



CEMENT BOND
GAMMA RAY
CCL LOG

Pioneer Energy Services

Company BONANZA CREEK ENERGY
Well STATE SEVENTY HOLES 21-24-4HNB
Field WATTENBERG
County WELD
State COLORADO

Company BONANZA CREEK ENERGY
Well STATE SEVENTY HOLES 21-24-4HNB
Field WATTENBERG
County WELD State COLORADO

Location: API # : 05-123-39209
SEC 4 TWP 4N RGE 62W
Permanent Datum Ground Level Elevation 4552'
Log Measured From K.B. 22' A.G.L.
Drilling Measured From K.B.
Other Services
Elevation
K.B. 4574'
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 16:00
Time Logger on Bottom 16:30
Equipment Number 75
Location FT. MORGAN
Recorded By HARPER
Witnessed By BUNKER

Borehole Record
Run Number Bit From To Size Weight From To

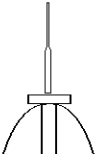
Casing Record
Surface String Size 9-5/8" Wgt/Ft 36# Top SURFACE Bottom 450'
Prot. String
Production String 7" 26# SURFACE 6680'
Liner

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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 21-24-4hnb.db: field/well/run1/pass5.1 Total Length: 20.25 ft Total Weight: 140.00 lb O.D. 3.25 in						

Database File:

bonanza creek energy state seventy holes 21-24-4hnb.db

Dataset Pathname:

pass5.1

Presentation Format:

cbl_dr

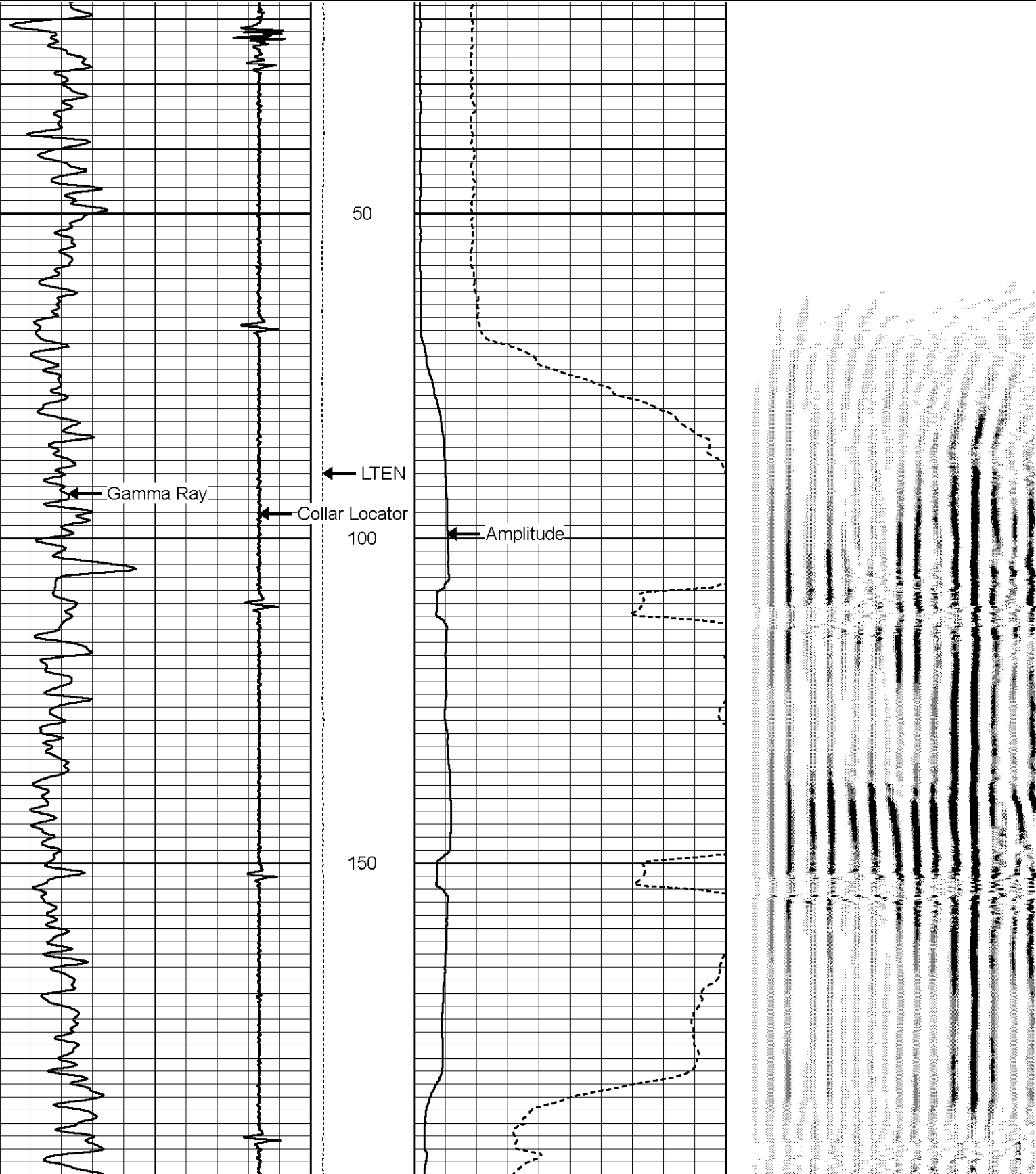
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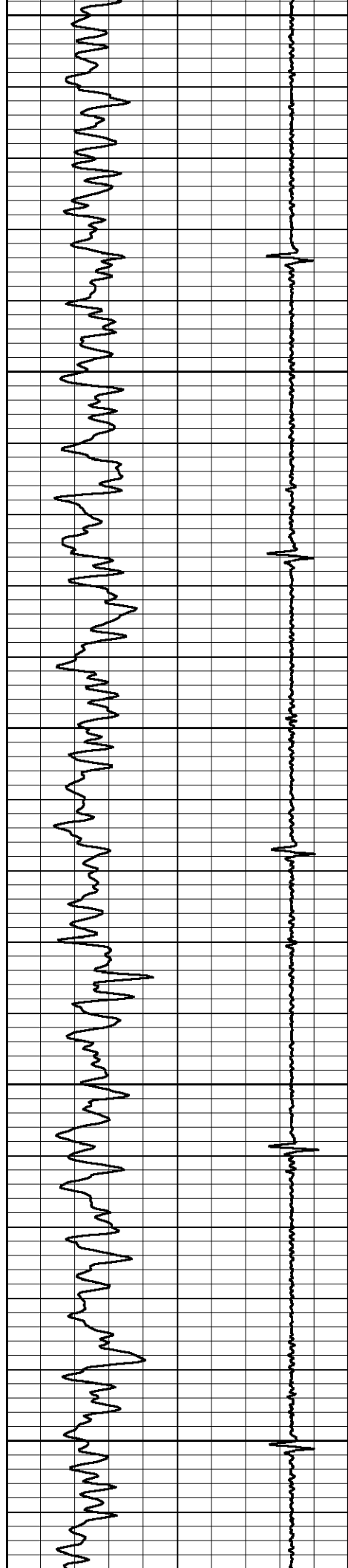
Mon Feb 09 17:52:09 2015 by Calc 7.0 B1

Charted by:

Depth in Feet scaled 1:240

5	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		





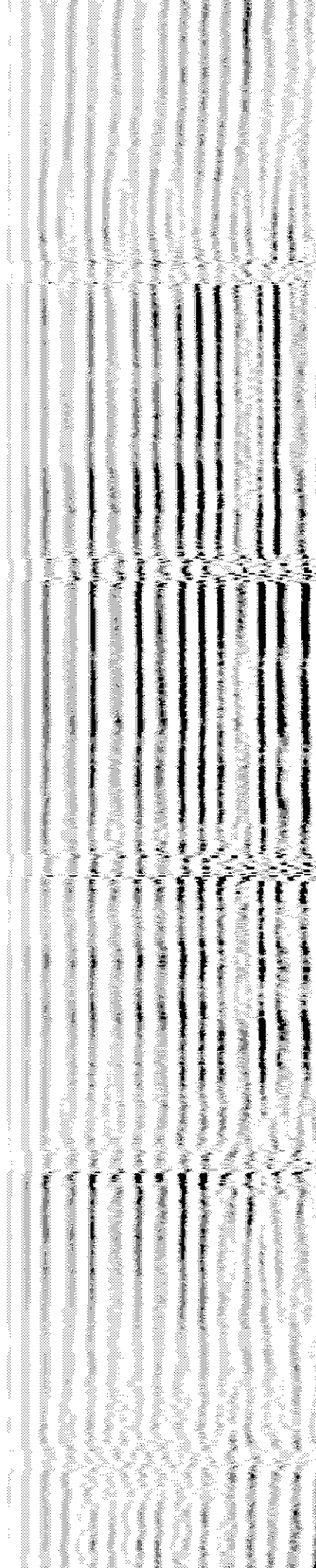
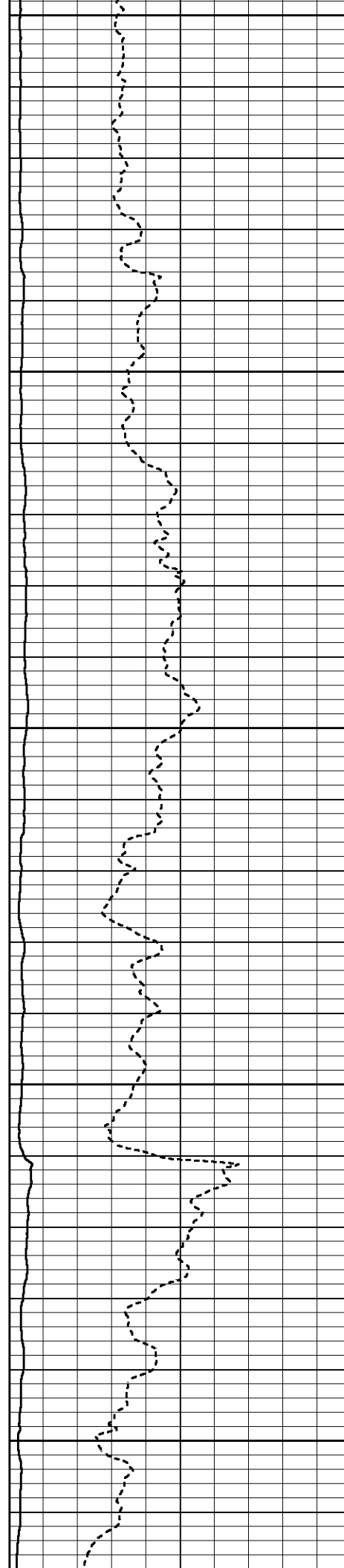
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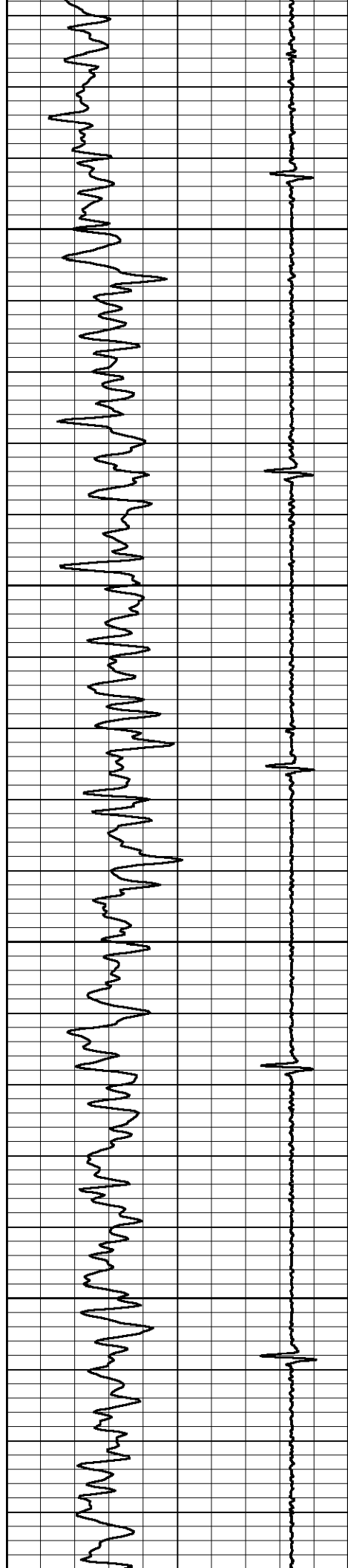
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300

350

400



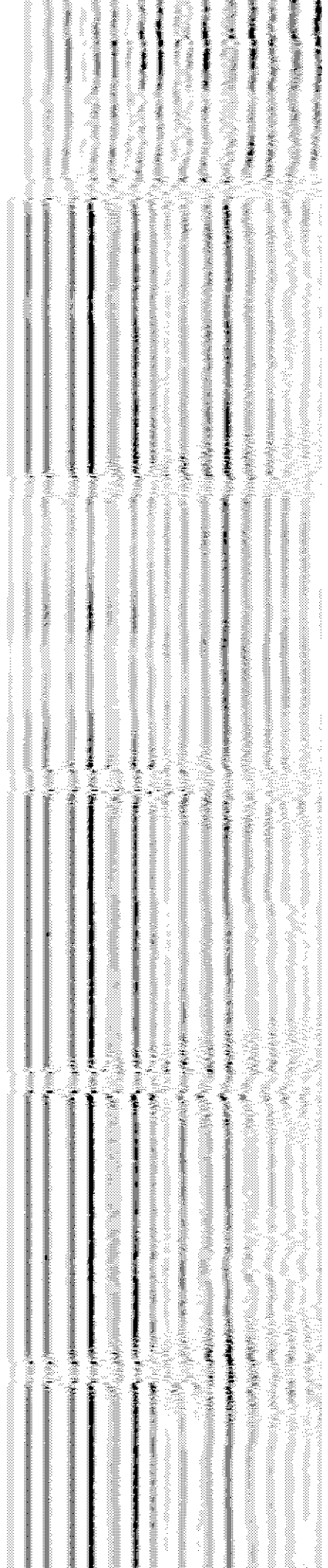
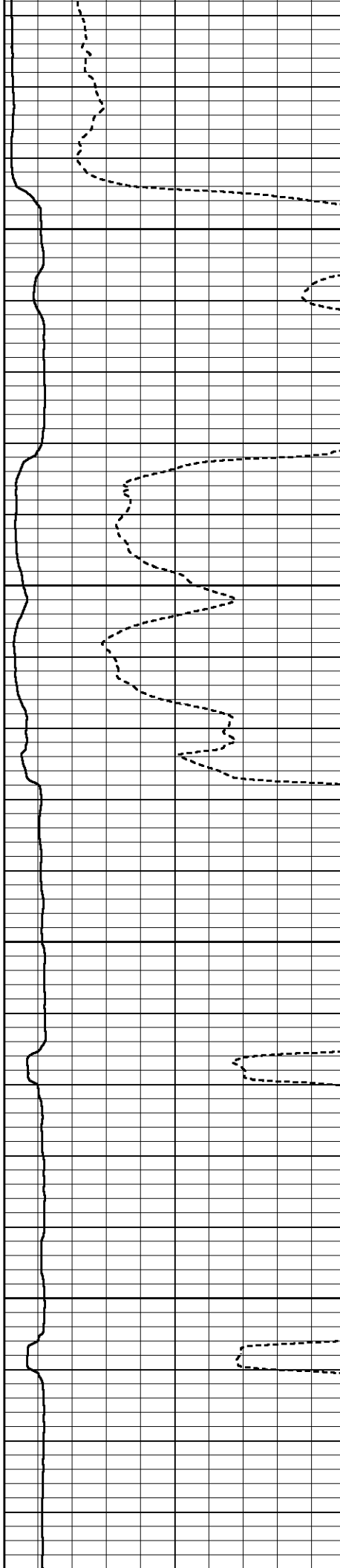


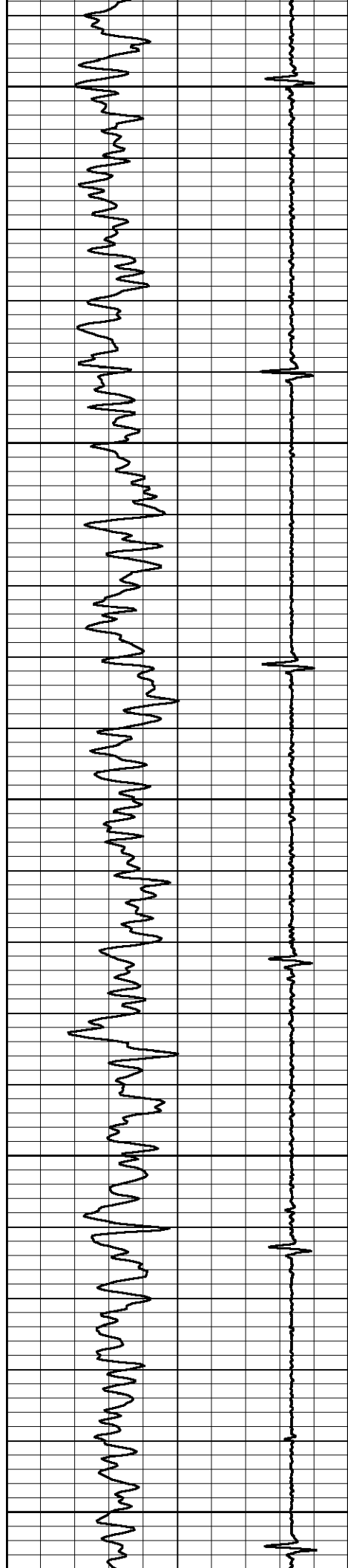
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500

