

**CEMENT BOND LOG  
GAMMA RAY CCL  
V D L**

Company		Noble Energy INC.	
Well		PETTINGER USX AB 27-02	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05123329460000	
Permanent Datum		GL	
Log Measured From		KB 13'	
Drilling Measured From		KB	
SEC 27 TWP 7N RGE 64W		Elevation 4869	
Other Services		K.B. 4882 D.F. 4881 G.L. 4869	
Date		December 29, 2011	
Run Number		One	
Depth Driller		7289	
Depth Logger		7170	
Bottom Logged Interval		7169	
Top Log Interval		1125	
Casing Size		4 1/2"	
Type Fluid		Water	
Max. Recorded Temp.		221 deg F	
Estimated Cement Top		1406	
Time Well Ready		Crane	
Time Logger On Bottom		AM	
Unit Number		4367	
Tool Size / ID Number		2.75 Probe 110802	
Location		Platteville, CO	
Recorded By		K. Monaghan	
Witnessed By		M. Trimble	
Borehole Record		Tubing Record	
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size	
Surface String		8 5/8"	
Prot. String		24 lb/ft J-55	
Production String		4 1/2"	
Liner		11.6 lb/ft M-80	
		Surface	
		7263	

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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 interpretation, 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 our general terms and conditions set out in our current Price Schedule.

**Comments**

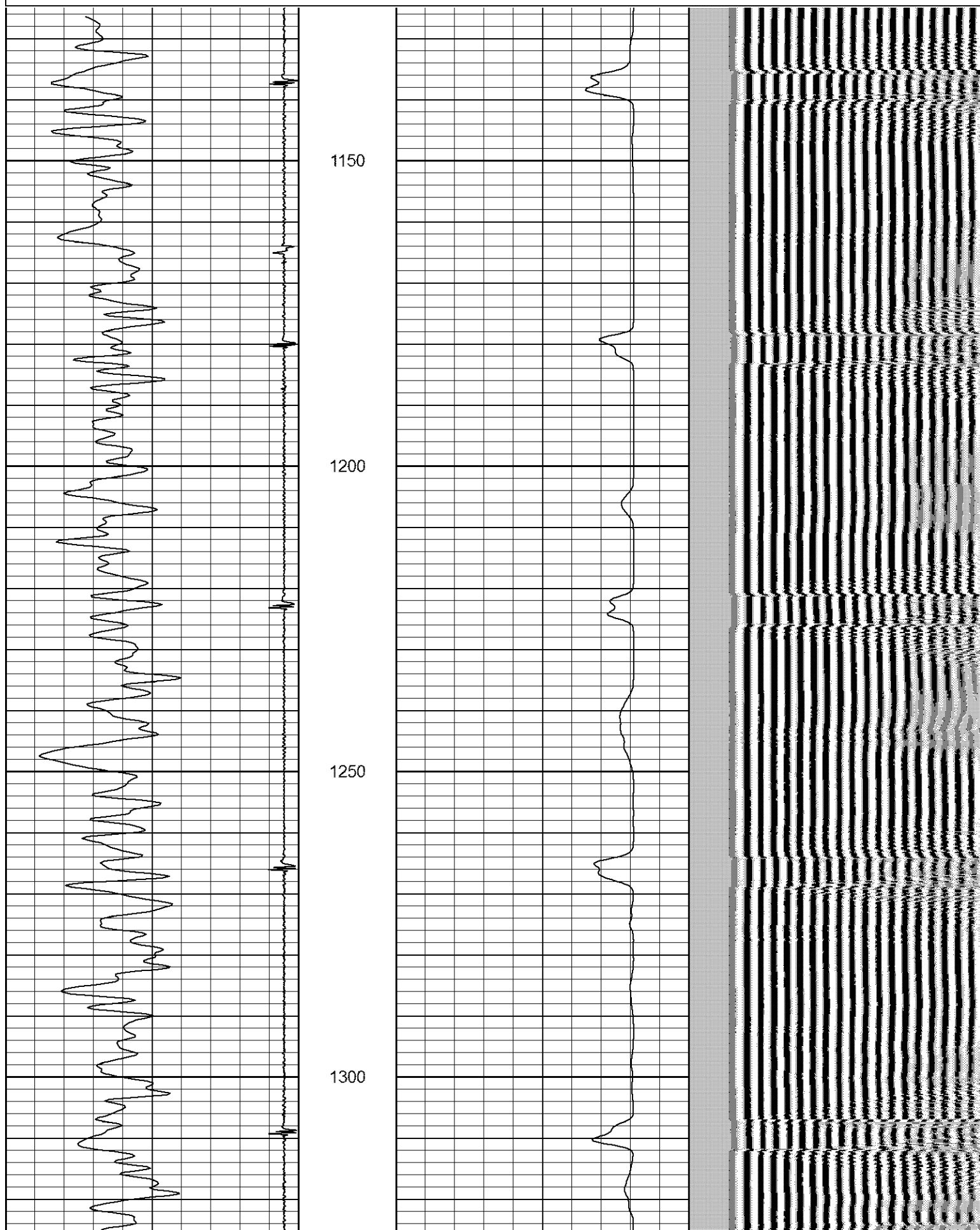
**Thank You For Choosing Superior Well Services!!!**  
**API# 05-123-32946-0000**  
**Correlated to PSI's**  
**Compensated Density / Compensated Neutron / Microlog**  
**Dated: December 7, 2011**  
**Directions: 78 & 57, W 4/10, S 2/10, E Into**

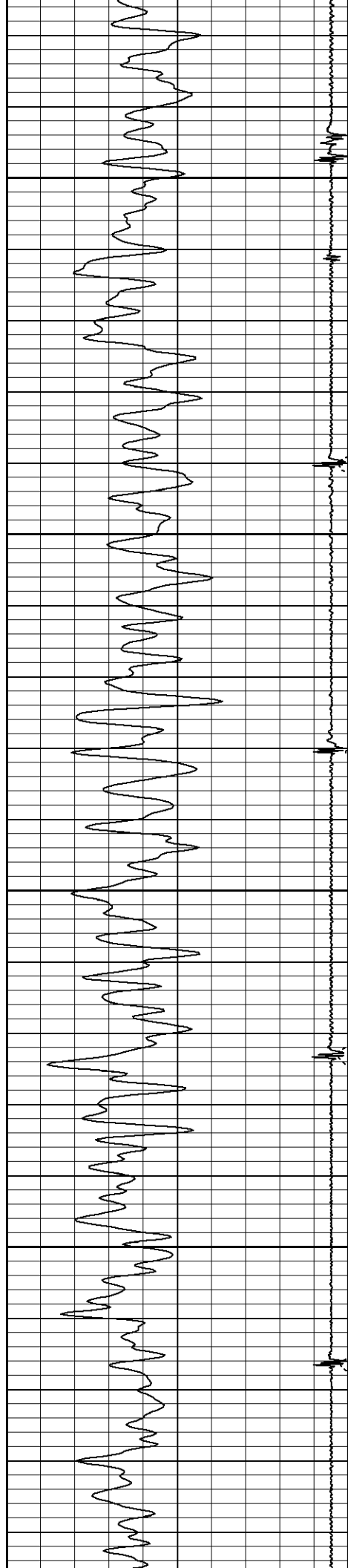
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Dataset Pathname: pass3  
Presentation Format: noble en  
Dataset Creation: Thu Dec 29 08:07:50 2011 by Log SCH 111116  
Charted by: Depth in Feet scaled 1:240

60	CCL	-3
30	Gamma Ray (GAPI)	130
350	TT3 (usec)	285

0	Amplified Amplitude (mV)	30	200
0	Amplitude (mV)	100	

	Variable Density	1200
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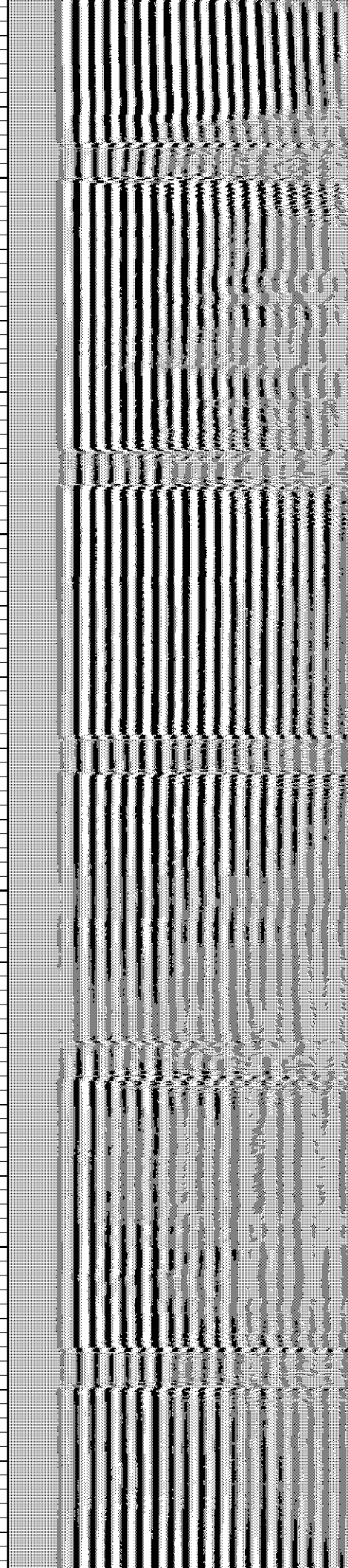
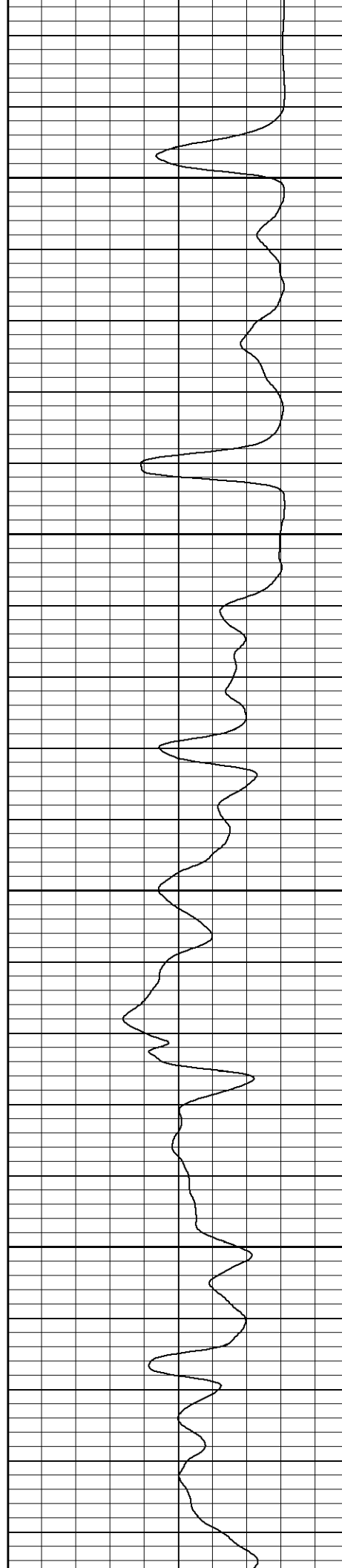


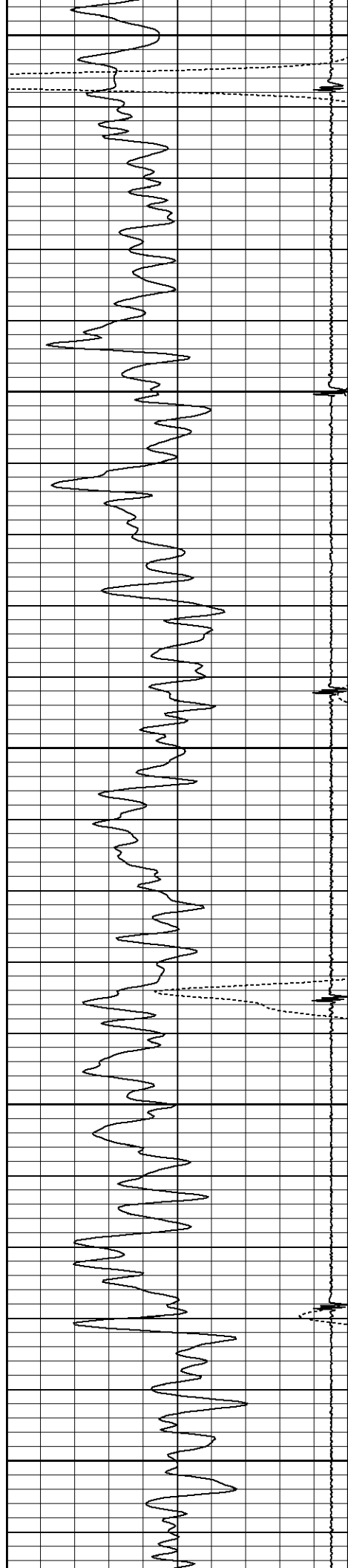
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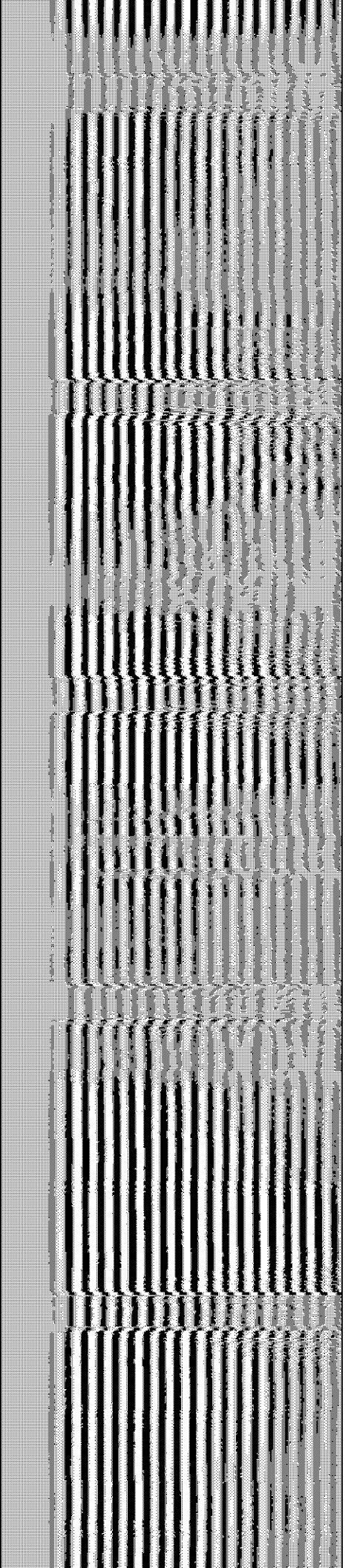
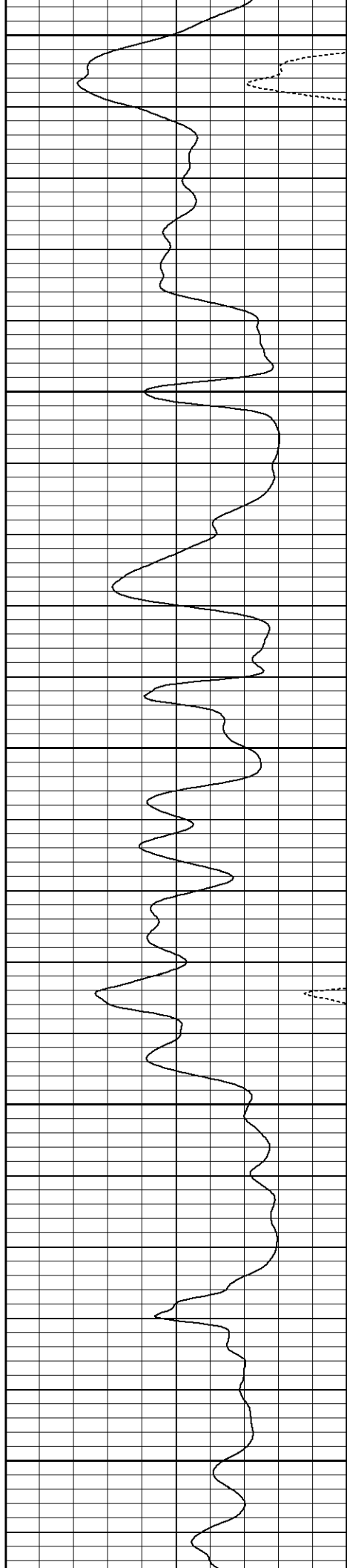
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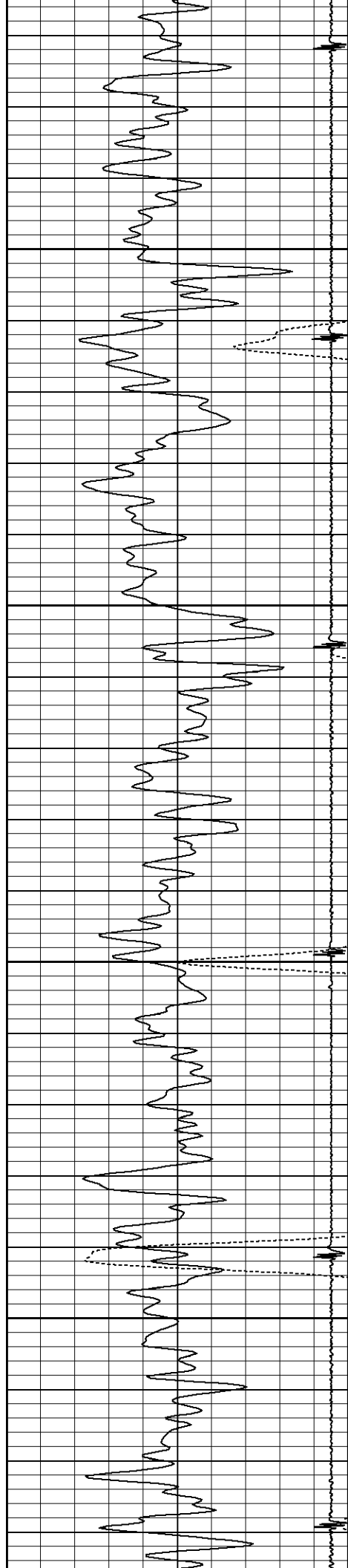
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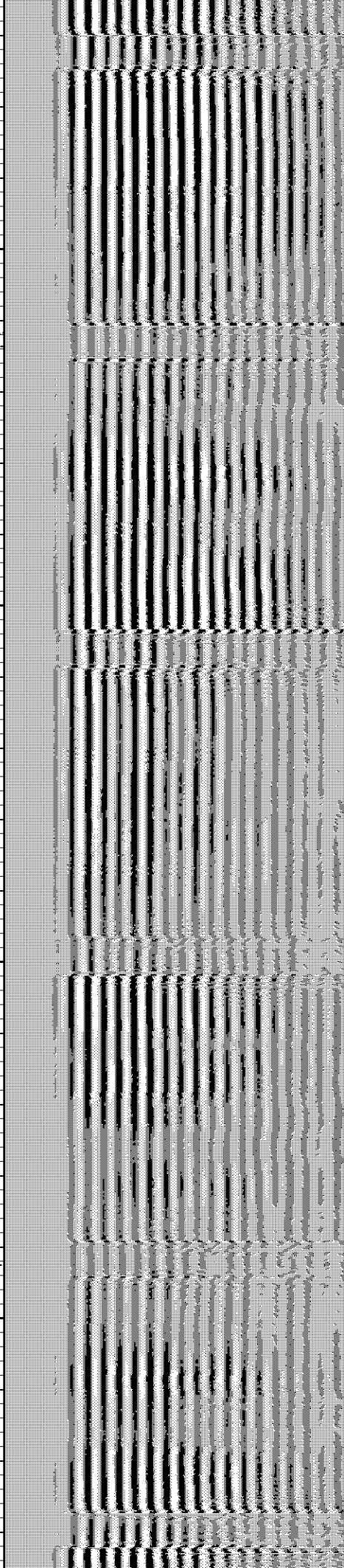
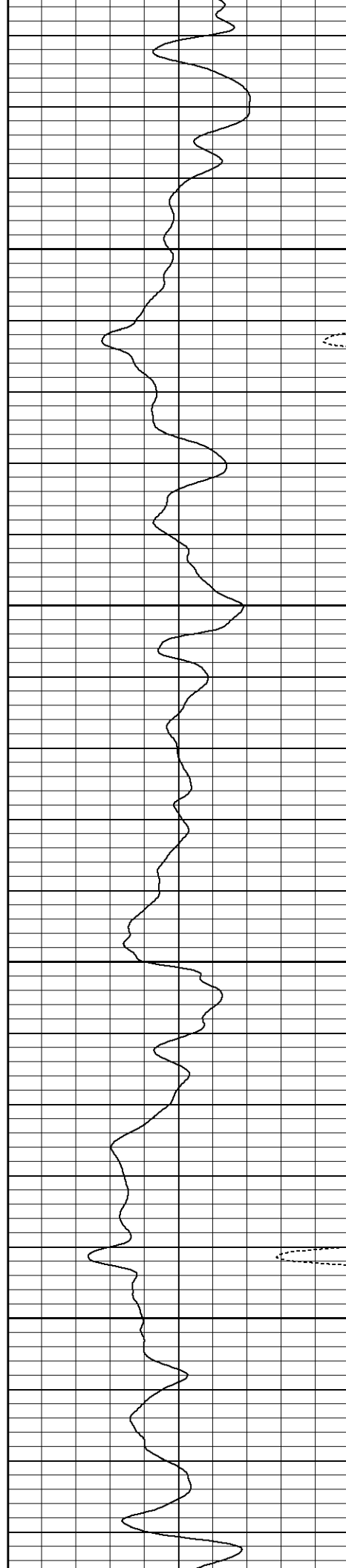


