



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: **Company** **WPX ENERGY**

CH082309 **Well** **SAVAGE RWF 14-25**

API No: **Field** **RULISON**

05045219800000 **County** **GARFIELD** **State** **COLORADO**

25 6S 94W **Location**

RWF 23-25 PAD SHL: 1699' FSL & 2295' FWL

NABORS 677 BHL: 501' FSL & 836' FWL (SWSW)

SEC 25 TWP 6S RGE 94W

Other Services  
RPM

Permanent Datum GL Elevation 6096 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KELLY BUSHING KB 6122 ft  
DF  
GL 6096 ft

Date	31/JAN/14	
Run	ONE	
Service Order	US62E098	
Depth Driller	8819 ft	
Depth Logger	8797 ft	
Bottom Logged Interval	8787 ft	
Top Logged Interval	26 ft	
Time Started	0830	
Time Finished	1130	
Operator Rig Time	3 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	71 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	230 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLORIO RENEAU	
Witnessed By	BOB CADY	

- 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	1139 ft
8.75 in	1139 ft	8819 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1139 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8819 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 = 230 °F
SJ = 5163'-5187'

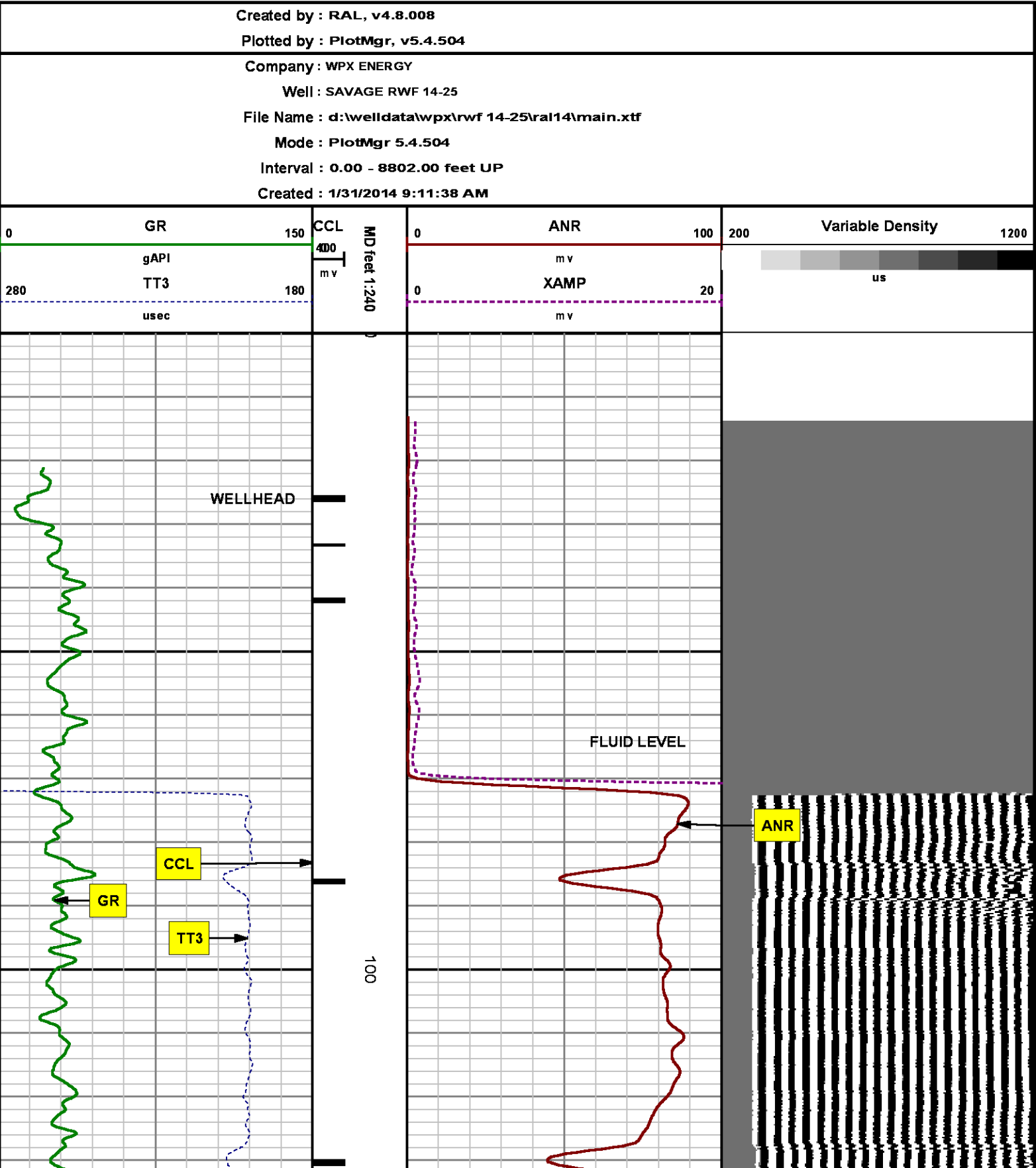
Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	FREE
1	1	GR/CCL	2459XA	10124121	FREE

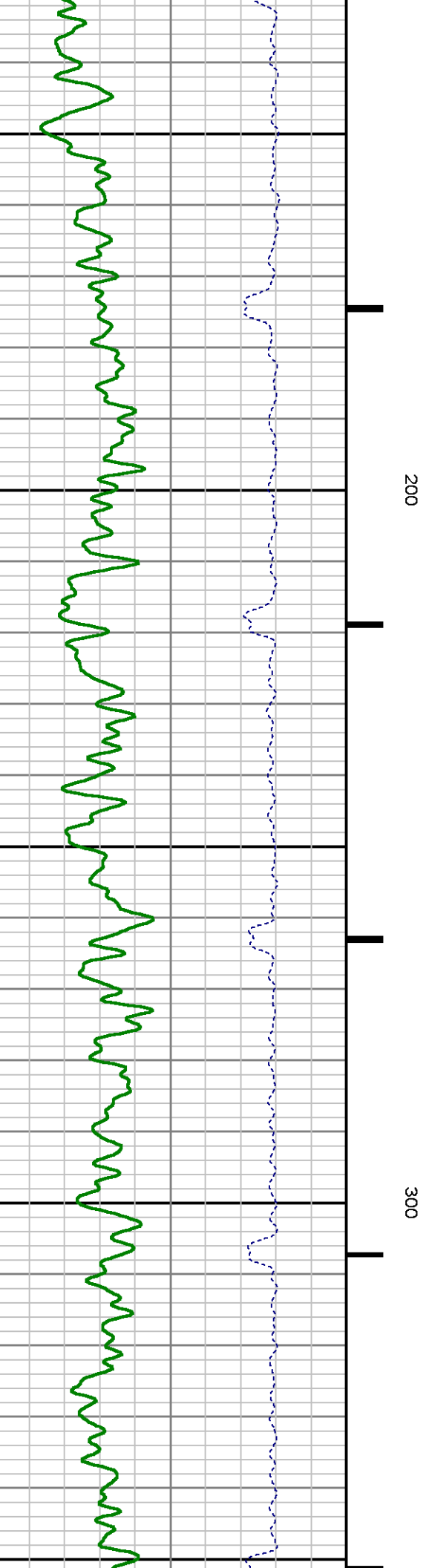
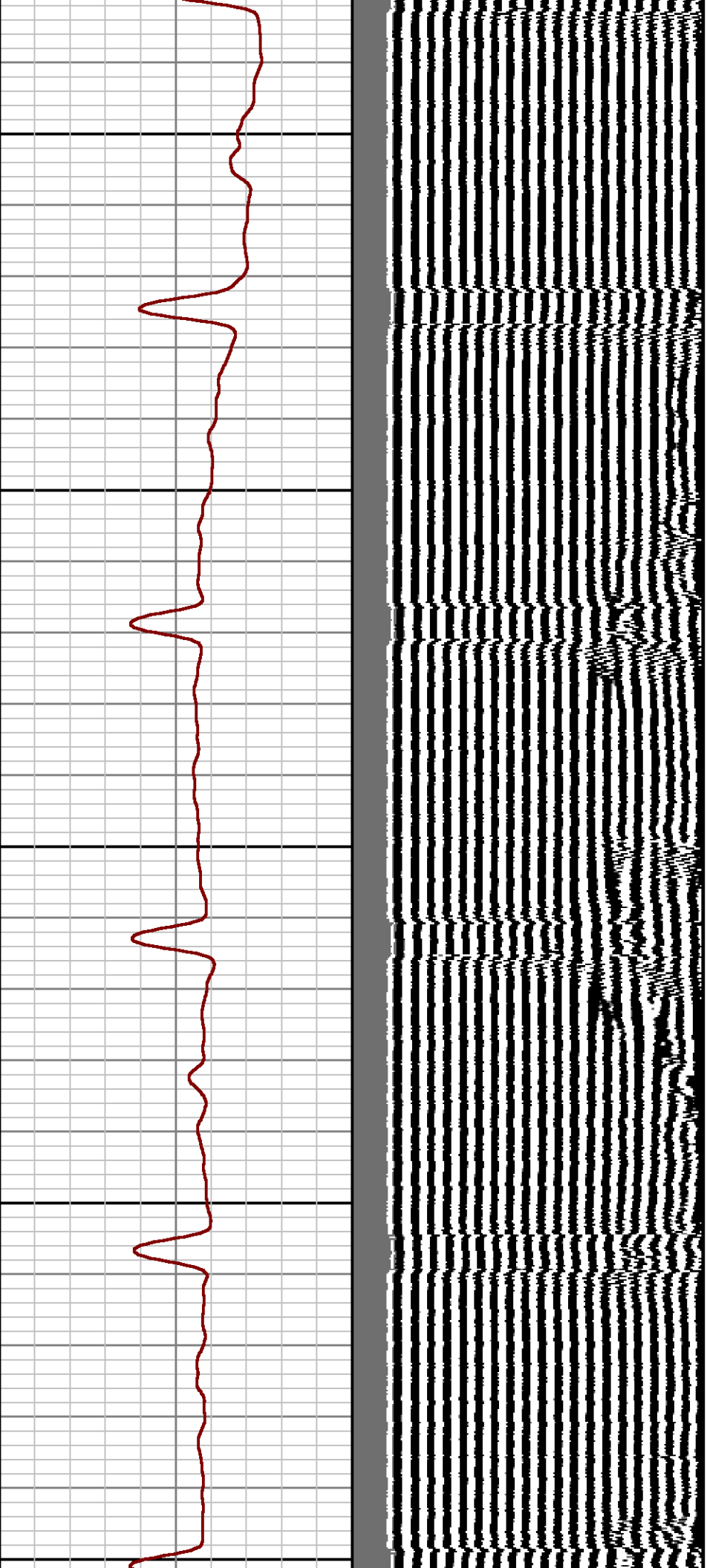
PRIMARY PRESENTATION  
0 PSI

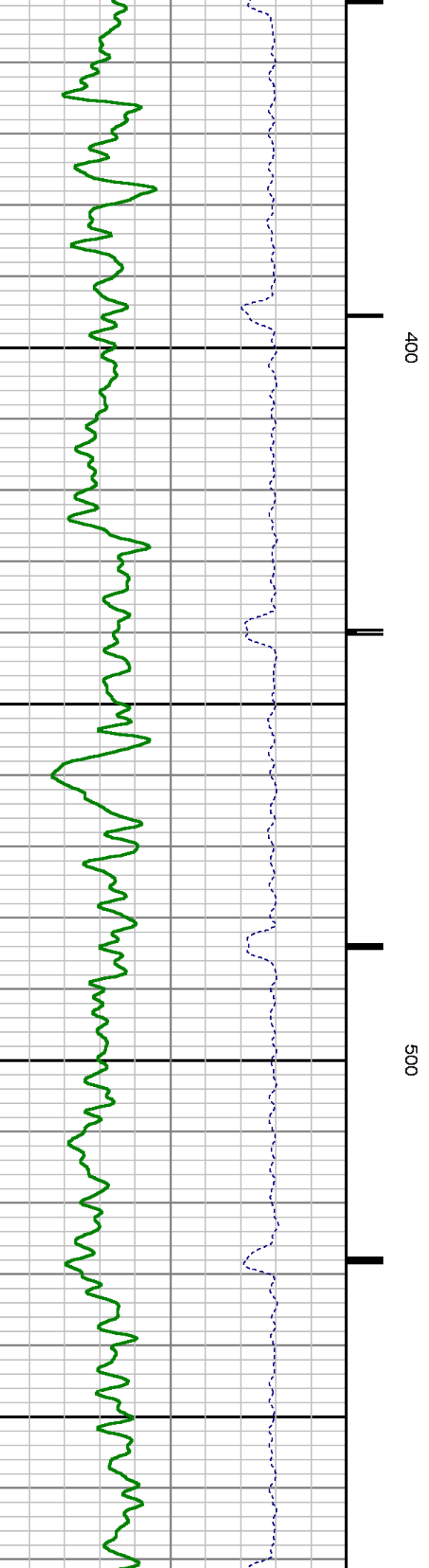
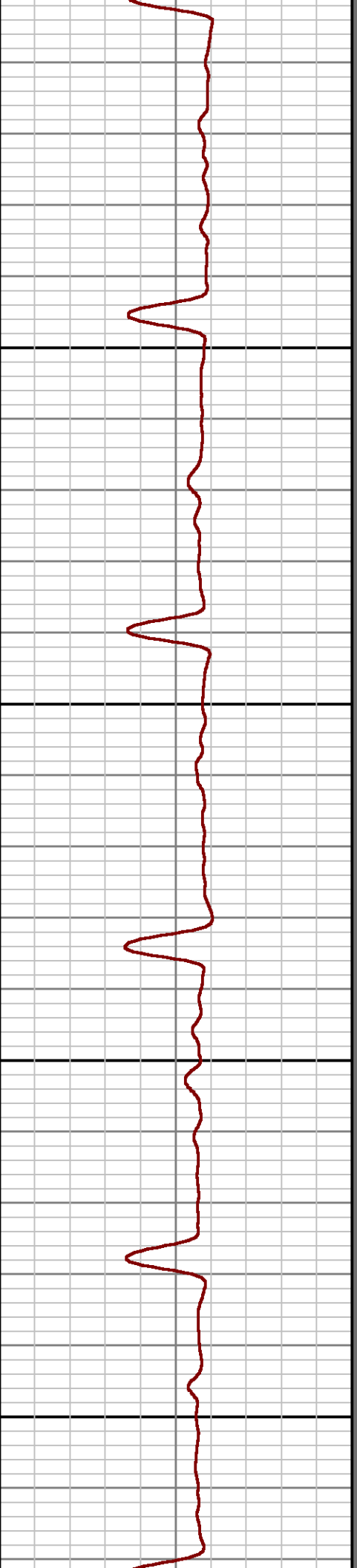
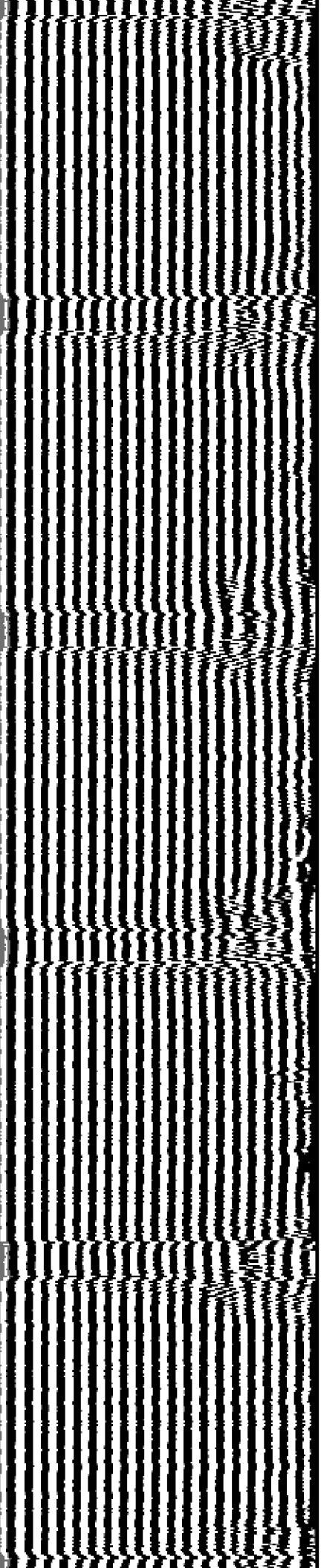
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	29.368	8820.500
RAL	Amp Gate Start Near	195.000	usec	29.368	8820.500
RAL	Amp Gate Start Radial	195.000	usec	29.368	8820.500
RAL	Amp Gate Width Far	25.000	usec	29.368	8820.500
RAL	Amp Gate Width Near	25.000	usec	29.368	8820.500
RAL	Amp Gate Width Radial	25.000	usec	29.368	8820.500
RAL	casing od	4.500	inches	29.368	8820.500
RAL	casing wt	11.600	lbm/ft	29.368	8820.500
RAL	FB Start Far	291.900	usec	29.368	8820.500
RAL	FB Start Near	175.391	usec	29.368	8820.500
RAL	FB Start Radial	175.391	usec	29.368	8820.500
RAL	FB Thresh Far	10.000	mv	29.368	8820.500
RAL	FB Thresh Near	4.000	mv	29.368	8820.500
RAL	FB Thresh Radial	4.000	mv	29.368	8820.500
RAL	Fluid Travel Time	200.000	usec/ft	29.368	8820.462

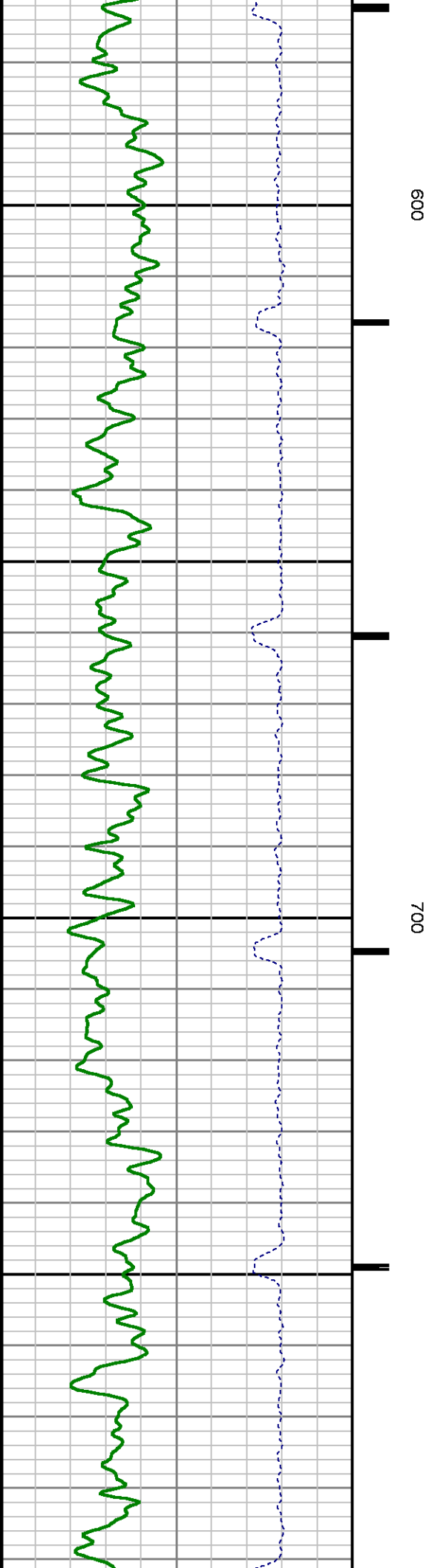
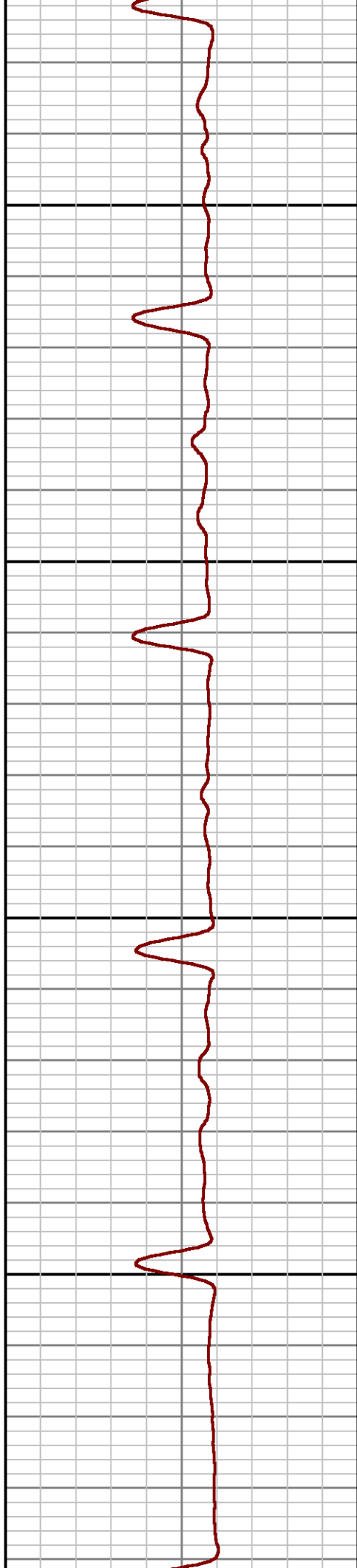
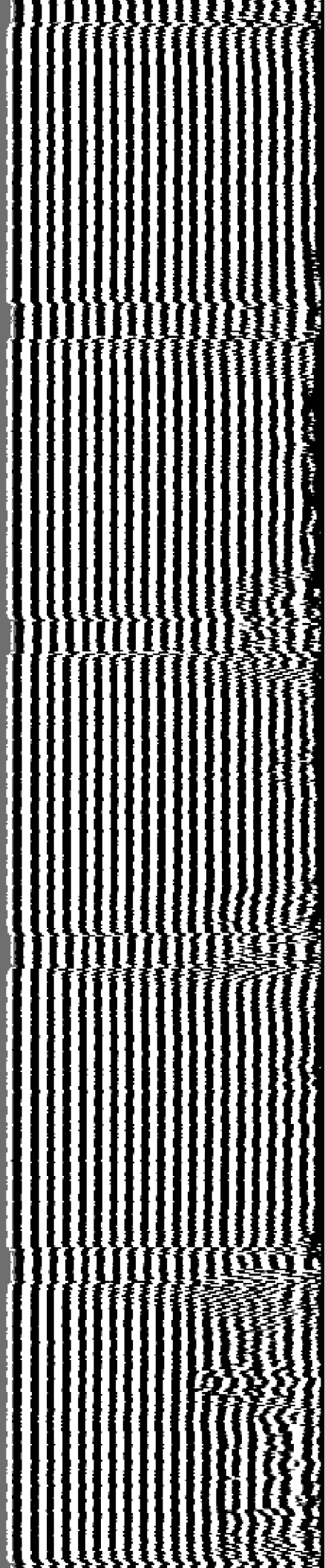
DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

