



**Cement Bond
Variable Density Log
W/Gamma Ray/CCL**

Company		Bonanza Creek Energy Operating Company LLC					
Well		Antelope 24-21-20HC					
Field		Wallsenburg					
County		Weld					
State		Colorado					
Location:		API # : 05-123-38910-00					
SEC 20 TWP 5N RGE 62W		Other Services None					
Permanent Datum		Ground Level		Elevation			
Log Measured From		Kelly Bushing 17'		K.B. 4682'			
Drilling Measured From		Kelly Bushing		D.F. 4681'			
				G.L. 4665'			
Date	11-May-2014						
Run Number	One						
Depth Driller	6978'						
Depth Logger	6650'						
Bottom Logged Interval	6650'						
Top Log Interval	Surface						
Open Hole Size	-						
Type Fluid	Water						
Density / Viscosity	-						
Max. Recorded Temp.	-						
Estimated Cement Top	Surface						
Time Well Ready	10:00						
Time Logger on Bottom	11:45						
Equipment Number	13034						
Location	Brighton, CO						
Recorded By	J. Campbell						
Witnessed By	Bill Mansfield						
Borehole Record							
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft		Top	Bottom		
Surface String	9 5/8"	36#		Surface	467'		
Prot. String							
Production String	7"	26#		Surface	6978'		
Liner	4.5"	11 6#		6978'	NA		
Short Joint							

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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

Well Logged using 17' KB

Main Pass and Repeat Pass logged with zero Pressure on surface

Thank You for using Allied Wireline

(303)659-4609



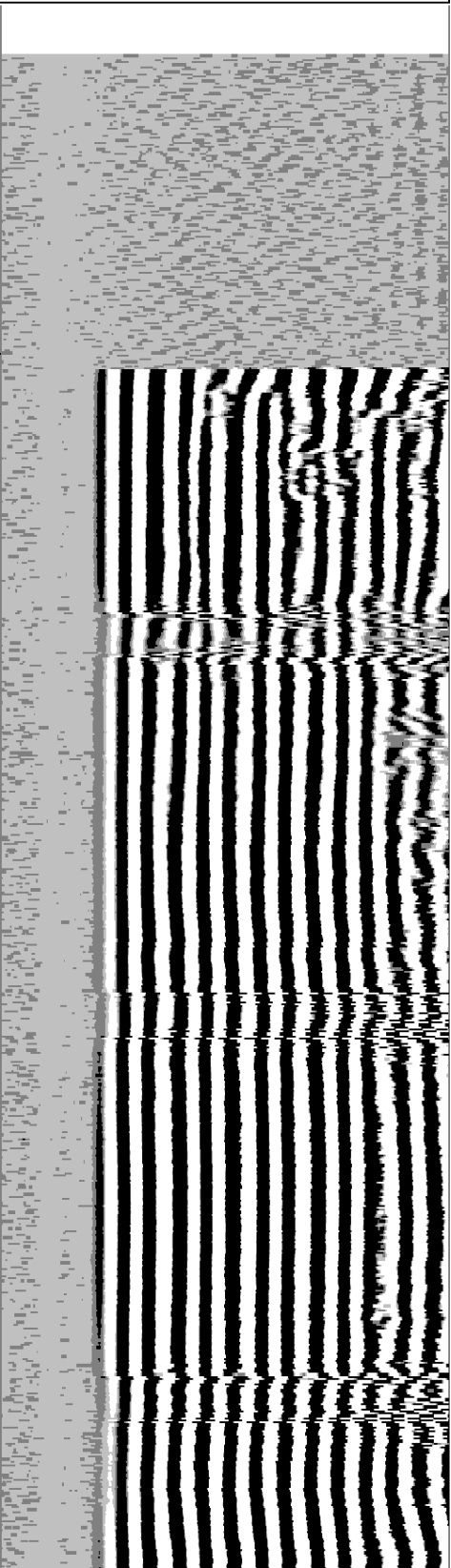
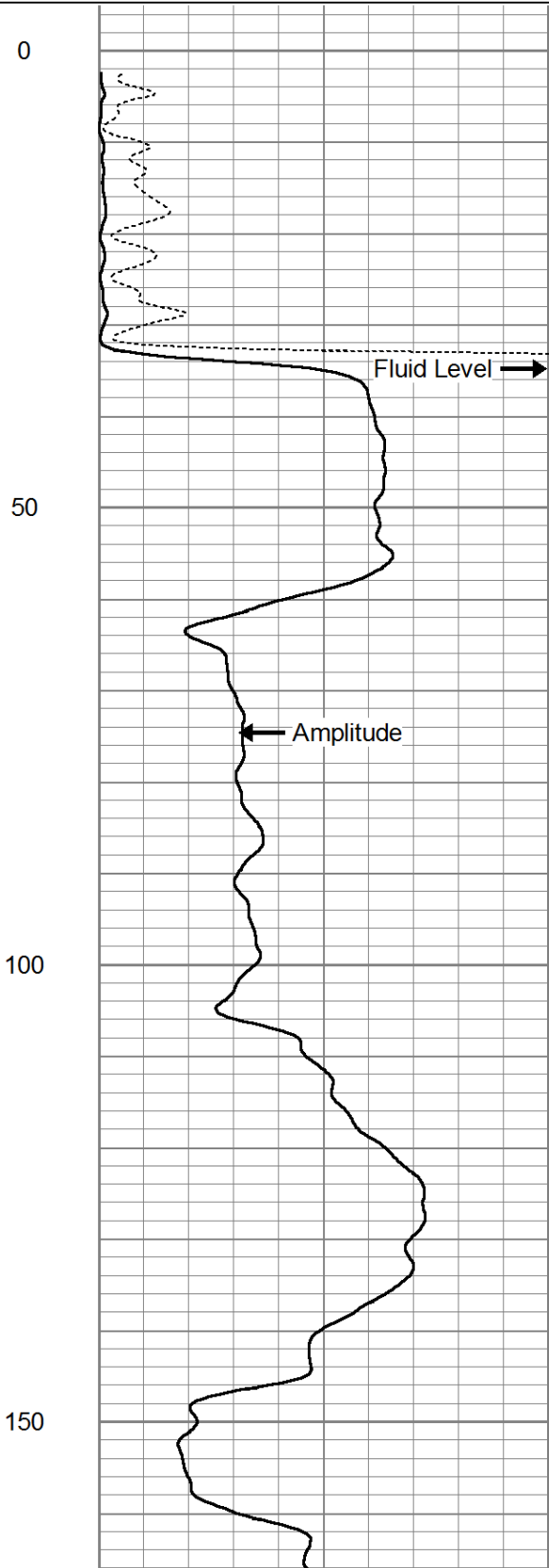
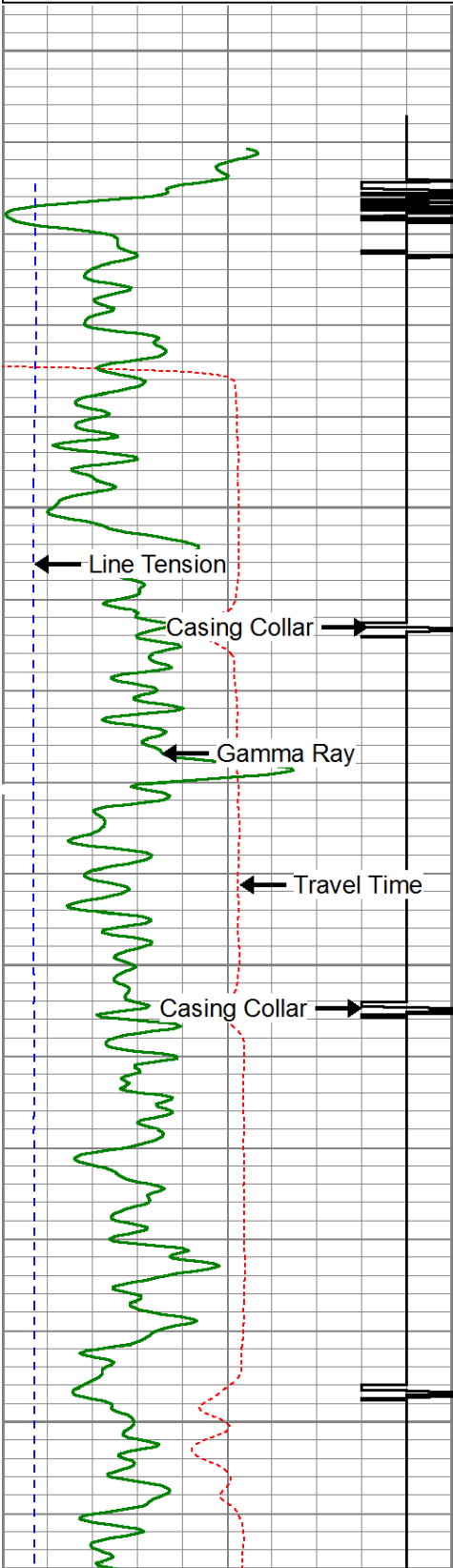
Main Pass (0 PSI)

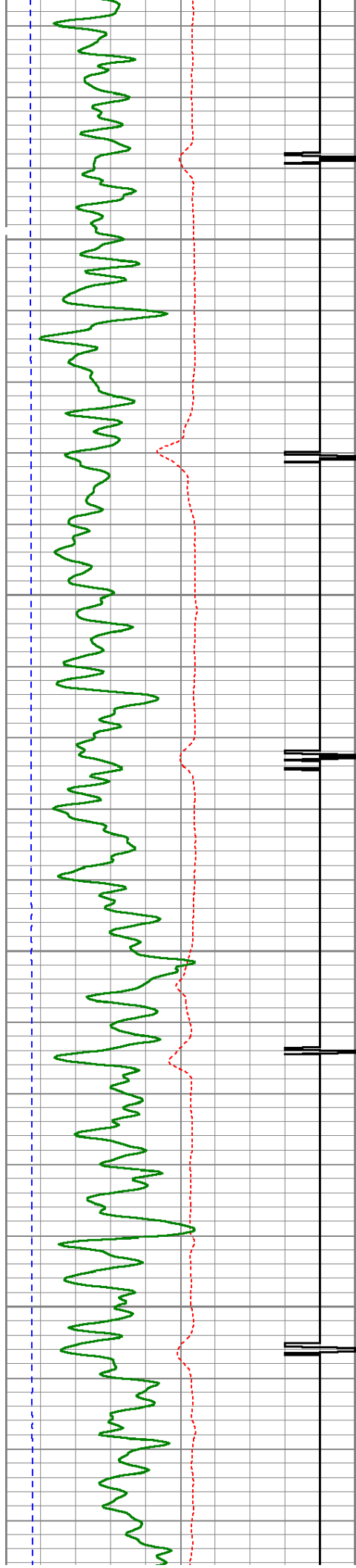
Database File: bonanza_antelope24-21-20hc.db
Dataset Pathname: pass7
Presentation Format: cblprobe
Dataset Creation: Sun May 11 11:36:59 2014 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

400	Travel Time (usec)	200
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000

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

200	Variable Density	1200
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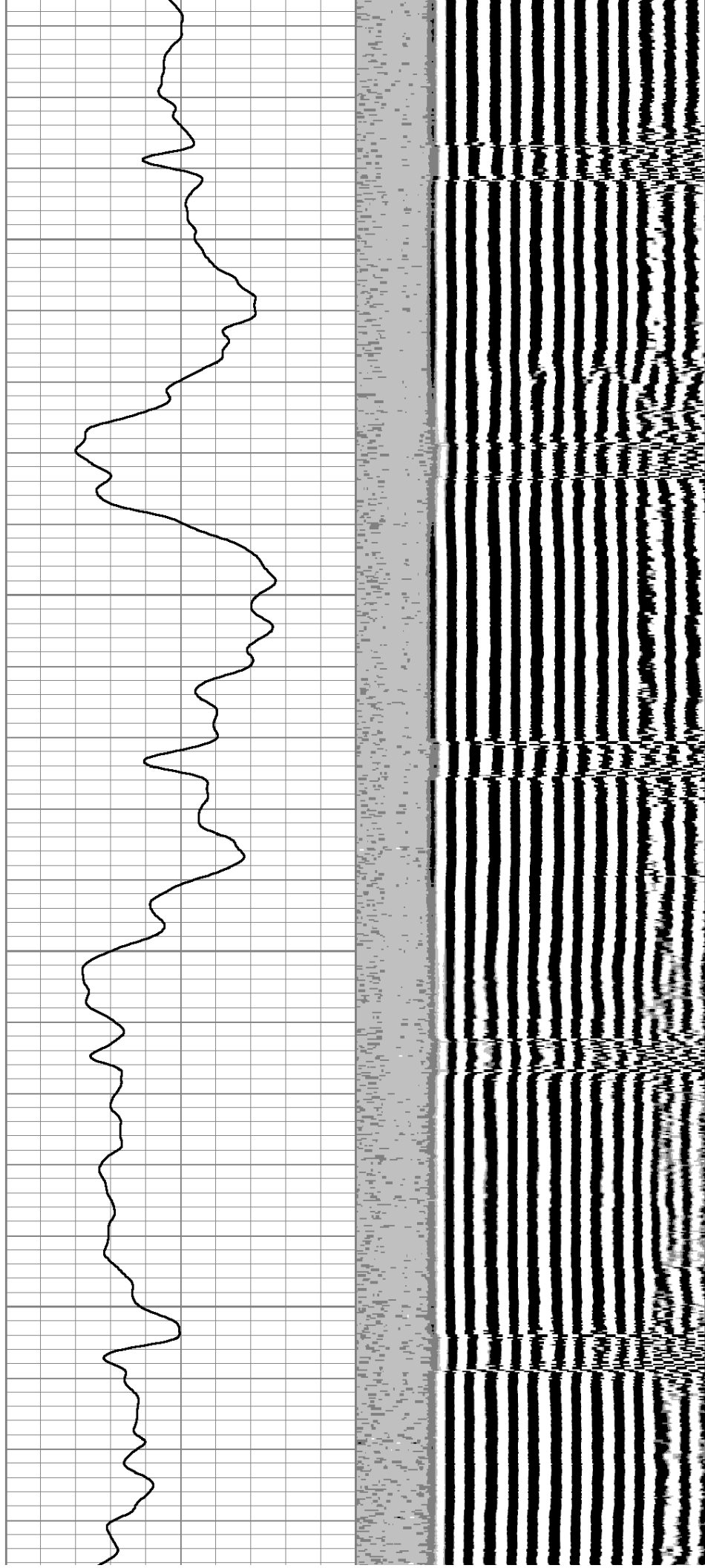


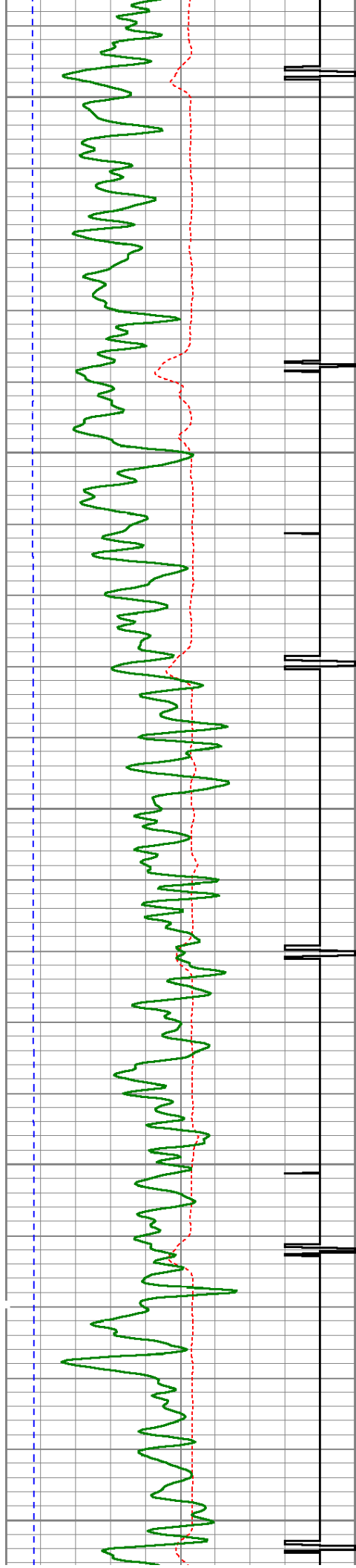
200

250

300

350





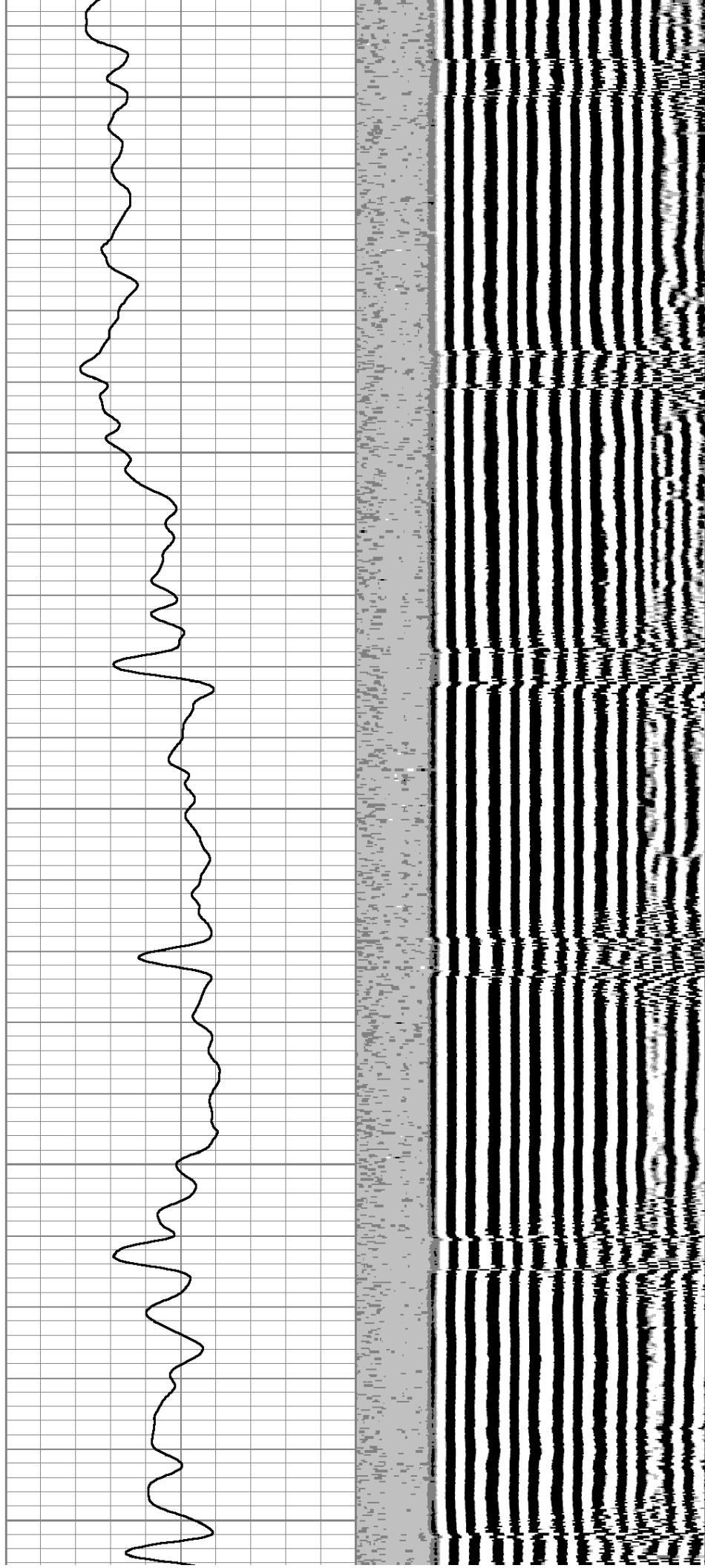
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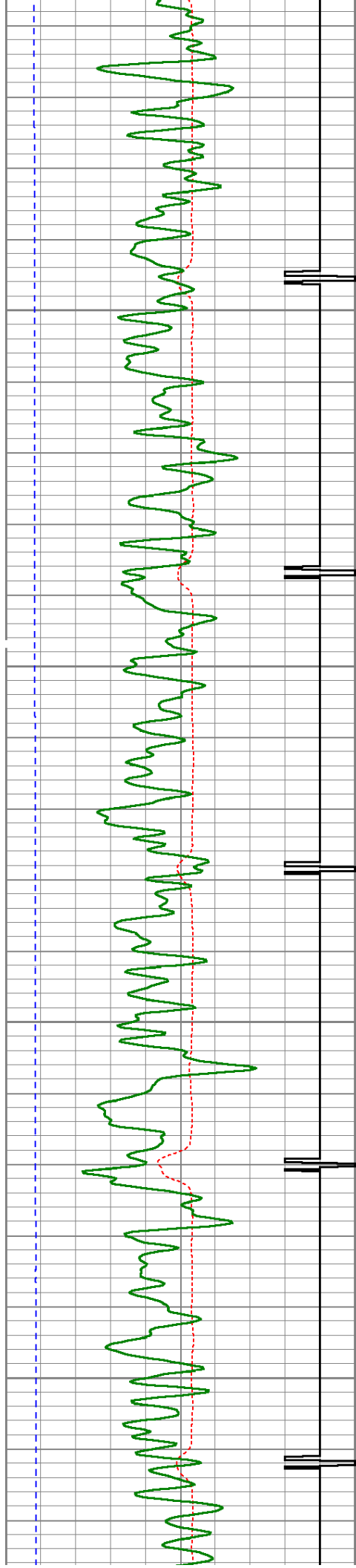
450