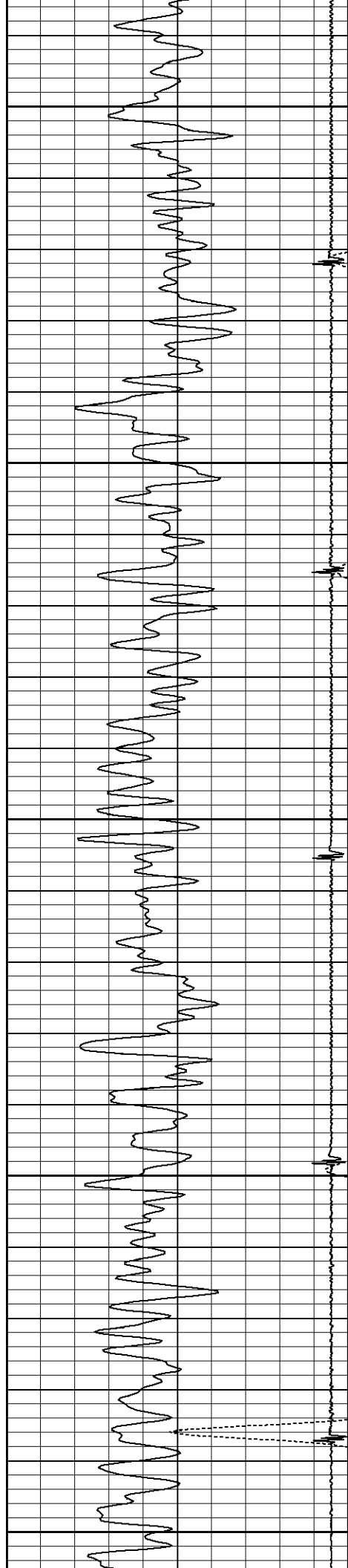
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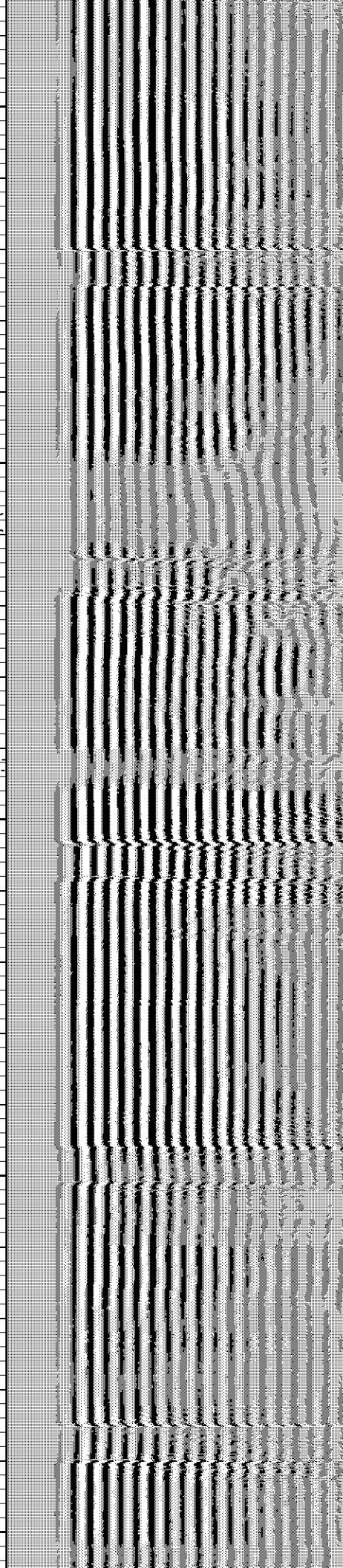
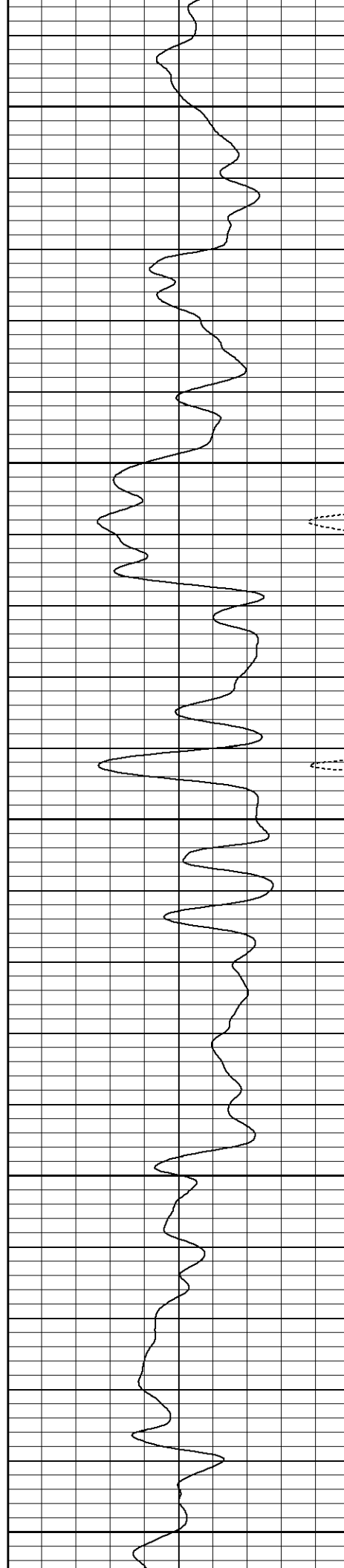
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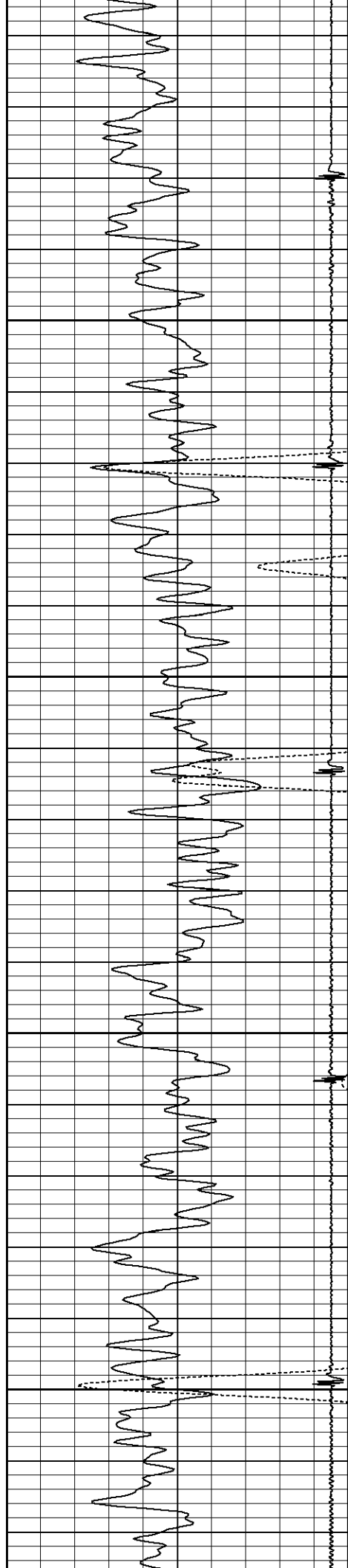
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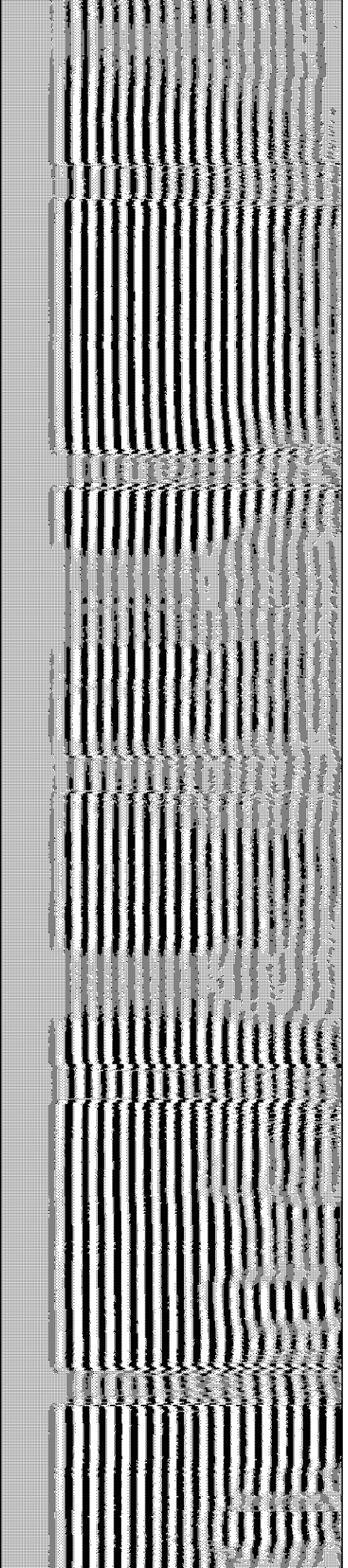
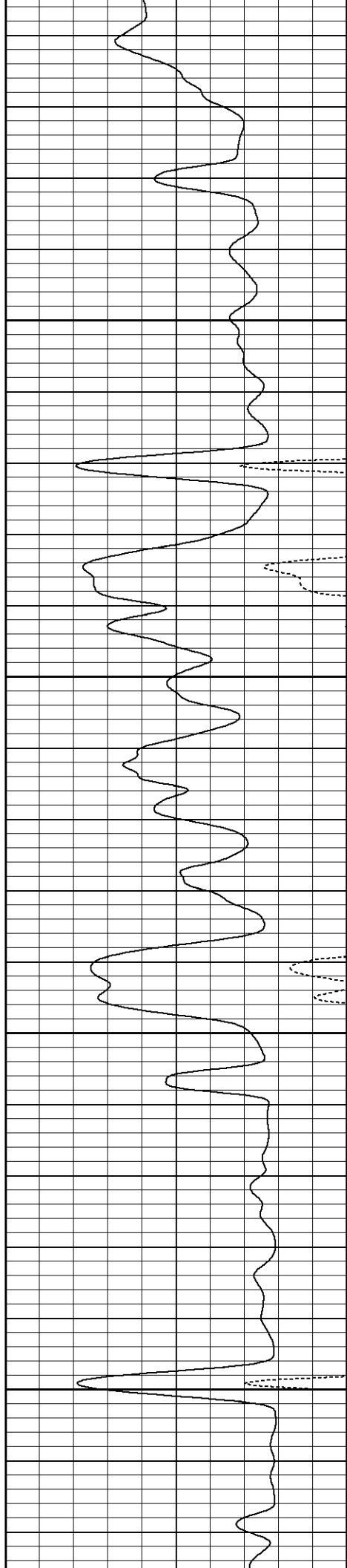


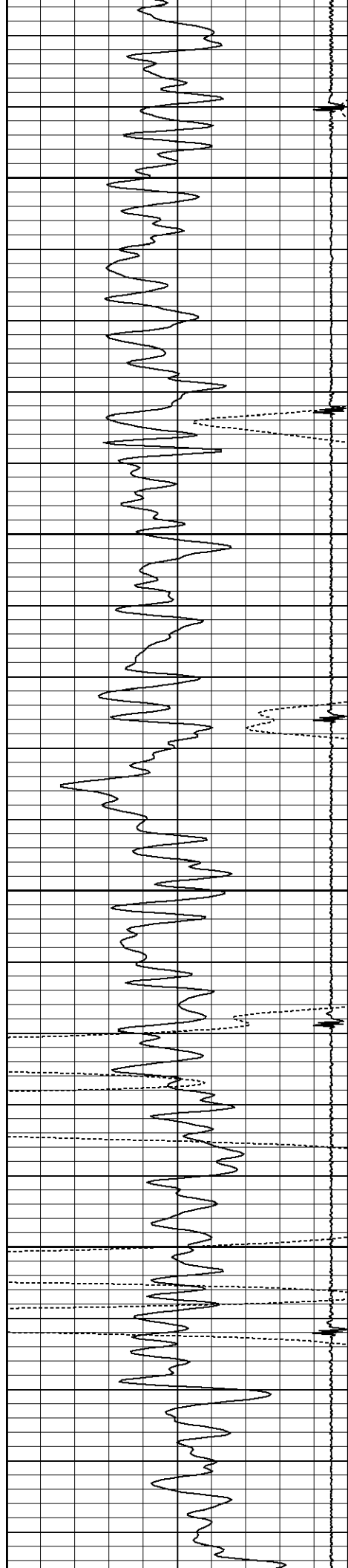
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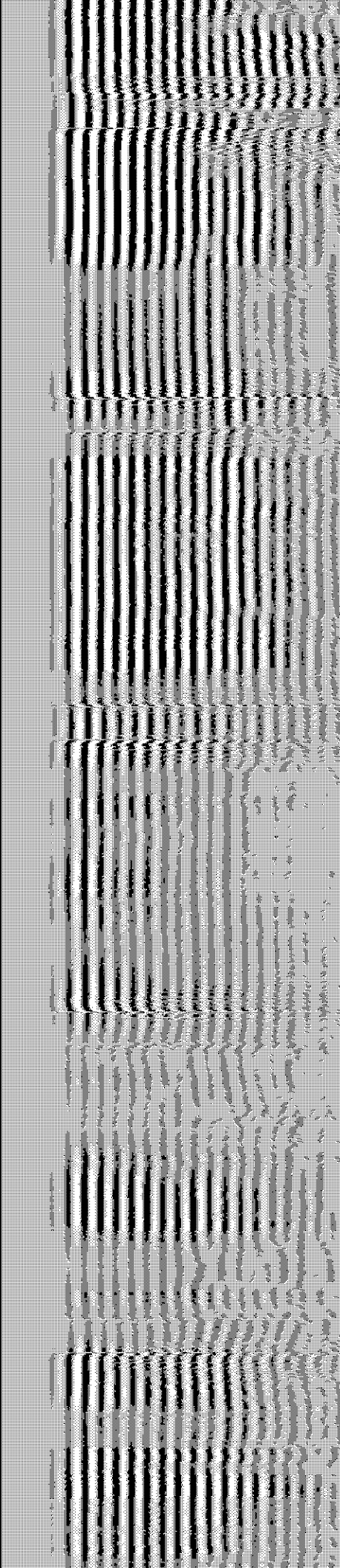
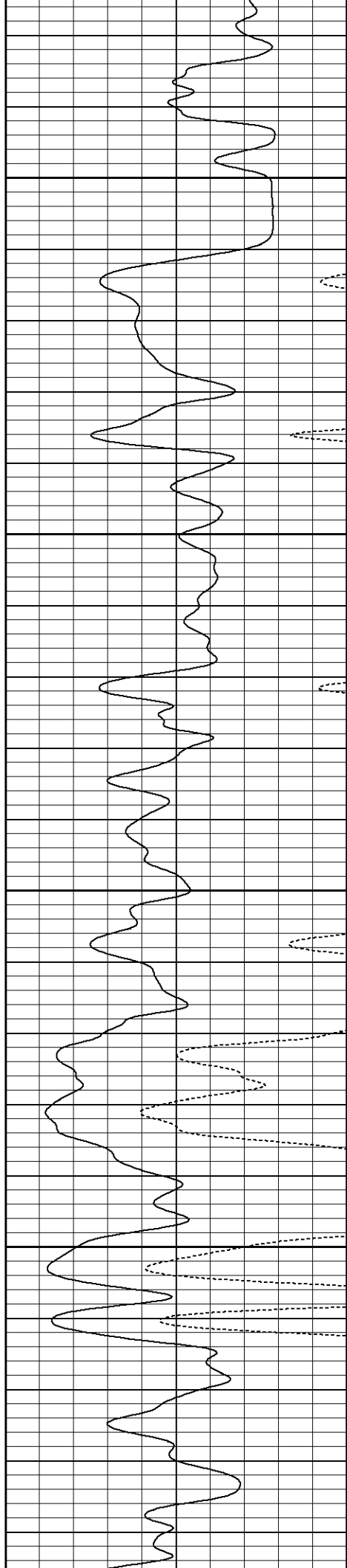


