



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

Company		Bonanza Creek Energy Operating Company LLC	
Well	Antelope O34-K31-20HNC		
Field	Wallseburg		
County	Weld	State	Colorado
Location:		API # : 05-123-38909-00	Other Services None
SEC 20 TWP 5N RGE 62W		Elevation	
Permanent Datum	Ground Level	Elevation	4665'
Log Measured From	Kelly Bushing 17'	K.B. 4682'	D.F. 4681'
Drilling Measured From	Kelly Bushing	G.L. 4665'	
Date	11-May-2014		
Run Number	One		
Depth Driller	6932'		
Depth Logger	6800'		
Bottom Logged Interval	6800'		
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	Steve James		
Borehole Record			
Run Number	Bit	From	To
		Size	Weight
			From
			To
Casing Record	Size	Wgt/Ft	Top
Surface String	9 5/8"	36#	Surface
Prot. String			Bottom
Production String	7"	26#	Surface
Liner	4.5"	11 6#	6932'
Short Joint			11092'

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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

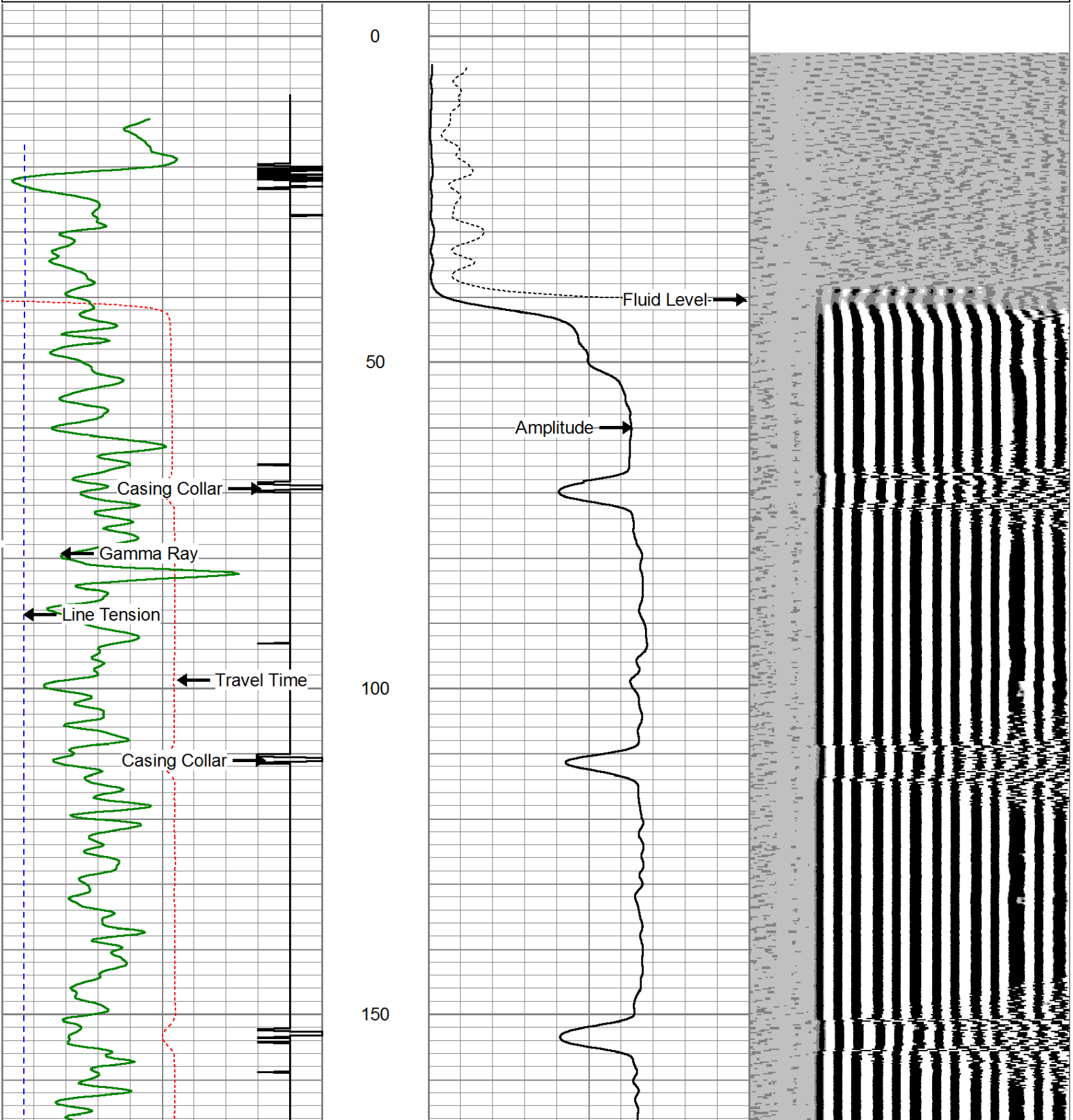
(303)659-4609

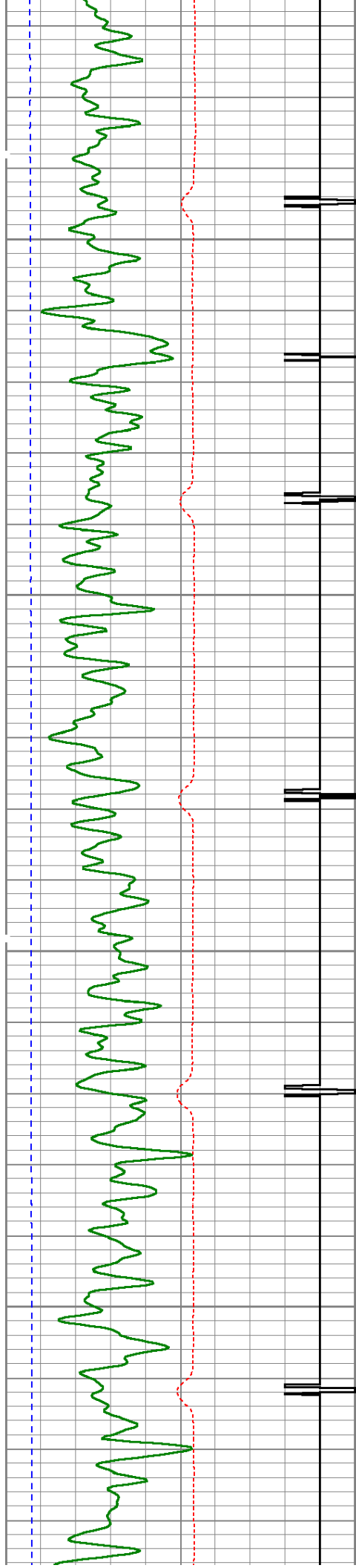


Main Pass (0 PSI)

Database File: bonanza_antelope_o34-k31-20hnc.db
Dataset Pathname: pass6
Presentation Format: cblprobe
Dataset Creation: Sun May 11 13:04:59 2014 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

400	Travel Time (usec)	200	0	Amplitude (mV)	100	200	Variable Density	1200
9	Casing Collar	-1	0	Amplified Amplitude (mV)	10			
0	Gamma Ray (GAPI)	150						
0	Line Tension (lb)	5000						



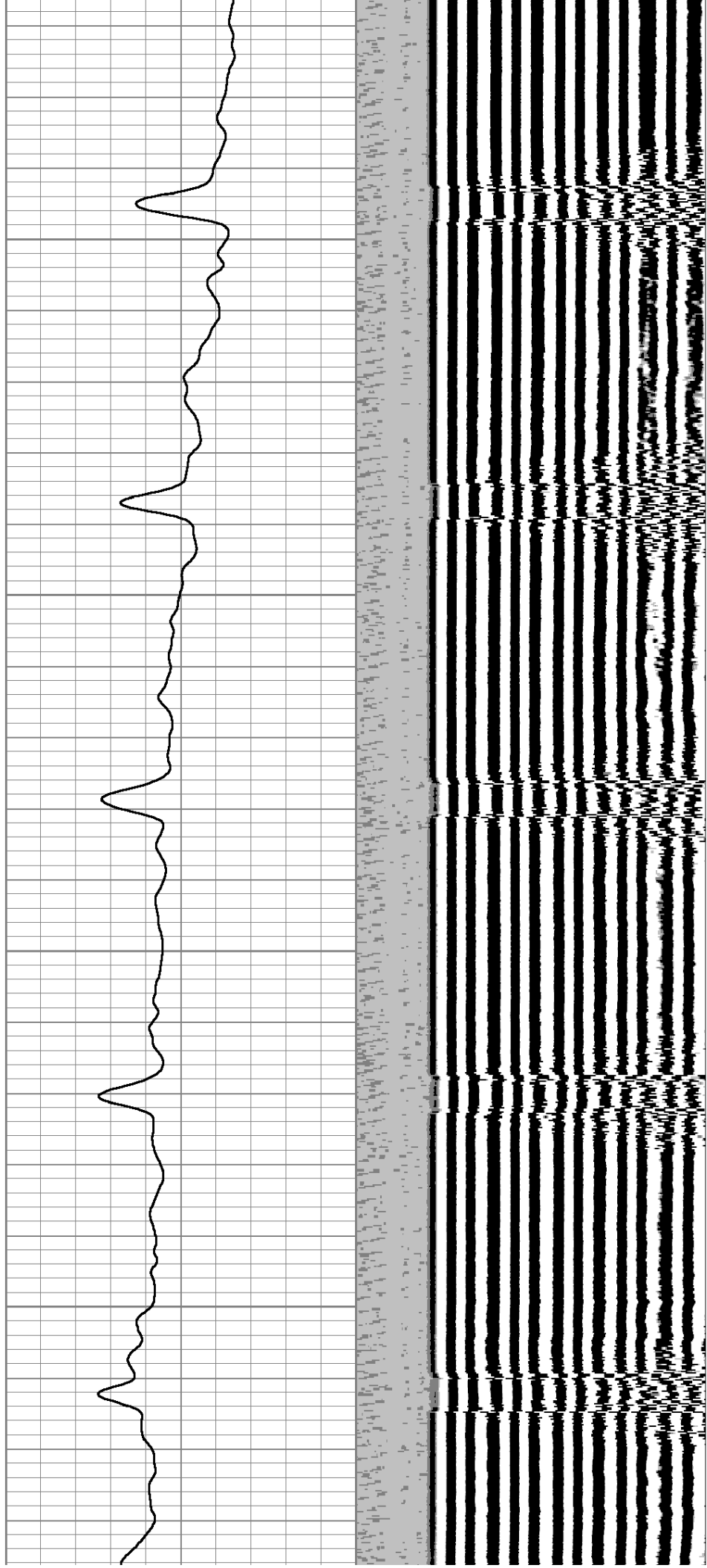


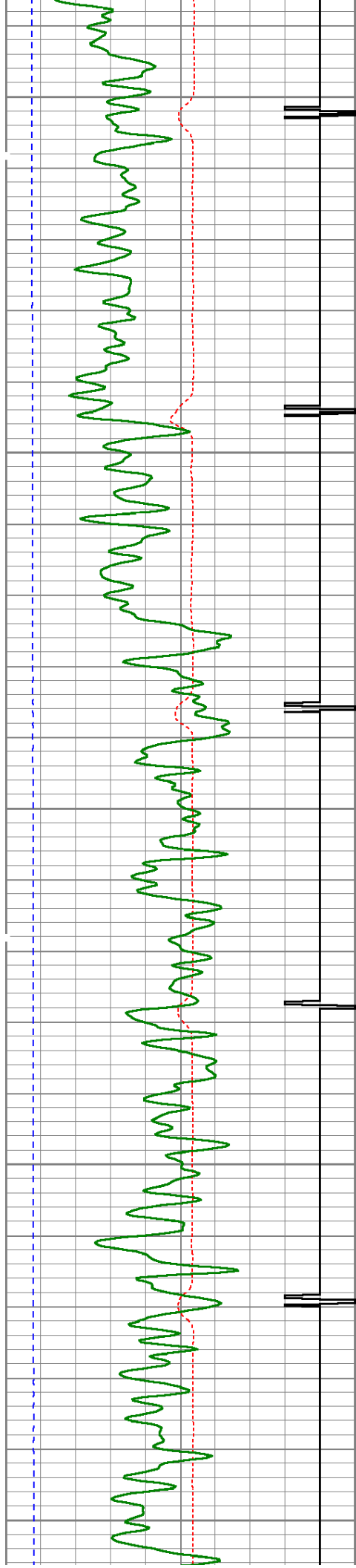
200

250

300

350





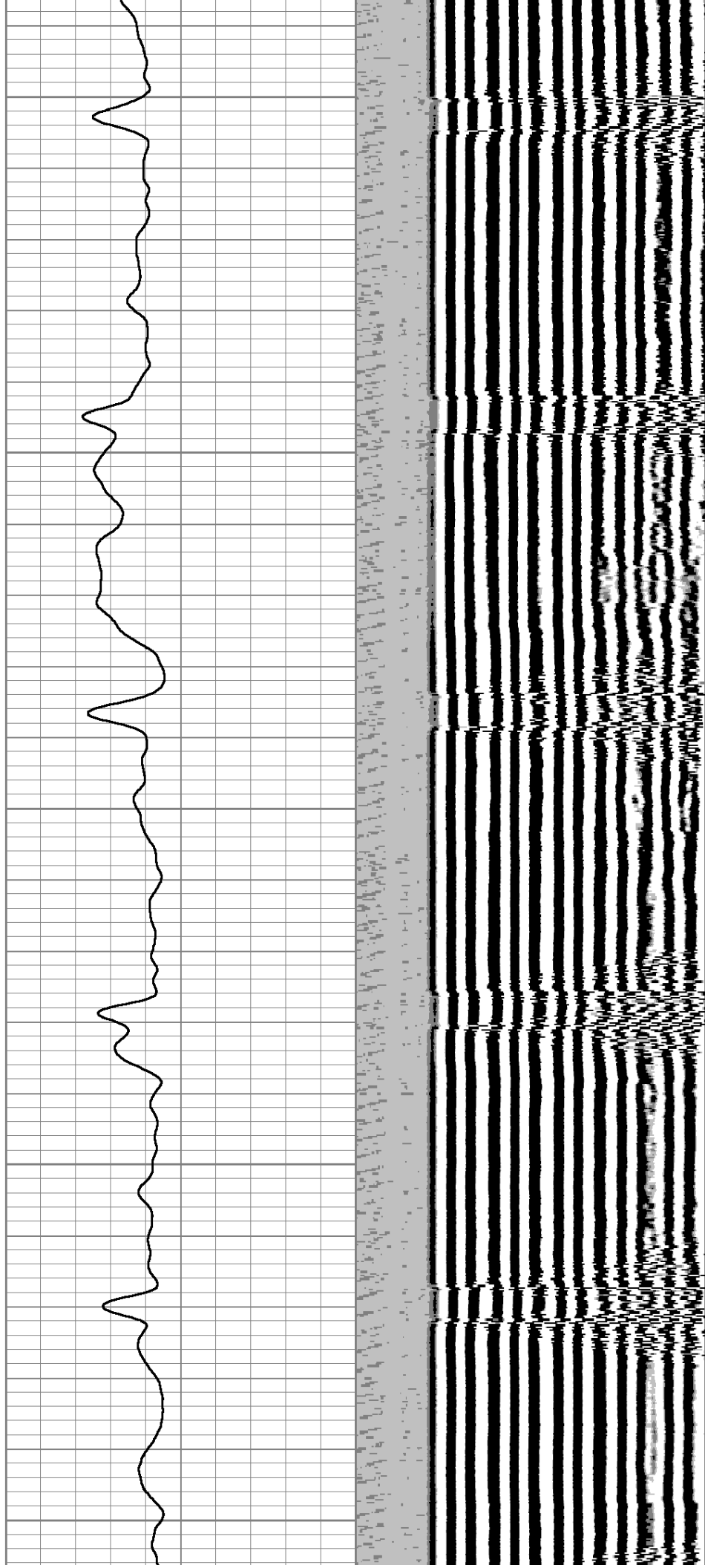
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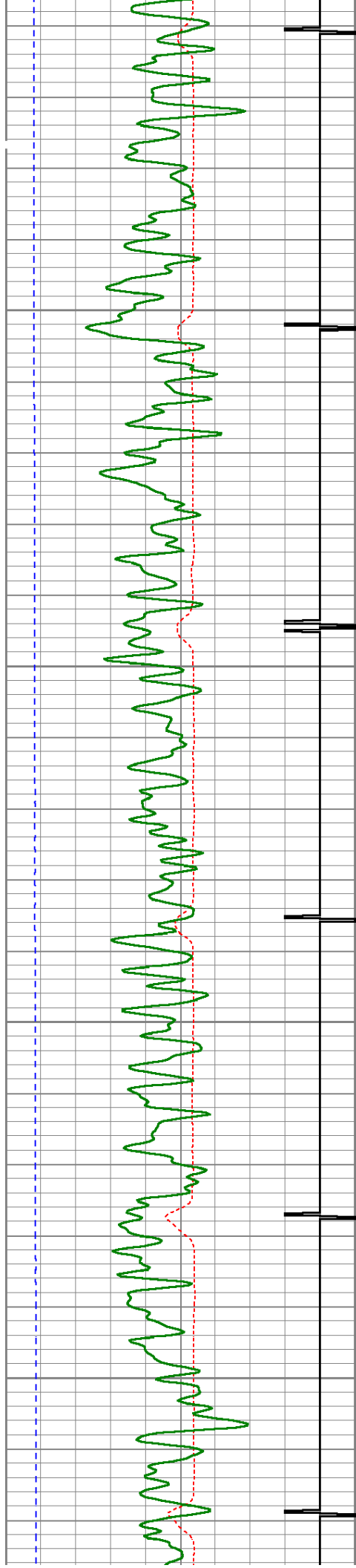
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500

