



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH091479	Company Well Field County	WPX ENERGY CHEVRON GM 512-21 GRAND VALLEY GARFIELD	State CO
API No: 050452235650000	Location SHL: 2067' FNL & 704' FWL (20 6S 96W) BHL: 2277' FNL & 1004' FWL (21 6S 96W) CYCLONE 17		Other Services RPM
21 6S 96W GM 442-20 PAD CYCLONE 17	SEC 21 TWP 6S RGE 96W	Permanent Datum Log Measured From Drill Measured From	
GL KB KB		Elevation 21 ft Above P. D.	Elevations KB 5596 ft DF GL 5575 ft

Date	11/OCT/14	
Run	ONE	
Service Order	US091479	
Depth Driller	7302 ft	
Depth Logger	7269 ft	
Bottom Logged Interval	7269 ft	
Top Logged Interval	21 ft	
Time Started	1:30	
Time Finished	4:30	
Operator Rig Time	3 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	60 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	238 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	44271	GRAND JUNCTION
Recorded By	NEWELL	
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	1186 ft
8.75 in	1186 ft	7385 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1186 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	7385 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 clients request.
The amount of linear shift is 2 feet.
Logged with zero PSI at wellhead.
BHT = 238 °F

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

PRIMARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	24.344	7274.250
RAL	Amp Gate Start Near	195.000	usec	24.344	7274.250
RAL	Amp Gate Start Radial	195.000	usec	24.344	7274.250
RAL	Amp Gate Width Far	25.000	usec	24.344	7274.250
RAL	Amp Gate Width Near	25.000	usec	24.344	7274.250
RAL	Amp Gate Width Radial	25.000	usec	24.344	7274.250
RAL	casing od	4.500	inches	24.344	7274.250
RAL	casing wt	11.600	lbm/ft	24.344	7274.250
RAL	FB Start Far	291.900	usec	24.344	7274.250
RAL	FB Start Near	175.391	usec	24.344	7274.250
RAL	FB Start Radial	175.391	usec	24.344	7274.250
RAL	FB Thresh Far	10.000	mv	24.344	7274.250
RAL	FB Thresh Near	4.000	mv	24.344	7274.250
RAL	FB Thresh Radial	4.000	mv	24.344	7274.250
RAL	Fluid Travel Time	200.000	usec/ft	24.344	7275.031

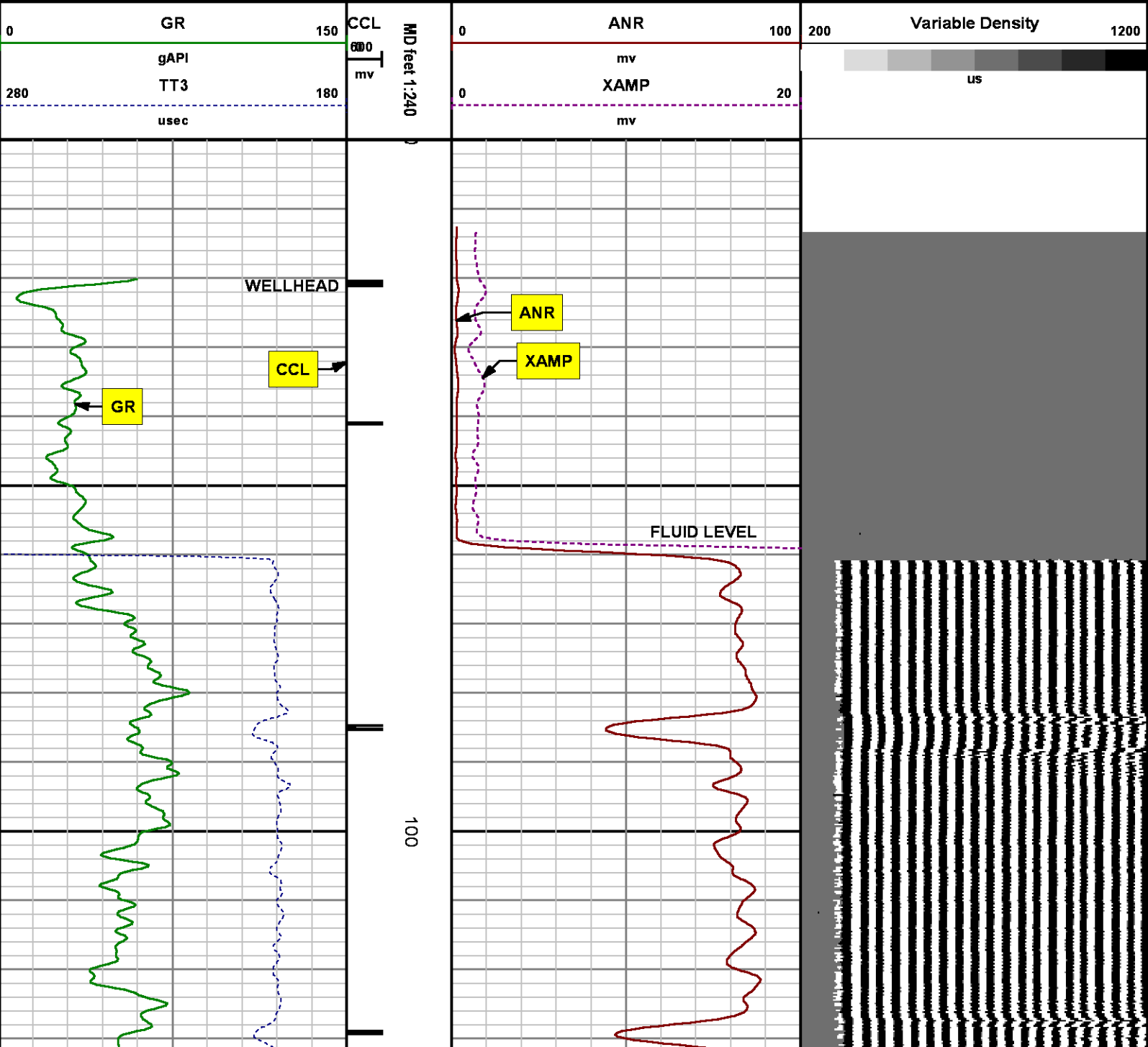
DEPTH OFFSETS

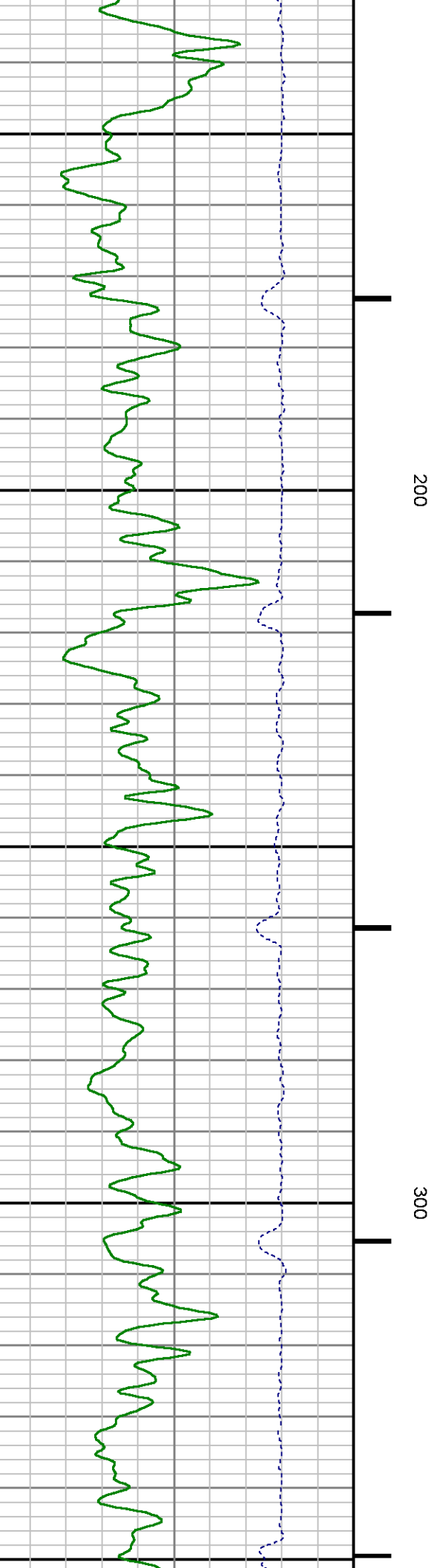
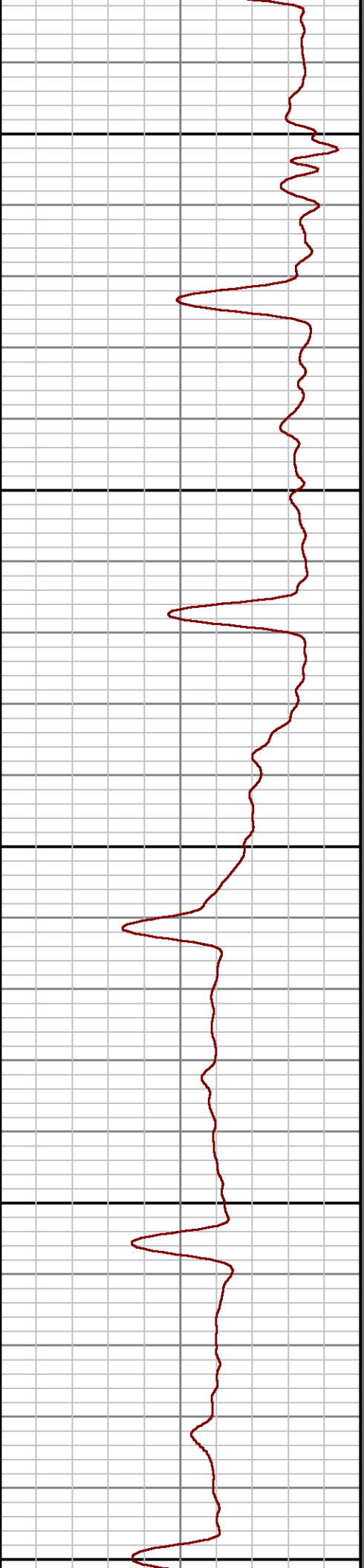
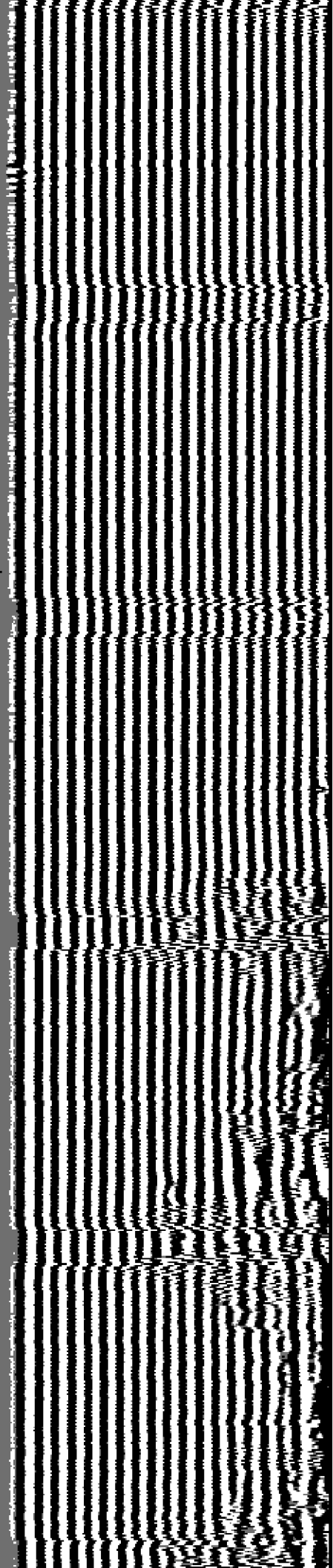
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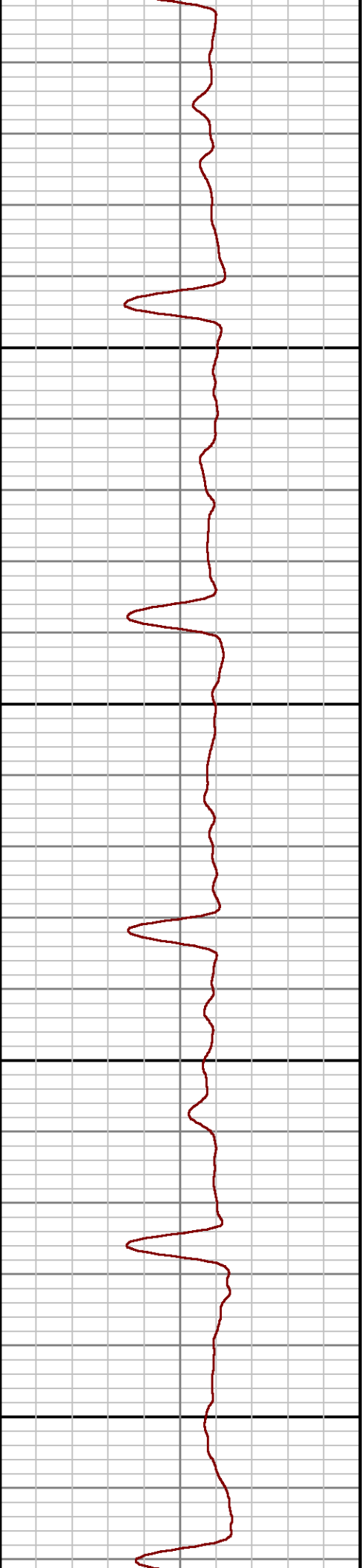
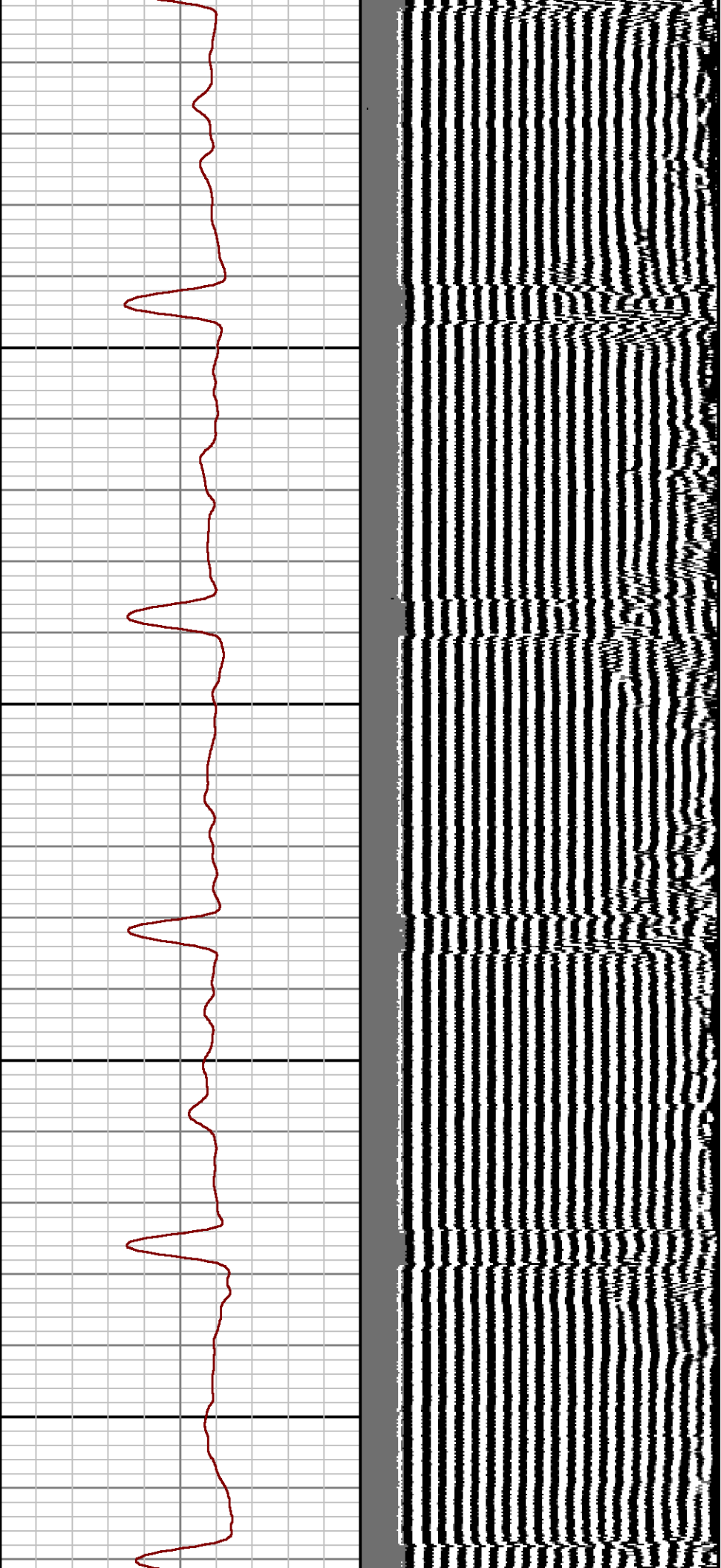
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

		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 512-21  
 File Name : d:\welldata\wpx\gm 512-21\512cbl\main.xtf  
 Mode : PlotMgr 5.4.504  
 Interval : 0.00 - 7274.00 feet UP  
 Created : 10/11/2014 4:47:21 AM

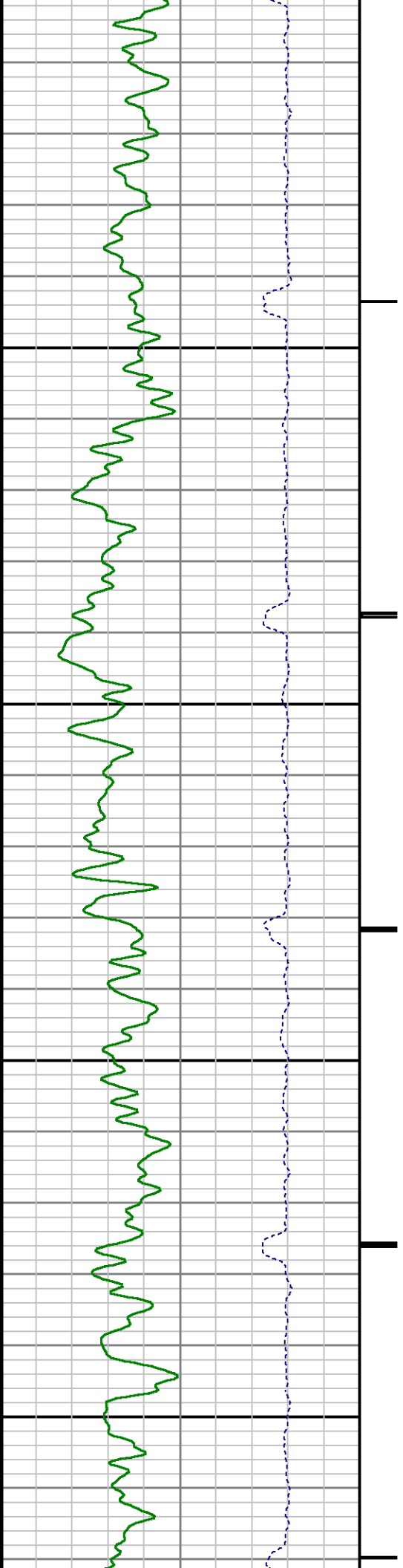


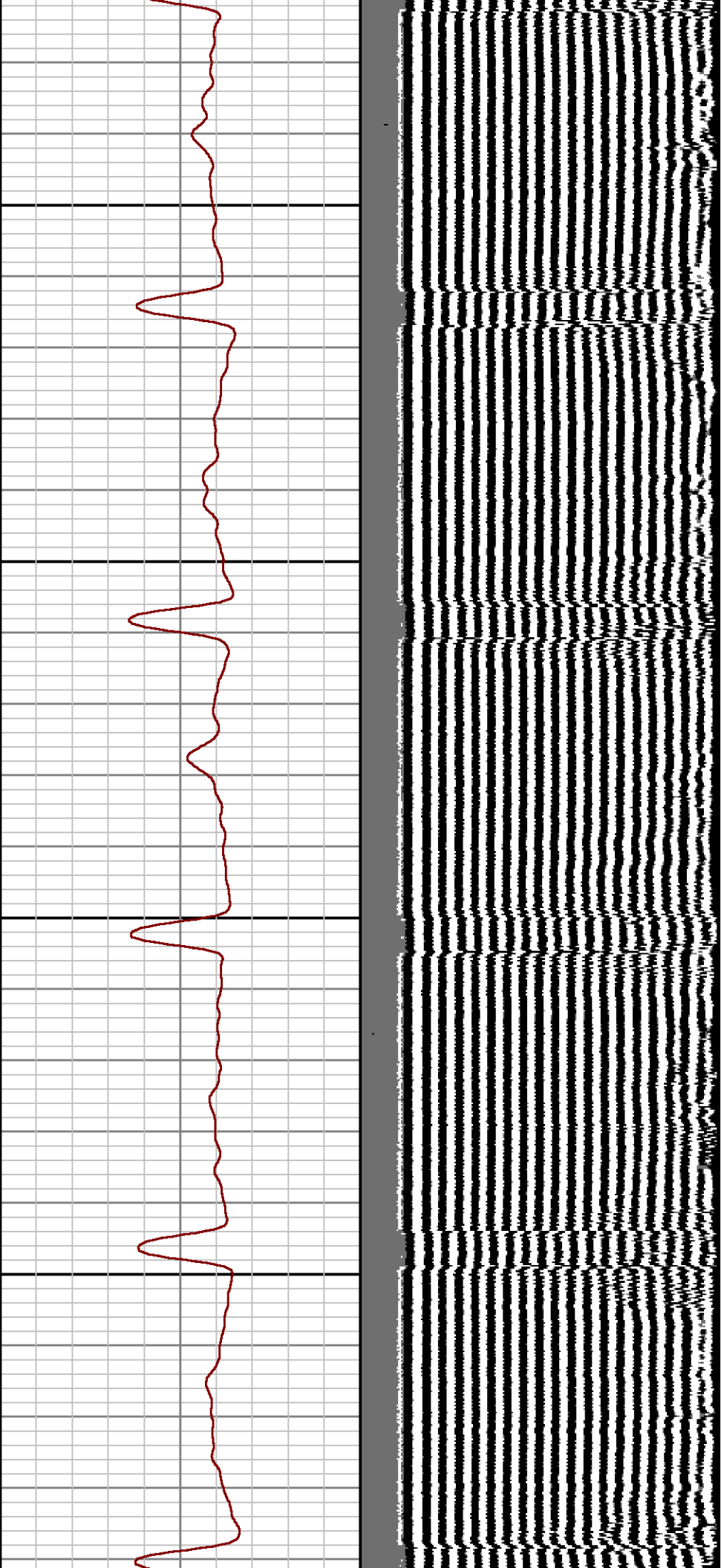




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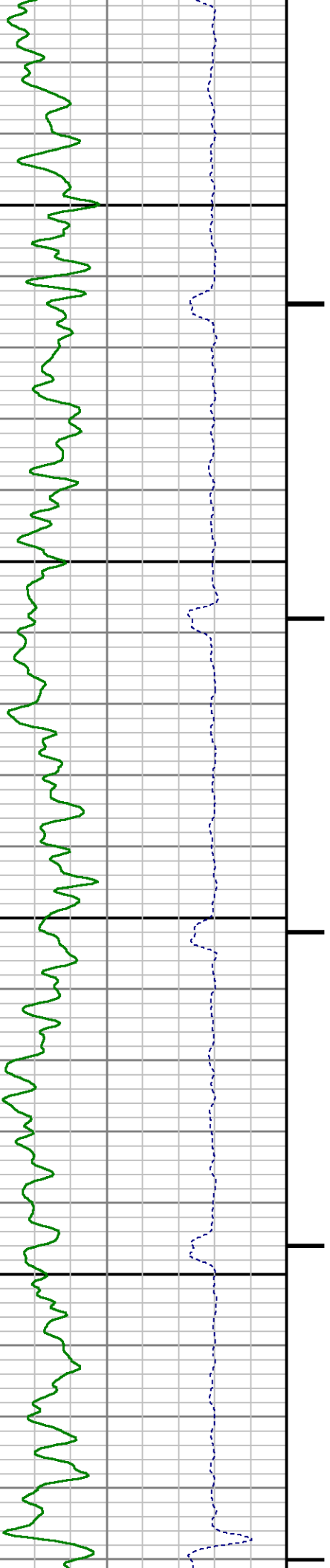
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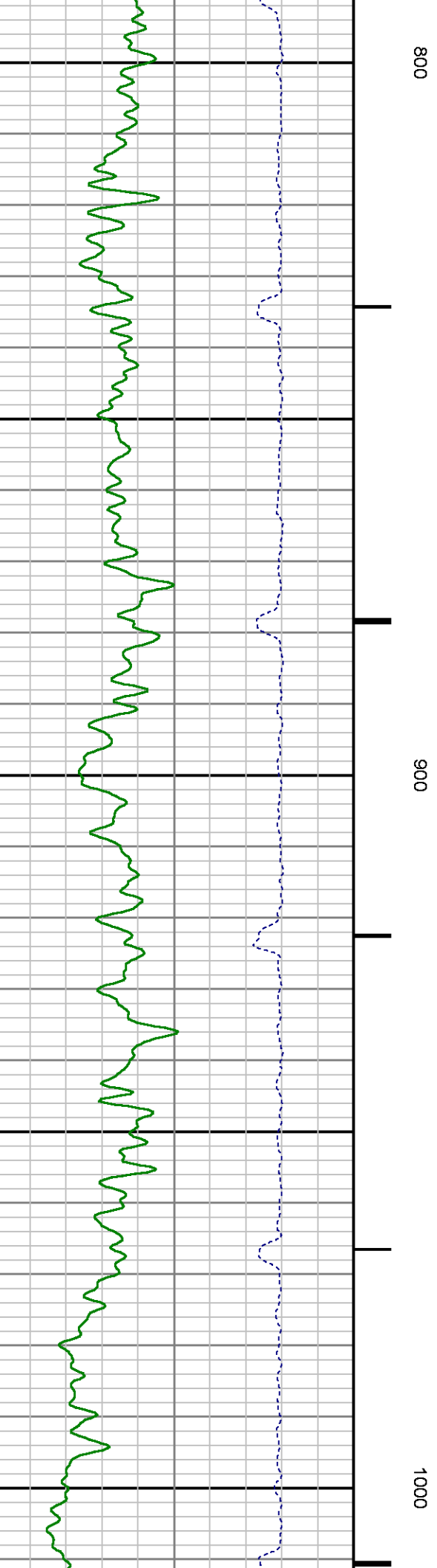
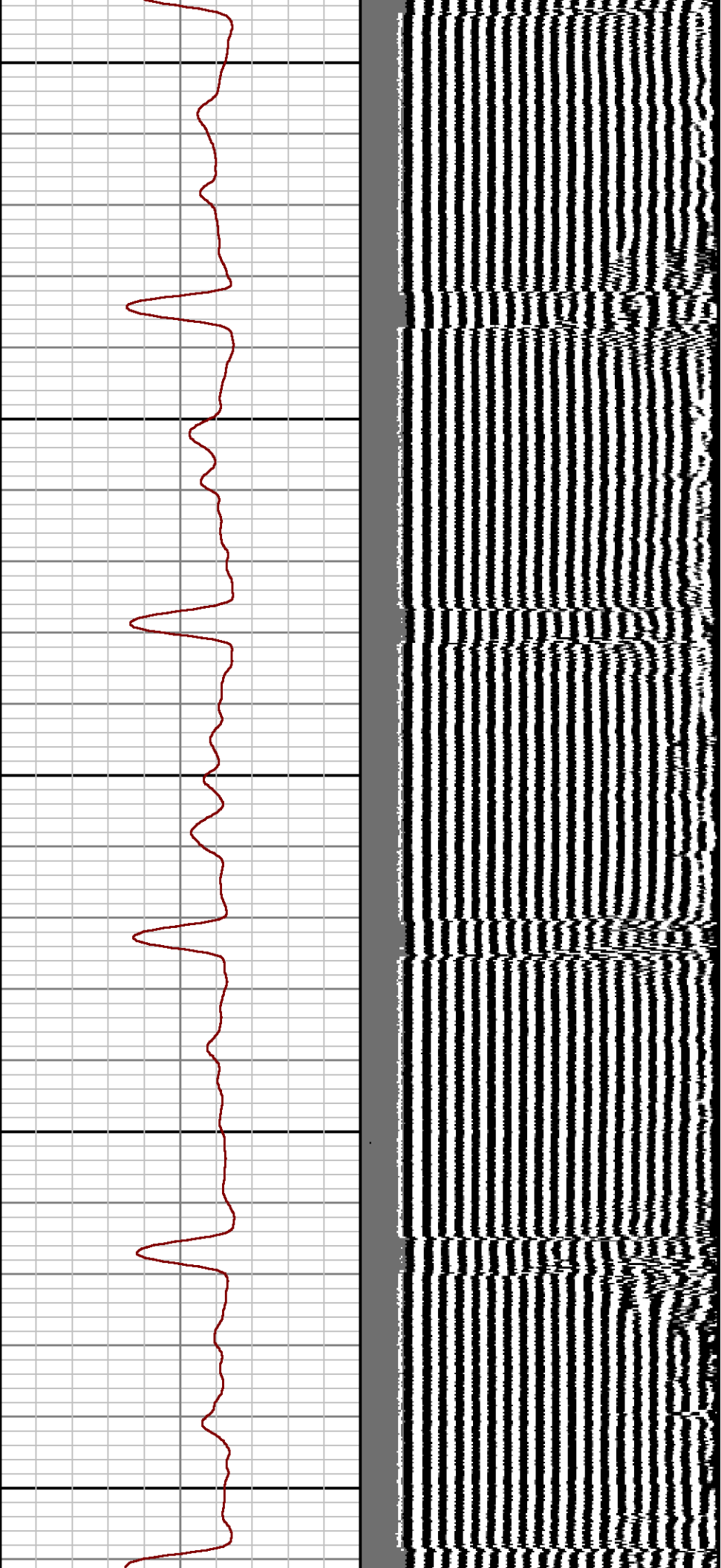




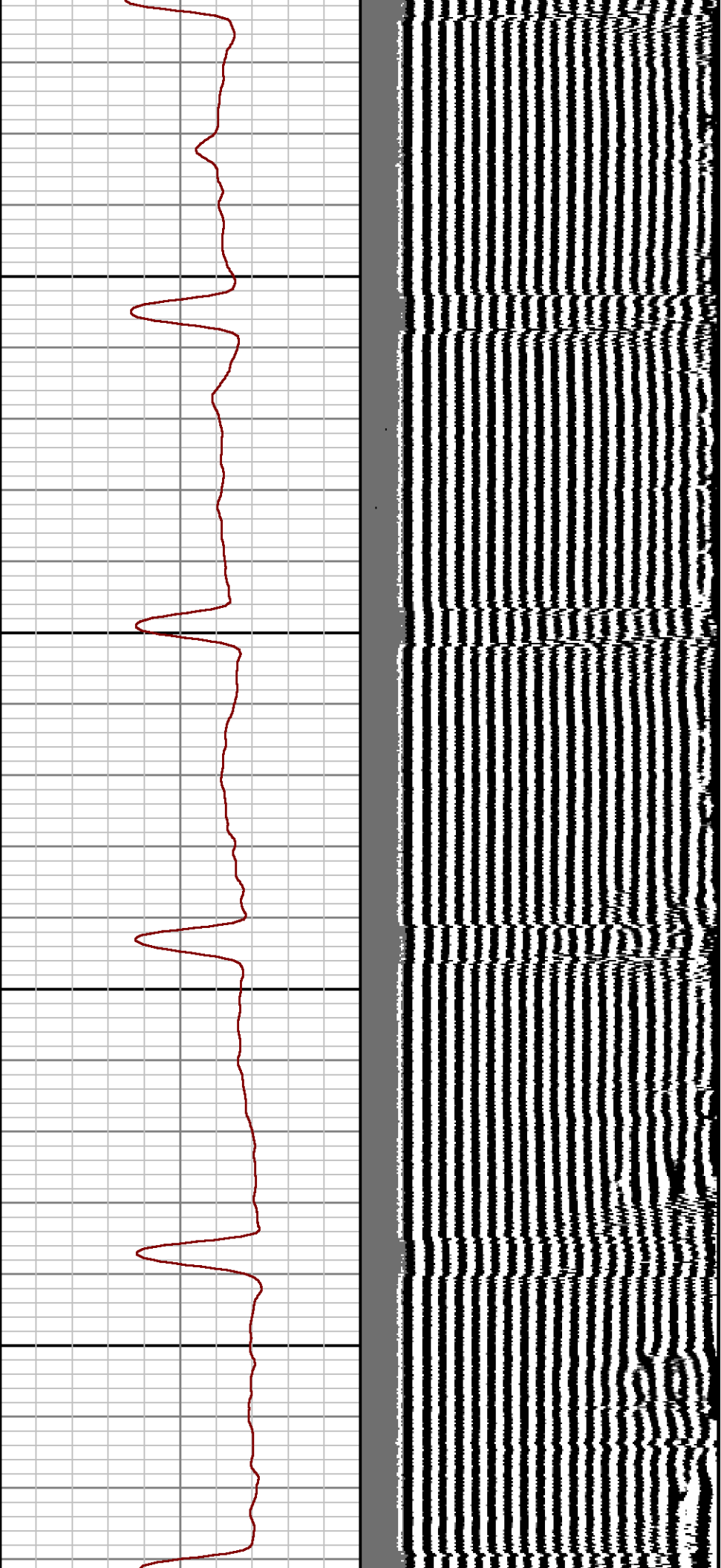
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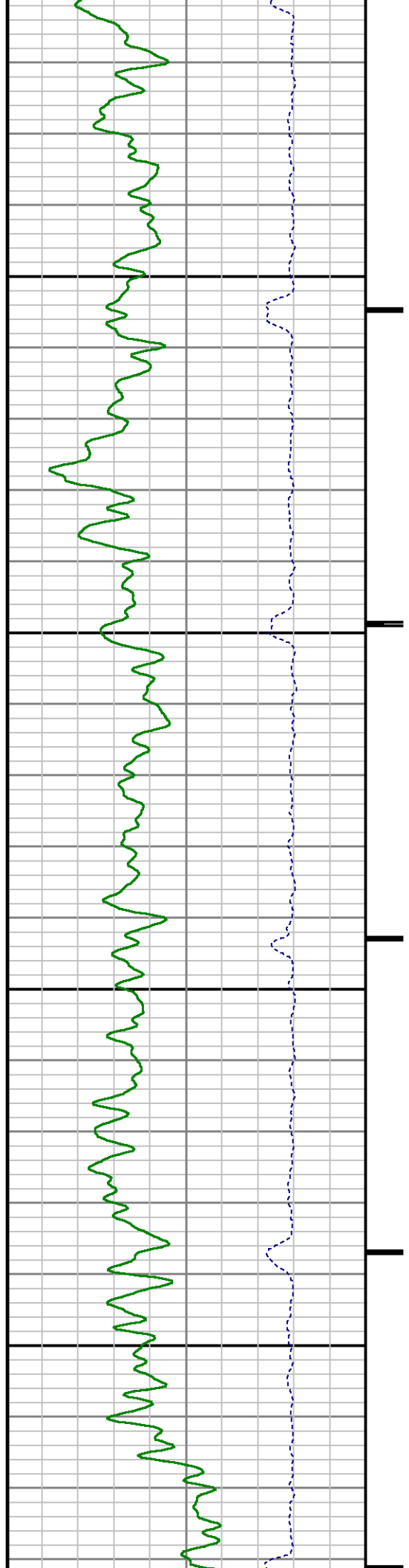




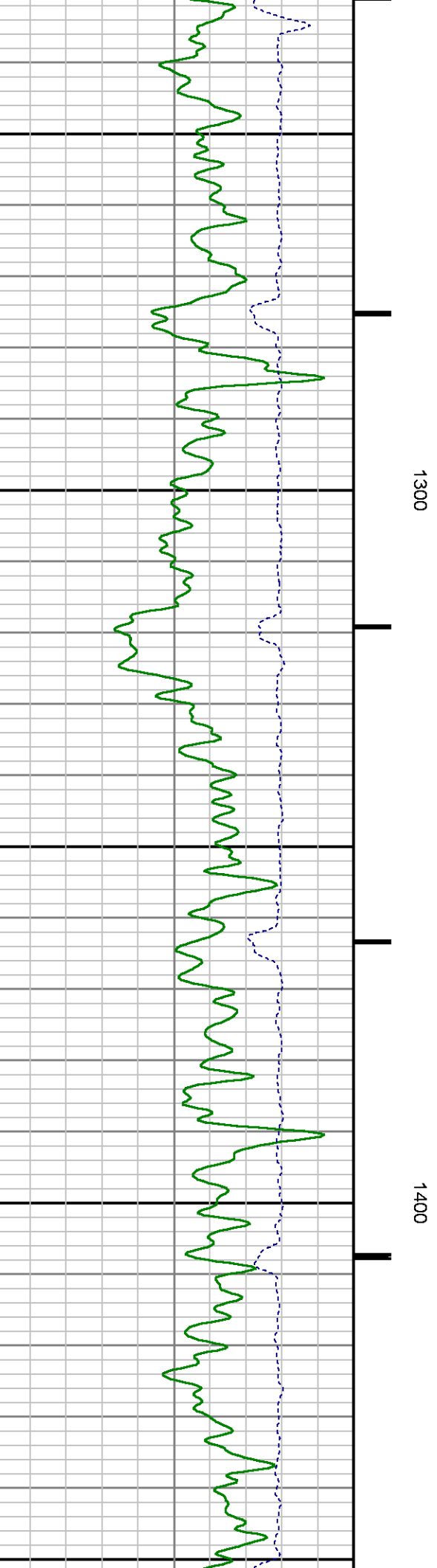
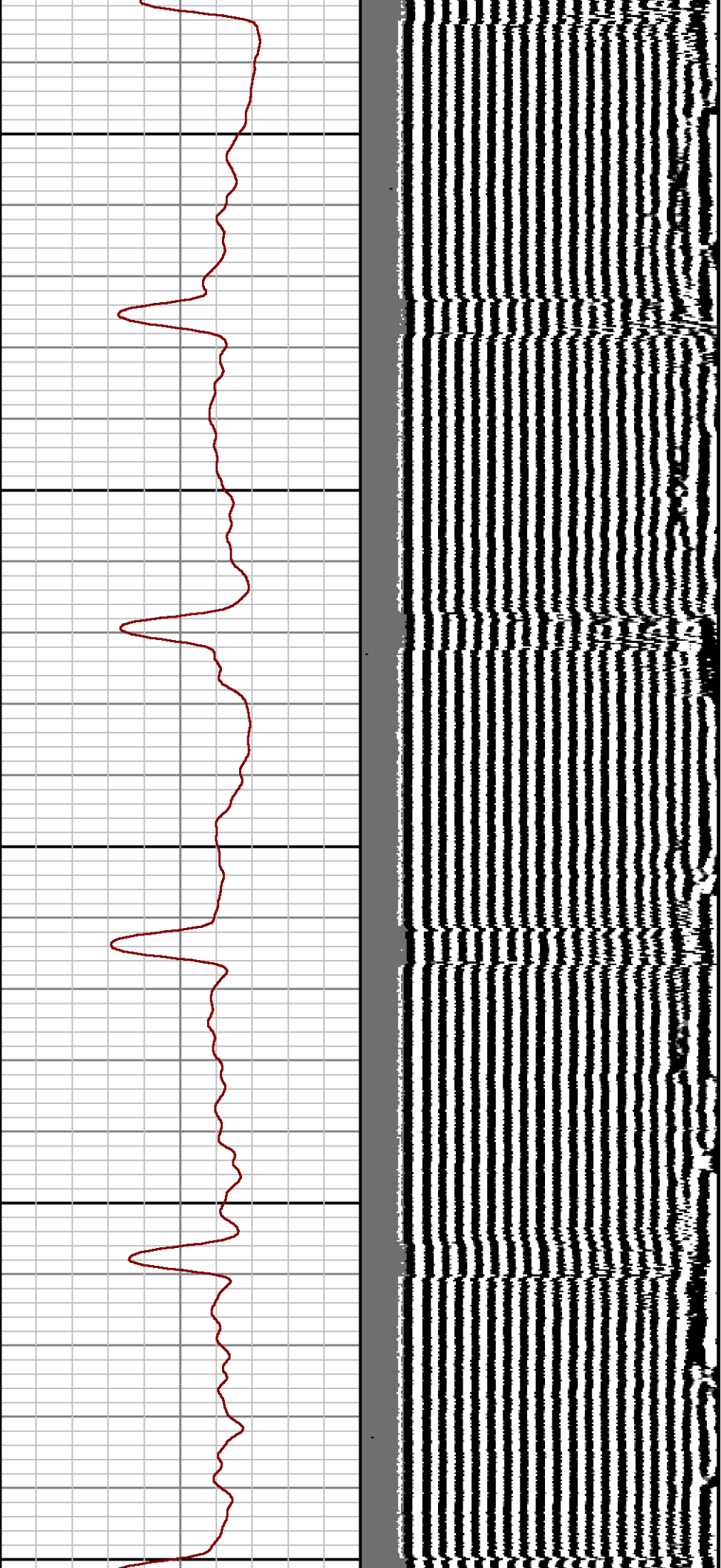


