80																																
Drilling Line Record																																
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles																																
2582 74 2656 7 1/4 58 2069 41																																
No. 6 8 1/4 2656 7 1/4 58 2069 41																																
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 95 95 94 9.4 No. 1 PRE-SURE 700 700 700 700 No. 2 PRE-SURE																																
VISCOSITY 43 42 40 42 MODEL S.P.M. 67 67 67 67 MODEL S.P.M.																																
GEL 100 LINER SIZE 5 1/2 x 14 7.0 LINER SIZE 5 1/2 x 15																																
W.L. 12.8 F.C. pH. 7.1 DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																																
ADDITIVES: 55L #500 lbs GENERAL: Change stand packing on 10/10/80																																
Drilling Line Record																																
From Footage To Hrs. on Bottom Wt. Drill Pipe (1000 lbs.) Stands Singles																																
2656 74 2730 7 1/4 58 2131 41																																
No. 6 8 1/4 2730 7 1/4 58 2131 41																																
M.U.D. 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. PUMP 12 m. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																																
WEIGHT 95 95 94 9.4 No. 1 PRE-SURE 700 700 700 7																																

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO. 16

LOCATION FINEA 27 1/2

LSD SEC 66

TWP

RGE

W

DATE

APR 17

MAILING
POINTSHIPPING
POINTMILES
MOVEDROAD
CONDITIONSDAYS FROM
SPUD

From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		REMARKS			TIME												
No.		Size		Type		Ints/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corod		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.		START			STOP			INTVL.					
1967		77		1041		7 1/4		56		1000		07																				Drill 8 1/4" Hole			12:00			12:15			15						
6		8 1/4		SSA		10 1/4		24173		30		45		90		7 1/4								1		700		67		18		14		14		Drill 8 1/4" Hole			12:15			12:30			15		
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change															
WEIGHT		45		75		15		No. 1		PRES-SURE		700		700		700		700		No. 2		PRES-SURE		700		700		700		700		700															
VISCOSITY		41		41		41		MODEL		S.P.M.		64		64		64		64		MODEL		S.P.M.		64		64		64		64		64															
GEL								300		LINER SIZE		5 1/2		X 1 1/4						300		LINER SIZE		5 1/2		X 1 1/4																					
W.L.		210		F.C.		132		pH.		8.5		DESILTER: Hours Op:		U. Flow:		O. Flow:				SURVEYS		At Feet		Degrees																							
ADDITIVES								GENERAL																																							
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool																					
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Drill			Rig Serv & Check BOPs			Drill									
2044		83		2127		7 1/4		56		1562.62				14		6		27 1/8		522.83		7.20								6					8:00			10:00			2 1/2						
No.		Size		Type		Ints/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corod		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.													
6		8 1/4		SSA		10 1/4		24173		30		45		90		7 1/4								1		700		67		18		14		14													
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change															
WEIGHT		45		75		15		No. 1		PRES-SURE		700		700		700		700		No. 2		PRES-SURE		700		700		700		700		700															
VISCOSITY		41		41		41		MODEL		S.P.M.		64		64		64		64		MODEL		S.P.M.		64		64		64		64		64															
GEL								300		LINER SIZE		5 1/2		X 1 1/4						300		LINER SIZE		5 1/2		X 1 1/4																					
W.L.		210		F.C.		132		pH.		8.5		DESILTER: Hours Op:		U. Flow:		O. Flow:				SURVEYS		At Feet		Degrees																							
ADDITIVES								GENERAL																																							
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool																					
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Drill			Rig Serv & Check BOPs			Drill									
