



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH091476	Company Well Field County	WPX ENERGY CHEVRON GM 312-21 GRAND VALLEY GARFIELD	State CO
API No: 05045223560000	Location SHL: 2042' FNL & 703' FEL (20 6S 96W) BHL: 1652' FNL & 1004' FWL (21 6S 96W) CYCLONE 17		Other Services RPM
21 6S 96W GM 442-20 CYCLONE 17	SEC 21 TWP 6S RGE 96W	Elevations KB 5596 ft DF GL 5575 ft	
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevation 21 ft Above P. D.	

Date	10/OCT/14	
Run	ONE	
Service Order	US091476J	
Depth Driller	7314 ft	
Depth Logger	7243 ft	
Bottom Logged Interval	7233 ft	
Top Logged Interval	21 ft	
Time Started	0830	
Time Finished	1230	
Operator Rig Time	3 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	61 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 PSI	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	241 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	44271	GRAND JUNCTION
Recorded By	FLOYD RENEAU	
Witnessed By	COLE APPLIGATE	

- FOLD HERE

In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record		
Bit Size	From	To
13.5 in	0 ft	1080 ft
8.75 in	1080 ft	7314 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1080 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	7314 ft

Remarks
All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.
The amount of linear shift is ZERO feet.
Logged with zero PSI at wellhead.
BHT = 241°F
SJ = 4048'-4070'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENT
1	1	GR/CCL	2459XA	10218503	CENT

PRIMARY PRESENTATION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	27.312	7253.000
RAL	Amp Gate Start Near	195.000	usec	27.312	7253.000
RAL	Amp Gate Start Radial	195.000	usec	27.312	7253.000
RAL	Amp Gate Width Far	25.000	usec	27.312	7253.000
RAL	Amp Gate Width Near	25.000	usec	27.312	7253.000
RAL	Amp Gate Width Radial	25.000	usec	27.312	7253.000
RAL	casing od	4.500	inches	27.312	7253.000
RAL	casing wt	11.600	lbm/ft	27.312	7253.000
RAL	FB Start Far	291.900	usec	27.312	7253.000
RAL	FB Start Near	180.000	usec	27.312	7253.000
RAL	FB Start Radial	180.000	usec	27.312	7253.000
RAL	FB Thresh Far	10.000	mv	27.312	7253.000
RAL	FB Thresh Near	4.000	mv	27.312	7253.000
RAL	FB Thresh Radial	4.000	mv	27.312	7253.000
RAL	Fluid Travel Time	200.000	usec/ft	27.312	7252.937

DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

1426XA -11.360  
2459XA -7.250  
2459XA -5.390  
2459XA 0.000

FPR3 FPR5 TT3 TTR1 TTR2 TTR3  
TTR4 TTR5 TTR6 TTR7 TTR8 XAMP  
AFAR SIG TT5  
CCL  
GR  
NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

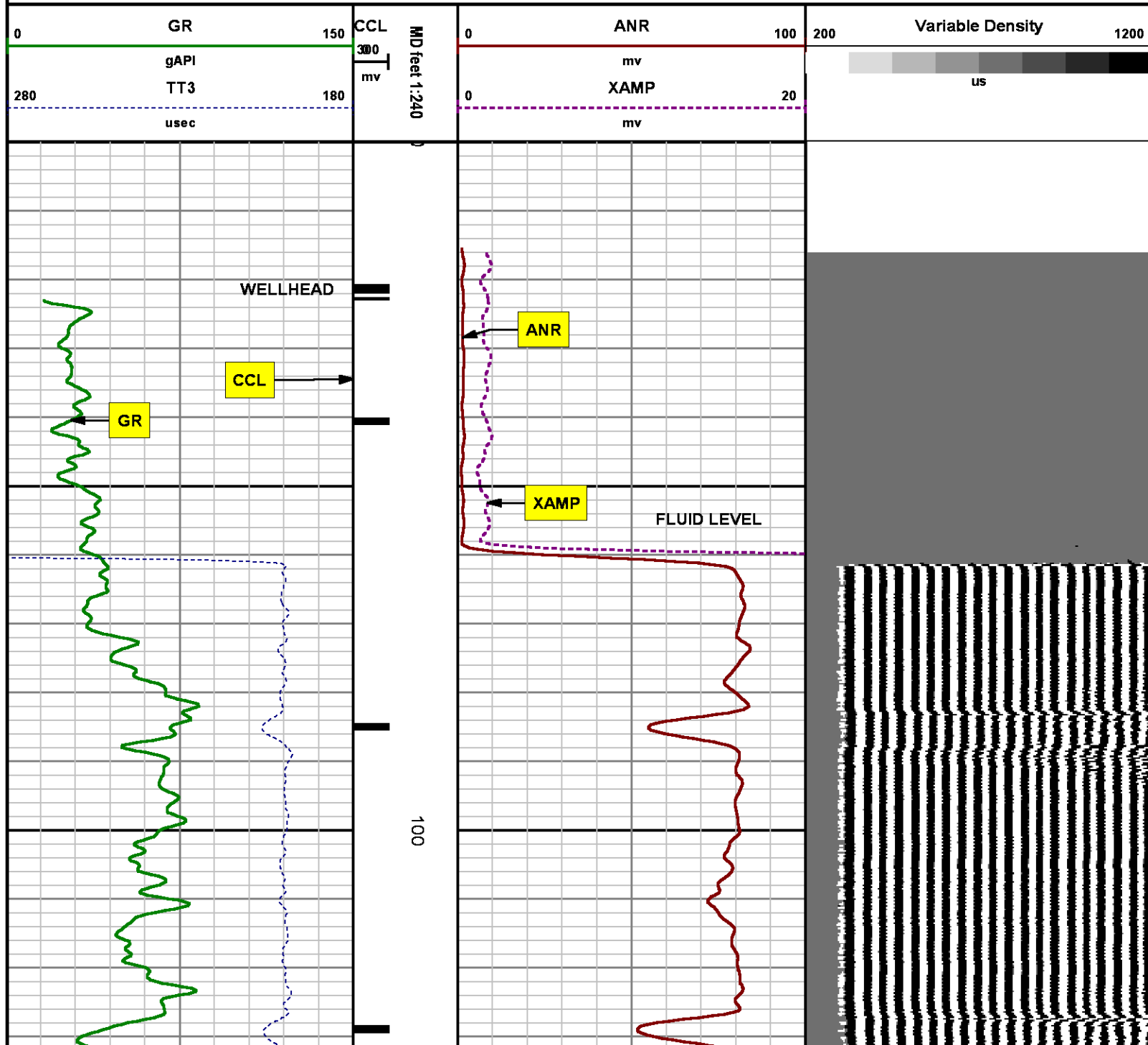
Well : CHEVRON GM 312-21

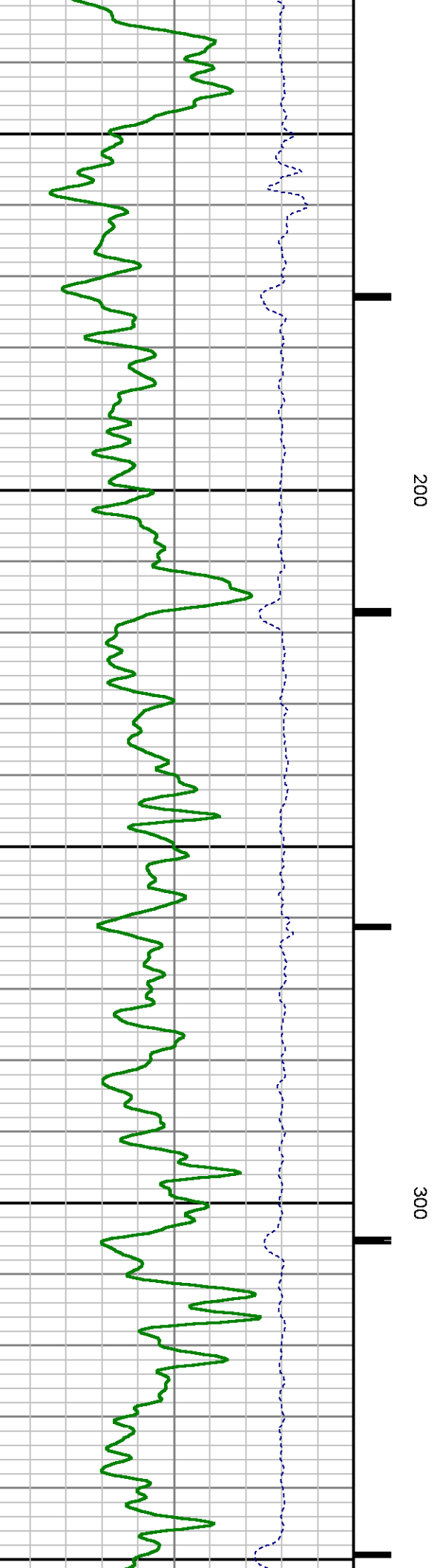
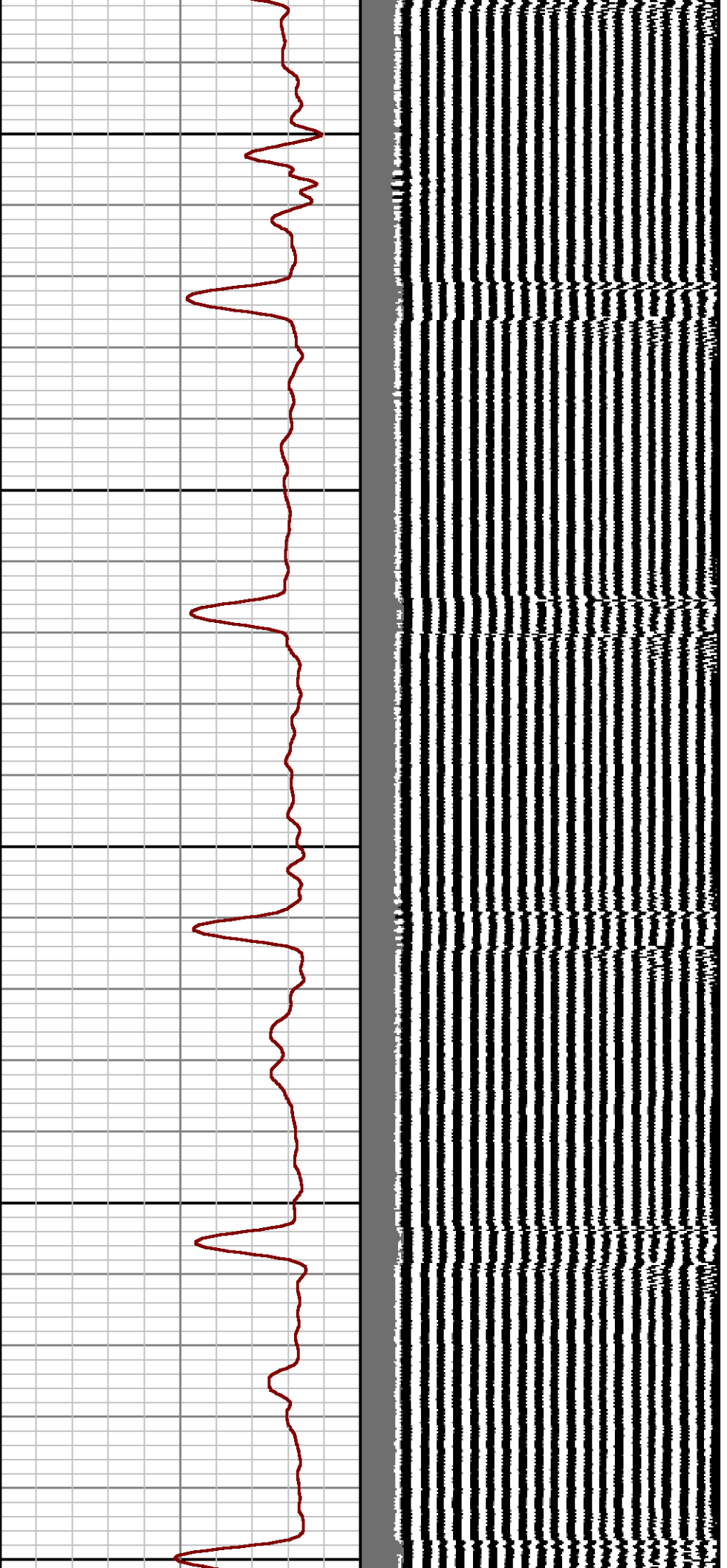
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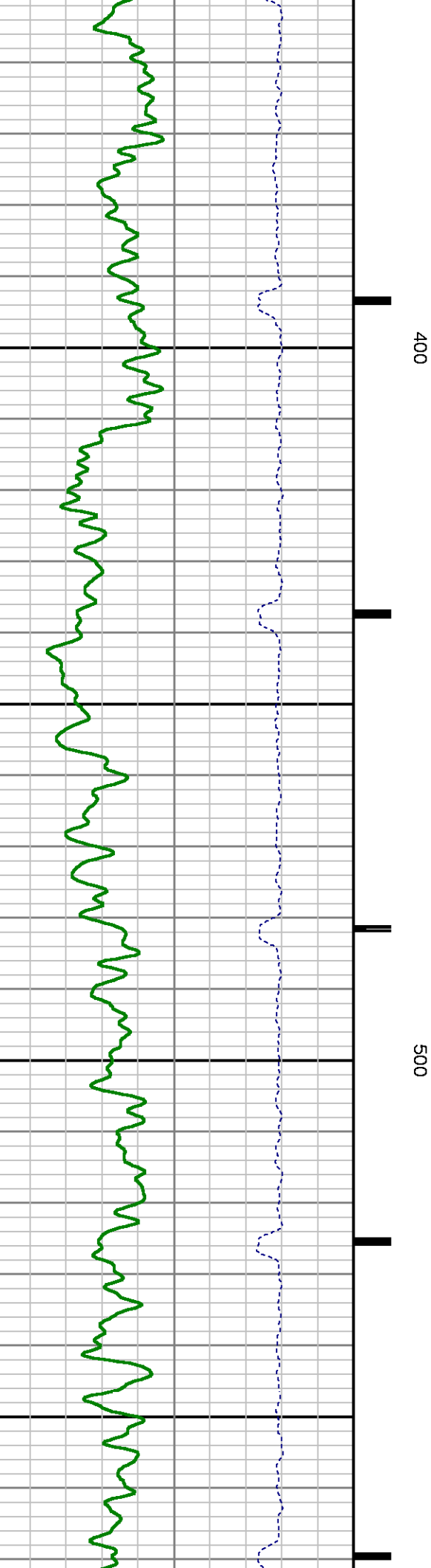
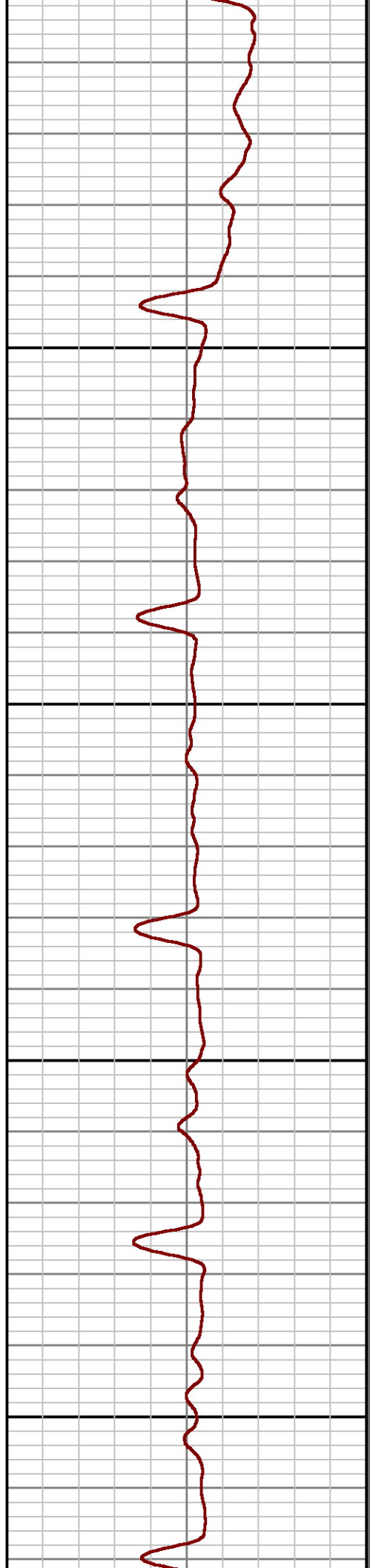
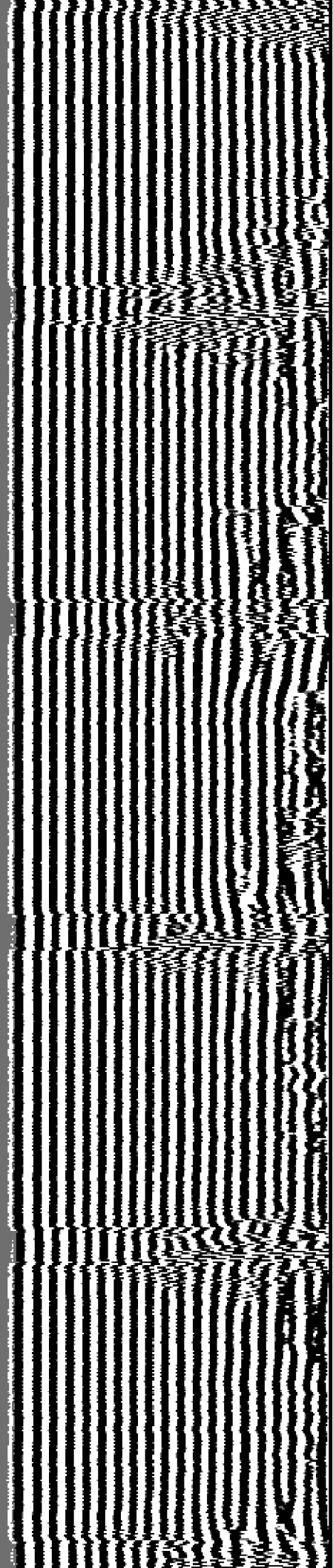
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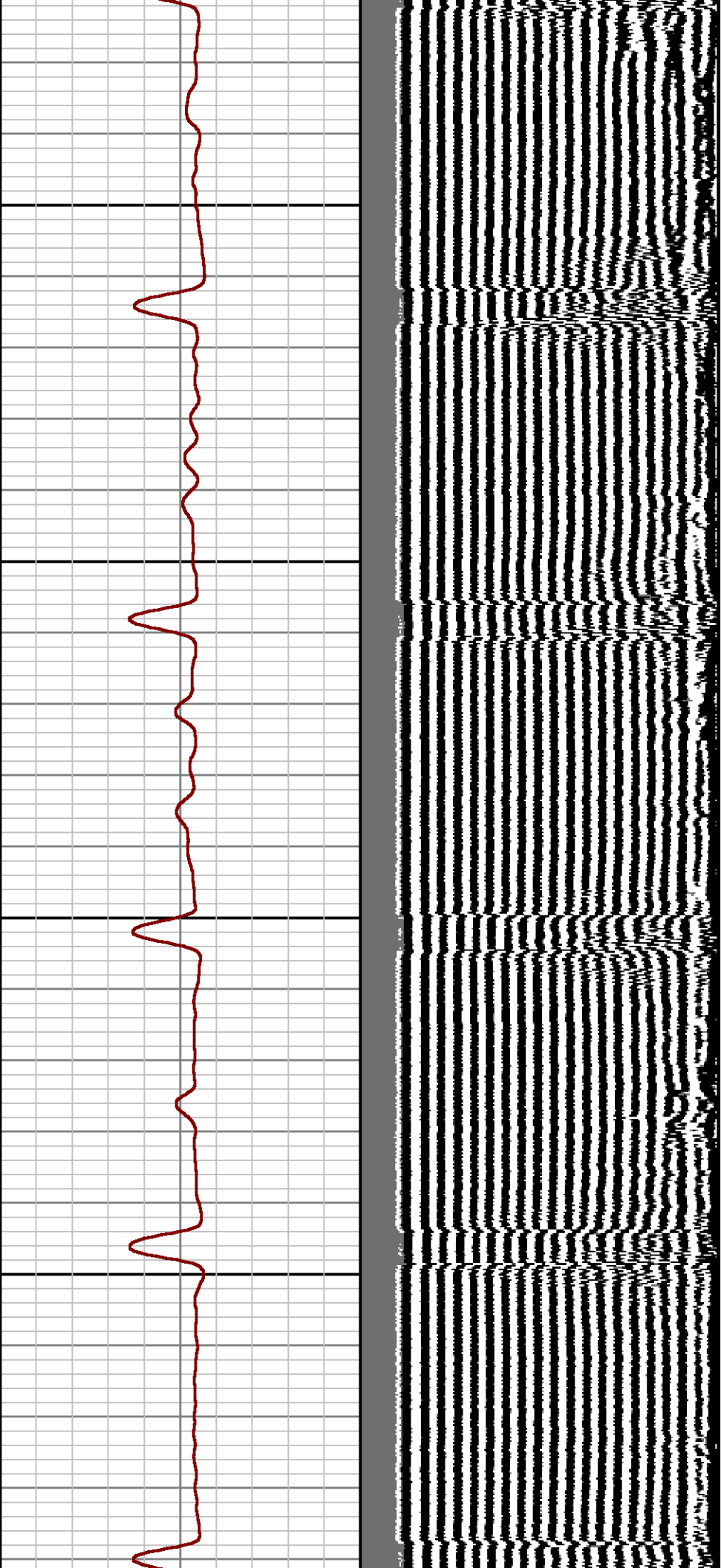
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Created : 10/10/2014 10:43:07 AM



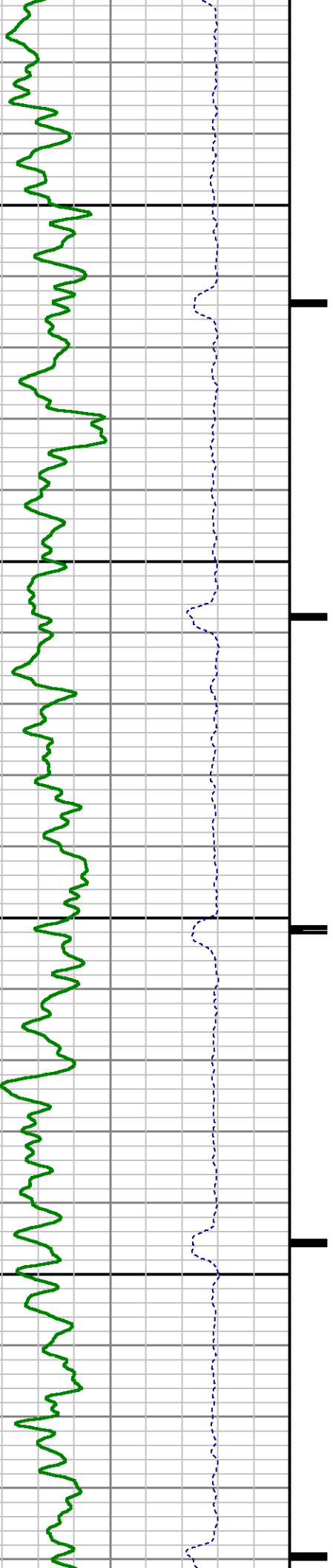


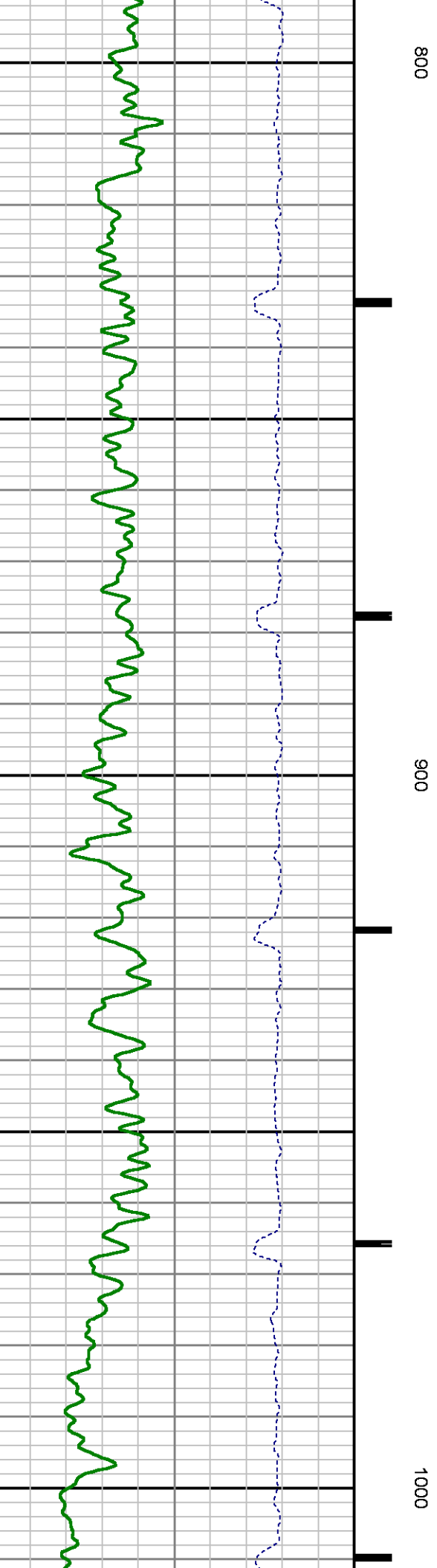
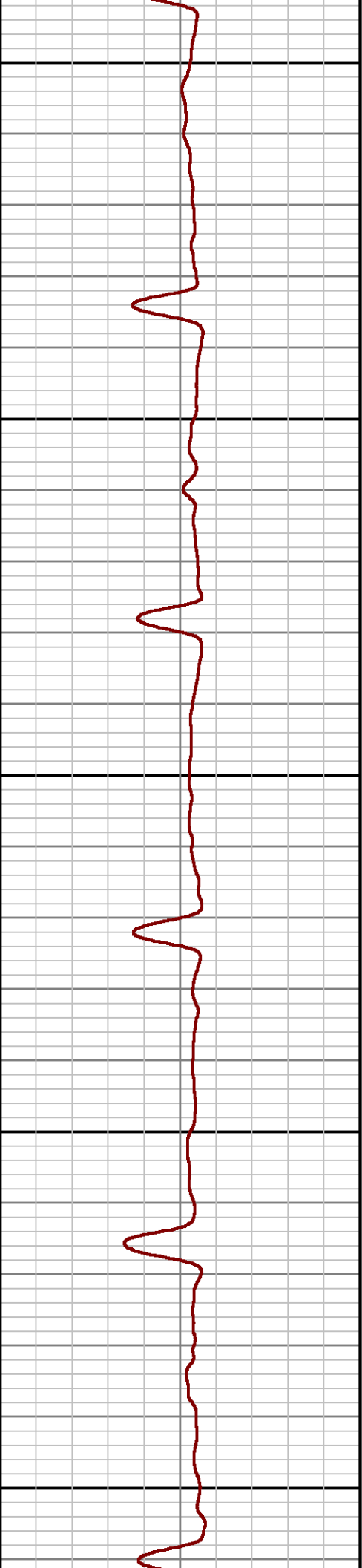
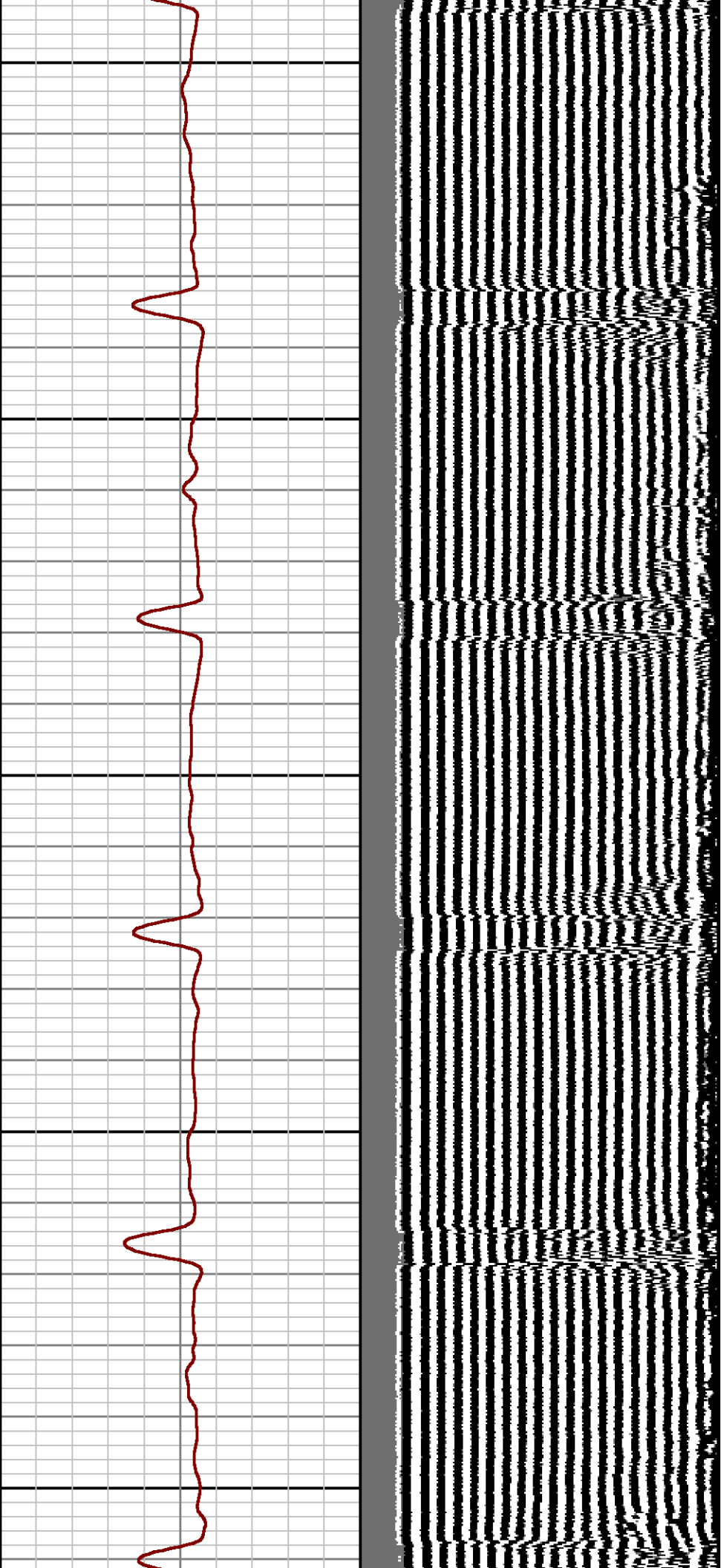




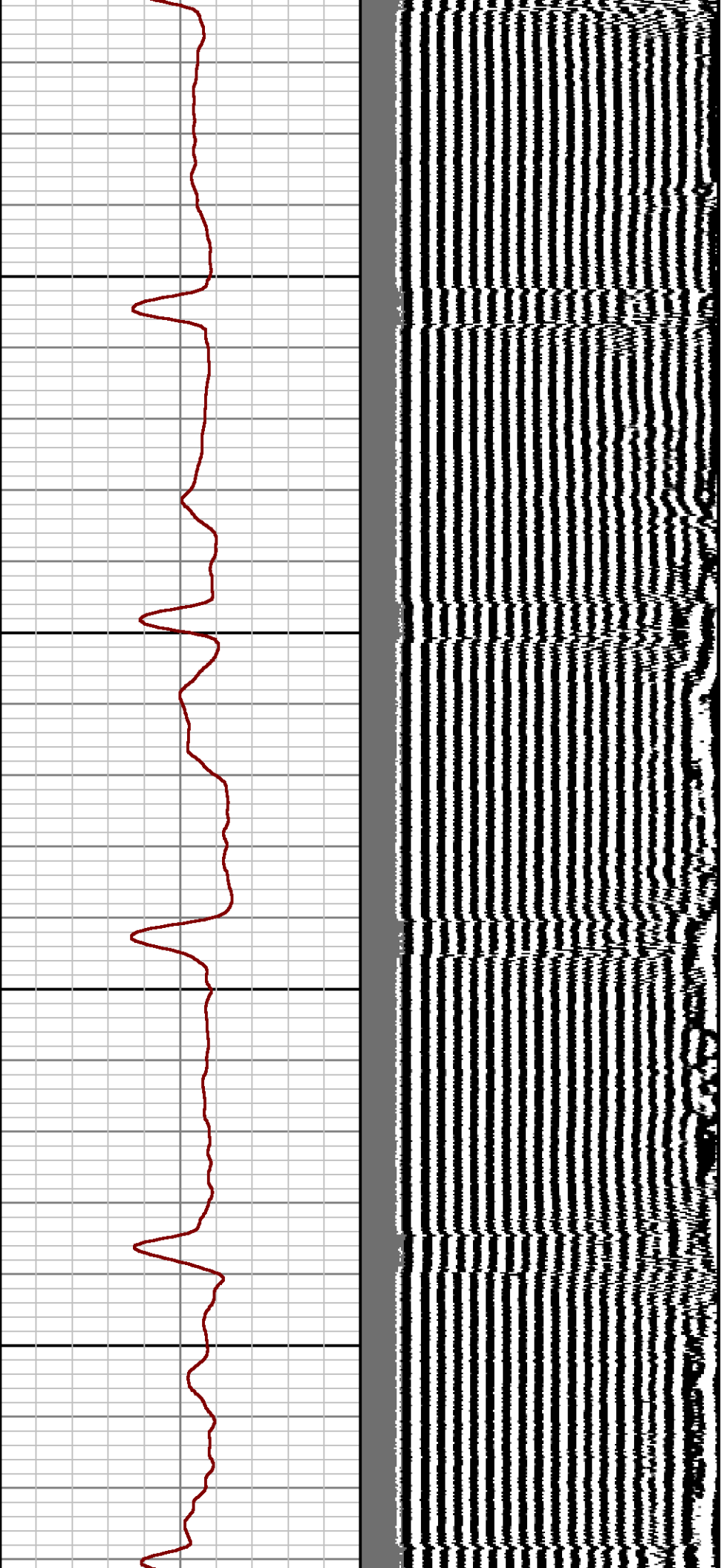
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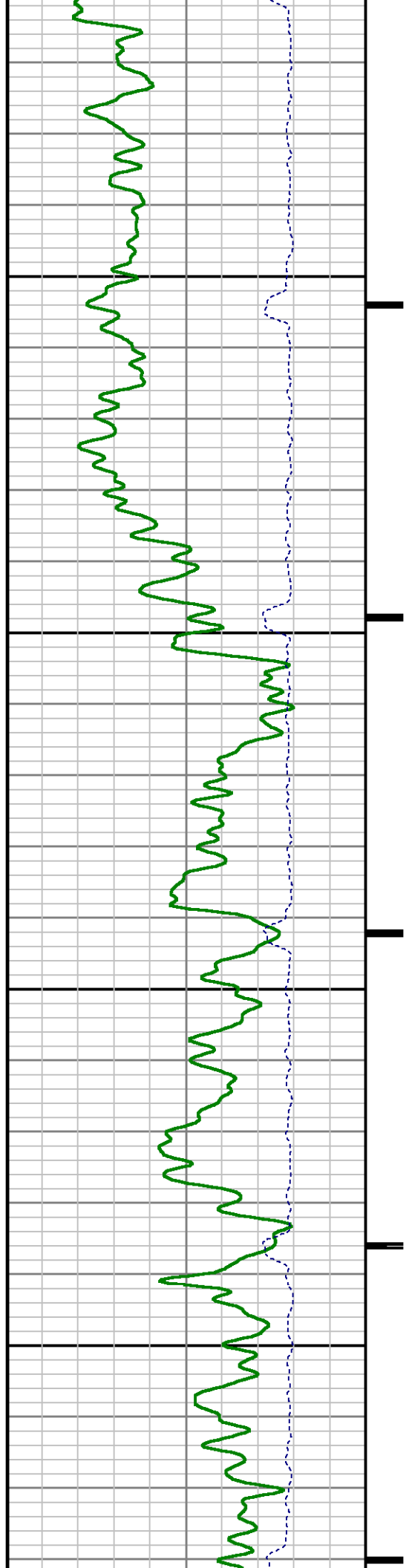




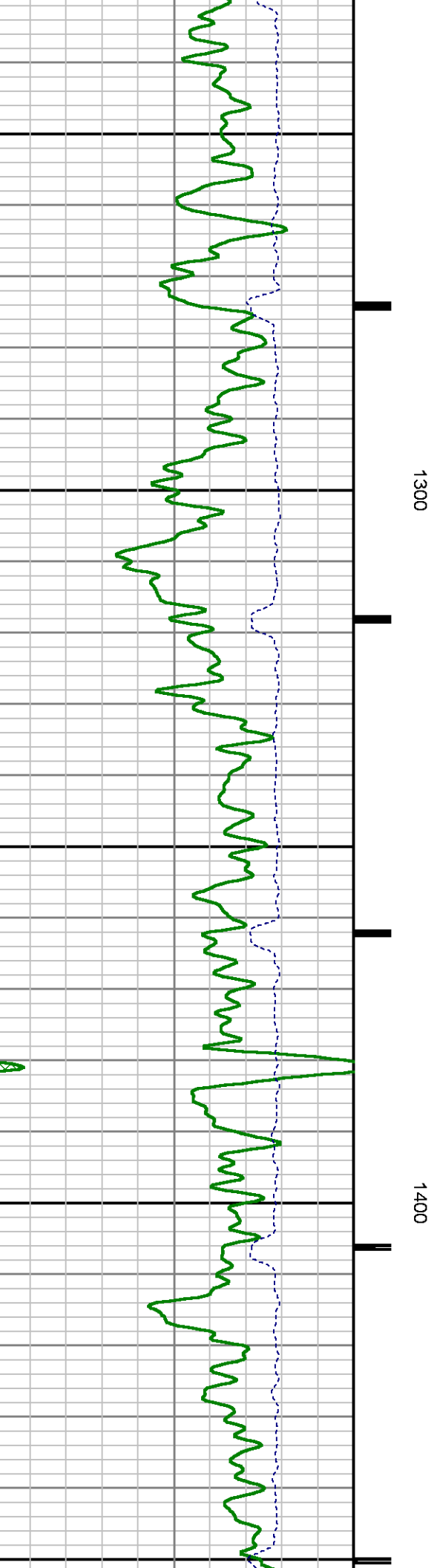
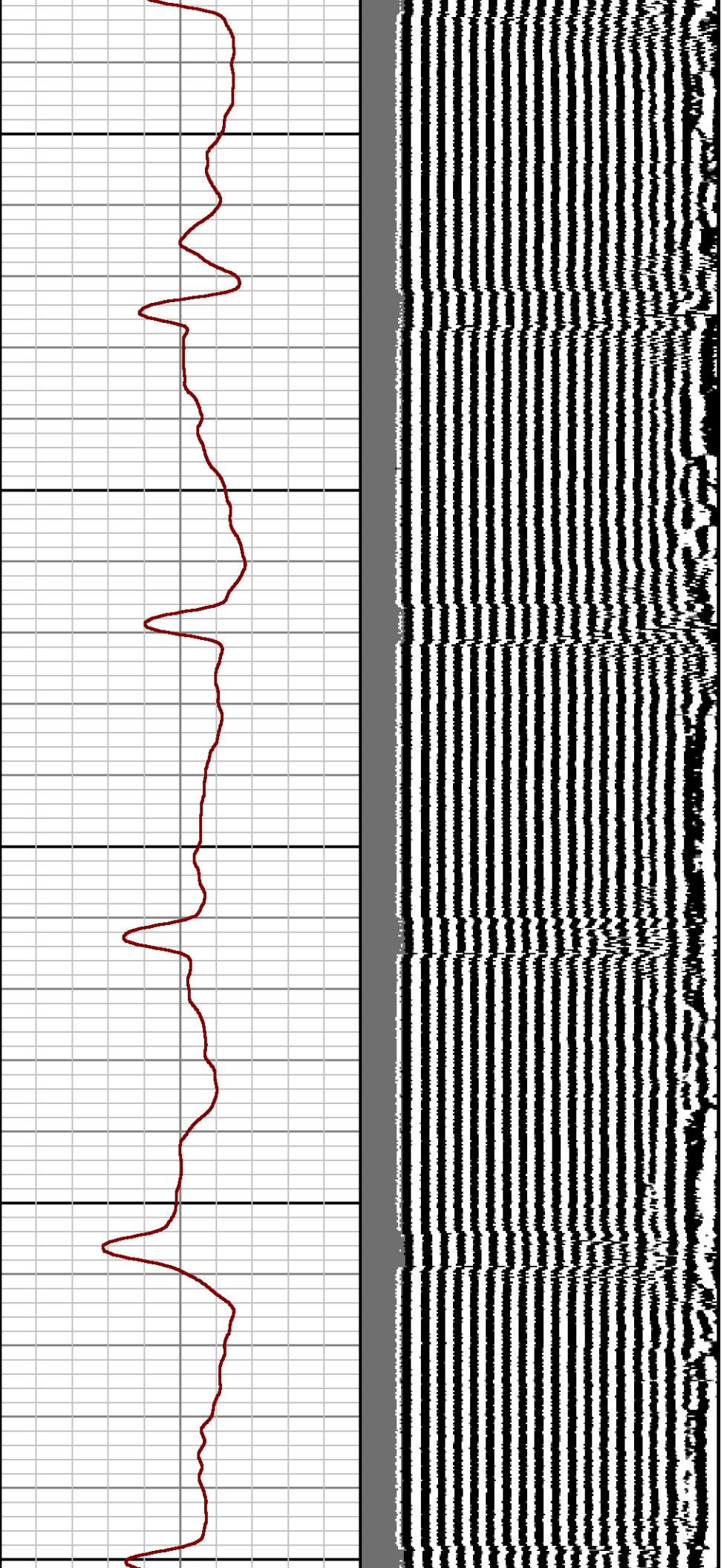


