

SCHLUMBERGER

SCHLUMBERGER OF CANADA Calgary, Alberta

BOREHOLE COMPENSATED SONIC LOG

COMPANY IMPERIAL OIL ENTERPRISES LTD.

WELL 10E BLOW RIVER YT

FIELD WILDCAT

PROVINCE YUKON TERRITORIES

LOCATION 68° 46' 20" N LAT. 137° 27' 13" W LONG.

PROVINCE YUKON TERRITORIES
 FIELD WILDCAT
 WELL 10E BLOW RIVER YT
 E47-68-50-137-15
 COMPANY IMPERIAL OIL ENTERPRISES LTD.

Permanent Datum: GL Elev. 368
 Log Measured From: KB 16 Ft. Above Perm. Datum

Other Services:
 DTL, SNT-GR, FDC-GR, HDT, CIS

Date	Run No.	First Reading	Last Reading	Feet Measured	Depth Reached	Bottom Driller	Csg. SOC	Csg. Driller	Mud Nature	Dens Visc	Mud pH	Water Loss	Res. @ BHT	Rim	Rinc	Bit Size	Spool	Op. Rig Time	Tool No. Recorded By	Class
22 JUNE 70	ONE	4138	781	3357	4140	4132	781	782	CEL	9.5	10.0	9.4	2.05 @ 9.4	1.78 @ 94	-	12 1/4"	2	3.5 HRS	OSU-C 363 REM PORTH	KAP JACK
27 AUG 70	TWO	9987	4048	5939	9989	10027	4048	4047	GEL	9.1	9.5	16.0	2.44 @ 9.4	1.91 @ 43	2.68 @ 45	12 1/4"	2	4 HRS	OSU-C 363 REM PICKFORD	MACRAE
9 NOV 70	THREE	14002	9999	4003	14005	14000	9999	9998	GEL	8.8	9.8	13.2	3.24 @ 60	0.96 @ 209	2.37 @ 61	9 5/8"	2	8 HRS	OSU-C 363 REM CHADDOCK	MACRAE

24 NOV 1970 CAL KM

REMARKS

Drilling Stopped 0600 22nd Circulation Stopped 0800 / 22nd Tool on Bottom 2000 / 22nd Ist Run Service Order # 2942
 RUN 2 1700 / 26th 1700 / 27th 2200 / 27th B.H.T. 94 °F 161 °F

Caliper No. D 917 D 856
 Cartridge No. A 15 A 75 RUN 1 CALIPER: PLUGGED WITH SHALE AND WOULD NOT OPEN MORE THAN 13"
 Panel No. C 472 A 296
 Sonde No. A 75 296
 Centralizer Type RUBBERS & CALIPER

GAMMA RAY CALIBRATION

Background CPS	Test Source CPS	Galv. Increase Divisions	Panel Sens. Tap for Cal.
40	440	10.0	GAL
50	450	10.0	GAL

RUN 3

REMARKS

Drilling Stopped 2100 8th Circulation Stopped 2300 8th Tool on Bottom 1300 9th Ist Run Service Order # 2942
 B.H.T. 209 °F

Caliper No. D 804 TEMPERATURE THERM. # 1 = 208 °F
 Cartridge No. A 256 # 2 = 210 °F
 Panel No. C 316
 Sonde No. A 75 SKIPPING DUE TO FRACTURED ZONES AND DEVIATED HOLE
 Centralizer Type STAND OFF & CALIPER

GAMMA RAY CALIBRATION

Background CPS	Test Source CPS	Galv. Increase Divisions	Panel Sens. Tap for Cal.
30	440	10.0	PGP-0

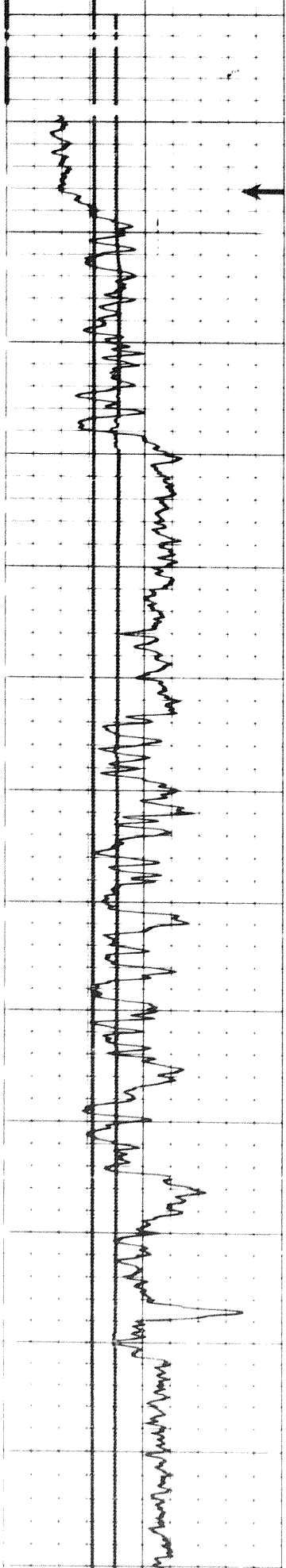
GAMMA RAY API UNITS	DEPTHS	SONIC INTERVAL TRANSIT TIME microseconds per foot
Sens 150 TC 2 Zero 0 div to left	140	90 40
150	240	190 140
300		
CALIPER hole diameter in inches		
10 12 14 16 18		

Speed in FPM →

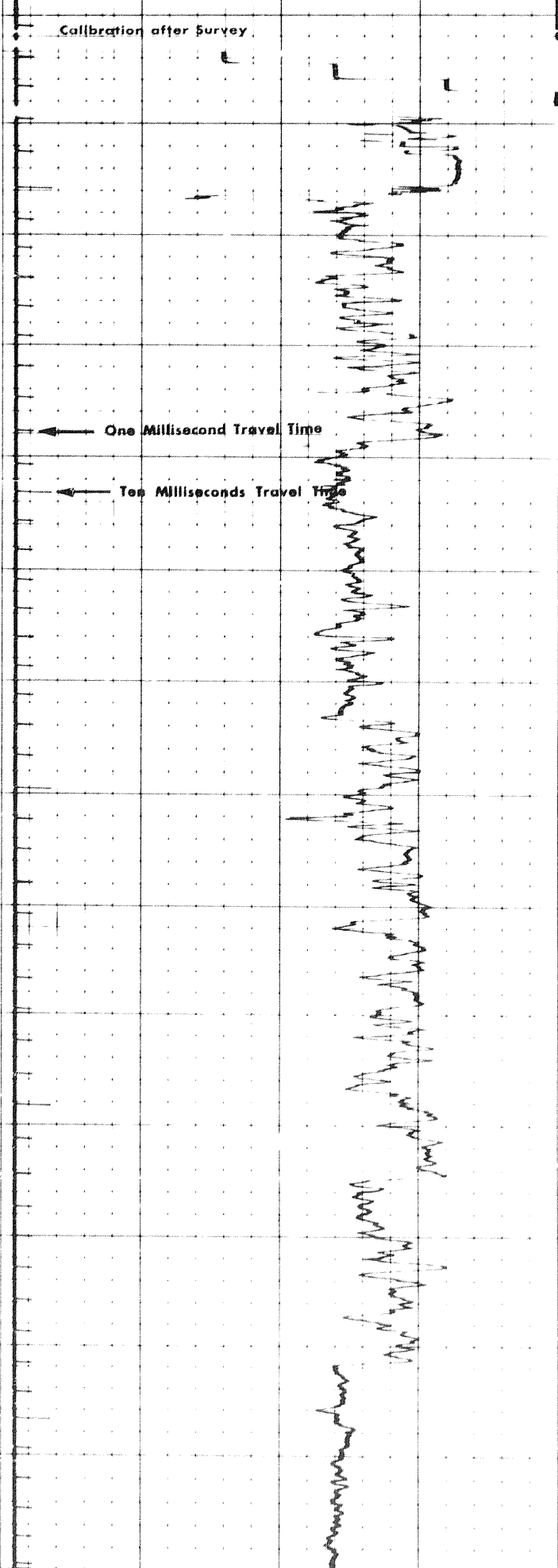
07

1 of

CALIPER				
hole diameter in inches				
10	12	14	16	18



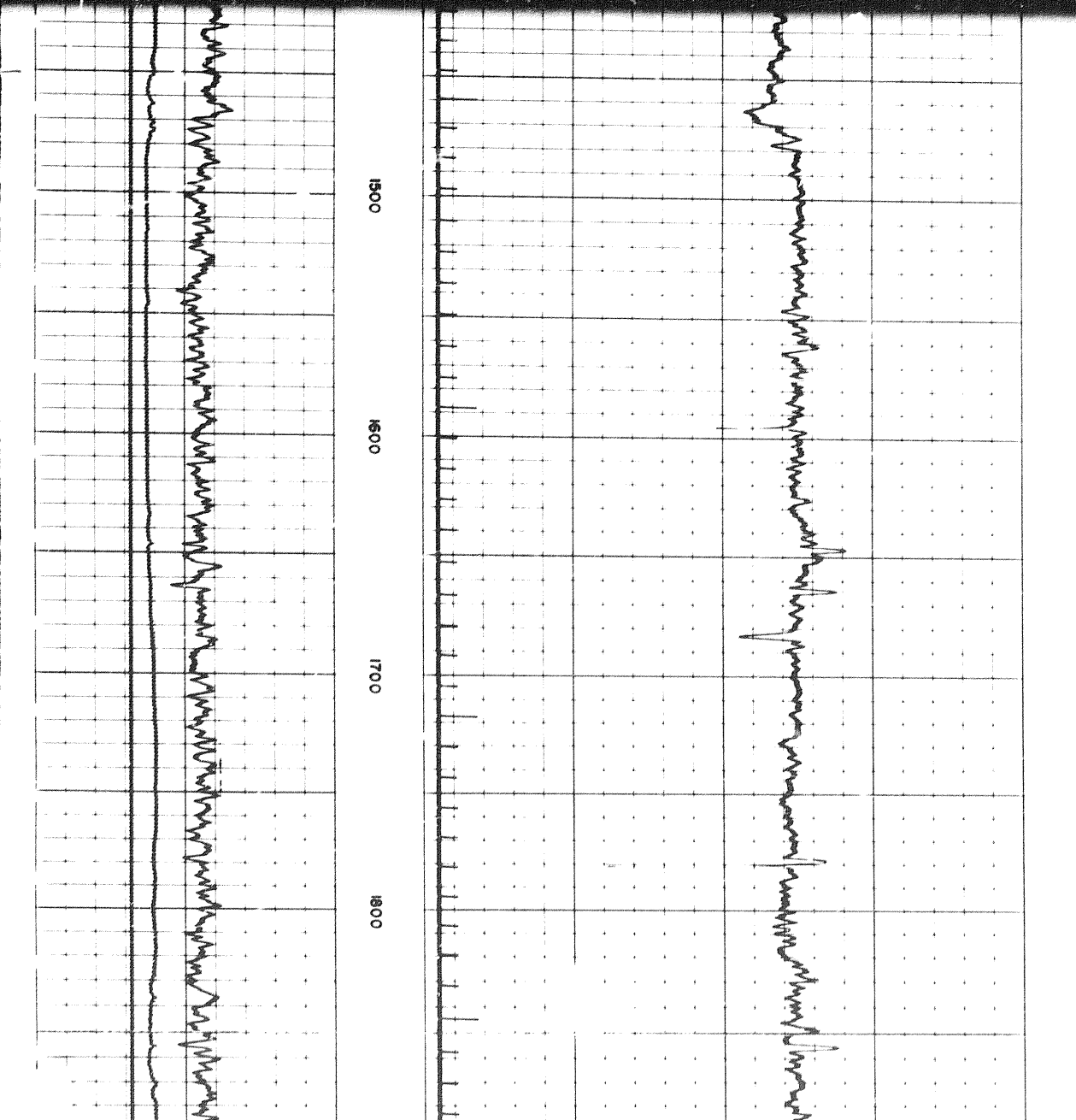
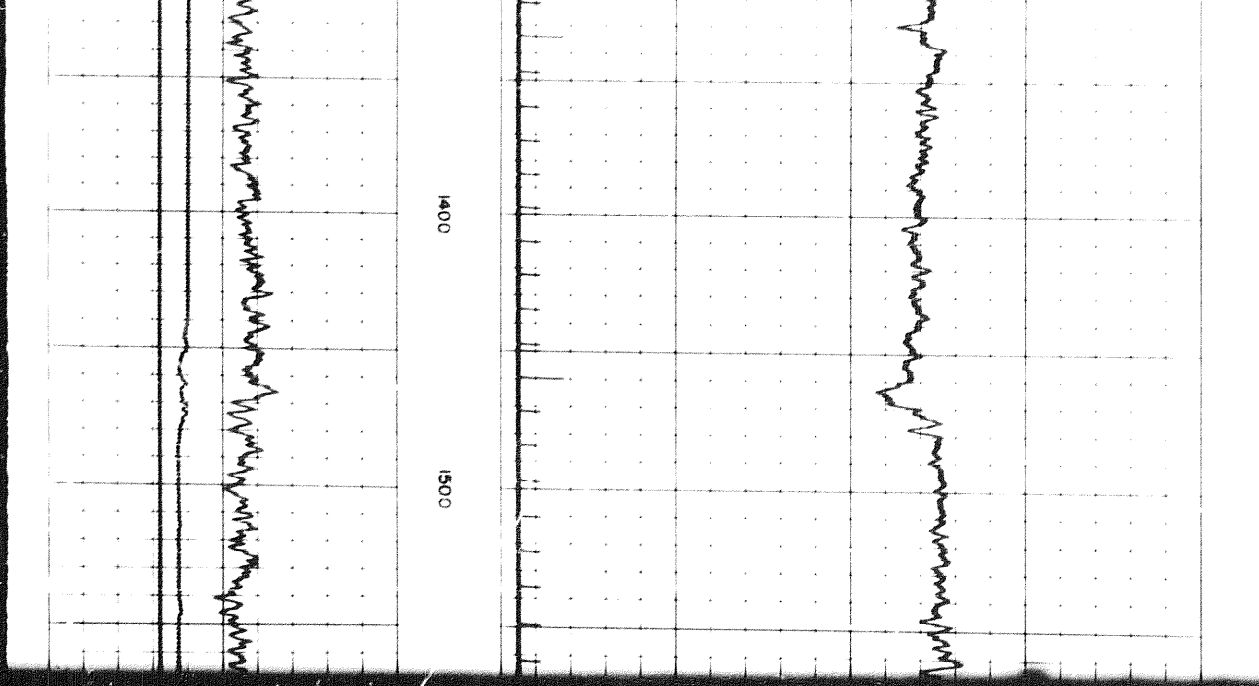
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0800
0900
1000
1100
1200
1300
1400



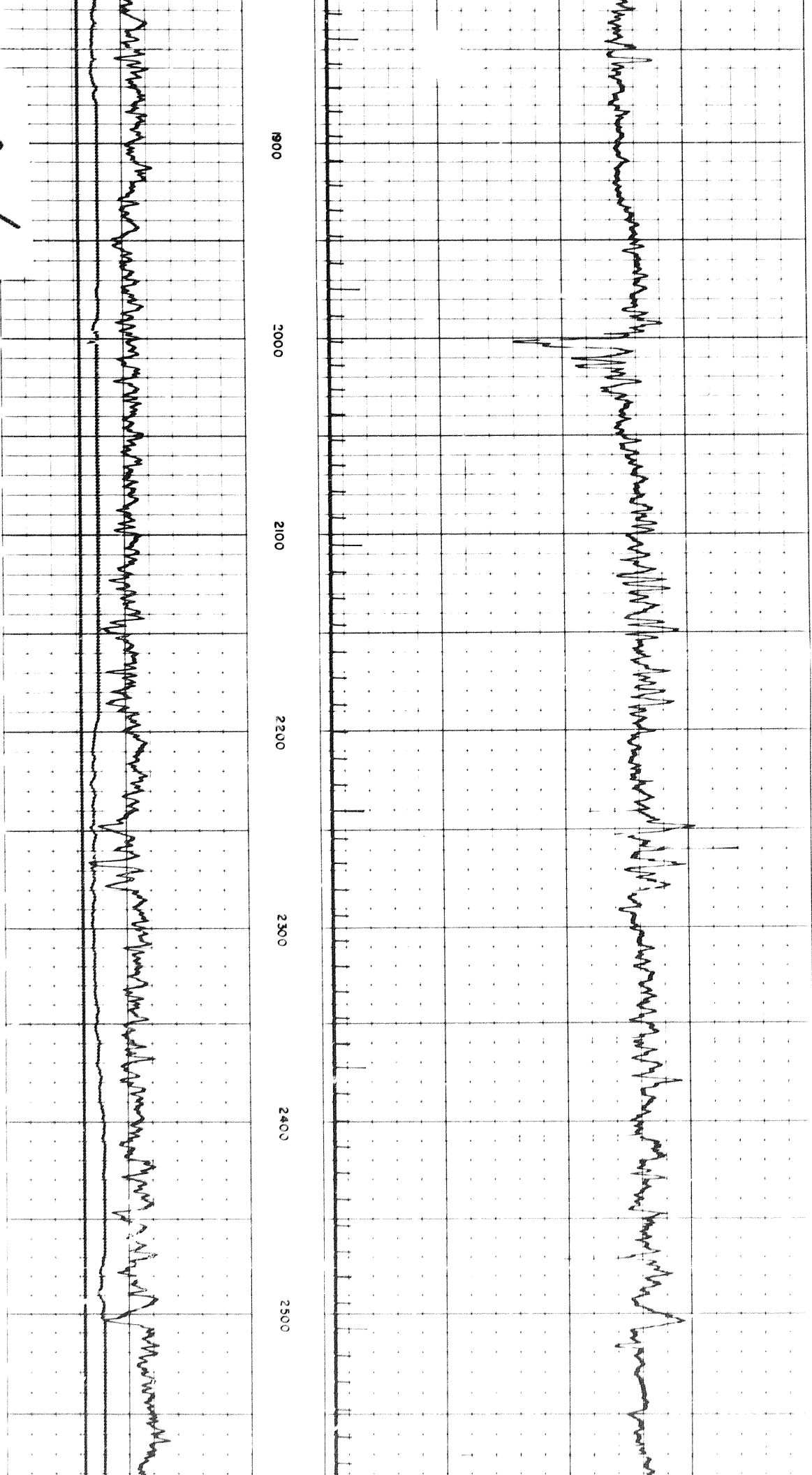
Calibration after Survey

One Millisecond Travel Time

Ten Milliseconds Travel Time



202



1900

2000

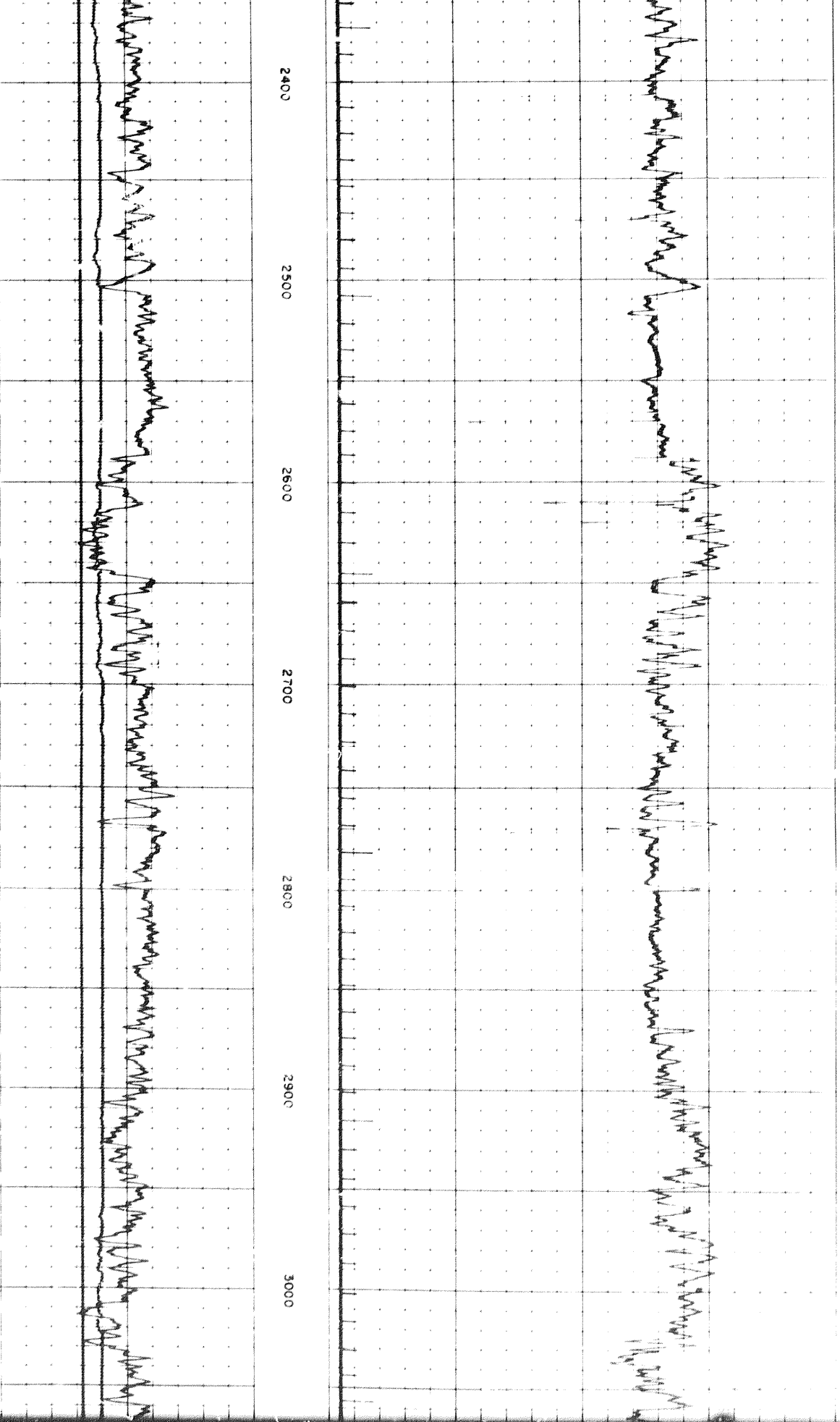
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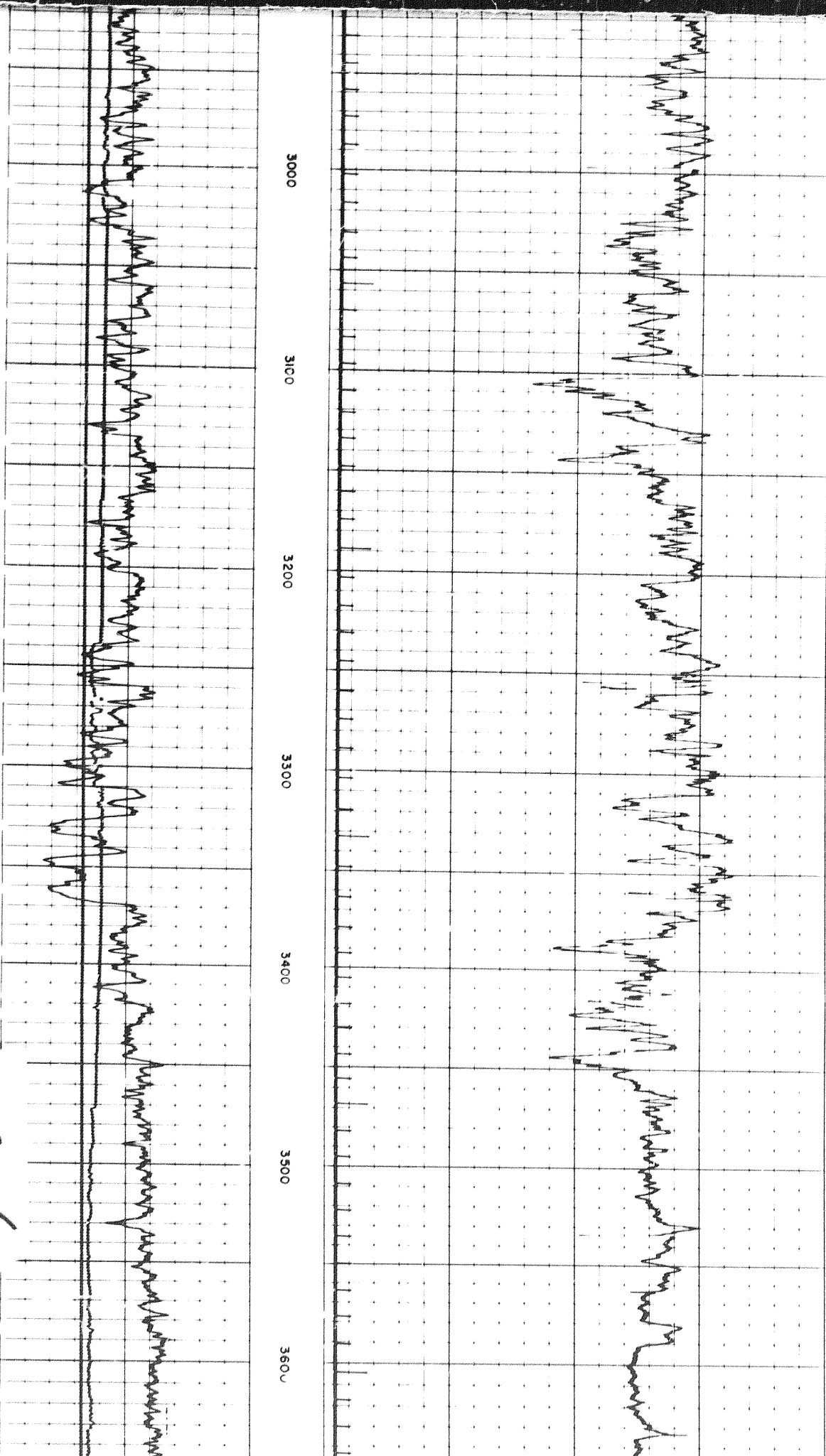
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2300

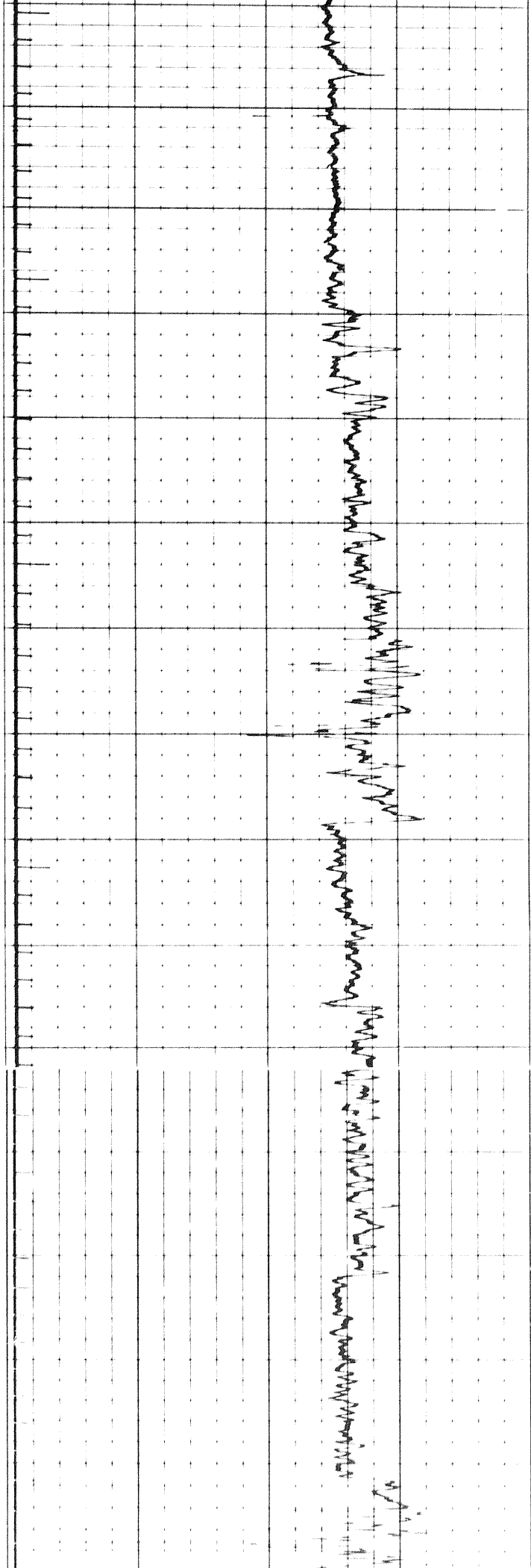
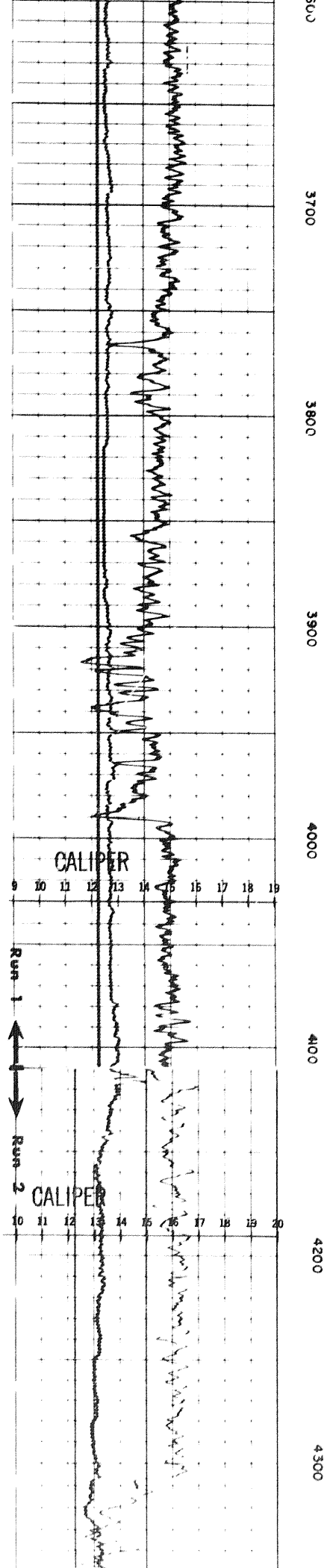
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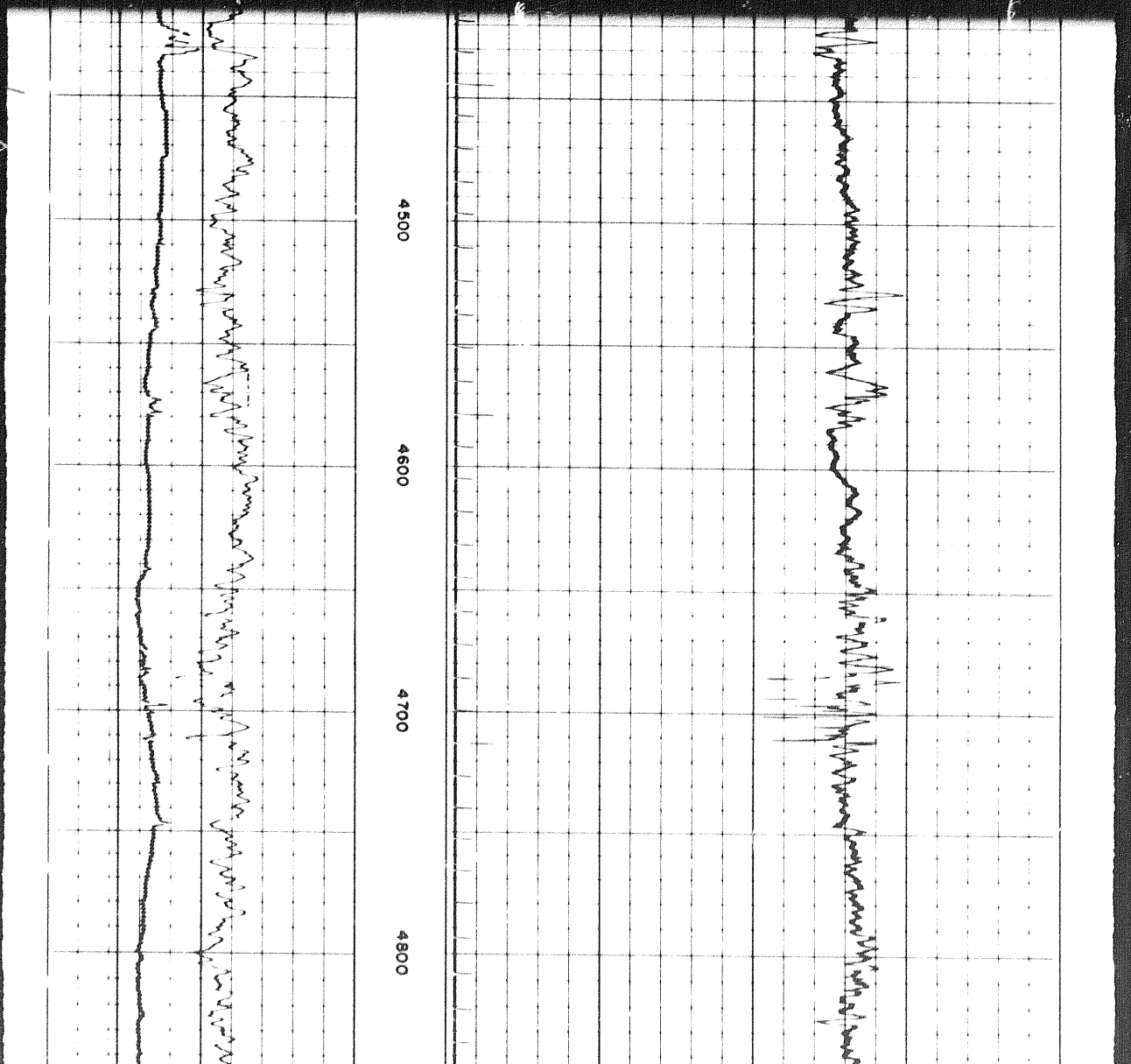
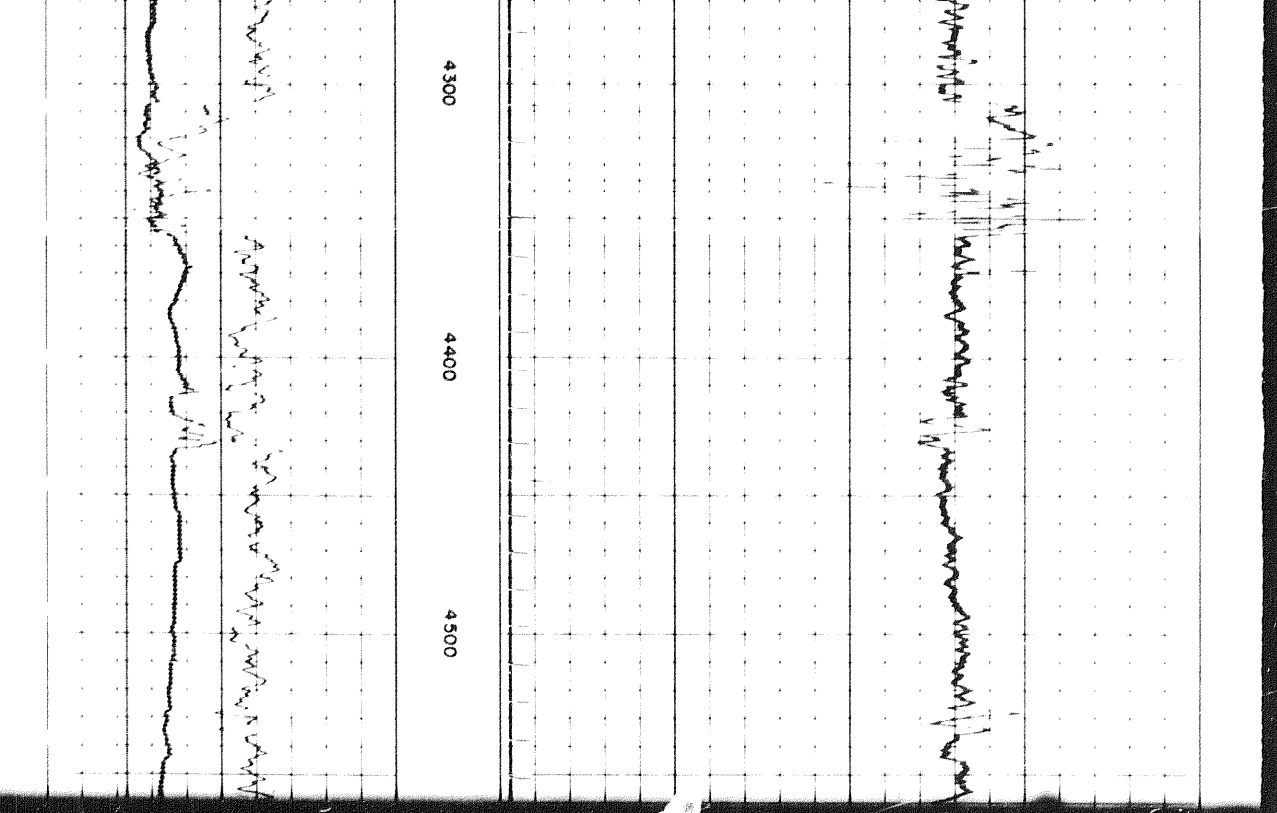
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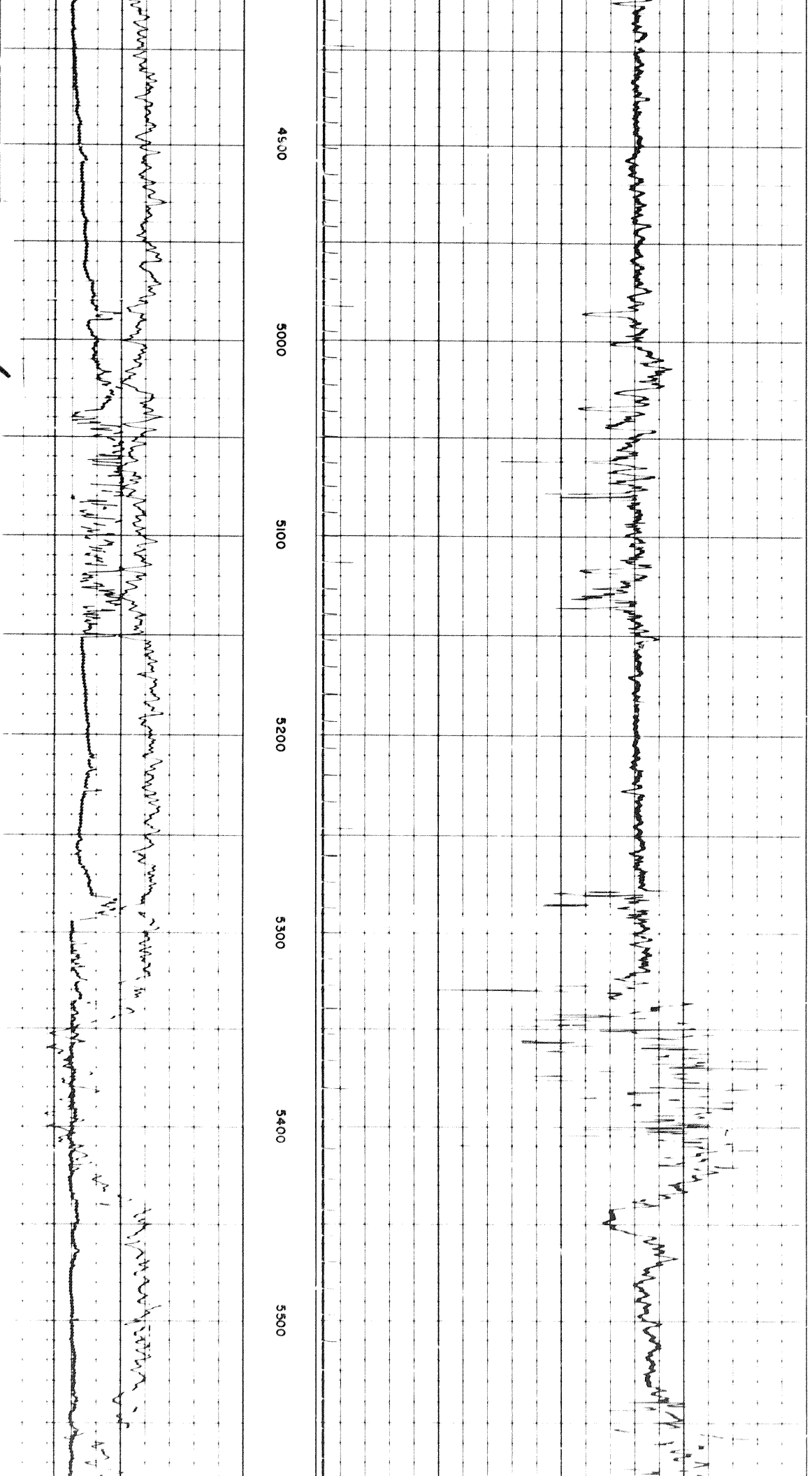


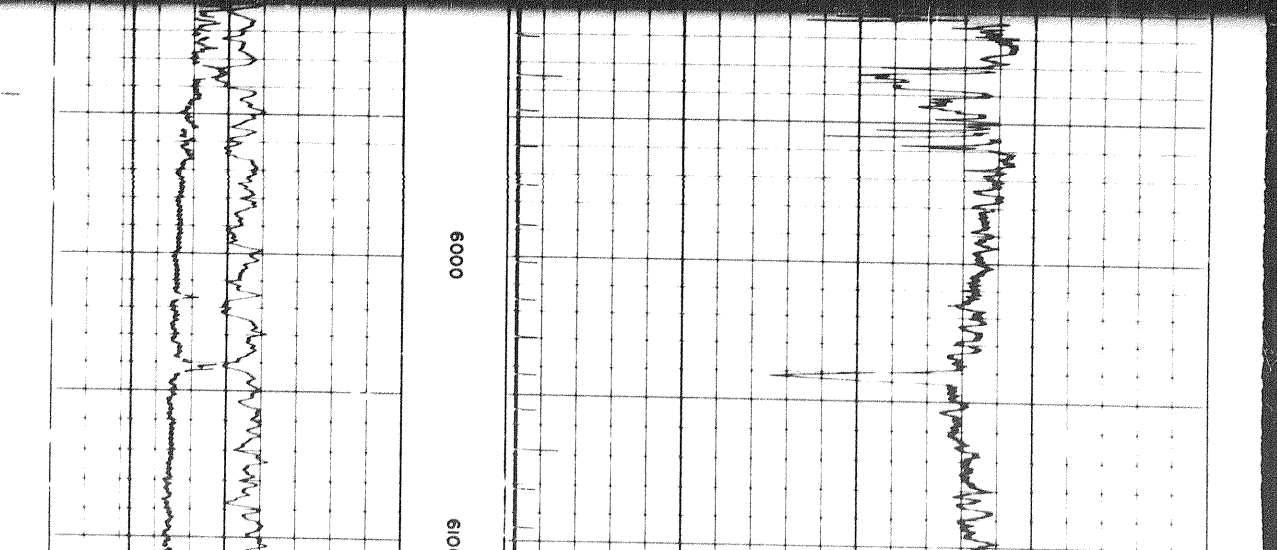
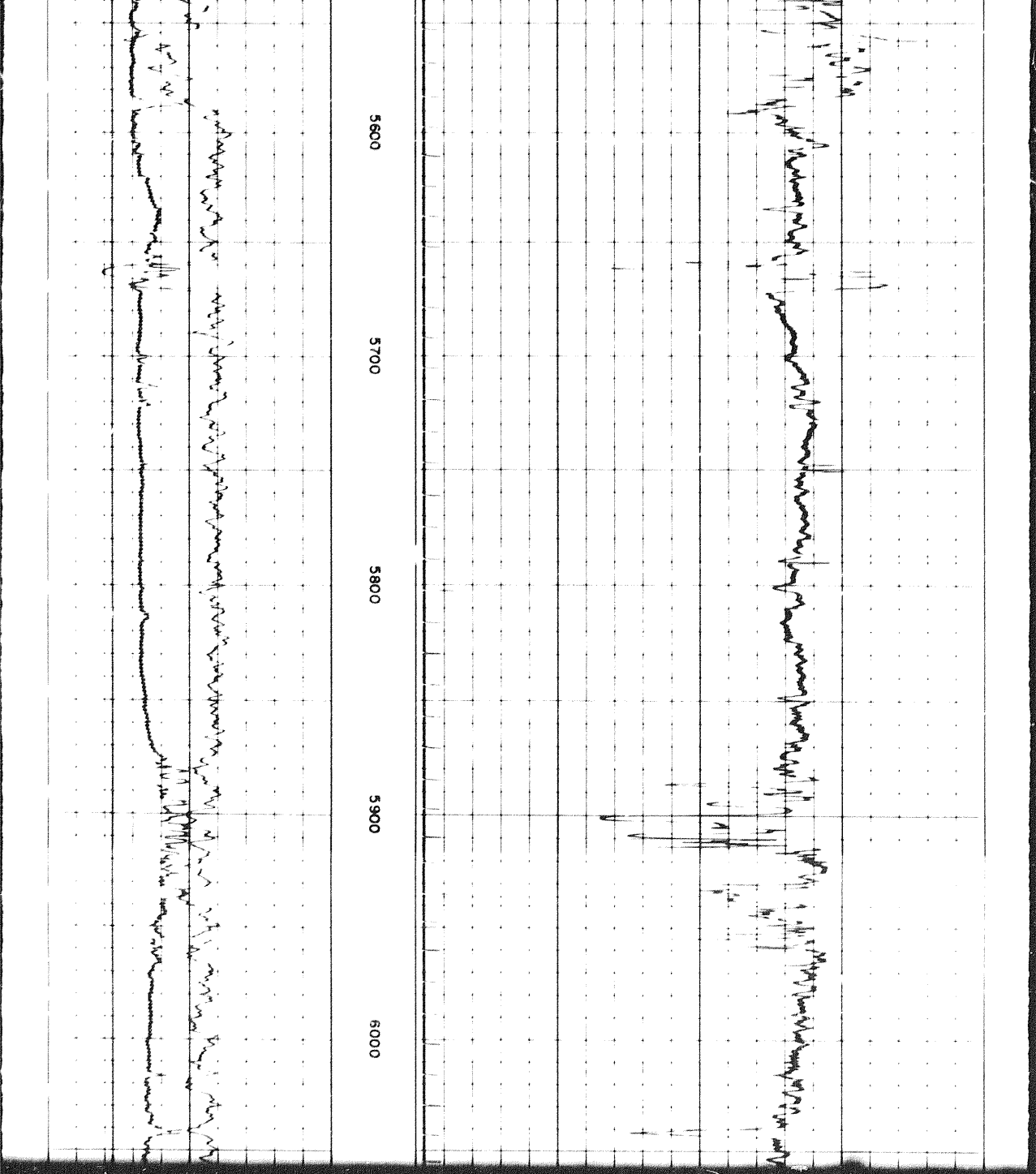
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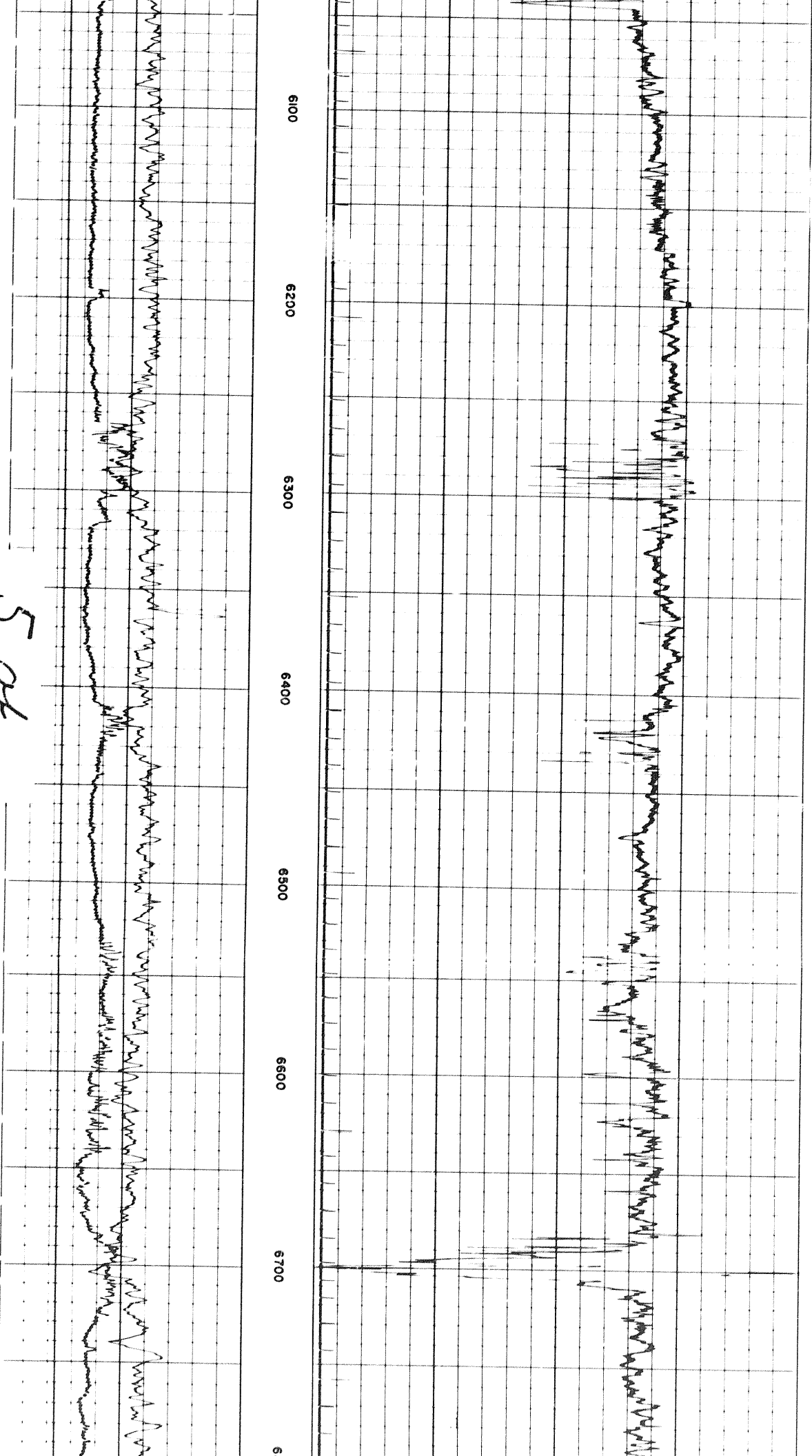


