



CEMENT BOND
GAMMA RAY
CCL LOG

Company		GREAT WESTERN OIL AND GAS					
Well		SCHAEFER LD 13-032HC					
Field		WATTENBERG					
County		ADAMS					
State		COLORADO		Country USA			
Location:		APL # : 05-001-10 254		Other Services			
SEC 24 TWP 1S RGE 67W		Permanent Datum		Elevation			
Log Measured From		G.L. K.B., 20'		5021'			
Drilling Measured From		K.B.		Elevation K.B. 5041' D.F. 5042' G.L. 5021'			
Date	MAR 7 2019						
Run Number	ONE						
Depth Driller	NA						
Depth Logger	8050'						
Bottom Logged Interval	8050'						
Top Log Interval	SURFACE						
Open Hole Size	8.5"						
Type Fluid	H2O						
Density / Viscosity	8.4						
Max. Recorded Temp.	236 DEG F						
Estimated Cement Top	LOGGED						
Time Well Ready	1435						
Time Logger on Bottom	1506						
Equipment Number	79						
Location	PLATTEVILLE CO						
Recorded By	CORNETT						
Witnessed By	LINDSEY						
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size		Wgt/ft		Top		Bottom
Surface String	9.625"		35#		SURFACE		1784'
Prod. String							
Production String	5.5"		17#		SURFACE		18218'
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

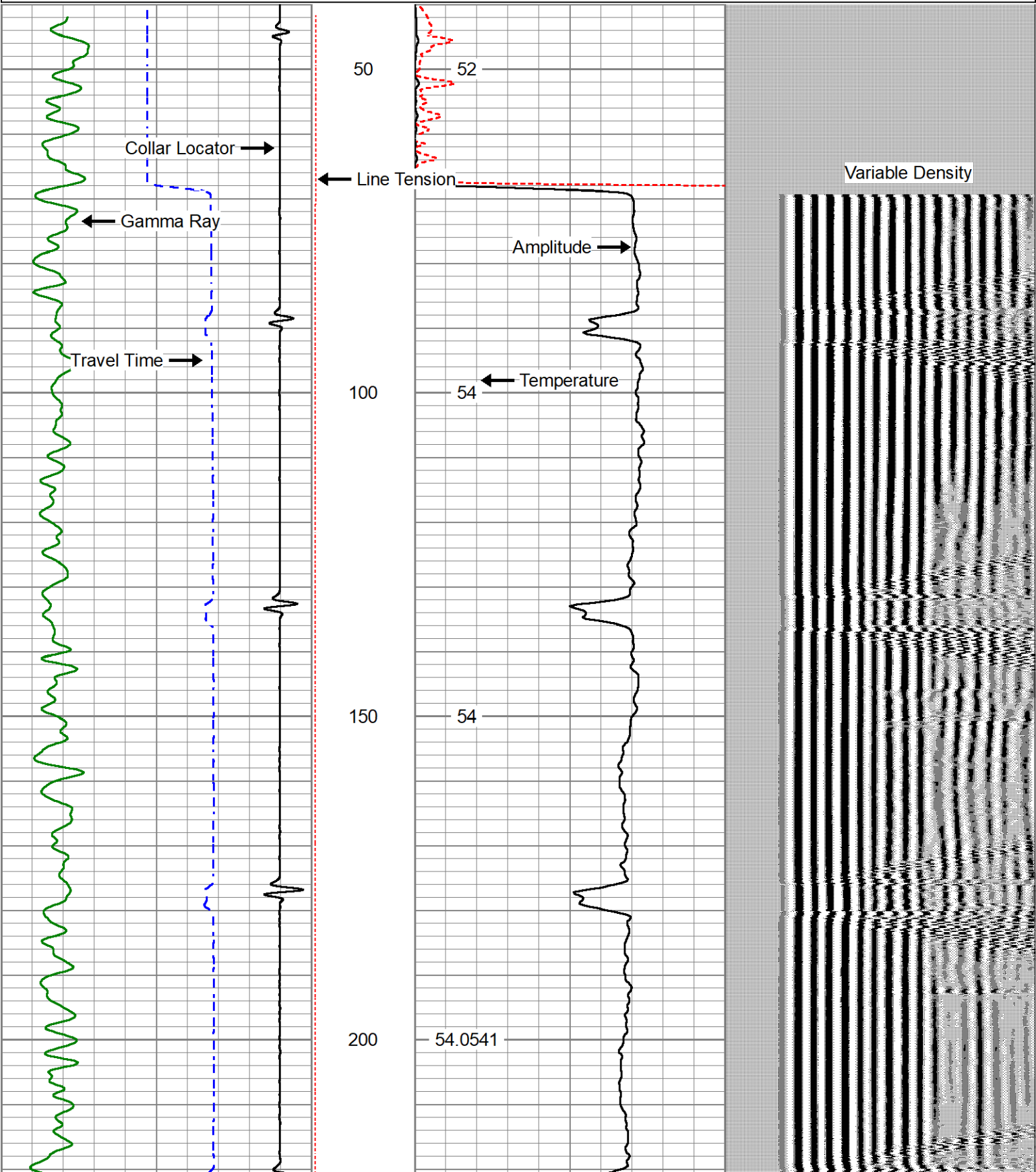
LOG CORRELATED TO CASING REPORT 2/2/19
SHORT JOINT 6859'-6869'
4.5" GAUGE RING RUN TO 8050'

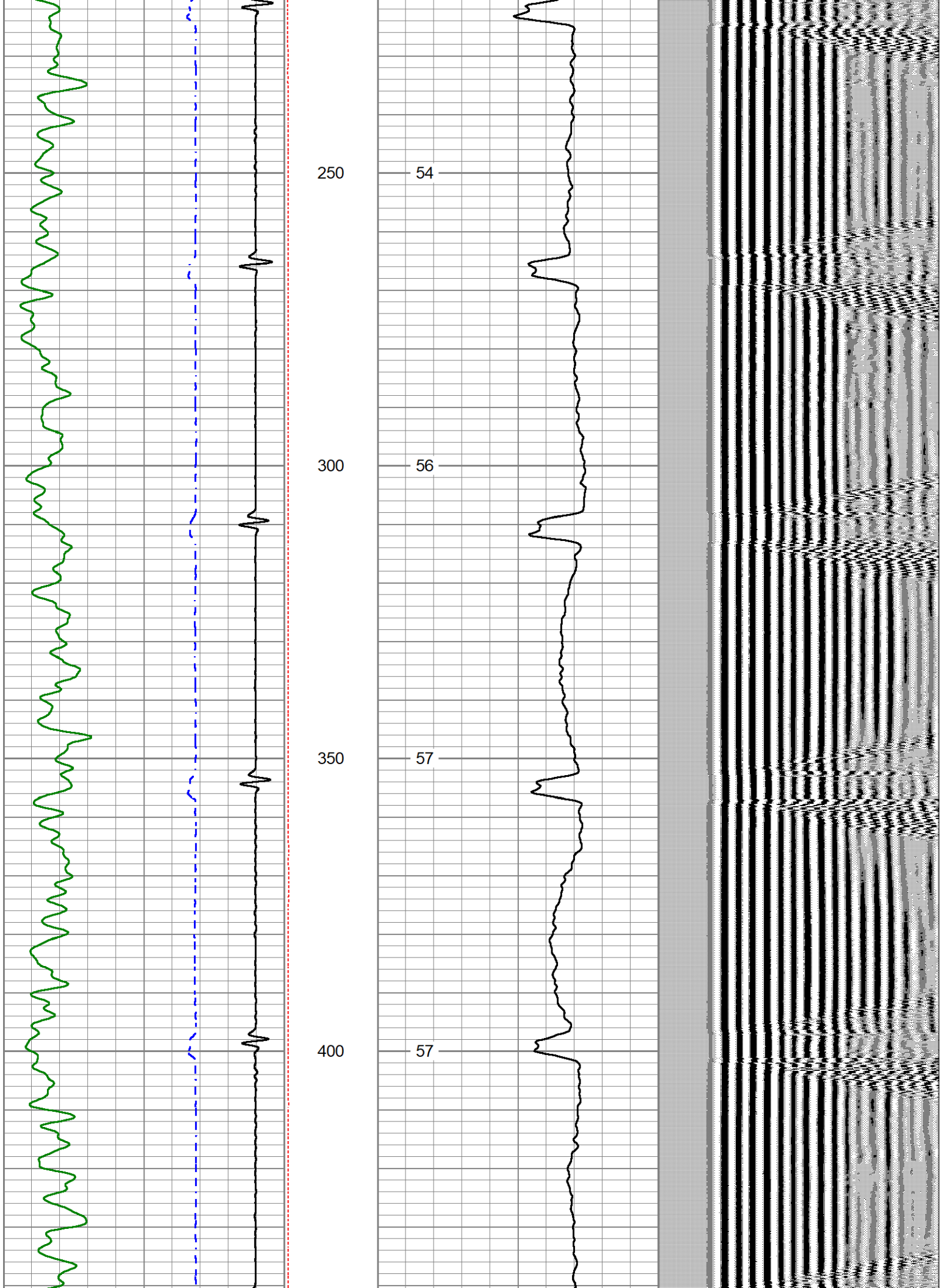


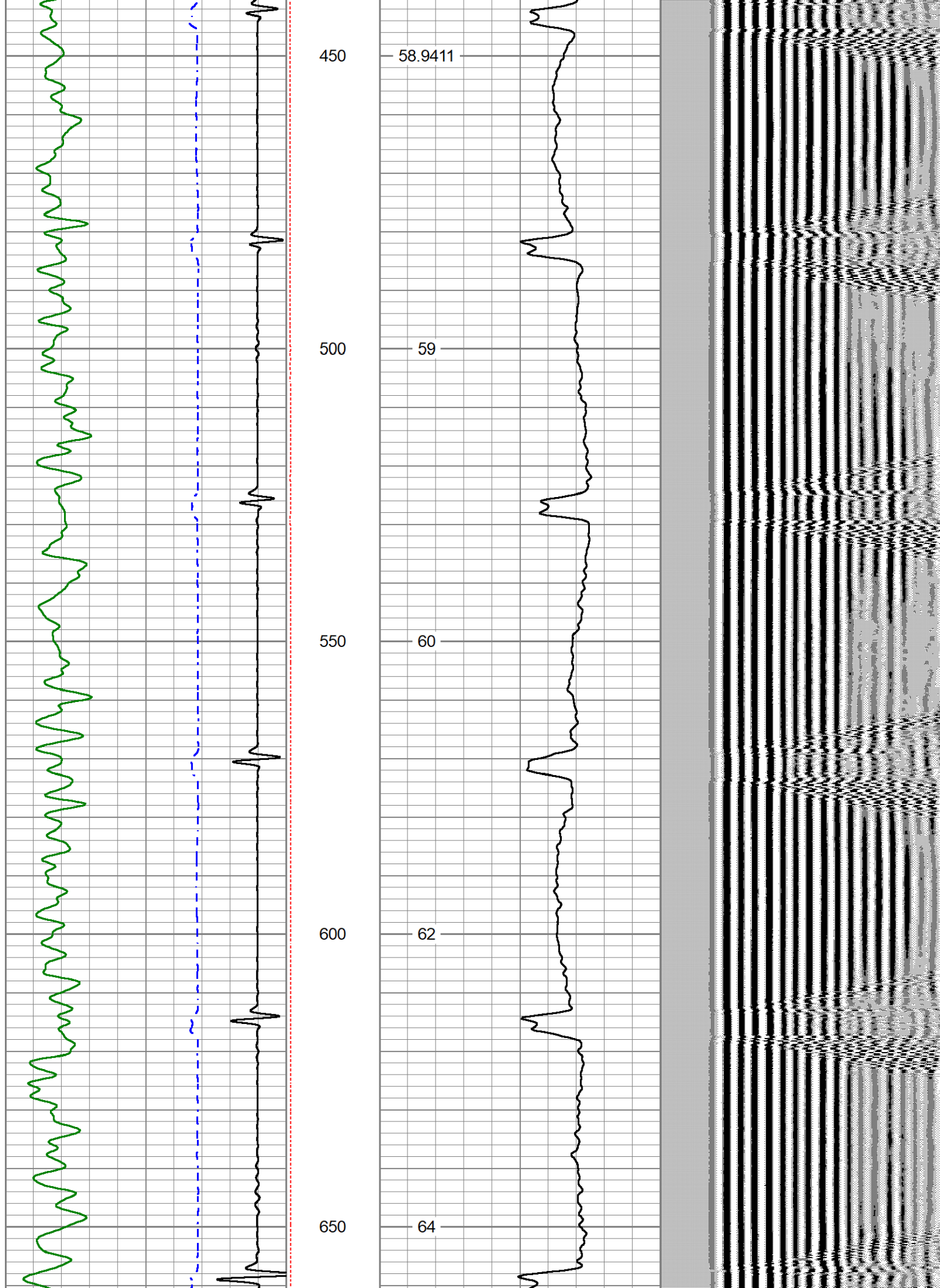
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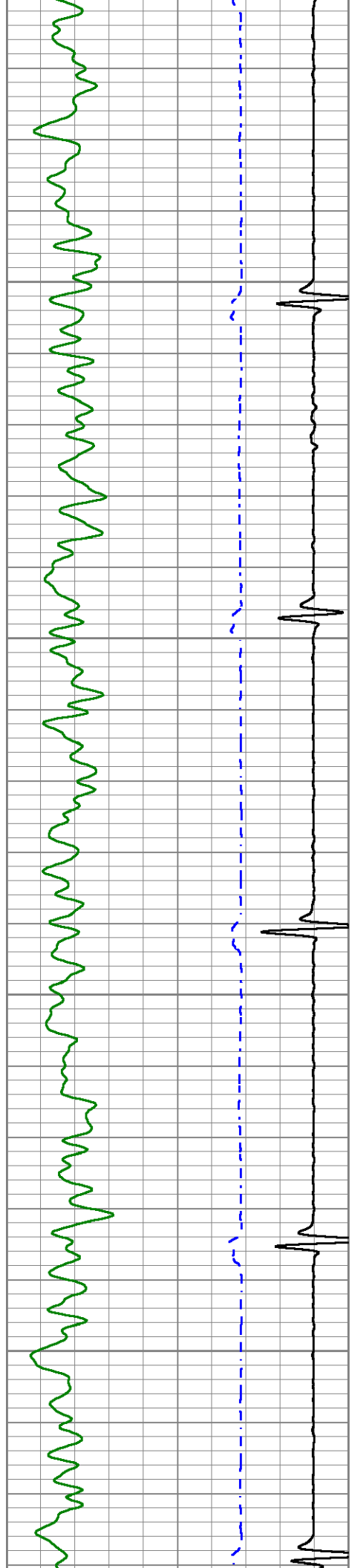
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Dataset Pathname	pass4
Presentation Format	cblww
Dataset Creation	Thu Mar 07 15:17:17 2019
Charted by	Depth in Feet scaled 1:240

400	Travel Time (usec)	200	LTEN	0	Amplified Amplitude (mV)	10	200	Variable Density (usec)	1200
9	Collar Locator	-1	0	(lb 5000	0	Amplitude (mV)	100		
0	Gamma Ray (GAPI)	200		TEMP					
				(degF)					