550

600



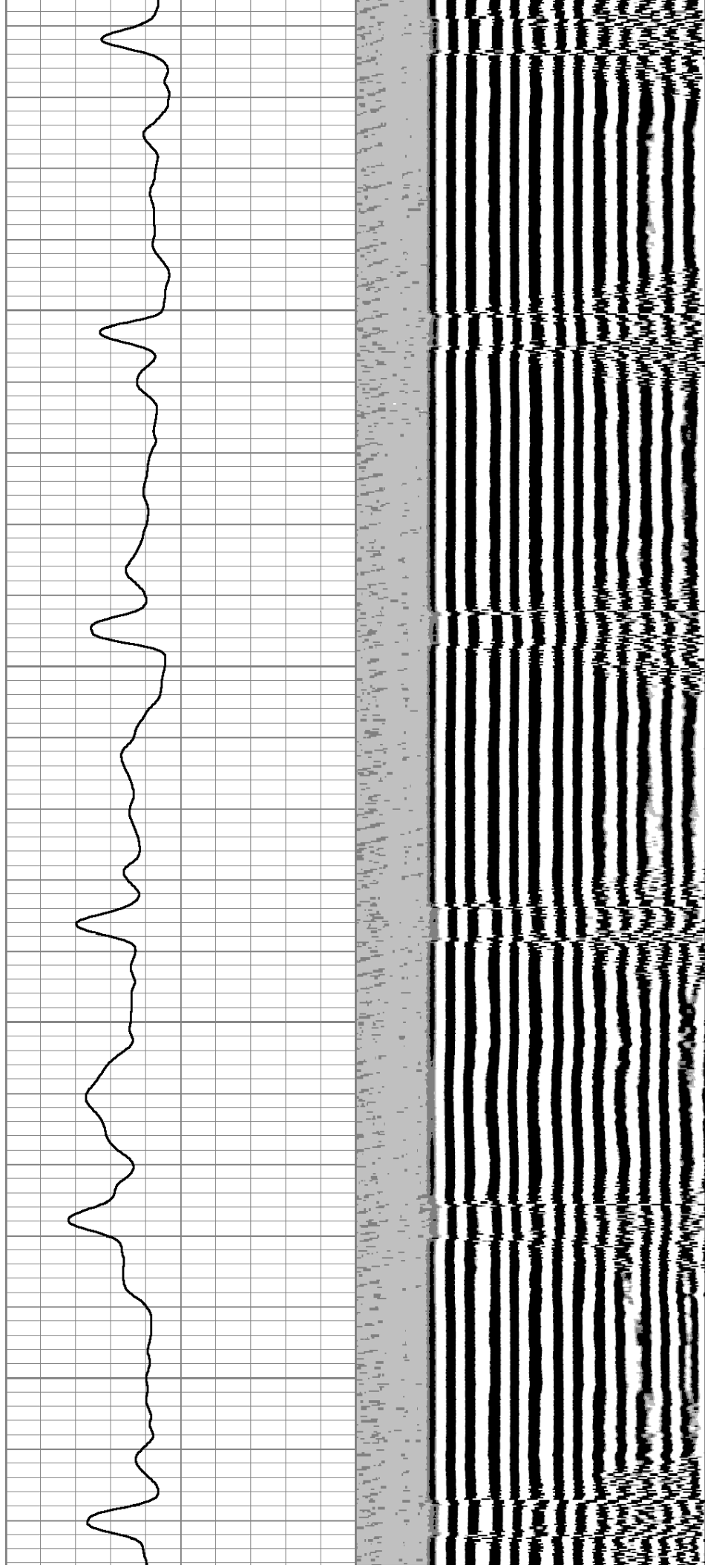


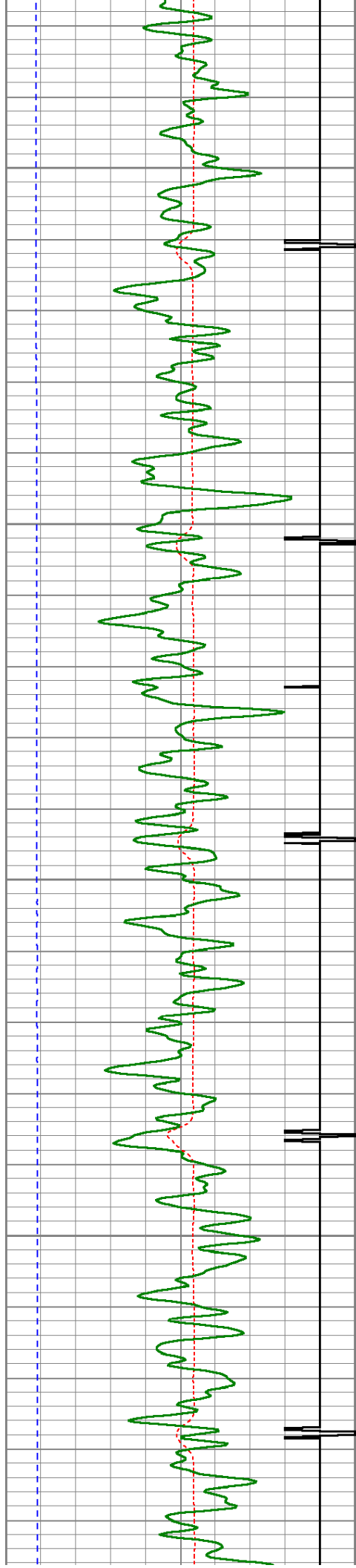
650

700

750

800



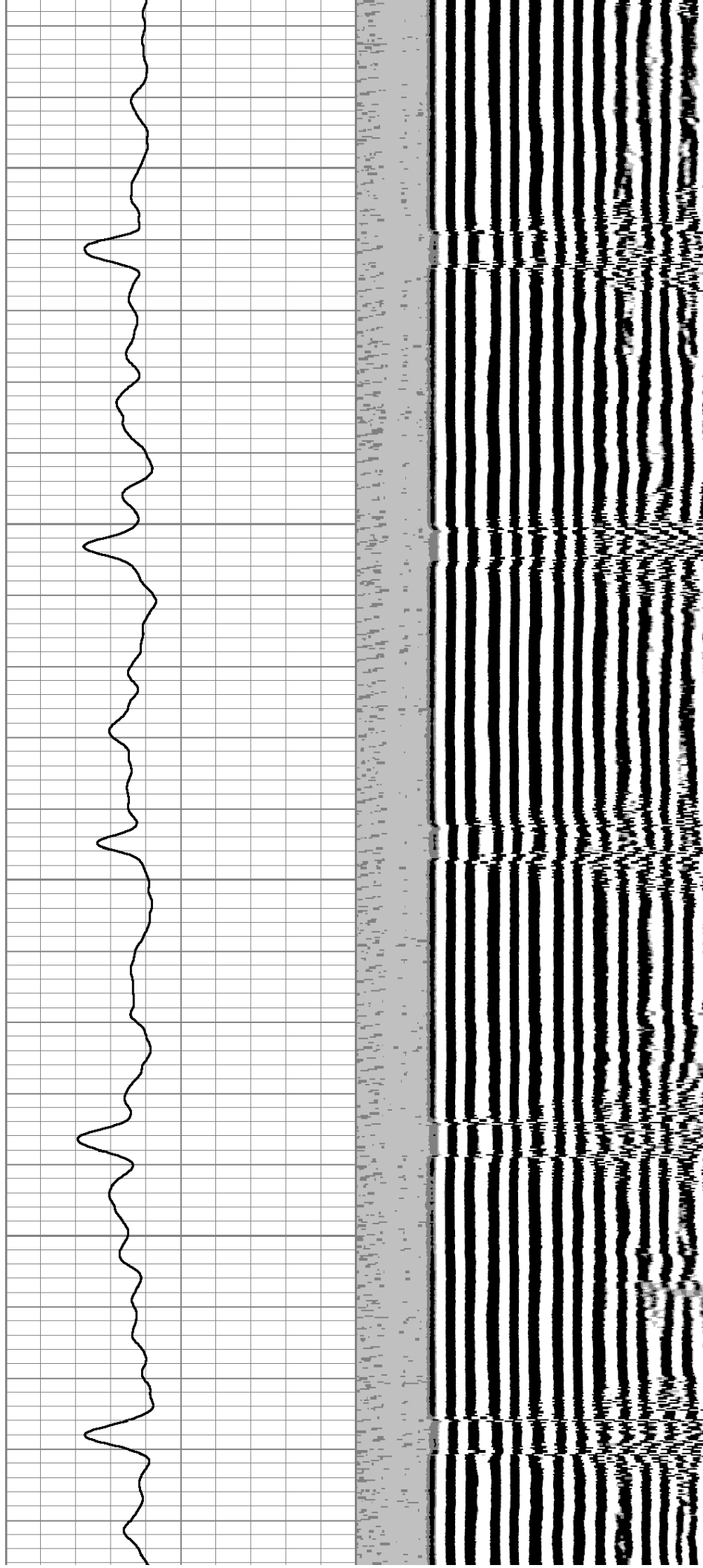


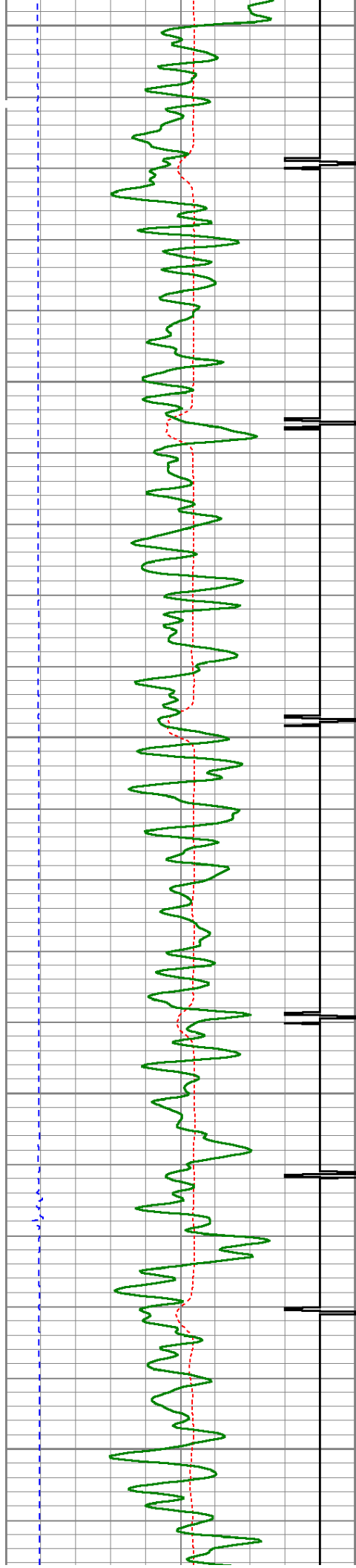
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900

950

1000





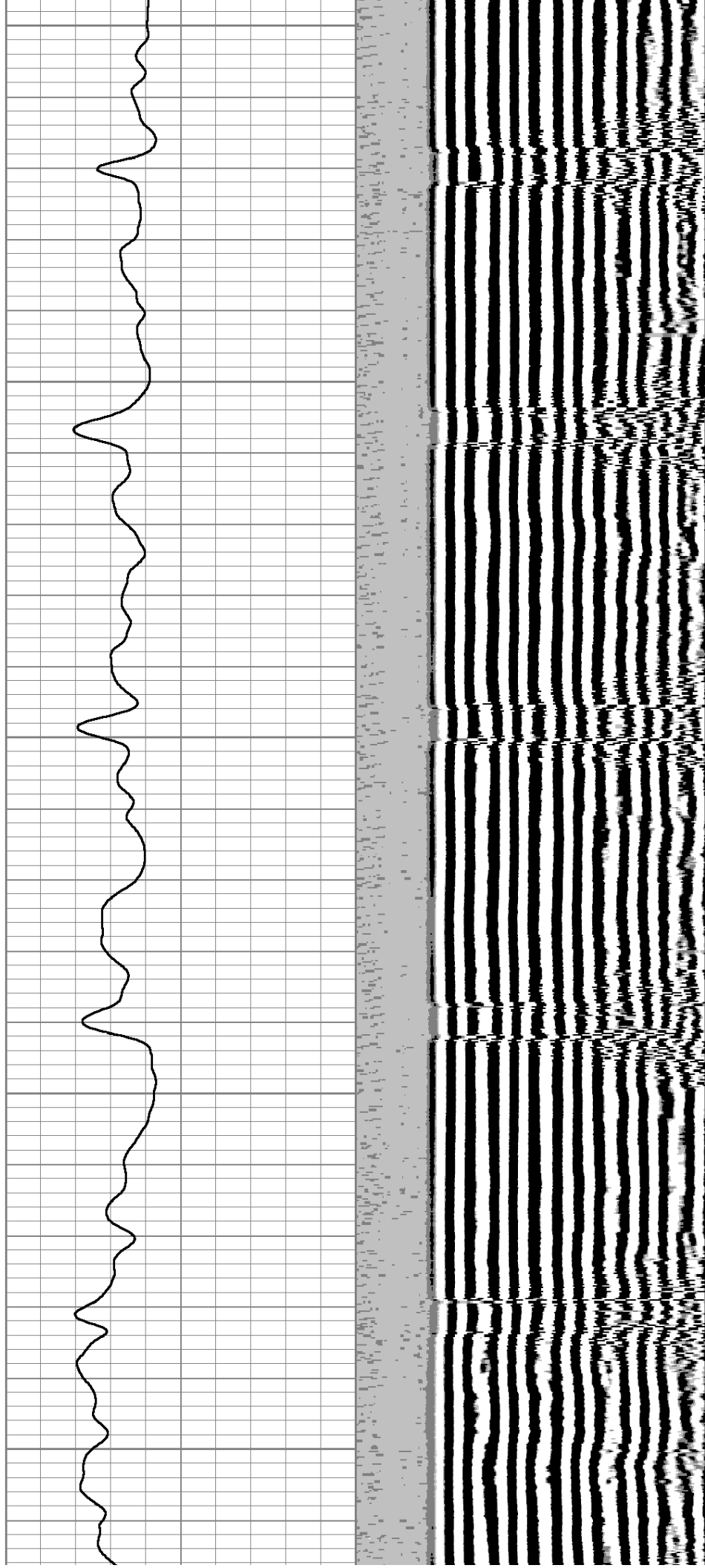
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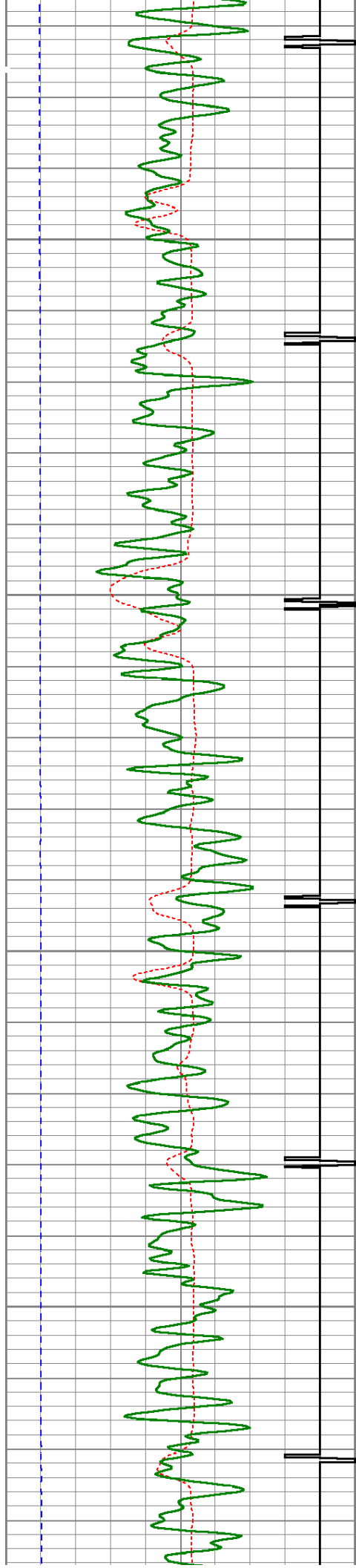
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1150

1200

1250



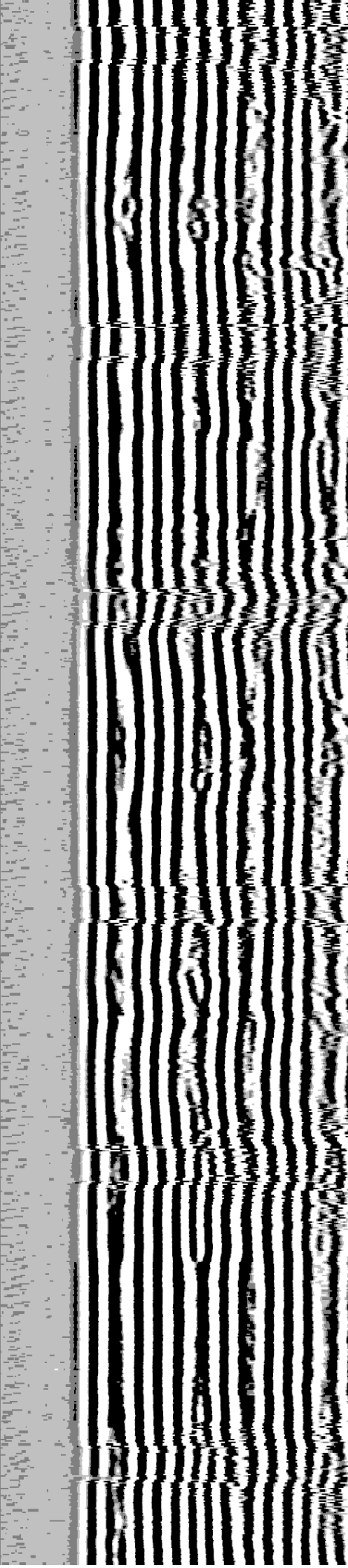
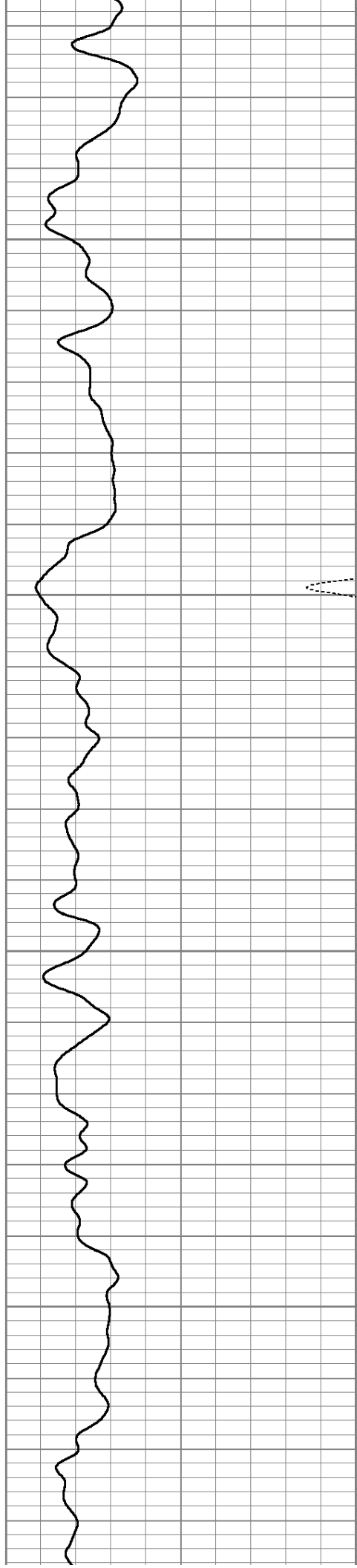


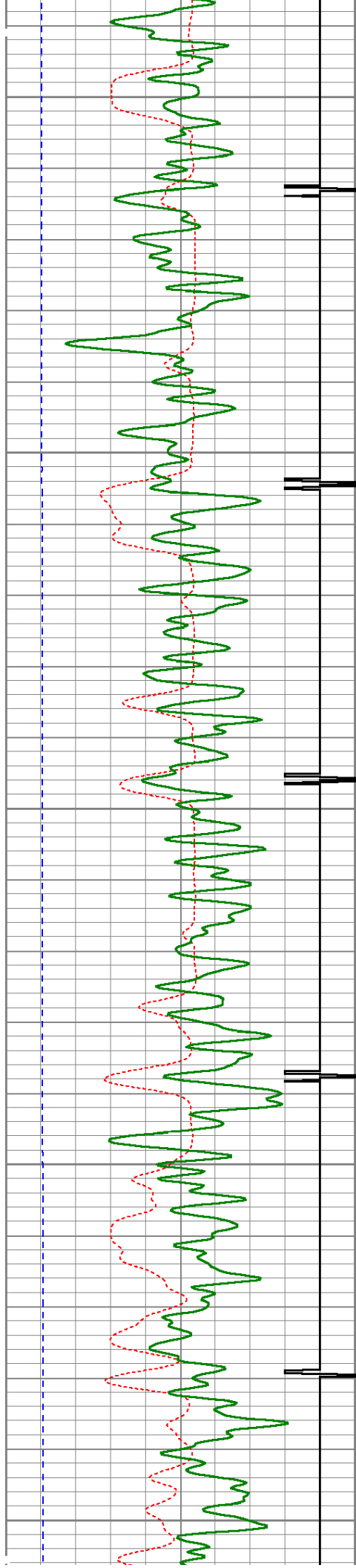
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1350

1400

1450





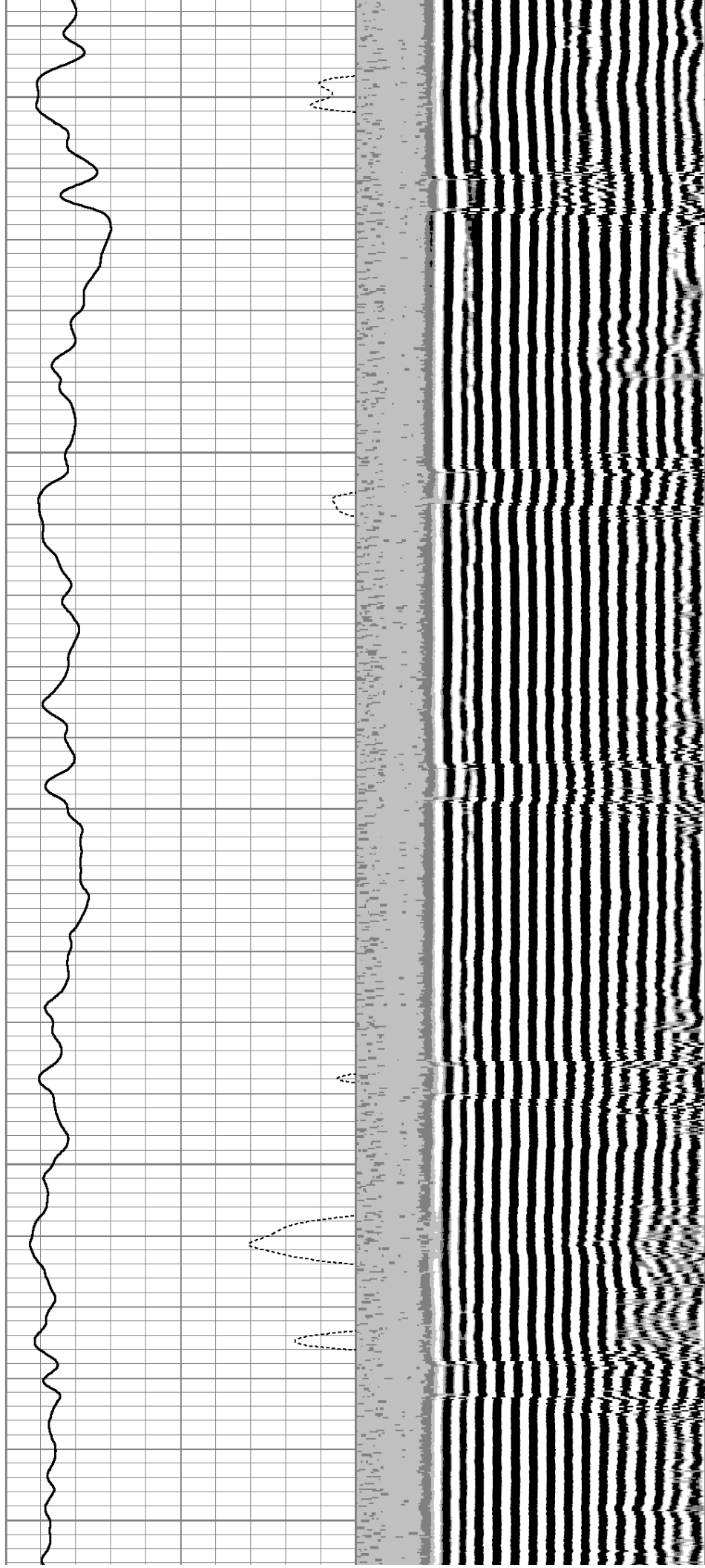
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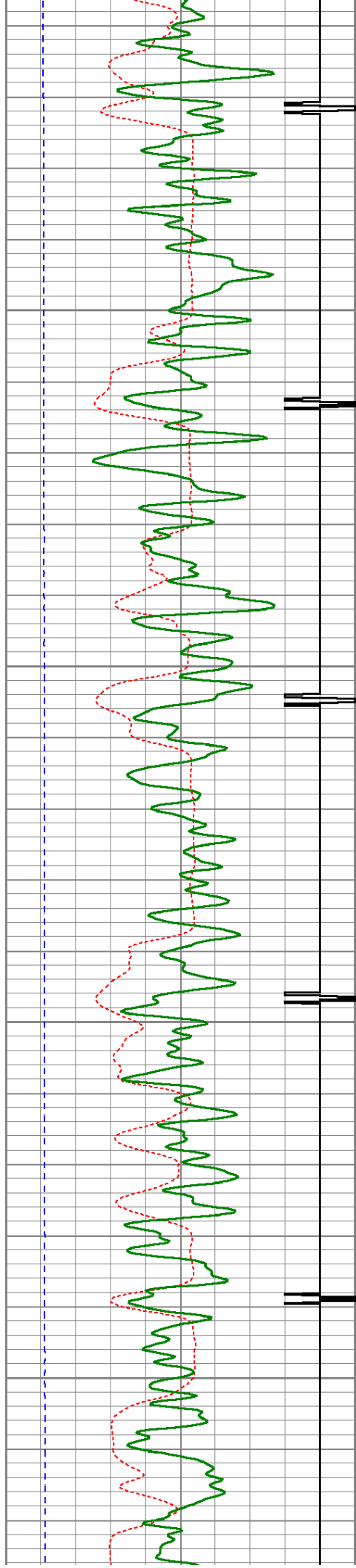
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1600

