36R

GL02172

AREA
NV
Church
Stillwtr
Reynolds1

OLIPHANT LABORATORIES INC.
NATIONAL BANK OF TULSA BUILDING
TULSA, OKLAHOMA

Electric Log

COMPANY O'NEILL - OLIPHANT

WELL REYNOLDS #1

FIELD STILLWATER

COUNTY CHURCHILL, STATE NEVADA

LOCATION:
1050' EWL & 1150' NSL SW/4

SEC. 6 TWP. 19N RGE. 31E

OTHER SERVICES:

PERMANENT DATUM GROUND LEVEL ELEV. 3895'
LOG MEASURED FROM KB, 11.7 FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM KB

ELEV. K.B. 3906.7
D.F. 3905'
G.L. 3895'

DATE	2-6-'64		2-10-'64		2-15-'64		2-17-'64		2-21-'64		2	
RUN NO.	ONE		TWO		THREE		FOUR		FIVE		S	
DEPTH—DRILLER	350'		1500'		2472'		3245'		3501'		3	
DEPTH—LOGGER	350'				Brg'd@1595'		3245'		3500'		3	
BTM. LOG INTER.	349'		1260'		1630'		3244'		3500'		3	
TOP LOG INTER.	128'		349'		1459'		1459'		3150'		3	
CASING—DRILLER	20" @ 126'		16" @ 340		10 3/4"@1459'		10 3/4" @ 1459'		10 3/4" @ 1459'		1	
CASING—LOGGER	126		342'		1459'		1459'		1459'		1	
BIT SIZE	19"		15"		9 7/8"		9 7/8		9 7/8"		9	
TYPE FLUID IN HOLE	Gel Mud		GEL MUD		CARBONOX		CARBONOX		CARBONOX		C	
DENS. | VISC.	9.3	42	10.4	42			9.7	42	9.8	42	9	
pH | FLUID LOSS		ml		13 ml		ml		ml		ml		
SOURCE OF SAMPLE	FLOW LINE		FLOW LINE		FLOW LINE		FLOW LINE		FLOW LINE		F	
Rm @ MEAS. TEMP.	217 @ 64 °F		2.35 @ 72 °F		1.85 @ 80 °F		1.9 @ 85 °F		2.5 @ 55 °F		2	
Rmf @ MEAS. TEMP.	@ °F		@ °F		@ °F		@ °F		@ °F		(	
Rmc @ MEAS. TEMP.	@ °F		@ °F		@ °F		@ °F		@ °F		S	
SOURCE Rmf | Rmc											D	
Rm @ B.H.T.	@ °F		@ °F		@ °F		@ °F		@ °F			
TIME SINCE CIRC.			2 HRS. I.T.		117°F				5 HOURS		1	
MAX. REC. TEMP.	°F		167° °F		°F		°F		220 (HG) °F		2	
EQUIP. | LOCATION												
RECORDED BY	WILLETT		WILLETT		WILLETT		WILLETT		WILLETT		W	

B. 3906.7
F. 3905'
3895'

ERVICES:

DA

NG
G

2-21-'64	2-22-'64	2-23-'64	
BLUE	SIX	SEVEN	
3620'	3620'	4225'	
3619'	3619'	4223'	
3618'	3618'	4233'	
3400'	3400'	3450'	
10¾" @1159'	10¾" @1159'	10¾" @1159'	
1159'	1159'	1159'	
9 7/8"	9 7/8"	9 7/8"	
CARBONOX	CARBONOX	CARBONOX	
42 ml	42 ml	ml	
9.9	9.9	9.7	
42	40	39	
FLOW LINE	FLOW LINE	FLOW LINE	
2.2 @55 °F	2.6 @62 °F	2.4 @68 °F	
(on mud sample from DST)			
WILLETT	WILLETT	WILLETT	
5 HOURS	10½ HOURS	4 HOURS	
220 (4G) °F	240 °F	210 °F	

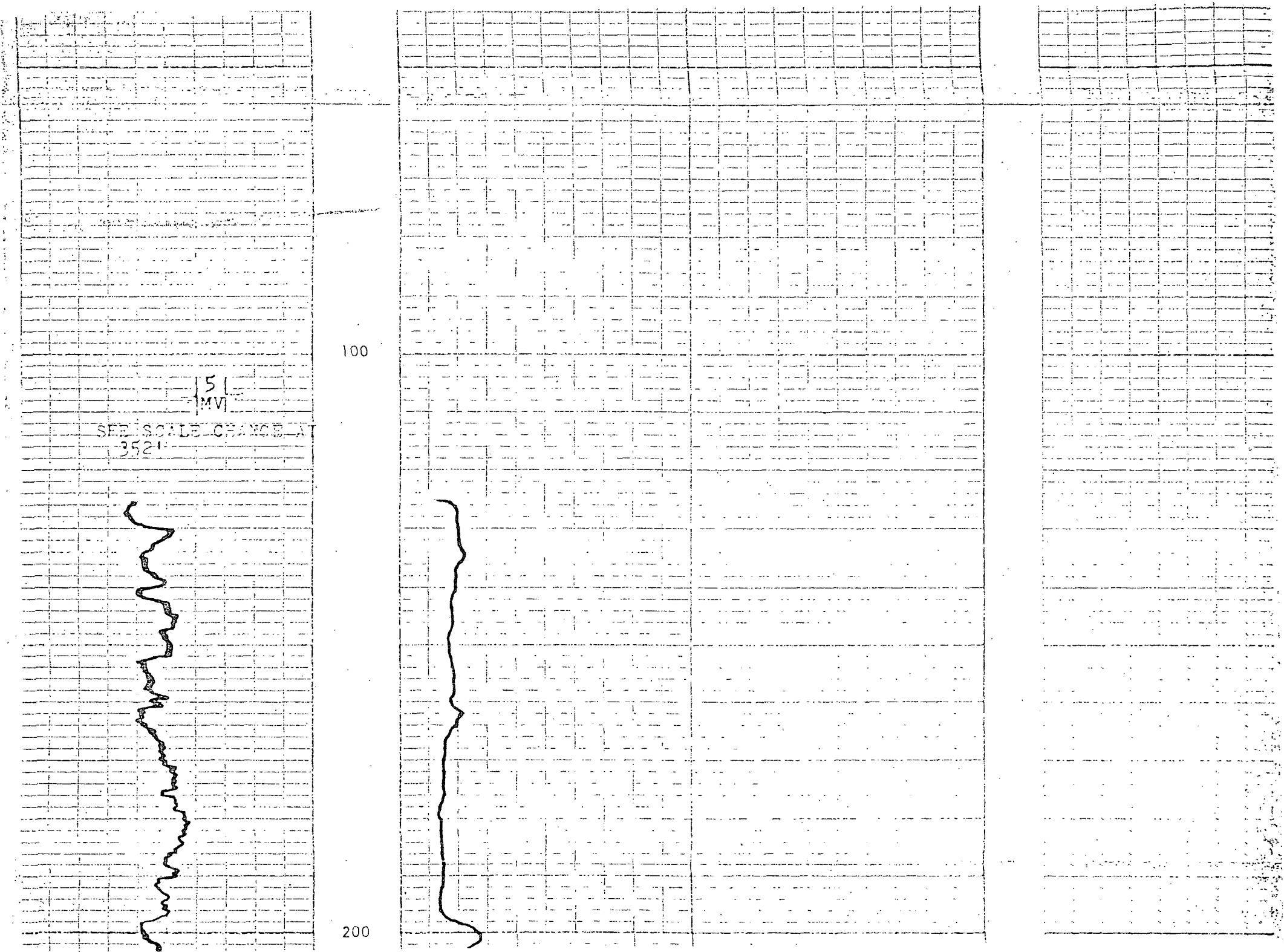
THIS HEADING AND LOG CONFORM TO API RP-31 (R)

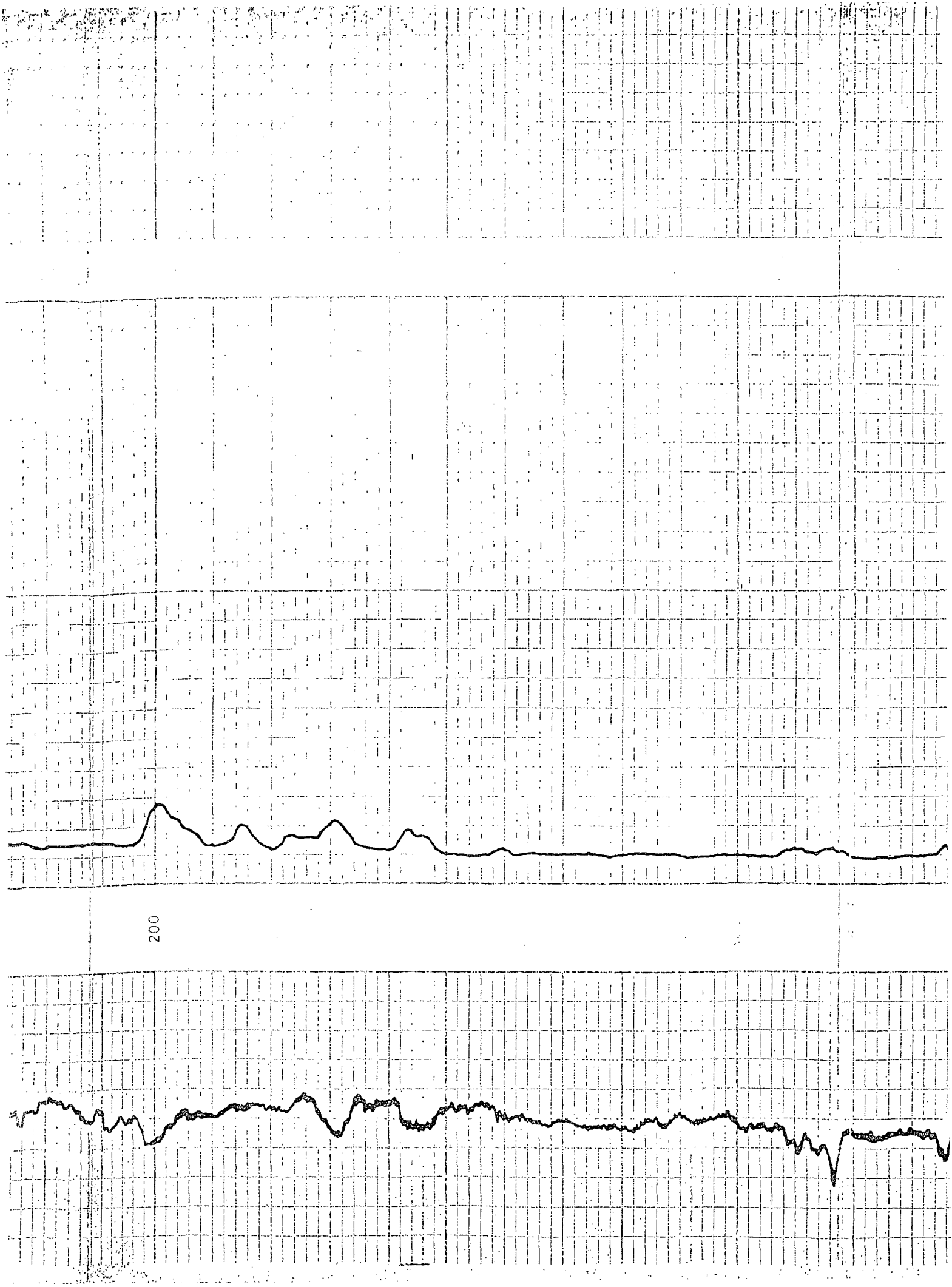
REMARKS

CHANGES IN MUD TYPE OR ADDITIONAL SAMPLES					SCALE CHANGES			
DATE	SAMPLE NO.				TYPE LOG	DEPTH	SCALE UP HOLE	SCALE DOWN HOLE
DEPTH—DRILLER								
TYPE FLUID IN HOLE								
DENS.	VISC.							
PH	FLUID LOSS	ml		ml				
SOURCE OF SAMPLE					EQUIPMENT DATA			
R_m @ MEAS. TEMP.	@ °F		@ °F		RUN NO.	TOOL TYPE	PAD TYPE	TOOL POSITION	OTHER
R_{mf} @ MEAS. TEMP.	@ °F		@ °F						
R_{mc} @ MEAS. TEMP.	@ °F		@ °F						
SOURCE R_{mf} R_{mc}									
R_m @ B.H.T.	@ °F		@ °F						
R_{mf} @ B.H.T.	@ °F		@ °F						
R_{mc} @ B.H.T.	@ °F		@ °F						

R_{mf} @ MEAS. TEMP.	@	°F	@	°F				
R_{mc} @ MEAS. TEMP.	@	°F	@	°F				
SOURCE R_{mf} | R_{mc}								
R_m @ B. H. T.	@	°F	@	°F				
R_{mf} @ B. H. T.	@	°F	@	°F				
R_{mc} @ B. H. T.	@	°F	@	°F				

SPONTANEOUS-POTENTIAL MILLIVOLTS	DEPTHS	RESISTIVITY OHMS M^2/M	RESISTIVITY OHMS M^2/M
-|-|+		16" SHORT NORMAL 10	64" LONG NORMAL 10


100
5
MV
SEE SCALE CHANGE AT
352'
200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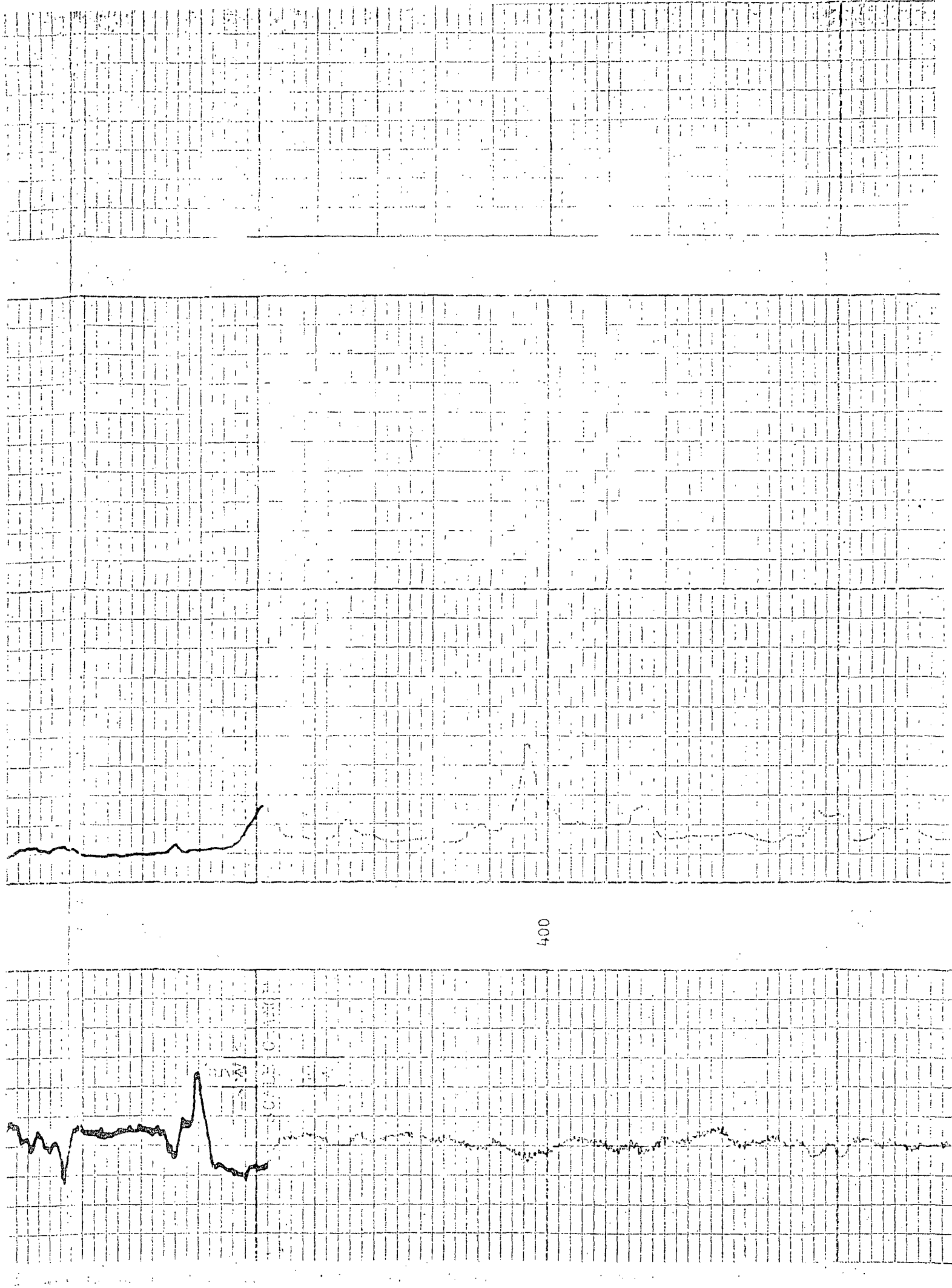
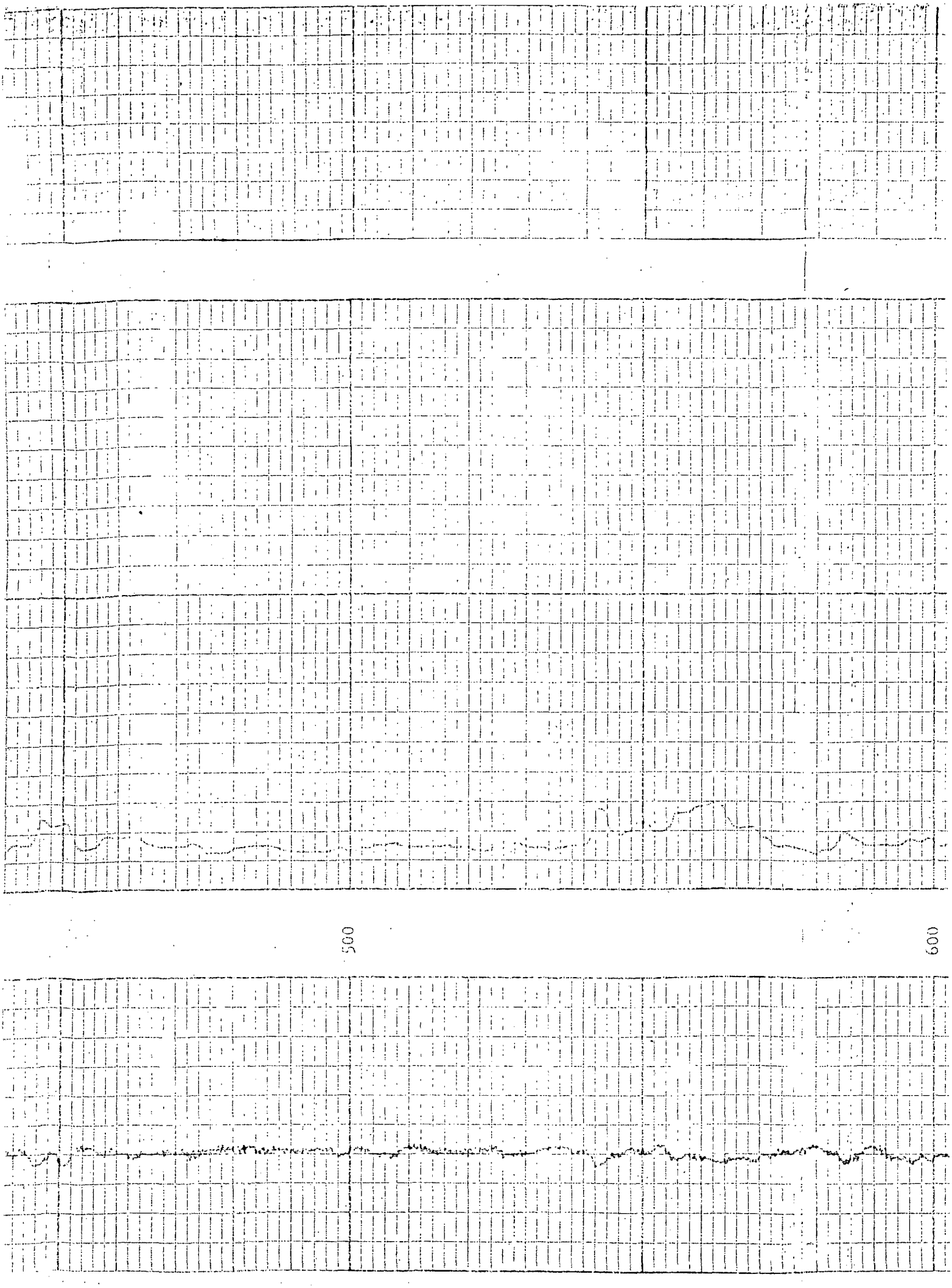
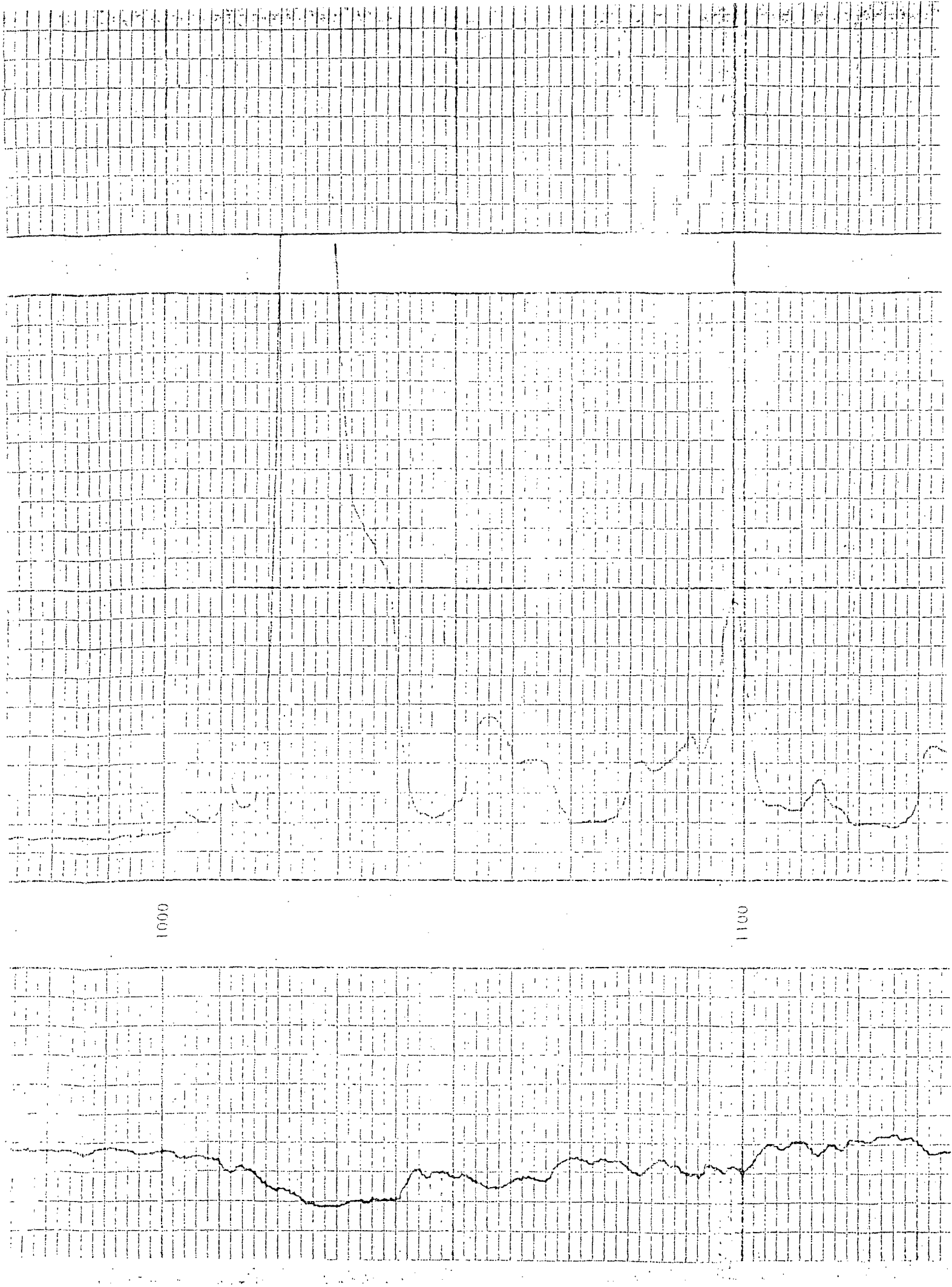