700

750

800

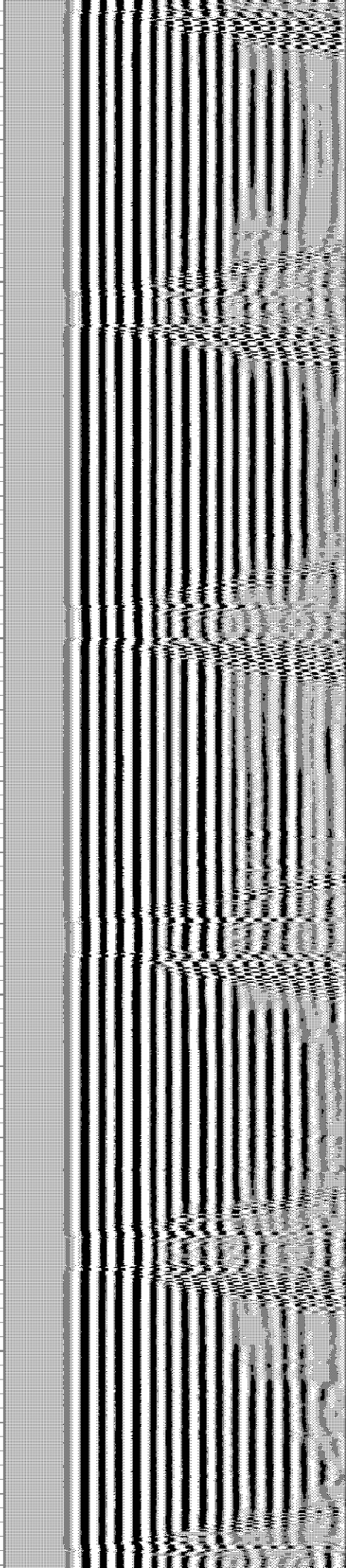
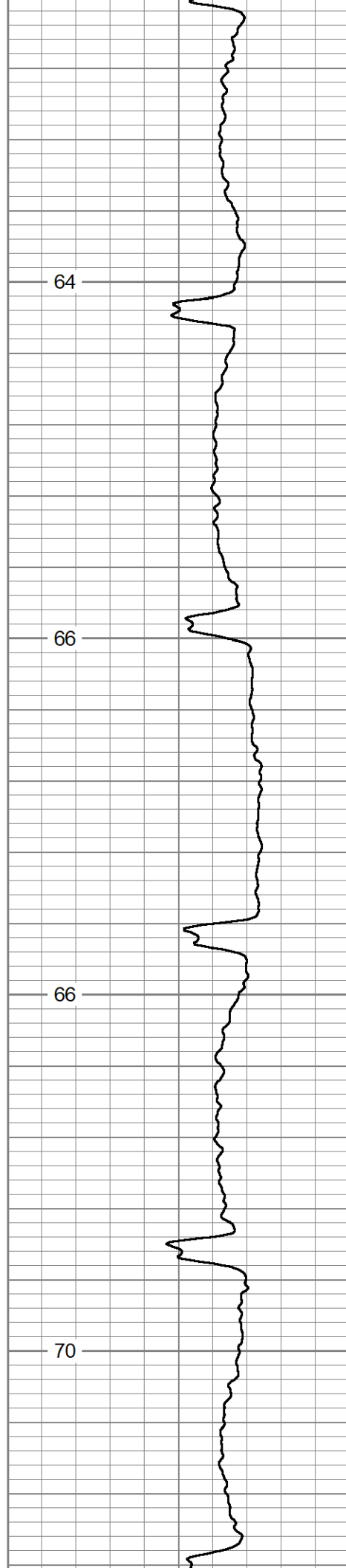
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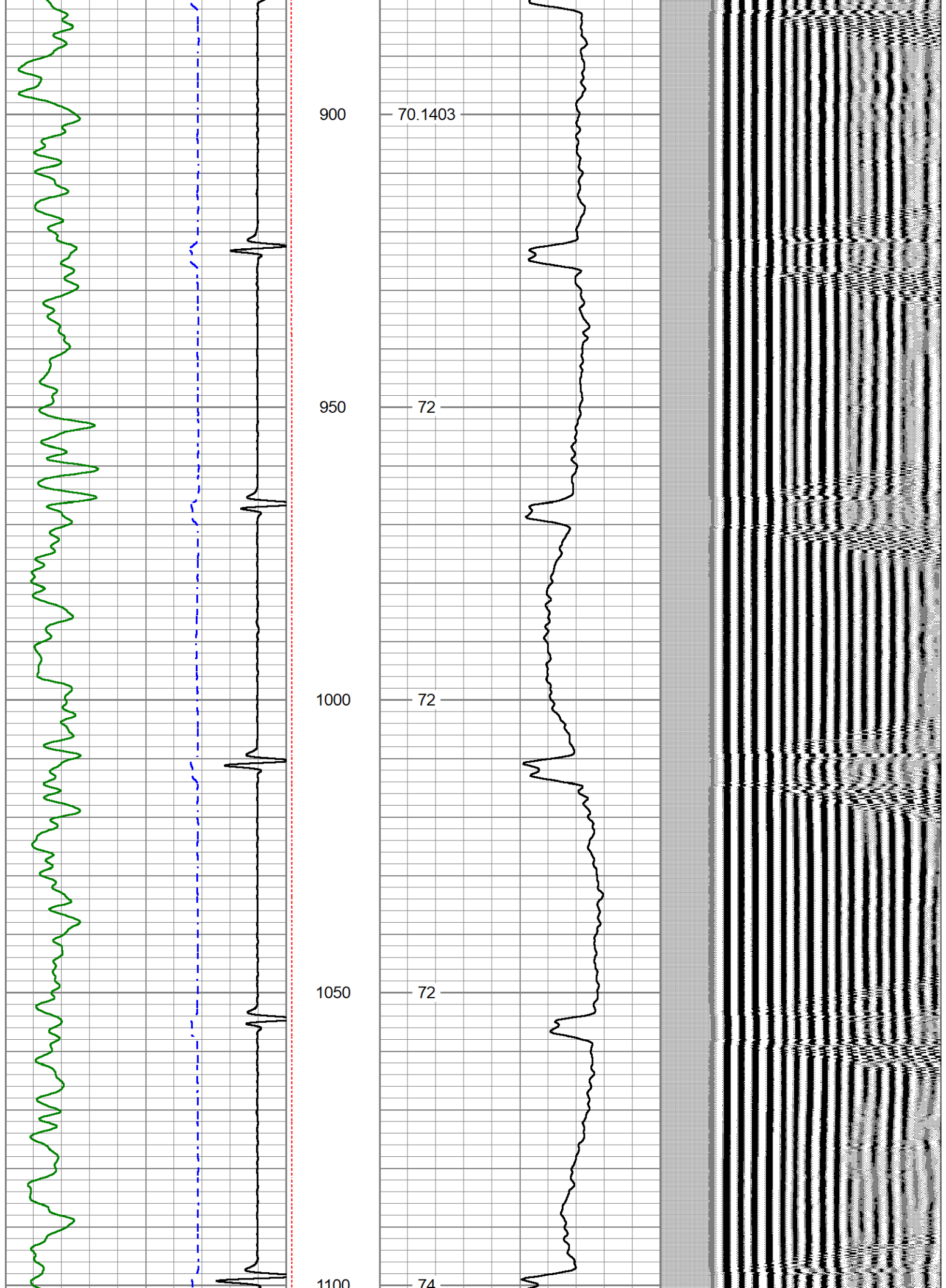
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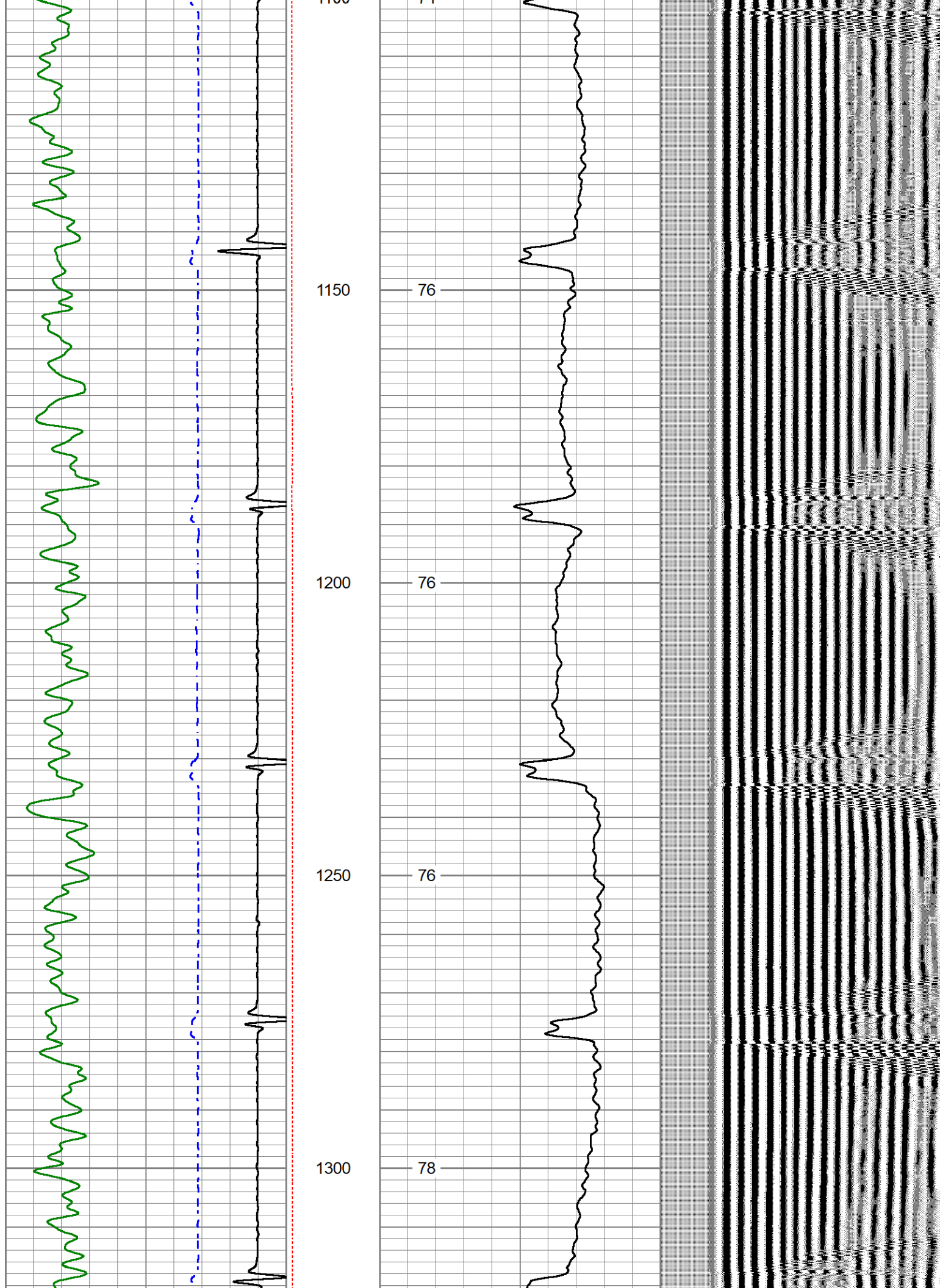
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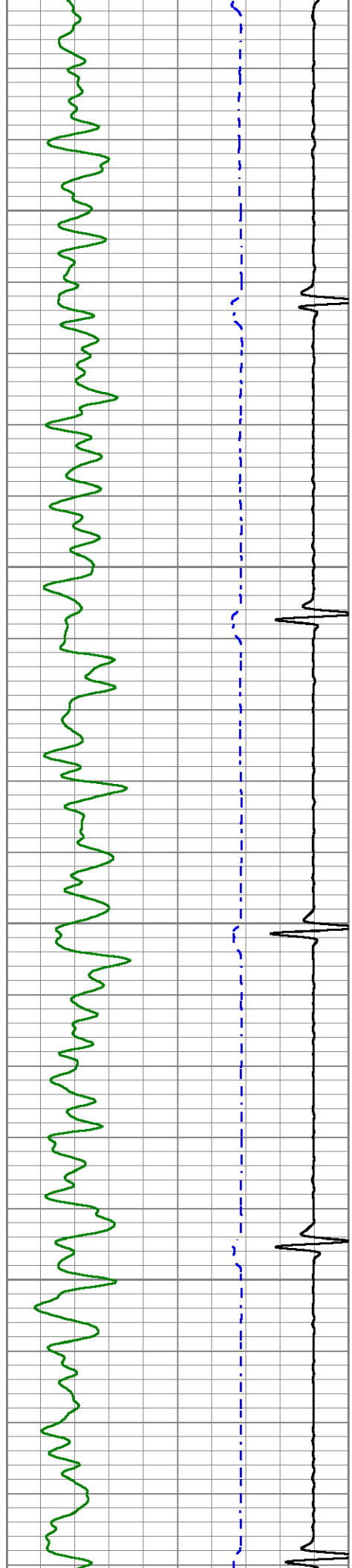
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1350

78

1400

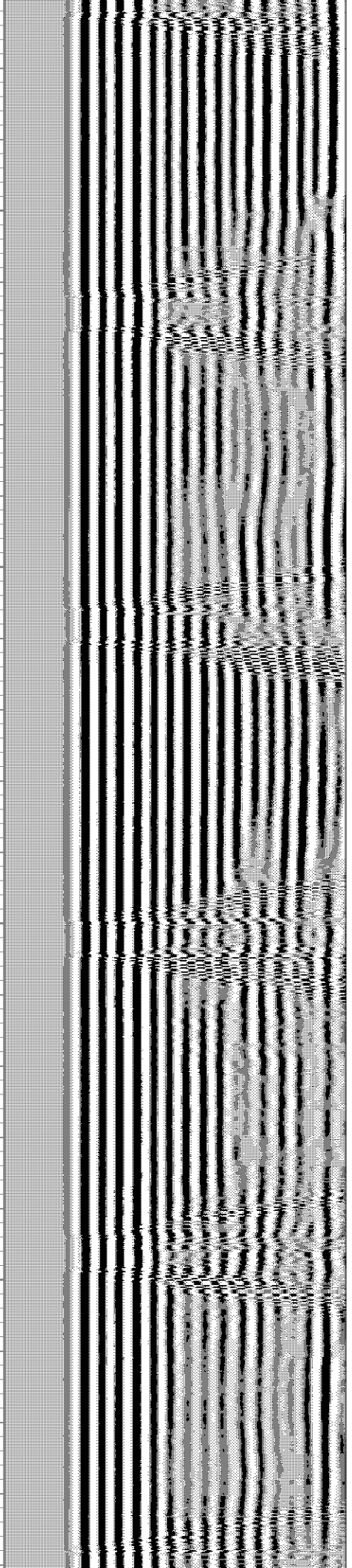
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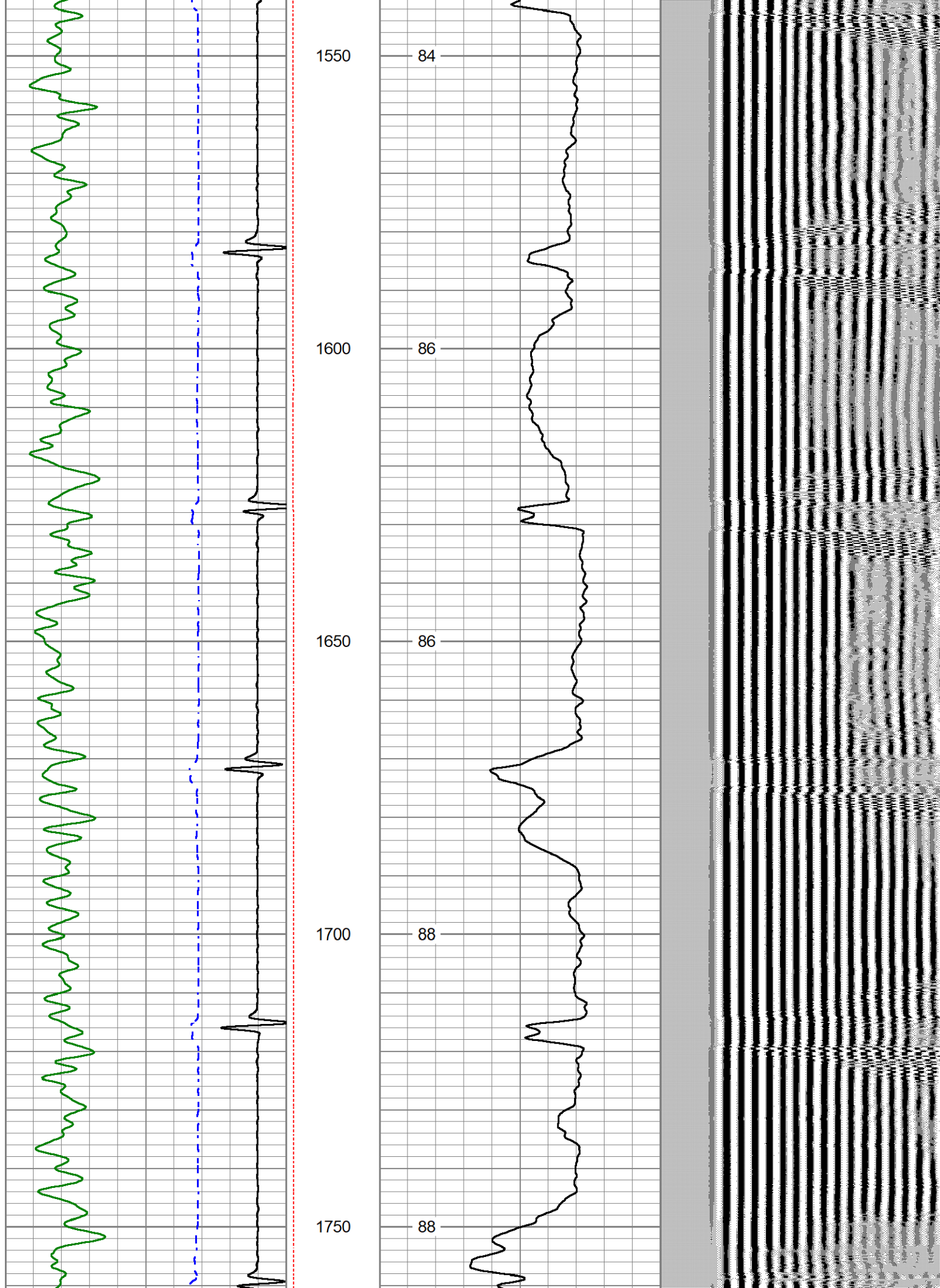
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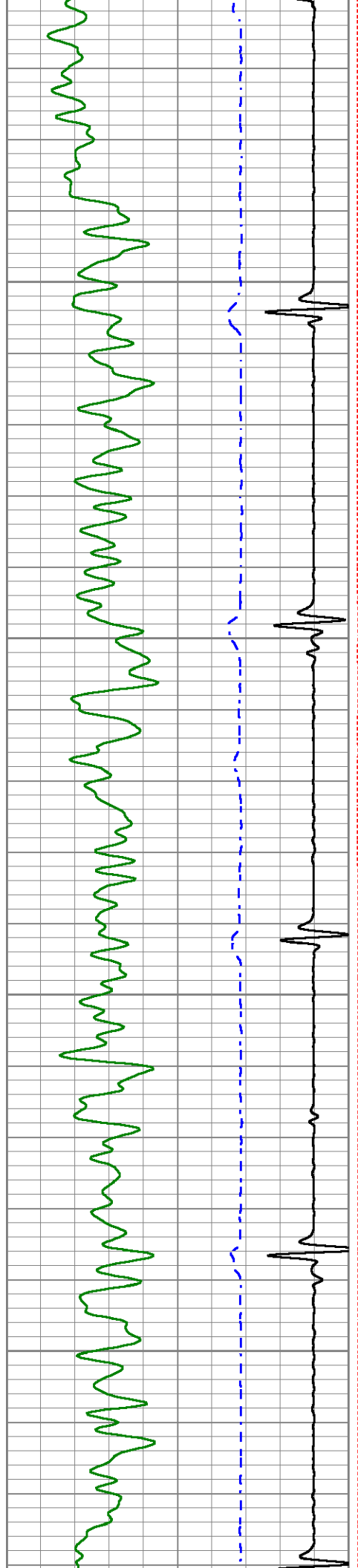
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1500