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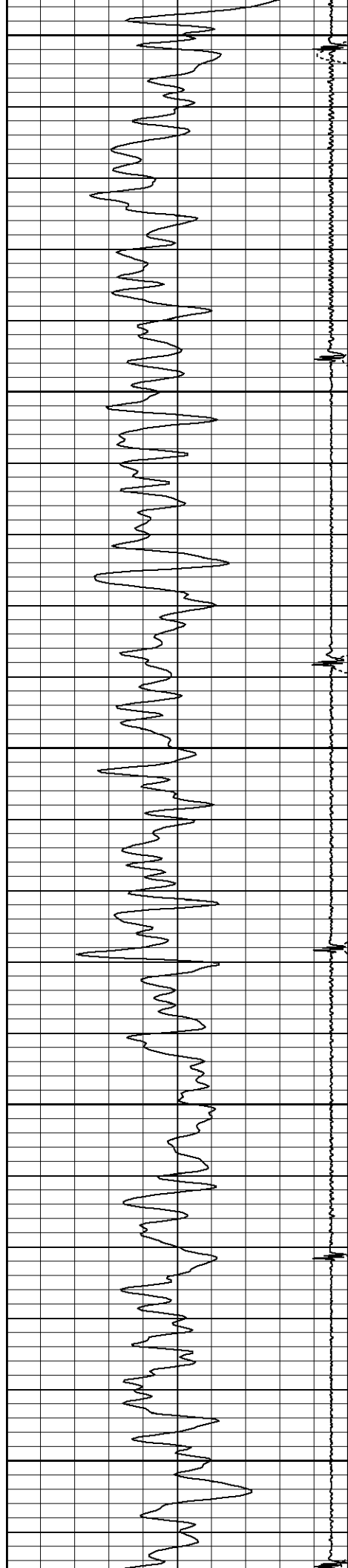
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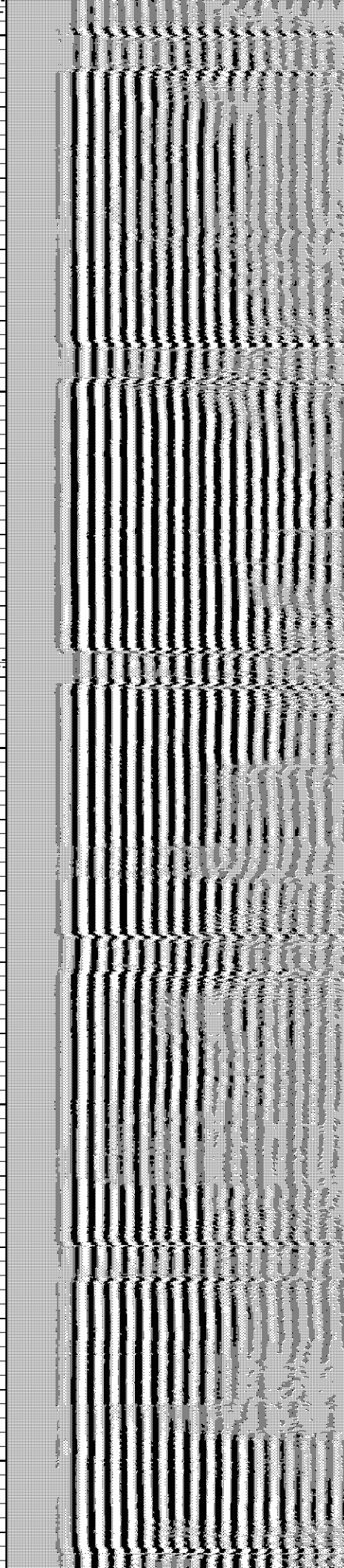
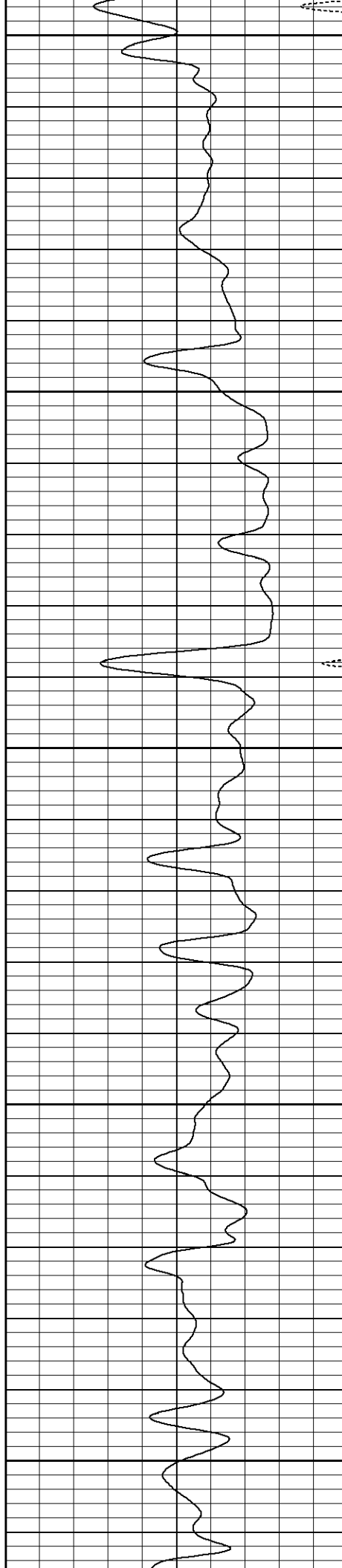
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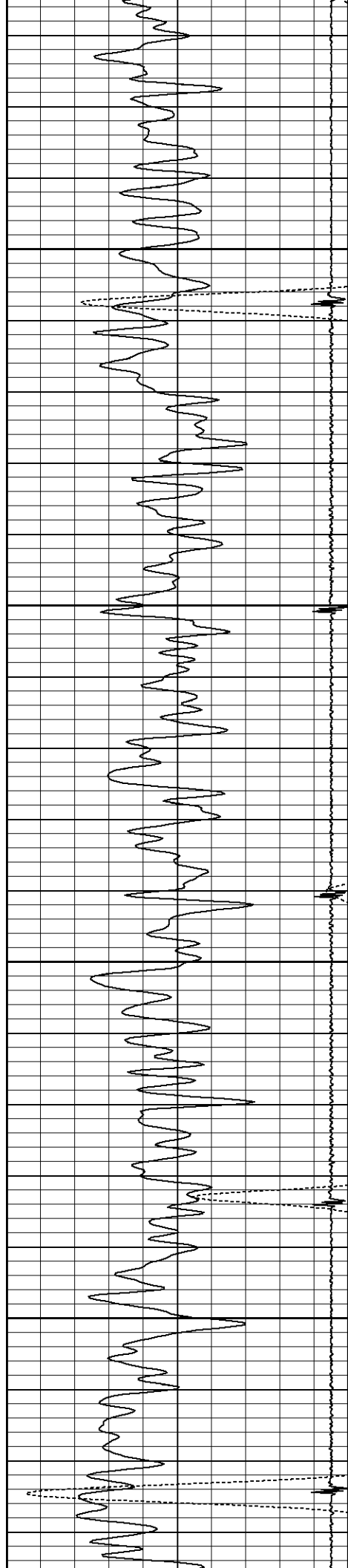
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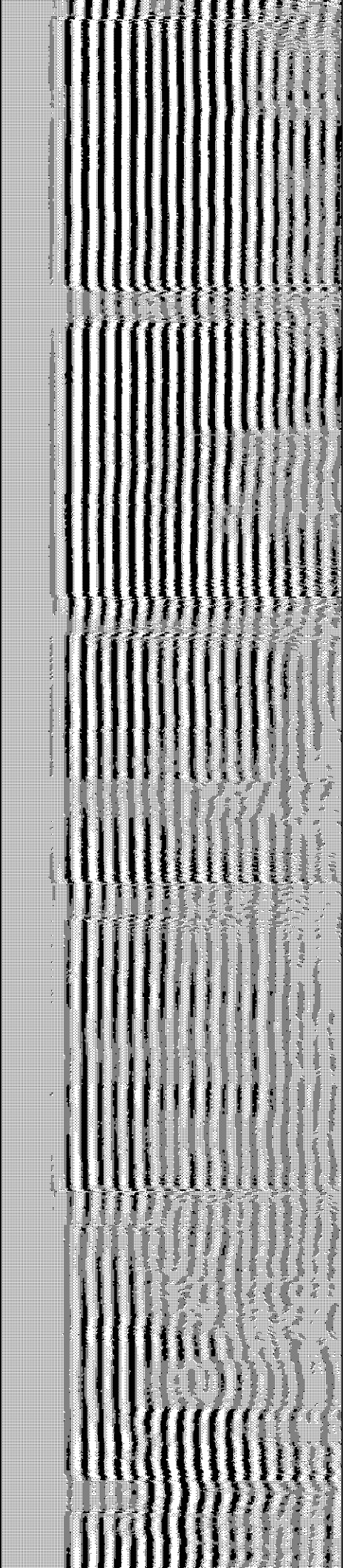
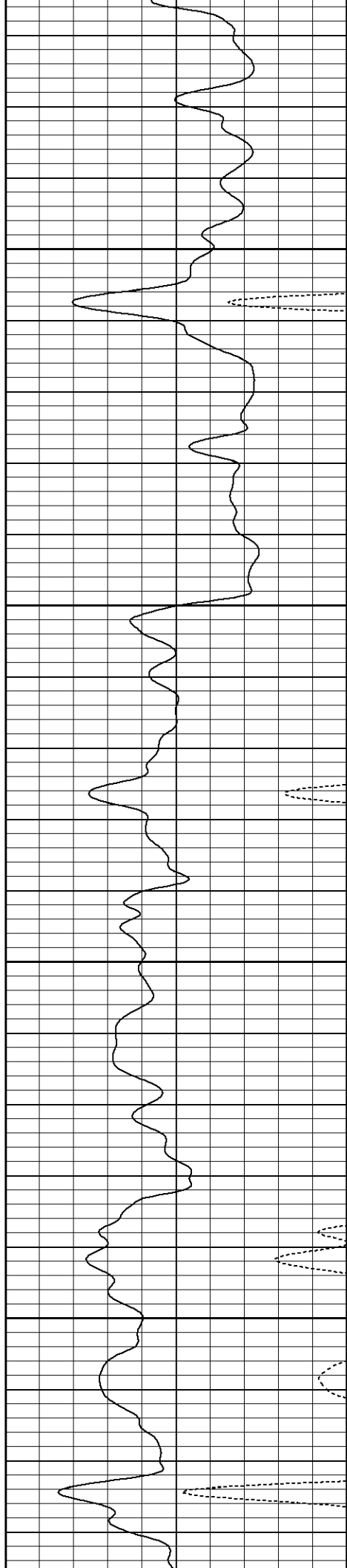


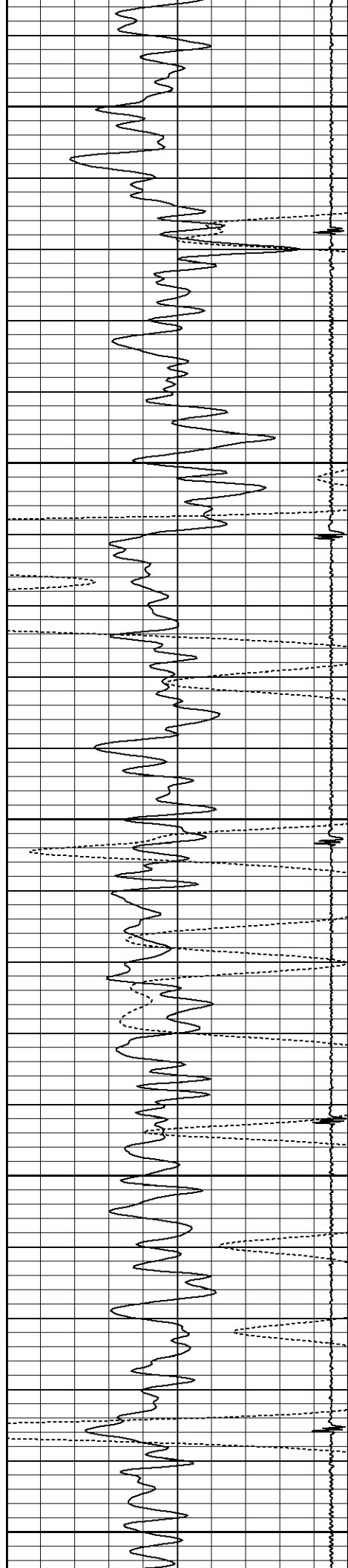
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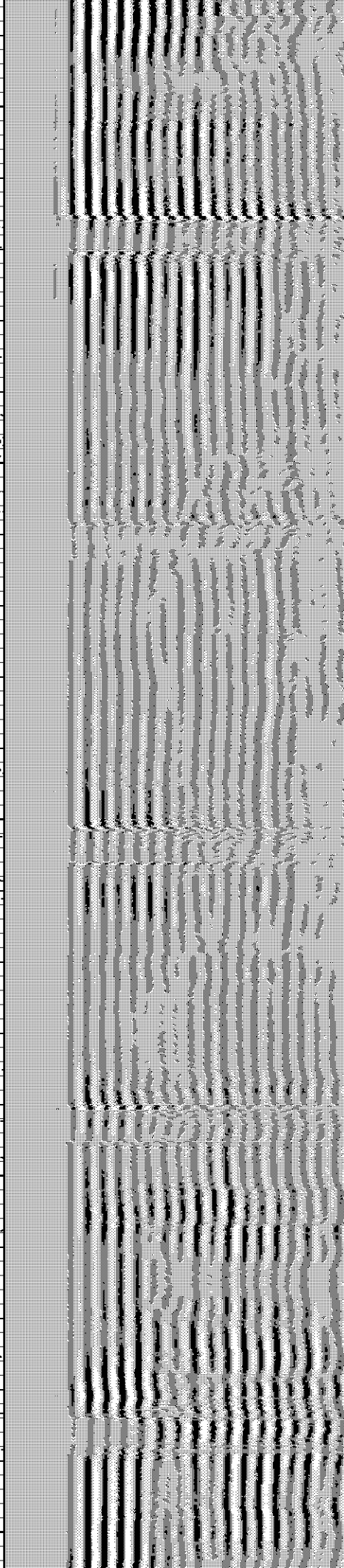
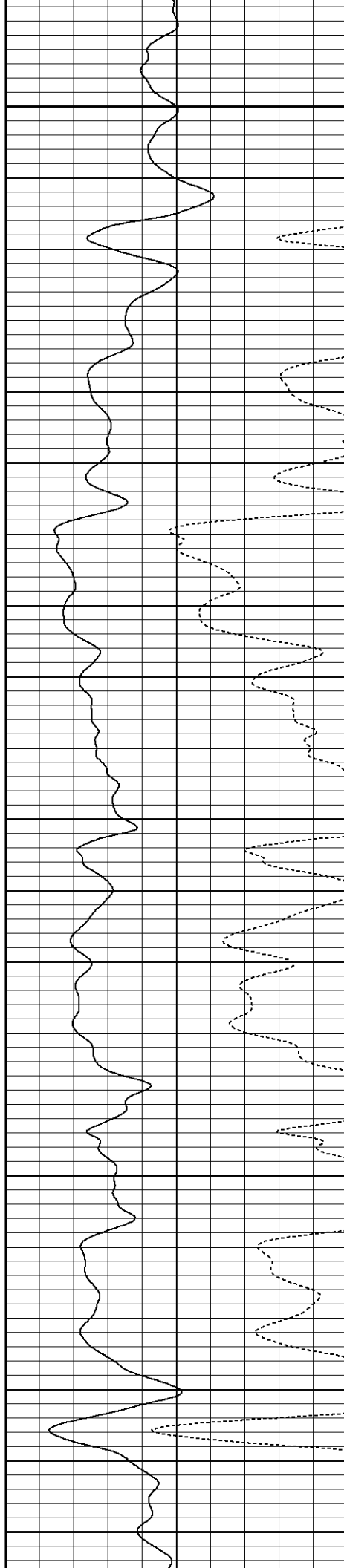
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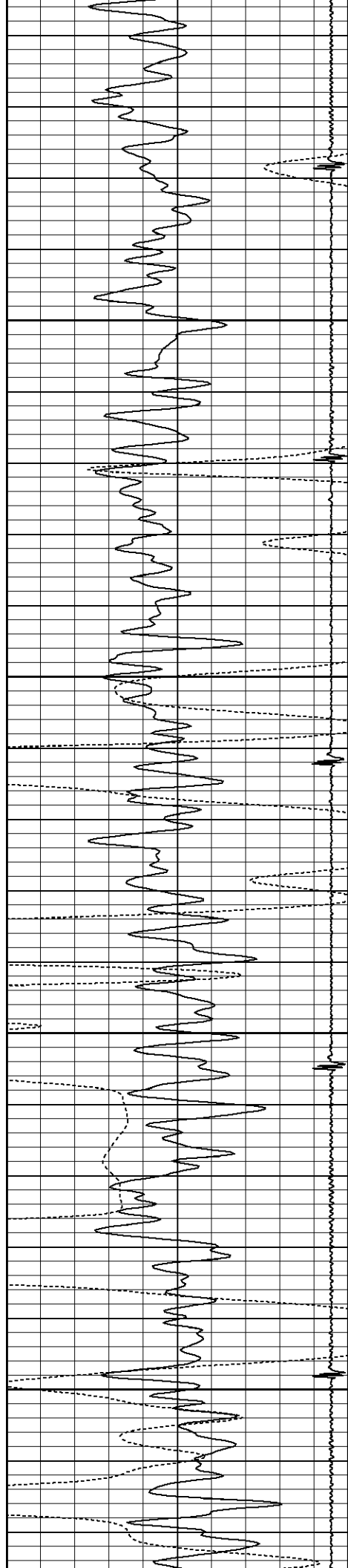
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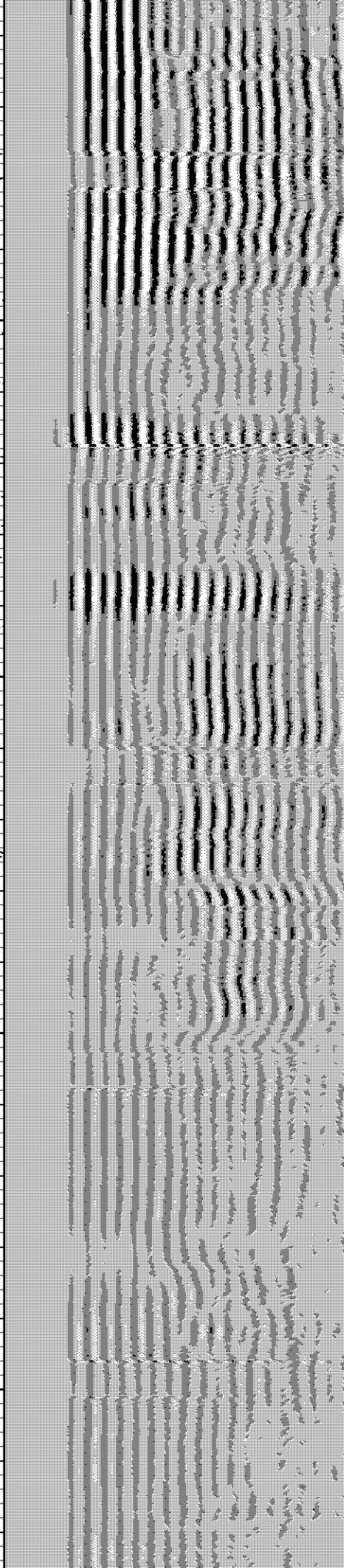
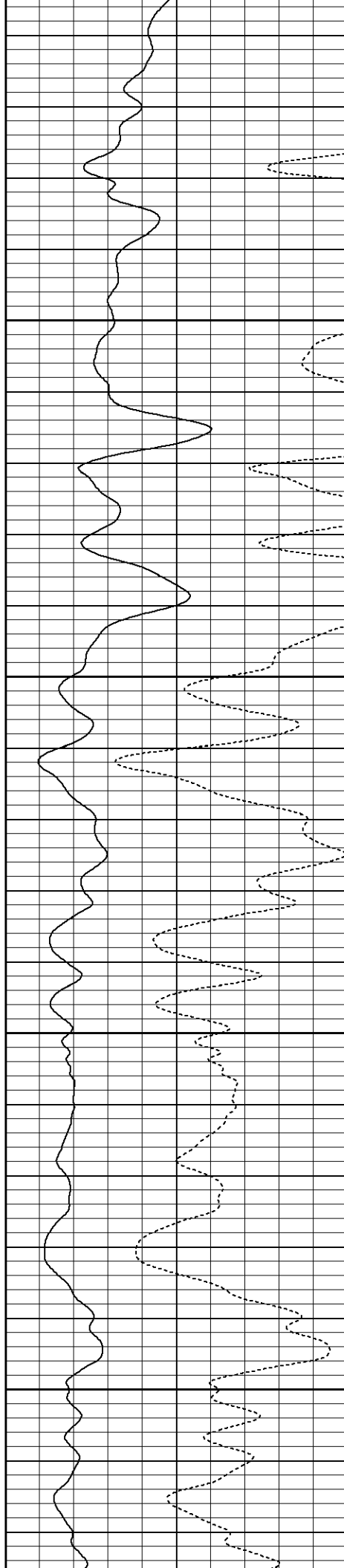


