



CEMENT BOND
GAMMA RAY
CCL LOG

Company	GREAT WESTERN OIL AND GAS			Country	USA
Well	SCHAEFER LD 13-033HN				
Field	WATTENBERG				
County	ADAMS				
State	COLORADO				
Location:	AP1 # : 05-001-10253			Other Services	
Permanent Datum	SEC 24	TWP 1S	RGE 67W		
Log Measured From	G.L. K.B.. 20'			Elevation	5021'
Drilling Measured From	K.B.				K.B. 5041' D.F. 5042' G.L. 5021'

Date	MAR 7 2019						
Run Number	ONE						
Depth Driller	NA						
Depth Logger	7880'						
Bottom Logged Interval	7880'						
Top Log Interval	SURFACE						
Open Hole Size	8.5"						
Type Fluid	H2O						
Density / Viscosity	8.4						
Max. Recorded Temp.	232 DEG F						
Estimated Cement Top	LOGGED						
Time Well Ready	1230						
Time Logger on Bottom	1300						
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/lbft		Top	Bottom
Surface String	9.625"			35#		SURFACE	1781'
Prot. String							
Production String	5.5"			17#		SURFACE	18044'
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

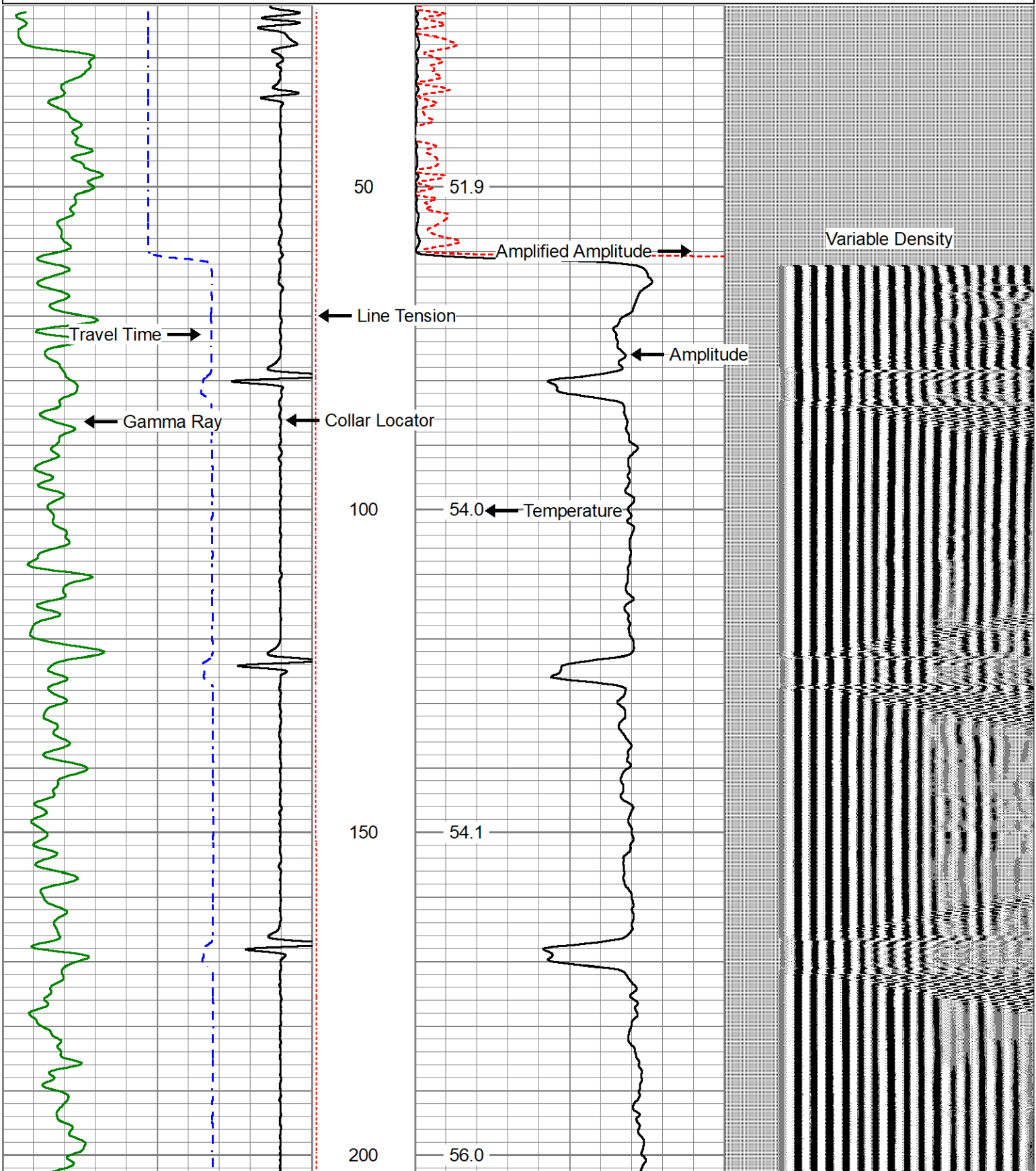
LOG CORRELATED TO CASING REPORT DATED 2/10/19
4.5" GAUGE RING RUN TO 7880'
SHORT JOINT AT 6718'-6728'
LOGGED FROM 6500' TO 3500' AT 3000 PSI

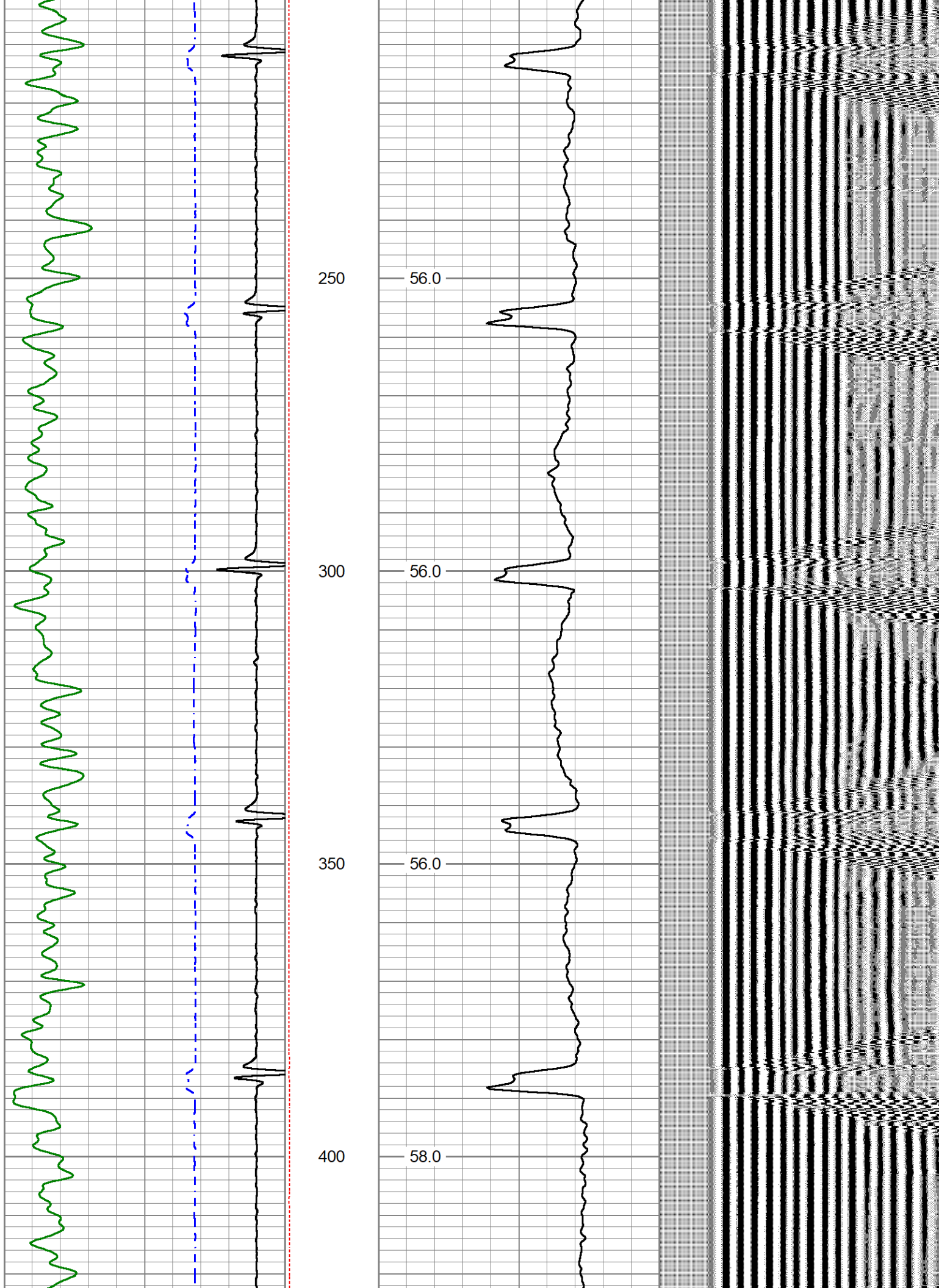


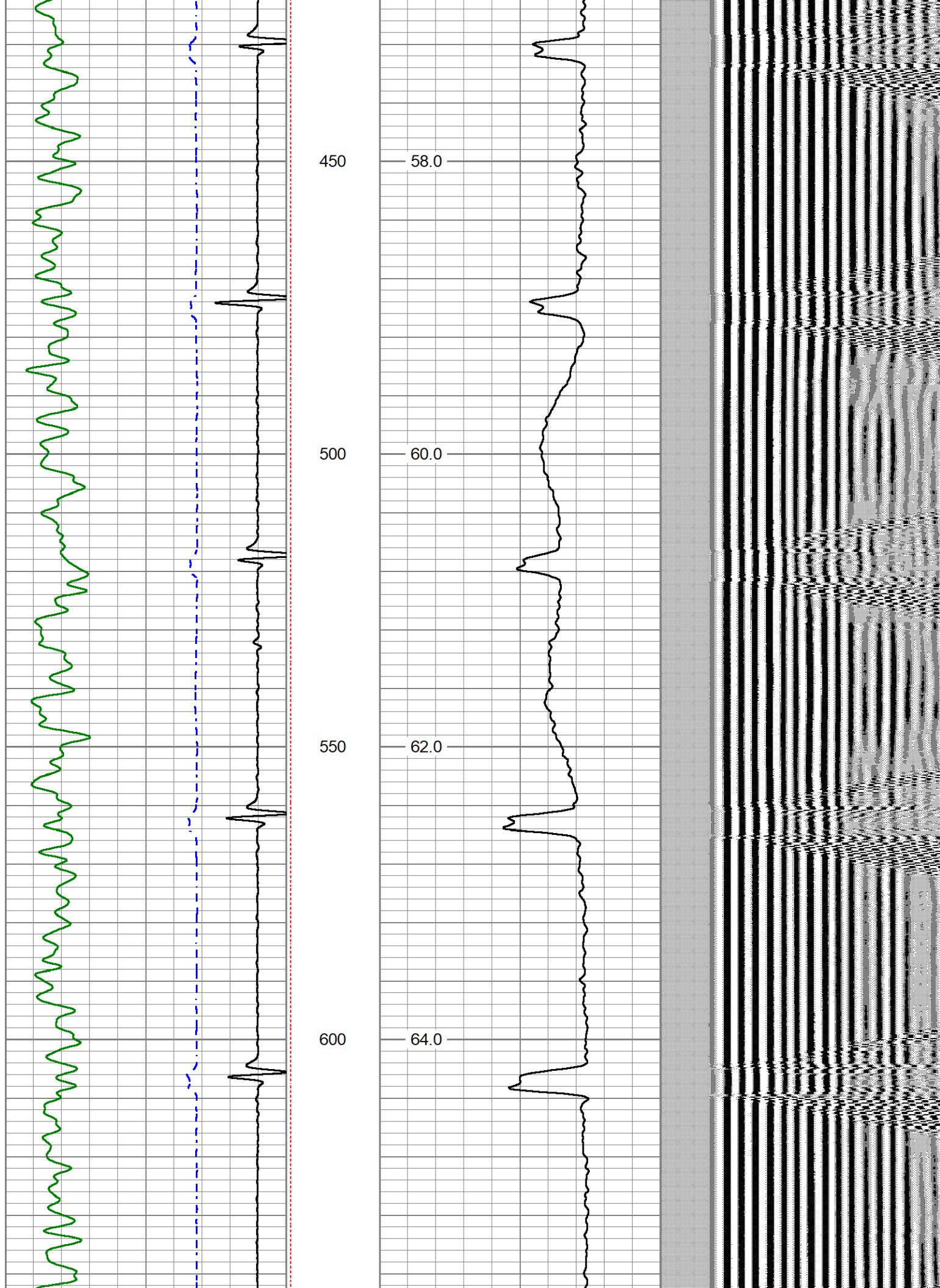
MAIN PASS 0PSI

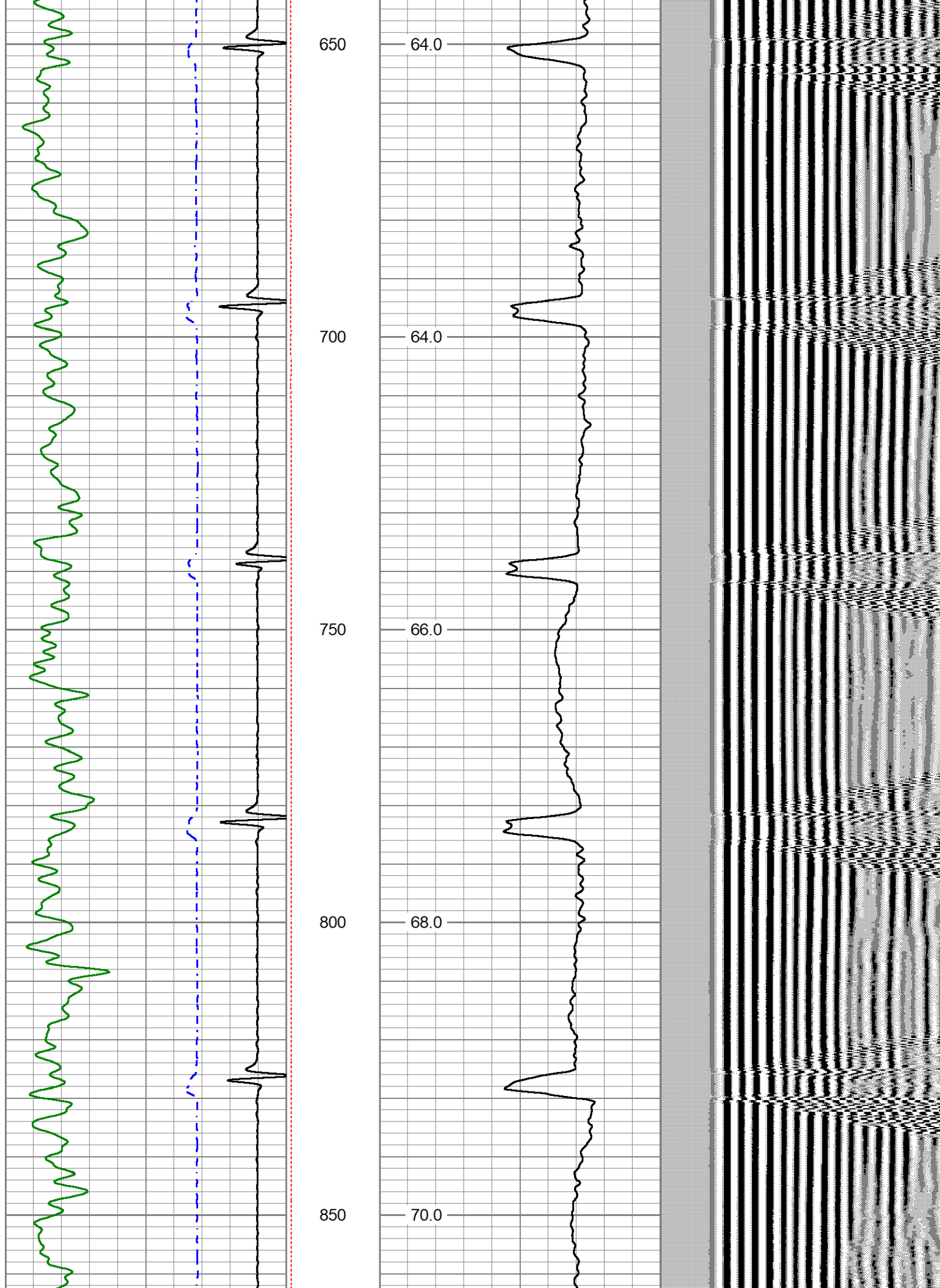
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Dataset Pathname	pass15.1
Presentation Format	cblww
Dataset Creation	Thu Mar 07 14:43:57 2019
Charted by	Depth in Feet scaled 1:240

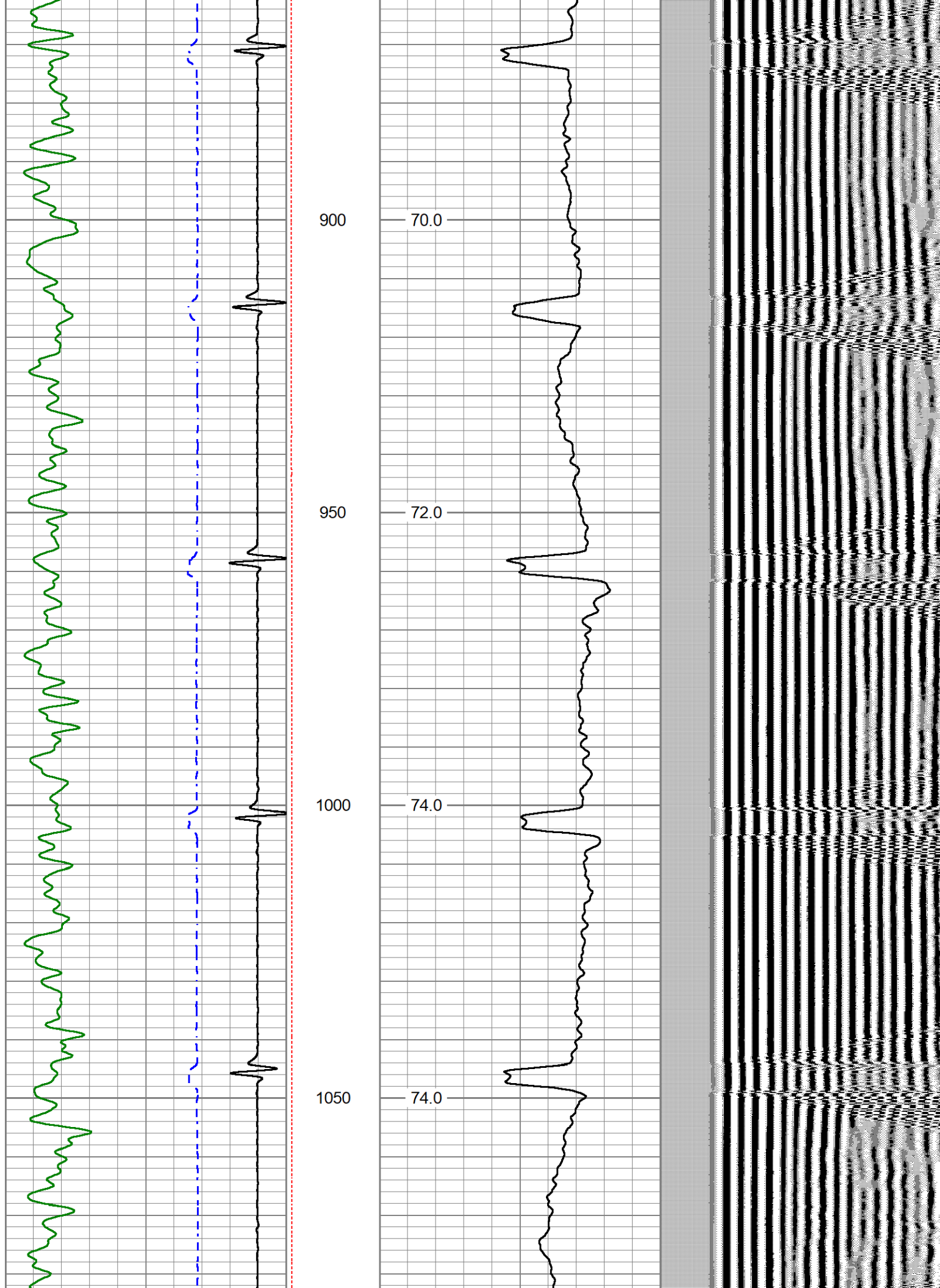
400	Travel Time (usec)	200	LTEN	0	Amplified Amplitude (mV)	10	200	Variable Density (usec)	1200
9	Collar Locator	-1	0	(lb/5000	0	Amplitude (mV)	100		
0	Gamma Ray (GAPI)	200			TEMP				
					(degF)				