1650

1700



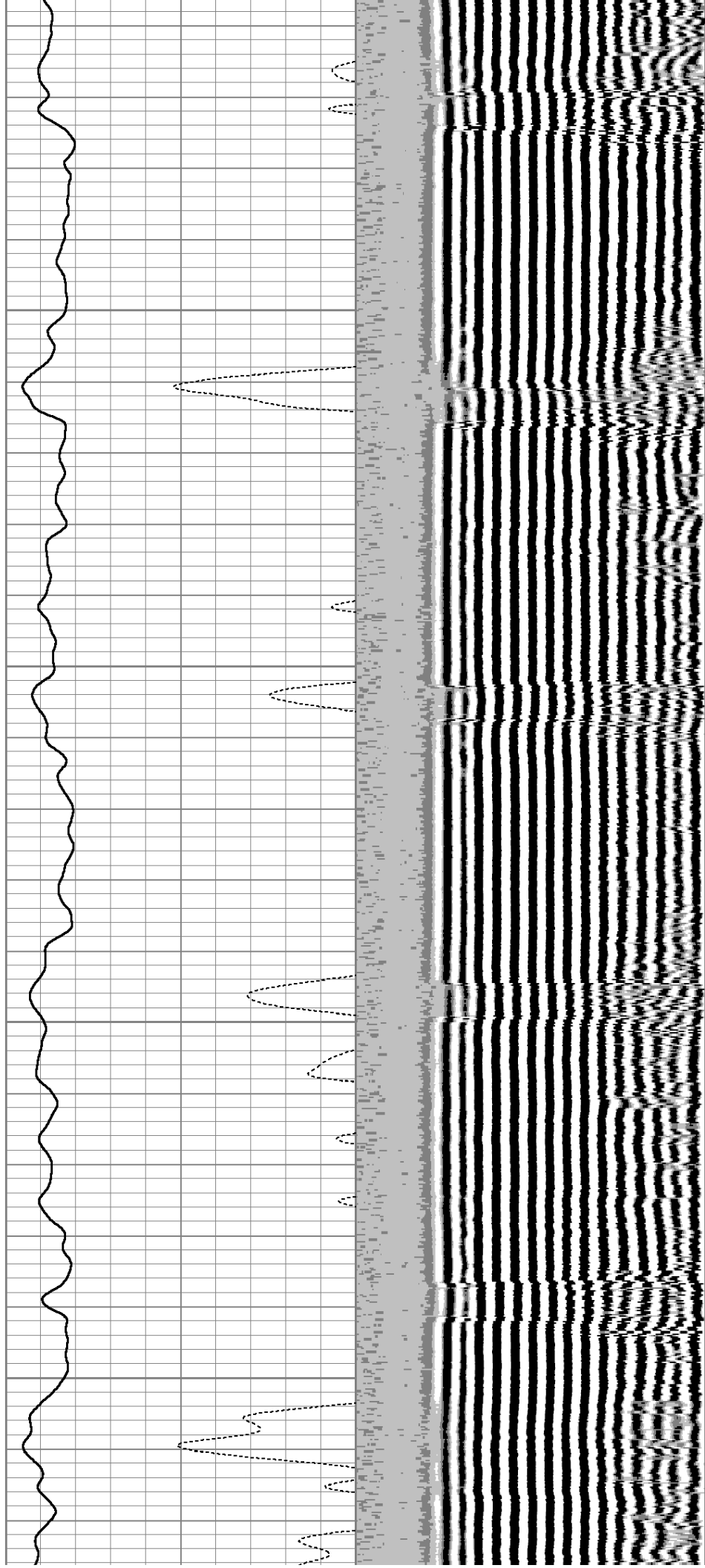


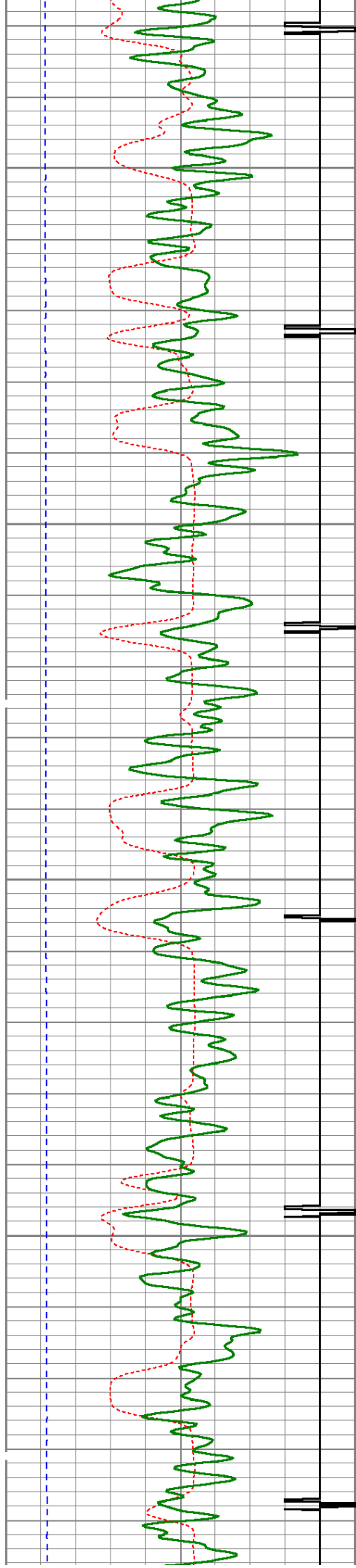
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1850

1900



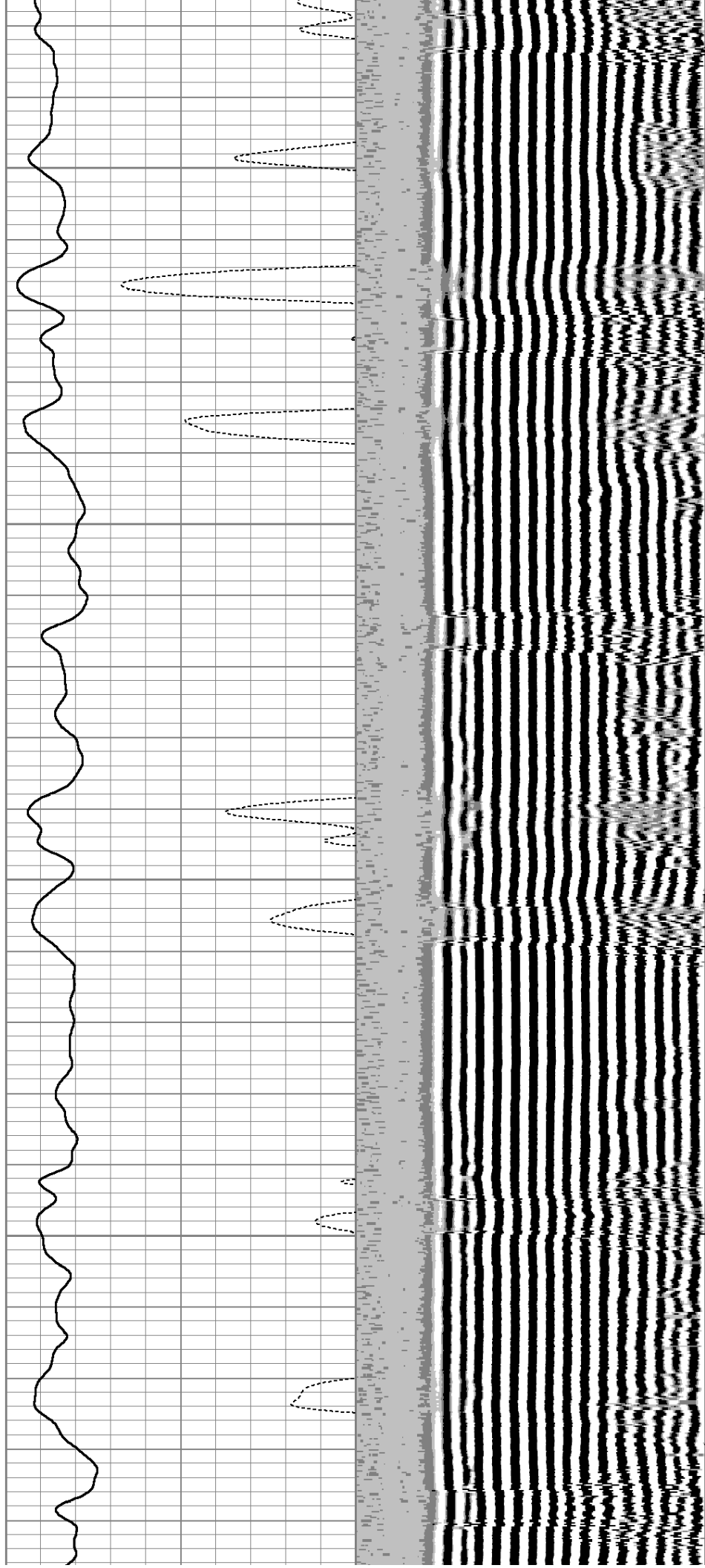


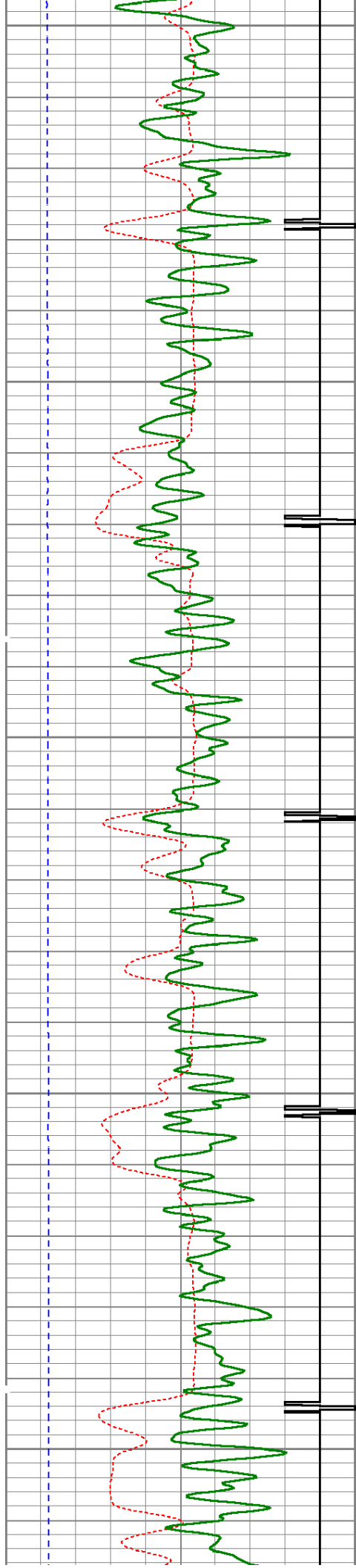
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2000

2050

2100





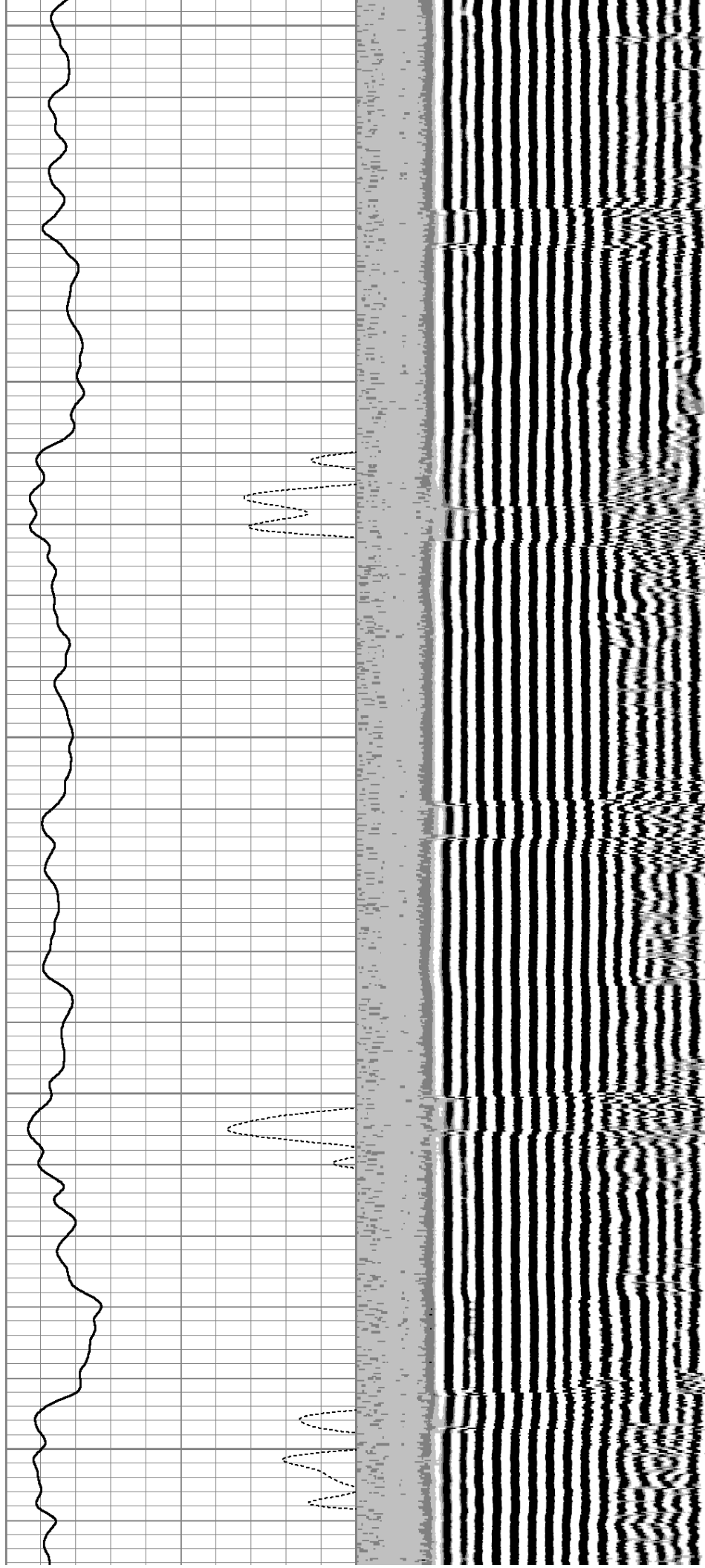
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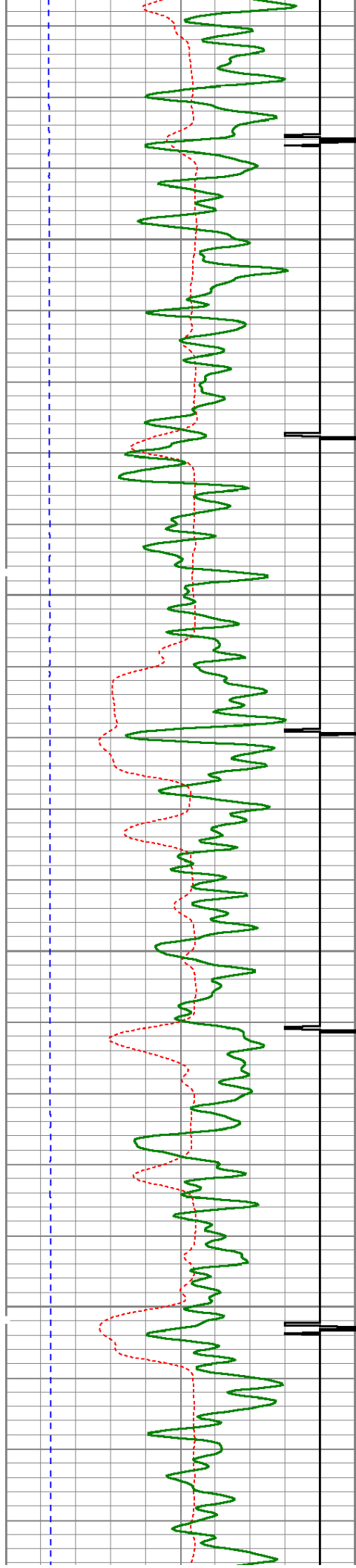
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2250

2300

2350



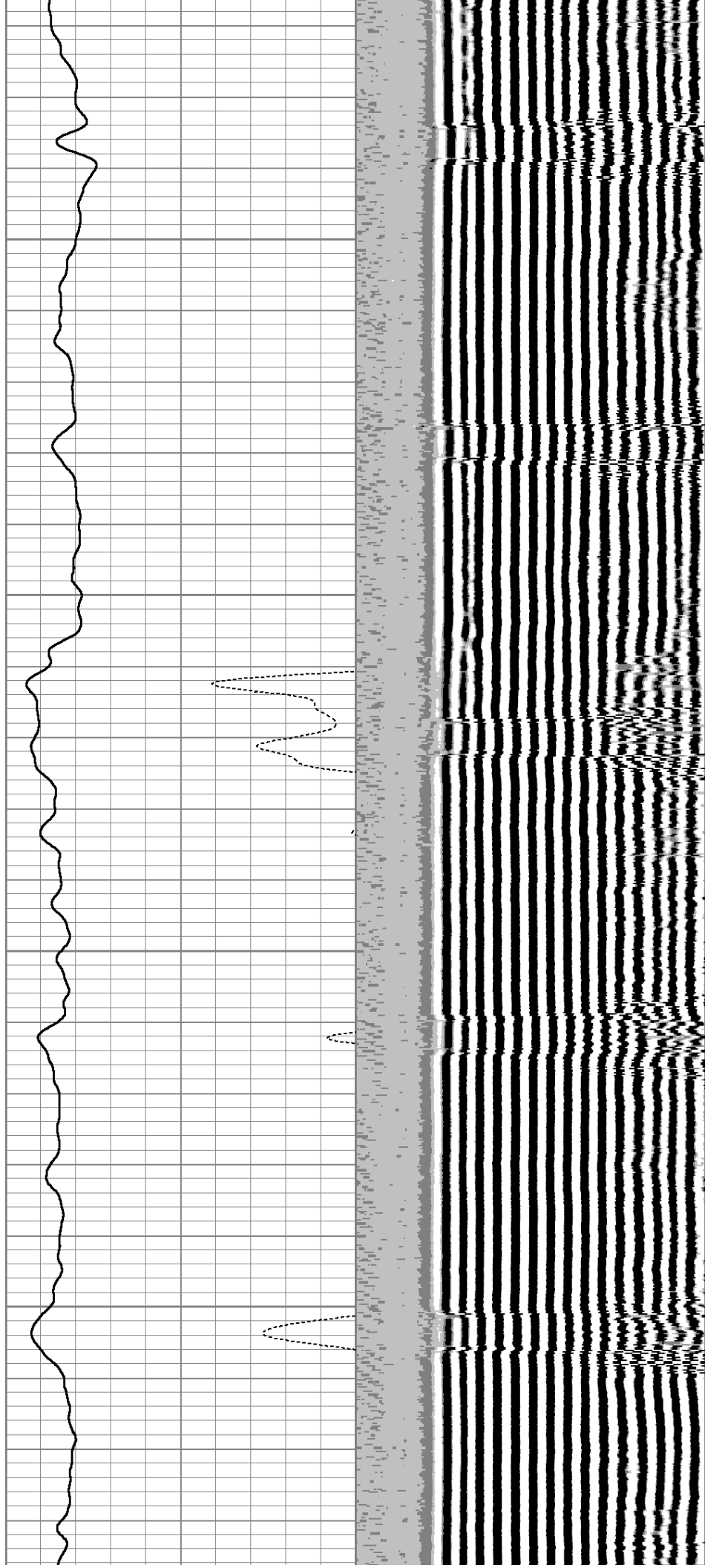


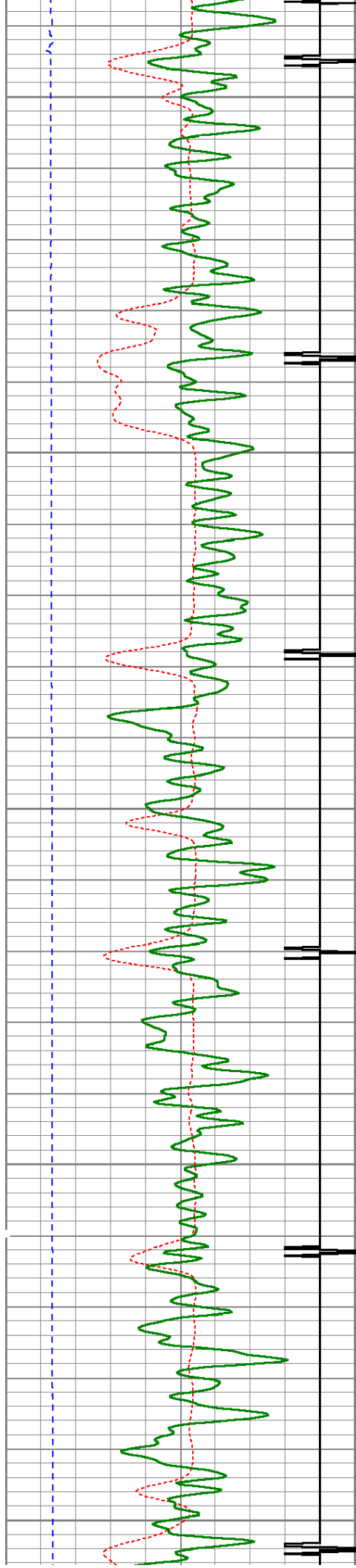
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2550