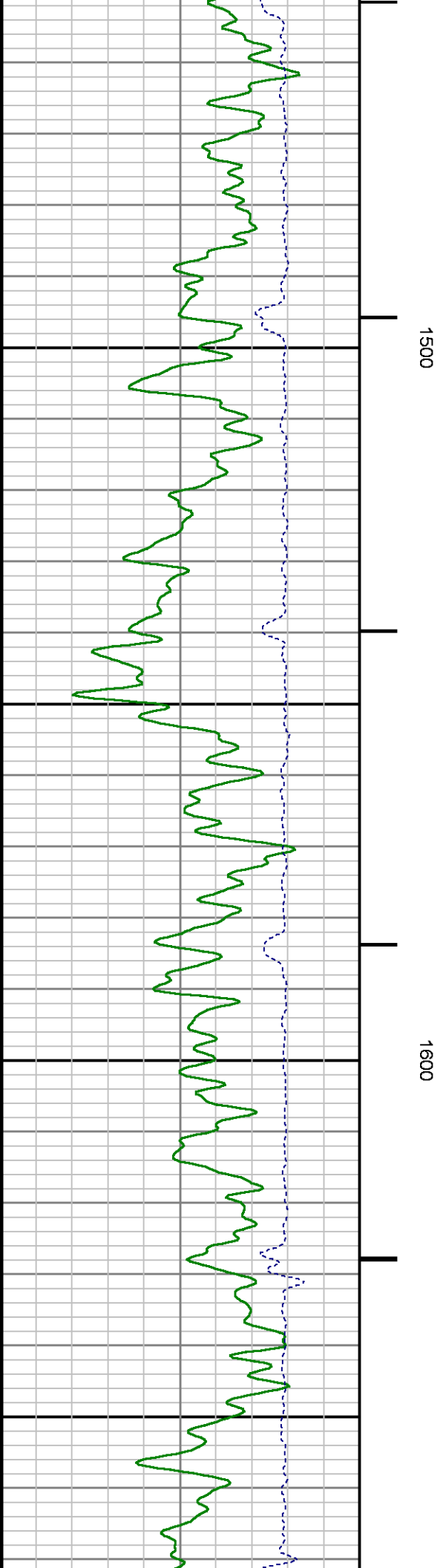
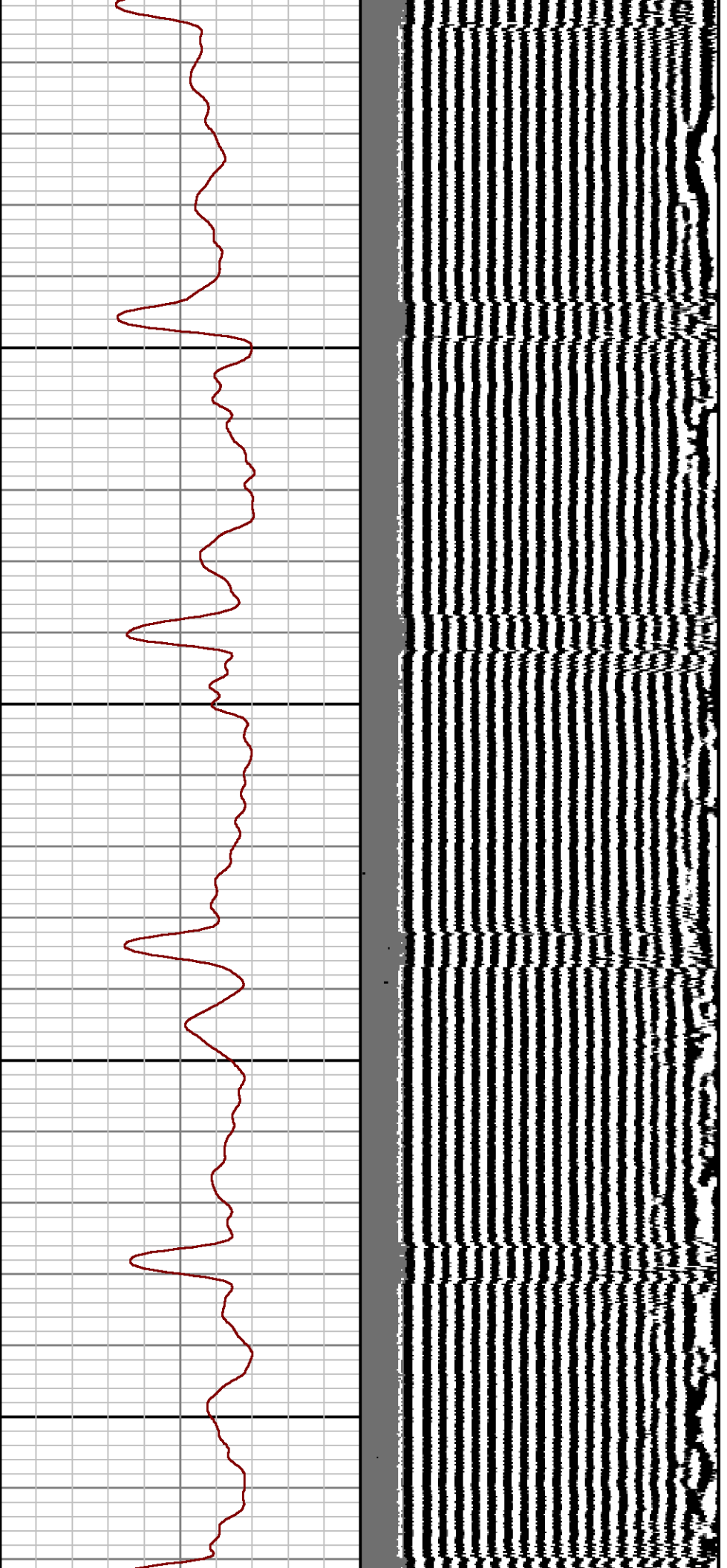
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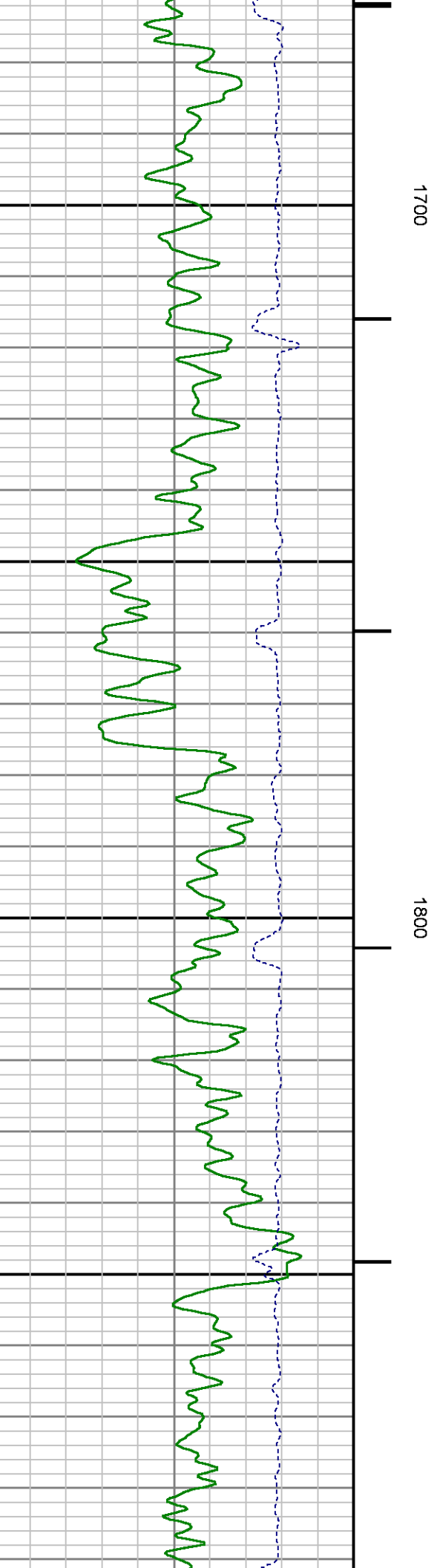
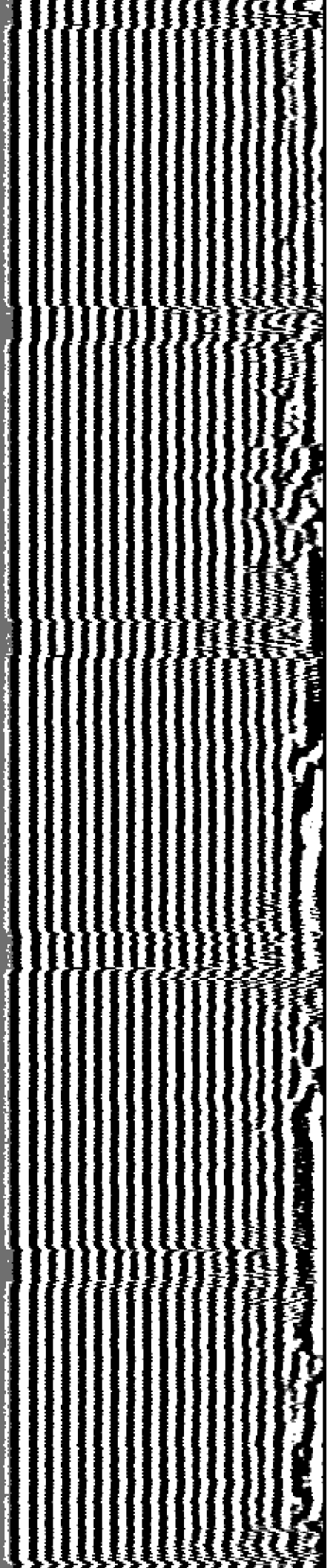
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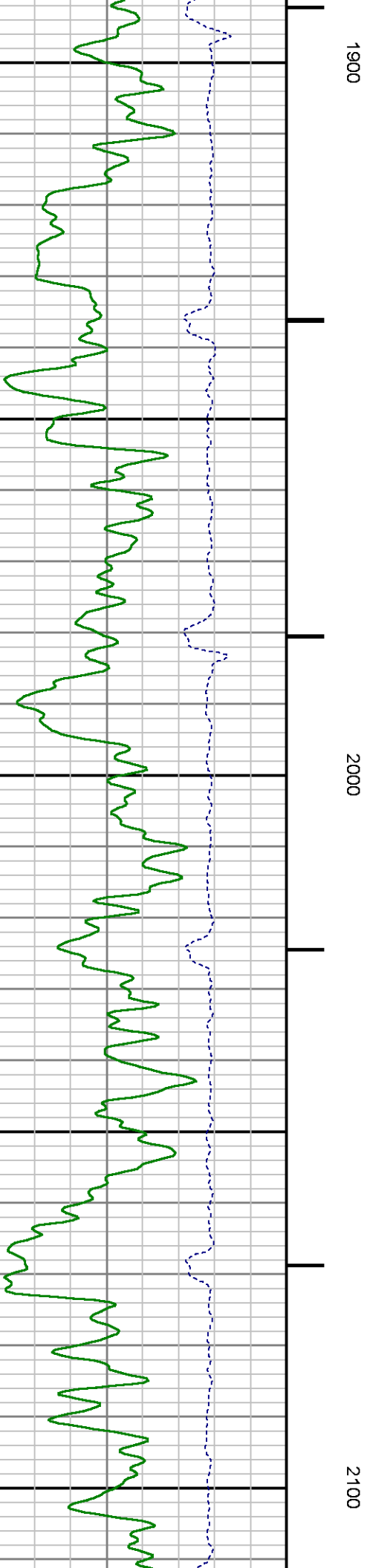
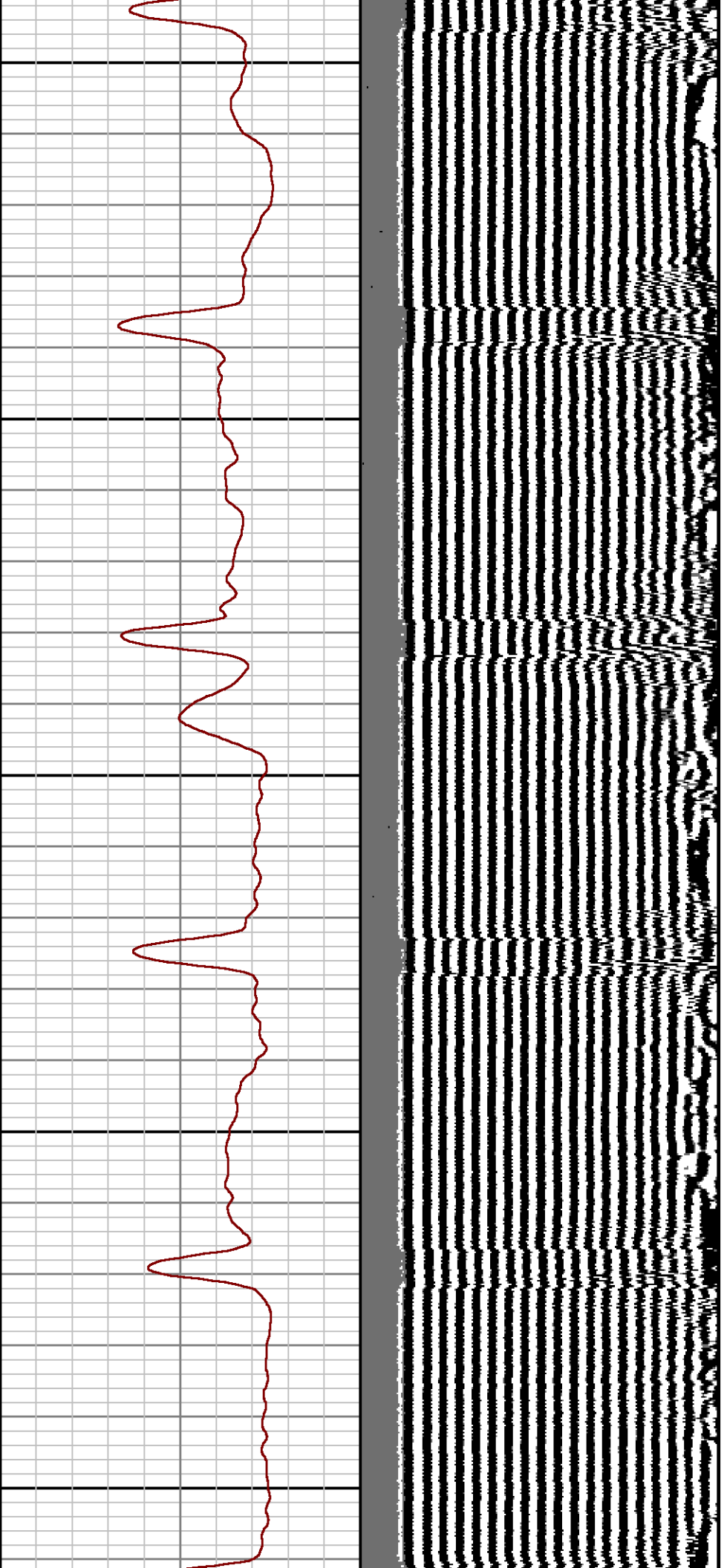


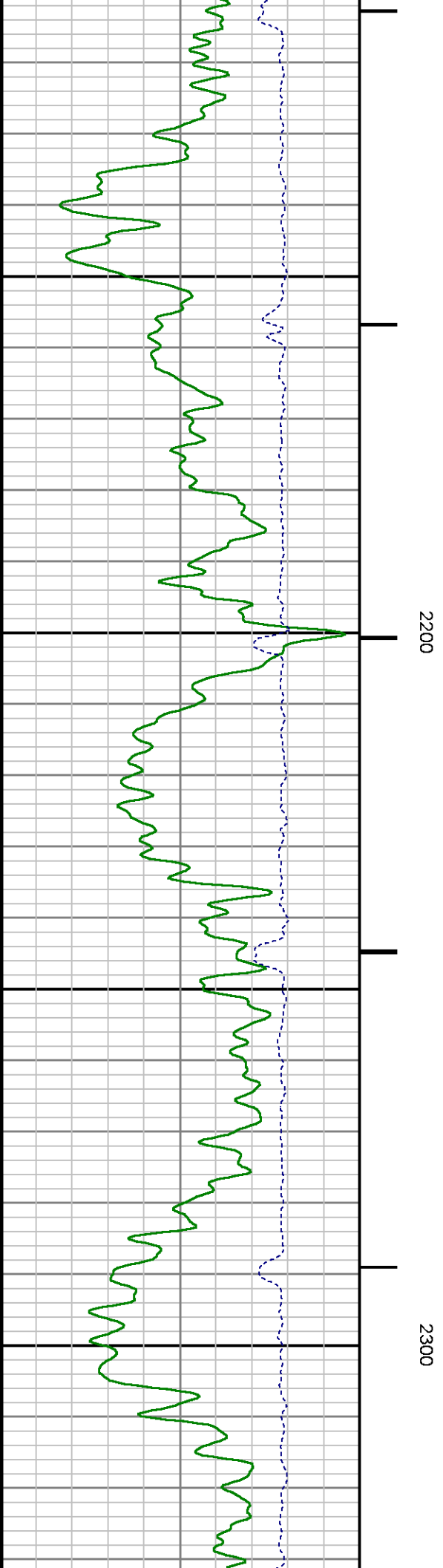
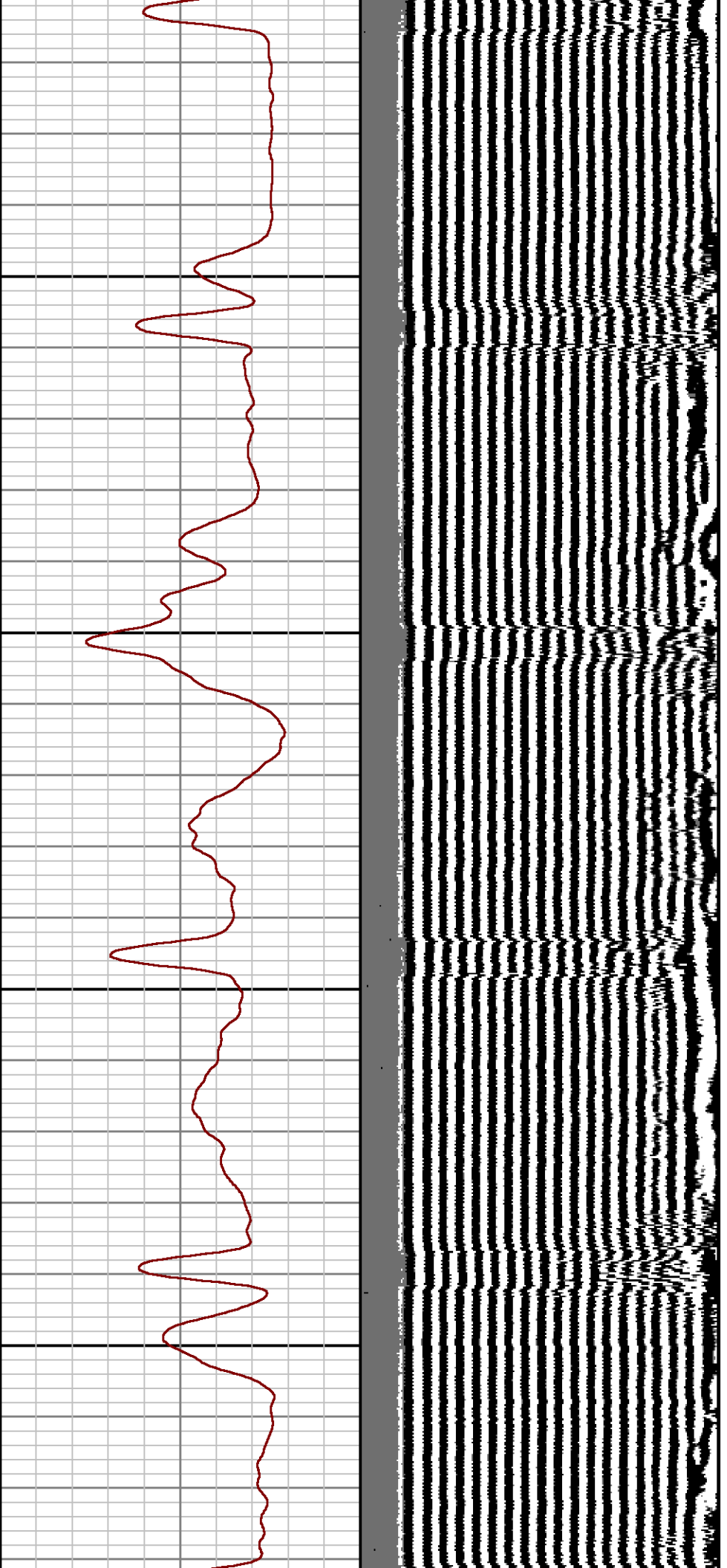




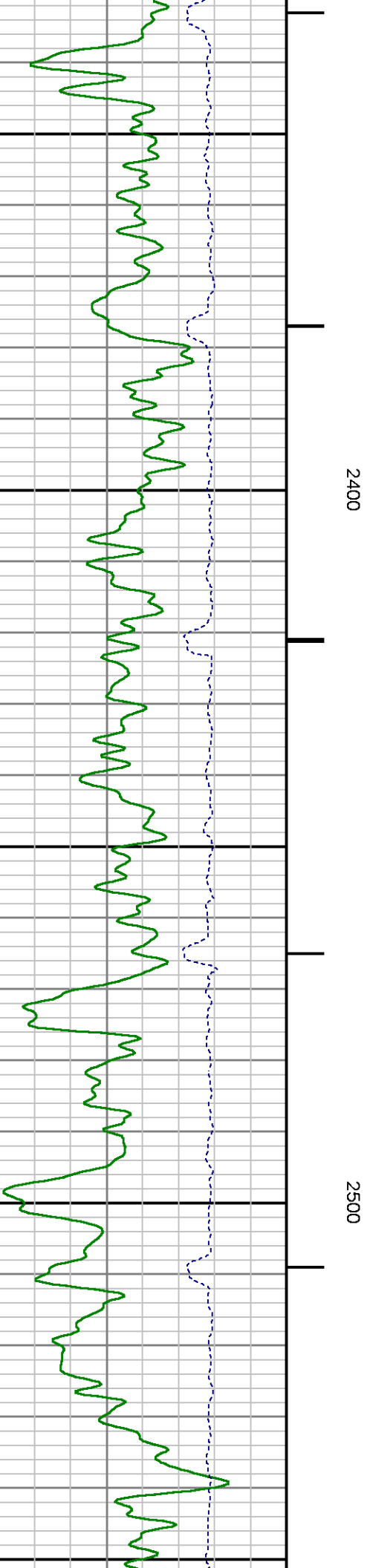
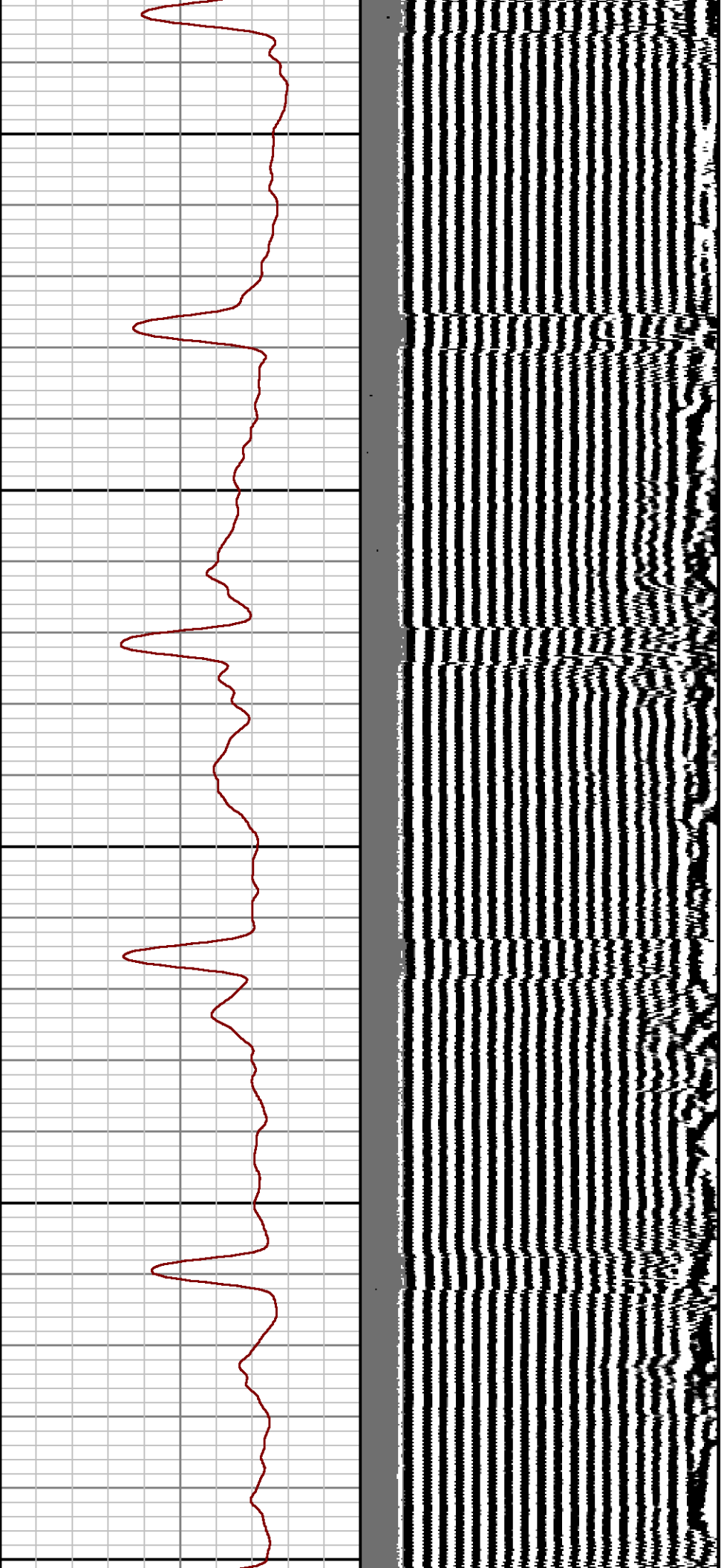


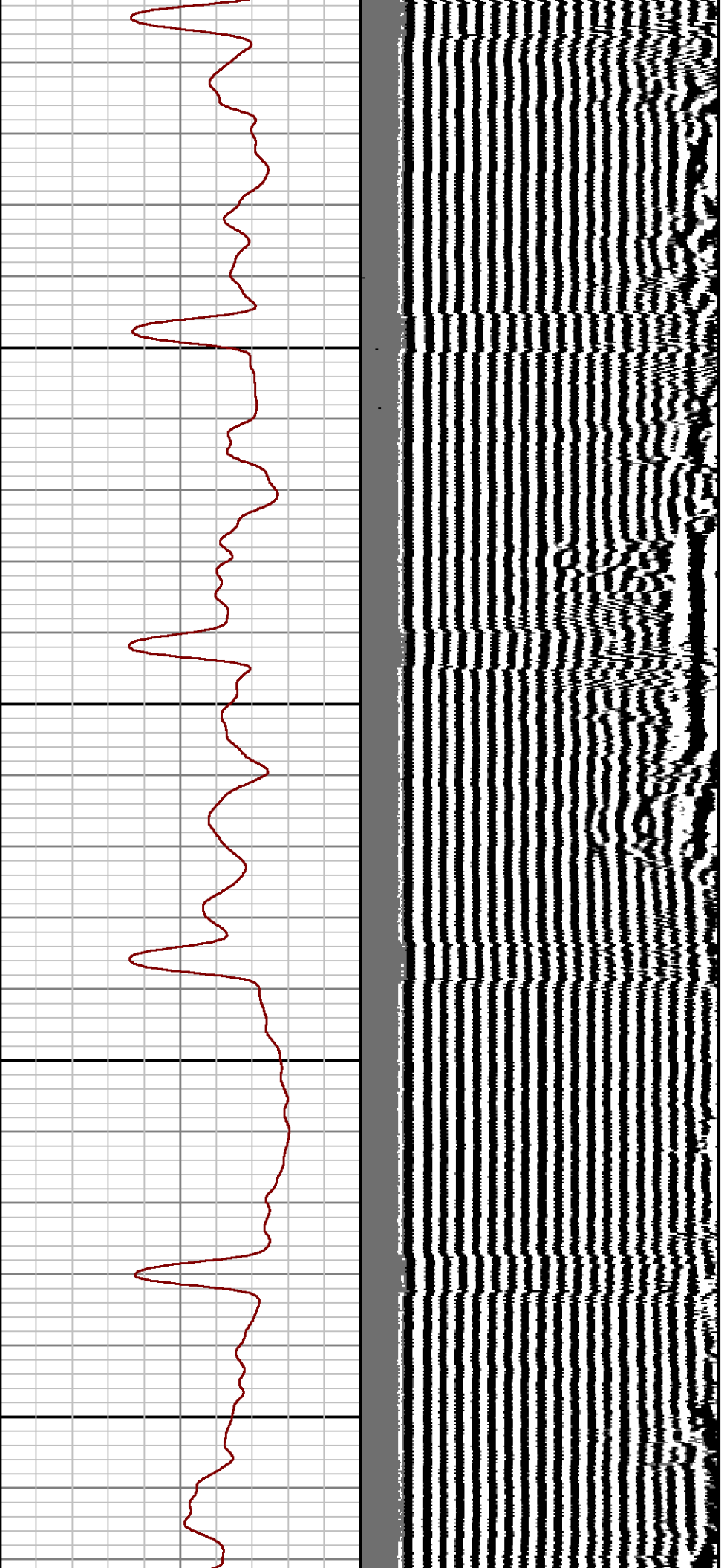






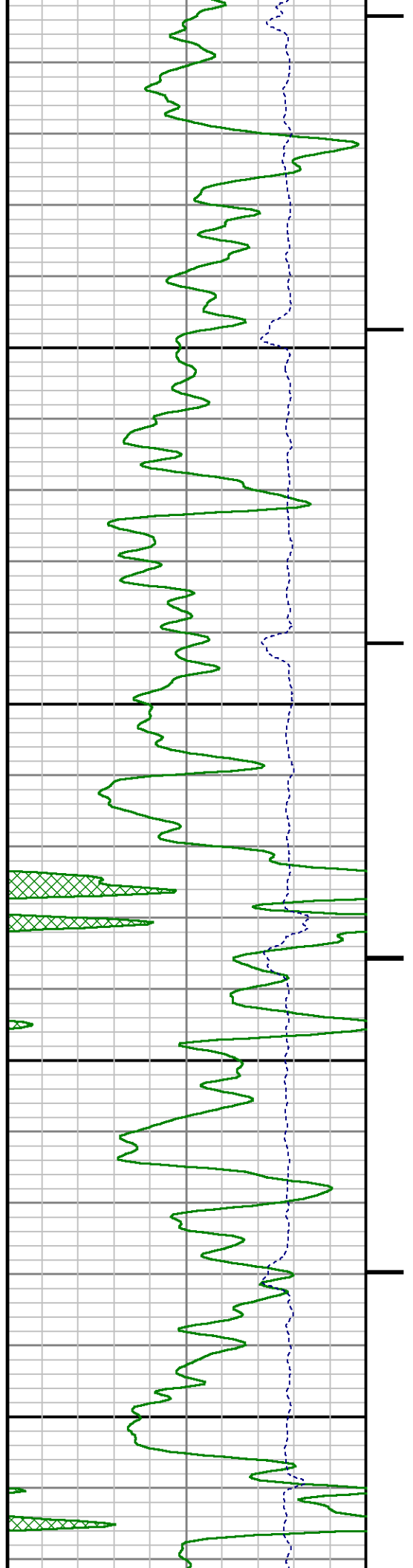




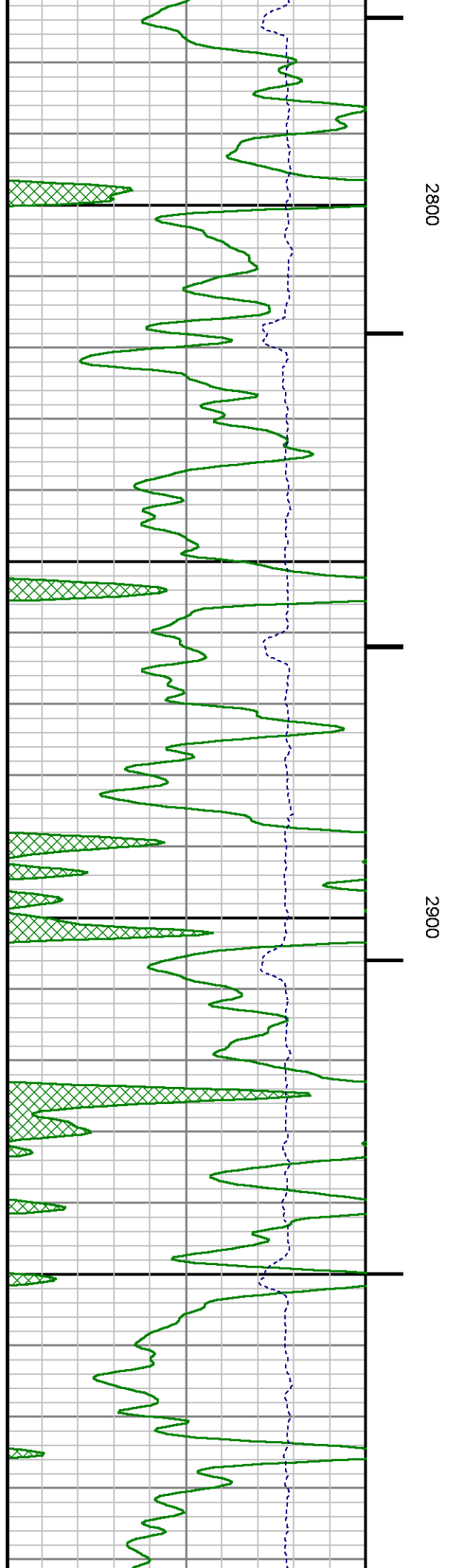
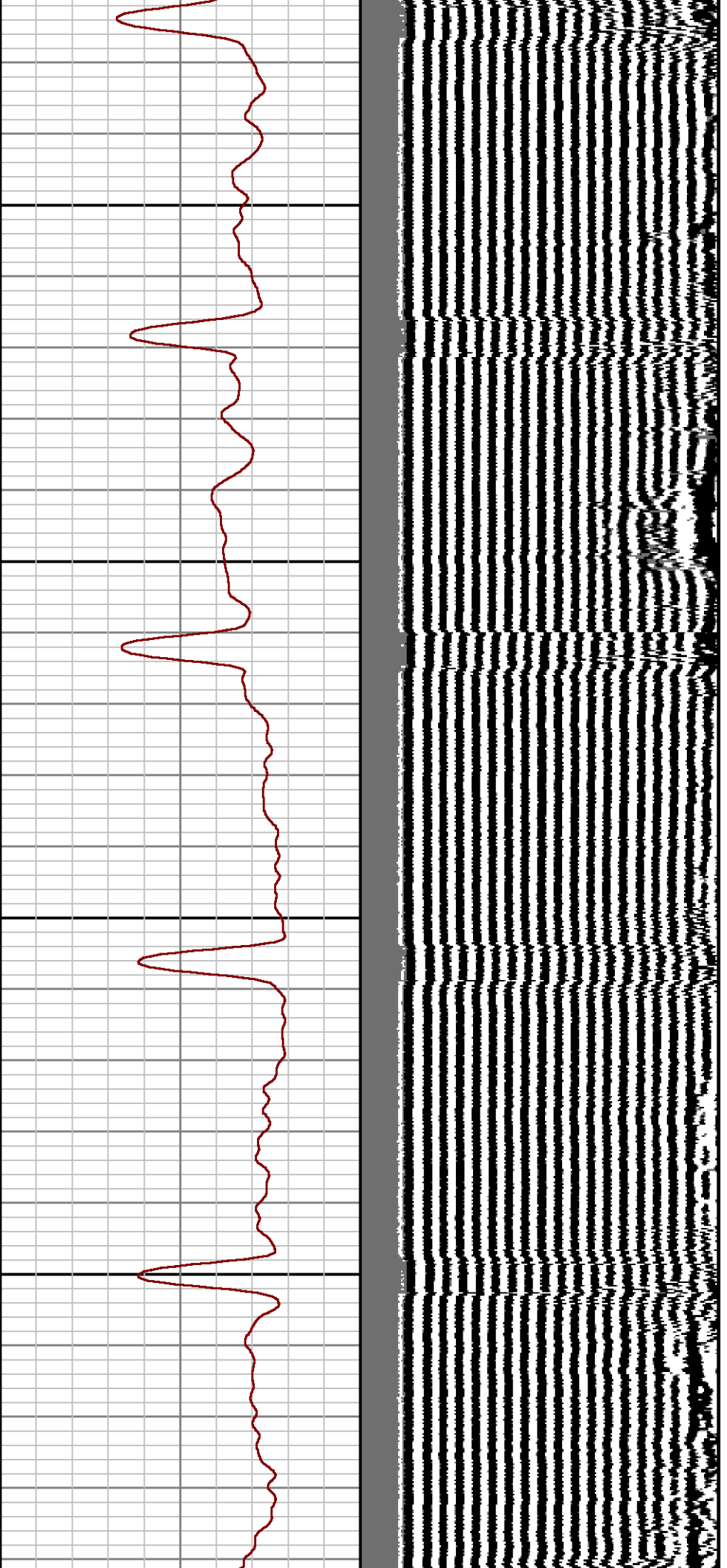


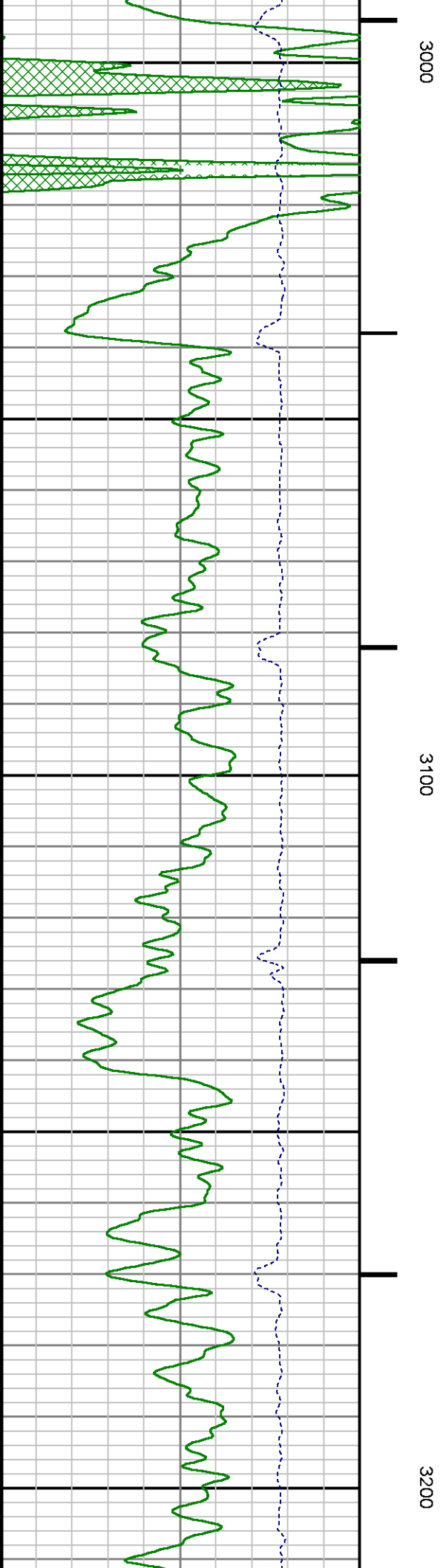
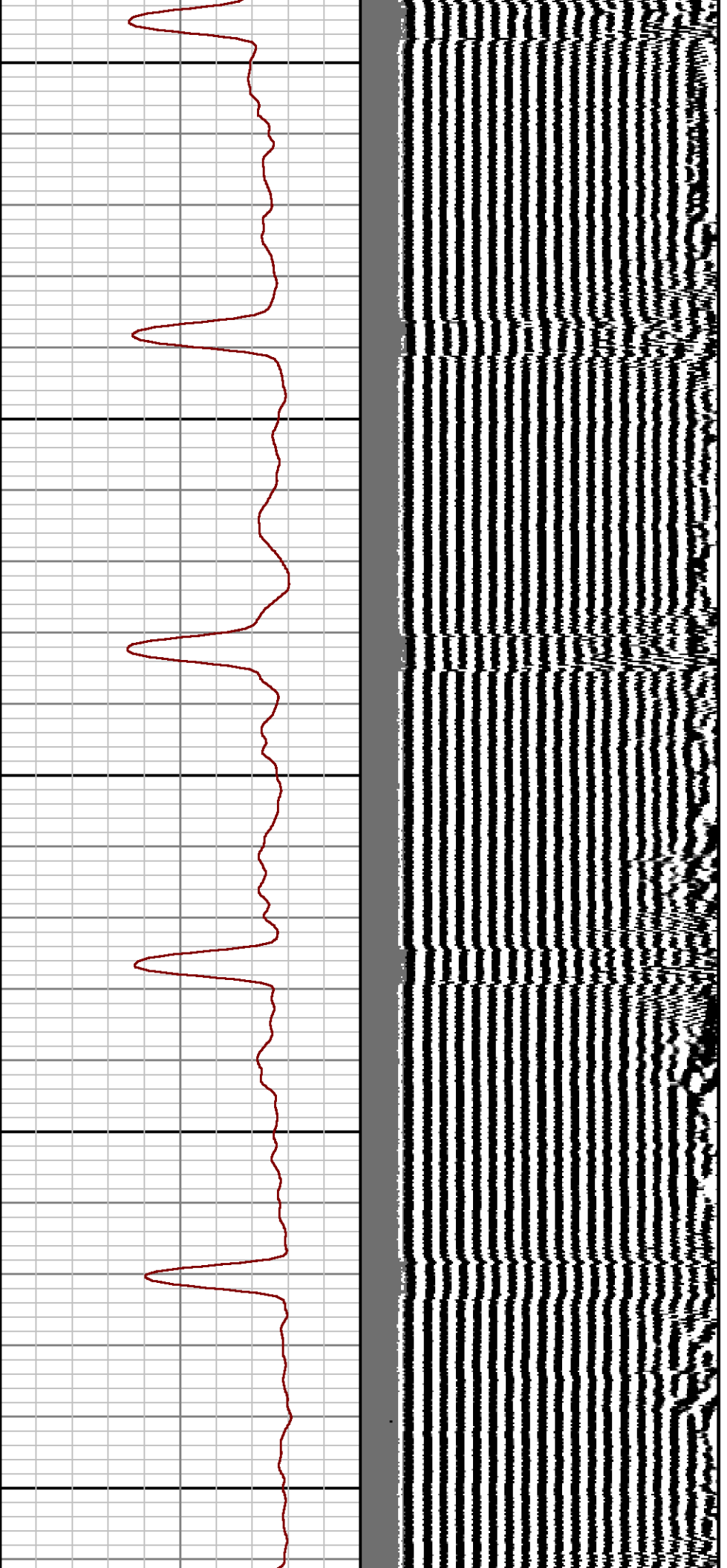
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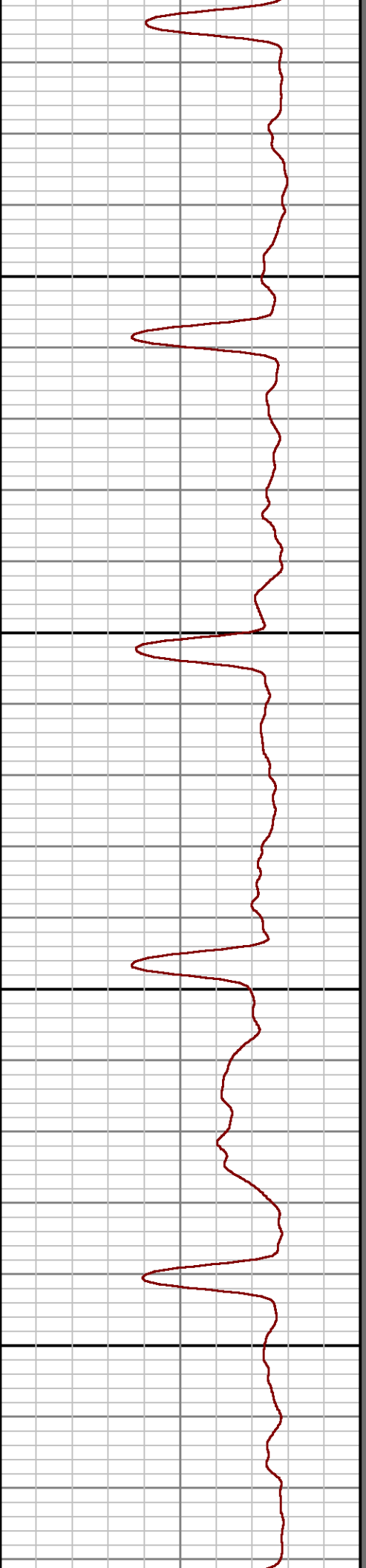
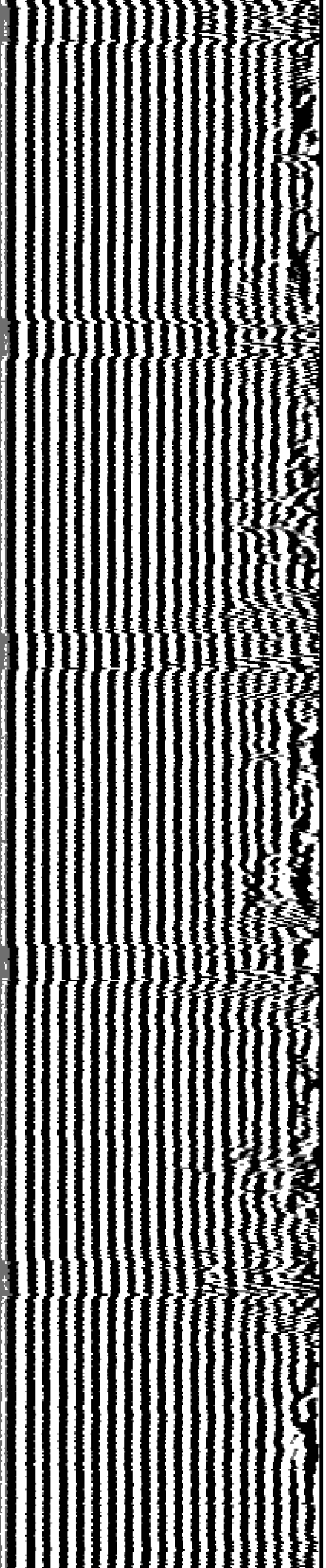
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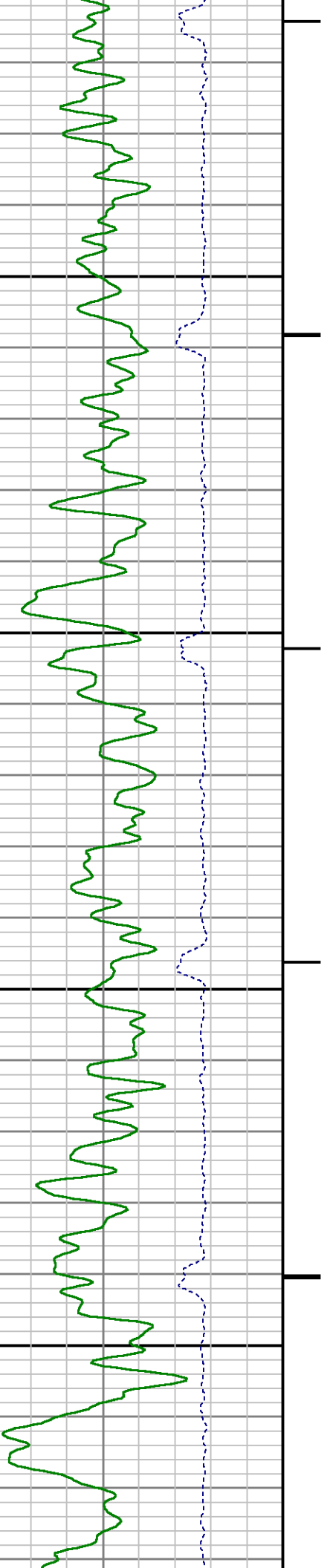