82.1643







1800

1850

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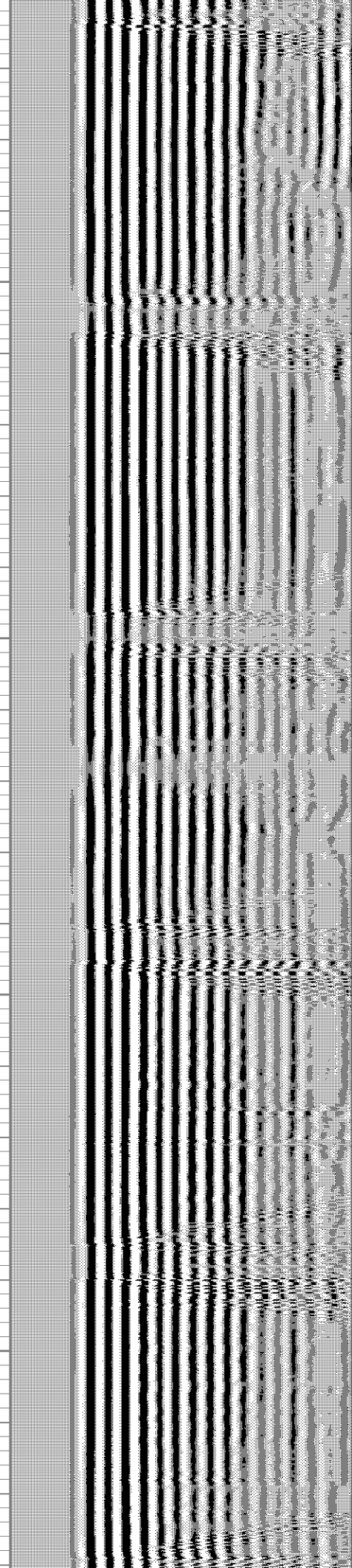
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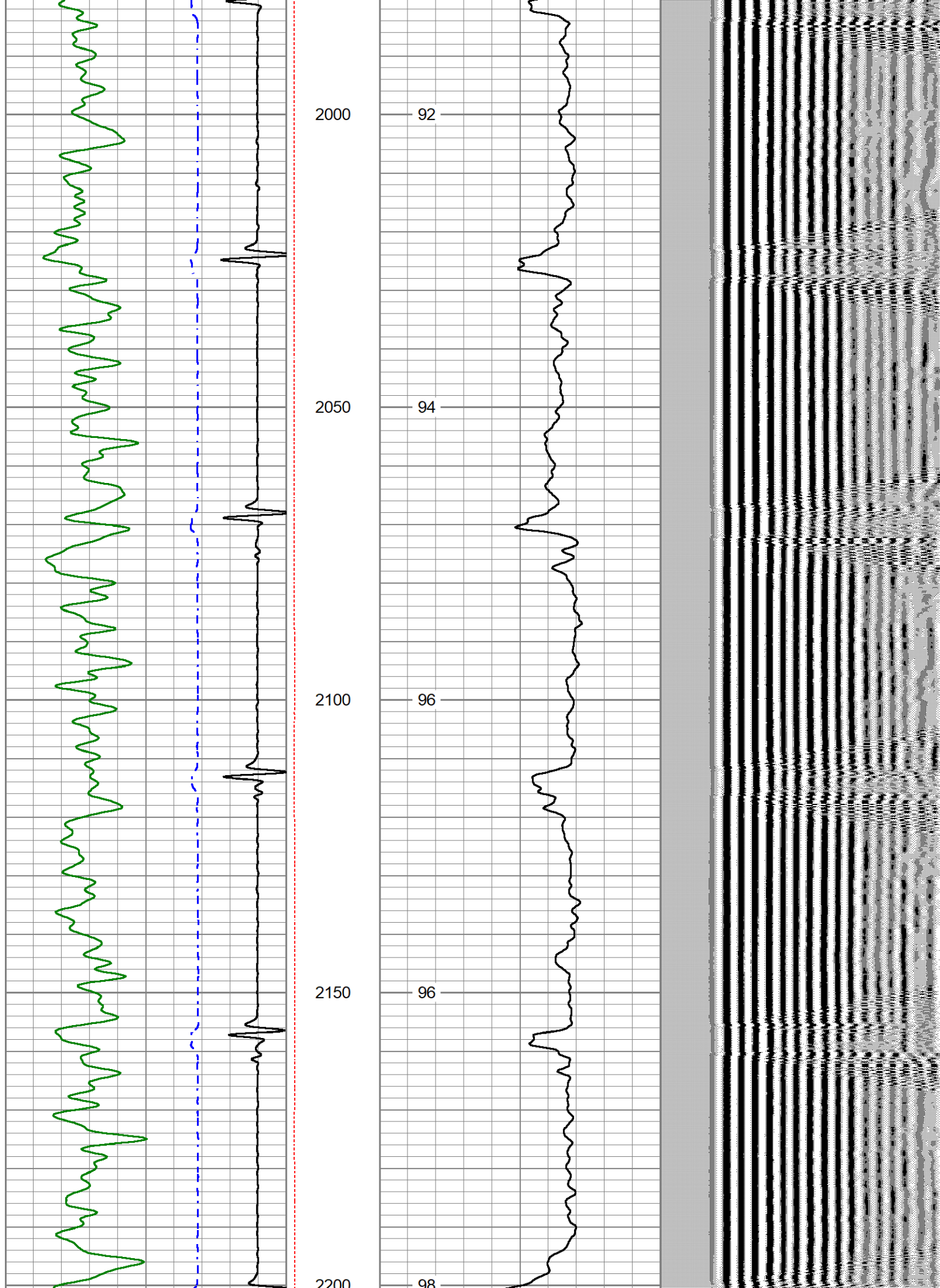
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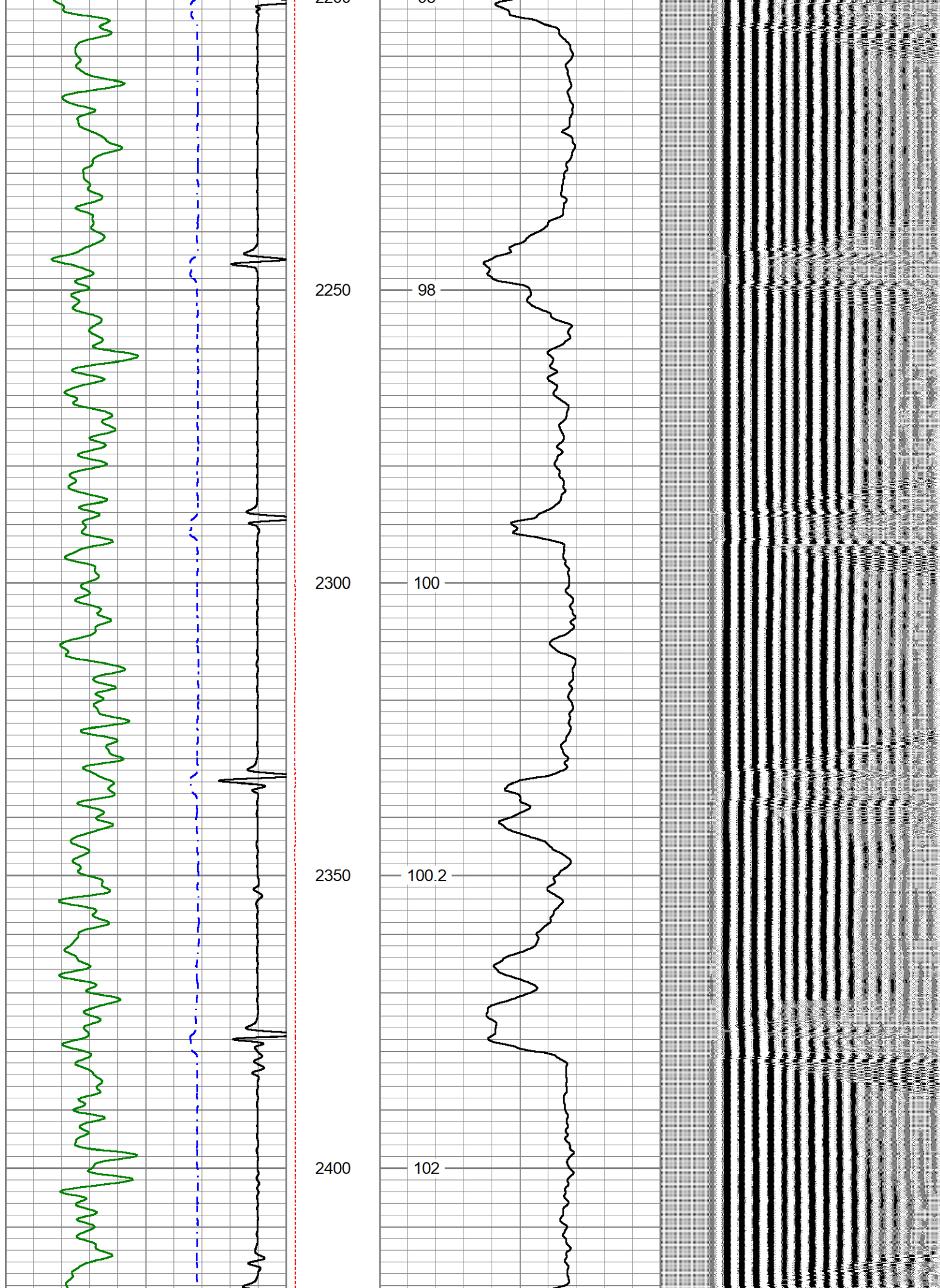
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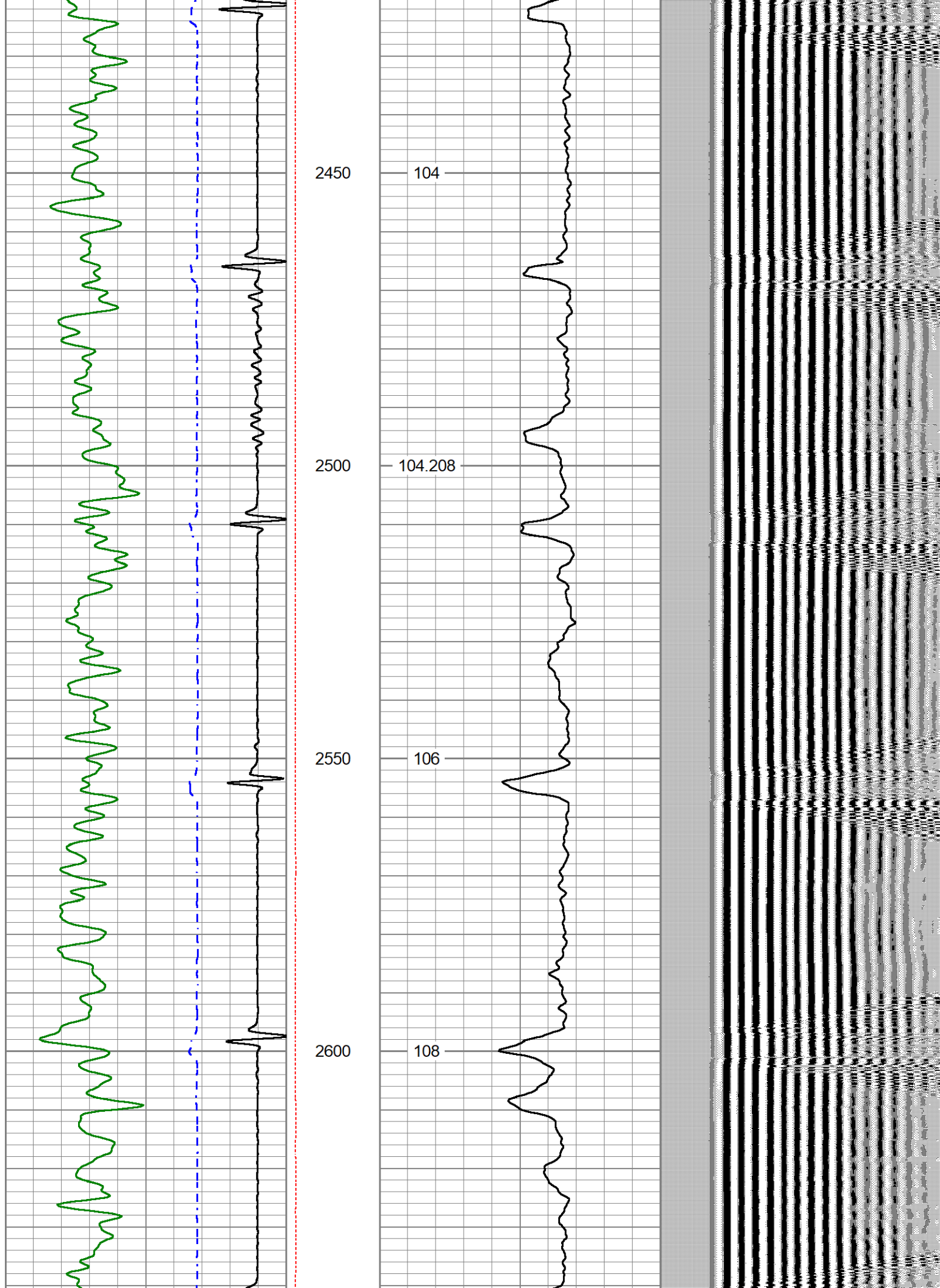
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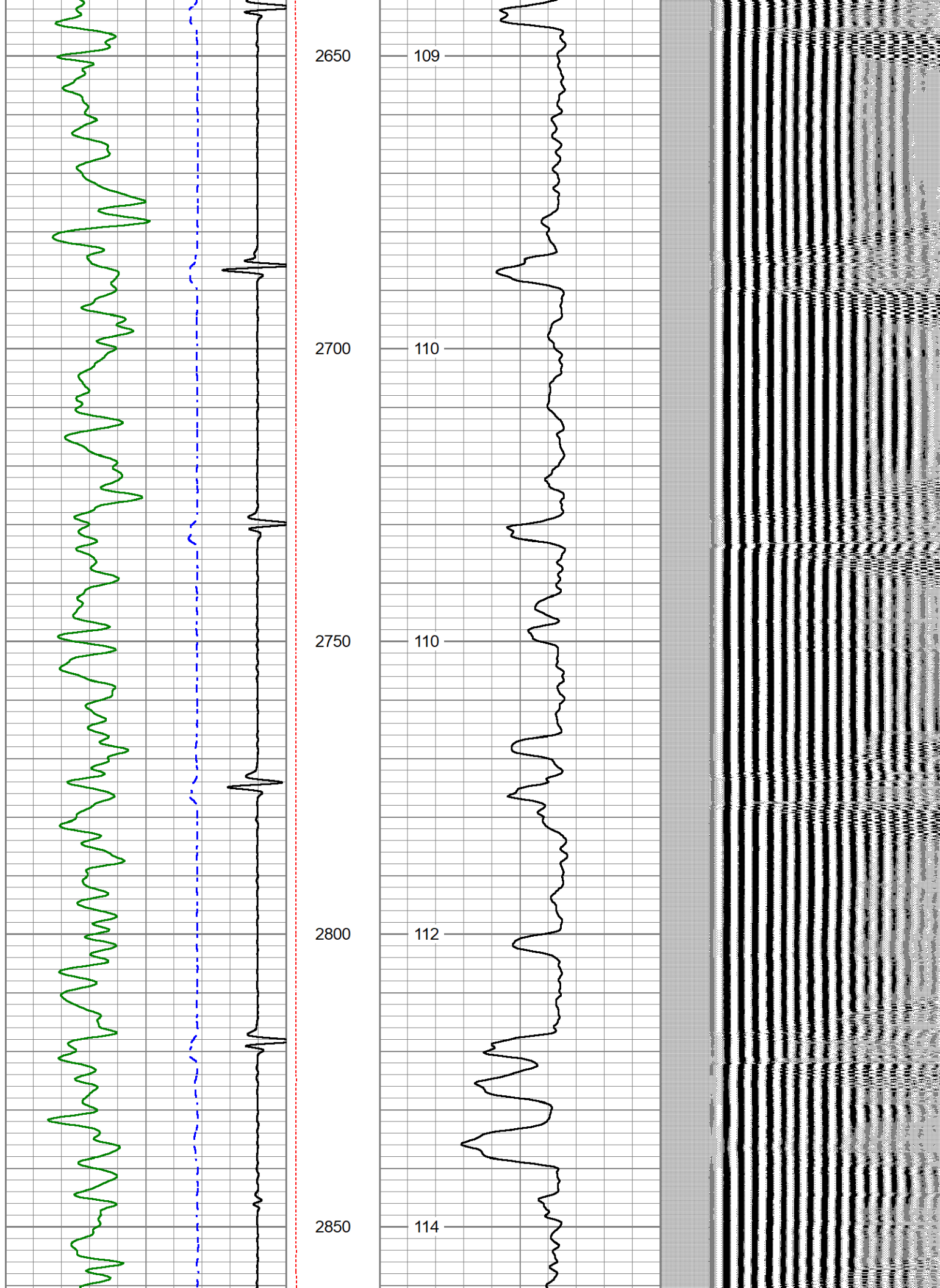
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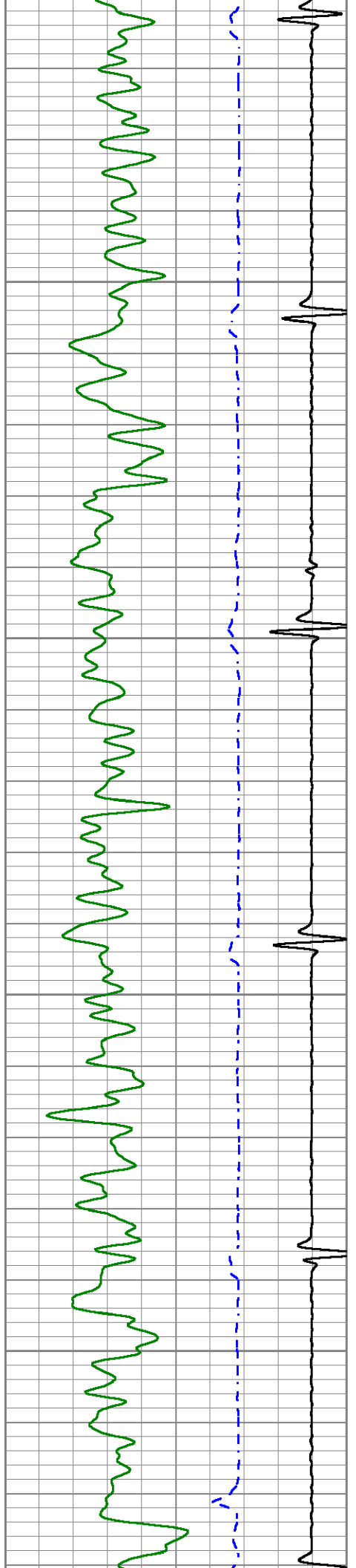












2900

2950

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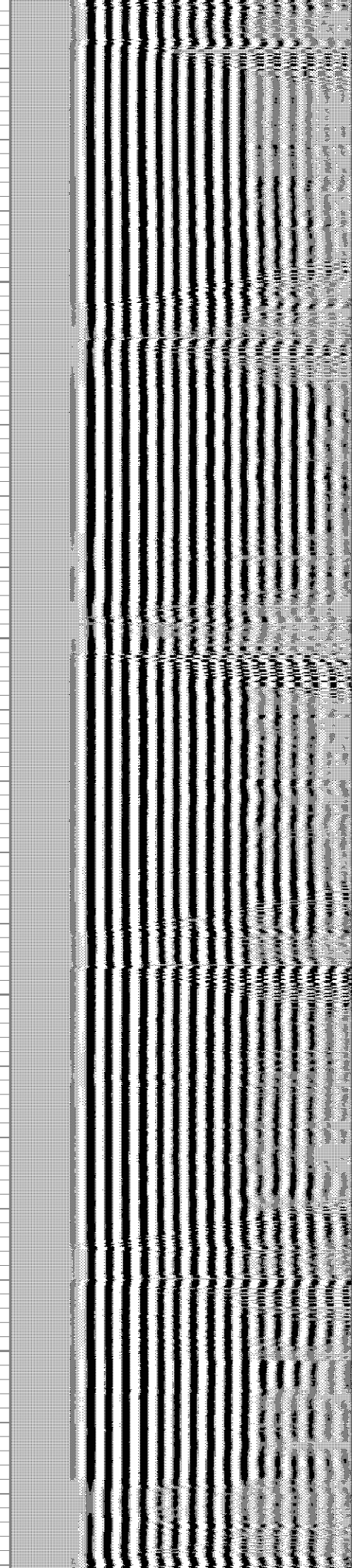
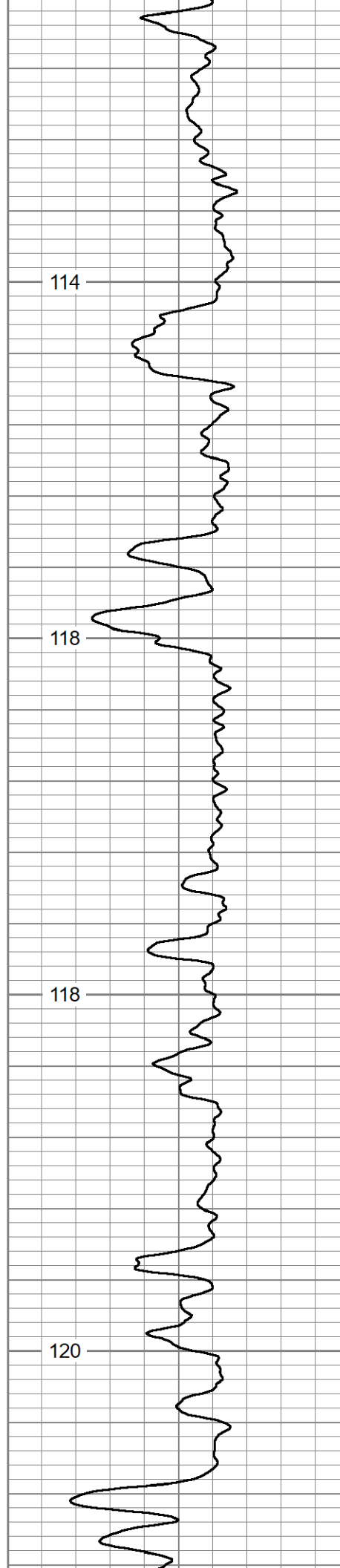
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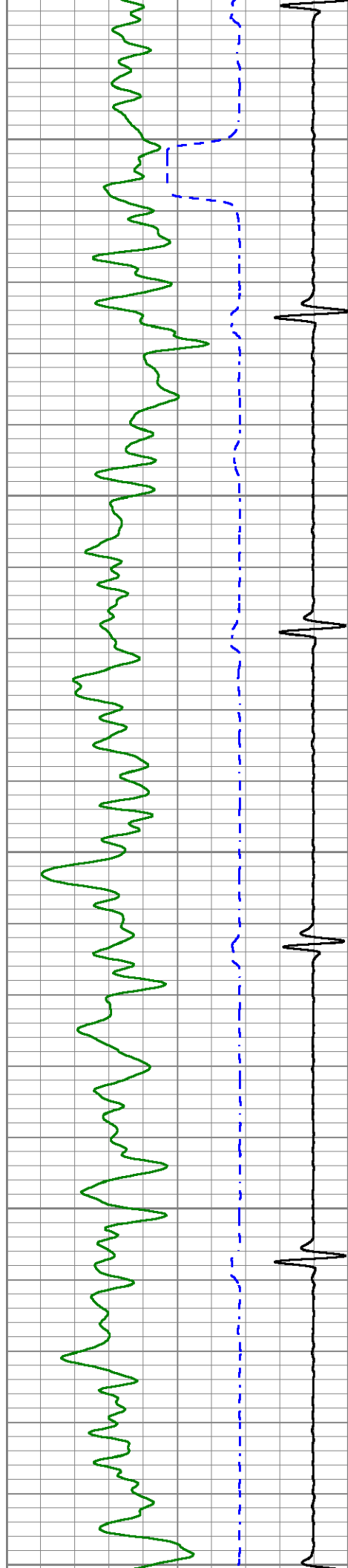
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120





3100

3150

3200

3250

3300

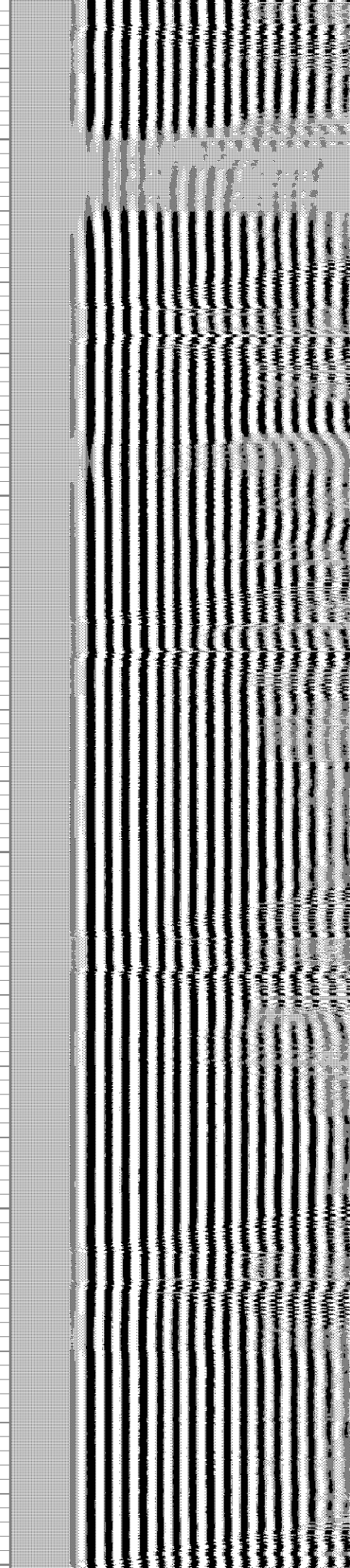
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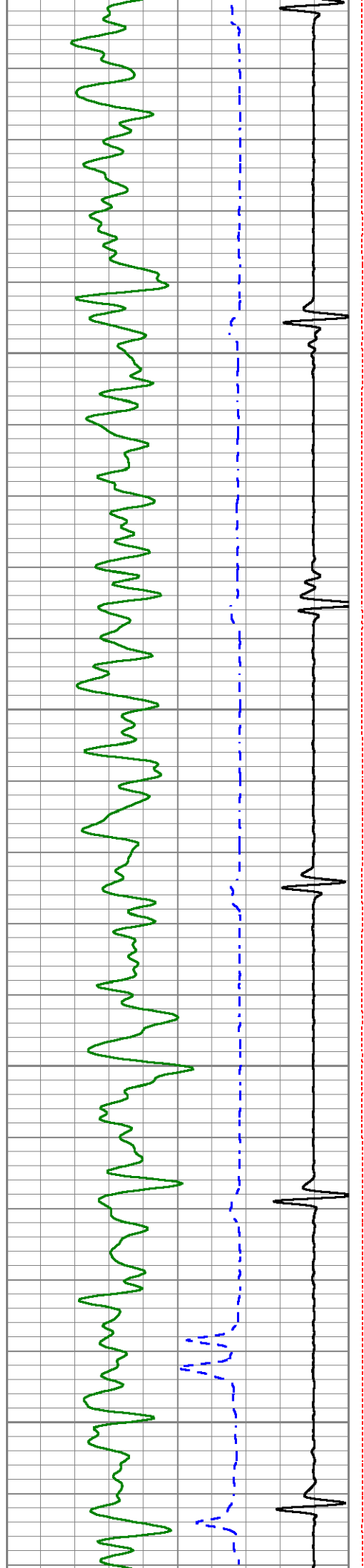
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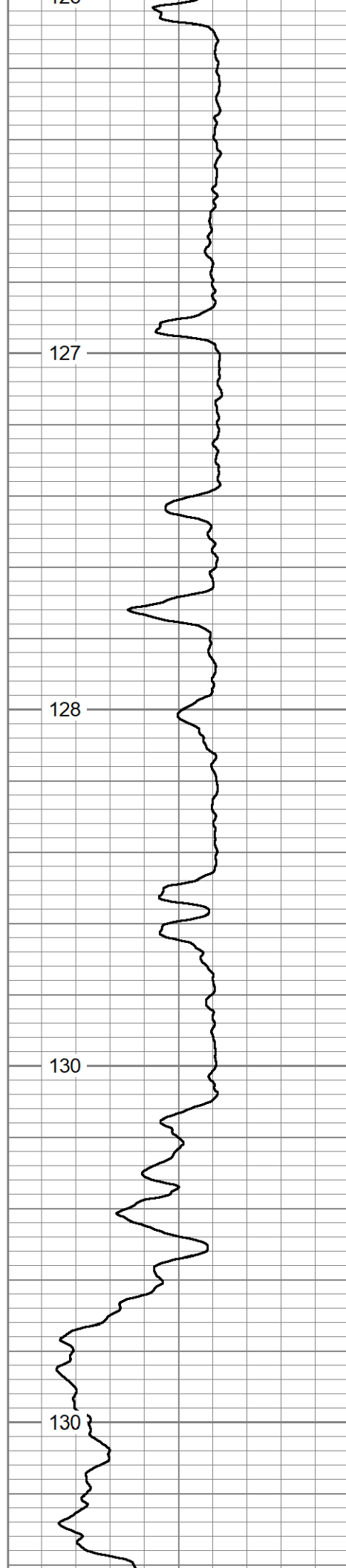