500
600


600
700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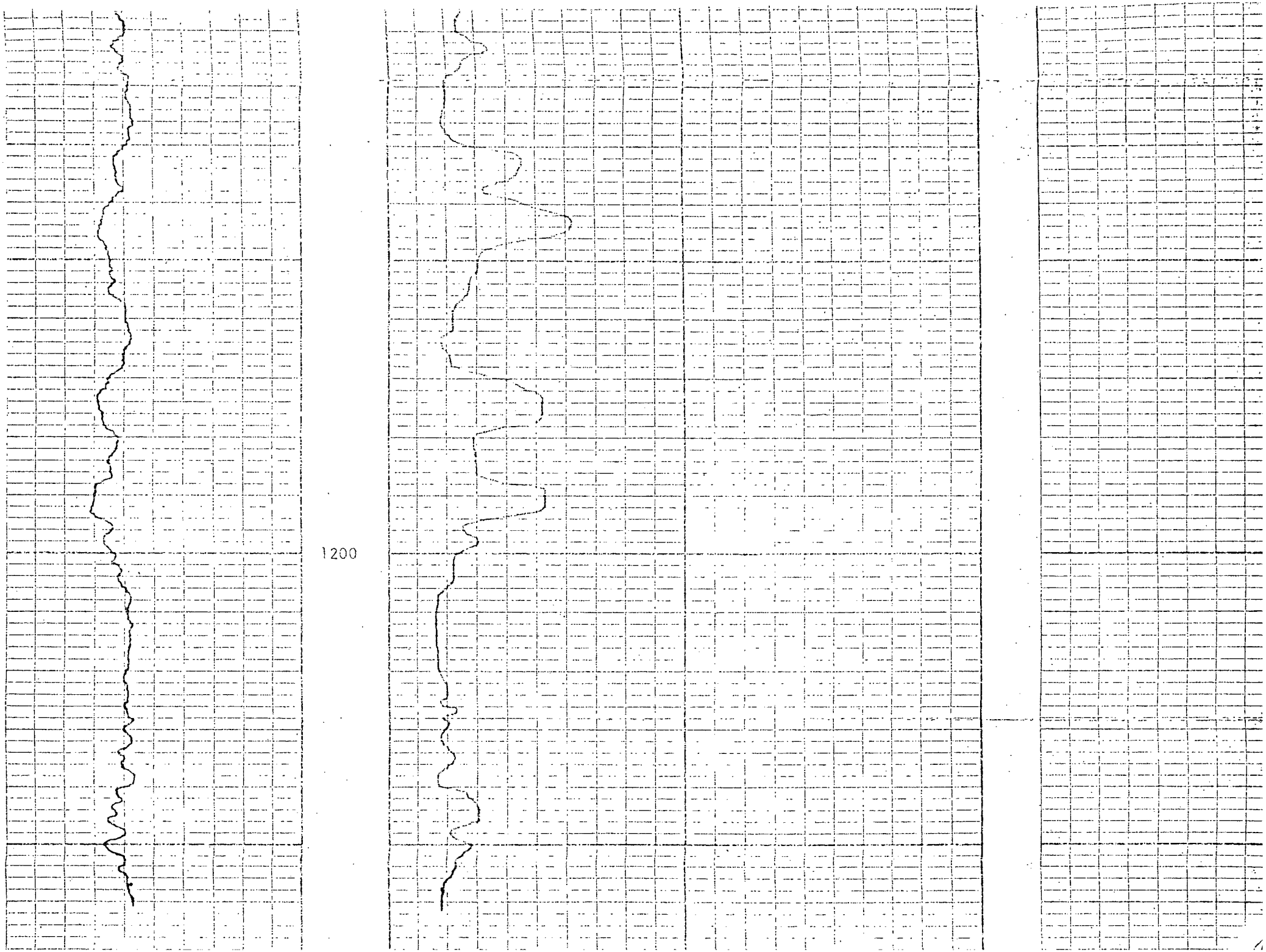
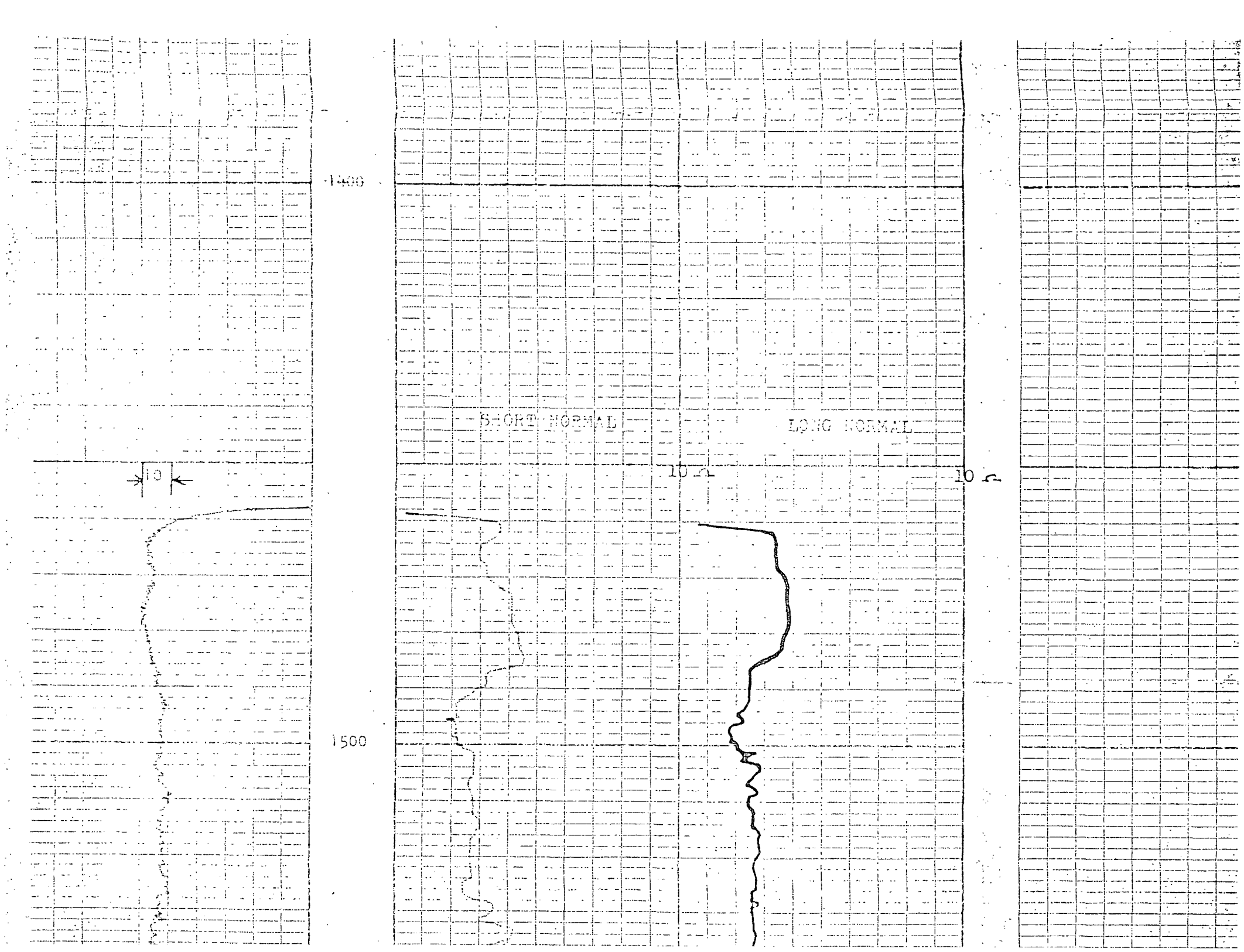
1100

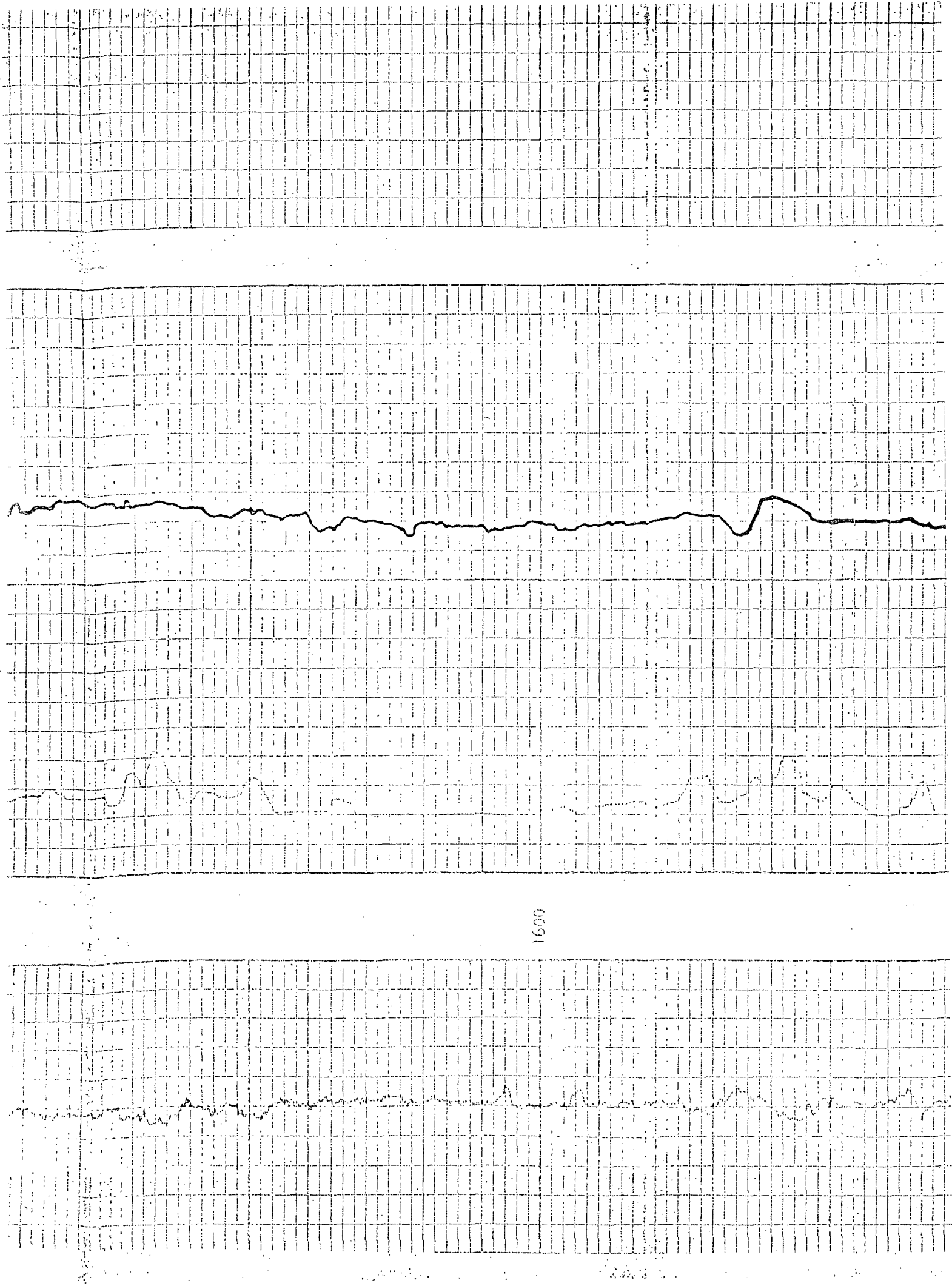

1200

1300

UNABLE TO LOG INTERVAL
1260' to 1459' BEFORE
10-3/4" casing RUN
BECAUSE OF HEAVY MUD IN
BOTTOM OF HOLE.

1400


1400
10
SHORT NORMAL
LONG NORMAL
10 Ω
10 Ω
1500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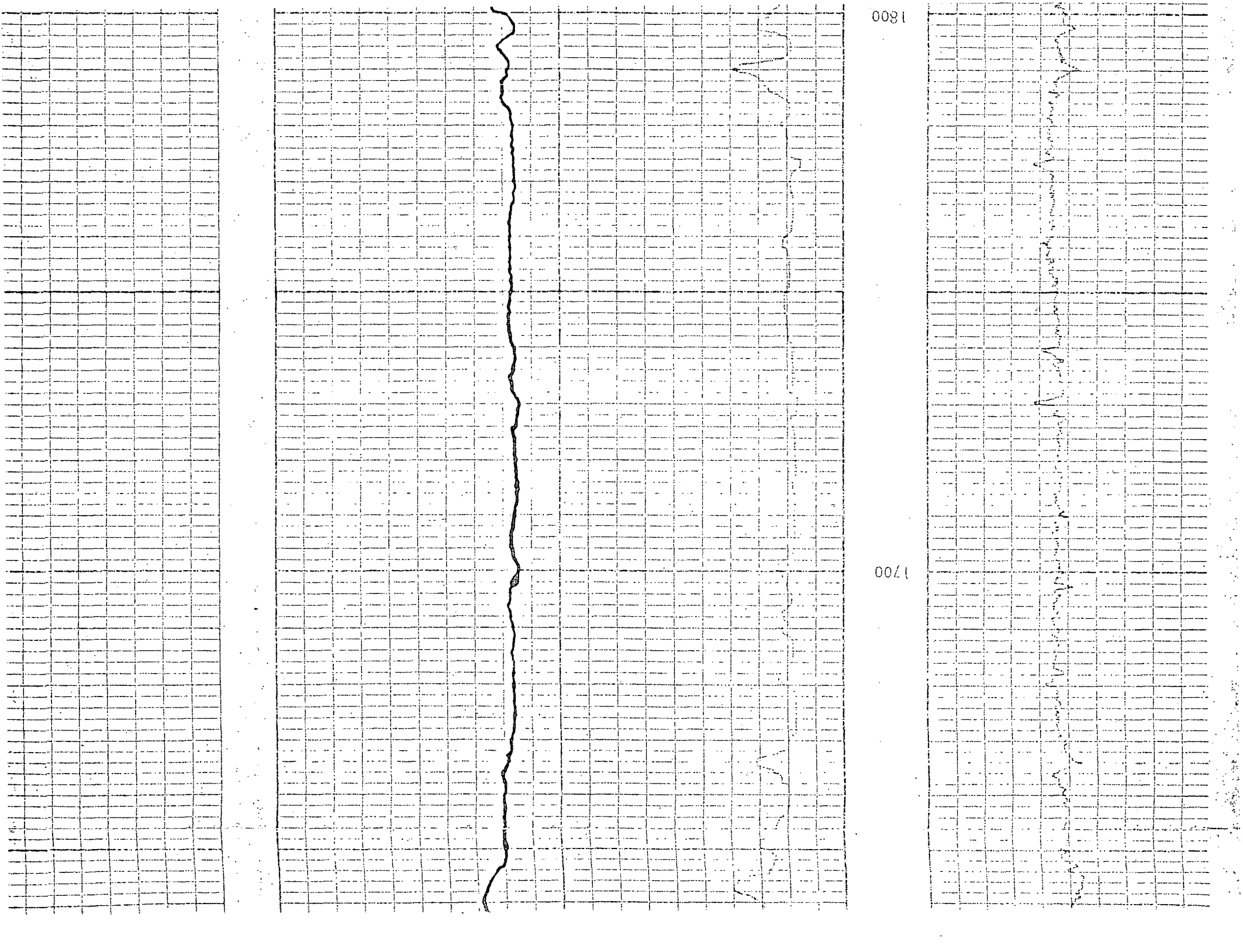
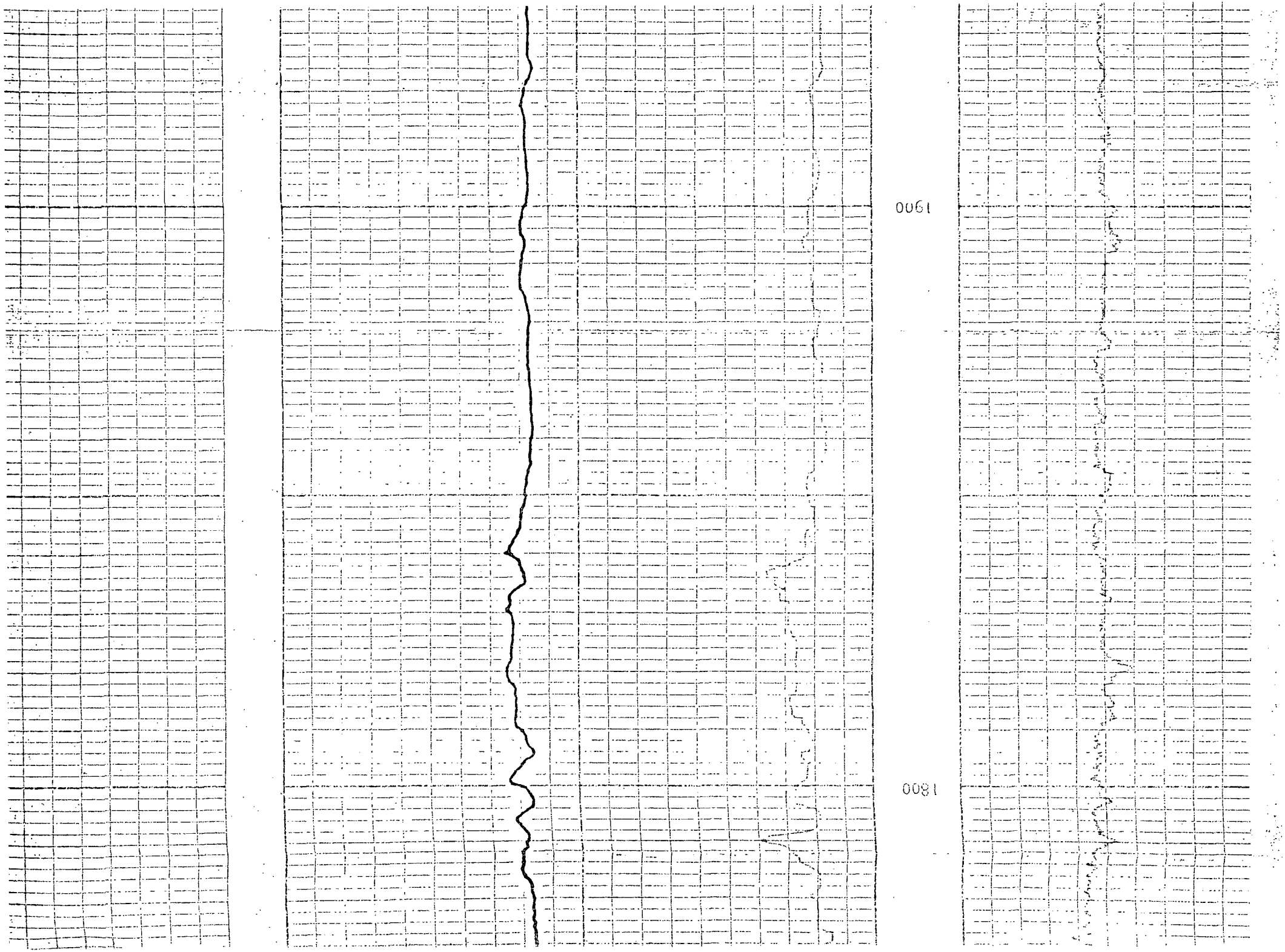

