

Schlumberger

**BOREHOLE COMPENSATED
SONIC LOG**
SCHLUMBERGER OF CANADA Calgary Alberta

PROVINCE ALBERTA
FIELD WILKINSON
WELL COLUMBIA ET AL KOTANEETEE
COMPANY COLUMBIA GAS DEVELOPMENT OF CANADA LTD.

LOCATION
WELL COLUMBIA ET AL KOTANEETEE
FIELD WILKINSON
PROVINCE ALBERTA
COMPANY COLUMBIA GAS DEVELOPMENT OF CANADA LTD.
Other Services: DISC, NI-GR, TPG

Permanent Datum: 411.48 m
Log Measured From: KB 4.62 m Above Perm. Datum
Drilling Measured From: KB

Run No.	One	Two	Three	Four
Date	15 FEB 79			
Depth-Driller	1332			
Depth-Logger (Schl.)	1334			
Run Log Interval	1324			
Log Interval	215			
Casing-Driller	214			
Casing-Logger	215			
Bit Size	216			
Type Fluid in Hole	CEL CHEM			
Dens (kg/m ³)	1370	200+		
pH	9.0	7.8		
Source of Sample	FLOWLINE			
Rin @ Meas. Temp.	2.67 @ 19.5 °C	2.63 @ 19.5 °C	2.65 @ 19.5 °C	
Rin @ Meas. Temp.	2.27 @ 19.0 °C			
Source: Rin	FLOWLINE			
Rin @ BHT	1.10 @ 47 °C	1.09 @ 47 °C	1.10 @ 47 °C	
TIME				
Creation Stopped	0409/16.4			
Tool Last on Bottom	1330/16.1			
Max. Rec. Temp. #1	46 °C	47 °C		
Unit	FRONT			
Recorded By	M. G. 7/5			
Witnessed By	AF3017			

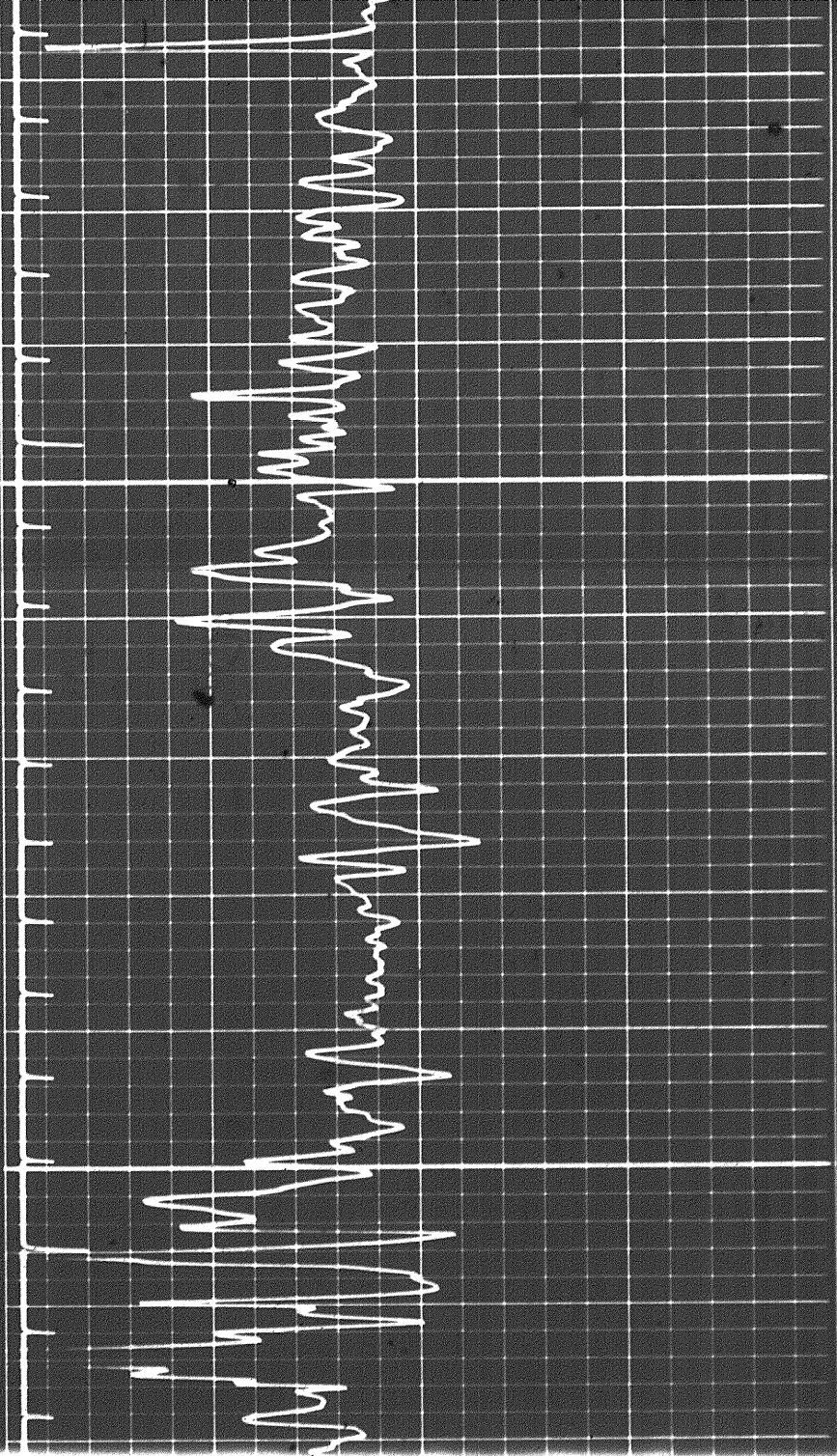
Run No.	One	Two	Three	Four
Service Order No.	30947			
EQUIPMENT DATA				
Panel	JJ 263			
Cartridge	EA 523			
Sonde	RA 1665			
Memorizer	ILP BA 410			
GR Cartridge	JAA 1439			
Calliper	D 280			
TTR	EB 2794			
Centralizer Type	FINS & CHE-Z & CALIPER			
CALIBRATION DATA				
GR	Background CPS	100		
	Source CPS	530		
	API Scale	165	165	165

REMARKS 16 MAR 79 CAL AS
THIS SURVEY WAS RECORDED IN COMBINATION WITH THE DUAL INDUCTION - SFL
Log Taped Yes No

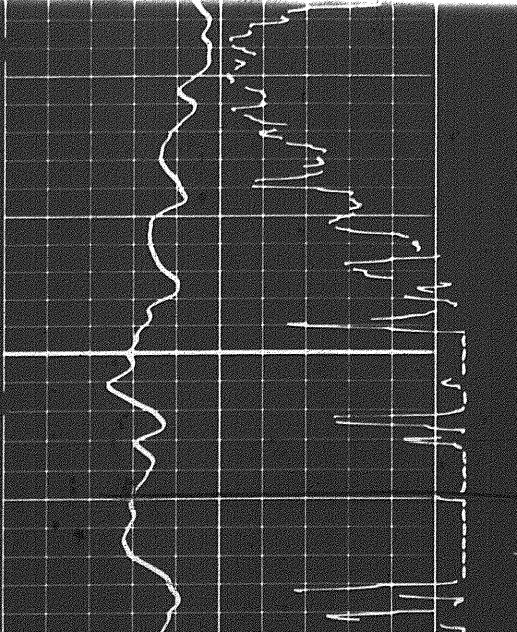
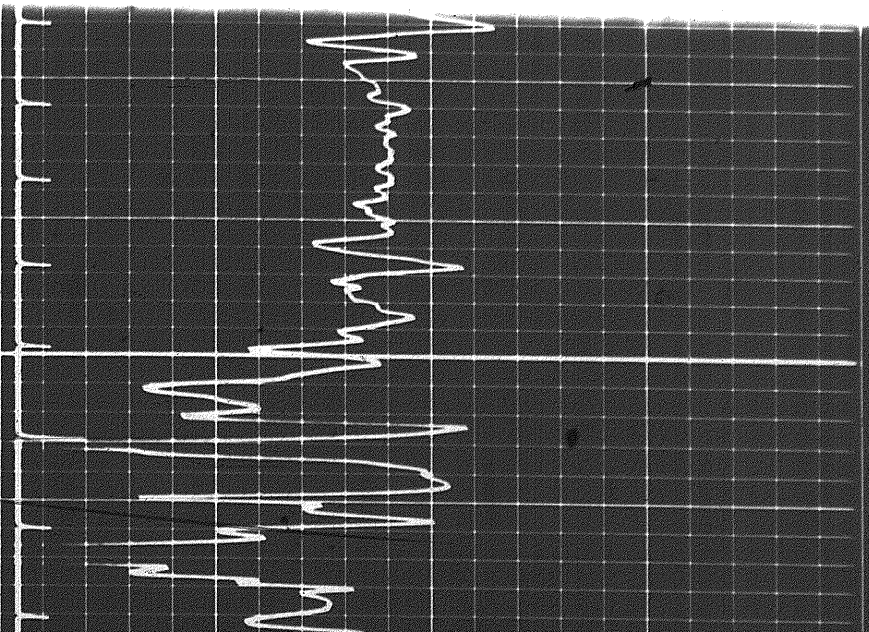
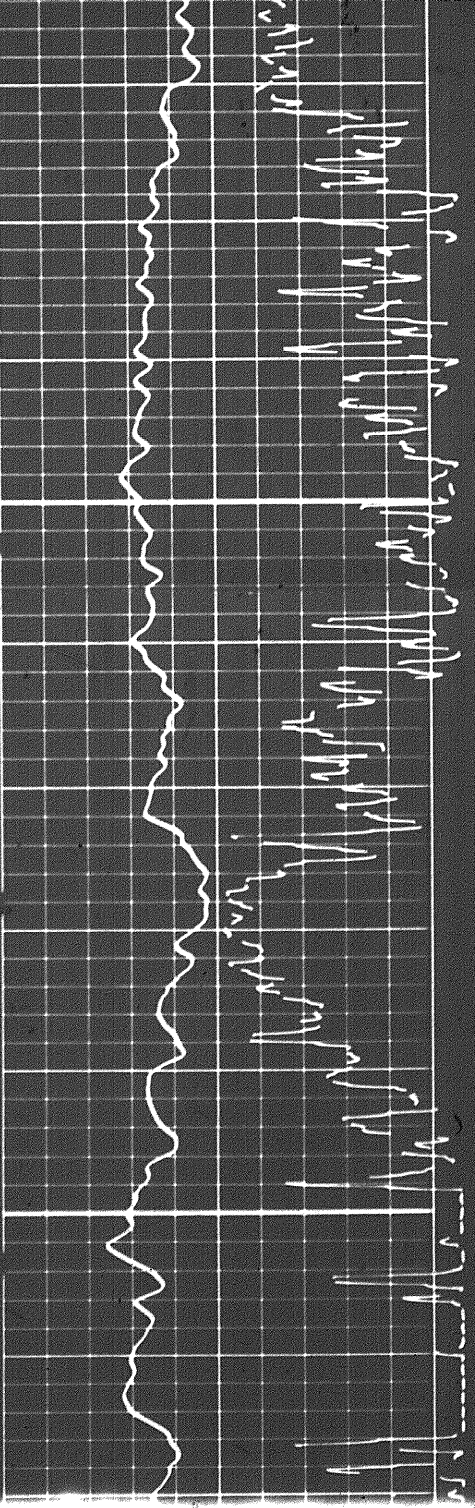
Run No.	Depth		Scale	GR Scale	φ Scale	φ Selectors		
	From	To				matrix	fluid	Cp
ONE	1324	216	500-300-100	0-150				

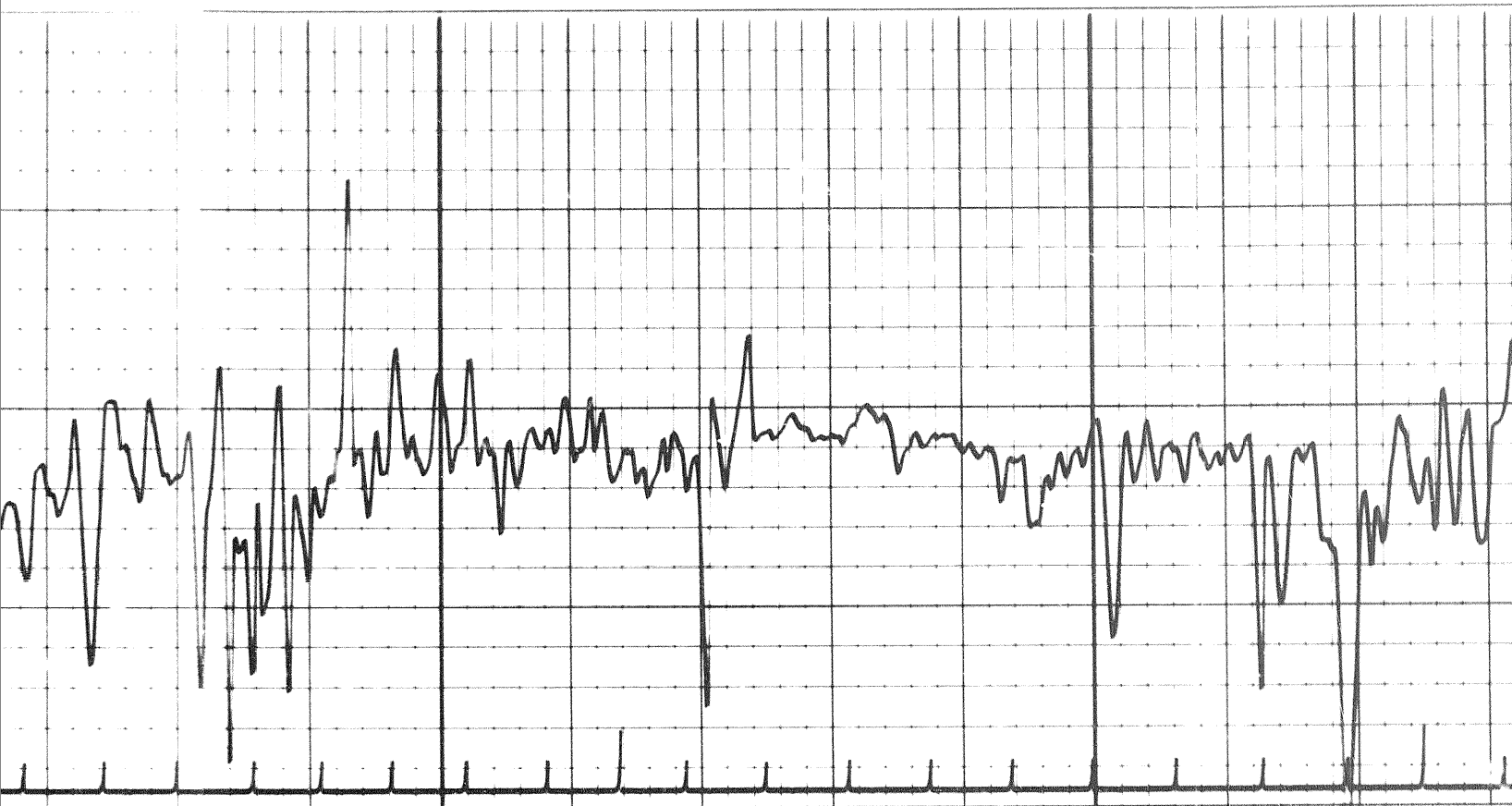
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

GAMMA RAY Activity API units T.C. AUTO	DEPTH METRES	INTERVAL TRANSIT TIME μs/m	X2000
500	300	100	

