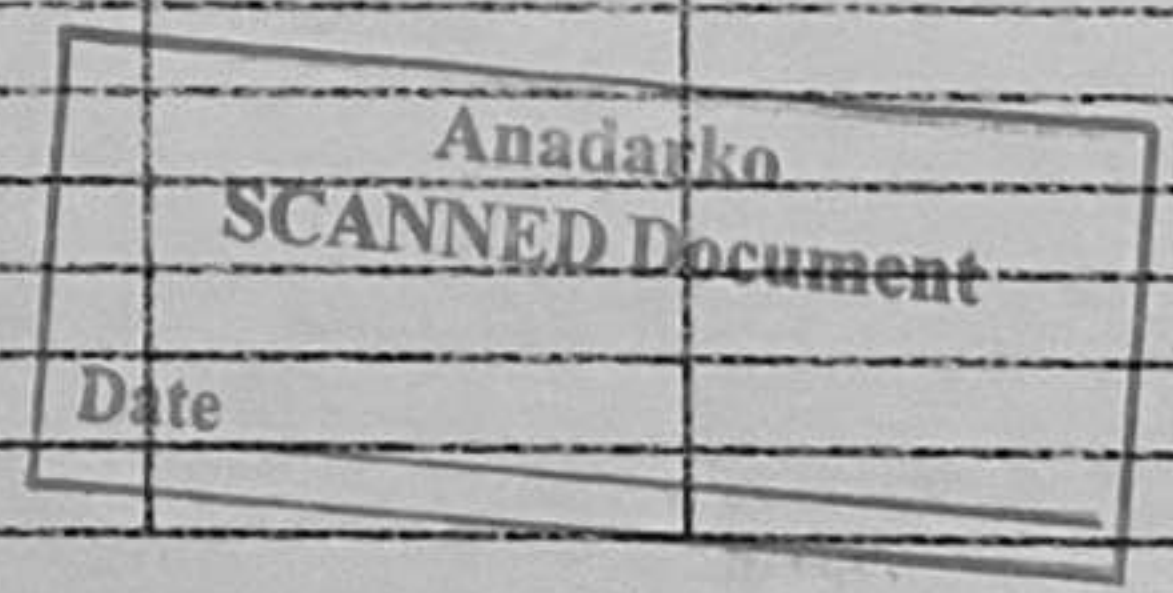


ACOUSTIC CEMENT
BOND LOG

CO. KERR-McGEE ROCKY MOUNTAIN WELL GRANADOS 4-3 FLD WATTENBERG CTY WELD STATE COLORADO FILING NO	COMPANY	KERR-McGEE ROCKY MTN. CORP.		
	WELL	GRANADOS 4-3		
	FIELD	WATTENBERG		
	COUNTY	WELD	STATE	COLORADO
	LOCATION:	NW/NW		OTHER SERVICES PERFORATE CODELL & NIOBRARA A & B API #: 05- 123-21647
	SEC 3	TWP 5N	RGE 64W	
	PERMANENT DATUM	G. L.	ELEVATION 4620	K. B. 4632
	OG MEAS. FROM K. B.	12 FT. ABOVE PERM DATUM		D. F. 4631
	DRILLING MEASURED FROM	K. B.		G. L. 4620

DATE & TIME LOGGED	10/13/2003	TYPE FLUID	WATER
LOG NO	ONE	DENSITY	1.1
DEPTH-DRILLER	6935	FLUID LEVEL	FULL
DEPTH-LOGGER	6925	CEM TOP EST	3194
TIME LOGGED INTERVAL	6921	EQUIP-LOC	1 GREELEY
TOP LOGGED INTERVAL	3058	RECORDED BY	G. ZACK
MAX. TEMP. F.	260	WITNESSED BY	L. CAMP

CEMENTING DATA	SURFACE	PROTECTION	PRODUCTION	LINER
DATE/TIME CEMENTED				
PRIMARY SQUEEZE				
EXP. COMP. STRENGTH				
CEMENT VOLUME				
CEMENT TYPE/WEIGHT				
FORMULATION				
MUD TYPE/WEIGHT				



RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO
	12.25	SURFACE	500	8 5/8	24	SURFACE	500
2	7 7/8	500	6935	4 1/2	11.6	SURFACE	6958

FOLD HERE

SERVICE TICKET NO.: 3812

API NO.: 0512321647

PGM VERSION: K, K3

THE WELL NAME, LOCATION CEMENTING DATA & BOREHOLE DESCRIPTION FURNISHED BY CLIENT

CEMENTING DATA

CEMENT PUMPED										BBL/MIN @		PSI				/JOINT FROM		TO			
PRECEDING FLUID										VOLUME		BBL		CENTRALIZERS		/JOINT FROM		TO			
RETURNS? FULL										PARTIAL		NONE				/JOINT FROM		TO			
PIPE ROTATED/RECIP. DURING PUMPING?										YES		NO									
										AFTER PLUG DOWN?		YES		NO				/JOINT FROM		TO	
PLUG BUMPED?										YES		NO		SCRATCHERS		/JOINT FROM		TO			
PLUG LANDING PRESSURE:										PSI						/JOINT FROM		TO			
PRESSURE HELD										PSI		HOURS AFTER PUMPING									

EQUIPMENT DATA

GAMMA		NEUTRON		ACOUSTIC	
RUN NO.	1	RUN NO.		RUN NO.	1
SERIAL NO.	B2	SERIAL NO.		SERIAL NO.	B2
MODEL NO.		MODEL NO.		MODEL NO.	
DIAMETER	2 1/8	DIAMETER		NO OF CENT.	2
DETECTOR MODEL NO.		LOG TYPE		SPACING	3
TYPE	SCINT	SOURCE TYPE			
LENGTH		SERIAL NO.			
DISTANCE TO SOURCE		STRENGTH			

LOGGING DATA

GENERAL					GAMMA		NEUTRON		ACOUSTIC	
RUN	DEPTHS		WELLHEAD	SPEED	SCALE		SCALE		SCALE	
NO.	FROM	TO	PRESSURE	FT./MIN	L	R	L	R	L	R
1	3058	5100	0	60	30	130	-----	-----	0	100
1	5100	6921	0	60	0	200	-----	-----	0	100

REMARKS THANK YOU! 970-353-5118

CORRECTED UP-HOLE 5 FEET TO CORROLATE TO OPEN HOLE LOGS.

T O O L D I A G R A M

TOOL TYPE:
2 1/8" CCL, GR, SNGL RCVR CBL

TOOL MODEL: 2108 1RX TX

BOWSPRING CENTRALIZER 40.75' @ 2.25" O.D.

CASING COLLAR LOCATOR 15.50' @ 2.125" O.D.

GAMMA DETECTOR

ELECTRONICS 82.50' @ 2.125" O.D.

ACOUSTIC TRANSMITTER 8.75' @ 2.125" O.D.

ACOUSTIC ISOLATOR 28.375' @ 2.125" O.D.

ACOUSTIC RECEIVER 10.687' @ 2.125" O.D.

BOWSPRING CENTRALIZER 40.75' @ 2.25" O.D.

TOP OF TOOL 18.94' (227.75")

14.90' (178.75")

12.92' (155.0")

6.98' (83.75")

3'

3.98' (47.75")

OPTIONAL GUIDED WHEELED CENTRALIZER

40.75' @ 2.125" O.D.

0.00'

CHART SCALING

30.00 GAMMA 130.00
130.00 API 230.00
230.00 TIME 630.00
USECS

CHART SCALING

0.00 AMP 1000.00
UVS
0.00 X5_AMP 200.00
UVS

200

1200

MICROSECONDS

STOP : 3058.00

DEPTHS

Mon Oct 13 13:38:12 2003

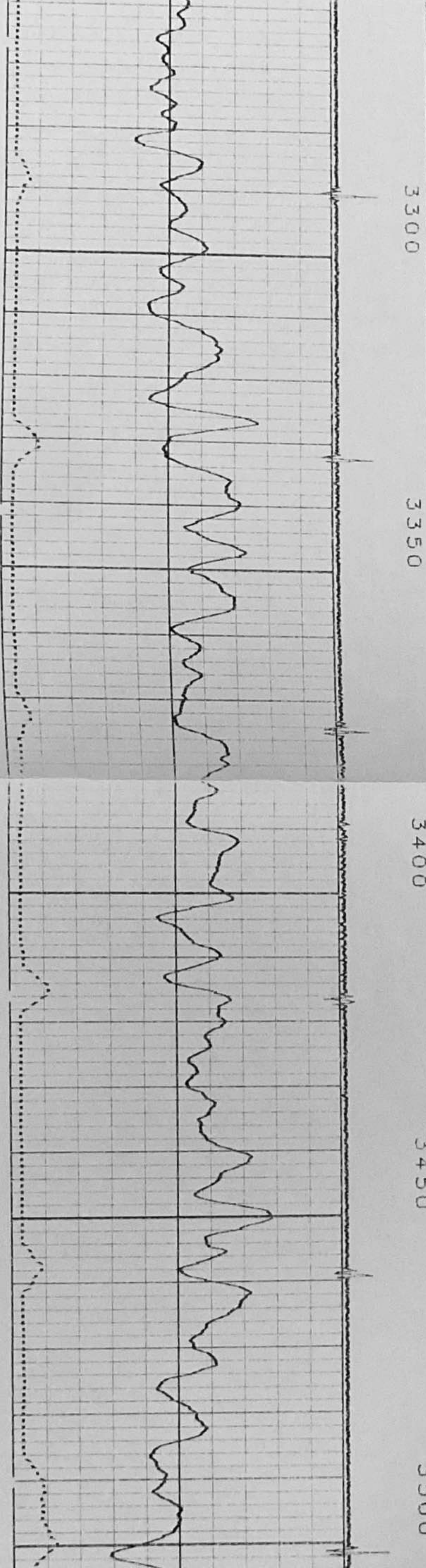
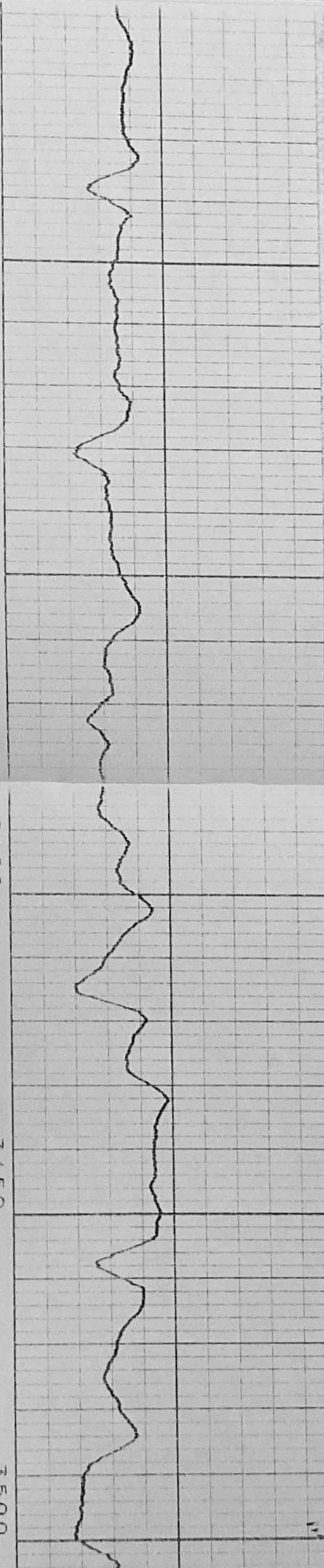
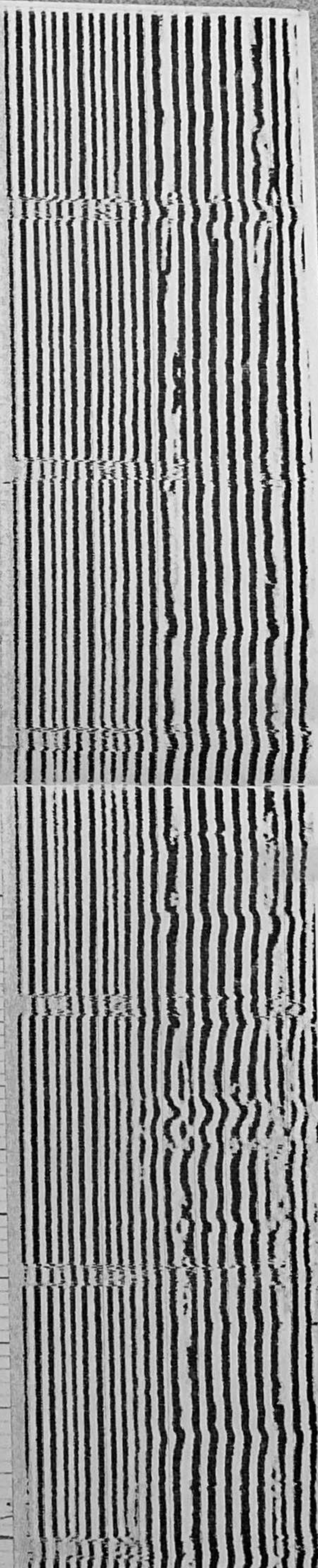
LOG UP

