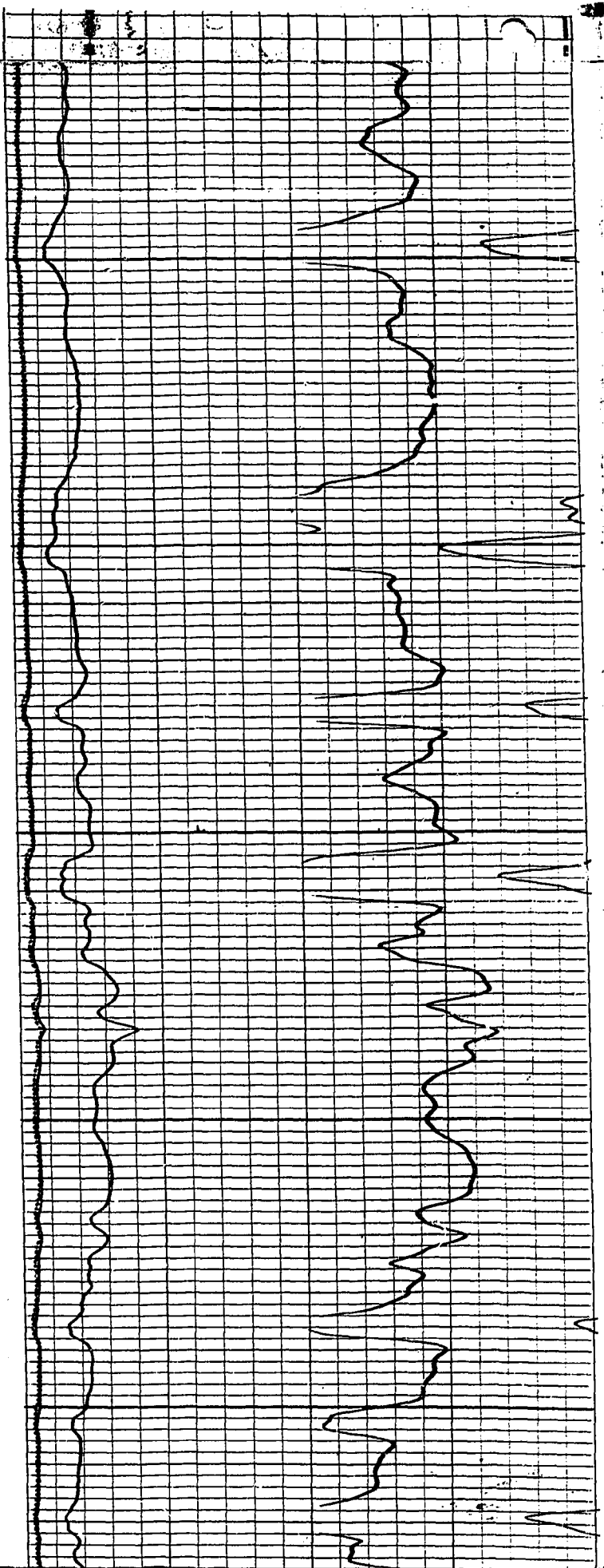
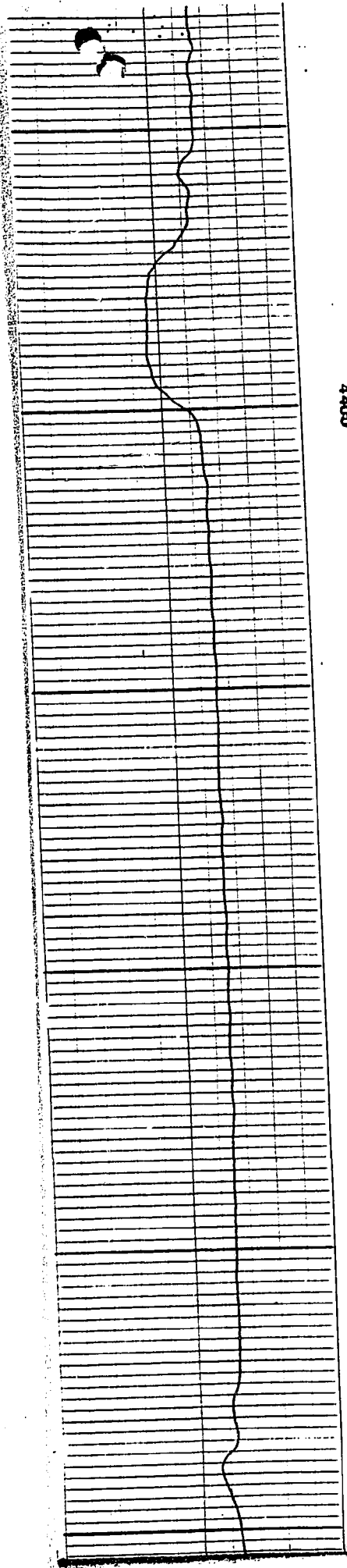


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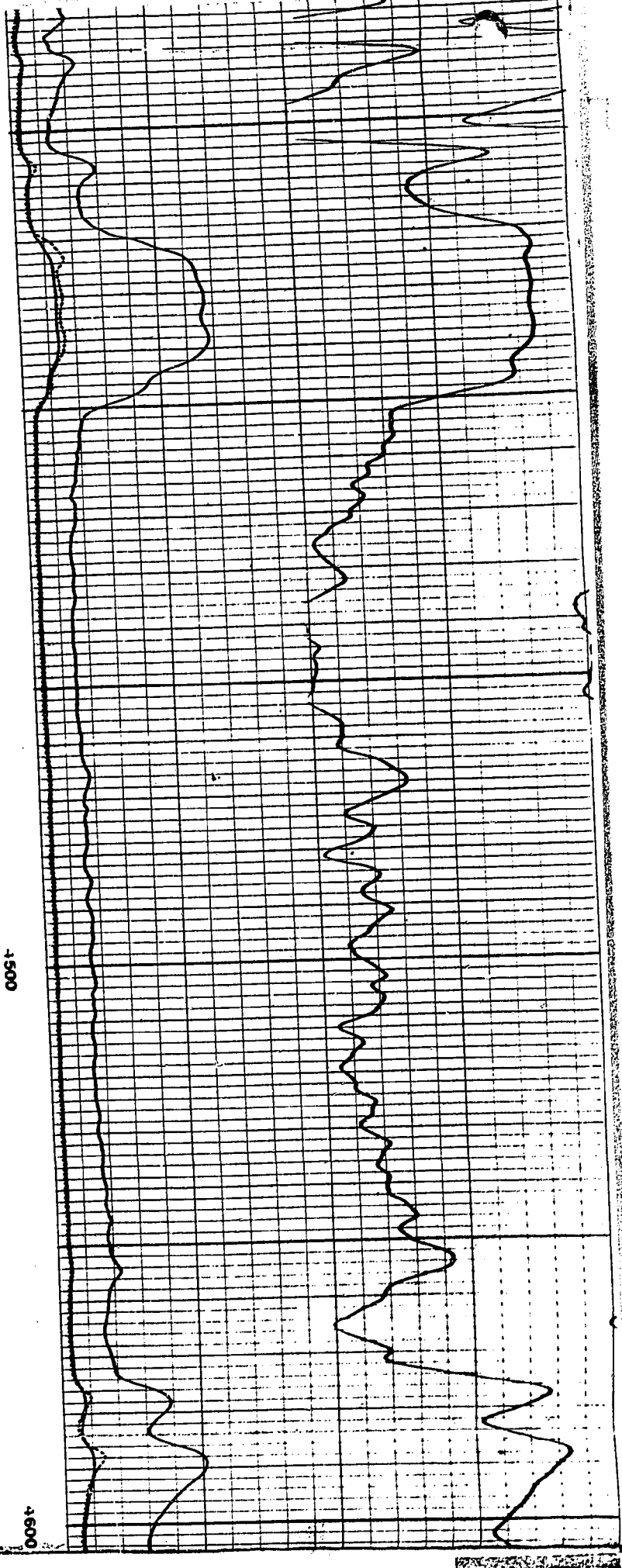
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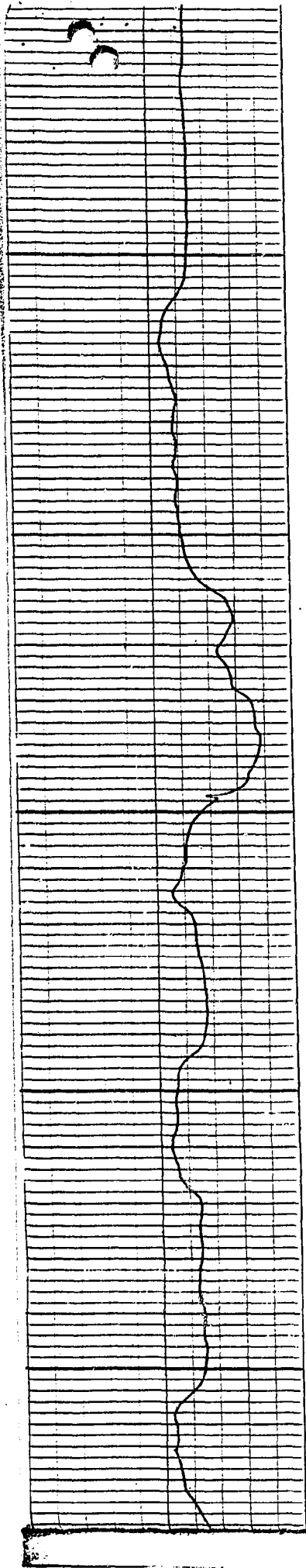


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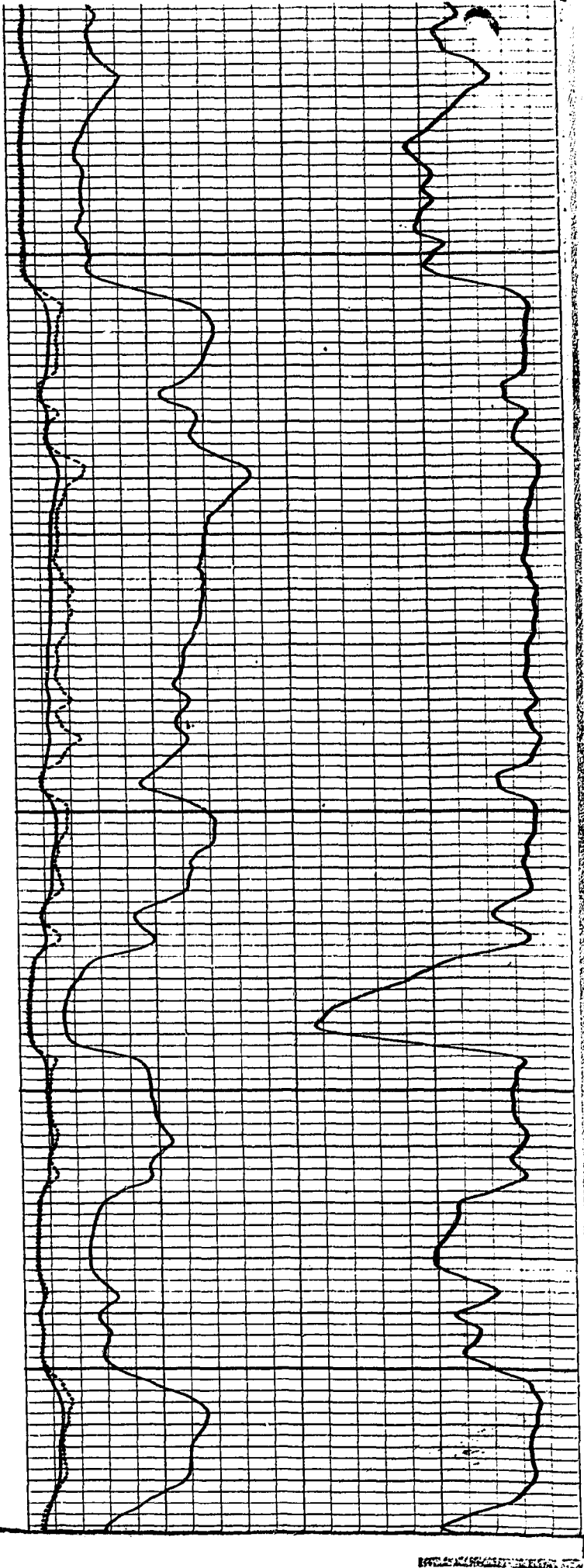
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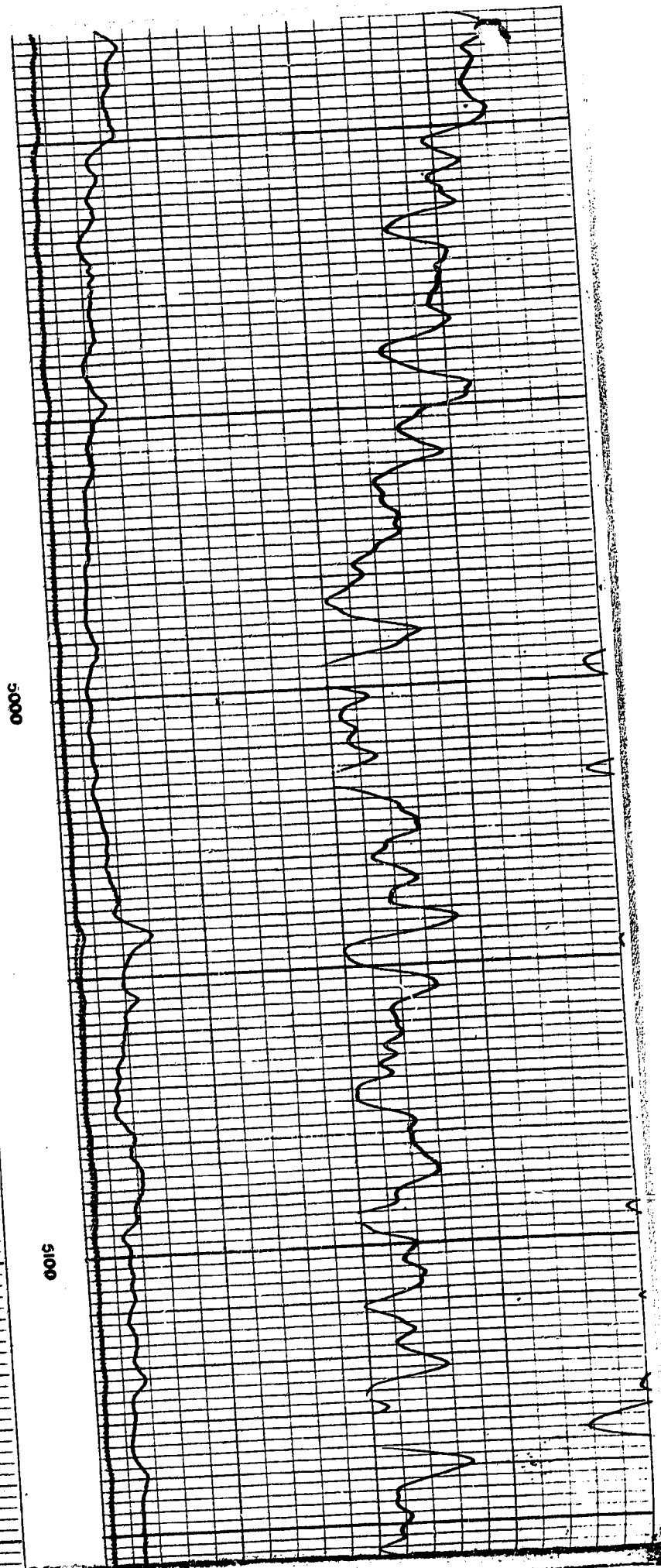
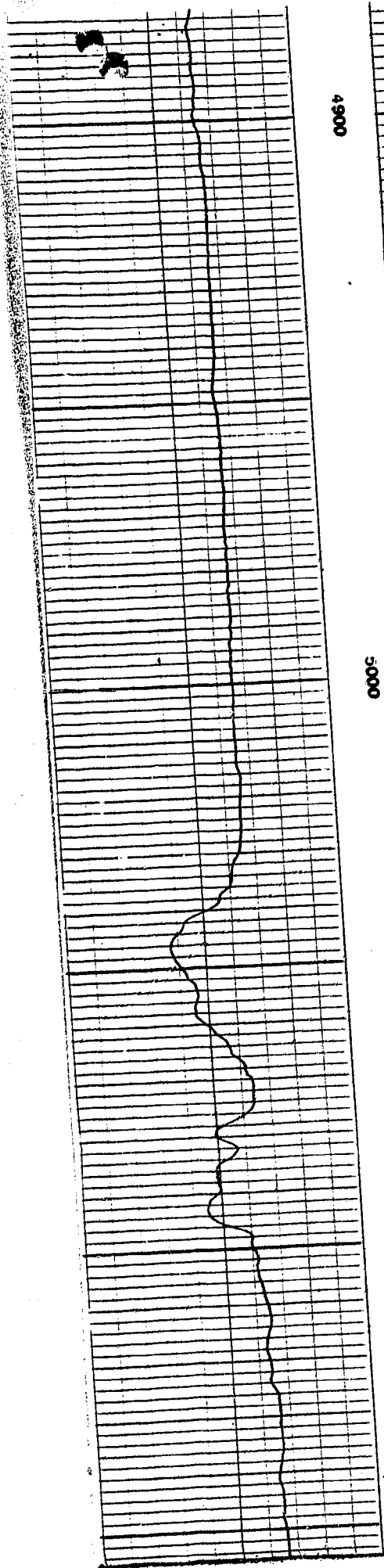
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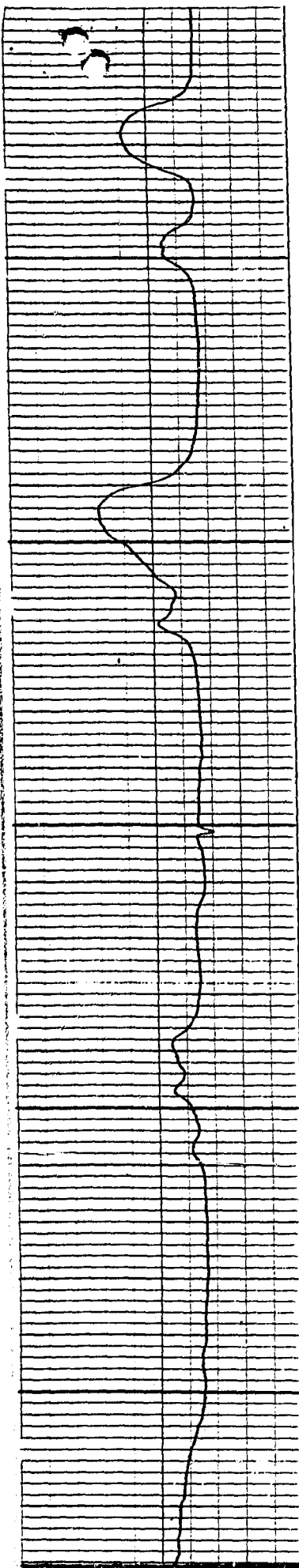