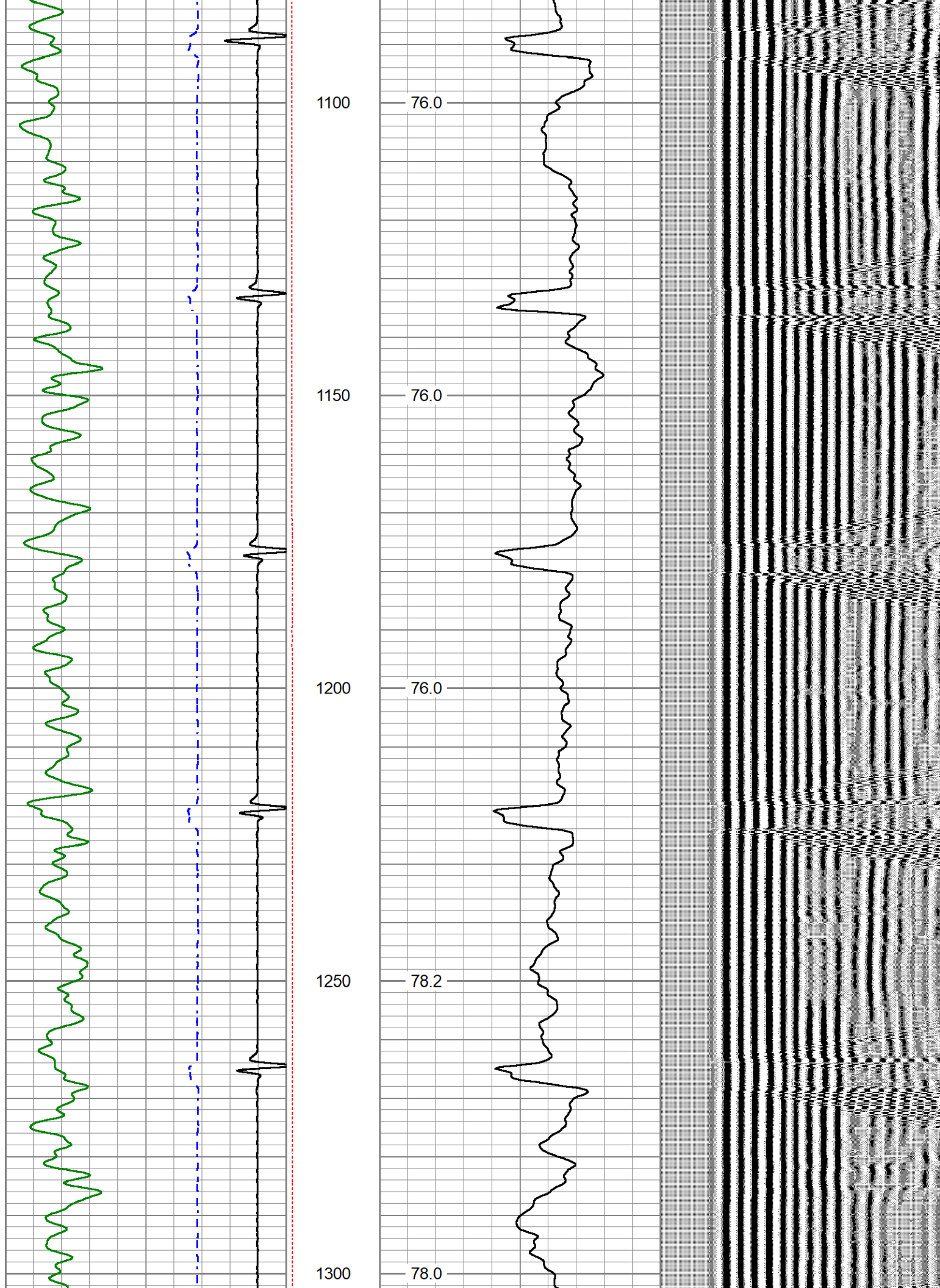


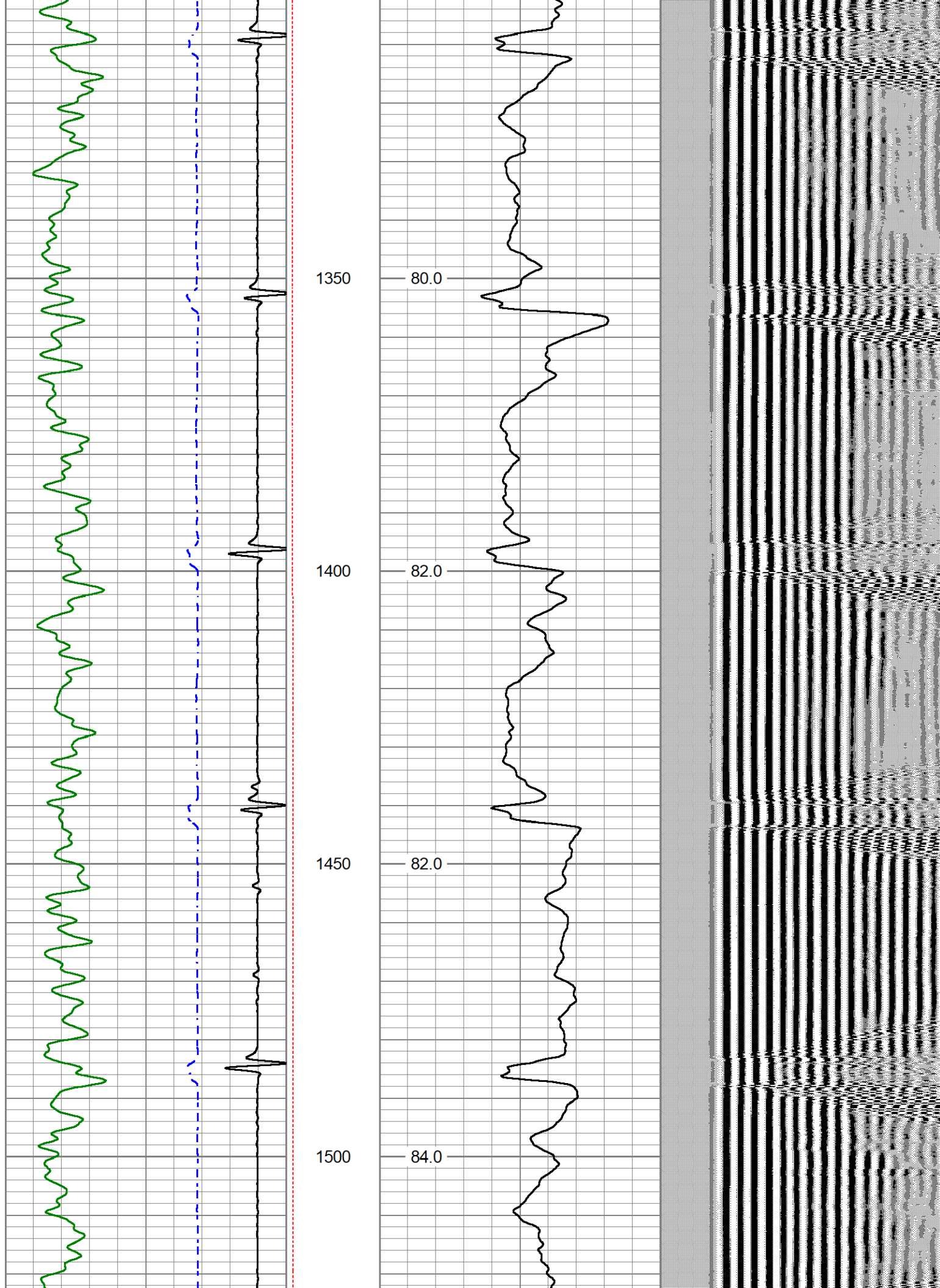


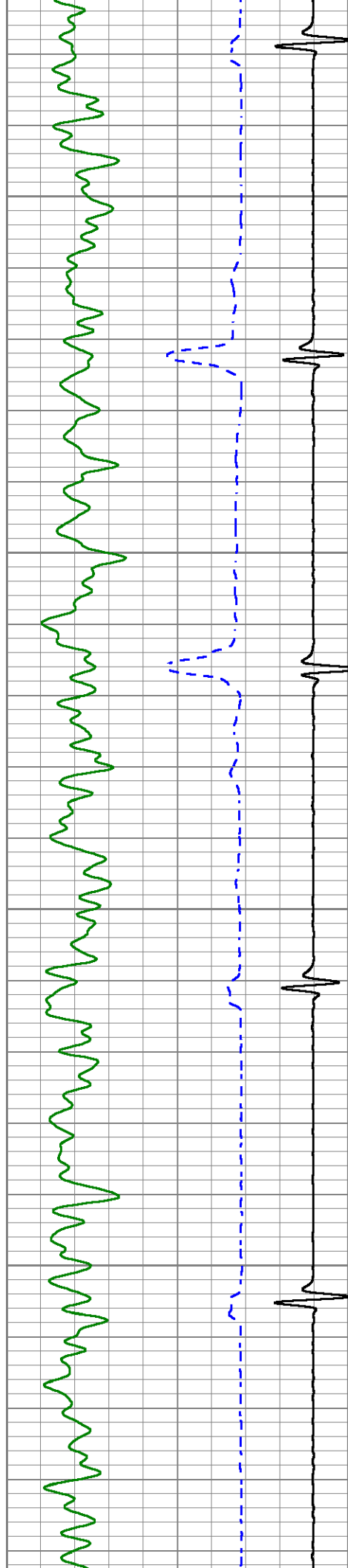












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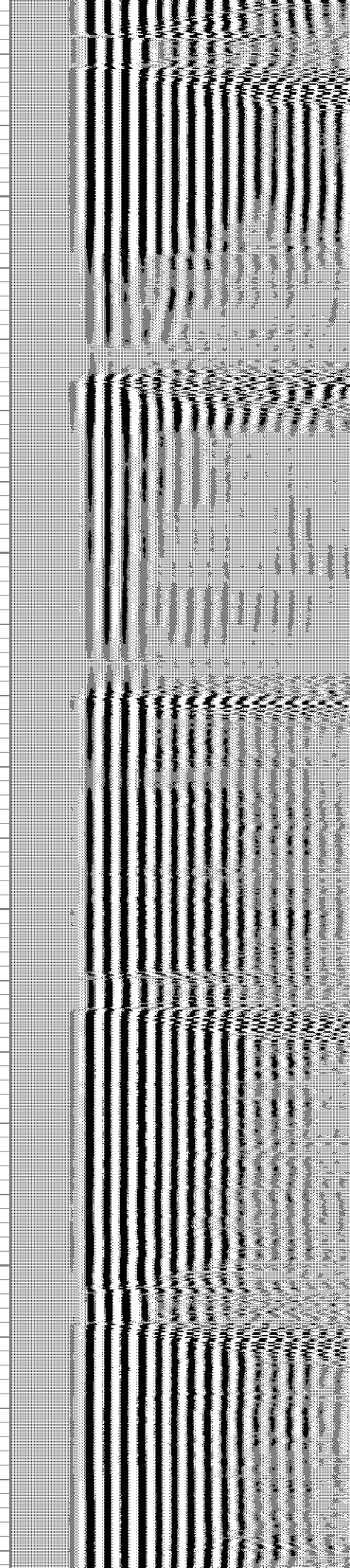
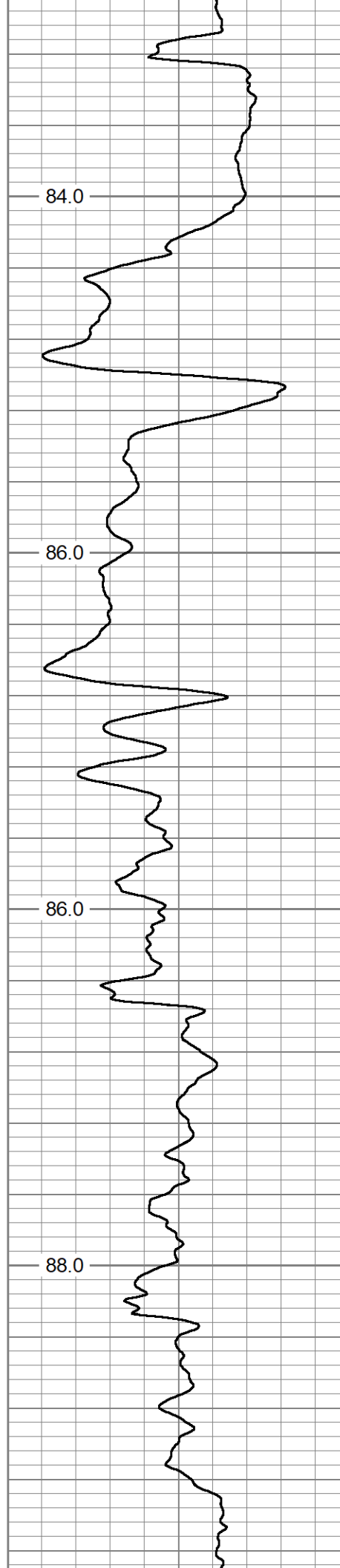
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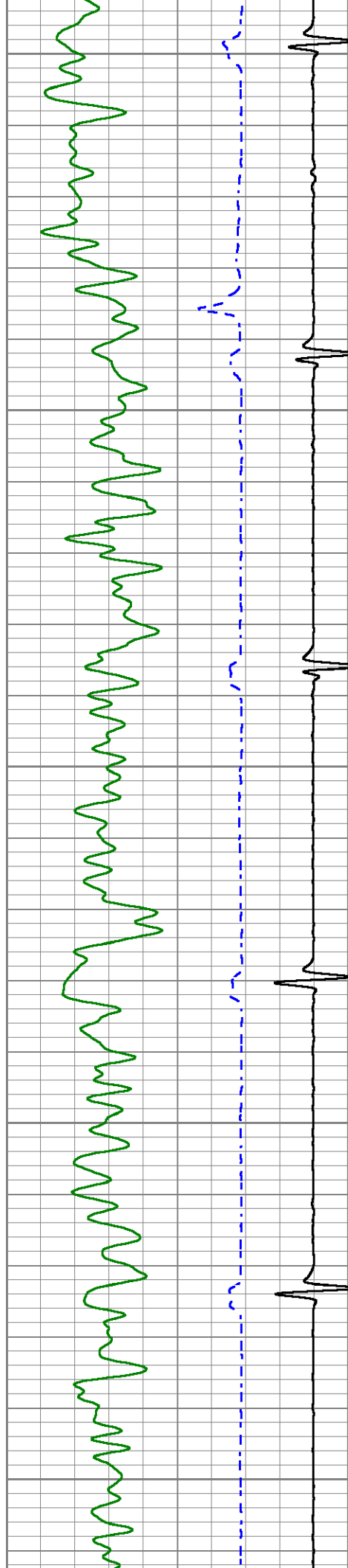
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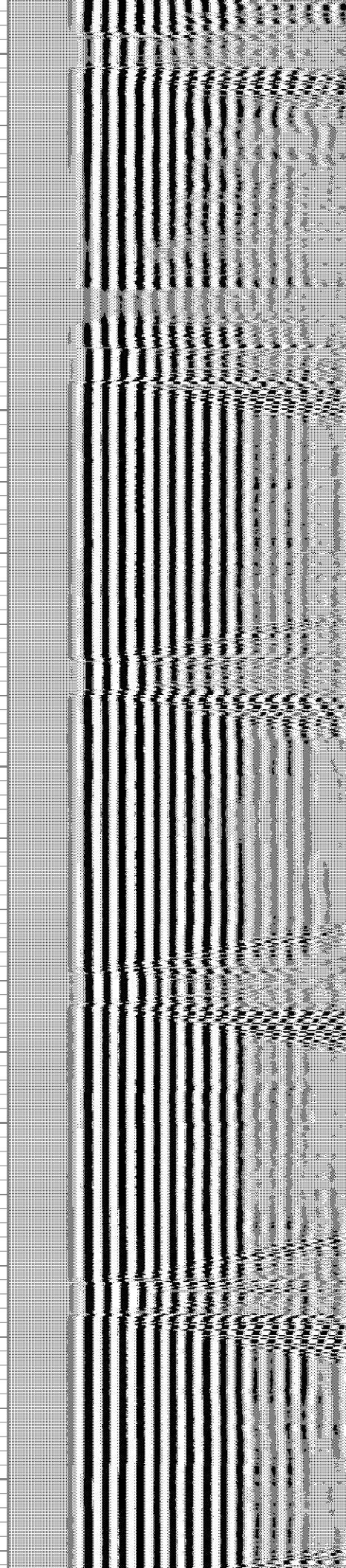
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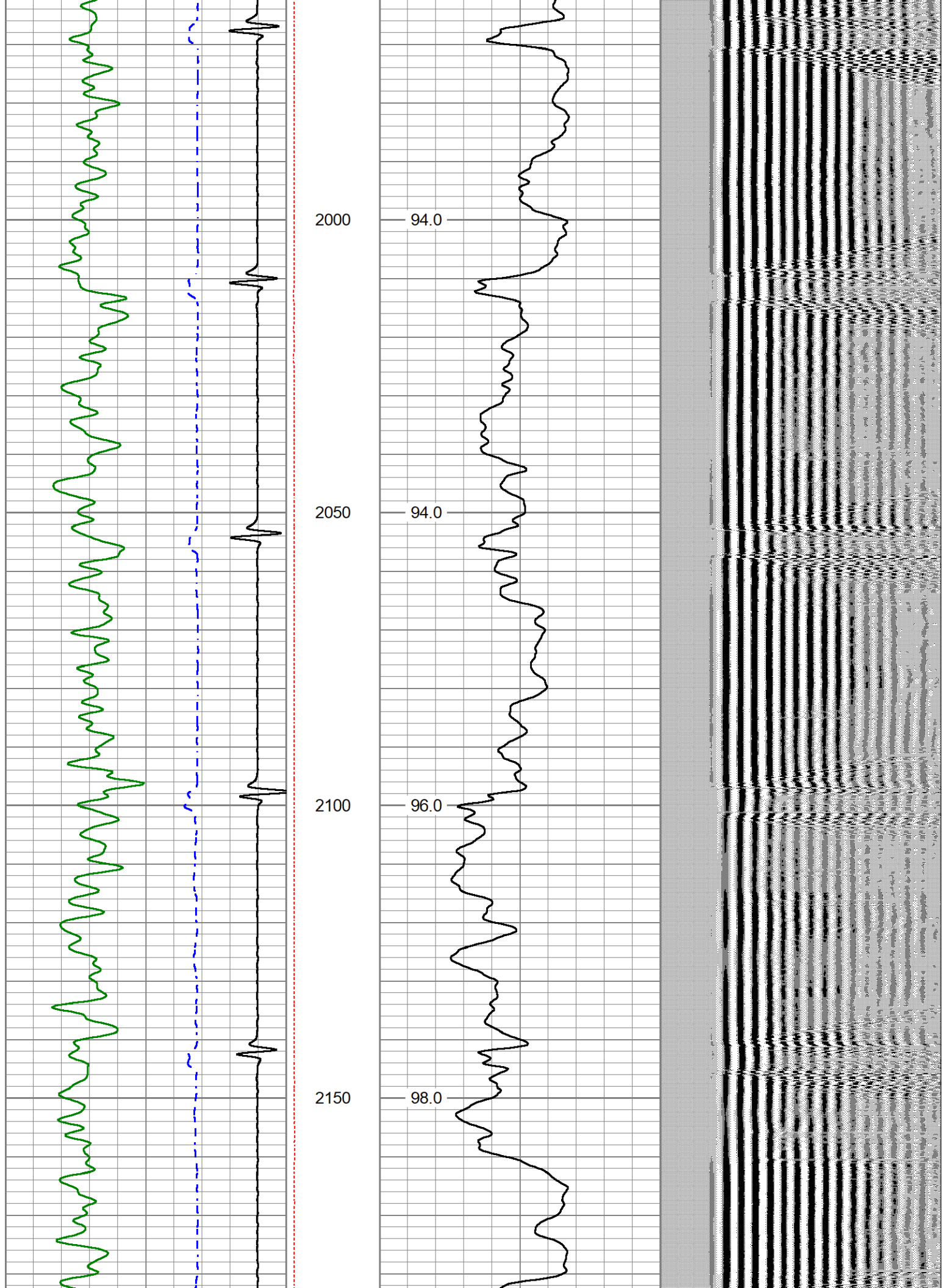
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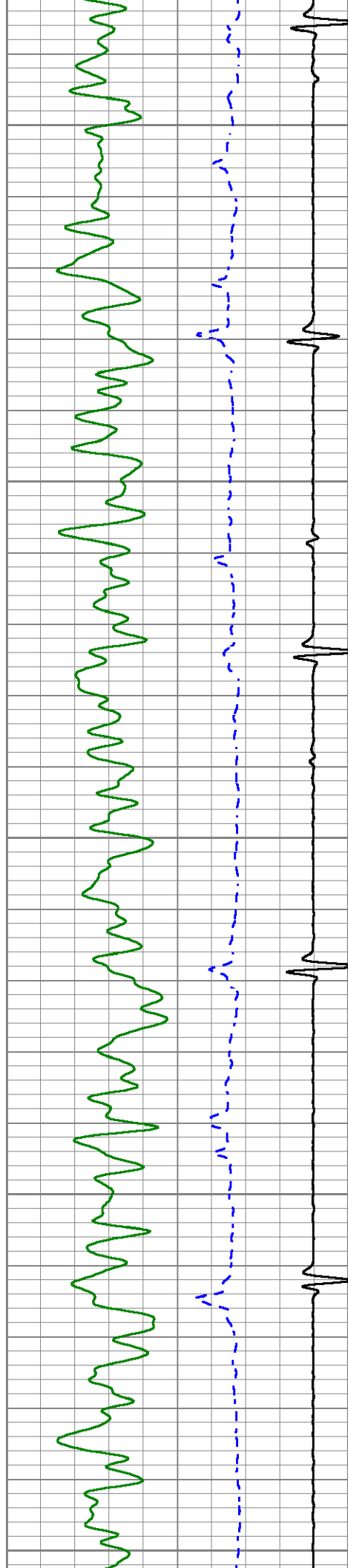
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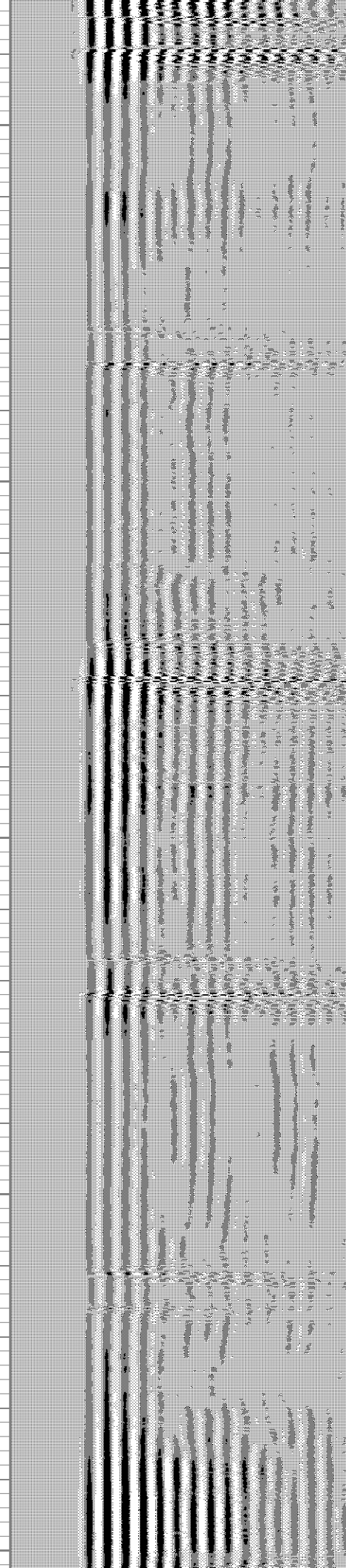
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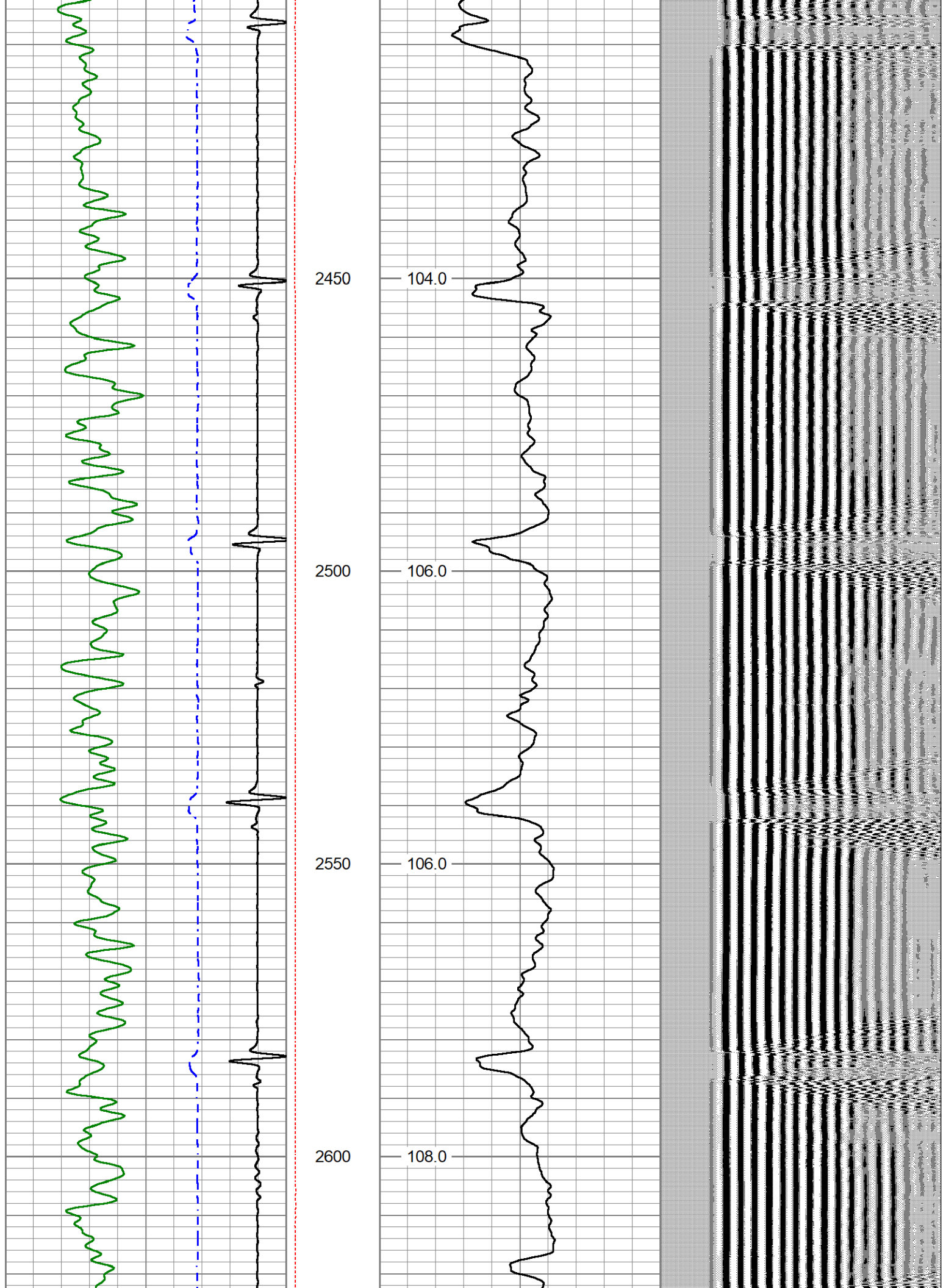
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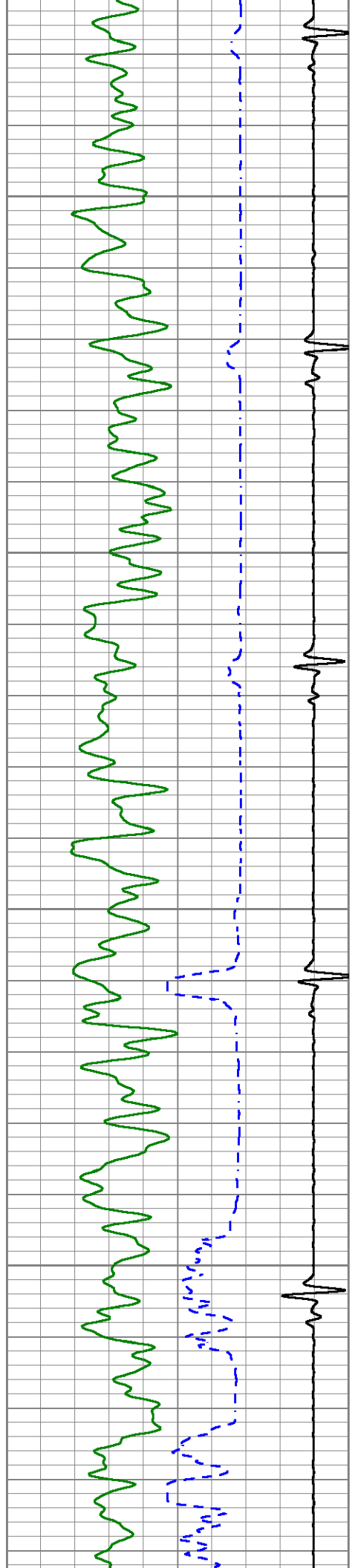
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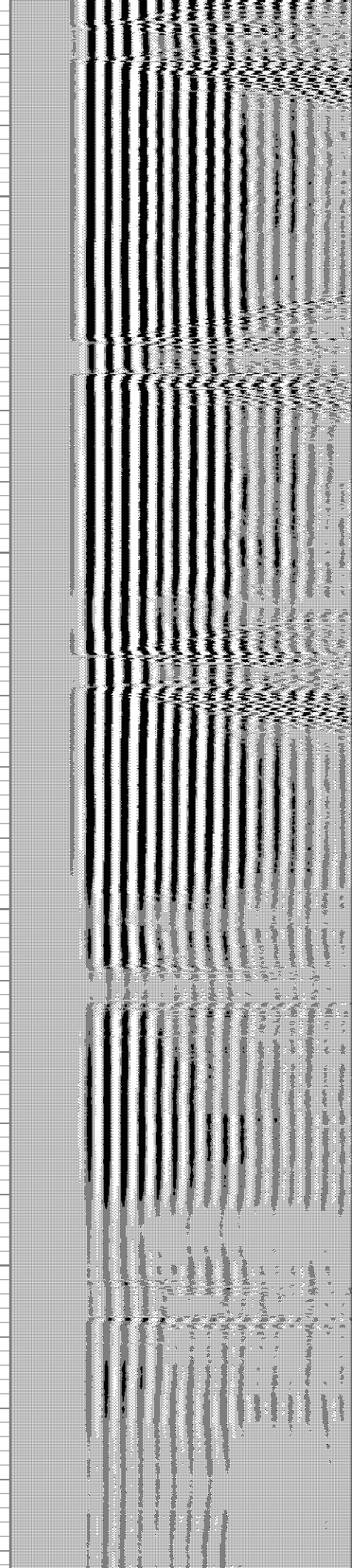
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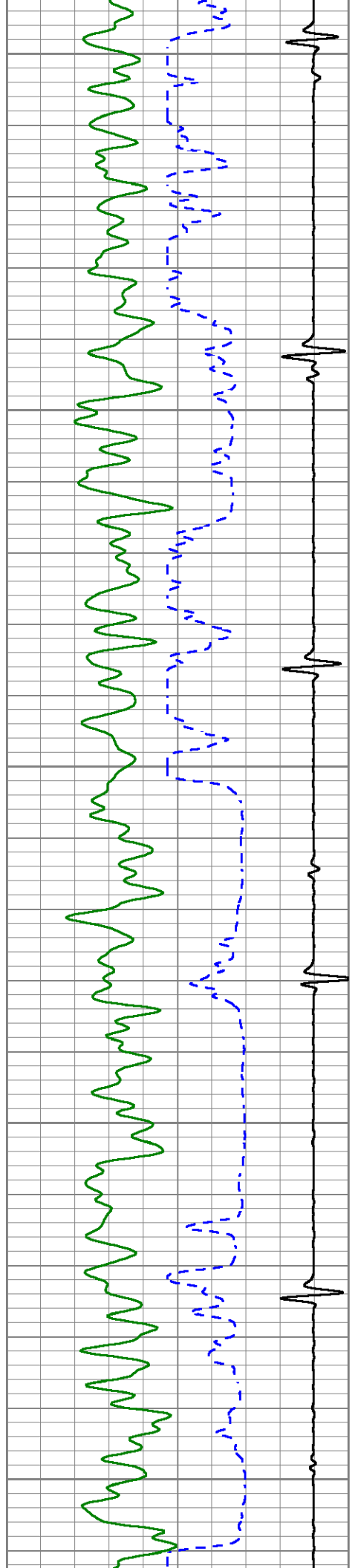
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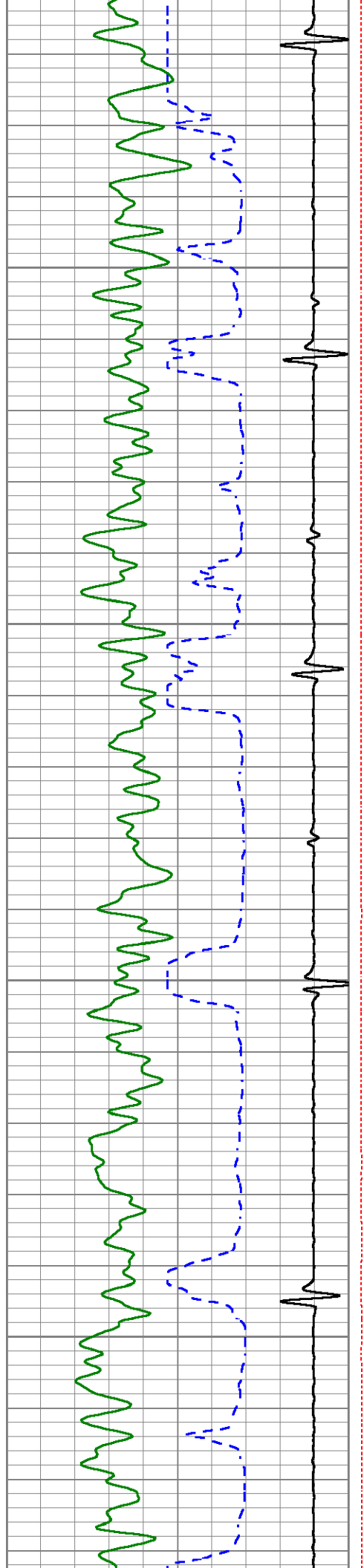
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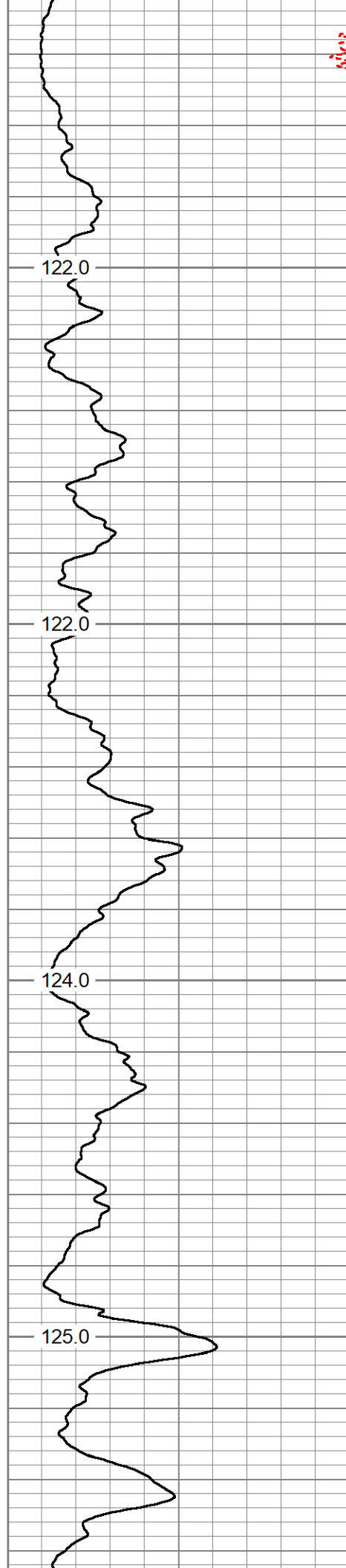