1800
1700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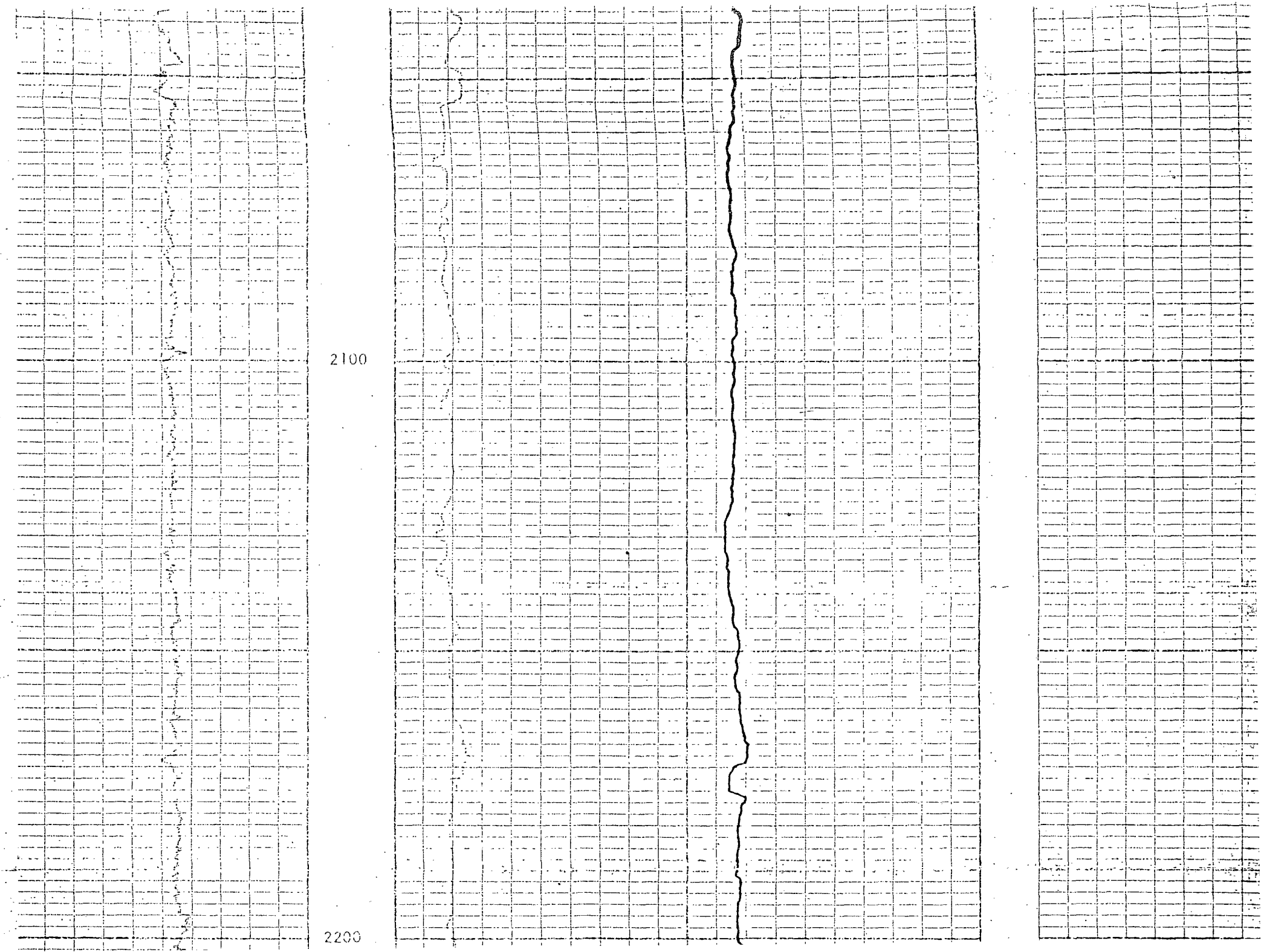
1800

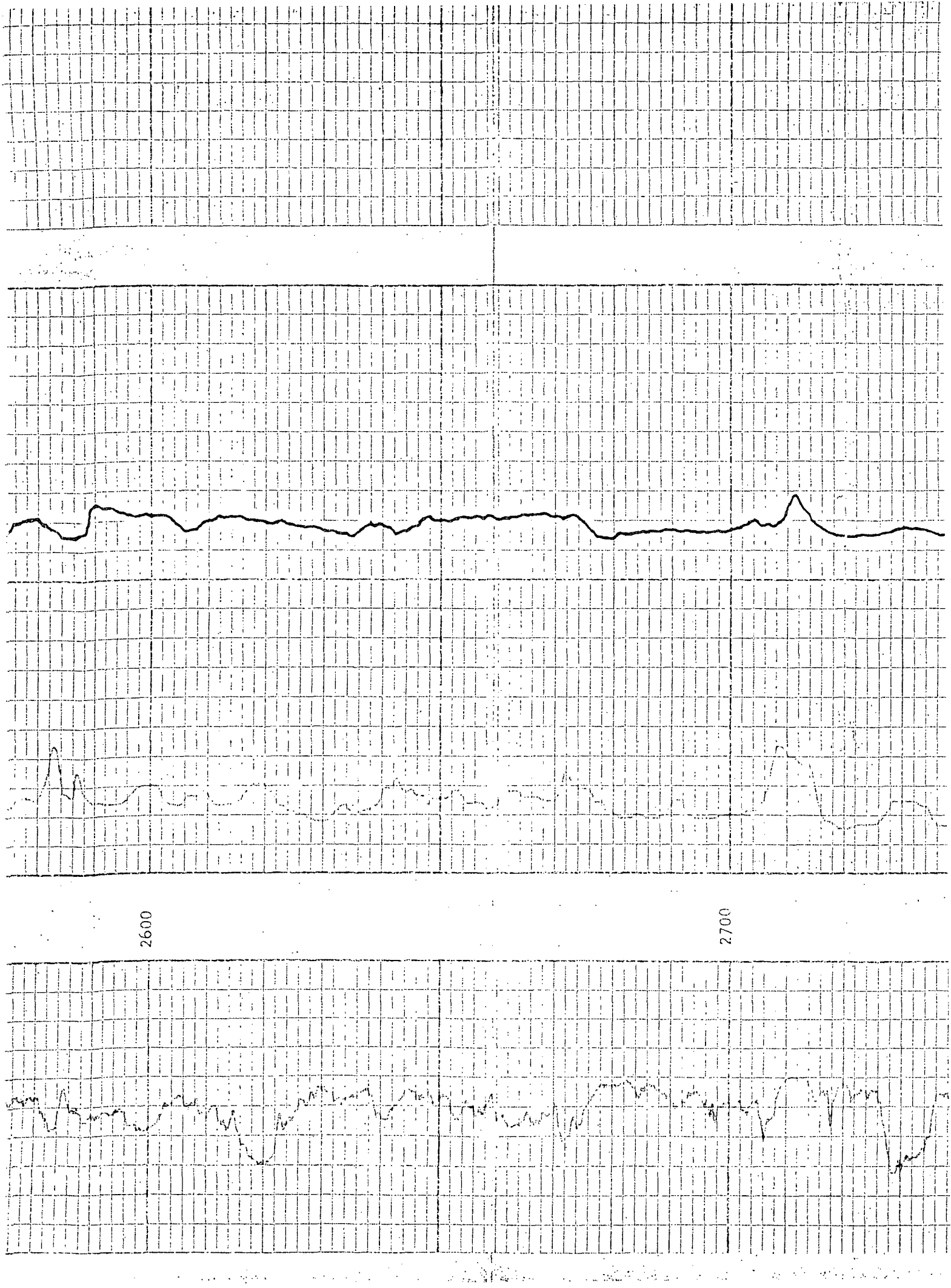

2000


2100
2200


2200
2300

2600

2500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2700


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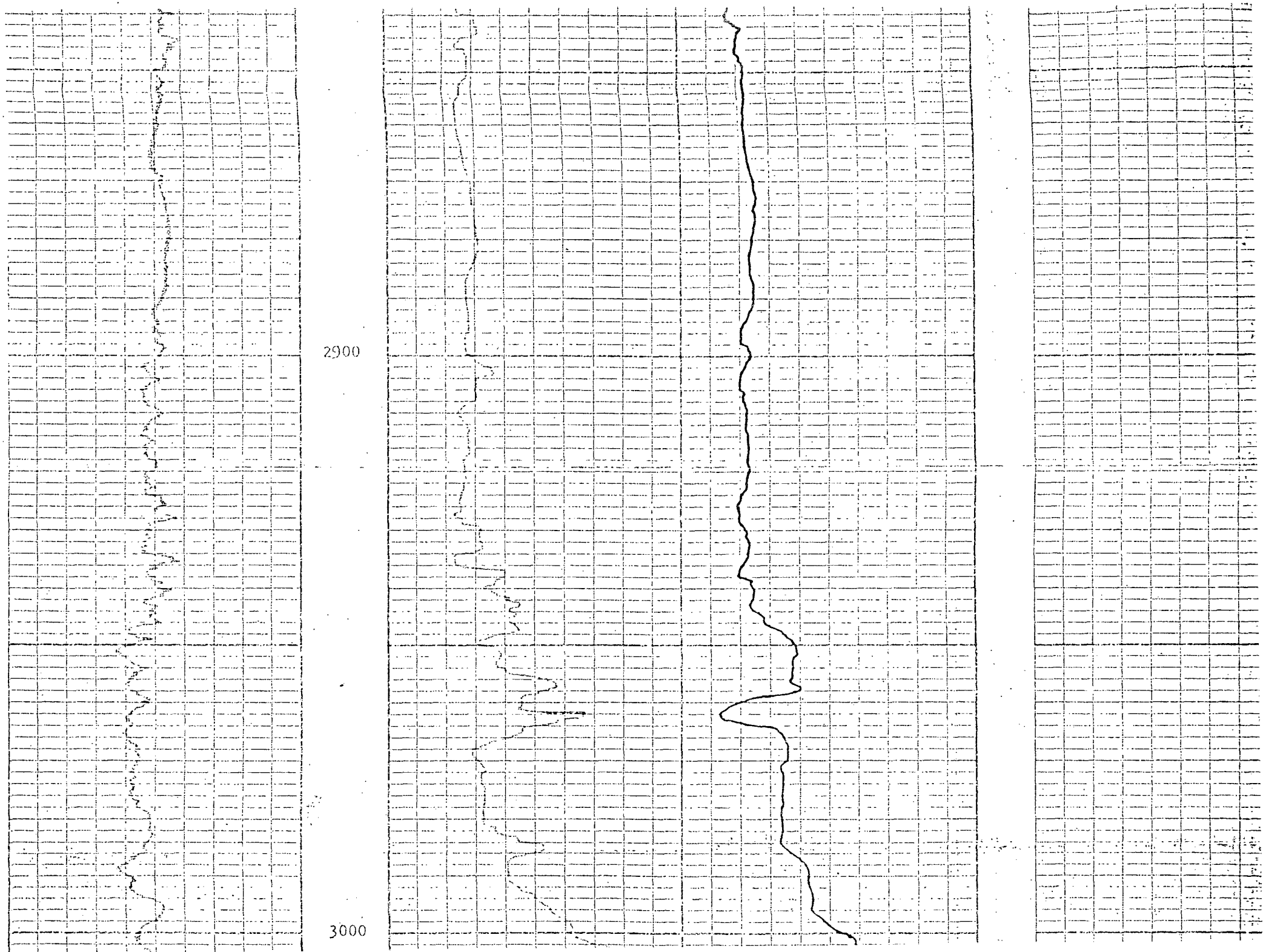
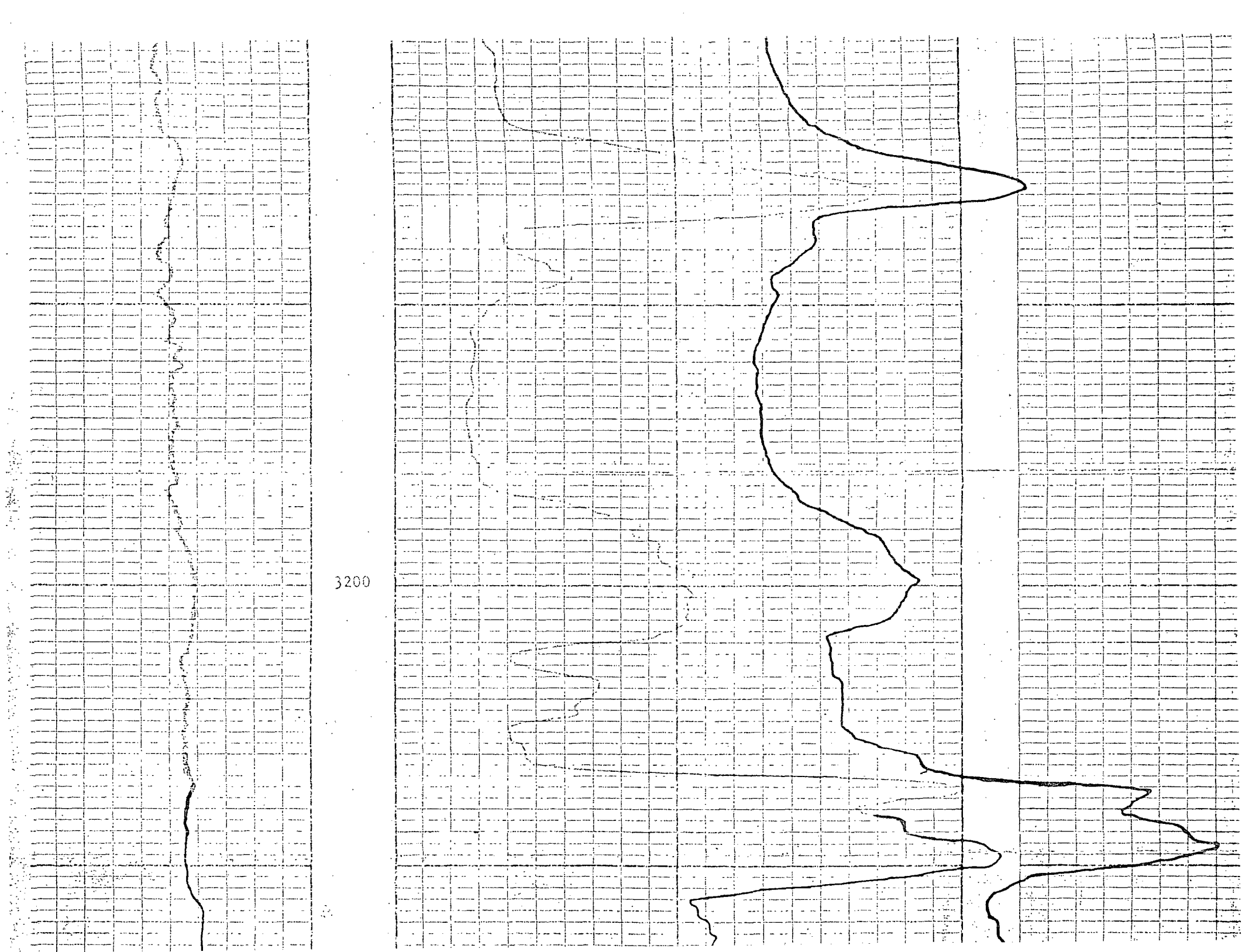

2900
3000


3100
3000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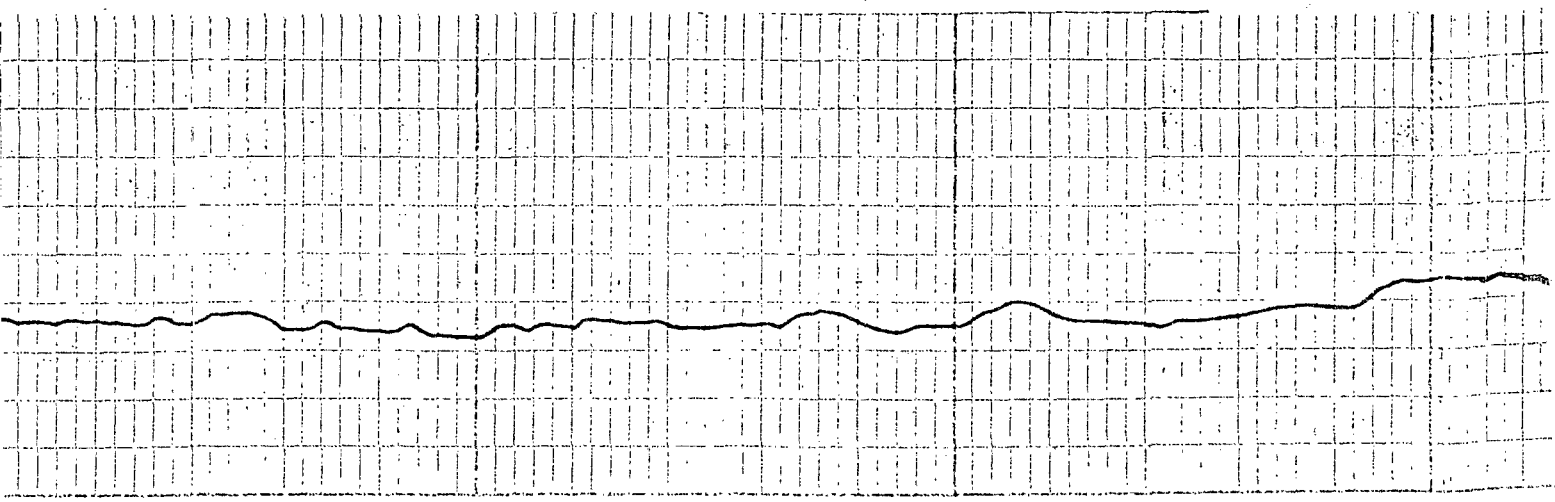
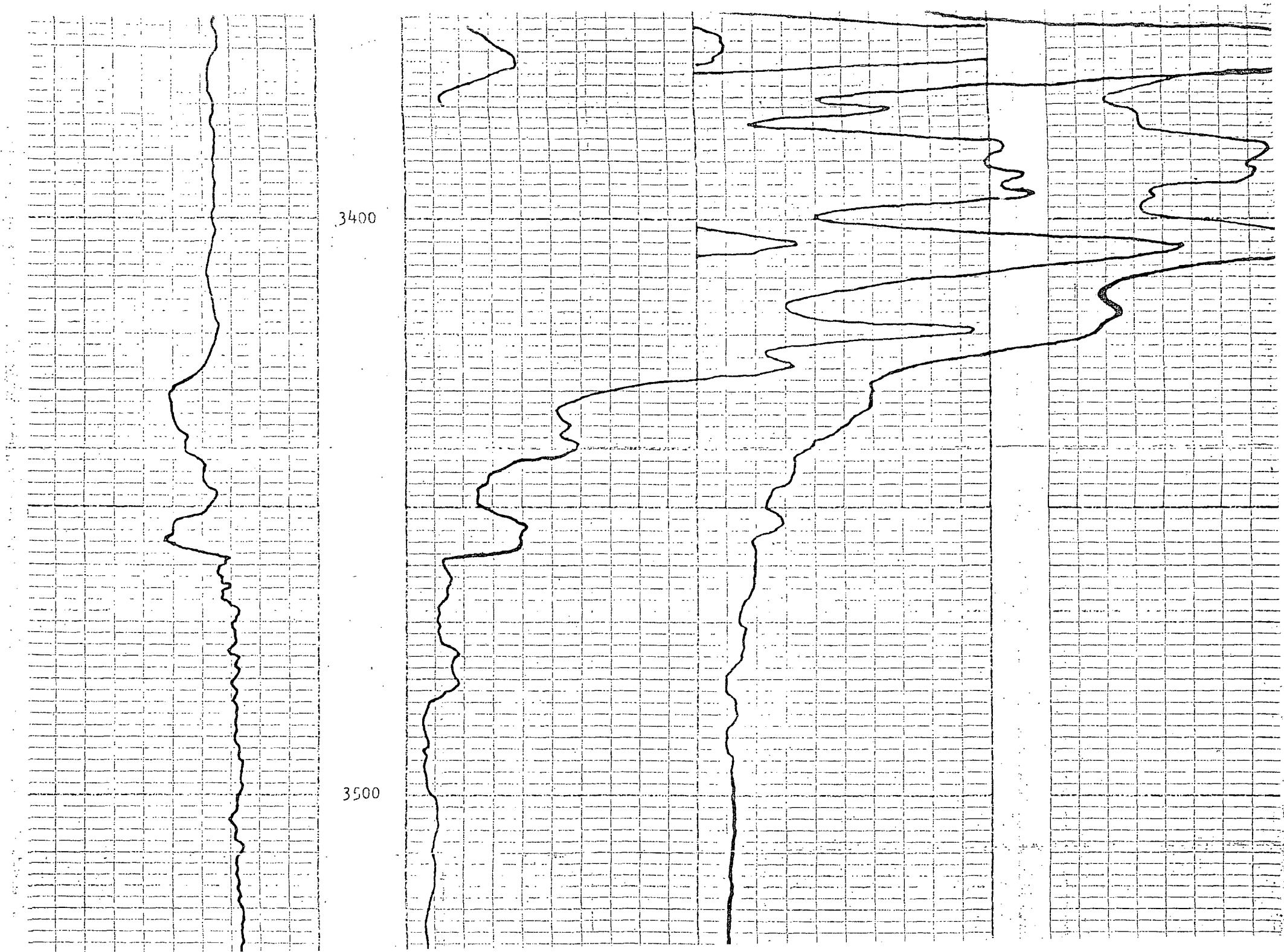
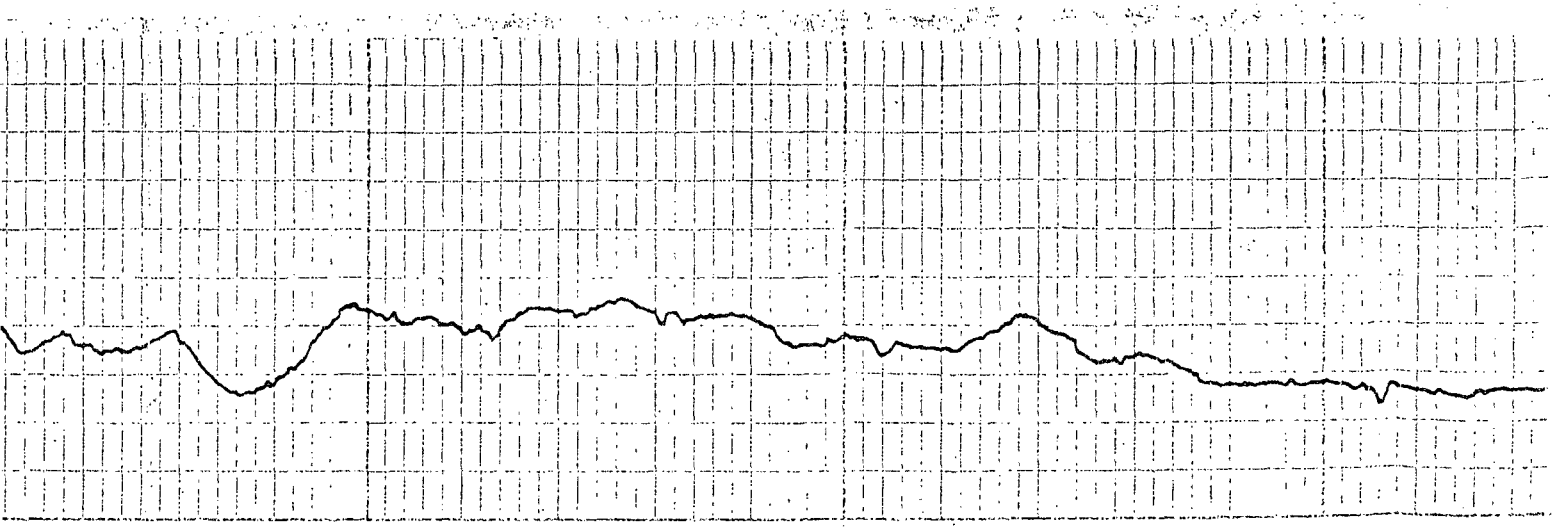