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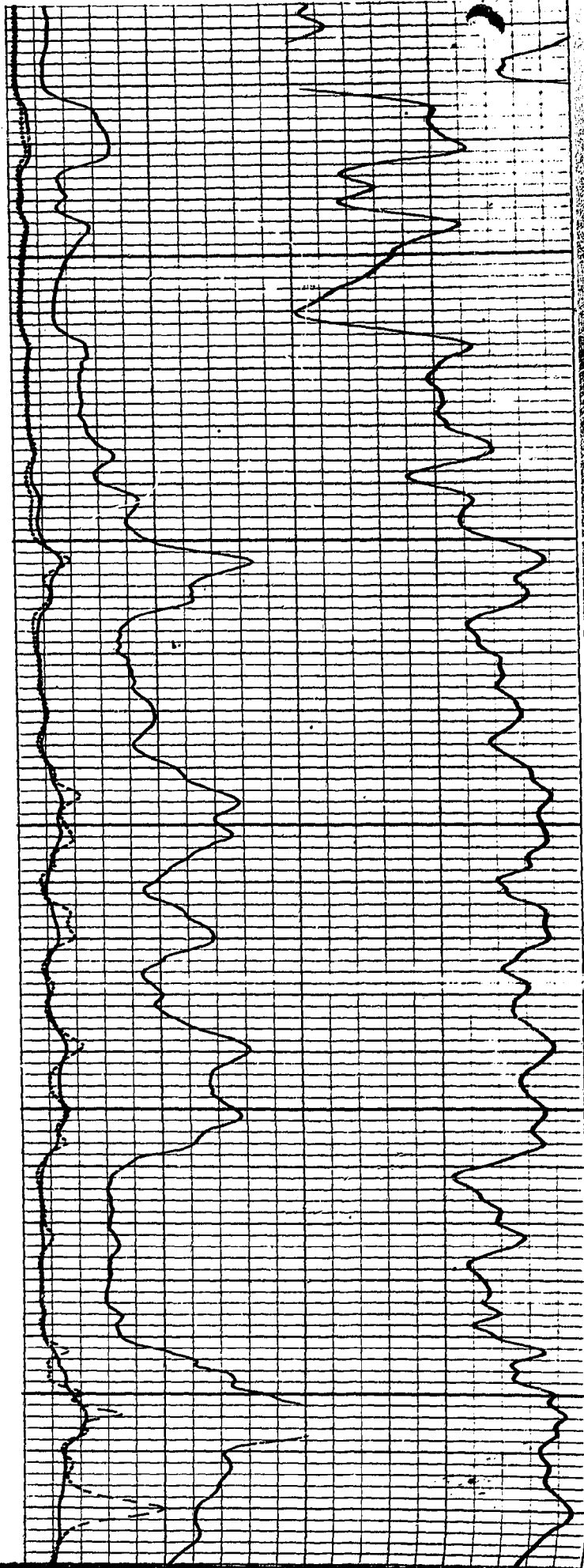
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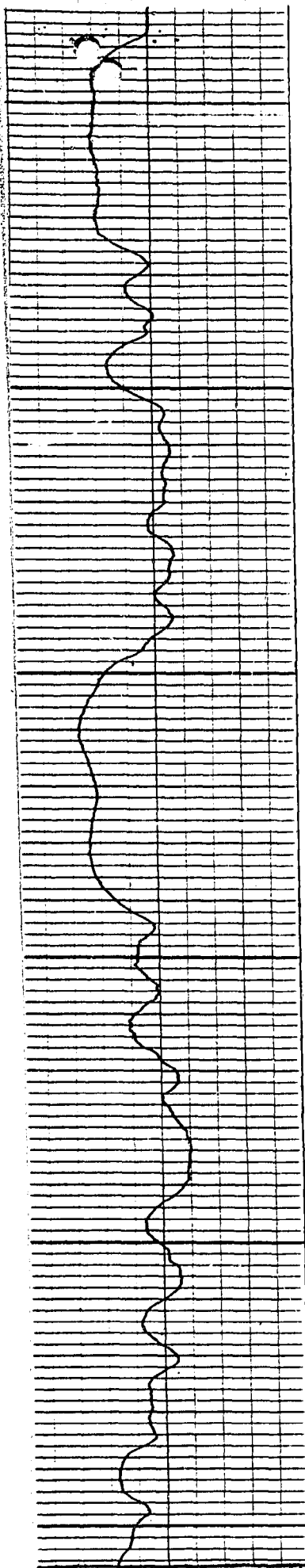


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5300

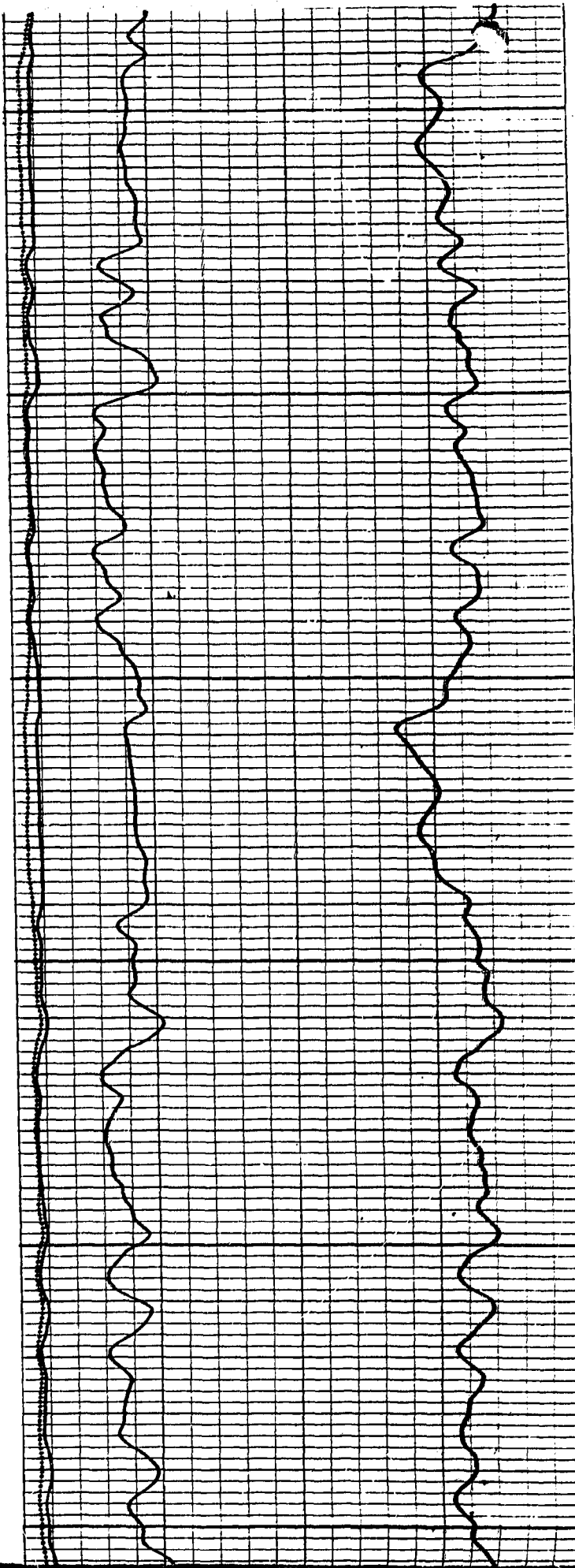
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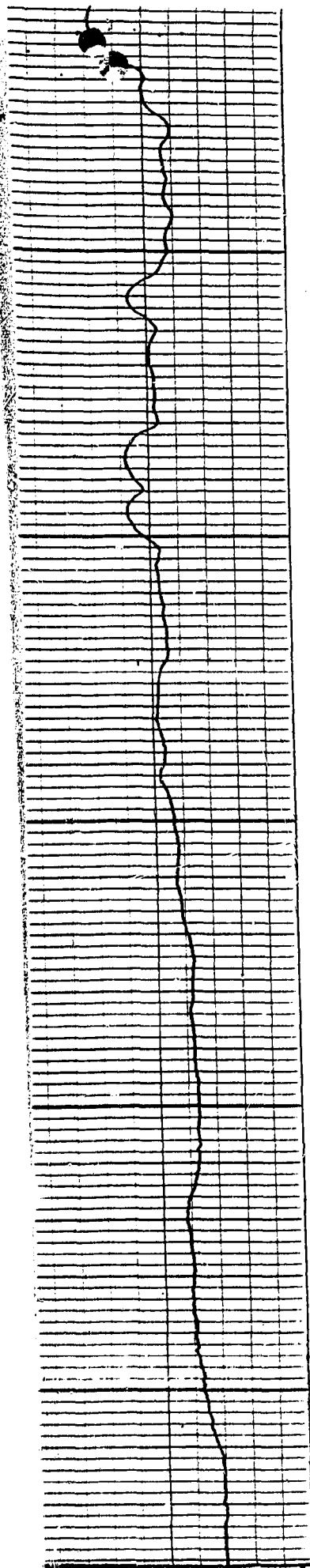


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5600

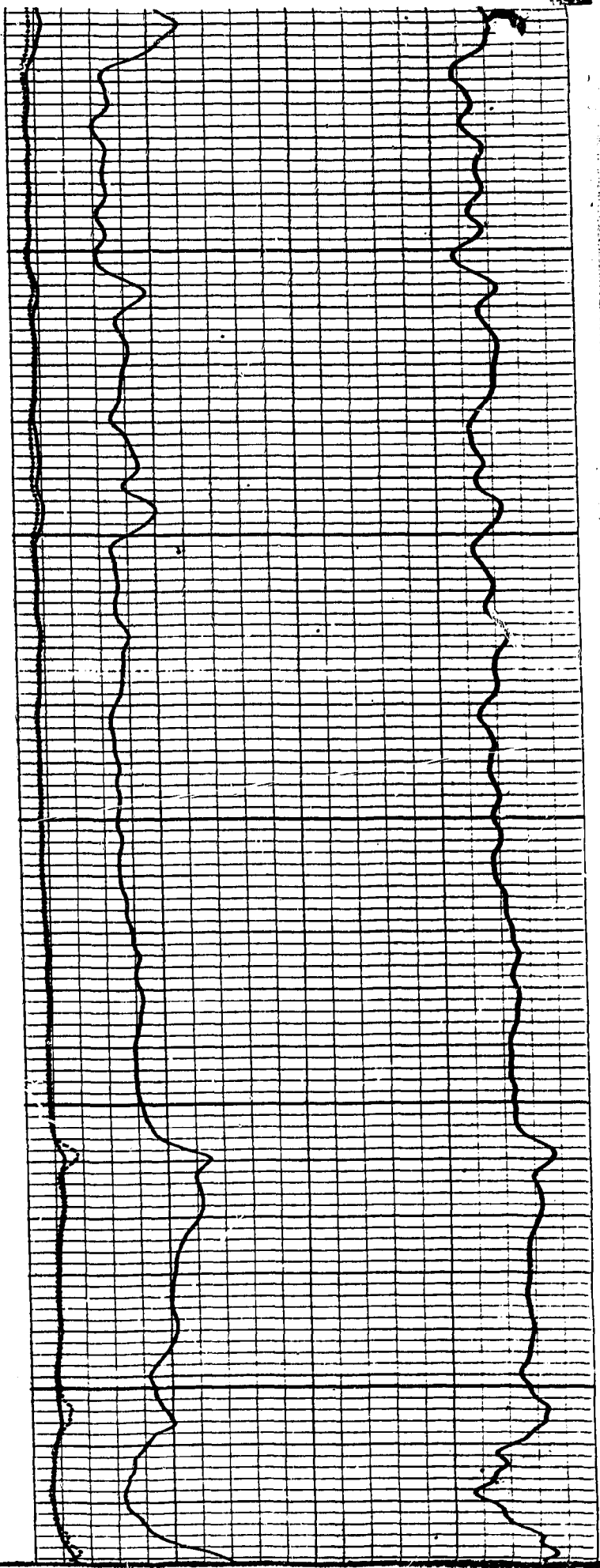
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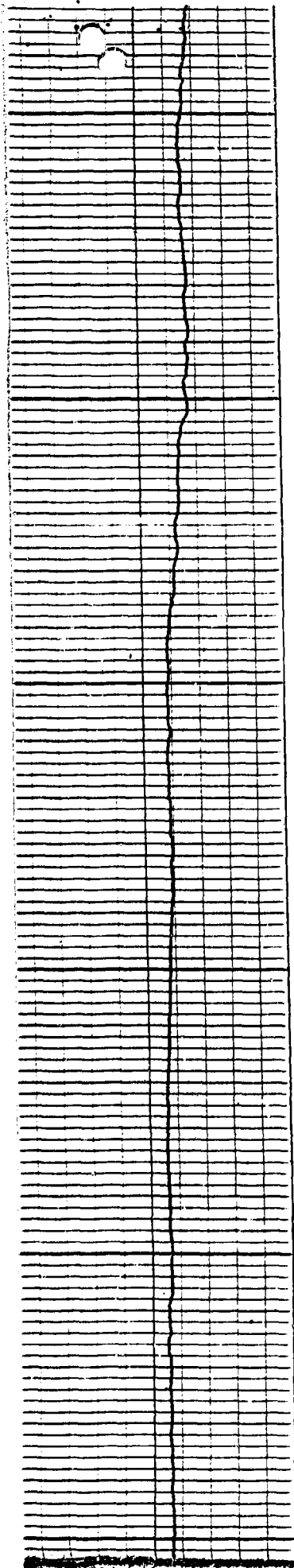




5800

5900

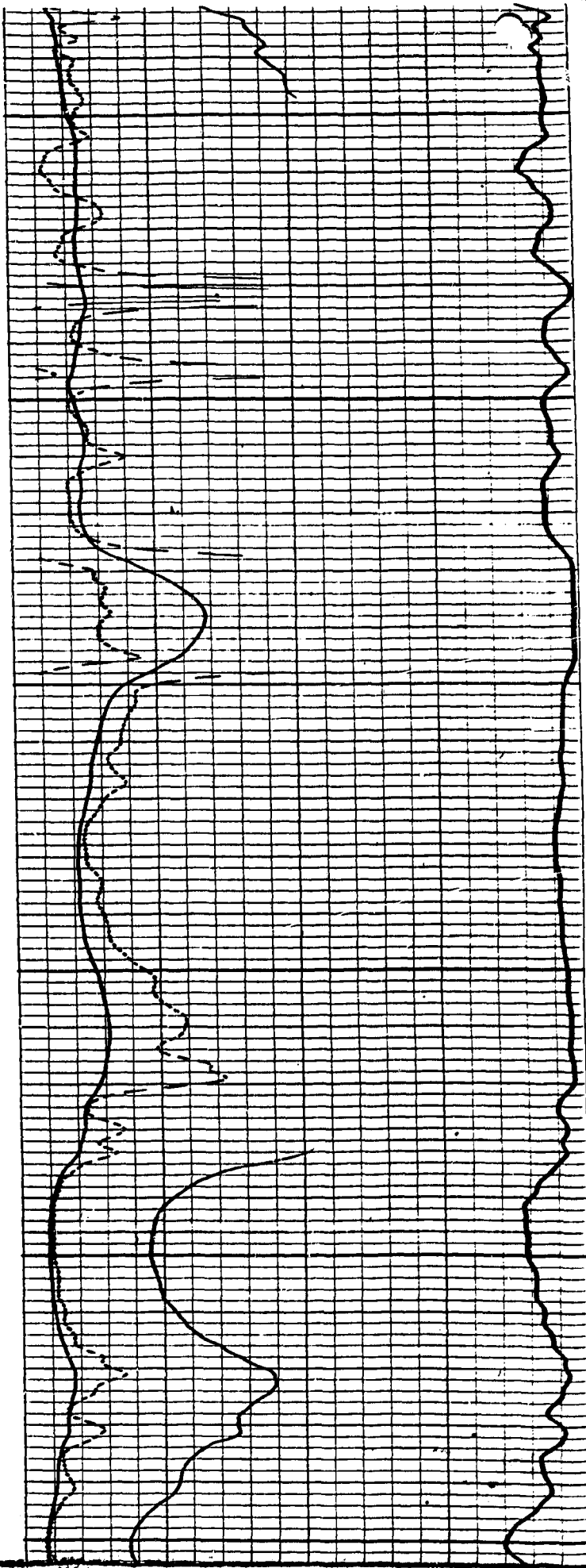


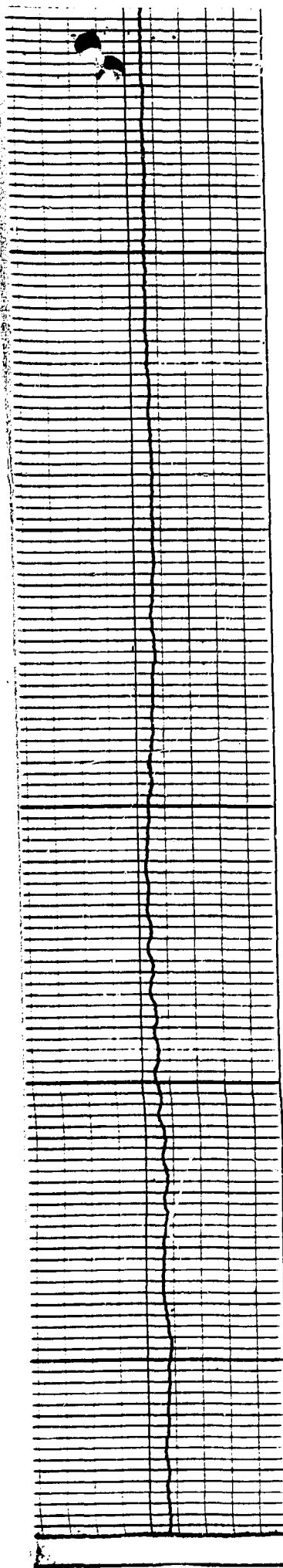


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6100

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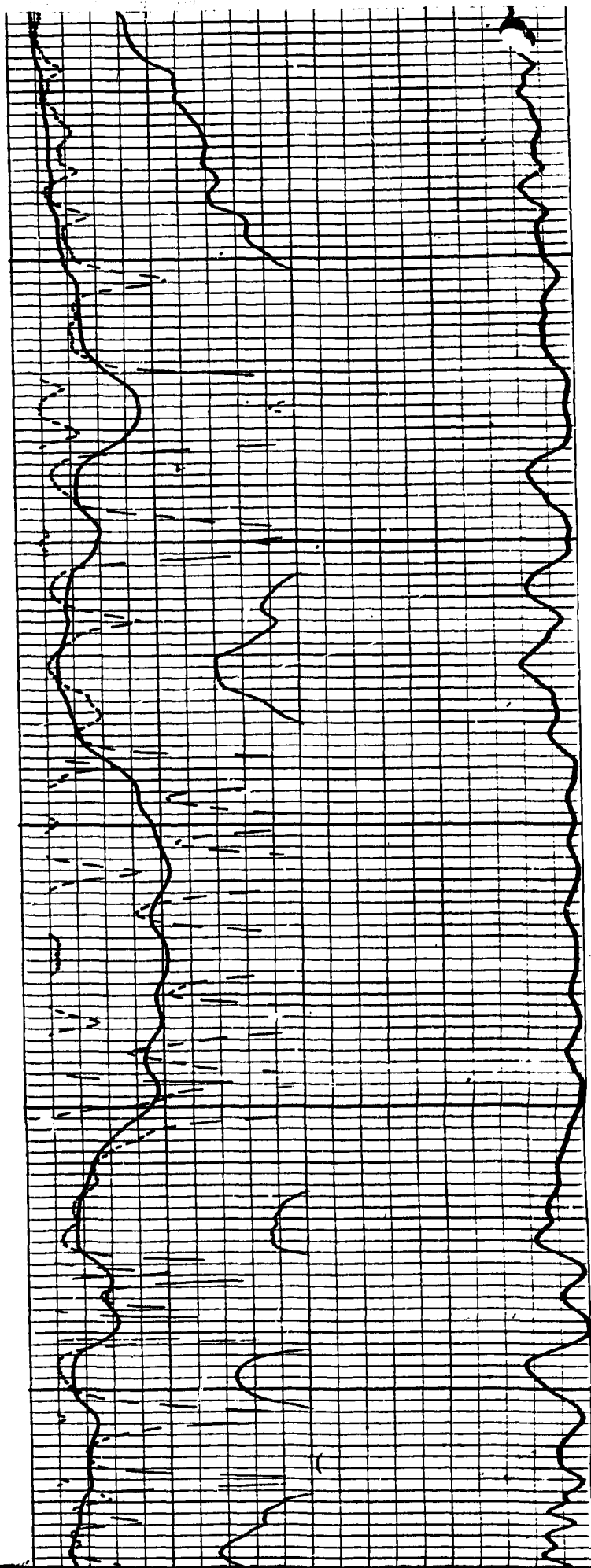