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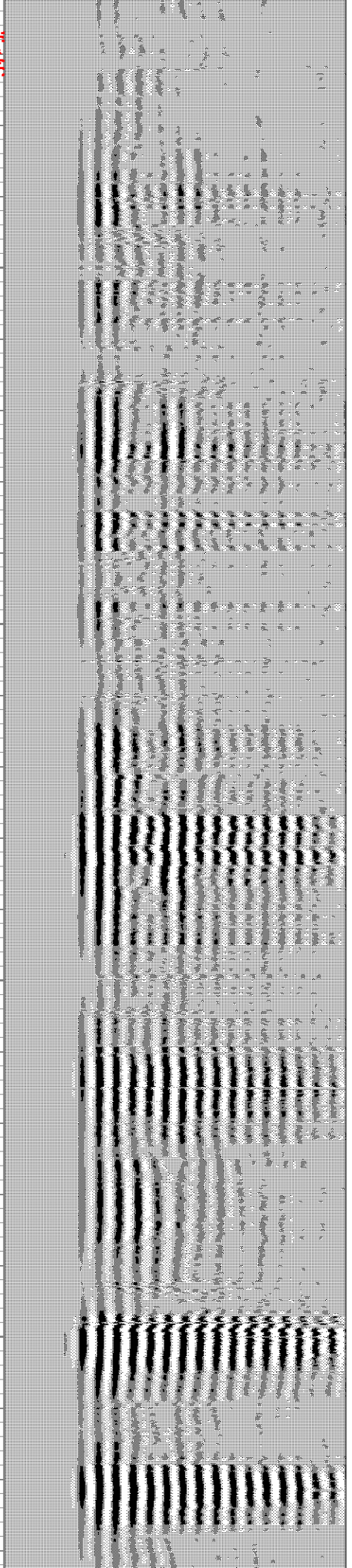
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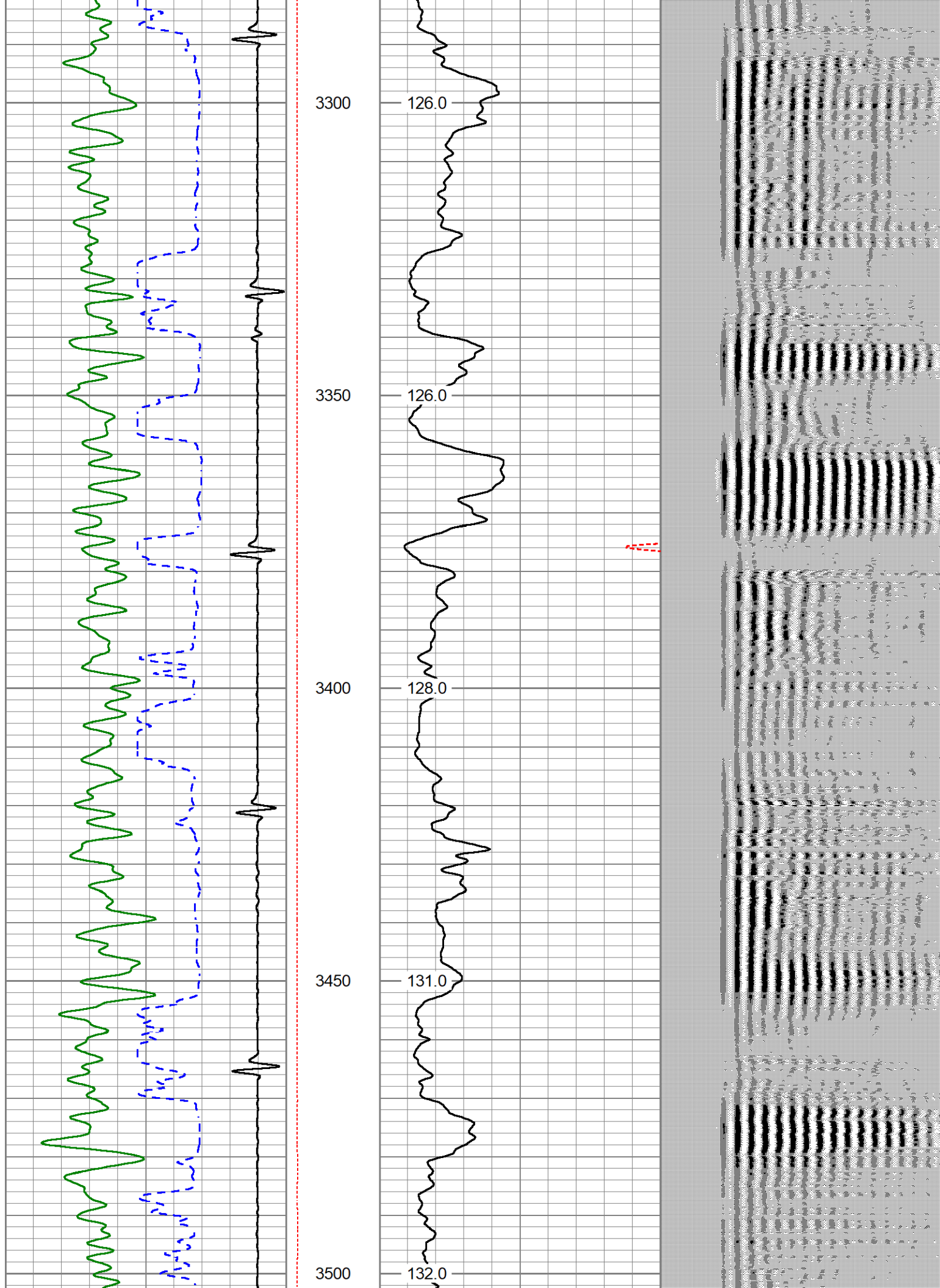
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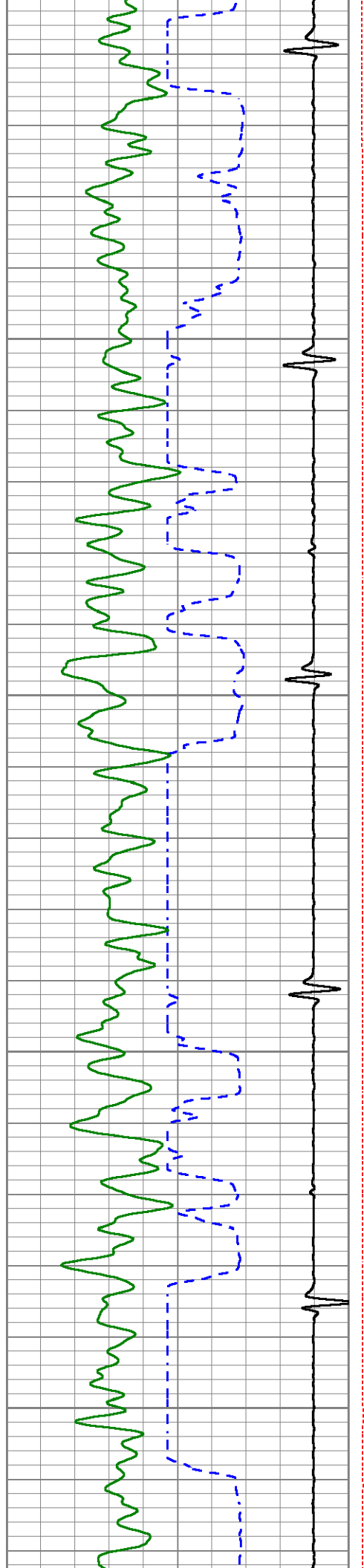
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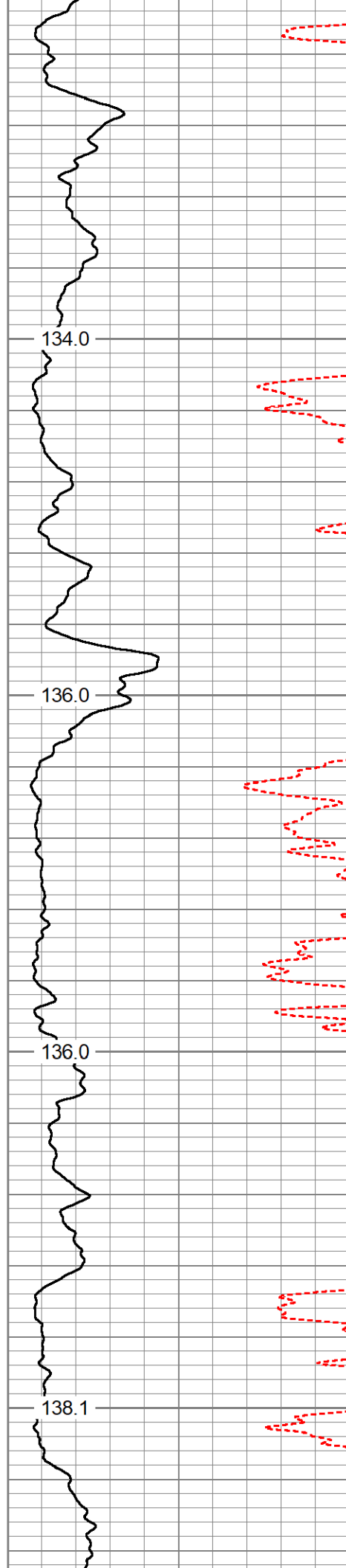


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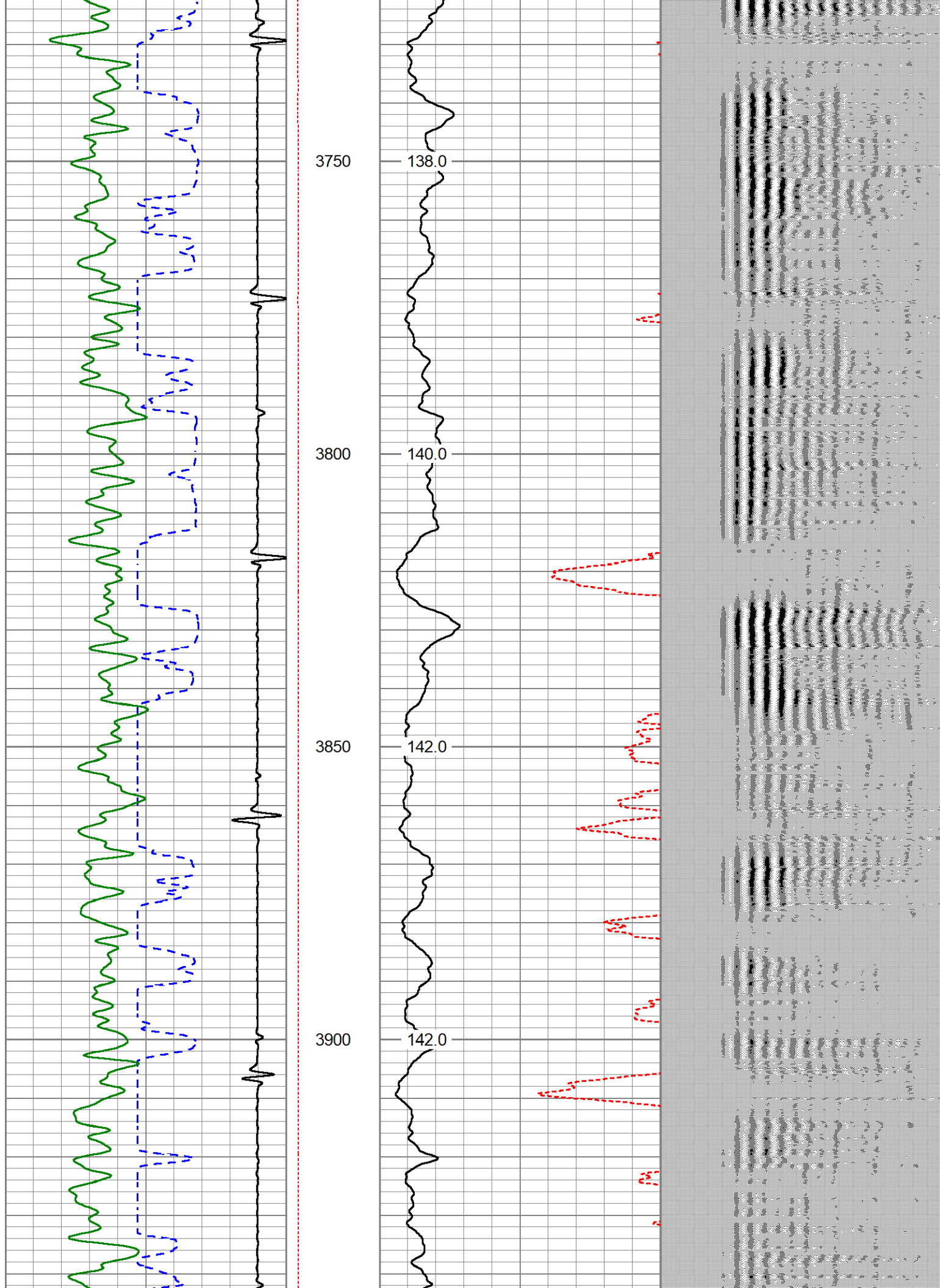