2127		76		2203		7 1/2		56		1657.04				14		6		27 1/8		522.83		7.20								24					4:00			4:00			0						
No.		Size		Type		Ints/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corod		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.													
6		8 1/4		SSA		10 1/4		24173		30		45		90		7 1/4								1		700		67		18		14		14													
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change															
WEIGHT		45		75		15		No. 1		PRES-SURE		700		700		700		700		No. 2		PRES-SURE		700		700		700		700		700															
VISCOSITY		41		41		41		MODEL		S.P.M.		64		64		64		64		MODEL		S.P.M.		64		64		64		64		64															
GEL								300		LINER SIZE		5 1/2		X 1 1/4						300		LINER SIZE		5 1/2		X 1 1/4																					
W.L.		210		F.C.		132		pH.		8.5		DESILTER: Hours Op:		U. Flow:		O. Flow:				SURVEYS		At Feet		Degrees																							
ADDITIVES								GENERAL																																							
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool																					
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Drill			Rig Serv & Check BOPs			Drill									
2127		76		2203		7 1/2		56		1657.04				14		6		27 1/8		522.83		7.20								24					4:00			4:00			0						
No.		Size		Type		Ints/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corod		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.													
6		8 1/4		SSA		10 1/4		24173		30		45		90		7 1/4								1		700		67		18		14		14													
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change															
WEIGHT		45		75		15		No. 1		PRES-SURE		700		700		700		700		No. 2		PRES-SURE		700		700		700		700		700															
VISCOSITY		41		41		41		MODEL		S.P.M.		64		64		64		64		MODEL		S.P.M.		64		64		64		64		64															
GEL								300		LINER SIZE		5 1/2		X 1 1/4						300		LINER SIZE		5 1/2		X 1 1/4																					
W.L.		210		F.C.		132		pH.		8.5		DESILTER: Hours Op:		U. Flow:		O. Flow:				SURVEYS		At Feet		Degrees																							
ADDITIVES								GENERAL																																							
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool																					
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Drill			Rig Serv & Check BOPs			Drill									
2127		76		2203		7 1/2		56		1657.04				14		6		27 1/8		522.83		7.20								24					4:00			4:00			0						
No.		Size		Type		Ints/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corod		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.													
6		8 1/4		SSA		10 1/4		24173		30		45		90		7 1/4								1		700		67		18		14		14													
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change															
WEIGHT		45		75		15		No. 1		PRES-SURE		700		700		700		700		No. 2		PRES-SURE		700		700		700		700		700															
VISCOSITY		41		41		41		MODEL		S.P.M.		64		64		64		64		MODEL		S.P.M.		64		64		64		64		64															
GEL								300		LINER SIZE		5 1/2		X 1 1/4						300		LINER SIZE		5 1/2		X 1 1/4																					
W.L.		210		F.C.		132		pH.		8.5		DESILTER: Hours Op:		U. Flow:		O. Flow:				SURVEYS		At Feet		Degrees																							
ADDITIVES								GENERAL																																							
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool																					
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Drill			Rig Serv & Check BOPs			Drill									
2127		76		2203		7 1/2		56		1657.04				14		6		27 1/8		522.83		7.20								24					4:00			4:00			0						
No.		Size		Type		Ints/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corod		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.													
6		8 1/4		SSA		10 1/4		24173		30		45		90		7 1/4								1		700		67		18		14		14													
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change															

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELLRIG NO 12 LOCATION FIVE FT 42 WINDMILL L&D SEC 5 TWP RGE W DATE 11 16 1971
MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS DAYS FROM SPUD