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3400

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3500



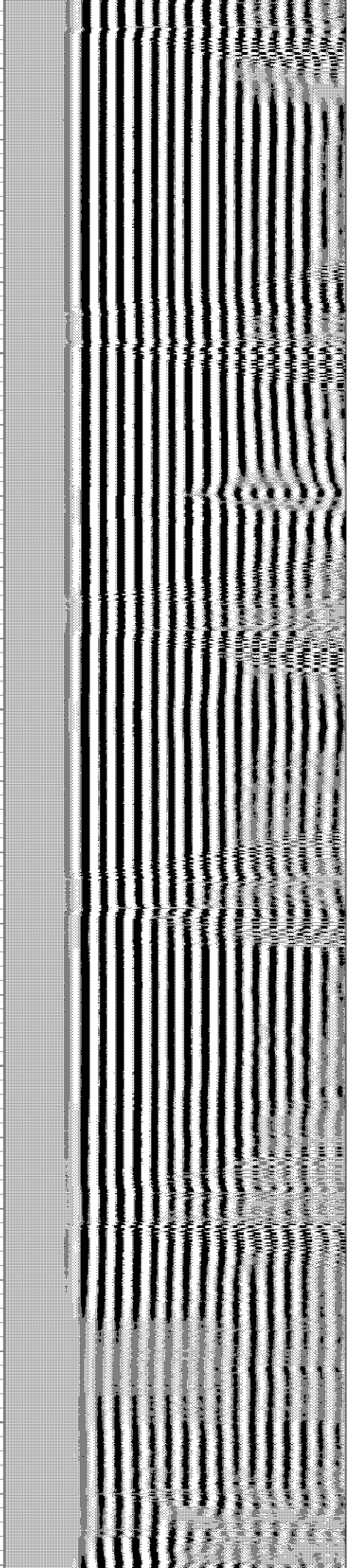
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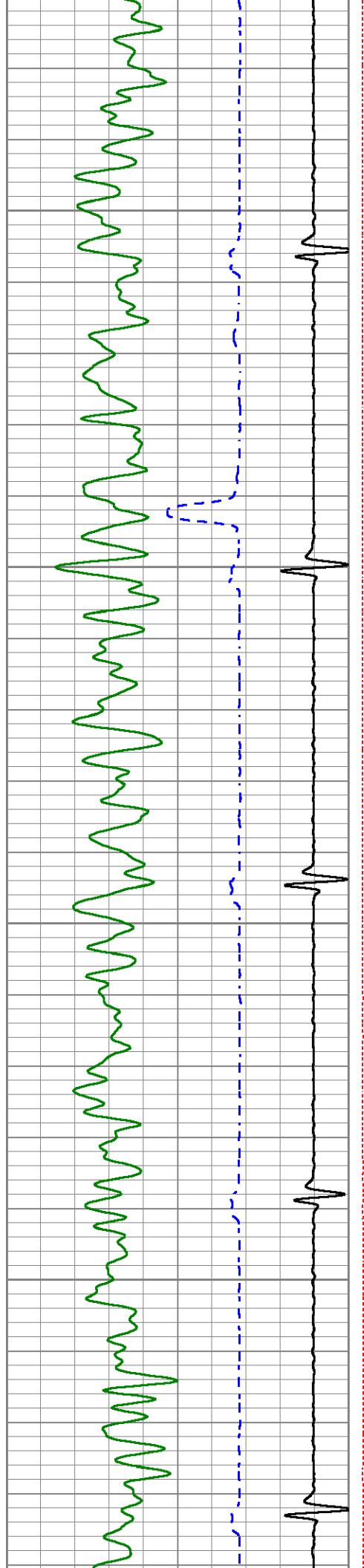
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130

130





3550

3600

3650

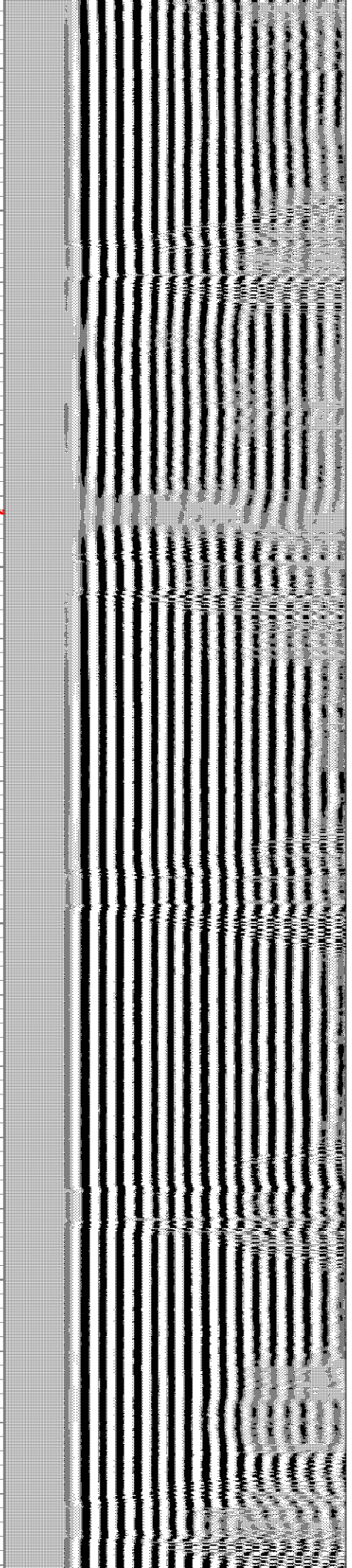
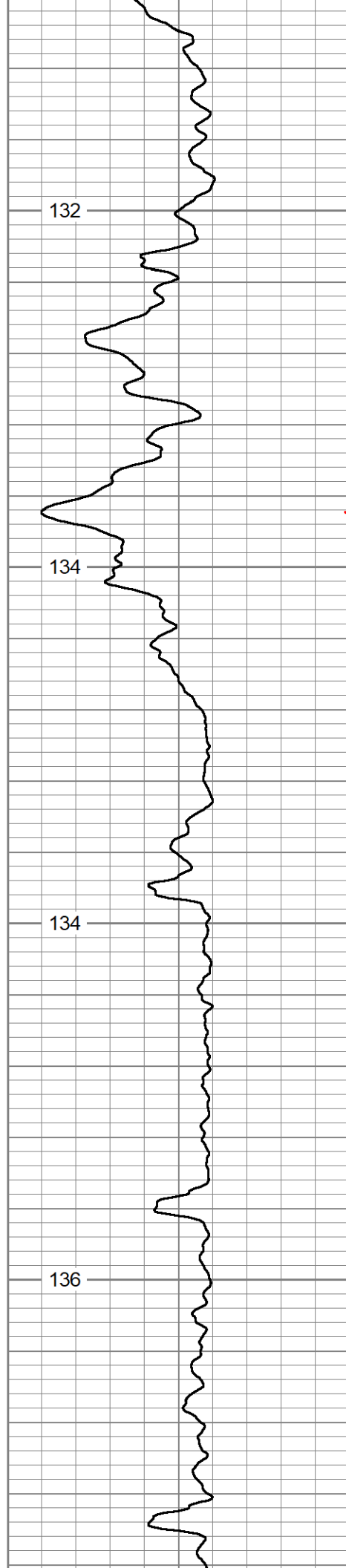
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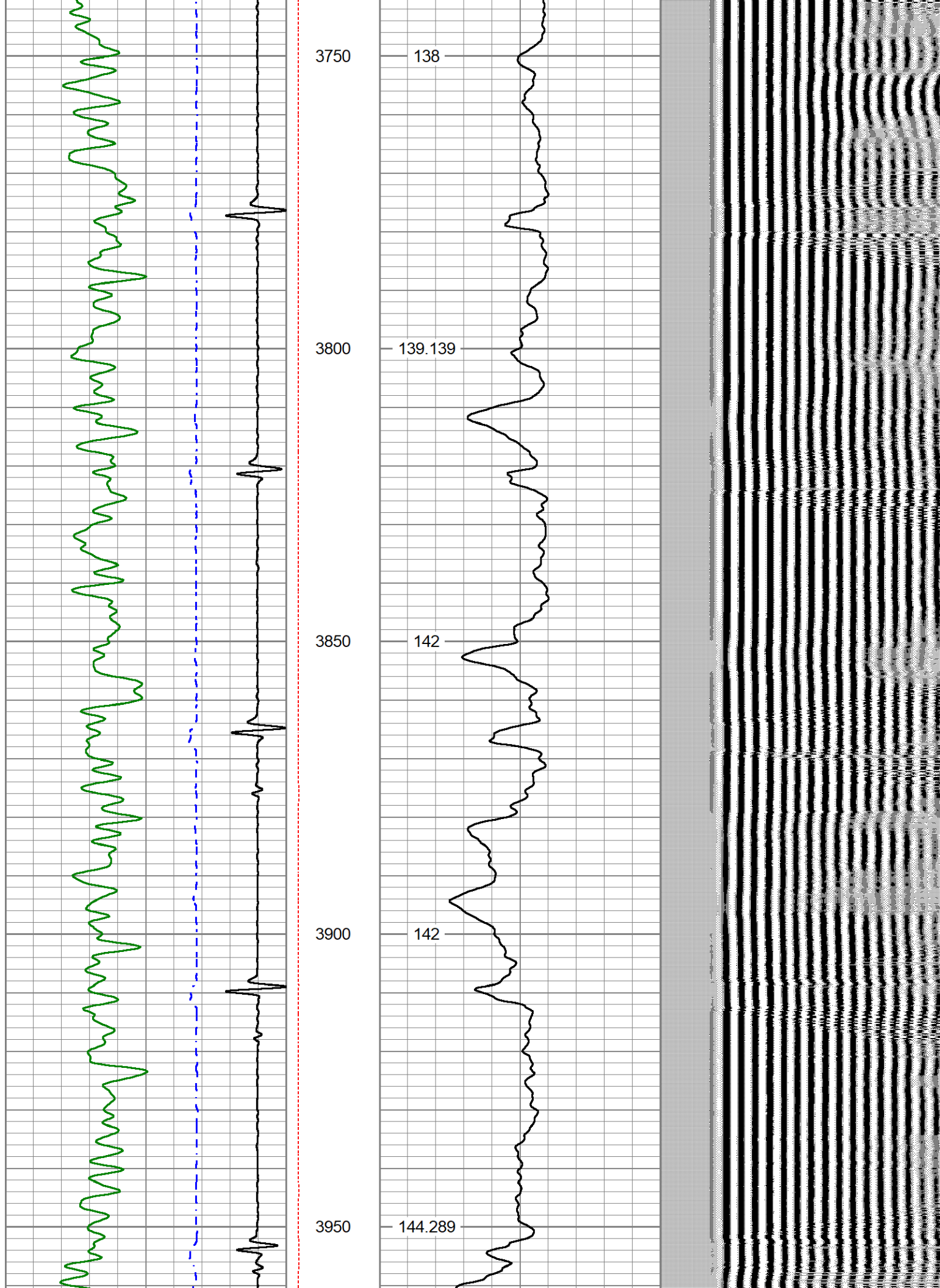
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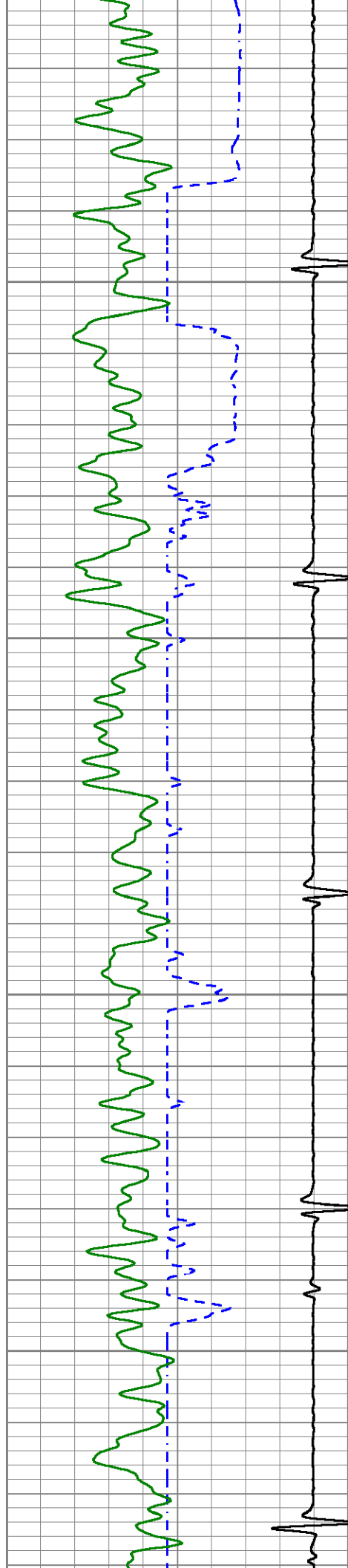
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4050

4100

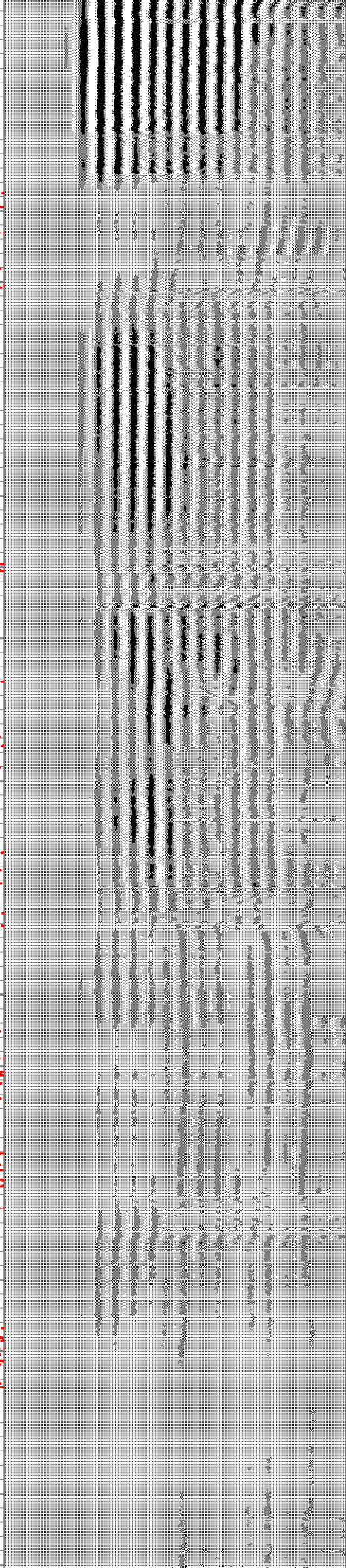
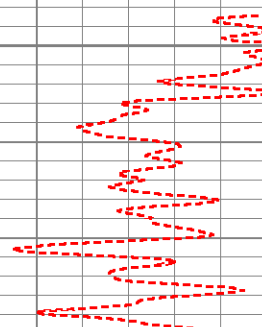
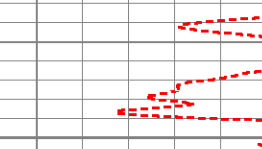
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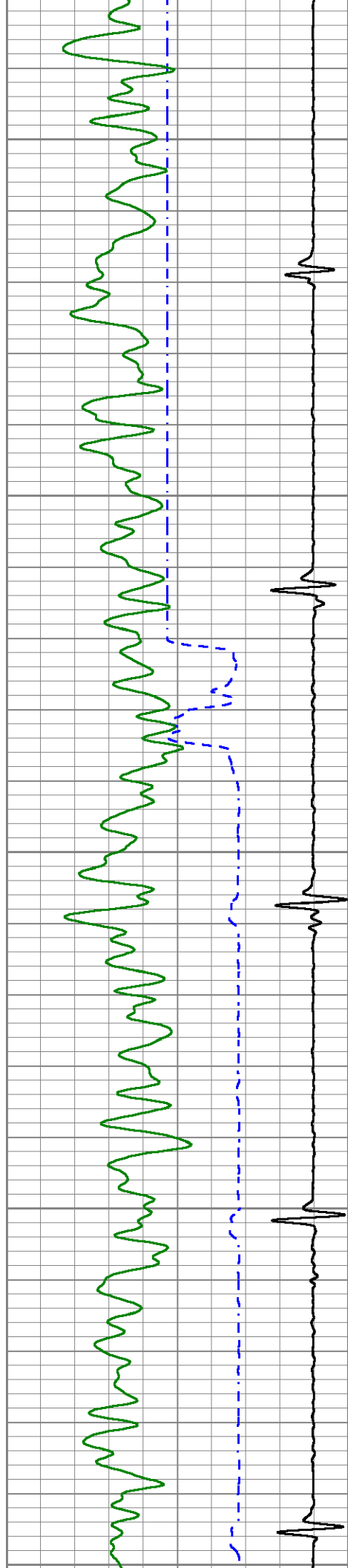
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148





4200

152

4250

152

4300

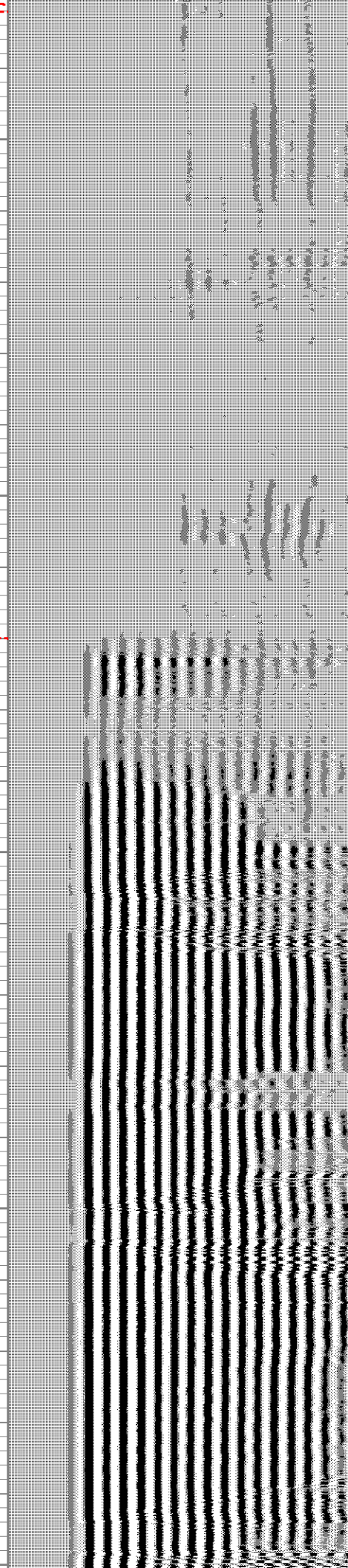
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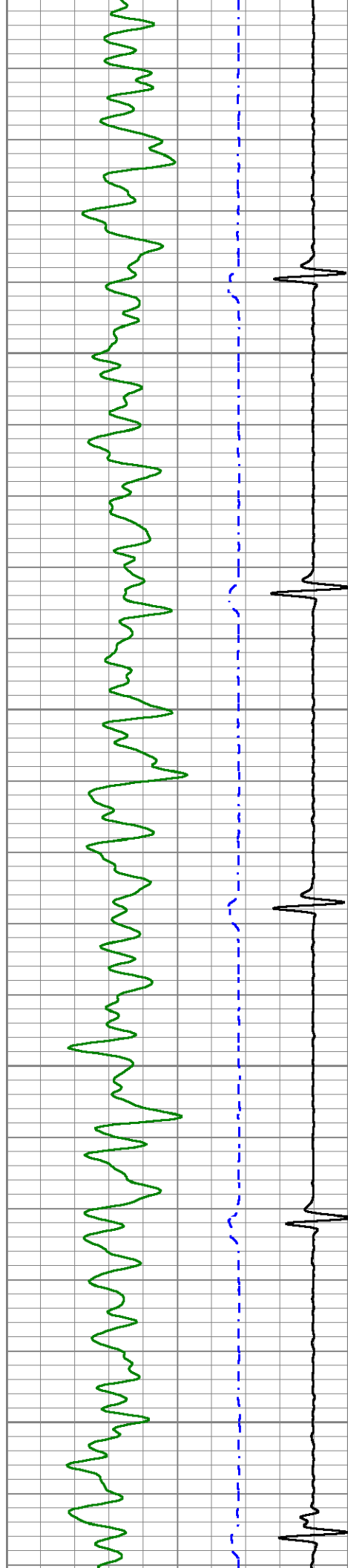
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4400