500

550

600



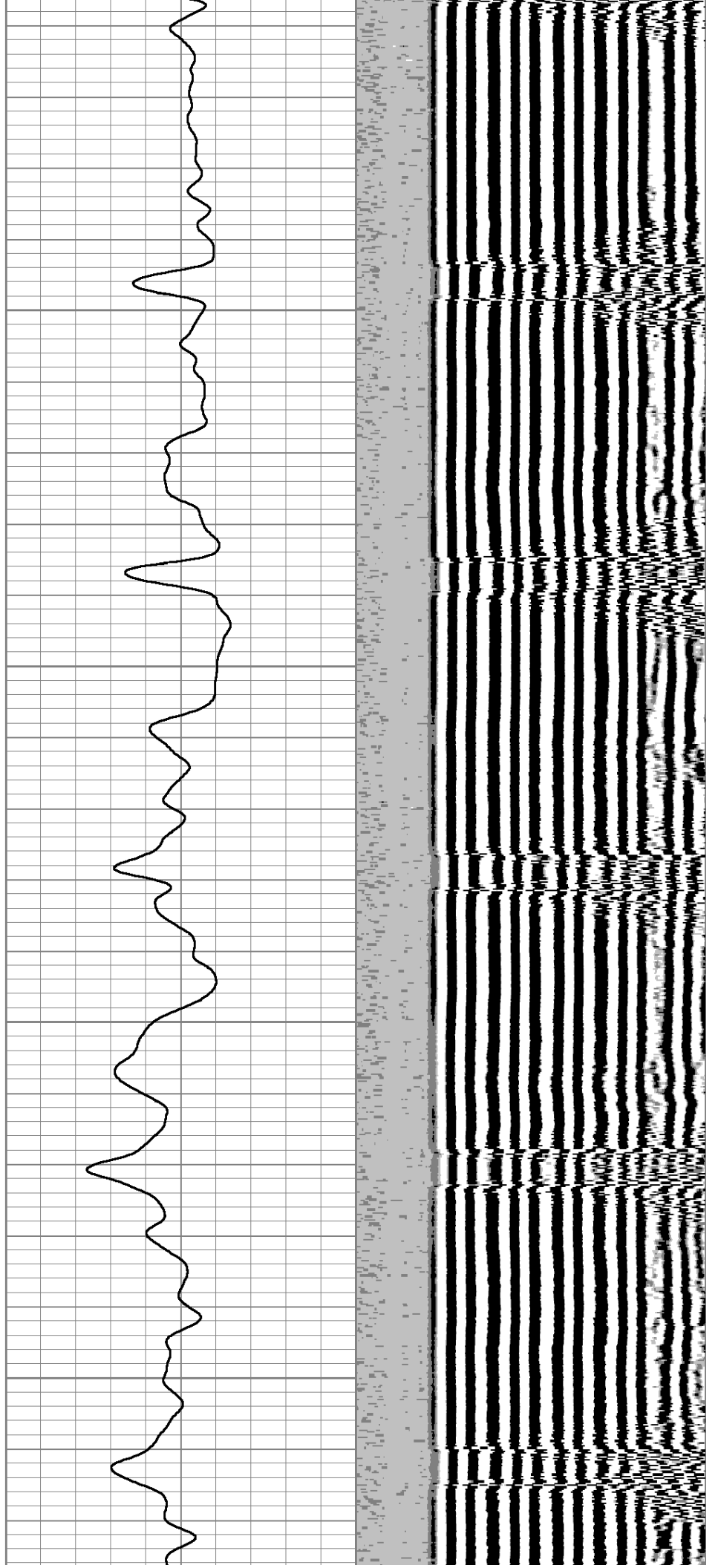


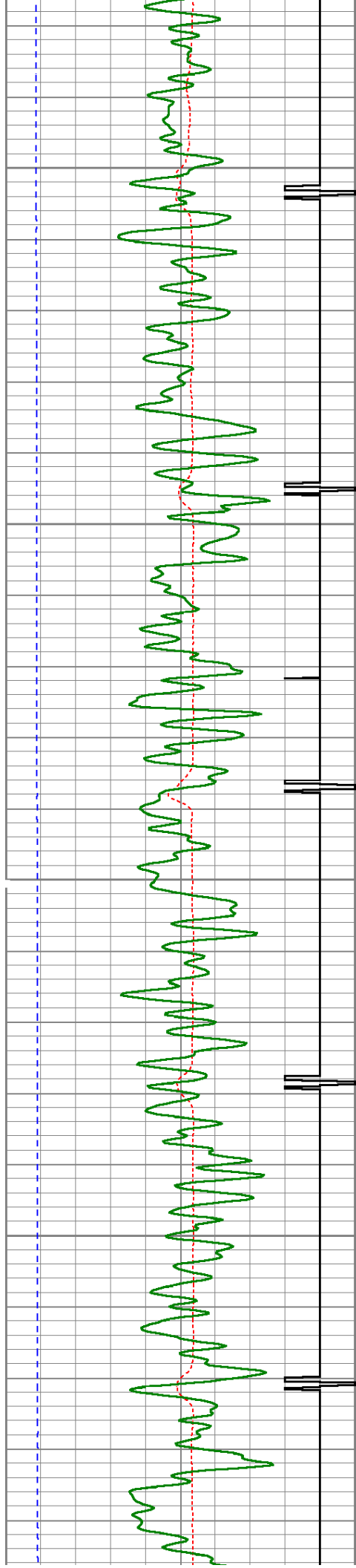
650

700

750

800



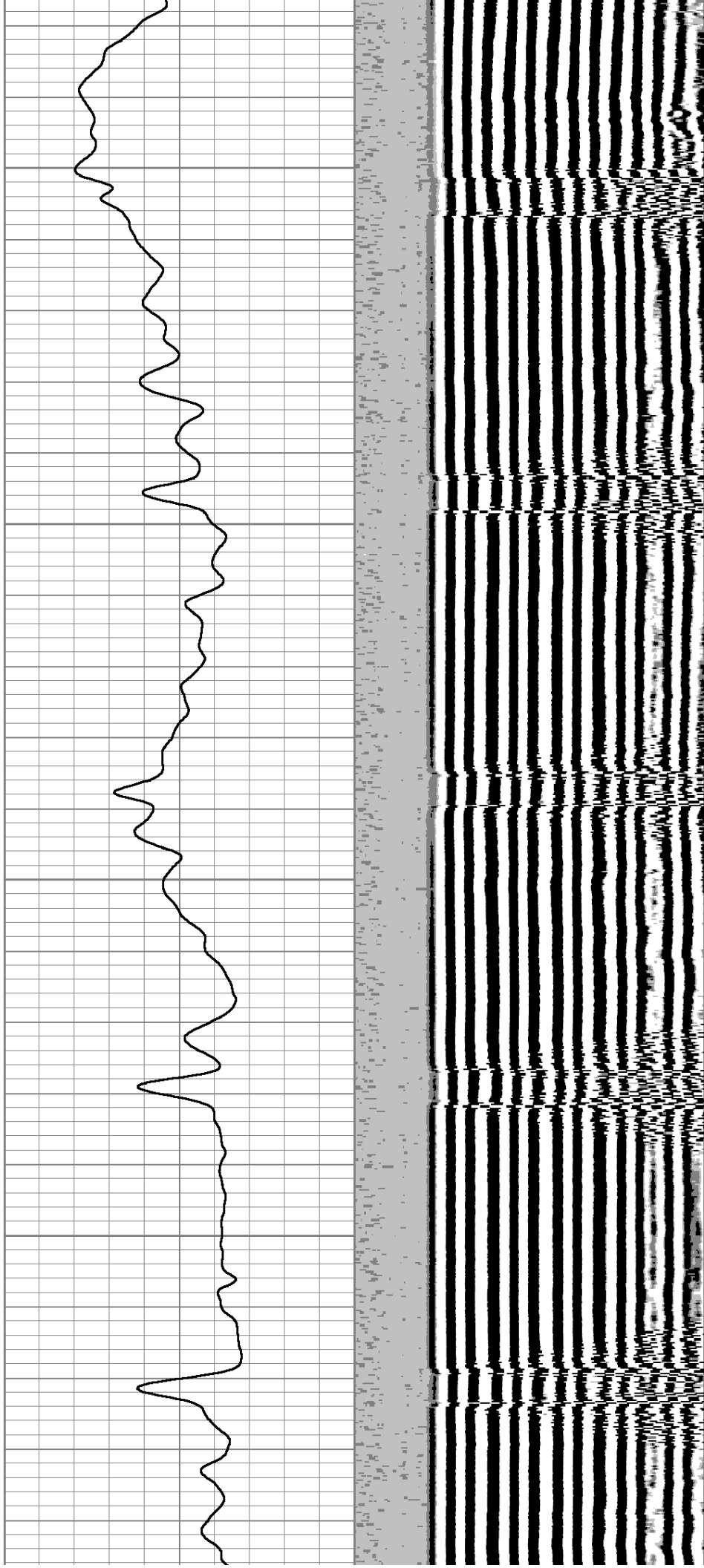


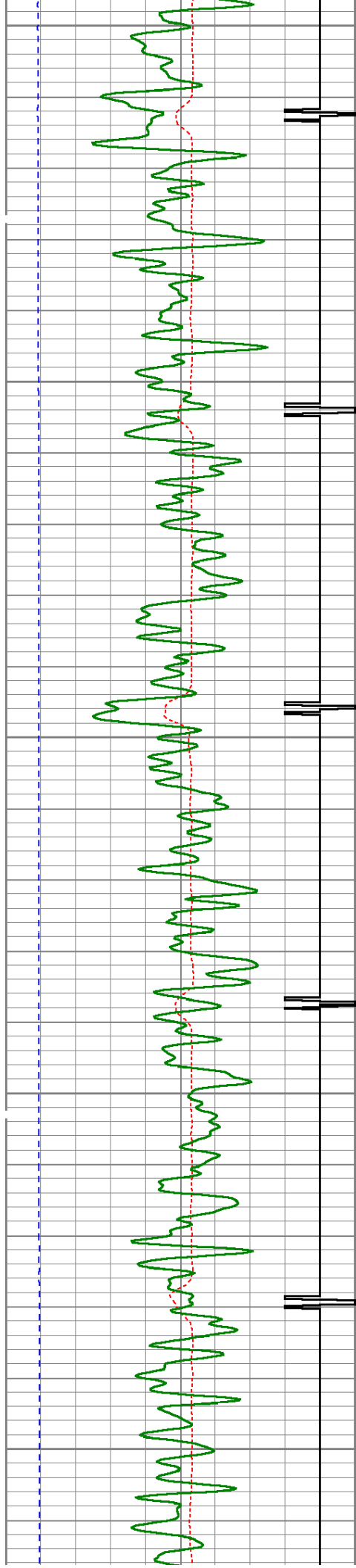
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900

950

1000





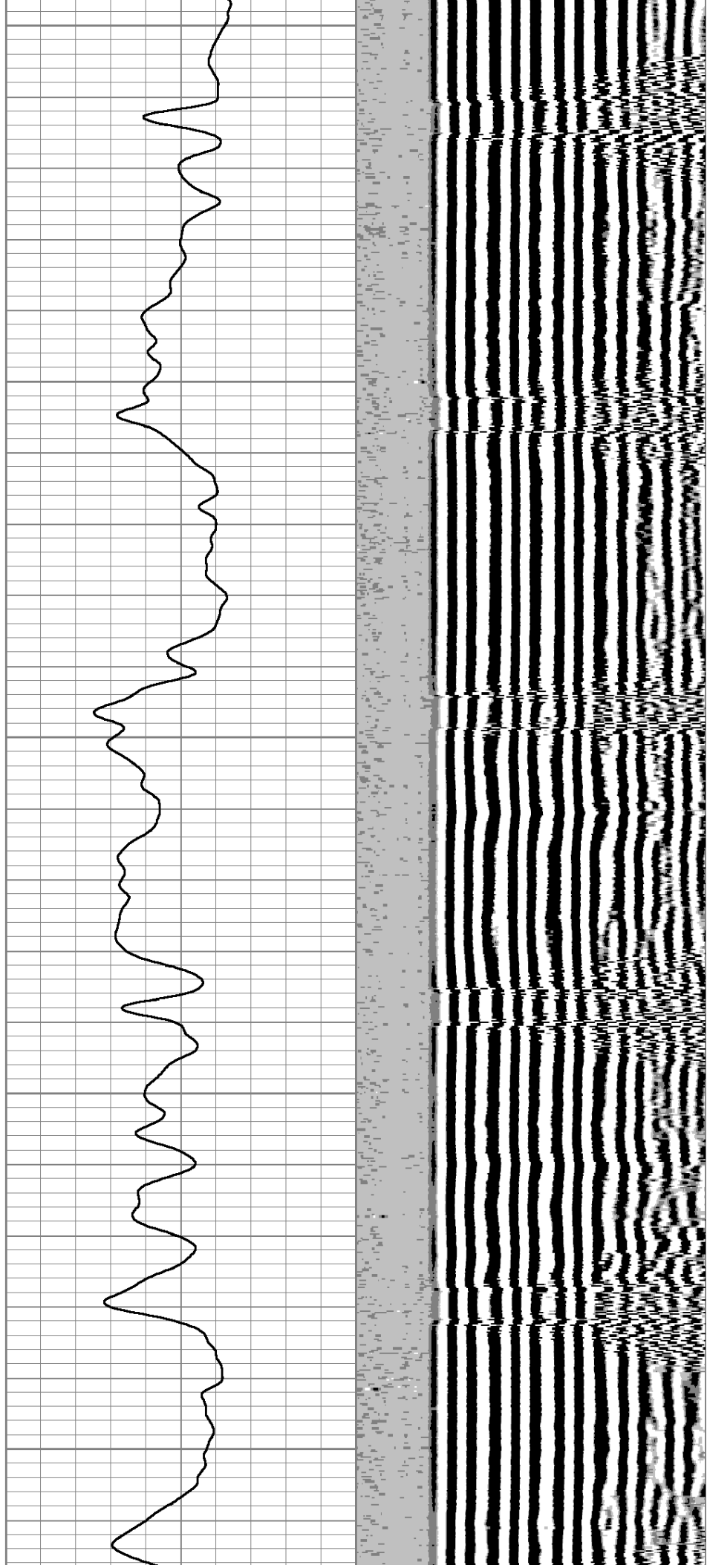
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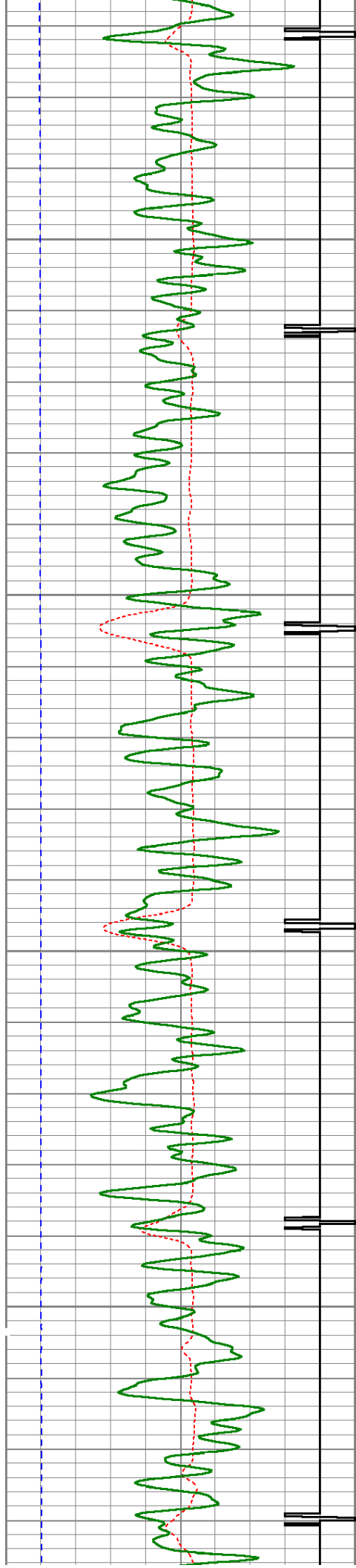
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1150

1200

1250



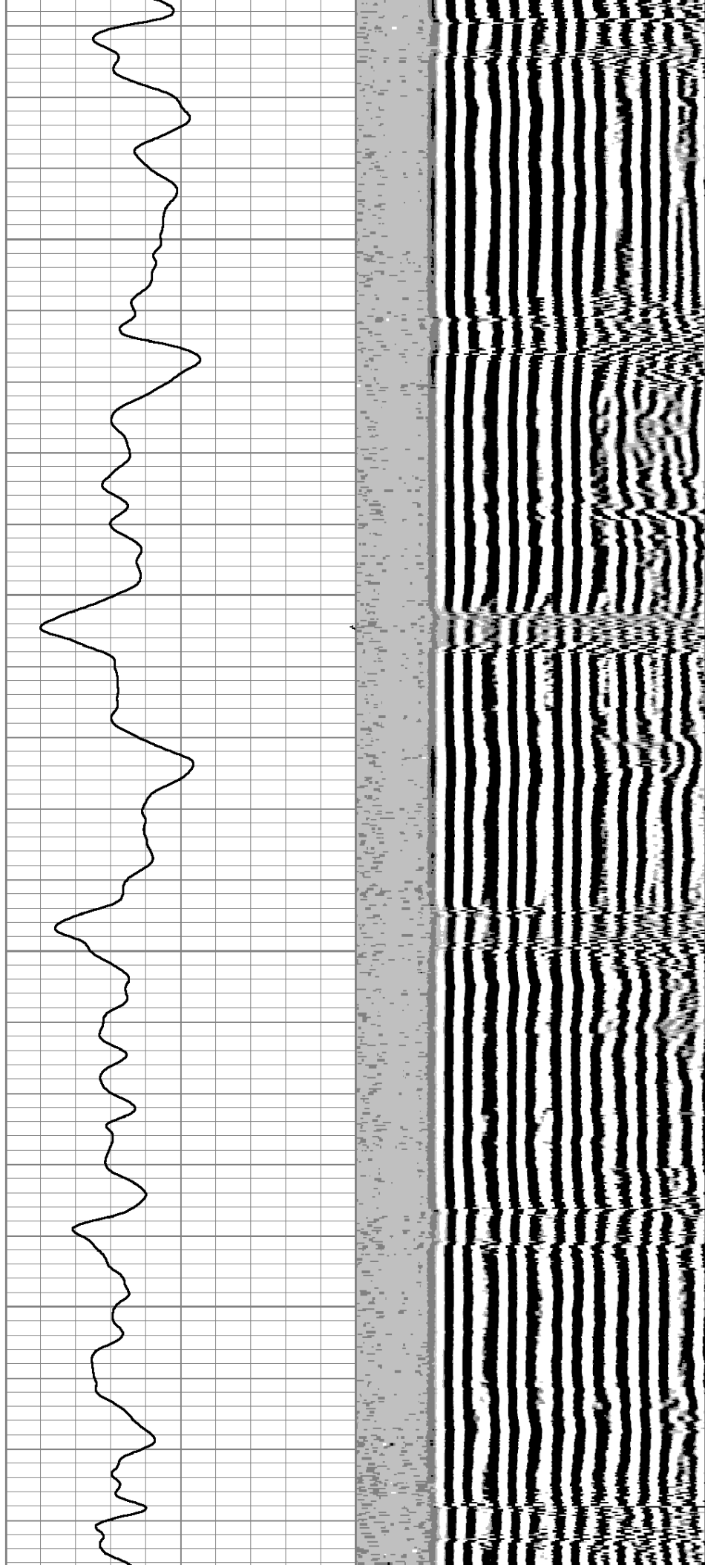


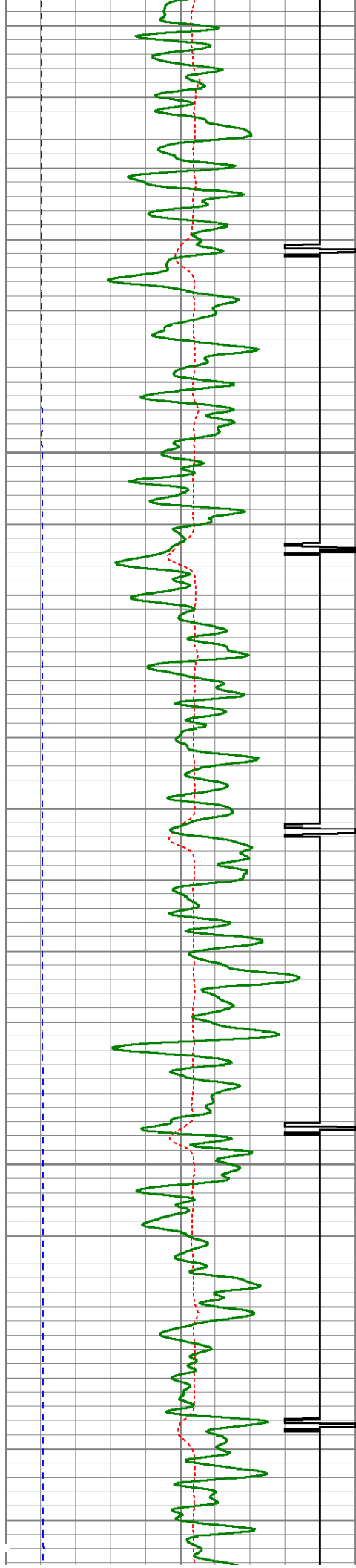
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1350