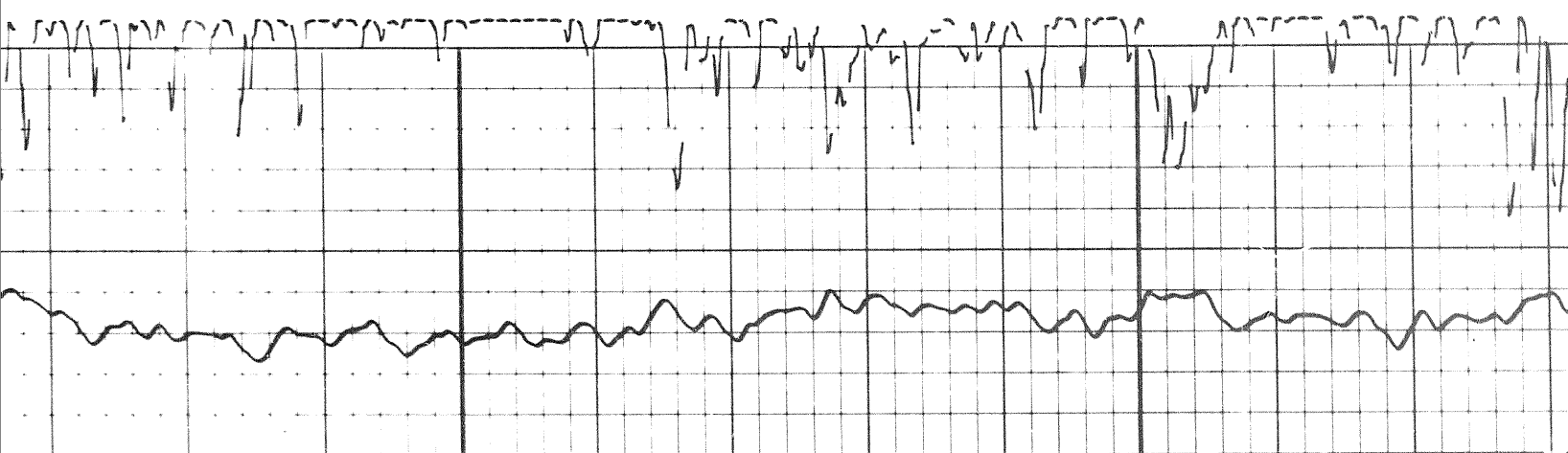


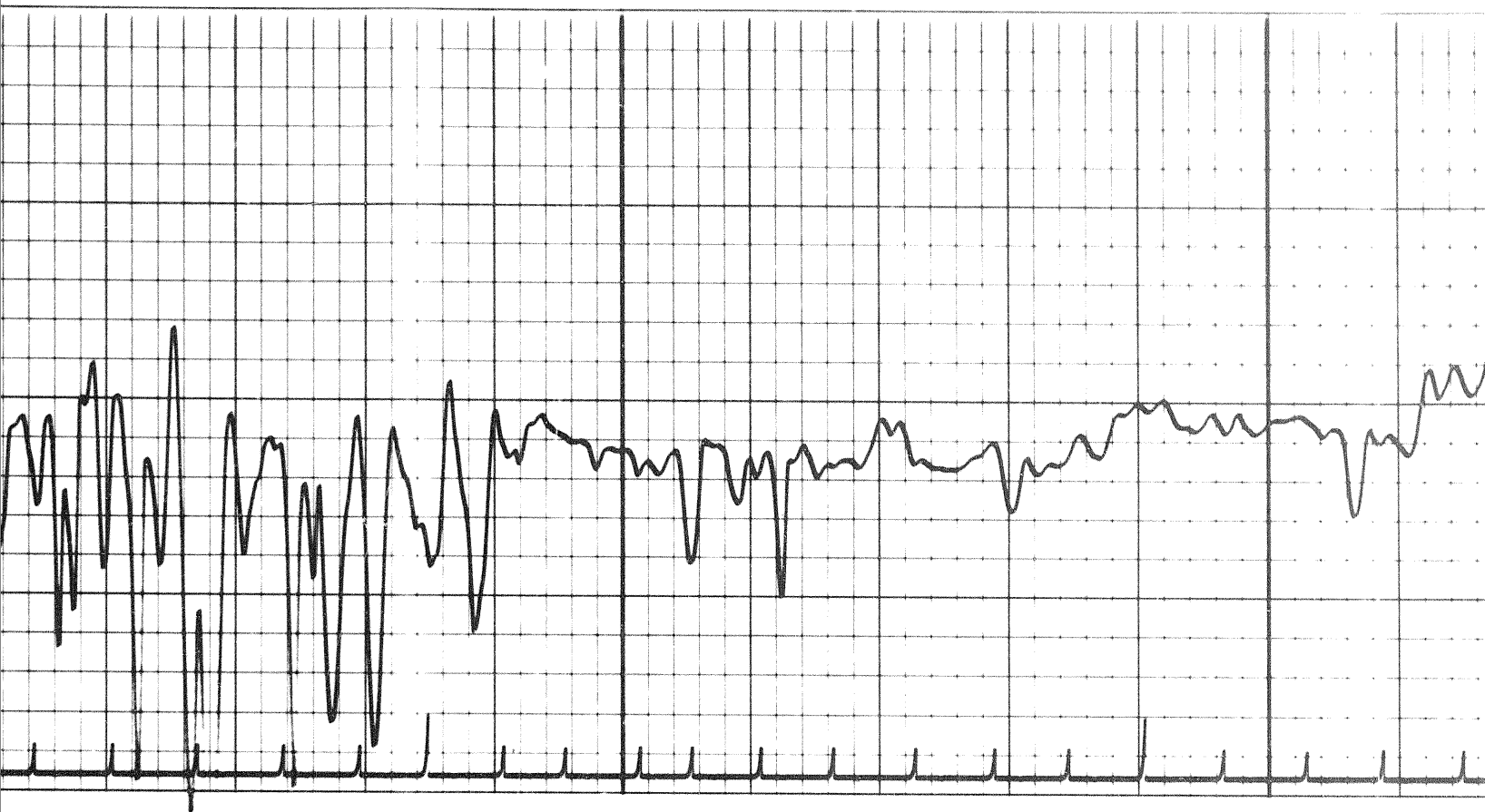
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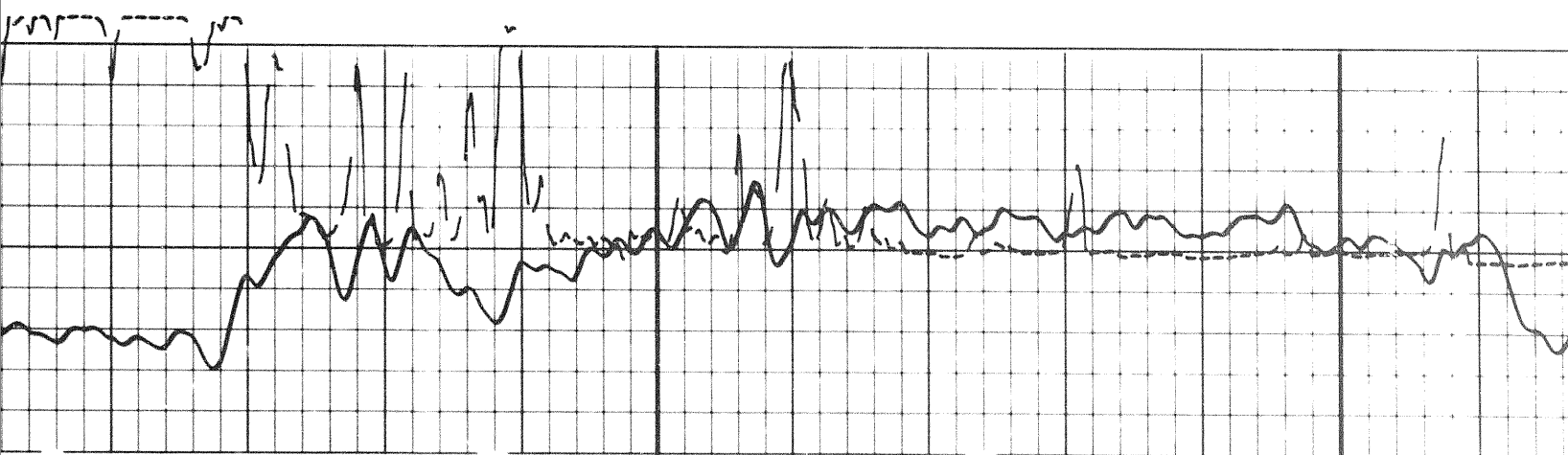


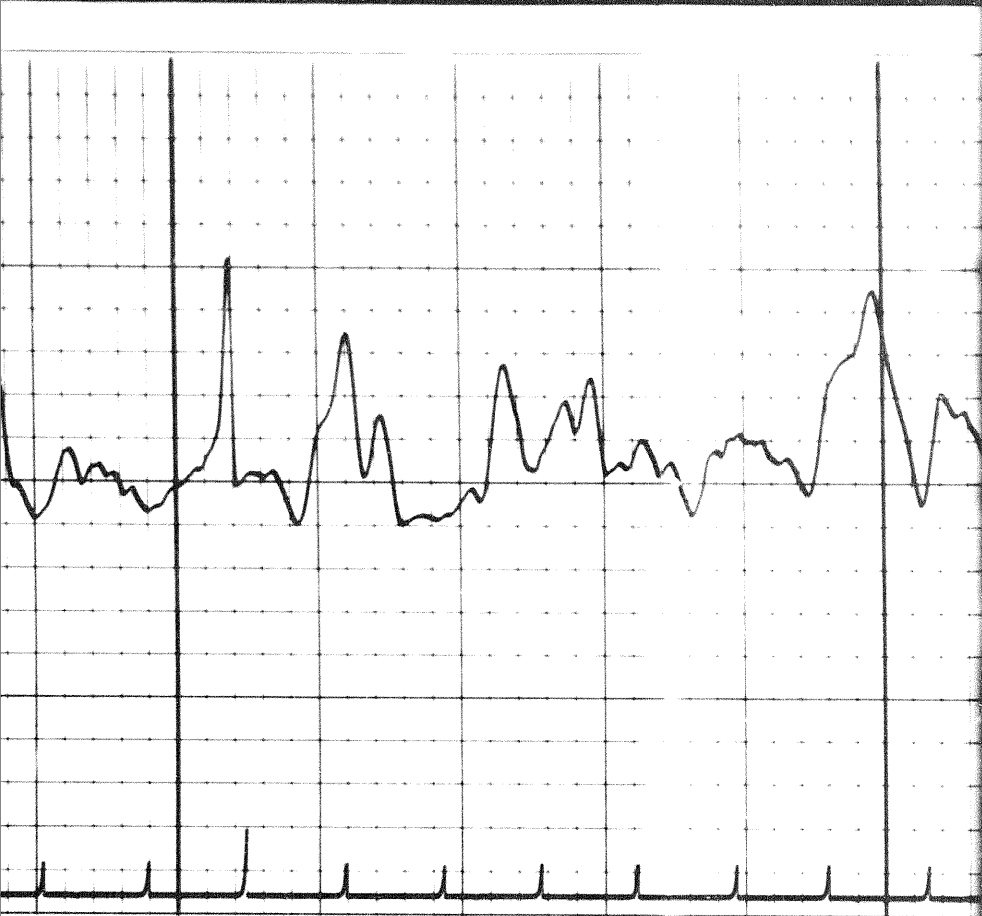
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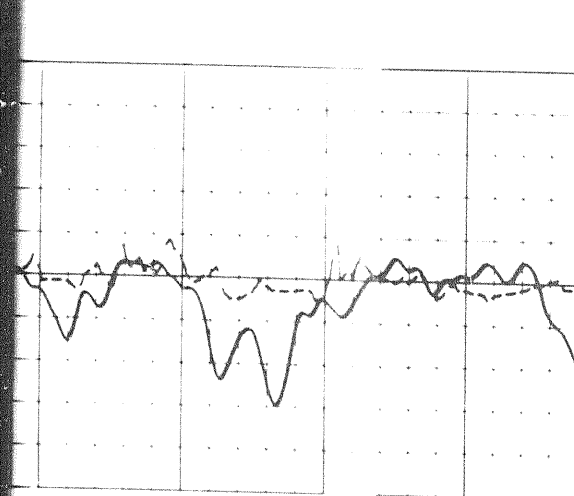
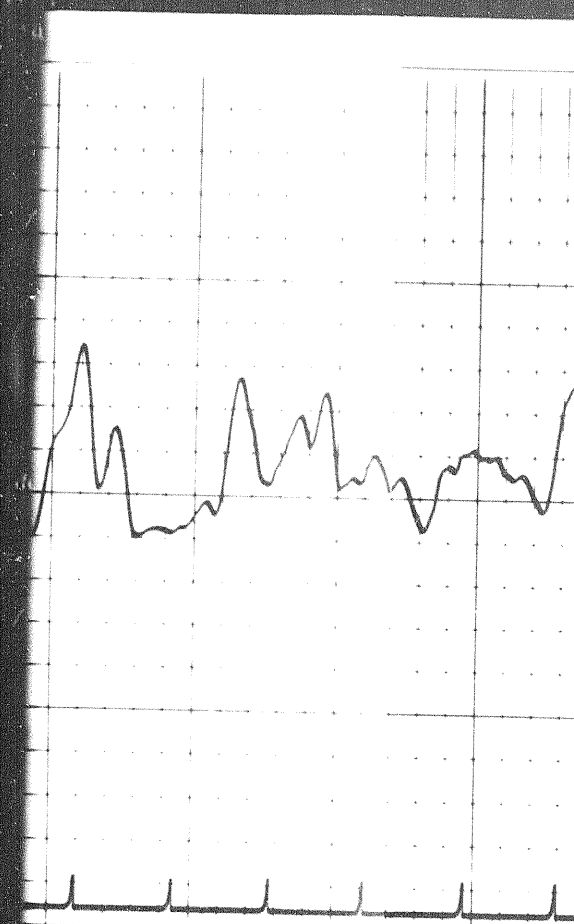
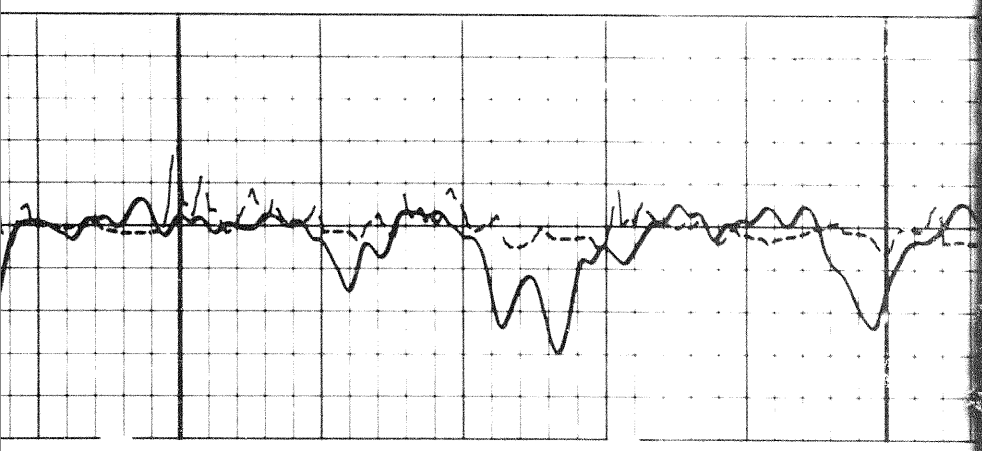


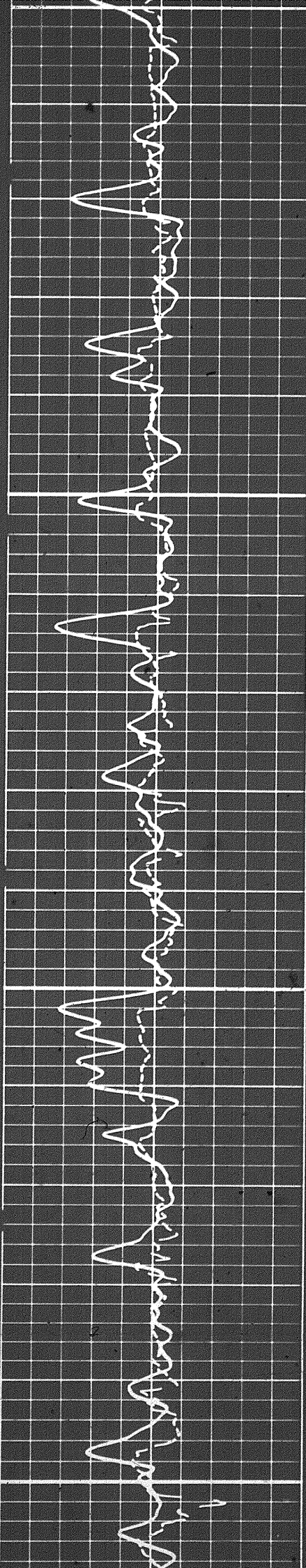
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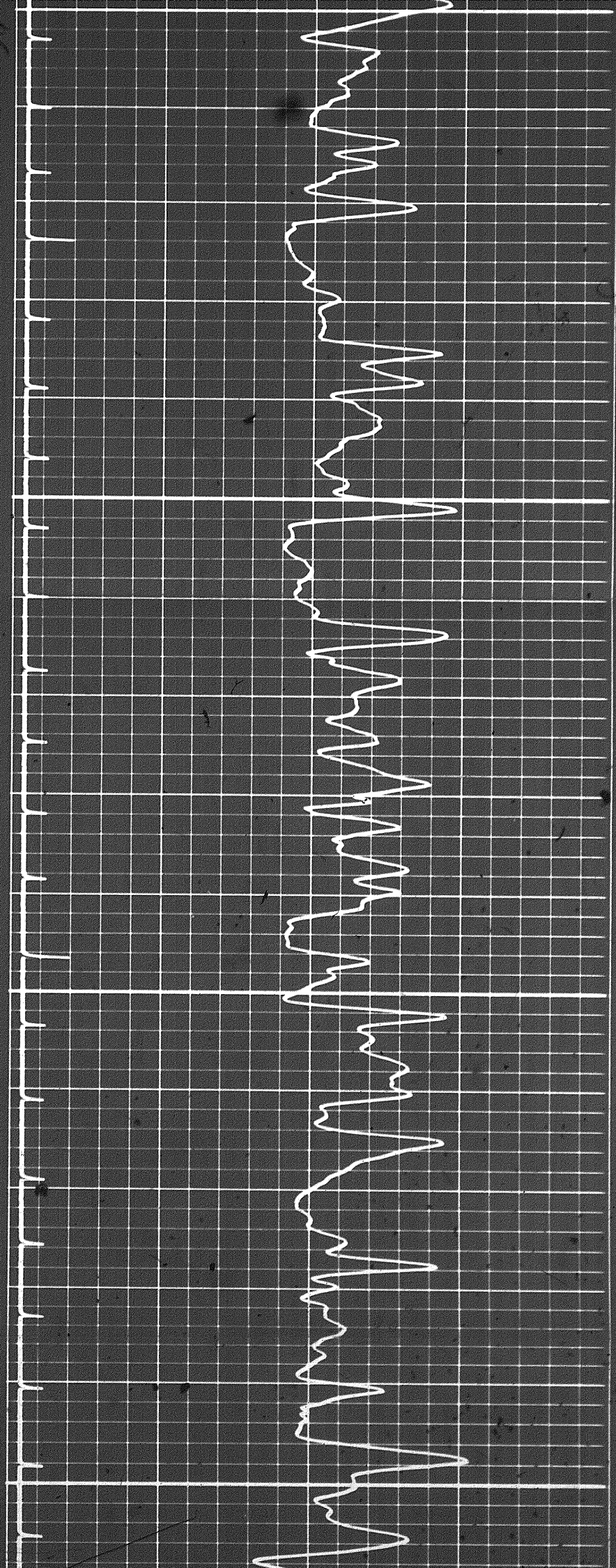
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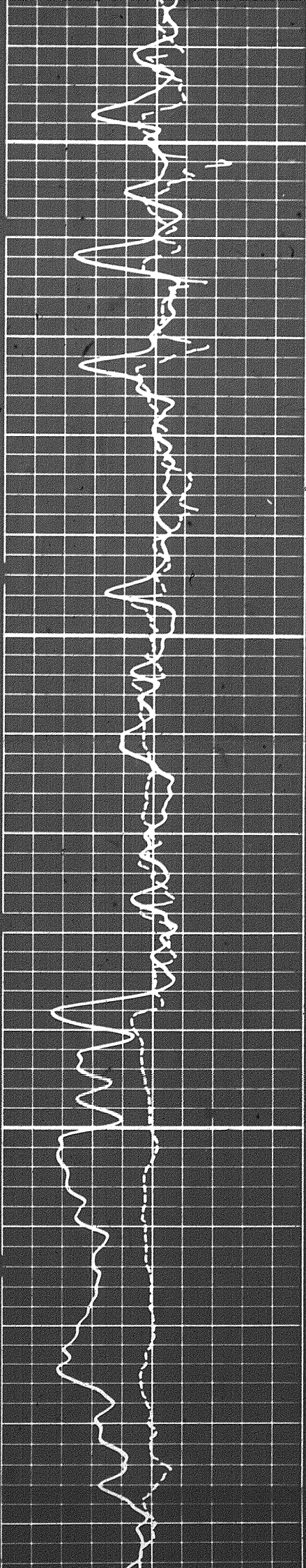