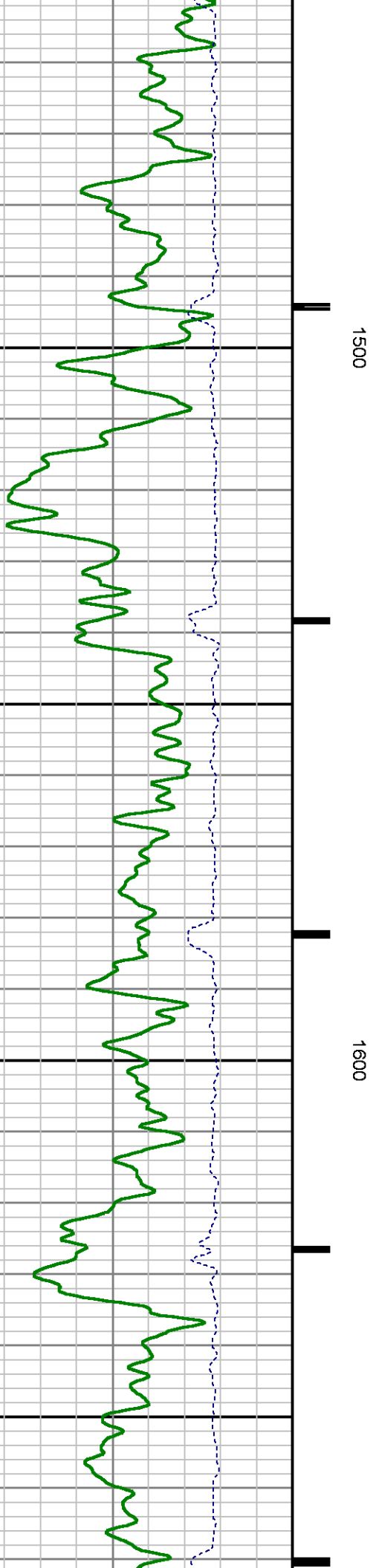
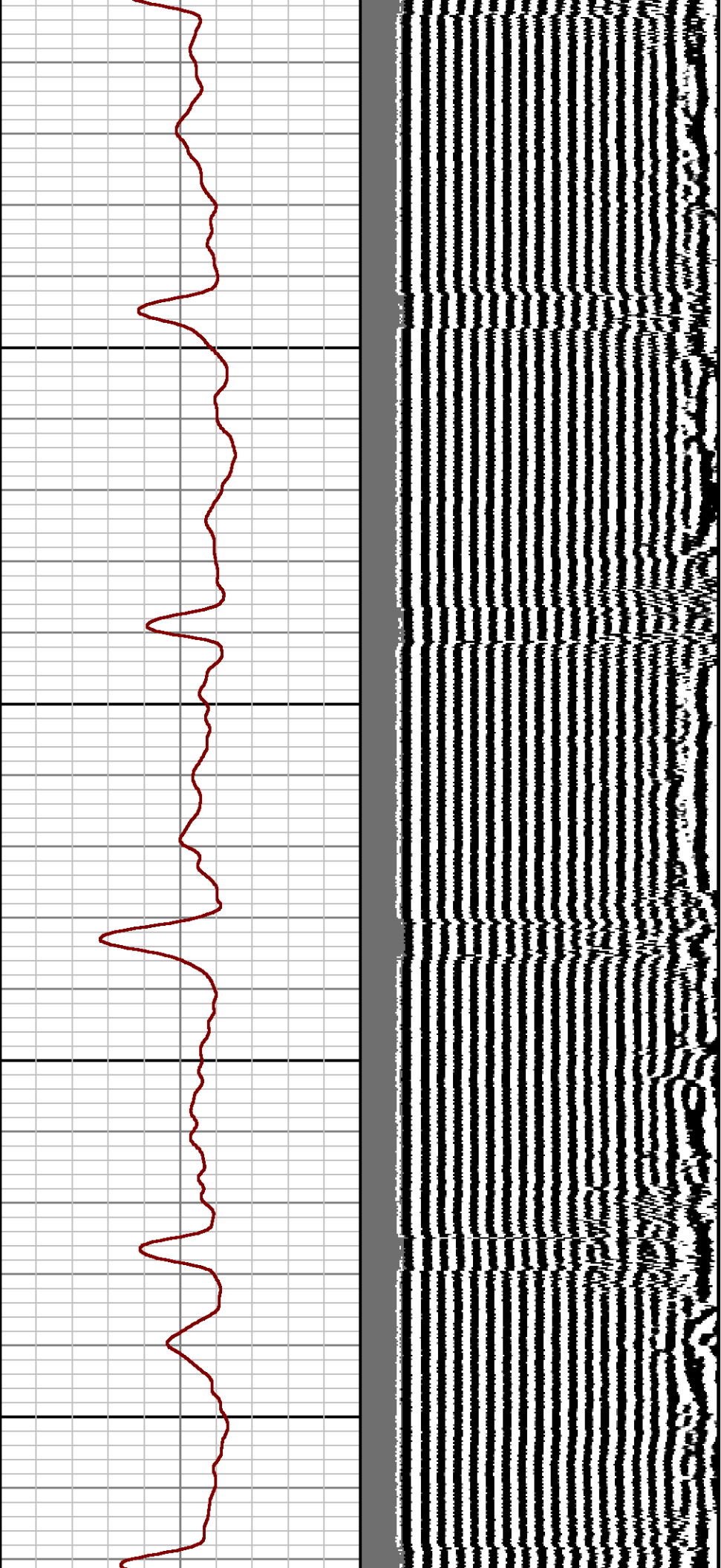
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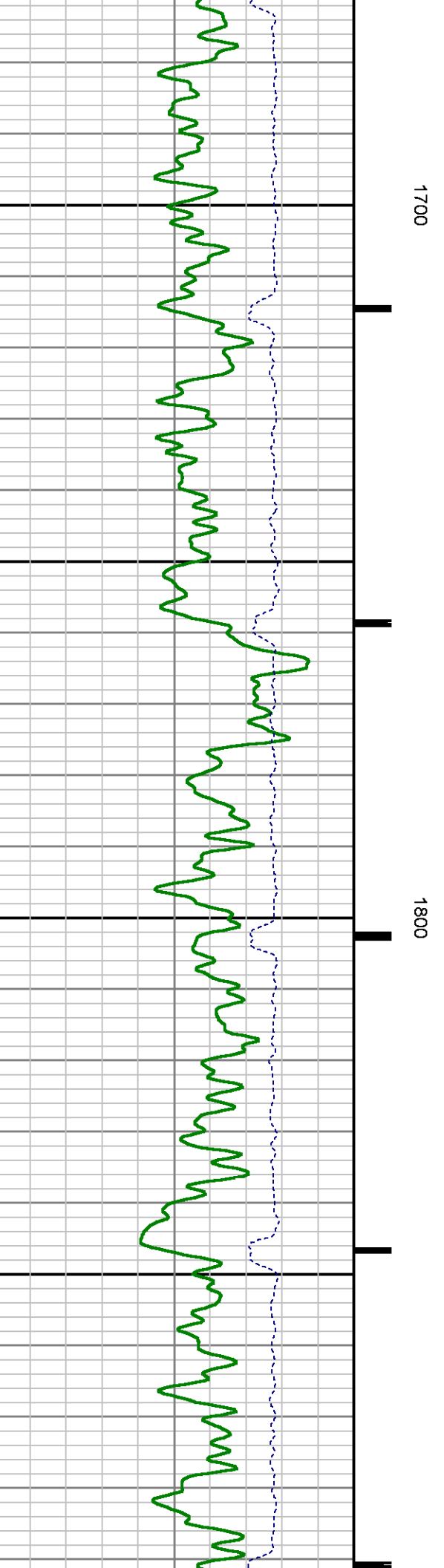
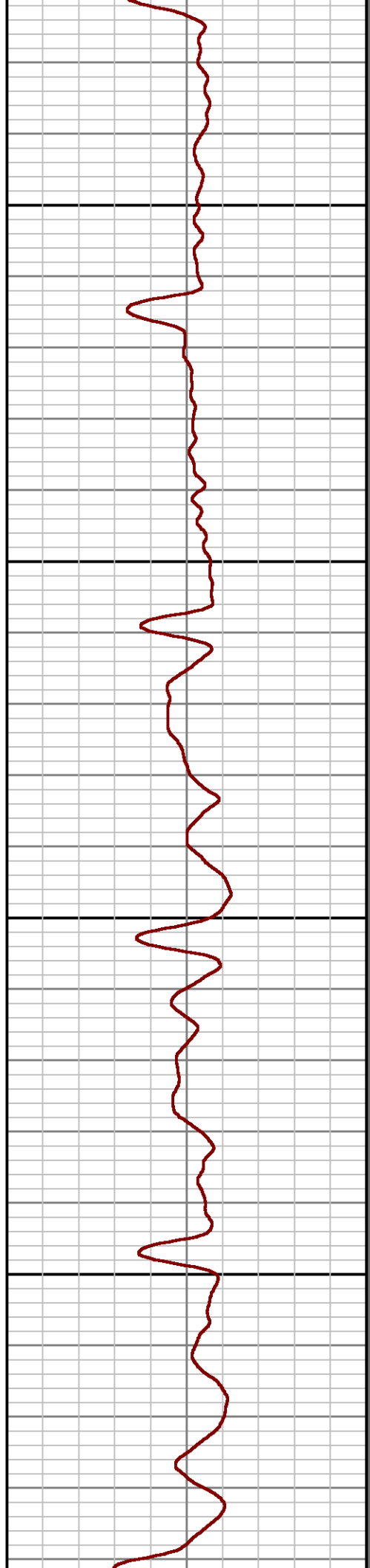
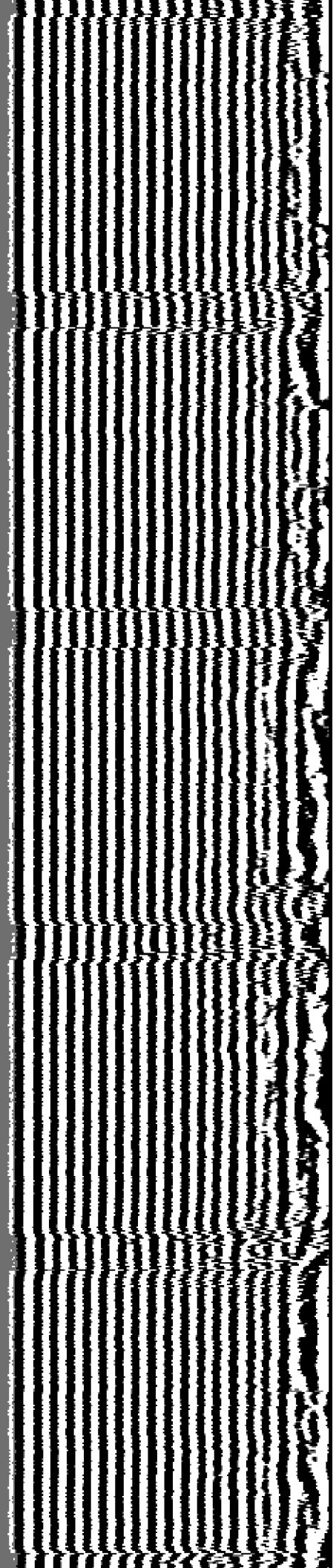
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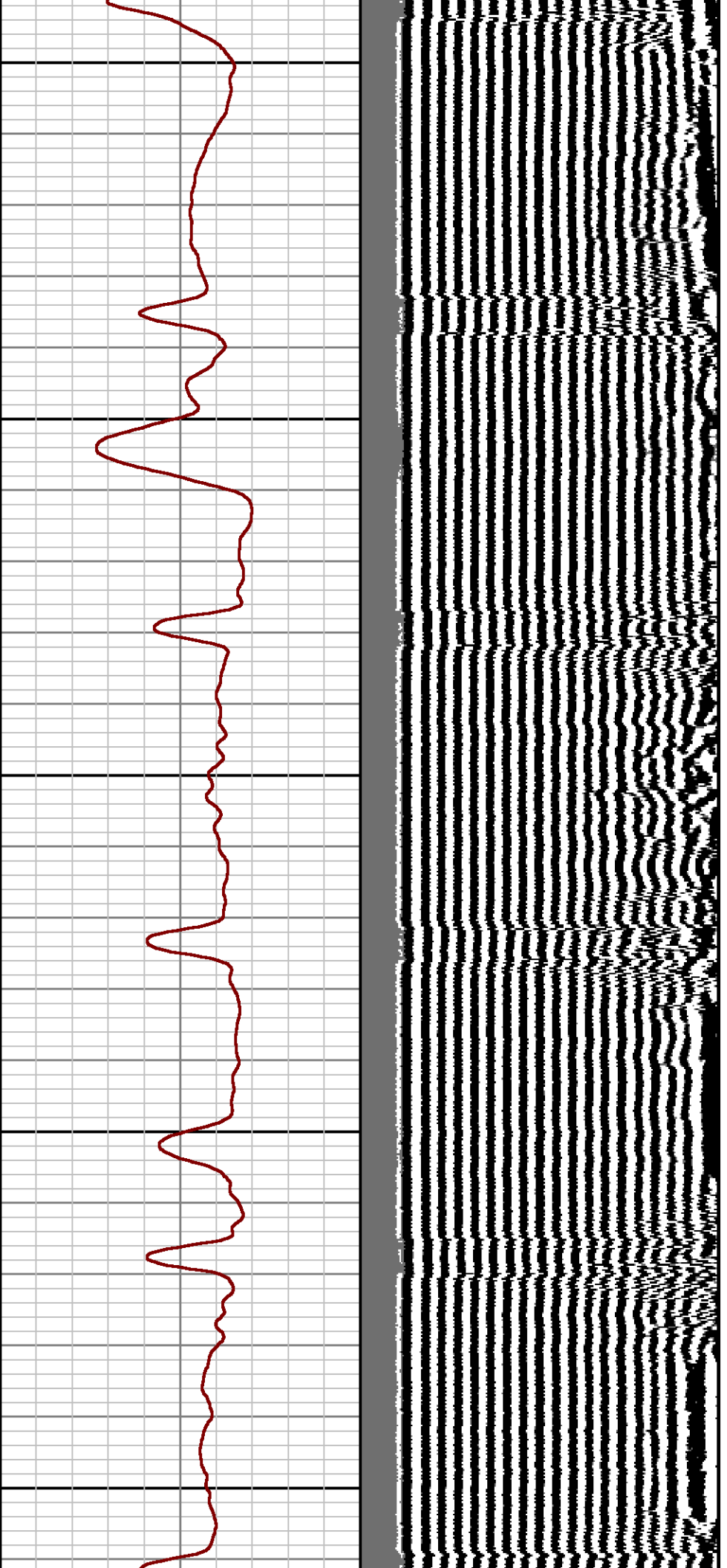








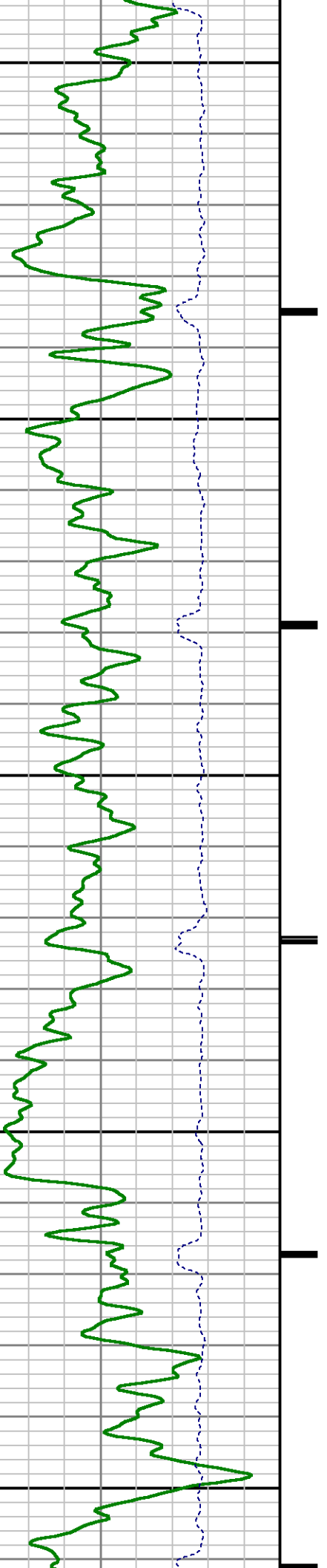


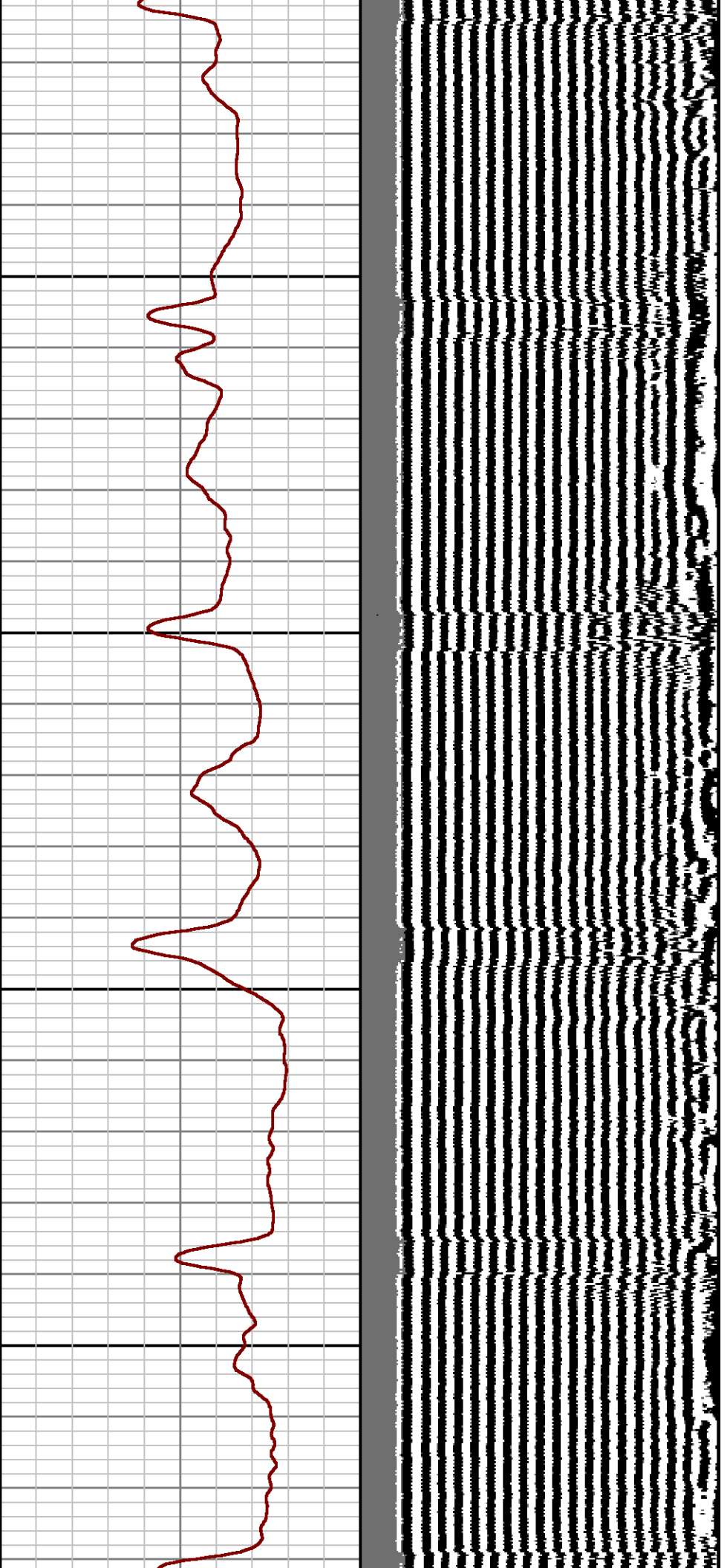


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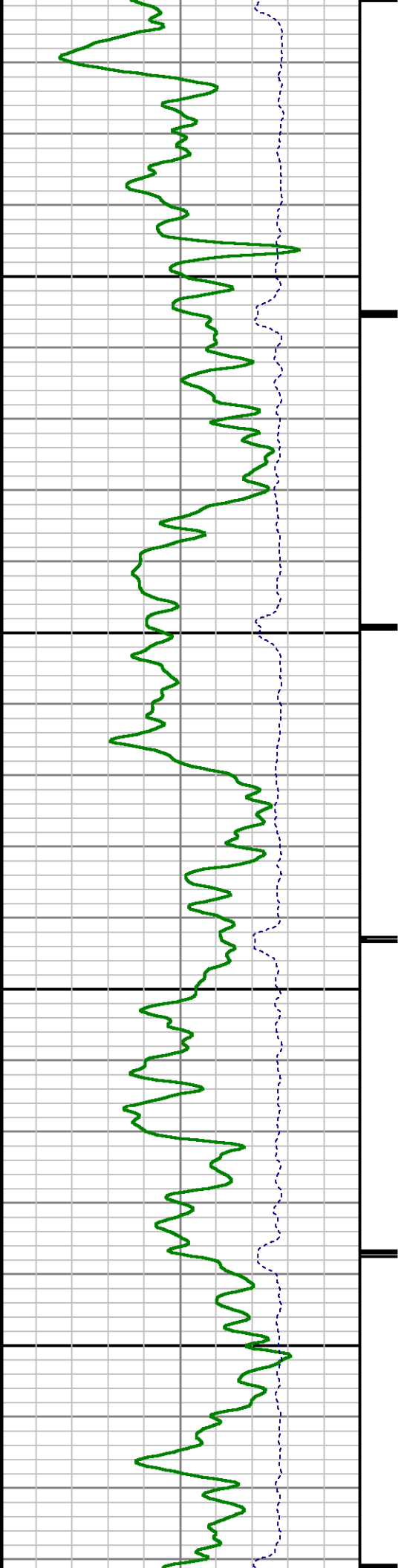
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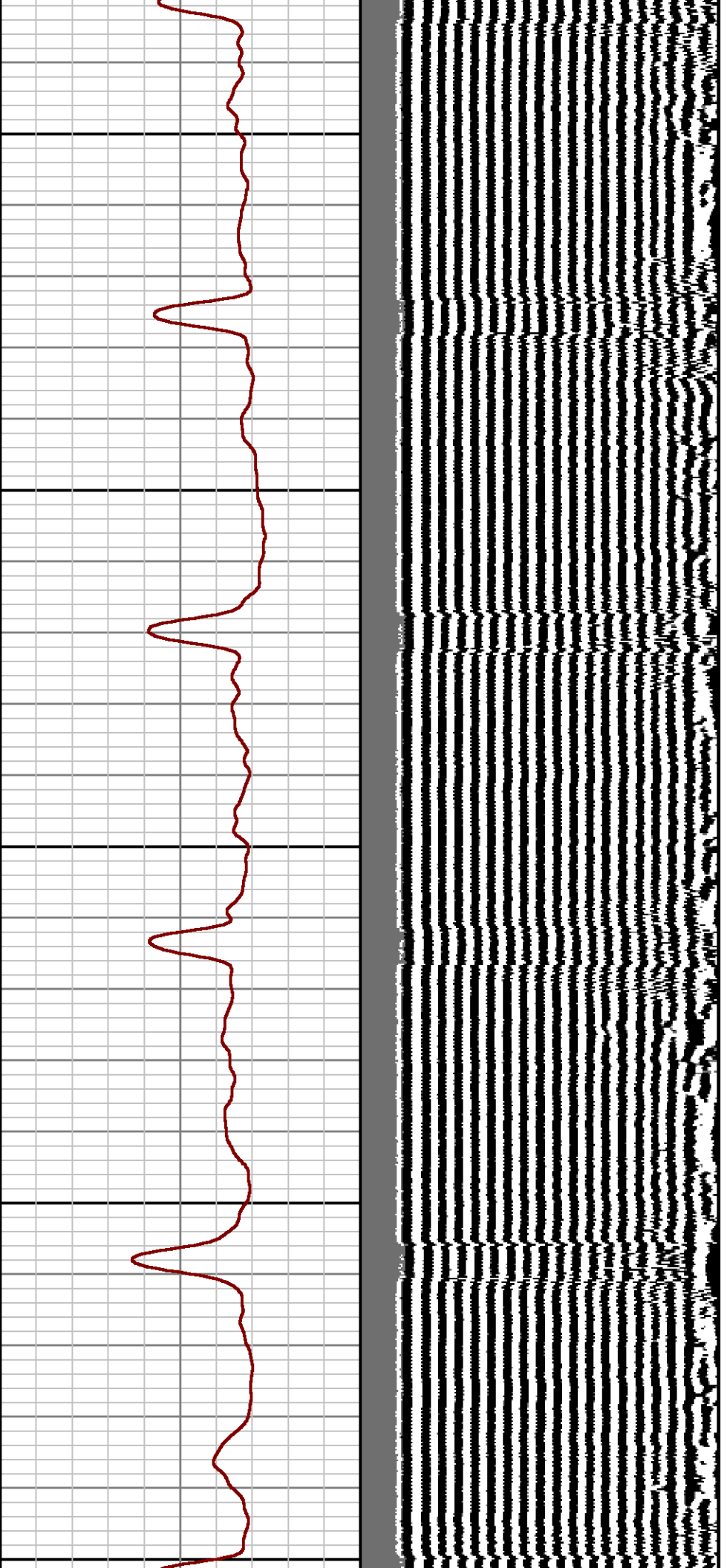


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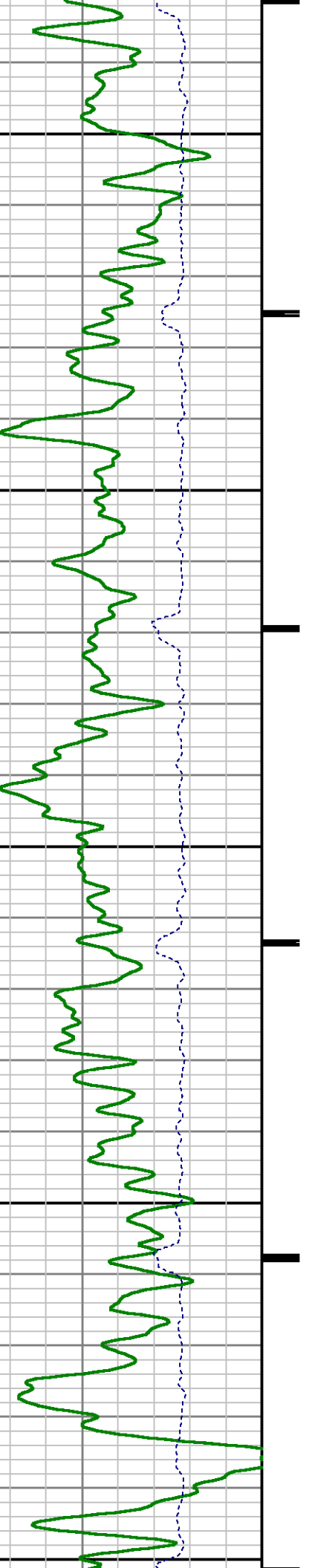


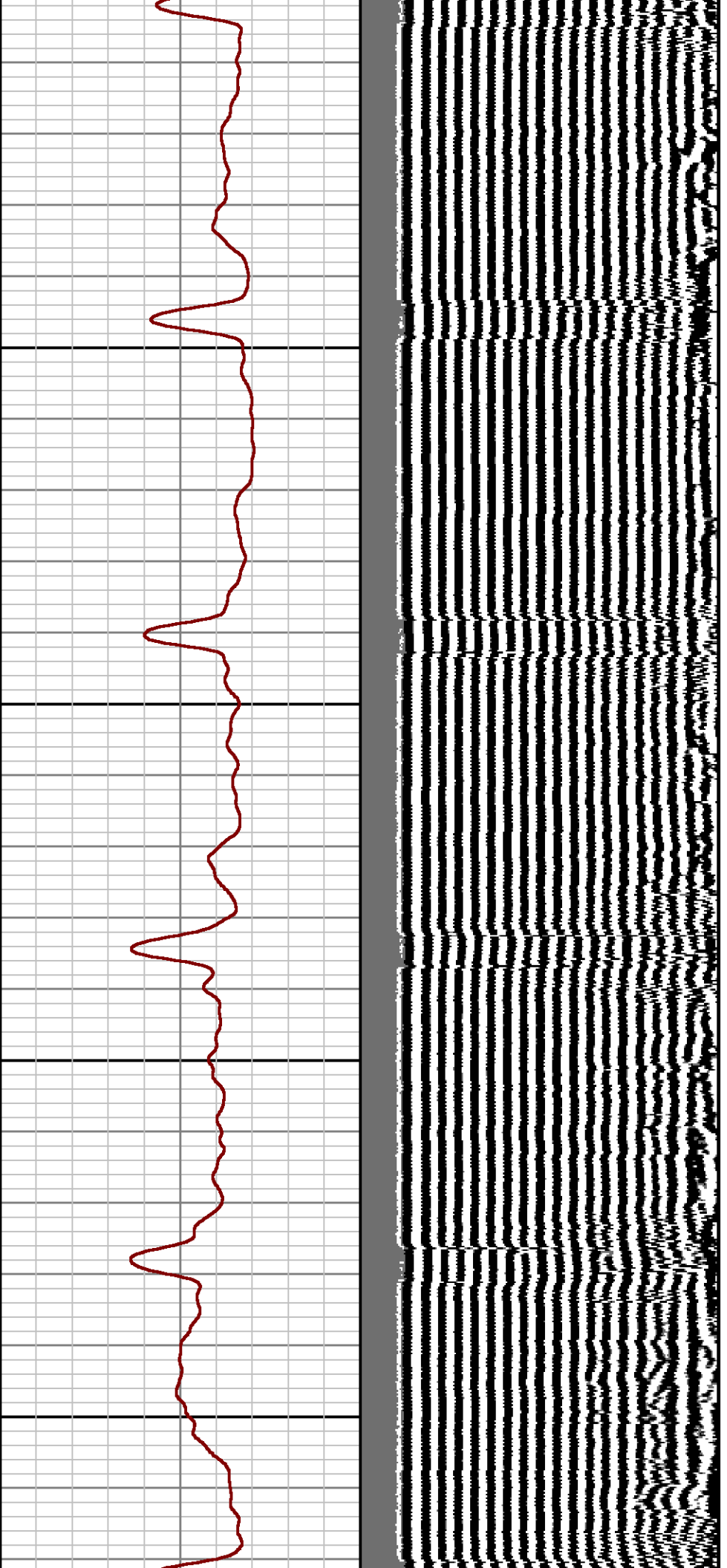




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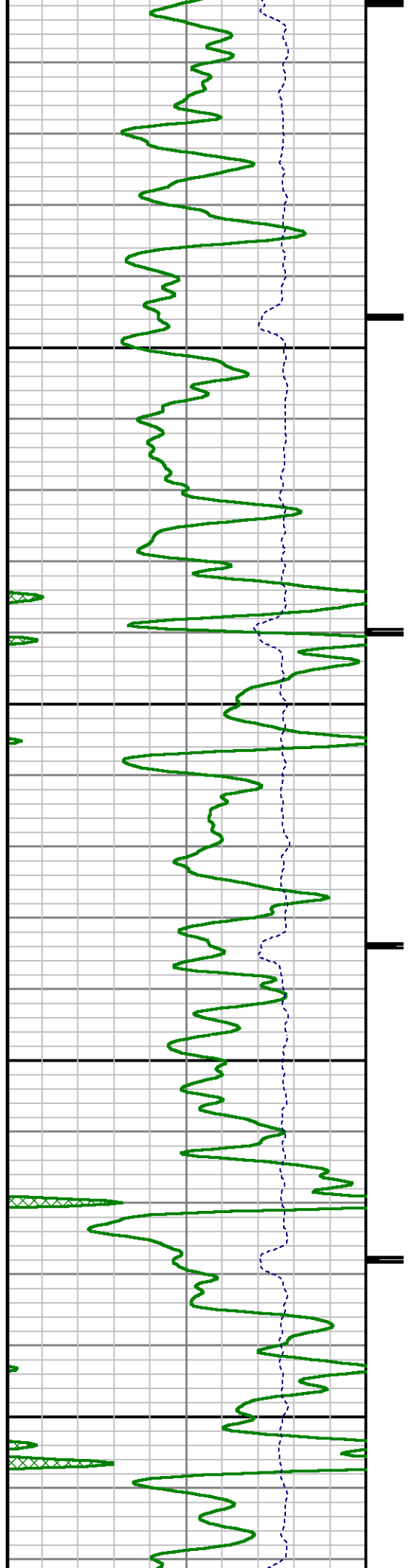
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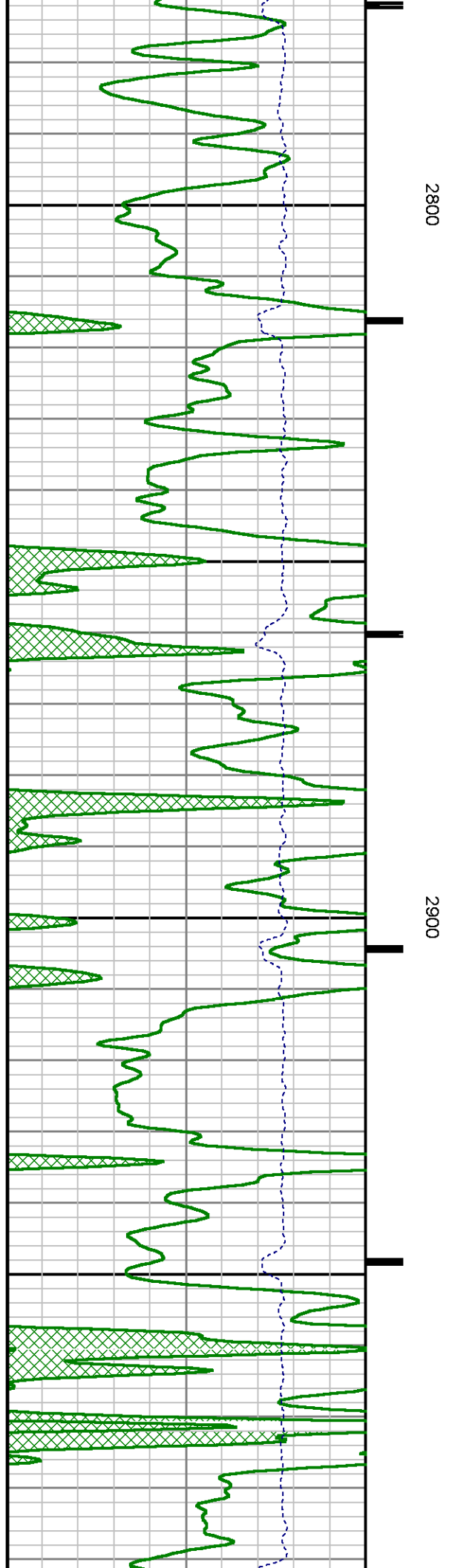
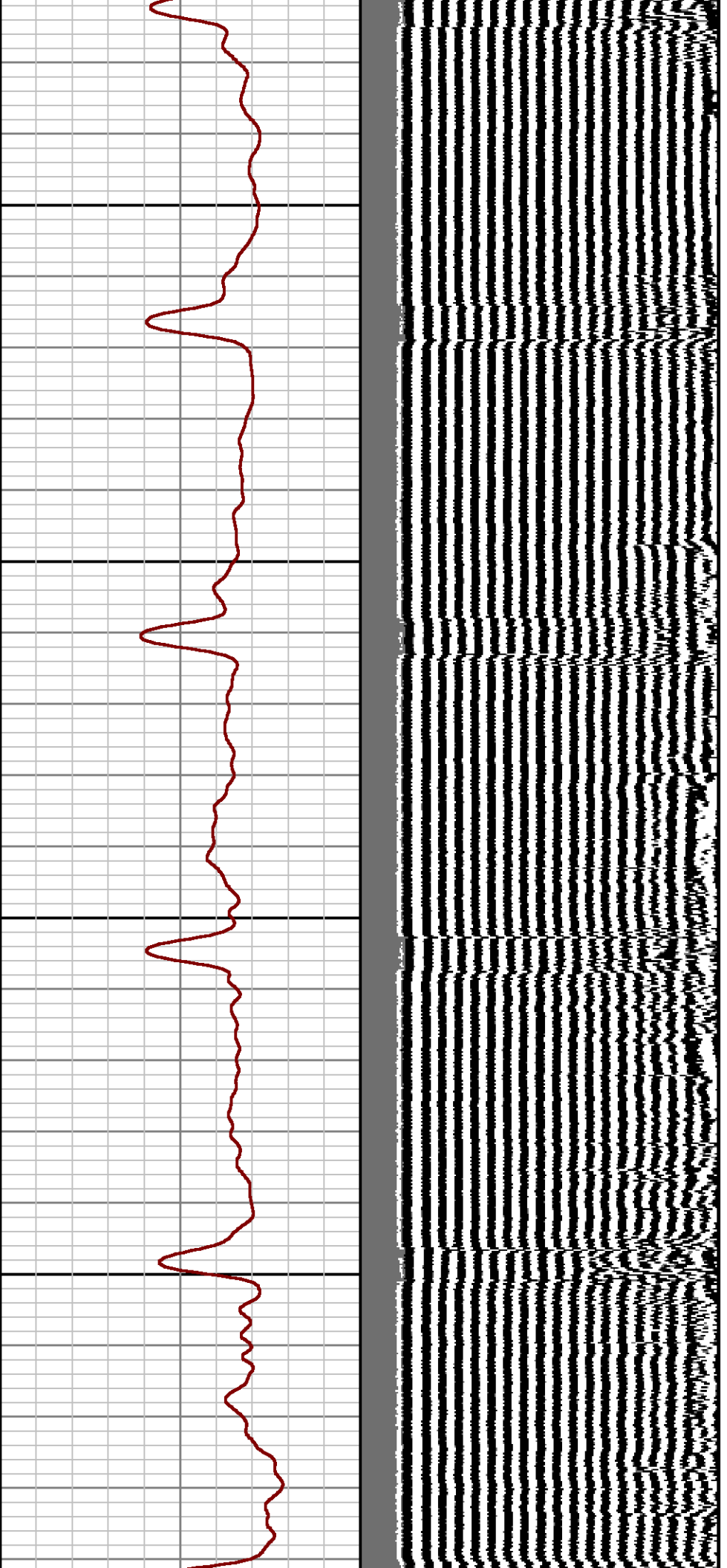