3100

3150

3200

3250



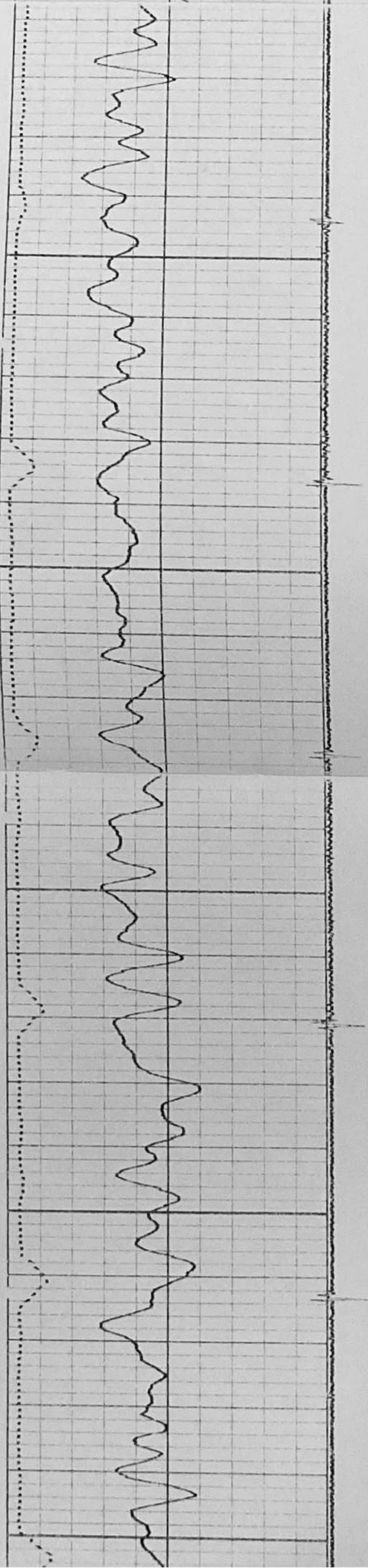
3550

3600

3650

3700

3750



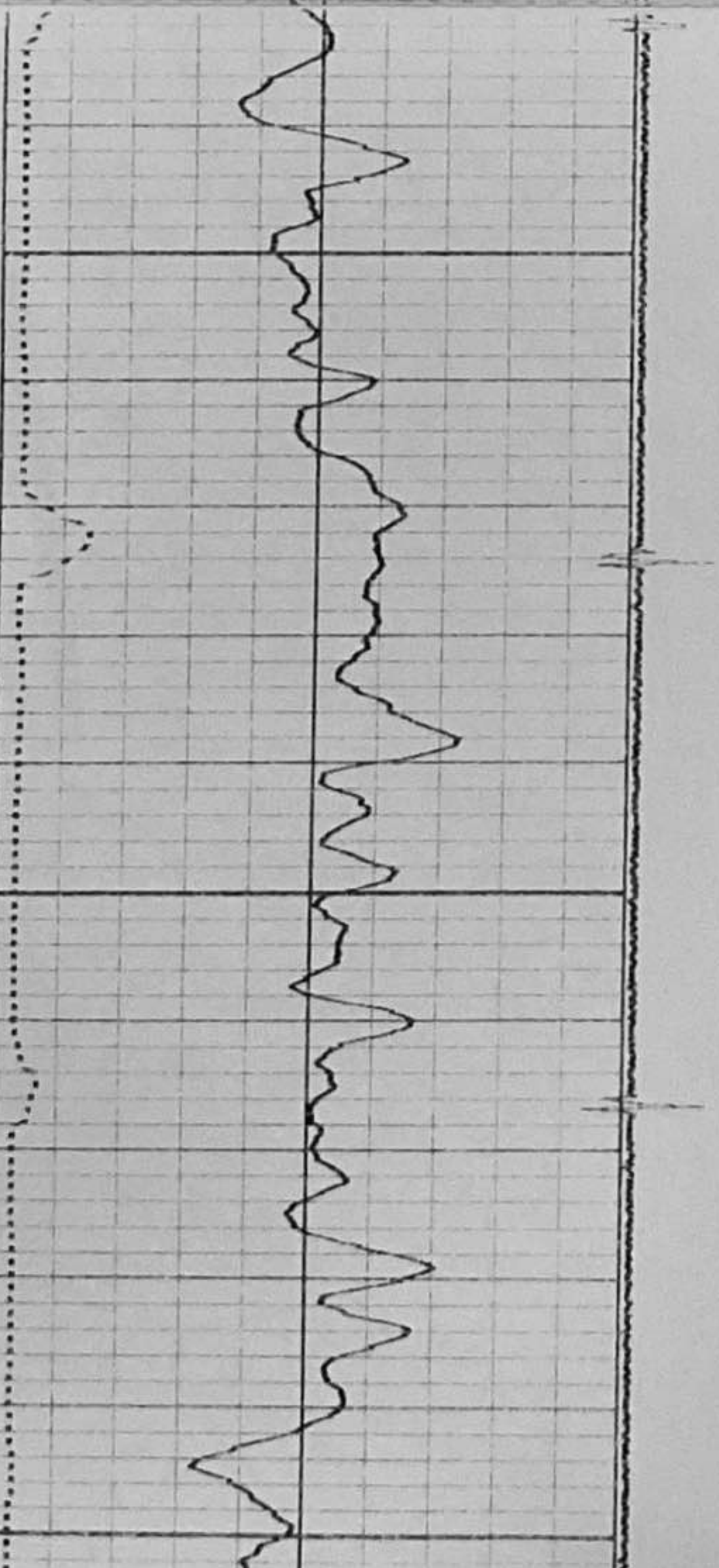
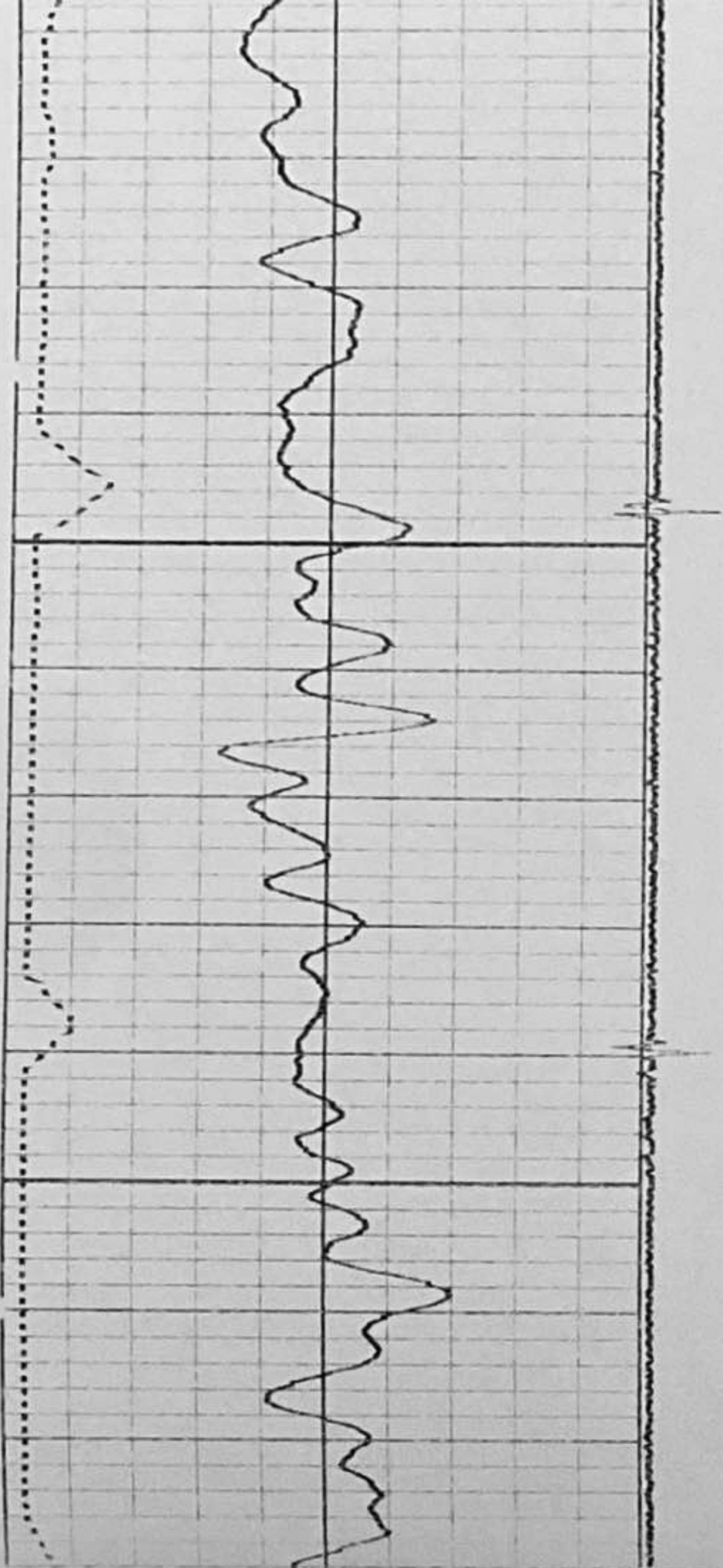
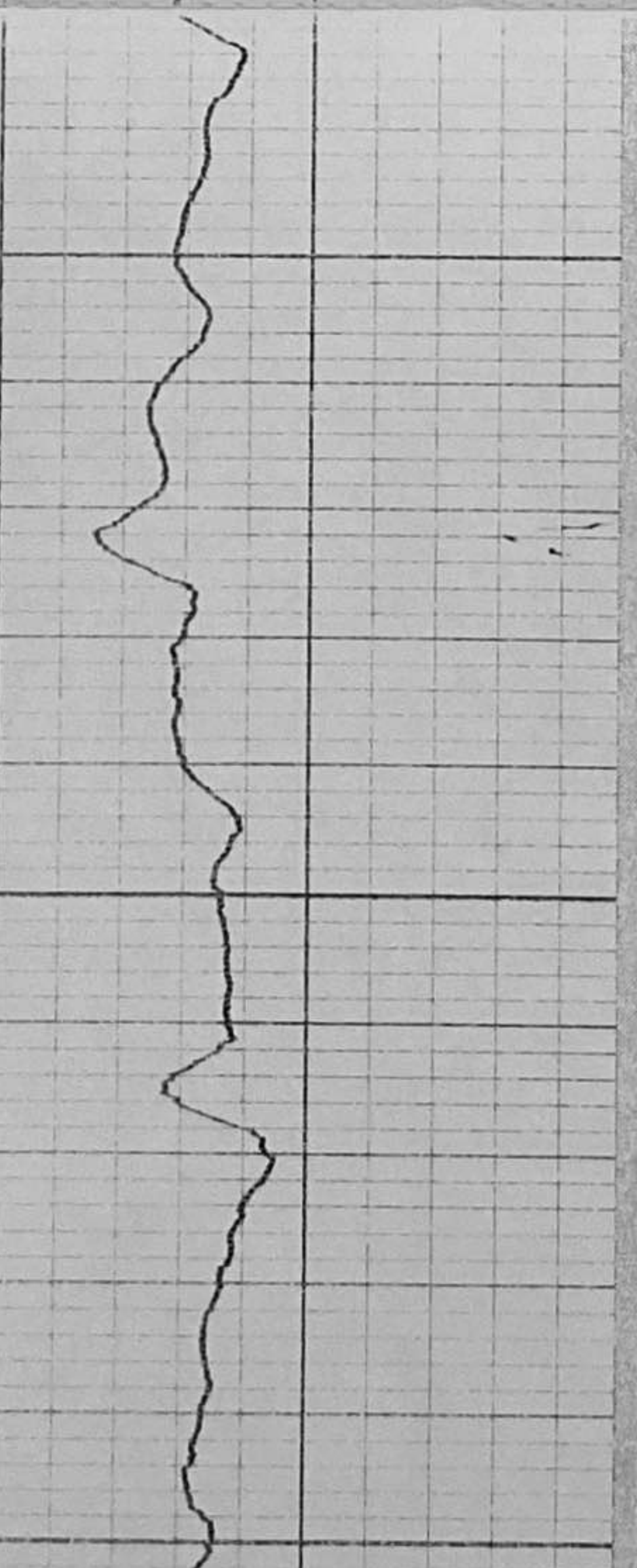
3800