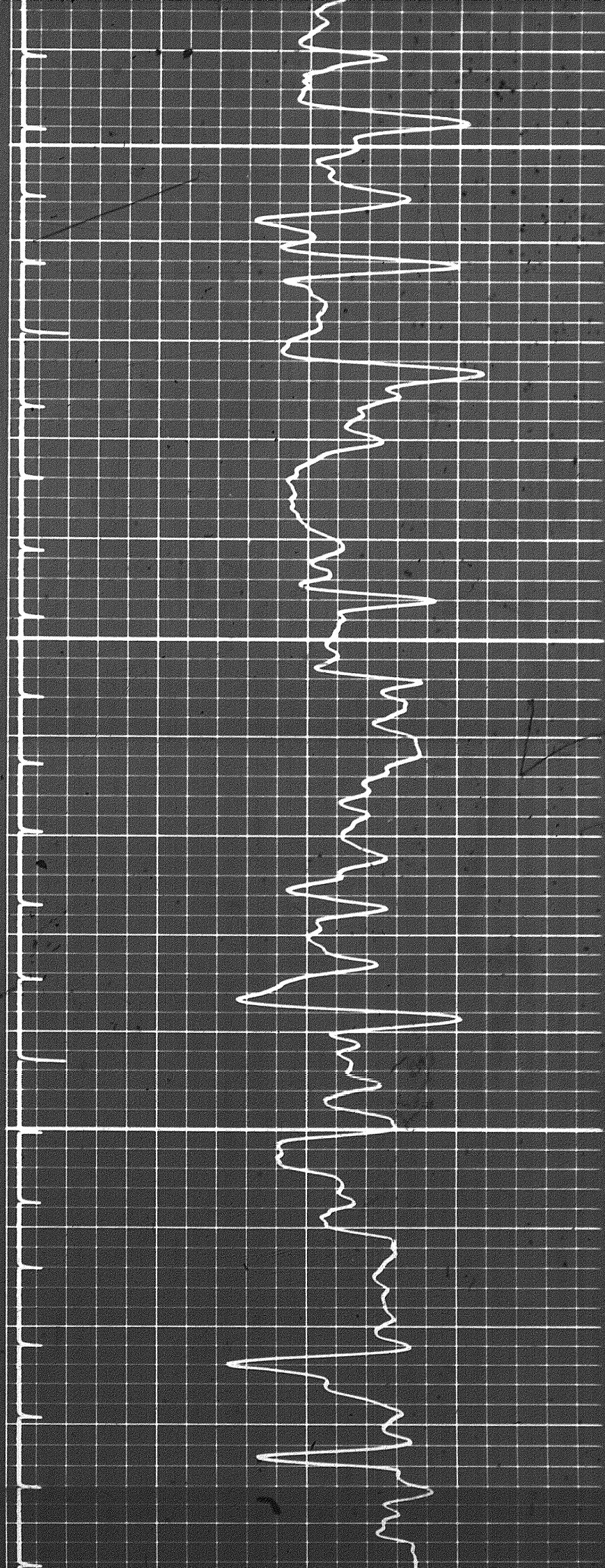
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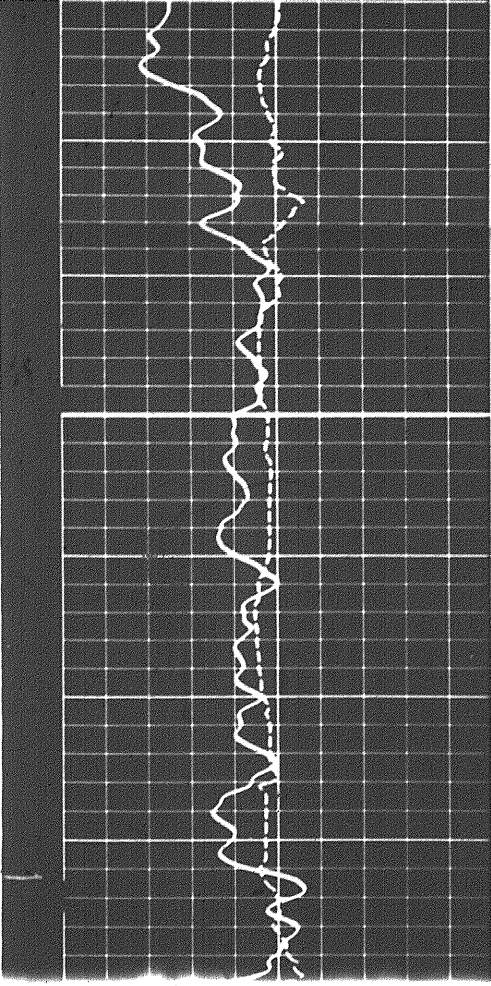
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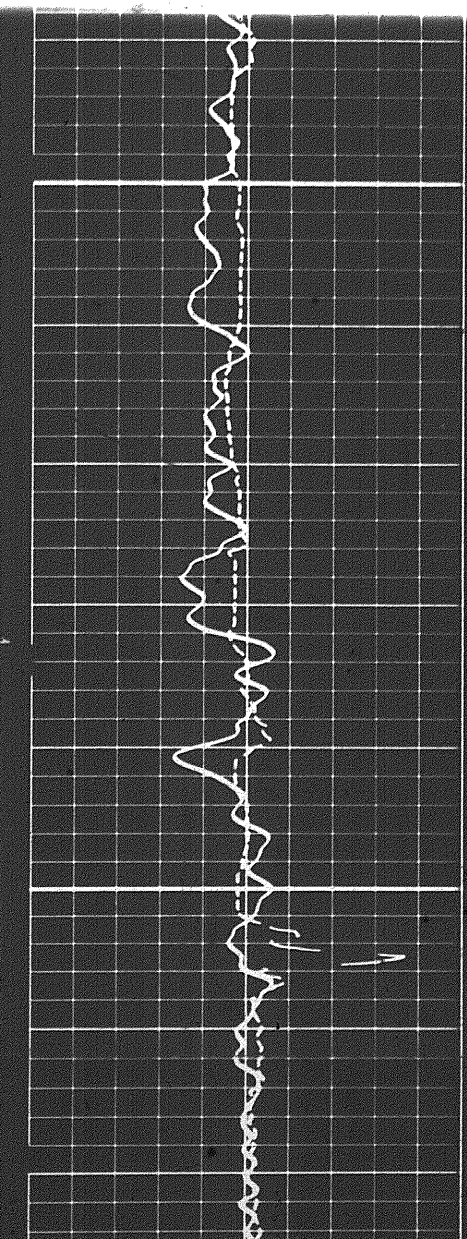
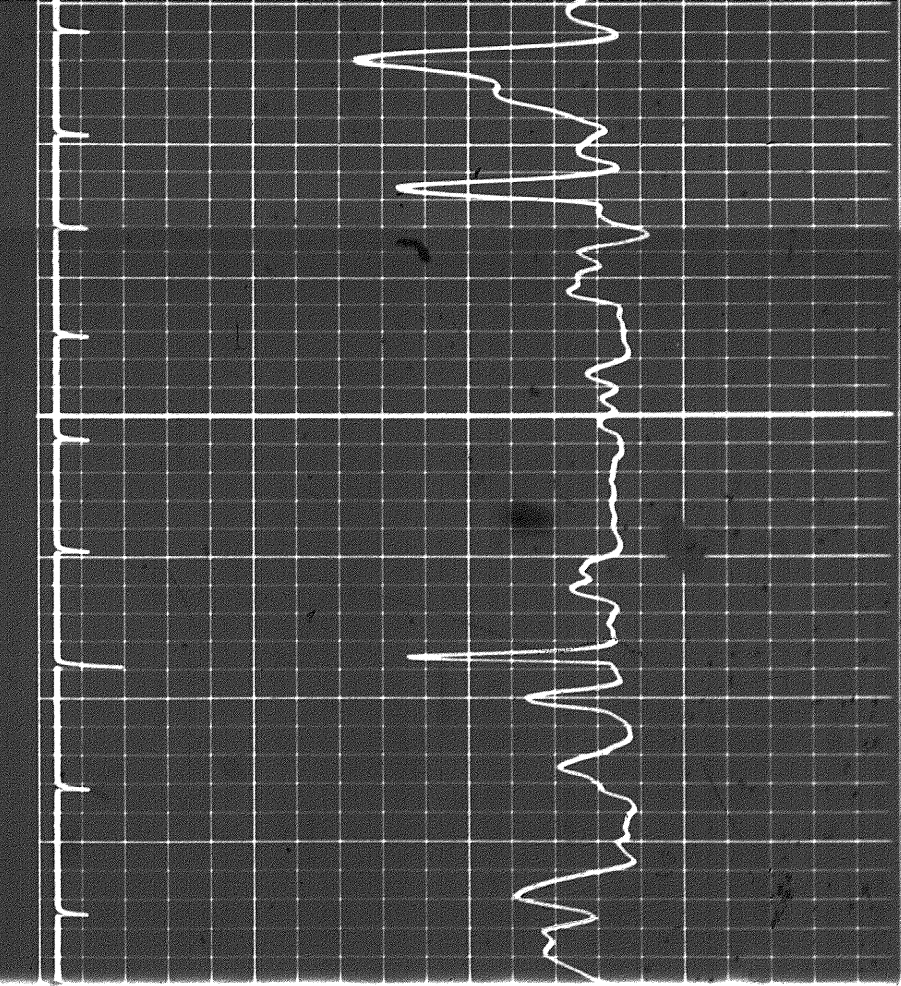


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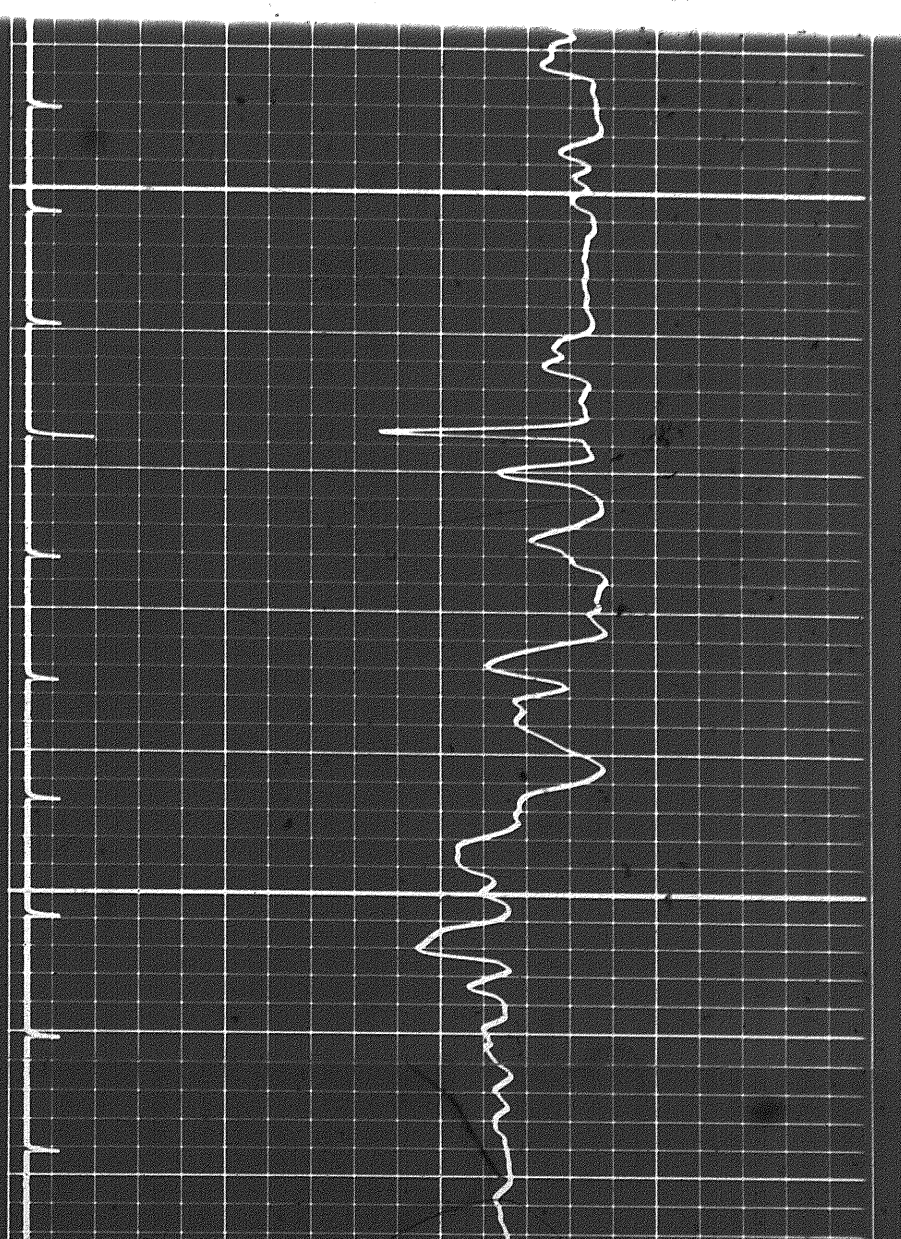