1400

1450





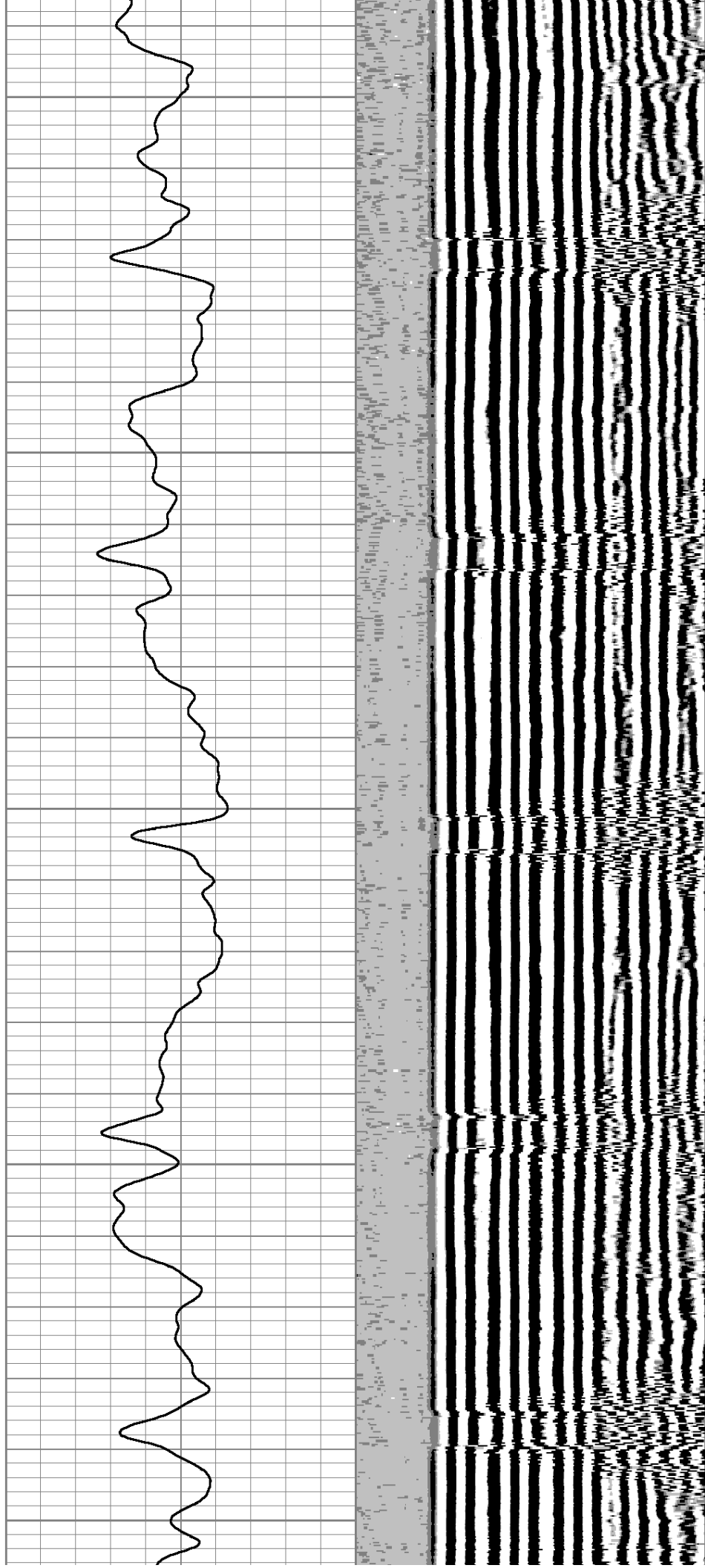
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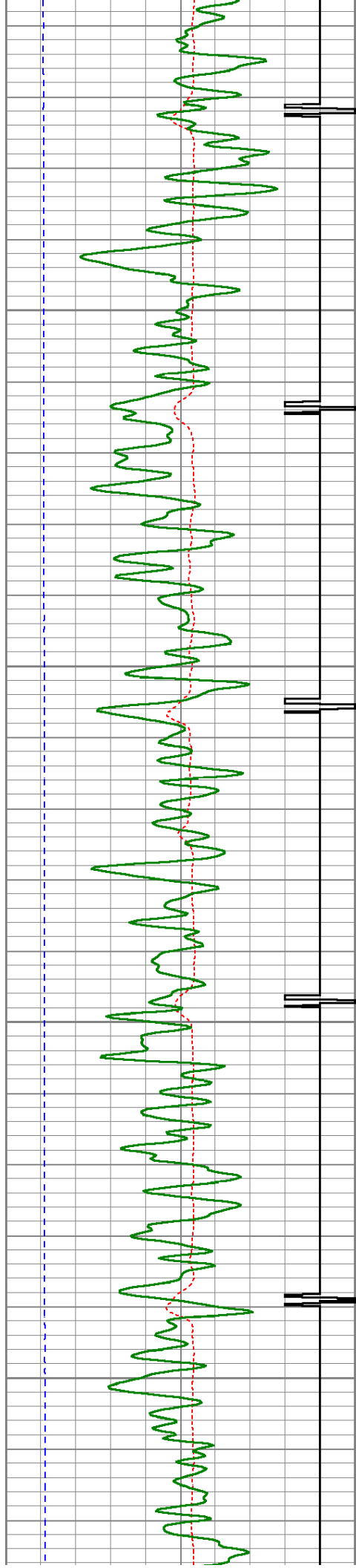
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1600

1650

1700



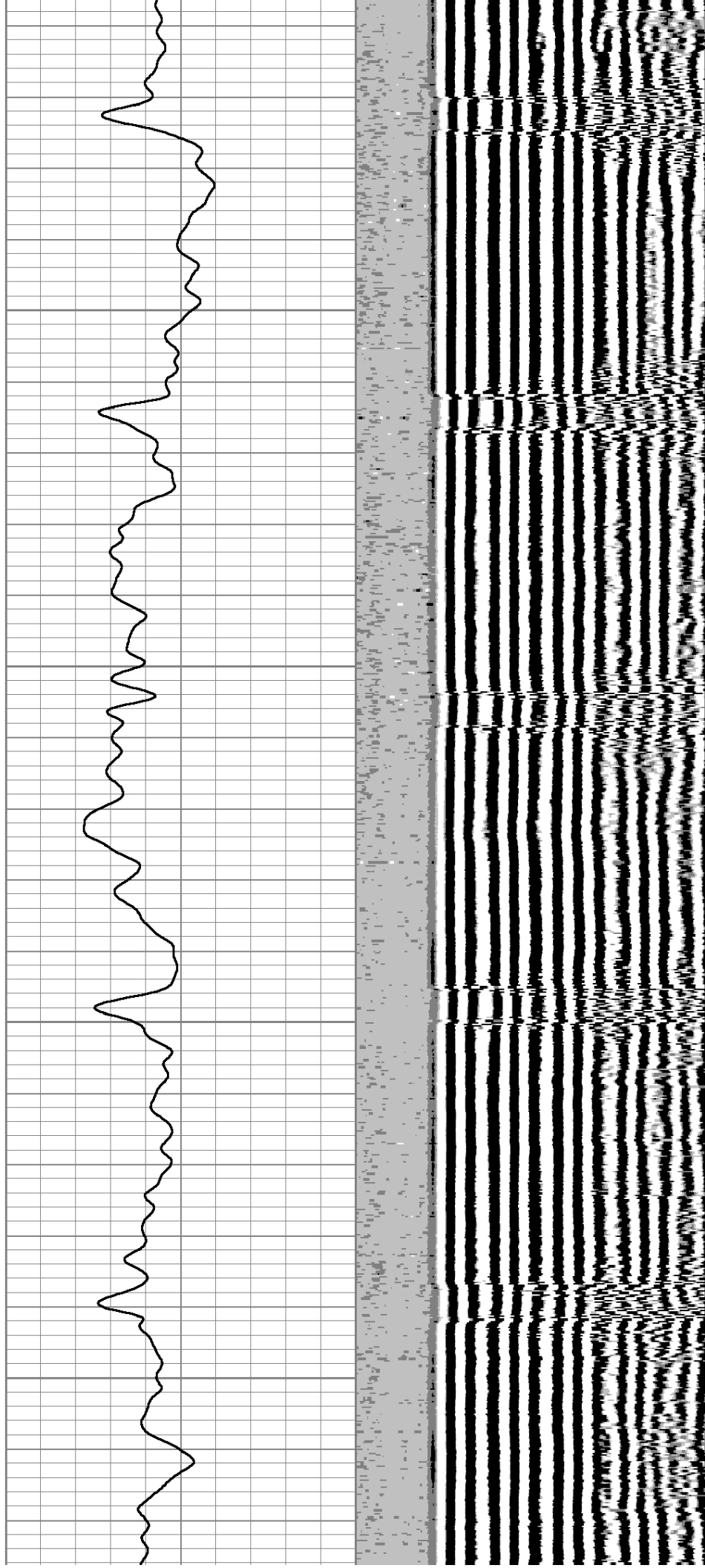


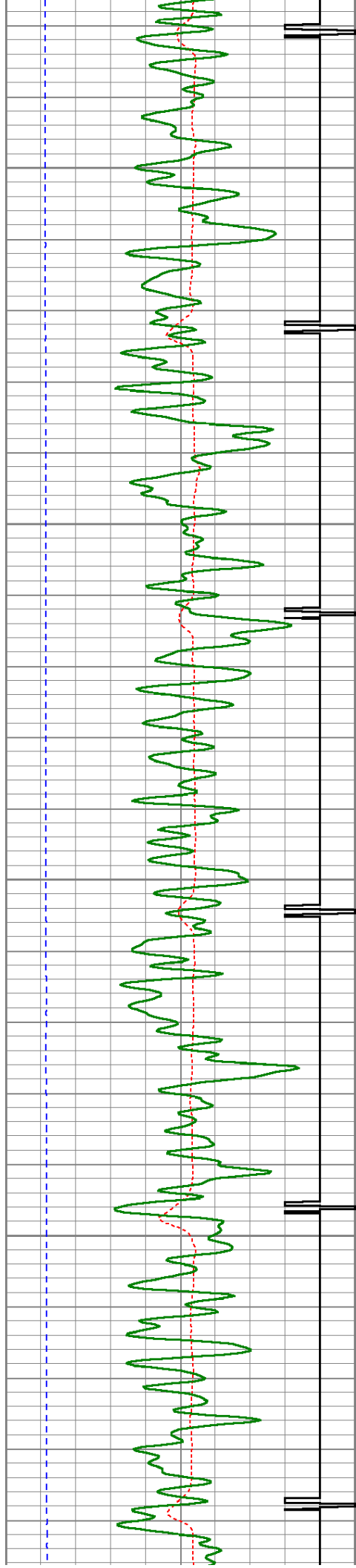
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1850

1900



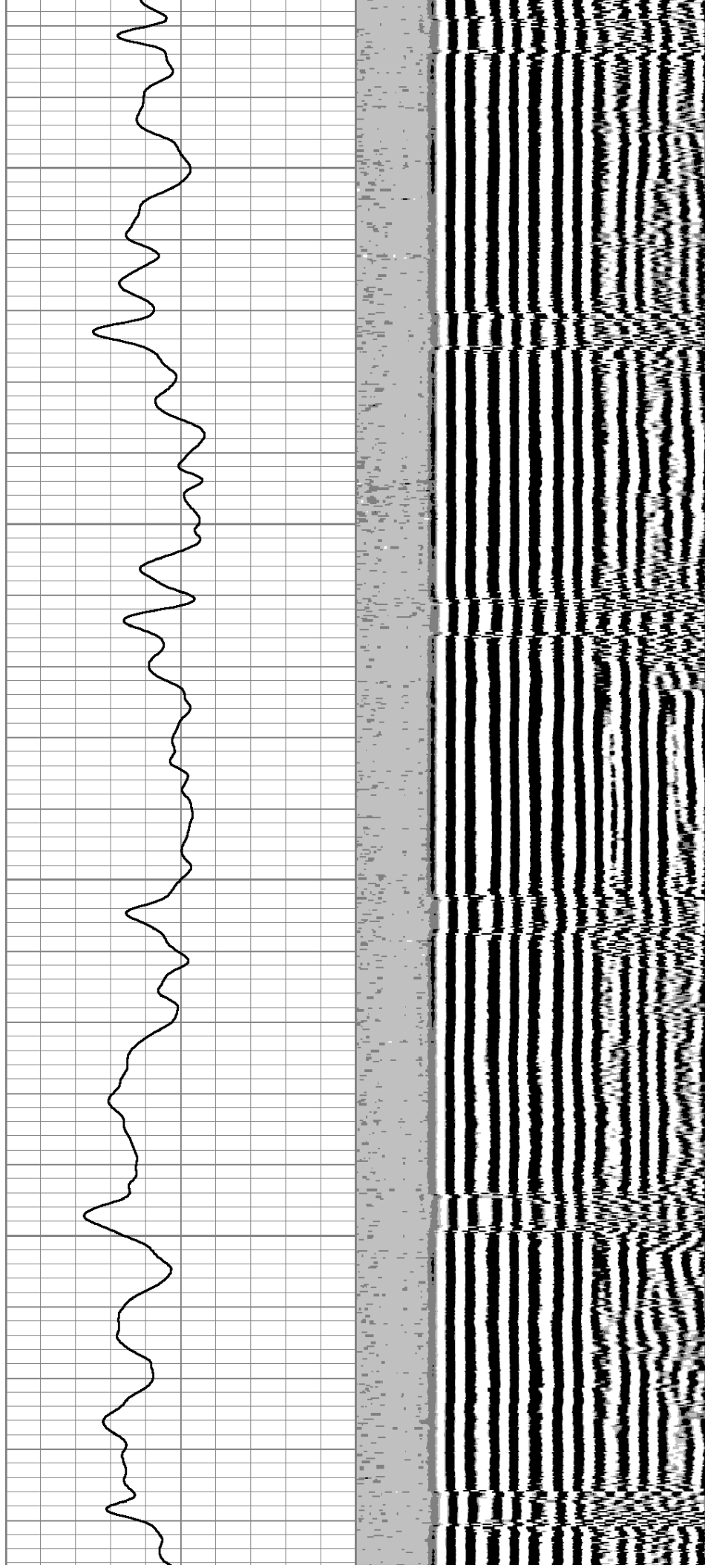


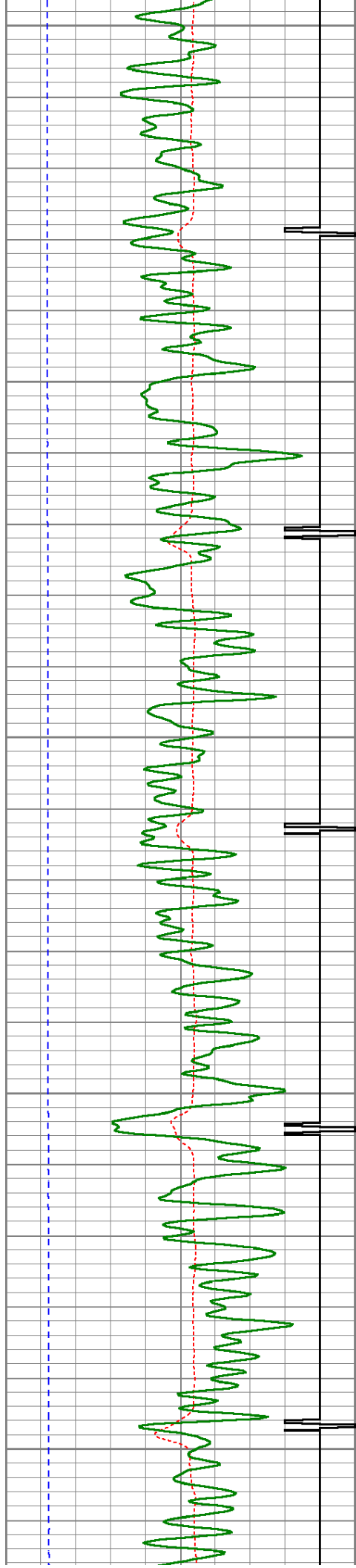
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2000

2050

2100





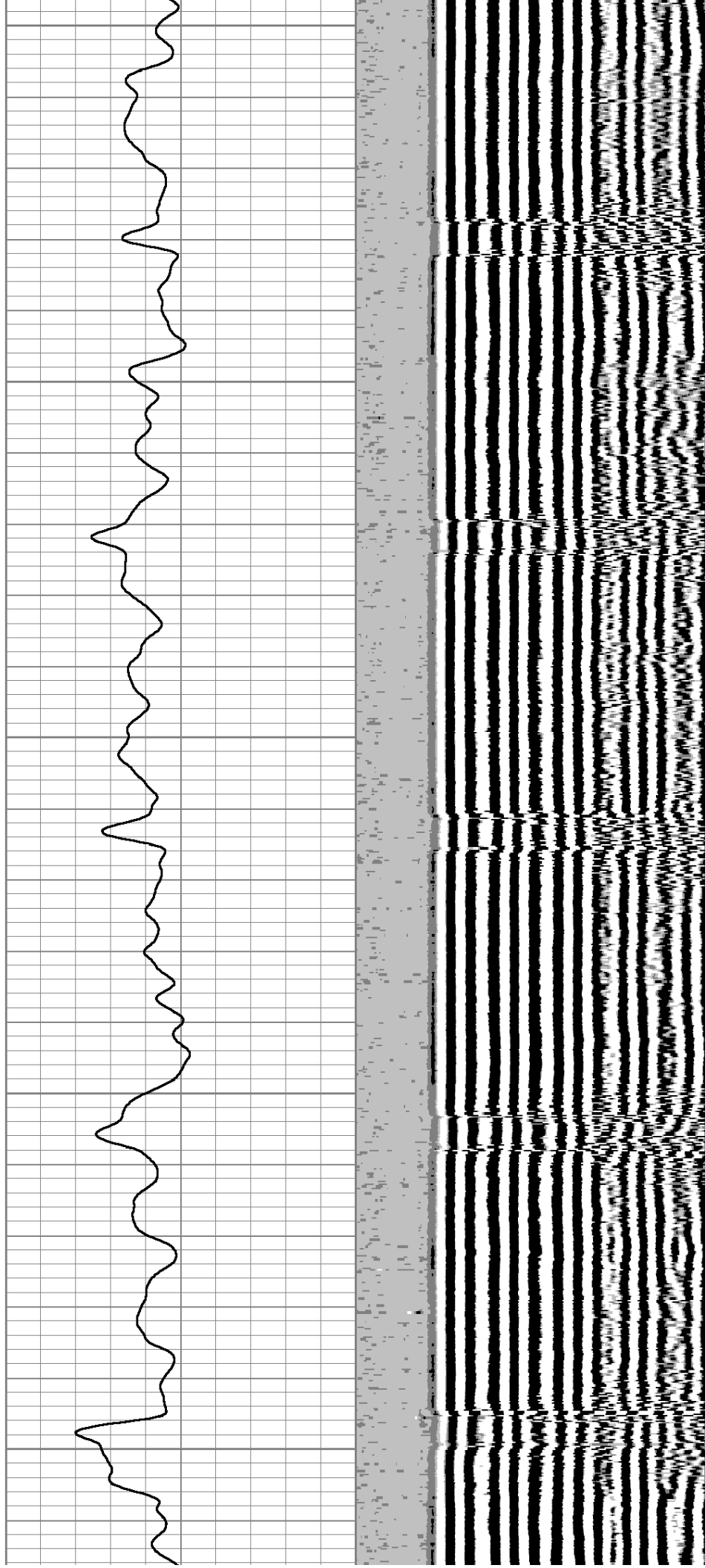
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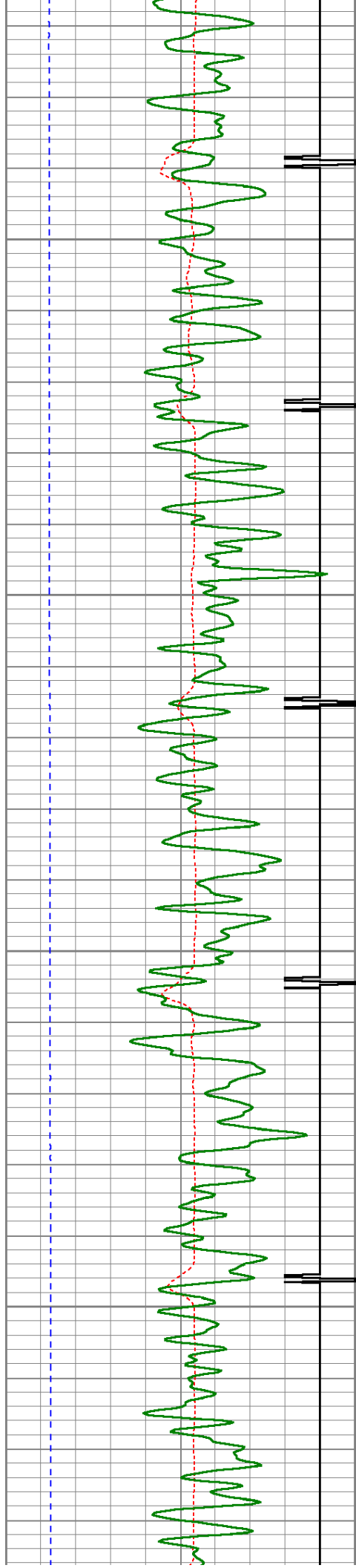
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2250

2300

2350



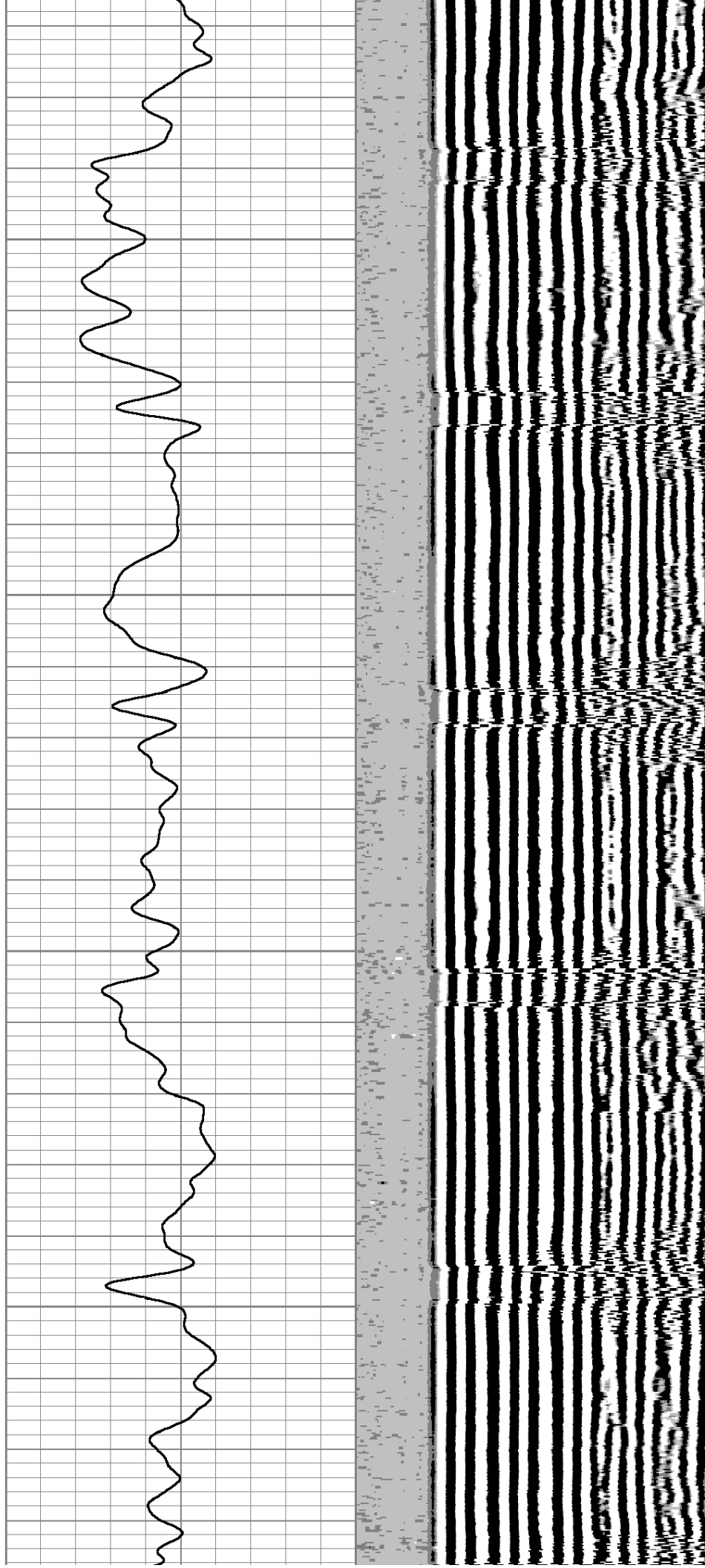


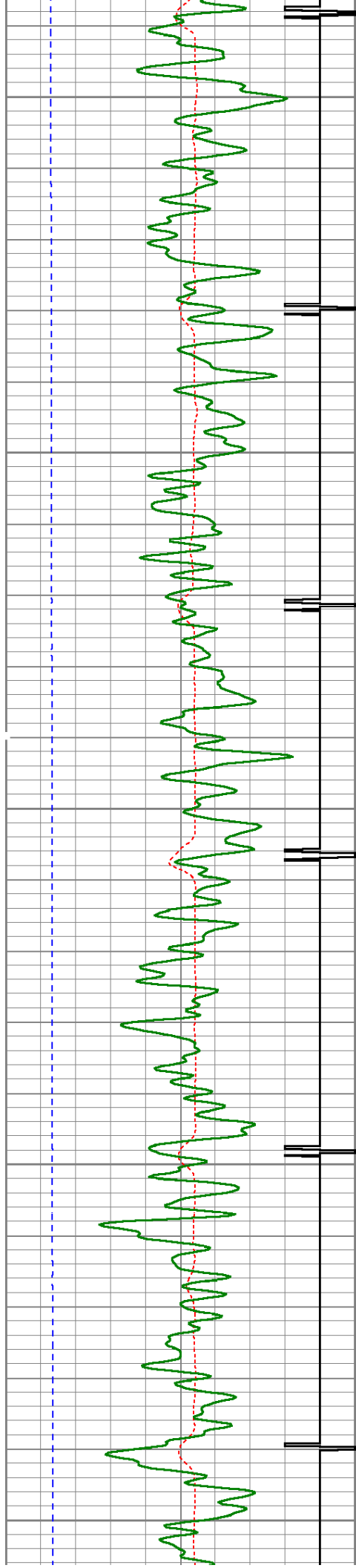
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2450