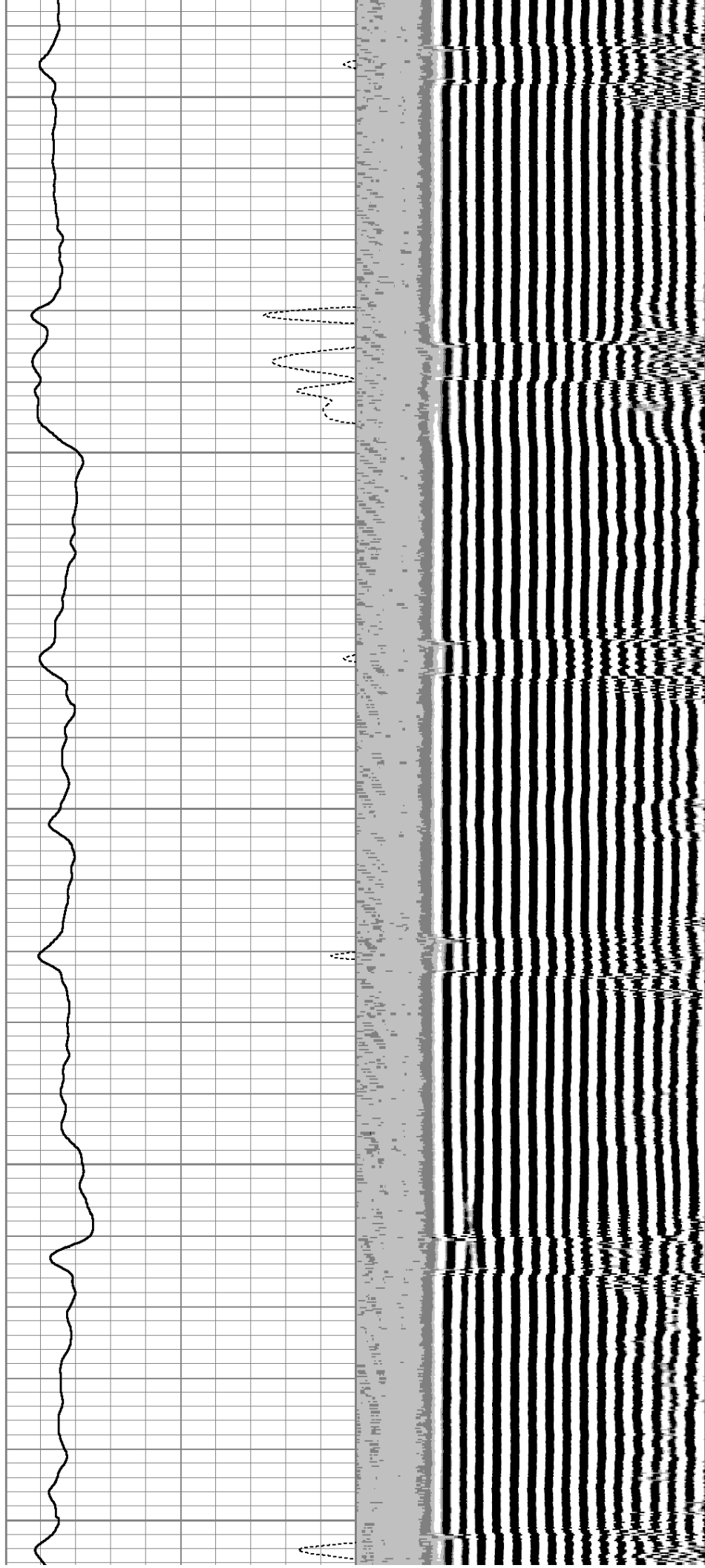
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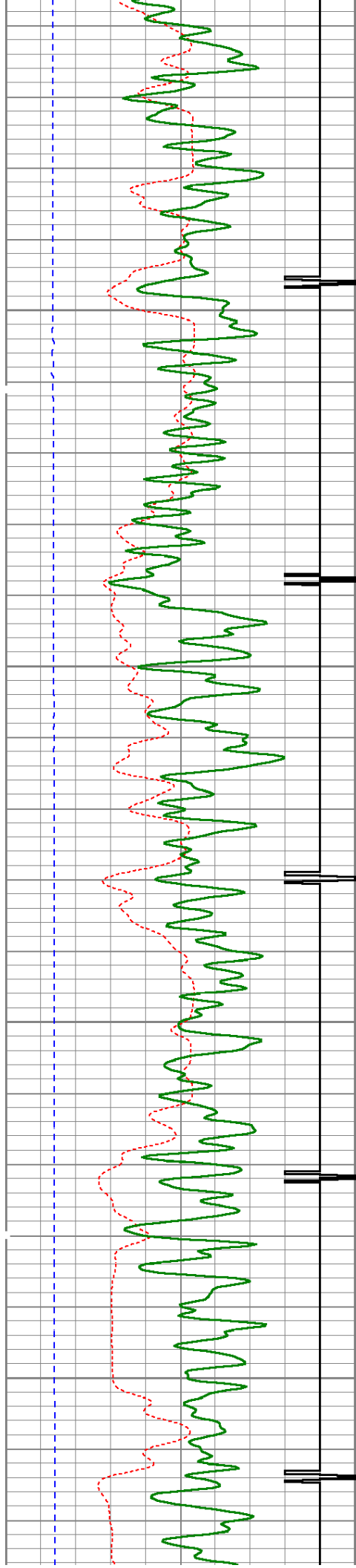
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2700

2750

2800



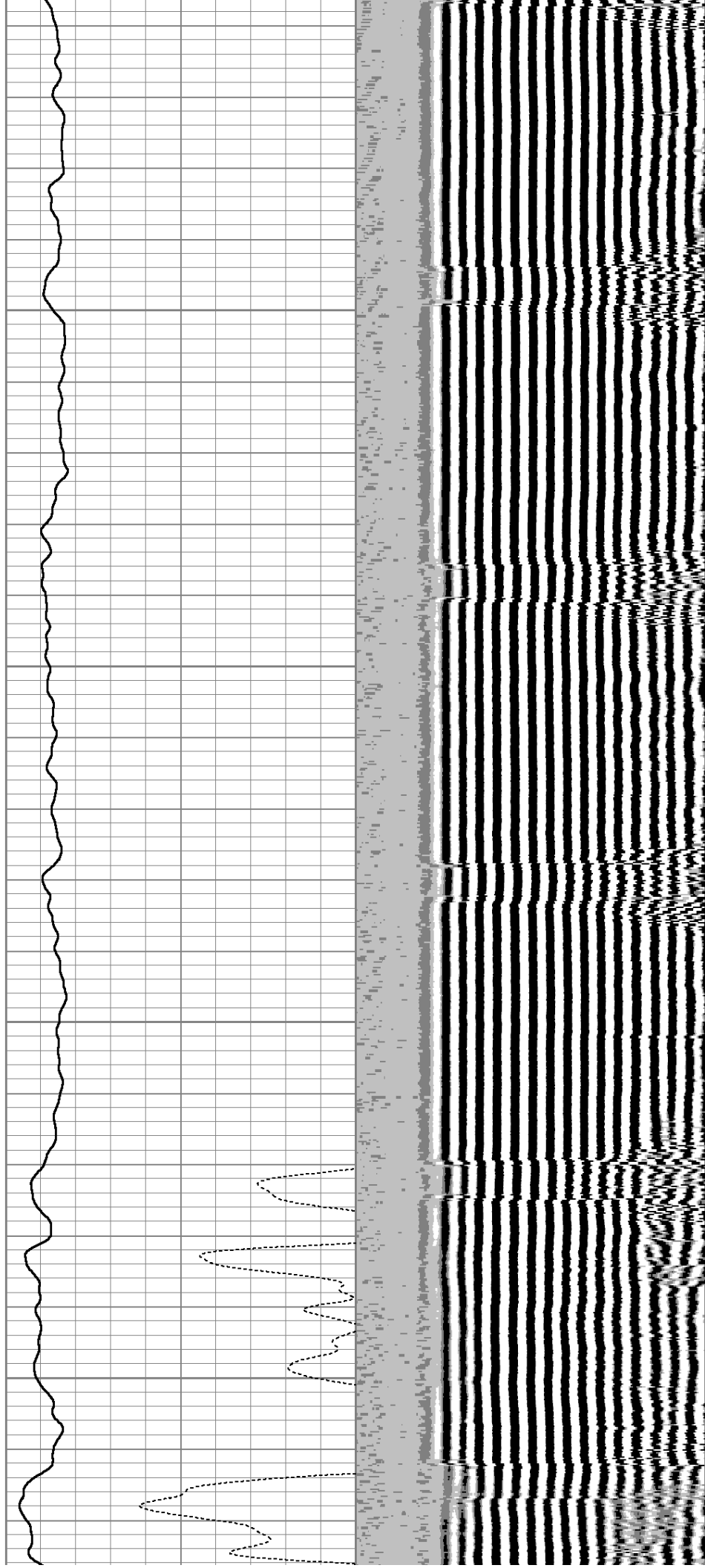


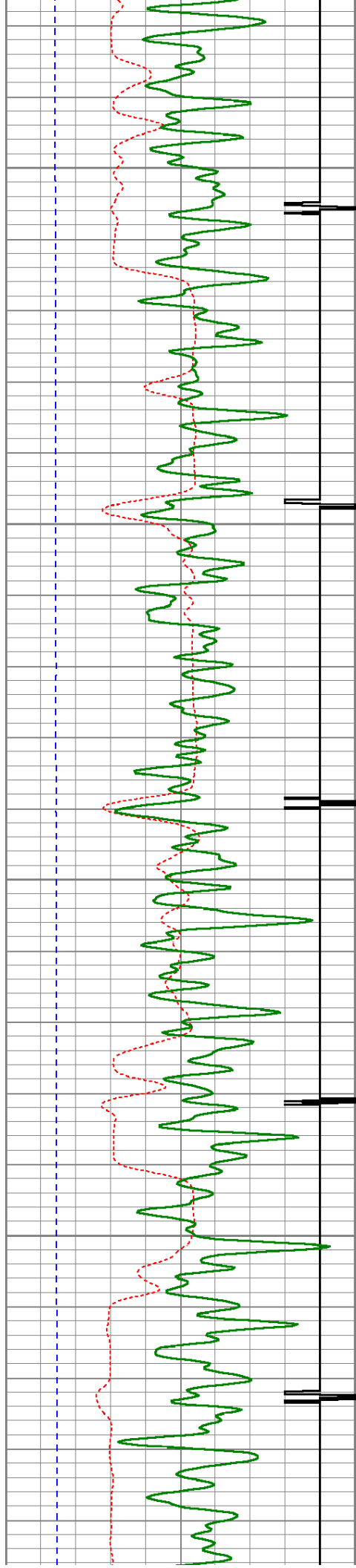
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2950

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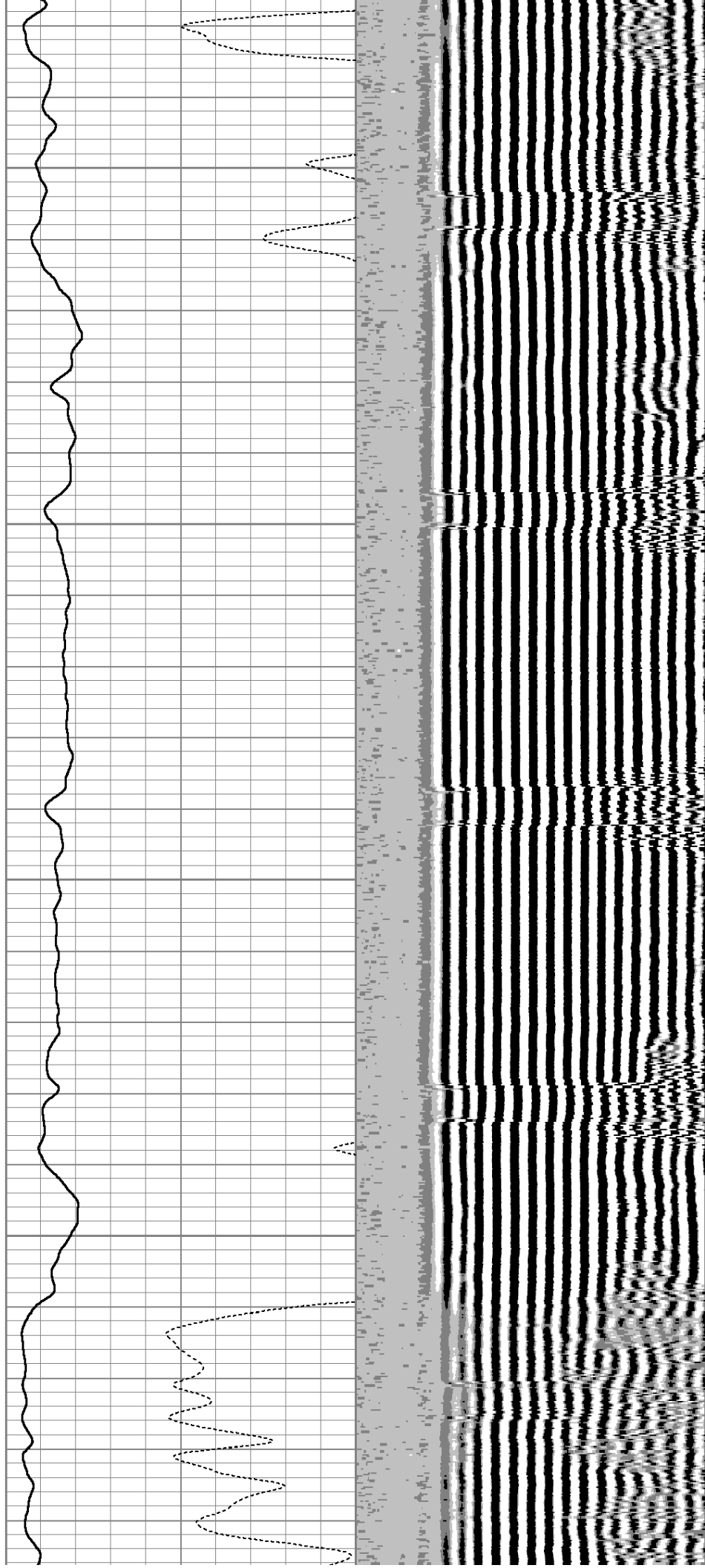


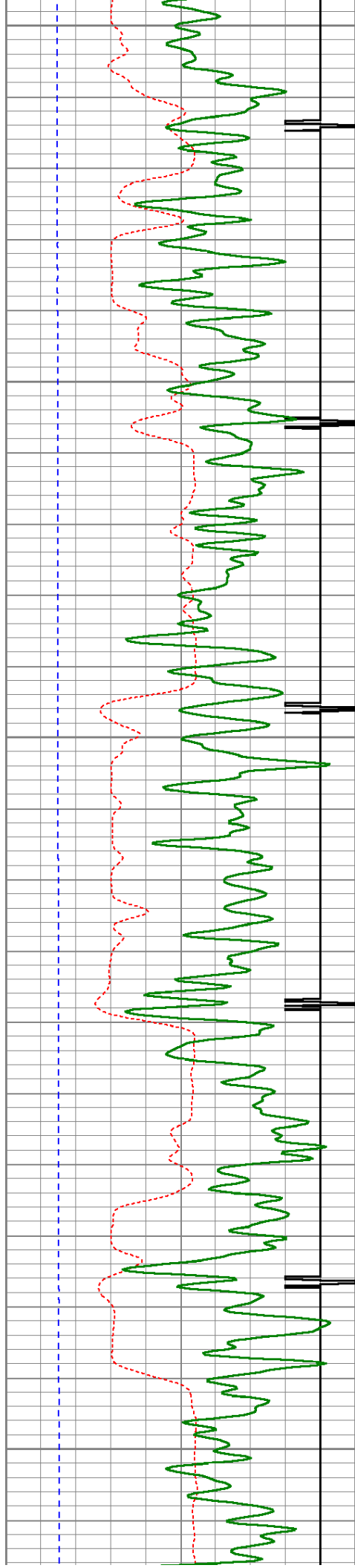
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3150

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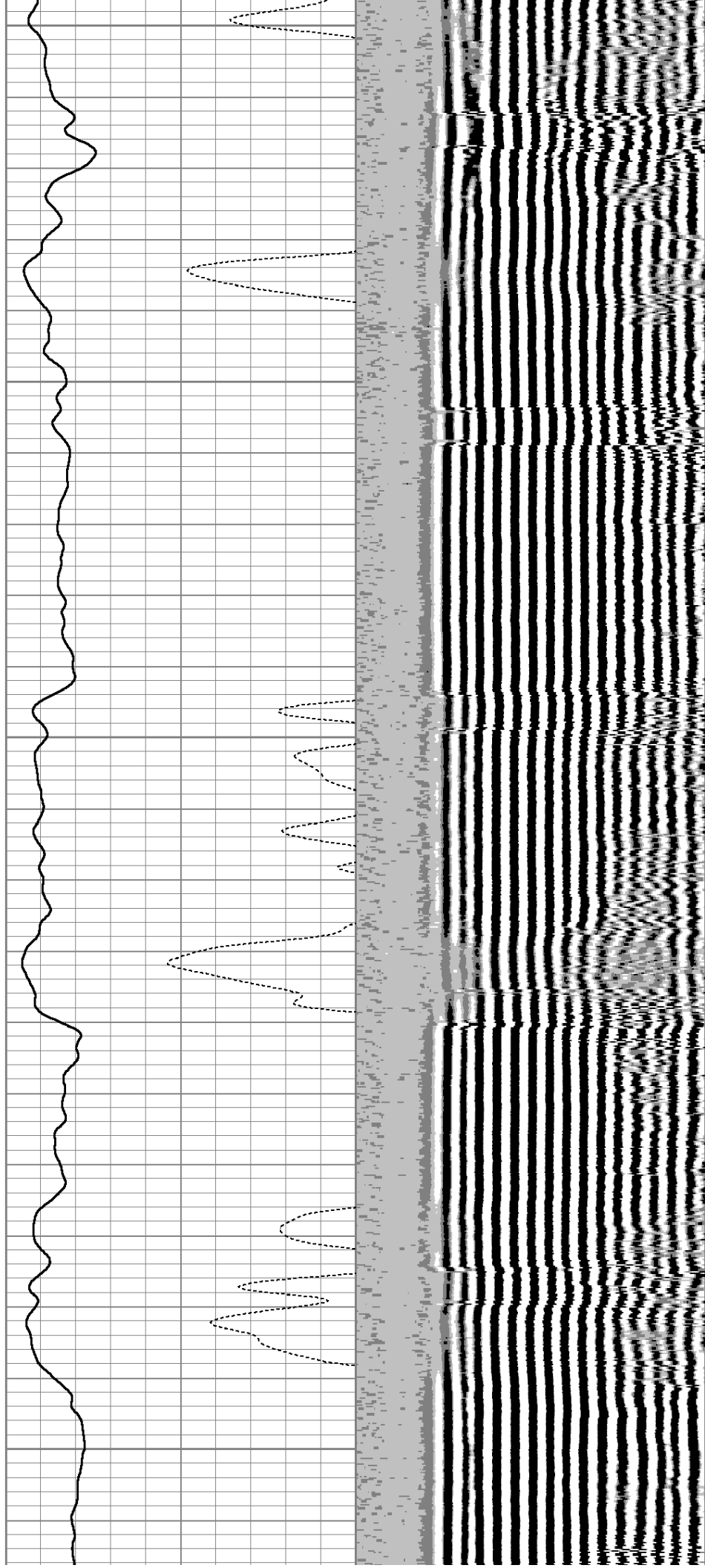
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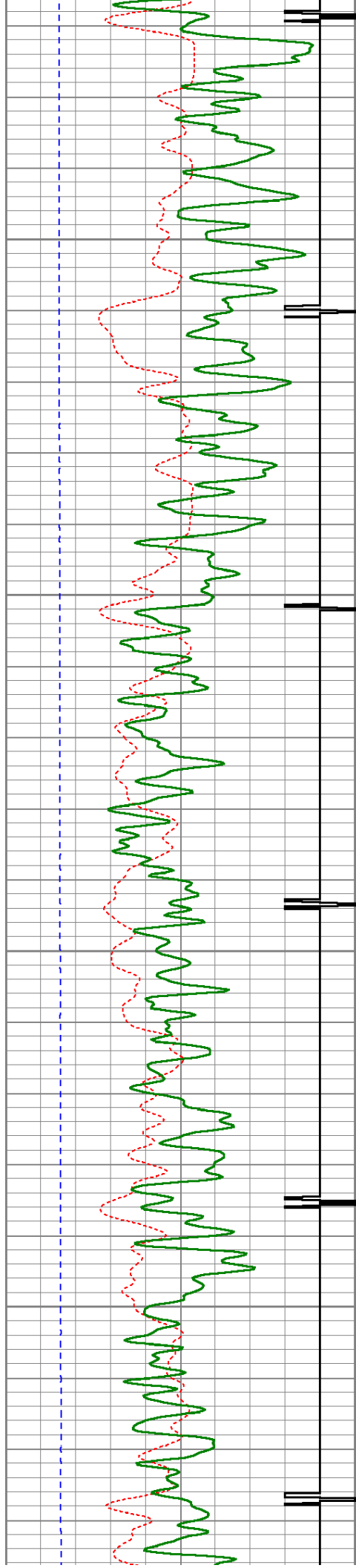
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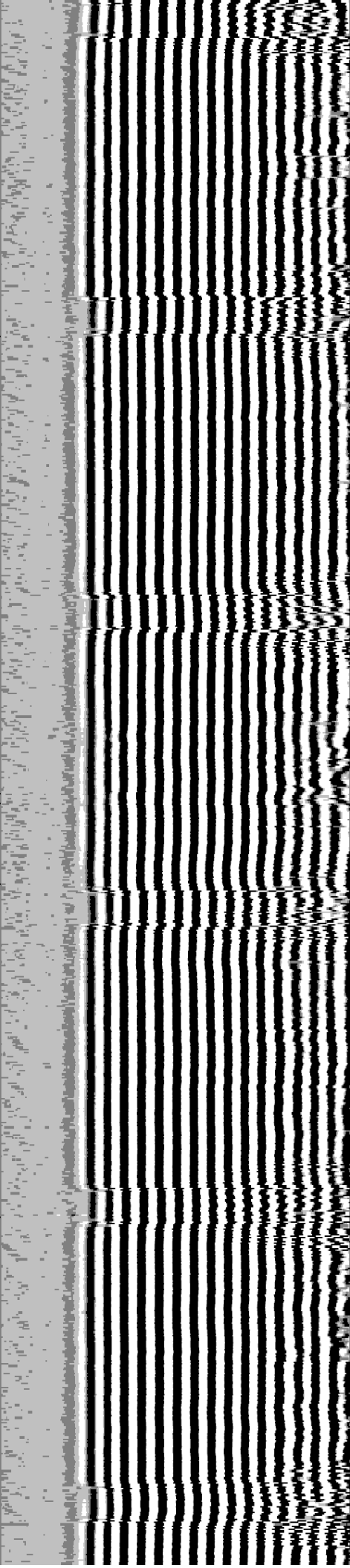
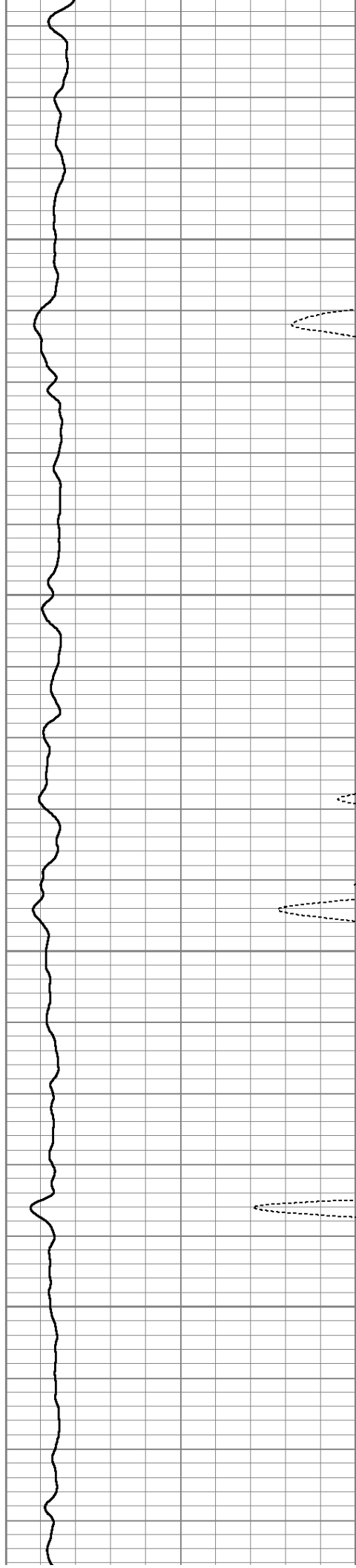


