



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH085270

Company Well WPX ENERGY FEDERAL NER 314-32

API No: 050452177400000

Field County RUISON GARFIELD State CO

Location SHL: 178' FNL & 2591' FWL (5 75 93W)

RU 23-5 PAD BHL: 810' FSL & 645' FWL (32 65 93W)

NABORS 576 SEC 32 TWP 6S RGE 93W

Other Services

RPM

Permanent Datum GL Elevation 7603 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KB GL Elevations KB 7629 ft DF GL 7603 ft

Date	26/APR/14	
Run	ONE	
Service Order	US625394	
Depth Driller	10314 ft	
Depth Logger	10285 ft	
Bottom Logged Interval	10275 ft	
Top Logged Interval	26 ft	
Time Started	1700	
Time Finished	2030	
Operator Rig Time	3.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	92 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	245 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	4271	GRAND JUNCTION
Recorded By	FLORIO RENEAU	
Witnessed By	JEFF DUCY	

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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	1132 ft
8.75 in	1132 ft	10314 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1132 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	10314 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 12 feet.
Logged with zero PSI at wellhead.
BHT = 245°F
SJ = 6904'-6927'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	2459XA	10417456	CENT

PRIMARY PRESENTATION
0 PSI

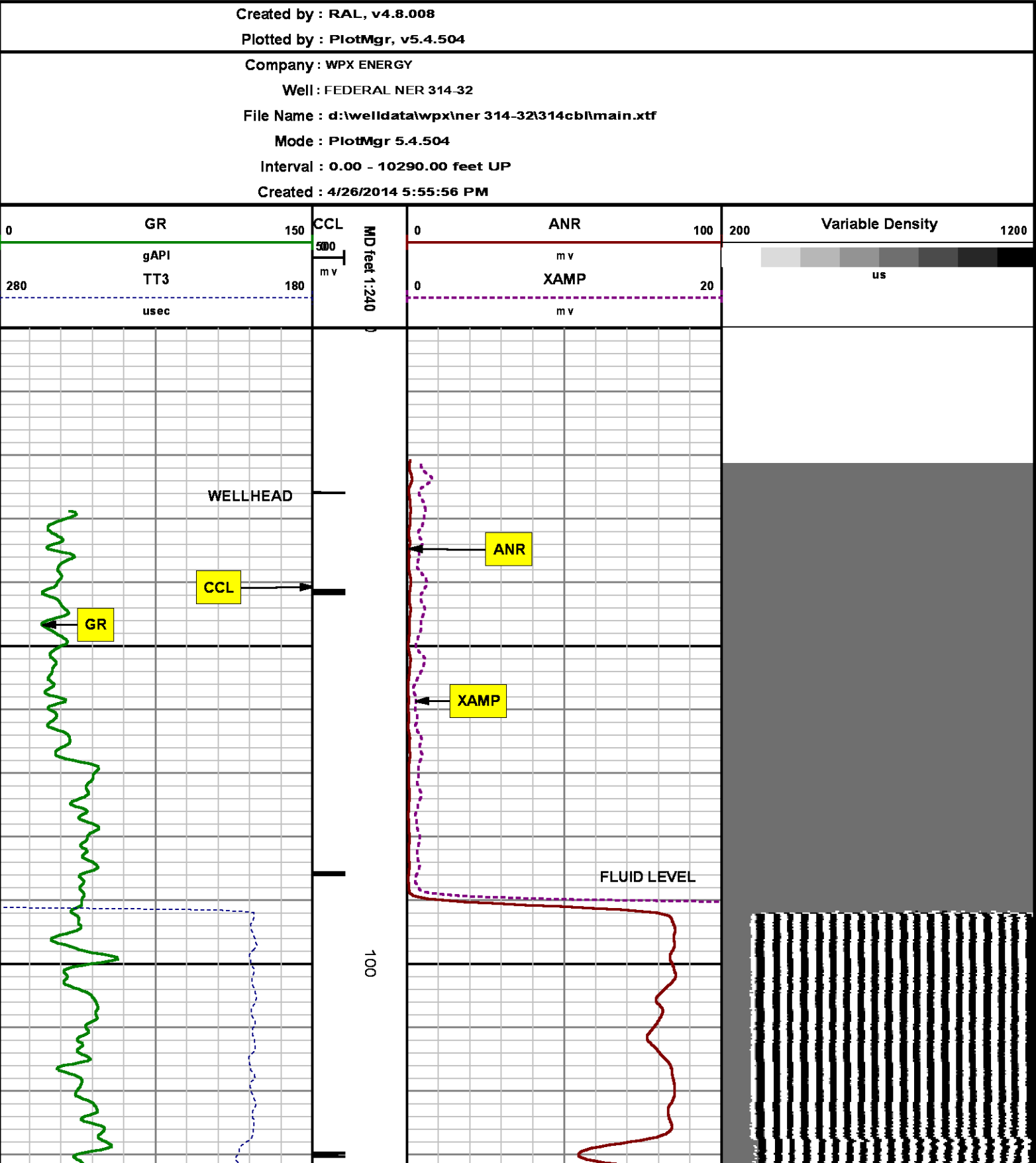
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	36.999	10286.500
RAL	Amp Gate Start Near	195.000	usec	36.999	10286.500
RAL	Amp Gate Start Radial	195.000	usec	36.999	10286.500
RAL	Amp Gate Width Far	25.000	usec	36.999	10286.500
RAL	Amp Gate Width Near	25.000	usec	36.999	10286.500
RAL	Amp Gate Width Radial	25.000	usec	36.999	10286.500
RAL	casing od	4.500	inches	36.999	10286.500
RAL	casing wt	11.600	lbm/ft	36.999	10286.500
RAL	FB Start Far	291.900	usec	36.999	10286.500
RAL	FB Start Near	180.000	usec	36.999	10286.500
RAL	FB Start Radial	180.000	usec	36.999	10286.500
RAL	FB Thresh Far	15.000	mv	36.999	10286.500
RAL	FB Thresh Near	4.000	mv	36.999	10286.500
RAL	FB Thresh Radial	4.000	mv	36.999	10286.500
RAL	Fluid Travel Time	200.000	usec/ft	36.999	10286.405

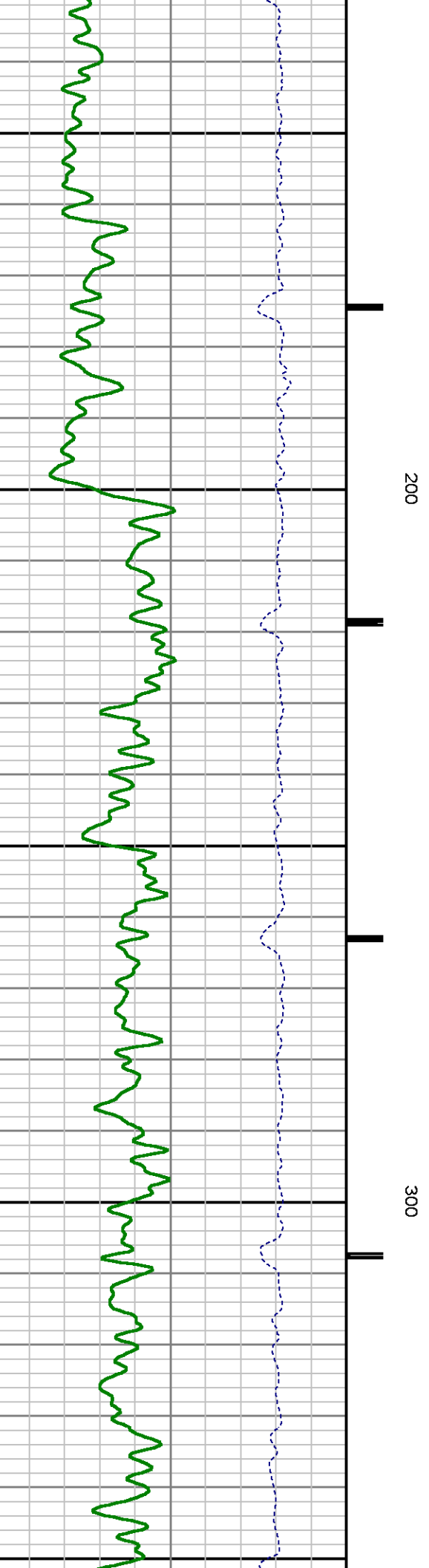
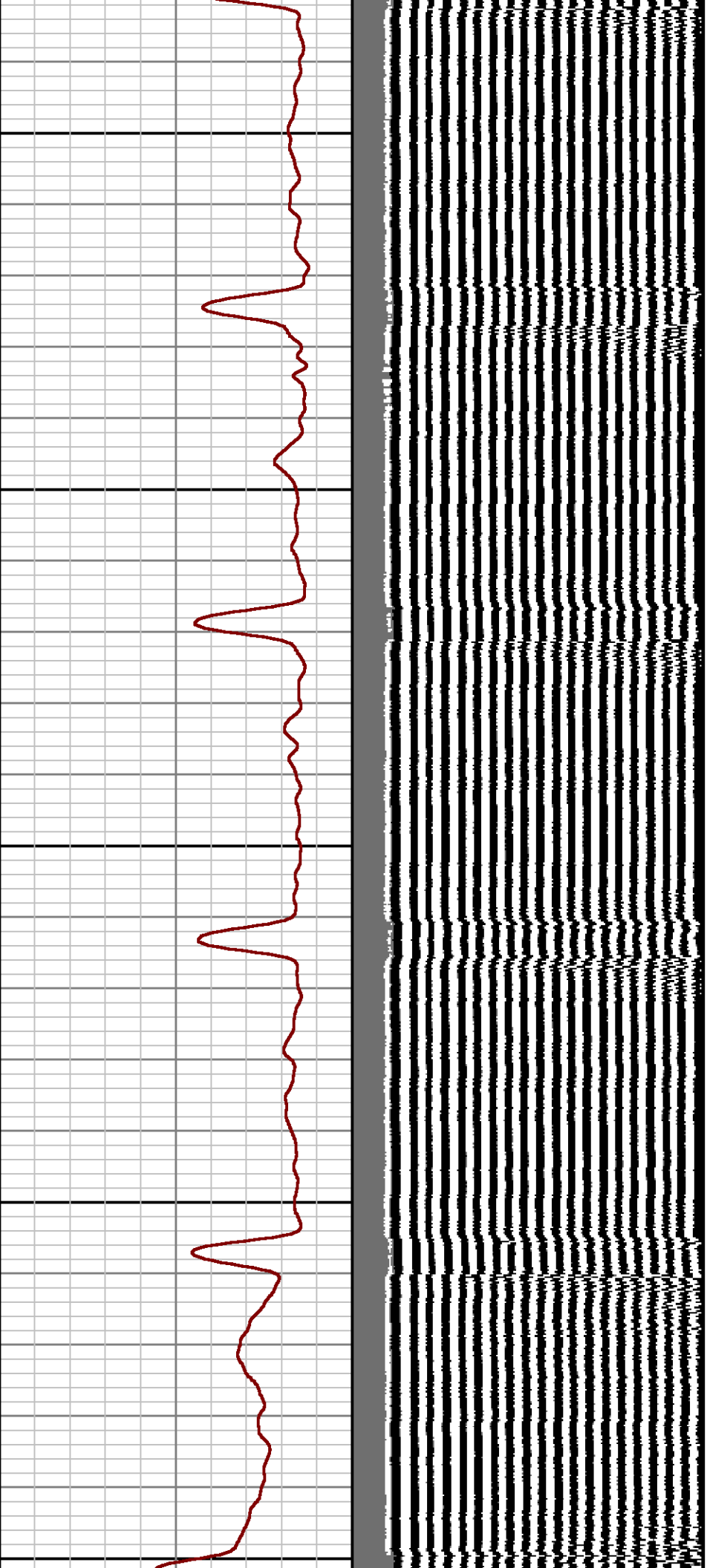
DEPTH OFFSETS

(for Acquired Curves)

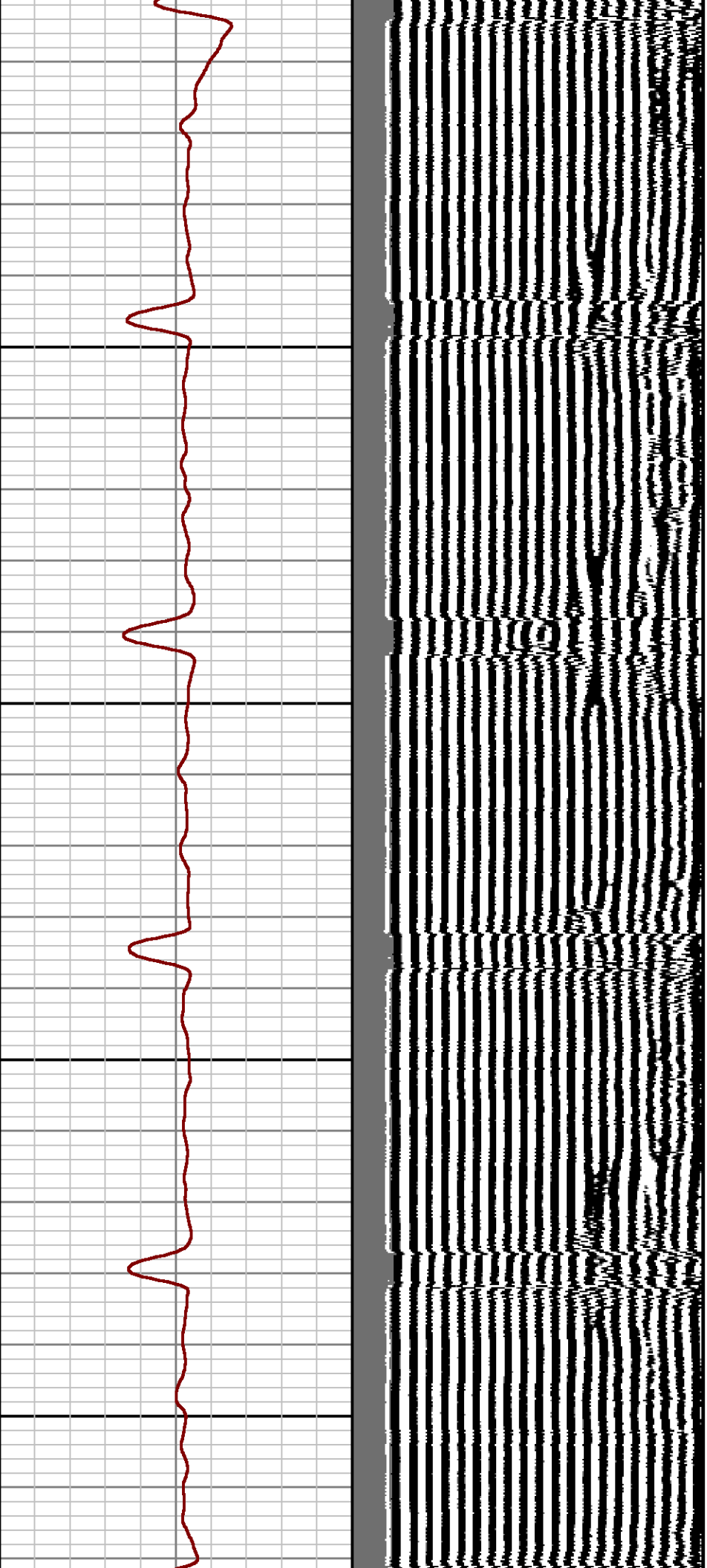
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					



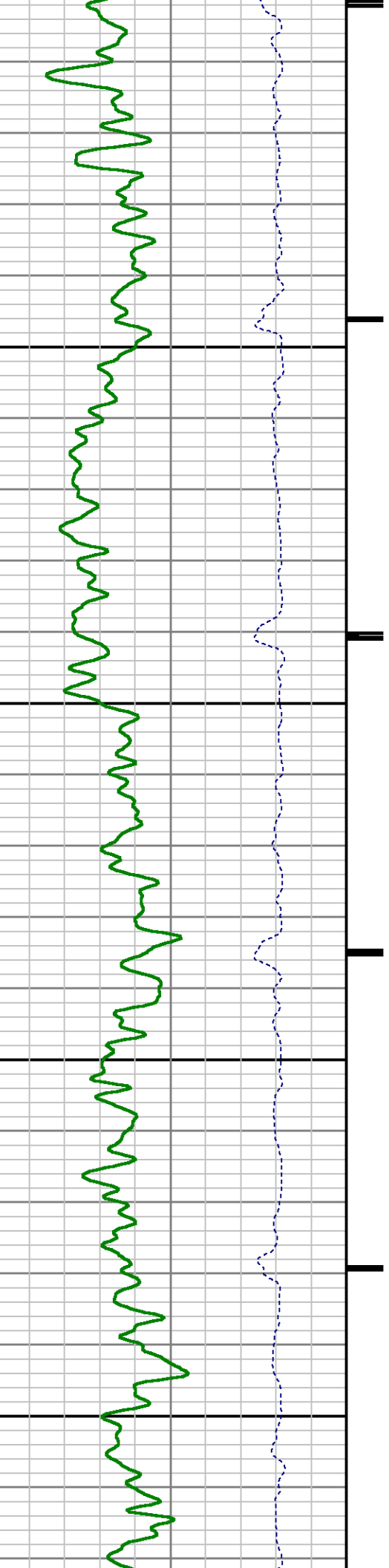


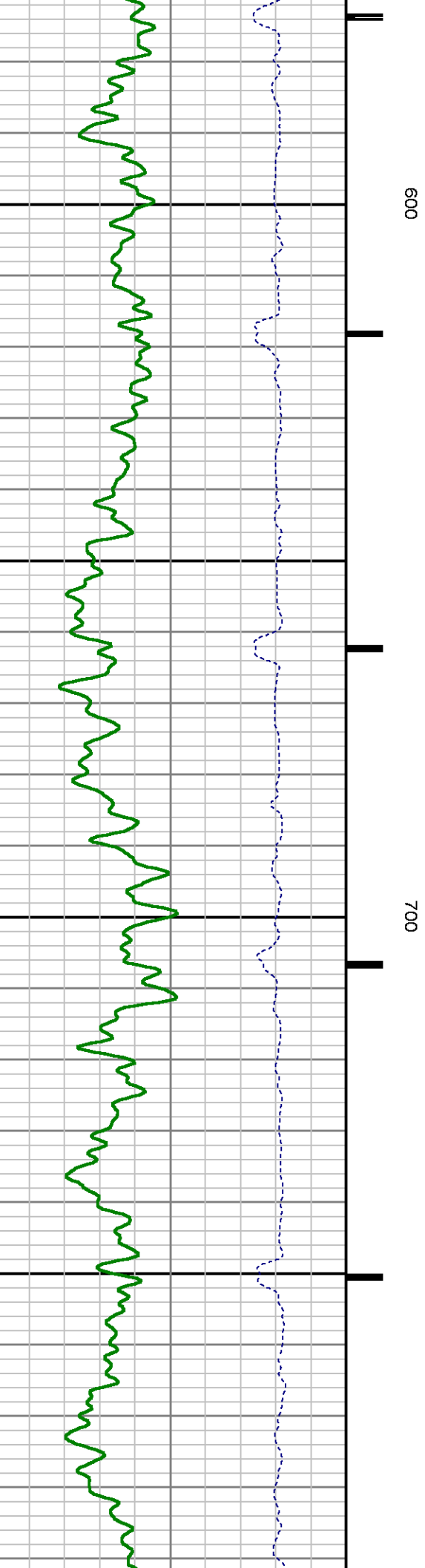
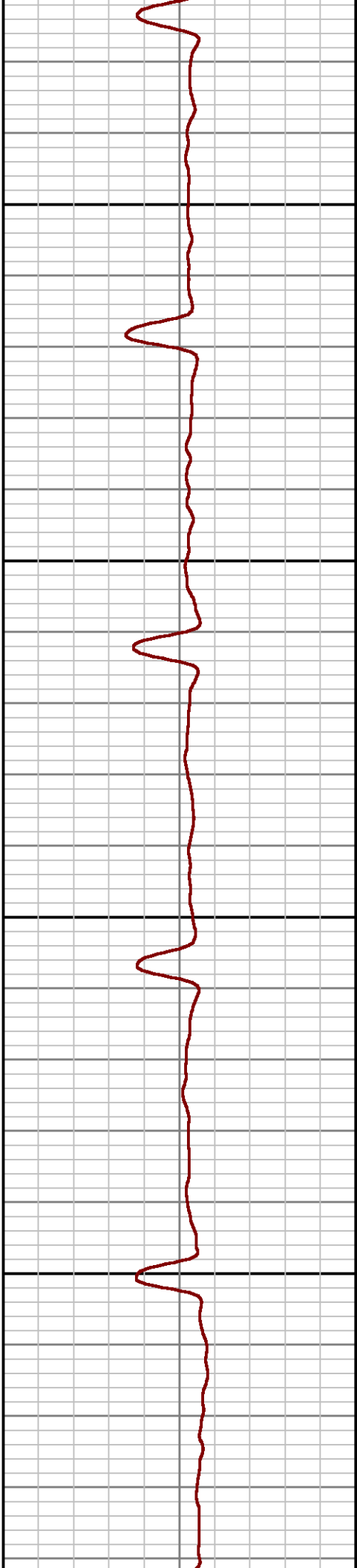
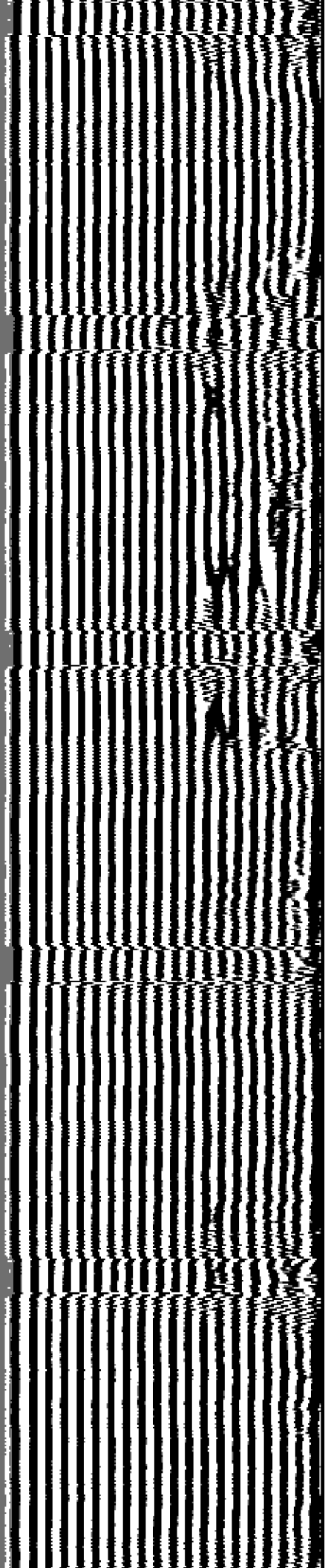


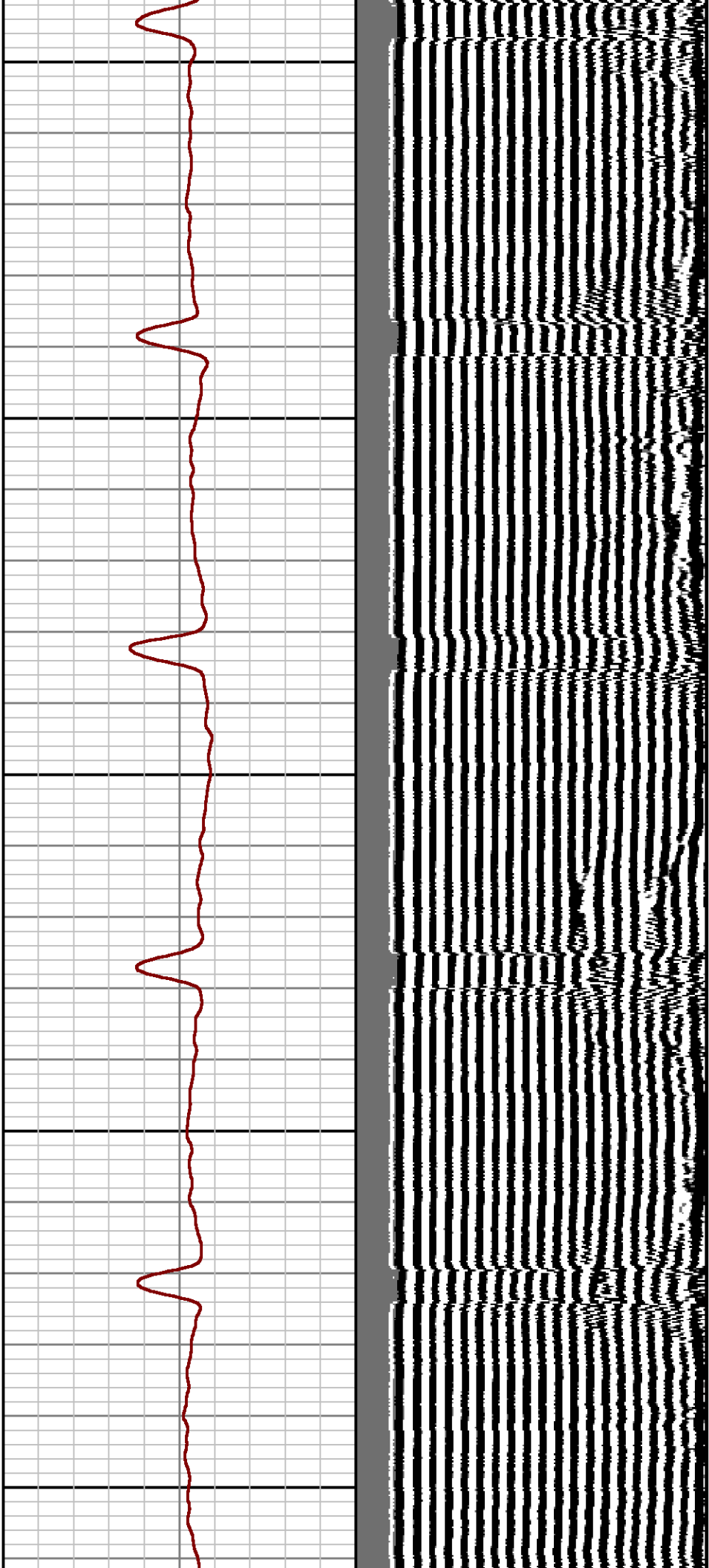


400

500



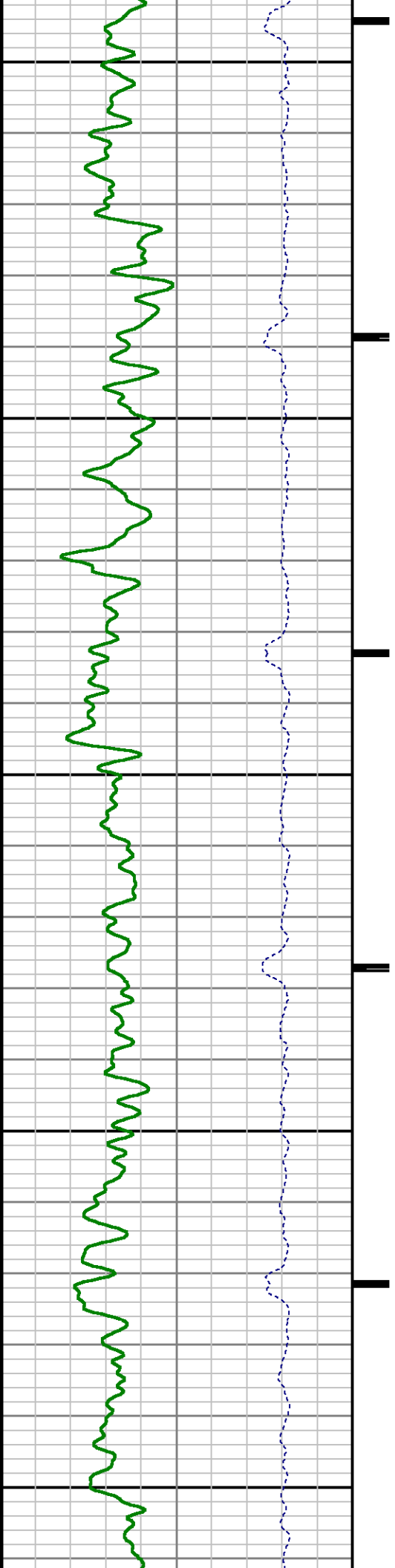


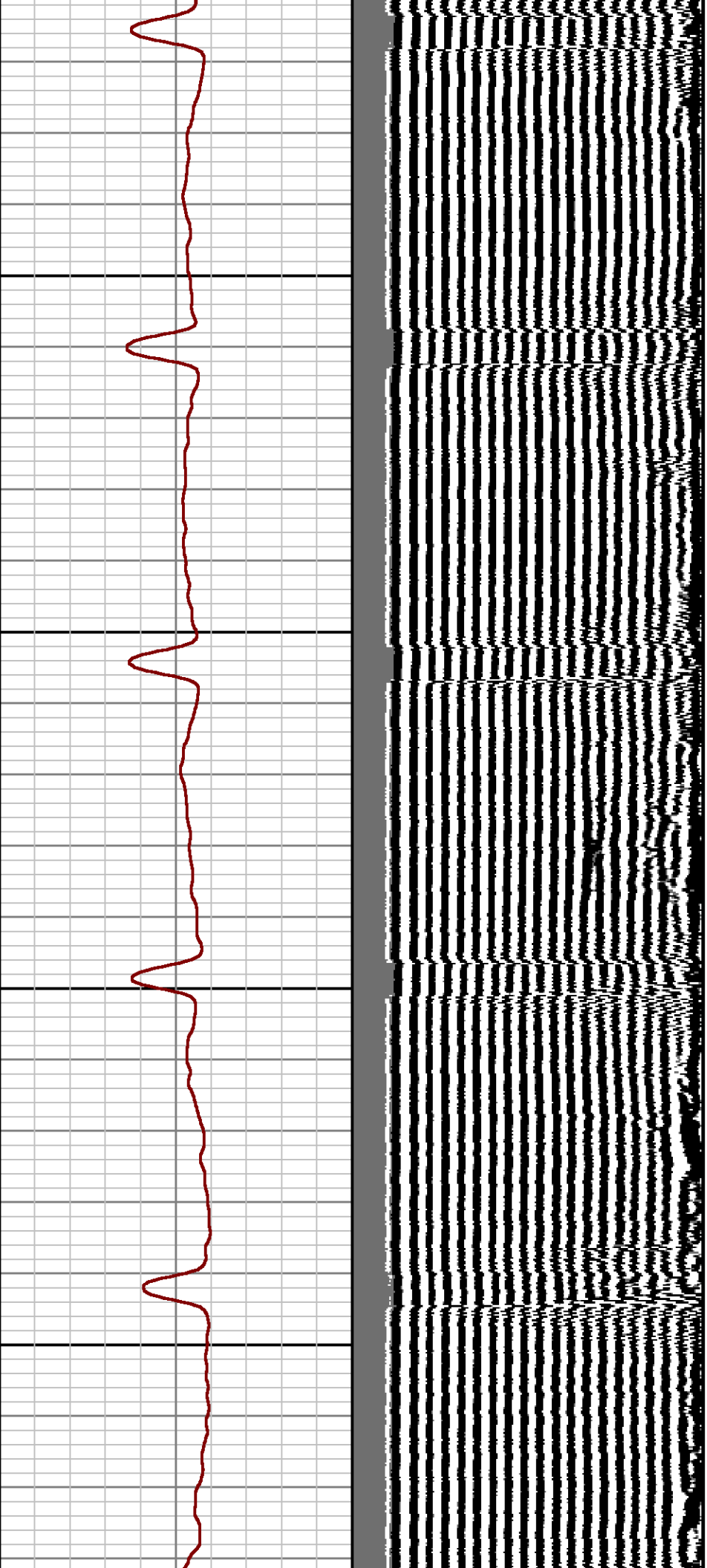


800

900

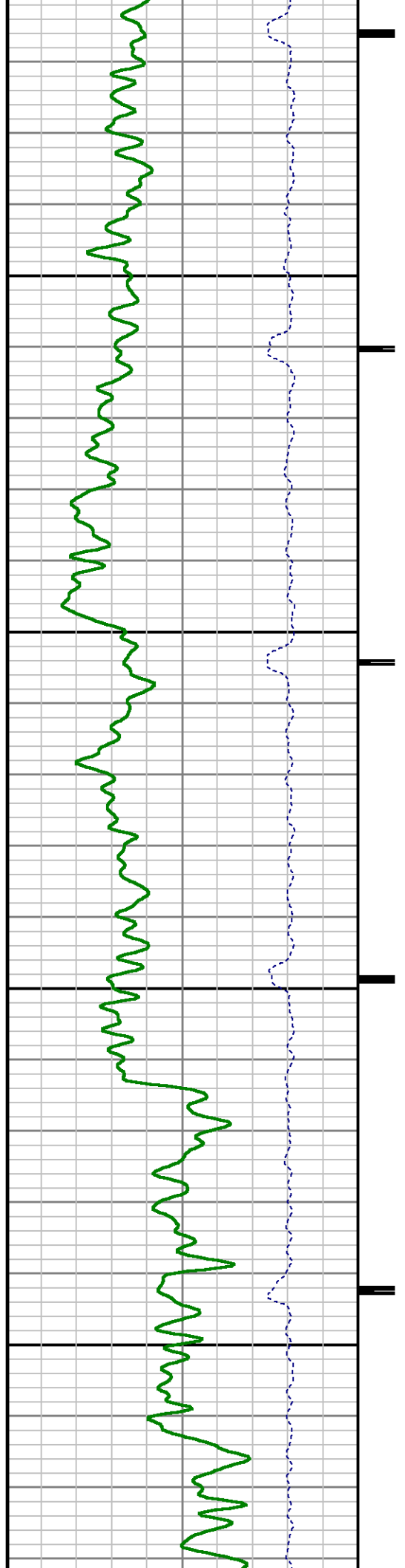
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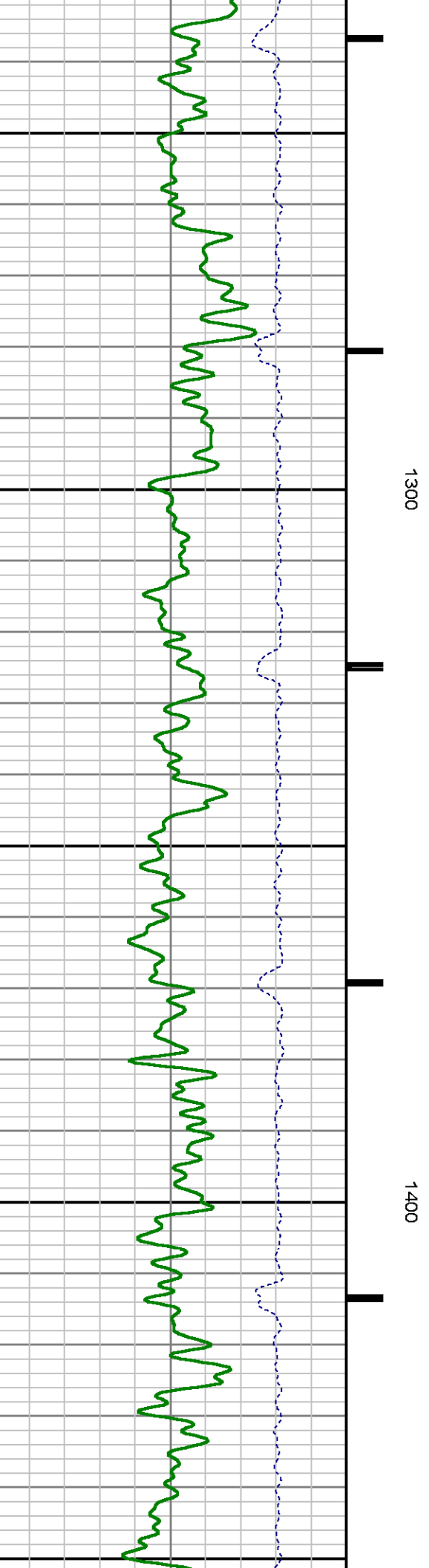
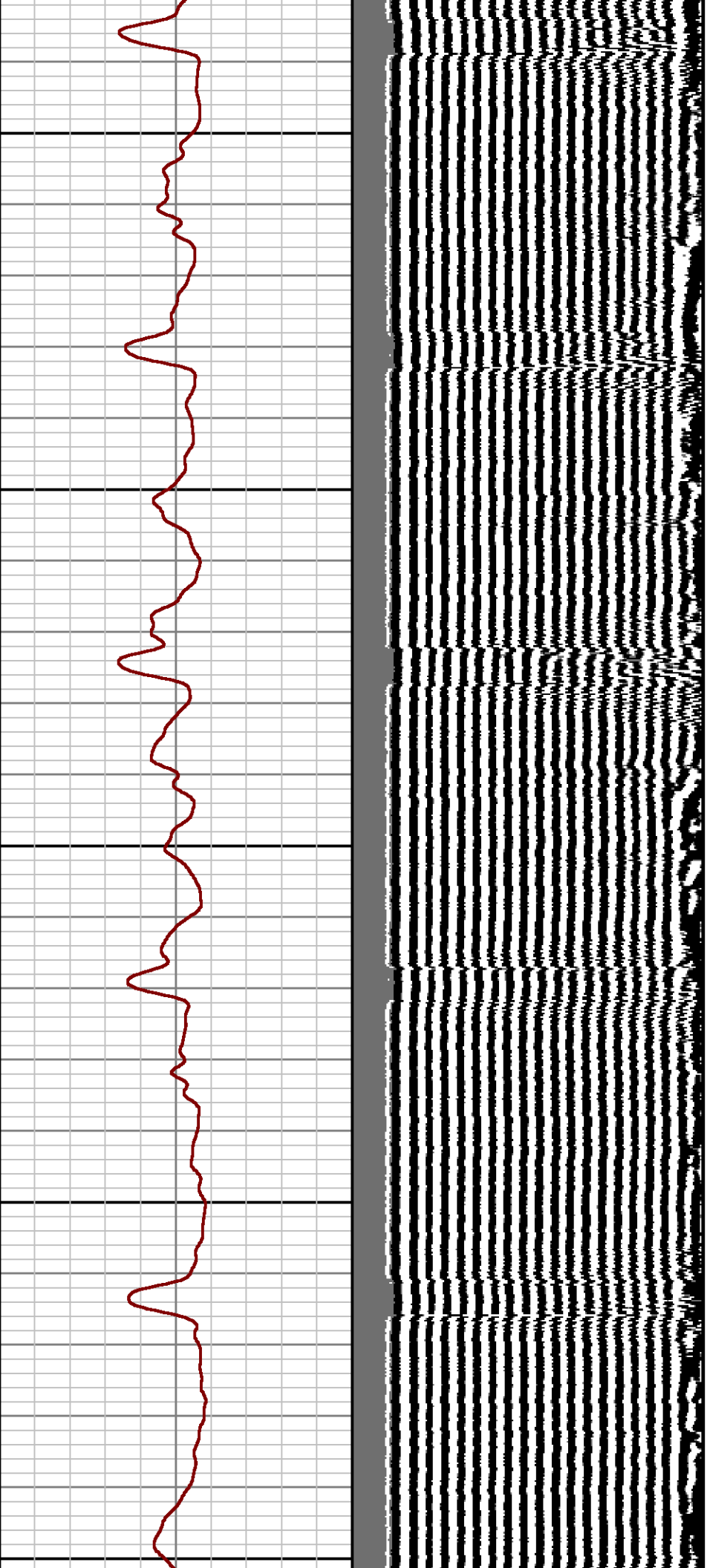


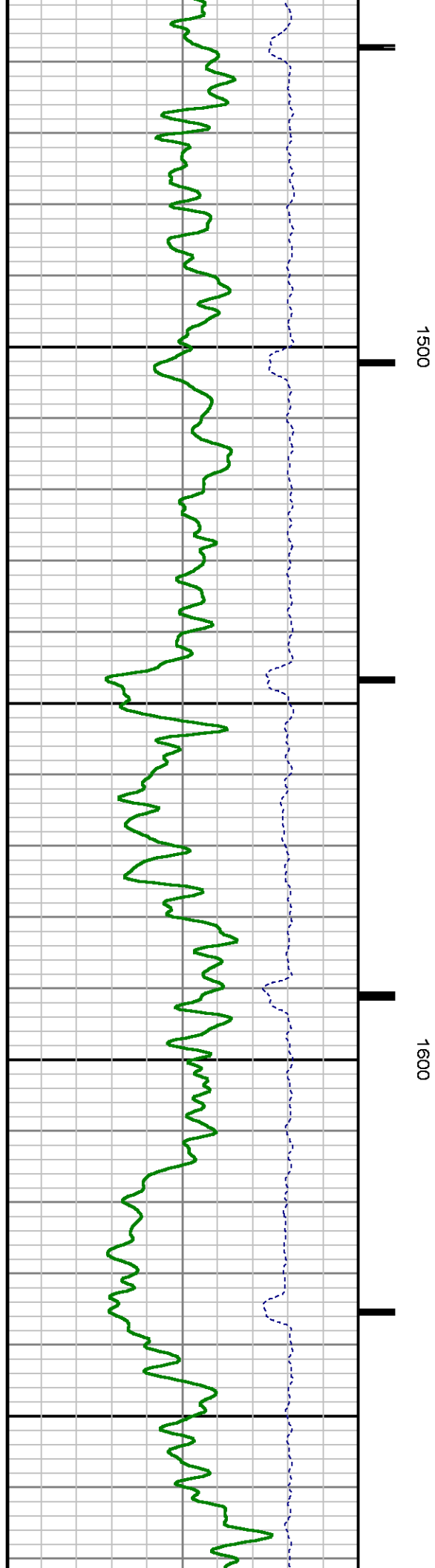
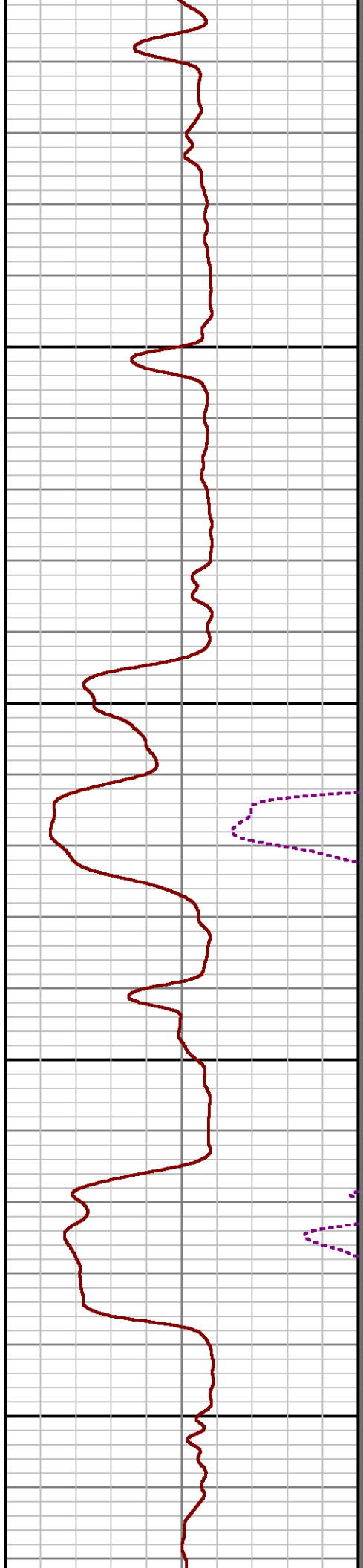
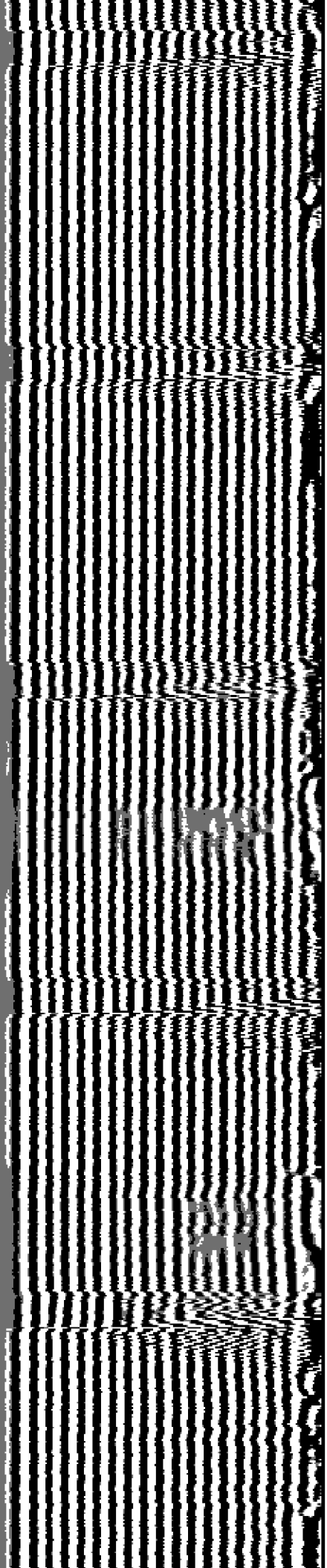


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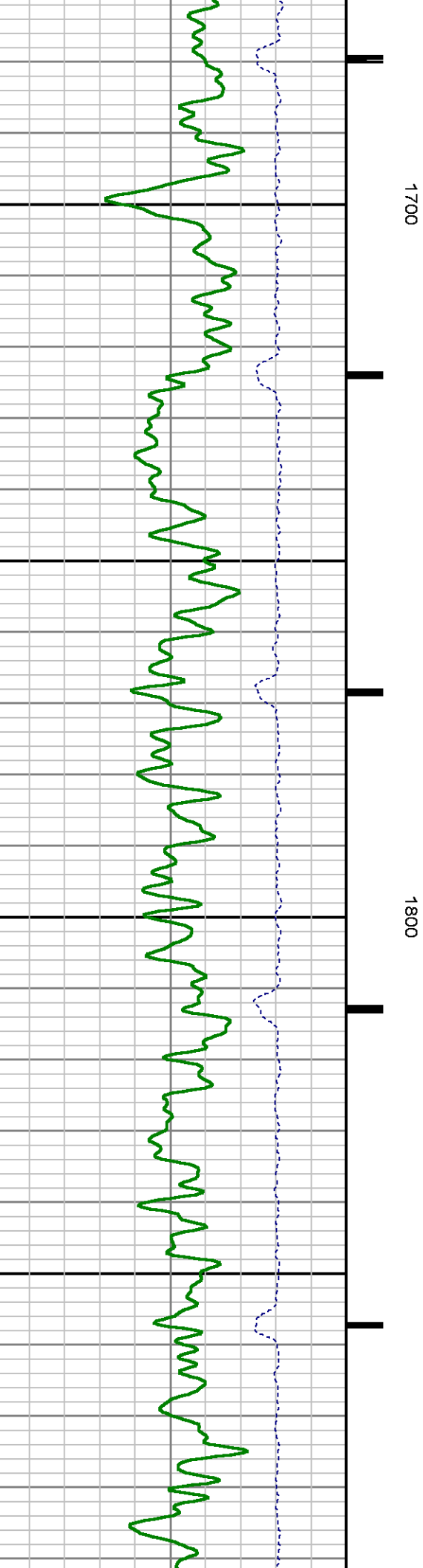
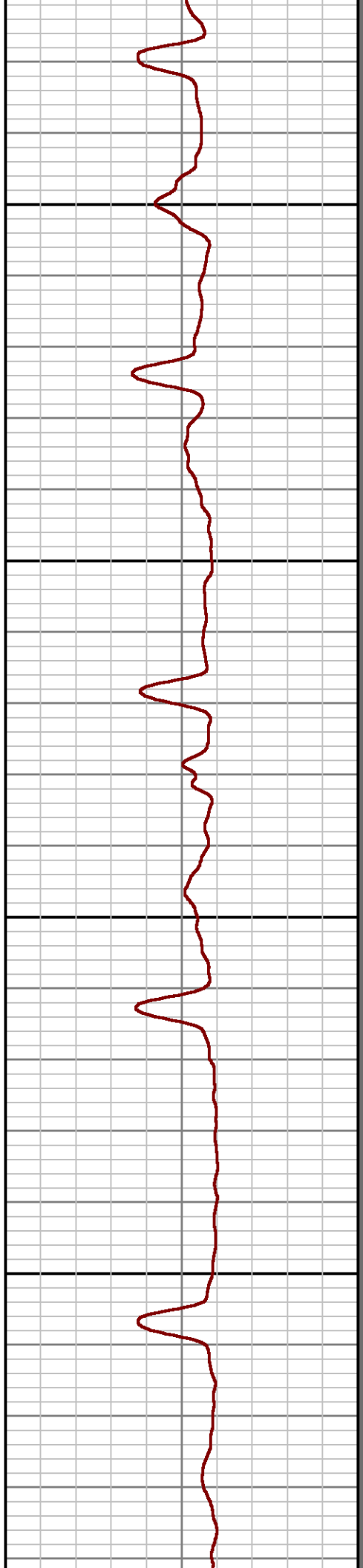
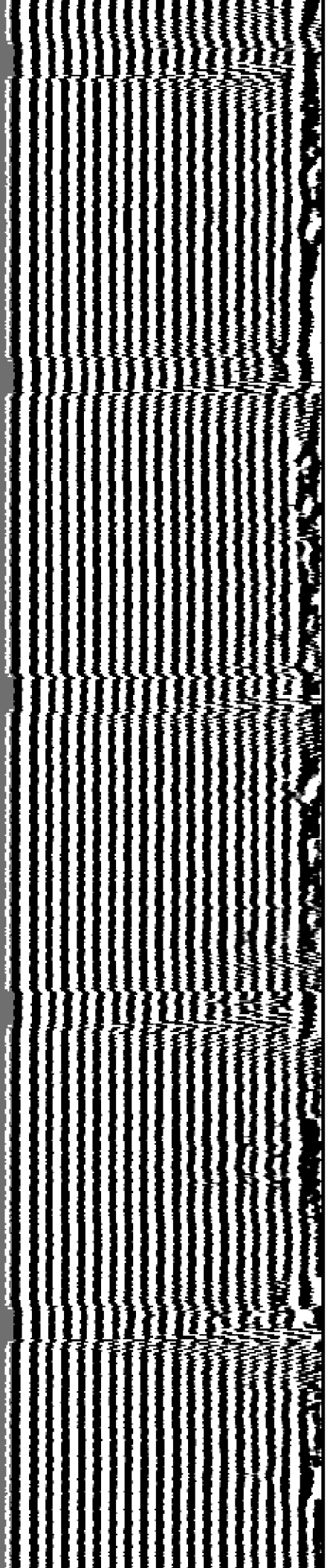
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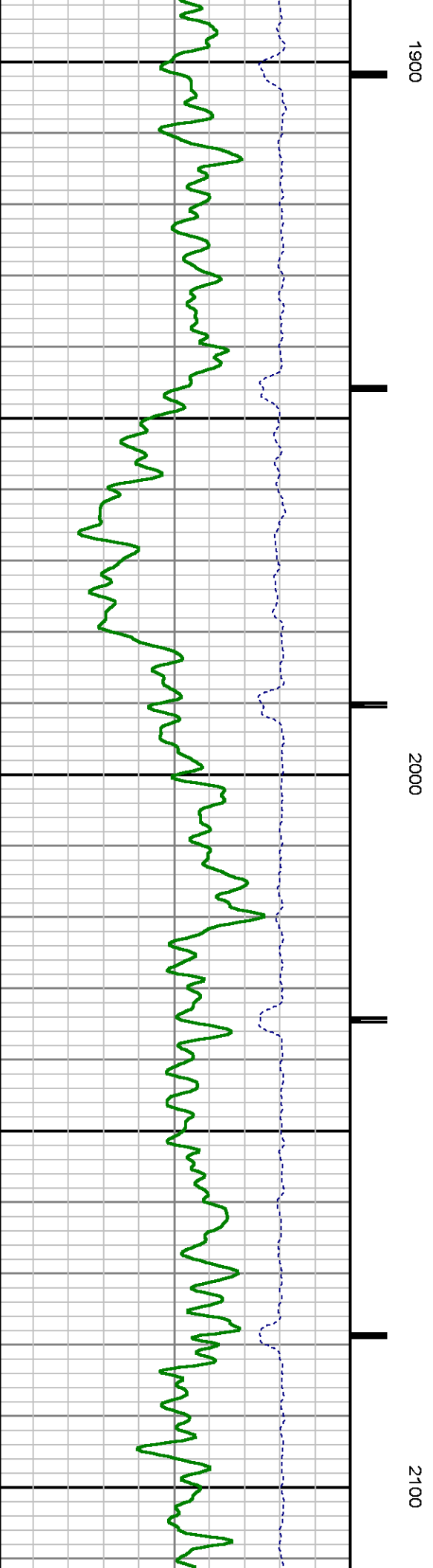
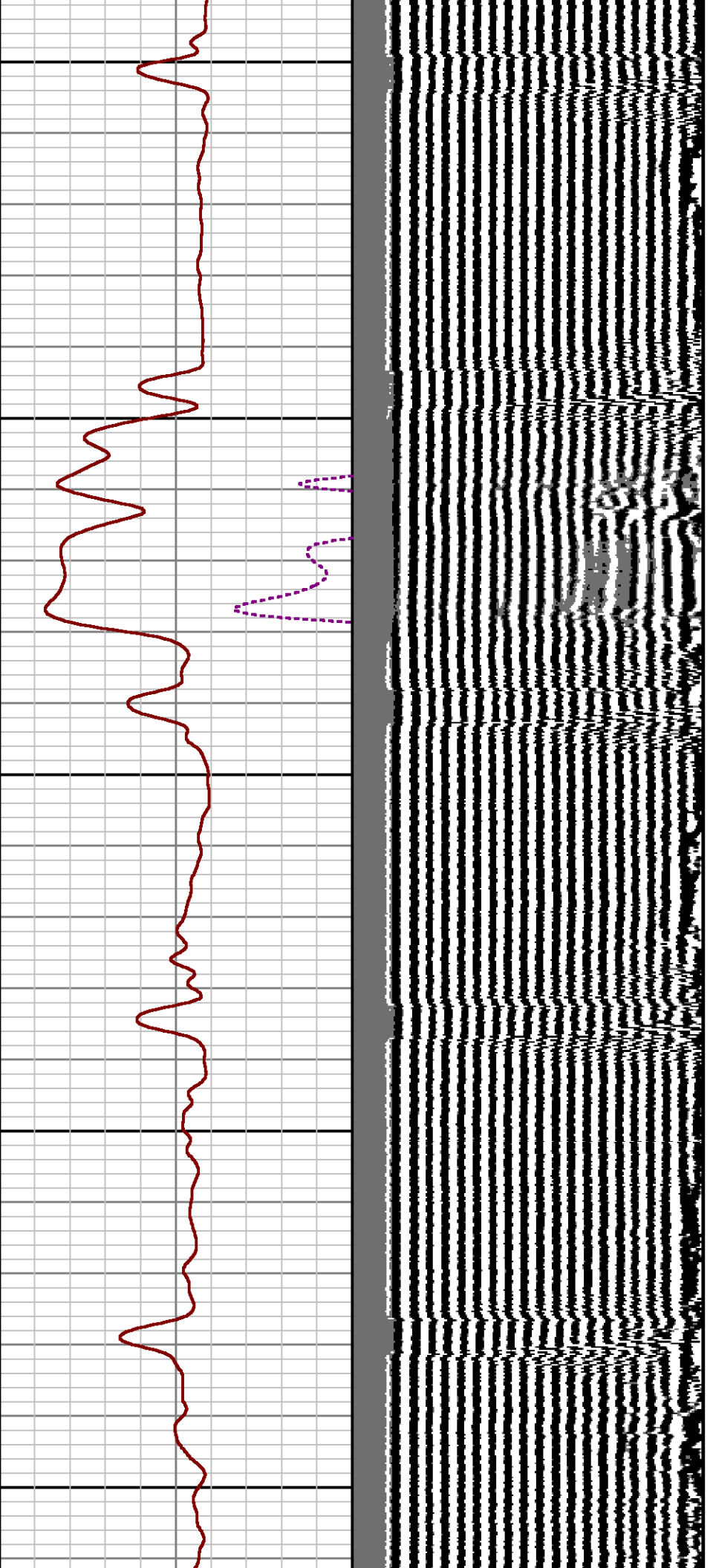