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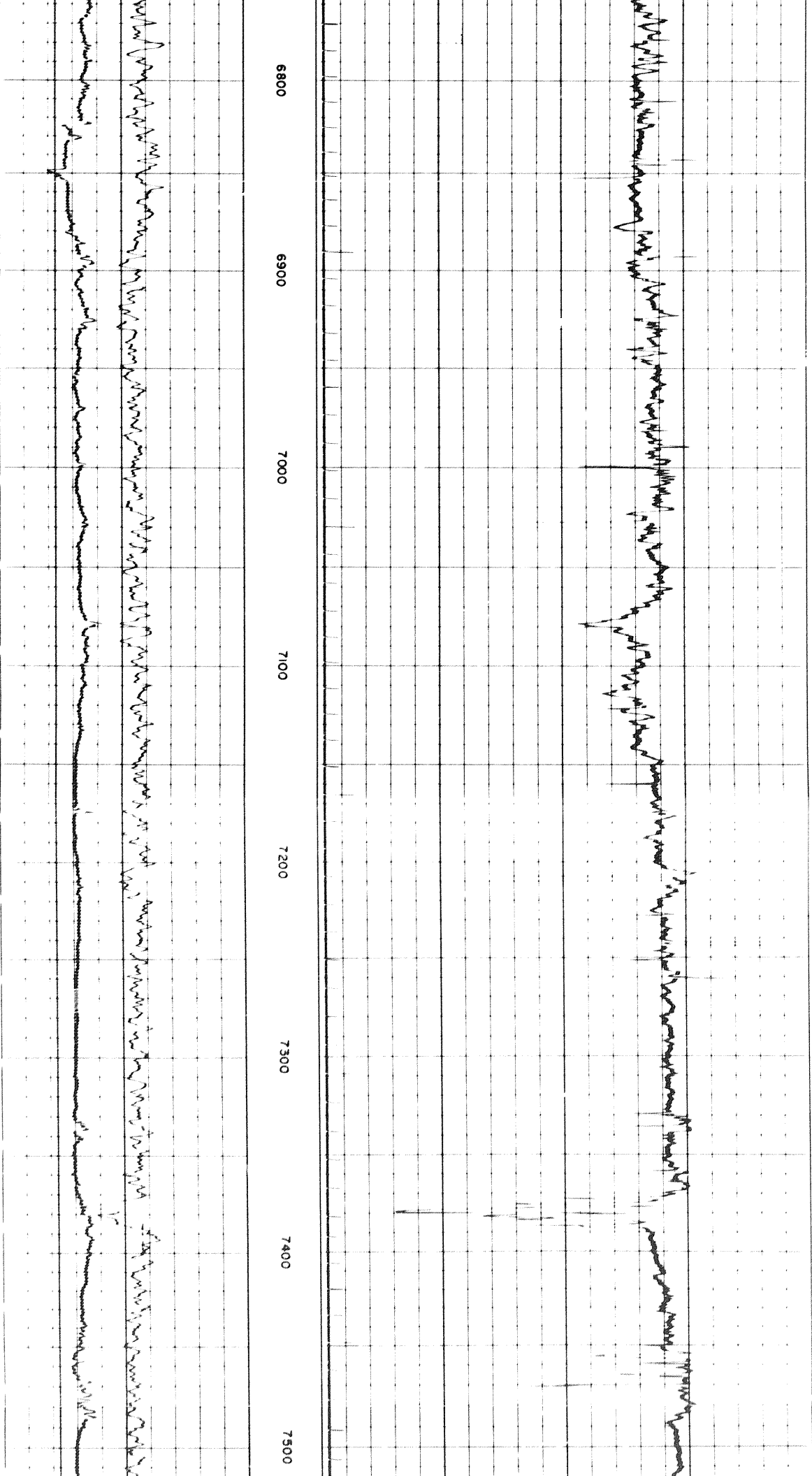


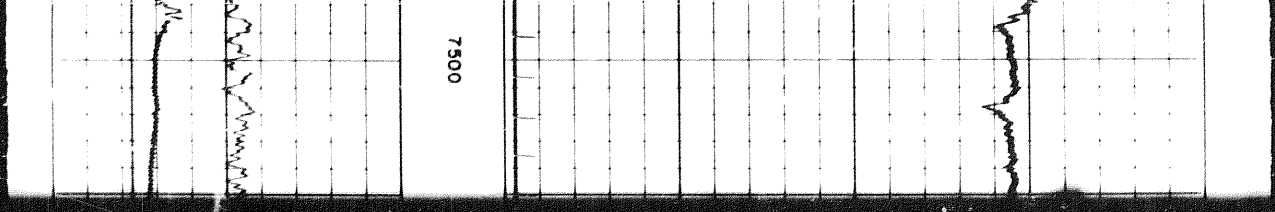


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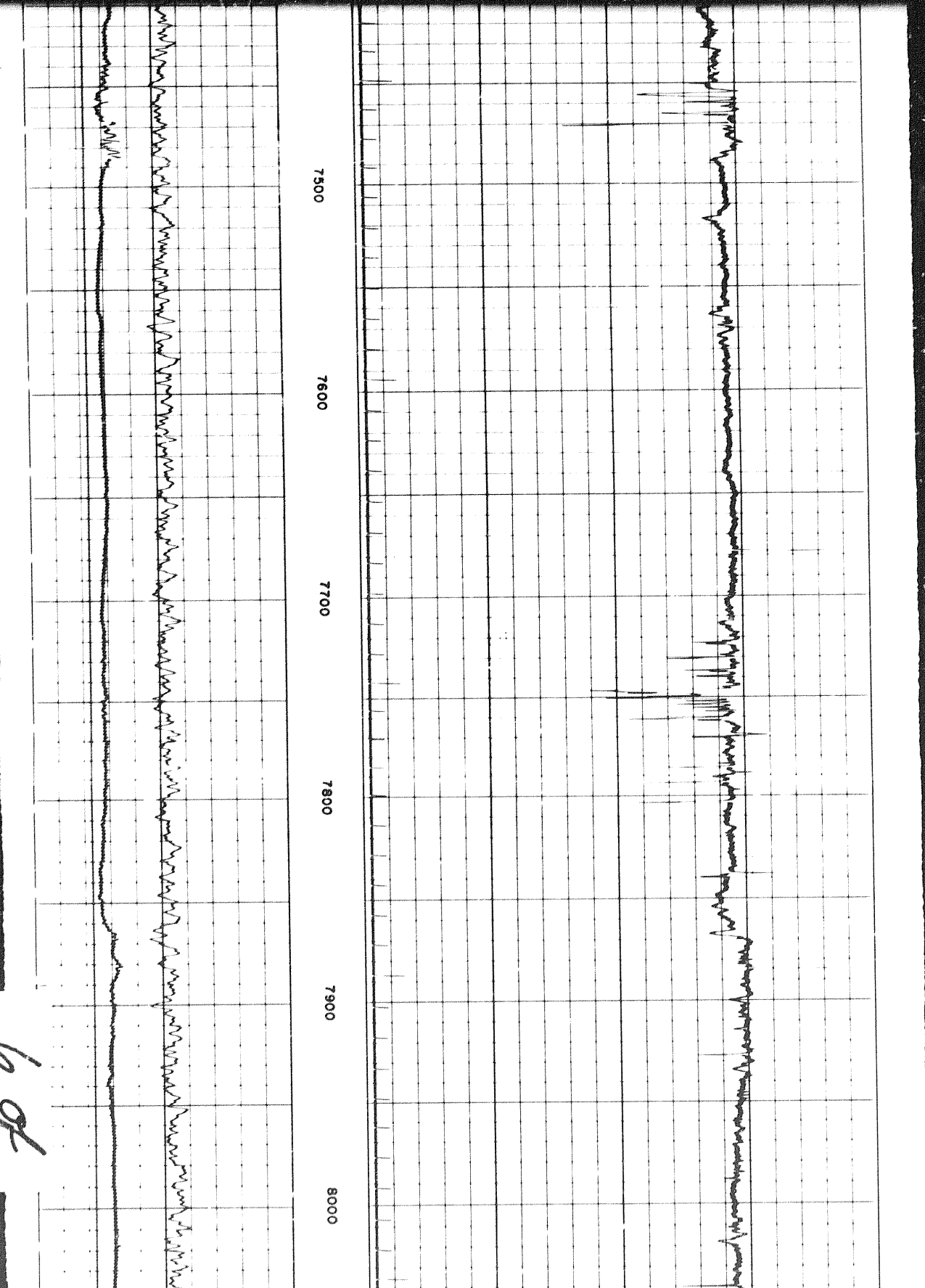


6100 6200 6300 6400 6500 6600 6700





7500



7500

7600

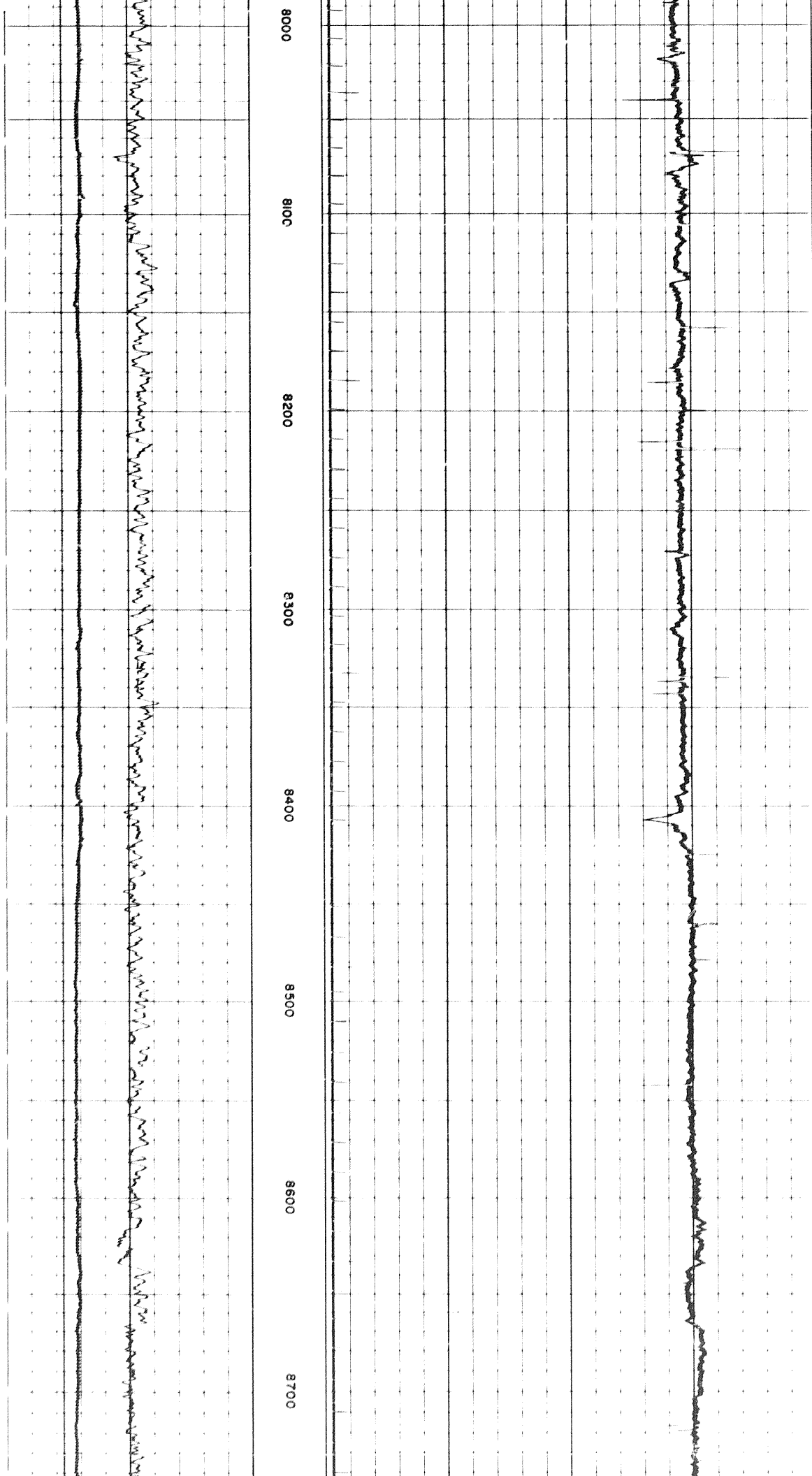
7700

7800

7900

8000

6 of



8000

8100

8200

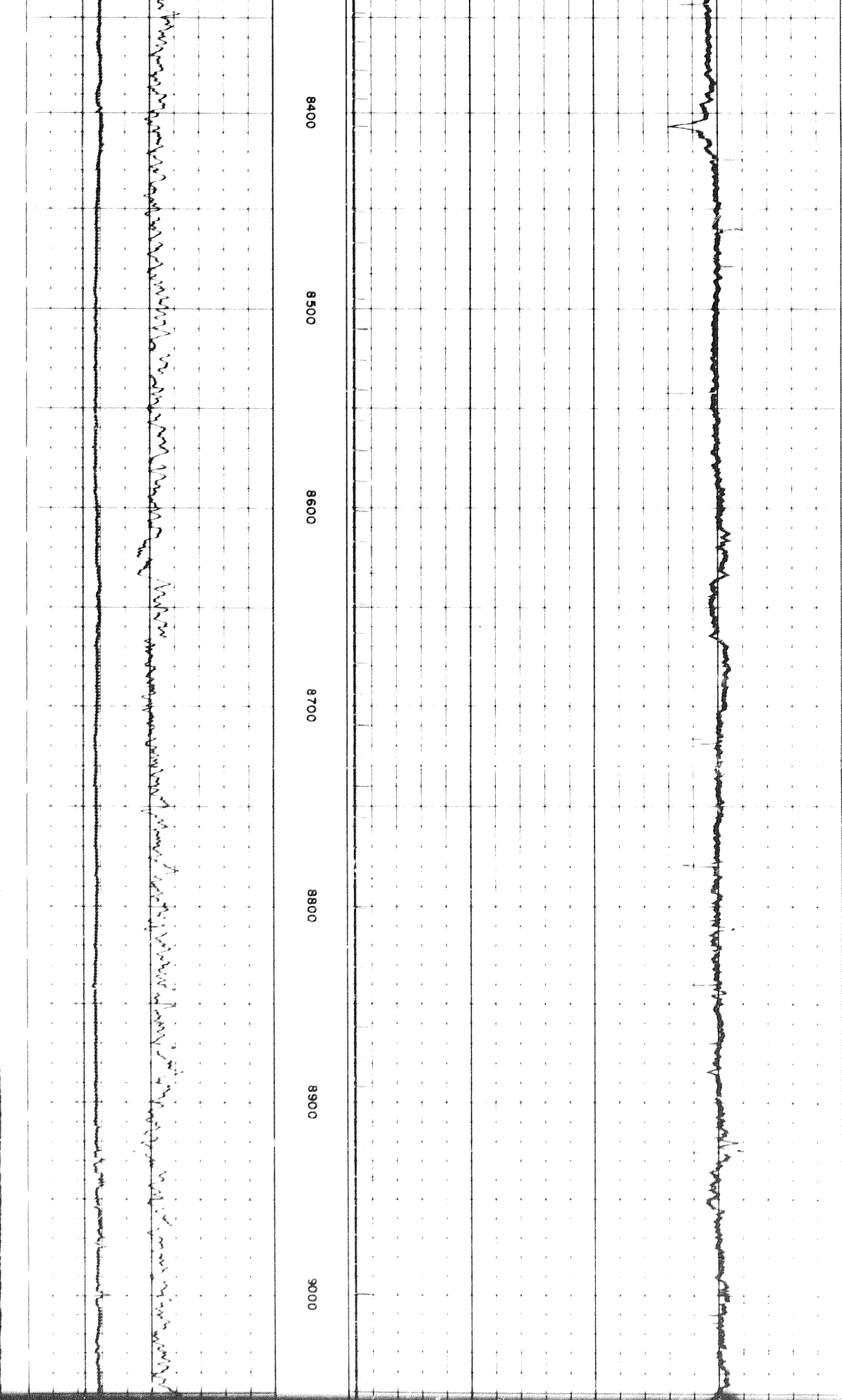
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8400

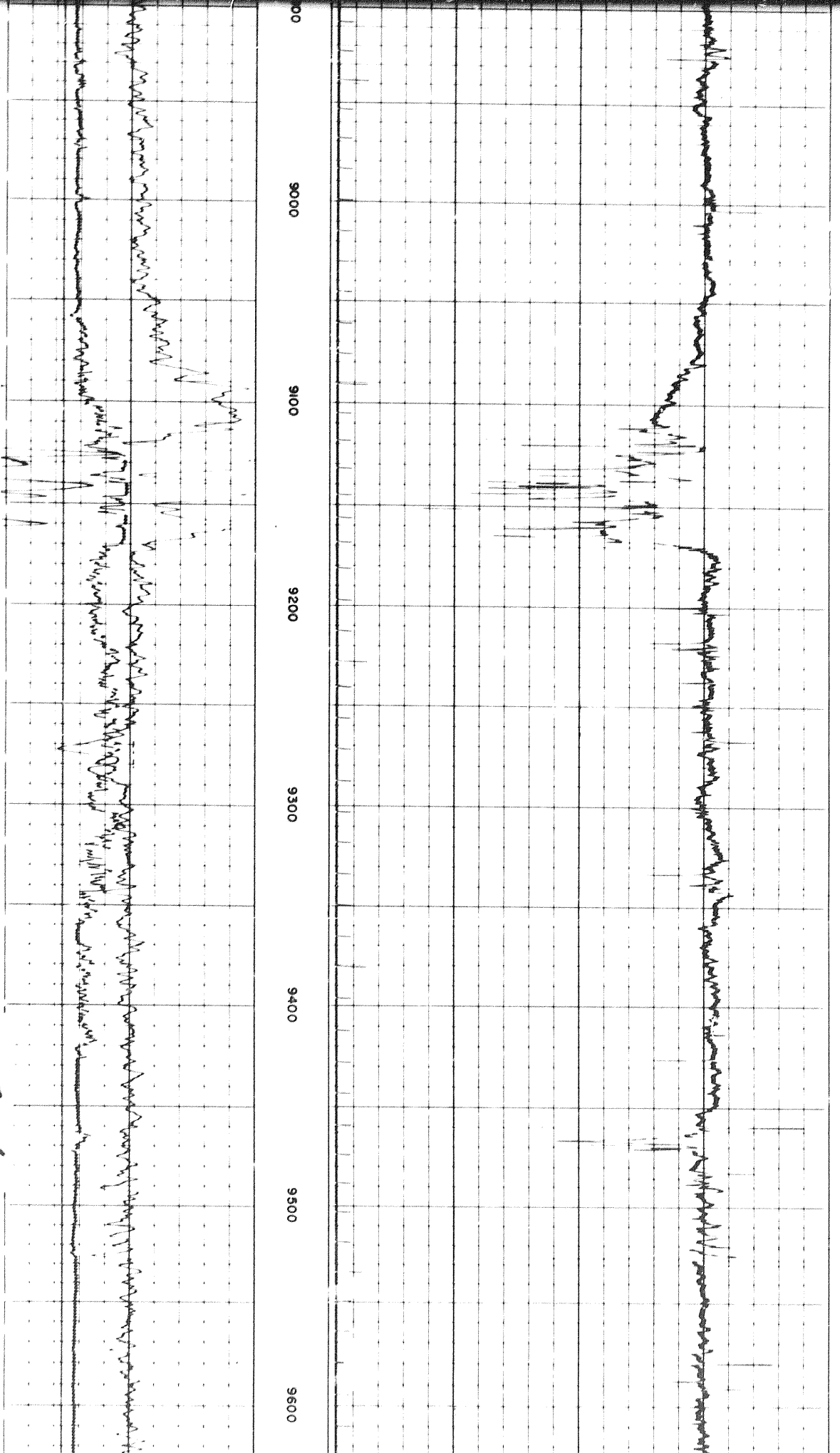
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8600

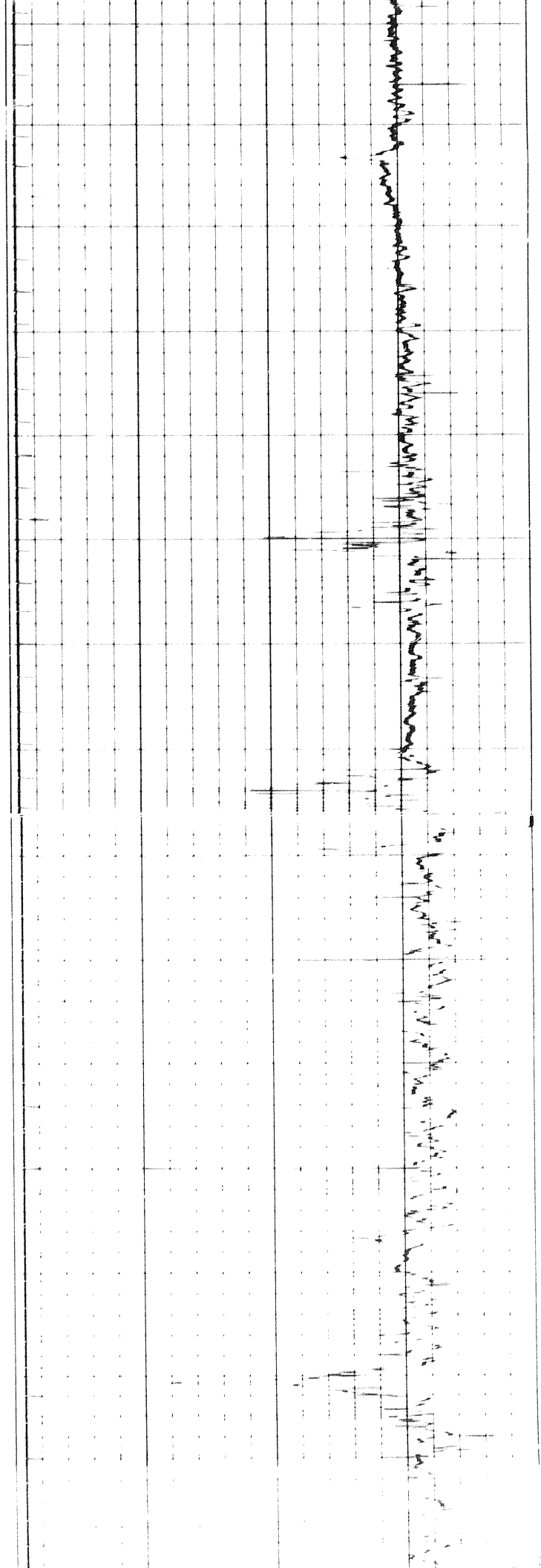
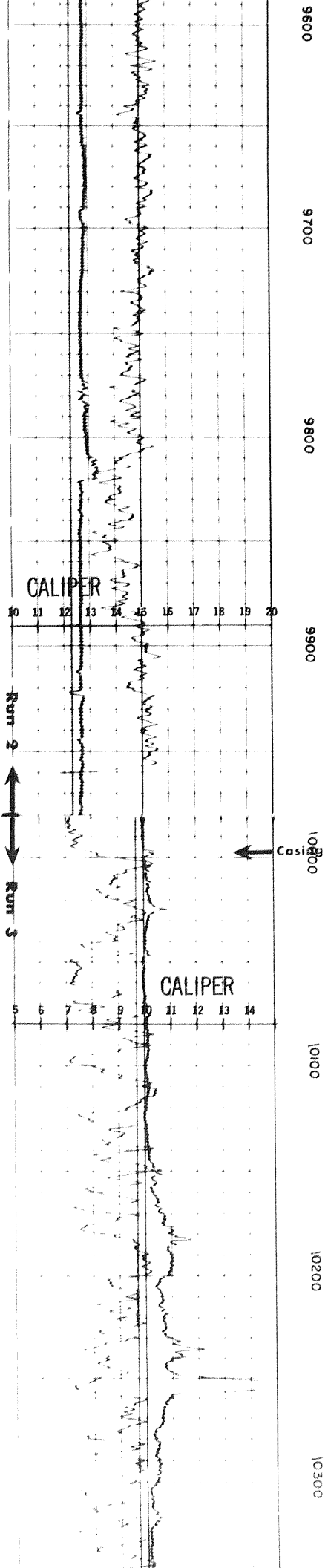
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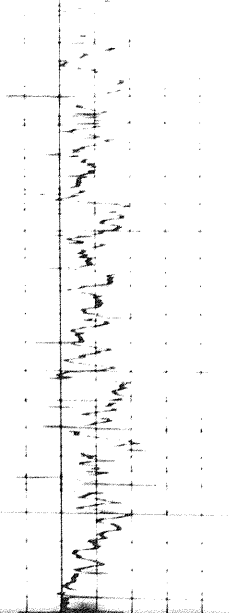


8400 8500 8600 8700 8800 8900 9000



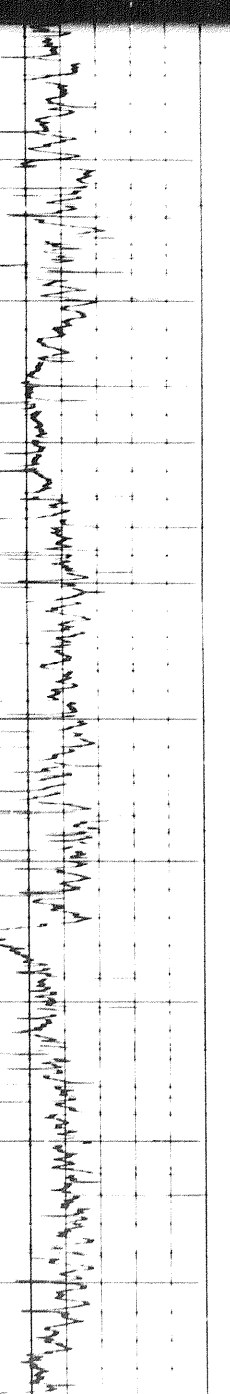
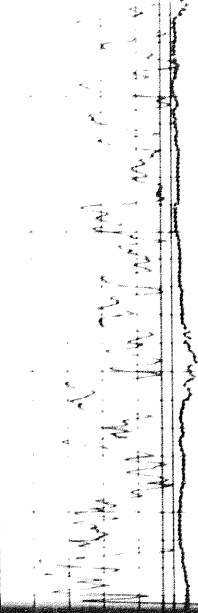
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10500



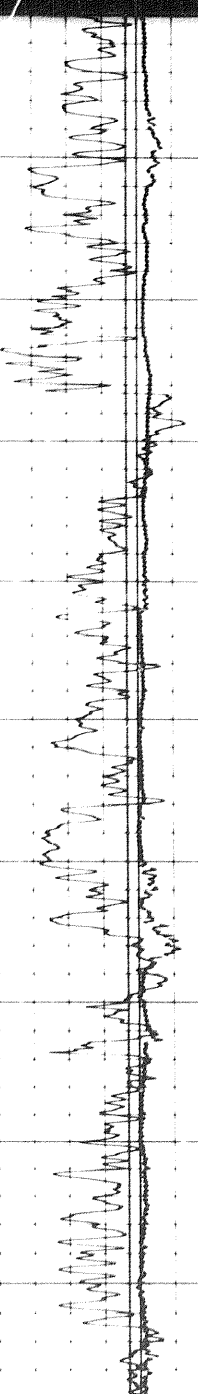
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10500

10600

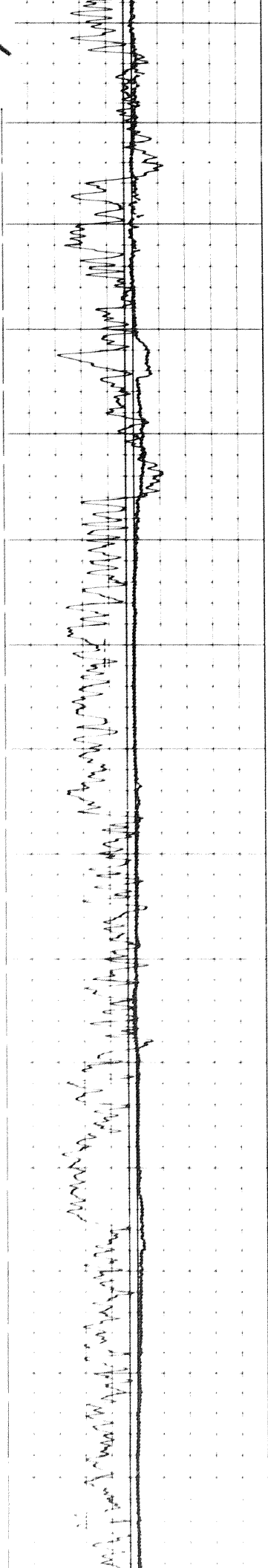
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10800



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10



10900

11000

11100

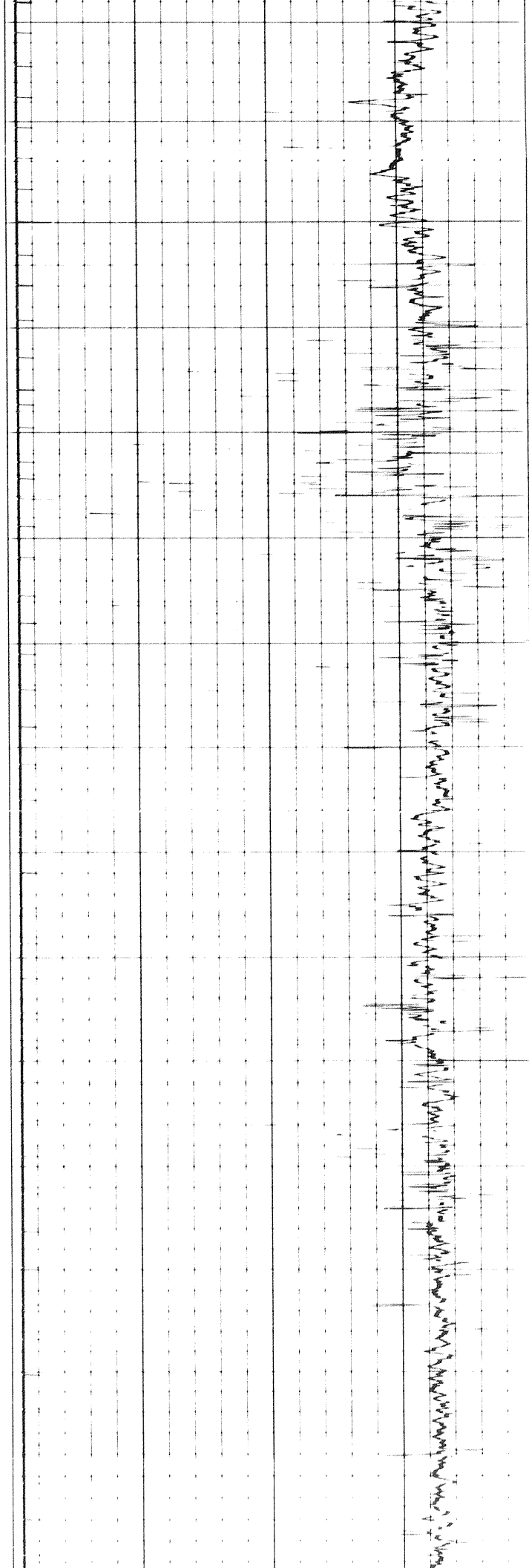
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11300

11400

11500

1



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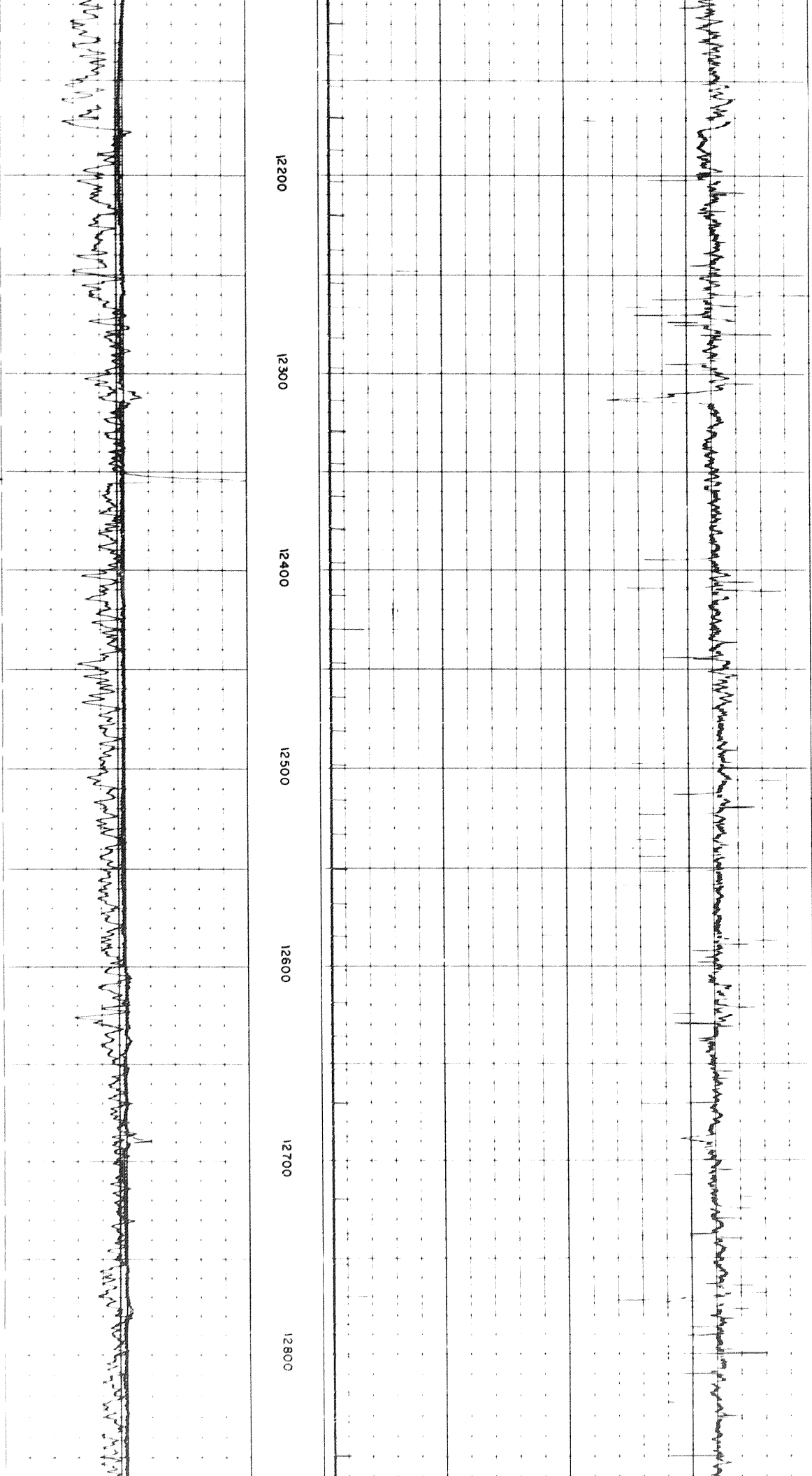
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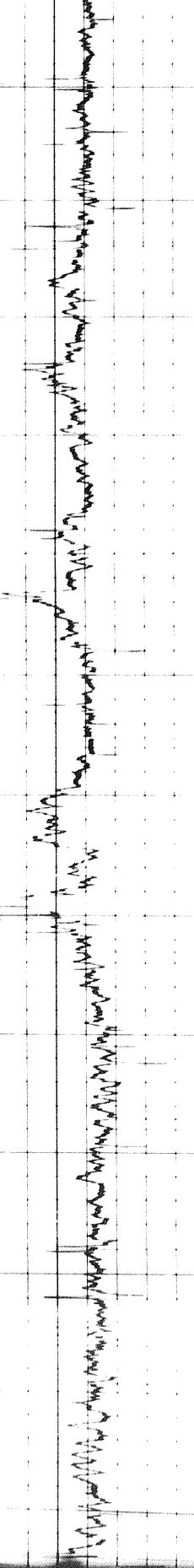
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1900 2000 2100

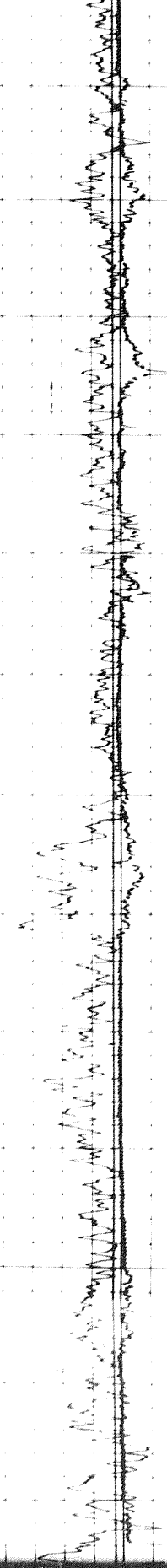
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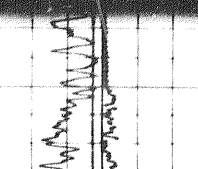
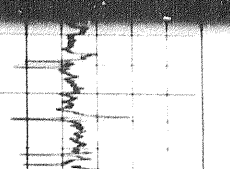




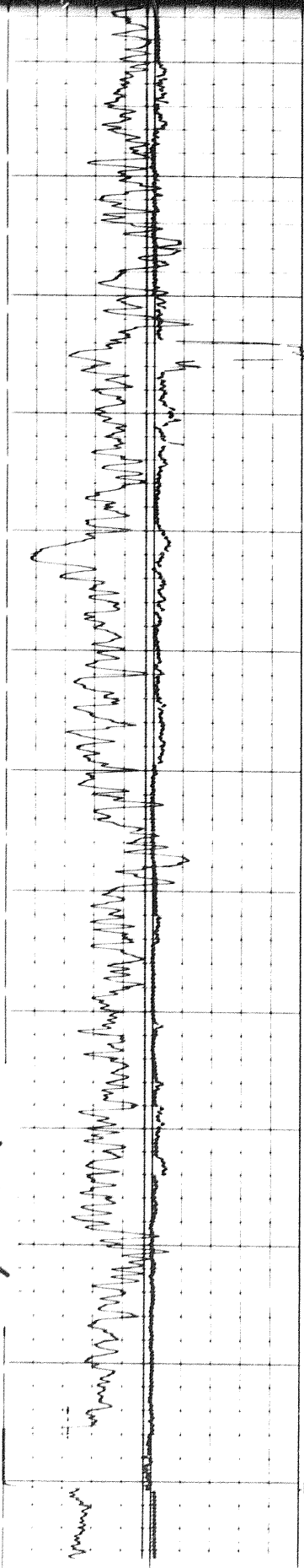
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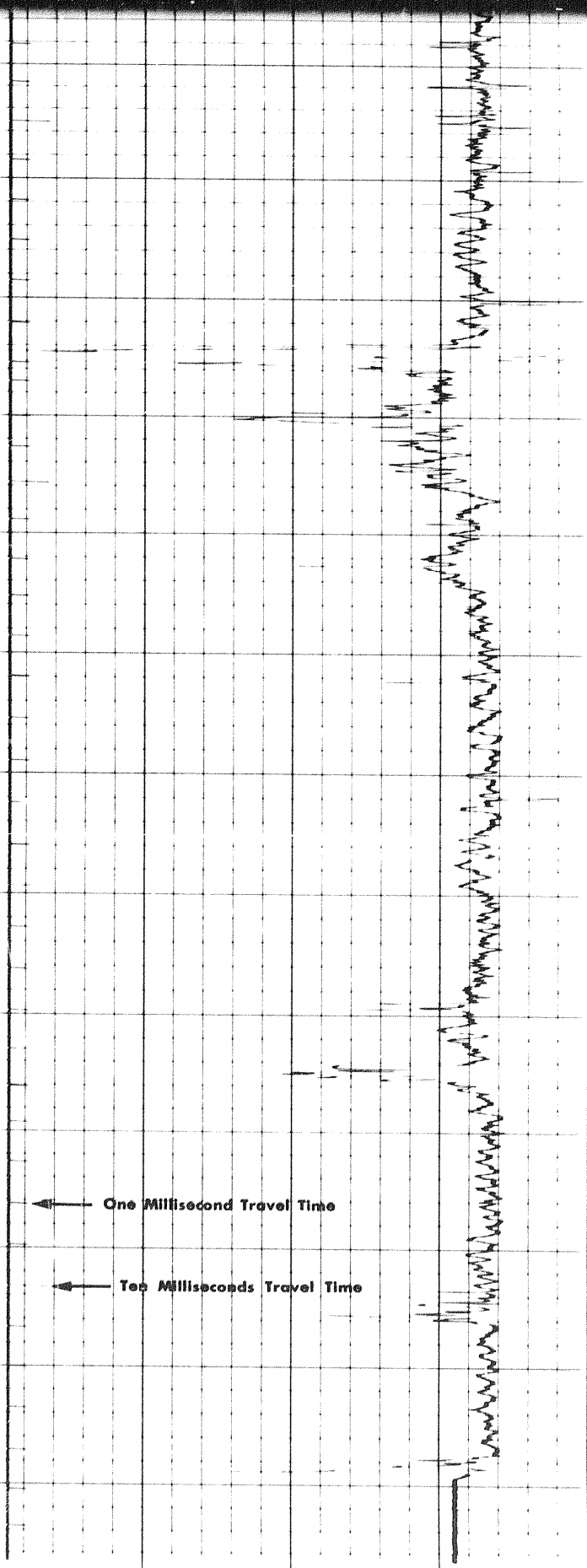
13400



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13400
13500
13600
13700
13800
13900
14000