550

600





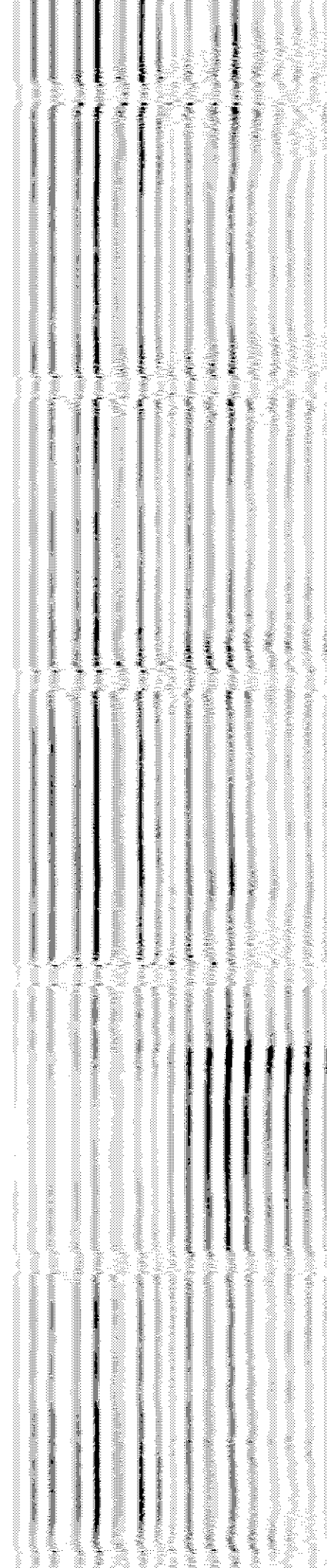
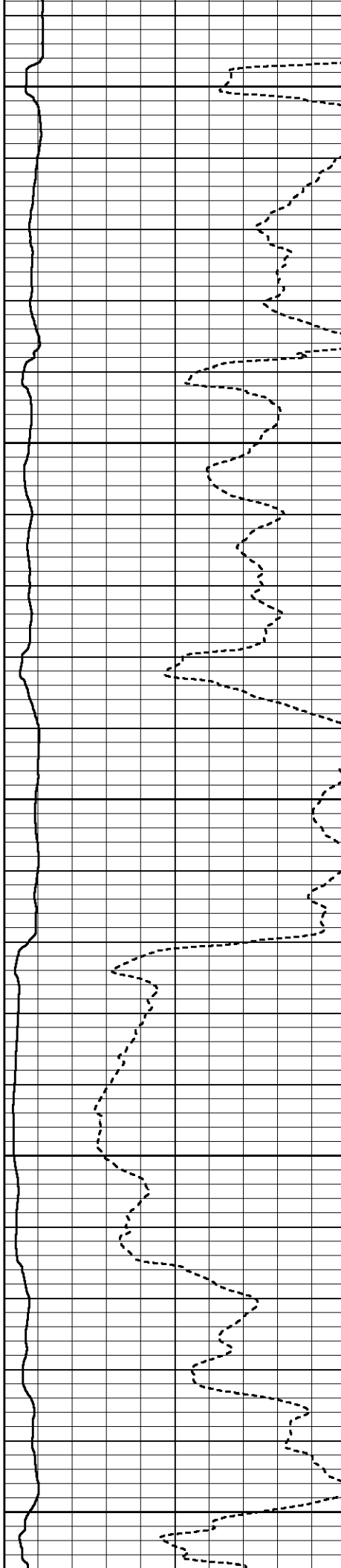
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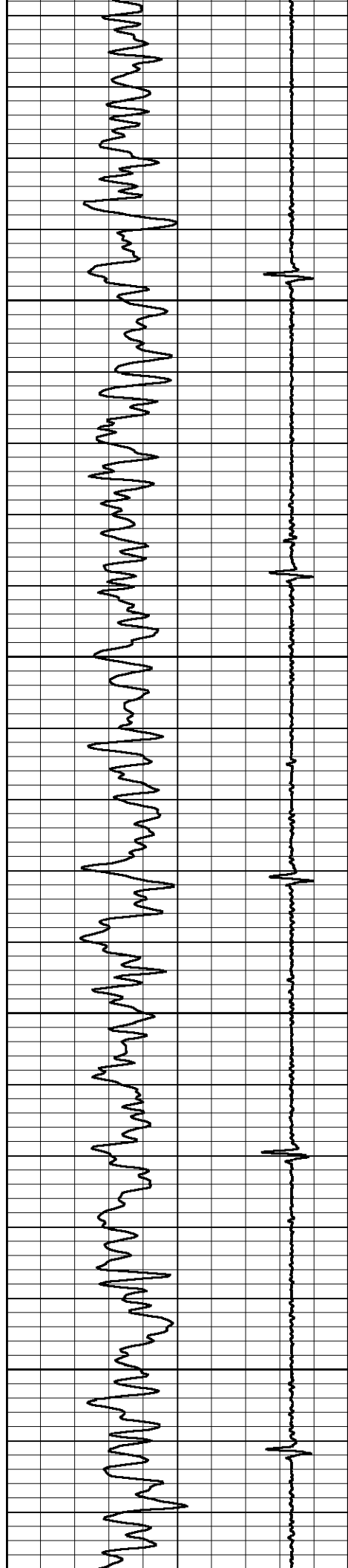
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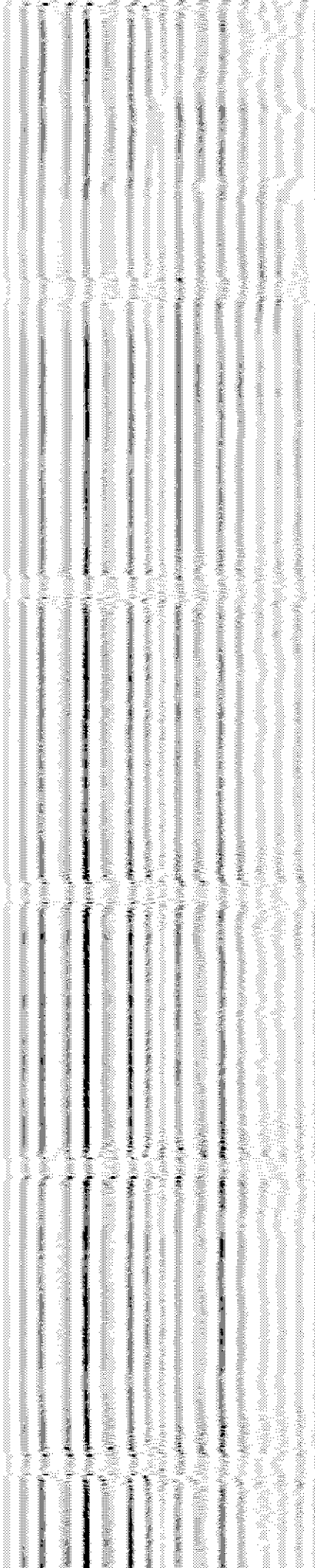
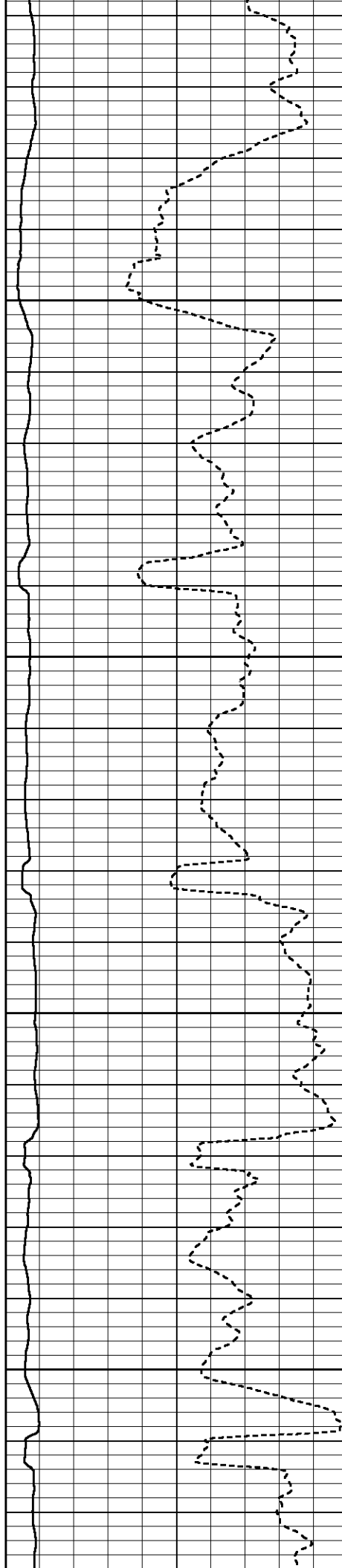


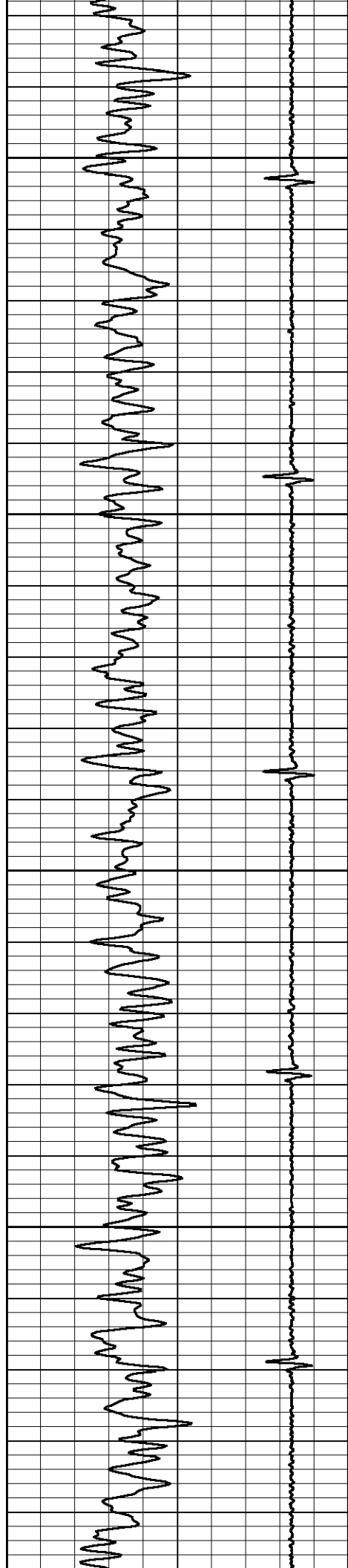
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950

1000

1050



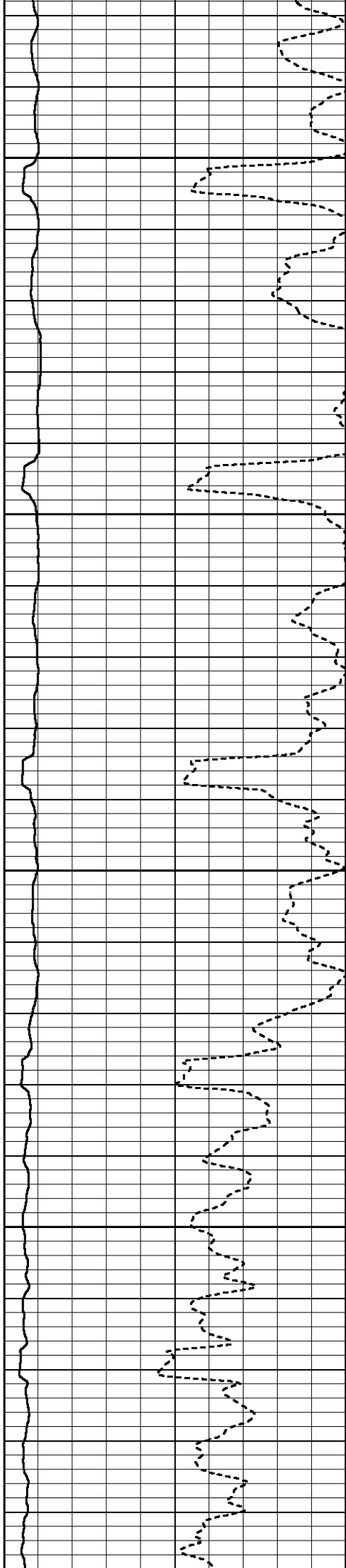


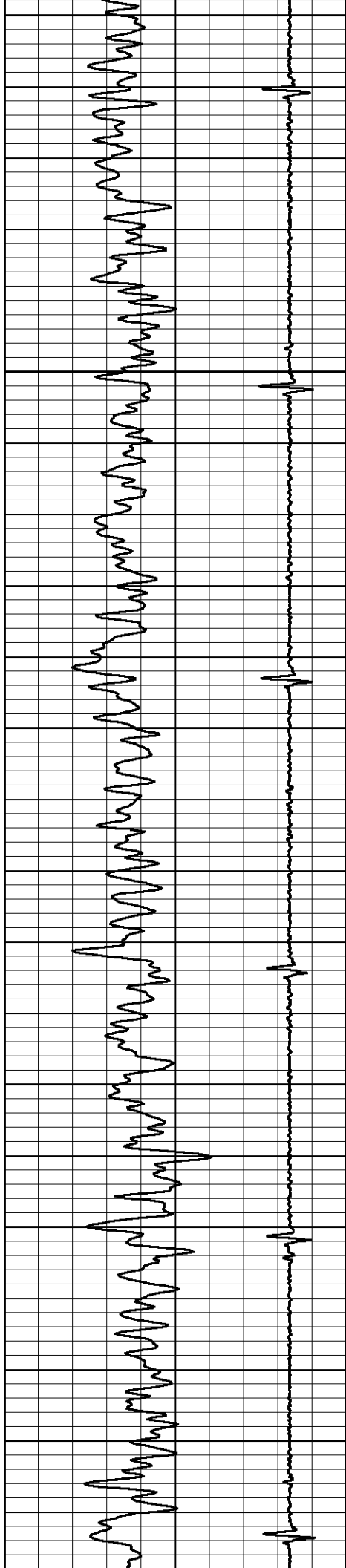
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1150

1200

1250





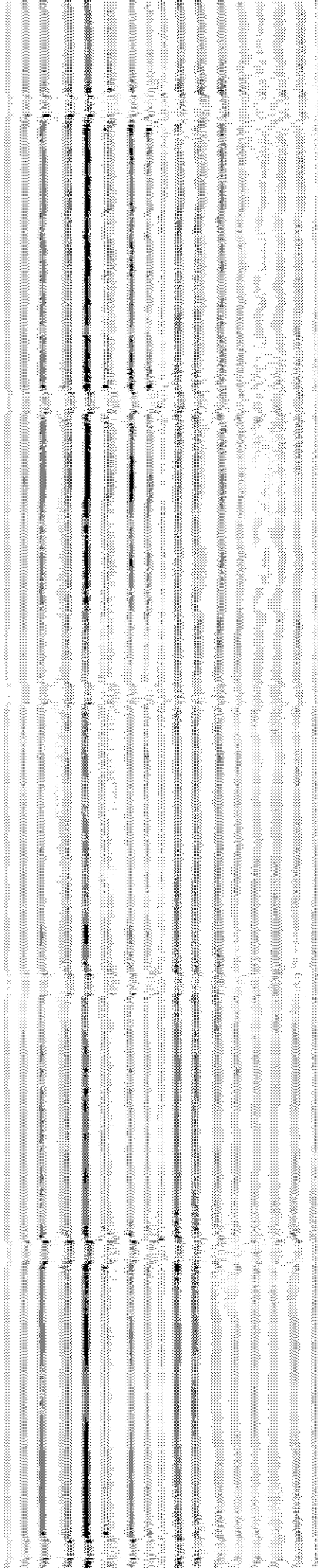
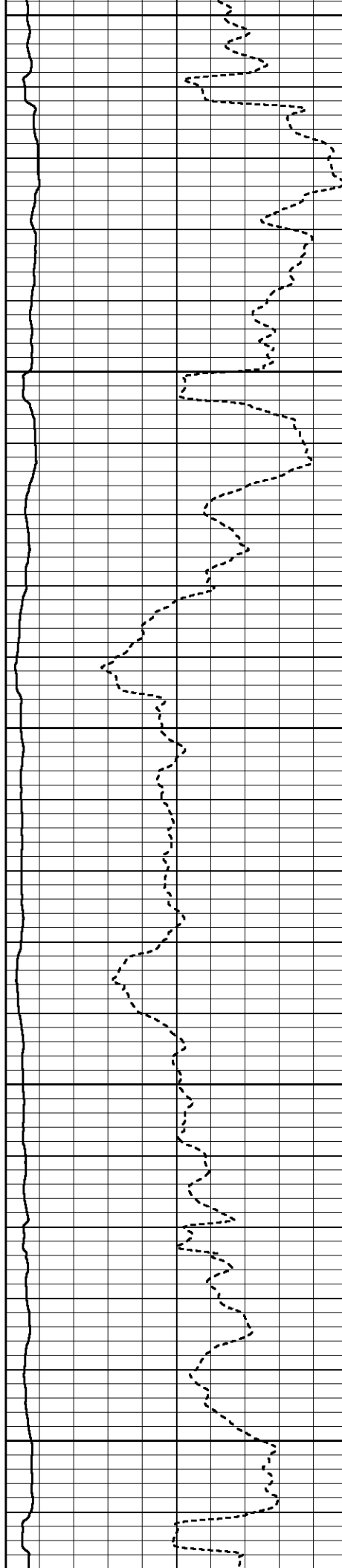
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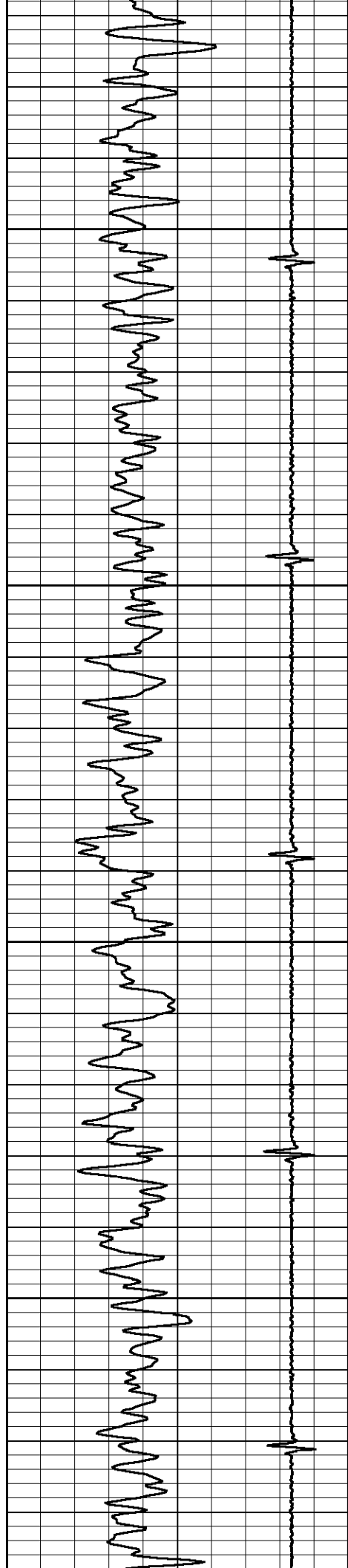
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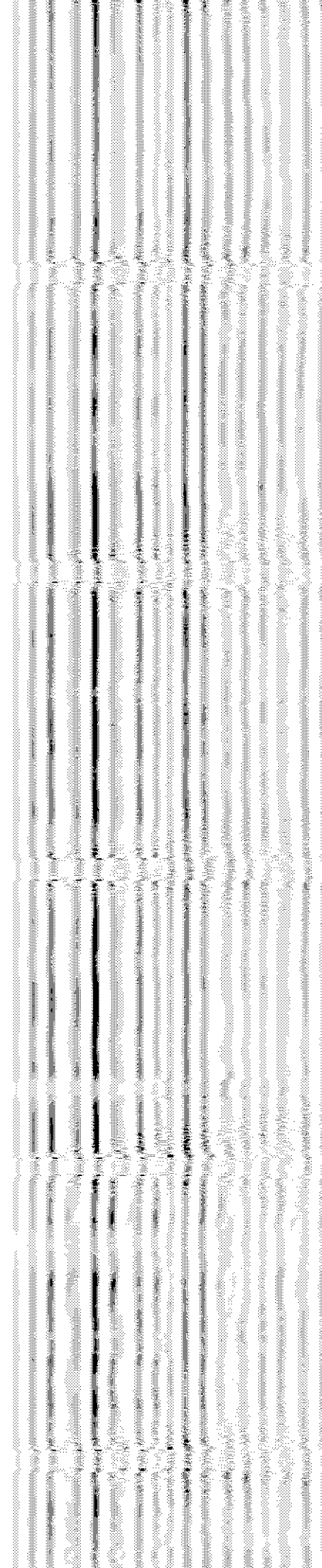
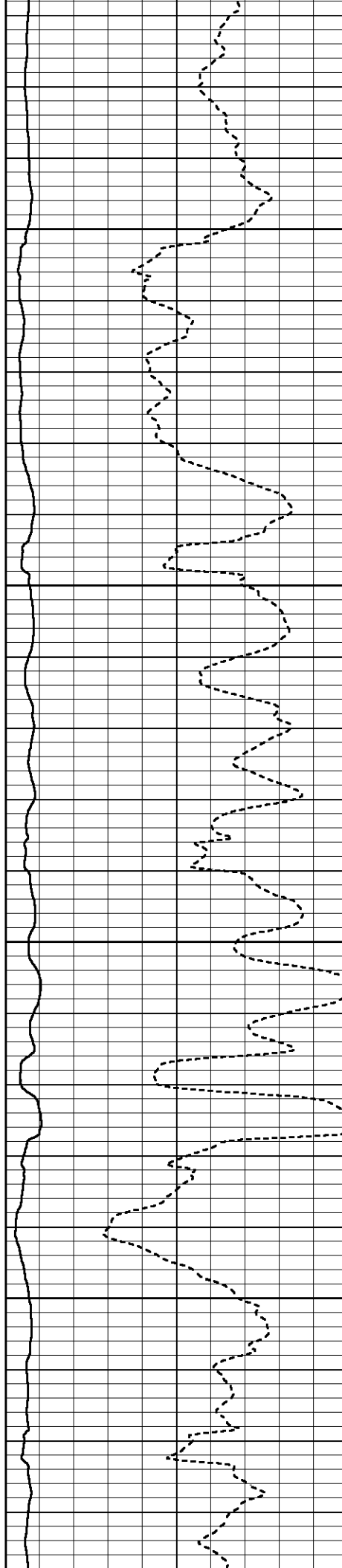