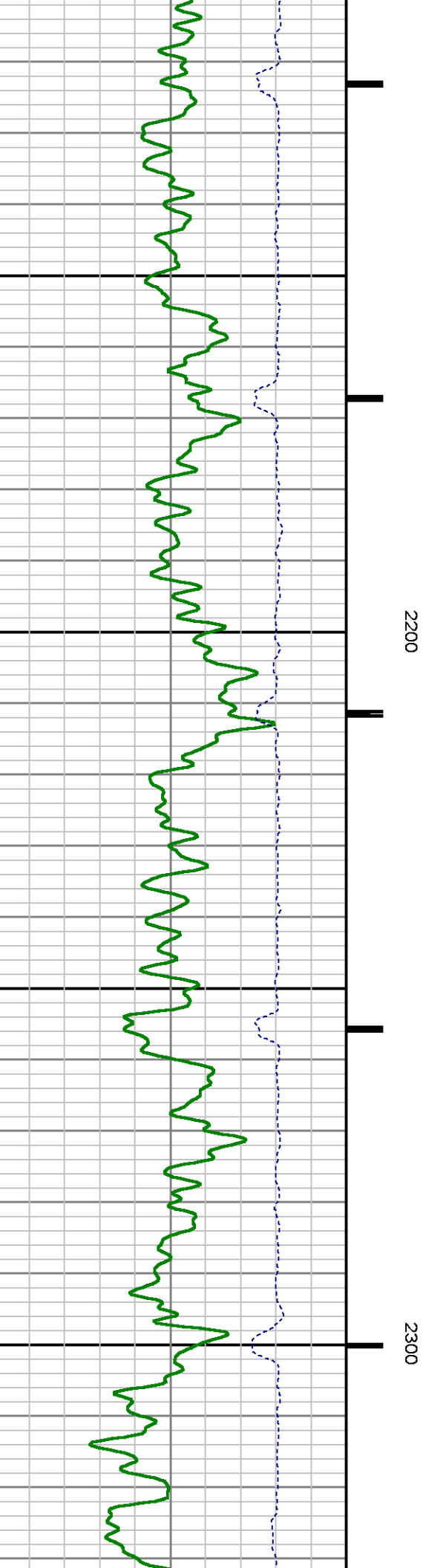
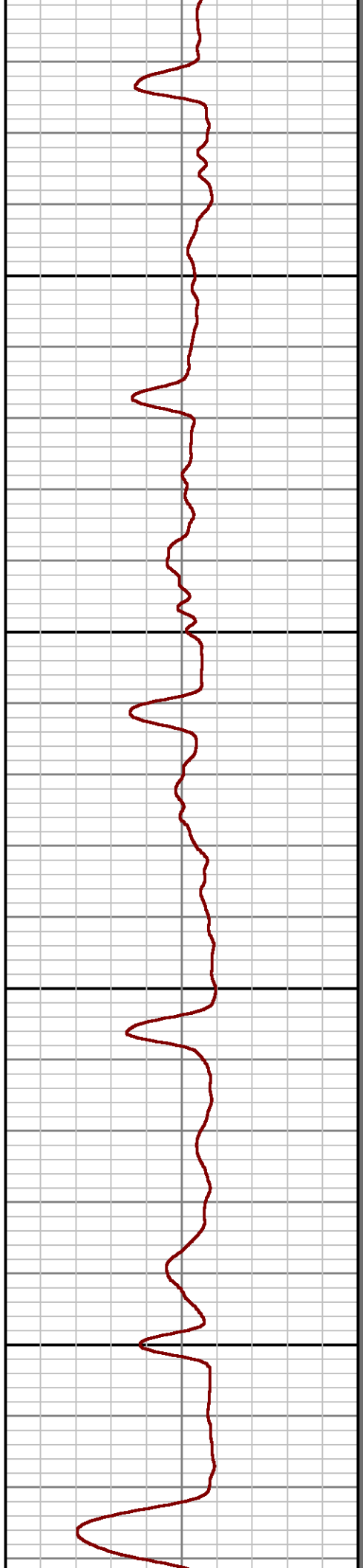
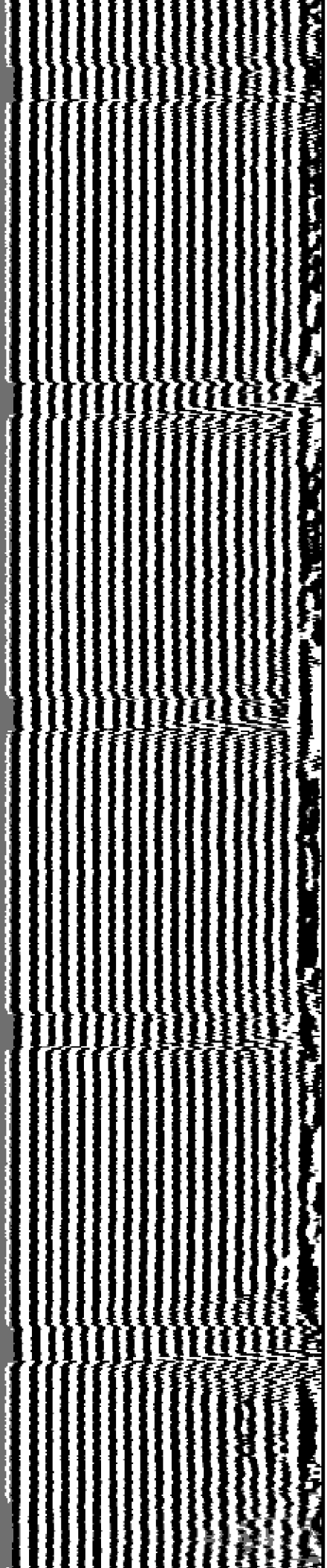


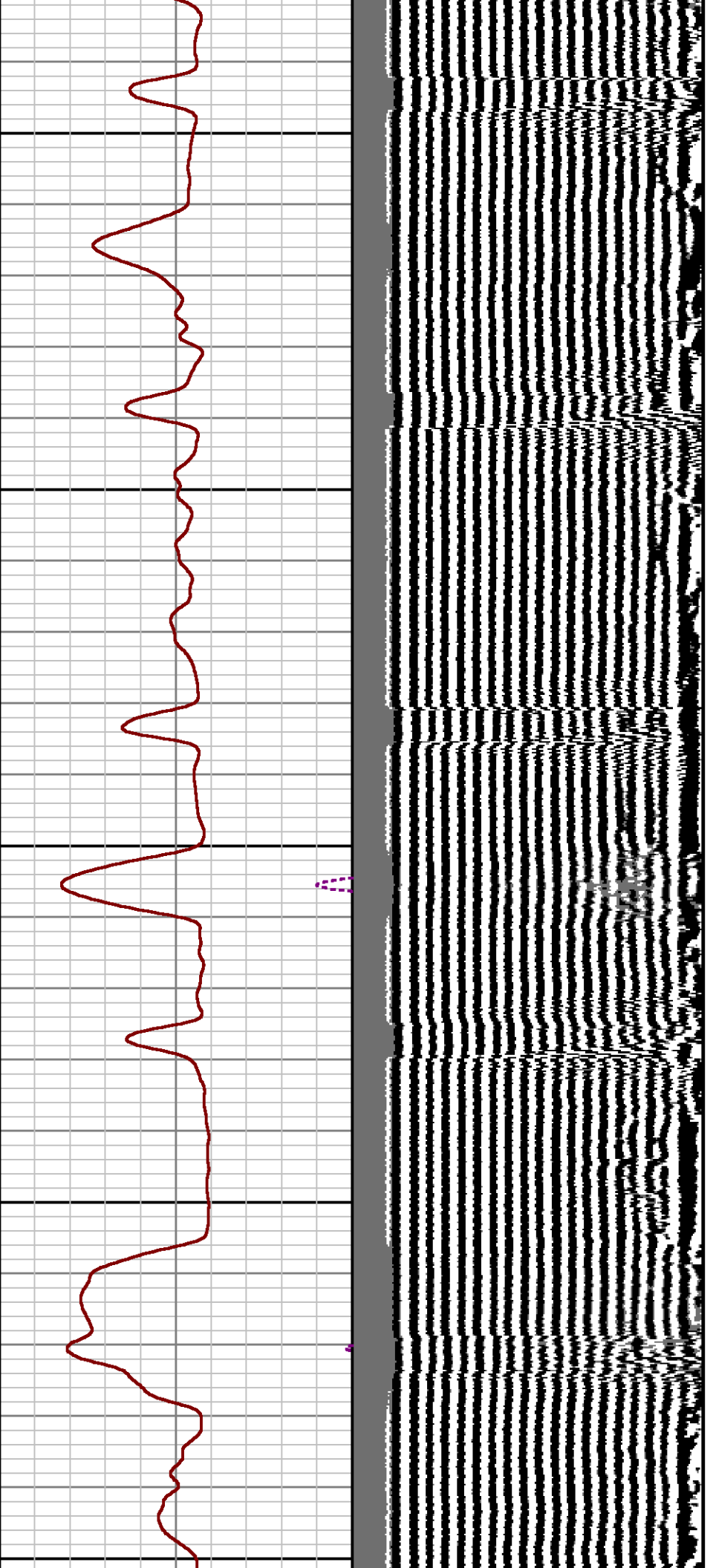






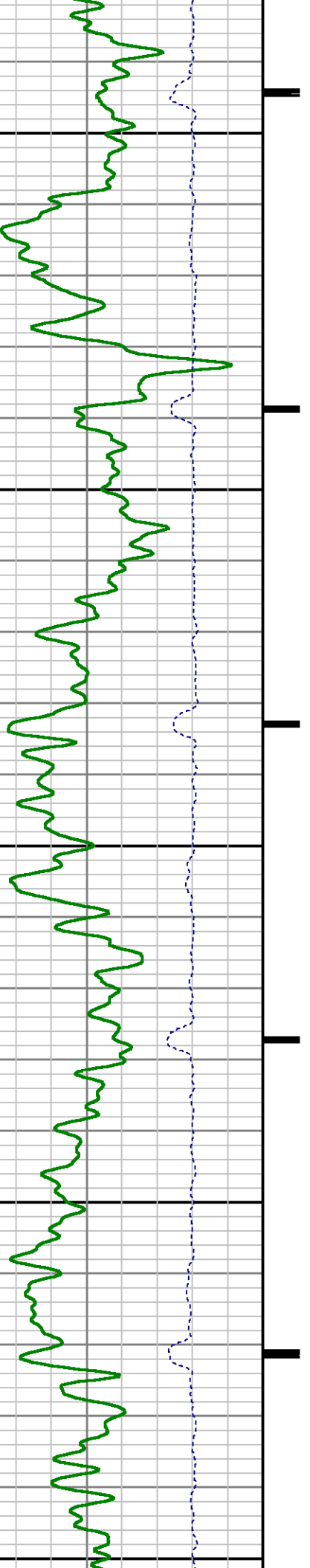


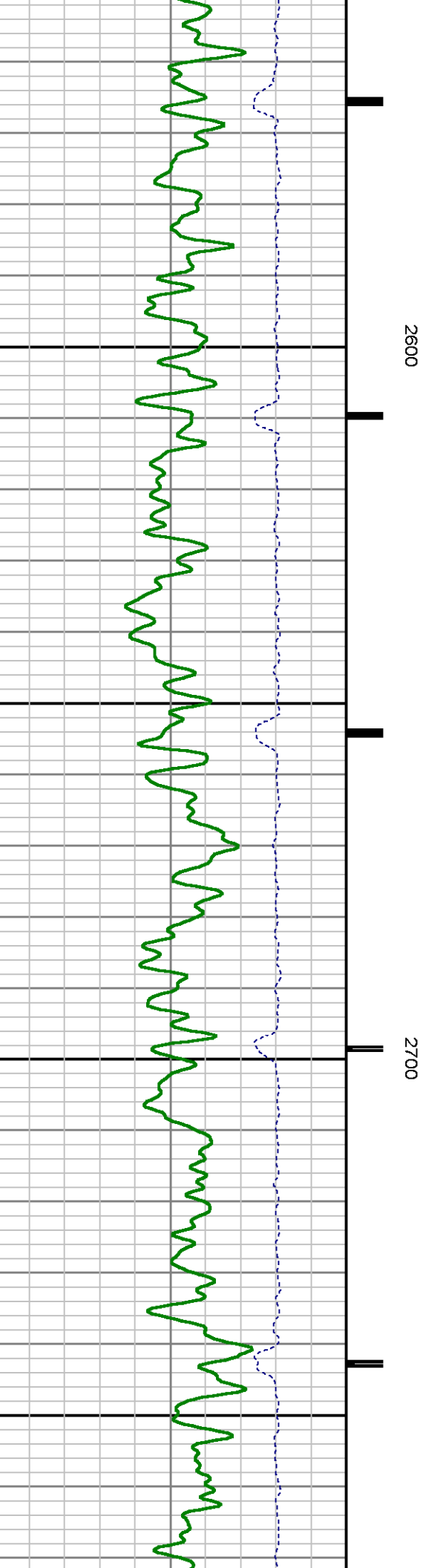
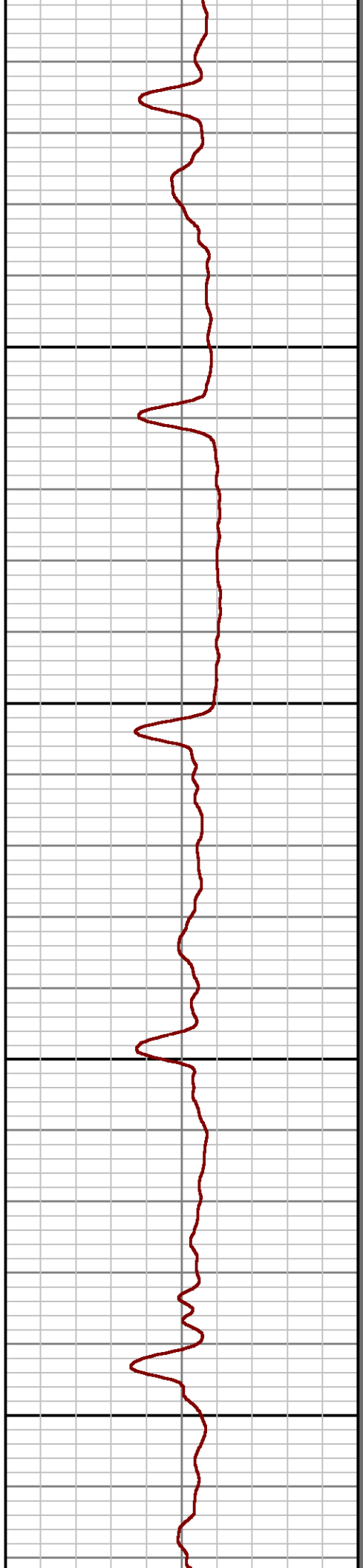
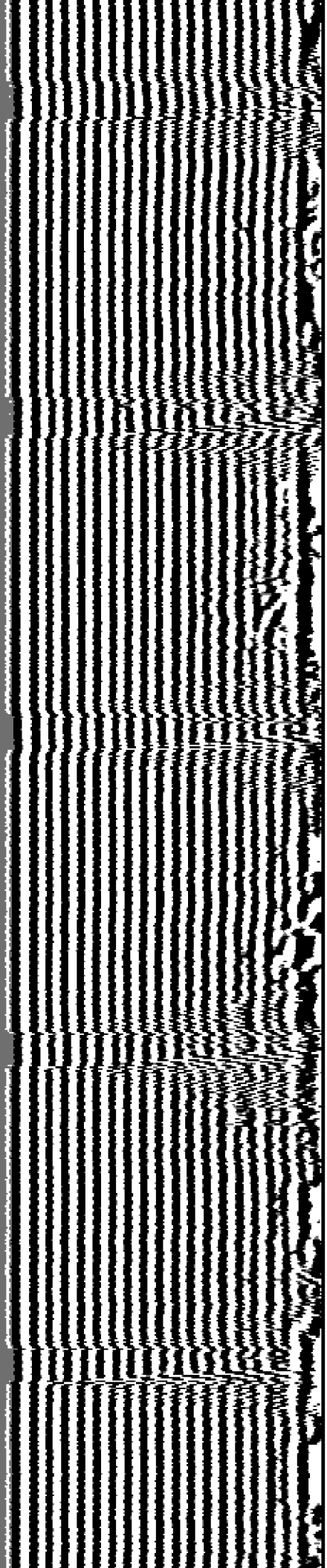


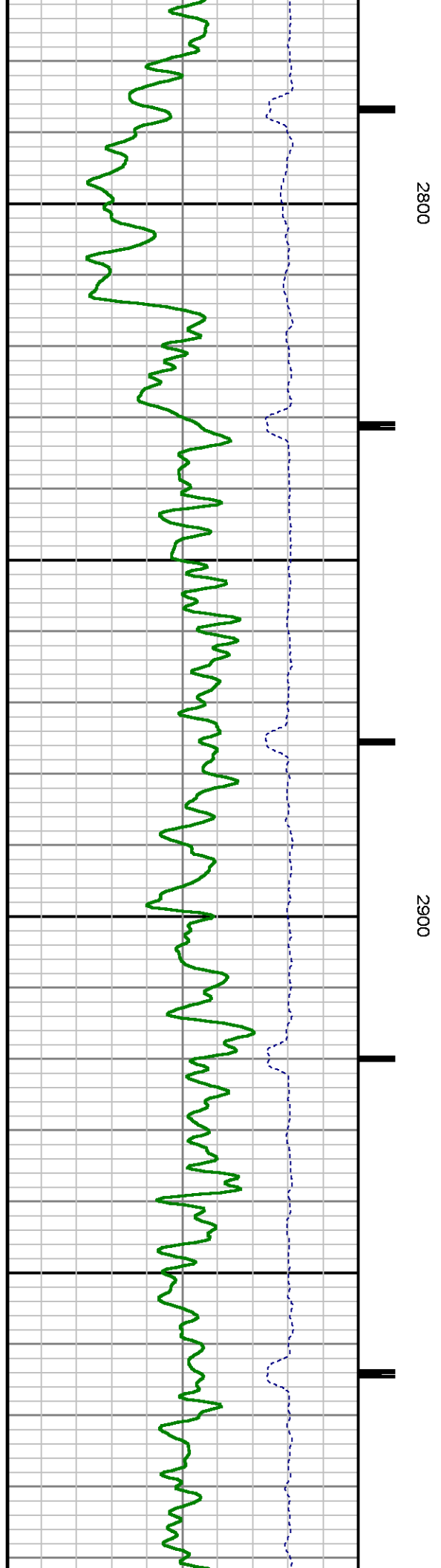
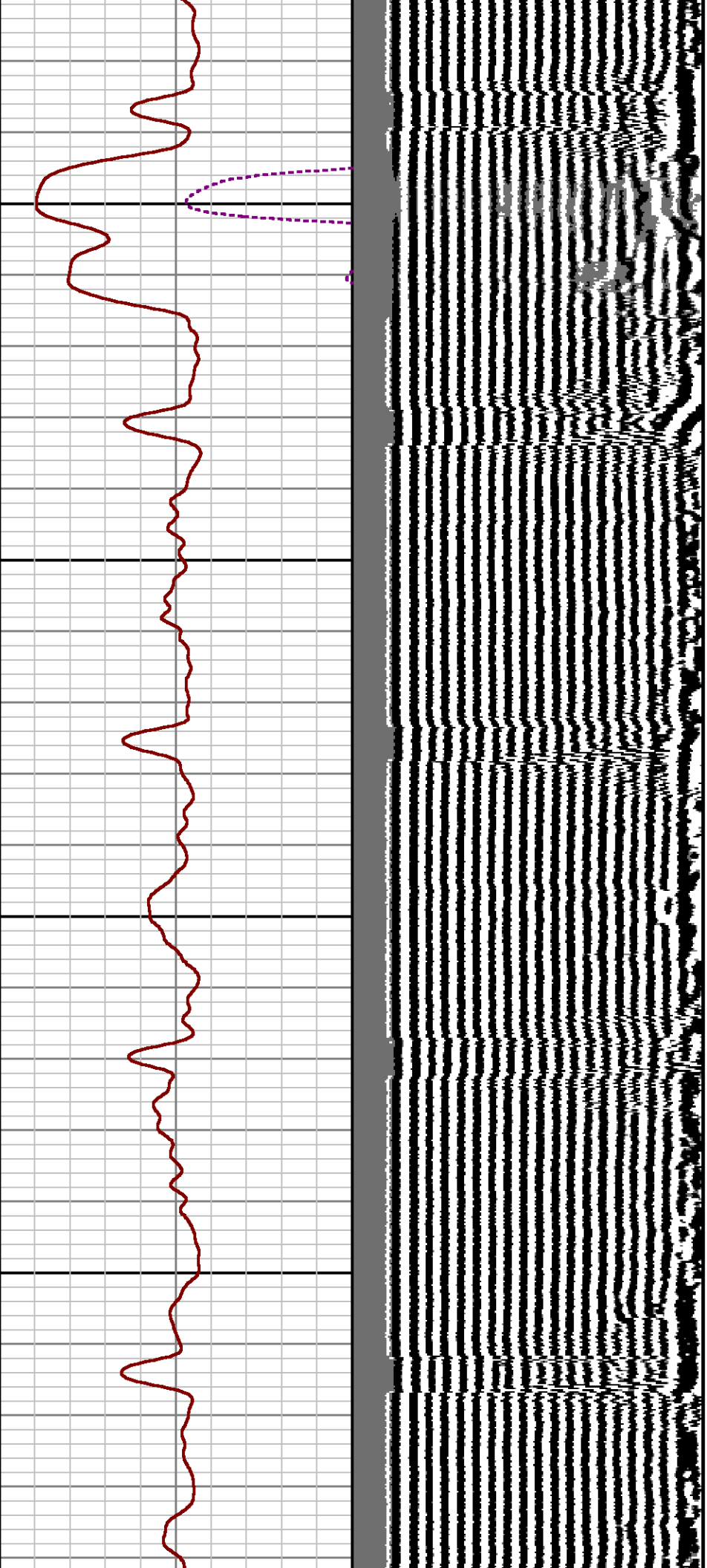


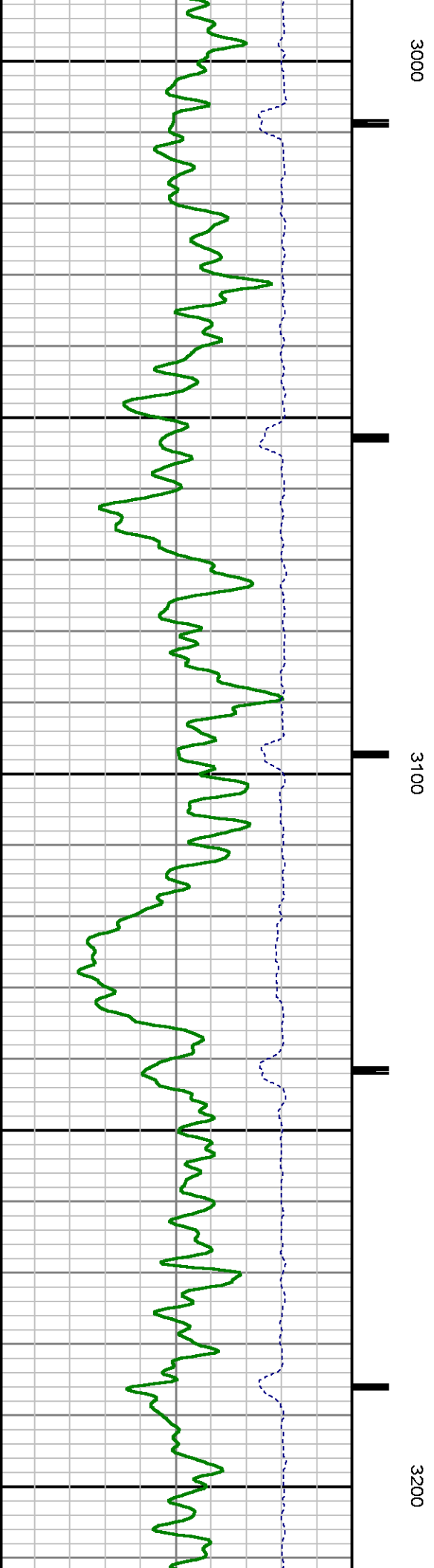
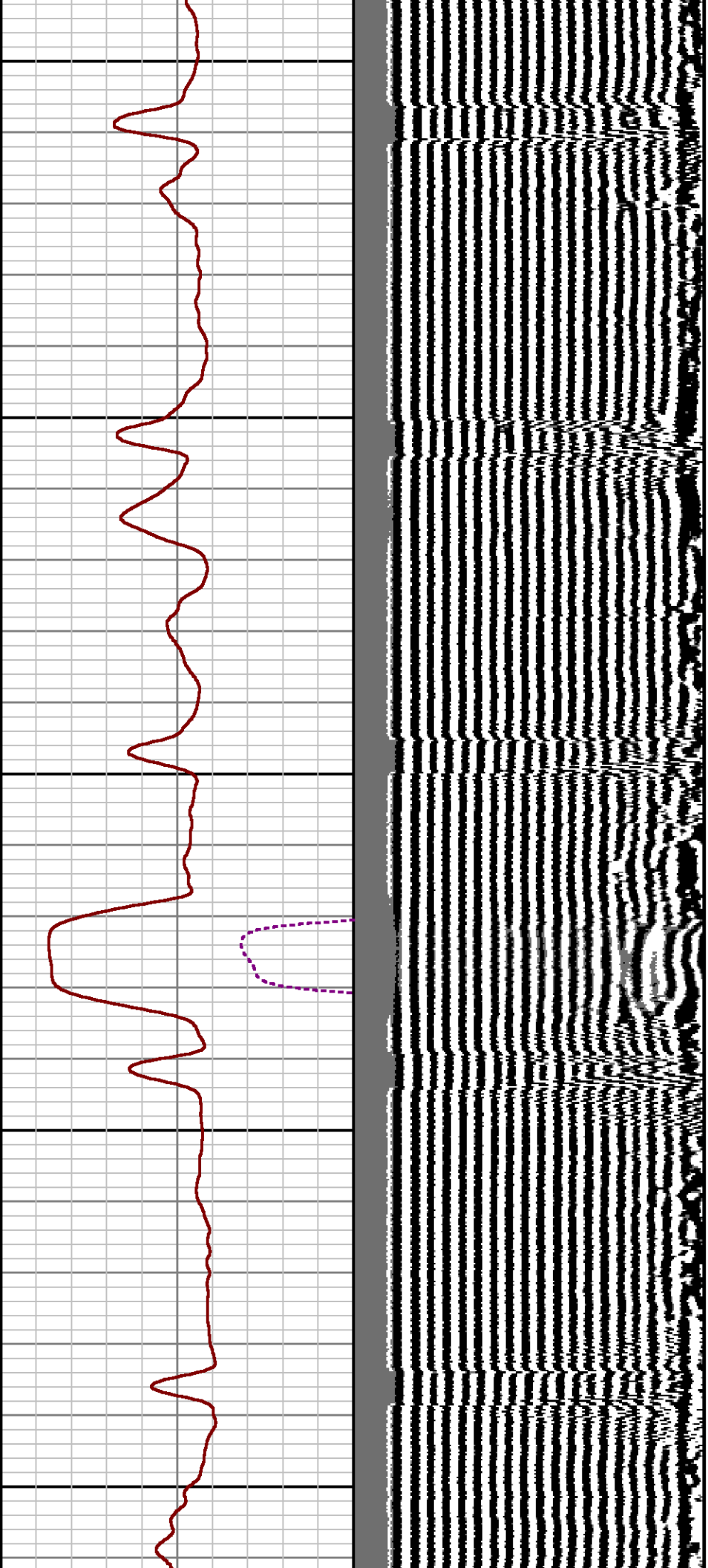
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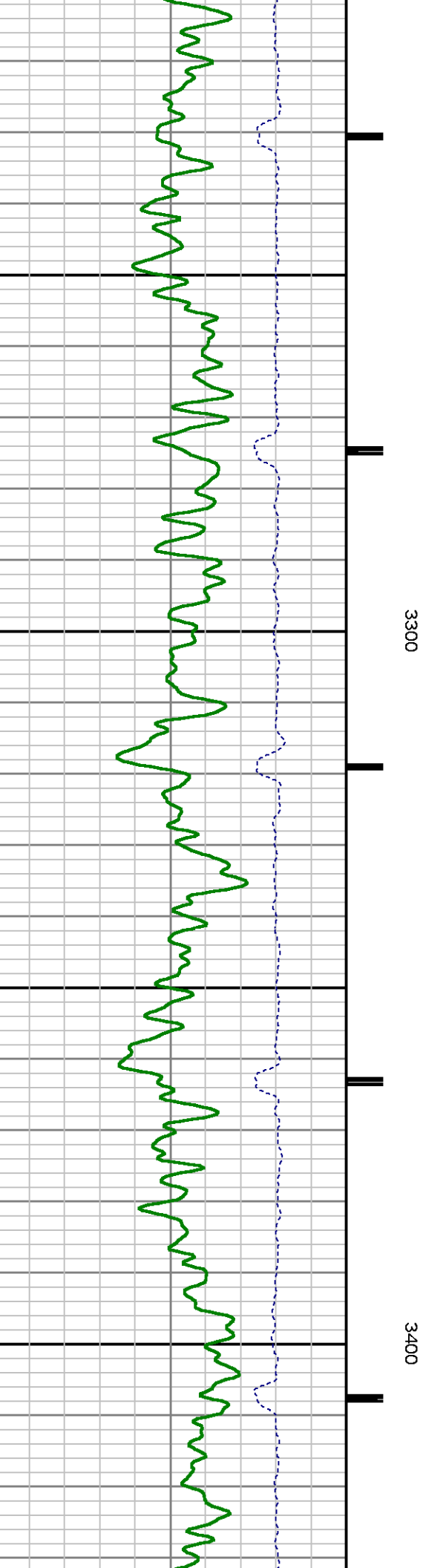
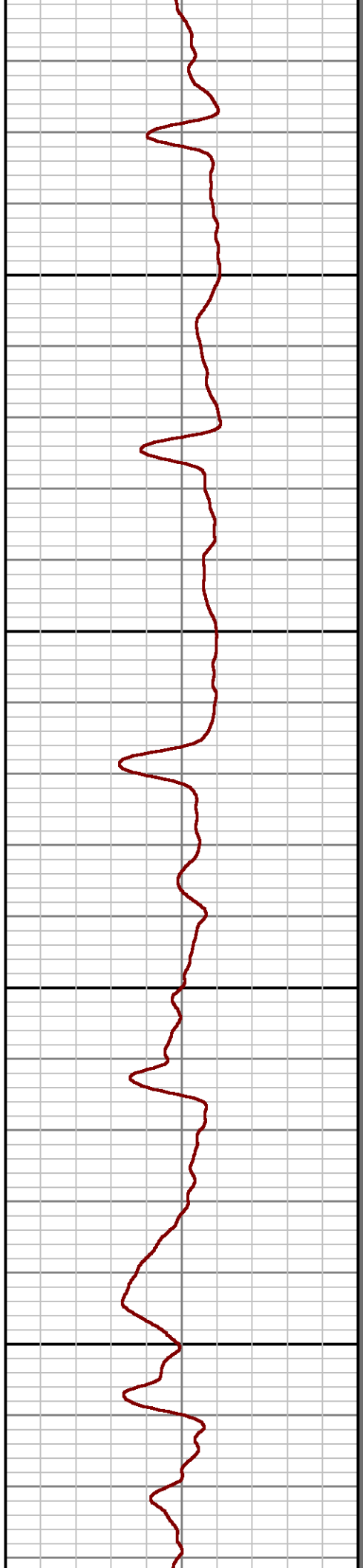
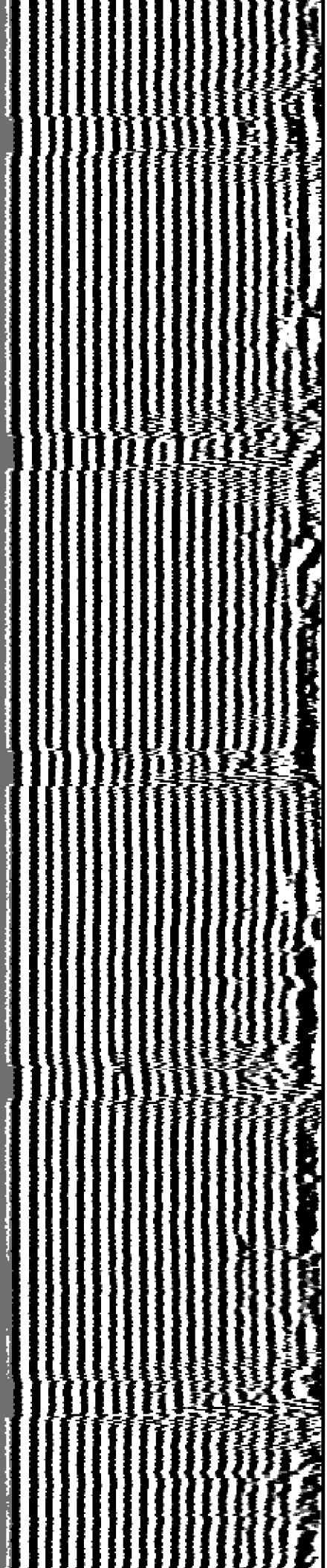
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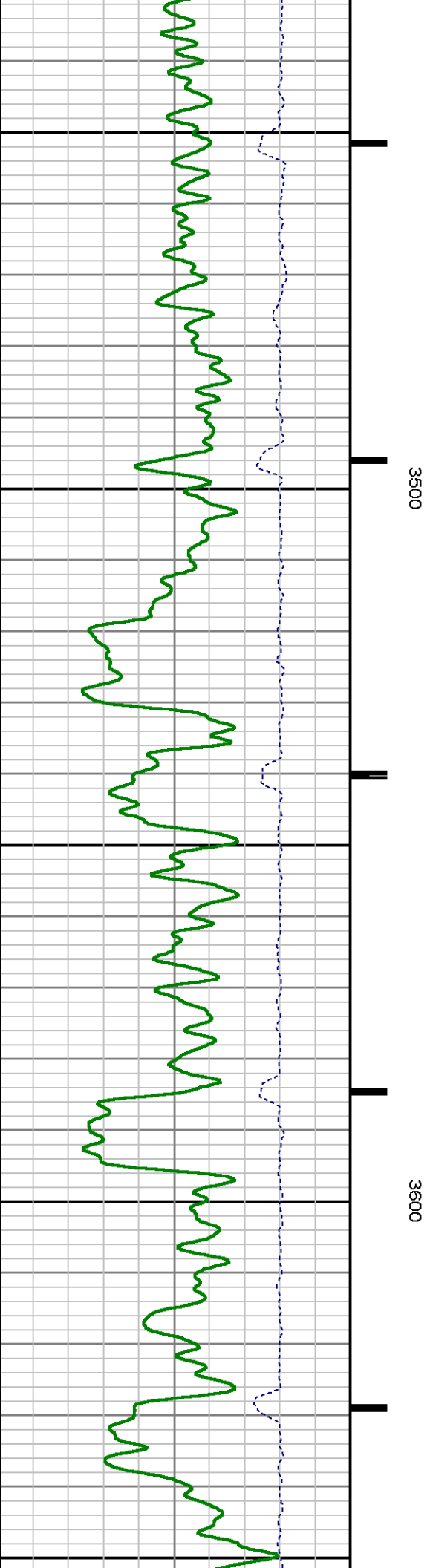
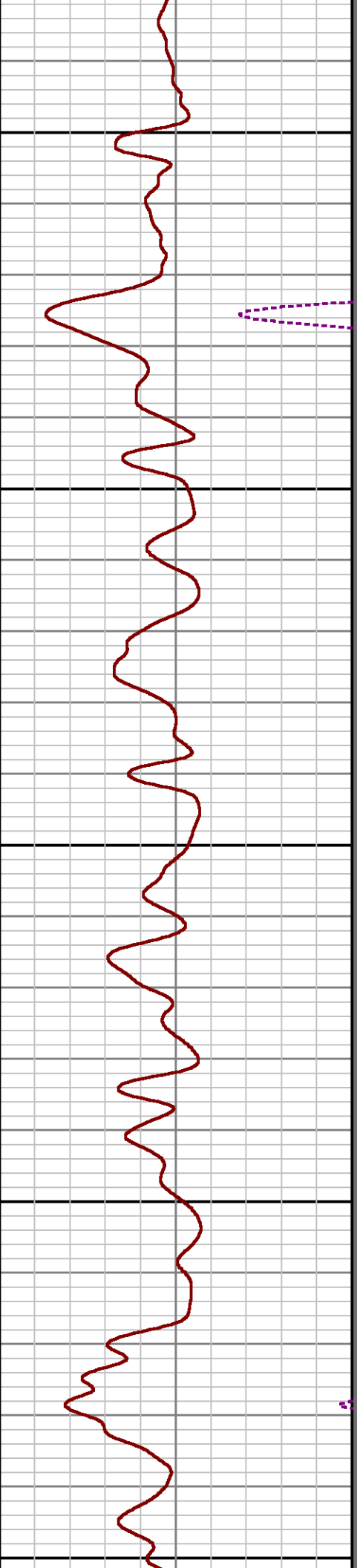
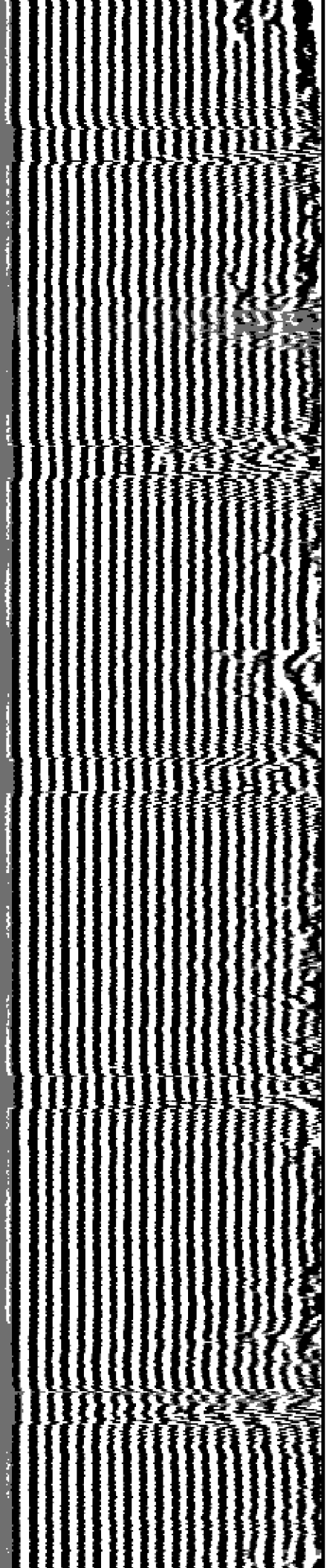


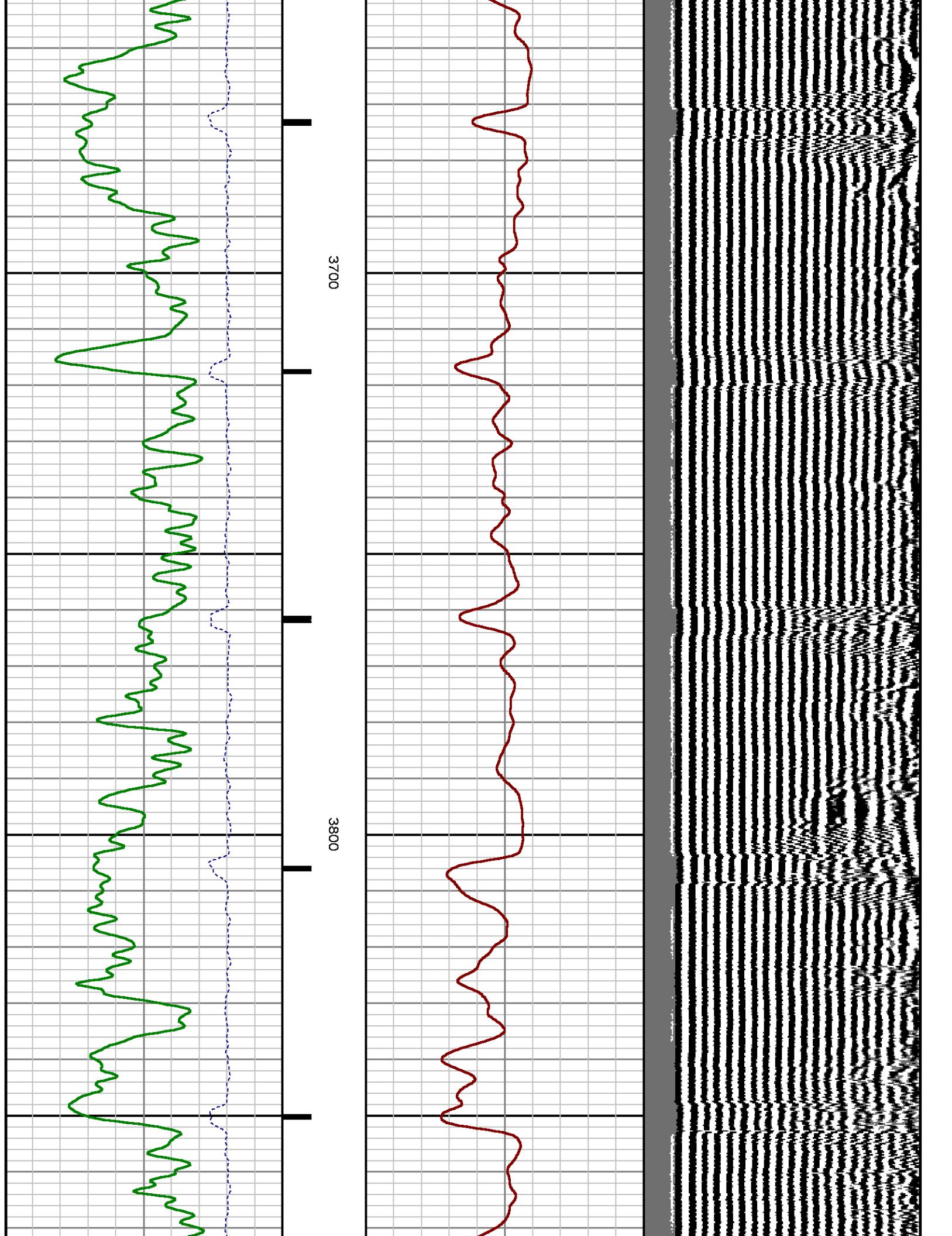




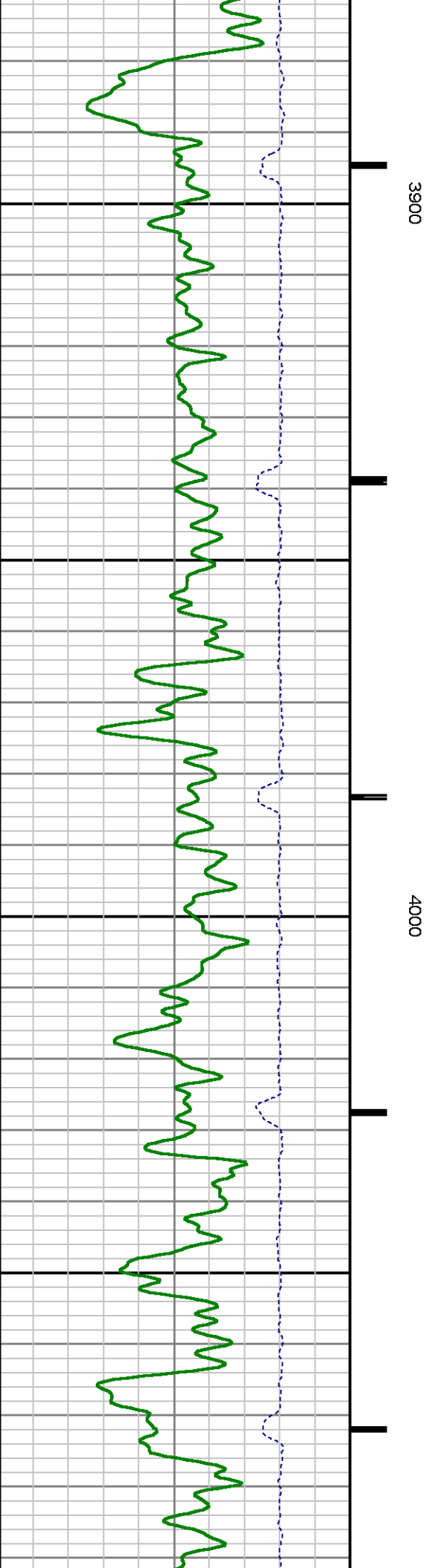
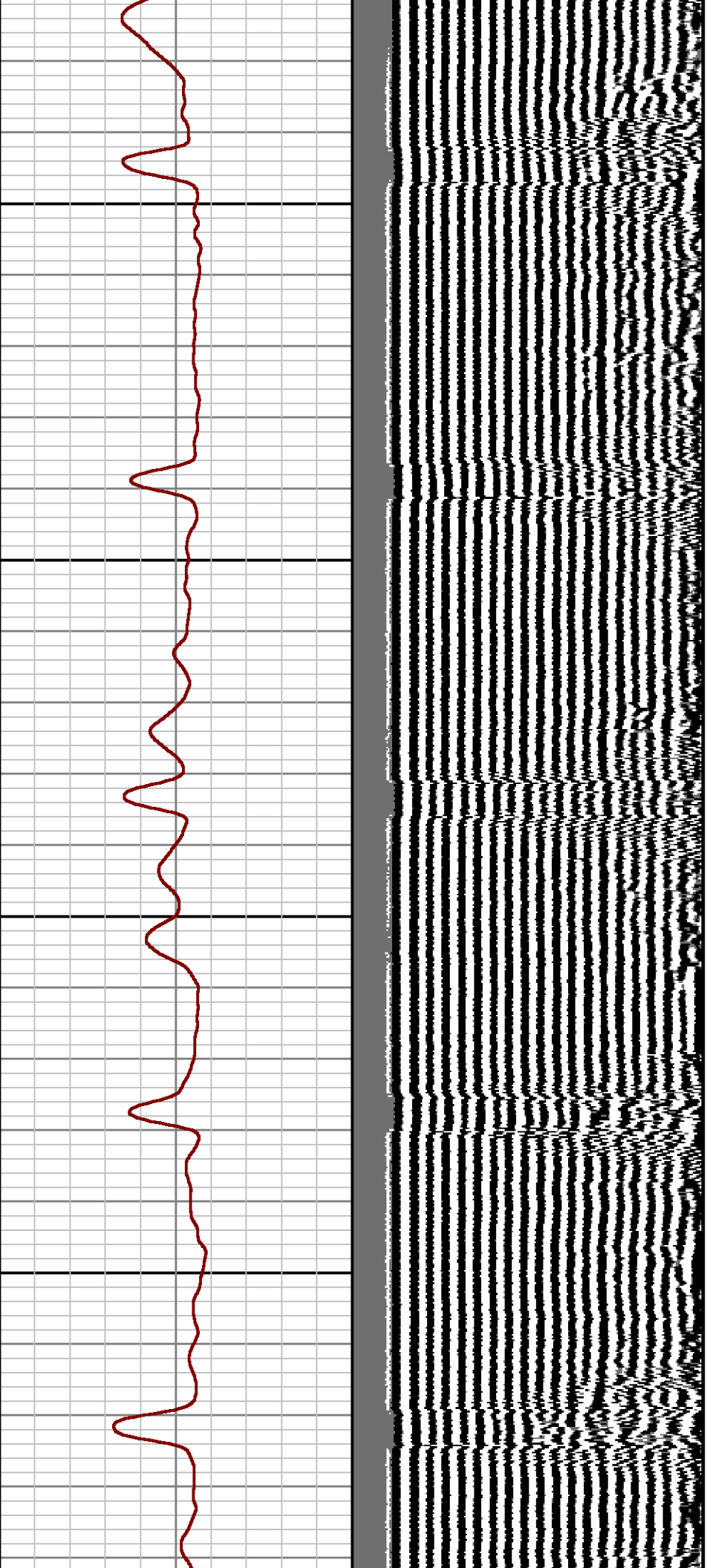


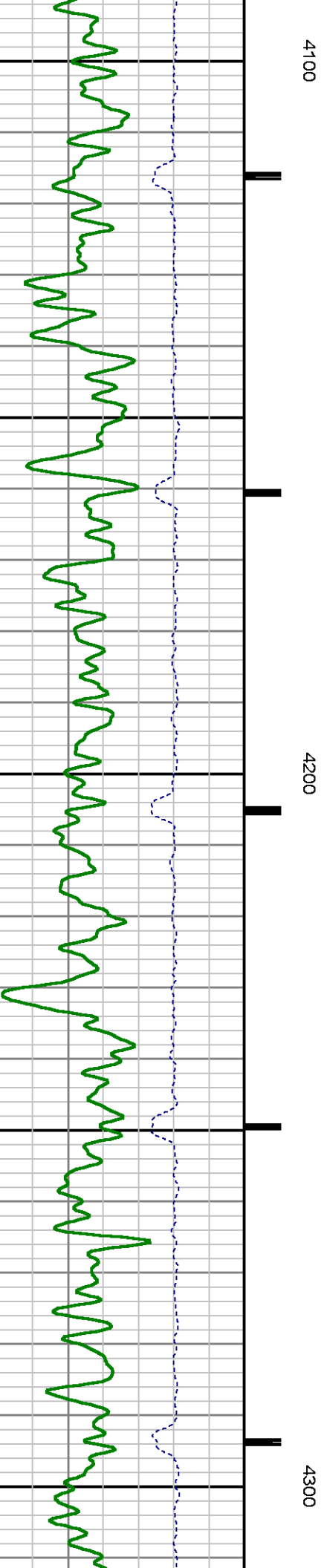
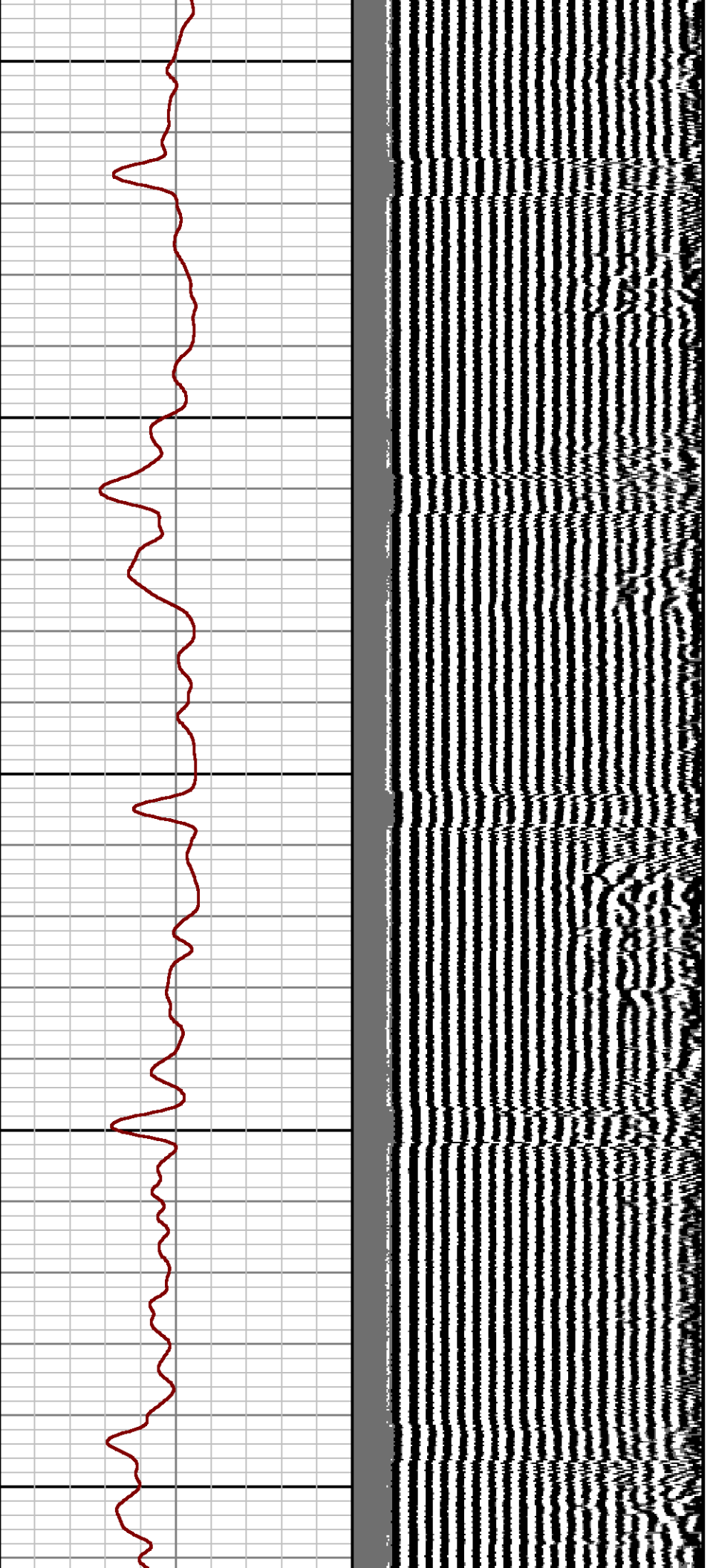


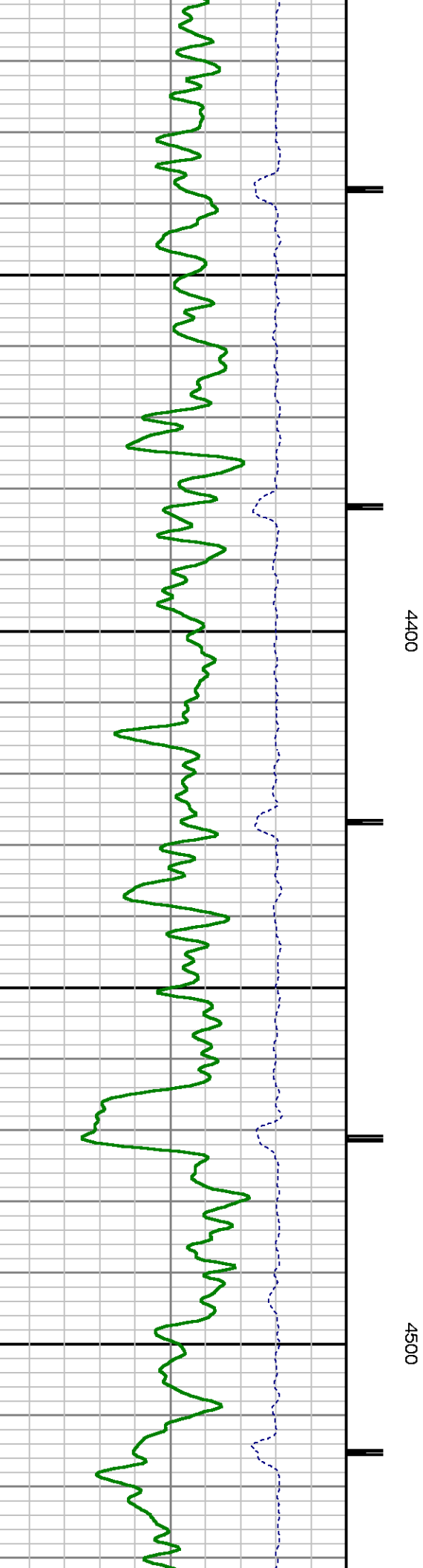
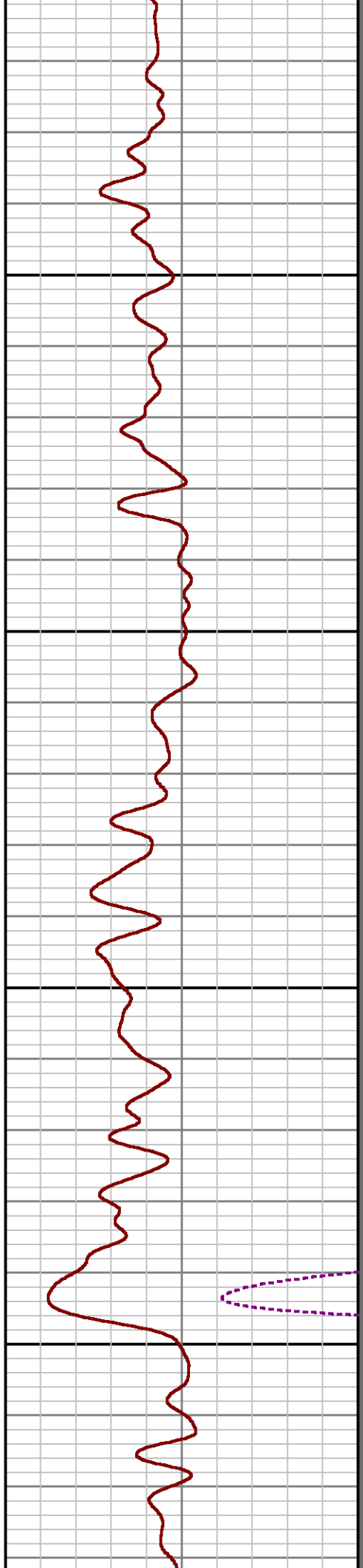
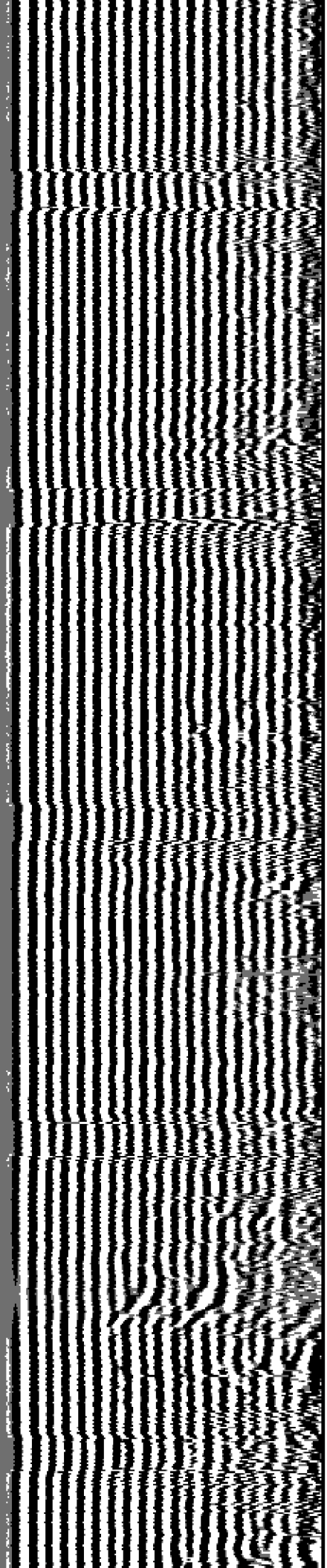