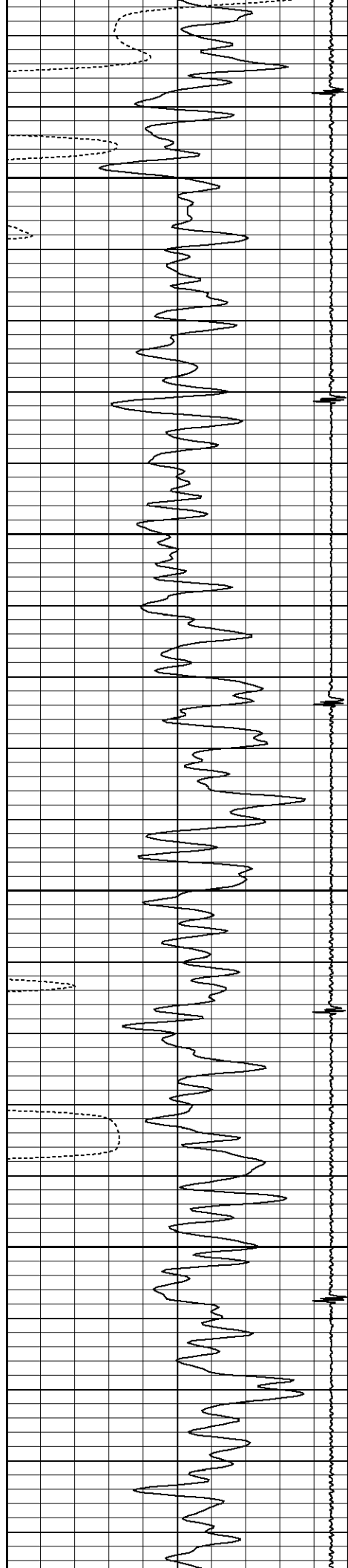
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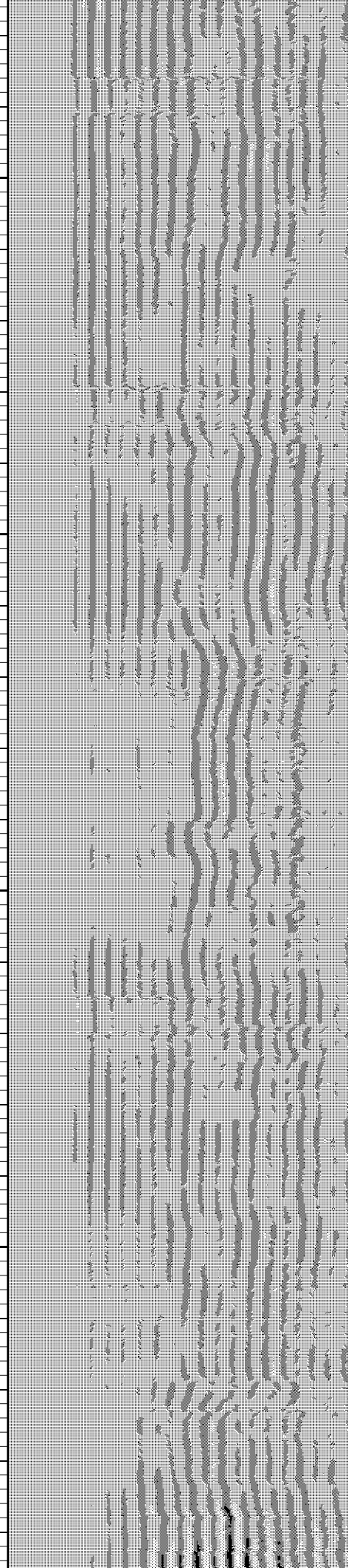
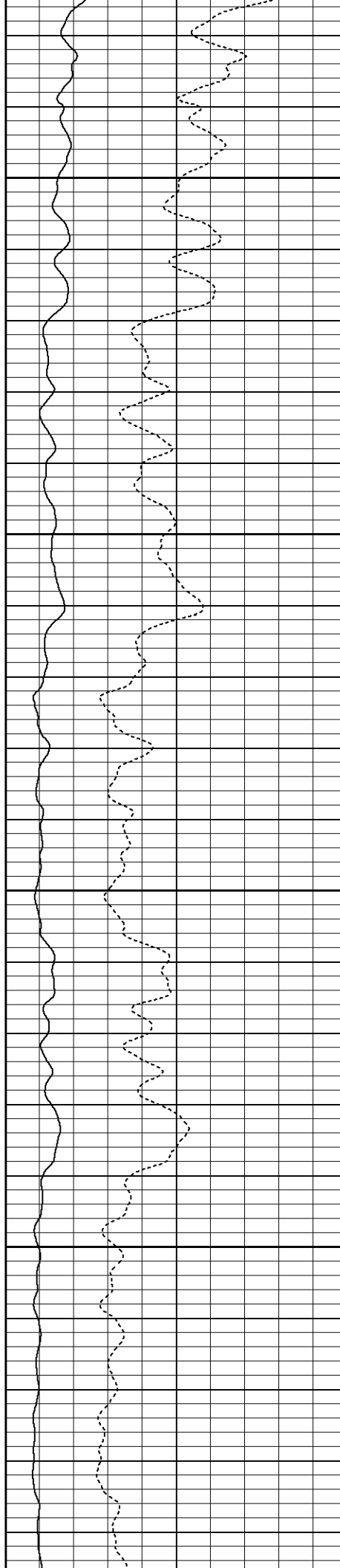


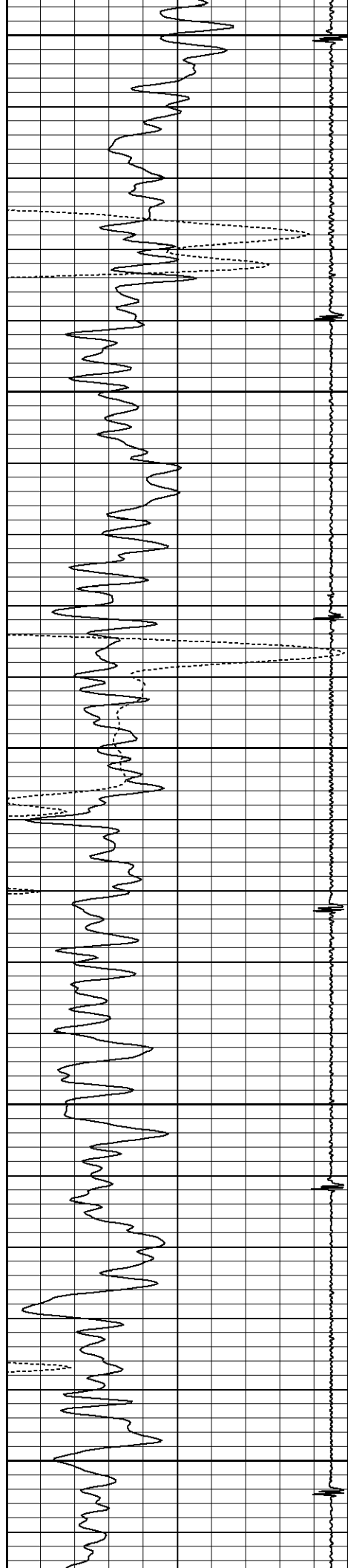
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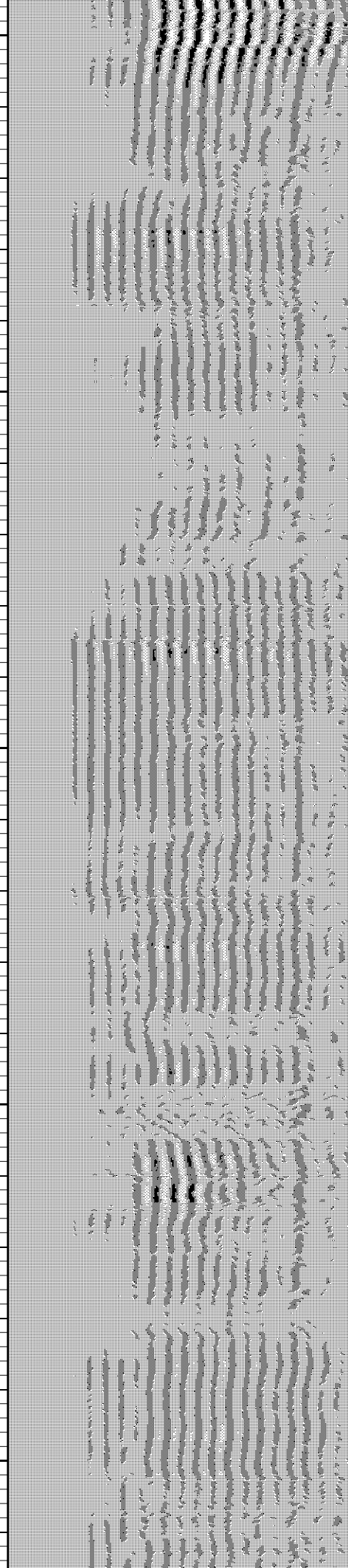
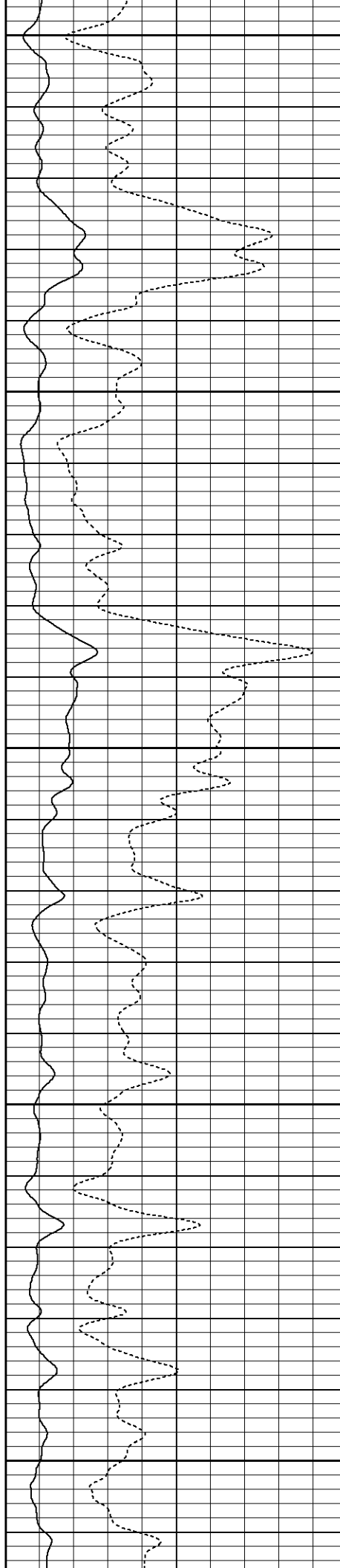
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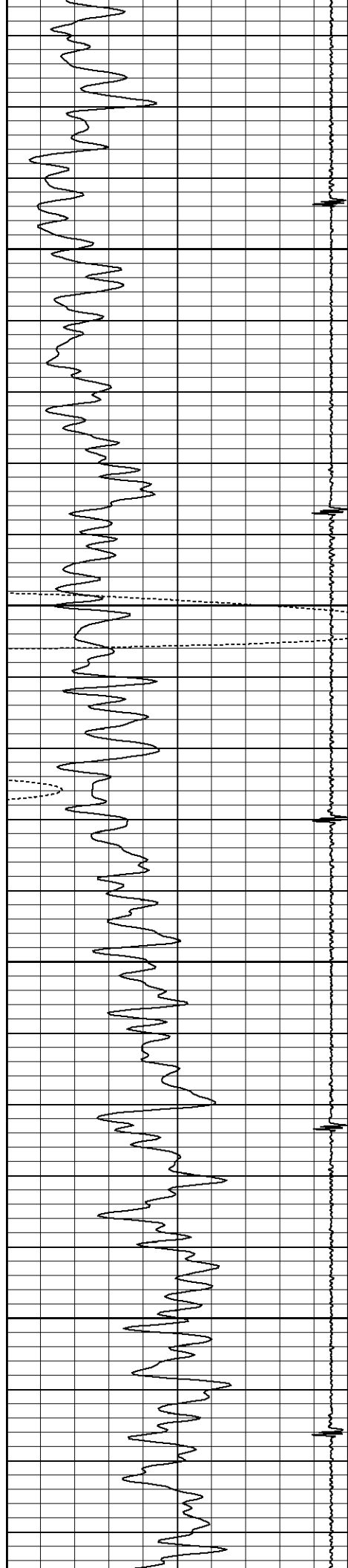
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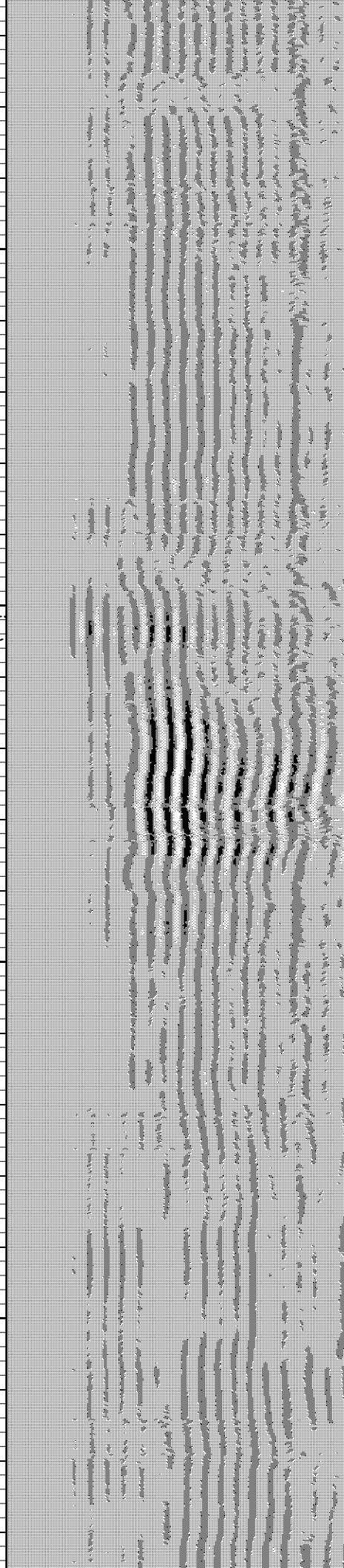
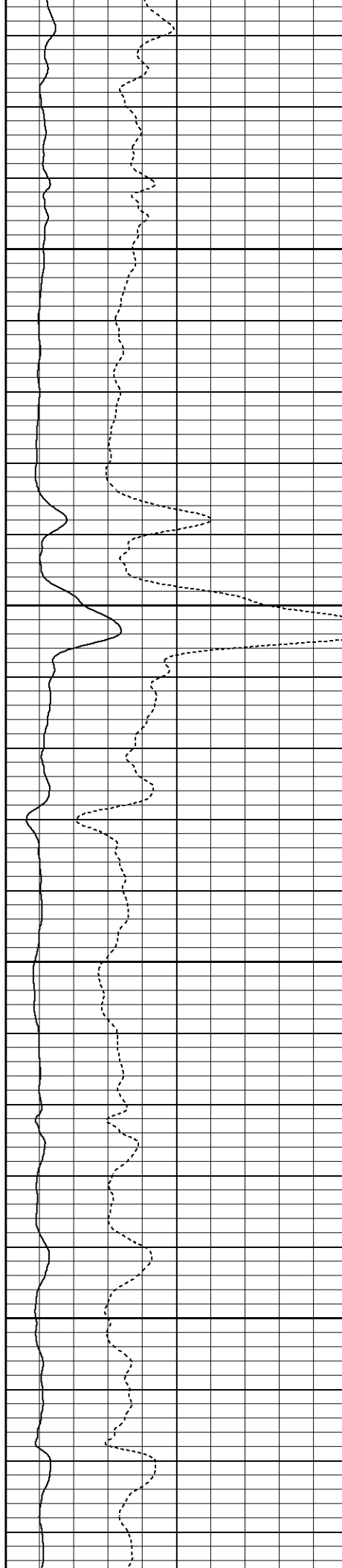


