



CEMENT BOND
GAMMA RAY
CCL LOG

Pioneer Energy Services

Company	BONANZA CREEK ENERGY			Location:	API # : 05-123-39212	Other Services
Well	STATE SEVENTY HOLES F21-J24-4HNB			SEC 4	TWP 4N	RGE 62W
Field	WATTENBERG			Permanent Datum	Ground Level	Elevation 4552'
County	WELD			Log Measured From	K.B. 22' A.G.L.	Elevation K.B. 4574'
State	COLORADO			Drilling Measured From	K.B.	D.F. G.L. 4552'

Date 09-FEB-2015

Run Number	ONE	
Depth Driller	N/A	
Depth Logger	6000'	
Bottom Logged Interval	6000'	
Top Log Interval	SURFACE	
Open Hole Size	N/A	
Type Fluid	WATER	
Density / Viscosity	N/A	
Max. Recorded Temp.	N/A	
Estimated Cement Top	SEE LOG	
Time Well Ready	18:00	
Time Logger on Bottom	18:30	
Equipment Number	75	
Location	FT. MORGAN	
Recorded By	HARPER	
Witnessed By	BUNKER	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9-5/8"	36#	SURFACE	447'
Prot. String				
Production String	7"	26#	SURFACE	6577'
Liner				

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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

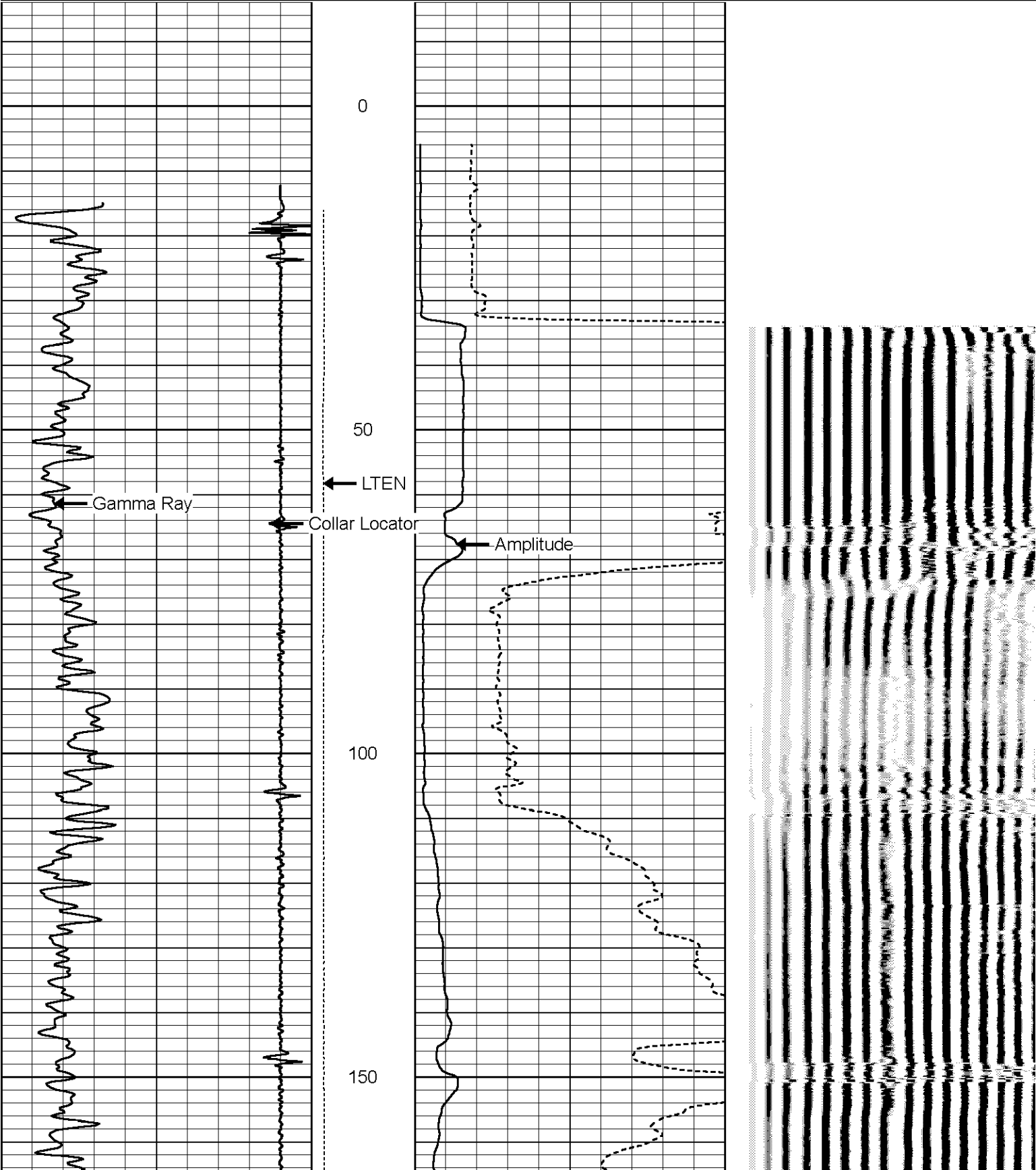
LOG CORRELATED TO K.B. 22' A.G.L.

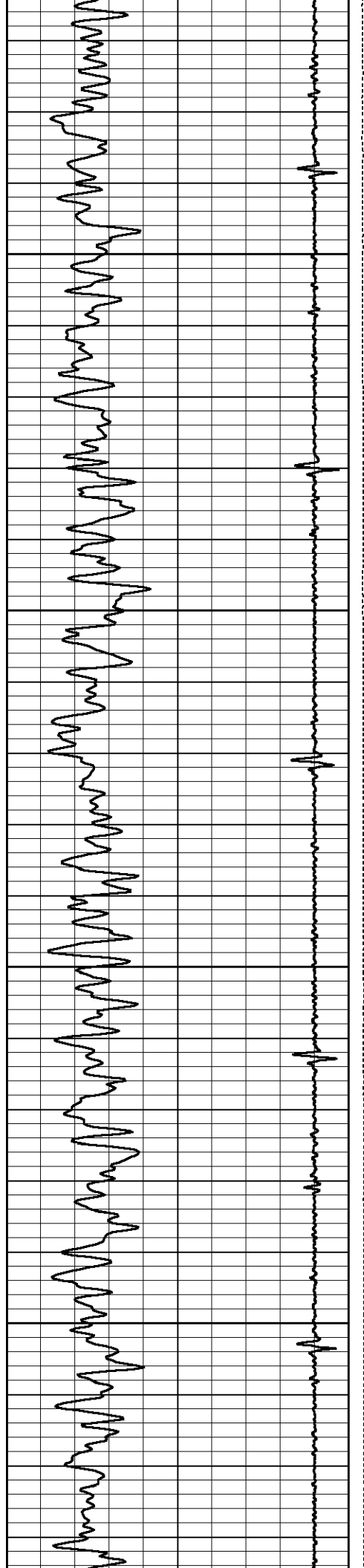
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.69	10.00

			SDSCENT Centralizer for testing	3.00	3.25	20.00
WVF3	11.75					
WVF5	10.75		CBL-Probe (050215) Probe 2.75" Dual Receiver Bond	8.75	2.75	60.00
			SDSCENT Centralizer for testing	3.00	3.25	20.00
CCL	3.75					
GR	2.67		GR-Probe (11205) Probe 2.75" 4 Channel Pulse	4.50	2.75	30.00
Dataset: bonanza creek energy state seventy holes f21-j24-4hnb.db: field/well/run1/pass5 Total Length: 20.25 ft Total Weight: 140.00 lb O.D. 3.25 in						

Database File: bonanza creek energy state seventy holes f21-j24-4hnb.db
 Dataset Pathname: pass5
 Presentation Format: cbl_dr
 Dataset Creation: Mon Feb 09 18:26:26 2015 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240

9	Collar Locator	-1	LTEN	0	Amplified Amplitude (mV)	10	200	Variable Density	1200
0	Gamma Ray (GAPI)	200	0 (lb/2000)	0	Amplitude (mV)	100			



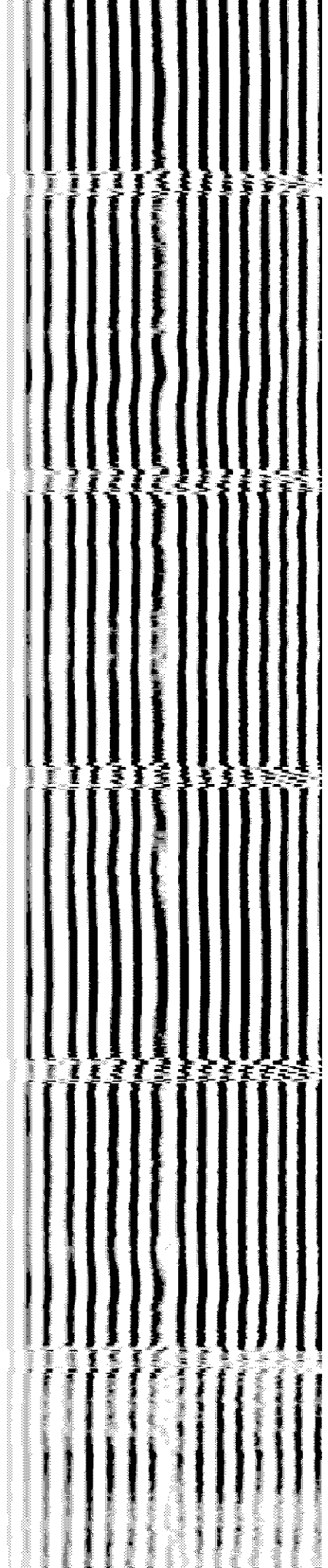
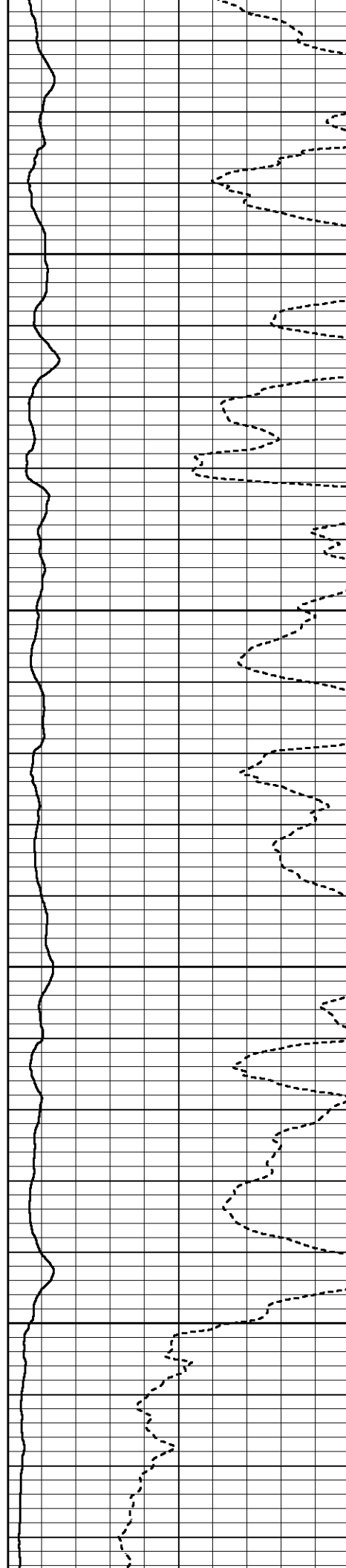


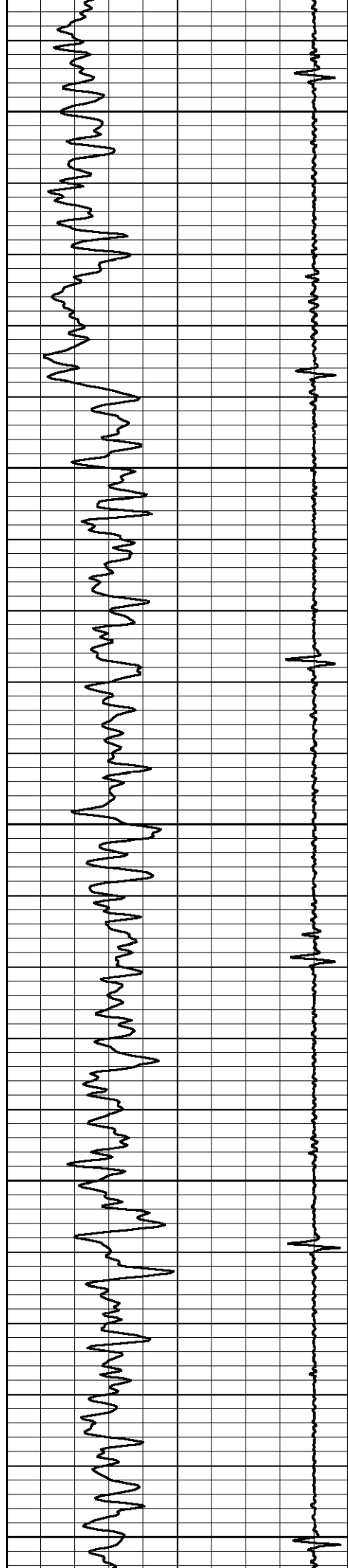
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250

300

350





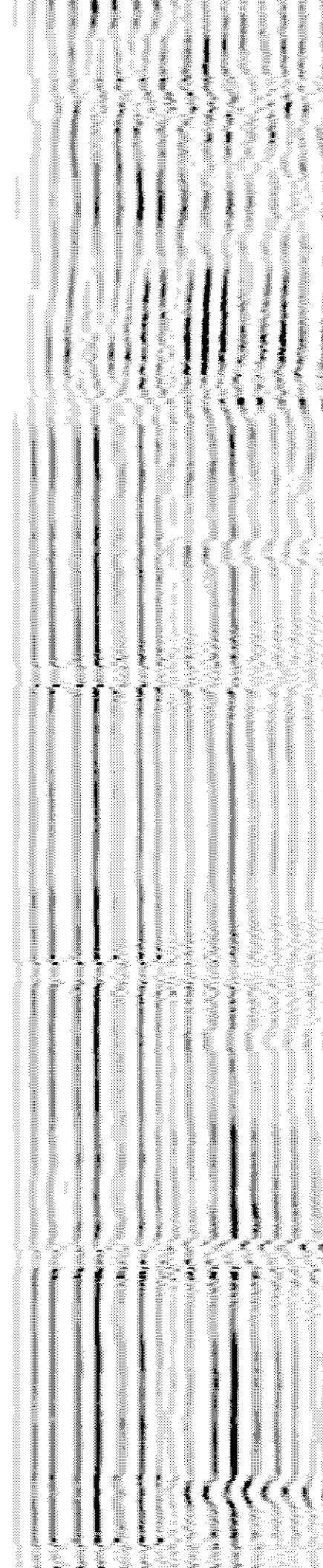
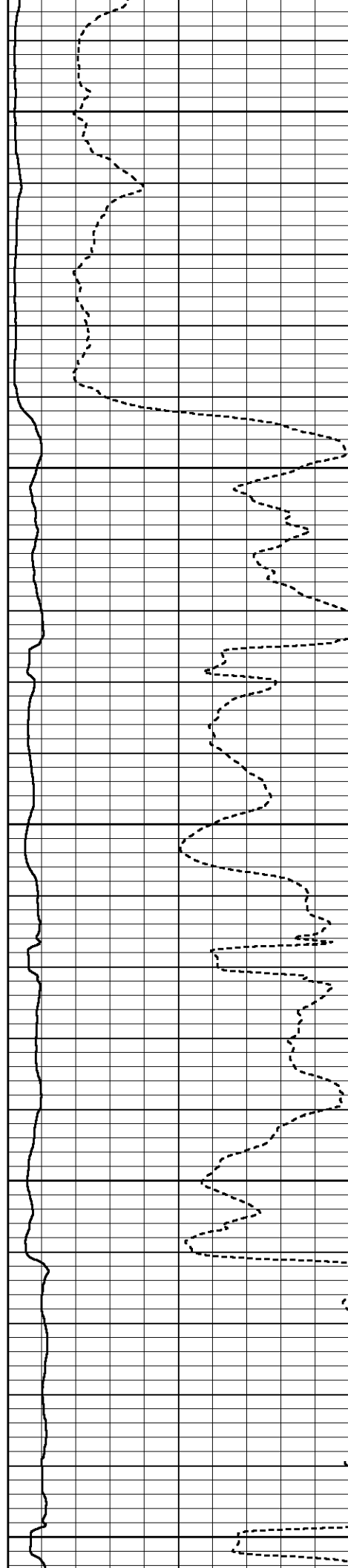
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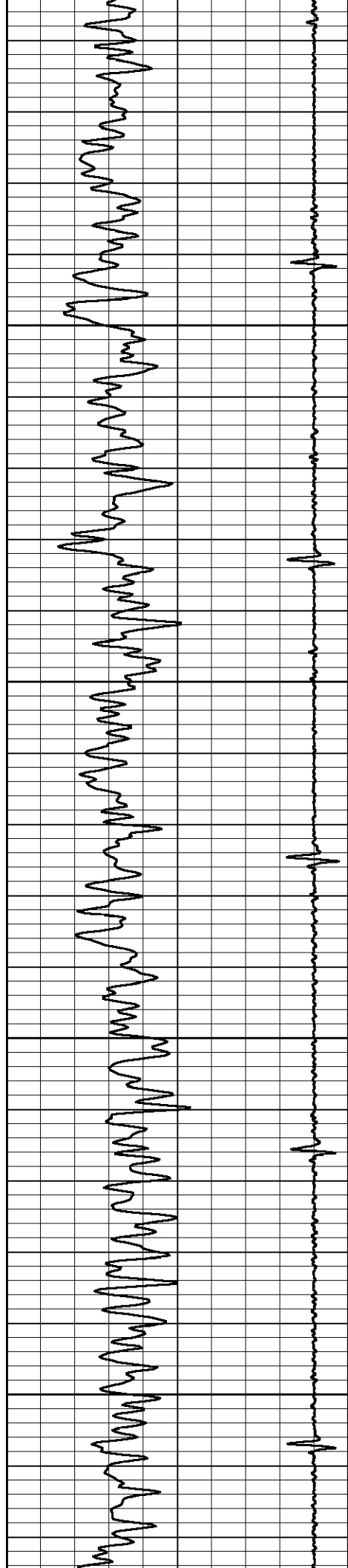
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500