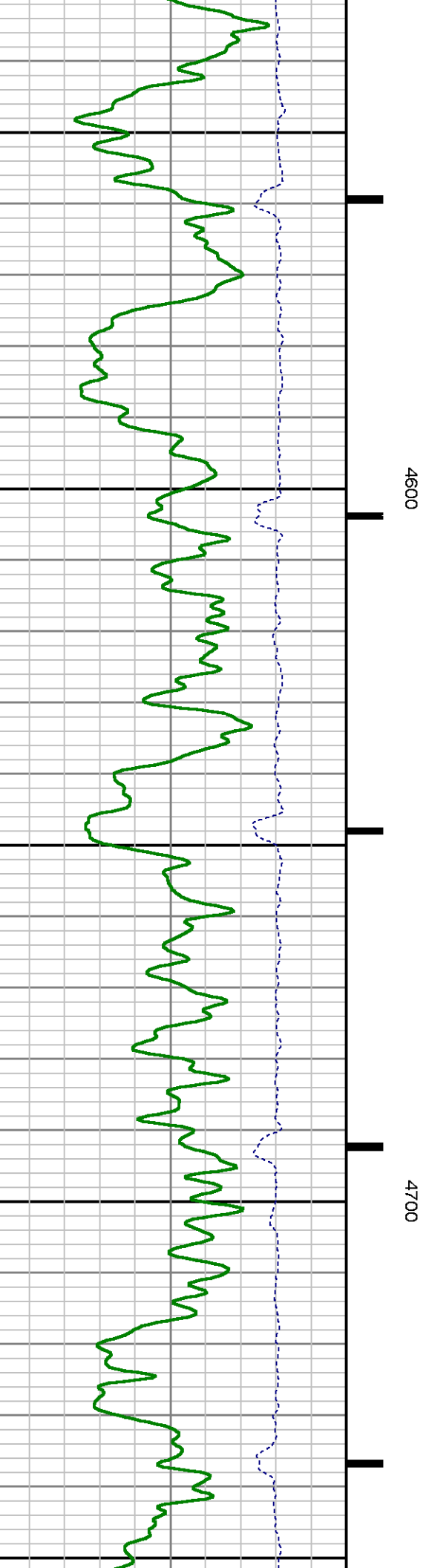
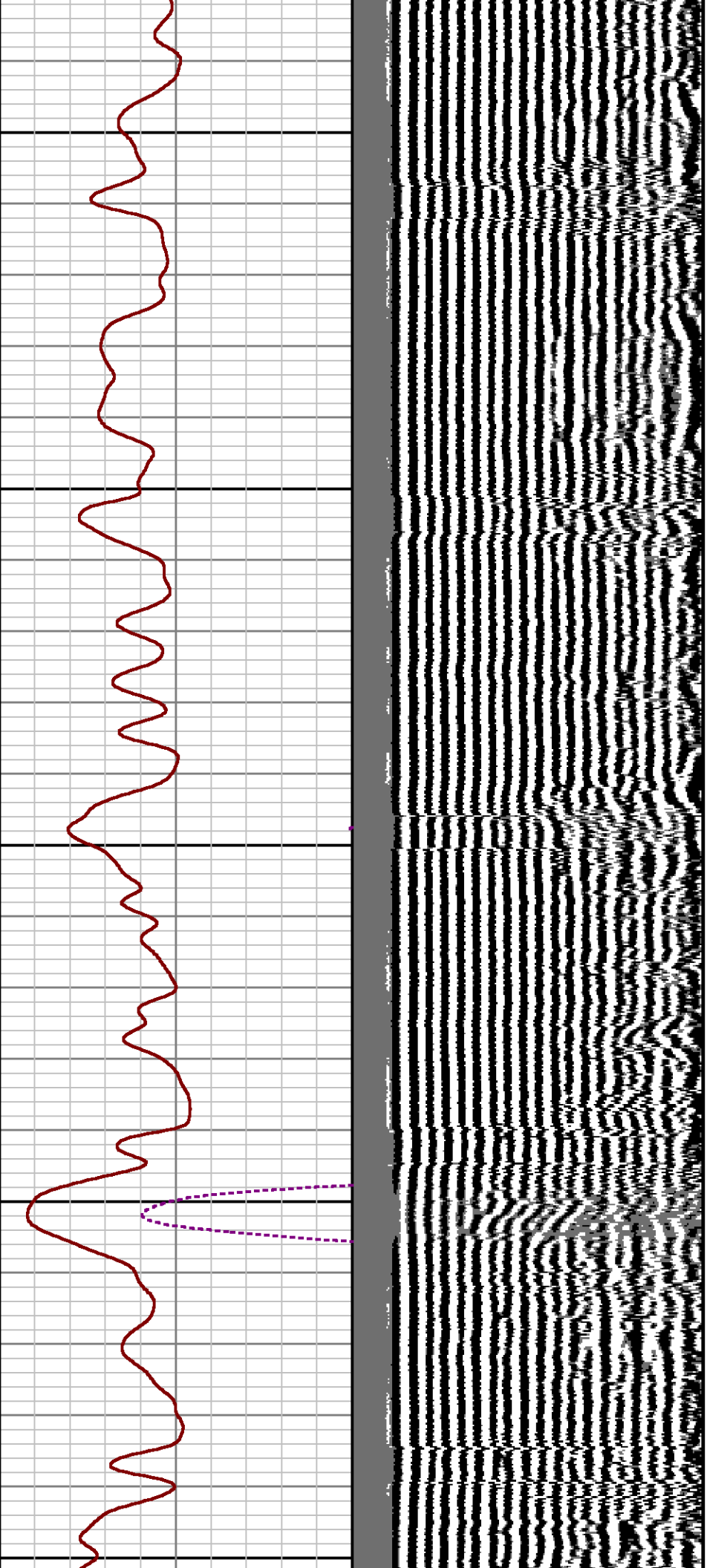


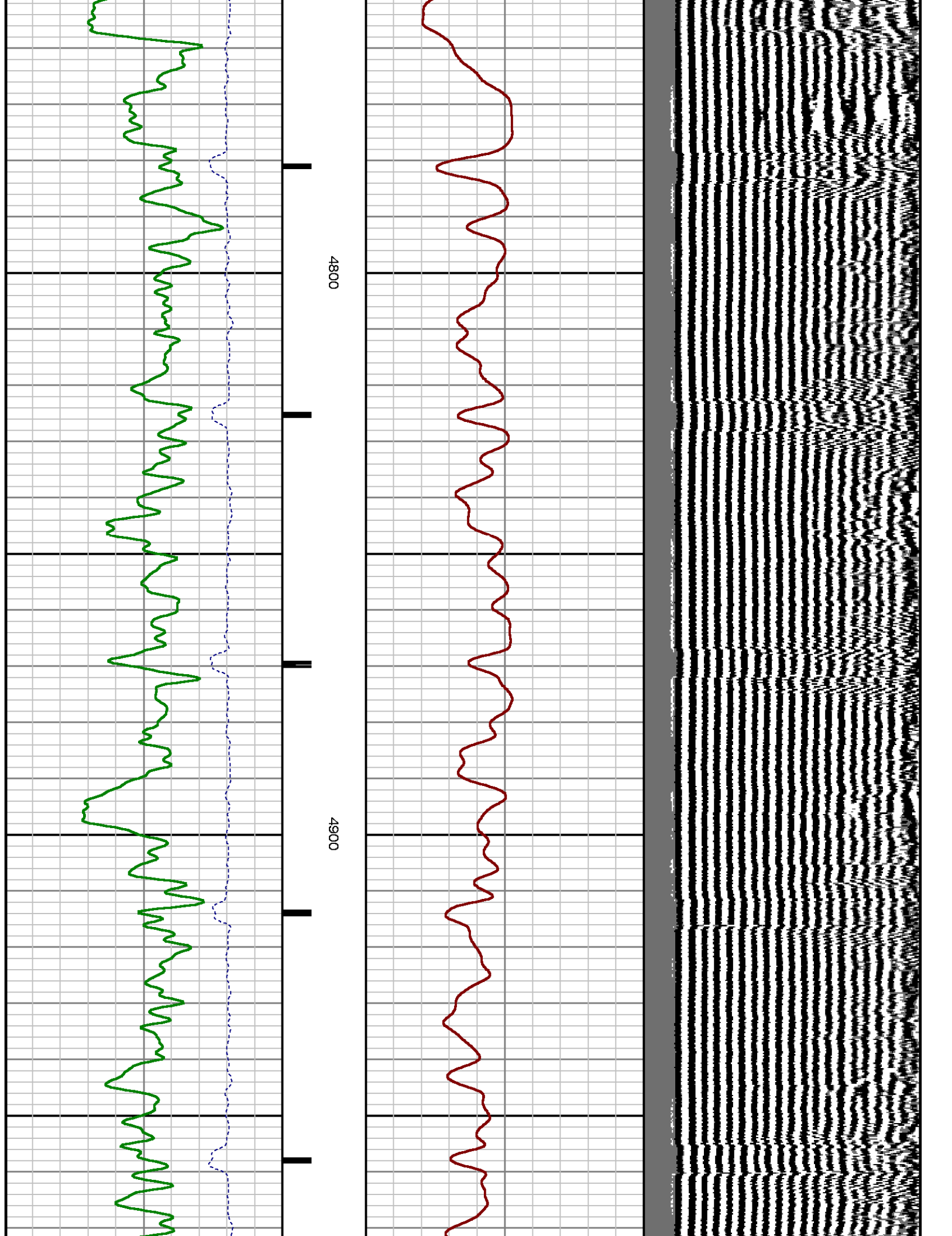




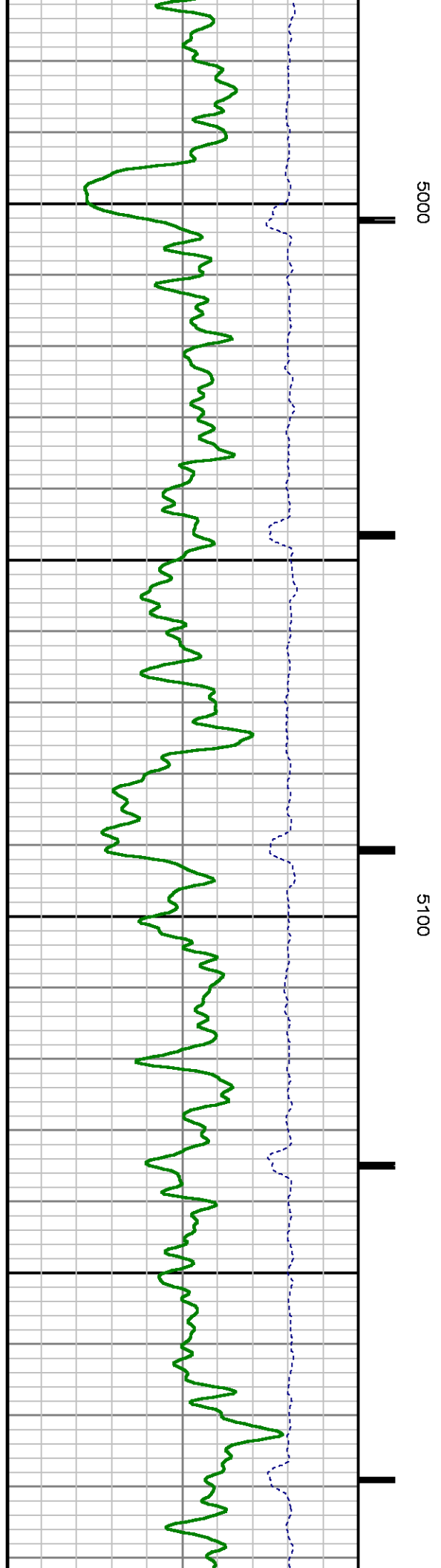
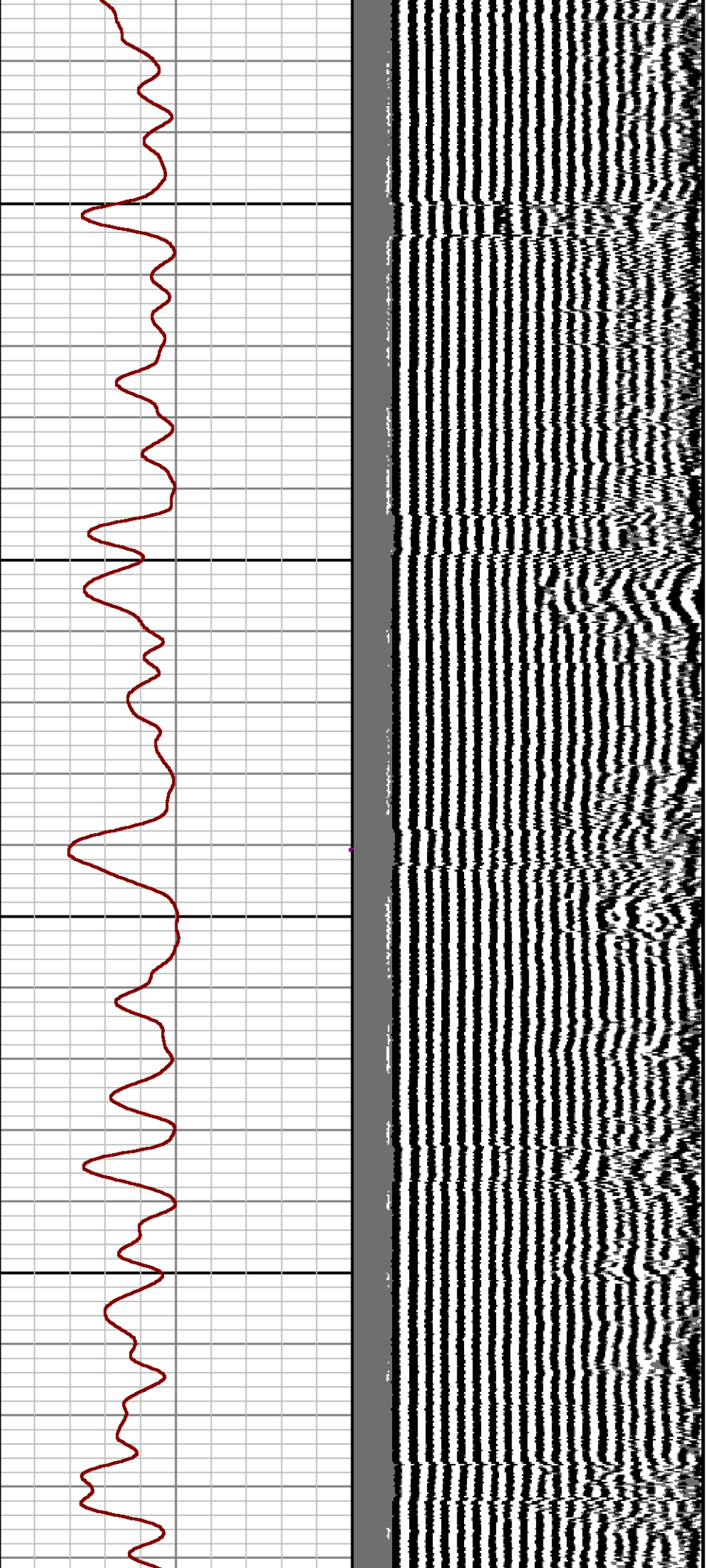


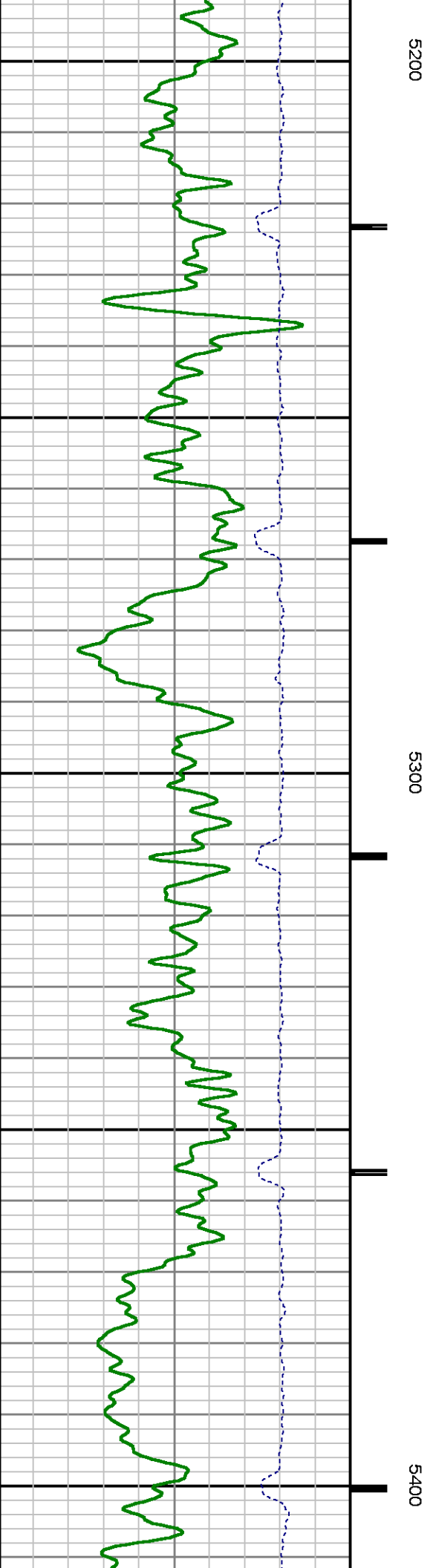
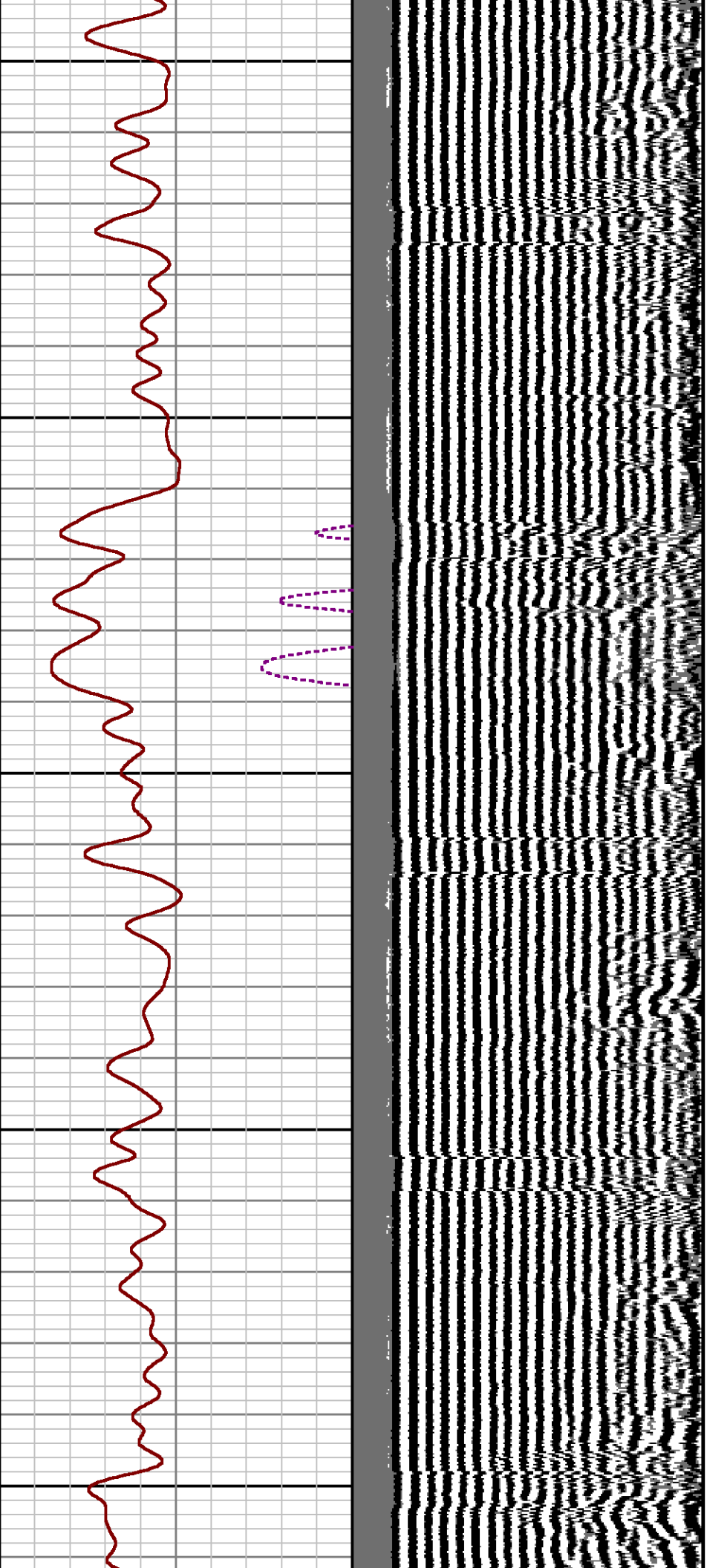


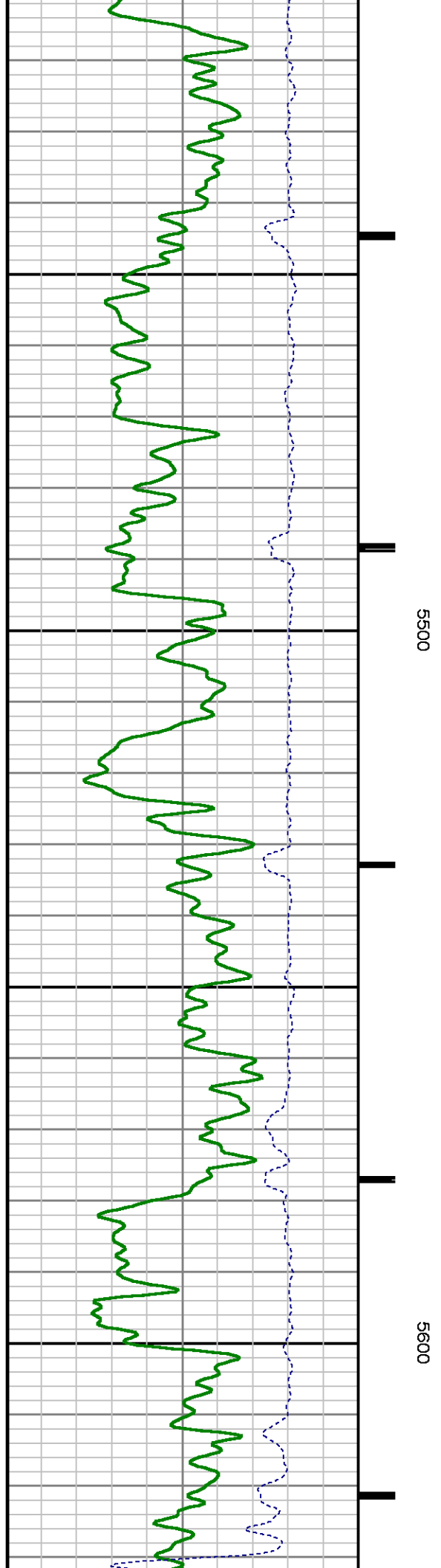
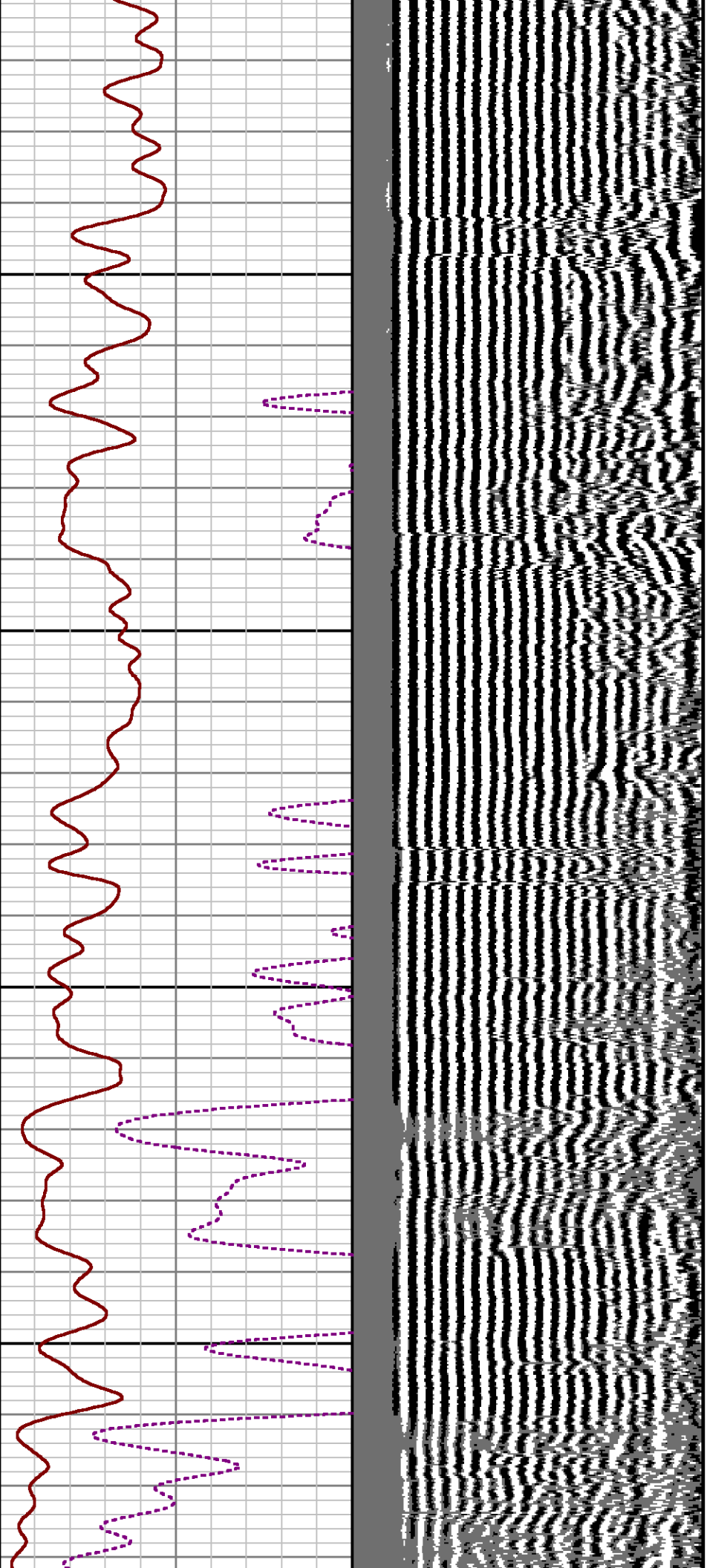




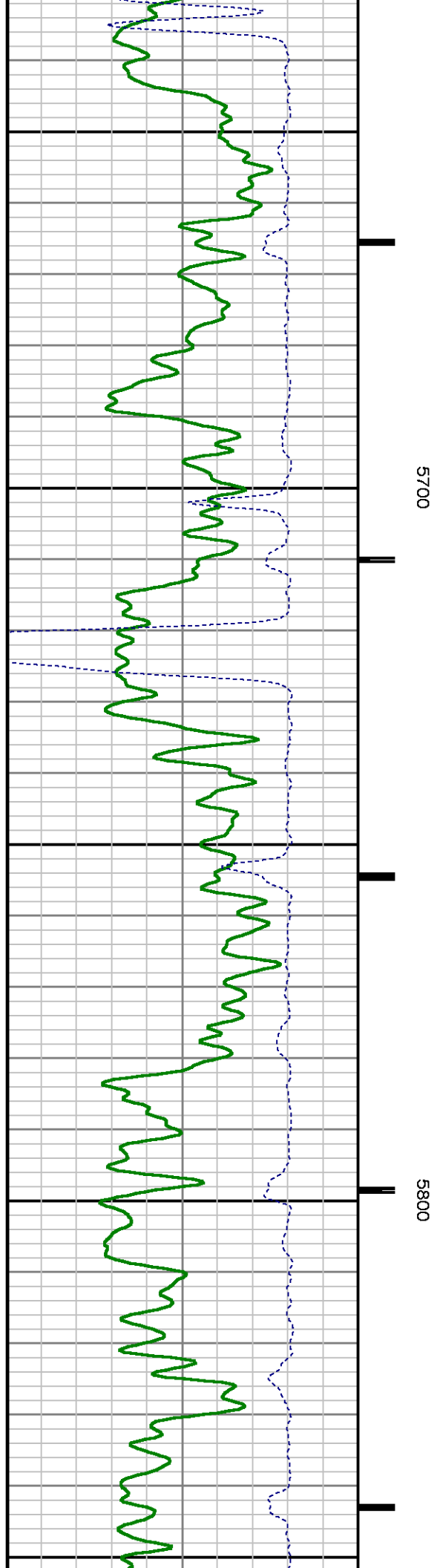
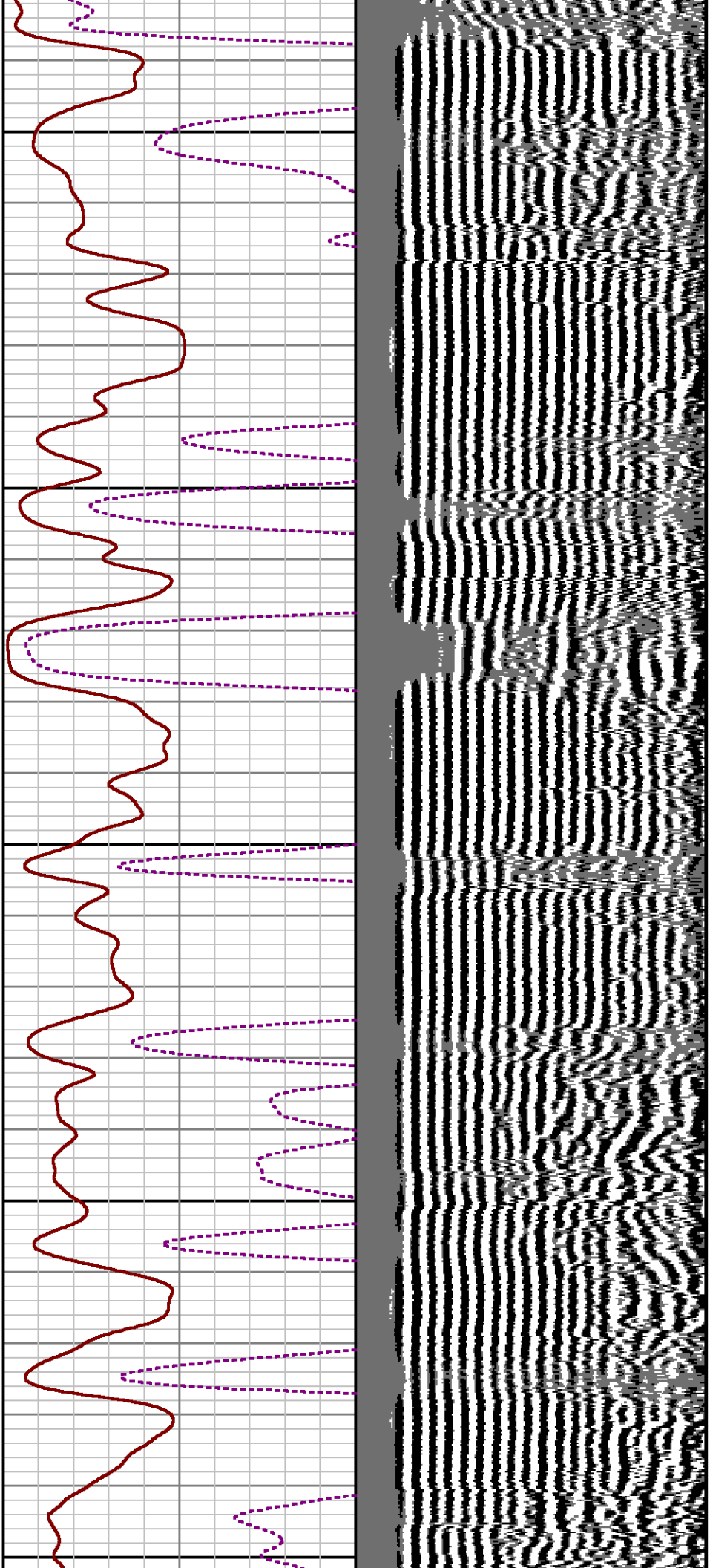


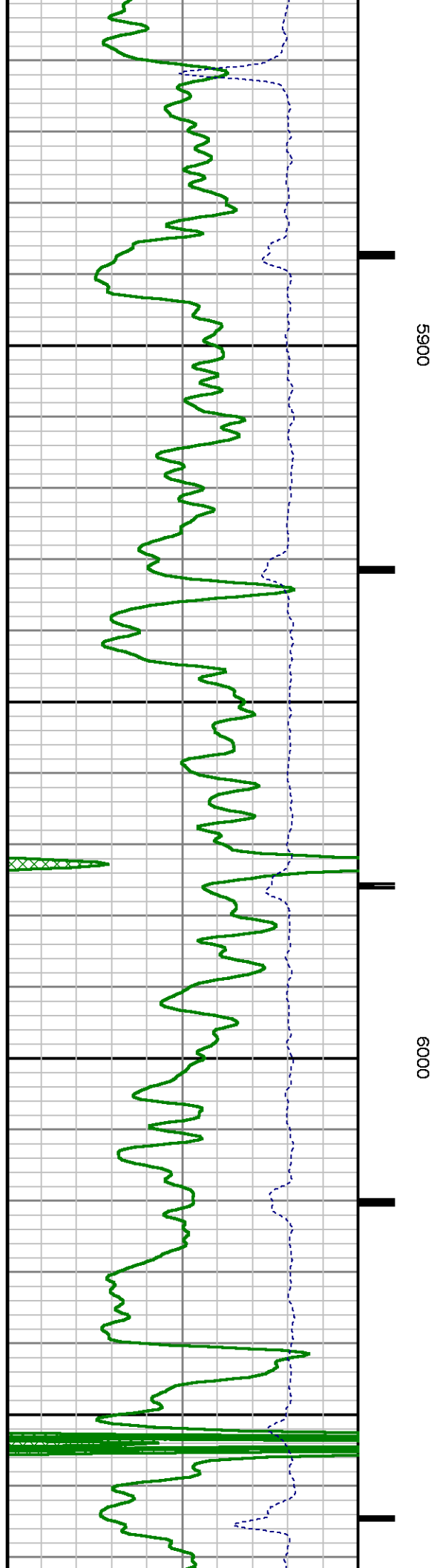
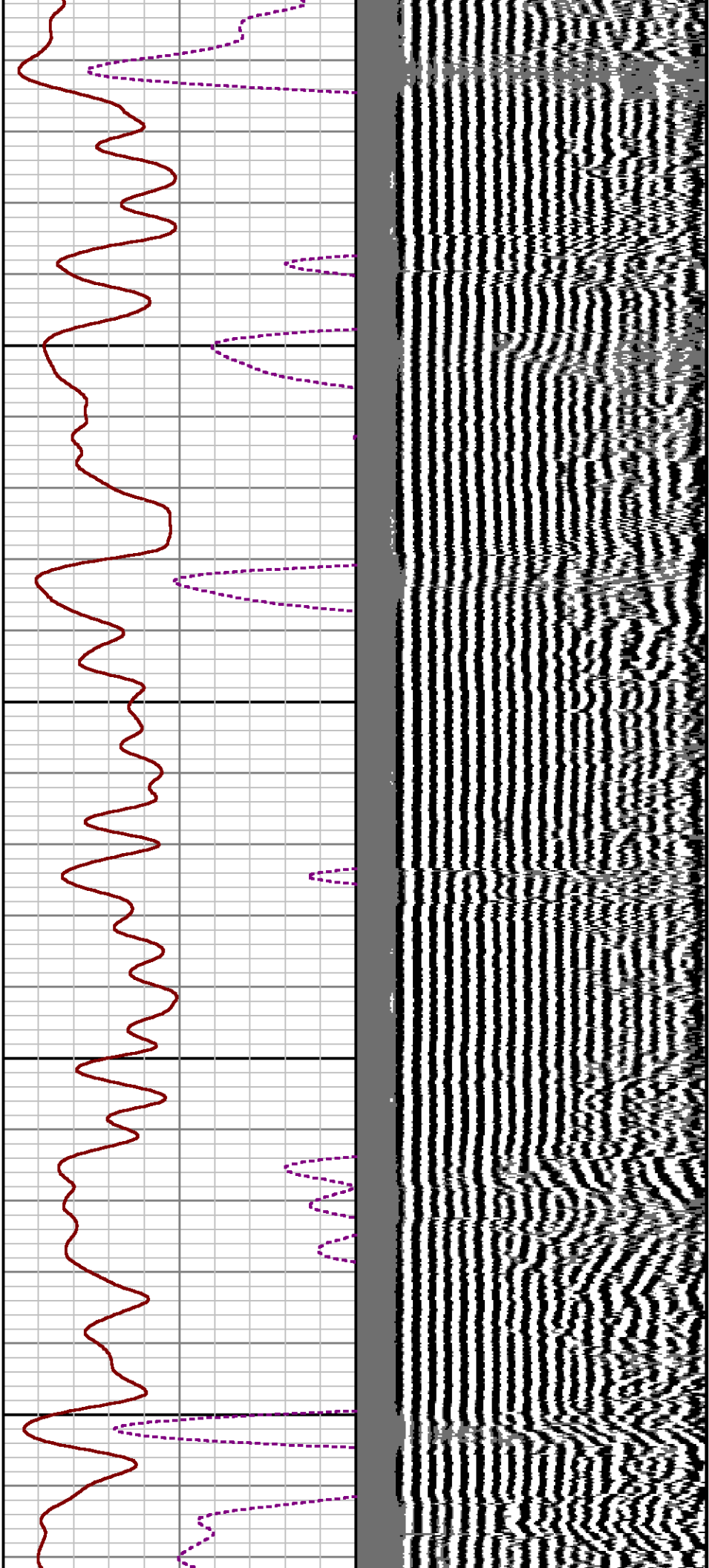


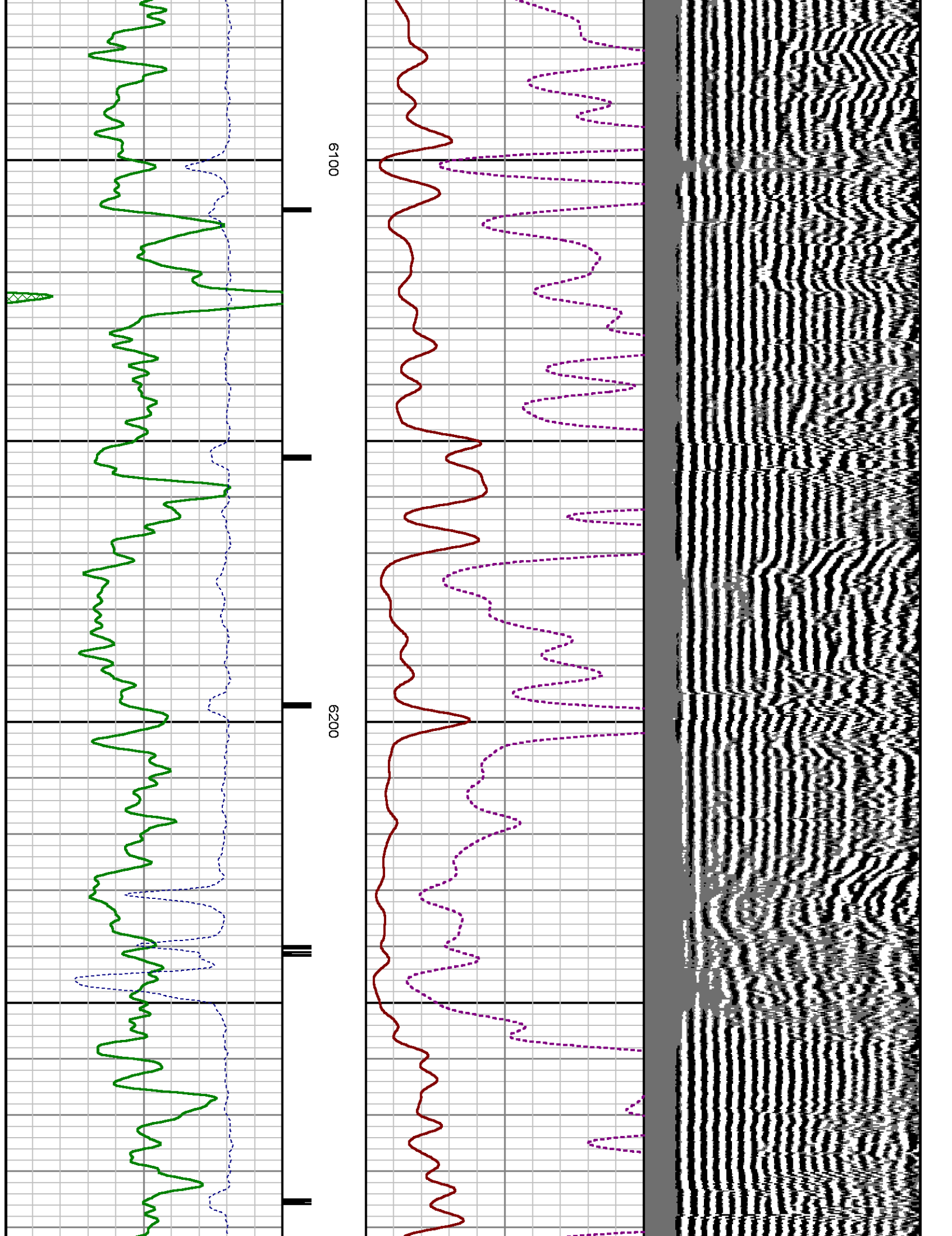


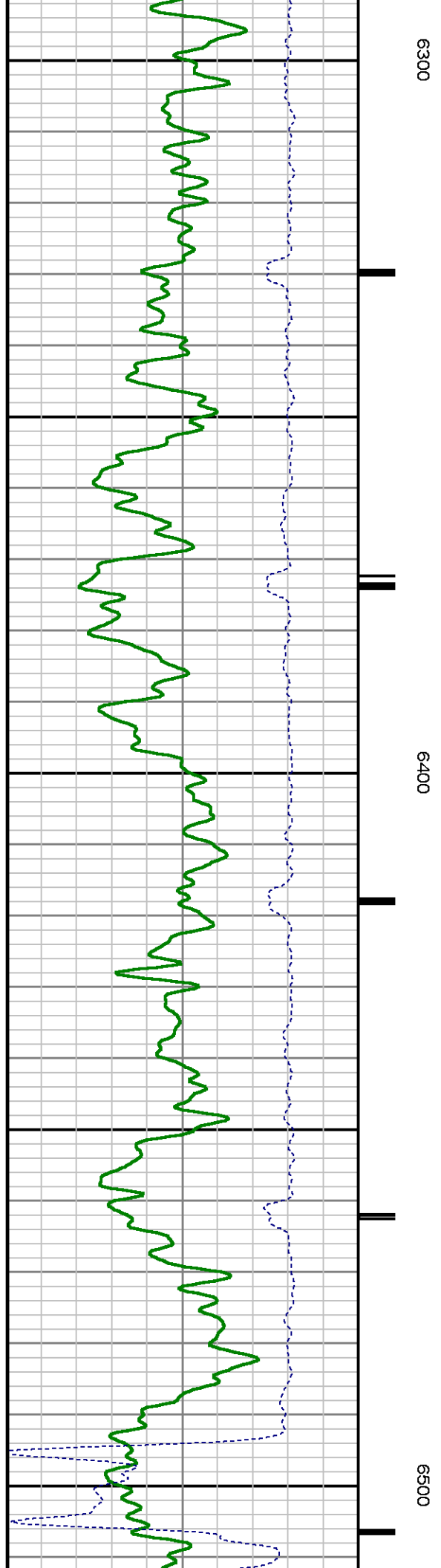
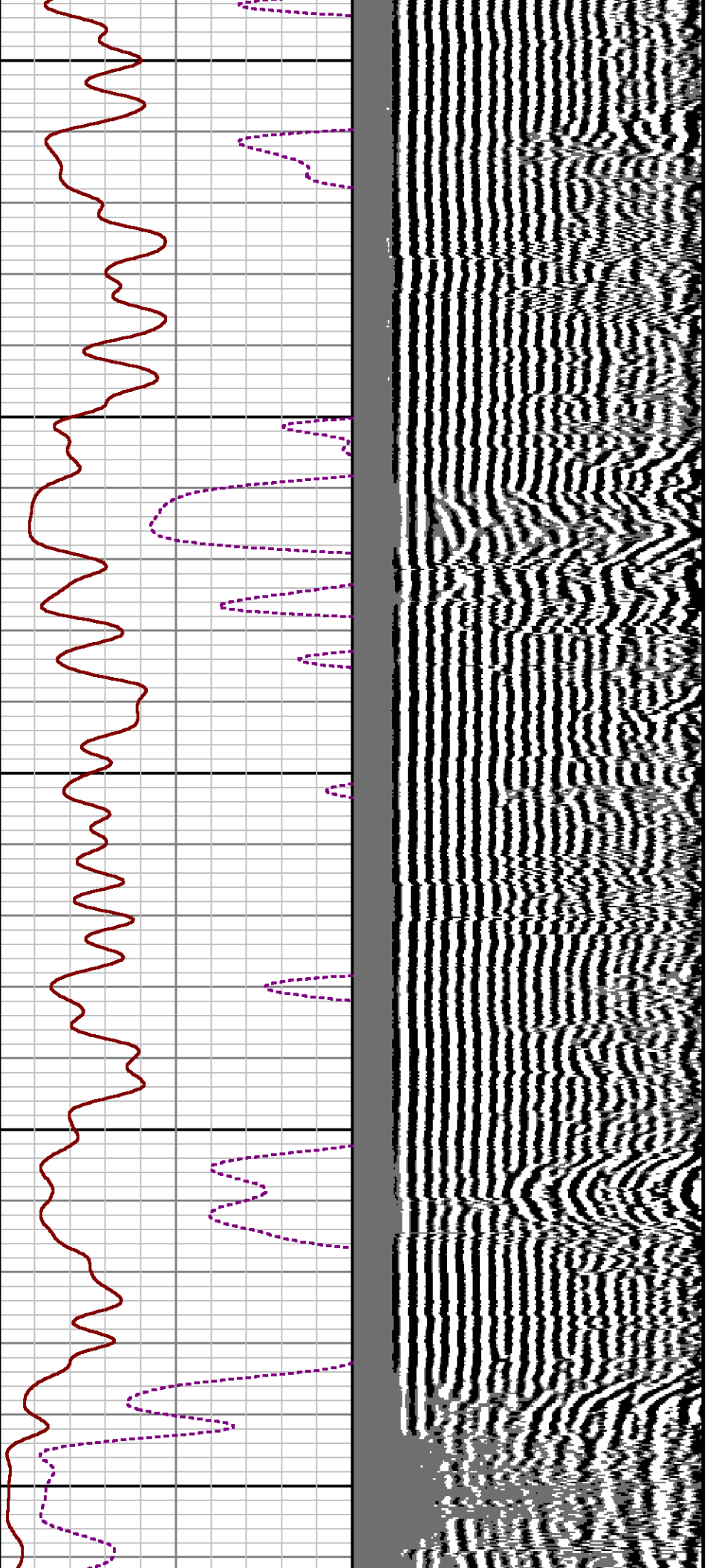




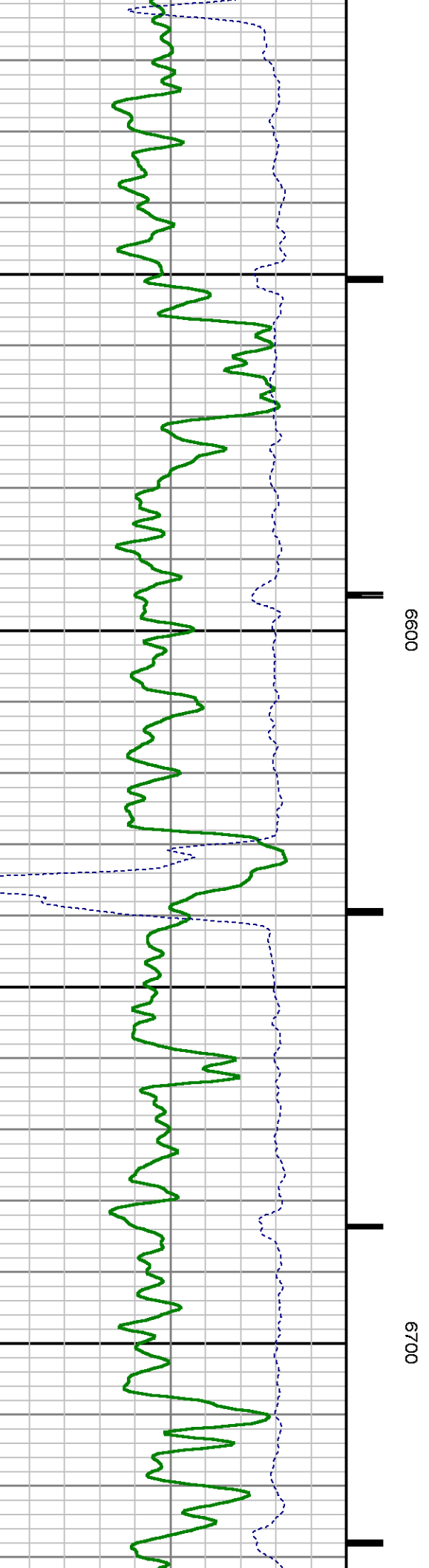
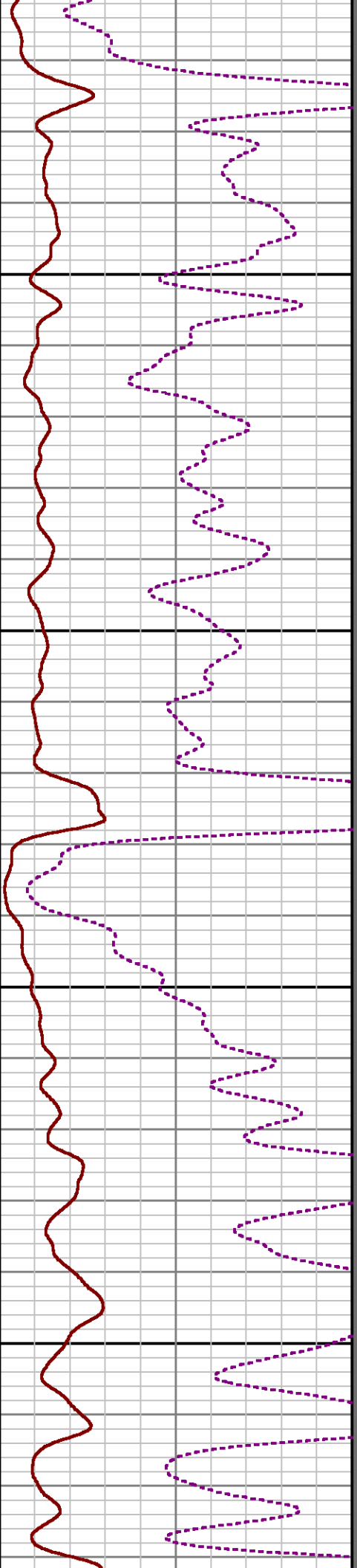
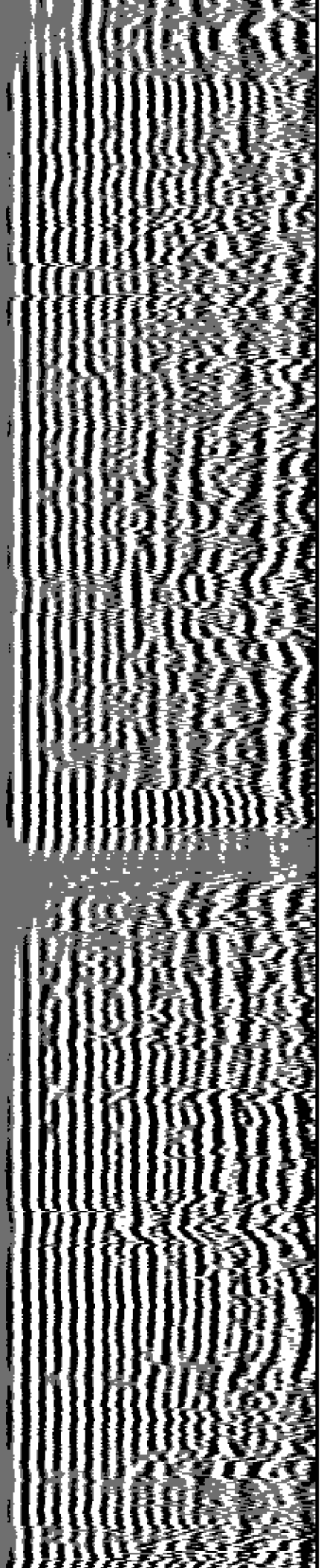