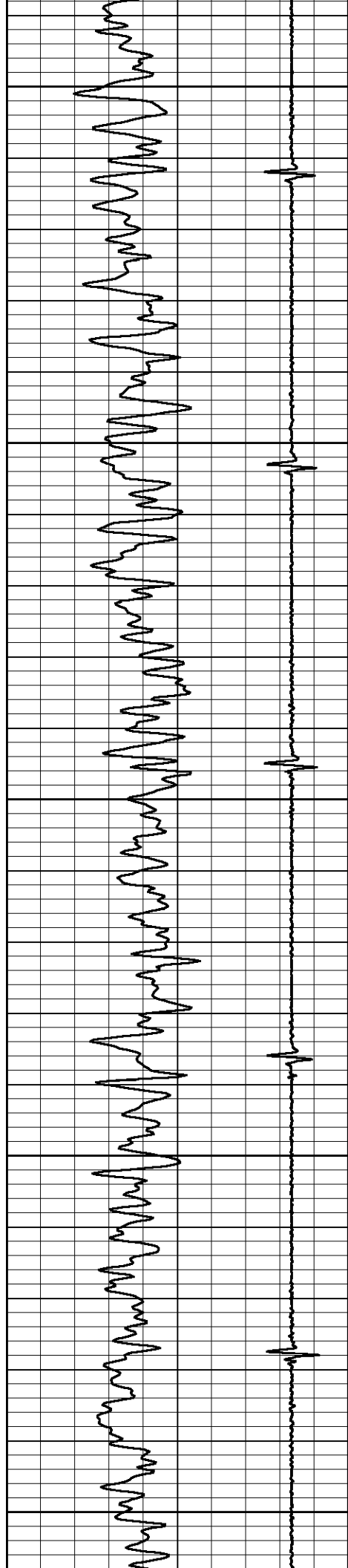
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1700





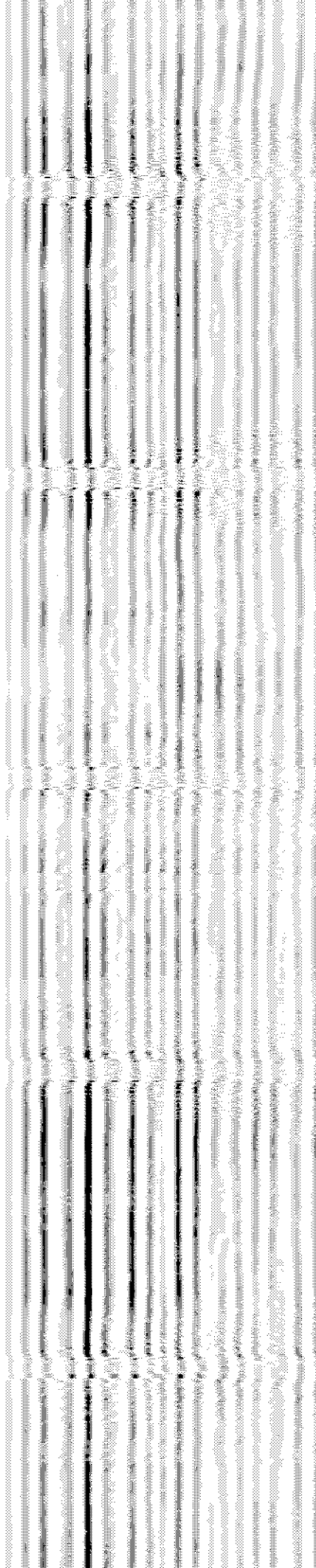
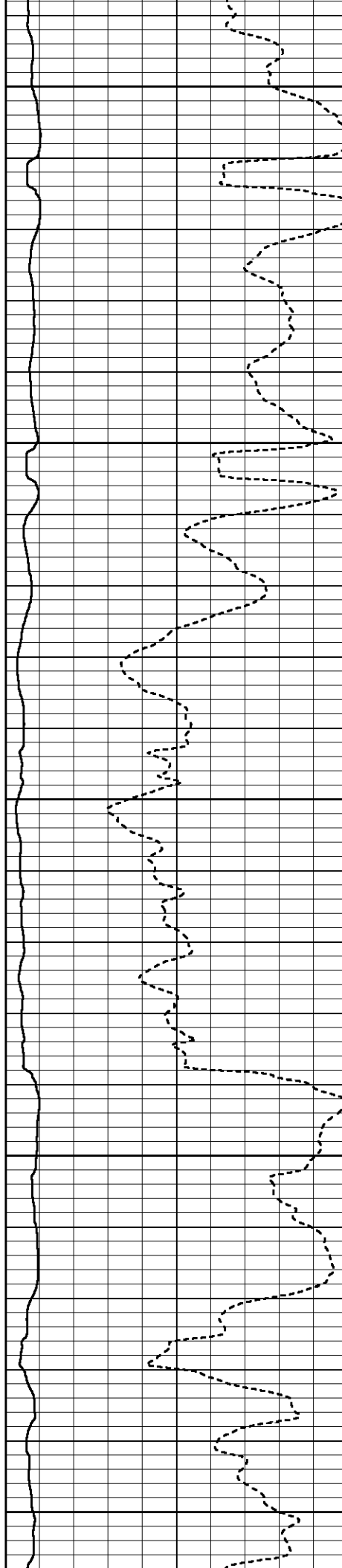
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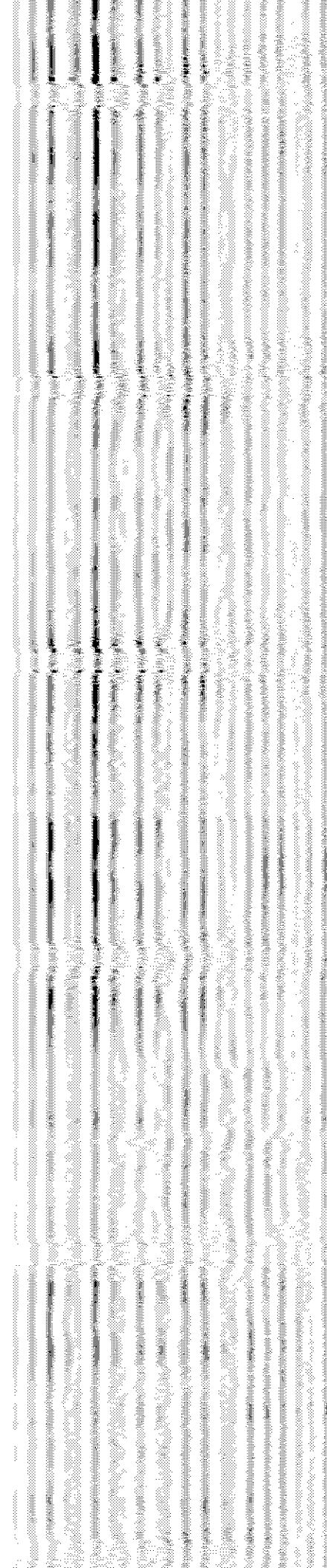
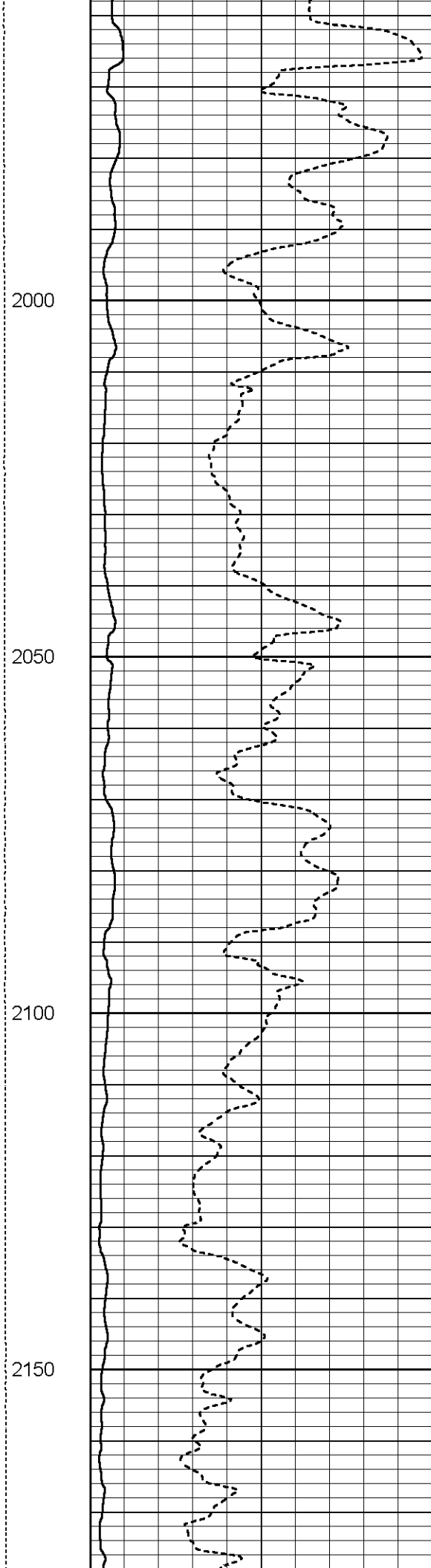
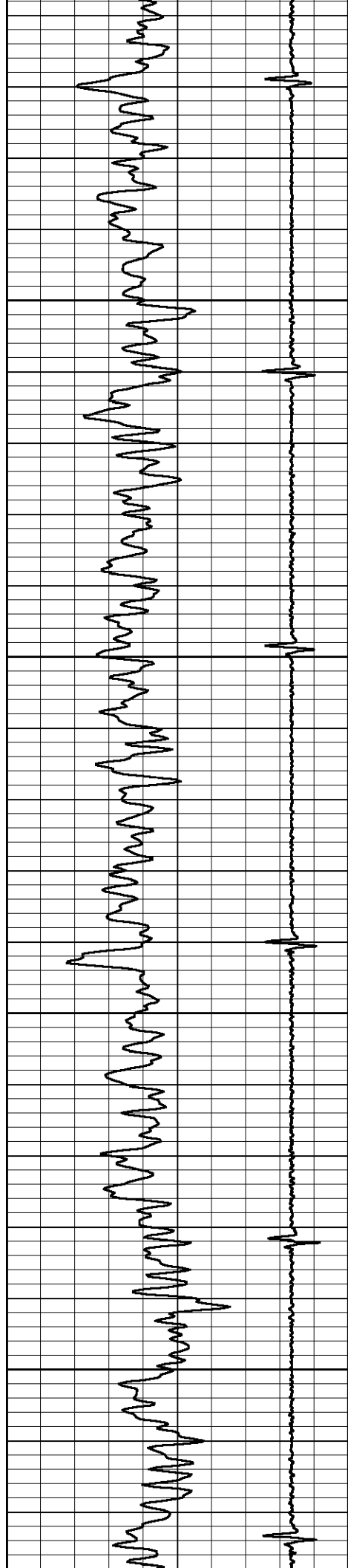
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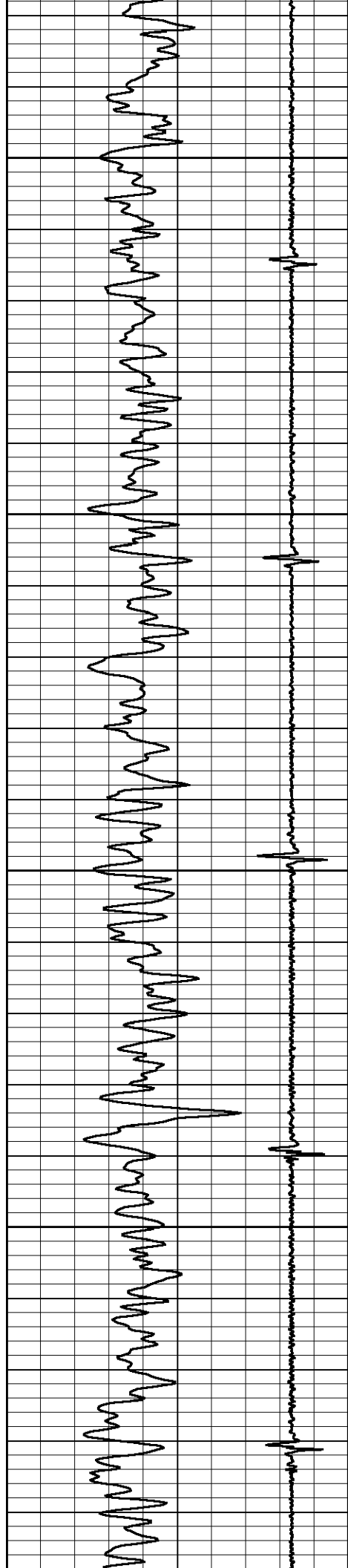
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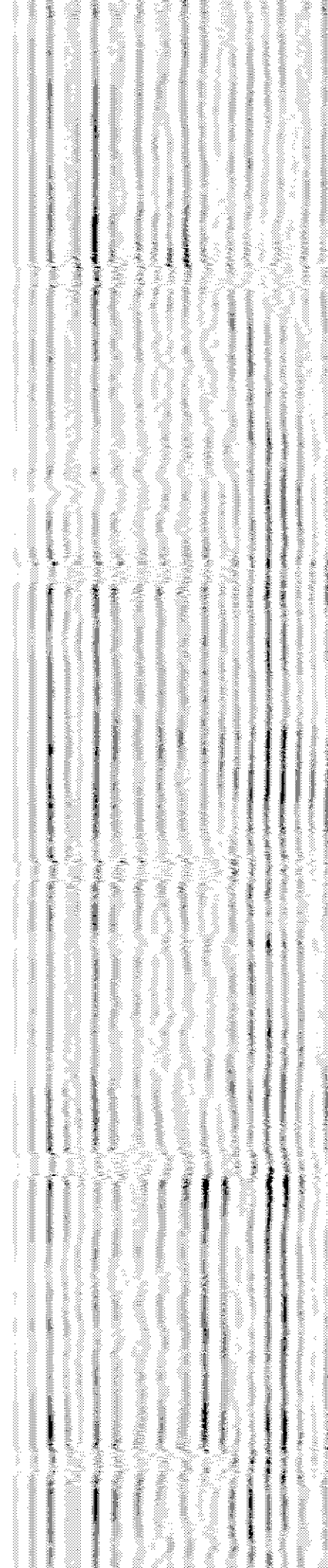
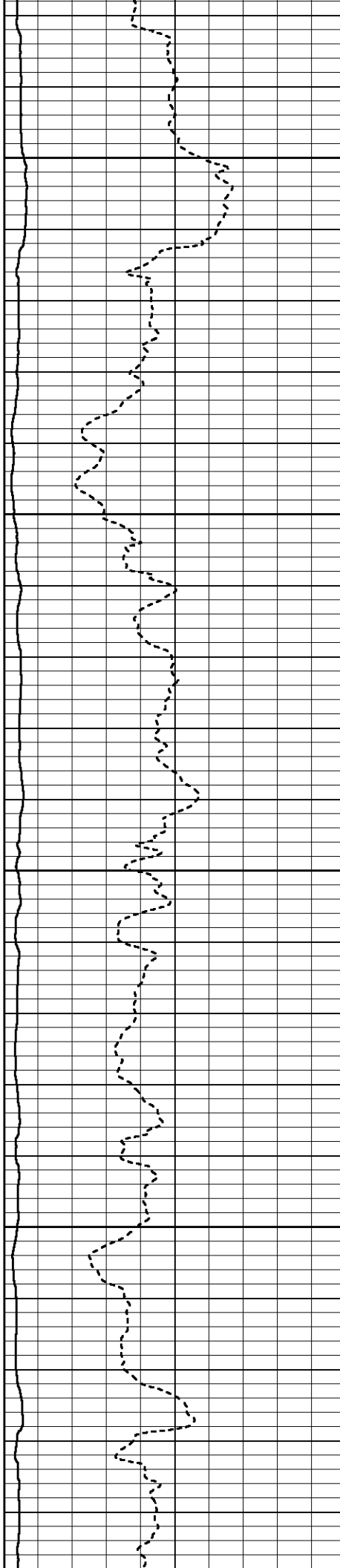