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4450

4500

4550

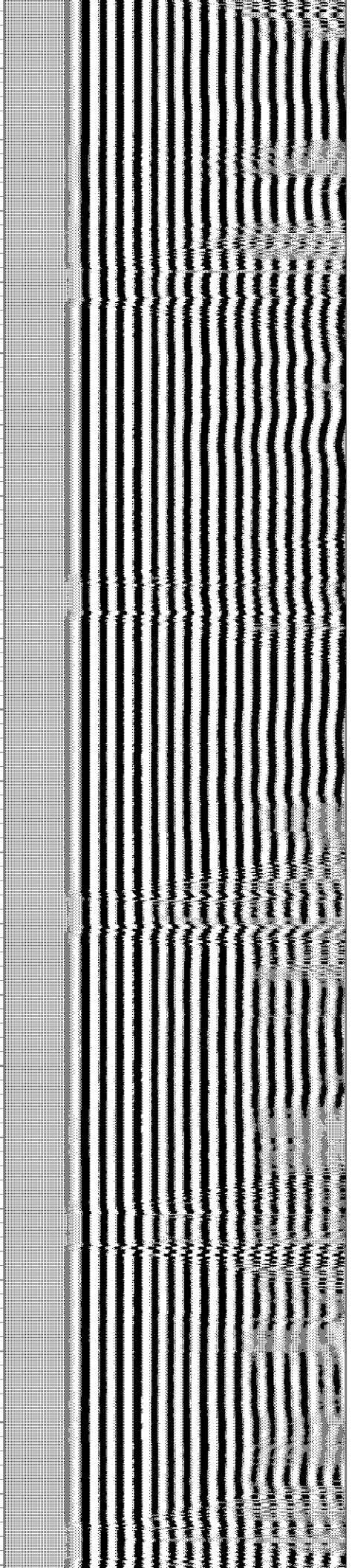
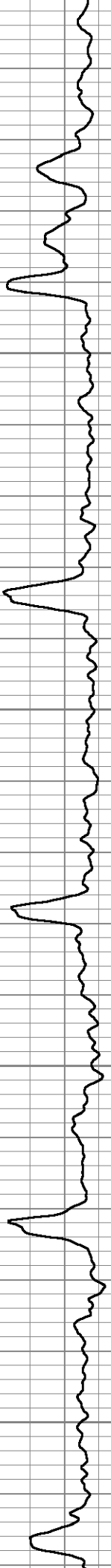
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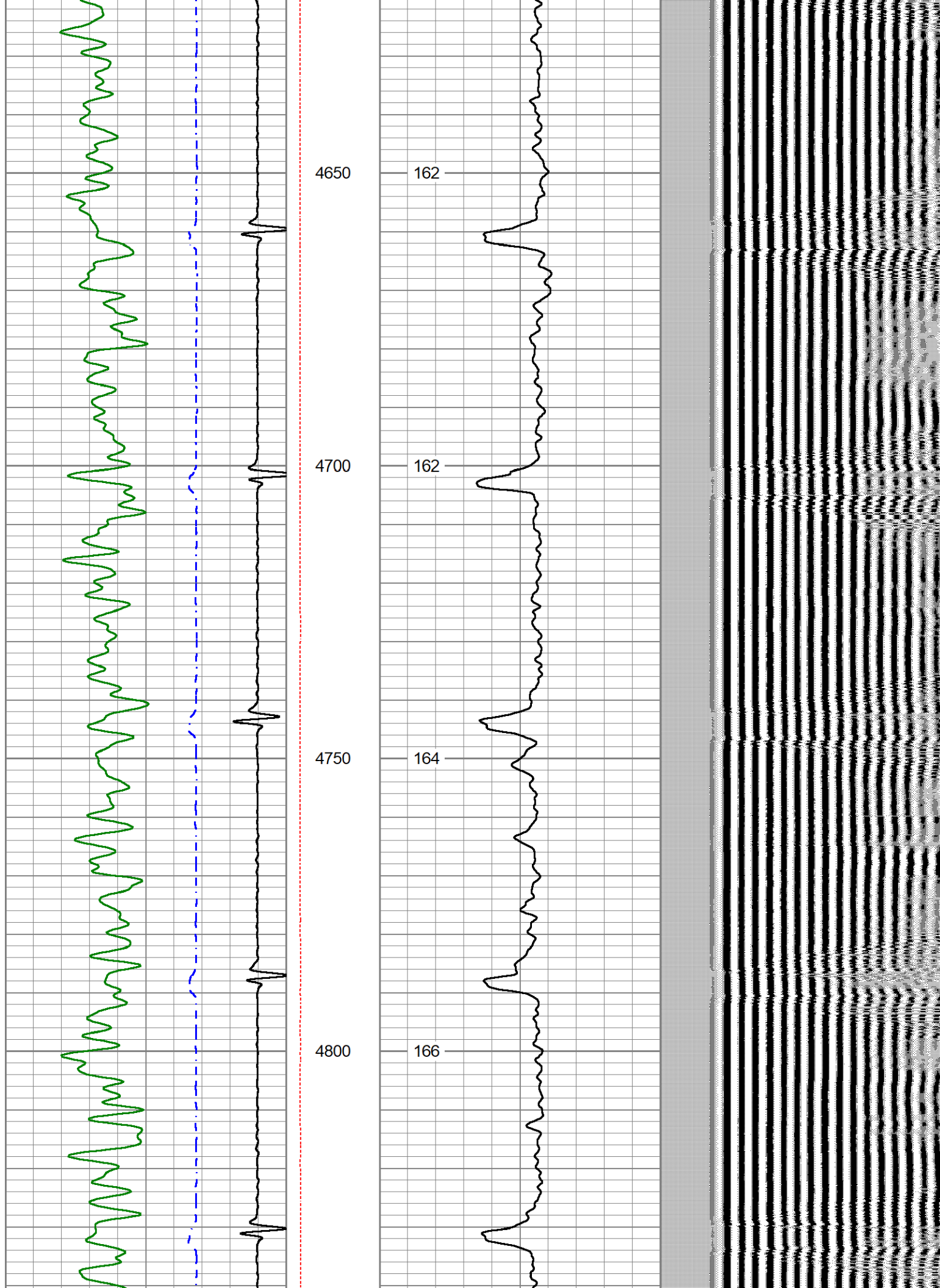
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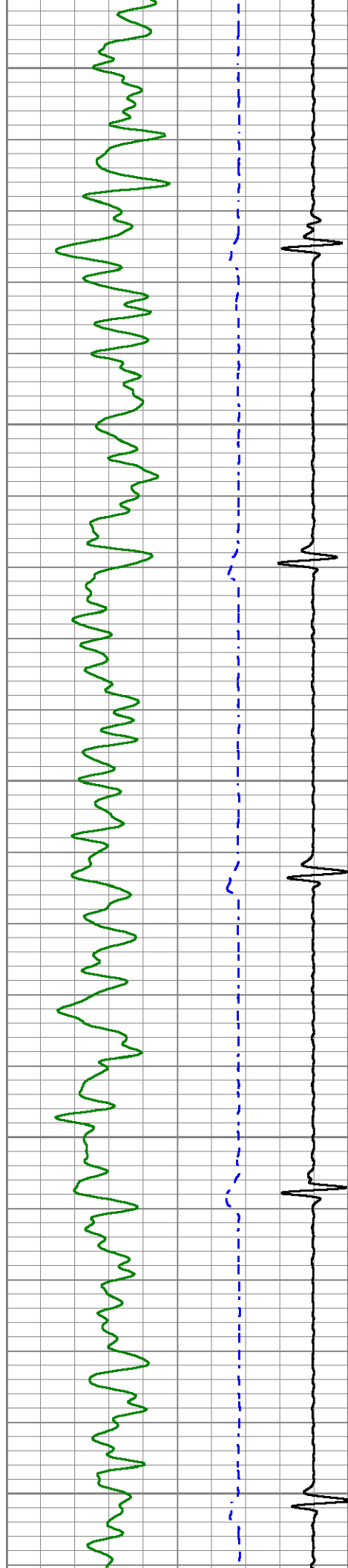
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4850

4900

4950

5000

5050

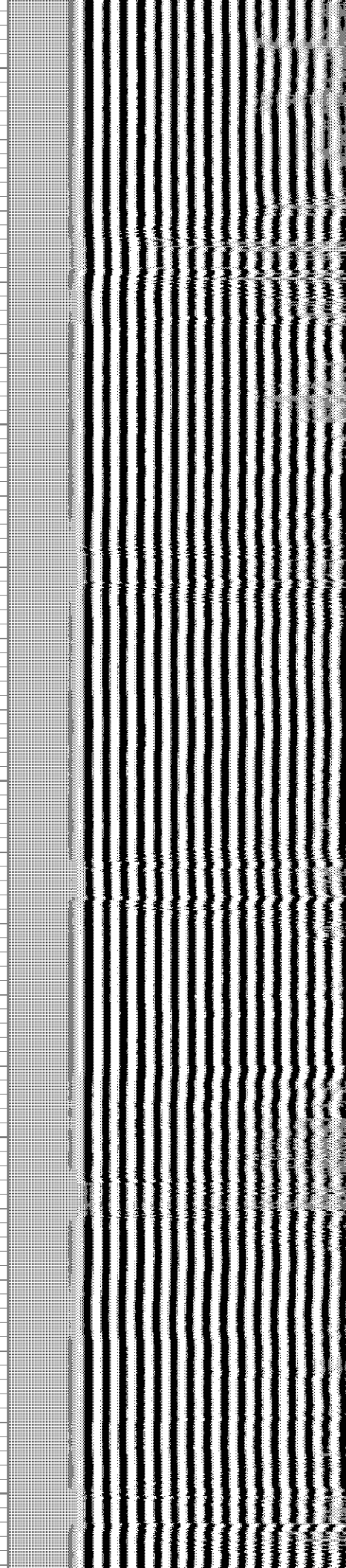
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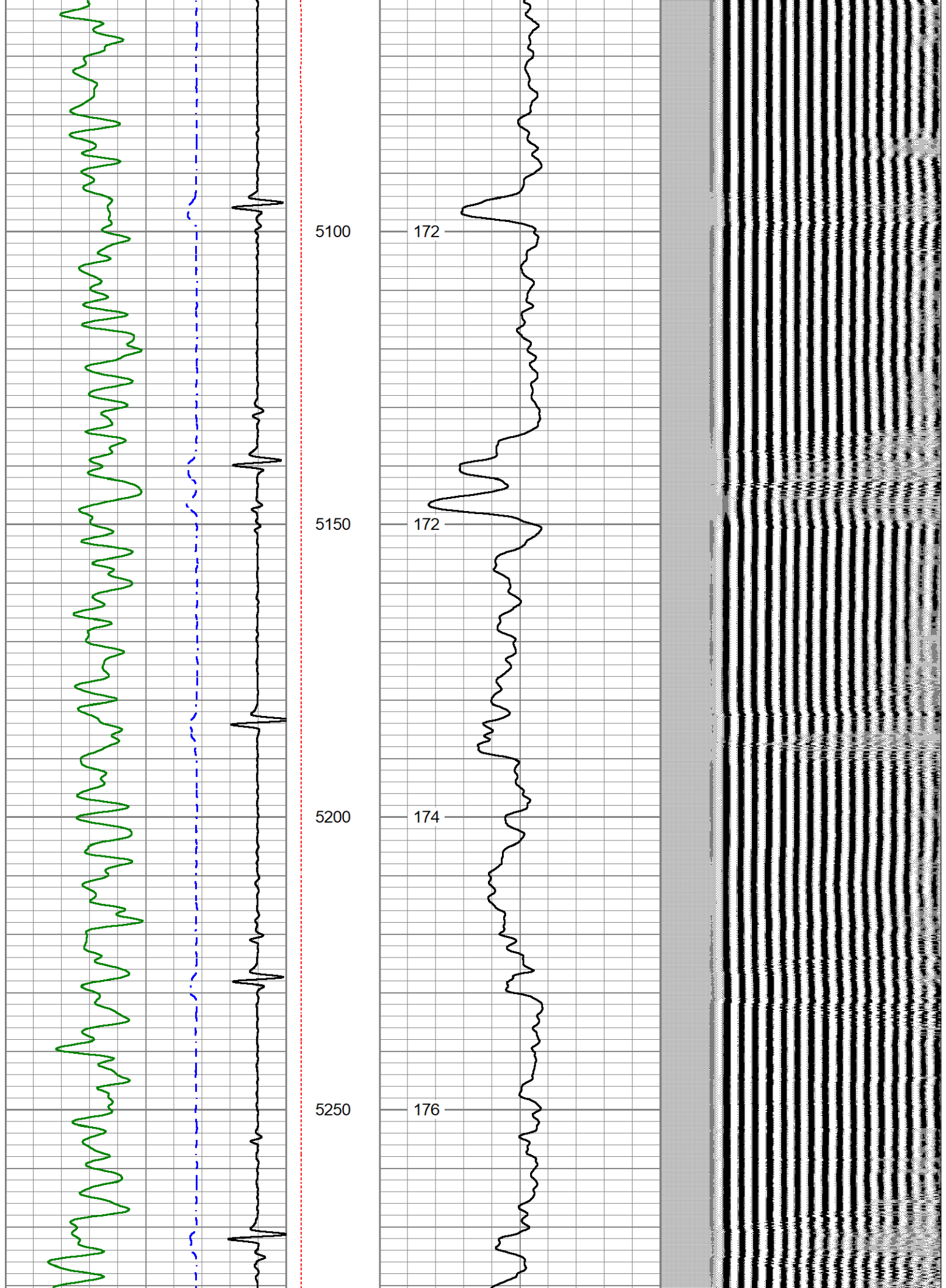
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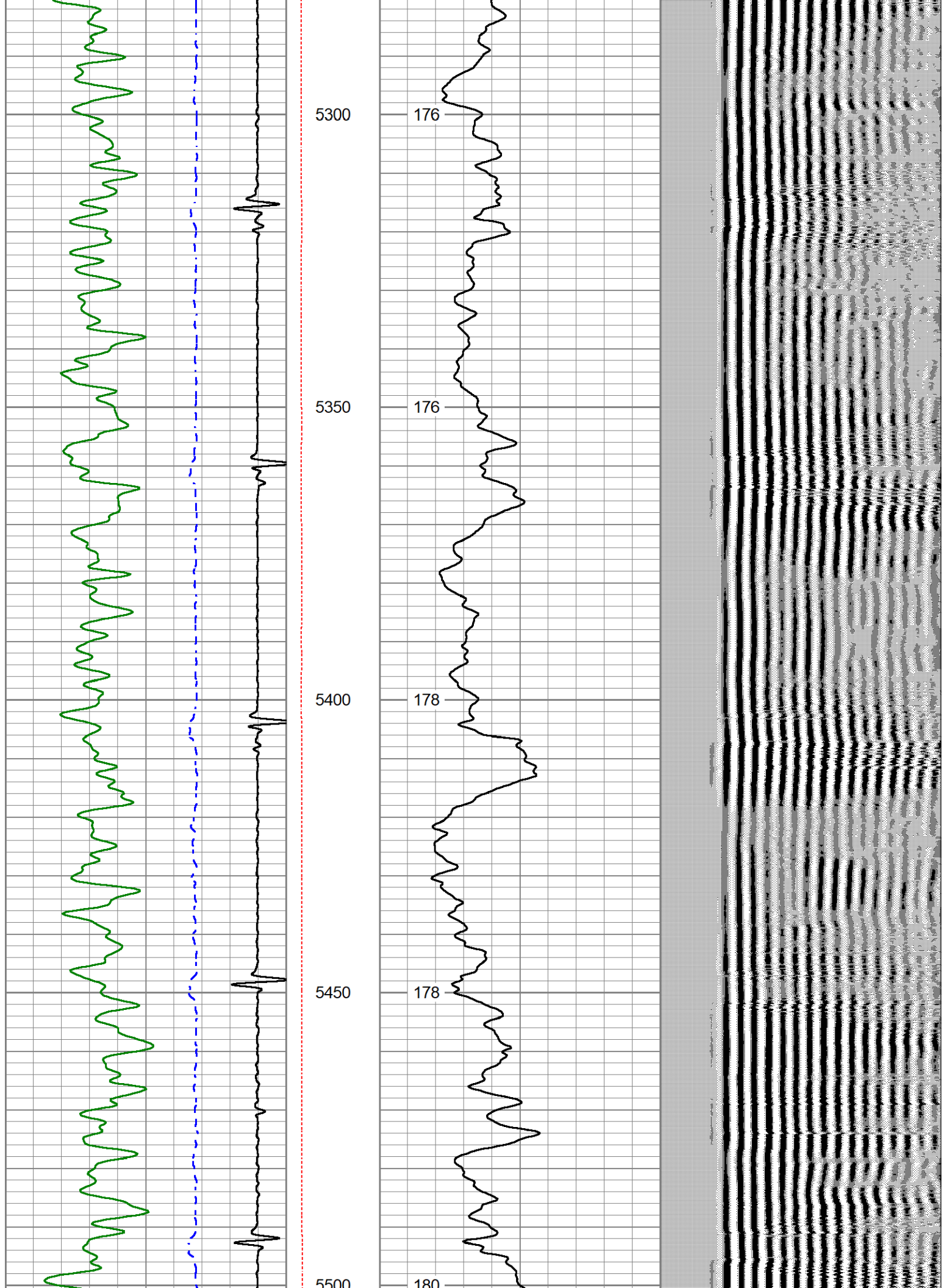
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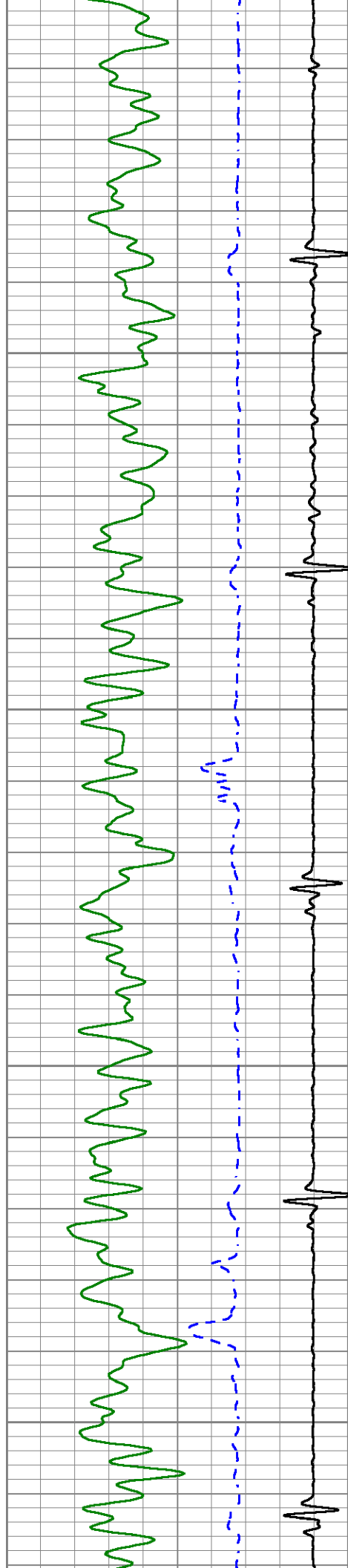
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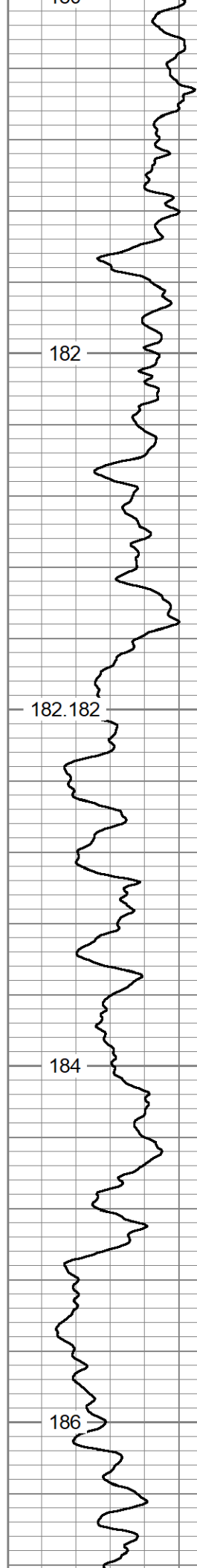