6	7	8	9	10	11	12	13	14
CALIPER hole diameter in inches								
Sens 150 T.C. 2								

Seeds

240

100

140

6 7 8 9 10 11 12 13 14

CALIPER
hole diameter in inches

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

240 190 140
140 90 40

GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot

DETAIL LOG
5' = 100' RUN 1

GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot

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

140 90 40
240 190 140

CALIPER
hole diameter in inches

10 12 14 16 18

0700

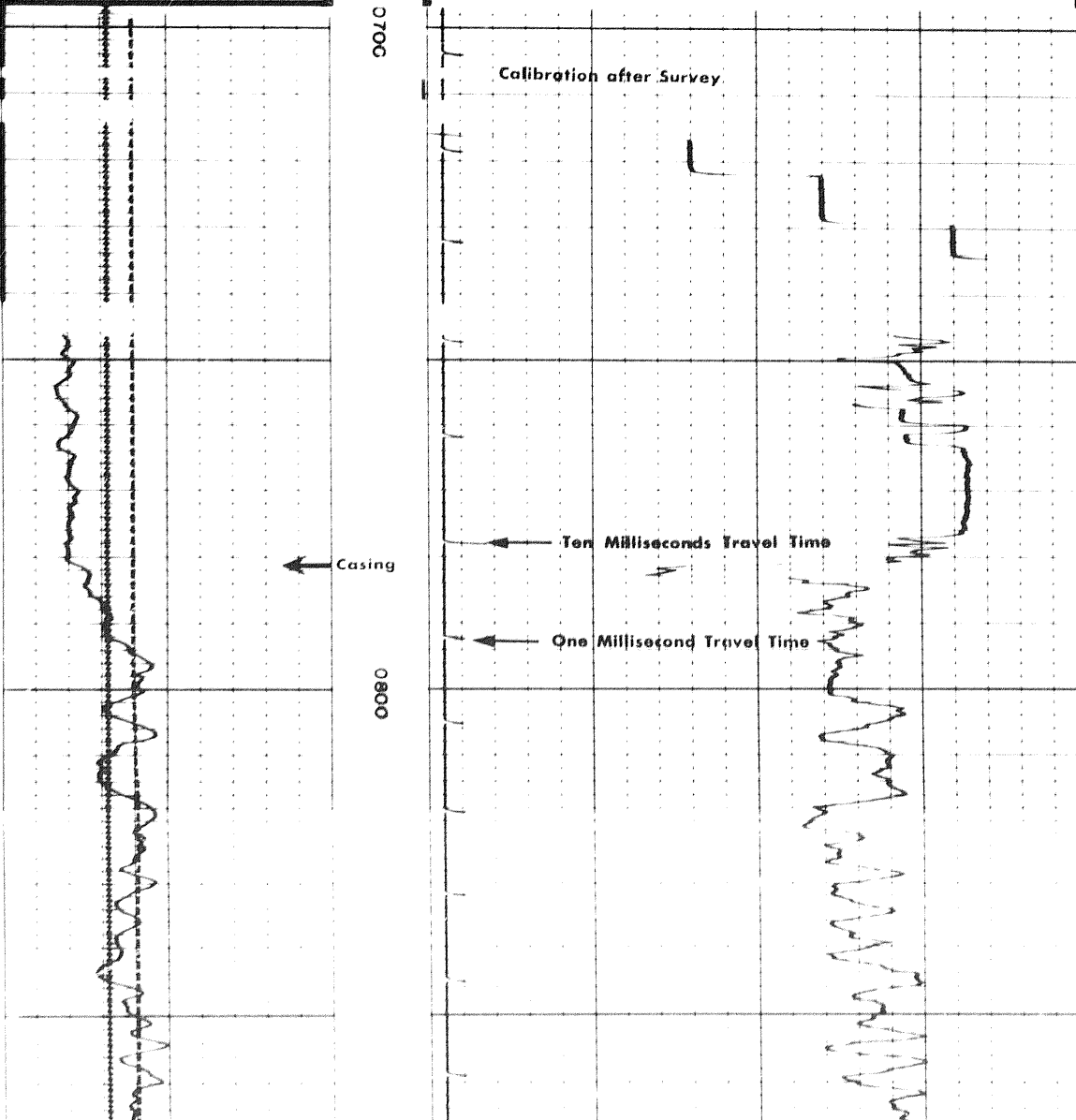
Calibration after Survey

Casing

Ten Milliseconds Travel Time

One Millisecond Travel Time

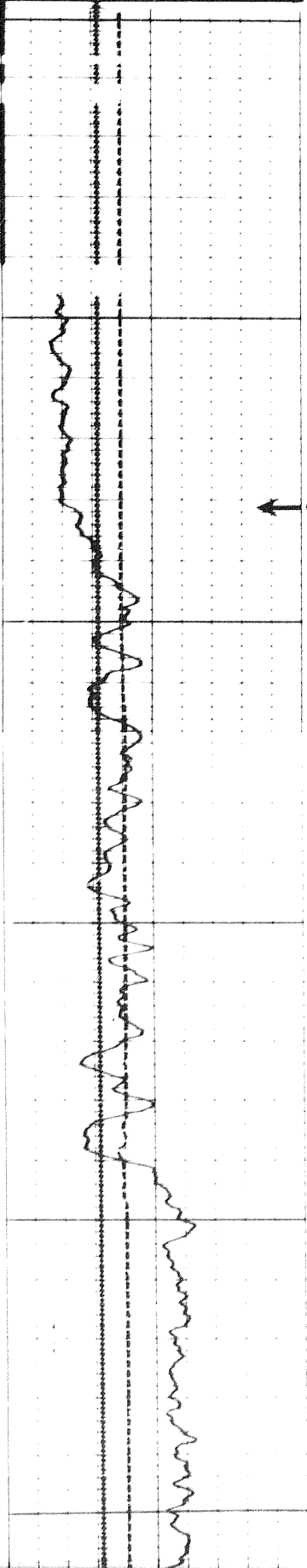
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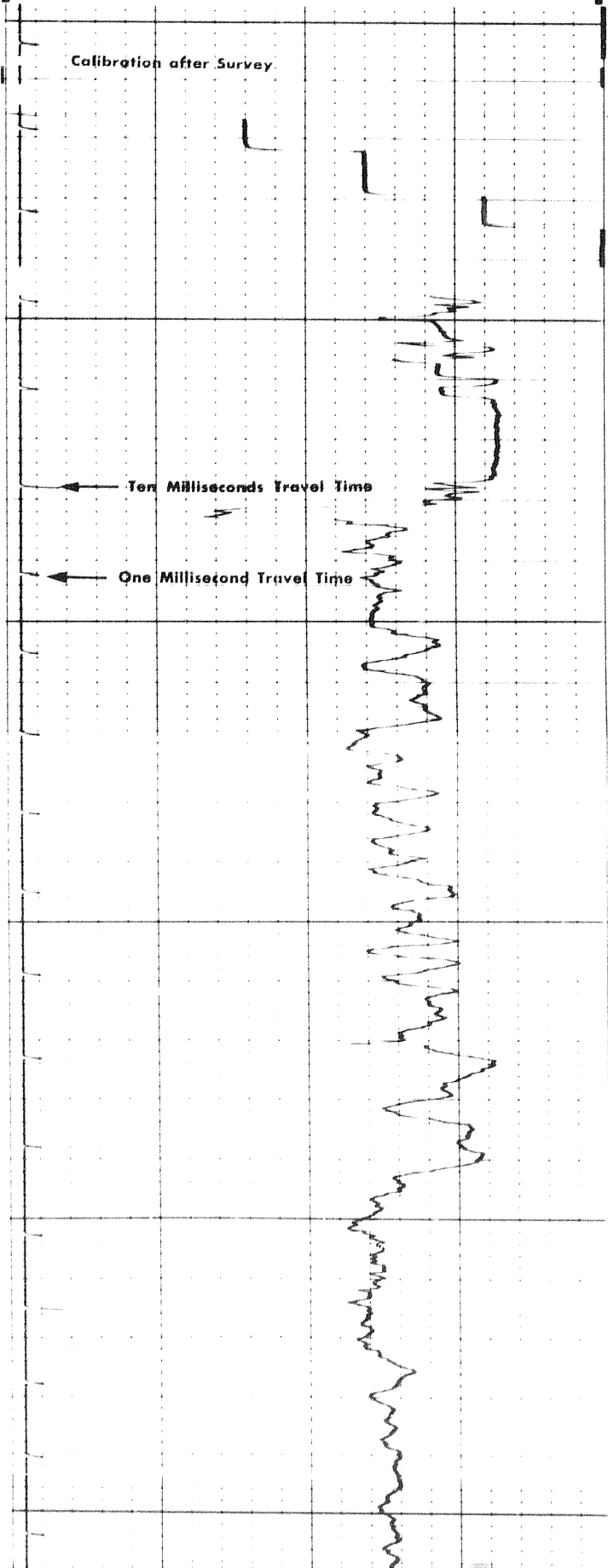
CALIPER

hole diameter in inches

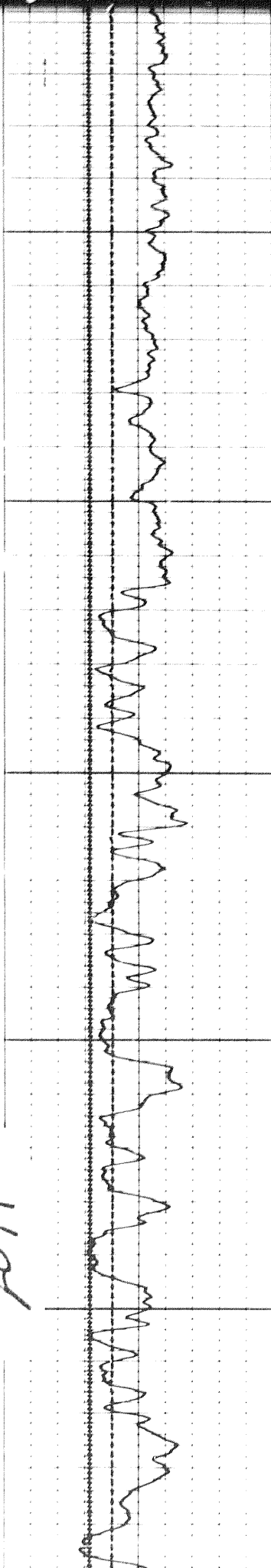
10	12	14	16	18
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← Casing

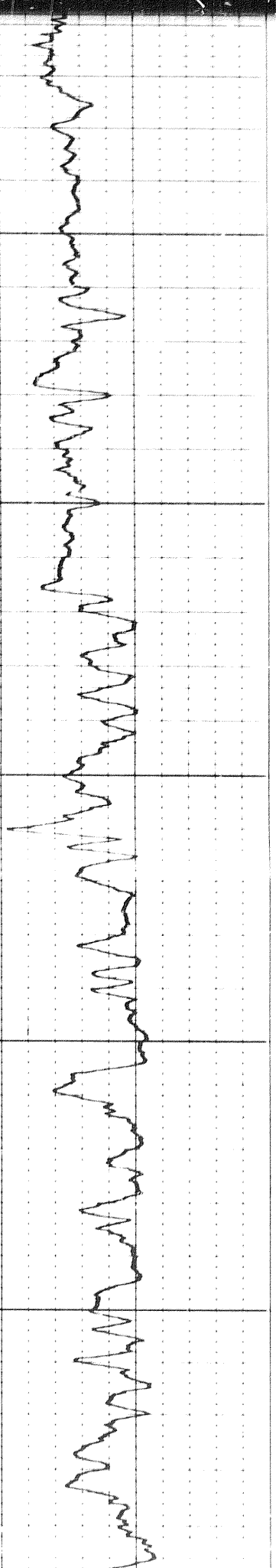
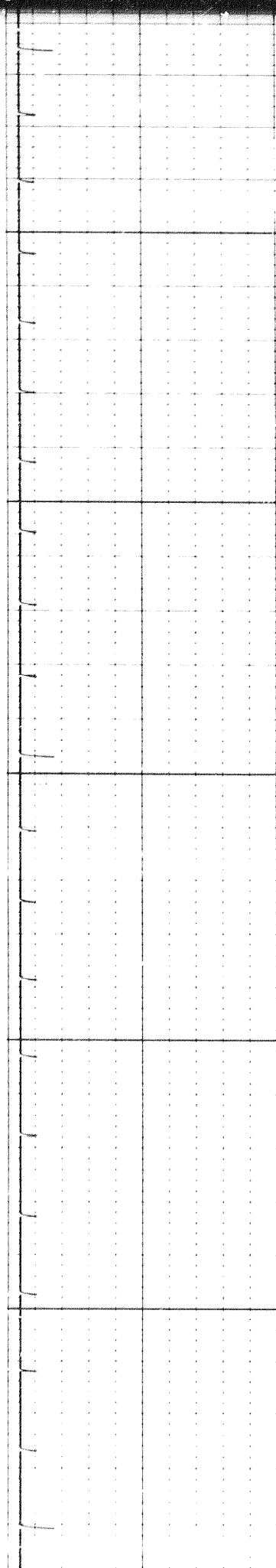


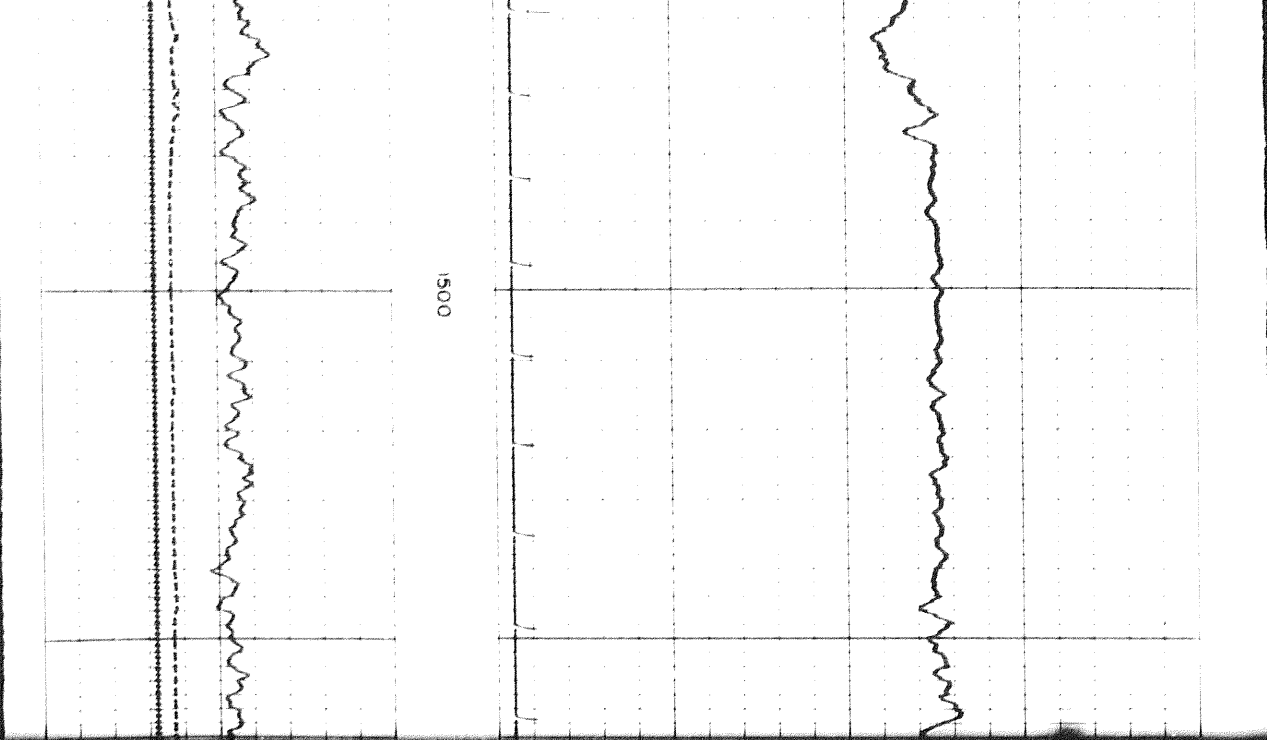
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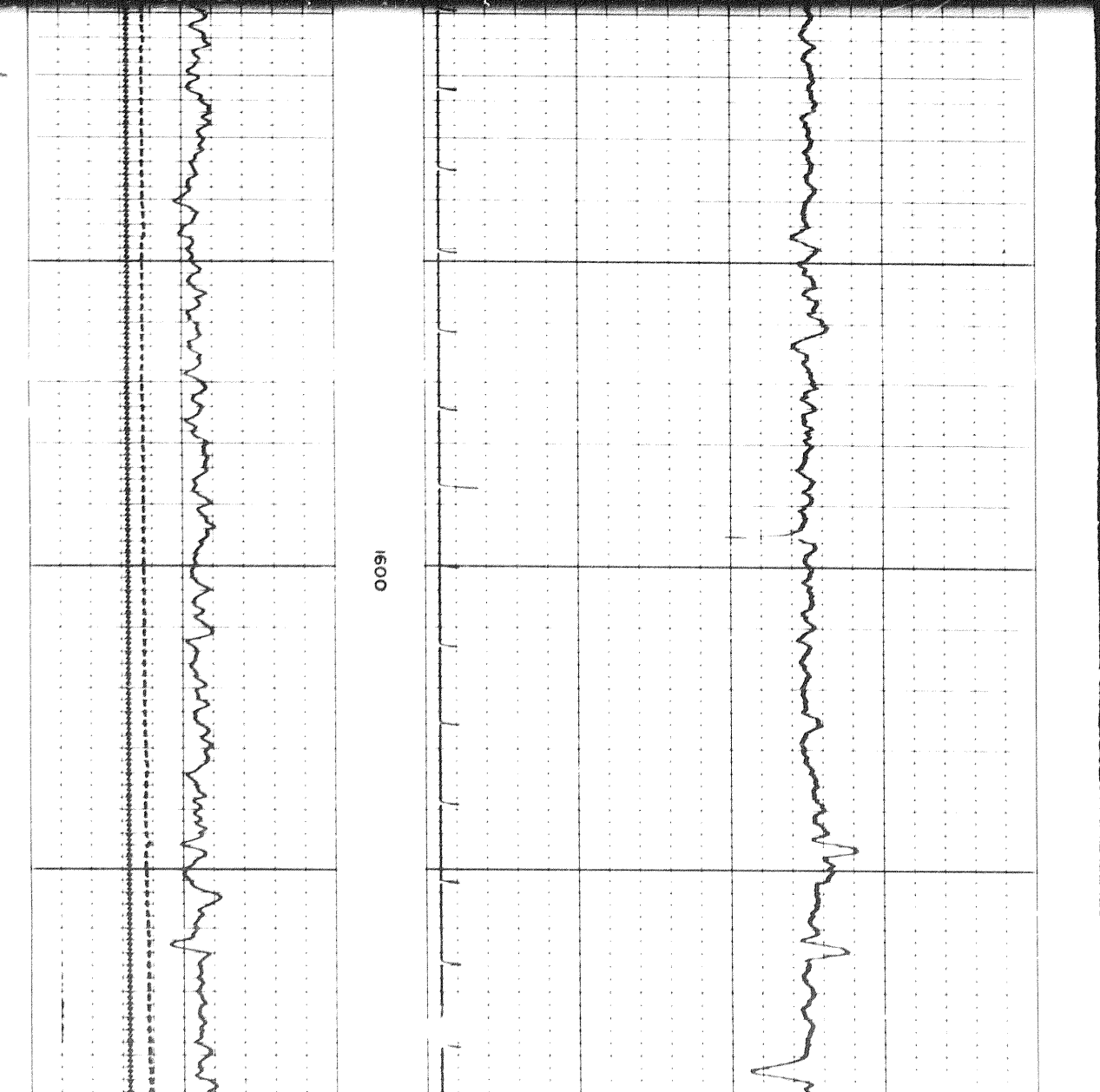
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0011



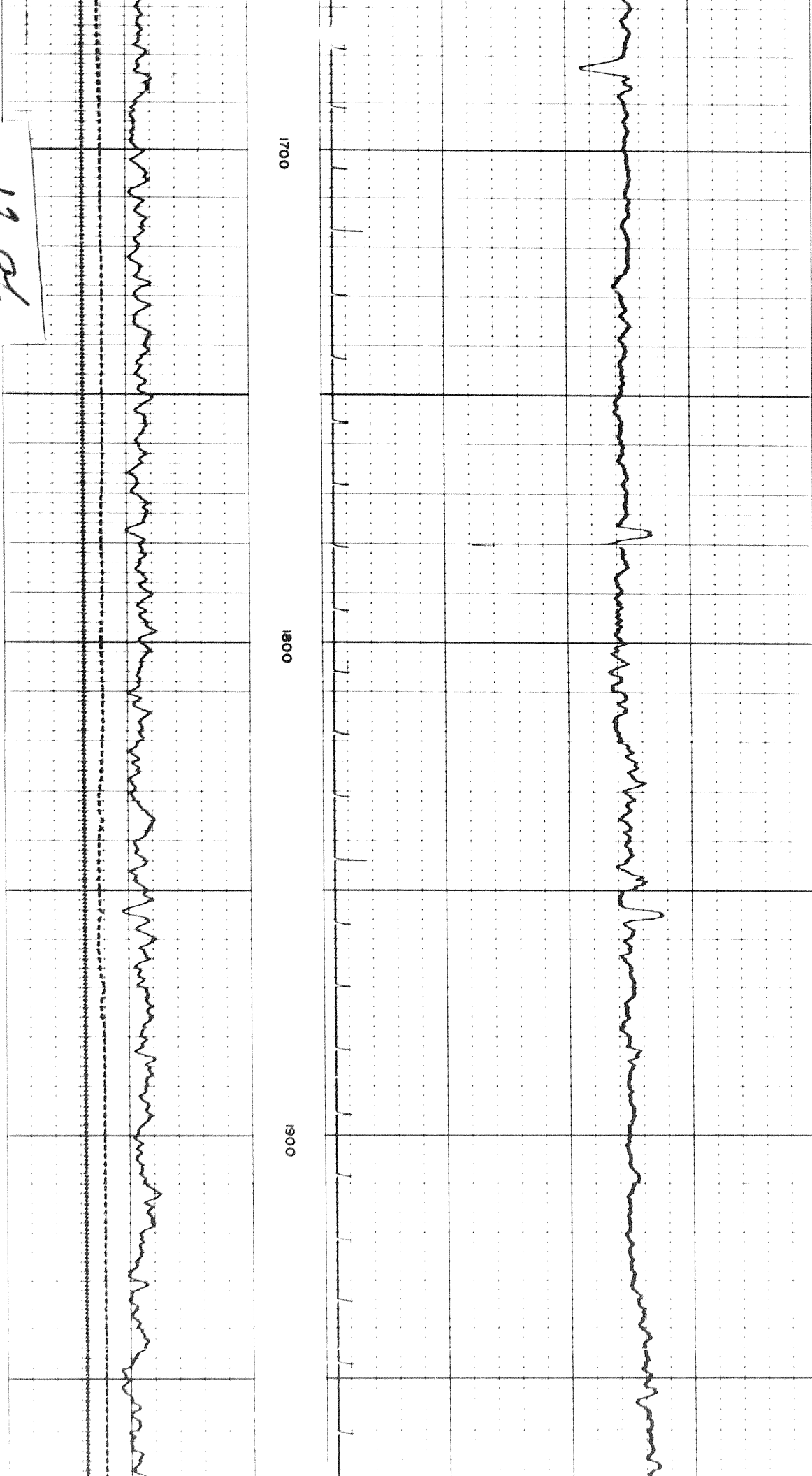


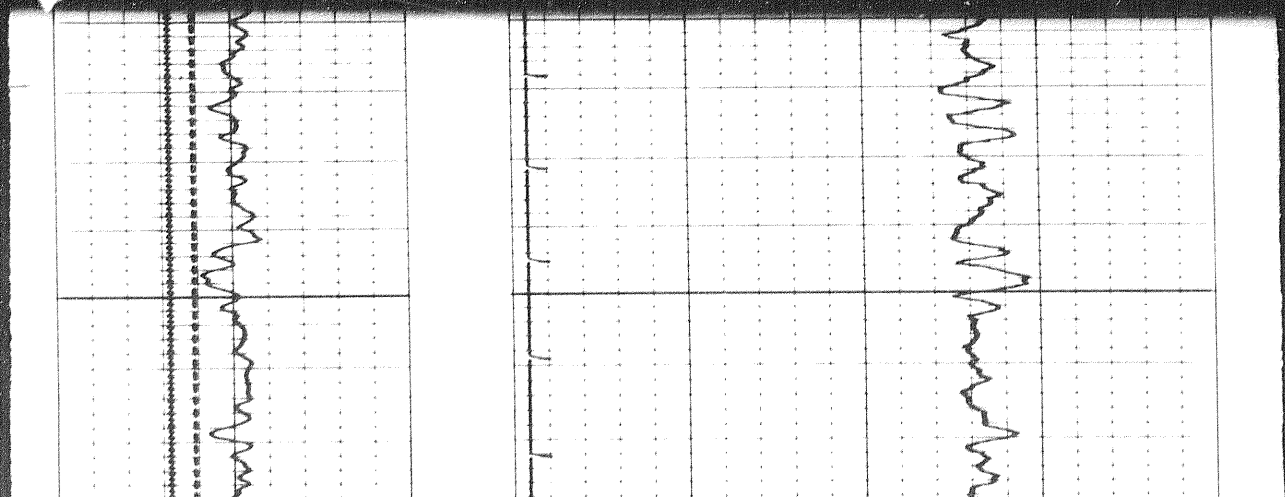
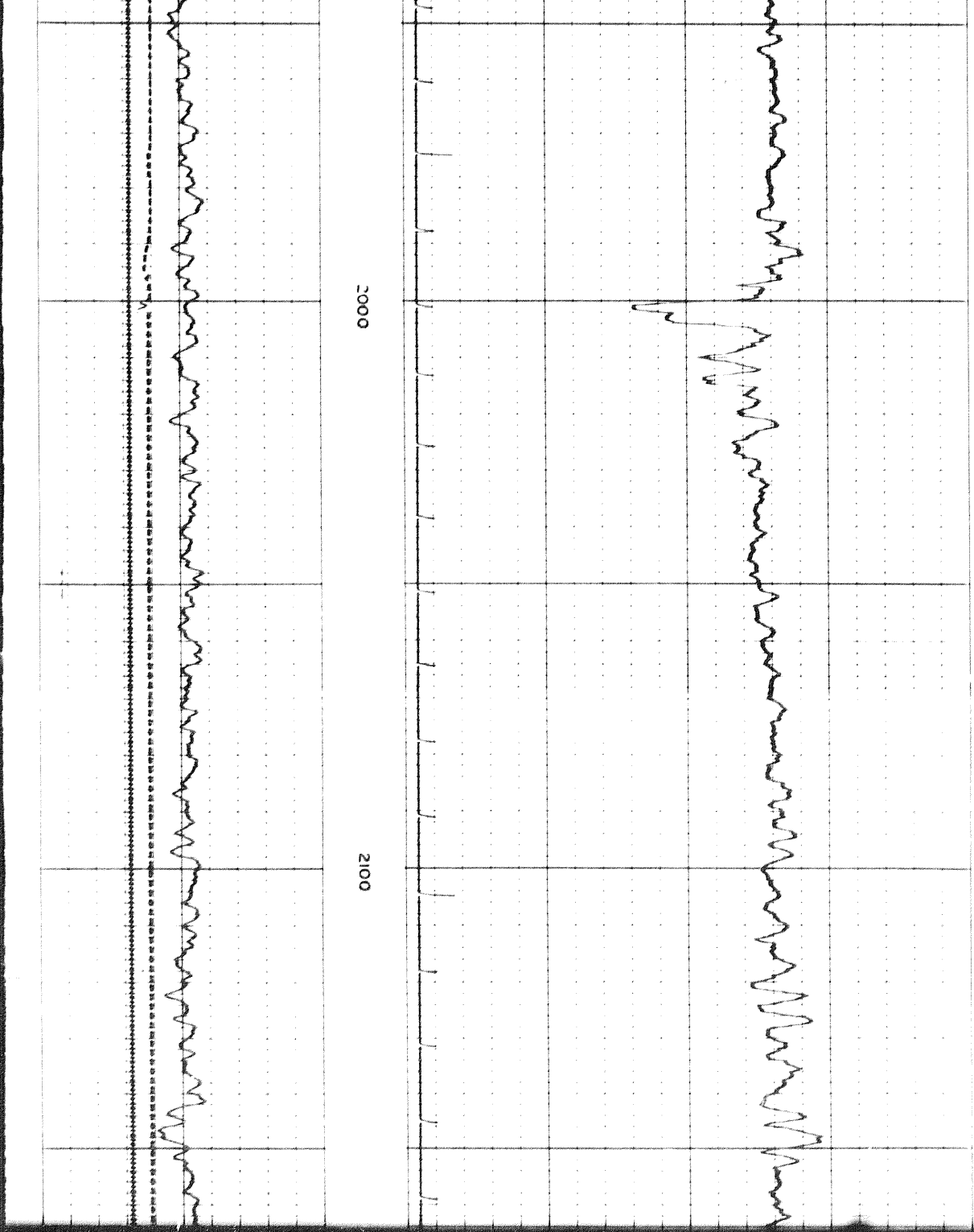
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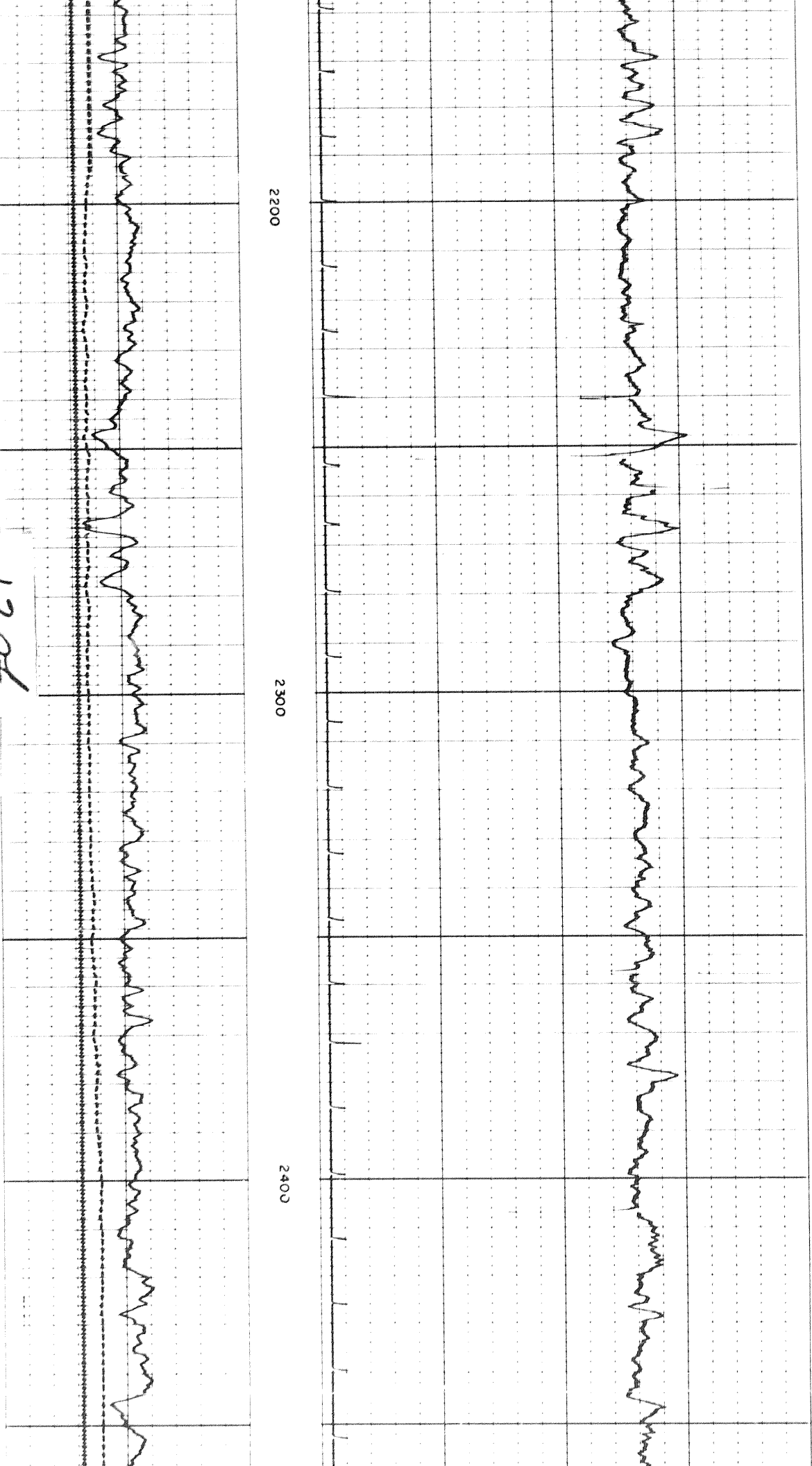
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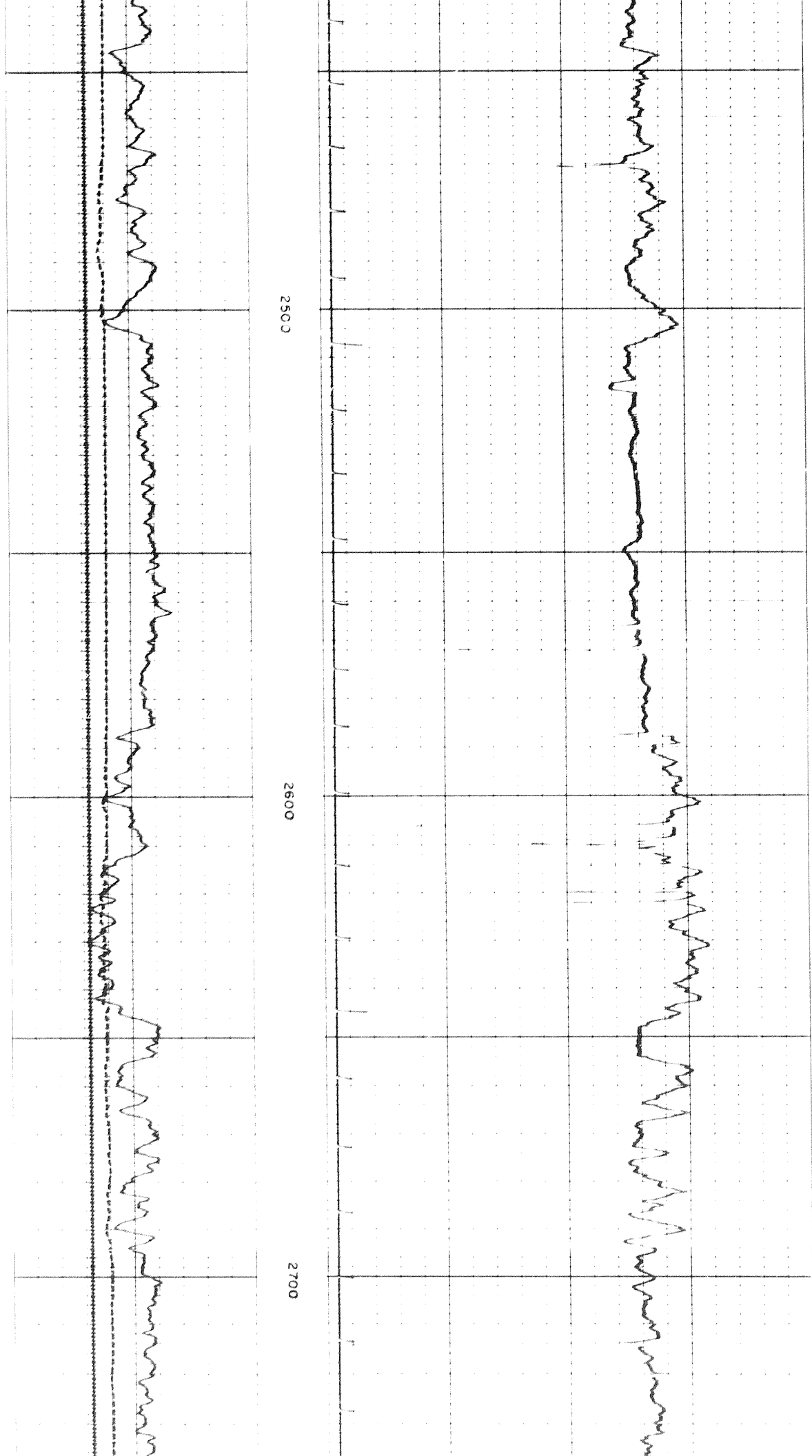
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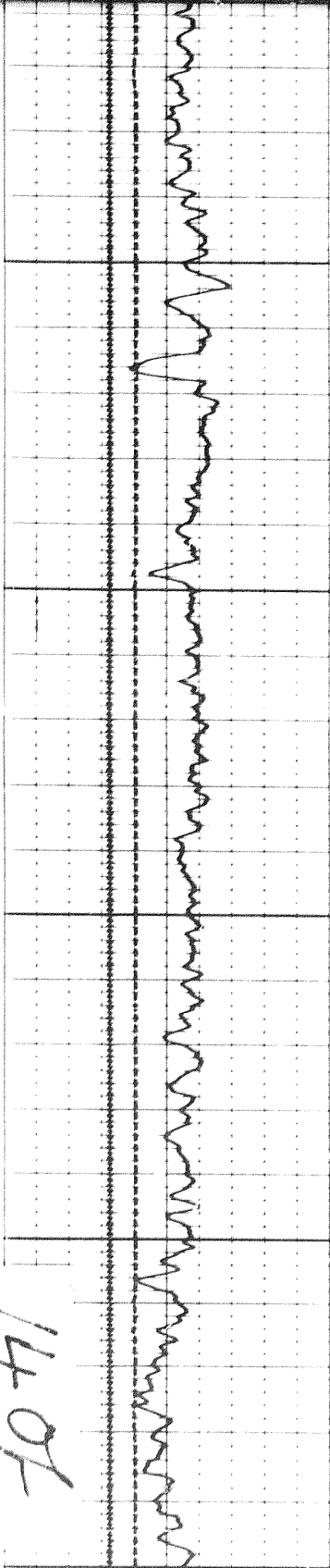


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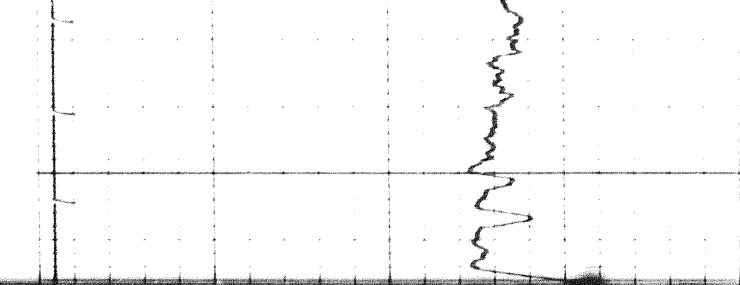
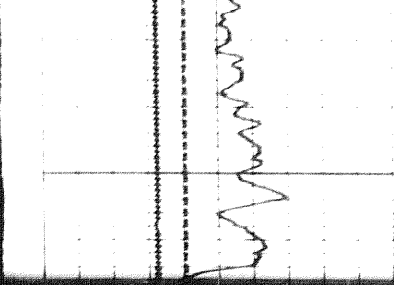
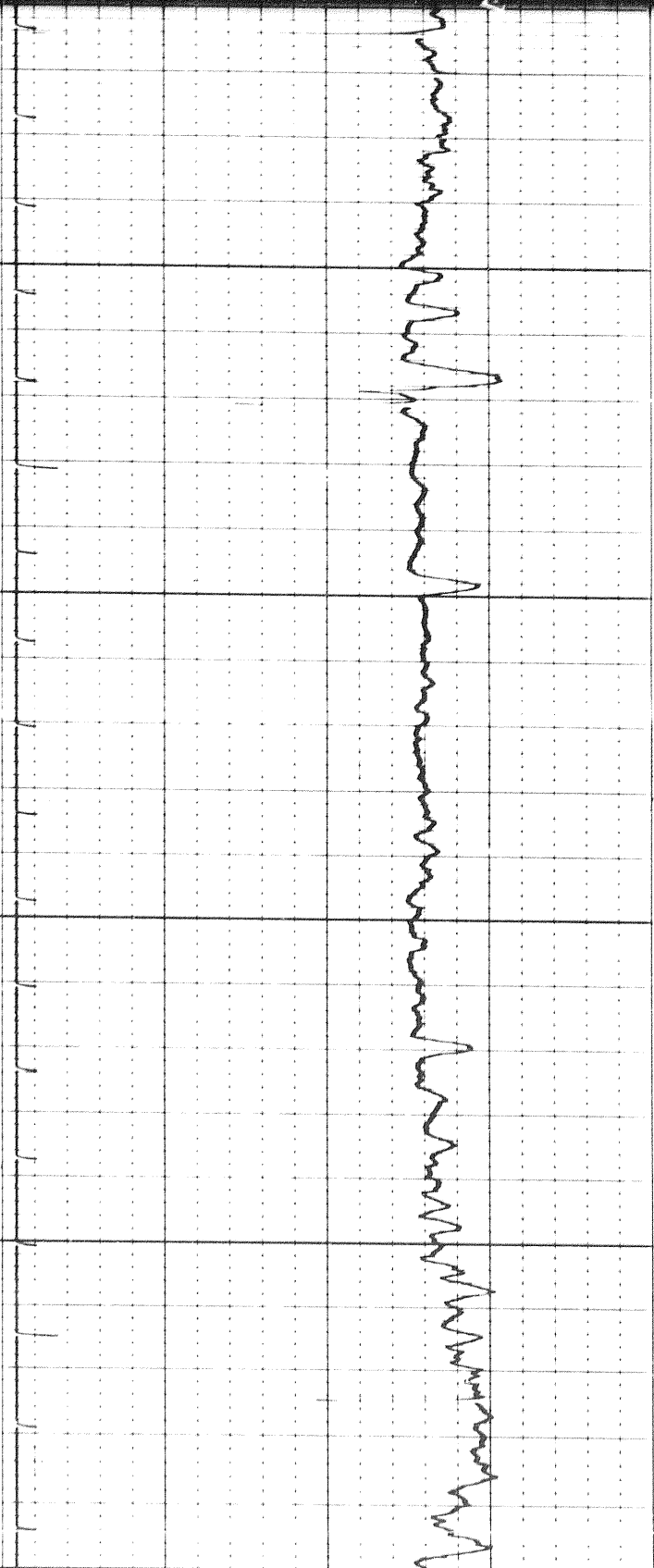
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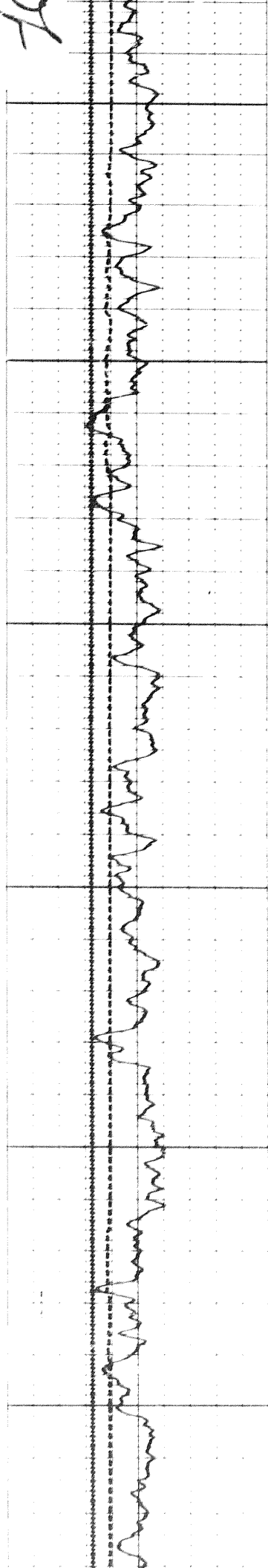


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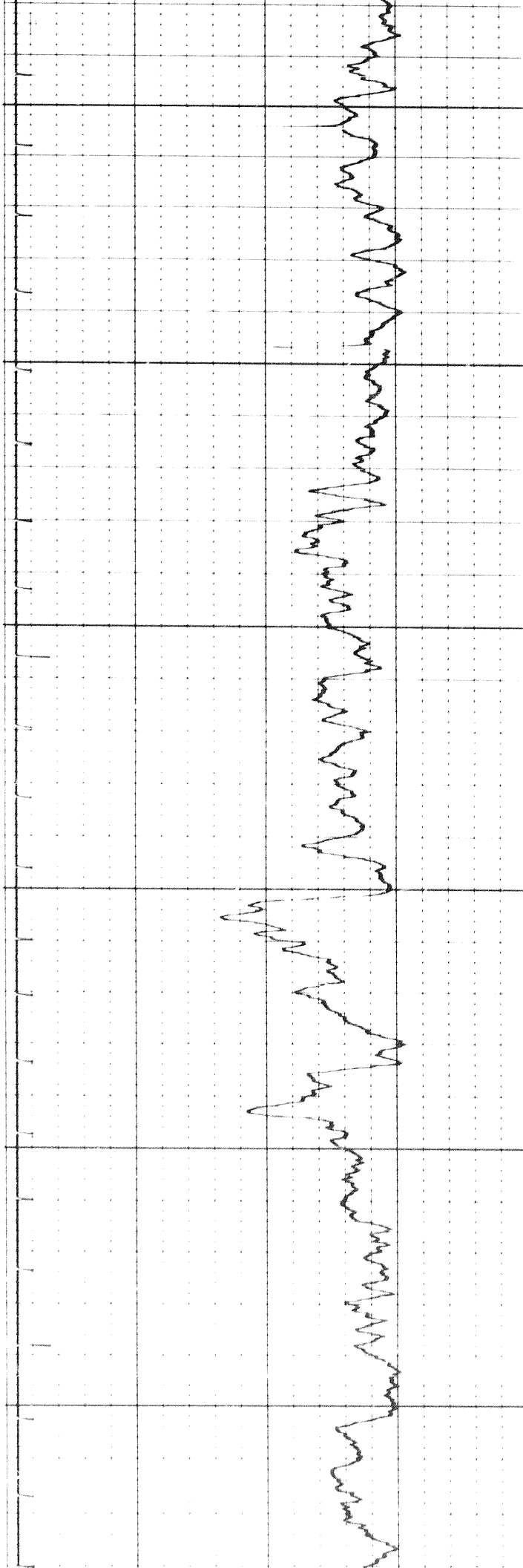
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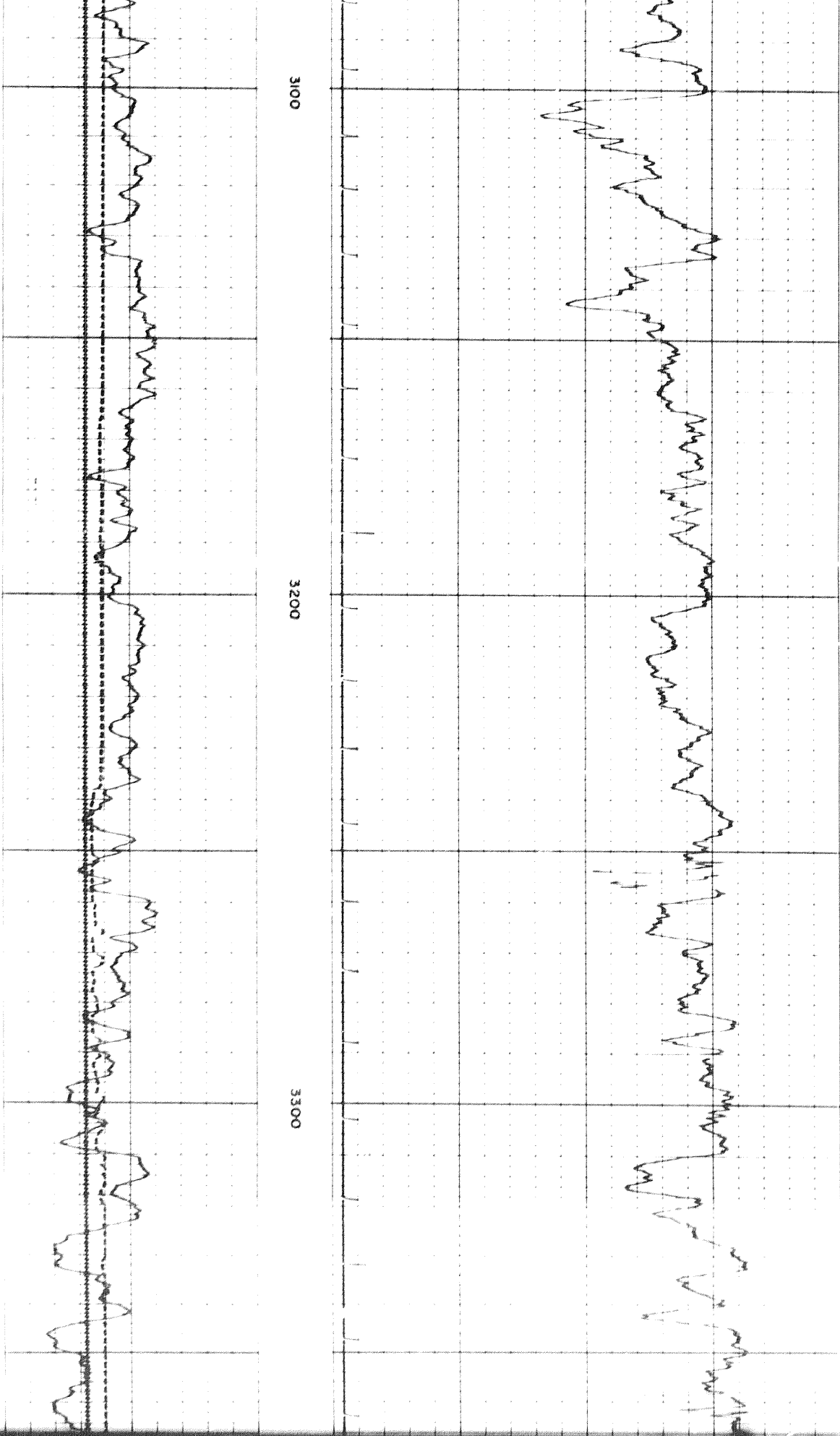