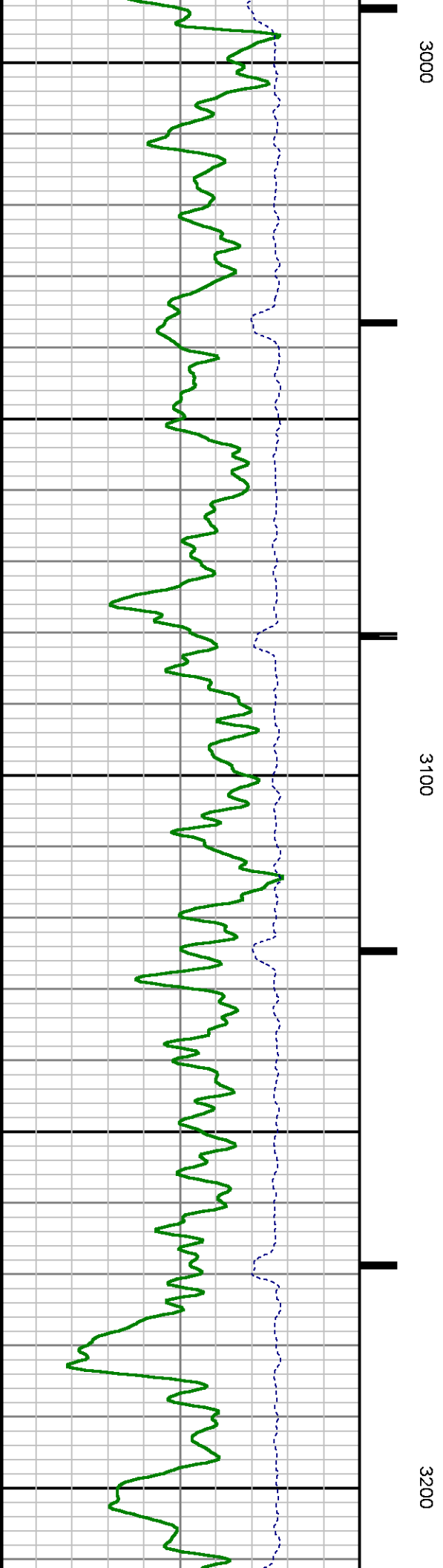
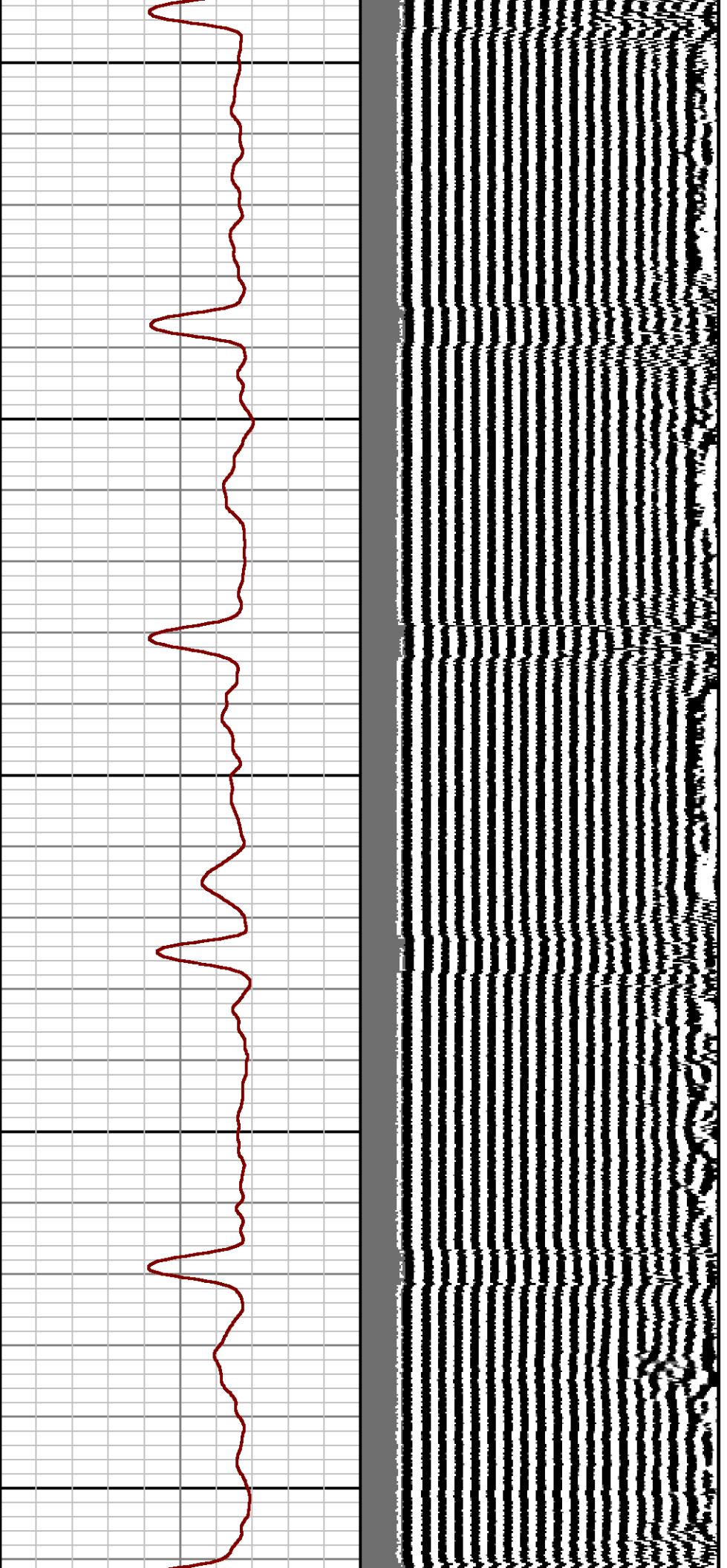
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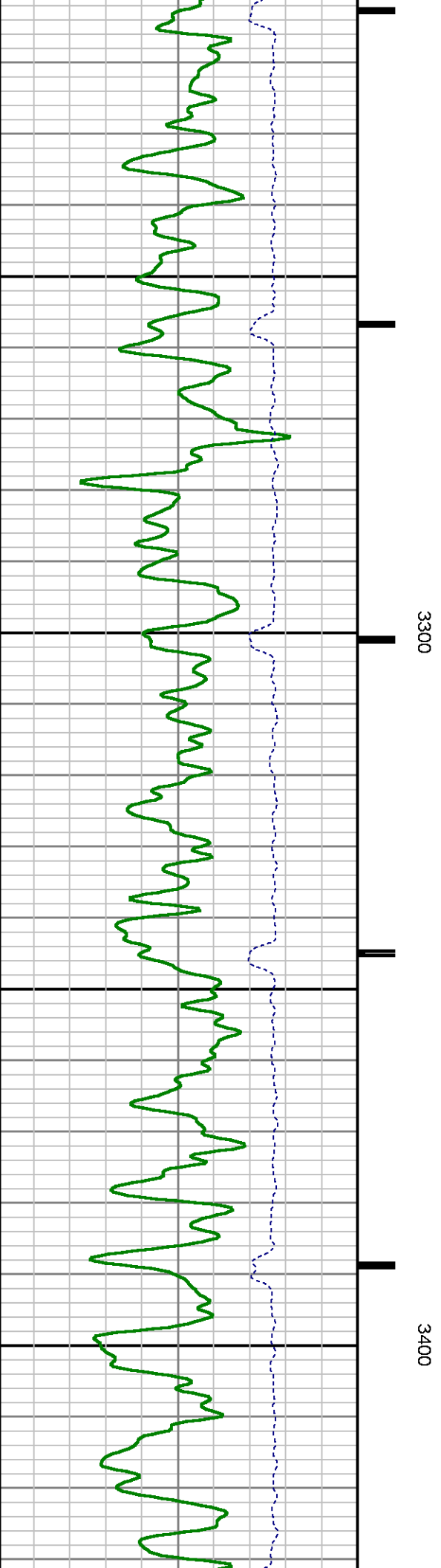
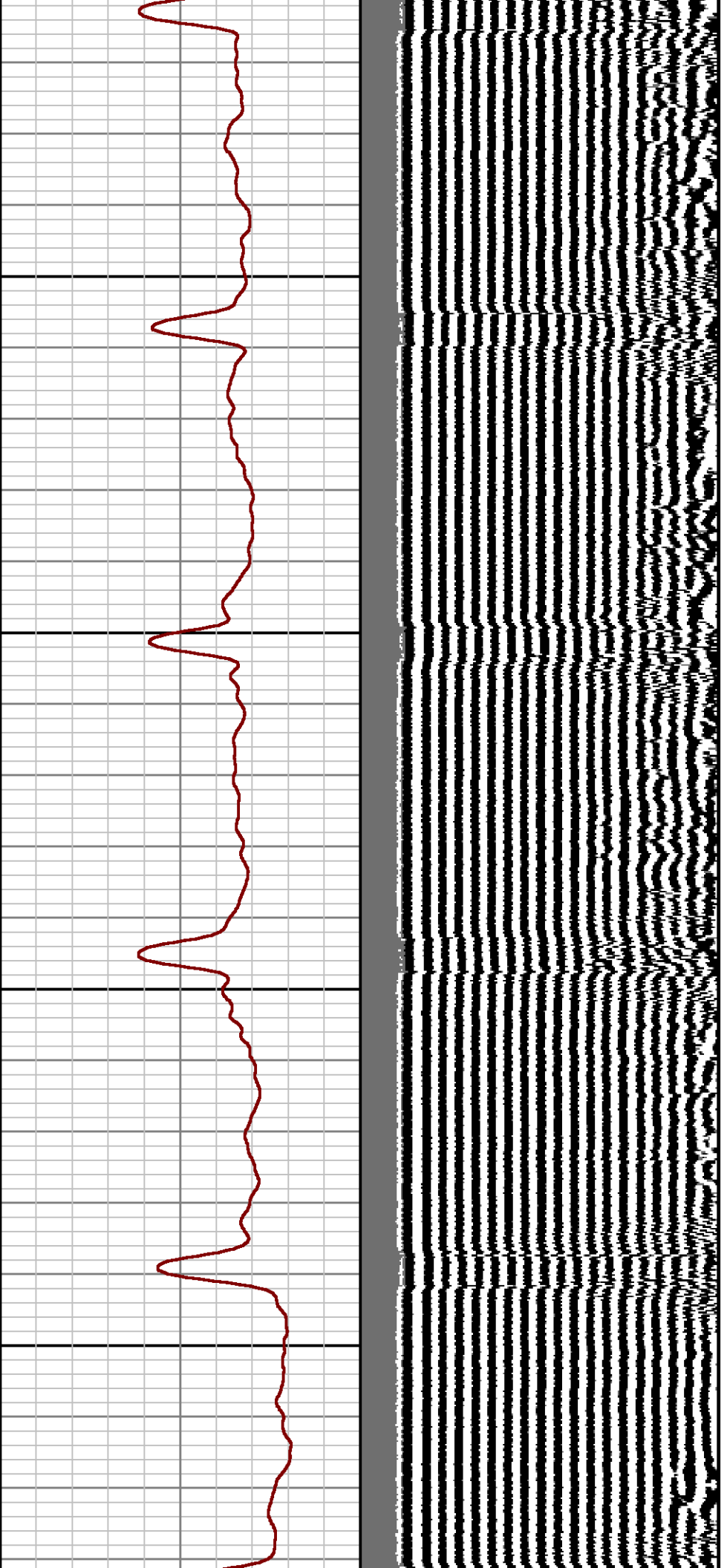
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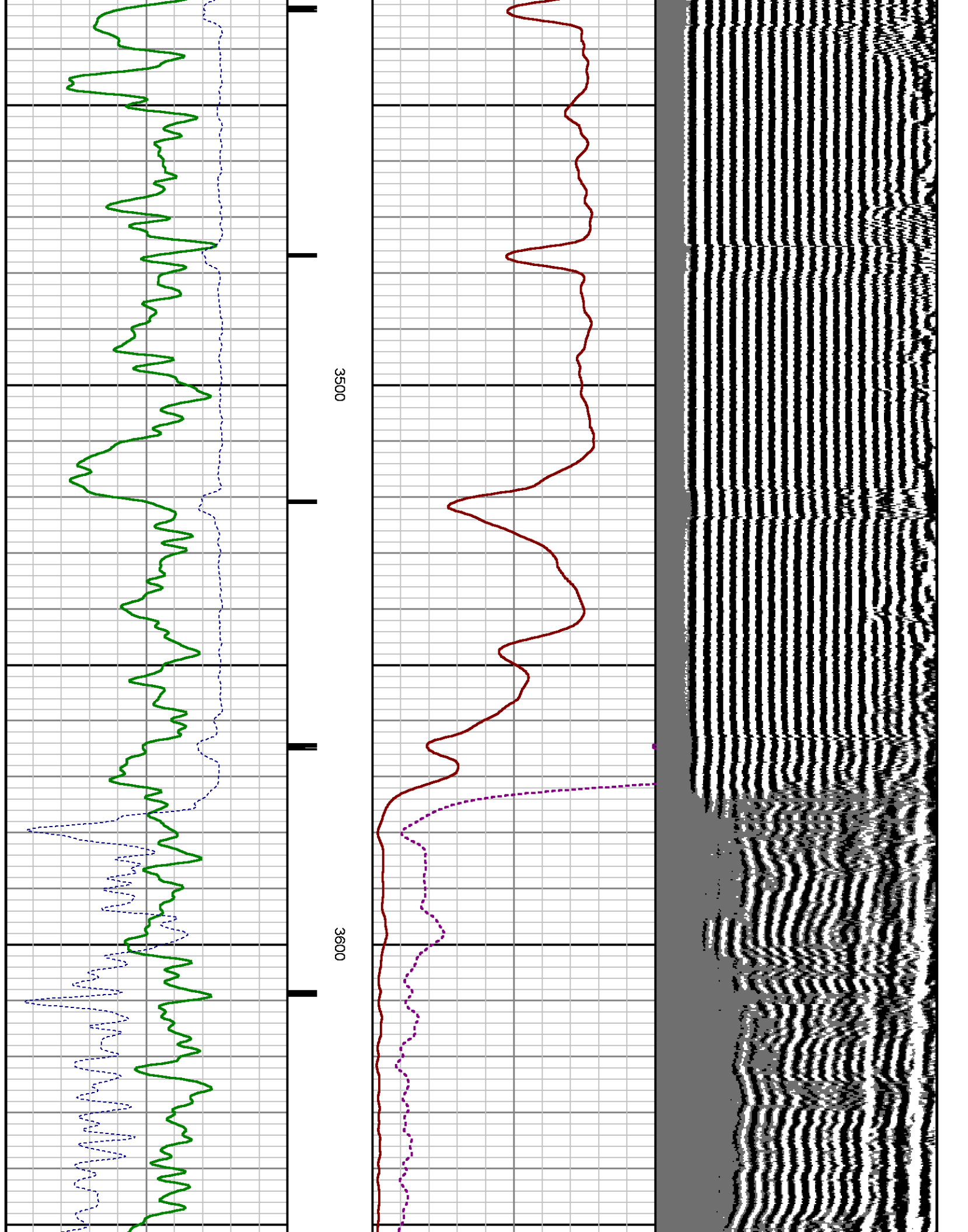


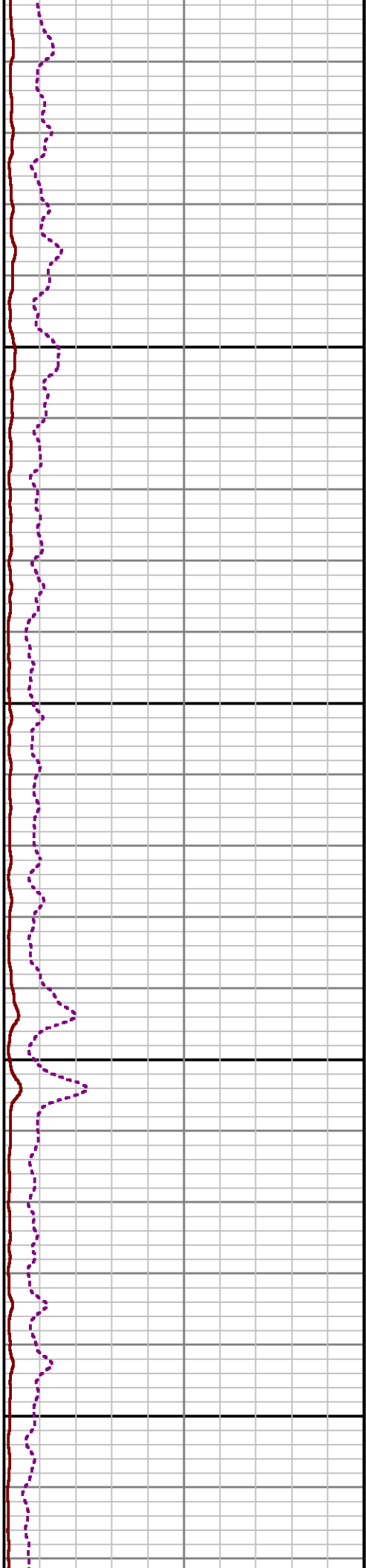
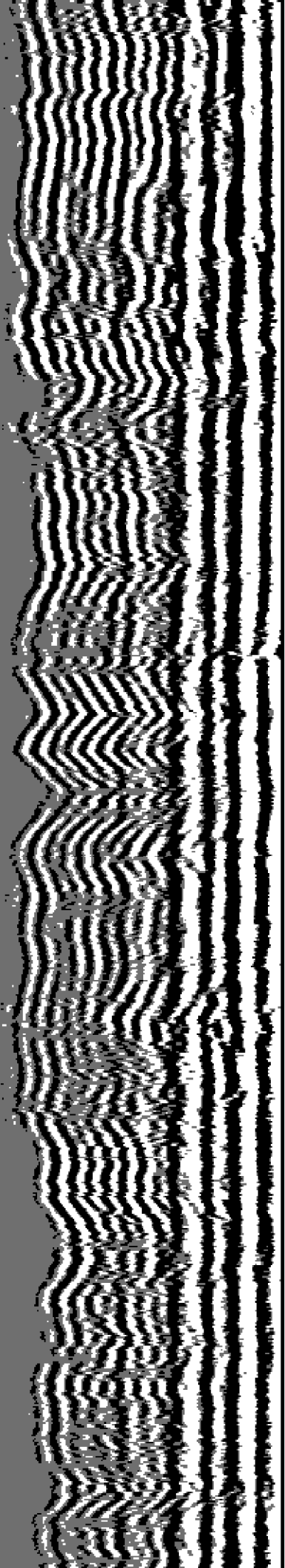






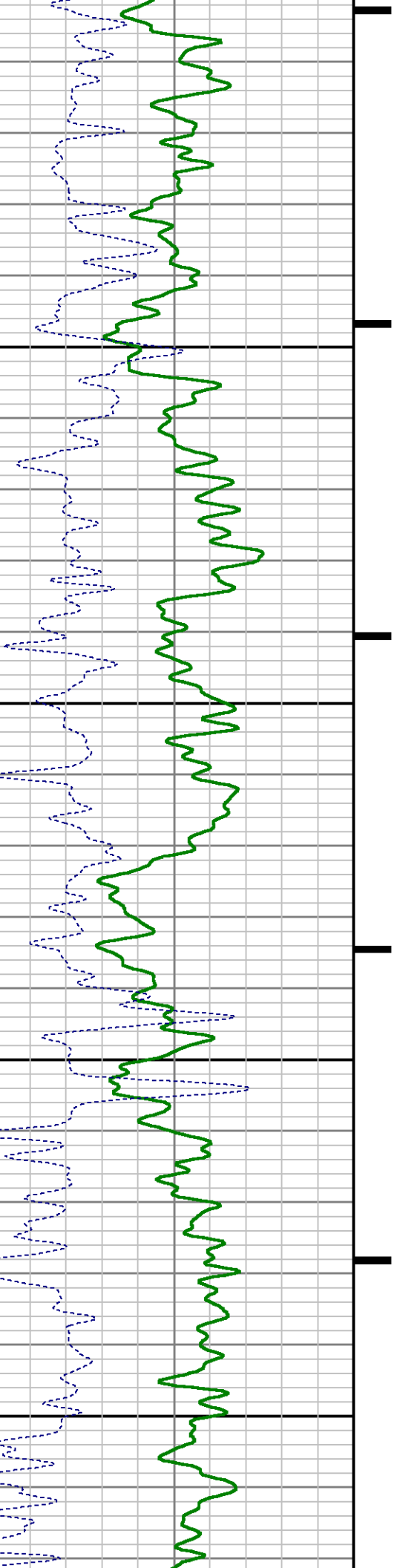




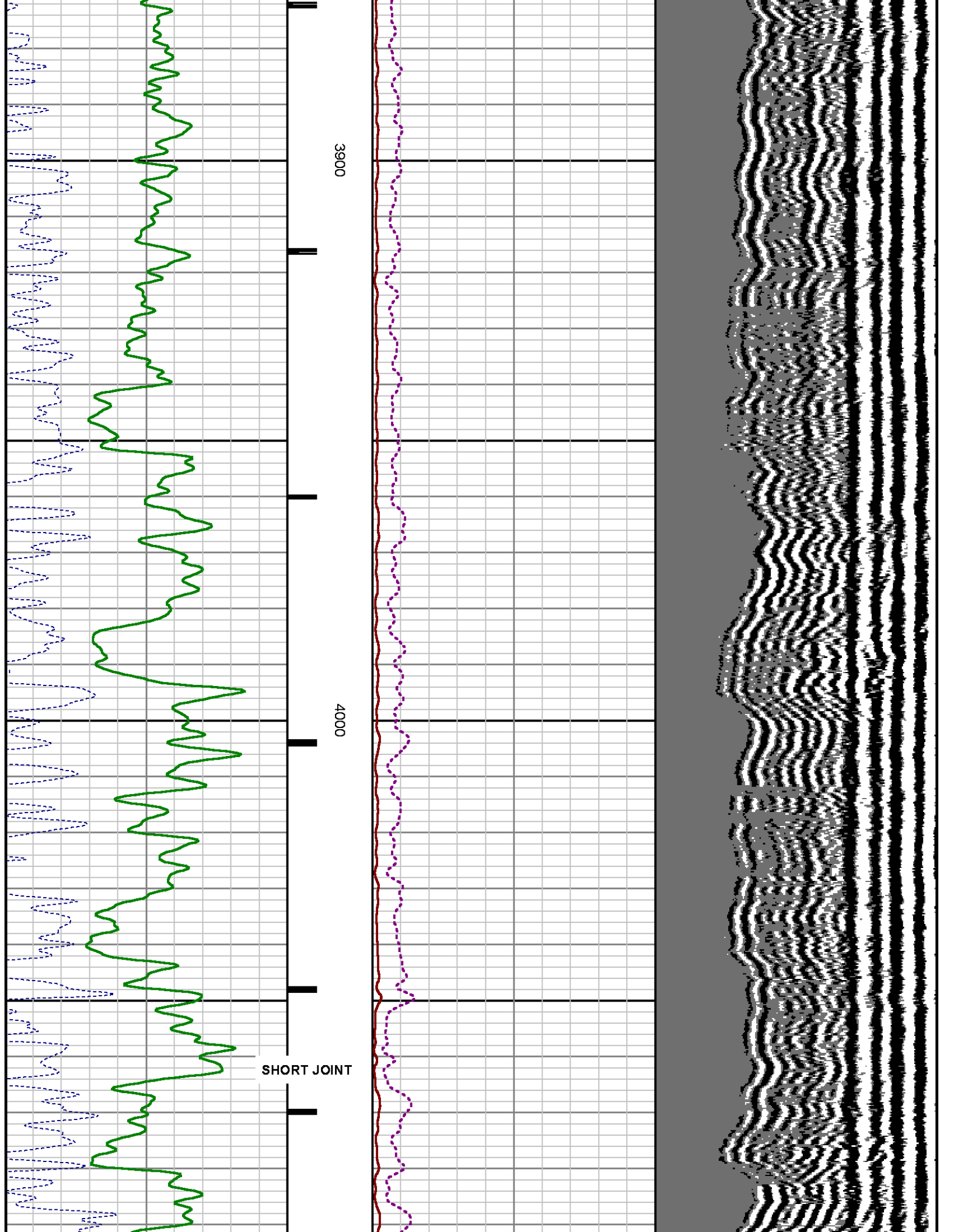


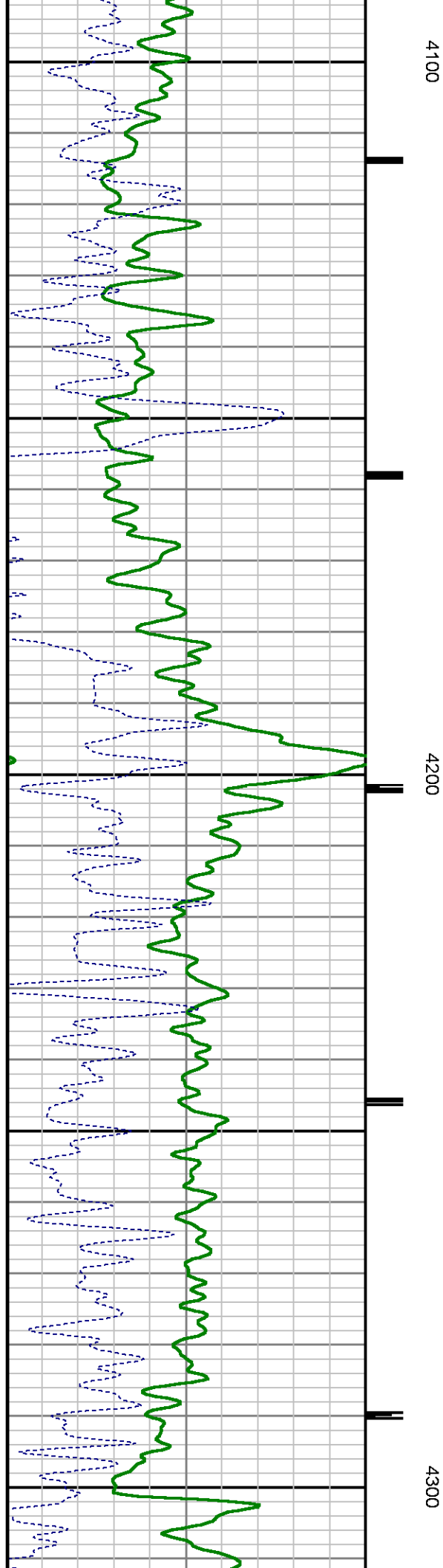
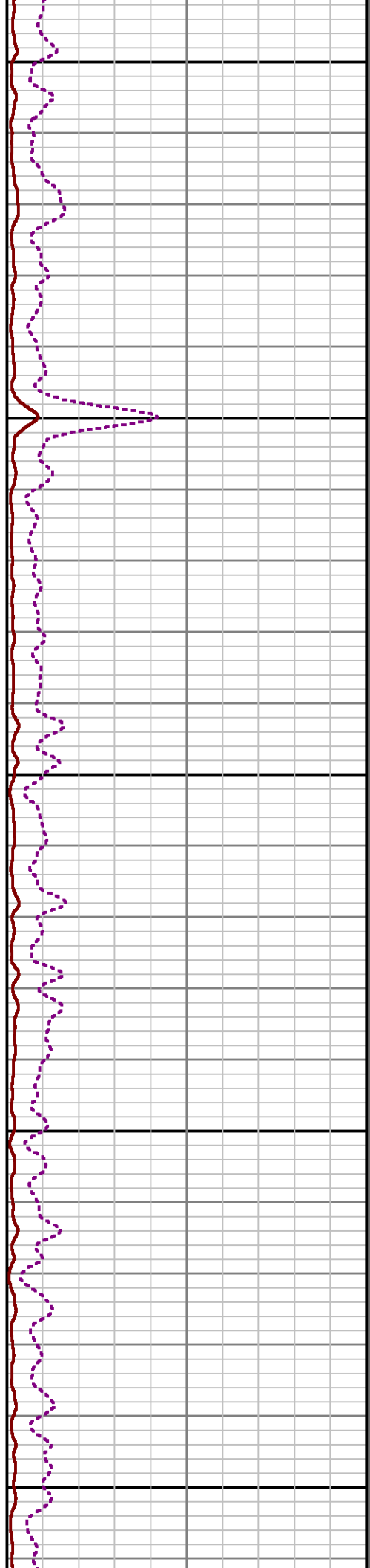
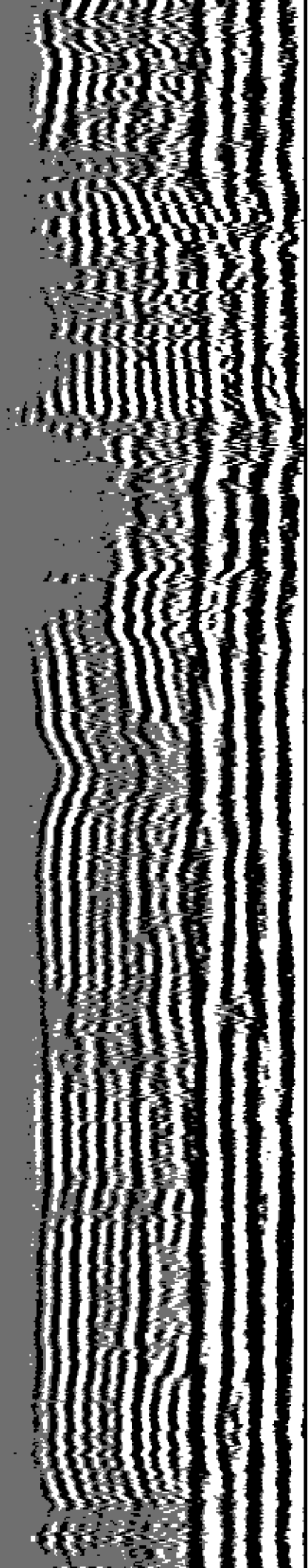
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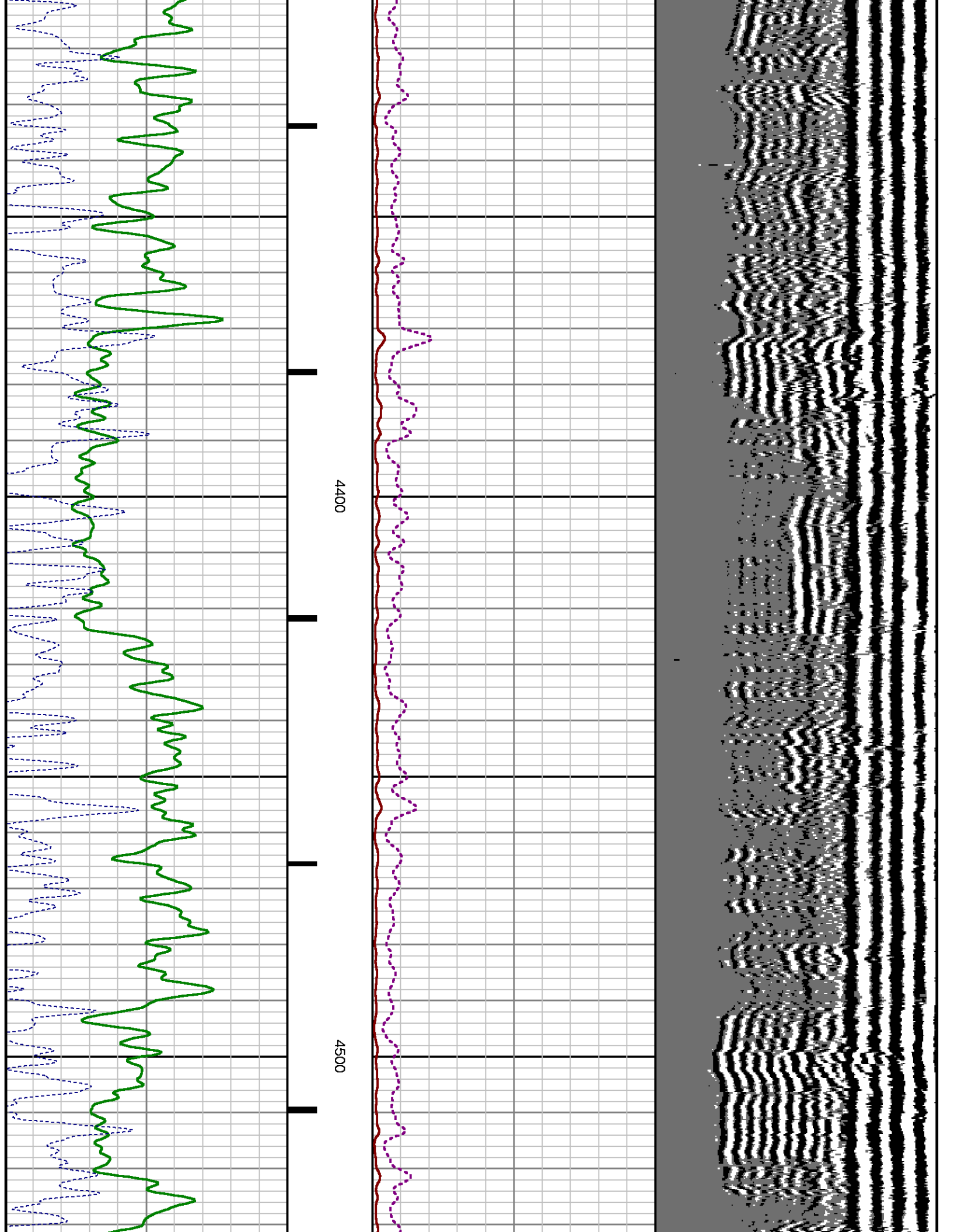


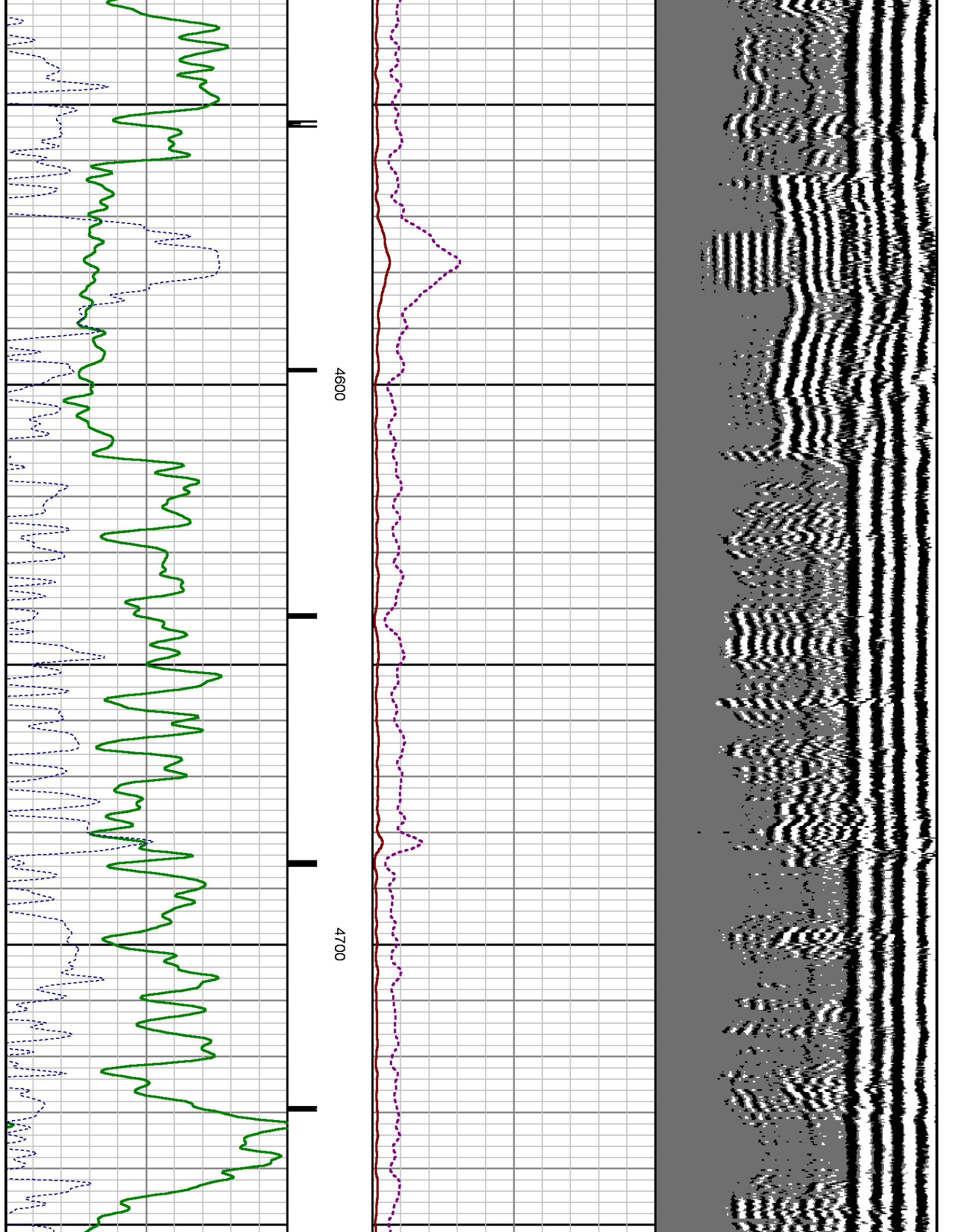


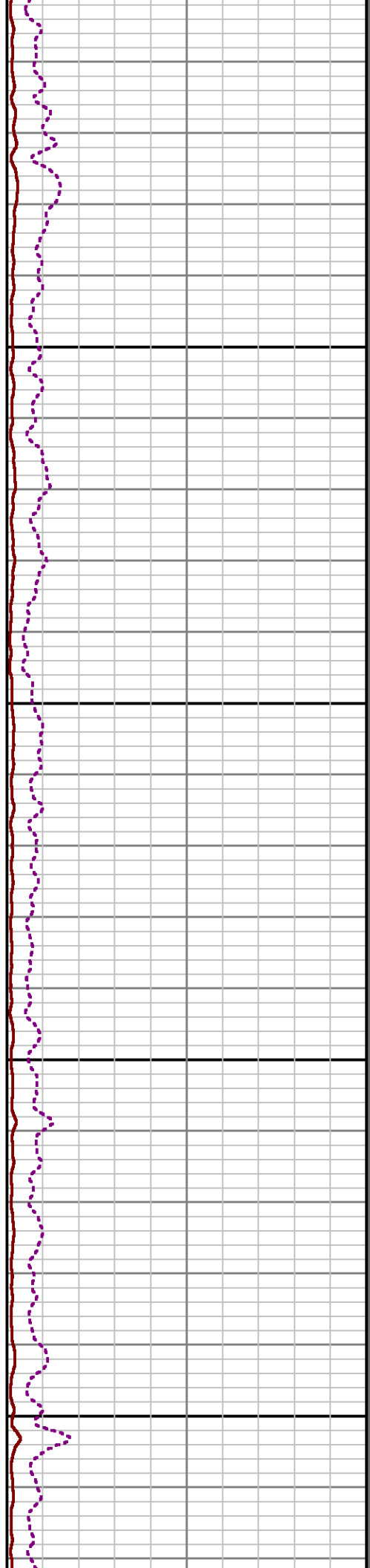
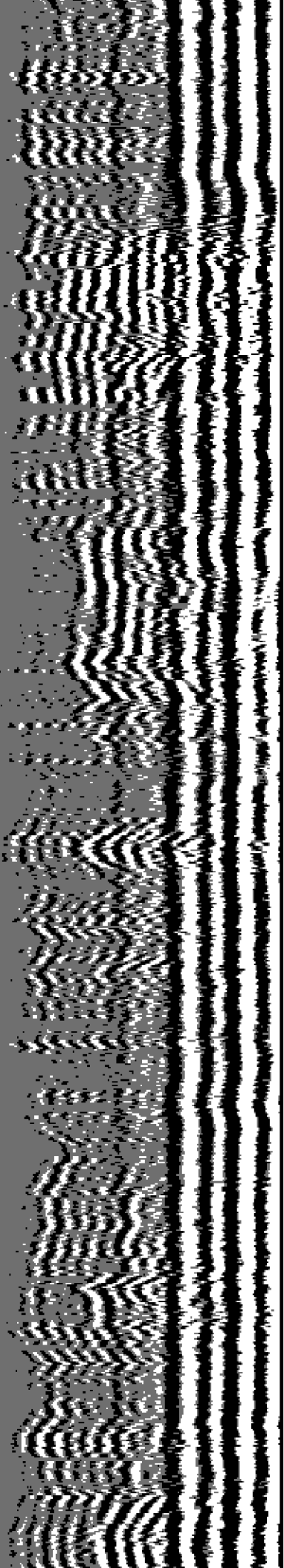






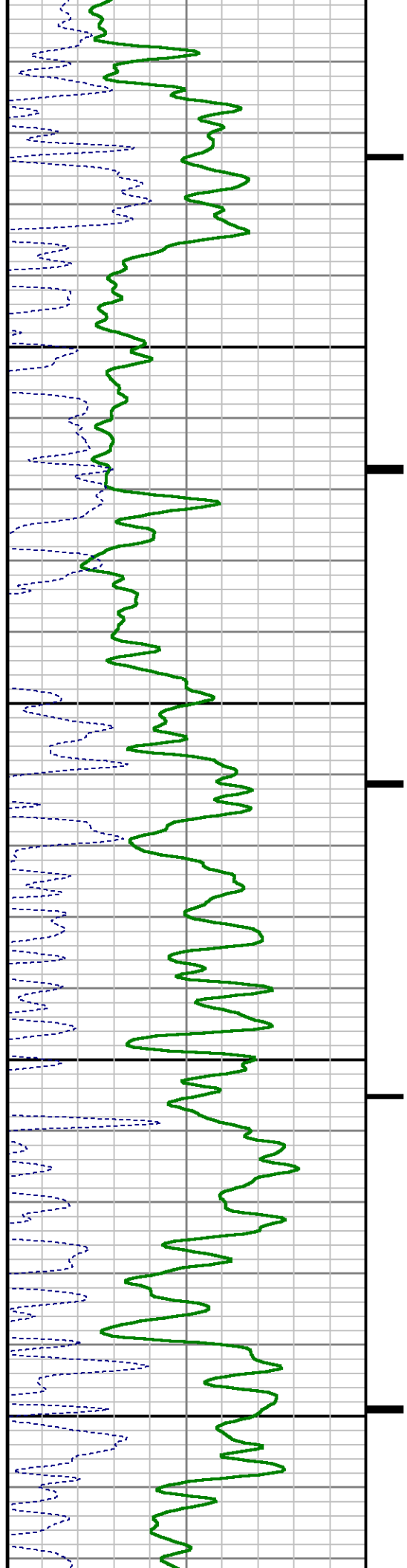


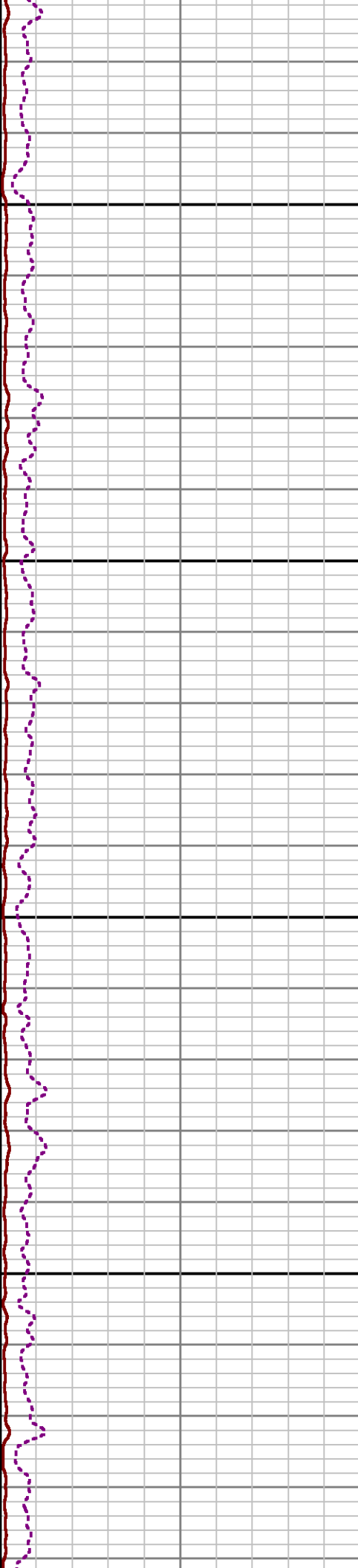
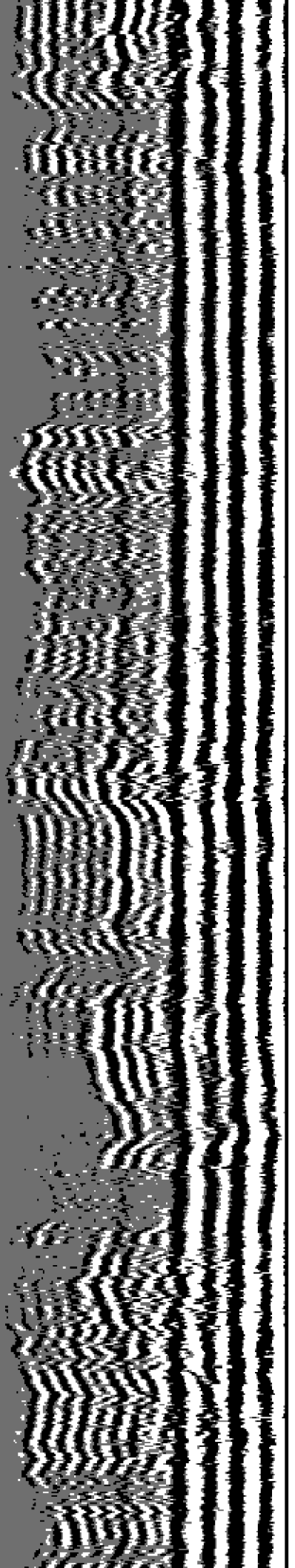