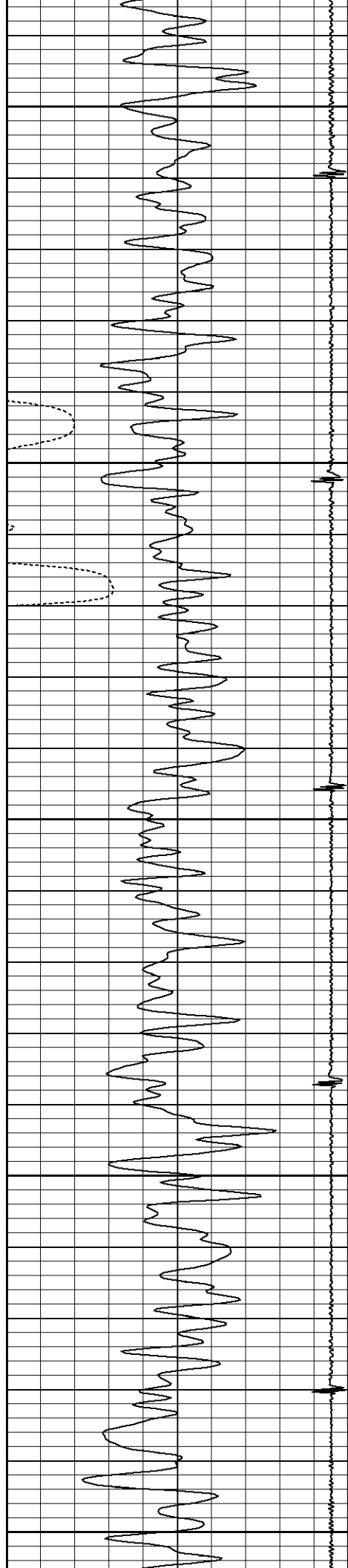
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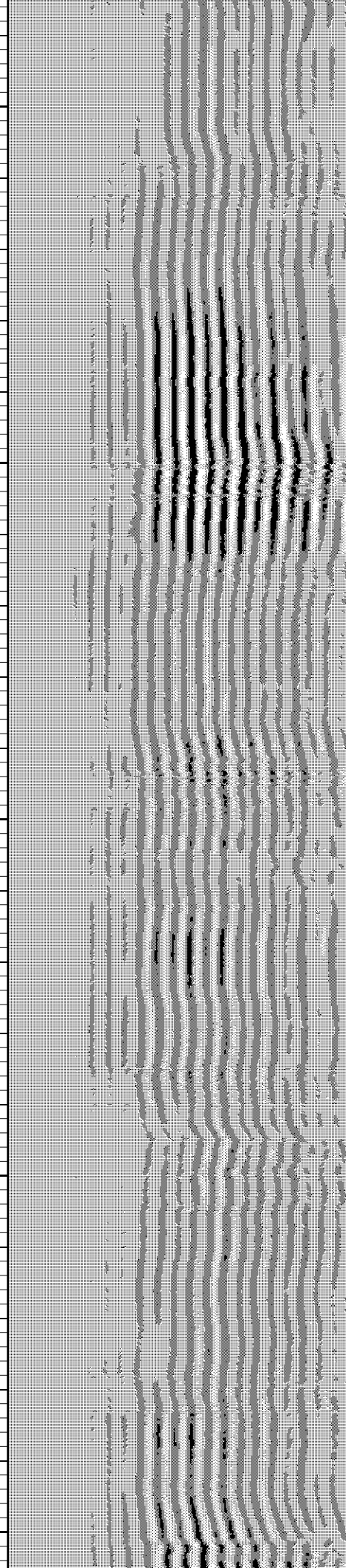
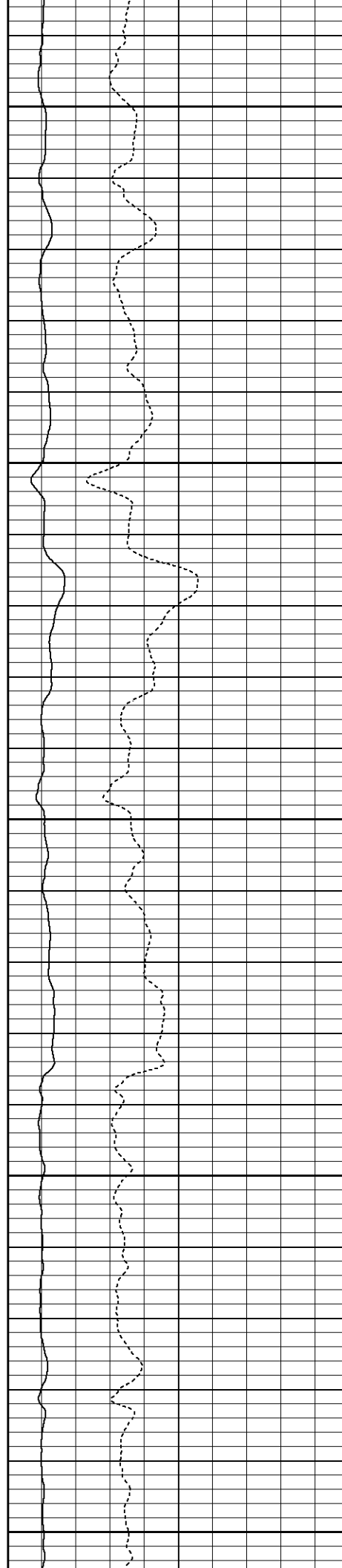
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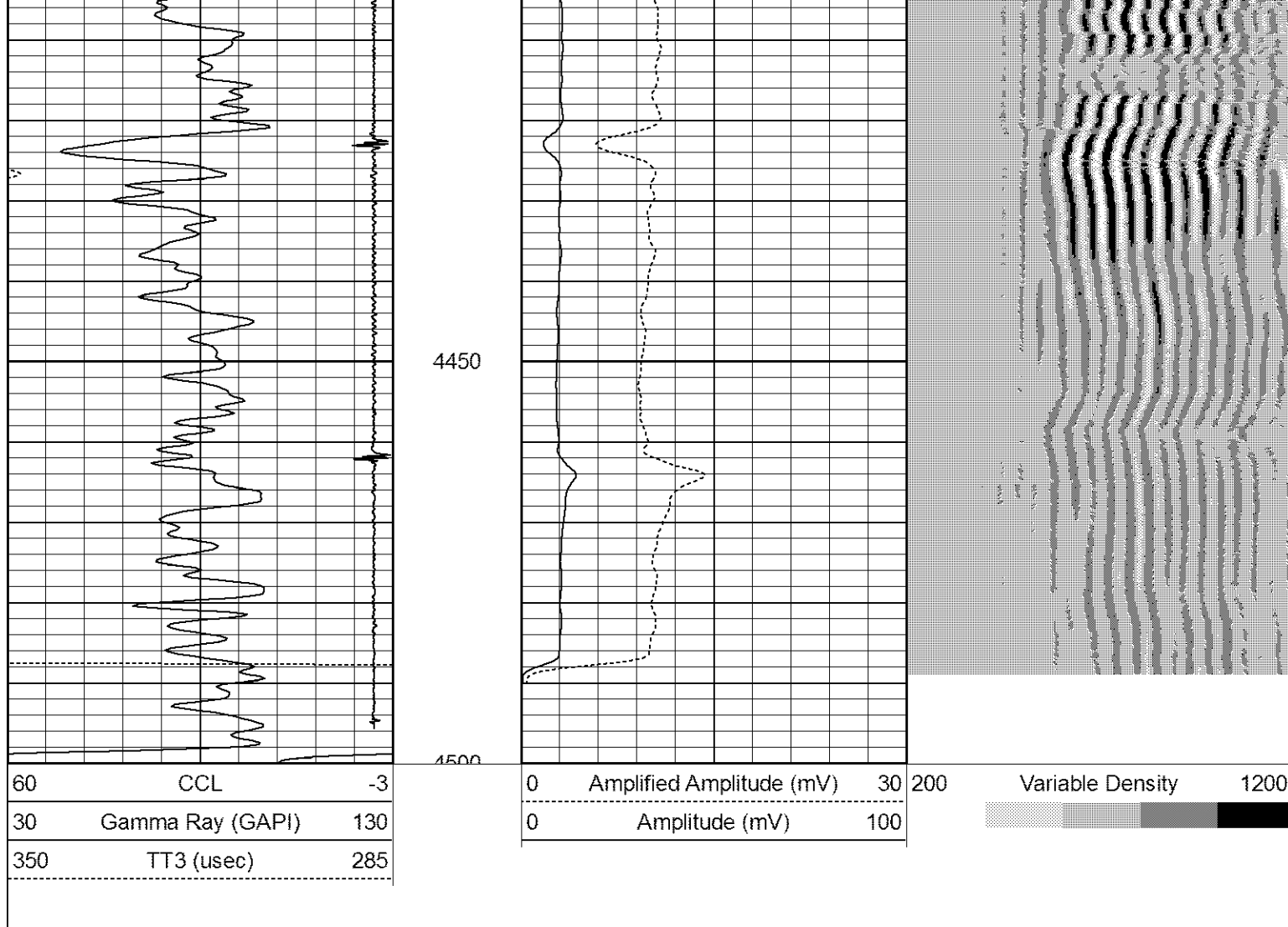
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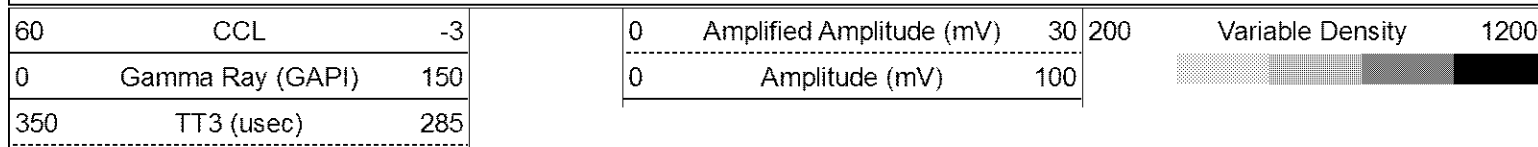
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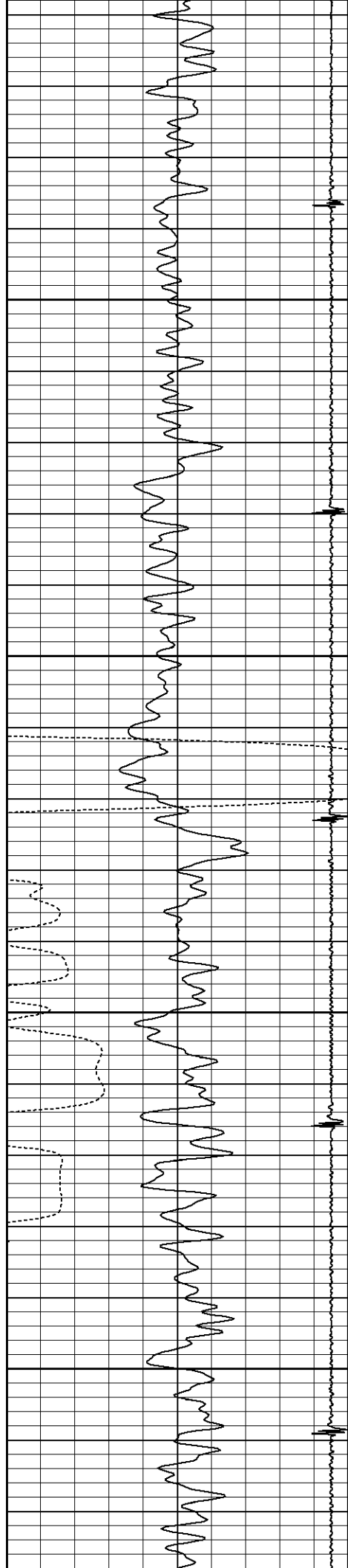
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 Presentation Format: noble en  
 Dataset Creation: Thu Dec 29 07:43:10 2011 by Log SCH 111116  
 Charted by: Depth in Feet scaled 1:240



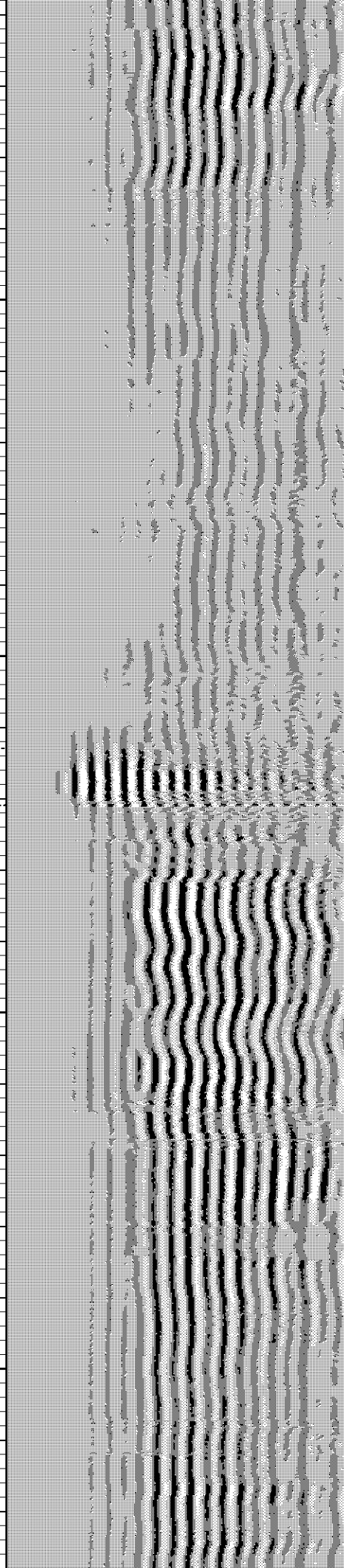
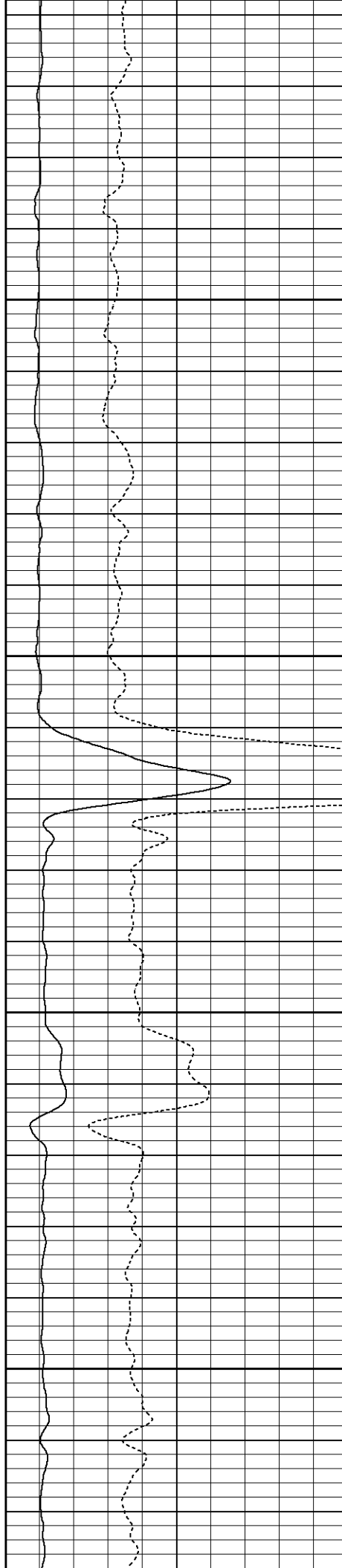


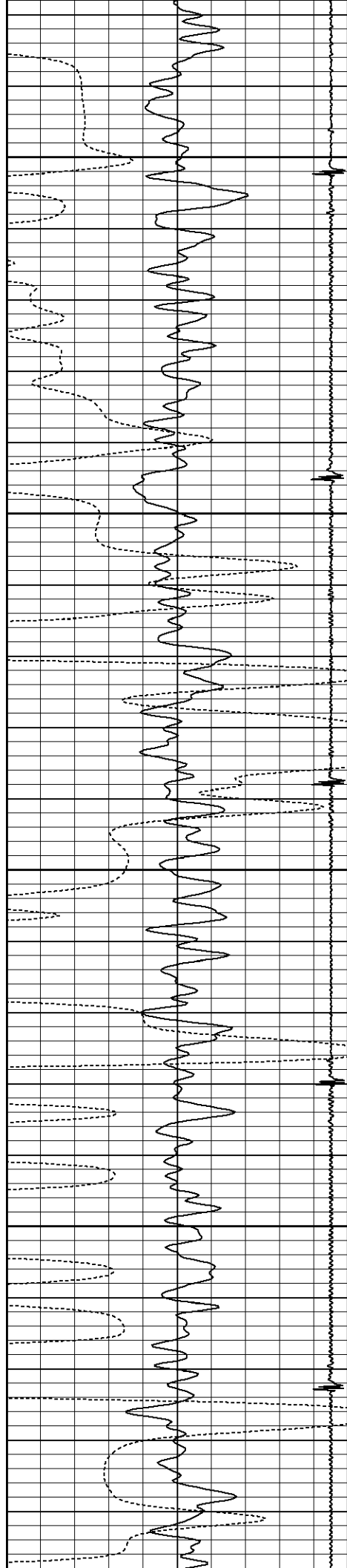
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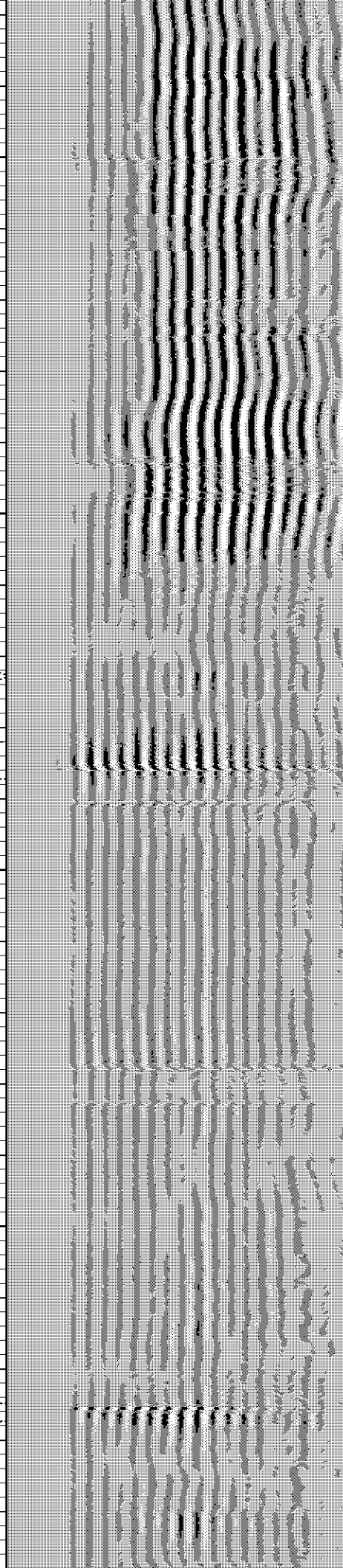
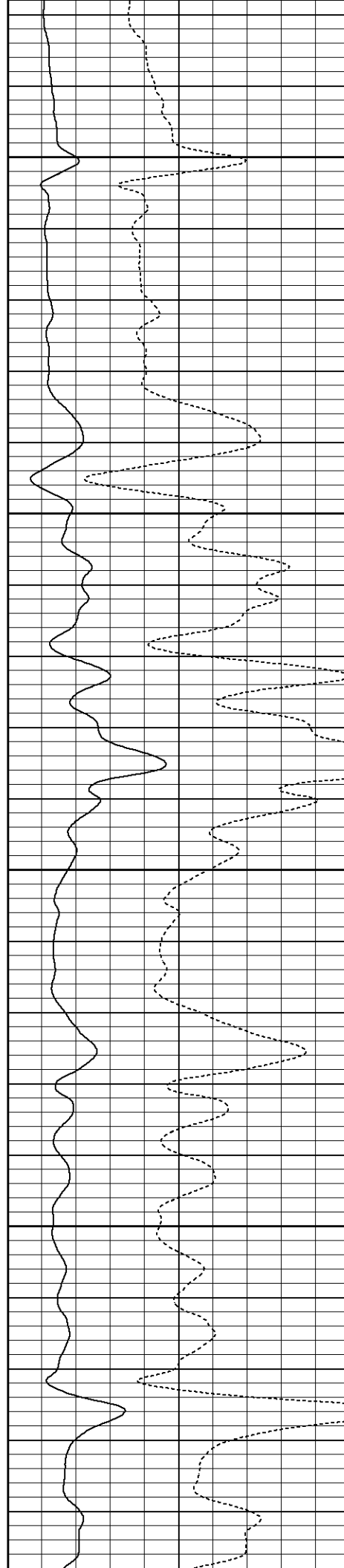