2500

2550





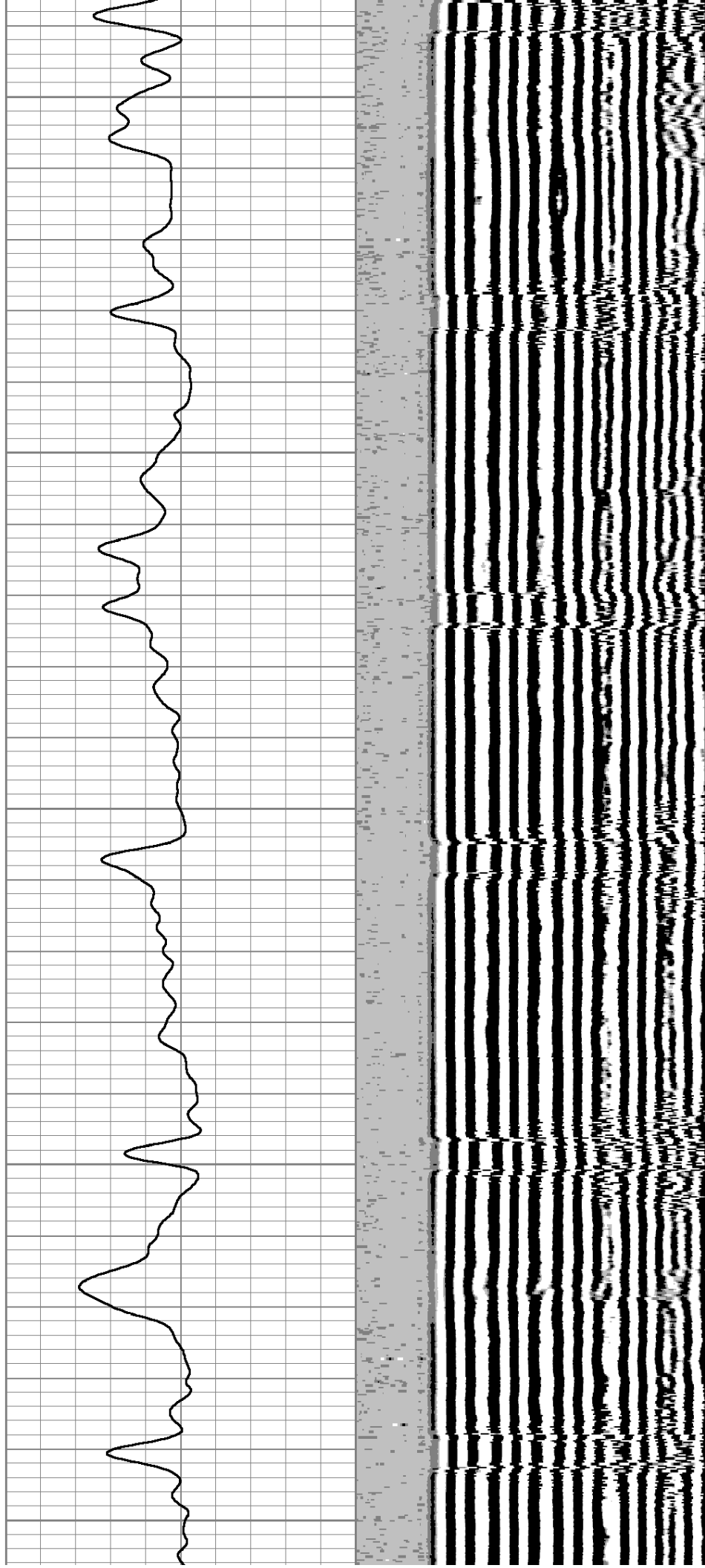
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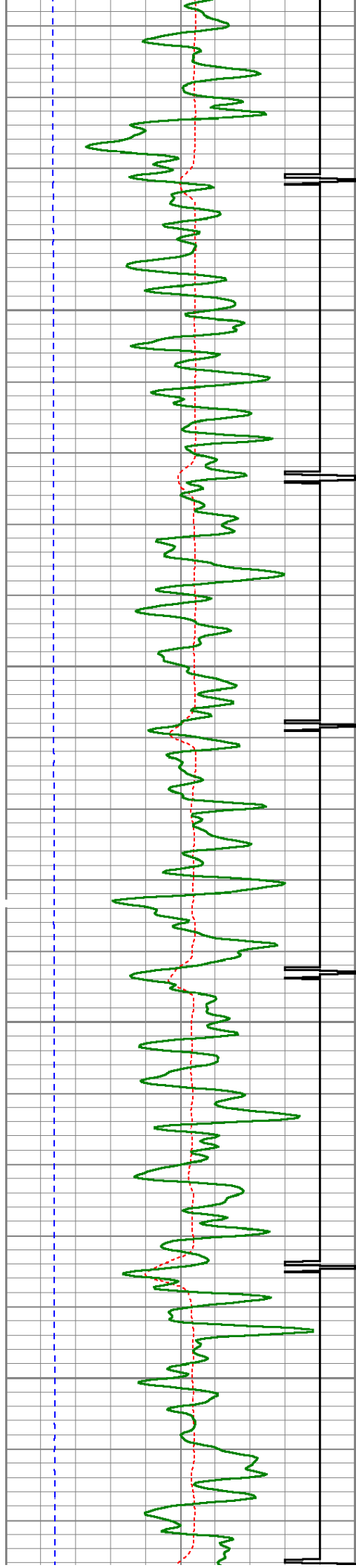
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2700

2750

2800



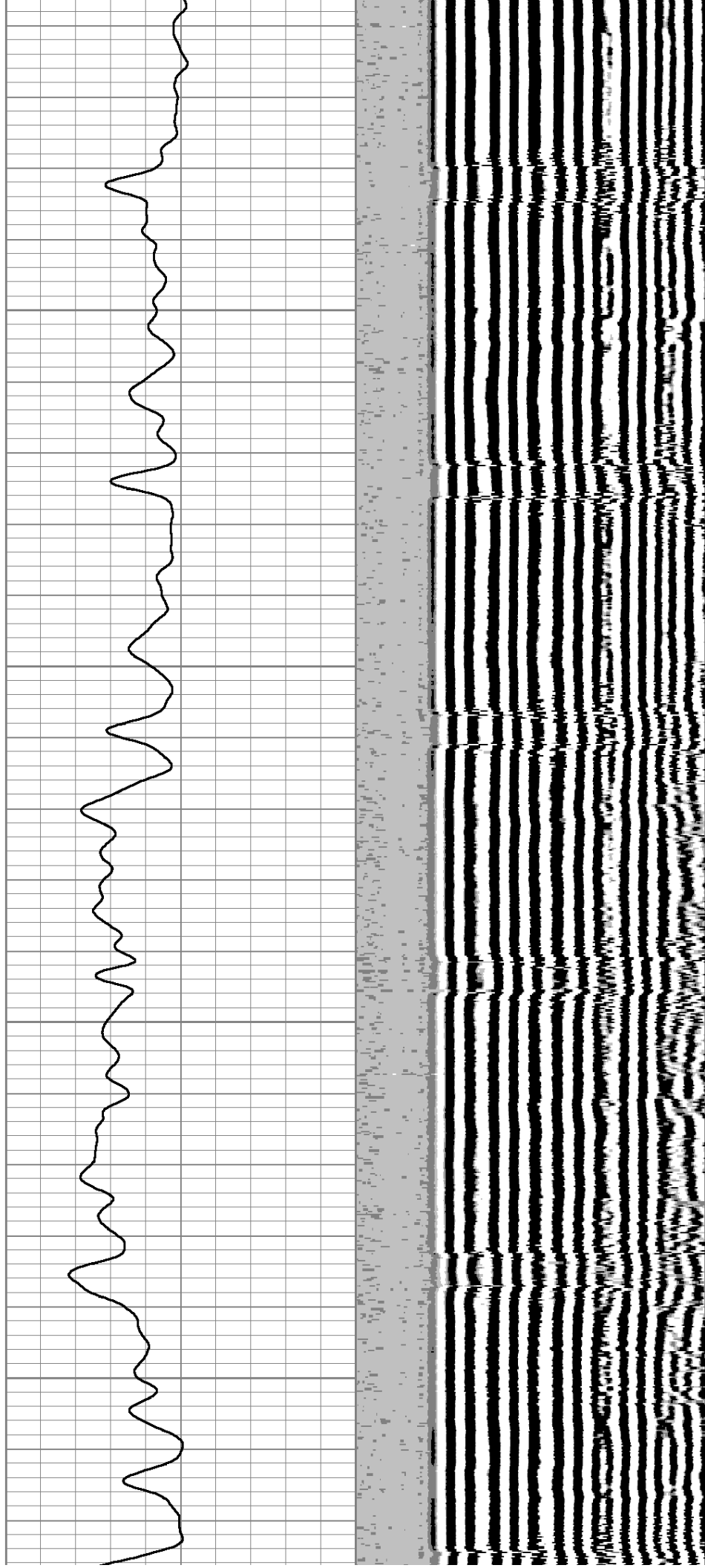


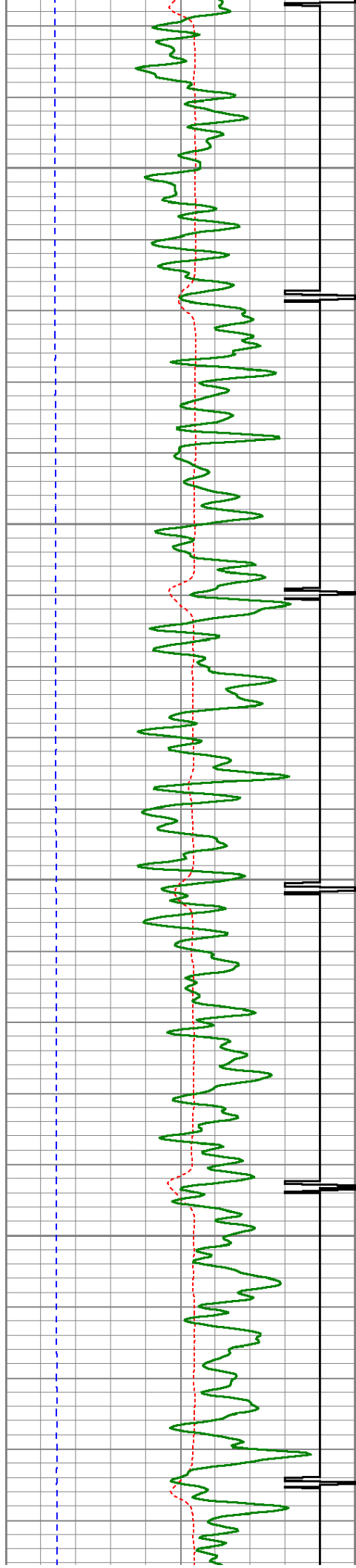
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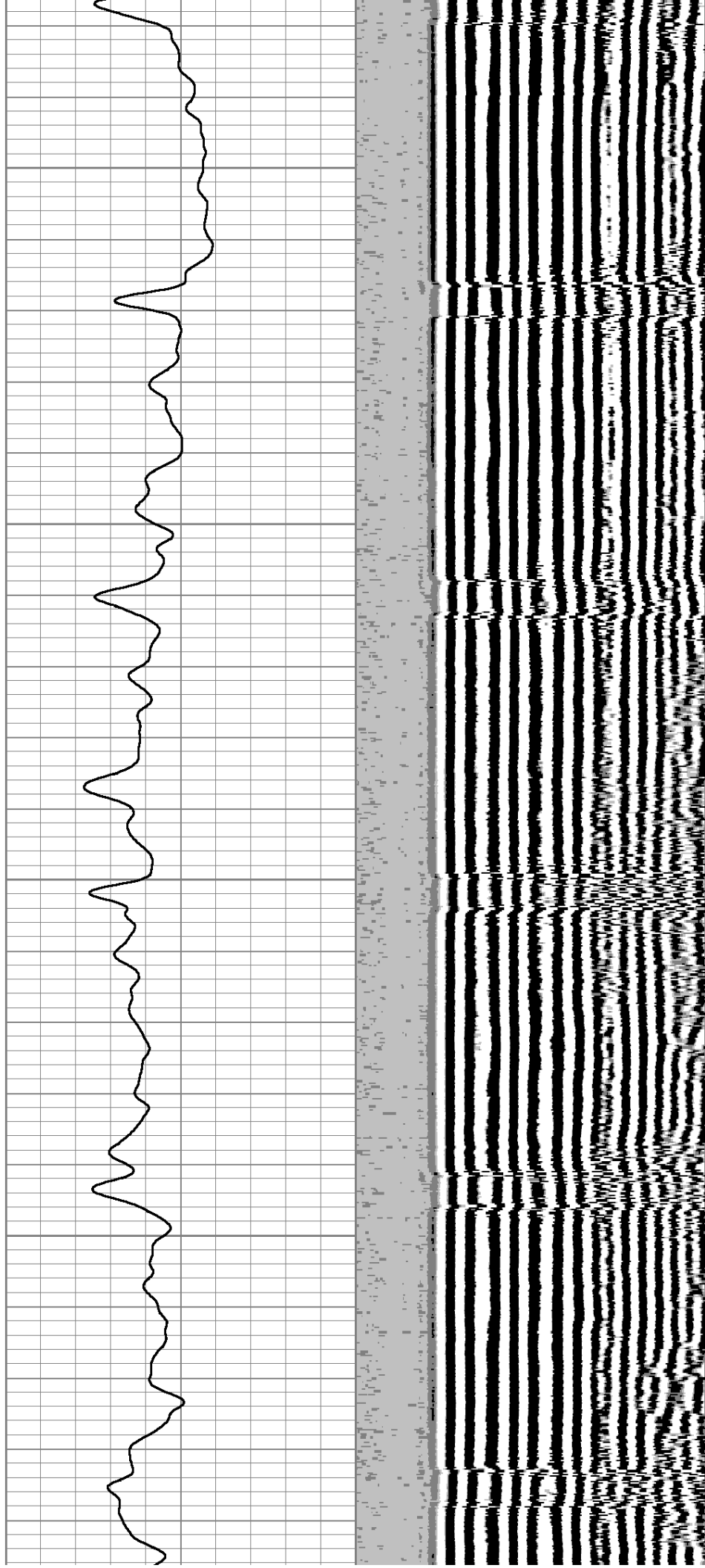


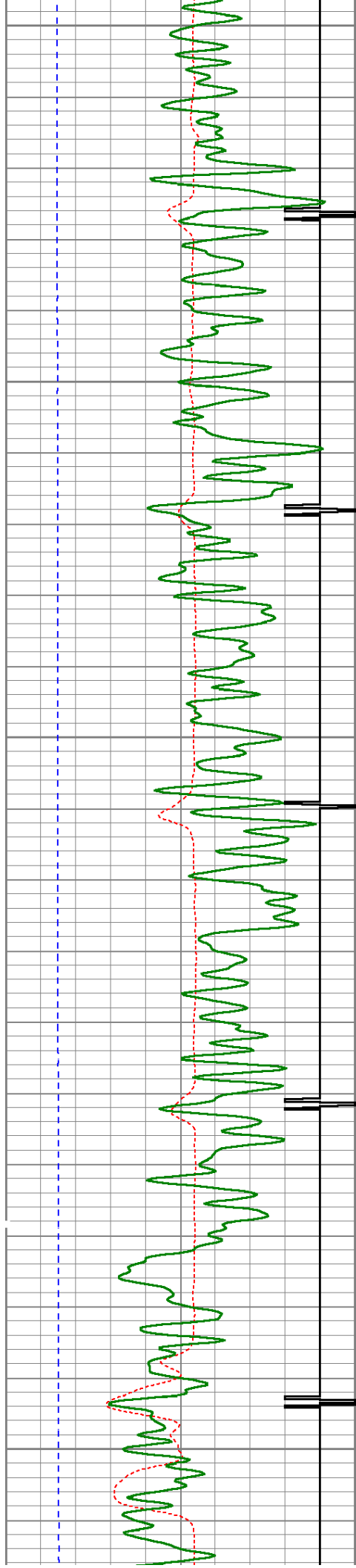
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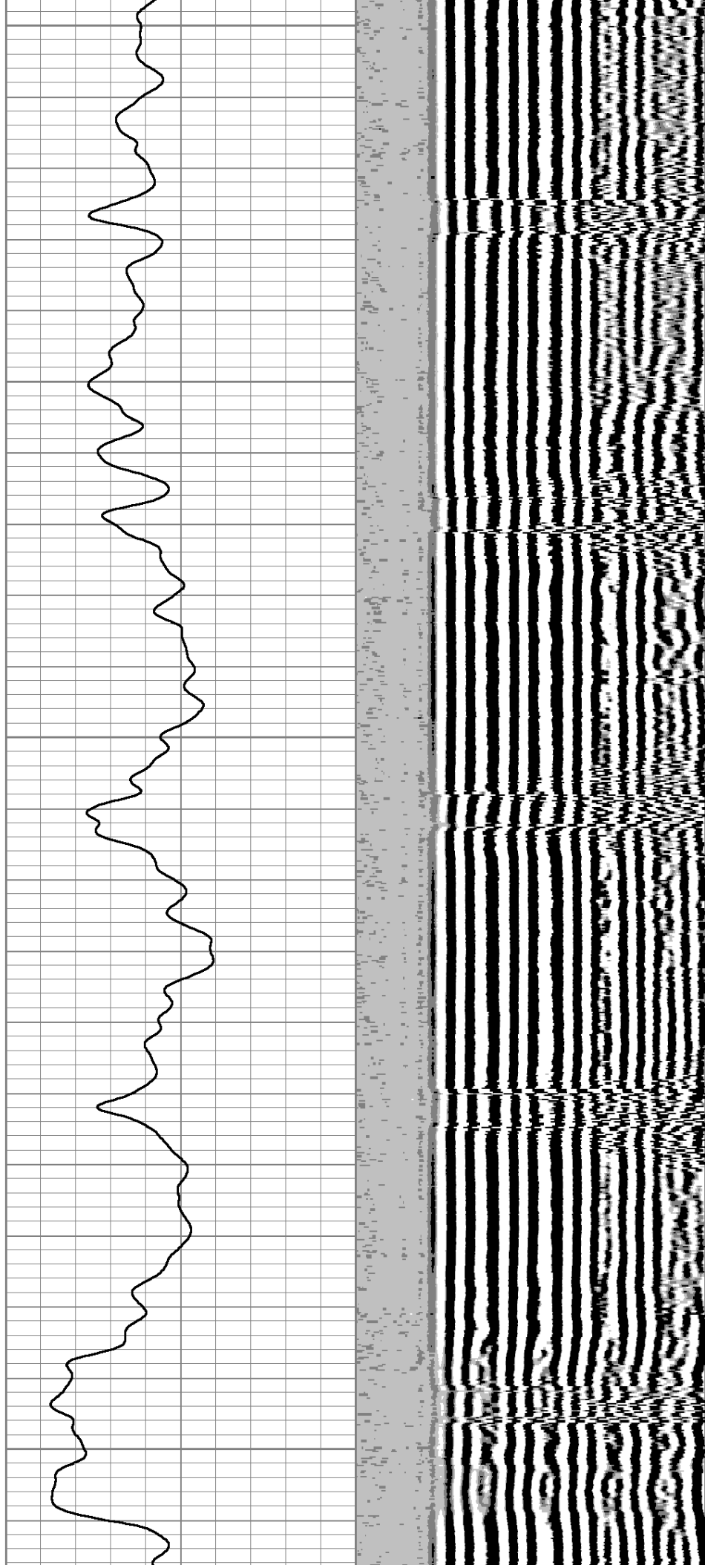
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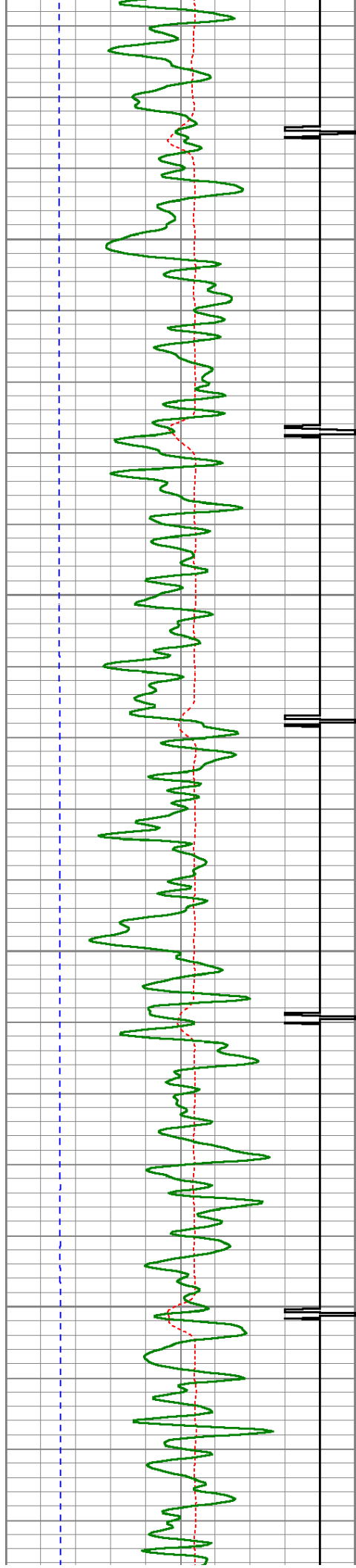
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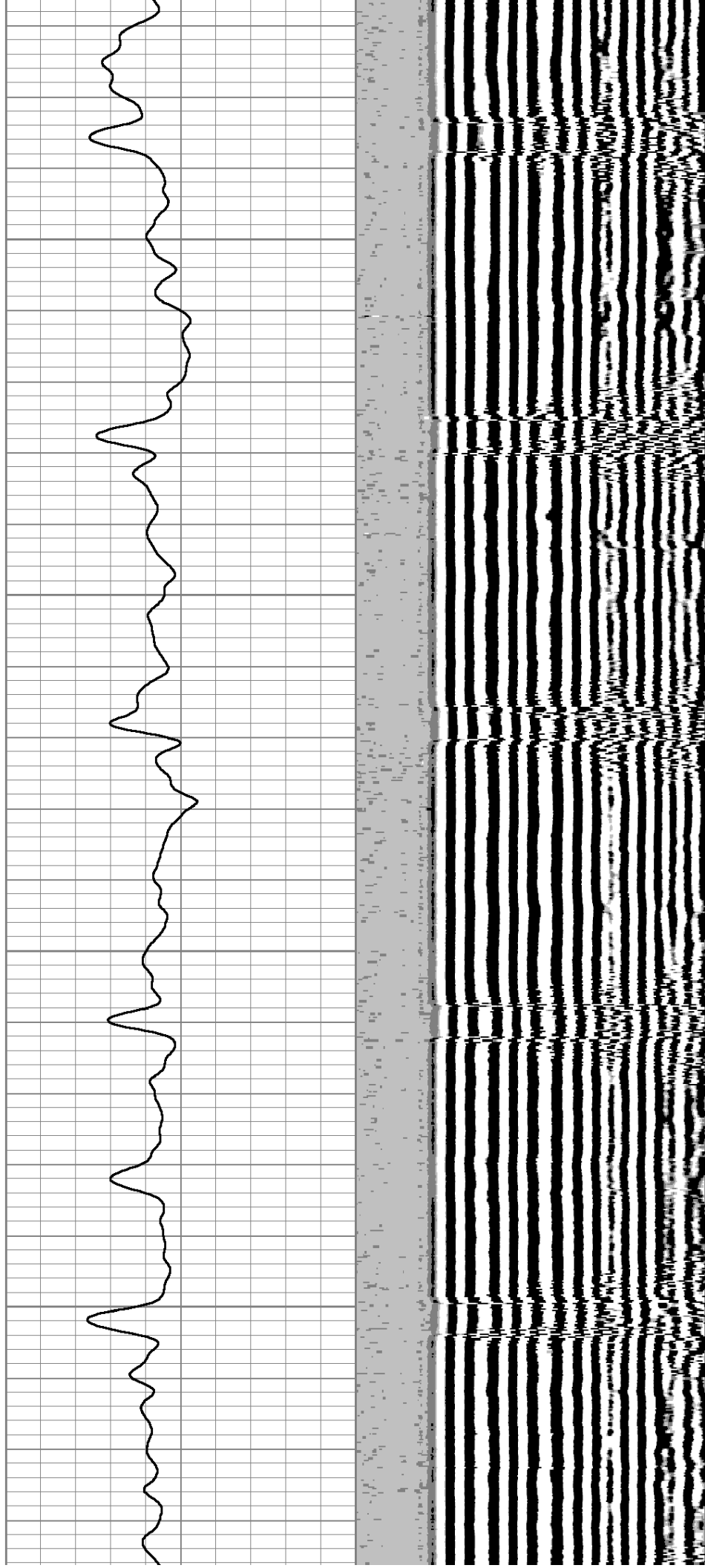