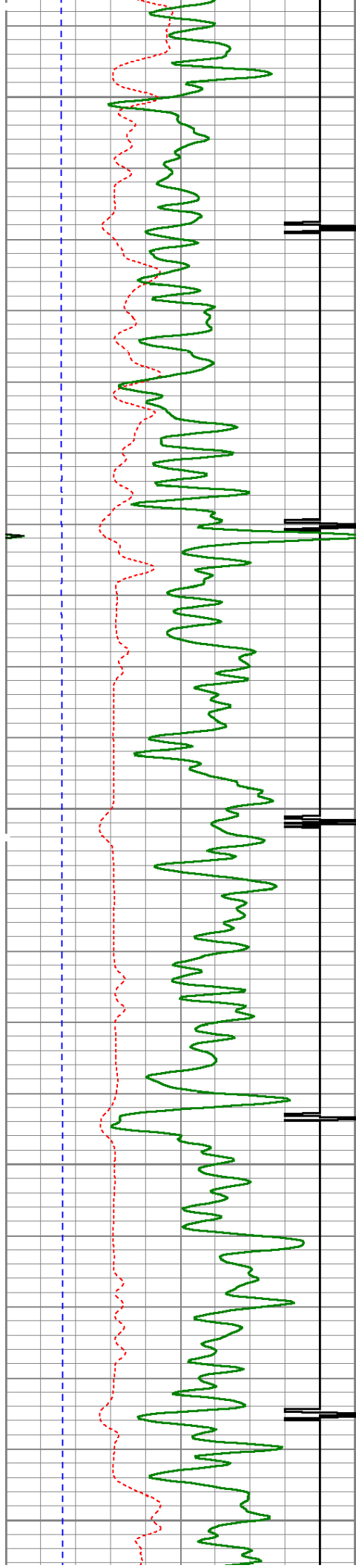
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3650





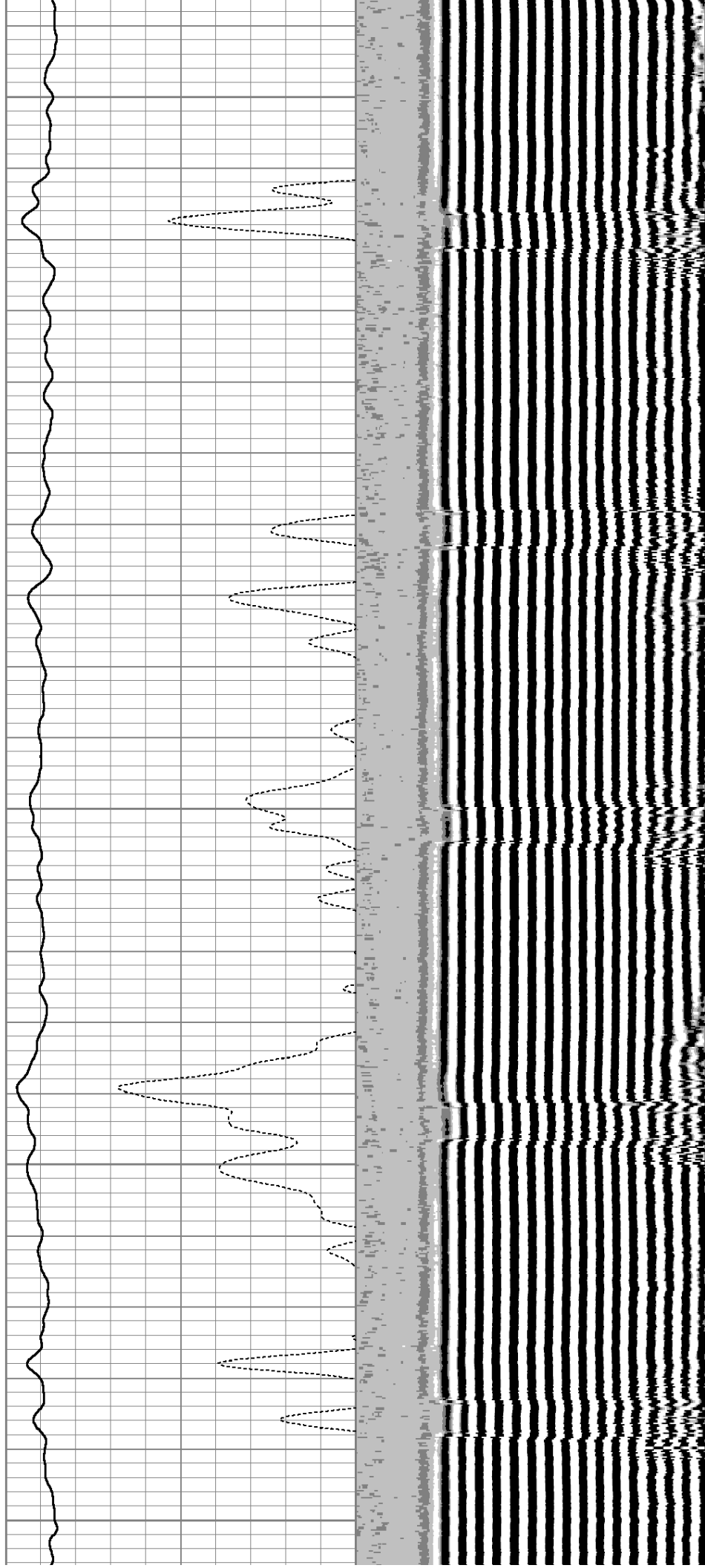
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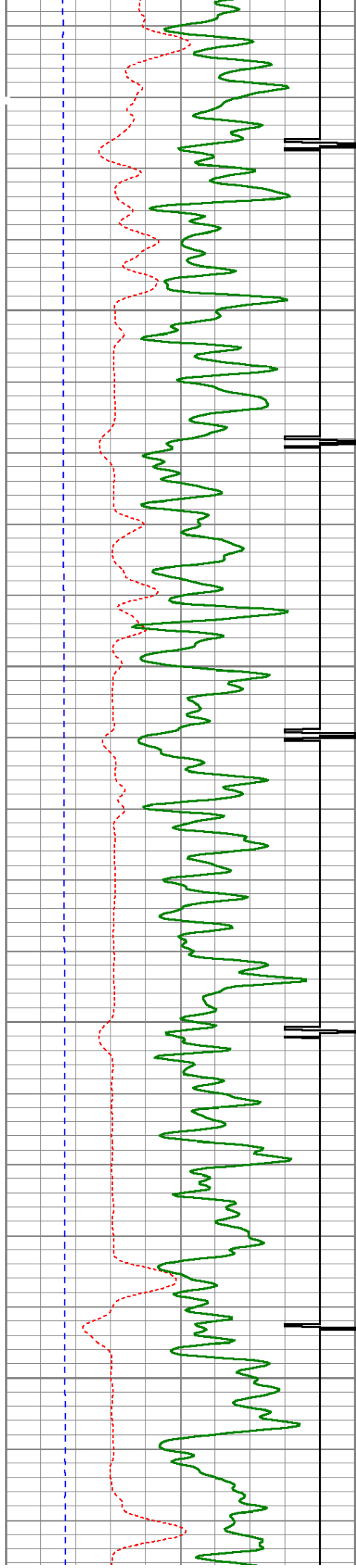
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3850

3900



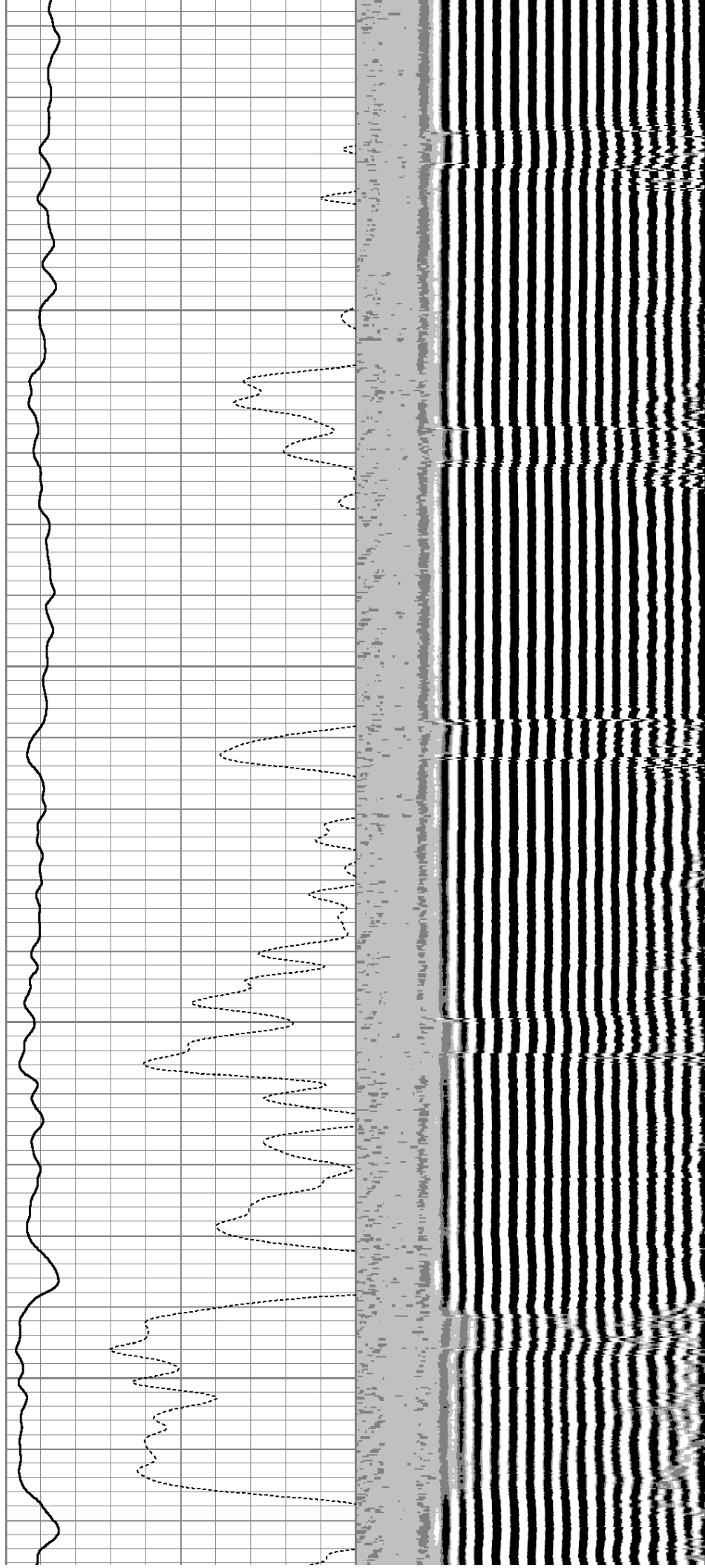


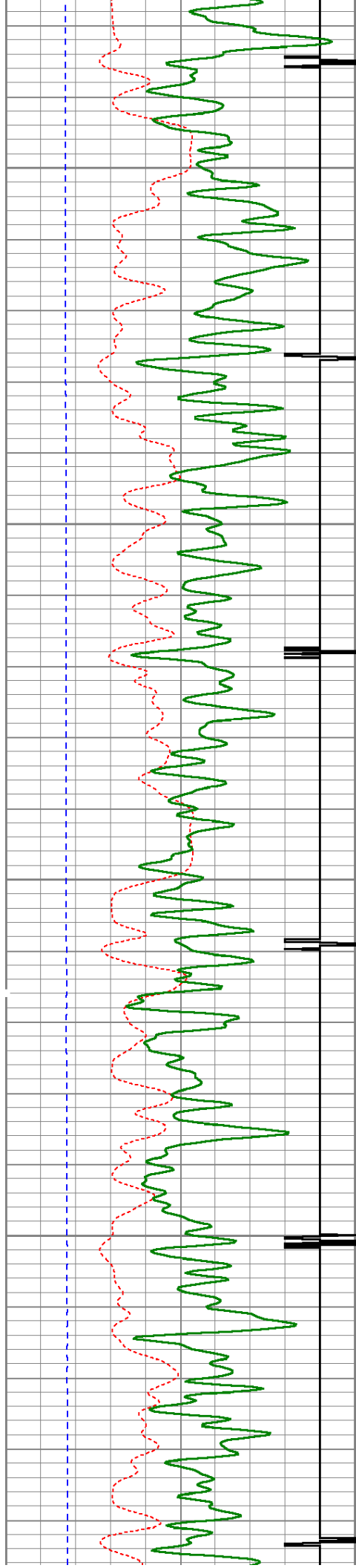
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4000

4050

4100



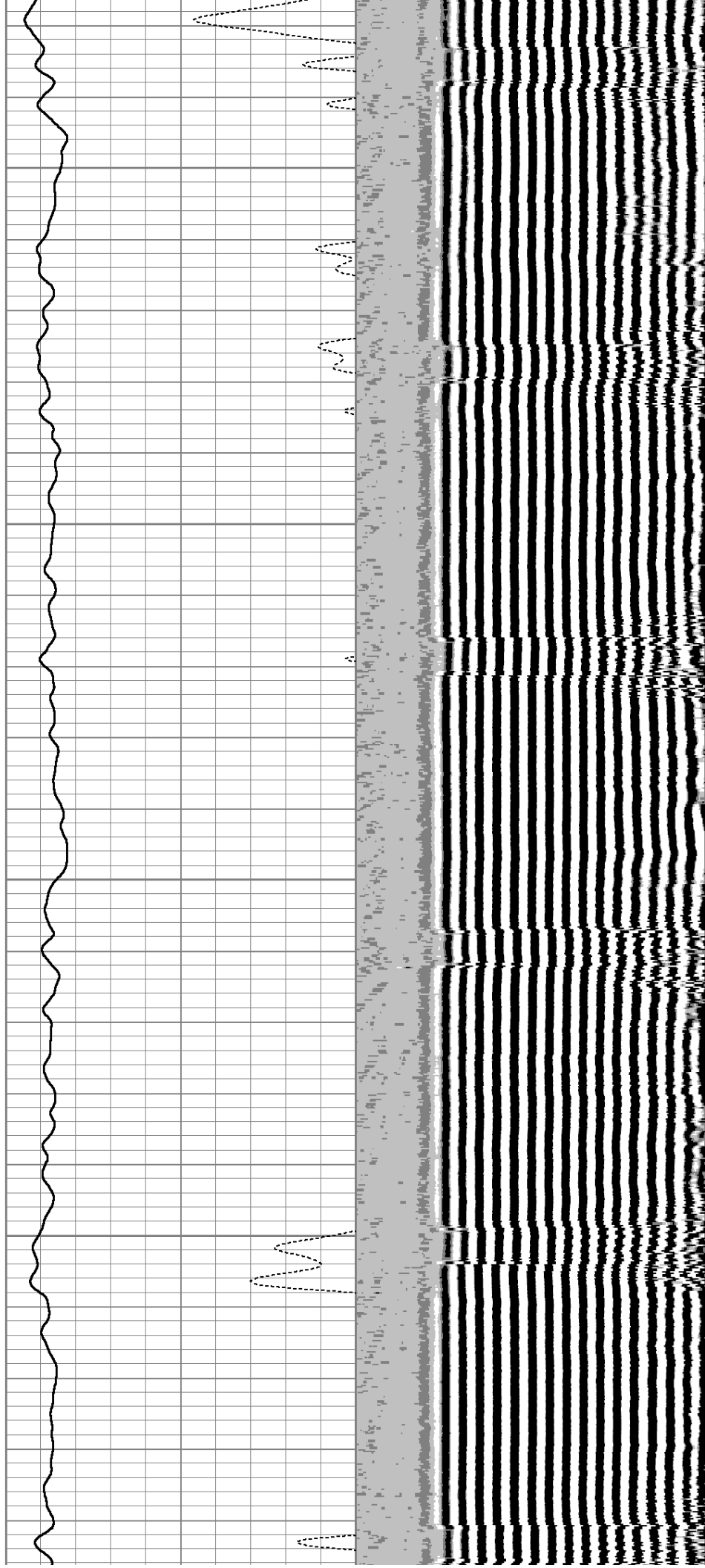


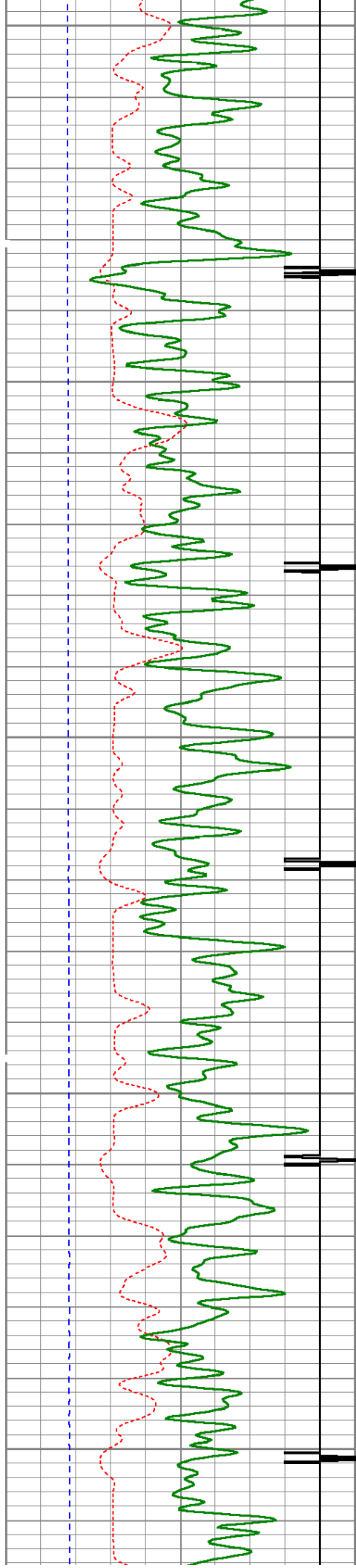
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4200

4250

4300





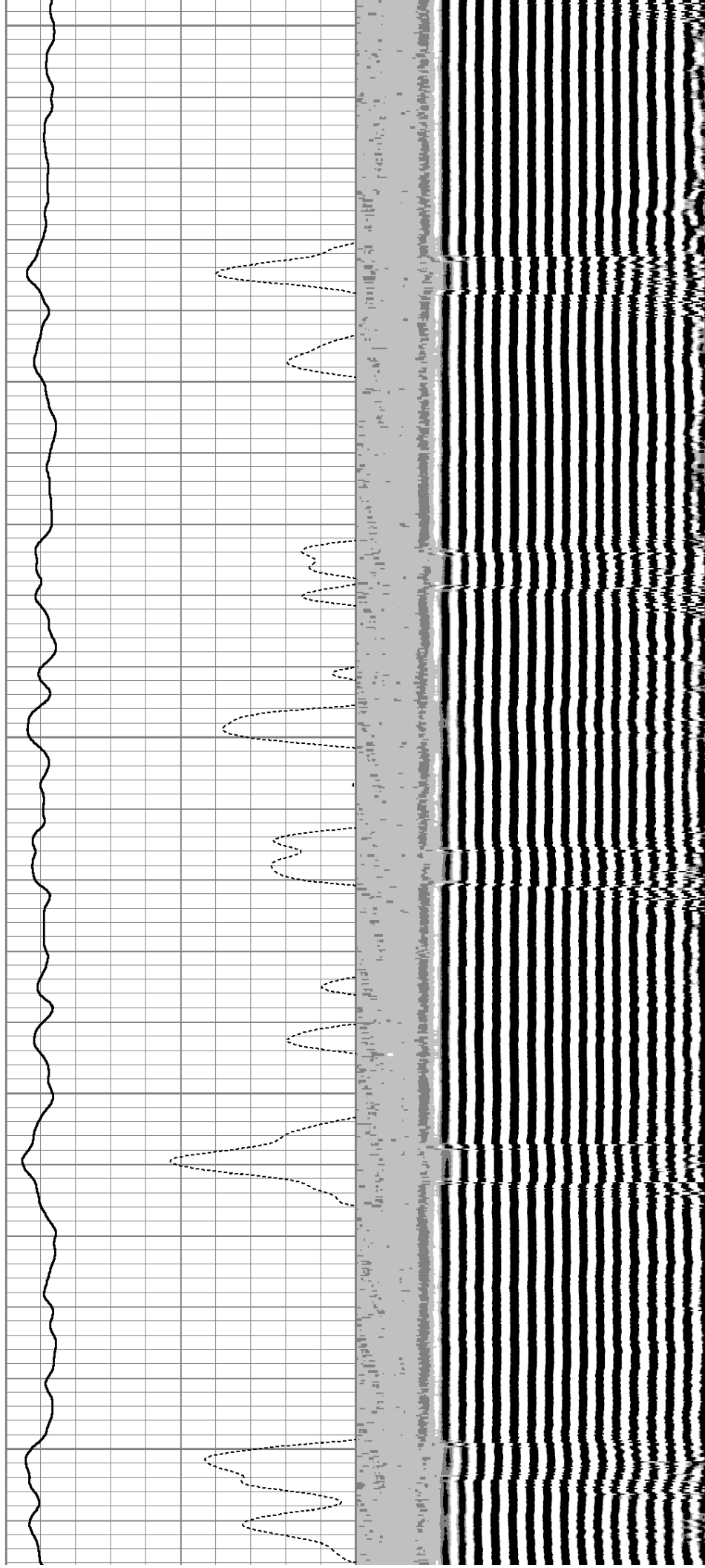
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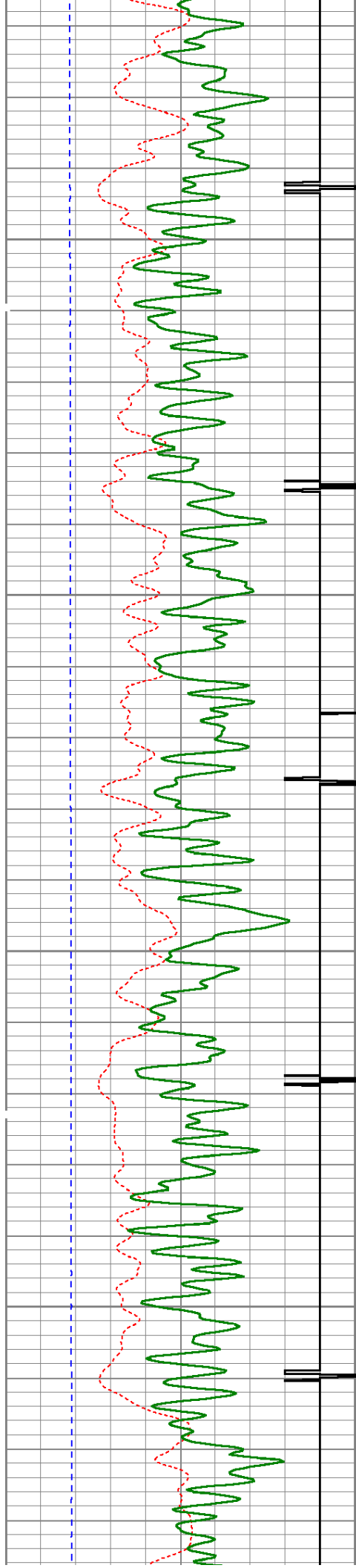
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4550