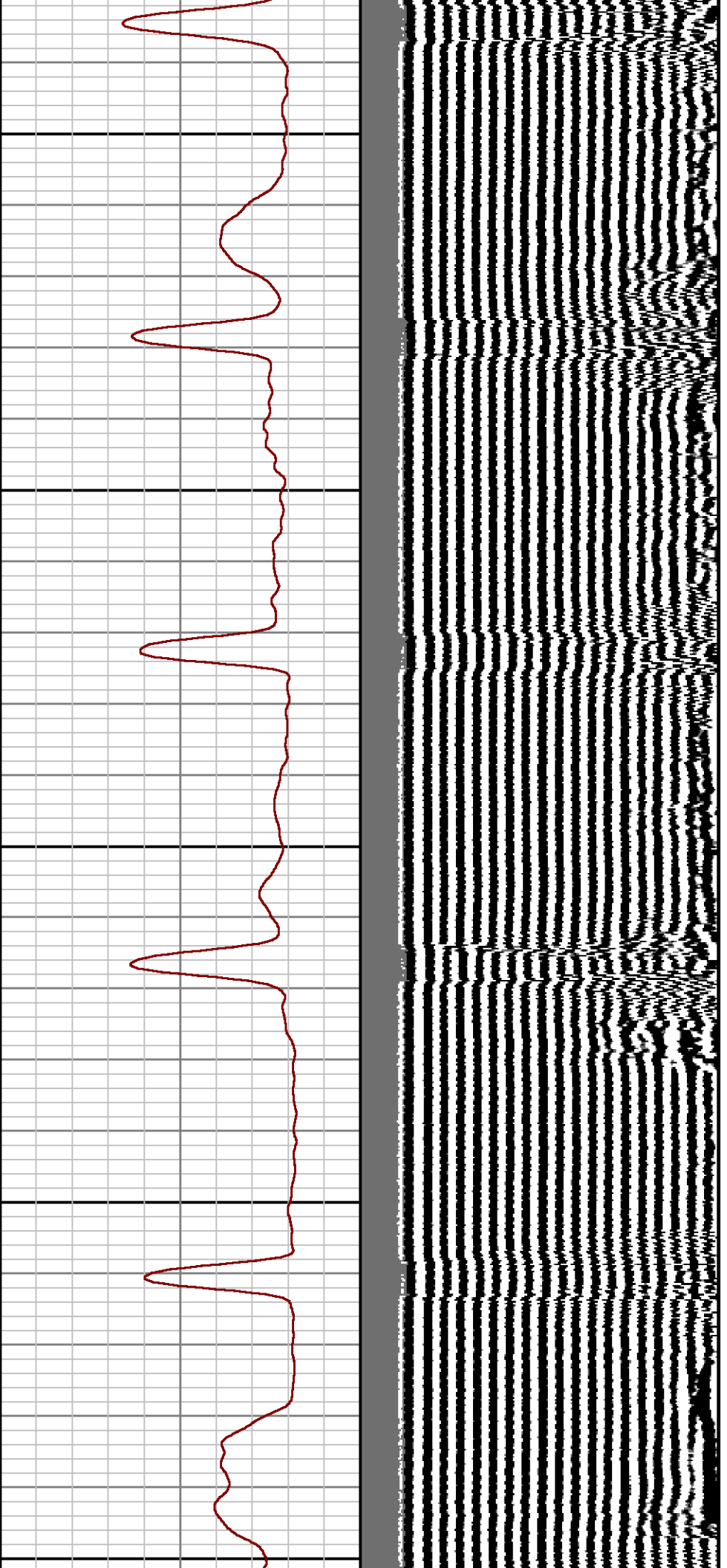




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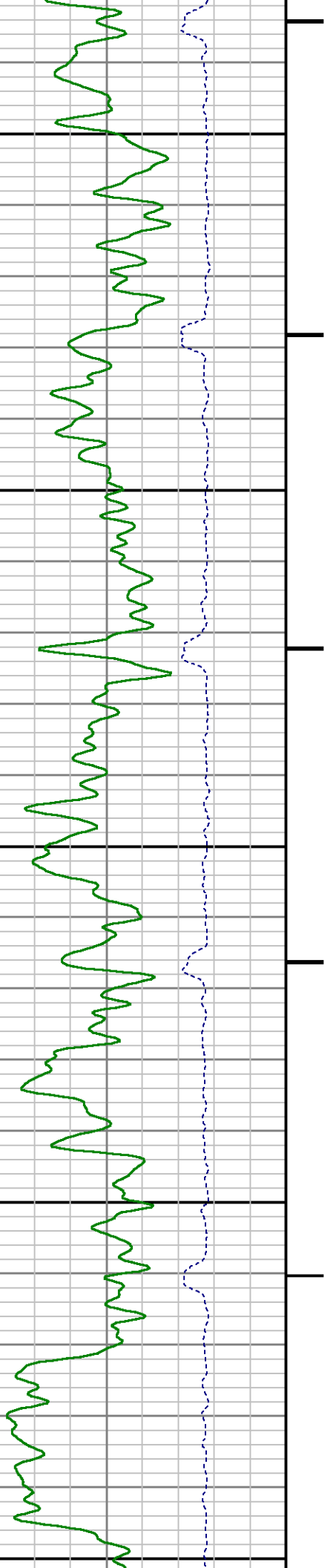
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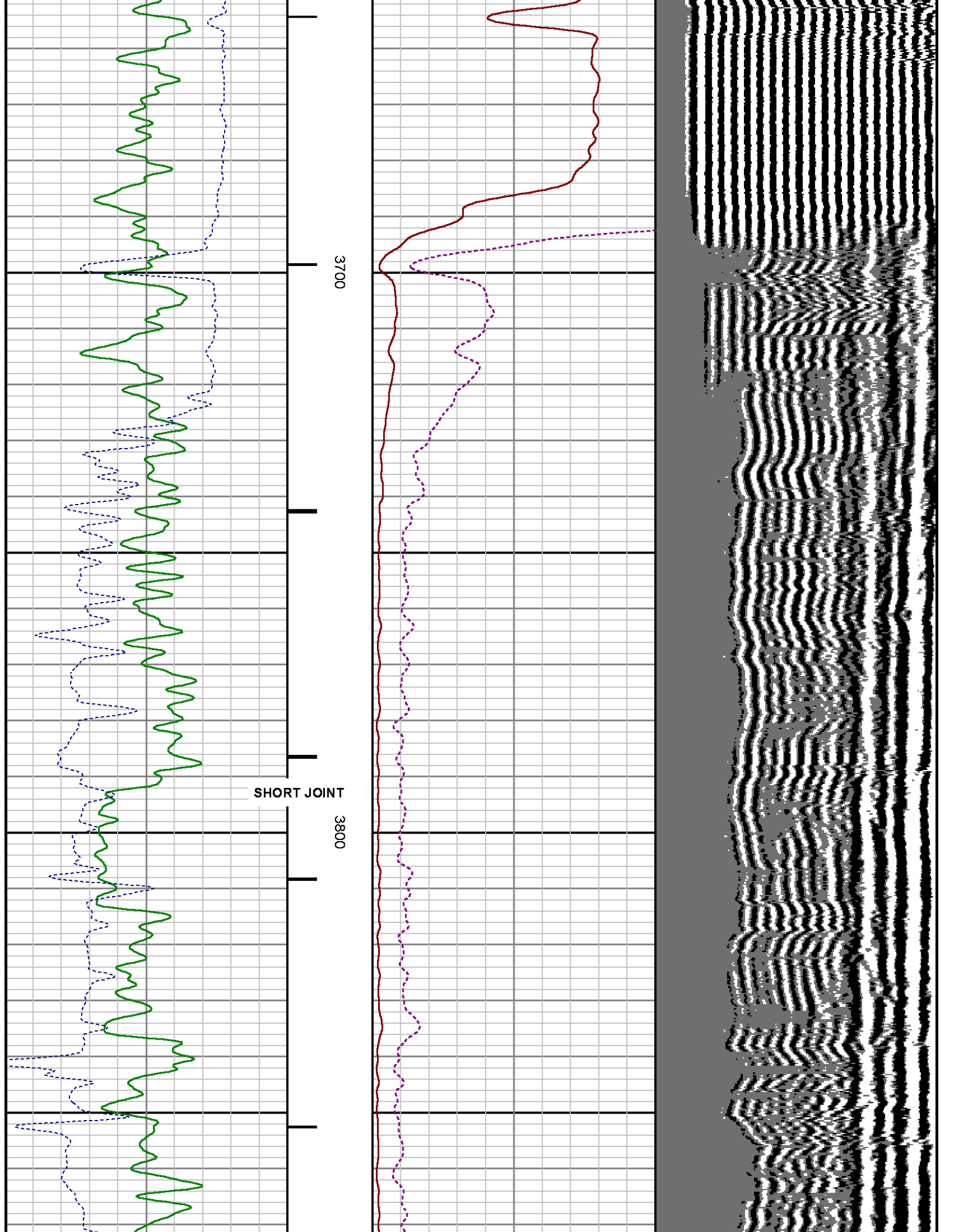




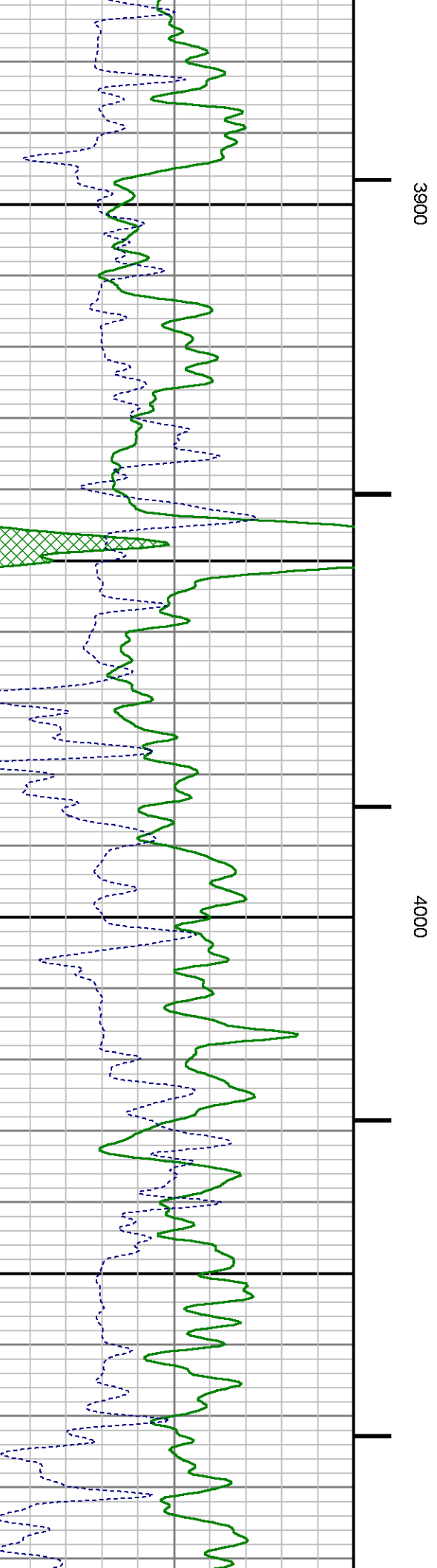
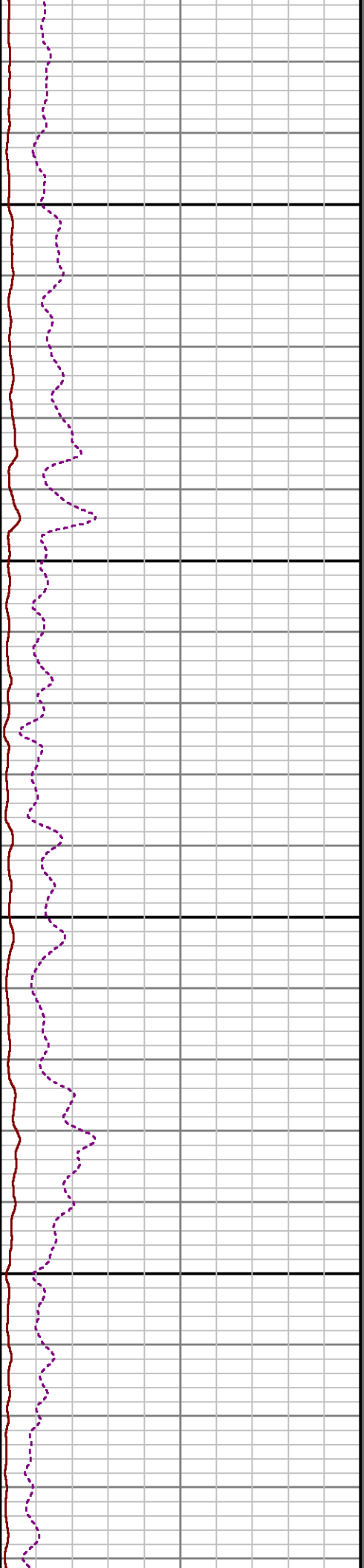
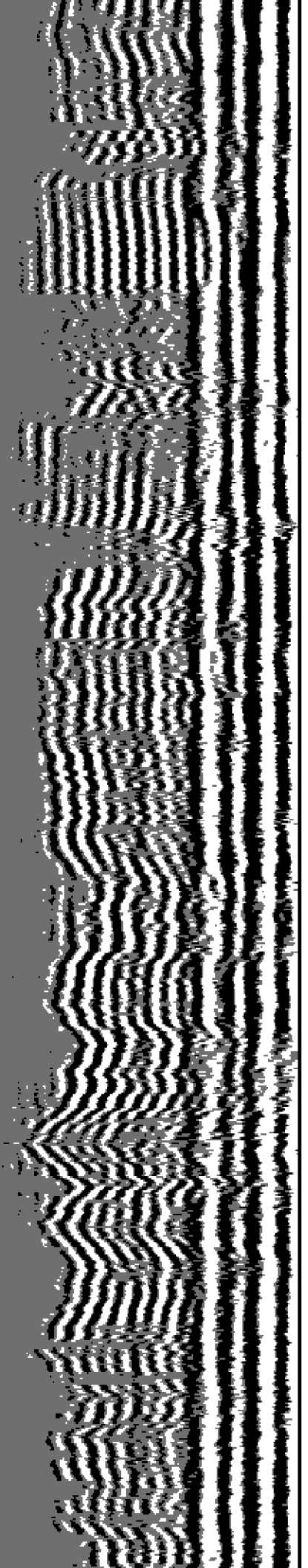
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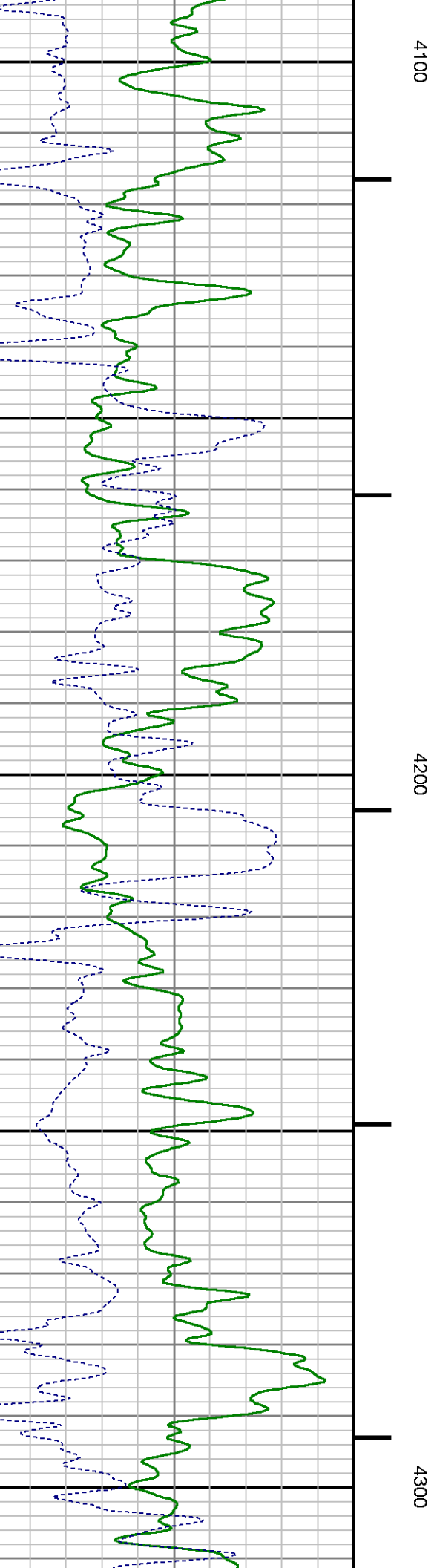
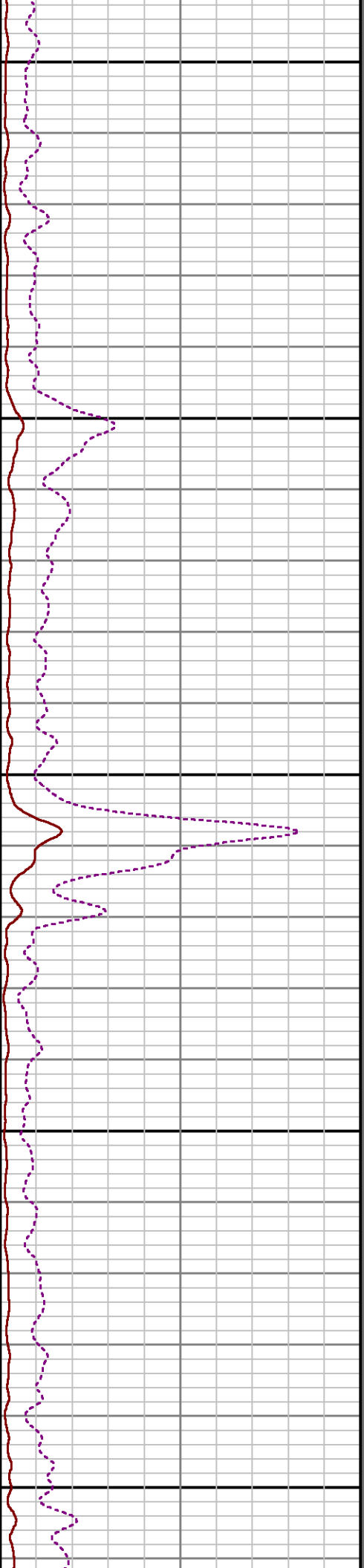
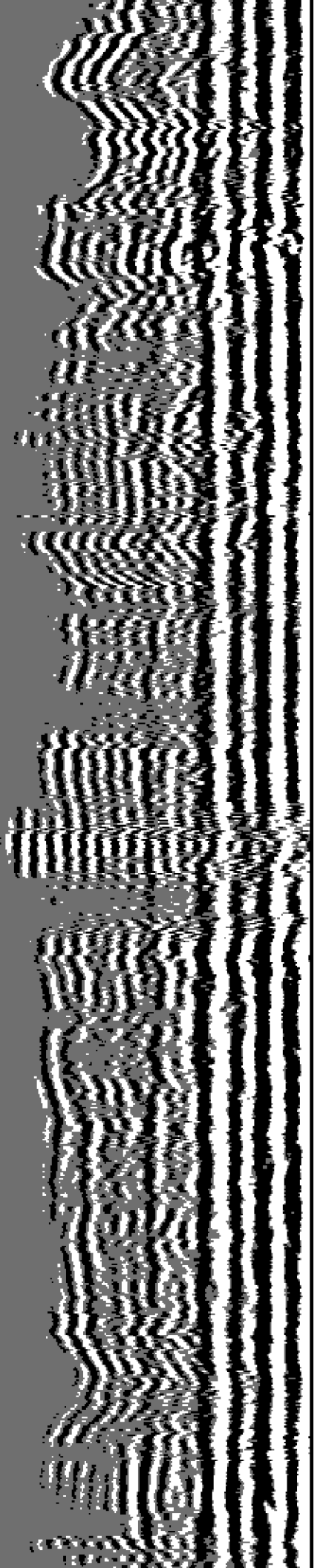
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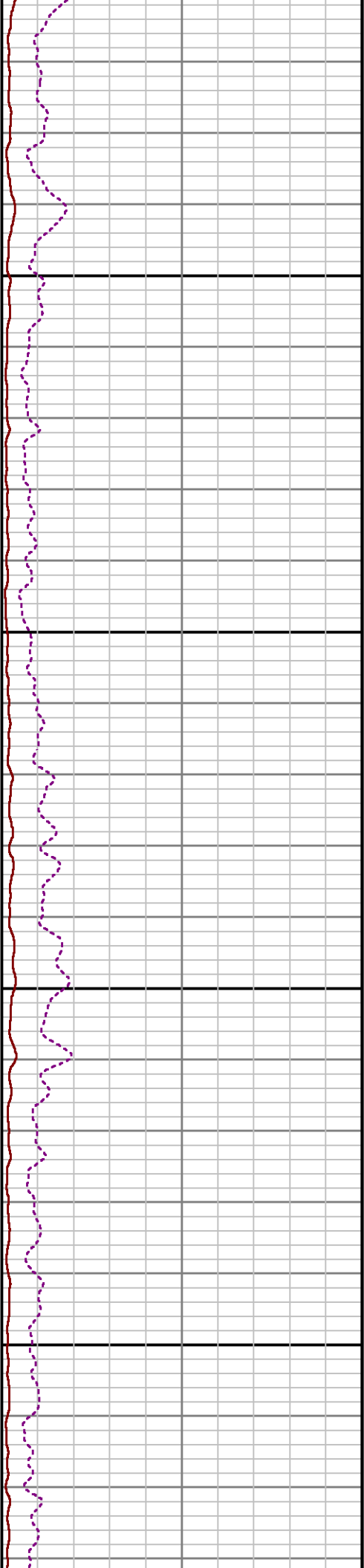
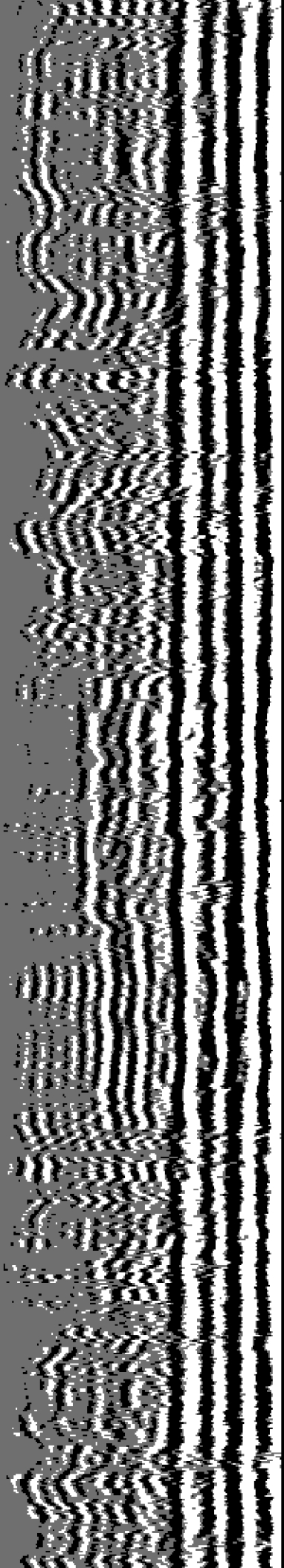






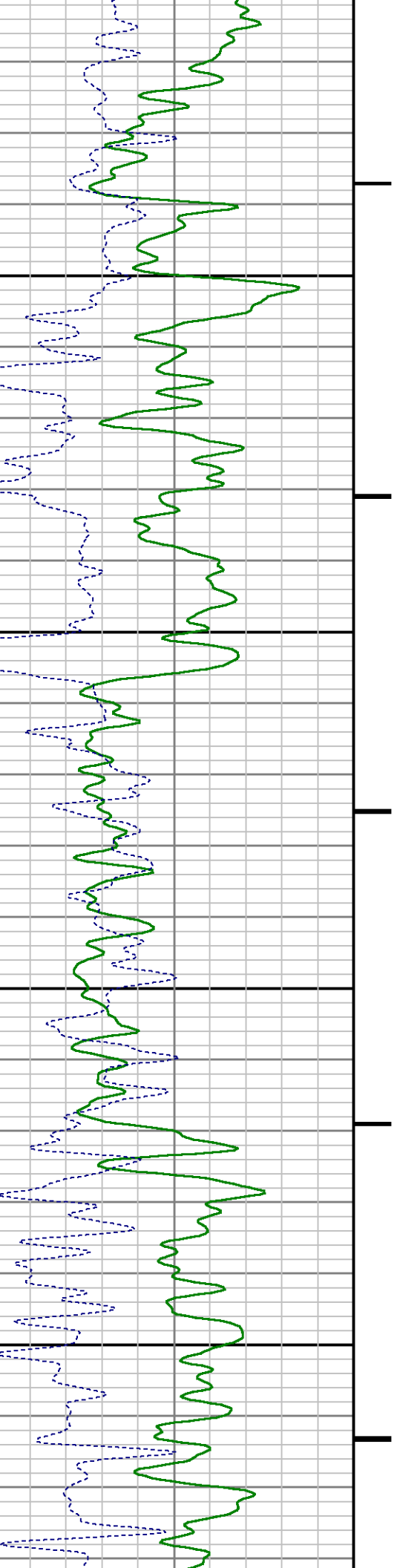


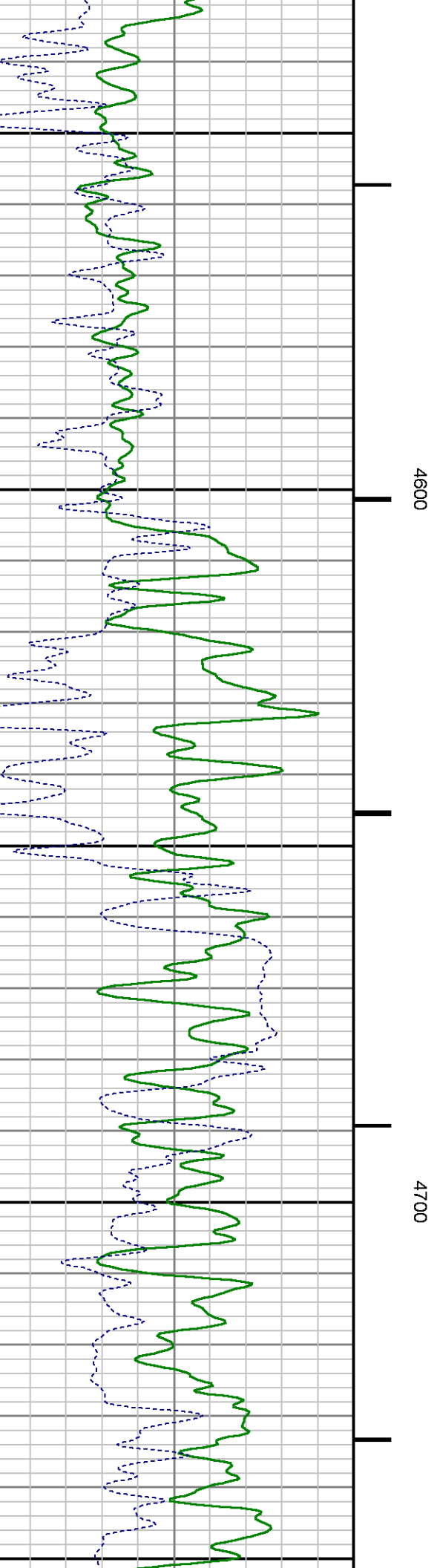
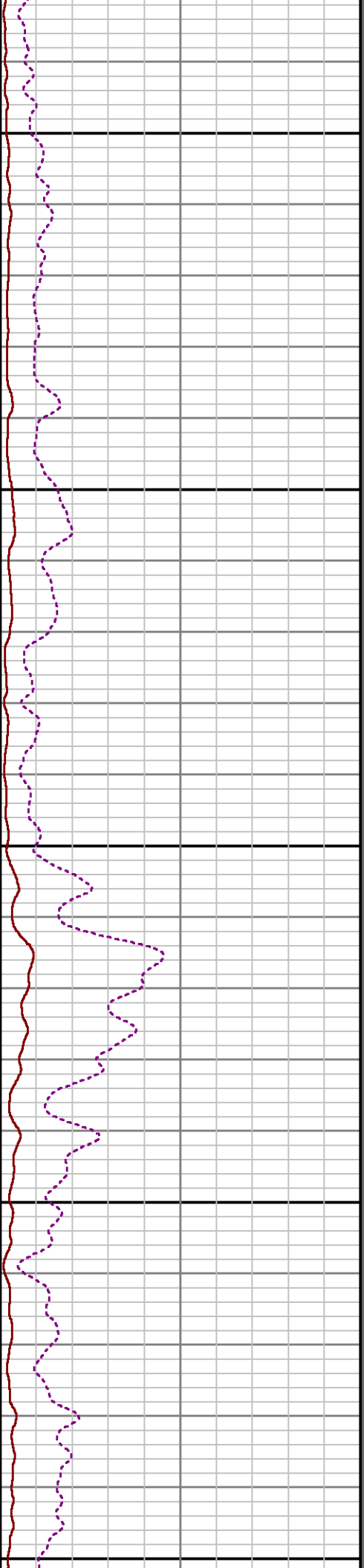
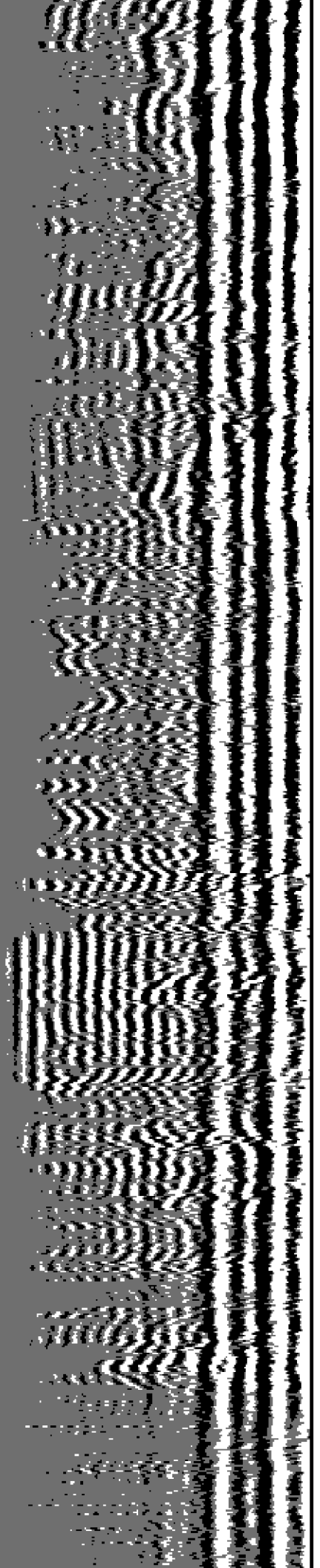


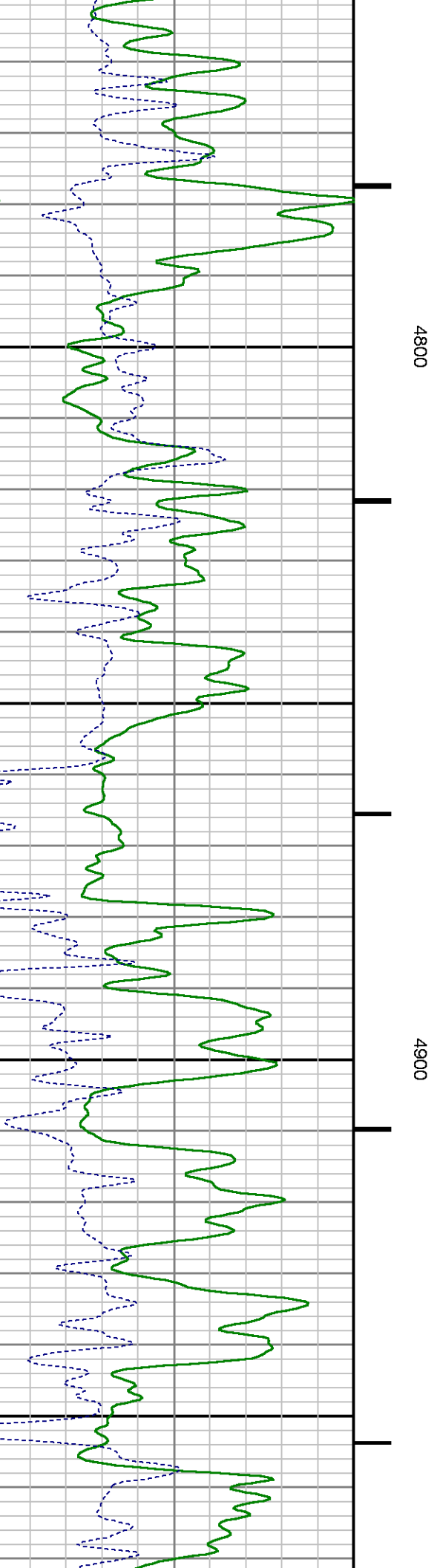
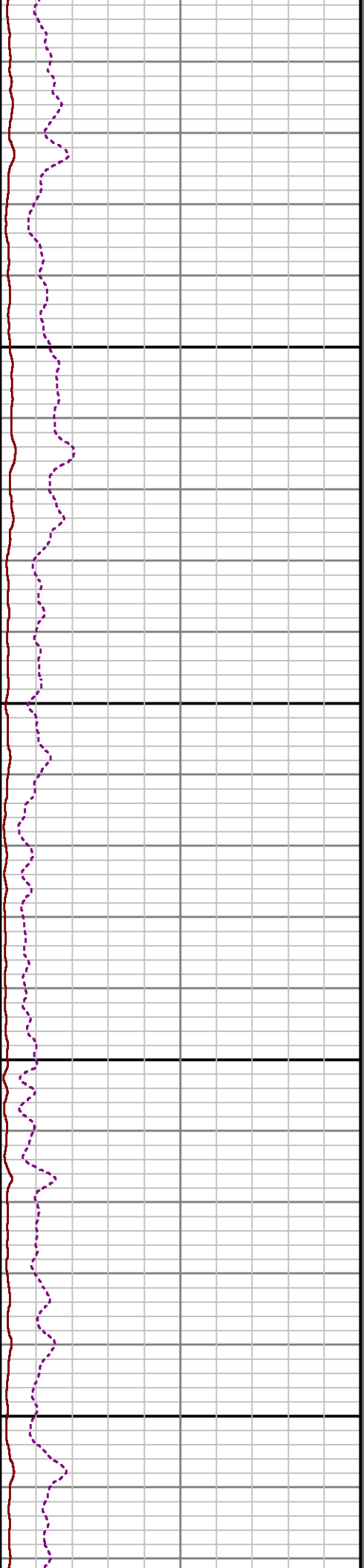
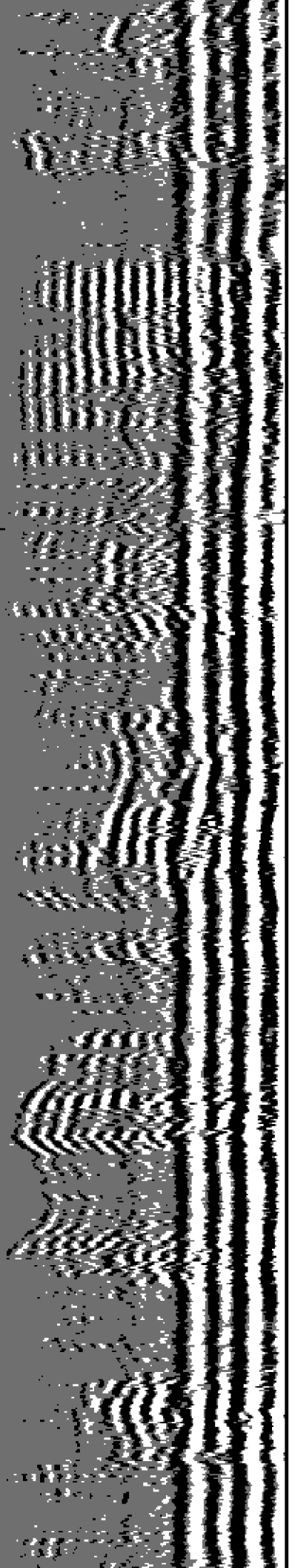


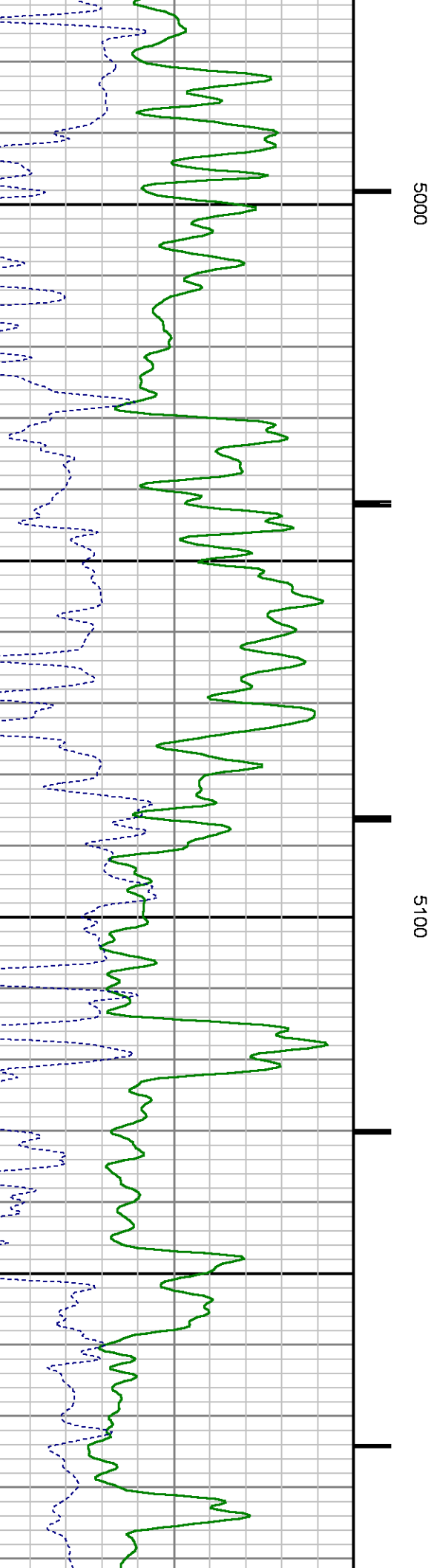
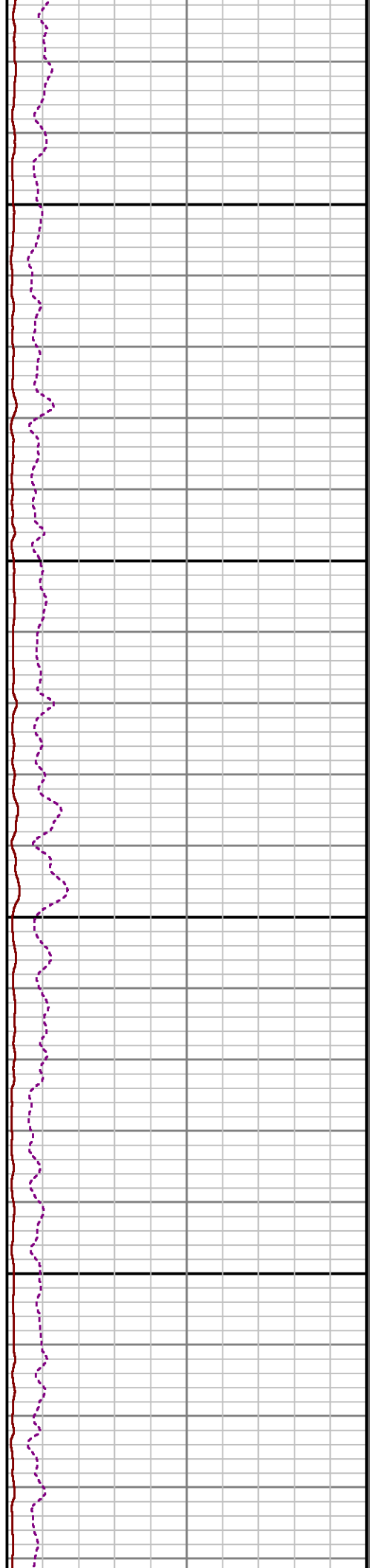
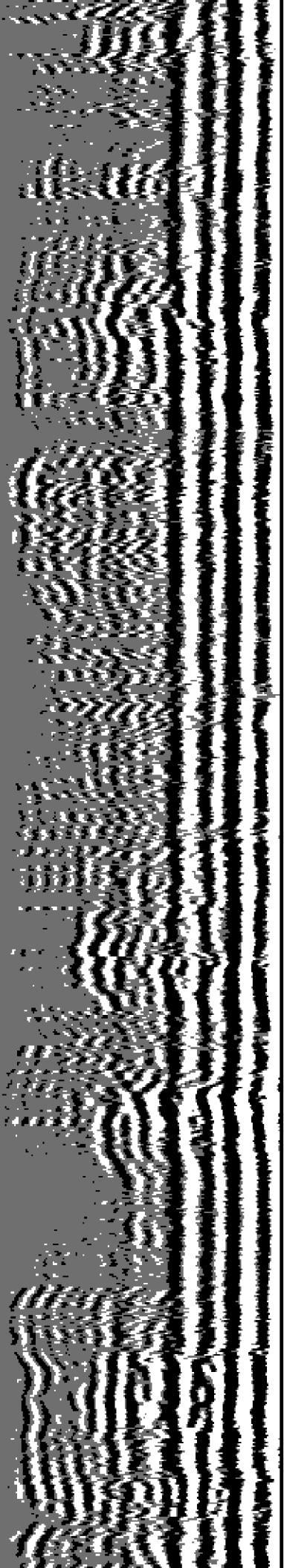
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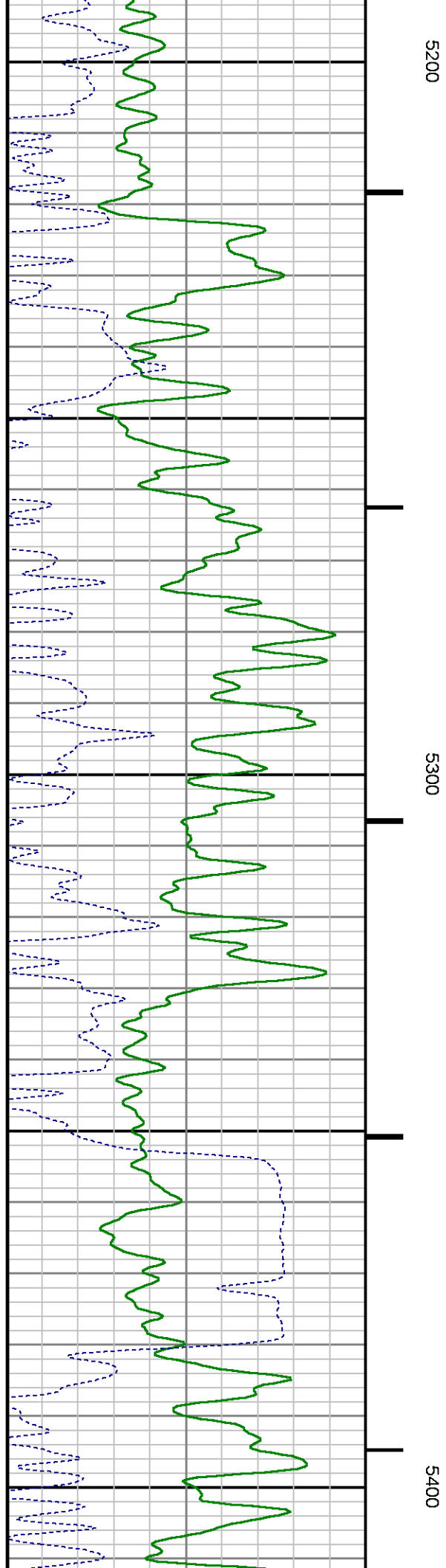
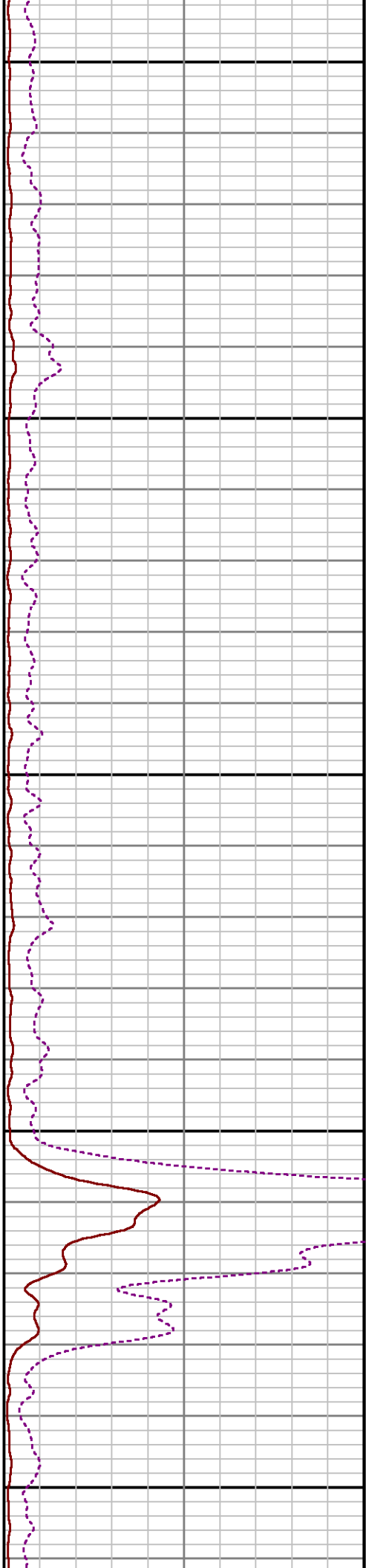
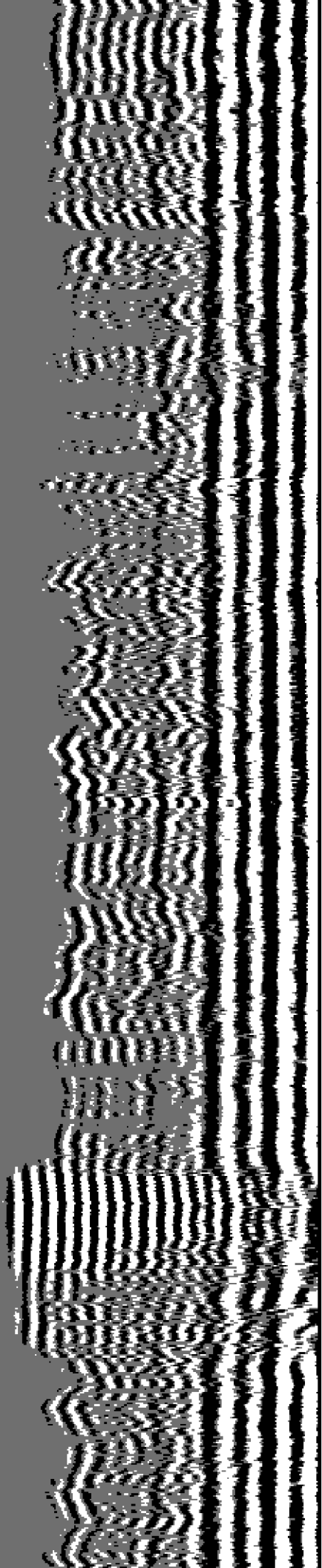
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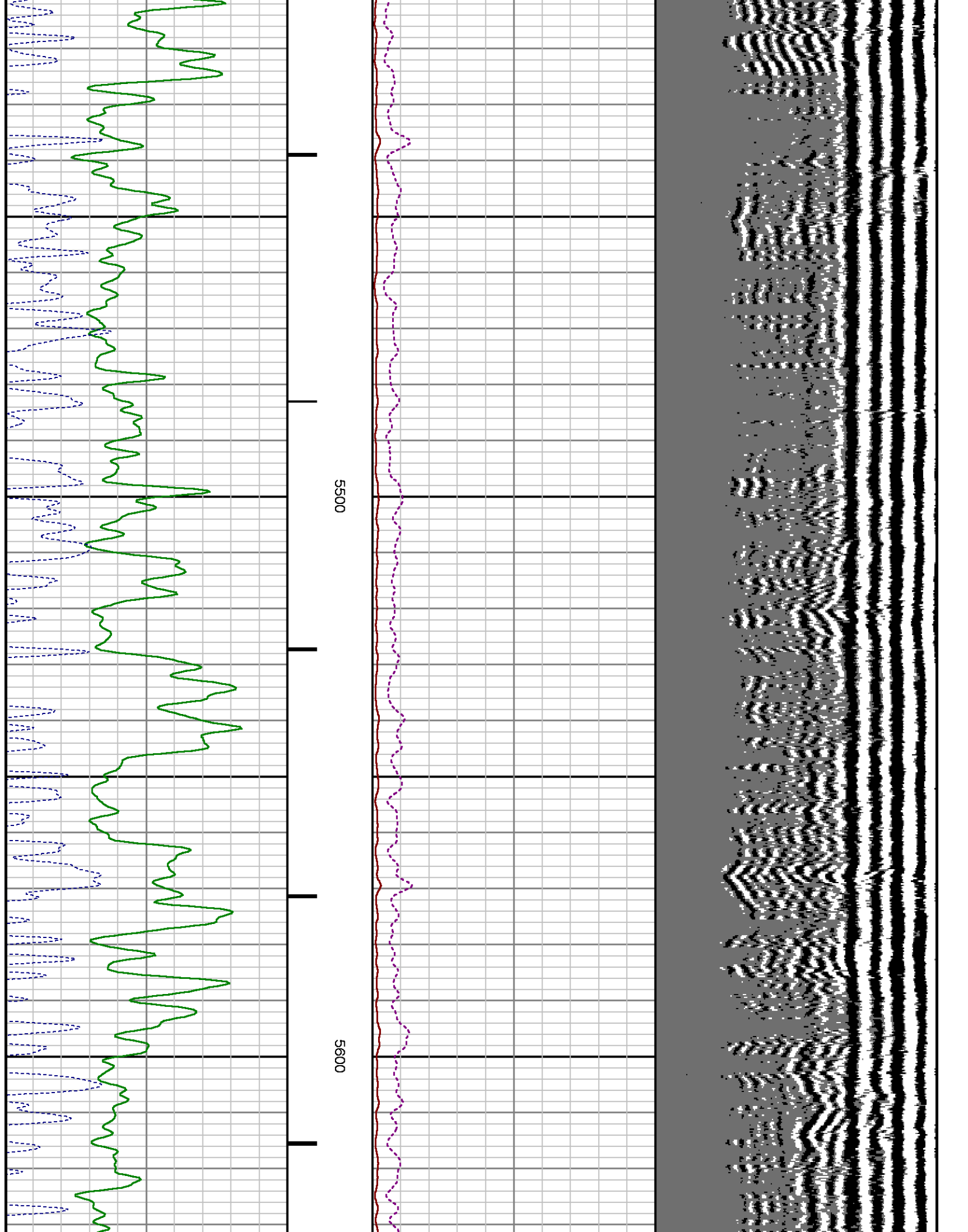