550

600



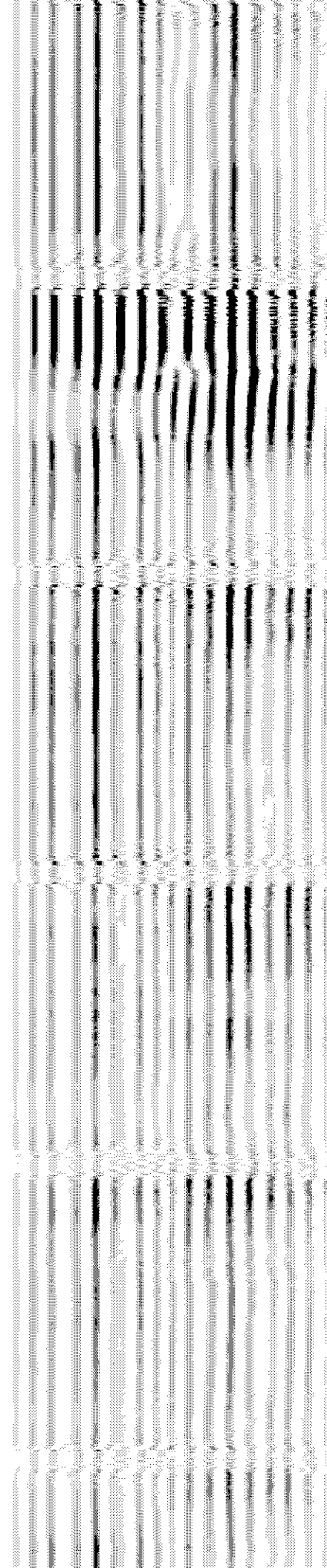
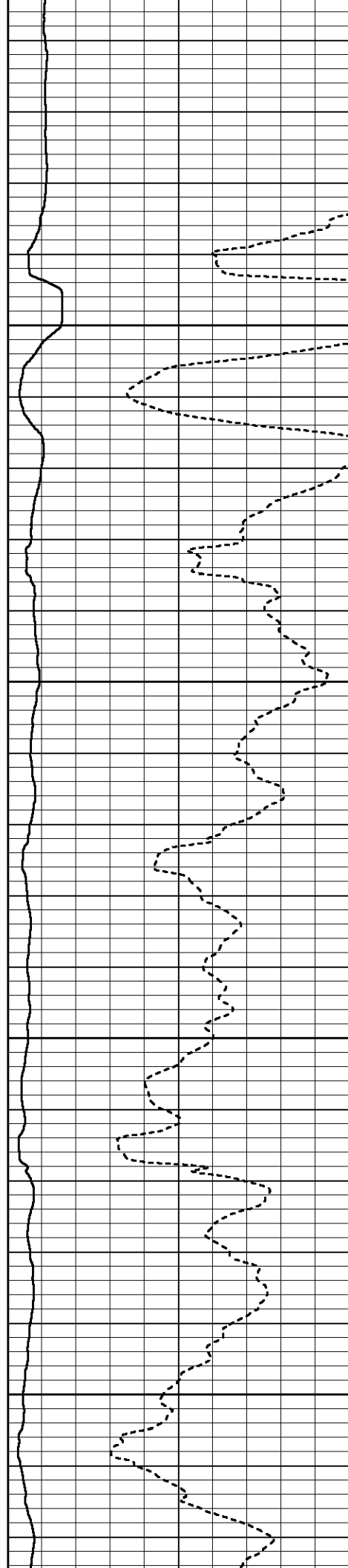


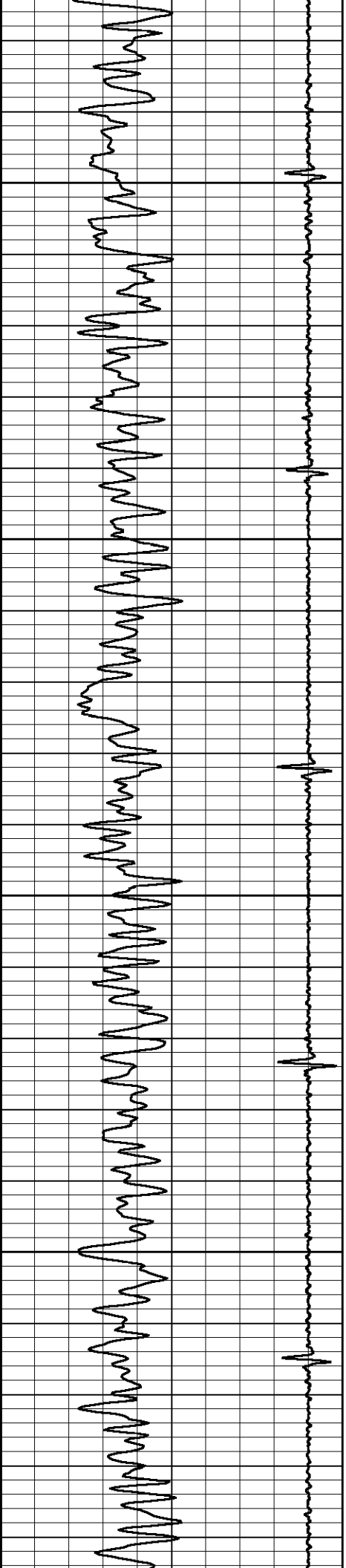
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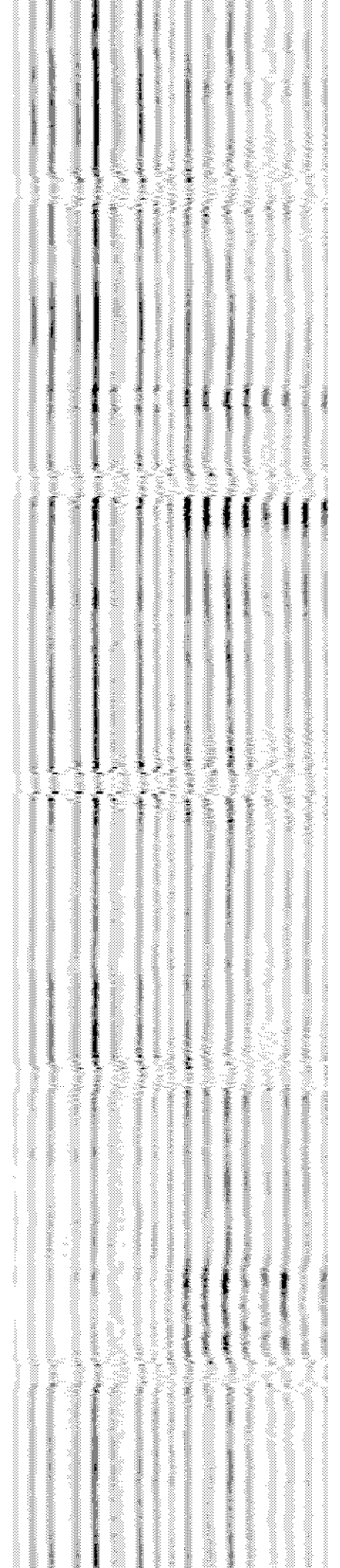
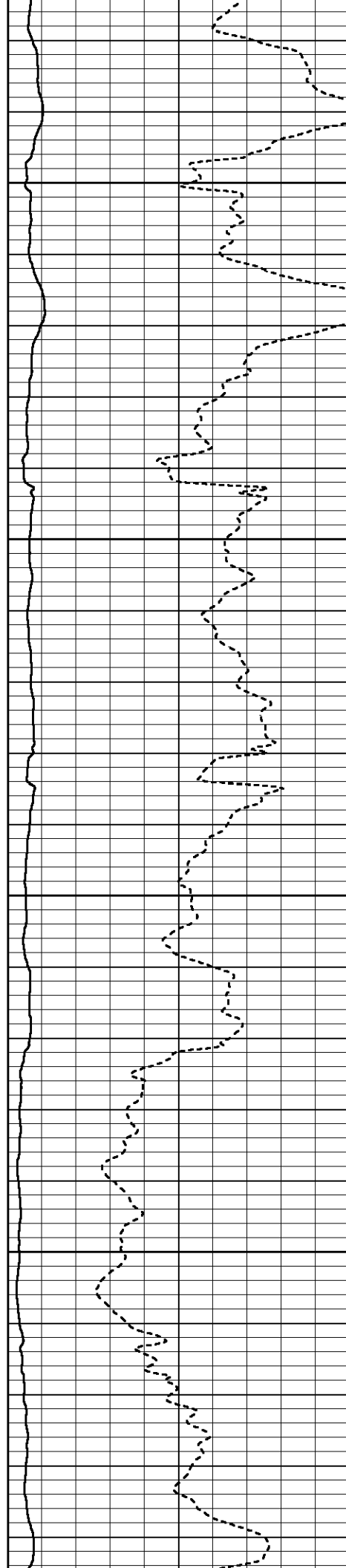


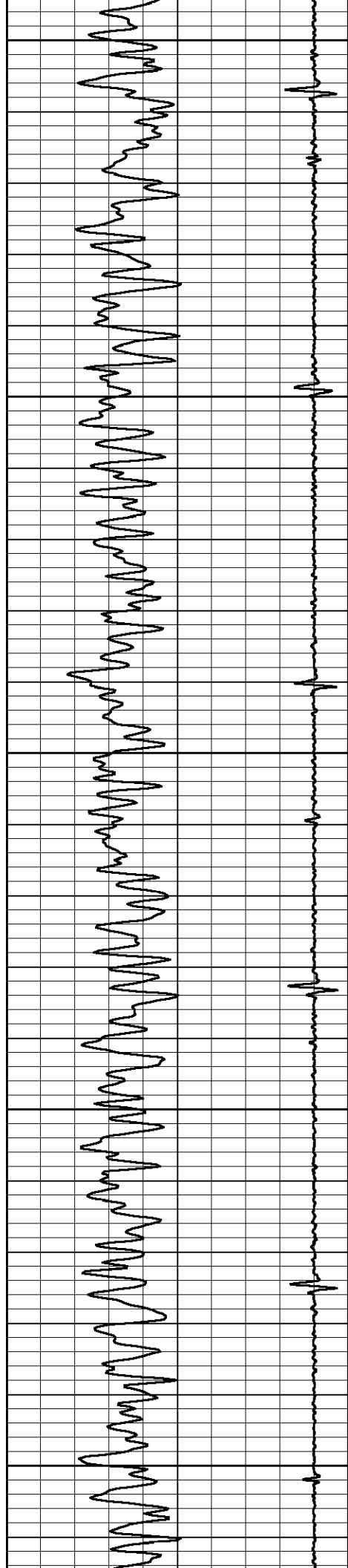
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900

950

1000





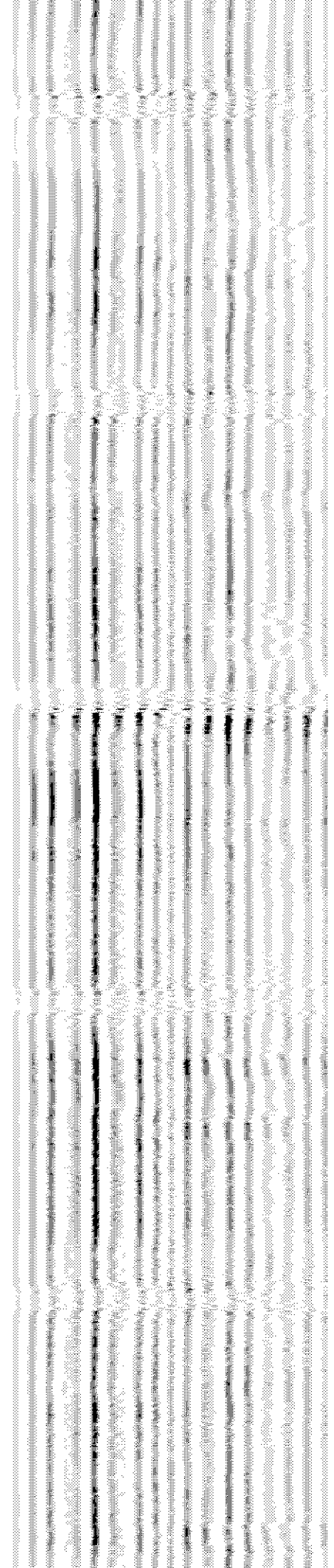
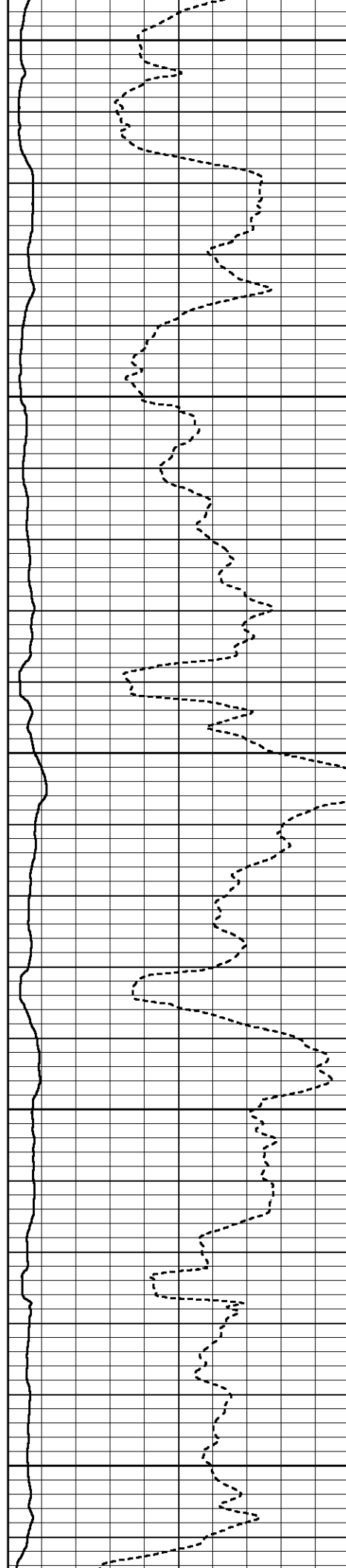
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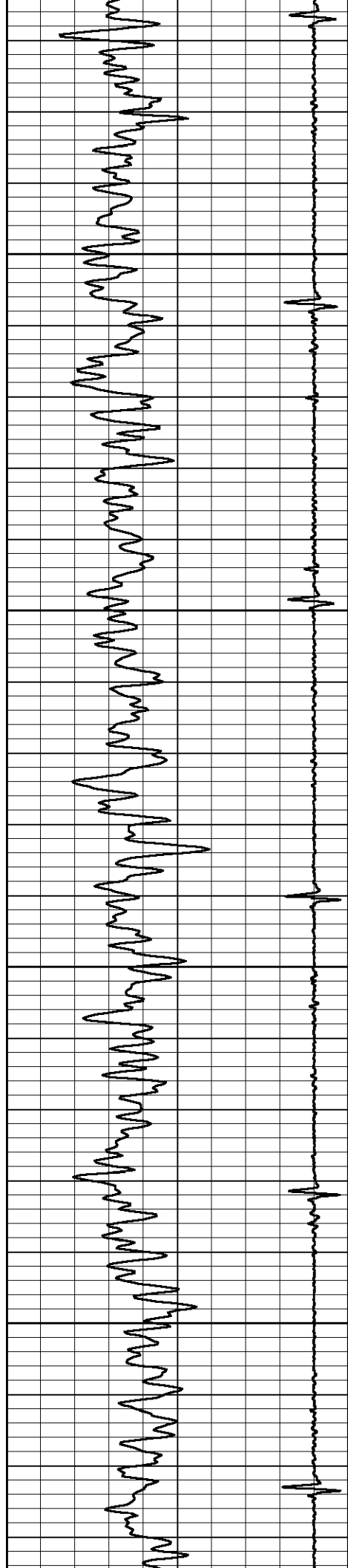
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1200