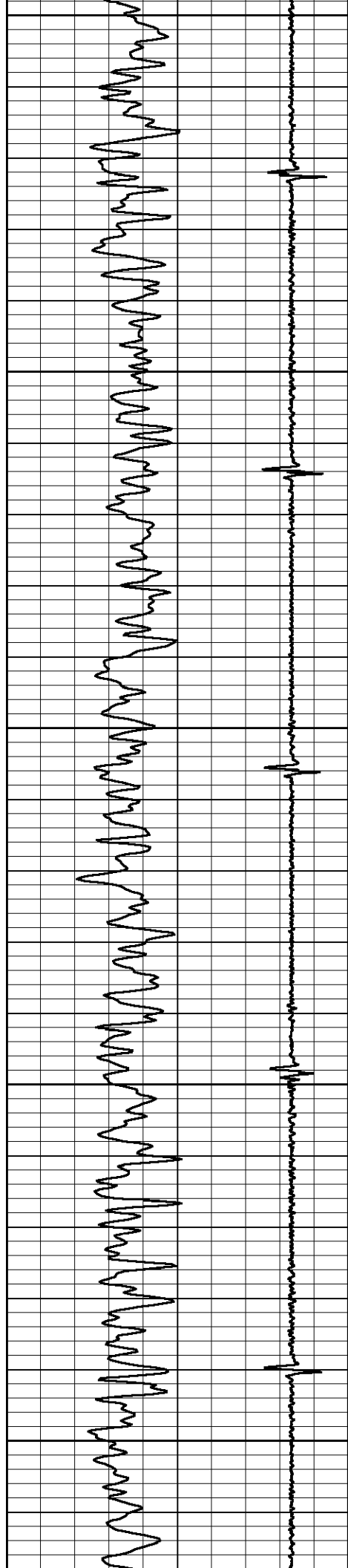
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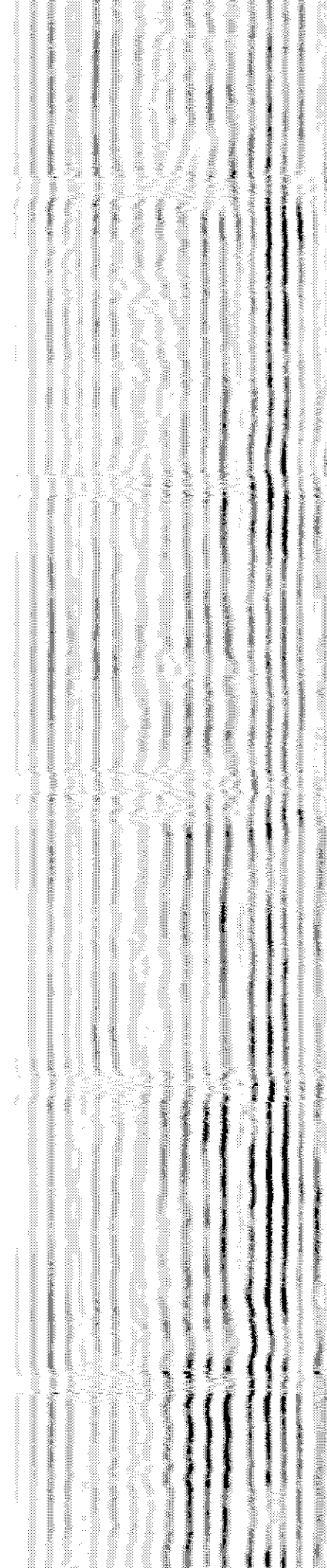
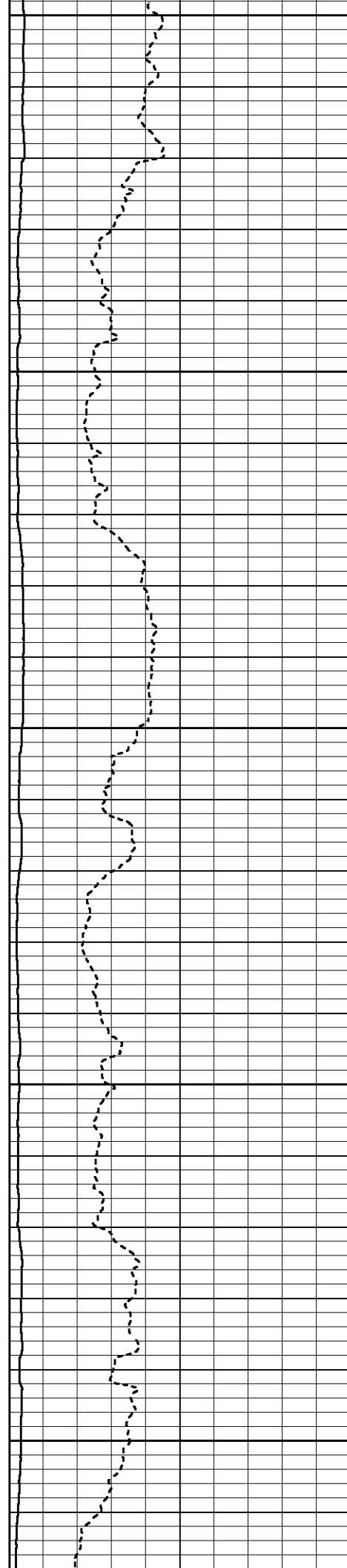
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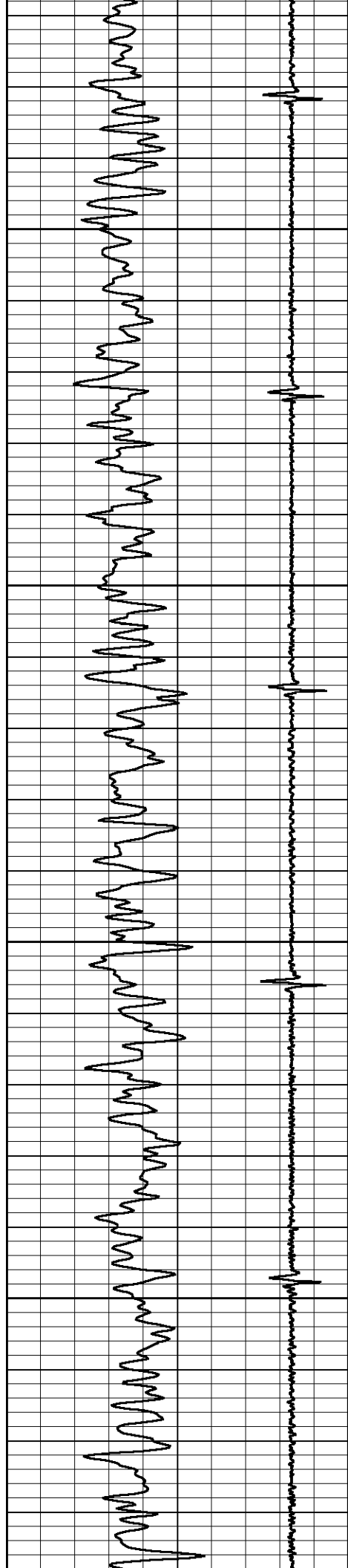
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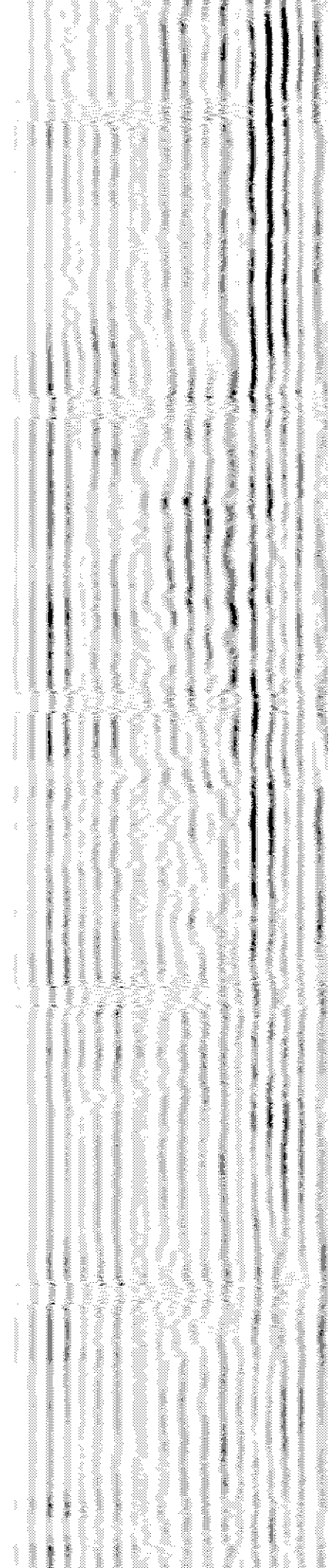
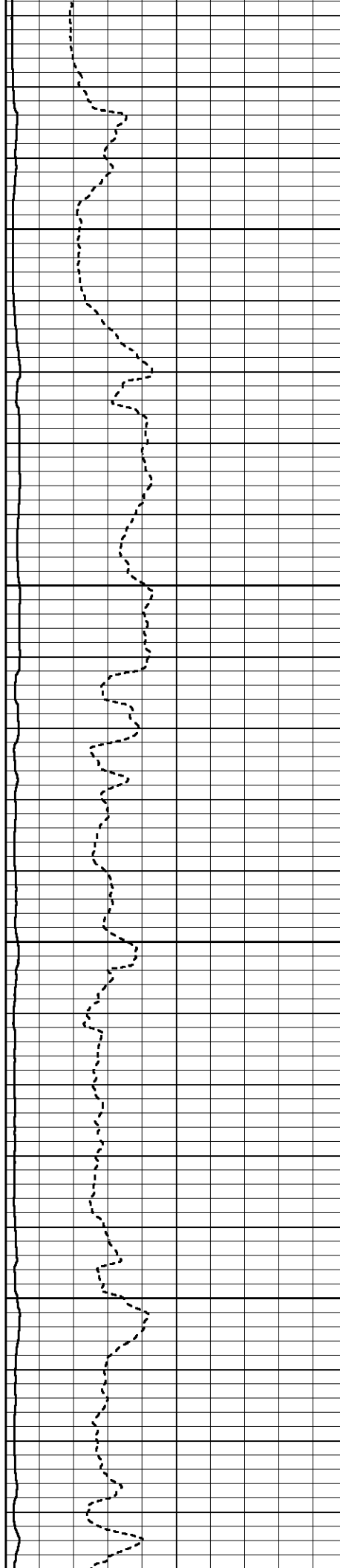


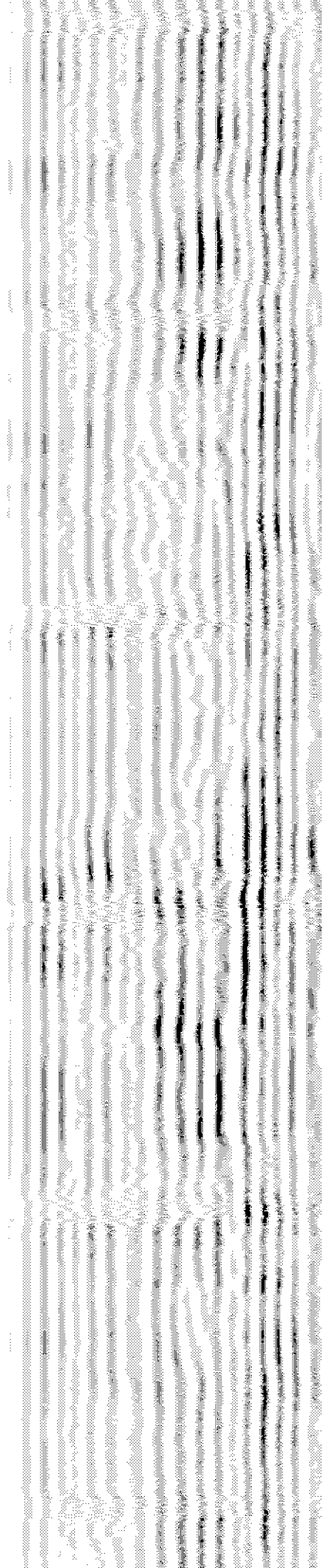
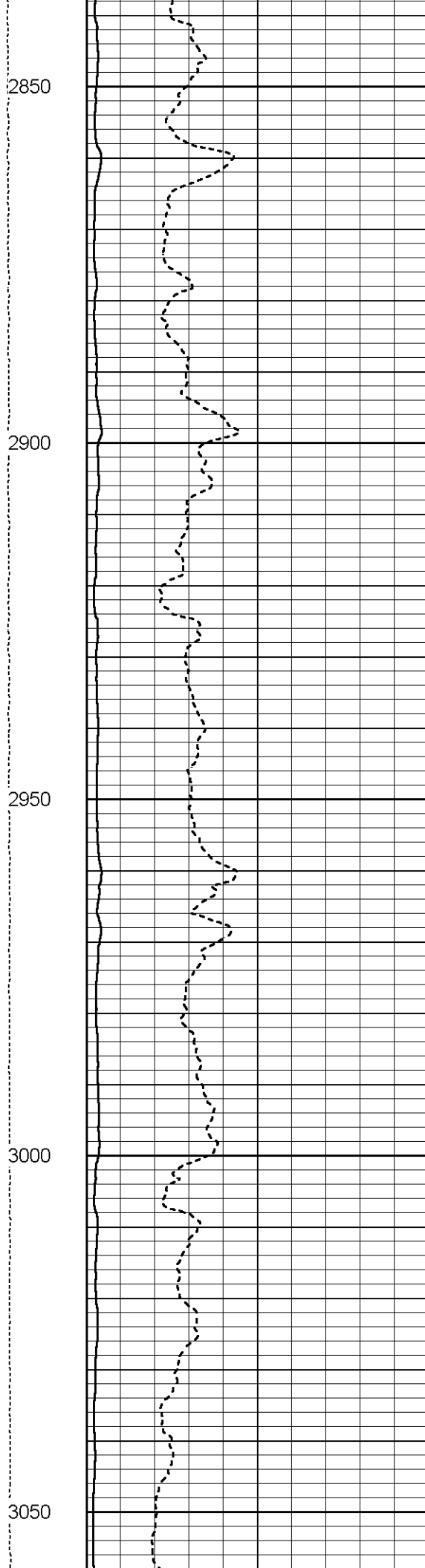
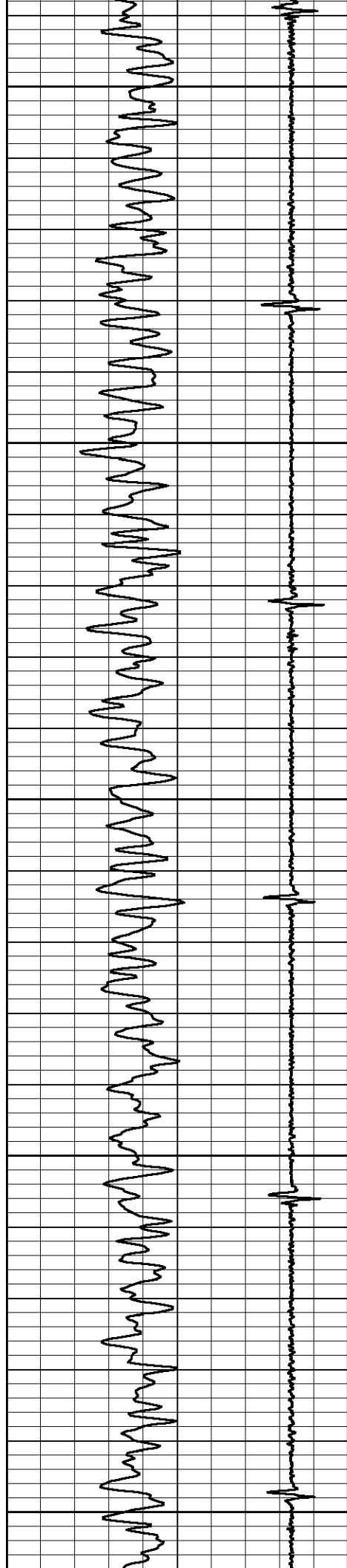
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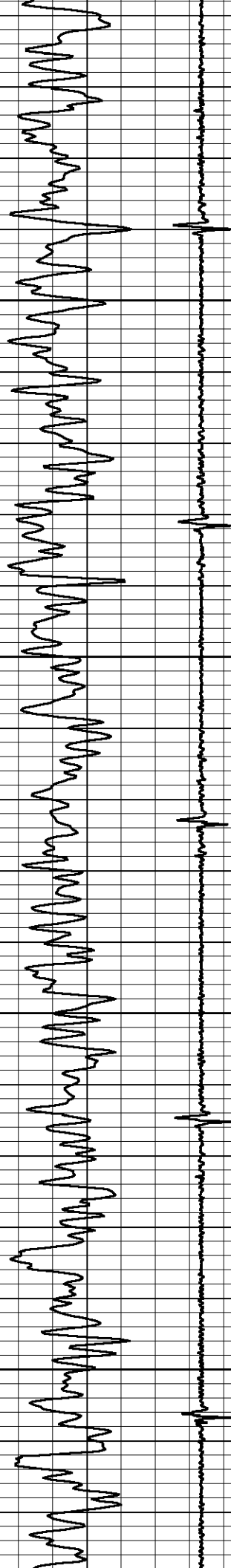
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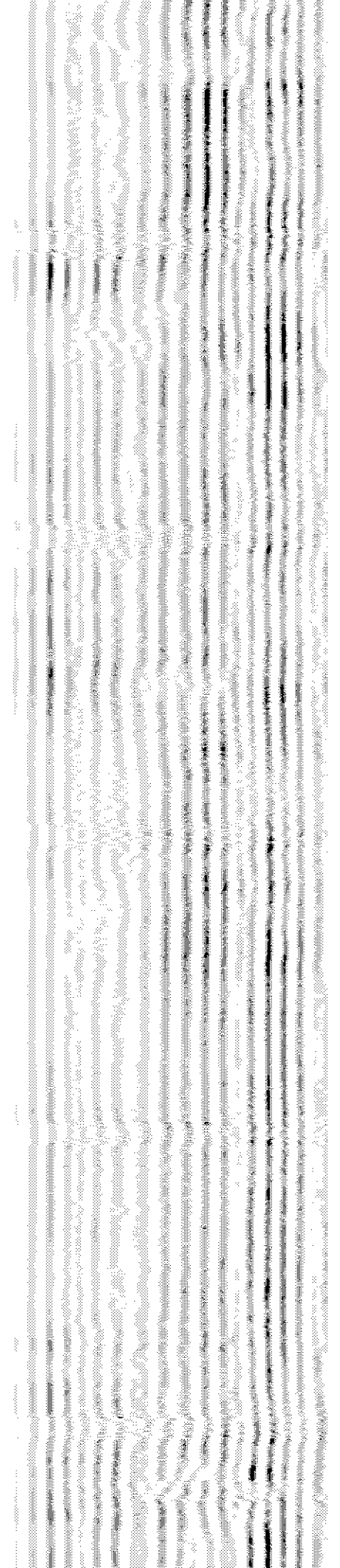
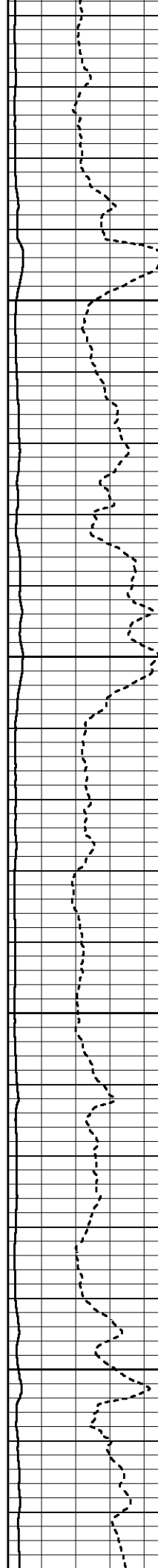