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME			
No.	Size	Type	Jets/W.C.	Serial No.	Wgt.	R.P.M.	Drilled or Cased	Hrs.	Beam	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	S.	G.	START	STOP	INTVL.
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						11:00	11:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	11:15	11:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						11:30	11:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	11:45	12:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						12:00	12:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	12:15	12:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						12:30	12:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	12:45	13:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						13:00	13:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	13:15	13:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						13:30	13:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	13:45	14:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						14:00	14:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	14:15	14:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						14:30	14:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	14:45	15:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						15:00	15:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	15:15	15:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						15:30	15:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	15:45	16:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						16:00	16:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	16:15	16:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						16:30	16:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	16:45	17:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						17:00	17:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	17:15	17:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						17:30	17:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	17:45	18:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						18:00	18:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	18:15	18:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						18:30	18:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	18:45	19:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						19:00	19:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	19:15	19:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						19:30	19:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	19:45	20:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						20:00	20:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	20:15	20:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						20:30	20:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	20:45	21:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						21:00	21:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	21:15	21:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						21:30	21:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	21:45	22:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						22:00	22:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	22:15	22:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						22:30	22:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	22:45	23:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						23:00	23:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	23:15	23:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						23:30	23:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	23:45	24:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						24:00	24:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	24:15	24:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						24:30	24:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	24:45	25:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						25:00	25:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	25:15	25:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						25:30	25:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	25:45	26:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						26:00	26:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	26:15	26:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						26:30	26:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	26:45	27:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						27:00	27:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	27:15	27:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						27:30	27:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	27:45	28:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						28:00	28:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	28:15	28:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						28:30	28:45	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	28:45	29:00	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						29:00	29:15	15
5	8 1/4	ODS	12 1/2	27193	30	60	135	17 1/2			1	250	64		11	12	14	29:15	29:30	15
1891	50	1911	7 1/4	55	14	29	17	6	2 1/8	522	83	7.20						29:30	29:45	15
5	8 1/4	ODS	12 1/2	27193	30	60														

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELLRIG NO. 12 LOCATION Pine Bluff, Arkansas LSD SEC. 2 TWP. 36 RGE. 10 W. DATE Jan-15 1971
MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS DAYS FROM SPUD

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	START	STOP	INTVL.				
1668	56	1724	7 3/4	54	1133	77	4	6	2 1/4	83	720				1	DRILL 8 3/4" HOLES	12 00	3 21	3 1/2				
No.	Size	Type	Jets/W.C.	Serial No.	Wt.	R.P.M.	Drilled or Cored	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	B.	G.						
4	8 3/4	ODS	1/2 #3	27671	30	60	192	23 1/2			1	850	67			R	U	W	3 4	1 00	4 1/2		
W.D.	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	9.2	9.3	9.3	9.3	No. 1	PRES-SURE	850	850	850	850	No. 2	PRES-SURE											
VISCOSITY	30	45	112	42	MODEL	S.P.M.	14	64	67	67	MODEL	S.P.M.	1100	Roll									
GEL					20	LINER SIZE	3 1/2	1 1/4			20	LINER SIZE	3 1/2	1 1/4									
W.L.	8	F.C.	pH. 7.6	DESILTER, Hours Op.	J. Flow:	O. Flow:	SURVEYS	At Feet	Degrees														
ADDITIVES:				GENERAL:																			
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool										
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	START	STOP	INTVL.				
1724	43	1766	4 1/4	55	1217	86	4	6	2 1/4	522	60	720			22	DRILL	5 00	8 12	1 1/4				
No.	Size	Type	Jets/W.C.	Serial No.	Wt.	R.P.M.	Drilled or Cored	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	B.	G.						
4	8 3/4	ODS	1/2 #3	27671	30	60	192	23 1/2			1	850	67			R	U	W	5 12	8 12	1 1/4		
W.D.	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	9.2	9.3	9.3	9.3	No. 1	PRES-SURE	800	800	800	800	No. 2	PRES-SURE											
VISCOSITY	38	40		48	MODEL	S.P.M.	64	64	64	64	MODEL	S.P.M.	1100	Roll									
GEL					20	LINER SIZE	3 1/2	1 1/4			20	LINER SIZE	3 1/2	1 1/4									
W.L.	8 1/2	F.C. 482	pH. 7.6	DESILTER, Hours Op.	U. Flow:	O. Flow:	SURVEYS	At Feet	Degrees														
ADDITIVES:				GENERAL:																			
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool										
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	START	STOP	INTVL.				
1766	65	1831	7 3/4	55	1217	86	4	6	2 1/4	522	60	720			18	DRILL	4 00	6 21	2 1/4				
No.	Size	Type	Jets/W.C.	Serial No.	Wt.	R.P.M.	Drilled or Cored	Hrs.	Reamed	Hrs.	Pump No.	Pump Pressure	S.P.M.	Table Torque	T.	B.	G.						
4	8 3/4	ODS	1/2 #3	27671	30	60	192	23 1/2			1	850	67			R	U	W	6 12	6 21	2 1/4		
W.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	9.3	9.3	9.4	1.3	No. 1	PRES-SURE	850	850	850	850	No. 2	PRES-SURE											
VISCOSITY	46	44	40	45	MODEL	S.P.M.	64	64	64	64	MODEL	S.P.M.	1100	Roll									
GEL					20	LINER SIZE	3 1/2	1 1/4			20	LINER SIZE	3 1/2	1 1/4									
W.L.	8 1/2	F.C. 732	pH. 7.6	DESILTER, Hours Op.	U. Flow:	O. Flow:	SURVEYS	At Feet	Degrees														
ADDITIVES:				GENERAL:																			
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip	Feet or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool										
B.O.P.	Tested	Elapsed Time	Pres-sure	Packing & Seal Inspected Date	Crown & Seal Chk'd	Fuel on Hand 12:01 a.m.	gals.	CASING REPORT	RAN	ITS	CSG	RENTAL EQUIPMENT ON HAND	TRANSFER										
Mud					Ria Savers Chk'd	Fuel Rec'd Today (add)	gals.																
Pipe Rams					Kelly Cork Chk'd	TOTAL	gals.																
Blind Rams					Firm Equip. Chk'd	Fuel on Hand 11:59 a.m. (deduct)	gals.																
TOTCO RING ON BIT		Boiler Operated	24	Hrs		FUEL USED	gals.																
														CEMENT RETURNS - (YES/NO)		EQUIPMENT CHANGES		APPROVED BY		TOTAL COMPANY TIME		TOTAL CONTRACTOR'S TIME	
																		Operator's Representative		HRS.		TIME	
																		Approved by Toolpusher					