3850

3900

3950

4000



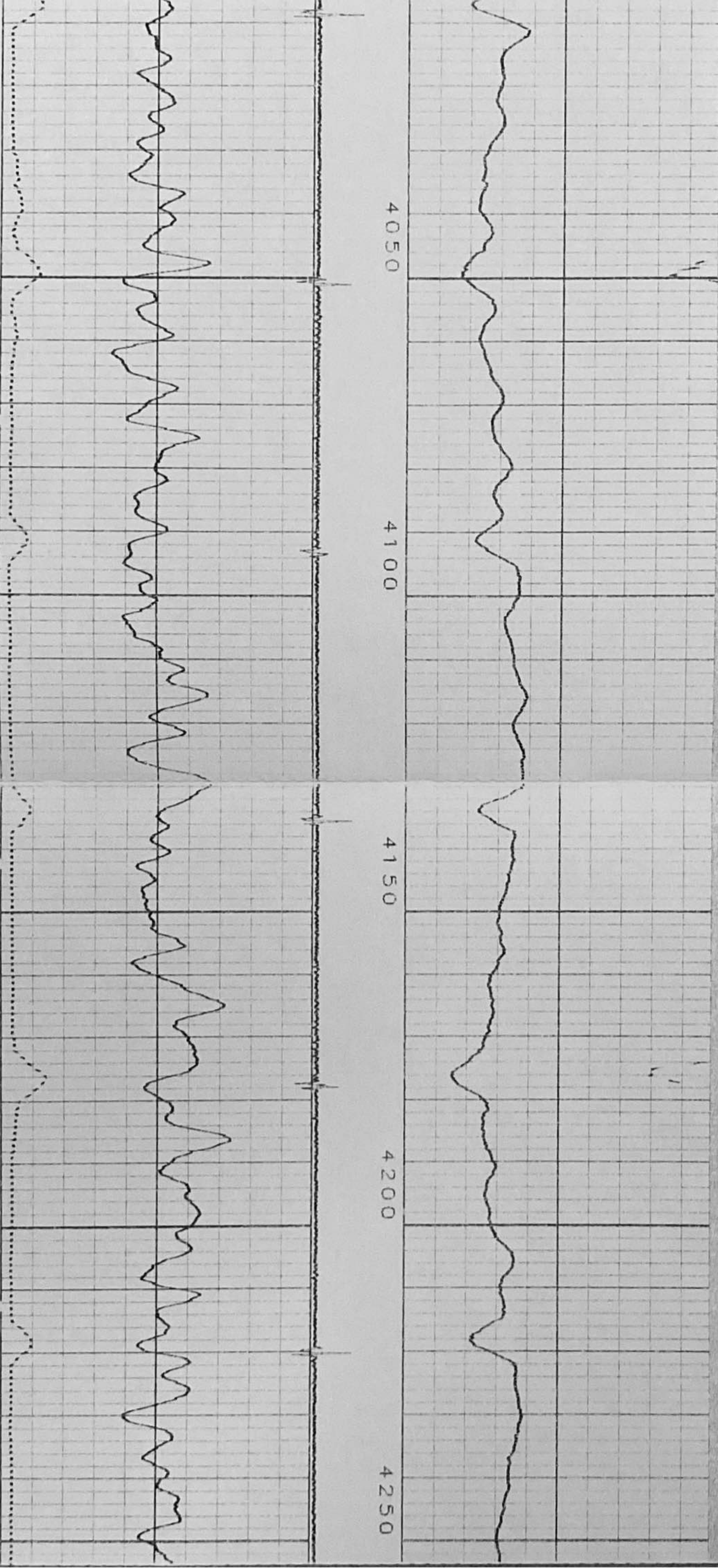
4050

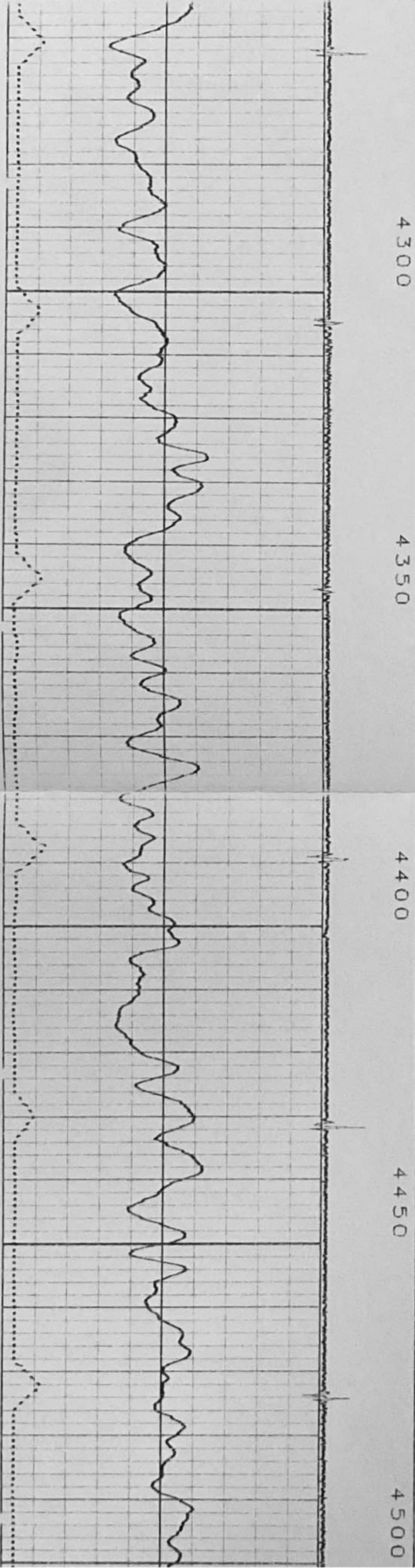
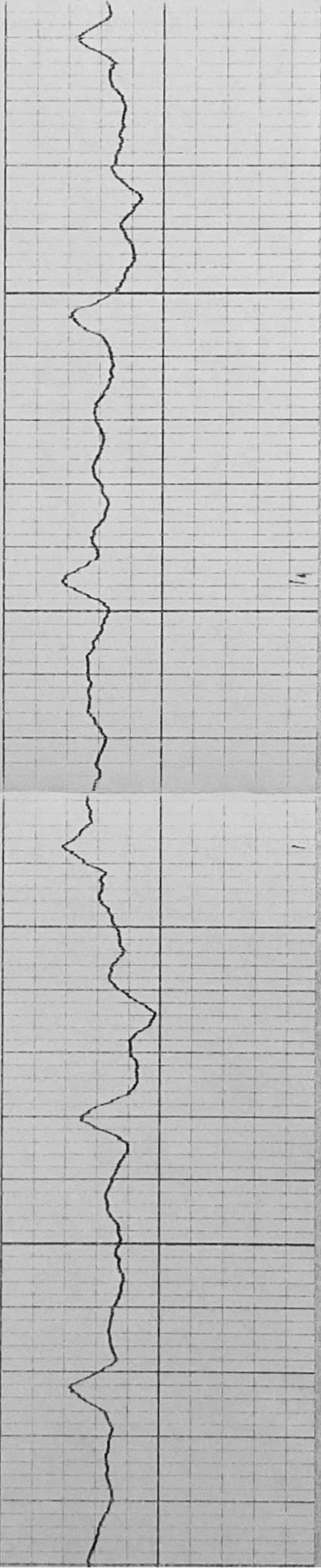
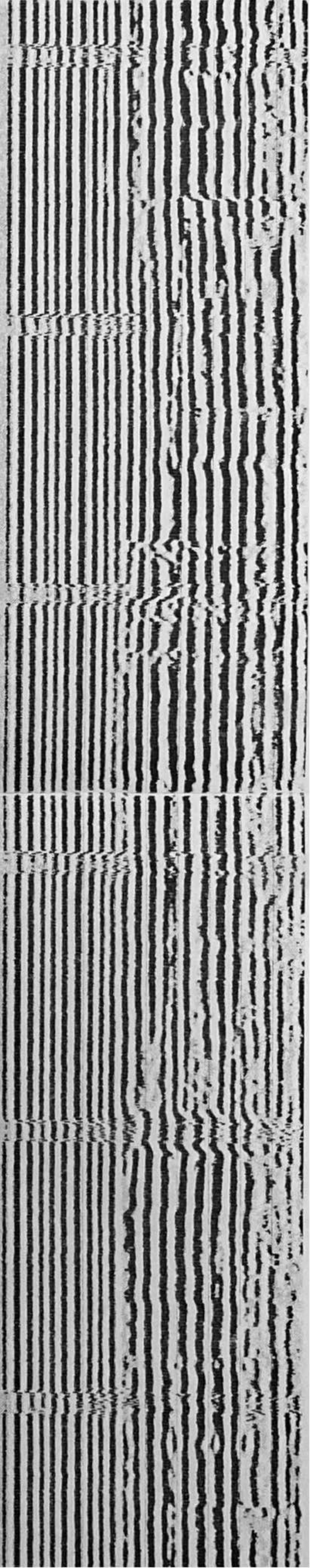
4100