3400
3500


3500
3600



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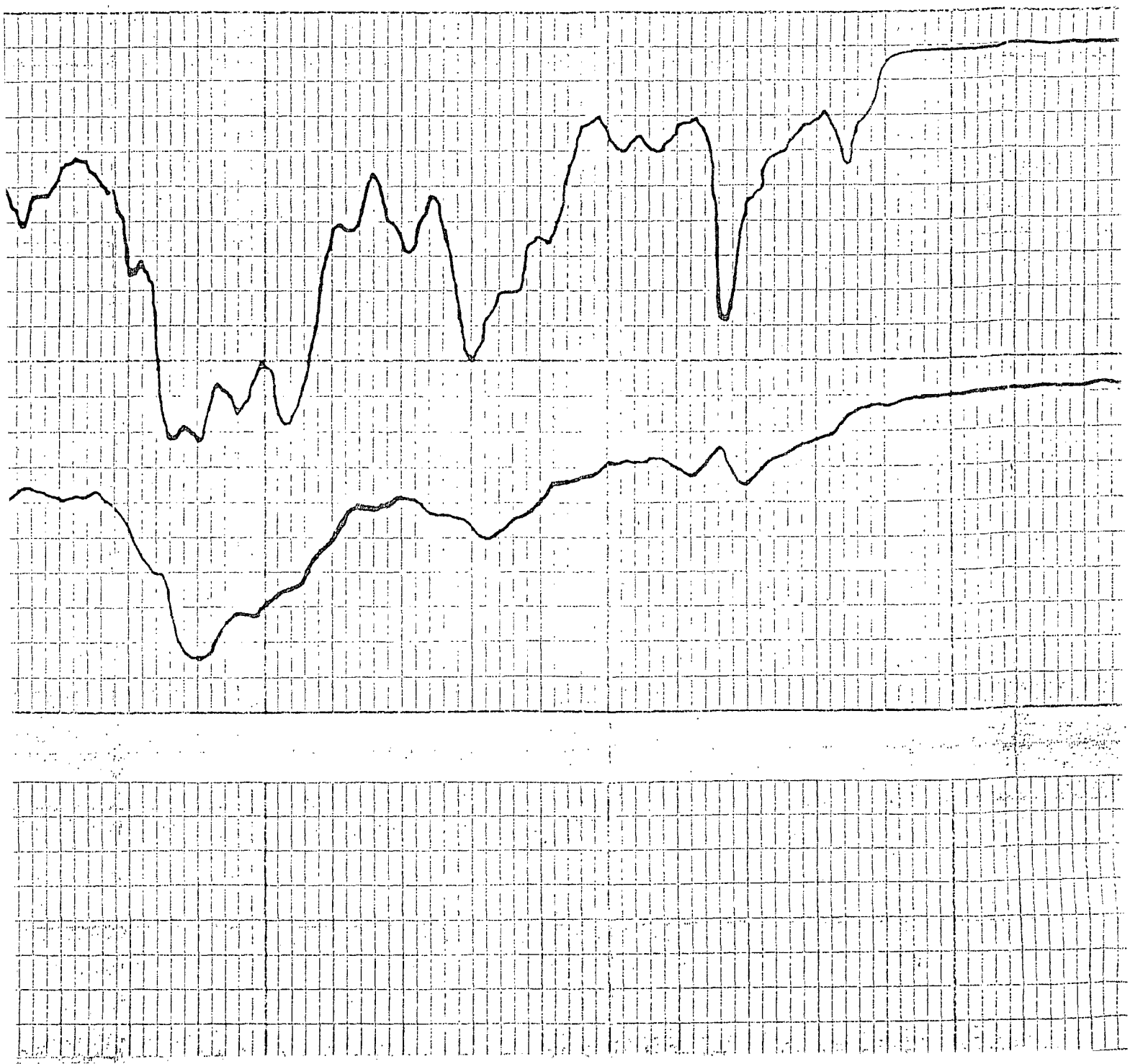

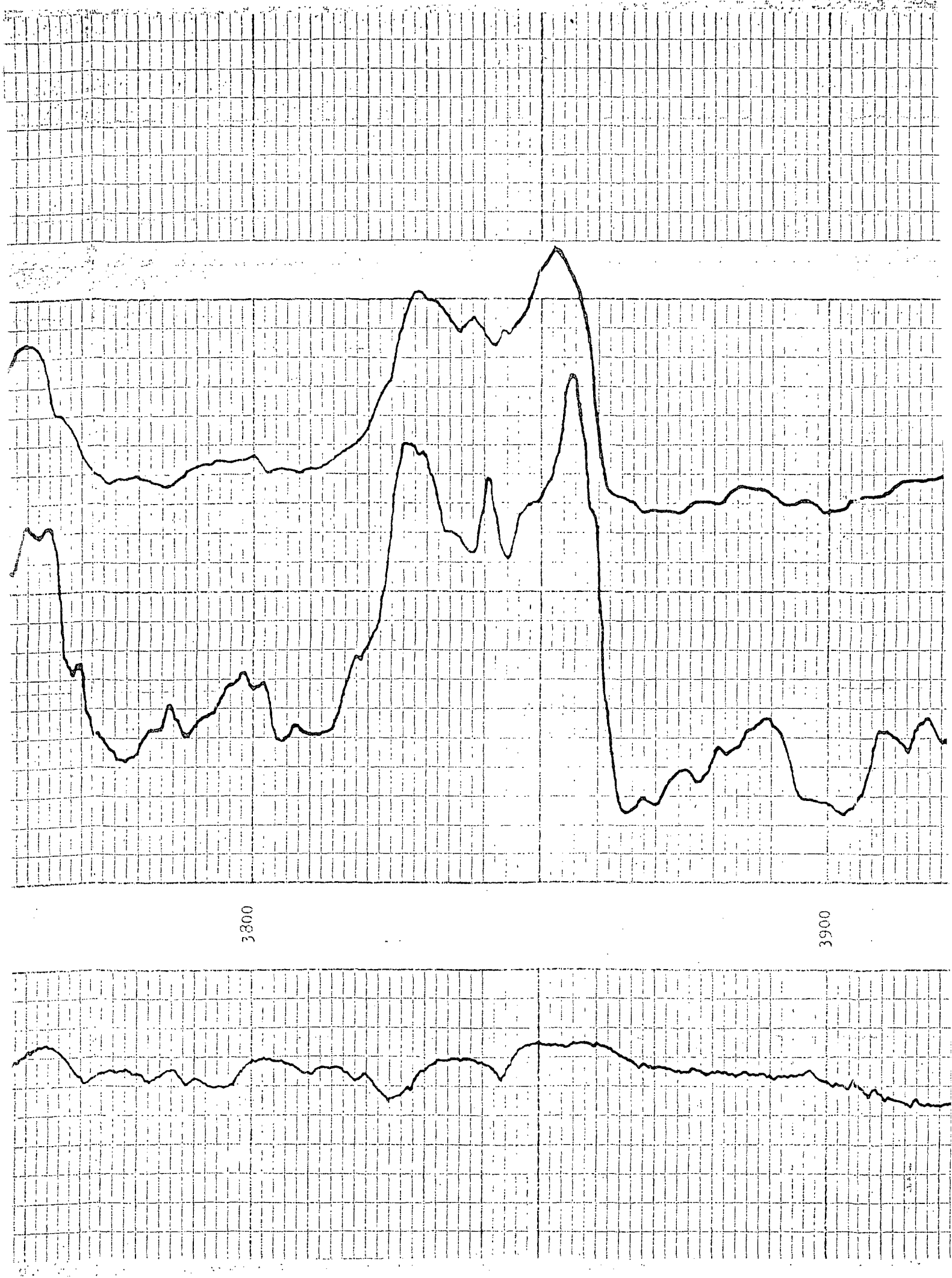
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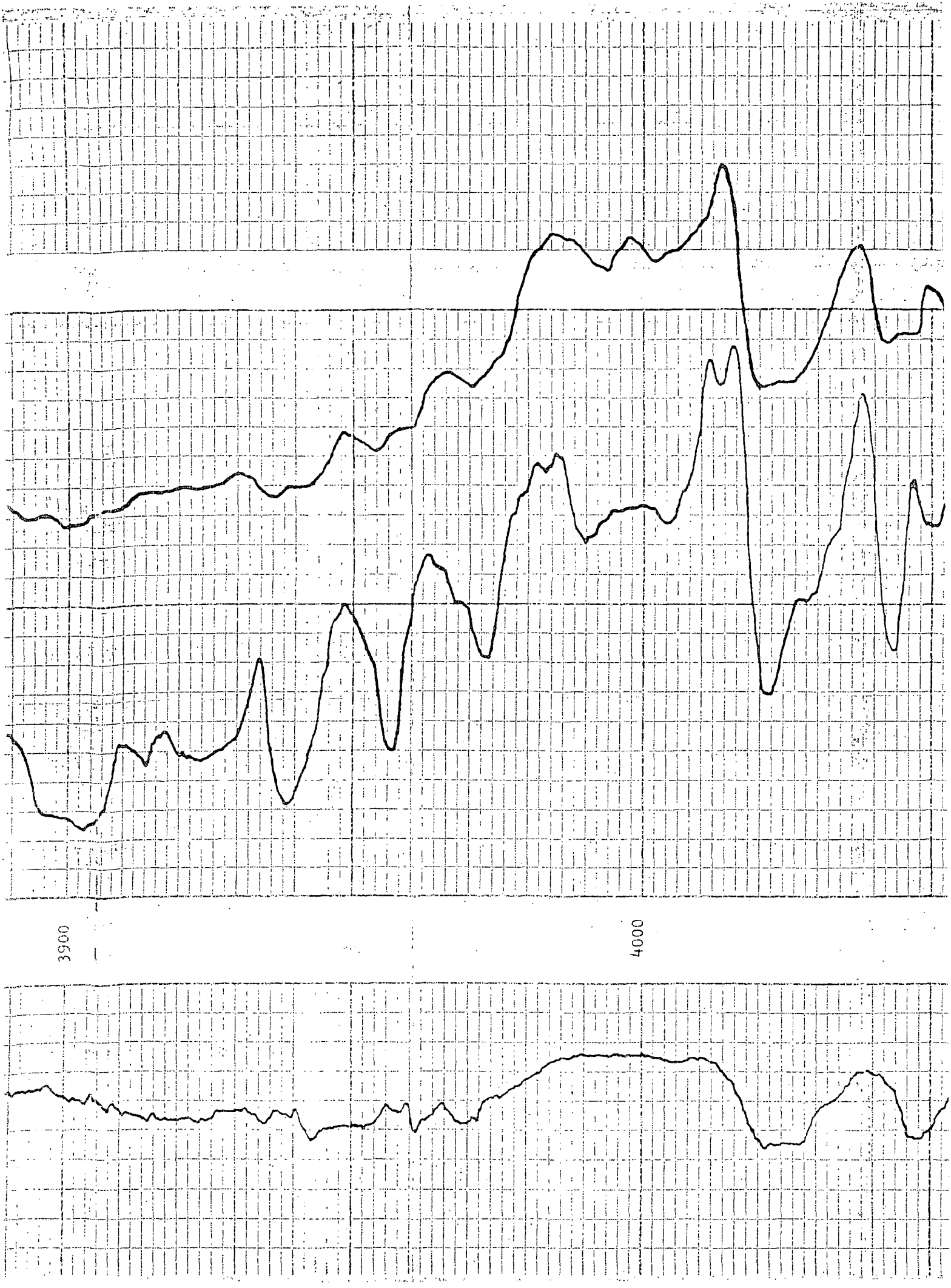
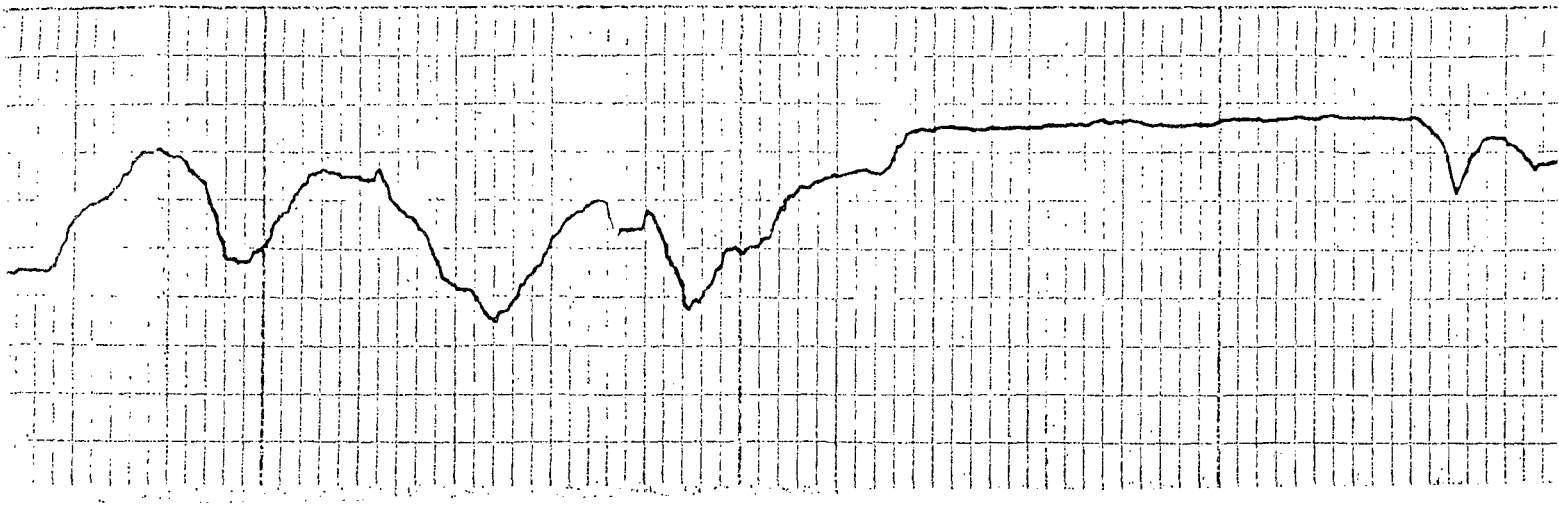
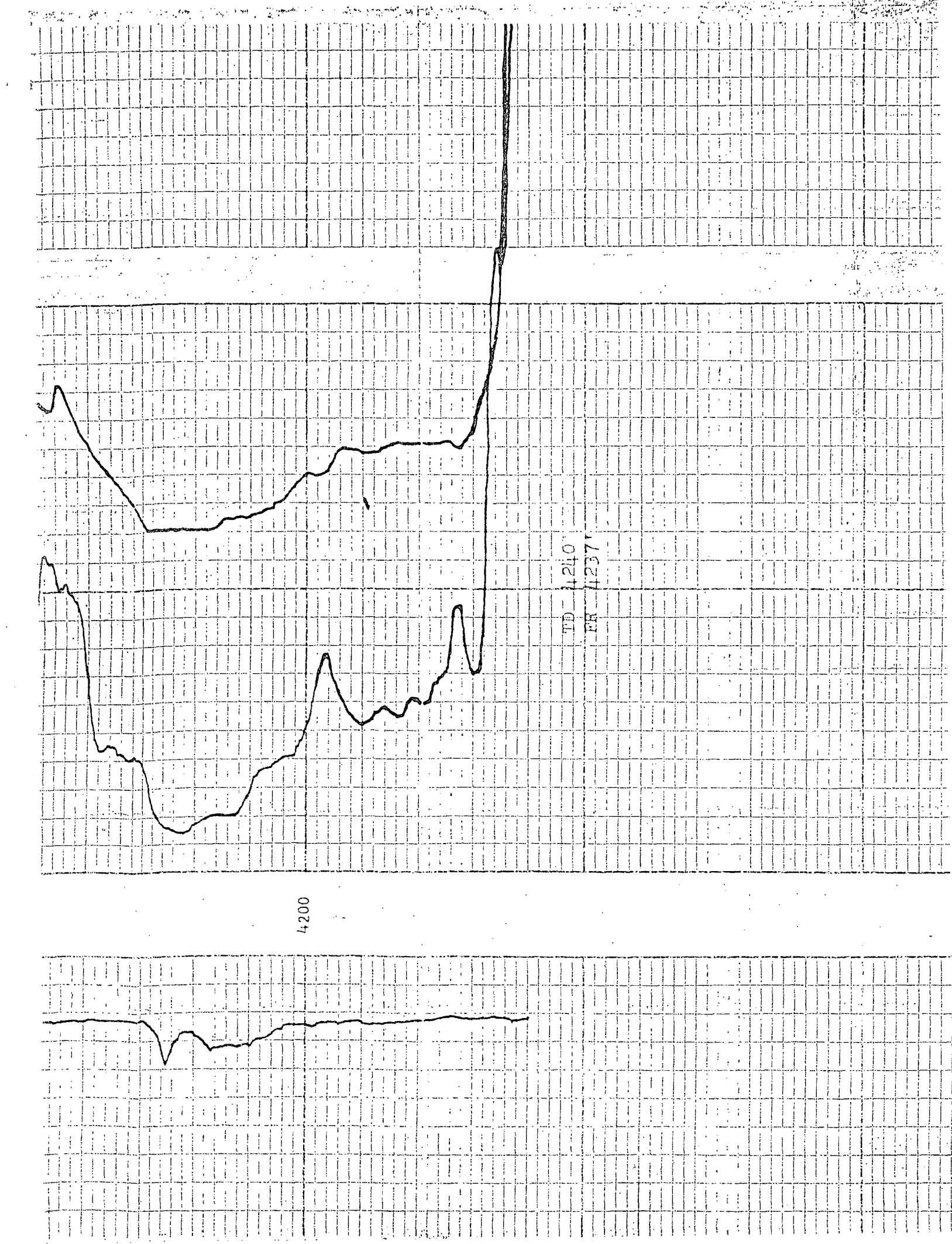
3900


3900
4000

4100




TD 4240'
ER 4237'
4200

23P

OLIPHANT LABORATORIES INC
NATIONAL BANK OF TULSA BUILDING
TULSA, OKLAHOMA

Temperature Log

FILING NO.

COMPANY O'NEILL - OLIPHANT

WELL REYNOLDS #1

FIELD STILLWATER

COUNTY CHURCHILL STATE NEVADA

LOCATION:
1150' NSL & 1050' EWL SW/4

SEC. 6 TWP. 19N RGE. 31E

OTHER SERVICES:

ELEVATIONS:
KB. 3906'
DF.
GL. 3895'

PERMANENT DATUM GL ELEV. 3895'
LOG MEASURED FROM KB 11.7' ABOVE GL
DRILLING MEASURED FROM KB

DATE	2-24-'64		
RUN NO.	ONE		
TYPE LOG	TEMP.		
DEPTH—DRILLER			
DEPTH—LOGGER	4237'		
BOTTOM LOGGED INTERVAL	4237'		
TOP LOGGED INTERVAL	1300'		
TYPE FLUID IN HOLE			
SALINITY PPM CL.			
DENSITY LB./GAL.			
LEVEL			
MAX. REC. TEMP.—DEG. F.	255.25°F.		
OPR. RIG TIME			
RECORDED BY	WILLETT		
WITNESSED BY			
LOCATION			

RUN NO.	BORE HOLE RECORD			CASING RECORD			
	BIT	FROM	TO	SIZE	WGT.	FROM	TO
	26"	0	135'	20"		0	126'
	19"	135'	350'	16"		0	340'
	15"	350'	1500'	10 3/4"		0	1459'
	—	1500'	3350'				