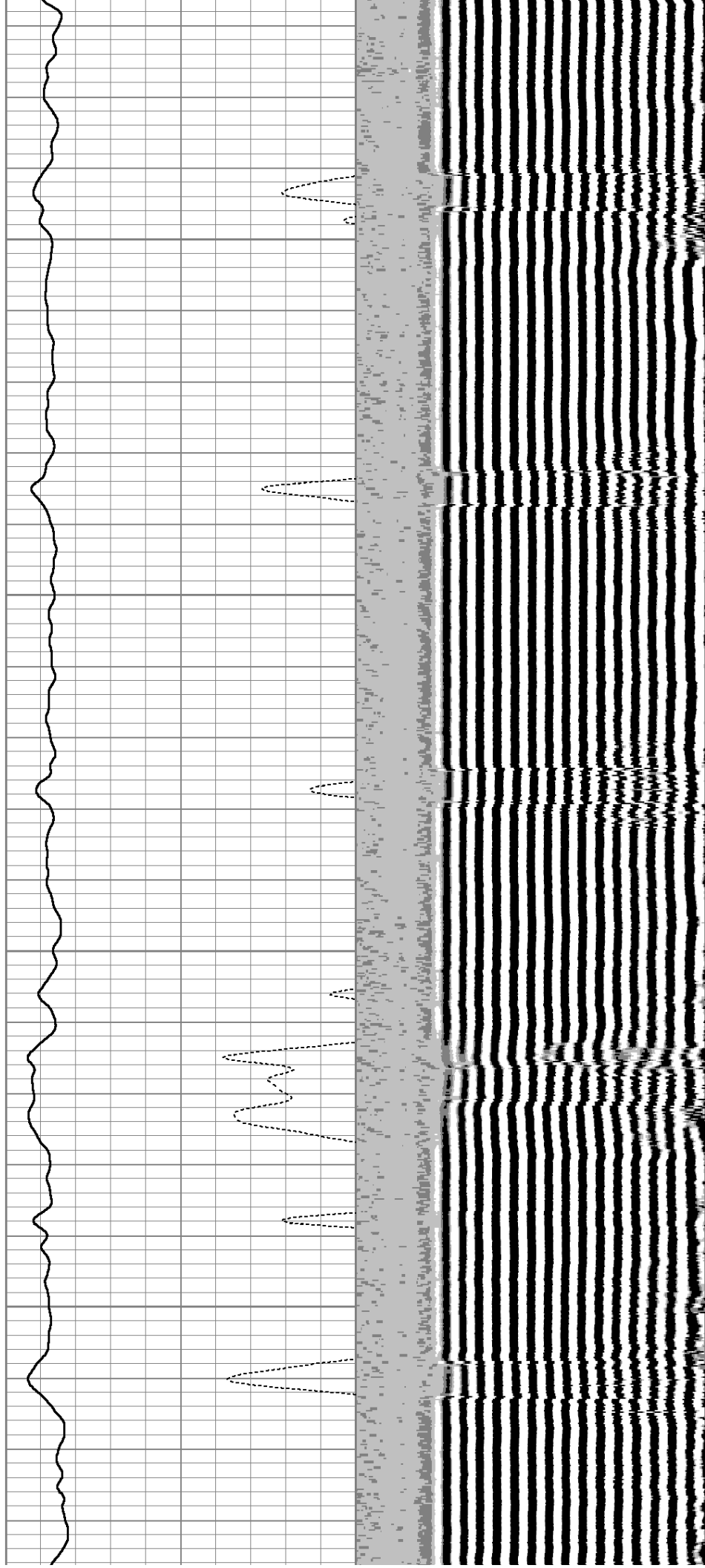


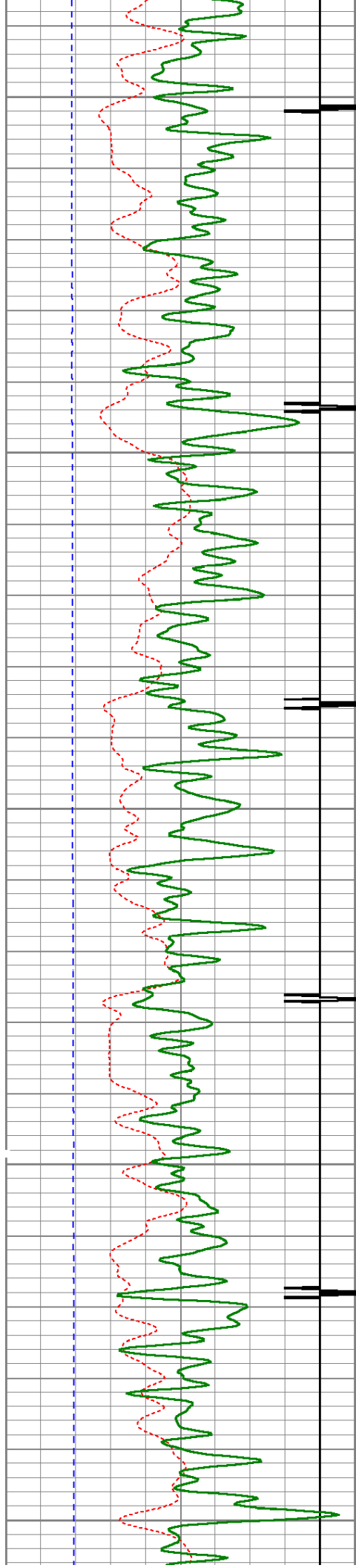
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4650

4700

4750





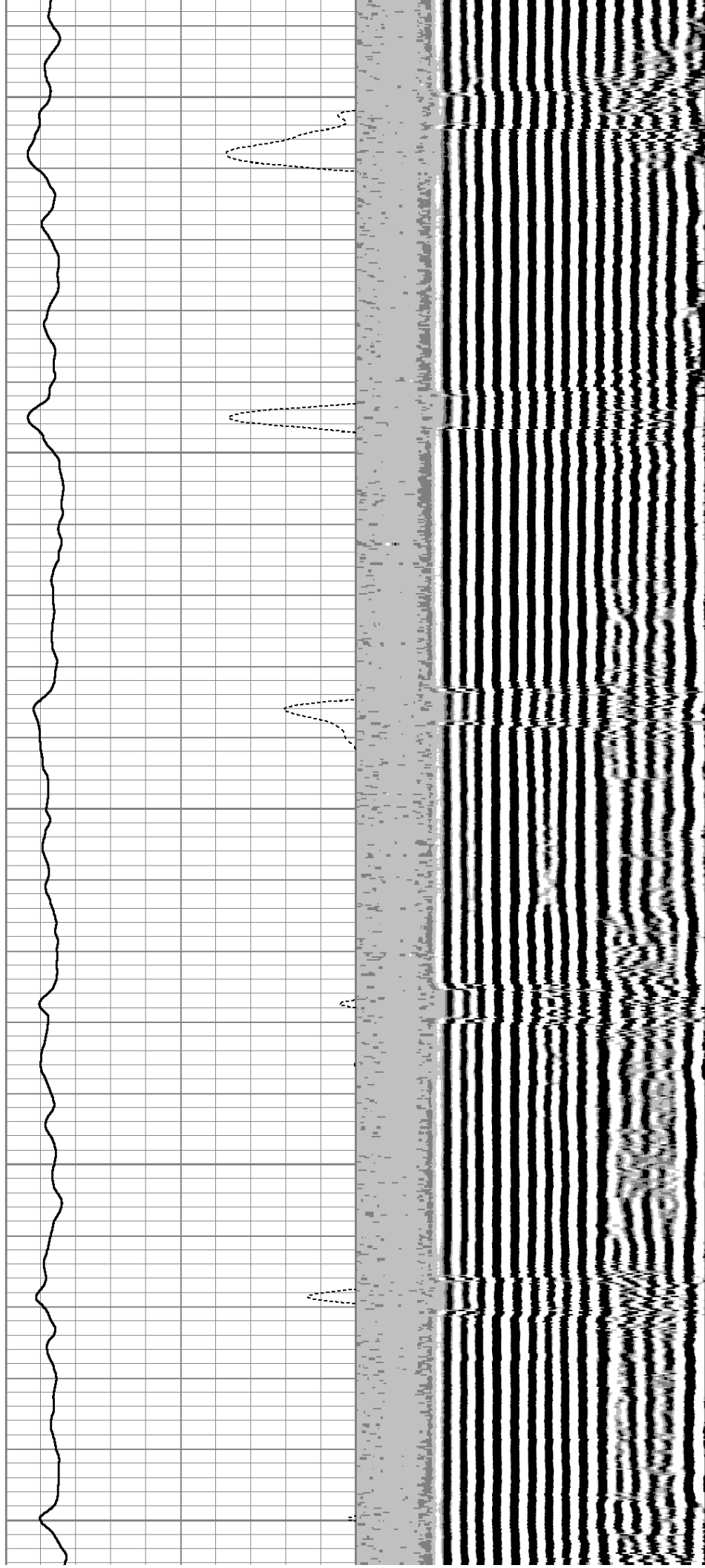
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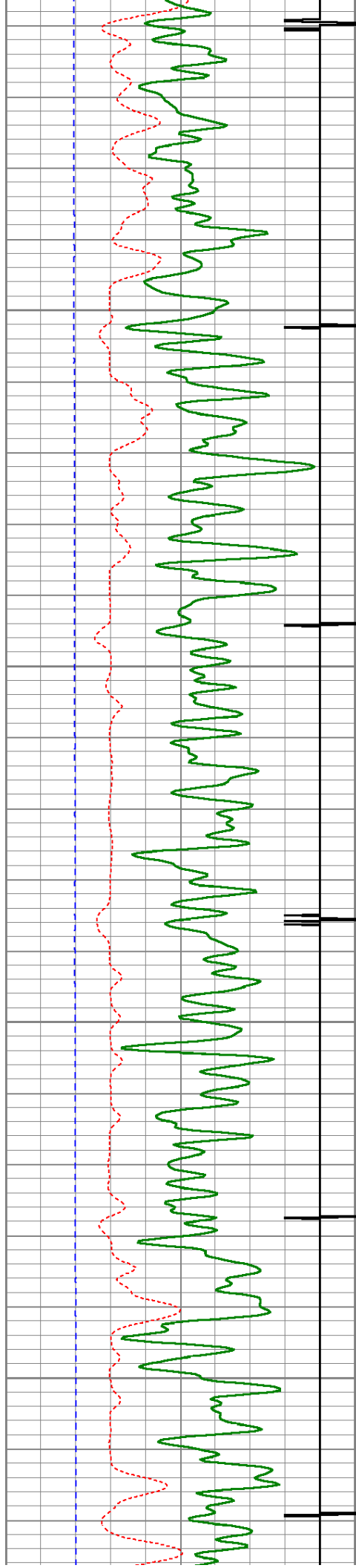
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4900

4950

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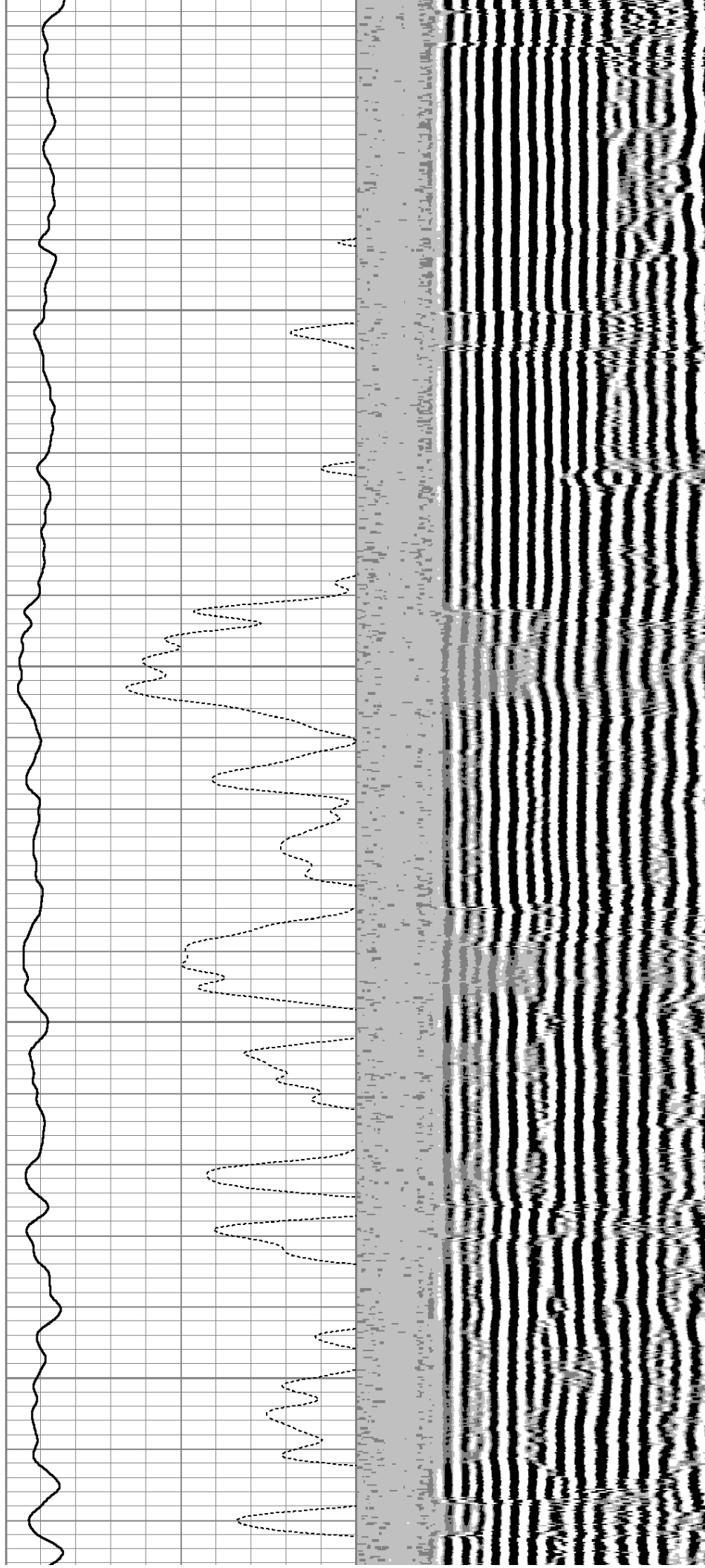


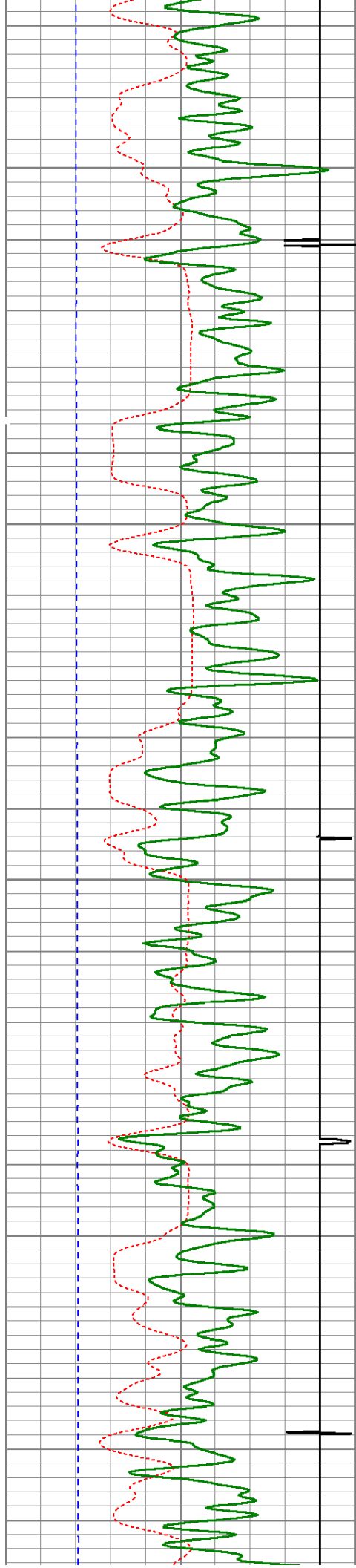
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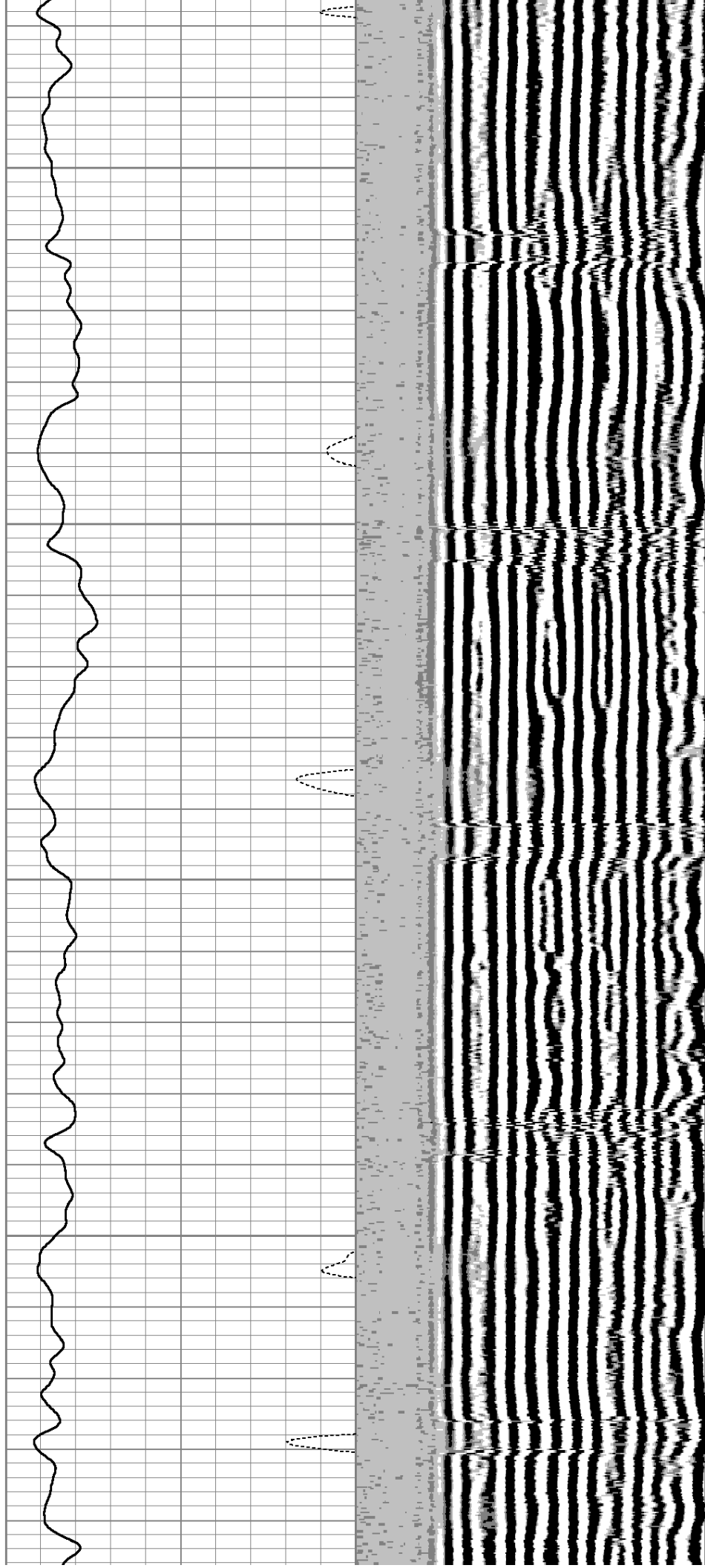


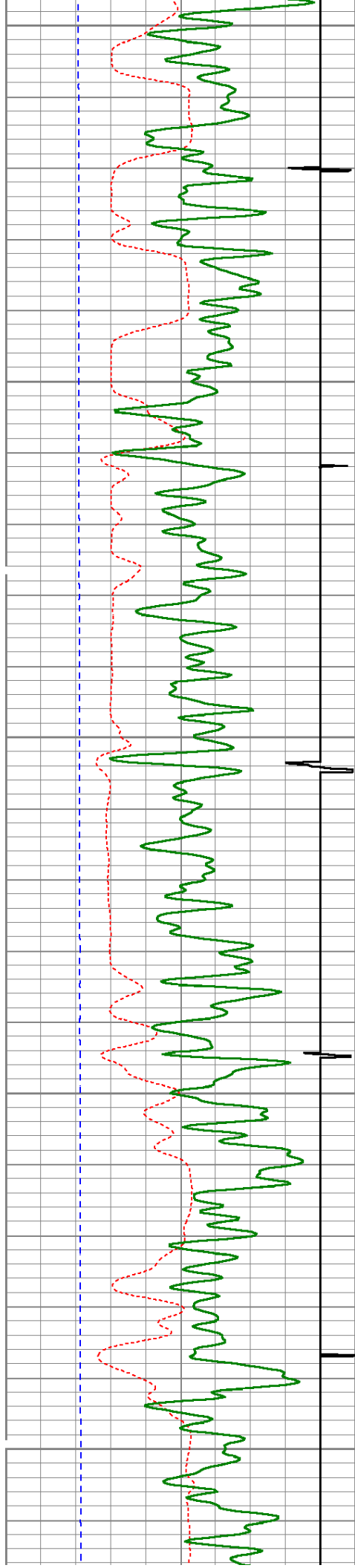
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5400