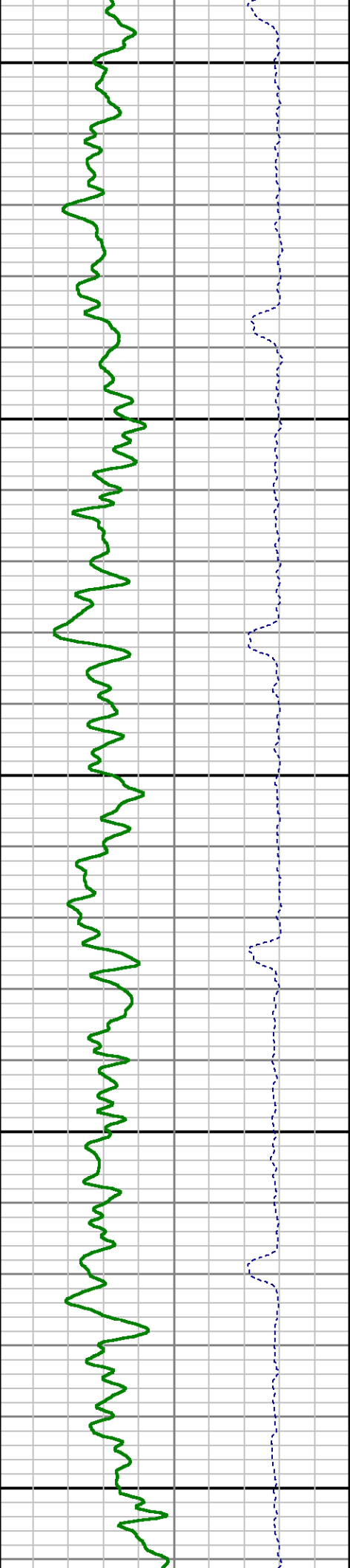
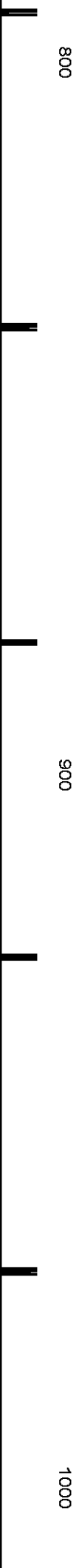
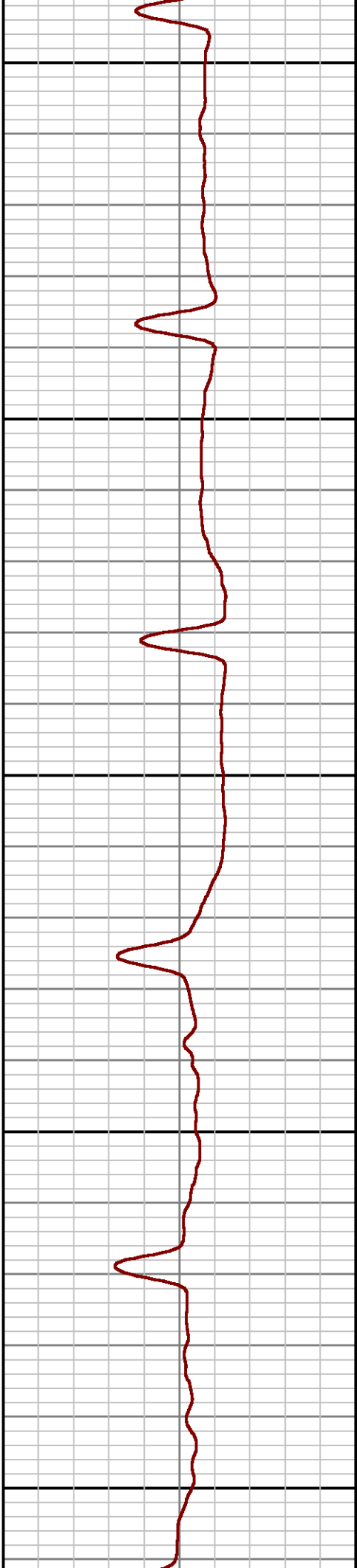
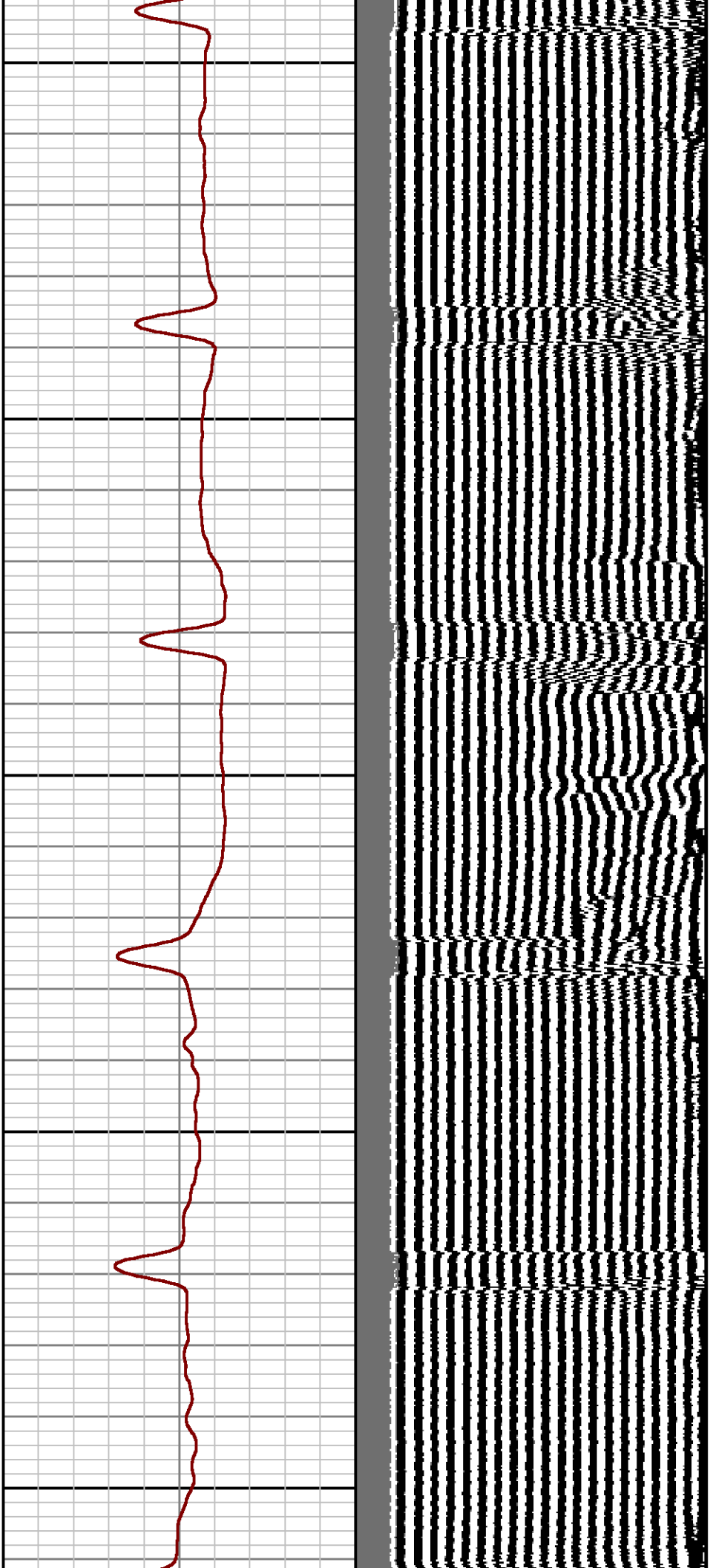
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

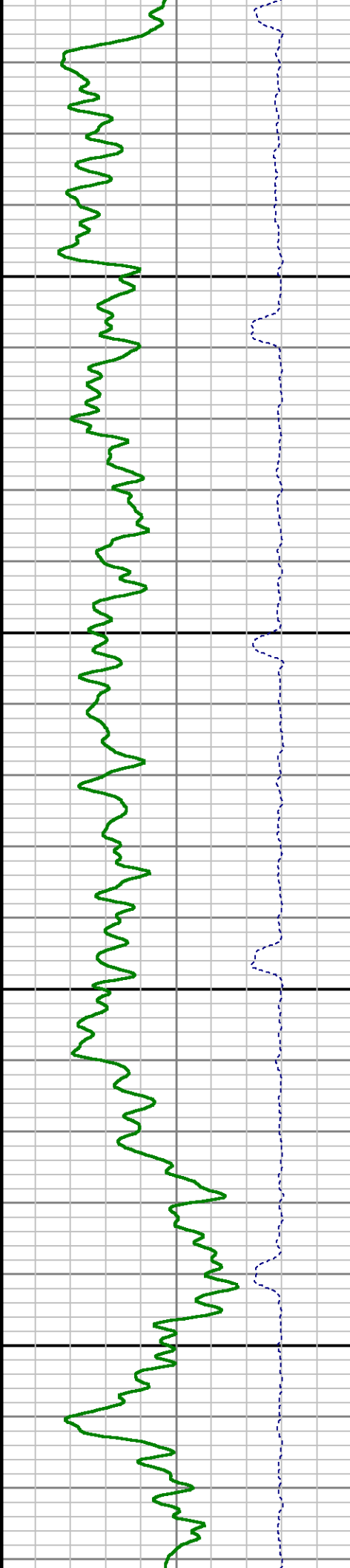
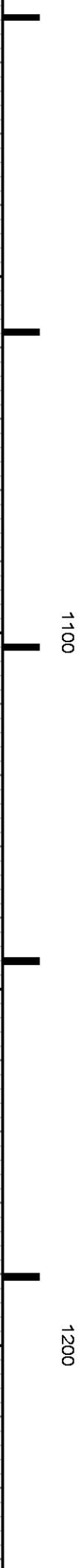
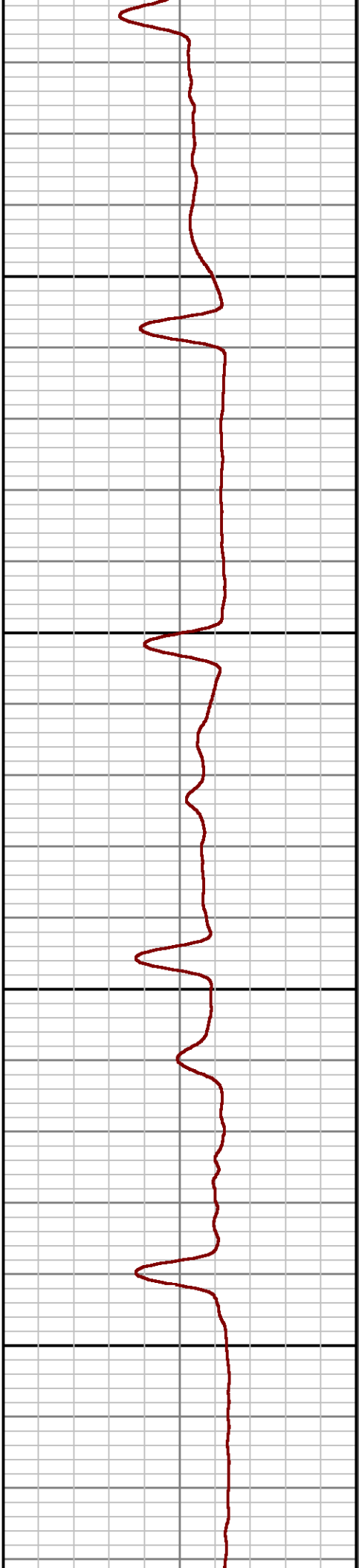
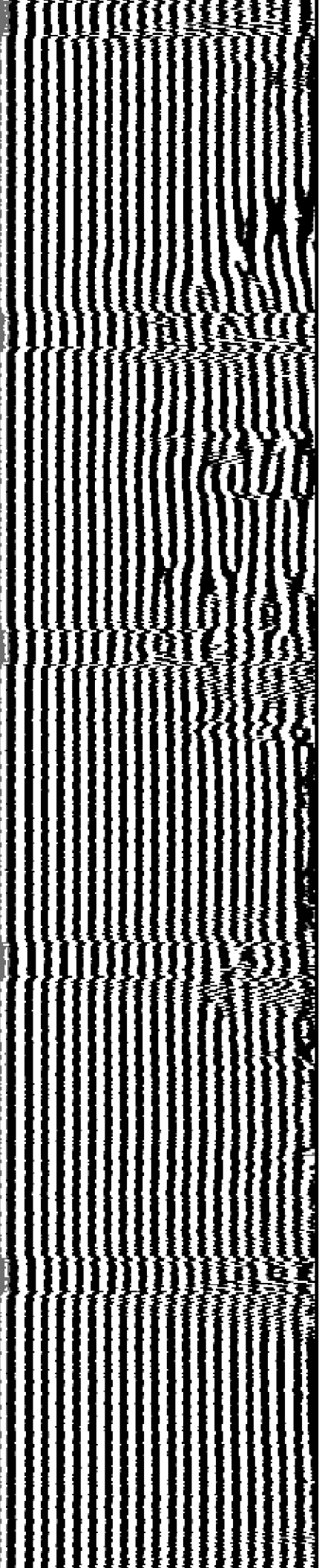




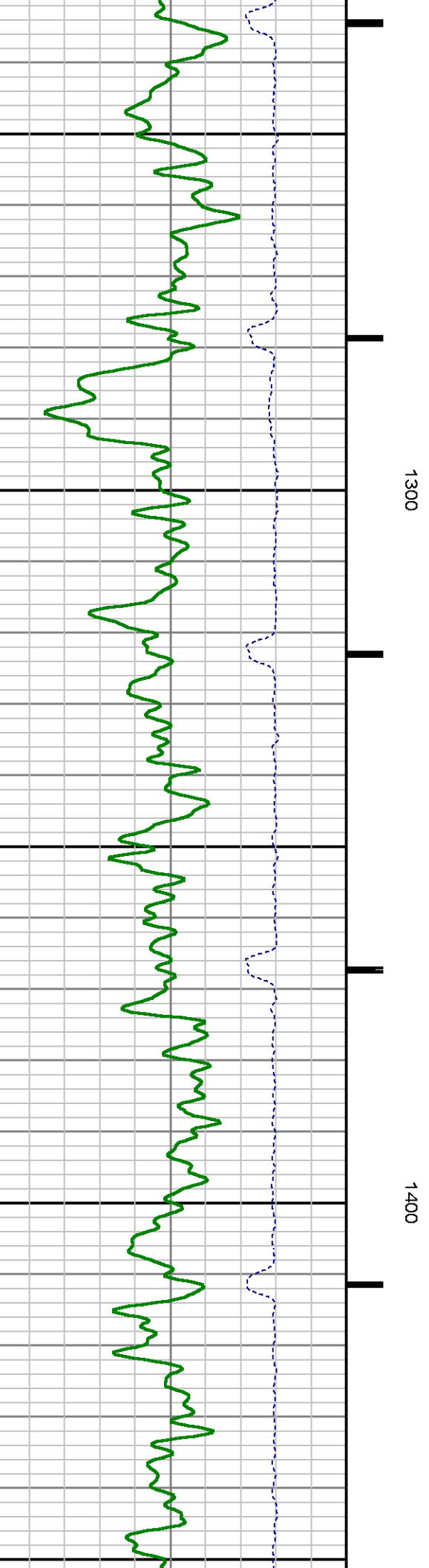
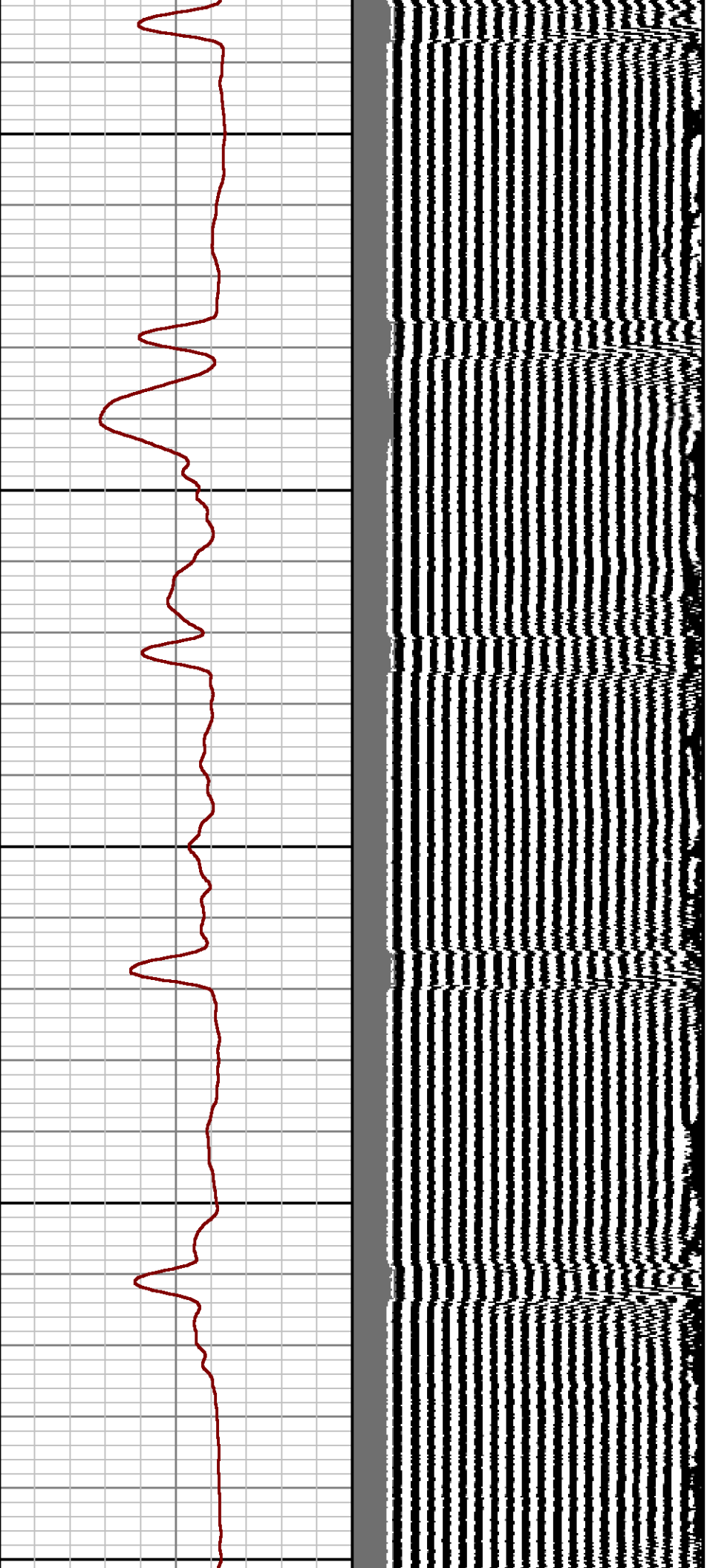


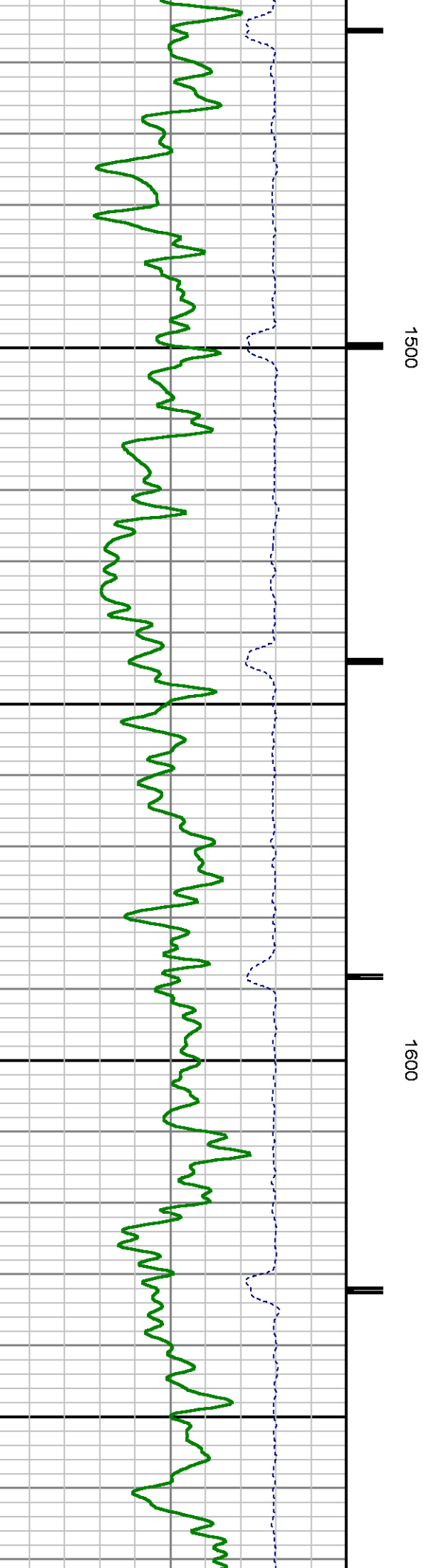
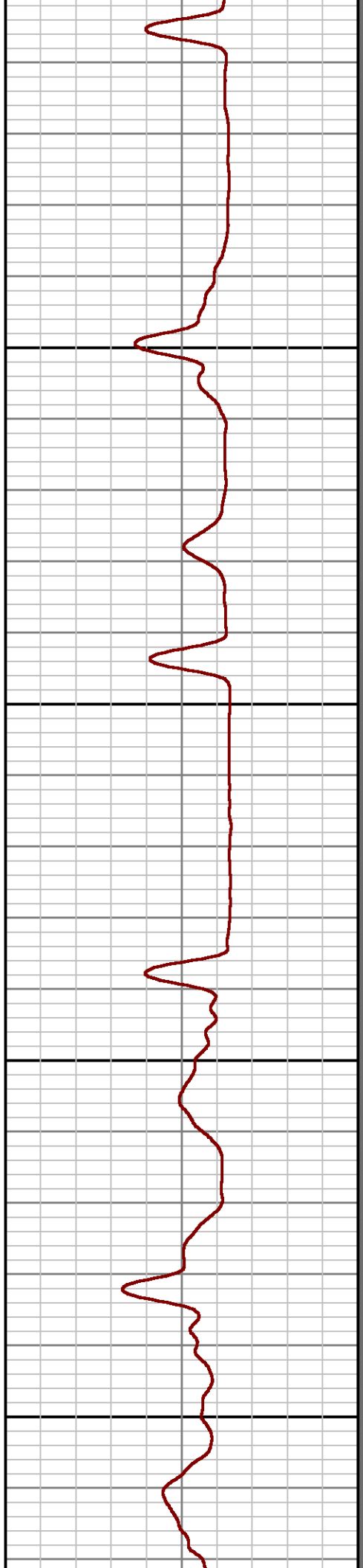
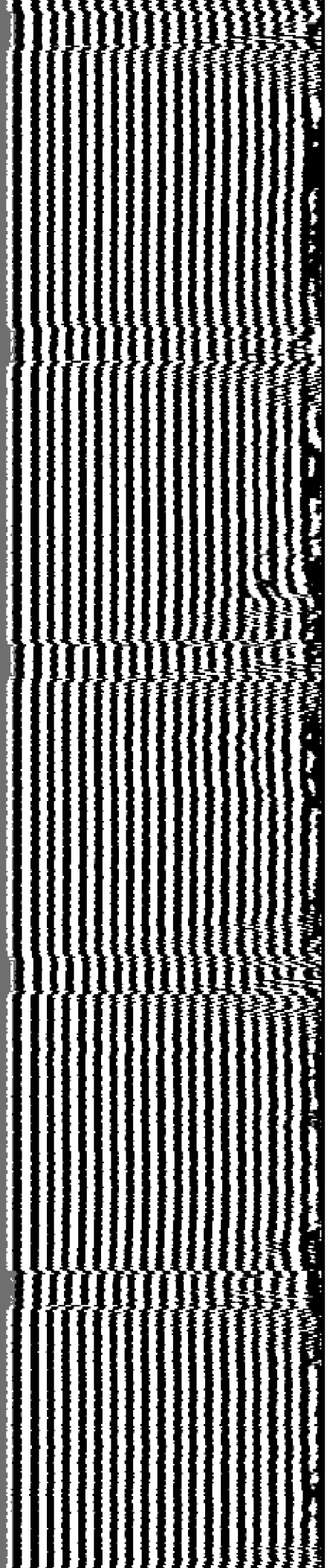


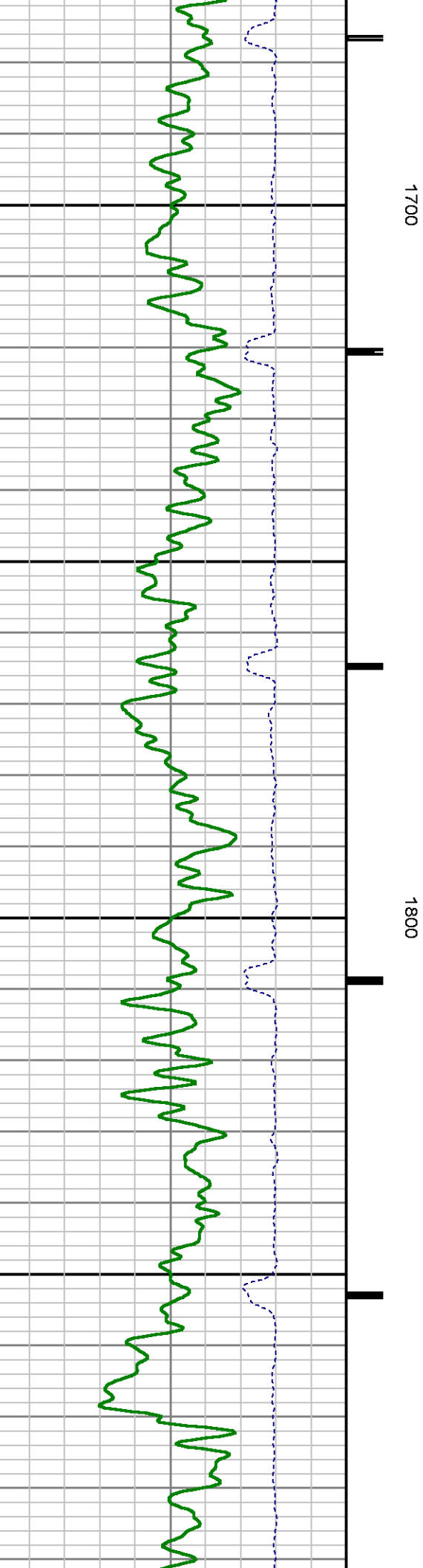
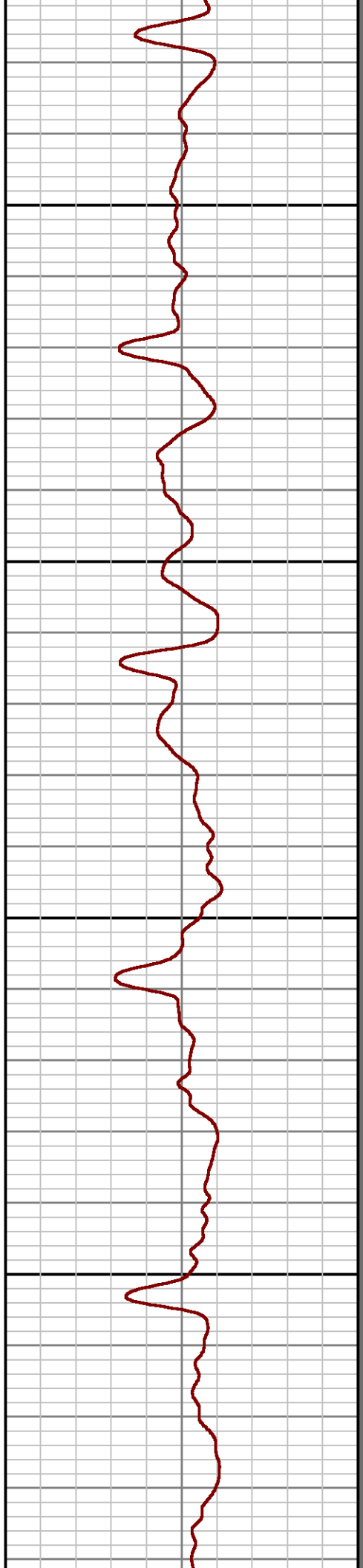
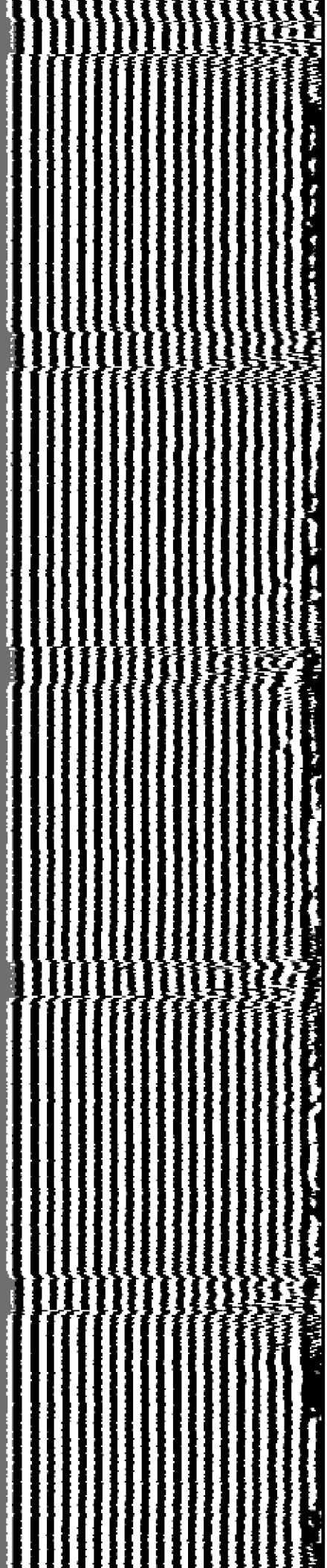