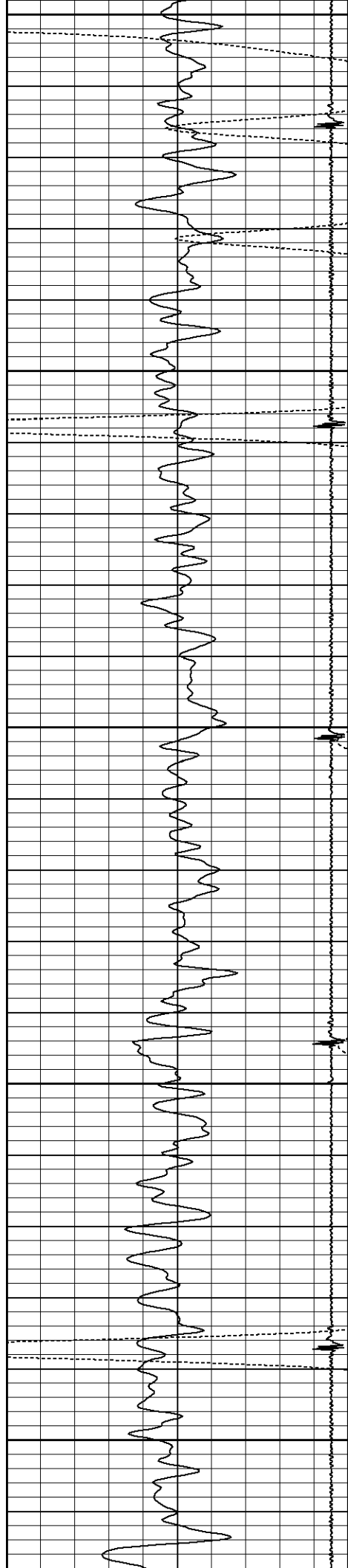
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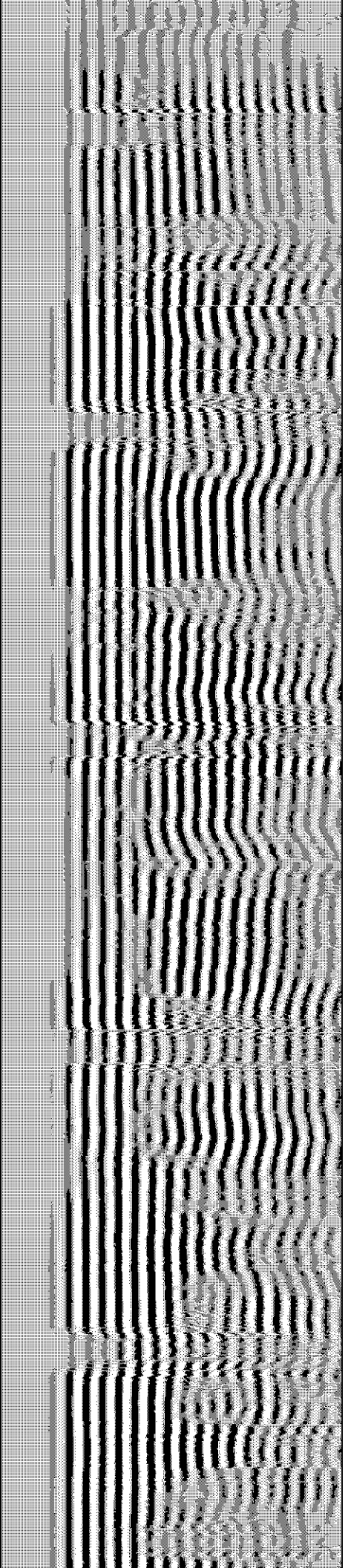
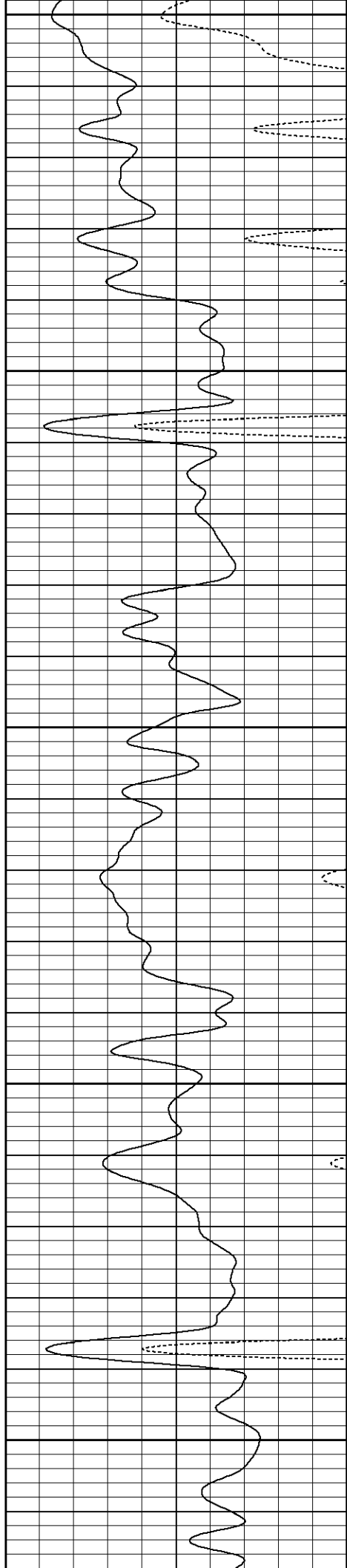
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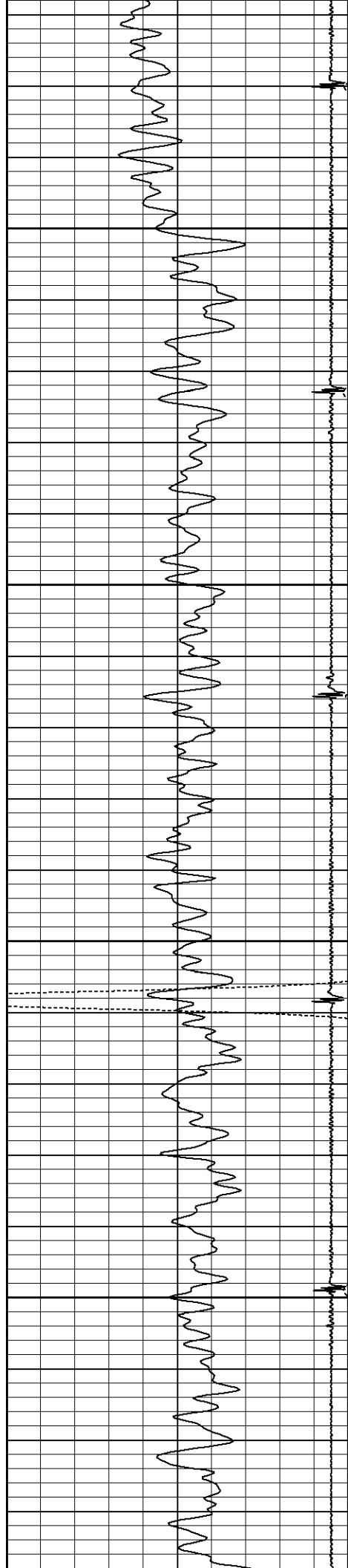
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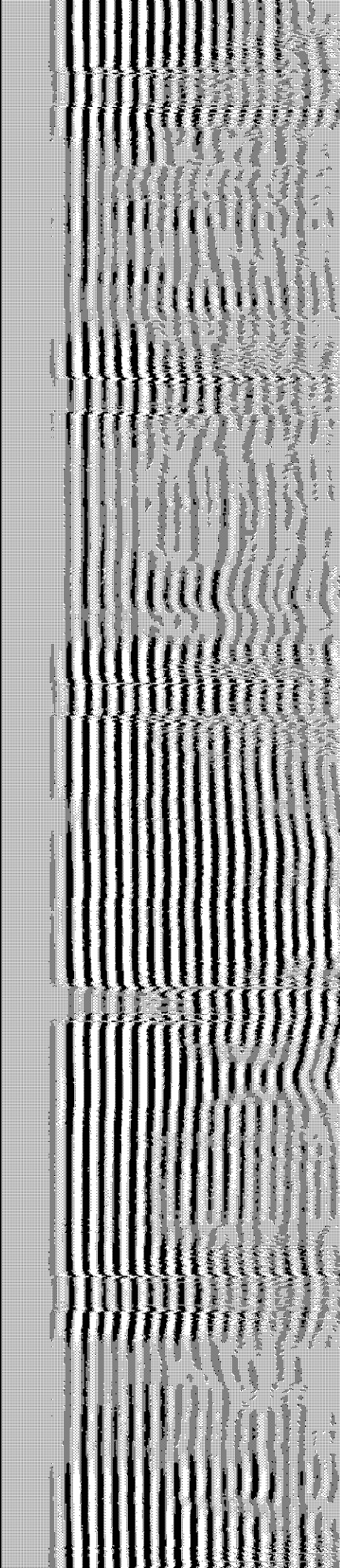
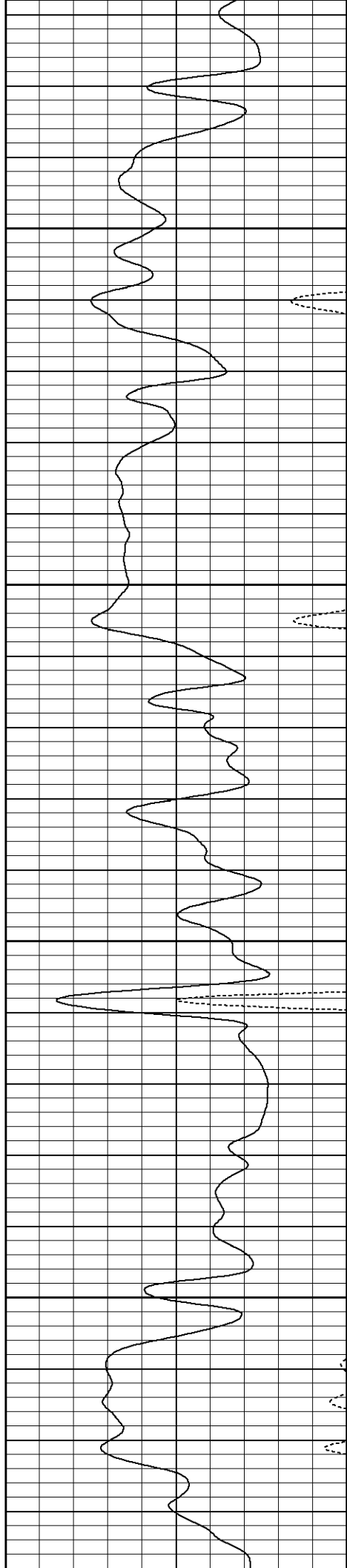


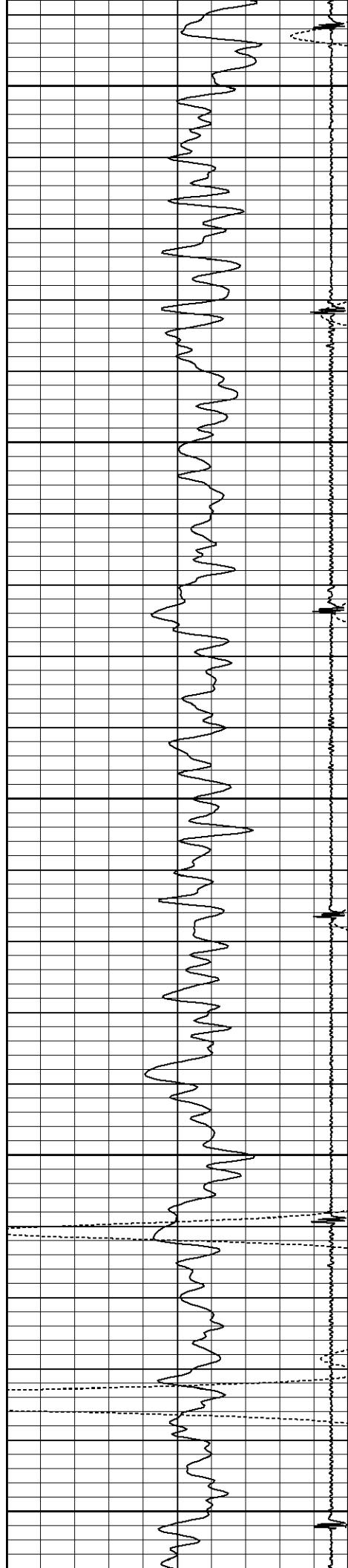
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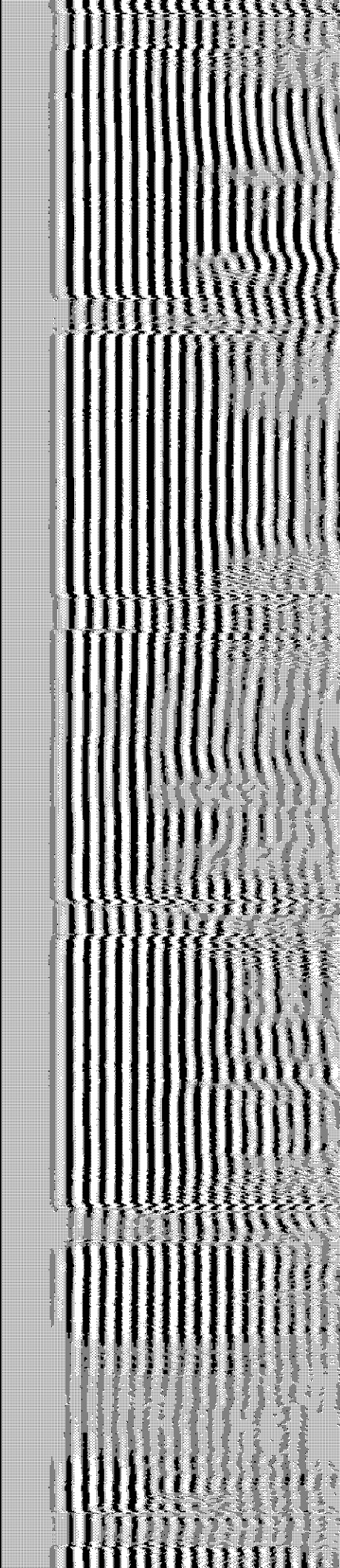
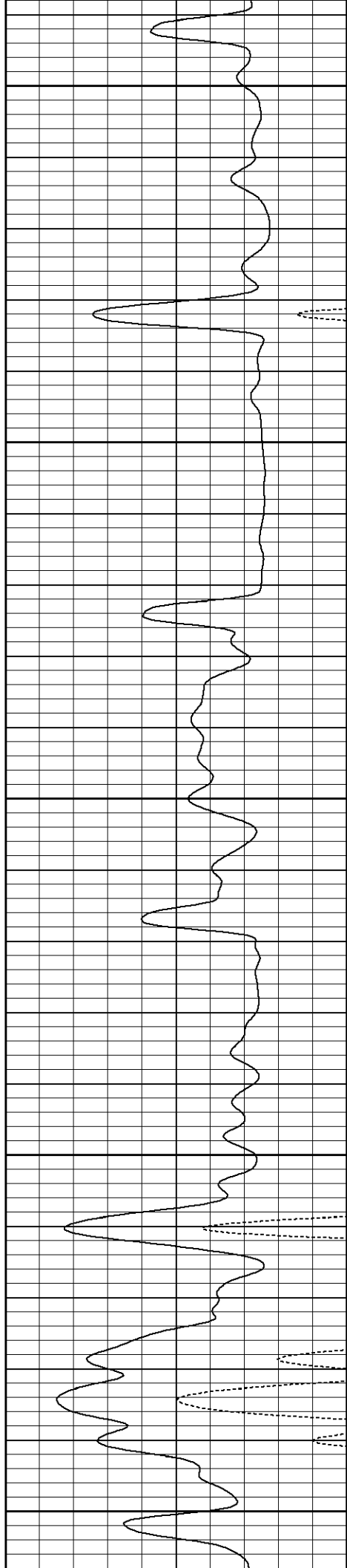
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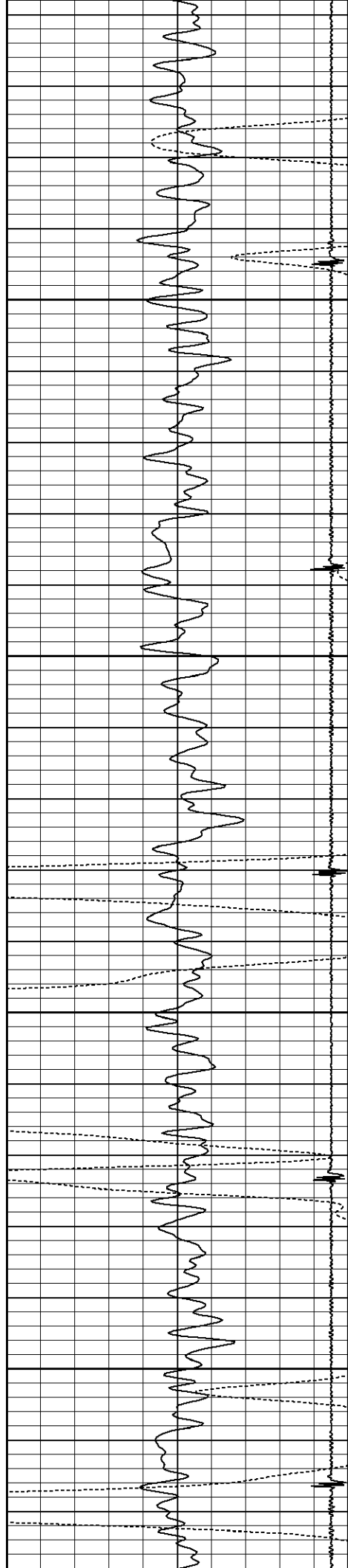
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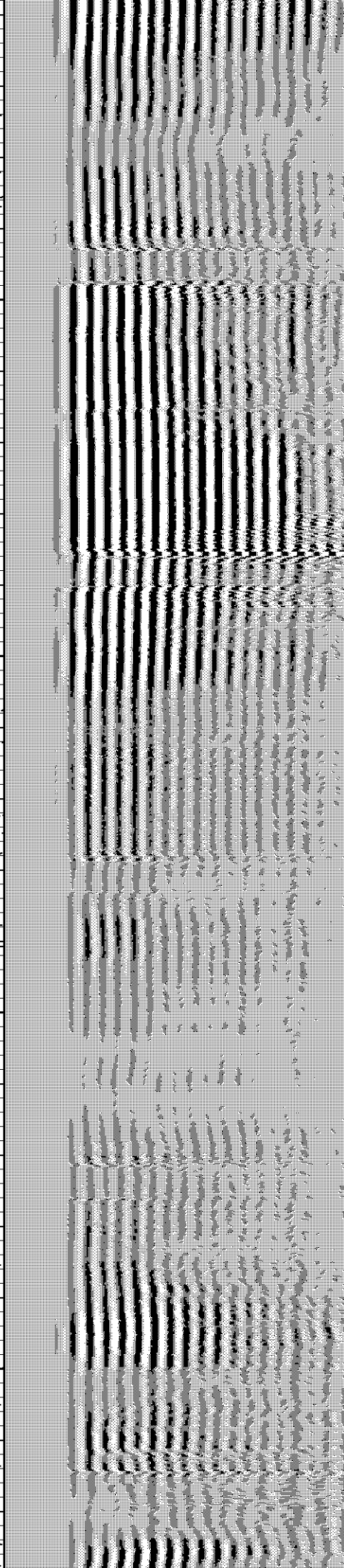
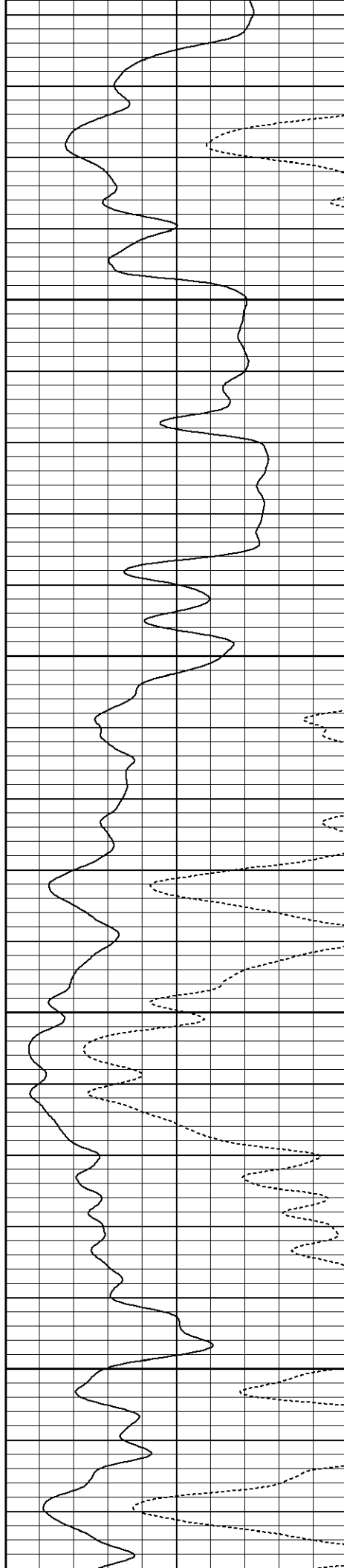