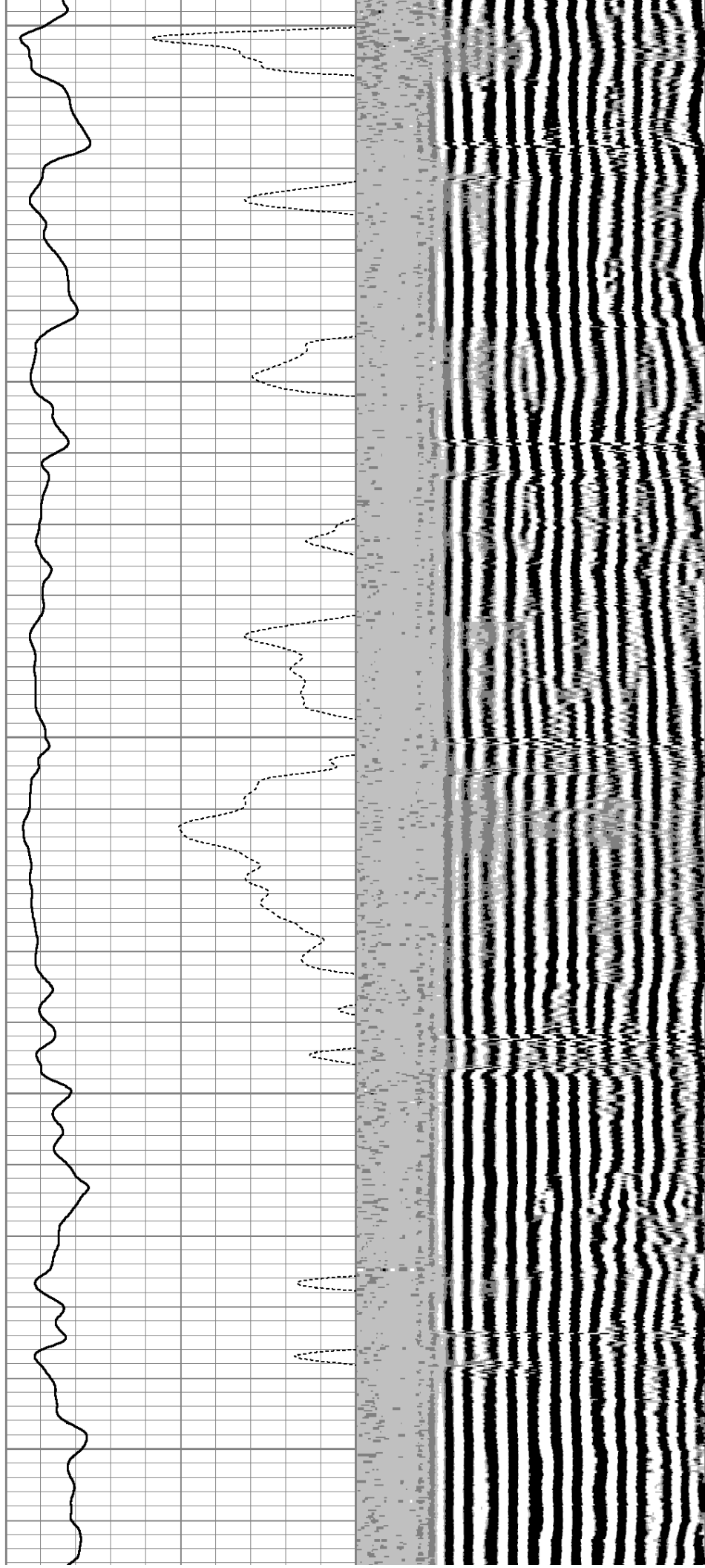
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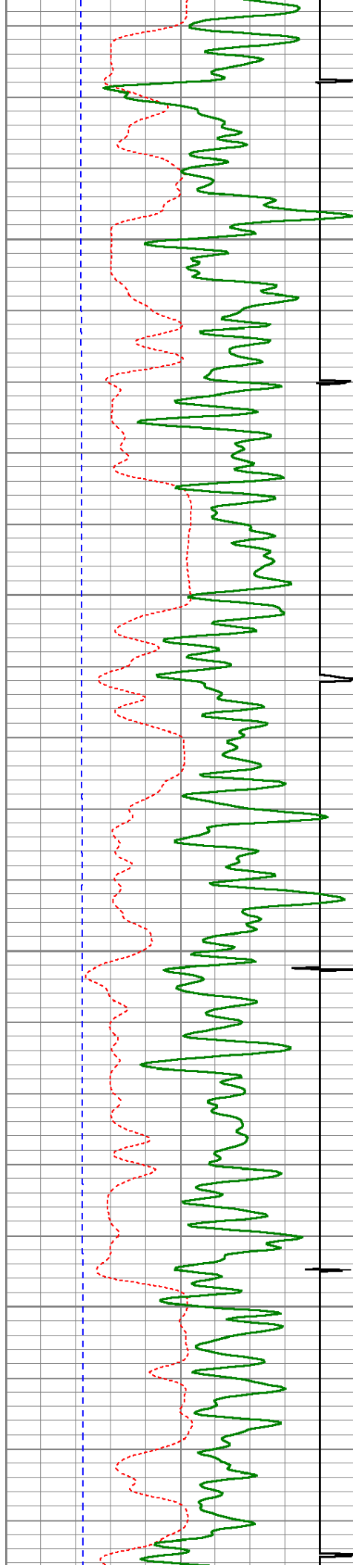
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5600

5650



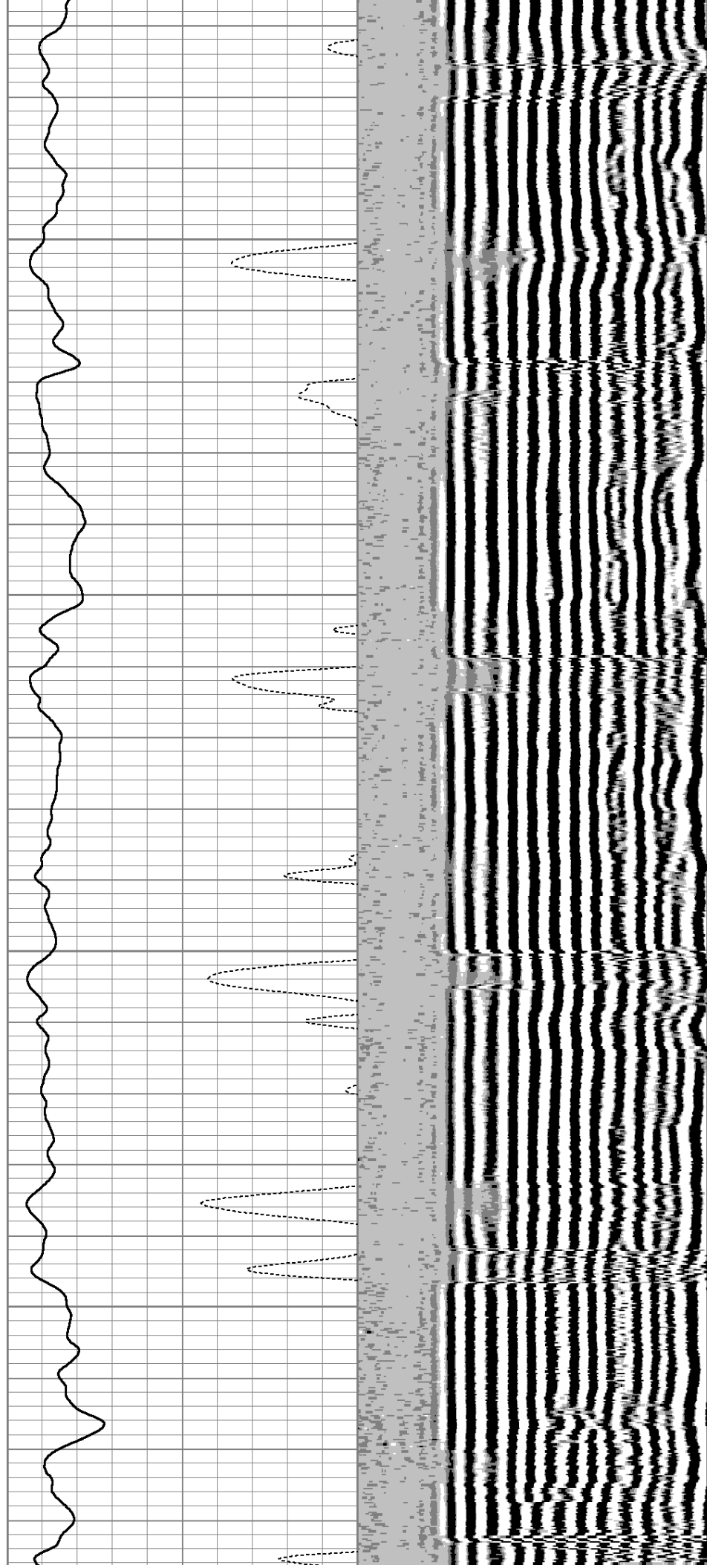


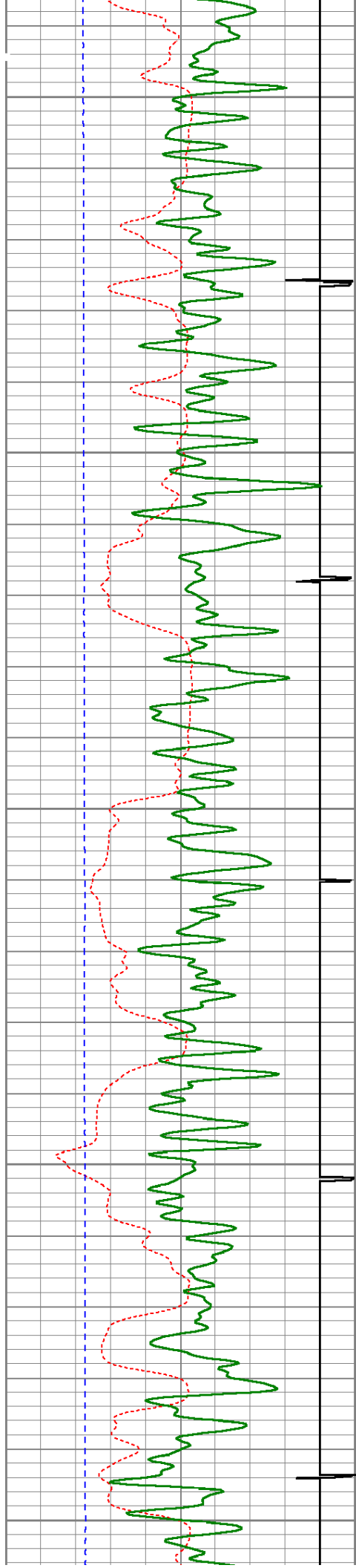
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5750

5800

5850





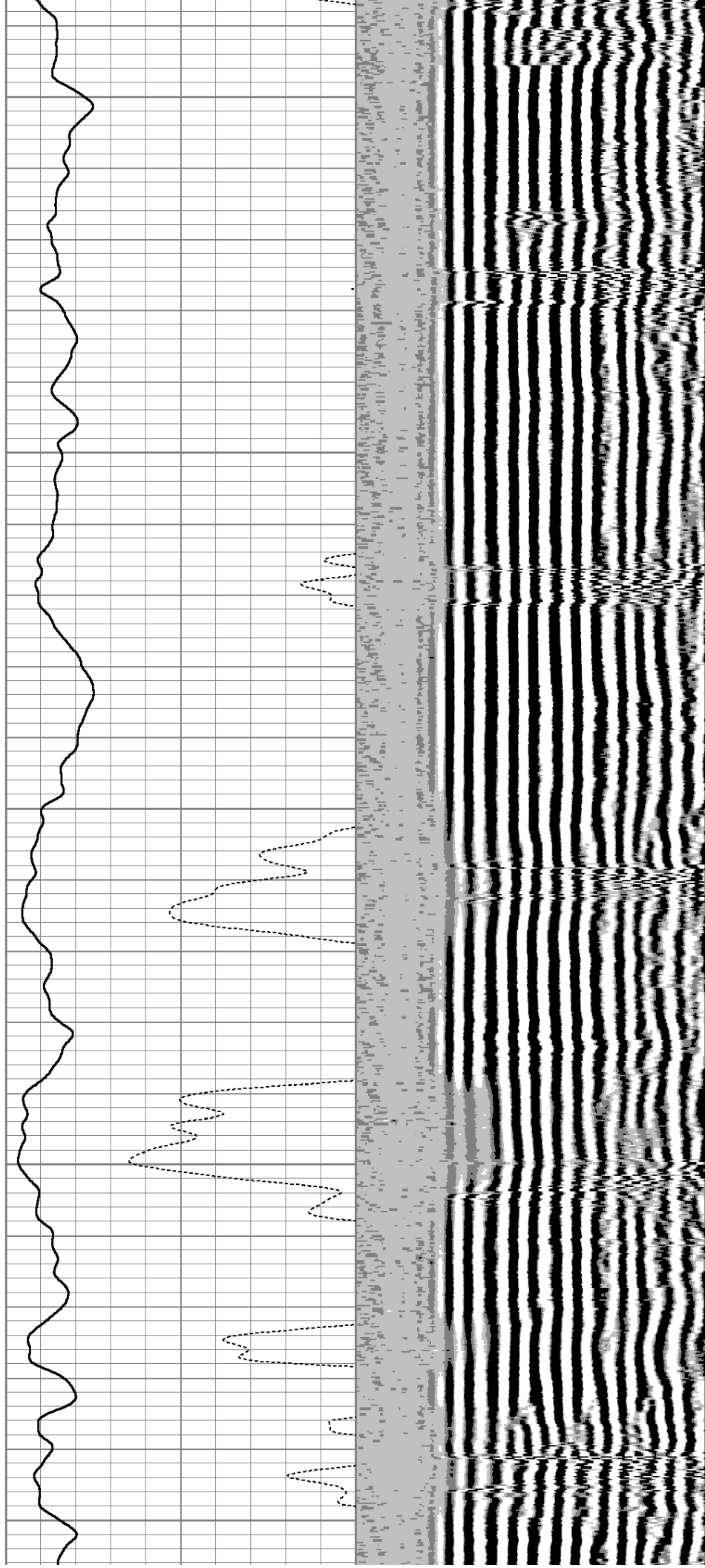
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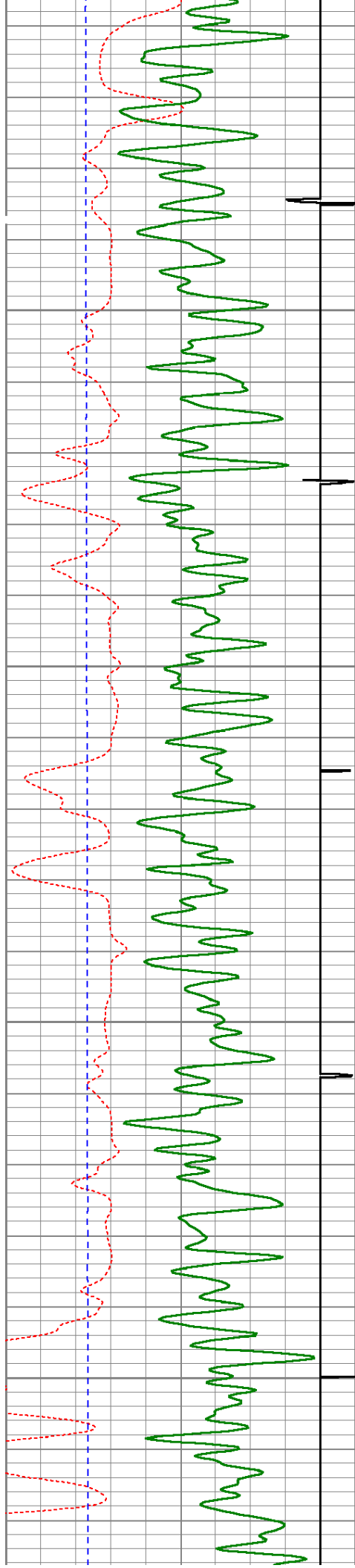
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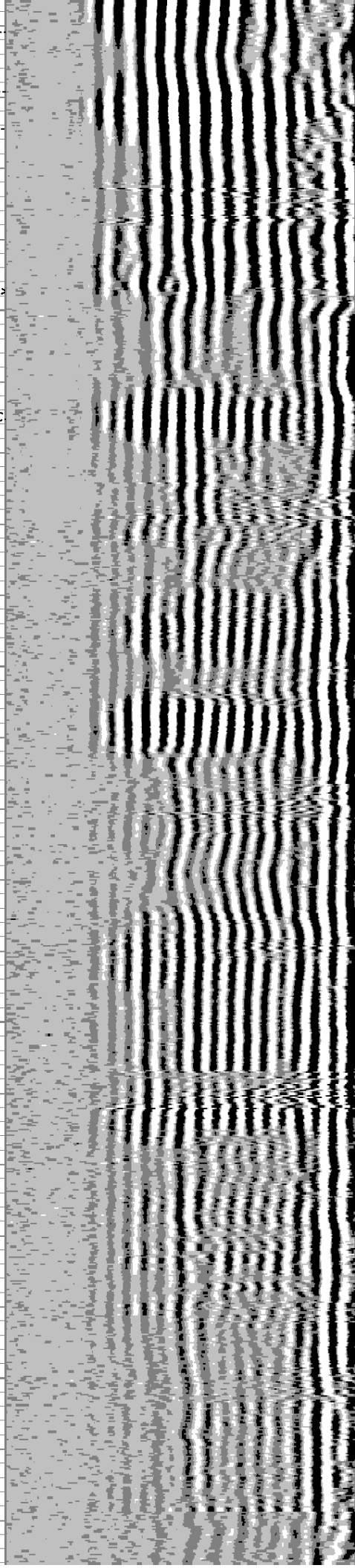
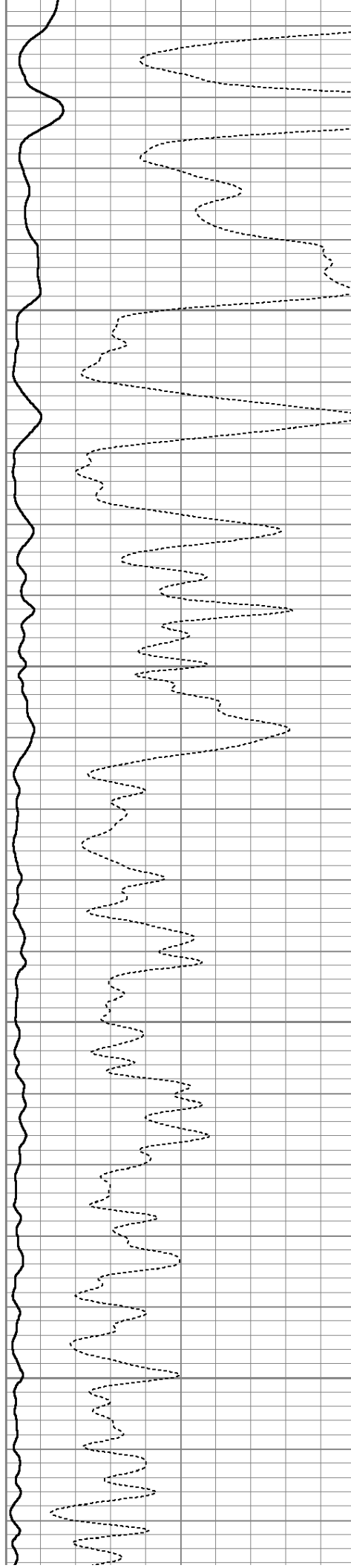