1250



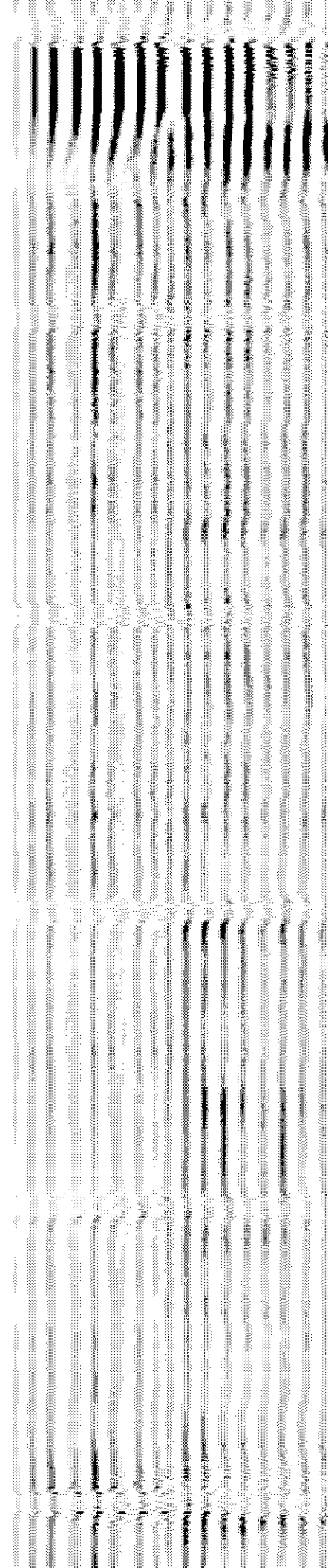
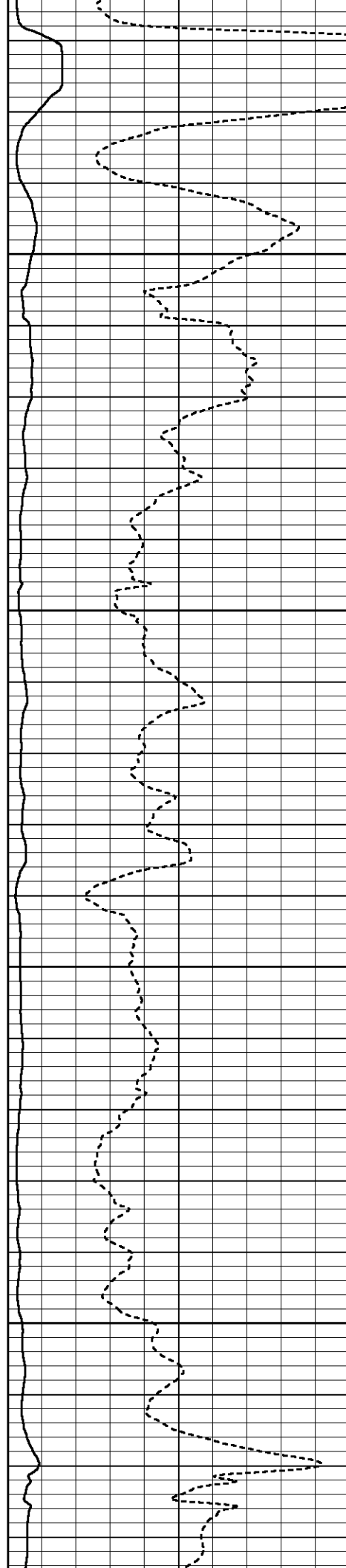


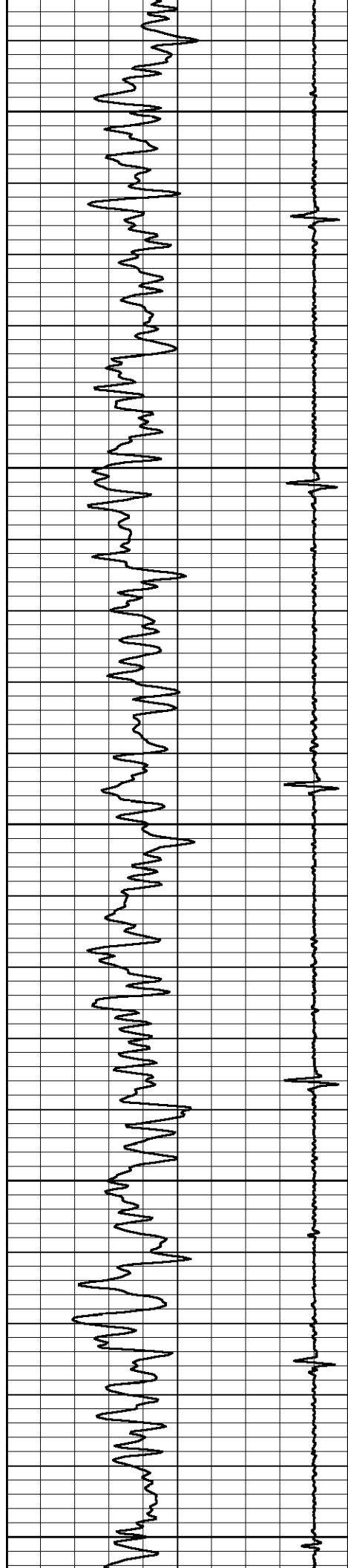
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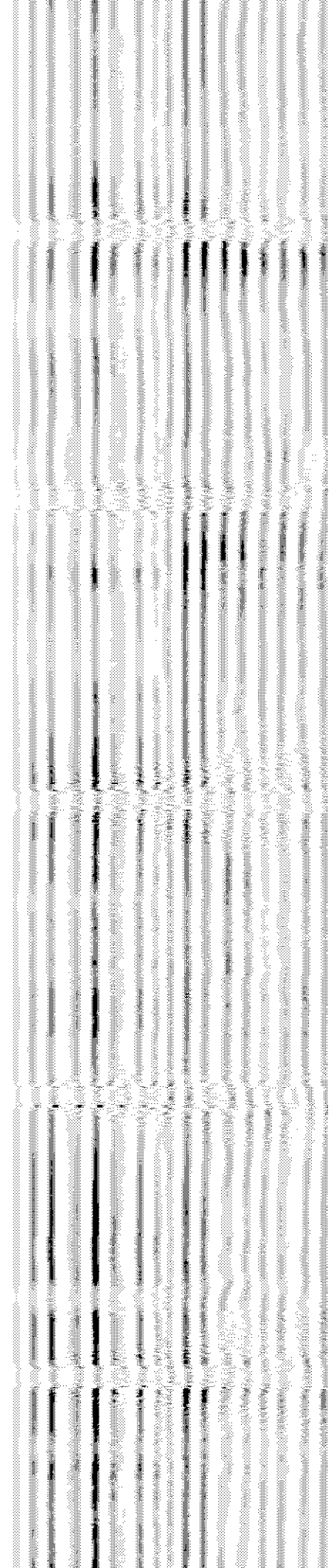
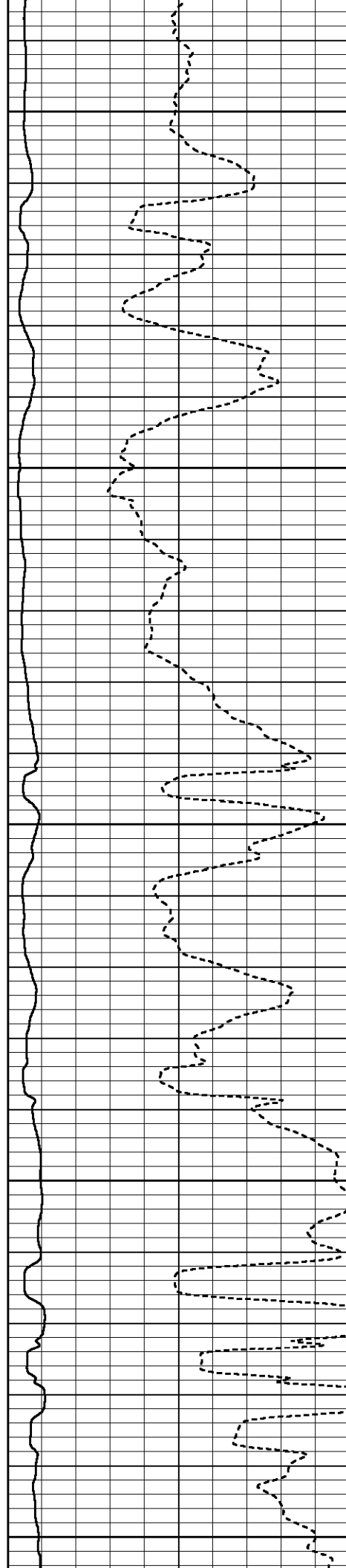
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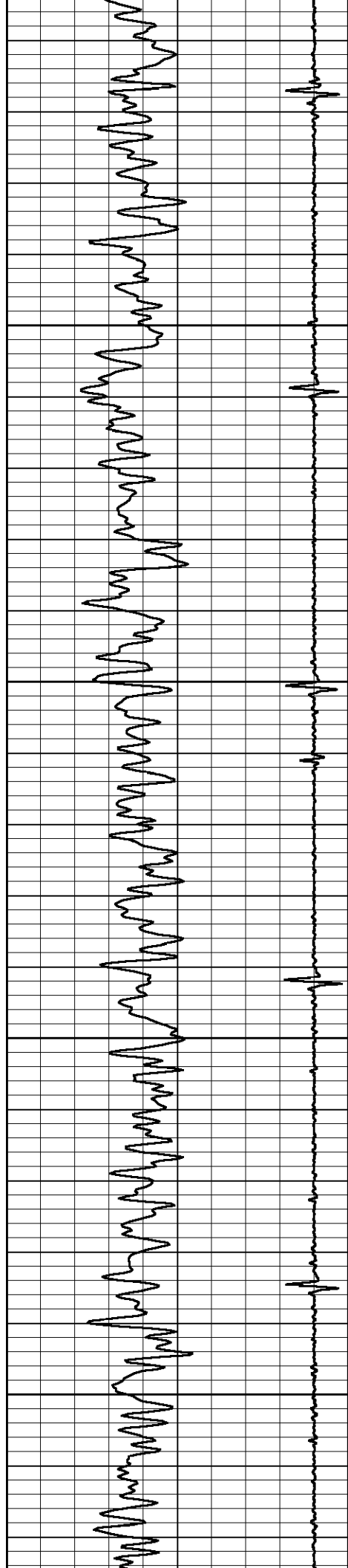
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1700



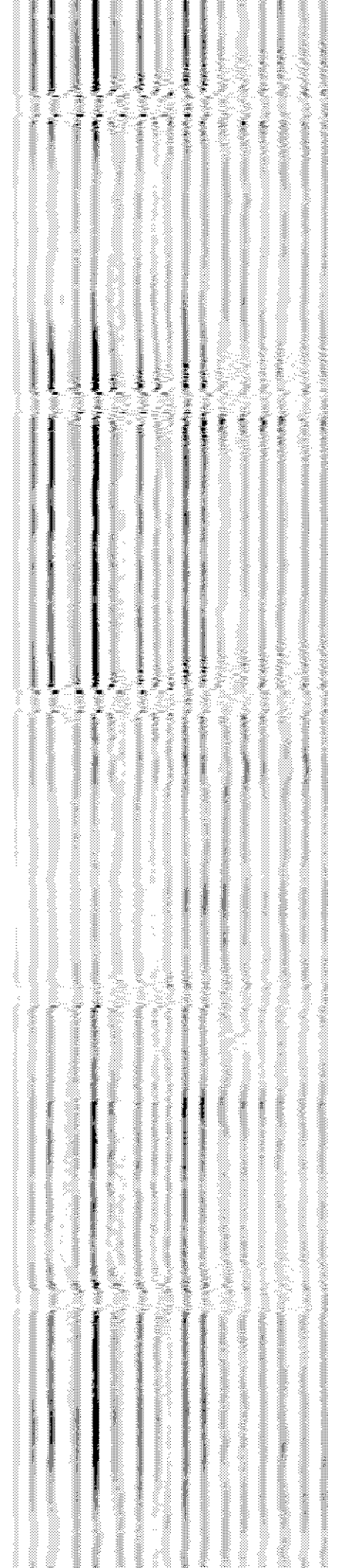
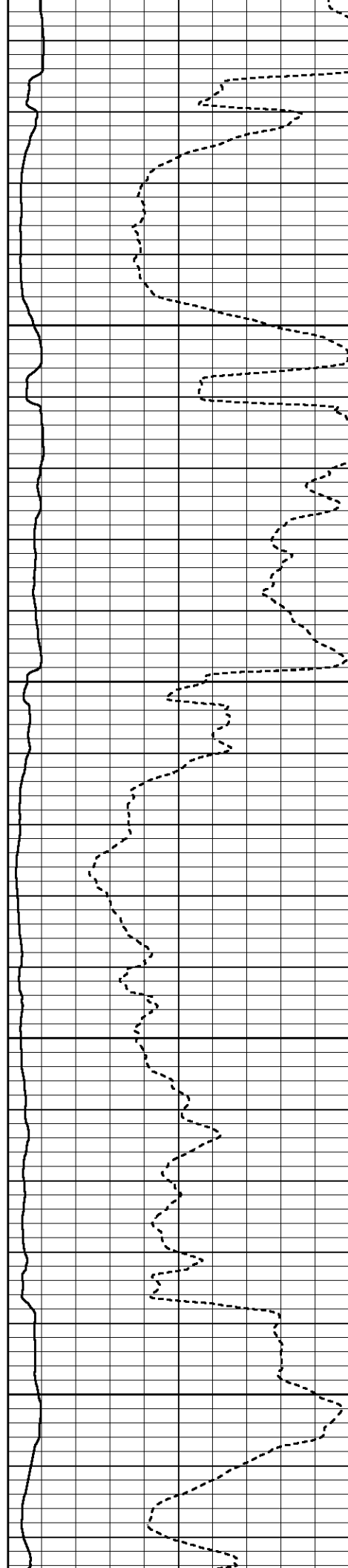


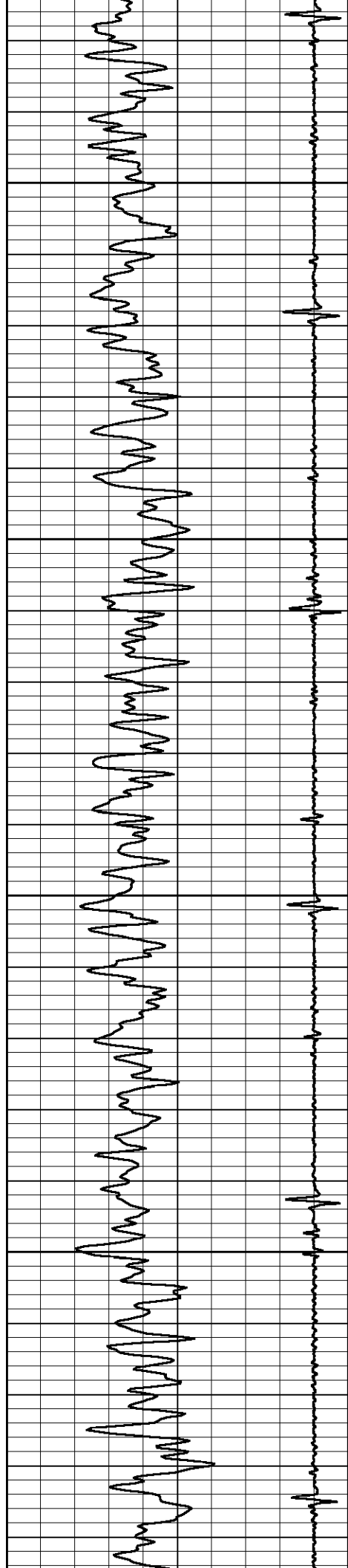
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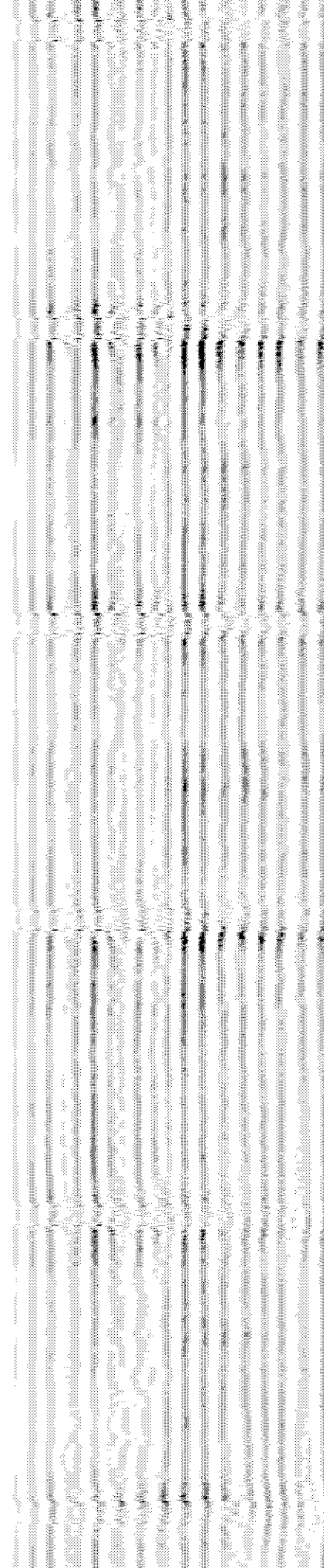
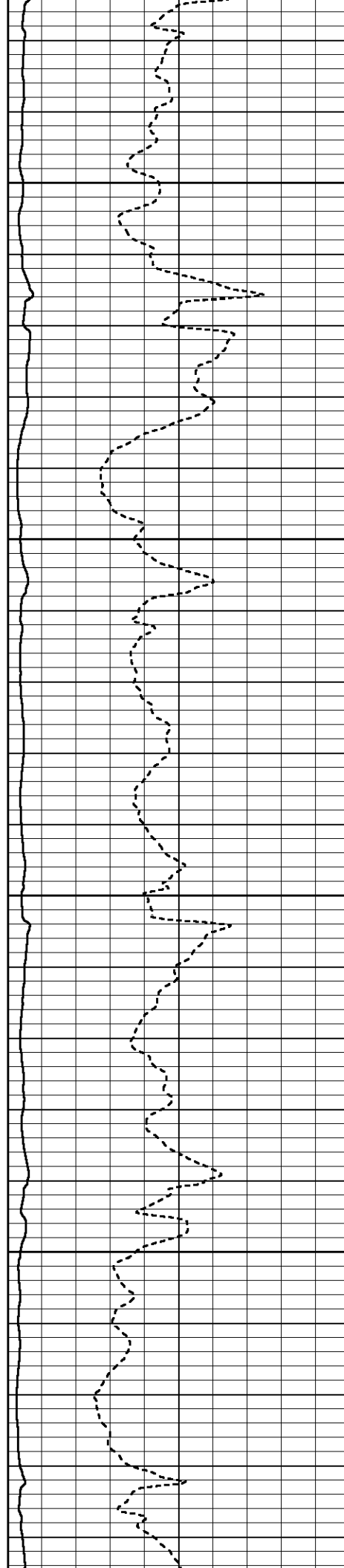