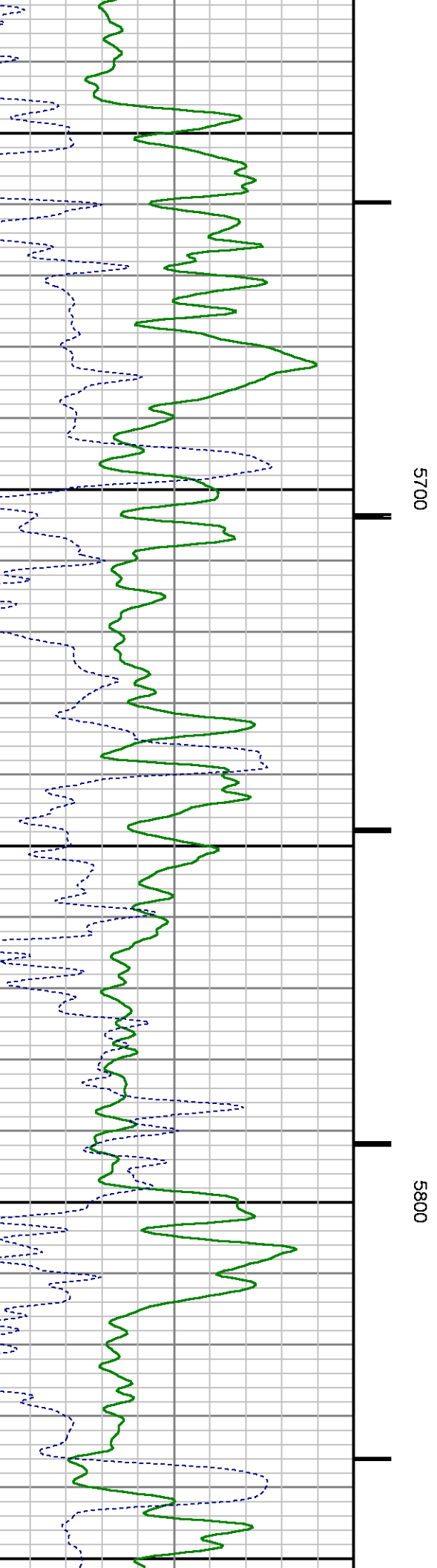
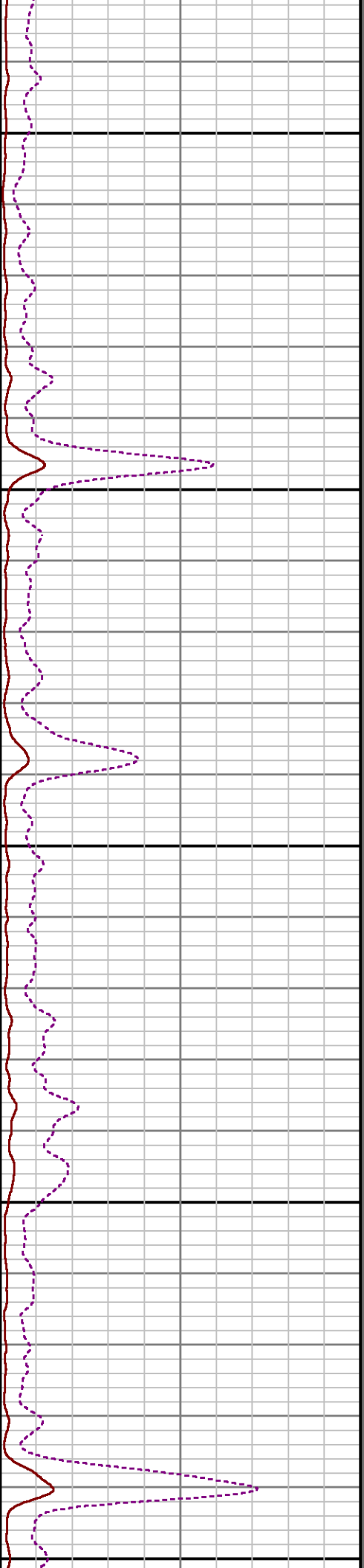
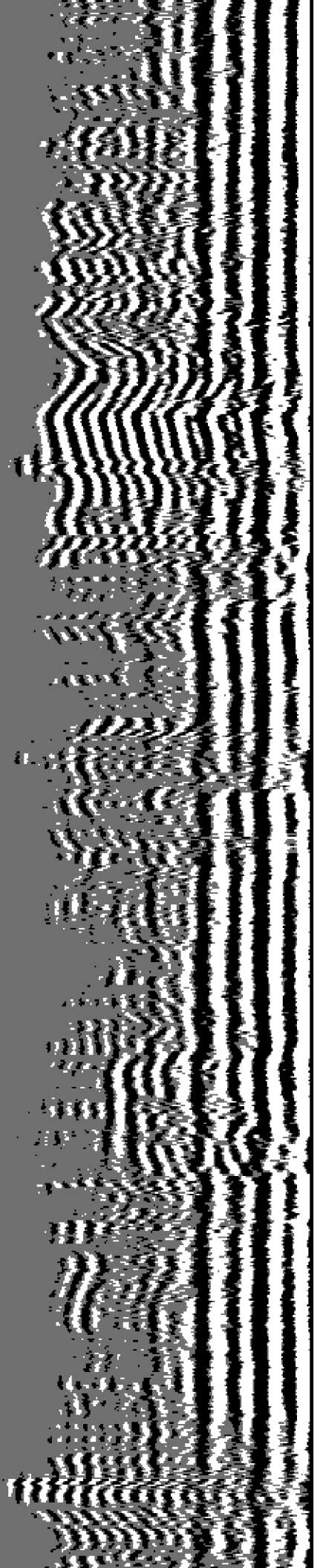




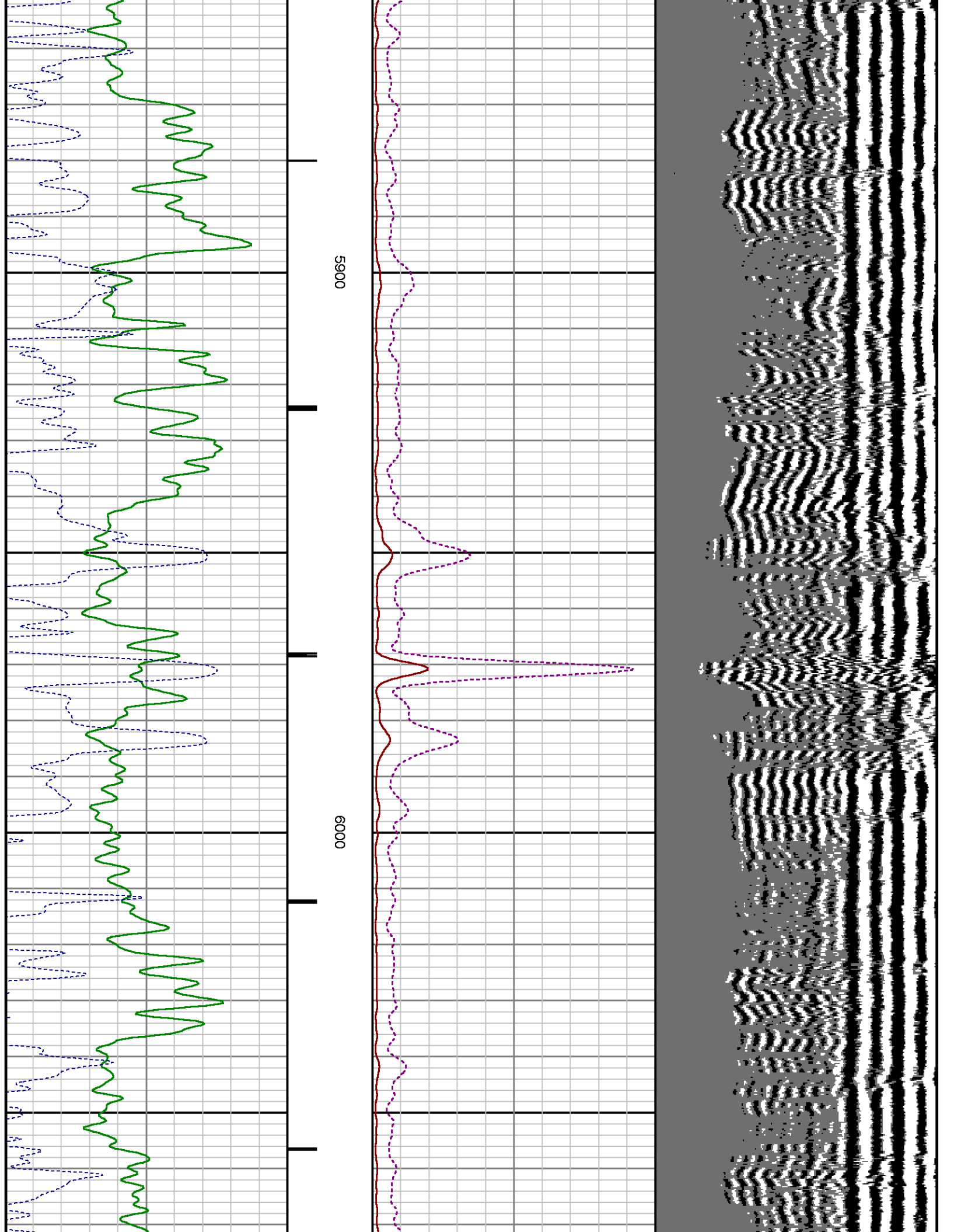


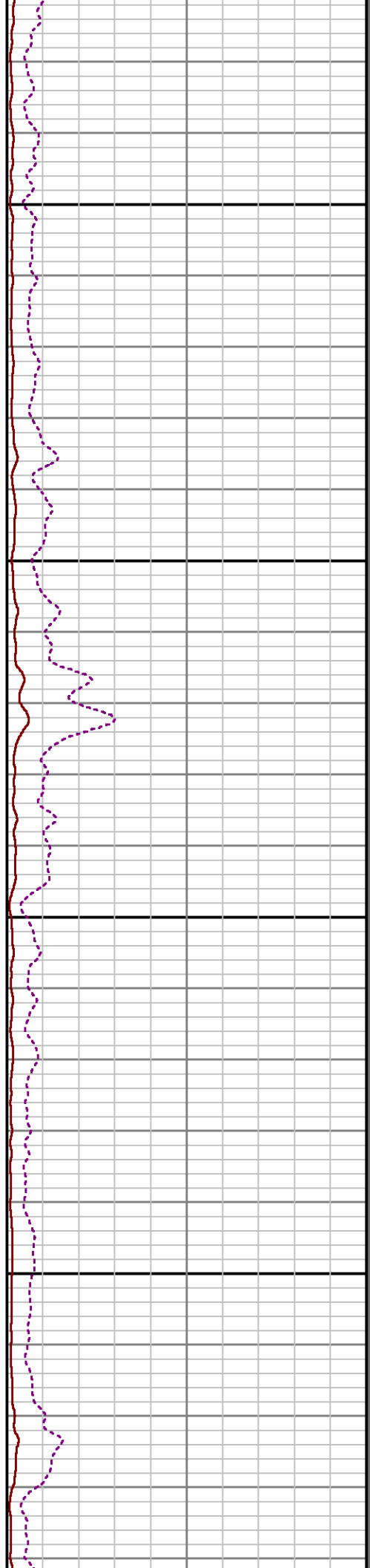
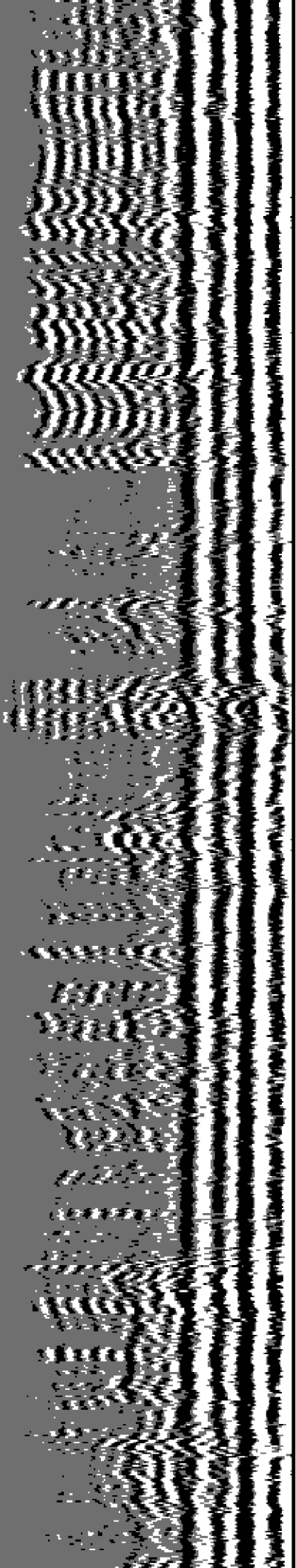






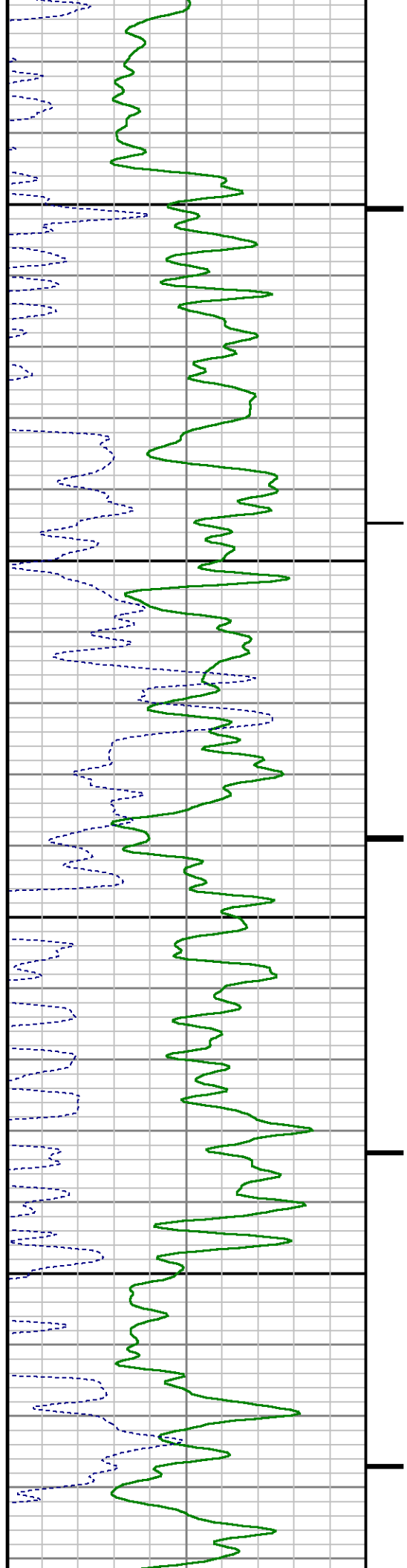


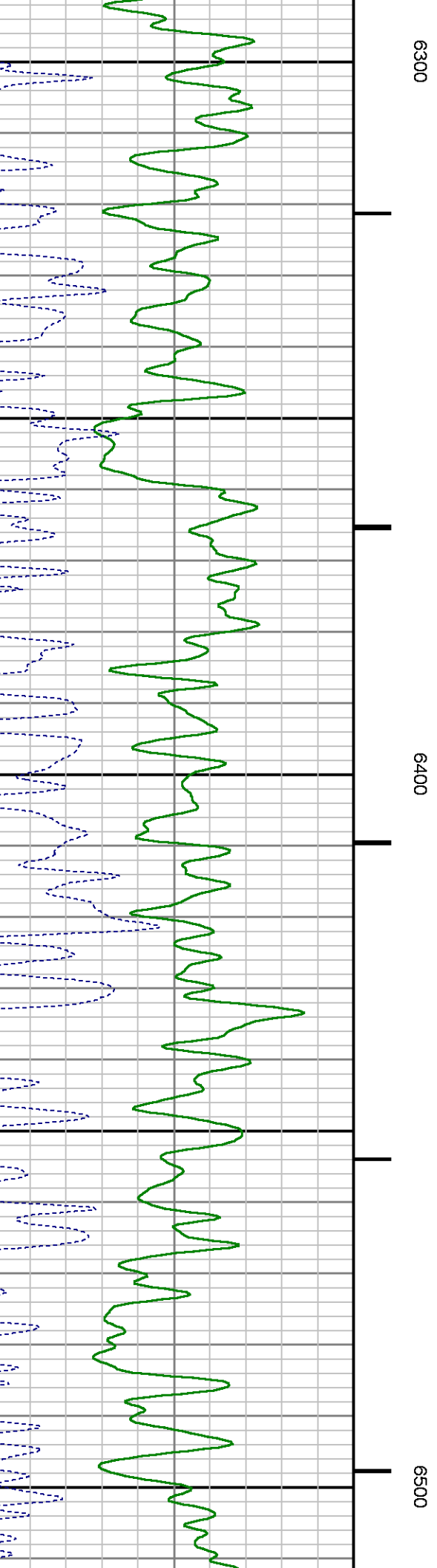
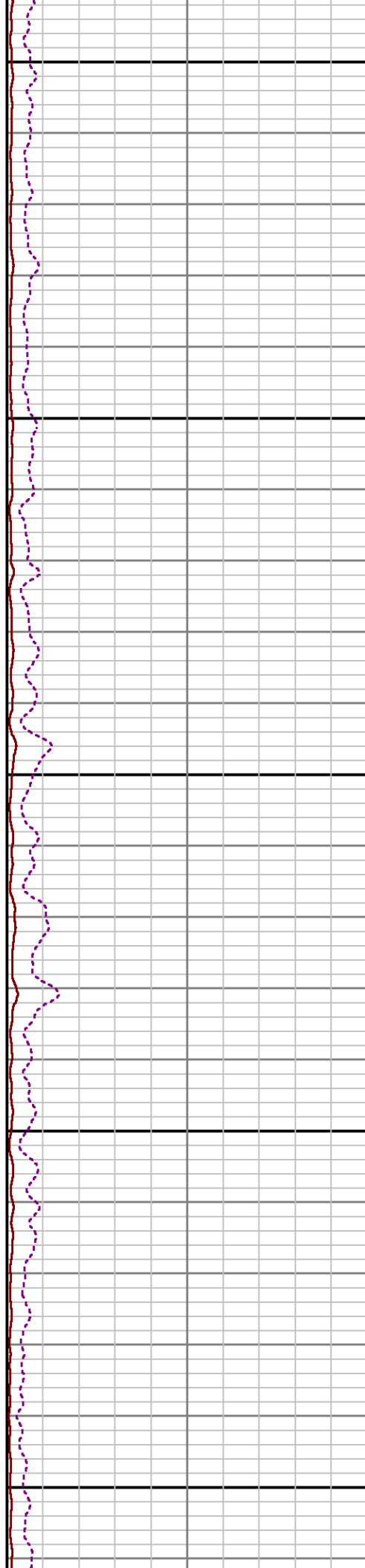
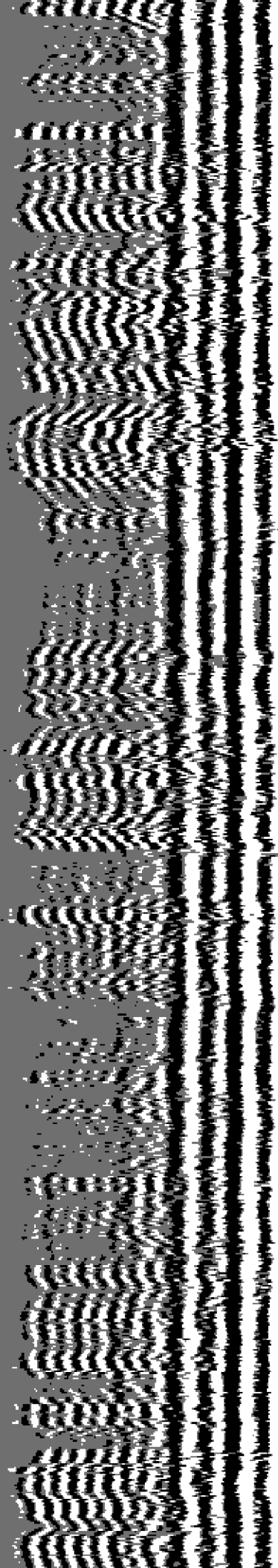


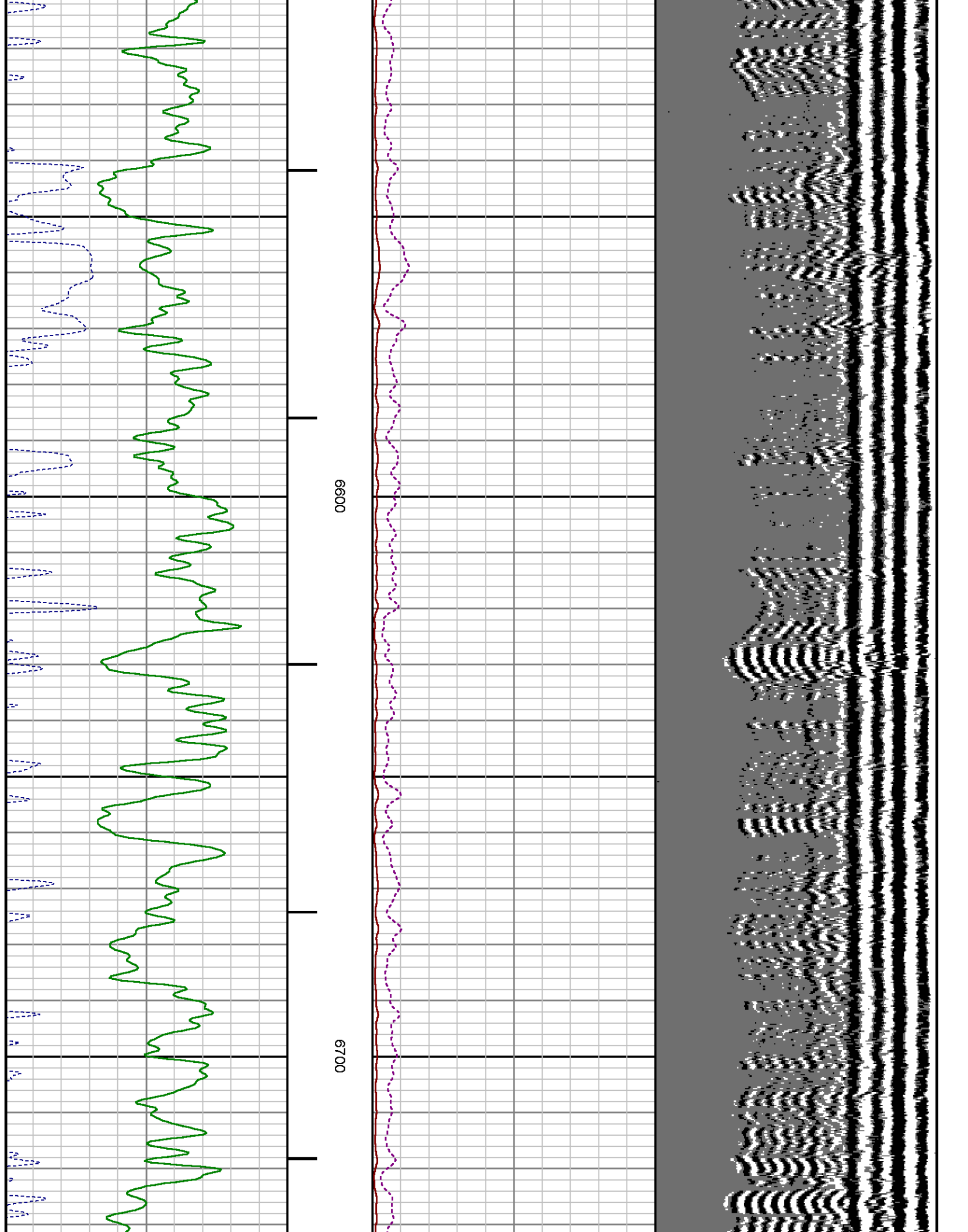


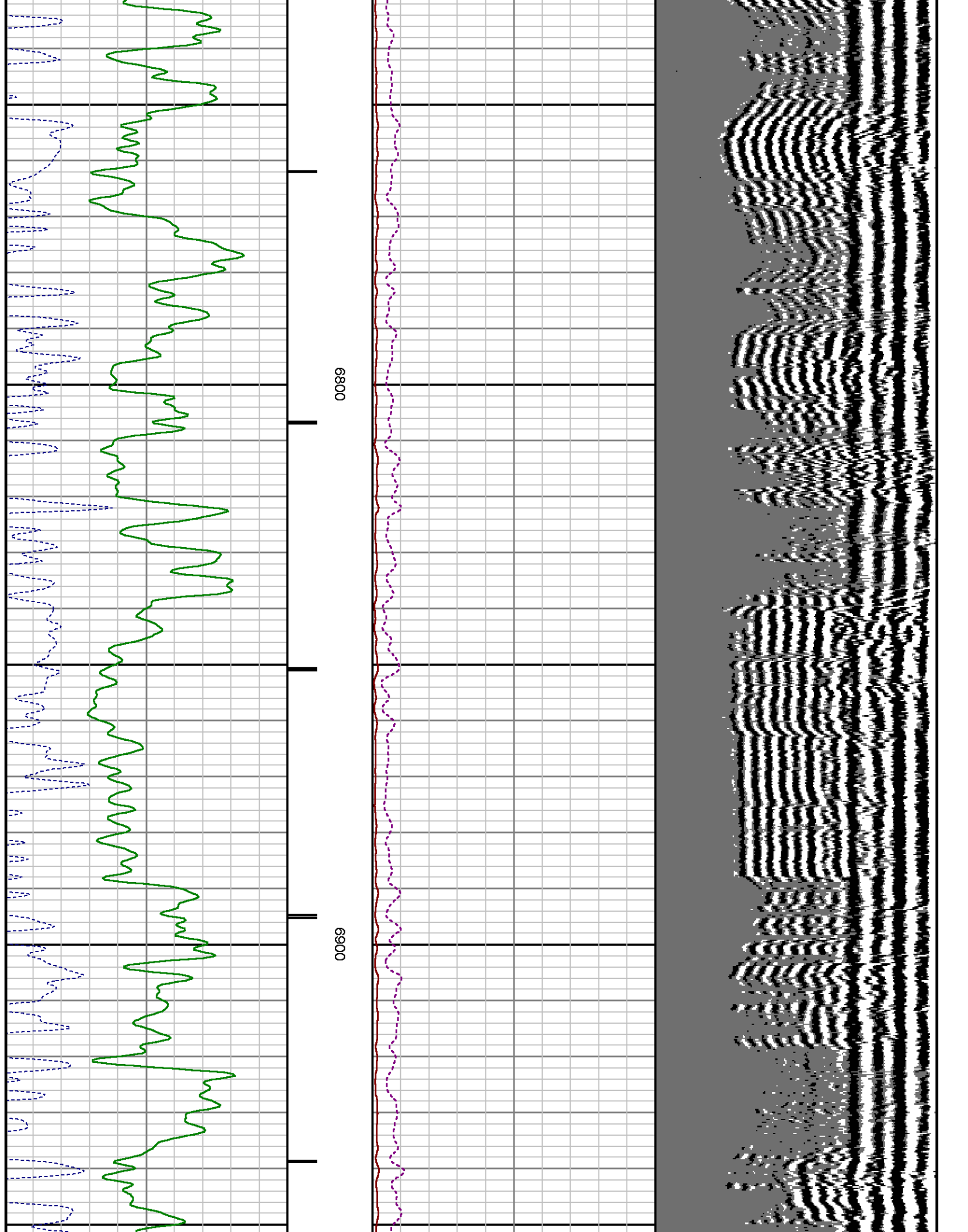
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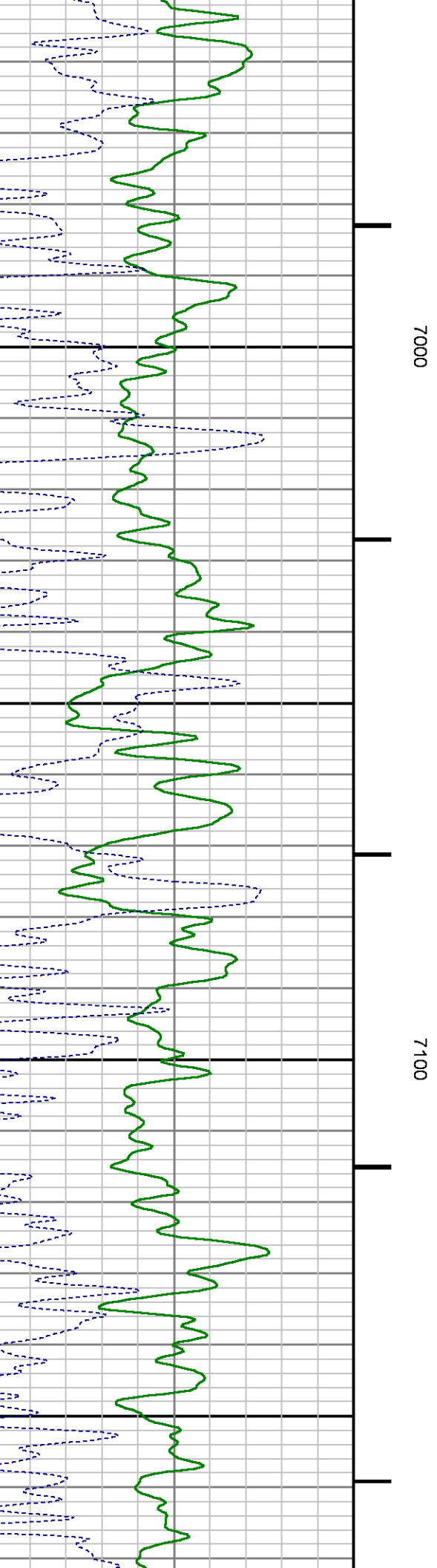
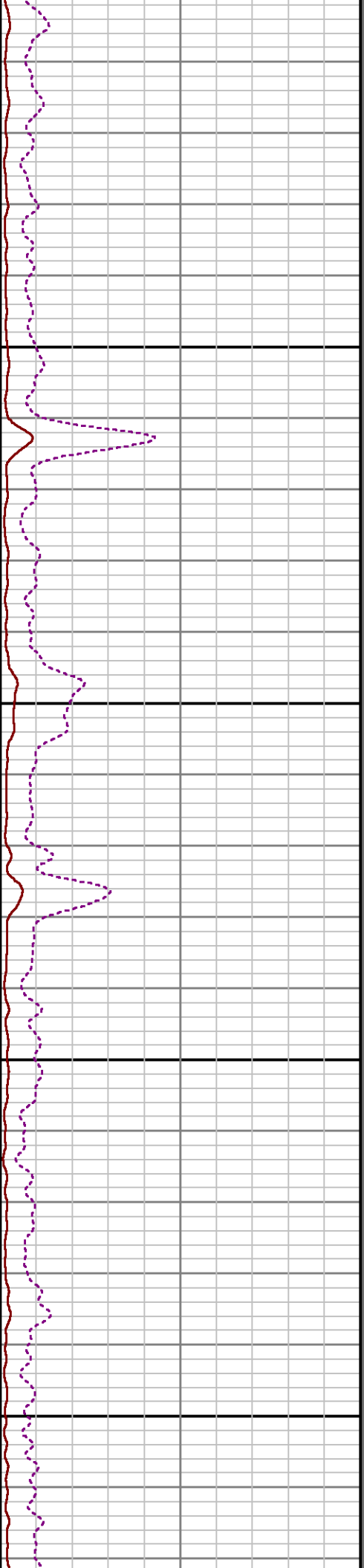
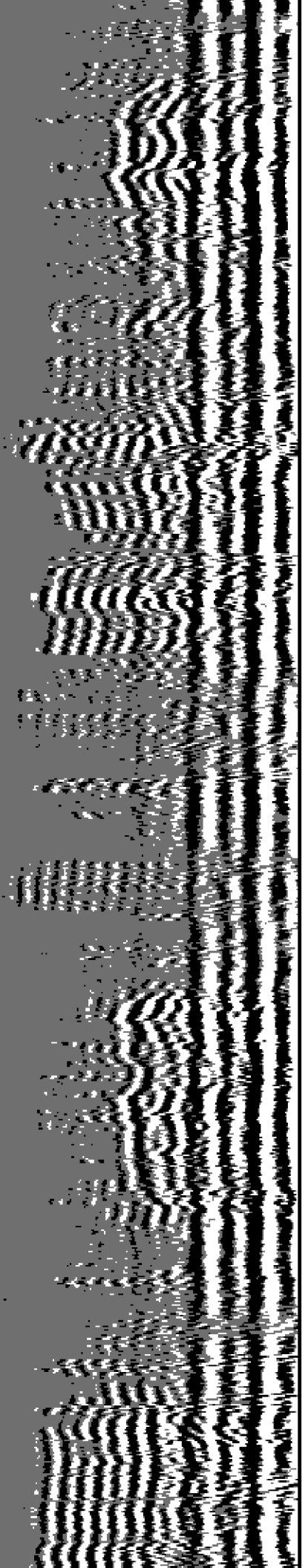
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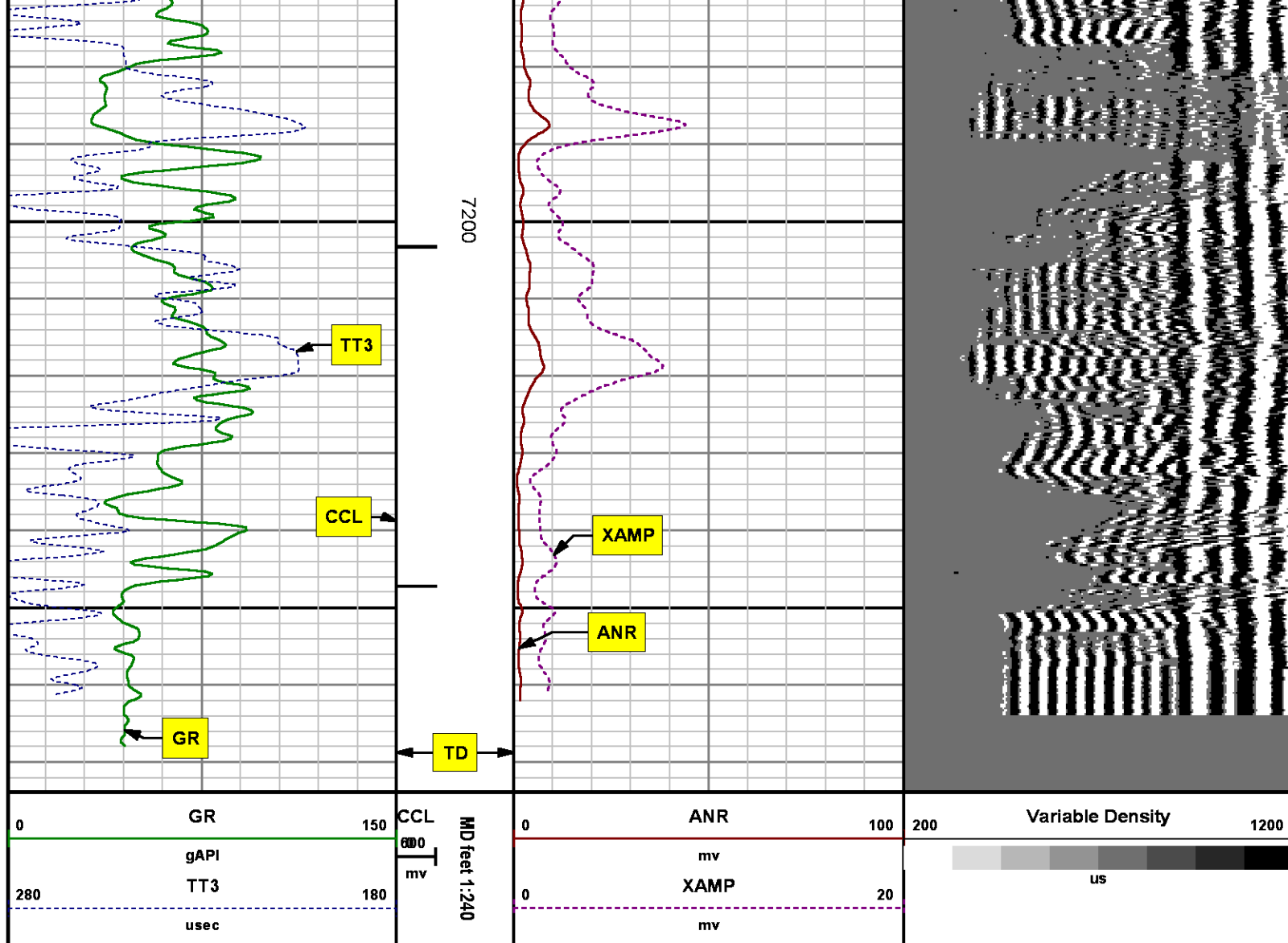












## SECONDARY PRESENTATION 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	24.344	7274.250
RAL	Amp Gate Start Near	195.000	usec	24.344	7274.250
RAL	Amp Gate Start Radial	195.000	usec	24.344	7274.250
RAL	Amp Gate Width Far	25.000	usec	24.344	7274.250
RAL	Amp Gate Width Near	25.000	usec	24.344	7274.250



RAL	Amp Gate Width Radial	25.000	usec	24.344	7274.250
RAL	casing od	4.500	inches	24.344	7274.250
RAL	casing wt	11.600	lbm/ft	24.344	7274.250
RAL	FB Start Far	291.900	usec	24.344	7274.250
RAL	FB Start Near	175.391	usec	24.344	7274.250
RAL	FB Start Radial	175.391	usec	24.344	7274.250
RAL	FB Thresh Far	10.000	mv	24.344	7274.250
RAL	FB Thresh Near	4.000	mv	24.344	7274.250
RAL	FB Thresh Radial	4.000	mv	24.344	7274.250
RAL	Fluid Travel Time	200.000	usec/ft	24.344	7275.031