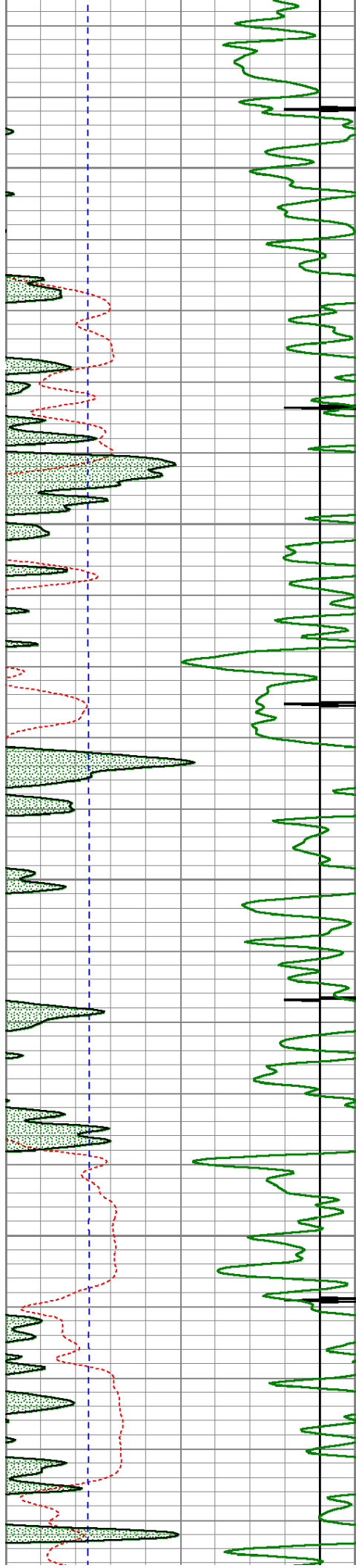
6150

6200

6250

6300



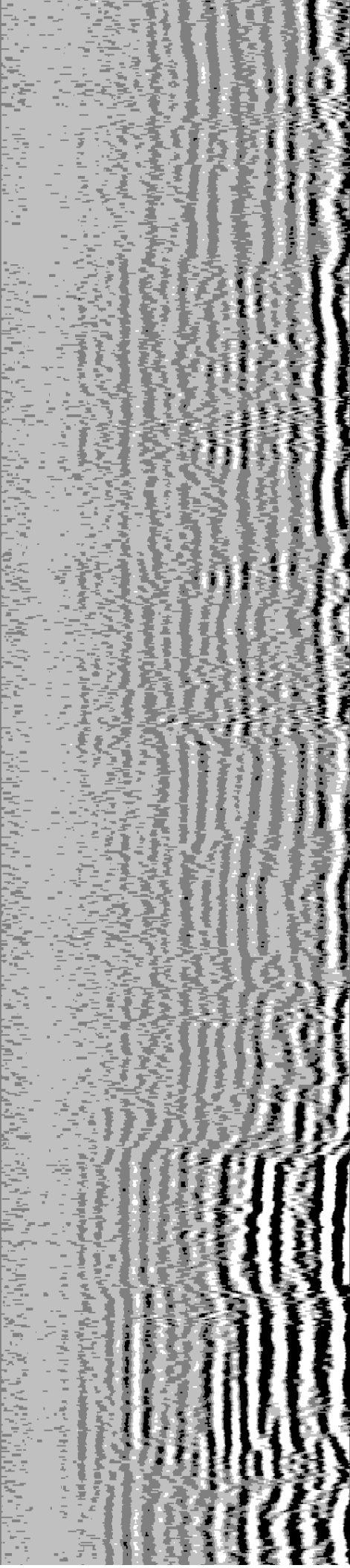
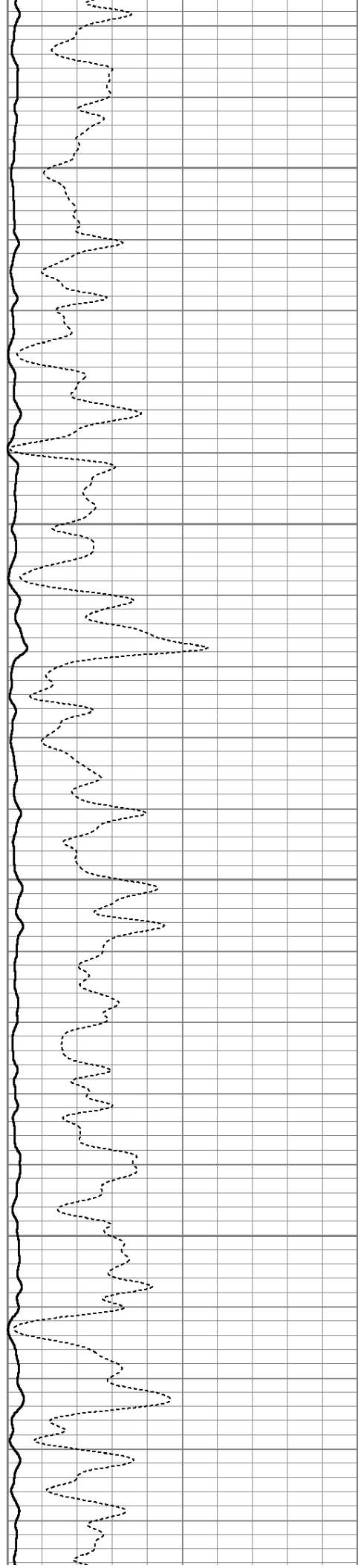


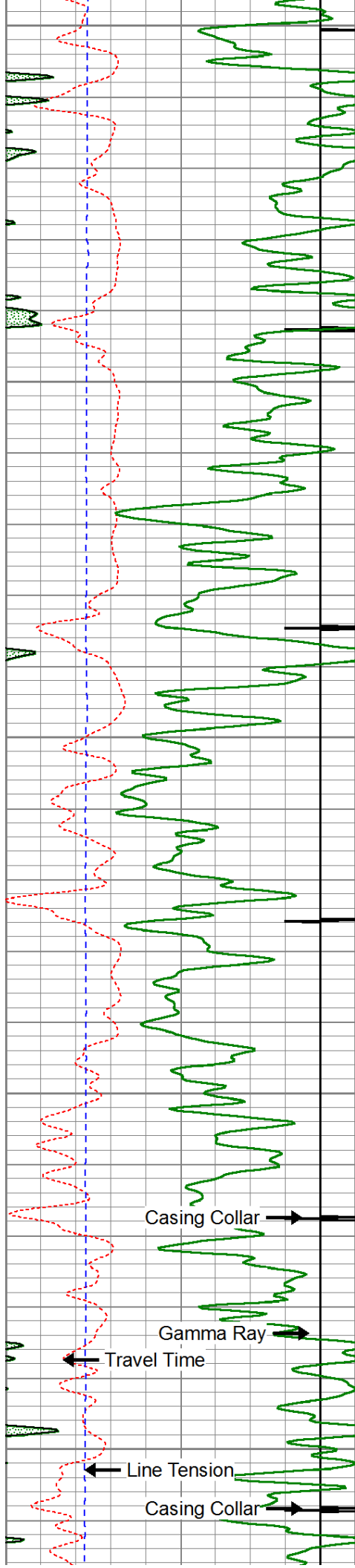
6350

6400

6450

6500





6550

6600

6650

6700

6750

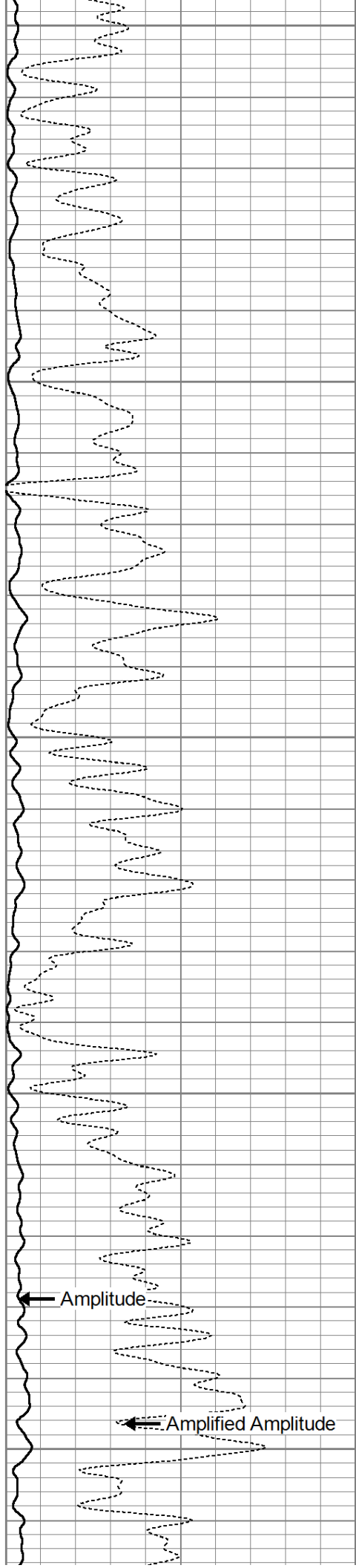
Casing Collar

Gamma Ray

Travel Time

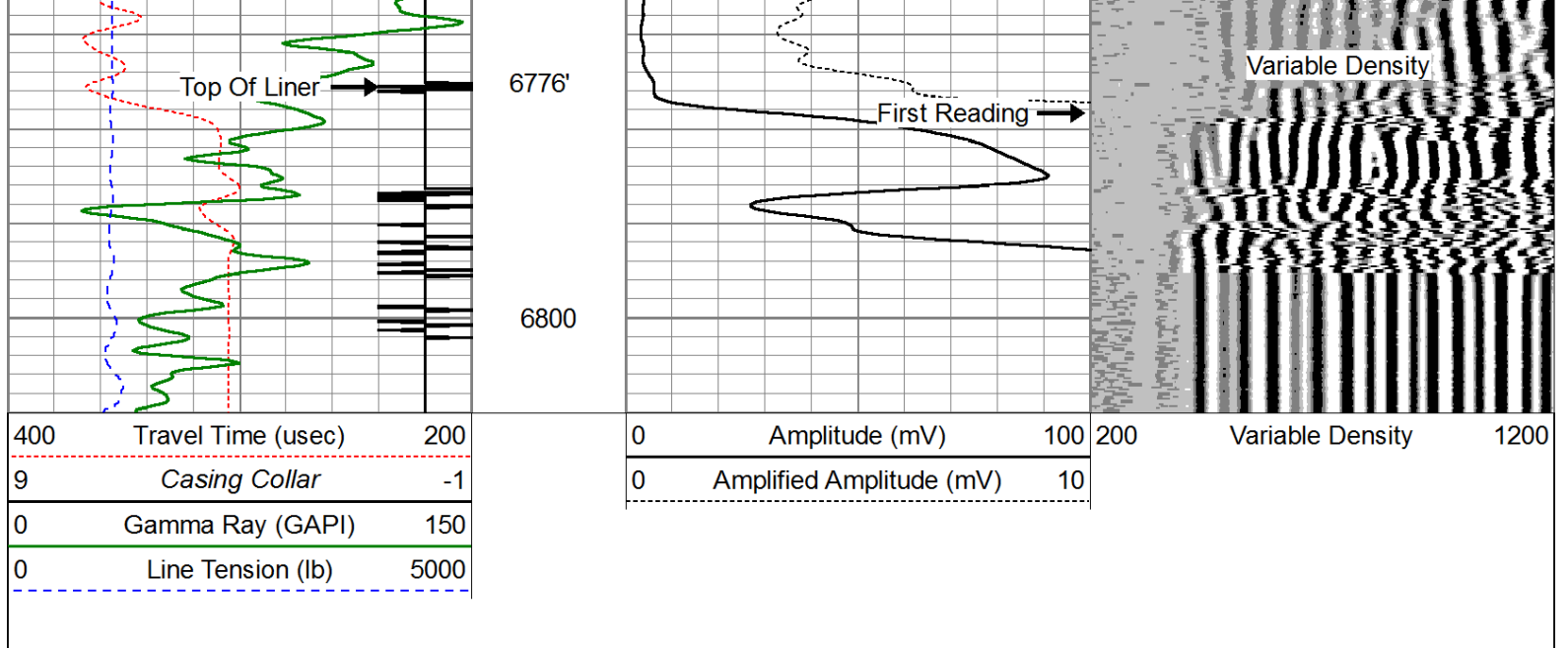
Line Tension

Casing Collar



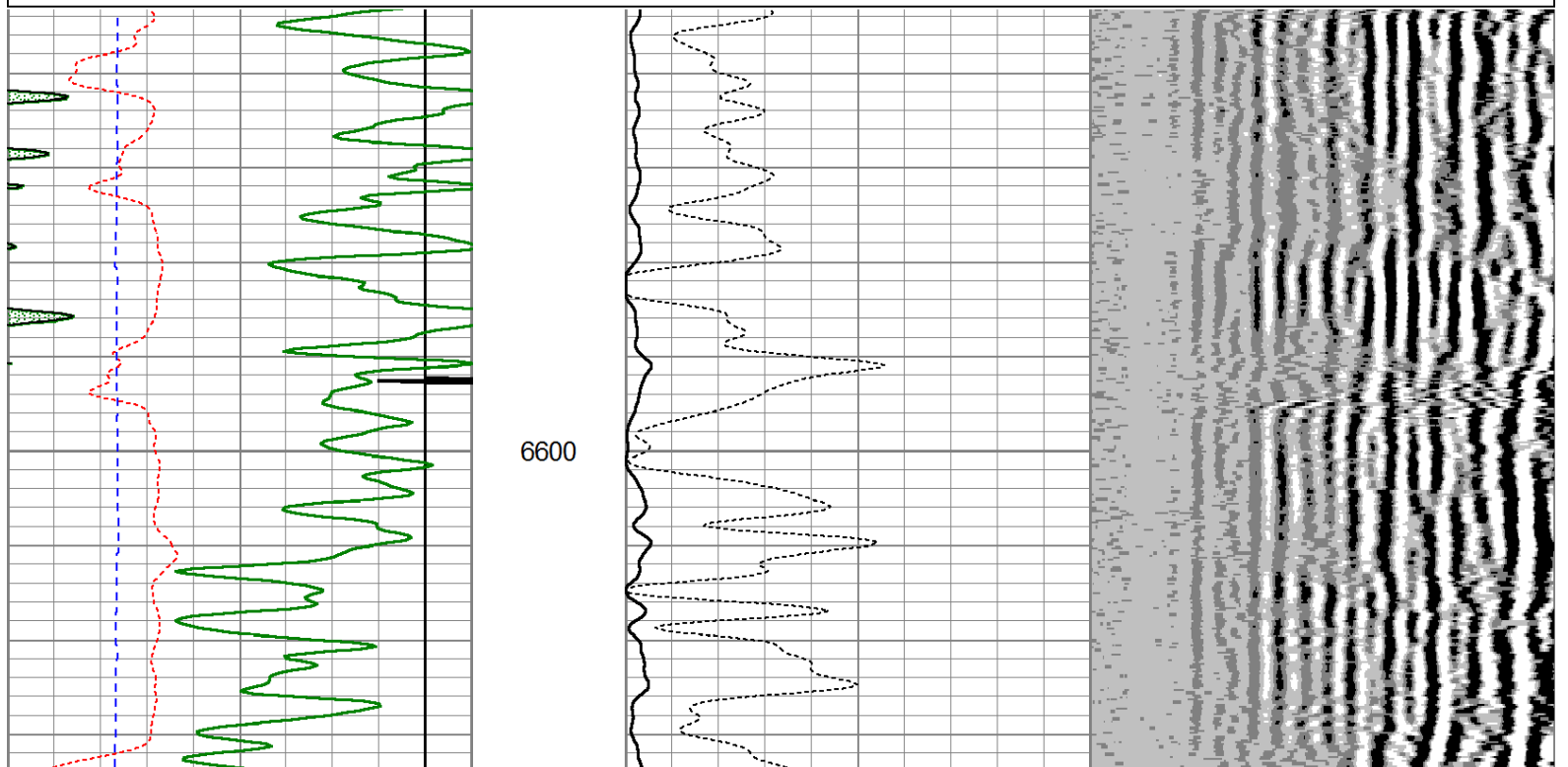
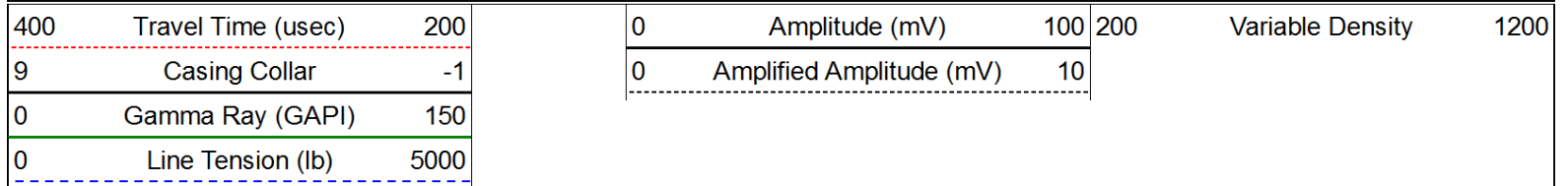
Amplitude

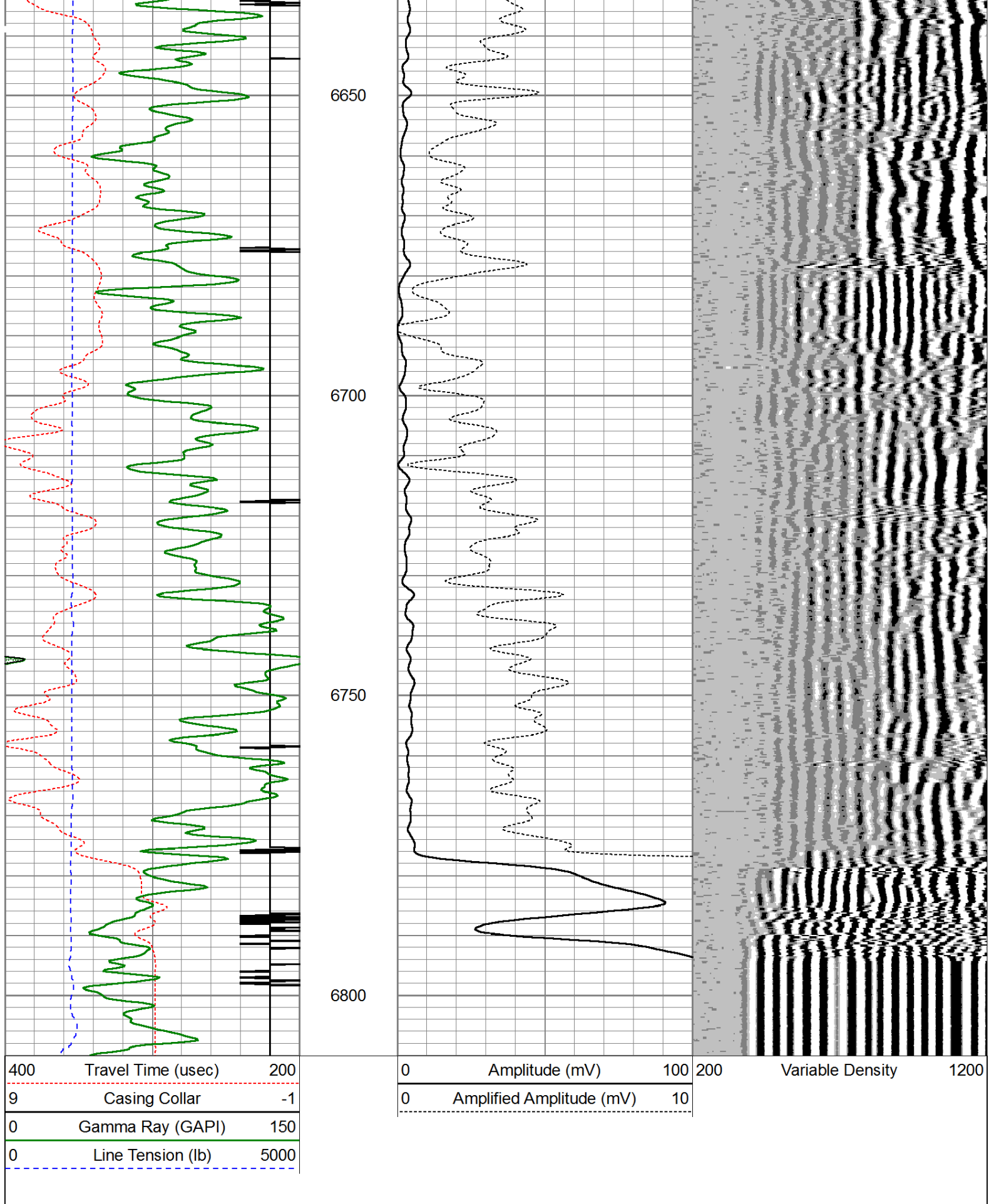
Amplified Amplitude



Repeat Pass (0 PSI)

Database File: bonanza_antelope_o34-k31-20hnc.db
 Dataset Pathname: pass4
 Presentation Format: cblprobe
 Dataset Creation: Sun May 11 12:59:47 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240





Log Variables

Database: C:\Warrior\Data\bonanza_antelope_o34-k31-20hnc.db
Dataset: field/well/run1/pass6

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_antelope_o34-k31-20hnc.db
Dataset Pathname: pass6
Dataset Creation: Sun May 11 13:04:59 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
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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:	91.600	ft

Master Calibration, performed Sun May 11 13:40:47 2014:

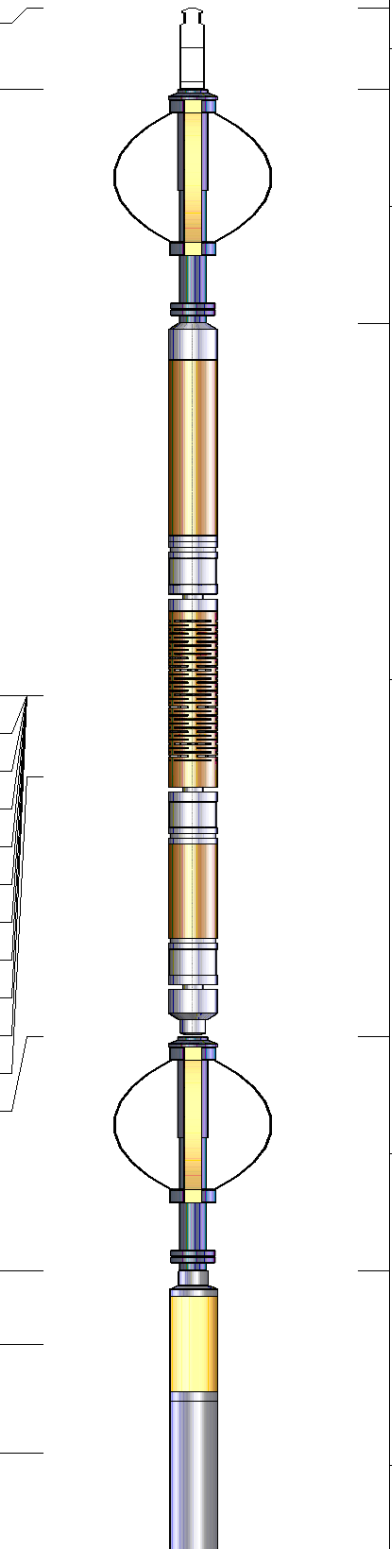
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.761	1.000	62.000	80.136	0.985
CAL	-0.005	0.764				
5'	0.014	0.651	1.000	62.000	95.659	-0.294
SUM						
S1	-0.162	0.752	0.000	100.000	109.466	17.709
S2	0.020	0.838	0.000	100.000	122.183	-2.410
S3	0.008	0.859	0.000	100.000	117.542	-0.970
S4	0.015	0.837	0.000	100.000	121.718	-1.842
S5	0.011	0.755	0.000	100.000	134.407	-1.470
S6	0.013	0.681	0.000	100.000	149.609	-1.947
S7	0.010	0.631	0.000	100.000	161.171	-1.633
S8	0.011	0.667	0.000	100.000	152.387	-1.678

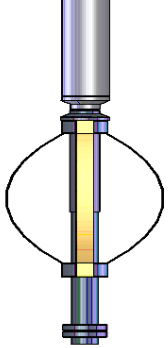
Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.005	0.764	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 Cable_head	1.00	1.44	10.00
CENT	22.16		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_antelope_o34-k31-20hnc.db: field/well/run1/pass6 Total Length: 23.16 ft Total Weight: 217.00 lb O.D. 2.75 in						

	Company	Bonanza Creek Energy Operating
	Well	Antelope O34-K31-20HNC
	Field	Wallsenburg
	County	Weld
	State	Colorado