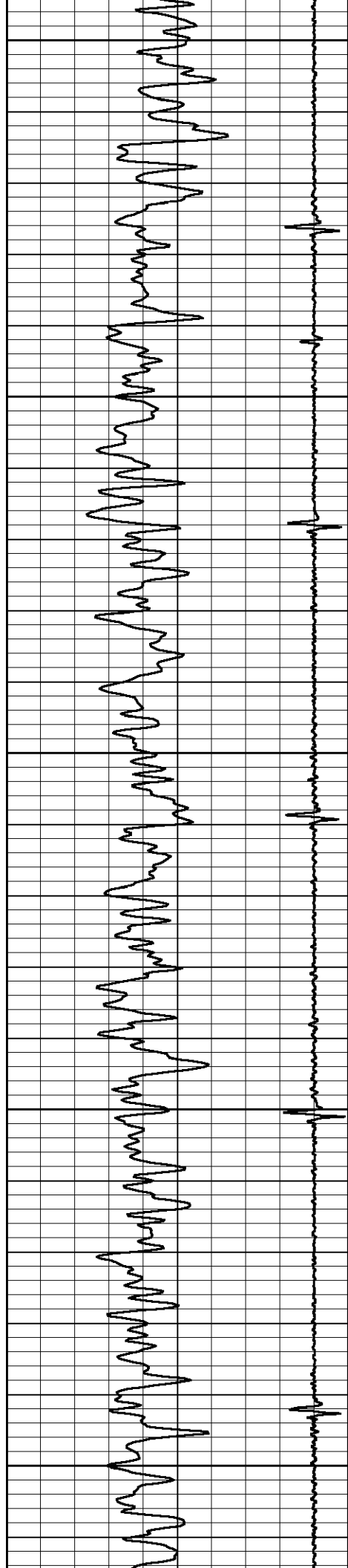
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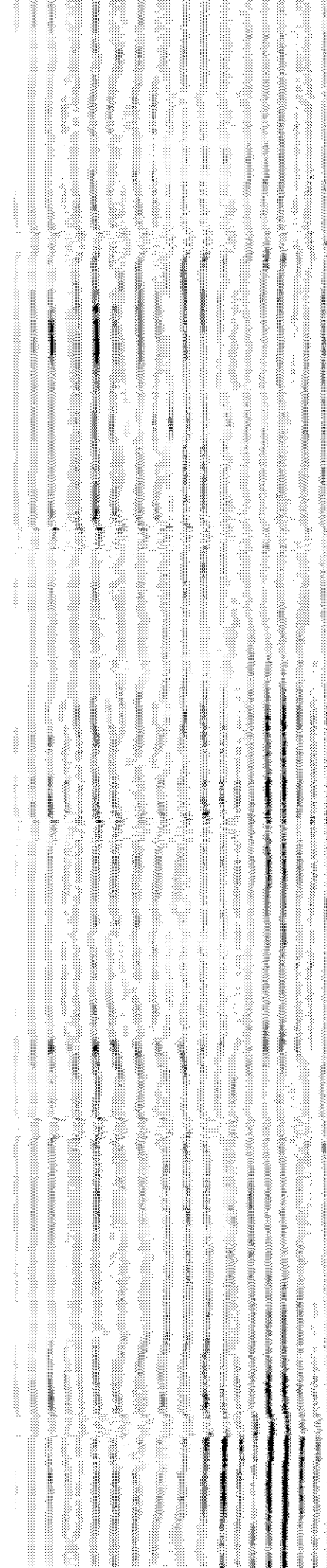
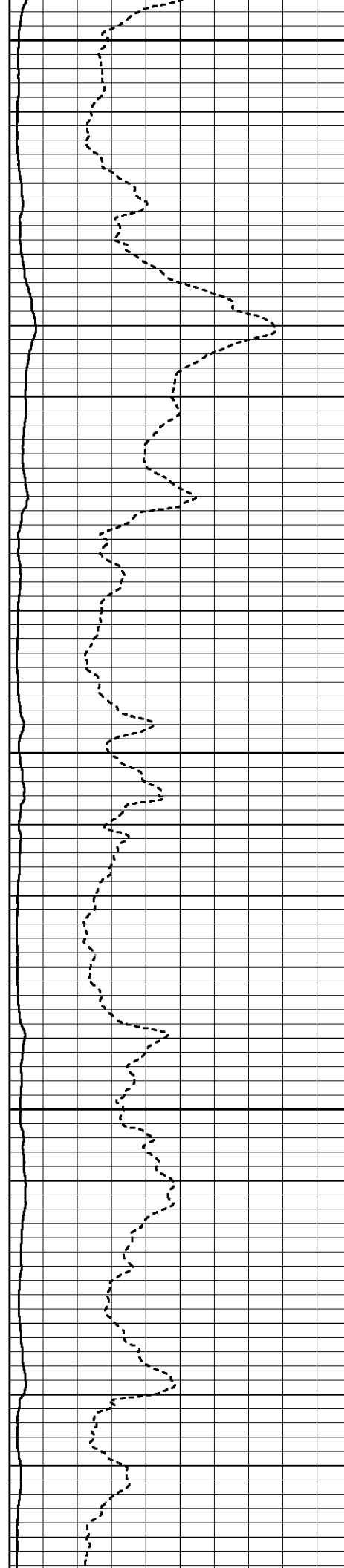
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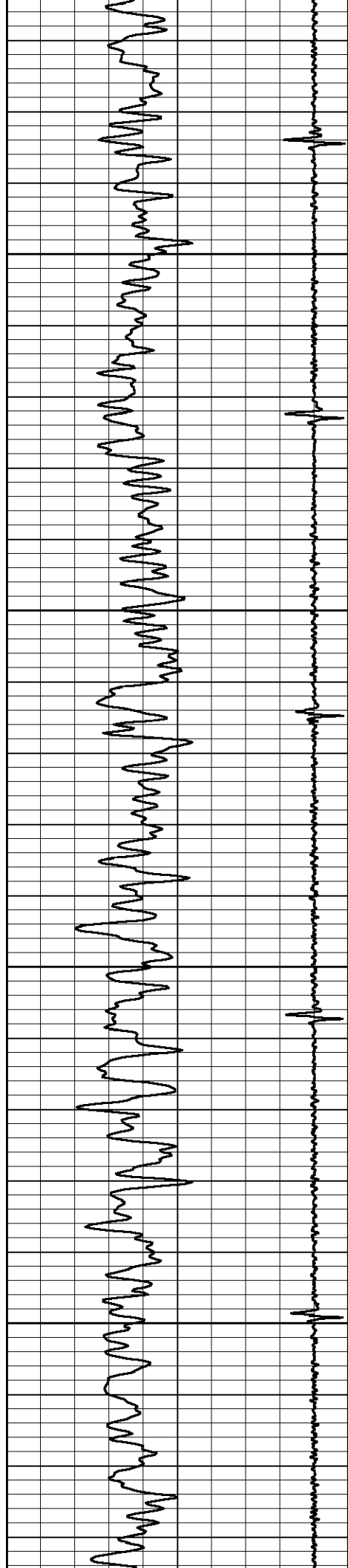
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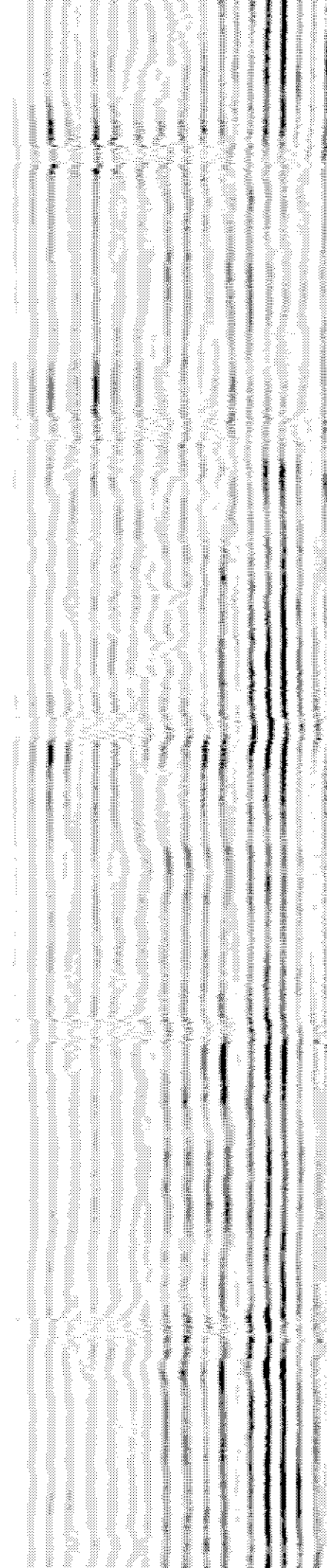
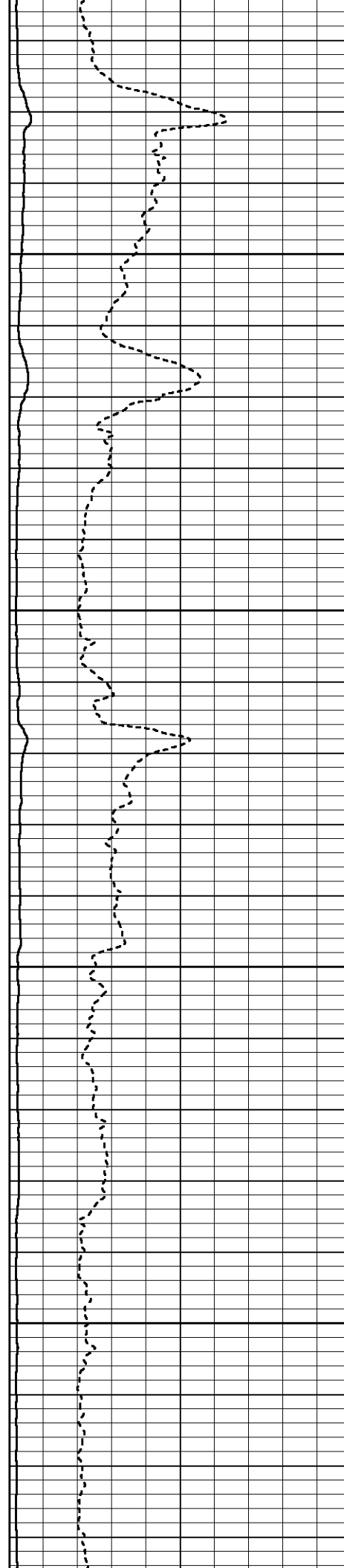


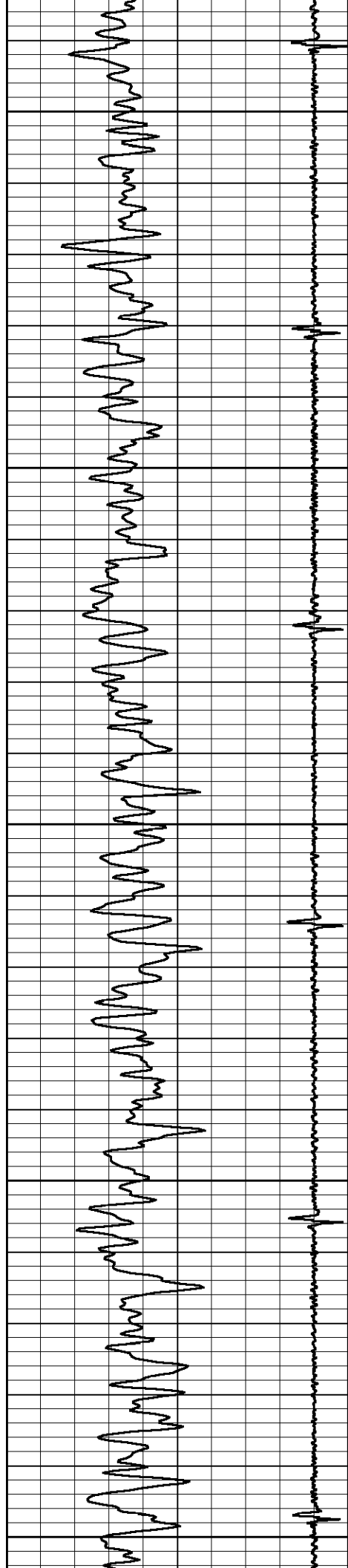
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2550





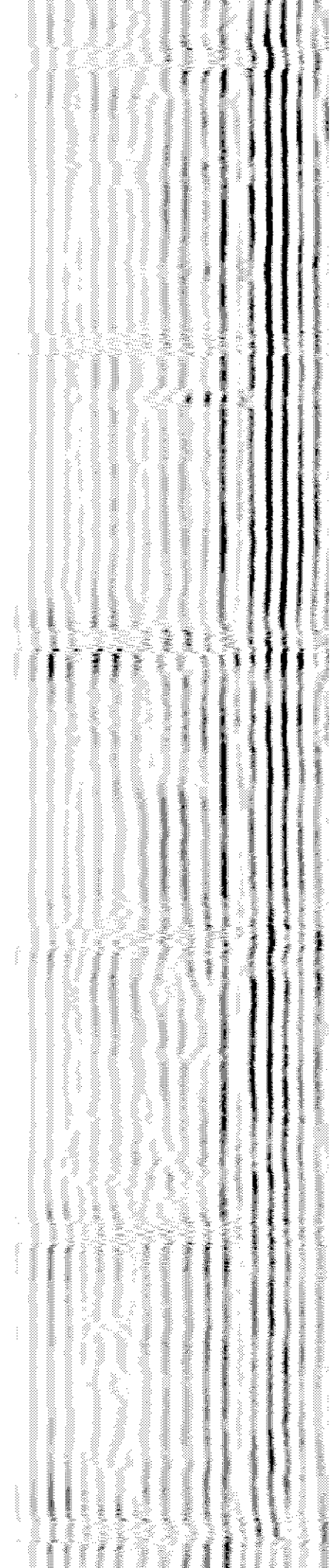
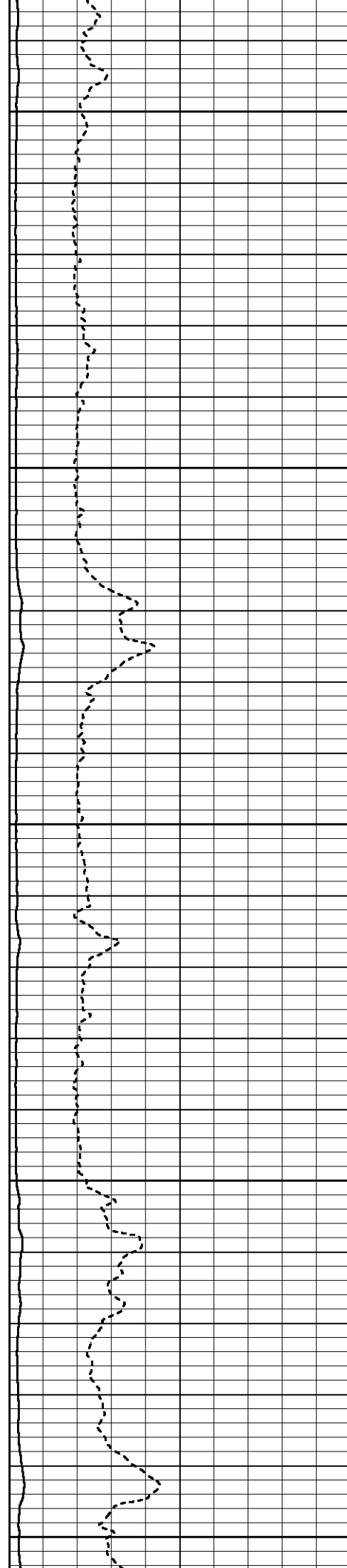
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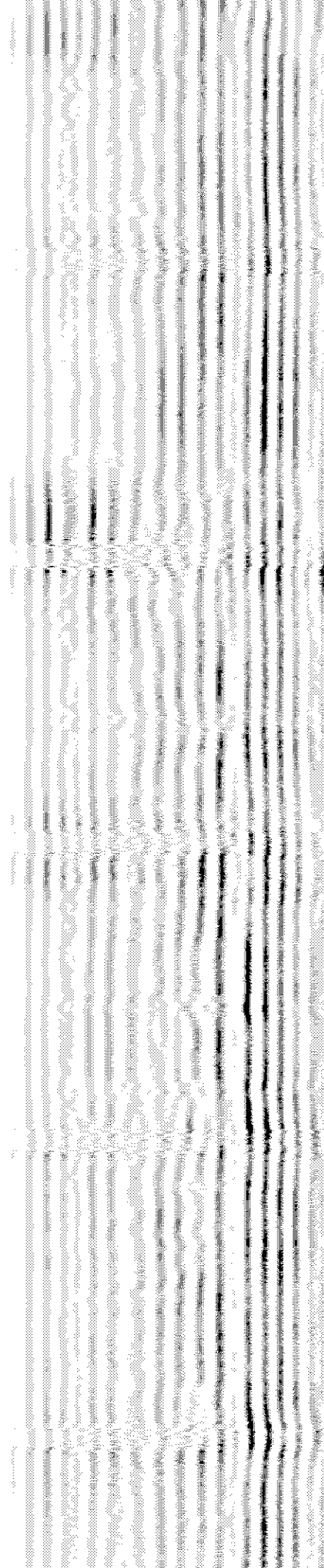