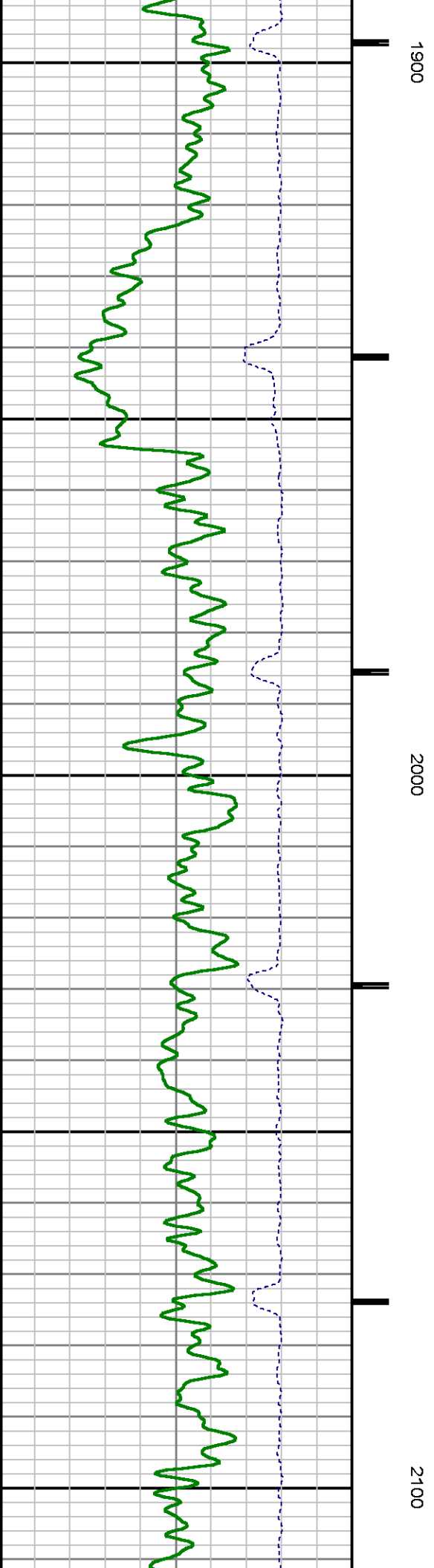
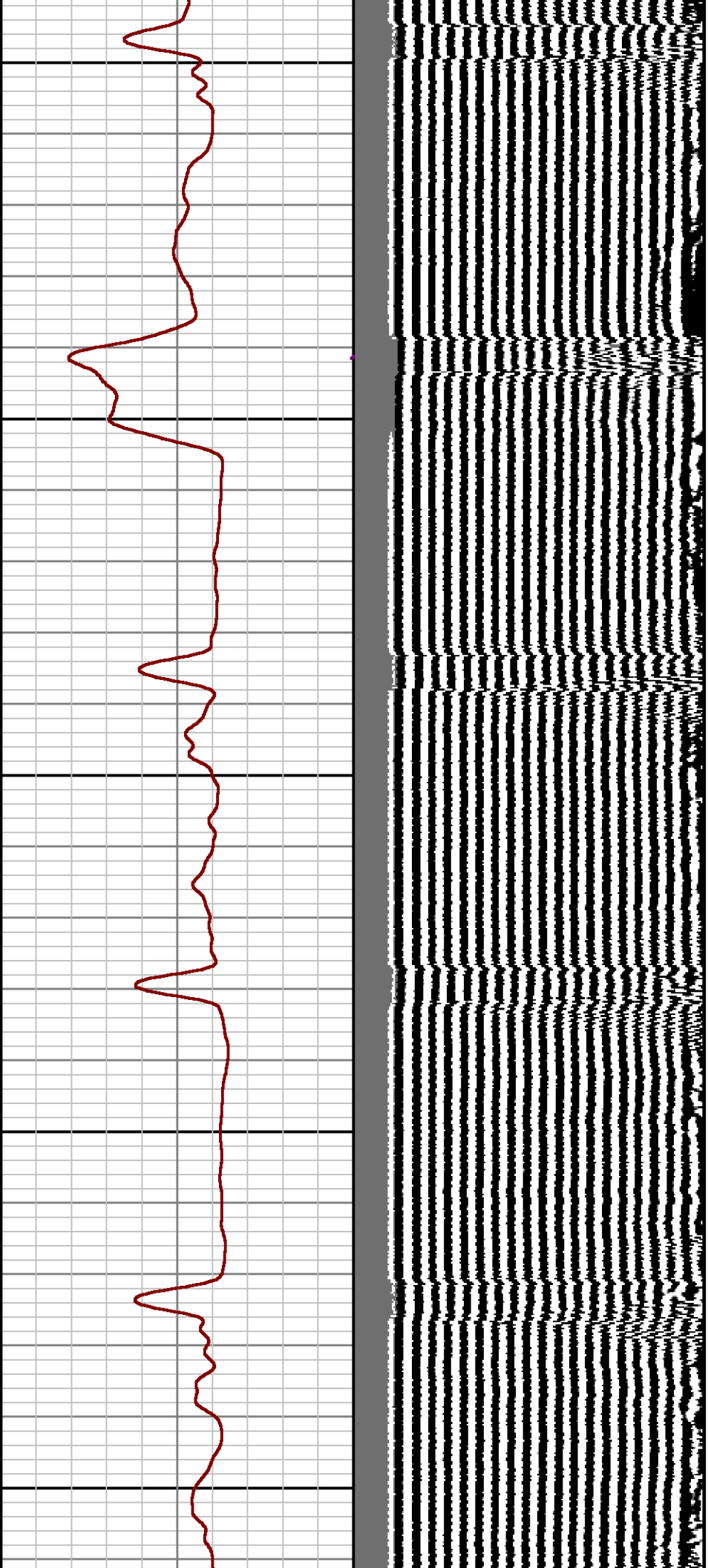


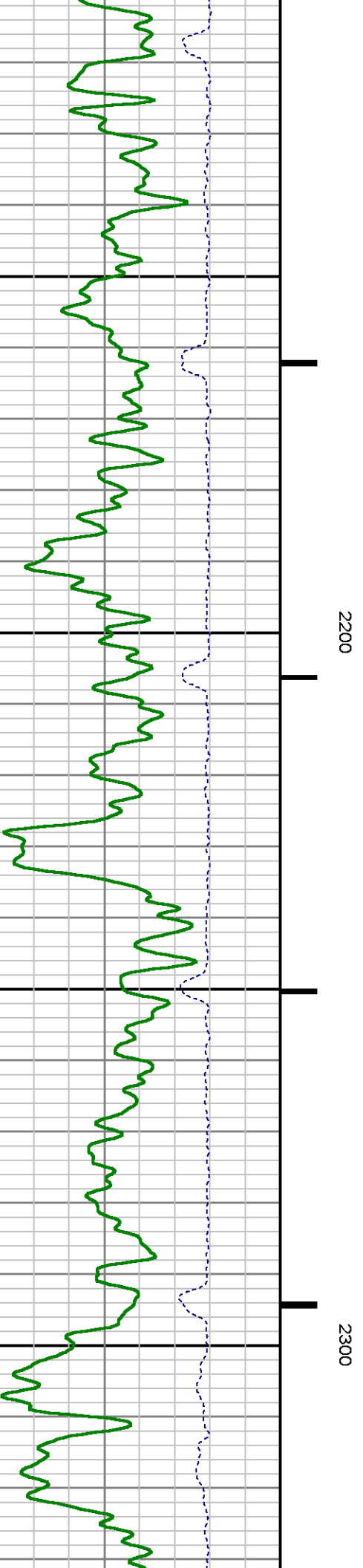
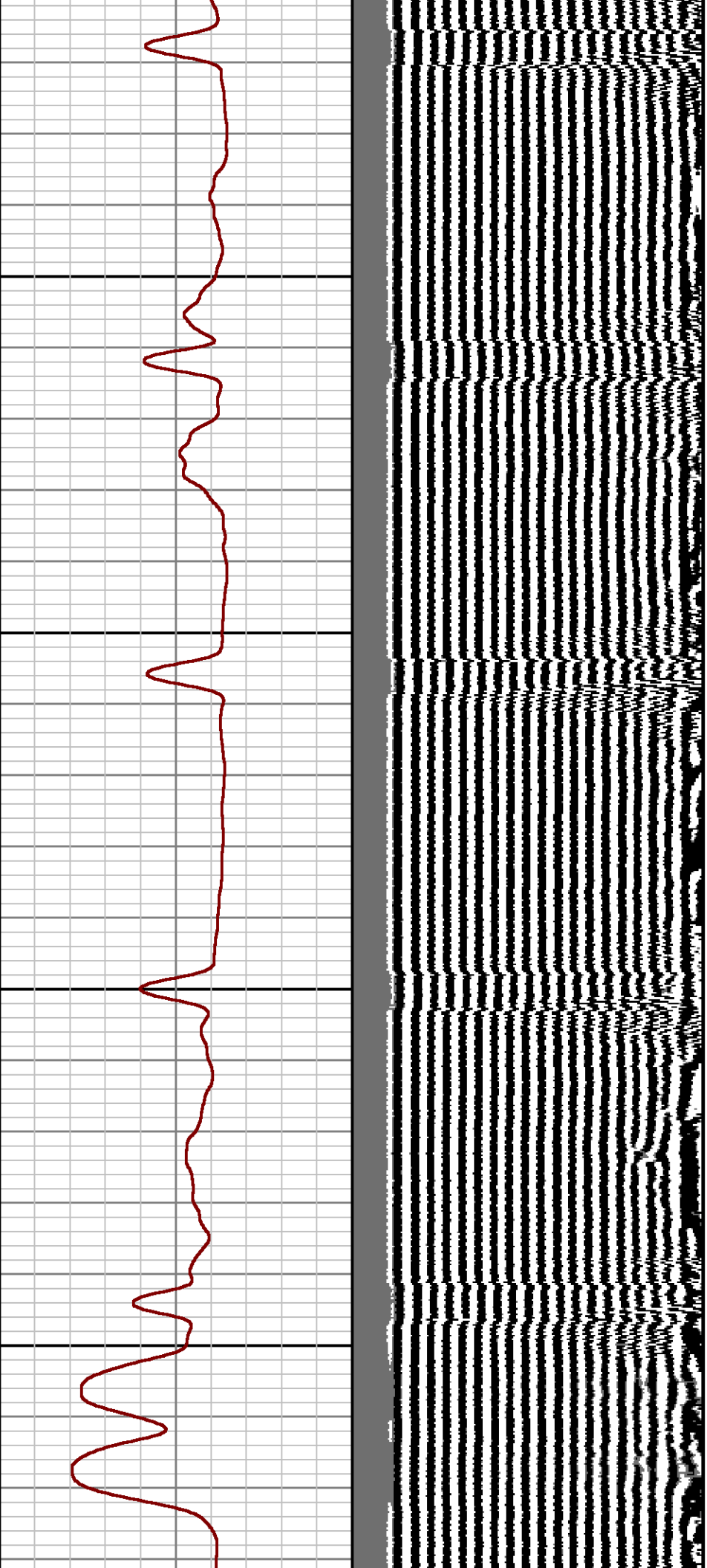


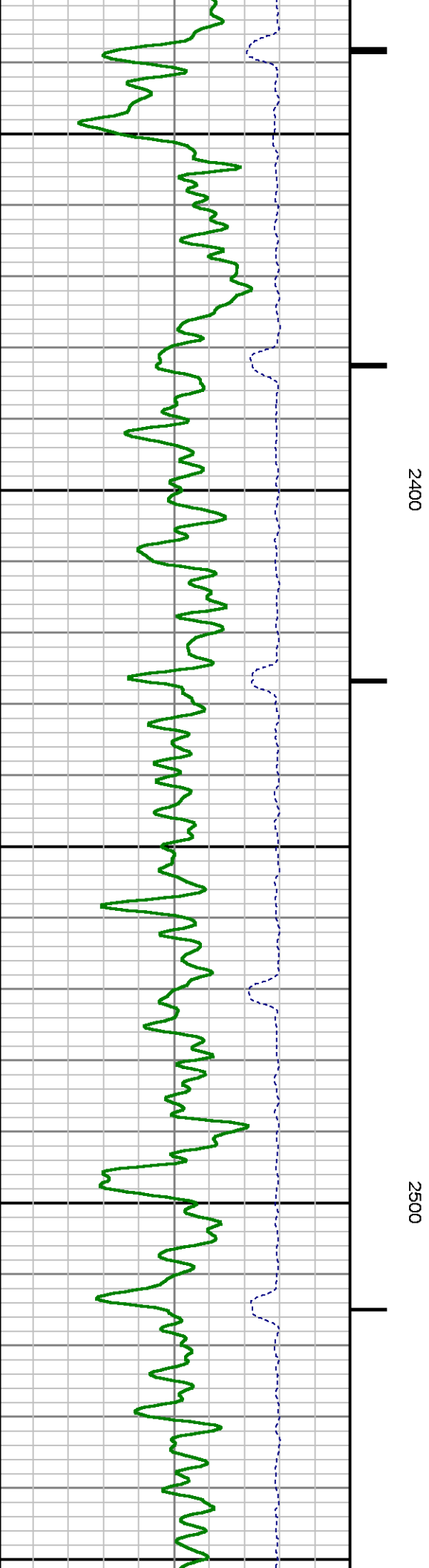
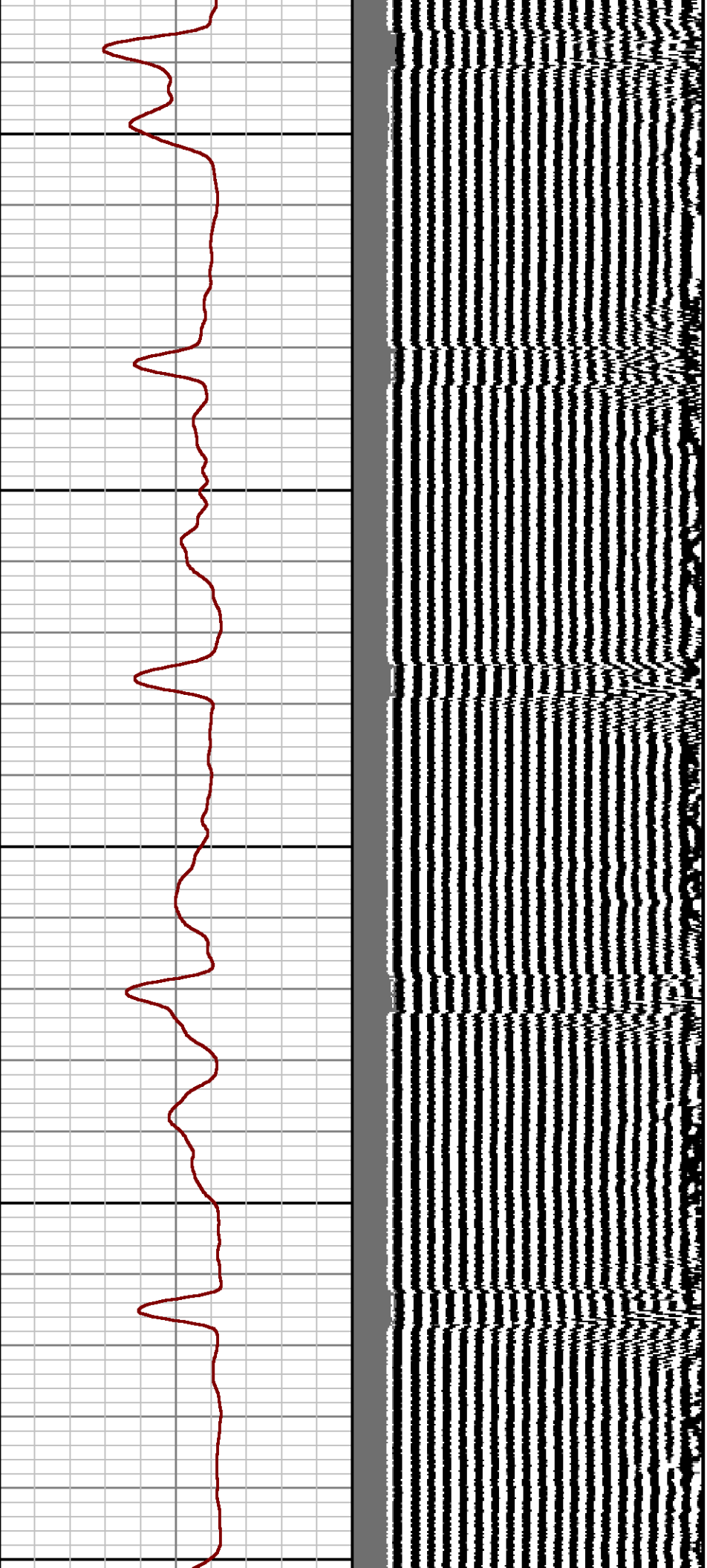




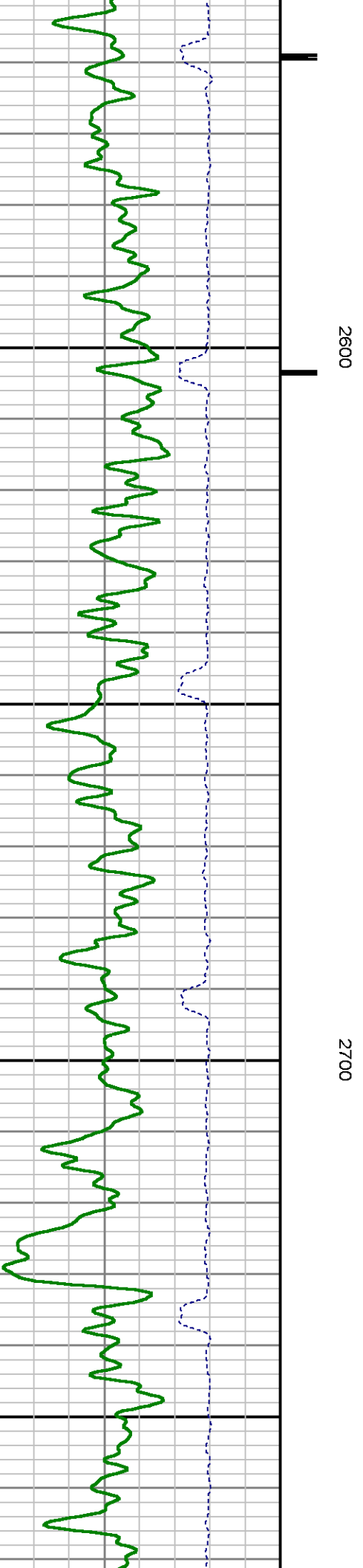
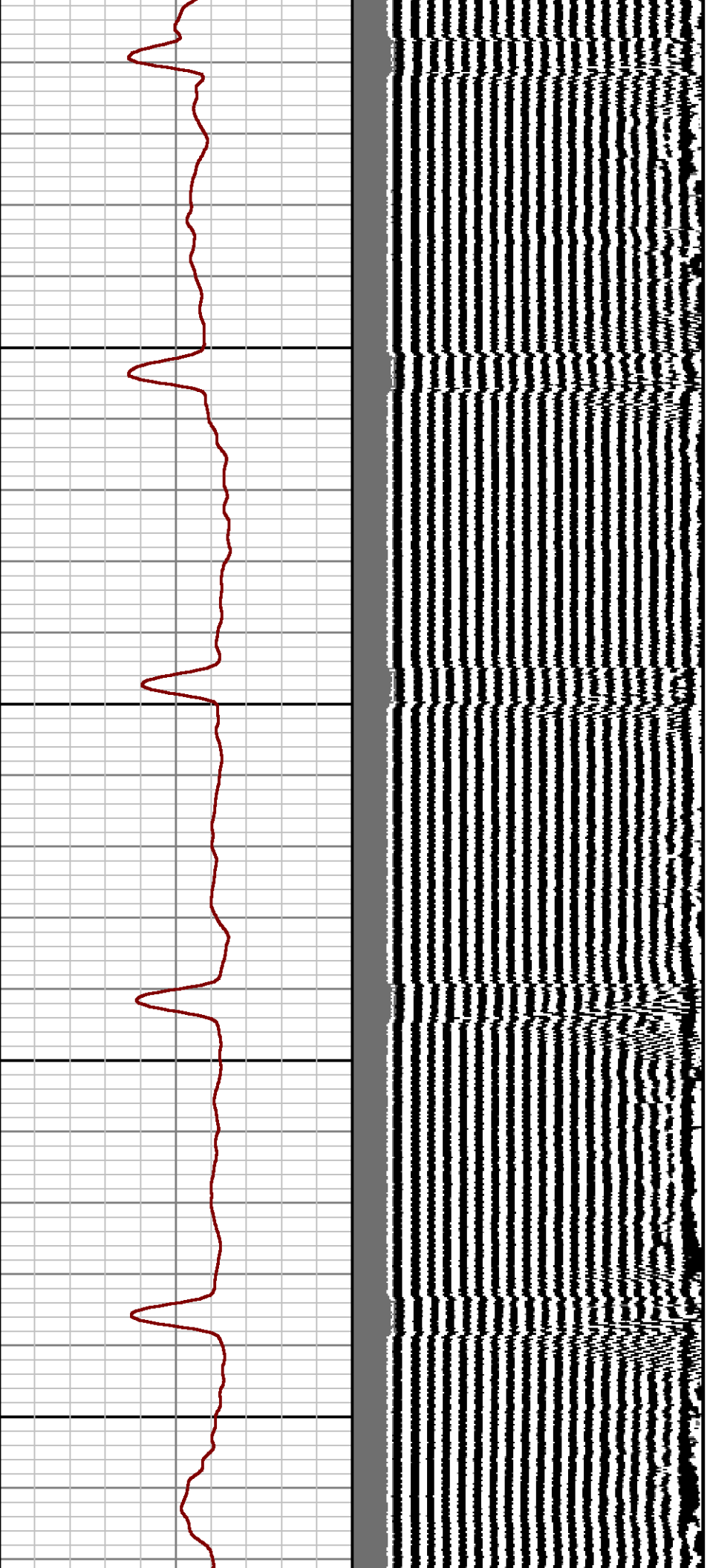


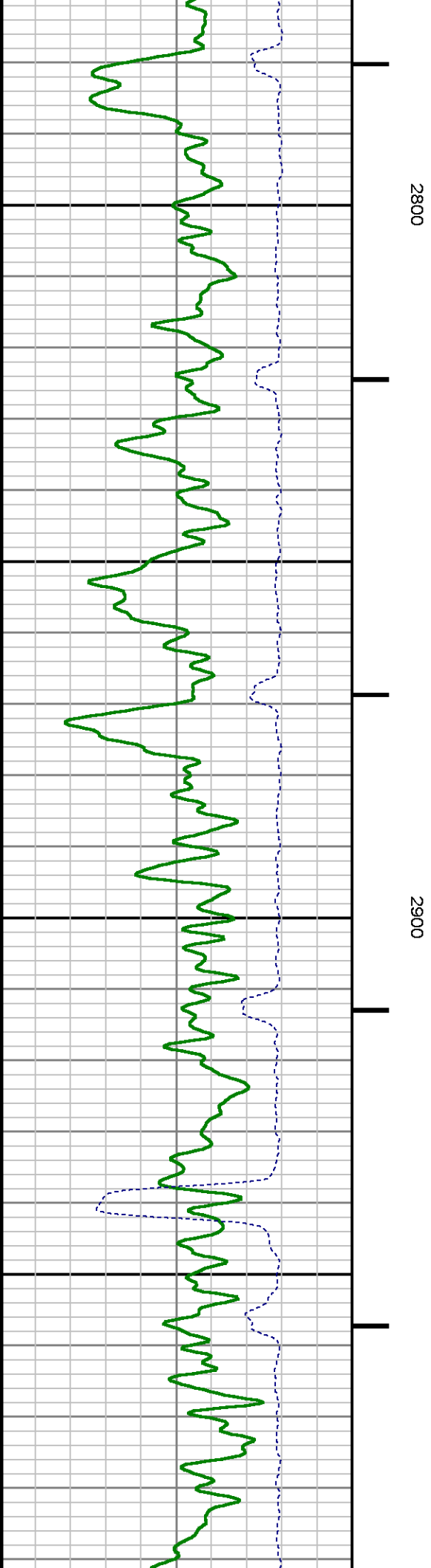
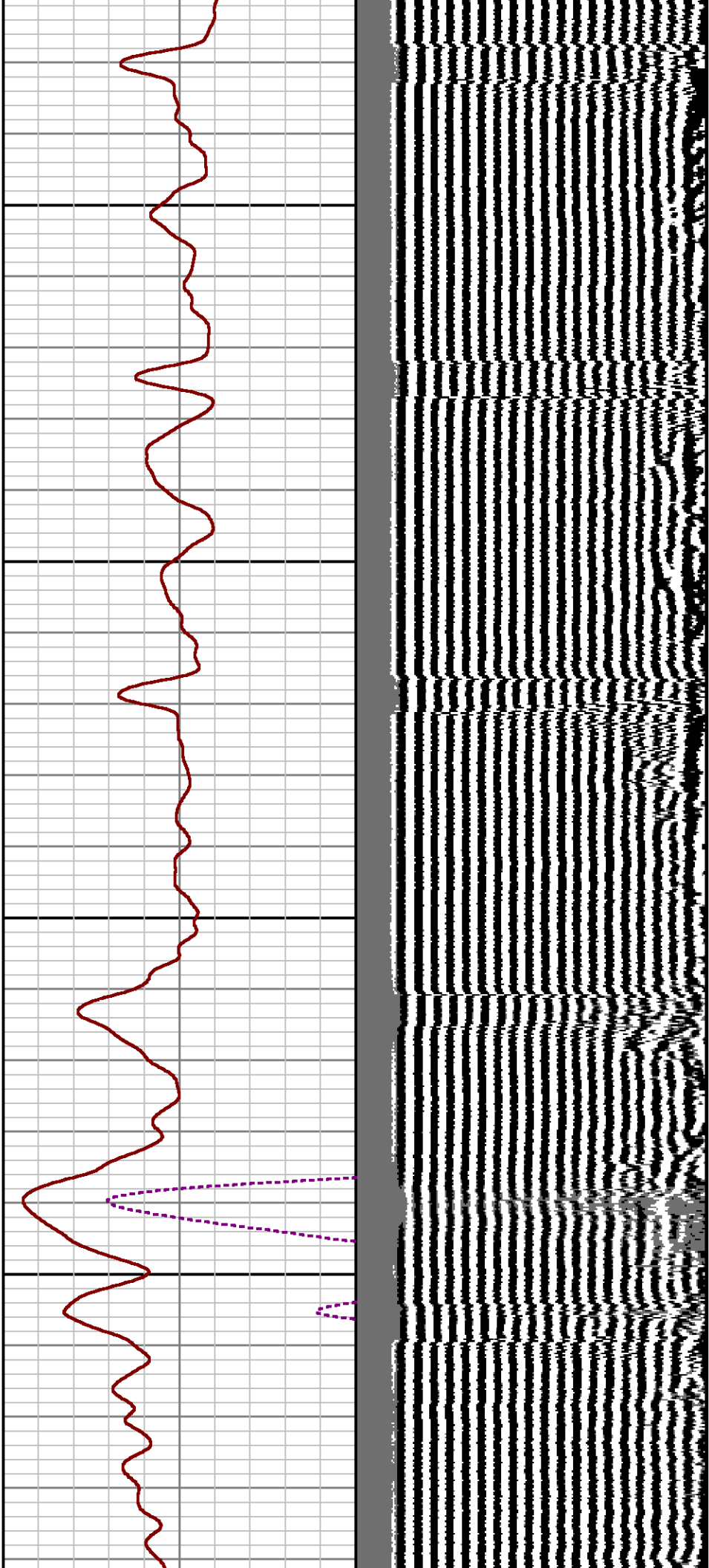