## 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

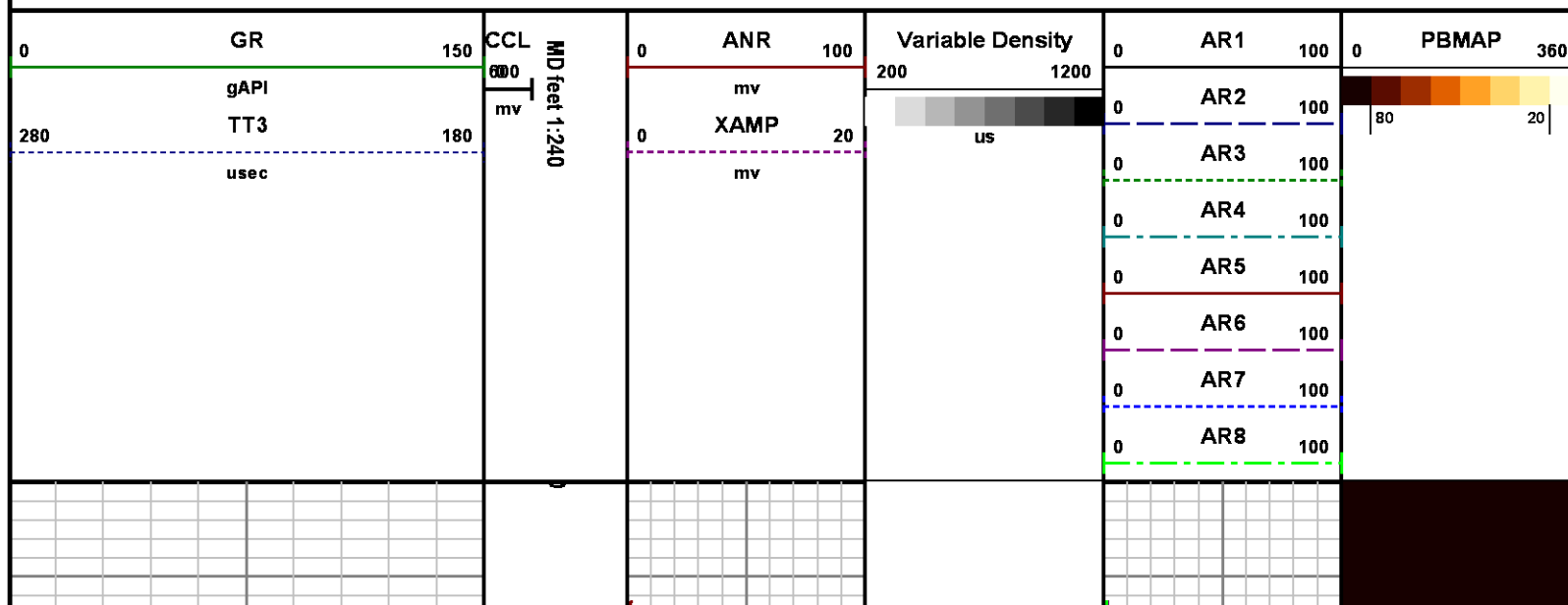
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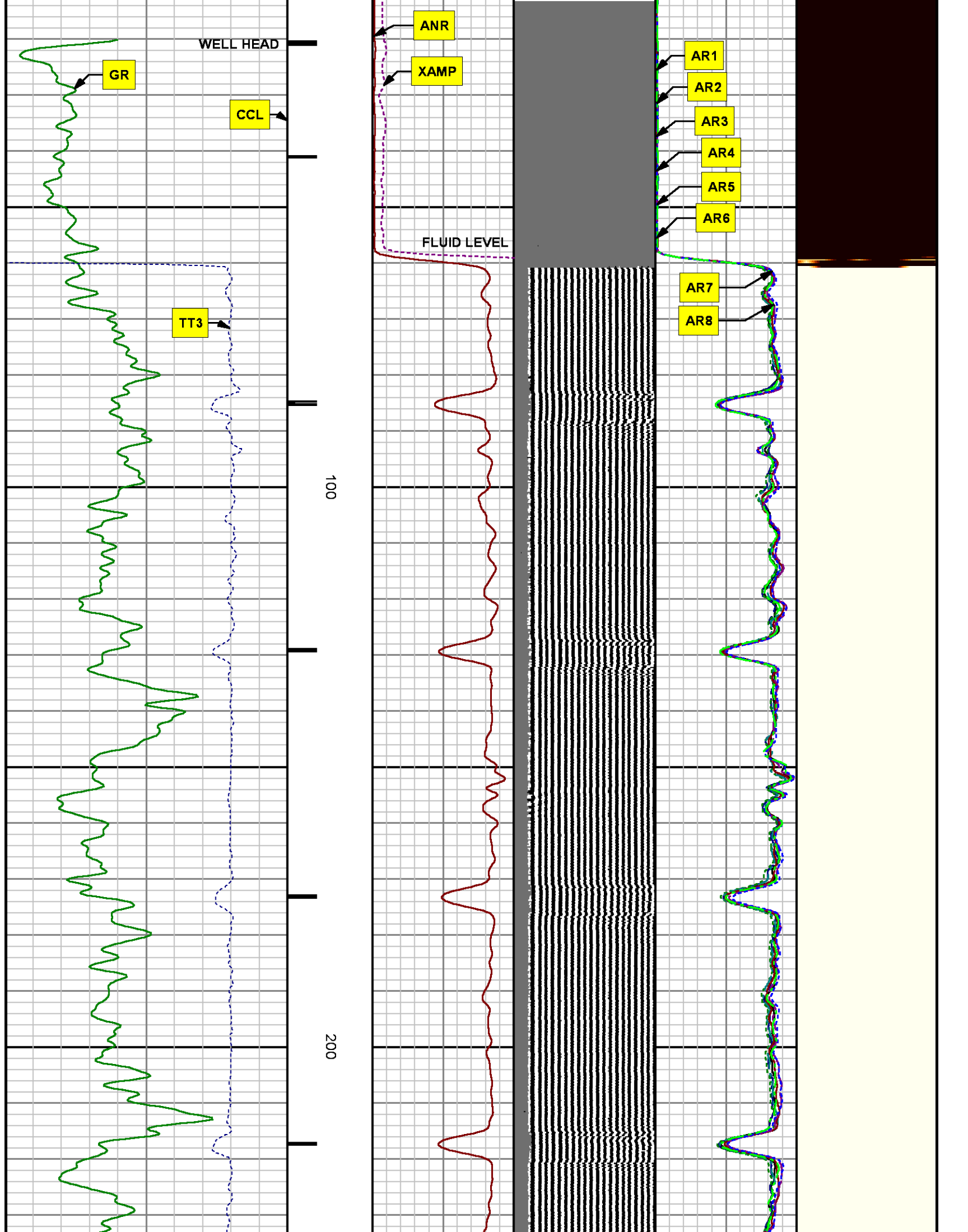
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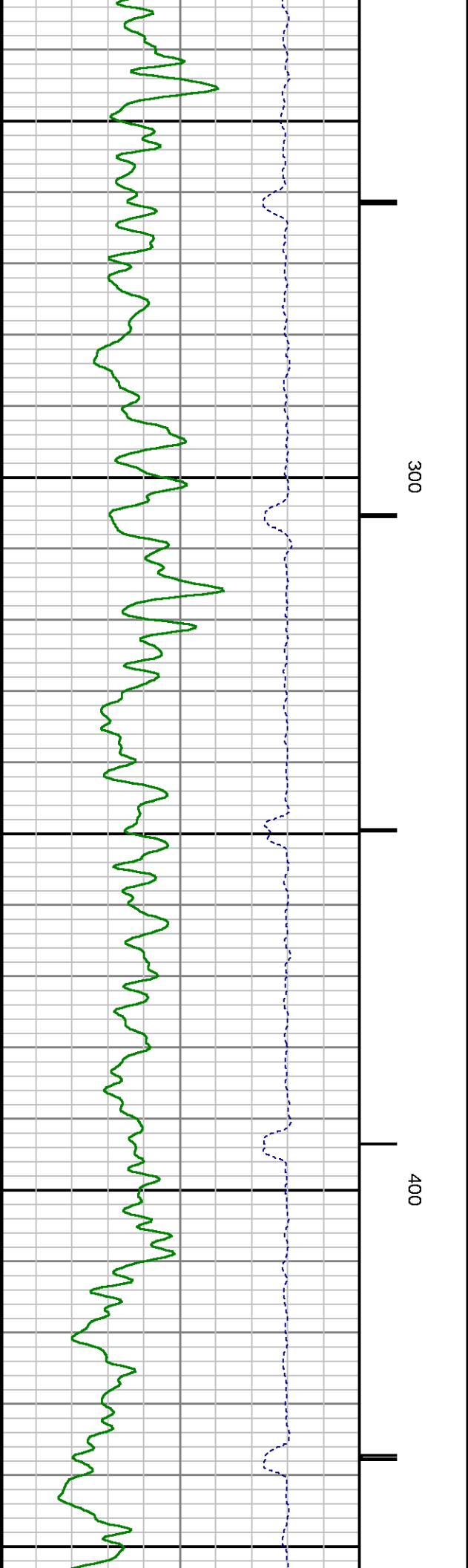
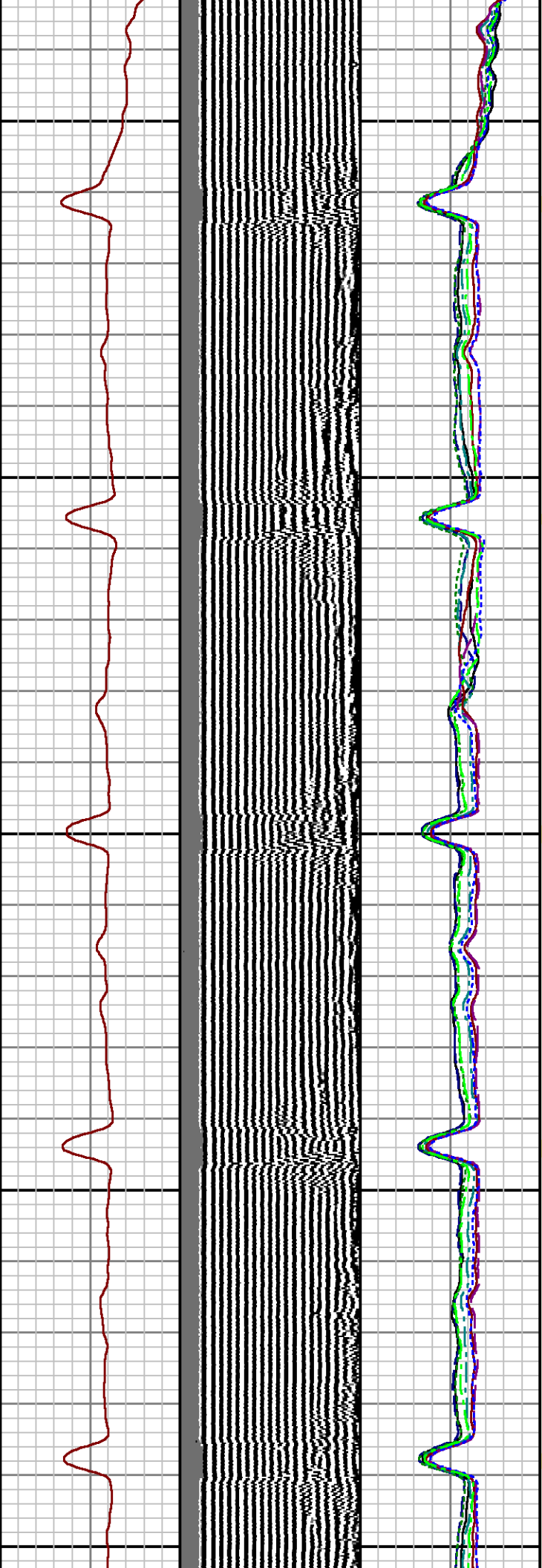
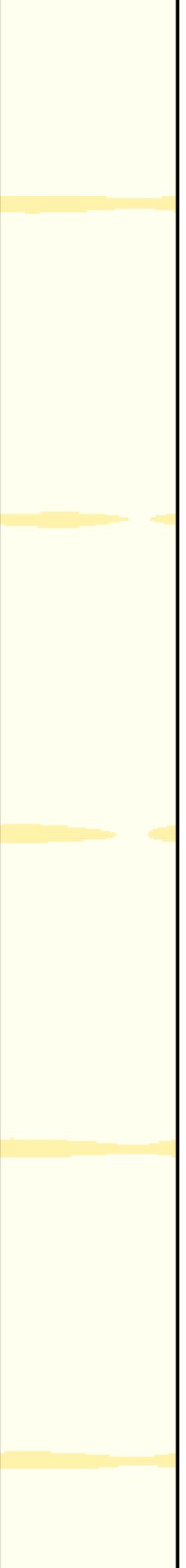
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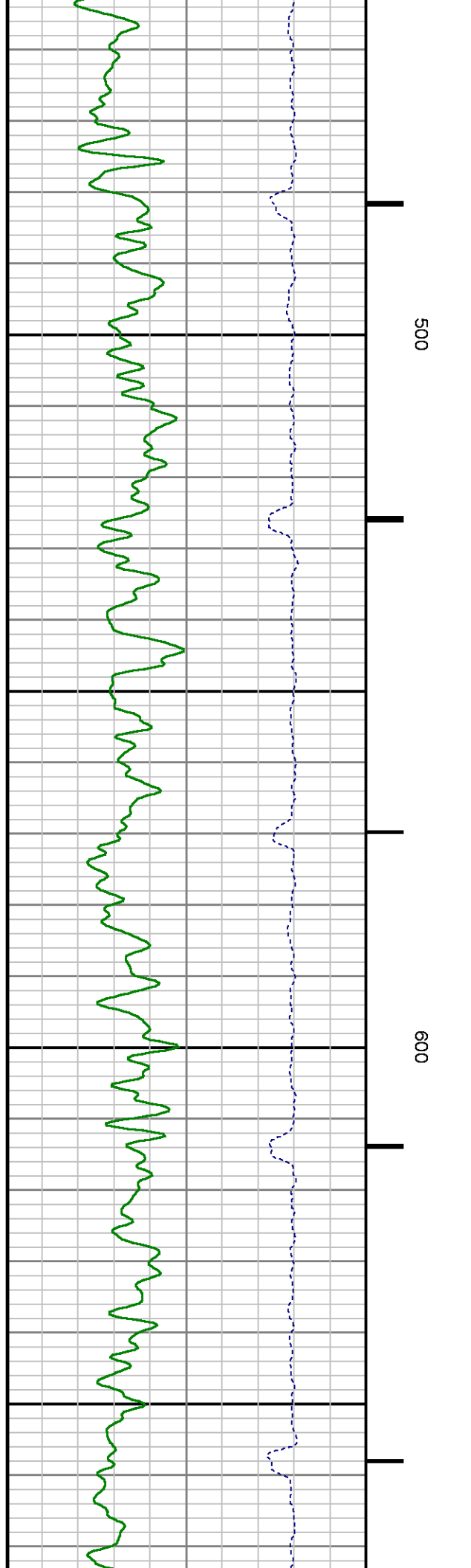
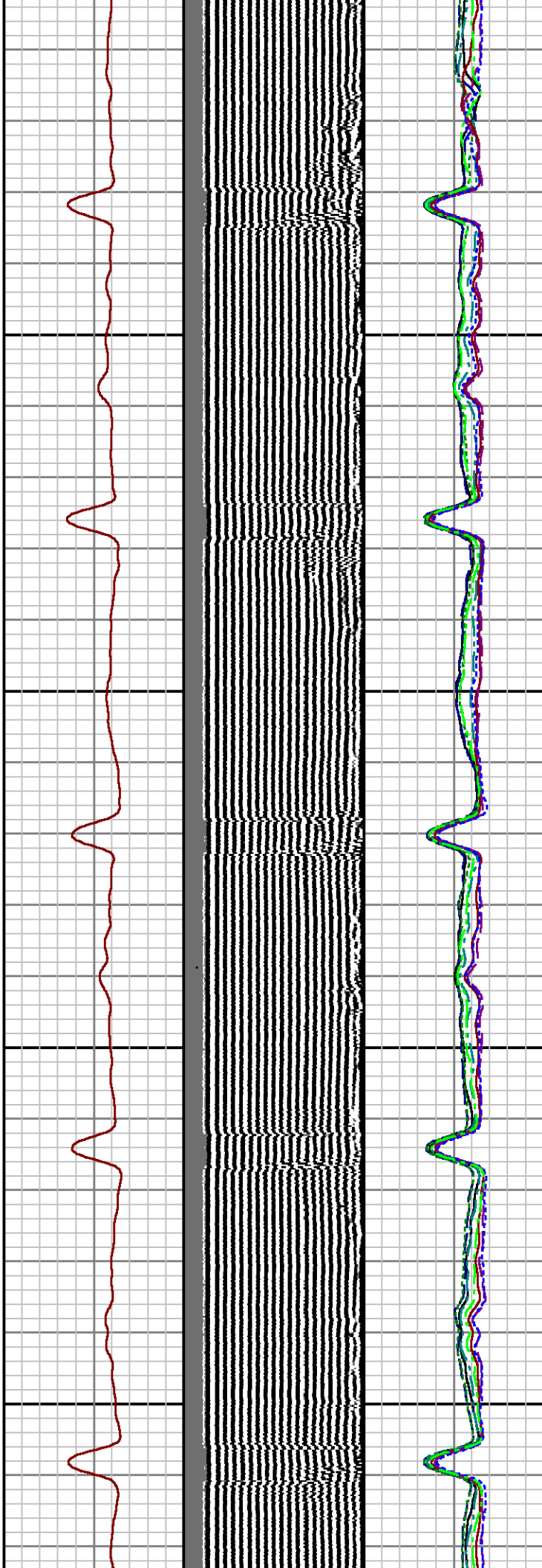
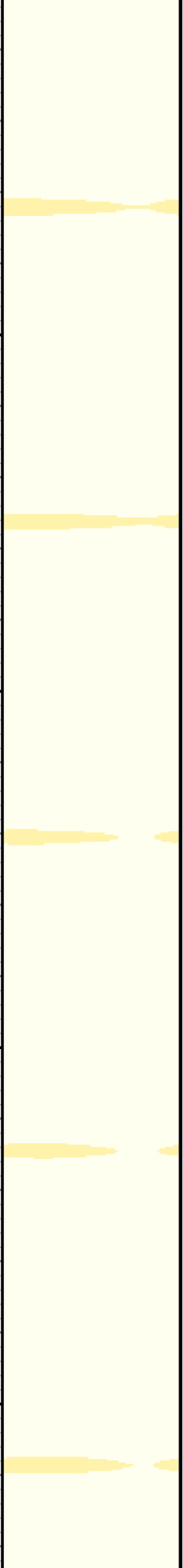
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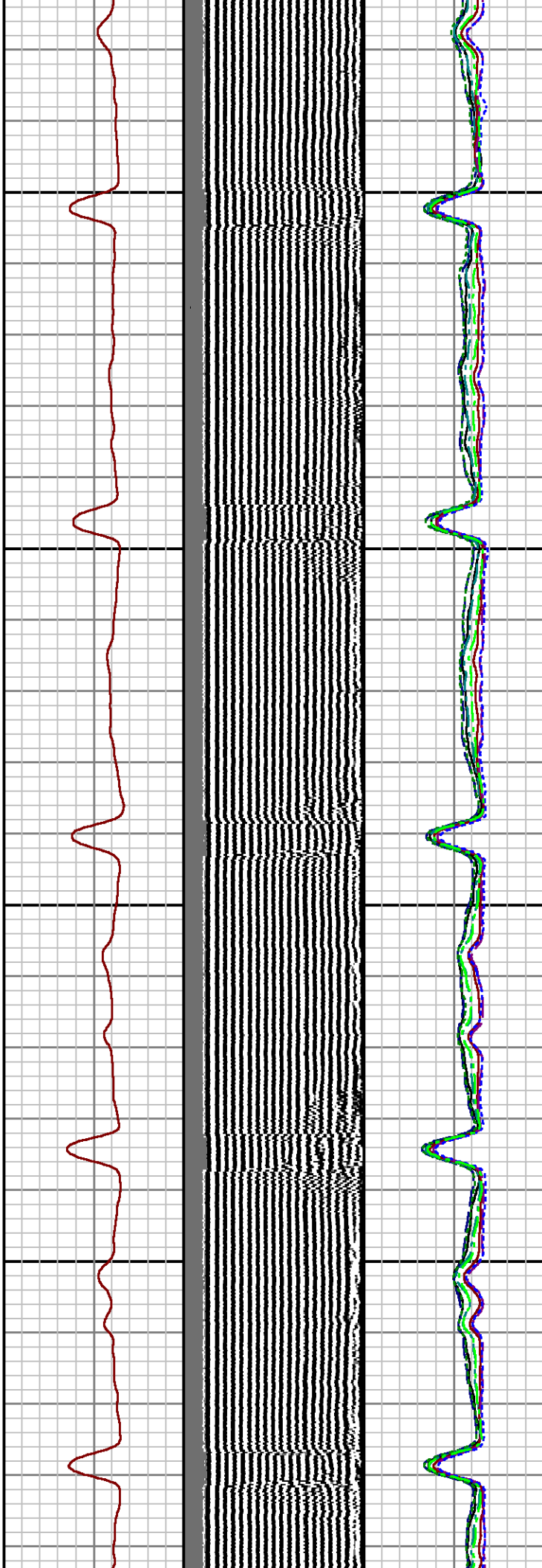
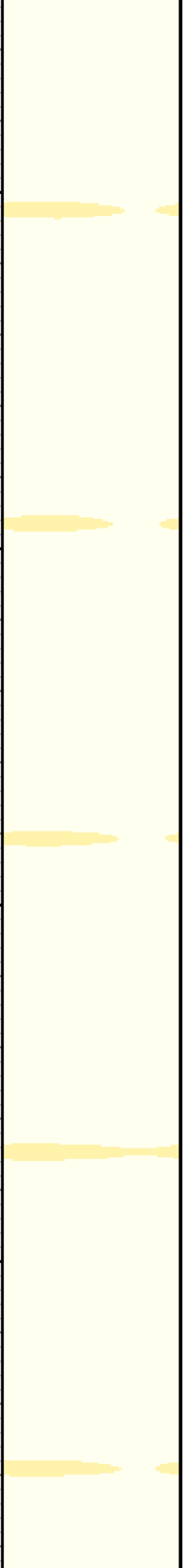
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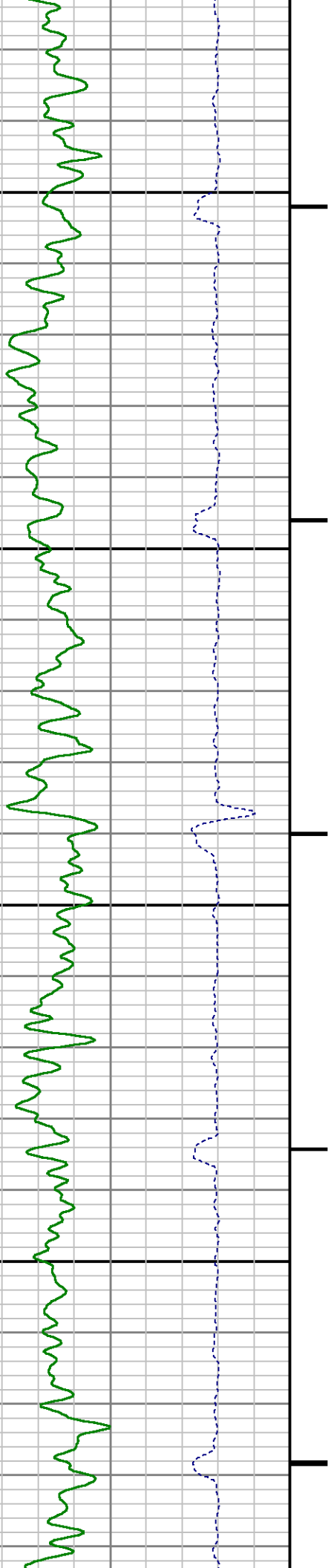


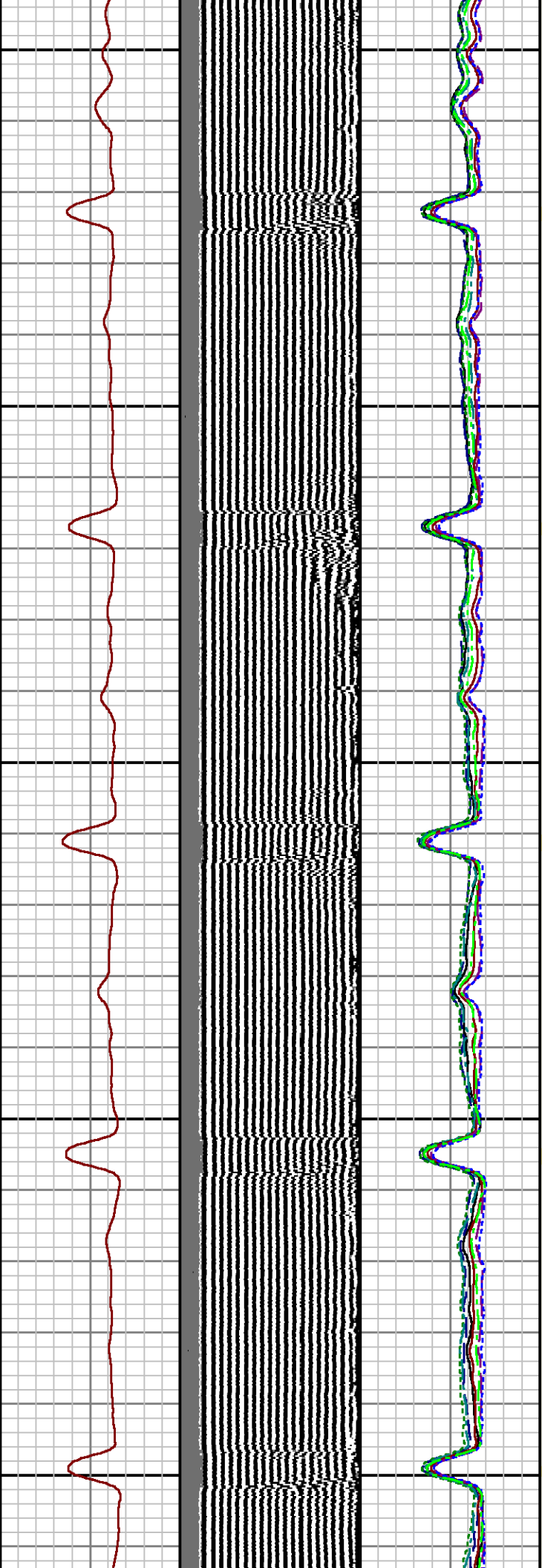
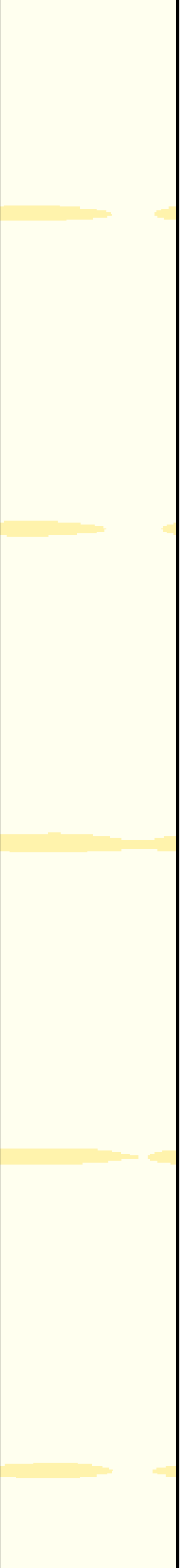




700

800

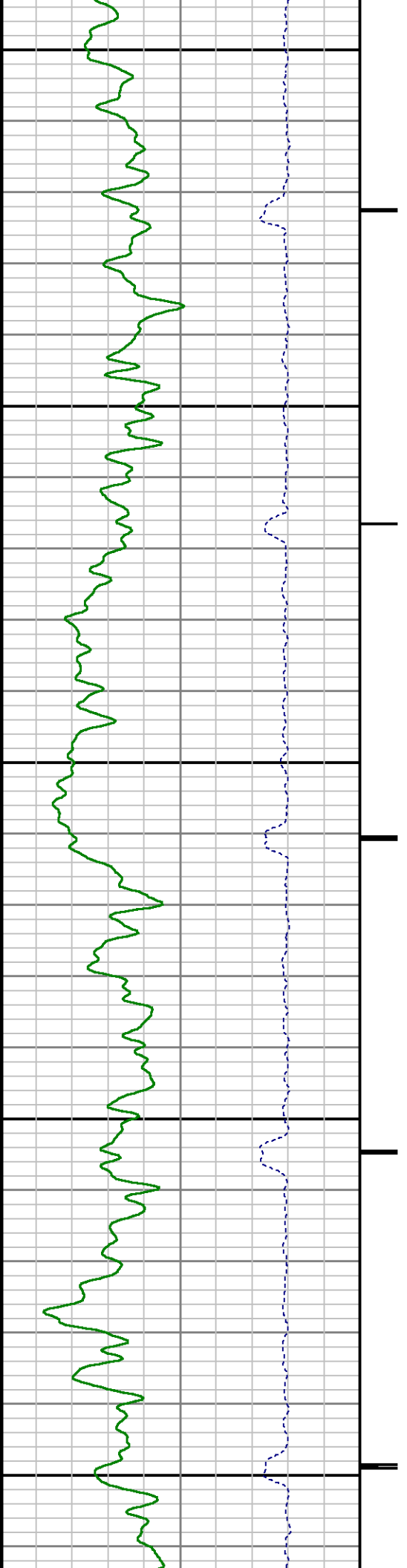




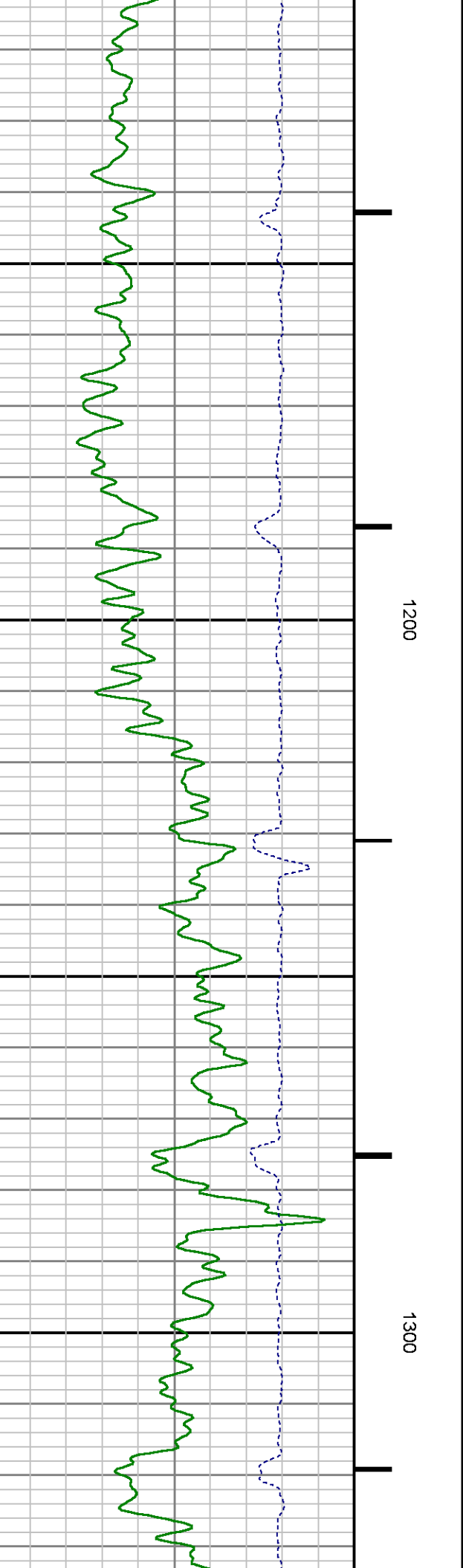
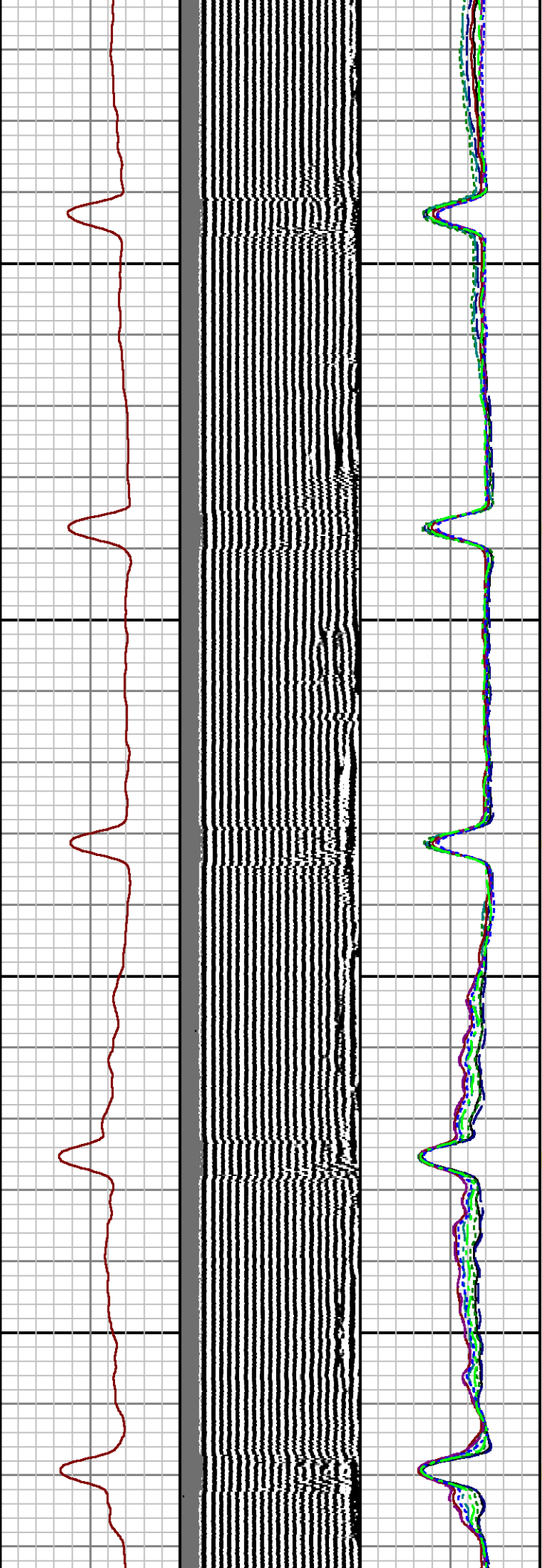
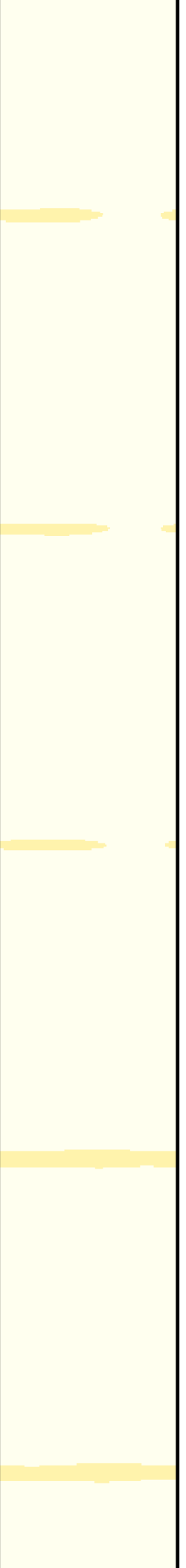
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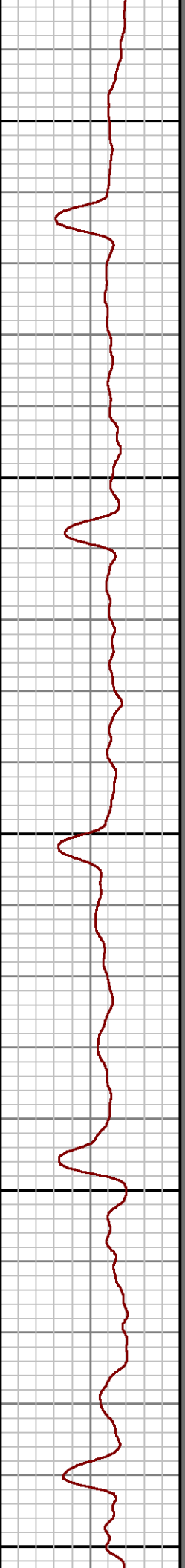
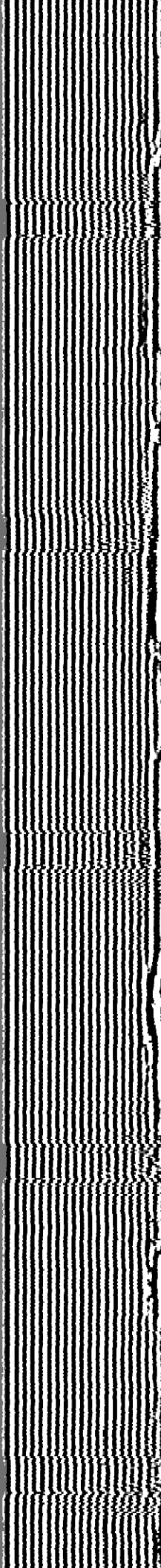
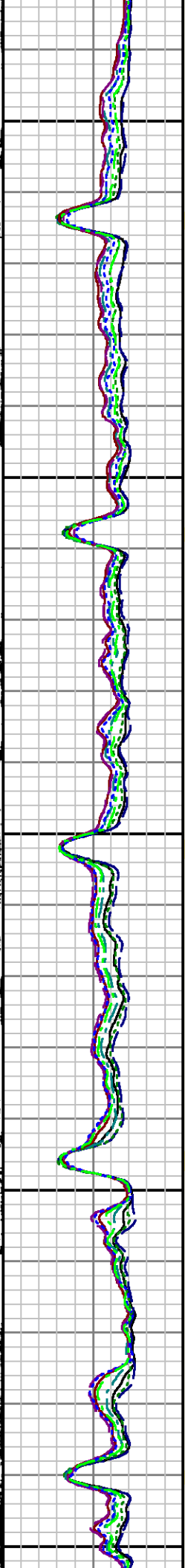
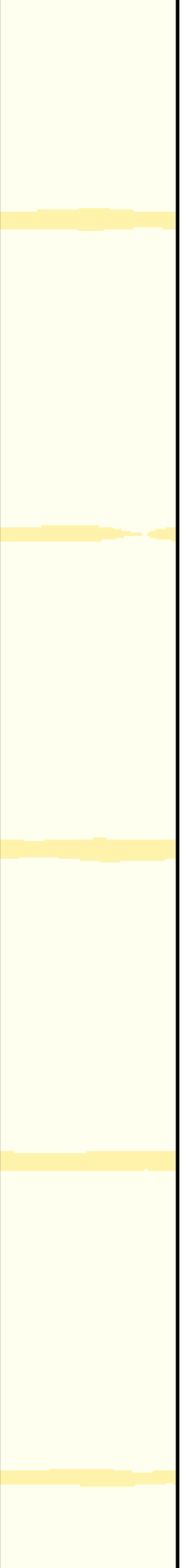
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1100



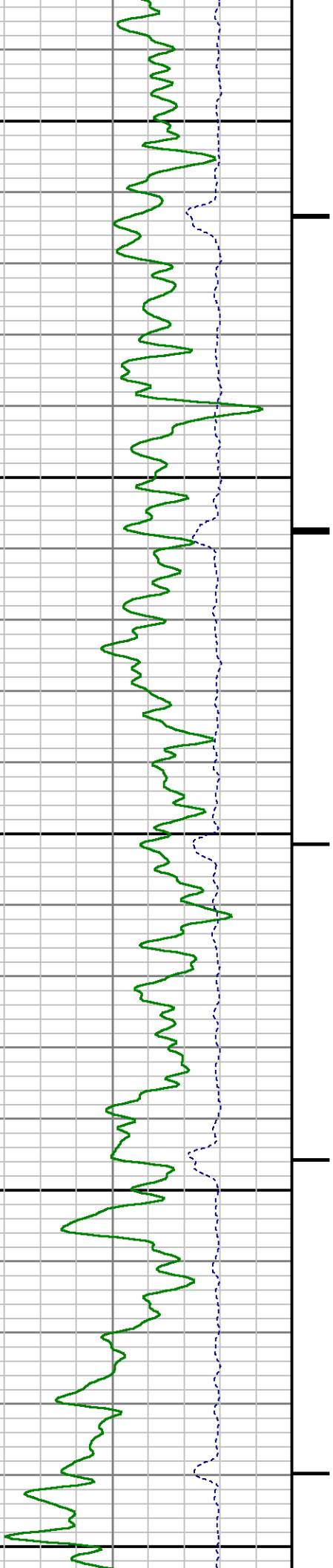


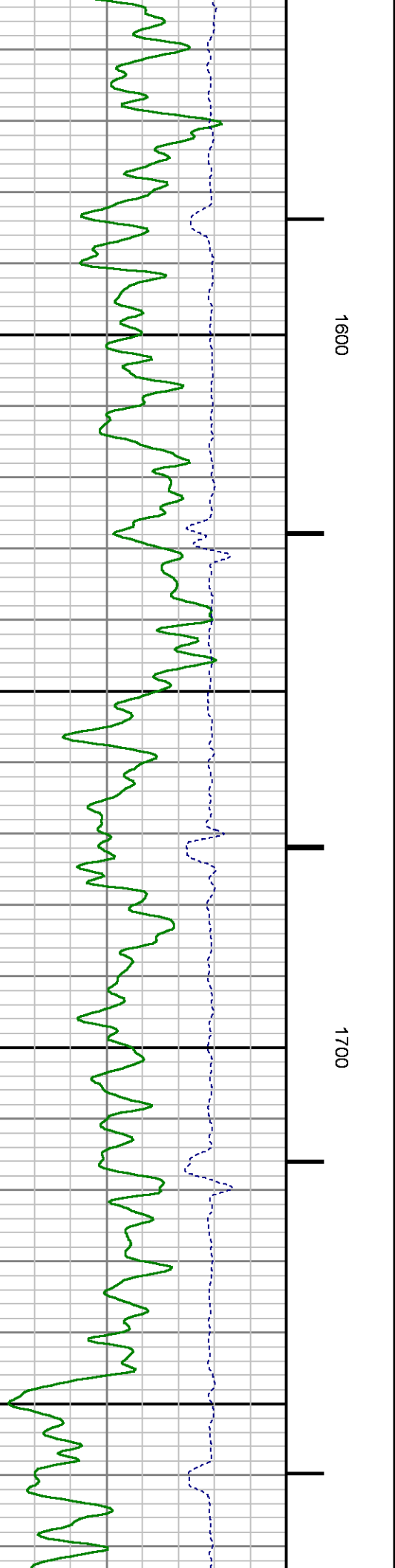
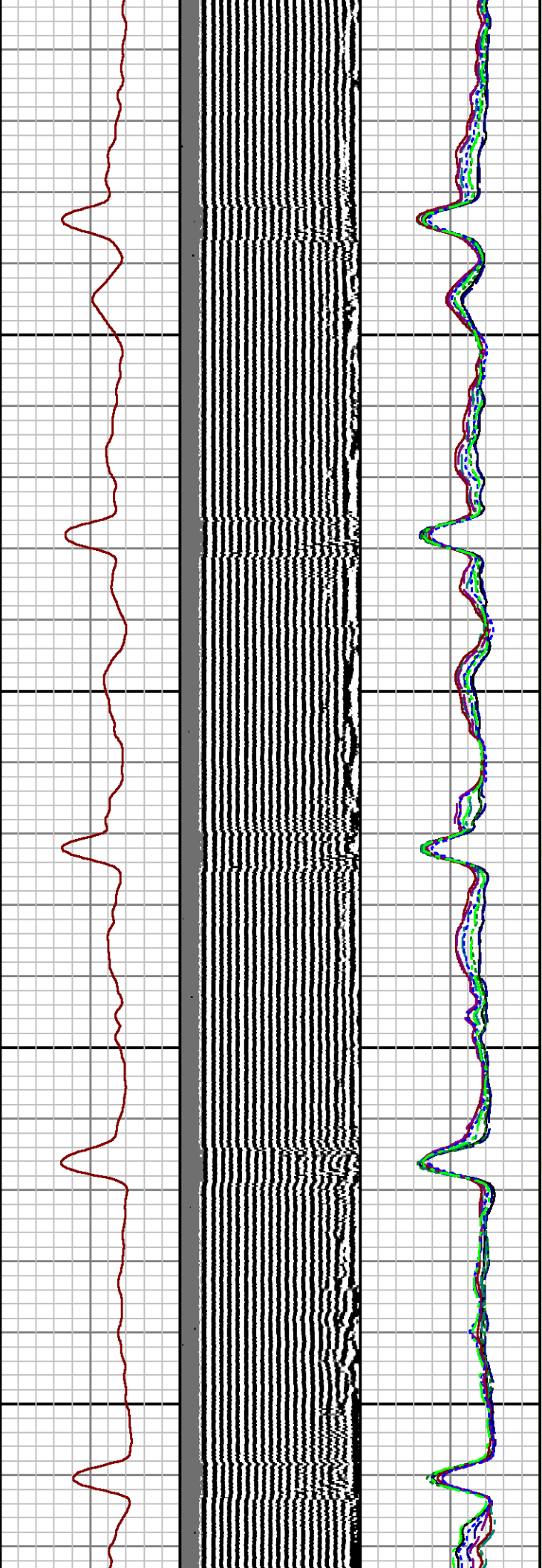
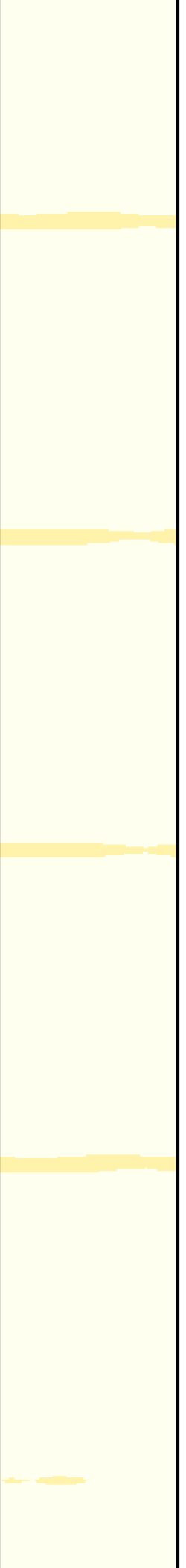