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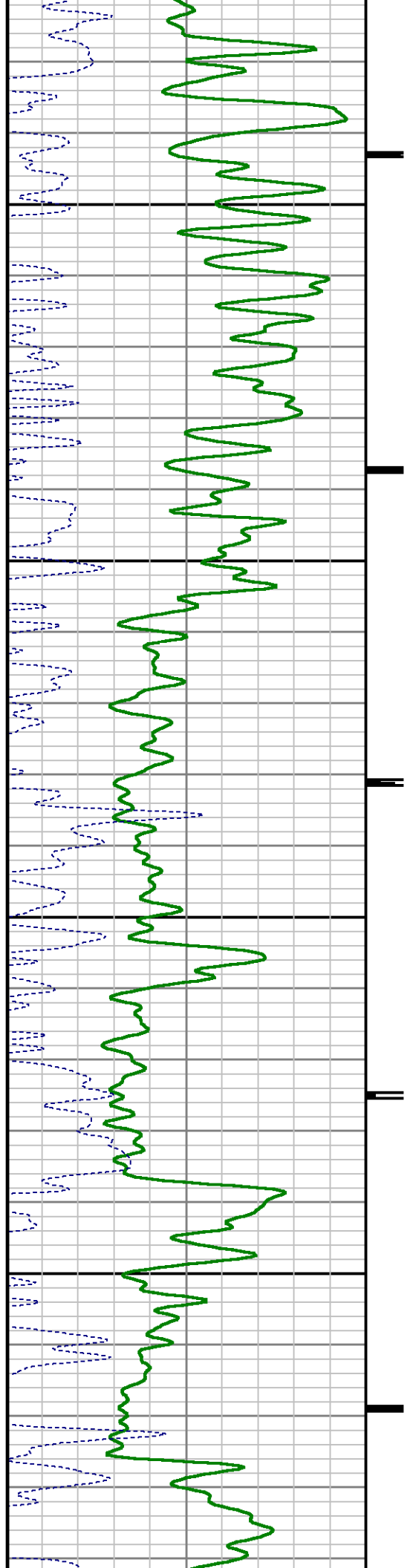
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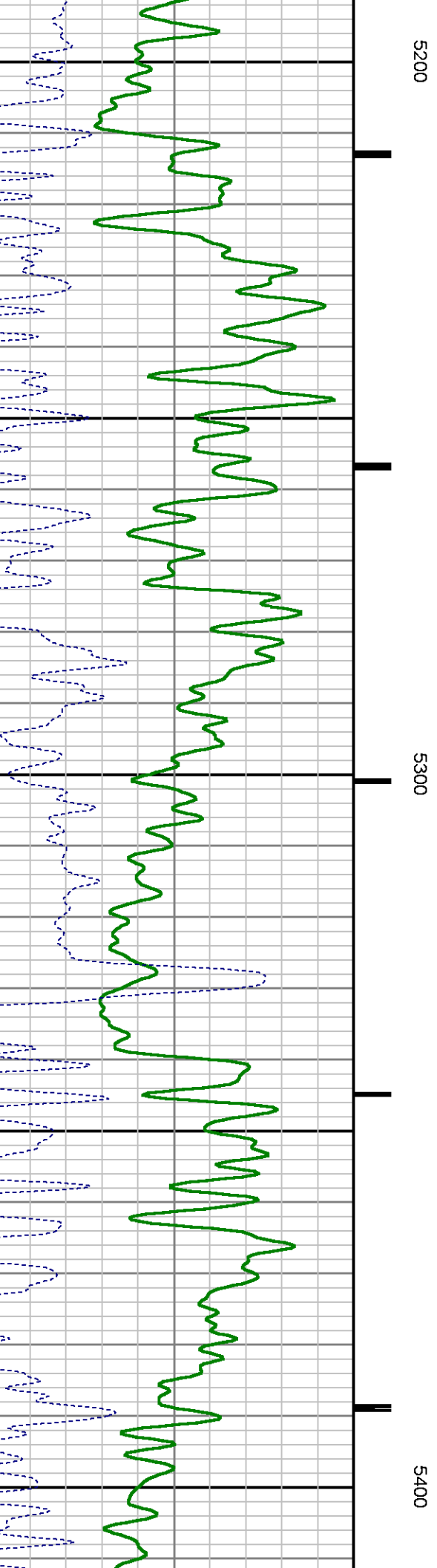
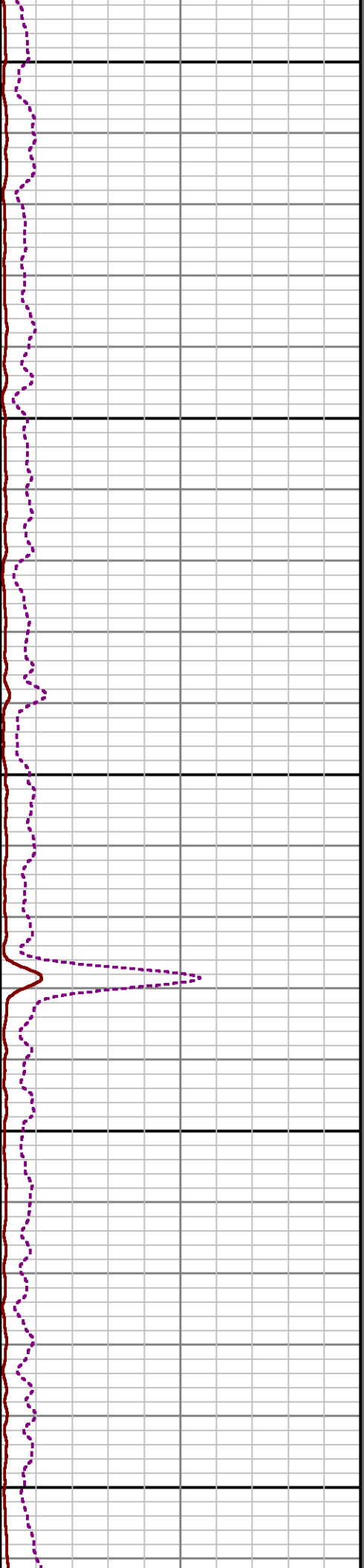
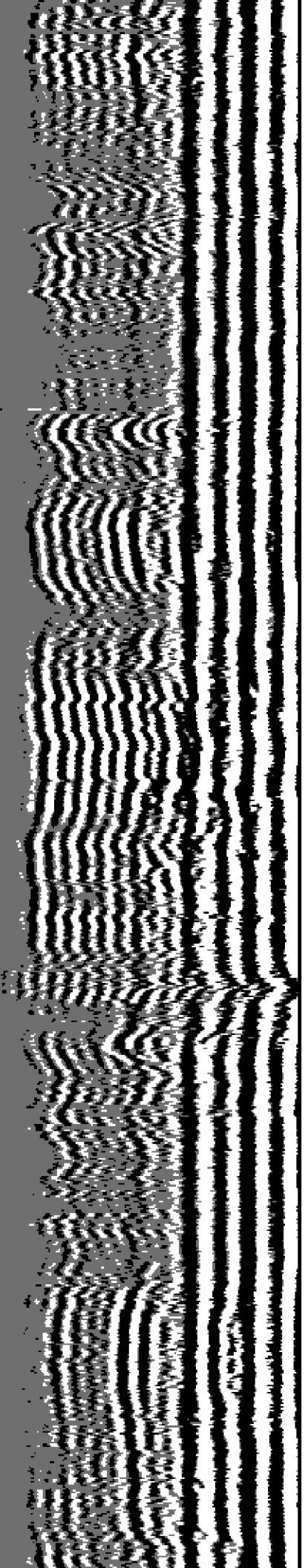




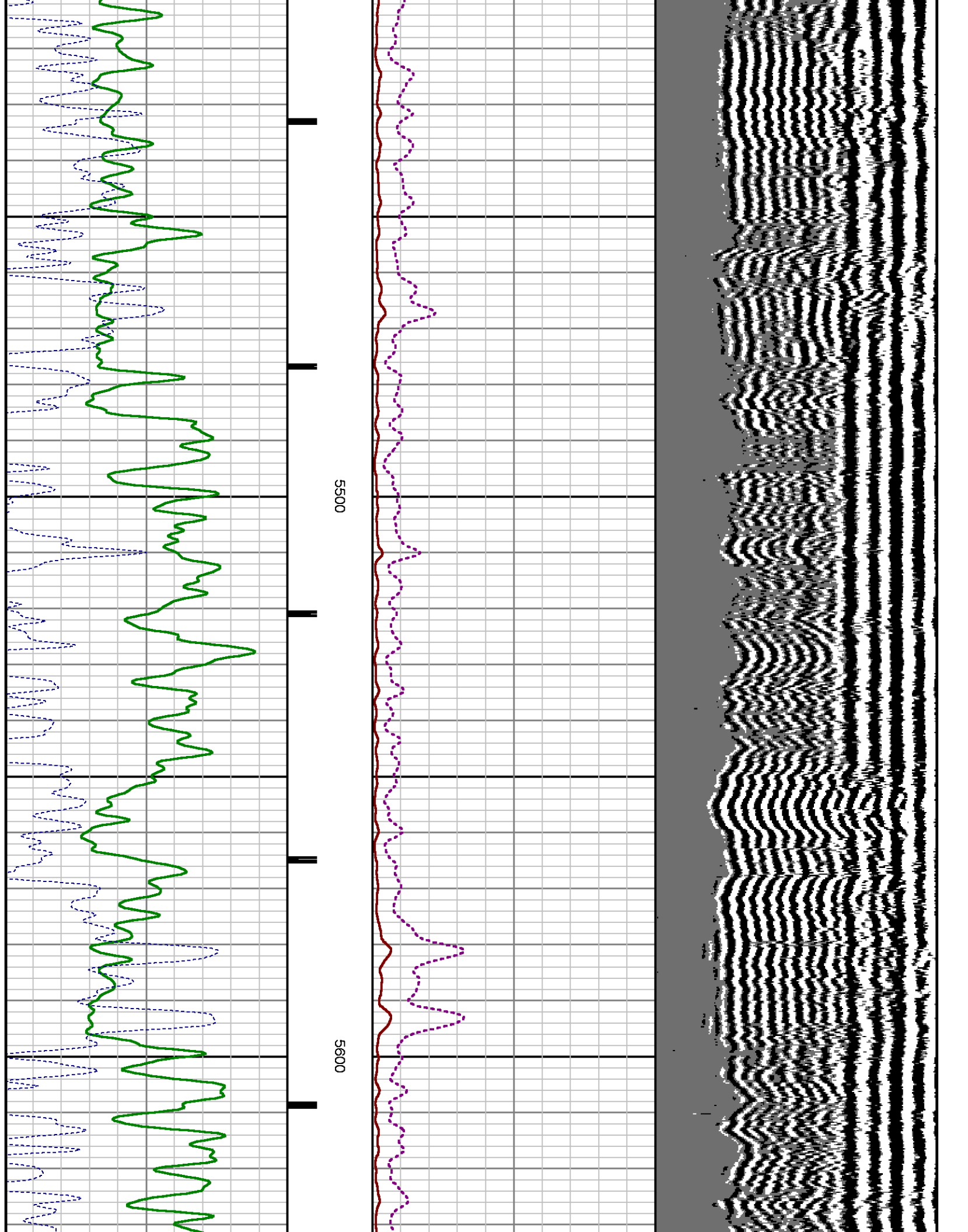
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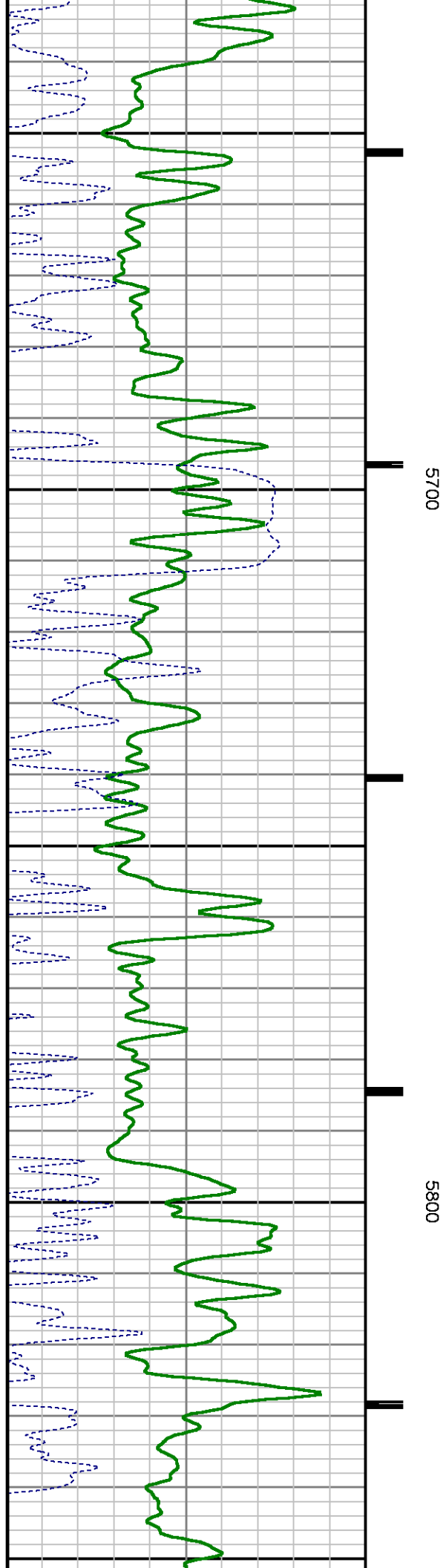
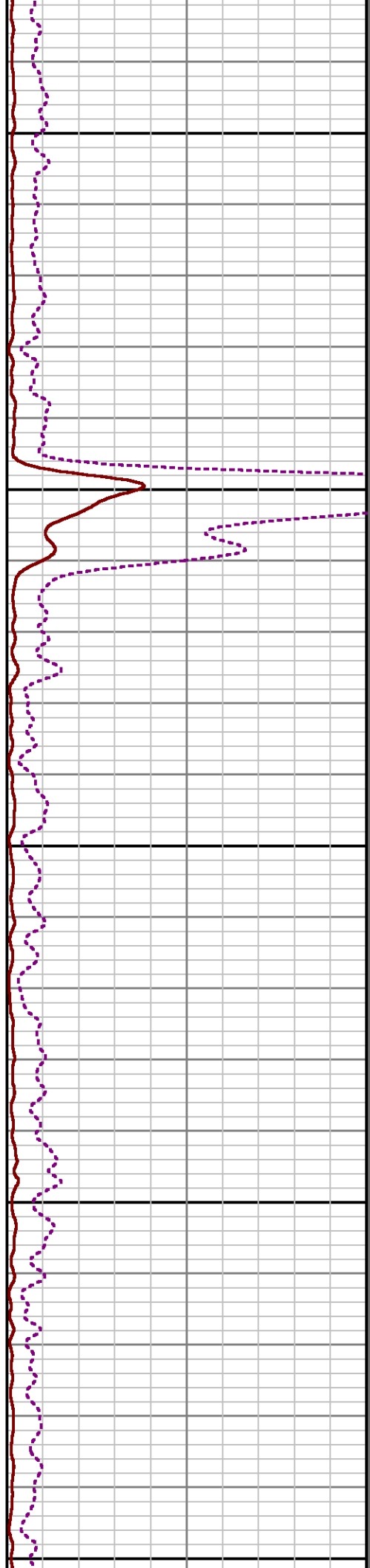
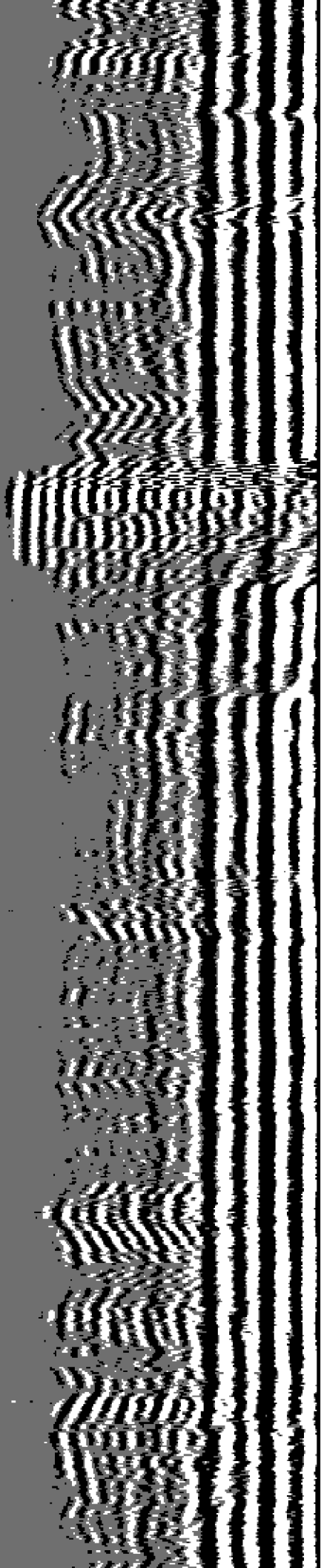
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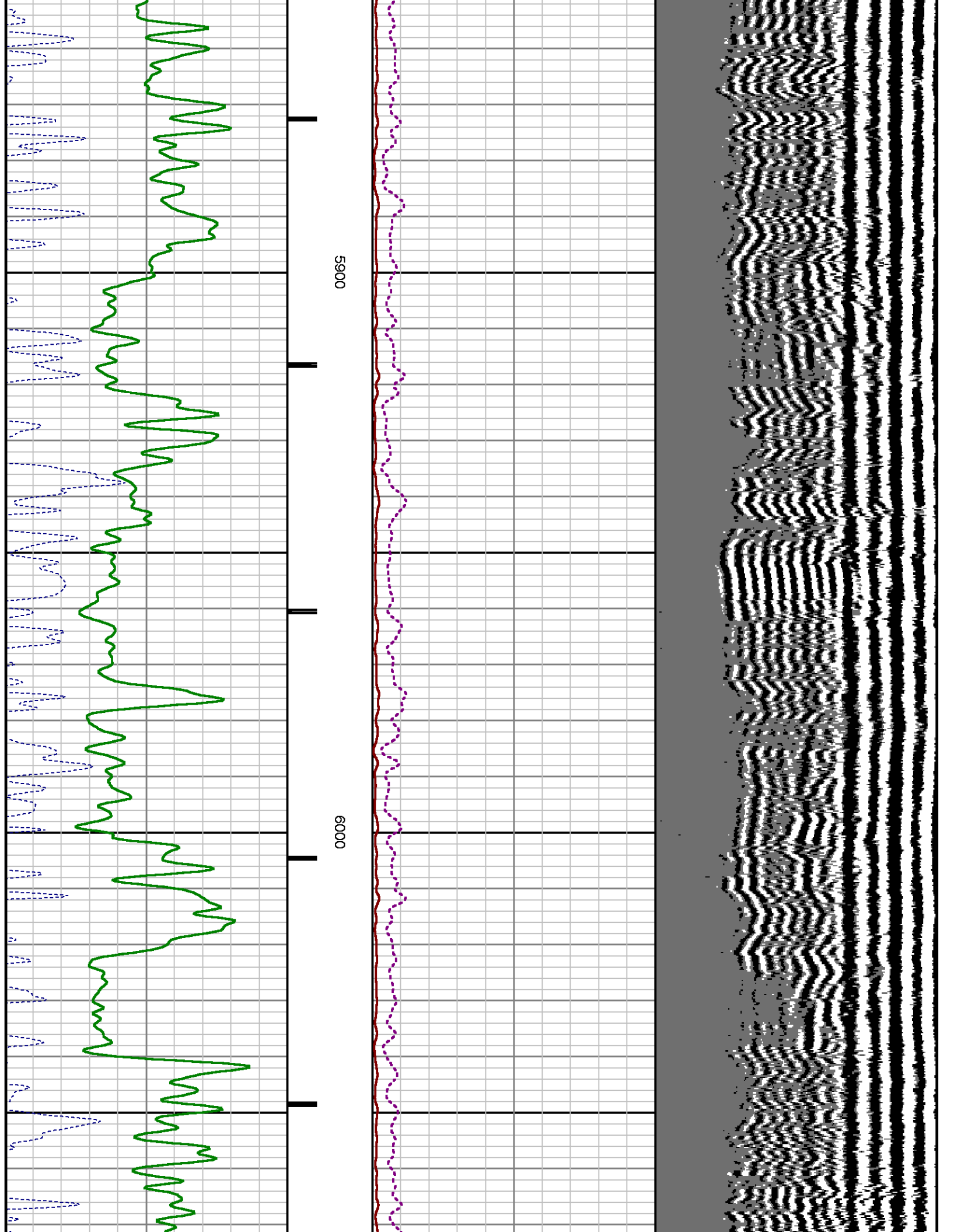


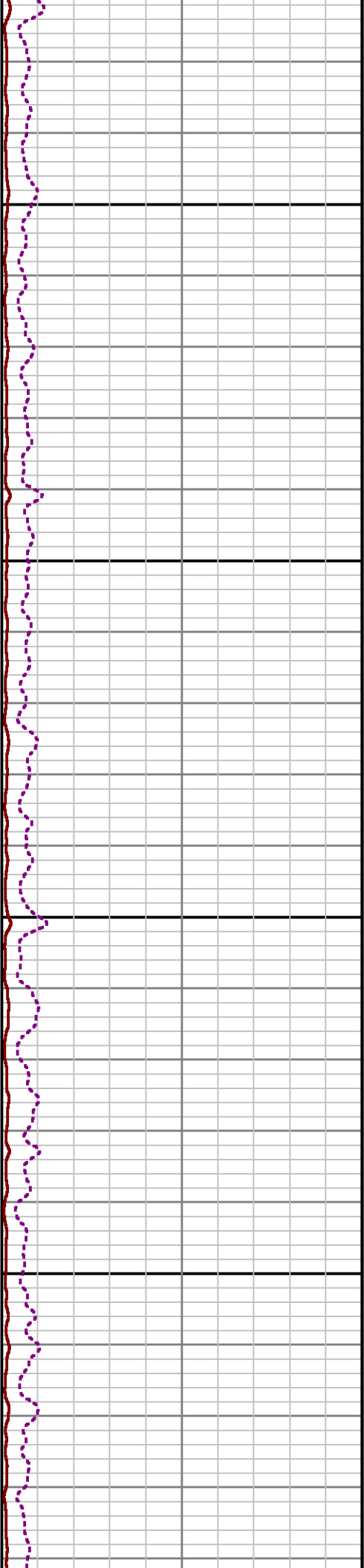
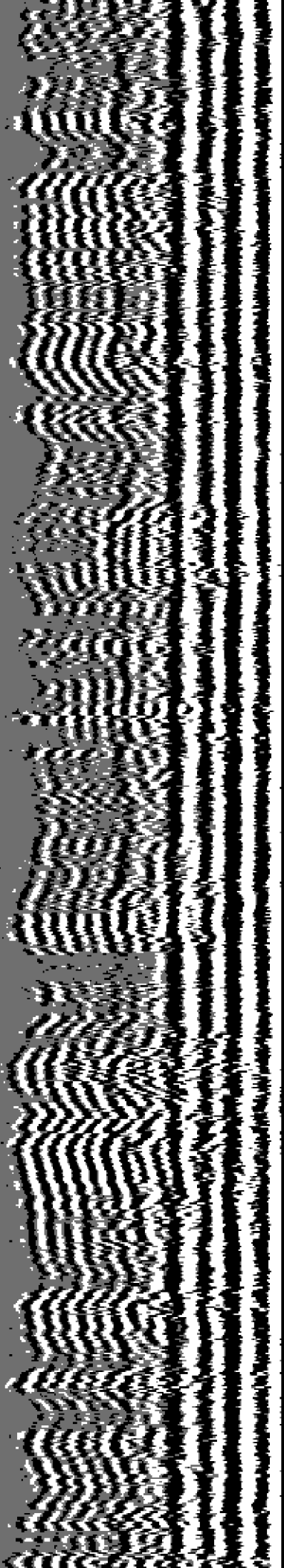






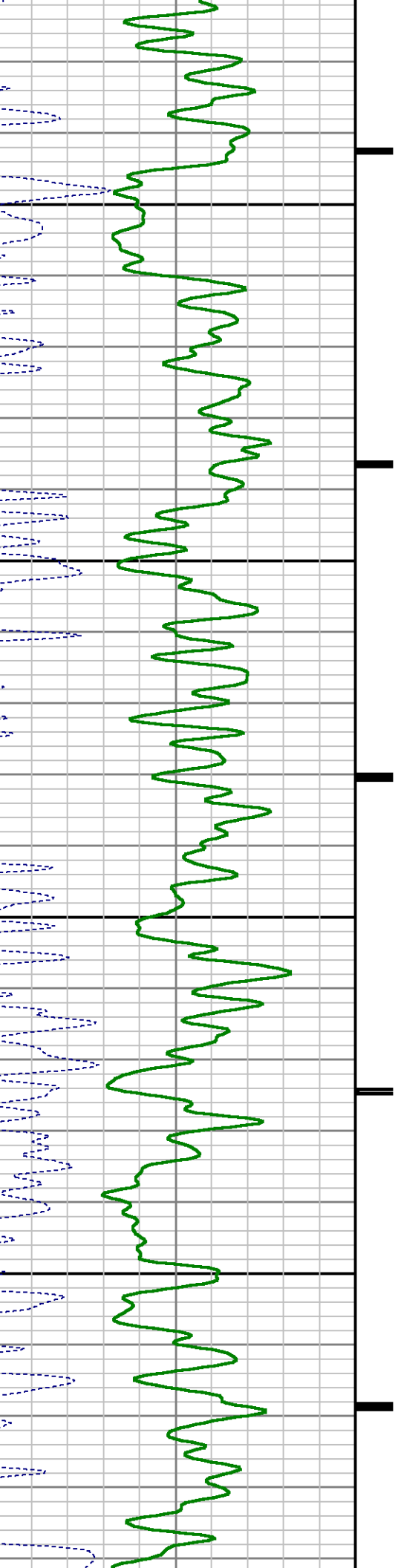


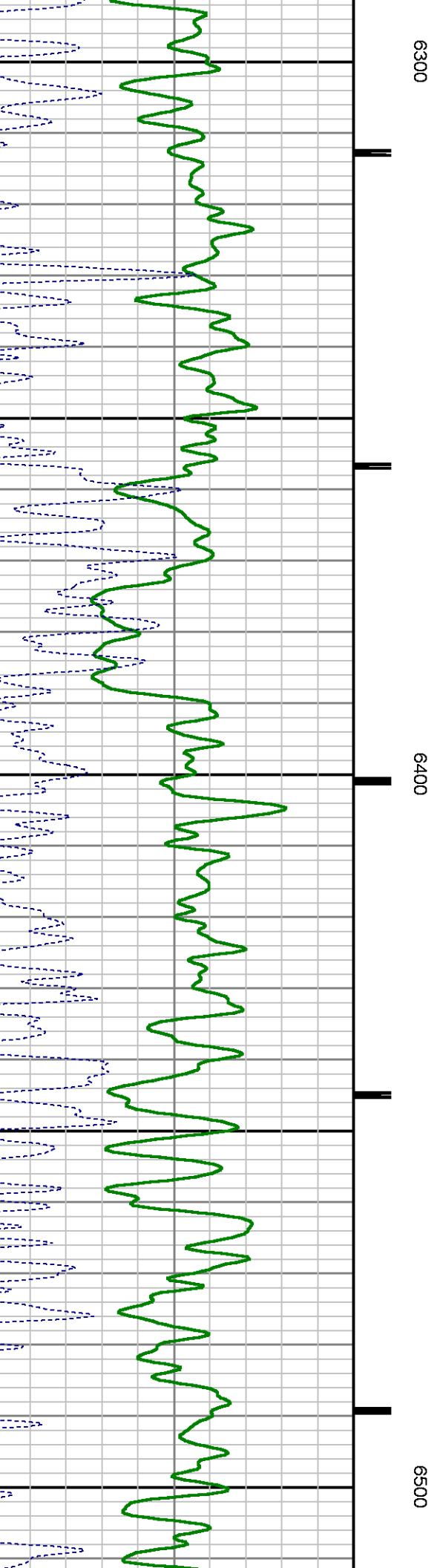
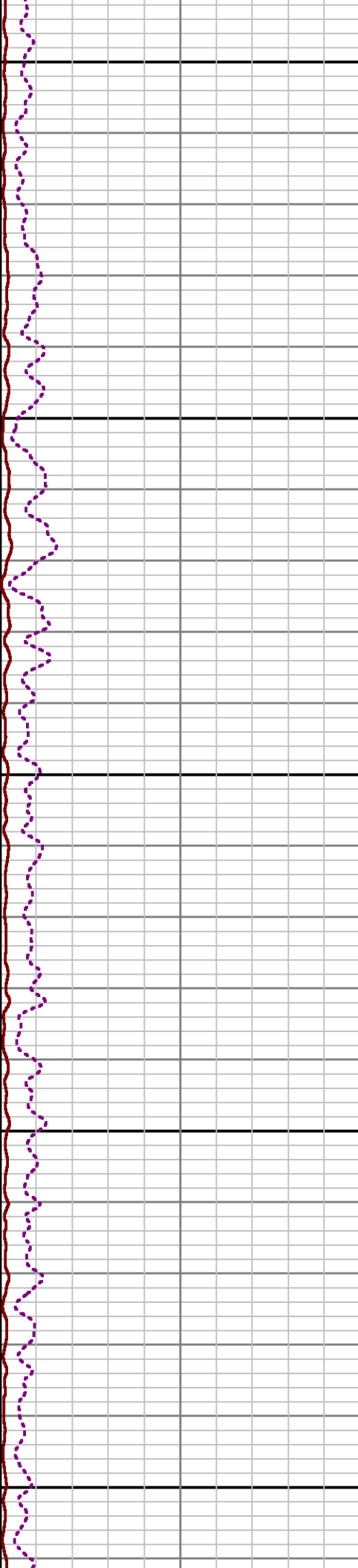
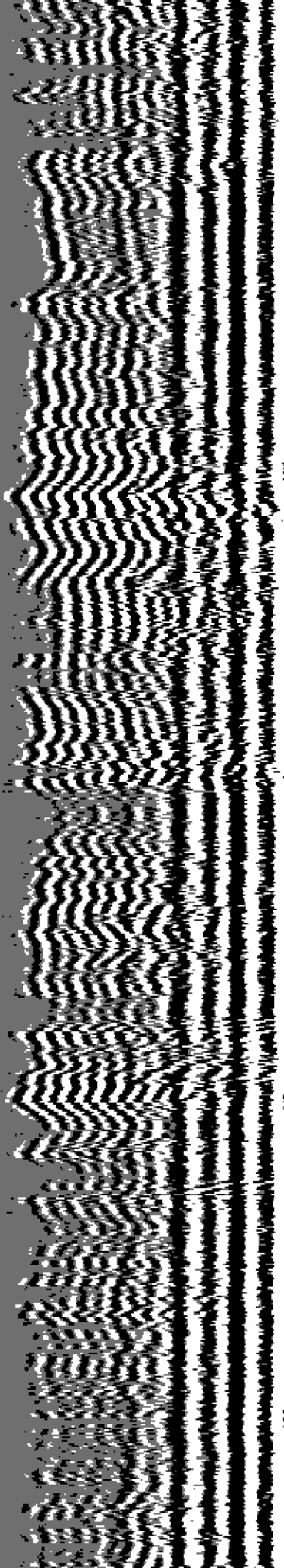


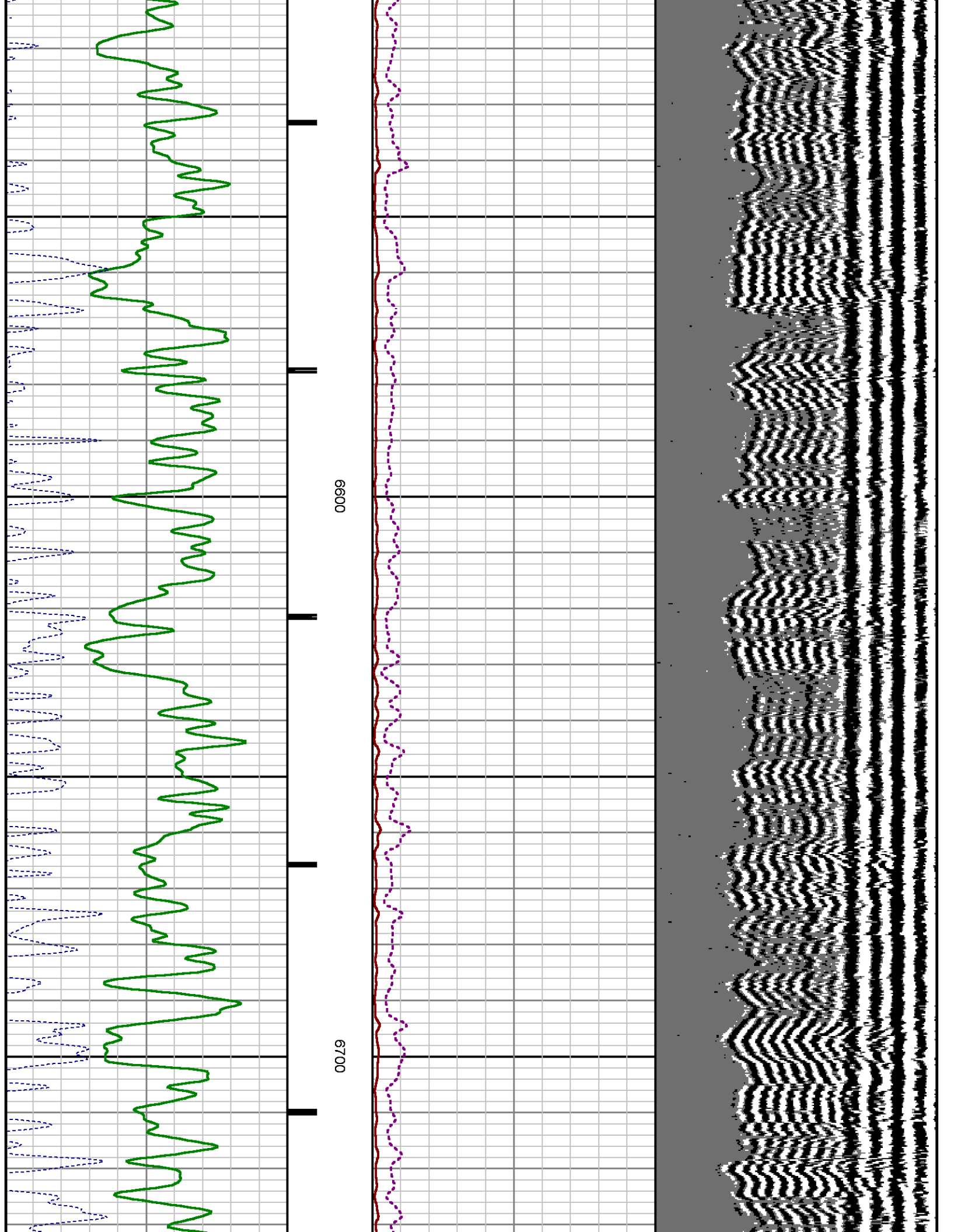


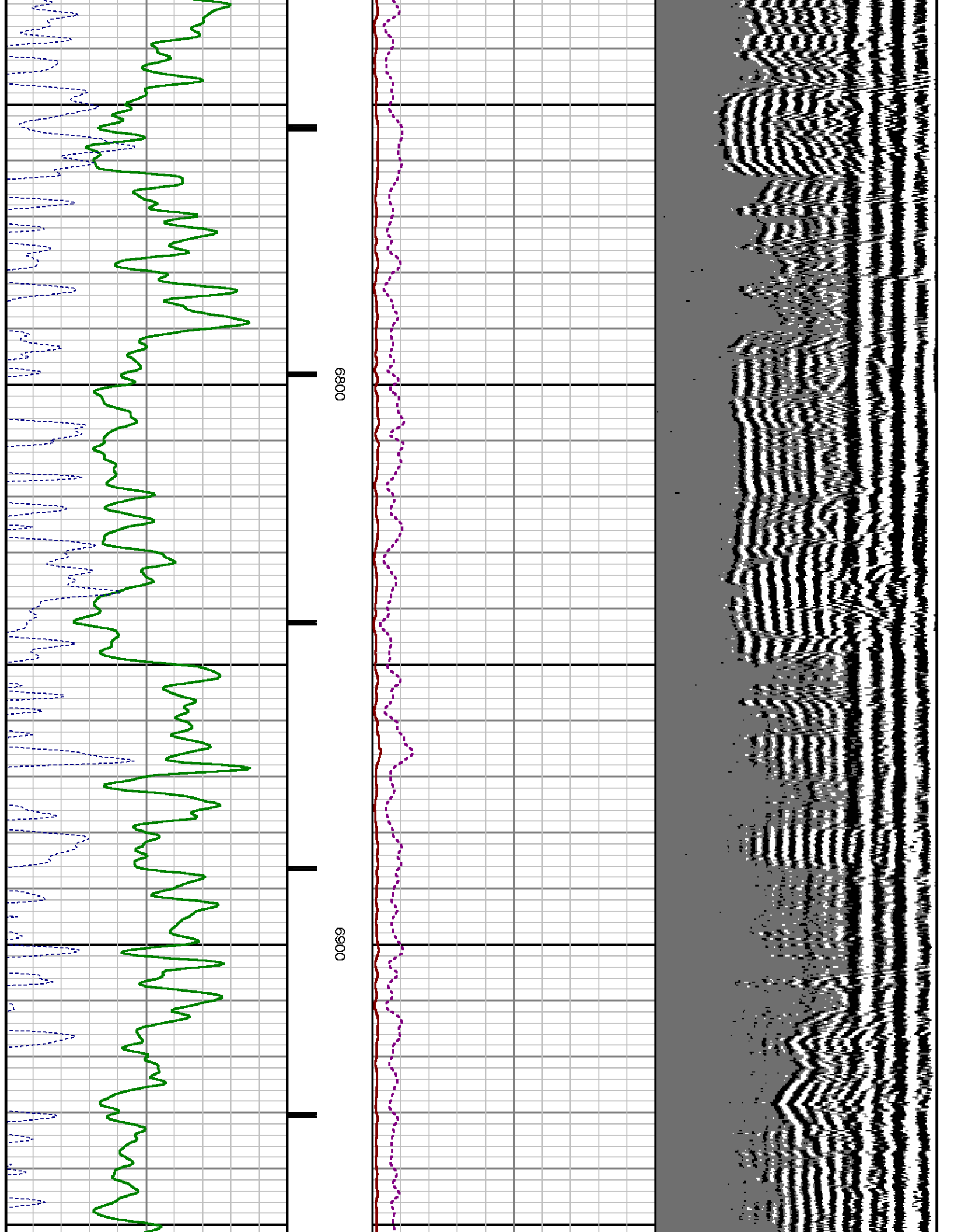
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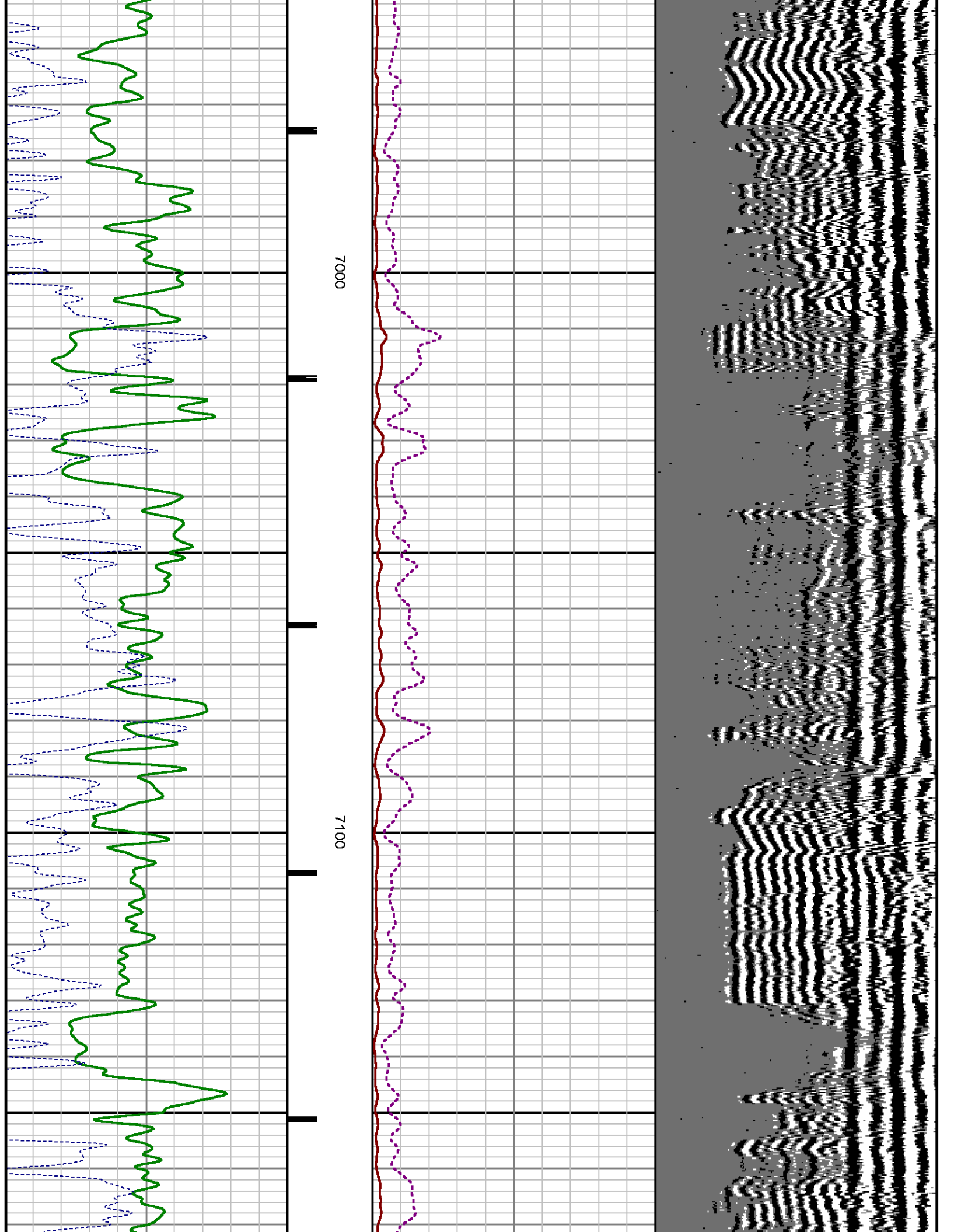