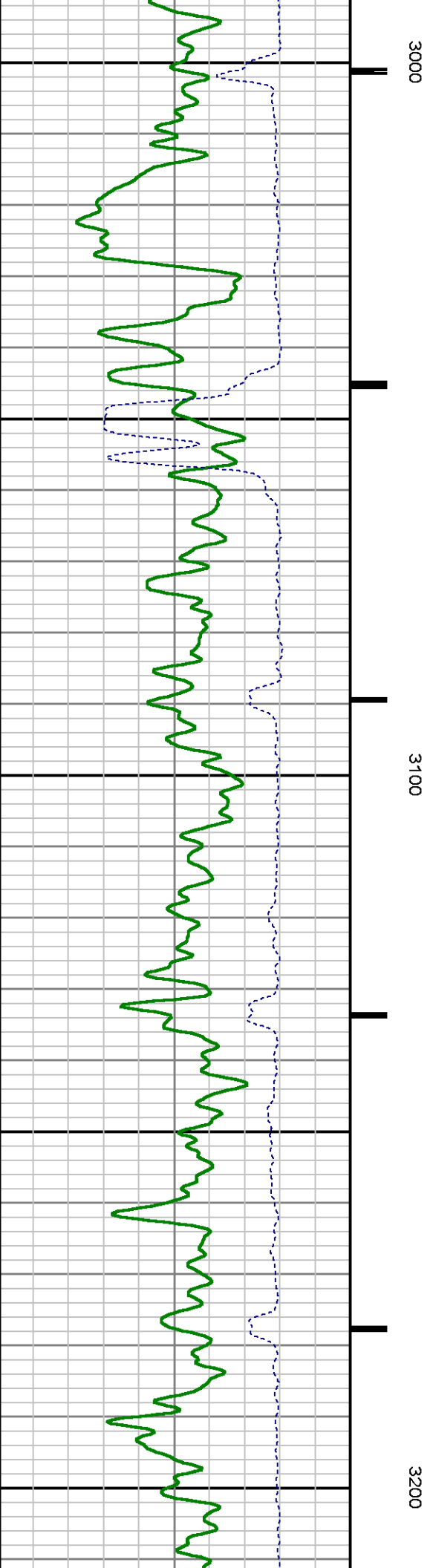
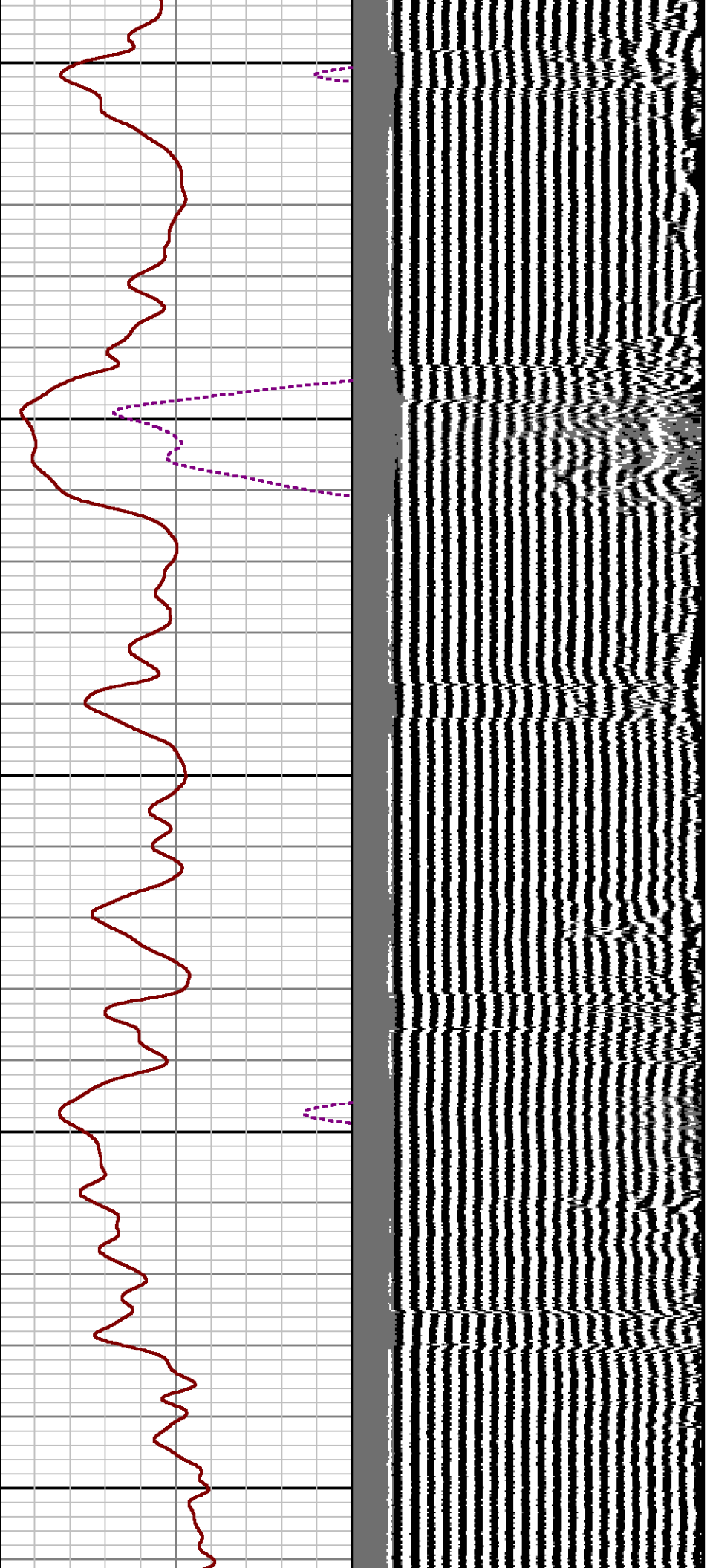


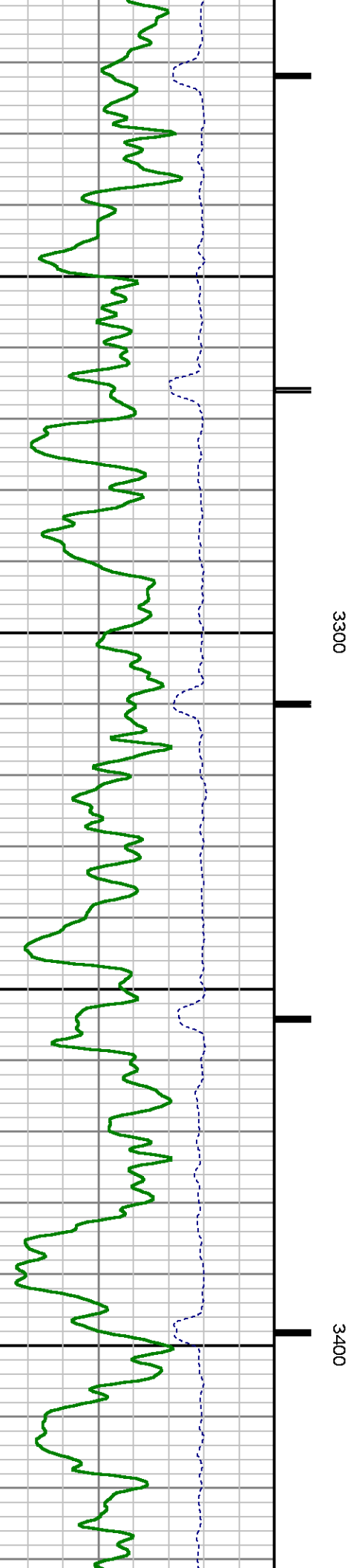
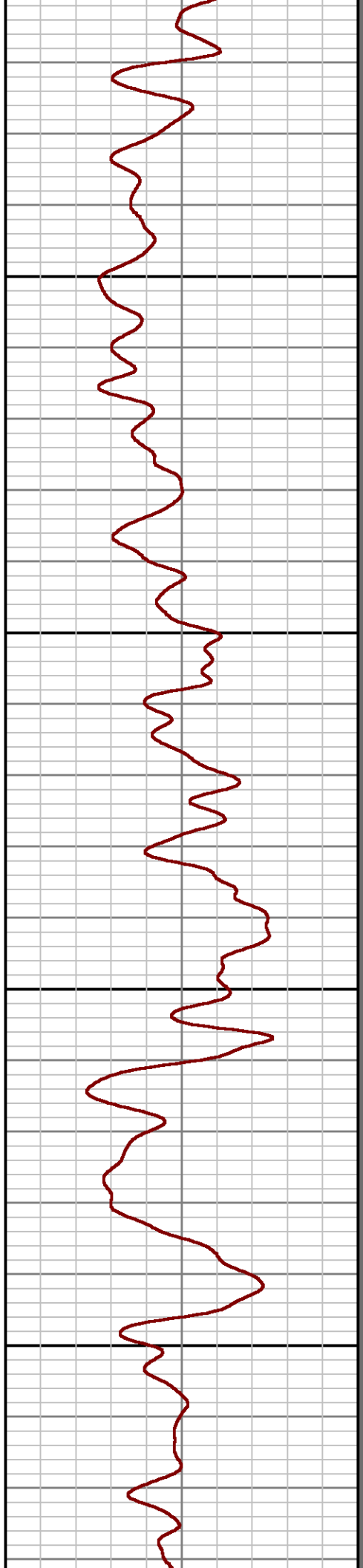
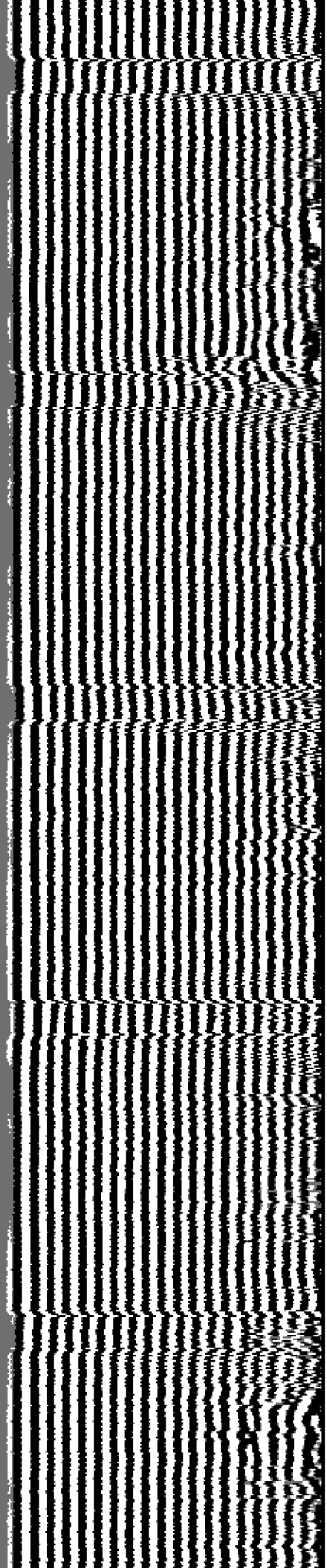


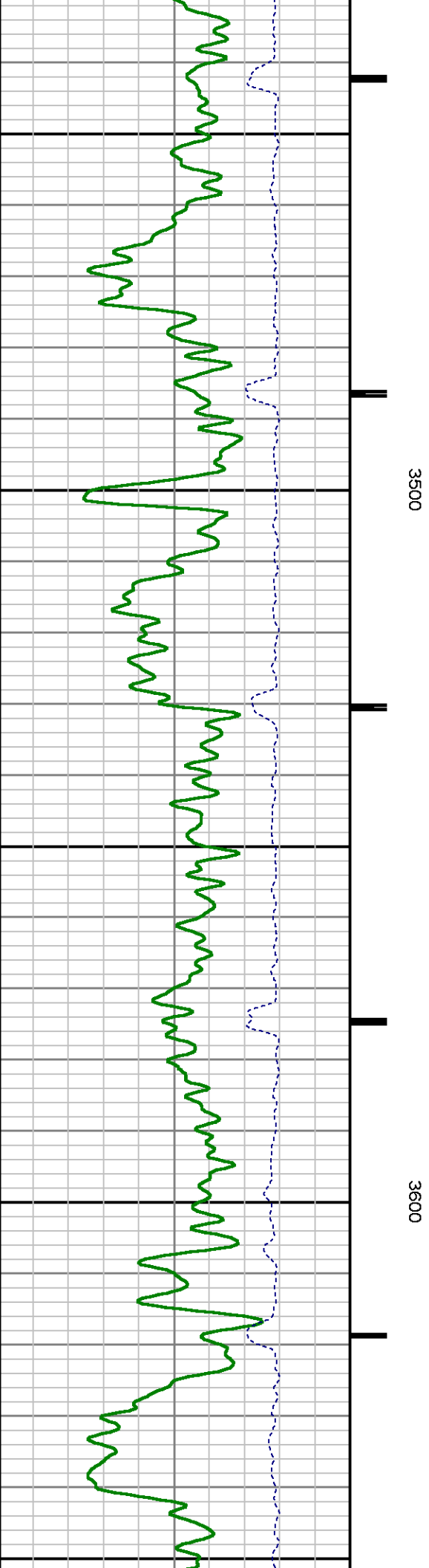
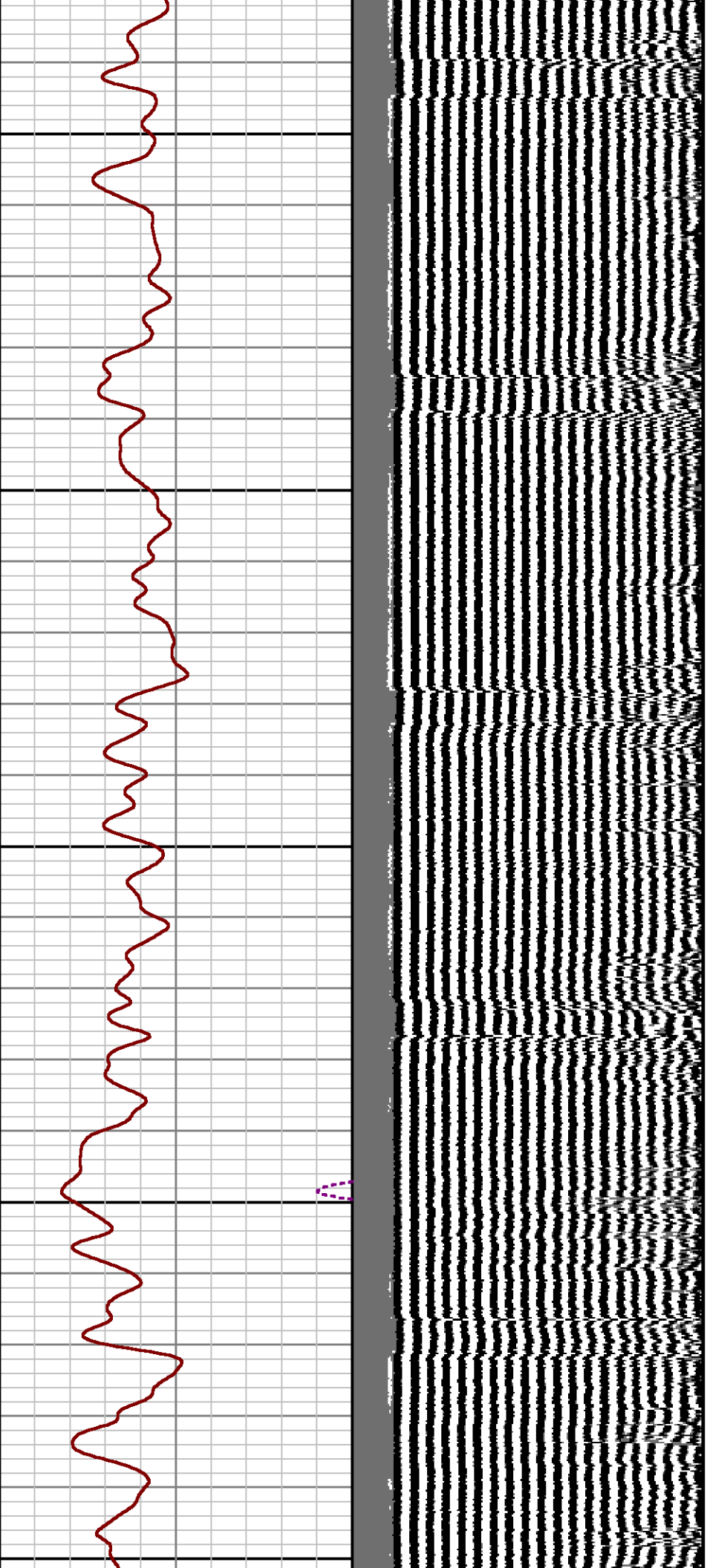


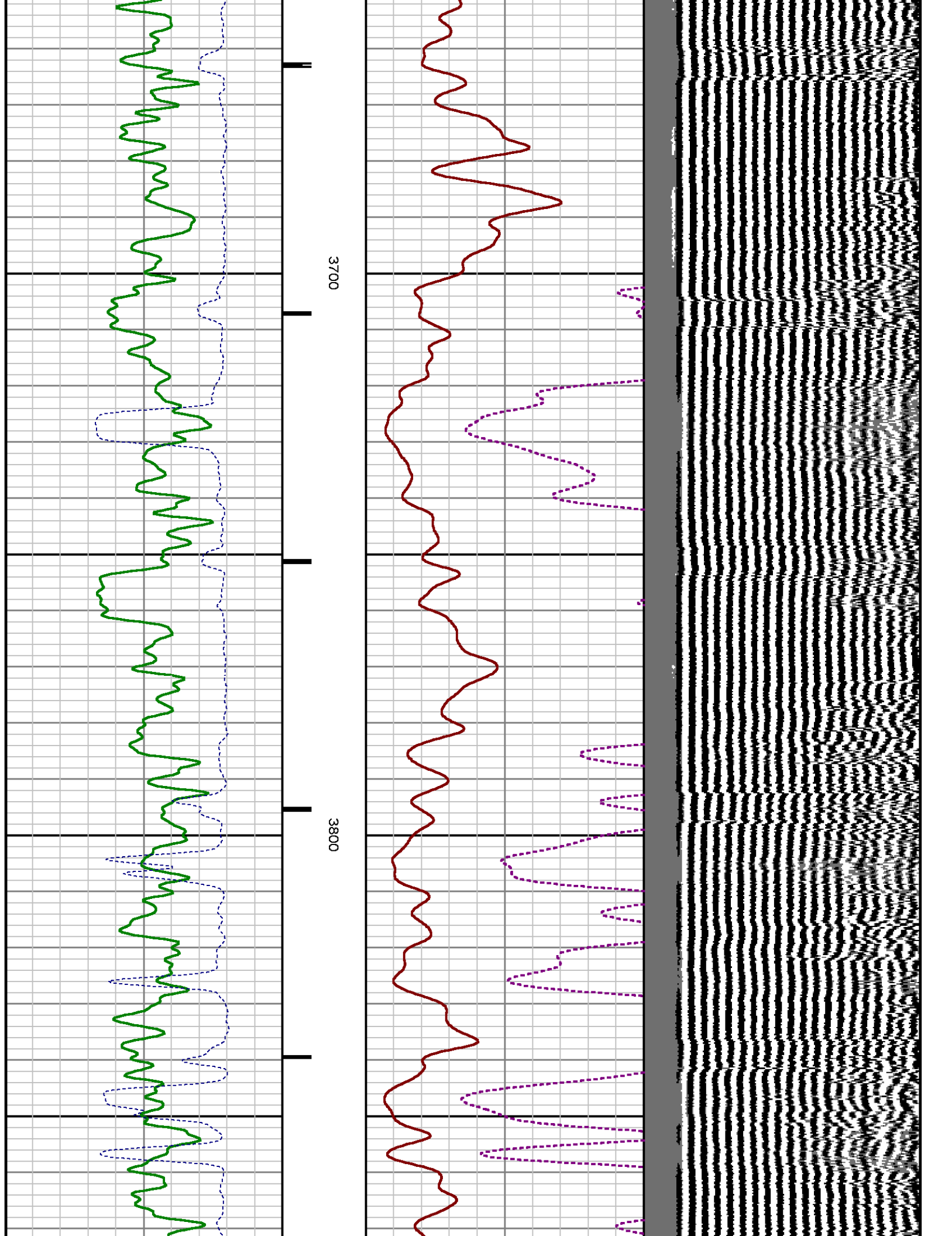


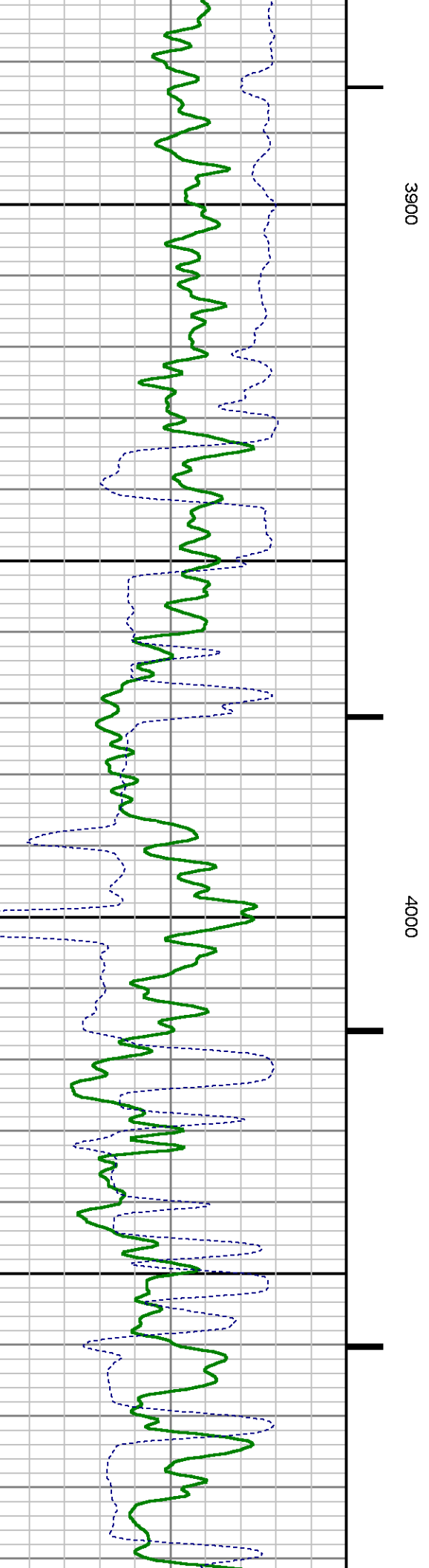
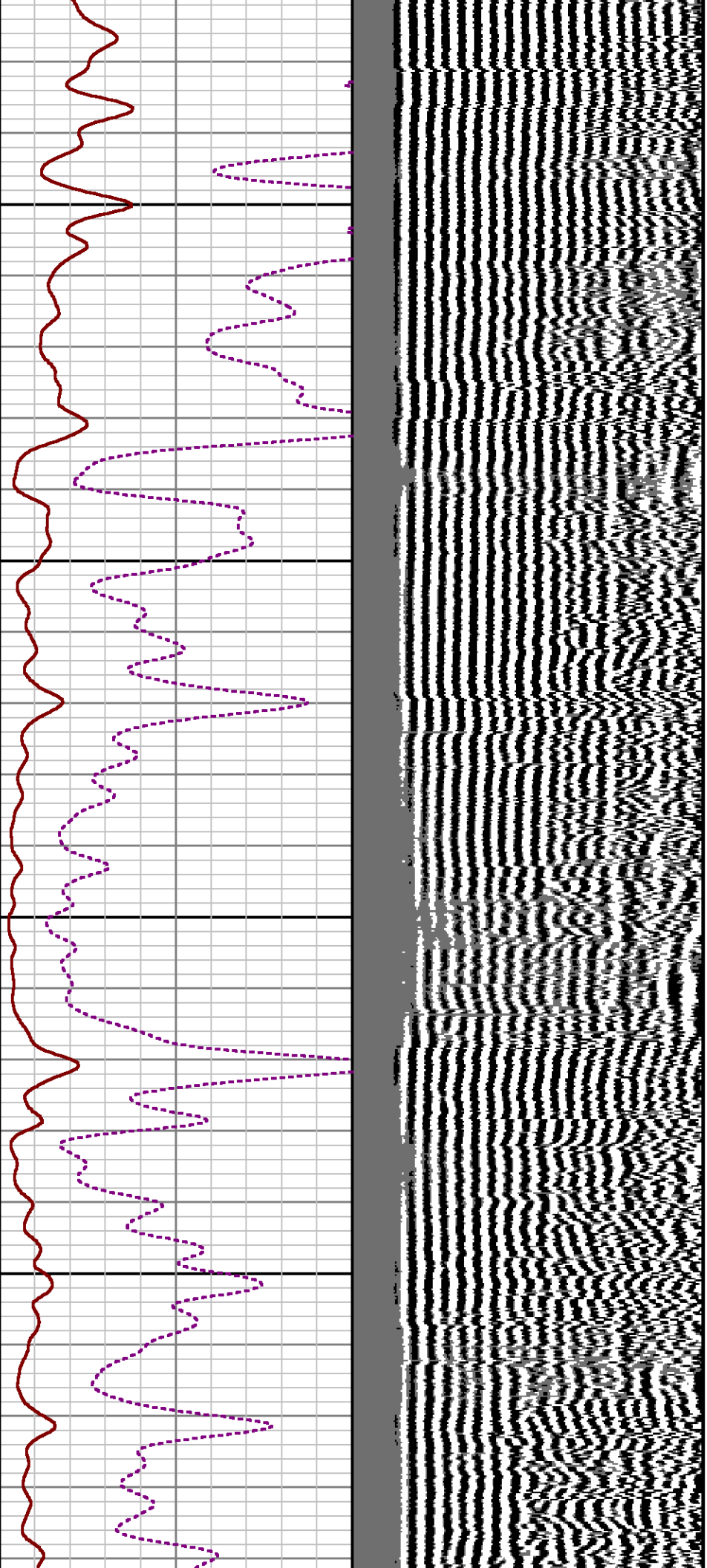