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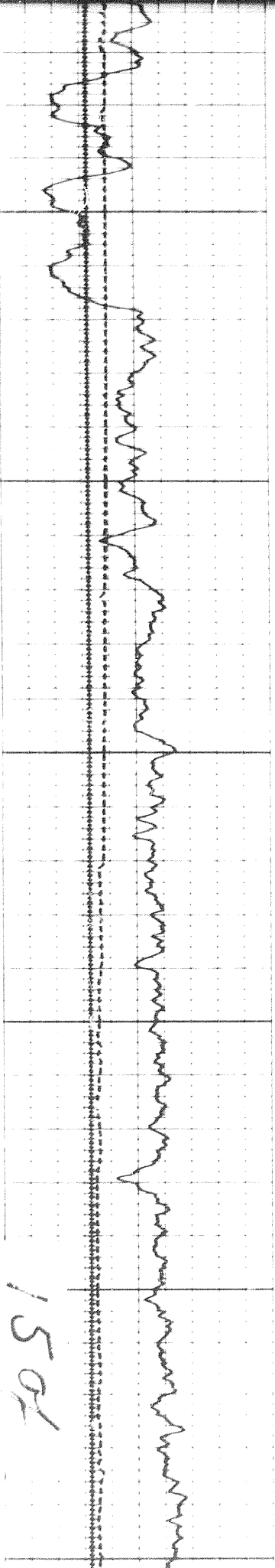
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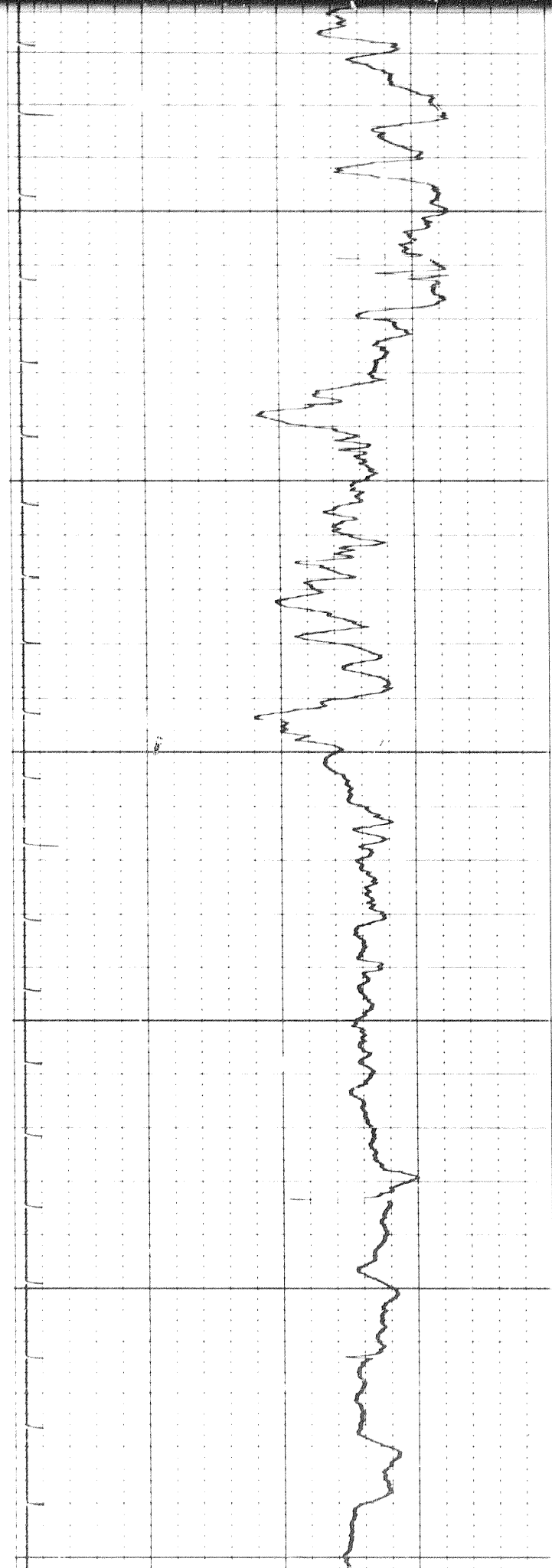
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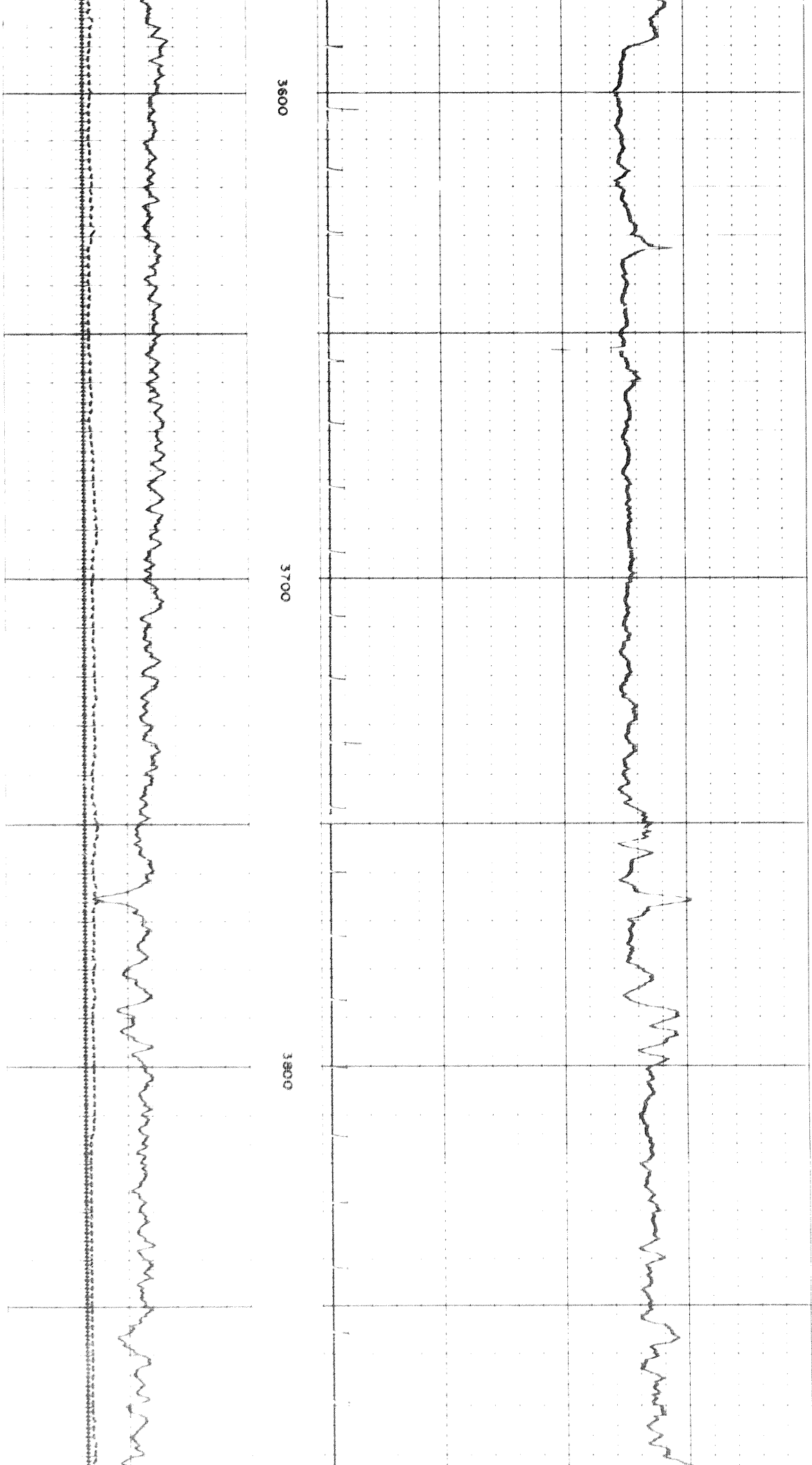


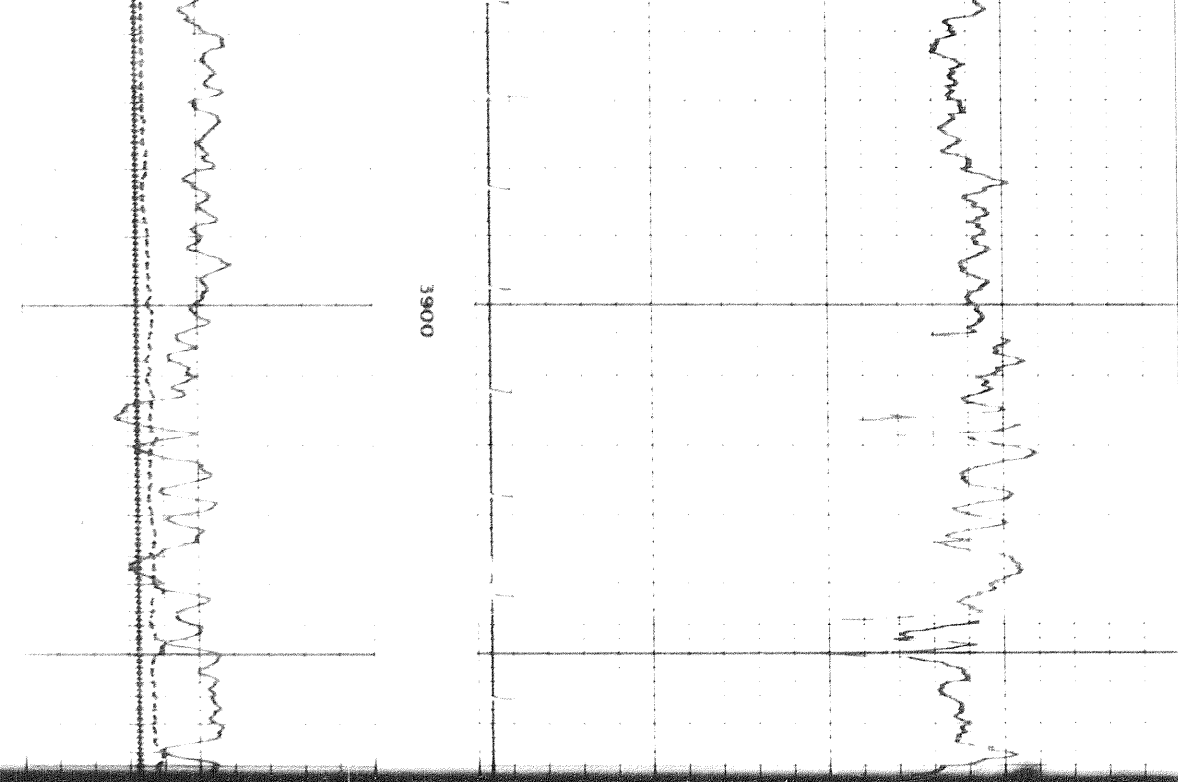
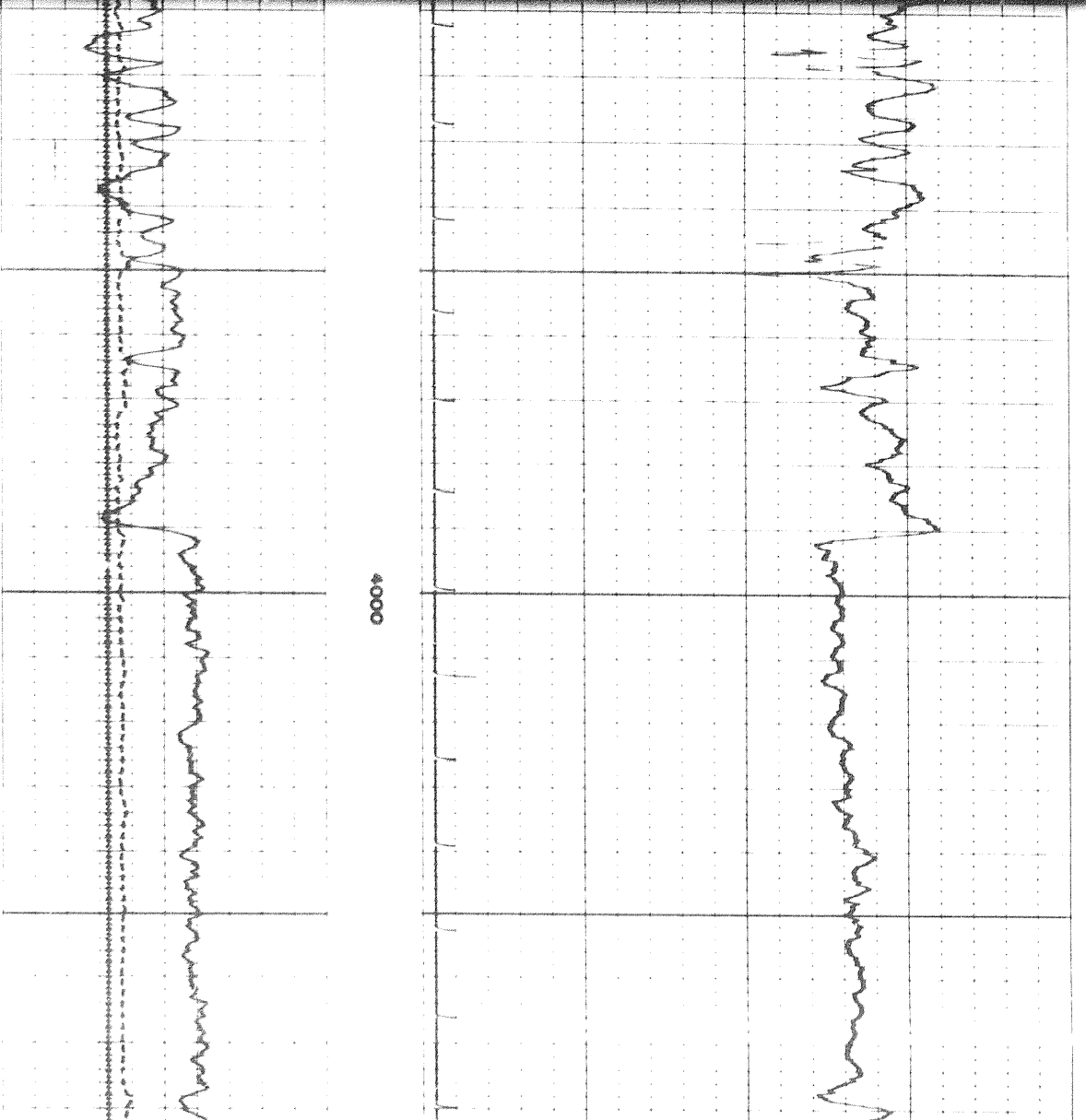
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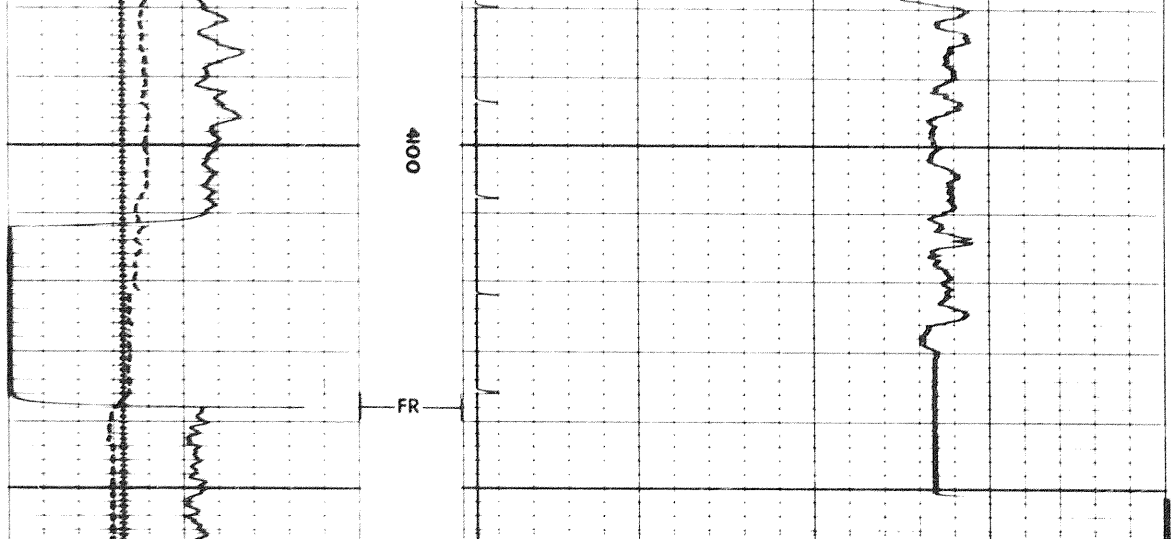
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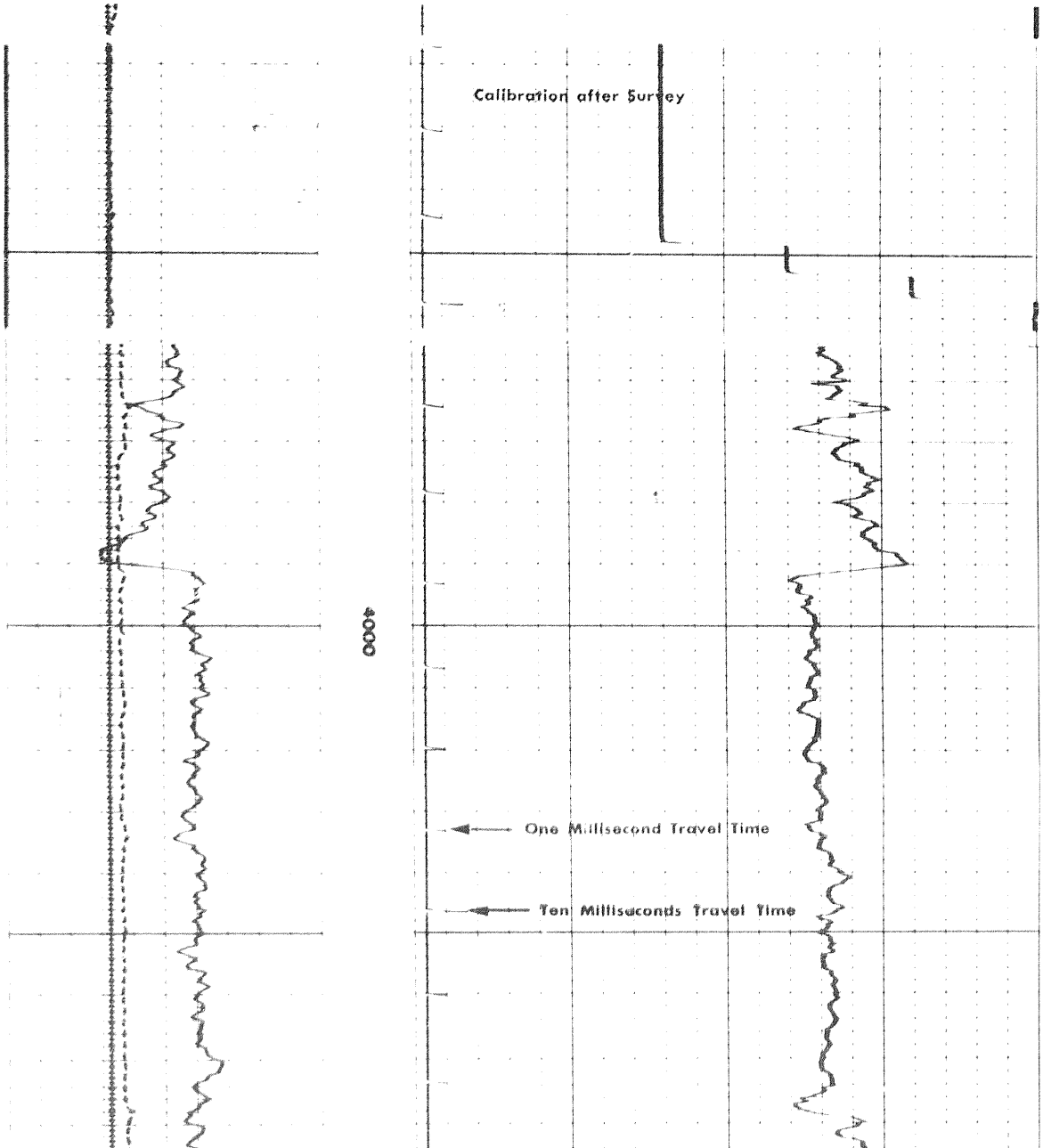


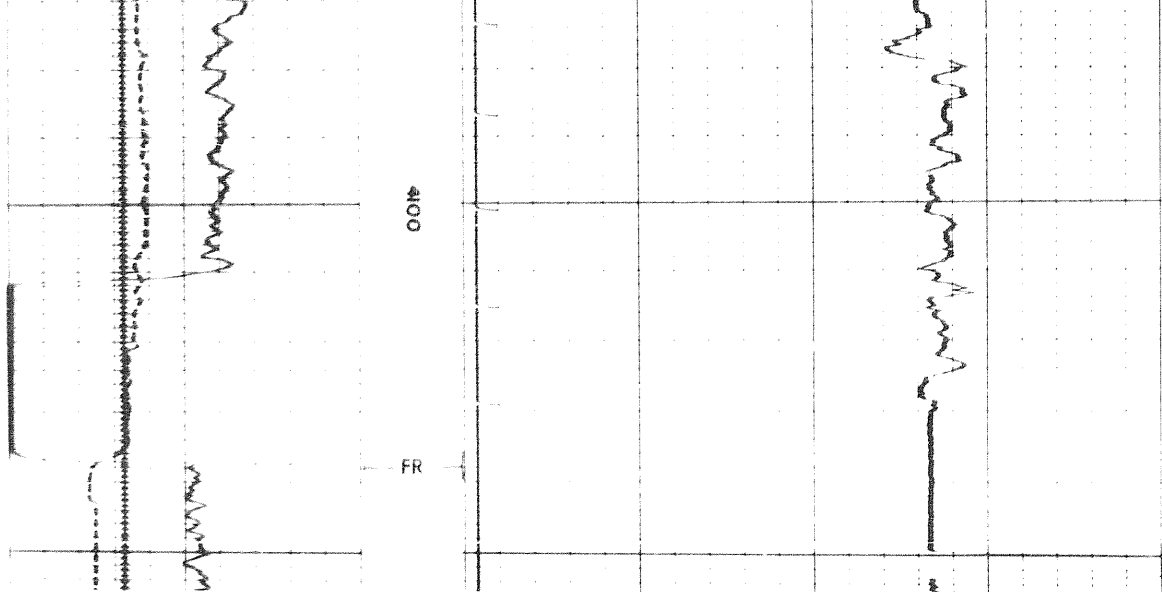


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REPEAT SECTION





CALIPER hole diameter in inches				
Sens	1.5 TC 2			
Zero	div to left	140	190	140
		140	90	140

GAMMA RAY API UNITS	DEPTHS	SONIC INTERVAL TRANSIT TIME microseconds per foot
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DETAIL LOG
5' = 100'

GAMMA RAY API UNITS	DEPTHS	SONIC INTERVAL TRANSIT TIME microseconds per foot
------------------------	--------	---

Sens	TC 2			
Zero	div to left	140	90	140
		140	190	140

CALIPER hole diameter in inches				
------------------------------------	--	--	--	--

DETAIL LOG
5' = 100' RUN 2

GAMMA RAY API UNITS	DEPTHS	SONIC INTERVAL TRANSIT TIME microseconds per foot
------------------------	--------	---

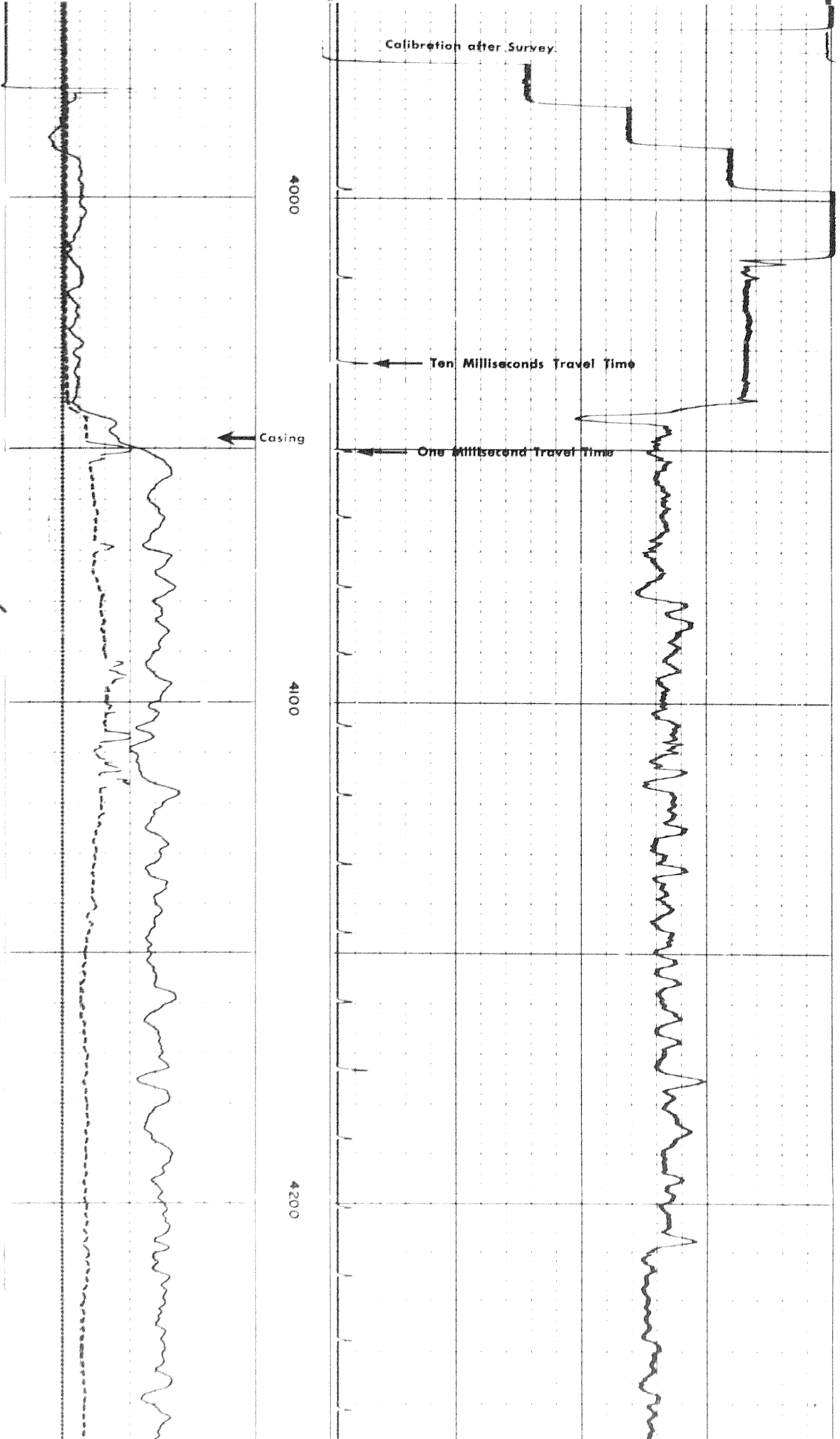
Sens	TC 2			
Zero	div to left	140	90	140
		240	190	140

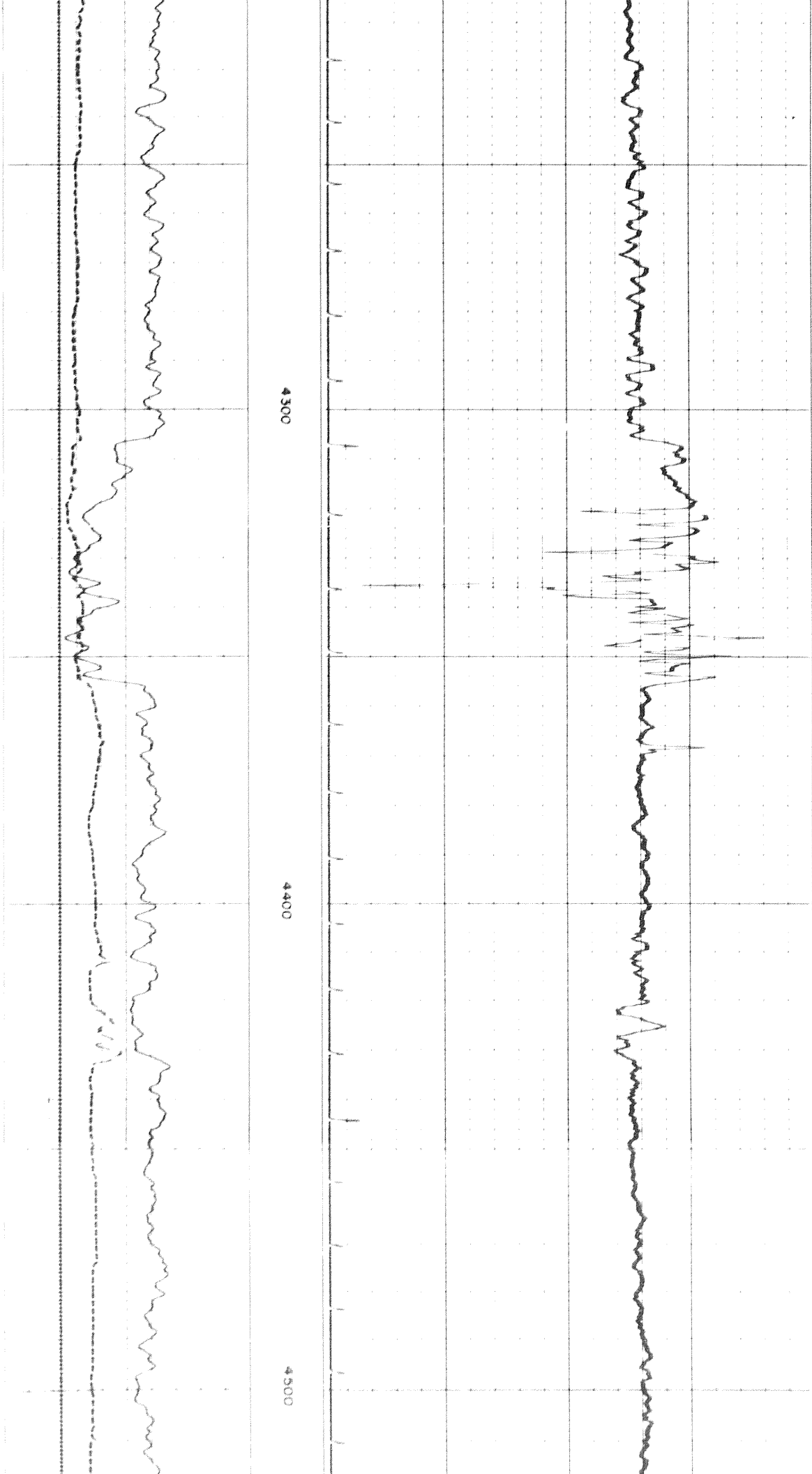
CALIPER hole diameter in inches				
11	13	17	19	

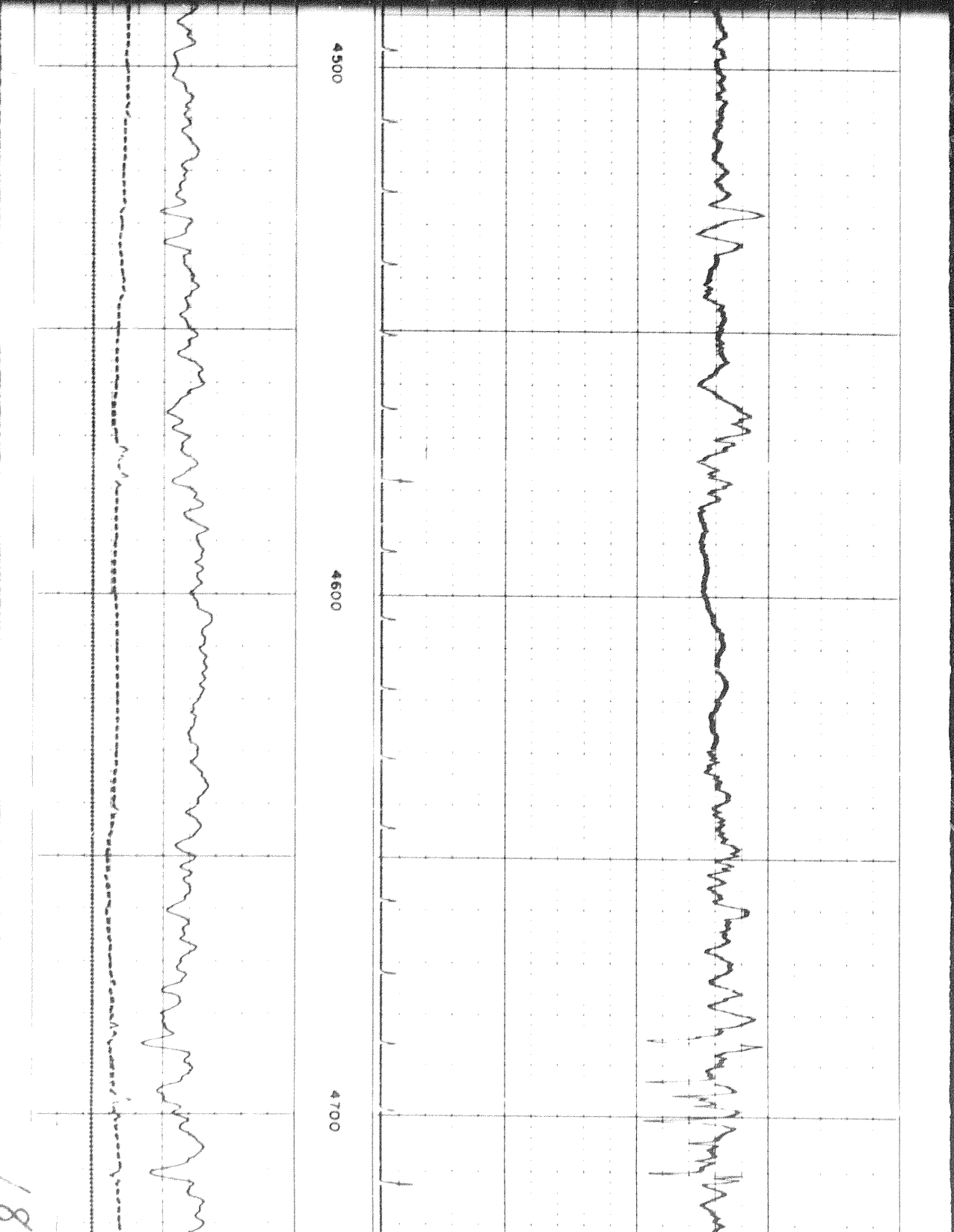
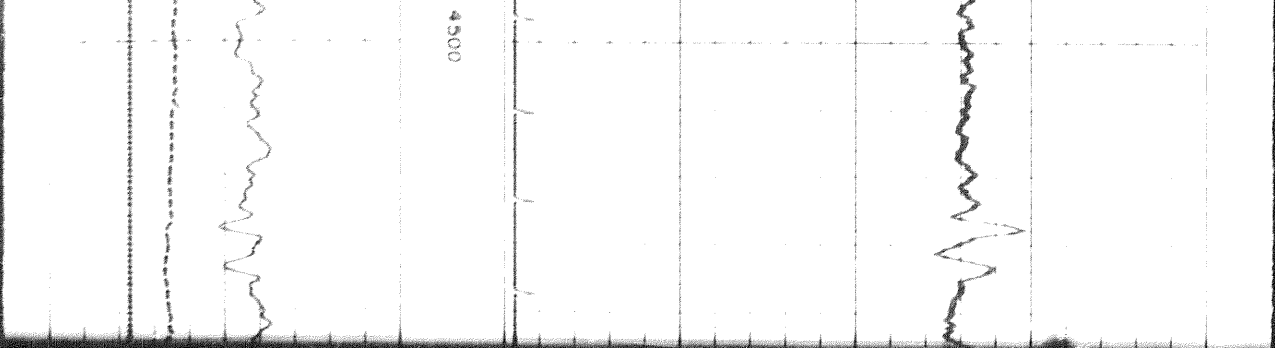
Calibration after Survey.

11 13 15 17 19

17 of

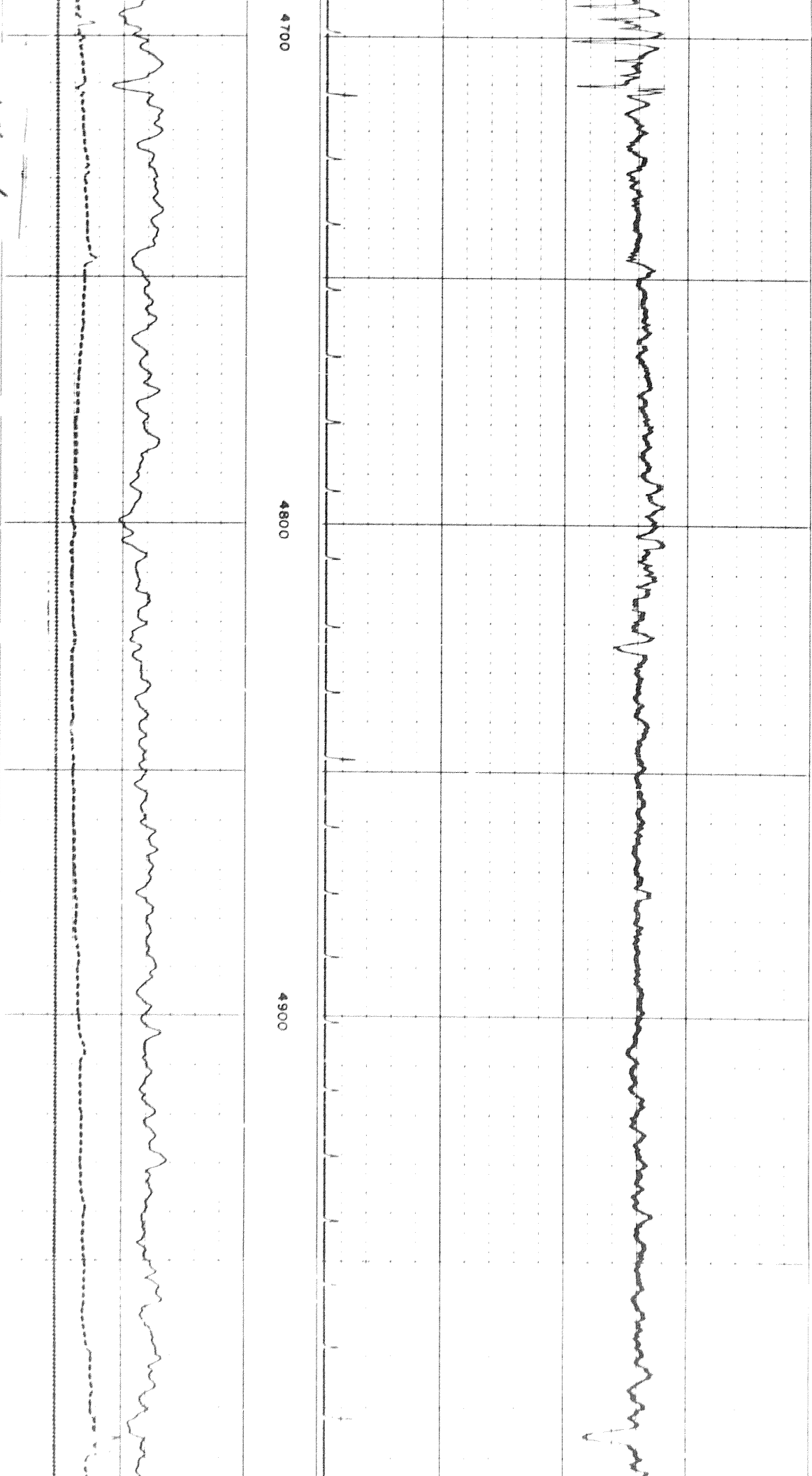






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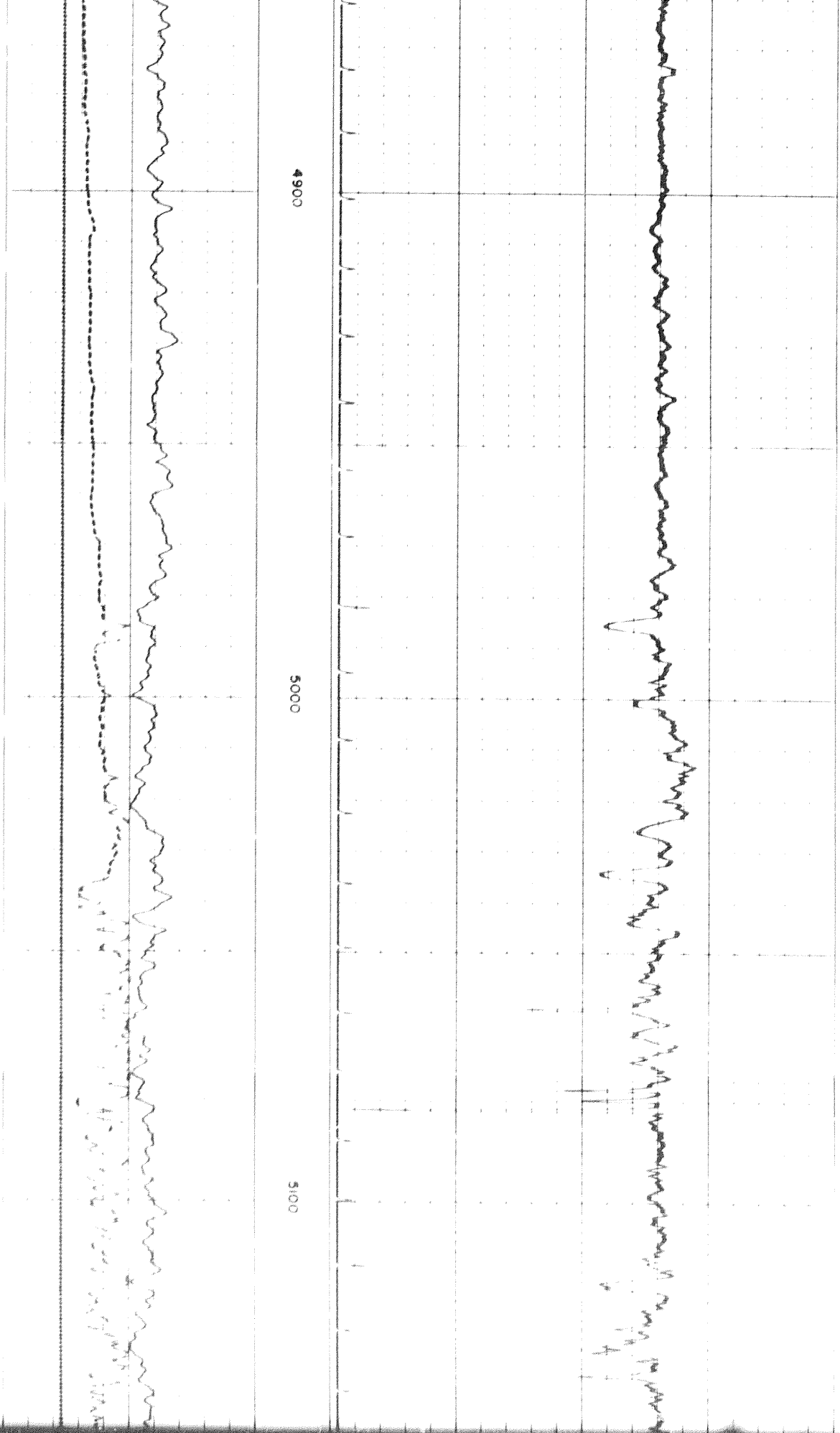
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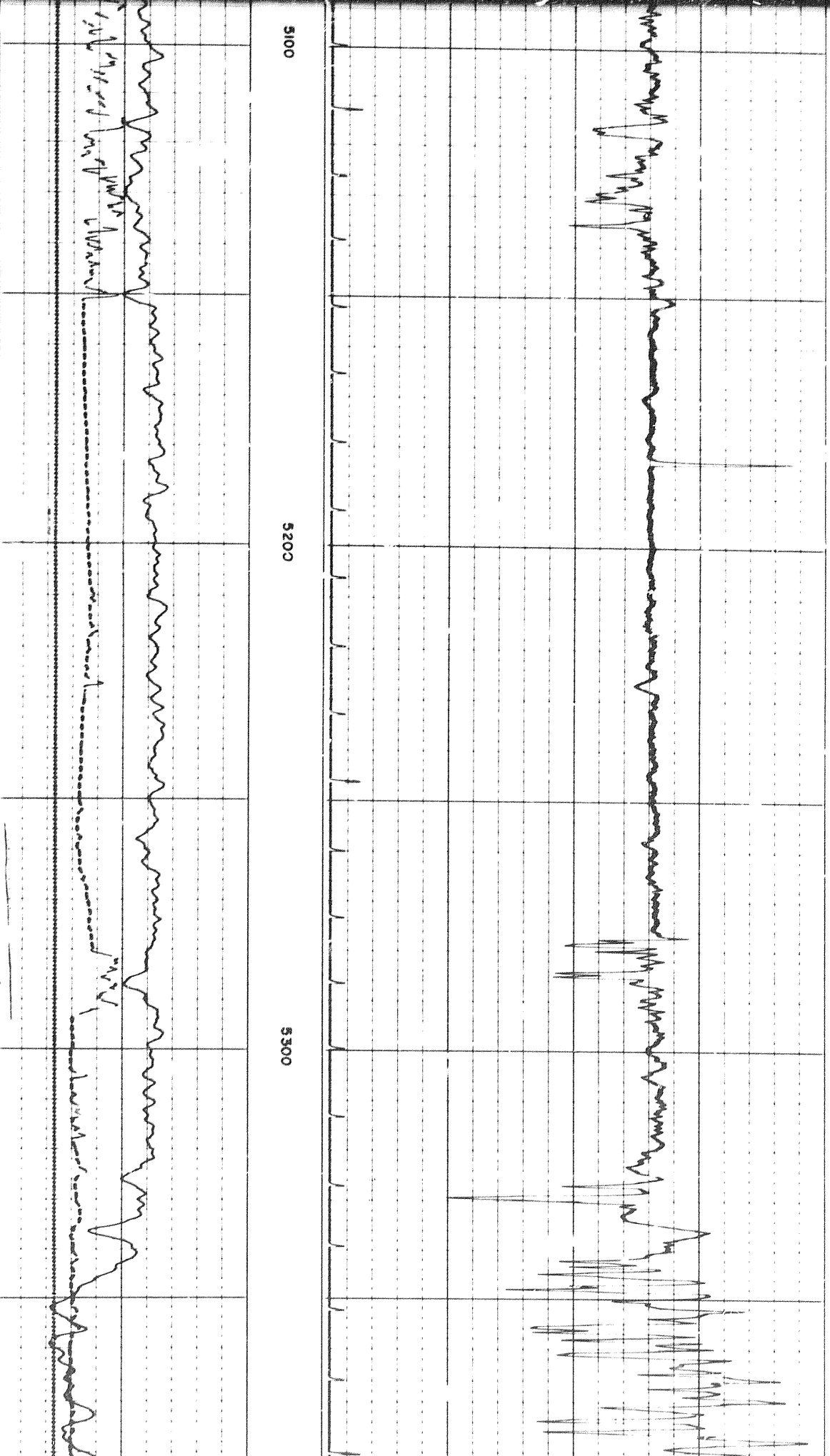
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4800