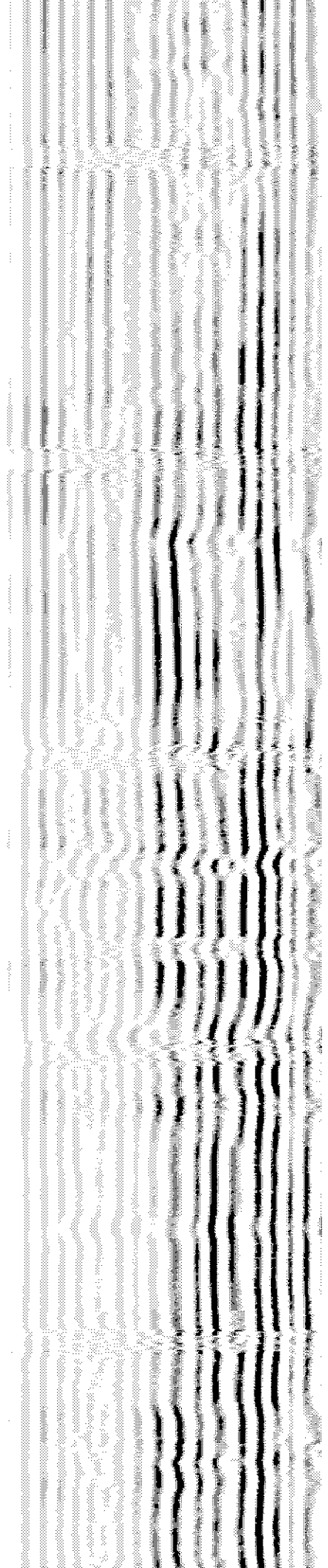
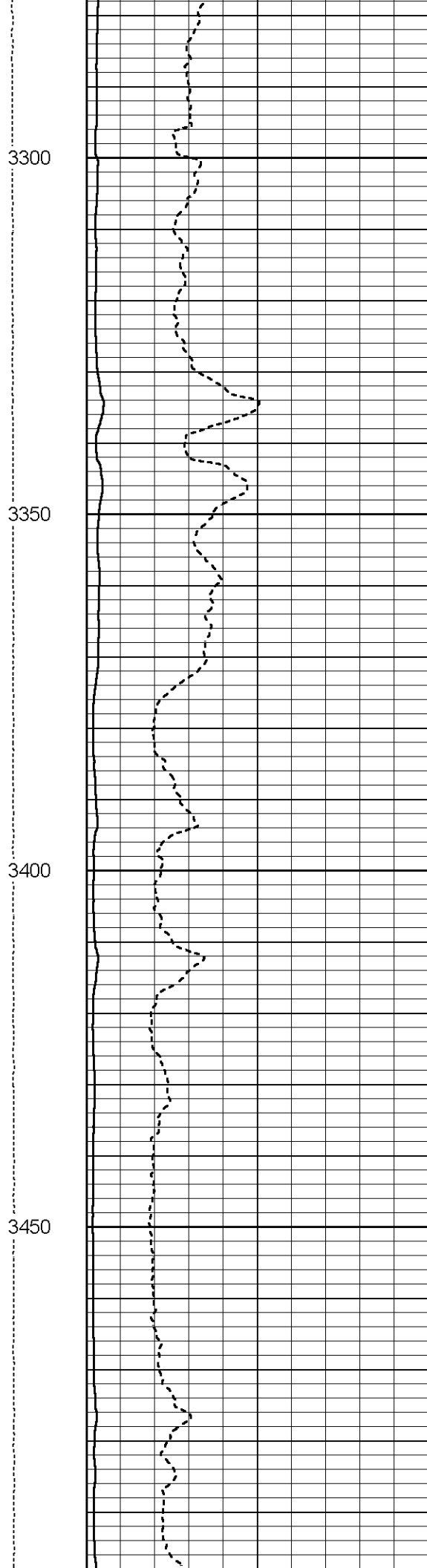
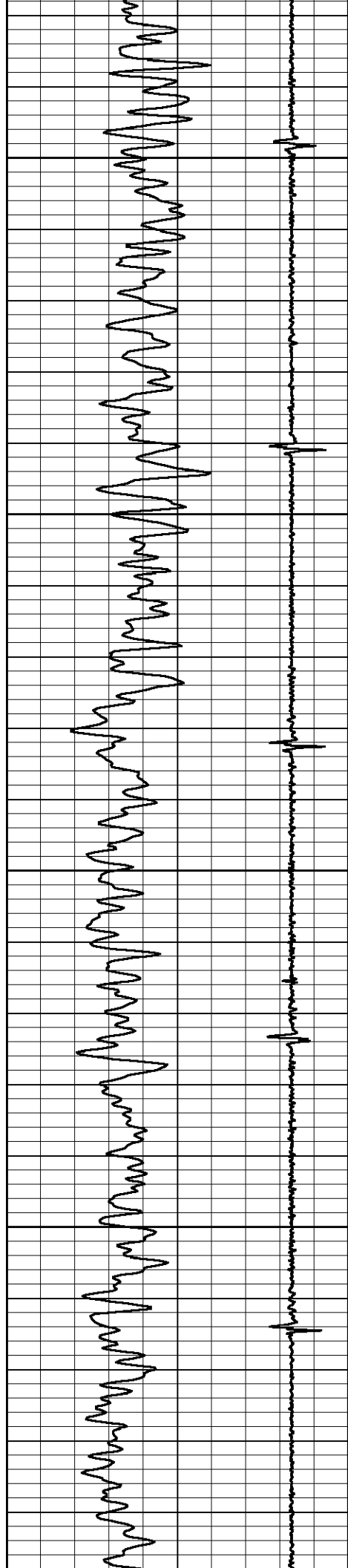
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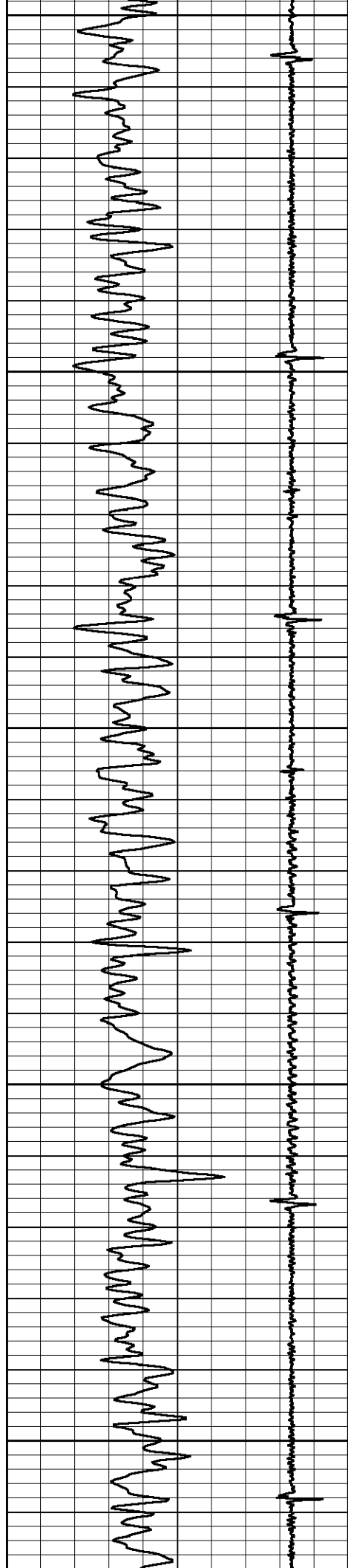
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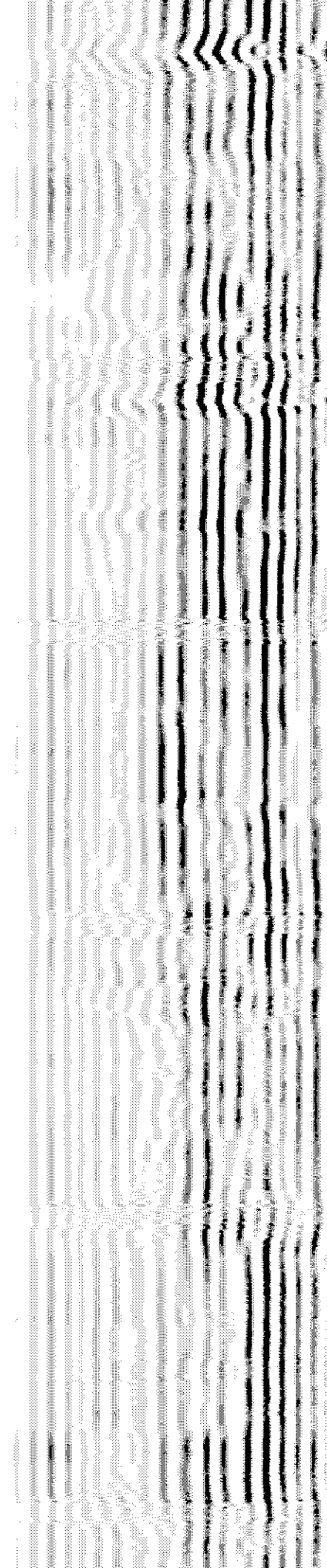
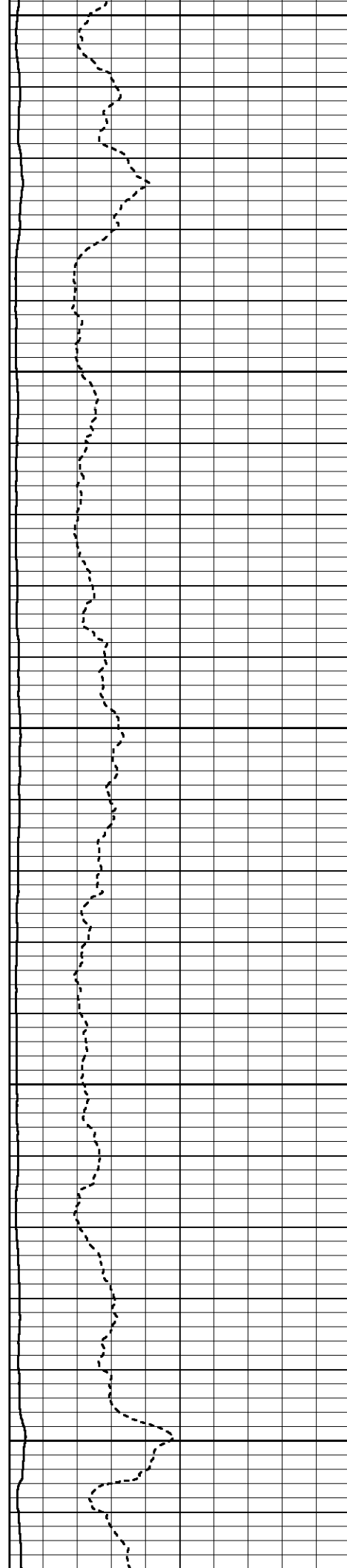
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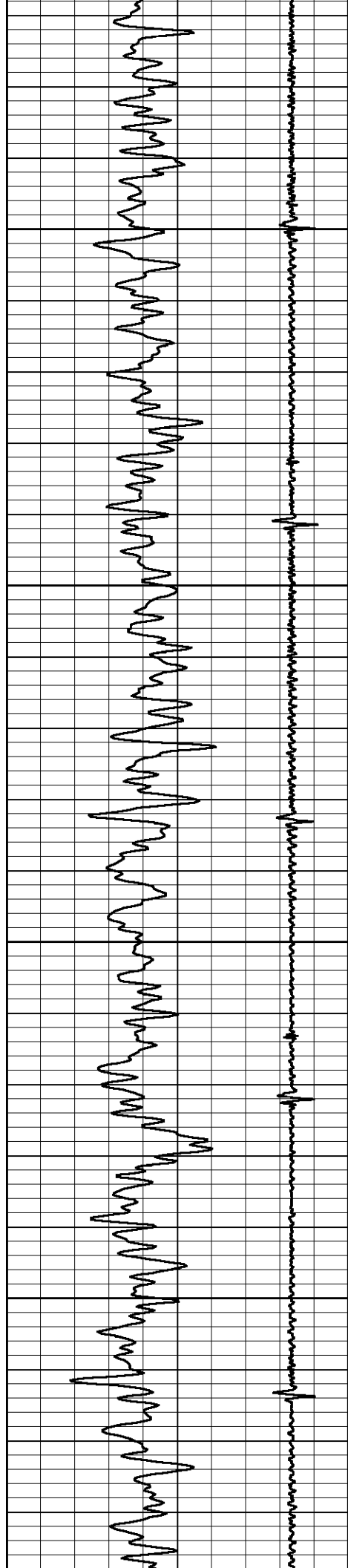
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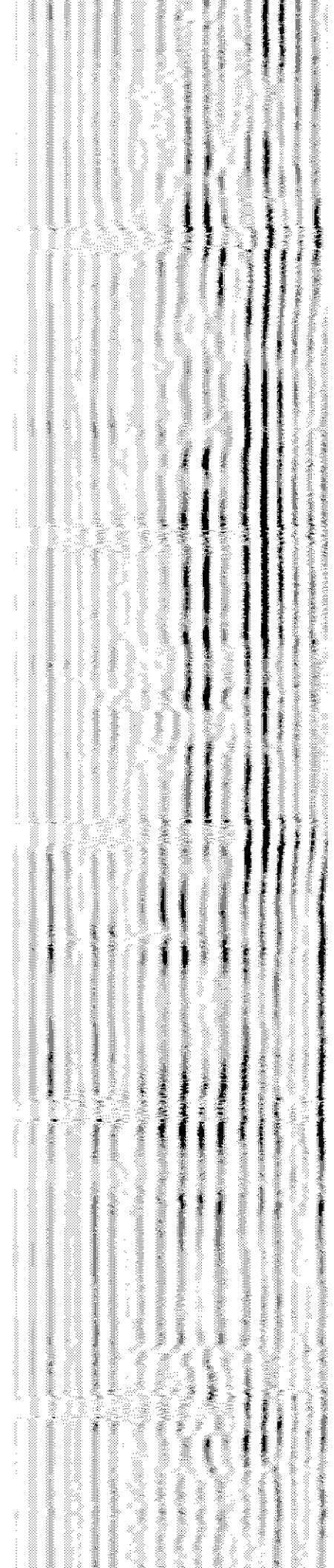
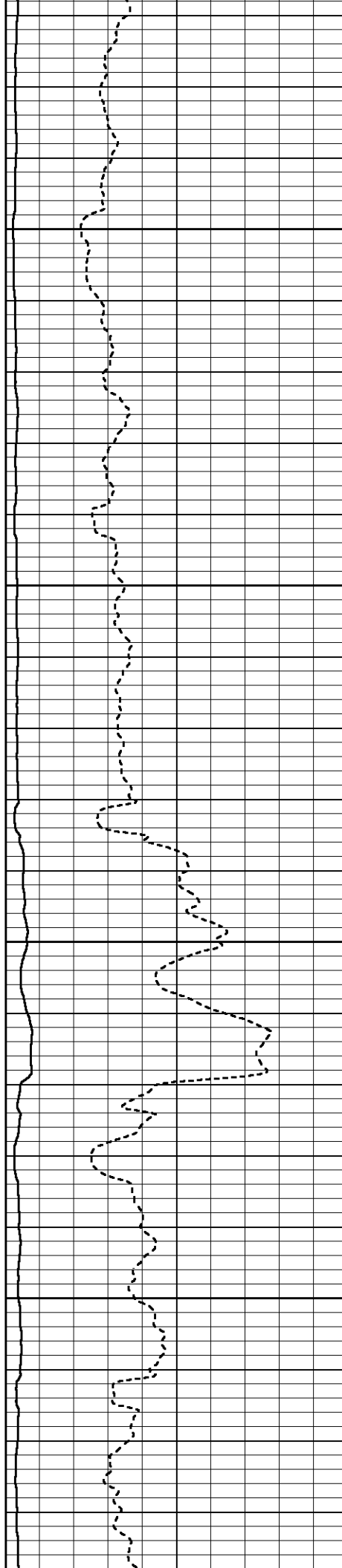