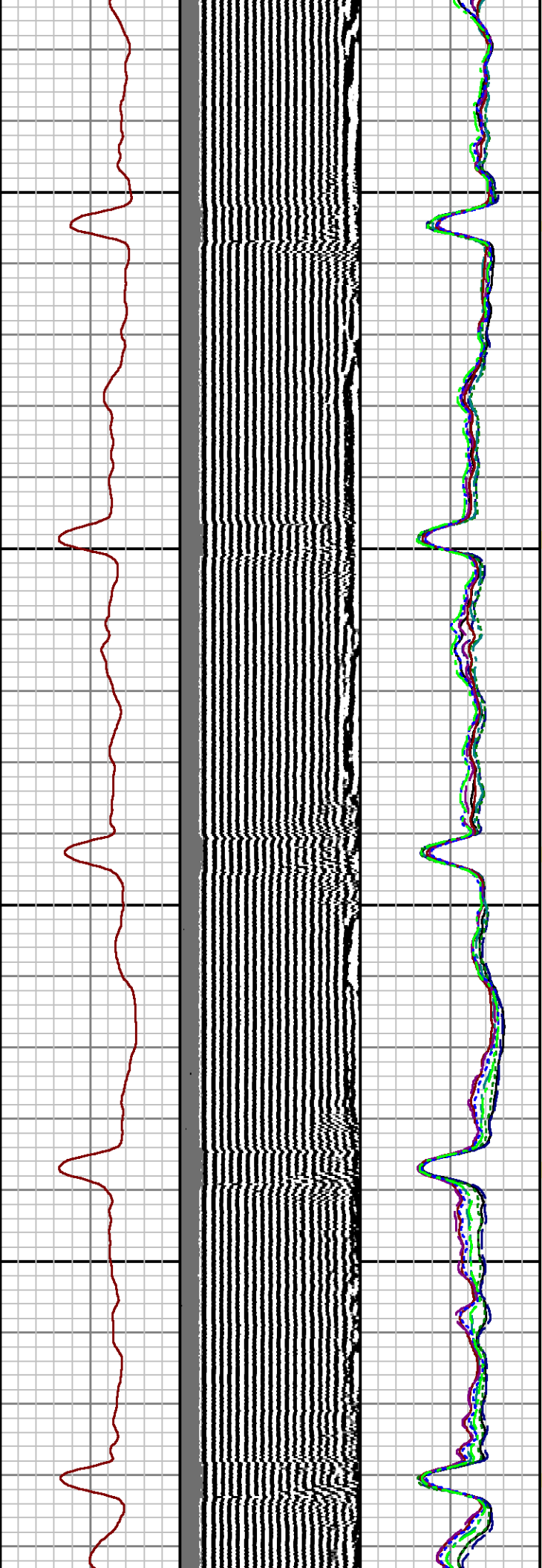
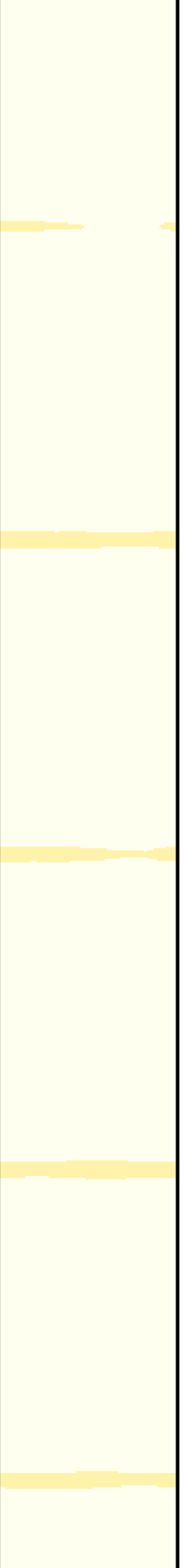


1400

1500

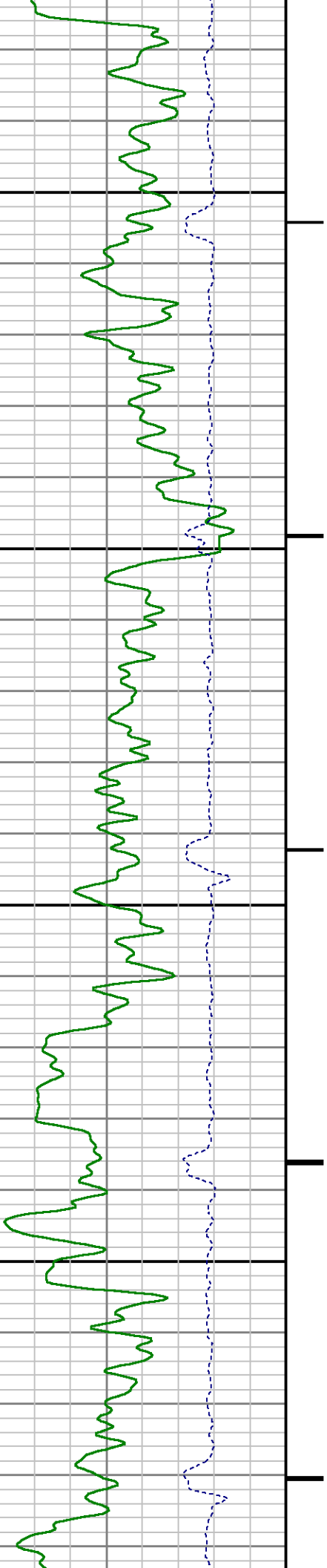


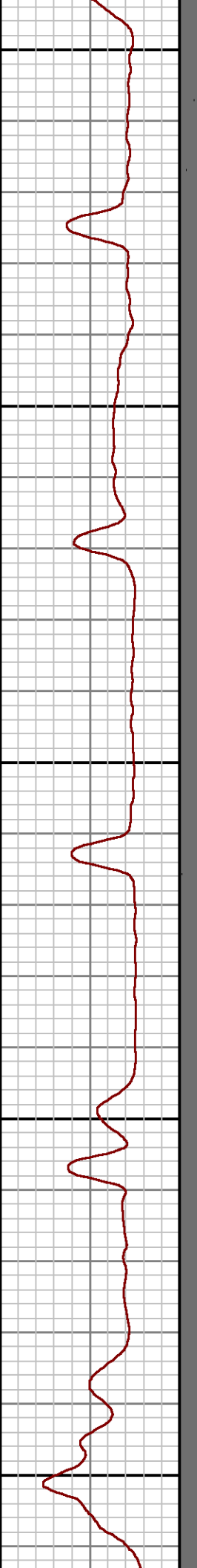
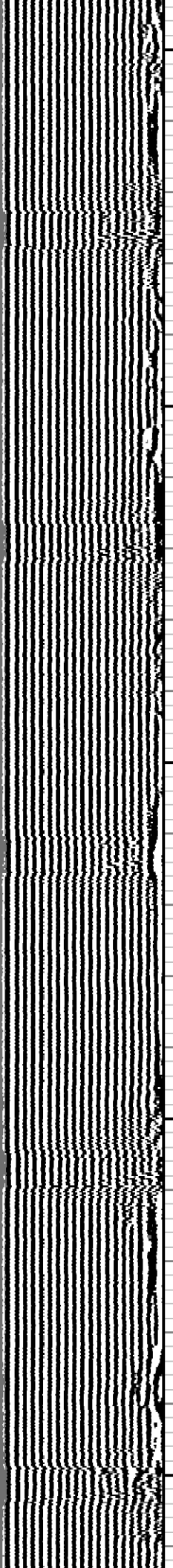
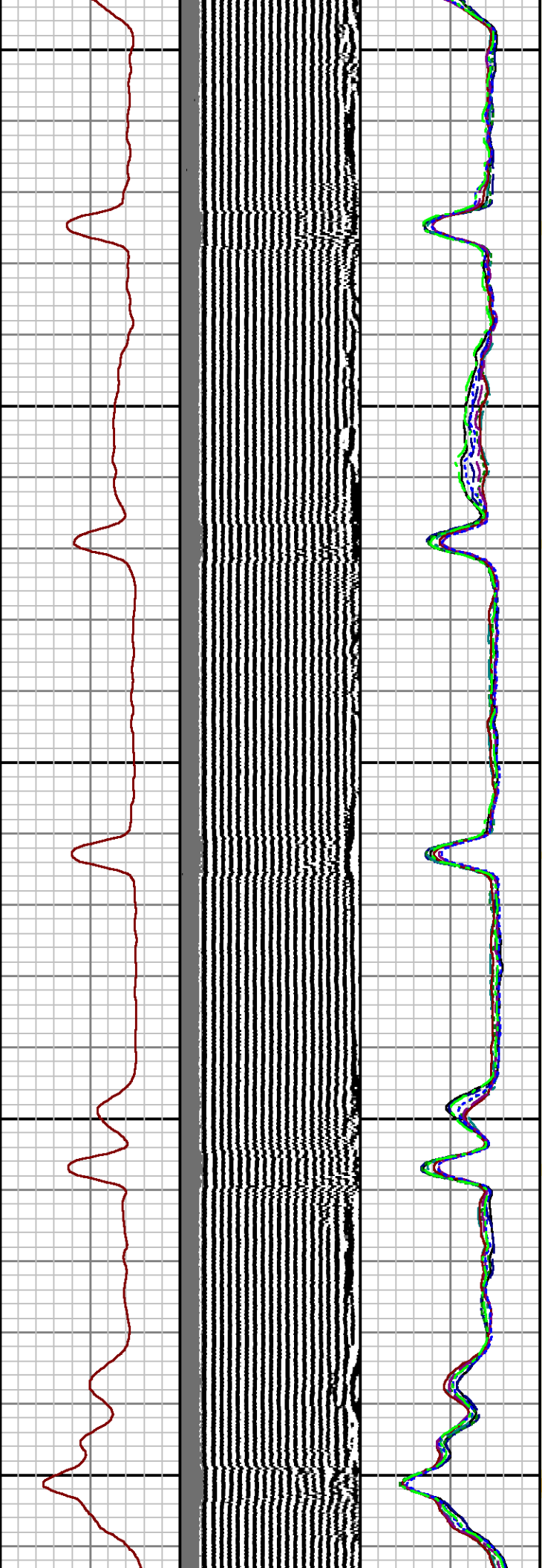
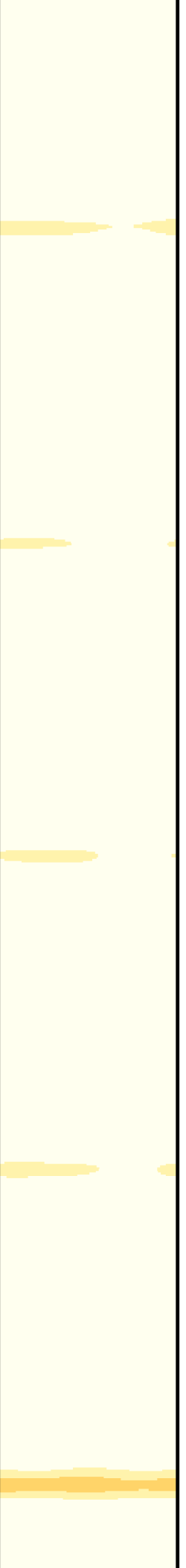




1800

1900

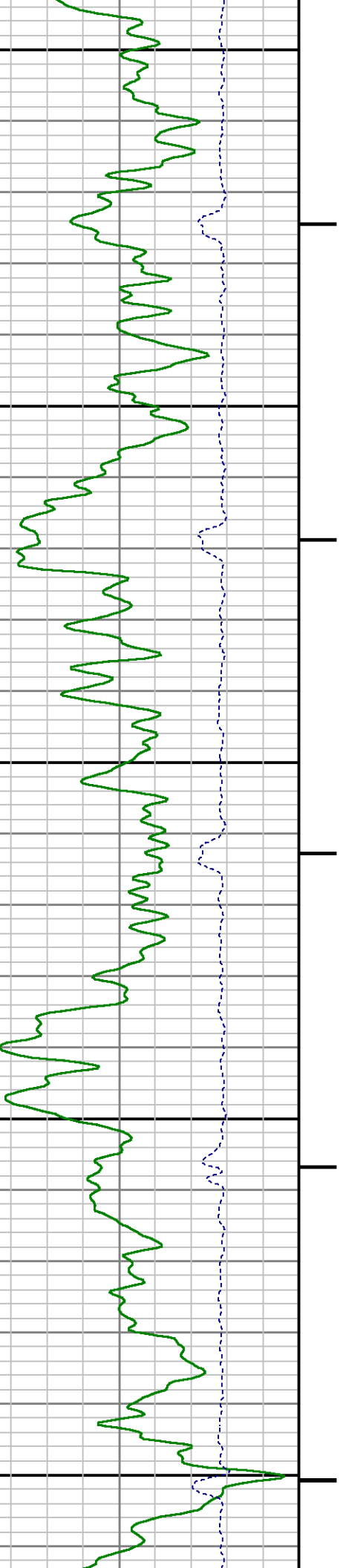


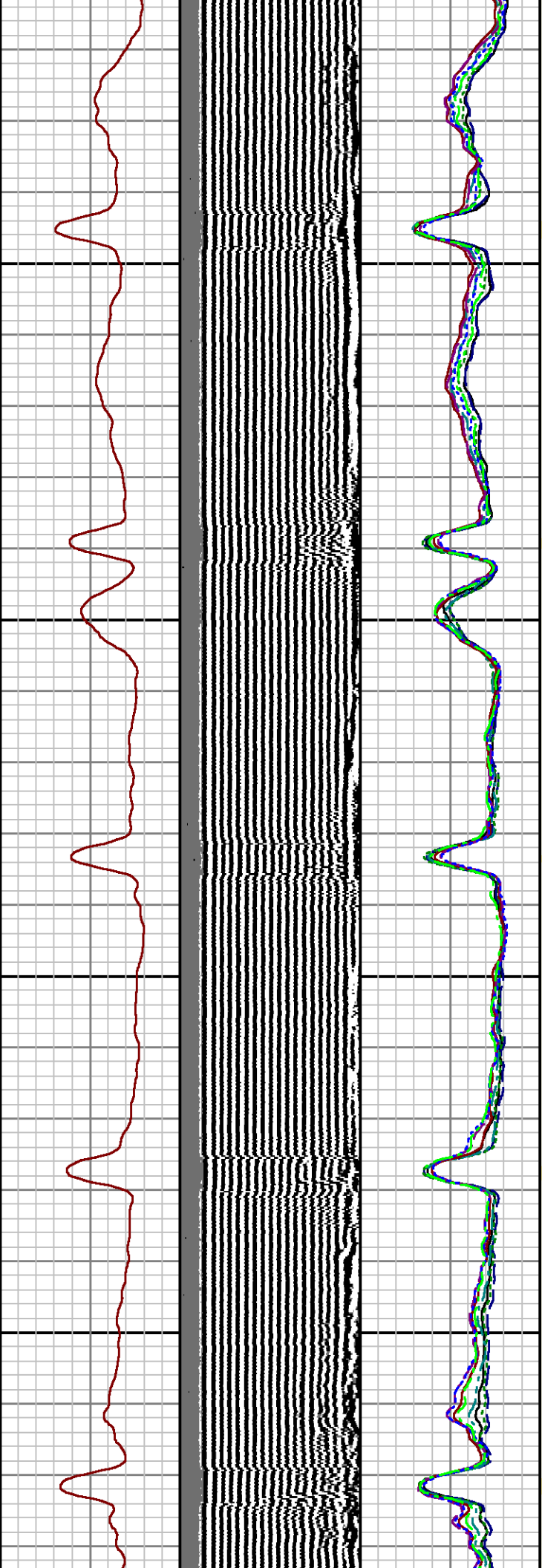
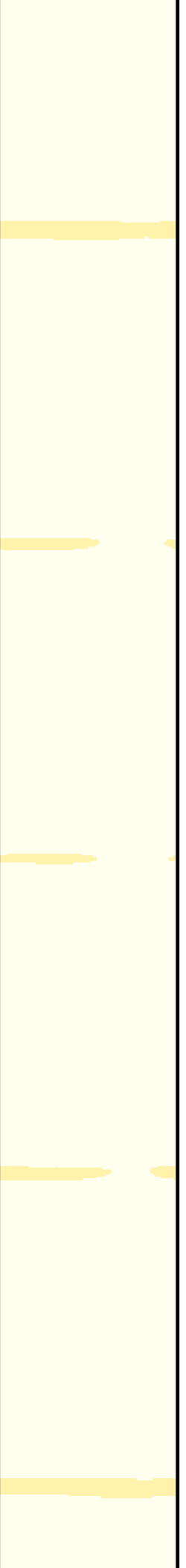


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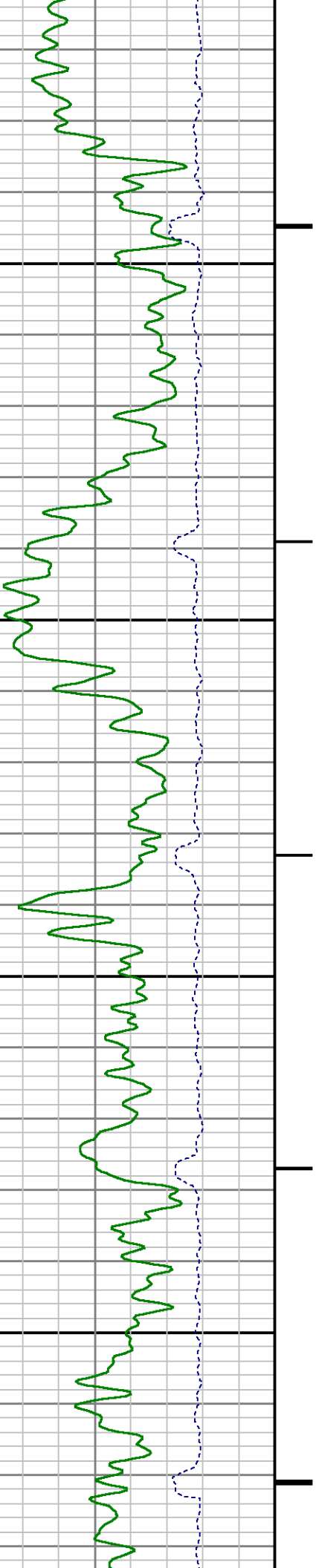
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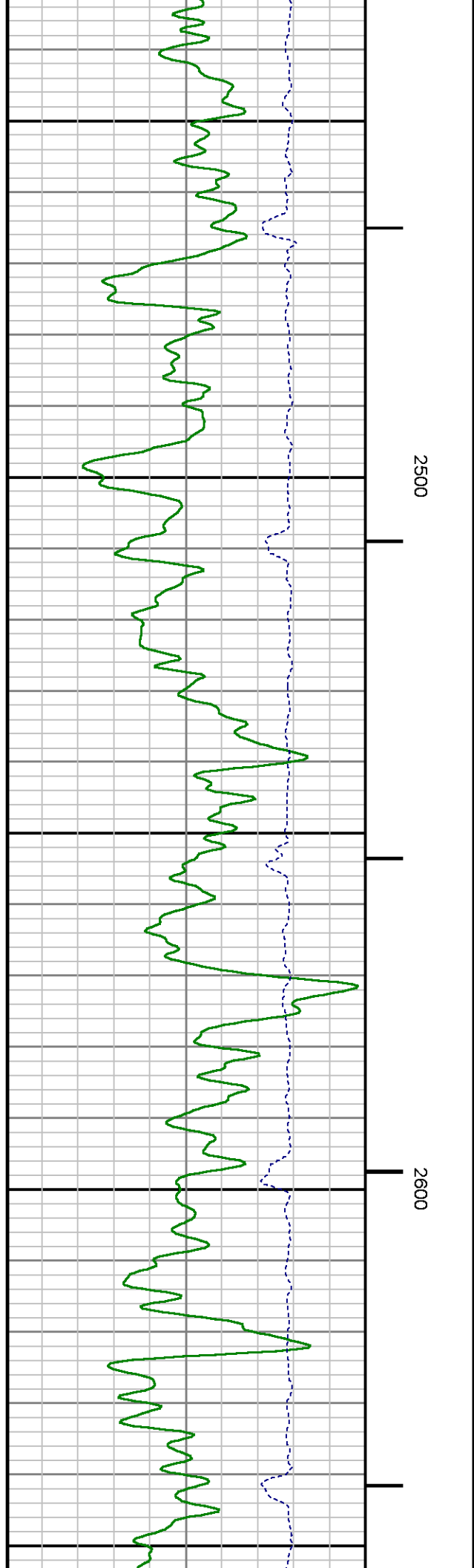
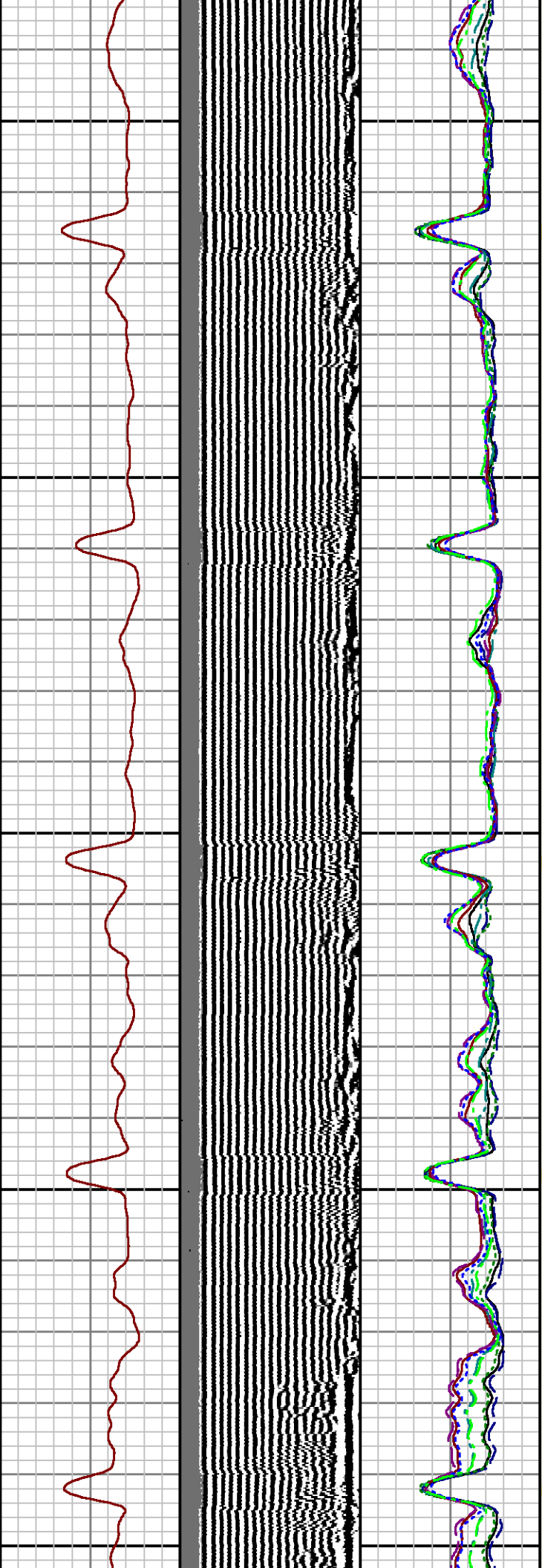
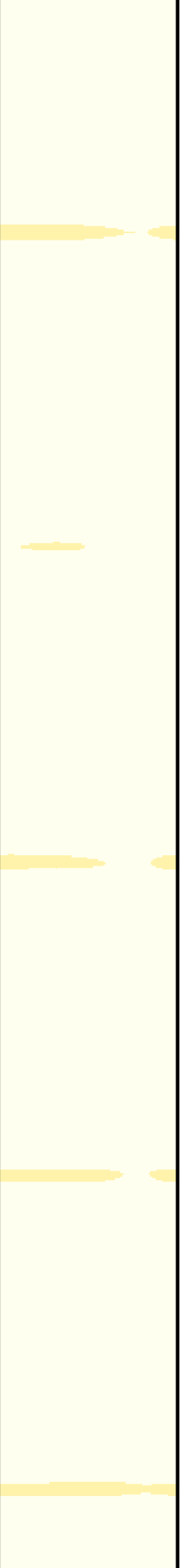


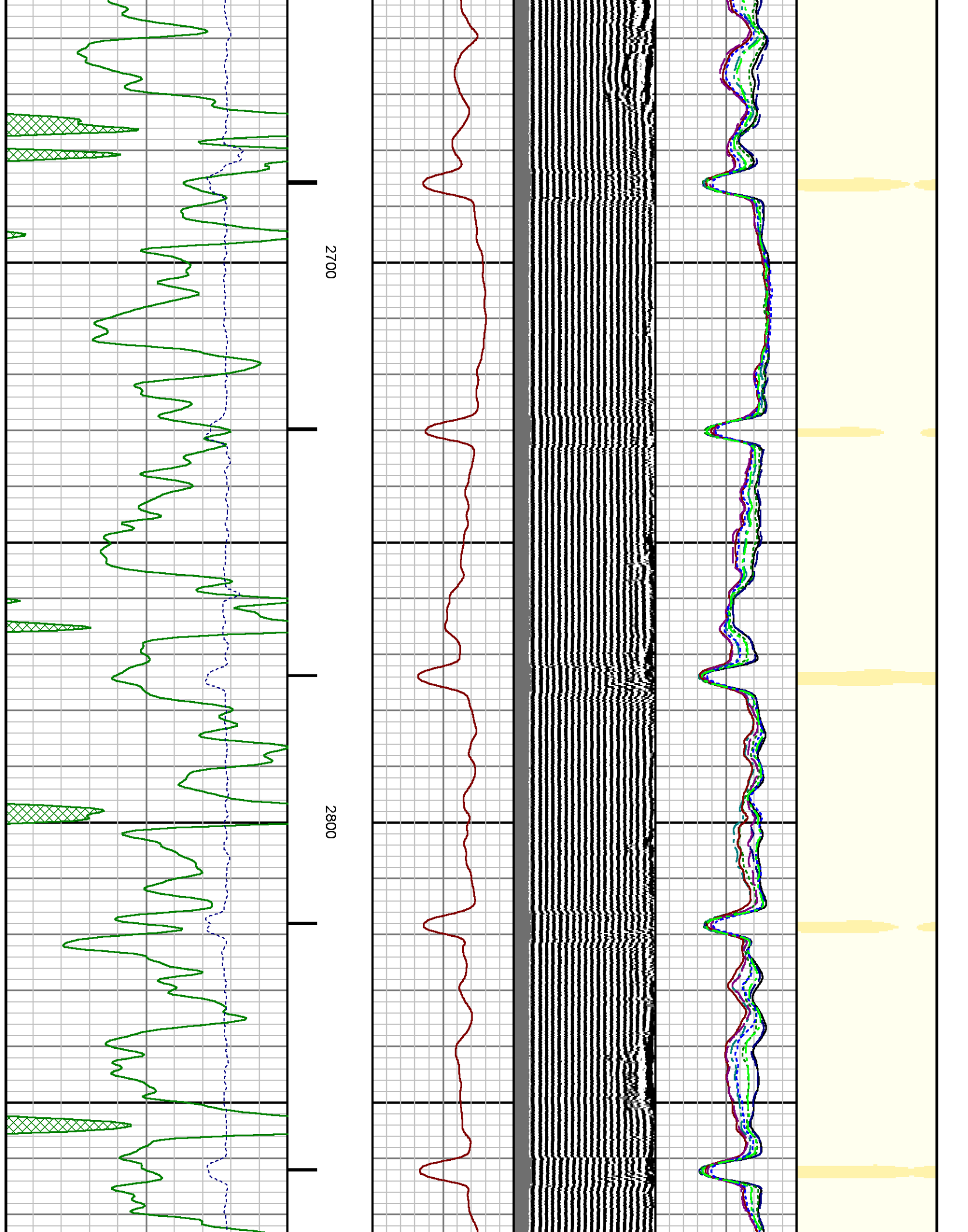
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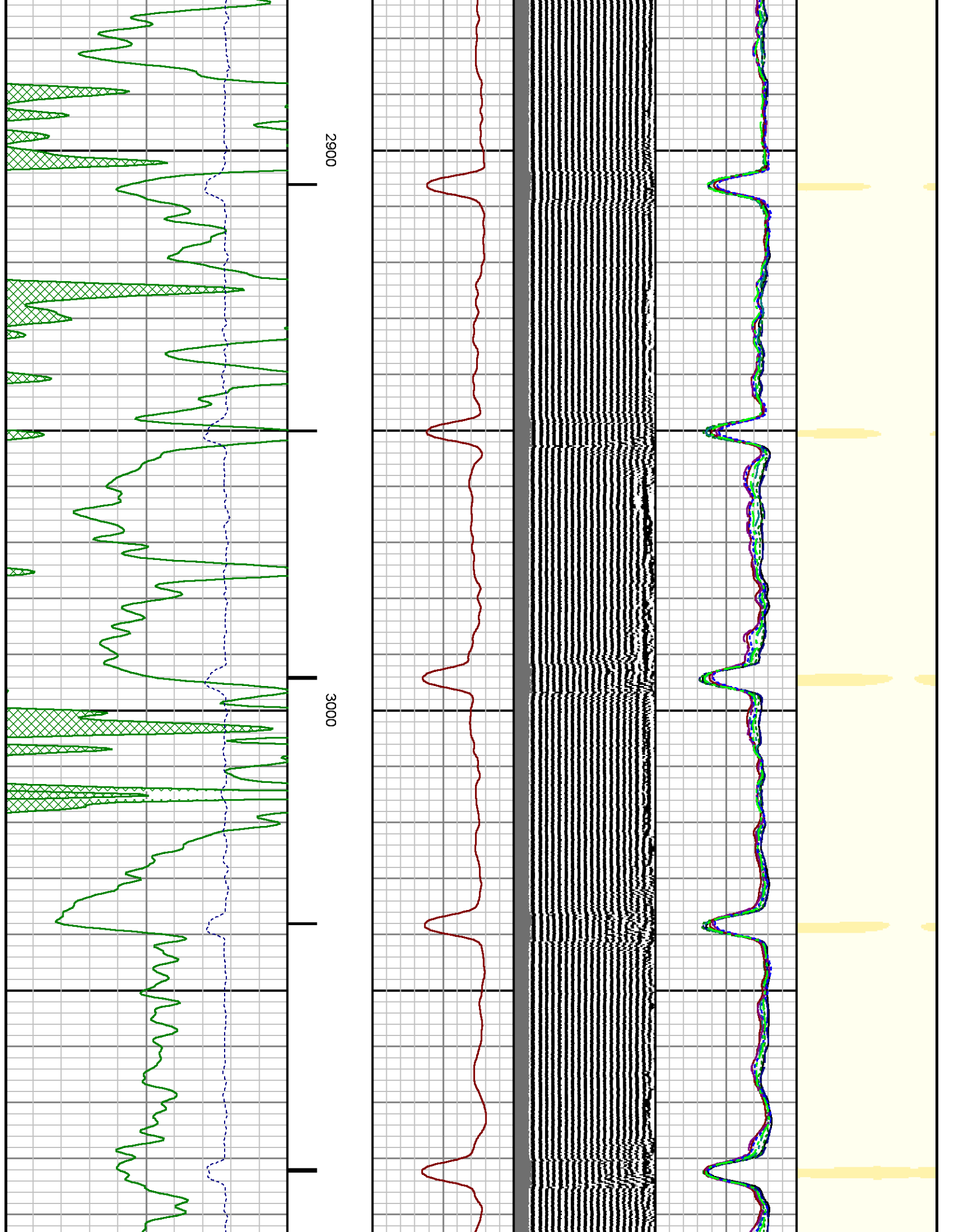
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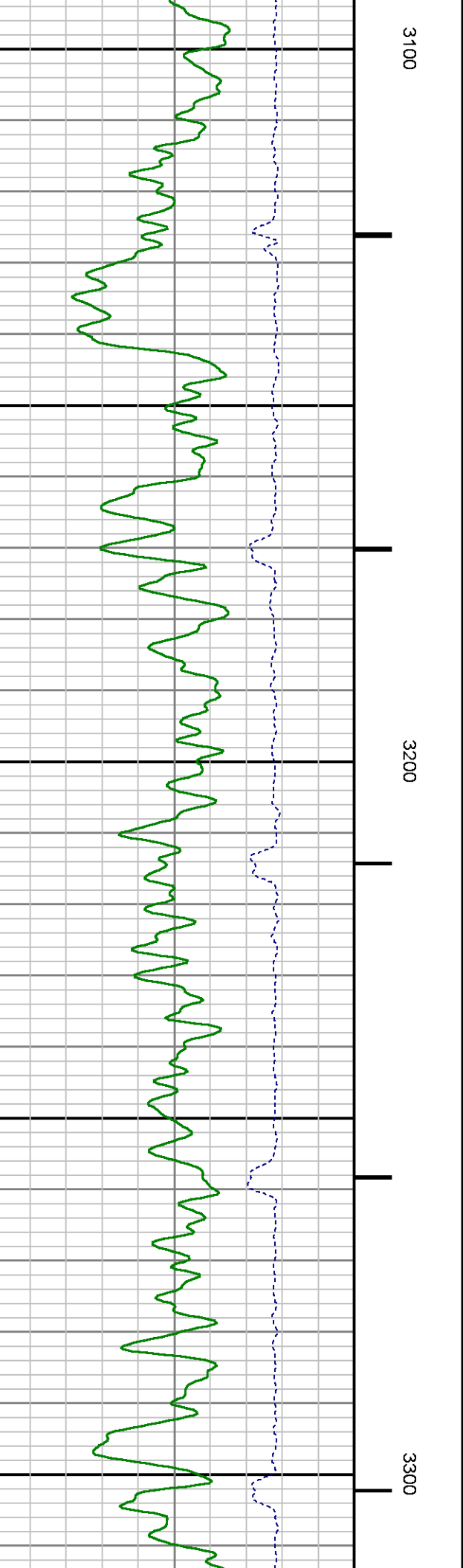
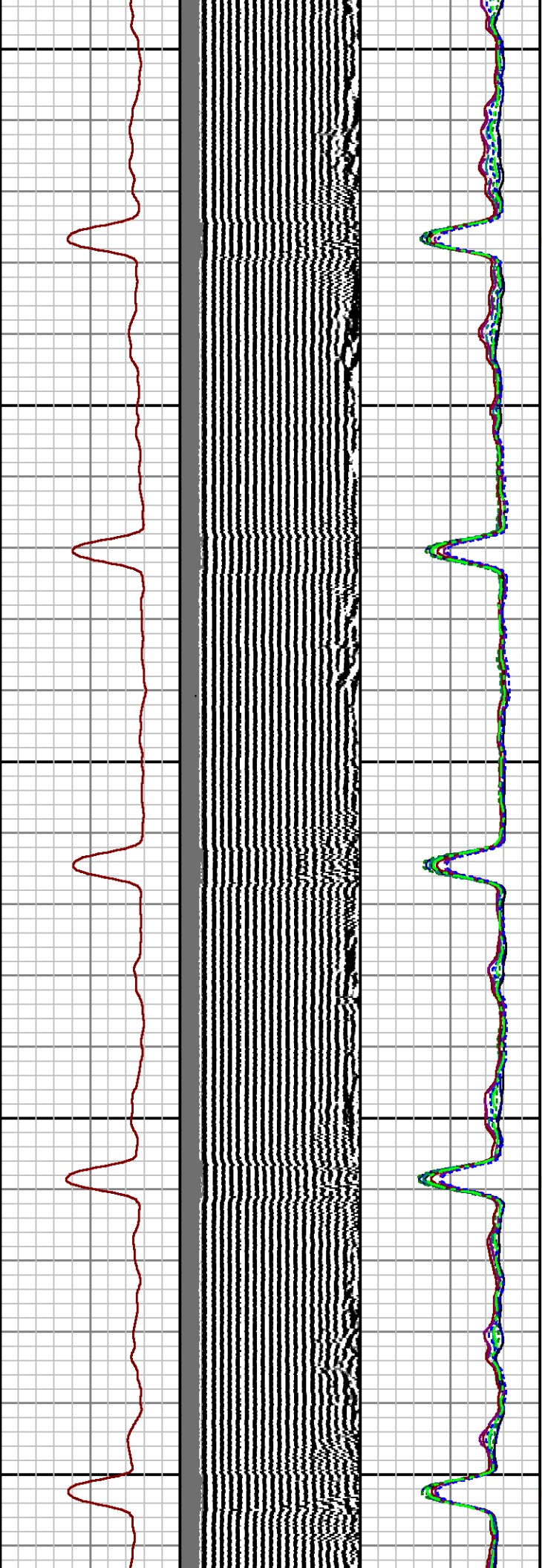
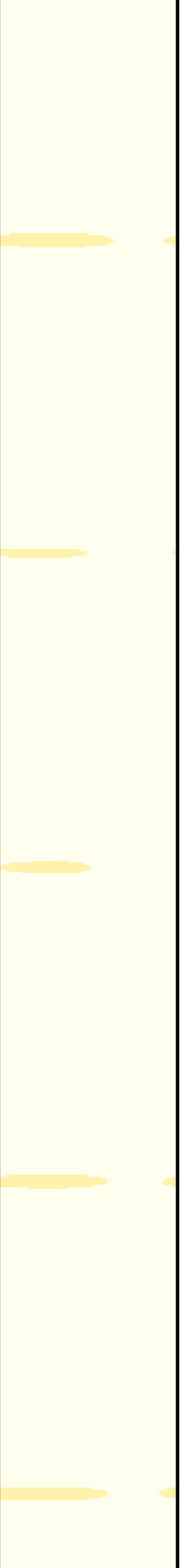


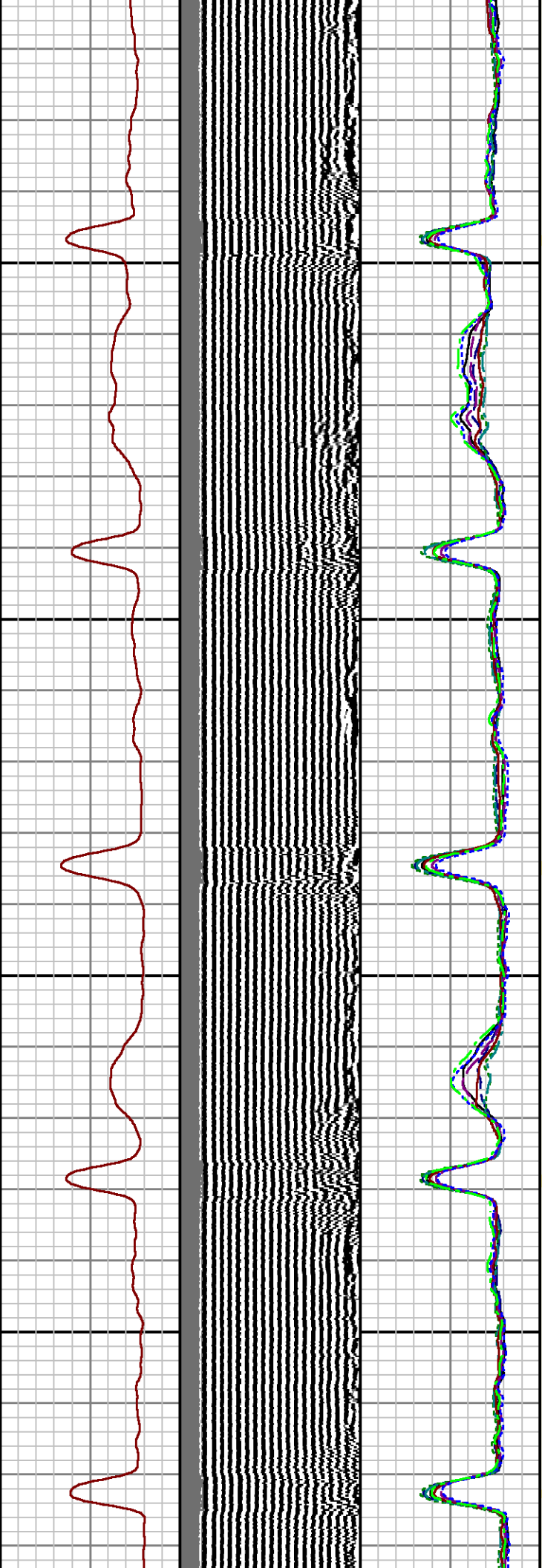
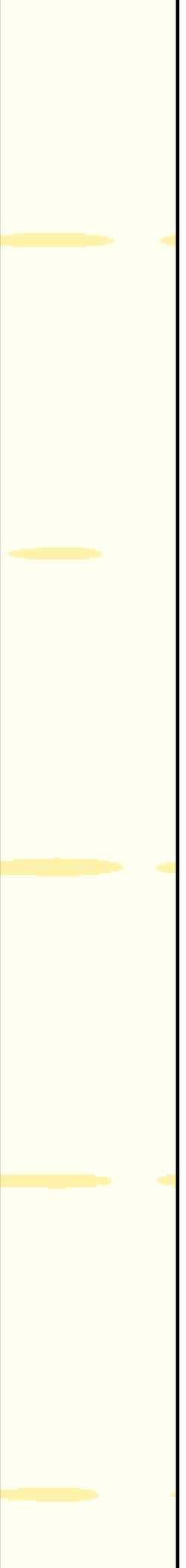






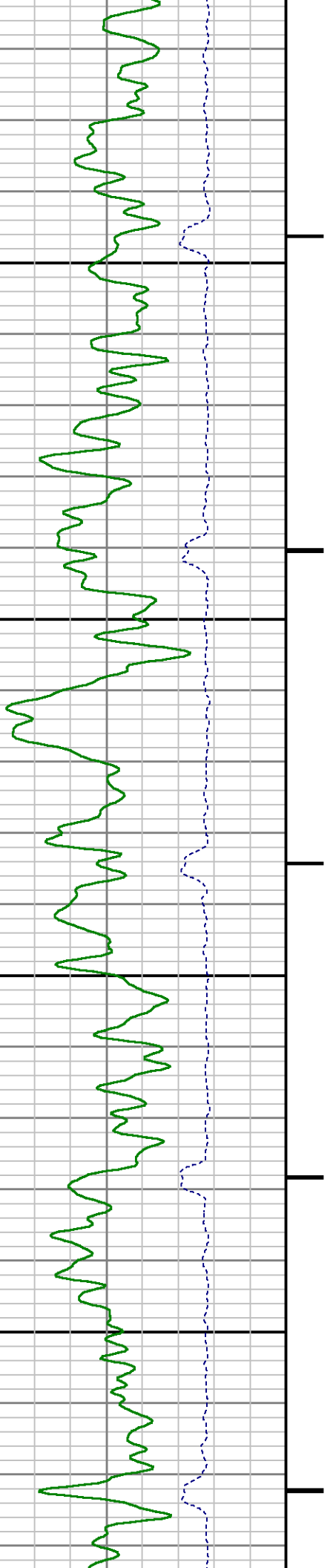




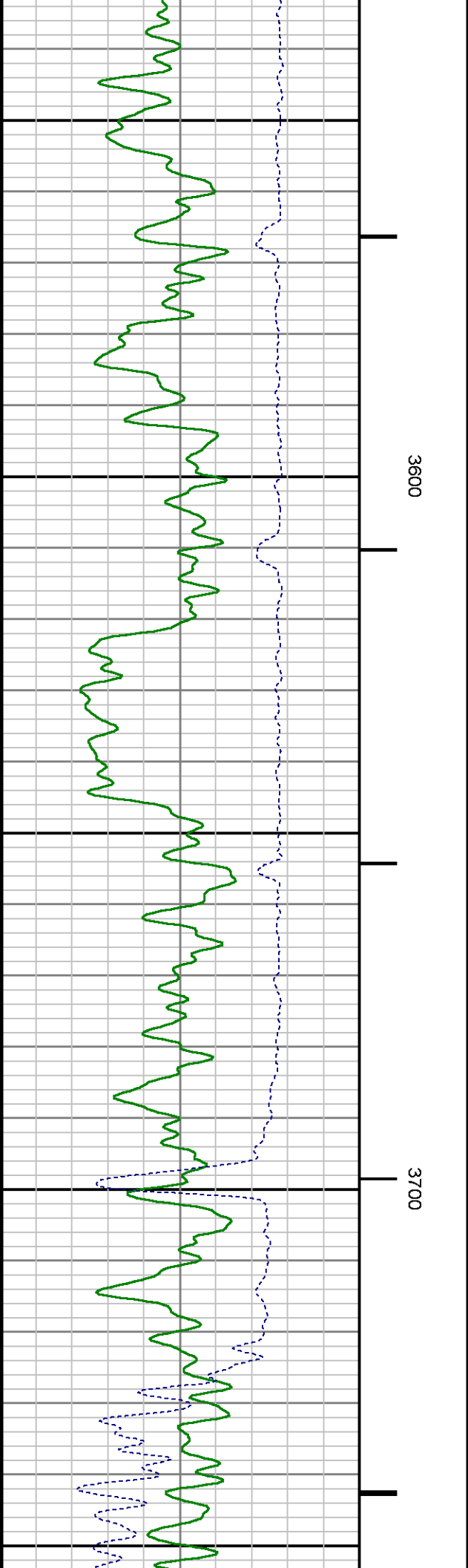
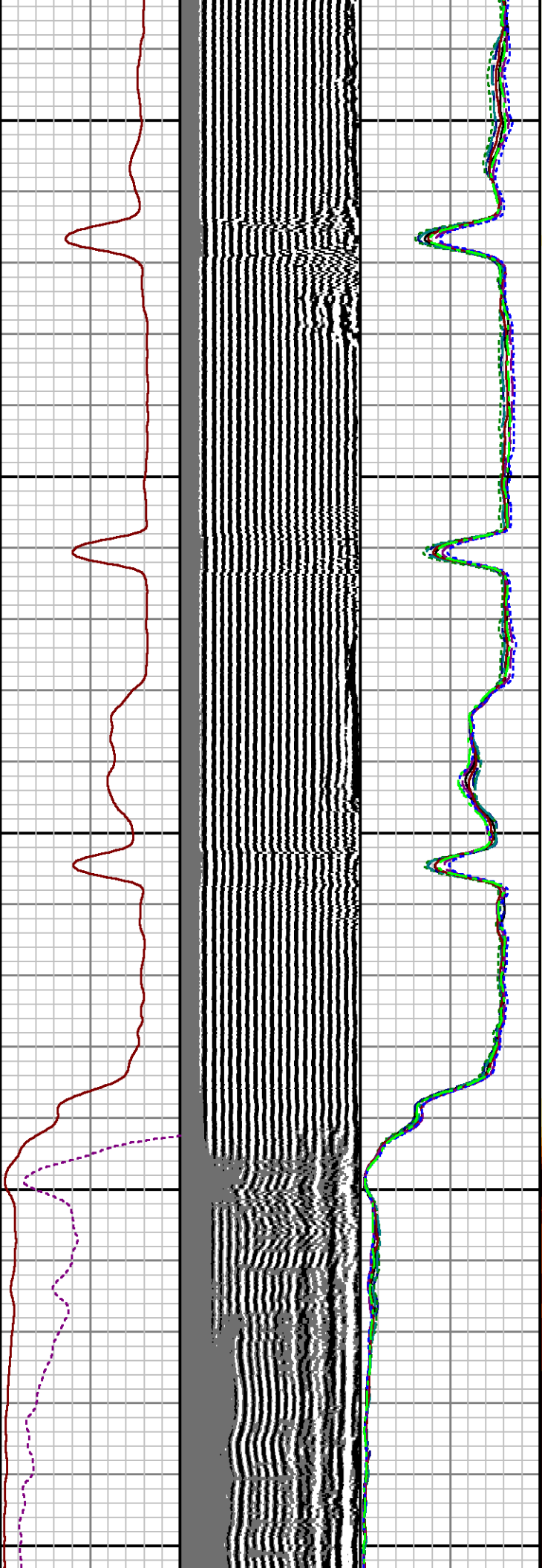
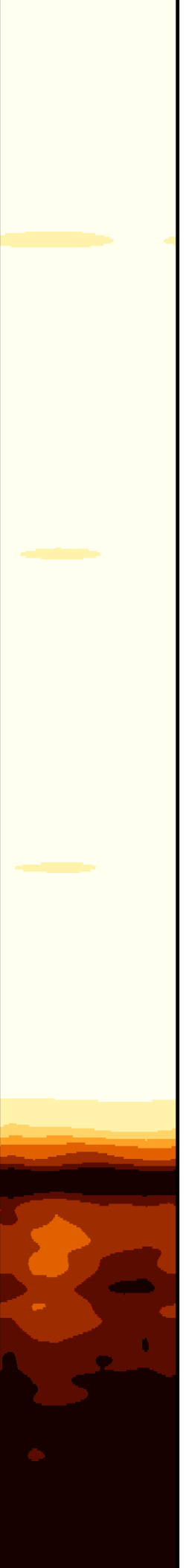