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO. 12 LOCATION 104 18th Street NW ASD ✓ SEC 16 TWP 1 RGE 1 W. 1 DATE 5-20-17 1931

MAILING
POINT

SHIPPING
POINT

MILES
MOVED

ROAD
CONDITIONS

DAYS FROM
SPUD

COM 42921

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO	12	LOCATION	PINA RT 92 WILLOW LAKE	LSD	J - 66	TWP		RGE		N.		DATE	Jan. 13	71
MAILING POINT		SHIPPING POINT		MILES MOVED		ROAD CONDITIONS		DAYS FROM SPID						

[illegible]

DAILY DRILLING LOG
DIRECTIONS TO
WELL

A. E. NO. 12 LOCATION FIND ETLA WILLOW LAKE T66 LSD _____ SEC. _____ TWP _____ RGE. _____ W. _____ DATE Jan 12 1971

MAILING POINT	SHIPPING POINT	MILES MOVED	ROAD CONDITIONS	DAYS FROM SPUD
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[illegible]

COM 42919

DAILY DRILLING LOG
DIRECTIONS TO
WELL

FIG NO 12 LOCATION FINN ELEM WILLOW LAKE TUE LSD TUE SEC. TWP. RCE W. DATE Jan 11 1971

MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS DAYS FROM SP.

[illegible]

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO 12 LOCATION FINA WETTH WILLER LAK TWP 316 SEC 1 RGE 1 W 1 DATE Jan 10 1971

MAILING POINT _____ SHIPPING POINT _____ MILES MOVED _____ ROAD CONDITIONS _____ DAYS FROM SELL _____

[illegible]

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELLRIG NO 12 LOCATION FINE BETA WILLOW LAKE JOB SEC TWP RGE DATE Jan 9 1971
MAILING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS DAYS FROM SPUD