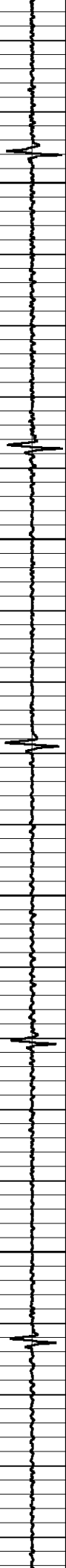
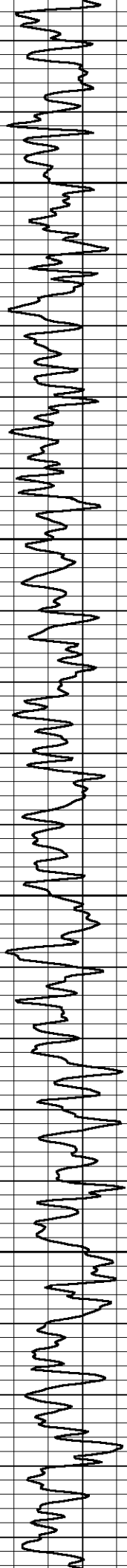
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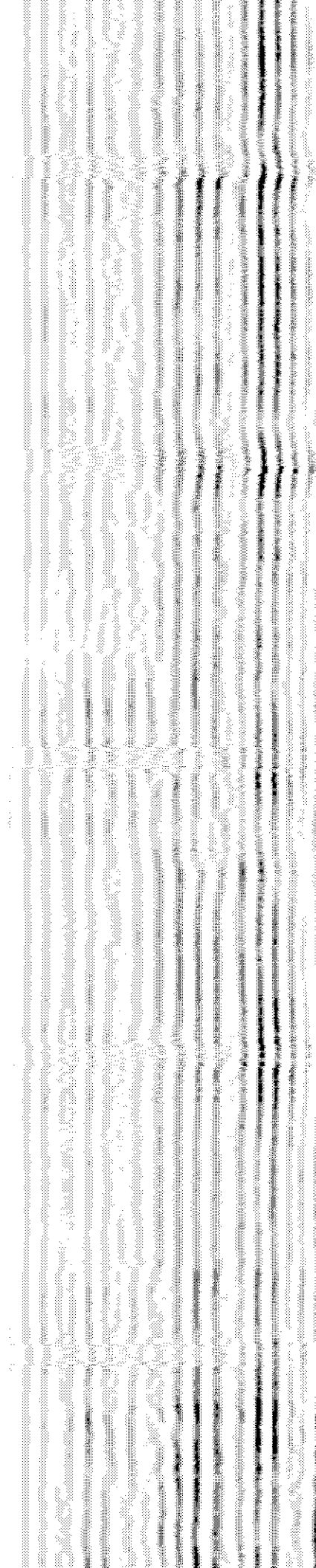
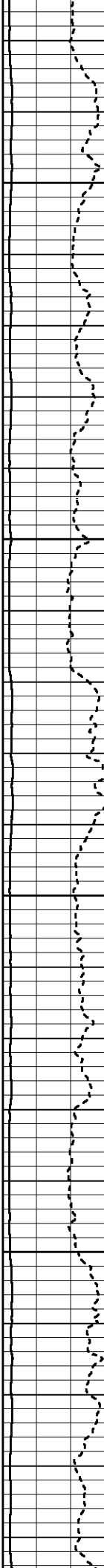


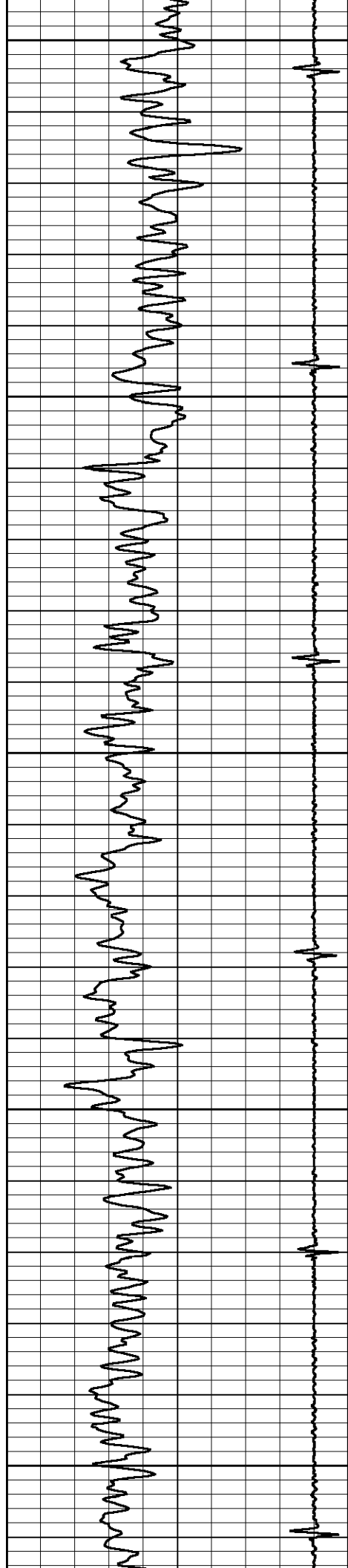
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3200





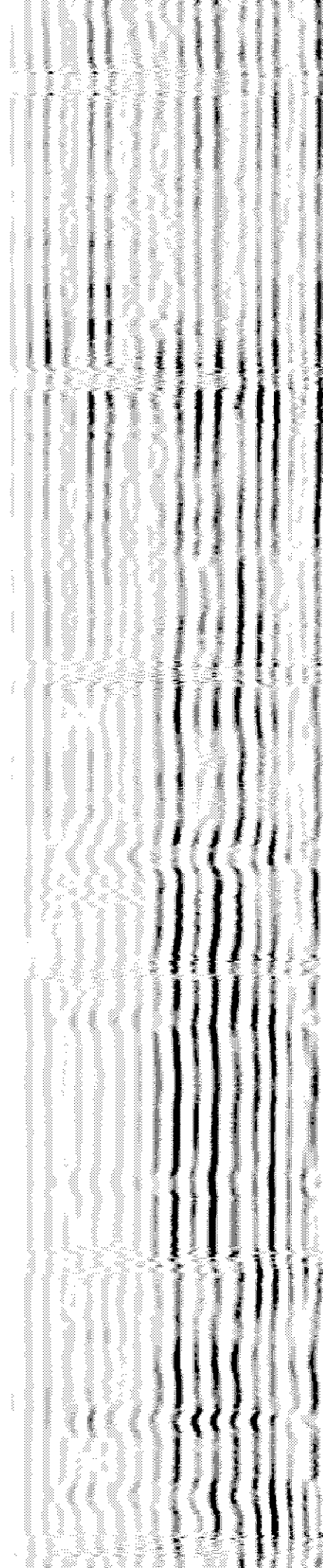
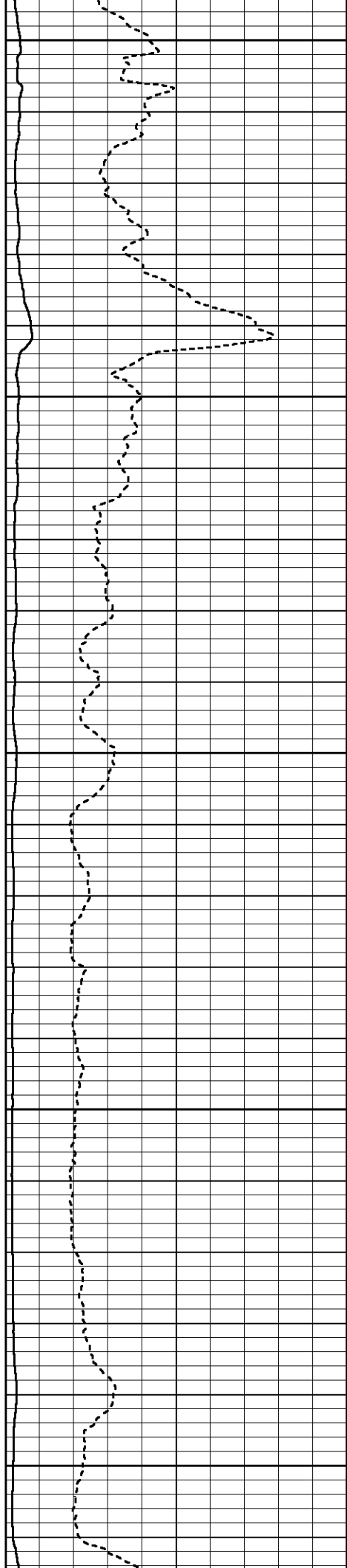
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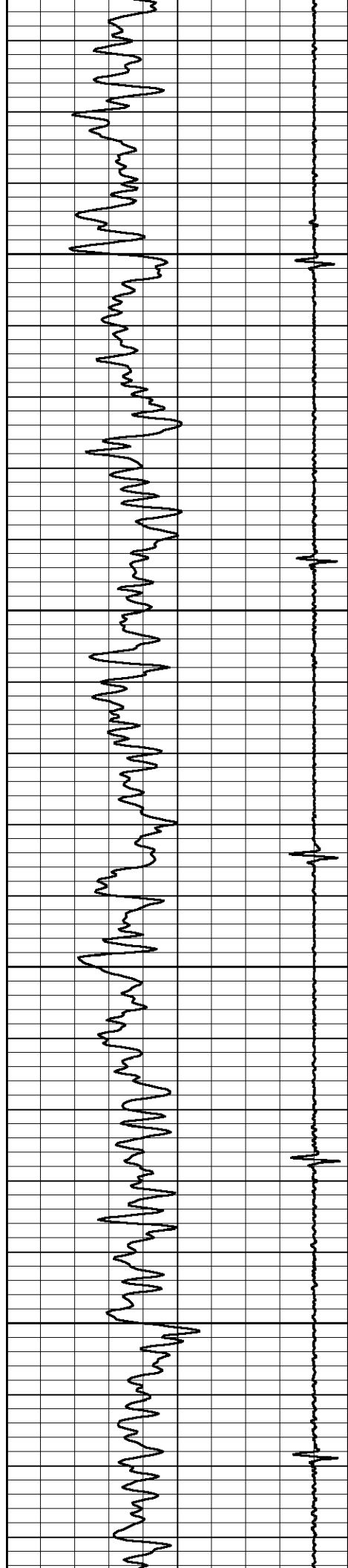
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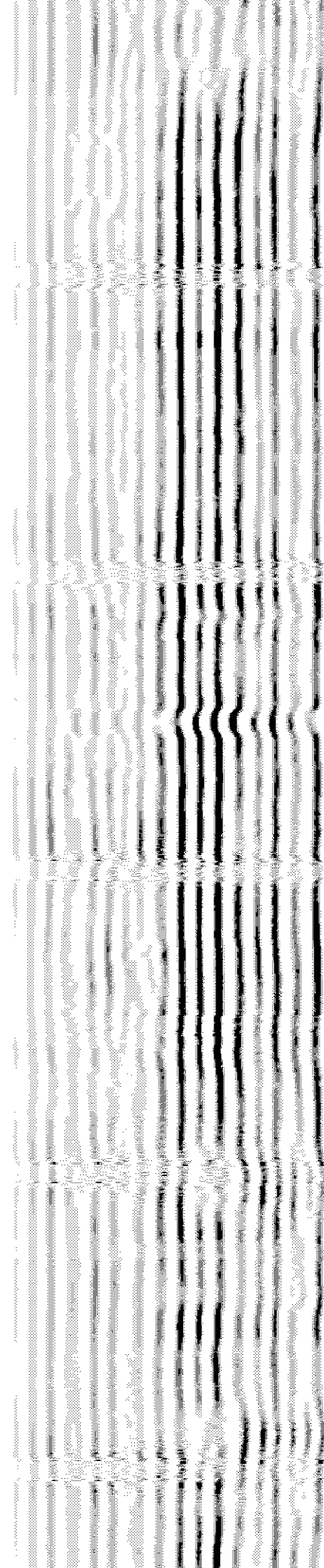
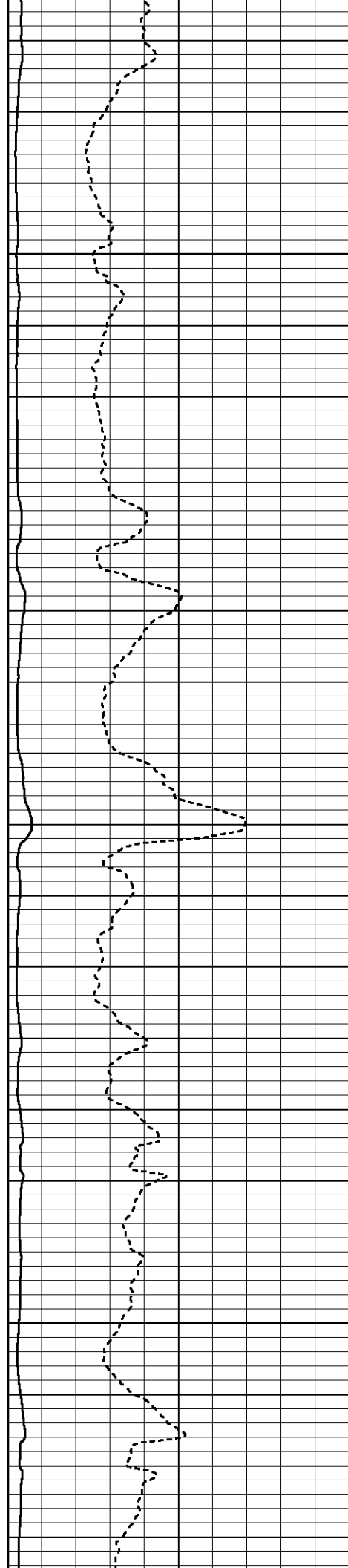