4900



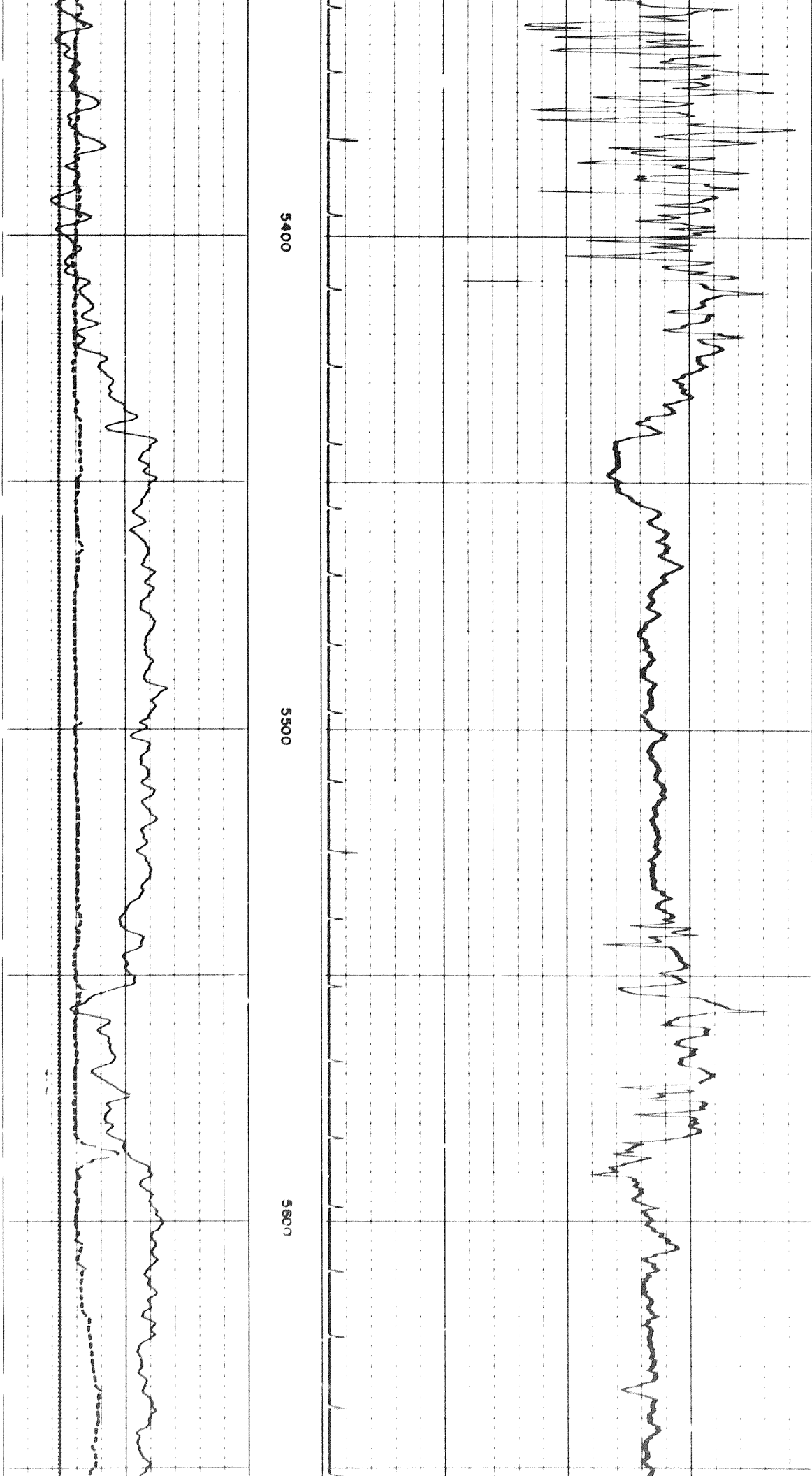
190f



5100

5200

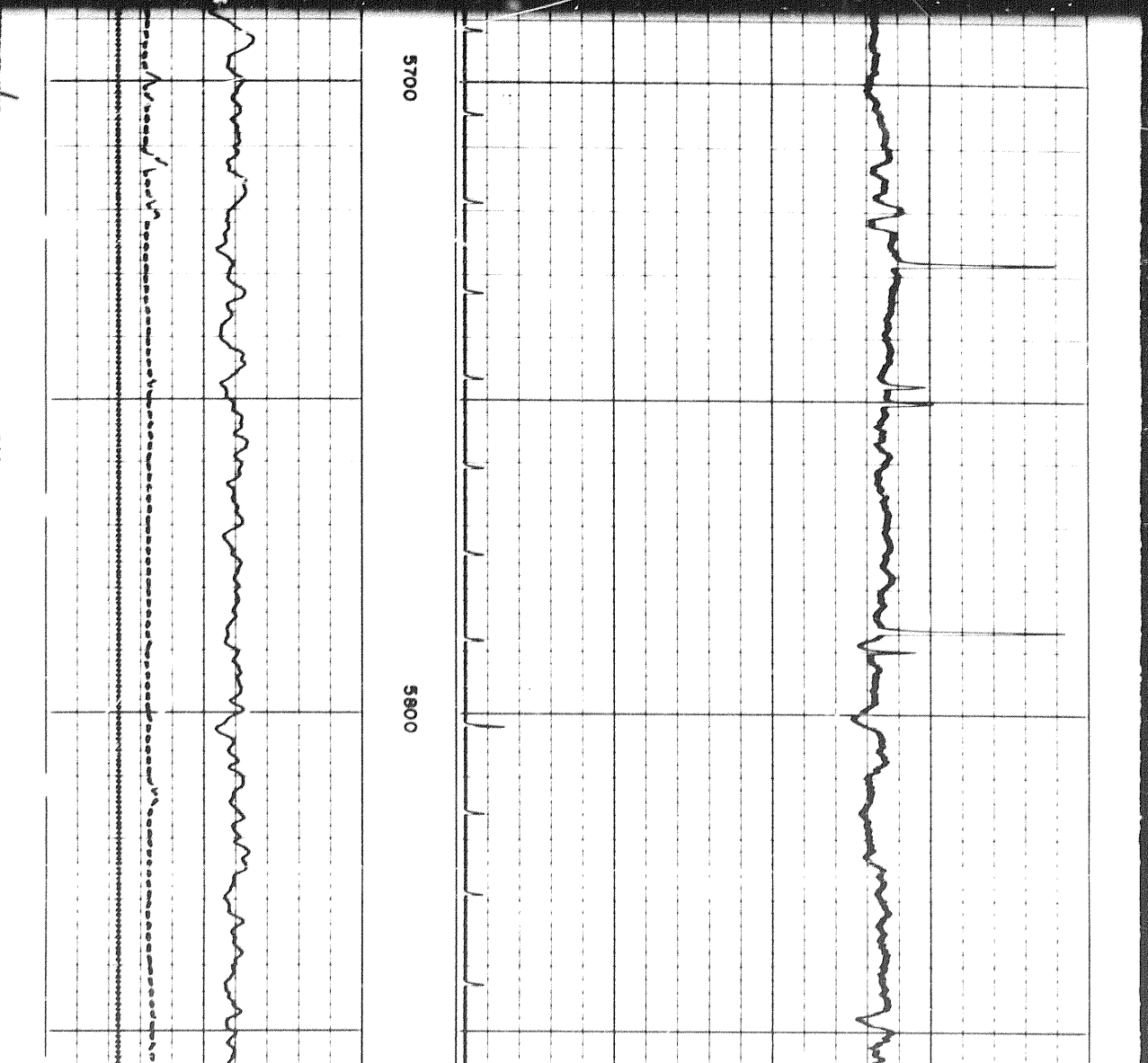
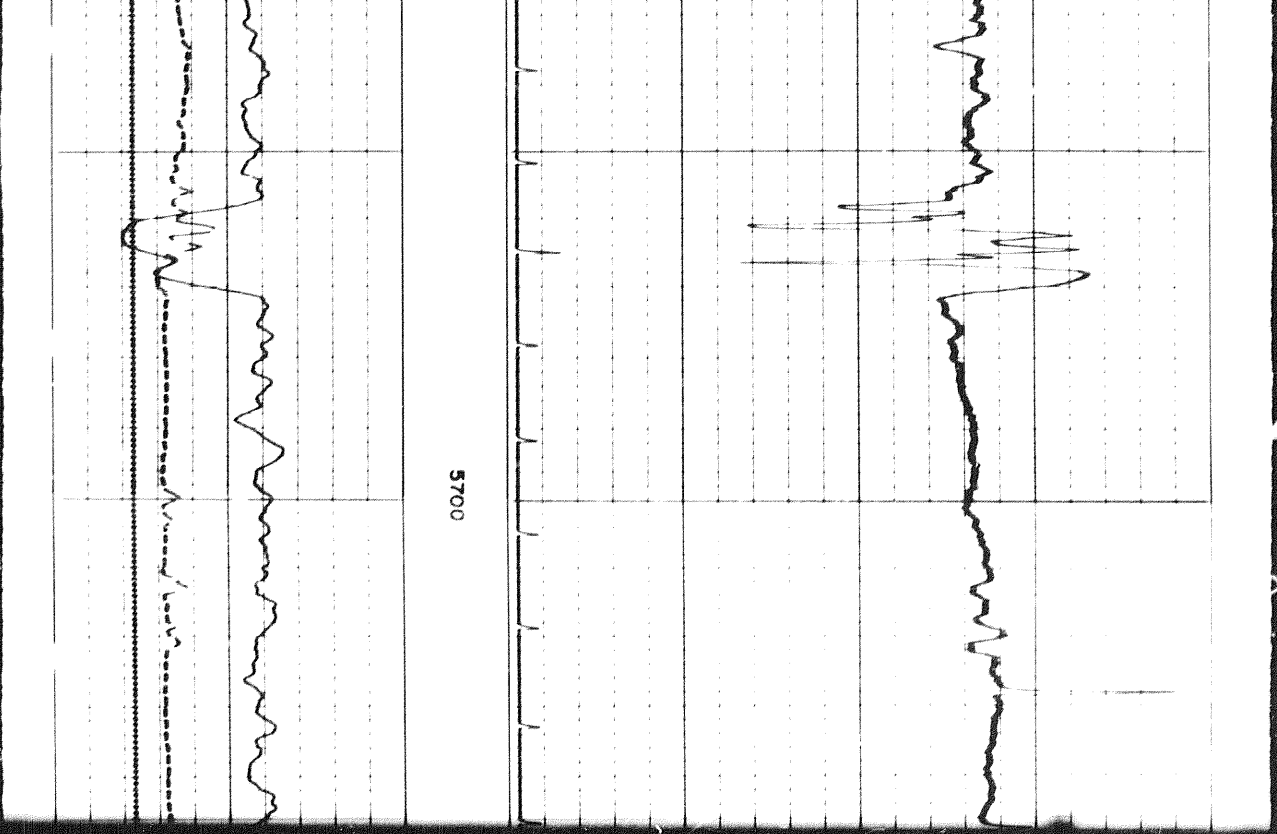
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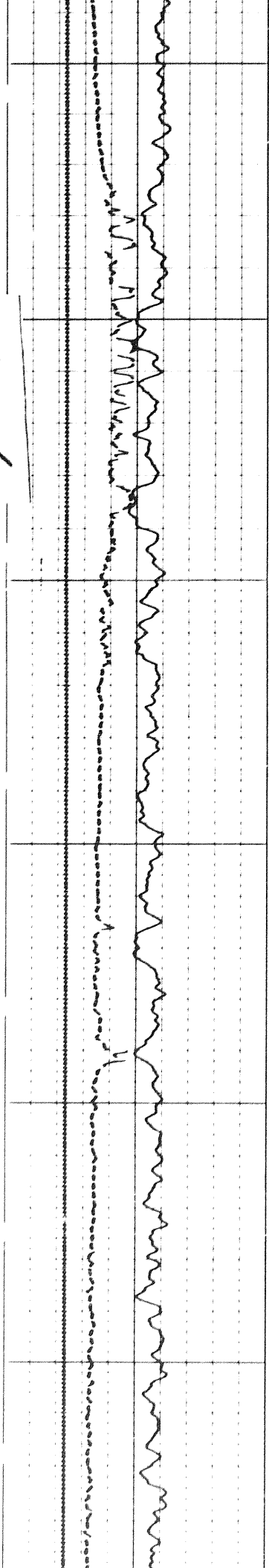
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5500

5600



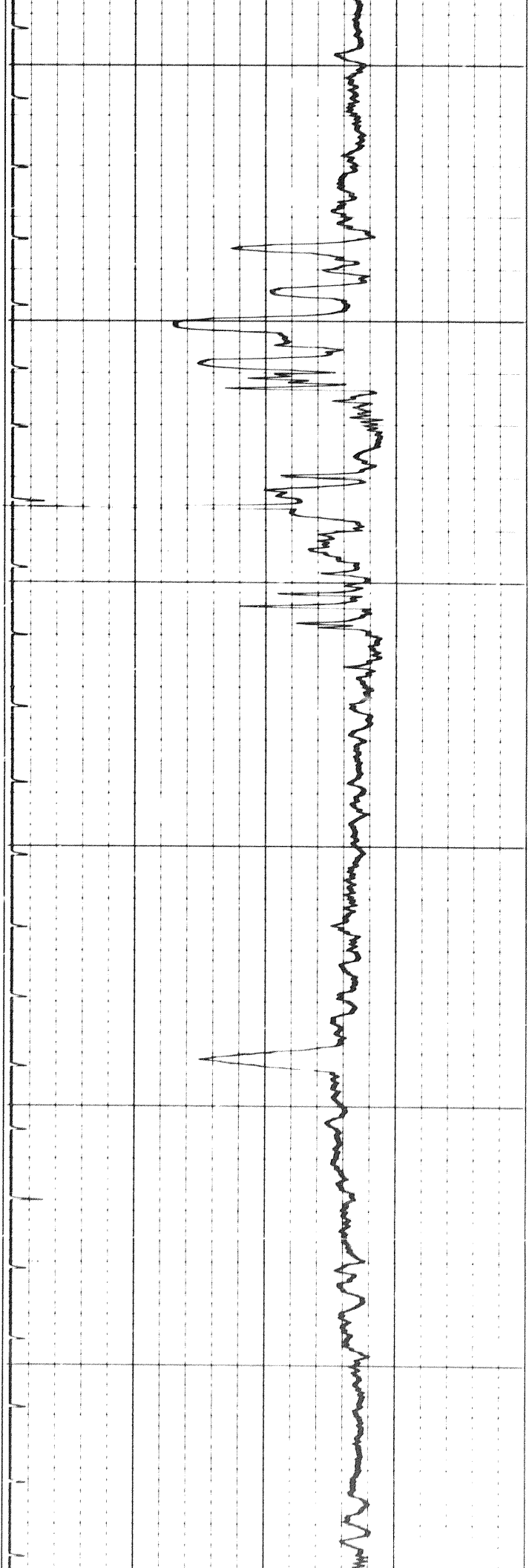
2007

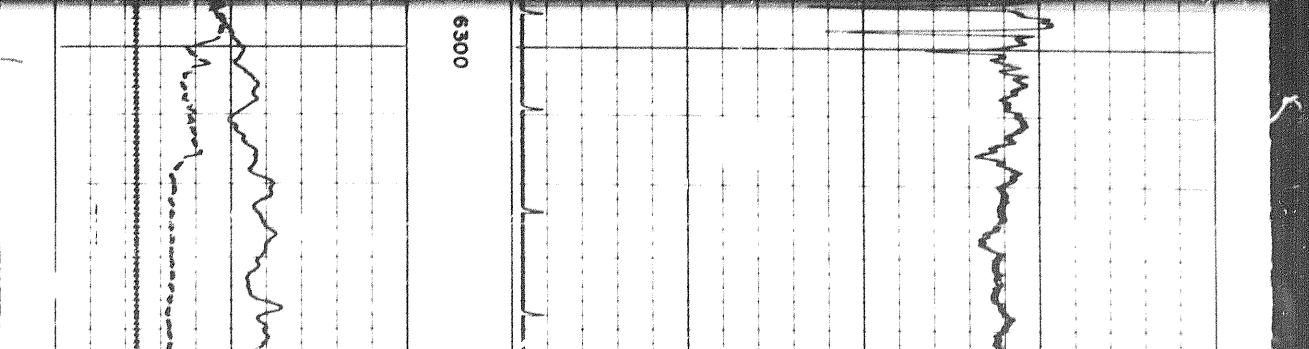
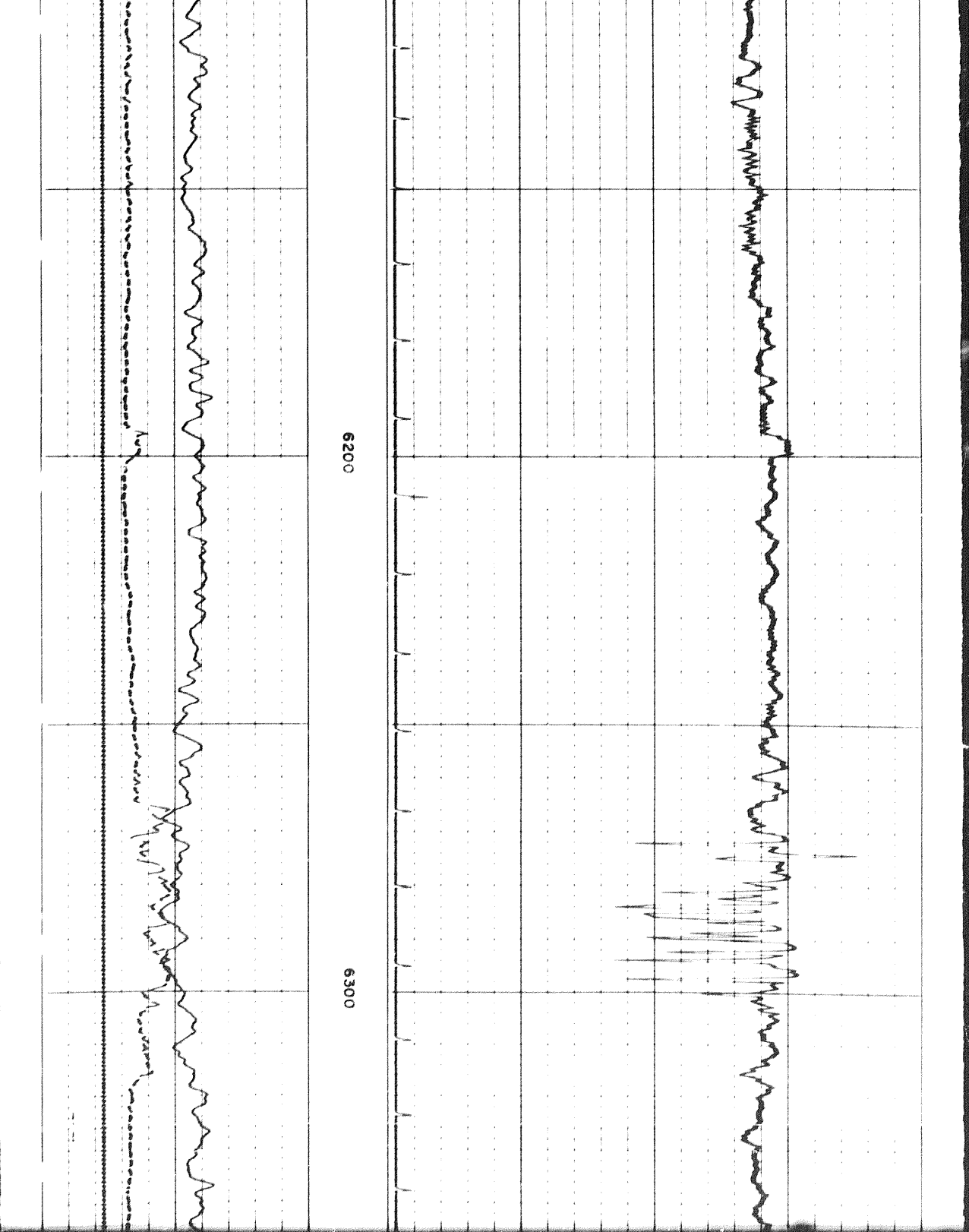


5900

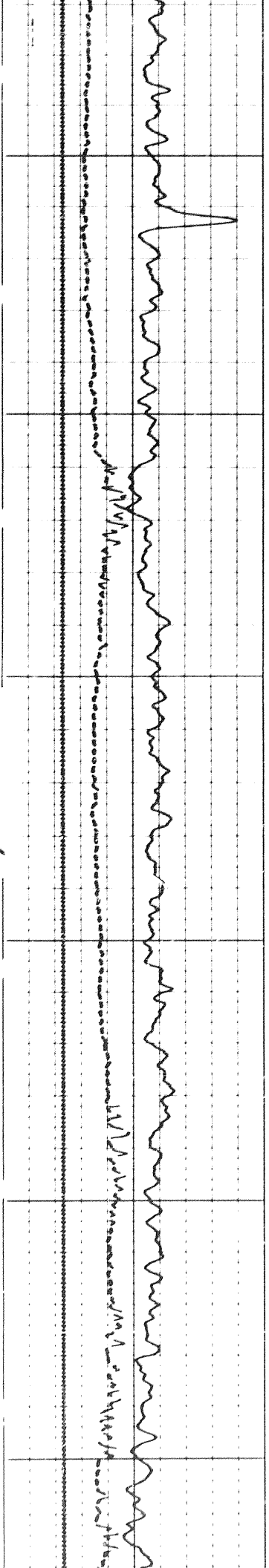
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6100





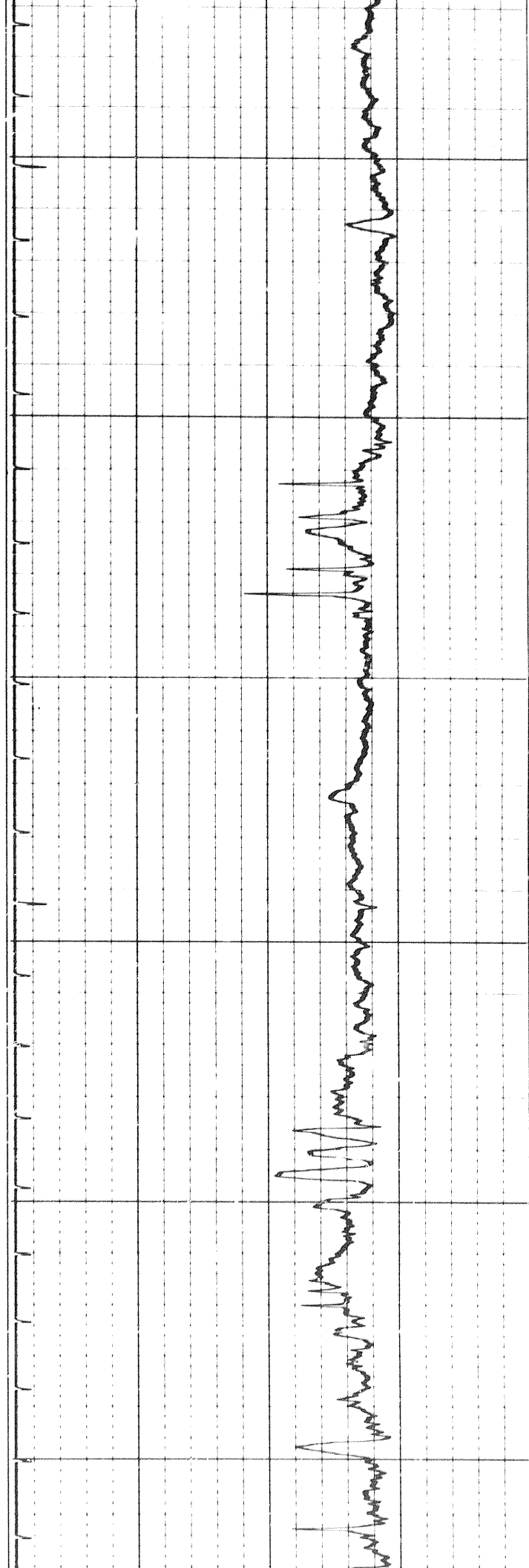
21 of

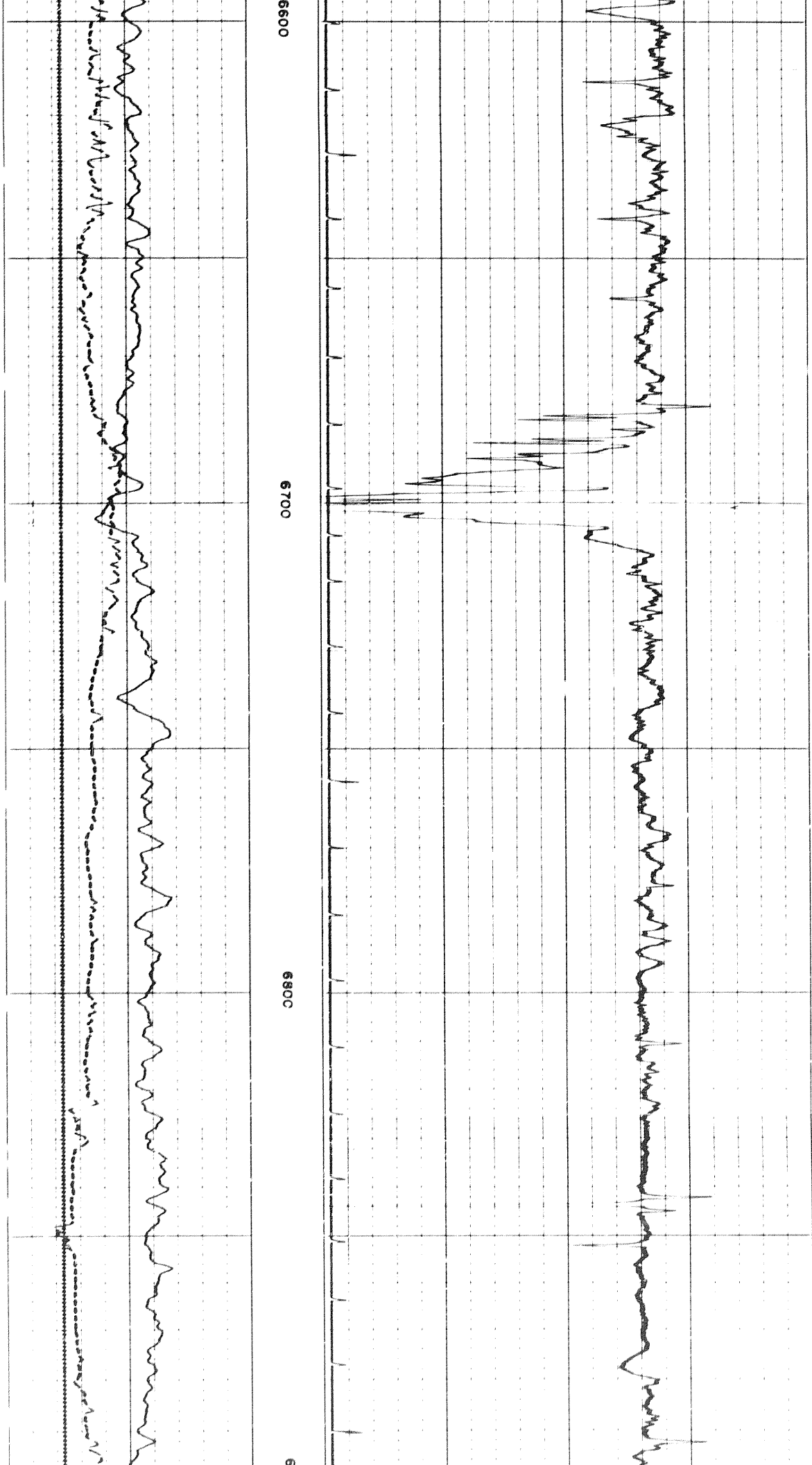


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6500

6600



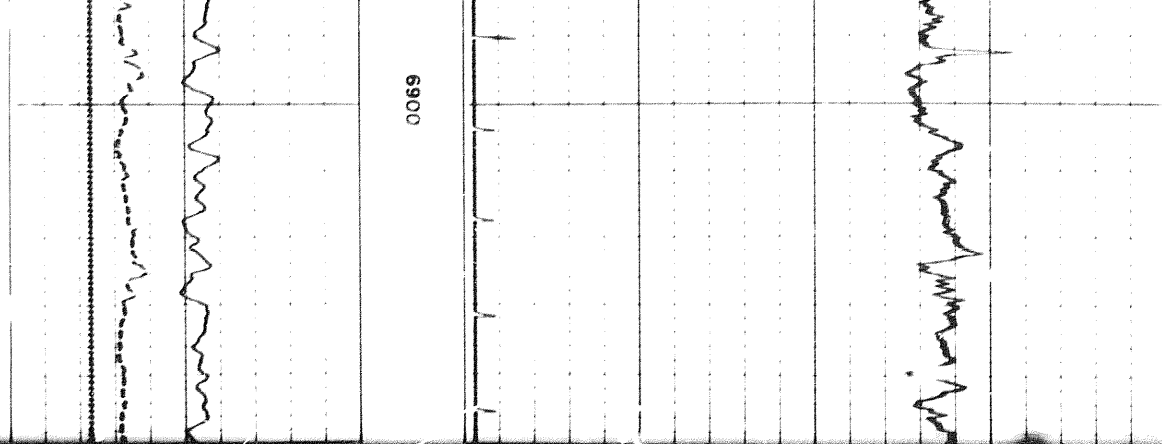


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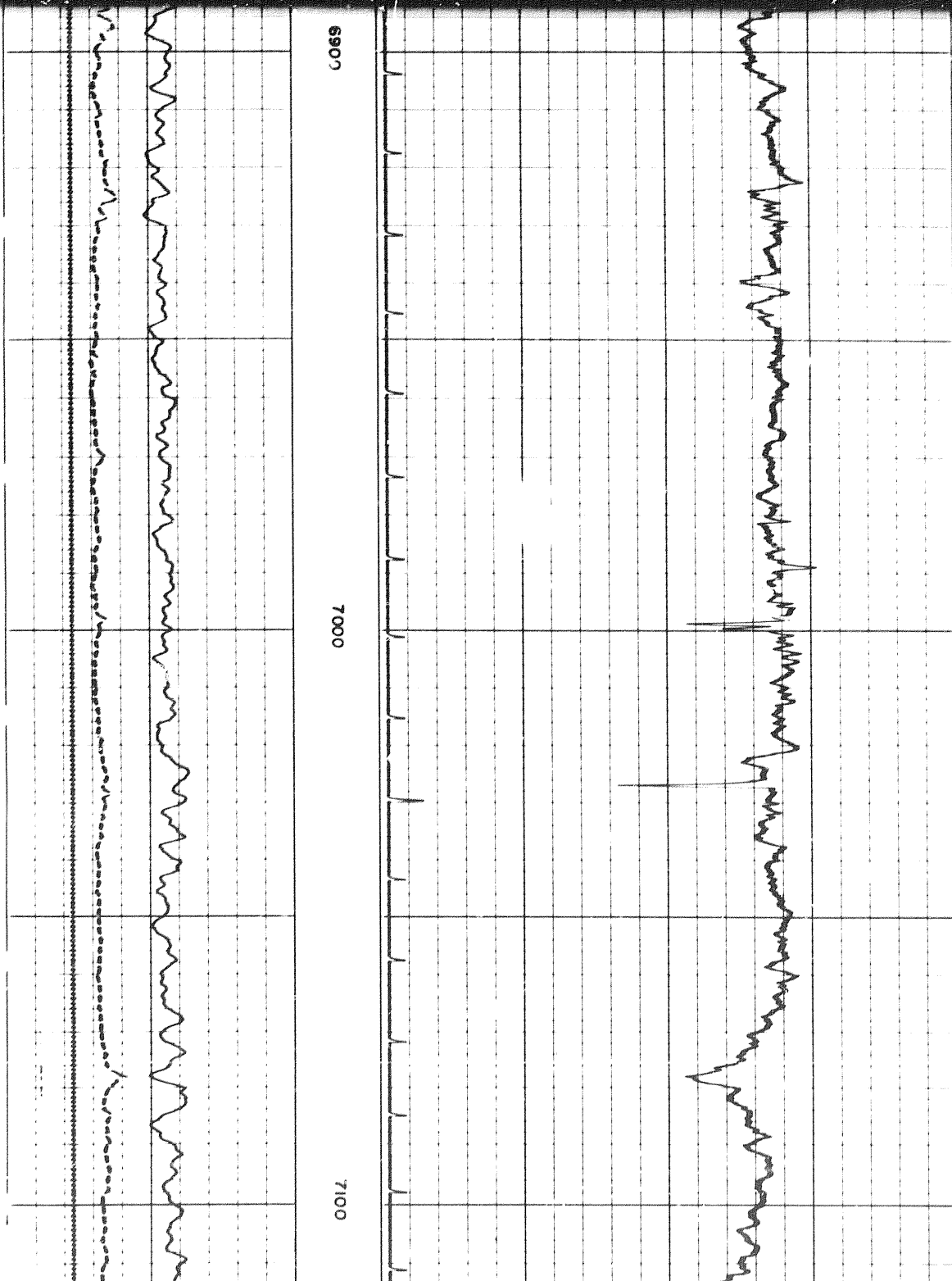
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6800

6



6900

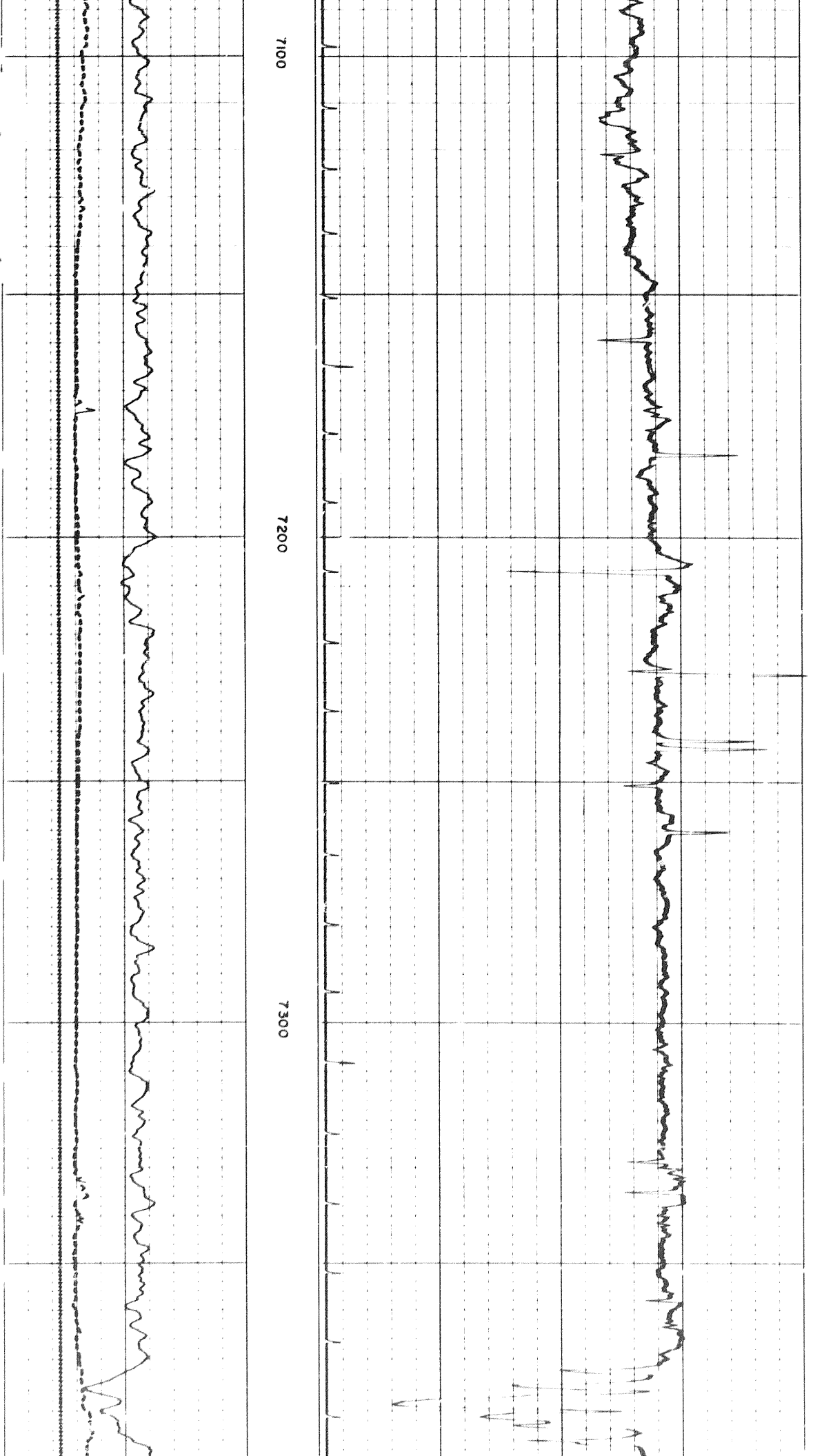


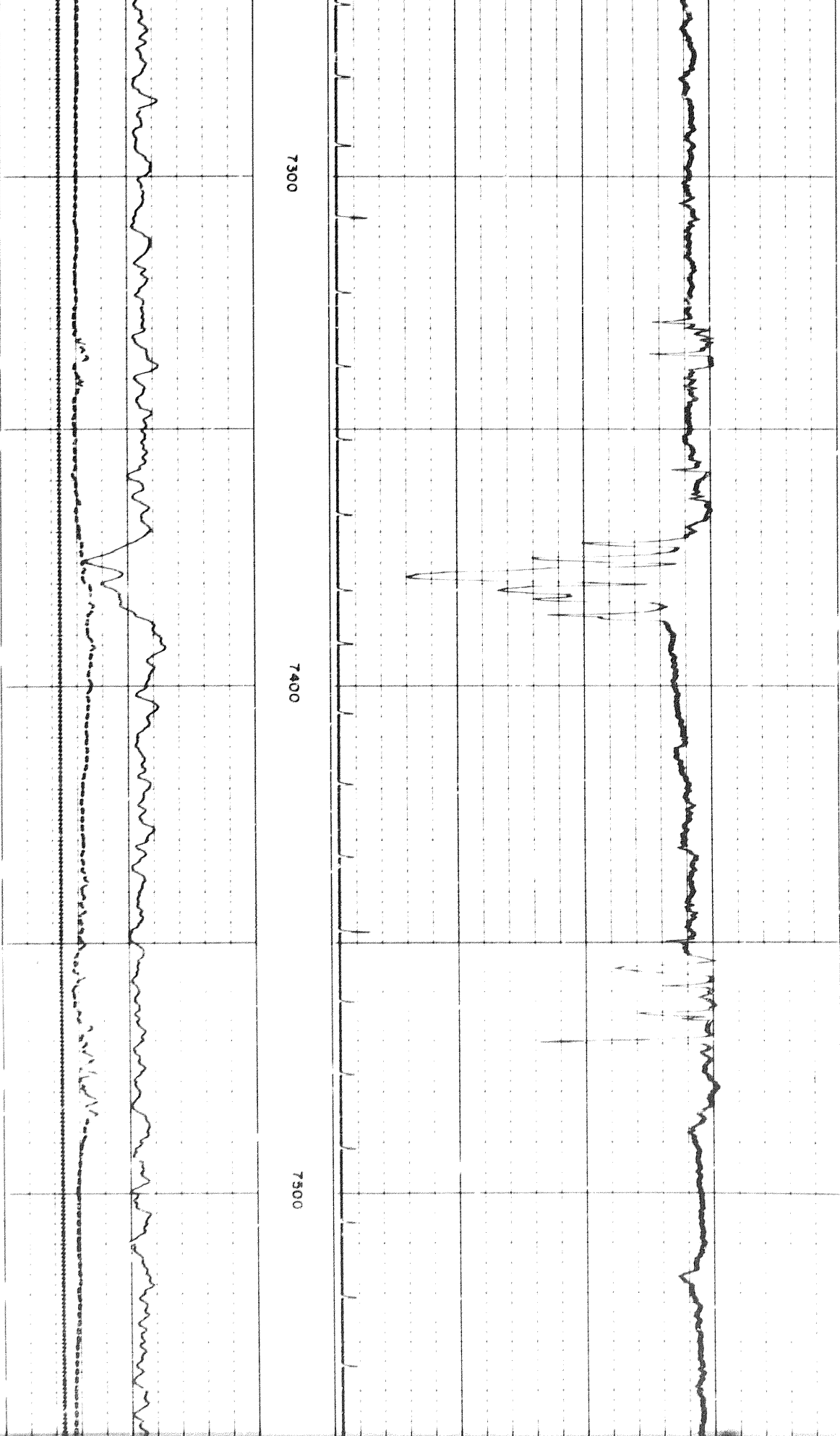
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7000