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5600

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5700



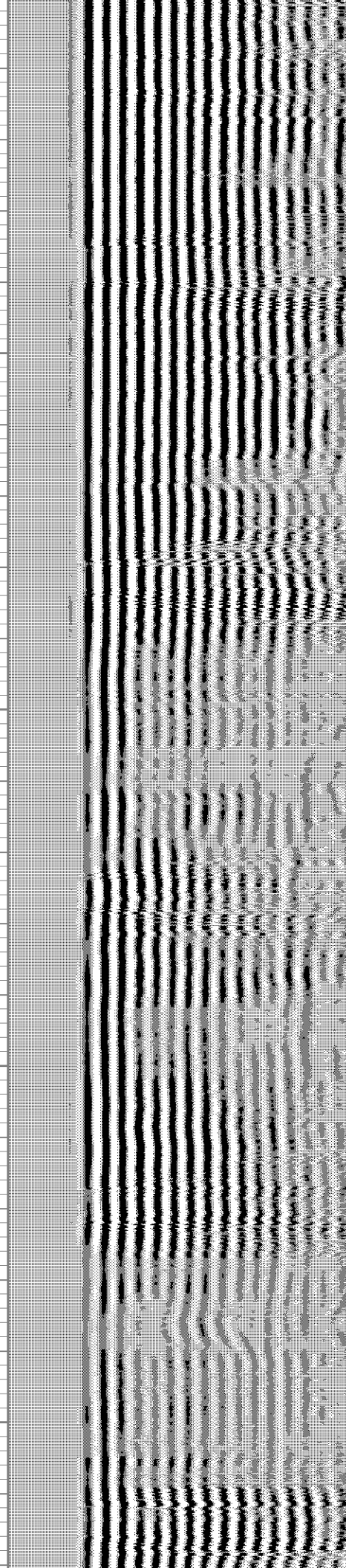
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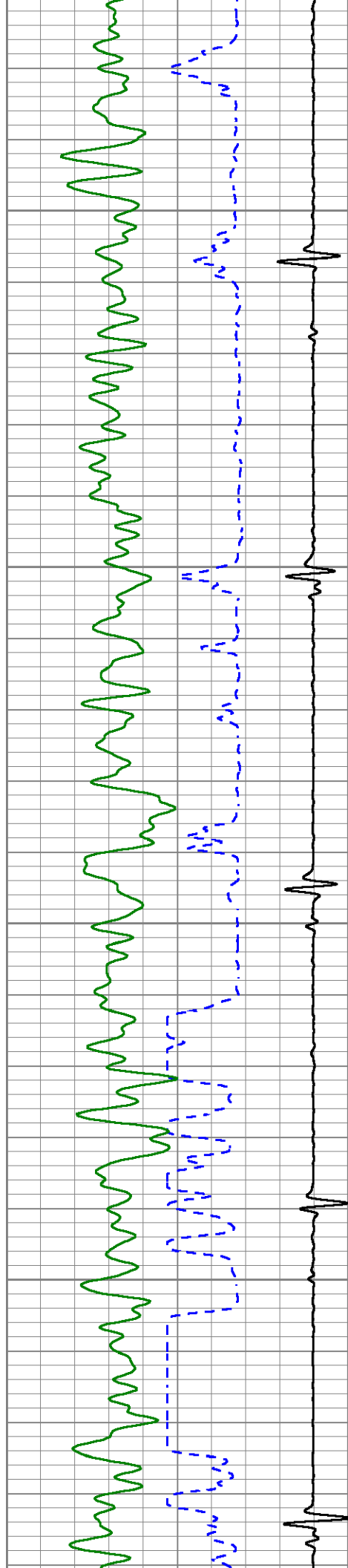
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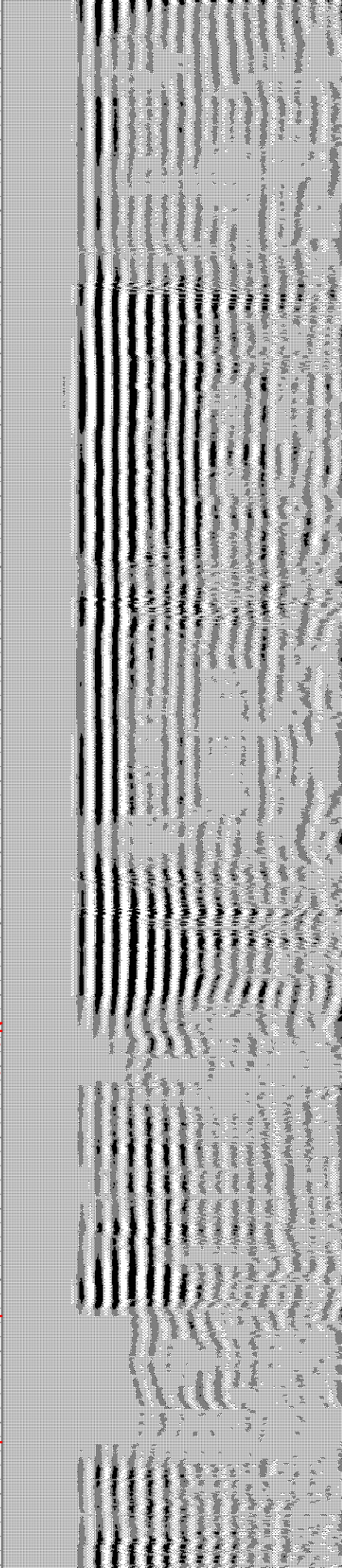
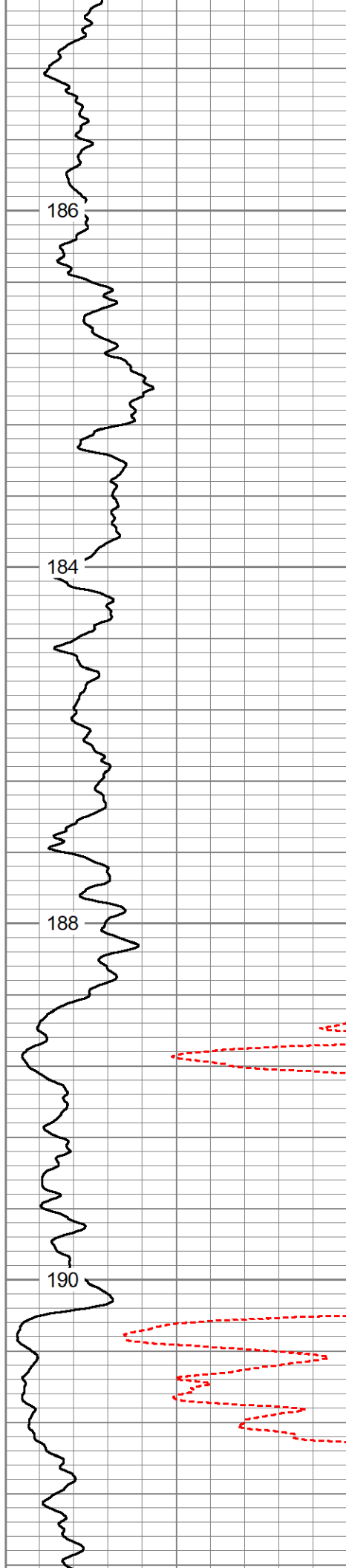


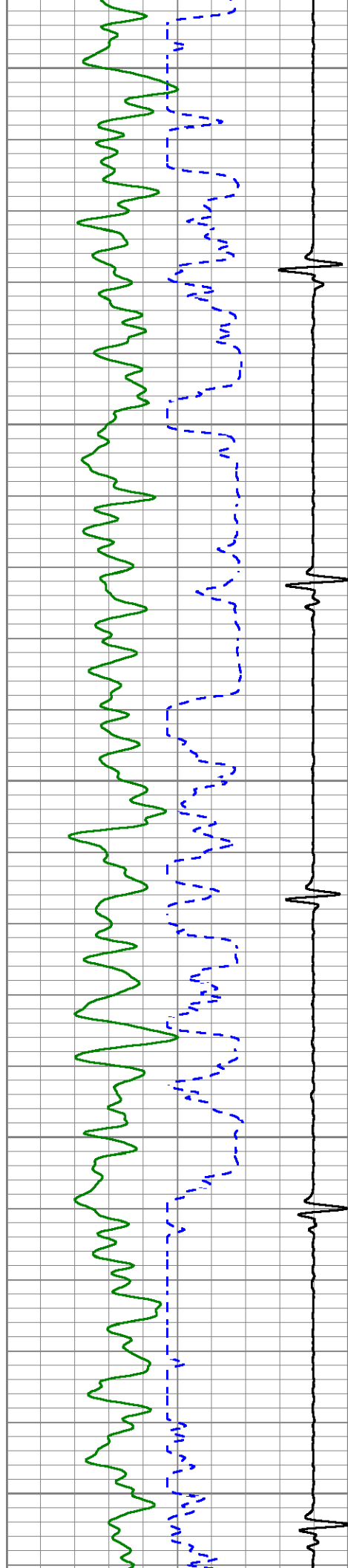
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5800

5850

5900





5950

6000

6050

6100

6150

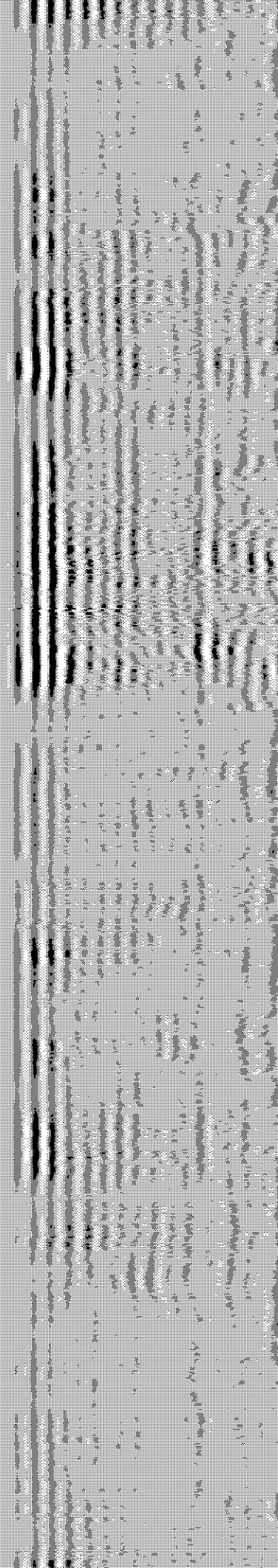
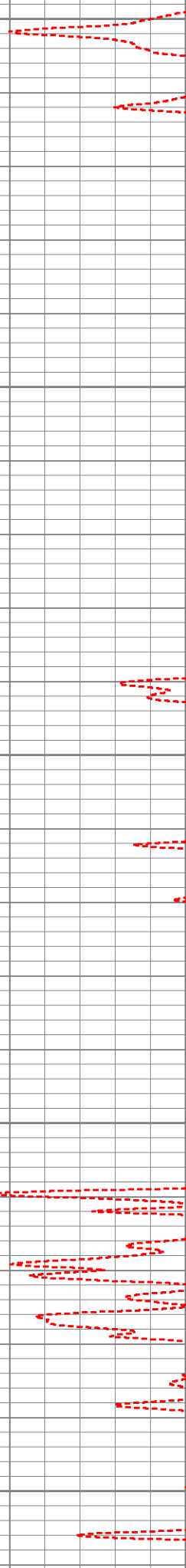
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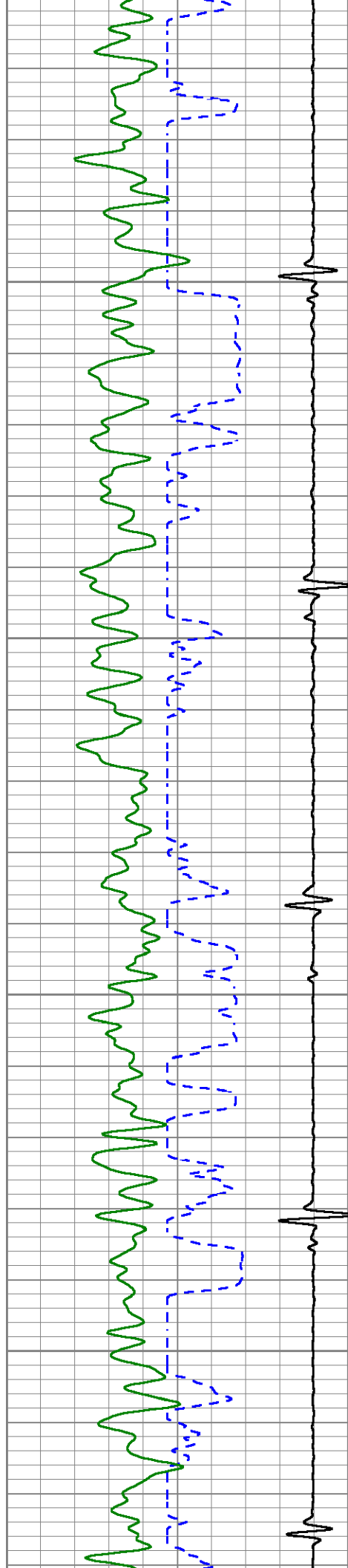
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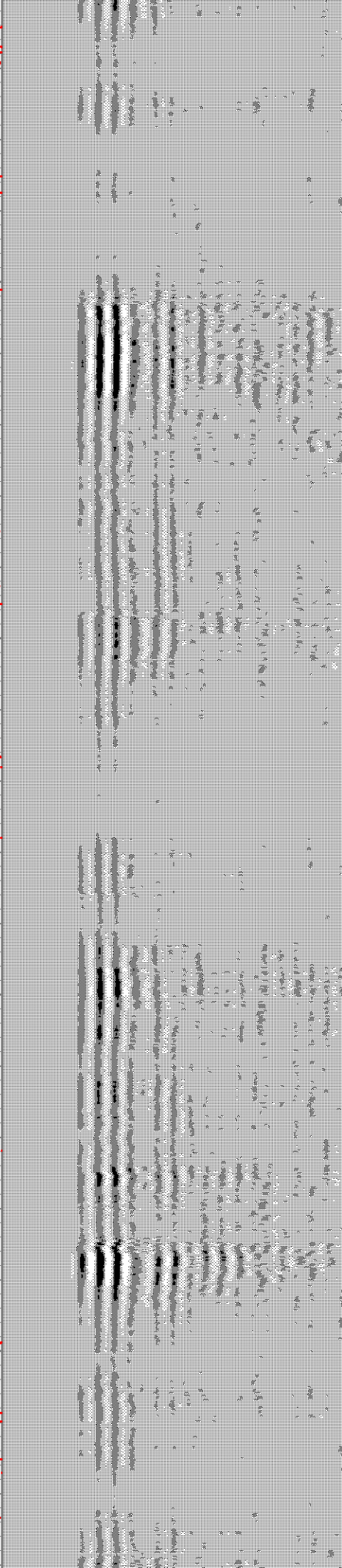
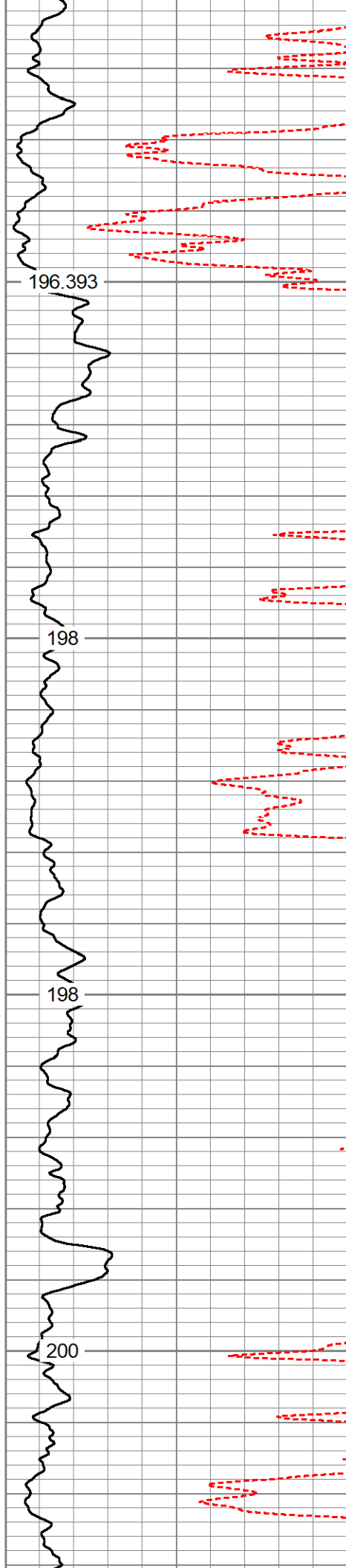


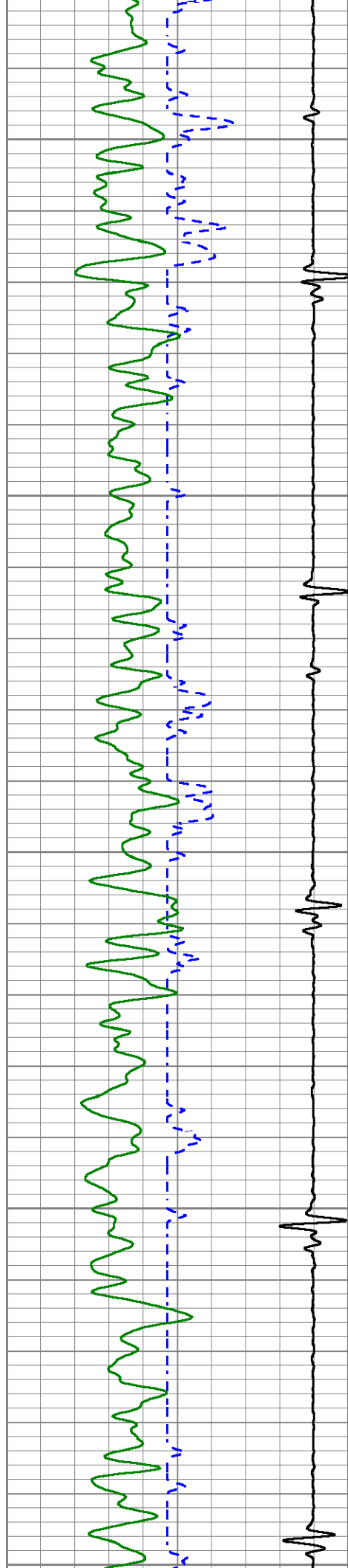
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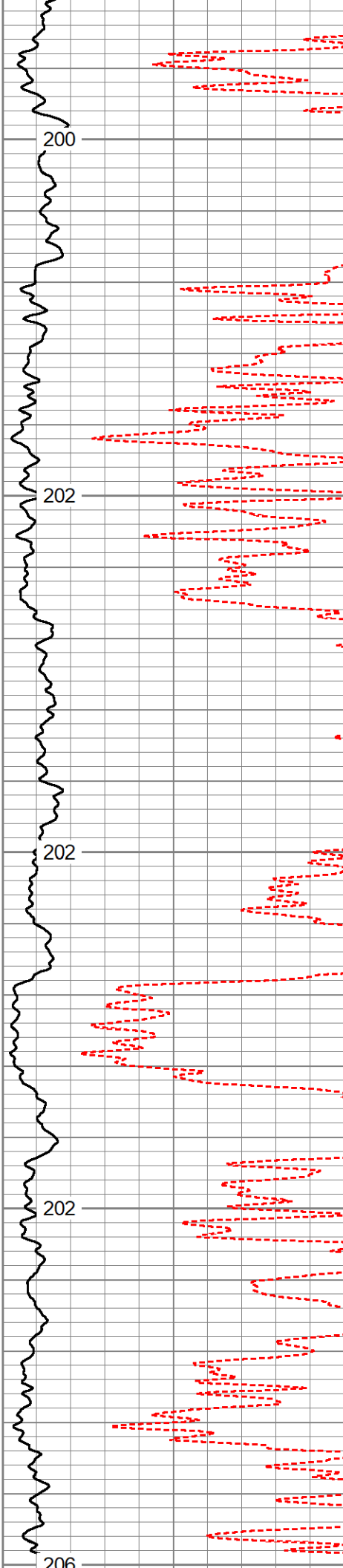
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6550