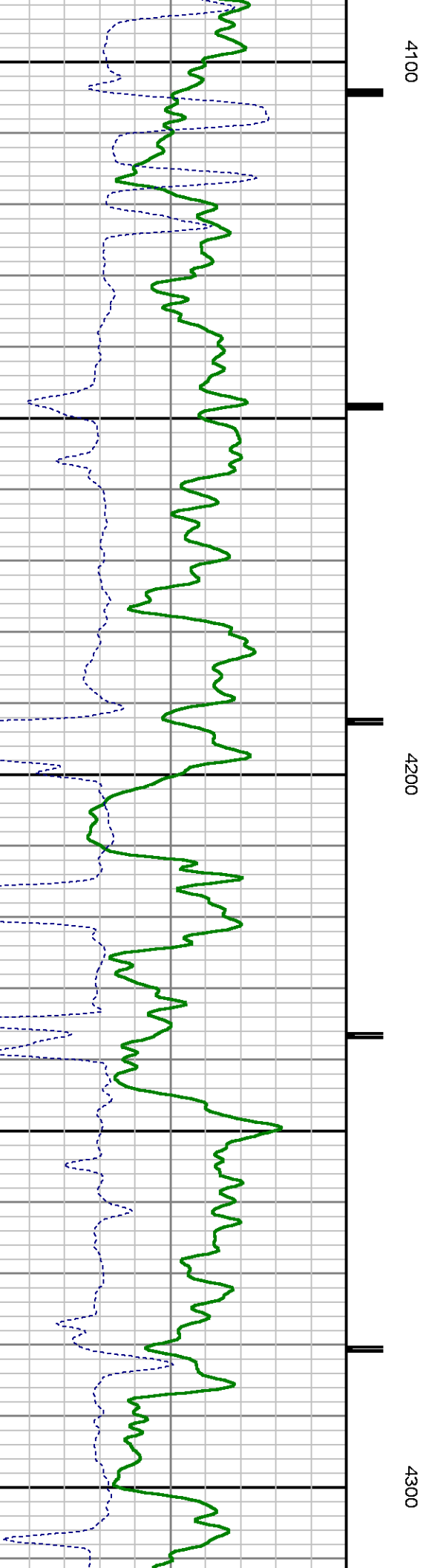
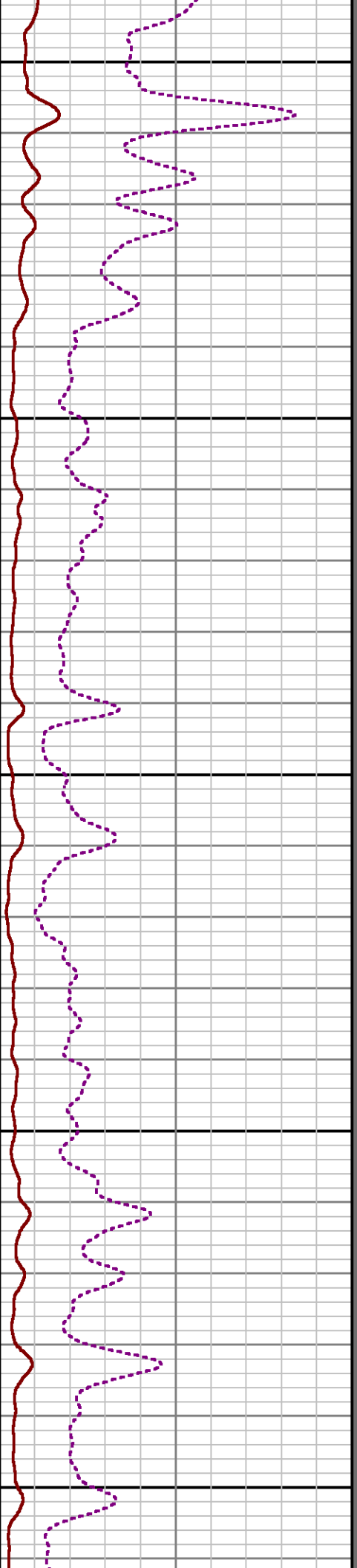
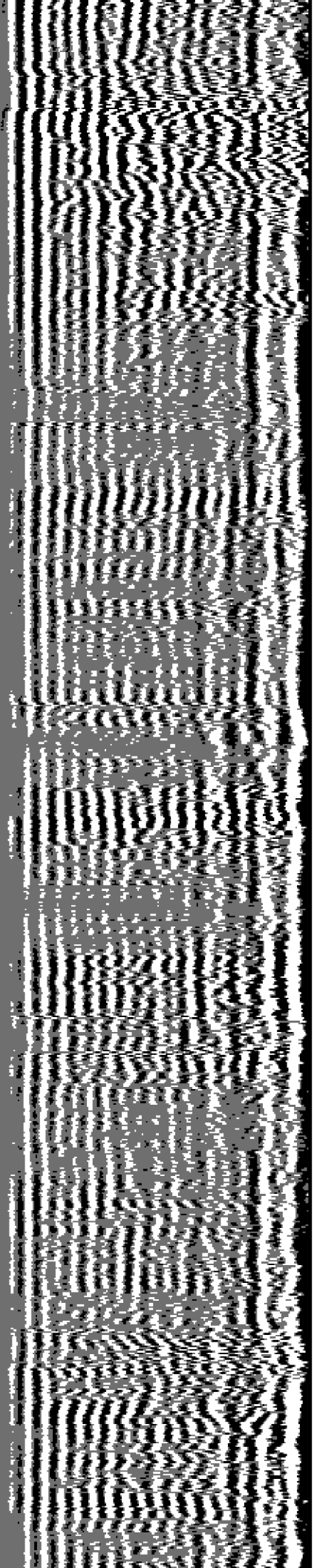


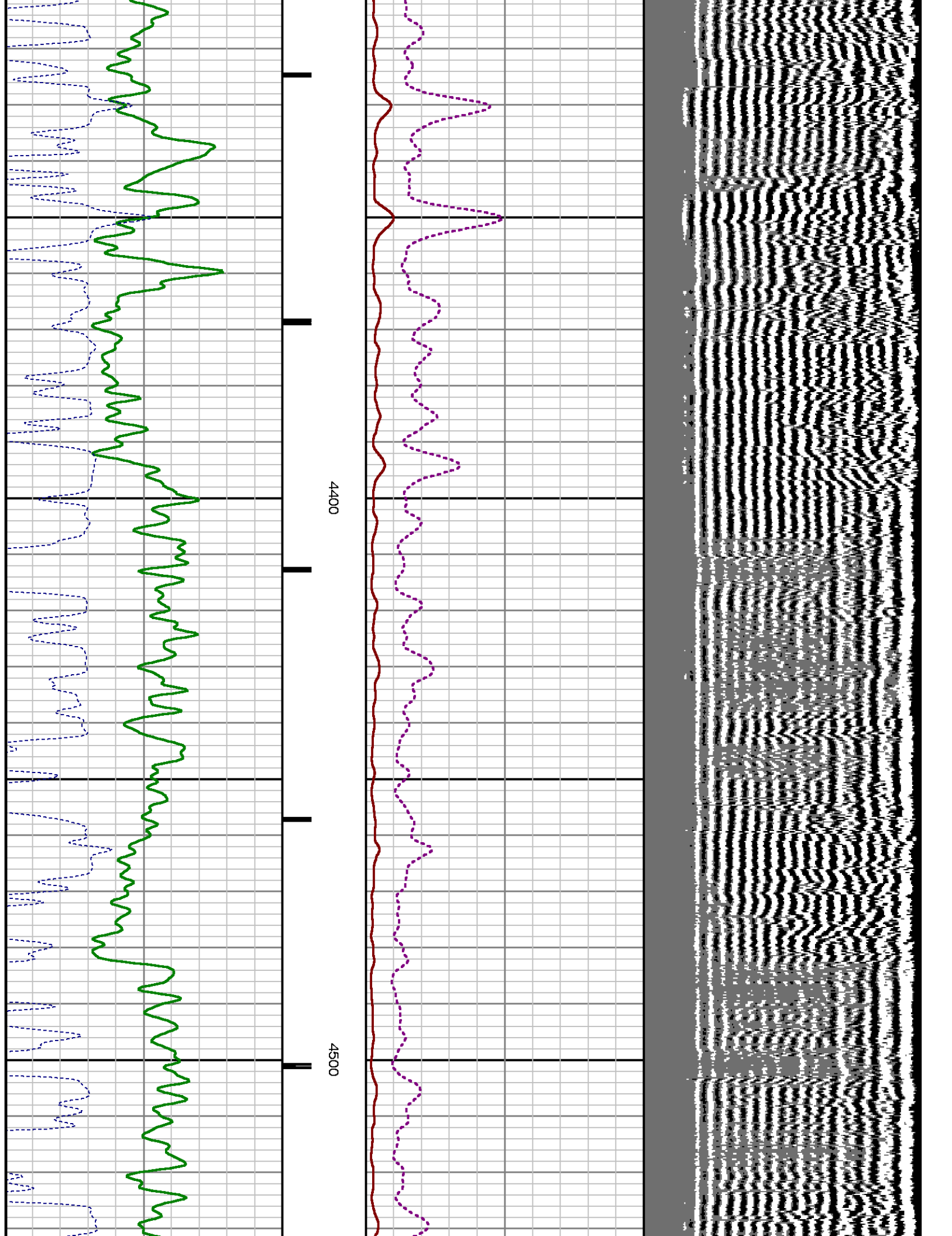


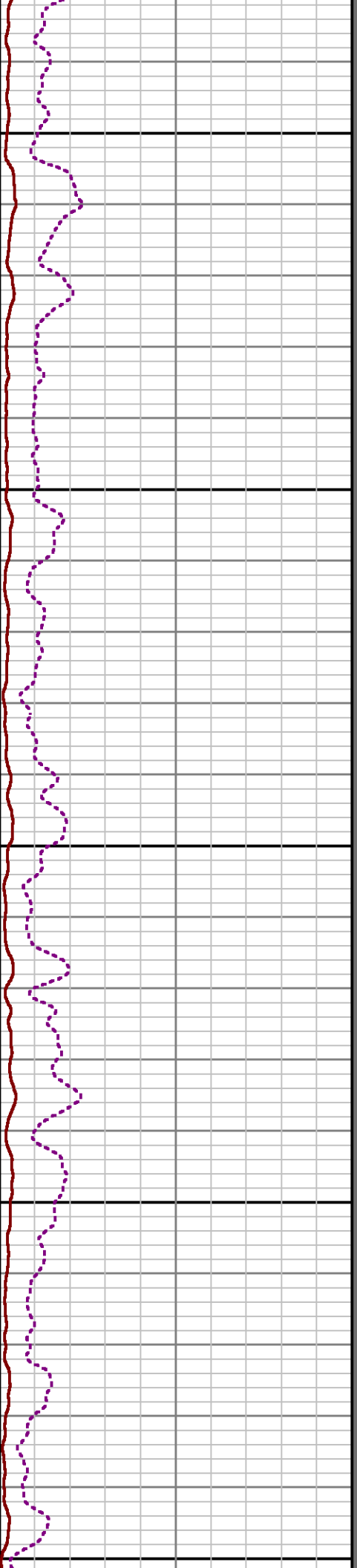
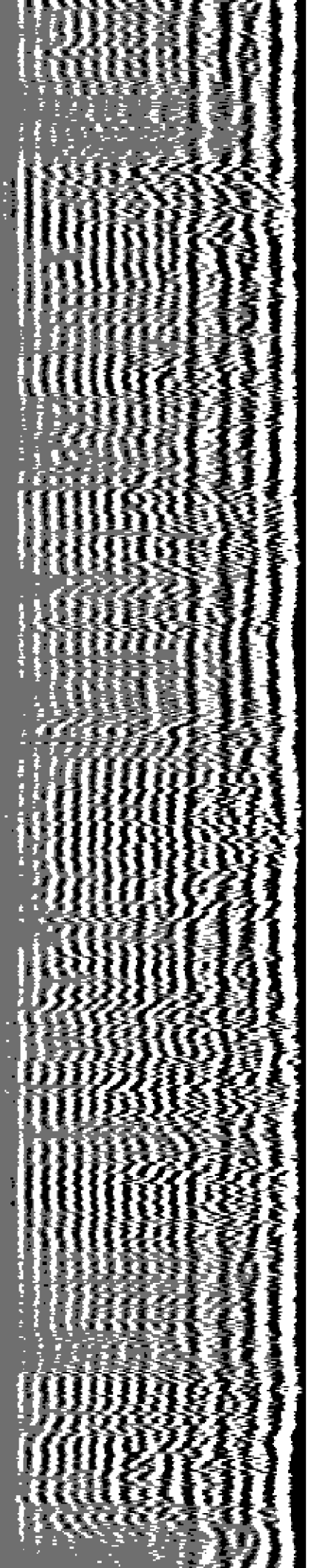






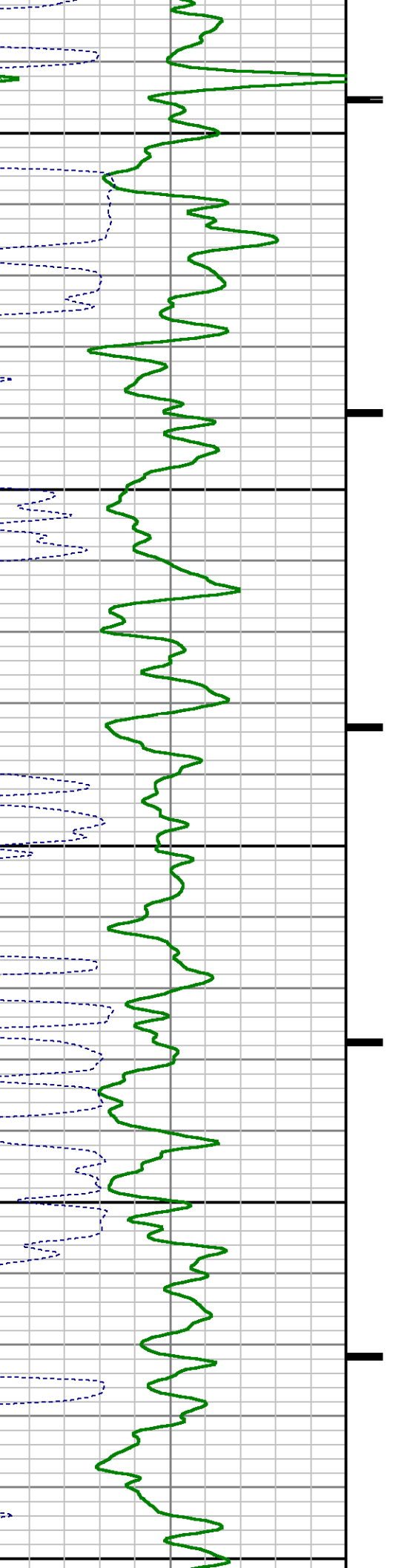




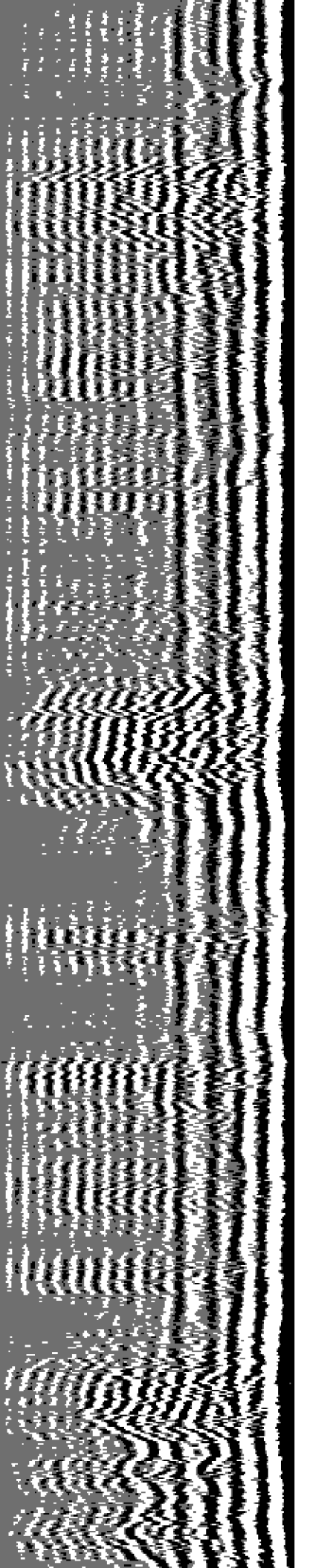


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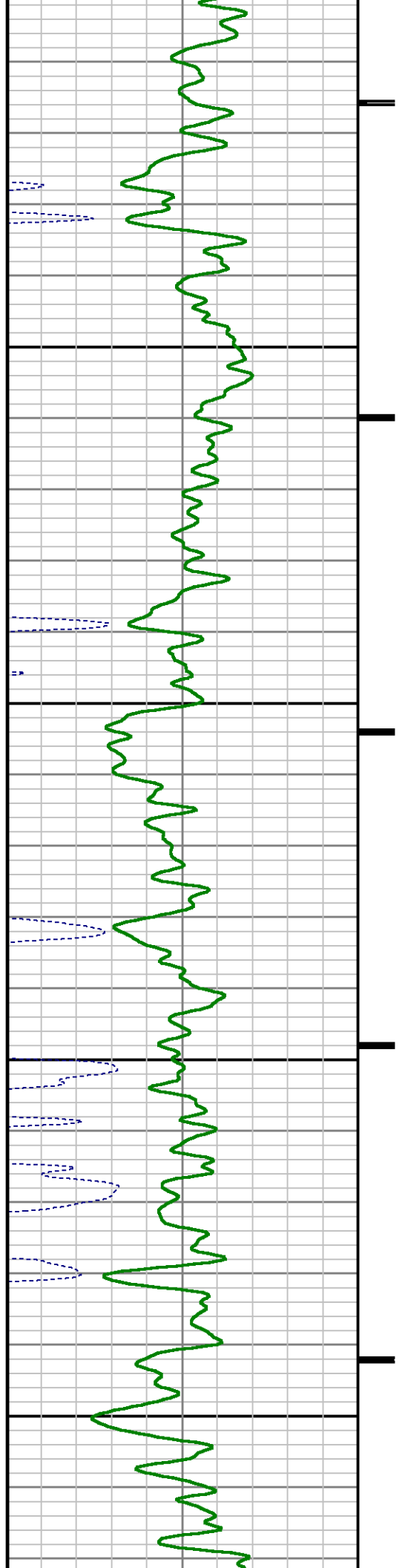


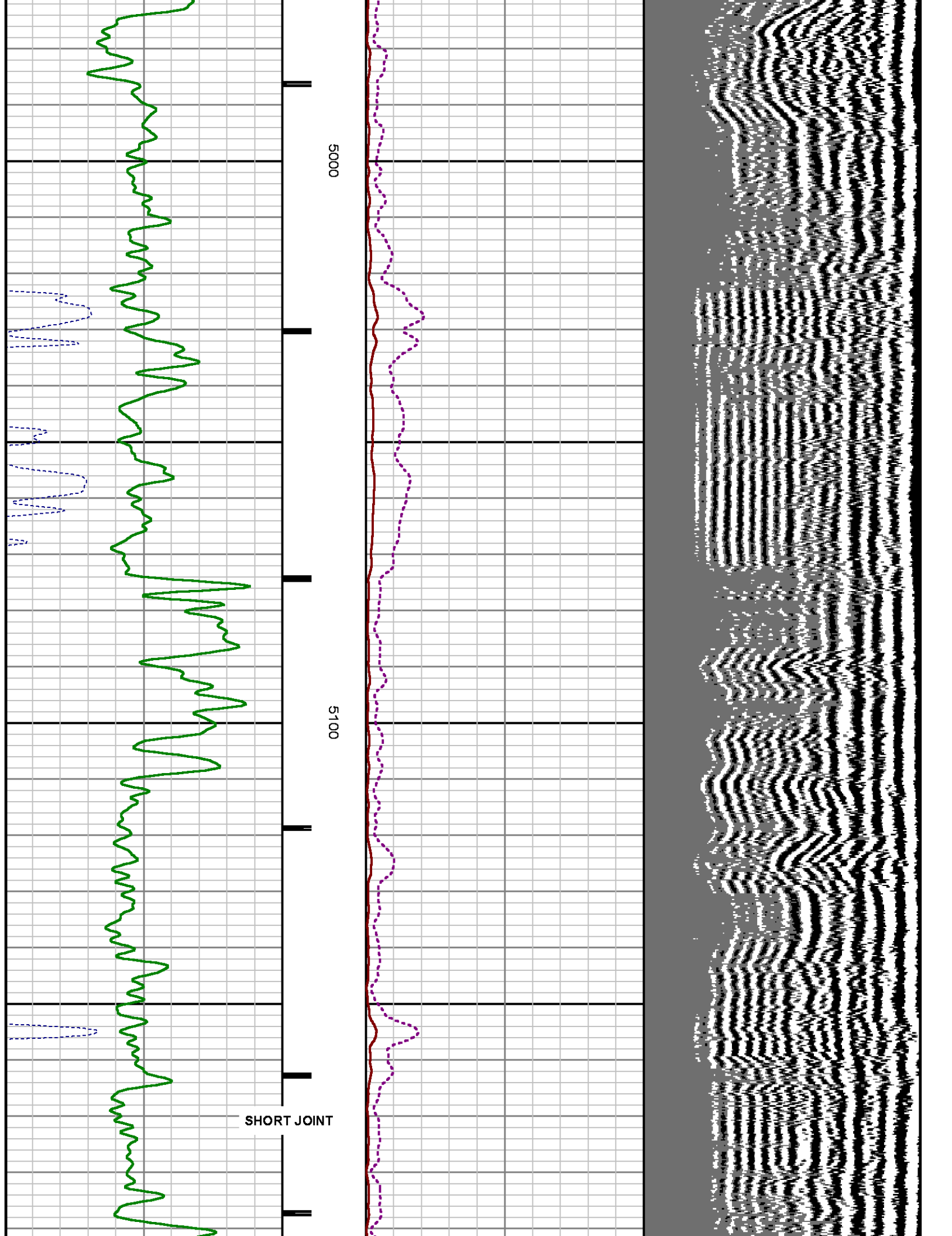


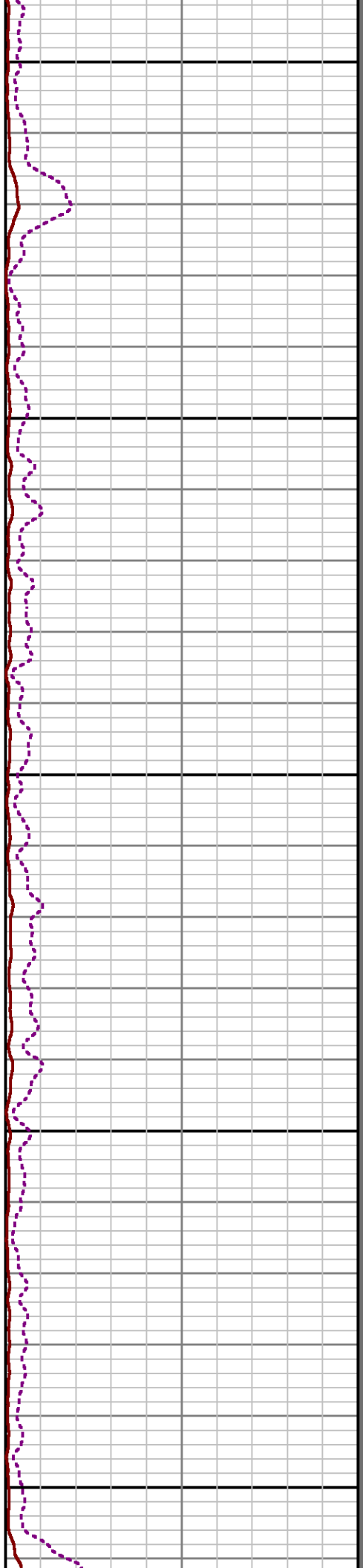
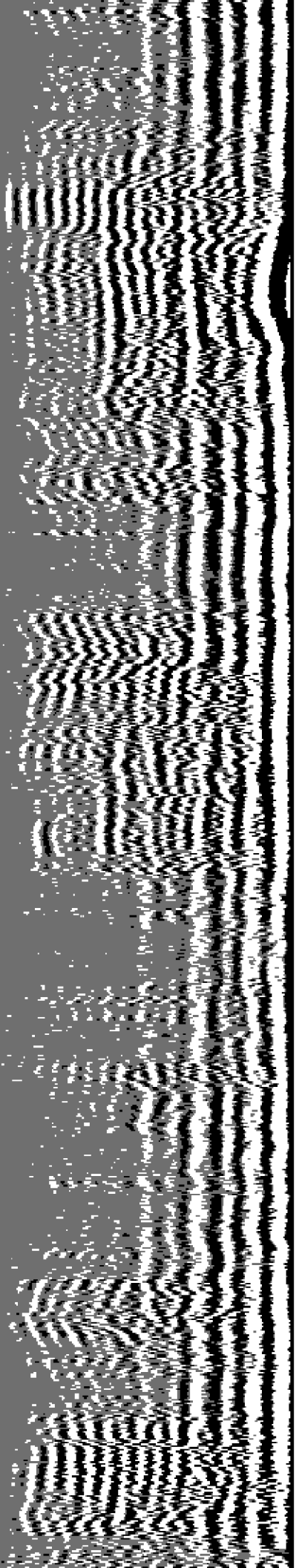