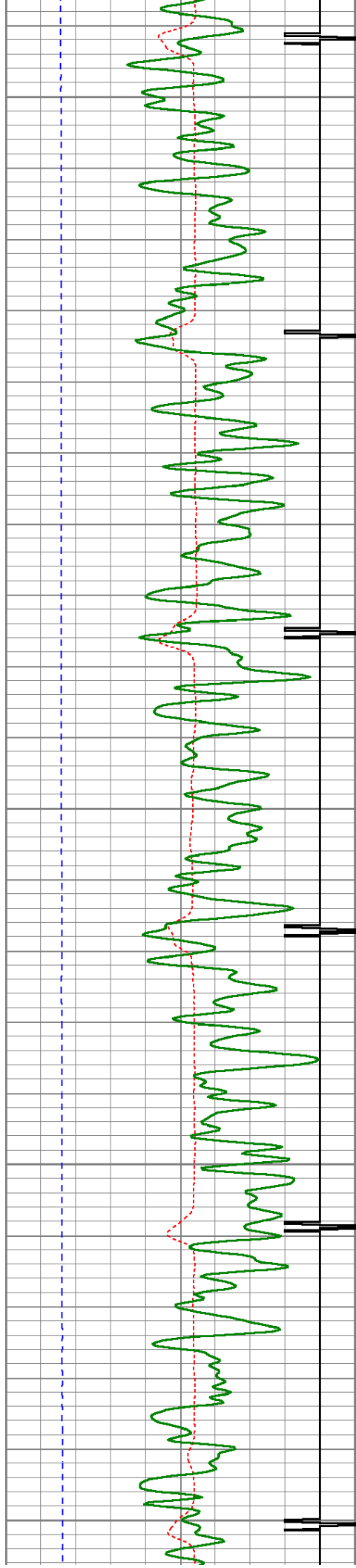
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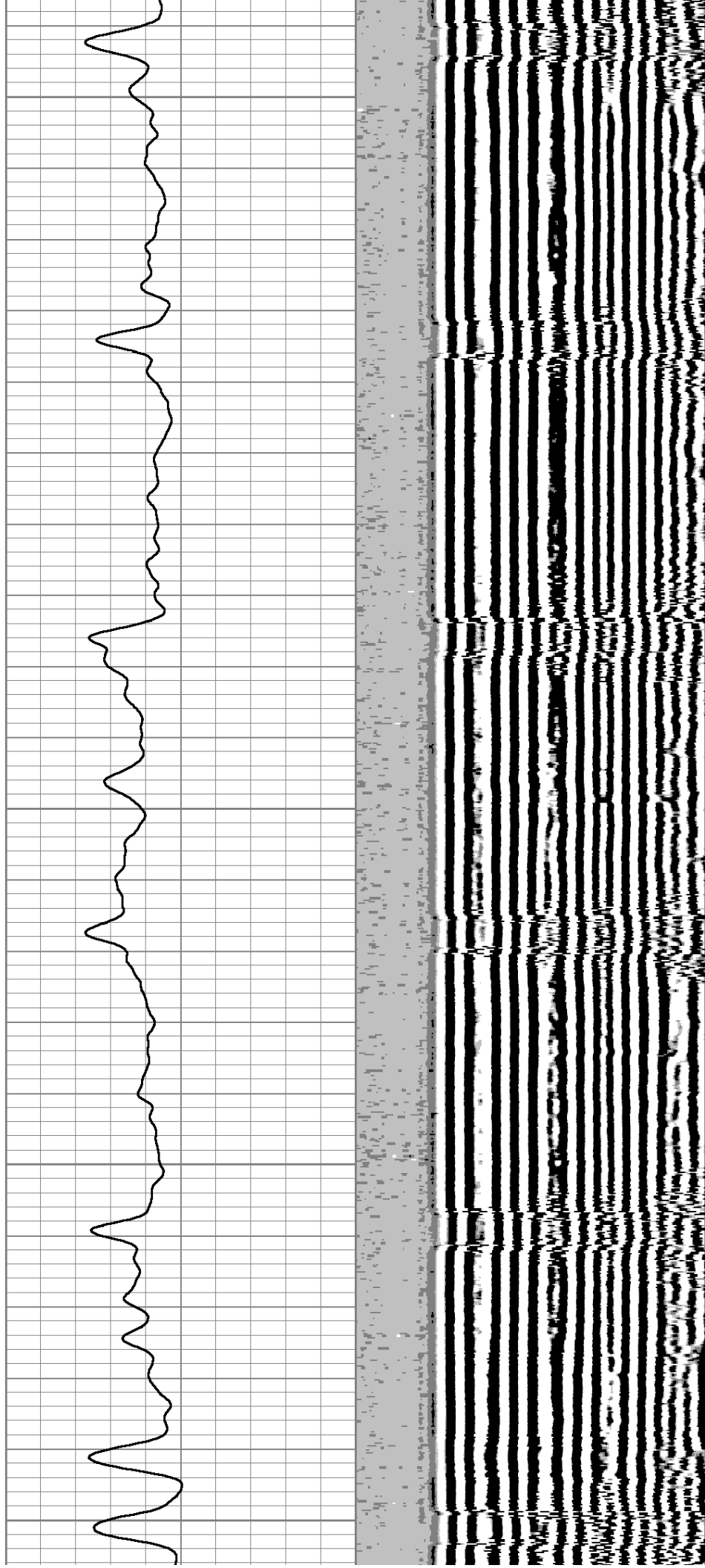
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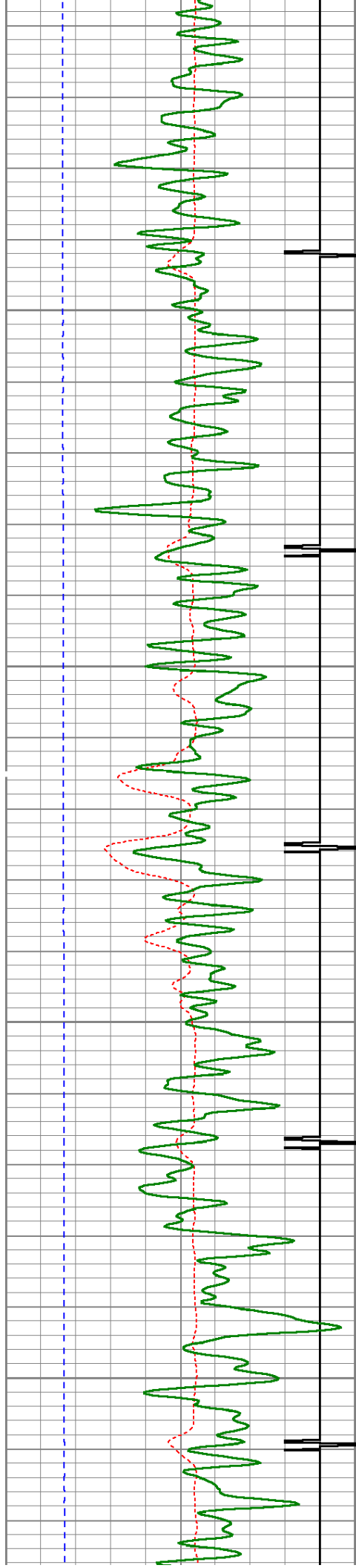
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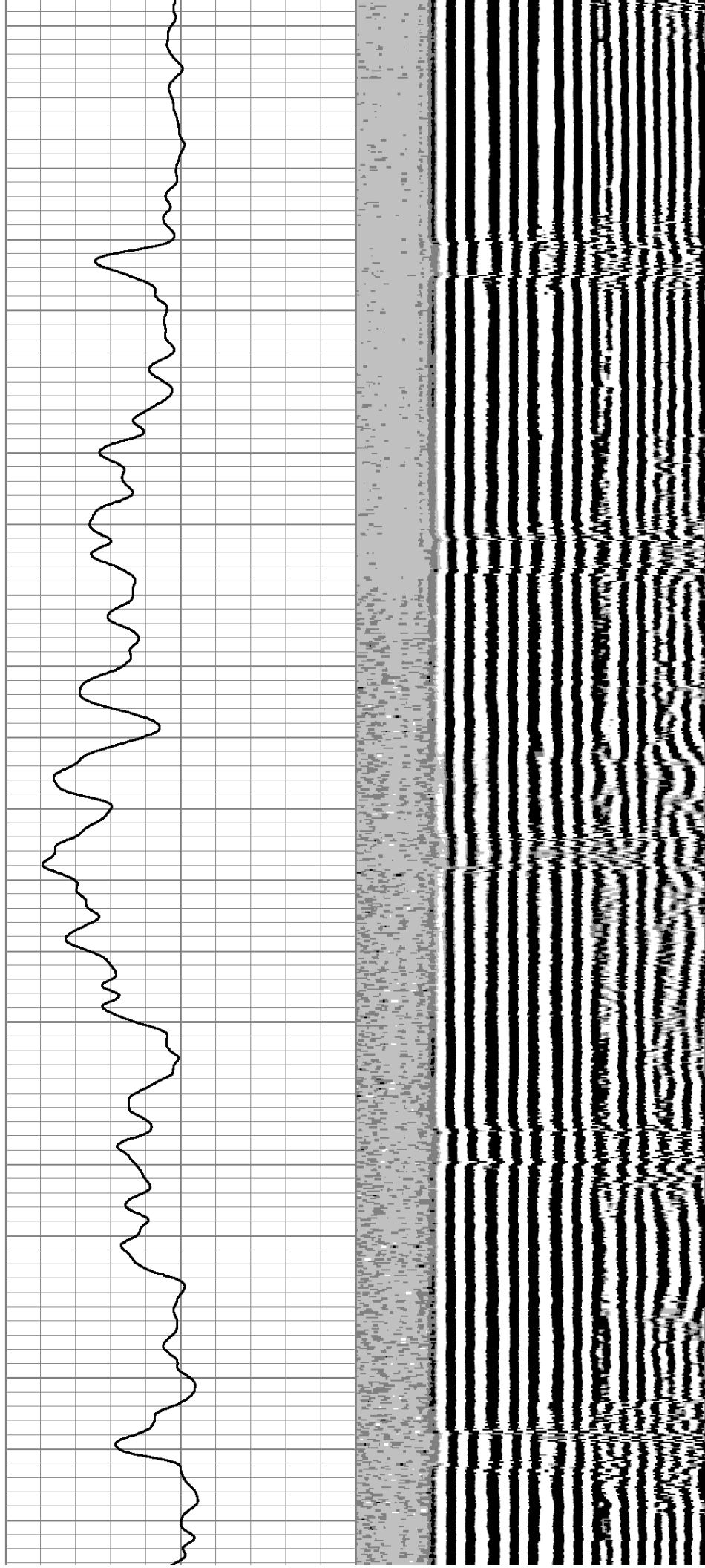


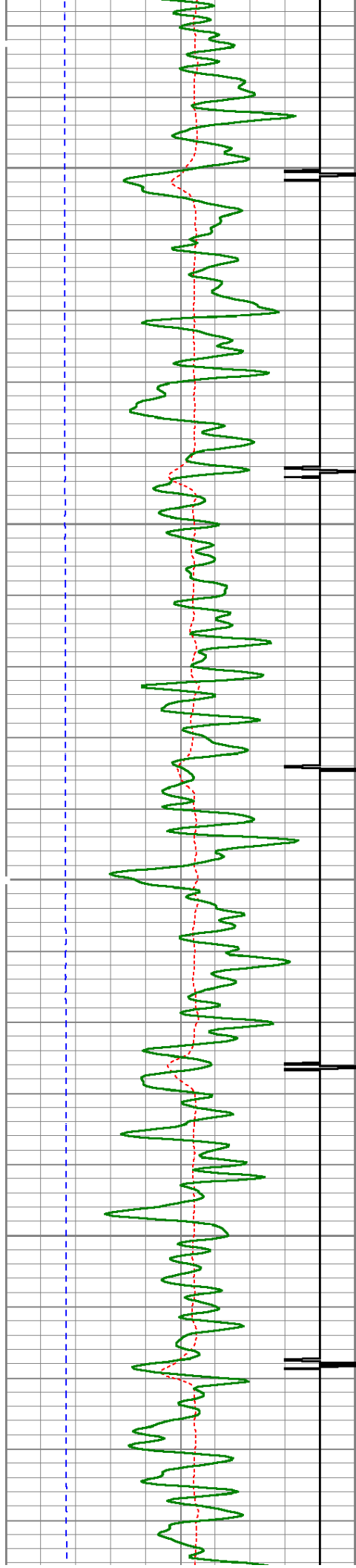
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4050

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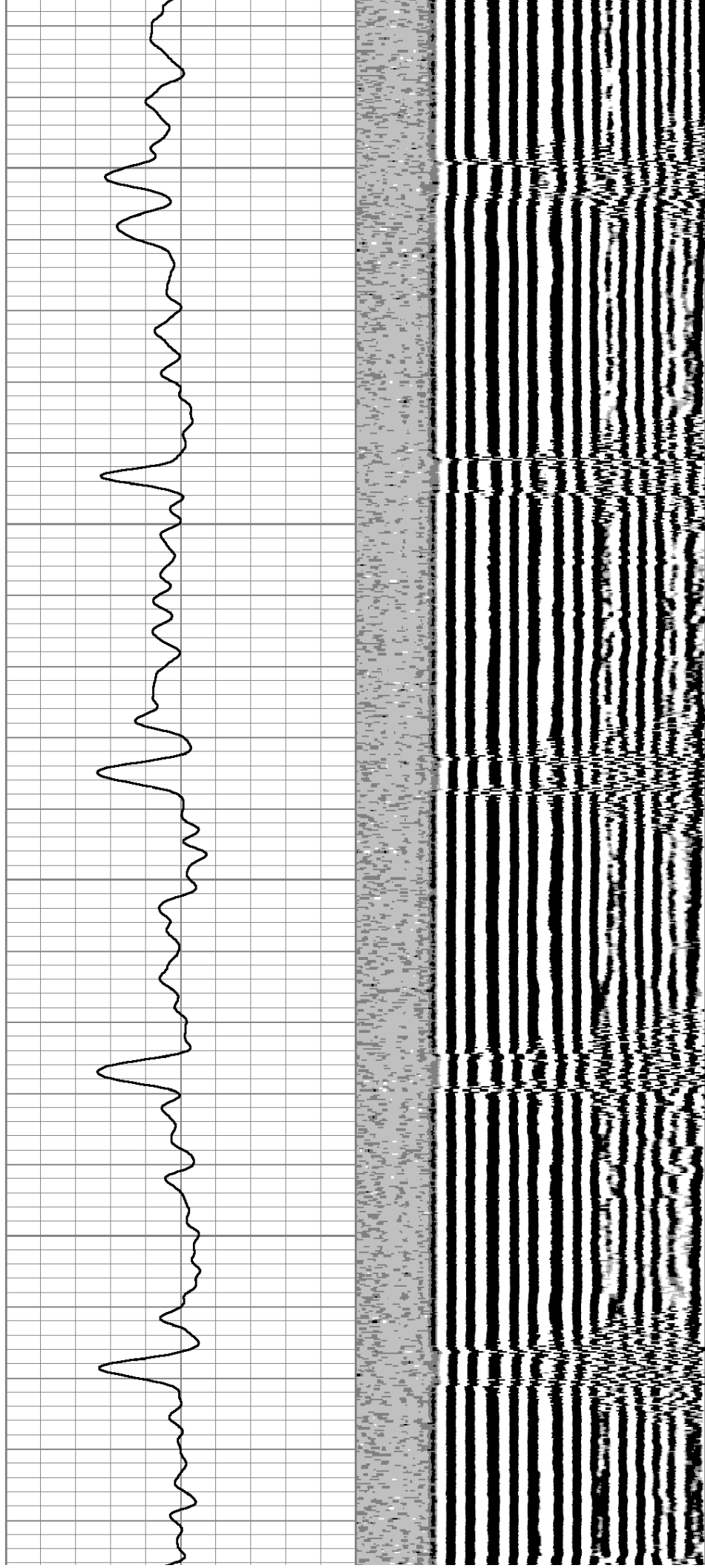


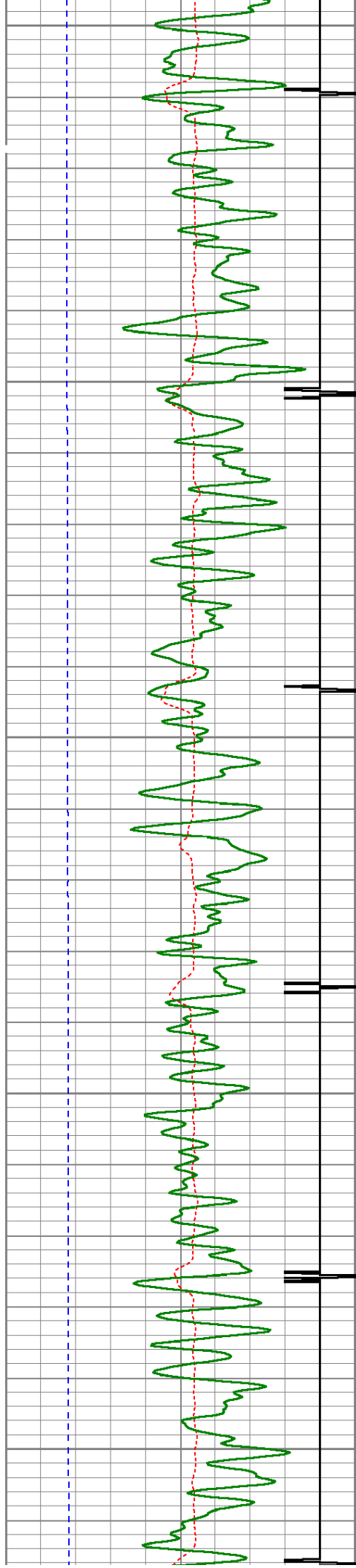
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4200