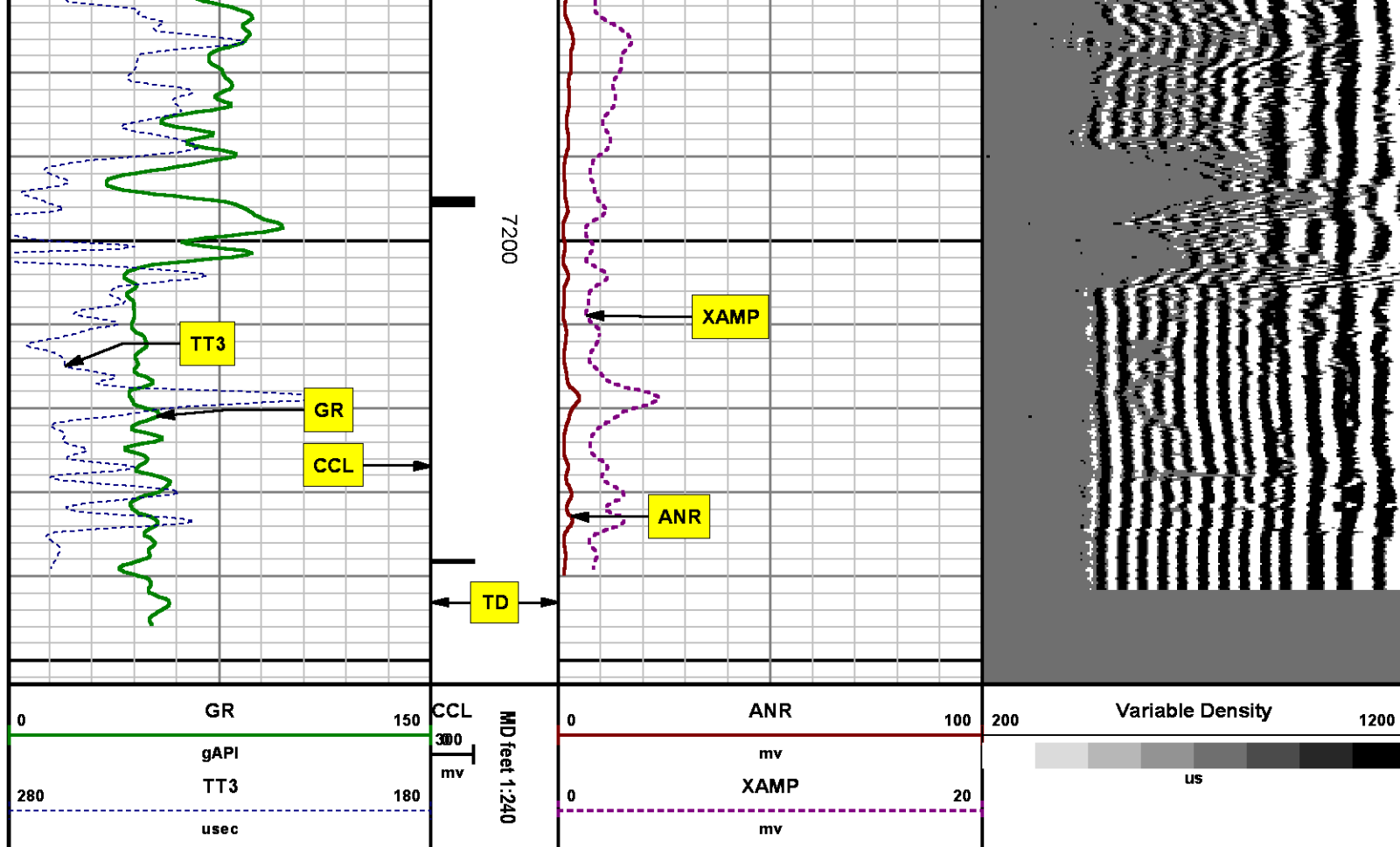












## SECONDARY PRESENTATION

### 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	27.312	7253.000
RAL	Amp Gate Start Near	195.000	u sec	27.312	7253.000
RAL	Amp Gate Start Radial	195.000	u sec	27.312	7253.000
RAL	Amp Gate Width Far	25.000	u sec	27.312	7253.000
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RAL	casing od	4.500	inches	27.312	7253.000
RAL	casing wt	11.600	lbm/ft	27.312	7253.000
RAL	FB Start Far	291.900	u sec	27.312	7253.000
RAL	FB Start Near	180.000	u sec	27.312	7253.000
RAL	FB Start Radial	180.000	u sec	27.312	7253.000

RAL	FB Thresh Far	10.000	mv	27.312	7253.000
RAL	FB Thresh Near	4.000	mv	27.312	7253.000
RAL	FB Thresh Radial	4.000	mv	27.312	7253.000
RAL	Fluid Travel Time	200.000	usec/ft	27.312	7252.937

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4		
		AR5	AR6	AR7	AR8	CHV	FPR2		
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3		
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP		
1426XA	-11.360	AFAR	SIG	TT5					
2459XA	-7.250	CCL							
2459XA	-5.390	GR							
2459XA	0.000	NEU							

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

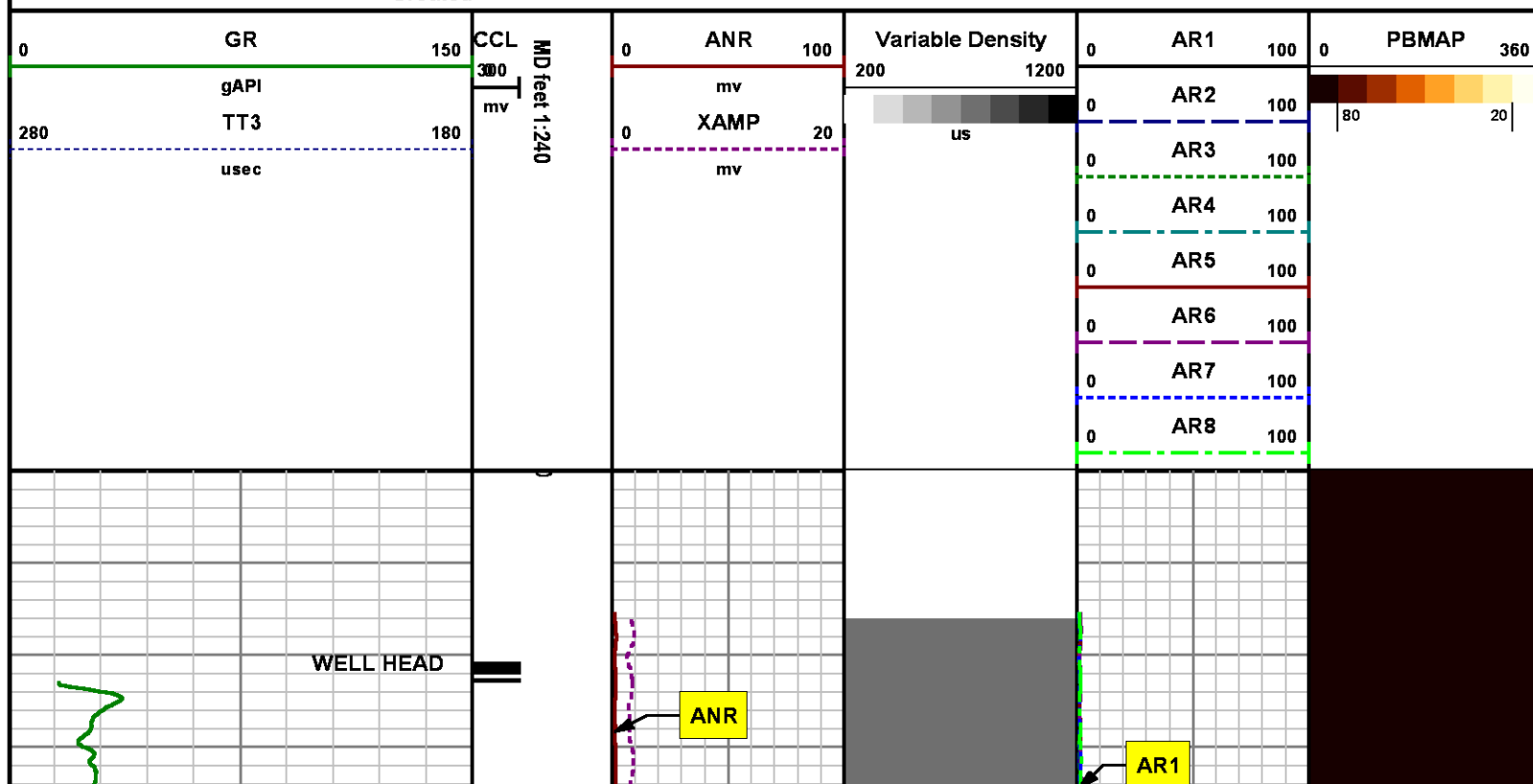
Well : CHEVRON GM 312-21

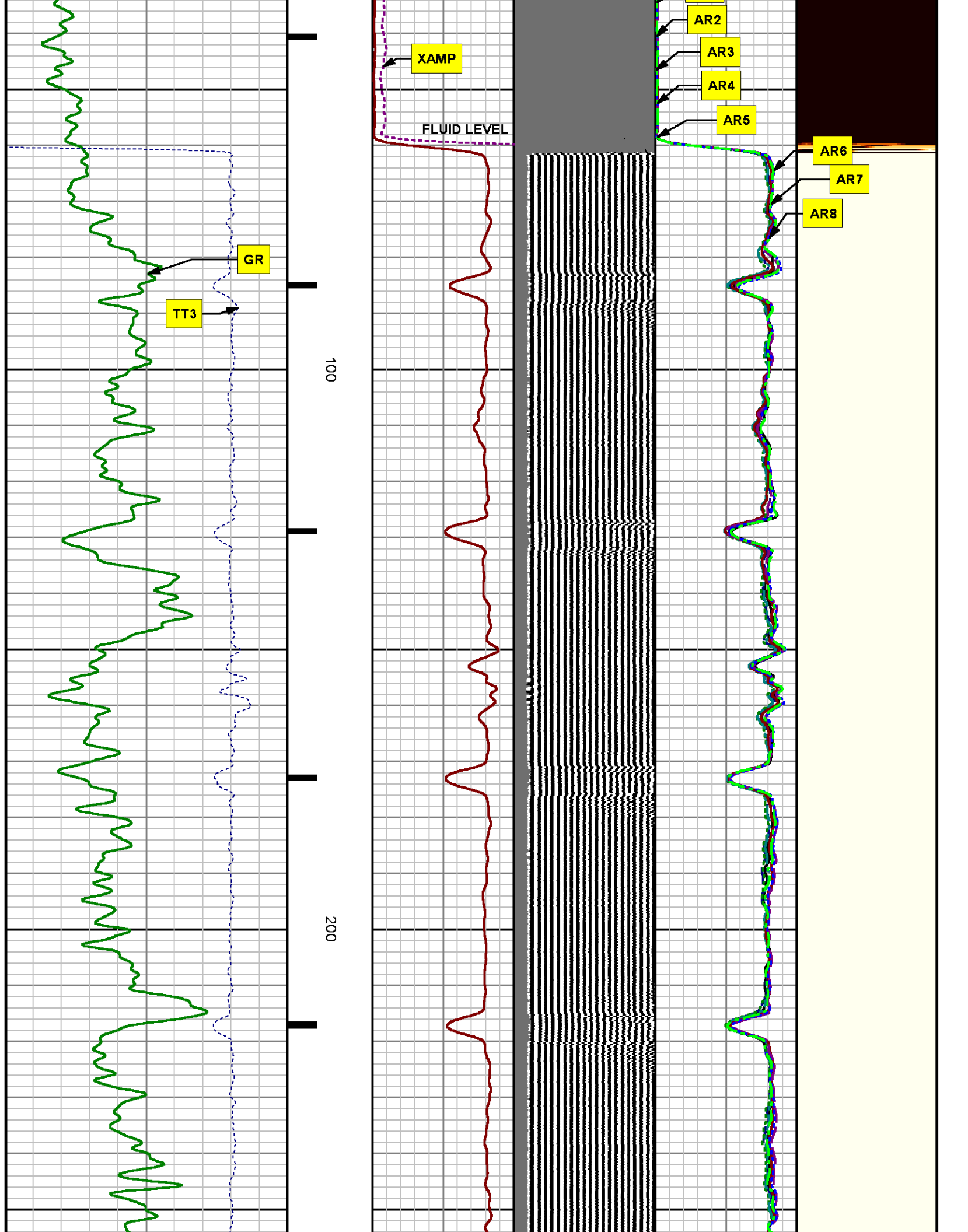
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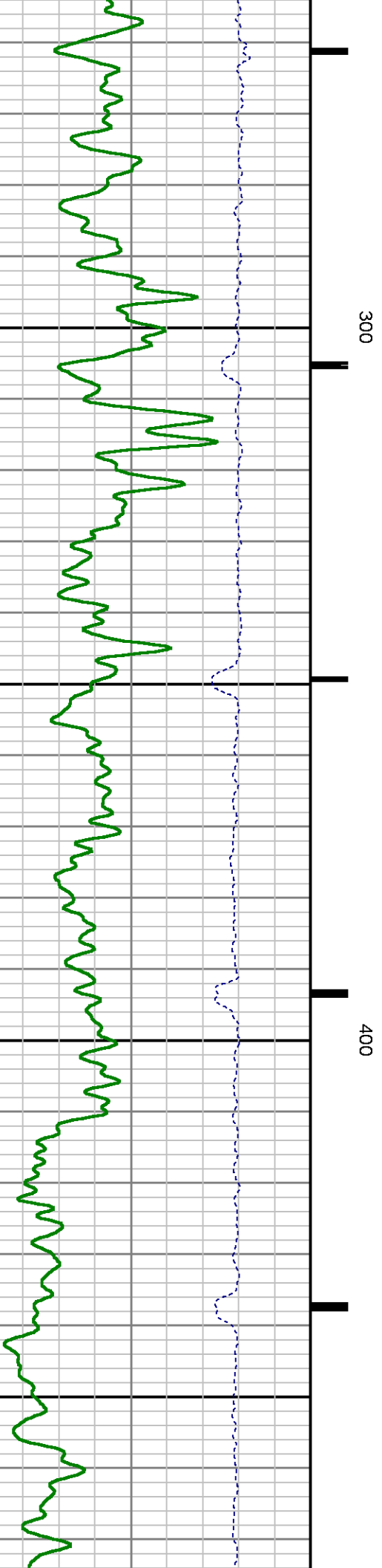
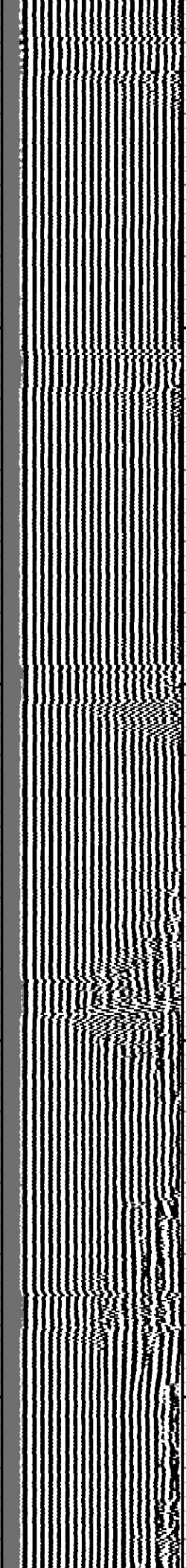
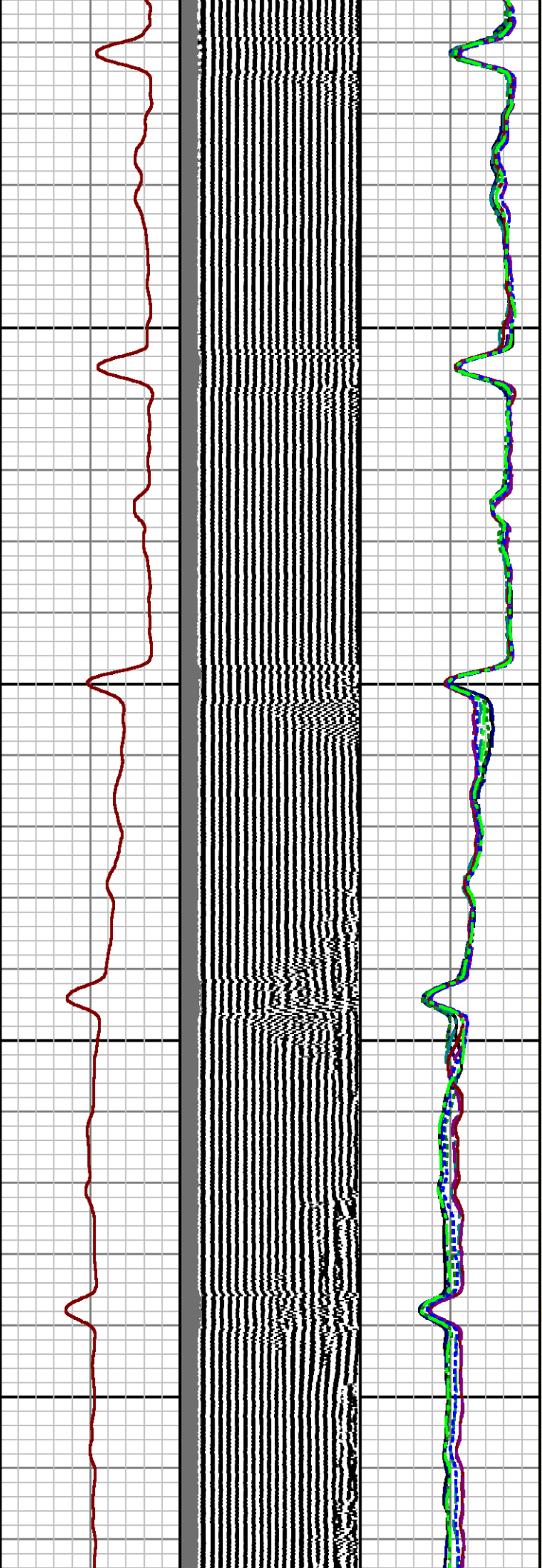
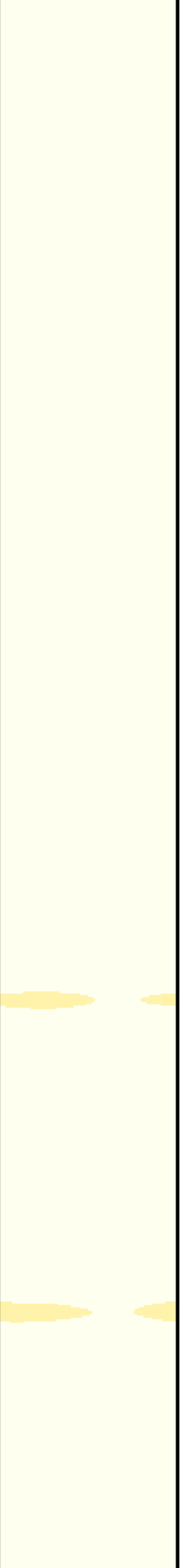
Mode : PlotMgr 5.4.504

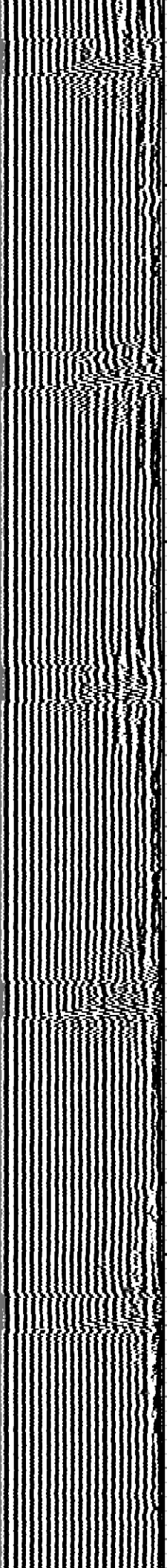
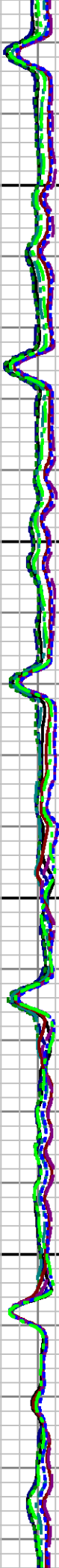
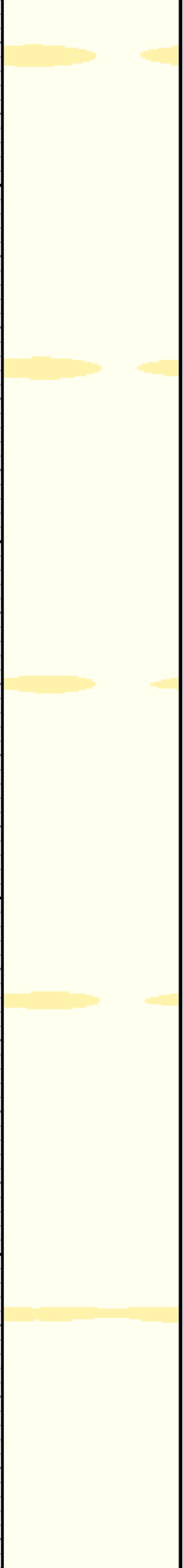
Interval : 0.00 - 7253.00 feet UP

Created : 10/10/2014 10:43:07 AM



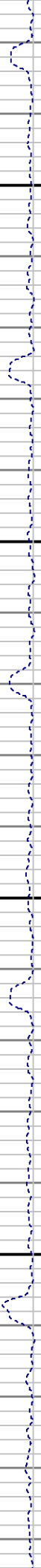


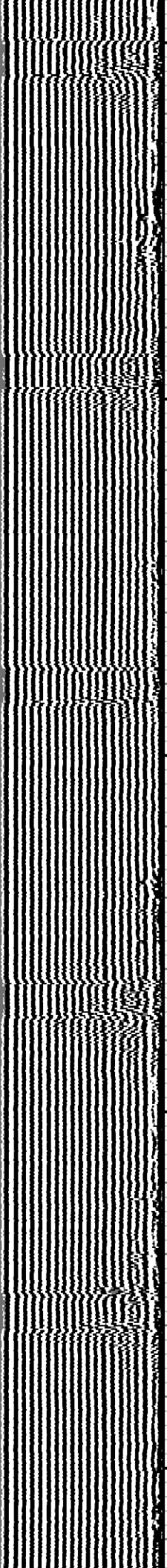
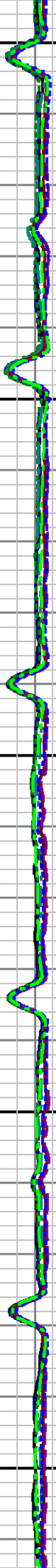
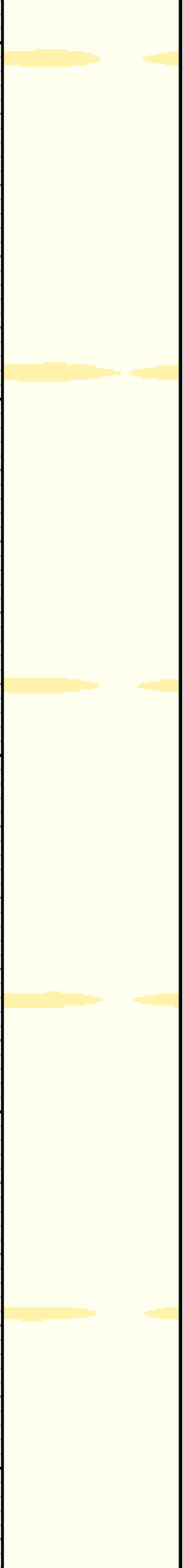




500

600





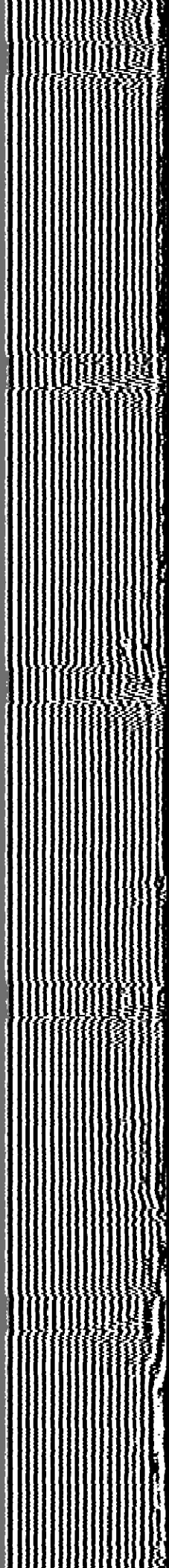
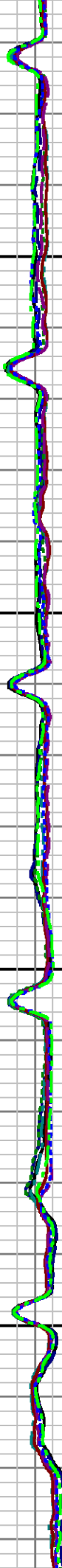
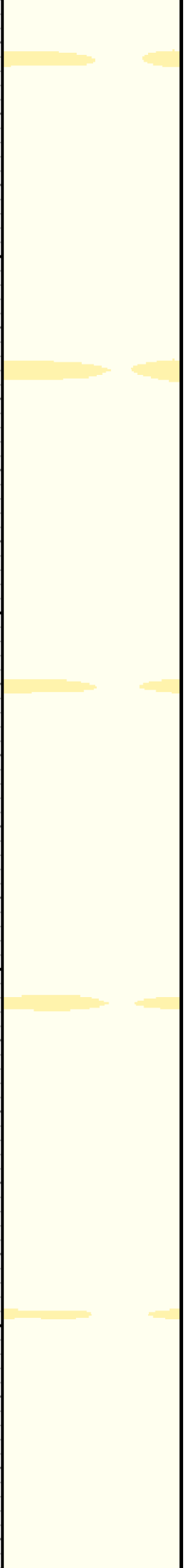
700

800

900

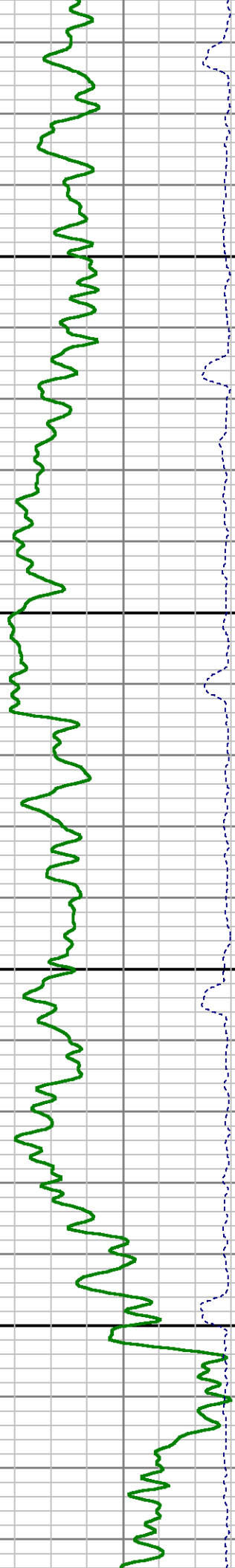


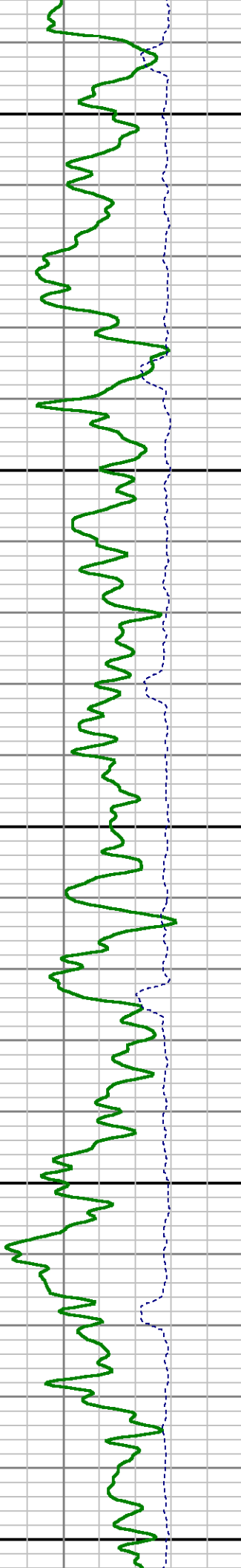
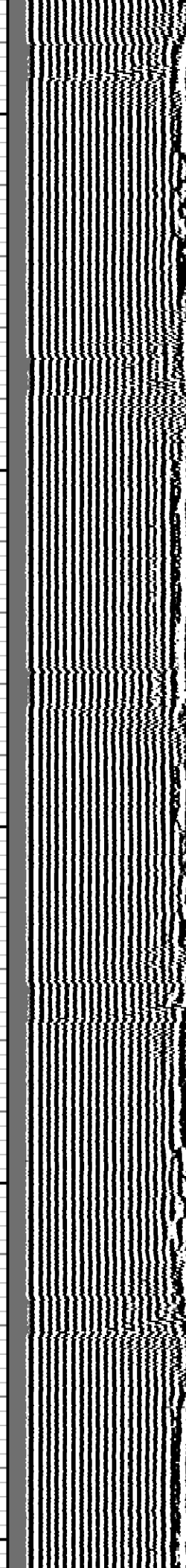
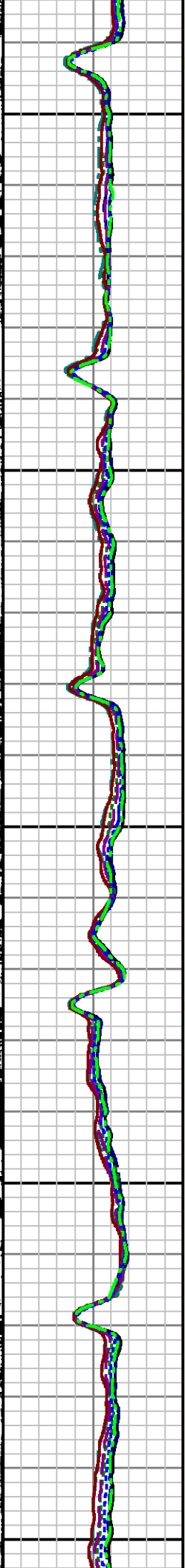
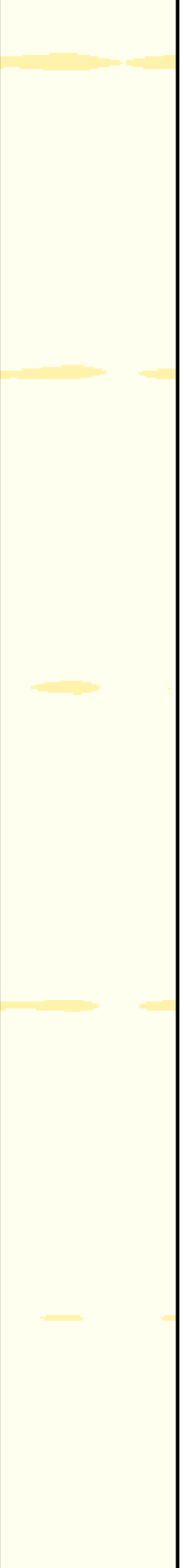


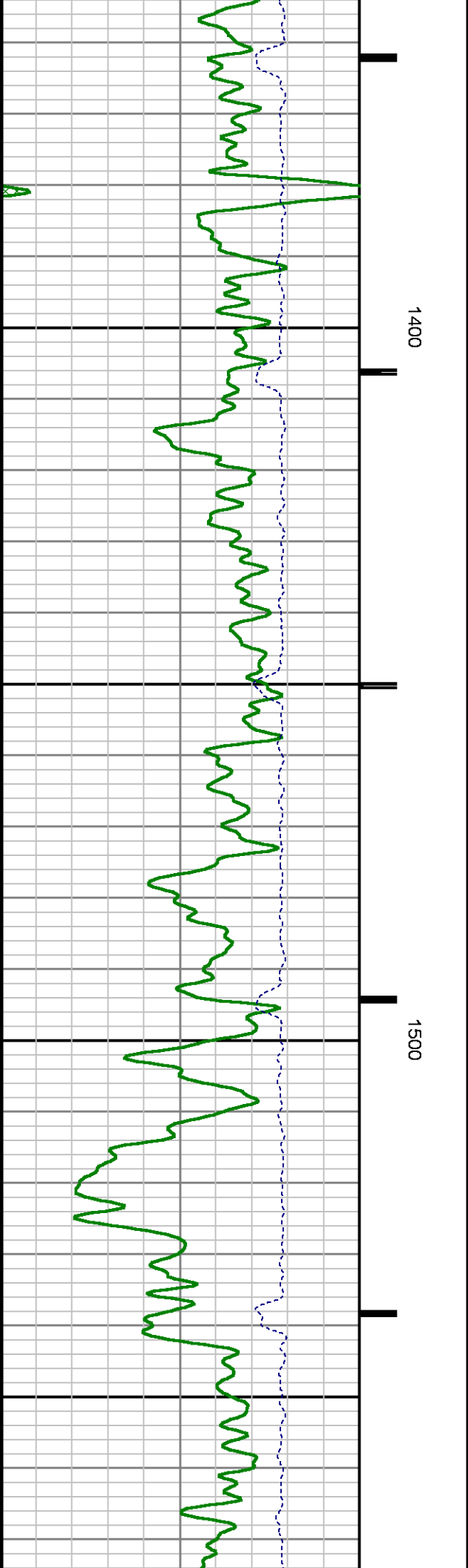
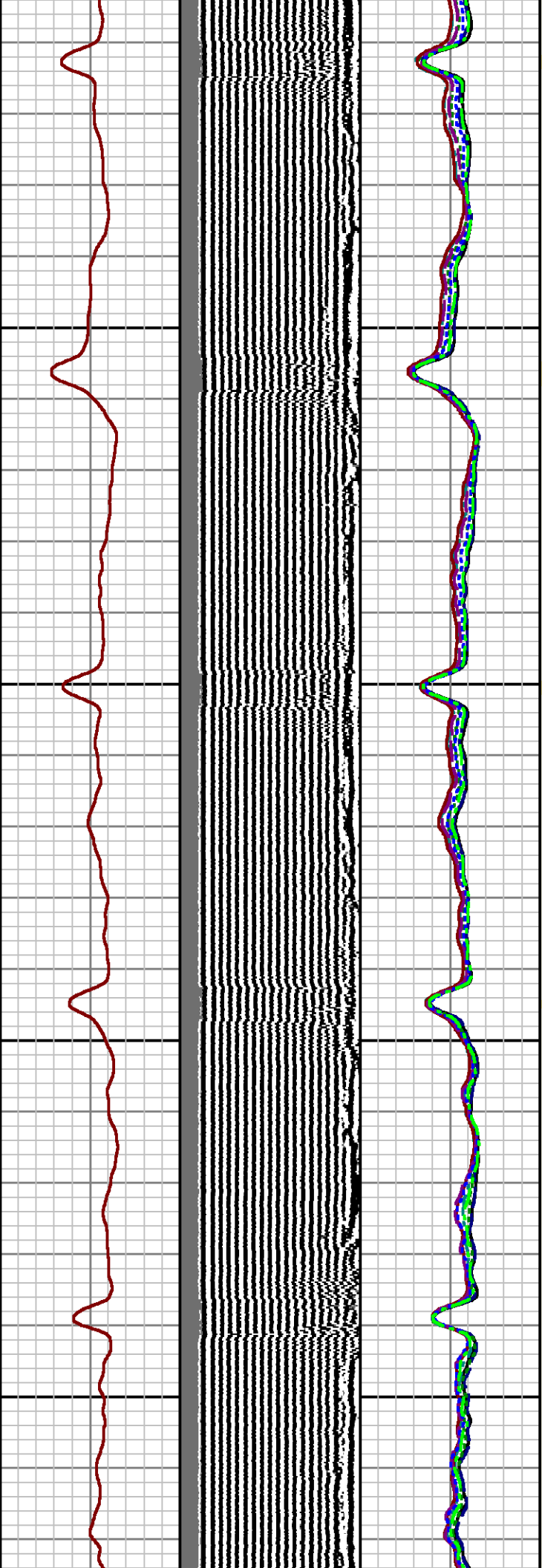
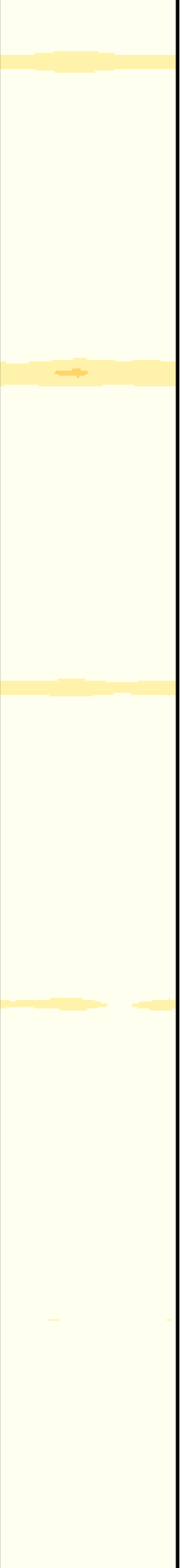


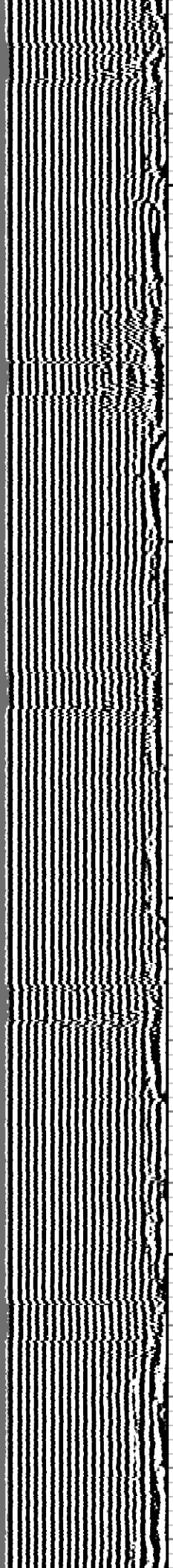
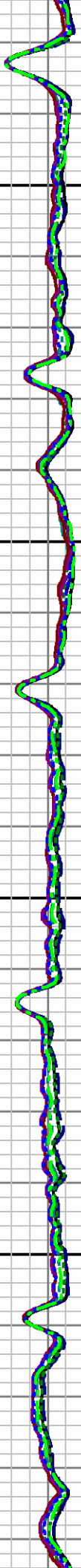
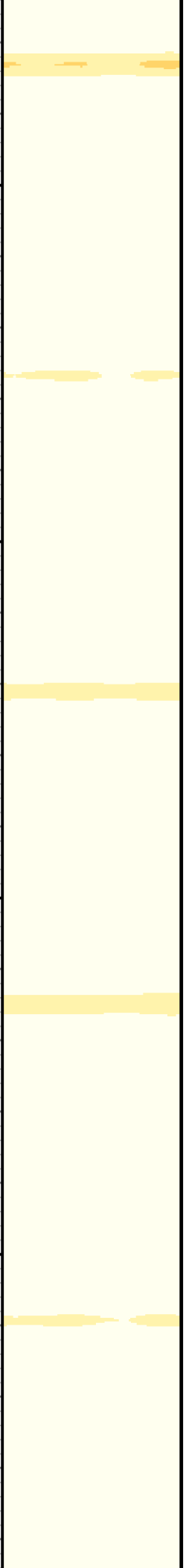
1000