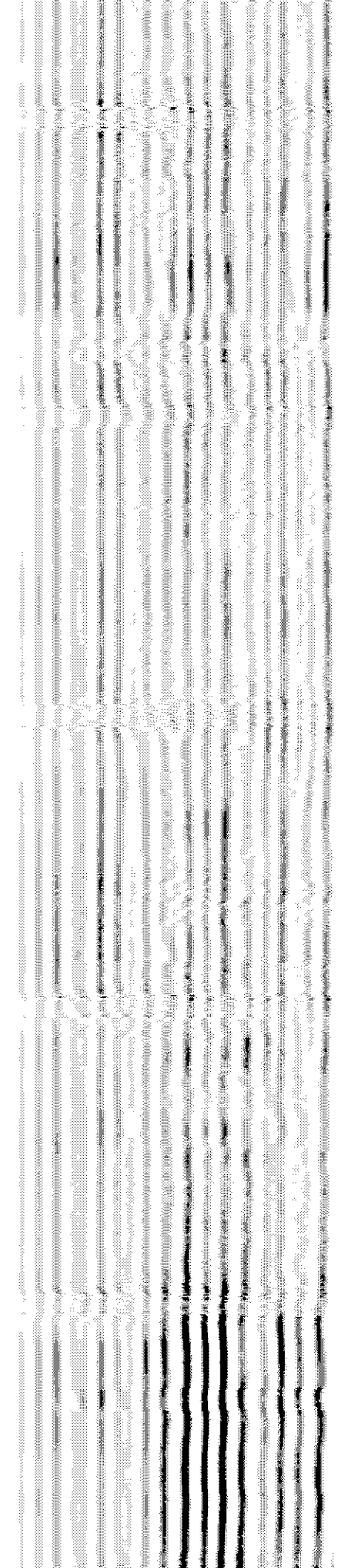
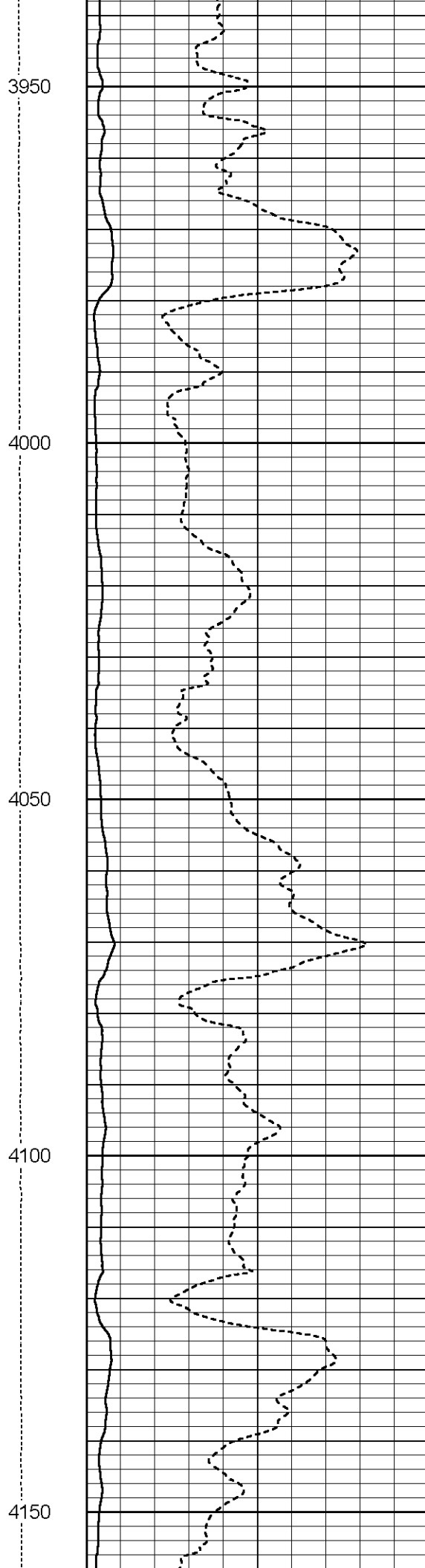
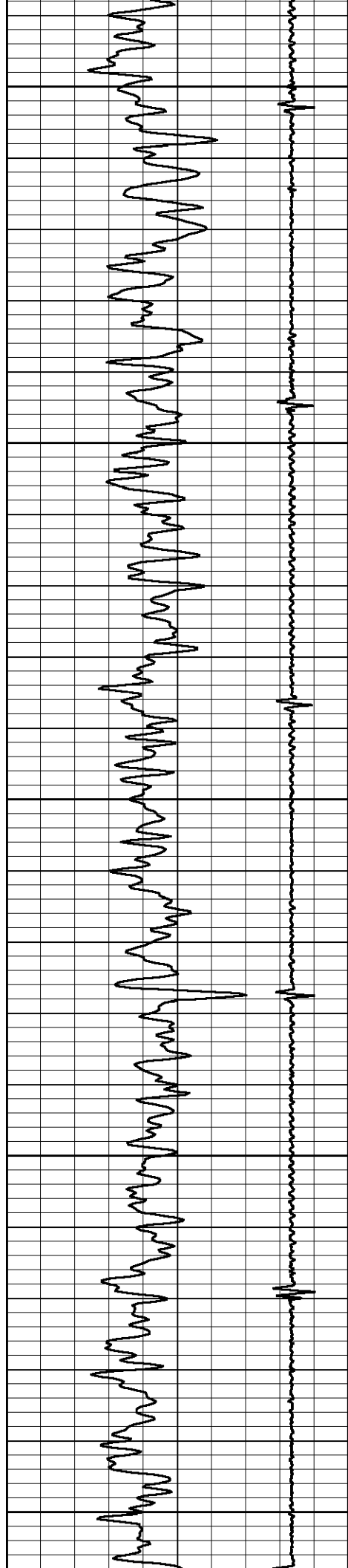
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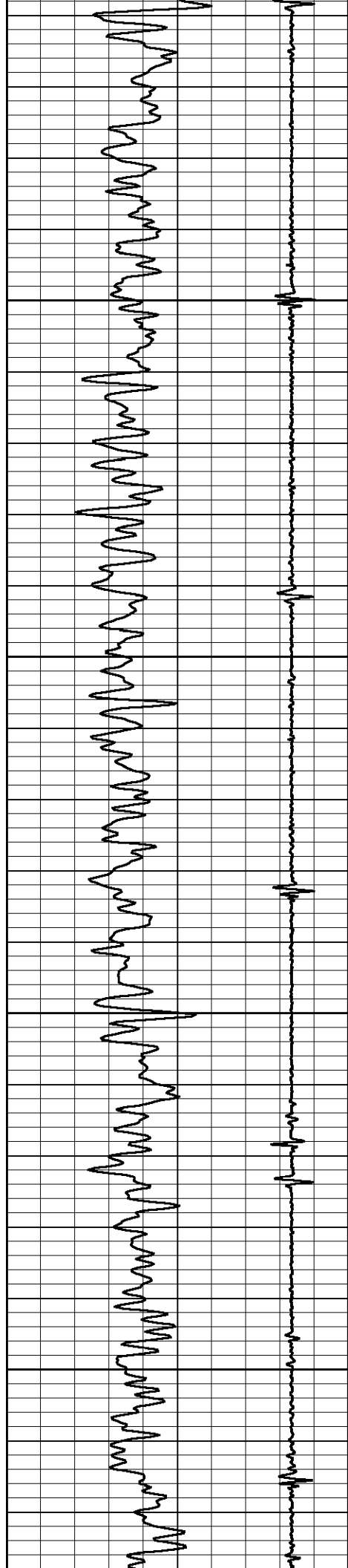
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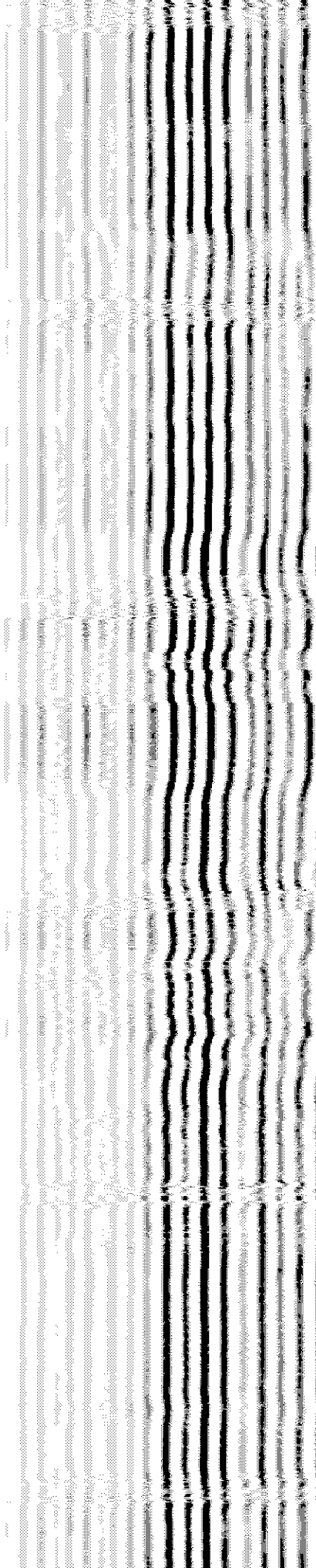
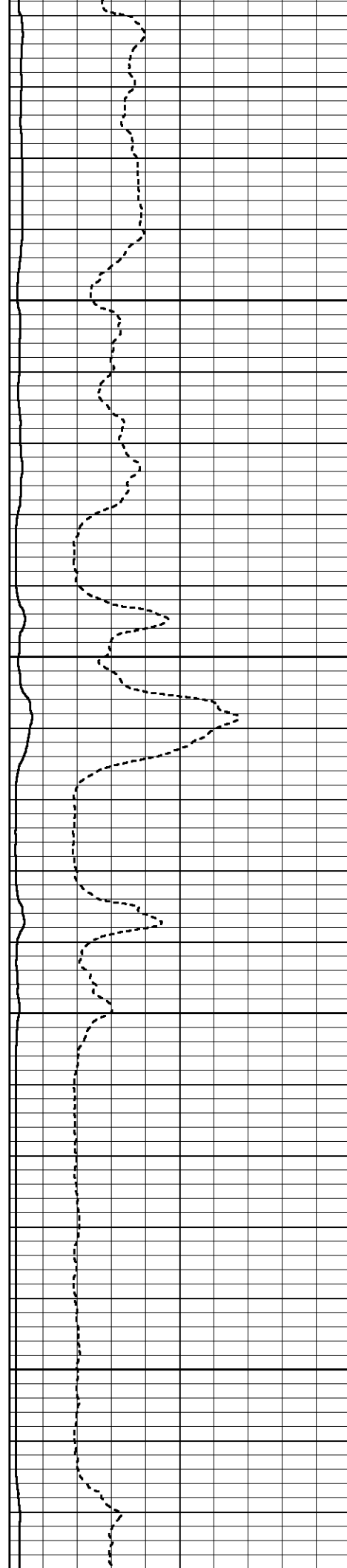


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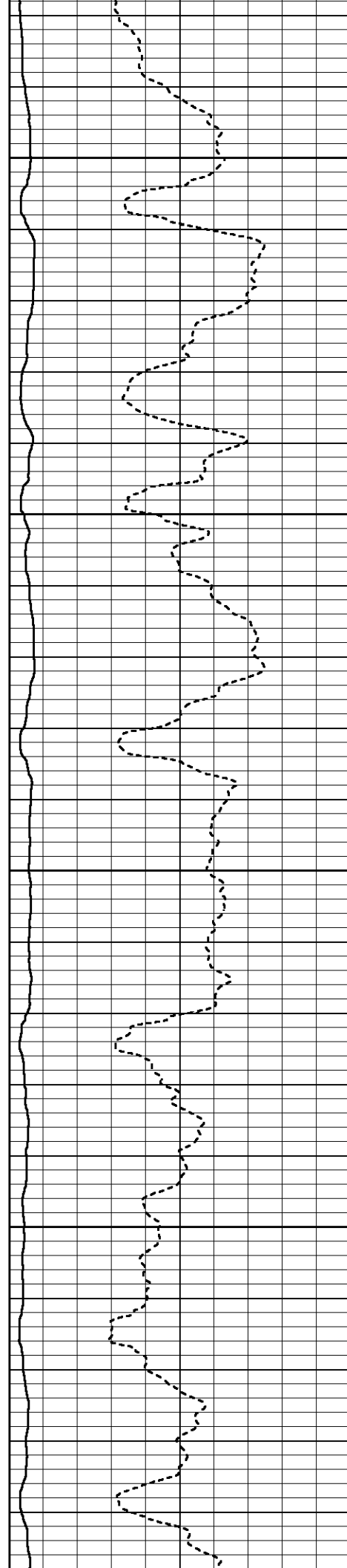


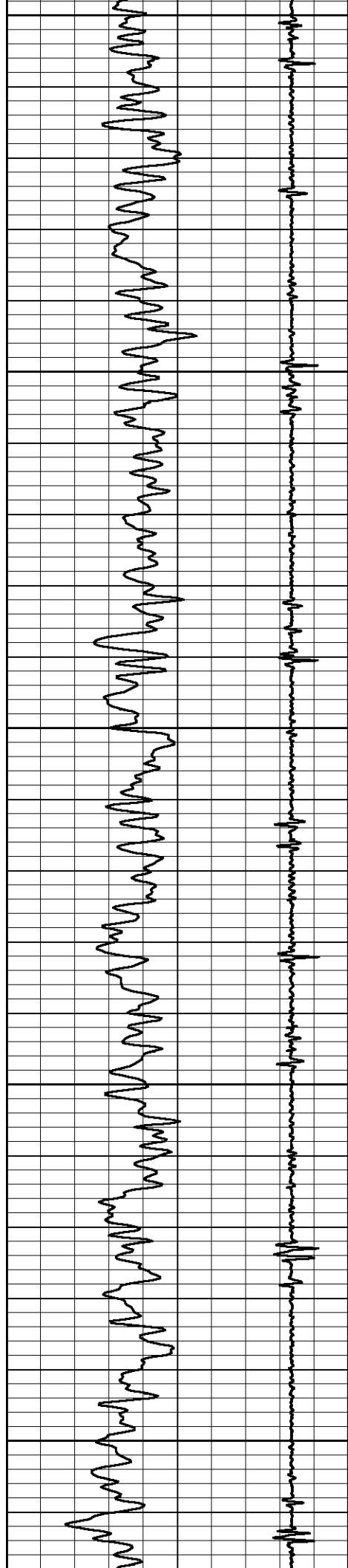
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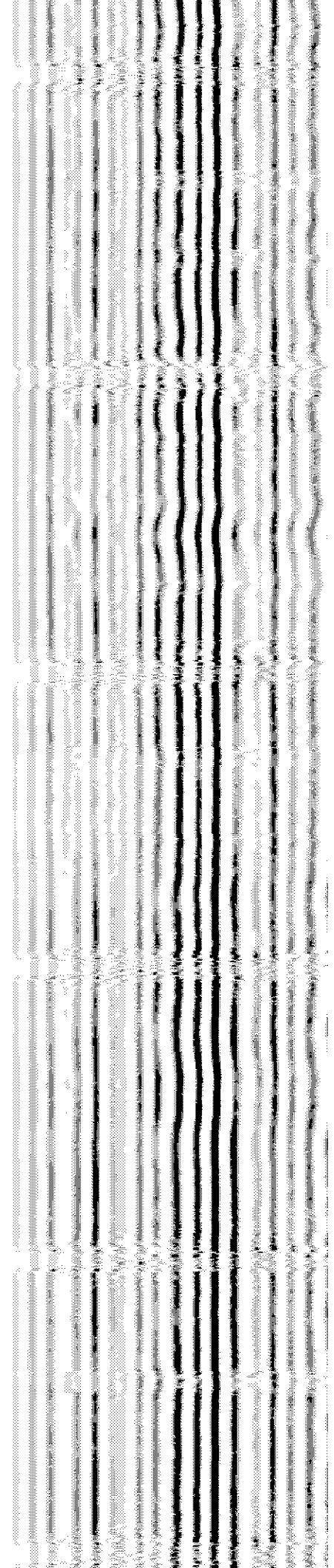
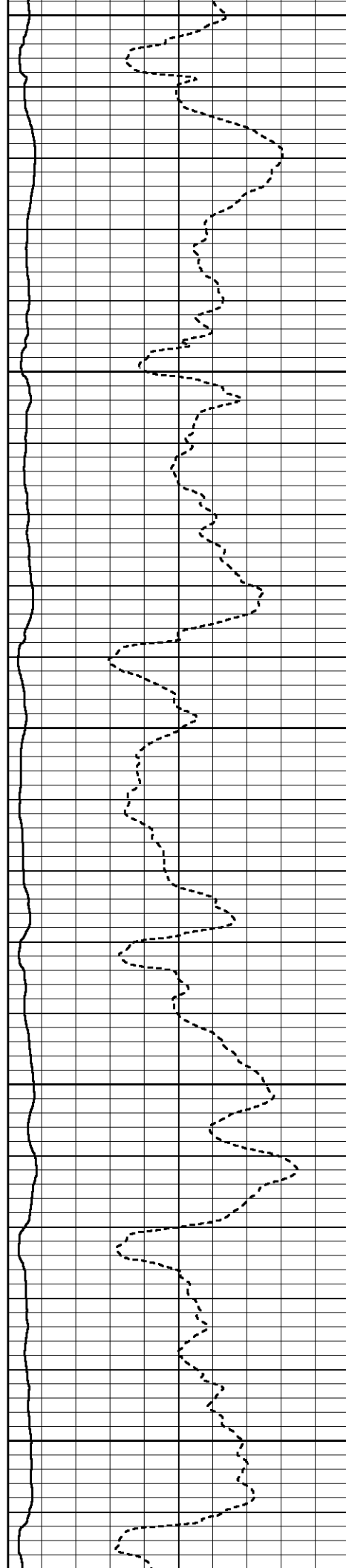
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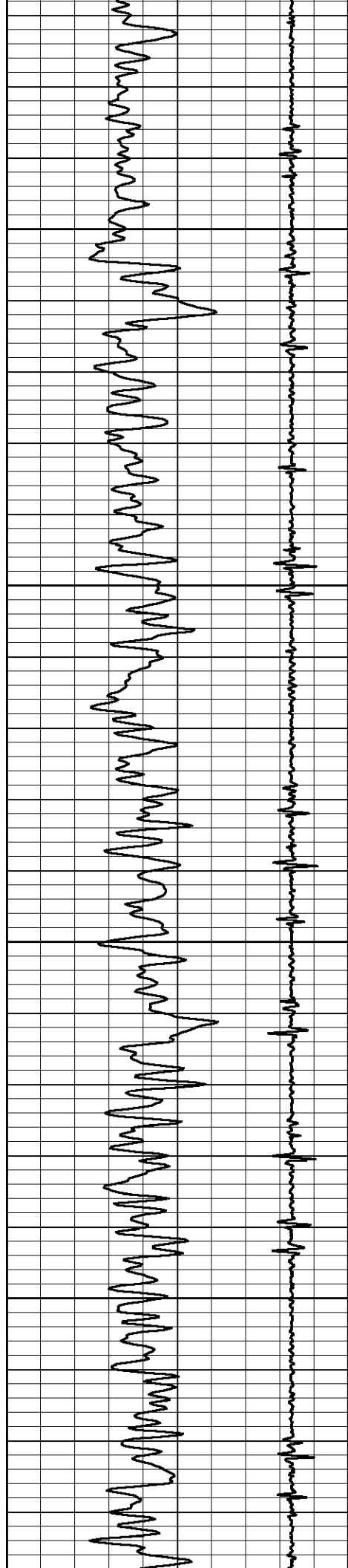
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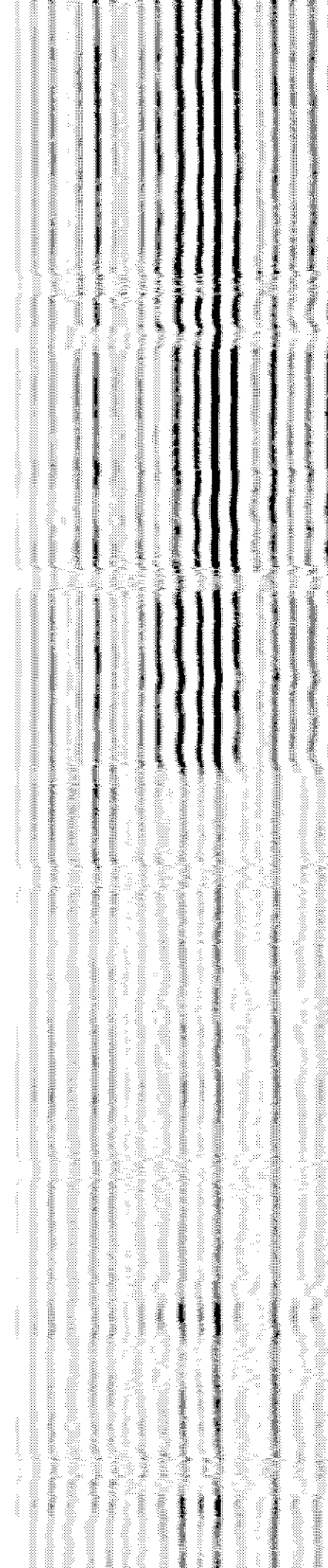
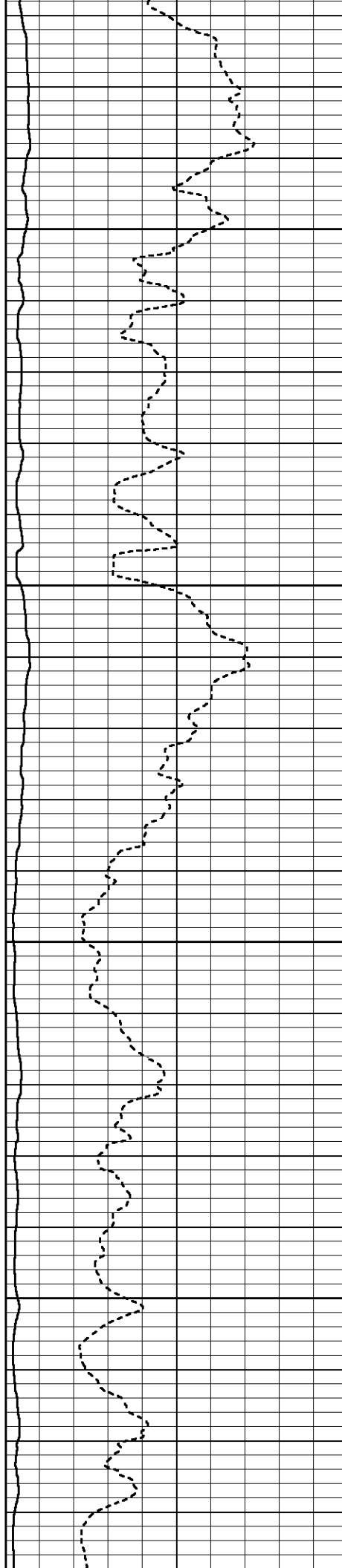