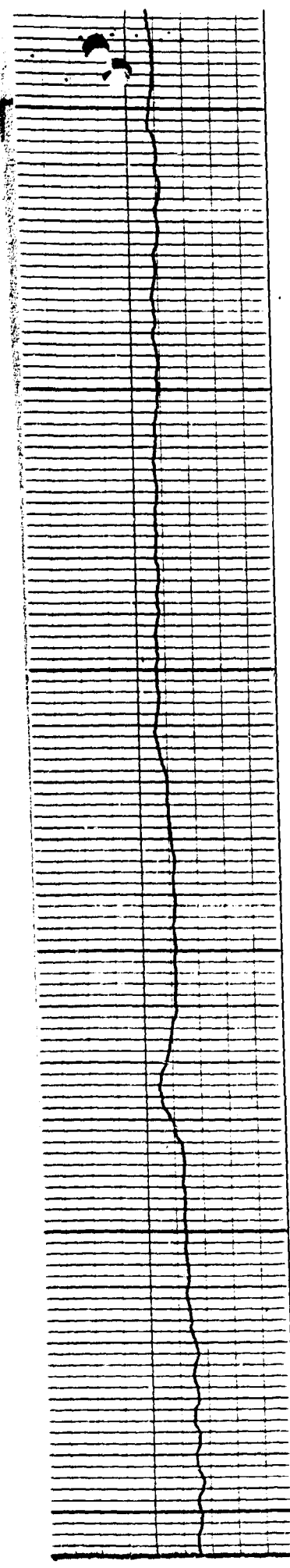


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6400

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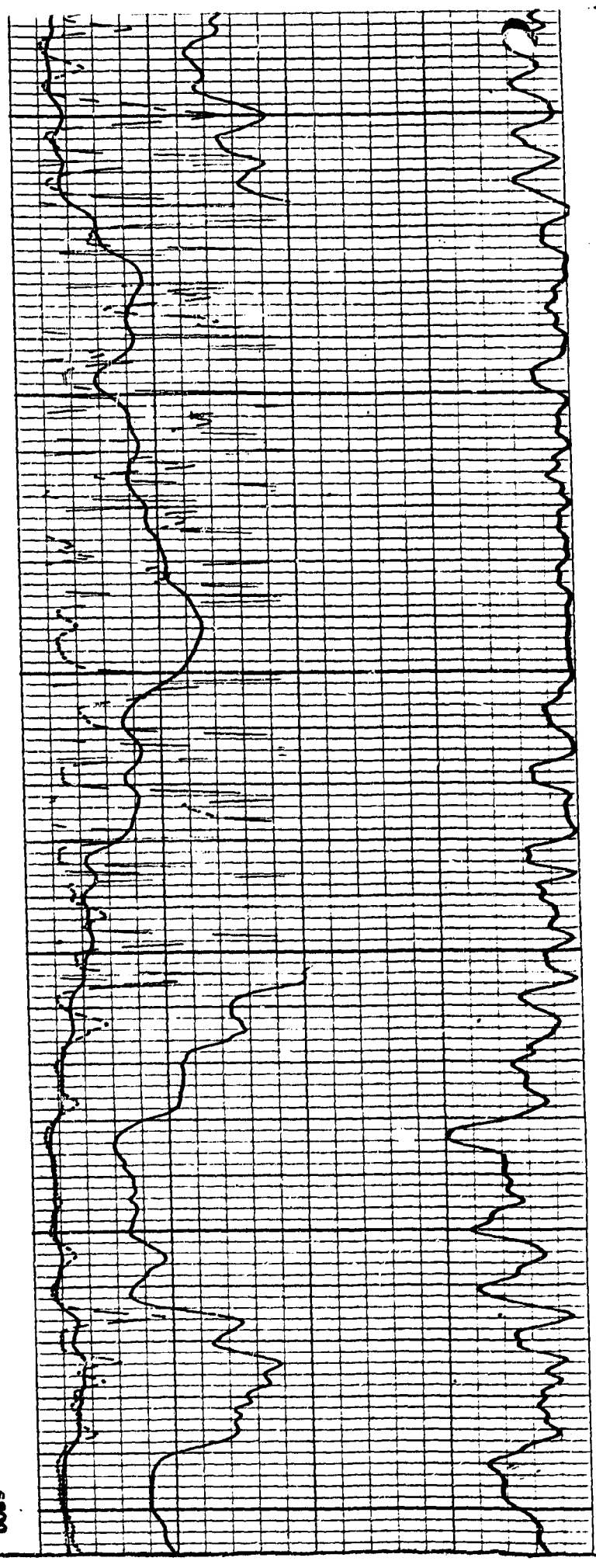




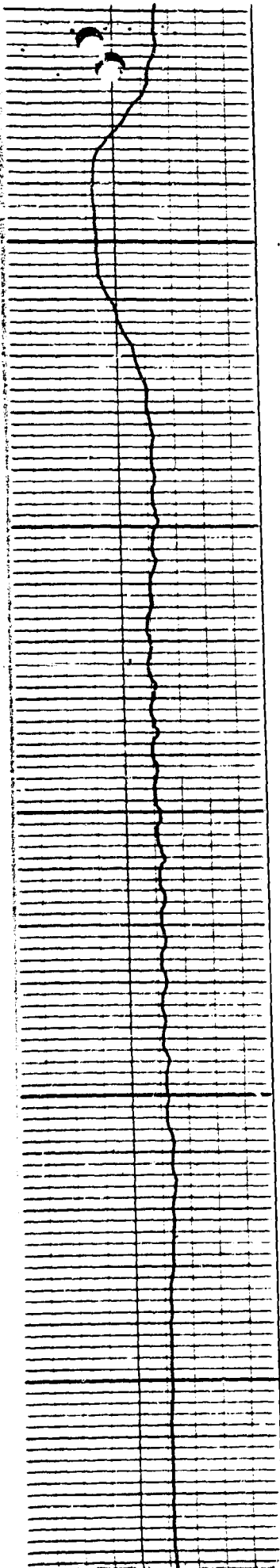
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6700

6800

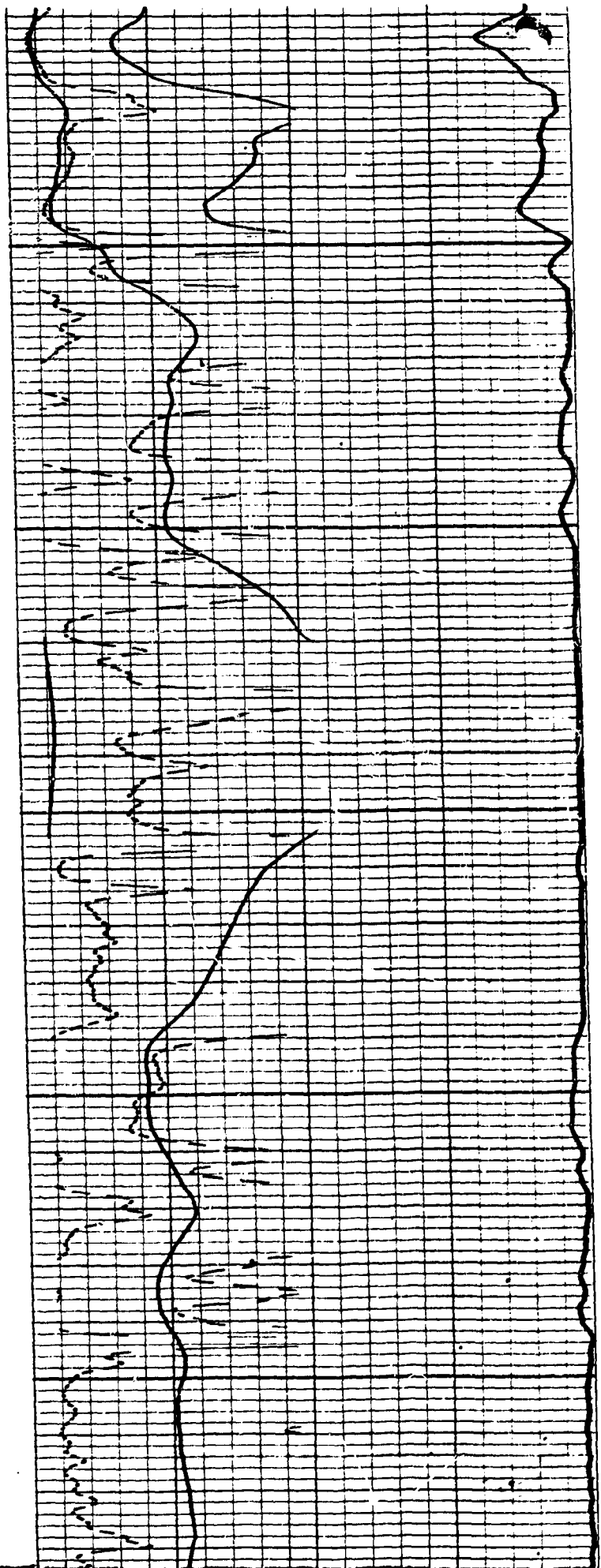


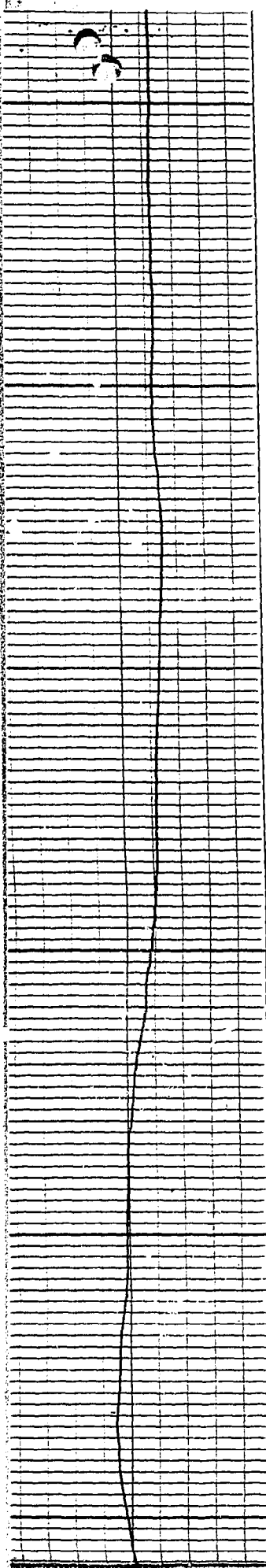
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6900