4150

4200

4250





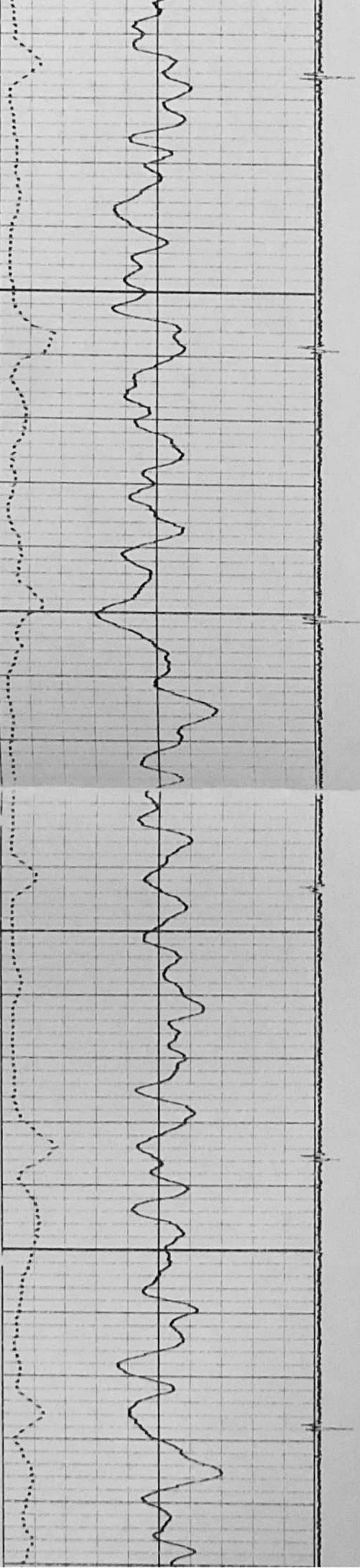
4550

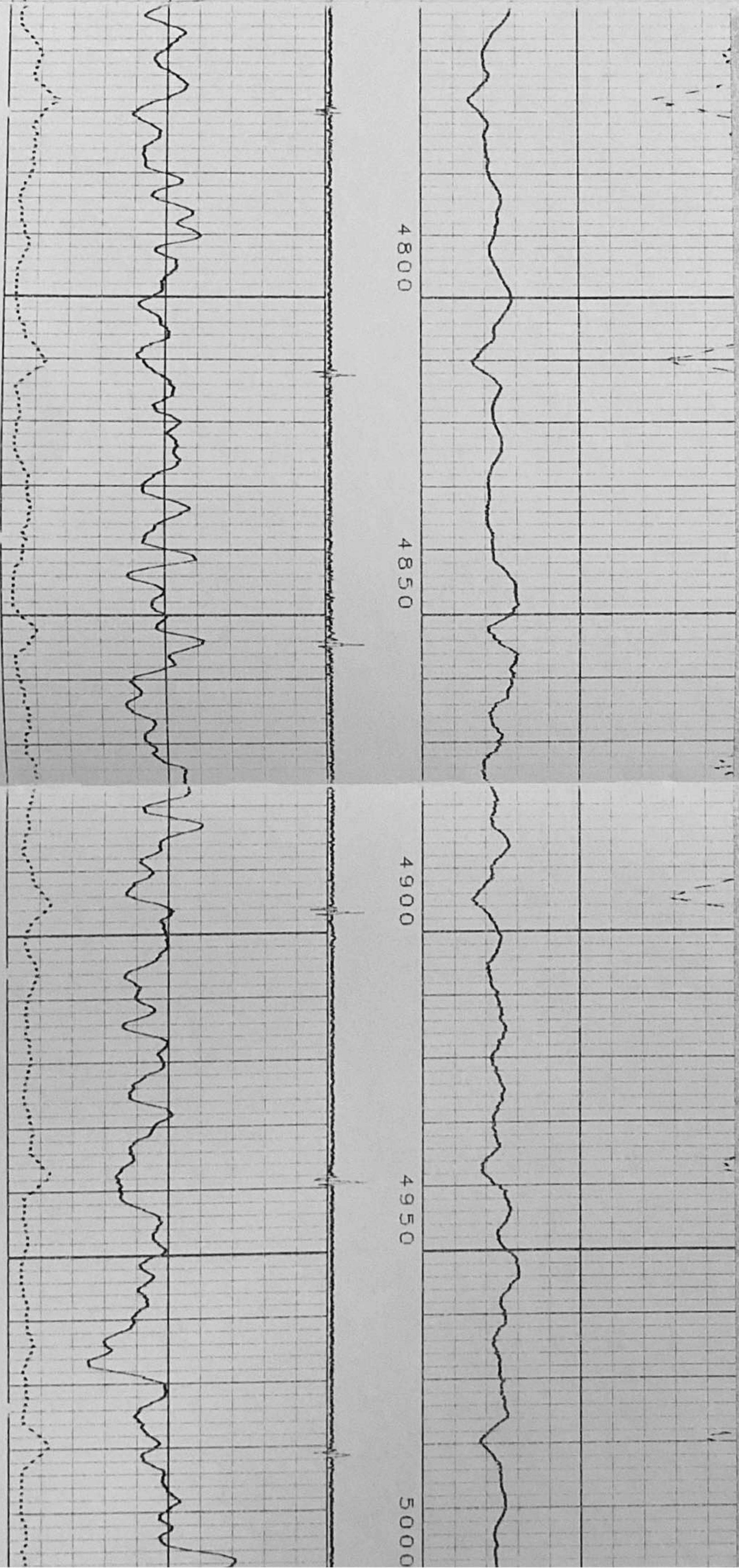
4600

4650

4700

4750





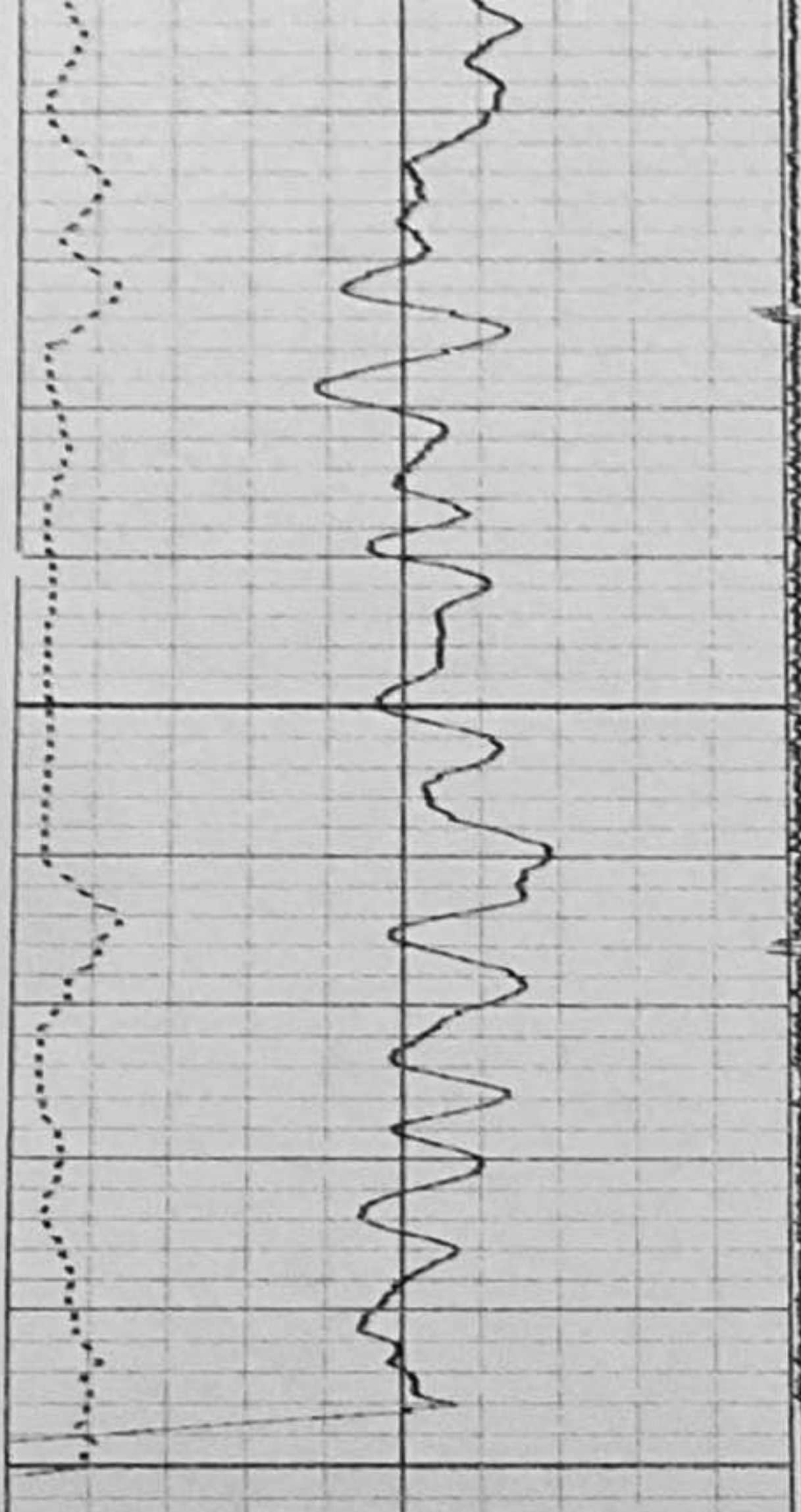


CHART SCALING

30.00	GAMMA	130.00
130.00	API	230.00
230.00	TIME	630.00

USECS

5050

5100

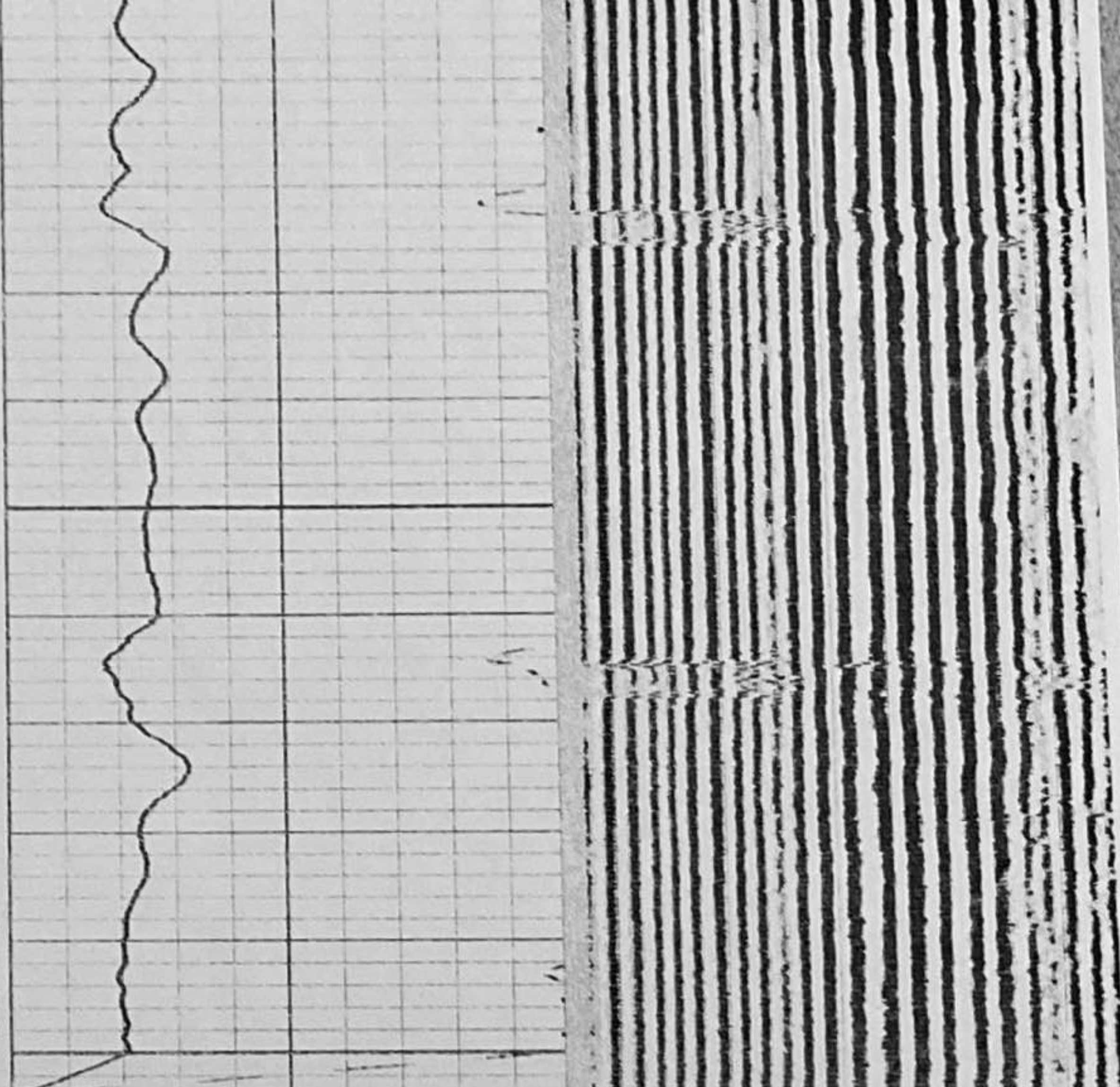


CHART SCALING

0.00	AMP	1000.00
	UVS	
0.00	X5_AMP	200.00

UVS

200

1200

MICROSECONDS

START DEPTH: 5104.02

DEPTHS

Mon Oct 13 13:18:53 2003