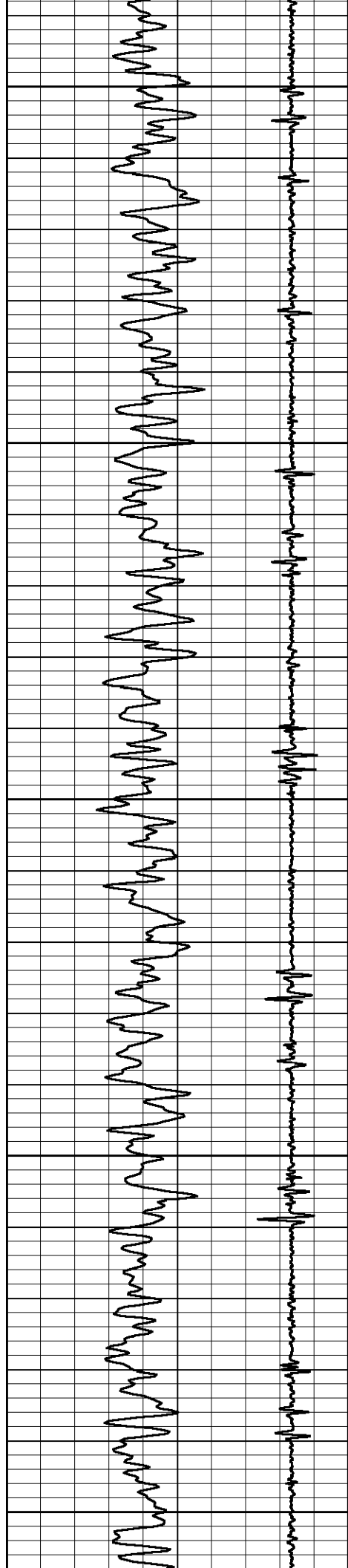
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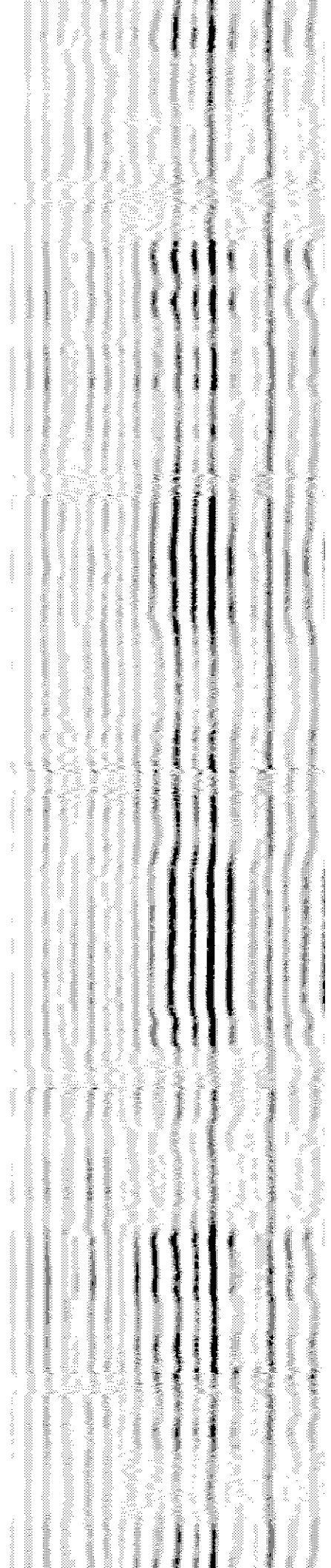
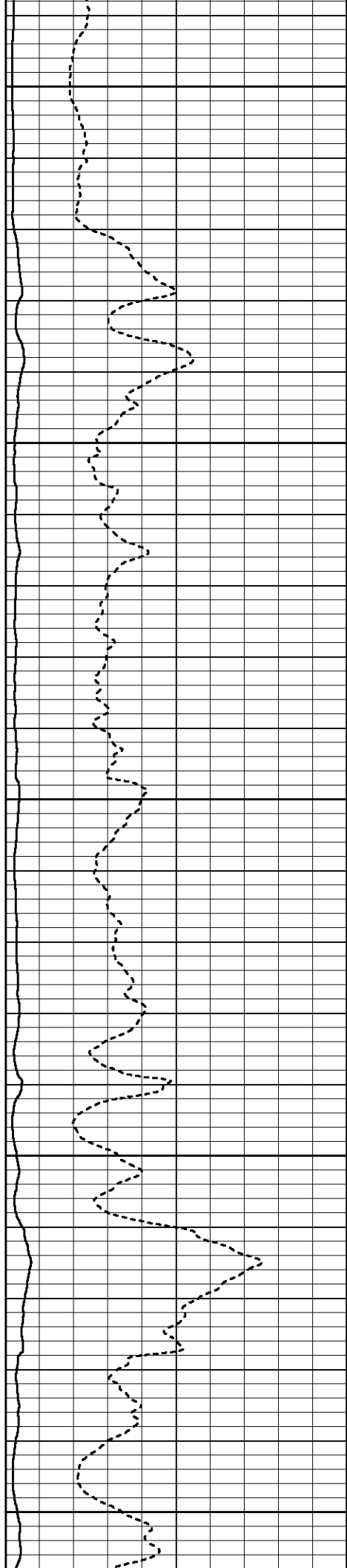
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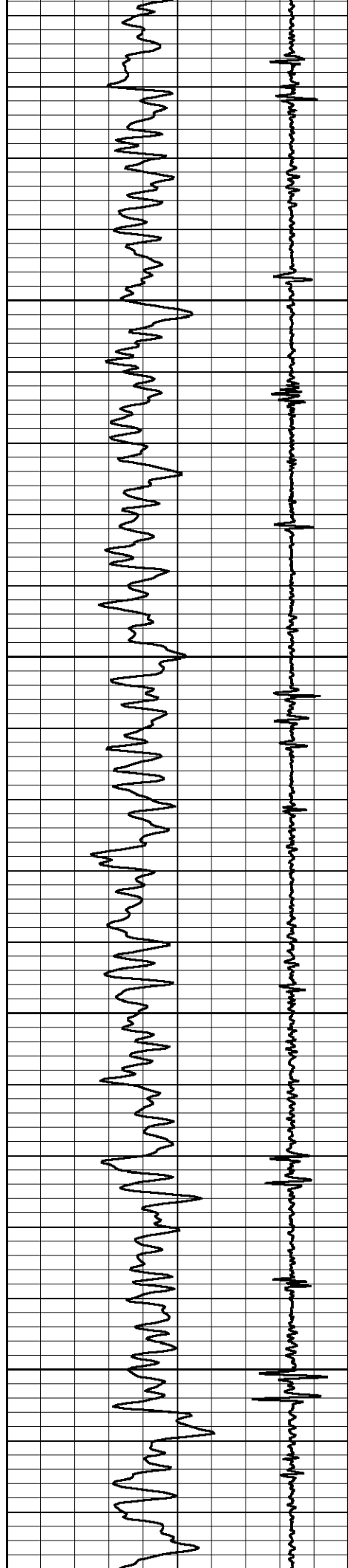
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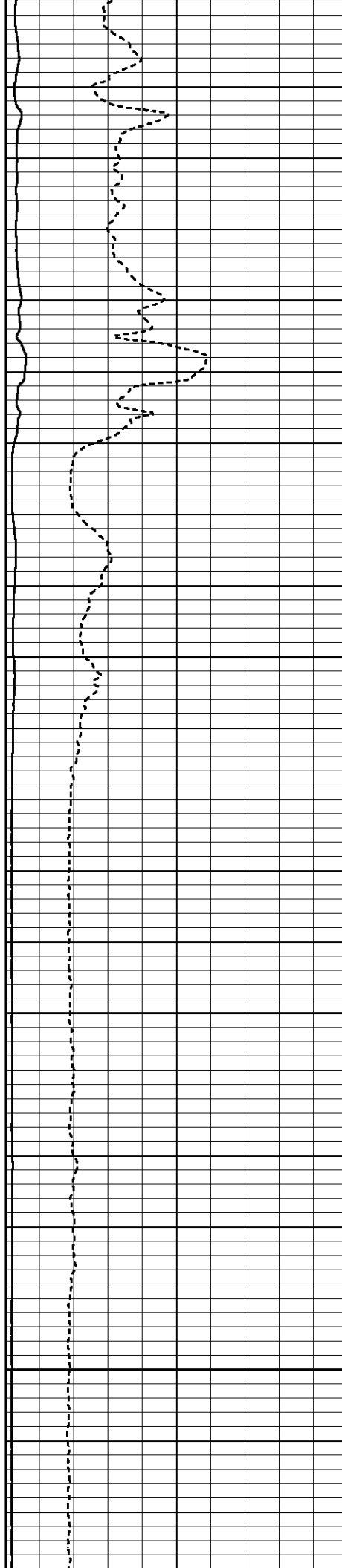


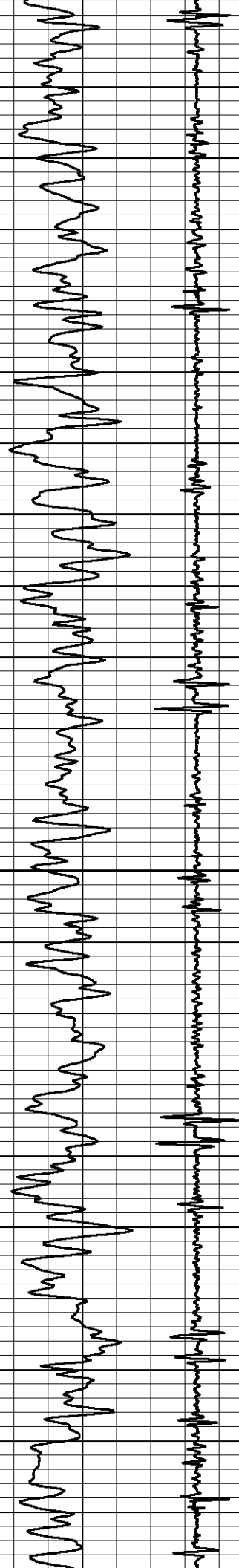
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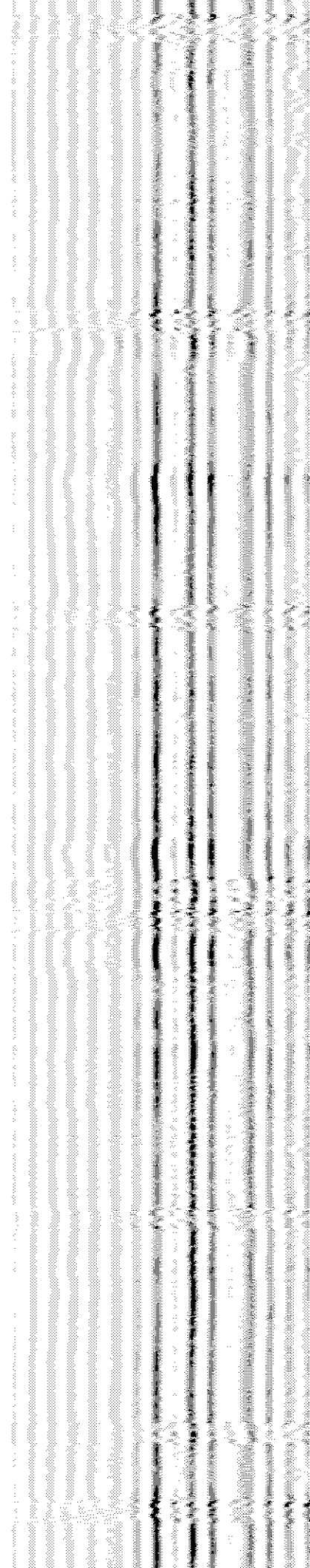
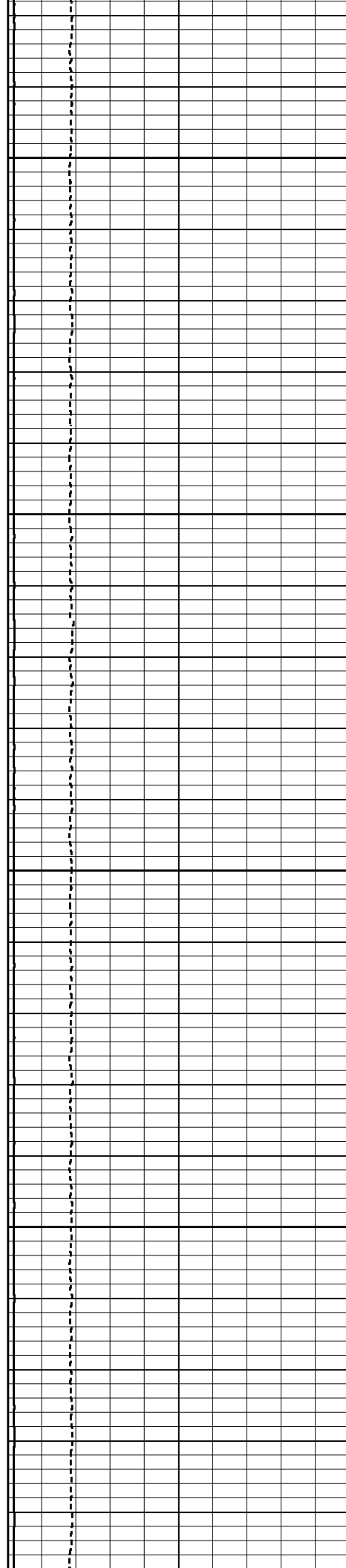