WELL DATA

TYPE WELL	GEOTHERMAL			
RUN NO.	ONE			
PROD. OR INJ. RATE				
WELL HEAD PRESSURE	NONE			

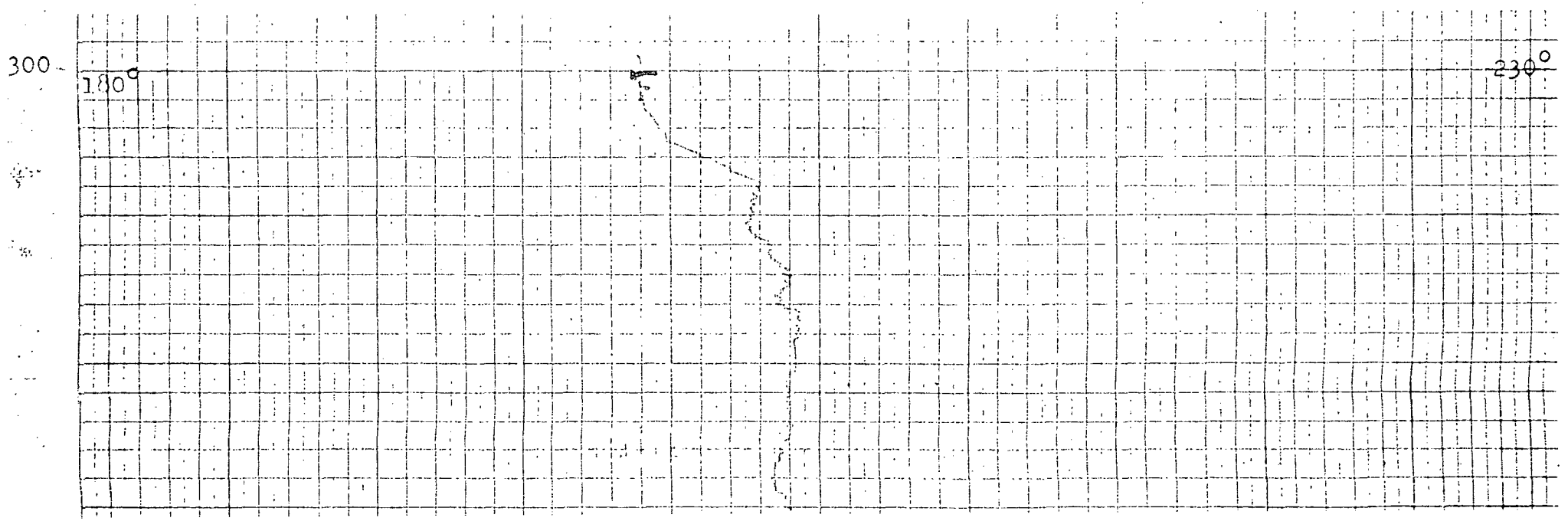
EQUIPMENT DATA

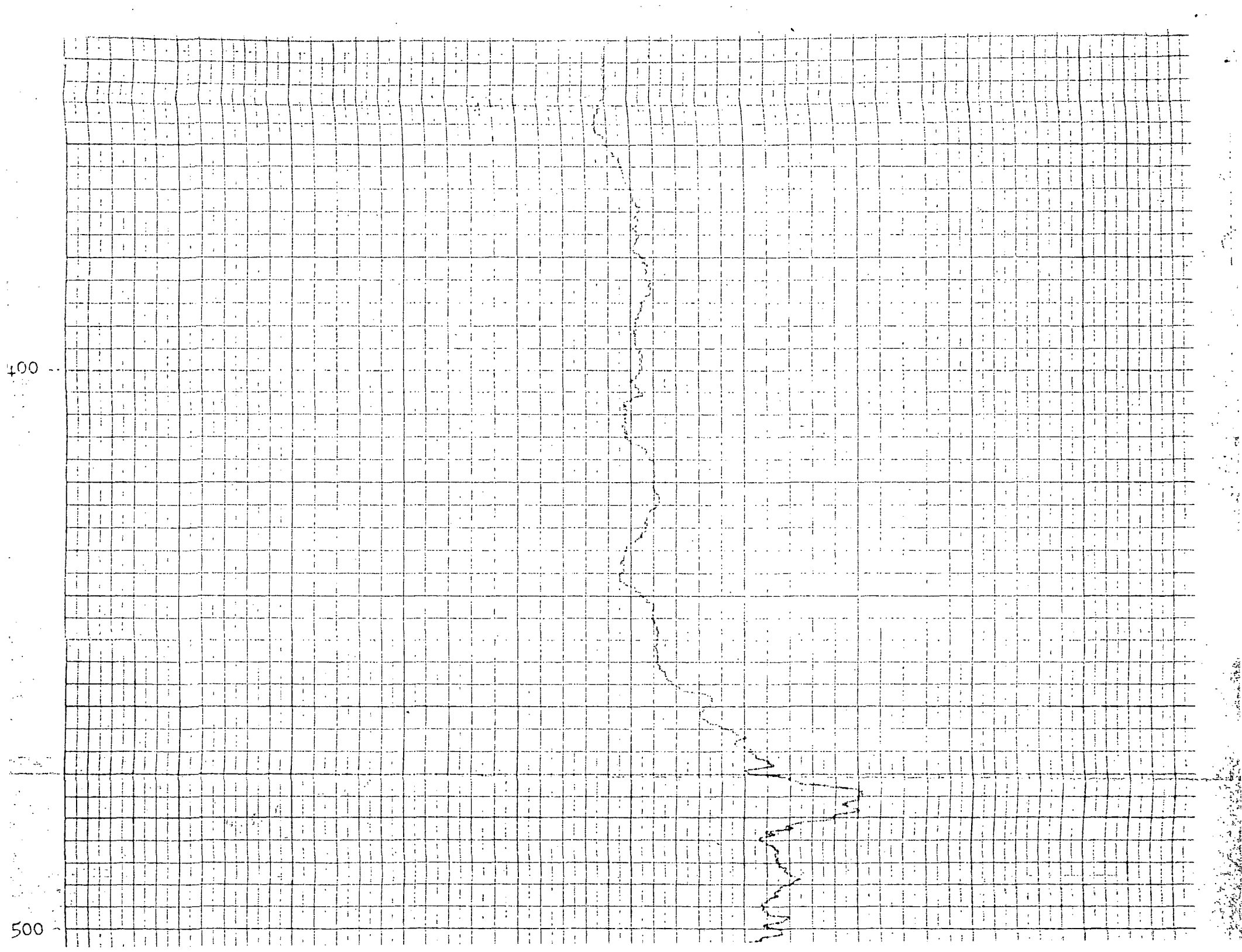
TYPE LOG	TEMP.			
RUN NO.	ONE			
TOOL MODEL NO.	LDAC 601C			
DIAM.	1¾"			

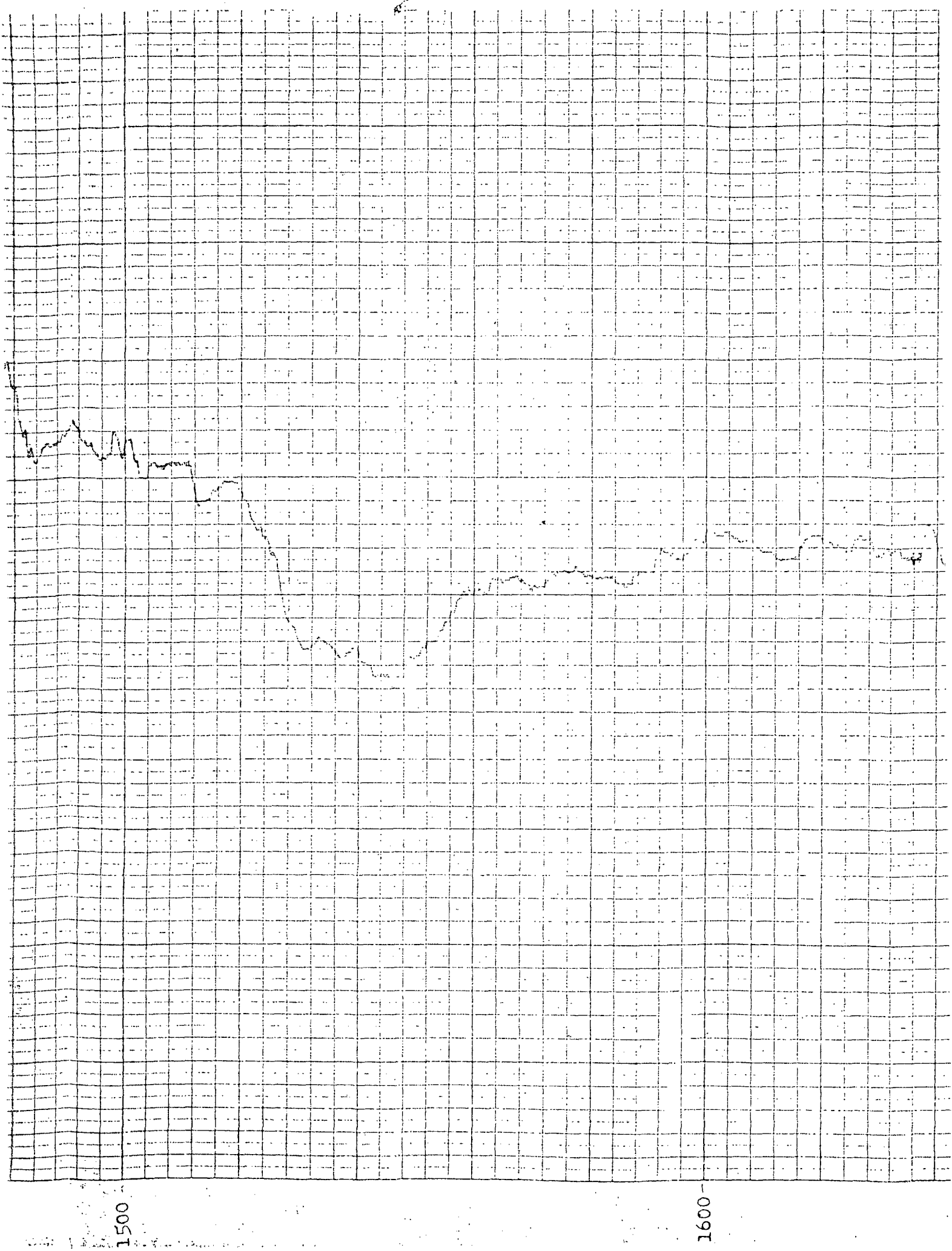
EQUIPMENT DATA				WELL DATA			
TYPE LOG	TEMP.			TYPE WELL	GEOTHERMAL		
RUN NO.	ONE			RUN NO.	ONE		
TOOL MODEL NO.	LDAC 6010			PROD. OR INJ. RATE			
DIAM.	1½"			WELL HEAD PRESSURE	NONE		
SPEED FT. / MIN.	20			TYPE & AMT. CEMENT			
T. C. - SEC.	1			LENGTH OF TIME:			
SCALE	5°=1"			PROD. OR INJECTING			
				SHUT IN			
				SINCE CEMENTING			
GENERAL				REFERENCE LITERATURE:			
HOIST TRUCK NO.							
INST. TRUCK NO.	23						
TOOL SERIAL NO.	159						

REMARKS:

STARTED LOGGING 9:50 P.M. On BOTTOM AT 11:40 P.M.
7½ HRS. SINCE LAST DRILLING.
5½ HRS. SINCE LAST CIRC.
Hg THERM. 255°




400
500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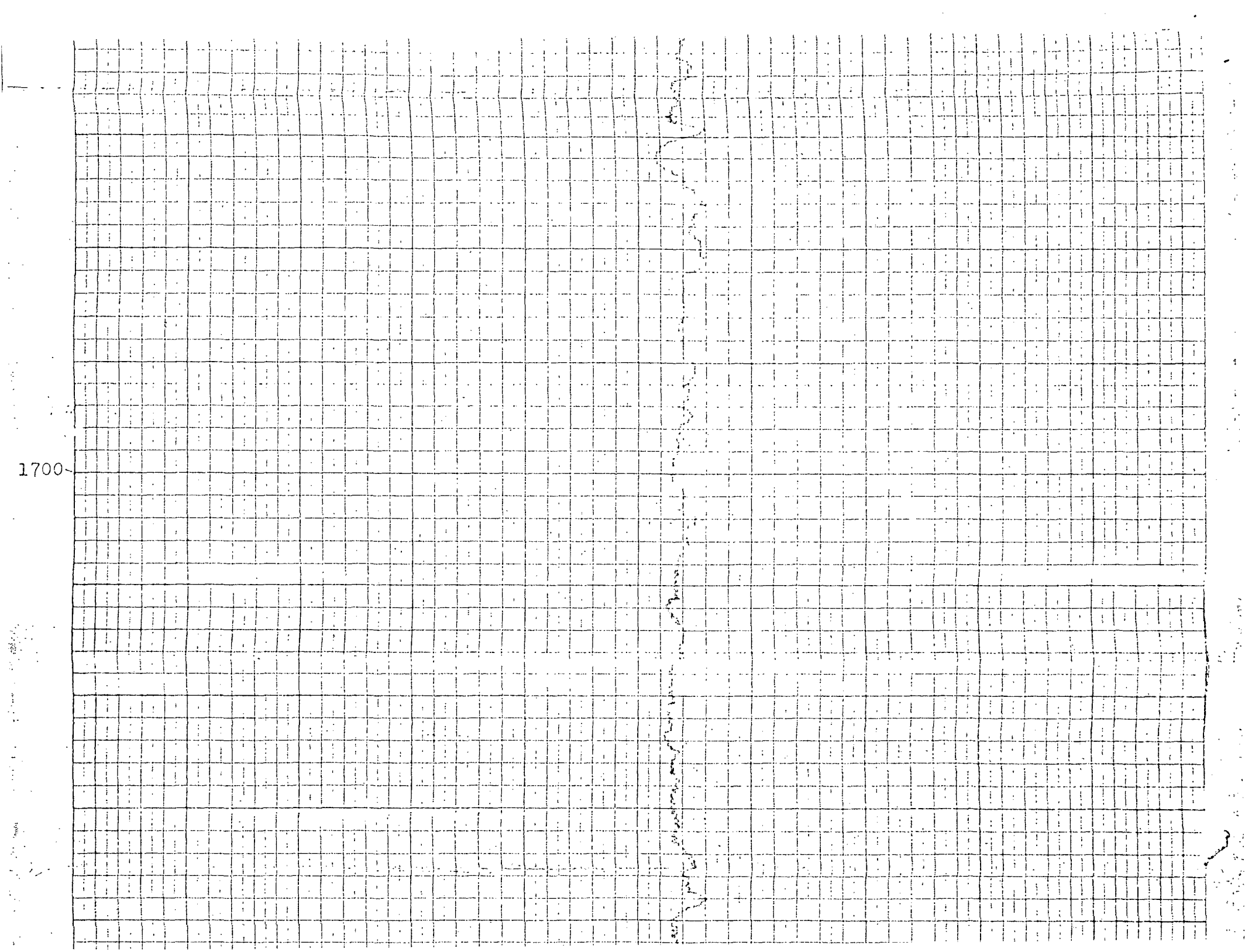
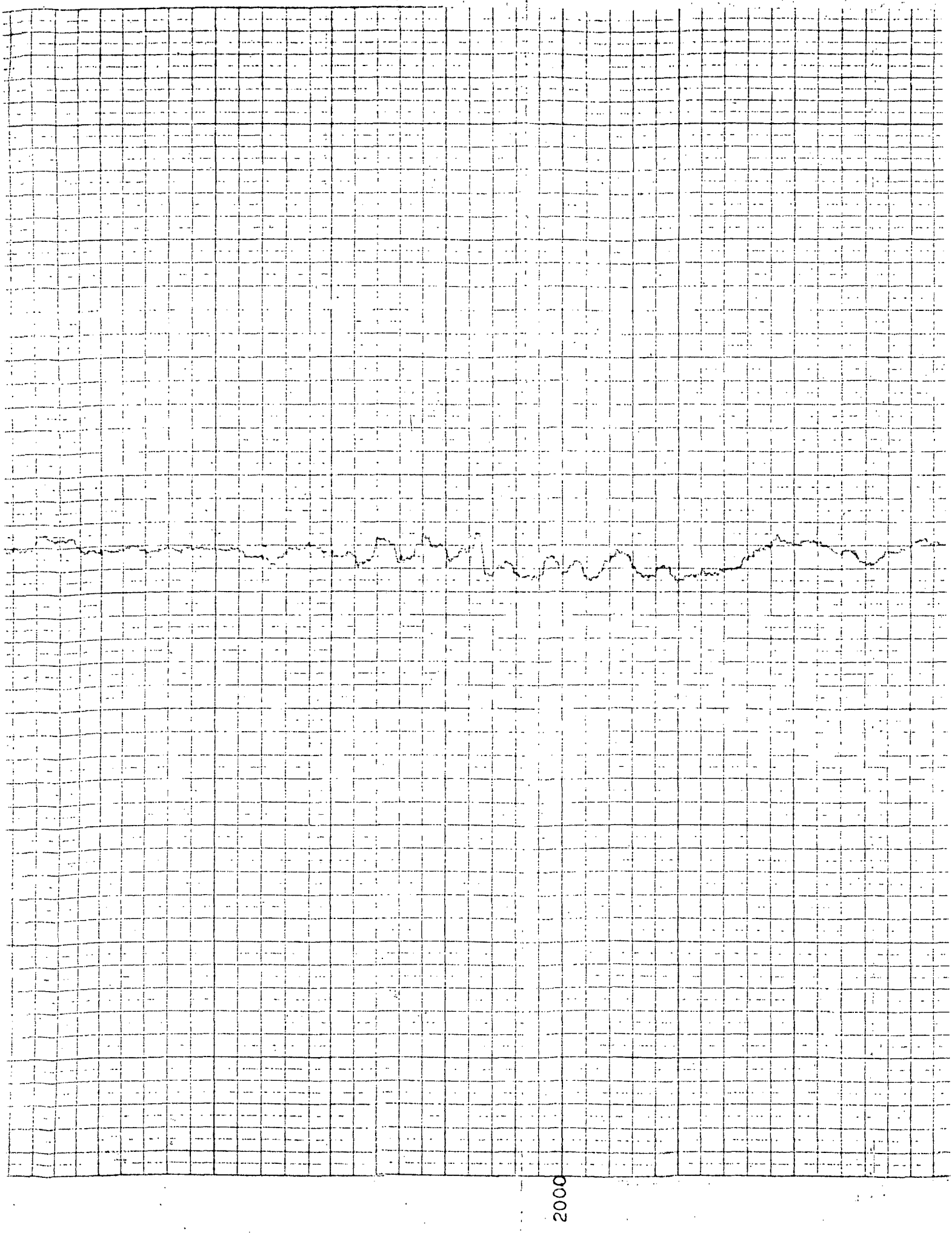
1600