LOG UP

CHART SCALING

0.00	GAMMA	200.00
200.00	API	400.00
230.00	TIME	630.00

USECS

CHART SCALING

0.00	AMP	1000.00
	UVS	
0.00	X5_AMP	200.00

UVS

200

1200

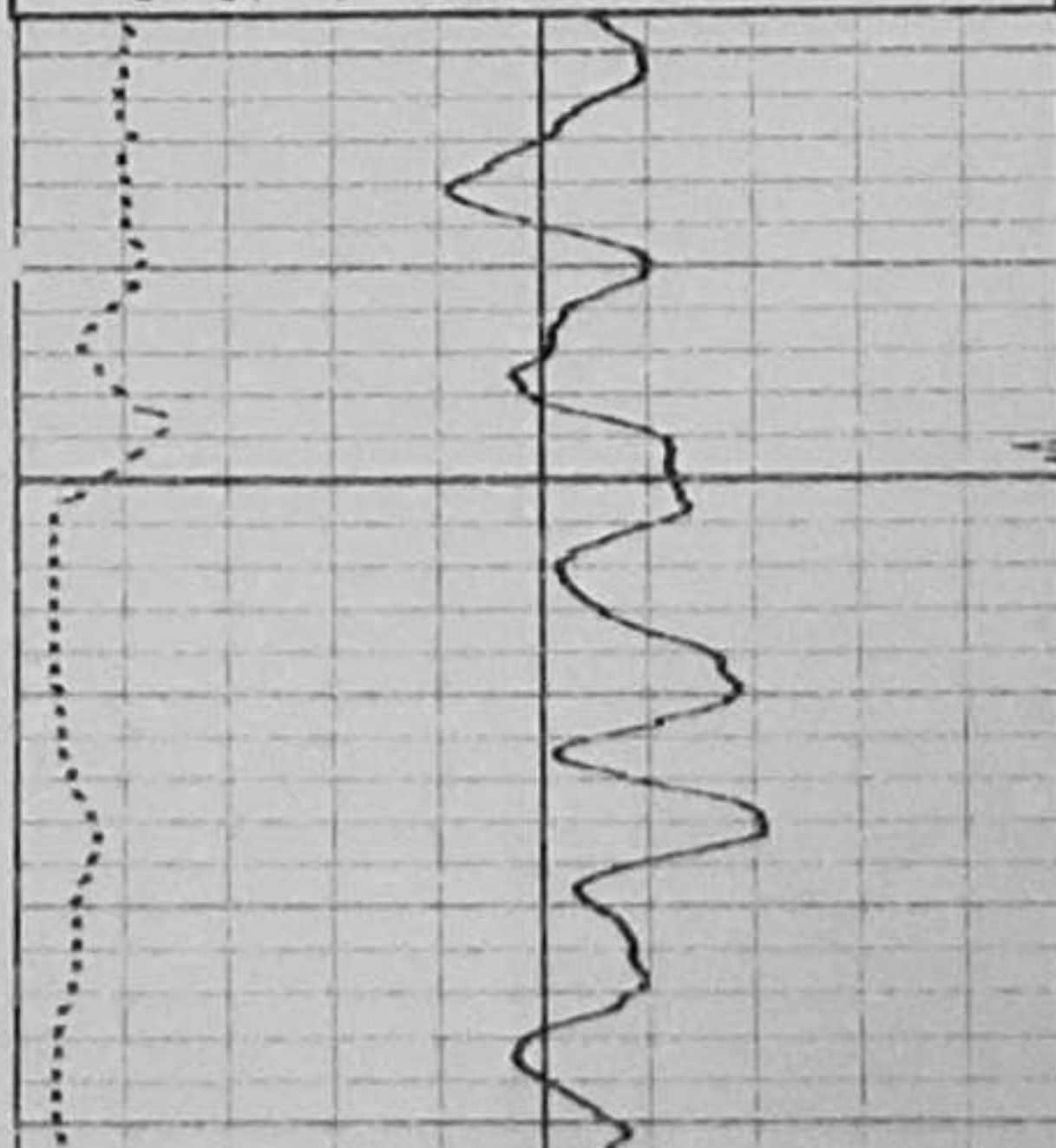
MICROSECONDS

STOP : 5078.10

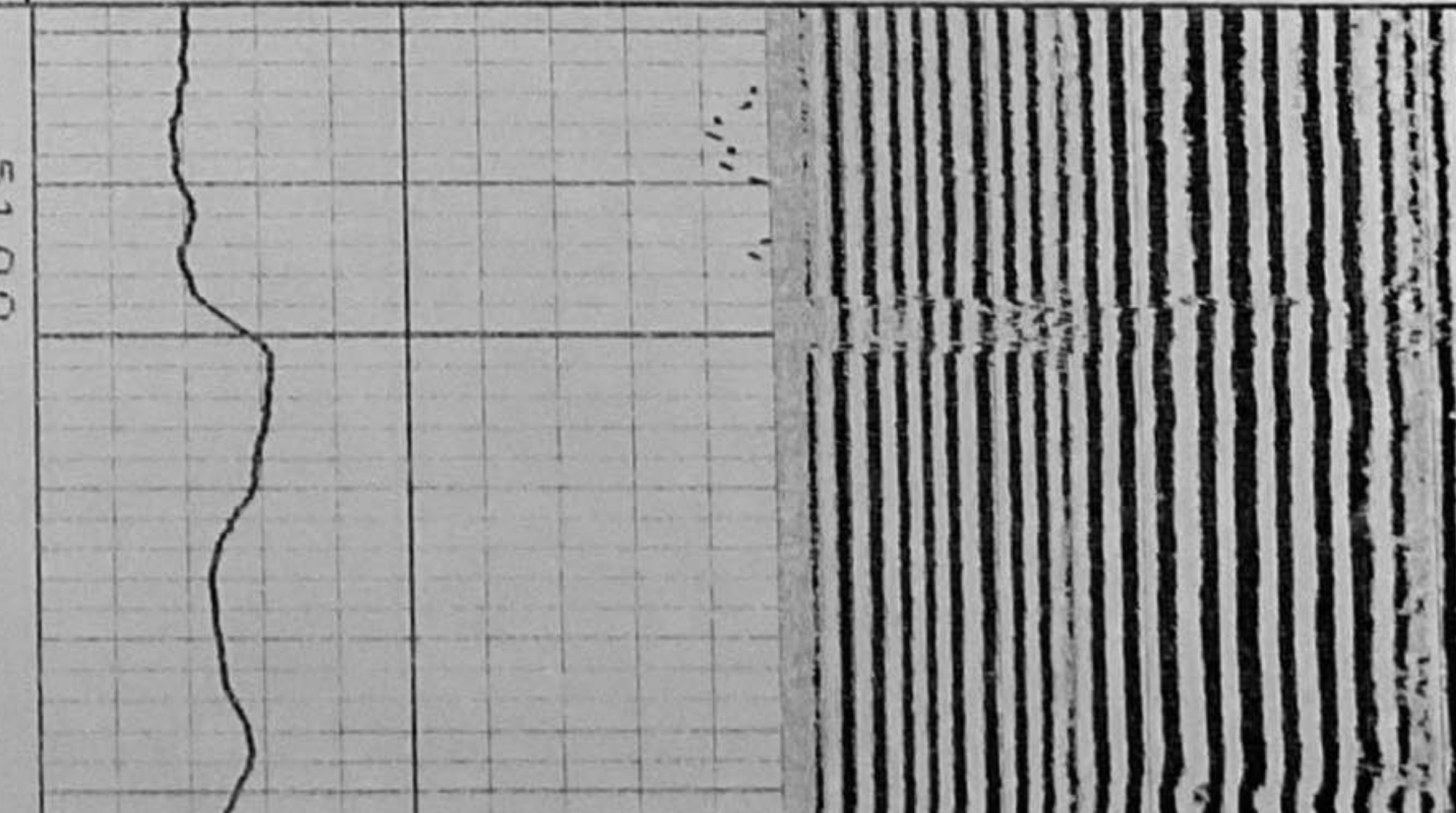
DEPTHS

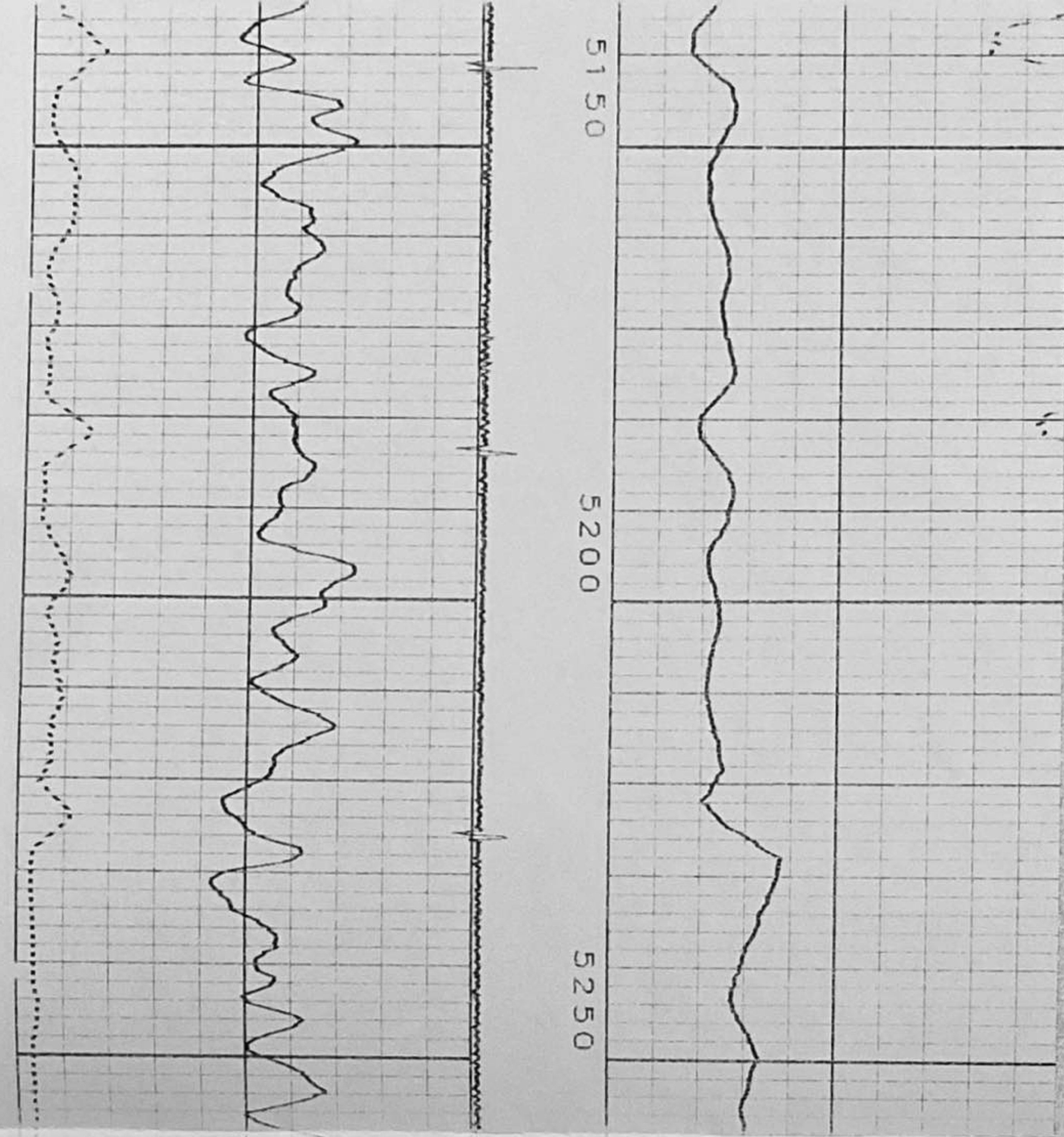
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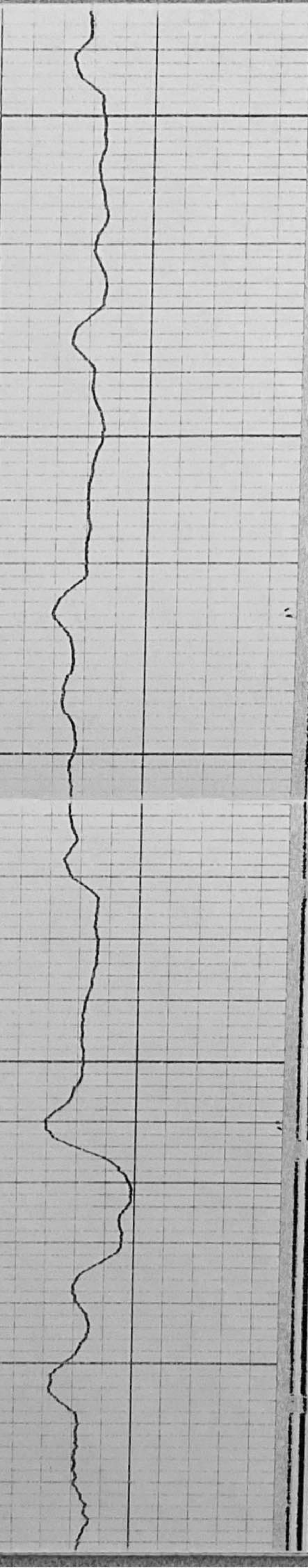
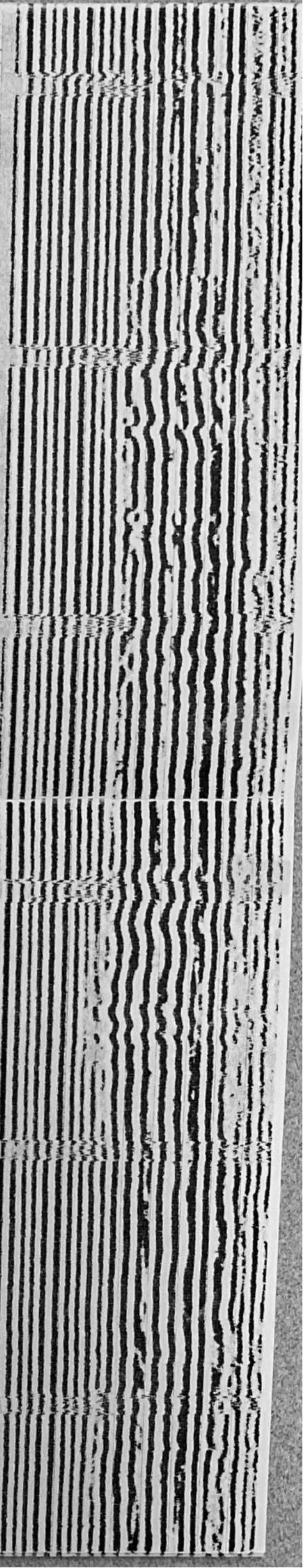
LOG UP