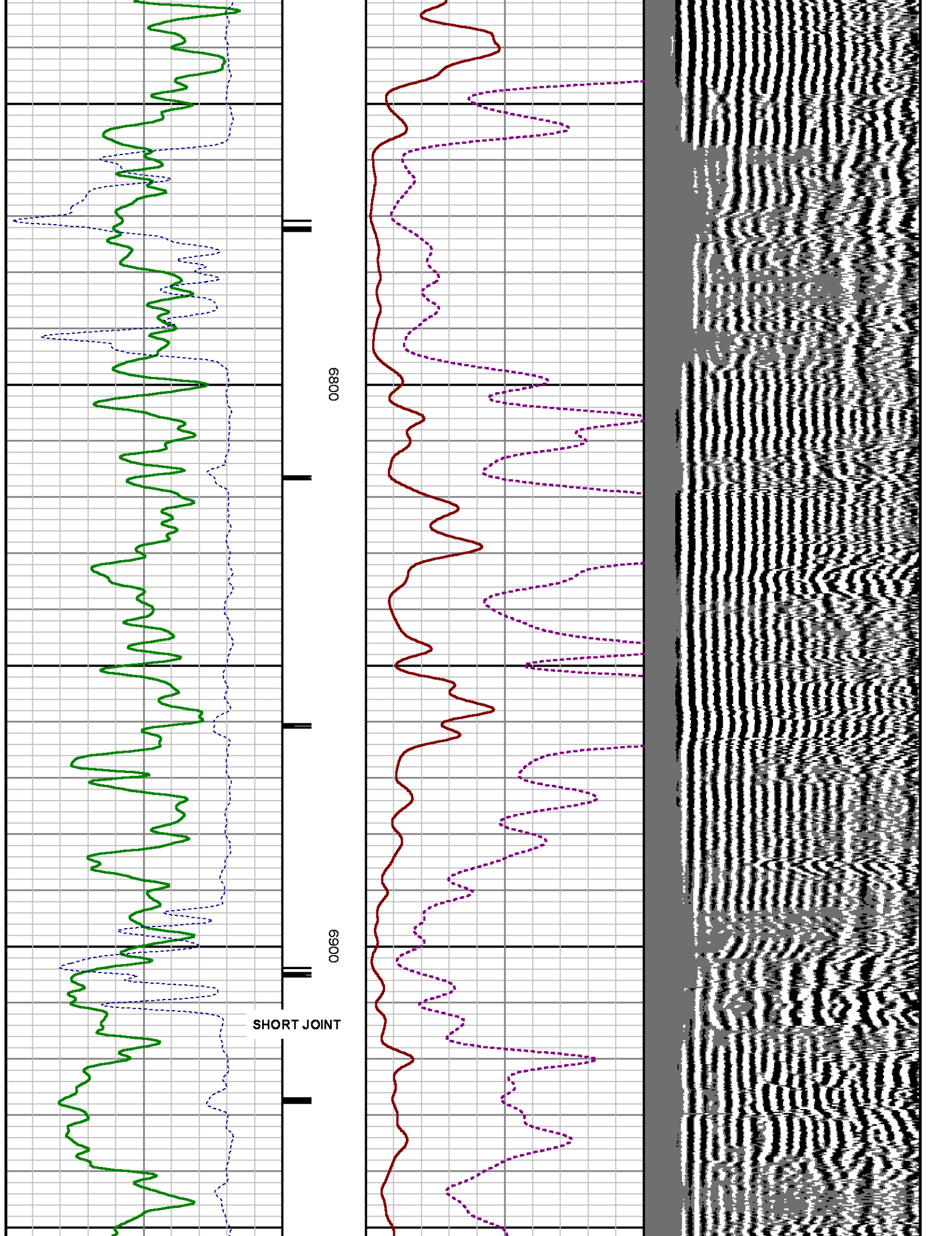


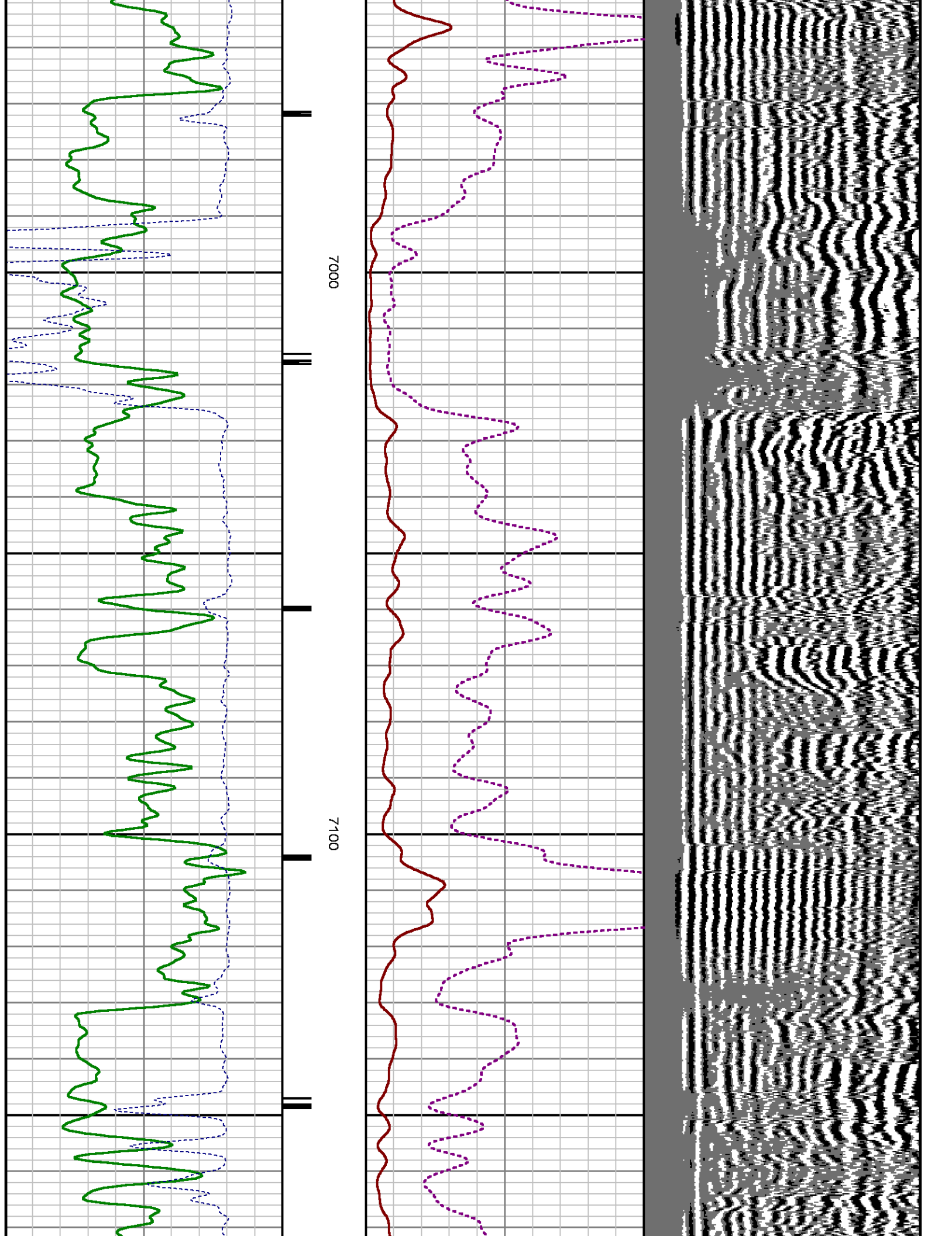


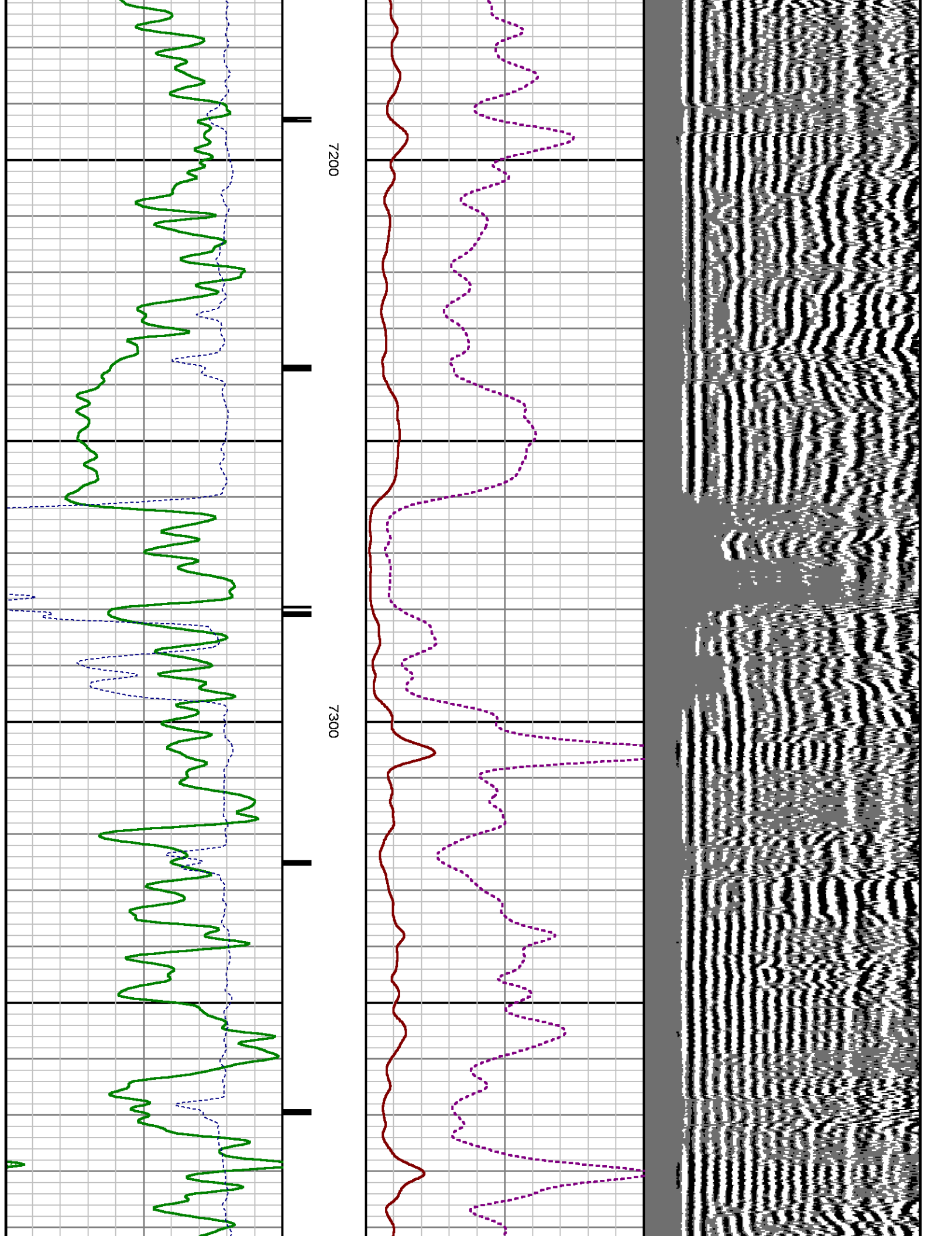




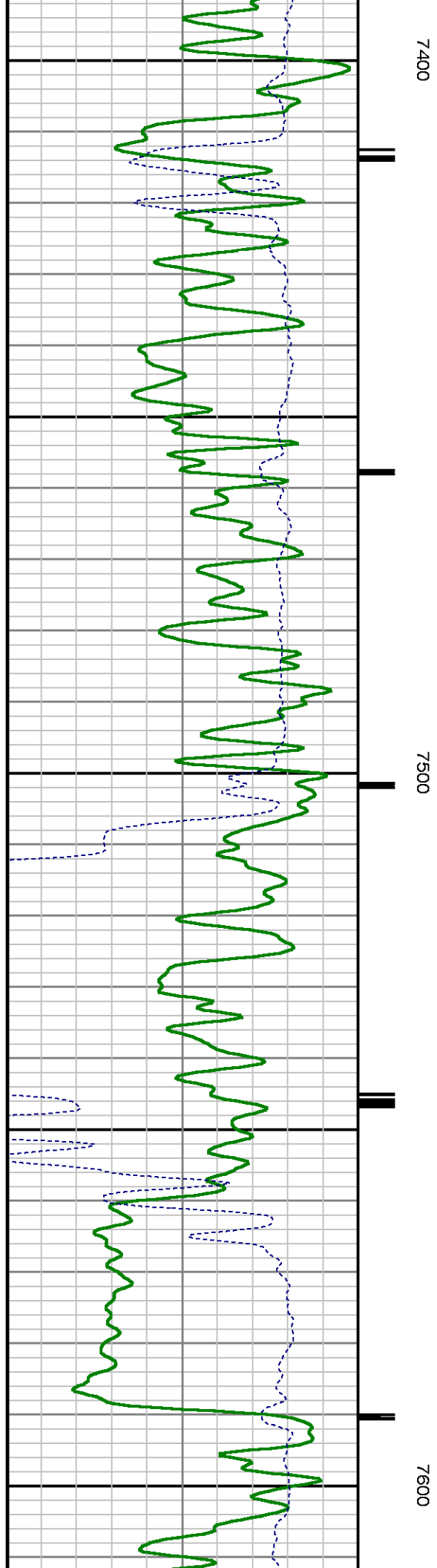
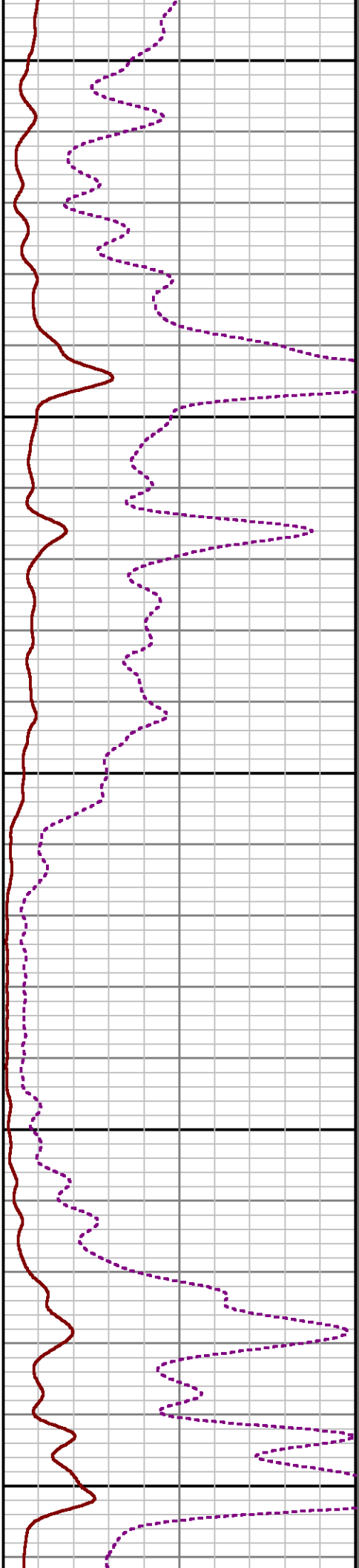
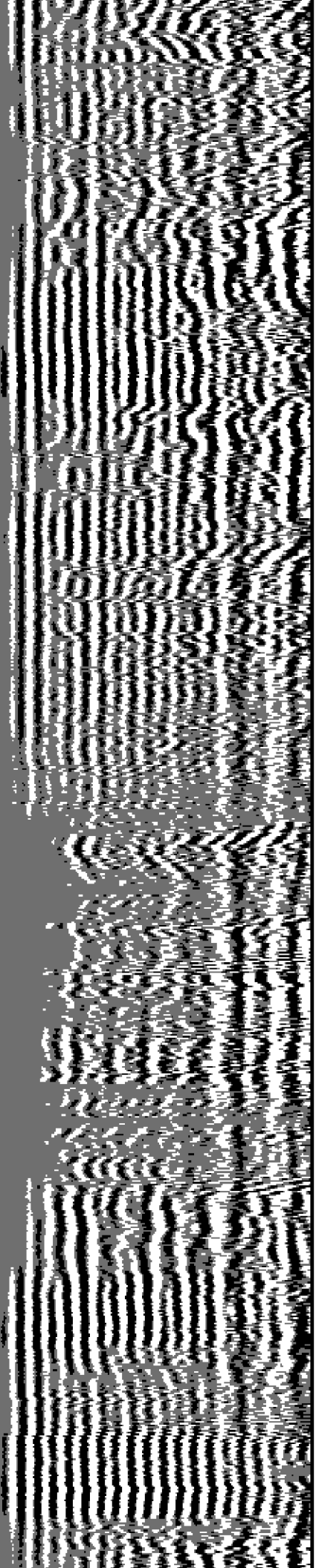


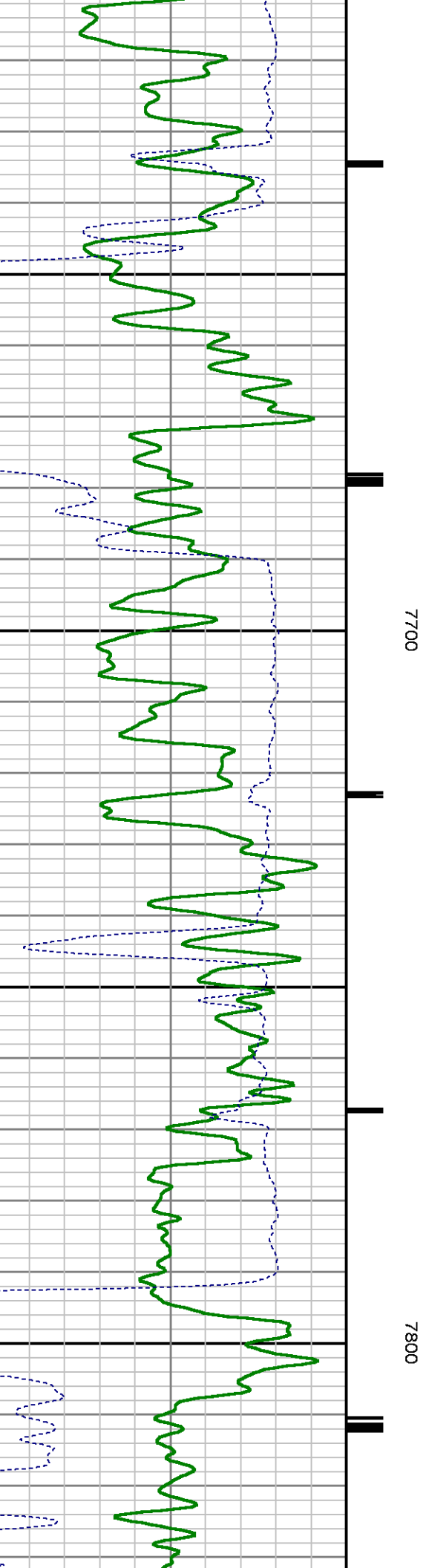
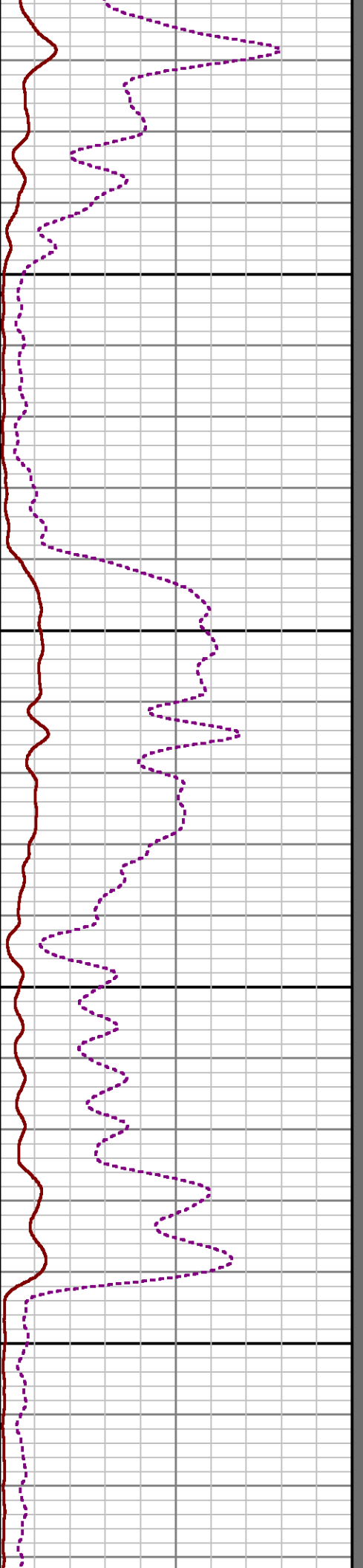
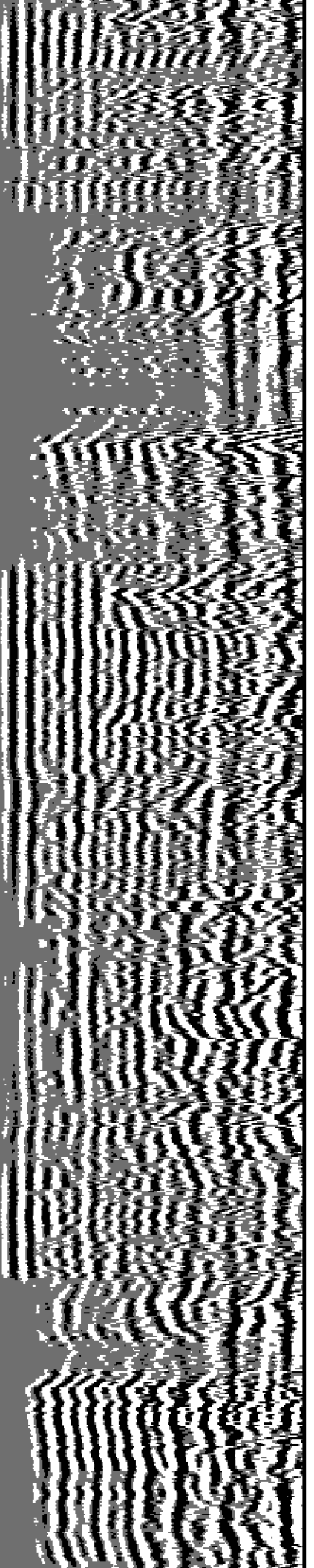


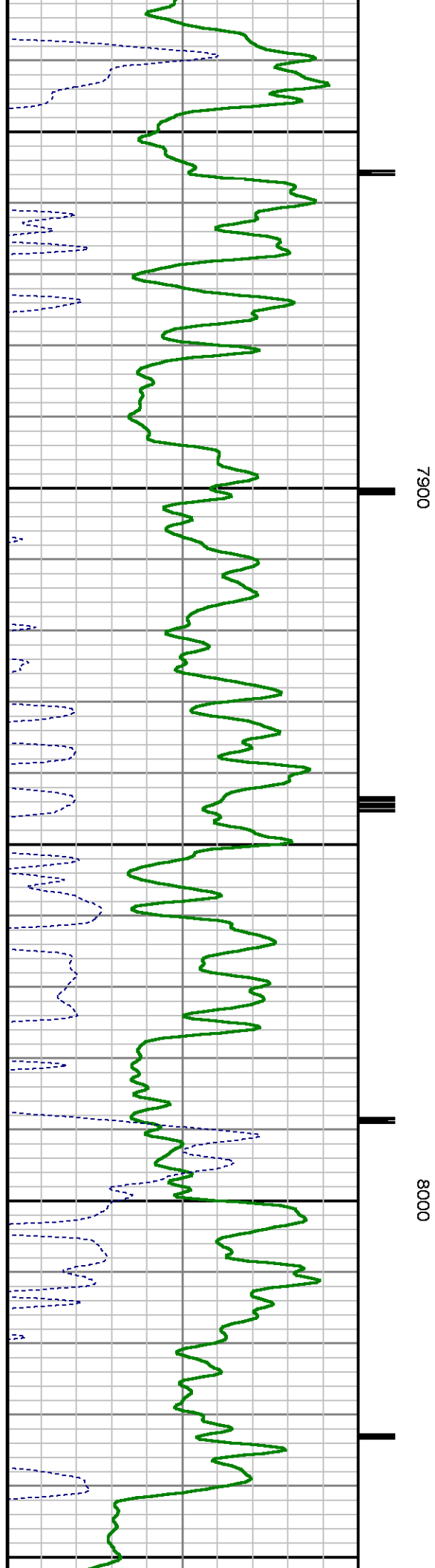
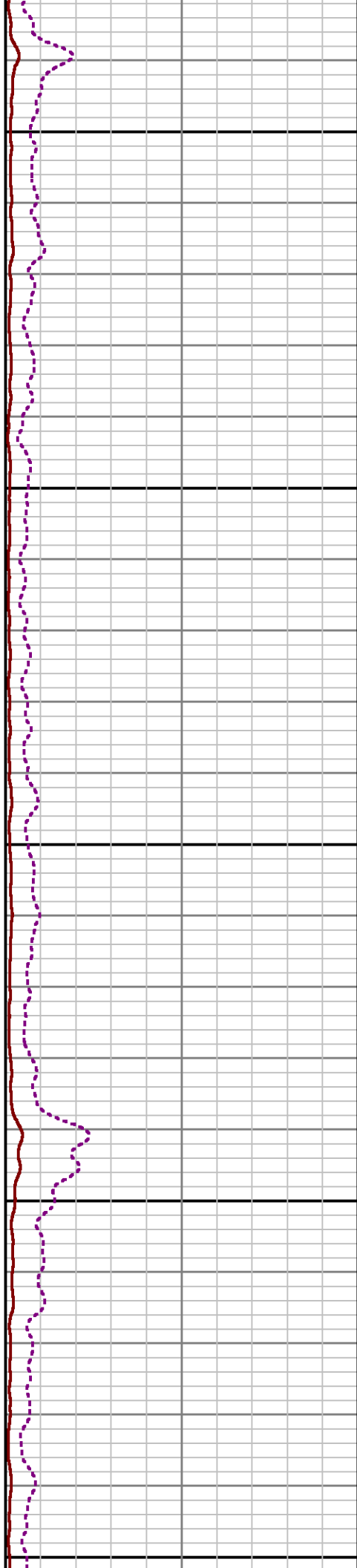
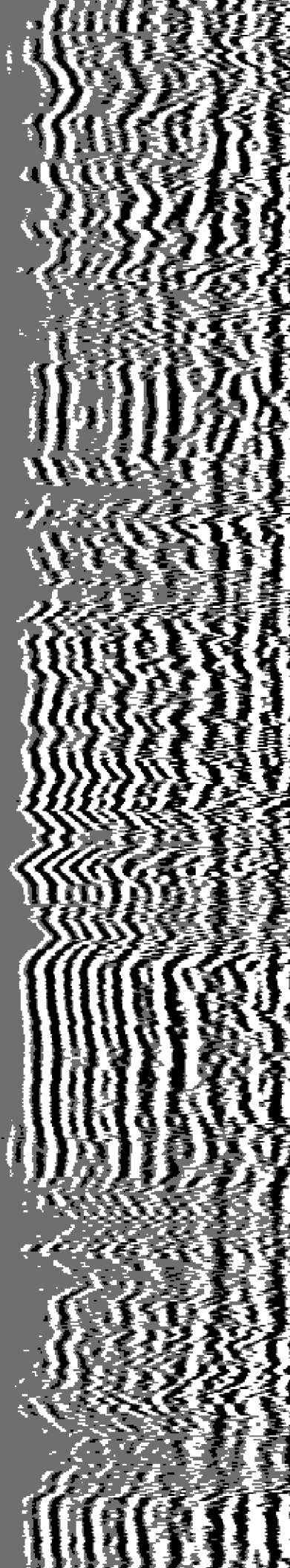


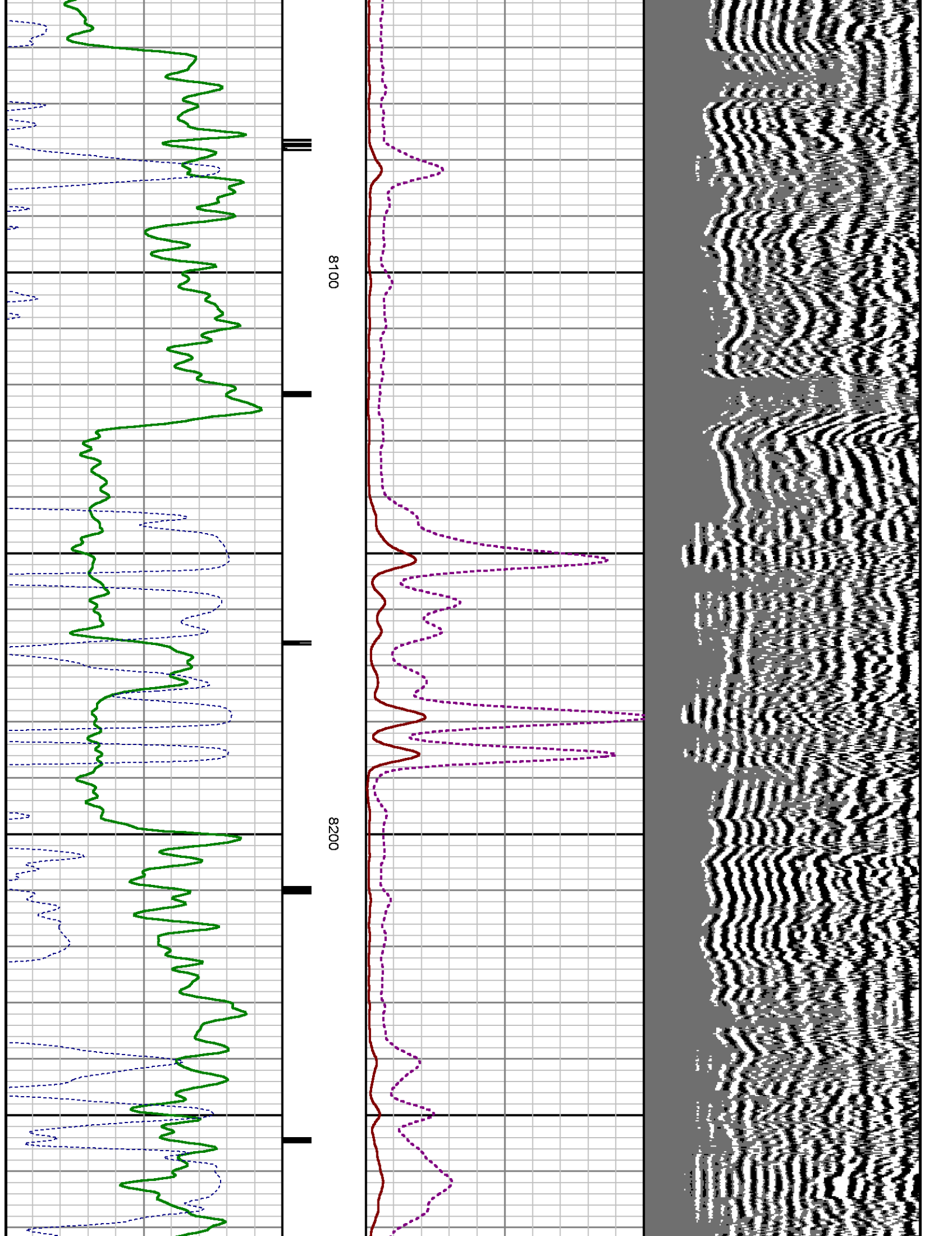


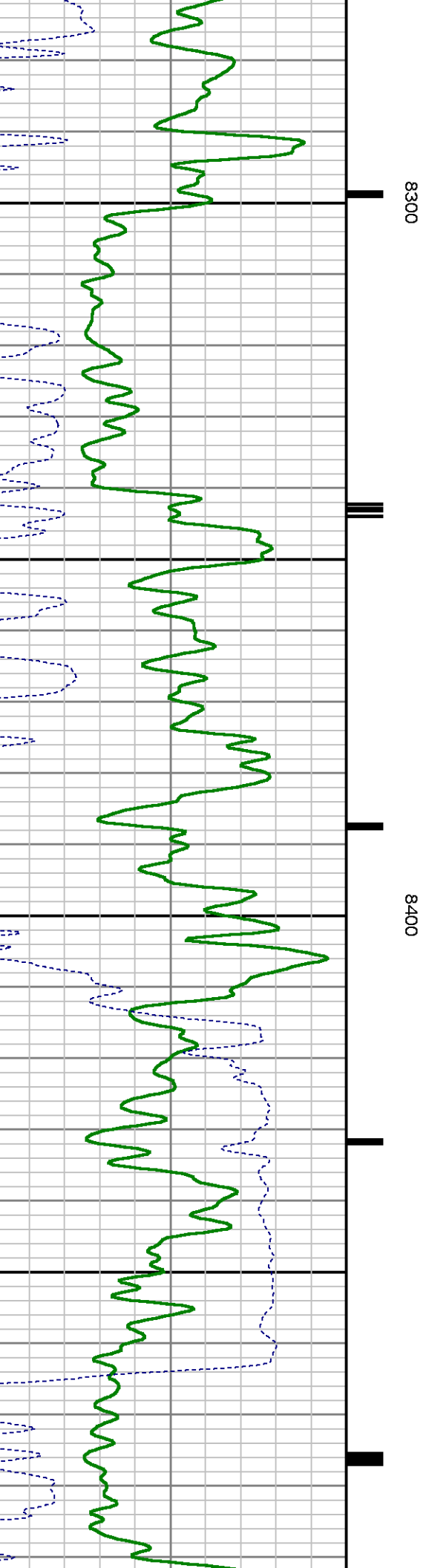
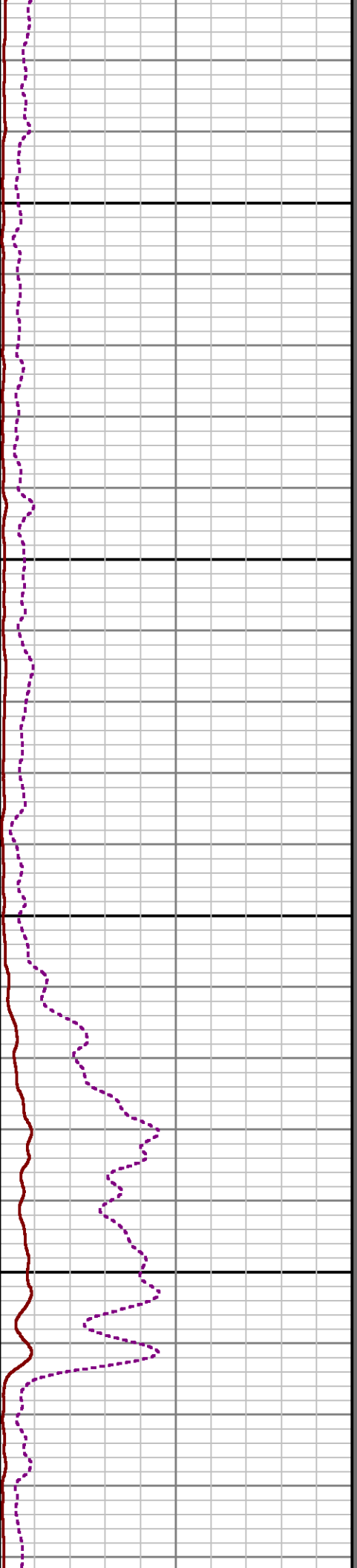
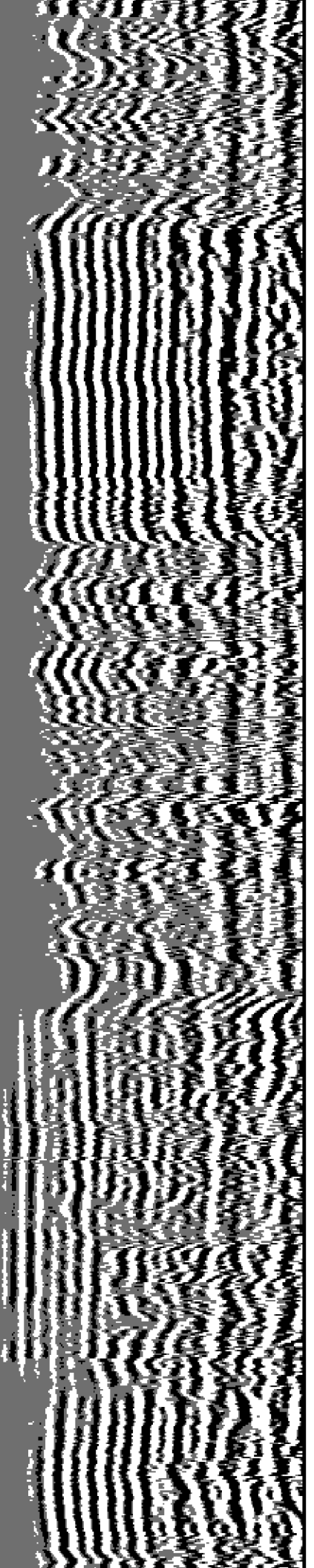




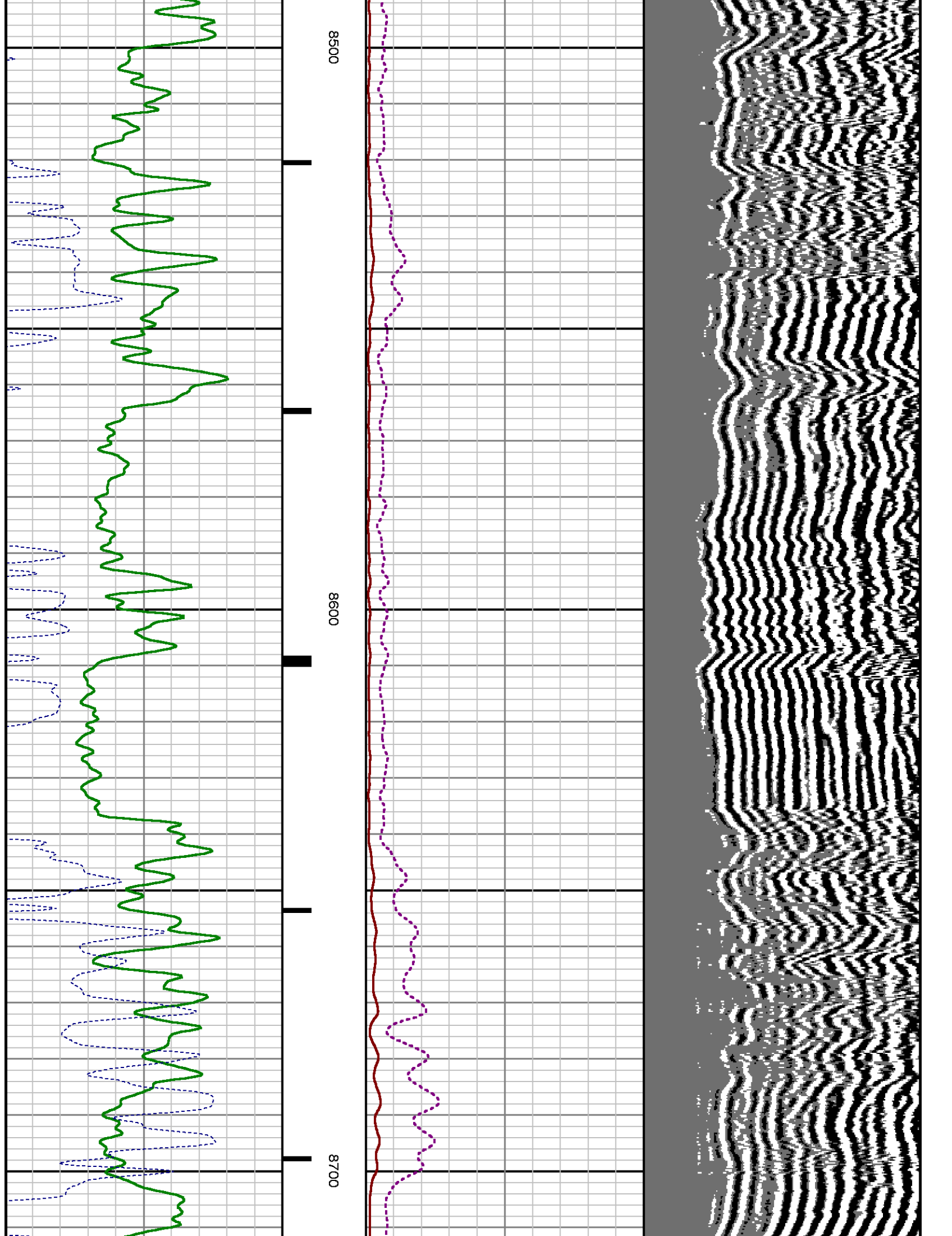


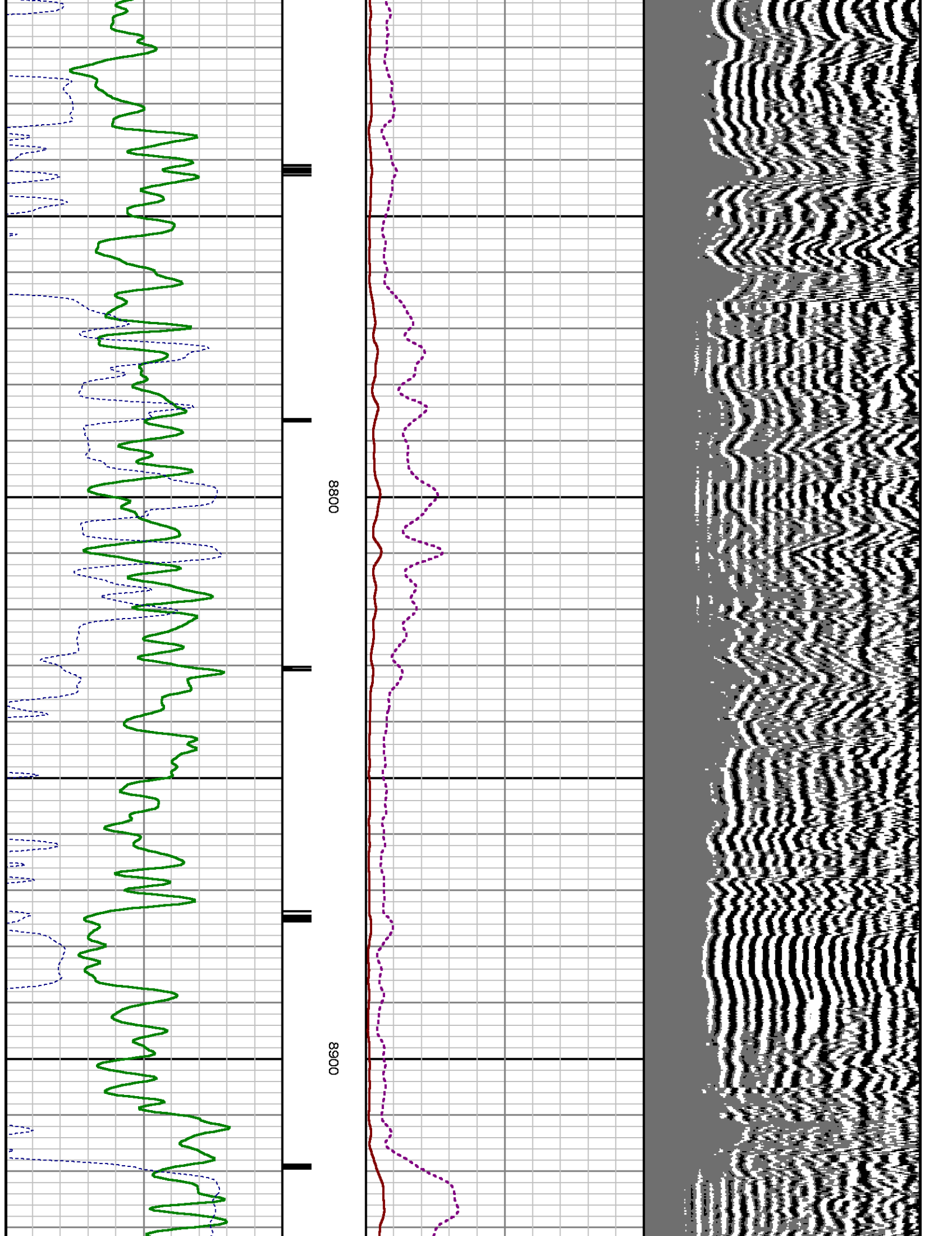


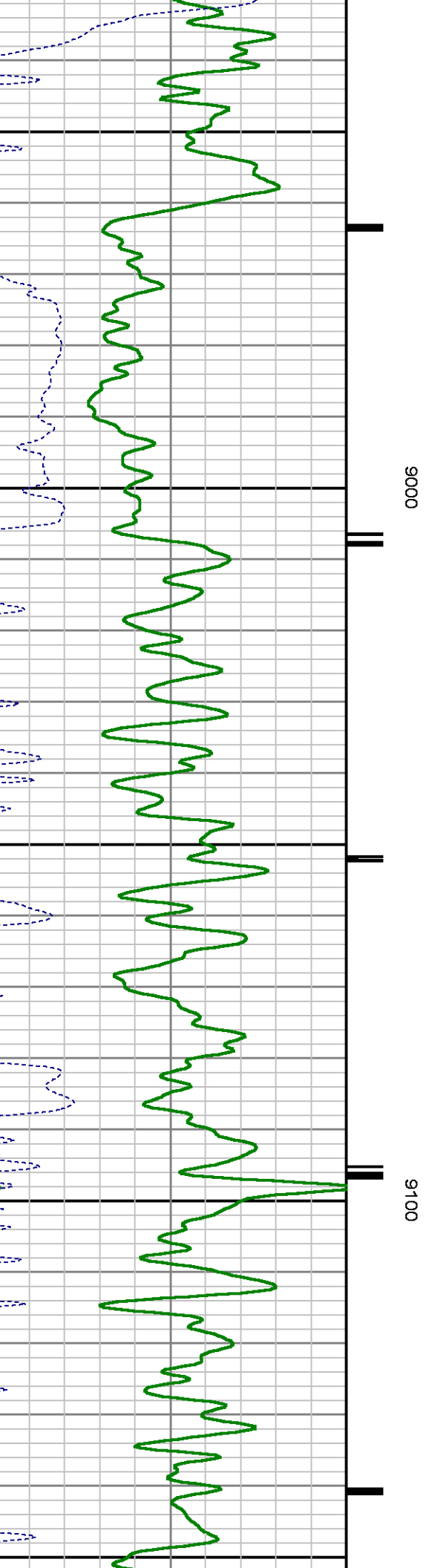
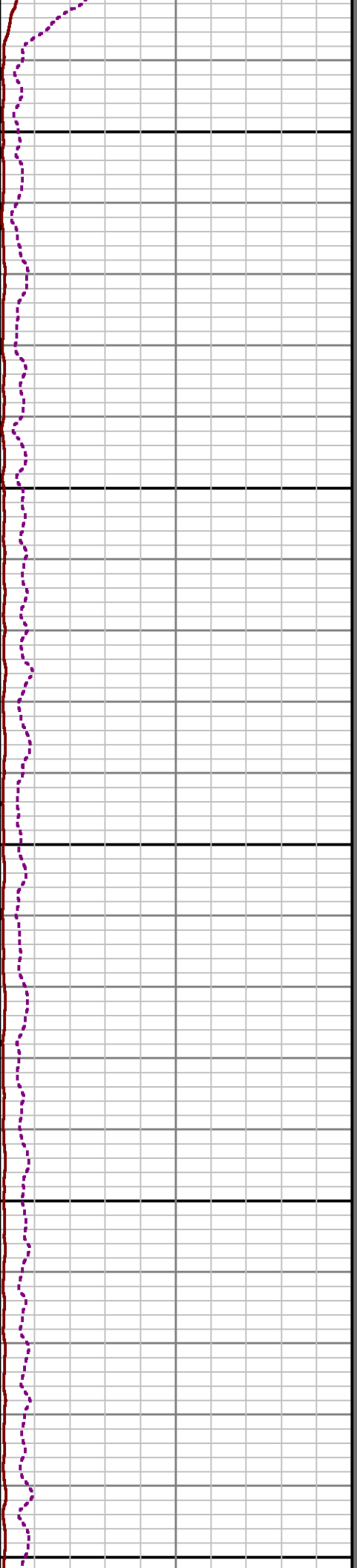
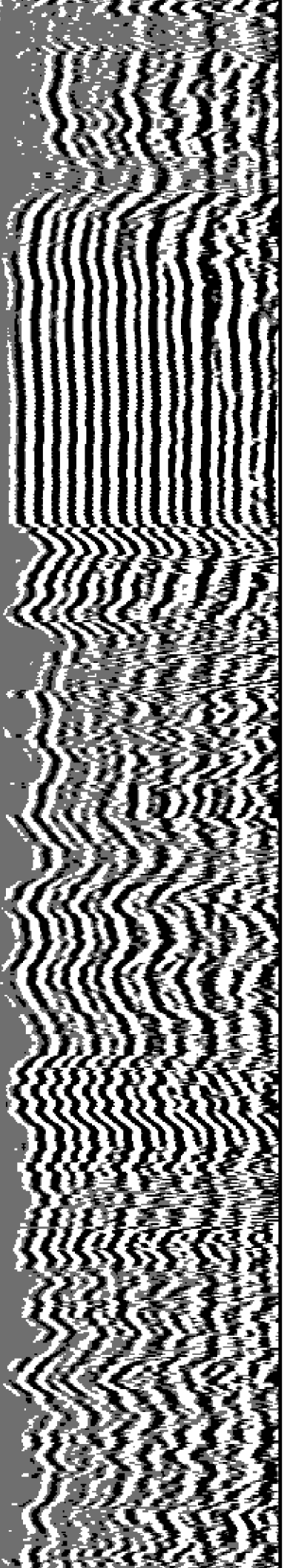


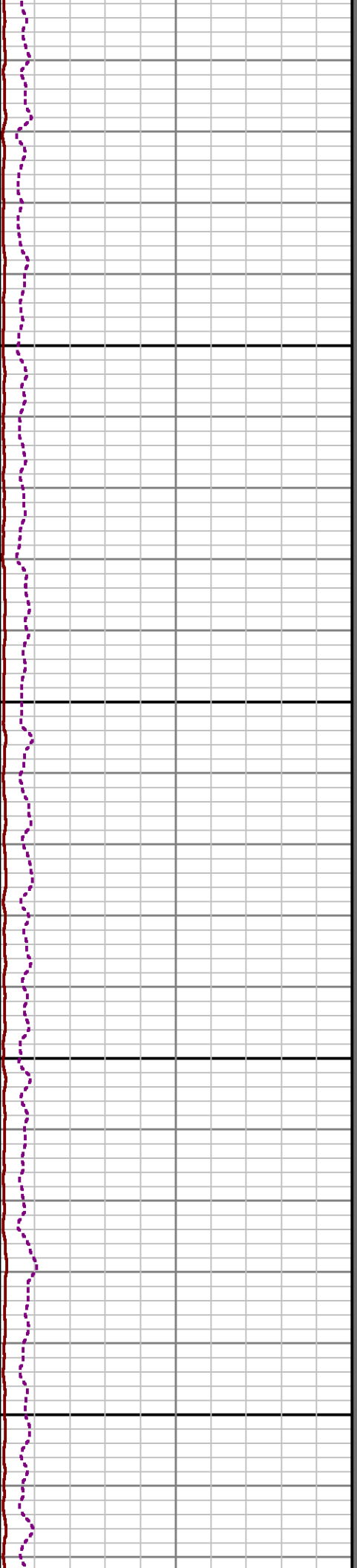
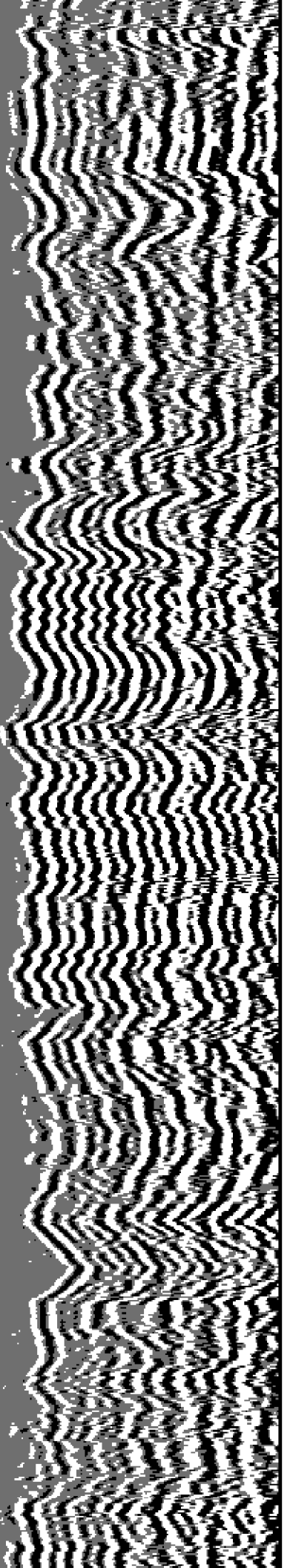






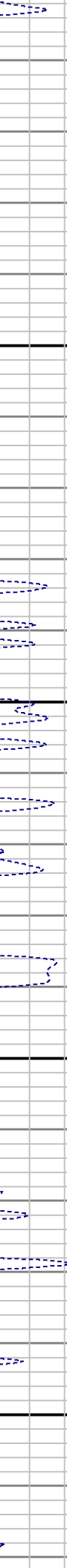
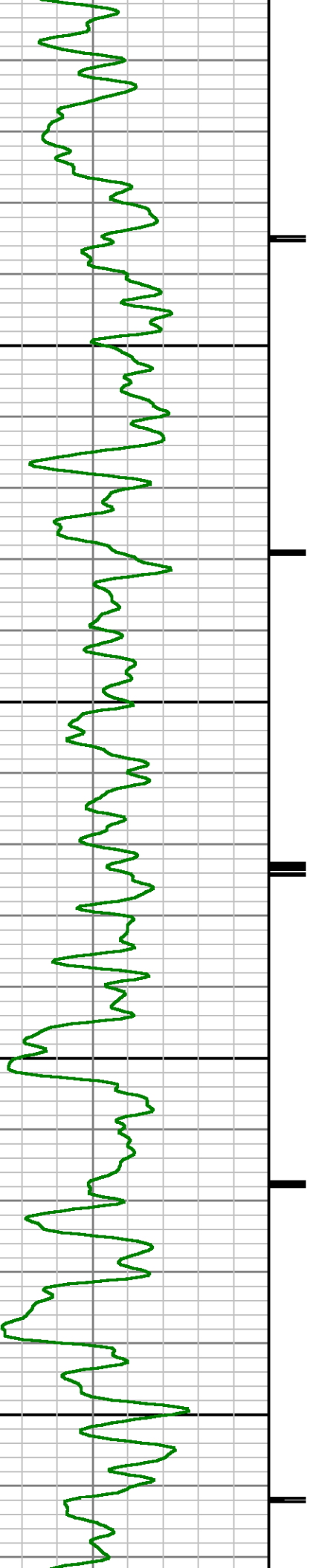


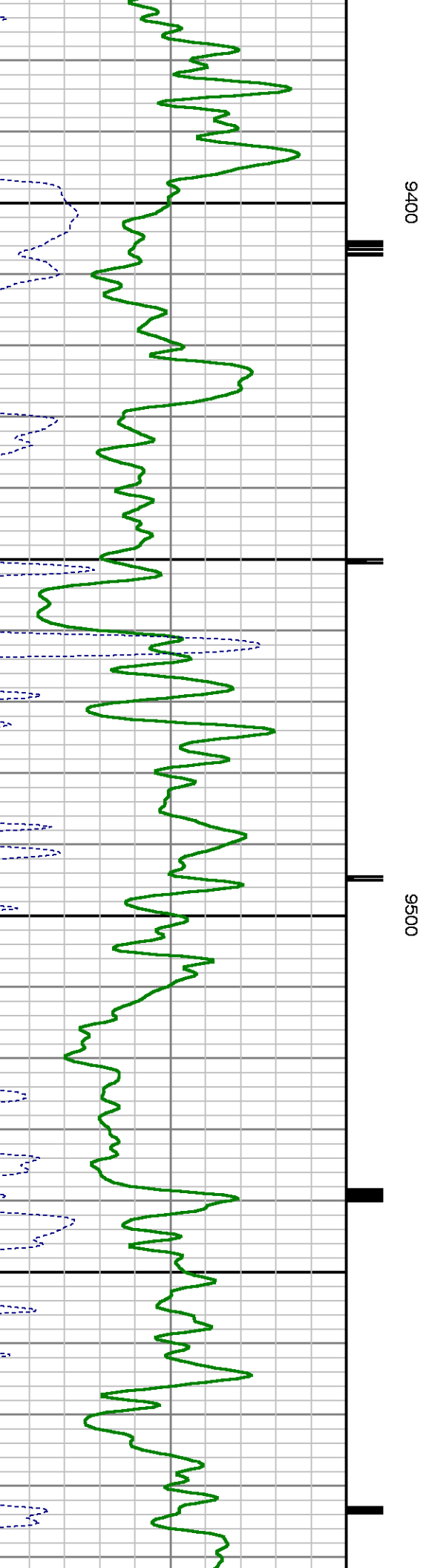
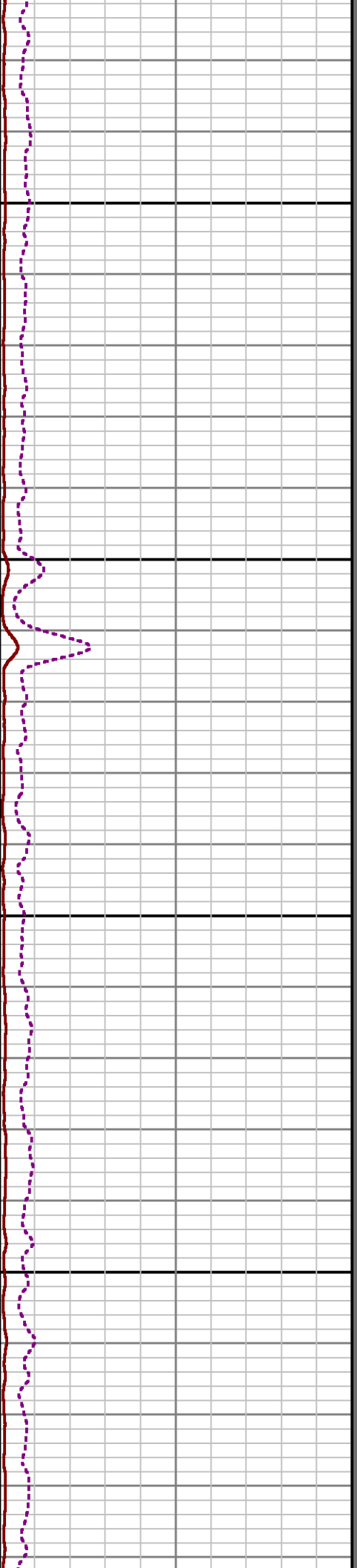
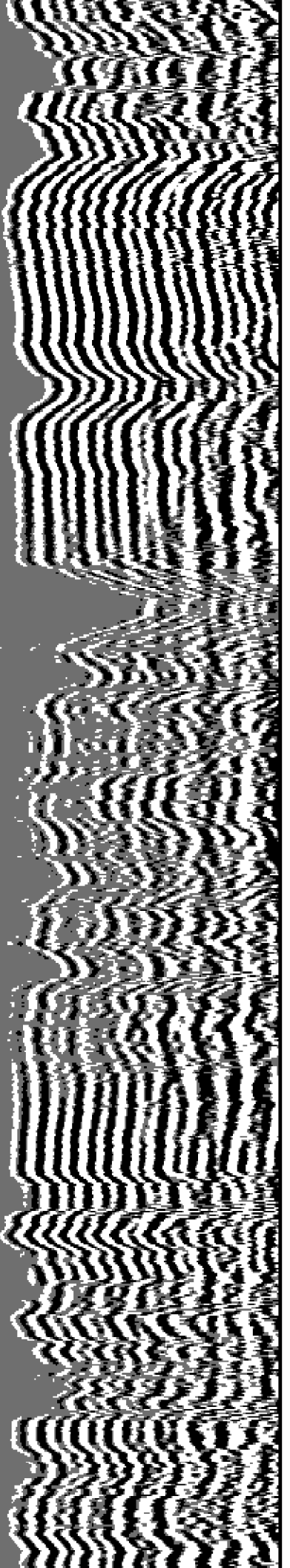




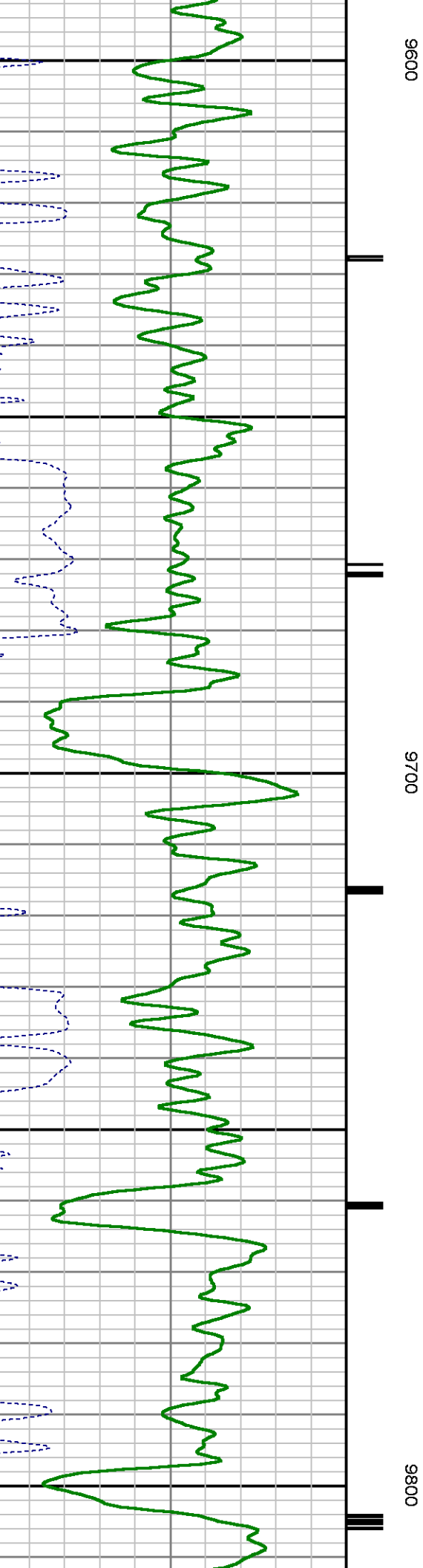
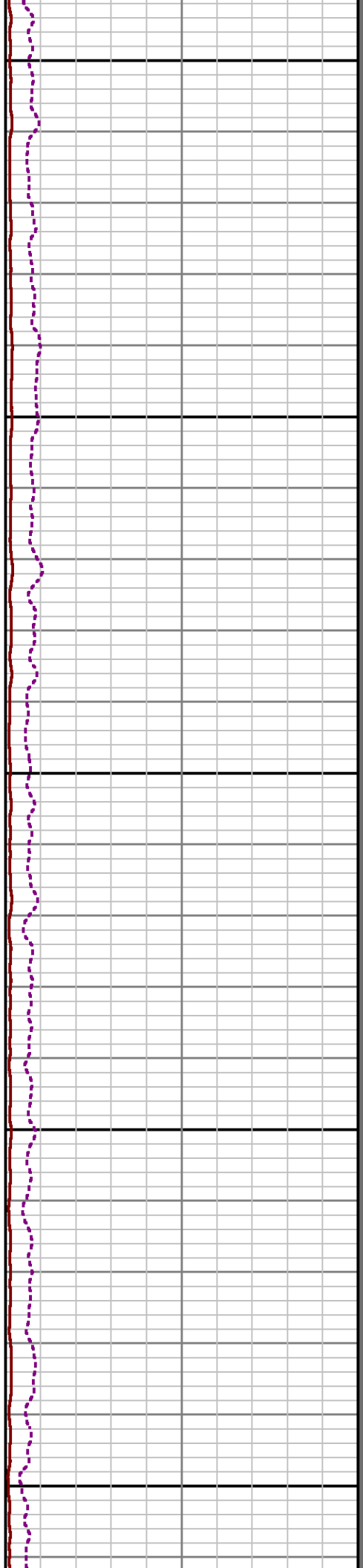
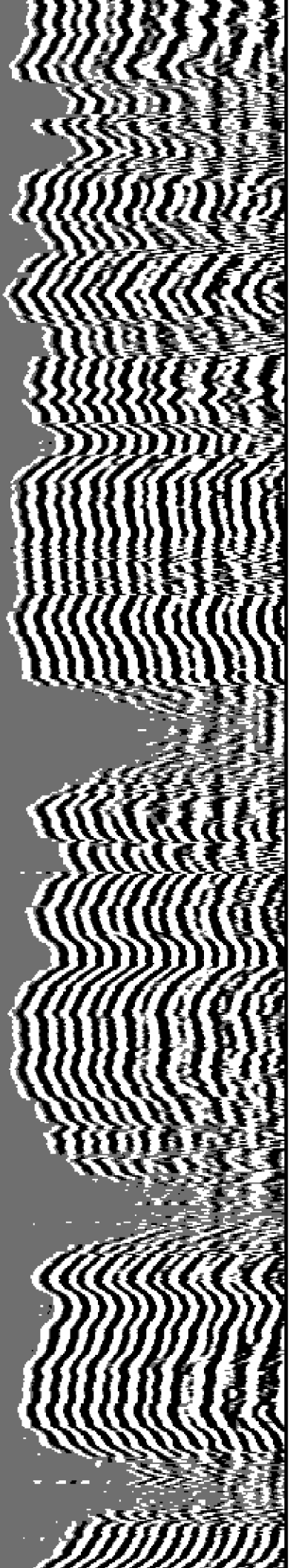
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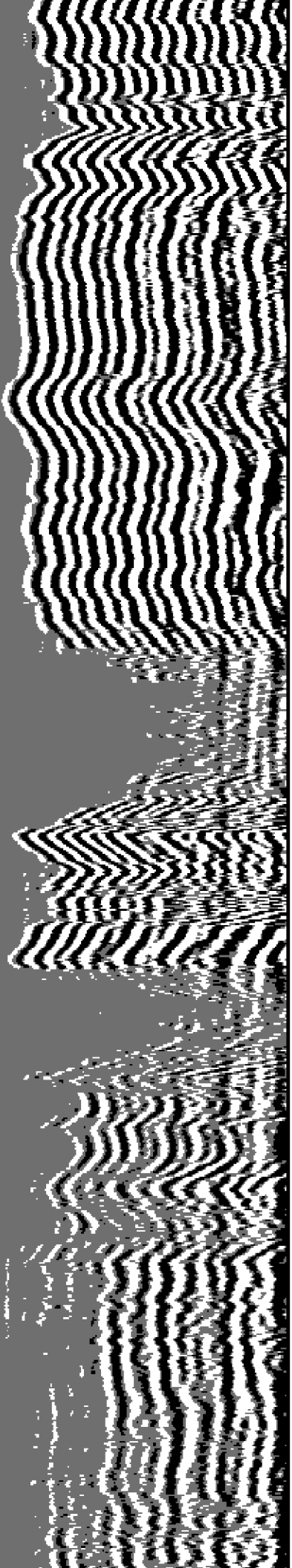
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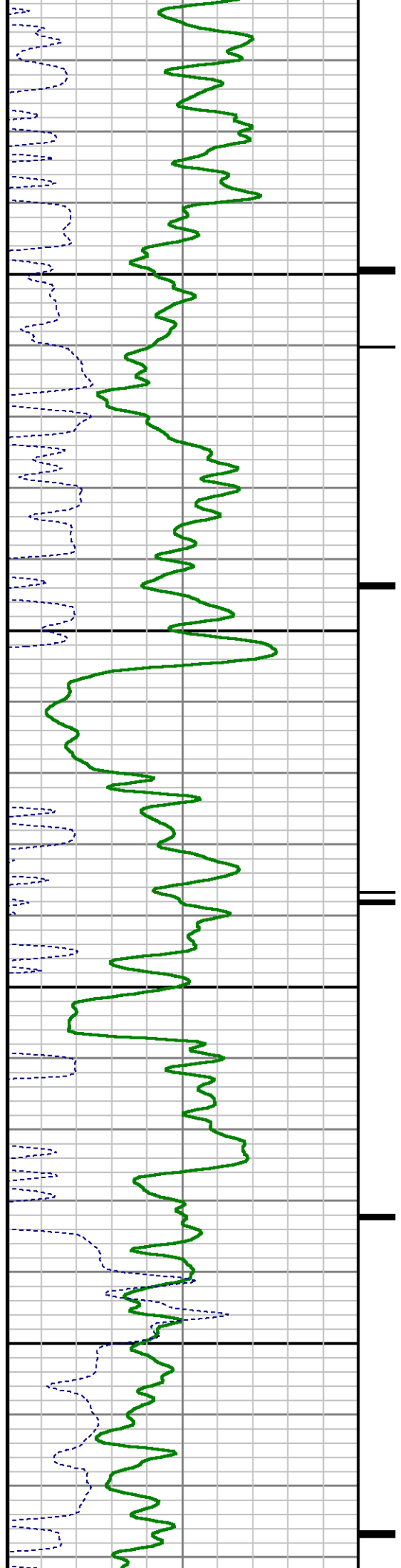