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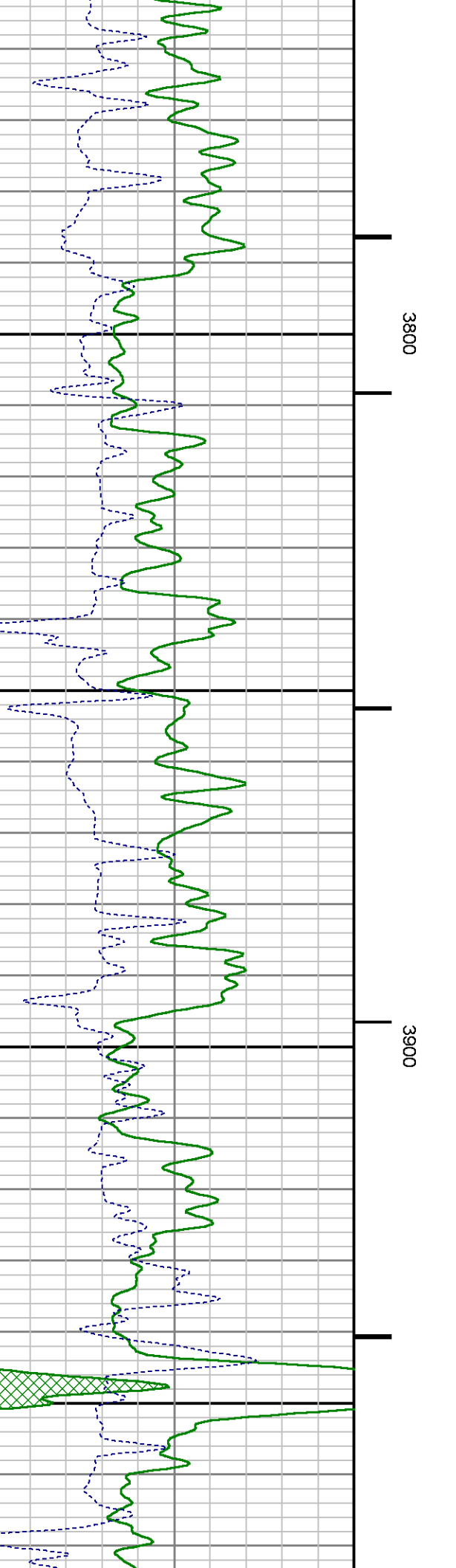
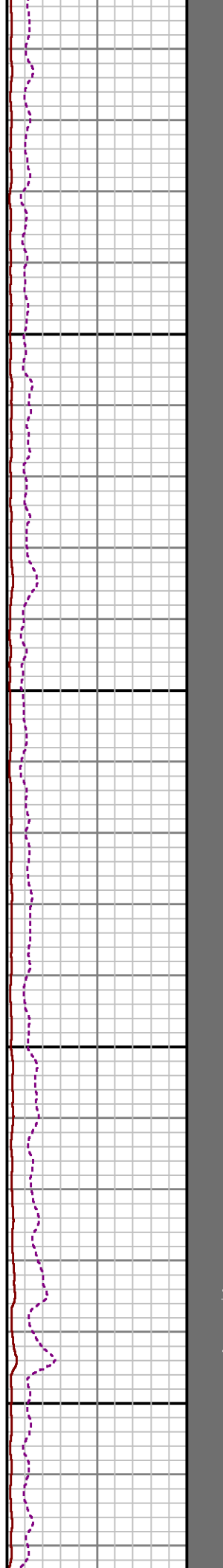
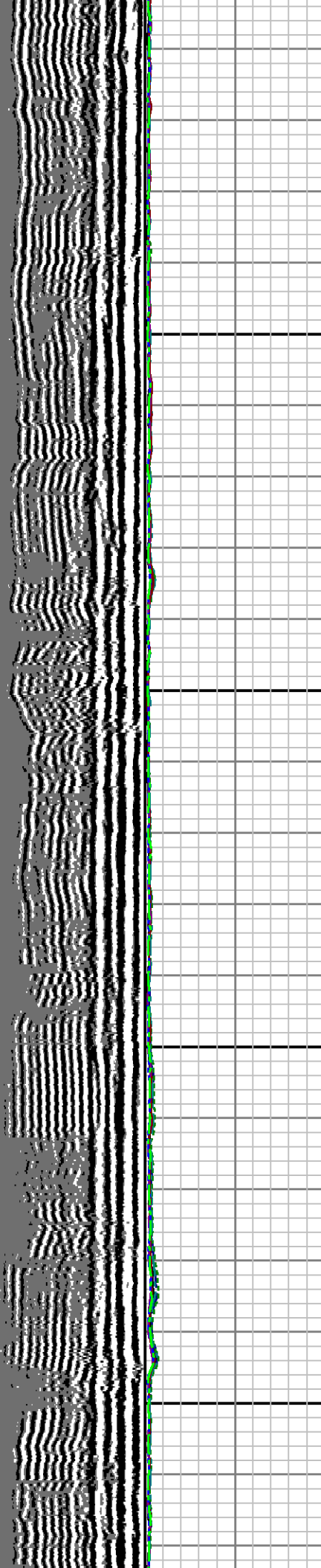
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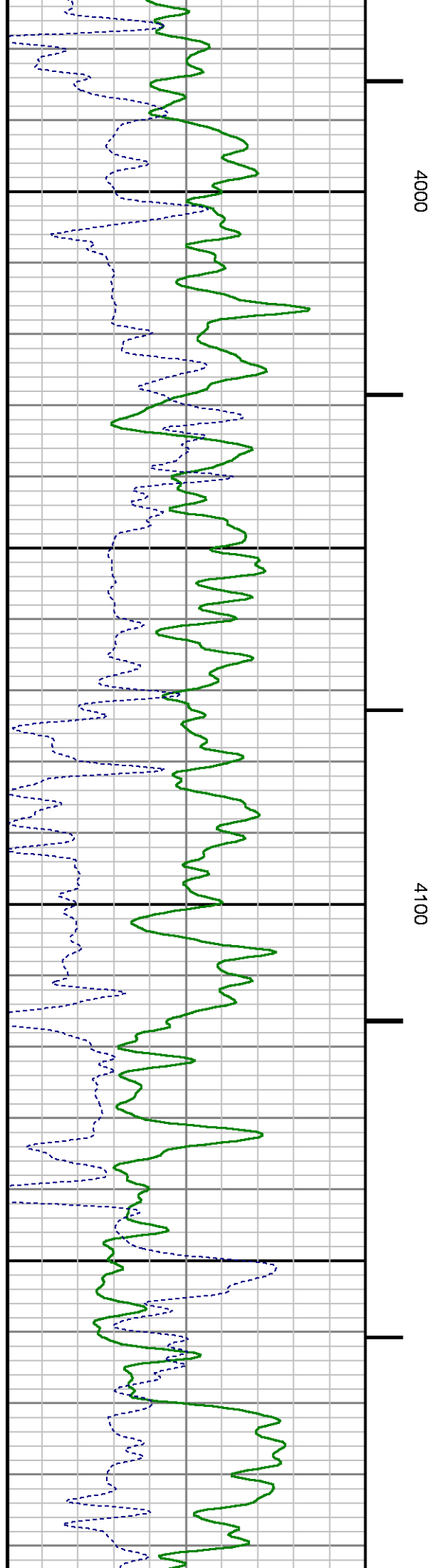
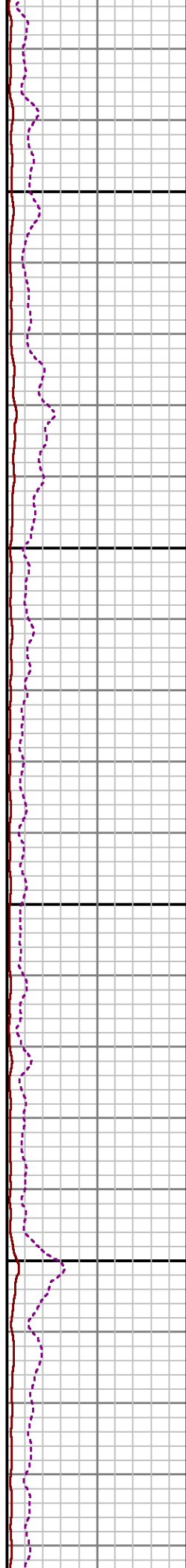
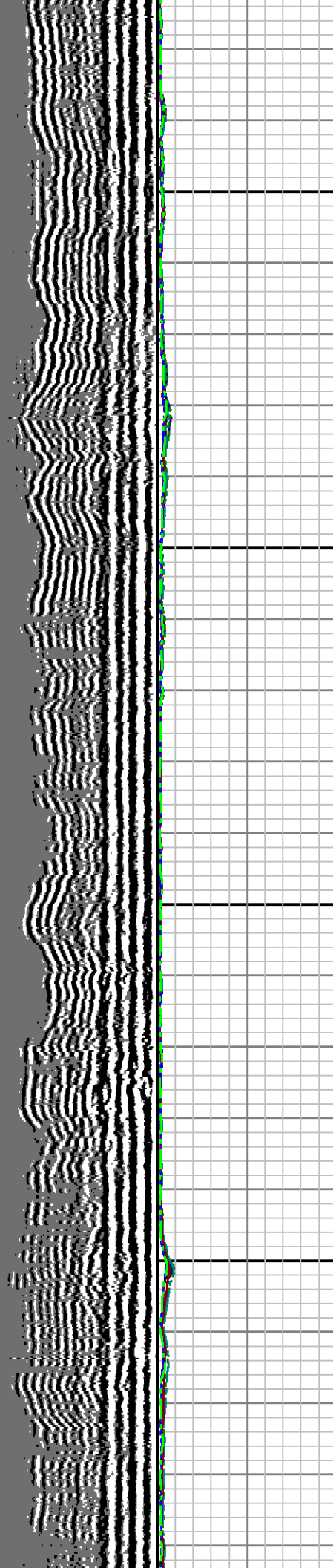


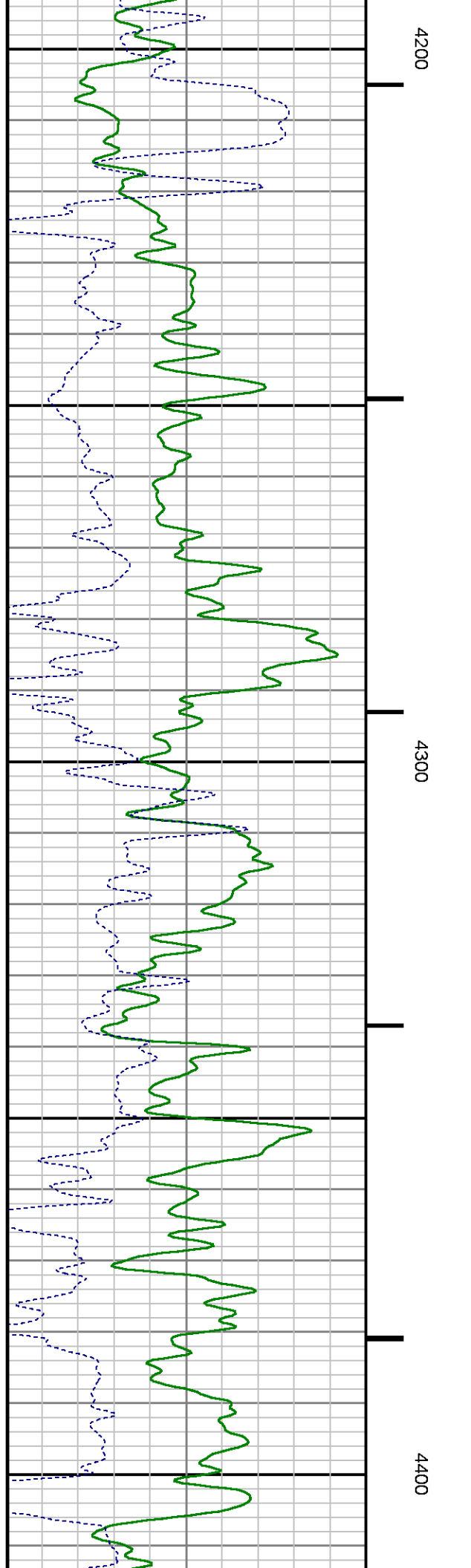
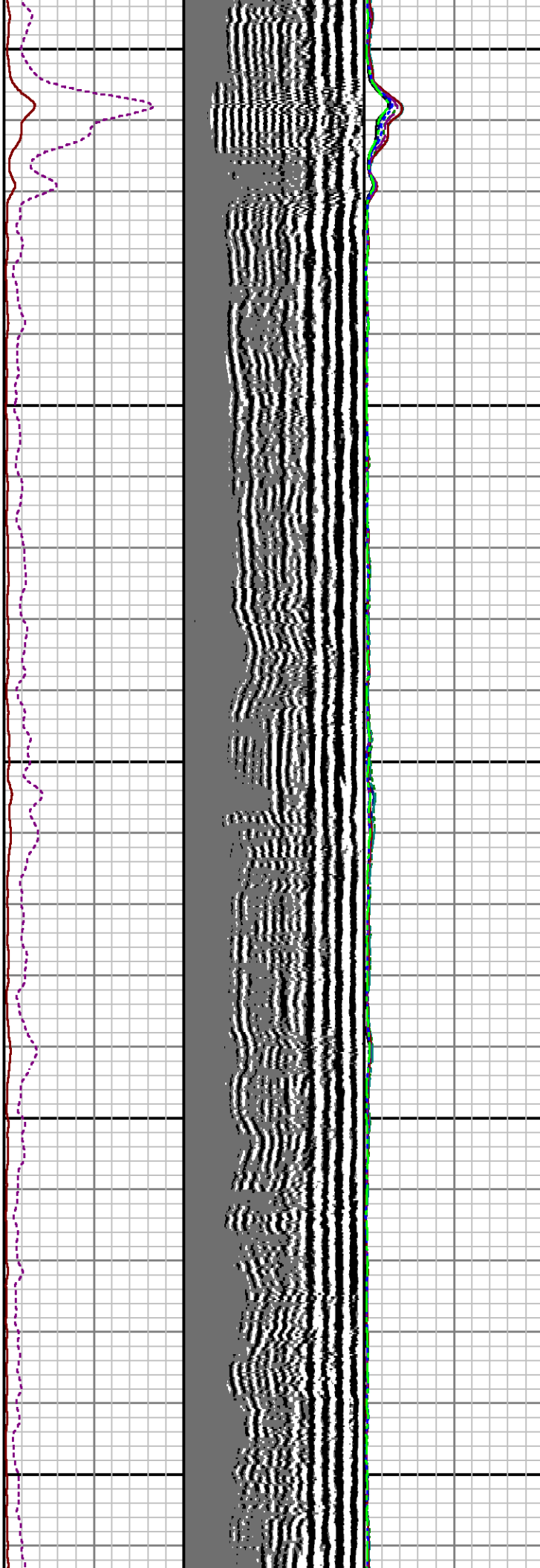
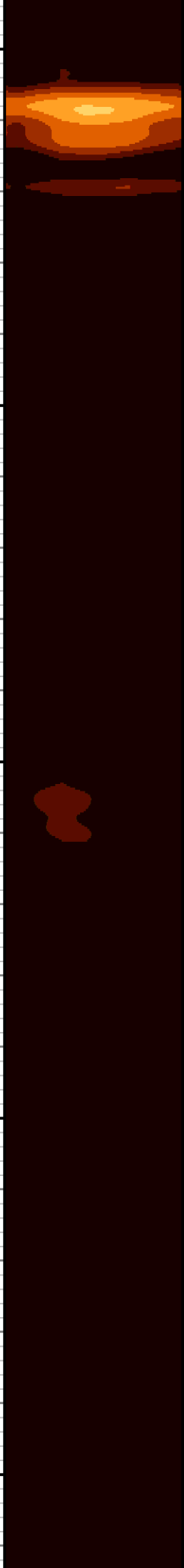


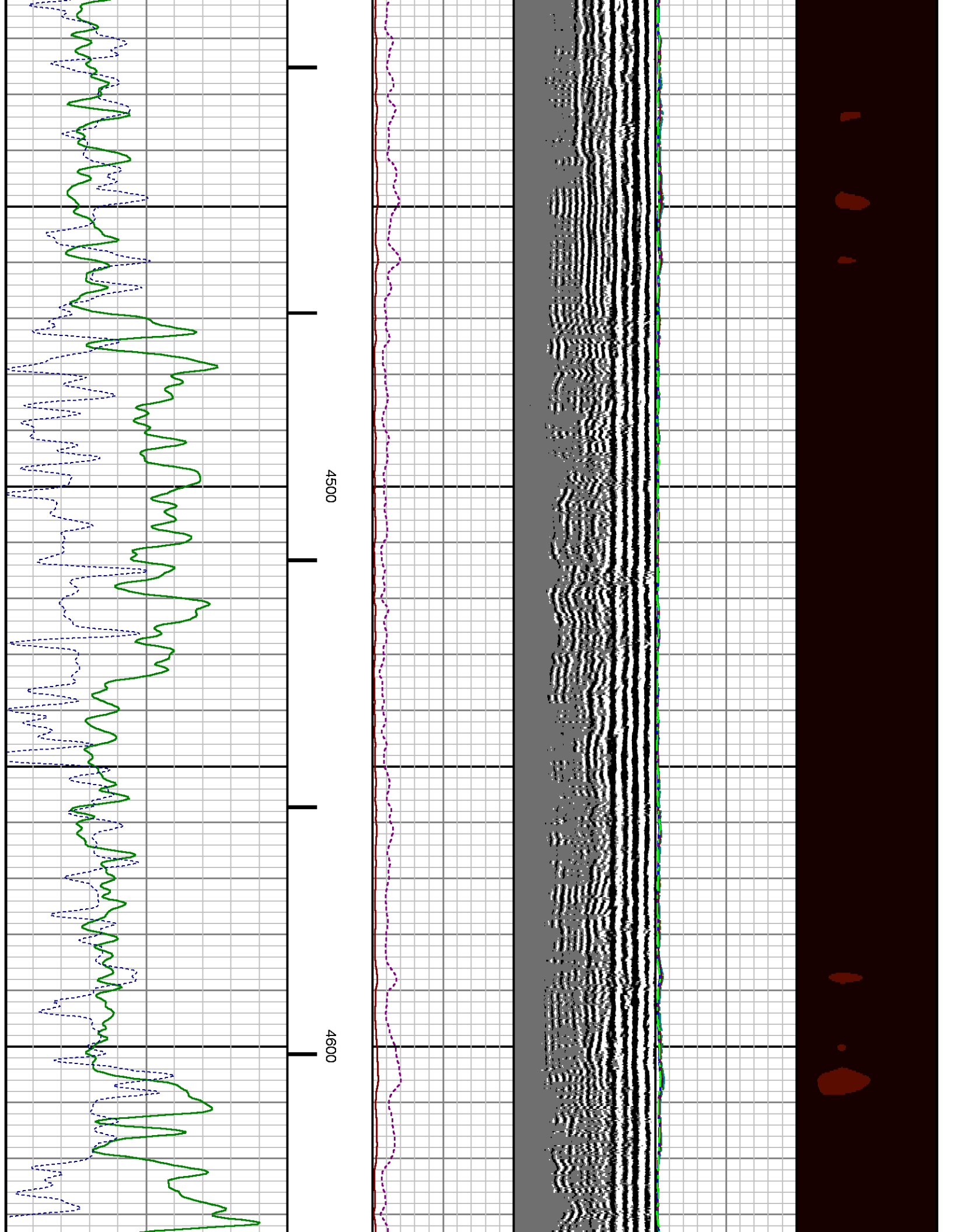


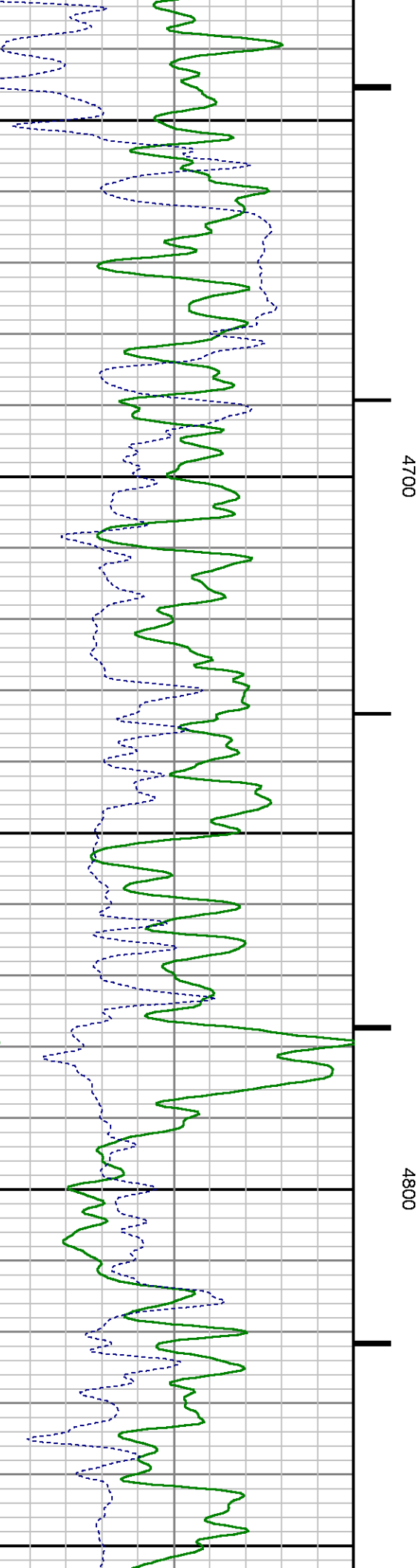
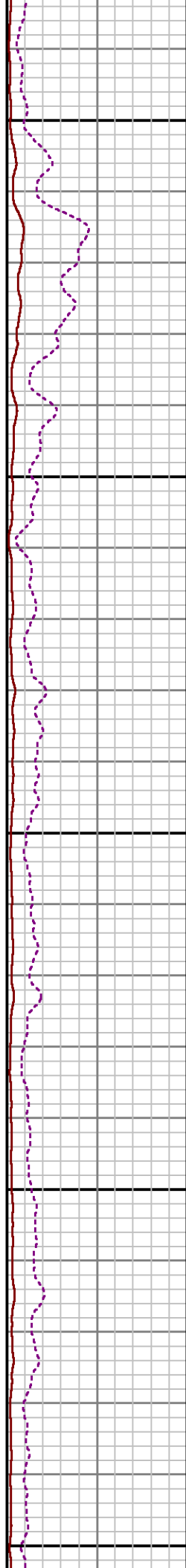
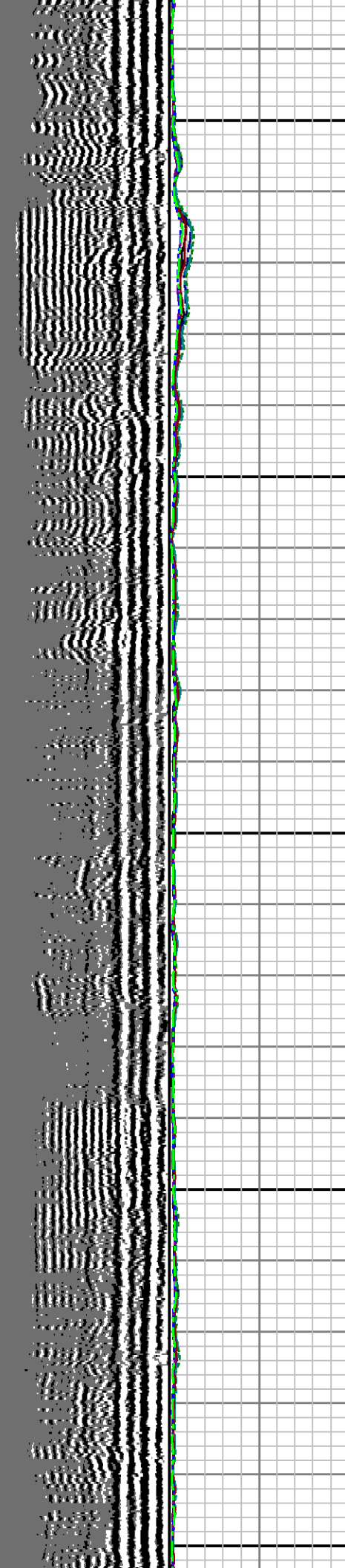
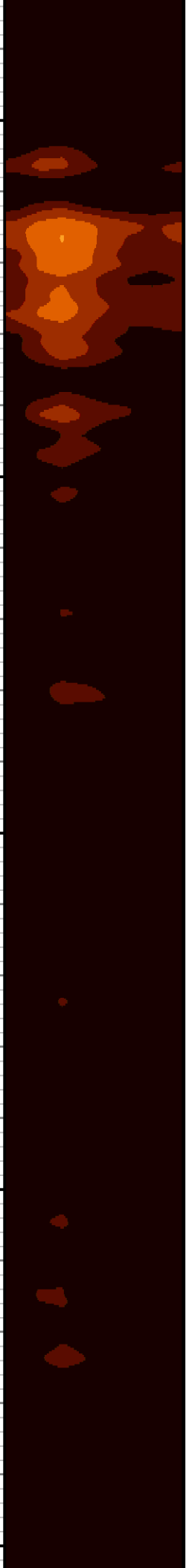


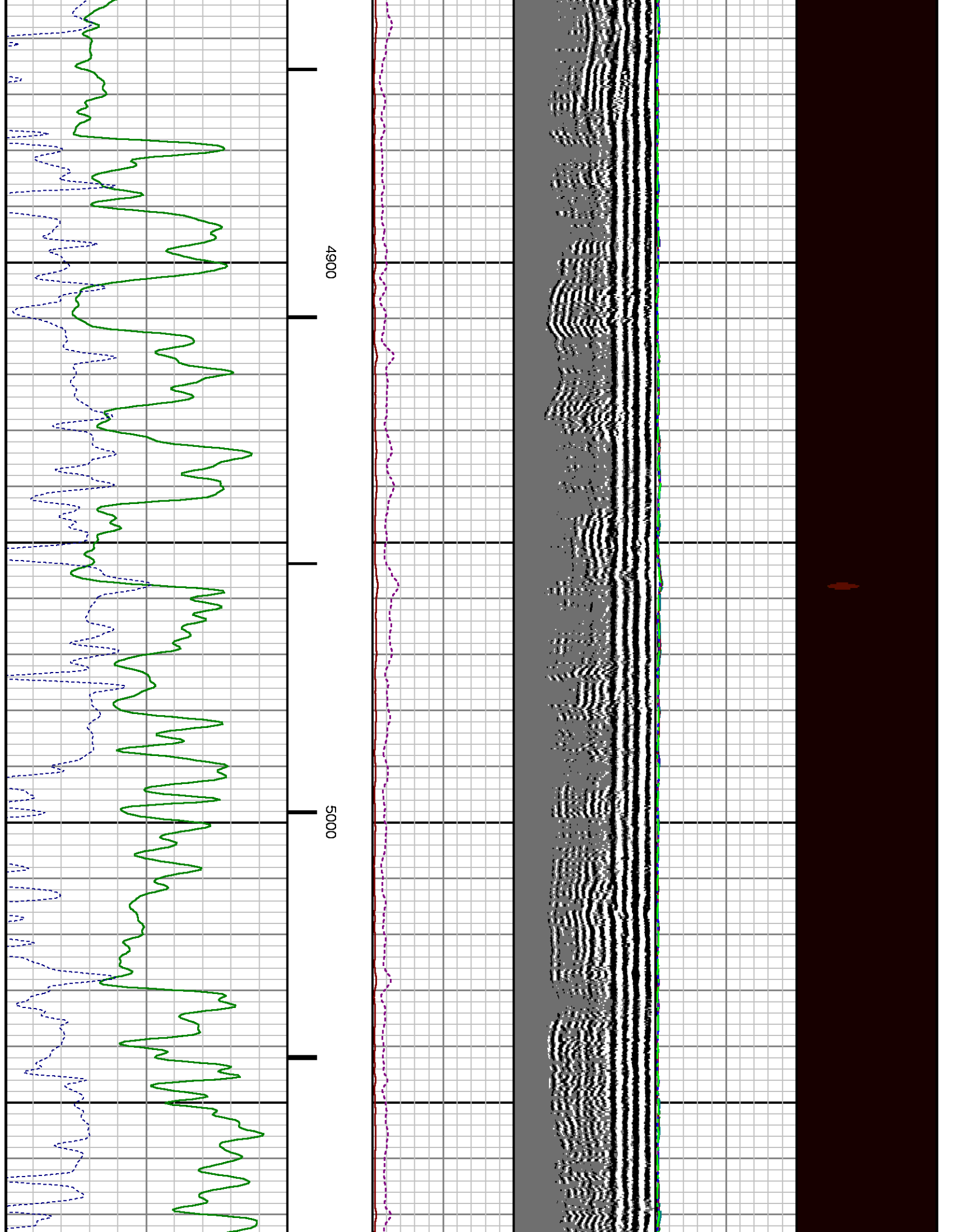




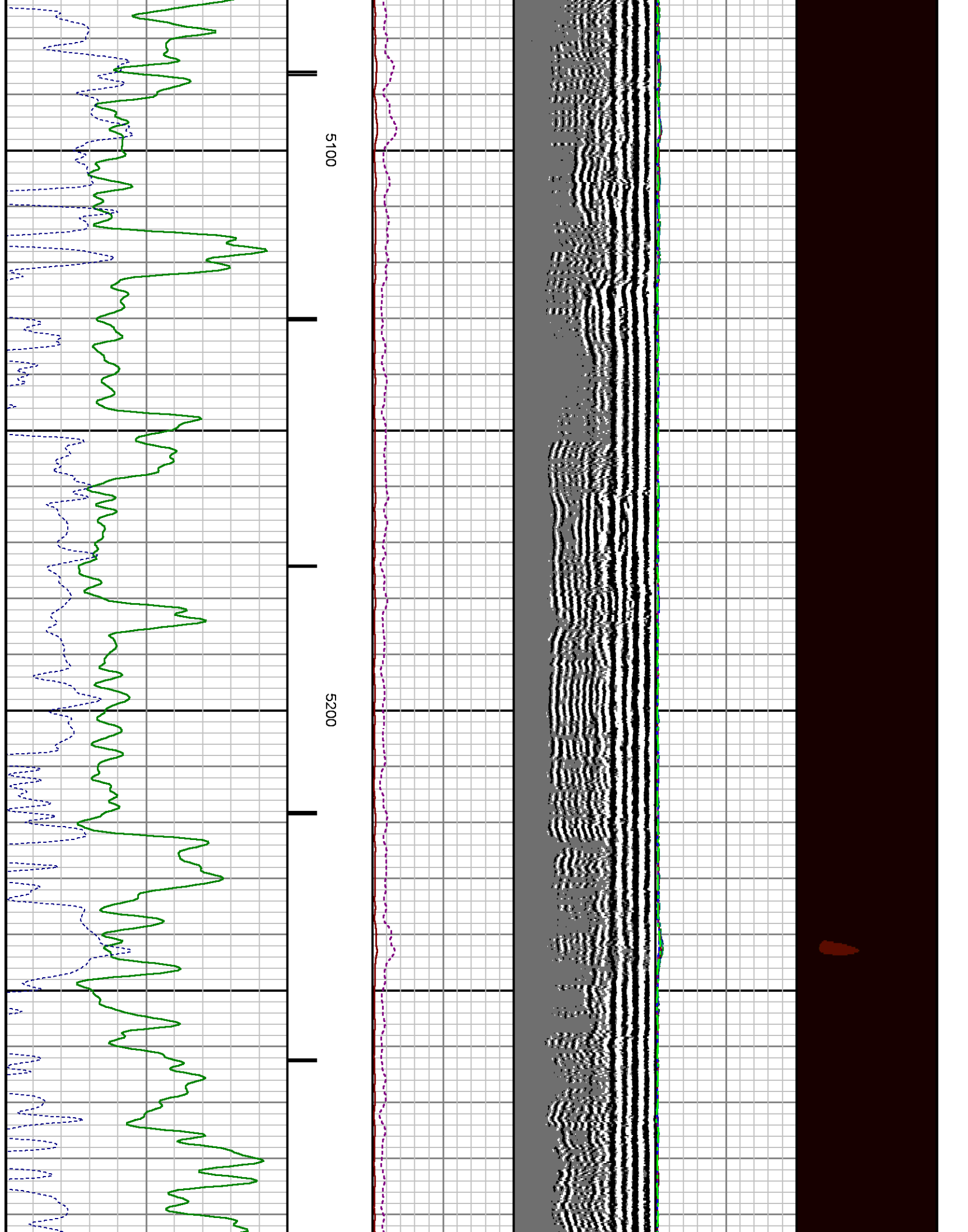


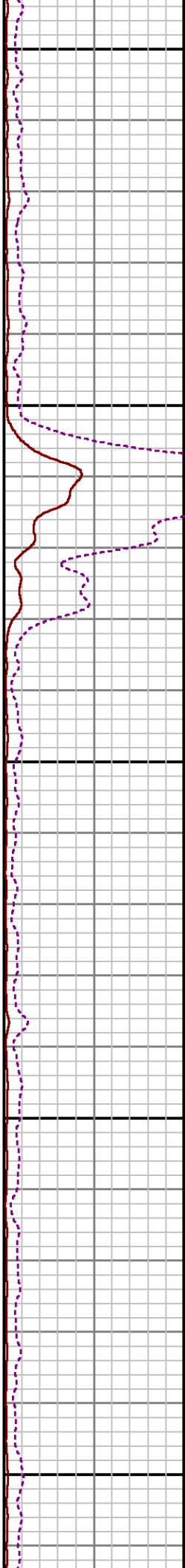
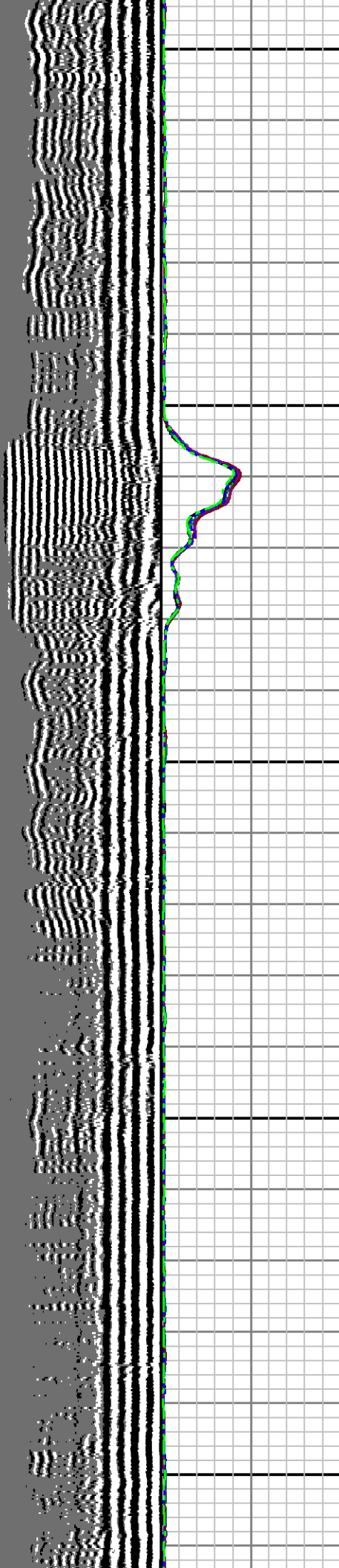
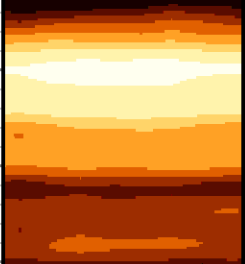








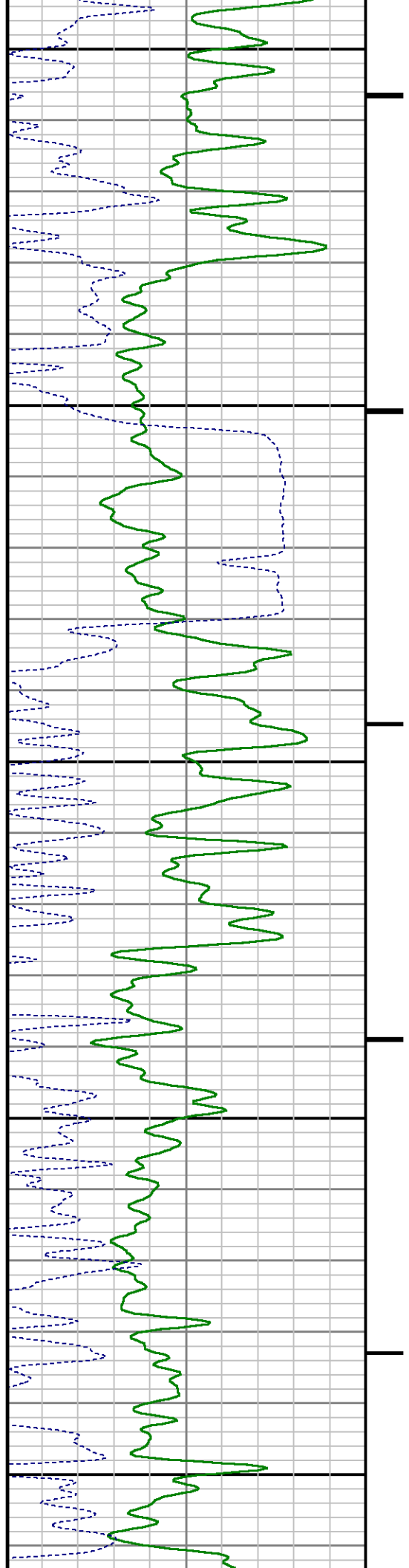


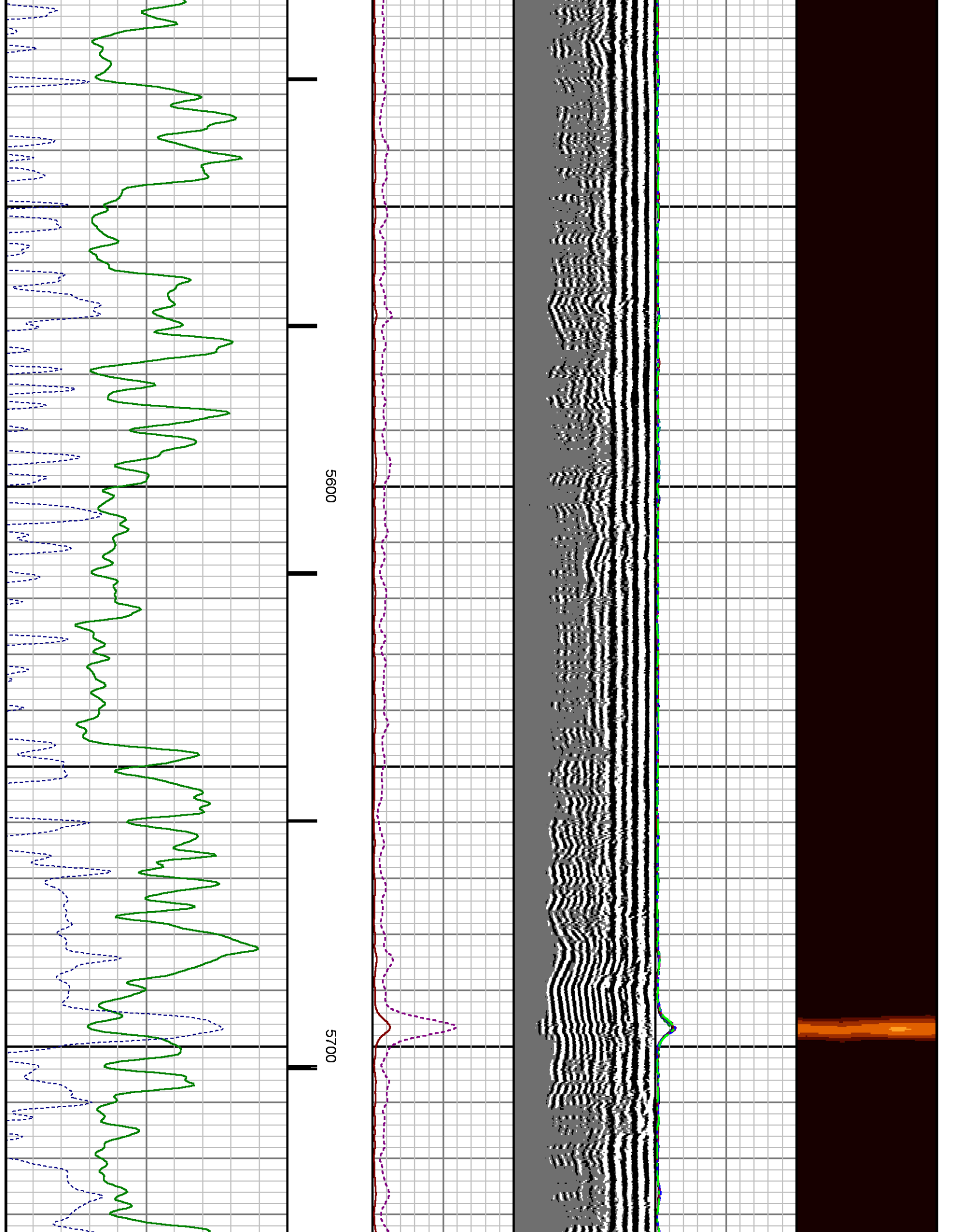


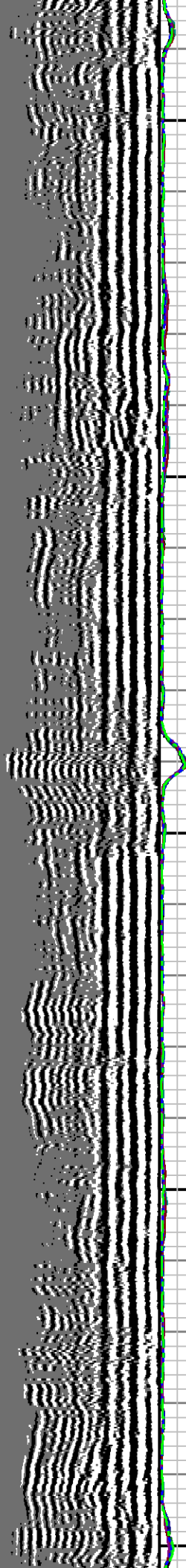
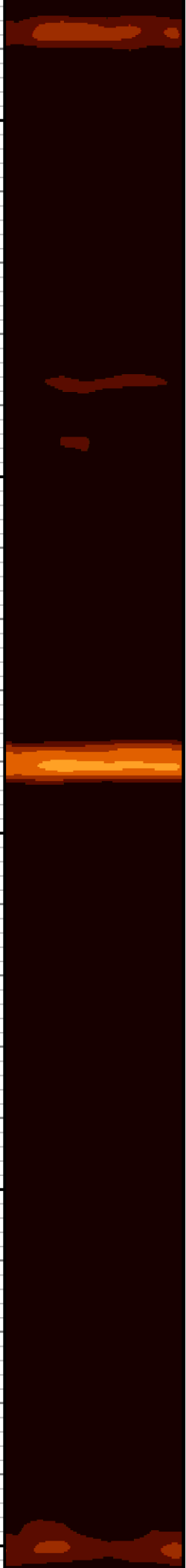
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5400