4250

4300





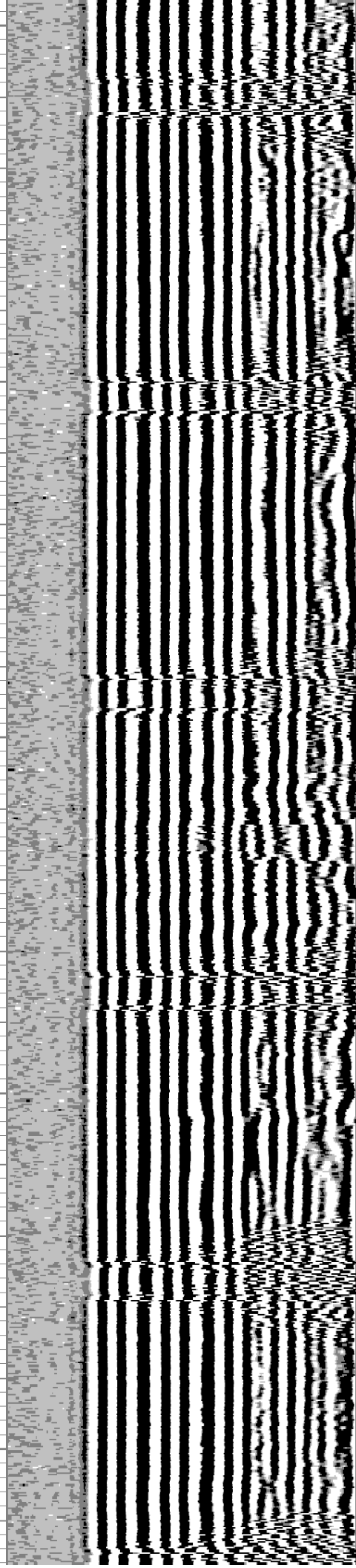
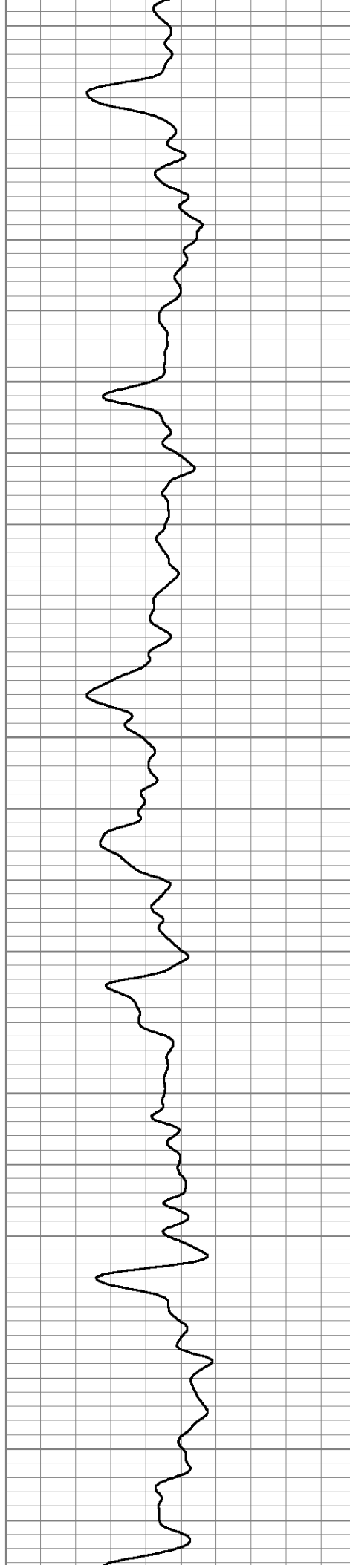
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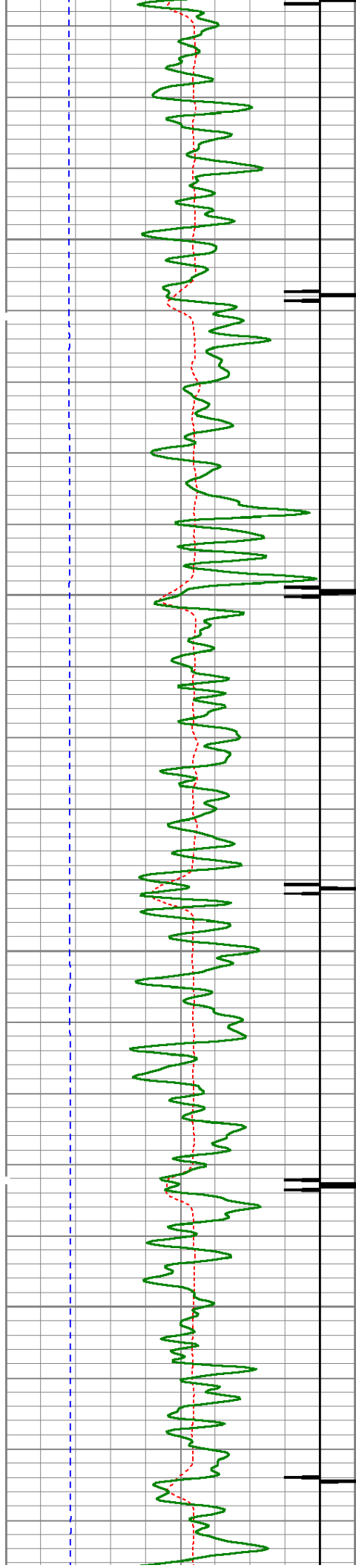
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4550



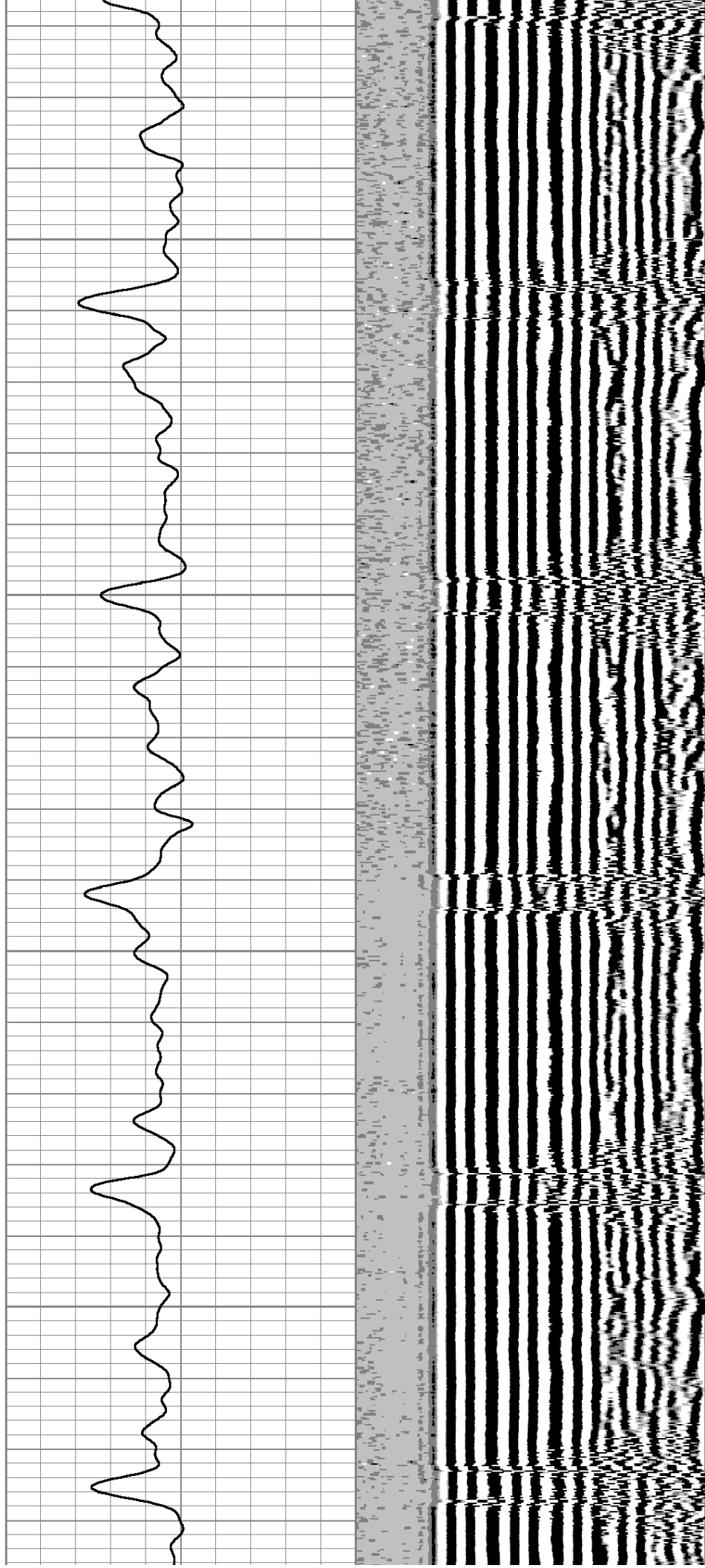


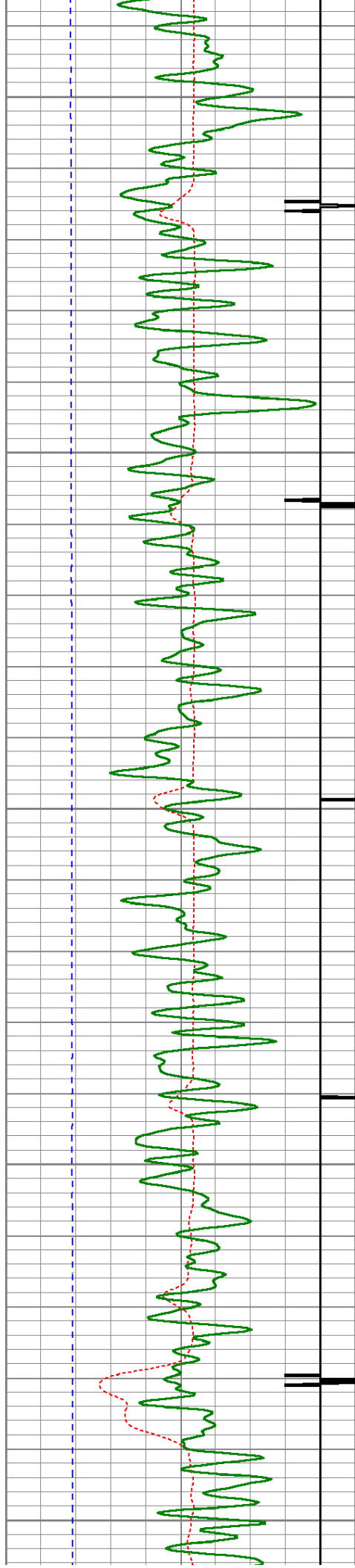
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4700

4750





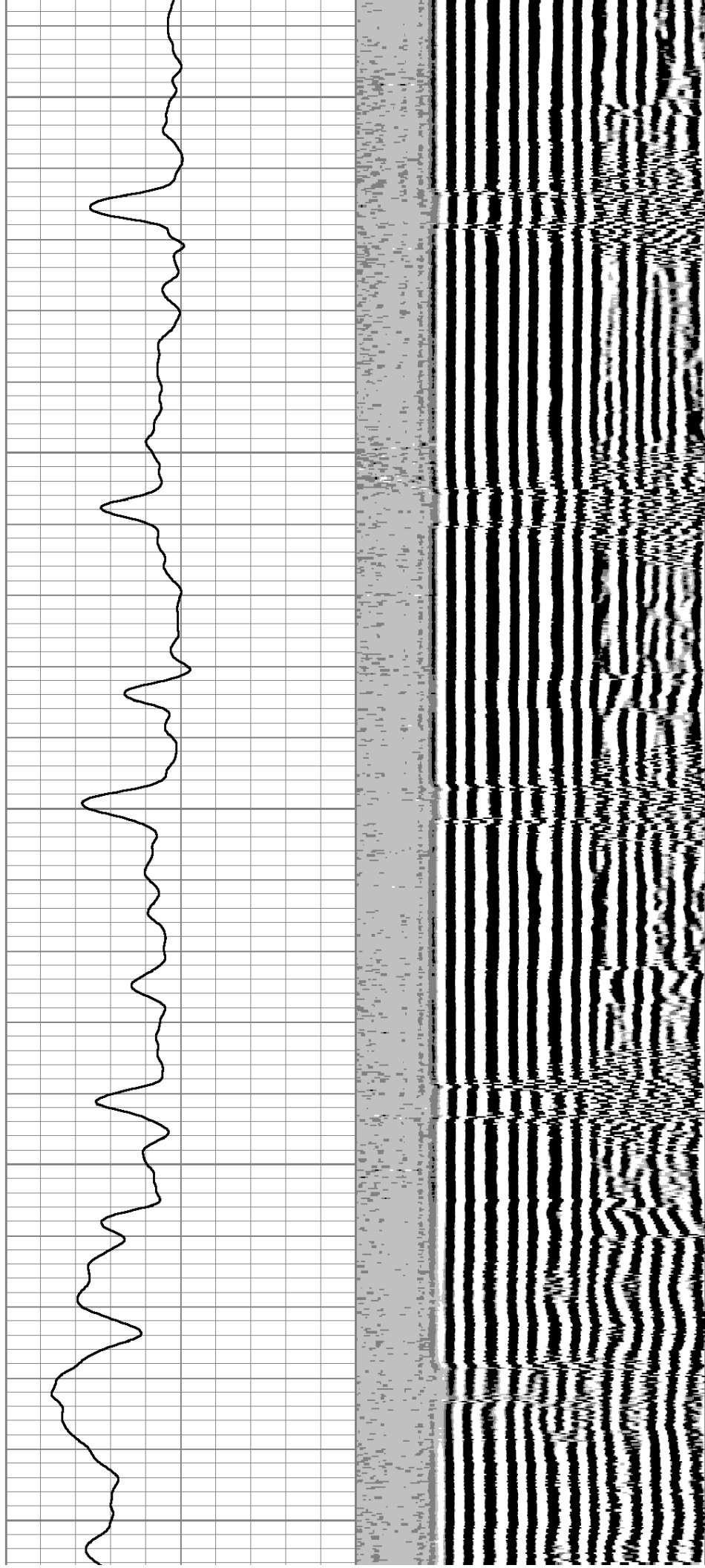
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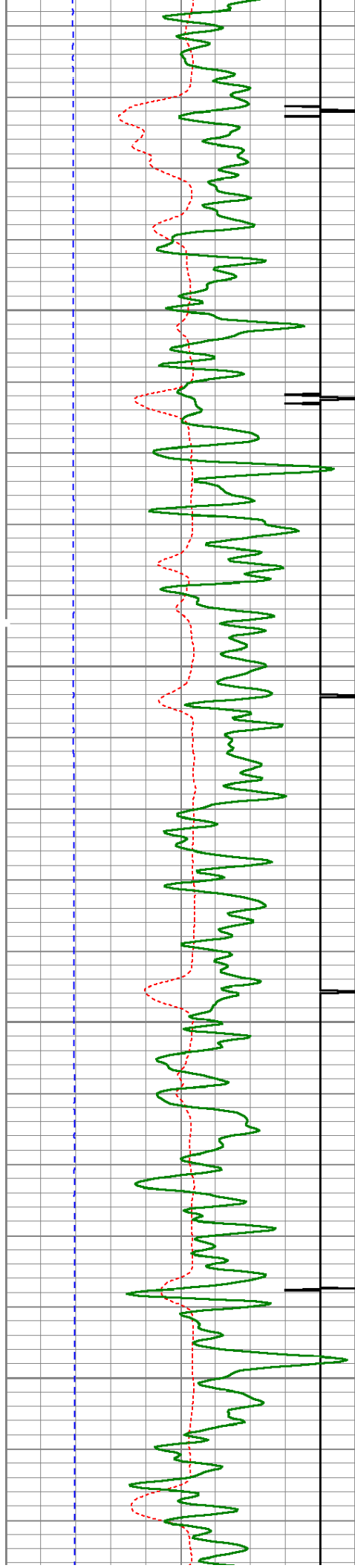
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4900

4950

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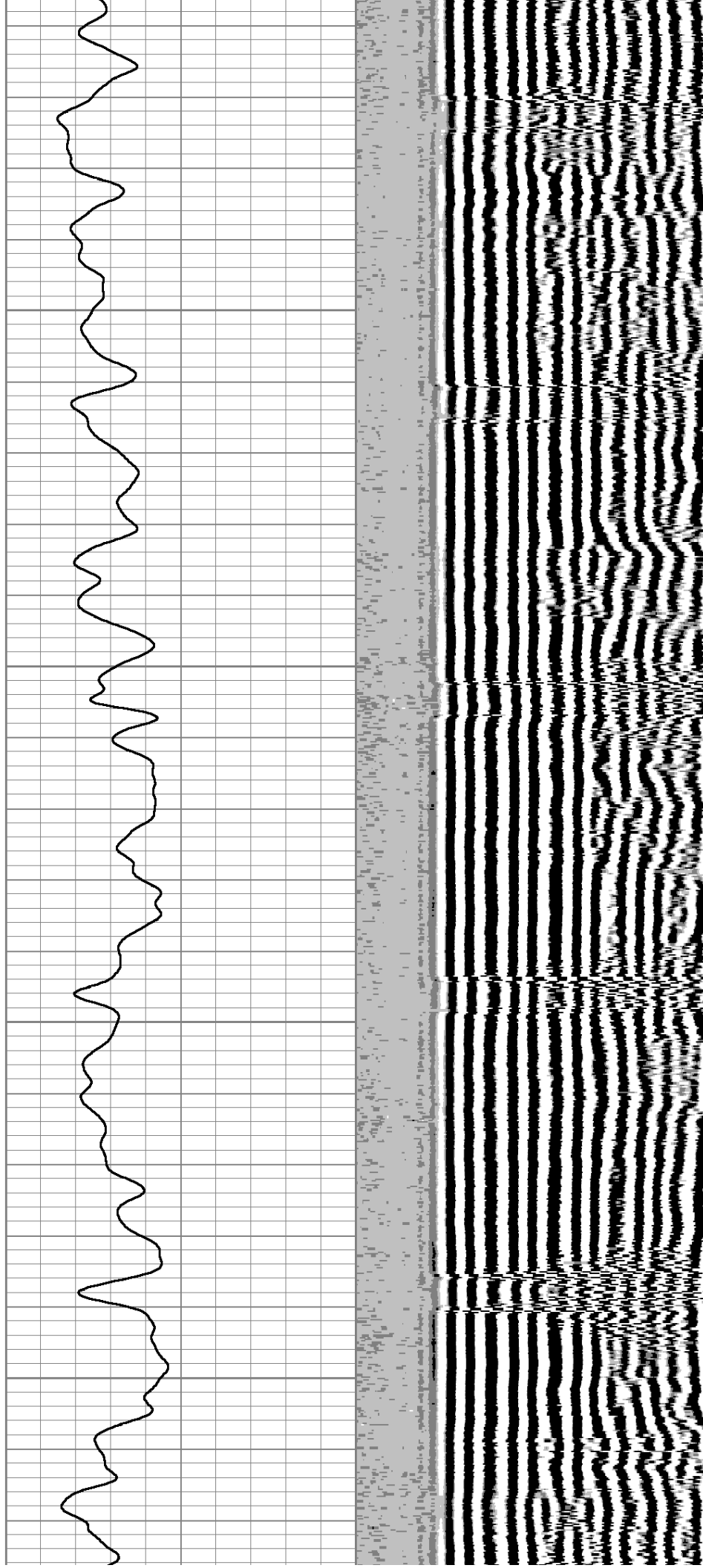


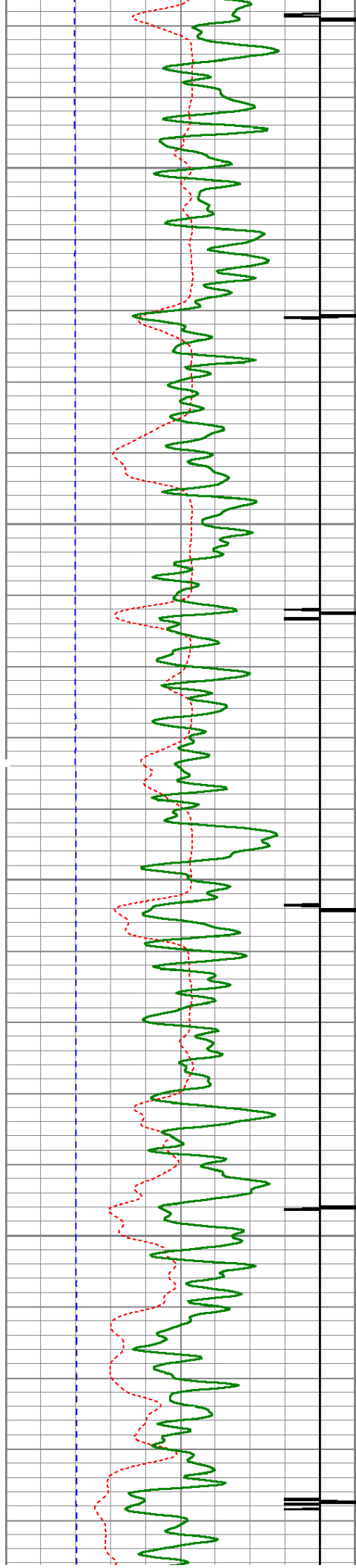
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5150