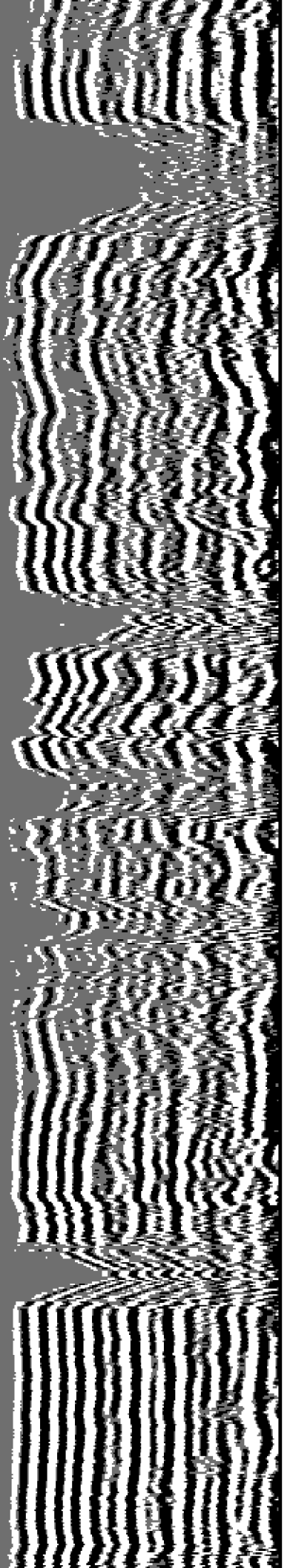




9900

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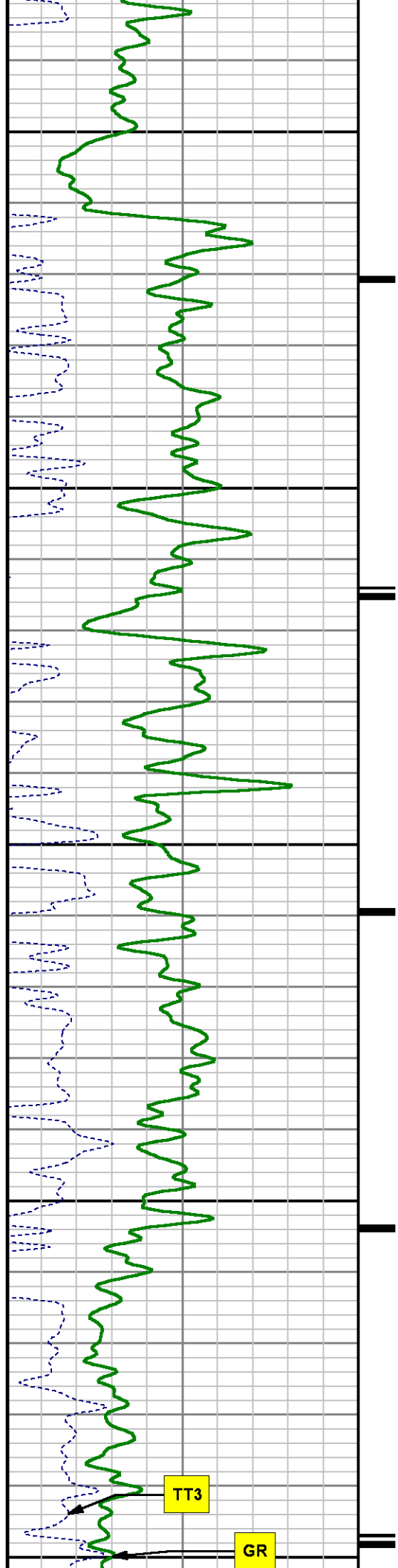
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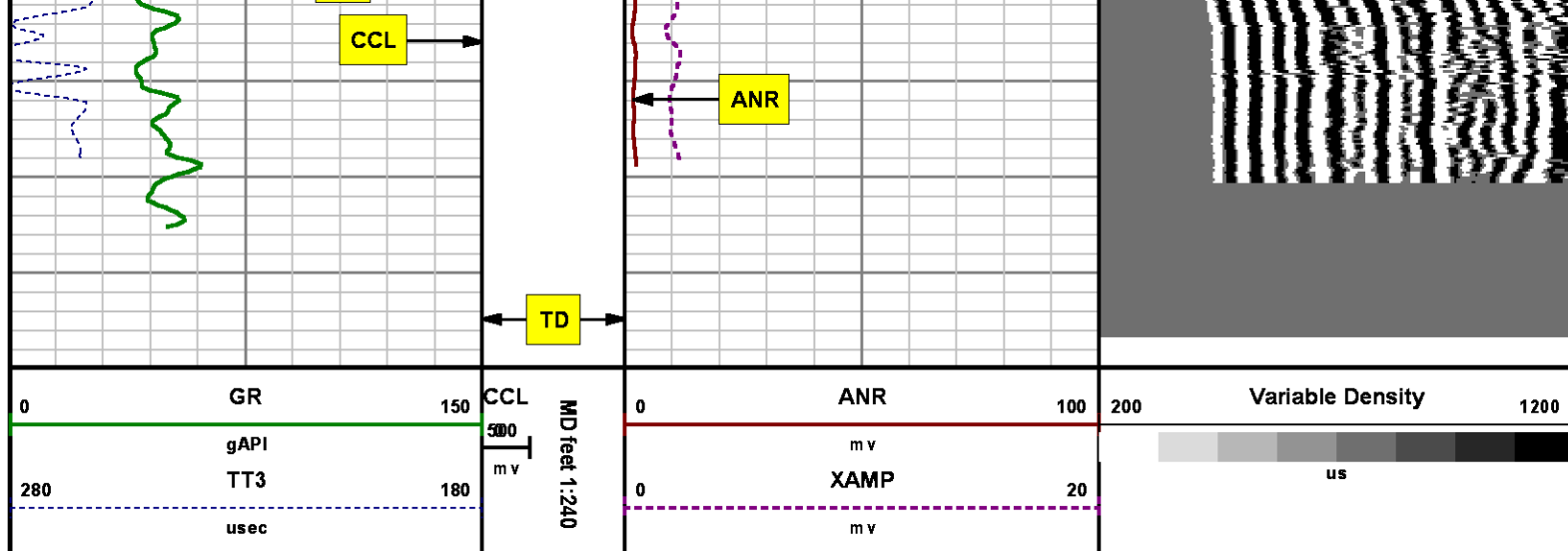
10200

XAMP

TT3

GR





## SECONDARY PRESENTATION

### 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	36.999	10286.500
RAL	Amp Gate Start Near	195.000	usec	36.999	10286.500
RAL	Amp Gate Start Radial	195.000	usec	36.999	10286.500
RAL	Amp Gate Width Far	25.000	usec	36.999	10286.500
RAL	Amp Gate Width Near	25.000	usec	36.999	10286.500
RAL	Amp Gate Width Radial	25.000	usec	36.999	10286.500
RAL	casing od	4.500	inches	36.999	10286.500
RAL	casing wt	11.600	lbm/ft	36.999	10286.500
RAL	FB Start Far	291.900	usec	36.999	10286.500
RAL	FB Start Near	180.000	usec	36.999	10286.500
RAL	FB Start Radial	180.000	usec	36.999	10286.500
RAL	FB Thresh Far	15.000	mv	36.999	10286.500
RAL	FB Thresh Near	4.000	mv	36.999	10286.500
RAL	FB Thresh Radial	4.000	mv	36.999	10286.500
RAL	Fluid Travel Time	200.000	usec/ft	36.999	10286.405

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
		ACAL	ANR	AR1	AR2	AR3	AR4	AR5	AR6
1426XA	-16.750								
		AR5	AR6	AR7	AR8	CHV	FPR2		
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3		
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP		
1426XA	-15.750	AFAR	SIG	TT5					
2459XA	-11.340	CCL							
2459XA	-9.490	GR							
2459XA	-4.090	NEU							

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

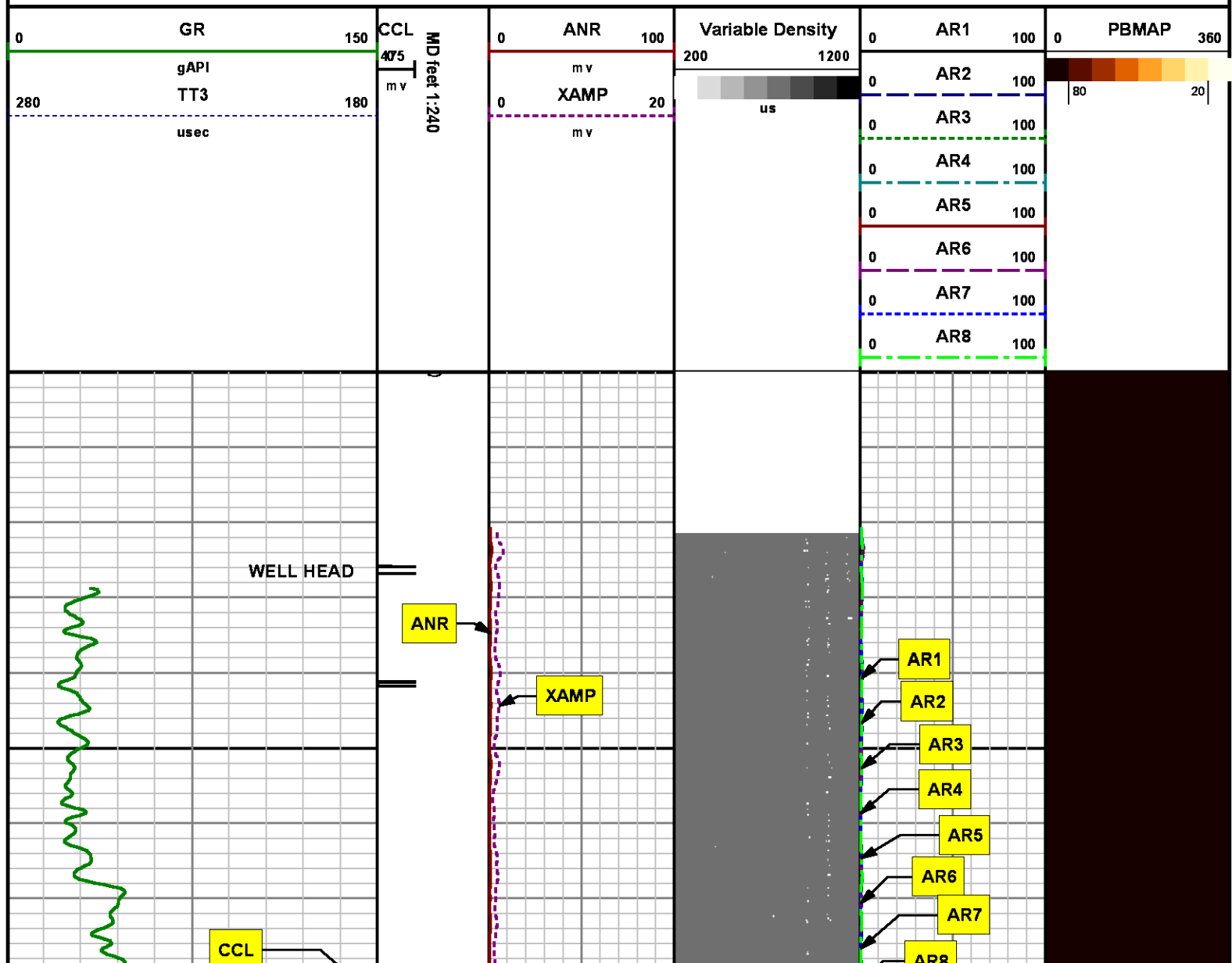
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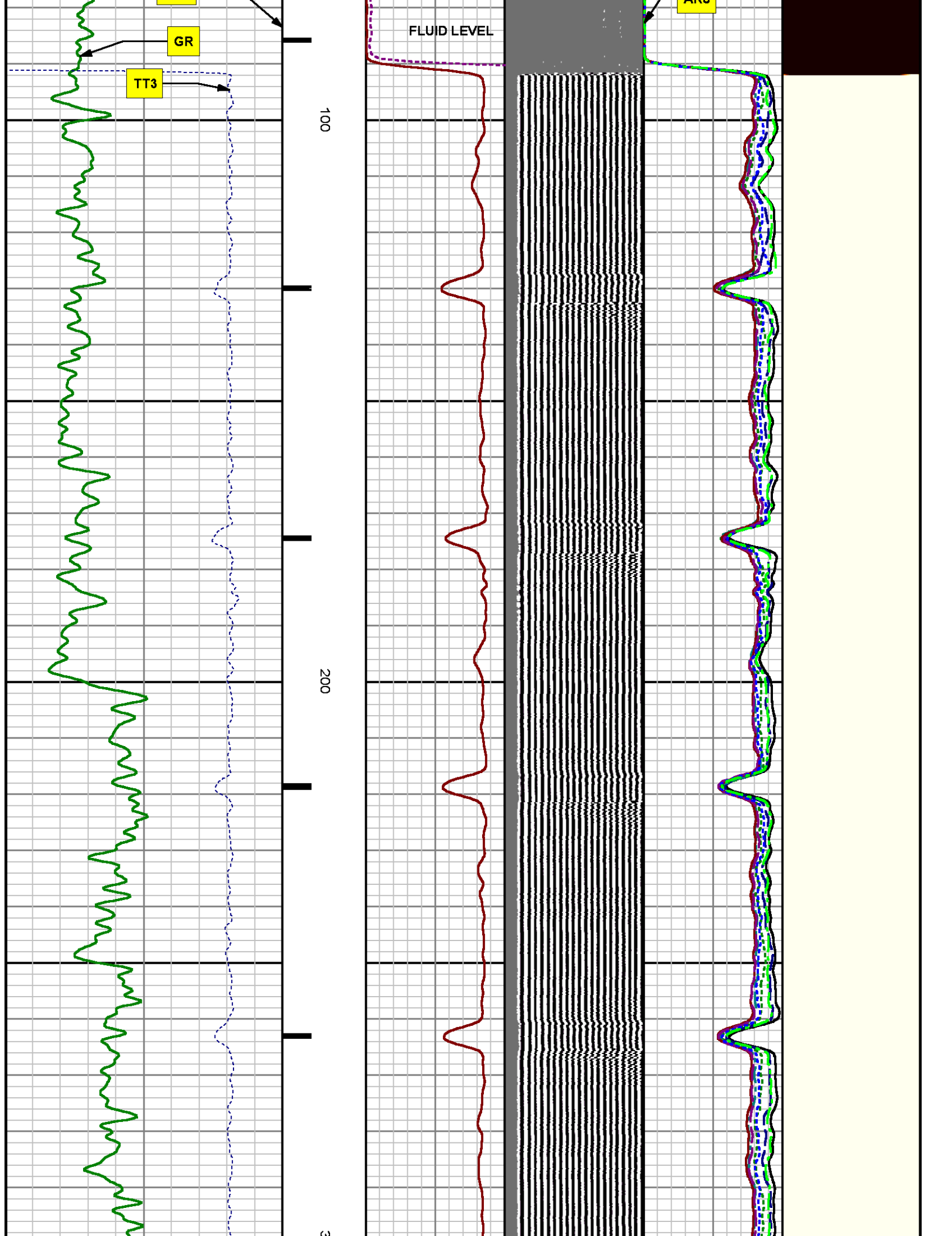
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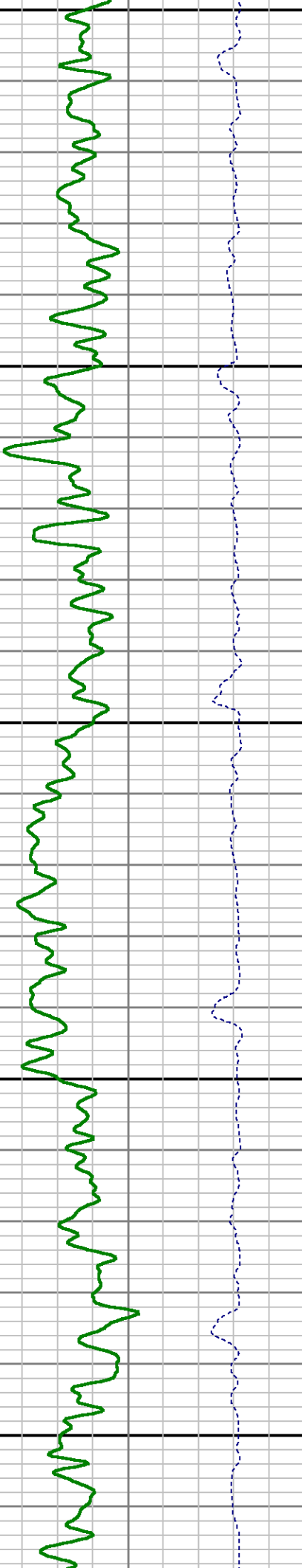
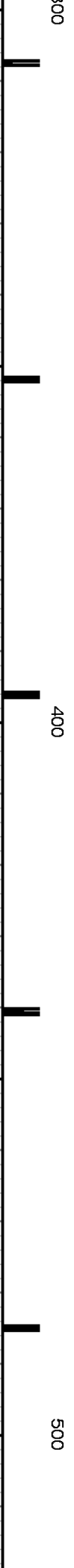
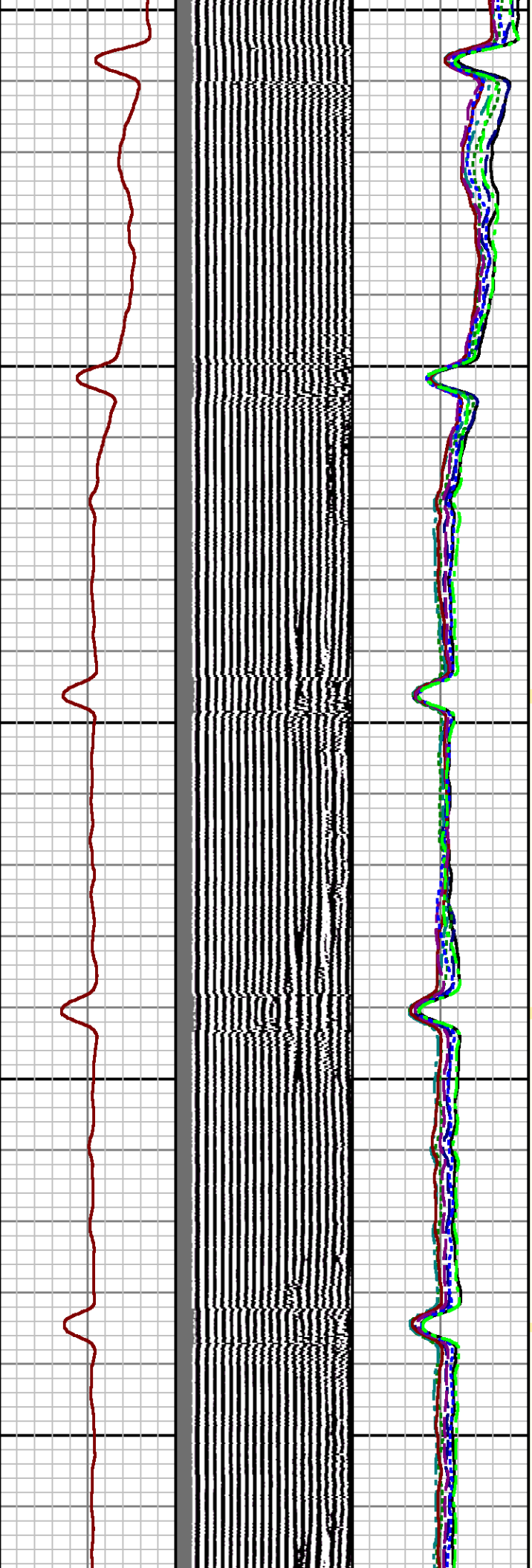
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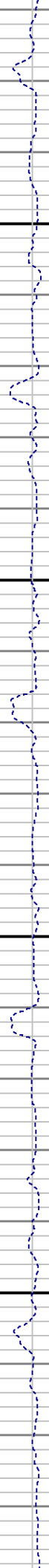
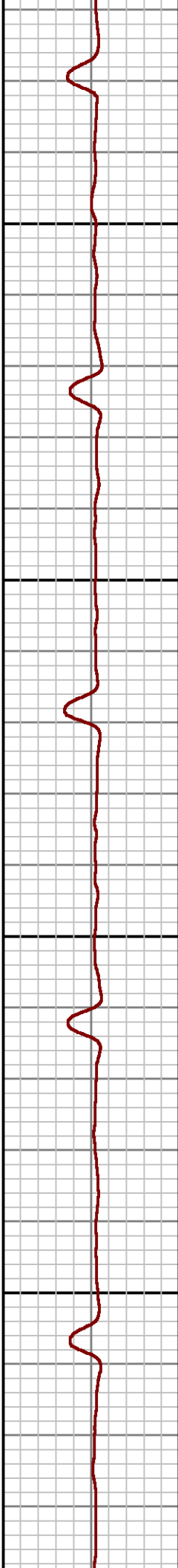
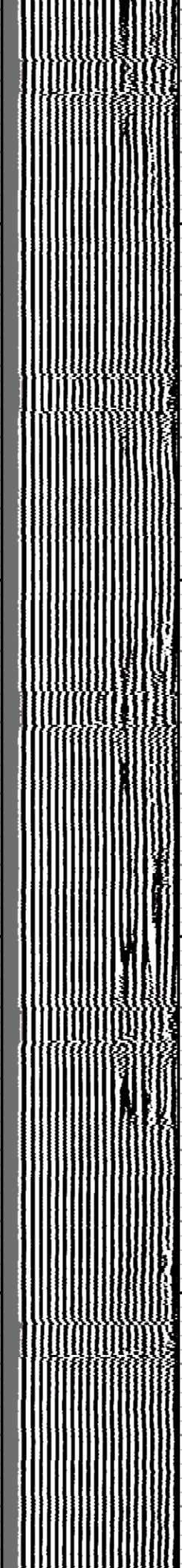
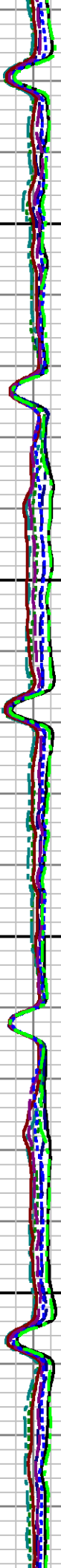
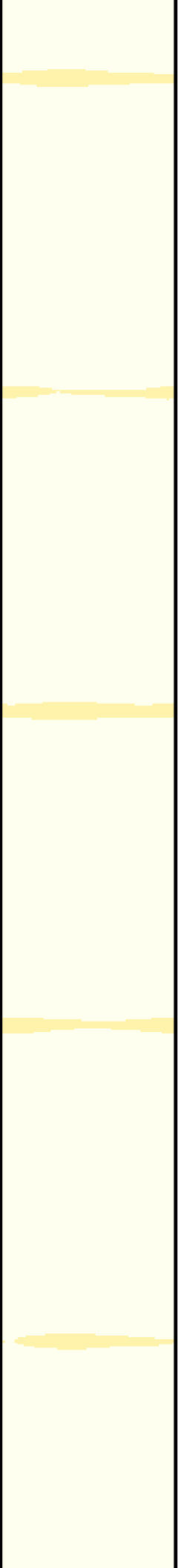
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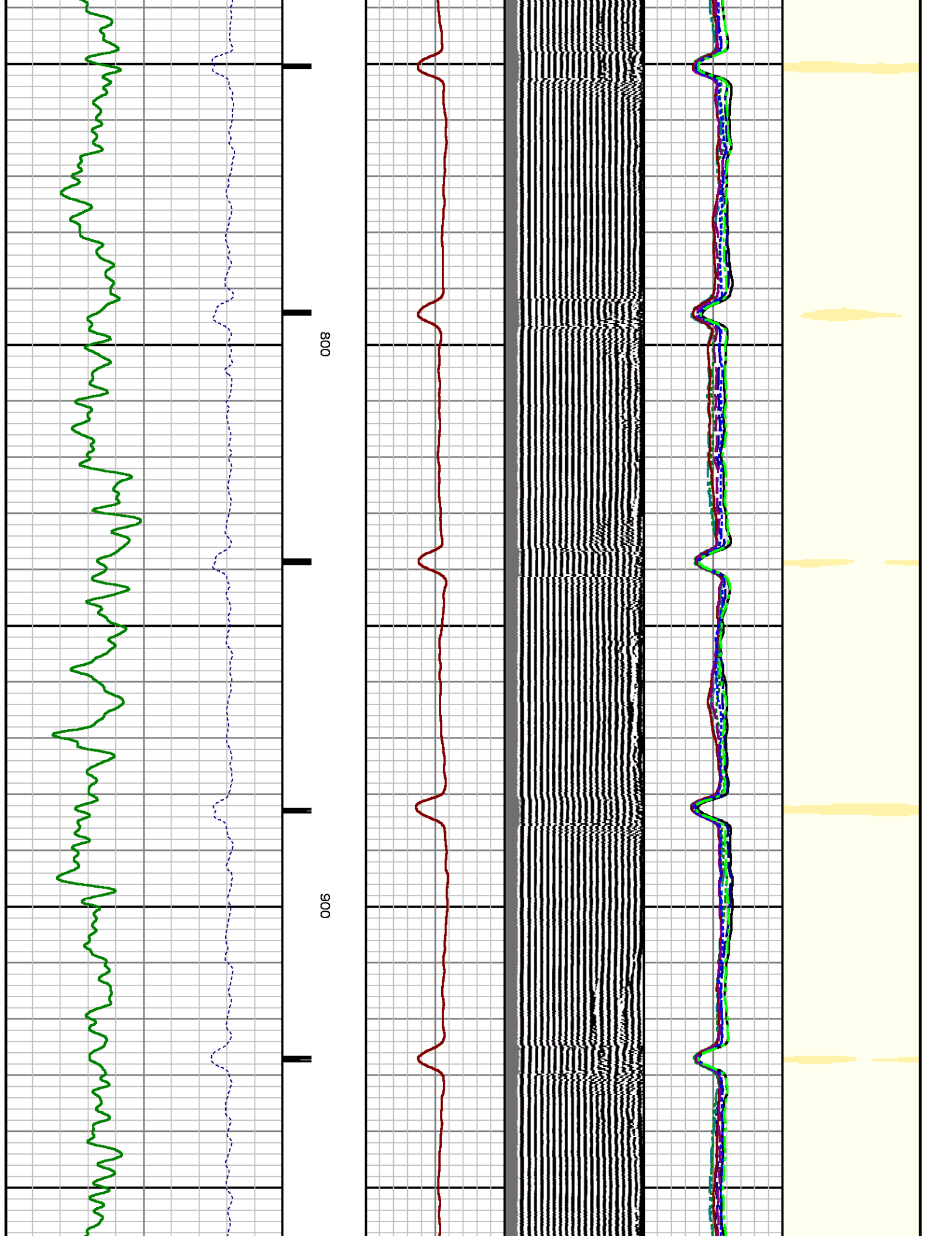


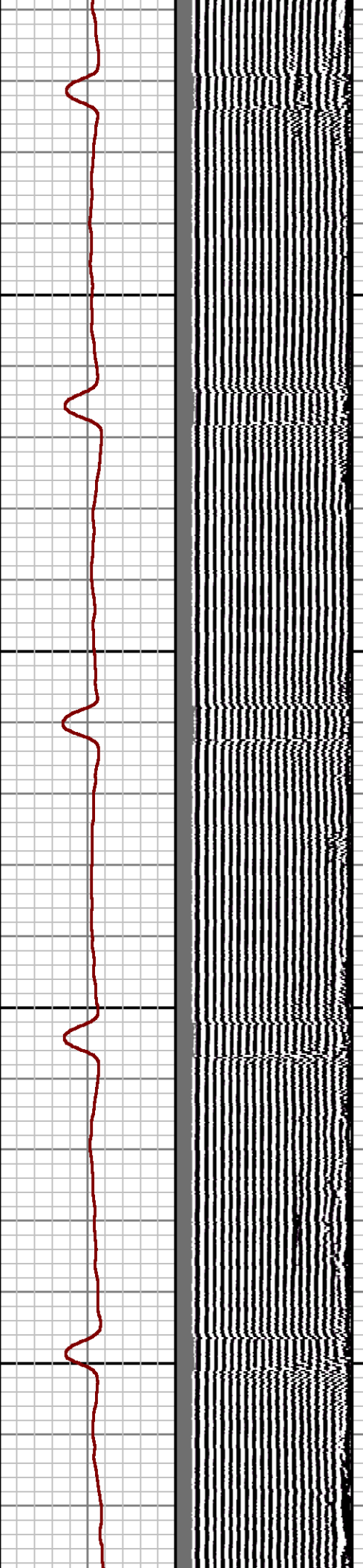
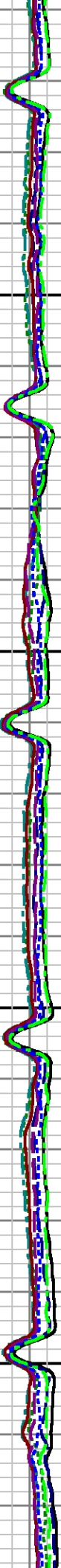






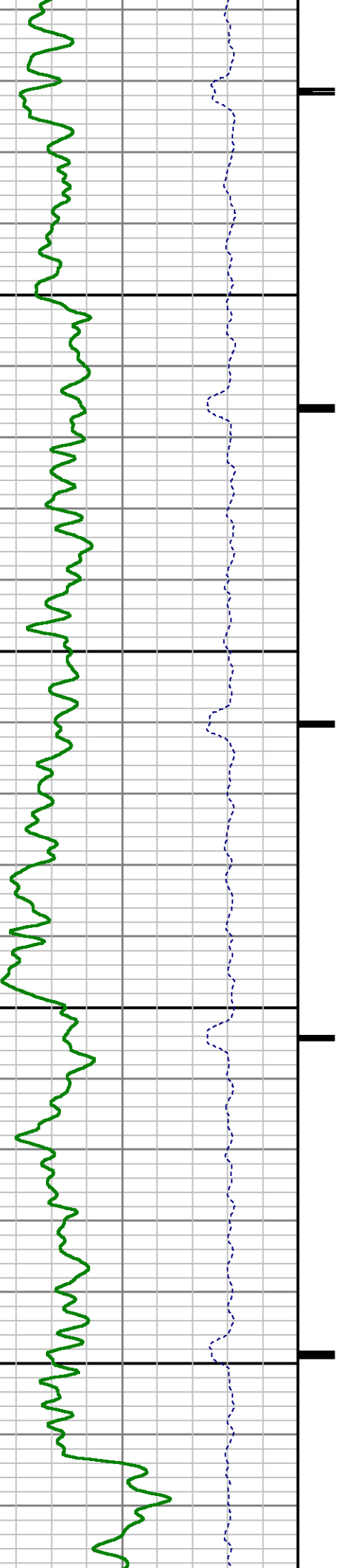




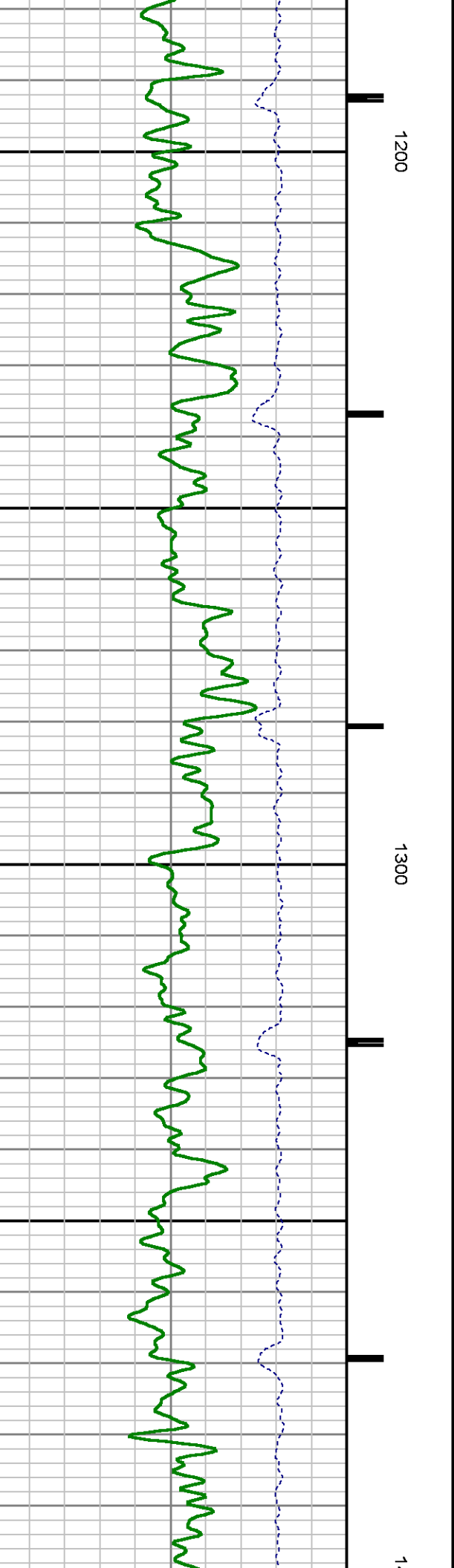
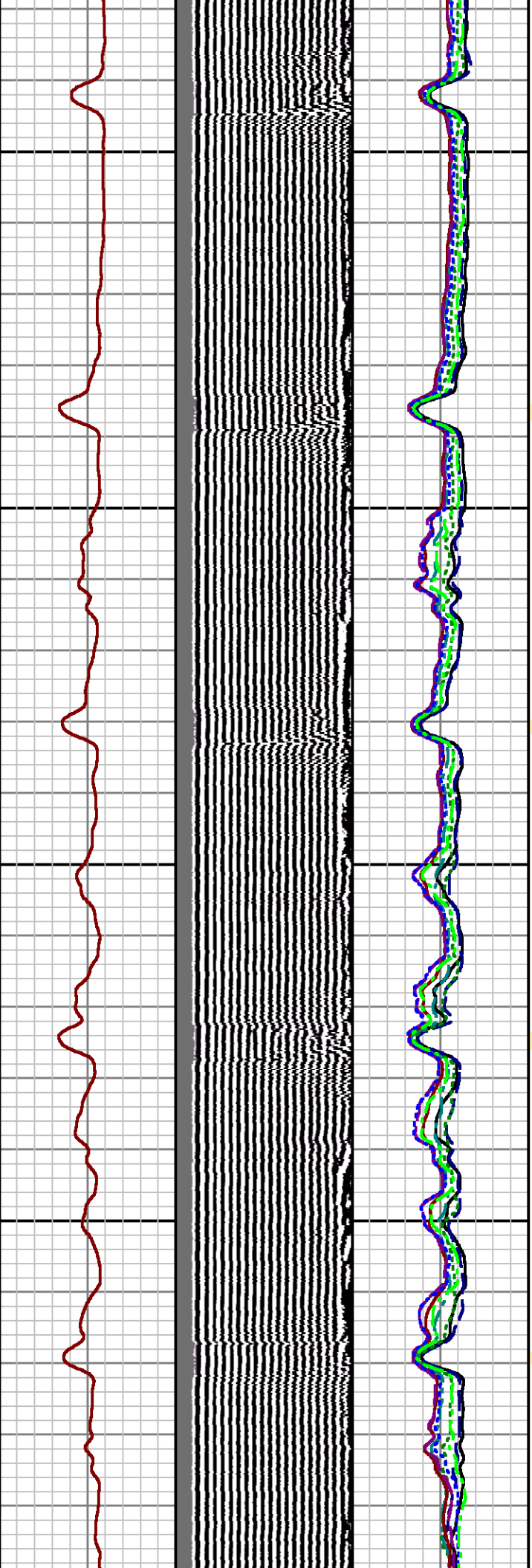


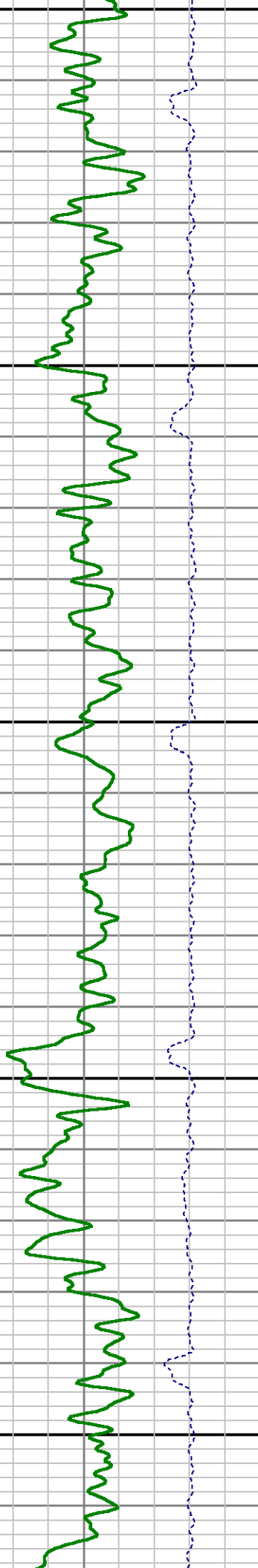
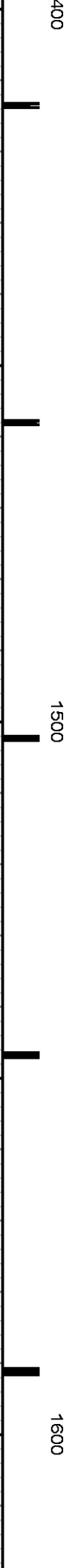
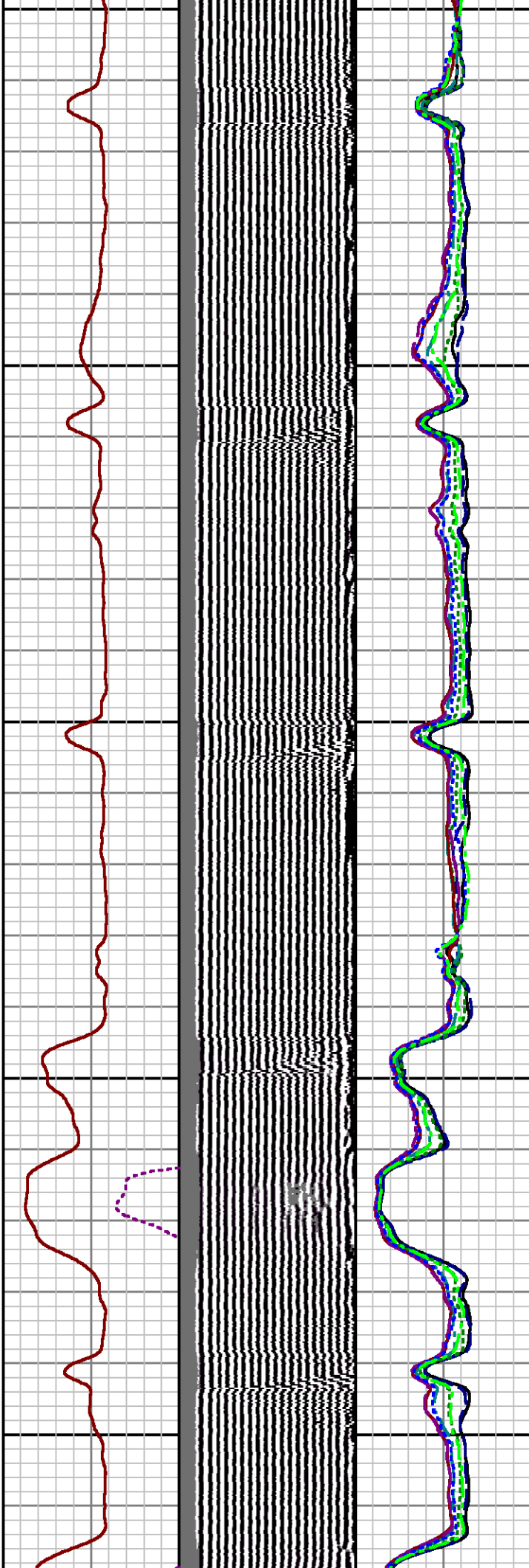
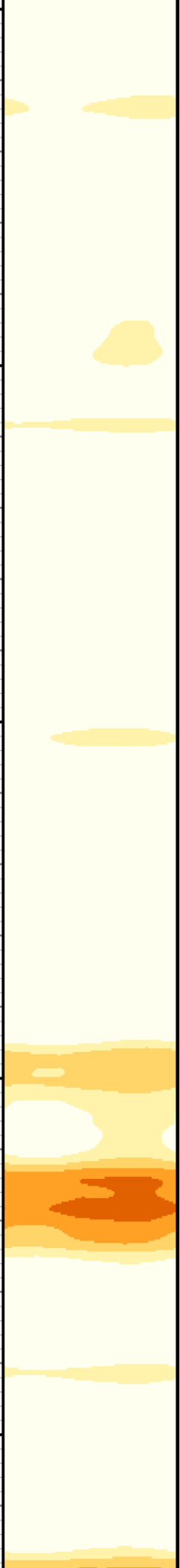
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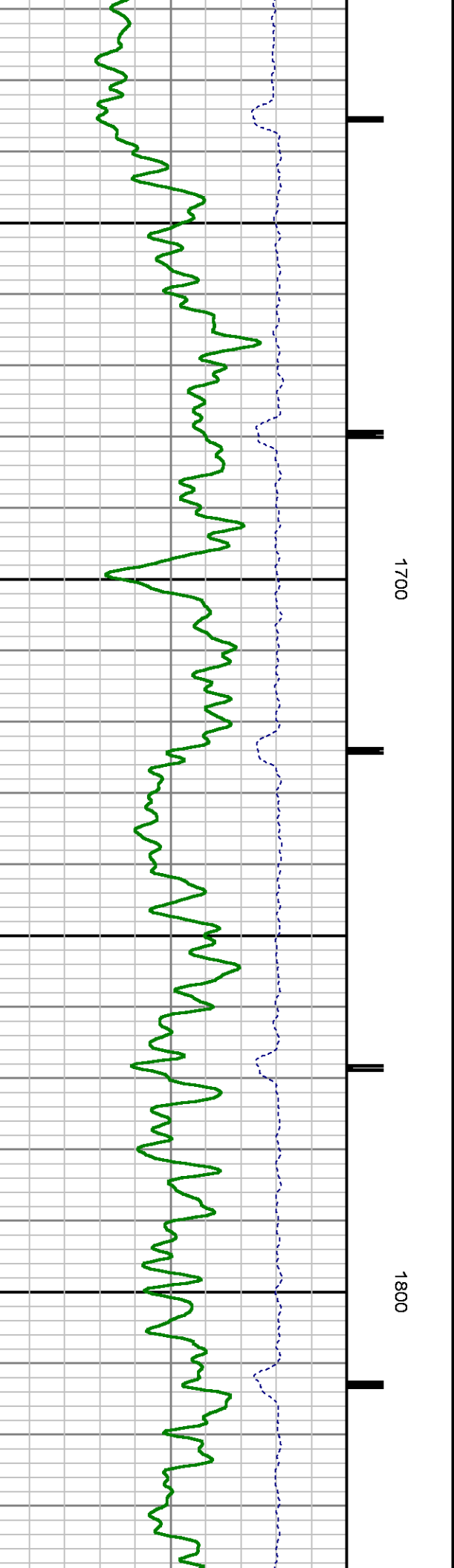
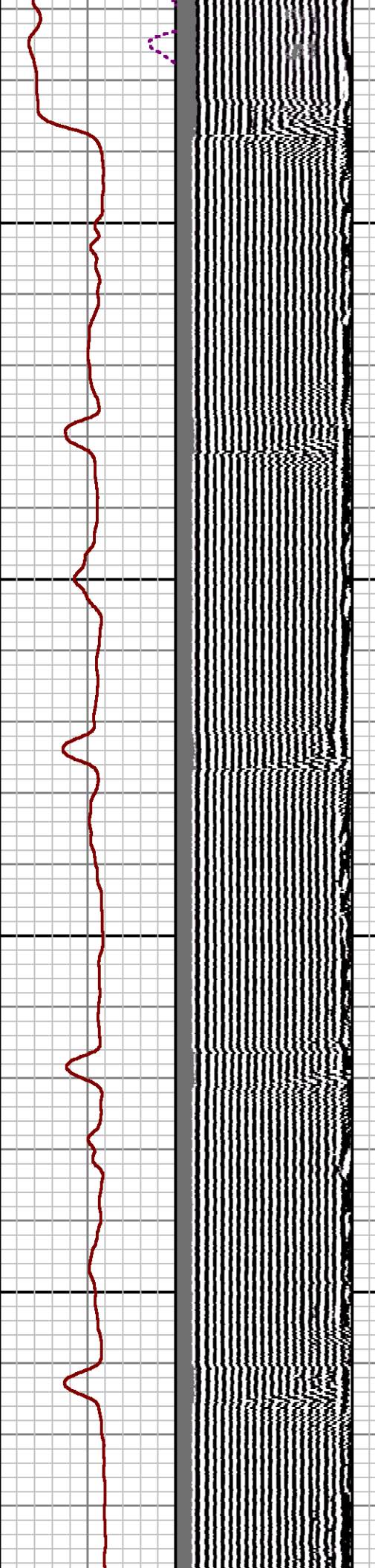
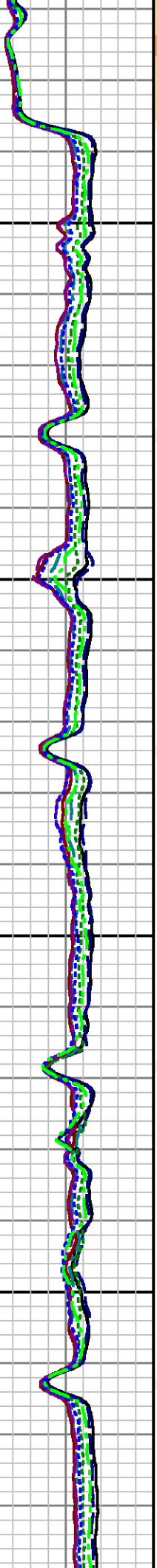
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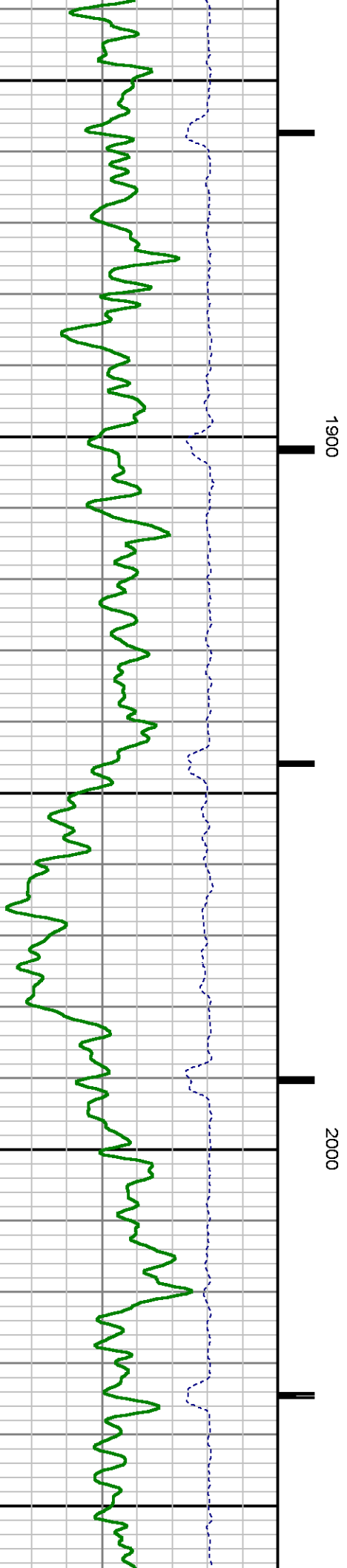
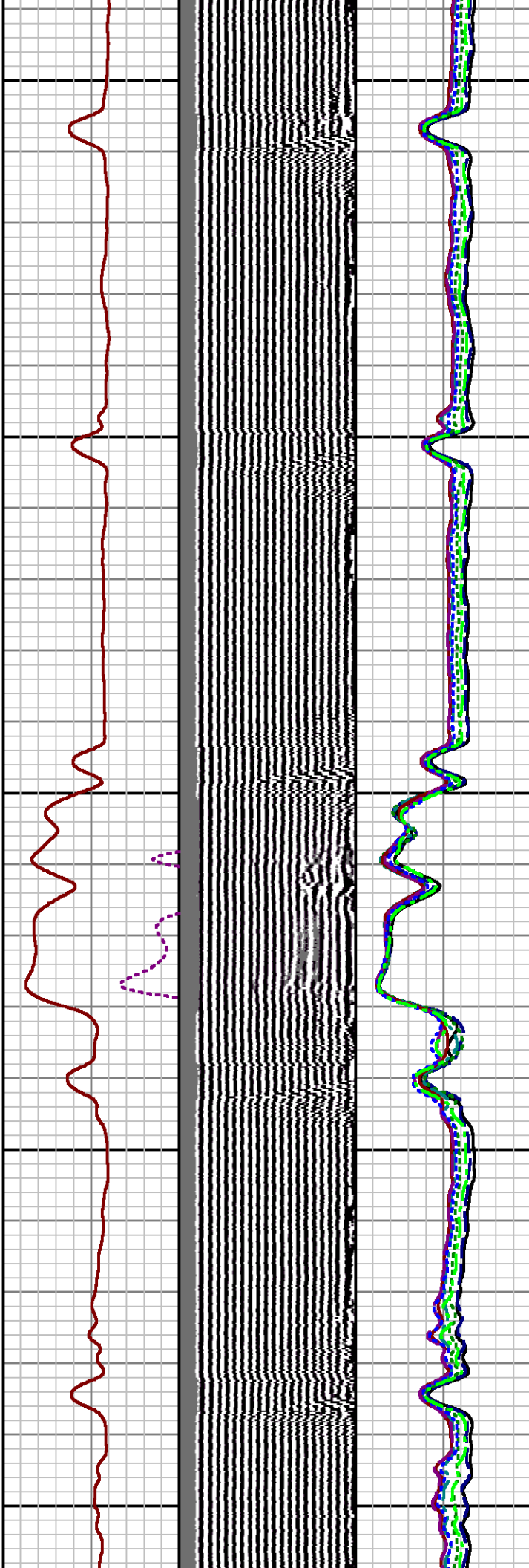
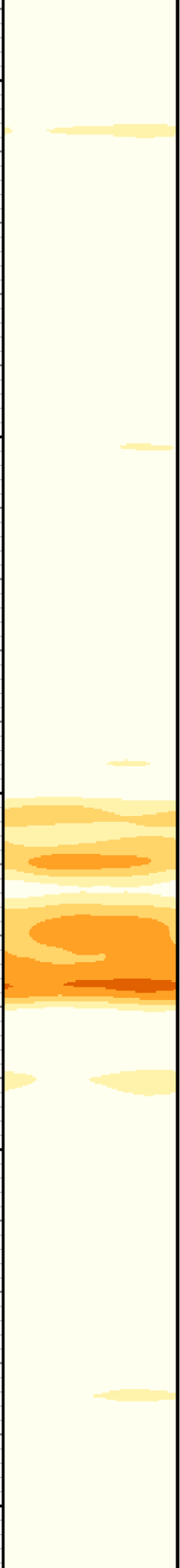


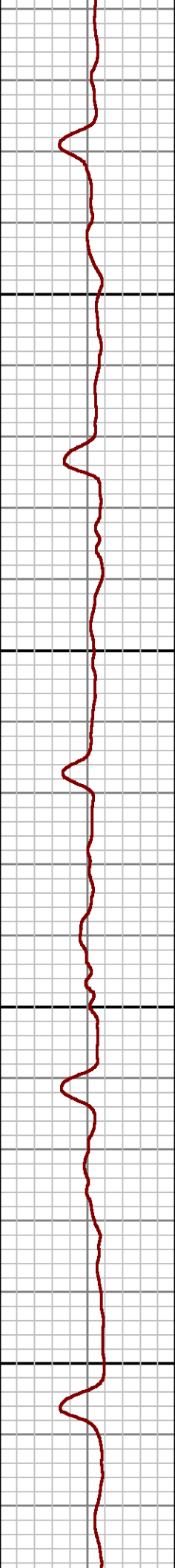
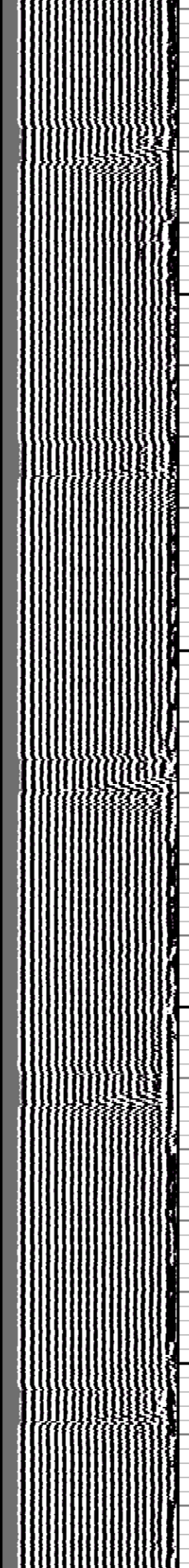
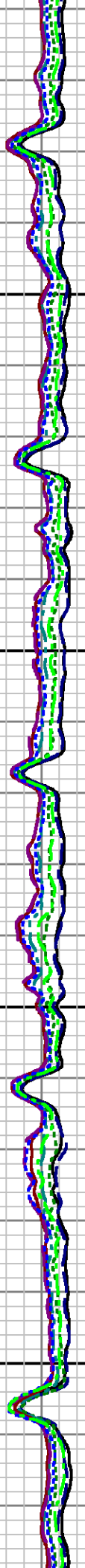
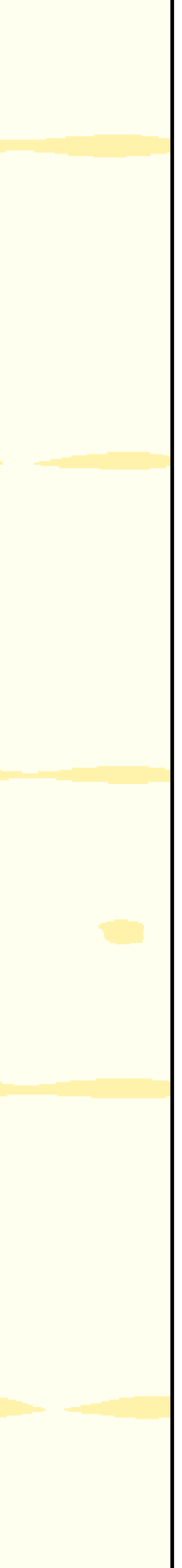