7000

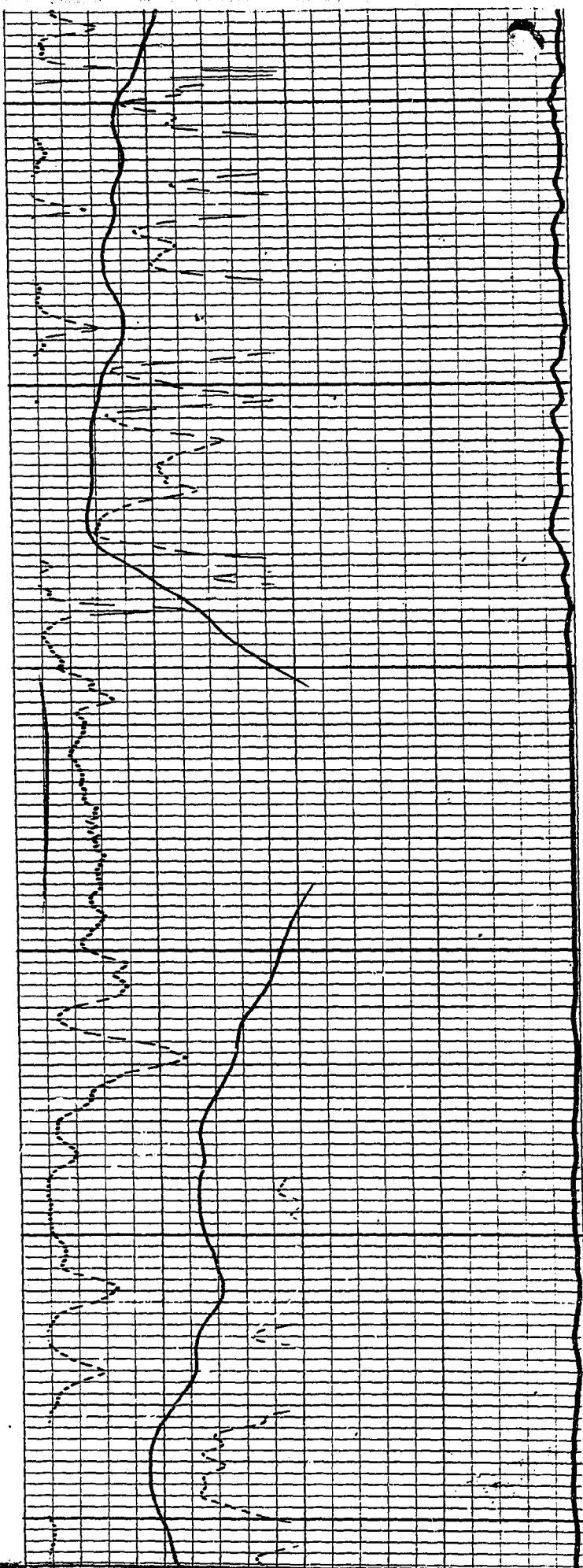


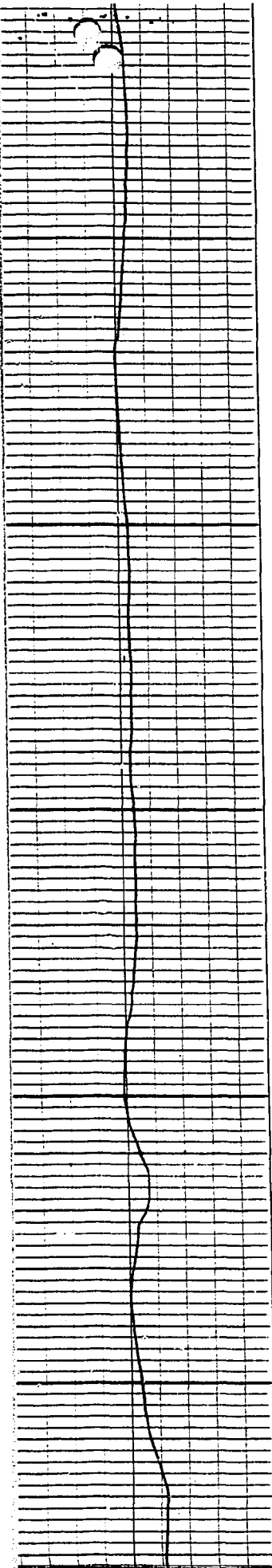


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7200

7300

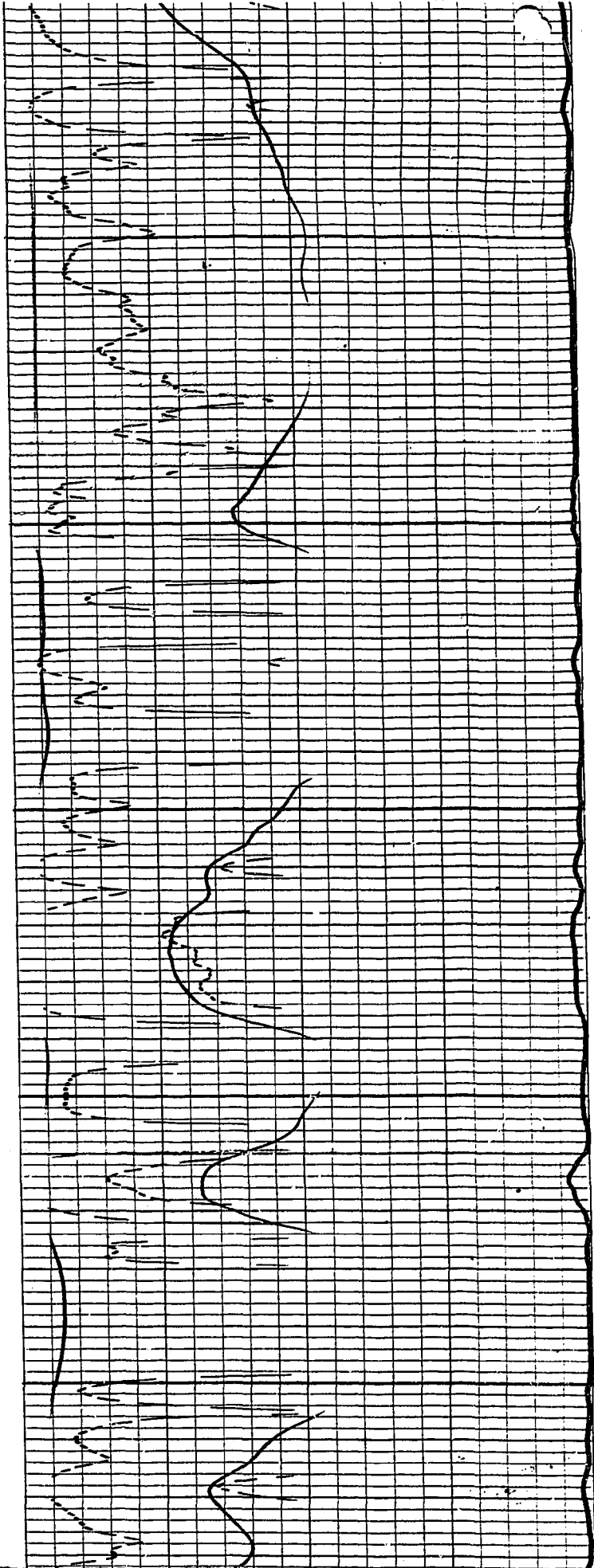


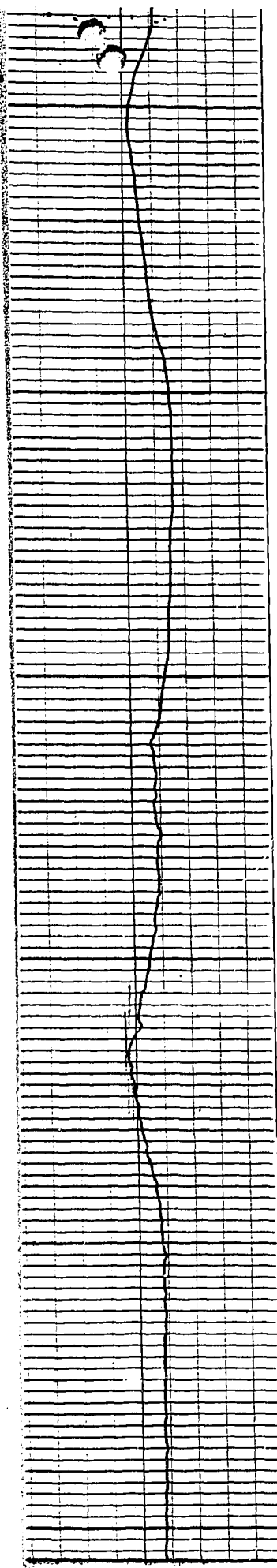


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7600



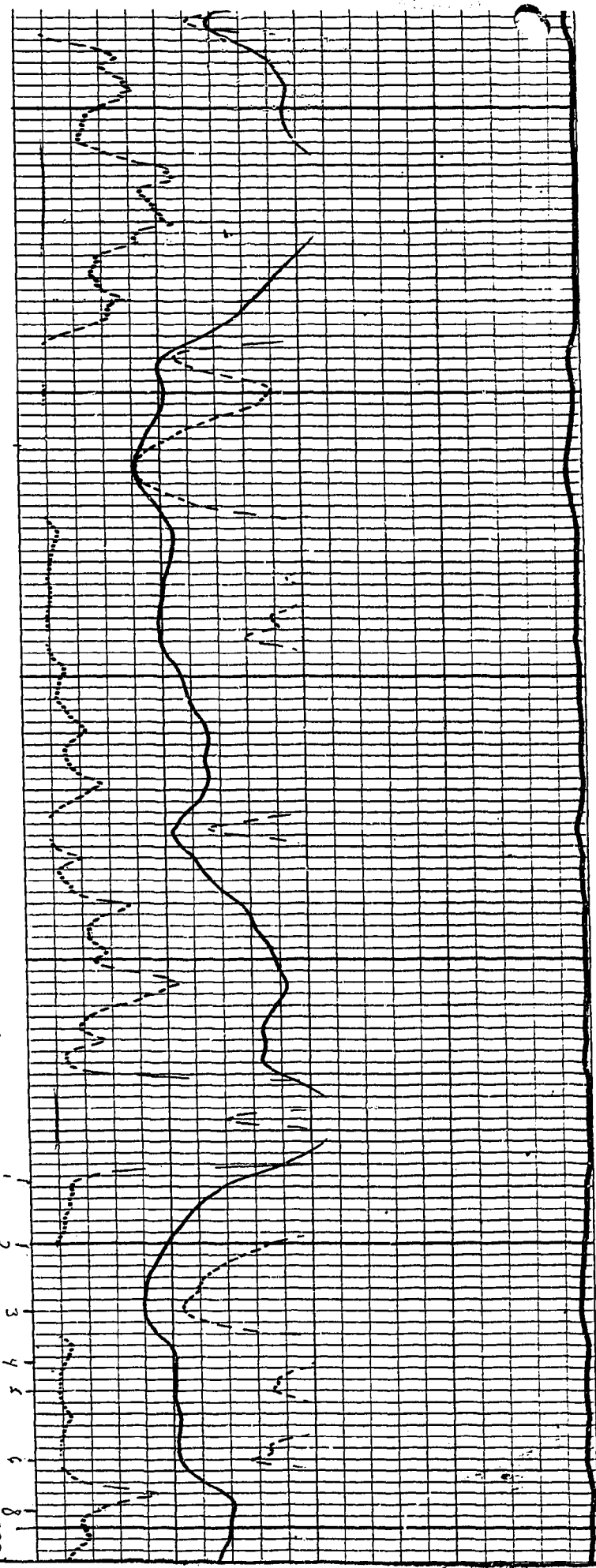


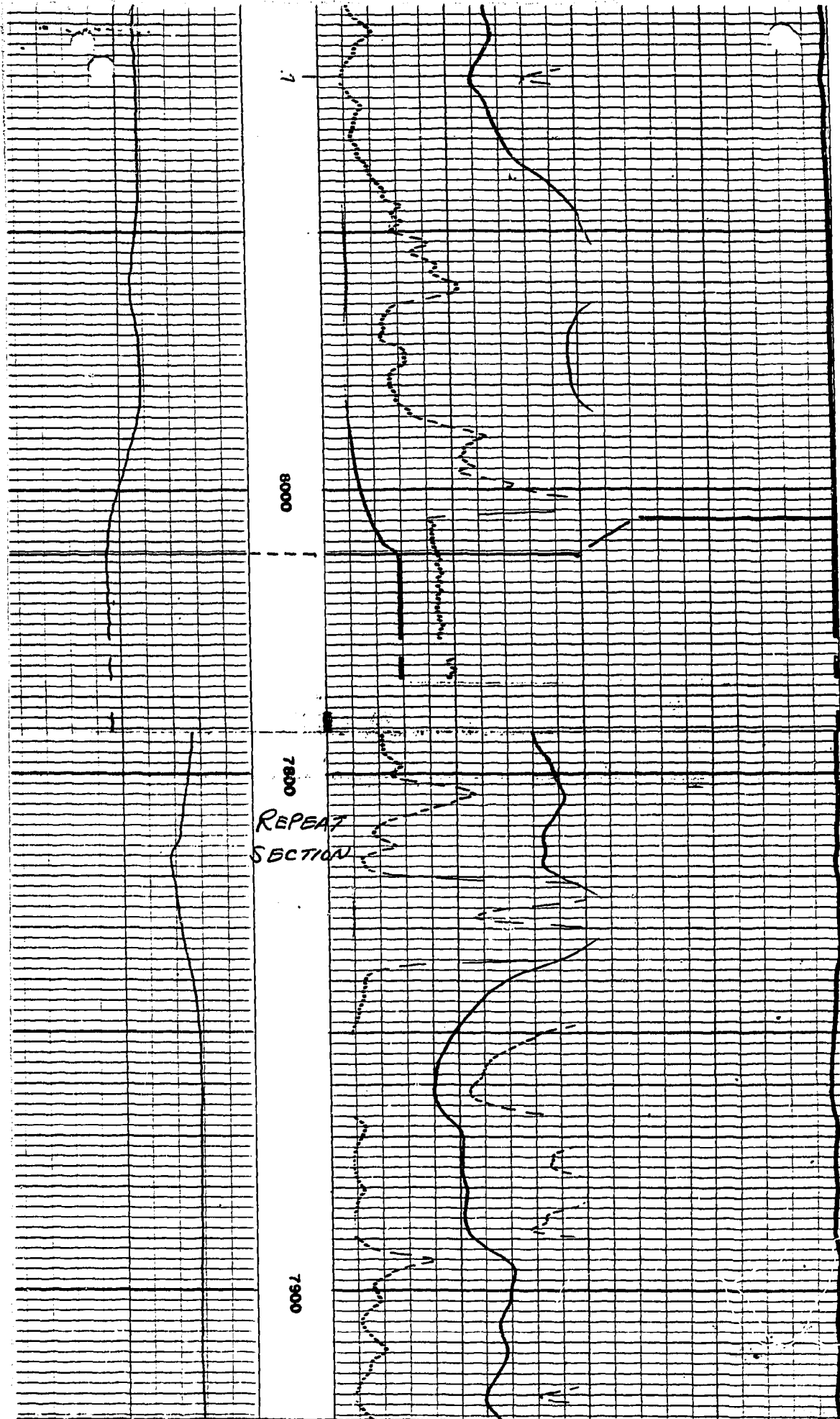
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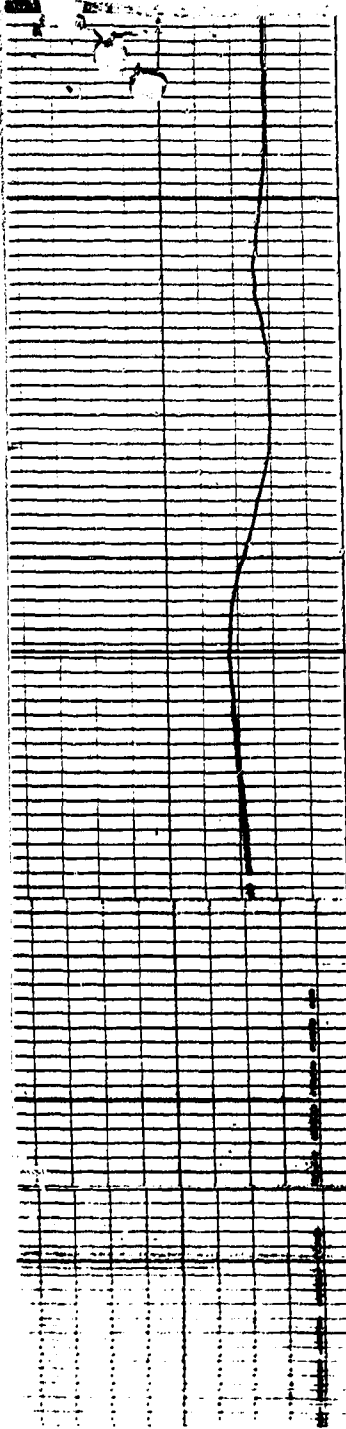
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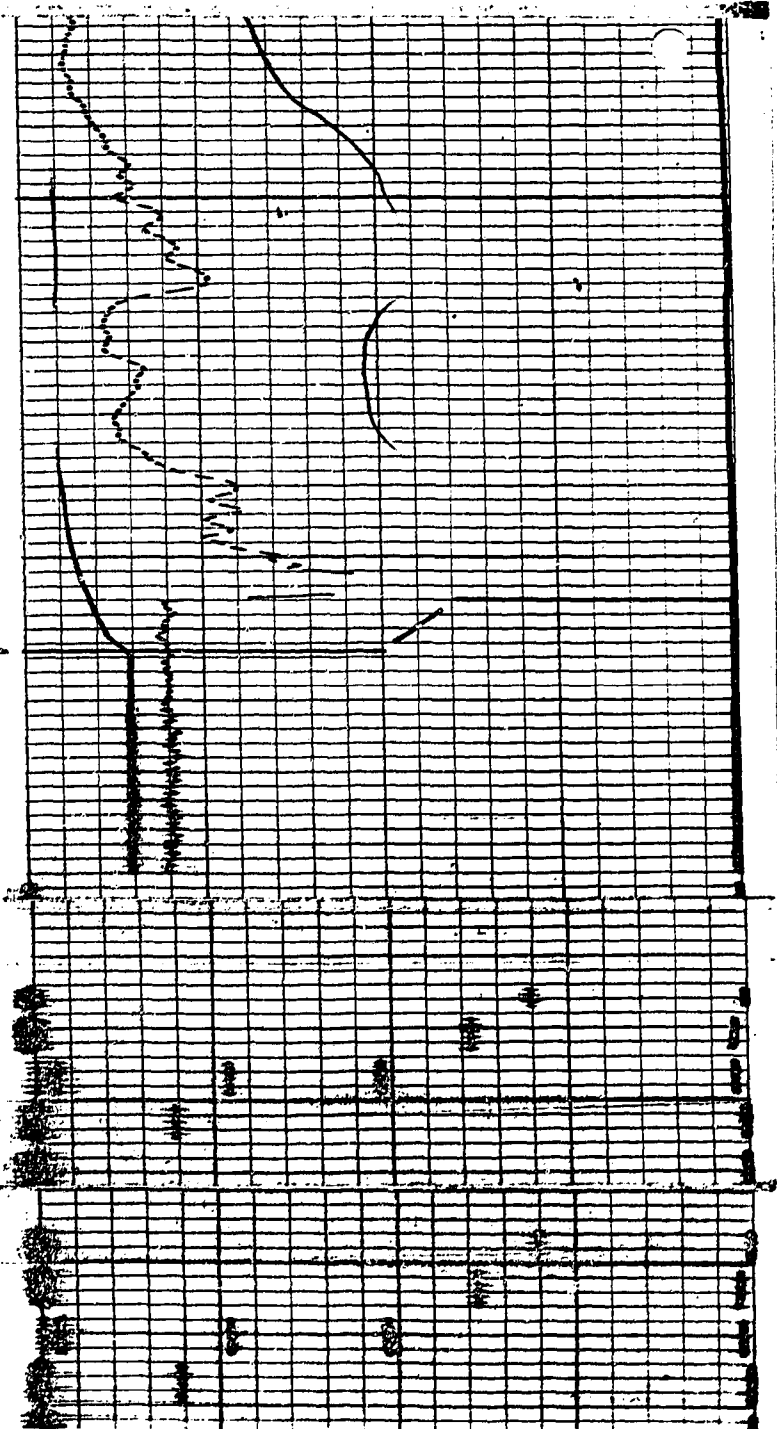
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0008



RECEIVED

JAN 9 1968

GW - 2

File No. 21106
 Filed: 1-8-68 19
2:10 P.M.

Charlotte Edwards
 Clerk and Recorder
 Powder River County (Under Chapter 237, Montana Session Laws, 1961)

Notice of COMPLETION of Groundwater Twp. 8s Rge 54
 Appropriation by Means of Well

OWNER Falliburton Co. Address Gillette, Wyo.

Top of Ground -
 Elev. above sea level. DRILLER Earl Drane Address Broadus, Mont.

Date of Notice of Appropriation of Groundwater _____

0
21
45
65
122
136
192
210
212
212
217
241
280
281

2
48
65
122
136
192
210
212
217
241
280
281

Date well started 11-29-67 Completed 12-3-67

Type of Well drilled _____ Equipment Used rotary
 (dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic X; Municipal _____; Stock _____; Other _____;
 Industrial _____; Drainage _____; Irrigation _____;

Indicate on diagram character and thickness of different strata met in drilling -s, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind	From (feet)	To (feet)
6"	4"	9 1/2'	0	240		

Static Water Level for non-flowing well 30 feet

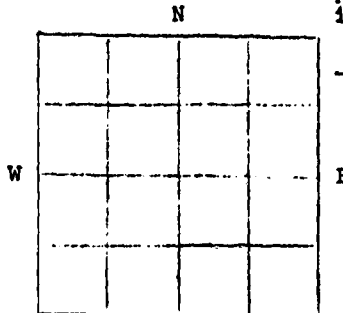
Shut-in Pressure for Flowing Well _____

Pumping Water Level 180 feet at 16 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested pumping Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



Sec 22, Twp. 8s, Rge 54 East.

20
 Driller's License NO.

Earl Drane
 Driller's Signature

STATE OF MONTANA) ss.
 County of Powder River)

_____ having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein set are true.

Owner's Signature John Merry

Subscribed and sworn to before me, this 8 day of Jan, 1968.

Charlotte Edwards
 CLERK & RECORDER
 POWDER RIVER COUNTY, MONTANA
 Clerk and Recorder

42,739

23/25

74977. Filed,
12-10, 1963,
at 1:58 P. M.
\$2.00 fee paid

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

Twp 3 S, Rge 4 E

RECEIVED
DEC 23 1963

DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961.)

STATE ENGINEER

1. Henry A. Malley, of Powder River, Montana,
County of POWDER RIVER, State of MONTANA, have appropriated groundwater according to
the Montana Laws in effect prior to January 1, 1962, as follows:

WELLS	Sec. 25	Sec. 25	Sec. 24	Sec. 25	Sec. 25	Sec. 25
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Basis of			spring	spring	spring	spring
2. Beneficial Use	stock	stock	stock	stock	stock	stock
3. DATE OF USE	1948	May 1961	unknown	unknown	unknown	unknown
How continuous	6 mo.	6 mo.	6 mo.	6 mo.	6 mo.	6 mo.
Amount claimed	6 gpm	6 gpm	all	all	all	all
4. (gal. per minute)						
Irrigated description						
Irrigation owner						
5. Irrigated acreage						
6. Location	SWSE	NWSE	SESE	NWSE	SWSE	SWSE
Withdrawal means	windmill	windmill	?	?	?	?
7. Completion date	1948	May 1961				
8. Water depth table	25'	20'				
Type (drilled or dug)	drilled	drilled	dug	dug	dug	dug
9. Size & depth	2" x 125'	1" x 72'				
Estimated annual						
10. Amount withdrawn						
11. Other information						
12. Log, if available						

STATE OF MONTANA)
) ss.
County of Powder River)

Signature of Owner Henry A. Malley

Date 11-26-63

Henry A. Malley having first been duly sworn, deposes and says that he is of lawful age and is the appropriator and claimant of the order and water right mentioned in the foregoing Declaration of Vested Groundwater Rights and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Subscribed and sworn to before me this 26th day of November, 1963.

Lucille Staley, deputy (11762)

File No. 74875 - Nov. 27, 1963
 at 1:125 P.M. \$2.00 fee pd. ADMINISTRATOR OF GROUNDWATER CODE
 Lucille Godsey, deputy
 Clerk and Recorder

STATE OF MONTANA

Twp 8-2 S, Rge 54 E

RECEIVED
 DEC 28 1963

DECLARATION OF VESTED GROUNDWATER RIGHTS
 (Under Chapter 237, Montana Session Laws, 1961)

STATE ENGINEER

1. Elmo Riesland, of Biddle,
 County of POWDER RIVER, State of MONTANA, have appropriated groundwater according to the
 Montana laws in effect prior to January 1, 1962, as follows:

	9-54	9-54	8-54 ✓			
	Sec. 24	Sec. 24	Sec. 24	Sec.	Sec.	Sec.
WELLS	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
2. Basis of Beneficial Use	Domestic & Stock	Stock	stock			
3. Date of use How continuous	-0- constant	spring constant	spring constant			
4. Amount claimed	all	all	all			
Irrigated description						
5. Irrigation owner						
6. Location	NESW	NESW	NWNE			
6. Withdrawal means	pump	spring	spring			
7. Completion date	-0-	spring	spring			
8. Water depth table	24'	spring	spring			
Type	dug	spring	spring			
9. Size & depth	5' x 24"	spring	spring			
10. Estimated annual Amount withdrawn						
11. Other information						
12. Log, if available						

STATE OF MONTANA)
) ss.
 County of Powder River)

Signature of Owner Elmo Riesland

Date 11-6-63

Elmo Riesland having first been duly sworn, deposes and says that he is of lawful age and is the appropriator and claimant of the order and water right mentioned in the foregoing declaration of vested groundwater rights and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Subscribed and sworn to before me this
6th day of November, 19 63.

Lucille Godsey deputy
 Clerk and Recorder
 Powder River County
 Broadus, Montana

Elmo Riesland

11728

Tiger Oil

by Ed Mills

Twp. 8 S. Rg. 54 E.
Sec. 27

File No. 04903
Filed: 8/10 1969
at 9803 A. M.

INDEXED

Charlotte and order
Powder River County (Under Chapter 237, Montana Session Laws, 1961)

Notice of COMPLETION of Groundwater
Appropriation by Means of Well

By Deputy Surveyor DePUTY SURVEYOR John Giacometto Address

Top of Ground -
Elev. above sea level. DRILLER Earl Drane Address Broadus, Mont

Date of Notice of Appropriation of Groundwater

Date well started 8-21-67 Completed 8-24-67

- 0 2 top soil
- 2 30 clay
- 30 50 gravel & clay
- 50 63 shale
- 63 66 rock
- 66 84 blue sand
- 84 175 shale
- 175 180 rock
- 180 200 sand
- 200 238 shale
- 238 284 blue sand
- 284 285 rock

Type of Well drilled Equipment Used rotary
(dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic ; Municipal ; Stock ; Other
Industrial ; Drainage ; Irrigation

Indicate on diagram character and thickness of different strata met in drilling - i.e., soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind Size	From (feet)	To (feet)
6"	4"	91#	0	284	slots 2x4"	240 280

Static Water Level for non-flowing well 30 feet

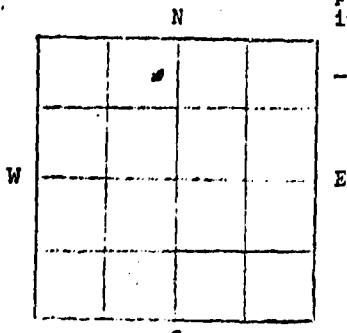
Shut-in Pressure for Flowing Well

Pumping Water Level 125 feet at 15 gal. per minute.

Discharge in Gal. per min. of flowing well

How Tested air-jet Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



20
Driller's License NO.
Earl Drane
Driller's Signature

Sec 27, Twp. 8, Rge 54 East.

STATE OF MONTANA)
County of Powder River) ss.

having first been duly sworn, deposes and says that he is of legal age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Owner's Signature John Giacometto

Subscribed and sworn to before me, this 10 day of September, 1969

by Helen J. Dion Dept.
Charlotta and Recorder, Powder River Co.
Broadus, Montana (45627)

Belle Creek Pipe Line--Don Welch

Twp. 8 S. R. 5 E.

File No. 84984
Filed: 9/10 1969
at 9:04 A. M.

INDEXED

Sec. 27

Charlotte Edwards
Clerk and Recorder
Powder River, County (Under Chapter 237, Montana Session Laws, 1961)

Notice of COMPLETION of Groundwater
Appropriation by Means of Well

By Henry J. Iron Deputy OWNER John Giacometto Address _____

Top of Ground -
Elev. above sea level. DRILLER Earl Drane Address Broadus, Mont.

0	23	clay
23	44	yellow sand
44	70	blue clay
		gravel
70	120	blue shale
120	135	sand
135	193	shale
193	212	sand
212	235	shale
235	245	sand
245	247	rock
247	279	sand
279	281	shale

Date of Notice of Appropriation of Groundwater _____

Date well started 10-67 Completed 10-67

Type of Well drilled _____ Equipment Used rotary
(dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic X; Municipal _____; Stock _____; Other _____;
Industrial _____; Drainage _____; Irrigation _____;

Indicate on diagram character and thickness of different strata met in drilling -s, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind Size	From (feet)	To (feet)
6"	4" 9#	0	222			

Static Water Level for non-flowing well 30 feet

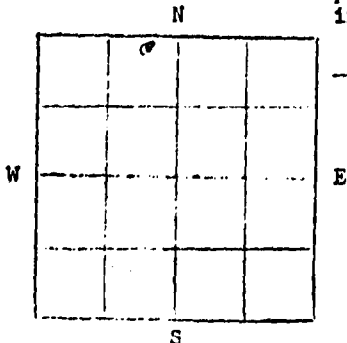
Shut-in Pressure for Flowing Well _____

Pumping Water Level 190 feet at 16 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested pumping Length of Test 1 1/2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



20
Driller's License NO.
Earl Drane
Driller's Signature

Sec 27, Twp. 8, Rge 54 East.

STATE OF MONTANA)
County of Powder River) ss.

John Giacometto having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Owner's Signature John Giacometto

Subscribed and sworn to before me, this 10 day of September, 1969.

Charlotte Edwards by Henry J. Iron Deputy
Clerk and Recorder, Powder River Co
Broadus, Montana
45628

Caliburton Co. *by John M. ...*

Twp. S. E.
Sec. 27

File No. 84982
Filed: 9/10 1969
at 9:02 A.M.
Charlotte Edwards

INDEXED _____

Notice of COMPLETION of Groundwater
Appropriation by Means of Well
Powder River County (Under Chapter 237, Montana Session Laws, 1961)
By Charlotte Edwards Deputy
Clerk and Recorder

OWNER John Giacometto Address _____
DRILLER Earl Drane Address Broadus, Mont.