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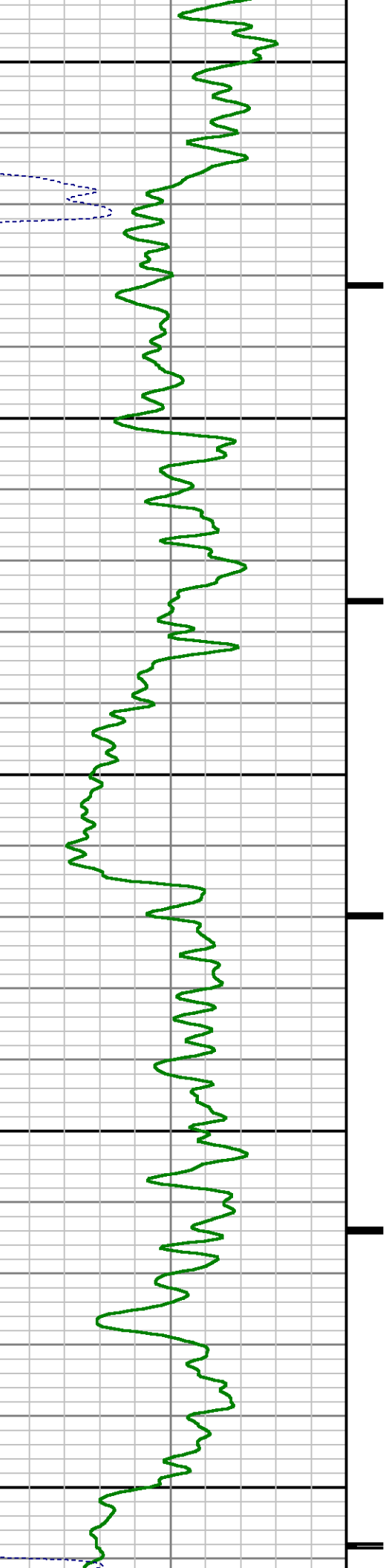


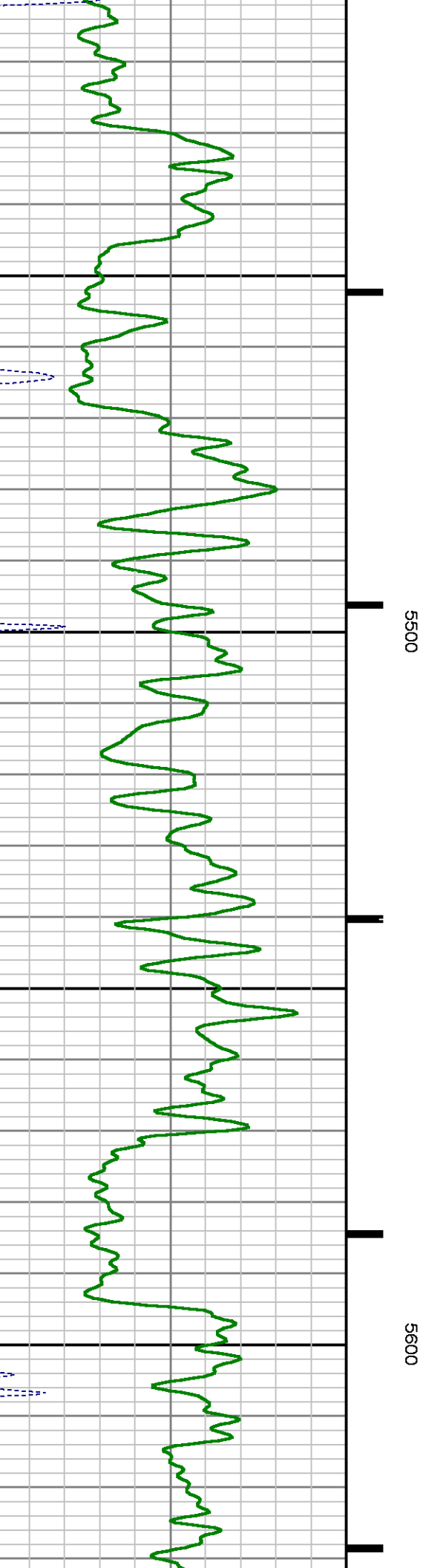
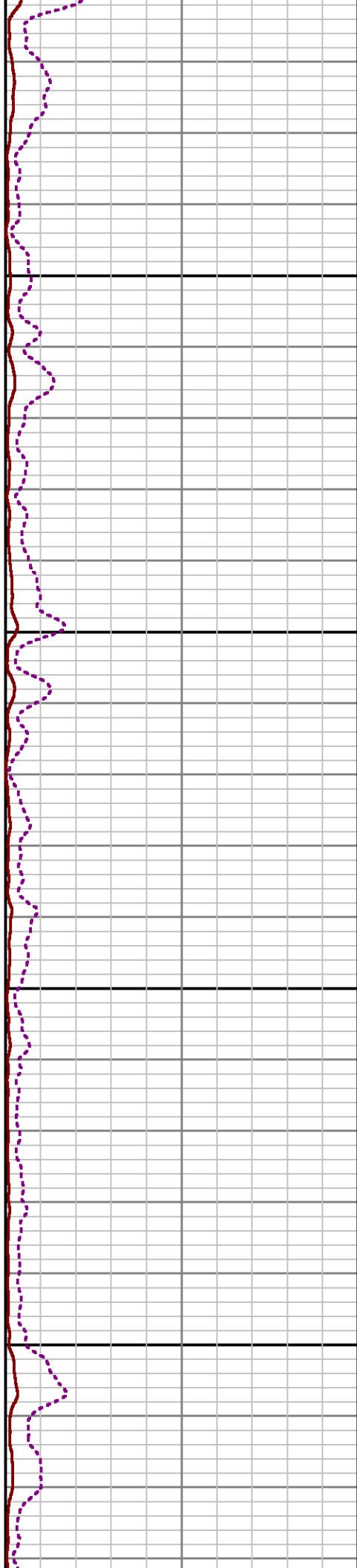
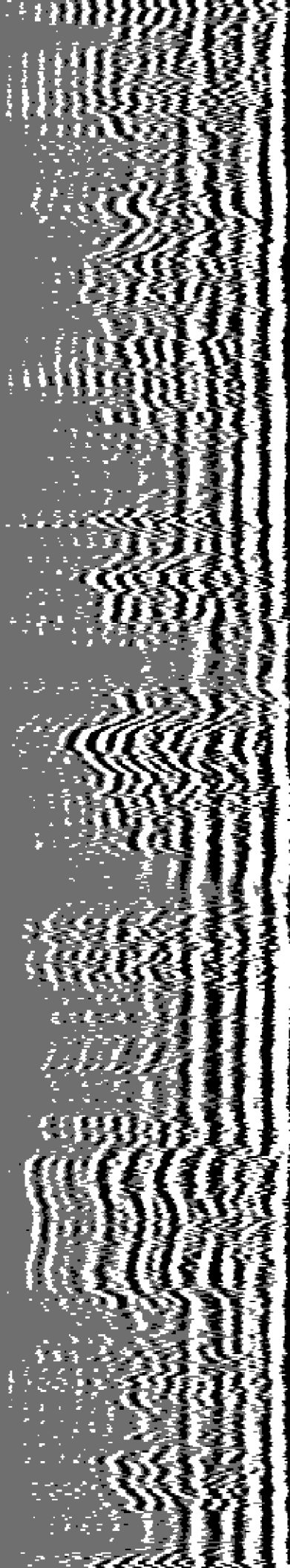


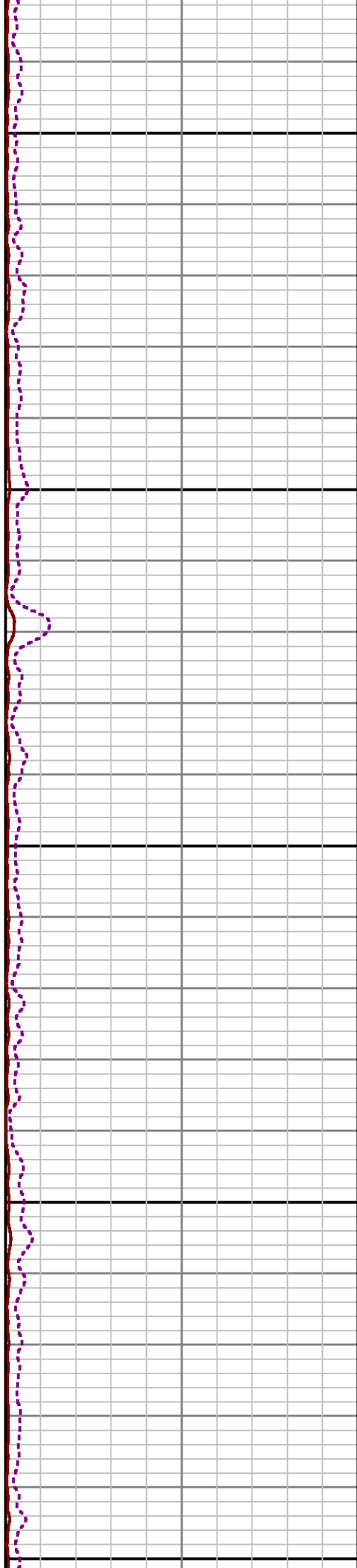
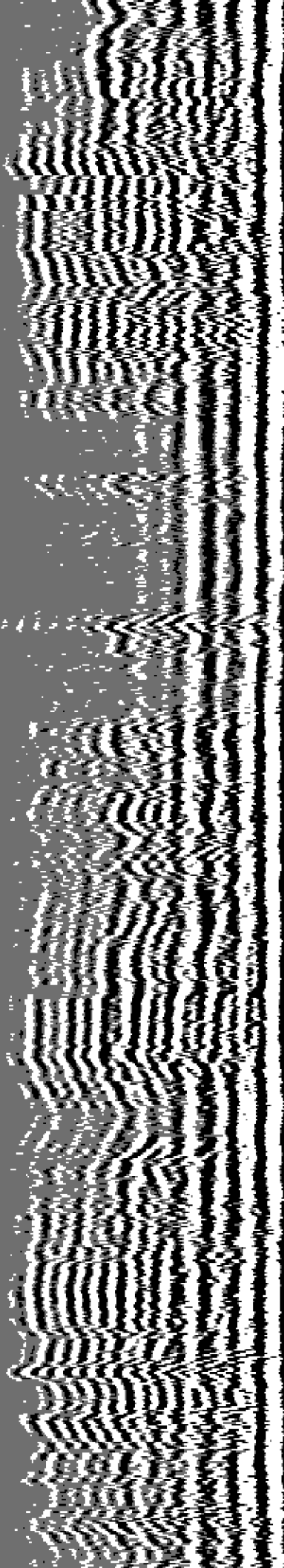
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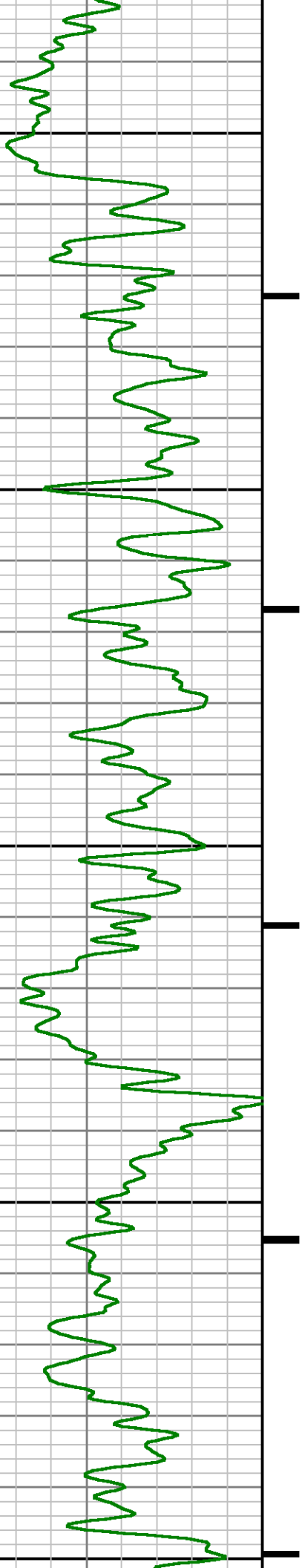




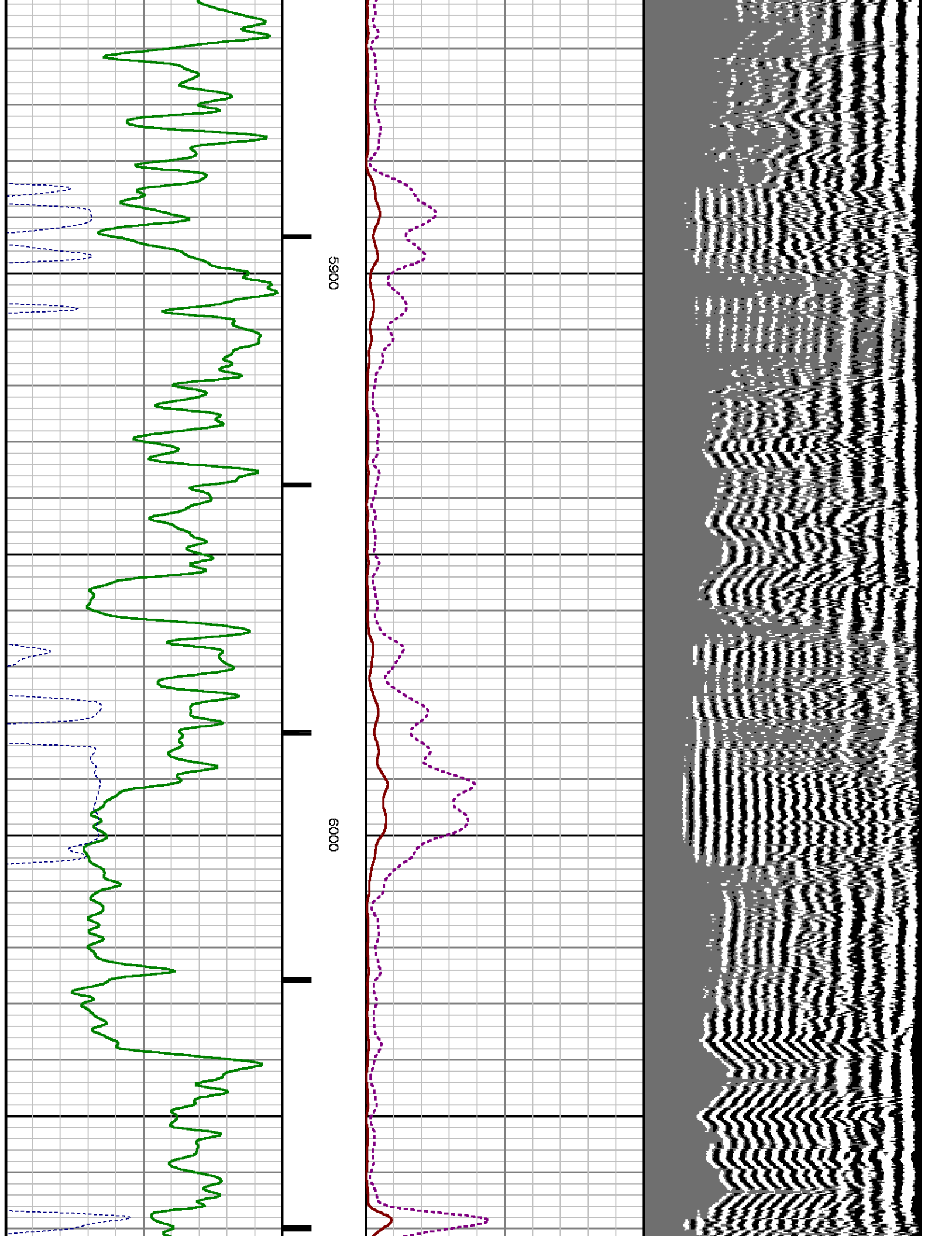


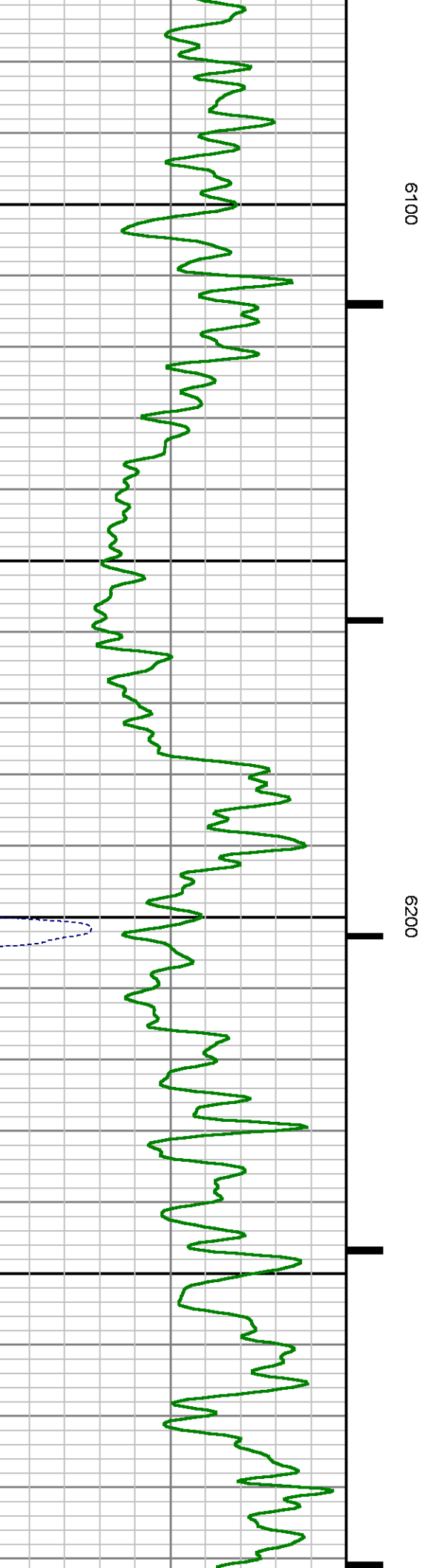
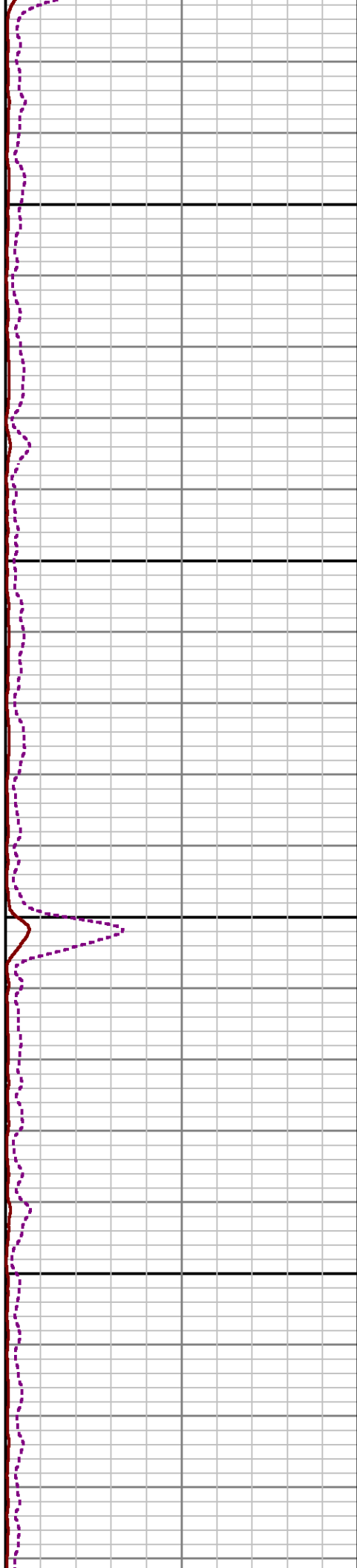
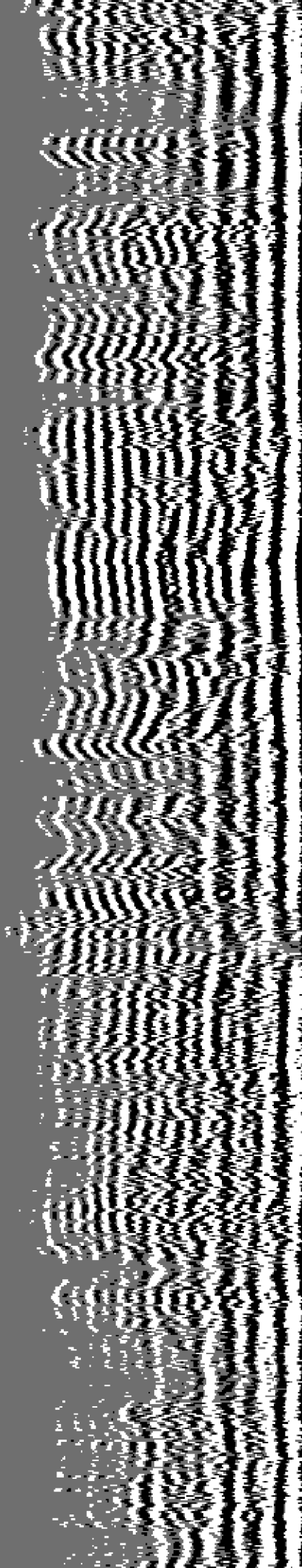
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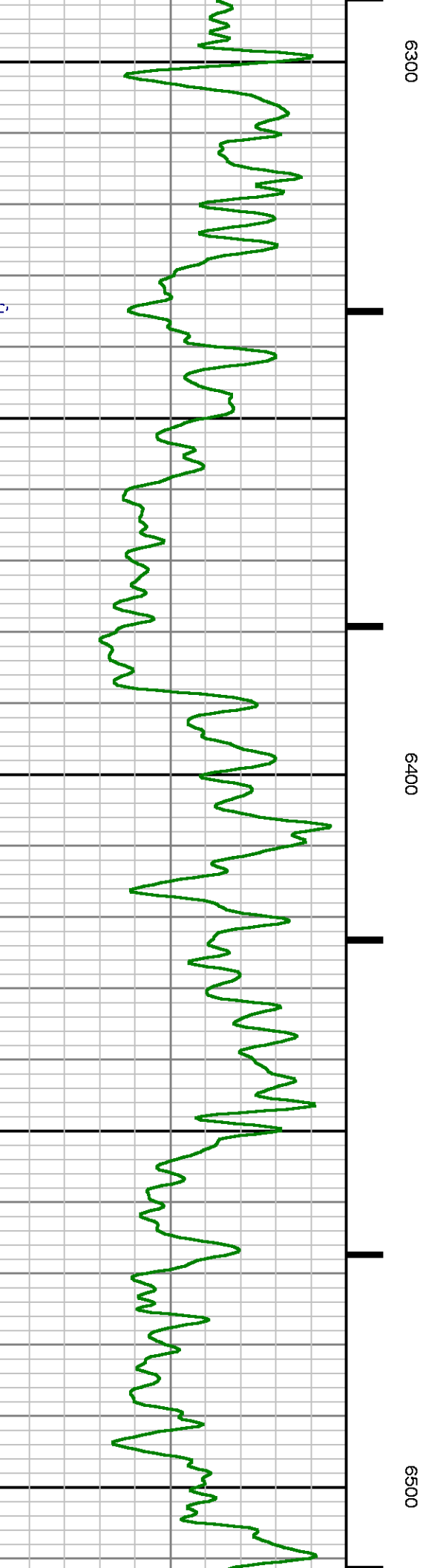
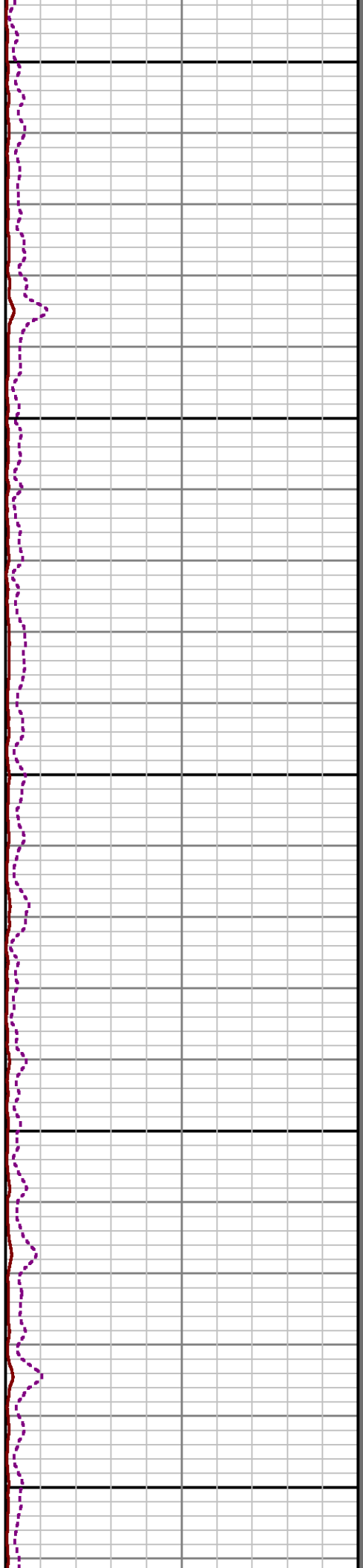
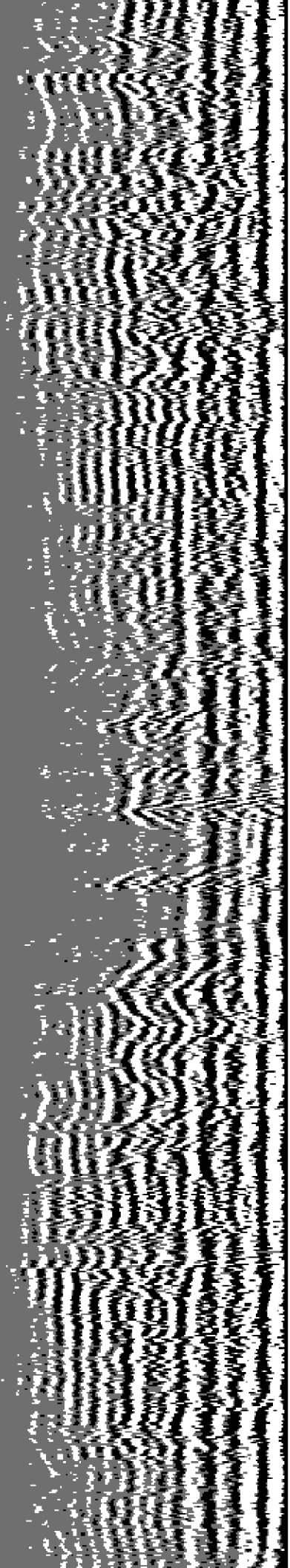
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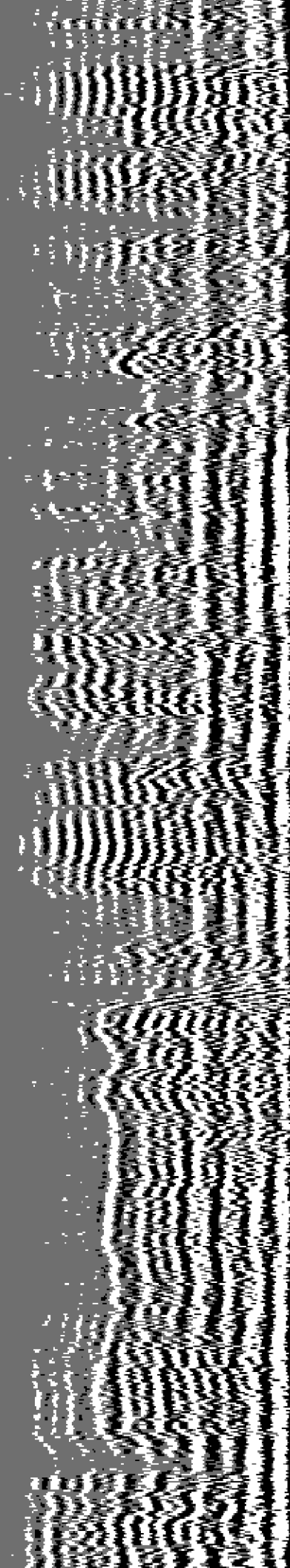