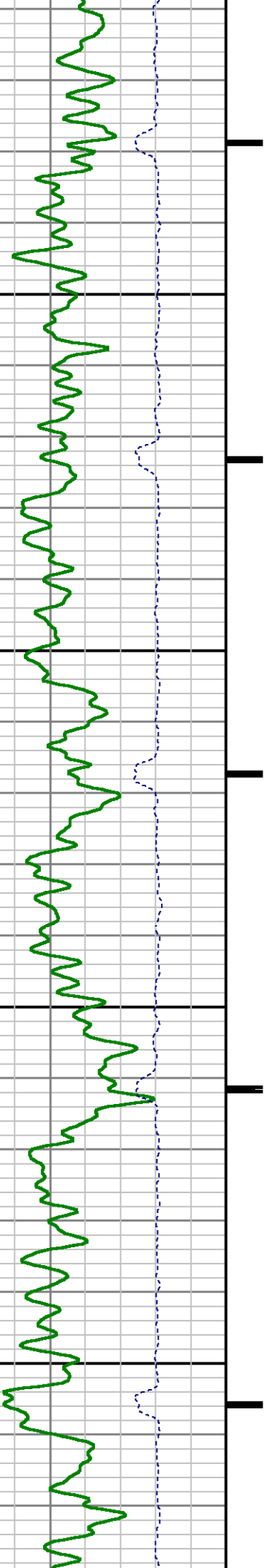




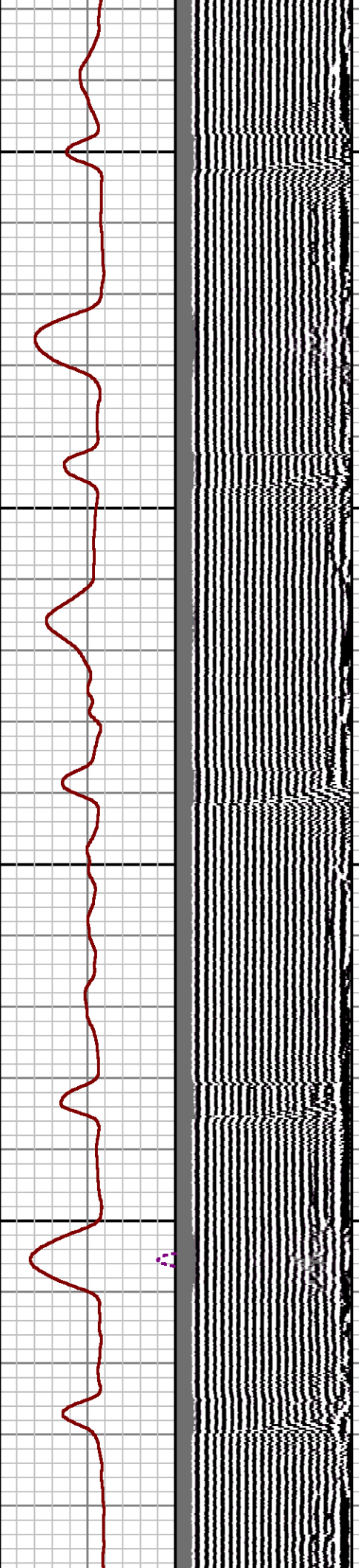
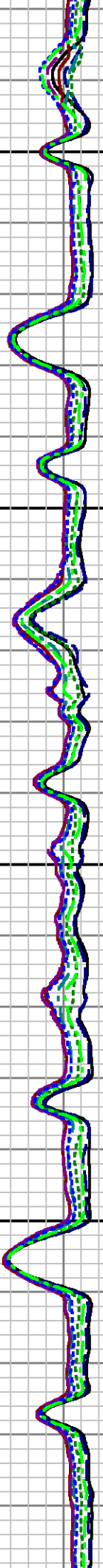
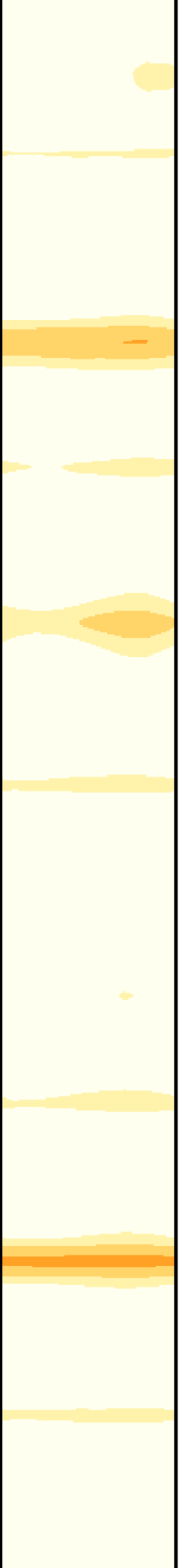


2100

2200



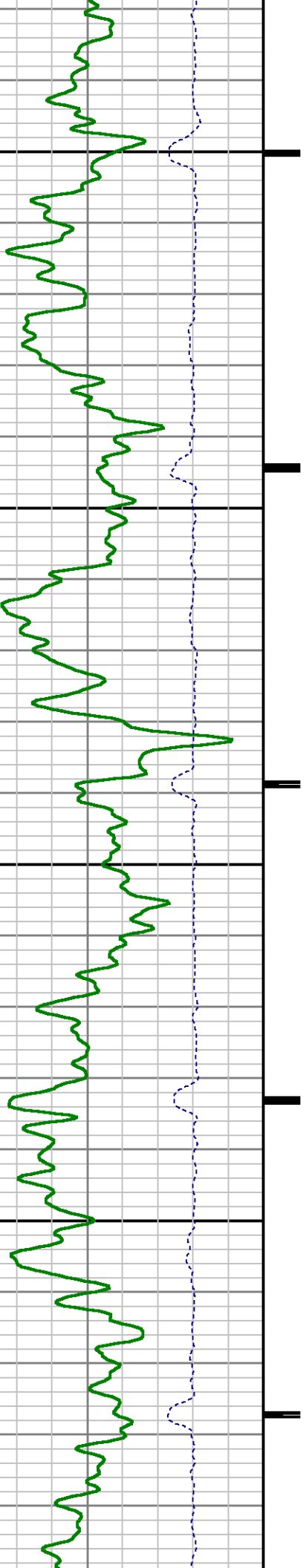


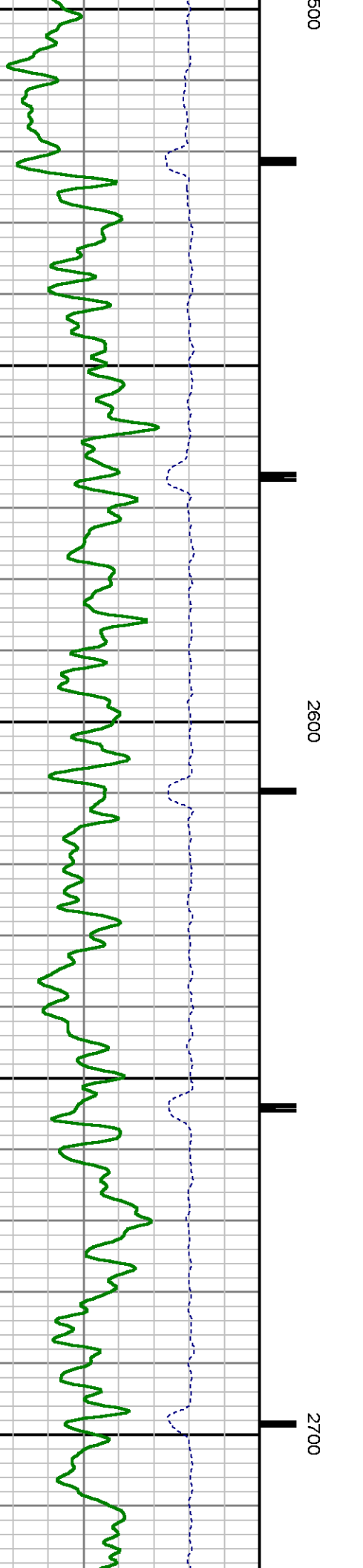
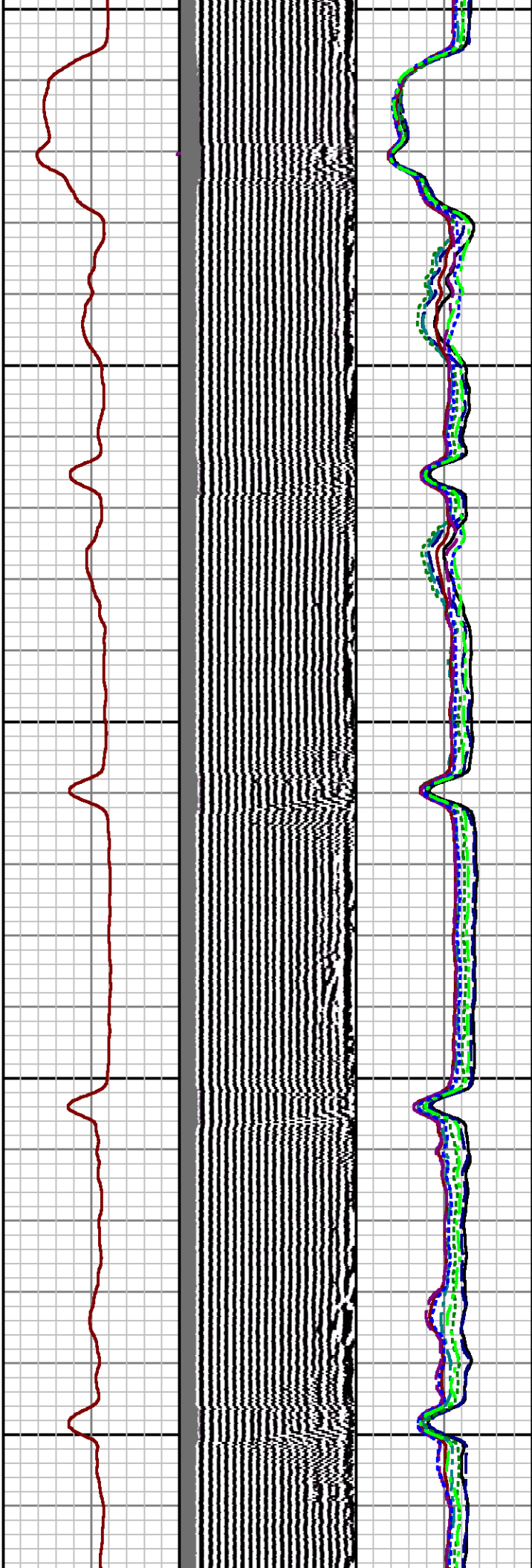
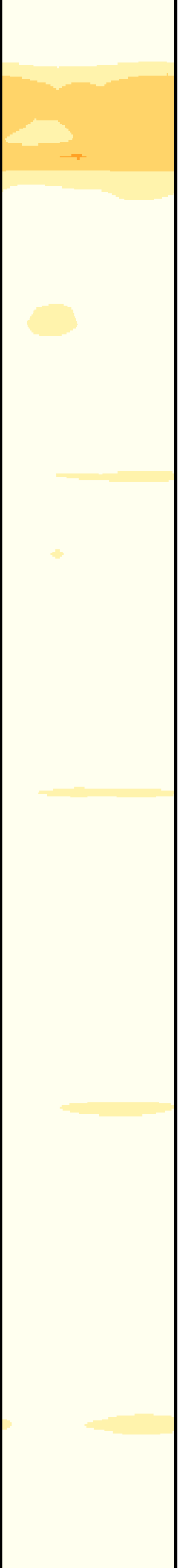


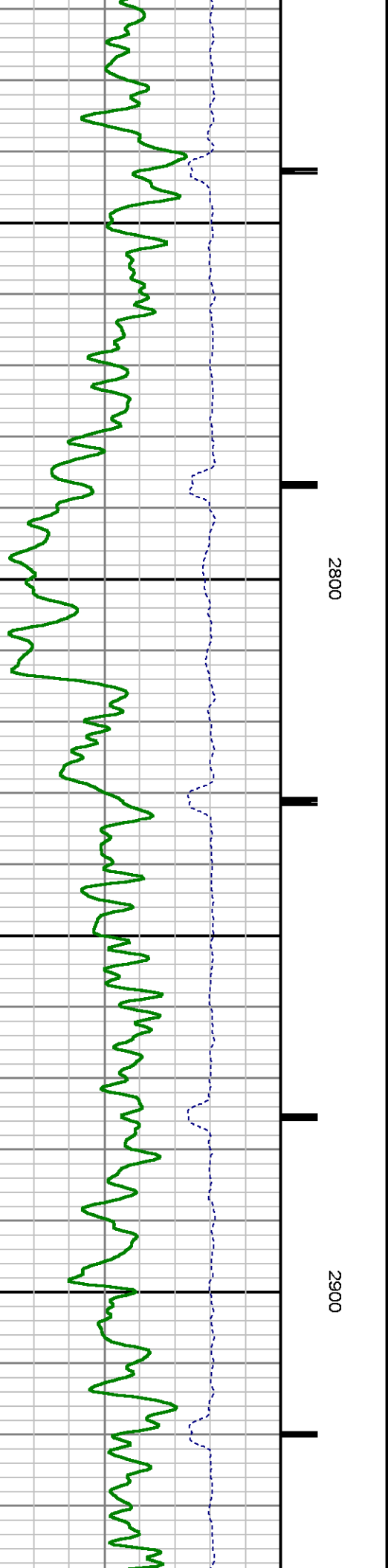
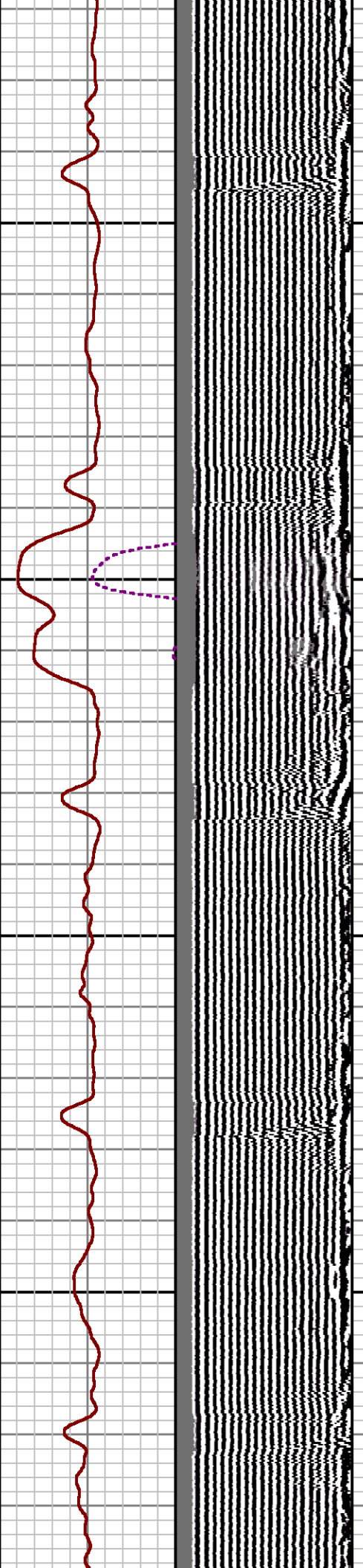
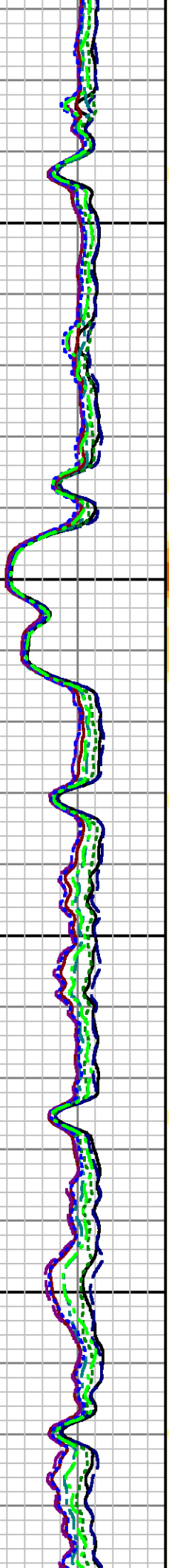
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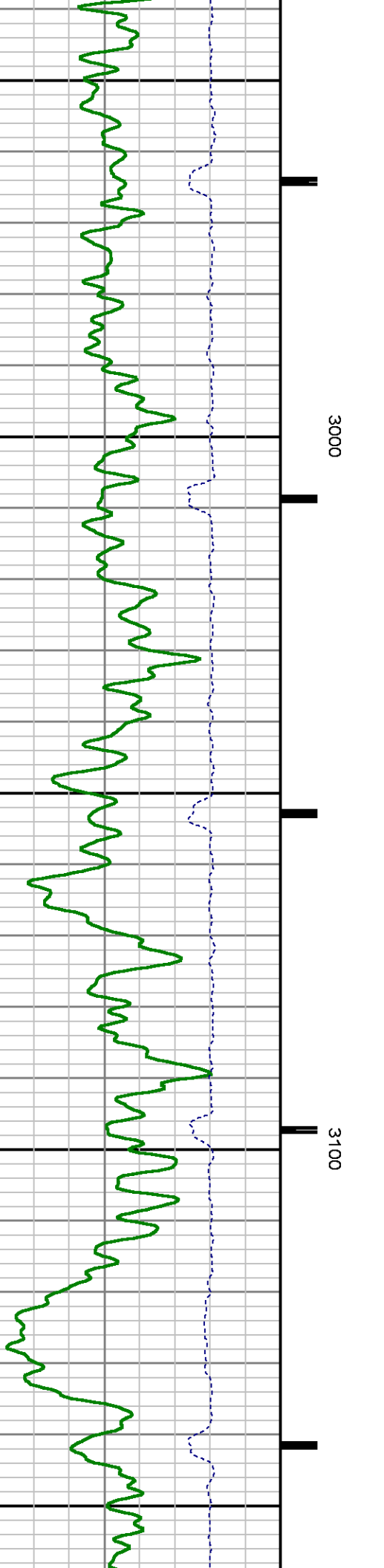
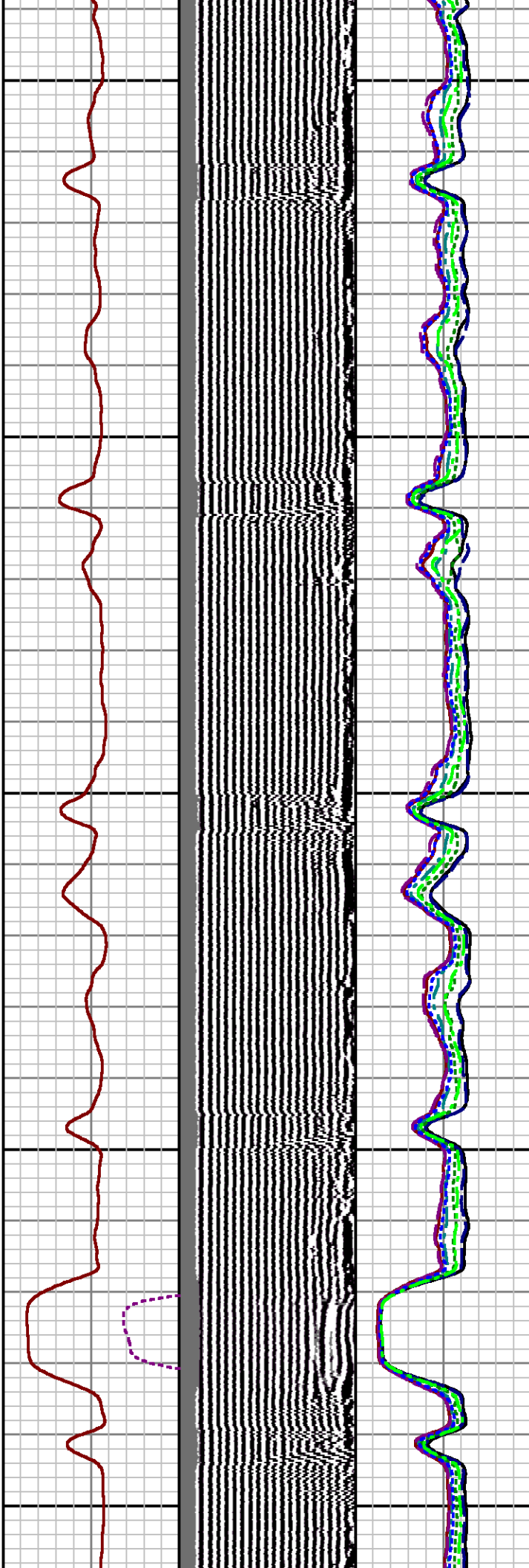
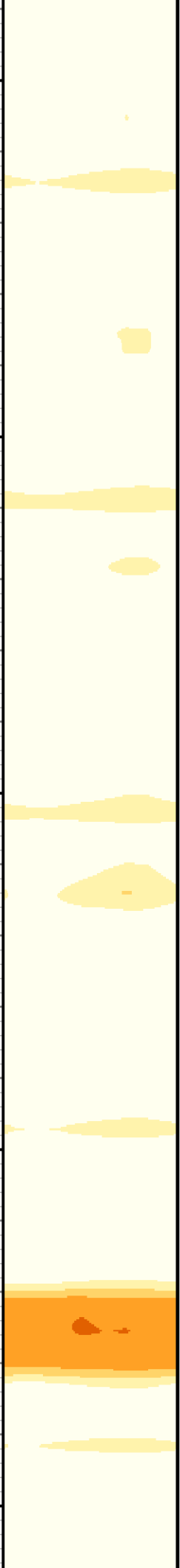
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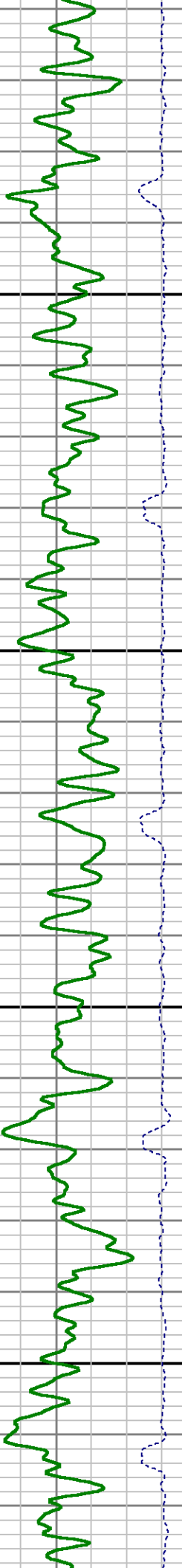
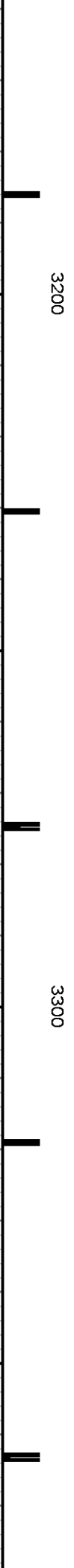
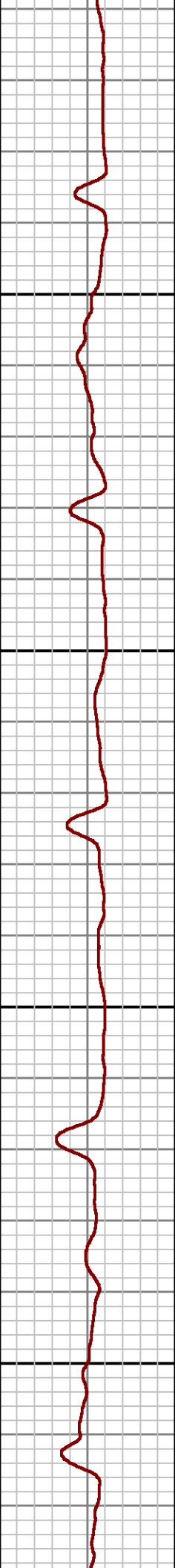
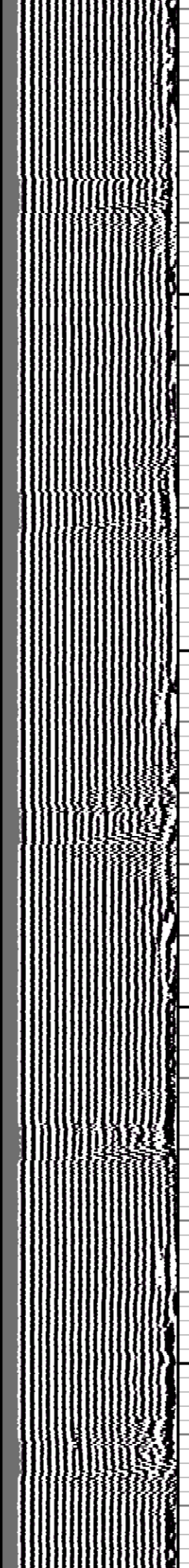
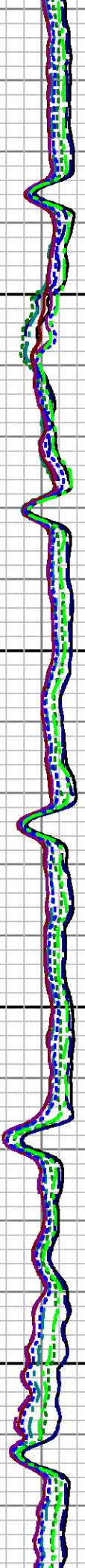
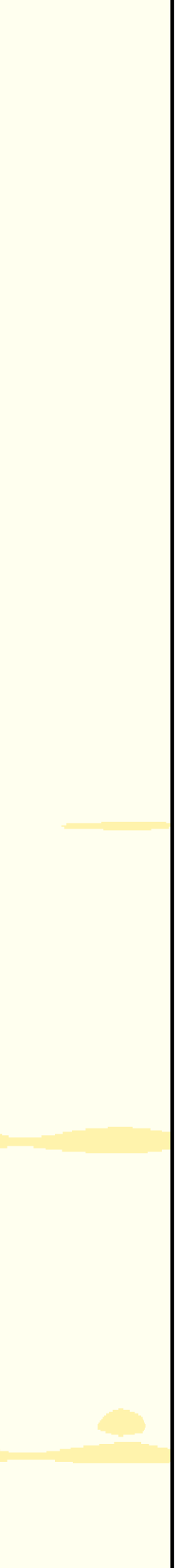
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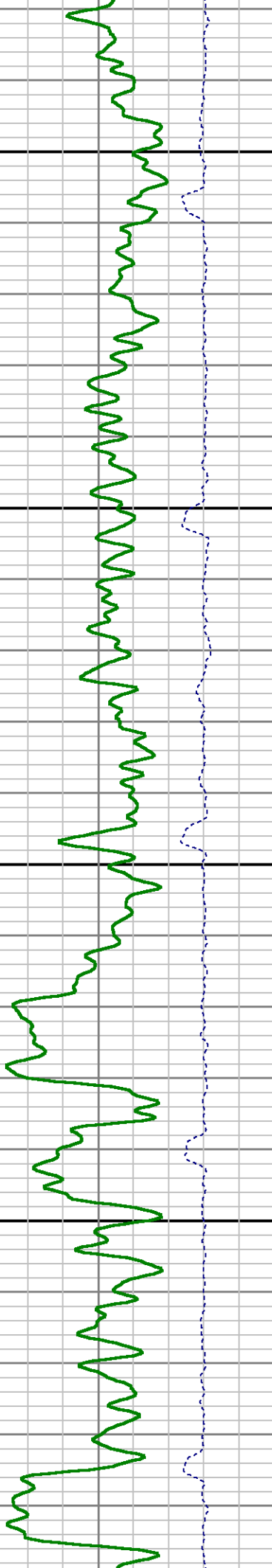
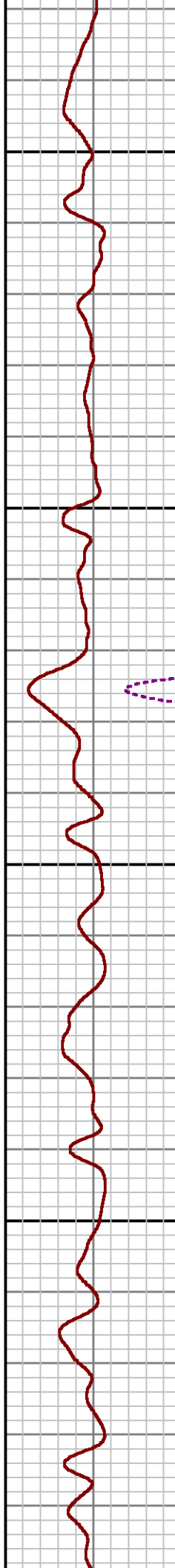
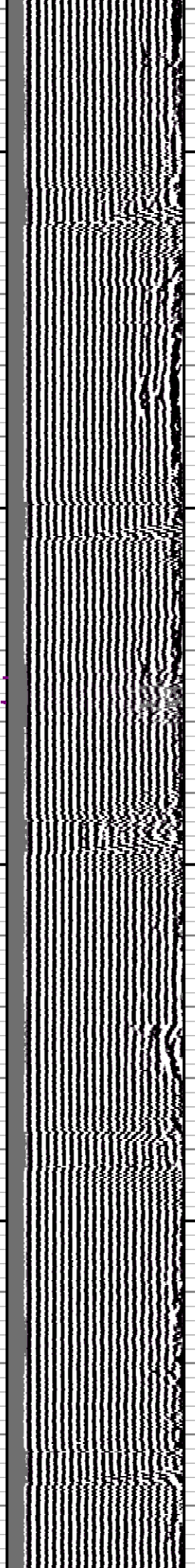
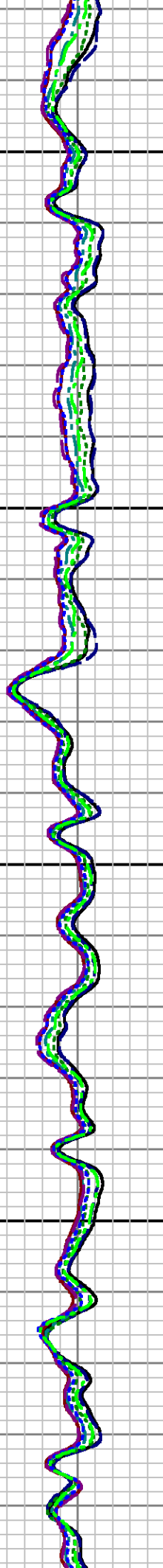
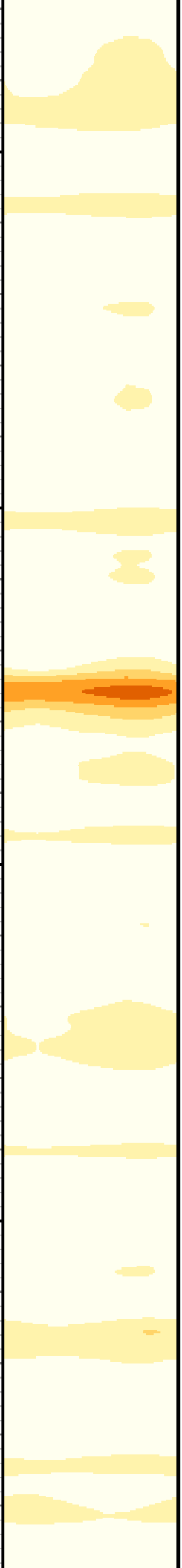








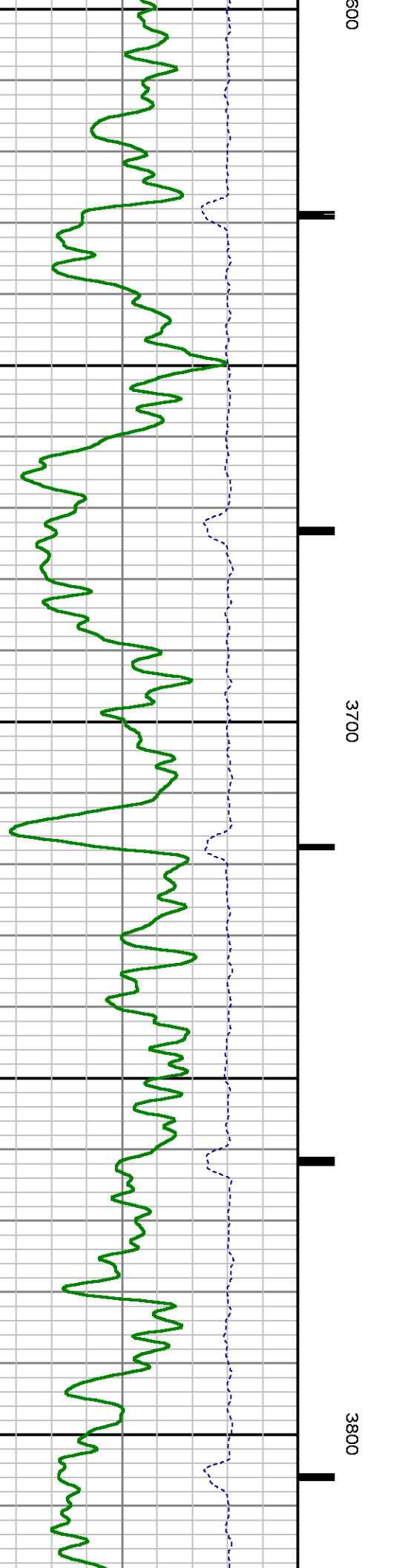
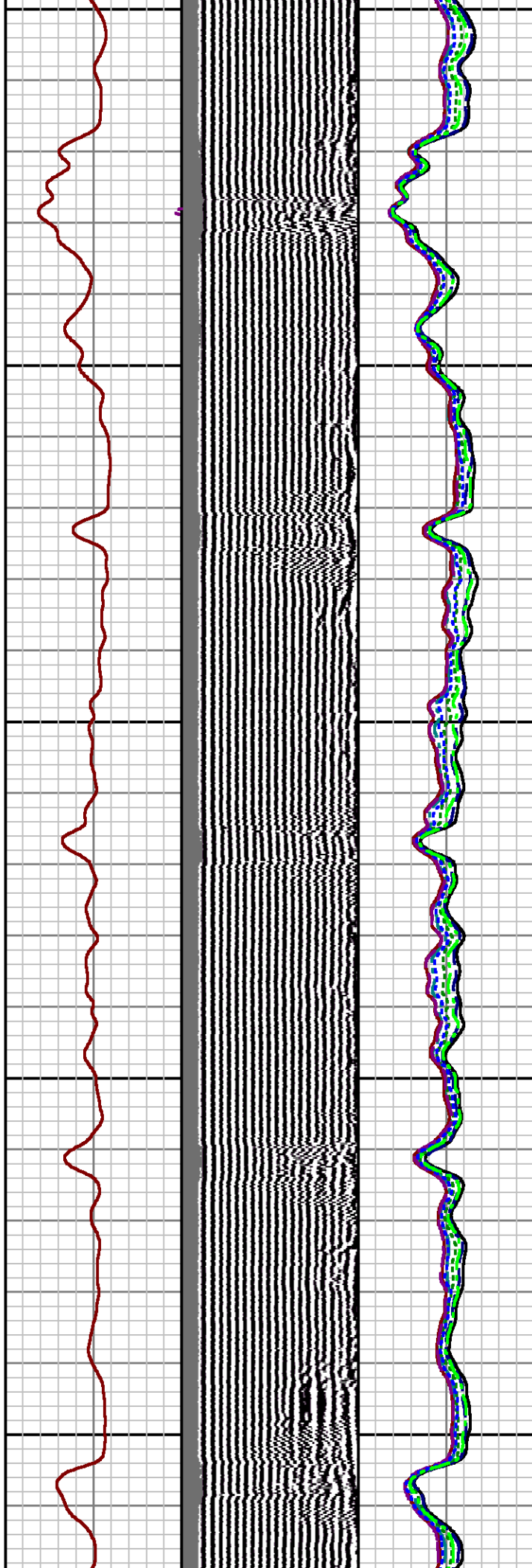
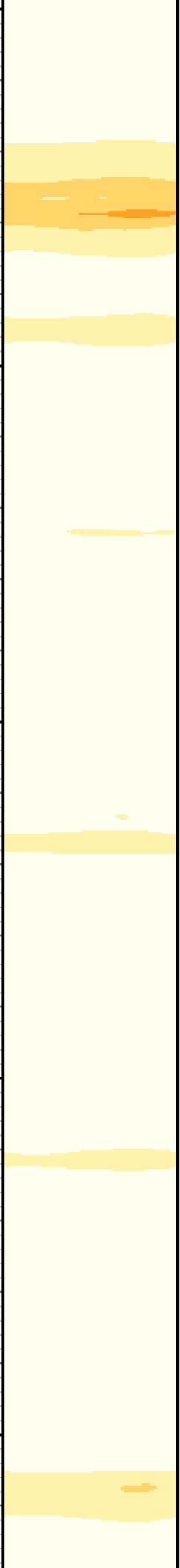


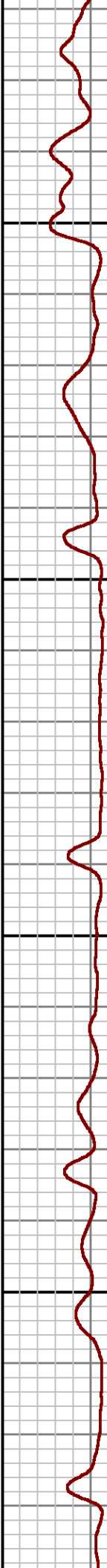
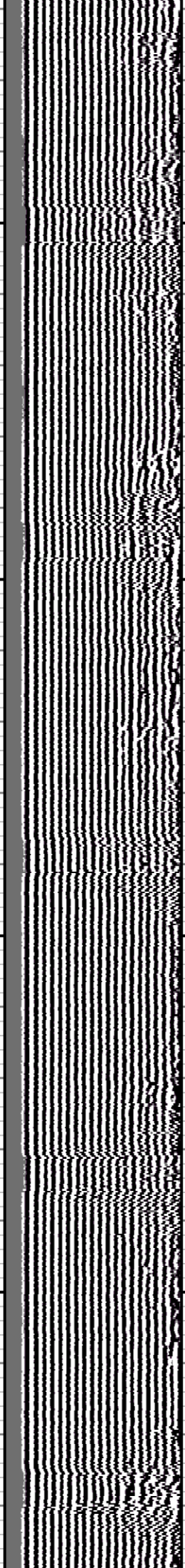
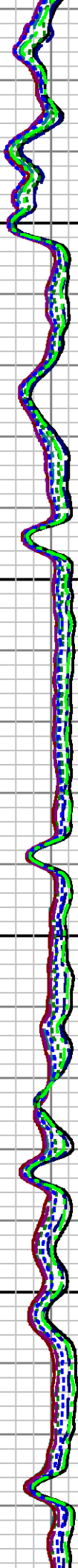
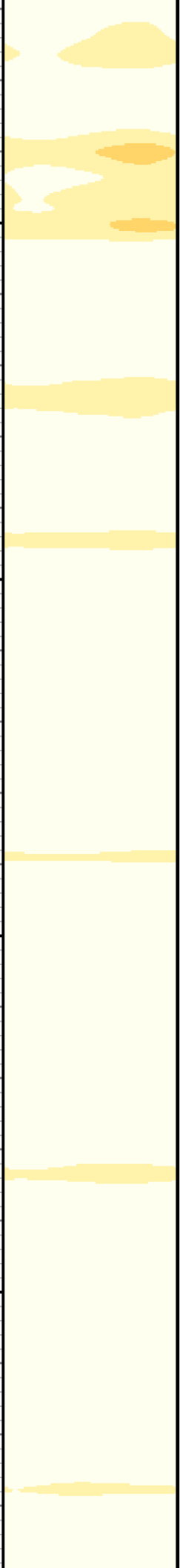


3400

3500

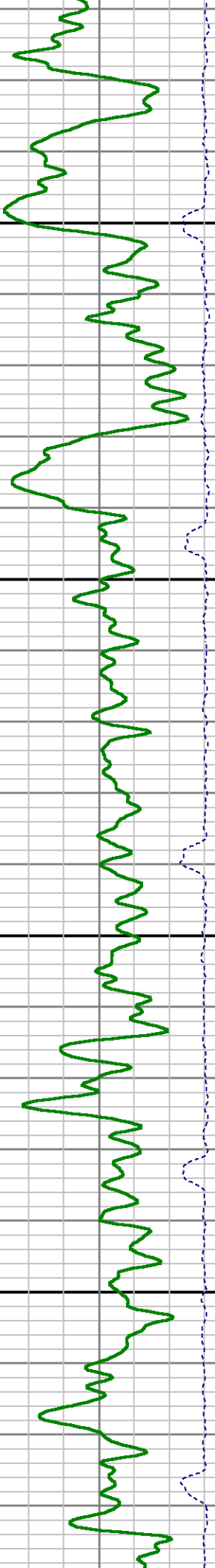
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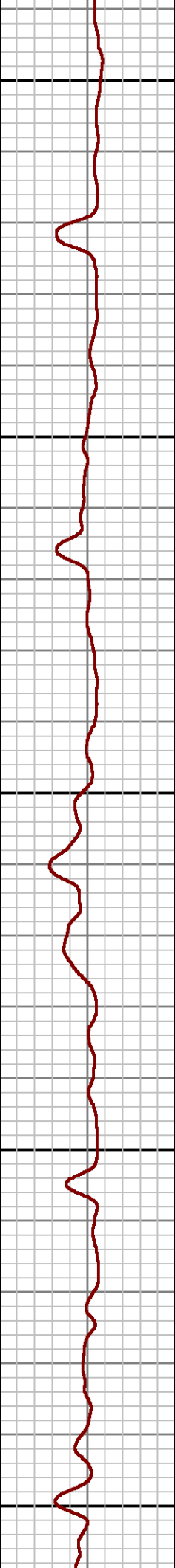
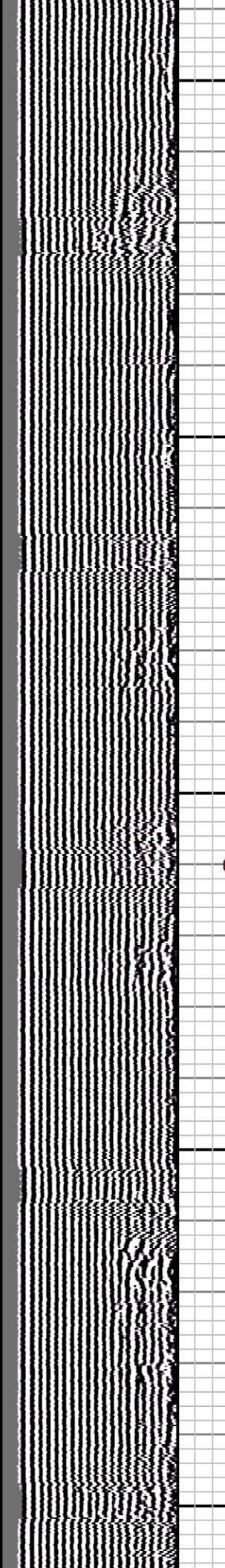
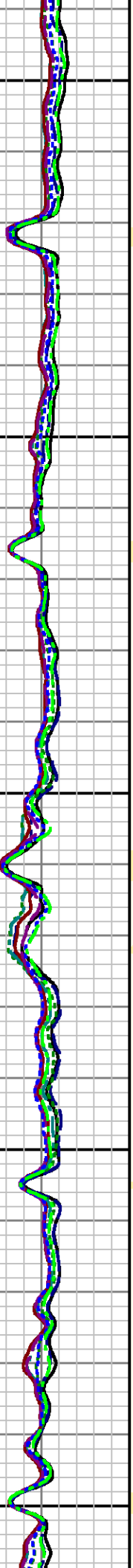




3900

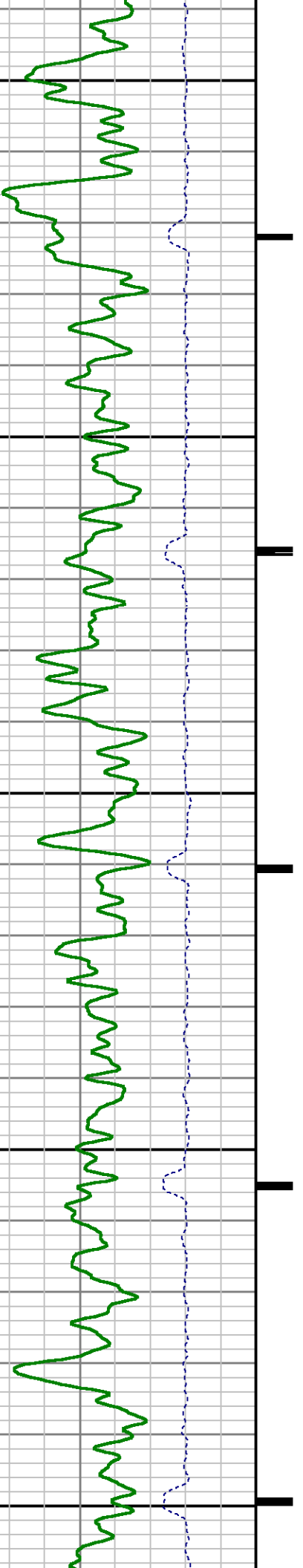
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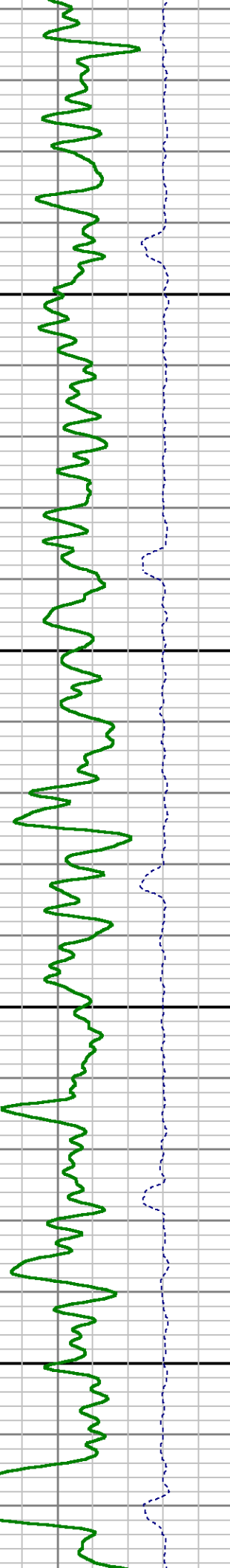
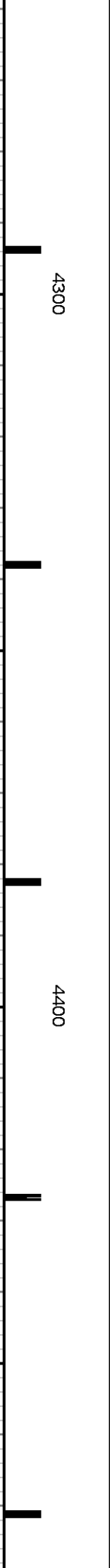
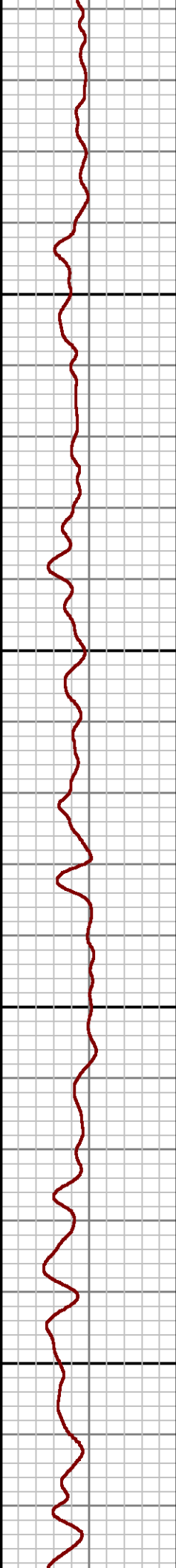
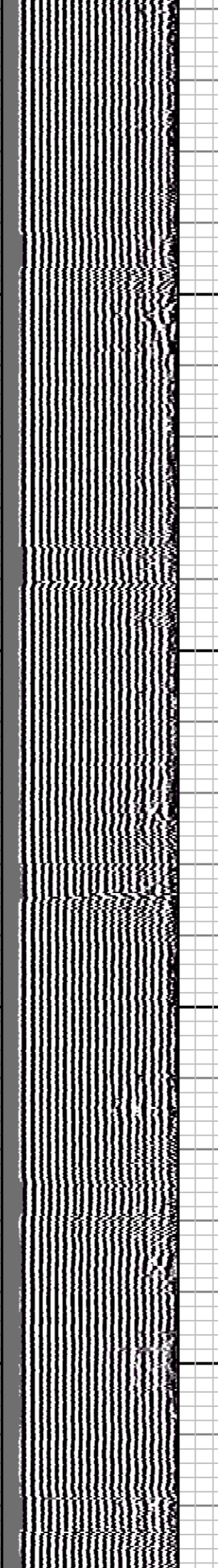
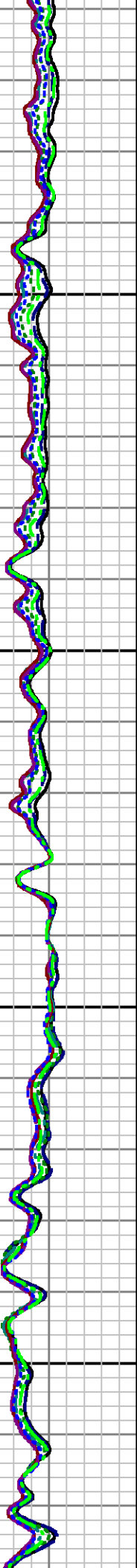
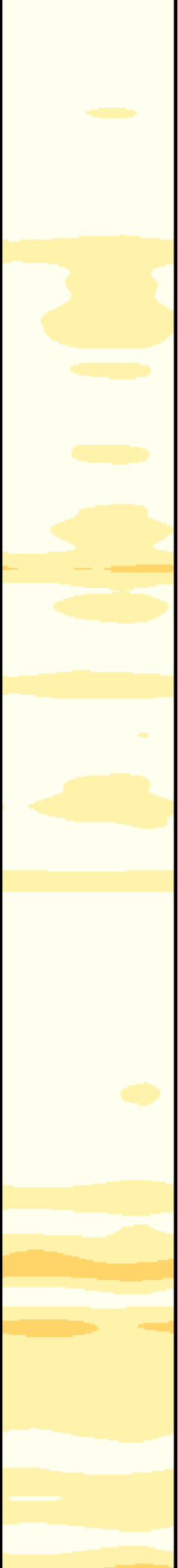




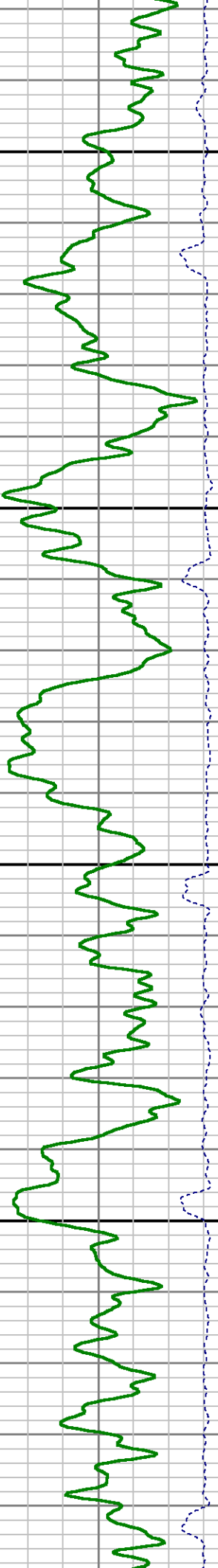
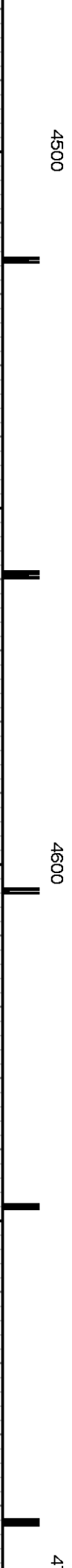
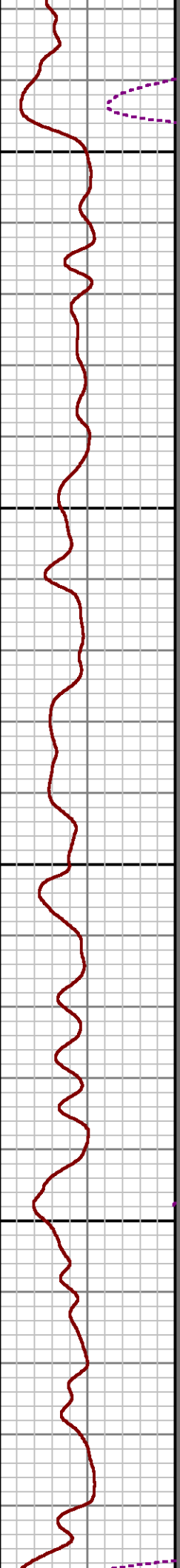
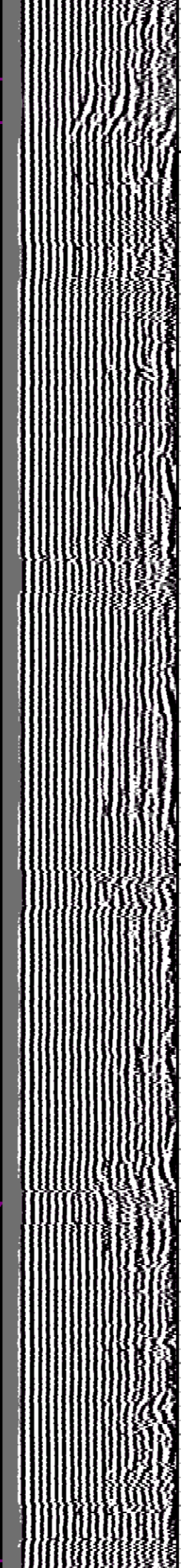
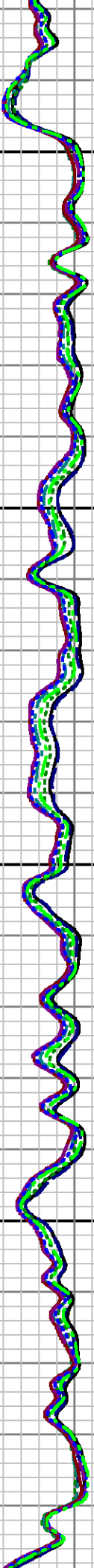
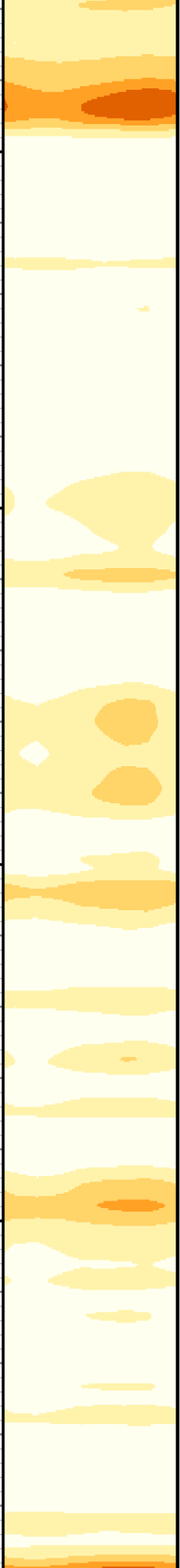
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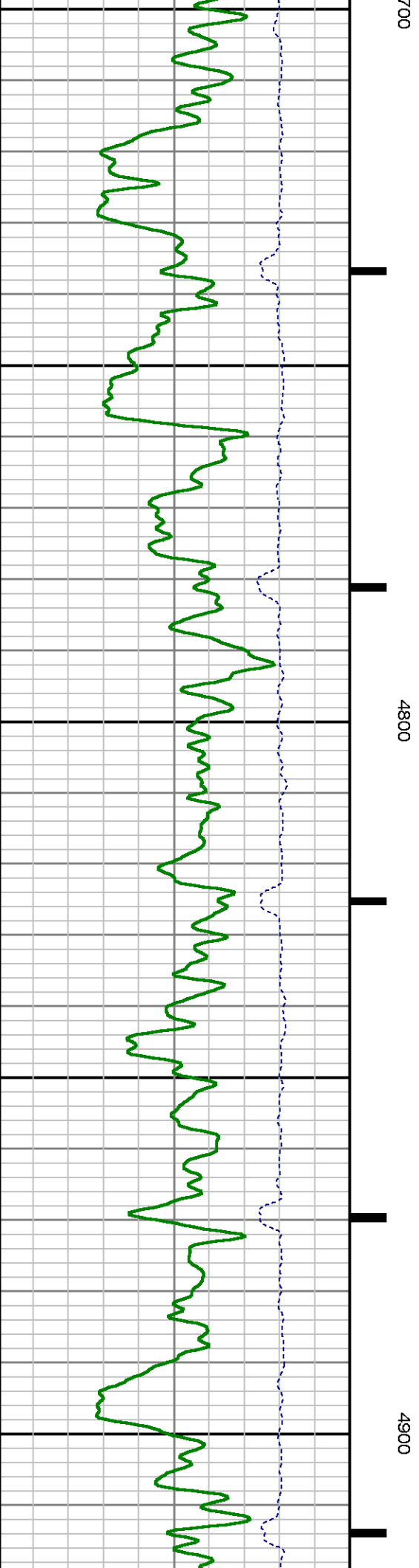
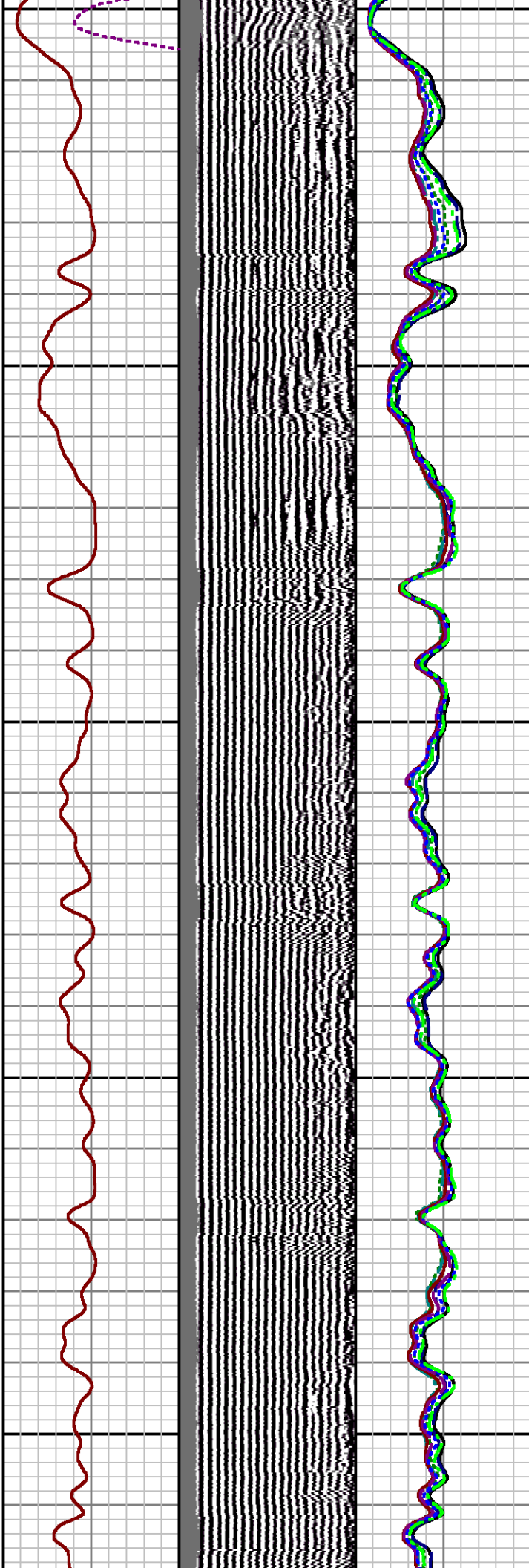
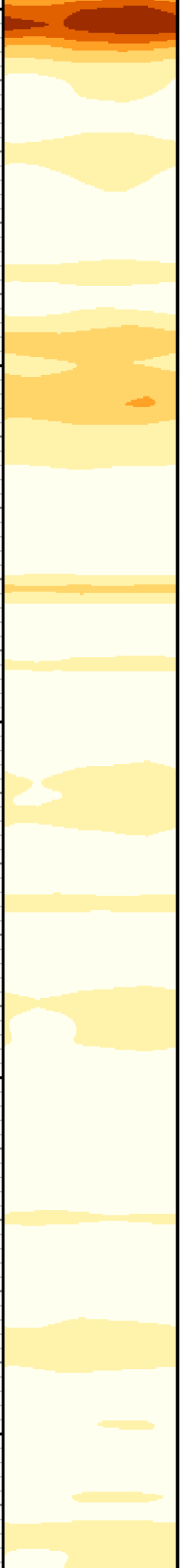
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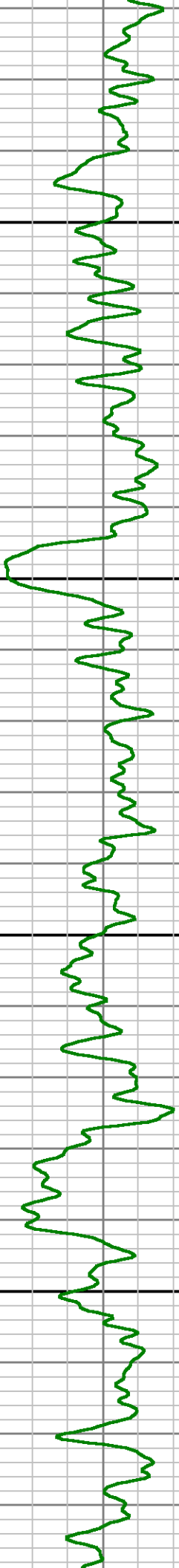
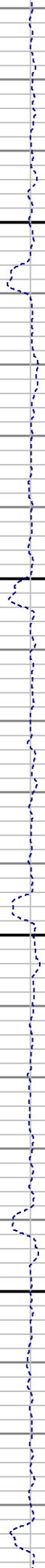
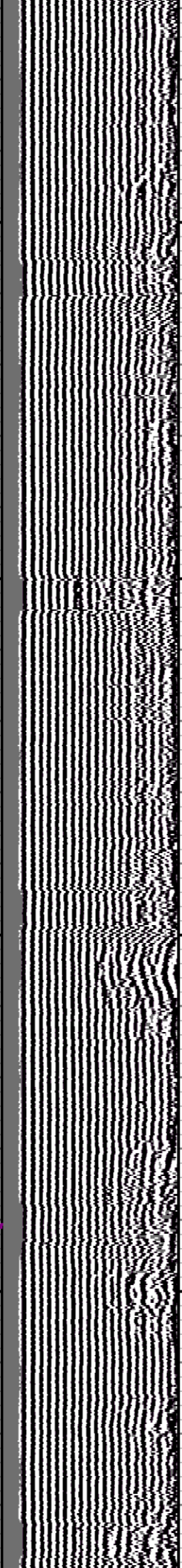
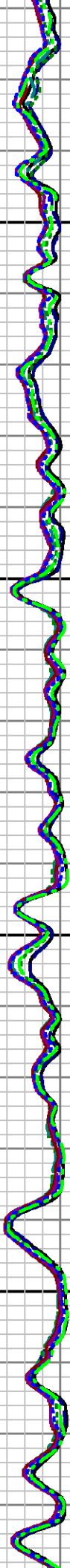
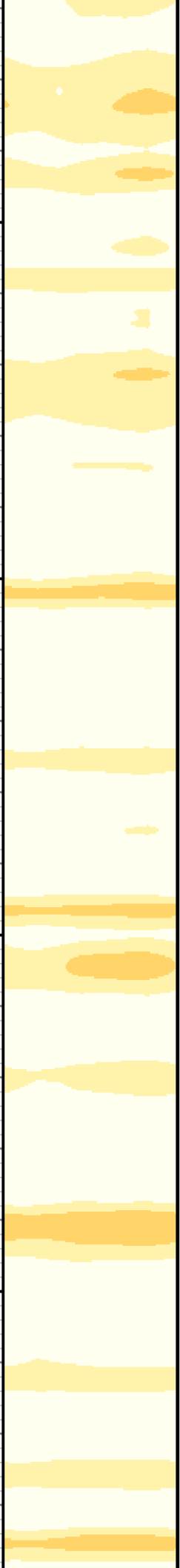