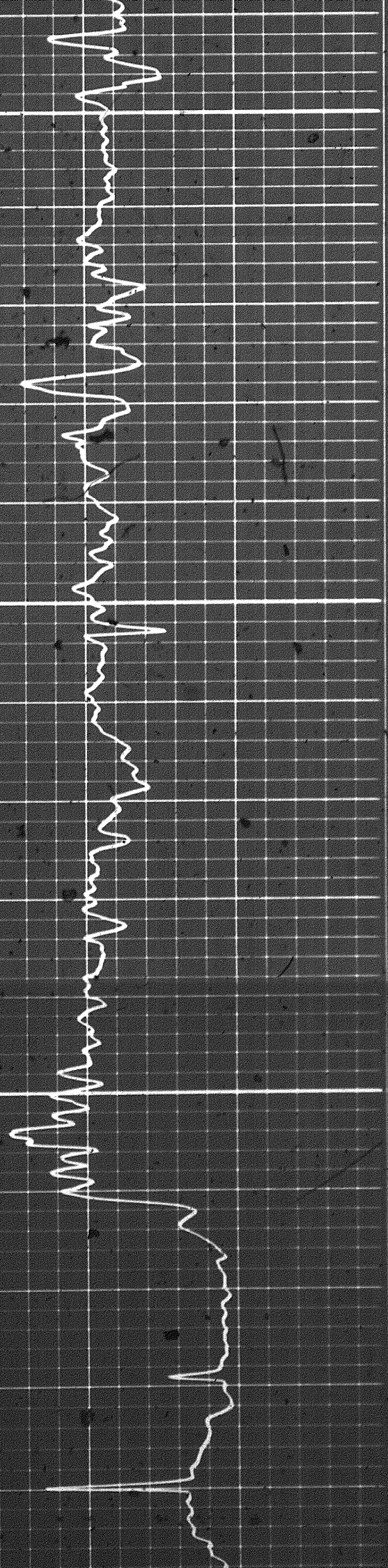


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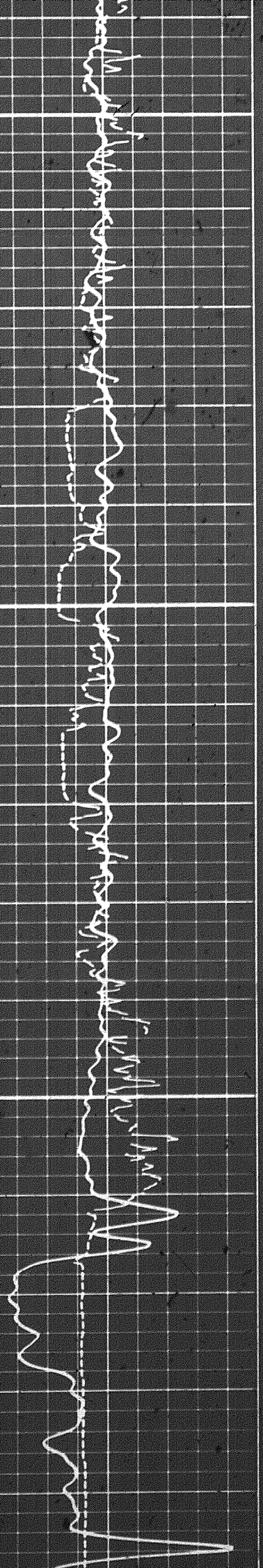
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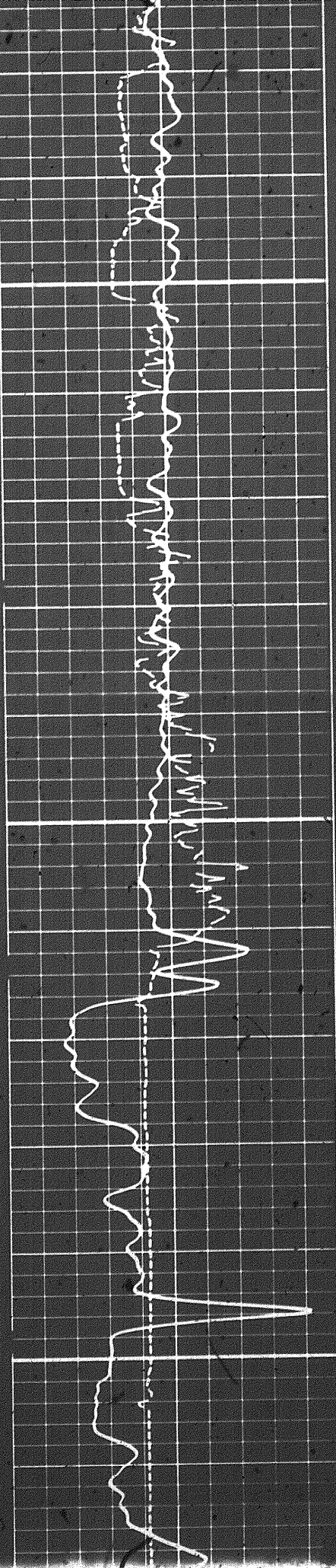




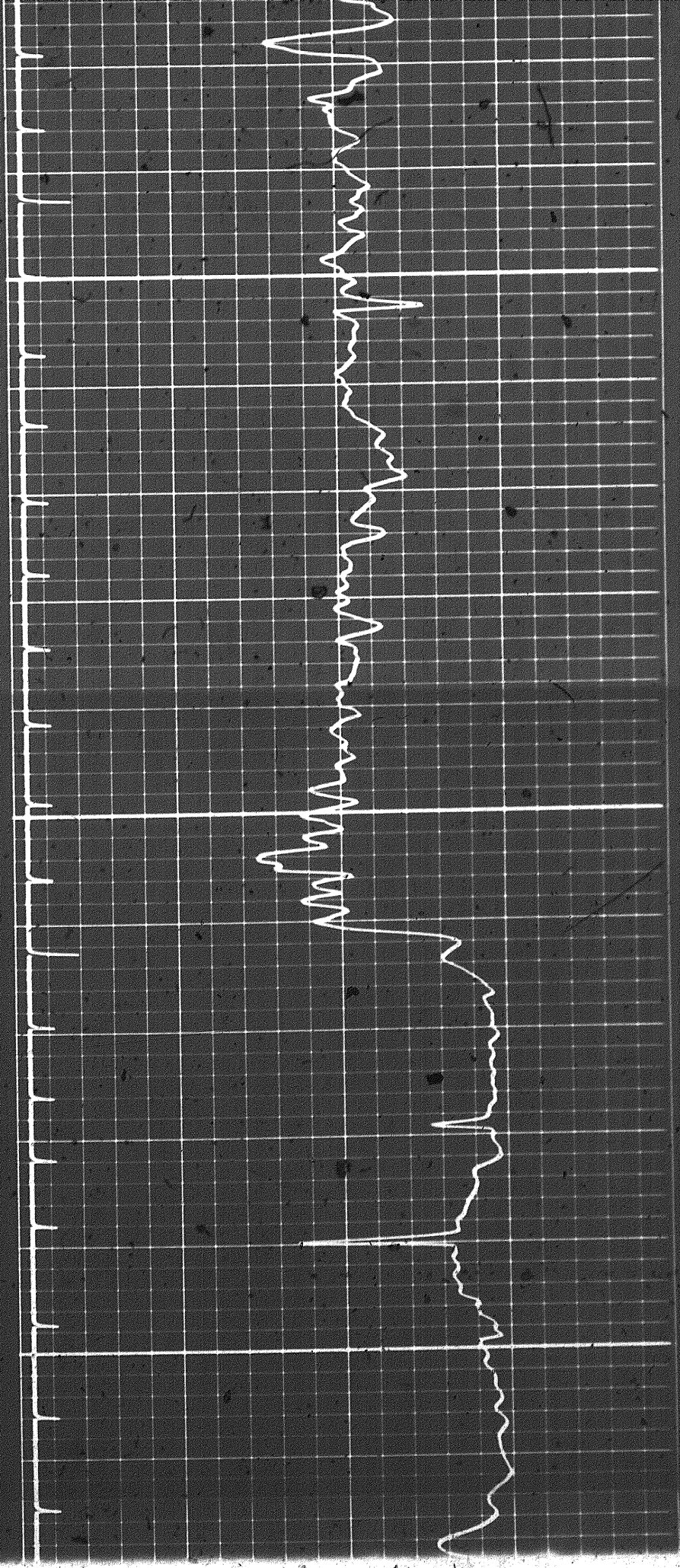
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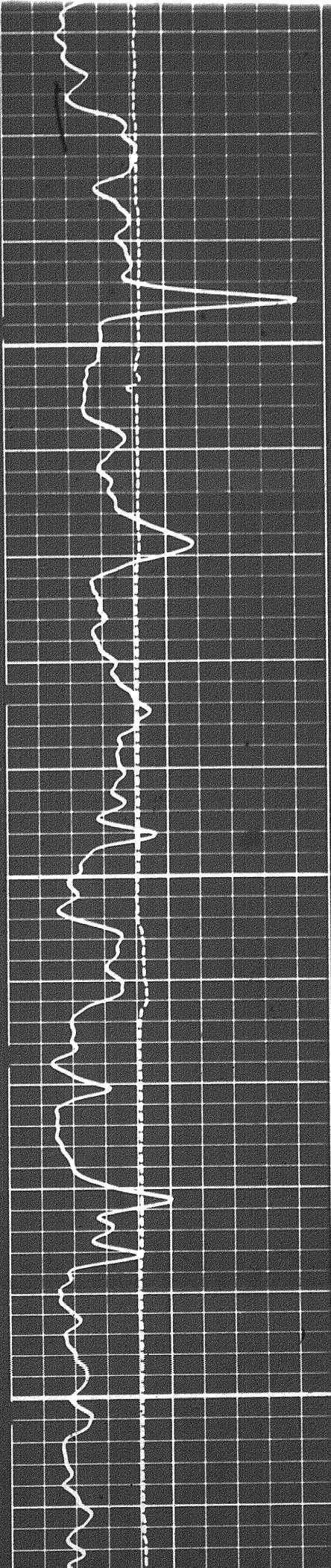
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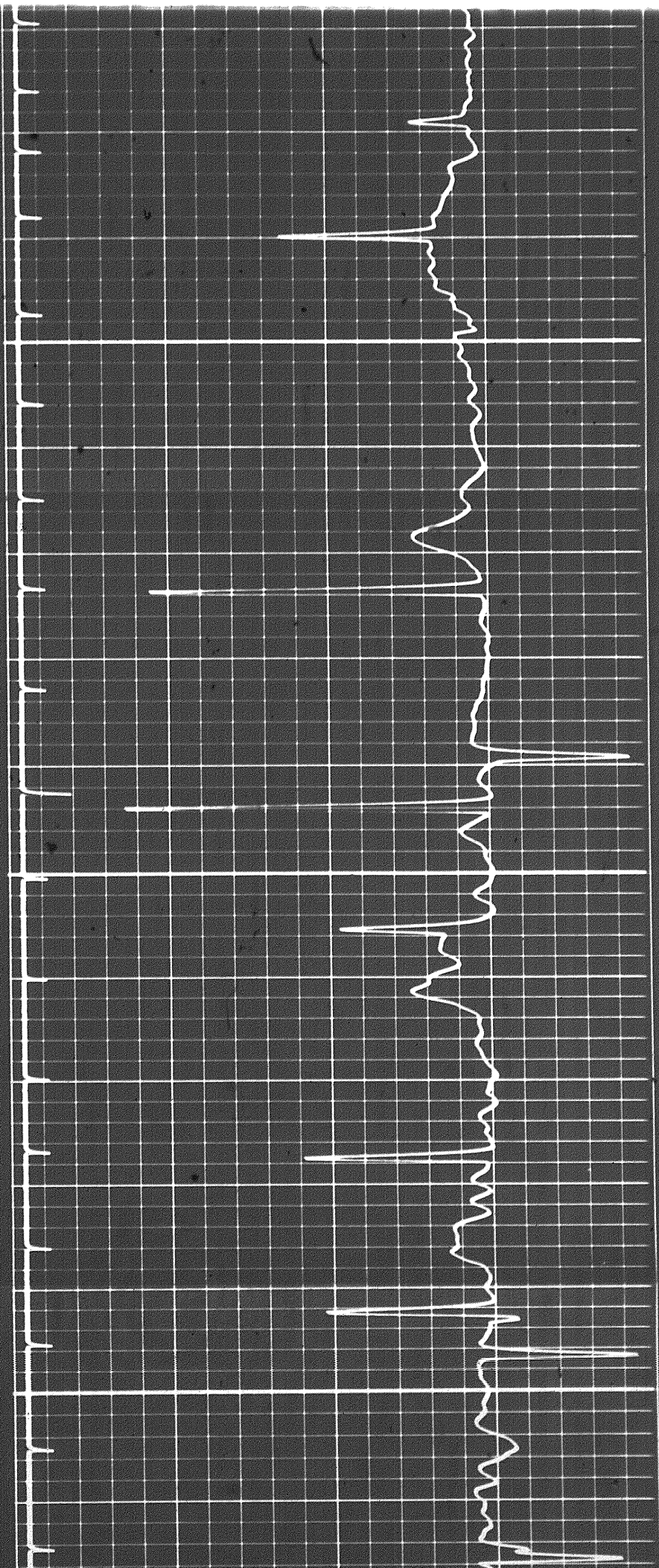


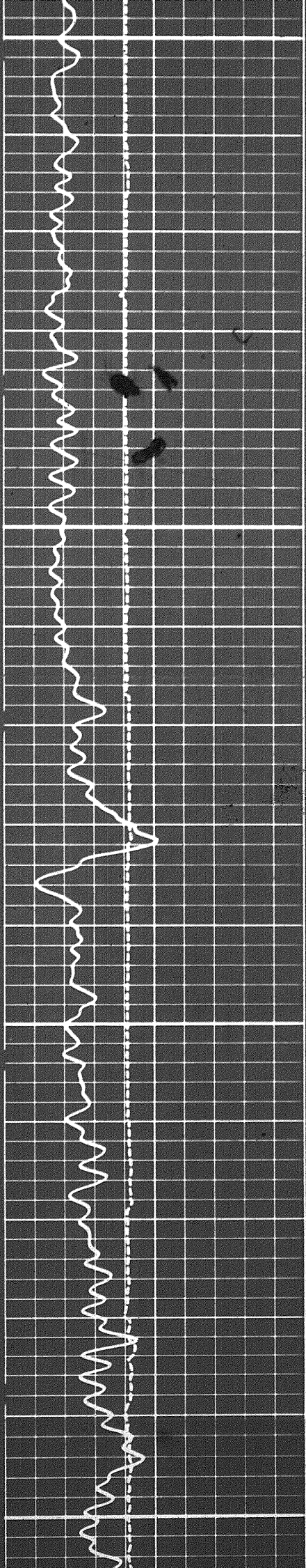
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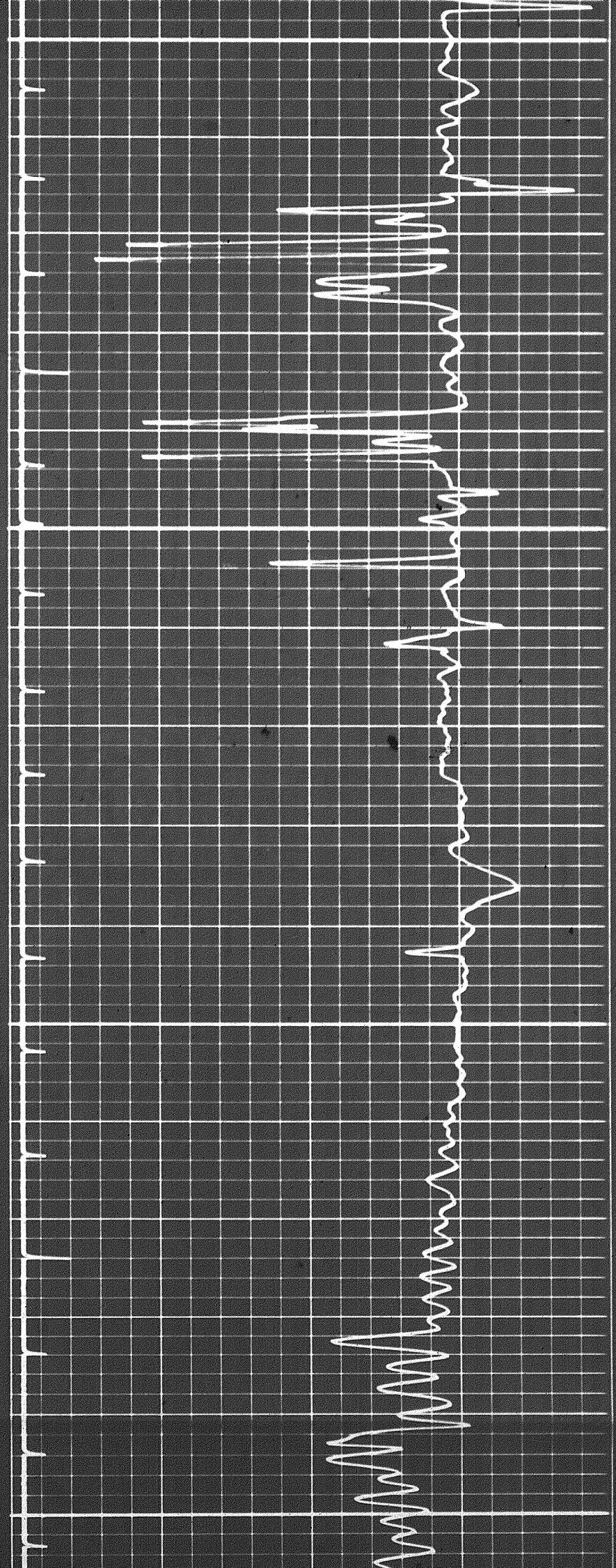
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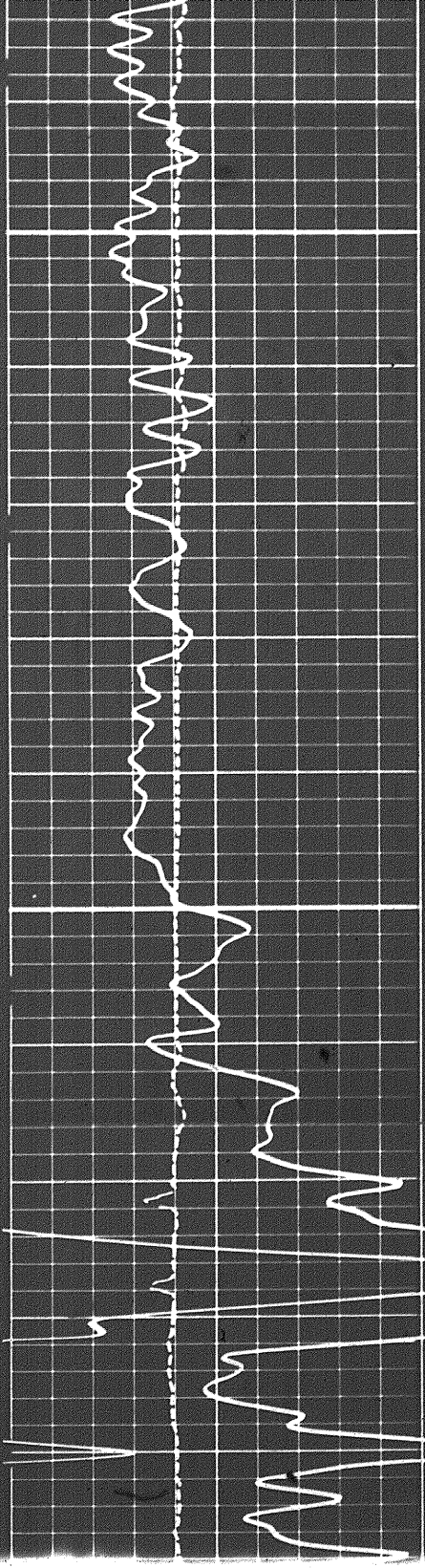