5200



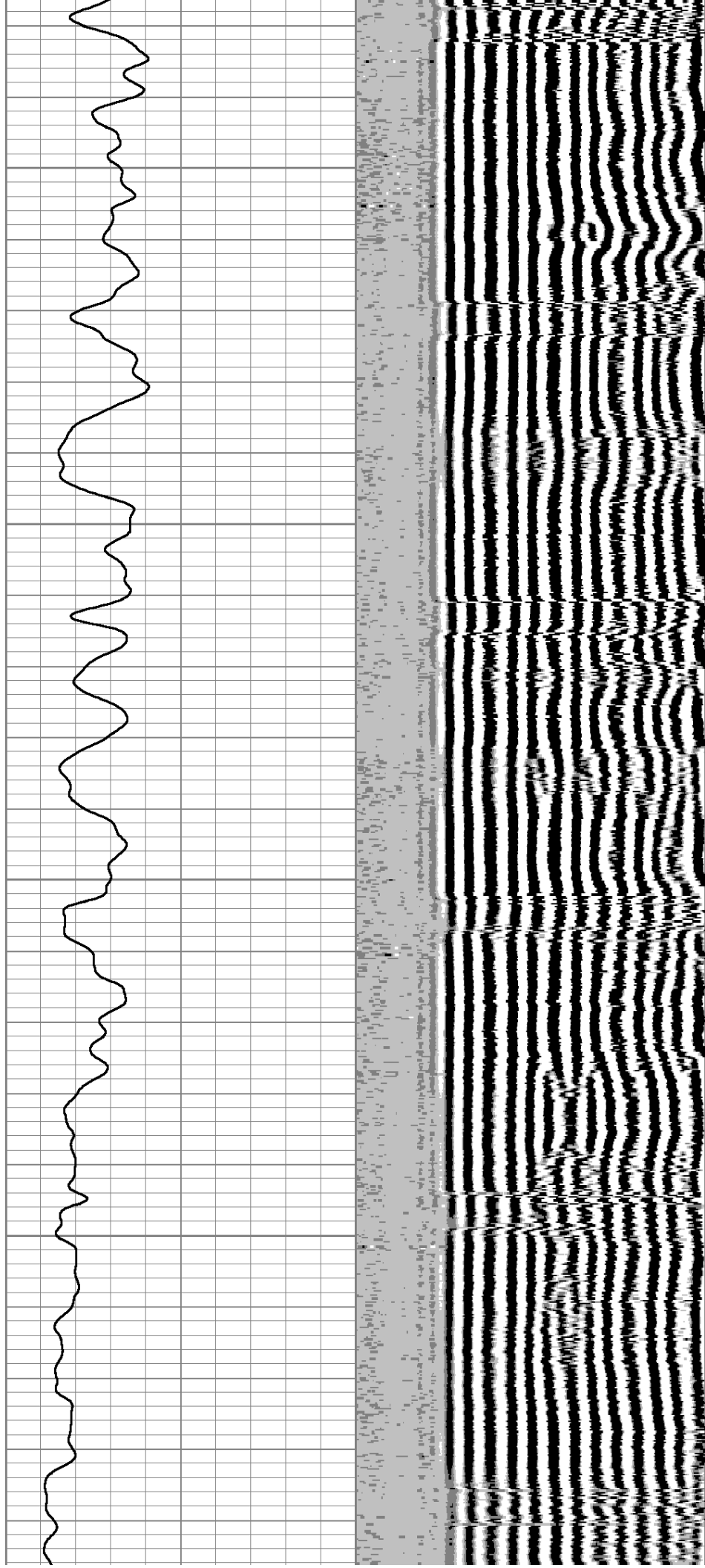


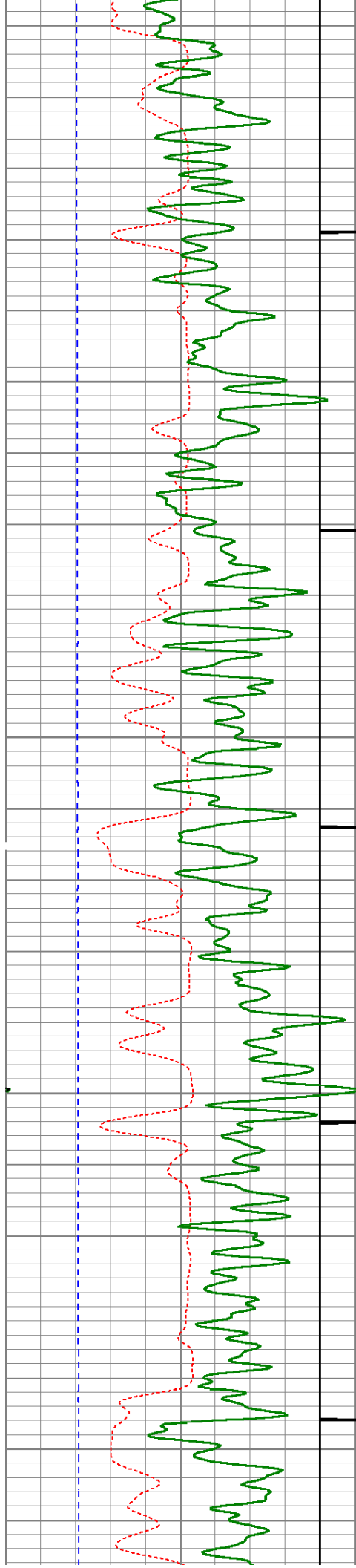
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5350

5400





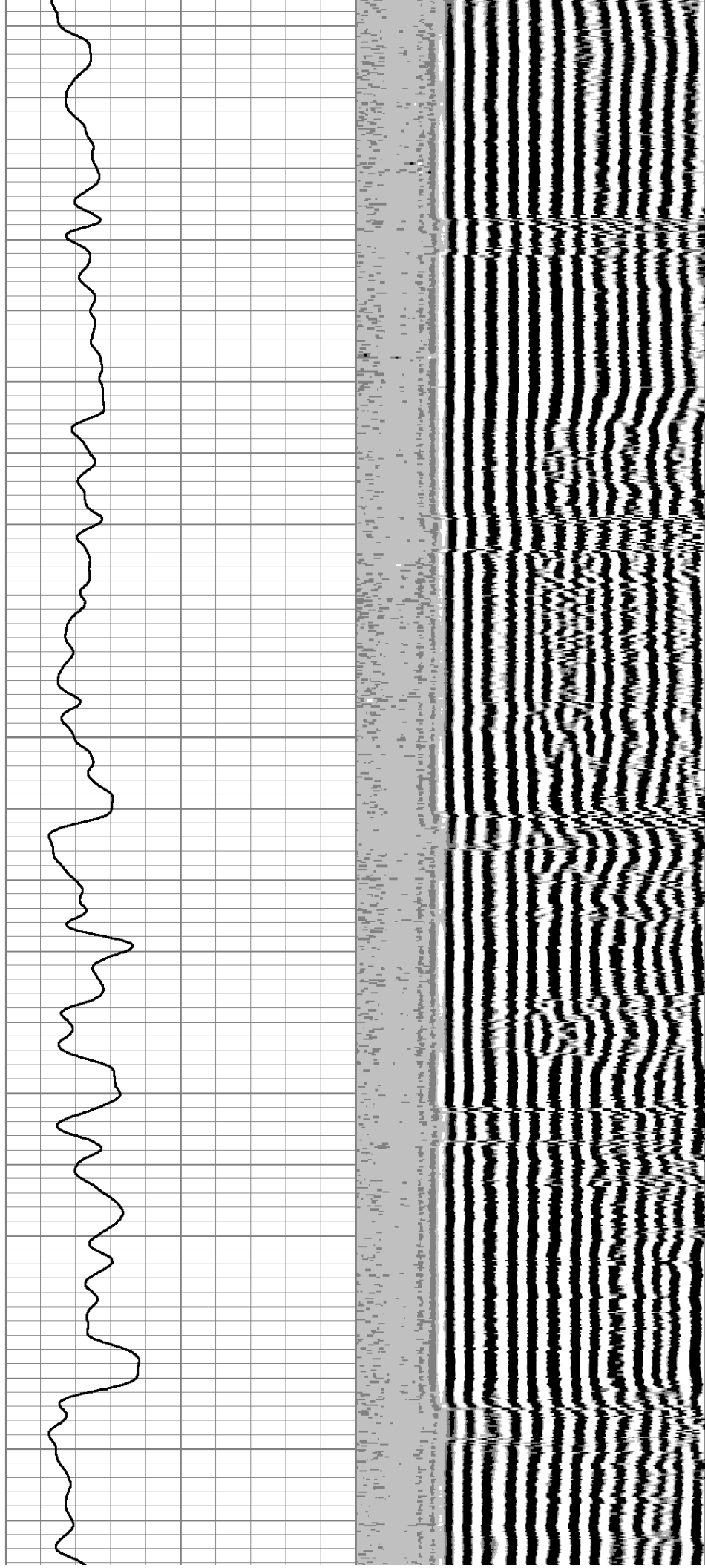
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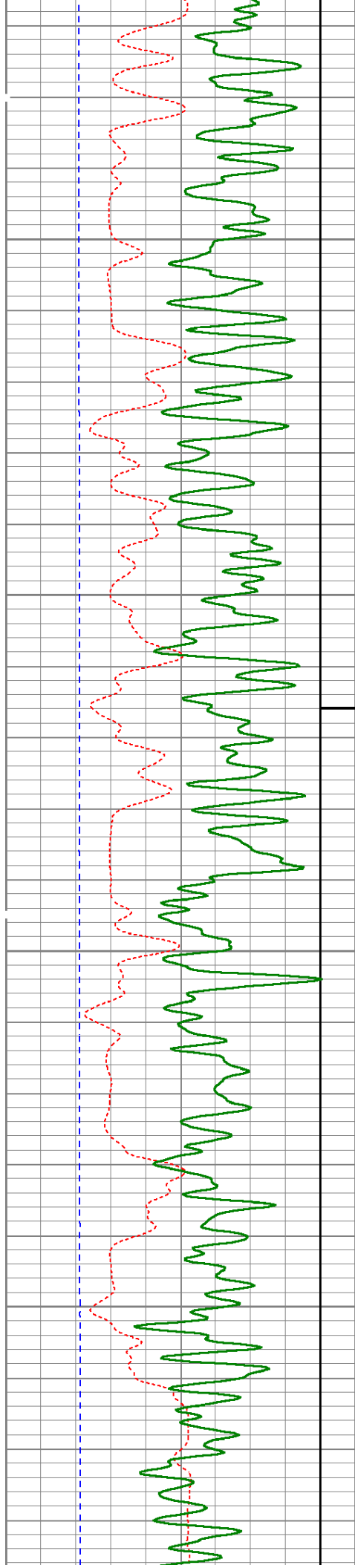
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5650



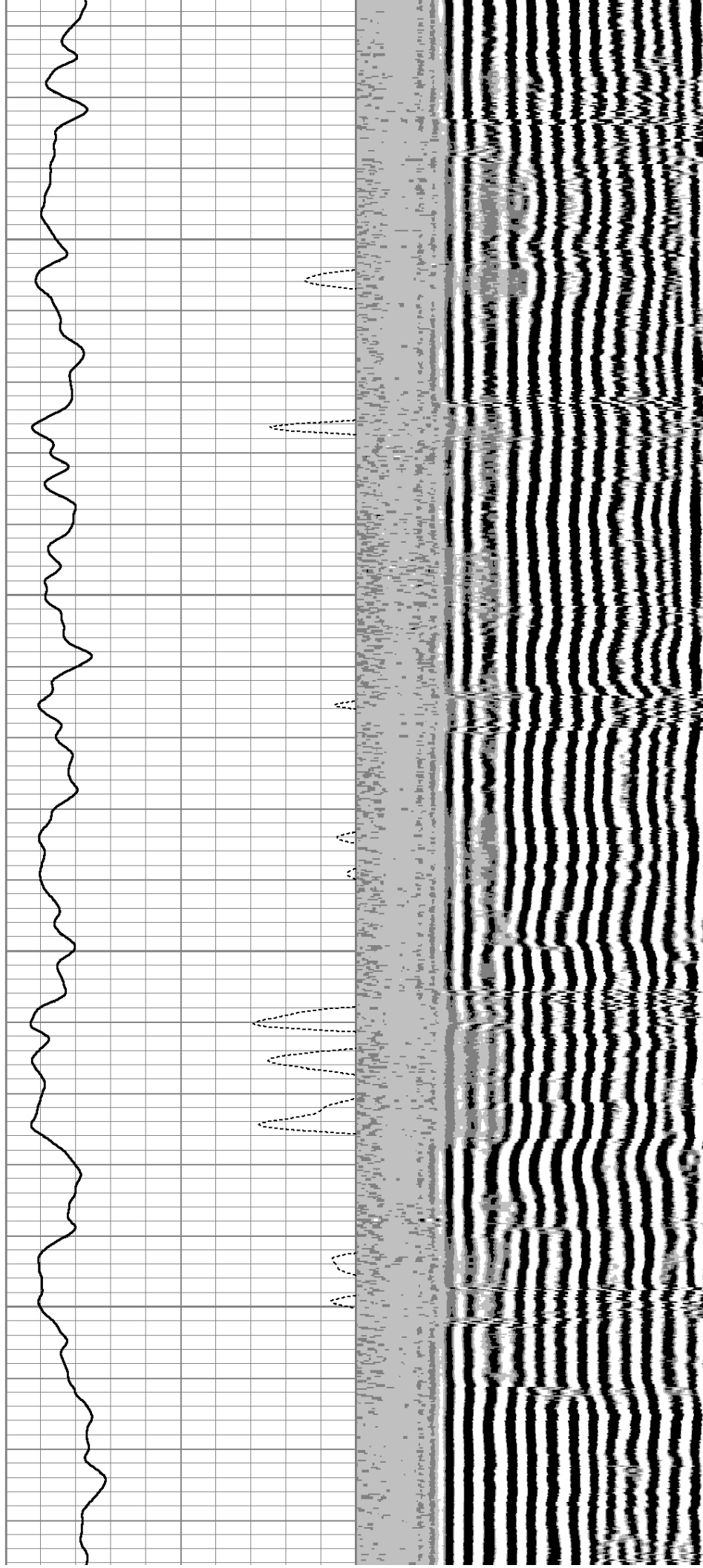


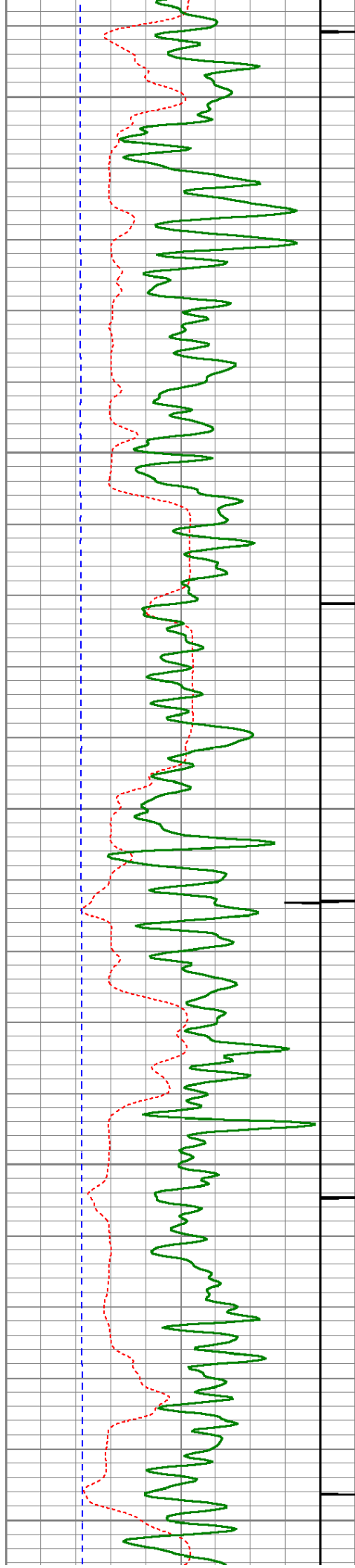
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5800

5850





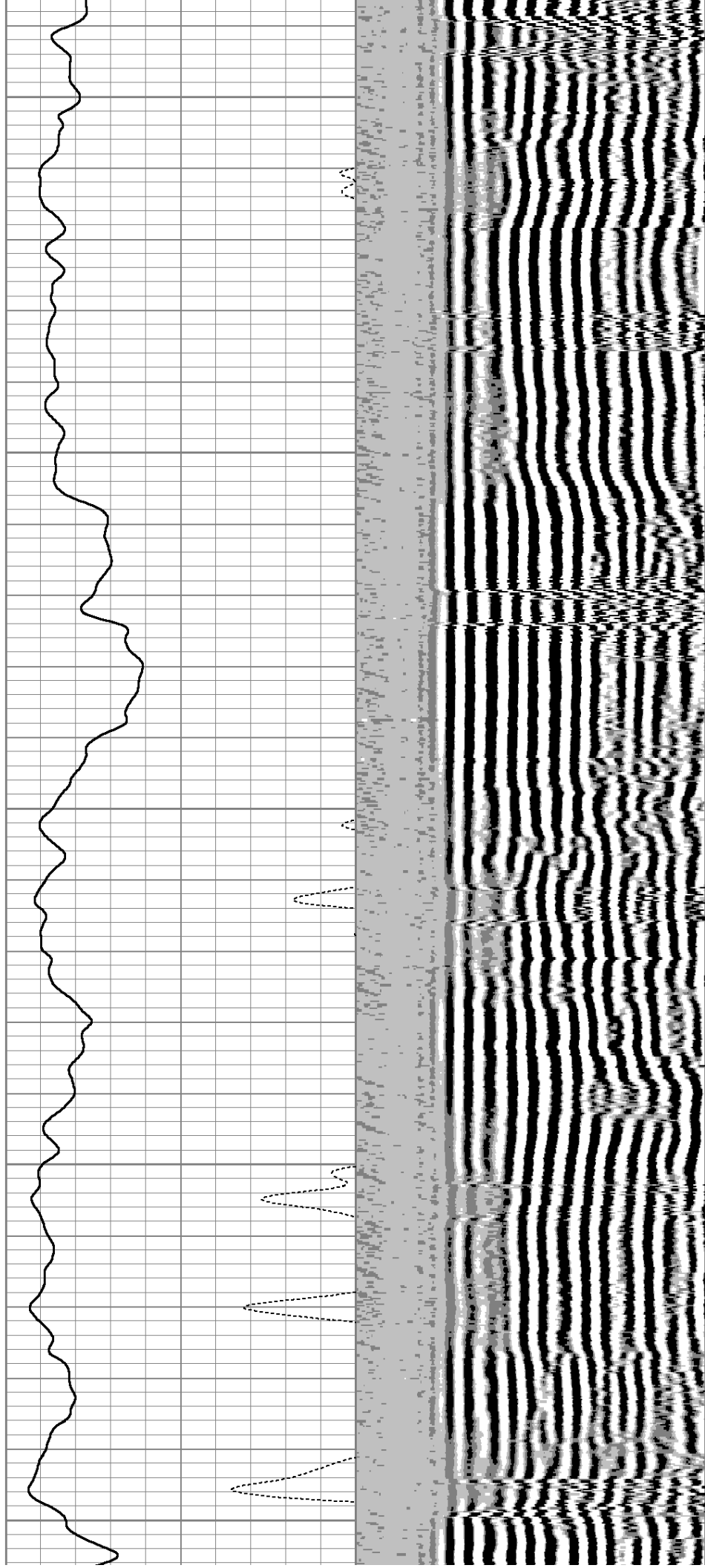
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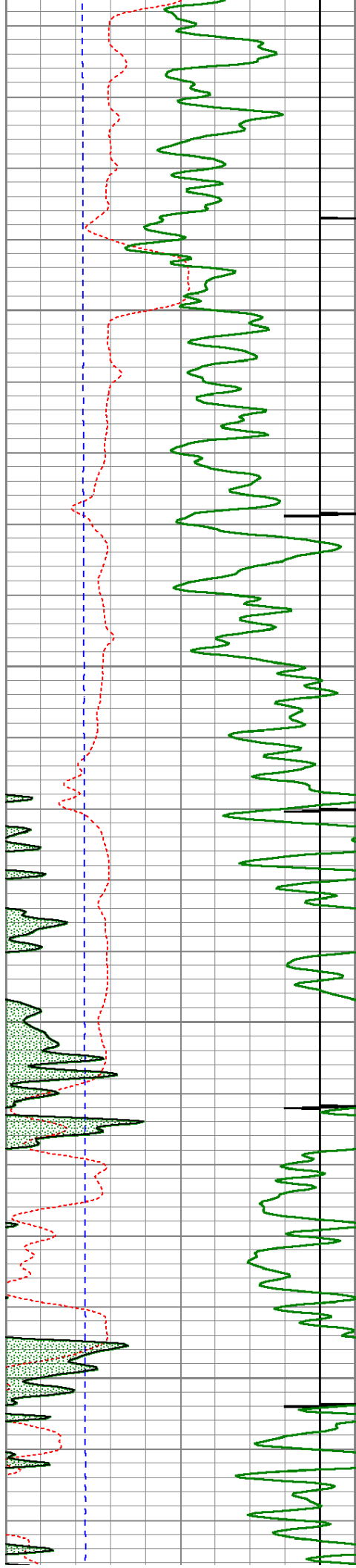
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6050

6100



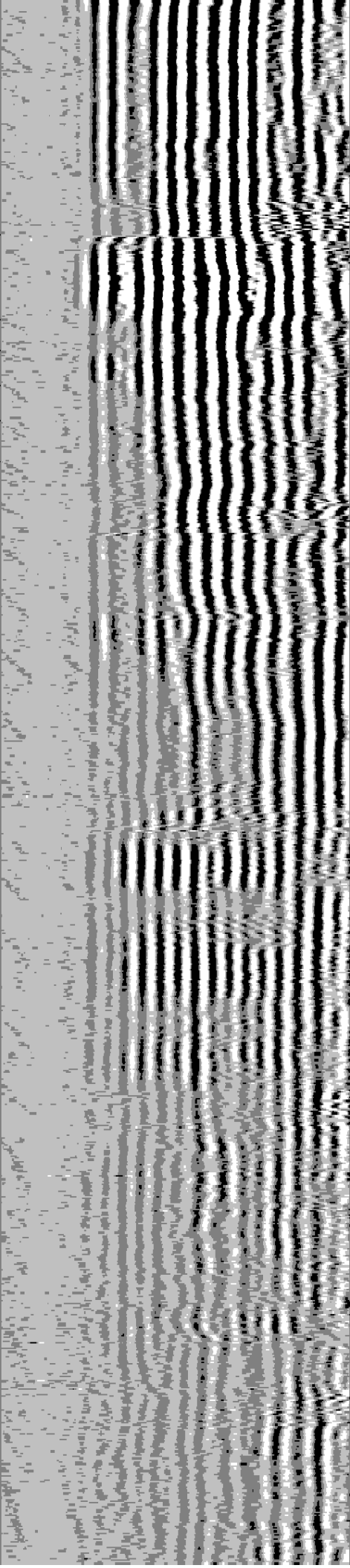
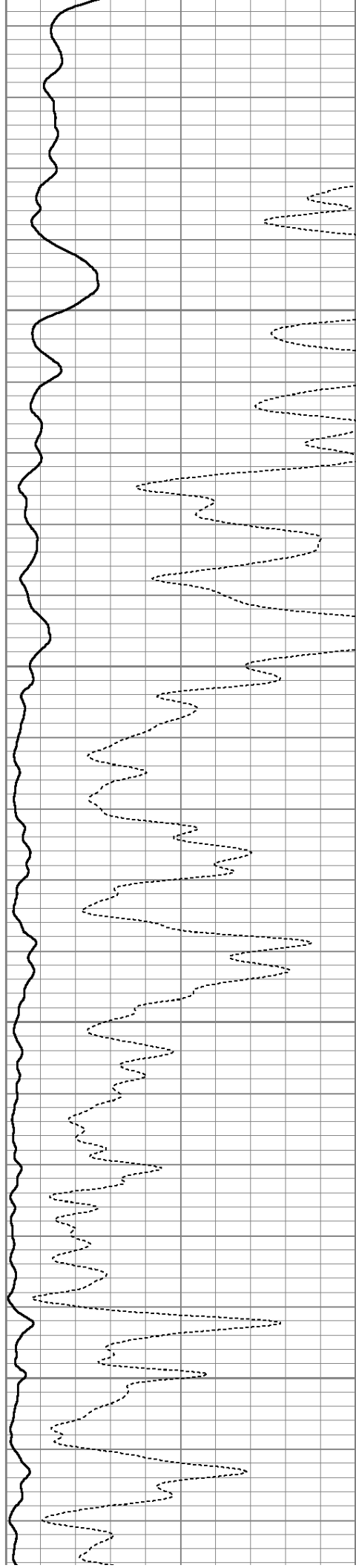