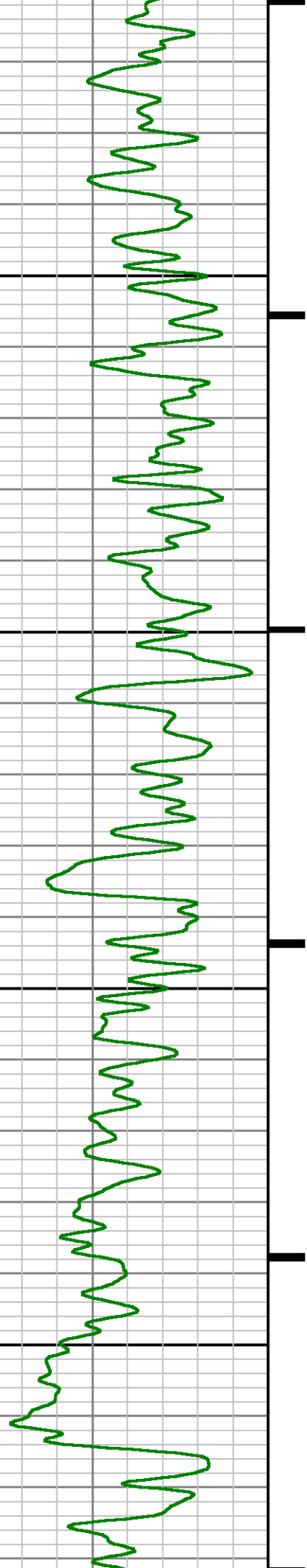


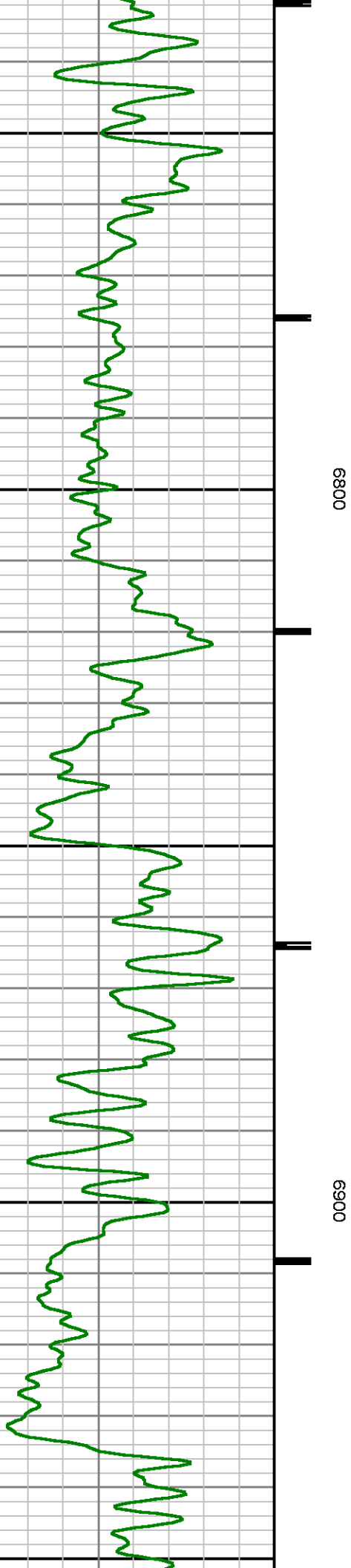
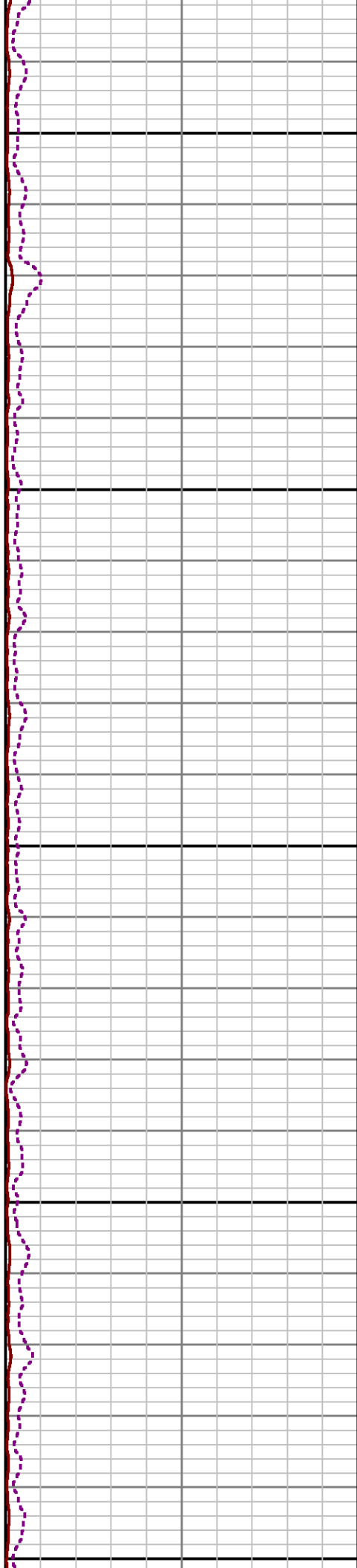
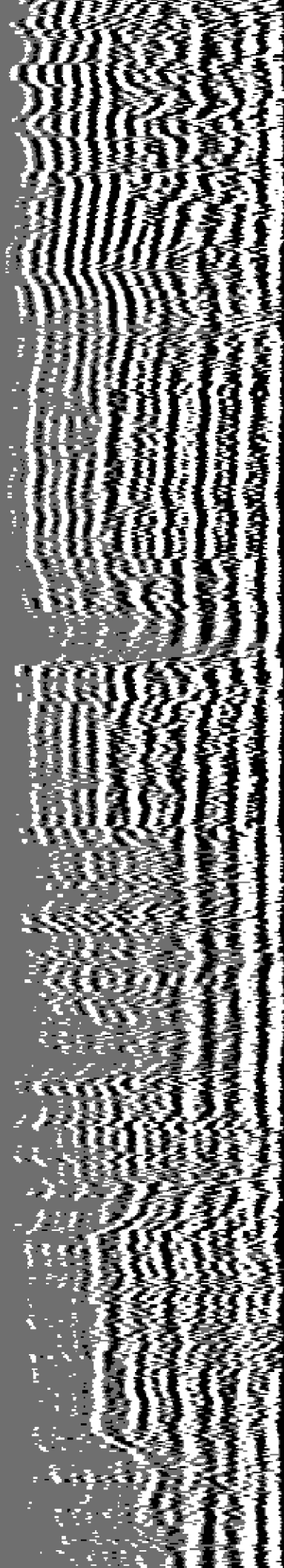


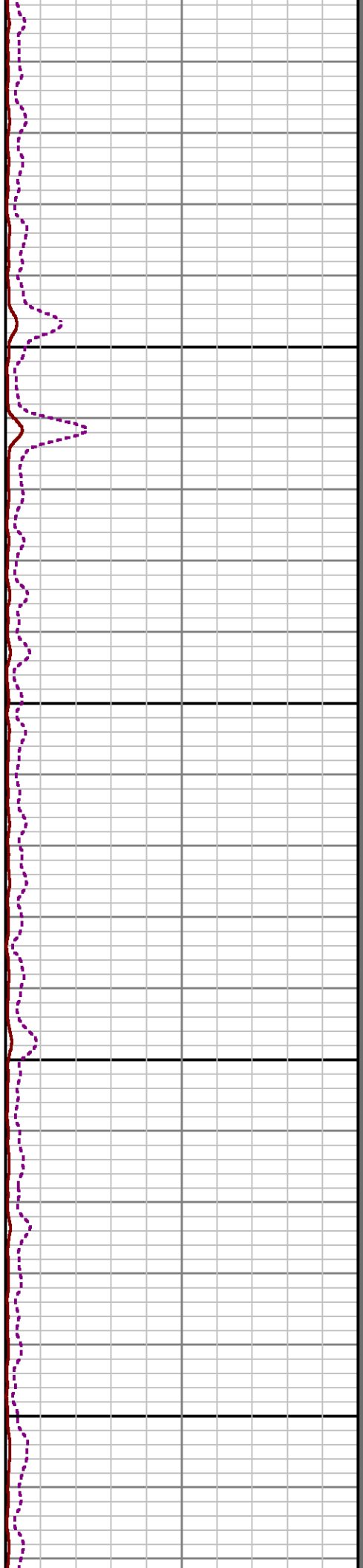
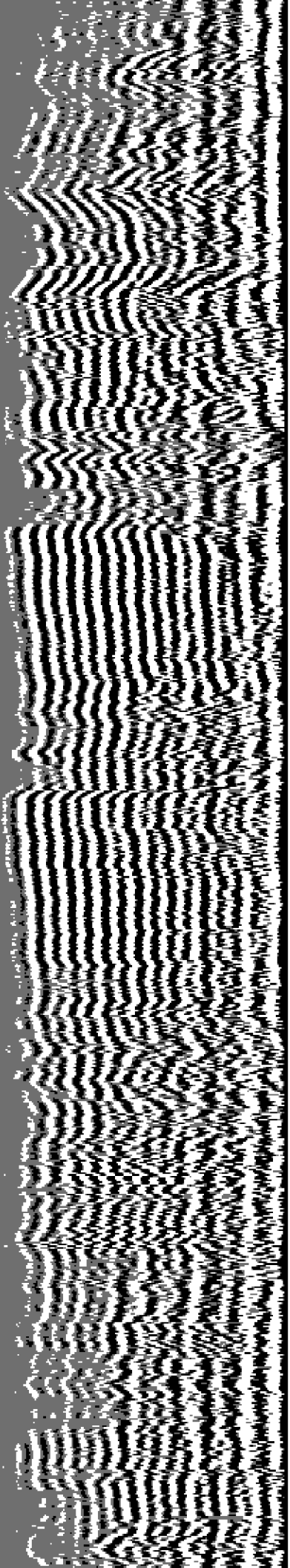


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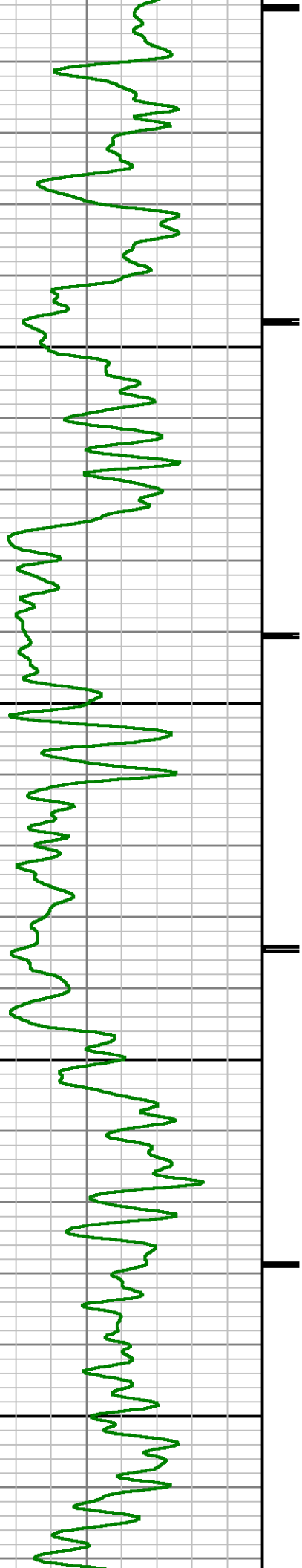


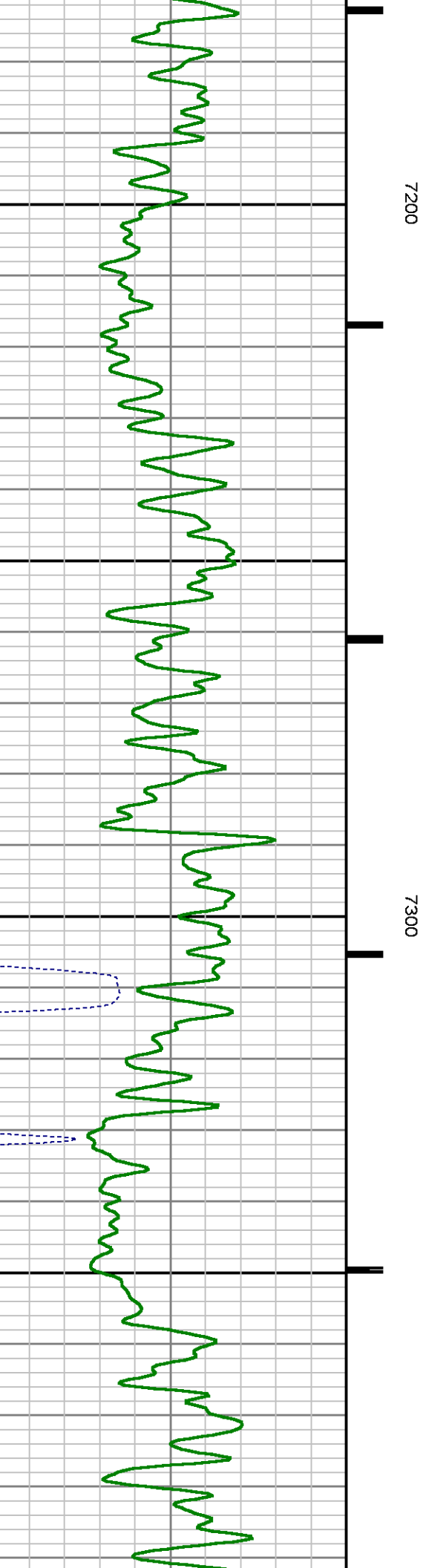
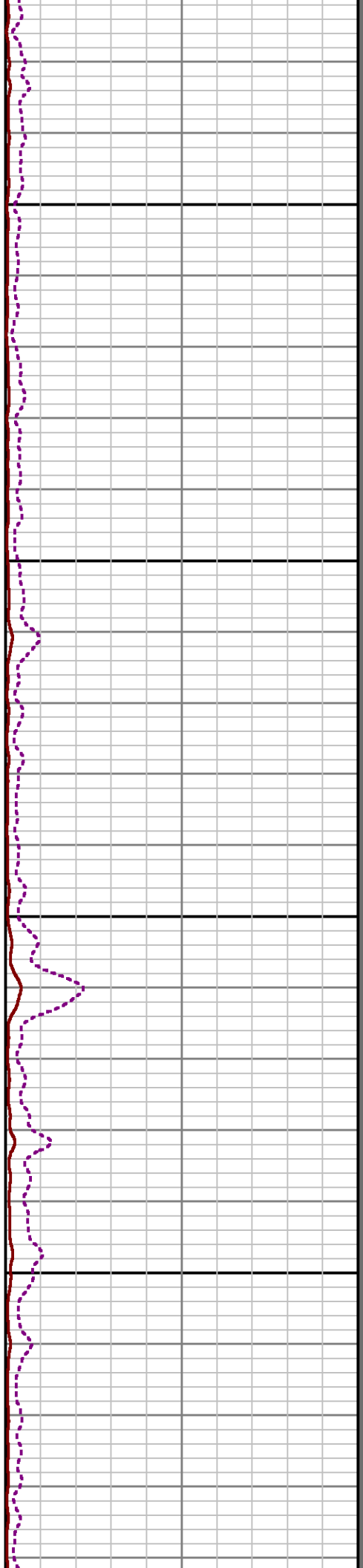
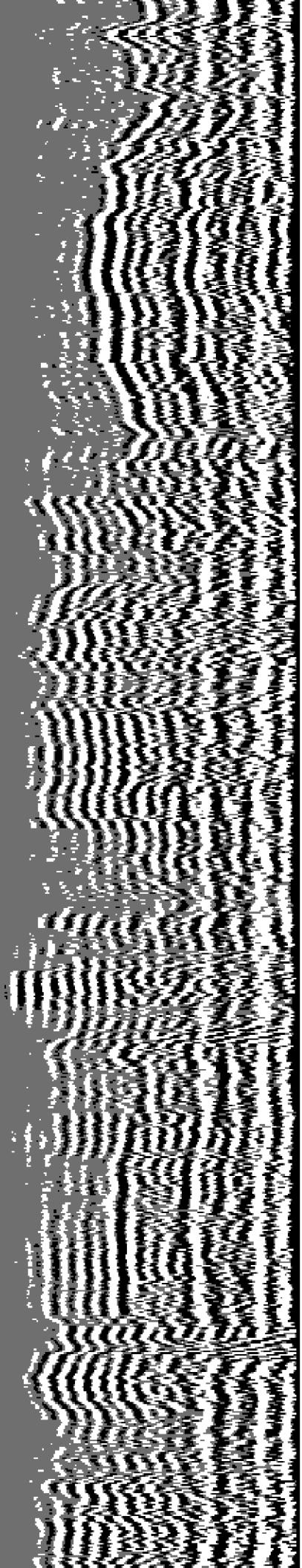


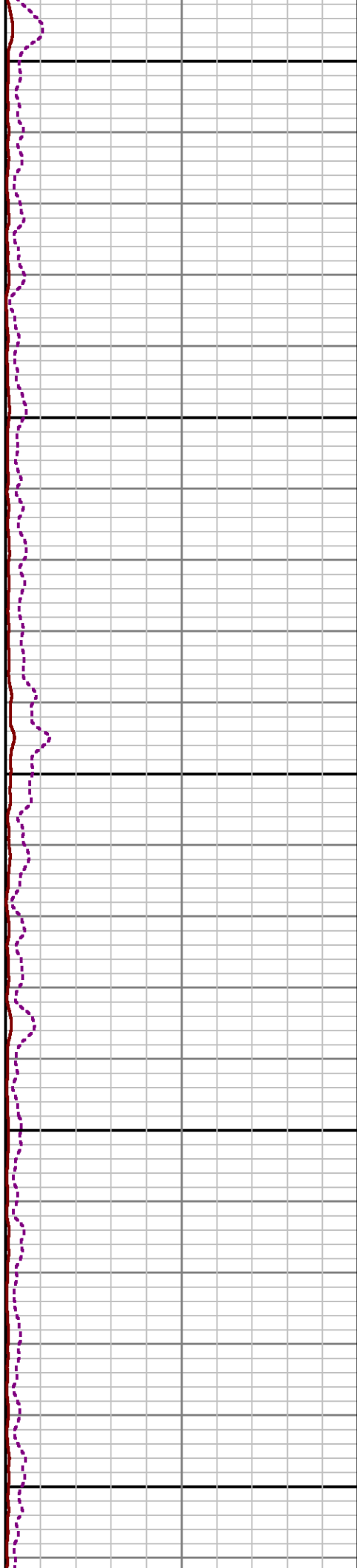
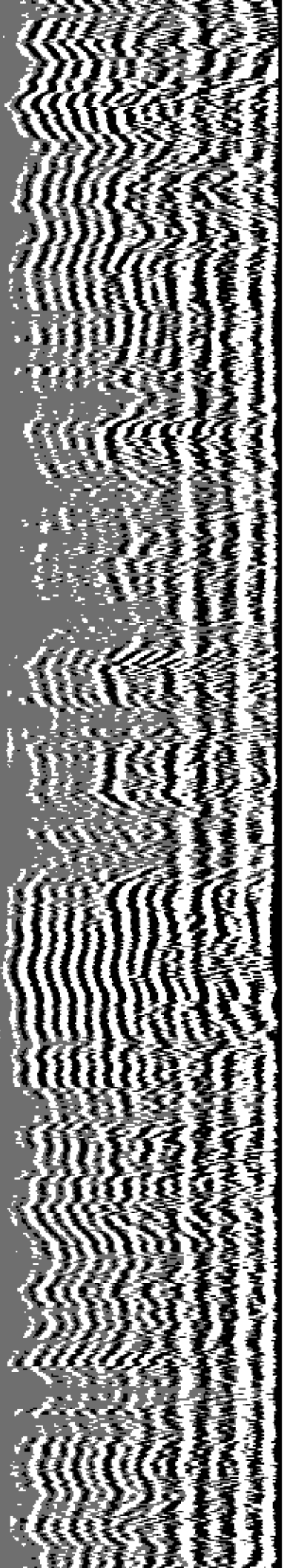