Top of Ground -
Elev. above sea level. _____

Date of Notice of Appropriation of Groundwater _____

- 0 21 clay
- 21 45 yellow sand
- 45 65 blue shale
- 65 122 gravel
- 122 136 blue shale
- 136 192 blue sand
- 192 210 blue shale
- 210 212 rock
- 212 217 sand
- 217 241 blue shale
- 241 280 blue sand
- 280 281 shale

Date well started 11-29-67 Completed 12-3-67

Type of Well drilled _____ Equipment Used rotary
(dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic X; Municipal _____; Stock _____; Other _____;
Industrial _____; Drainage _____; Irrigation _____;

Indicate on diagram character and thickness of different strata met in drilling - s, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From To		Perforations		
		(feet)	(feet)	Kind	From To	To
				Size	(feet)	(feet)
5"	4" 914	0	240			

Static Water Level for non-flowing well 30 feet

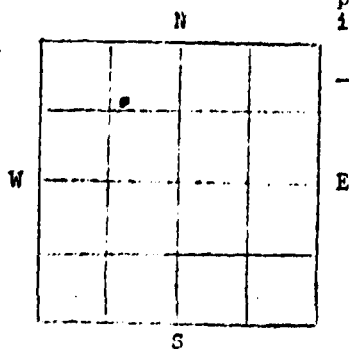
Shut-in Pressure for Flowing Well _____

Pumping Water Level 180 feet at 15 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested pumping Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



20
Driller's License NO.
Earl Drane
Driller's Signature

Sec 27, Twp. S, Rge. 54 East.

STATE OF MONTANA)
County of Powder River) ss.

John Giacometto having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein set forth are true.

Owner's Signature John Giacometto

Subscribed and sworn to before me, this 10 day of September, 1969.

Charlotte Edwards *by Helen J. ...*
Clerk and Recorder, Powder River Co.
Broadus, Montana (45629)

File No. 80980
 Filed: 12-21-1967
 at 9:20 A. M.

Charlotte Edwards
 Clerk and Recorder

Notice of COMPLETION of Groundwater
 Appropriation by Means of Well

Twp. 85 Rge 54E

Powder River County (Under Chapter 237, Montana Session Laws, 1961)

OWNER TIGER OIL Co Address P.O. Box 169

Top of Ground -
 Elev. above sea level. DRILLER Earl Drane Address Broadus, Montana

Date of Notice of Appropriation of Groundwater _____

- 0 2 top soil
- 2 30 clay
- 30 50 gravel & clay
- 50 65 shale
- 65 66 rock
- 66 85 b lue sand
- 85 175 shale
- 175 180 rock
- 180 200 sand
- 200 238 shale
- 238 284 b lue sand
- 284 285 rock

Date well started 8-21-67 Completed 8-24-67

Type of Well drilled Equipment Used Rotary
 (dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic X; Municipal _____; Stock _____; Other _____;
 Industrial _____; Drainage _____; Irrigation _____

Indicate on diagram character and thickness of different strata met in drilling -ei, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind Size	From (feet)	To (feet)
6"	4"	0	284	slots 3/4"	240	280

Static Water Level for non-flowing well 30 feet

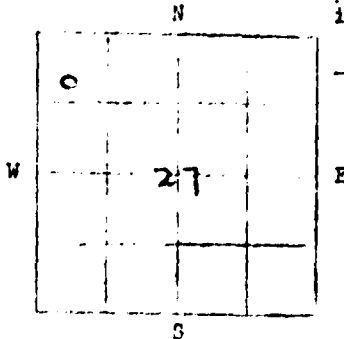
Shut-in Pressure for Flowing Well _____

Pumping Water Level 126 feet at 15 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested air jet Length of Test 24 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



Sec 27, Twp. 85, Rge 54 East.

20

Driller's License NO.

Earl Drane
 Driller's Signature

STATE OF MONTANA)
 County of Powder River) ss.

EDGAR H. MILLS having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mention in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein set are true.

REPRESENTATIVE
 Owner's Signature [Signature]

Subscribed and sworn to before me, this 18 day of December, 1967.

Charlotte Edwards
 Clerk and Recorder

[Signature]
 Deputy
 42691

RECEIVED

GW -

File No. 80945

Filed: 12-27 1967

at 11:00 A. M.

Paul H. ...
Clerk and Recorder

Powder River County

2nd

Notice of COMPLETION of Groundwater Twp. 82 Rge 54E

Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

Top of Ground -

Elev. above sea level.

OWNER Thomas Getter Laurens, Mo. Address Balliste, Mo.

DRILLER Earl Drane Address Broadus, Mont.

Date of Notice of Appropriation of Groundwater _____

0	8	sandy top soil
8	67	clay
67	85	blue shale
85	118	sand
118	120	rock
120	163	shale
163	187	sand
187	250	shale
250	265	sand
265	300	shale
300	322	sand
322	330	shale

Date well started 10-67 Completed 10-67

Type of Well drilled Equipment Used rotary
(dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic X; Municipal ; Stock ; Other ;
Industrial ; Drainage ; Irrigation ;

Indicate on diagram character and thickness of different strata met in drilling -ei, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind	From (feet)	To (feet)
6"	4"	9 1/2	0	320		

Static Water Level for non-flowing well 30 feet

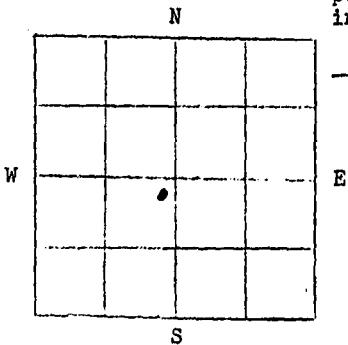
Shut-in Pressure for Flowing Well _____

Pumping Water Level 200 feet at 15 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested pumping w/air Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



Sec 27, Twp. 8-S2 Rge 54E East.

20
Driller's License NO.
Earl Drane
Driller's Signature

STATE OF MONTANA)
County of Powder River) ss.

Thomas Getter having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Owner's Signature Thomas Getter

Subscribed and sworn to before me, this 27 day of Dec., 1967.

Paul H. ...
Clerk and Recorder
Powder River County, Broadus, Montana

42,701

File No. 82167
Filed: 4/10/ 1968
at 11:00 A. M.

ONTANA WATER RESOURCES BOARD
INDEXED RECEIVED

GW -

(Signature)
Clerk and Recorder
Powder River County
2nd Cd.

Notice of COMPLETION of Groundwater
Appropriation by Means of Well
Twp. 8th Rge. 54th E

Top of Ground -
Elev. above sea level.

OWNER *George Rakes Inc.* Address *Blainville, Mont.*
DRILLER *Benny Drilling Co.* Address *Blainville, Mont.*

Date of Notice of Appropriation of Groundwater *April 10, 1968*

- 0-11 surface soil
- 11-18 sand
- 18-37 shale
- 37-67 sand stone
- 67-118 blue shale
- 118-136 sand stone
- 136-182 blue shale
- 182-214 sand stone
- 214-223 blue shale

Date well started *April 9, 1968* Completed *April 10, 1968*

Type of Well *Drilled* Equipment Used *Rotary*
(dug, driven, bored, drilled) (churn, drill, rotary, etc.)

Water Use: Domestic ; Municipal ; Stock ; Other ;
Industrial ; Drainage ; Irrigation

Indicate on diagram character and thickness of different strata met in drilling -ei, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind Size	From (feet)	To (feet)
6"	4" - 10.5 lb.		199'			

Static Water Level for non-flowing well 70 feet

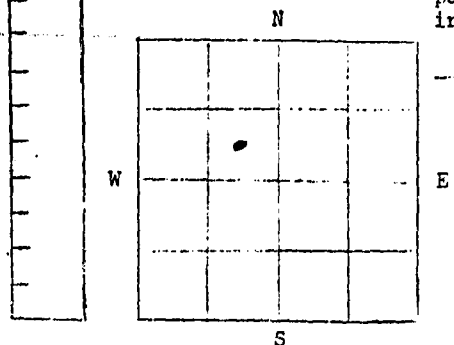
Shut-in Pressure for Flowing Well _____

Pumping Water Level 180 feet at 30 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested *Per Pump Test* Length of Test _____

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



Sec. 27, Twp. 8th, Rge. 54th East.

16
Driller's License NO.
Frank Randy Jr.
Driller's Signature

STATE OF MONTANA)
County of Powder River) ss.

George Rakes, Inc. having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Owner's Signature *George Rakes*

Subscribed and sworn to before me, this 10 day of April, 196⁸.

CHARLOTTE EDWARDS
CLERK & RECORDER
BROADUS, MONT.
Clerk and Recorder
by Helen Y. Irion Deputy

82167

44,051

File No. 84823
Filed for record: 7-28-69
DUPLICATE - 9:23 A.M.
Charlotte Edwards
Clerk + Recorder
By M. J. M. Robinson
Deputy

T. 8S R. 54E
County Powder River

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

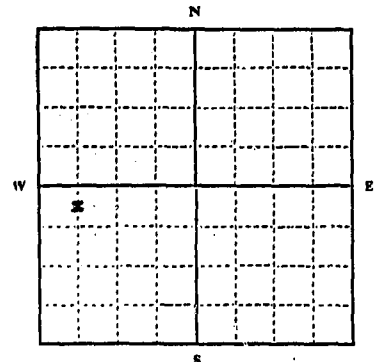
INDEXED

Notice of Appropriation of Groundwater

(Under Chapter 237, Montana Session Laws, 1961)

- I, Samuel Gary, of Box 99, Belle Creek,
(Name of Appropriator) (Address) (Town)
County of Powder River, State of Montana, intend to appropriate groundwater in accordance with Chapter 237, Montana Session Laws of 1961.
- The beneficial use to which water is to be applied is injection into the Muddy formation for secondary recovery.
(describe lands to be benefited, if for irrigation)
- The rate of use in gallons per minute or miner's inches of groundwater claimed 585 GPM
- The annual period (inclusive dates) of intended use June 1970 - Continuous
- The probable or intended date of first beneficial use June 1970
- The probable or intended date of commencement and completion of the well* or wells*
Spud July 27, 1969 Complete August 21, 1969
- The location, type, size and depth of well or wells contemplated Rotary hole - 11" - 4600'
7-7/8" from 4600' to 8000'
- The probable or estimated depth of the water table or artesian aquifer 6900'
- Name, address and license number of the driller engaged Samuel Gary (Jack M. Lucay),
300 Great Plains Building, Casper, Wyoming No. 191

10. Give such other similar information as may be useful in carrying out the policy of this act.....
.....
.....
.....
.....



SW 1/4 Sec. 27 T. 8S R. 54E
Locate well or other means of development as accurately as possible on the plat.

Signature of Appropriator Samuel Gary by J.M. Lucay
Date July 25, 1969

* As defined in the Code Sec. 1 (c) "Well" means any artificial opening or excavation in the ground, however made, by which groundwater can be obtained or through which it flows under natural pressures or is artificially withdrawn."

Three copies of this notice are to be filed with County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

45626

RECEIVED

GW 2

File No. 80499
Filed: 11-16 19 67
at 9:09 A. M.

NOV 17 1967

Charlotte Edwards
Clerk and Recorder
Powder River County (Under Chapter 237, Montana Session Laws, 1961)
Myrtle M. Kiskinow Deputy

Notice of COMPLETION of Groundwater Twp. Rge
Appropriation by Means of Well

OWNER Belle Creek Pipe Line Address Broadus, Mont.
Top of Ground -
Elev. above sea level. DRILLER Earl Drane Address Broadus, Mont.

Date of Notice of Appropriation of Groundwater

Date well started 10-67 Completed 10-67

Type of Well drilled Equipment Used rotary
(dug, driven, bored, drilled) (churn, drill, rotary, etc.)

Water Use: Domestic X; Municipal; Stock; Other;
Industrial; Drainage; Irrigation;

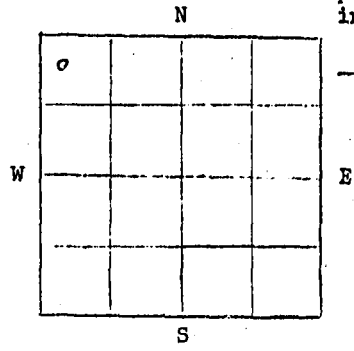
Indicate on diagram character and thickness of different strata met in drilling -cl, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

0	23	clay
23	44	yellow sand
44	70	blue clay & gravel
70	120	blue shale
120	135	sand
135	193	shale
193	212	sand
212	235	shale
235	245	sand
245	247	rock
247	279	sand
279	281	shale

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind Size	From (feet)	To (feet)
6"	4"	9 1/2'	0	222		

Static Water Level for non-flowing well 30 feet
Shut-in Pressure for Flowing Well
Pumping Water Level 198 feet at 16 gal. per minute.
Discharge in Gal. per min. of flowing well
How Tested pumping Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



20
Driller's License NO.
Earl Drane
Driller's Signature

Sec 27, Twp 85, Rge 54 East.

STATE OF MONTANA) ss.
County of Powder River)

having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Owner's Signature *[Signature]*

Subscribed and sworn to before me, this 16 day of November, 1967.

Charlotte Edwards - By Myrtle M. Kiskinow, Deputy
Clerk and Recorder

142,543

RECEIVED

Rep. 8 S. 54 E

JAN 12 1970

Sec. 27

85557

12/29 1969

9:07 A.M.

INDEXED

Charlotte Edwards

Notice of COMPLETION of Groundwater

County Recorder

Appropriation by Means of Well

Fee \$2.00 pd.

County (Under Chapter 237, Montana Session Laws, 1961)

BY: Deputy County Recorder

OWNER Samuel Gary

Address Box 99, Belle Creek, Mont.

Top of Ground - 3672'

Elev. above sea level DRILLER Samuel Gary

Address Box 99, Belle Creek, Mont.

Date of Notice of Appropriation of Groundwater 7-25-69

Date well started July 28, 1969 Completed December 4, 1969

Type of Well Drilled (aug, driven, bored, drilled) Equipment Used Rotary (churn, drill, rotary, etc)

Water Use: Domestic; Municipal; Stock; Other; Industrial X; Drainage; Irrigation;

Indicate on diagram character and thickness of different strata met in drilling - e.g., soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

(See attached Geological Report and Logs)

Table with columns: Size of Hole, Size and Weight of Casing, From (feet), To (feet), Perforations (Kind, From, To). Rows include 17-1/2" hole with 13-3/8" casing, 12-1/4" hole with 8-5/8" casing, and 7-5/8" hole with 5-1/2" casing.

Static Water Level for non-flowing well feet

Shut-in Pressure for Flowing Well 25 Psi

Pumping Water Level feet at gal. per minute.

Discharge in Gal. per min. of flowing well 253

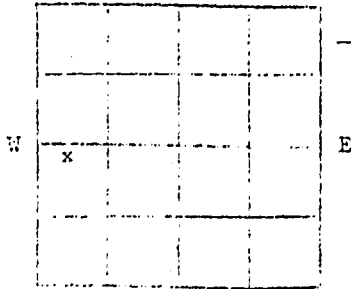
How Tested Meter Length of Test 6 hours

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)

See attached completion report.

191 Driller's License NO.

Driller's Signature



Sec 27, Twp. 8S, Rge 54 East.

WYOMING

STATE OF (XXXXXX) ss. County of (XXXXXXXXXX) NATRONA

SAMUEL GARY (By JACK M. LUCEY) having first been duly sworn, deposes and says that he is of legal age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and that he knows the contents of said foregoing notice and that the matters and things therein are true.

Owner's Signature

Subscribed and sworn to before me this 22 day of December, 1969.

Notary Public, County of Natrona, State of Wyoming, My Commission Expires May 20, 1972.

46038

J.P. ANDERSON
GEOLOGIST

J.L. HARVEY
GEOLOGIST



VERDE EXPLORATION INC.
217 CITY CENTER BUILDING
CASPER, WYOMING 82601
PHONE 307 234-7959

WELL REPORT

SAMUEL GARY

#1 Madison
NW SW Sec. 27-T8S-R54E
Powder River County

MONTANA

Prepared By: Joseph L. Harvey

DATA SHEET

OPERATOR: Samuel Gary

WELL NAME: Madison #1

LOCATION: NW SW Sec. 27-T8S-R54E

COUNTY: Powder River

STATE: Montana

WELL CLASSIFICATION: Water Supply Well

ELEVATION: 3672' Ground Level - 3684' Kelly Bushing

CONTRACTOR: Lohman and Johnson

EQUIPMENT: Rig No. 1 Pump #1: National C-250
Engines: 4-GMC - 671N Pump #2: Oilwell 214P
Derrick: L. C. Moore 127' Pipe: 4½" FH Collars: 5 7/8" - 4½" H90

SPUD DATE: 23 July 1969

COMPLETION DATE: Finished Drilling & Logging 1 Sept. 1969

CASING: Surf. - 13 3/8" to 164'; 8 5/8" to 4393', 5½" liner to 8000'

DRILLING FLUID: Chem-Gel, Magco-bar

GEOLOGIST: O. P. Miles to 4400', J. L. Harvey to 8000'.

CORING: 1 Core - 4338' to 4370' (Muddy Sand) Christensen

TESTING: None

LOGGING: Induction Electric - 4100' to 8013'
Gamma Ray-Sonic - 4100' to 8006'

TOTAL DEPTH: 8000' Driller - 8014' Logger

SAMPLES: 10' samples from 4400' to 8000'
Stored at Amstrat, Casper, Wyoming

STATUS: Testing for water potential

CHRONOLOGIC HISTORY

29 July 1969 Spud 9:00 A.M., set 13 5/8" at 164' with 200 sax
30 Drlg at 2220'
31 Drlg at 4070', cored from 4338' to 4370'
1 Aug Prep to roam
2 Reaming at 2025'
3 Reaming at 4290', set 8 5/8" at 4393' with 350 sax
4 WCC
5 GIIH with retainer, perf. 4135' with 4 holes per foot
6 Set retainer at 4315' with 200 sax
7 Trip in with 7 5/8" bit, drld to 4172'
8 Milling
9 Drld to 4219, trip for mill
10 Drld to 4230', milling
11 Milled to 4241'
12 Drlg at 4775'
13 Milling
14 Trip for bit at 5315'
15 Drlg at 5459'
16 Drlg at 5950'
17 Tripping at 6152', strapped pipe 6' depth correction
18 Tripping at 6282'
19 Drlg at 6418'
20 Drlg at 6484'
21 Drlg at 6581'
22 Fishing for cones at 6590'
23 Tripping for bit #29 at 6626'
24 Drlg at 6692'
25 Drlg at 6836'
26 Mixing mud at 7002', LC at 6970'
27 Drlg at 7090', LC at 7002', 7007', 7077'
28 Drlg at 7245'
29 Drlg at 7480'
30 Drlg at 7645'
31 Tripping at 7781'
1 Sept. T.D. 8000', condition hole for logs
2 Running 5 1/2" long string, set at 8000' with 325 sax
Rig released

DEVIATION RECORD

<u>Date</u>	<u>Depth</u>	<u>Deviation</u>	<u>Date</u>	<u>Depth</u>	<u>Deviation</u>
29 July	1050	1/4°	14 Aug	5043	1 1/4°
30 July	1952	3/4°	15 Aug	5744	1 1/2°
31 July	3663	3/4°	19 Aug	6429	1 1/4°
3 Aug	3959	3/4°			

FORMATION TOPS

<u>Formation</u>	<u>Sample Top</u>	<u>Log Top</u>	<u>K.B. Datum</u>
Fort Union	Not Logged		
Piarra		"	
Eagle		"	
Niobrara		"	
Mowry		"	
Muddy		"	
Muddy Sand		"	
Skull Creek		"	
Fall River	4664	4633	- 949
Lakota	4770	4741	-1057
Morrison	4889	4829	-1145
Sundance	5025	4919	-1235
Piper	5412	5303	-1619
Spearfish	5597	5557	-1873
Minnekahta	6078	6079	-2395
Opeche	6098	6100	-2416
Winnelusa	6157	6156	-2472
Madison	6608	6627	-2943
Stony Mountain	7598	7608	-3924
Red River	7686	7688	-4004
T.D.	8000 Driller	8014 Logger	

BIT RECORD

<u>No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>Depth Out</u>	<u>Footage</u>	<u>Hours</u>	
1	7 7/8	Smith	DS	1952	1787	14	
2	7 7/8	Smith	DS	3663	1711	17 3/4	
3	7 7/8	Reed	YT3-A	4338	675	9 1/2	
4	6 1/2	Chris.	Ø diam.	4370	32	2	
5	12 1/4	Smith	DTJ	2741	2577	10 1/2	aming
6	12 1/4	Smith	DTJ	4400	1659	19	"
7	7 5/8	Reed	YTLAR				
8	"	Reed	YSLR	4166	151		Drig com & junk
9	"	Reed	YSLR				
10	"	Smith	W4I				
11	"	Reed	YSLJ				
12	"	Reed	YTLAR	4552	152	8 1/2	
13	"	Smith	DCJ	4747	195	10 1/2	
14	"	Smith	DT2G	5043	296	15 1/2	
15	"	Reed	YTLAJ	5315	272	10	
16	"	HTC	OSCLG	5347	32	2 1/2	
17	"	Smith	K 2	5459	112	7	
18	"	HTC	CSC1G-J	5744	285	9 1/2	
19	"	HTC	OSCLG-J	5988	244	11 3/4	
20	"	Reed	YSLJ	6152	164	13 1/2	
21	"	Security	H7U	Run on junk			
22	"	Smith	L4J	6282	130	8	
23	"	Smith	L4J	6364	82	7	
24	"	Security	H7U	6429	65	10	
25	"	Reed	YUJ	6483	54	9 1/2	
26	"	Reed	YC50J	6590	107	27 1/2	
27	"	Reed	YHW-2	6603	13	3 1/4	
28	"	Reed	YHW-2	6626	23	7 1/4	
29	"	Reed	YHW-2J	6677	51	11 1/4	
30	"	Reed	YUJ	6757	80	11 1/2	
31	"	HTC	CWC	6863	106	12 1/2	
32	"	Smith	T2	7007	144	13 1/4	
33	"	Smith	V2J	7217	210	12 1/2	
34	"	Reed	YH	7412	195	13 1/4	
35	"	HTC	ONV-J	7540	128	9 1/2	
36	"	Security	M4L	7648	108	12	
37	"	HTC	ONV-J	7781	133	11 1/2	
38	"	HTC	ONV-J	8000	219	13 1/2	

OIL SHOWS

No shows were seen in the samples between the luddy sandstone and the lower portion of the Madison group. In the samples from 7500-10' and 7520-30' a brownish-gray, finely sucrosic dolomite was seen which had dark gray to black streaks in it. These may have been either mineral stain along fractures or stylolites, or a dead residual oil stain. These samples would neither cut nor fluoresce.