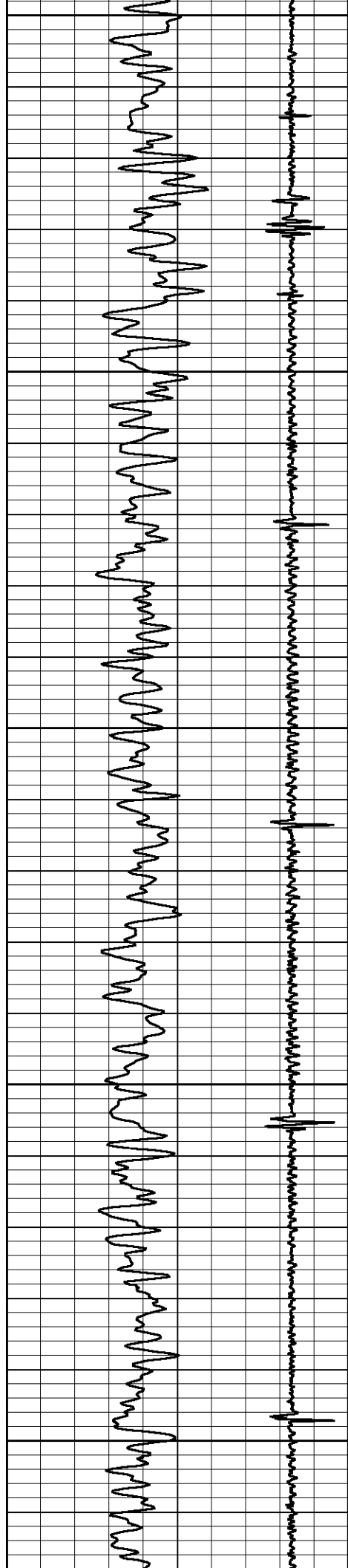
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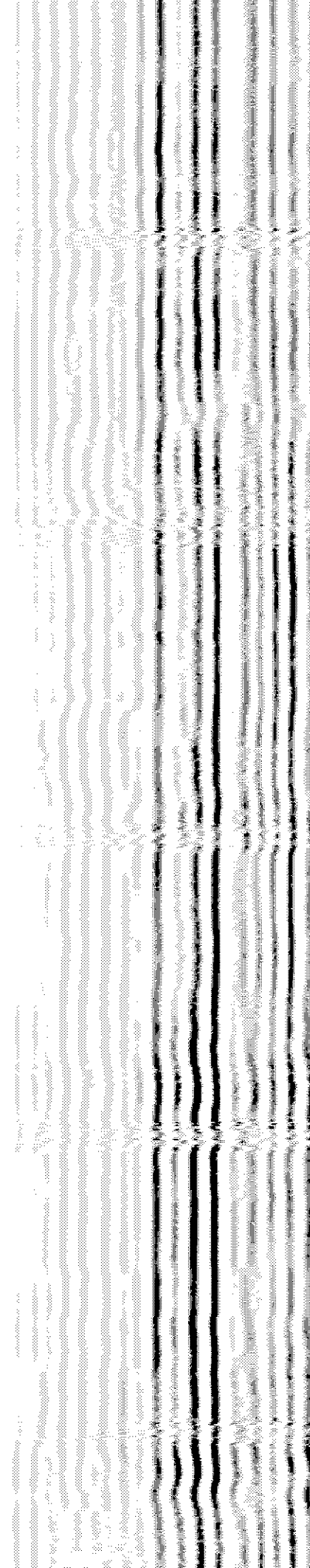
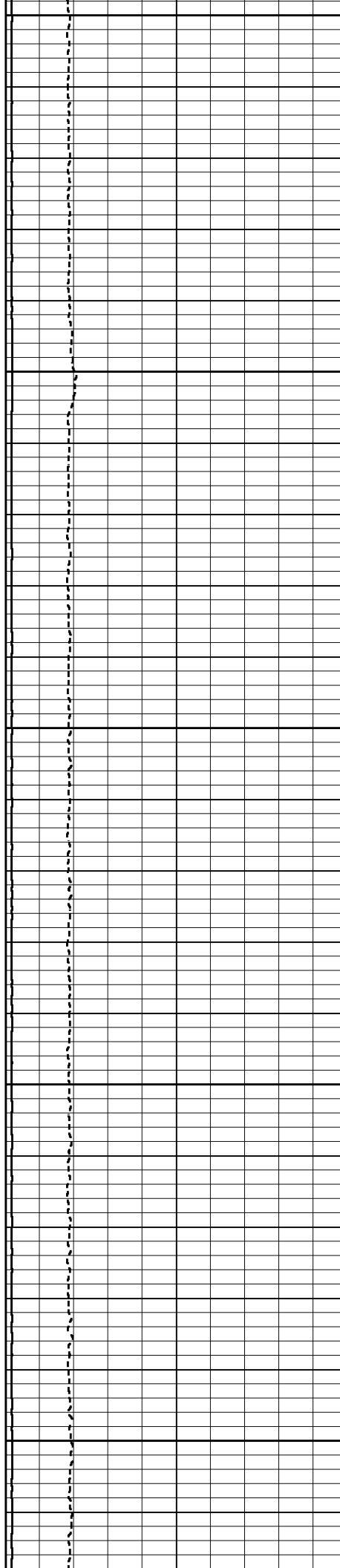
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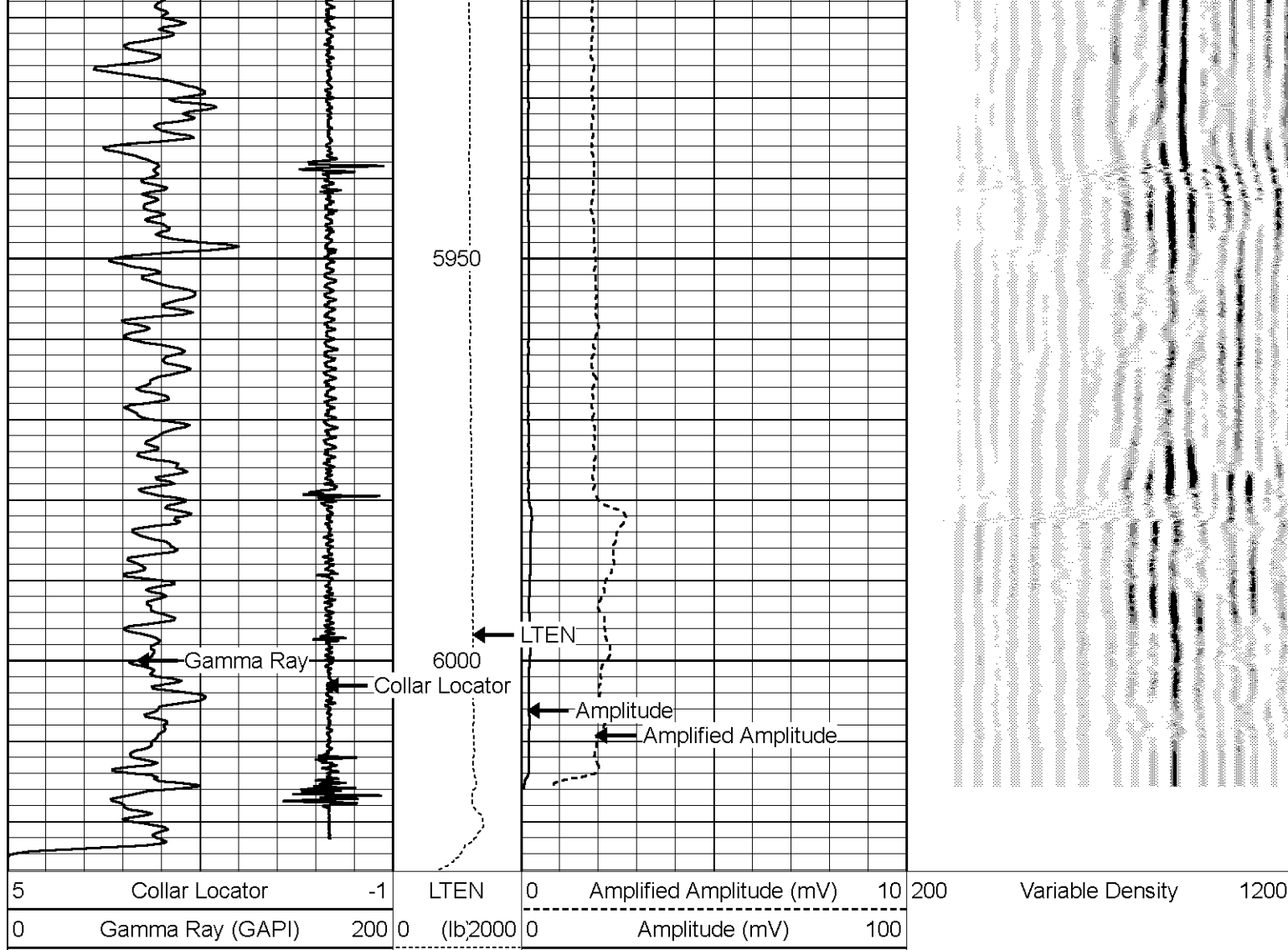
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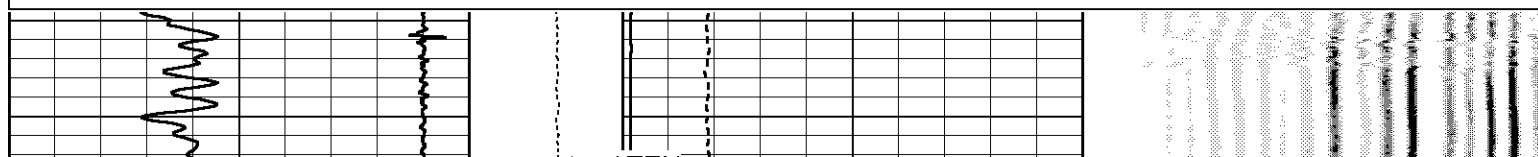
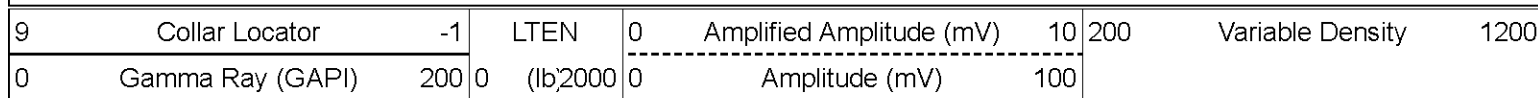


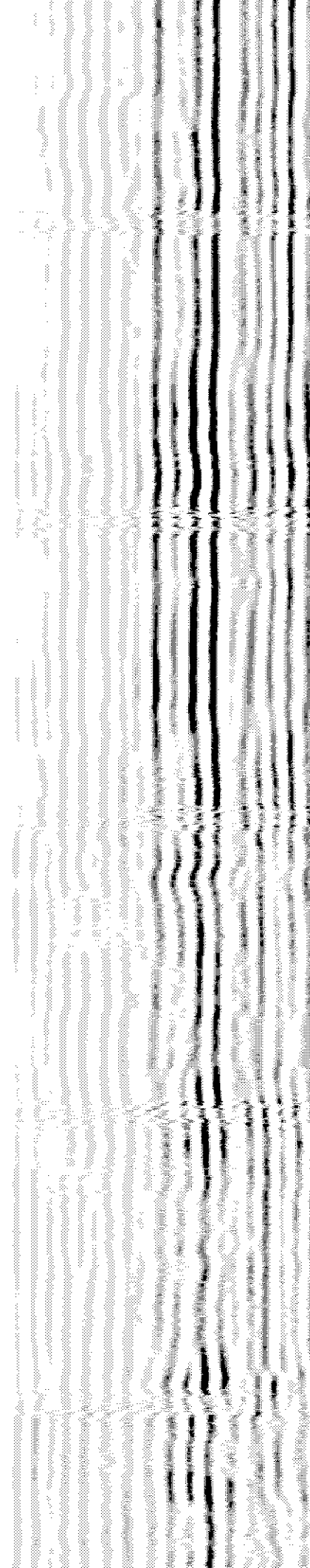
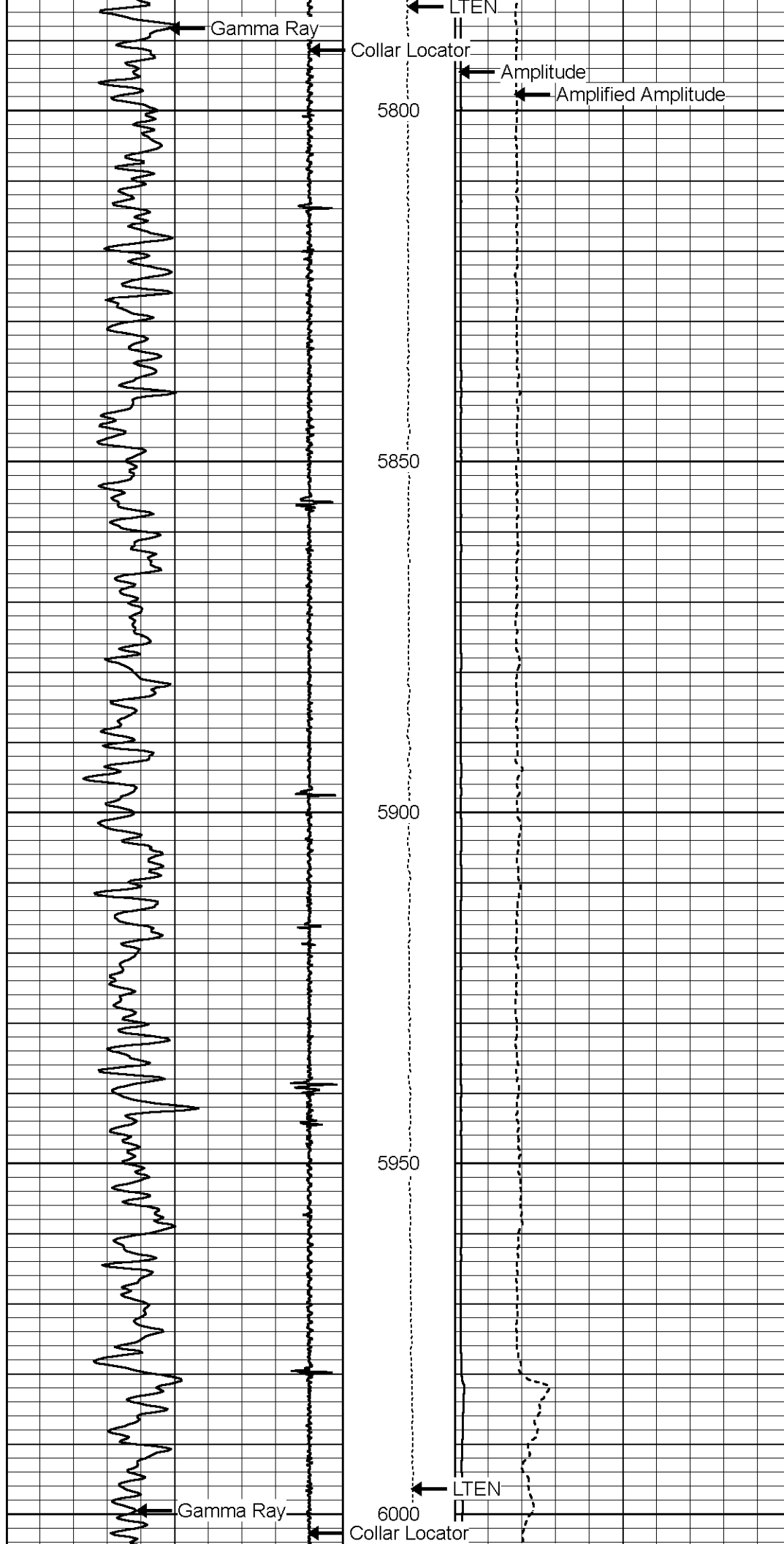
MAIN PASS

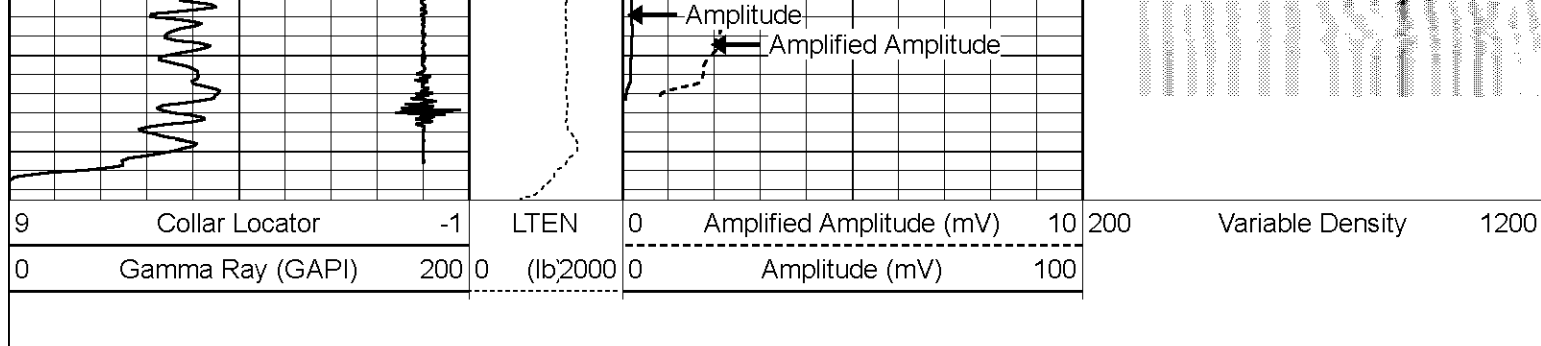


REPEAT PASS

Database File: bonanza creek energy state seventy holes 21-24-4hnb.db
 Dataset Pathname: pass4.1
 Presentation Format: cbl_dr
 Dataset Creation: Mon Feb 09 17:09:05 2015 by Calc 7.0 B1
 Charted by: Depth in Feet scaled 1:240







REPEAT PASS

Calibration Report

Database File: bonanza creek energy state seventy holes 21-24-4hnb.db
 Dataset Pathname: pass5.1
 Dataset Creation: Mon Feb 09 17:52:09 2015 by Calc 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 mV
 Calibrated Amplitude: 81.1961 mV
 Reading at Signal Zero: -0.005034 V
 Reading in Free Pipe: 0.981348 V

Gain: 81.9116 104.582
 Offset: 0.812343 -0.391518



Company: BONANZA CREEK ENERGY
 Well: STATE SEVENTY HOLES 21-24-4HNB
 Field: WATTENBERG
 County: WELD
 State: COLORADO