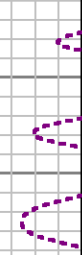
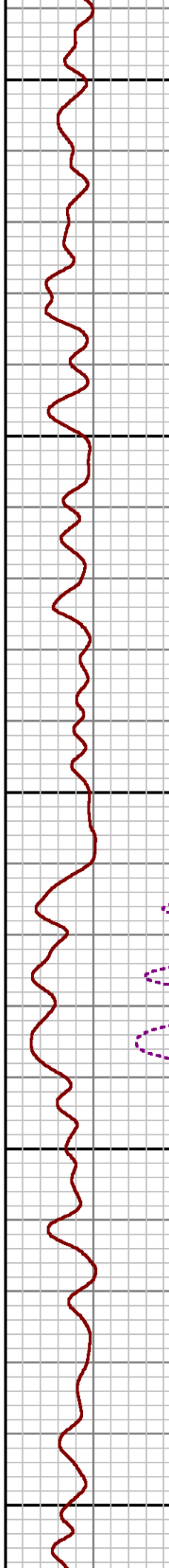
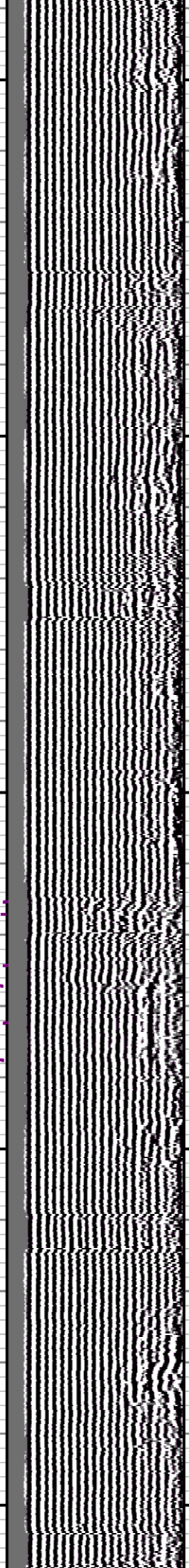
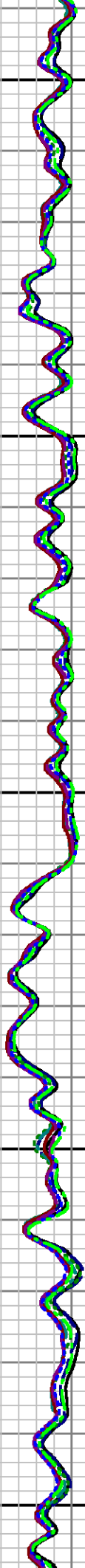
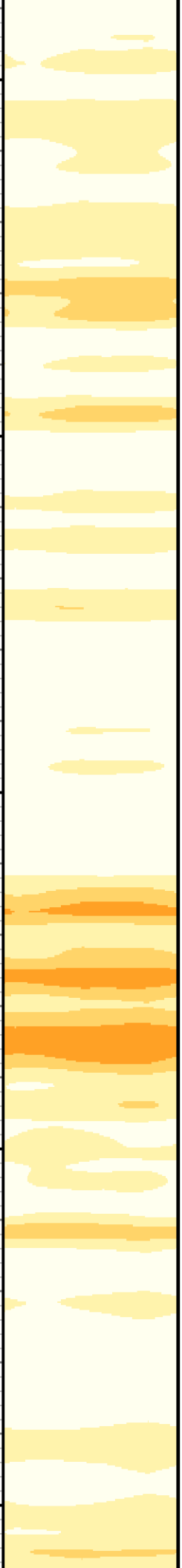






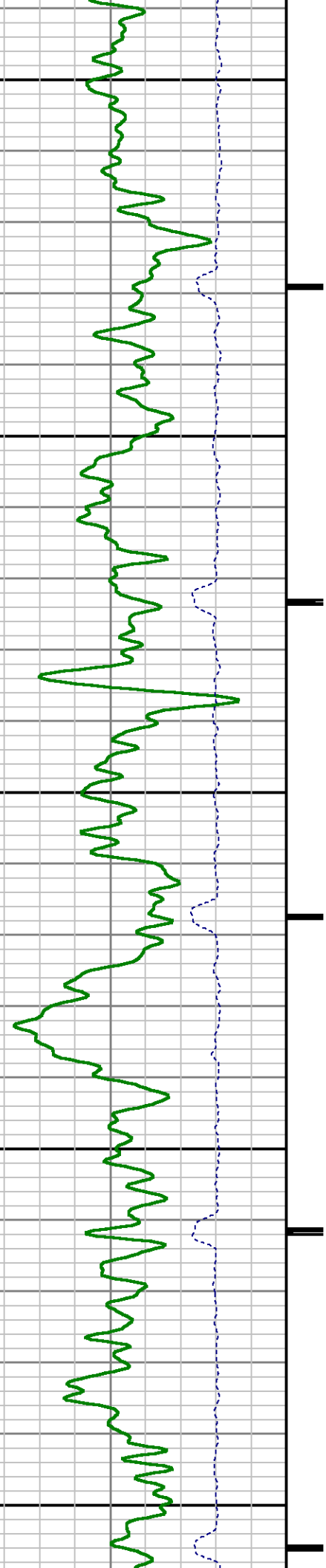




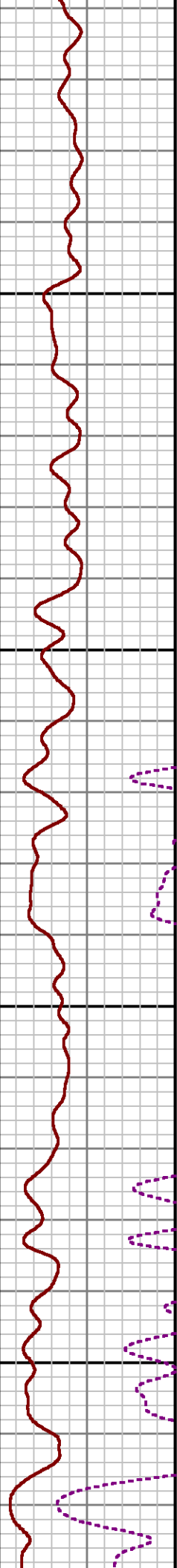
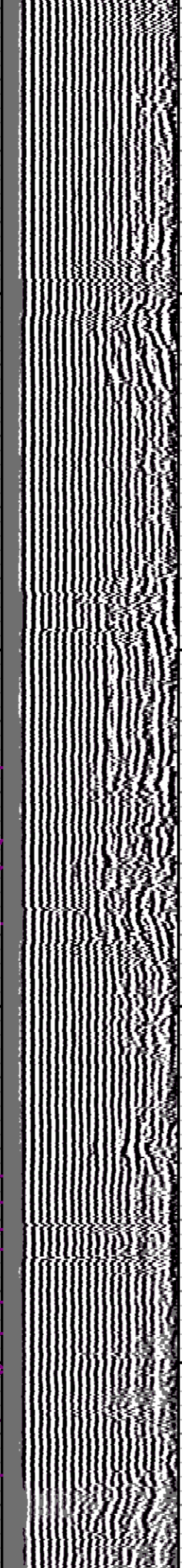
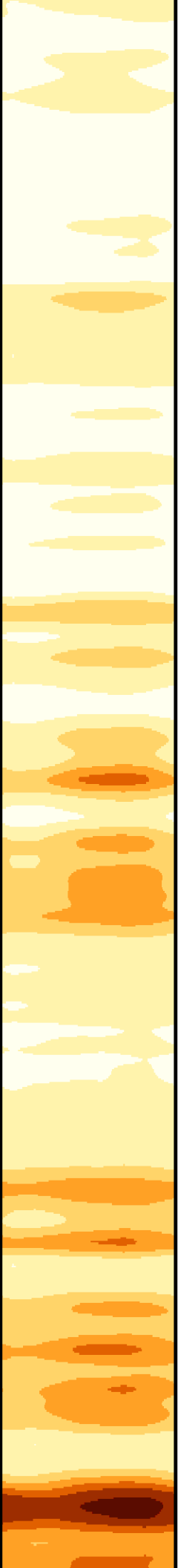


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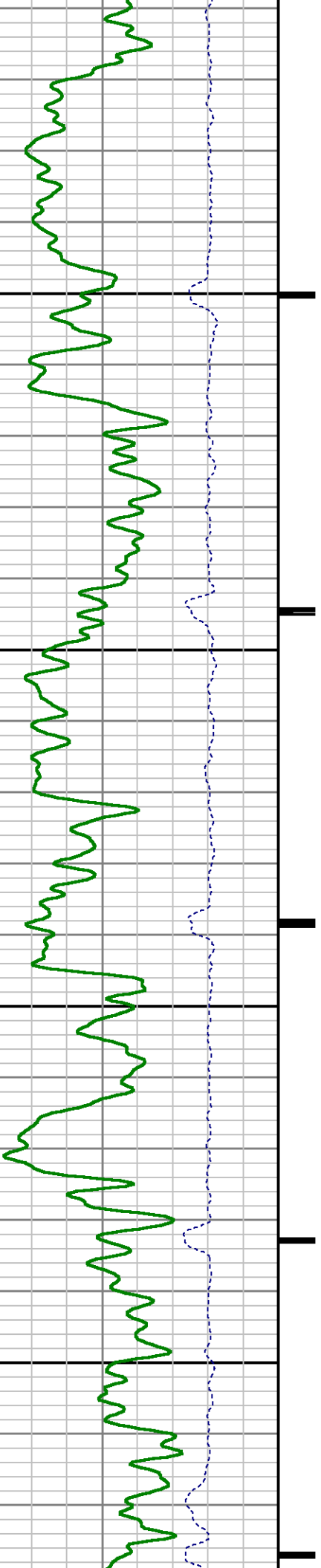


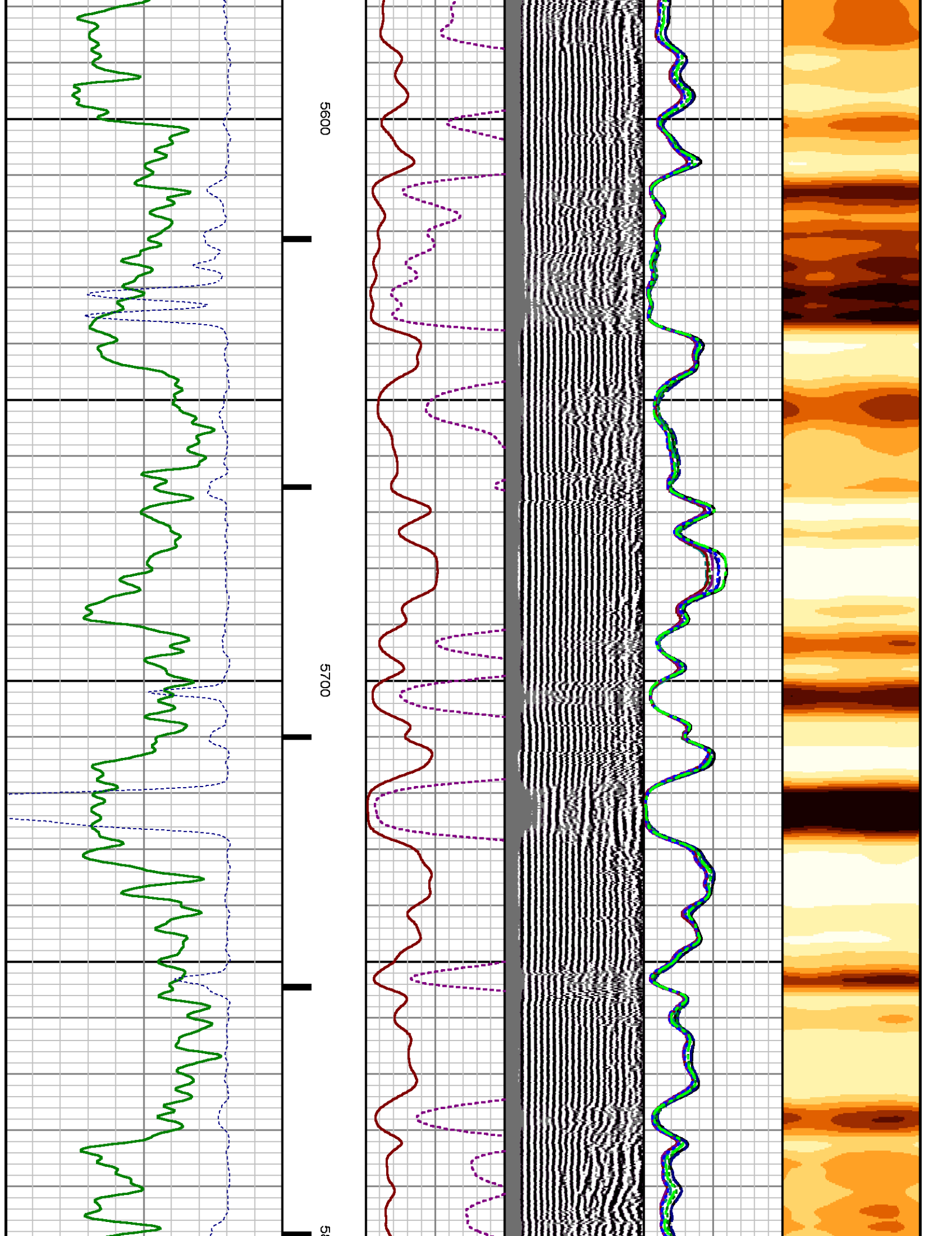




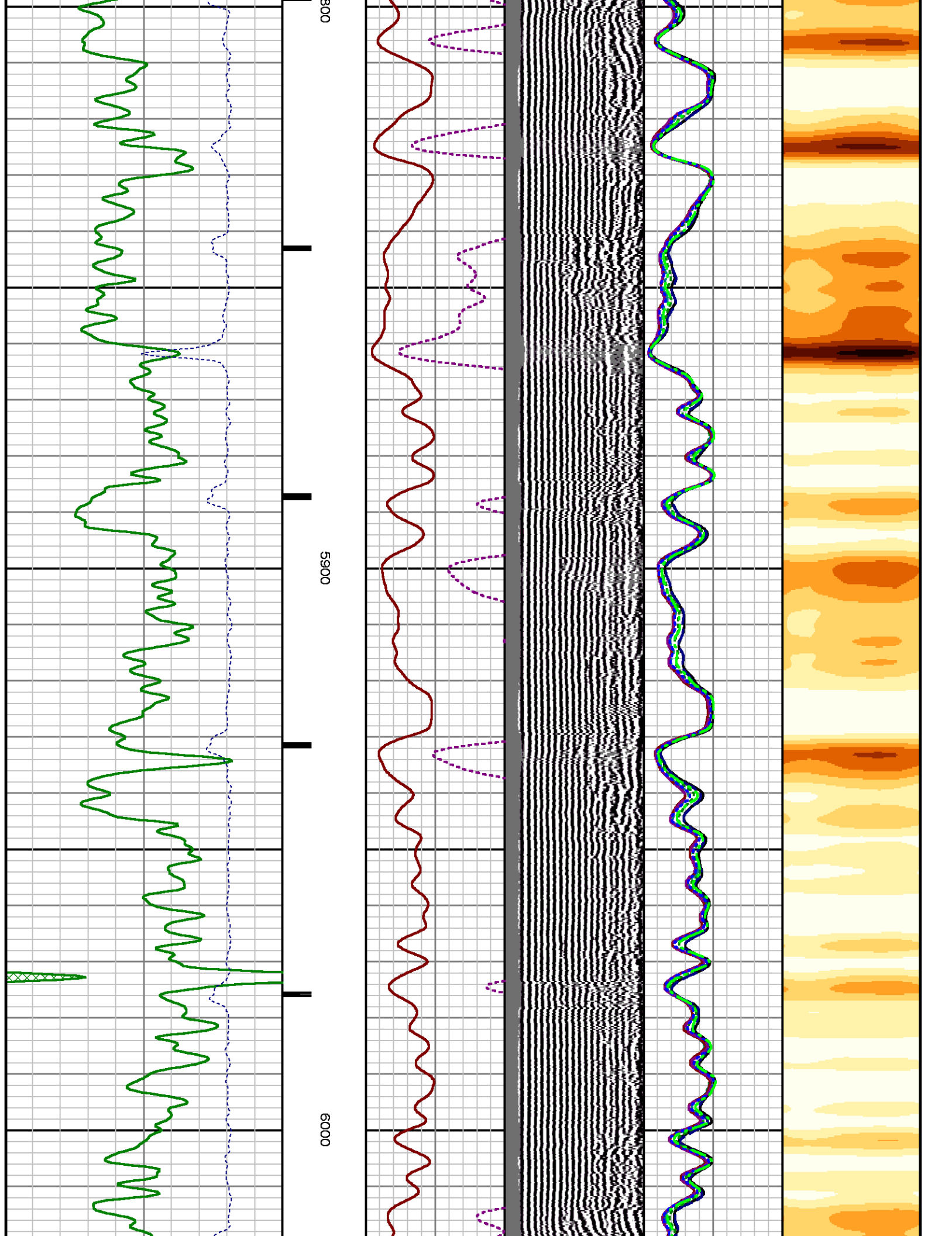
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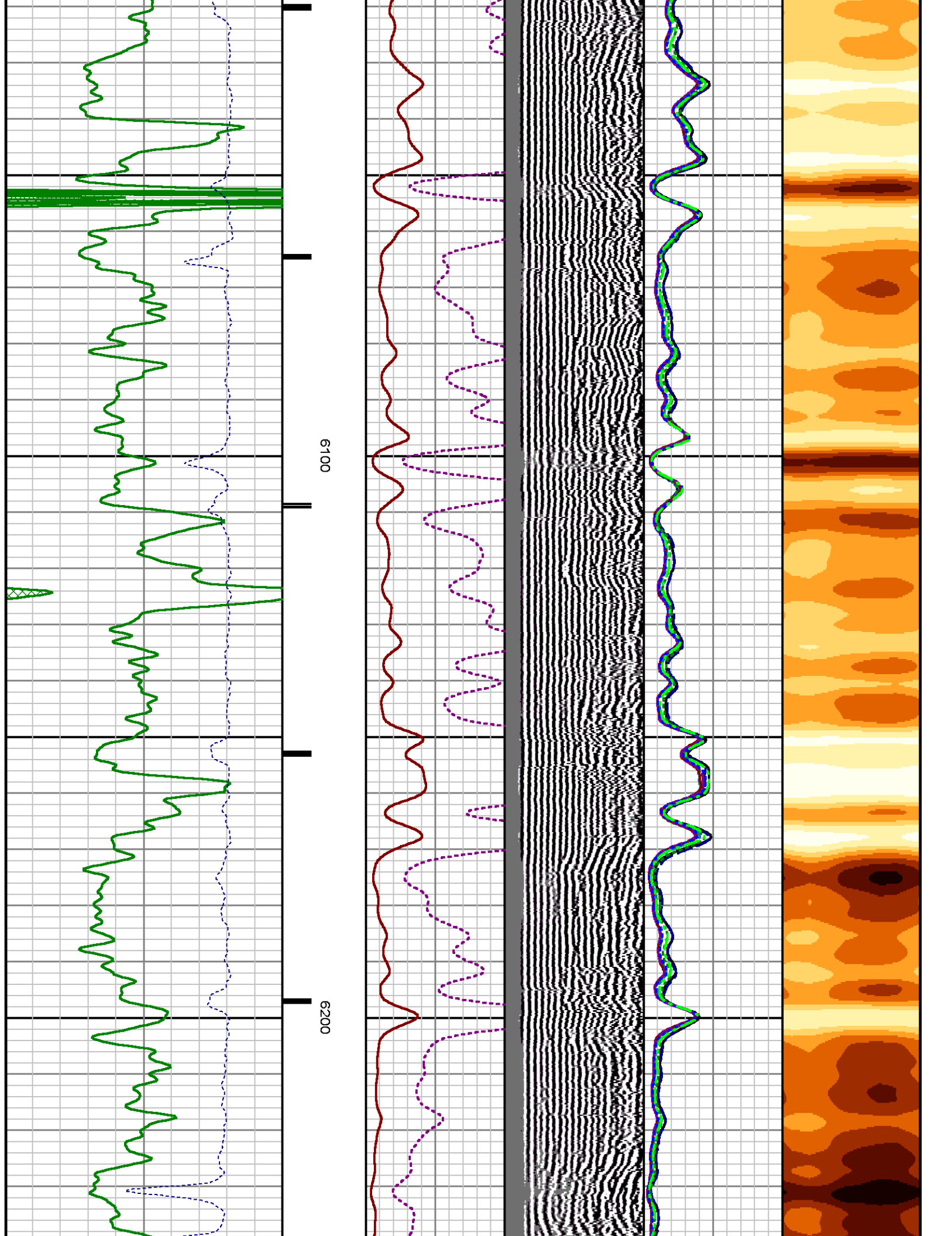
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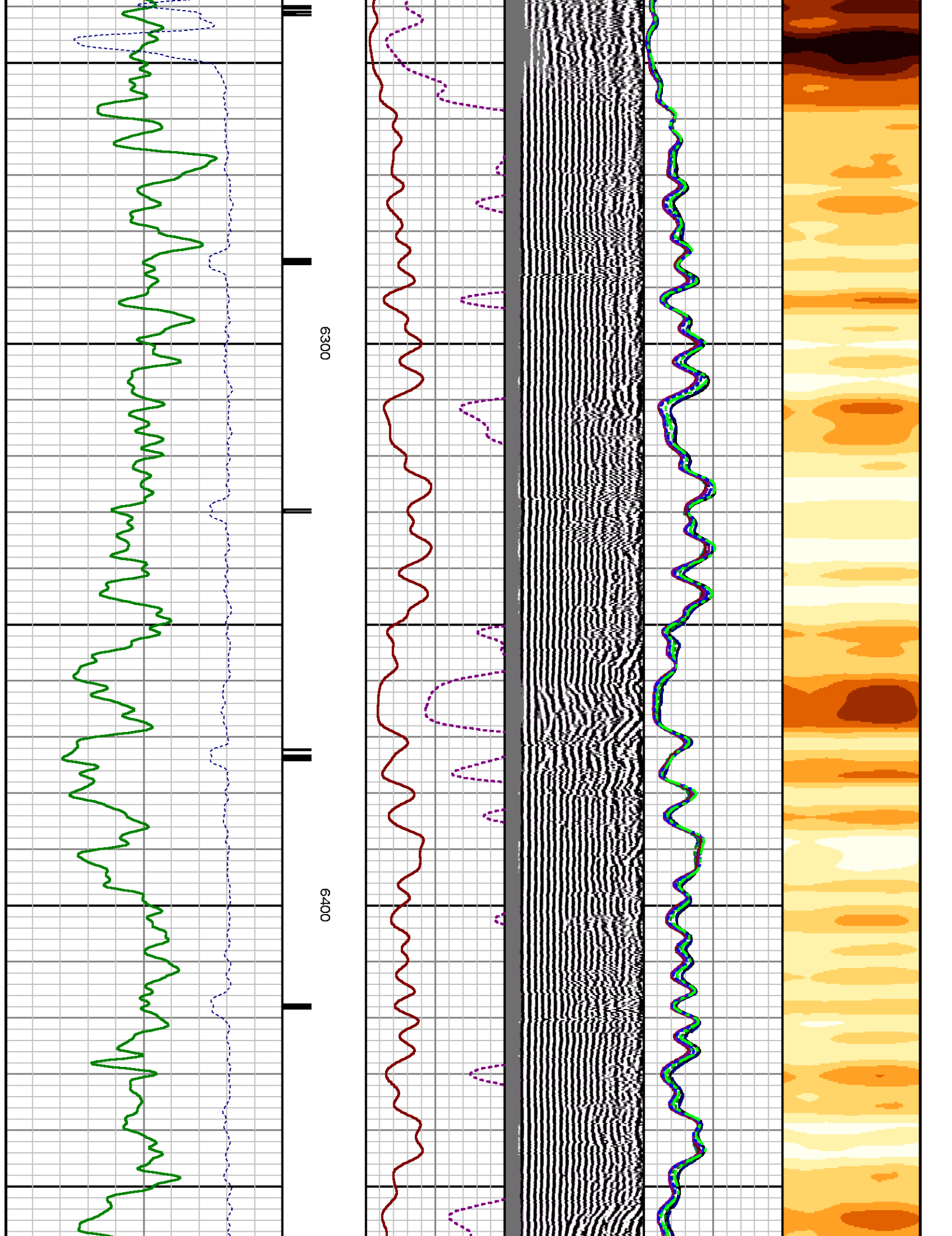


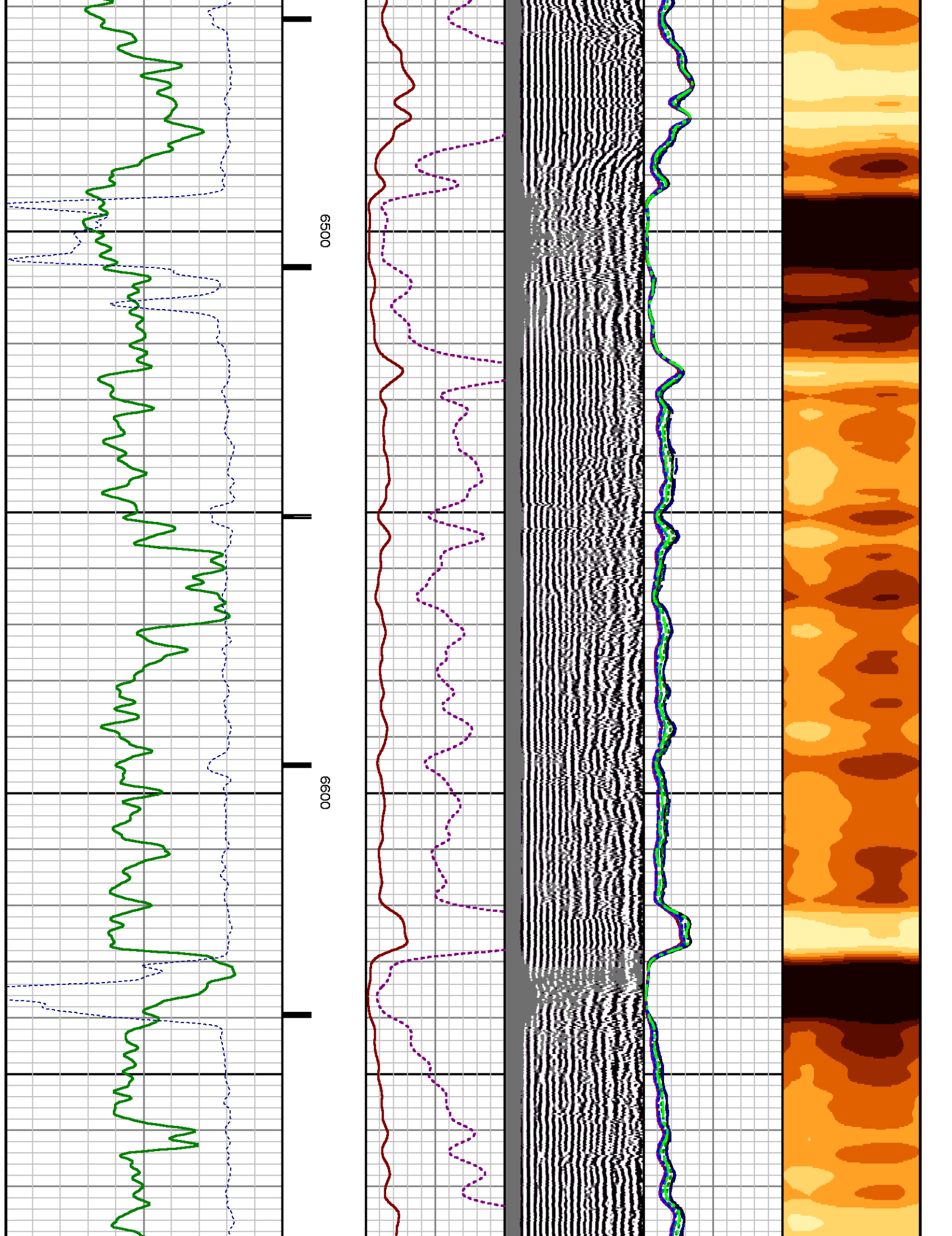




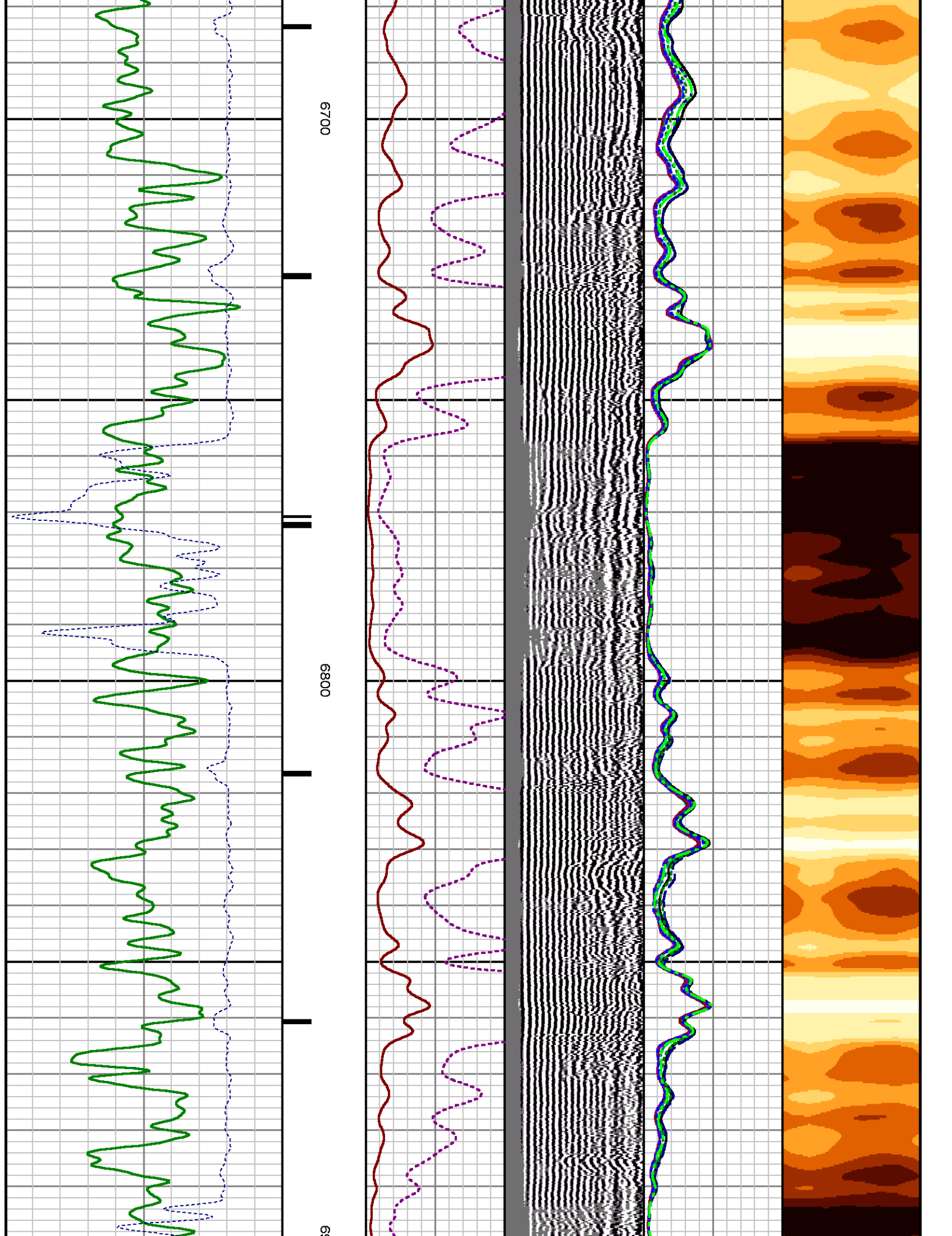




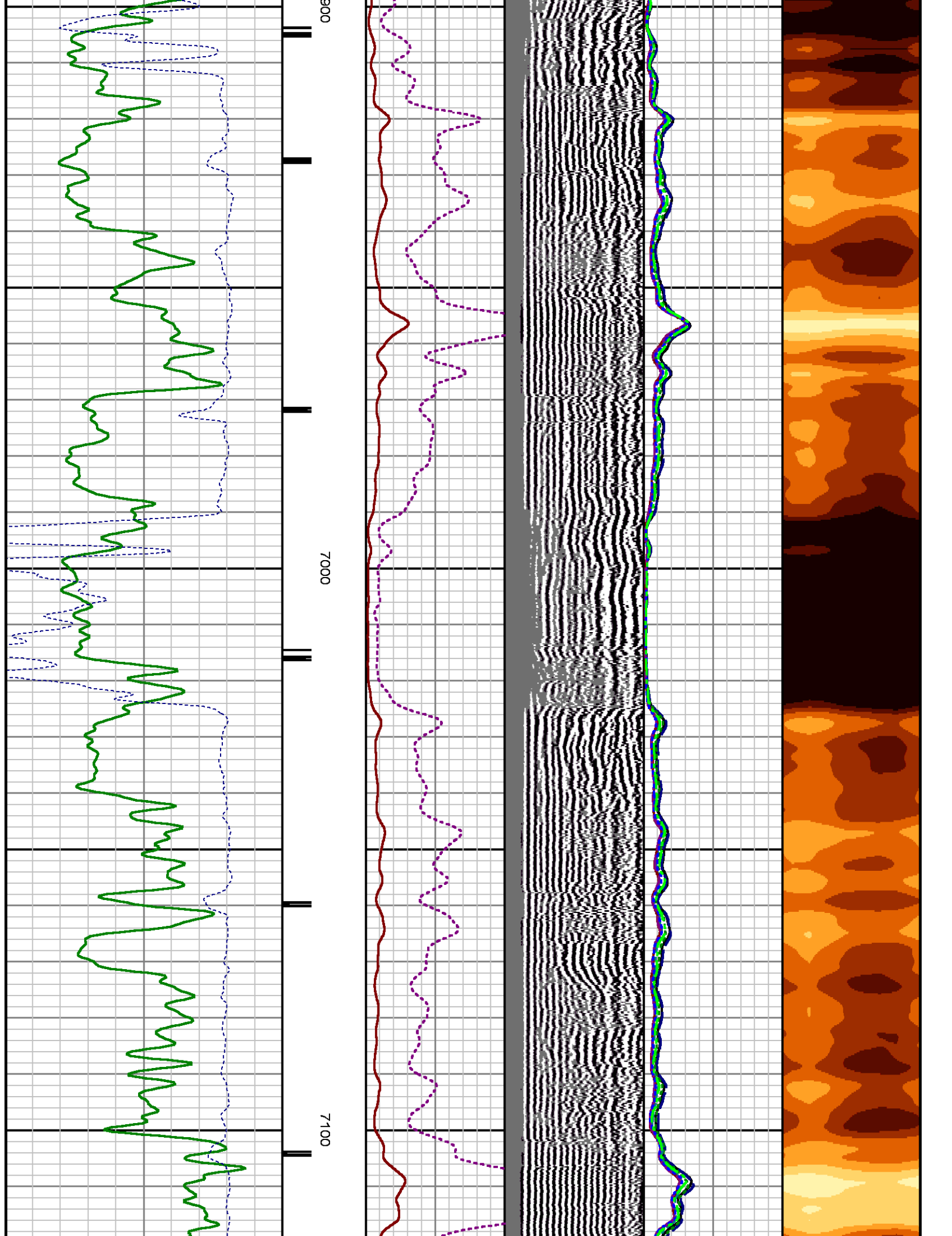


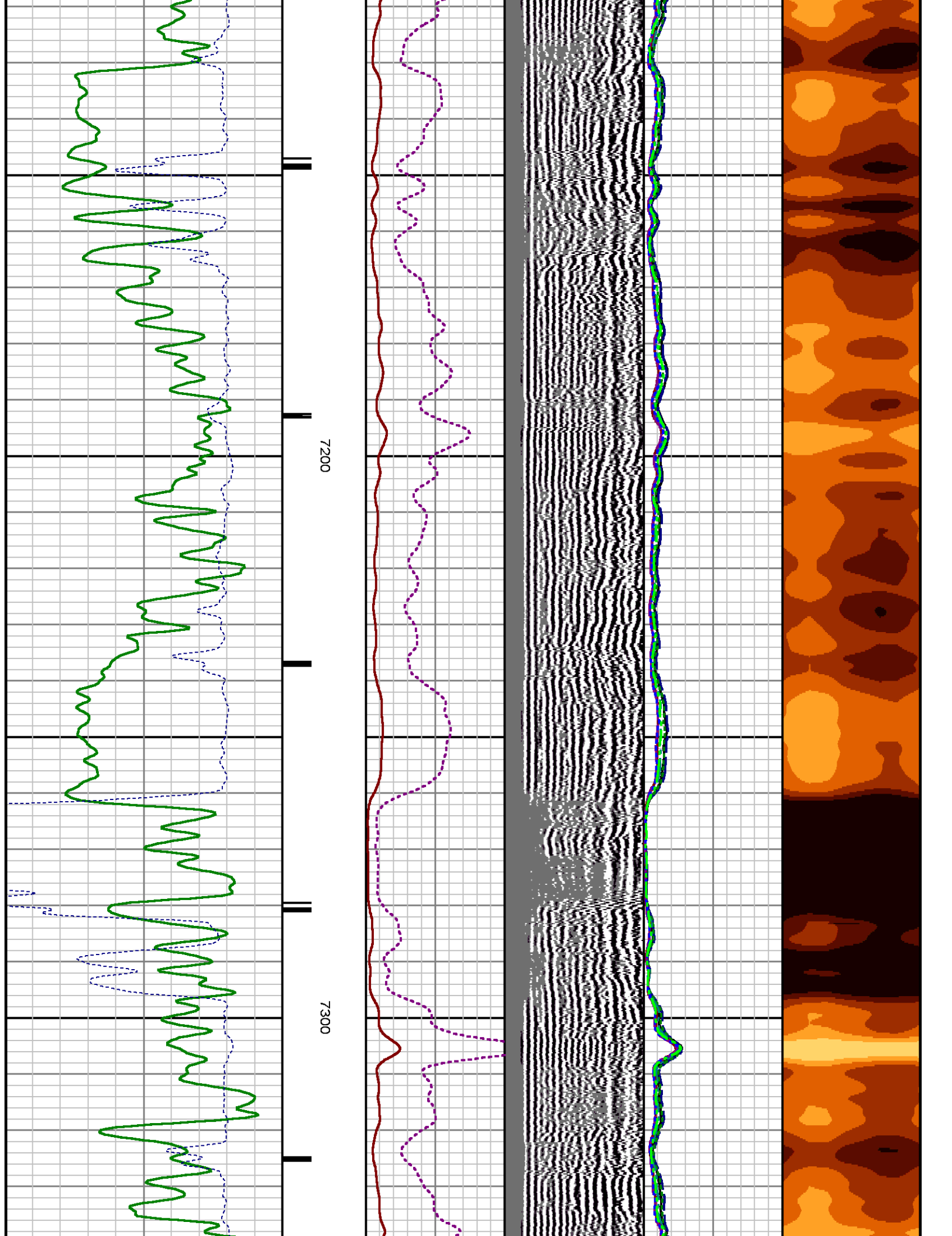


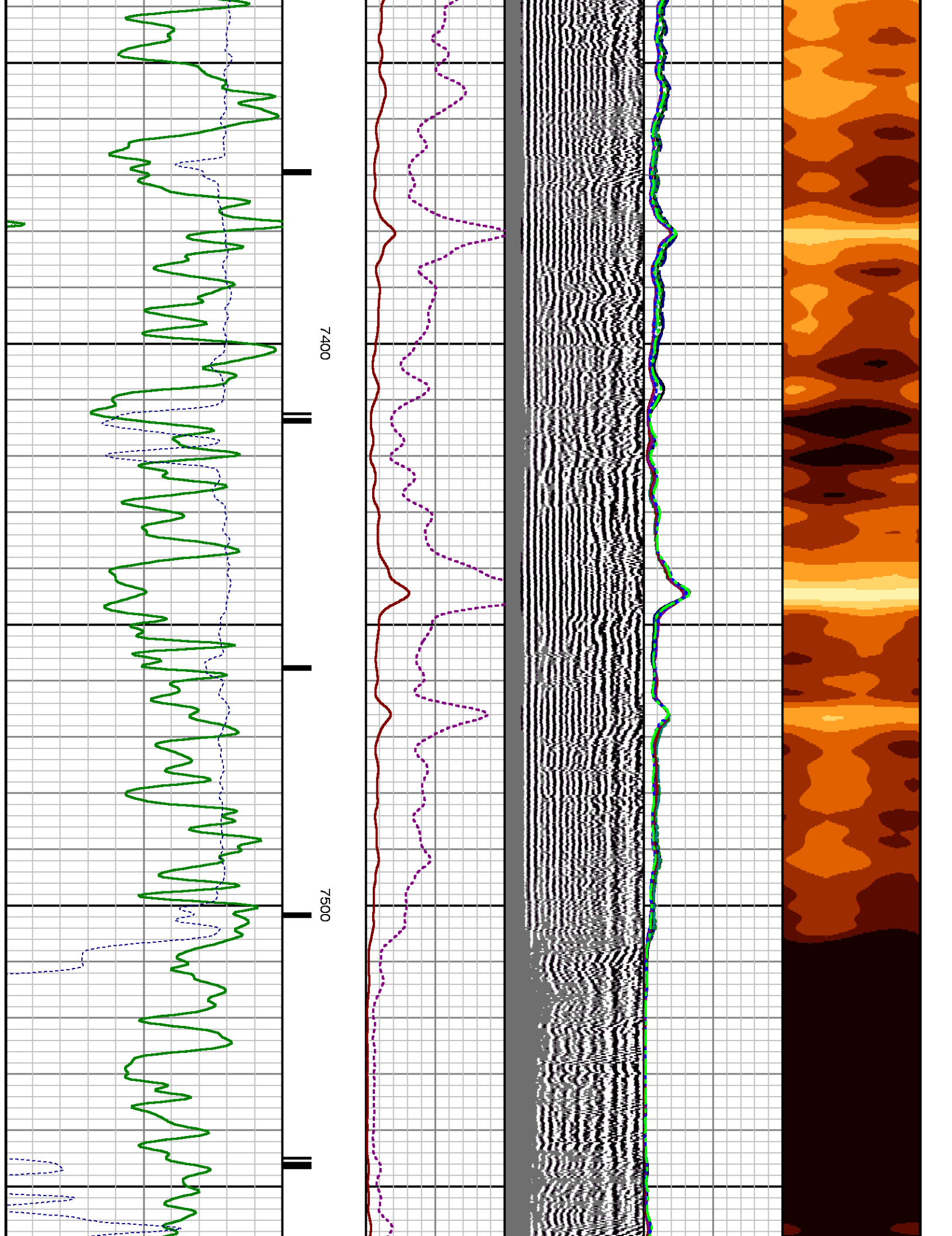


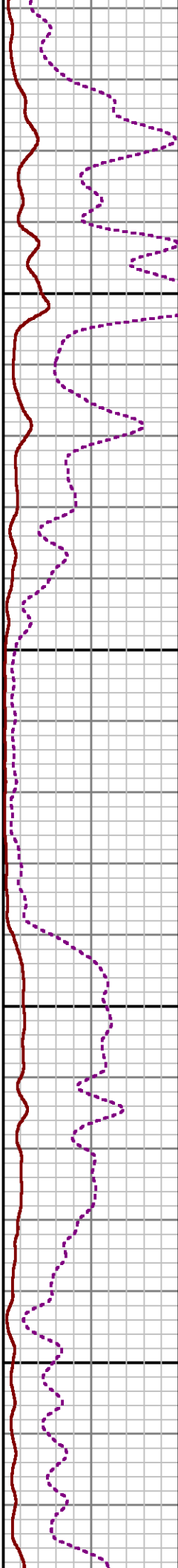
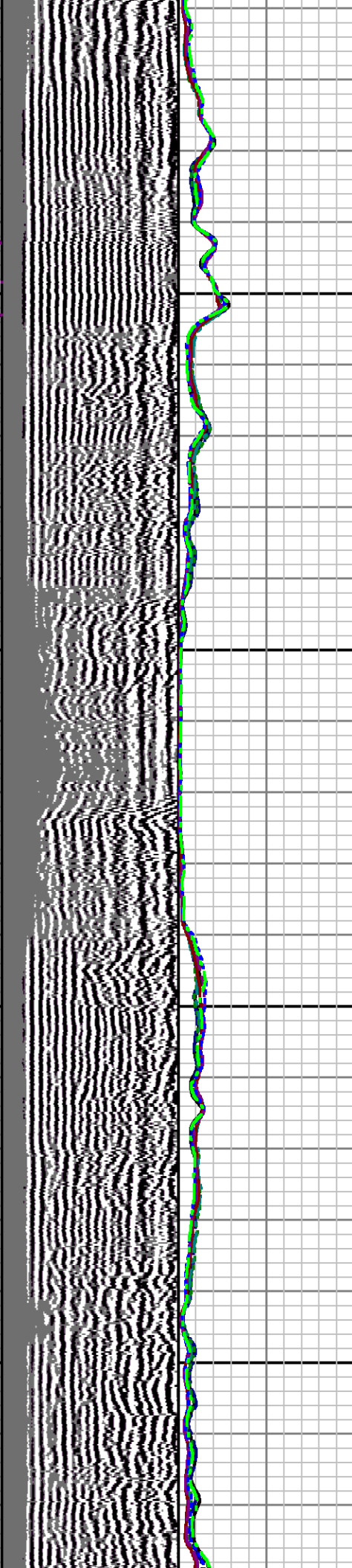