A few pieces of the samples from the Red River formation at depths of 7660-90' and 7820-30' had black stain similar to that described above. This rock was more of a fine crystalline dolomite which had very poor porosity. This was also interpreted as being the result of mineral stain or possibly a very dead oil stain.

In contrast to the weak shows described above, the samples from 7910-40' contained a grayish tan, finely sucrosic dolomite which had a light brown live oil stain. These samples had a good golden fluorescence and a good golden cut when treated with xylene under the UV lamp. The samples with the stain first appeared in the 7910-20' sample and constituted perhaps 5% of the sample. They increased to 10-15% of the sample from 7920-30' and decreased to only 5% of the sample from 7930-40'. No shows were seen in the samples from 7940-70'. The show reappeared in the samples from 7970 to 8000' (T.D.) but never comprised more than a few percent of the sample. The first appearance of this show lagged back to a depth of about 7660-70' and probably came from this interval. Because of the small percentage of rock which had the stain in the sample it is likely that the presence of the oil is controlled by fractures and only the rocks immediately adjacent to the fractures contain any of the oil. This interpretation is supported by the fact that the show was not apparent on the mechanical logs.

DESCRIPTION OF POTENTIAL RESERVOIRS

FALL RIVER SANDSTONE - 4633' to 4741'

In the samples examined of this interval only loose, fine to medium, well rounded quartz grains were seen. Approximately 80 feet of this sand with excellent porosity were penetrated. Sonic log calculations show this sand to have a porosity of at least 25%. This formation might be able to deliver large quantities of water but it would be very fresh and would require considerable chemical treatment before it could be used to water flood theuddy sandstone at Bell Creek.

MINNELUSA SANDSTONE - 6156' to 6627'

The Minnelusa formation contains large quantities of very porous sandstone especially in the upper 200 feet of the unit. This sandstone consists of white to light gray, mostly very fine to fine grained, slightly dolomitic sandstone. The grains are fairly well sorted, subangular to subrounded and only loosely cemented with a dolomitic cement so the rock is quite friable. Some pink short grains were present although the vast majority of the rock consists of quartz grains. The samples examined of the well appeared to have good to excellent porosity.

Calculations of the E-Log and Gamma Ray Sonic Log showed that at least 130 feet of sand has a porosity of 20% or better and could be expected to yield water from the Minnelusa formation. This unit should be thoroughly evaluated by perforations and swab testing as this water should be more chemical compatible with the water in theuddy sandstone and would require less treatment before using it for injection purposes.

MADISON GROUP - 6627' to 7603'

As anticipated the Madison Group was found to be comprised of almost 1000 feet of greatly varied carbonate rocks which become somewhat more argillaceous towards the base of the unit. The porosity as seen in the samples and calculated from the logs turned out to be somewhat disappointing. Log calculations show that the majority of the porosity present ranges between 12-15% with only a small portion running over 15%. The best portion of the section lies between 6960' and 7170'. Except for a few tight streaks most of this interval should be capable of excellent water production. The samples from this interval included a large amount of limy dolomite which was almost a fossil hash and appeared to have excellent porosity and permeability. Although the Sonic Log only shows about 15% porosity for this section, serious lost circulation problems were encountered while drilling this interval. This indicates that these rocks are probably quite fractured as this severe a loss of circulation would not be expected in rocks with only 15% porosity. The presence of fractures would greatly increase the water productivity of this section.

DESCRIPTION OF POTENTIAL RESERVOIRS (Cont'd.)

RED RIVER - 7688' to 8000' (T.D.)

All of the Red River formation penetrated in this well consisted of dolomite, most of which was finely sucrosic, white to tan, with fair to good porosity. Most of the comments which applied to the Madison Group can also be said for the Red River. The porosity as seen in the samples was somewhat disappointing and the log calculations support this by showing most of the unit to have less than 15% porosity. Although the dolomites had intercrystalline porosity in the sucrosic portion and vugular porosity in the finely crystalline dolomite, this is expected to be greatly augmented by the fracturing evidenced by the lost circulation encountered while drilling the formation.

Joseph L. Harvey

VERDE EXPLORATION INC.

217 City Center Building
CASPER, WYOMING

J.L. Anderson

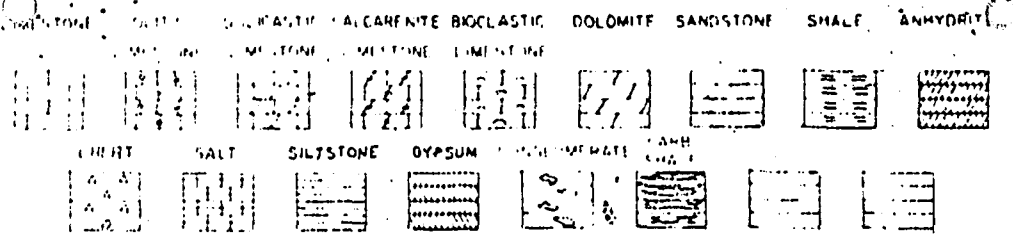
J.L. Harvey

<p>Operator <u>SAMUEL GARY</u></p> <p>Farm <u>GARY MADISON No. 1</u></p> <p>Field <u>BELL CREEK</u></p> <p>County <u>Powder River</u> State <u>Montana</u></p> <p>Location <u>NW-SW</u></p> <p>Sec. <u>27</u> Twp. <u>8 S</u> Rng. <u>54 E</u></p> <p>Contractor <u>Lohman & Johnson</u></p> <p>Comm. <u>7-28-69</u> Comp. <u>9-2-69</u></p> <p>Rotary Total Depth <u>8000'</u></p> <p>Mud Up at _____</p> <p>Type Mud Chem. <u>Gel, Magcobar</u></p>	<p style="text-align: center;">ELEVATIONS</p> <p>KB. <u>3684'</u></p> <p>DF. <u>3682'</u></p> <p>GL. <u>3672'</u></p> <hr/> <p style="text-align: center;">CASING</p> <p><u>13 3/8" at 164'</u></p> <p><u>8 5/8" at 4393'</u></p> <p><u>5 1/2" liner to 8000'</u></p> <hr/> <p style="text-align: center;">ELECTRICAL SURVEYS</p> <p><u>Schl. I-ES 4100'-8013'</u></p> <p><u>GR-S 4100'-8006'</u></p>	<p style="text-align: center;">COMPLETION</p> <p>IP. _____</p> <p>Form- _____</p> <p>Perfs- _____</p> <hr/> <p>Remarks- _____</p> <p><u>Water Supply Well</u></p> <p><u>Samples - poor to 5500'</u></p> <p><u>good to T.D.</u></p>
<p>Drill Stem Test Intervals - _____</p> <p>_____</p> <p>_____</p> <p>Core Intervals - <u>I= 4338-4370' MUDDY</u></p> <p>_____</p> <p>_____</p>		<p style="text-align: center;">Wellsite Geologist</p> <p><u>O.P. MILES to 4400'</u></p> <p><u>J.L. HARVEY</u></p> <hr/> <p style="text-align: center;">Geological Supervision</p> <p>from <u>4400'</u> to <u>8000'</u></p>

LEGEND

LIMESTONE	SANDSTONE	CLAYSTONE	ARGILLITE	BIOLASTIC	DOLOMITE	SANDSTONE	SHALE	ANHYDRITE
CHERT	SALT	SILTSTONE	GYPSON	UNCONFORMITY	ANCHOR			

LEGEND



DATE	DEPTH	BIT RECORD			FORMATION TOPS		DEVIATION SURVEY						
		NO	TYPE	OUT	Sample	E log							
Aug 12, 1969	Dig 4775	1	DS	1952									
13	Millng	2	DS	3663									
14	Trip 5315	3	YT 3-A	4338	4664	FALL RIVER	4633	-949	1050	1/4°			
15	Dig 5489	4	DMD	4370									
16	" 5950	5	DTJ	2741									
17	Trip 6152	6	DTJ	4400	4770	LAKOTA	4741	-1057	1952	3/4°			
18	Trip 6262	7	YT IAR										
19	Dig 6410	8	YSIR	4166	4889	MORRISON	4829	-1145	3663	3/4°			
20	" 6484	9	YSIR										
21	" 6581	10	W4T										
22	Fishing 6590	11	YSIJ		5025	SUNDANCE	4919	-1235	3959	3/4°			
23	Trip 6626	12	YT IAR	4552									
24	Dig 6672	13	DG J	4747	5412	PIPER	5303	-1619	5083	1/4°			
25	" 6636	14	DT 2G	5043									
26	Mix Mud 7002	15	YT I A J	5315									
27	Dig 7020	16	OSC I G	5347	5597	SPEARFISH	5557	-1873	5744	1 1/2°			
28	" 7245	17	K2	5452									
29	" 7450	18	OSC I G J	5744	6078	MINNEKAHA	6079	-2395	6429	1/4°			
30	" 7525	19	OSC I G J	5988									
31	Trip 7781	20	YSIJ	6152									
Sept 1	T.D. 8000	Logging	21	H7U	6098	OPSCHE	6100	-2416					
2	T.D. 8000	Run Log	22	L4J	6282								
			23	L4J	6364	6157	MINNELUSA	6156	-2472				
			24	H7U	6429								
			25	YHJ	6483								
			26	YC 6G J	6590	6608	MADISON	6627	-2943				
			27	YHW 2	6603								
			28	YHW 2	6626	7598	STONY MOUNTAIN	7608	-3924				
			29	YHW 2 J	6677								
			30	YMJ	6757								
			31	OWC	6863	7686	RED RIVER	7688	-4404				
			32	T2	7007								
			33	V2 J	7217	8000	T.D.	8314					

BIT RECORD (CON'T)