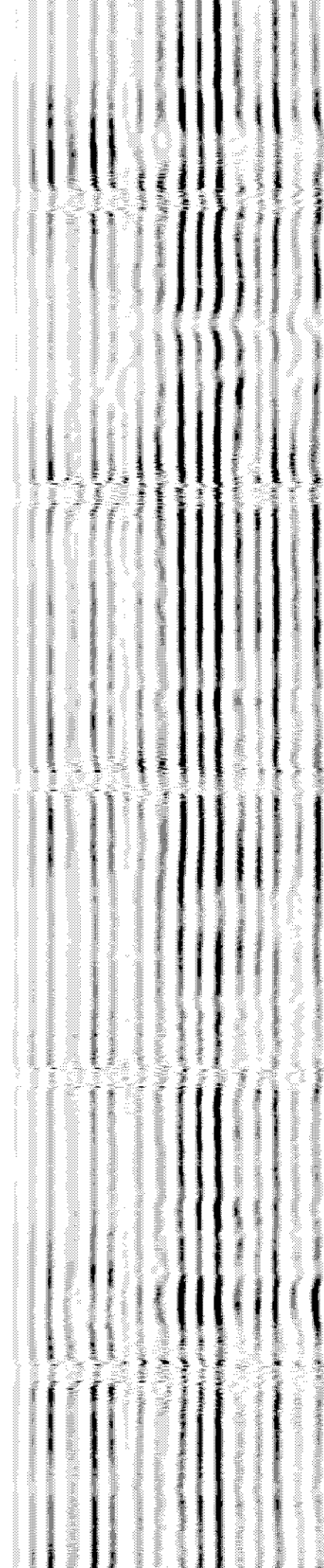
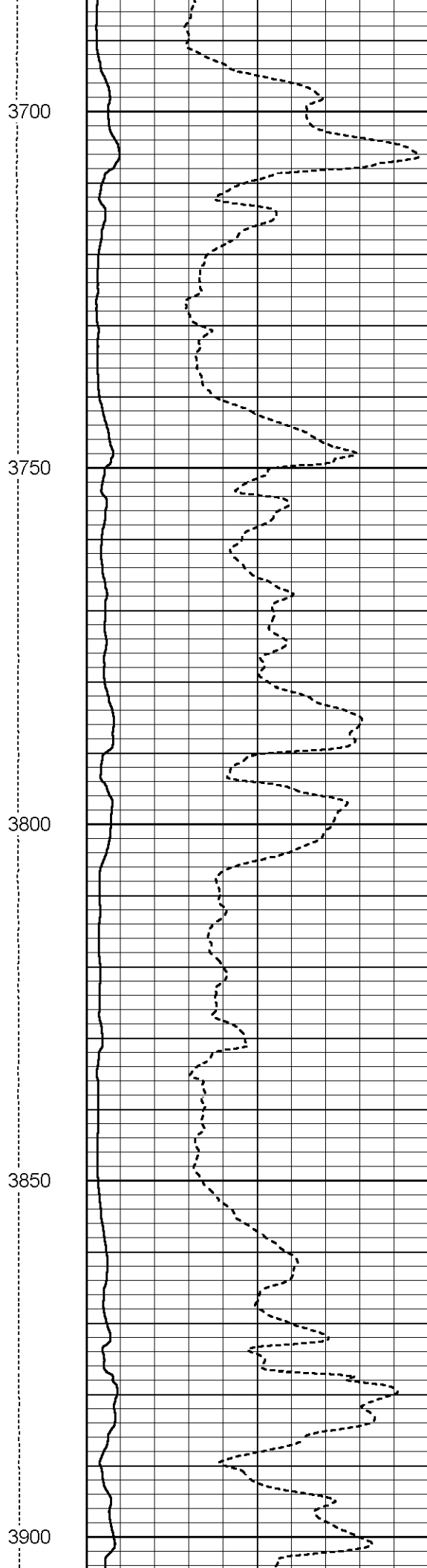
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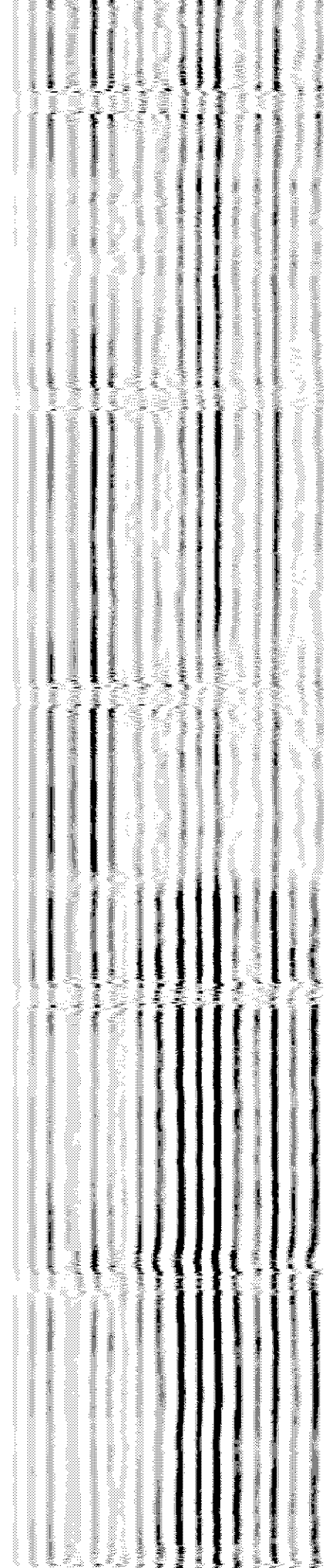
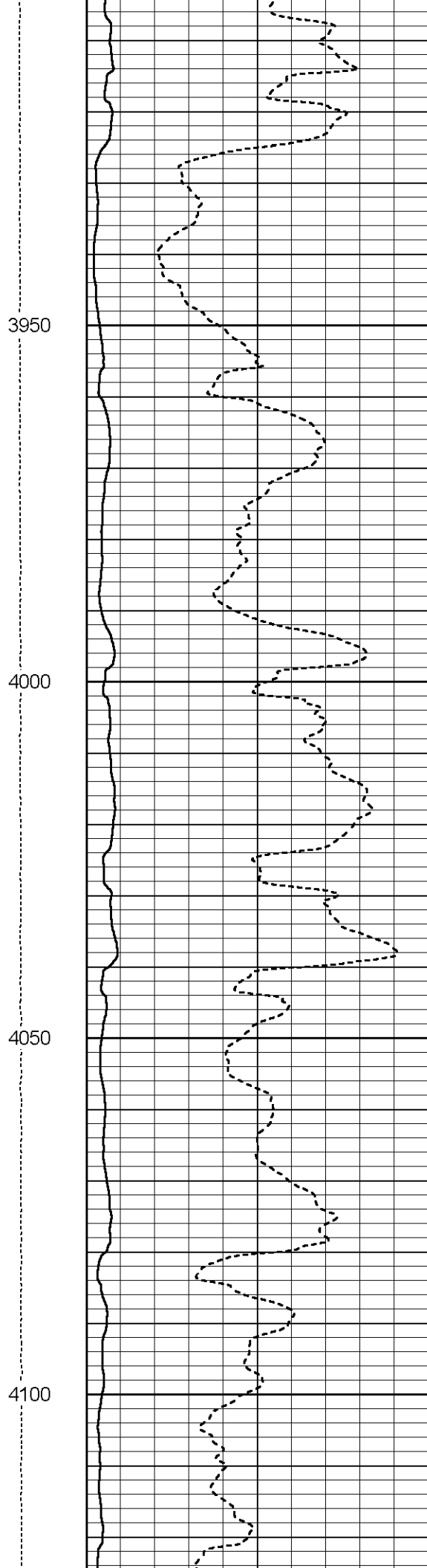
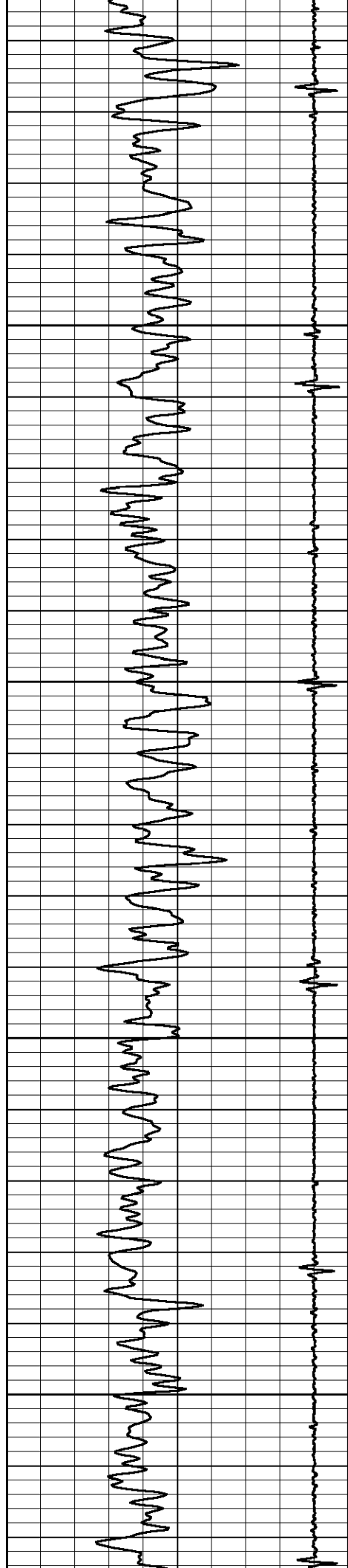
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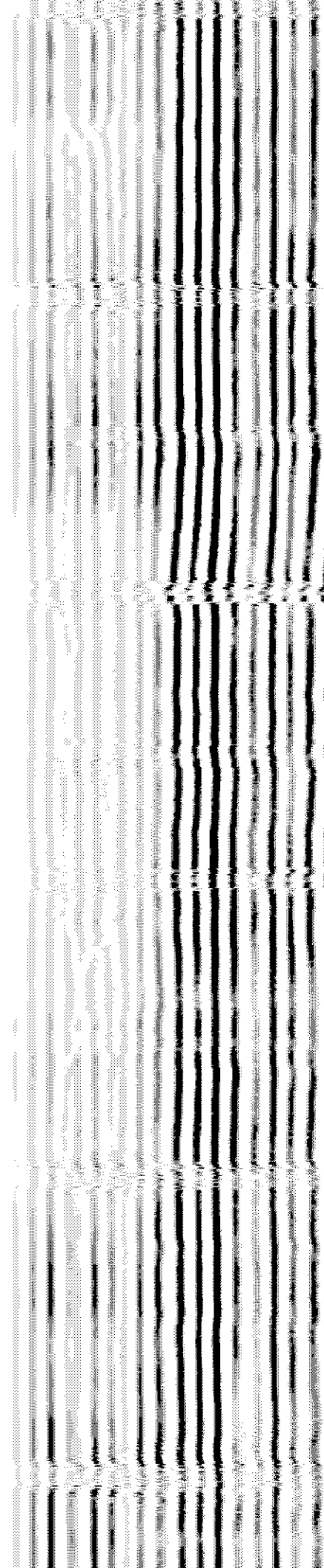
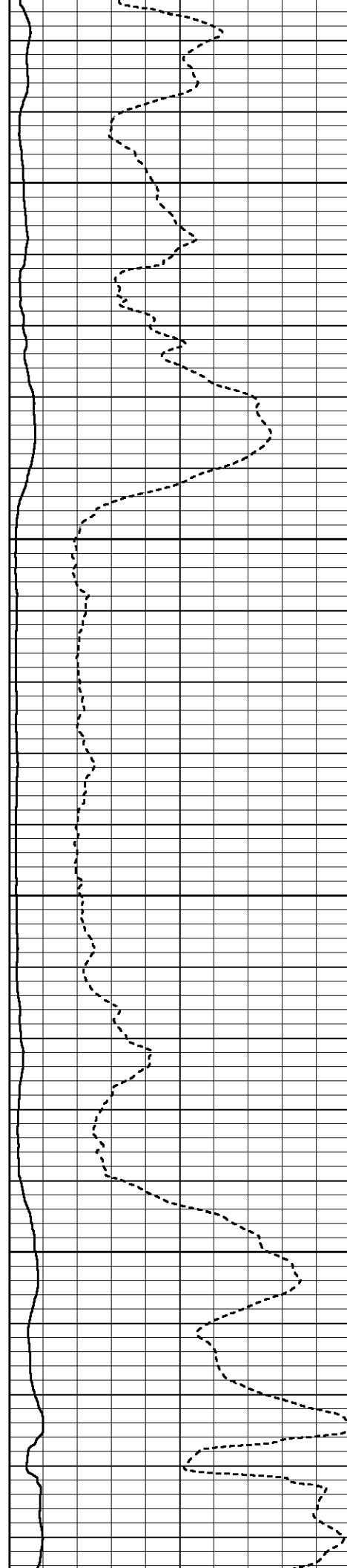


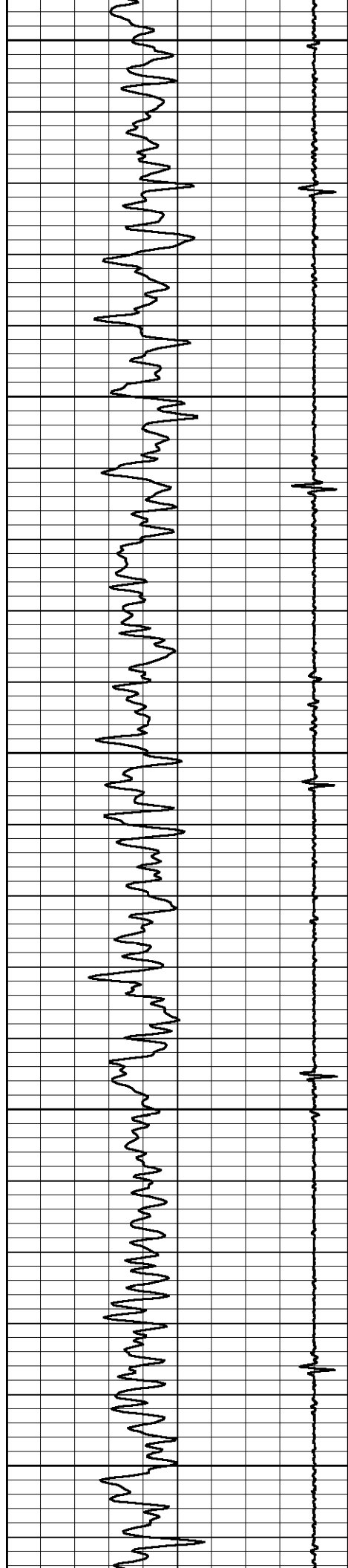
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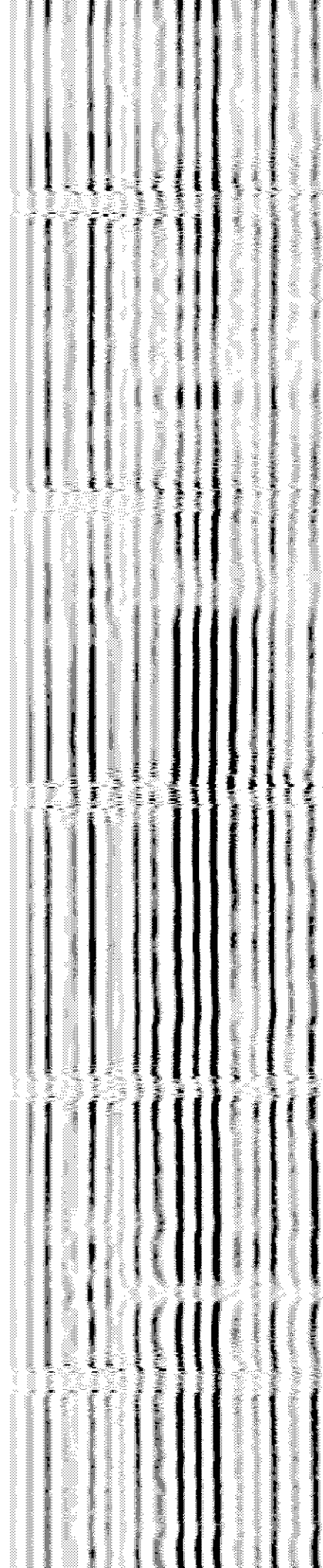
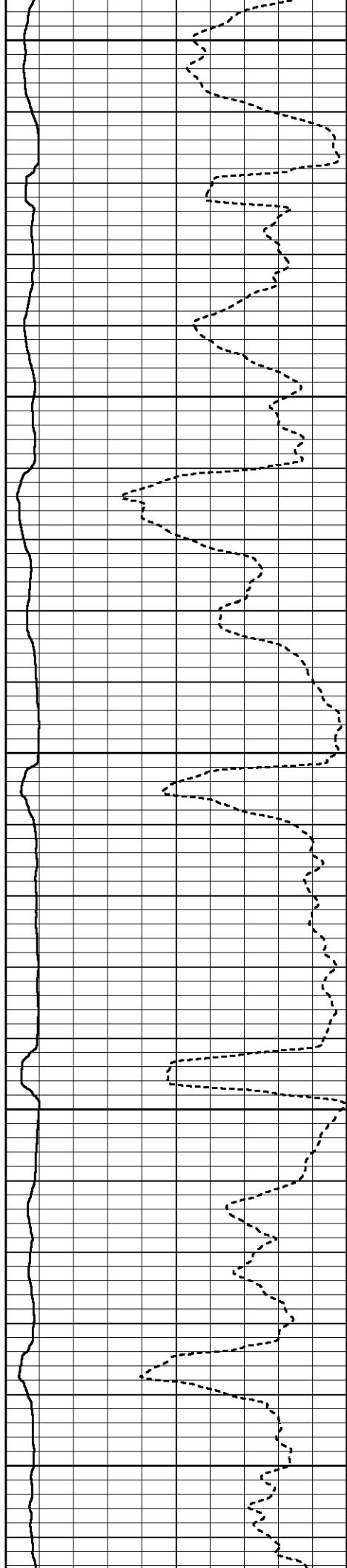
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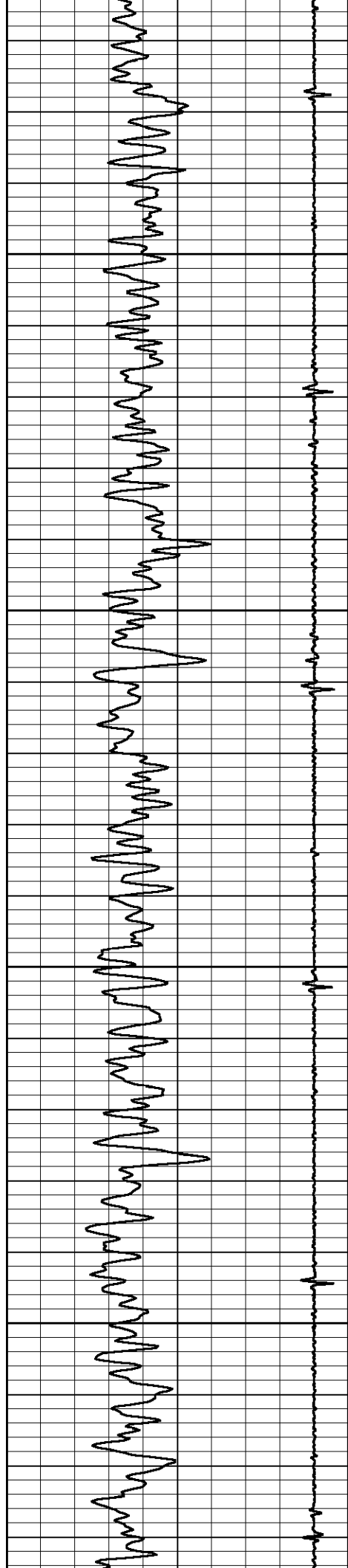
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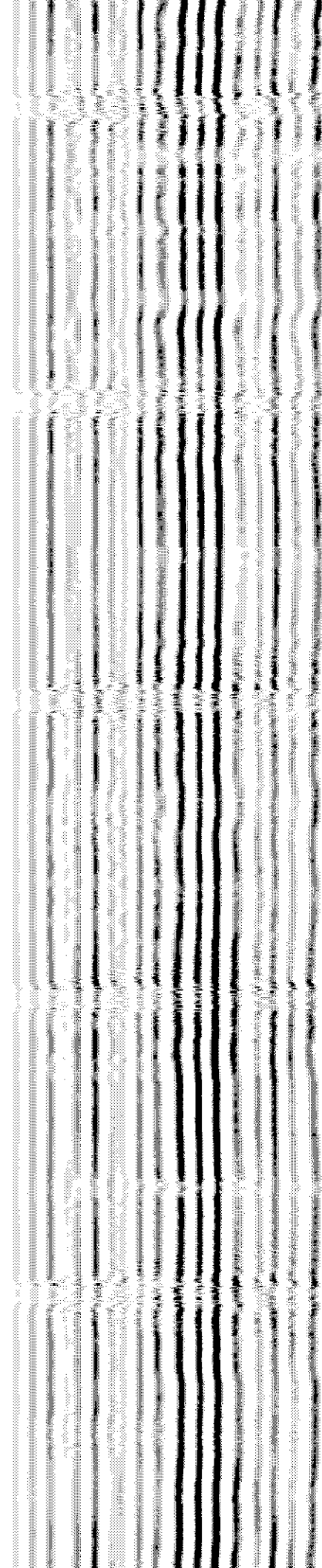
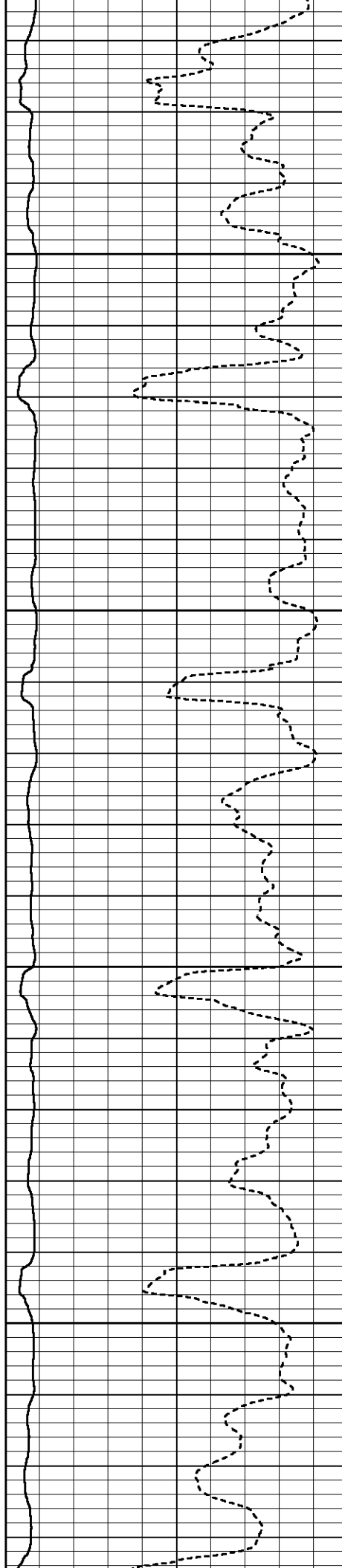