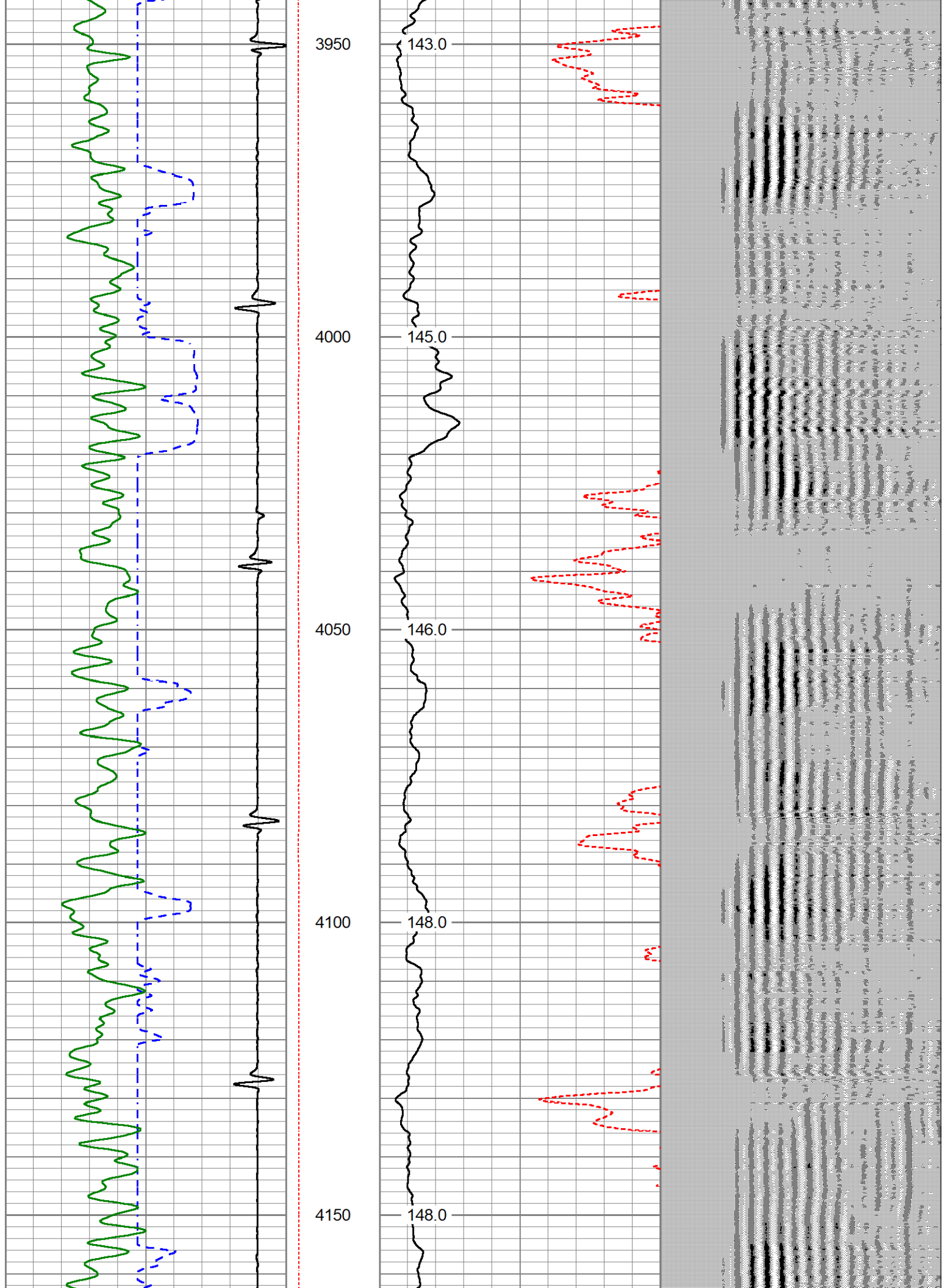
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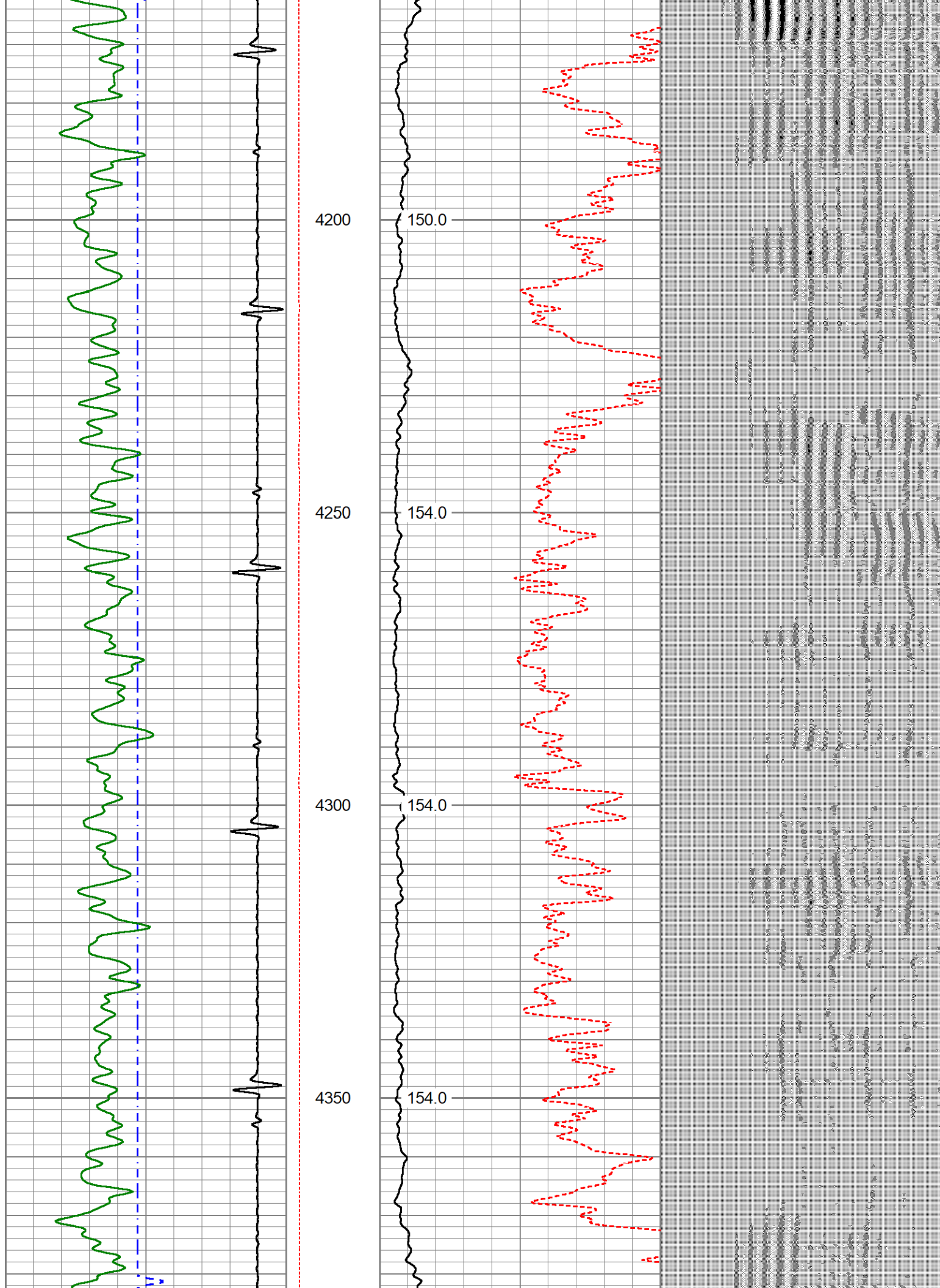
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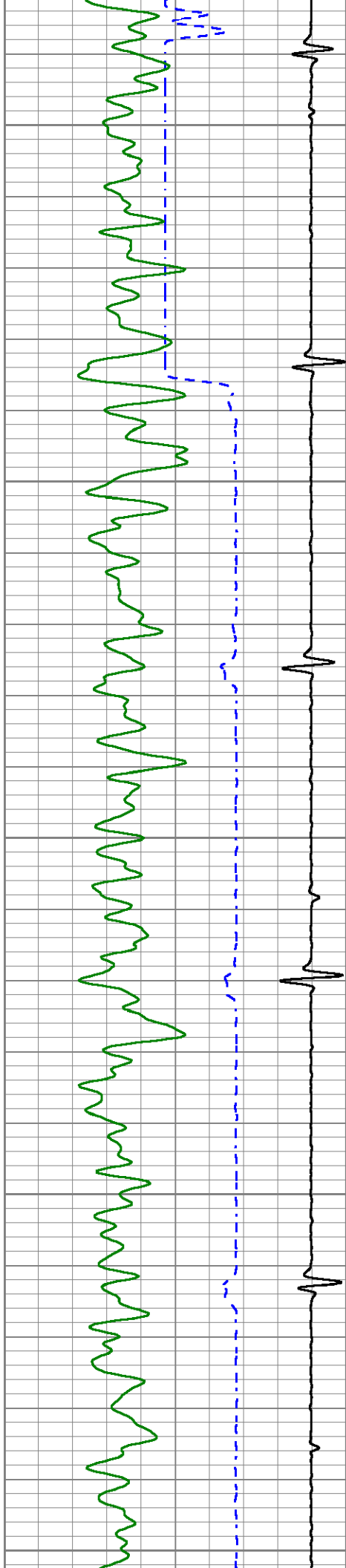
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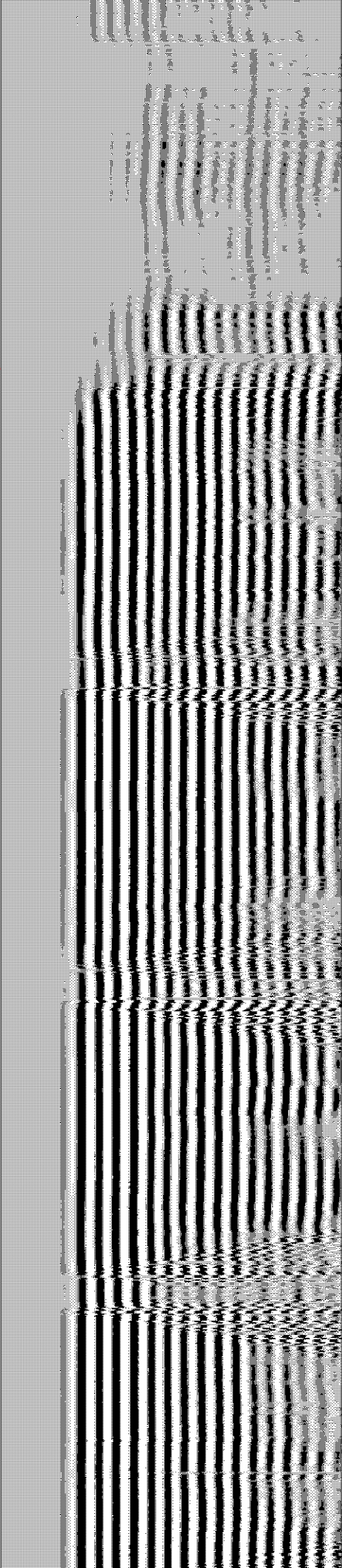
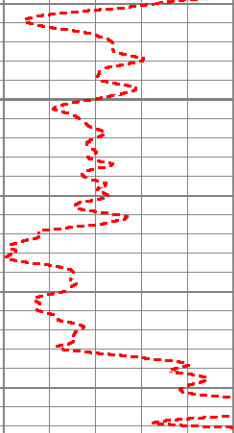
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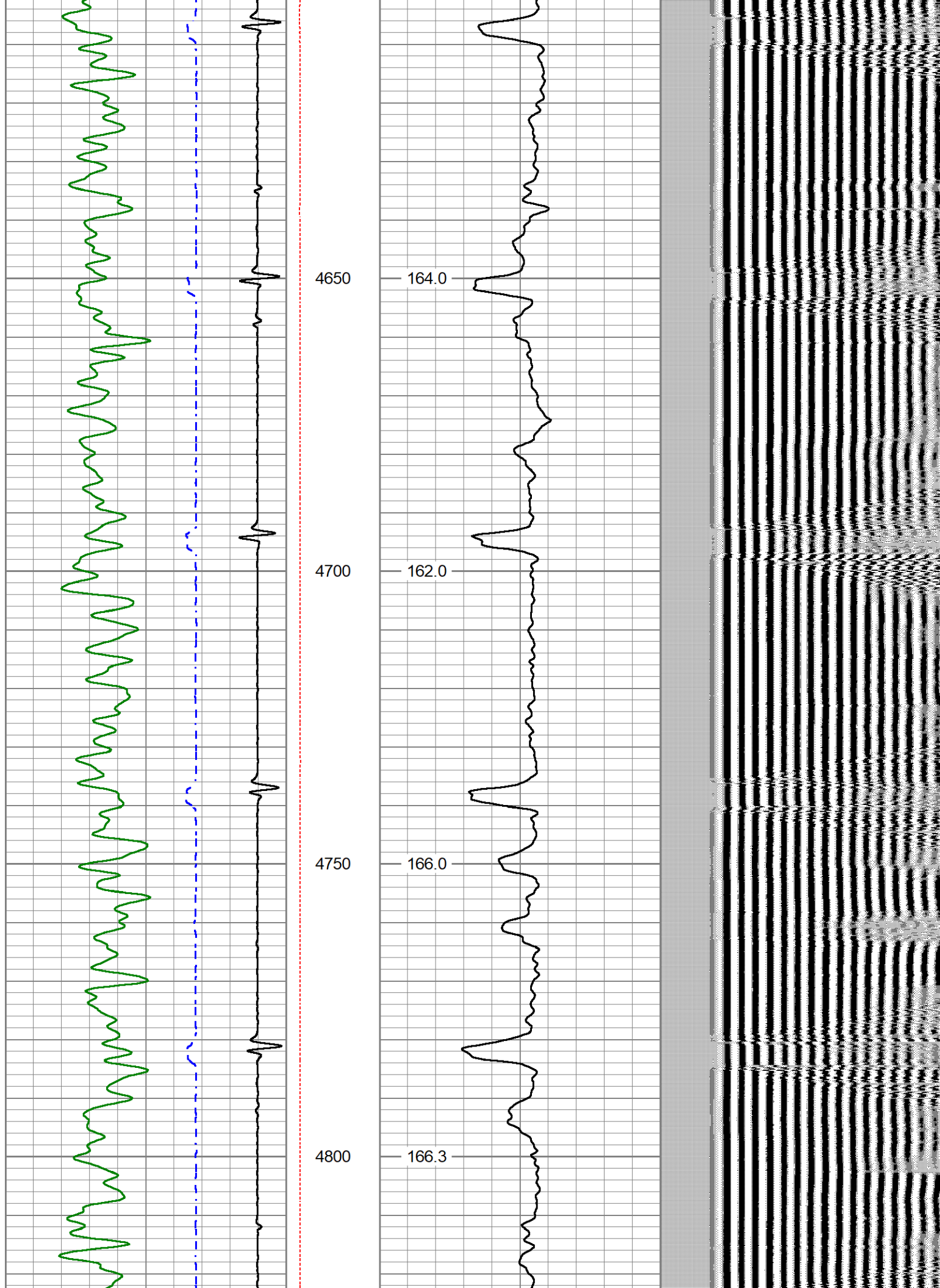
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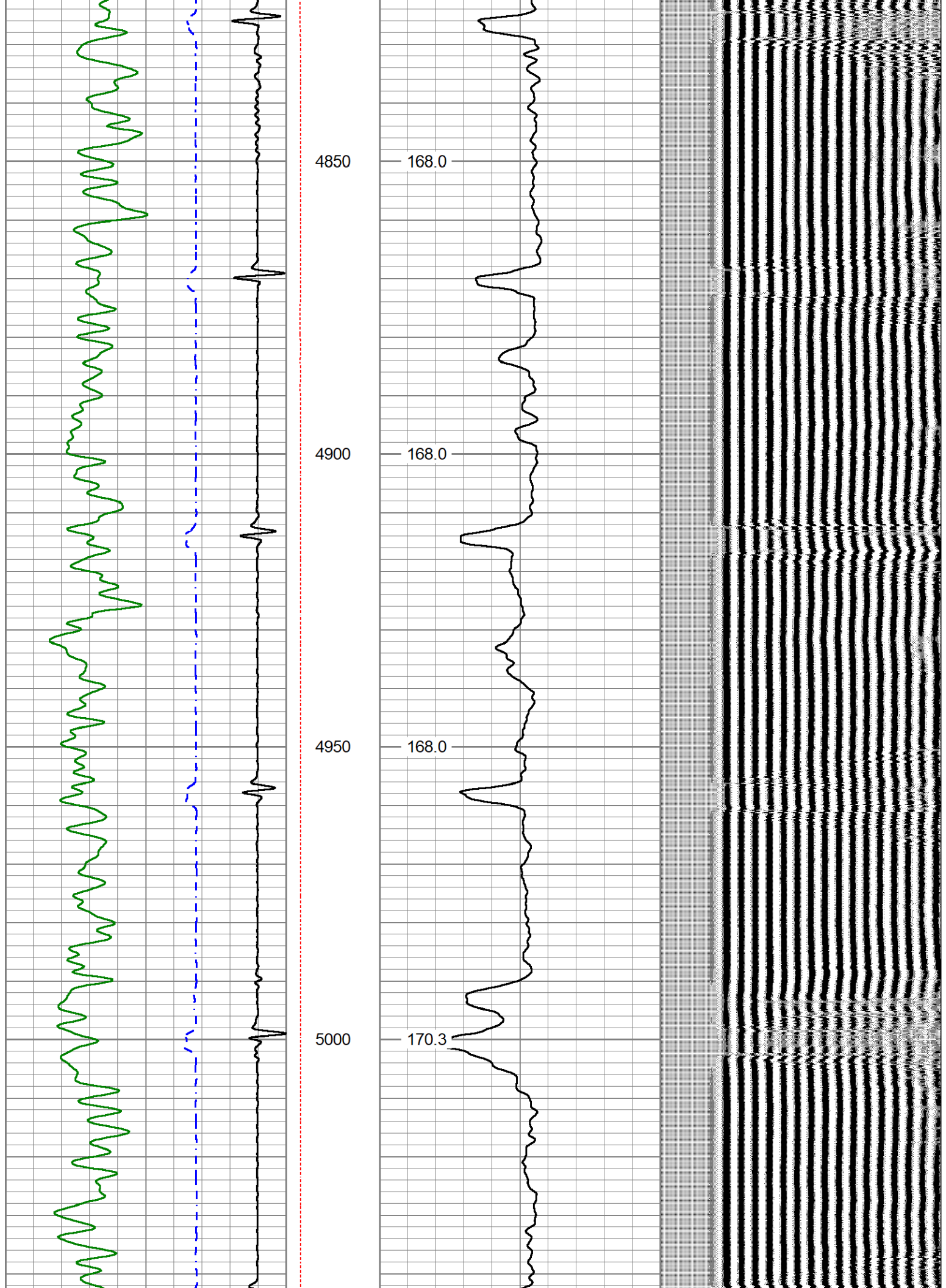
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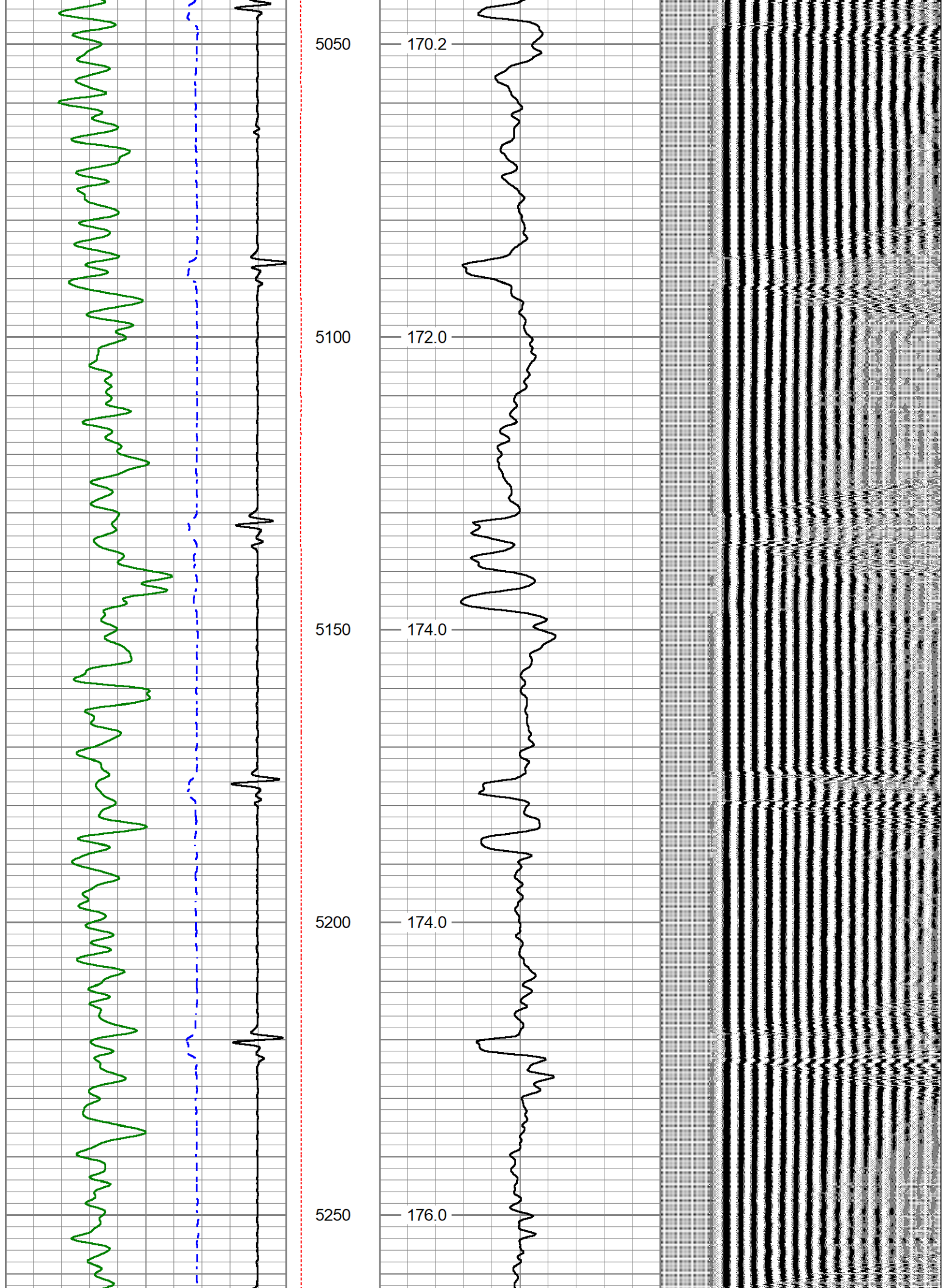
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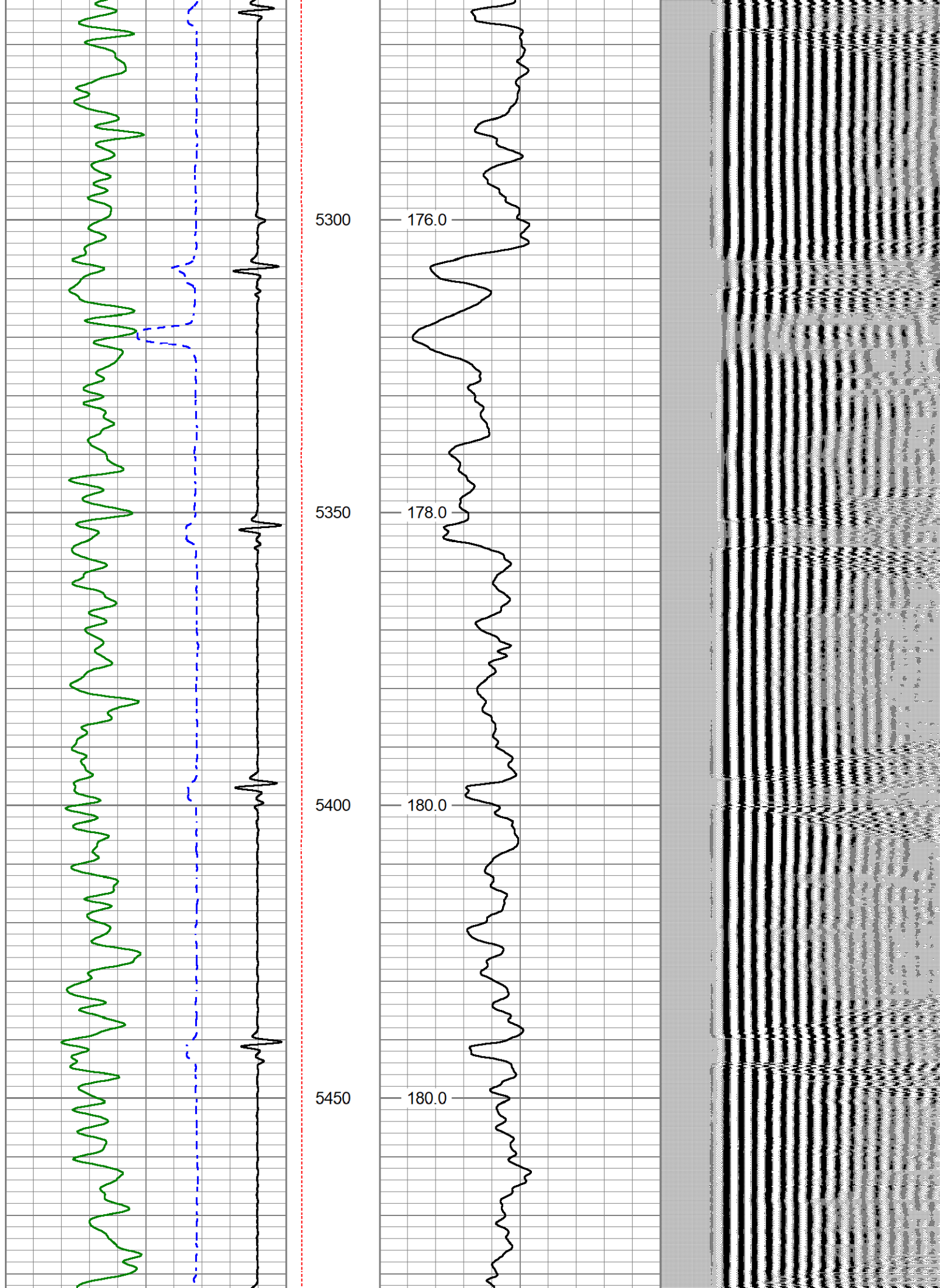
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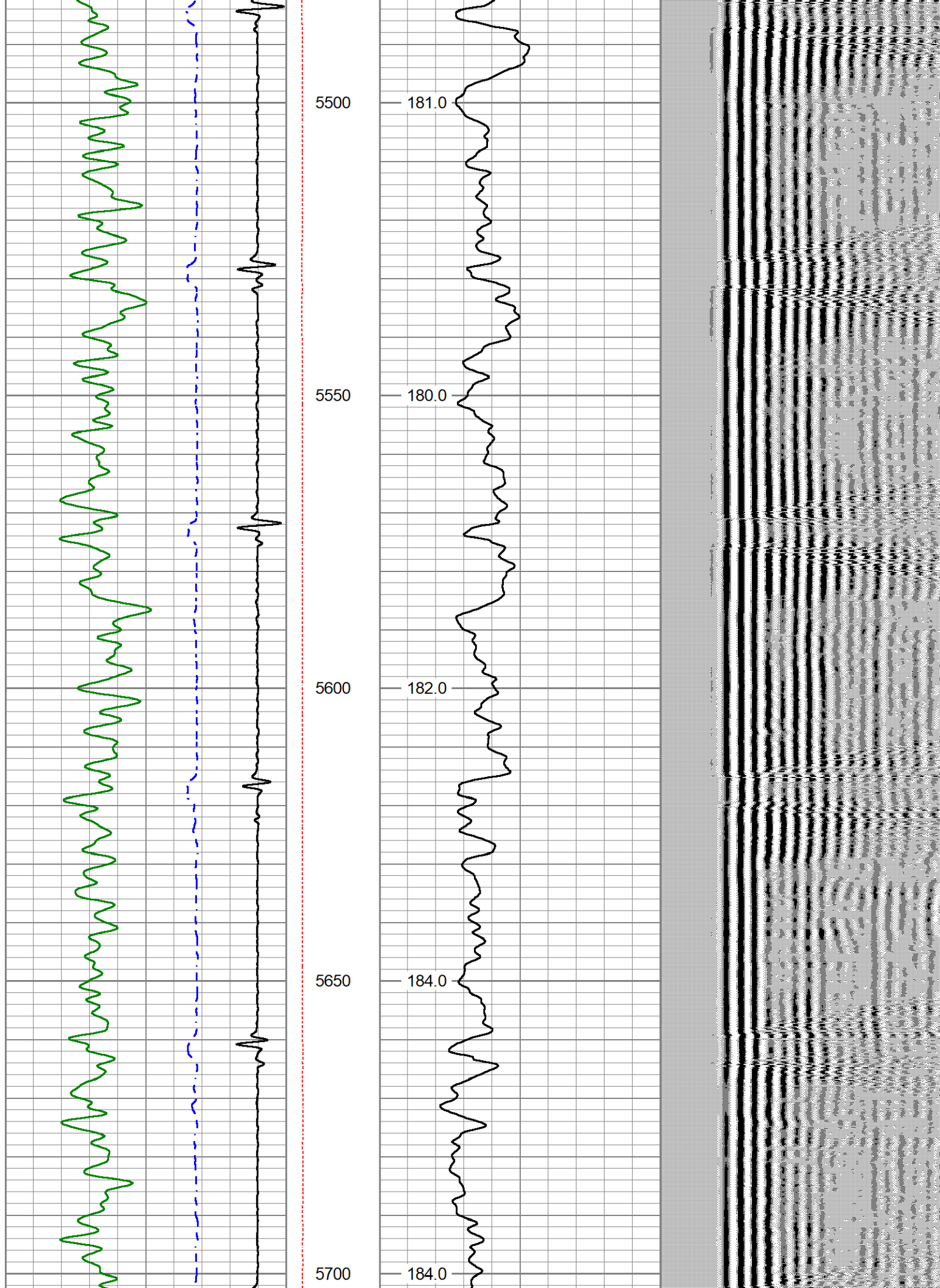


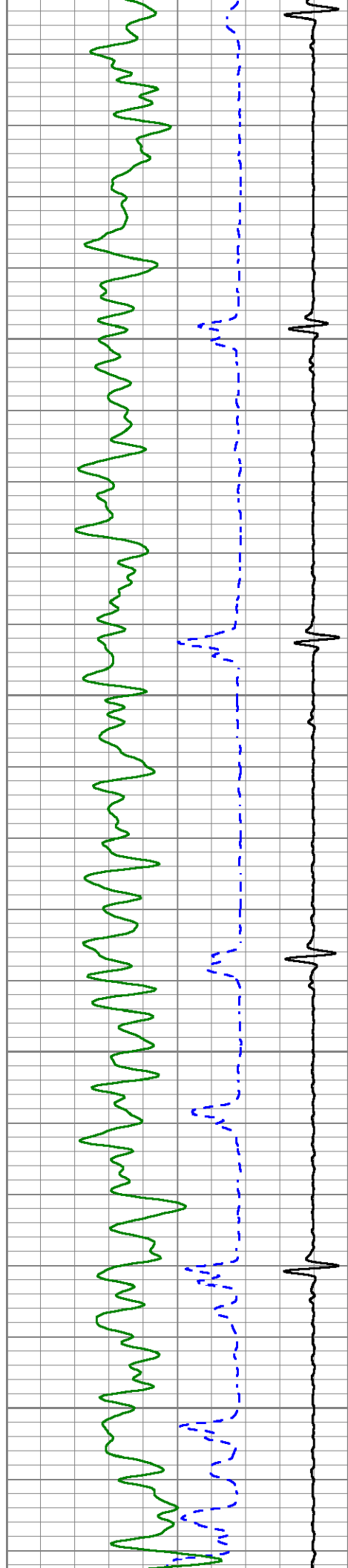












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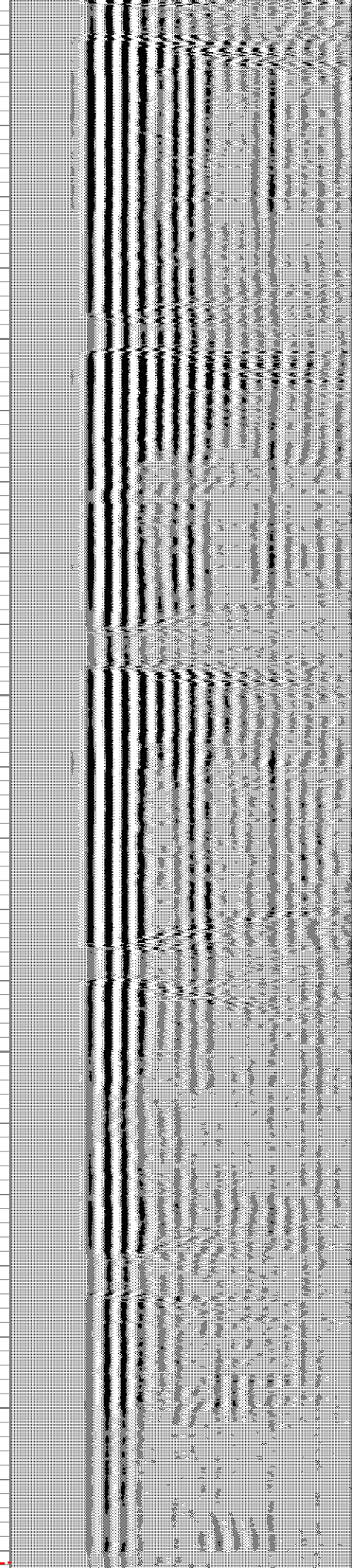


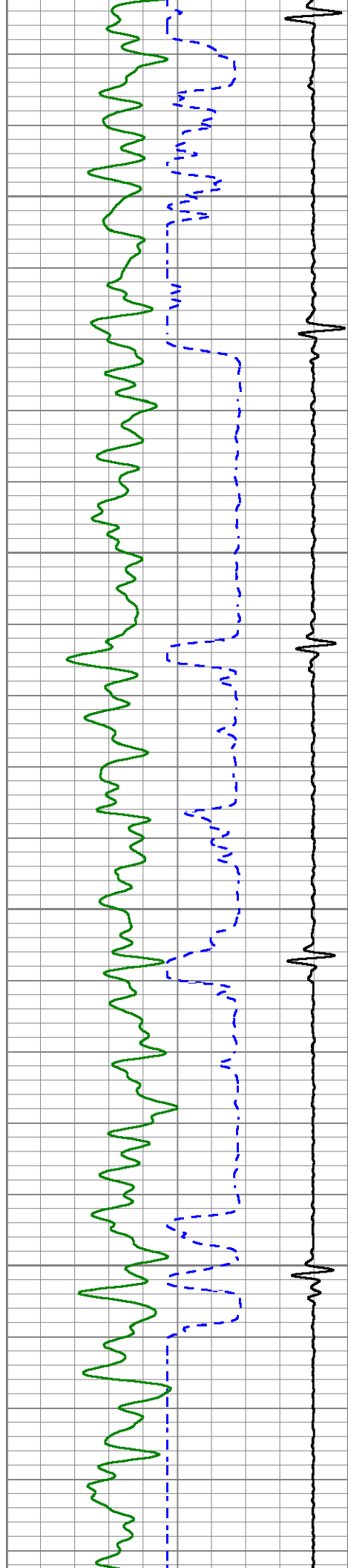
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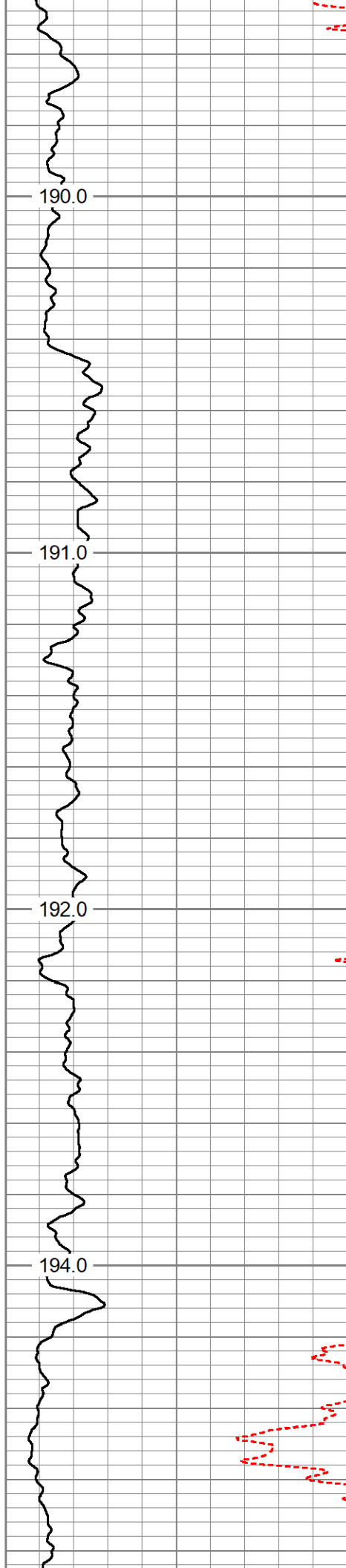


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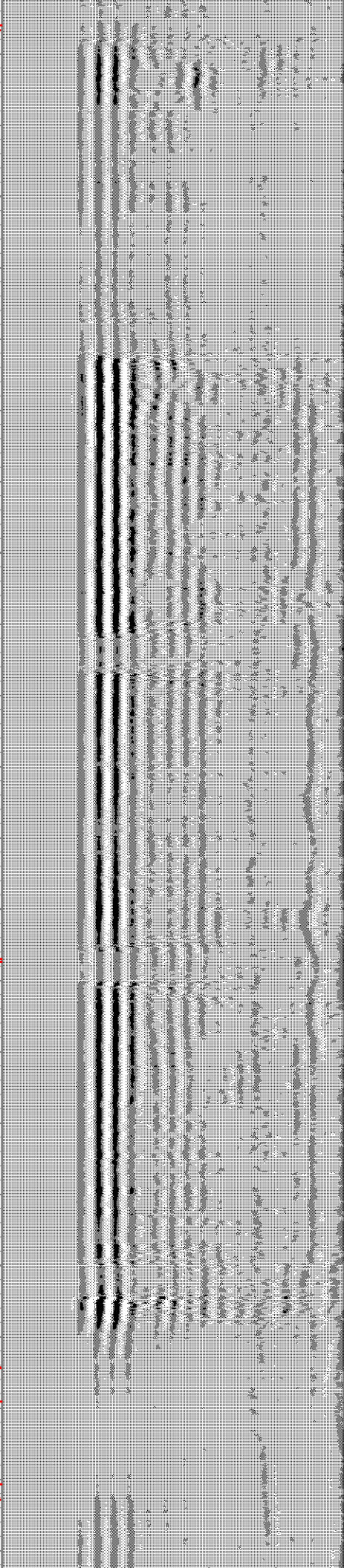