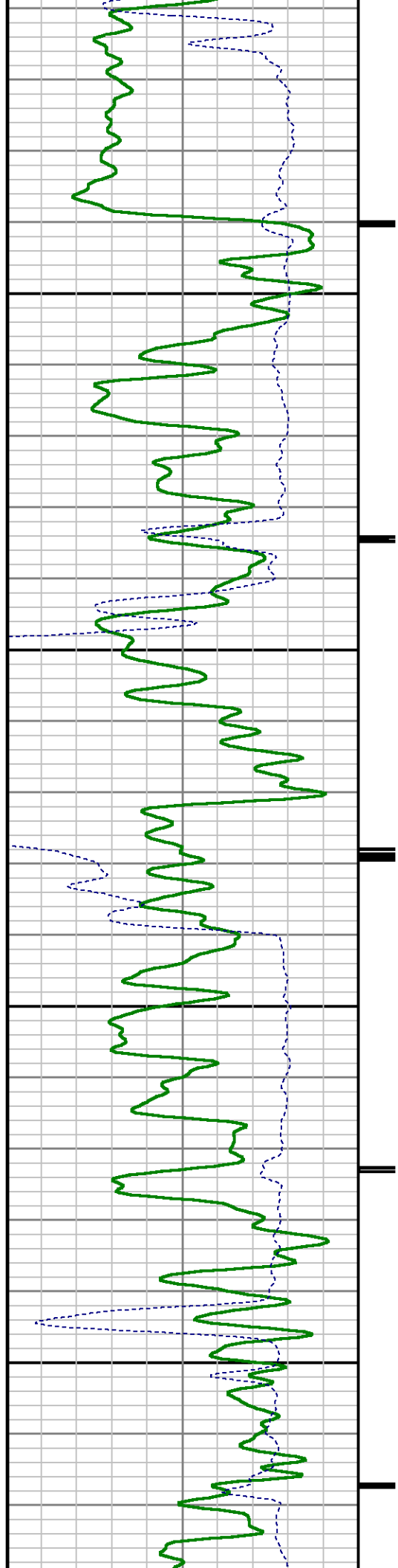




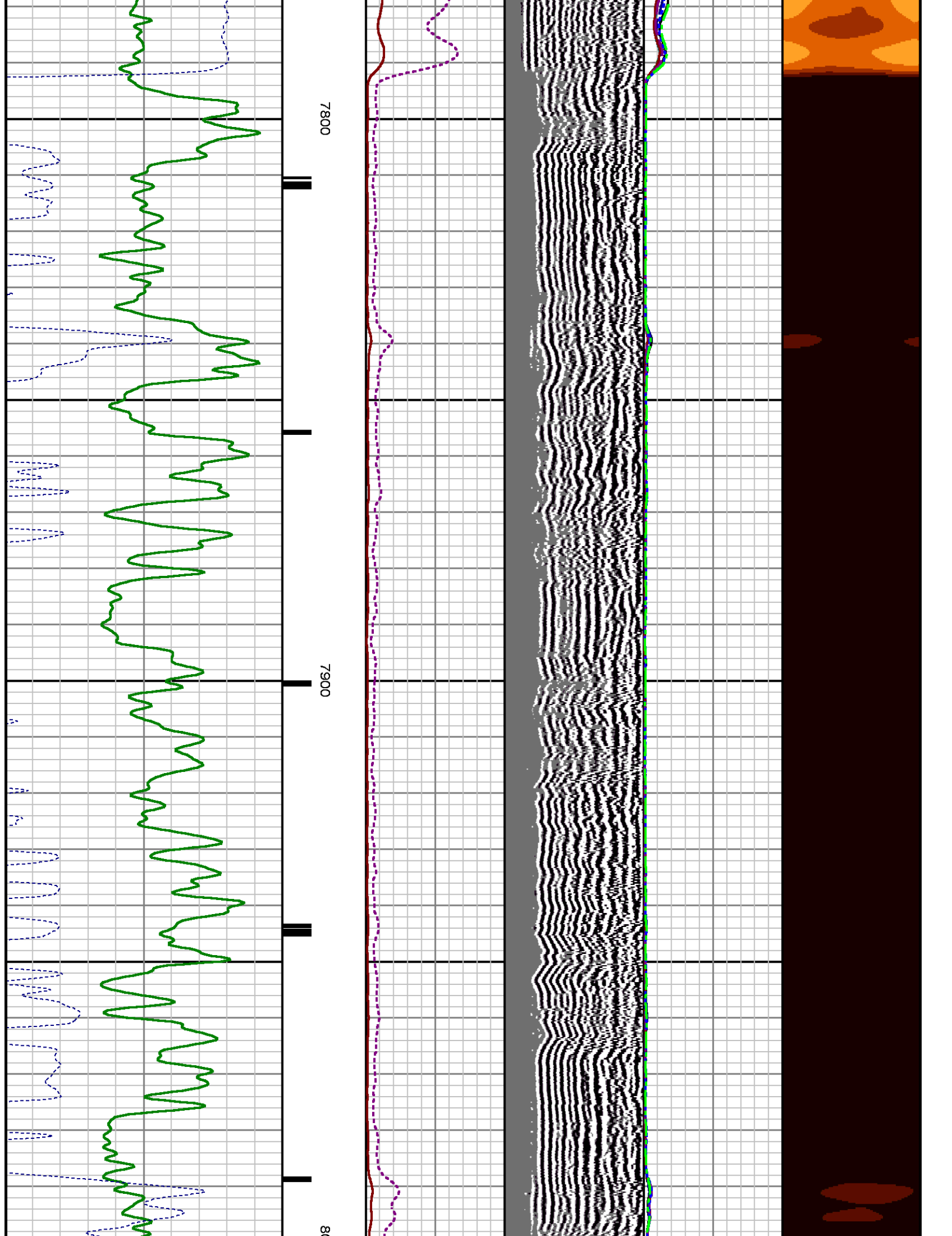


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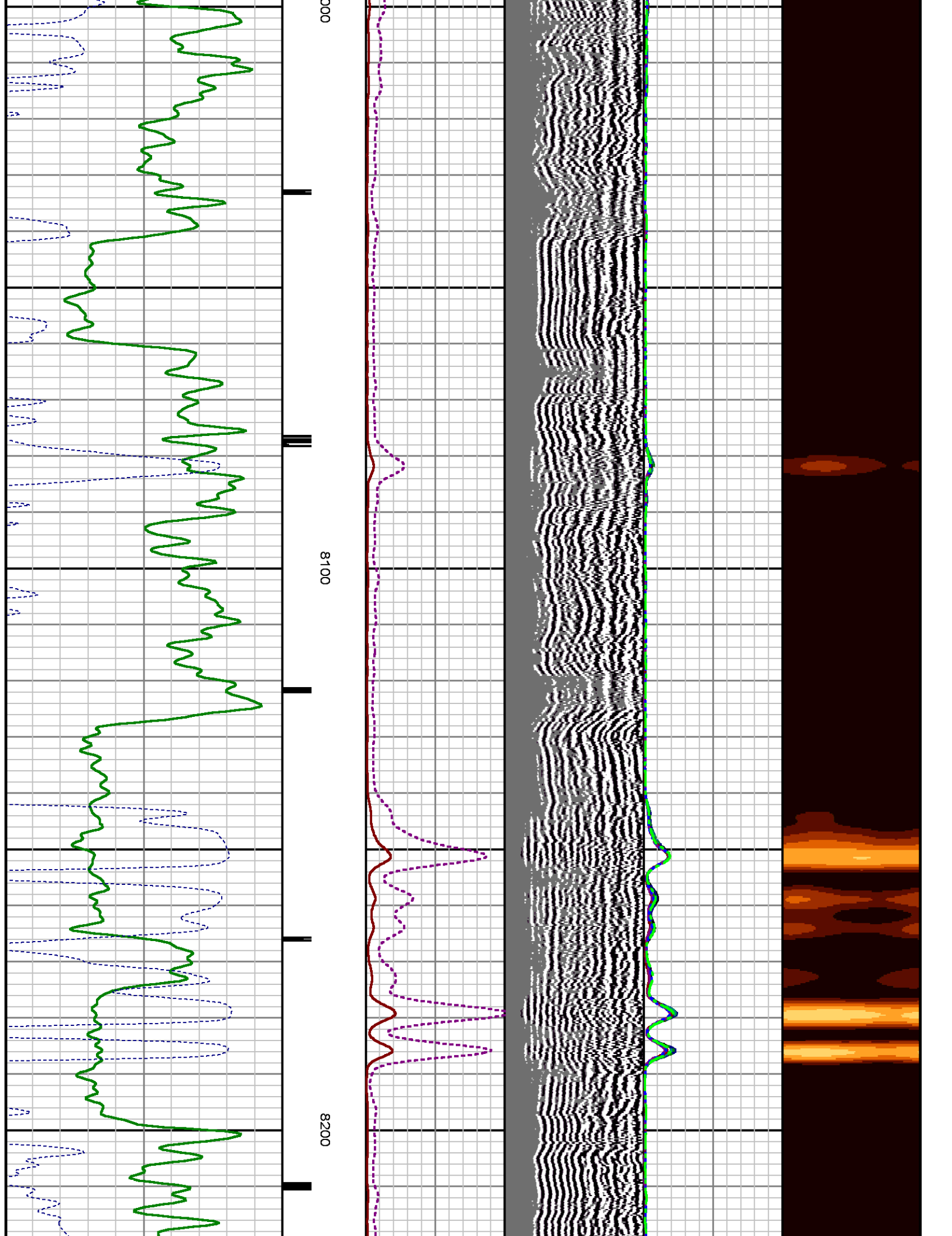
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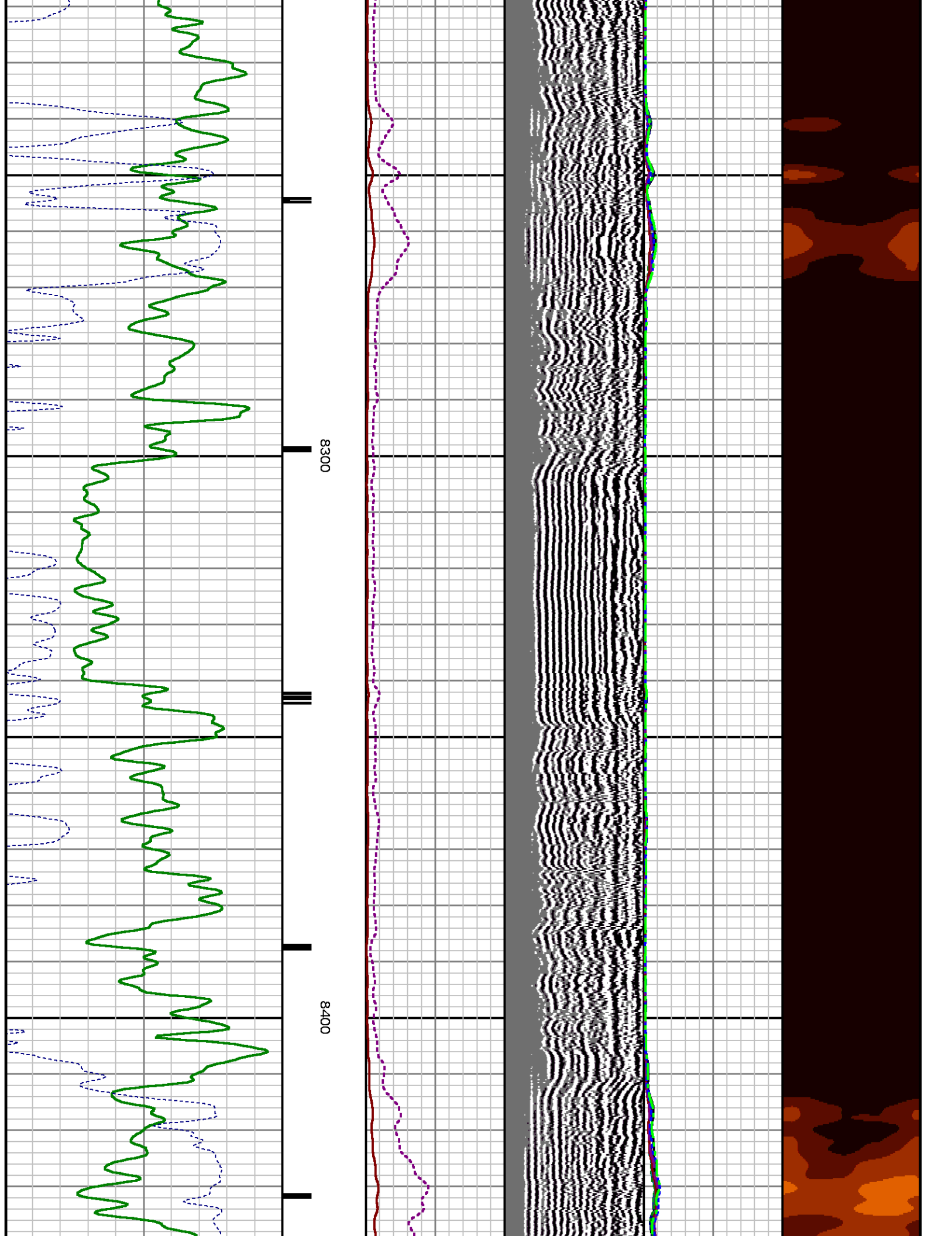


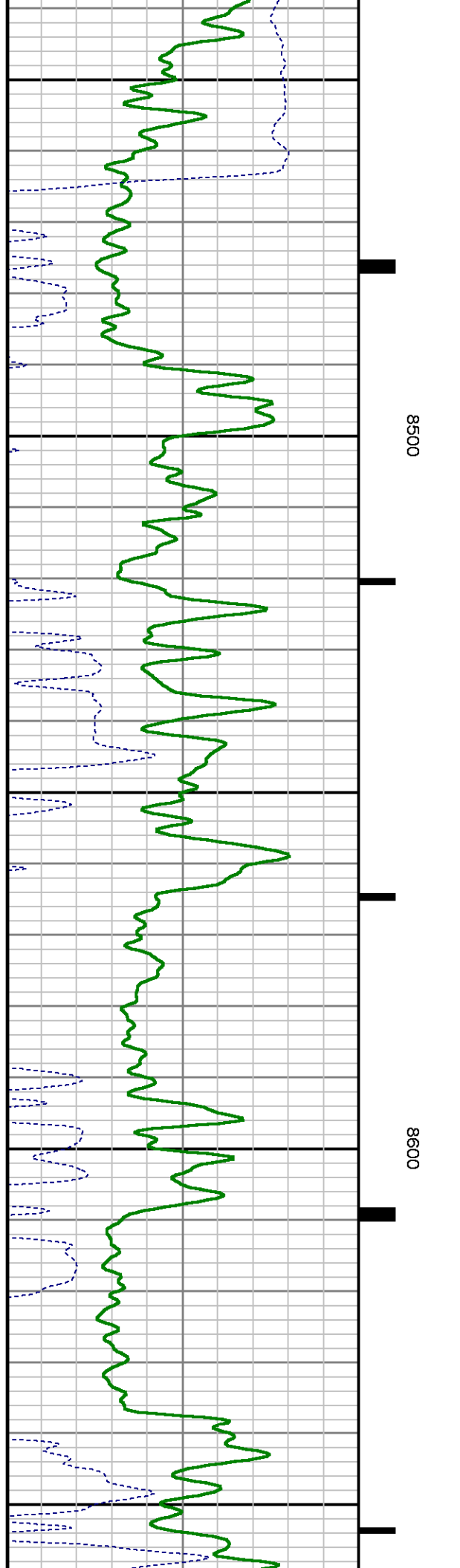
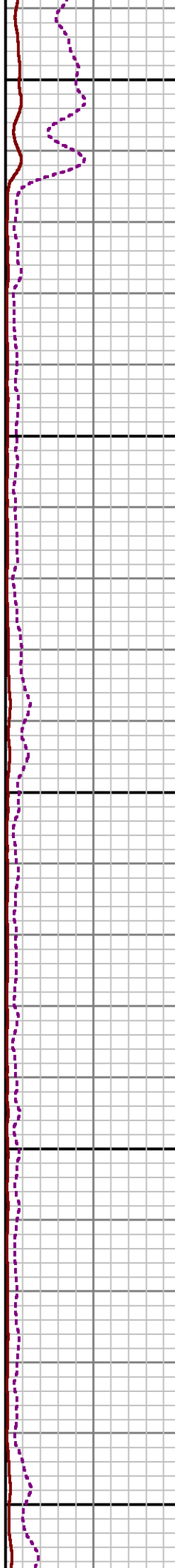
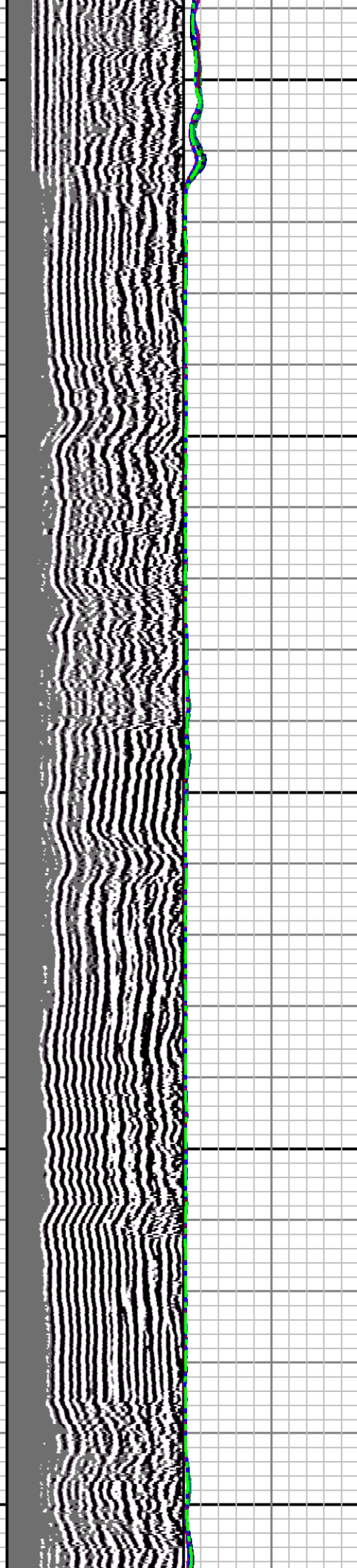


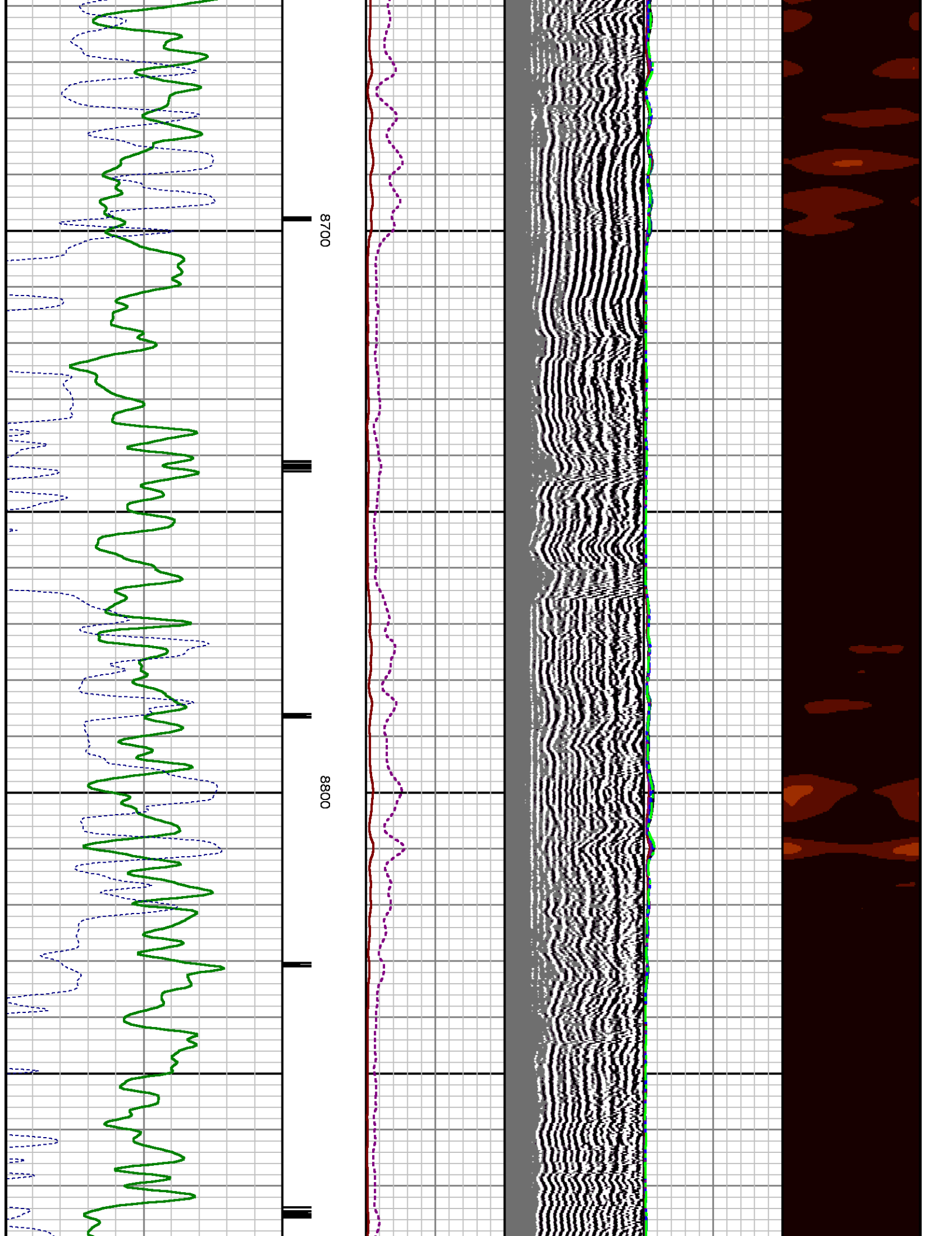


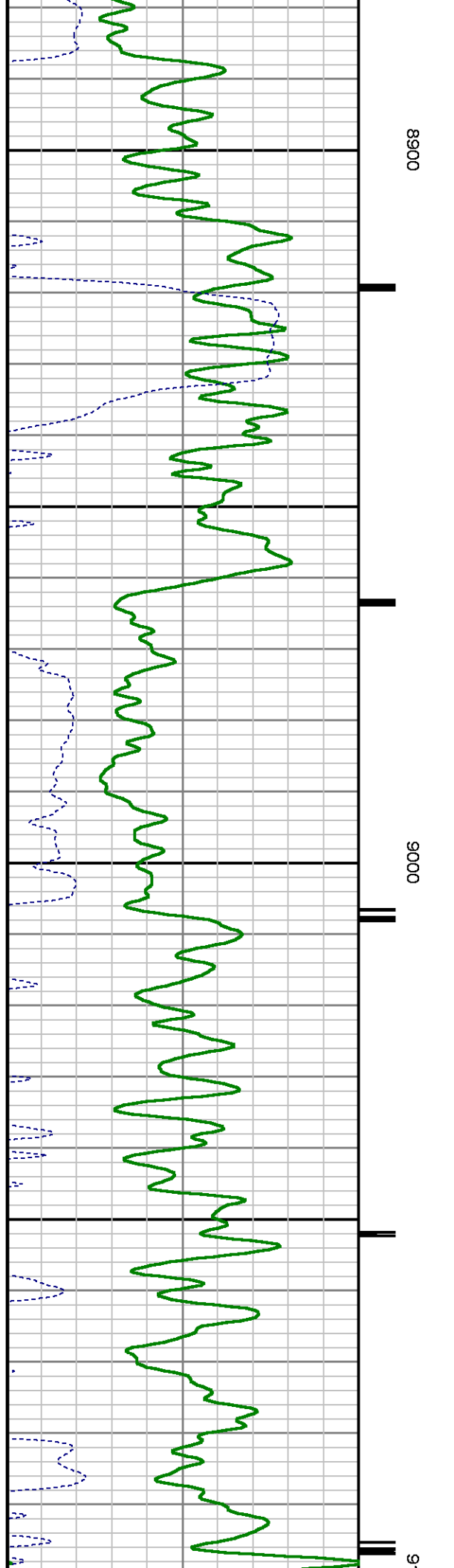
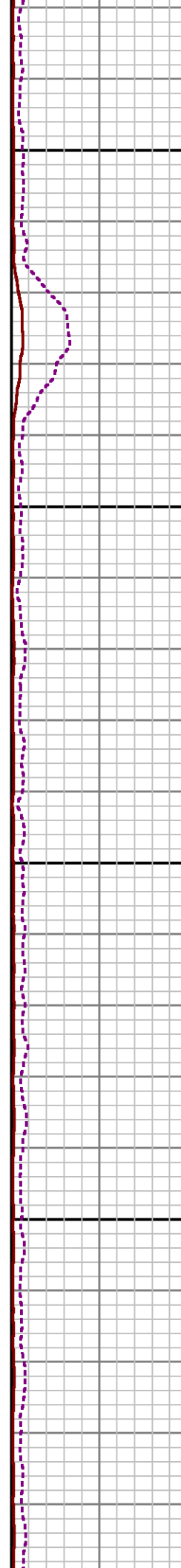
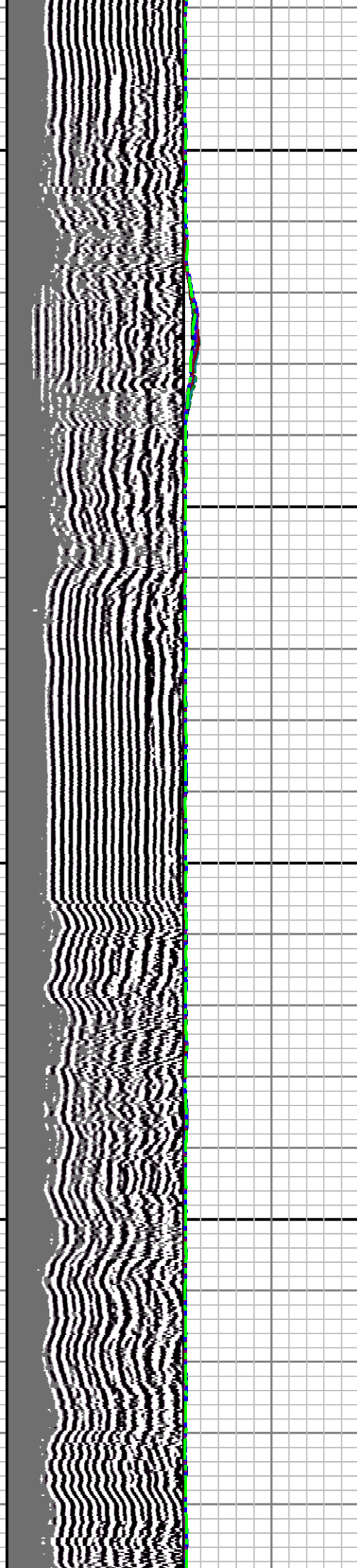




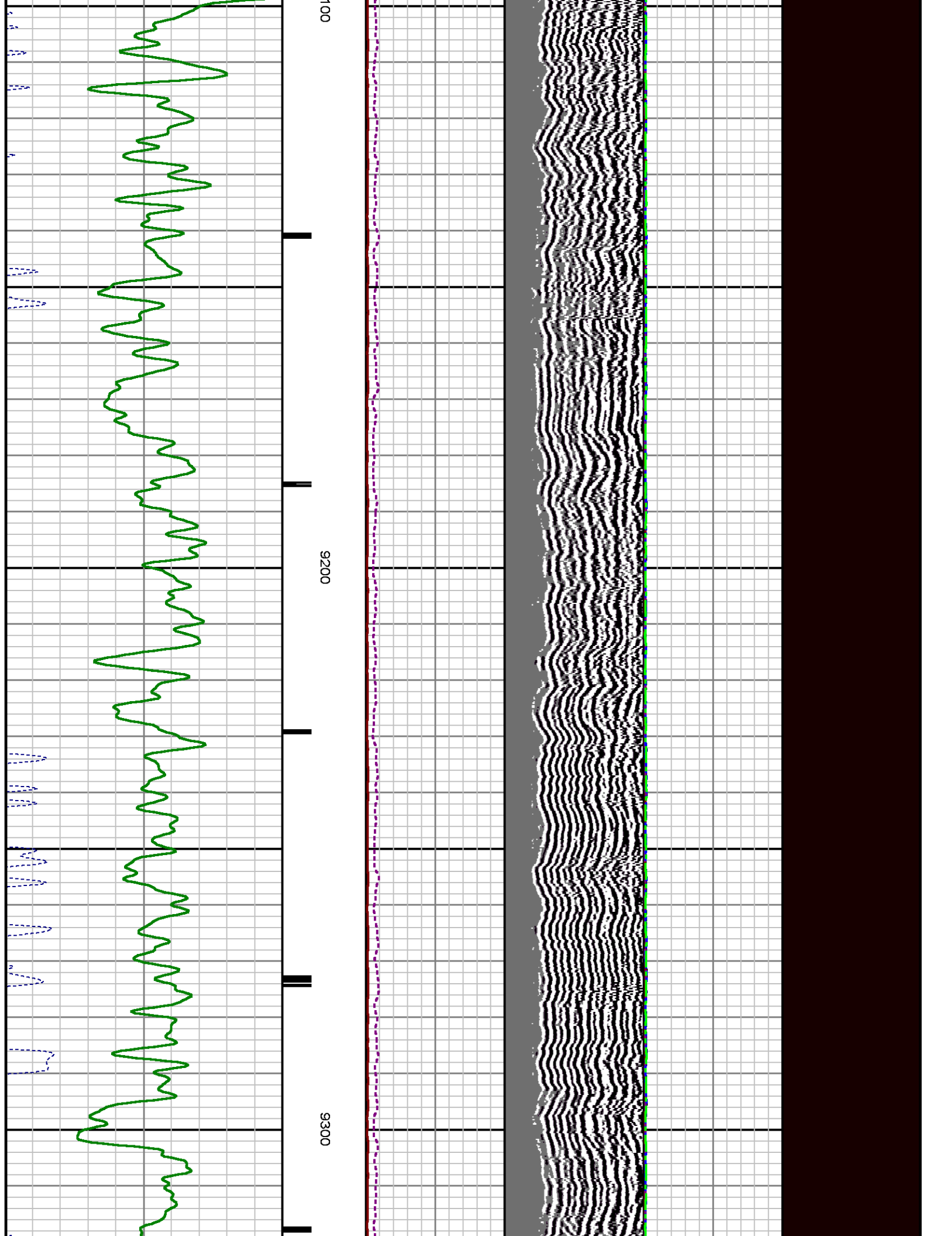


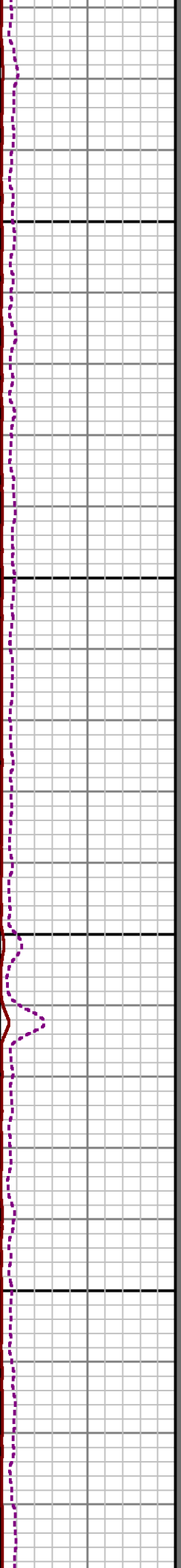
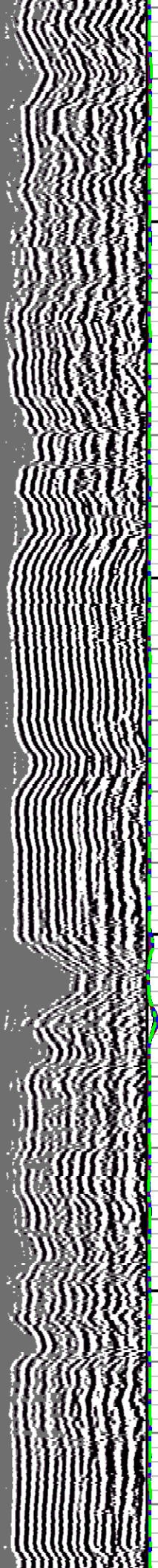






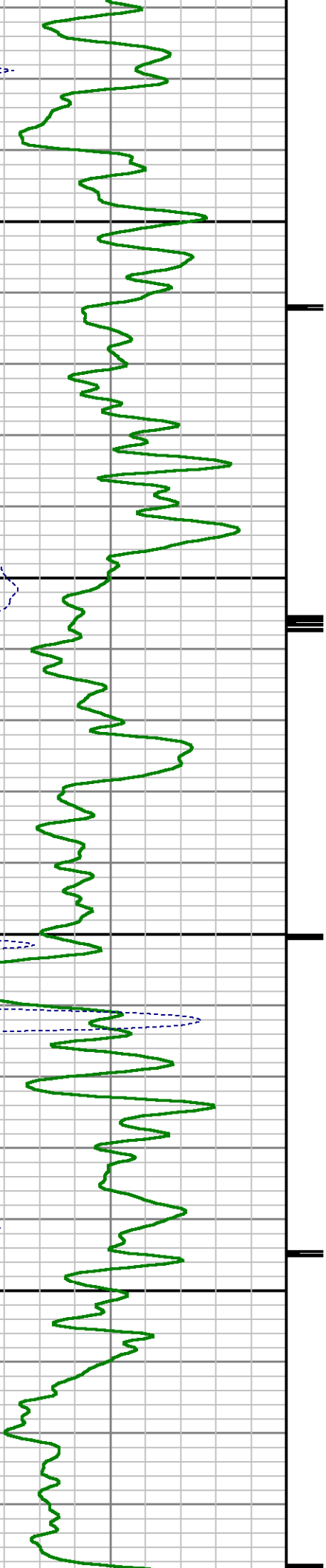


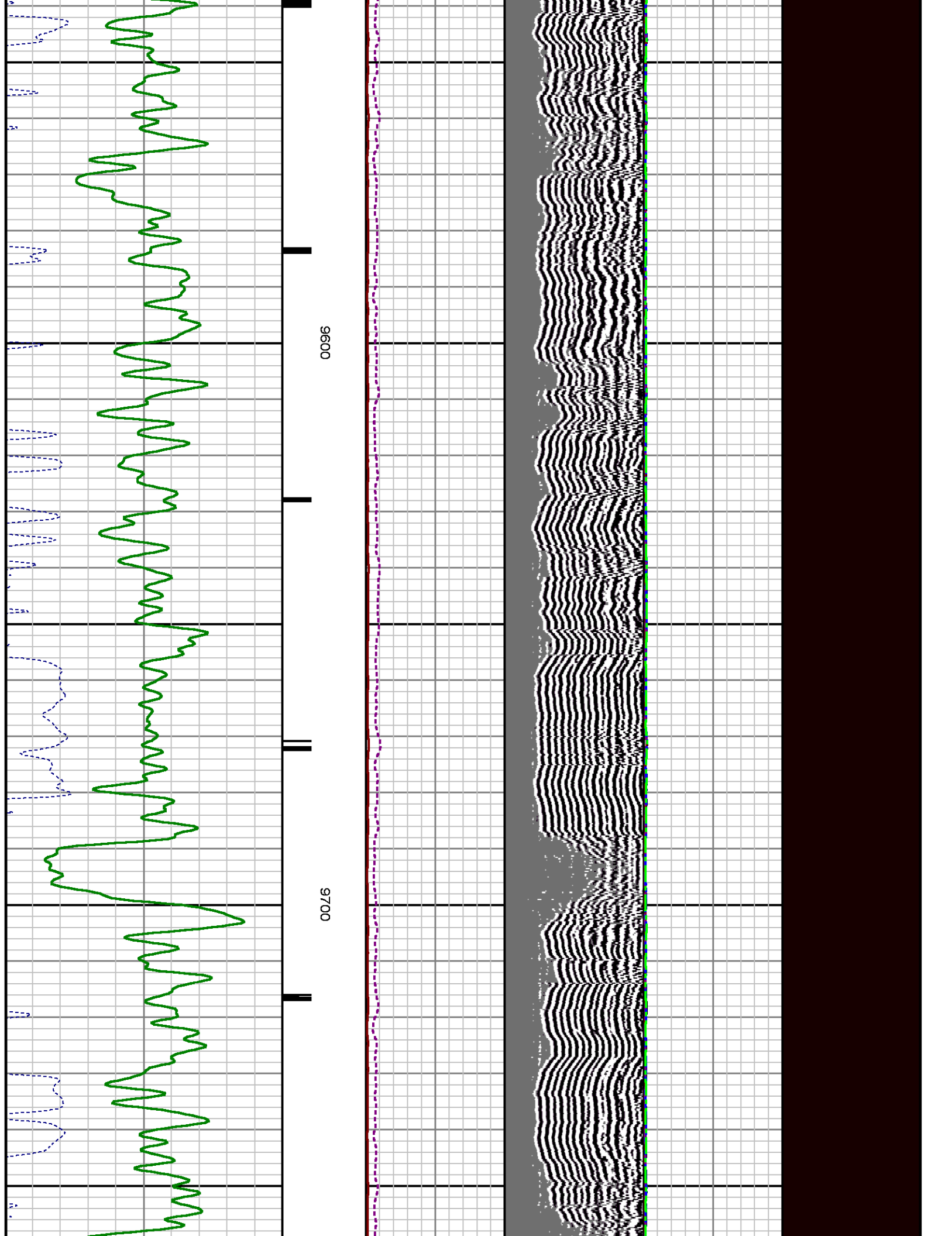


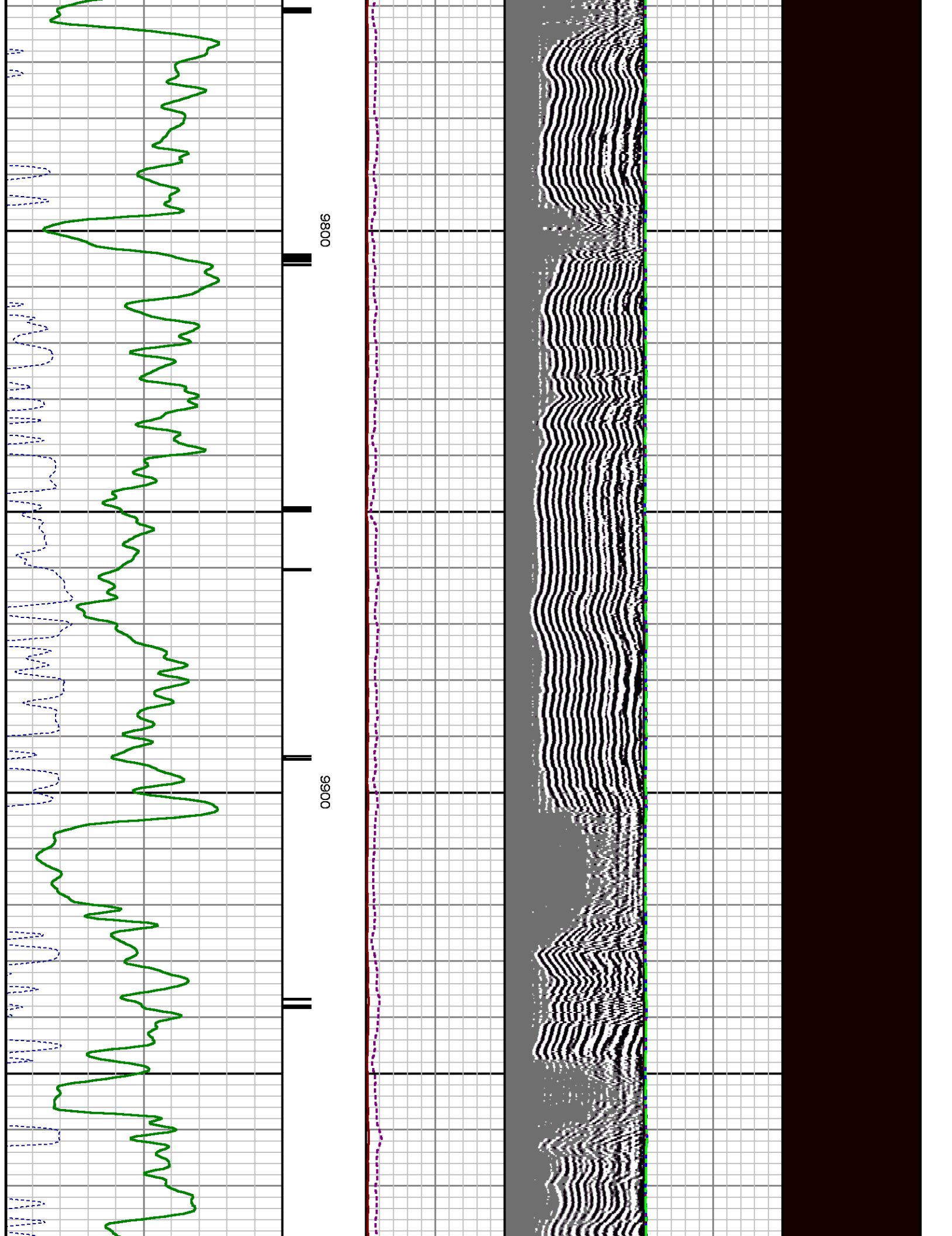


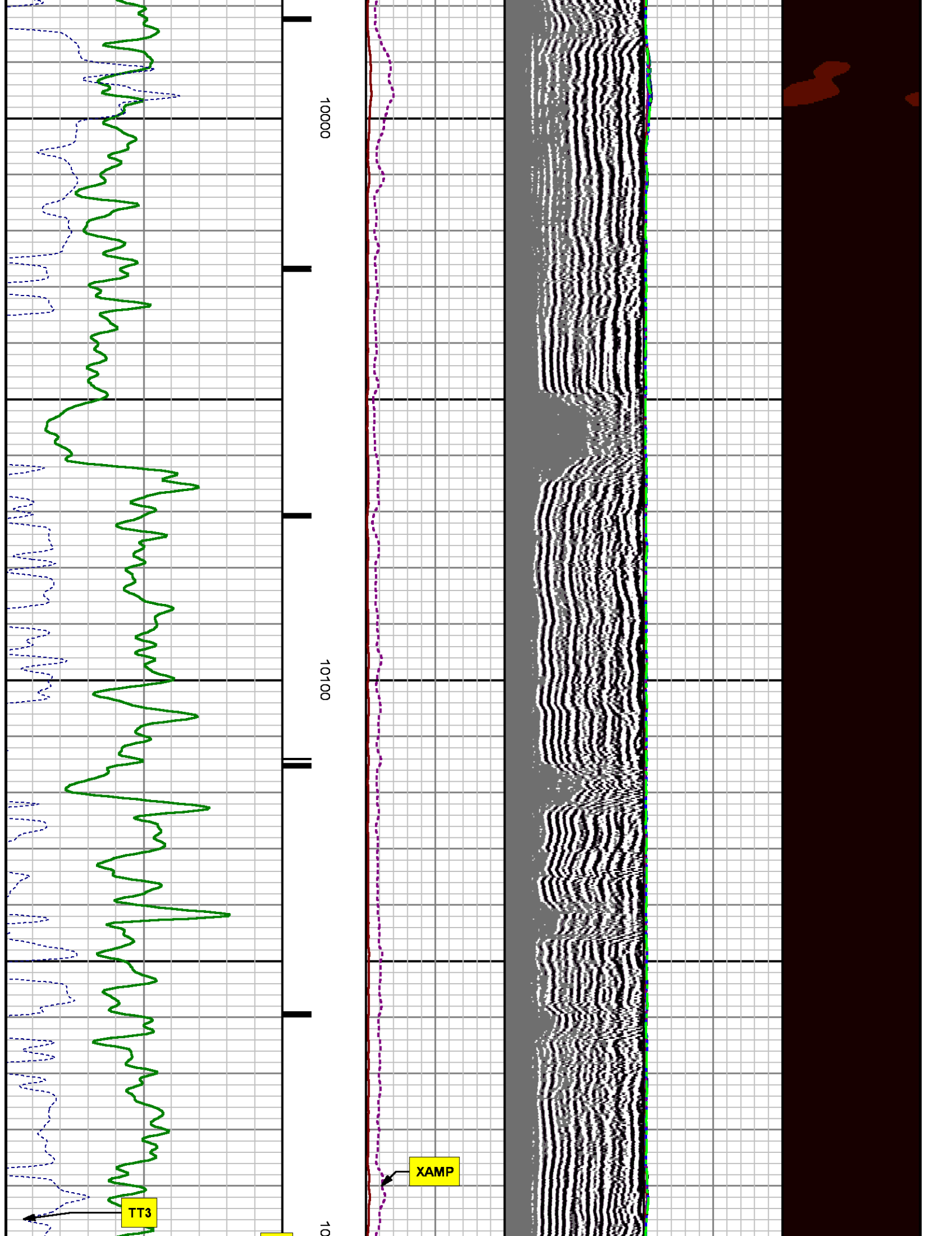
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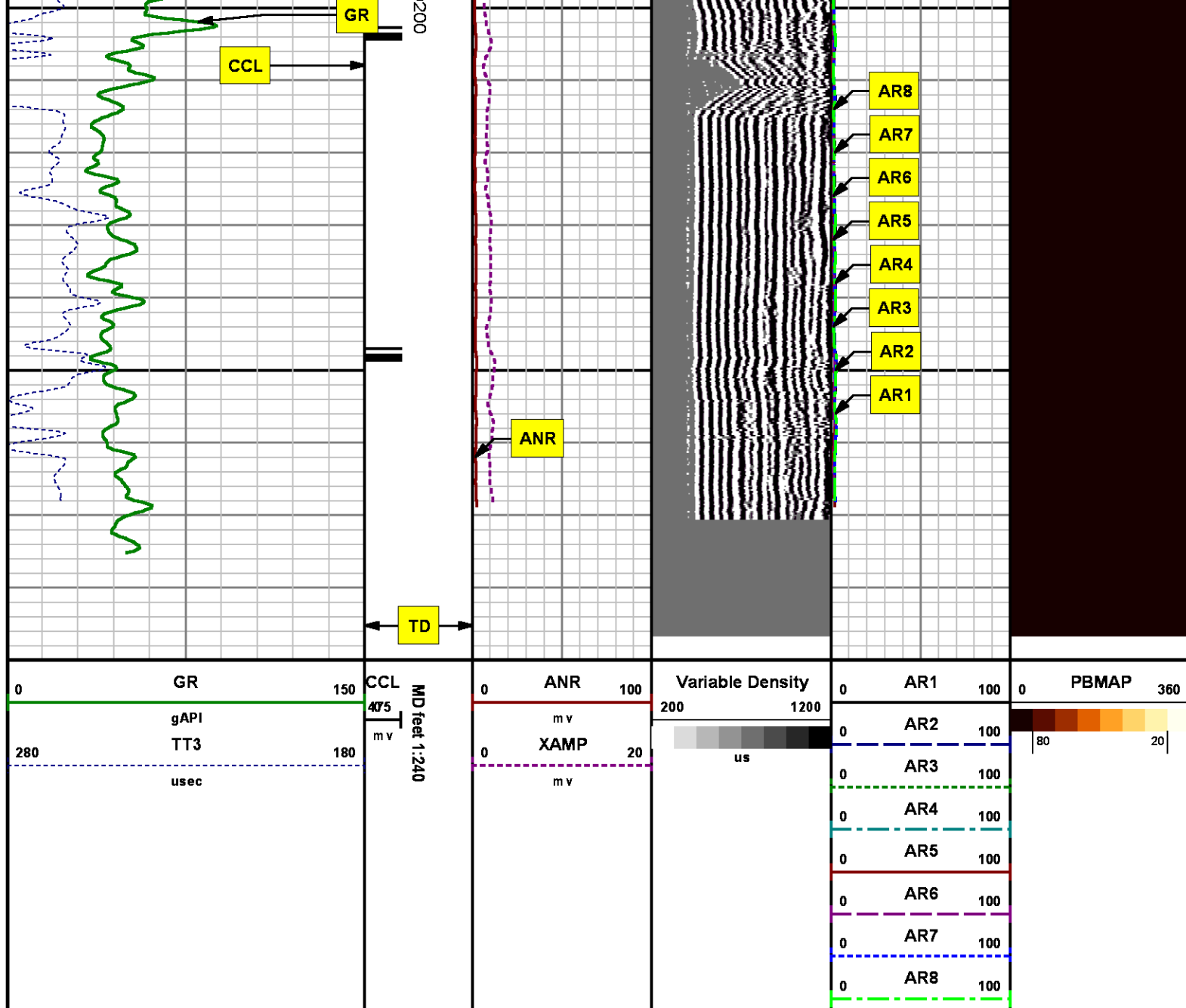












REPEAT SECTION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9961.640	10290.890

RAL	Amp Gate Start Near	195.000	usec	9961.640	10290.890
RAL	Amp Gate Start Radial	195.000	usec	9961.640	10290.890
RAL	Amp Gate Width Far	25.000	usec	9961.640	10290.890
RAL	Amp Gate Width Near	25.000	usec	9961.640	10290.890
RAL	Amp Gate Width Radial	25.000	usec	9961.640	10290.890
RAL	casing od	4.500	inches	9961.640	10290.890
RAL	casing wt	11.600	lbm/ft	9961.640	10290.890
RAL	FB Start Far	291.900	usec	9961.640	10290.890
RAL	FB Start Near	180.000	usec	9961.640	10290.890
RAL	FB Start Radial	180.000	usec	9961.640	10290.890
RAL	FB Thresh Far	15.000	mv	9961.640	10290.890
RAL	FB Thresh Near	4.000	mv	9961.640	10290.890
RAL	FB Thresh Radial	4.000	mv	9961.640	10290.890
RAL	Fluid Travel Time	200.000	usec/ft	9961.640	10290.890

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	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	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

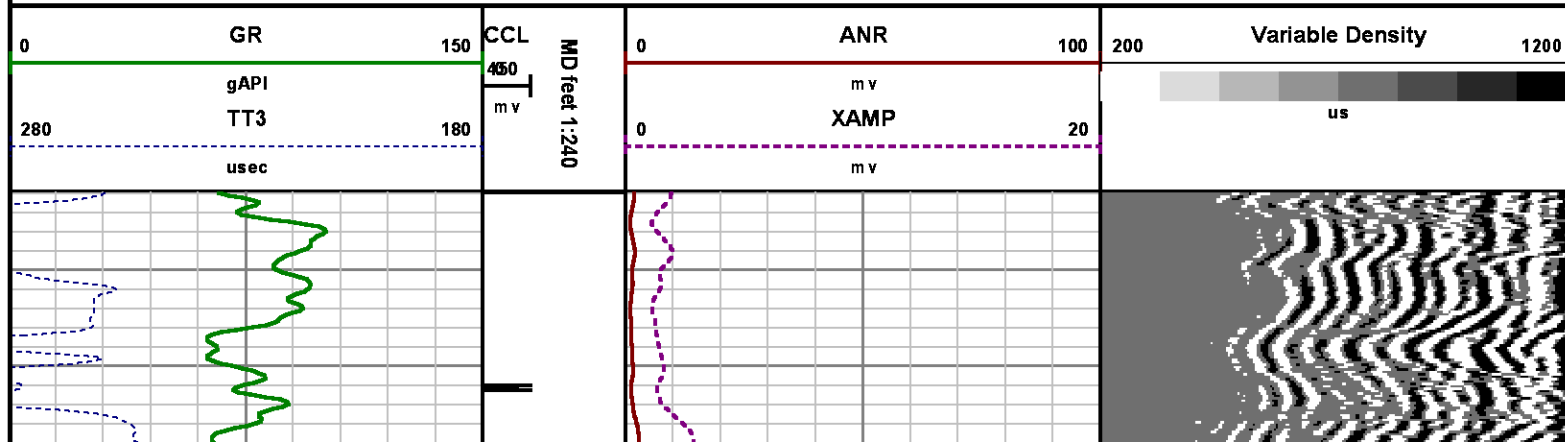
Well : FEDERAL NER 314-32

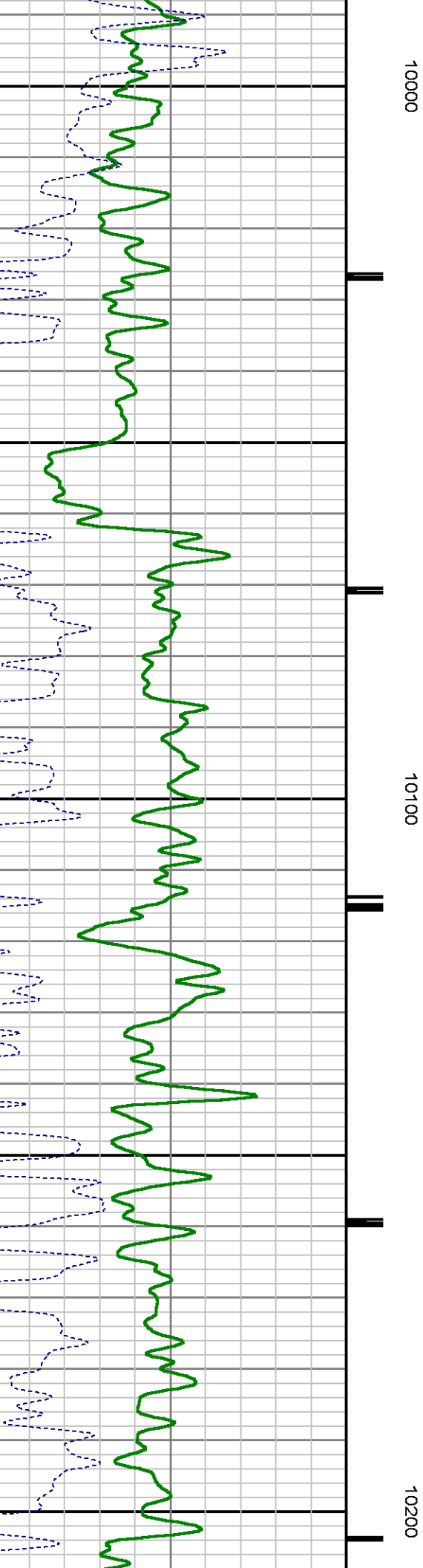
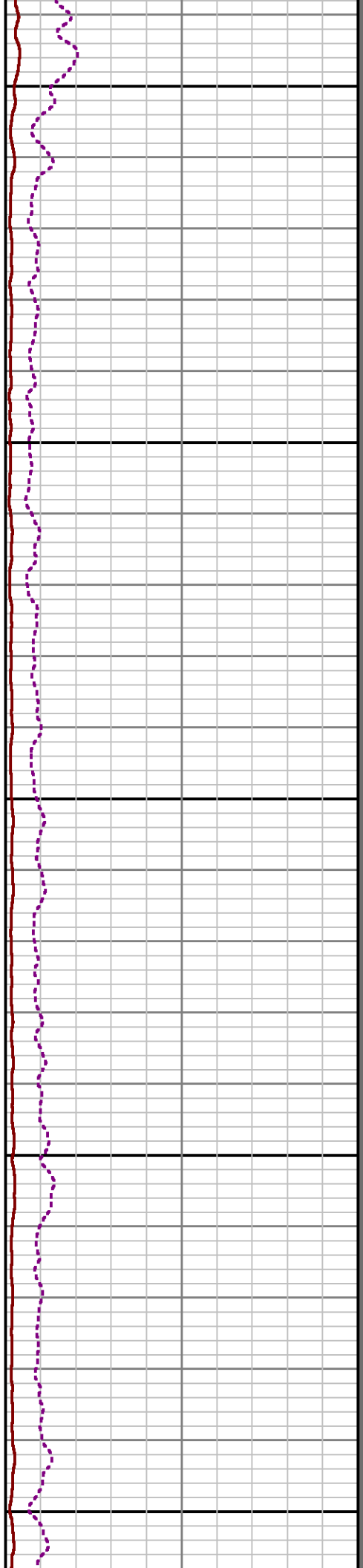
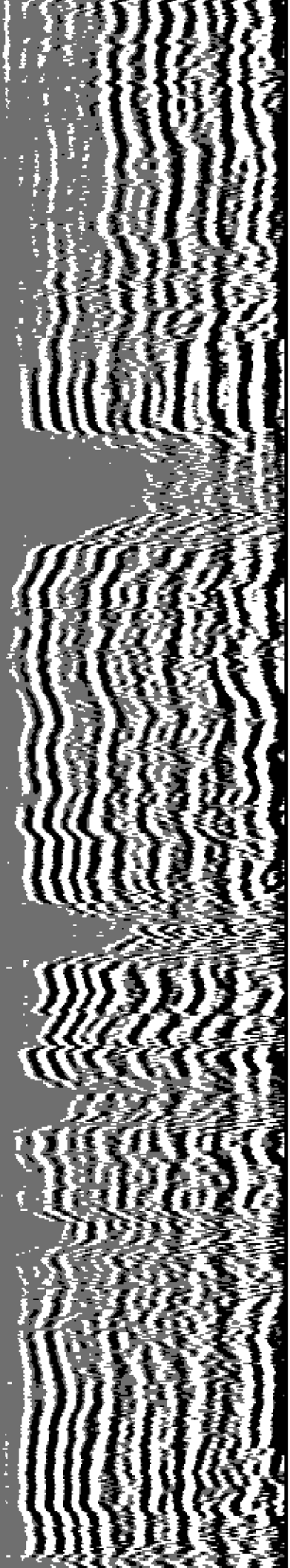
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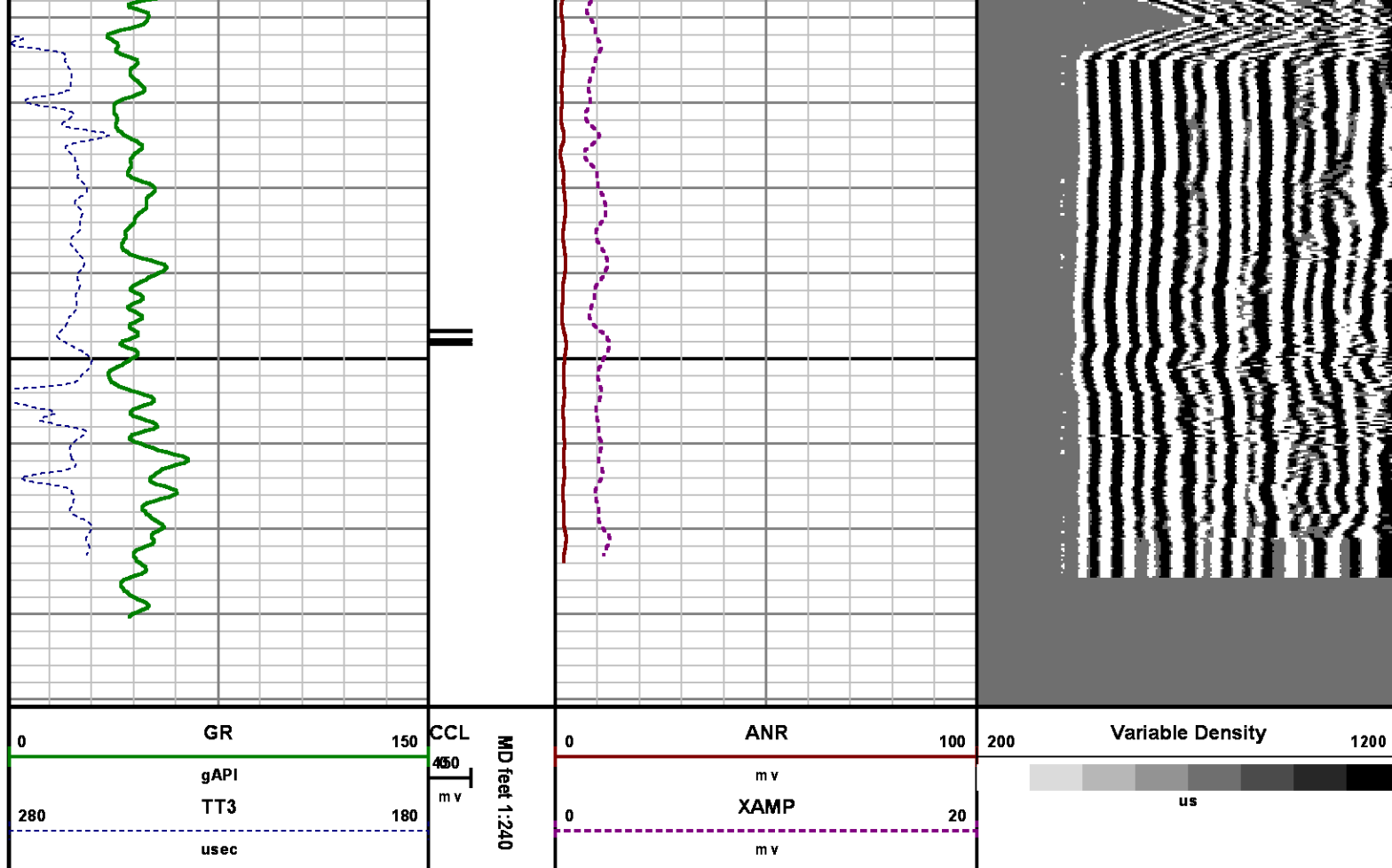
Mode : PlotMgr 5.4.504

Interval : 9961.89 - 10290.89 feet UP

Created : 4/26/2014 5:47:17 PM







## CALIBRATION SUMMARY

*RALSHP*

Shop Calibration: C:\case\calver\RAL SHP\496A25\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 25 09:15:09 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A25

Tool Delay [u sec] -53.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [u sec]	Amp. Gate Start [u sec]	Amp. Gate Width [u sec]	Zero Gate Start [u sec]	Zero Gate Width [u sec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	217	216	30	166	25	0.231	100.00	0.30
3 Ft. Receiver	218	216	30	166	25	1.290	100.00	0.30
5 Ft. Receiver	327	325	30	223	66	0.305	150.00	0.34
Radial #1	218	216	30	166	23	0.888	100.00	0.30
Radial #2	218	216	30	166	23	0.638	100.00	0.30
Radial #3	218	216	30	166	23	0.618	100.00	0.30

Radial #6	218	216	30	166	23	0.870	100.00	0.30
Radial #4	218	216	30	166	23	1.067	100.00	0.30
Radial #5	217	216	30	166	23	1.165	100.00	0.30
Radial #7	217	216	30	166	23	0.377	100.00	0.30
Radial #8	218	216	30	166	23	0.642	100.00	0.30

## RALFLD

Wellsite Calibration: C:\case\calver\RAL FLD\496025\_fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 25 12:55:21 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: 025

Tool Delay [usec] -53.00 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	0.119	0.000	1.01	100.000
3 Ft. Receiver	195	25	2.311			
5 Ft. Receiver	305	25	2.939			
Radial #1	195	25	1.604			
Radial #2	195	25	1.586			
Radial #3	195	25	1.793			
Radial #4	195	25	1.816			
Radial #5	195	25	2.168			
Radial #6	195	25	2.221			
Radial #7	195	25	1.732			
Radial #8	195	25	1.668			

## GAMMA RAY

Calibration File: C:\case\calver\GR\456A3.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 03 13:37:28 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	76.84	356.71	0.661	50.80	235.80	185.00

Verification File: C:\case\calver\GR\456A3.VP

### PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Apr 03 13:38:35 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator #	Background	Calibrator On	Multiplicative	Background	Calibrator On	Differential
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[cps]

[cps]

[api]

[api]

[api]

S2K

WA612

80.98

351.78

0.661

53.53

232.54

179.01

# TOOL DIAGRAM

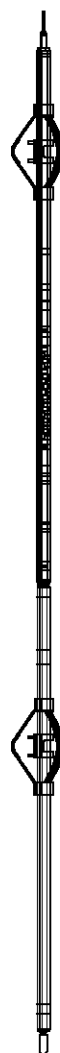
## OTA SHORT CABLE HEAD

### 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



21.81'

XMIT—15.62'

NEAR RCVR—12.54'

FAR RCVR—10.62'

CCL—8.92'

GR—7.06'

NEU—1.67'

0.00'

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



Baker Atlas

Company  
 Well  
 Field  
 County

WPX ENERGY  
 FEDERAL NER 314-32  
 RULISON  
 GARFIELD

State CO

File No:

CH085270

API No:

050452177400000



Location

SHL: 178' FNL & 2591' FWL (5 7S 93W)

BHL: 810' FSL & 645' FWL (32 6S 93W)

SEC 32 TWP 6S RGE 93W

Elevations

KB 7629 ft

DF

GL 7603 ft

32 6S 93W

RU 23-5 PAD

NABORS 576