1100



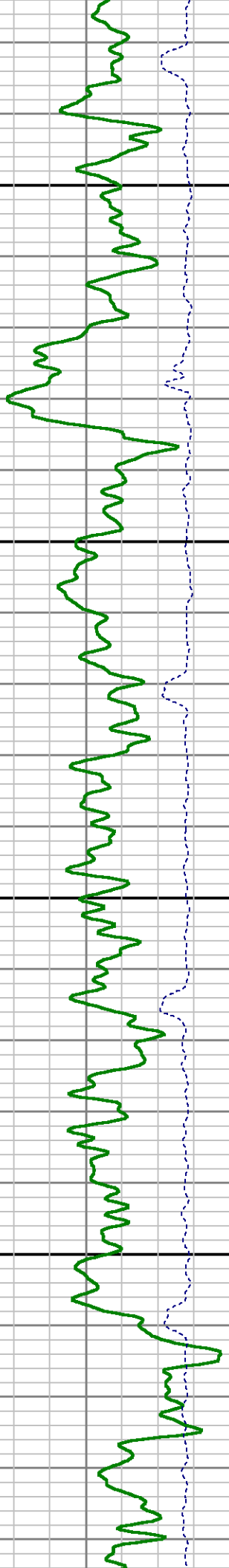


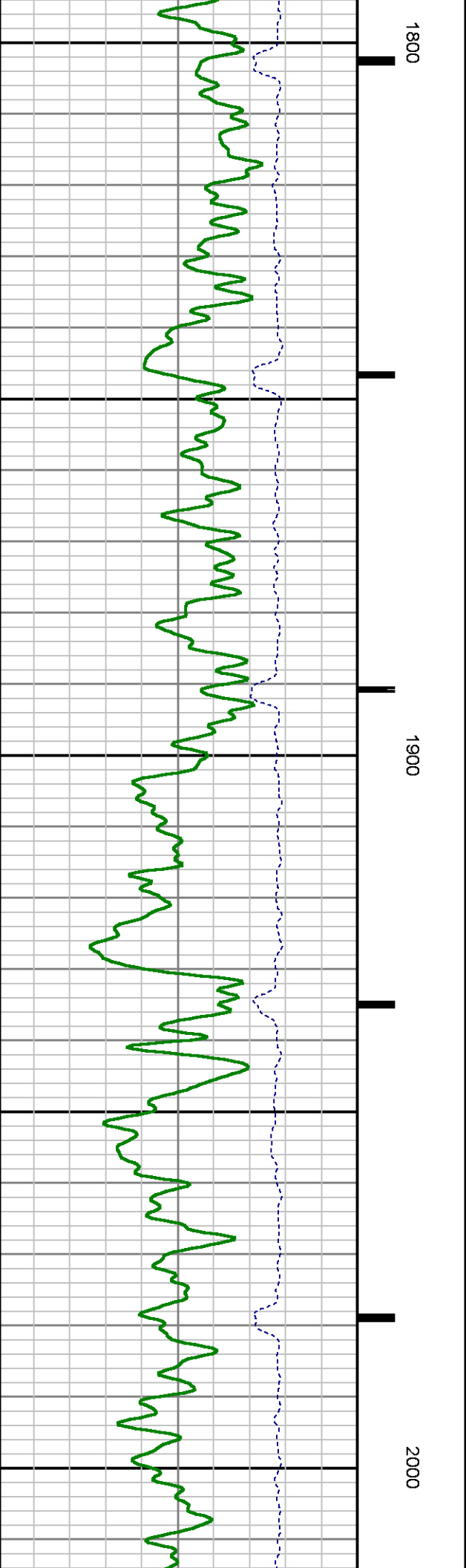
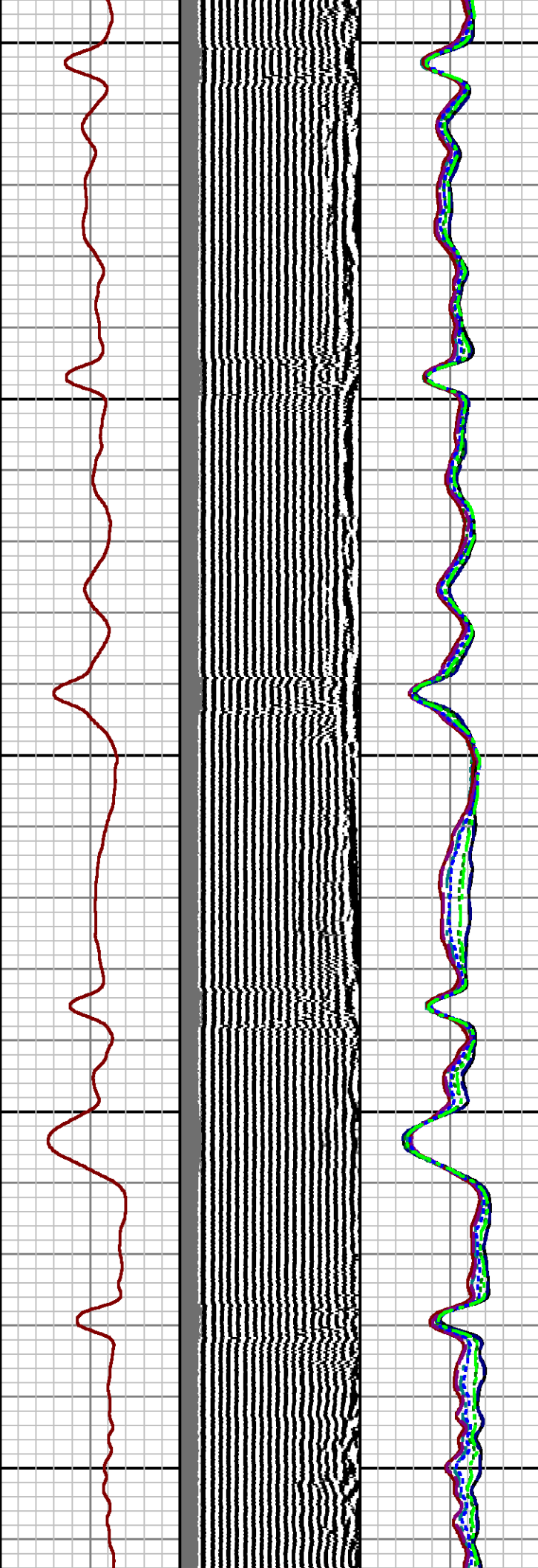
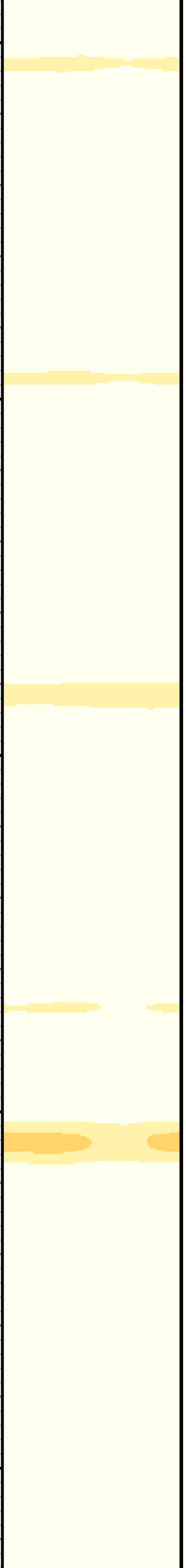


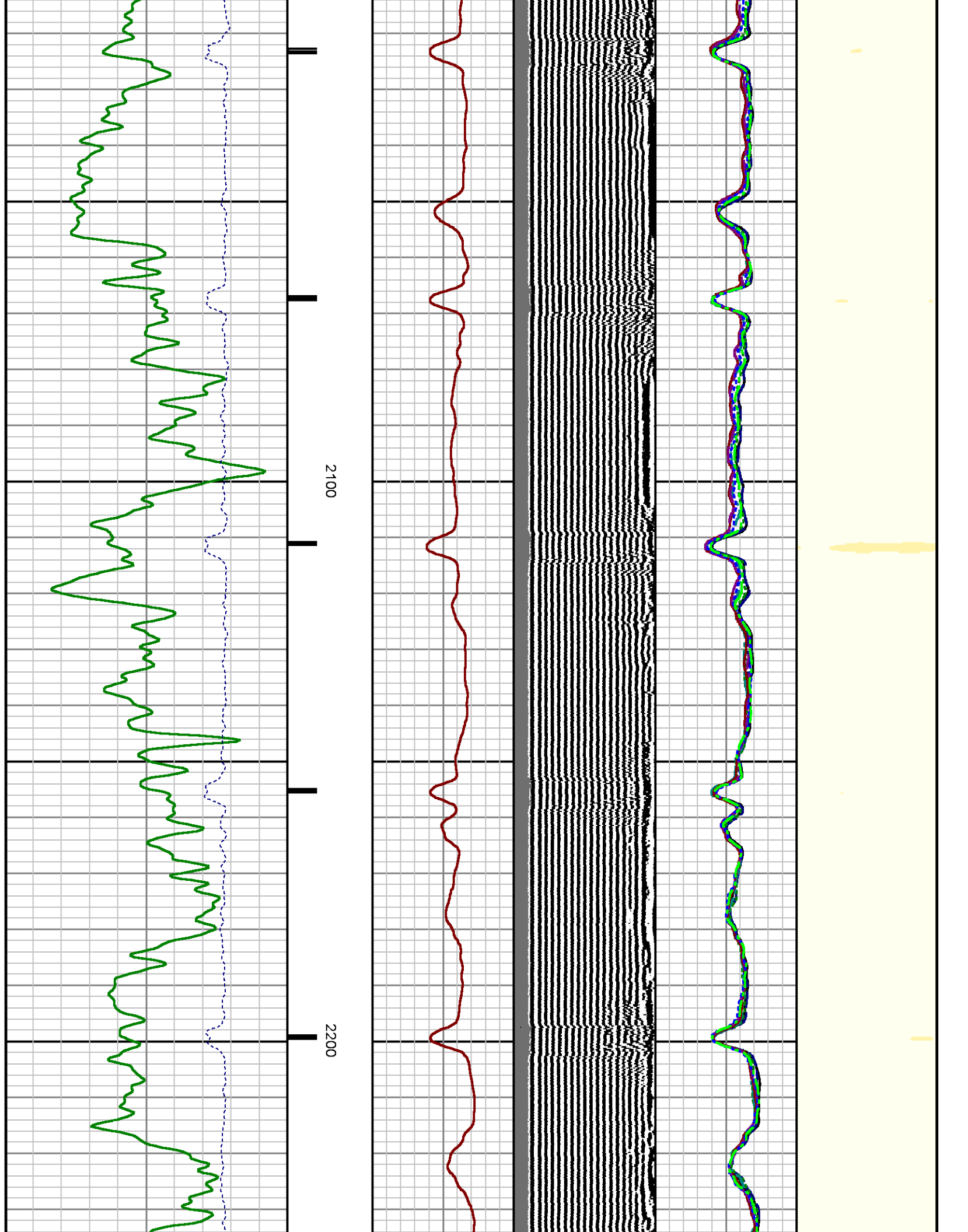


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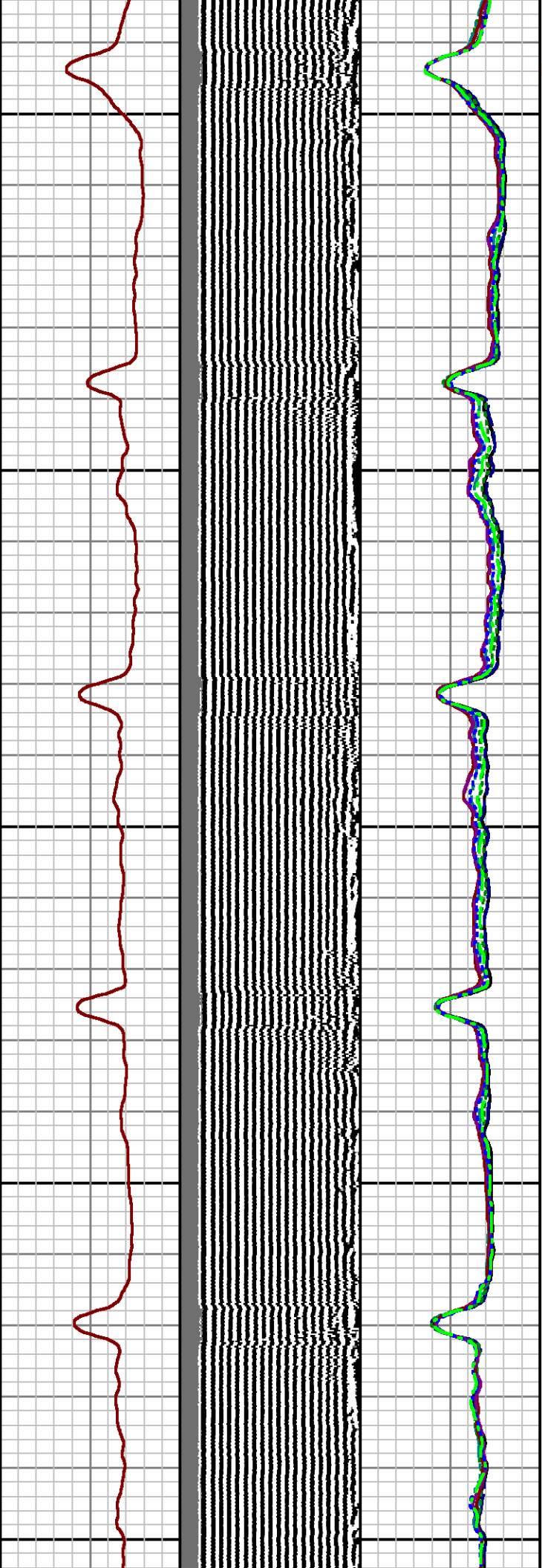
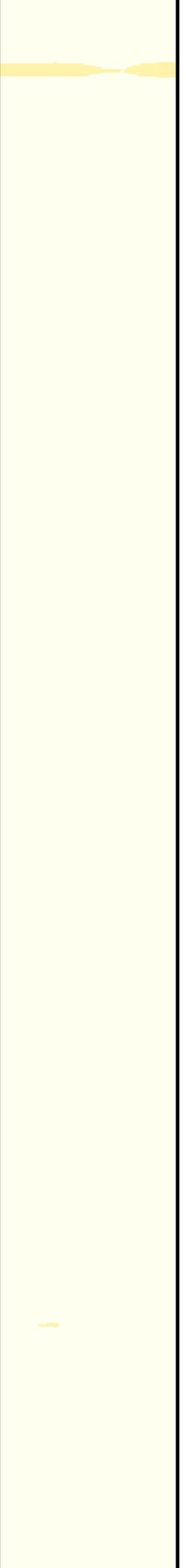
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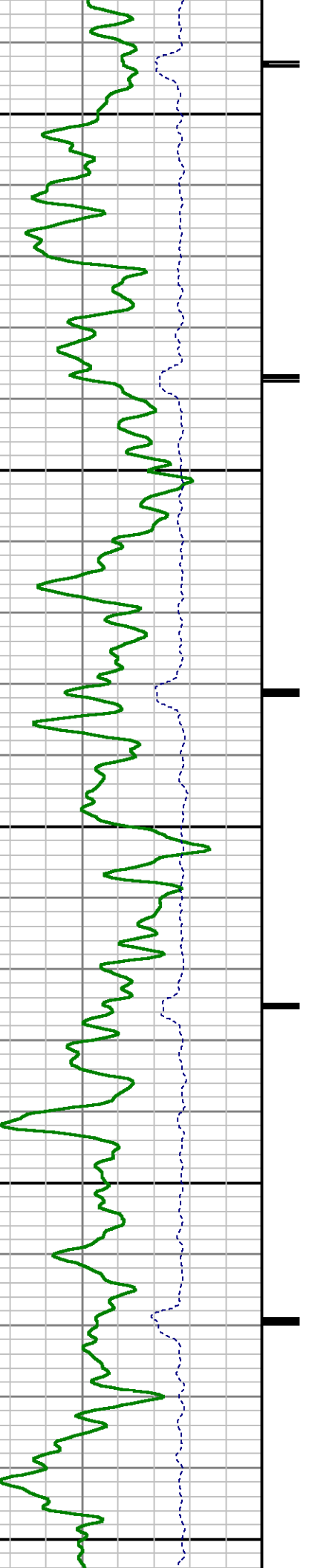


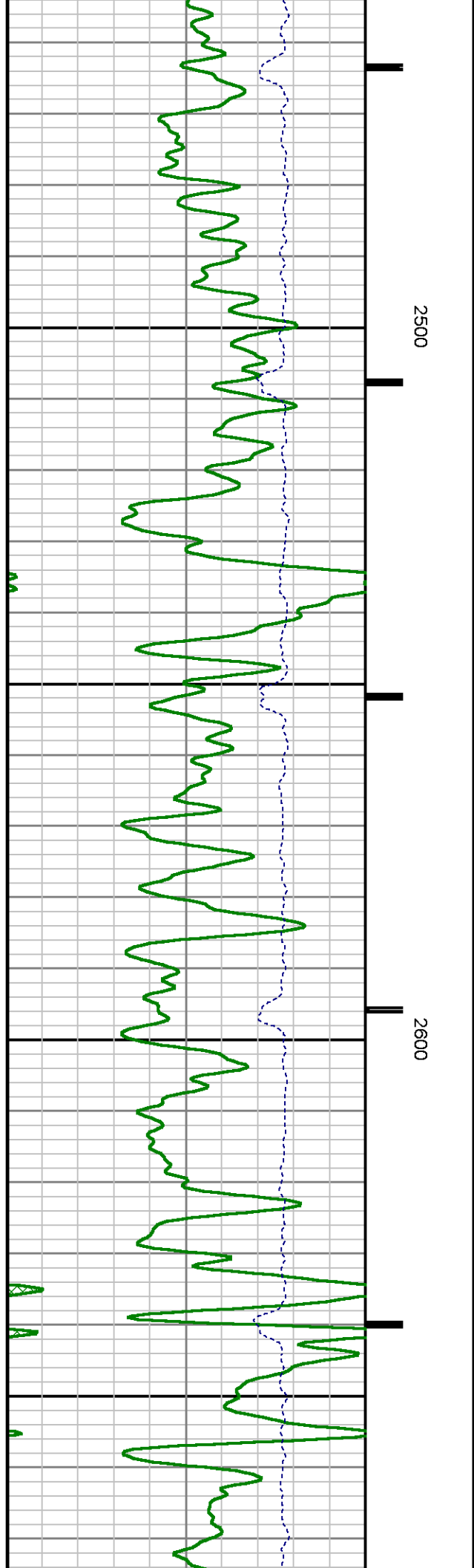
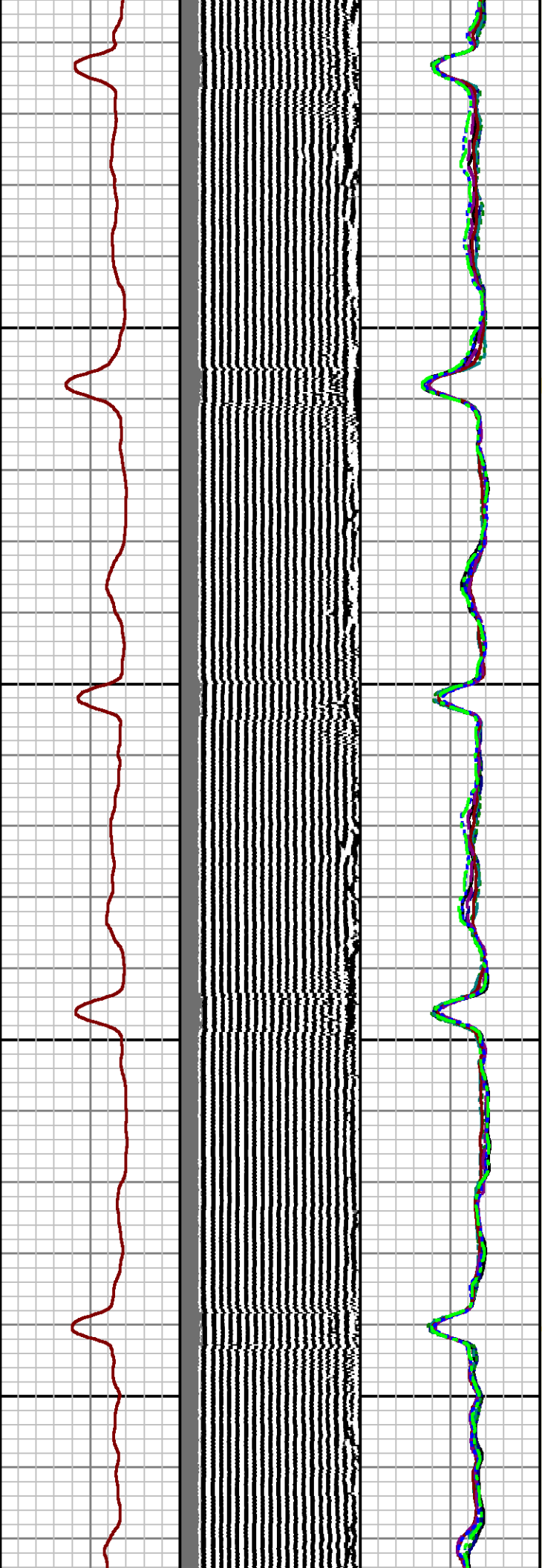
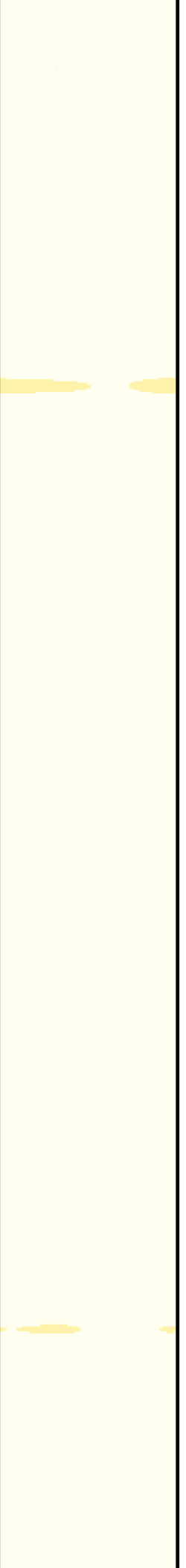


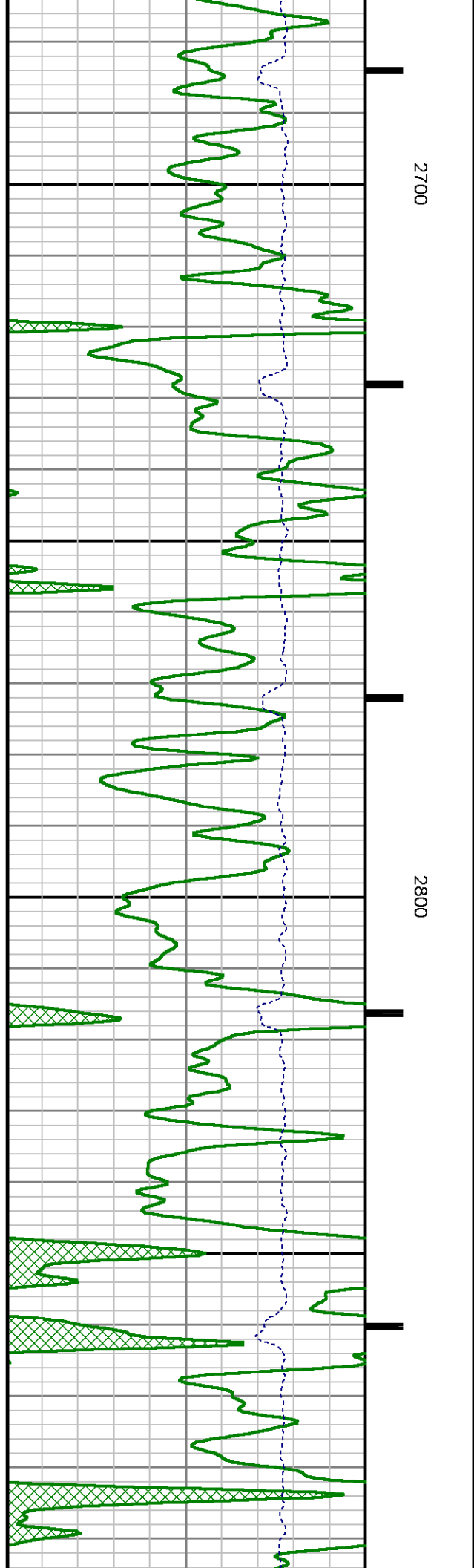
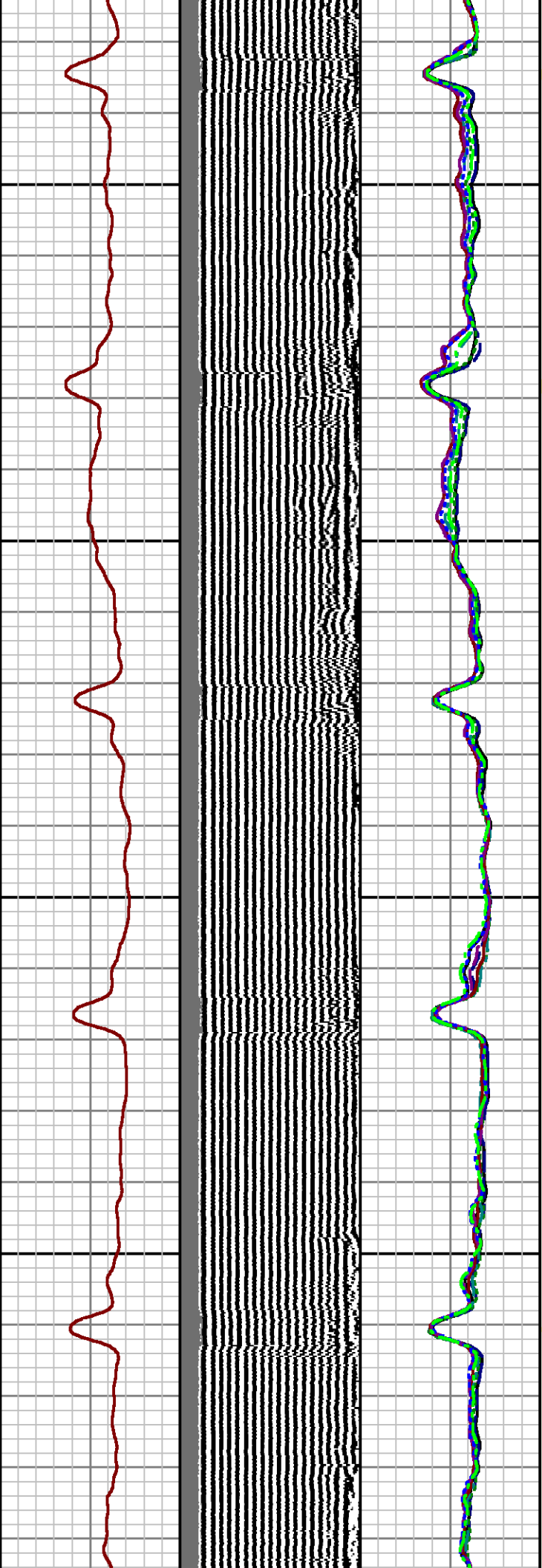
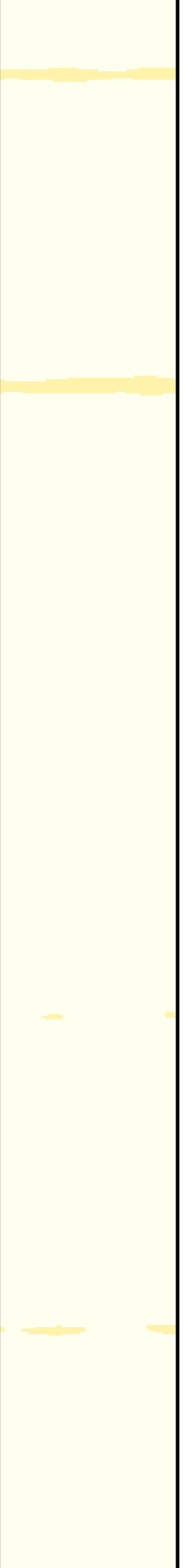


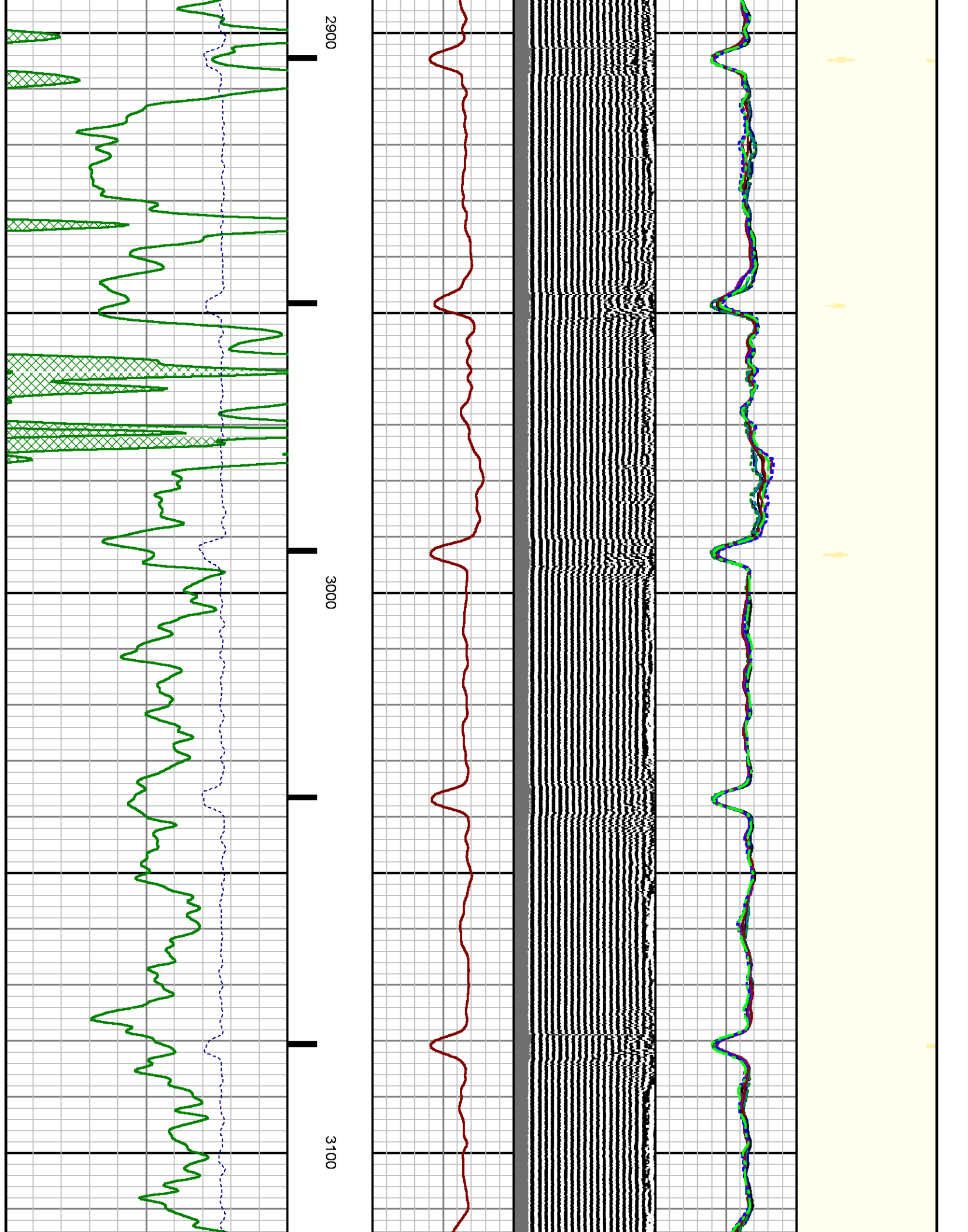
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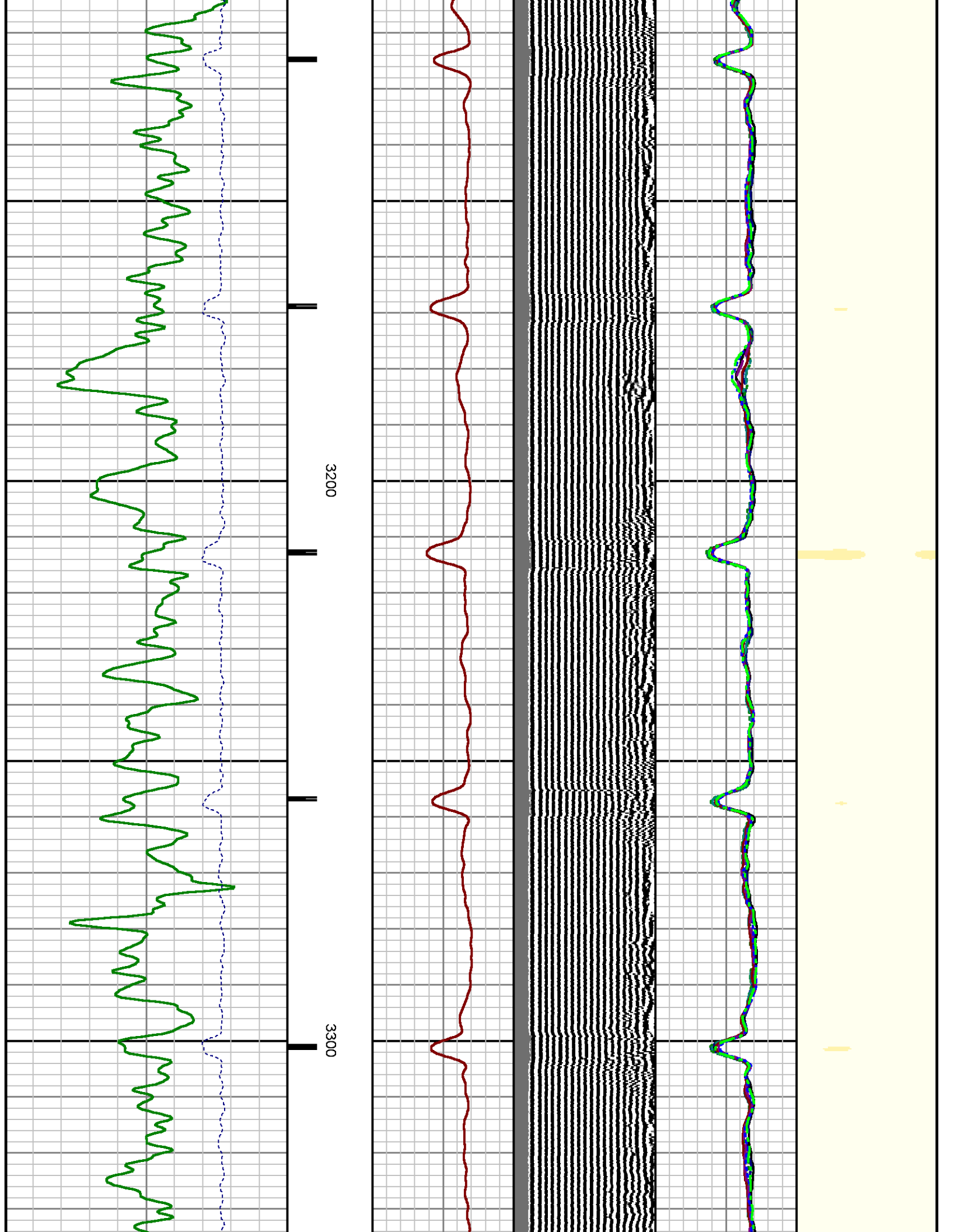
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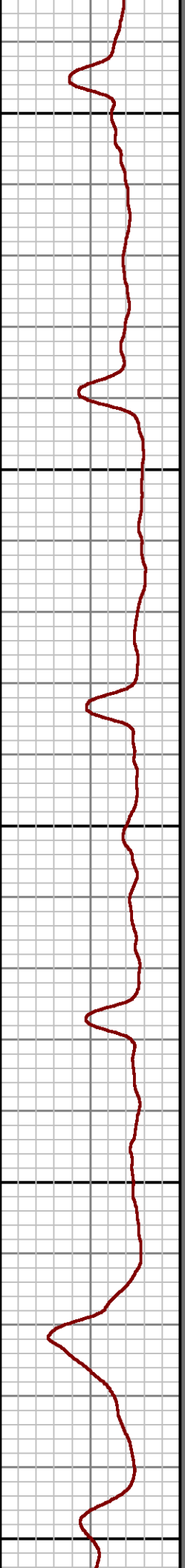
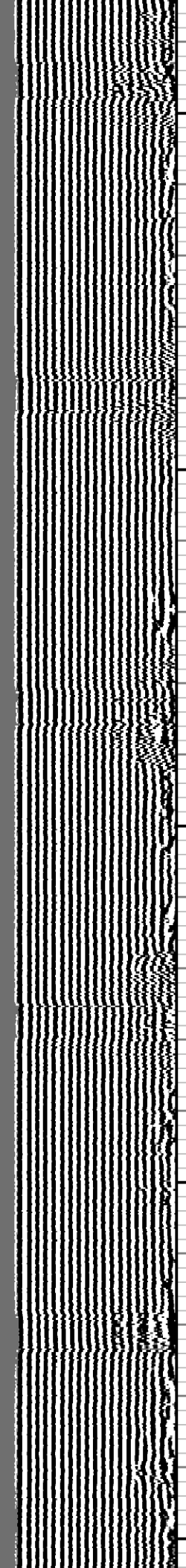
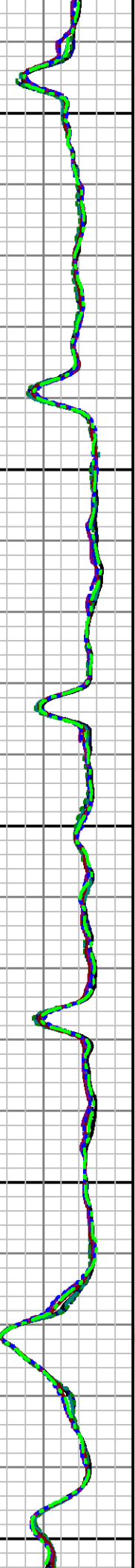
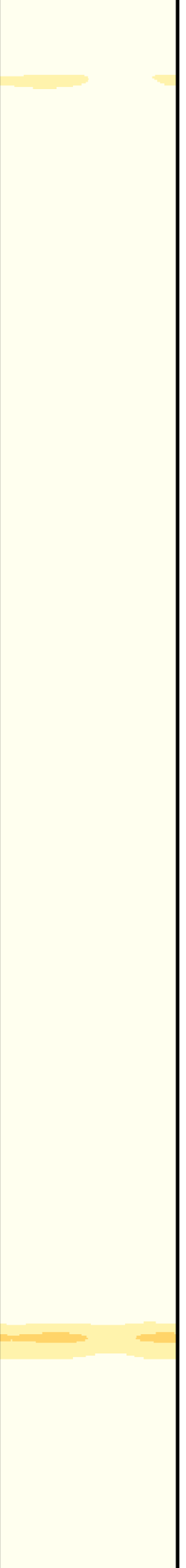