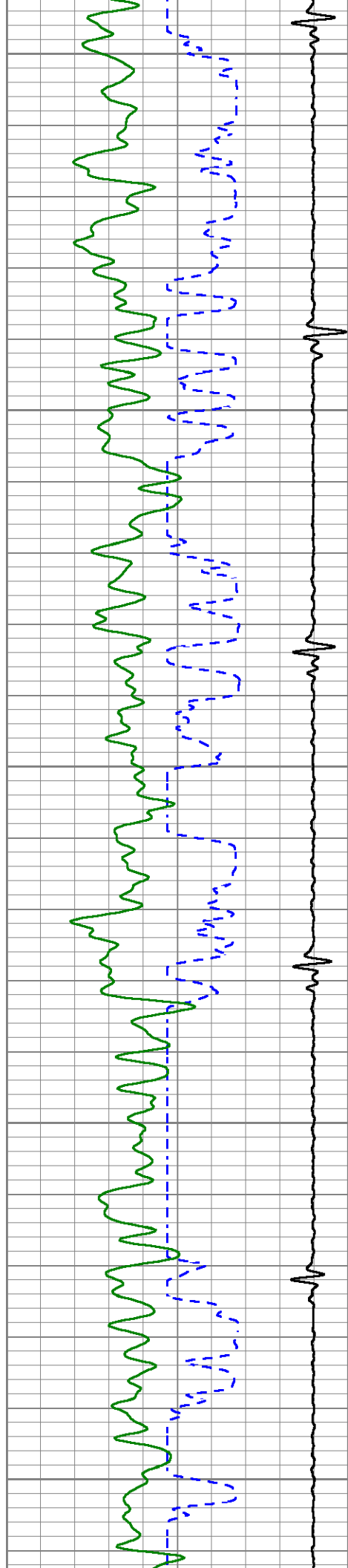
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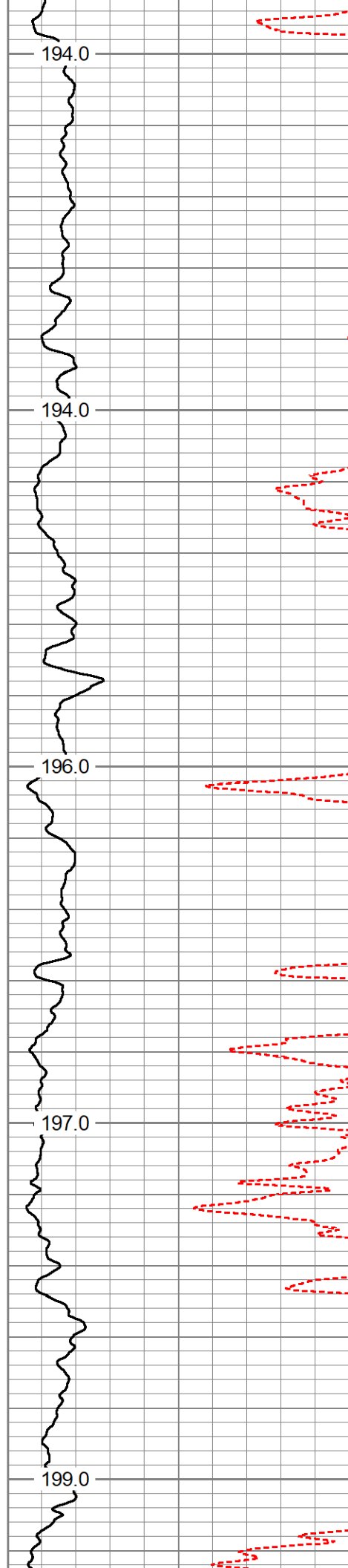
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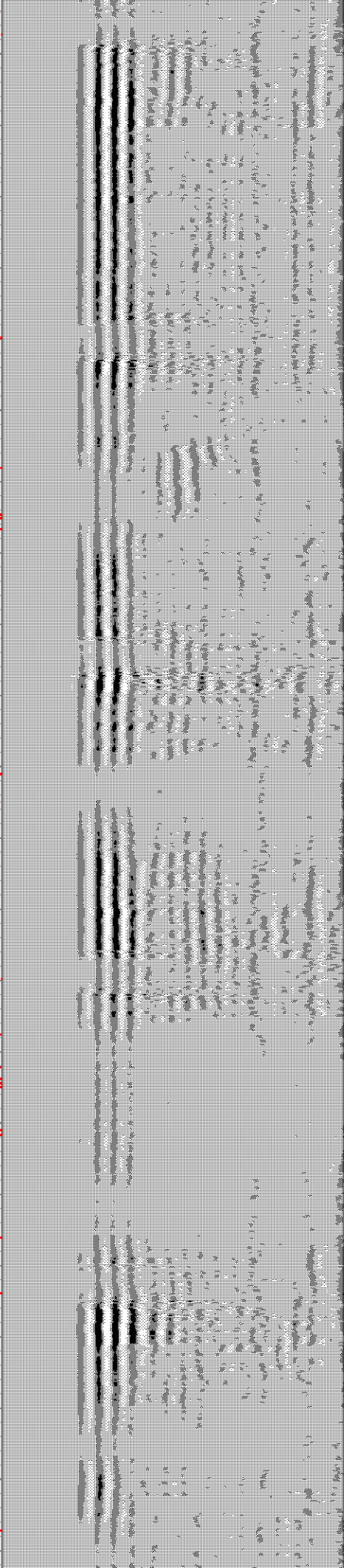
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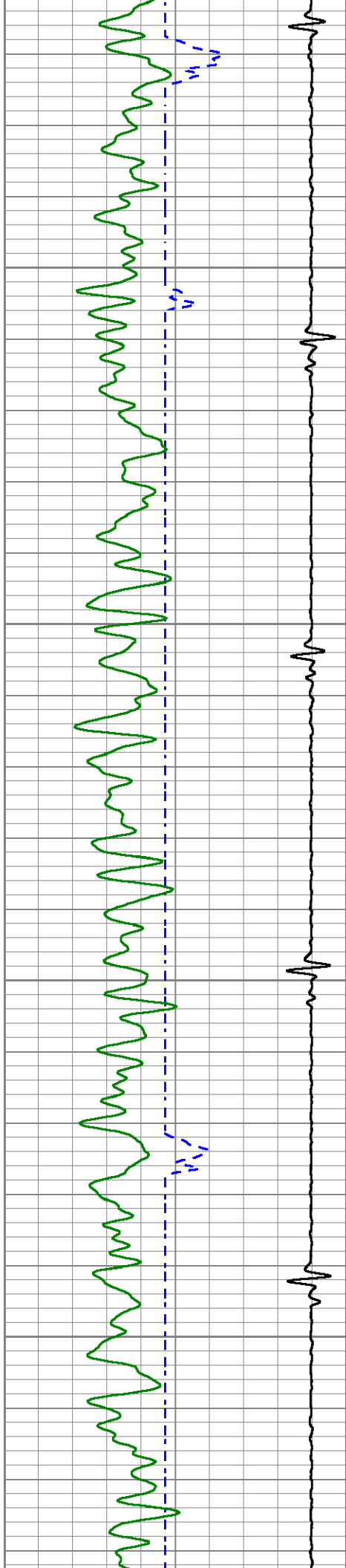
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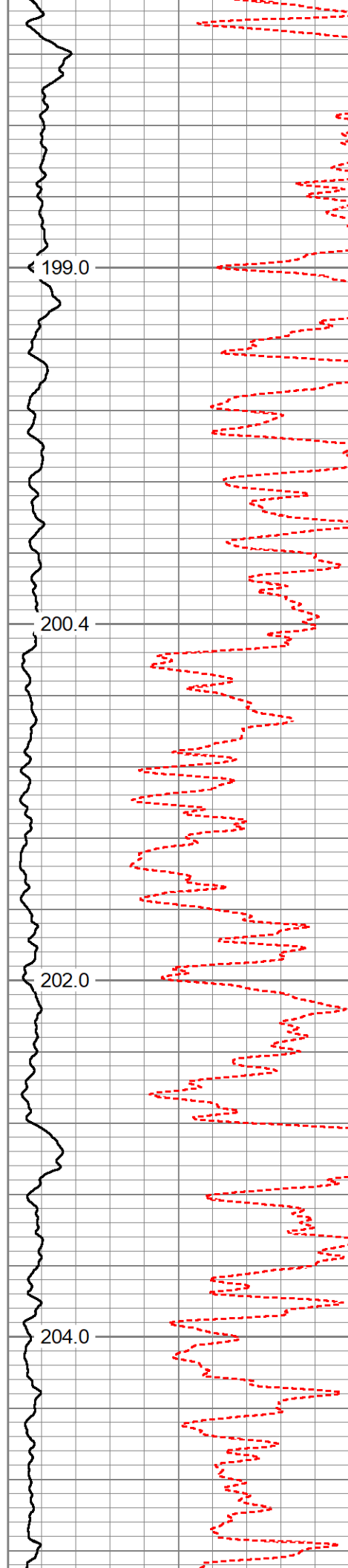


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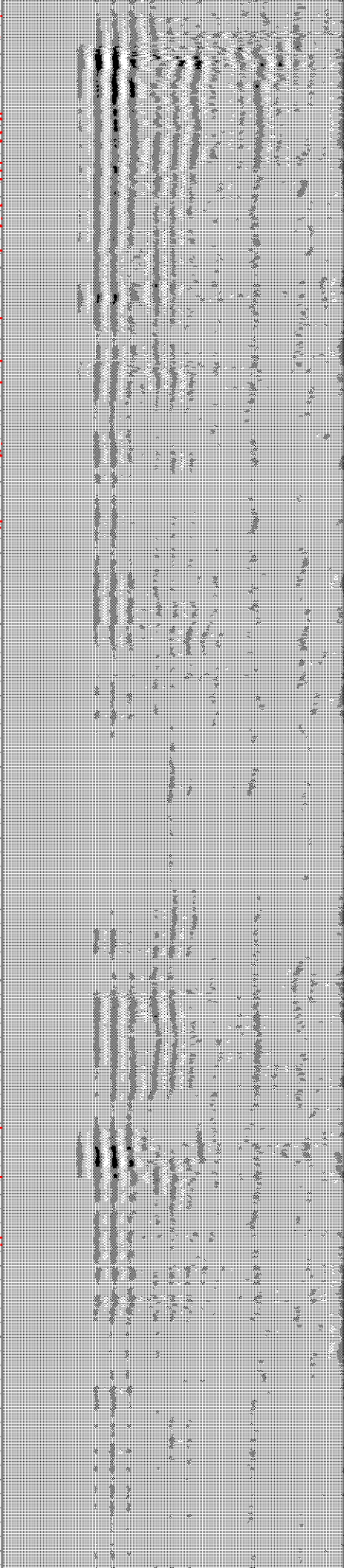


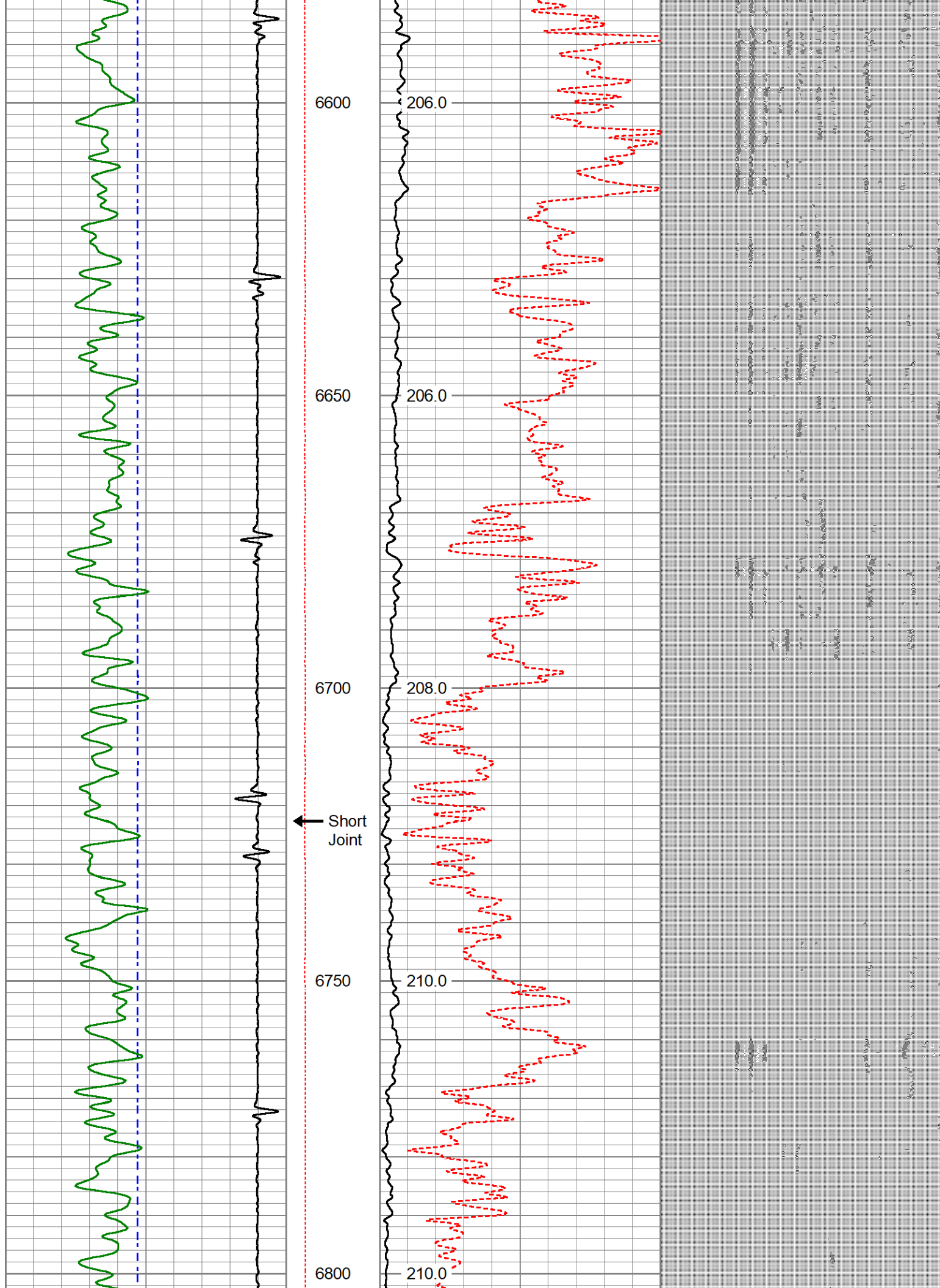
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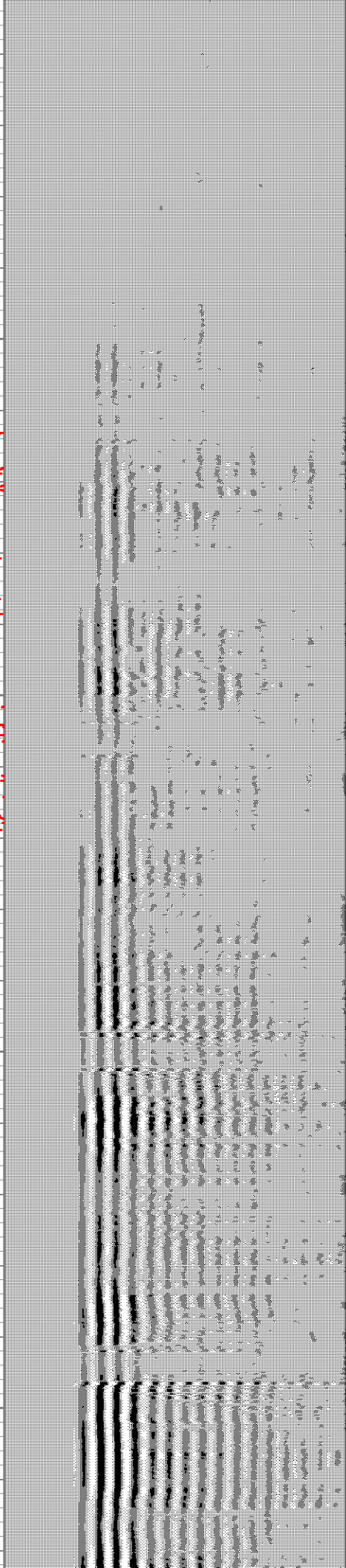
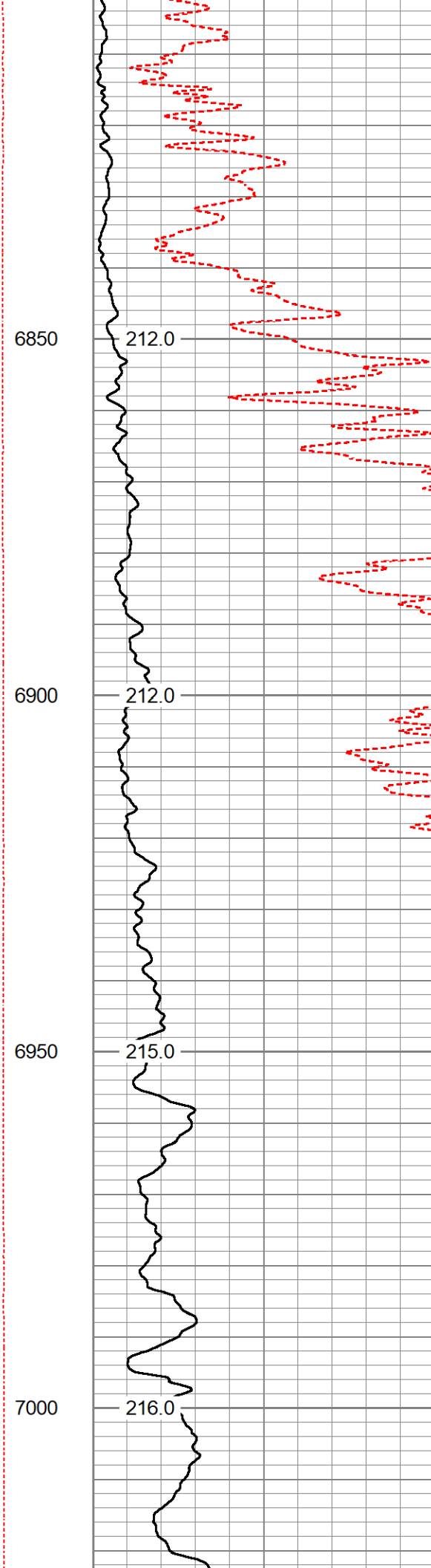
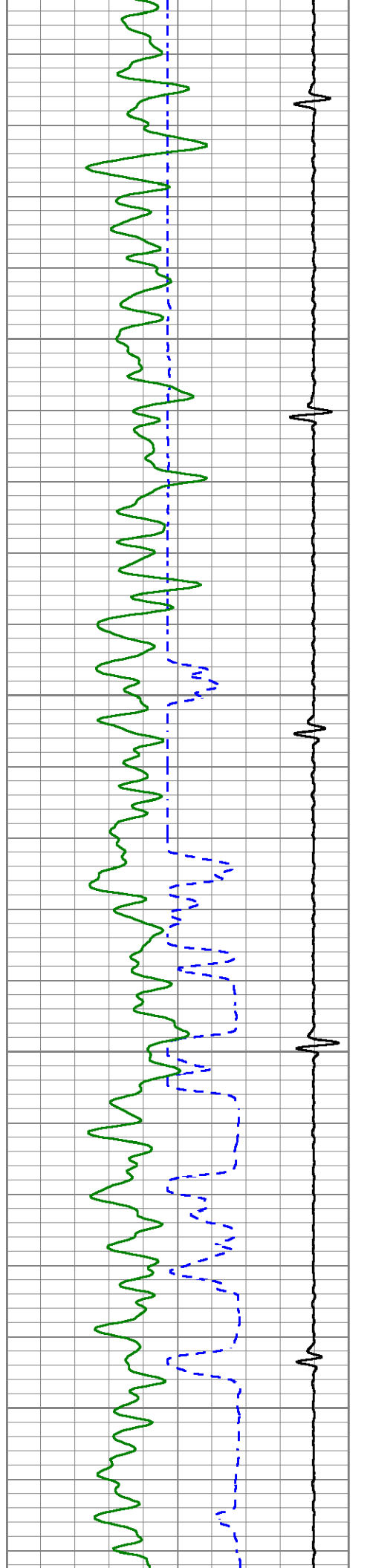
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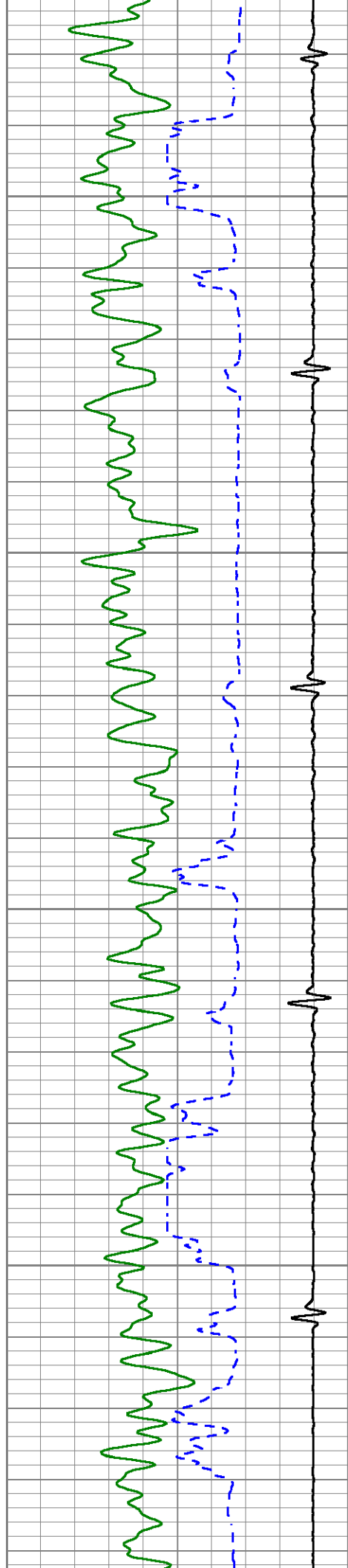
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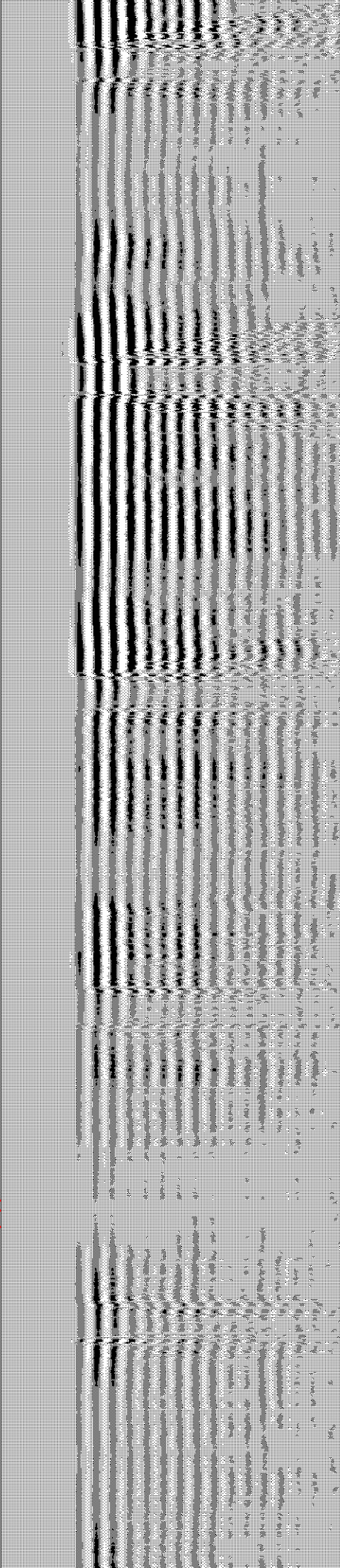
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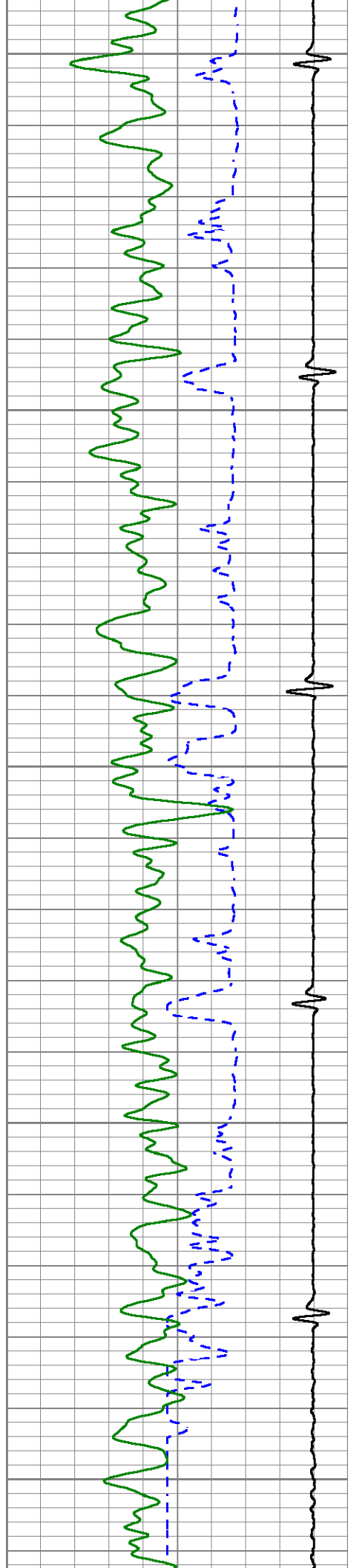
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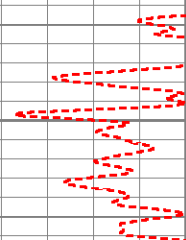
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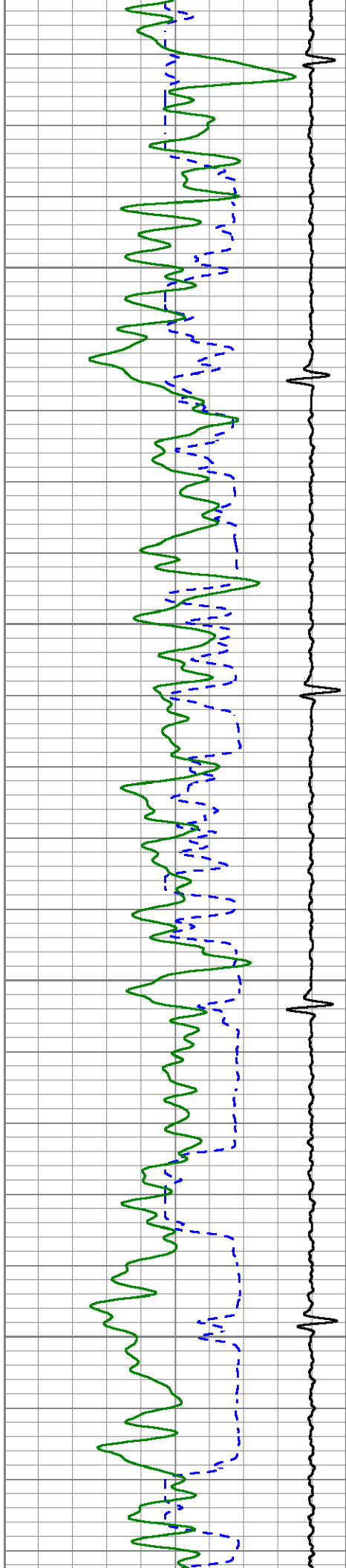
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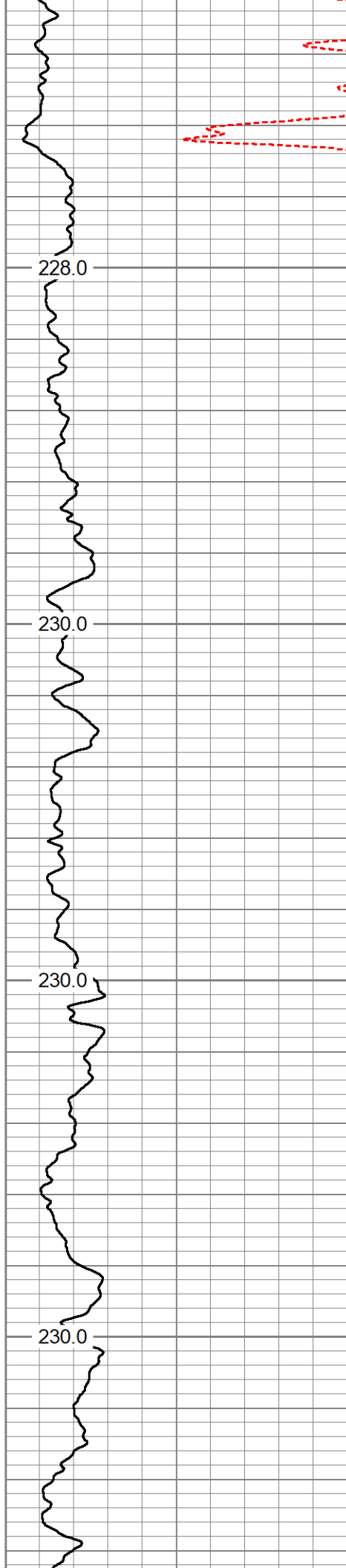