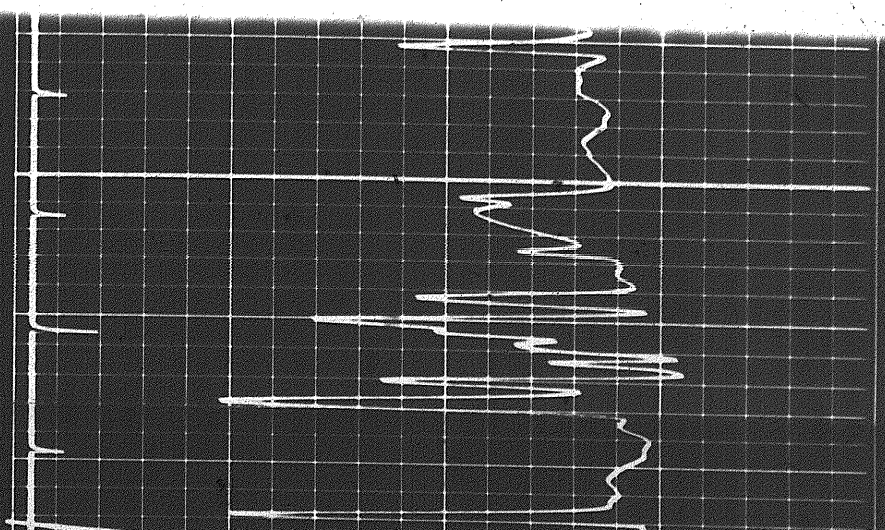
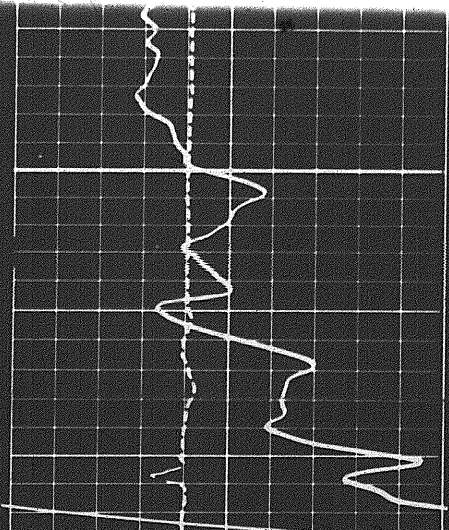
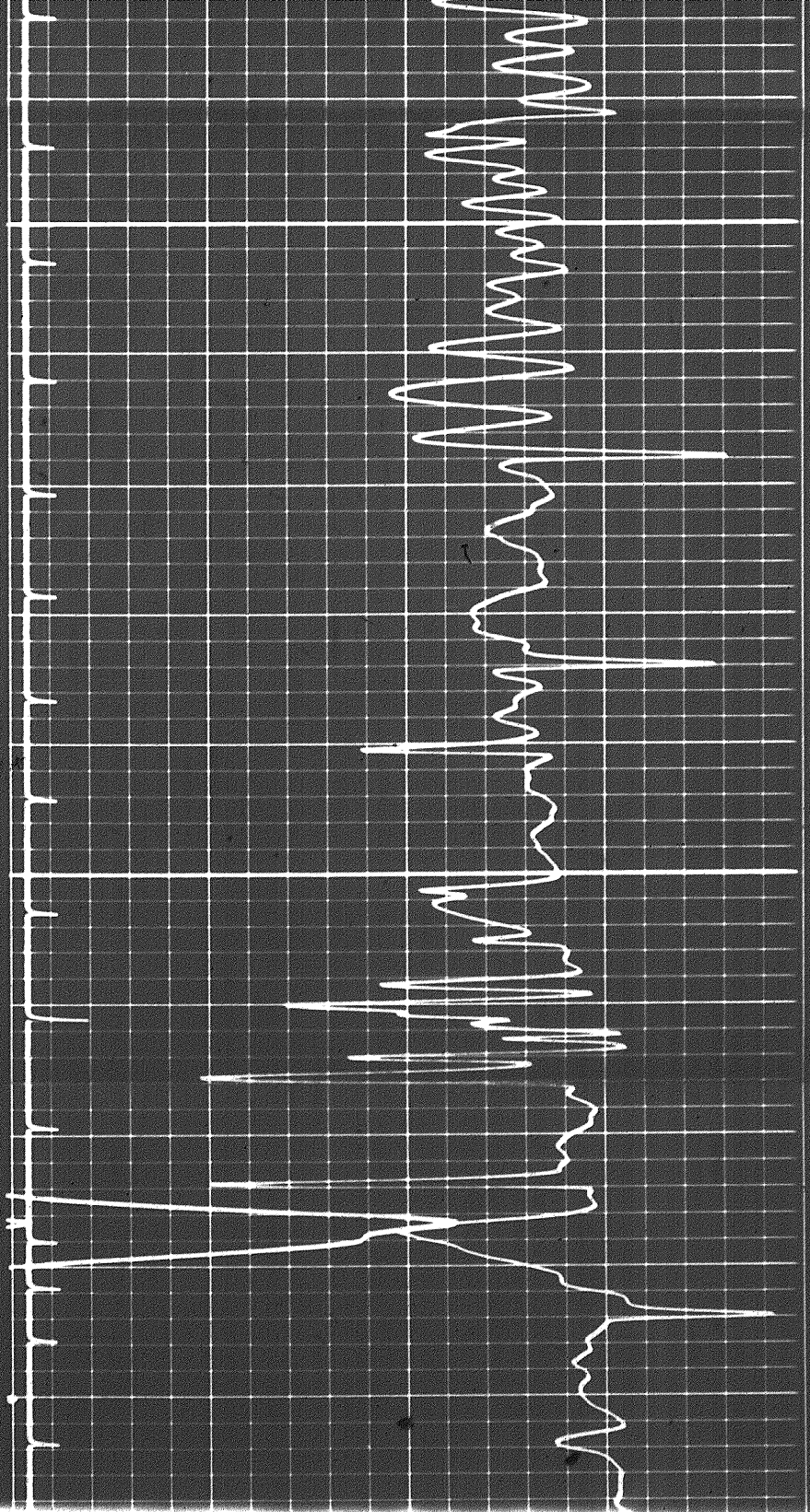
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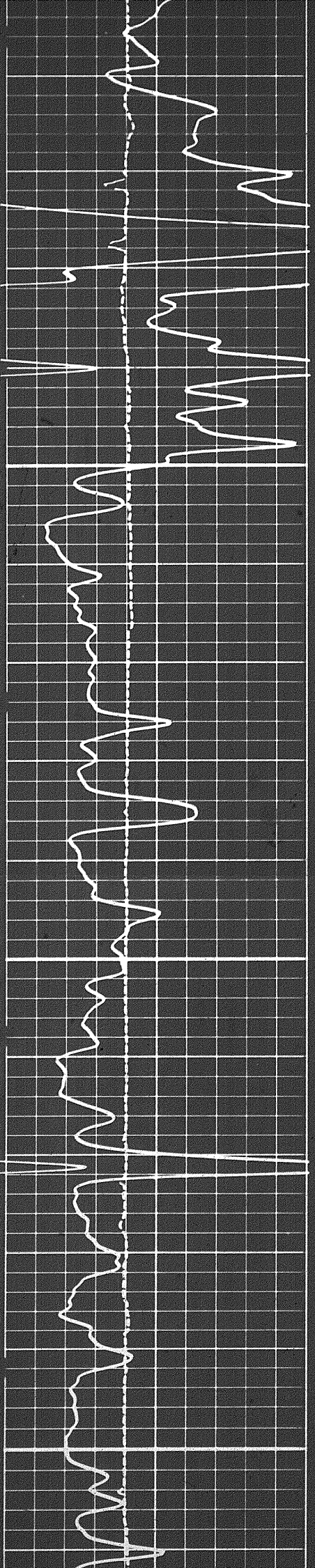
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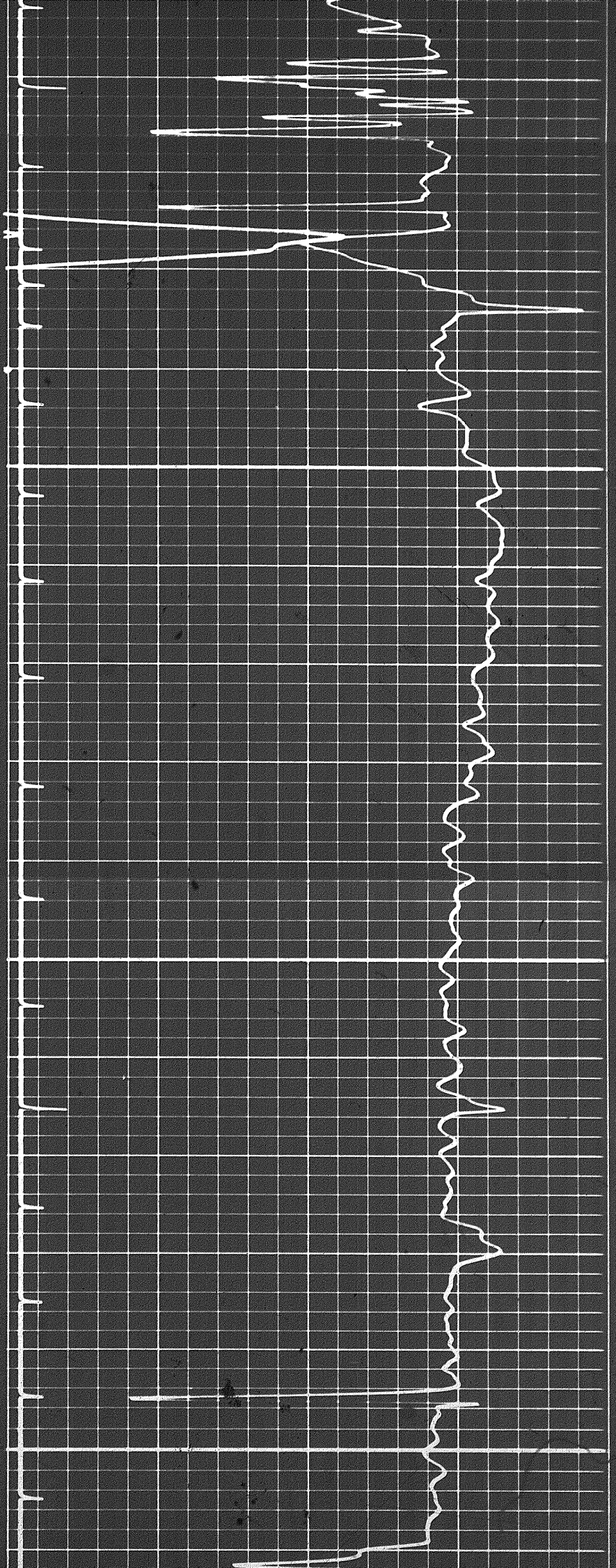
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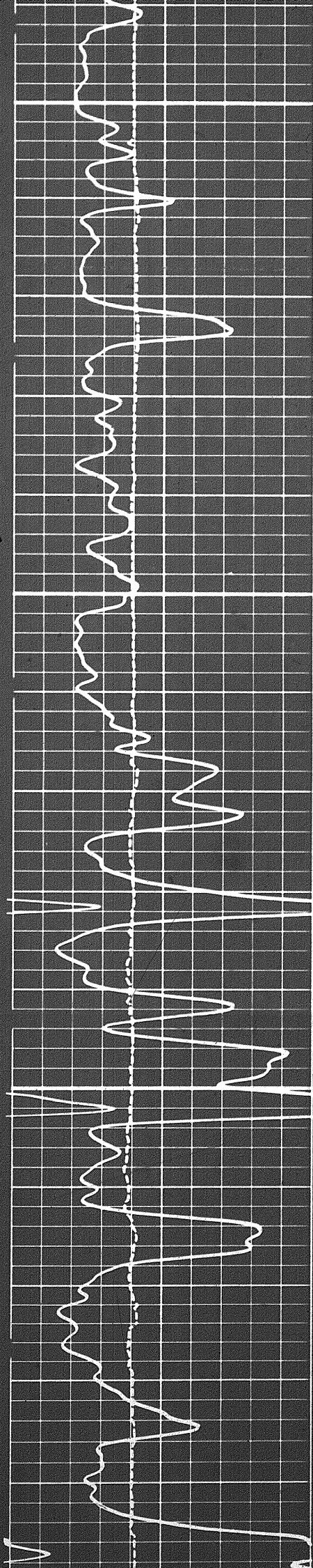




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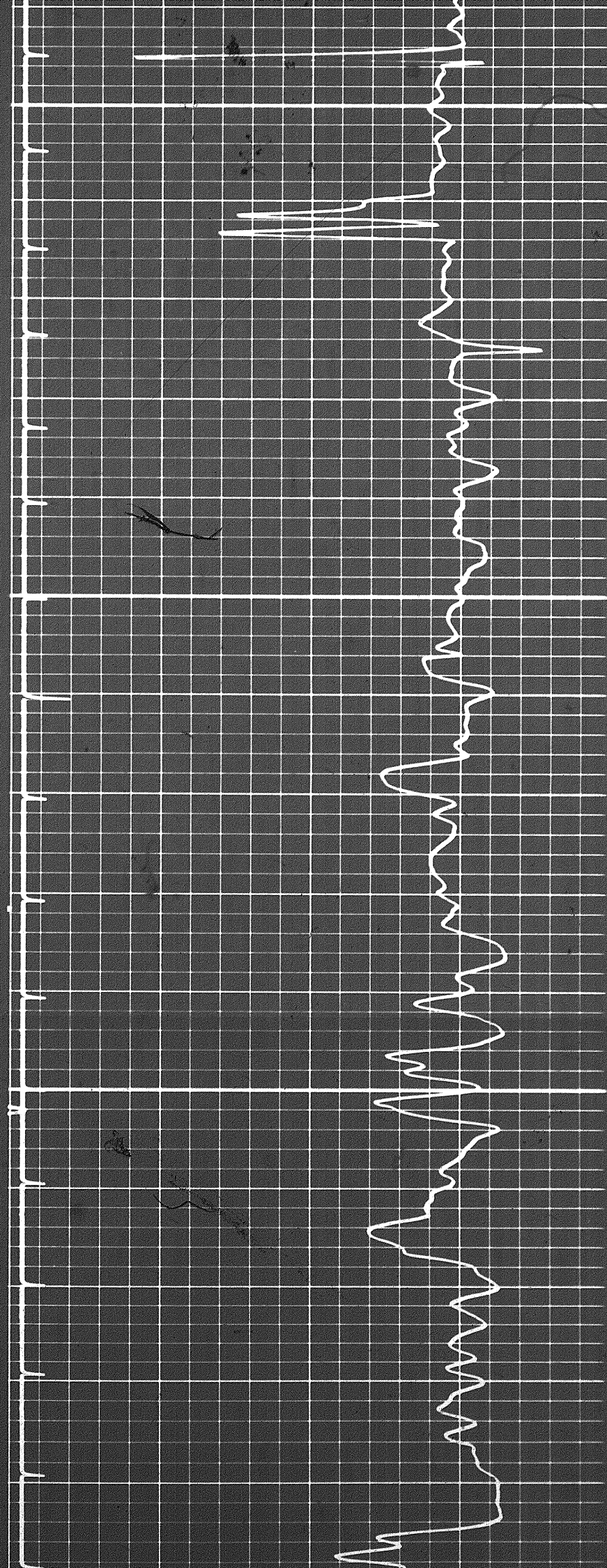
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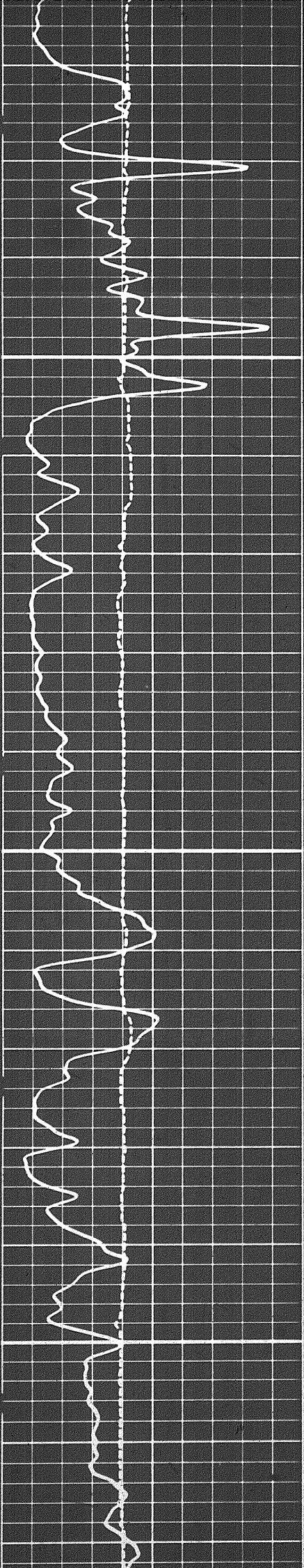