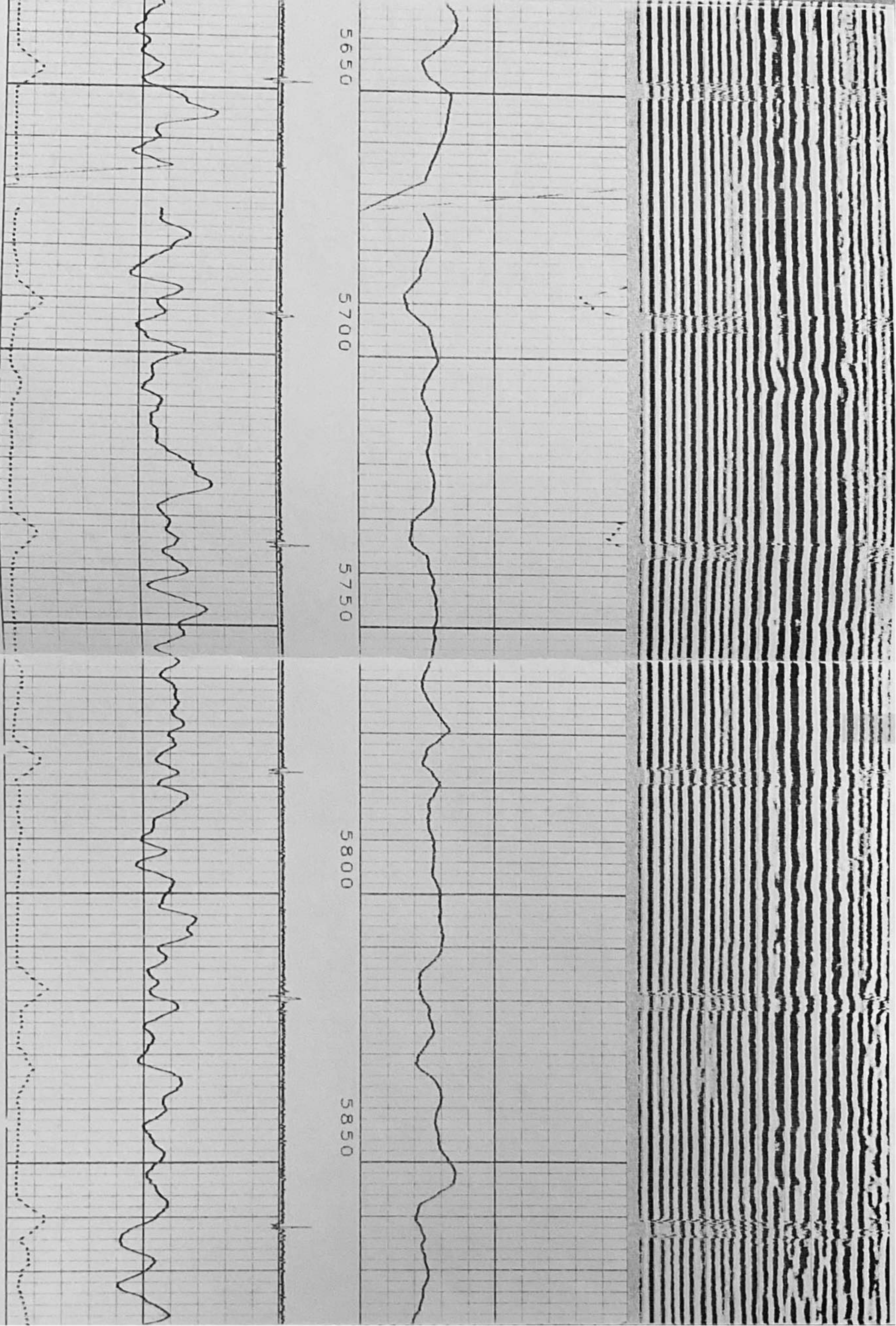


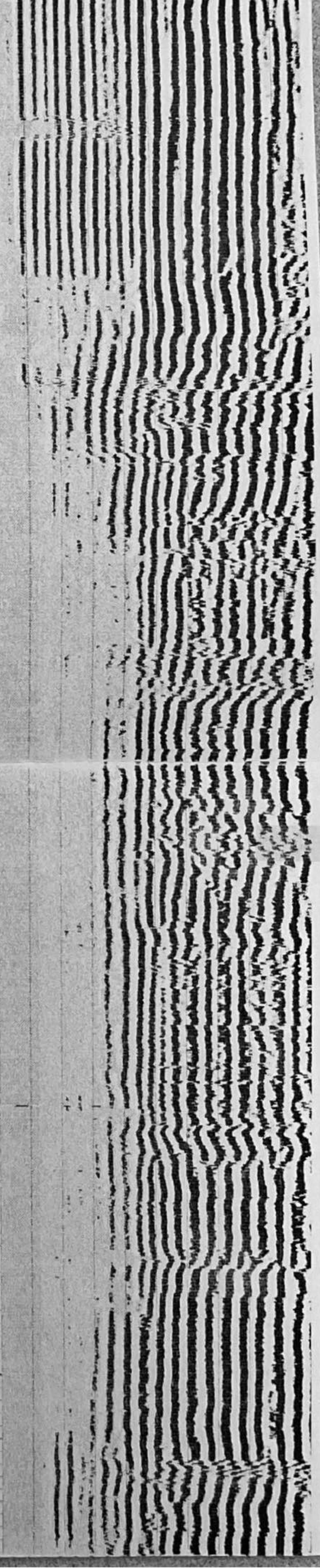
5100











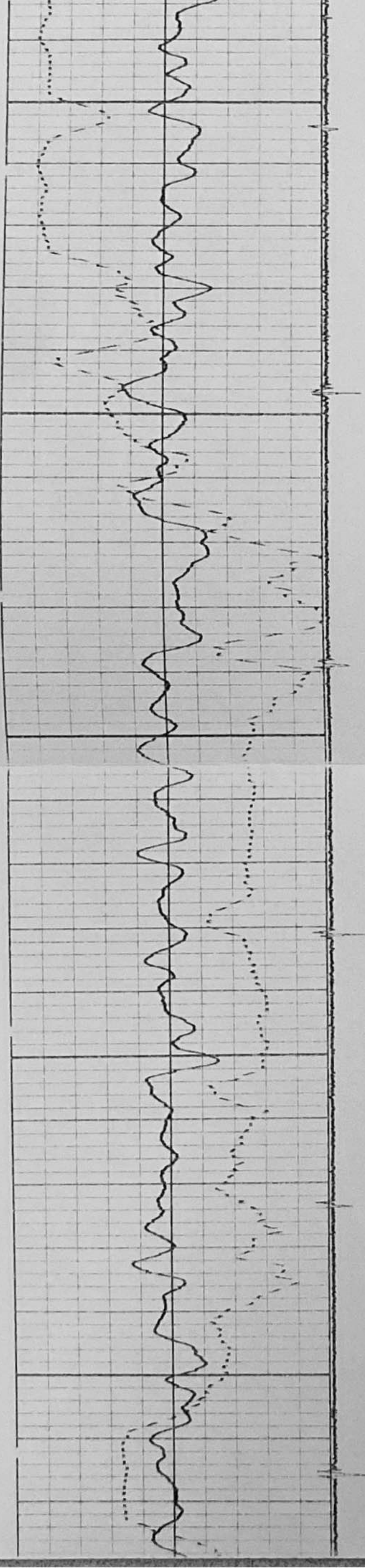
5900

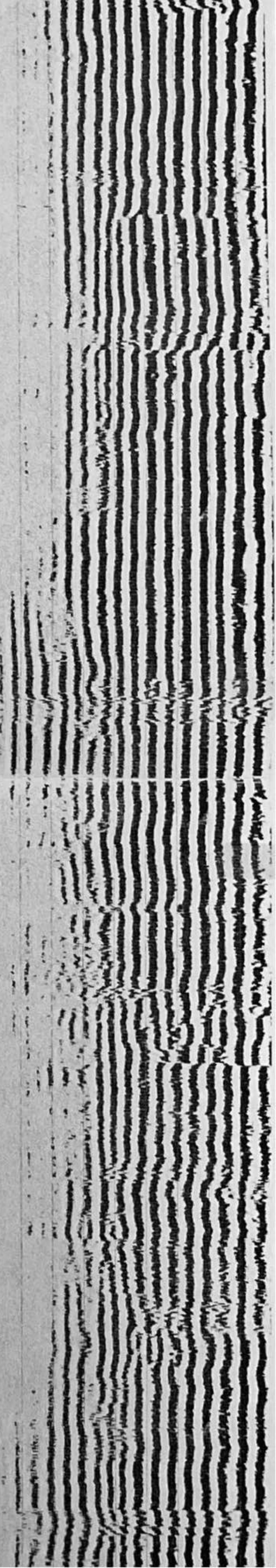
5950

6000

6050

6100