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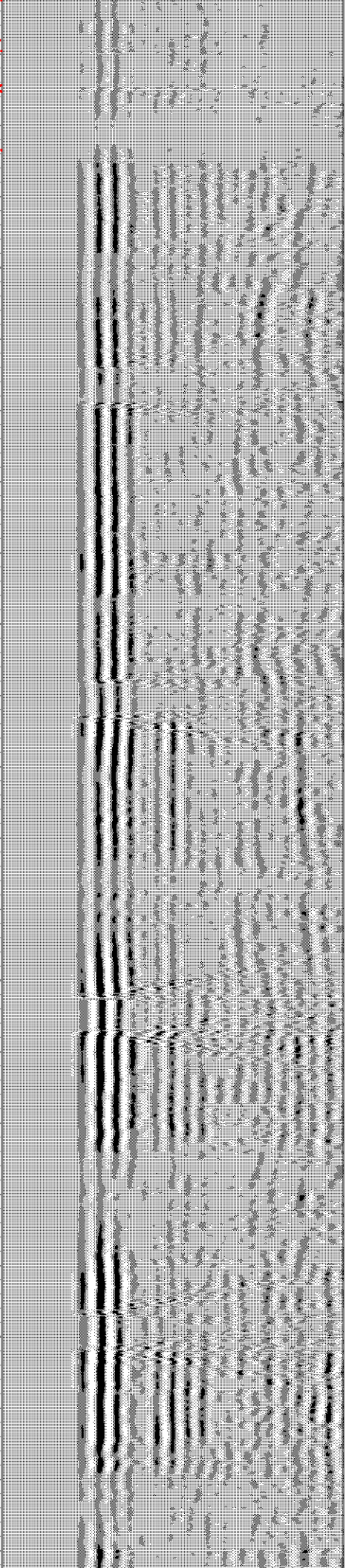


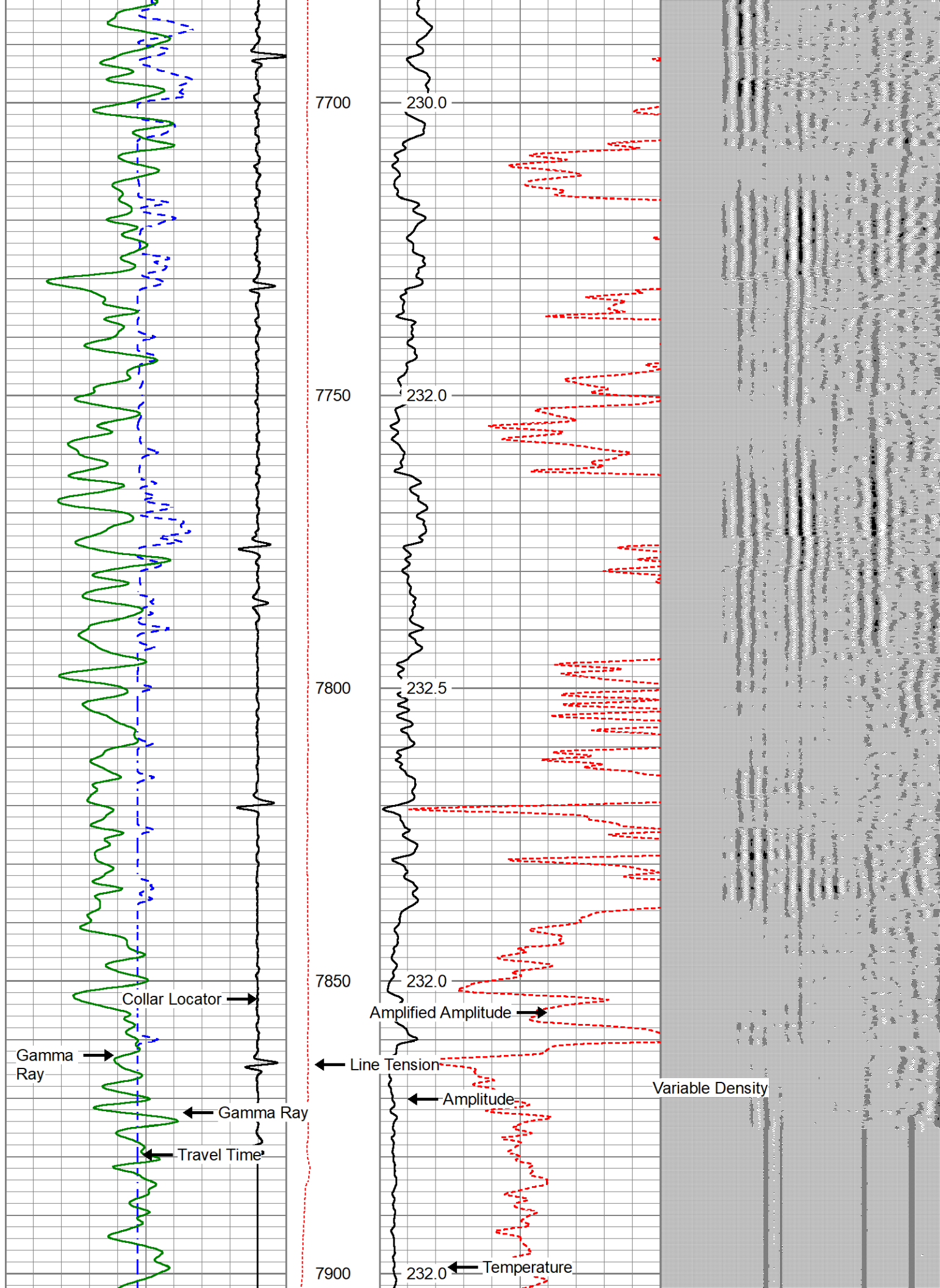
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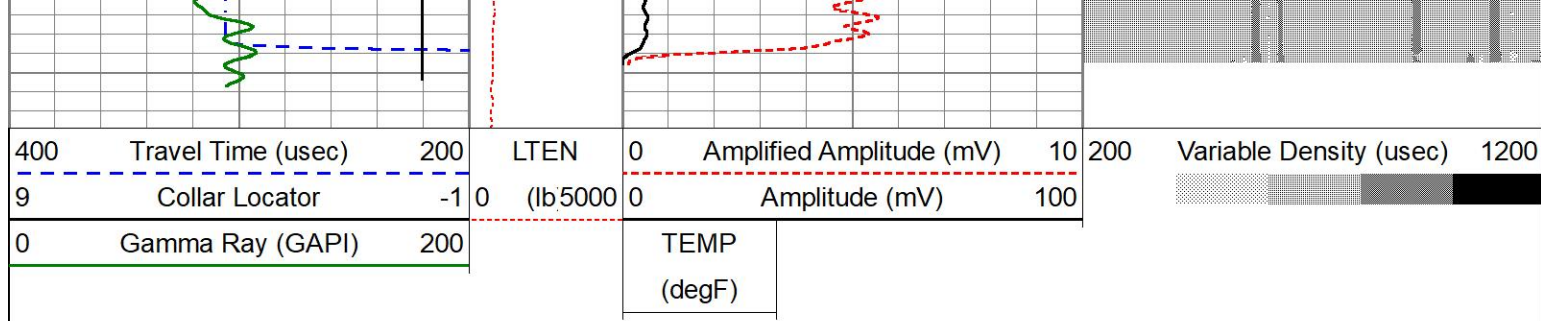
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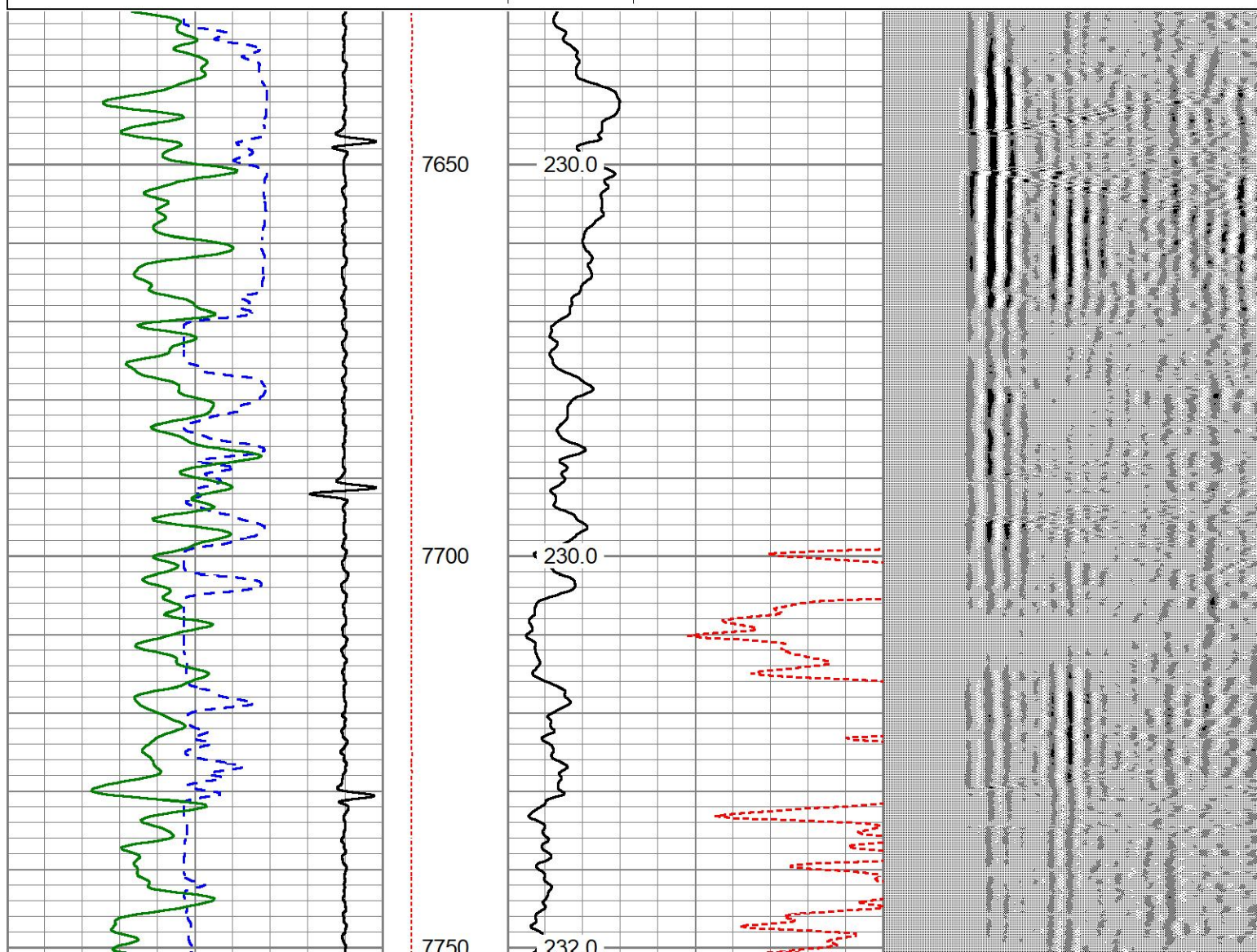
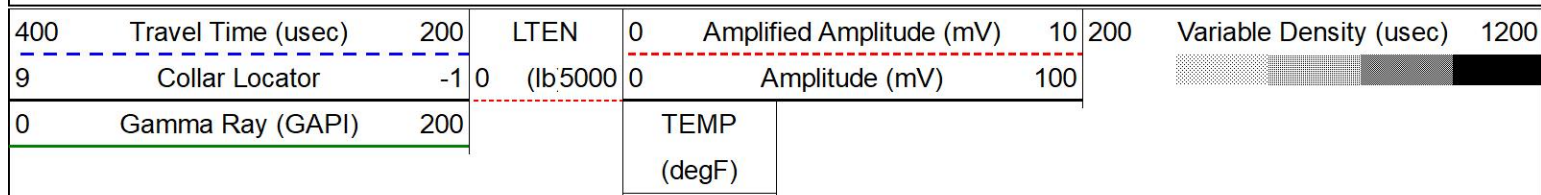


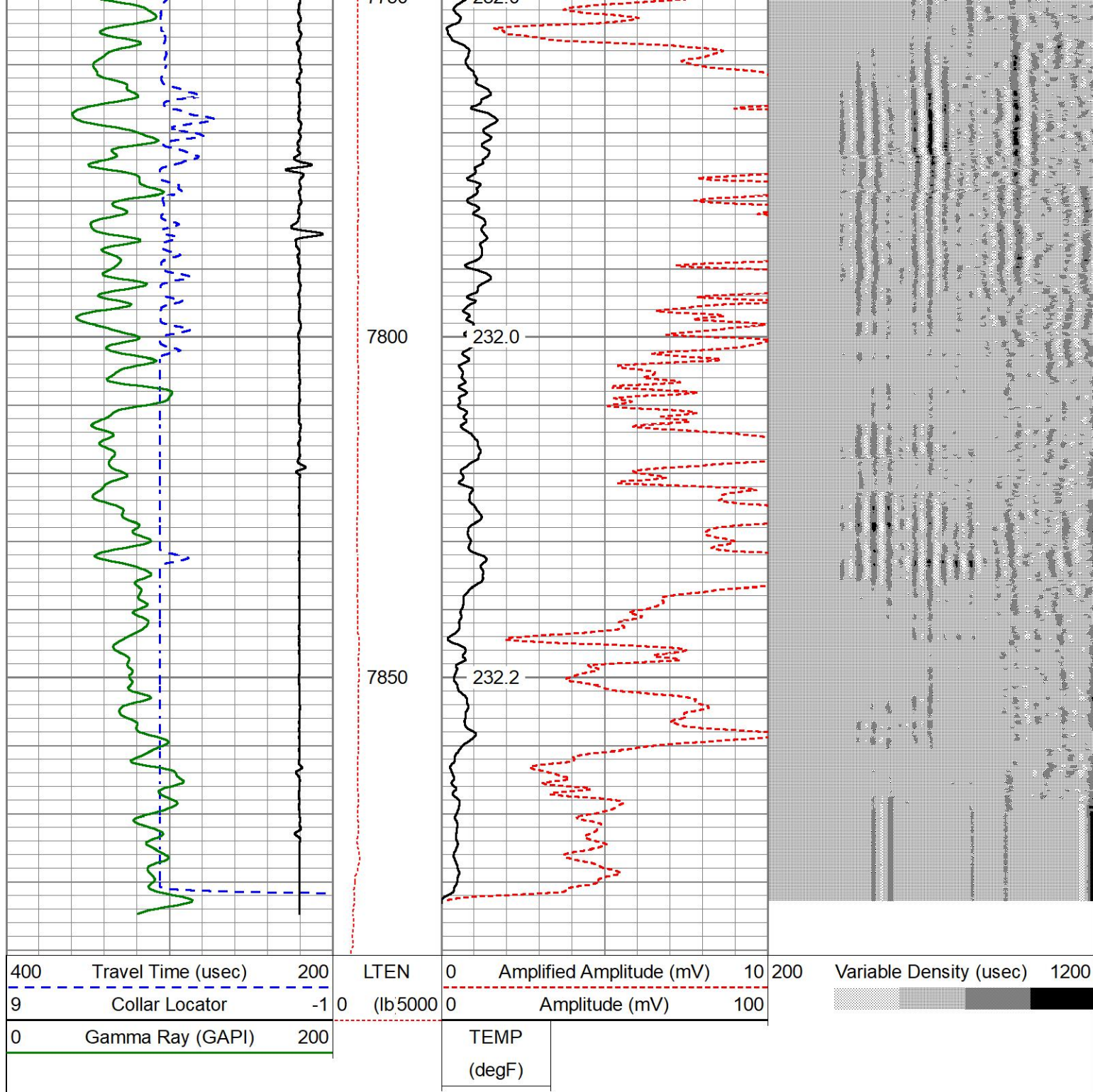




REPEAT PASS 0 PSI

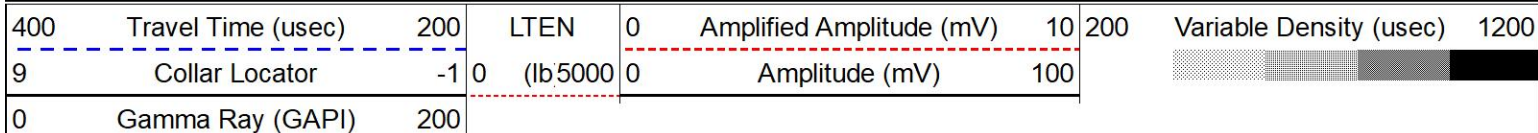
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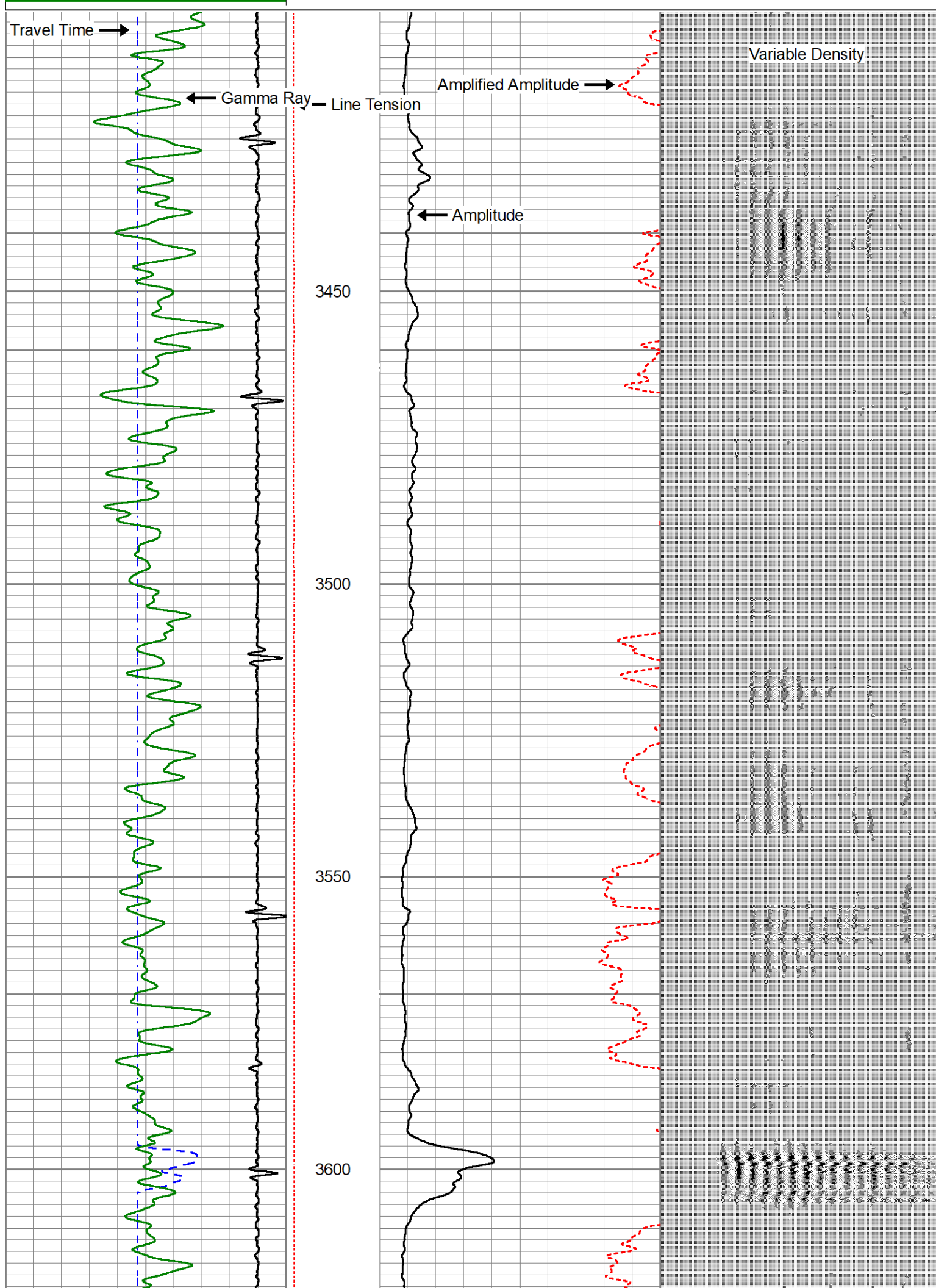


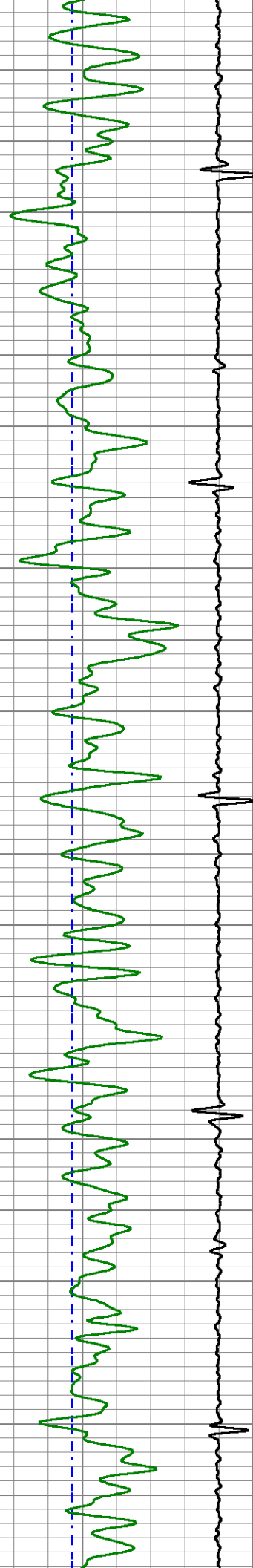


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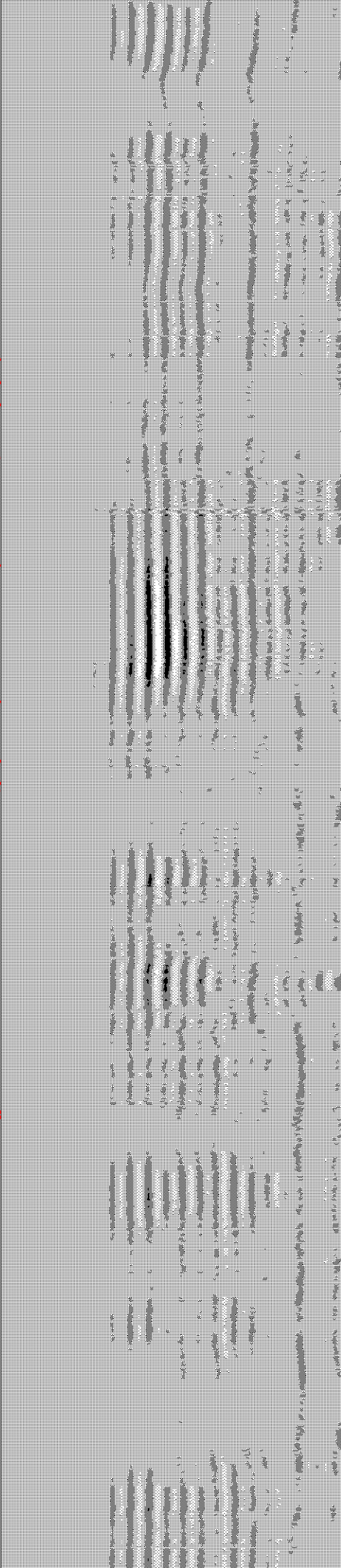
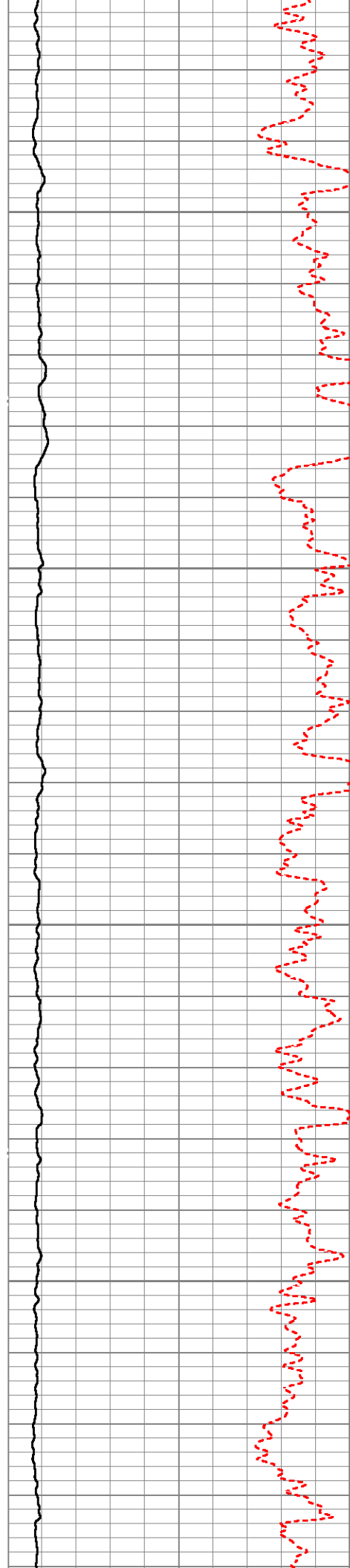