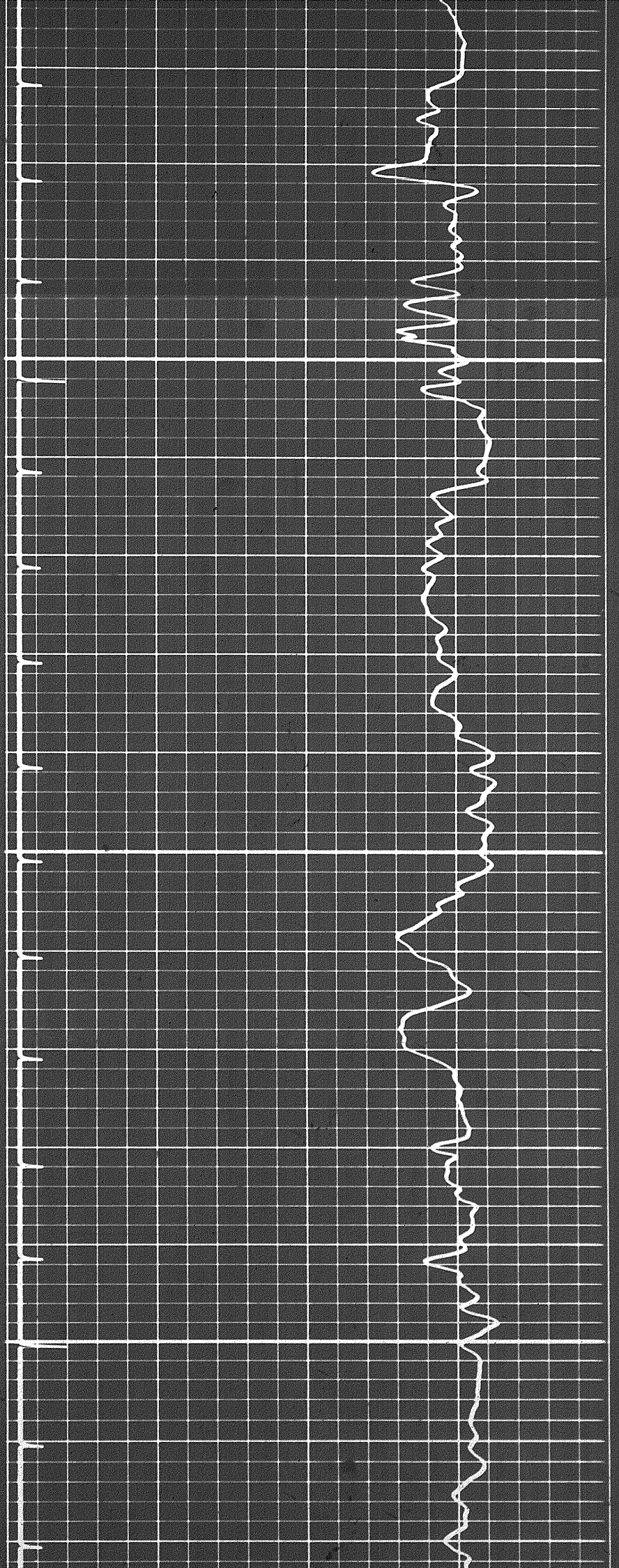
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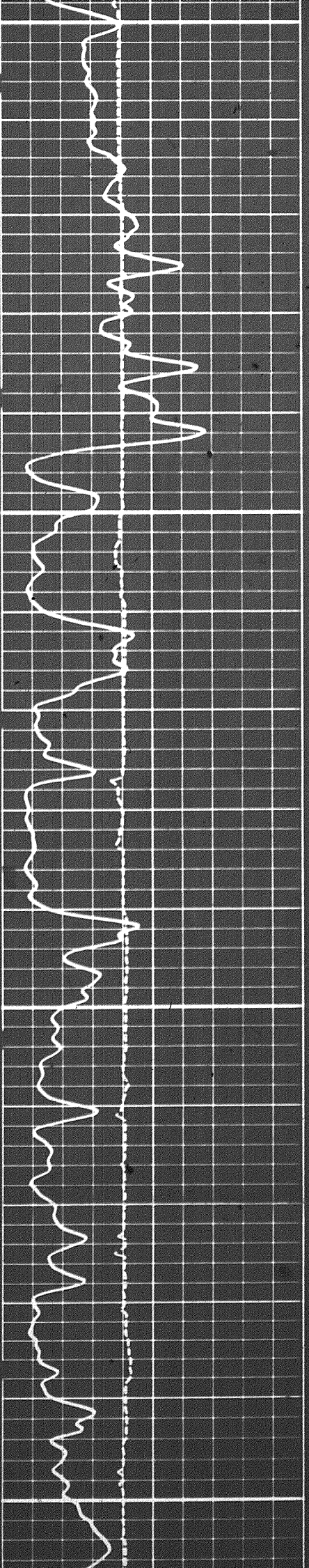
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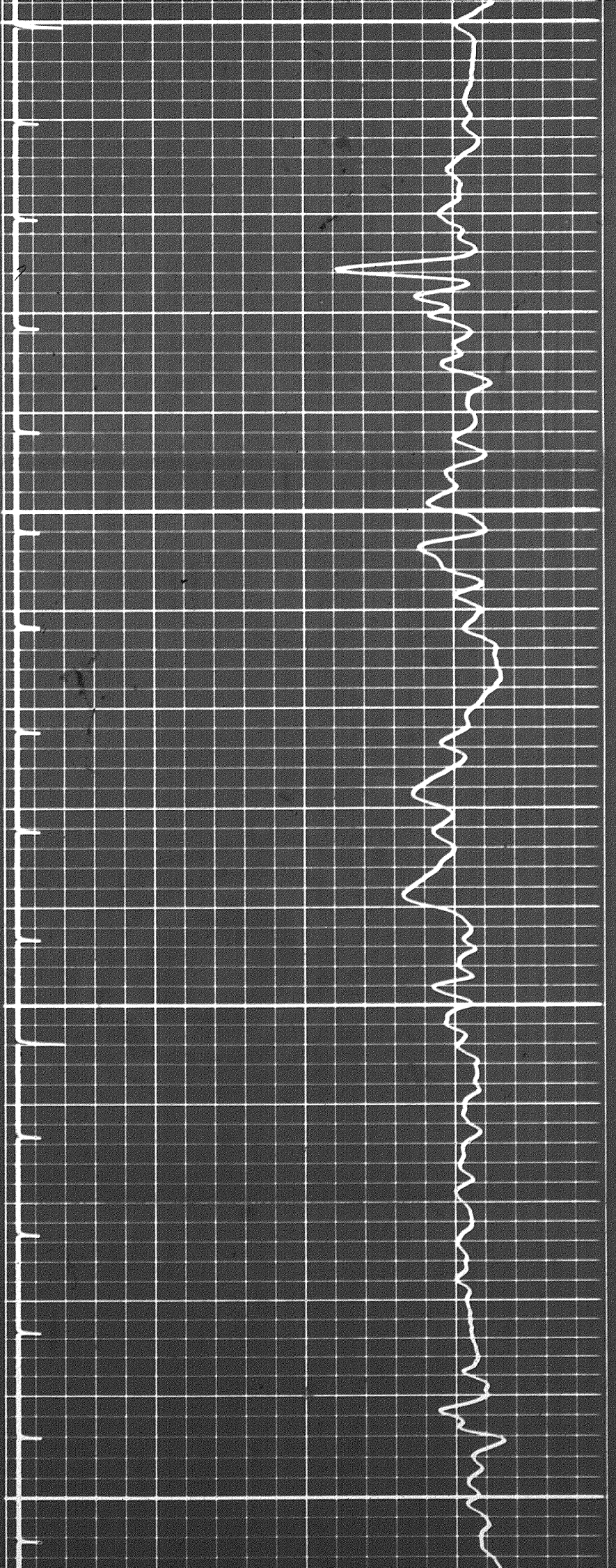
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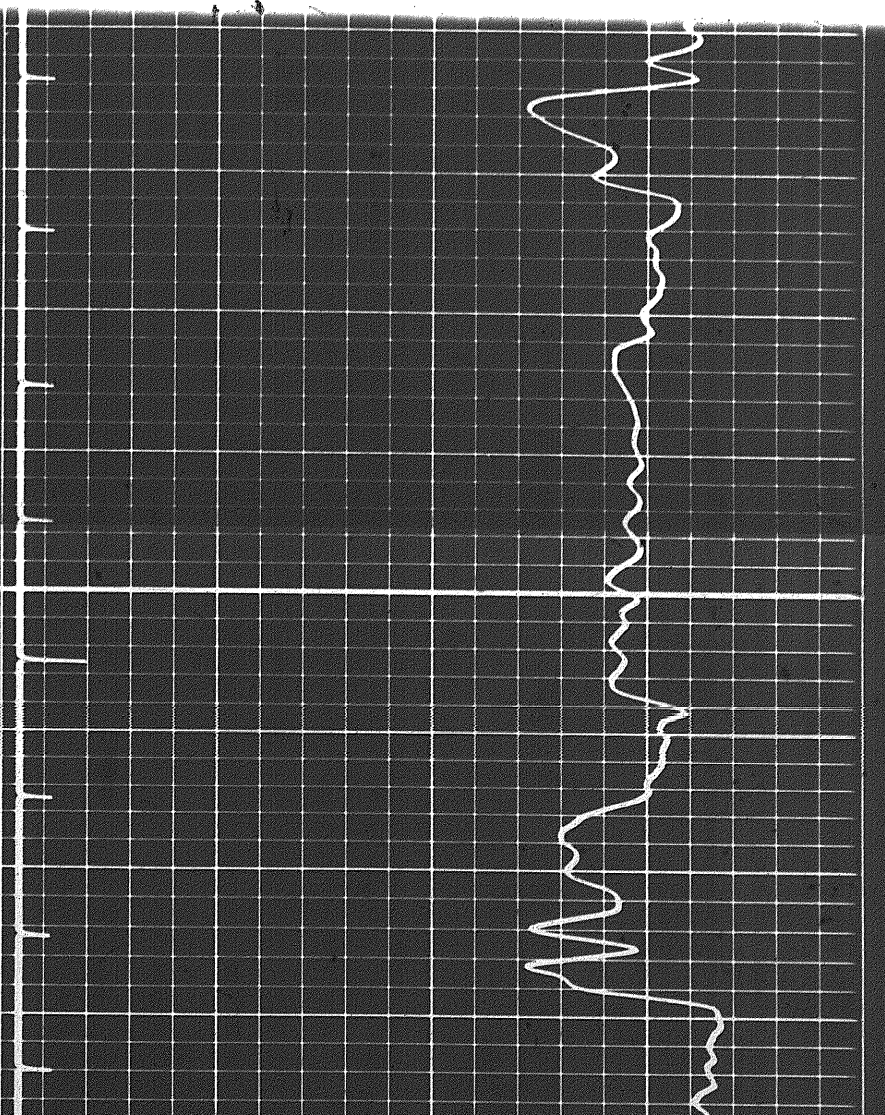
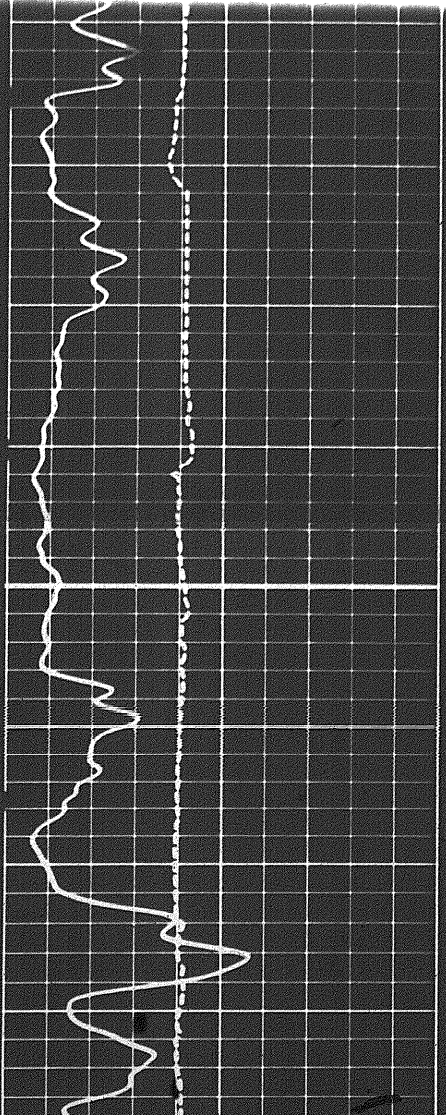
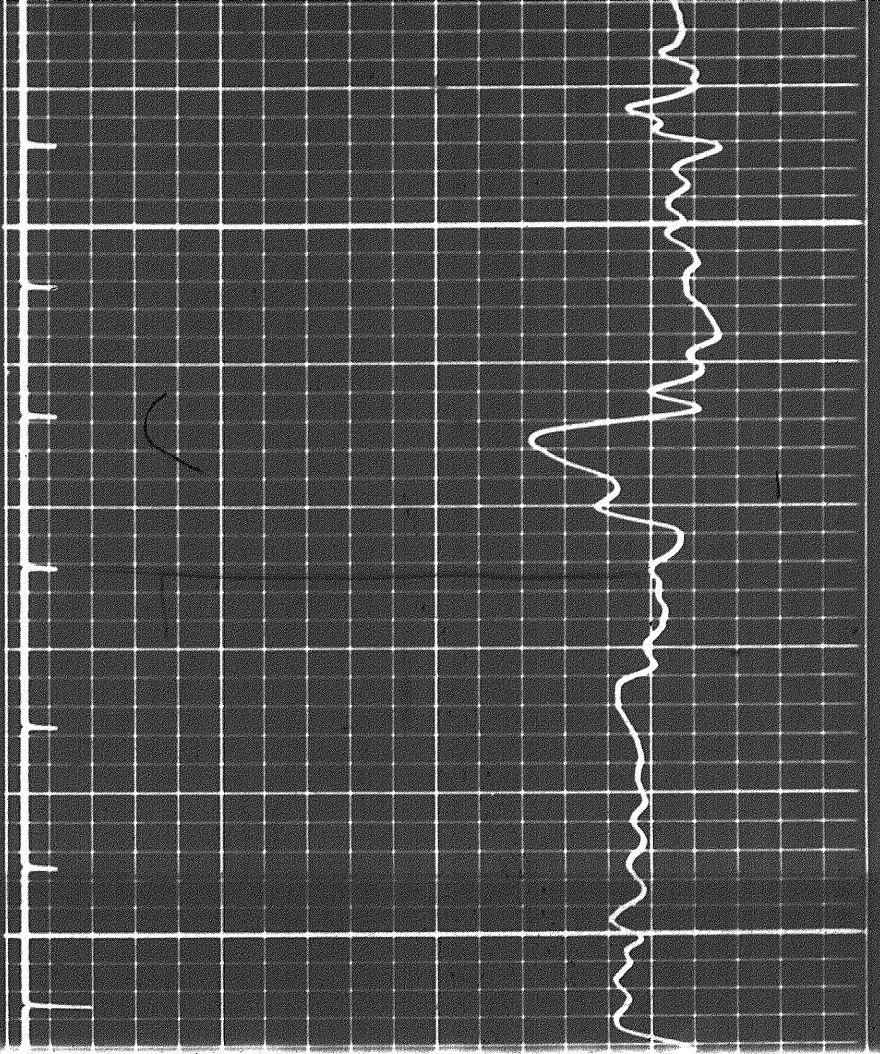
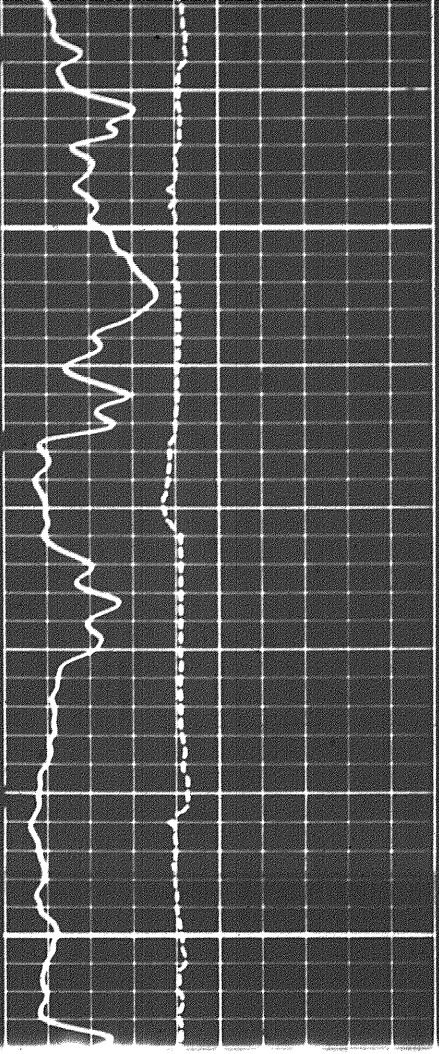