1700

1800
1900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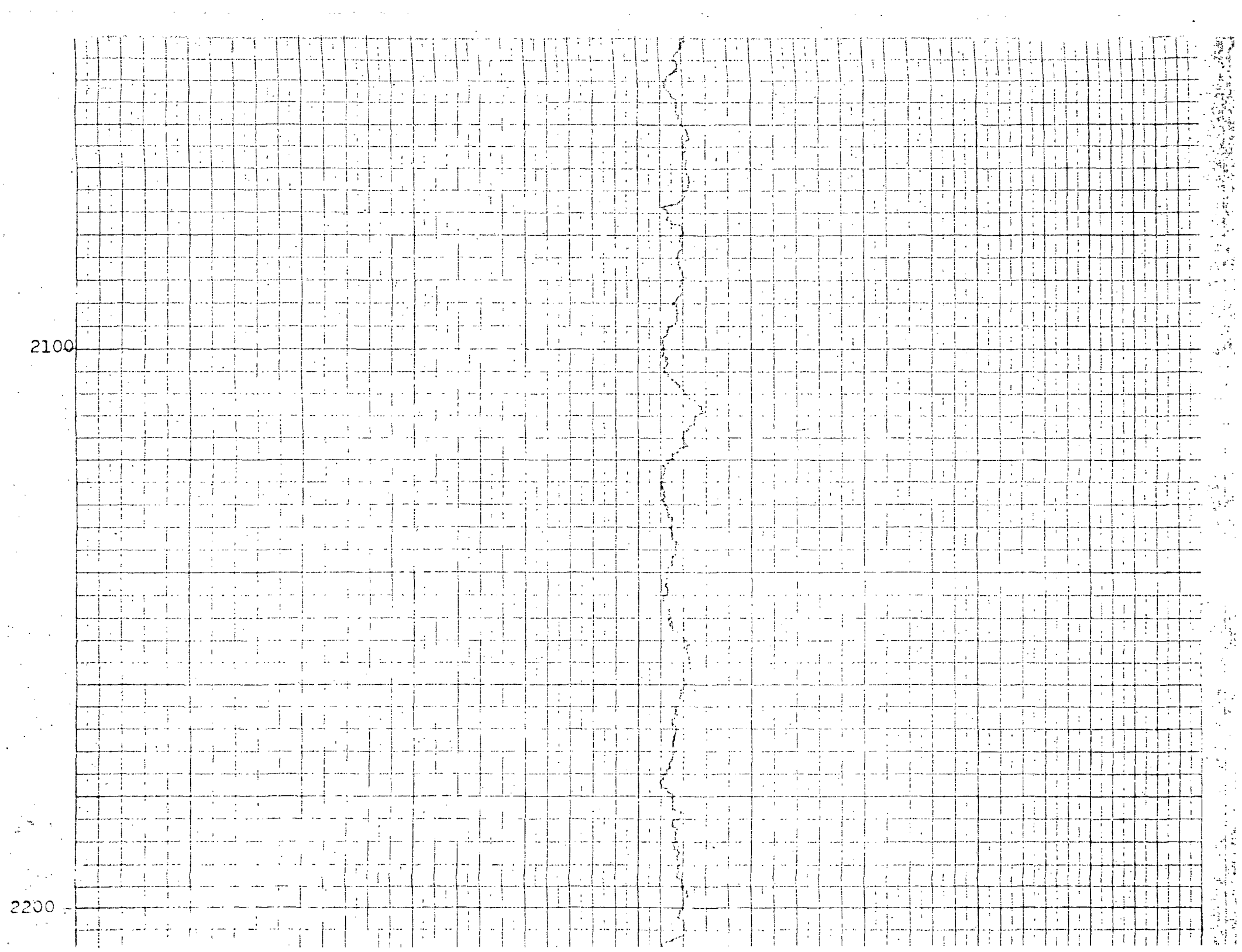
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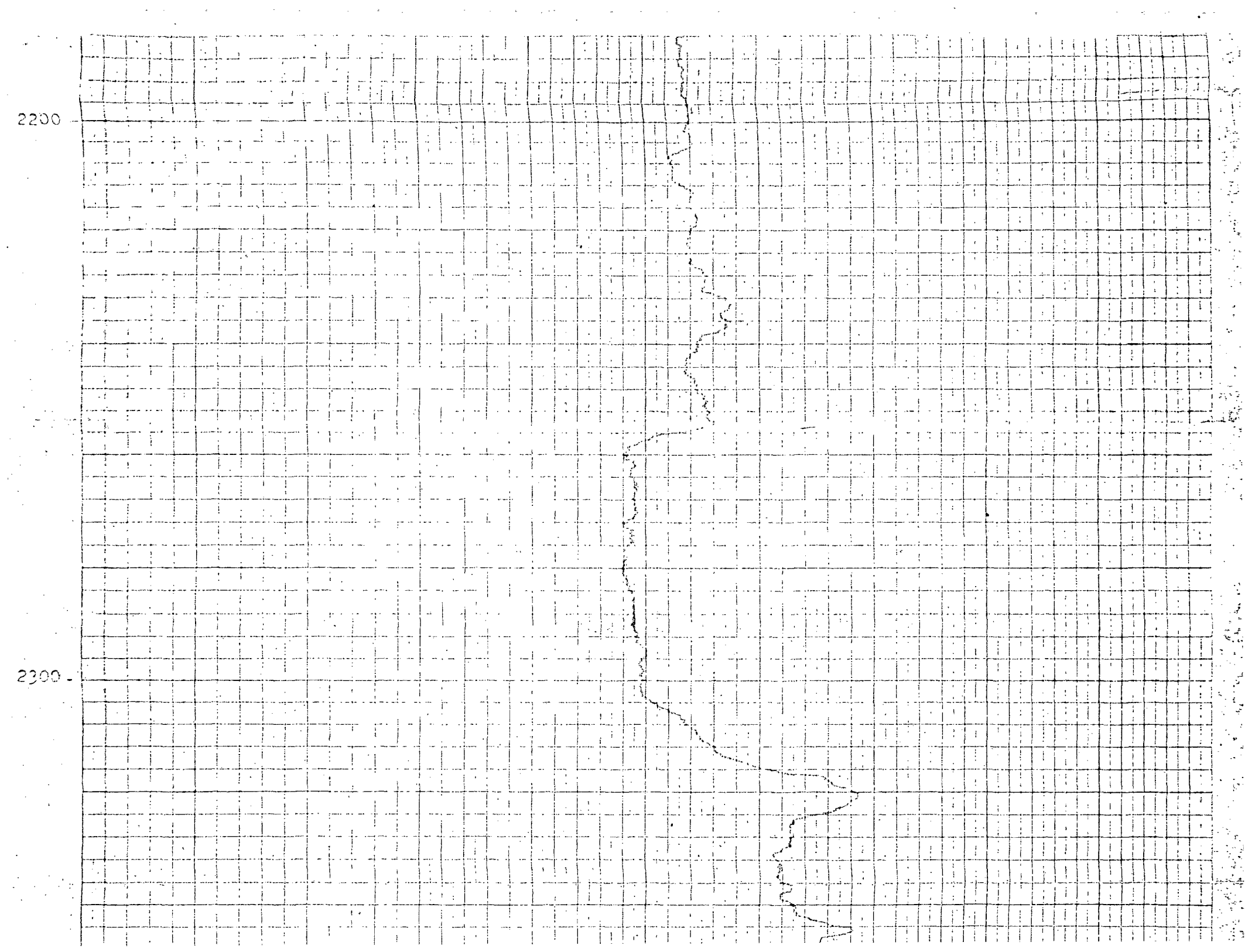
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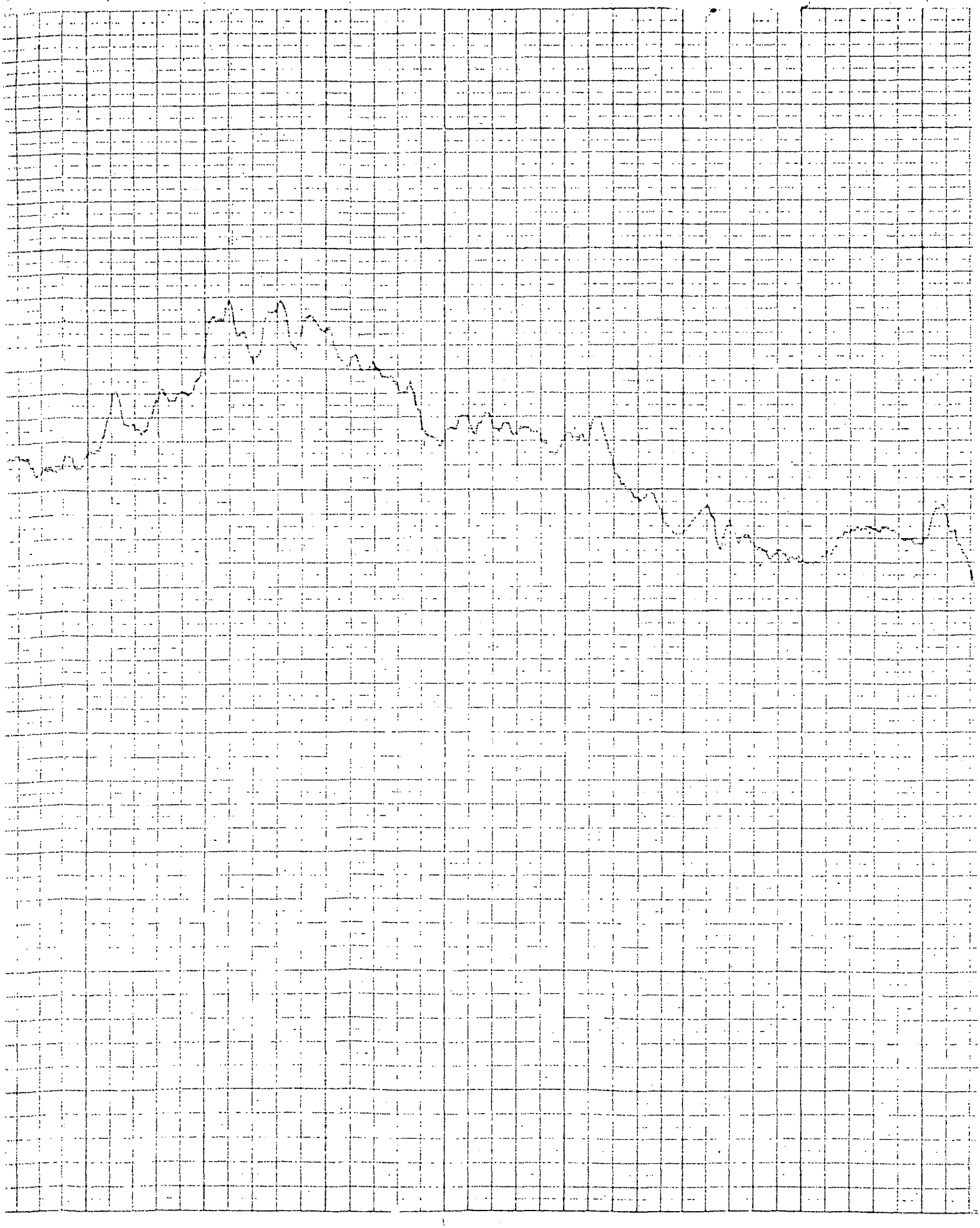

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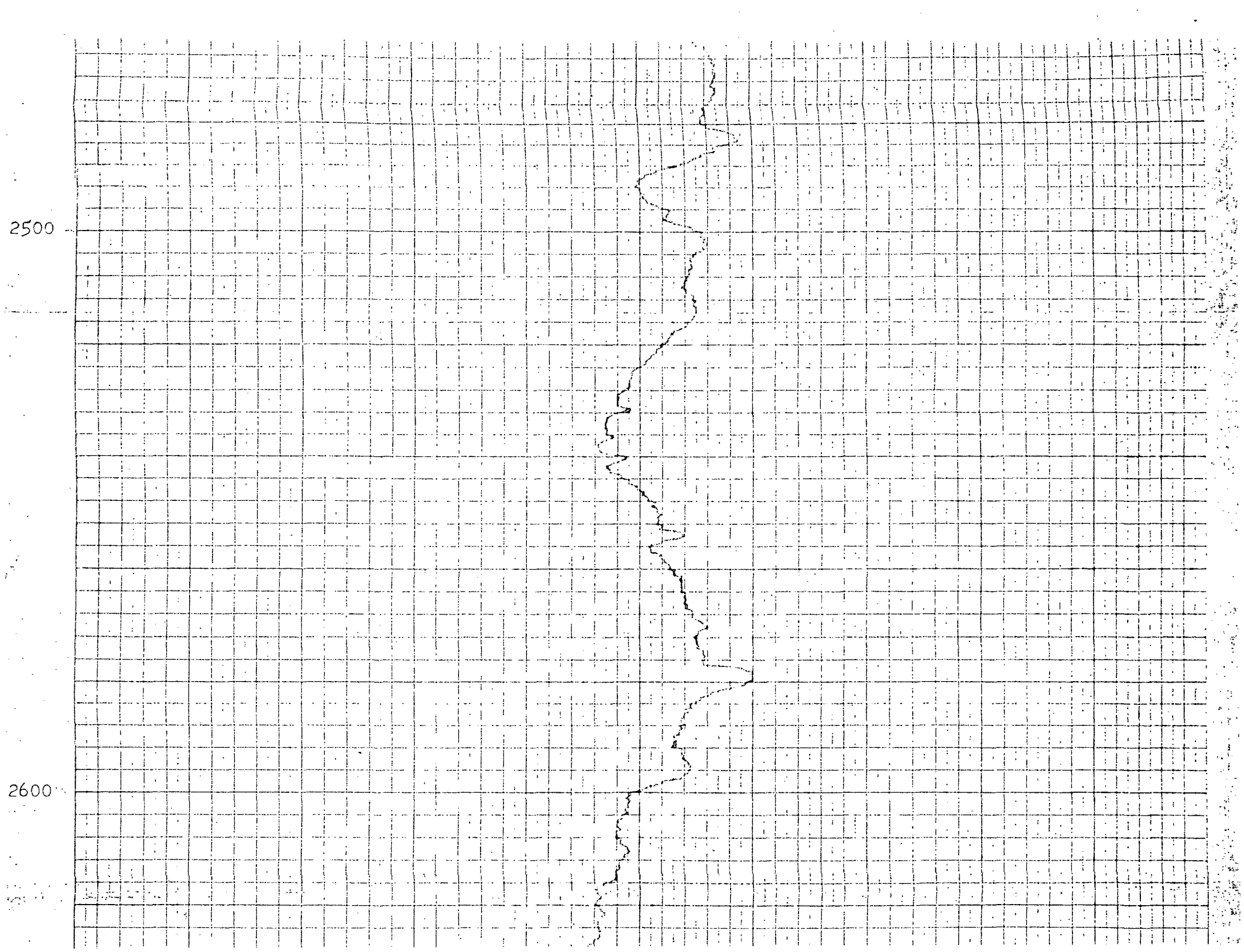
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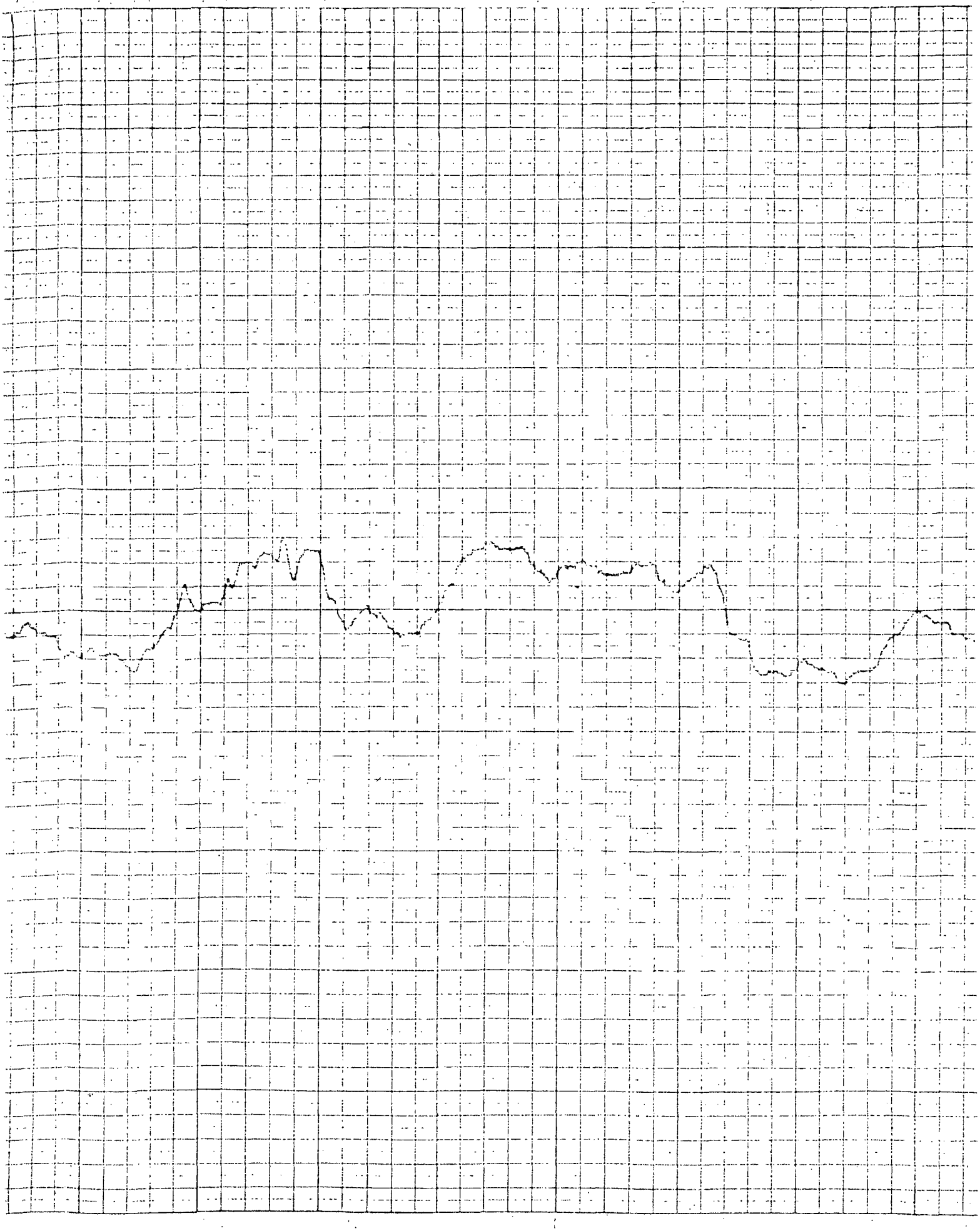