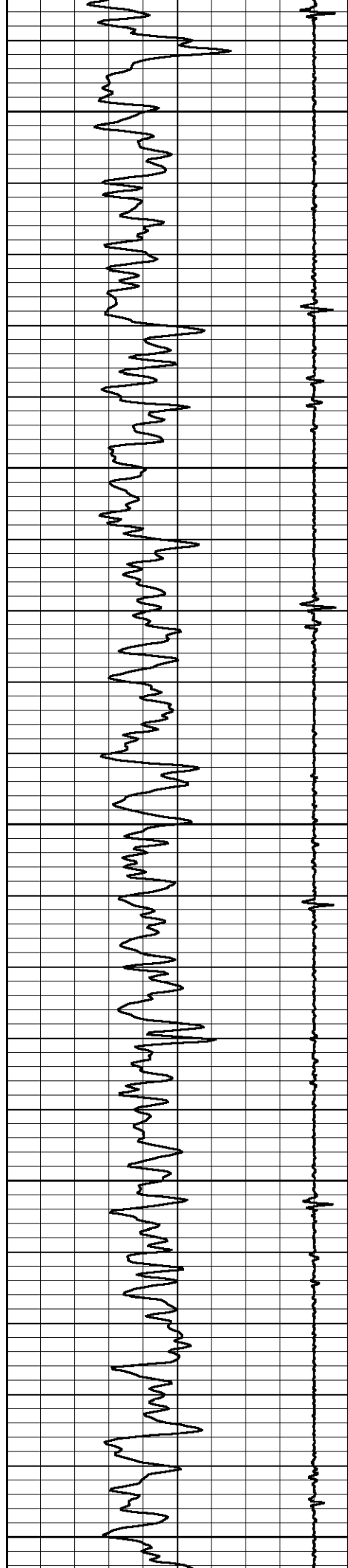
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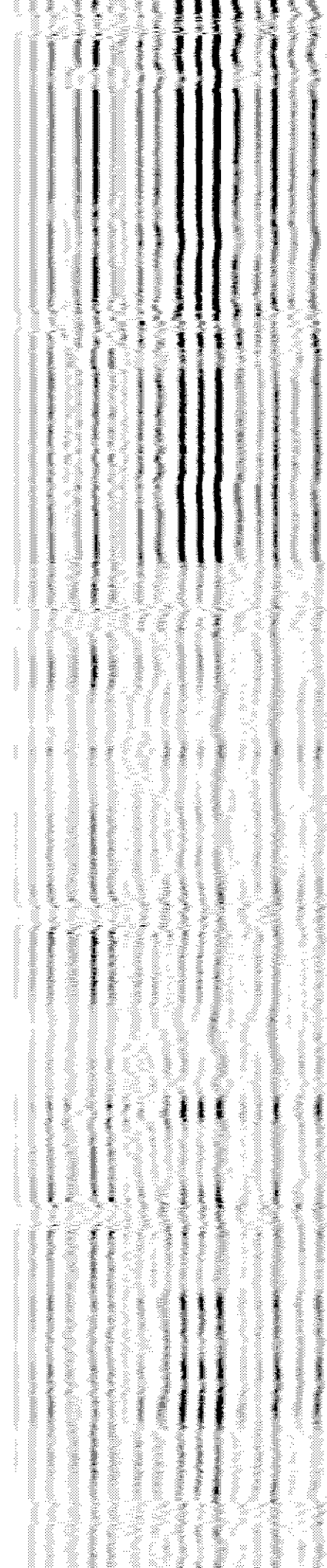
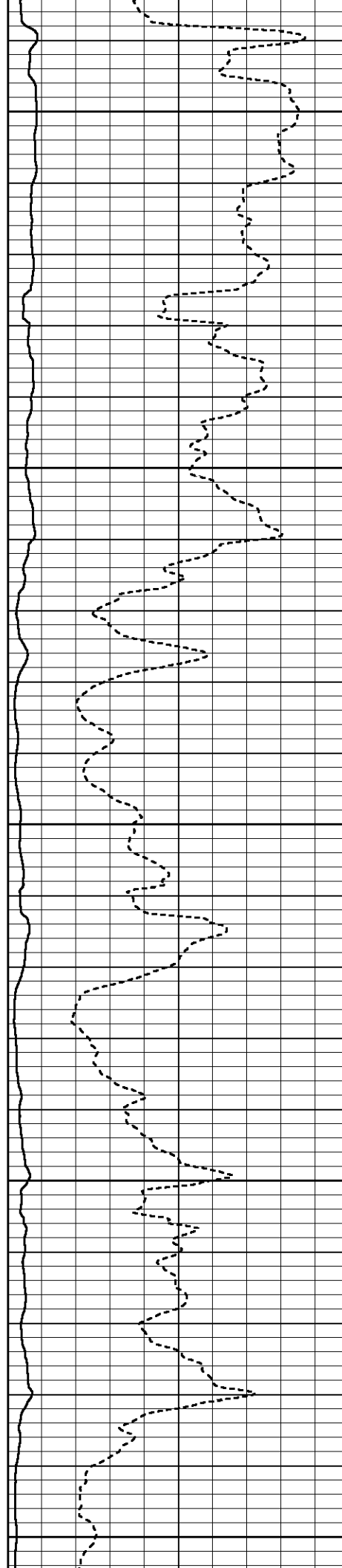
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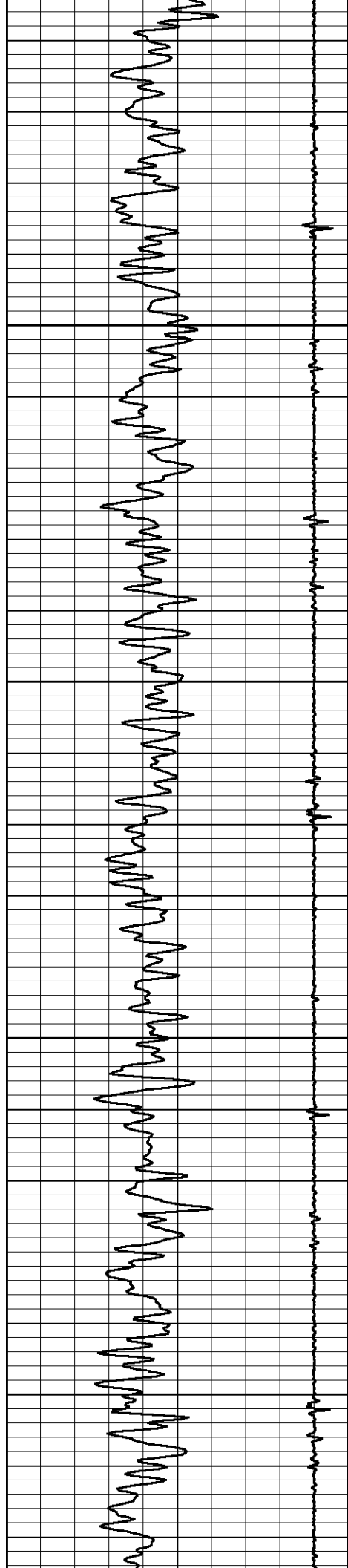
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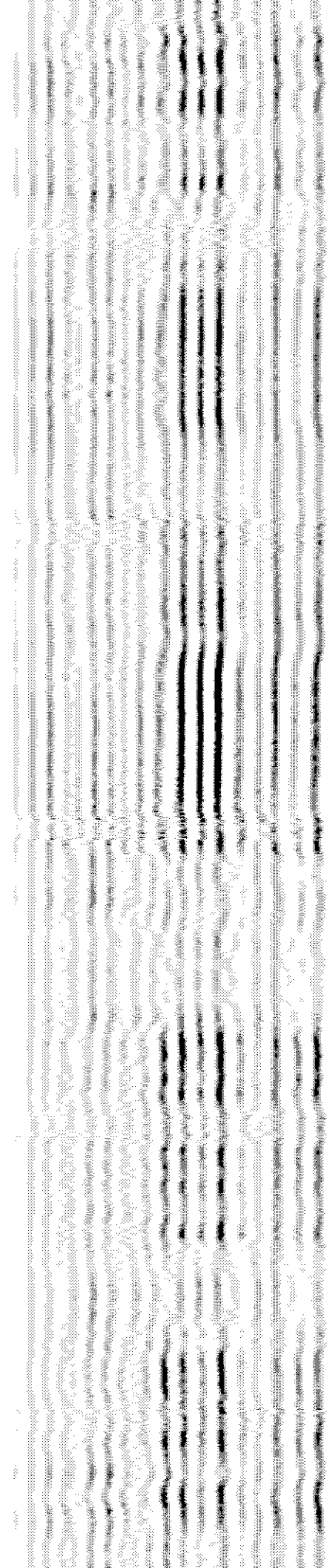
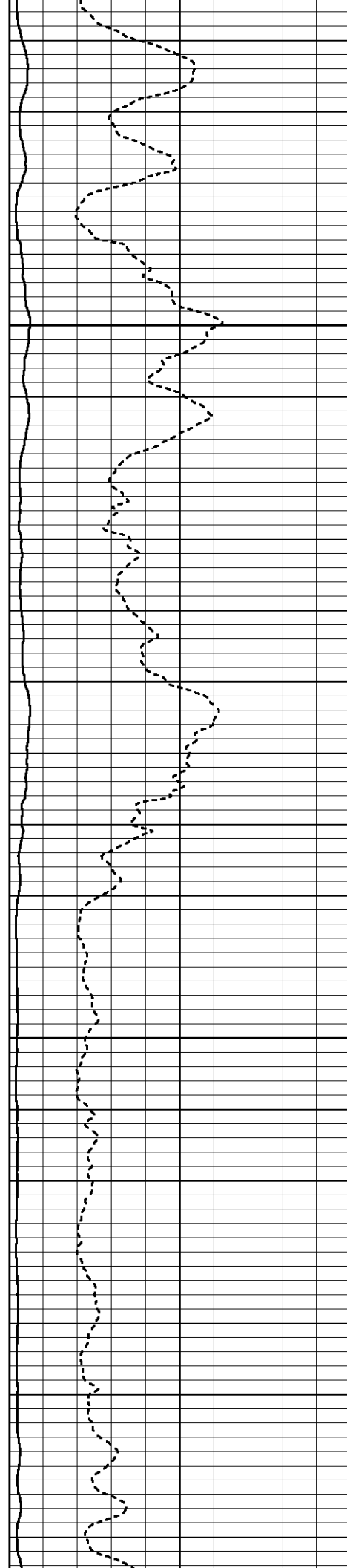


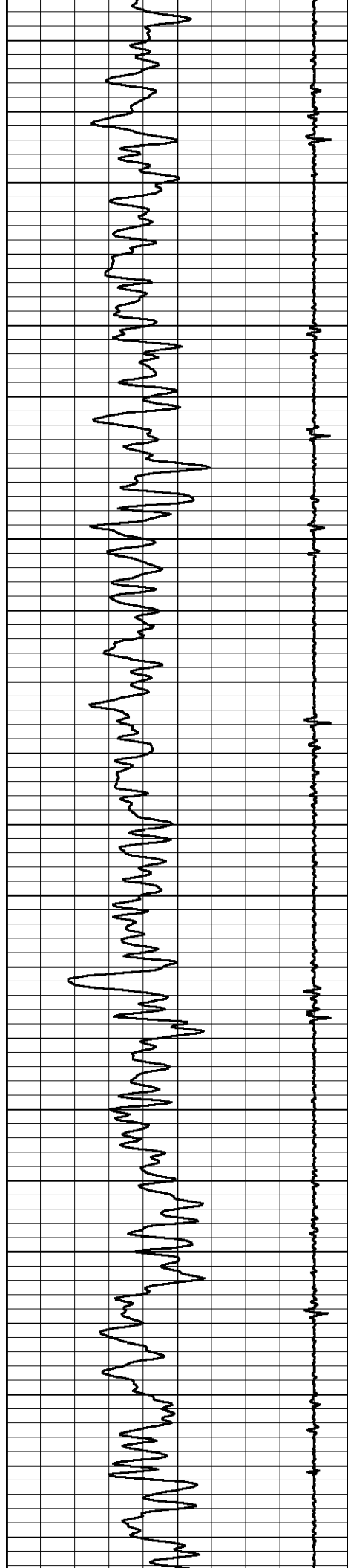
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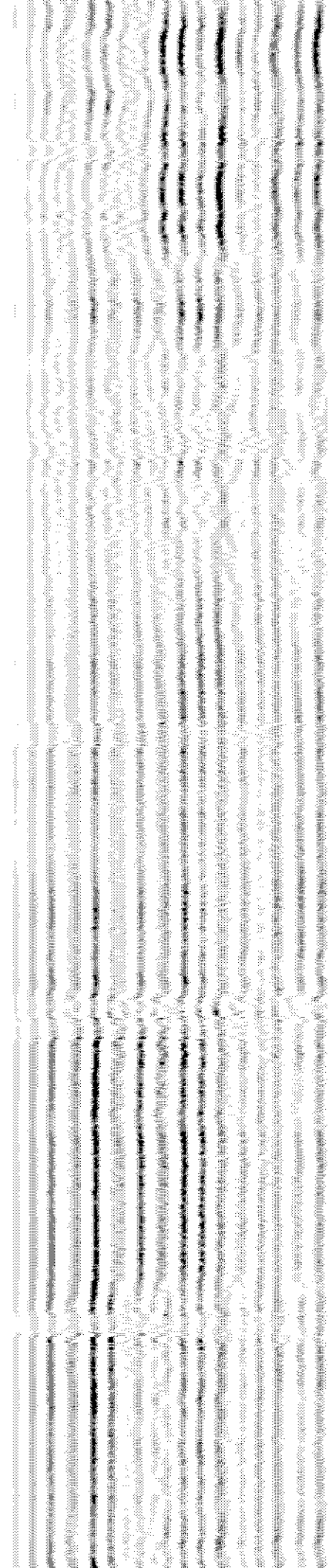
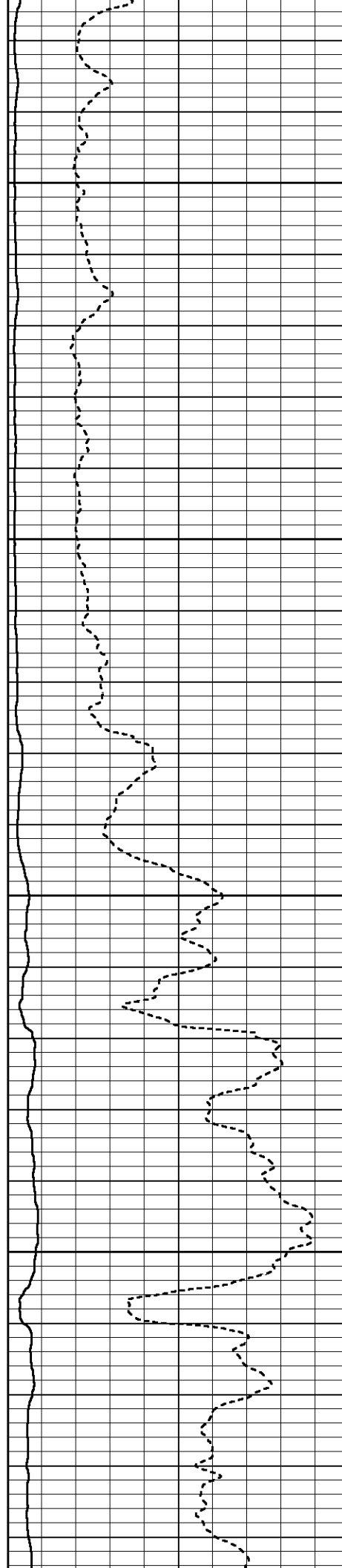