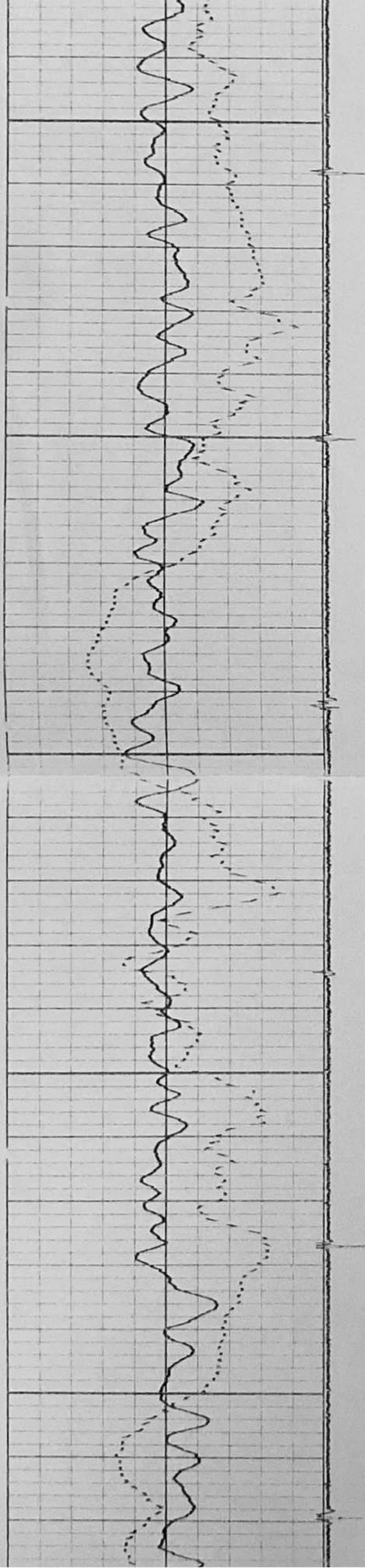
6150

6200

6250

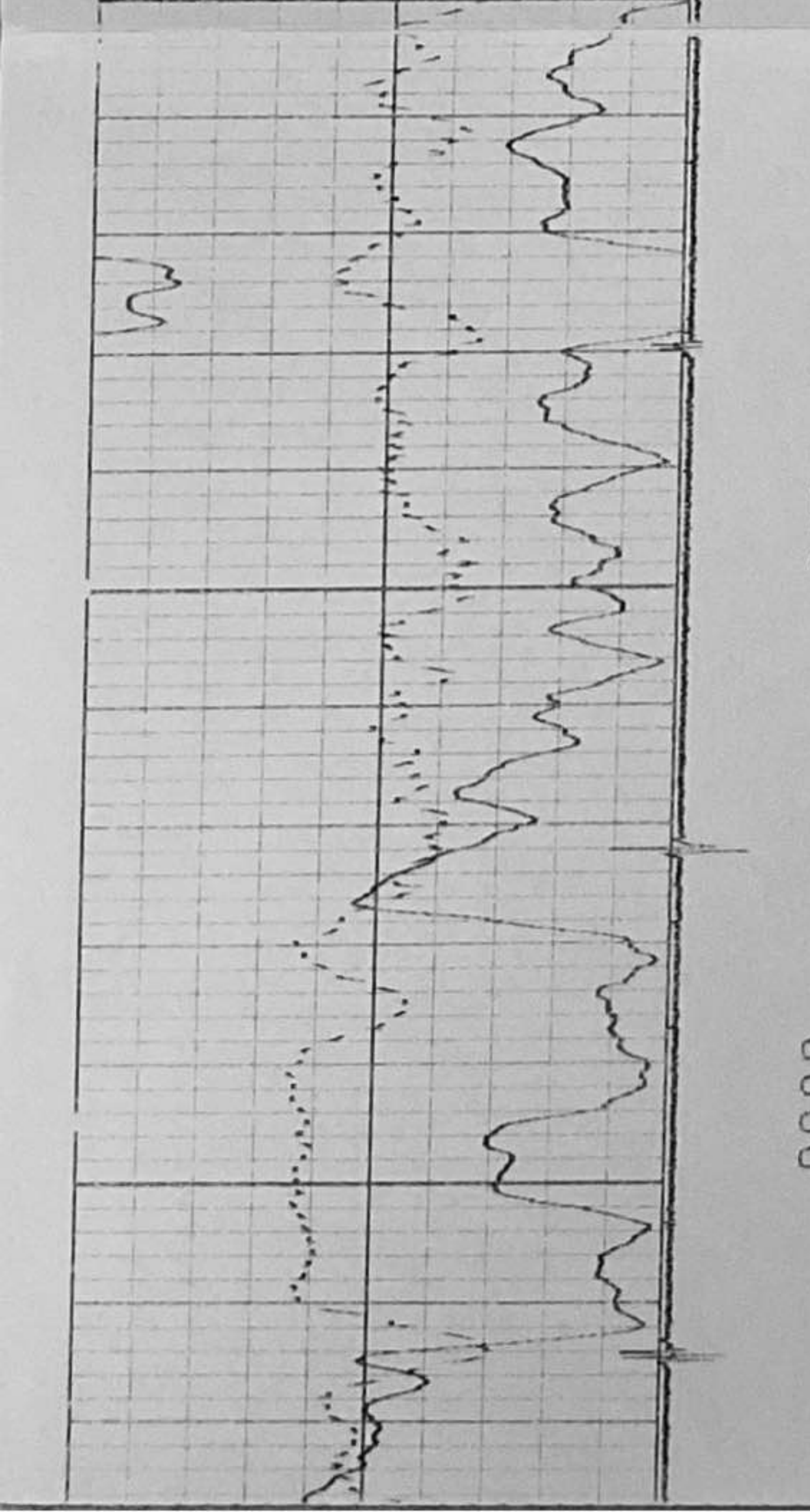
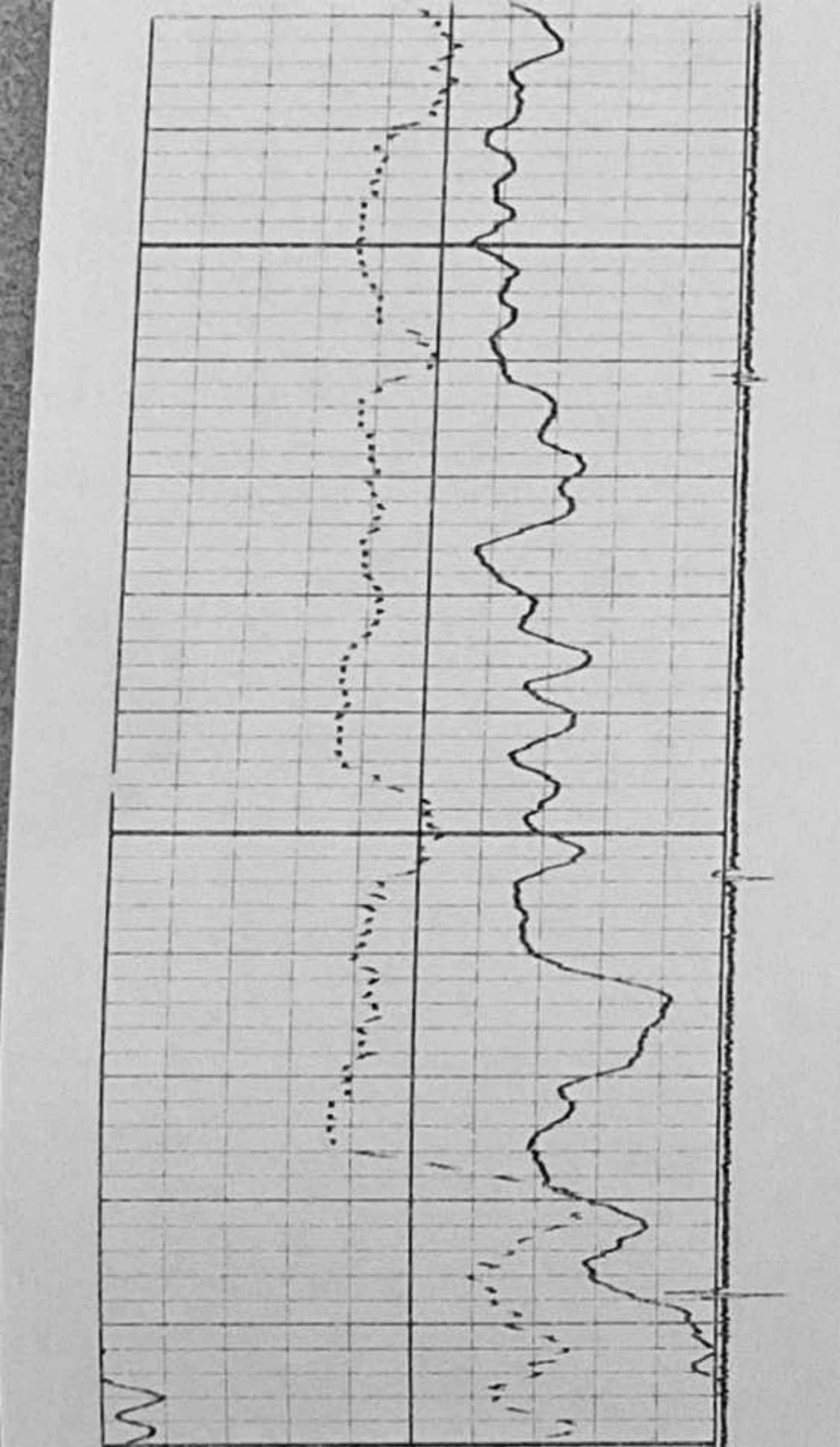
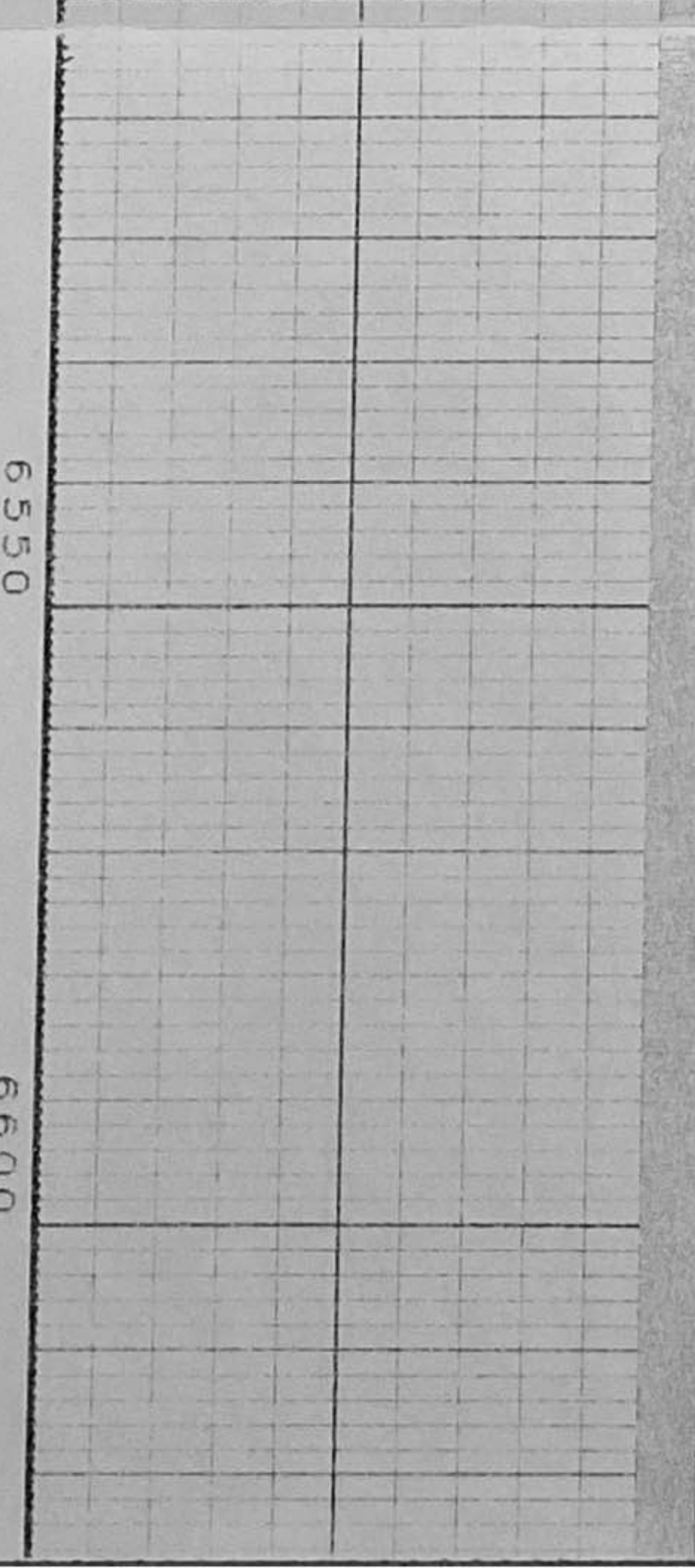
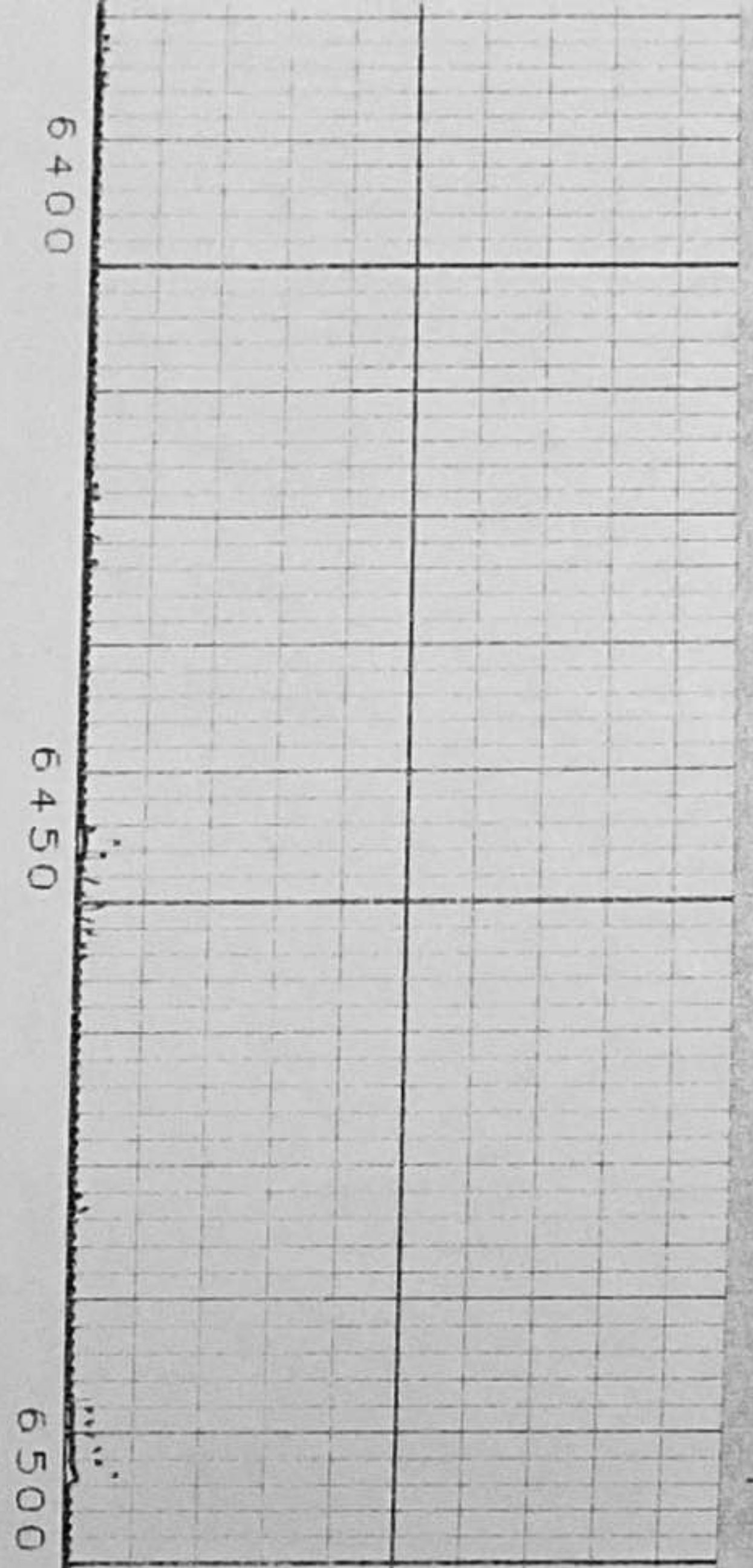
6300