From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		REMARKS			TIME									
B.		No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Coiled		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.		START STOP INTVL						
M.D.C.		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change		Trip Tight Hole work			1200 100 1							
WEIGHT										No. 1																										Pipe to Run casing			100 130 3					
VISCOSITY										MODEL																										Hoist			130 215 3					
GEL										L.I.N.E.R.																										Rig to Run casing			215 330 15					
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																				Run casing			330 900 4 1/2					
ADDITIVES:																																				RAN 18 JTS OF 72" 4" HOLE								
GENERAL:																																				+ JTS. 935" 36" STICK 607'								
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip										FIRE			4th Driller's Signature							
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		CIR. TO CEMENT			800 900 1 1/4									
605																2 1/4		20330		1222												CEMENTING W/ B.J.			910 1030 1 1/4									
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Coiled		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.		W.O.C.			1030 1100 5 1/2					
8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		MOTOR HOURS		Next Oil Change		RECEIVED BY 500 CEMENT												
WEIGHT										No. 1																								AS CONST. NIGHT CEMENT										
VISCOSITY										MODEL																								+ 2% PACK. GOOD RETURNS										
GEL										L.I.N.E.R.																								PLUG DOWN AT 1020 AM										
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																				FIRE			11th Driller's Signature					
ADDITIVES:																																												
GENERAL:																																												
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip																				
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		W.O.C.			410 600 2 1/4									
605																2 1/4		20330		1222												BACK ON HANDING JOINT			600									
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Coiled		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.		CUT OFF CON. COLLAR								
4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change		SREW ON CASING BOWL			900 1100 1 1/2									
WEIGHT										No. 1																								NIPPLE UP BOPS			800 1200 4							
VISCOSITY										MODEL																																		
GEL										L.I.N.E.R.																																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																				OVERTIME BY KEN BRENNAN								
ADDITIVES:																																				JAMES DOIDGE NORMAN SAUARD								
GENERAL:																																				LAWRENCE BERKNOLZ REQUESTED								
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip										By FINE. 4 HRS. EACH.										
B.O.P.		Tested		Elapsed Time		Pressure		Filling & Seal Indicated Date		Crown & male Chk d		Fuel on Hand 12:01 a.m.		gals.		CASING REPORT		RAN		JTS		CSG		RENTAL EQUIPMENT ON HAND		TRANSFER #																		
Hydral										Rig Savers Chk d		Fuel Rec'd Today (total)		gals.																														
Flow Ram										Kelly Cock Chk d		TOTAL		gals.																														
Blind Pumps										Fuel on Hand 11:50 p.m. (total)		gals.																																
TOTCO RING ON BIT #										Fuel Equip Chk d		FUEL USED		gals.																														

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELLRIG NO. 12 LOCATION FINK ETAL WILLOW LAKE J16 L5D SEC TWP RGE N DATE Jan 8 1971
MA LING POINT SHIPPING POINT MILES MOVED ROAD CONDITIONS DAYS FROM SPUC