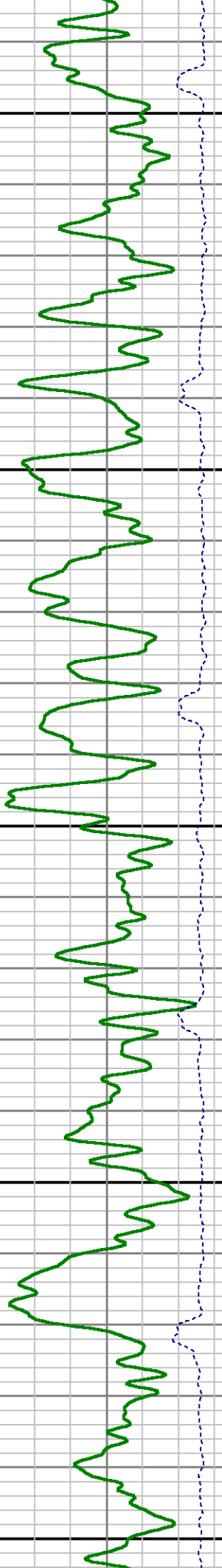




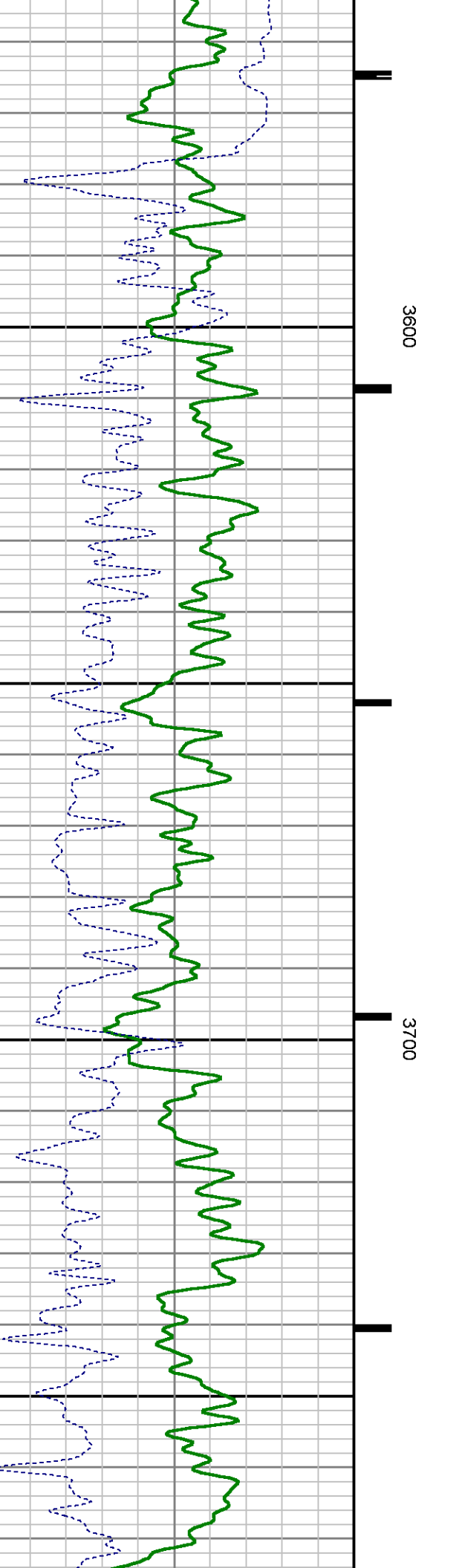
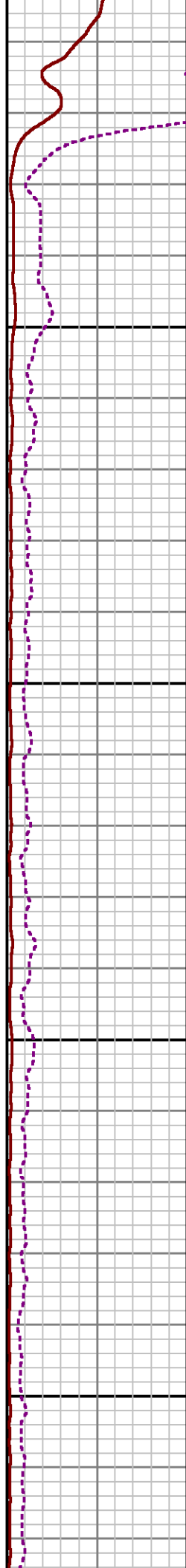
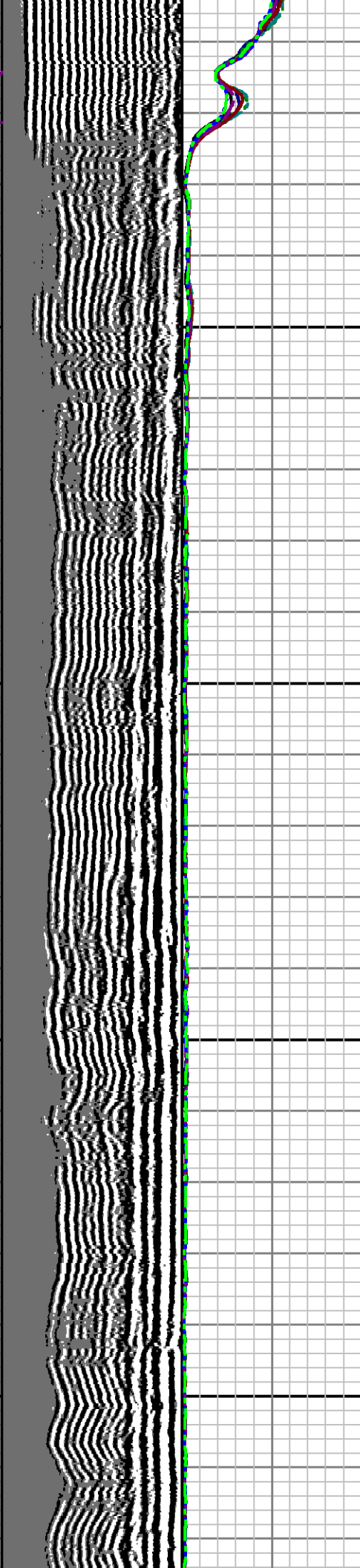
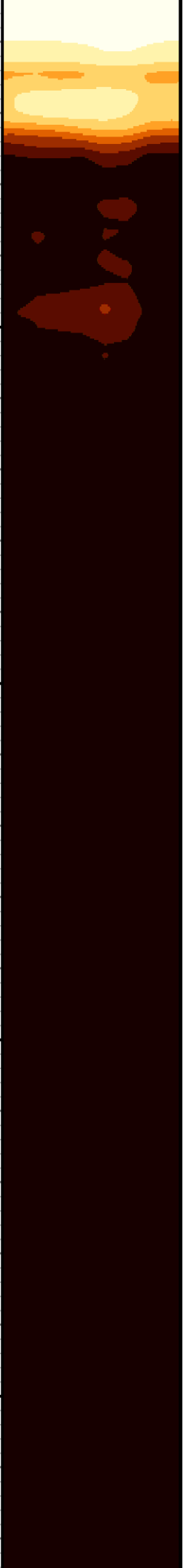


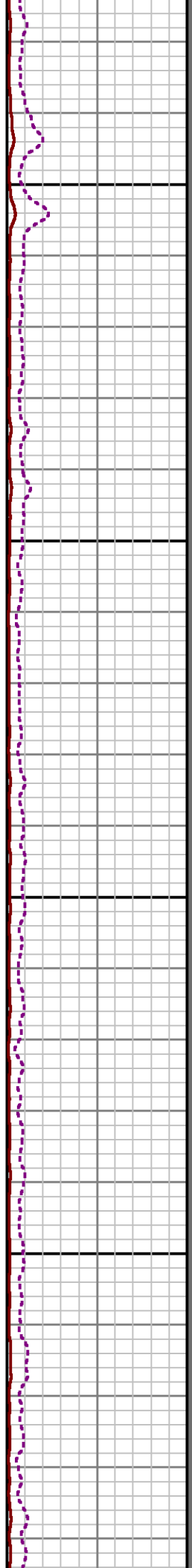
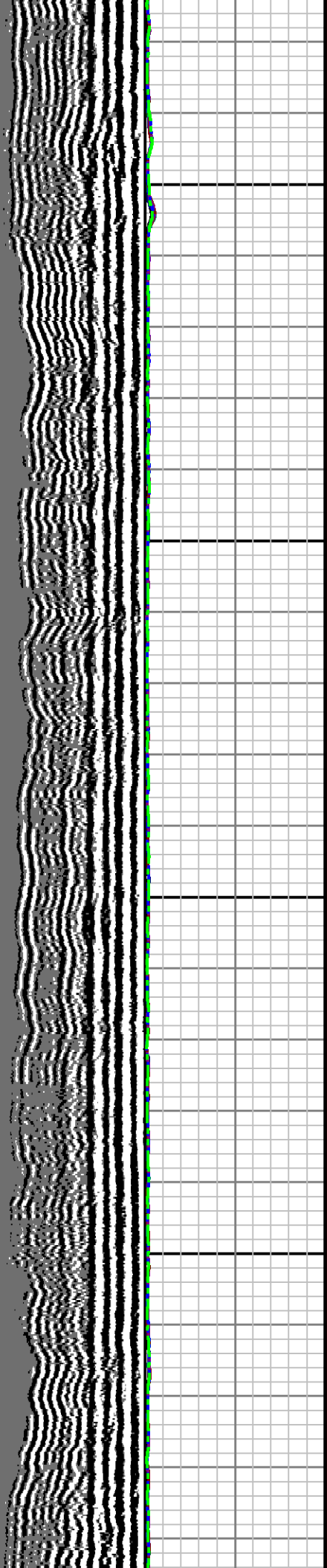
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3500



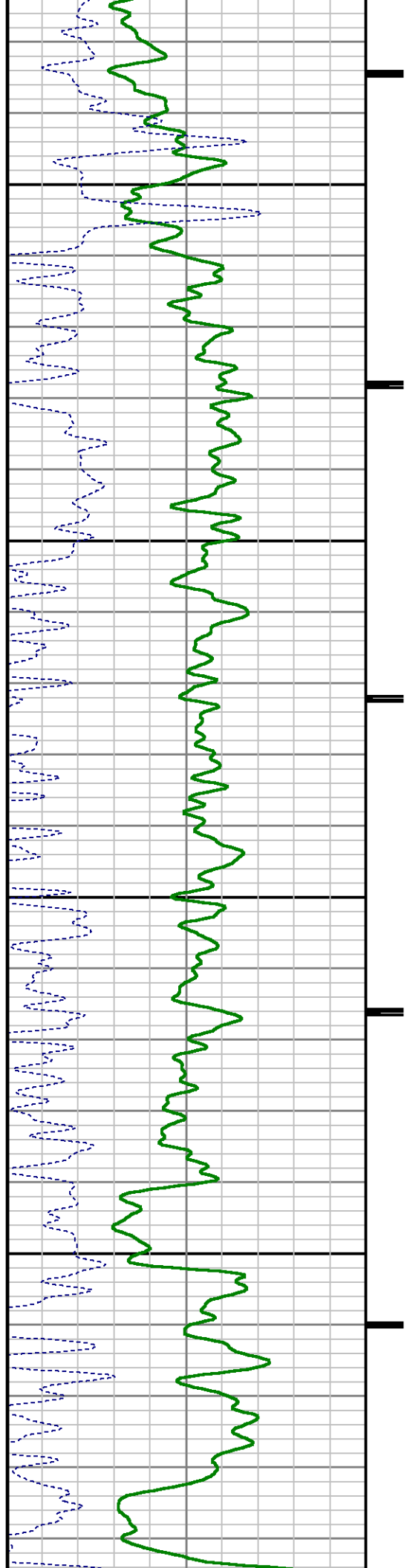


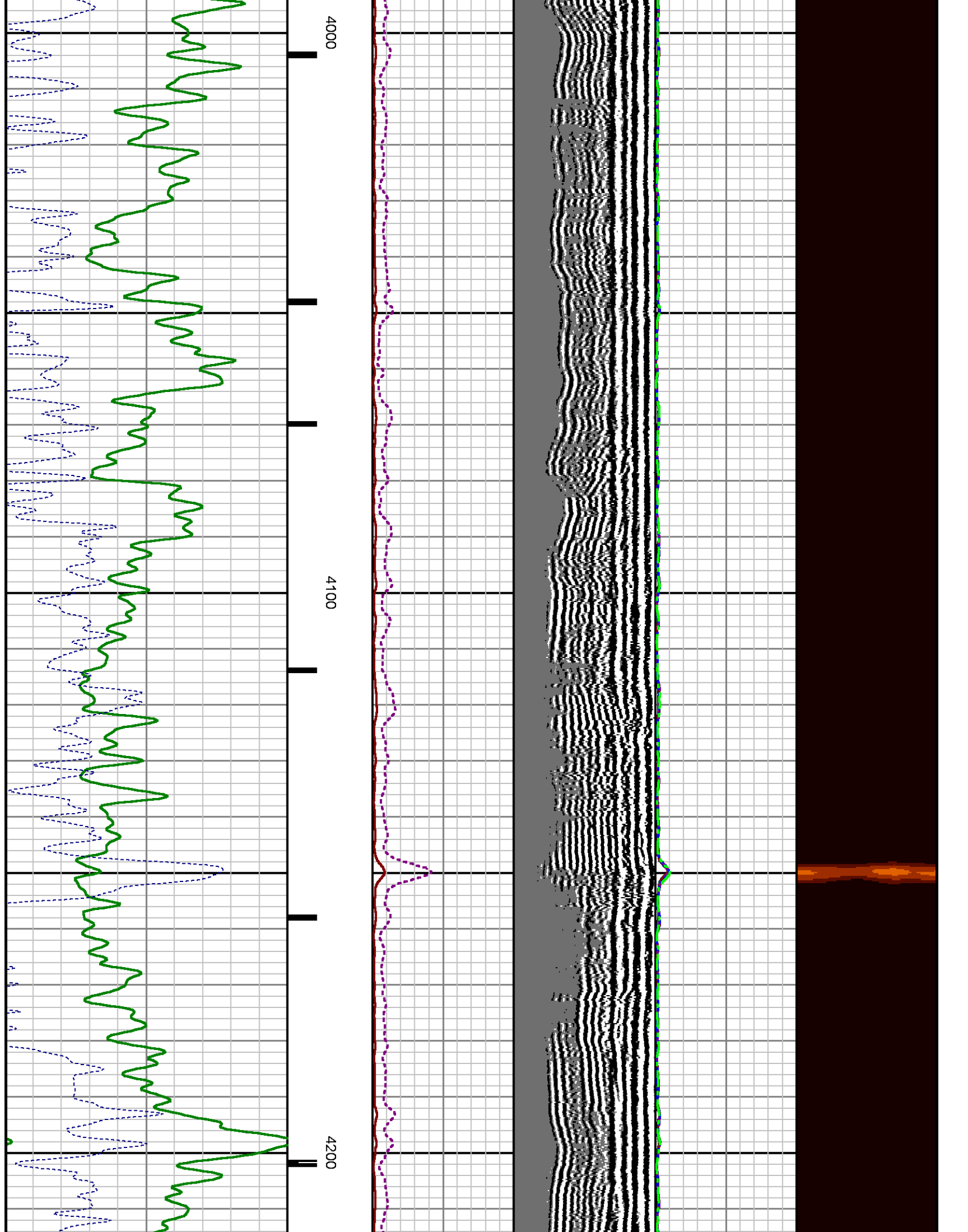


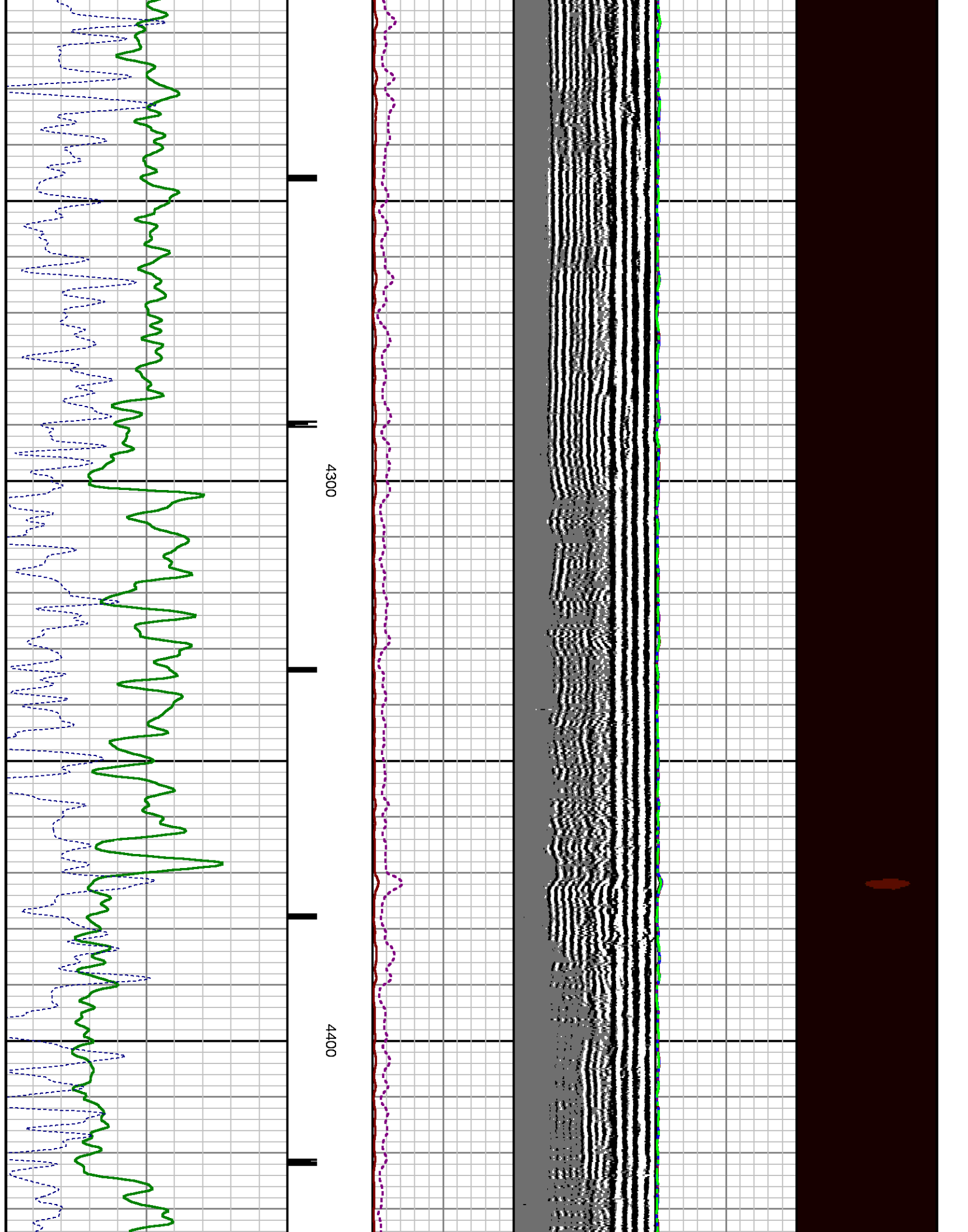


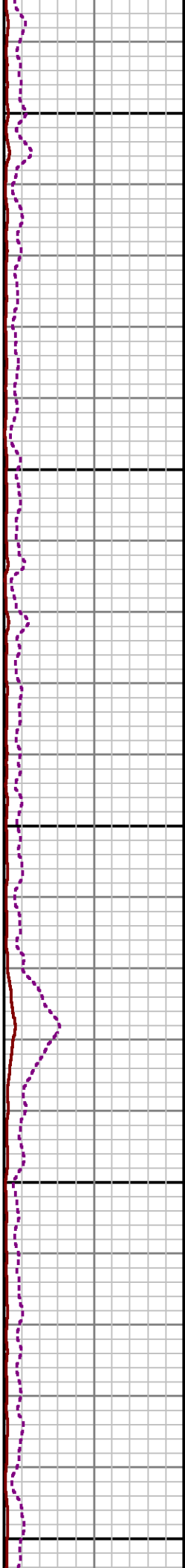
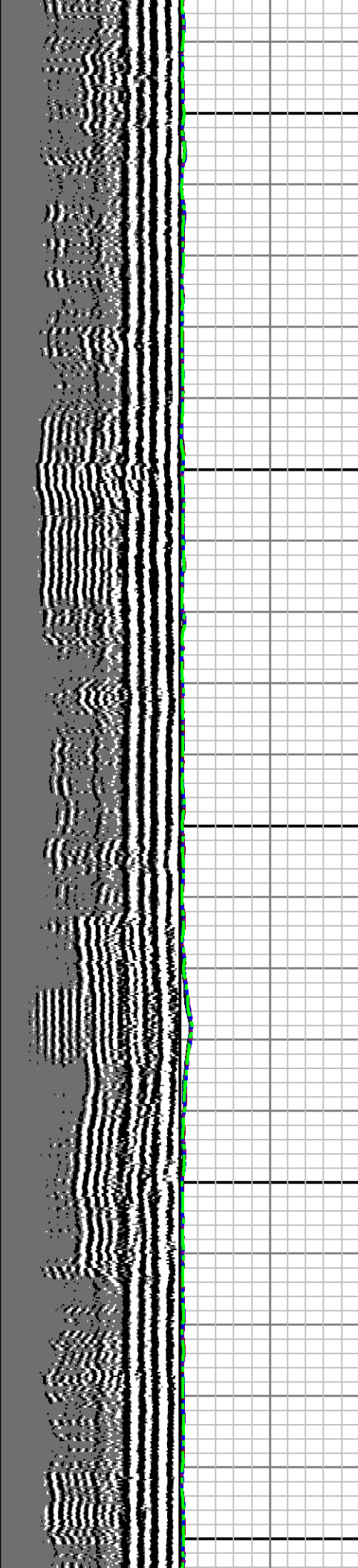
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3900



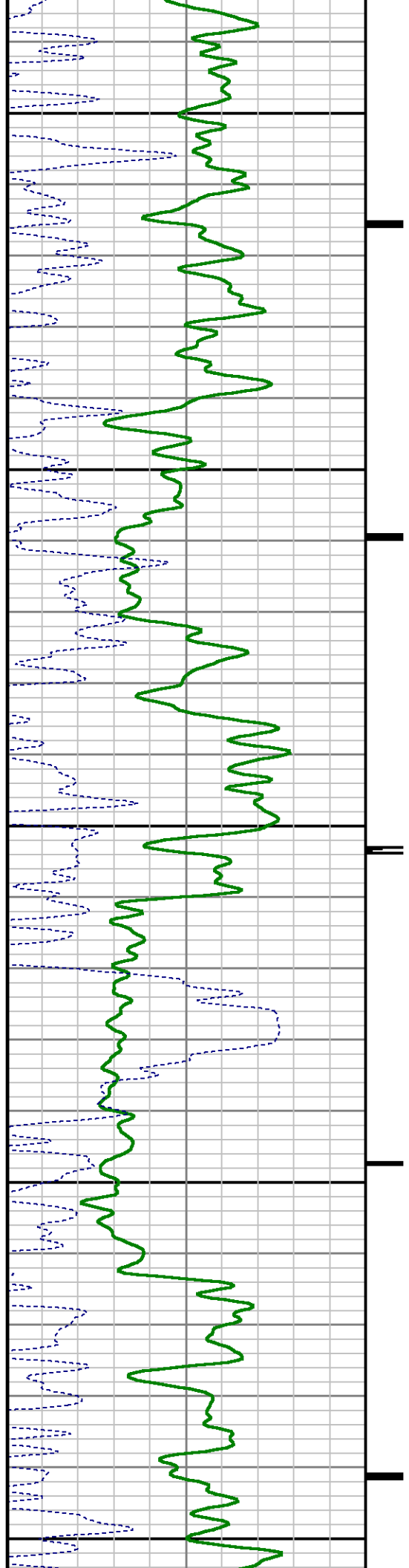


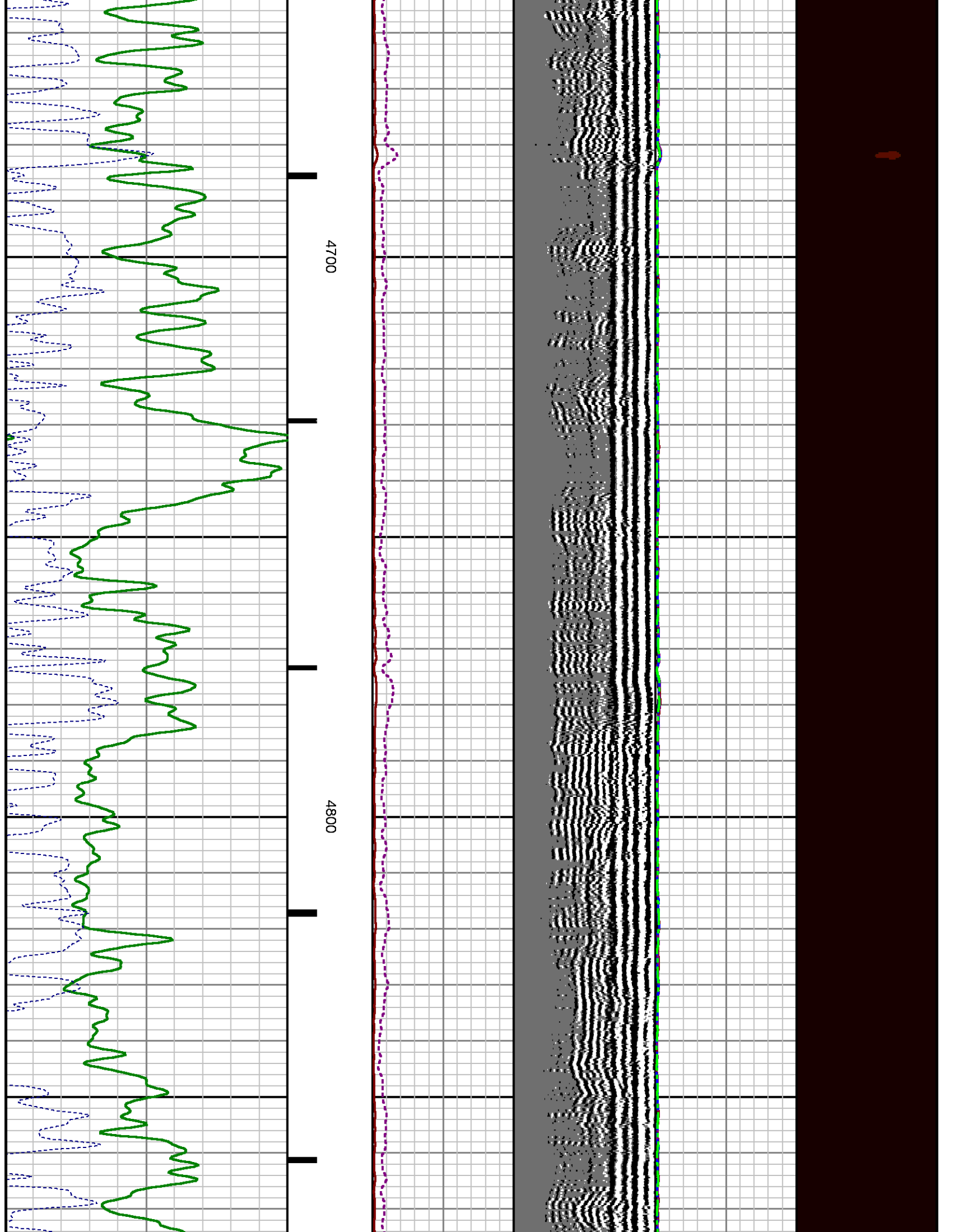




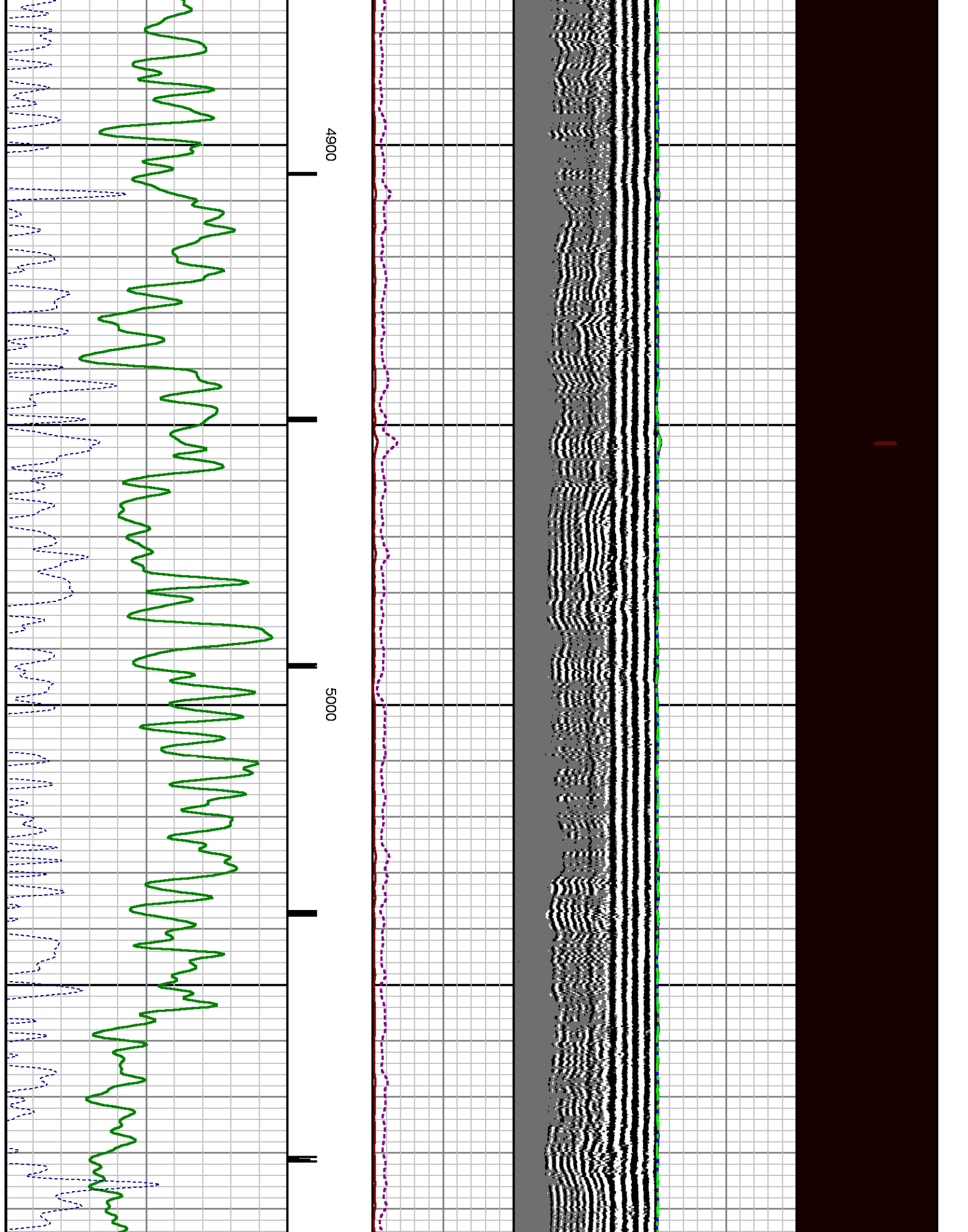
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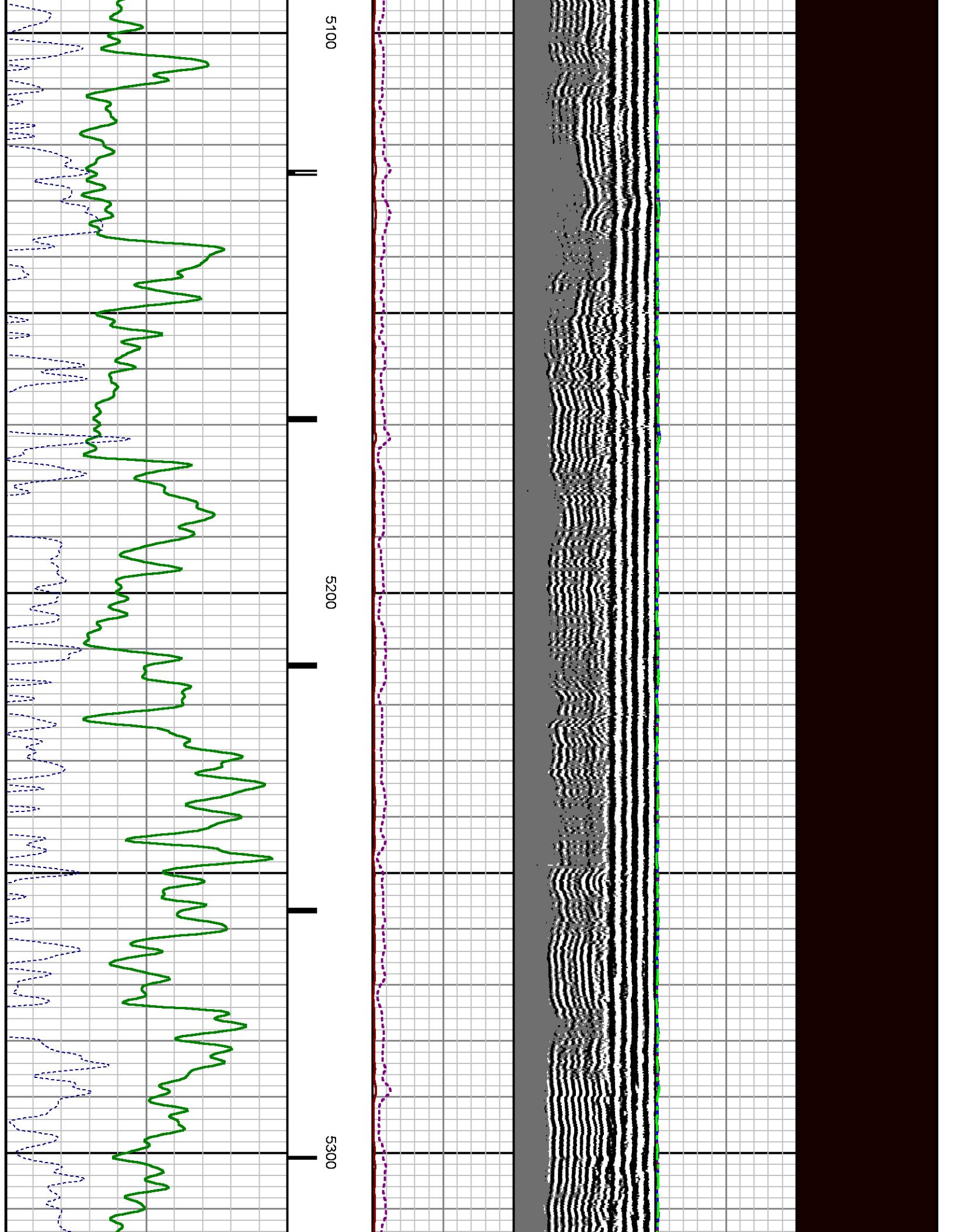
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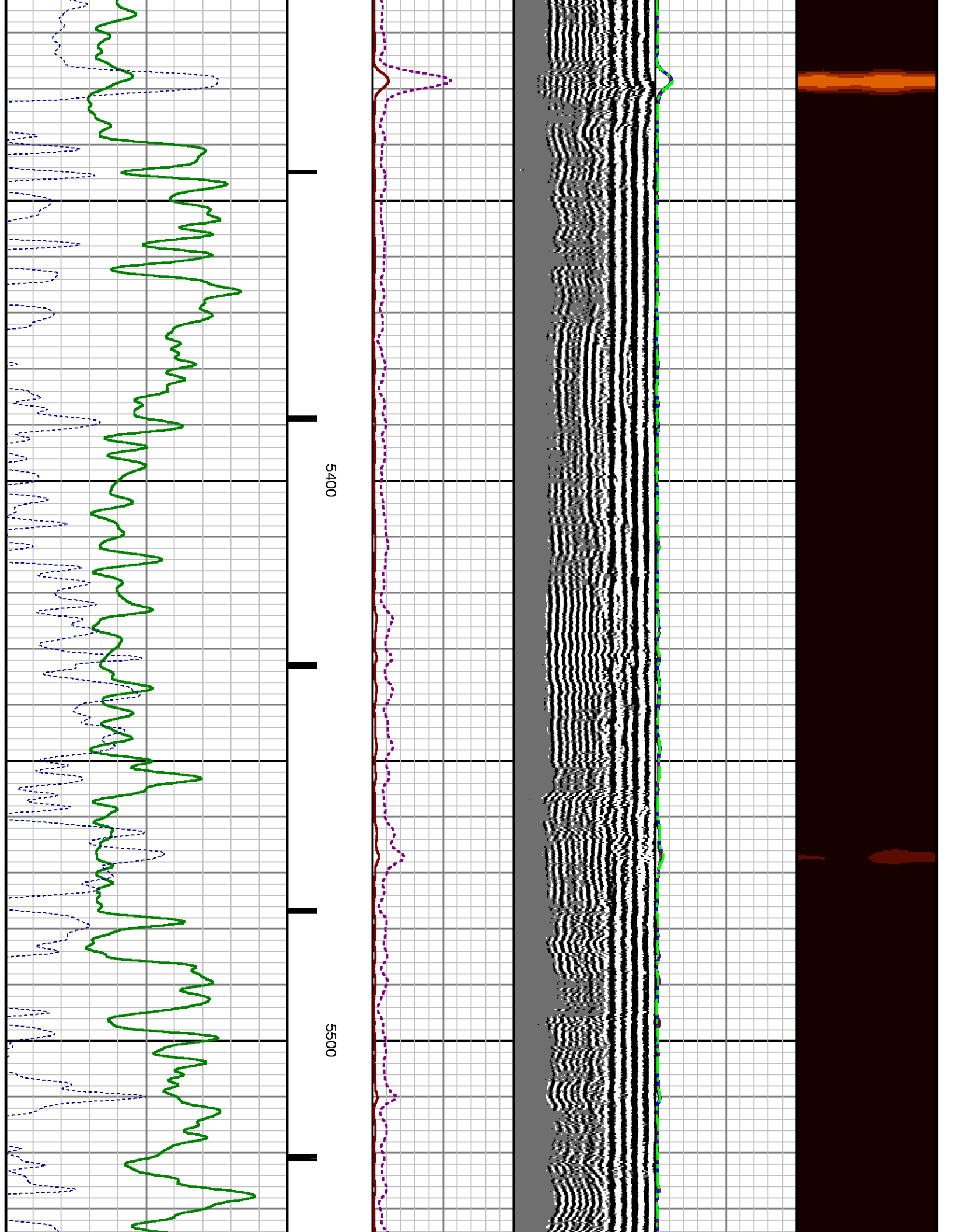


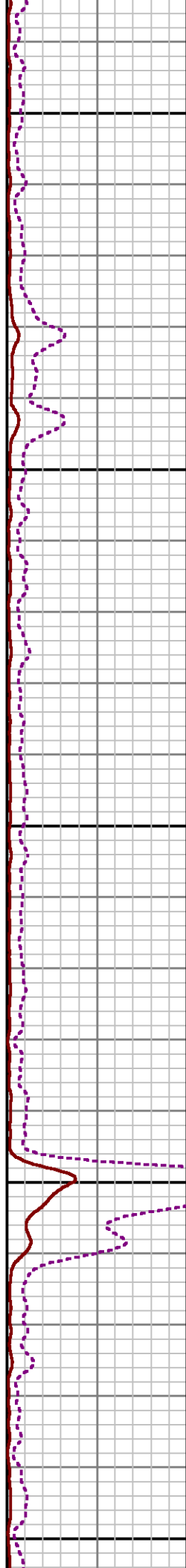
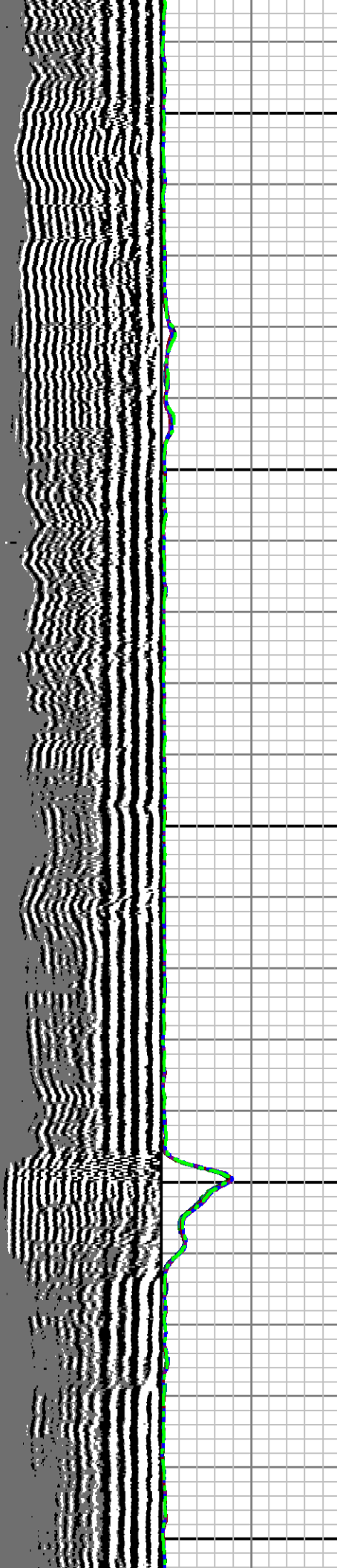
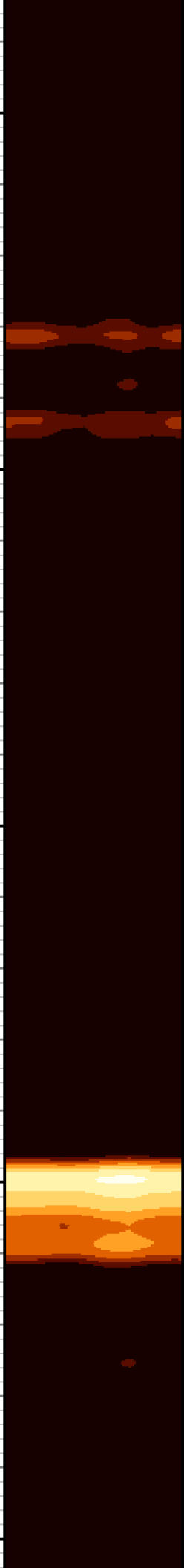