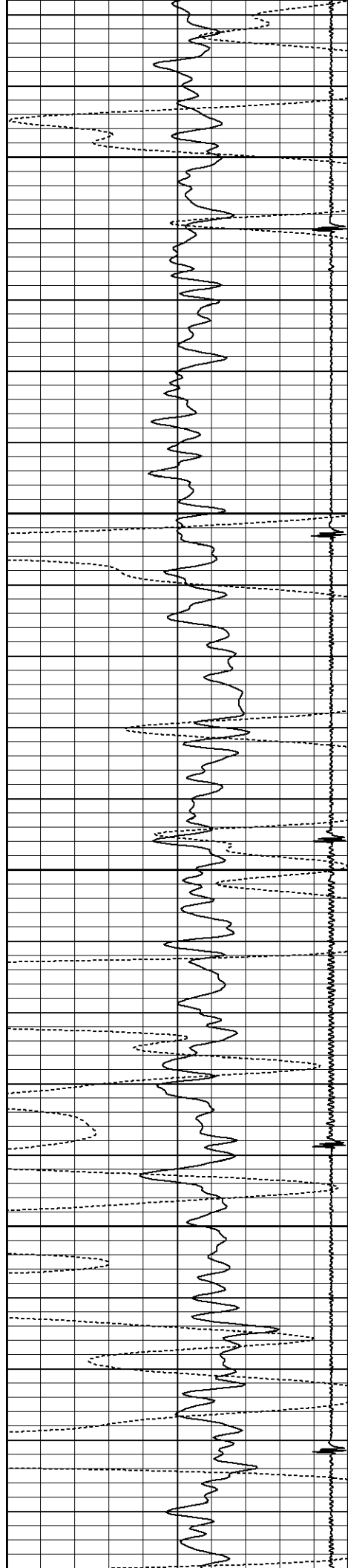
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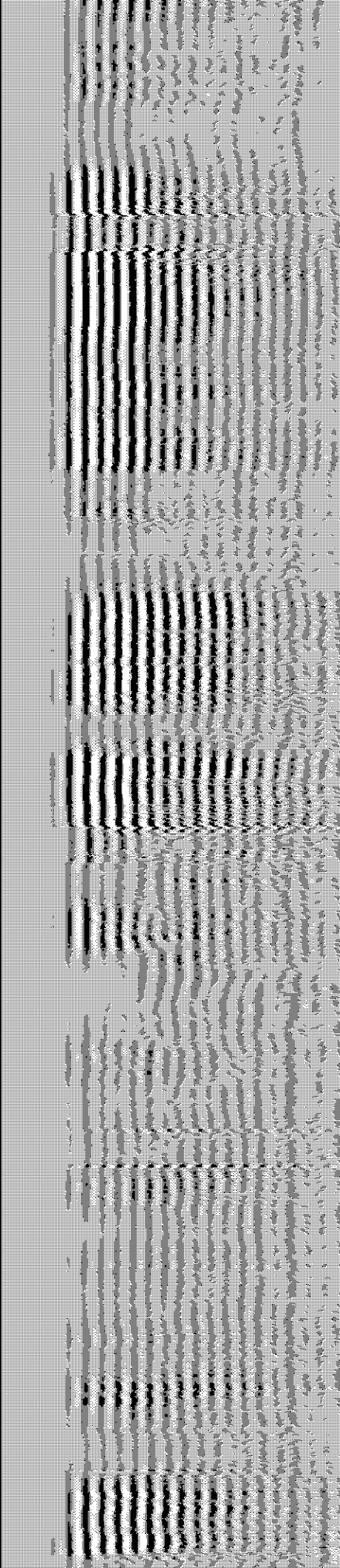
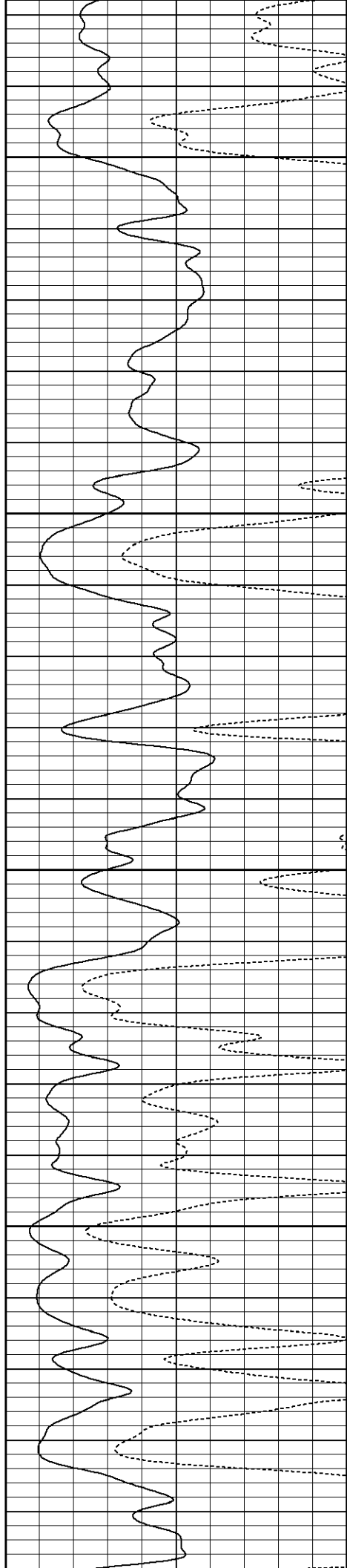


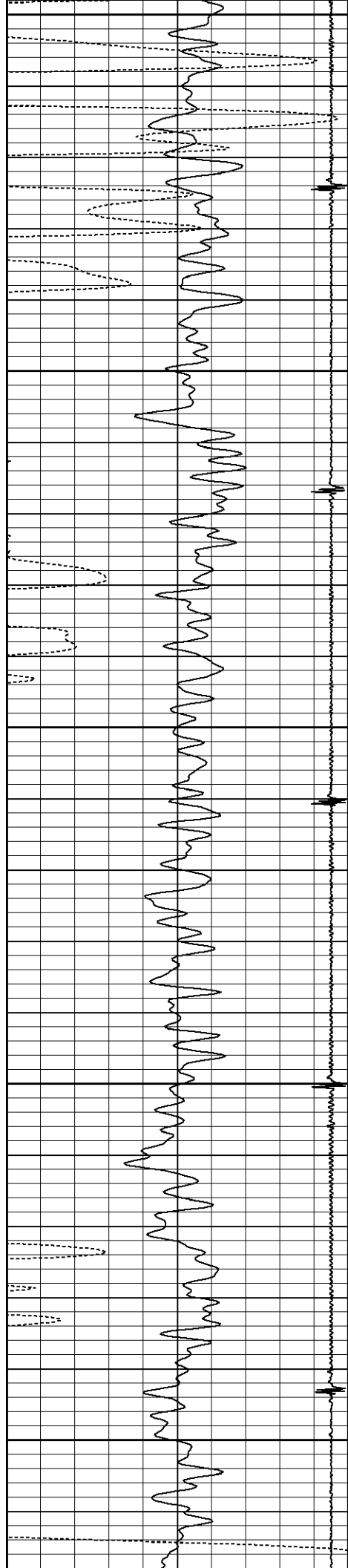
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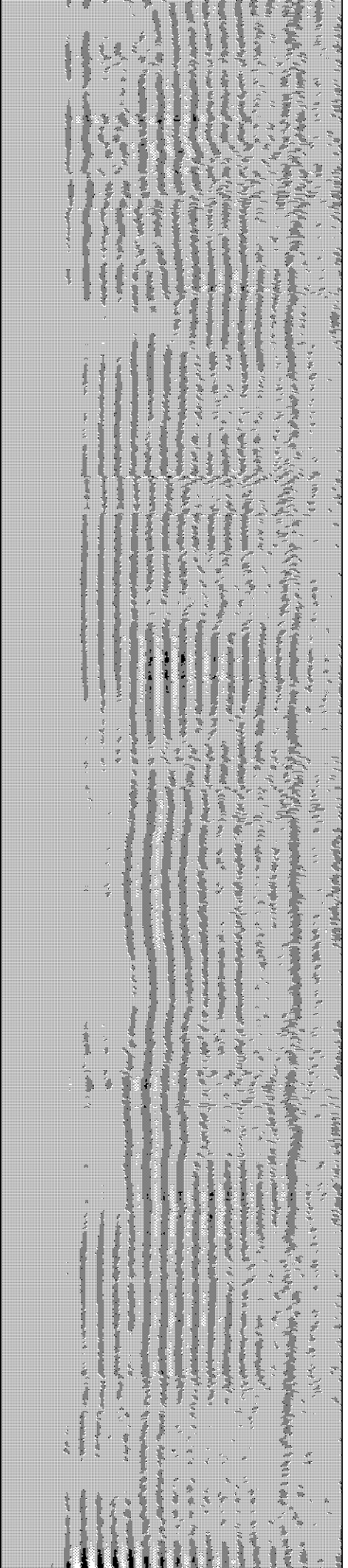
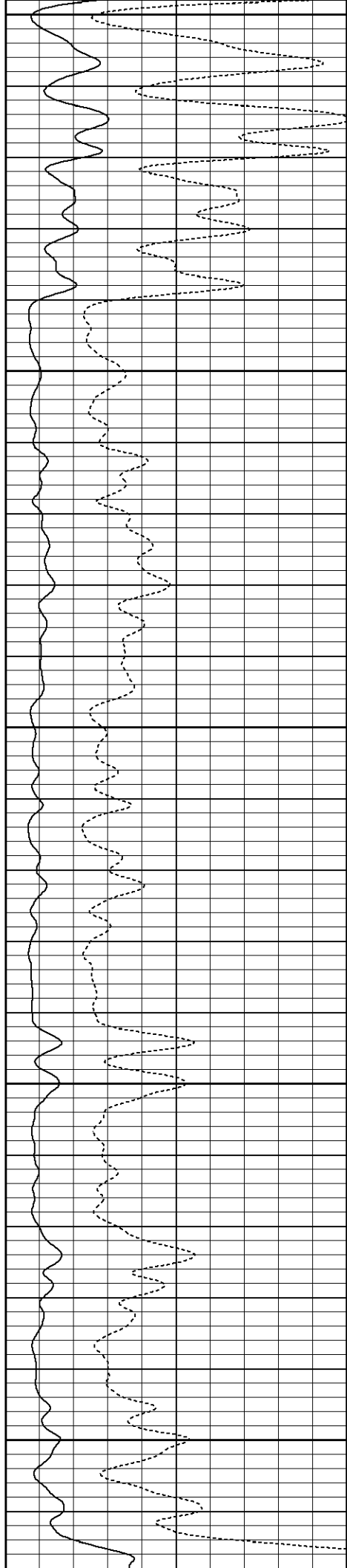
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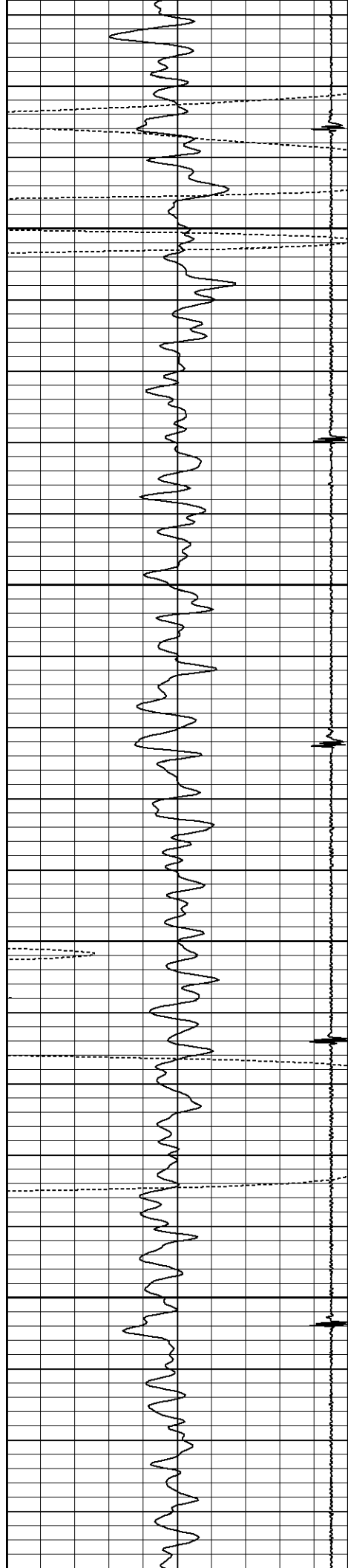
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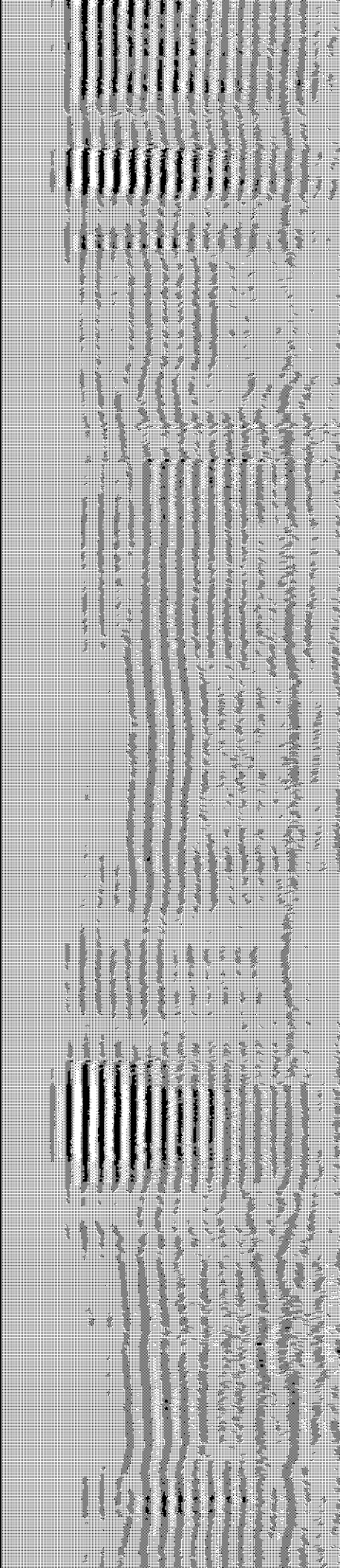
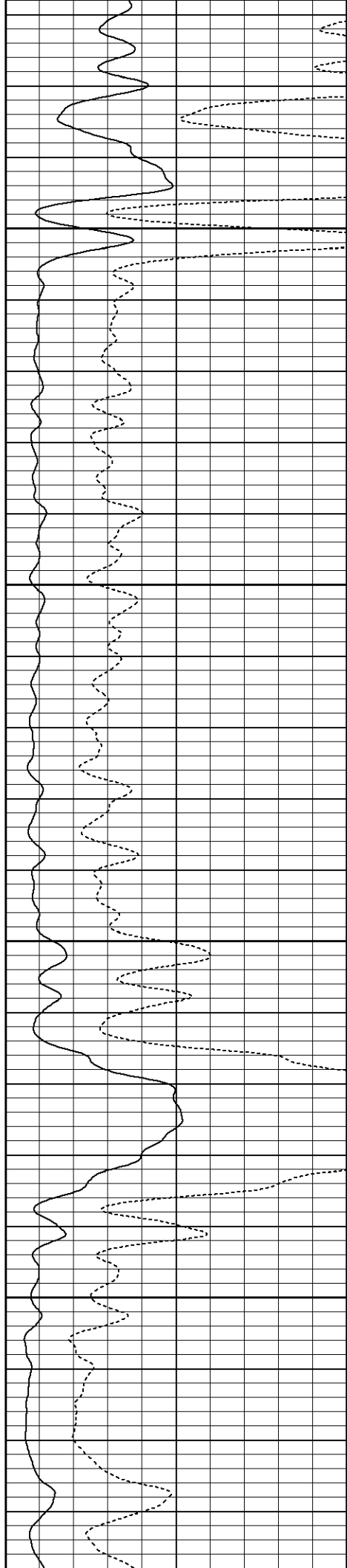