From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Standards		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		REMARKS		TIME						
No.		Size		Type		Jct/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Corred		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		S.		G.		START STOP INTVL				
320		174		495		6 1/2		32		24114						4		7		2 1/2		17445						1222		12		DRILL 13 1/4 HOLE		1200 1245 1/4						
1		174		DST		W.C.		K4		1750		190		495		234						1-2		400				R & M						Rig SERV		1245 1300 1/4				
																																		SURVEY		1300 1345 1/4				
MUD		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 mn.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change		DRILL 13 1/4 HOLE		1345 230 1/4				
WEIGHT		7.7		7.8		7.7		7.8		No. 1		PRES-SURE		400		L		400		No. 2		PRES-SURE		400		L		400		1		444		2		SURVEY		230 245 1/4		
VISCOSITY		65		65		60		55		MODEL		S.P.M.		300		L		2.96		MODEL		S.P.M.		2.96		L		2.96		3		475		3		DRILL 13 1/4 HOLE		245 400 1/4		
GEL										300		L		2.96		L		2.96		L		2.96		L		2.96		L		2.96		L		L		SURVEY		400 415 1/4		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees		Weather		Water		Temp.		Rbbs.		Fires		DRILLER'S SIGNATURE		TIME		START STOP INTVL								
ADDITIVES:		GENERAL:																																		415 545 1 1/2				
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool										545 600 1/4				
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Standards		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		SURVEY @ 475' 1/2"		600 645 1/4						
495		50		565		6 1/4		32		314		AD		4		500		202		80		12.82		15								DRILL 13 1/4 HOLE		645 700 1/4						
1		174		DST		W.C.		K4		1750		190		495		234						1-2		400				R & M						DRILL 13 1/4 HOLE		700 900 1 1/4				
																																				DRAIN WATER LINES		900 945 1/4		
MUD		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		MOTOR HOURS		Next Oil Change		RIG SERVICE		945 930 1/4				
WEIGHT		10.2		10.2		10.2		10.2		No. 1		PRES-SURE		50		50		50		No. 2		PRES-SURE		500										SURVEY @ 506'		930 130 1/4				
VISCOSITY		68		68		70		70		MODEL		S.P.M.		62		62		62		MODEL		S.P.M.		60										DRILLING 13 1/4" HOLE		130 125 1/4				
GEL										300		L		5 1/2 X 17		2.96		L		5 1/2 X 15		2.96		L		2.96		L		2.96		L		SURVEY @ 538' 1 1/4"		125 400 2 1/4				
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees		Weather		Water		Temp.		Rbbs.		Fires		DRILLER'S SIGNATURE		TIME		START STOP INTVL								
ADDITIVES:		GENERAL:																																				400 500 1		
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												500 538 1 1/4		
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Standards		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		DRILLING 13 1/4" HOLE		538 570 1 1/4						
565		40		605		3 1/2		32		6				4		8		2 1/2		203		30		1222		23						SURVEY @ 570' 1/4"		570 600 1/4						
1		174		DST		W.C.		K4		1750		190		495		234						1-2		400				R & M						DRILLING 13 1/4" HOLE		600 615 1/4				
																																				RIG SERVICE		615 645 1/4		
MUD		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change		TRIP TO MEASURE OUT.		645 945 2 1/2				
WEIGHT		10.2		10.2		10.2		10.2		No. 1		PRES-SURE		500						No. 2		PRES-SURE		500										DRILL 13 1/4 HOLE		945 1030 1 1/4				
VISCOSITY		72		72		91		91		MODEL		S.P.M.		10		10		10		MODEL		S.P.M.		10										SURVEY 605		1030 1045 1/4				
GEL										300		L		5 1/2 X 17		2.96		L		5 1/2 X 15		2.96		L		2.96		L		2.96		L		TRIP HOLE TIGHT T-T HOLE		1045 1100 1/4				
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees		Weather		Water		Temp.		Rbbs.		Fires		DRILLER'S SIGNATURE		TIME		START STOP INTVL								
ADDITIVES:		GENERAL:																																				1100 1110 1		
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												1110 1120 1/4		
B.O.P.		Tested		Elapsed Time		Pres-sure		Packing & Seal Inspected Date		Crown-o-matic Chkd.		Fuel on Hand 12:01 a.m.		gals.		CASING REPORT		RAN		JTS		CSG		RENTAL EQUIPMENT ON HAND		TRANSFER #														
Hydril										Rig Savers Chkd.		Fuel Rec'd Today (add)		gals.		TO		KB. USED		SAY		CEM																		
Pipe Rams.										Kelly Cack Chkd.		TOTAL		gals.		PLUS		PLUG DOWN		A.M.		P.M.		DAYS FROM SPUD.		TOTAL COMPANY TIME		TOTAL CONTRACTOR'S TIME		HRS.		HRS.								
Blind Rams.										Time Fault Chkd.		FUEL USED		gals.		CEMENT RETURNS - (YES / NO)		EQUIPMENT CHARGES																						
TOTCO RING ON BIT ±																																								
Boiler Operated: 24																																								
Hrs.																																								
Approved by Operator's Representative:																																								
Approved by Toolpusher:																																								