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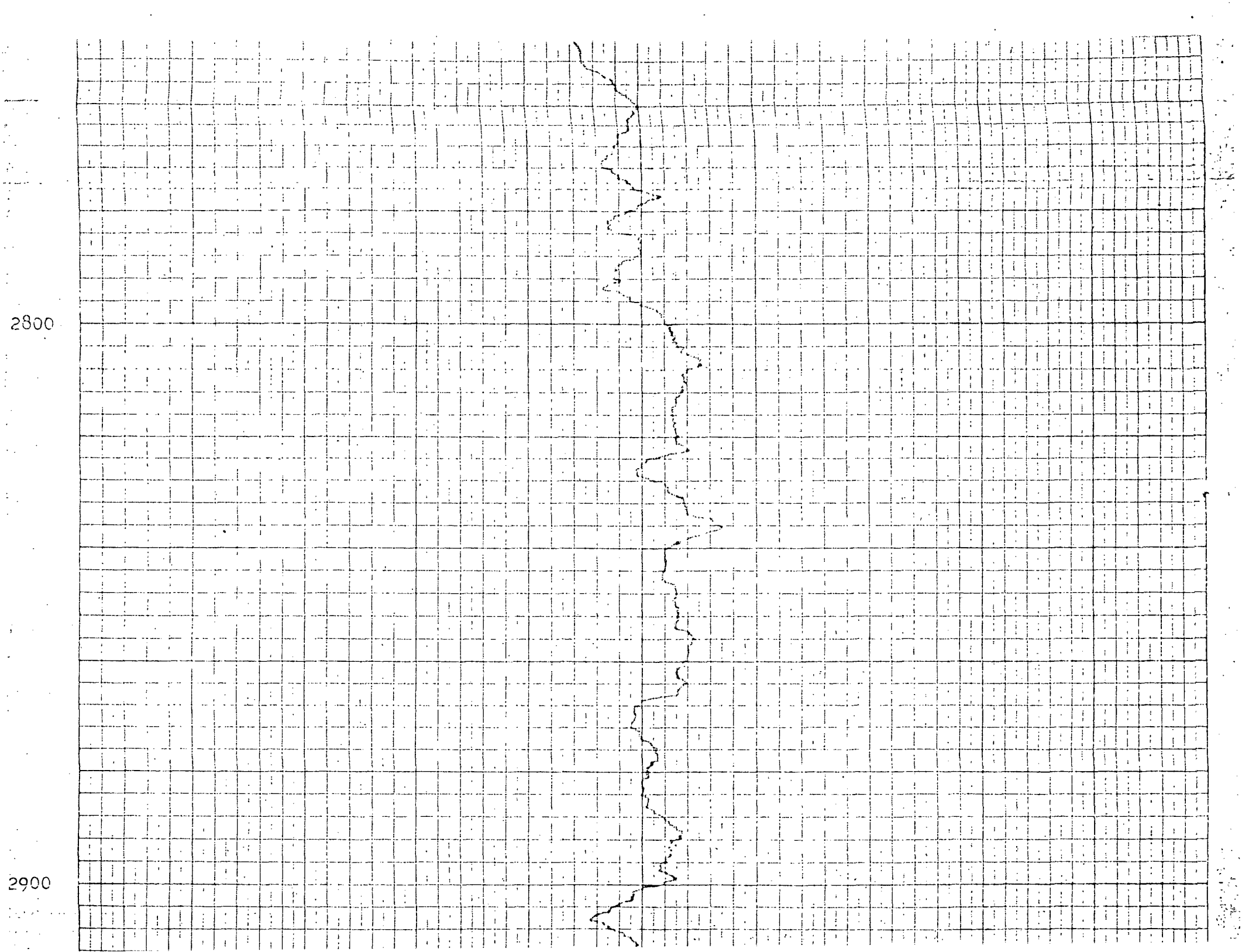
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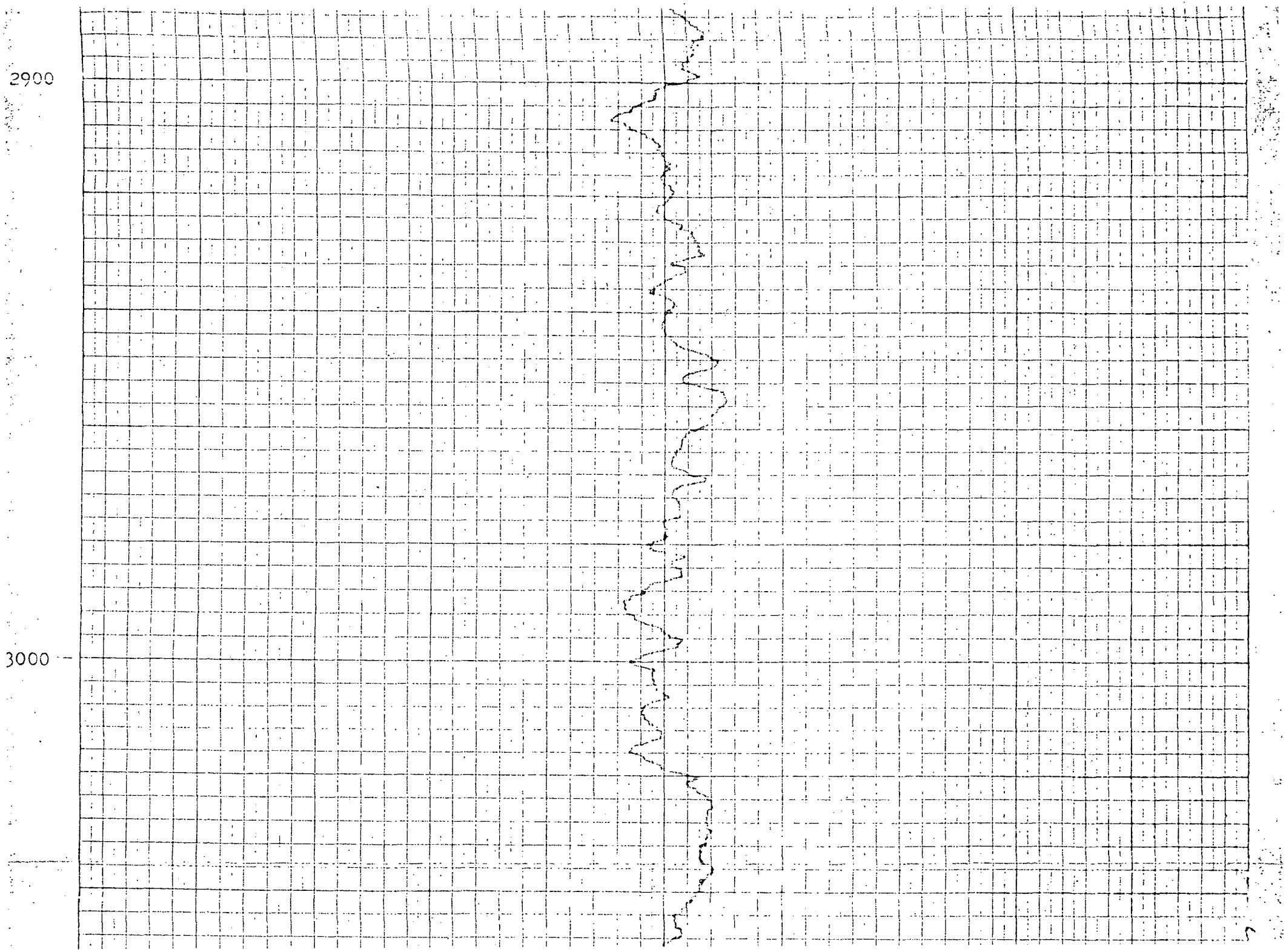
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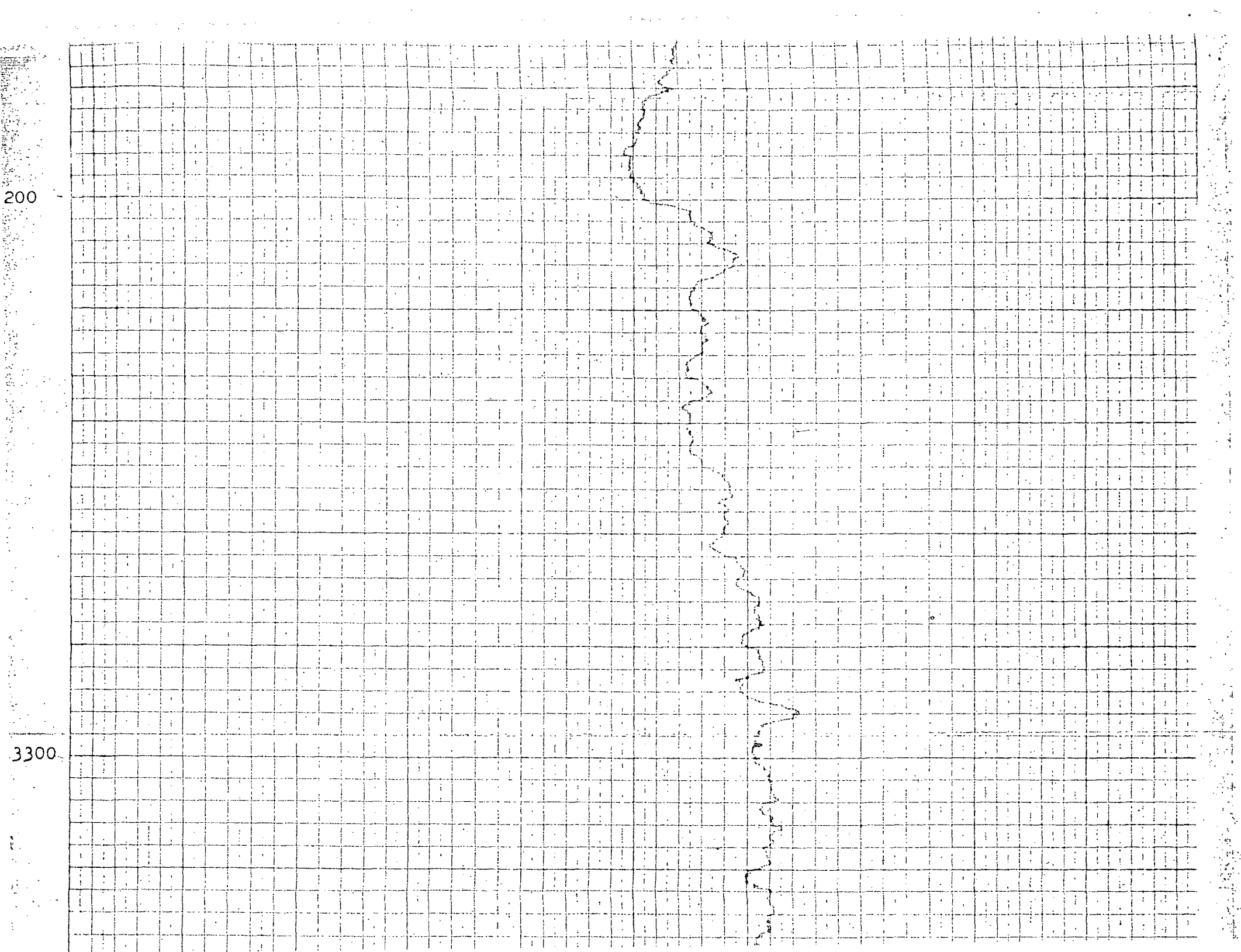
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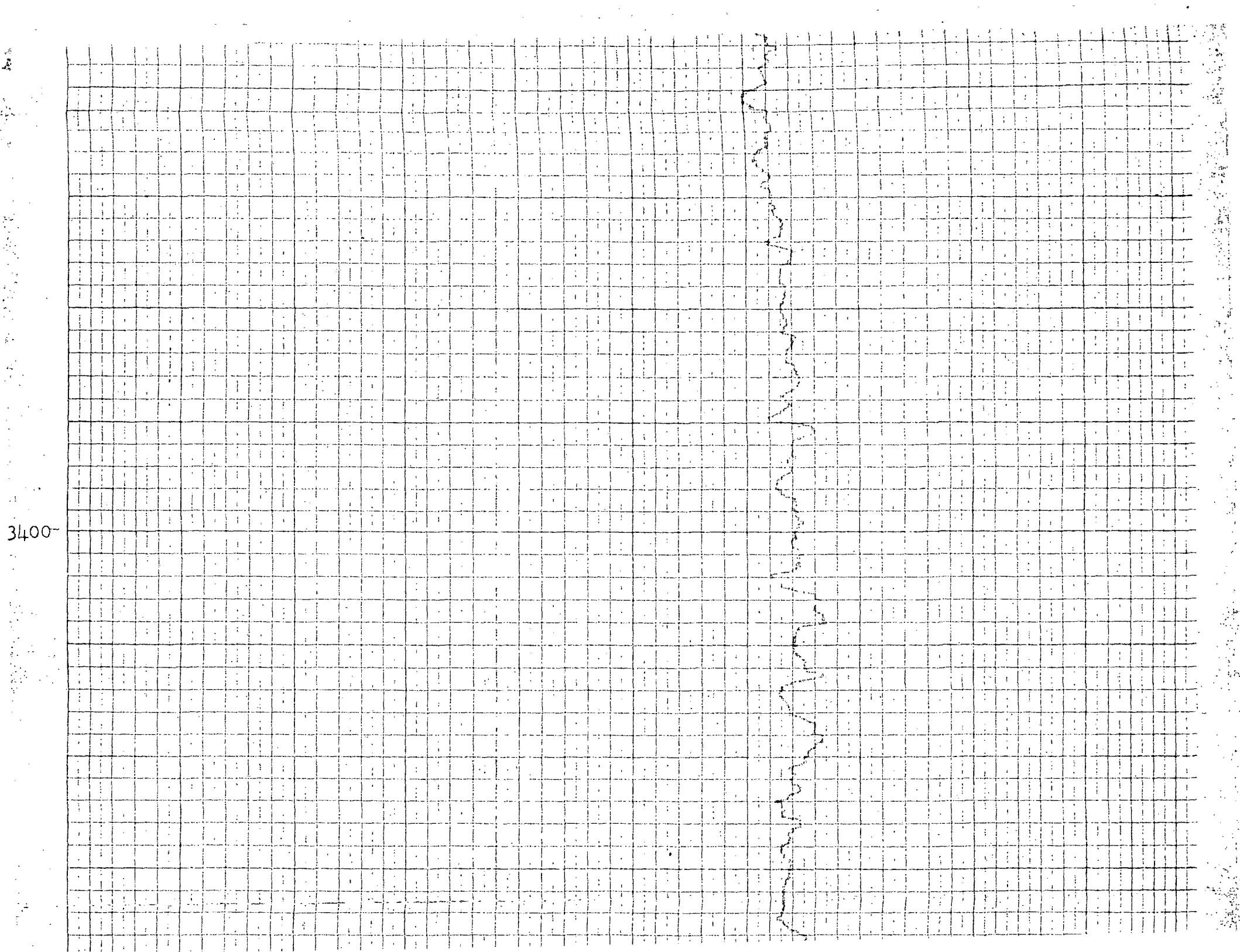
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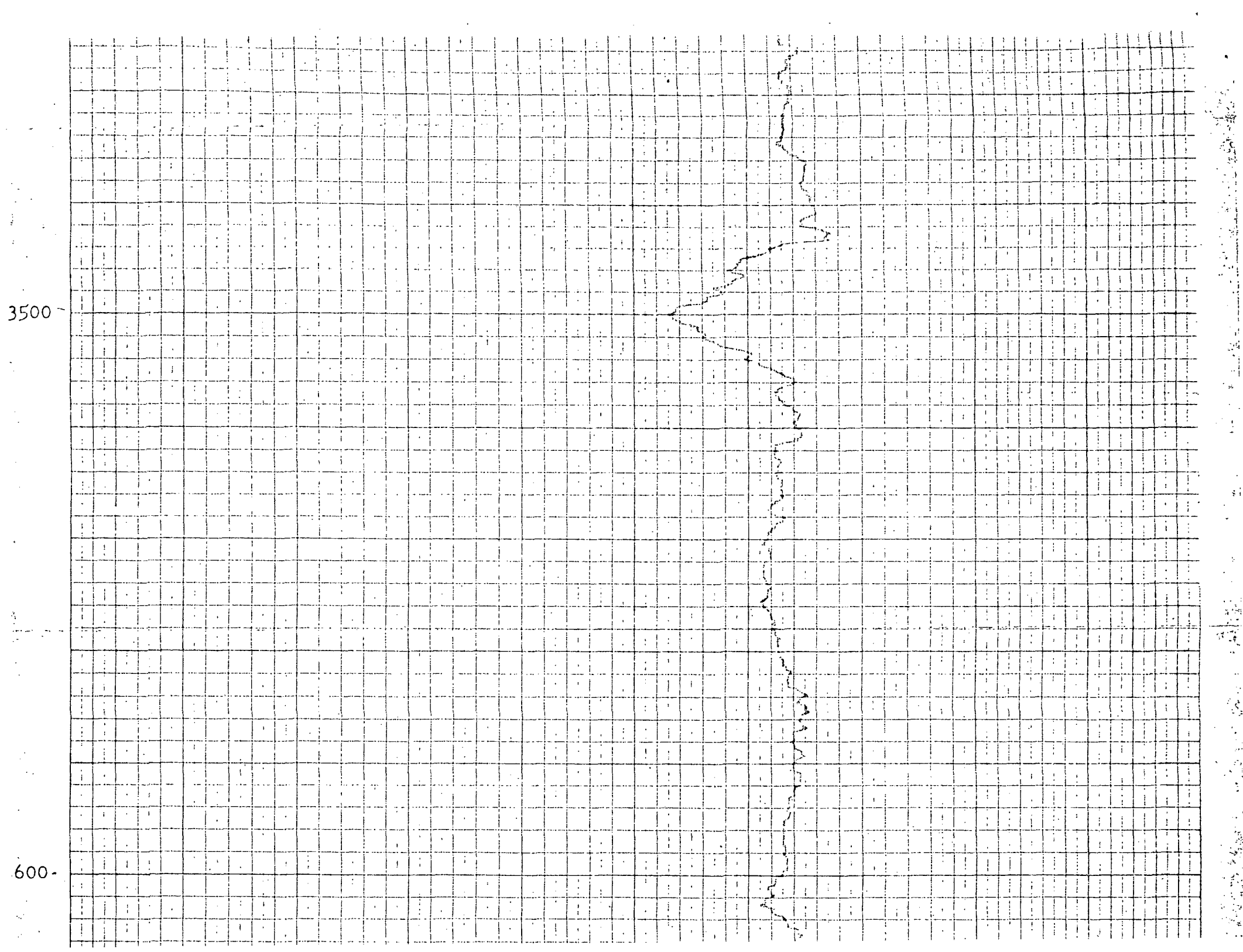
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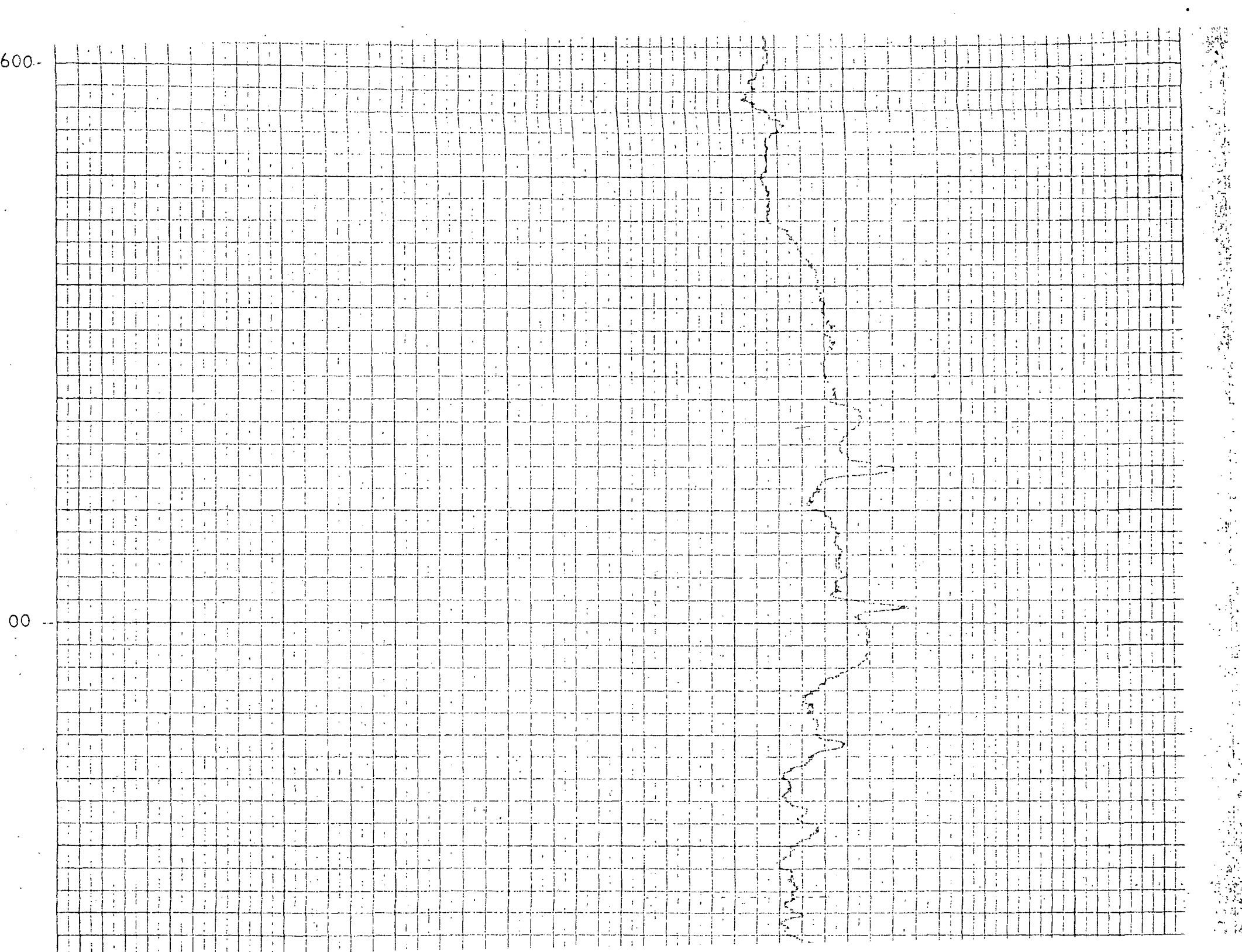
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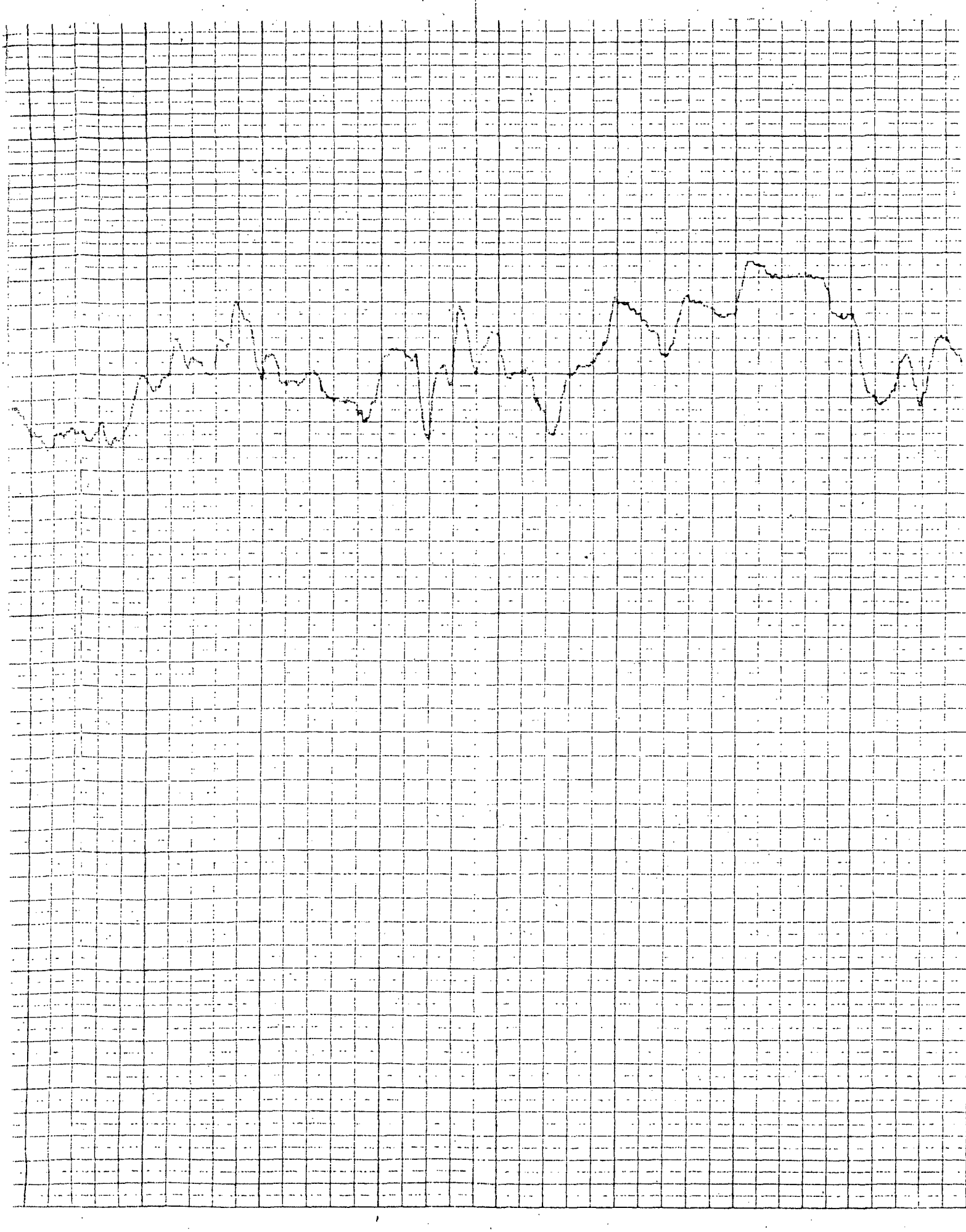
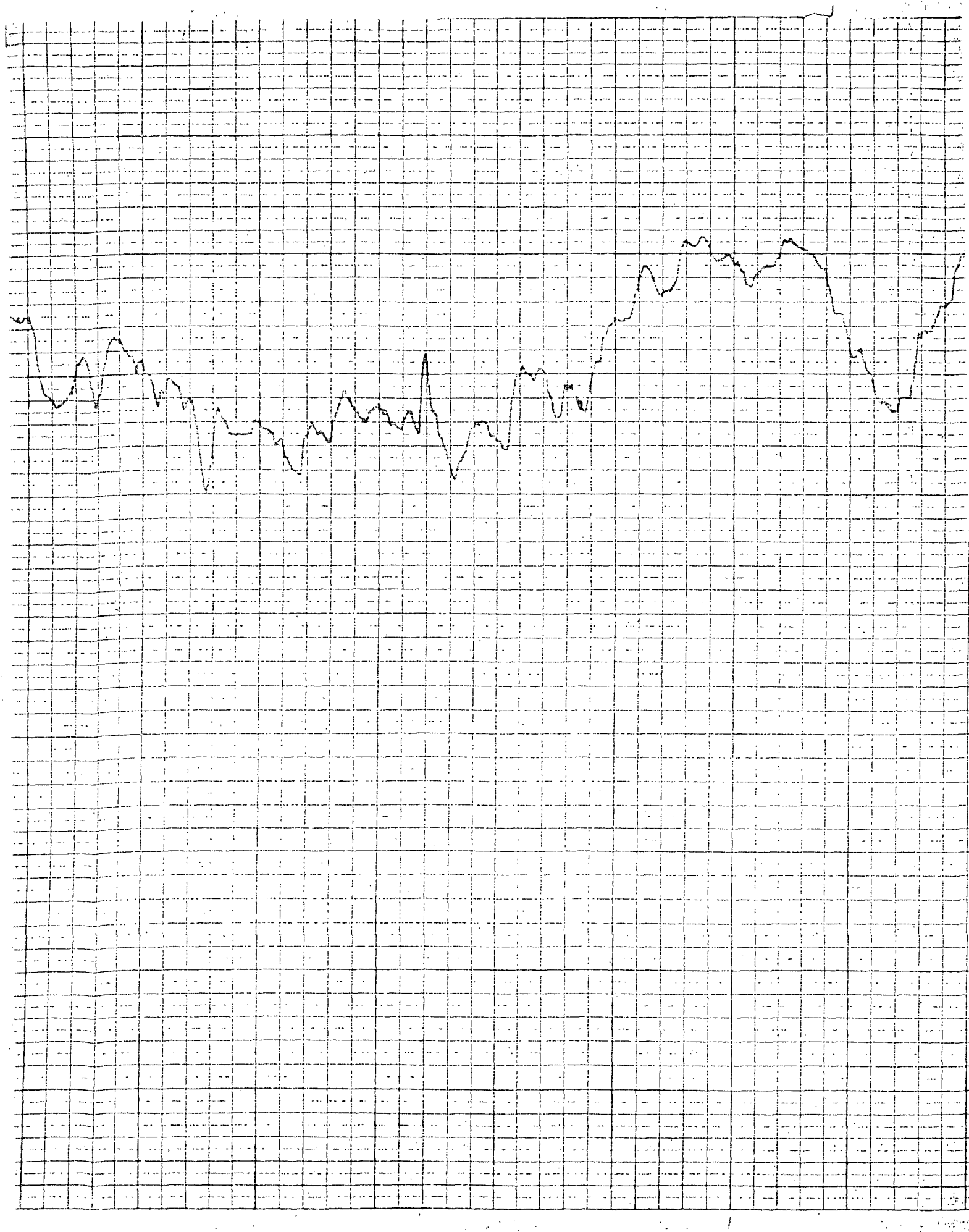
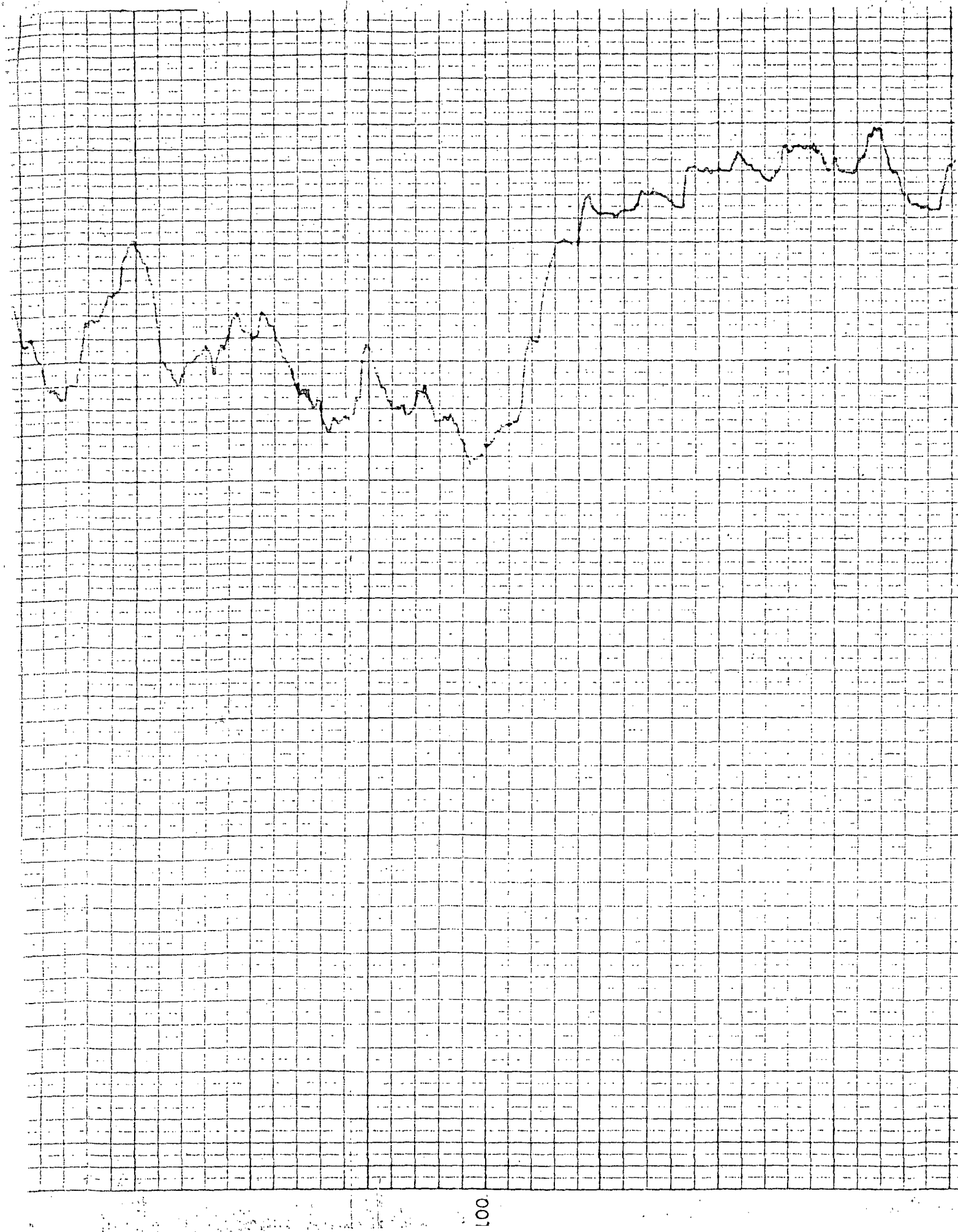





100


256° F.
ON BOTTOM 8 MIN.