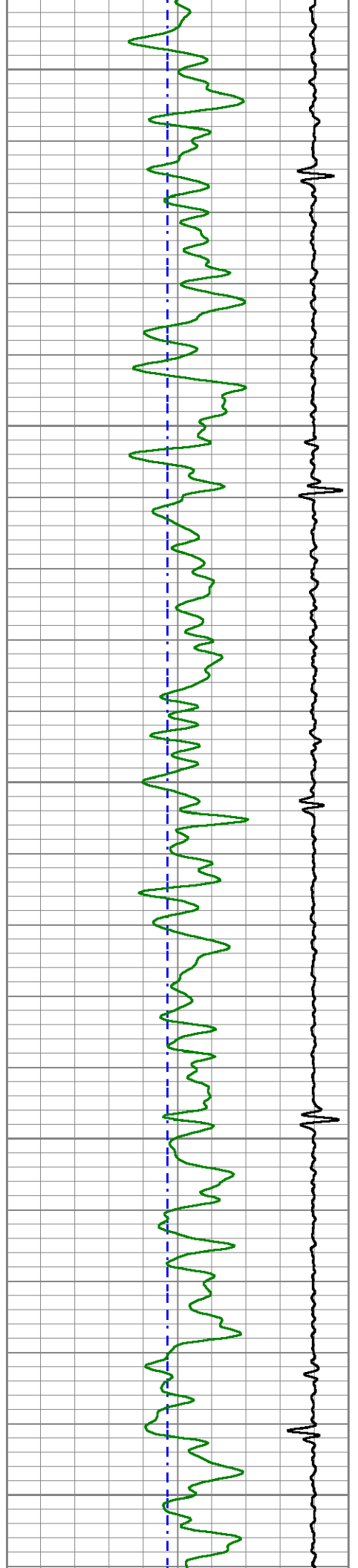
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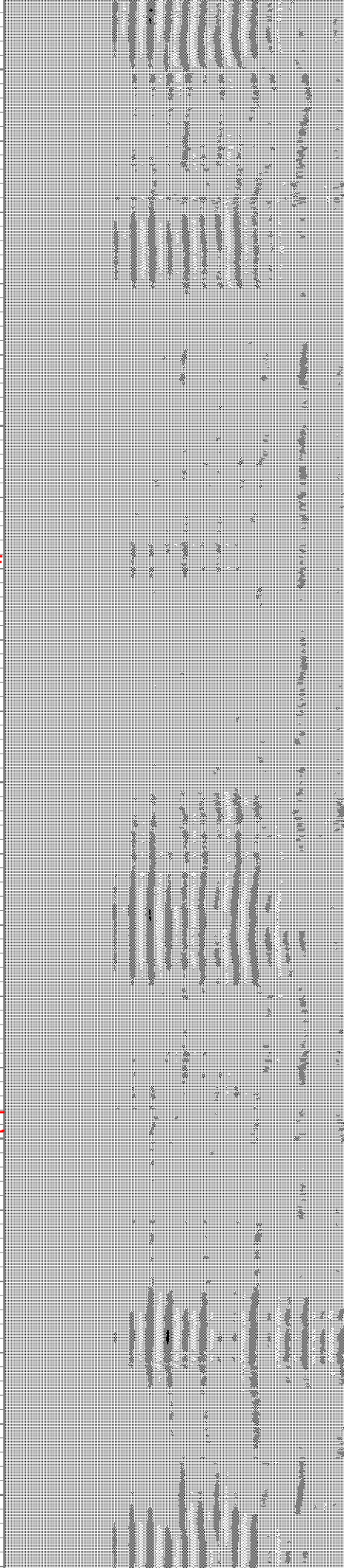
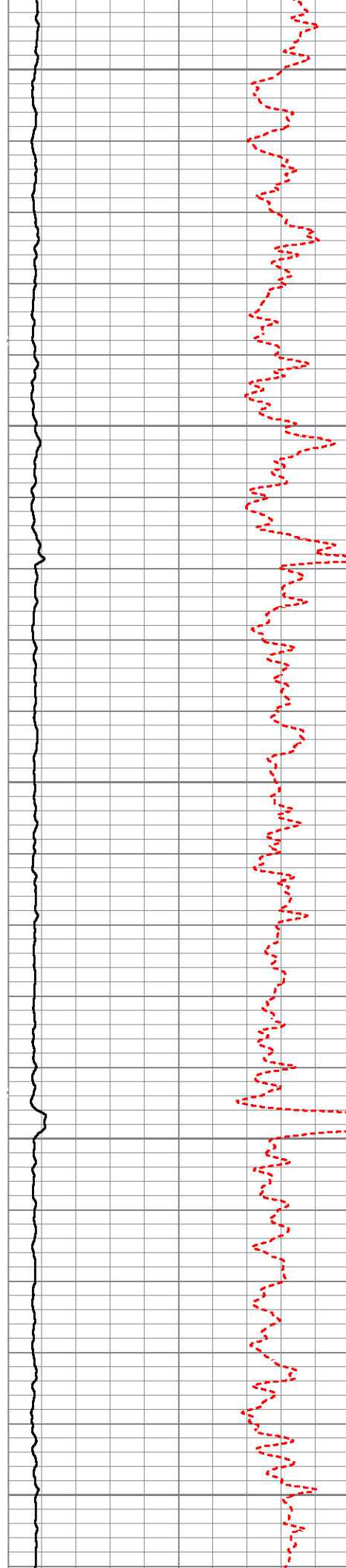
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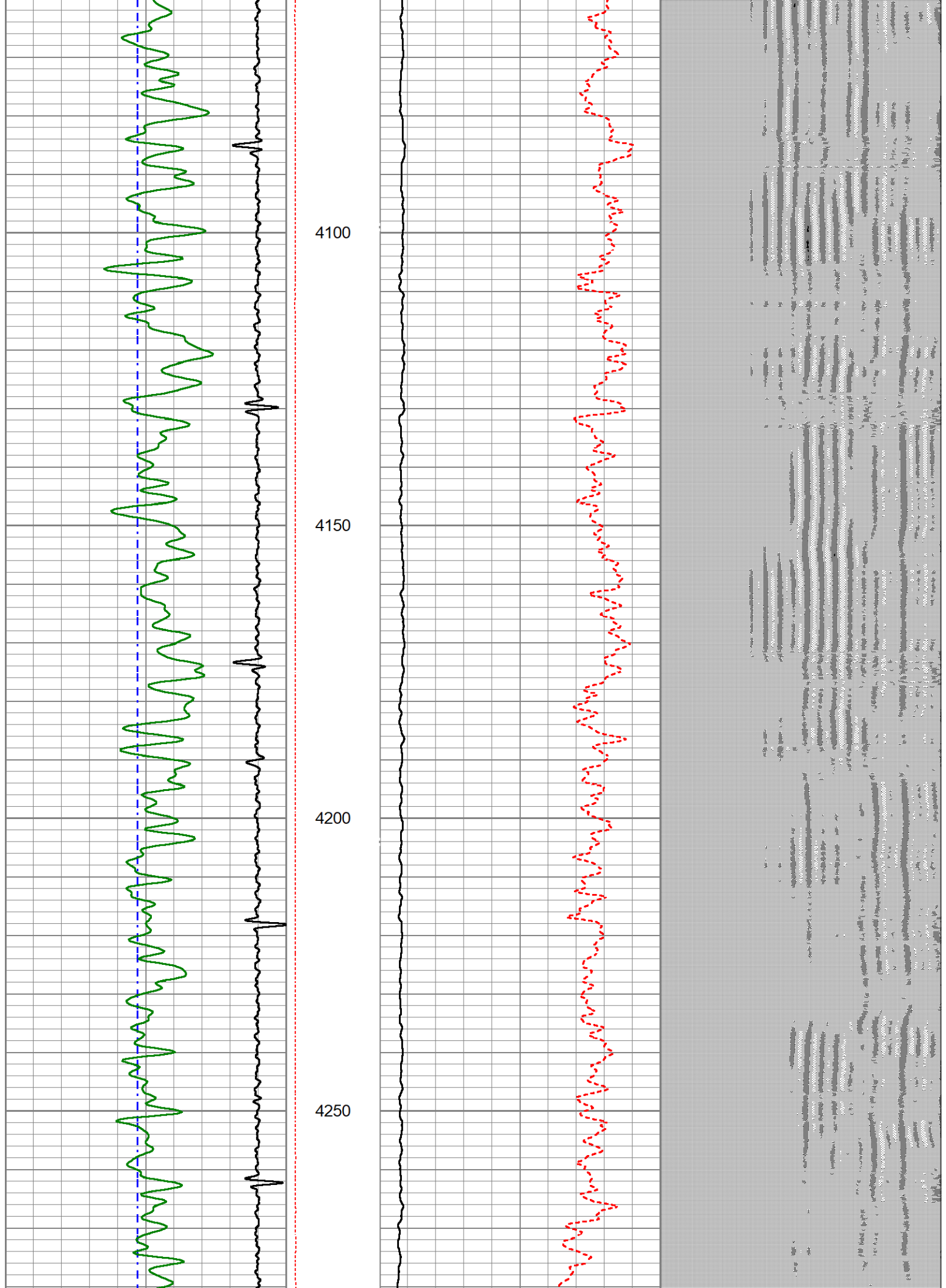
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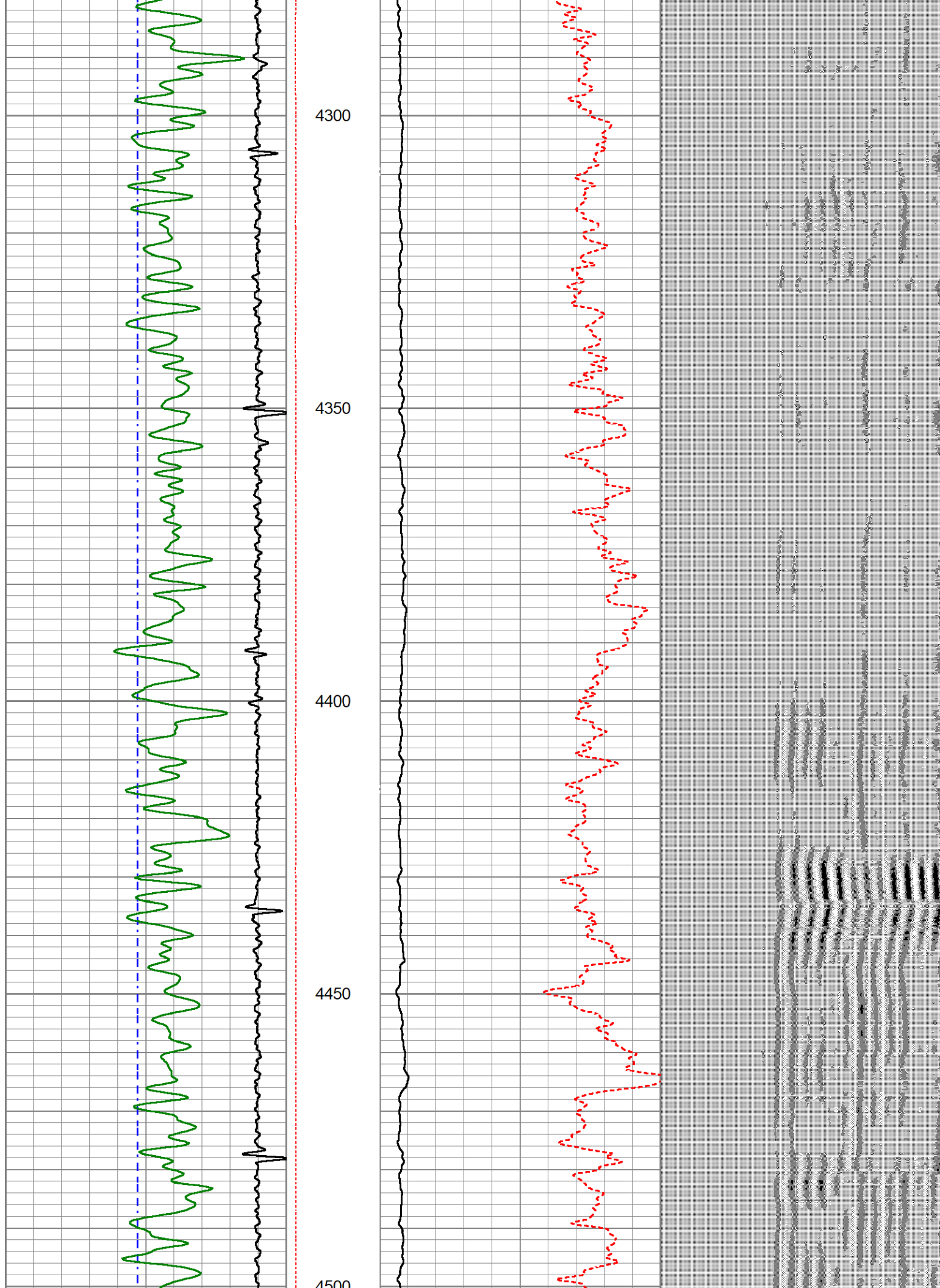
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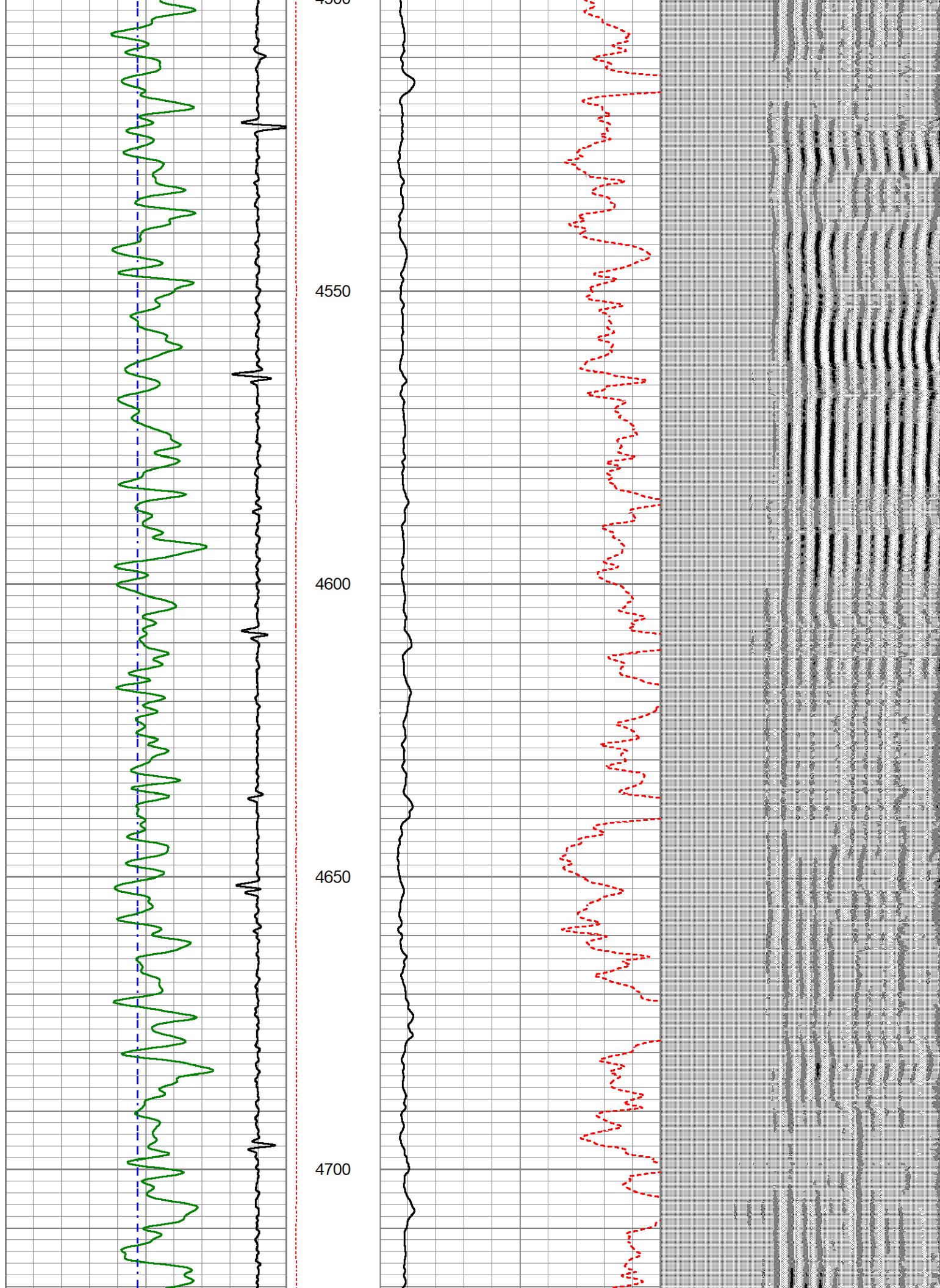
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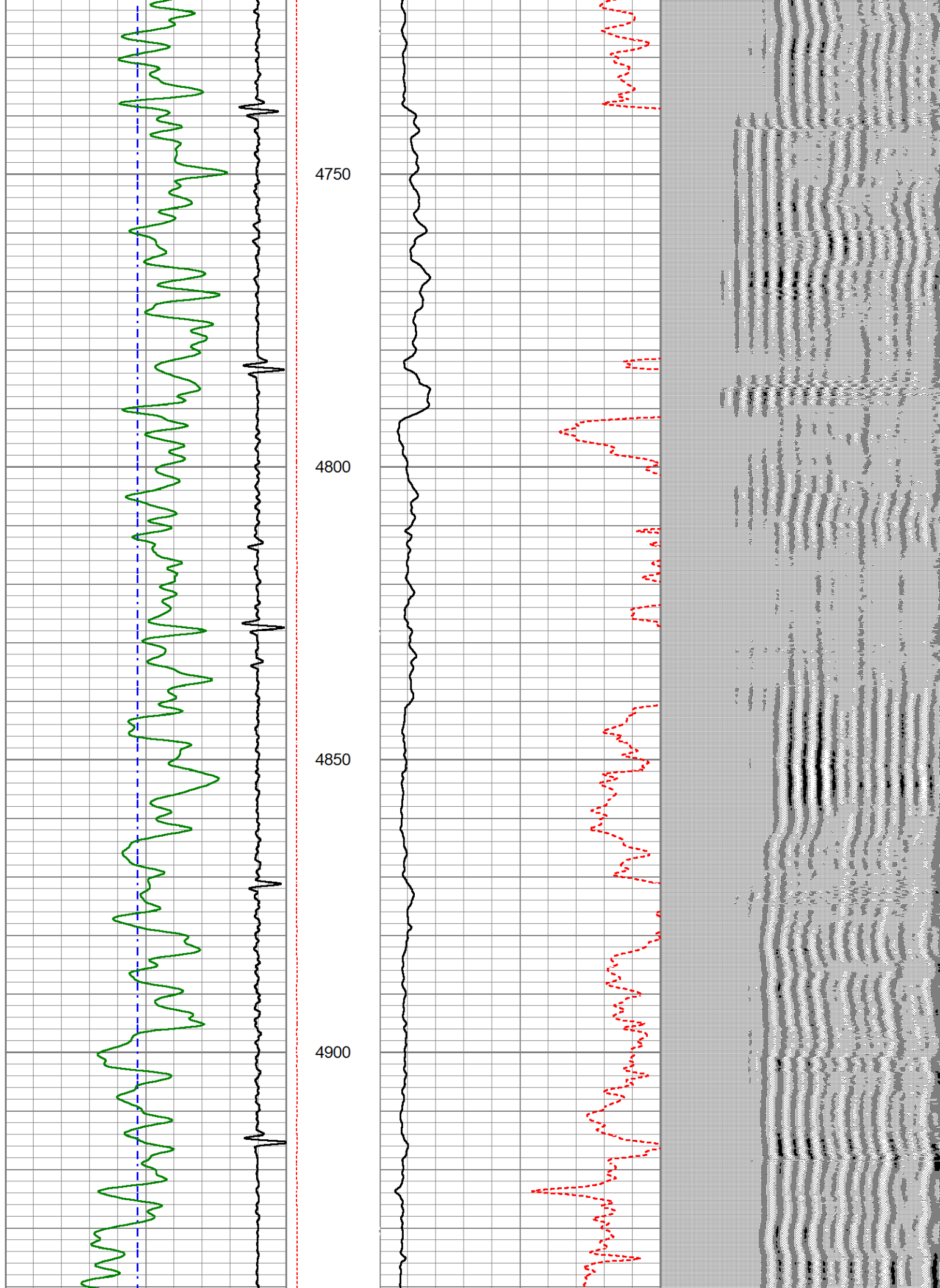
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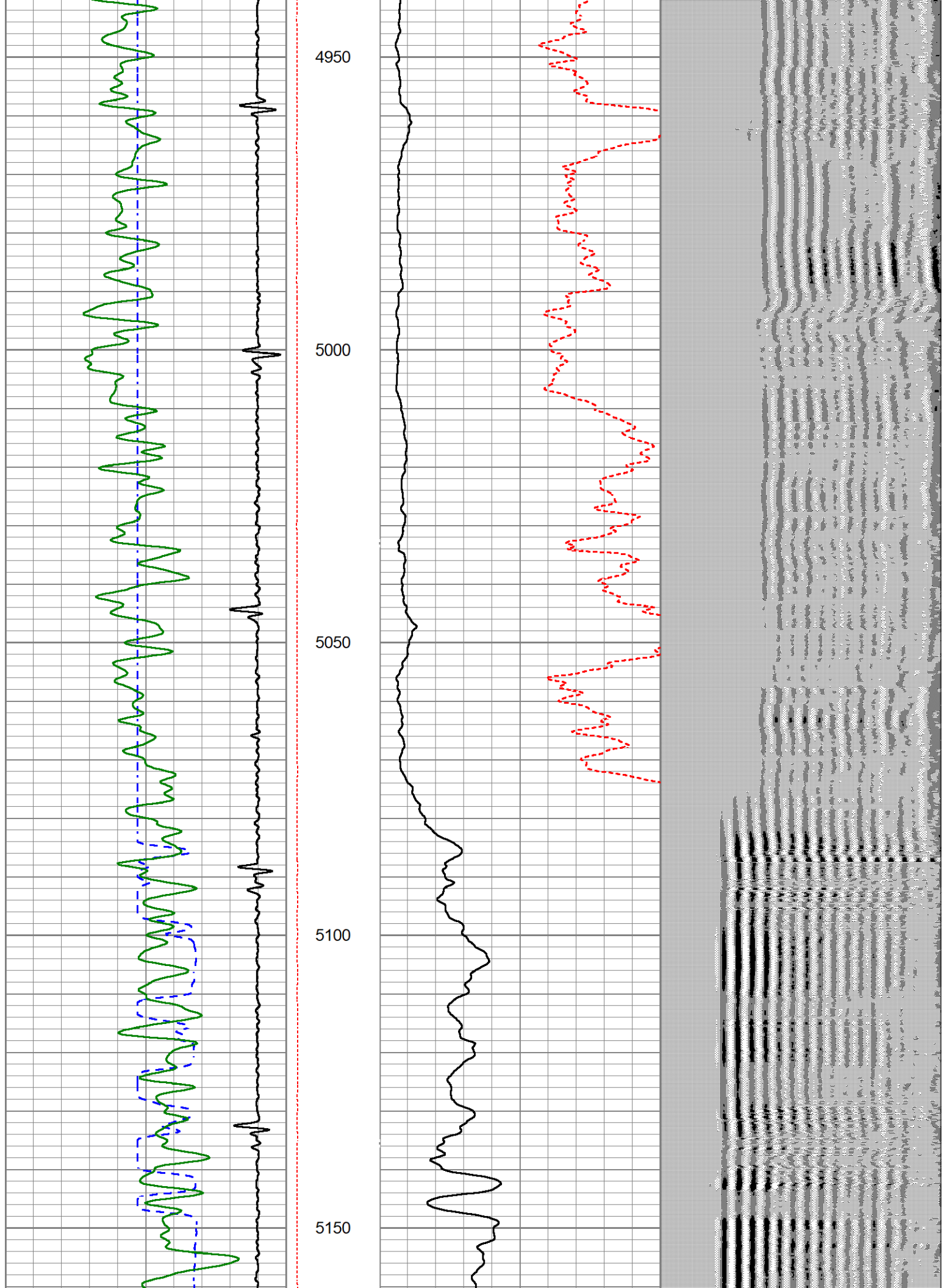


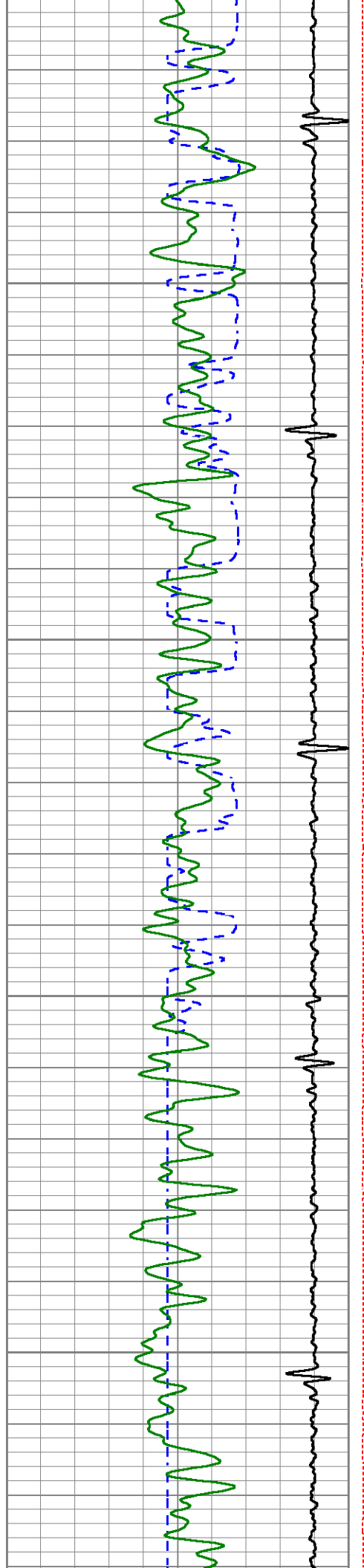










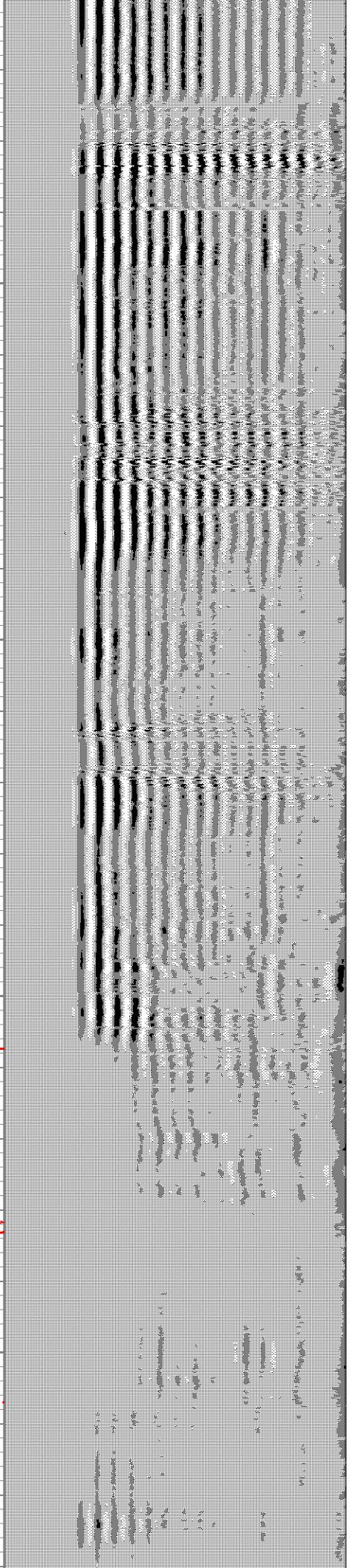
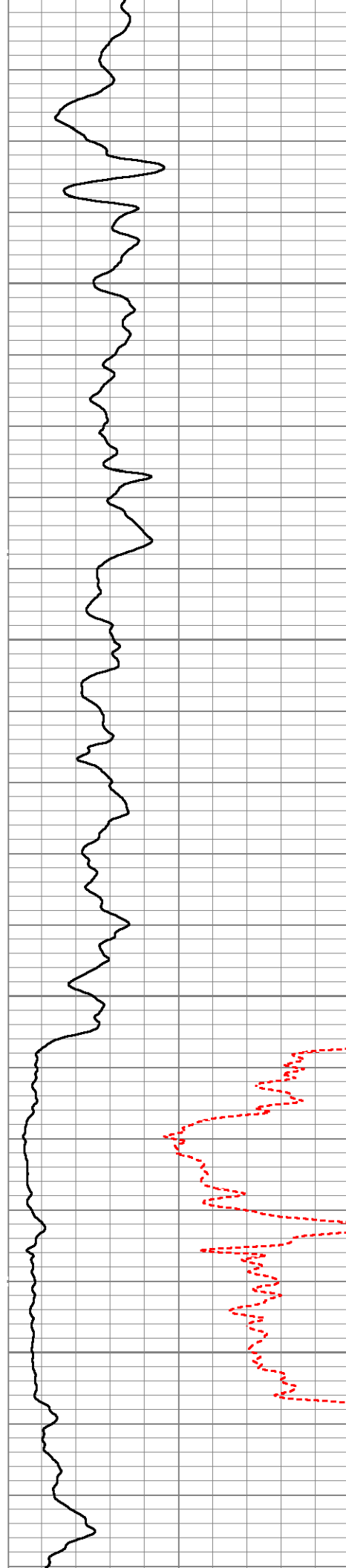