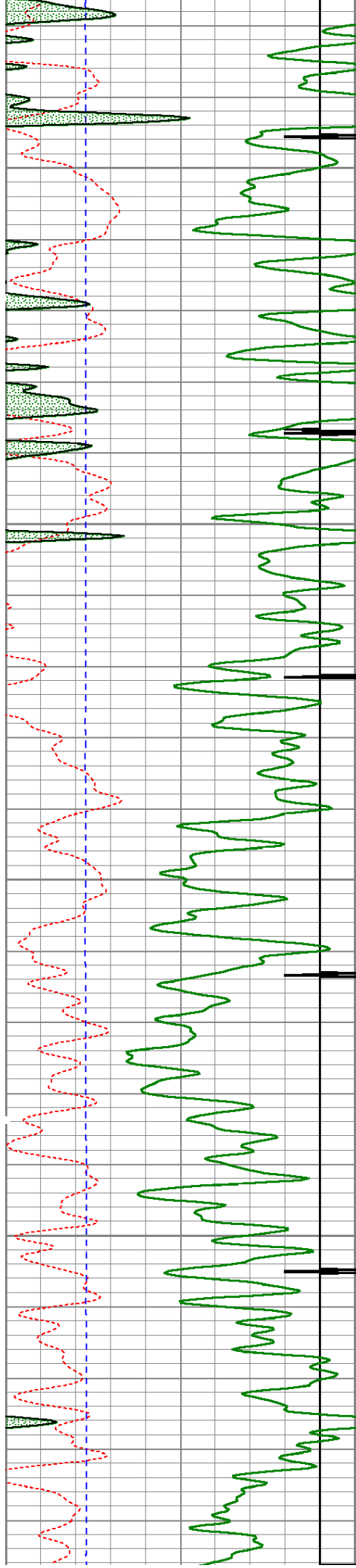
6150

6200

6250

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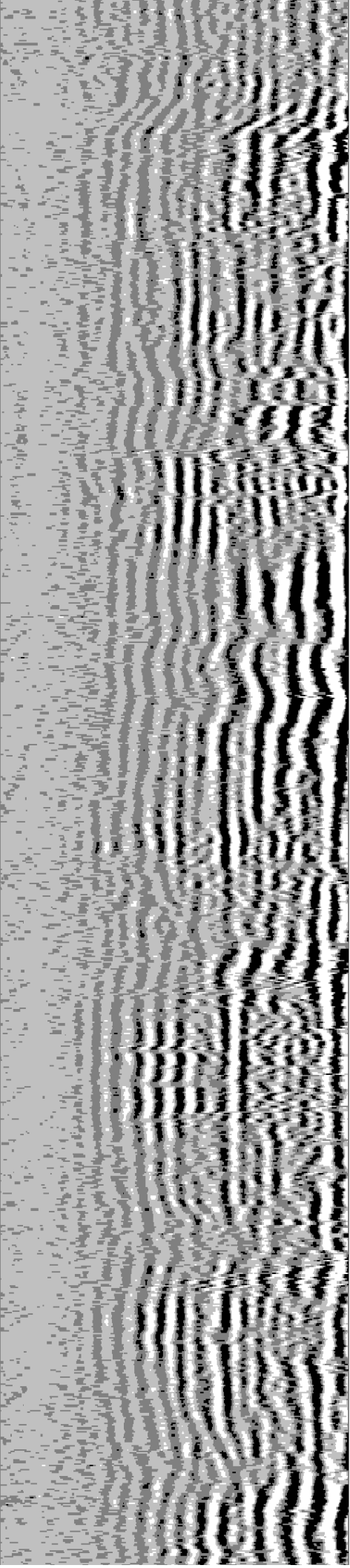
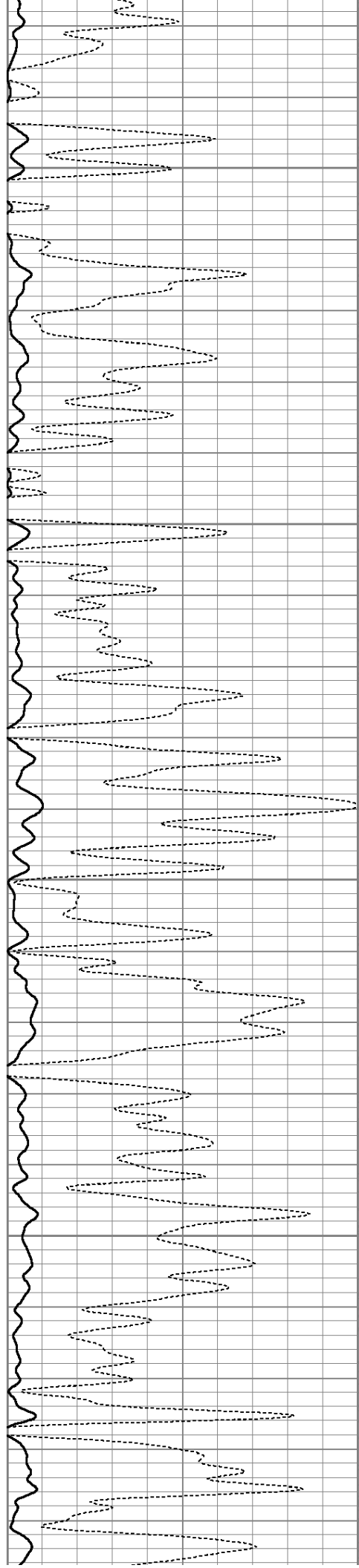


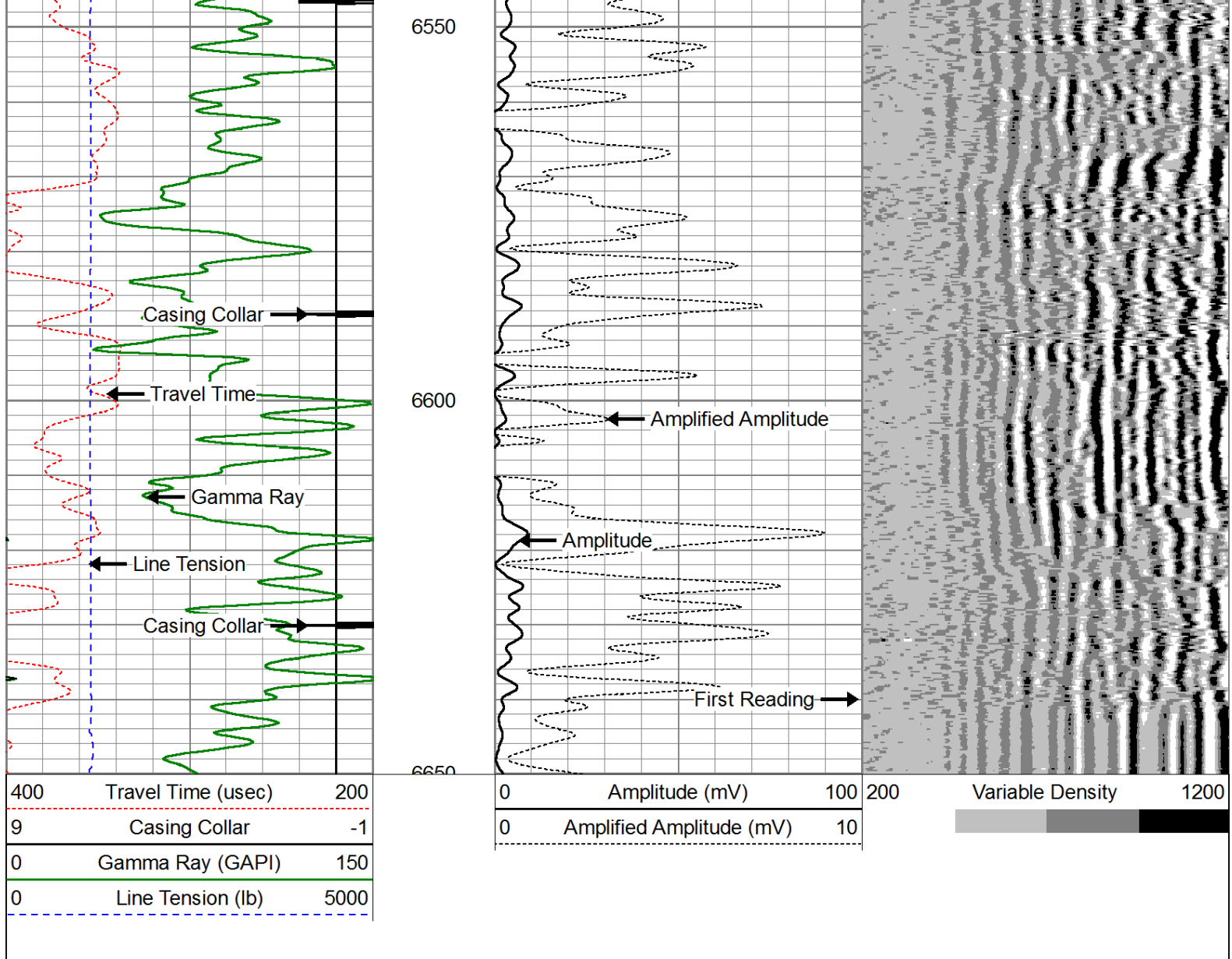
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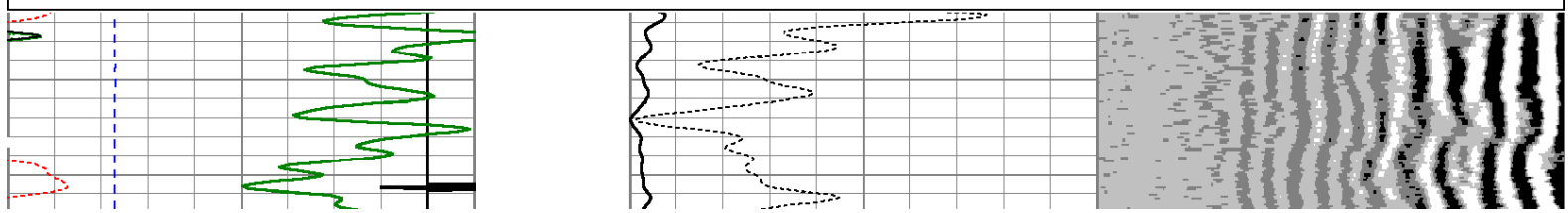
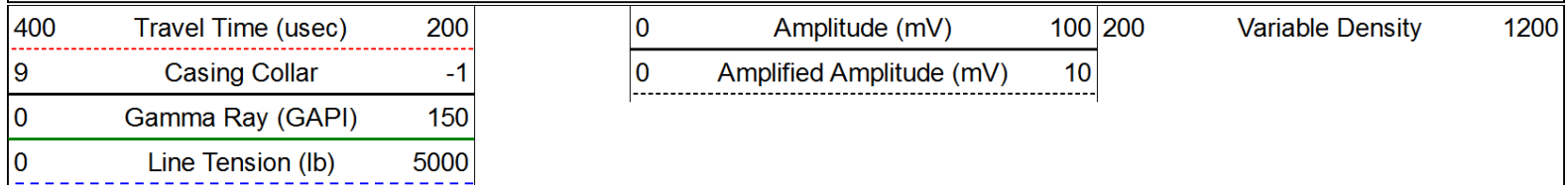
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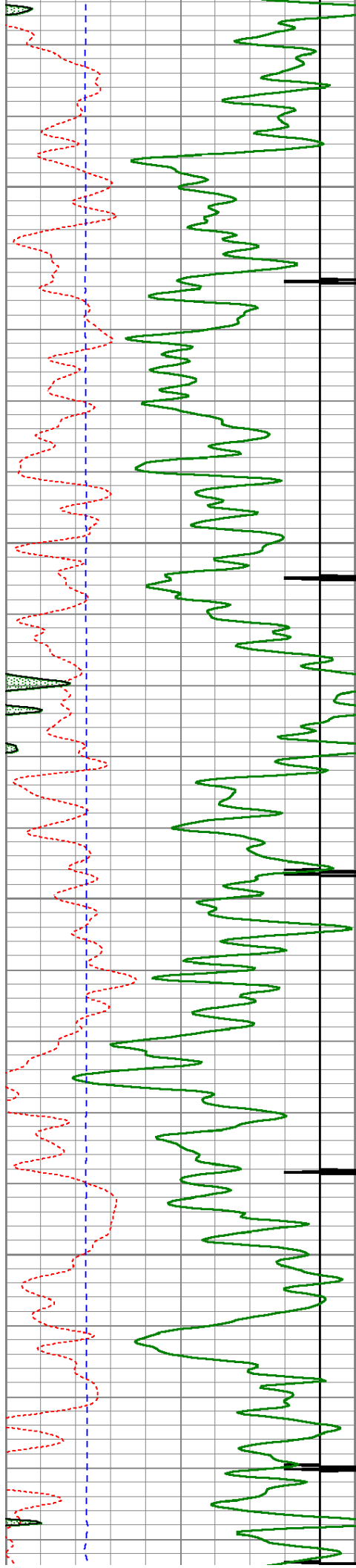




Repeat Pass (0 PSI)

Database File: bonanza_antelope24-21-20hc.db
 Dataset Pathname: pass5
 Presentation Format: cblprobe
 Dataset Creation: Sun May 11 11:31:27 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240



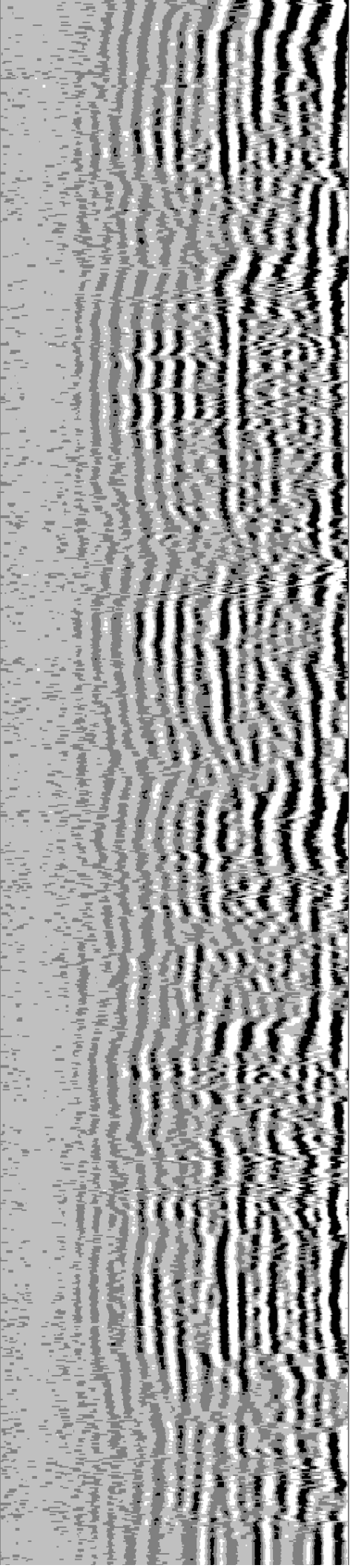
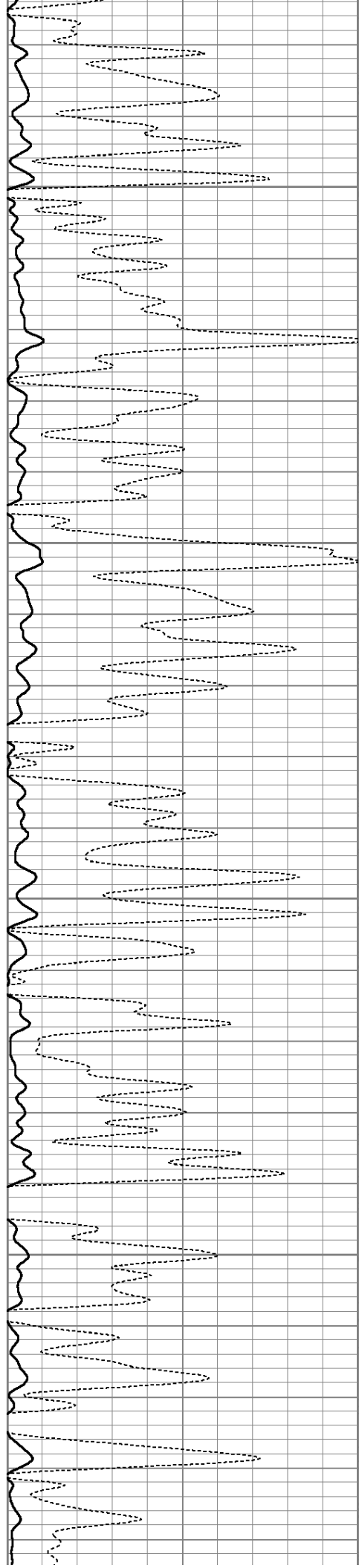


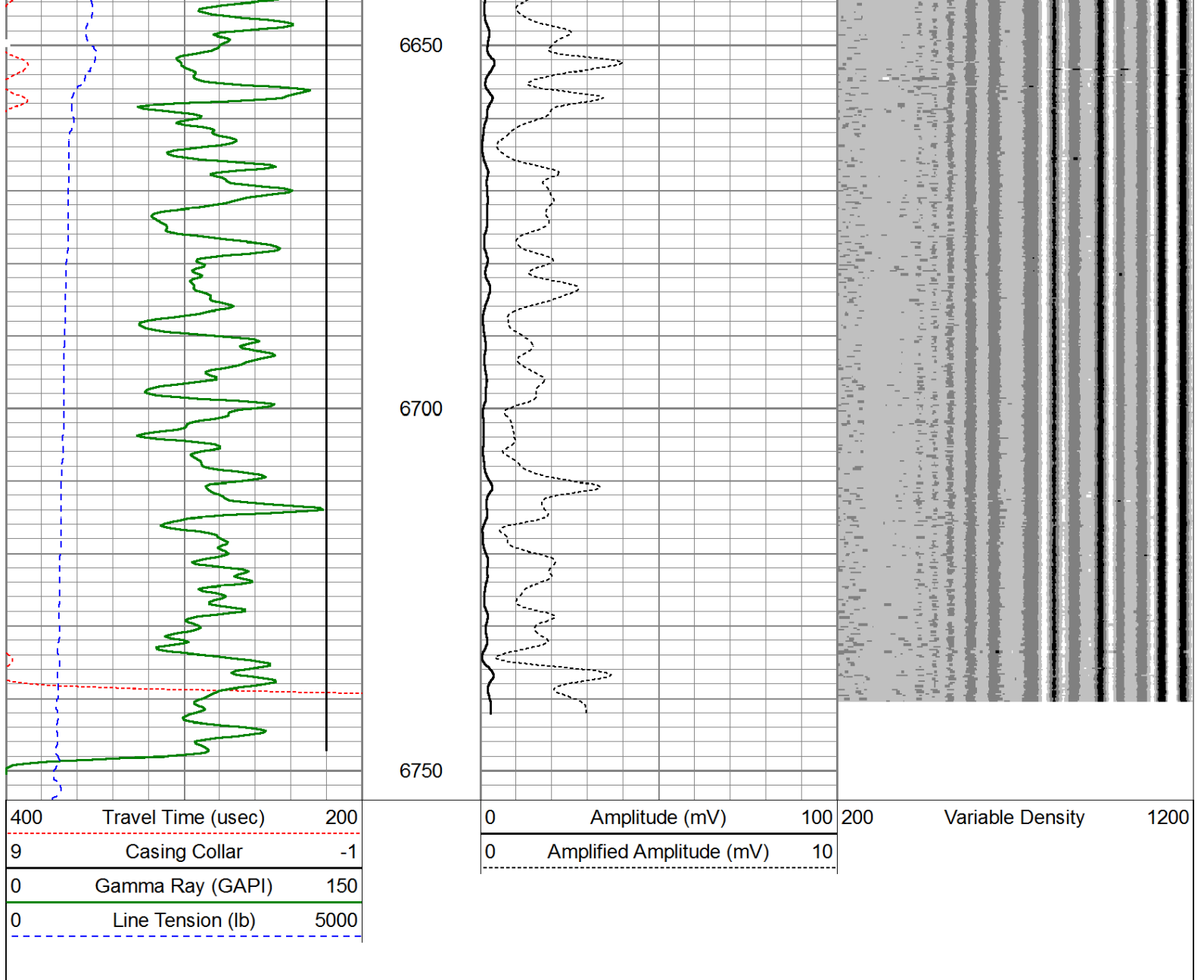
6450

6500

6550

6600





Log Variables

Database: C:\Warrior\Data\bonanza_antelope24-21-20hc.db
Dataset: field/well/run1/pass7

Top - Bottom

PPT usec 0	CASEWGHT lb/ft 26	MAXAMPL mV 62	MINAMPL mV 1	MINATTN db/ft 0.8	CASEOD in 7	PERFS 0	TDEPTH ft 0
BOTTEMP degF 100	BOREID in 8.5						

Calibration Report

Database File: bonanza_antelope24-21-20hc.db
Dataset Pathname: pass7
Dataset Creation: Sun May 11 11:36:59 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 110109-Dig
Tool Model: Probe275

Performed: Tue Feb 18 19:17:55 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading: 1.0 cps

Sensitivity: 0.8500 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 111107

Tool Model: Probe

Calibration Casing Diameter: 7.000 in

Calibration Depth: 1041.250 ft

Master Calibration, performed Sun May 11 11:06:55 2014:


	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.526	1.000	62.165	116.299	0.979
CAL	-0.005	0.759				
5'	0.014	0.423	1.000	62.165	149.317	-1.020
SUM						
S1	-0.162	0.534	0.000	100.000	143.787	8.262
S2	0.020	0.598	0.000	100.000	172.933	-3.411
S3	0.008	0.597	0.000	100.000	169.754	-1.401
S4	0.015	0.570	0.000	100.000	180.349	-2.730
S5	0.011	0.509	0.000	100.000	200.971	-2.198
S6	0.013	0.454	0.000	100.000	226.611	-2.949
S7	0.010	0.429	0.000	100.000	238.556	-2.417
S8	0.011	0.469	0.000	100.000	218.192	-2.402

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.005	0.759	1.000	0.000

Air Zero Calibration, performed Sun May 11 10:50:50 2014:

	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	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CHD	23.16		Titan	1.00	1.44	10.00

CENT	22.16		Cable_head			
			Probe275 2.75" Centralizer	2.88	2.75	20.00
WVF3FT	14.72		RBT-Probe (111107) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFCAL	14.72					
WVFS1	14.72					
WVFS2	14.72					
WVFS3	14.72					
WVFS4	14.72					
WVFS5	14.72					
WVFS6	14.72					
WVFS7	14.72					
WVFS8	14.72					
WVF5FT	13.72					
CENT	10.53		Probe275 2.75" Centralizer	2.88	2.75	20.00
GR	7.66					
CCL	6.75					
GR	5.42		GR-Probe275 (110109-Dig) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
CENT	2.88		Probe275 2.75" Centralizer	2.88	2.75	20.00

Dataset:
bonanza_antelope24-21-20hc.db: field/well/run1/pass7

Total Length:
23.16 ft

Total Weight:
217.00 lb

O.D.
2.75 in



Well	Antelope 24-21-20HC
Field	Wallsenburg
County	Weld
State	Colorado