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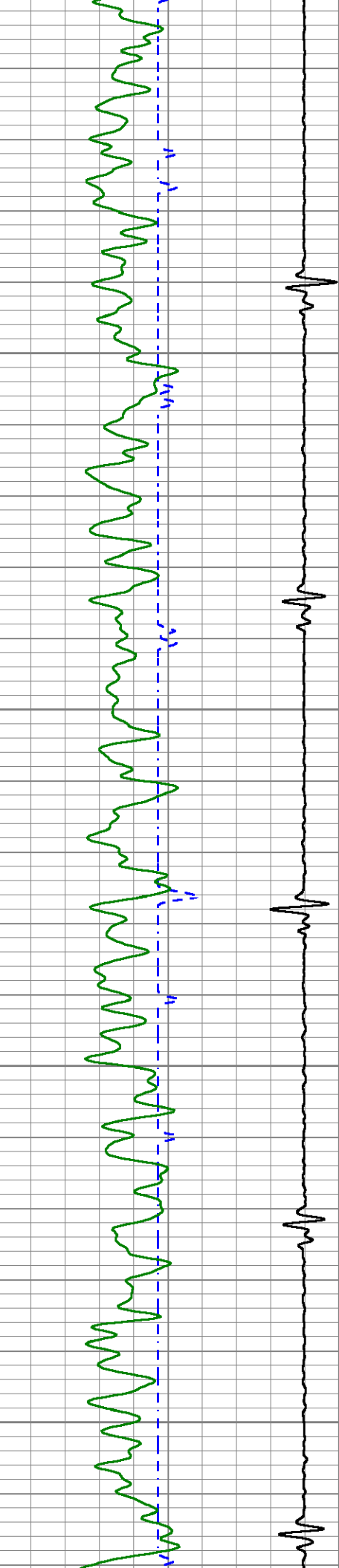
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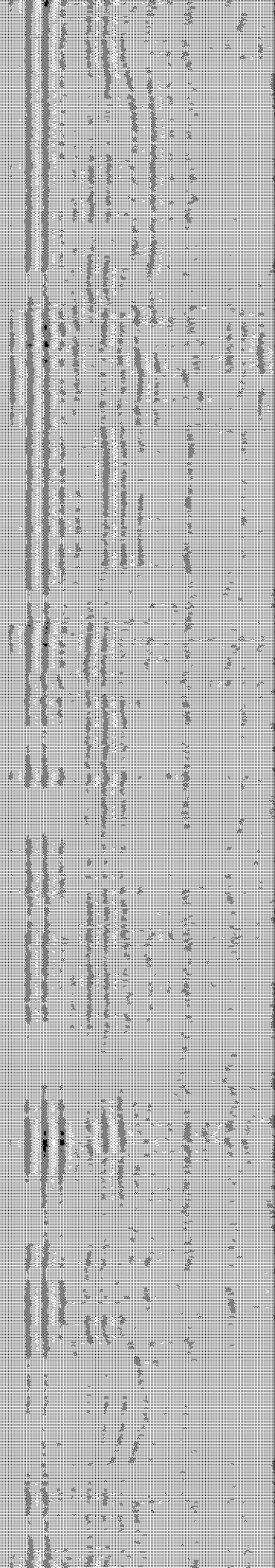
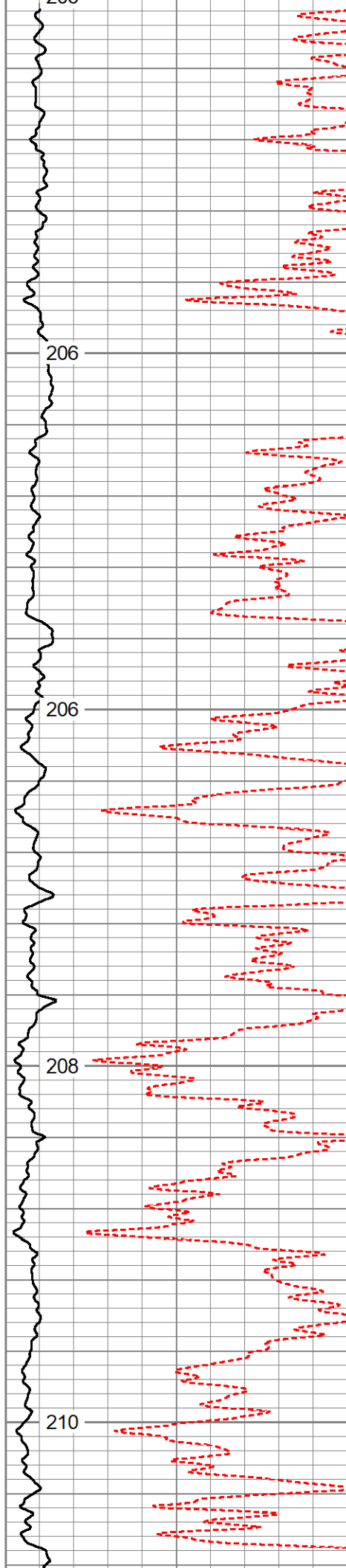
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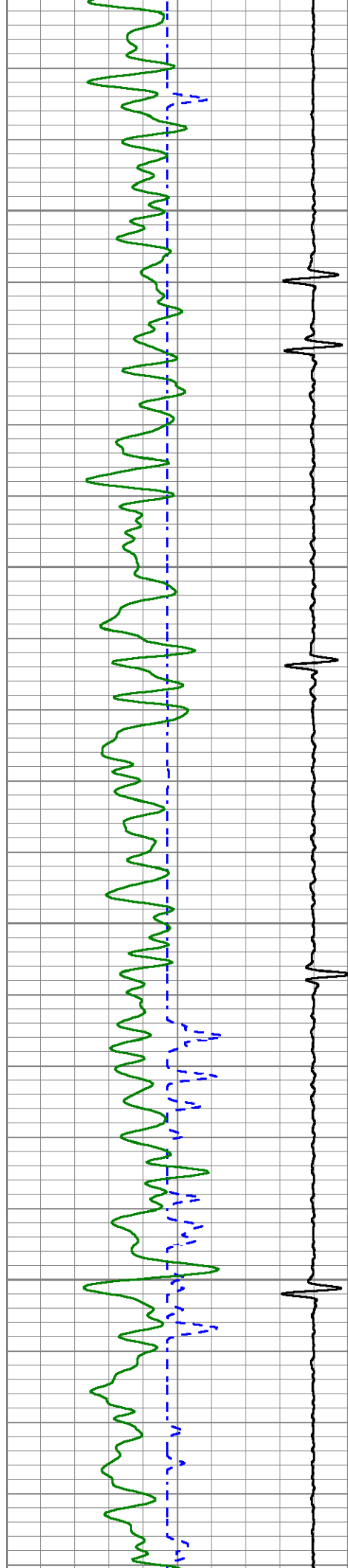
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6650
6700
6750
6800





6850

211

6900

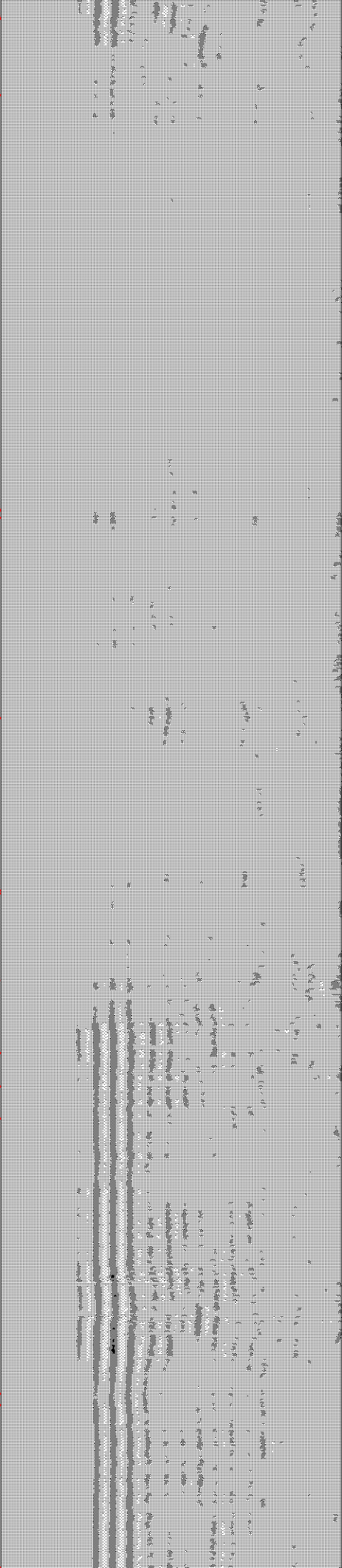
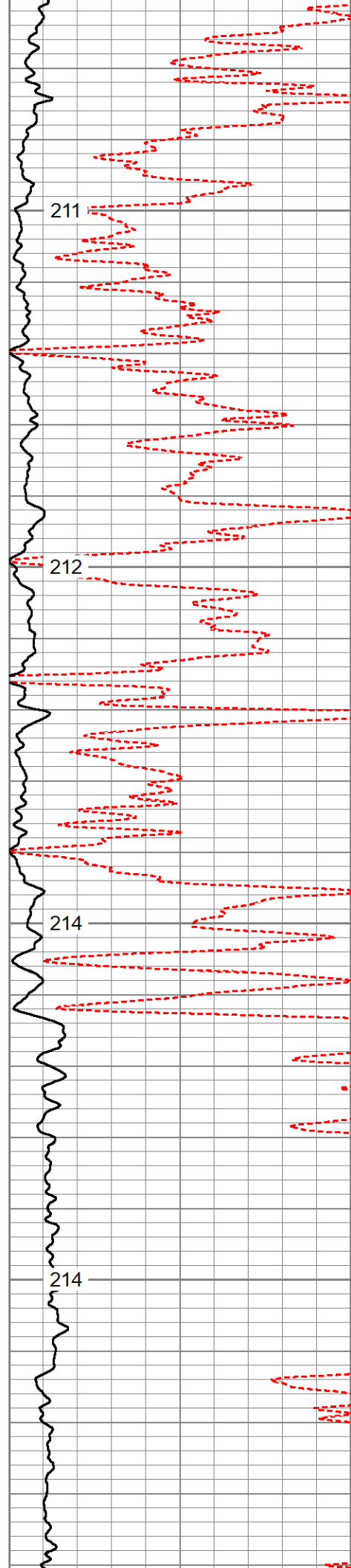
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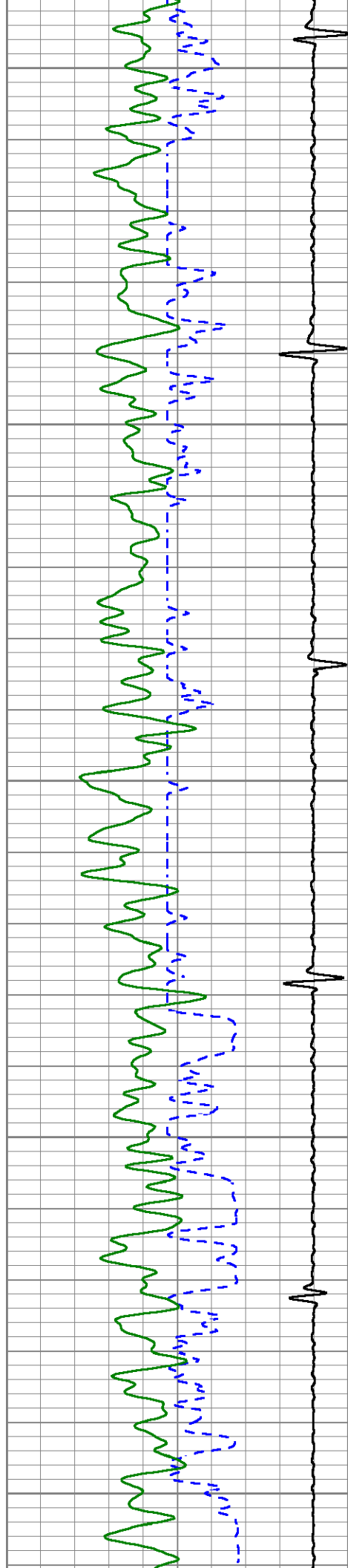
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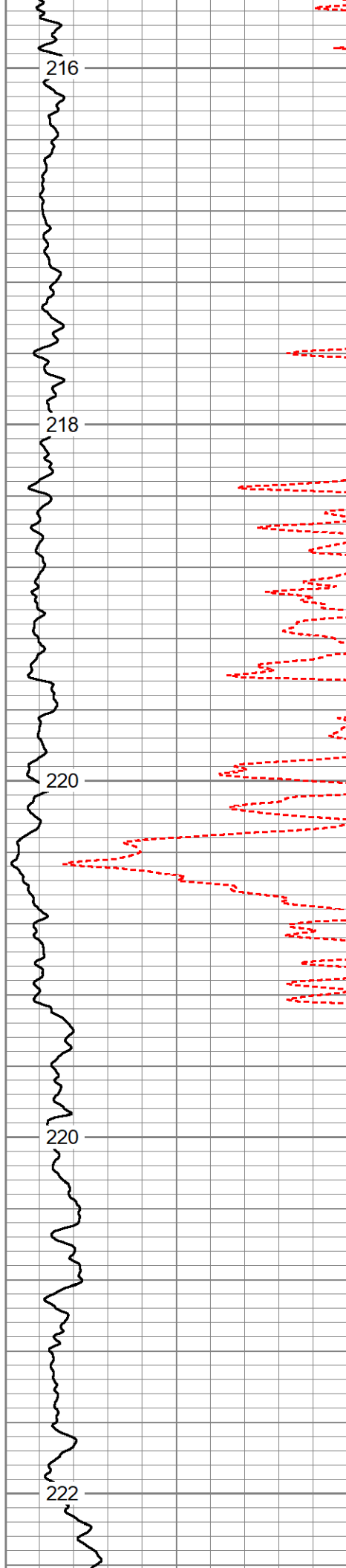
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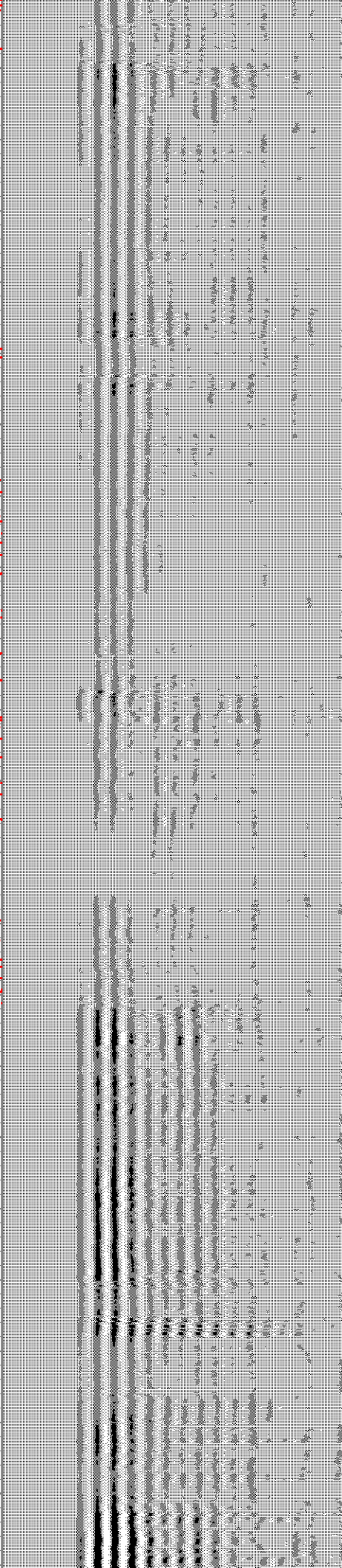
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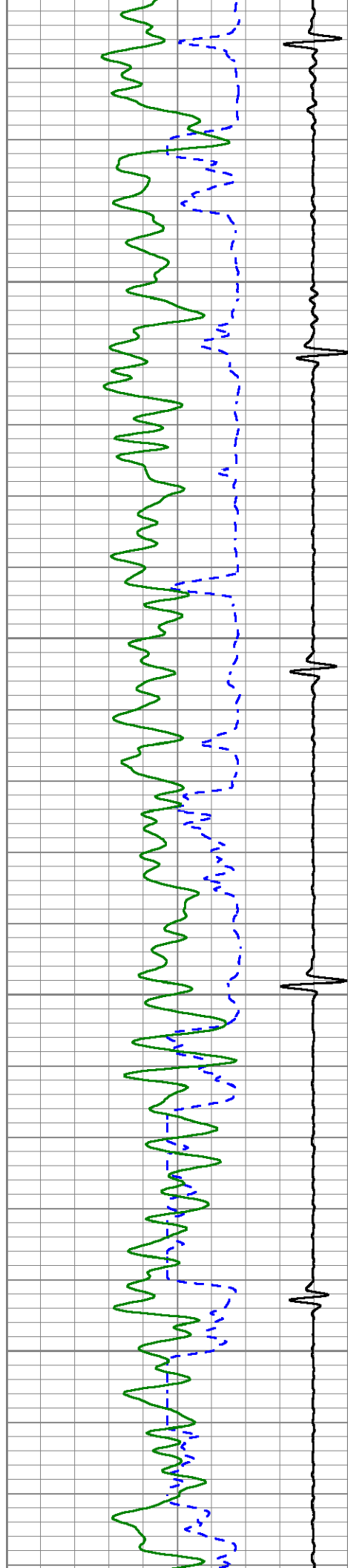
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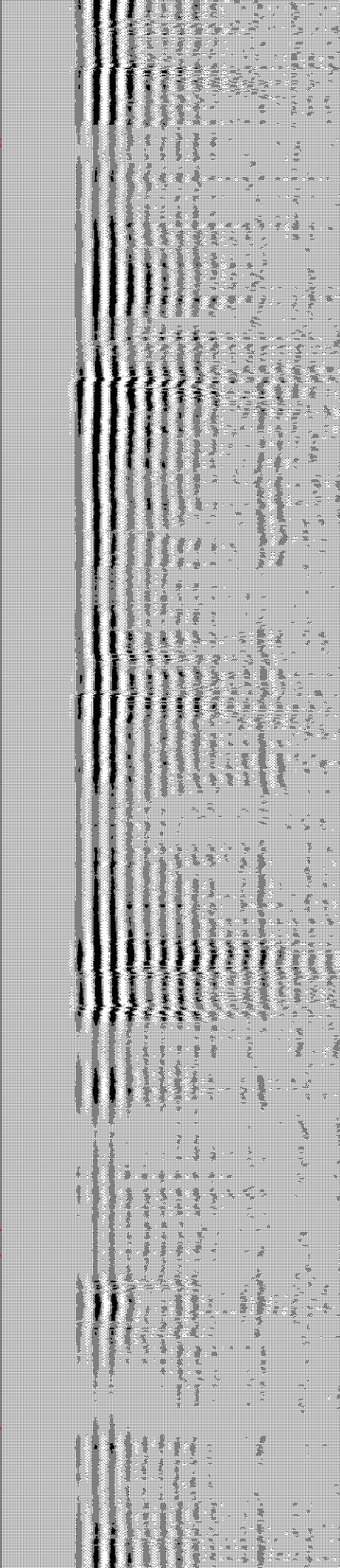
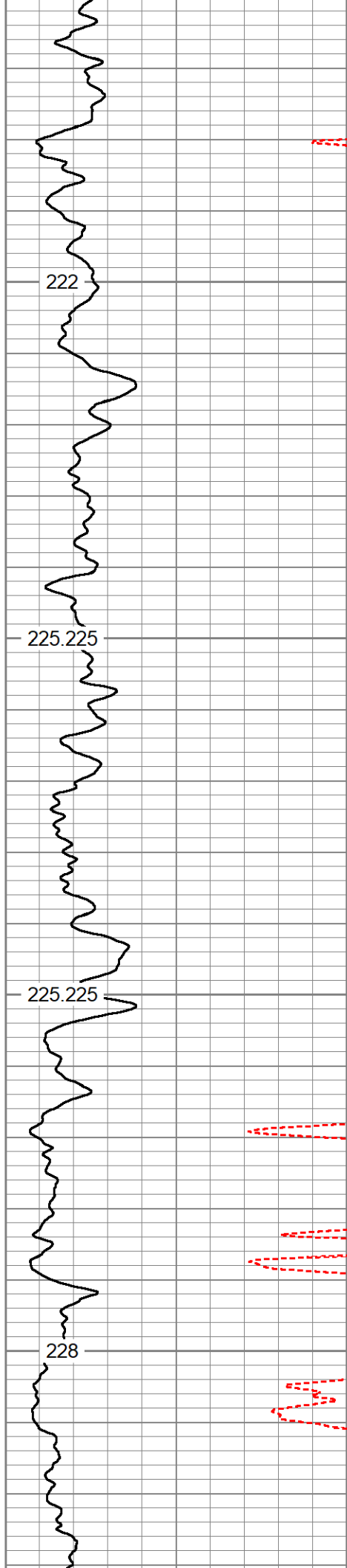
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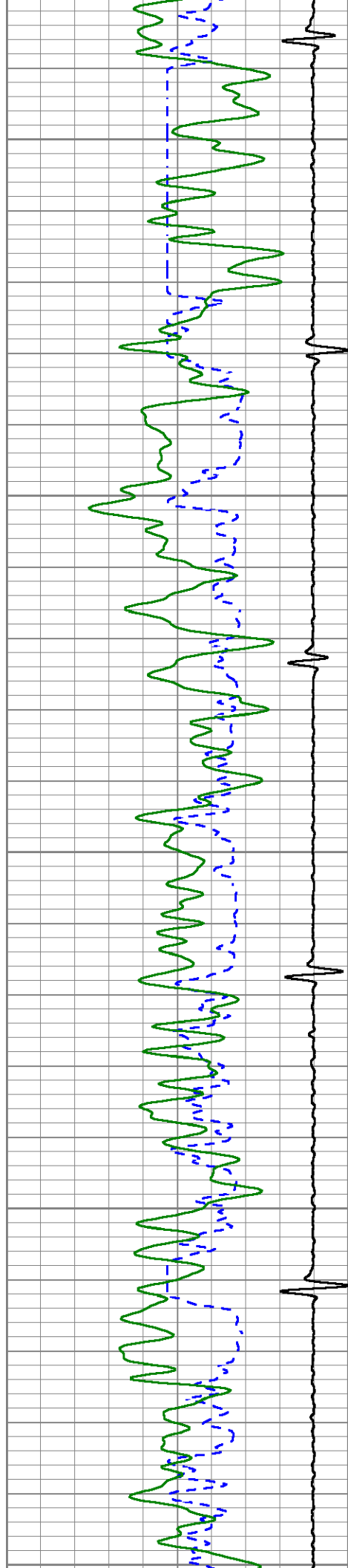
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225.225