5500

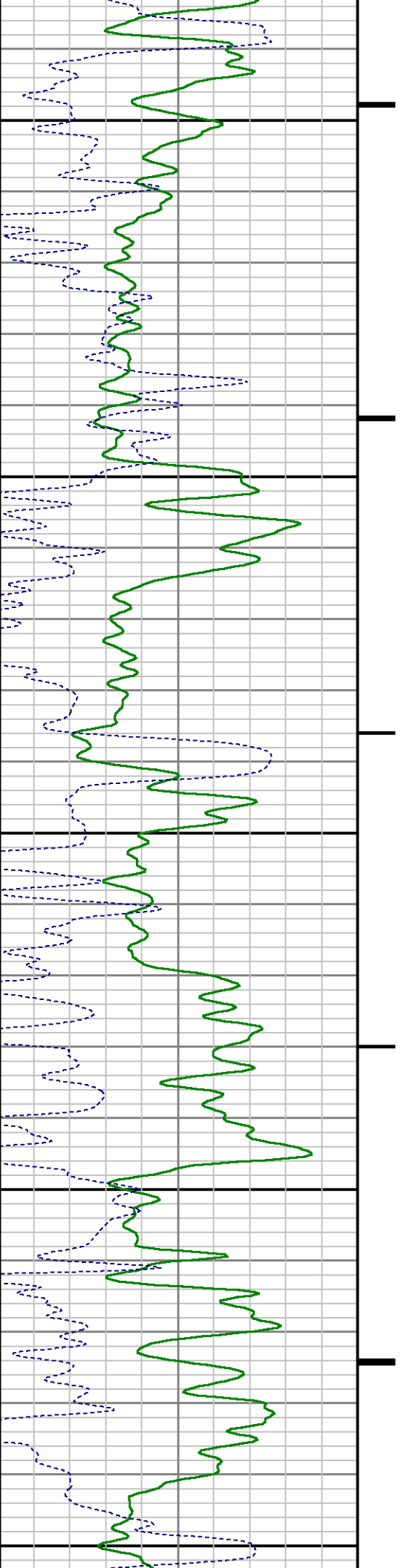


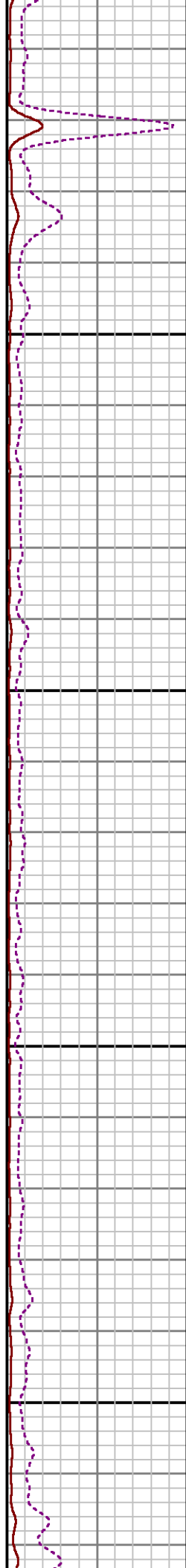
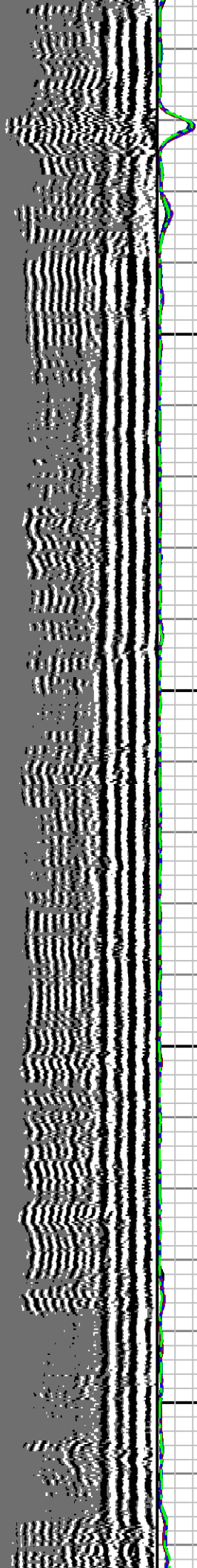
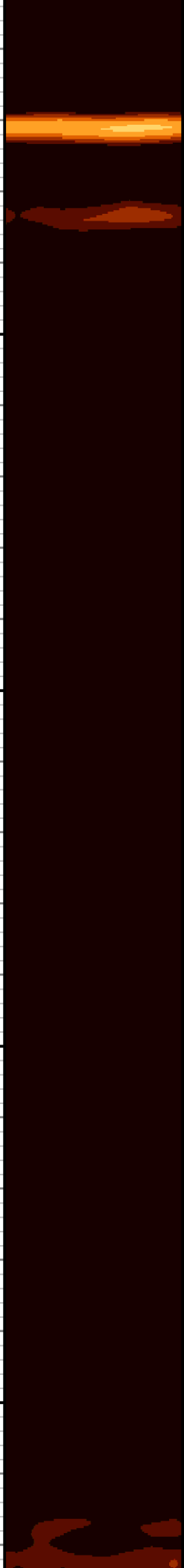




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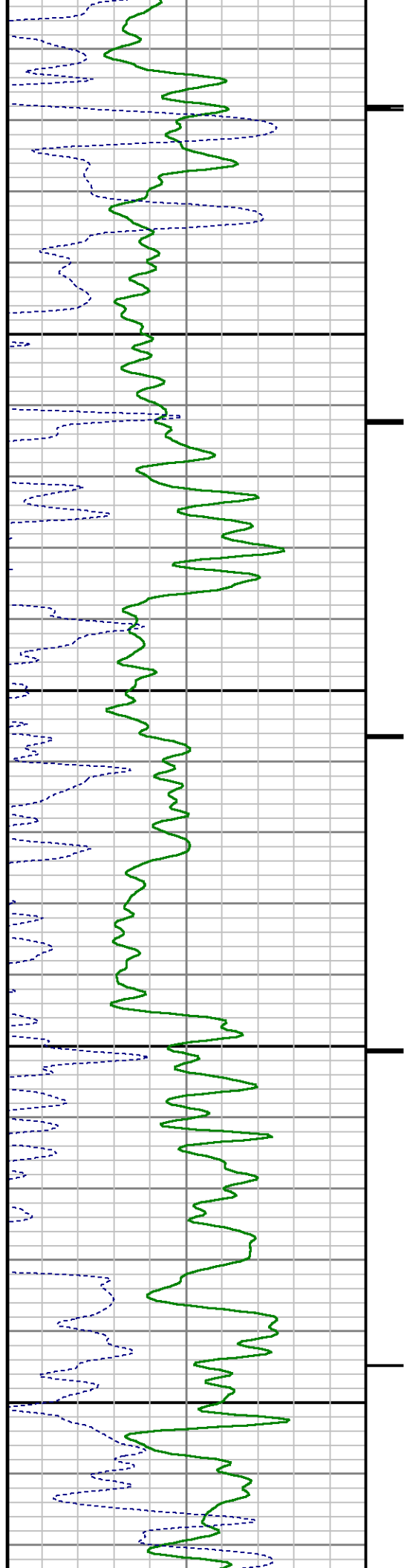
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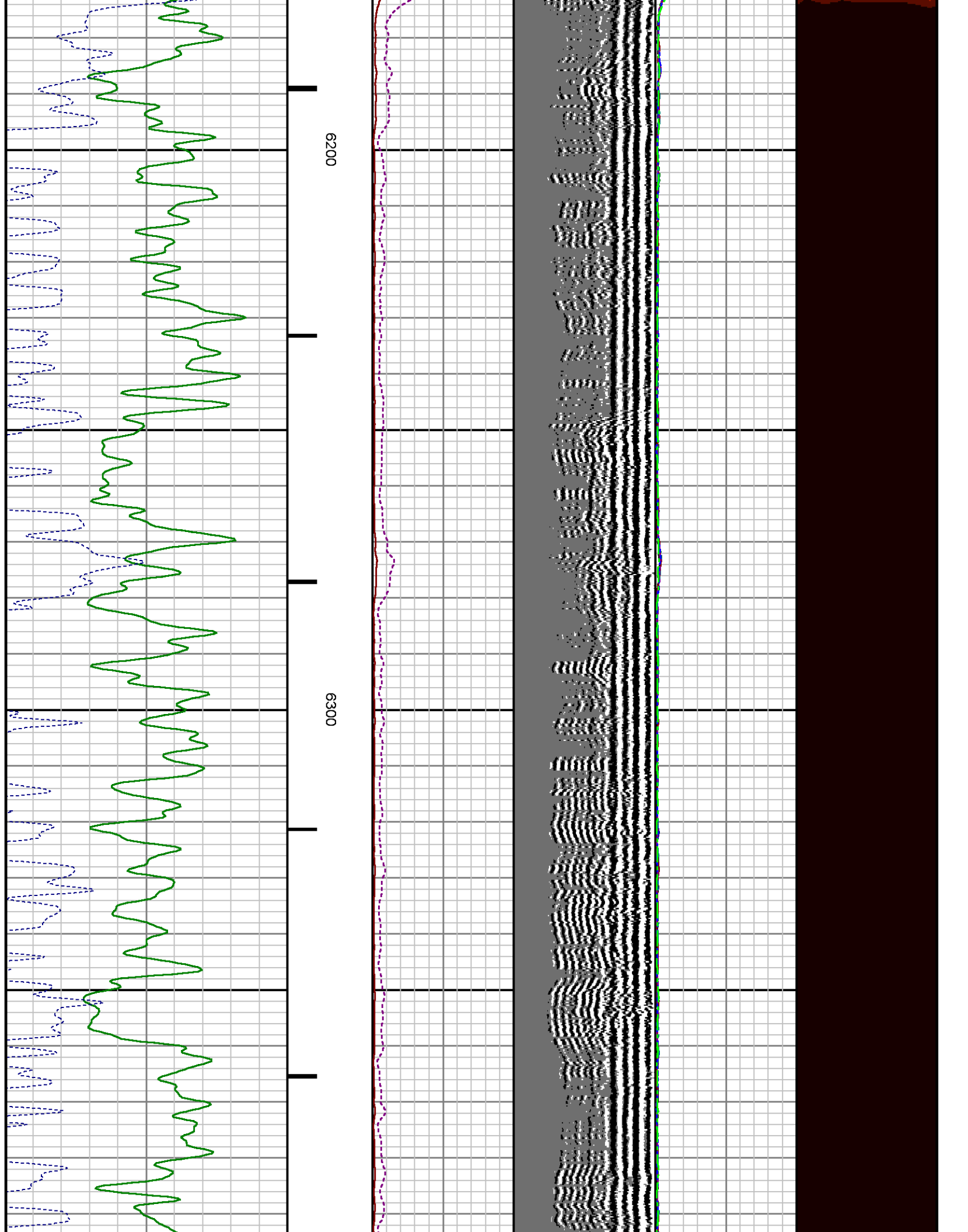




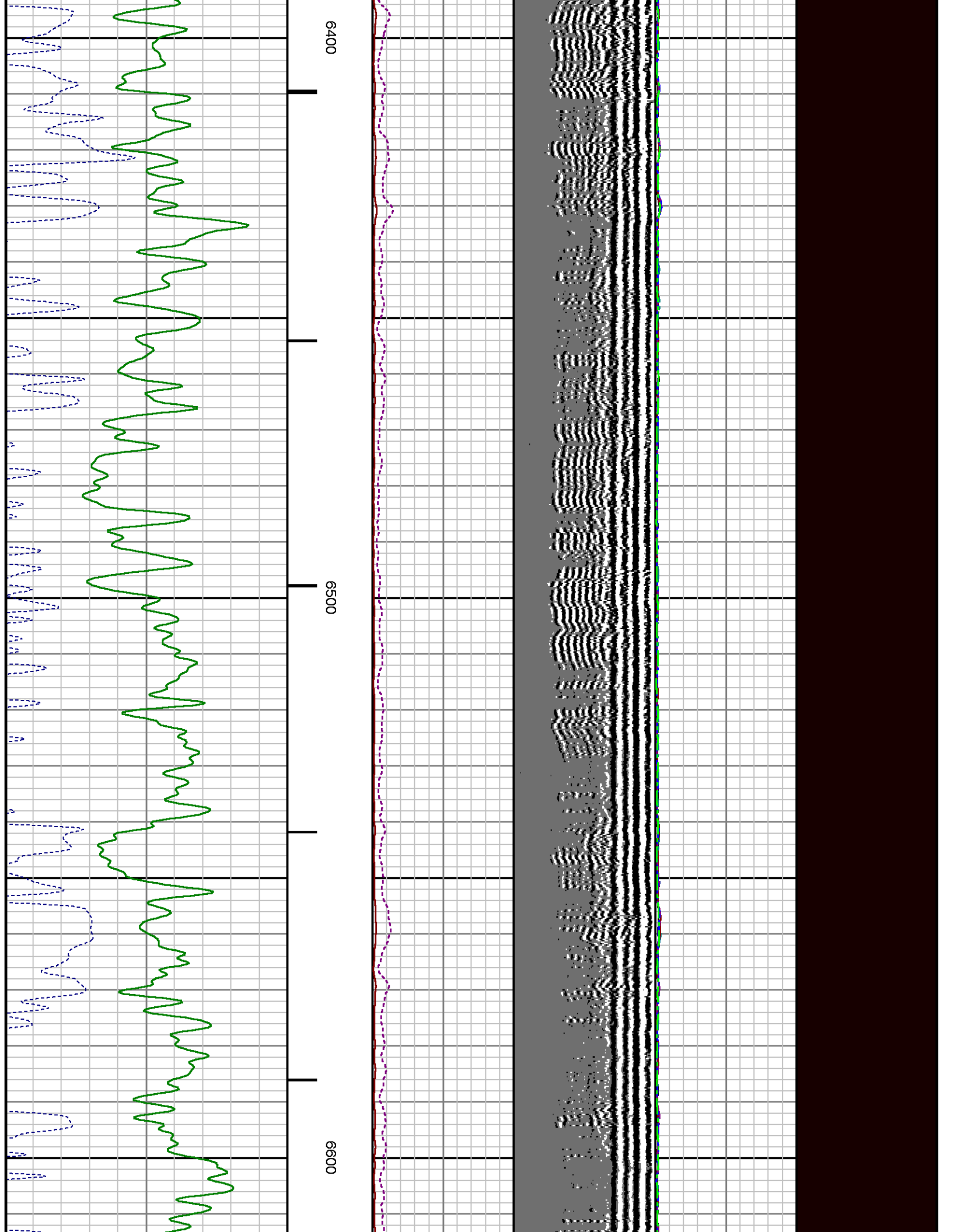
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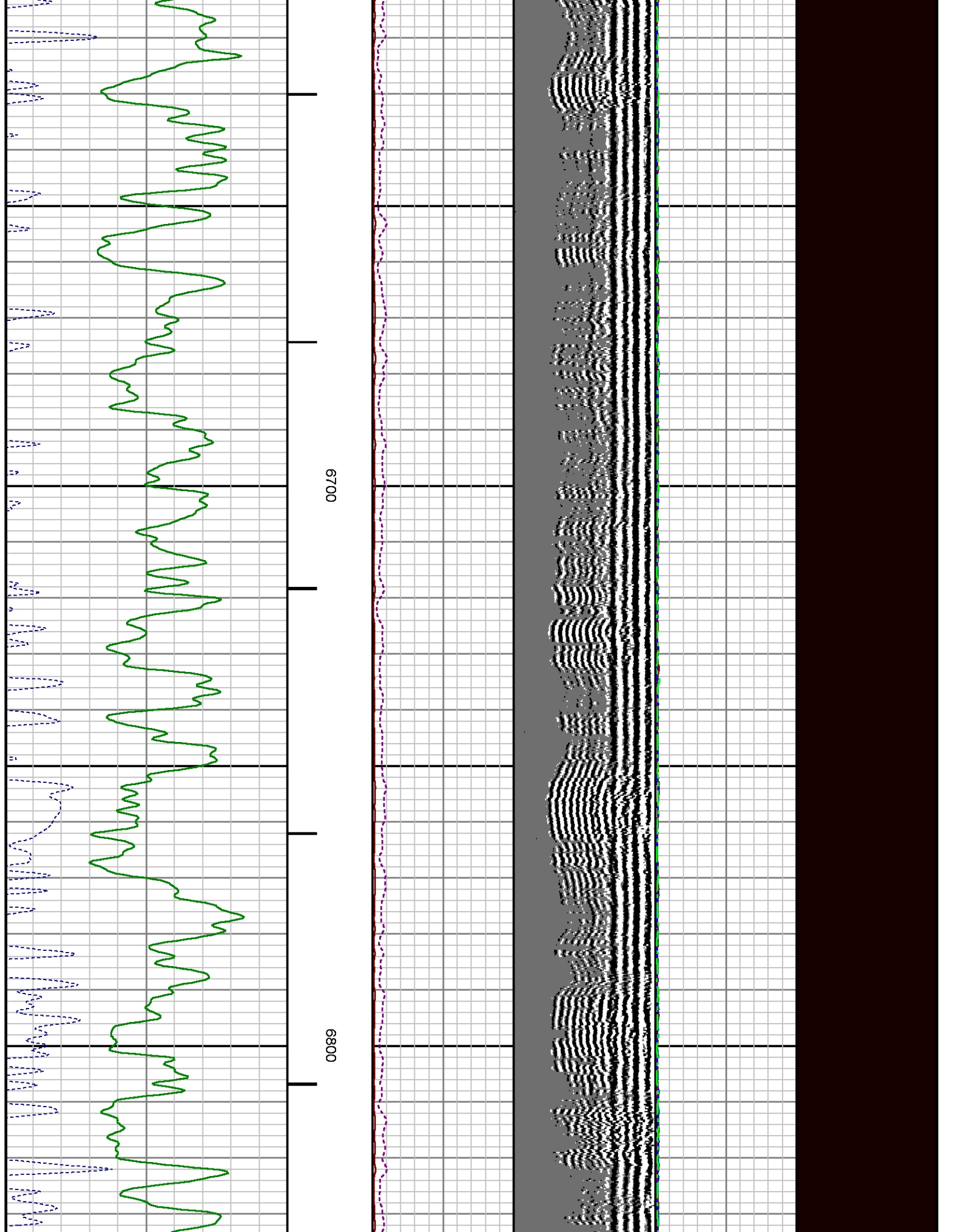
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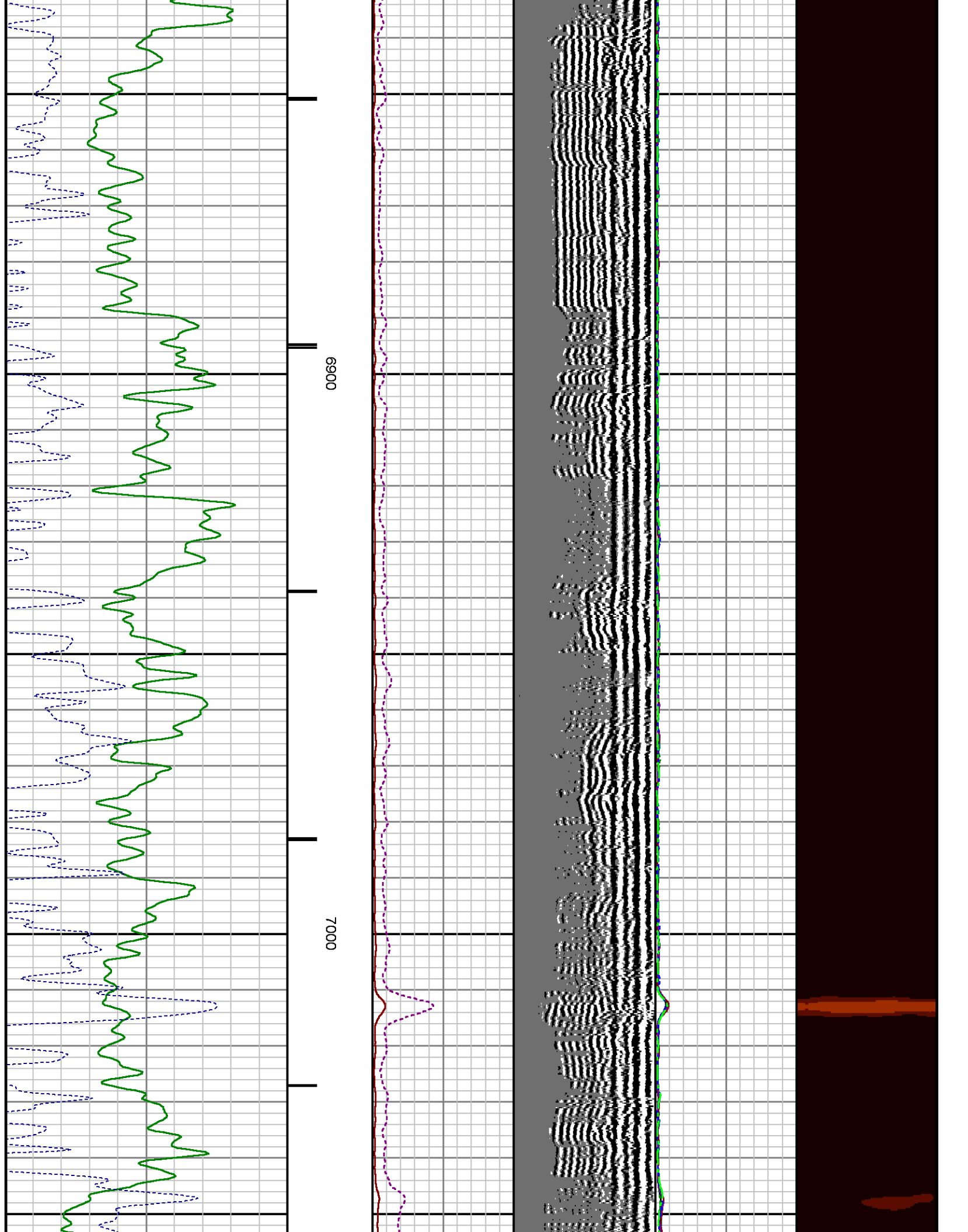


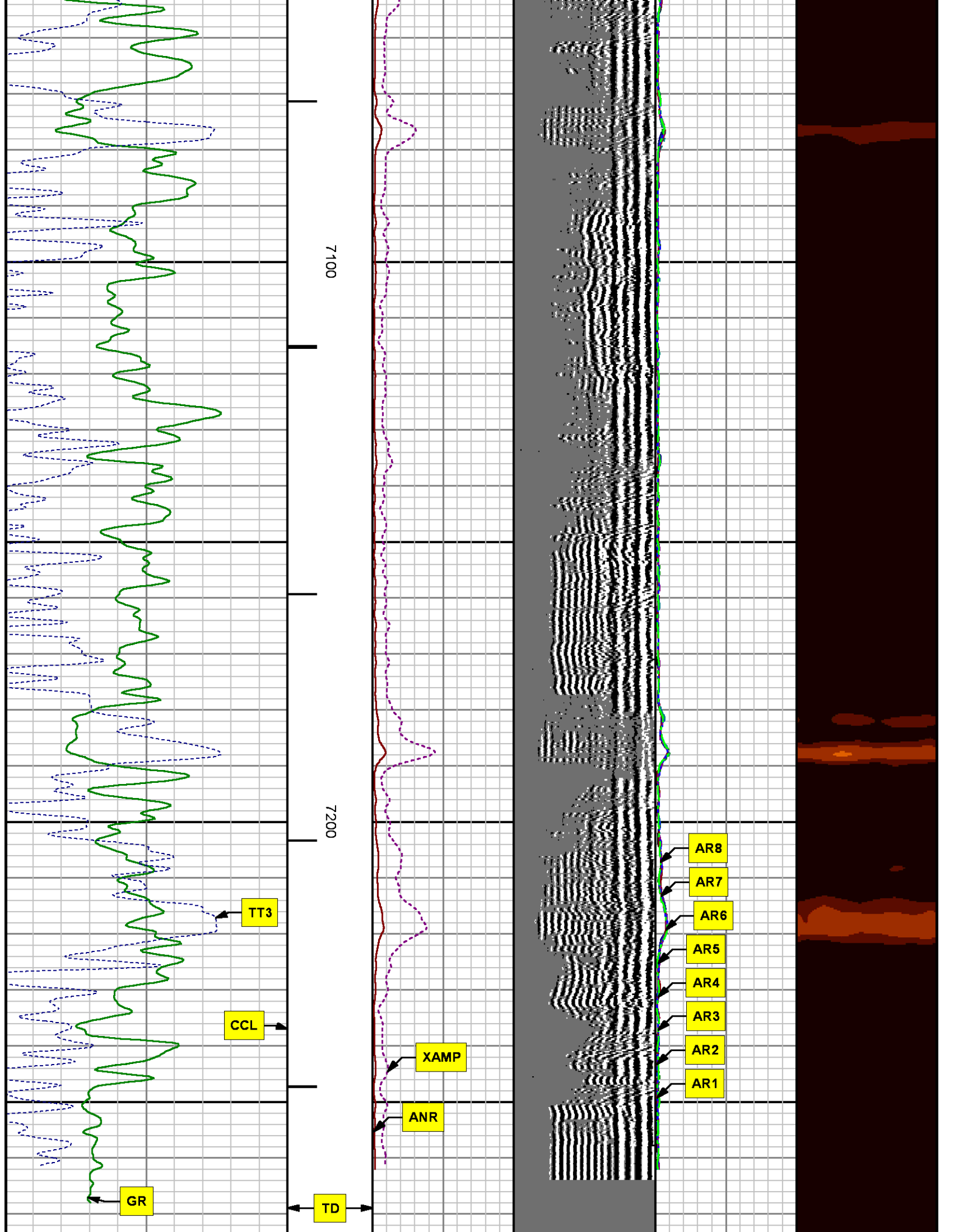


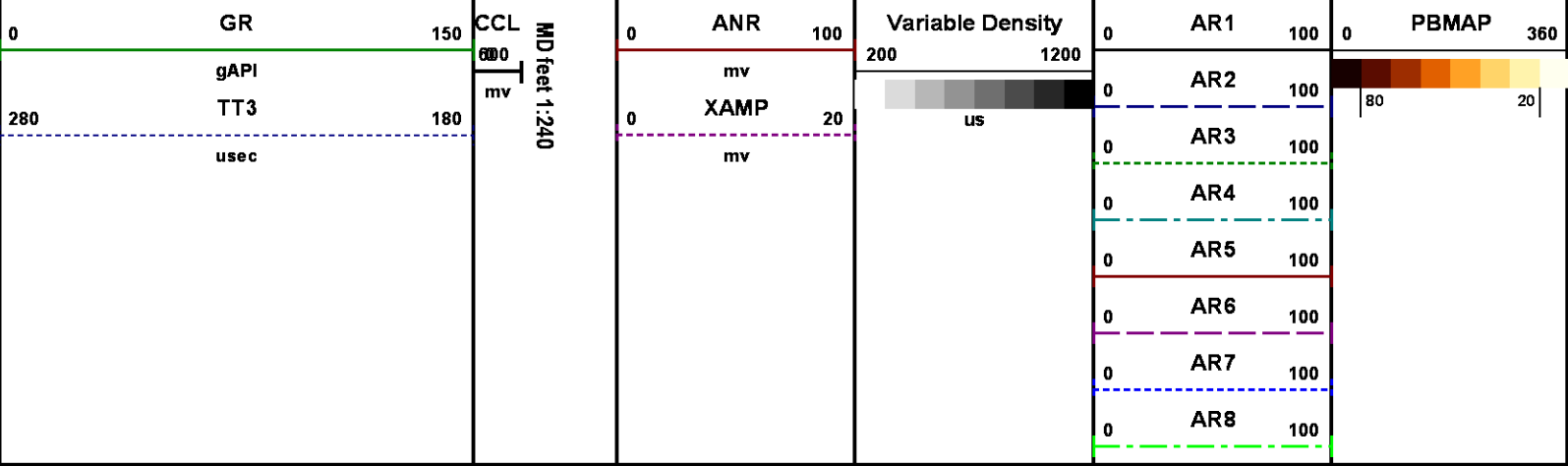










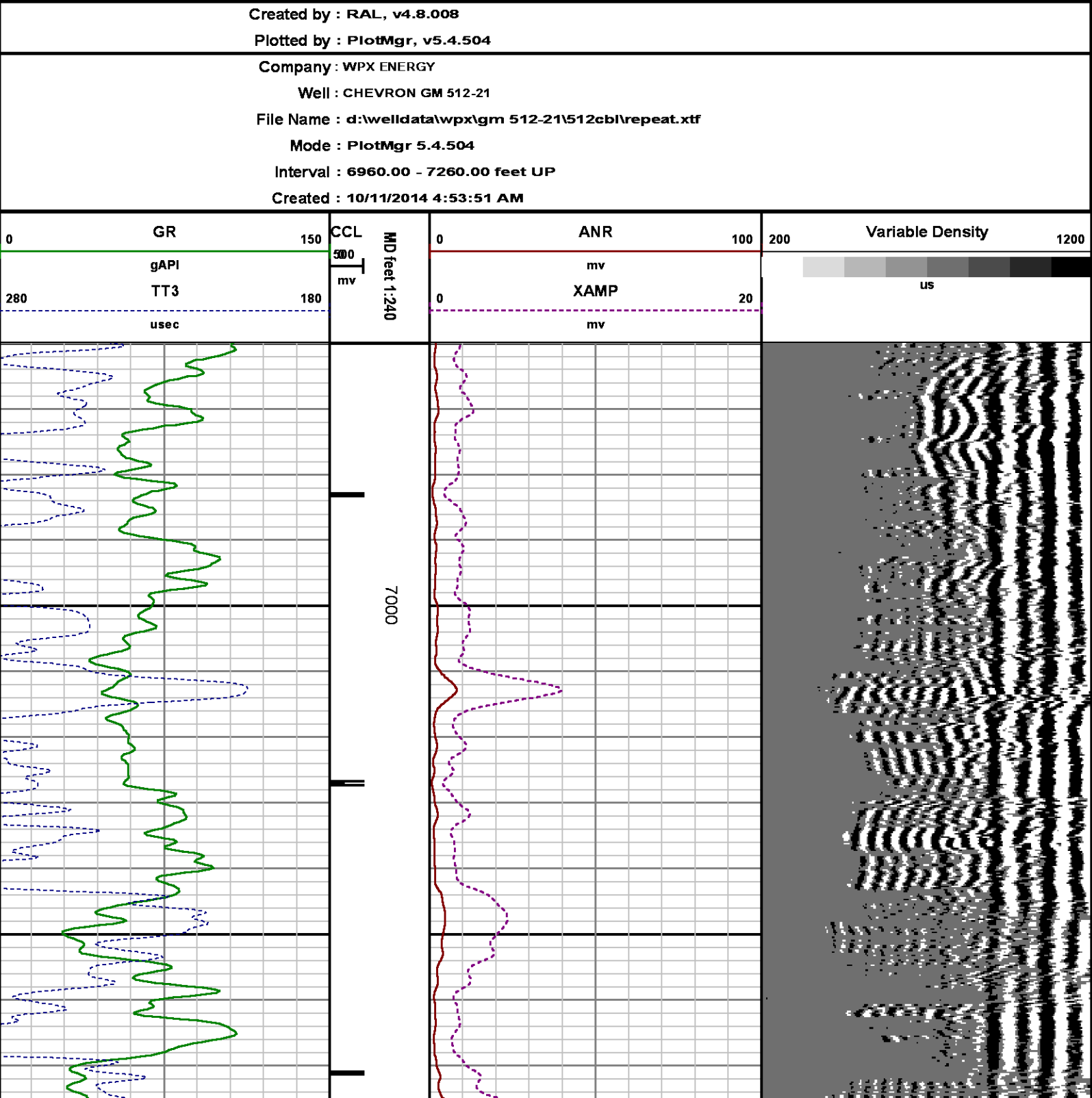


REPEAT SECTION  
0 PSI

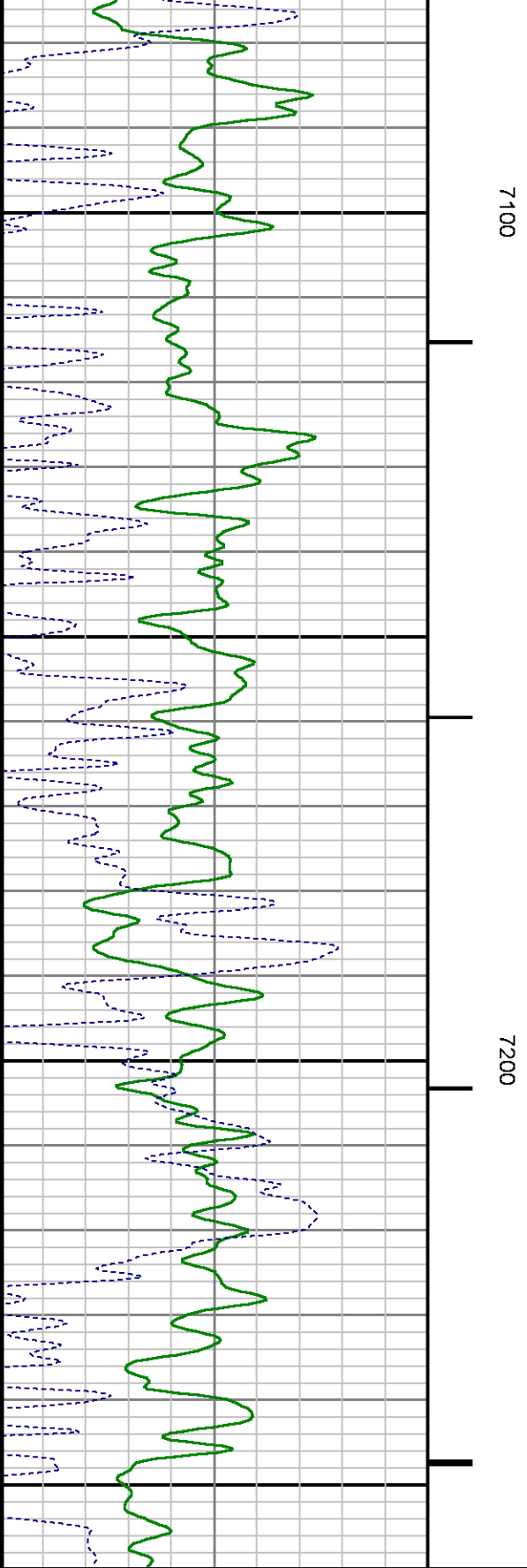
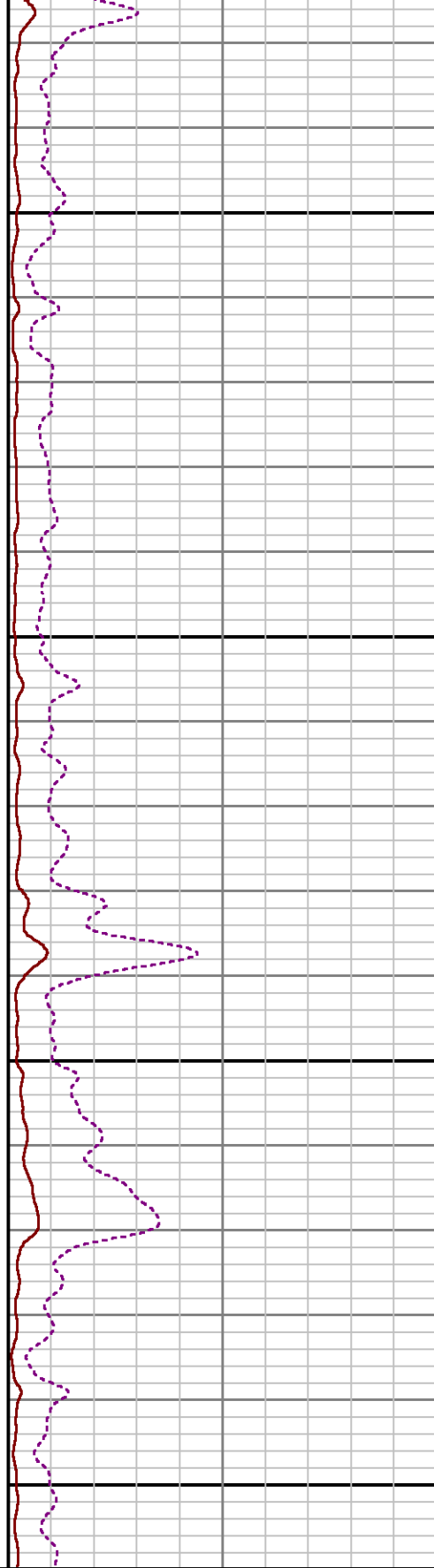
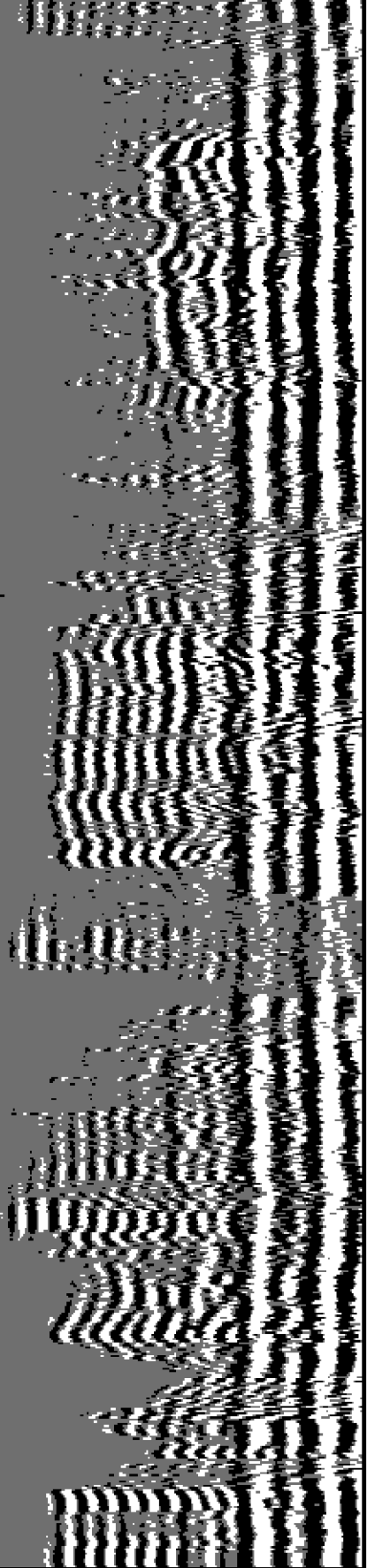
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	6934.350	7275.350
RAL	Amp Gate Start Near	195.000	u sec	6934.350	7275.350
RAL	Amp Gate Start Radial	195.000	u sec	6934.350	7275.350
RAL	Amp Gate Width Far	25.000	u sec	6934.350	7275.350
RAL	Amp Gate Width Near	25.000	u sec	6934.350	7275.350
RAL	Amp Gate Width Radial	25.000	u sec	6934.350	7275.350
RAL	casing od	4.500	inches	6934.350	7275.350
RAL	casing wt	11.600	lbm/ft	6934.350	7275.350
RAL	FB Start Far	291.900	u sec	6934.350	7275.350
RAL	FB Start Near	175.391	u sec	6934.350	7275.350
RAL	FB Start Radial	175.391	u sec	6934.350	7275.350
RAL	FB Thresh Far	10.000	mv	6934.350	7275.350
RAL	FB Thresh Near	4.000	mv	6934.350	7275.350
RAL	FB Thresh Radial	4.000	mv	6934.350	7275.350
RAL	Fluid Travel Time	200.000	u sec/ft	6934.350	7275.538

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							







0		GR	150	CCL 500 mV	MD feet 1:240	0	ANR		100	200	Variable Density		1200
		gAPI					mV						
280		TT3	180			0	XAMP		20		uS		
		uSec					mV						

# CALIBRATION SUMMARY

## RALSHP

Shop Calibration: C:\case\calver\RALSHP\10609\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Oct 09 21:42:22 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: 09

Tool Delay [usec]	-52.00	Tank OD in	5.50	Tank Wt lbm/ft	15.50	Tank ID in	4.95	
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	-0.399	100.00	0.54
3 Ft. Receiver	218	216	30	166	16	-0.528	100.00	0.54
5 Ft. Receiver	326	325	30	255	25	0.489	150.00	0.59
Radial #1	218	216	30	166	12	0.327	100.00	0.54
Radial #2	218	216	30	166	12	0.267	100.00	0.55
Radial #3	218	216	30	166	12	-0.204	100.00	0.54
Radial #4	218	216	30	166	12	0.160	100.00	0.55
Radial #5	217	216	30	166	12	-0.392	100.00	0.54
Radial #6	216	216	30	166	12	0.488	100.00	0.54
Radial #7	216	216	30	166	12	-0.006	100.00	0.53
Radial #8	217	216	30	166	12	-0.360	100.00	0.53

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\1069 fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Oct 10 00:17:06 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: 9

Tool Delay [usec]	-52.00	Casing OD in	4.50	Casing Wt lbm/ft	11.60	Casing ID in	4.00	
RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]		
CAL Pulse	166	25	-0.077	0.000	0.67	100.000		
3 Ft. Receiver	200	30	-1.656					
5 Ft. Receiver	317	30	-1.001					
Radial #1	200	30	-3.275					
Radial #2	200	30	-2.370					
Radial #3	200	30	-1.875					
Radial #4	200	30	-2.330					

Radial #5	200	30	-1.892
Radial #6	200	30	-1.715
Radial #7	200	30	-1.428
Radial #8	200	30	-1.815

## GAMMA RAY

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

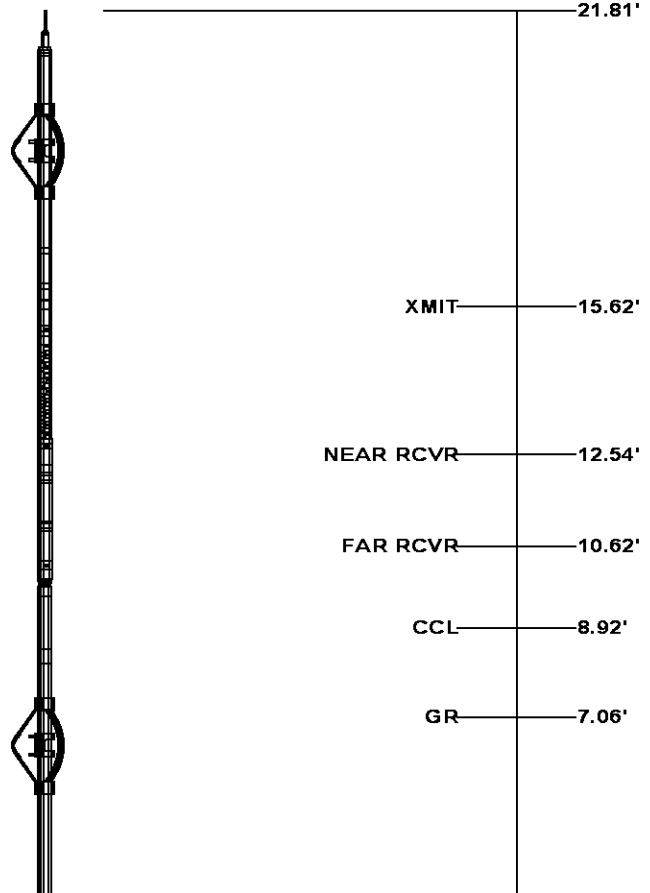
### OTA SHORT CABLE HEAD

### 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"



Baker Atlas

CASE

Company

WPX ENERGY

Well

CHEVRON GM 512-21

Field

GRAND VALLEY

County

GARFIELD

State

CO

File No:

CH091479

API No:

05045223550000

Location

SHL: 2057' FNL & 704' FWL (20 6S 96W)

BHL: 2277' FNL & 1004' FWL (21 6S 96W)

Elevations

KB 5596 ft

DF

GL 5575 ft

21 6S 96W

GM 442-20 PAD

CYCLONE 17

SEC 21 TWP 6S RGE 96W