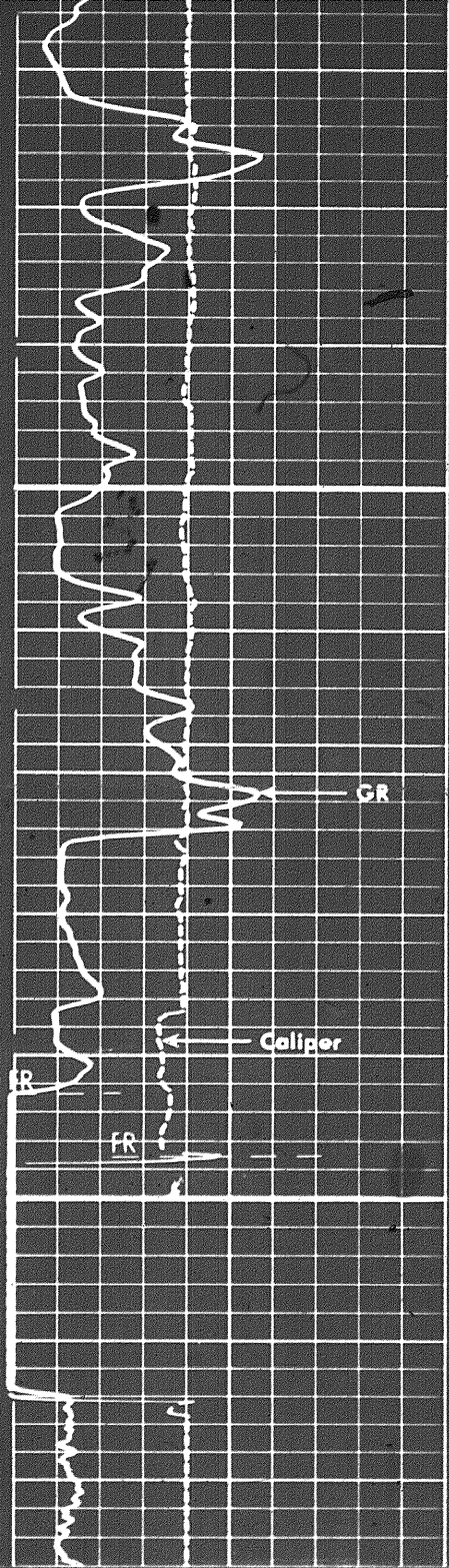
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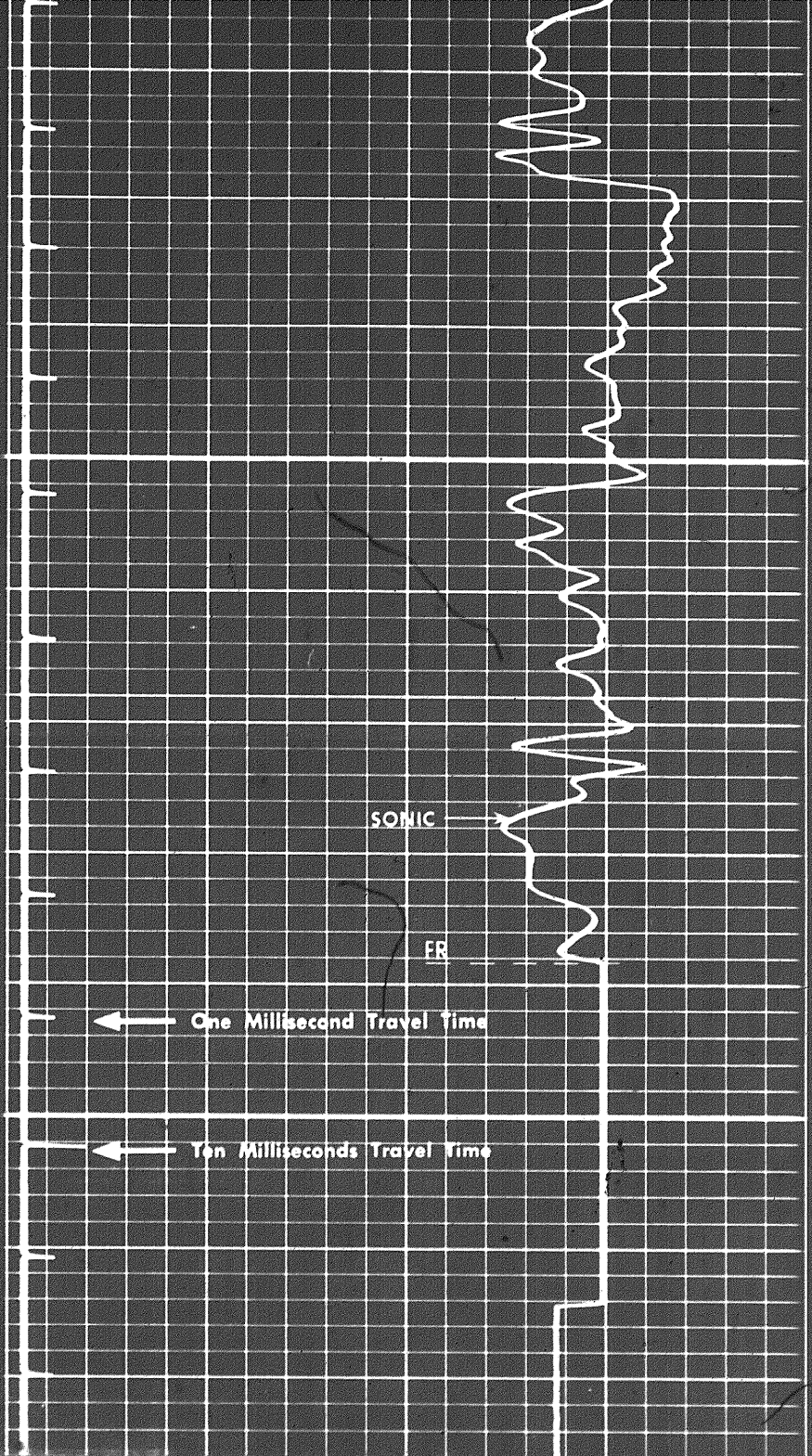


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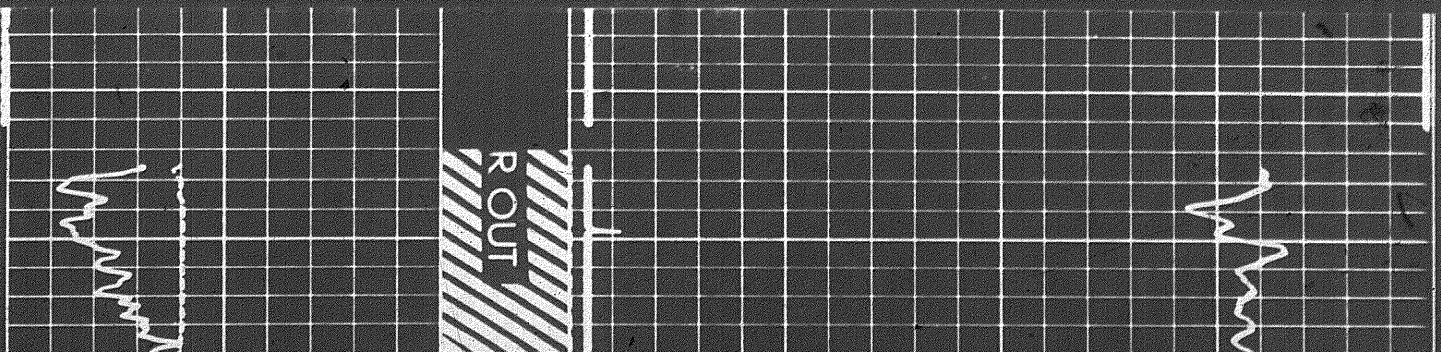


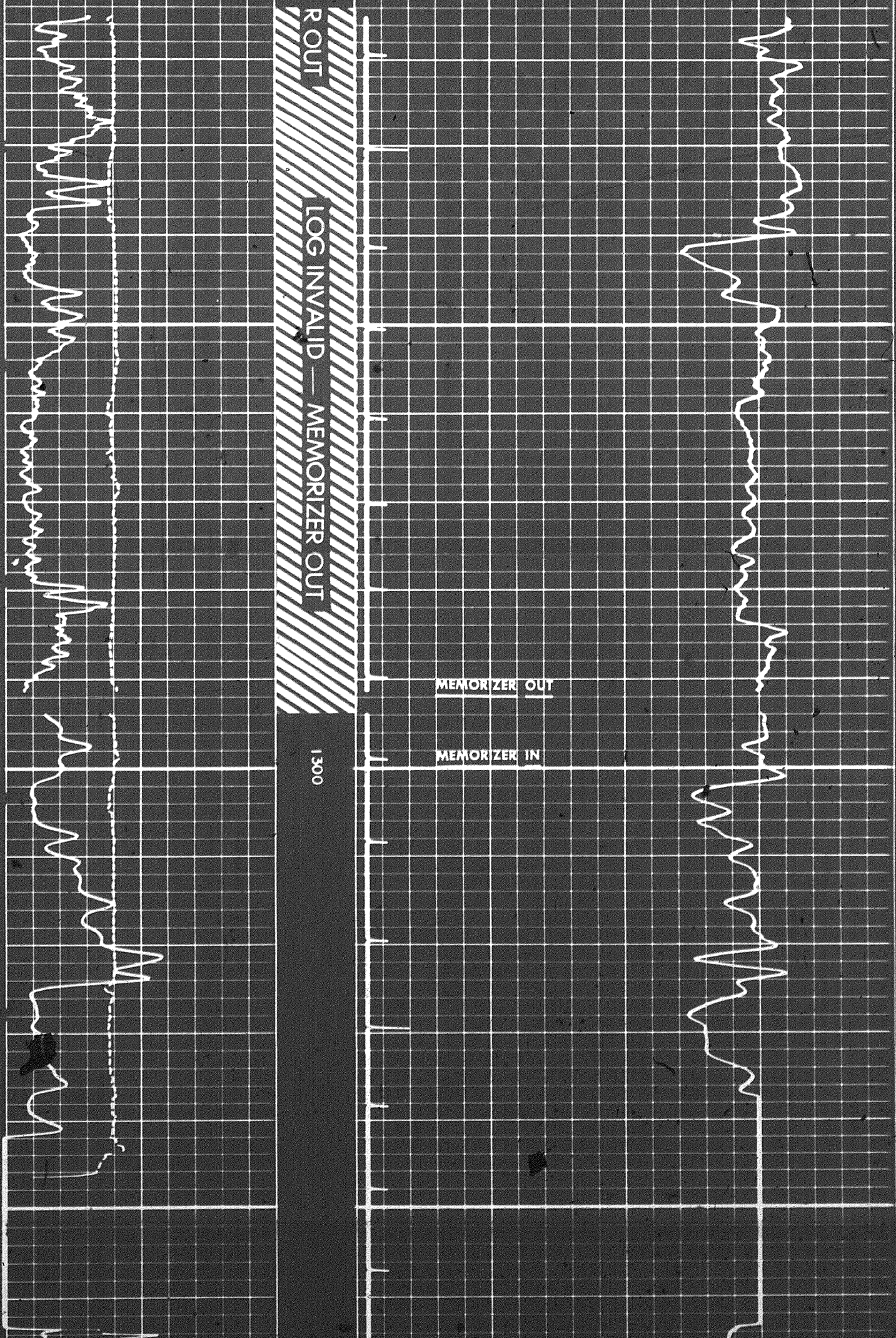


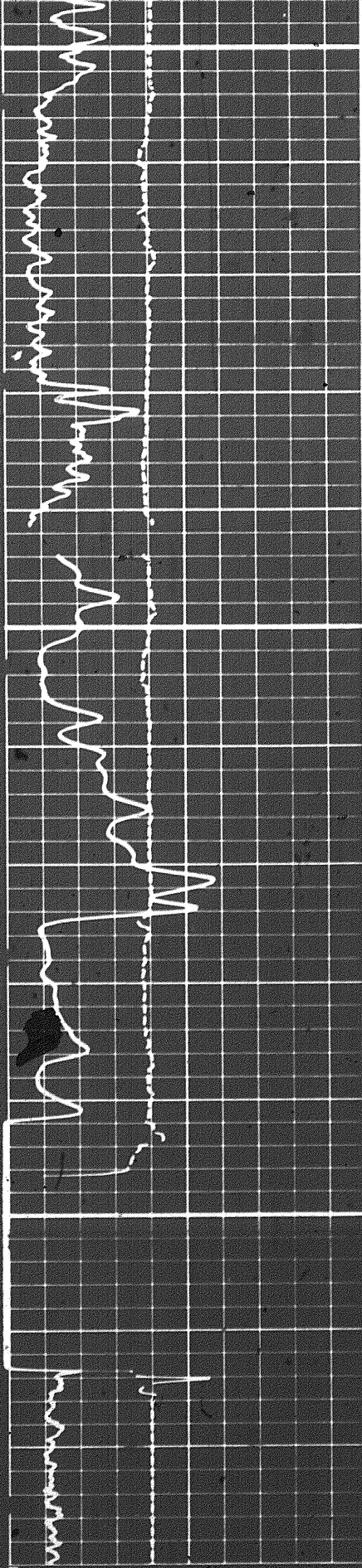
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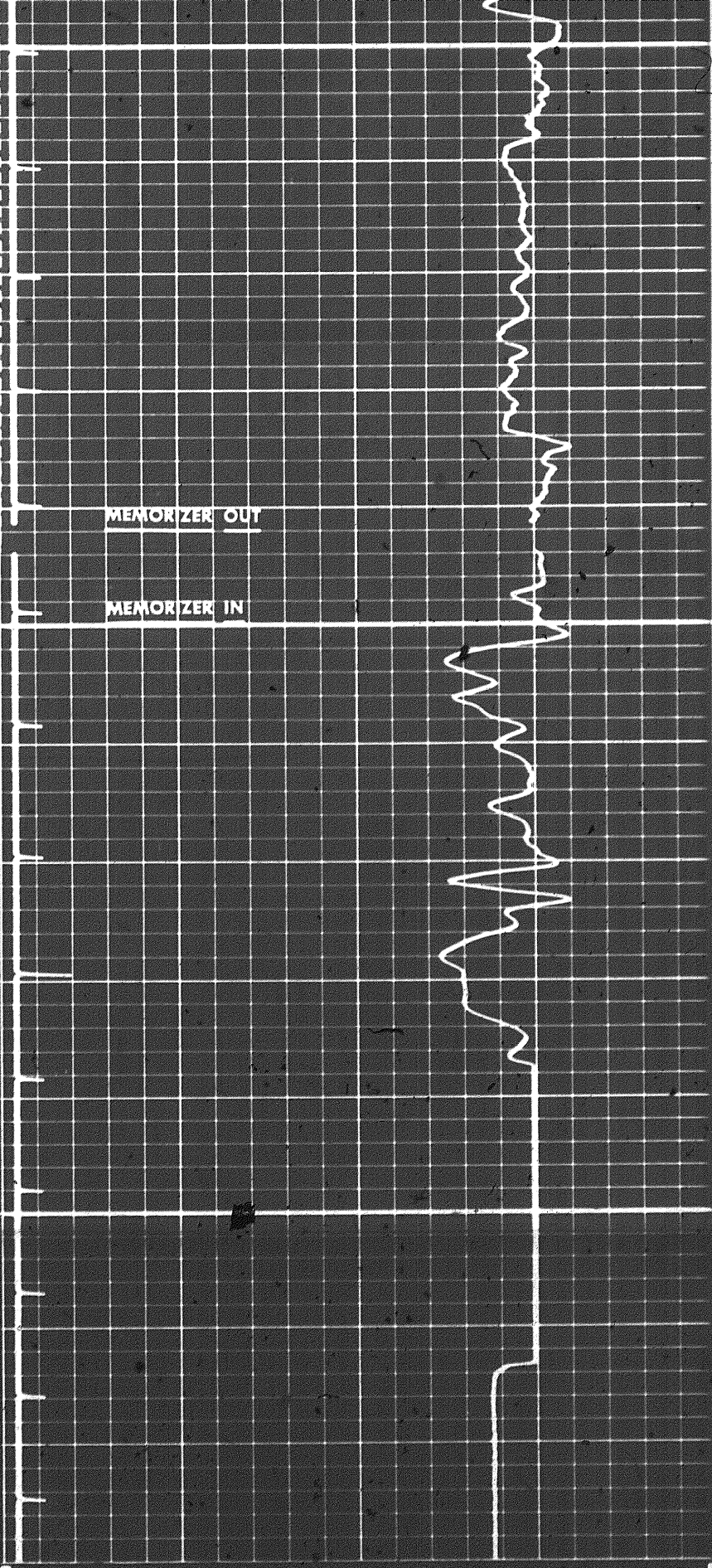
REPEAT SECTION