NO	TYPE	OUT
34	YM	7412
35	ONV J	7540
36	M4L	7648
37	ONV J	7781
38	ONV J	8000

COMPLETION REPORT

Bell Creek Madison #1

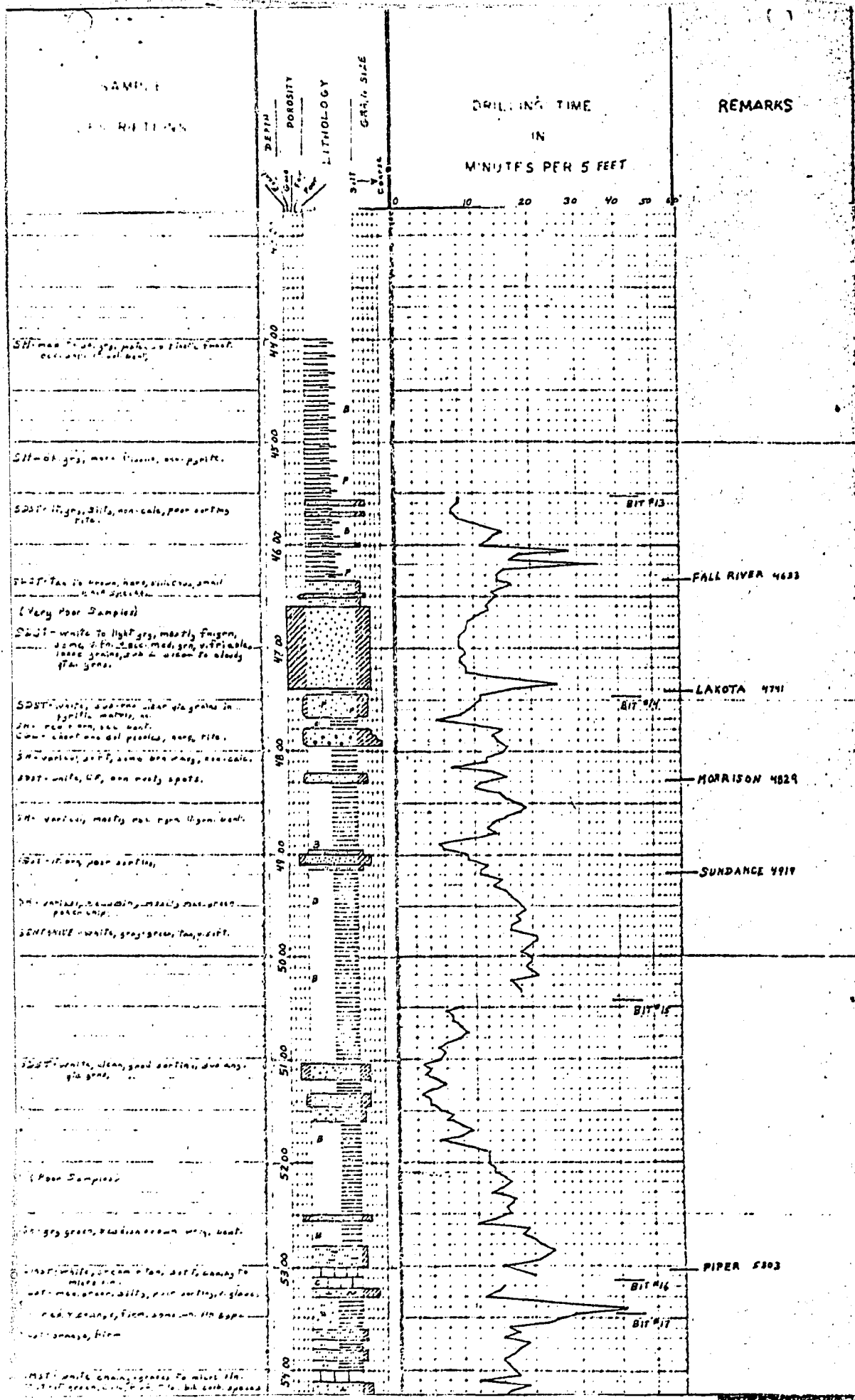
N 1/2 NW SW Section 27-8S-54E

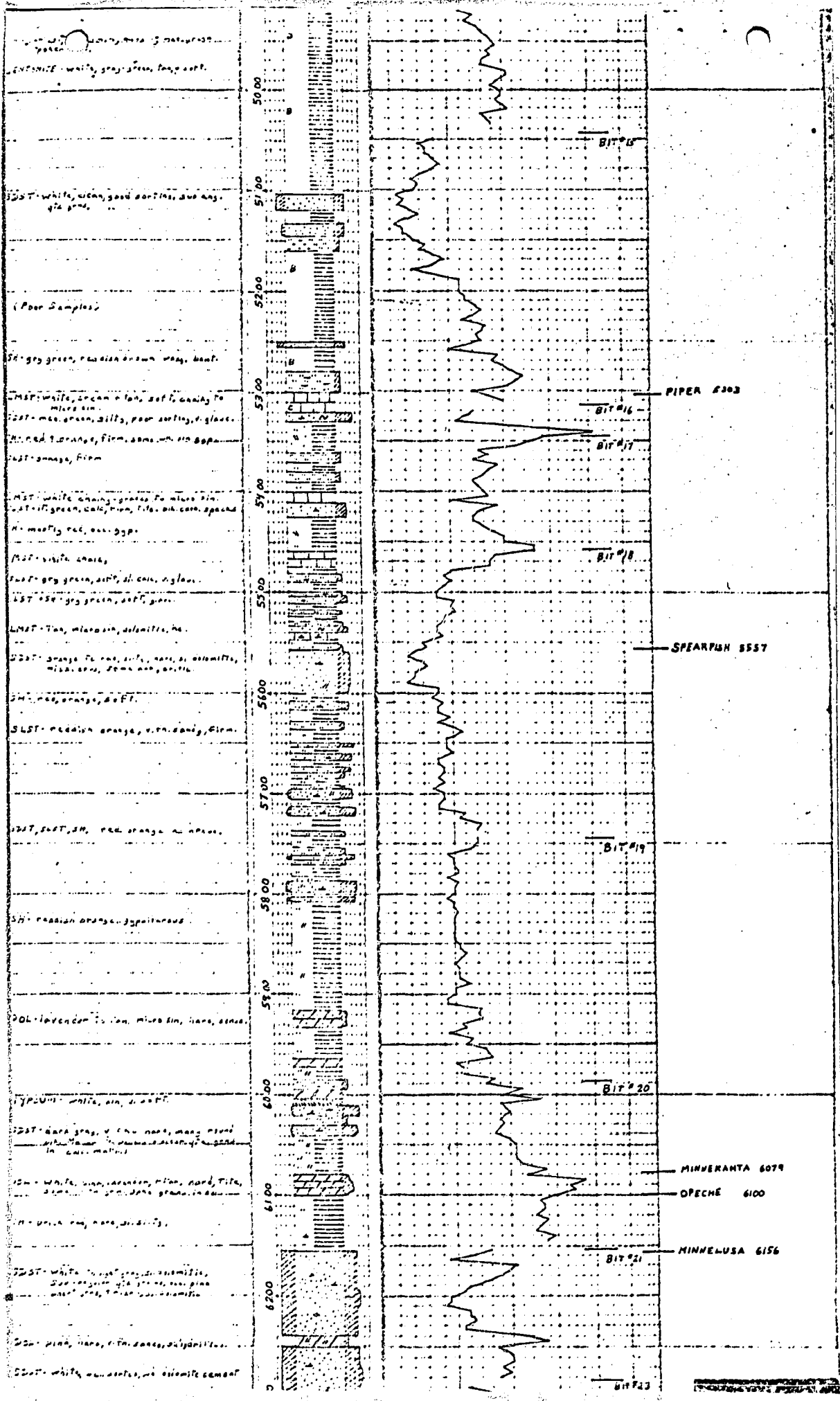
Powder River County, Montana

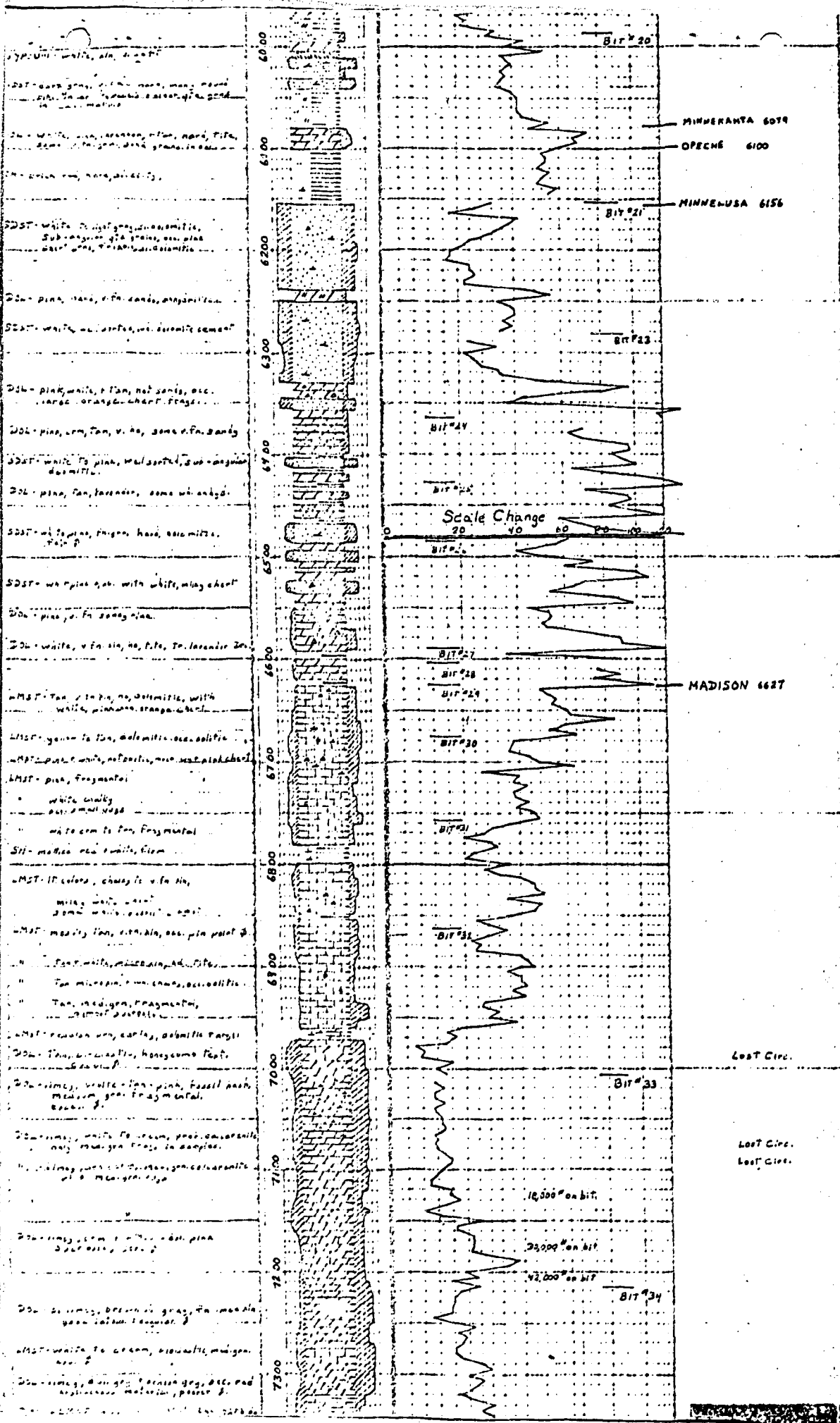
AFE #659

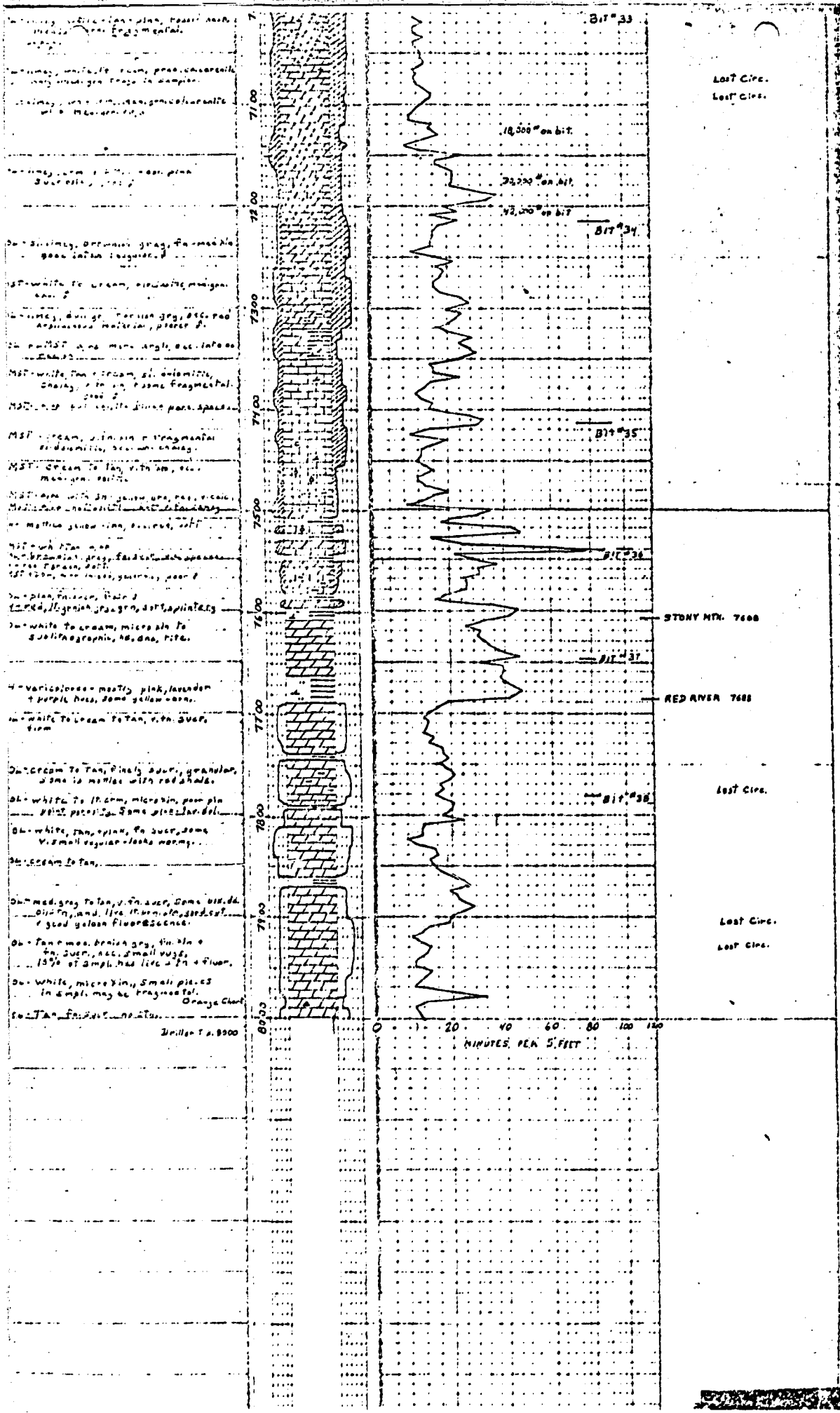
- 11-24-69 Moved in and rigged up double drum completion rig (Updike rig #48).
- 11-25-69 Rigged up Cardinal Inc. to run Gamma Ray, correlation log. Found a plug at 7870'. Went in with sand pump and worked plug to 7915'.
- 11-26-69 Worked plug to 7925'. Pick up string 2-7/8" tubing with 4-3/4" bit and cleaned out to 7800'.
- 11-28-69 Cleaned out to 7964. Ran Cardinal correlation log, PBT 7944' (the plug came back up hole 20'). Perforated the following Red River interval w/2-28 gram jet shots per foot. 7854'-58', 7867'-80', 7887'-89', 7913'-18' and 7924'-29'. Started in hole with tubing and Baker Model AD packer.
- 11-29-69 Set packer at 7820' and started tubing swabbing. Swabbed tubing down and established swab rate at 35 bbls/hour with fluid standing at 1000'. Swabbed 2 hours, 100% water. Pulled tubing and perforated 2-28 gram jet shots per foot the following intervals 7816'-18', 7820'-22', 7824'-26', 7828'-30' and 7833'-35'.
- 11-30-69 Ran tubing, set packer at 7760'. Established swabb rate at 40 bbls per hour with fluid staying at 900'. Fluid would rise within 25' of surface after 10 minutes.
- 12-1-69 Pulled tubing rigged up Cardinal and set Baker Mercury series Wireline bridge plug at 7620'. Perforated the Madison limestone with 1-28 gram jet shot per foot through the following interval 6960' to 7170'. Ran tubing with packer and set at 6950'.
- 12-2-69 Swabbing through tubing at 60 Bbls, 100% water per hour. Spotted 2500 gallons of 15% HCL acid and pumped away at 3 Bbls per minute. Swabbed spent acid back plus 250 barrels with no increase in rate.

- 12-3-69 Started out of hole laying down tubing. Well started flowing.
- 12-4-69 Finished laying down tubing. Installed 5-1/2" valve on well head. Released rig. Rigged up 6" Halliburton frac meter and flowed well for 6 hours. Average hourly rate - 356.9 barrels water per hour.
- 12-9-69 Flowed well for 5 days to clean up prior to Calgon getting a complete analysis plus compatability.
- 12-18-69 Ran bottom hole pressure gauge and recorded static gradient, flowing gradient and productivity index. Well should be capable of over 30,000 bbls per day with fluid level standing at 400'.









RECEIVED

GW - 2

File No. 80566

Filed: 11-21 1967

at 8:30 P. M.

NOV 24 1967

Charlotte Edwards
Clerk and Recorder

Notice of COMPLETION of Groundwater _____ Twp. _____ Rge. _____
Appropriation by Means of Well _____

Powder River County (Under Chapter 237, Montana Session Laws, 1961)

OWNER Western Oil Transportation Address Brookings, Mont.

DRILLER Earl Drane Address Brookings, Mont.

Date of Notice of Appropriation of Groundwater _____

Date well started 10-67 Completed 10-67

Type of Well drilled Equipment Used rotary
(dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic _____; Municipal _____; Stock _____; Other _____;
Industrial _____; Drainage _____; Irrigation _____;

Indicate on diagram character and thickness of different strata met in drilling -s, soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

0
8
8
22
40
70
86
109
111
120
138
153
164
173
178
272
280

8
22
40
70
86
109
111
120
138
153
164
173
178
272
280

clay
yellow sand
rock
clay
gravel
sand
shale
rock
shale
sand
shale
sand
shale
sand
shale
sand
shale

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations		
				Kind Size	From (feet)	To (feet)
6"	4" 91#	0	276	slots 3/4" x 4"	238	276

Static Water Level for non-flowing well 25 feet

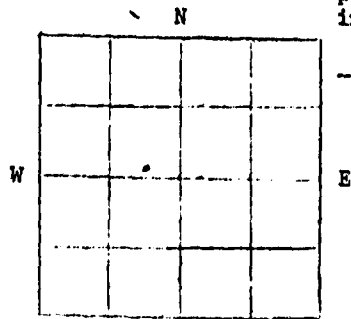
Shut-in Pressure for Flowing Well _____

Pumping Water Level 128 feet at 12 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested running Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



SE/4 of NW/4 Sec 22, Twp. 8-S, Rge 24-E East.

26
Driller's License NO.

Earl Drane
Driller's Signature

STATE OF MONTANA)
County of Powder River) ss.

Western Oil Trans. Co. Inc.
By: Earl Drane having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein set are true.

Owner's Signature Earl Drane

Subscribed and sworn to before me, this 21 day of November, 1967.

CHARLOTTE EDWARDS
Clerk and Recorder

Charlotte Edwards Clerk and Recorder

42563

File No. 80551
 Filed: 11-20 1967
 at 10:51 A. M.

Charlotte Edwards
 Clerk and Recorder
 Powder River County
 by Thelma W. Robinson
 Deputy

Notice of COMPLETION of Groundwater
 Appropriation by Means of Well
 (Under Chapter 237, Montana Session Laws, 1961)

Twp. 1

Top of Ground - _____
 Elev. above sea level. DRILLER Earl Drane Address Broadway Denver, Colorado

Date of Notice of Appropriation of Groundwater _____

0
5
30
65
135
150
246
268

top soil
clay
gravel & clay
blue shale
sand
blue shale
sand
sand & shale streaks

Date well started Aug. 16, 1967 Completed Aug. 18, 1967

Type of Well drilled Equipment Used rotary
 (dug, driven, bored, drilled) (churn, drill, rotary, etc)

Water Use: Domestic X; Municipal _____; Stock _____; Other _____
 Industrial _____; Drainage _____; Irrigation _____

Indicate on diagram character and thickness of different strata met in drilling - soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size and Weight of Casing	From (feet)	To (feet)	Perforations	
				Kind Size (feet)	From (feet) To (feet)
6"	4" 9 1/2 #	0	245	3/4" slots	

Static Water Level for non-flowing well 30 feet

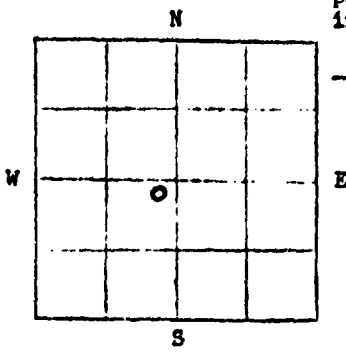
Shut-in Pressure for Flowing Well _____

Pumping Water Level 210 feet at 7 gal. per minute.

Discharge in Gal. per min. of flowing well _____

How Tested pumping & bailing Length of Test 2 hrs.

Remarks: (Gravel packing, cementing, packers, type of shut-off, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any.)



Sec 27, Twp. 1 S, Rge 5 E East.

Earl Drane
 Driller's License NO. _____

Earl Drane
 Driller's Signature

STATE OF Montana
 County of Powder River ss.

Samuel Gary having first been duly sworn, deposes and says that he is of lawful age and the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein set forth are true.

Owner's Signature Samuel Gary

Sworn to before me, this 14 day of November, 1967.



Myrtle J. Oriel
 Notary Public
 42,556

FILED 71849
 COUNTY CLERK and DEPUTY CLERK
 County of Powder River, Montana
 I have this day filed for
 Record the above
 and the same is
 this 29th day of
 Dec 1911

T. 8S R. 54 E
 County Powder River

MONTANA BUREAU OF MINES AND GEOLOGY
 Butte, Montana

RECEIVED

Willie Liberty
 Deputy

WATER WELL LOG

STATE ENGINEER

		X

Owner Roger Harford Address Biddle, Montana
 Driller Address
 Date Started Date Completed
 Location: Sec. 2E T. 8S R. 54E 1/4 sec

Type of well Drilled Equipment used rotary
(Dug, driven, bored, or drilled) (Churn drill, rotary, other)

Water use: Domestic Municipal Stock Irrigation
 Industrial Drainage Other:

Casing: 4 in. ft. to 18 ft. Type Black Size 4"

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Perforated or Screened: Ft. to ft. Ft. to ft.

Type of screen or perforations

Static Water level, for non-flowing well: 15 ft. feet.

Shut-in pressure, for flowing well: lb./sq. in. on: (date)

Pumping water level: 84' feet at 20 gal. per min.

How tested: By driller

Length of test

Remarks: (Gravel packing, cementing, packers, type of shut-off, depth of shut-off)

.....

(over)

DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED
OCT 23 1963

1. Roger Warford, of Biddle,
County of POWDER RIVER, State of MONTANA, have appropriated groundwater according to the
Montana laws in effect prior to January 1, 1962, as follows: **STATE ENGINEER**

WELLS	<table border="1"> <tr> <td style="text-align: center;">+</td> <td style="text-align: center;">+</td> <td style="text-align: center;">+</td> <td style="text-align: center;">+</td> <td style="text-align: center;">+</td> <td style="text-align: center;">+</td> </tr> <tr> <td style="text-align: center;">x</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sec. <u>28</u></td> <td>Sec.</td> <td>Sec.</td> <td>Sec.</td> <td>Sec.</td> <td>Sec.</td> </tr> </table>						+	+	+	+	+	+	x						✓						Sec. <u>28</u>	Sec.	Sec.	Sec.	Sec.	Sec.
	+	+	+	+	+	+																								
x																														
✓																														
Sec. <u>28</u>	Sec.	Sec.	Sec.	Sec.	Sec.																									
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6																								
2. Basis of Beneficial Use	Stock and Domestic																													
3. Date of use	Nov. - 1960																													
How continuous	constant																													
4. Amount claimed	10 gpm																													
Irrigated description																														
5. Irrigation owner																														
Irrigated acreage																														
6. Location	NENE																													
Withdrawal means	pump																													
7. Completion date	Nov. 1960																													
8. Water depth table	13'																													
Type	drilled																													
9. Size & depth	rotary																													
10. Estimated annual amount withdrawn																														
11. Other information																														
12. Log, if available	0-16 surface soil 16-42 blue shale 42-49 sand 49-122 blue shale 122-133 sand 133-180 blue shale 180-228 water sand 228-240 blue shale																													

STATE OF MONTANA)
County of Powder River) ss.

Signature of Owner Roger Warford

Date 9-10-63

Roger Warford having first been duly sworn, deposes and says that he is of lawful age and is the appropriator and claimant of the order and water right mentioned in the foregoing declaration of vested groundwater rights and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Subscribed and sworn to before me this
10th day of Sept., 1963.

Billie Lindsey deputy
Clerk and Recorder
Powder River County
Broadus, Montana

Roger Warford
Billie Mont

6577

74952 Filed, ³⁻
 at _____, 19____,
 \$2.00 fee paid _____ M.

STATE OF MONTANA
 ADMINISTRATOR OF GROUNDWATER CODE
 OFFICE OF STATE ENGINEER

8-54 29
 8-54
 S. Rge E
 REC'D
 DEC 23 1963
 STATE ENGINEER

DECLARATION OF VESTED GROUNDWATER RIGHTS
 (Under Chapter 237, Montana Session Laws, 1961)

1. Riddle Land & Cattle Co., of Riddle
 County of POWDER RIVER, State of MONTANA, have appropriated groundwater according to
 the Montana Laws in effect prior to January 1, 1962, as follows:

	8-54 ✓	8-54 ✓	8-54 ✓	8-54 ✓	9-54	8-53
	Sec. 29	Sec. 28	Sec. 31	Sec. 32	Sec. 6	Sec. 1
WELLS	No. 213	No. 214	No. 215	No. 216	No. 217	No. 218
2. Beneficial Use	stock	stock	stock	domestic	stock	stock
3. DATE OF USE	1956	1957	1946	1959	1957	1954
How continuous	2 mo.	3 mo.	6 mo.	constant	6 mo.	6 mo.
4. Amount claimed (gal. per minute)	6	7	6	15	4	5
Irrigated description						
Irrigation owner						
5. Irrigated acreage						
6. Location	SESW	NWSW	NENE	NWNE	NENE	NWSE
Withdrawal means	windmill	windmill	windmill	pump	windmill	windmill
7. Completion date	1956	1957	1946	1959	1957	1954
8. Water depth table	40'	50'	60'	40'	70'	60'
Type (drilled or dug)	drilled	drilled	drilled	drilled	drilled	drilled
9. Size & depth	4" x 150'	4" x 130'	4" x 160'	4" x 180'	4" x 220'	4" x 190'
10. Estimated annual amount withdrawn						
11. Other information						
12. Log, if available						

STATE OF MONTANA)
) ss.
 County of Powder River)

Signature of Owner Riddle Land & Cattle Co.
 by /s/ Verlin Popp
 Date 11-29-63

having first been duly sworn, deposes and says that he is of lawful age and is the appropriator and claimant of the order and water right mentioned in the foregoing Declaration of Vested Groundwater Rights and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Subscribed and sworn to before me this _____ day of _____, 19____.

11736-B

File No. 74667
 Filed: Oct. 22, 1963
 at 9:10A. M.
Lucille Godsey, deputy
 Clerk and Recorder
 Powder River County
 \$2.00 fee paid

STATE OF MONTANA
 ADMINISTRATOR OF GROUNDWATER CODE
 OFFICE OF STATE ENGINEER

T 8S R 51E

RECEIVED
 OCT 23 1963

NOTICE OF COMPLETION OF GROUNDWATER
 APPROPRIATION BY MEANS OF WELL
 (Under Chapter 237, Montana Session Laws, 1961)

STATE ENGINEER

Top of Ground
 (Elev. above sea
 level _____)
 0-18 surface soil
 18-37 sand
 37-103 blue shale
 103-178 sand
 178-190 blue shale

OWNER Roger Warford Address Biddle, Montana

DRILLER Frank Bandy, Jr. Address Brookings, Montana

Date of Notice of Appropriation of Groundwater _____

Date well started Nov. 1962 Completed Nov. 1962

Type of well drilled Equipment used rotary
 (dug, driven, bored, drilled) (churn, drill, rotary, other)

Water Use: Domestic Municipal Stock Other
 Industrial Drainage Irrigation

Indicate on diagram character and thickness of different strata met in drilling - soil, clay, shale, gravel, rock, sand. Show depth at which water is found, thickness and character of water-bearing strata and height to which water rises in well.