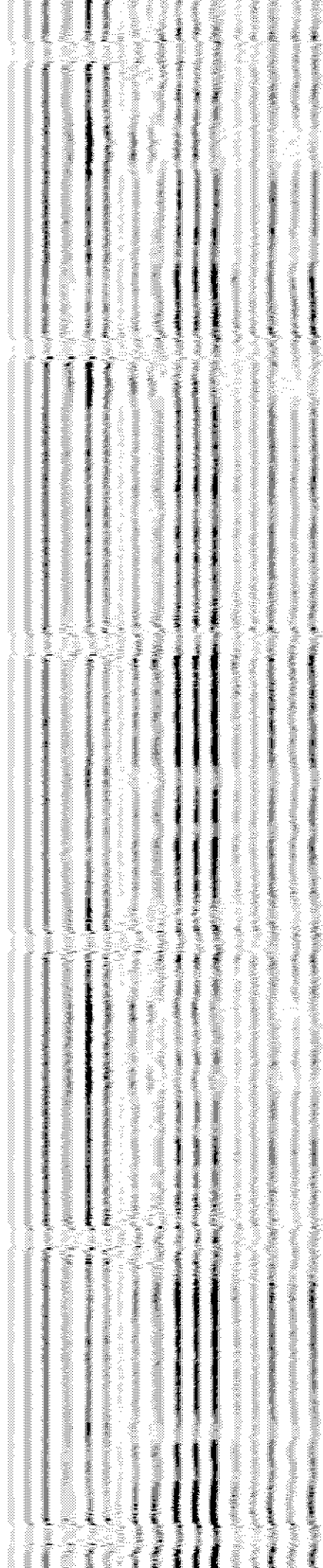
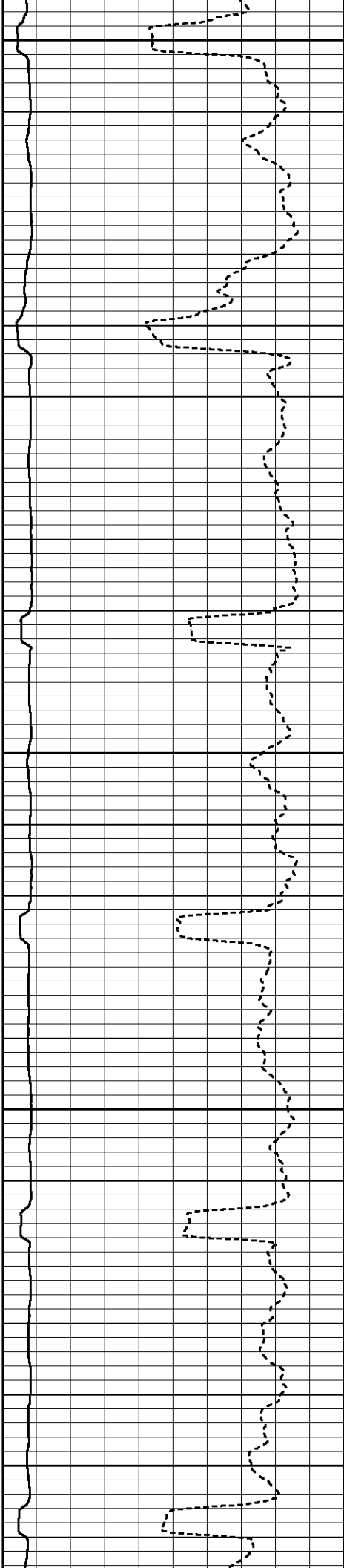
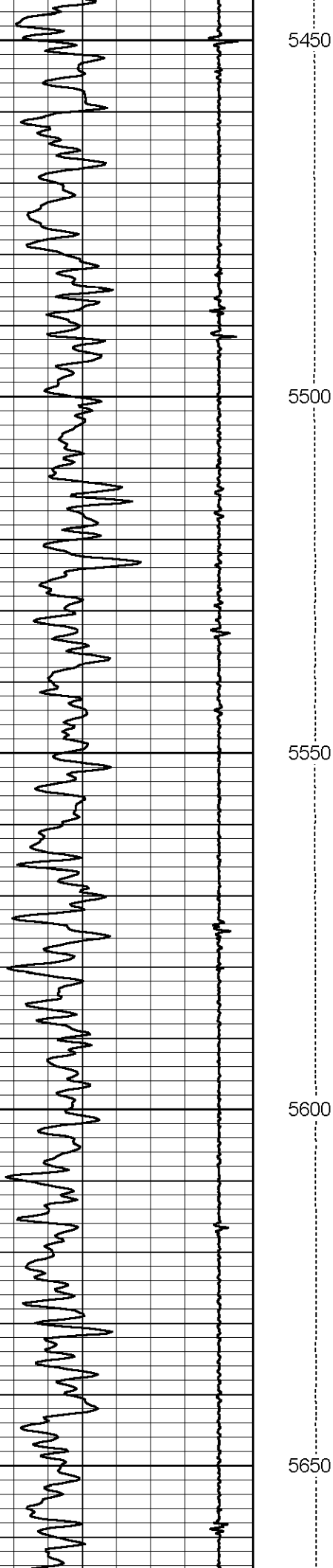
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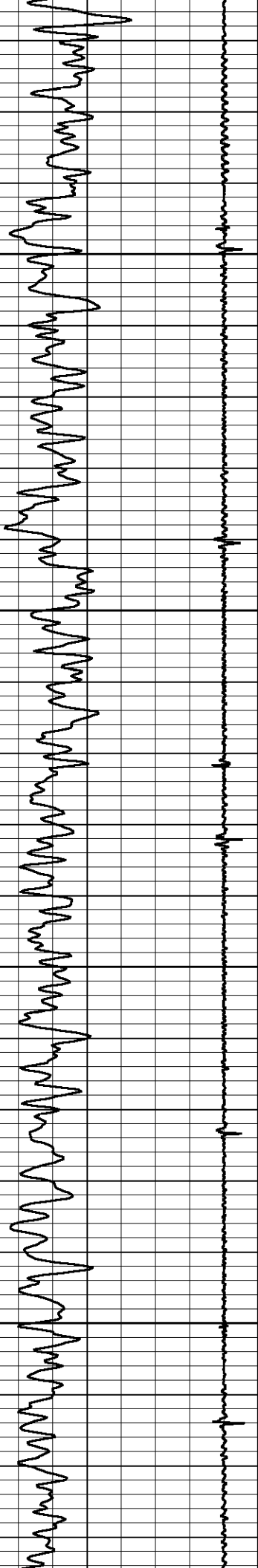
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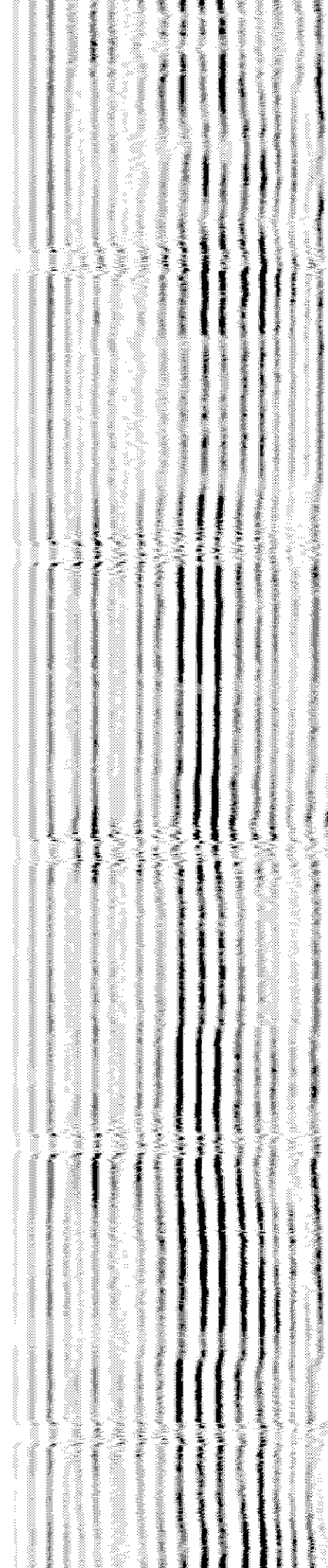
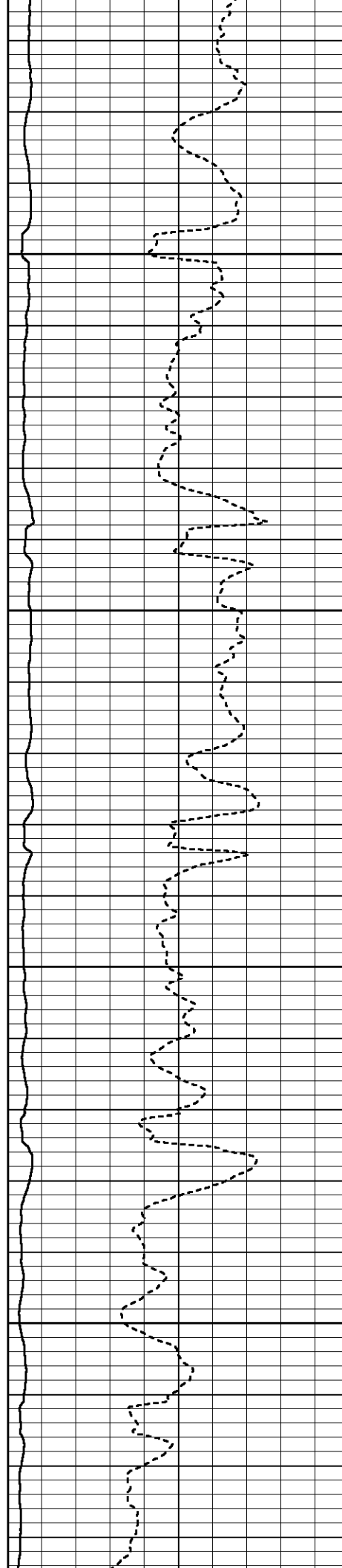


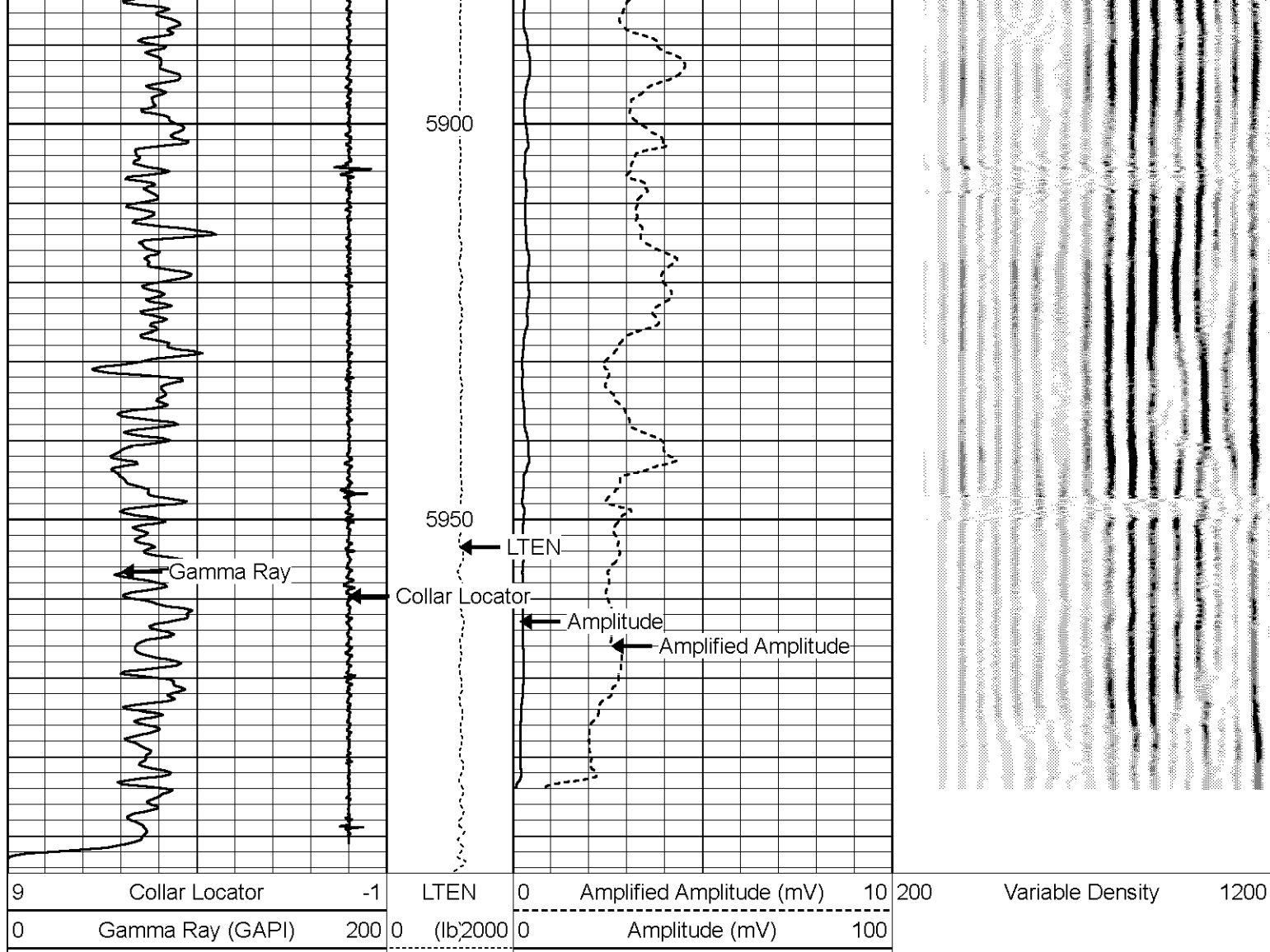
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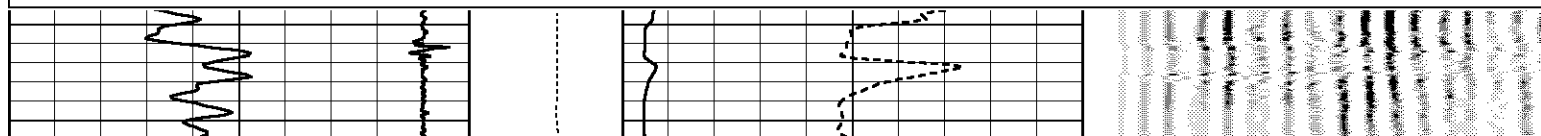
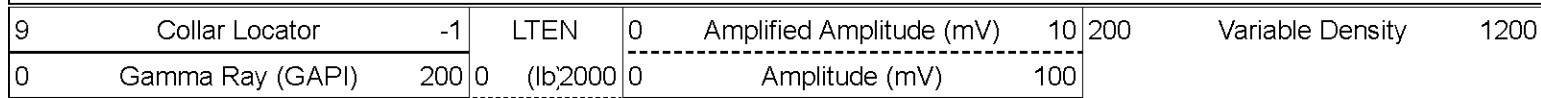


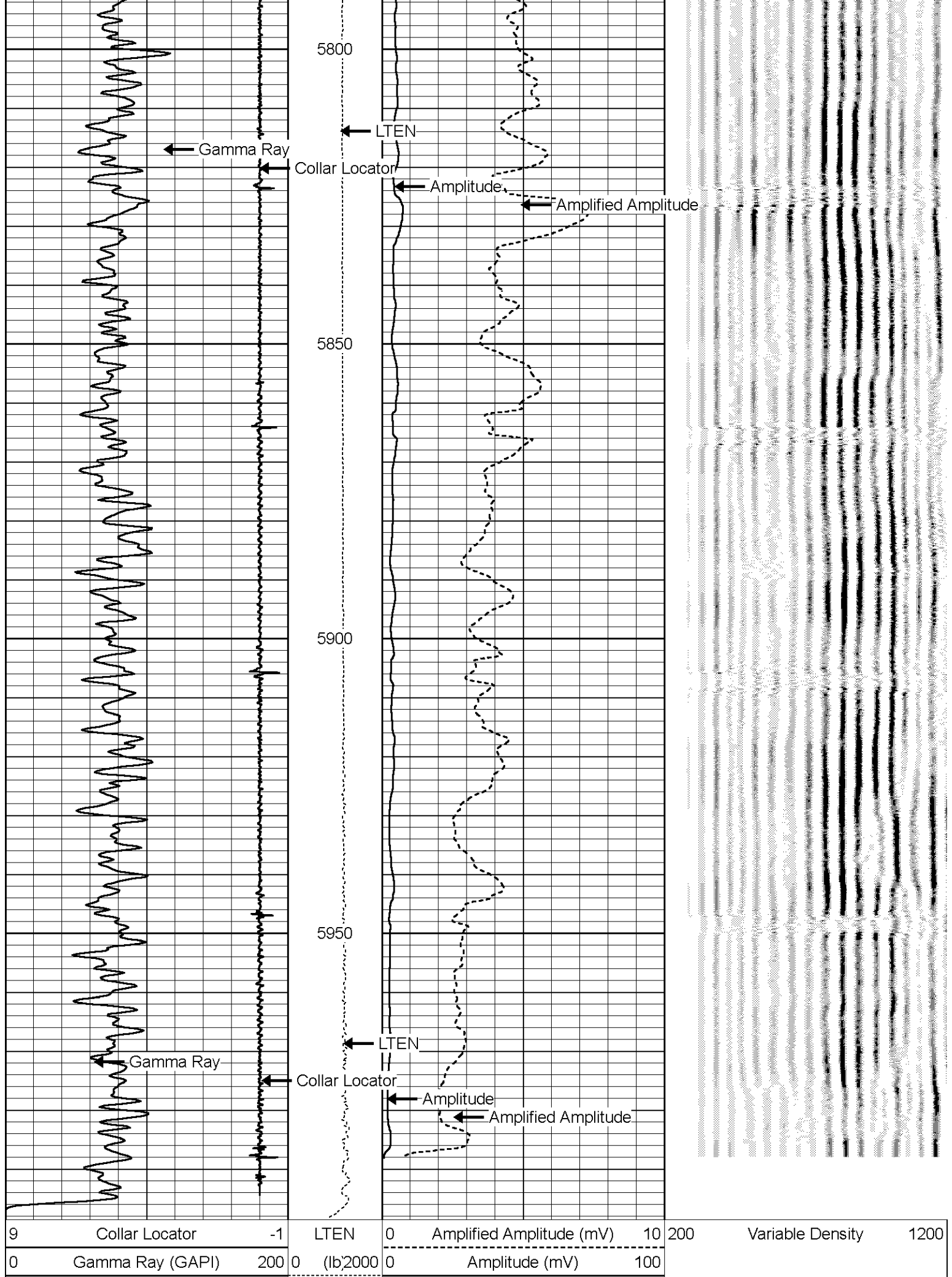
MAIN PASS



REPEAT PASS

Database File: bonanza creek energy state seventy holes f21-j24-4hnb.db
 Dataset Pathname: pass4
 Presentation Format: cbl_dr
 Dataset Creation: Mon Feb 09 18:21:56 2015 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240







Pioneer Energy Services

REPEAT PASS

Calibration Report

Database File: bonanza creek energy state seventy holes f21-j24-4hnb.db
Dataset Pathname: pass5
Dataset Creation: Mon Feb 09 18:26:26 2015 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 11205
Tool Model: Probe
Performed: Wed Feb 04 13:05:09 2015

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Cement Bond Log Calibration Report

Serial Number: 050215
Tool Model: Probe
Performed: Mon Feb 09 16:44:02 2015

Depth: 4639.77 ft
Casing Diameter: 4.5 in

3' Spacing 5' Spacing

Signal Zero: 0.4 0.4 mV
Calibrated Amplitude: 81.1961 81.1961 mV
Reading at Signal Zero: -0.005034 0.00756836 V
Reading in Free Pipe: 0.981348 0.780127 V

Gain: 81.9116 104.582
Offset: 0.812343 -0.391518



Pioneer Energy Services

Company: BONANZA CREEK ENERGY
Well: STATE SEVENTY HOLES F21-J24-4HN
Field: WATTENBERG
County: WELD
State: COLORADO