7100

2207

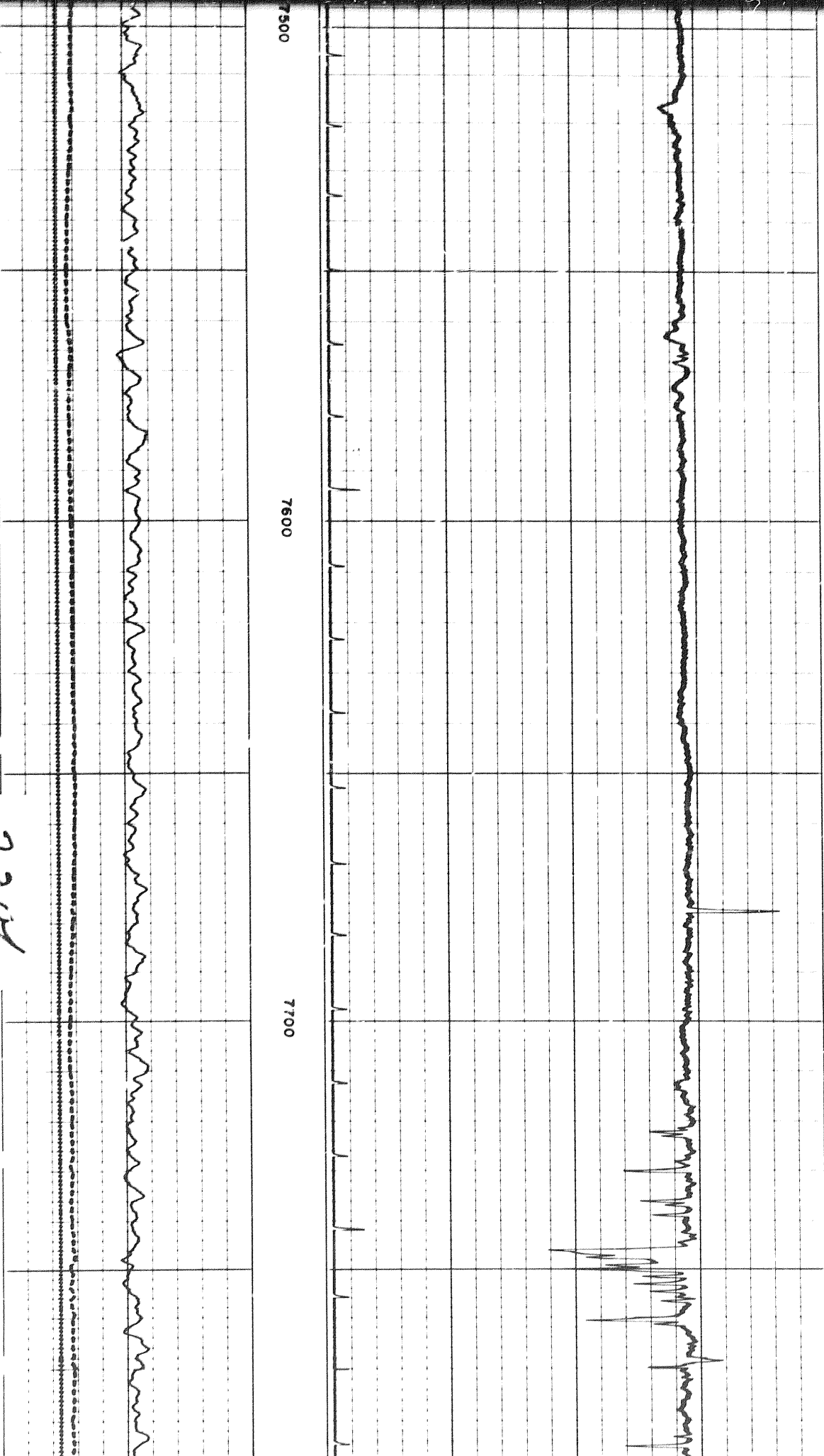




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7400

7500

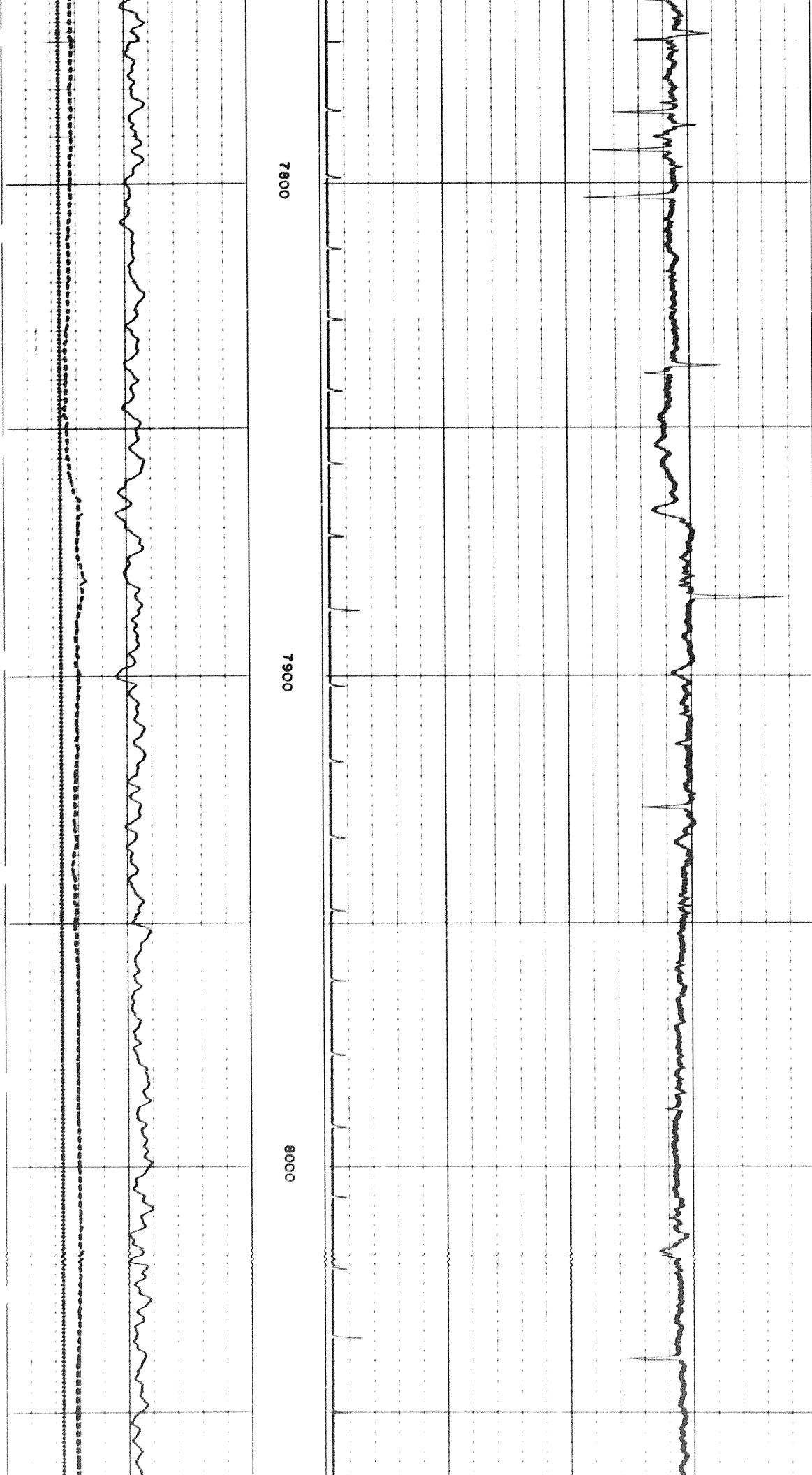


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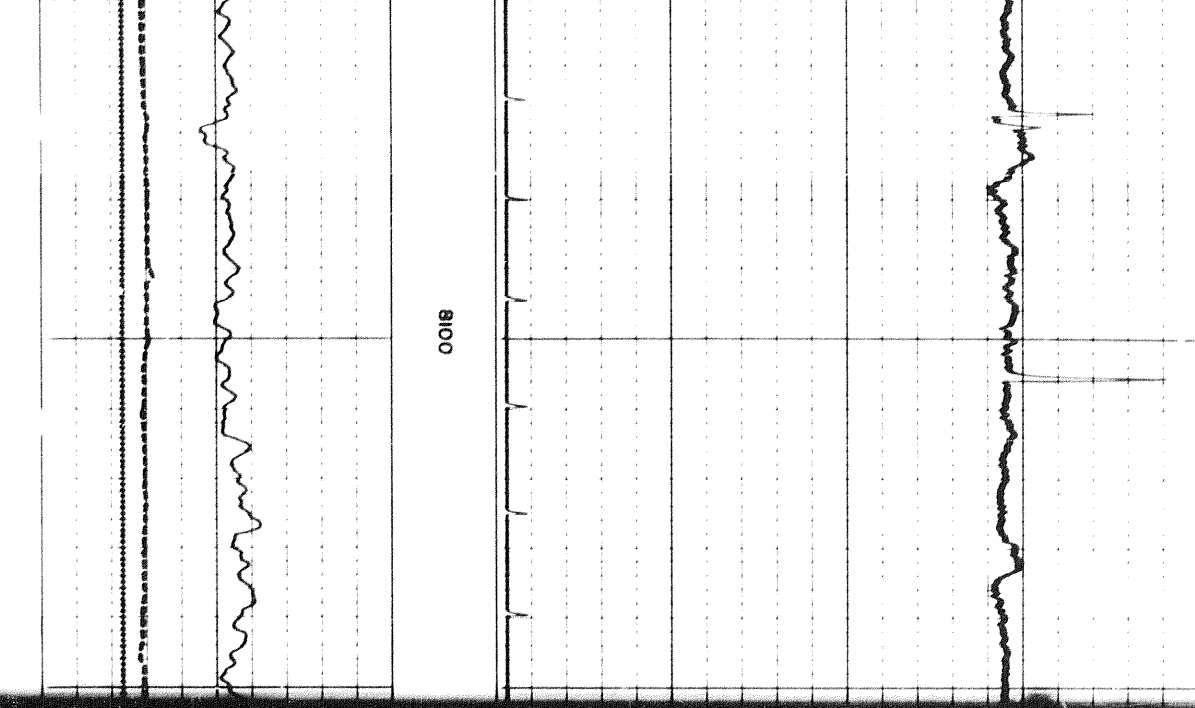
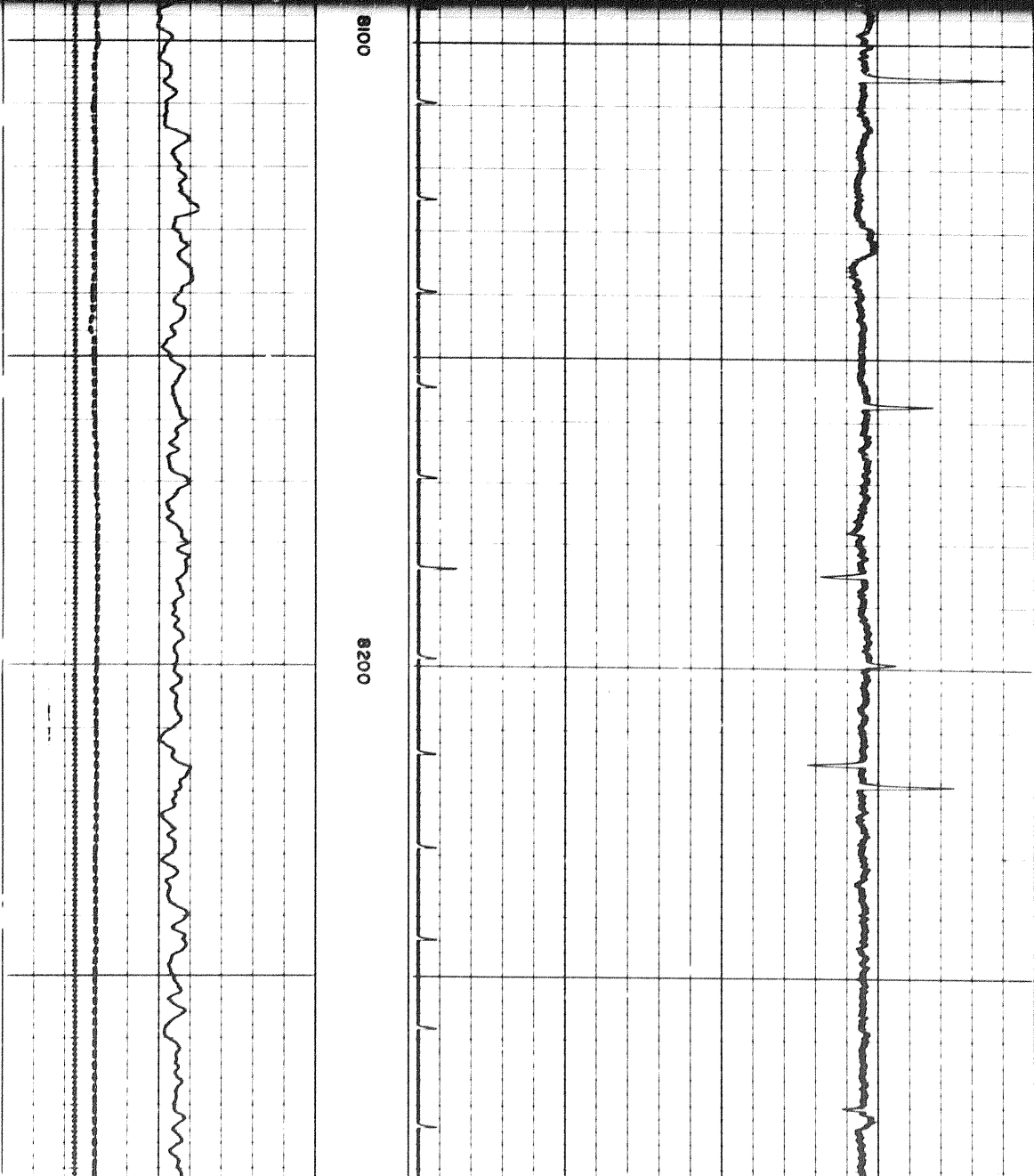
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7700

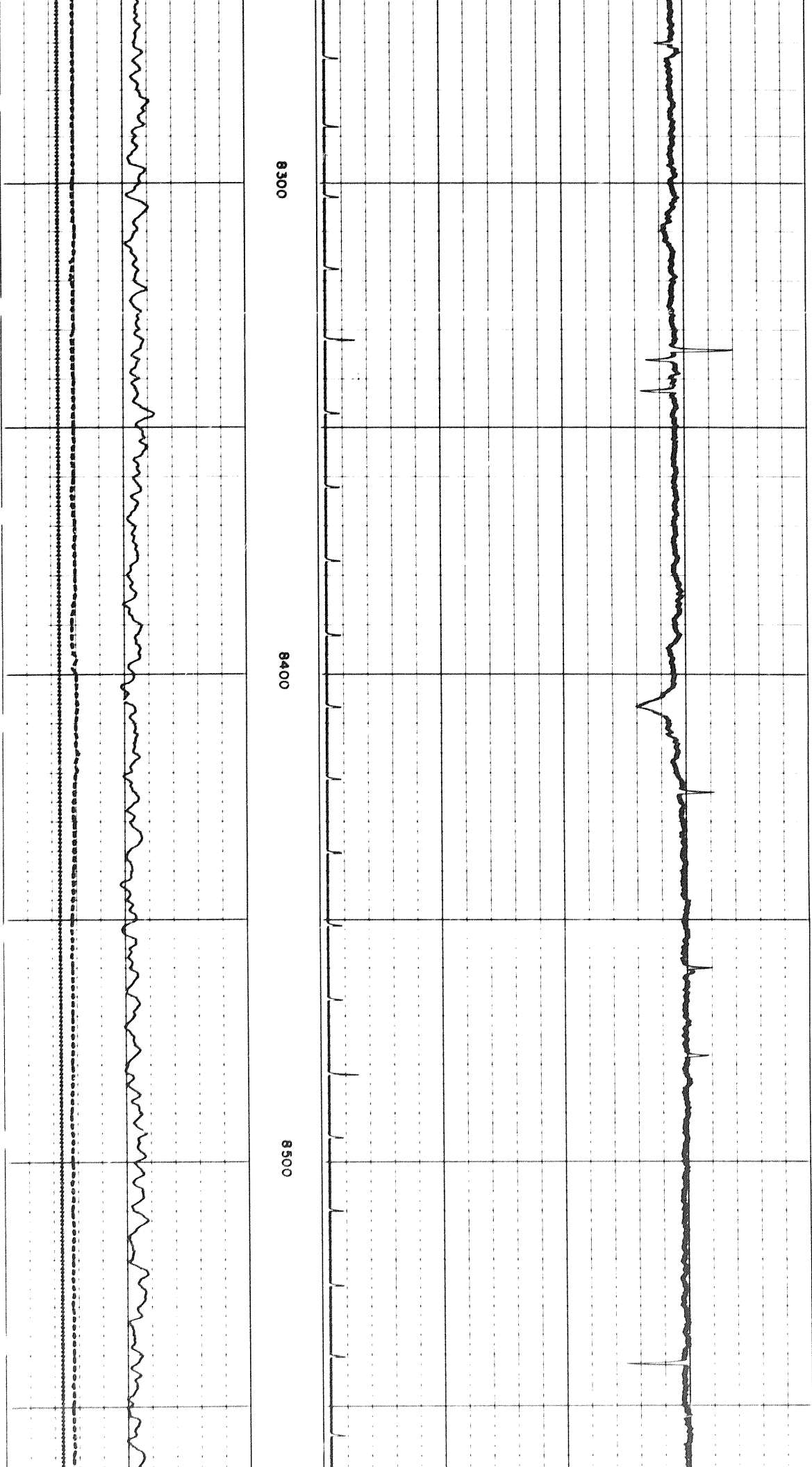
2307

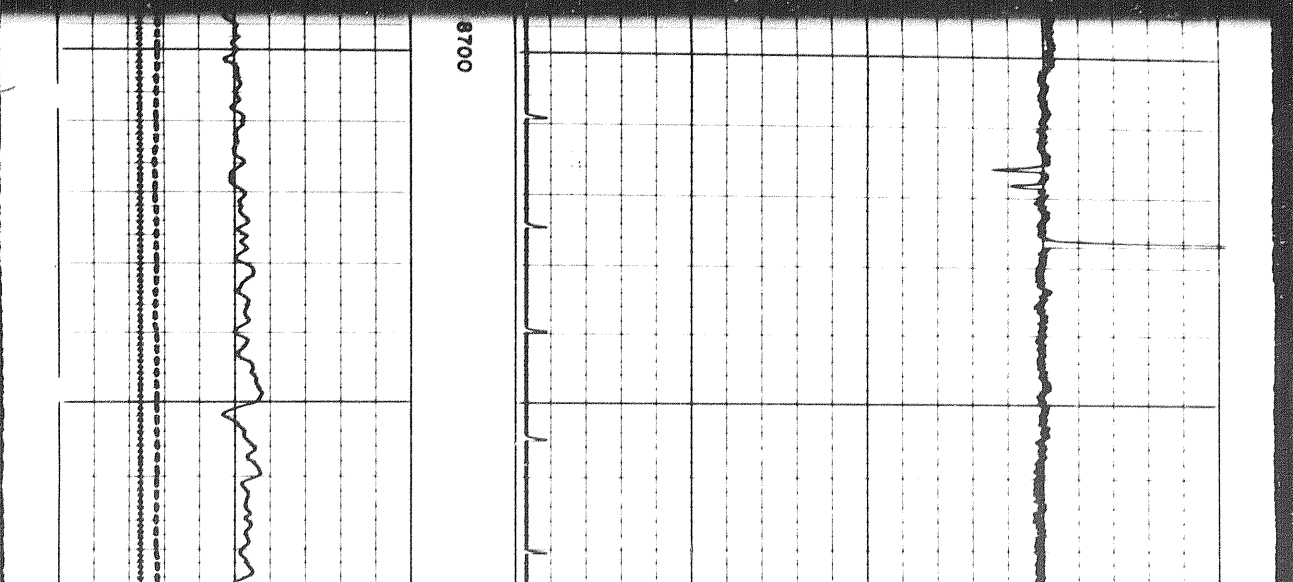
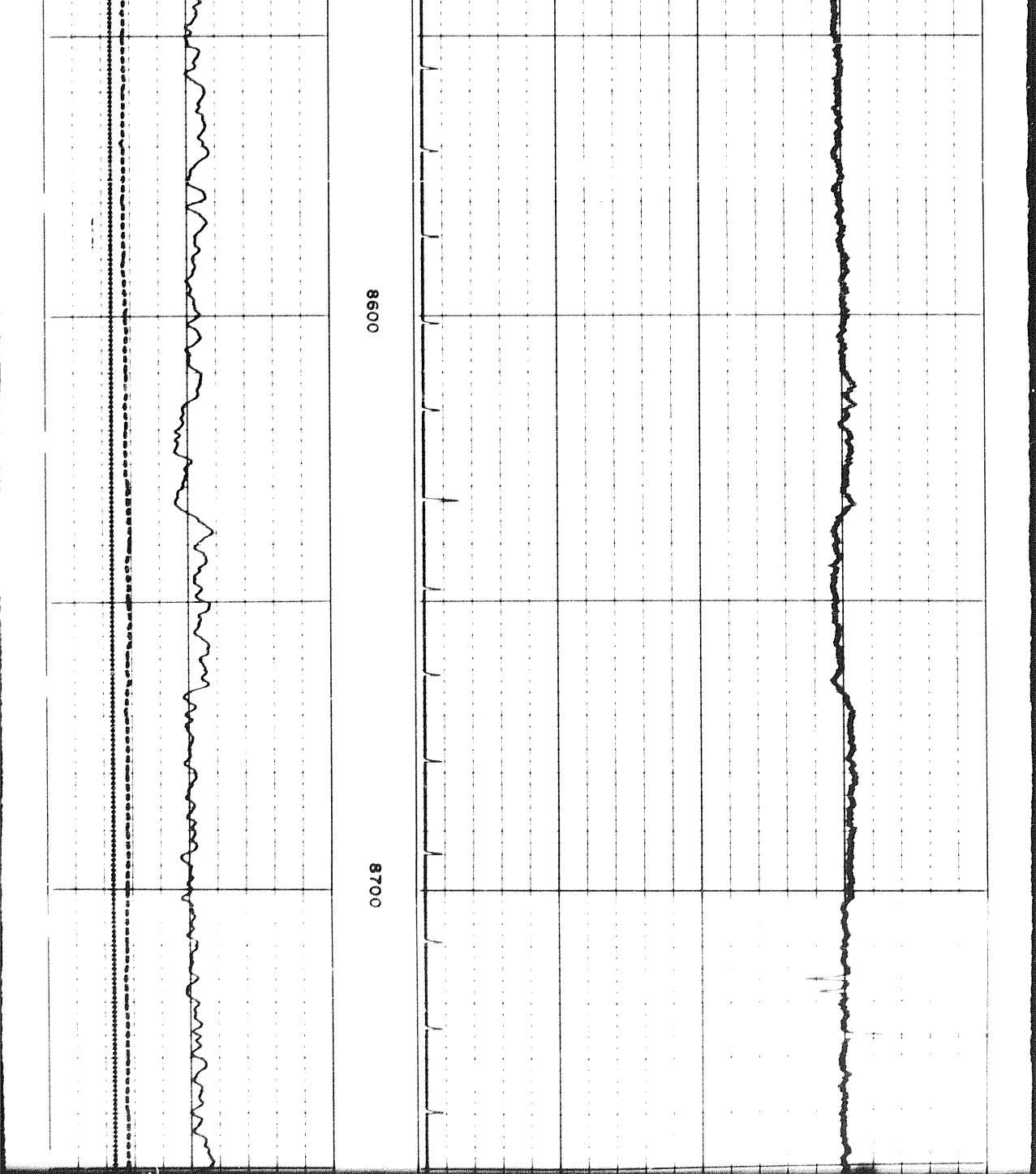


240

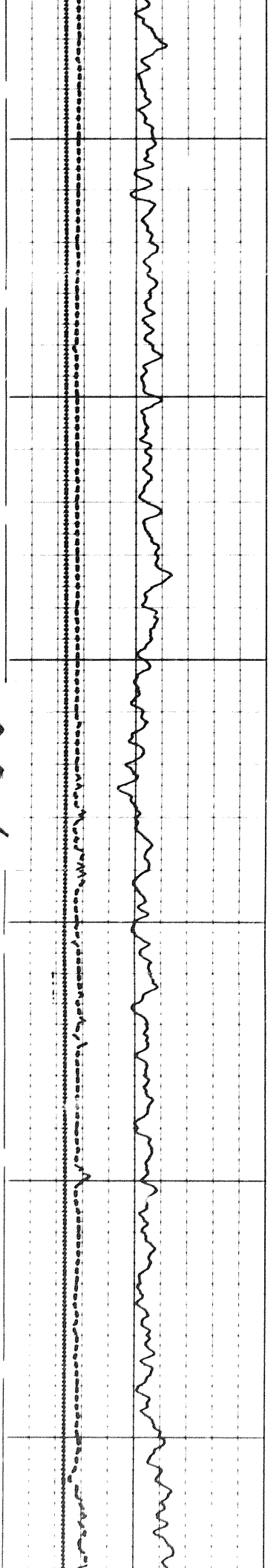


240x





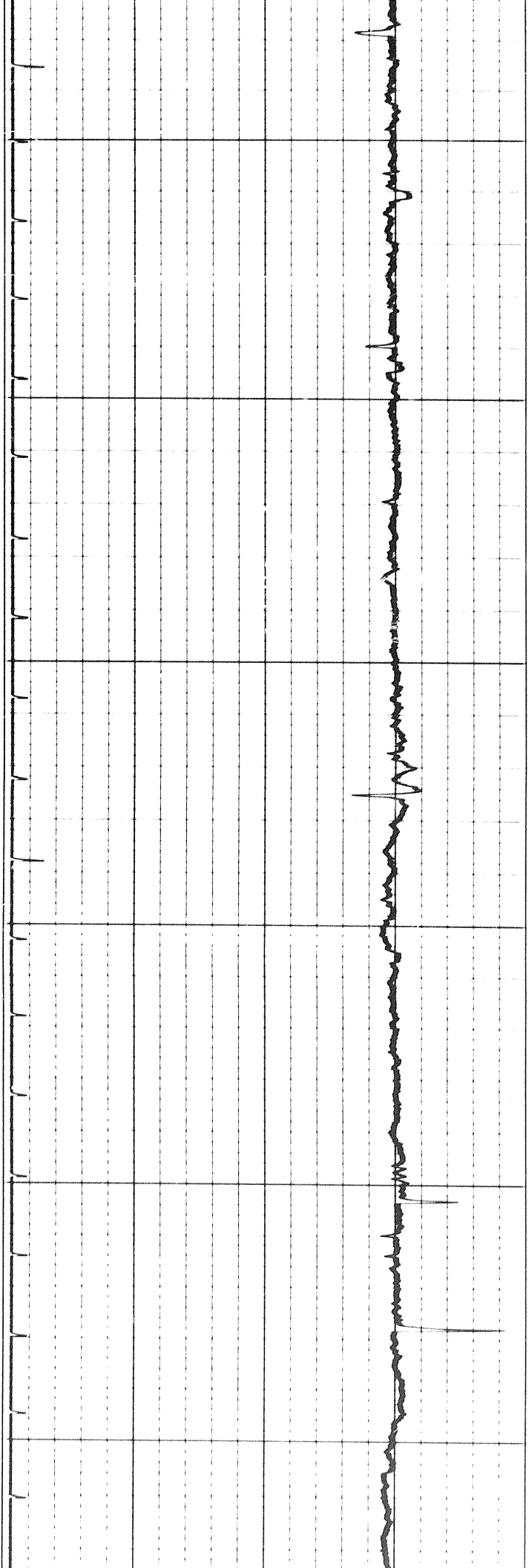
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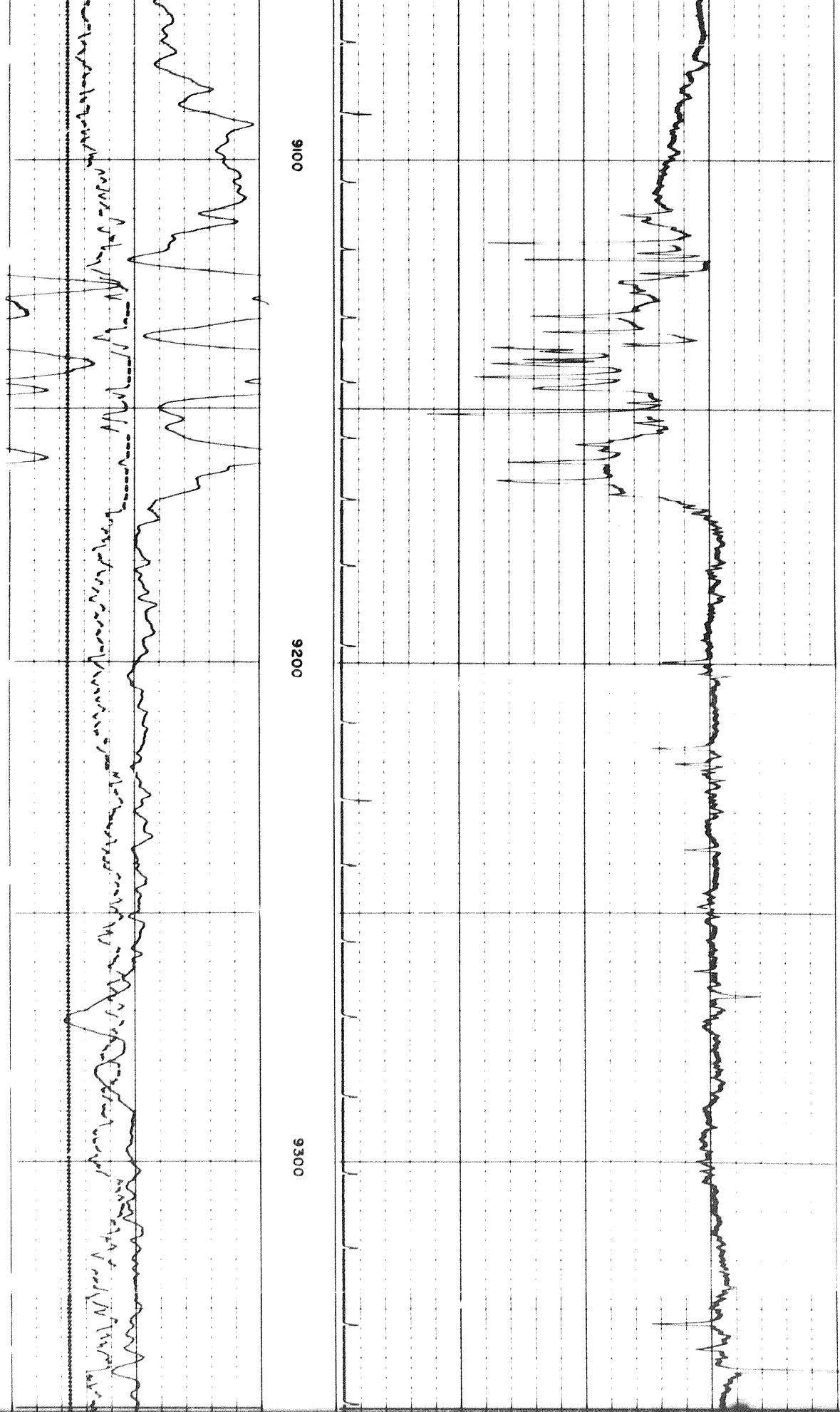


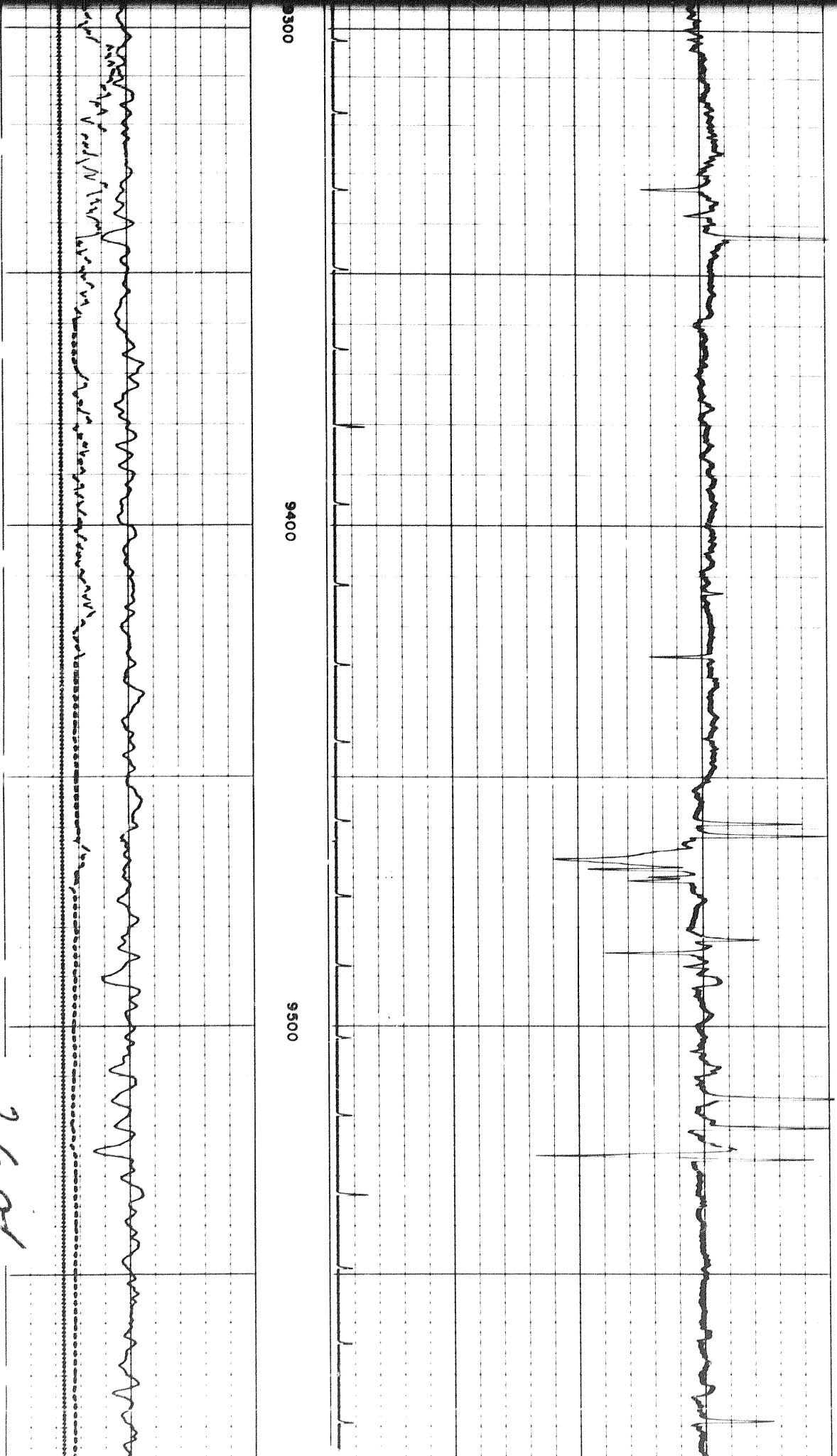
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0068

0088





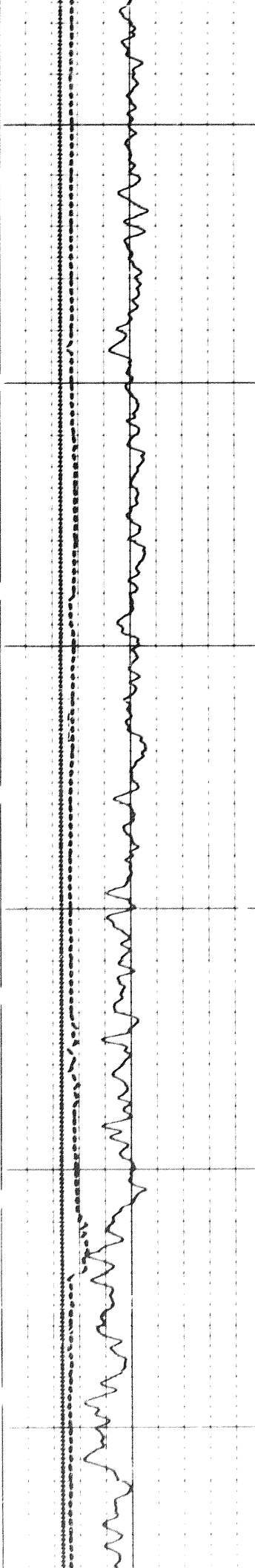


9300

9400

9500

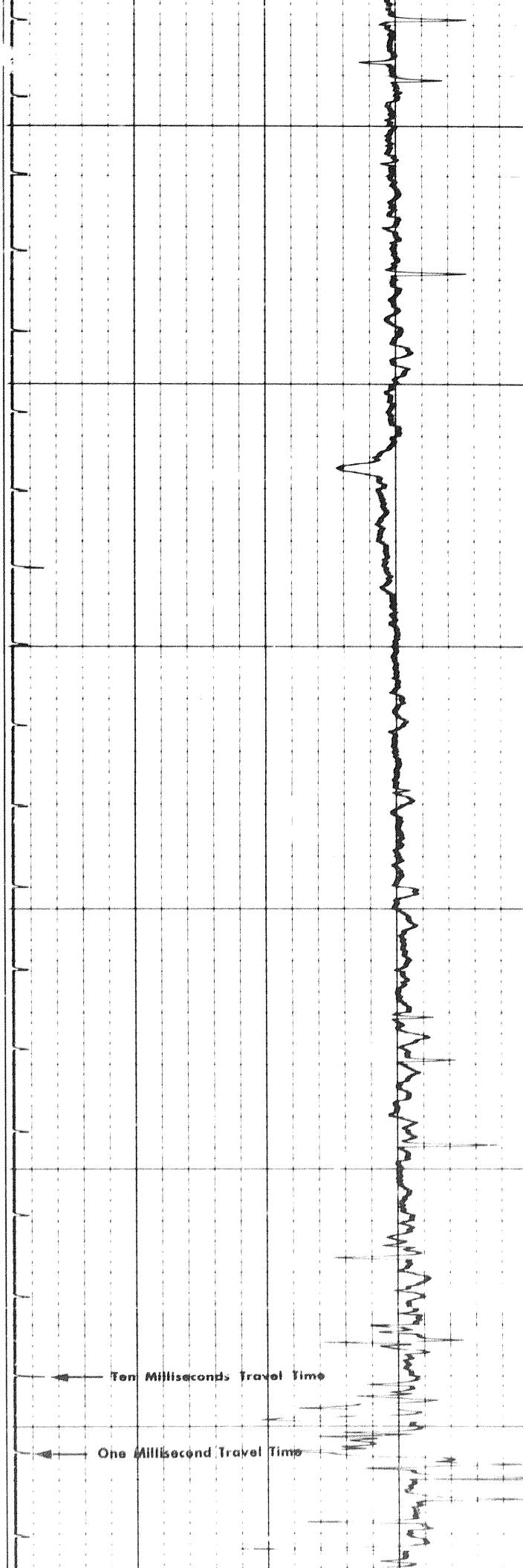
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0096

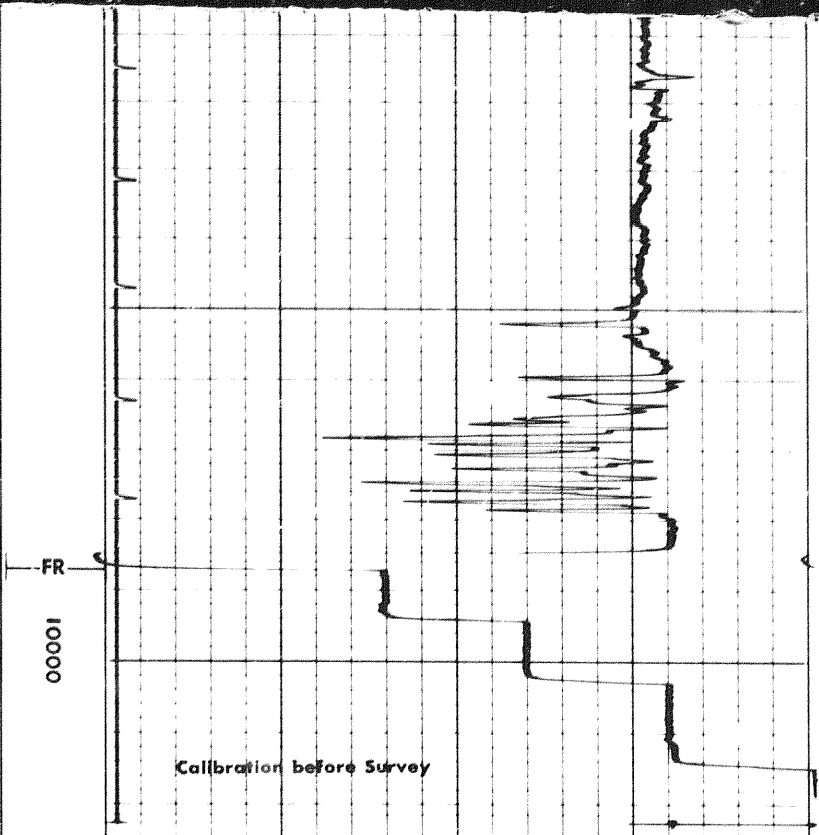
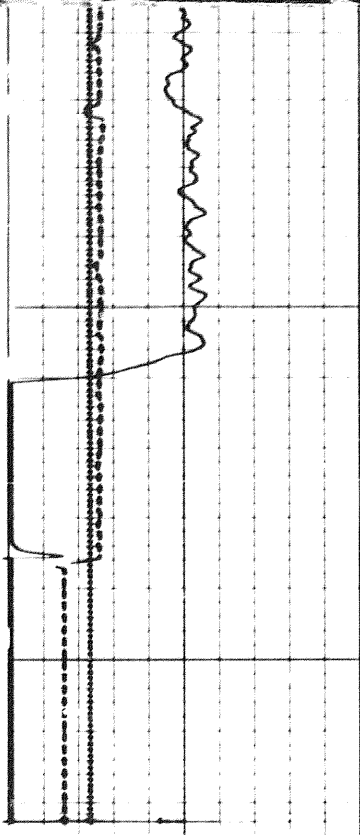
9700

0086



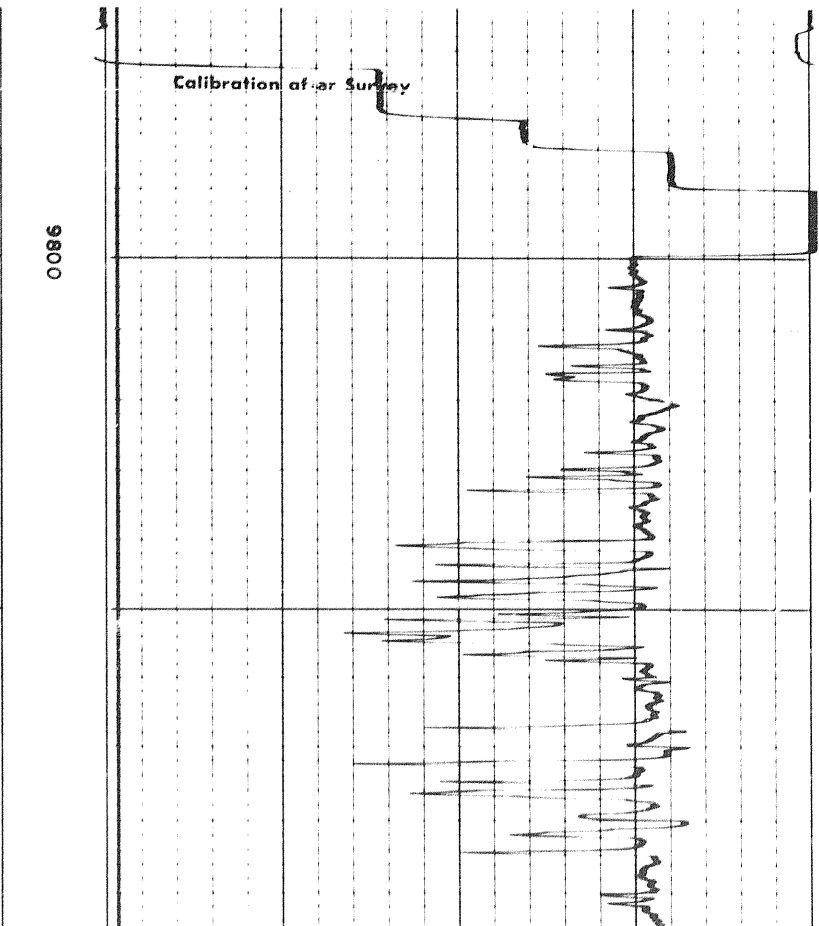
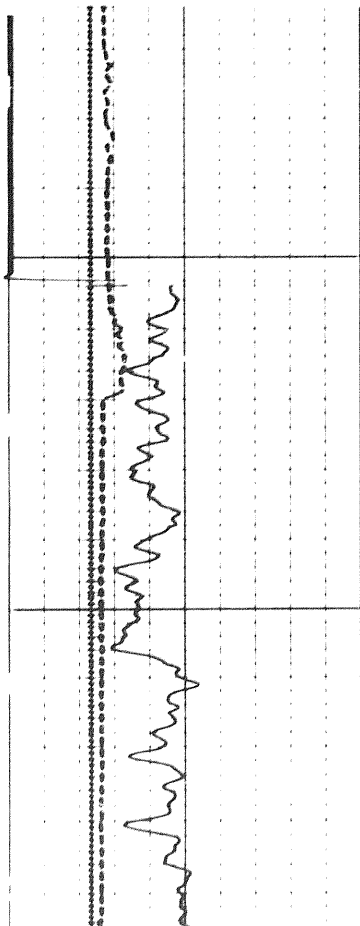
← Ten Milliseconds Travel Time