Size of Drilled Hole	Size & Weight of Casing	From To (feet)		PERFORATIONS		
		From (feet)	To (feet)	Kind Size	From (feet)	To (feet)
6"	4" 11 lb.	0	191	slashes	103	178

Static Water Level for non-flowing well 100' feet.

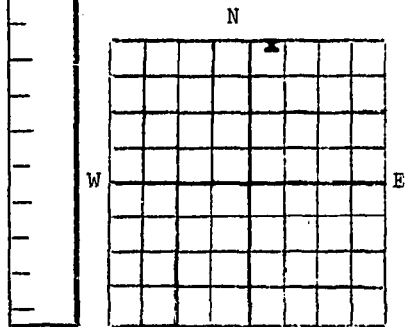
Shut-in Pressure for Flowing Well _____

Pumping Water Level 117 feet at 12 gal. per minute

Discharge in gal. per min. of flowing well _____

How Tested _____ Length of Test _____

Remarks: (Gravel packing, cementing, packers, type of shutoff, location of use if not at well, other similar pertinent information, including number of acres irrigated, if any)



N 1/2 NE Sec. 29 T. 8S R. 51E

STATE OF MONTANA)
 County of Powder River)SS.

Roger Warford having first been duly sworn, depose and say that he is of lawful age and is the appropriator and claimant of the order and water right mentioned in the foregoing notice of completion of groundwater appropriation by means of well and the person whose name is subscribed thereto, as the appropriator and claimant, that he knows the contents of said foregoing notice and that the matters and things therein stated are true.

Roger Warford

Subscribed and sworn to before me, this 10th day of Sept., 1963

Lucille Godsey, Deputy
 Clerk and Recorder
 Powder River County
 Brookings, Montana

-6578

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
MONTANA WATER RESOURCES BOARD

DRILLER'S LOG

NOTICE OF COMPLETION OF GROUNDWATER
APPROPRIATION BY MEANS OF WELL

Developed after January 1, 1962

(Under Chapter 237 Montana Session Laws, 1961, as amended)

This form to be prepared by driller, and three copies to be filed by the owner with the County Clerk and Recorder in the county in which the well is located, last copy to be retained by driller.

Please answer all questions. If not applicable, so state, otherwise the form may be returned.

Indicate the character, color, thickness of strata such as soil, clay, sand, gravel, shale, sandstone, etc. Show depth at which water is found and height to which water rises in well.

Owner John Giscometto

Address Boyes, Mont.

Date well started July, 1970

completed July, 1970

Type of well drilled

Equipment used rotary

Water Use: Domestic Municipal Stock Irrigation

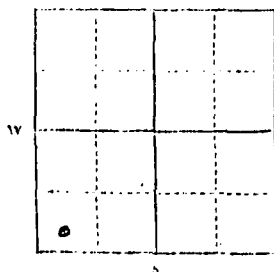
Industrial Drainage Other Garden/Lawn

*Describe

USE: If used for irrigation, industrial, drainage or other. Explain, state number of acres and location or other data (i.e. Lot, Block and Addition).

ESTIMATED ANNUAL WITHDRAWAL

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Rind Size	From (Feet)	To (Feet)
6"	4" plastic	0	140	1/8 x 5" slots	100	140



Static water level 65 ft.*
Pumping water level 80 ft.*
at 12 gallons per minute,
measured minutes after pumping
began.
*Measured from ground level.
Well developed by balling
for 1 hours.
Power elec. Pump 3/4 HP
Remarks: (Gravel packing, cementing,
packer, type of shutoff)

SW 1/4 SW 1/4 Sec. 29
T. 8 N. R. 54 E.

INDICATE LOCATION OF WELL AND PLACE OF USE, IF POSSIBLE.
EACH SMALL SQUARE REPRESENTS 40 ACRES.

Driller's Signature Earl Drace

Driller's Address Boydus, Montana

Top of Ground (Elev. above sea level)

From (Feet)	To (Feet)	
0	14	yellow sand & gravel
14	23	yellow clay
23	34	blue shale
34	41	yellow clay
41	62	yellow sand
62	106	blue shale
106	137	blue sand
137	140	blue shale

86898

FILED

Office of
COUNTY CLERK and RECORDER
County of Powder River, Montana

I hereby certify that the within

instrument was filed for record in

this office, on the 21 day of

January A. D. 1971

at 10:08 o'clock A. M.

By Karen Kobylsky, Deputy

County Clerk and Recorder.

Charlotte Schwartz

Fee 2.00 Paid

INDEXED ✓

RECEIVED

JUN 23 1971

MONTANA DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION

50,693

RECEIVED

County Powder R.

JUN 9 1972

DRILLER'S LOG

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
MONTANA WATER RESOURCES BOARD
NOTICE OF COMPLETION OF GROUNDWATER
APPROPRIATION BY MEANS OF WELL

Indicate the character, color, thickness of strata such as soil, clay, sand, gravel, shale, sandstone, etc. Show depth at which water is found and height to which water rises in well.

Developed after January 1, 1962

(Under Chapter 237 Montana Session Laws, 1961, as amended)

This form to be prepared by driller, and three copies to be filed by the owner with the County Clerk and Recorder in the county in which the well is located, last copy to be retained by driller.

Please answer all questions. If not applicable, so state, otherwise the form may be returned.

Owner Samuel Gary
Address P. O. Box 99
Belle Creek, Montana 59317
Date well started 3-4-72
completed 5-20-72

For Administrator's Use
File
GW 1

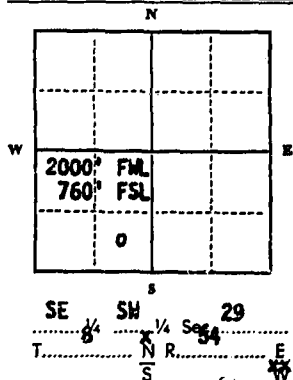
Type of well Drilled
(Dug, driven, bored or drilled)
Equipment used Rotary
(Cable drill, rotary or other)

Water Use: Domestic Municipal Stock Irrigation
Industrial Drainage Other Garden/Lawn

*Describe _____
USE: If used for irrigation, industrial, drainage or other. Explain, state number of acres and location or other data (i.e. Lot, Block and Addition). Section 29-8S-54E

ESTIMATED ANNUAL WITHDRAWAL 10,950,000 barrels

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
12-1/4"	9-5/8" 40#	5fc	7352'	1/2"	7056'	7292'



Static water level flowing ft.*
Pumping water level _____ ft.*
at 730 gallons per minute,
measured 9 days after flowing
began.
*Measured from ground level.
Well developed by _____
for _____ hours.
Power _____ Pump _____ HP
Remarks: (Gravel packing, cementing,
packers, type of shutoff)
cemented - master valve
on surface

INDICATE LOCATION OF WELL AND PLACE OF USE, IF POSSIBLE.
EACH SMALL SQUARE REPRESENTS 40 ACRES

Driller's Signature Samuel Gary
Driller's Address P. O. Box 99
Belle Creek, Montana 59317
LICENSE NO. 191

Top of Ground (Elev. above sea level) 3611'

From (Feet)	To (Feet)
SEE ATTACHED SAMPLE DESCRIPTION	
8/16/72 FILED	
Office of COUNTY CLERK and RECORDER County of Powder River, Montana I hereby certify that the within instrument was filed for record in this office, on the <u>9th</u> day of <u>June</u> A. D. 19 <u>72</u> at <u>9:00</u> o'clock <u>A.M.</u> <u>Charlette Edwards</u> County Clerk and Recorder By <u>Samuel Gary</u> Deputy Fee <u>5.00</u> Paid	
7350'	

Show exact depth of bottom

50,563

County Powder River

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
MONTANA WATER RESOURCES BOARD
NOTICE OF APPROPRIATION OF GROUNDWATER
(Under Chapter 237, Montana Session Laws, 1961, as amended)

After filing a notice of appropriation, in order to acquire a right based thereon, the person must, within ninety (90) days, commence actual excavation and diligently prosecute construction of a well and, upon its completion, file a notice of completion with the County Clerk of the county in which the appropriation is located.

Three copies of this notice are to be filed with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form may be returned.

1. I, SAMUEL GARY, of Box 99, Belle Creek, Montana
(Name of Appropriator) (Address) (Town)

County of Powder River, State of Montana, intend to appropriate groundwater in accordance with Chapter 237, Montana Session Laws of 1961.

2. The beneficial use to which water is to be applied is injection into the Muddy formation for secondary recovery.
(describe lands to be benefited, if for irrigation)

3. The rate of use in gallons per minute or miner's inches of groundwater claimed 1,085 GPM

The estimated amount of groundwater to be used annually 10 MM Barrels

4. The annual period (inclusive dates) of intended use February 1972 - Continuous

5. The probable or intended date of first beneficial use February 1972

6. The probable or intended date of commencement and completion of the well* or wells*
Spud January 4, 1972 Complete February 4, 1972

7. The location, type, size and depth of well or wells contemplated Rotary hole - 12-1/4" to 7400'

8. The probable or estimated depth of the water-table or artesian aquifer 7200'

9. The name, address, and license number of the driller engaged SAMUEL GARY (JACK M. LUCKY)
300 Western Resources Bldg., Casper, WY 82501 #191

10. Give such other similar information as may be useful in carrying out the policy of this act

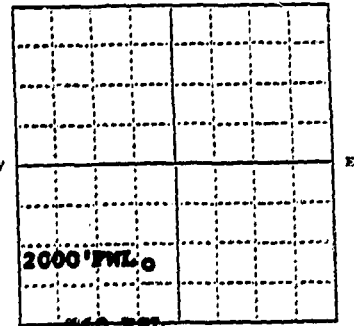
This well will be drilled into & completed in the Madison formation.

89055 FILED

Office of
COUNTY CLERK and RECORDER
County of Powder River, Montana

I hereby certify that the within instrument was filed for record in

THIS OFFICE ON _____ day of _____ A. D. 1972
For Administrator's Use
File 89055 Charlotta Edwards
County Clerk and Recorder
Dec. 13, 1972 9:05 AM
Paid 2.00 Deputy.



SE 1/4 SW 1/4 Sec. 29
T. 8S N. R. 54E E
S W

LOCATE WELL OR OTHER MEANS OF DEVELOPMENT AS ACCURATELY AS POSSIBLE ON THE PLAT.

Signature of Appropriator: Samuel Gary Date December 8, 1972

*As defined in the Code Sec. 1 (c) "Well" means any artificial opening or excavation in the ground, however made, by which groundwater can be obtained or through which it flows under natural pressure or is artificially withdrawn.

50,675

RECEIVED

County, Powder Riv.

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
MONTANA WATER RESOURCES BOARD

JUN 23 1972

DRILLER'S LOG

NOTICE OF COMPLETION OF GROUNDWATER
APPROPRIATION BY MEANS OF WELL

Developed after January 1, 1962

MONTANA DEPARTMENT OF MINES AND GEOLOGICAL SURVEY
Indicate the character, color, thickness of strata such as soil, clay, sand, gravel, shale, sandstone, etc. Show depth at which water is found and height to which water rises in well.

(Under Chapter 237 Montana Statutes, 1961, as amended)

This form to be prepared by driller, and three copies to be filed by the owner with the County Clerk and Recorder in the county in which the well is located, last copy to be retained by driller.

Please answer all questions. If not applicable, so state, otherwise the form may be returned.

Owner John Giacometto

Address Poyes, Mont.

Date well started July, 1970

completed July, 1970

Type of well drilled

(Dug, driven, bored or drilled)

Equipment used rotary

(Chain drill, rotary or other)

Water Use: Domestic Municipal Stock Irrigation

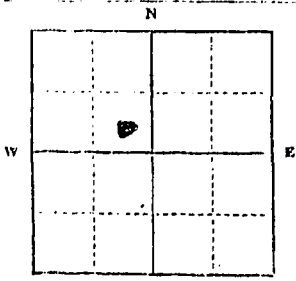
Industrial Drainage Other * Garden/Lawn

*Describe

USE: If used for irrigation, industrial, drainage or other. Explain, state number of acres and location or other data (i.e. Lot, Block and Addition).

ESTIMATED ANNUAL WITHDRAWAL

Size of Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
5"	4" plastic	0	180	1/8 x 5" slotts	140	180



Static water level 80ft.*
Pumping water level 117ft.*
at 12gallons per minute,
measuredminutes after pumping began.
*Measured from ground level.
Well developed by balling
for 2 hours.
Power elec. Pump 1/2 HP
Remarks: (Gravel packing, cementing, packers, type of shutoff)

S 1/4 NW 1/4 Sec. 30
T. 8 R. 54 E

INDICATE LOCATION OF WELL AND PLACE OF USE, IF POSSIBLE. EACH SMALL SQUARE REPRESENTS 10 ACRES.

Driller's Signature Carl Drane

Driller's Address Broadus, Mont.

Top of Ground (Elev. above sea level)

From (Feet)	To (Feet)	
0	62	yellow clay
62	88	blue shale
88	109	blue sand
109	142	blue shale
142	180	blue sand

For Administrator's Use
File 86899
Jan 21, 1972 10:09 a.m.
GW 1

86899
FILED
Office of
COUNTY CLERK and RECORDER
County of Powder River, Montana
I hereby certify that this within instrument was filed for record in this office, on the 24 day of January A. D. 1972
at 10:09 a.m. A. M.
Charles Edwards
County Clerk and Recorder
By [Signature] Deputy
Fee 2.00 Paid

INDEXED 4

50,694

74874 (2) Filed,
 _____, 19____,
 at _____ M.
 \$2.00 fee paid

STATE OF MONTANA
 ADMINISTRATOR OF GROUNDWATER CODE
 OFFICE OF STATE ENGINEER

9
 9
 8
 2
 45
 15
 15
 Trip _____ S. Page _____

RECEIVED
 DEC 23 1963

DECLARATION OF VESTED GROUNDWATER RIGHTS
 (Under Chapter 237, Montana Session Laws, 1961)

STATE ENGINEER

1. Walter B. Bales, of Otter
 County of POWDER RIVER, State of MONTANA, have appropriated groundwater according to
 the Montana Laws in effect prior to January 1, 1962, as follows:

	9-45	9-45	9-45	9-45	9-45	9-45 X	
WELLS	No. 722	No. 723	No. 724	No. 725	No. 726	No. 727	
2. Basis of Beneficial Use	Stock	stock	stock	stock	stock	stock	
3. DATE OF USE	5-30-15	4-17-58	1910	8-15-61	9-58	8-15-61	
How continuous	winter	summer	winter	summer	constant	constant	
4. Amount claimed (gal. per minute)	111	111	111	111	111	111	
5. Irrigated description							
Irrigation owner							
6. Location	SEW	SESE	NEWV	SESE	NESE	SESE	
Withdrawal means	pump	pump	pump	pump	pump	pump	
7. Completion date	5-30-15	4-17-58	1910	8-15-61	9-58	8-15-61	
8. Water depth table	200' x 4'	150'	10'	150'	150'	30'	
Type (drilled or dug)	dug	drilled	dug	drilled	drilled	drilled	
9. Size & depth	5' x 19'	4" x 220'	5' x 32'	4" x 210'	4" x 290'	4" x 90'	
10. Amount withdrawn	20,000 gal.	90,000	20,000	90,000	20,000	300,000	
11. Other information							
12. Log, if available		#8: 0-4 surface soil 4-17 clay 17-26 coal 26-70 blue shale 70-78 sandstone 78-90 blue shale 90-102 sandstone 102-115 blue shale 115-117 hard rock 117-132 sand shale 132-170 blue shale 170-200 water sand 200-220 blue shale		#10: 0-16 surface soil 16-28 coal 28-47 blue shale 47-52 hard rock 52-173 grey shale 173-200 sand-clay streaks 200-210 grey shale			(other side)

STATE OF MONTANA)
) ss.
 County of Powder River)

Signature of Owner /s/ Walter B. Bales

Walter B. Bales Date 11-5-63
 having first been duly sworn, deposes and says
 that he is of lawful age and is the appropriator and claimant of the order and water rights
 mentioned in the foregoing Declaration of Vested Groundwater Rights and the person whose
 name is subscribed thereto, as the appropriator and claimant, that he knows the contents
 of said foregoing notice and that the matters and things therein stated are true.

Subscribed and sworn to before me this _____ day of _____, 19____
 /s/ Walter B. Bales

#11 0-22 Surface soil
22-50 blue shale
50-72 coal
72-106 blue shale
106-135 sand stone
135-238 grey shale
232-285 water sand
285-290 grey shale

#12 0-30 Surface soil
30-38 coal
38-50 blue shale
50-56 coal
56-68 grey shale
68-81 sand
81-90 grey shale

File No. 9-7088AM
 TRIPPLICATE 2 Copies

MONTANA WATER RESOURCES BOARD

T 9 S R 45 E

CHARLOTTE POWERS
 Clerk
 Powder River County
 Broadus, Montana 59317

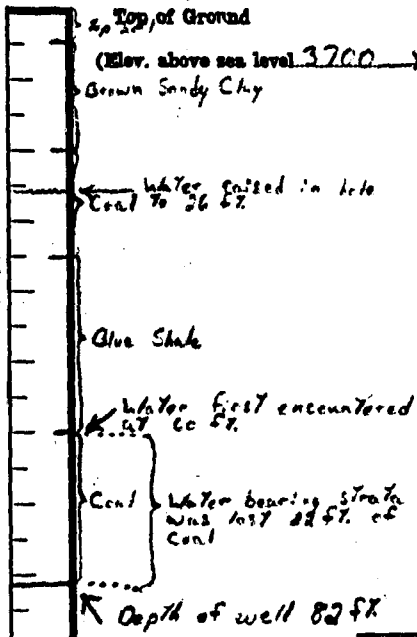
RECEIVED

County Poudre River

DEC 15 1964

STATE OF MONTANA
 ADMINISTRATOR OF GROUNDWATER CODE
 OFFICE OF STATE ENGINEER

Each mark represents 5 ft



Notice of Completion of Groundwater Appropriation by Means of Well

(Under Chapter 287, Montana Session Laws, 1961)

Owner Walter Bates Address Officer Montana

Driller V. BRADWELL Address Williston, Mont

Date of Notice of Appropriation of Groundwater.....

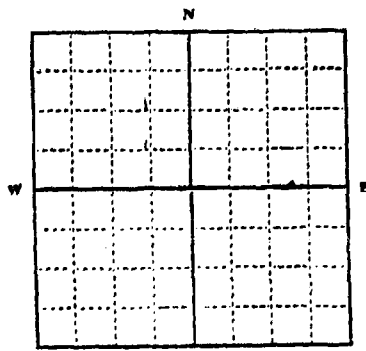
Date well started..... Date Completed.....

Type of well Drilled Equipment Used Rotary
 (dug, driven, bored or (Churn, drill, rotary or drilled) other)

Water Use: Domestic Municipal Other Irrigation
 Industrial Drainage Stock

Indicate on the diagram the character and thickness of the different strata met with in drilling, such as soil, clay, shale, gravel, rock or sand, etc. Show depth at which water is encountered, thickness and character of water-bearing strata and height to which water rises in the well.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				How Made	From (Feet)	To (Feet)
7 7/8	4" galv.	0	82	Medium Slot	30'	82'



S 5/4 N 6 Sec. 2 T 9 S R 45 E
 Indicate location of well and place of use, if possible. Each small square represents 10 acres.

Show exact depth of bottom.

Static Water Level for non-flowing Well..... 26..... feet.

Shut-in Pressure for Flowing Well.....

Pumping Water Level..... 60'..... feet at..... 10..... gal. per minute.

Discharge in gal. per min. of flowing well.....

How Tested..... Air Test..... Length of Test..... 2 hrs......

Remarks: (Gravel packing, cementing, packers, type of shutoff, location of place of use of groundwater if not at well, and any other similar pertinent information, including number of acres irrigated, if used for irrigation).....

Gravel packed

174
 Driller's License Number

V. Bradwell
 Driller's Signature

This form to be prepared by driller, and three copies to be filed by the owner with the County Clerk and Recorder in the county in which the well is located

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

SUPPORTING DOCUMENTS REVIEWED AND FOUND TO BE SUFFICIENT - INITIALS: DL 45978