COMMONWEALTH DRILLING

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO 12

LOCATION FINN FINE WILLOW LAKE 566

LSD SEC TWP RGE W DATE Jan 7 71

From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		REMARKS		TIME				
0		150		150		7		22H																														
No.		Size		Type		Jct/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cased		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.		START STOP INTVL		
1		1 3/4		DSJ		H 1/2		F1250		2		180		150		7																		Rig SERVICE DRILL 1 3/4" HOLE SURVEY DRILL 1 3/4" HOLE SURVEY DRILL 1 3/4" HOLE SURVEY DRILL 1 3/4" HOLE			1200 1215 15 1215 315 3 315 390 75 390 515 125 515 530 15 530 645 115 645 700 65 700 800 100	
M.U.D.		12 m.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 m.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 m.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change						
WEIGHT										No. 1		PRES. SURE								No. 2		PRES. SURE																
VISCOSITY										MODEL		S.P.M.								MODEL		S.P.M.																
GEL										LINER SIZE										LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES:								GENERAL:																														
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
150		50		200		3 1/2		26								3		2 7/8		17465		1322								27				Rig SERVICE SURVEY @ 170' 1 1/4" DRILLING 1 3/4" HOLE TRIP FOR HUGGED BIT WORK ON C-250 Mix MUD CLEAN 100' TO BOTTOM DRILLING 1 3/4" HOLE			800 815 15 815 830 15 830 1145 315 1145 1245 100 1245 215 170 215 245 30 245 345 100 345 400 55	
No.		Size		Type		Jct/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cased		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
1		1 3/4		DSJ		H 1/2		F1250		3		180		200		10																						
M.U.D.		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT										No. 1		PRES. SURE								No. 2		PRES. SURE																
VISCOSITY		45		70		38		50		MODEL		S.P.M.								MODEL		S.P.M.																
GEL										LINER SIZE										LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES:		GEL 1500						GENERAL:																														
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
200		120		320		4		700		9		90				4		2 1/2		17465		1222								39				Rig SERVICE DRILLING 1 3/4" HOLE SURVEY'S @ 227' 1 1/4" & 1 3/4" DRILLING 1 3/4" HOLE SURVEY 241' with RUN DRILL 1 3/4" HOLE SURVEY 246' DRILL 1 3/4" HOLE SURVEY 245' DRILL 1 3/4"			400 415 15 415 515 100 515 545 30 545 730 185 730 745 15 745 930 145 930 945 15 945 1000 55 1000 1045 45 1045 1130 85 1130 1145 15	
No.		Size		Type		Jct/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cased		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
1		3 1/4		DSJ		H 1/2		F1250		25		190		320		10																						
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT										No. 1		PRES. SURE								No. 2		PRES. SURE																
VISCOSITY										MODEL		S.P.M.								MODEL		S.P.M.																
GEL										LINER SIZE										LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES:								GENERAL:																														
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
B.O.P.		Tested		Elapsed Time		Pres. sure		Packing & Seal Inspected Date		Crown-a-matic Chk'd		Fuel on Hand 12:01 a.m.		gals.		CASING REPORT		RAN		ITS		CSG		RENTAL EQUIPMENT ON HAND														
Mycril										Rig Savers Chk'd		Fuel Rec'd Today (add)		gals.		TO		KB USED		SAX		CEM																
Pipe Ram										Rig Savers Chk'd		TOTAL		gals.																								
Blind Rams										Rig Savers Chk'd		Fuel on Hand 1:59 p.m. (deduct)		gals.		PLUS		FLUG DOWN		A.M. P.M.		DAYS FROM SPUD:		TOTAL COMPANY TIME		HRS		TOTAL CONTRACTOR'S TIME		HRS								
TOTCO RING ON BIT #								Boiler Operated: 24		Hrs		FUEL USED		gals.		CEMENT RETURNS (YES-NO)		EQUIPMENT CHANGES						Approved by Operator's Representative														
																								Approved by Toolpusher														

DAILY DRILLING LOG
DIRECTIONS TO
WELL

RIG NO 12 LOCATION FINN ETAL WILLOW LAKE JOB ESD _____ SEC _____ TWP _____ RGE _____ W _____ DATE Jan 6 19 71

MAILING POINT	SHIPPING POINT	MILES MOVED	ROAD CONDITIONS	DAYS FROM SPUD
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[illegible]