225.225

228





7500

7550

7600

7650

7700

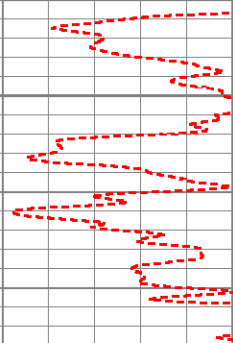
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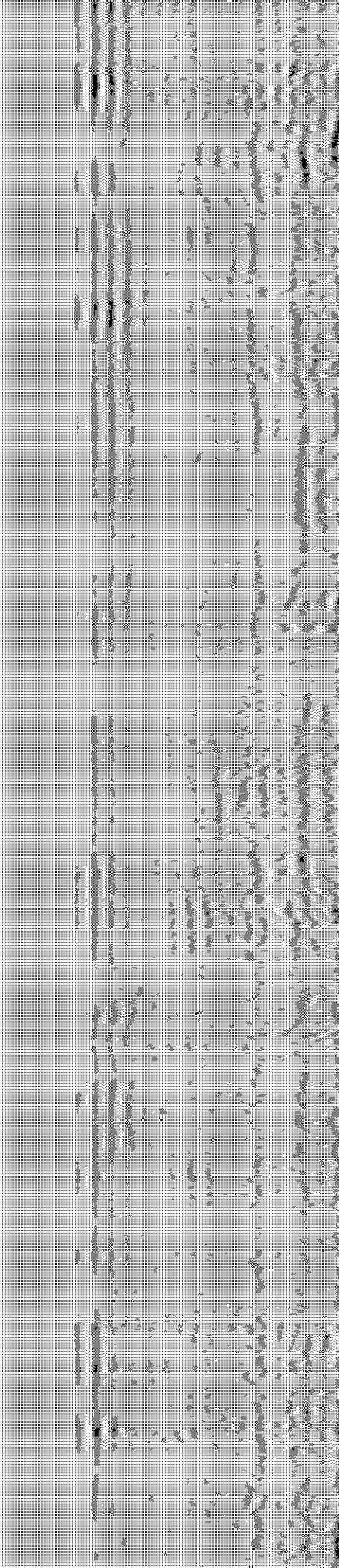
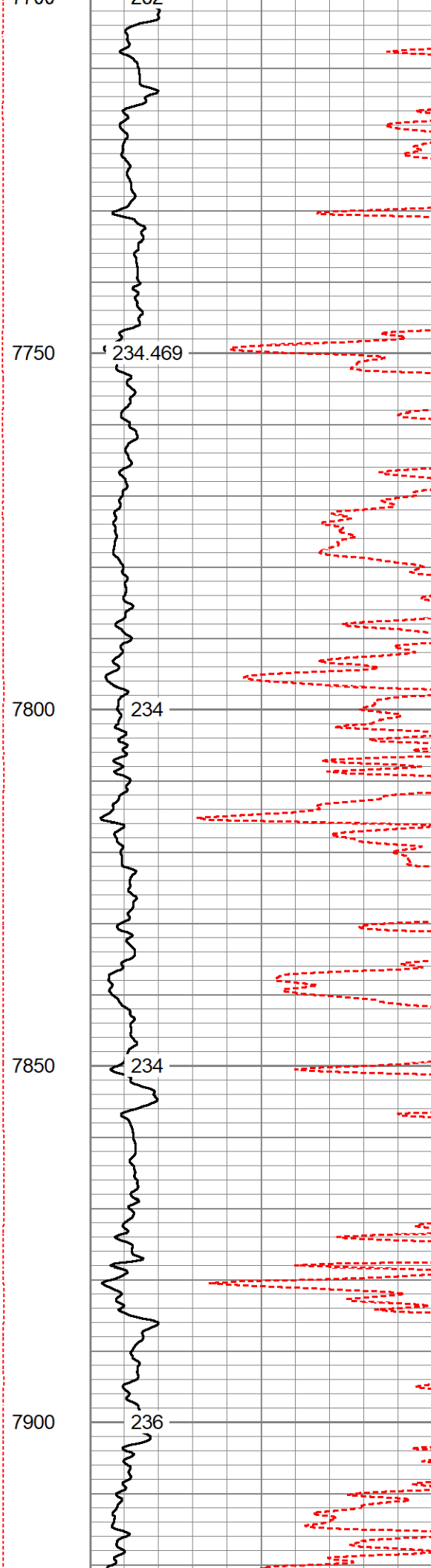
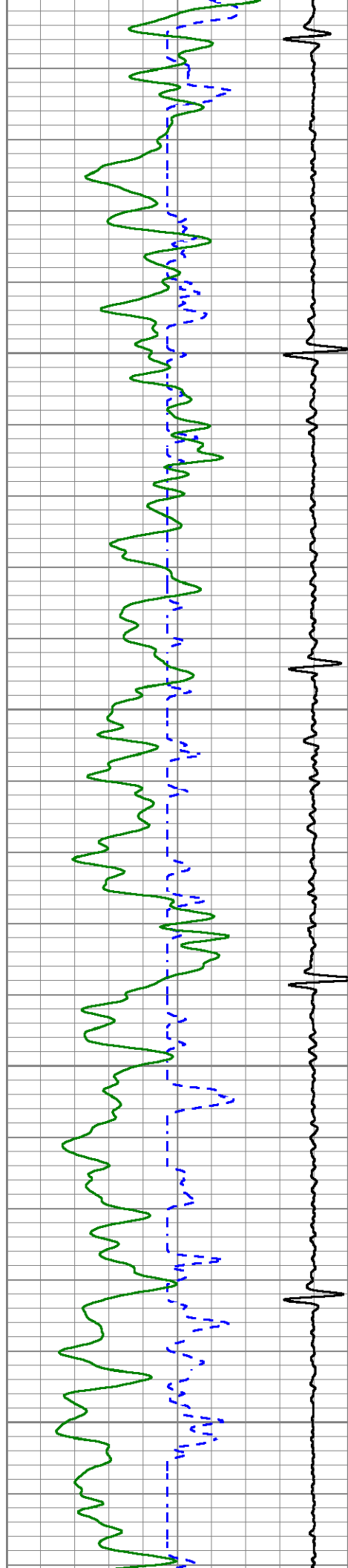
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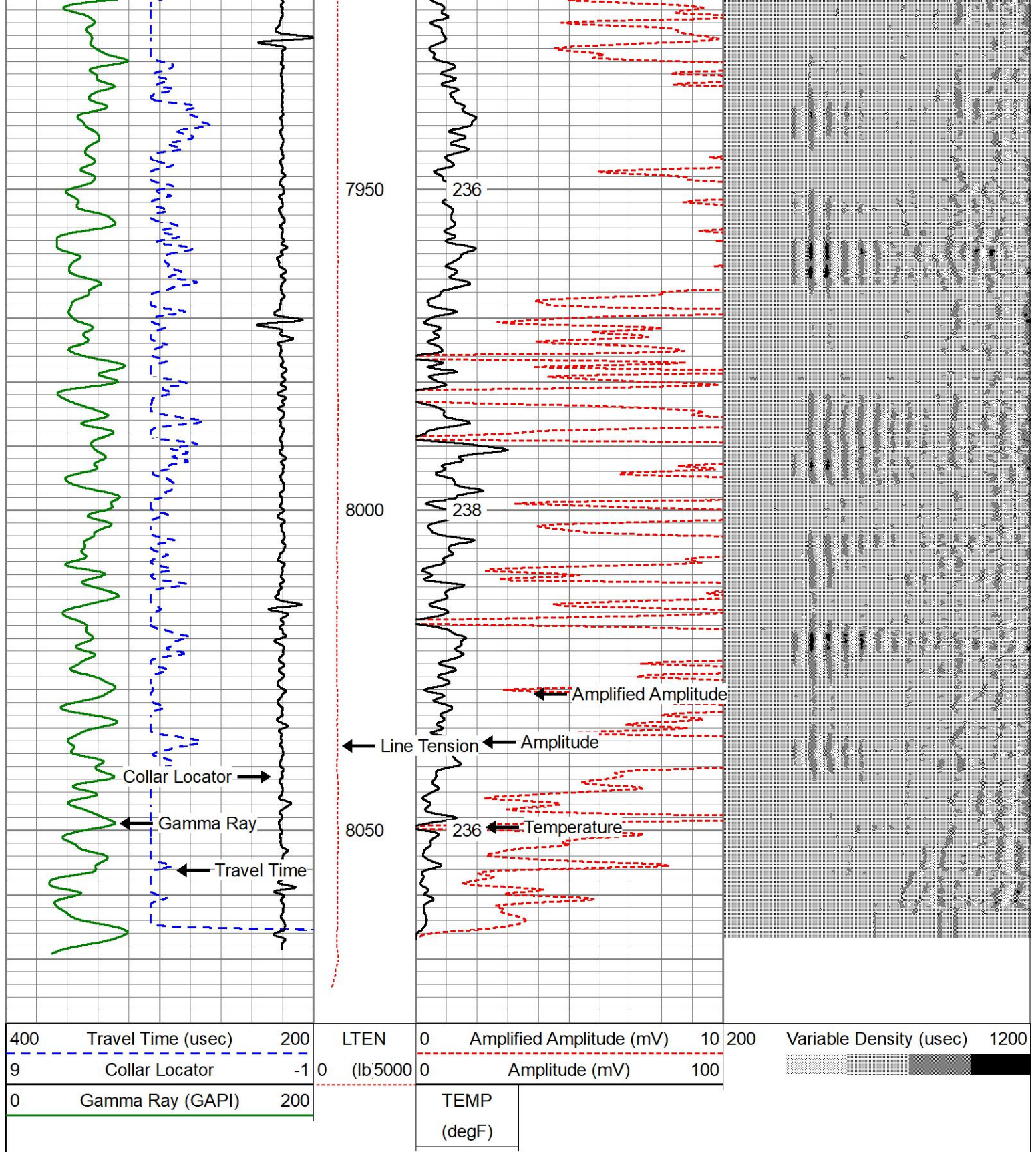
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232







REPEAT PASS 0 PSI

Database File gw_schaefer_032hc_cbl.db
 Dataset Pathname pass3
 Presentation Format cblww
 Dataset Creation Thu Mar 07 15:11:34 2019

Charted by

Depth in Feet scaled 1:240

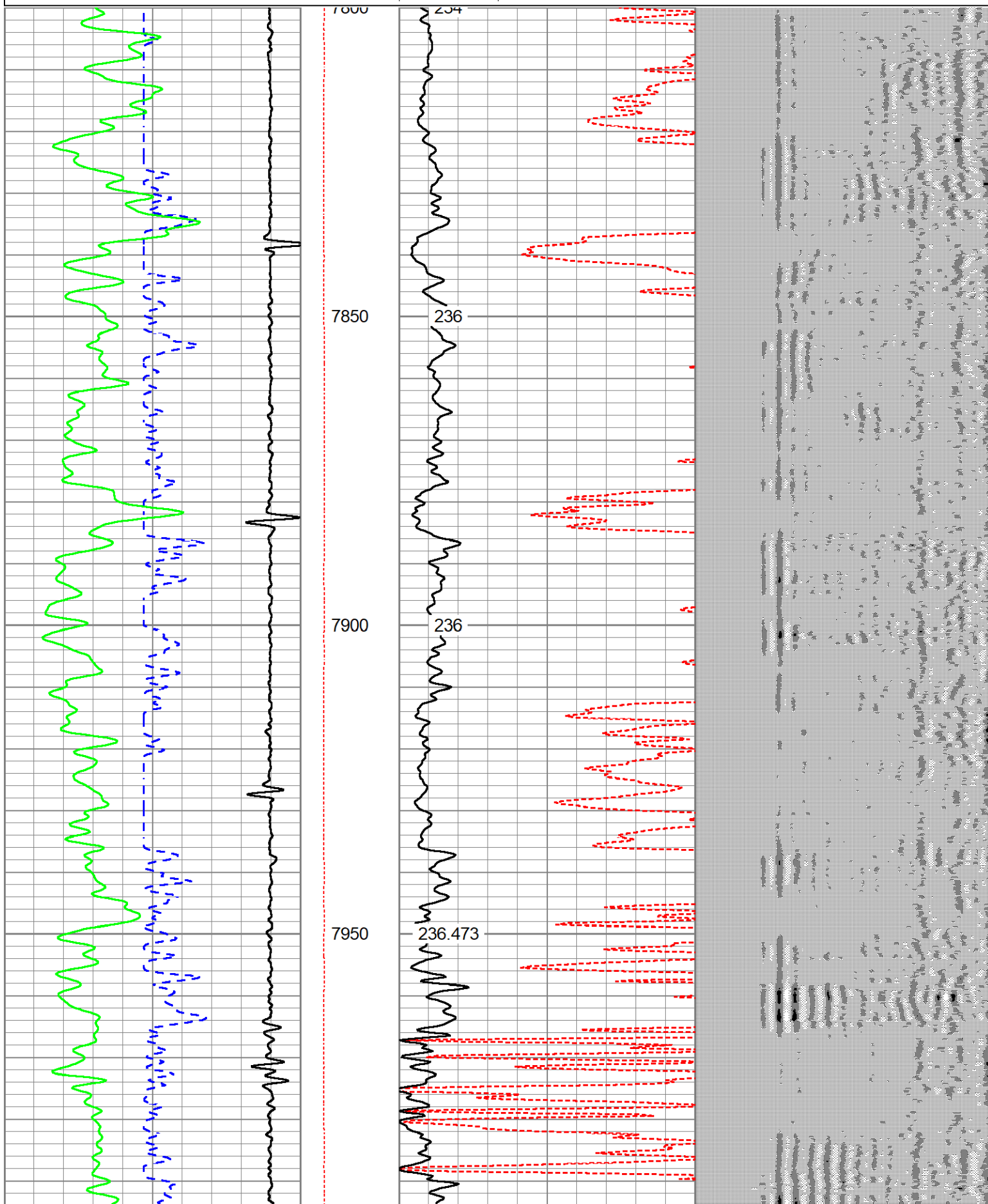
400	Travel Time (usec)	200
9	Collar Locator	-1
0	Gamma Ray (GAPI)	200

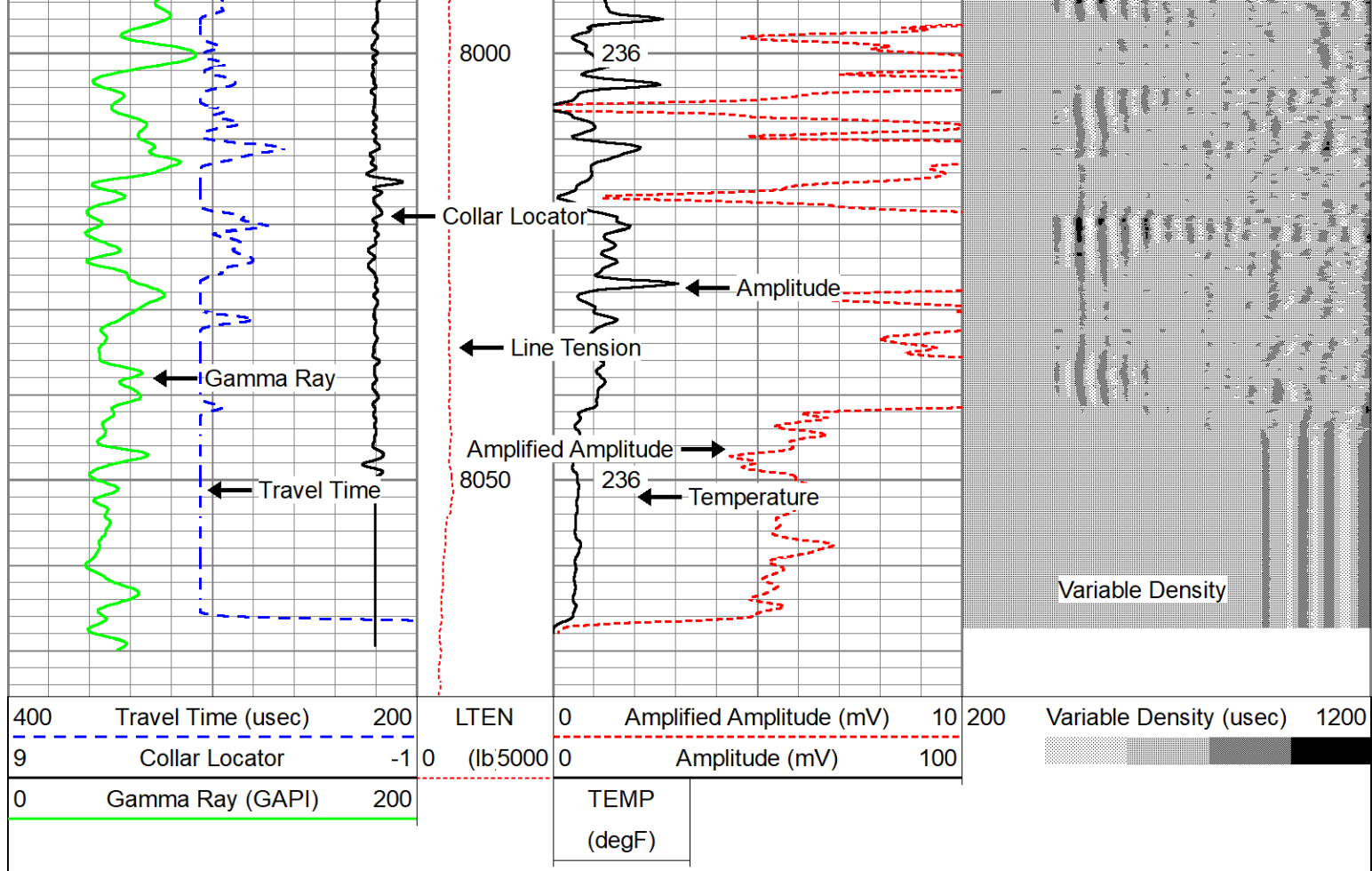
LTEN
(lb/5000)

0	Amplified Amplitude (mV)	10
0	Amplitude (mV)	100

200 Variable Density (usec) 1200

TEMP
(degF)





Calibration Report

Database File gw_schaefer_032hc_cbl.db
 Dataset Pathname pass4
 Dataset Creation Thu Mar 07 15:17:17 2019

Gamma Ray Calibration Report

Serial Number: FW1808-013
 Tool Model: 2.75
 Performed: (Not Performed)

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Temperature Calibration Report

Serial Number: FW1808-013
 Tool Model: 2.75
 Performed: Thu Mar 07 12:30:55 2019

	Reference	Reading
Low Reference:	0.00 degF	0.00 cps
High Reference:	0.10 degF	1.00 cps
Gain:	0.10	
Offset:	0.00	
Delta Spacing	1	

Segmented Cement Bond Log Calibration Report

Serial Number: 1307-48
Tool Model: PROBE

Calibration Casing Diameter: 5.500 in
Calibration Depth: 1427.508 ft

Master Calibration, performed Thu Mar 07 14:42:23 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	0.470	1.000	71.921	152.728	0.139
CAL	0.008	0.997				
5'	0.008	0.370	1.000	71.921	195.763	-0.599
SUM						
S1	0.029	0.495	0.000	100.000	214.737	-6.268
S2	-0.014	0.386	0.000	100.000	250.137	3.484
S3	0.004	0.401	0.000	100.000	251.628	-0.903
S4	0.006	0.421	0.000	100.000	240.870	-1.417
S5	0.000	0.434	0.000	100.000	230.566	-0.099
S6	0.001	0.455	0.000	100.000	220.061	-0.191
S7	0.000	0.448	0.000	100.000	223.252	-0.044
S8	0.004	0.441	0.000	100.000	229.070	-0.940

Internal Reference Calibration, performed Wed Dec 05 12:55:41 2018:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.008	0.997	1.000	0.000

Air Zero Calibration, performed Thu Mar 07 12:26:50 2019:

	Raw (v)		Calibrated (v)		Results
	Zero		Zero		Offset
3'	0.000		0.000		0.000
5'	0.000		0.000		0.000
SUM					
S1	0.000		0.000		0.000
S2	0.000		0.000		0.000
S3	0.000		0.000		0.000
S4	0.000		0.000		0.000
S5	0.000		0.000		0.000
S6	0.000		0.000		0.000
S7	0.000		0.000		0.000
S8	0.000		0.000		0.000



Company GREAT WESTERN OIL AND GAS
Well SCHAEFER LD 13-032HC
Field WATTENBERG
County ADAMS
State COLORADO

Country USA