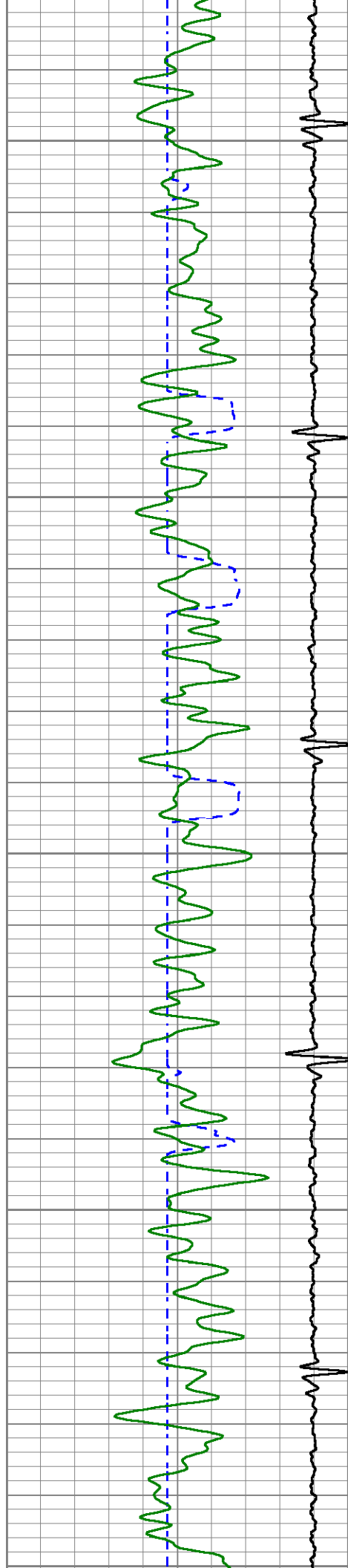
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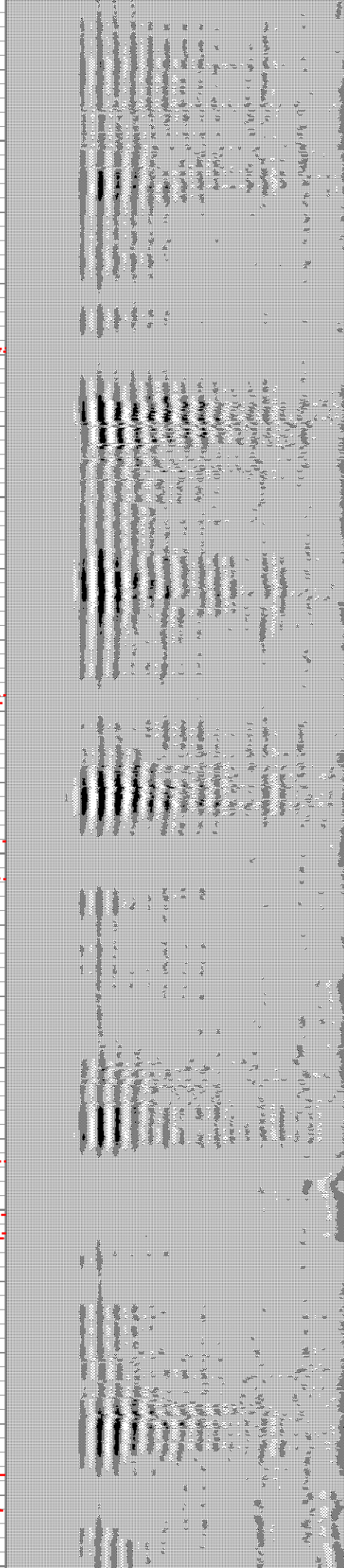
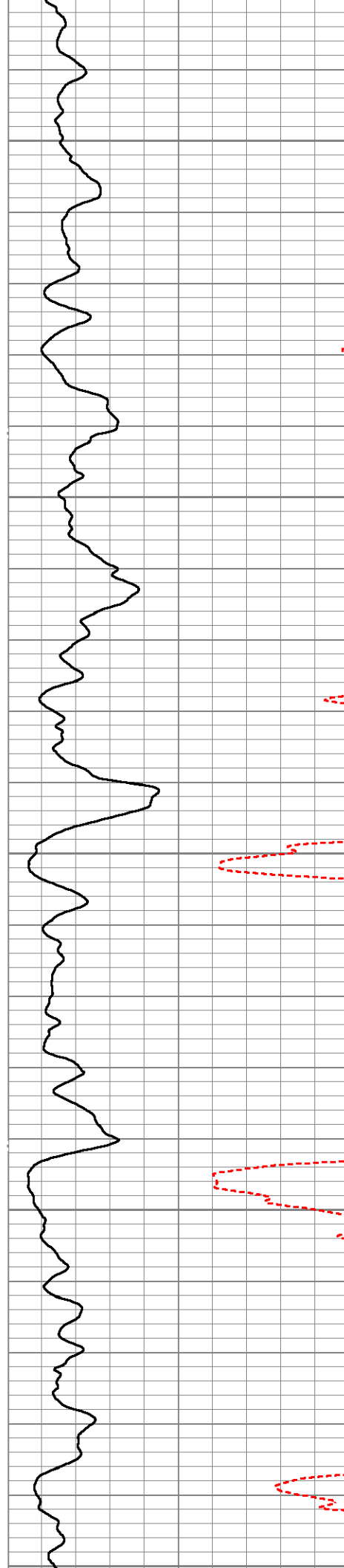
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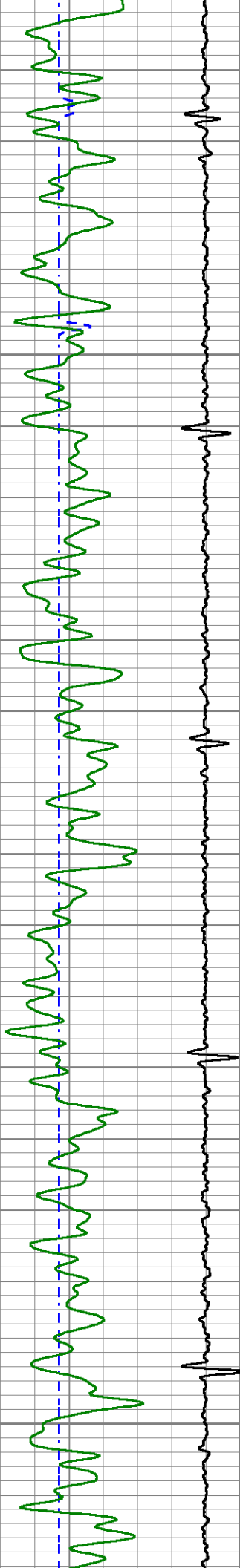
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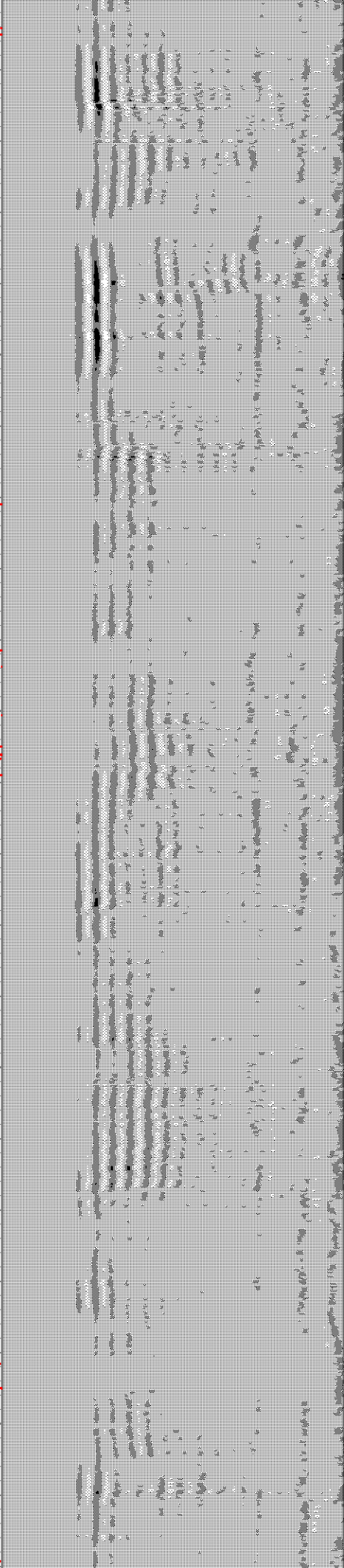
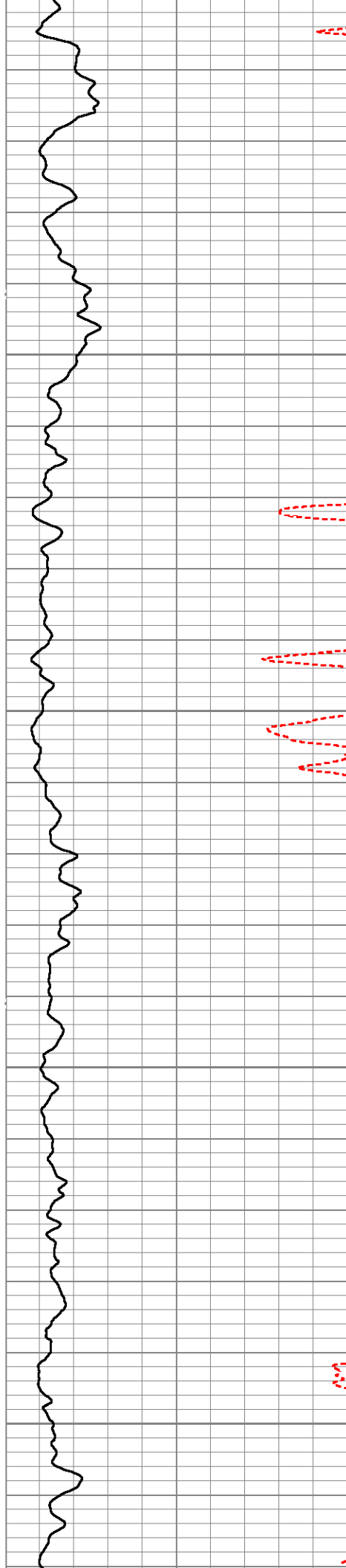
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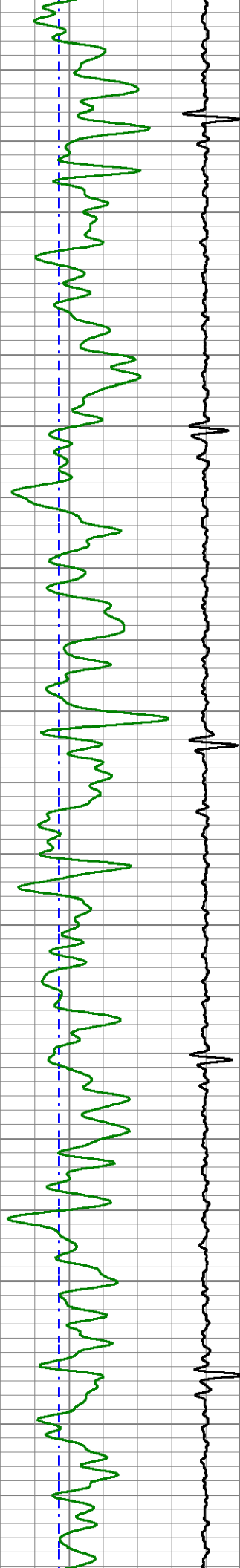
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5800 5750 5700 5650 5600



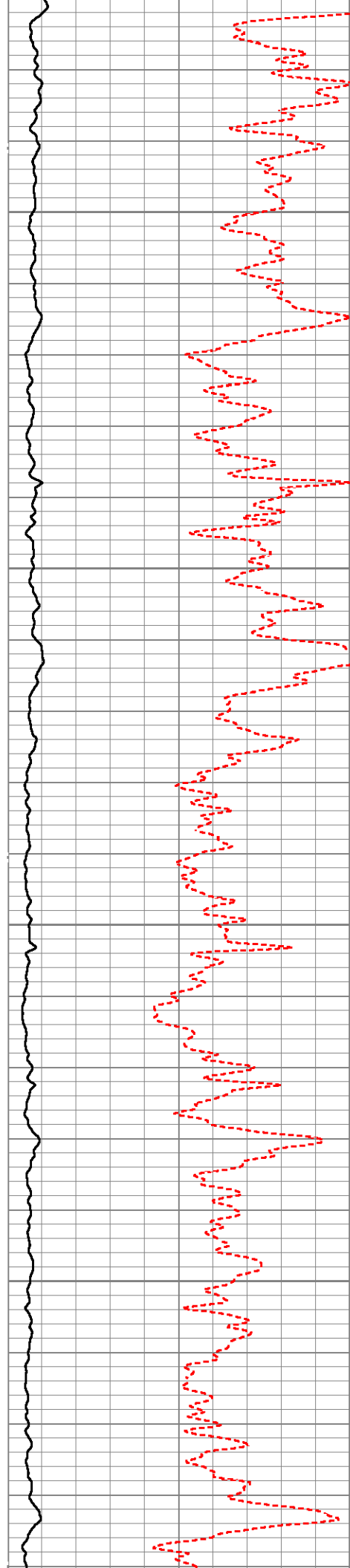


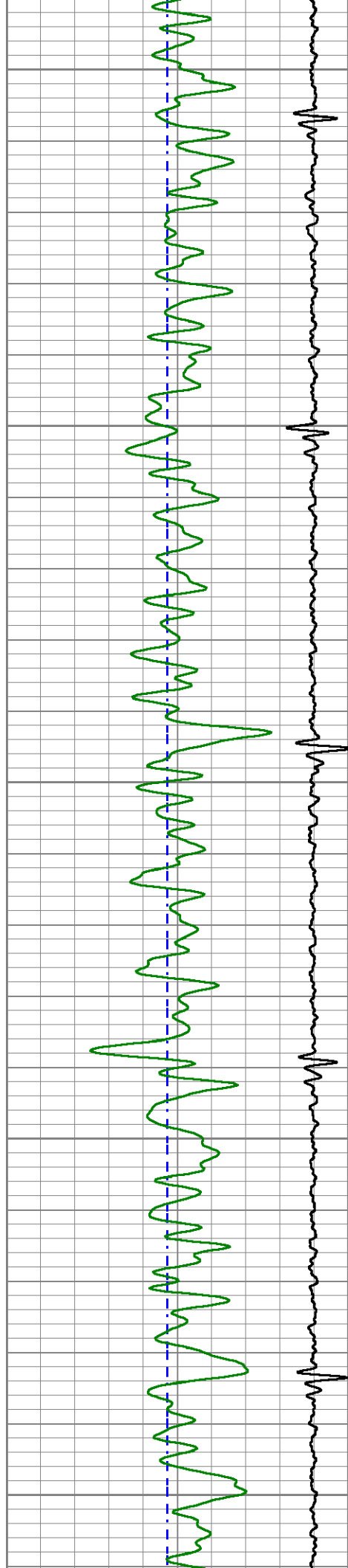
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5900

5950

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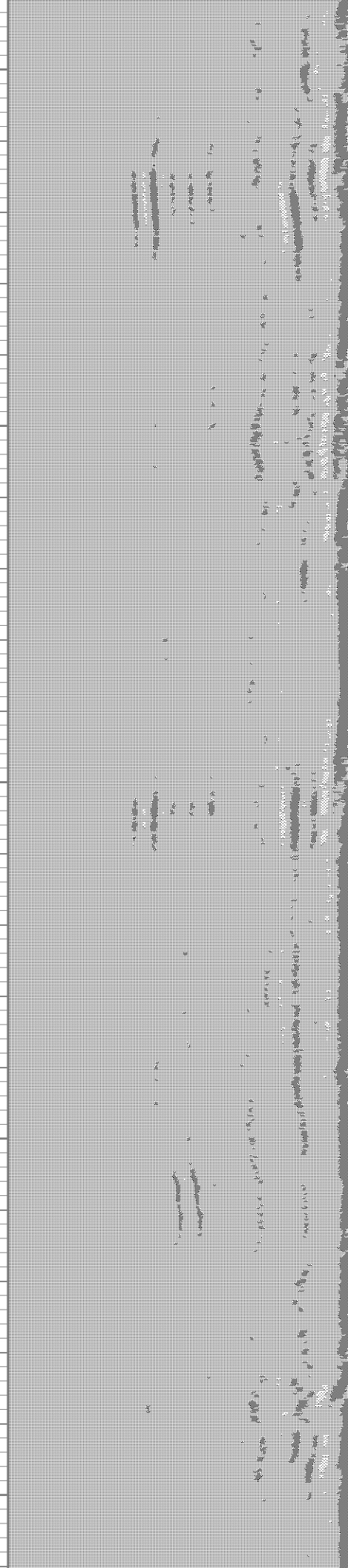
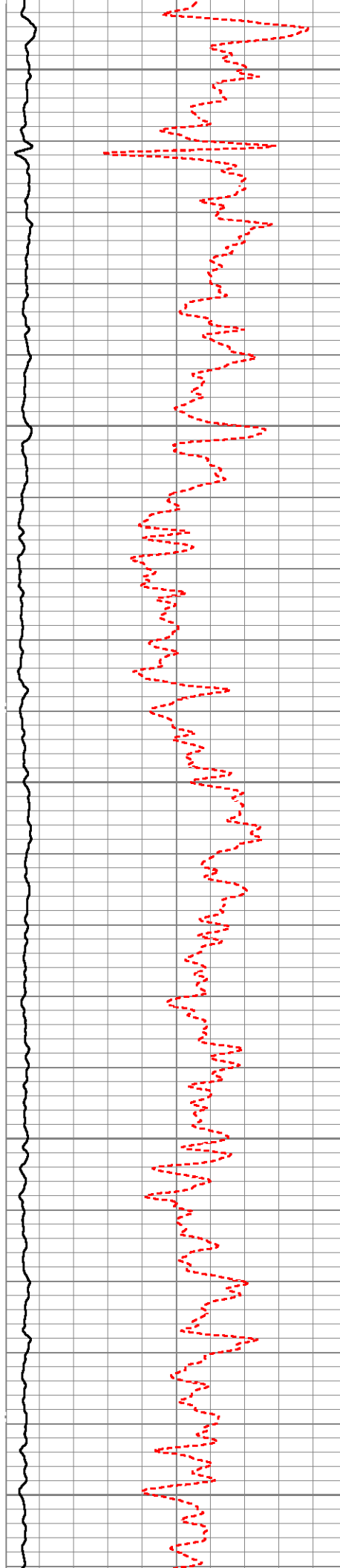
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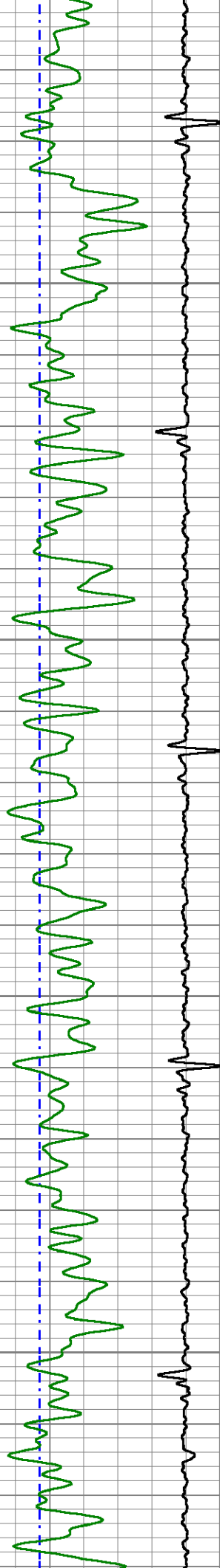
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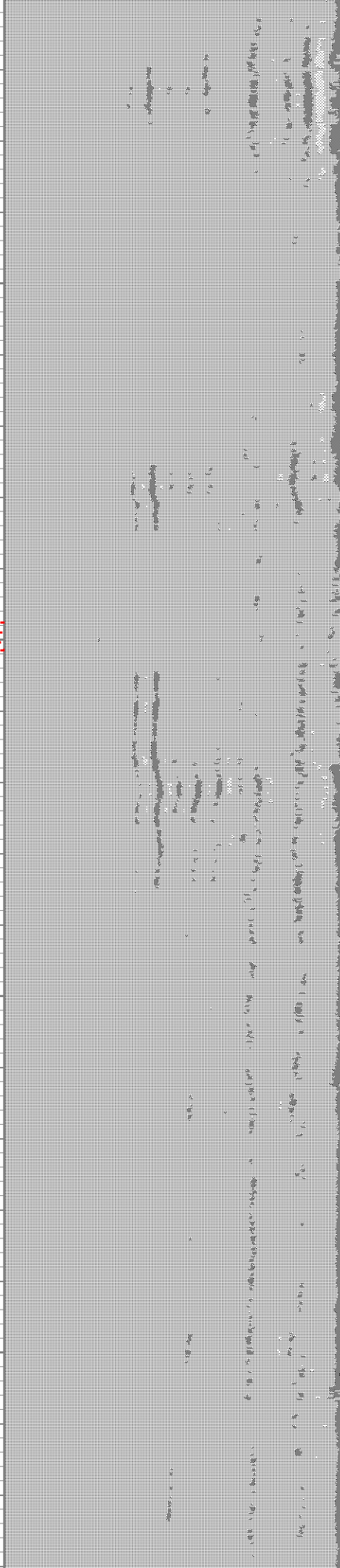
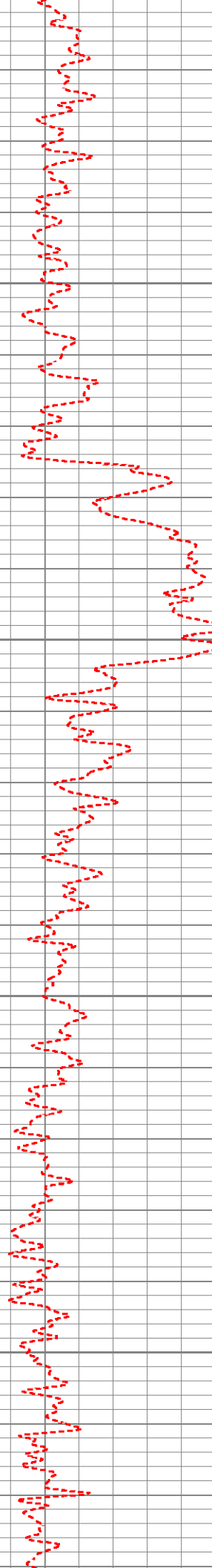


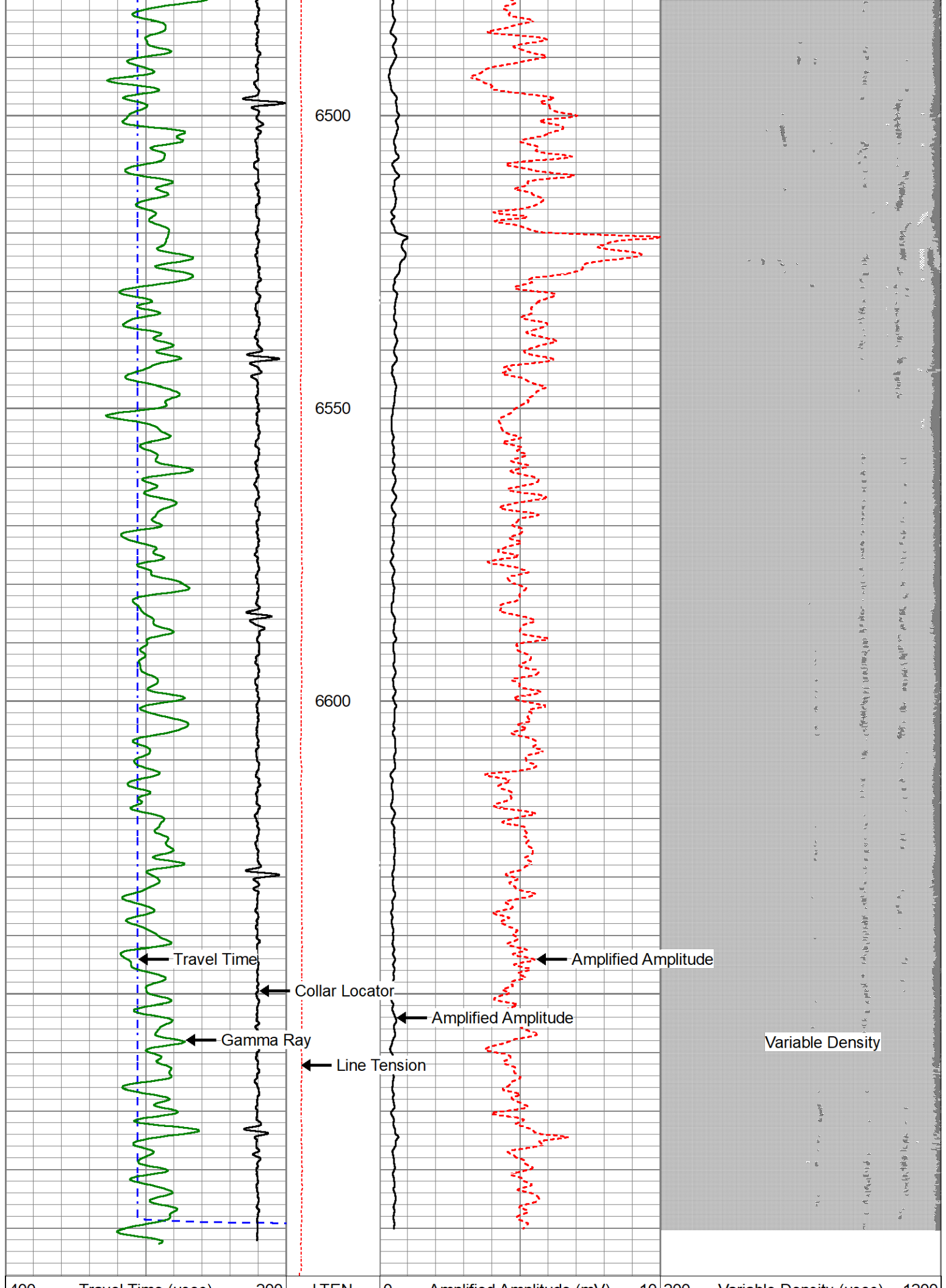
6300

6350

6400

6450





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							

Calibration Report

Database File gw_schaefer_033hn_cbl.db
Dataset Pathname pass15.1
Dataset Creation Thu Mar 07 14:43:57 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 13:02:08 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 O33HN		
Field	WATTENBURG		
County	ADAMS		
State	COLORADO	Country	USA