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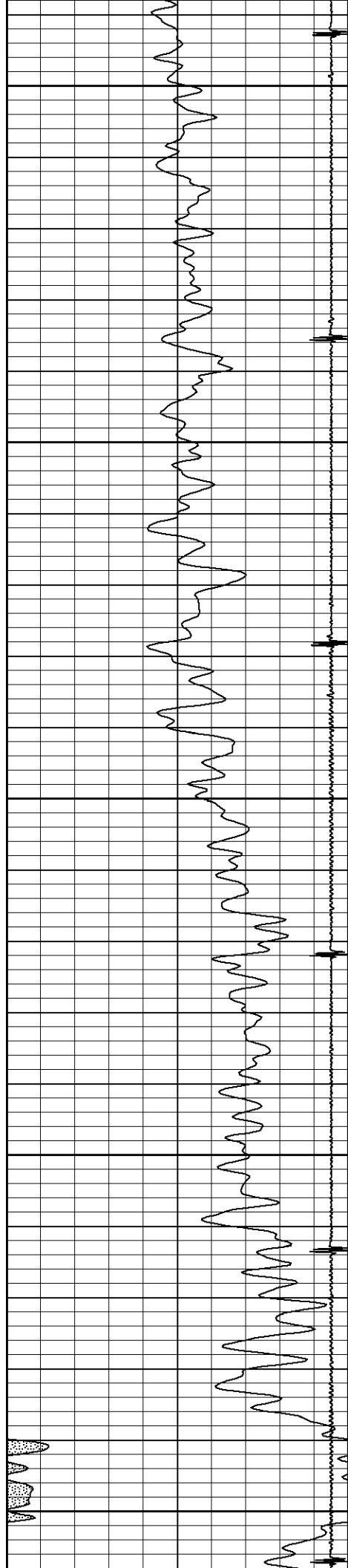
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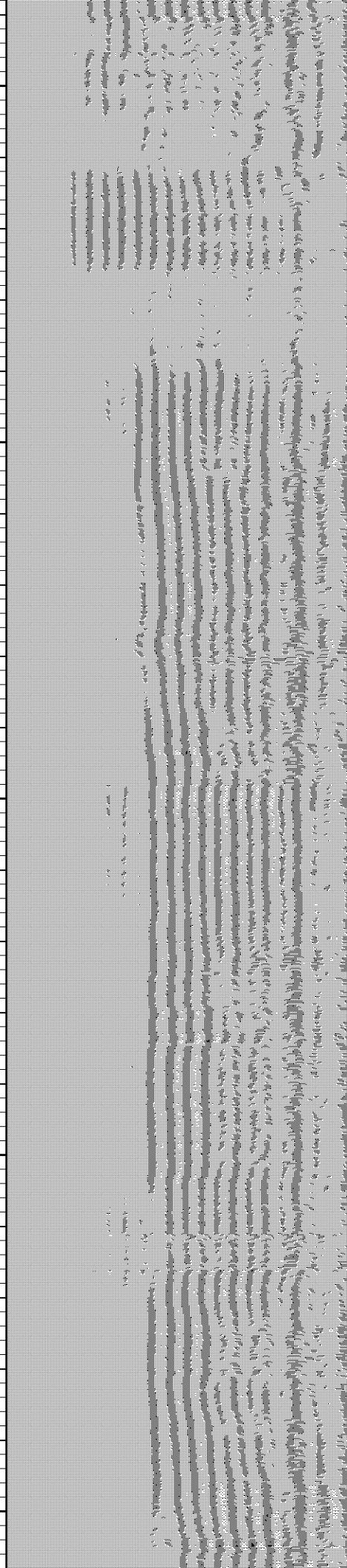
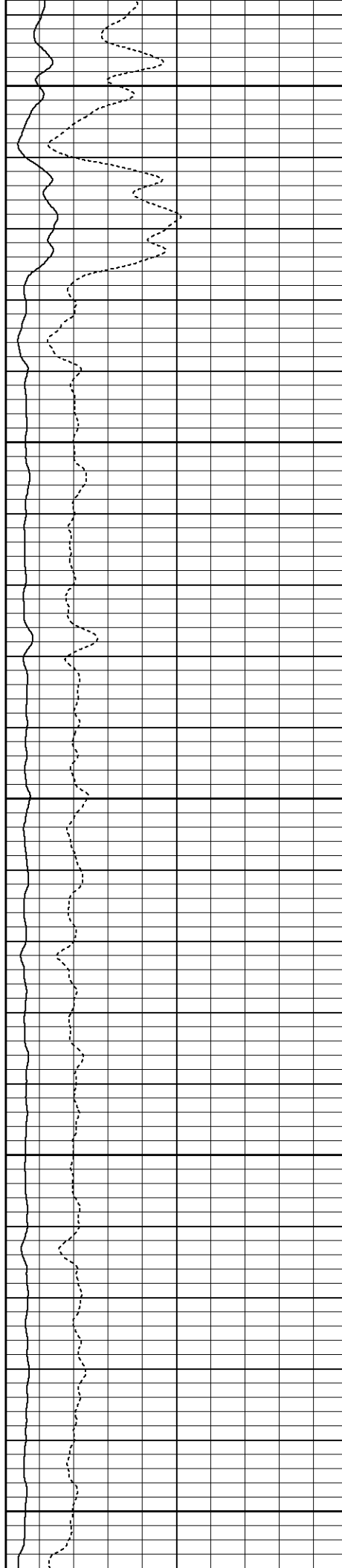
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6750



Flag Joint

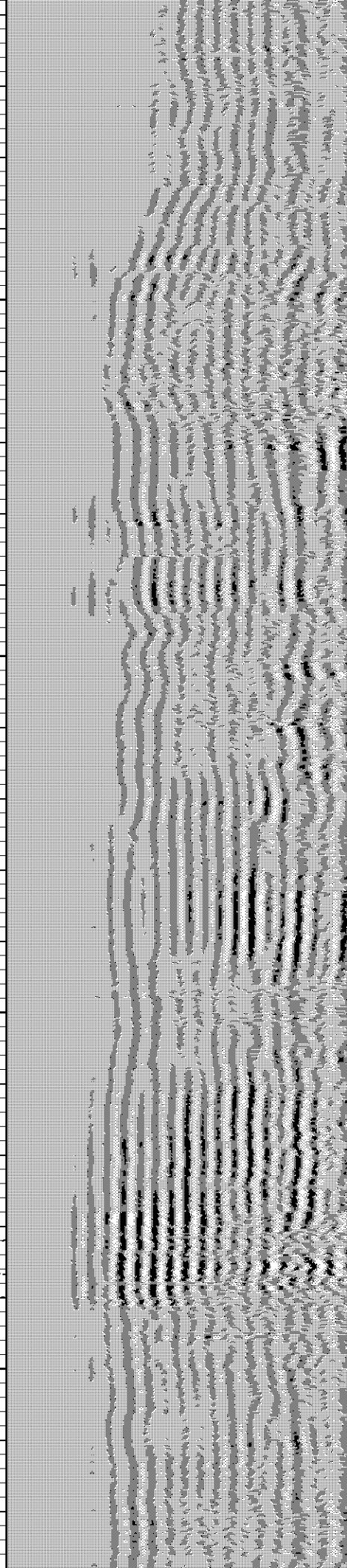
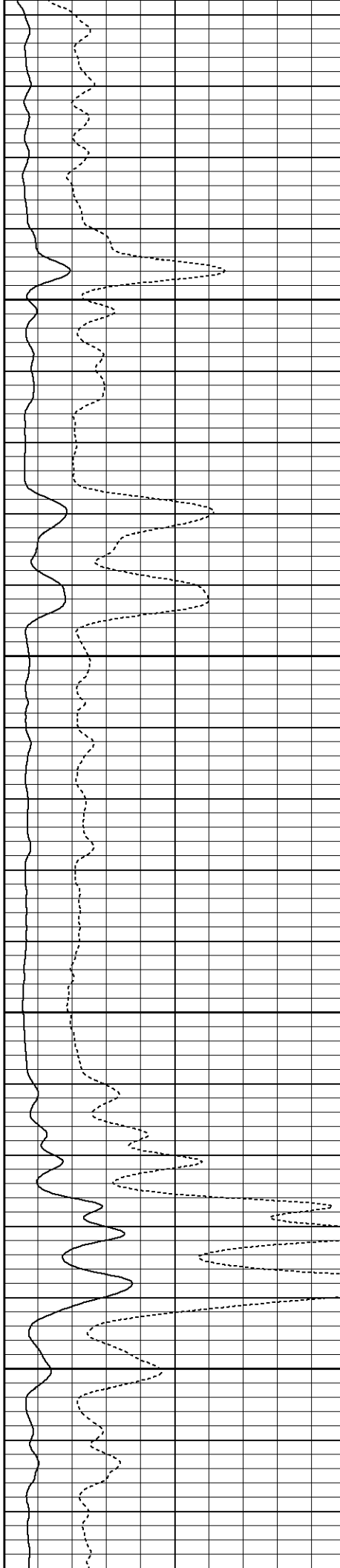
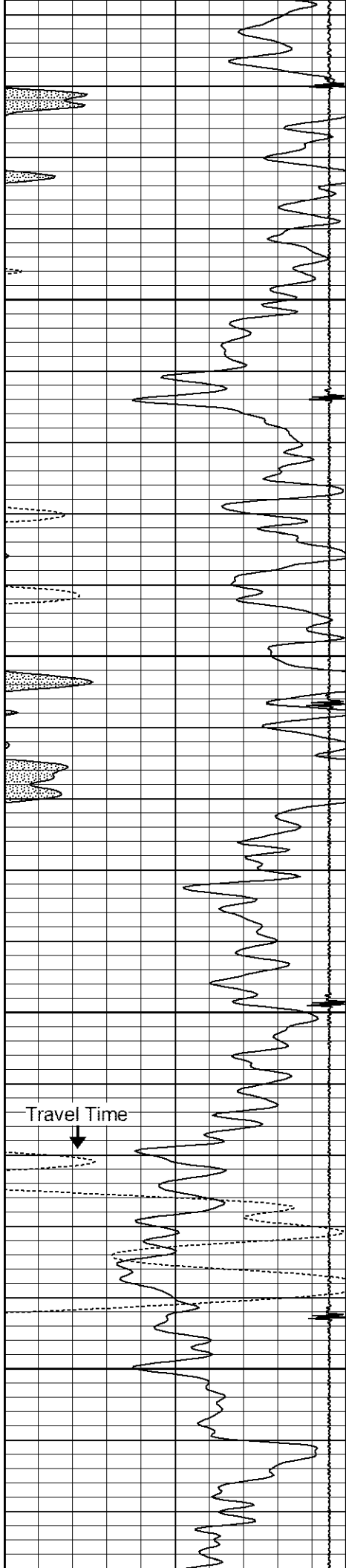
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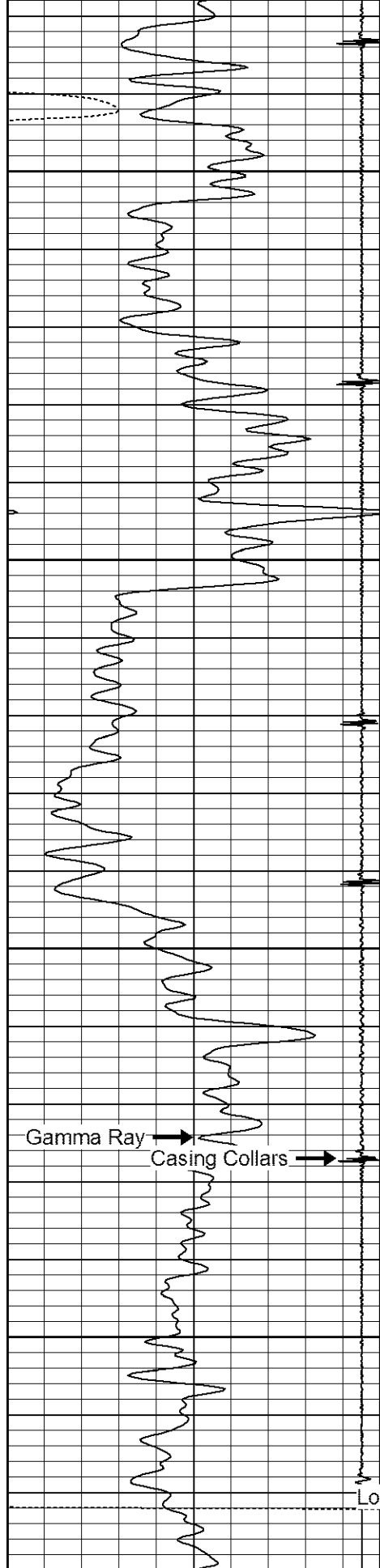
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6950

Travel Time





7000

7050

Flag Joint

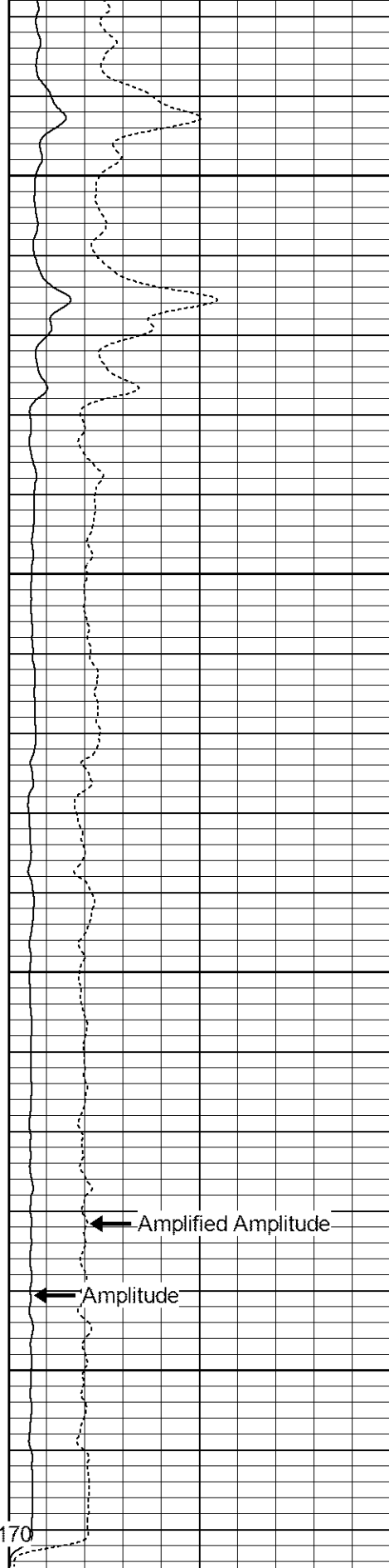
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Gamma Ray

Casing Collars

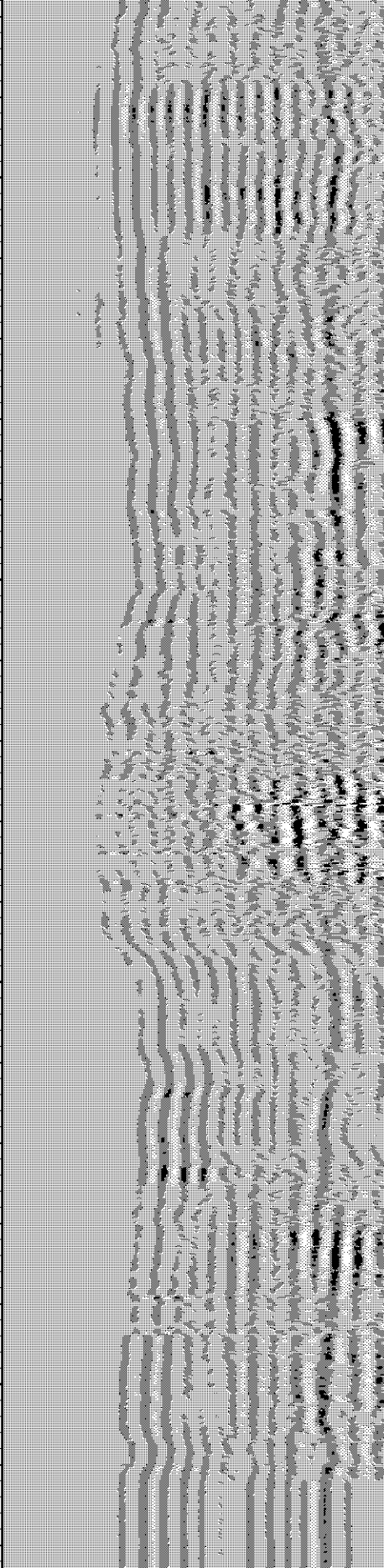
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Loggers TD: 7170



Amplified Amplitude

Amplitude



60	CCL	-3	0	Amplified Amplitude (mV)	30	200	Variable Density	1200
0	Gamma Ray (GAPI)	150	0	Amplitude (mV)	100			
350	TT3 (usec)	285						

### Calibration Report

Database File: cblpettinger usx ab27-02.db  
Dataset Pathname: pass3  
Dataset Creation: Thu Dec 29 08:07:50 2011 by Log SCH 111116

### Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

#### SHOP CALIBRATION

Tue Dec 06 11:52:21 2011

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.6800			GAPI/cps

#### PRIMARY VERIFICATION

Background	0.0			cps
Calibrator	0.0			cps
Difference			0.0	GAPI

#### BEFORE SURVEY VERIFICATION

Background	0.0			cps
Calibrator	0.0			cps
Difference			0.0	GAPI

#### AFTER SURVEY VERIFICATION

Background	0.0			cps
Calibrator	0.0			cps
Difference			0.0	GAPI

### Cement Bond Log Calibration Report

Serial Number: 110802  
Tool Model: Probe275Digital  
Performed: Thu Dec 29 07:23:39 2011

Depth: 517.083 ft  
Casing Diameter: 4.5 in

3' Spacing                      5' Spacing

Signal Zero:	0.9	0	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	0.0132568	0.0133057	V
Reading in Free Pipe:	2.49817	2.3438	V

Gain:	32.3135	34.8407
Offset:	0.471626	-0.463579