Flow Time	1st Min. 5	2nd Min. 30	Date	2-23-64	Ticket Number	331922 - S	Legal Location Sec. - Twp. - Rng. 6 - 19N - 31E
Closed In Press. Time	1st Min. 20	2nd Min. -	Kind of Job	OPEN HOLE	Halliburton District	RIO VISTA	Lease Name
Pressure Readings	Field	Office Corrected	Tester	BOATMAN	Witness	BARR	
Depth Top Gauge	1424' Ft.	YES Blanked Off	Drilling Contractor	BRINKERHOFF DRILLING COMPANY			Well No.
BT. P.R.D. No.	325	12 Hour Clock	Elevation	-	Top Packer	1409'	
Initial Hydro Mud Pressure	691	727	Total Depth	3620'	Bottom Packer	-	
Initial Closed in Pres.	630	629	Interval Tested	2163' OPEN HOLE	Formation Tested	-	Test No.
Initial Flow Pres.	1 535 / 550 / 2 559		Casing or Hole Size	9 7/8"	Casing Perfs. Top	-	
					Casing Perfs. Bot.	-	
Final Flow Pres.	1 555 / 608 / 2 610		Surface Choke	1"	Bottom Choke	3/4"	
Final Closed in Pres.	-	-	Size & Kind Drill Pipe	5 9/16" F.H.	Drill Collars Above Tester I.D. - LENGTH	3.8" x 91'	Field Area STILLWATER
Final Hydro Mud Pressure	679	727	Mud Weight	9.8	Mud Viscosity	48	
Depth Cen. Gauge	Ft.	Blanked Off	Temperature °F Est. / °F Actual	279 & 290	Anchor Size & Length ID - OD 3 7/8" X	21'	
BT. P.R.D. No.		Hour Clock	Depths Mea. From	KELLY BUSHING	Depth of Tester Valve	1399' Ft.	
Initial Hydro Mud Pres.			Cushion TYPE / AMOUNT	NONE Ft.	Depth Back Pres. Valve	1394' Ft.	
Initial Closed in Pres.			Recovered	Feet of			Meas. From Tester Valve
Initial Flow Pres.	1 / 2		Recovered	Feet of			
Final Flow Pres.	1 / 2		Recovered	Feet of			
Final Closed in Pres.			Recovered	Feet of			
Final Hydro Mud Pres.			Oil A.P.I. Gravity	-	Water Spec. Gravity	-	County CHURCHILL
Depth Bot. Gauge	1427' Ft.	YES Blanked Off	Gas Gravity	-	Surface Pressure	0# psi	
BT. P.R.D. No.	273	12 Hour Clock	Tool Opened	2:45 AM A.M. P.M.	Tool Closed	3:40 AM A.M. P.M.	
Initial Hydro Mud Pres.	692	720	Remarks	Tool opened for a 5 minute first flow. Rotated tool for a 20 minute initial closed in pressure. Tool reopened with a good blow. Mud to the surface in 12 minutes - flowed hot muddy water the remainder of the test. Pulled loose and reversed out fluid.			State NEVADA
Initial Closed in Pres.	630	625					
Initial Flow Pres.	1 539 / 549 / 2 559						
Final Flow Pres.	1 553 / 608 / 2 609						
Final Closed in Pres.	-	-					
Final Hydro Mud Pres.	679	720					

Owner's District

FORMATION TEST DATA

8

SPECIAL PRESSURE DATA

Form No. 1296-R1


PRESSURE
TIME

Flow Time	1st Min.	2nd Min. 75	Date	2-14-54	Ticket Number	331918	
Closed In Press. Time	1st Min.	2nd Min.	Kind of Job	Production	Halliburton District	Rio Vista	
Pressure Readings	Field	Office Corrected	Tester	C. H. BOATMAN	Witness	JACK BARR	
Depth Top Gauge	1424 Ft.	yes Blanked Off	Drilling Contractor	BRINKERHOFF DRIG CO.			
BT. P.R.D. No.	1598	12 Hour Clock	Elevation	-	Top Packer	1412'	
Initial Hydro Mud Pressure	672	670	Total Depth	1582'	Bottom Packer		
Initial Closed in Pres.			Interval Tested	1412-1582'	Formation Tested		
Initial Flow Pres.	1 441	2 441	Casing or Hole Size	9 7/8"	Casing Perfs. Top / Bot.		
Final Flow Pres.	1 608	2 609	Surface Choke	1"	Bottom Choke	3/4"	
Final Closed in Pres.			Size & Kind Drill Pipe	5 9/10" FH	Drill Collars Above Tester I.D. - LENGTH	3.8" x 85'	
Final Hydro Mud Pressure	663	653	Mud Weight	8.9	Mud Viscosity	36	
Depth Cen. Gauge	Ft.	Blanked Off	Temperature °F Est. / °F Actual	112	Anchor Size & Length ID / OD	2 7/8" X 19'	
BT. P.R.D. No.		Hour Clock	Depths Mea. From	Kelly Bushing	Depth of Tester Valve	1402 Ft.	
Initial Hydro Mud Pres.			Cushion TYPE AMOUNT	Ft.	Depth Back Pres. Valve	Ft.	
Initial Closed in Pres.			Recovered	Feet of			
Initial Flow Pres.	1 2		Recovered	Feet of			
Final Flow Pres.	1 2		Recovered	Feet of			
Final Closed in Pres.			Recovered	Feet of			
Final Hydro Mud Pres.			Oil A.P.I. Gravity		Water Spec. Gravity		
Depth Bot. Gauge	1428 Ft.	yes Blanked Off	Gas Gravity		Surface Pressure	psi	
BT. P.R.D. No.	1597	12 Hour Clock	Tool Opened	1:45 PM A.M. P.M.	Tool Closed	3:00 PM A.M. P.M.	
Initial Hydro Mud Pres.	676	677	Remarks	Open tool with a medium blow, mud to surface in 13 mins. Flowing hot mud to water. 196° on surface flow. Pulled loose after test and reversed out hot water.			
Initial Closed in Pres.							
Initial Flow Pres.	1 445	2 444					
Final Flow Pres.	1 608	2 610					
Final Closed in Pres.							
Final Hydro Mud Pres.	665	651					

Legal Location Sec. - Twp. - Rng. 6-19N-31E | Lease Name REYNOLDS | Well No. 1 | Test No. 1 | Field Area STILLWATER | County CHURCHILL | State NEVADA

Lease Owner/Company Name J. I. O'NEILL OIL PROPERTIES | Owner's District MIDLAND

Meas. From Tester Valve

FORMATION TEST DATA

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Form No. 1296-R2

PRESSURE

TIME

Each Horizontal Line Equal to 1000 p.s.i.

	1st Min.	2nd Min.
Flow Time	4	39
Closed In Press. Time	15	-

Pressure Readings	Field	Office Corrected
Depth Top Gauge	2992 Ft.	no Blanked Off
BT. P.R.D. No.	325	12 Hour Clock
Initial Hydro Mud Pressure	1431	1453
Initial Closed in Pres.	1231	1257
Initial Flow Pres.	1089	1 1154 / 2 1110
Final Flow Pres.	1231	1 1140 / 2 1249
Final Closed in Pres.	-	-
Final Hydro Mud Pressure	1419	1415
Depth Cen. Gauge	Ft.	Blanked Off
BT. P.R.D. No.		Hour Clock
Initial Hydro Mud Pres.		
Initial Closed in Pres.		
Initial Flow Pres.		1 / 2
Final Flow Pres.		1 / 2
Final Closed in Pres.		
Final Hydro Mud Pres.		
Depth Bot. Gauge	3054 Ft.	yes Blanked Off
BT. P.R.D. No.	273	12 Hour Clock
Initial Hydro Mud Pres.	1479	1483
Initial Closed in Pres.	1277	1278
Initial Flow Pres.	1208	1 1222 / 2 1228
Final Flow Pres.	1270	1 1209 / 2 1271
Final Closed in Pres.	-	-
Final Hydro Mud Pres.	1479	1440

Date	2-18-64	Ticket Number	331920 S
Kind of Job	Open Hole	Halliburton District	Rio Vista
Tester	C.H. Boatman	Witness	Jack Barr
Drilling Contractor	Brinkerhoff Drlg Co.		
Elevation		Top Packer	3002'
Total Depth	3258'	Bottom Packer	3009'
Interval Tested	3258-3009'	Formation Tested	-
Casing or Hole Size	9 7/8"	Casing Perfs. Top / Bot.	
Surface Choke	1"	Bottom Choke	3/4"
Size & Kind Drill Pipe	5 9/16" FH	Drill Collars Above Tester (I.D. - LENGTH)	3.8" x 85'
Mud Weight	9.7	Mud Viscosity	36
Temperature	278 °F Est. / °F Actual	Anchor Size & Length ID / OD	5 3/4" X 249'
Depths Mea. From	Kelly bushing	Depth of Tester Valve	2987 Ft.
Cushion (TYPE / AMOUNT)	Ft.	Depth Back Pres. Valve	2982 Ft.
Recovered	Feet of		
Recovered 3048	Feet of drlg fluid & hot water		
Recovered	Feet of		
Recovered	Feet of		
Oil A.P.I. Gravity		Water Spec. Gravity	
Gas Gravity		Surface Pressure	psi
Tool Opened 10:22 AM	A.M. P.M.	Tool Closed 11:20 AM	A.M. P.M.

Remarks: Open tool with a medium blow decreasing to dead in 24 mins, dead remainder of test.

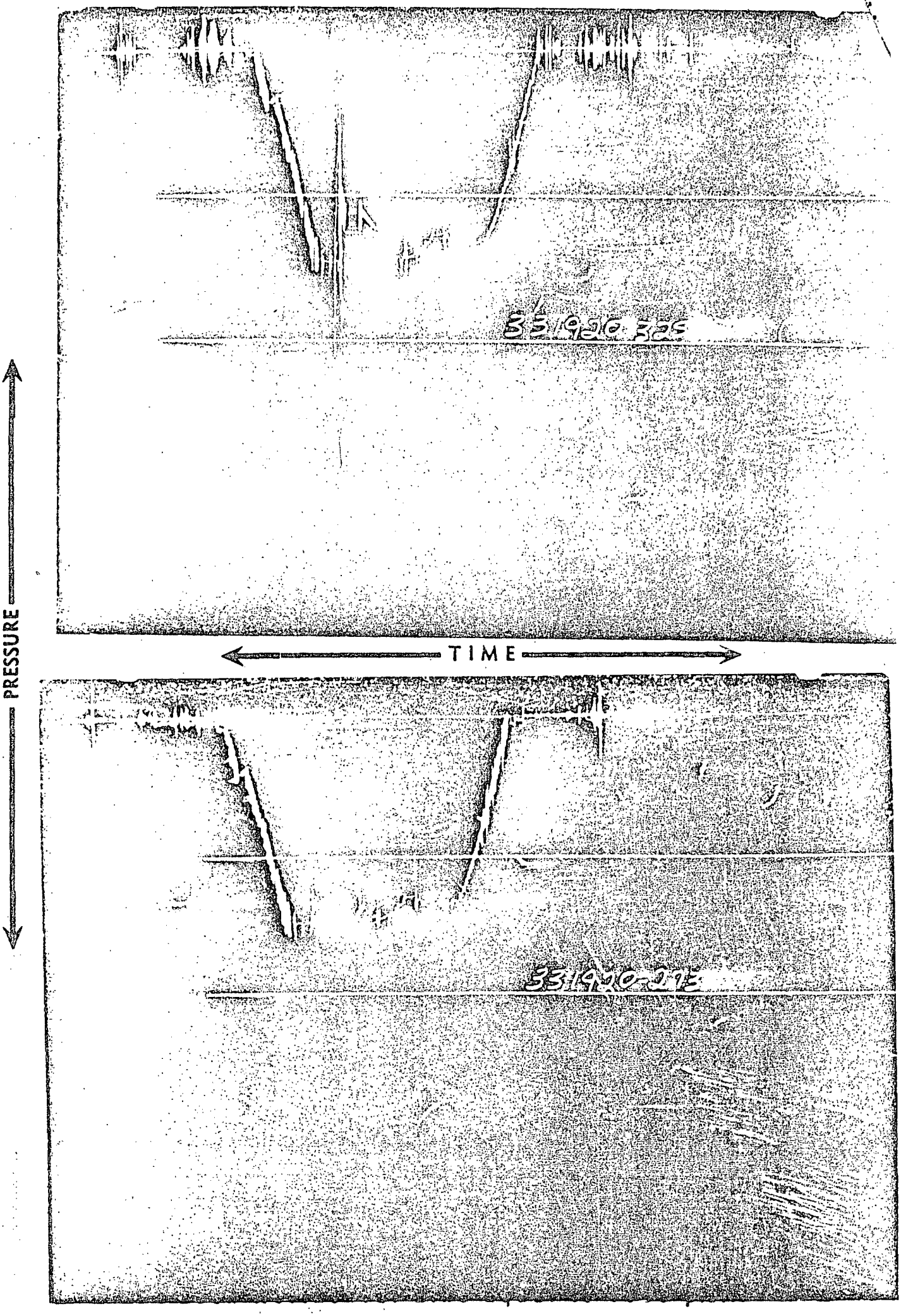
Legal Location Sec. - Twp. - Rng.: 6-19N-31E
Lease Name: REYNOLDS
Well No.: 1
Test No.: 2
Lease Owner/Company Name: J. I. O'NEILL JR
Owner's District: MIDLAND
Field Area: STILLWATER
County: CHURCHILL
State: NEVADA
Mea. From Tester Valve

FORMATION TEST DATA

8

SPECIAL PRESSURE DATA

Form No. 1296-R1


PRESSURE
TIME

1691

Form 6
Original—Commission—Well

NEVADA OIL AND GAS CONSERVATION COMMISSION

Box C, University Station
Reno, Nevada

PLUGGING RECORD

To be filed within fifteen (15) days after well has been plugged. Rule 204, NOGCC.

NOTE:
ALTHOUGH GEOTHERMAL WELLS ARE NOT COVERED BY THE NEVADA O & G COMMISSION WE WISH TO SUBMIT THIS FOR INFORMATION PURPOSES.

JOSEPH I. O'NEILL, JR. (Company or Operator) REYNOLDS (Lease)

Well No. 1 in WEST HALF of
Section 6 T 19N R 31E, M.D.B.M.
Field ..... County CHURCHILL
Permit No. .....

Date well plugged MARCH 2, 19 64

Was the well filled with mud-laden fluid according to regulations of the Nevada Oil and Gas Conservation Commission? YES

How was mud applied? PUMP Were plugs used? YES If so, show all shoulders left for casing, depth of each, and size of casing, size and kind of plugs used, and depths placed. Show also amount of cement and rock used.

Was notice given before plugging to Nevada Oil and Gas Conservation Commission? .....
Date ....., 19.....

4 JTS. 20" 94# H-40 ST&C : 125.73'	CEMENTED W/327 CU. FT. CEMENT CIRCULATED TO SURFACE LEFT IN HOLE
10 JTS. 16" 65# H-40 ST&C: 320.12	CEMENTED W/320 CU. FT. CEMENT CIRCULATED TO SURFACE LEFT IN HOLE
47 JTS. 10 3/4" 45.5 J-55 ST&C: 1441.06'	CEMENTED W/1125 CU. FT. CEMENT CIRCULATED TO SURFACE LEFT IN HOLE

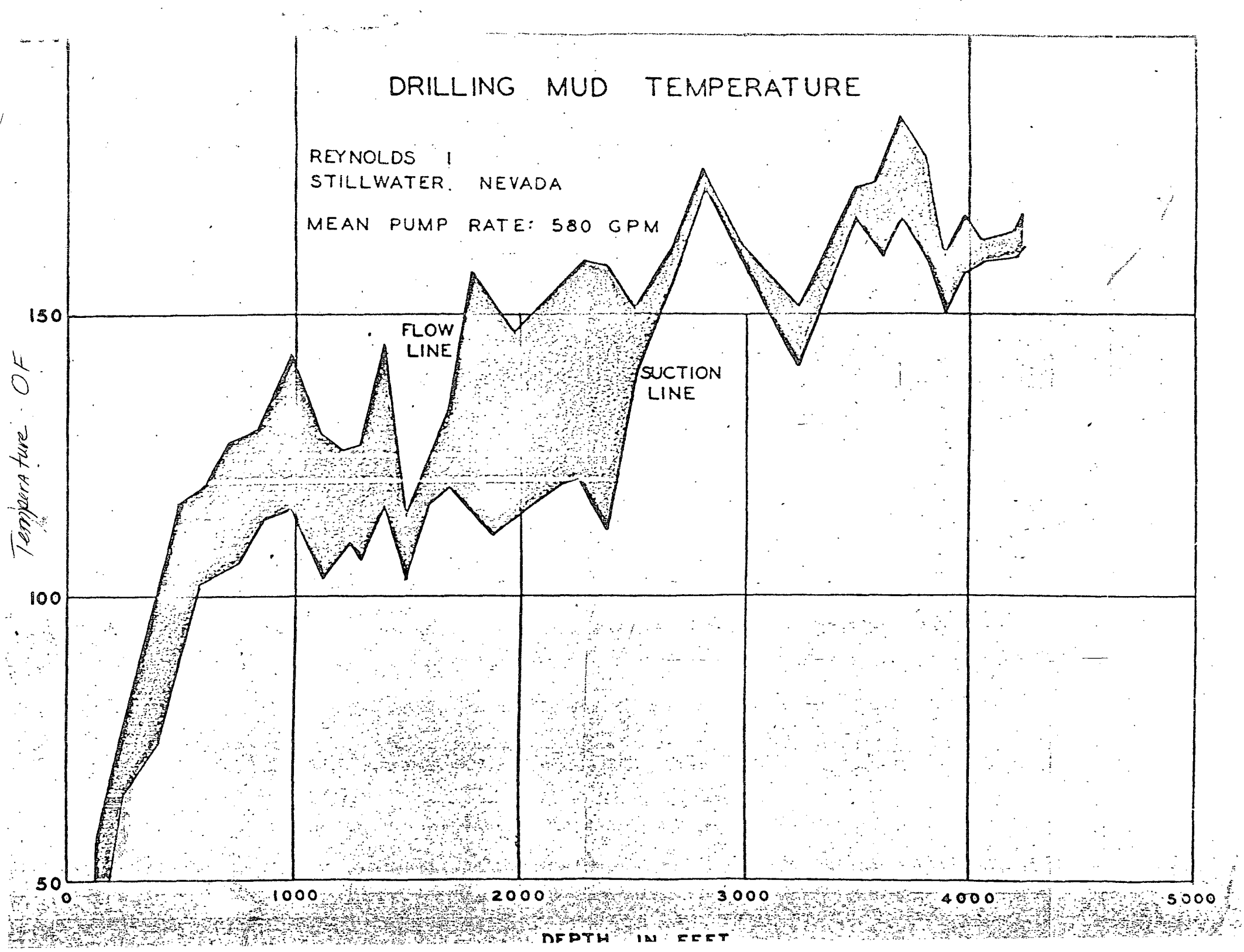
CEMENT PLUGS PLACED AS FOLLOWS:

PLUG #1	3200 TO 3100'	50 CU. FT.
PLUG #2	2325 TO 2225'	50 CU. FT.
PLUG #3	1550 TO 1350'	100 CU. FT.
PLUG #4	900 TO 700'	100 CU. FT.
PLUG #5	200 TO SURFACE	100 CU. FT.

P & A - MARCH 2, 1964

I hereby certify that the information given herewith is a true, correct and complete record of this well and all work done on it so far as can be determined from the available records.

Name G. W. Anderson
Position DRILLING & PRODUCTION SUPERINTENDENT
Company or Operator JOSEPH I. O'NEILL, JR.
Address 410 WEST OHIO
City MIDLAND State TEXAS
Date APRIL 7, 19 64


DRILLING MUD TEMPERATURE
REYNOLDS 1
STILLWATER, NEVADA
MEAN PUMP RATE: 580 GPM
FLOW LINE
SUCTION LINE
Temperature - OF
150
100
50
0
1000
2000
3000
4000
5000
DEPTH IN FEET