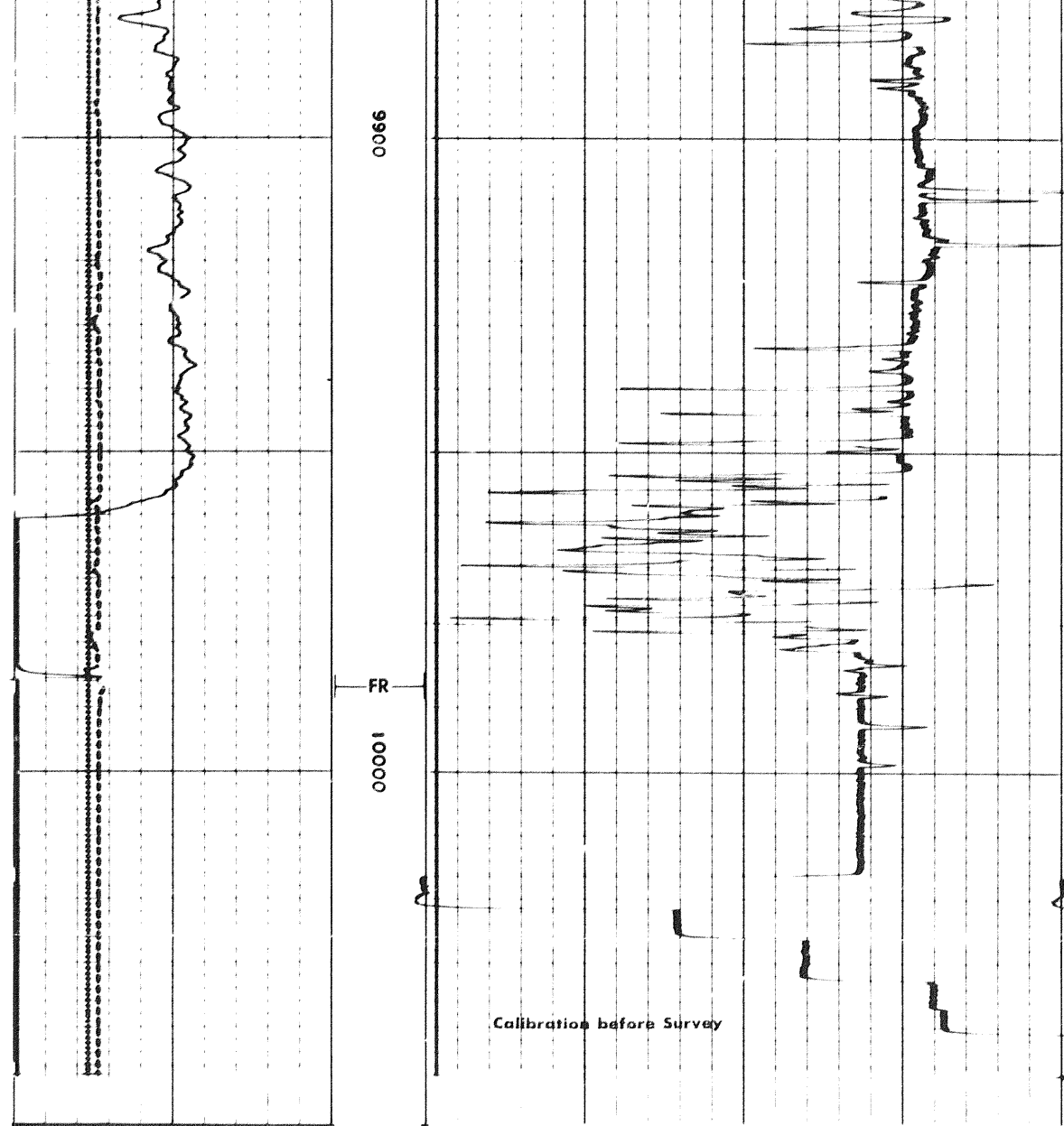
← One Millisecond Travel Time



2702

REPEAT SECTION





CALIPER
hole diameter in inches

Sens	150	TC	2
Zero	0	div to left	
150		150	
300		300	

GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot

DETAIL LOG
5" = 100' RUN 3

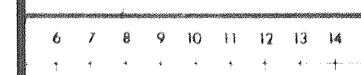
GAMMA RAY
API UNITS

DEPTHS

SONIC
INTERVAL TRANSIT TIME
microseconds per foot

Sens	150	TC	2
Zero	0	div to left	
150		150	
300		300	

CALIPER
hole diameter in inches

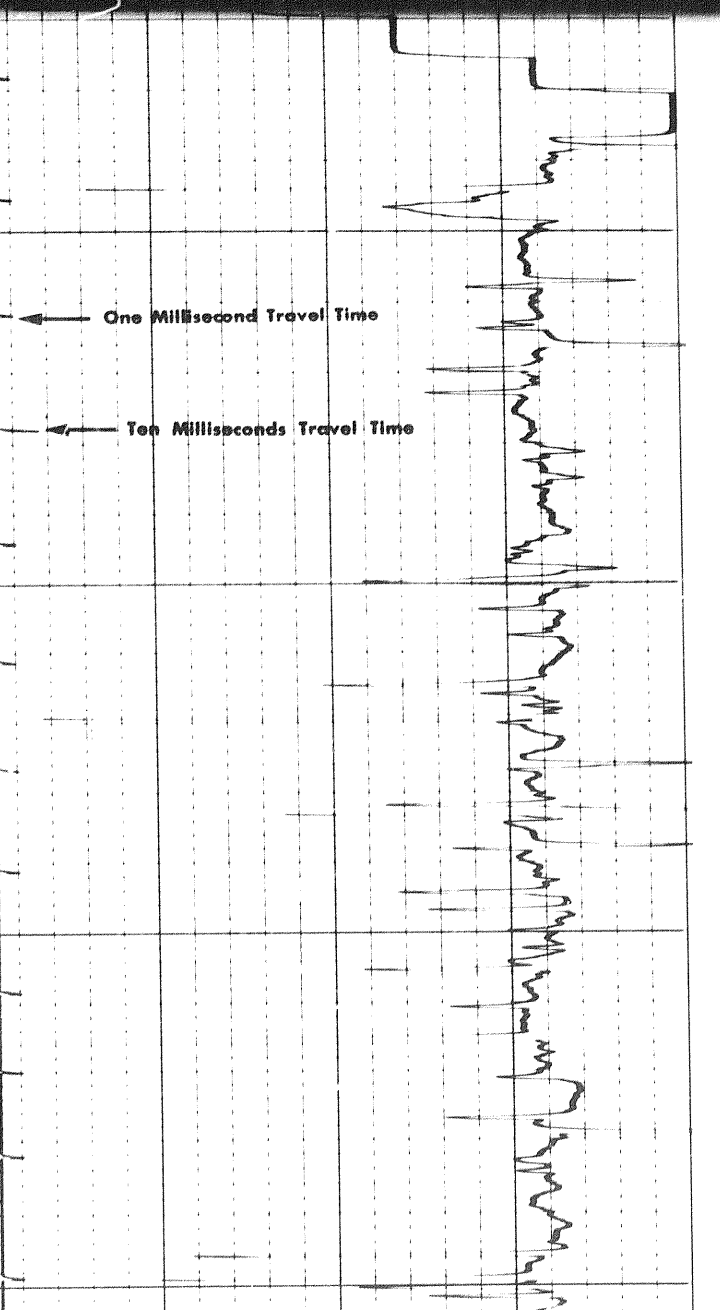
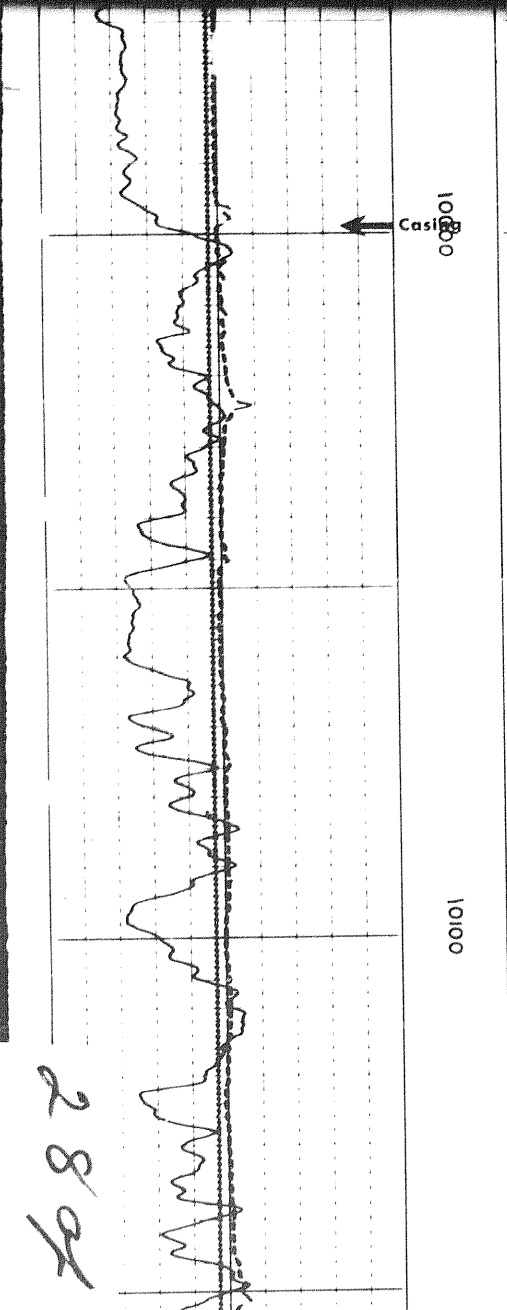
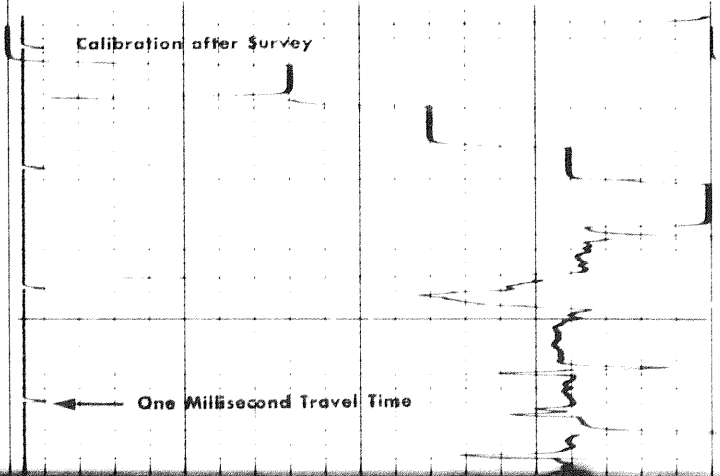
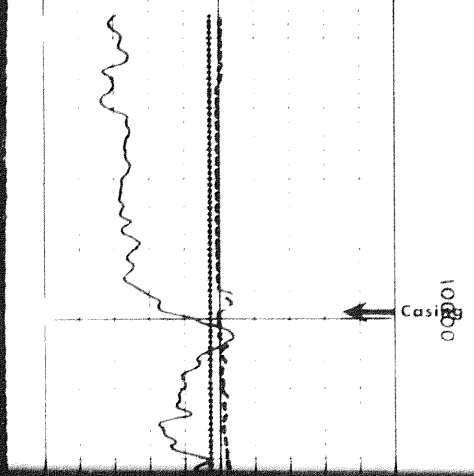


240	190	140
140	90	40

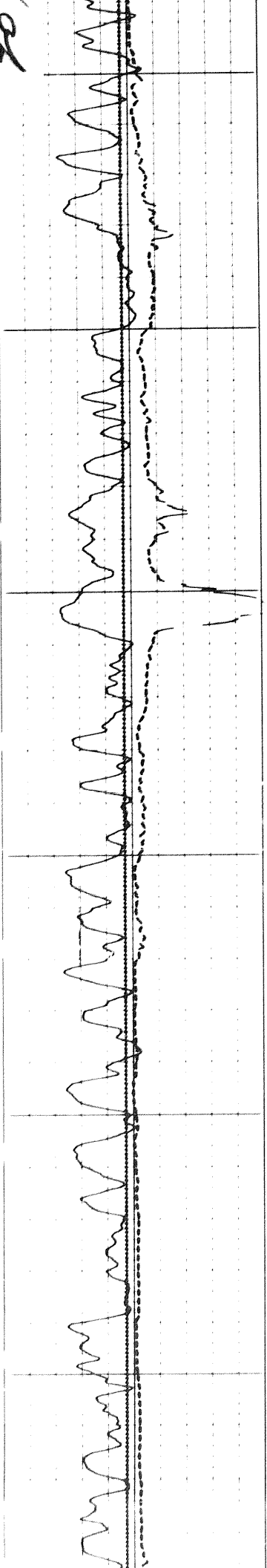
140	90	40
240	190	140

150
300

CALIPER														
hole diameter in inches														
6	7	8	9	10	11	12	13	14						
+	+	+	+	+	+	+	+	+						



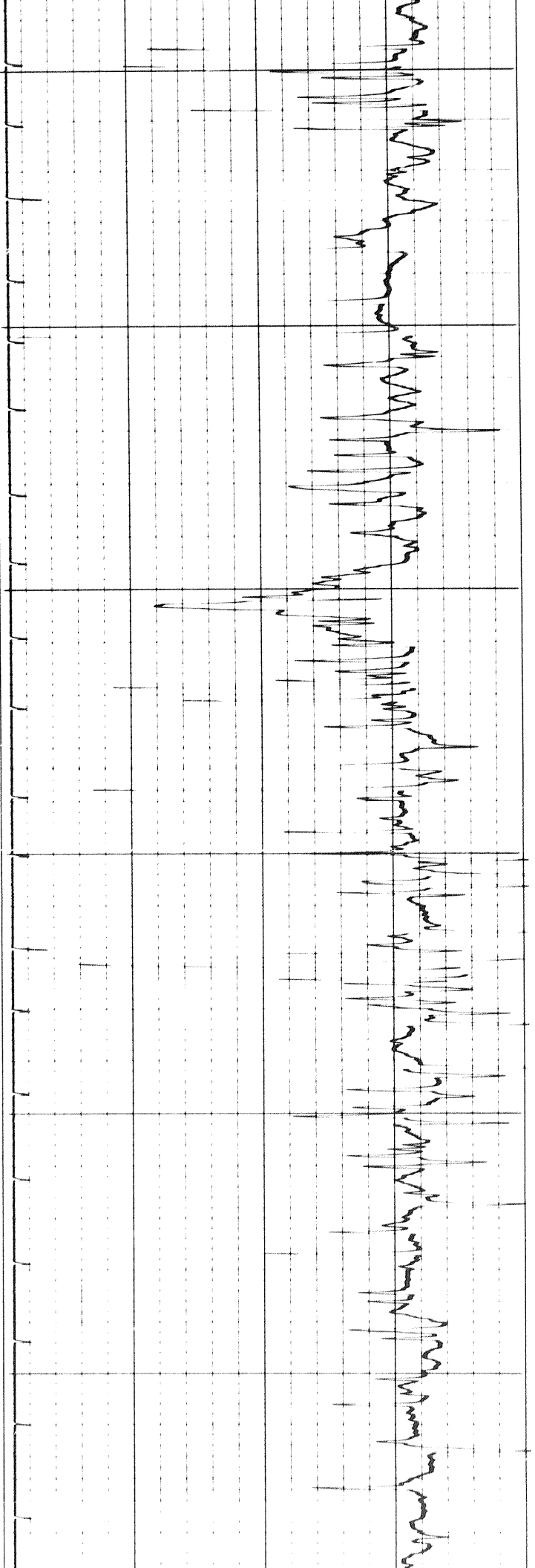
20

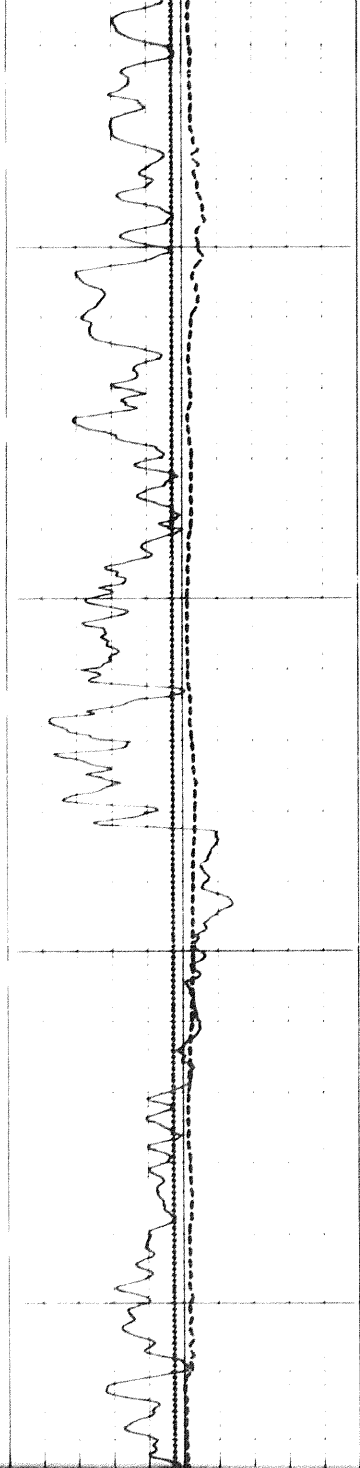


10200

10300

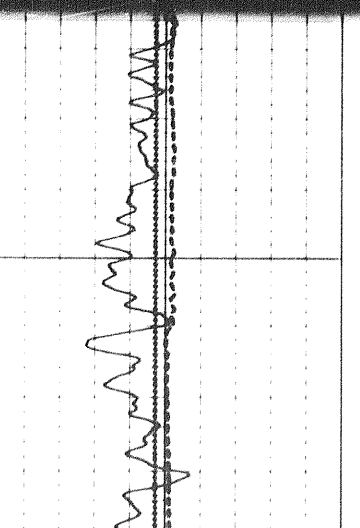
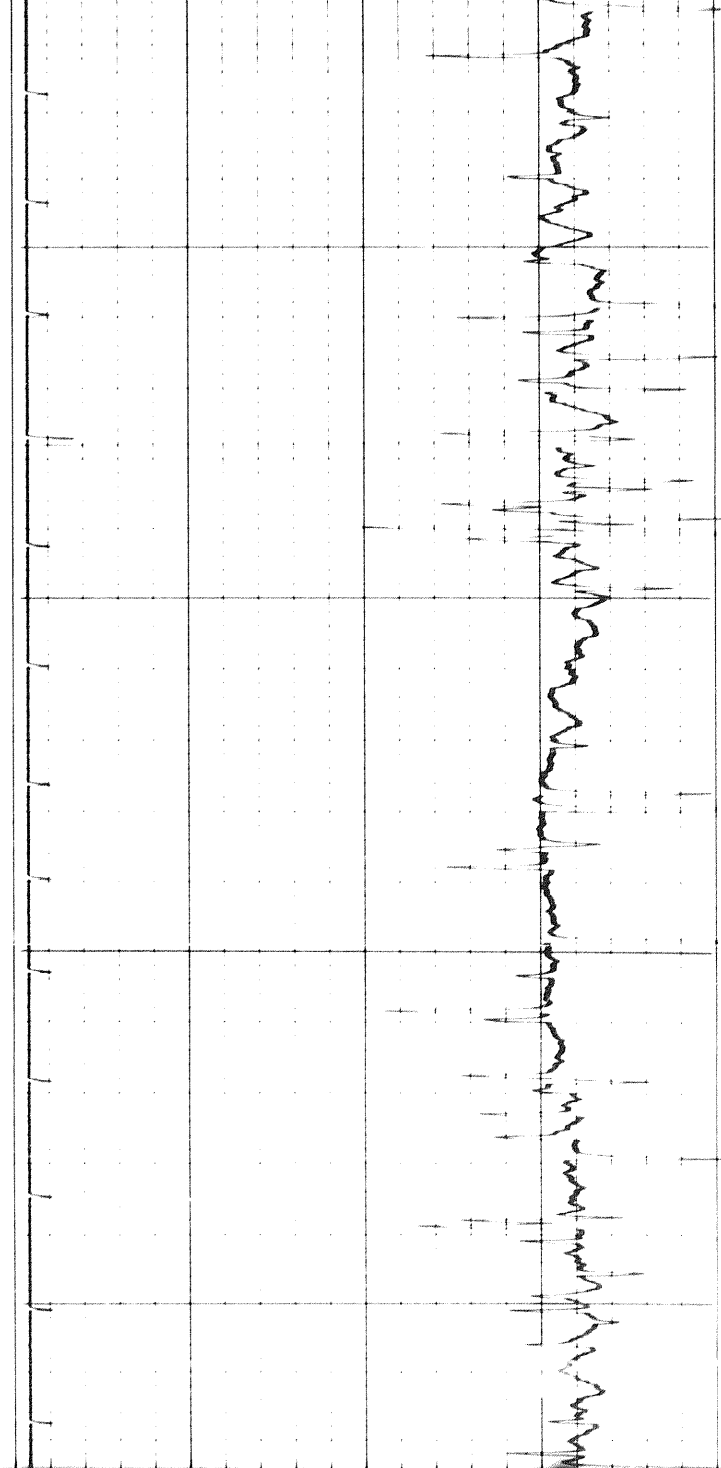
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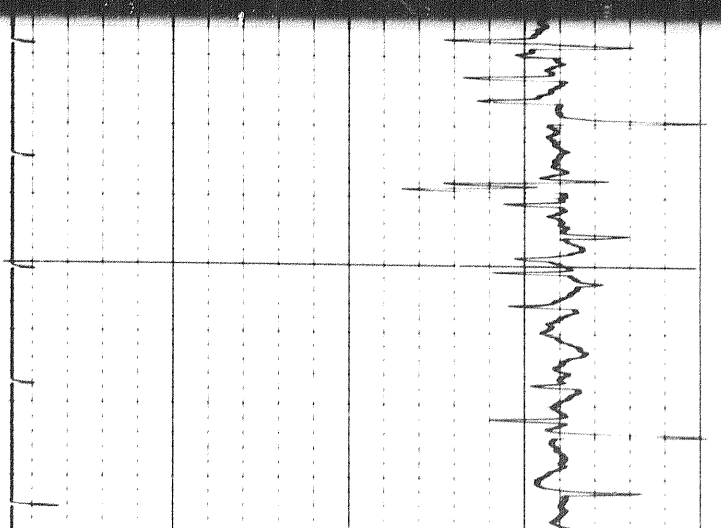


10500

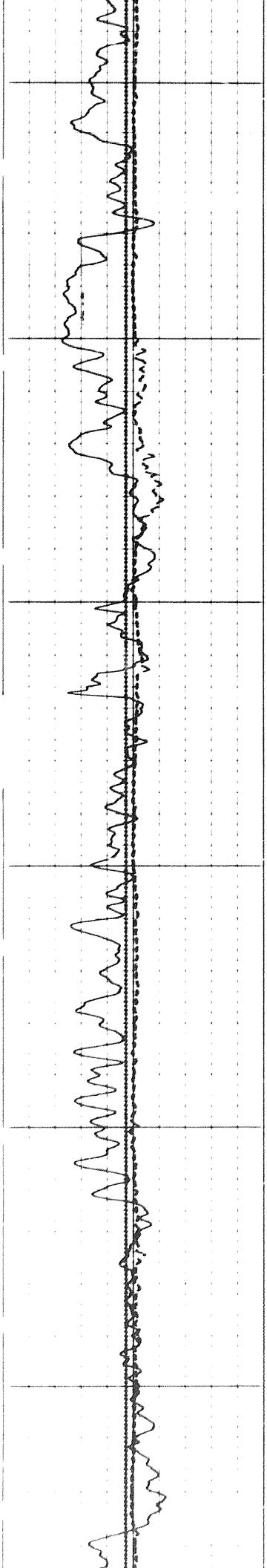
10600



10600



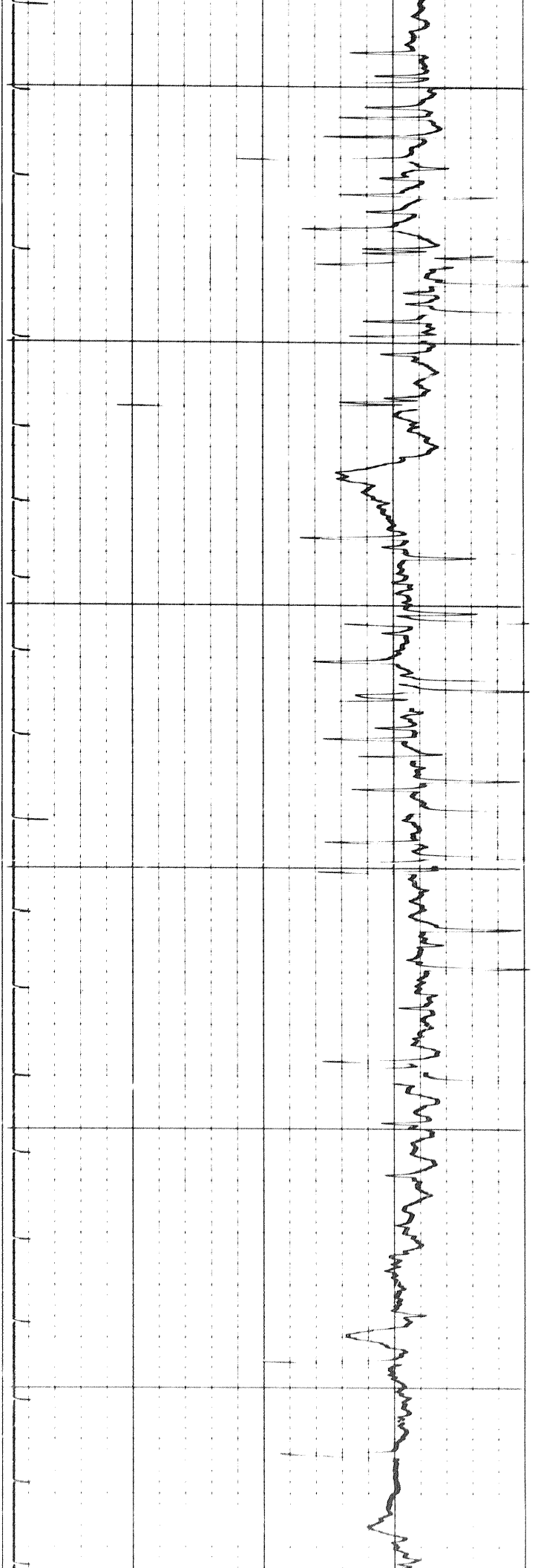
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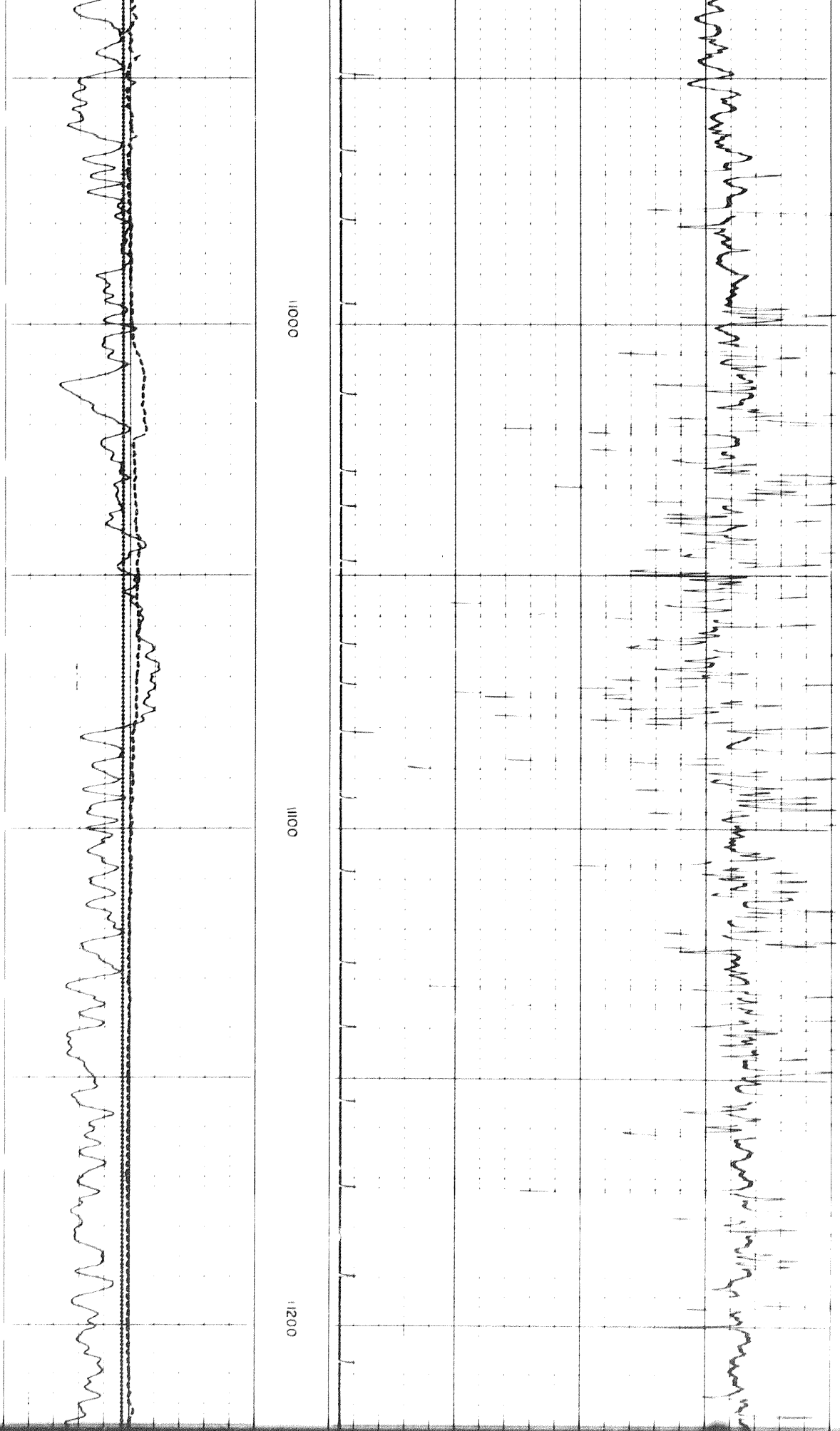


10700

10800

10900

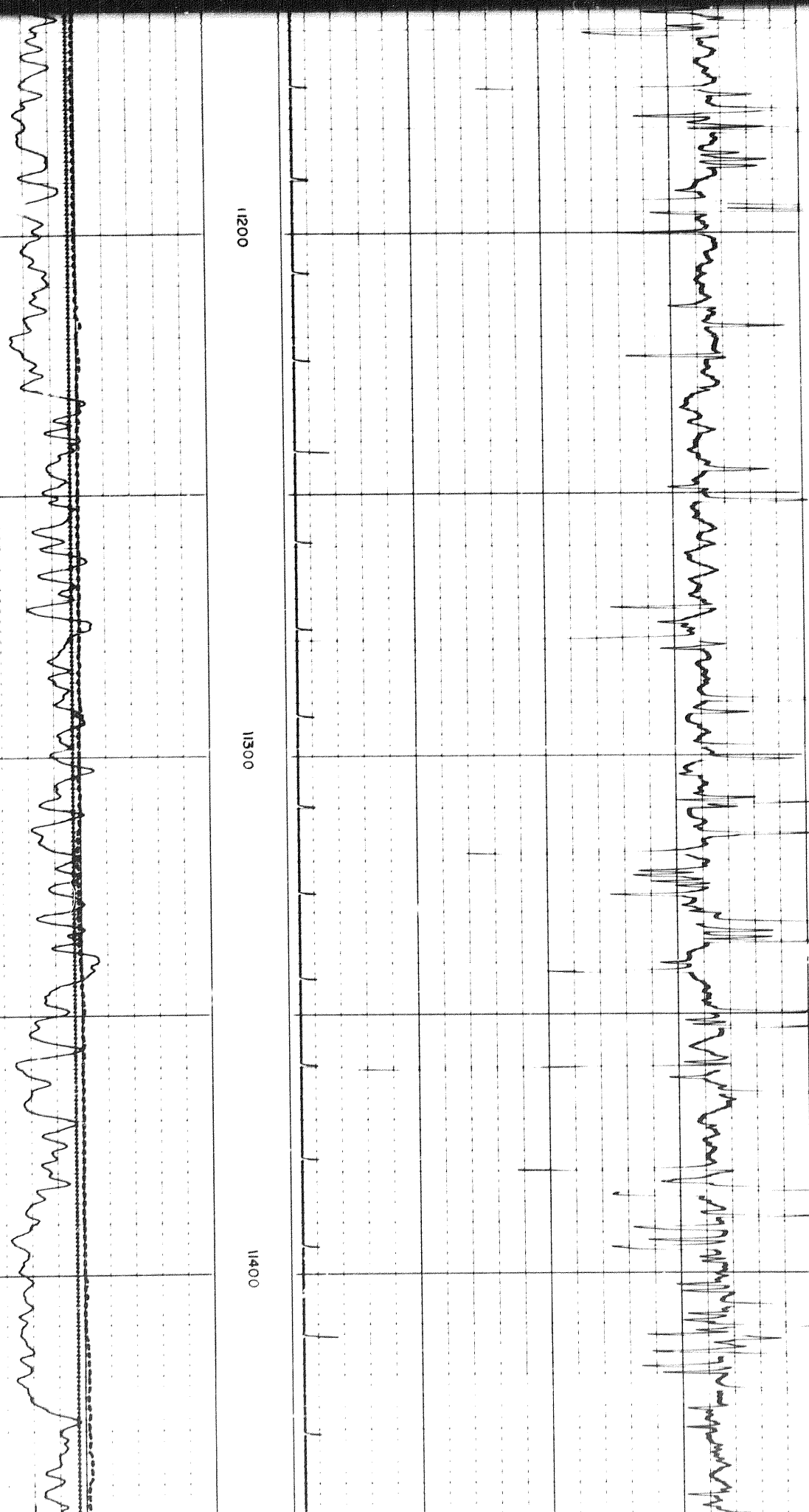




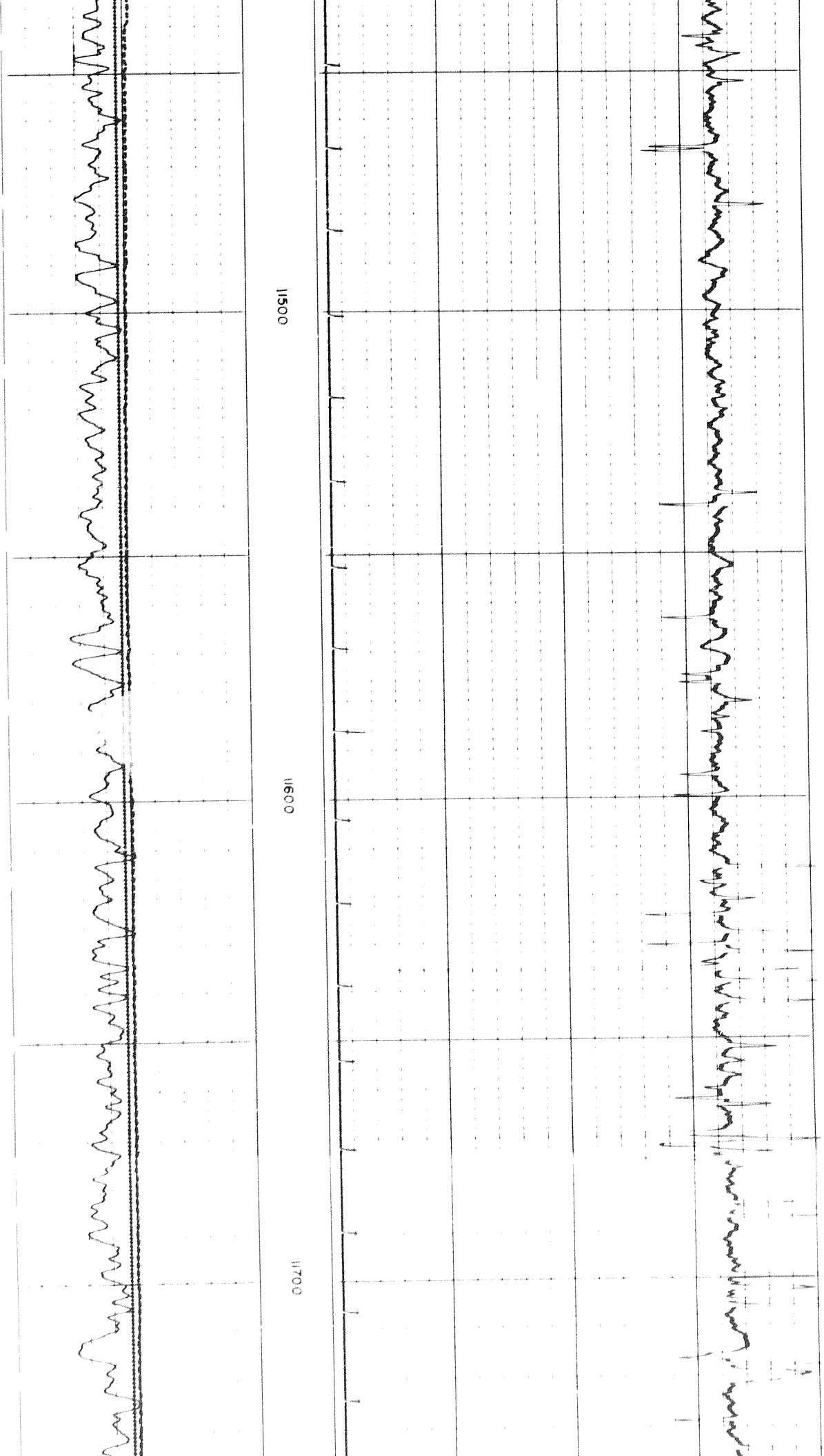
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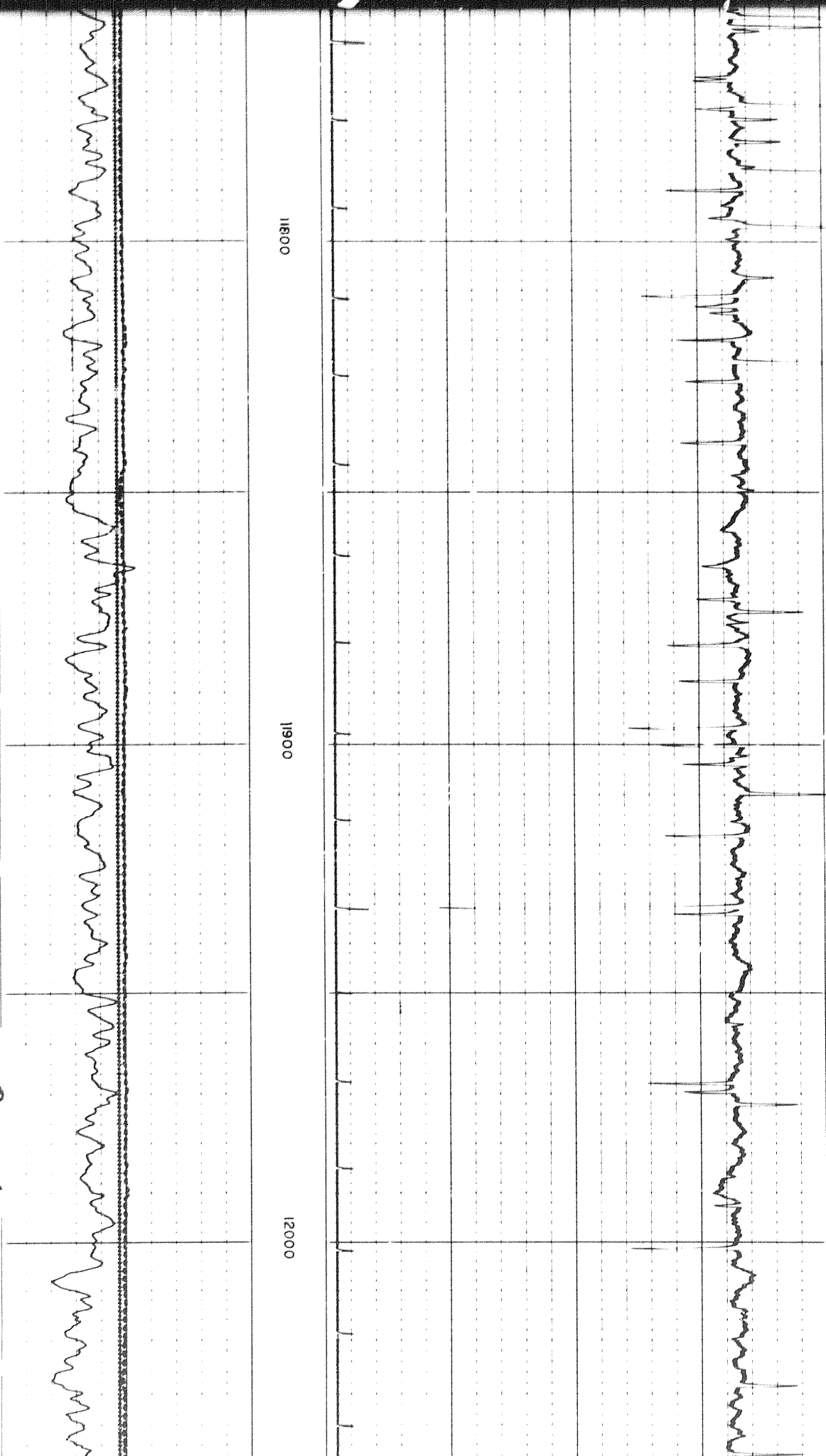
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11200



309



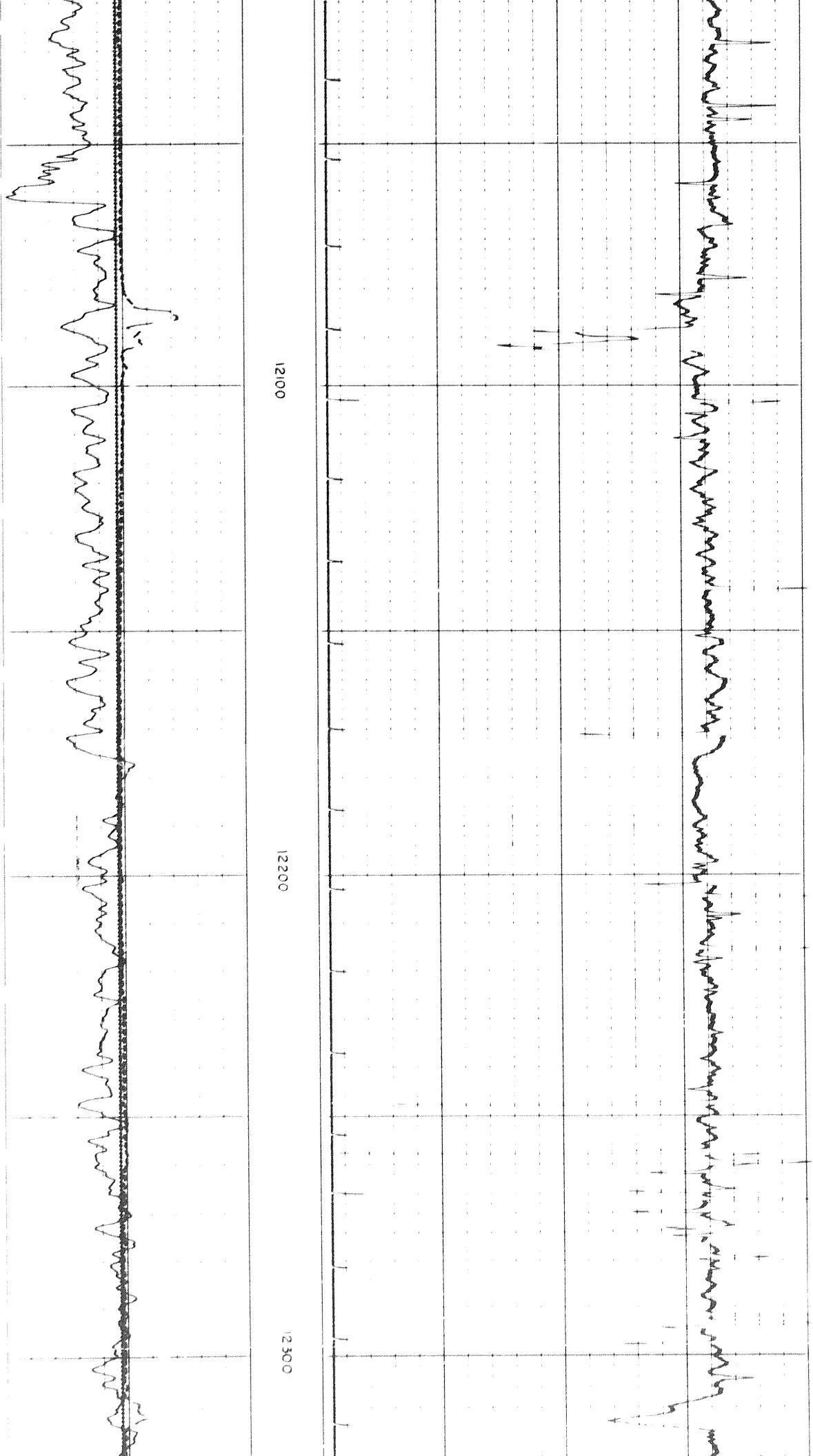


11800

11900

12000

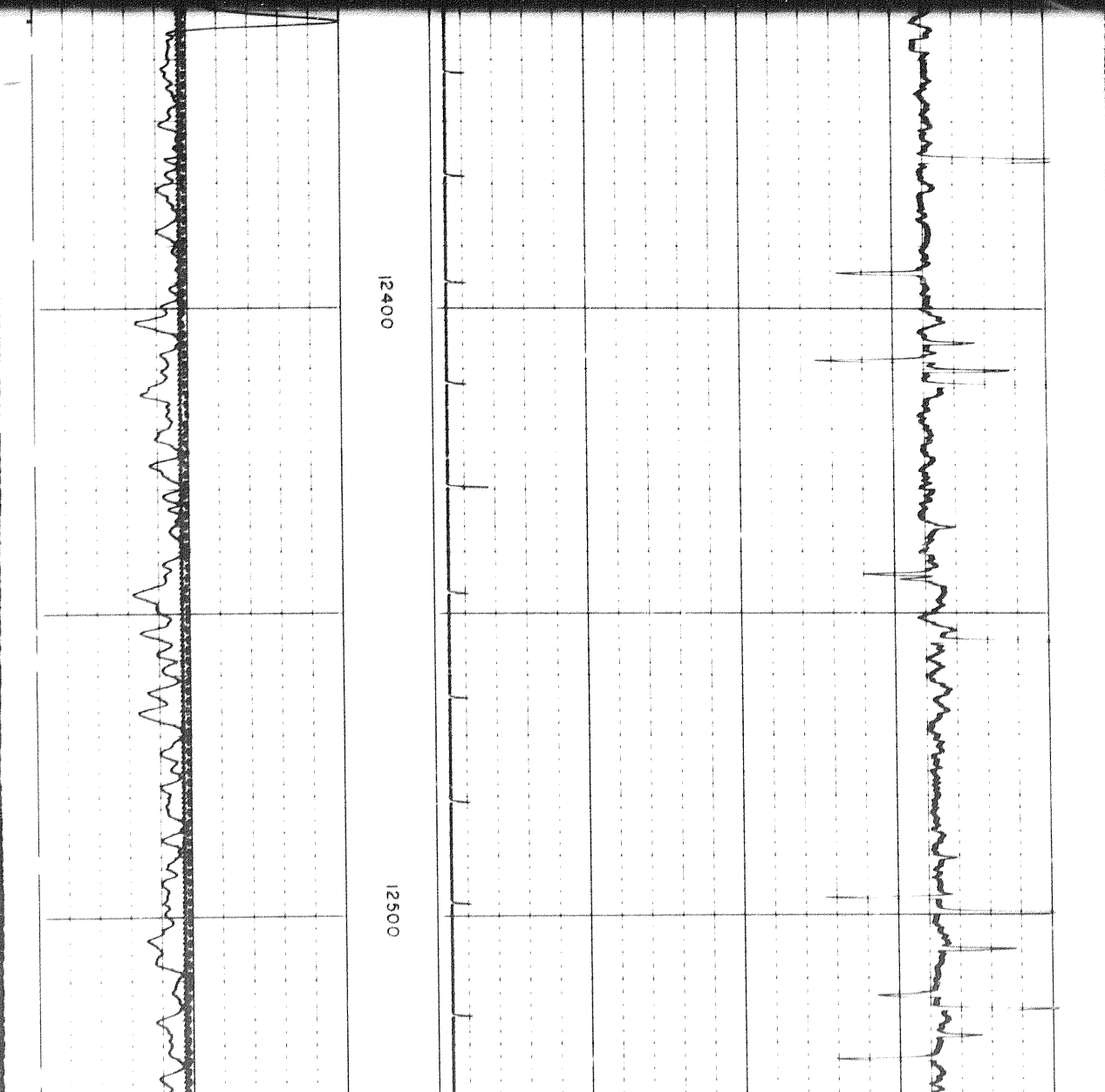
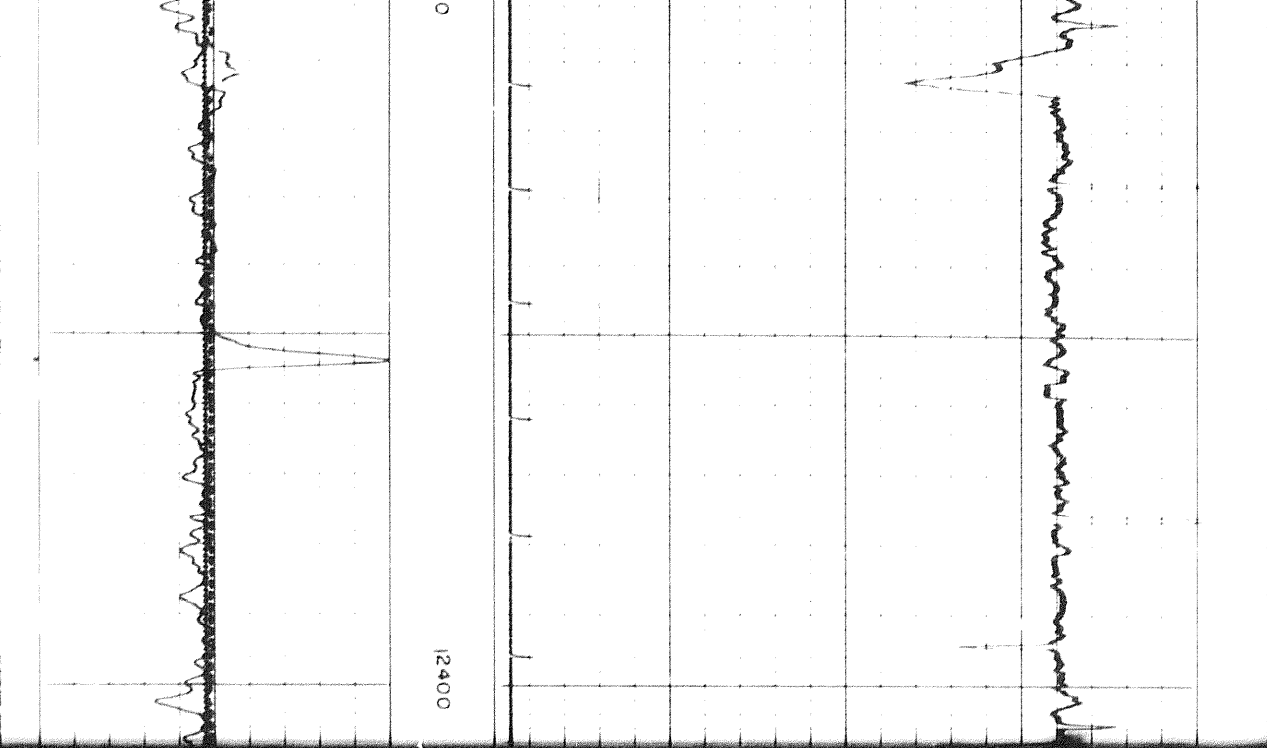
3107