6350

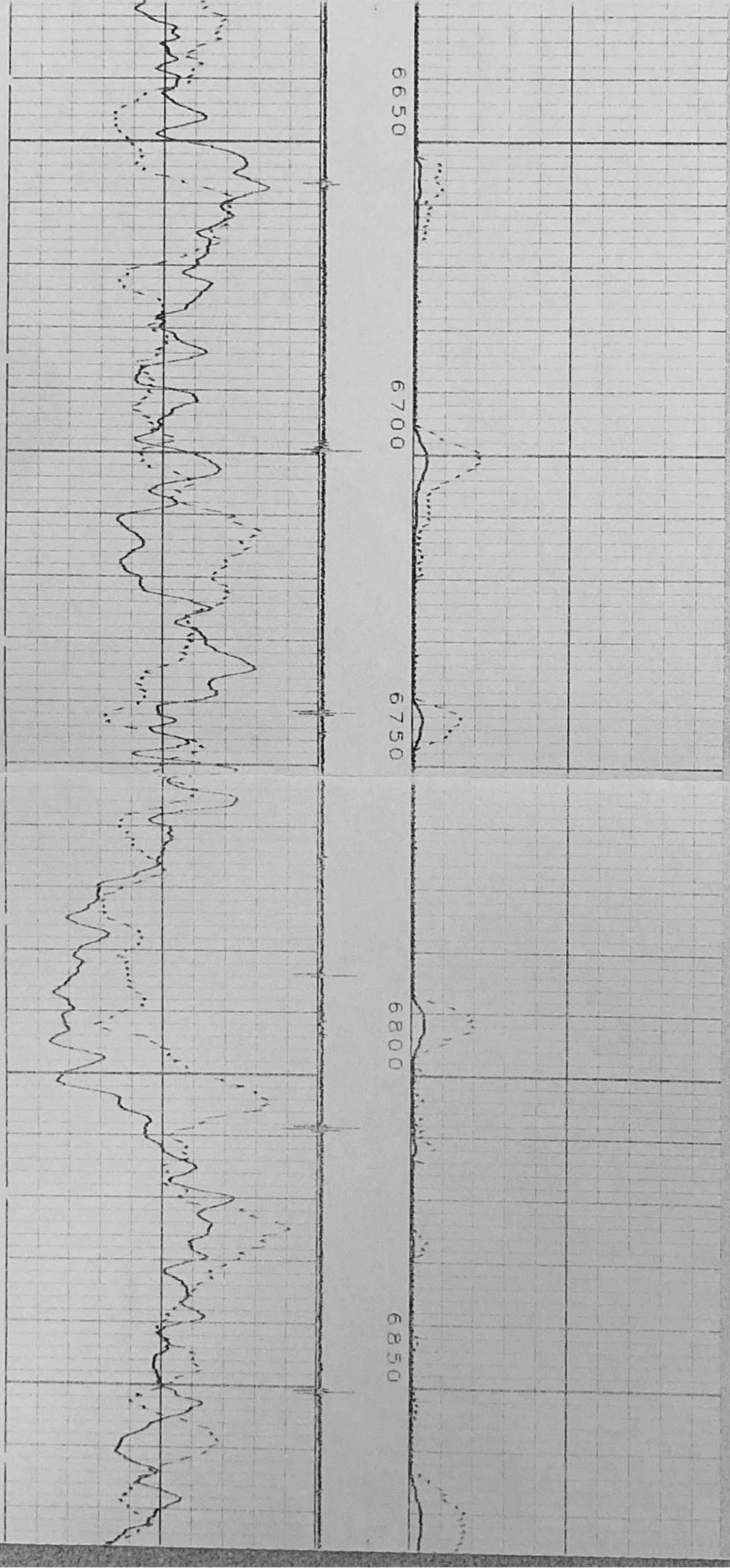


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Handwritten notes in Arabic script, continuing from the top section. The text is dense and covers the bottom portion of the page.



Handwritten notes in Arabic script, likely a field log or report, covering the top and right margins of the page. The text is dense and covers approximately 25% of the page area.



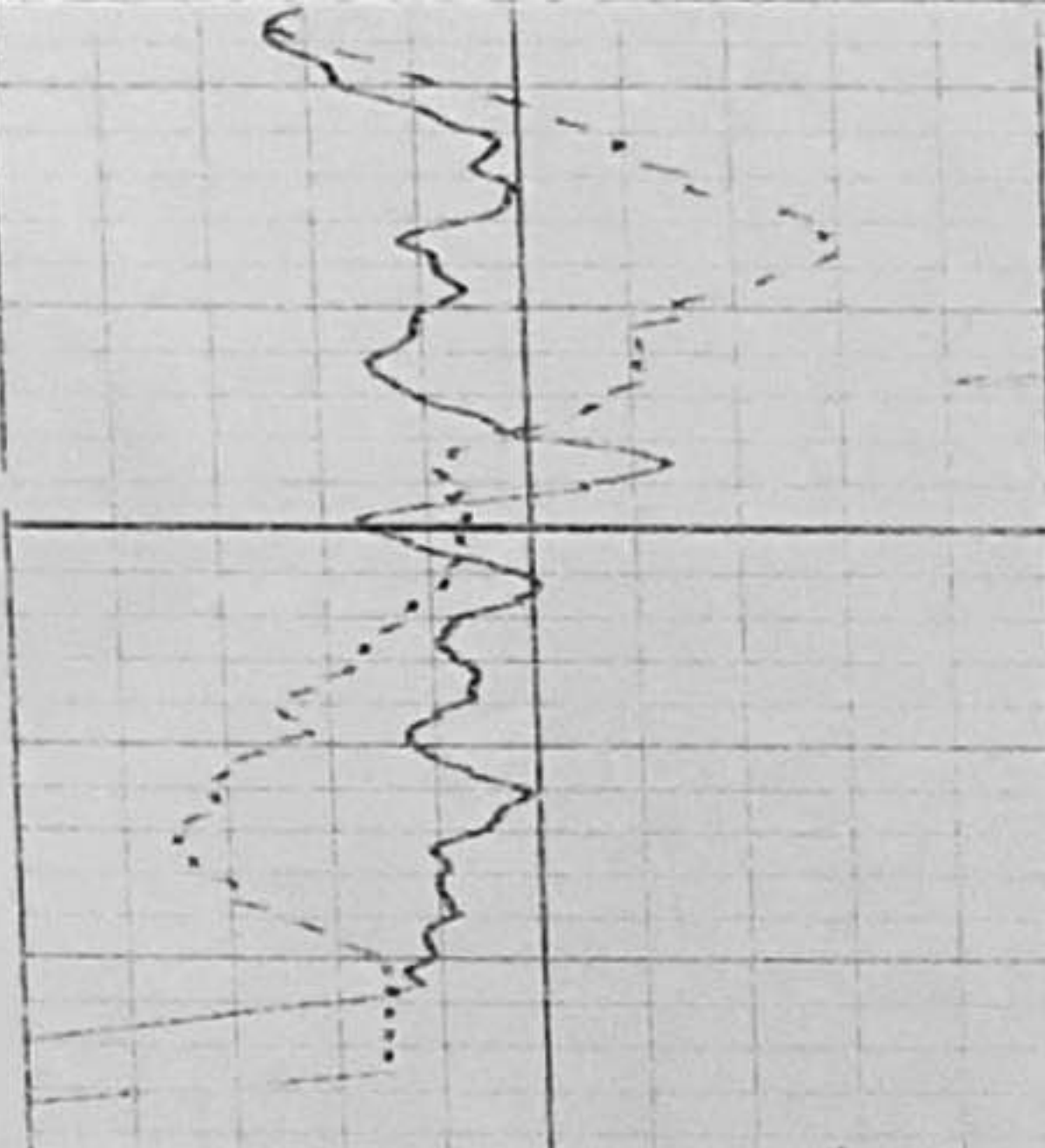


CHART SCALING

0.00	GAMMA	200.00
200.00	API	400.00
230.00	TIME	630.00

	USECS	

START DEPTH: 6929.14

0069



CHART SCALING

0.00	AMP	1000.00
	UVS	
0.00	X5_AMP	200.00

	UVS	

200

1200

MICROSECONDS

DEPTH

Mon Oct 13 12:55:36 2003

LOG UP