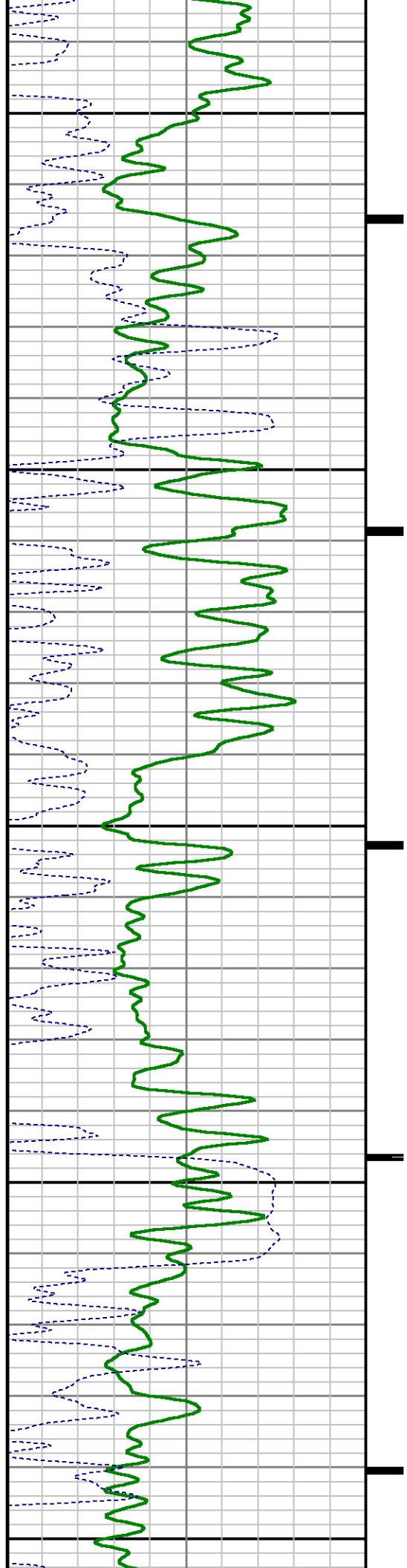


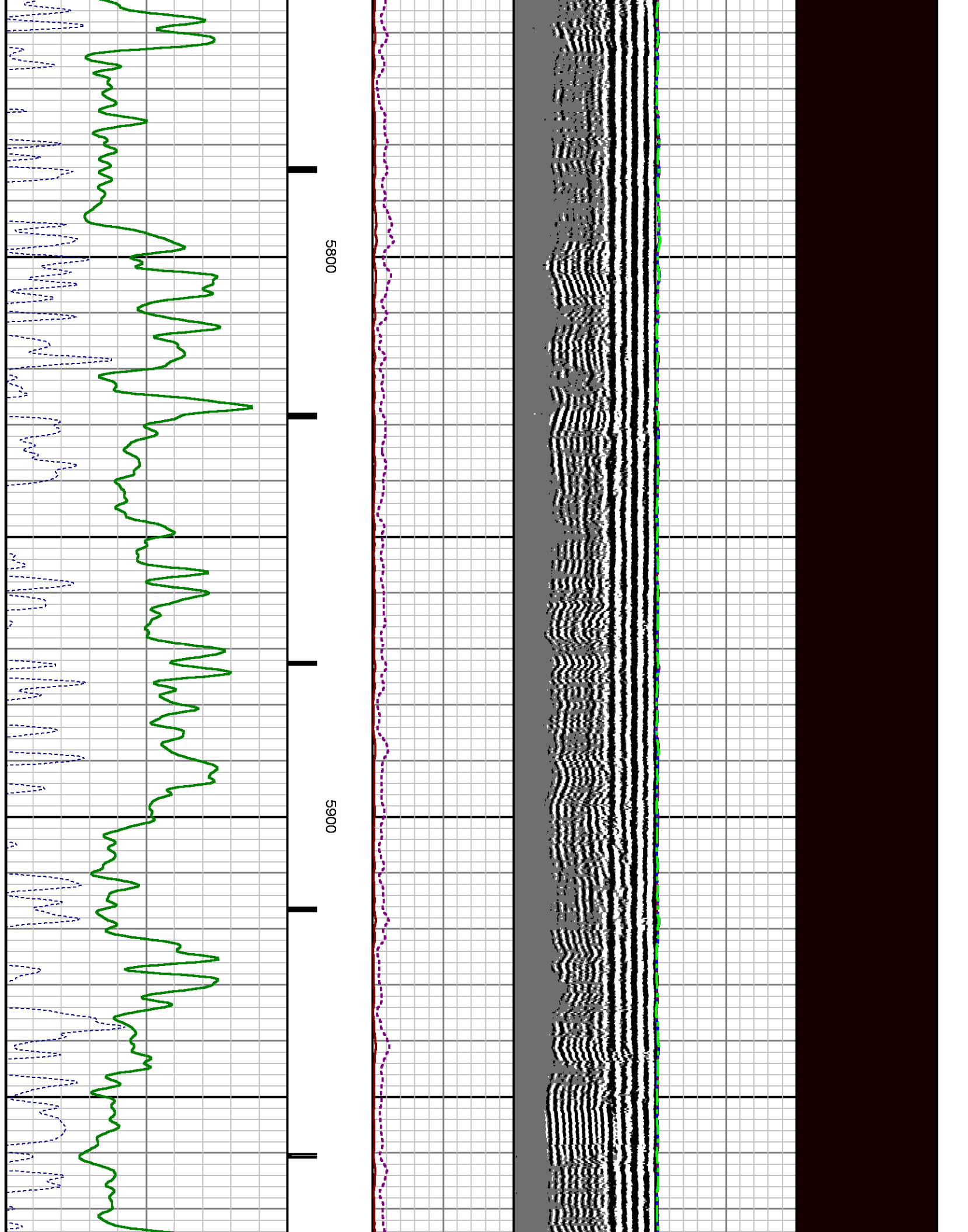


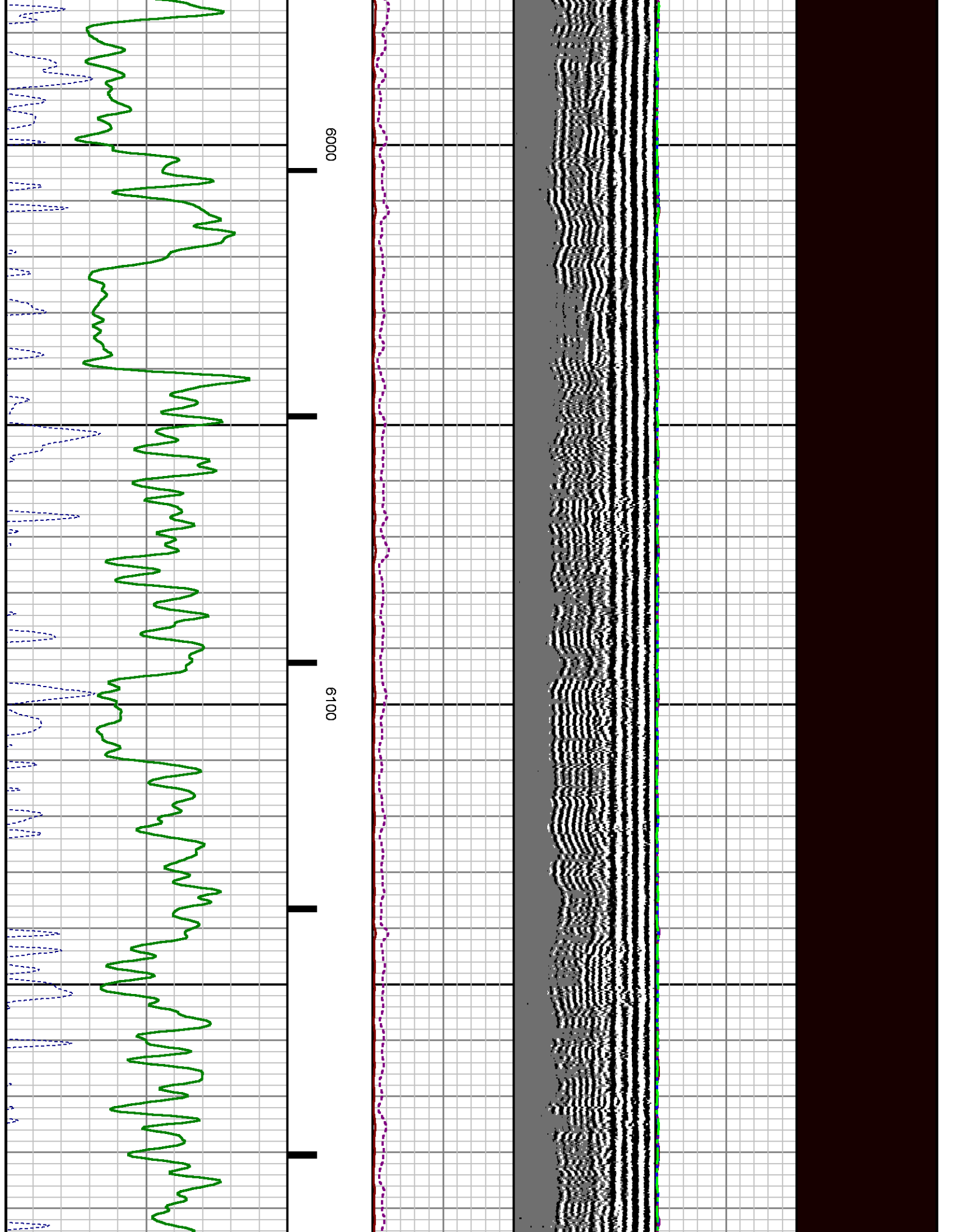


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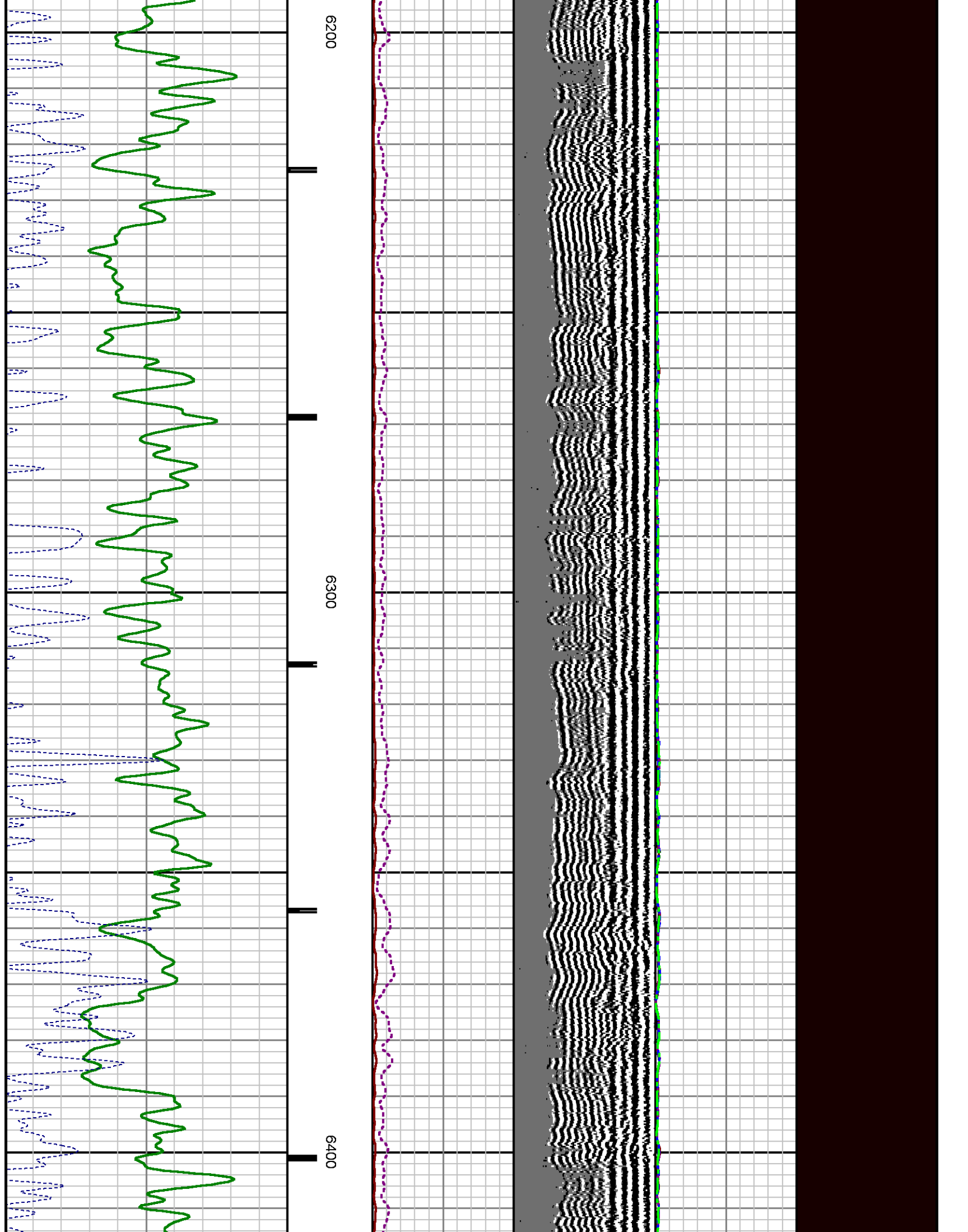
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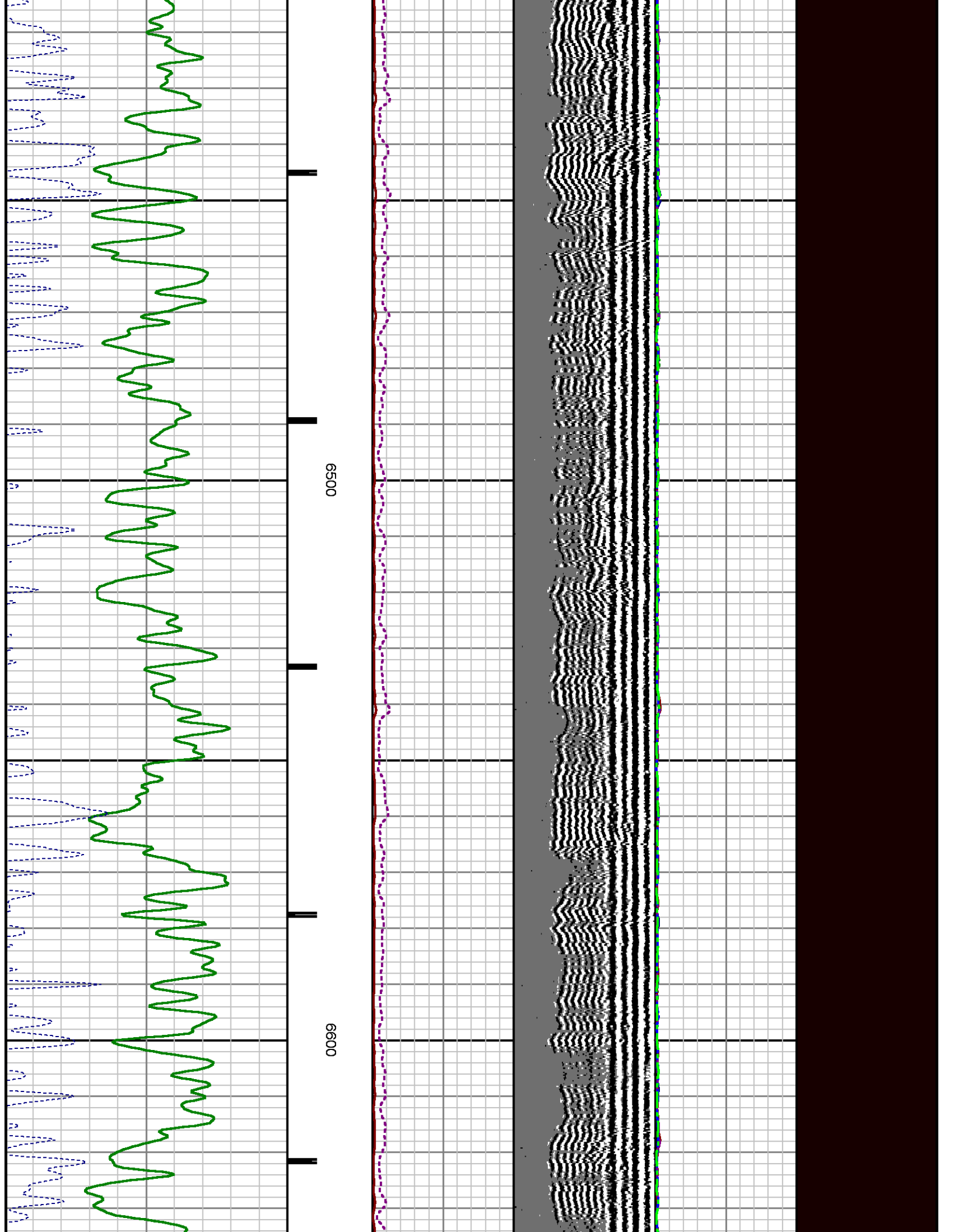


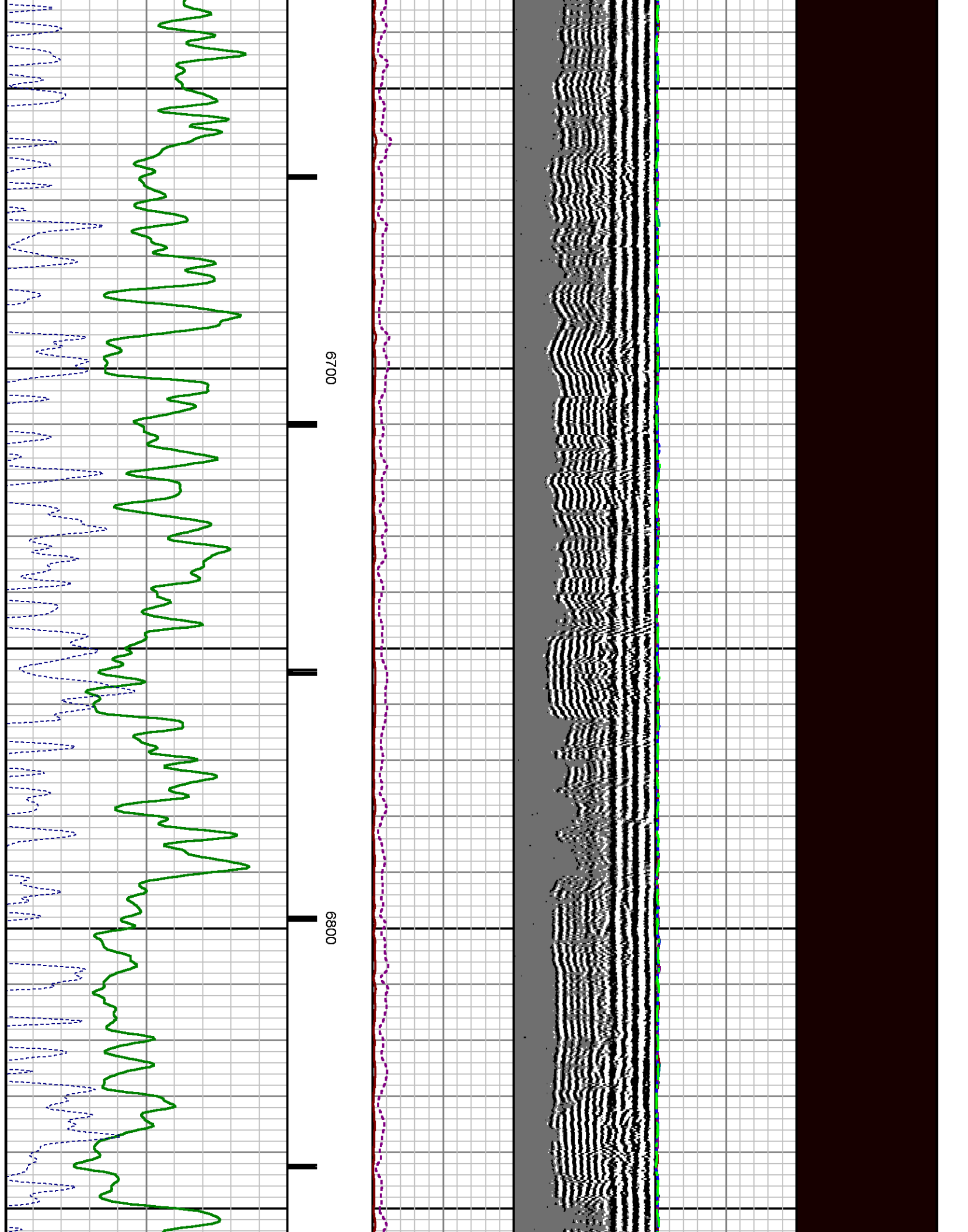


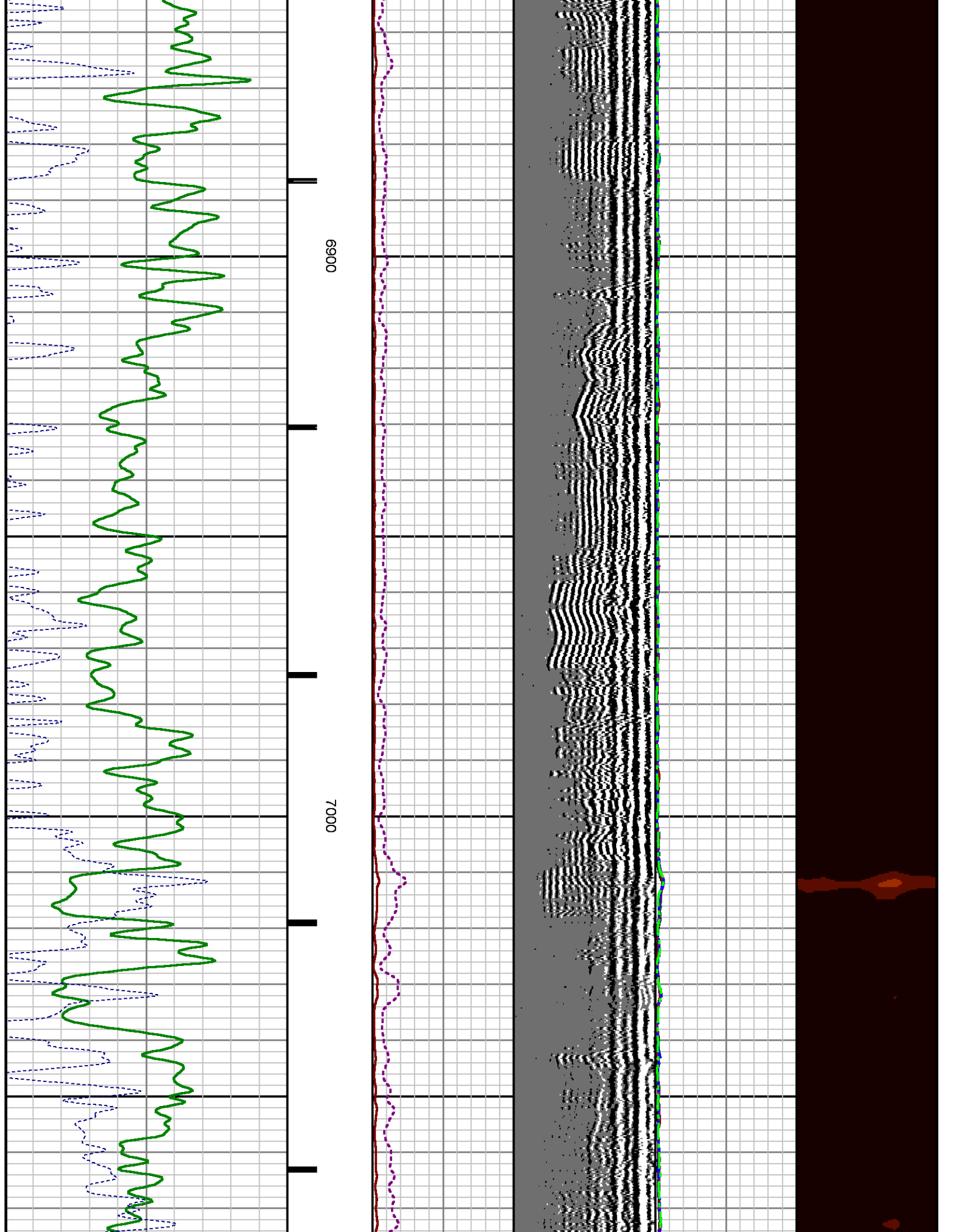


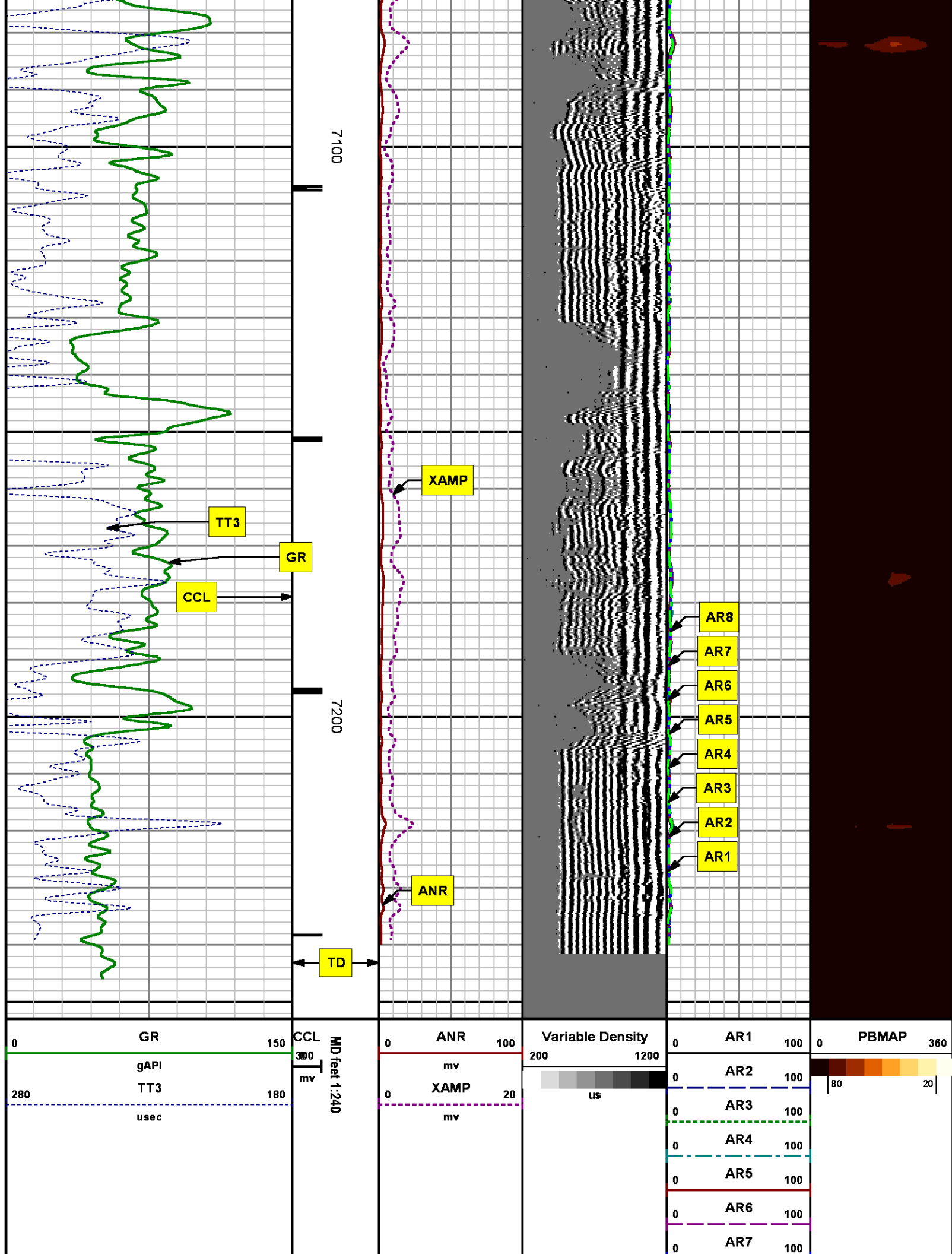












REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	6949.812	7252.000
RAL	Amp Gate Start Near	195.000	usec	6949.812	7252.000
RAL	Amp Gate Start Radial	195.000	usec	6949.812	7252.000
RAL	Amp Gate Width Far	25.000	usec	6949.812	7252.000
RAL	Amp Gate Width Near	25.000	usec	6949.812	7252.000
RAL	Amp Gate Width Radial	25.000	usec	6949.812	7252.000
RAL	casing od	4.500	inches	6949.812	7252.000
RAL	casing wt	11.600	lbm/ft	6949.812	7252.000
RAL	FB Start Far	291.900	usec	6949.812	7252.000
RAL	FB Start Near	180.000	usec	6949.812	7252.000
RAL	FB Start Radial	180.000	usec	6949.812	7252.000
RAL	FB Thresh Far	10.000	mv	6949.812	7252.000
RAL	FB Thresh Near	4.000	mv	6949.812	7252.000
RAL	FB Thresh Radial	4.000	mv	6949.812	7252.000
RAL	Fluid Travel Time	200.000	usec/ft	6949.812	7251.937

DEPTH OFFSETS

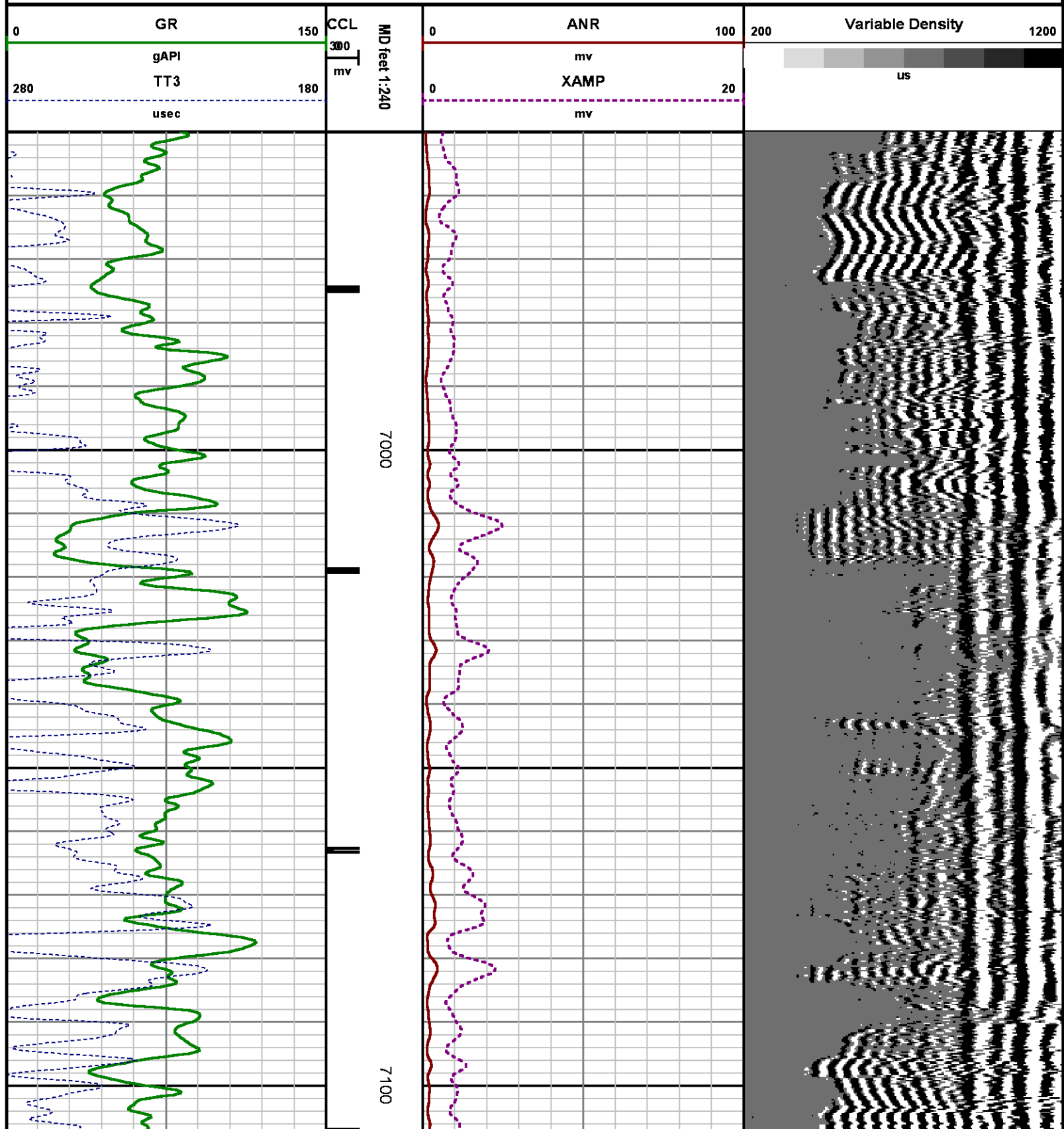
(for Acquired Curves)

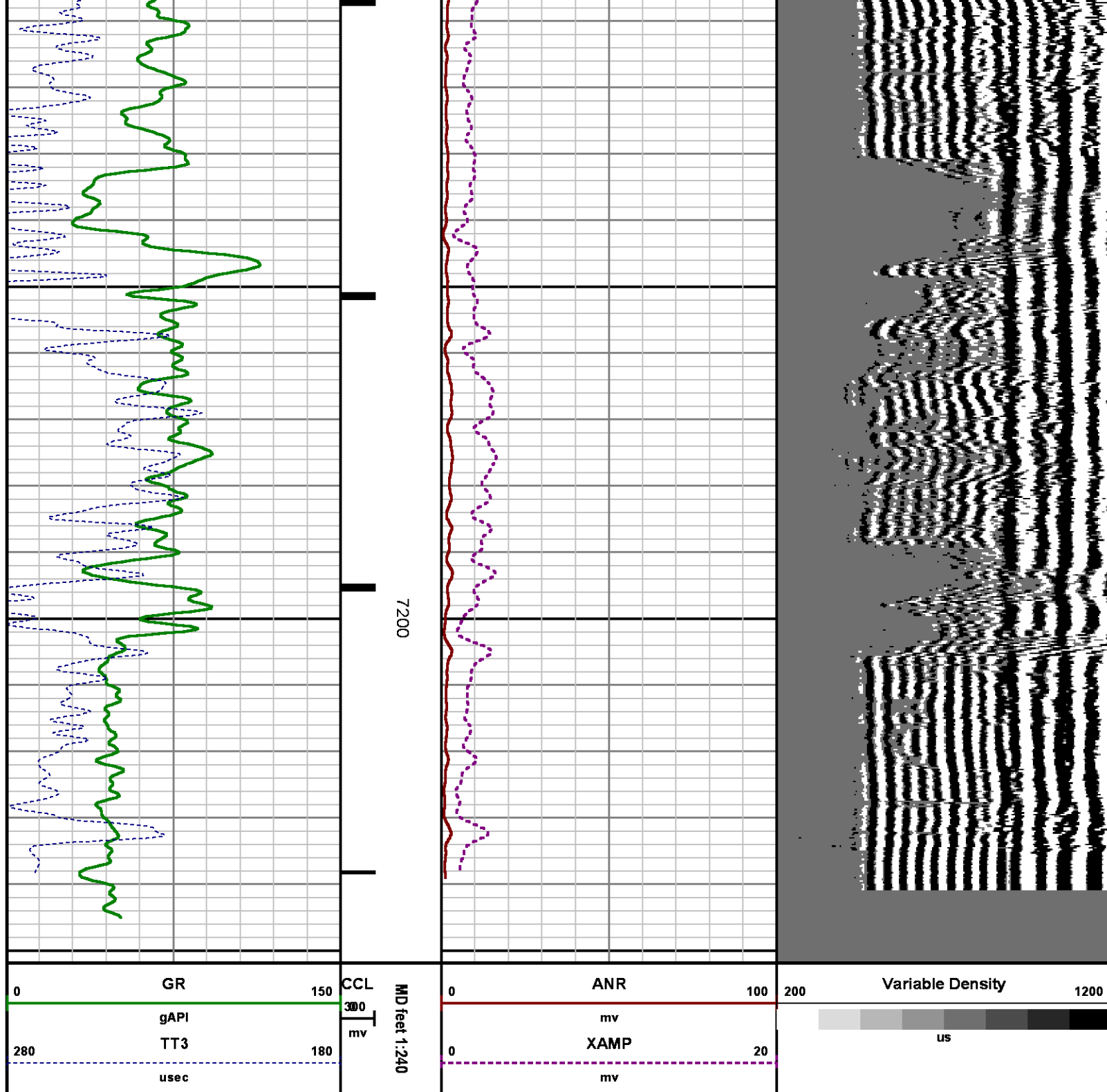
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1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
2459XA	-7.250	CCL					
2459XA	-5.390	GR					
2459XA	0.000	NEU					



Created by : RAL, v4.8.008  
Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY  
Well : CHEVRON GM 312-21  
File Name : d:\welldata\wpx\gm 312-21\312ral\repeat.xtf  
Mode : PlotMgr 5.4.504  
Interval : 6950.00 - 7252.00 feet UP  
Created : 10/10/2014 10:36:14 AM





CALIBRATION SUMMARY

RALSHP

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Oct 10 00:57:19 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: 9

Tool Delay [usec]	-52.00	Tank OD in	5.50	Tank Wt lbm/ft	15.50	Tank ID in	4.95
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RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	217	216	30	166	25	-0.092	100.00	0.46
3 Ft. Receiver	218	216	30	166	25	0.008	100.00	0.46
5 Ft. Receiver	326	325	30	252	25	0.160	150.00	0.51
Radial #1	217	216	30	153	14	-0.064	100.00	0.46
Radial #2	218	216	30	153	14	0.000	100.00	0.47
Radial #3	218	216	30	153	14	-0.092	100.00	0.47
Radial #4	218	216	30	153	14	-0.075	100.00	0.47
Radial #5	217	216	30	153	14	-0.178	100.00	0.46
Radial #6	217	216	30	153	14	-0.081	100.00	0.46
Radial #7	216	216	30	153	14	0.156	100.00	0.46
Radial #8	218	216	30	153	14	0.403	100.00	0.46

RALFLD

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Oct 10 04:11:09 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: KN

Tool Delay [usec]	-52.00	Casing OD in	4.50	Casing Wt lbm/ft	11.60	Casing ID in	4.00
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RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.245	0.000	0.79	100.000
3 Ft. Receiver	195	25	-1.603			
5 Ft. Receiver	305	25	-1.843			
Radial #1	195	25	-2.649			
Radial #2	195	25	-2.010			
Radial #3	195	25	-1.417			
Radial #4	195	25	-1.891			
Radial #5	195	25	-1.836			
Radial #6	195	25	-1.990			
Radial #7	195	25	-1.305			
Radial #8	195	25	-1.769			

GAMMA RAY

Calibration File: C:\case\calver\GR\503O8.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Oct 08 09:03:02 2014 TOOL SERIES: 2459XA ASSET: 503 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	110.22	393.29	0.654	72.04	257.04	185.00

Verification File: C:\case\calver\GR\503O8.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Wed Oct 08 09:04:12 2014 TOOL SERIES: 2459XA ASSET: 503 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	101.07	384.62	0.654	66.05	251.37	185.32

## TOOL DIAGRAM

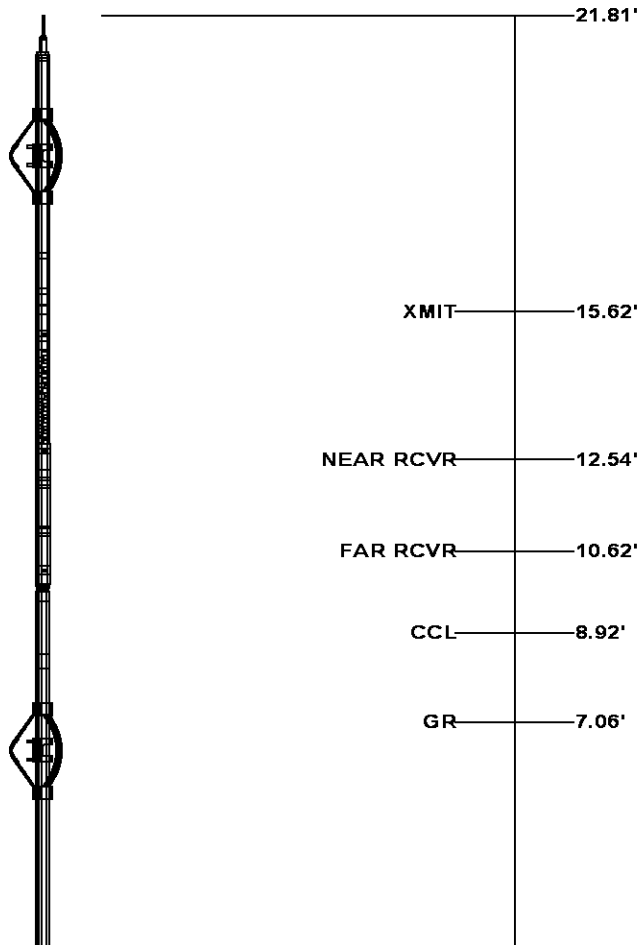
### OTA SHORT CABLE HEAD

#### PROBE 2 3/4 DUAL RECEIVER RADII

Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI



#### Probe GR/CCL/NEU

Series	2459XA
Mnemonic	PROB
Diameter	2.75"
Length	9.42'
Measure Point	1.21' NEU
Measure Point	6.60' GR
Measure Point	8.46' CCL



NEU 1.67'  
0.00'

Total Length: 21.81'  
Total Weight: Not Available  
Max Diameter: 0' 2.75"

 <b>Baker Atlas</b>  	<b>Company</b> WPX ENERGY	<b>File No:</b> CH091476
	<b>Well</b> CHEVRON GM 312-21	<b>API No:</b>
<b>Field</b> GRAND VALLEY		
<b>County</b> GARFIELD	<b>State</b> CO	<b>05045223560000</b>
<b>Location</b> SHL: 2042' FNL & 703' FEL (20 6S 96W) BHL: 1652' FNL & 1004' FWL (21 6S 96W)  SEC 21 TWP 6S RGE 96W	<b>Elevations</b> KB 5596 ft DF GL 5575 ft	21 6S 96W GM 442-20 CYCLONE 17