VALID — MEMORIZER OUT



1300

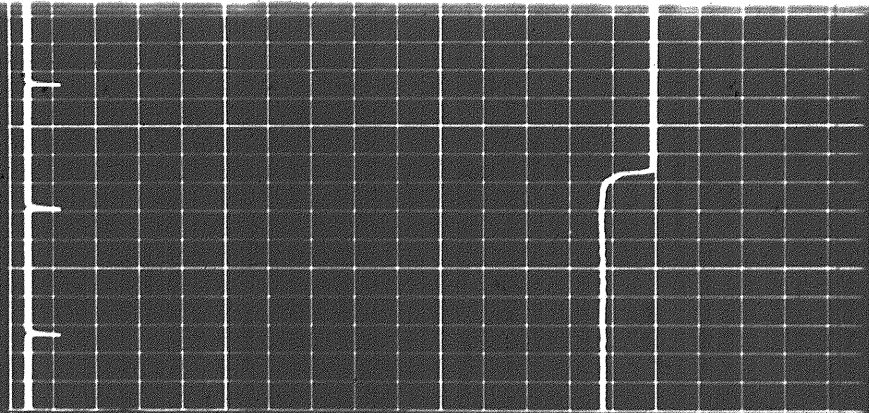
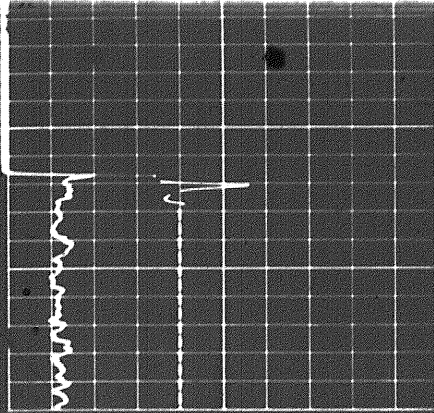
MEMORIZER OUT

MEMORIZER IN

GAMMA RAY

activity
API units

T.C. _____



GAMMA RAY

activity
API units

T.C. AUTO

Zero 0 div. to left

0	150
150	300

CALIPER

hole diameter
mm

125	250	375
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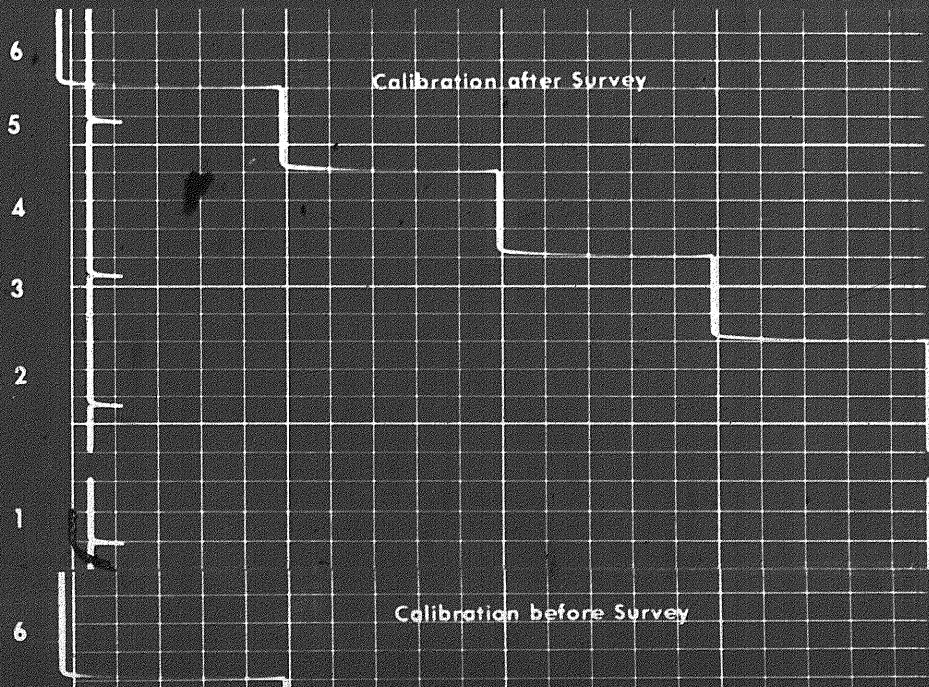
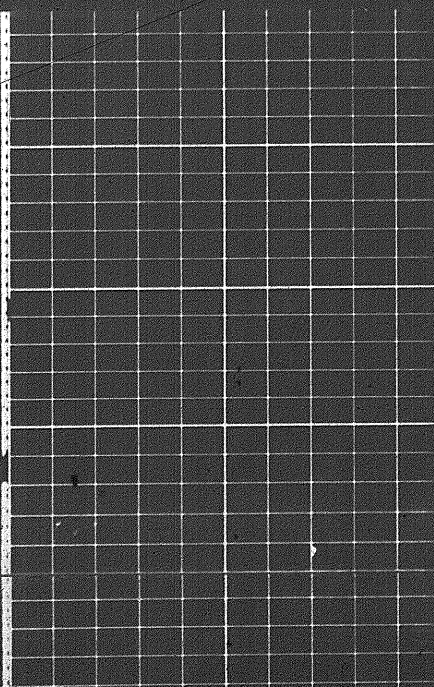
DEPTH
METRES

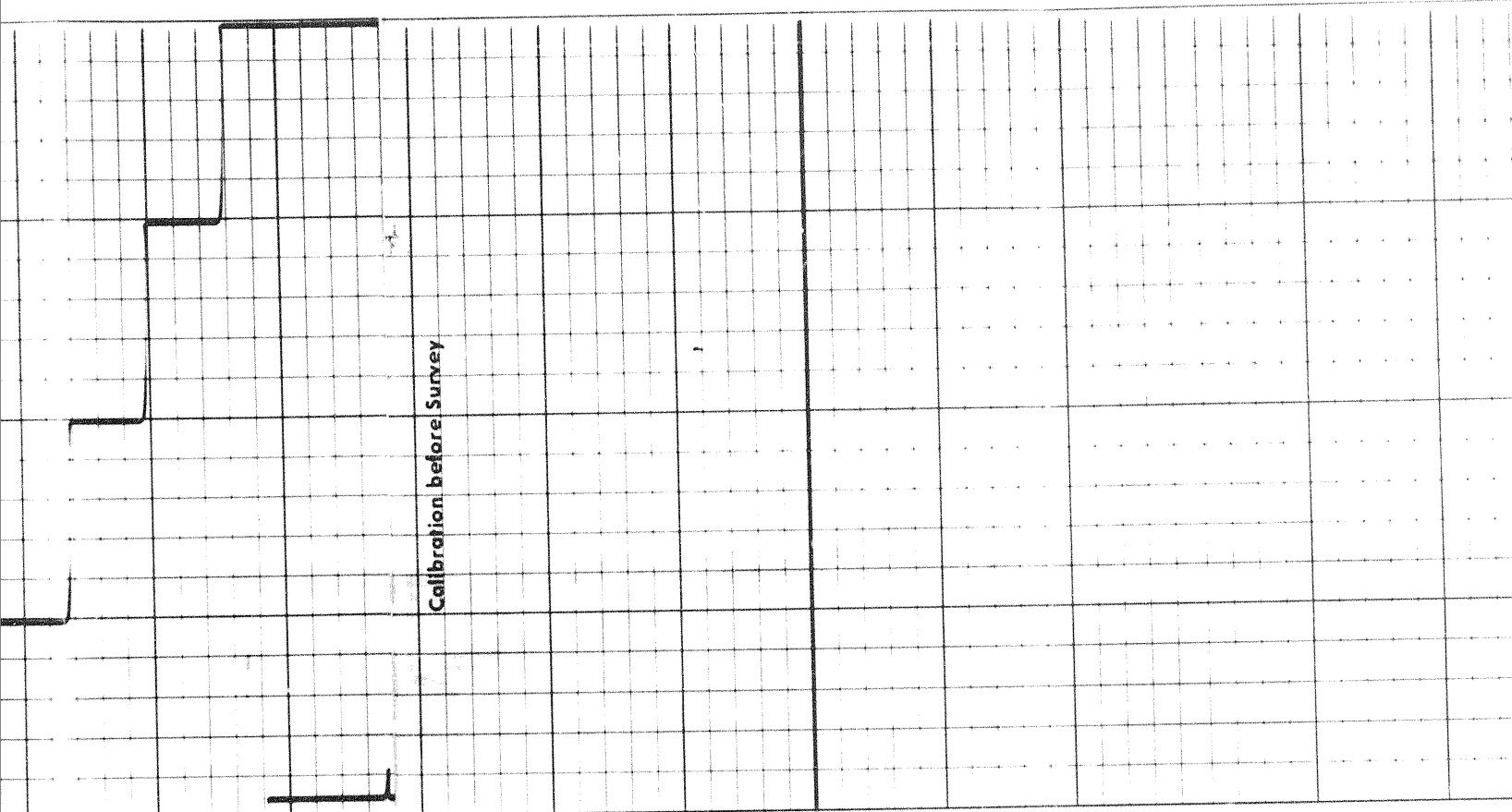
INTERVAL TRANSIT TIME
µs/m

CALIBRATION RECORD

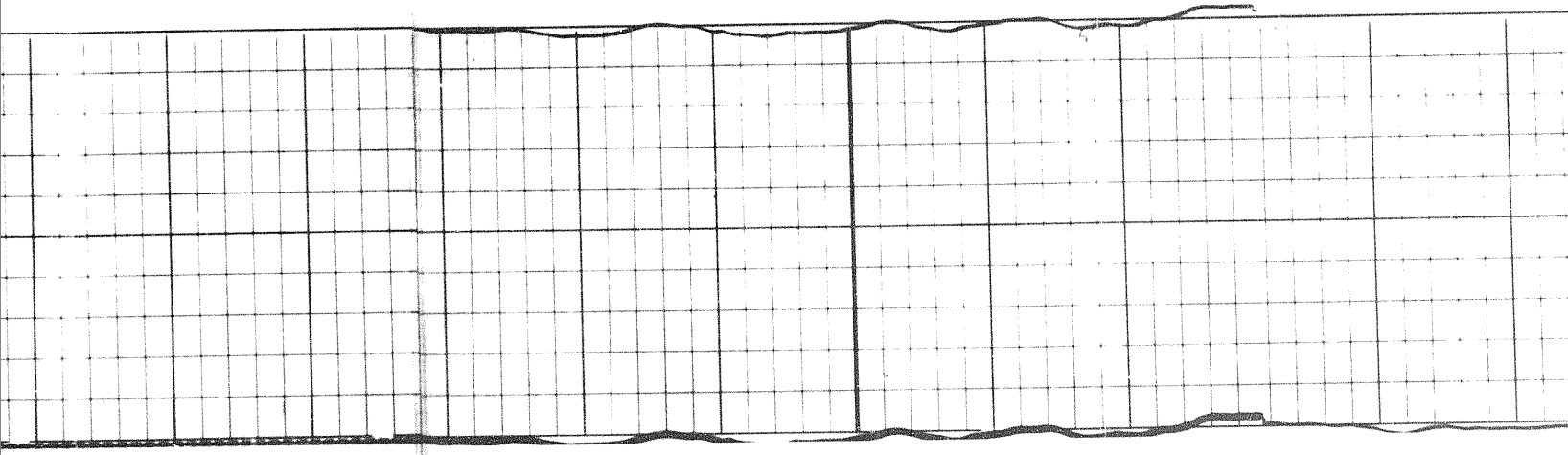


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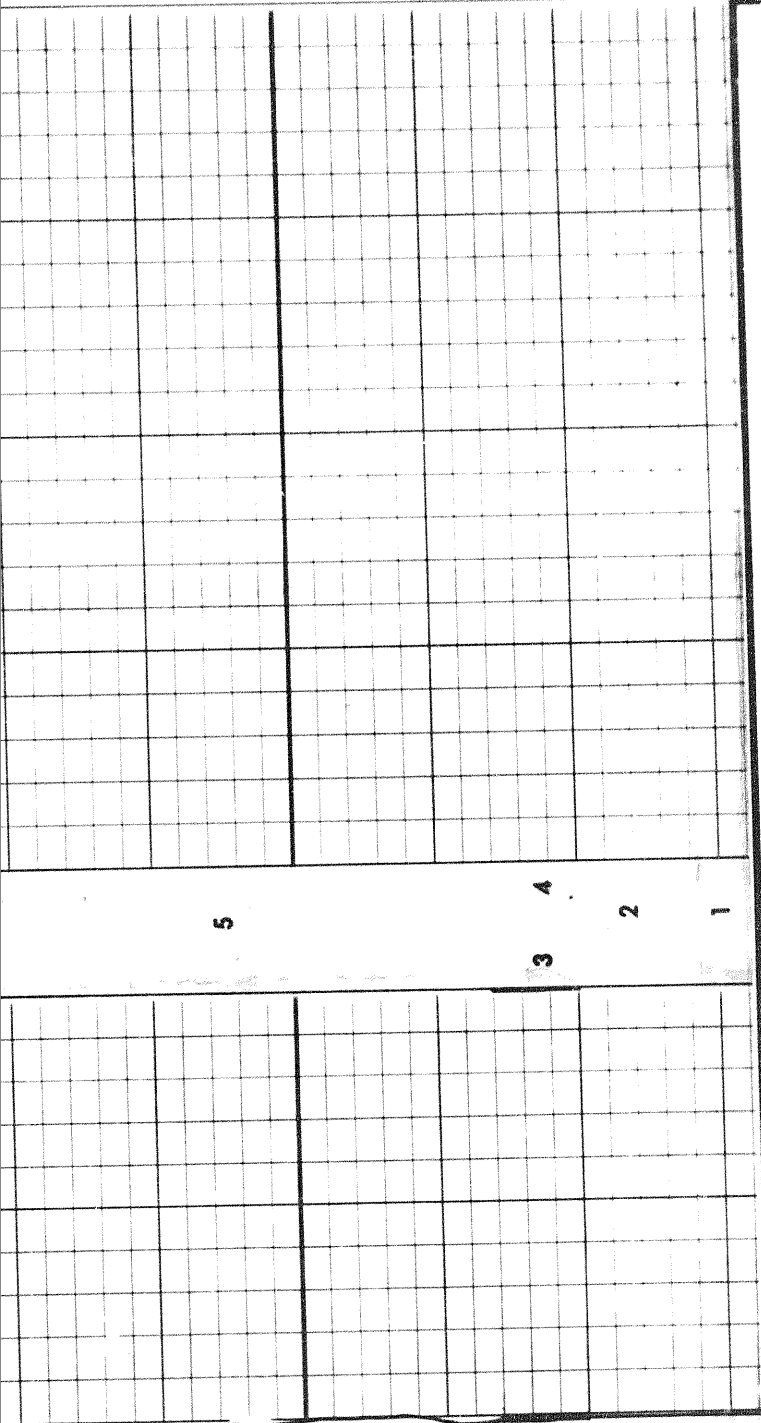




5
4
3
2
1
6



949



BOREHOLE COMPENSATED SONIC CALIBRATION CODING

- 1. MECHANICAL ZERO
- 2. 100 μ s/m
- 3. 200 μ s/m
- 4. 300 μ s/m
- 5. 400 μ s/m
- 6. 500 μ s/m

GAMMA RAY CALIBRATION CODING

- 1. MECHANICAL ZERO
- 2. ELECTRICAL ZERO
- 3. REORDER SENSITIVITY
- 4. MEMORIZER SENSITIVITY
- 5. BACKGROUND
- 6. CALIBRATION

COMPANY _____

WELL _____

FIELD _____

SCHL FR _____

SCHL TD _____

DRLR TO _____

Elev _____

KB _____

DF _____

GI _____