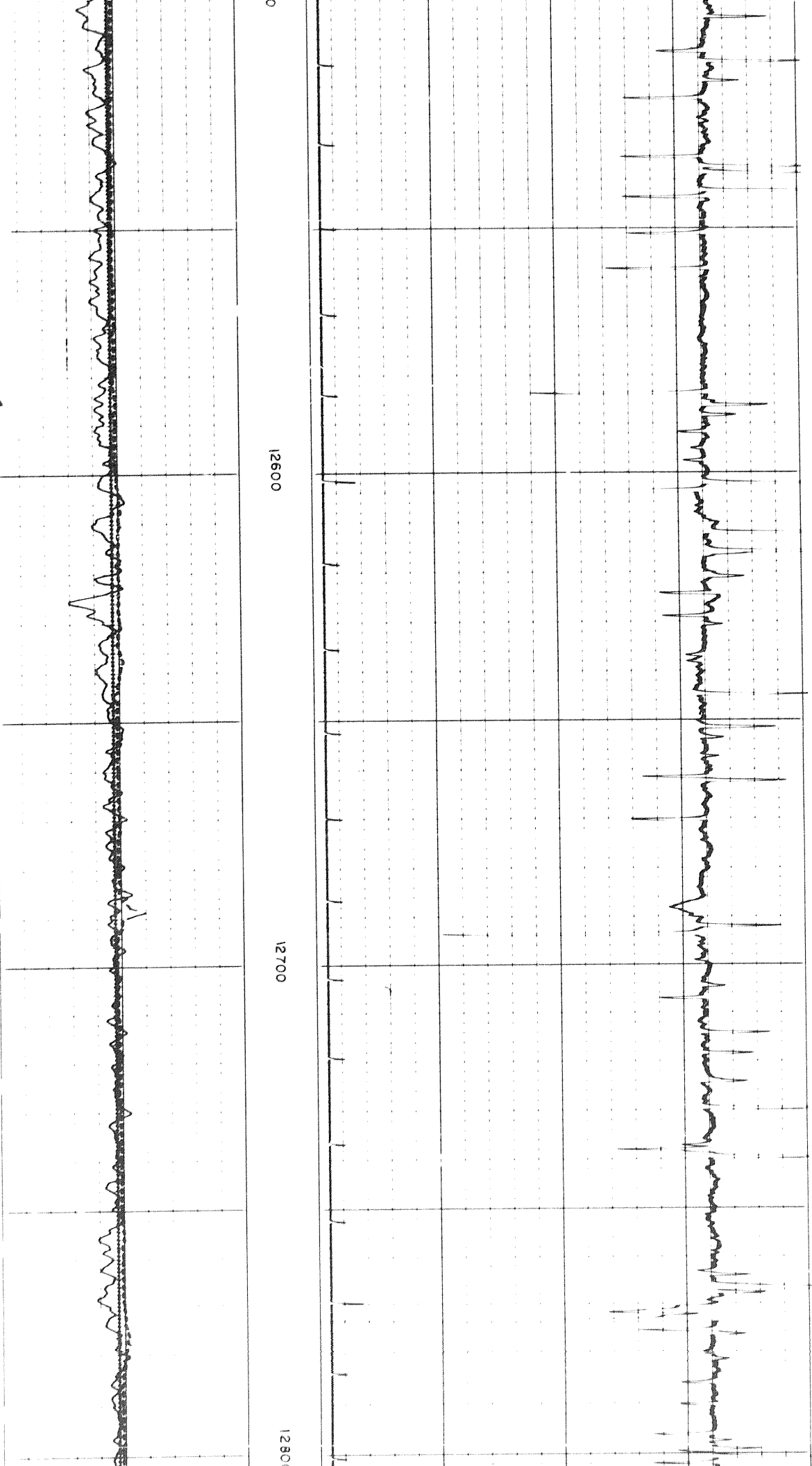
12:00

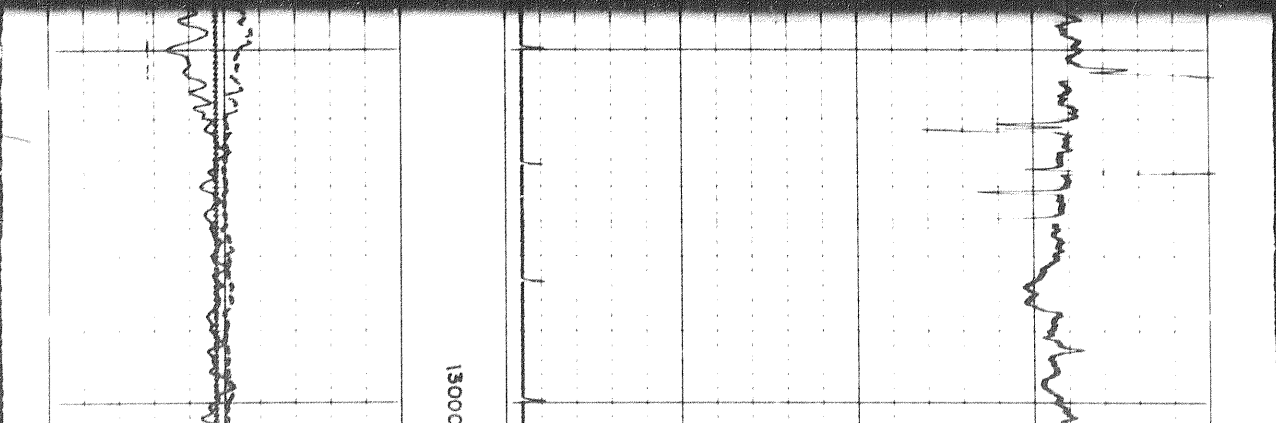
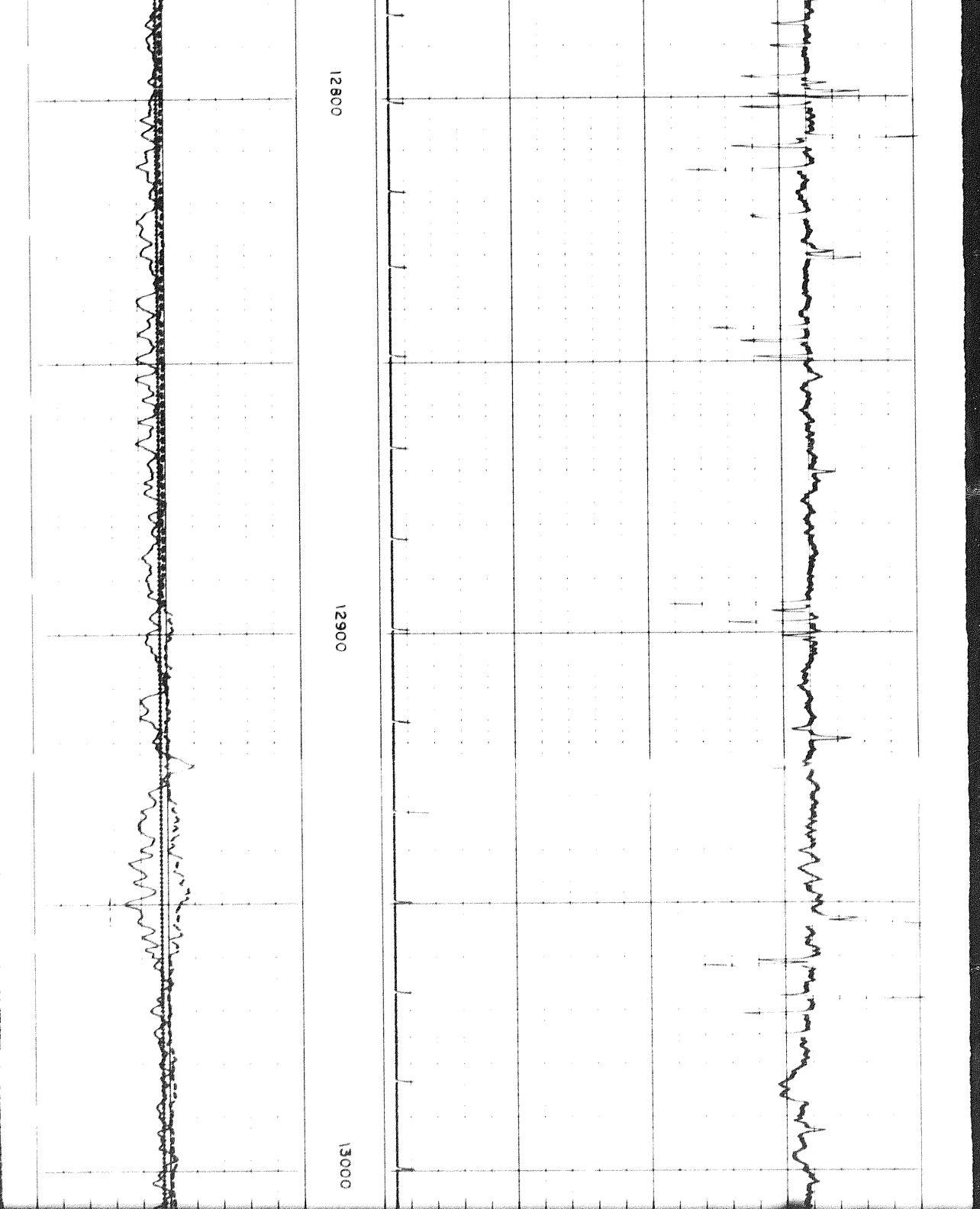
12:20

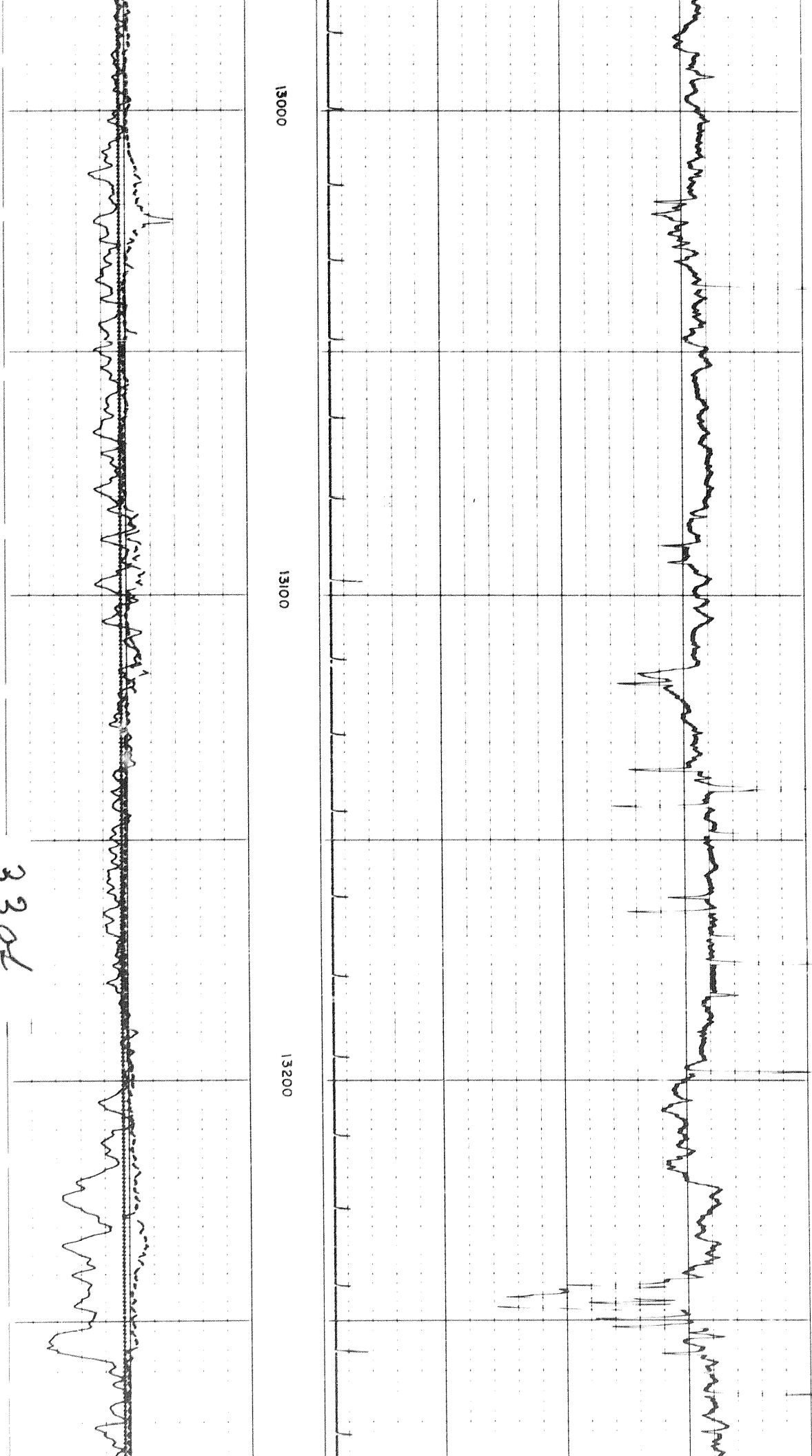
12:30

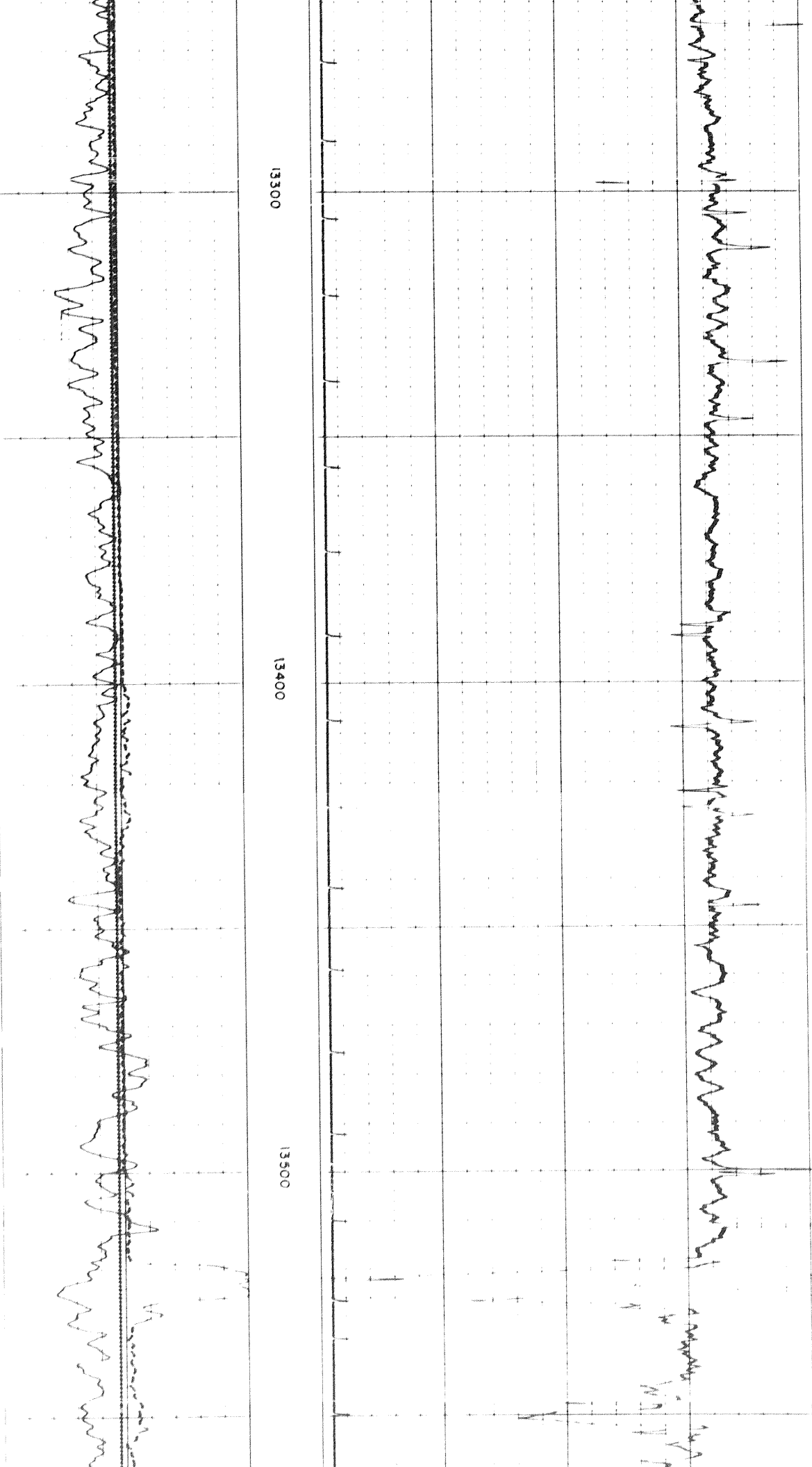


3207





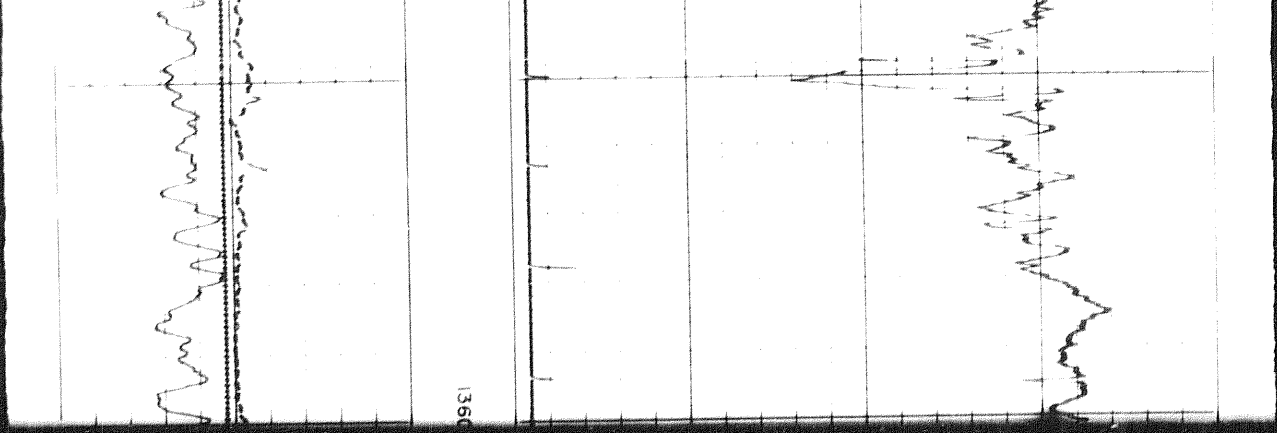




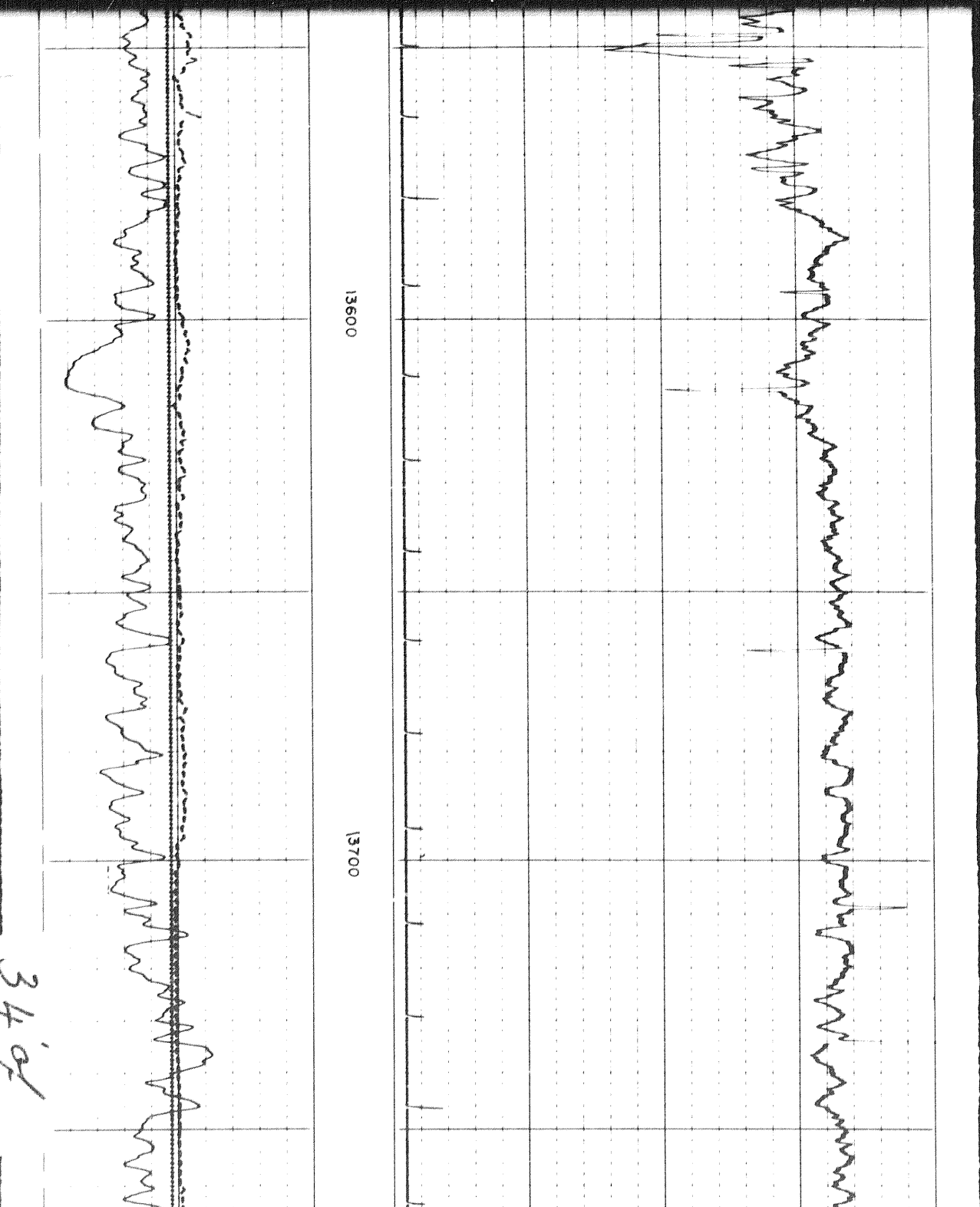
13300

13400

13500



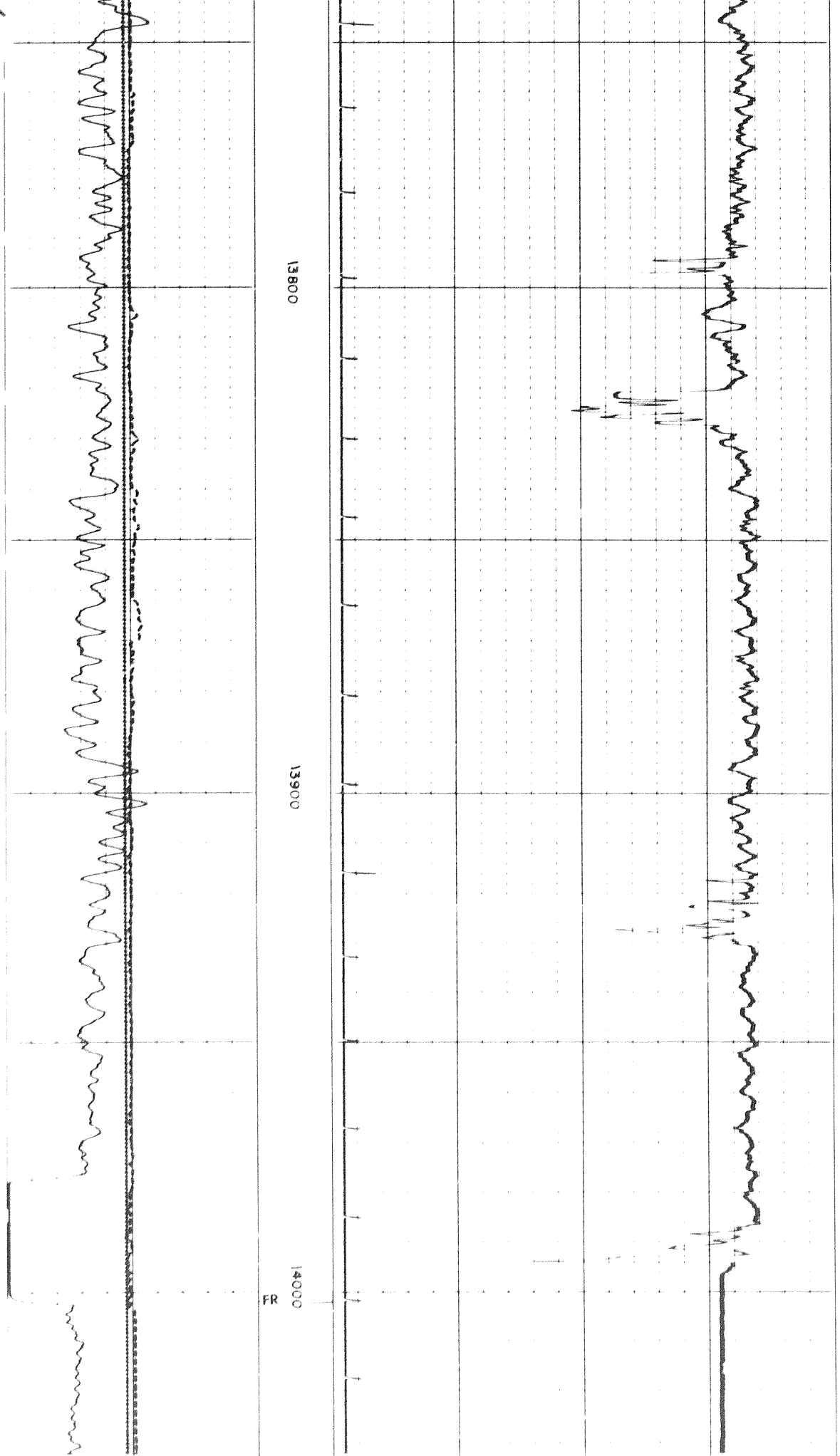
1360



13600

13700

34' a/

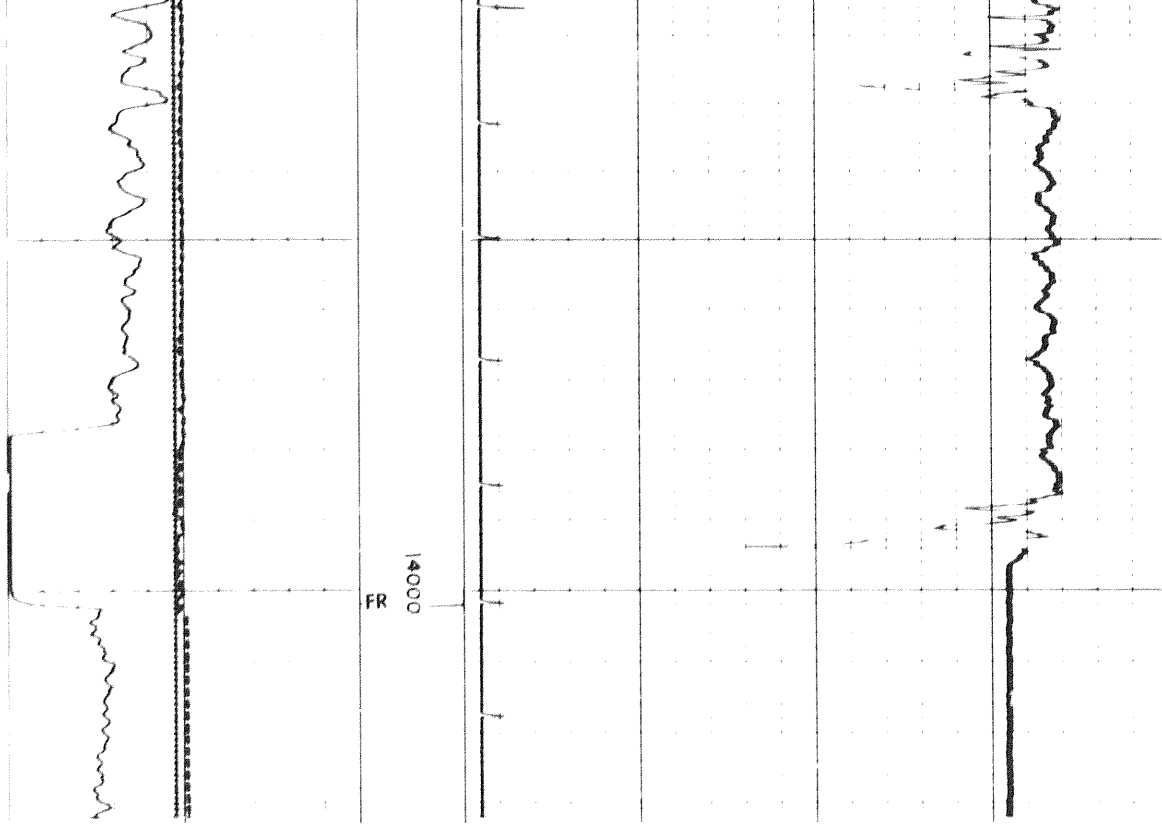


13800

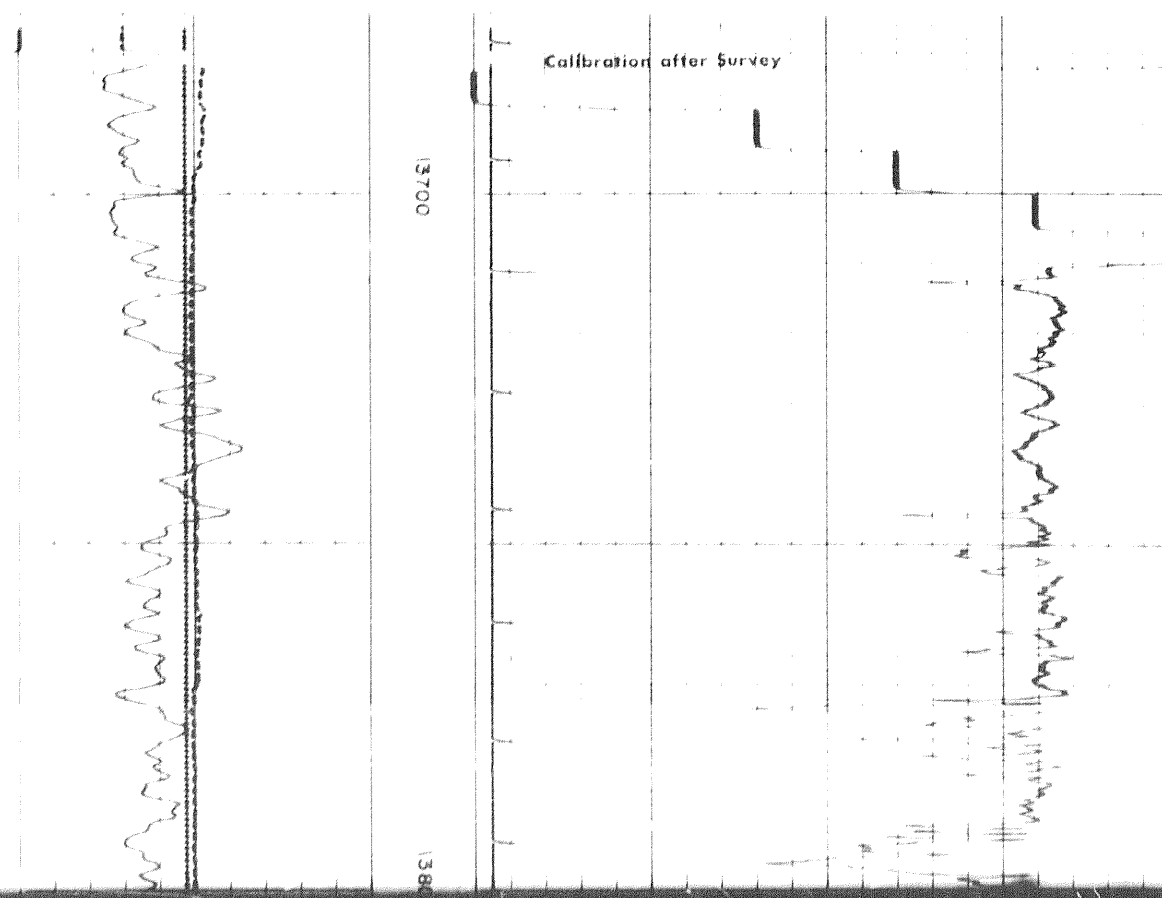
13900

14000

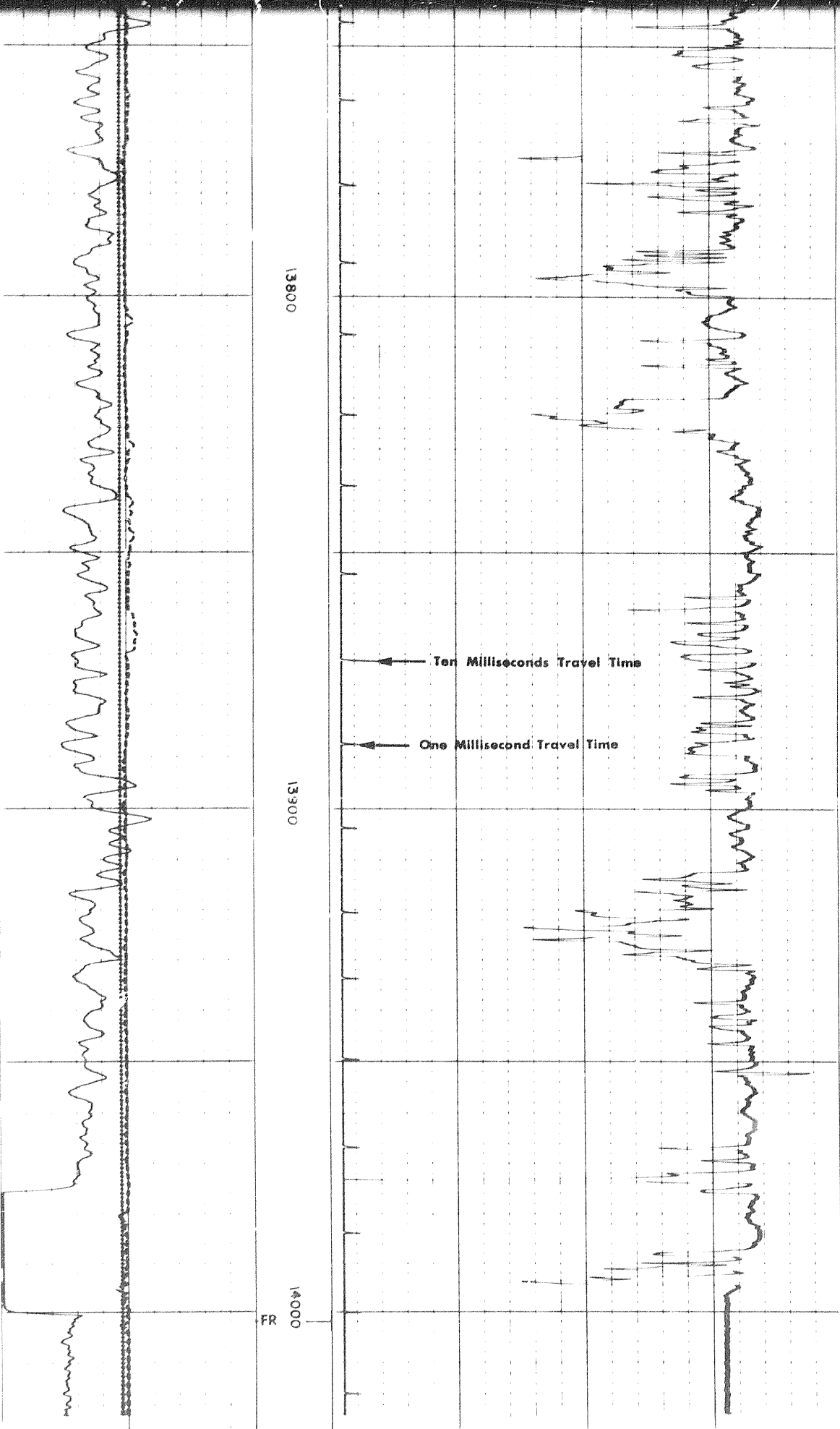
FR



REPEAT SECTION



359



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

Speed in FPM

240	190	140
140	90	40

GAMMA RAY API UNITS	DEPTHS	SONIC INTERVAL TRANSIT TIME microseconds per foot
------------------------	--------	---

Calibration before Survey		Run 2
← Gamma Ray Background		
← Gamma Ray Cal API Units →		
Calibration after Survey		
← Gamma Ray Cal API Units →		
← Gamma Ray Background		

0000

12" ring

8" ring

Calibration before Survey

Gamma Ray Cal
@ API Units

Run 3

GAMMA RAY API UNITS	SHLDR	INTERVAL TRANSIT TIME microseconds per foot
------------------------	-------	--

Calibration before Survey

Run 2

Gamma Ray Background

Gamma Ray Cal
@ API Units

Calibration after Survey

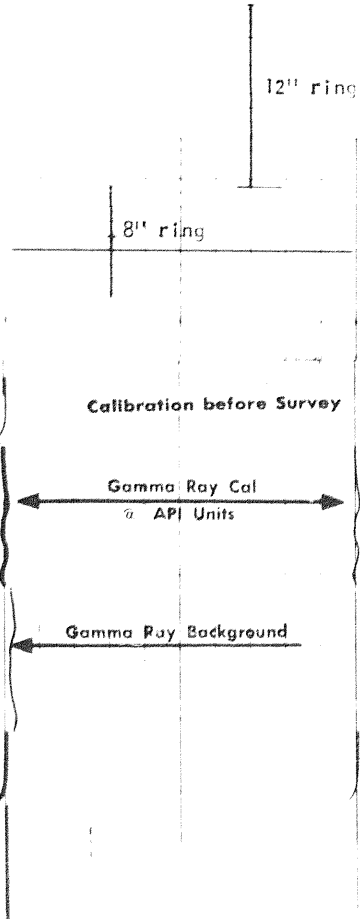
Gamma Ray Cal
@ API Units

Gamma Ray Background

36 0336

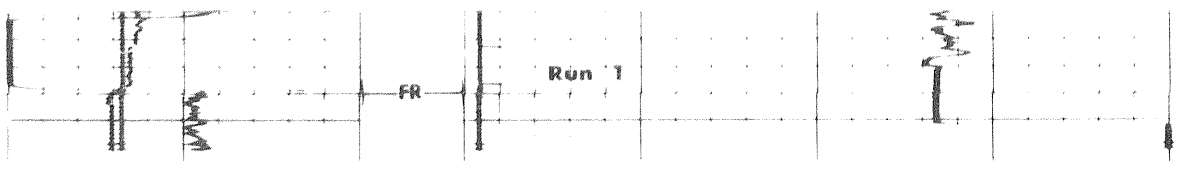
← Gamma Ray Background

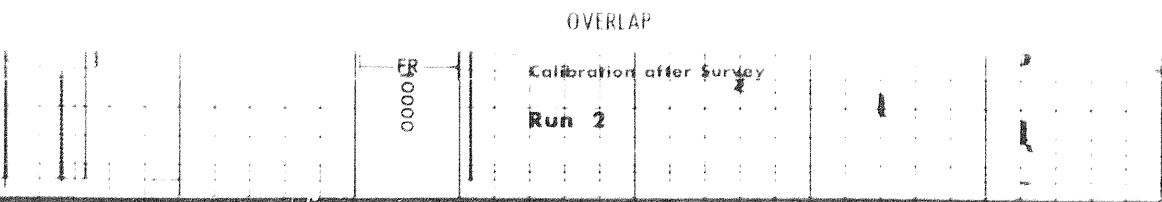
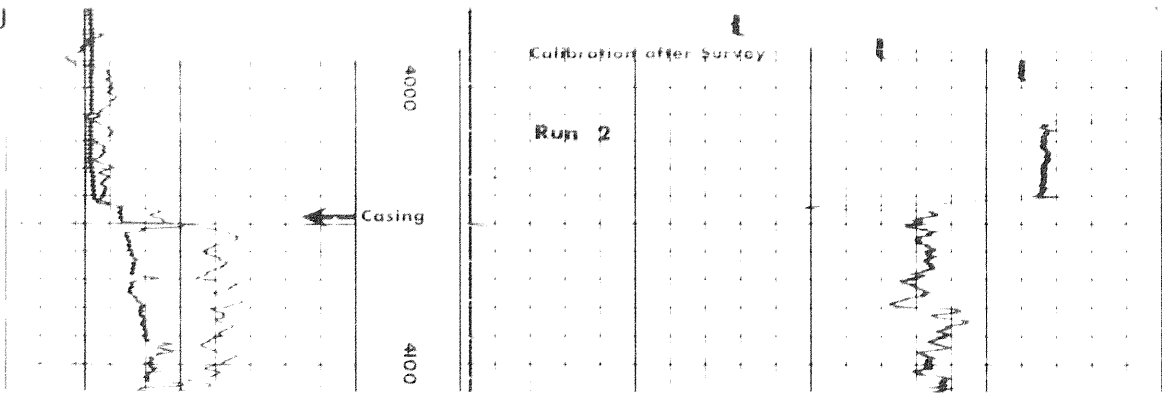
0000



Run 3

OVERLAP





COMPANY	IMPERIAL OIL ENTERPRISES LTD.		
WELL	ICE FLOW RIVER YT	647-60-50-137-15	SCHLUMBERGER
FIELD	WILSON	PROVINCE YUKON TERRITORIES	

PROVINCE YUKON TERRITORIES FIELD WILSON WELL ICE FLOW RIVER YT 647-60-50-137-15 COMPANY IMPERIAL OIL ENTERPRISES LTD.		COMPANY IMPERIAL OIL ENTERPRISES LTD. WELL ICE FLOW RIVER YT 647-60-50-137-15 FIELD WILSON PROVINCE YUKON TERRITORIES LOCATION
Date 22 JUNE 79 Run No ONE First Reading 4139 Last Reading 29 Feet Measured 4100 Depth Reached 4140 Bottom Driller 10017 Csg SOC 781 Csg Driller 782 Mud Nature 782 Mud Nature 781 Dens 9.2 Visc 55 Mud pH 10.0 Water Loss 9.4 Rss 6.0 Rmt 1.78 Rmt @ BHT 1.12 Rmk ppm Cl	Date 27 JUN 79 Run No TWO First Reading 2956 Last Reading 29 Feet Measured 2938 Depth Reached 2957 Bottom Driller 10017 Csg SOC 781 Csg Driller 782 Mud Nature 782 Mud Nature 781 Dens 9.1 Visc 55 Mud pH 9.2 Water Loss 15.9 Rss 6.2 Rmt 1.51 Rmt @ BHT 1.57 Rmk ppm Cl	Permanent Datum Elev 25 Log Measured From 15 Ft Above Perm. Datum
Equipment Type PNT-4 Opri Rig Time 3 hrs Truck No 363 Recorded By J.P.T.B. Witness J.P.T.B.	Equipment Type PNT-4 Opri Rig Time 3 hrs Truck No 363 Recorded By J.P.T.B. Witness J.P.T.B.	Equipment Type PNT-4 Opri Rig Time 3 hrs Truck No 363 Recorded By J.P.T.B. Witness J.P.T.B.