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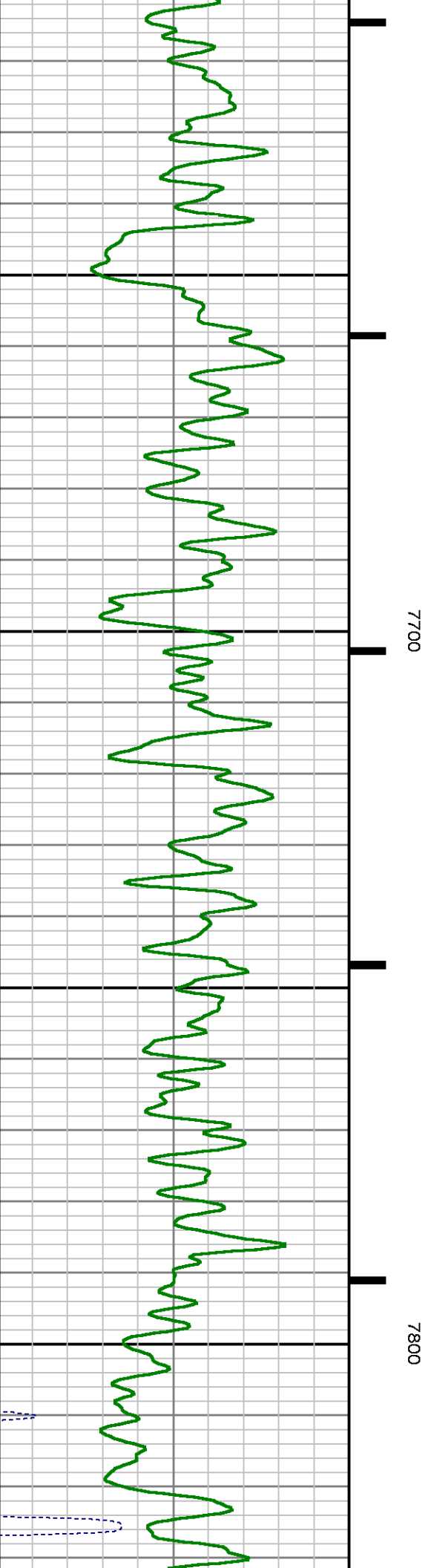
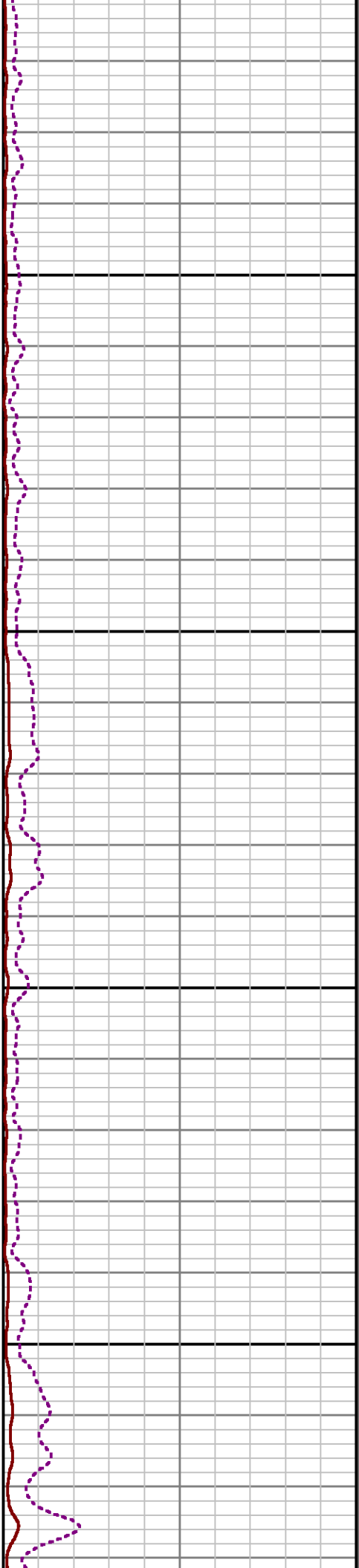
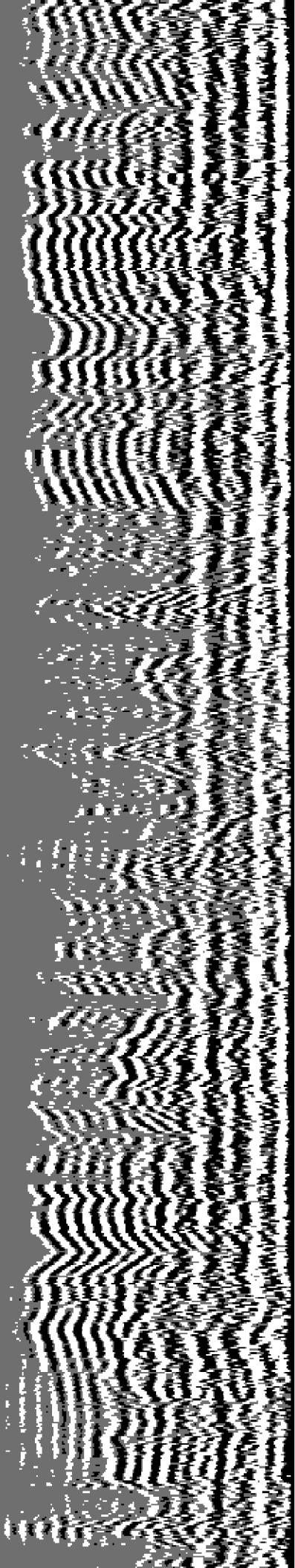
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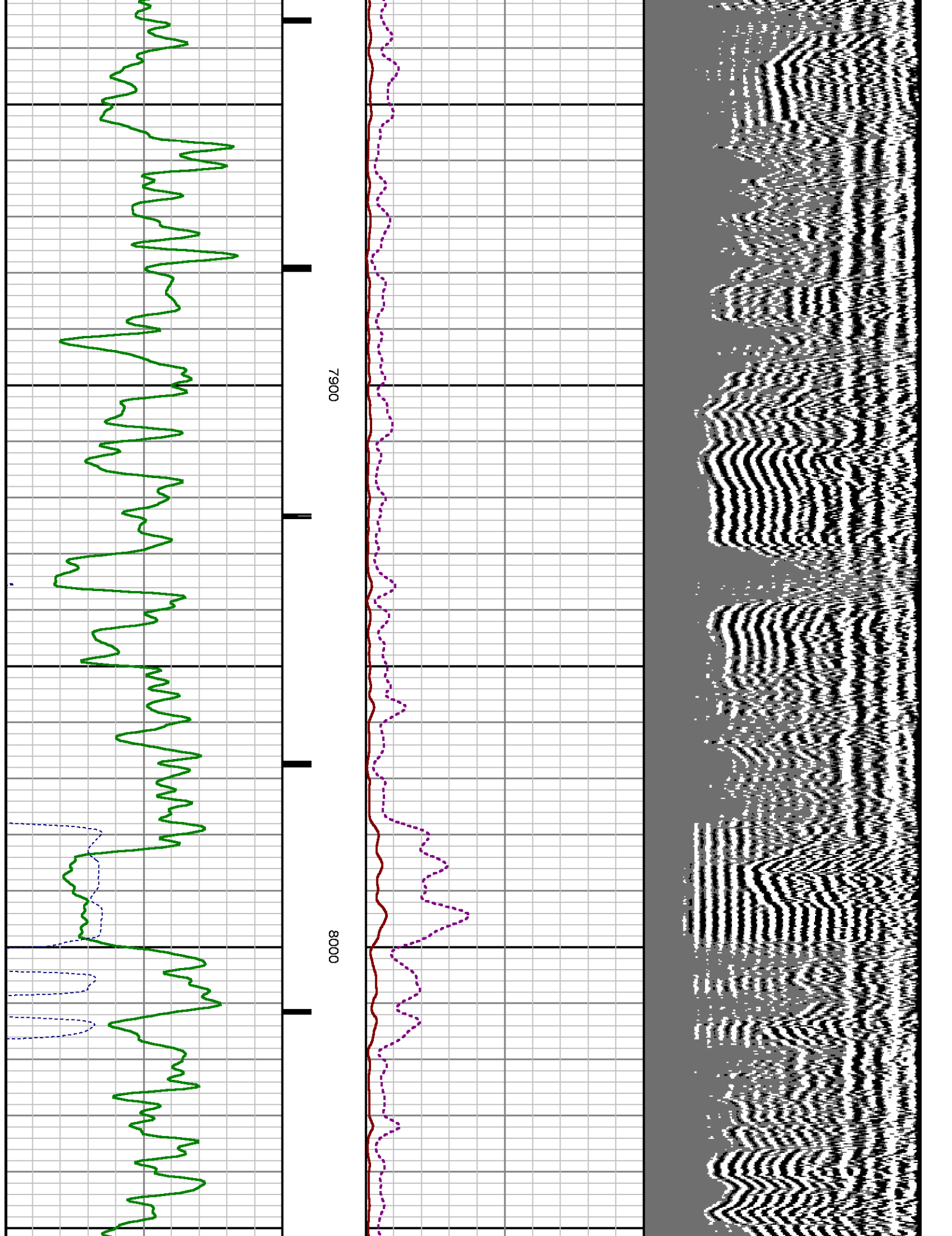
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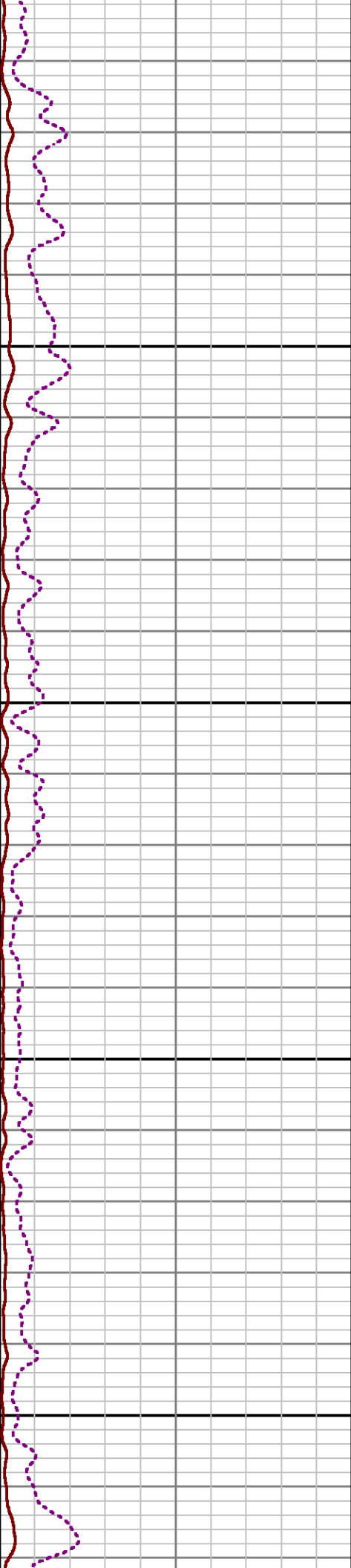
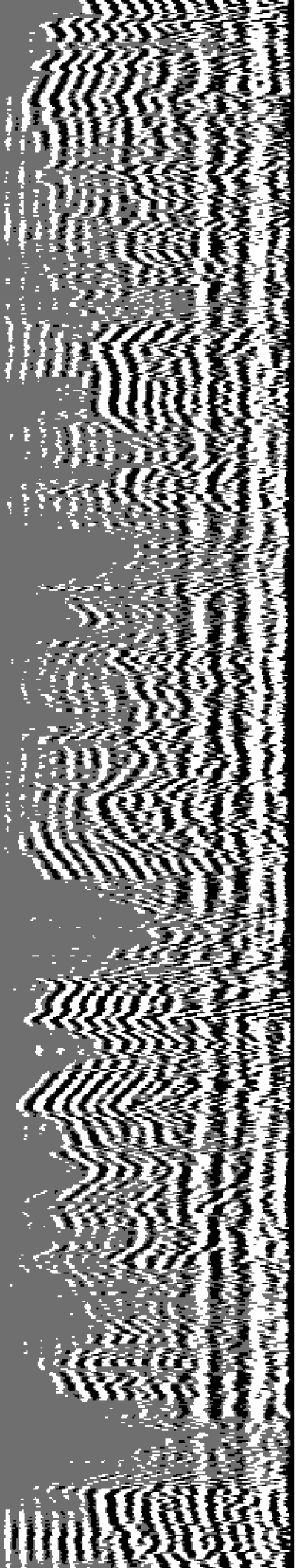
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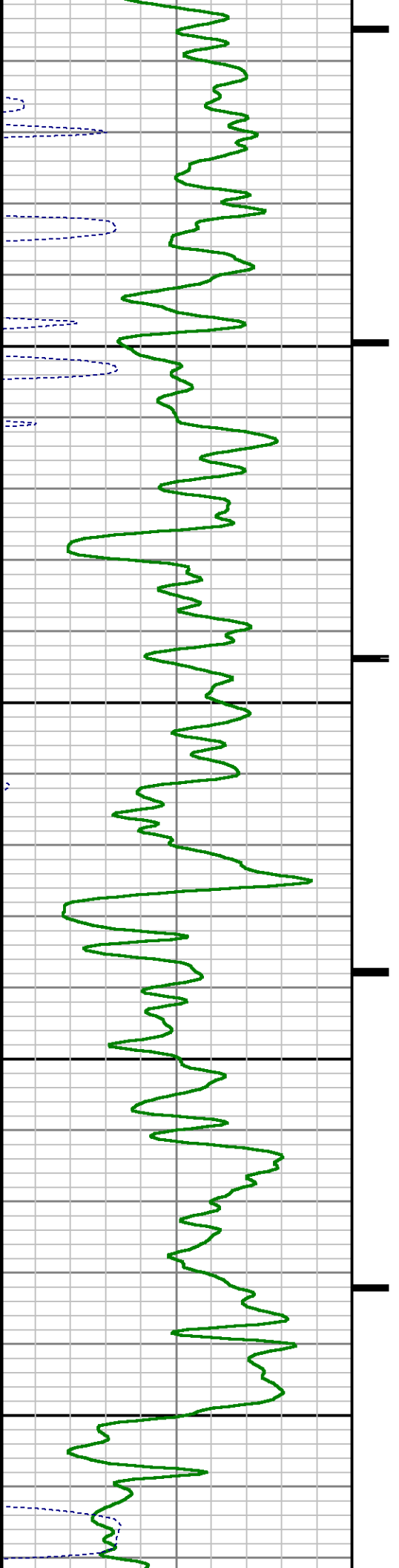




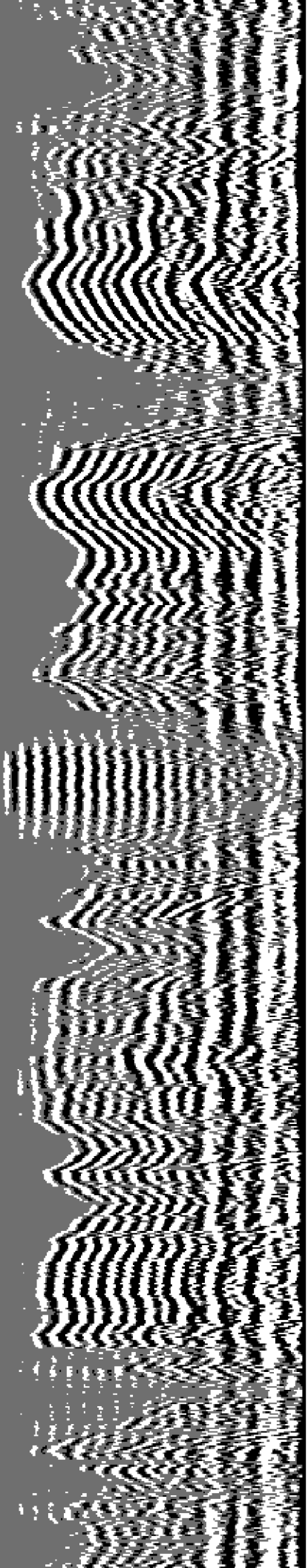


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8200

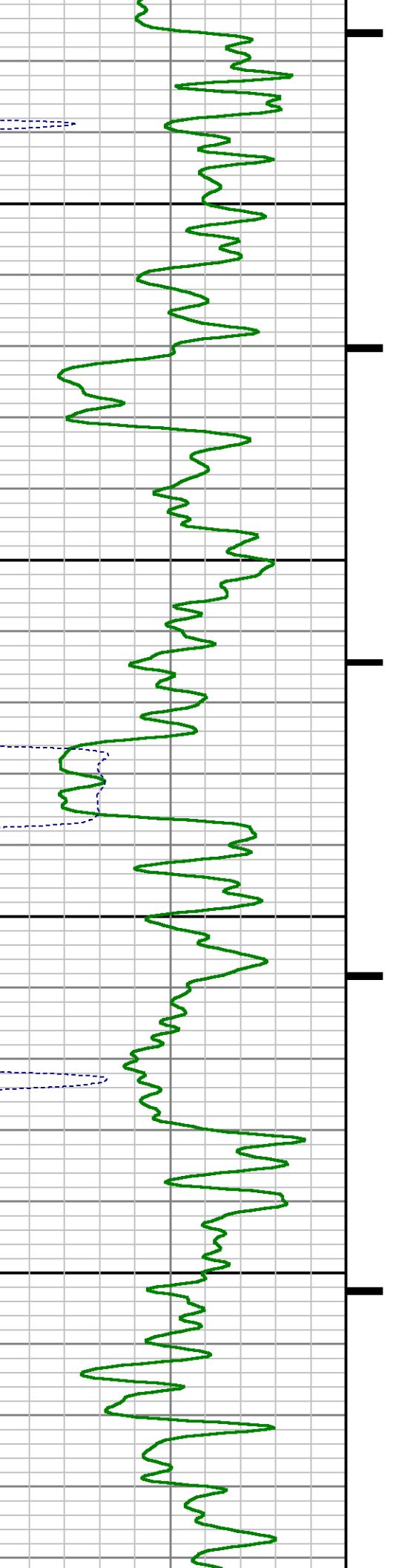


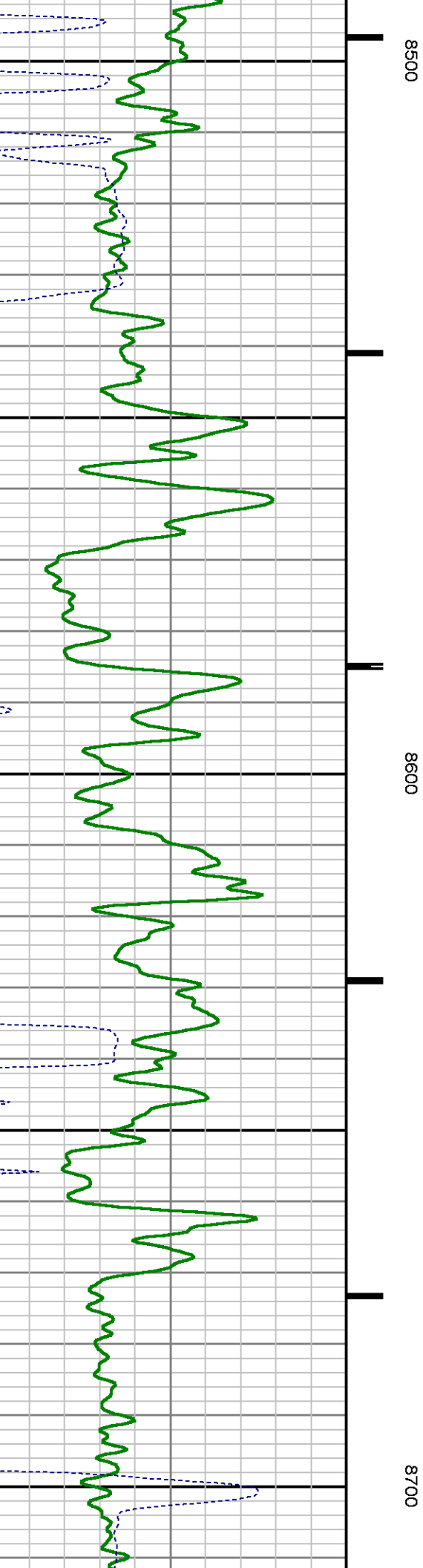
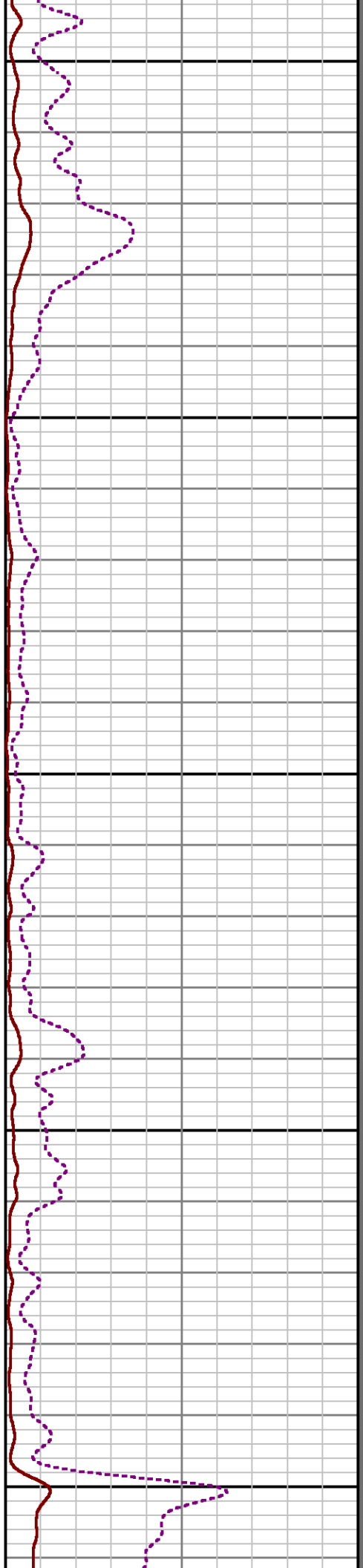
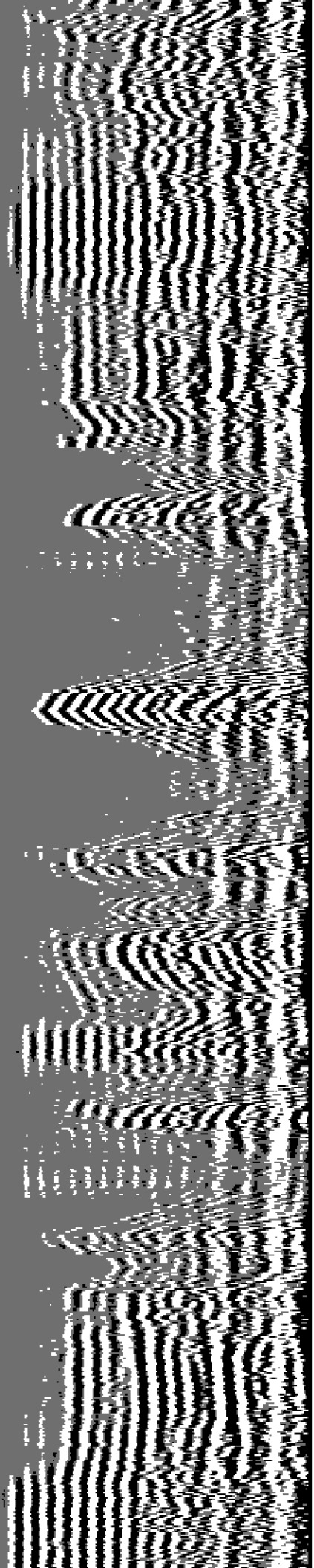


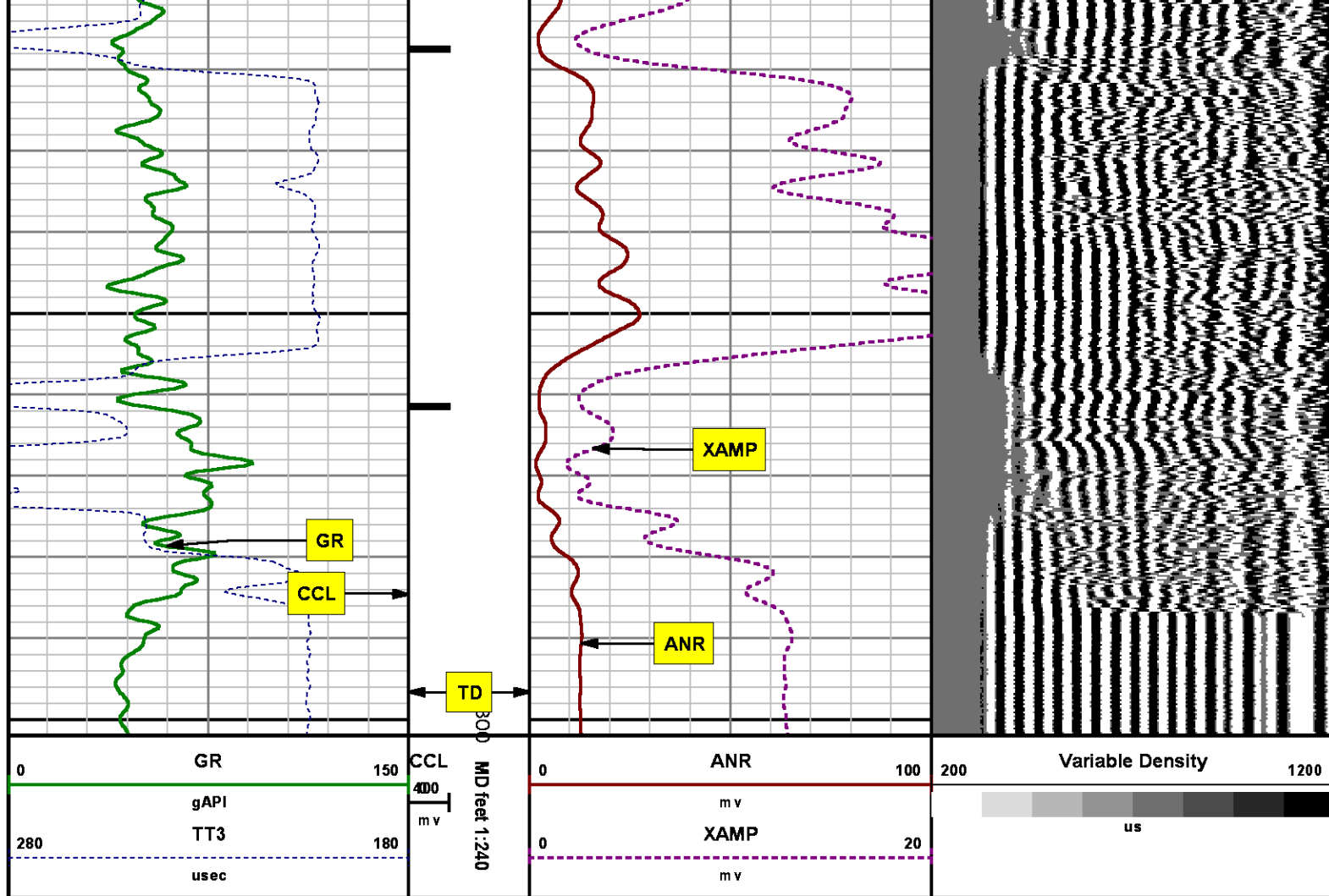


8300

8400







## SECONDARY PRESENTATION 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	29.368	8820.500
RAL	Amp Gate Start Near	195.000	usec	29.368	8820.500
RAL	Amp Gate Start Radial	195.000	usec	29.368	8820.500
RAL	Amp Gate Width Far	25.000	usec	29.368	8820.500
RAL	Amp Gate Width Near	25.000	usec	29.368	8820.500
RAL	Amp Gate Width Radial	25.000	usec	29.368	8820.500
RAL	casing od	4.500	inches	29.368	8820.500
RAL	casing wt	11.600	lbm/ft	29.368	8820.500

RAL	FB Start Far	291.900	usec	29.368	8820.500
RAL	FB Start Near	175.391	usec	29.368	8820.500
RAL	FB Start Radial	175.391	usec	29.368	8820.500
RAL	FB Thresh Far	15.000	mv	29.368	8820.500
RAL	FB Thresh Near	10.000	mv	29.368	8820.500
RAL	FB Thresh Radial	10.000	mv	29.368	8820.500
RAL	Fluid Travel Time	200.000	usec/ft	29.368	8820.462

## 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

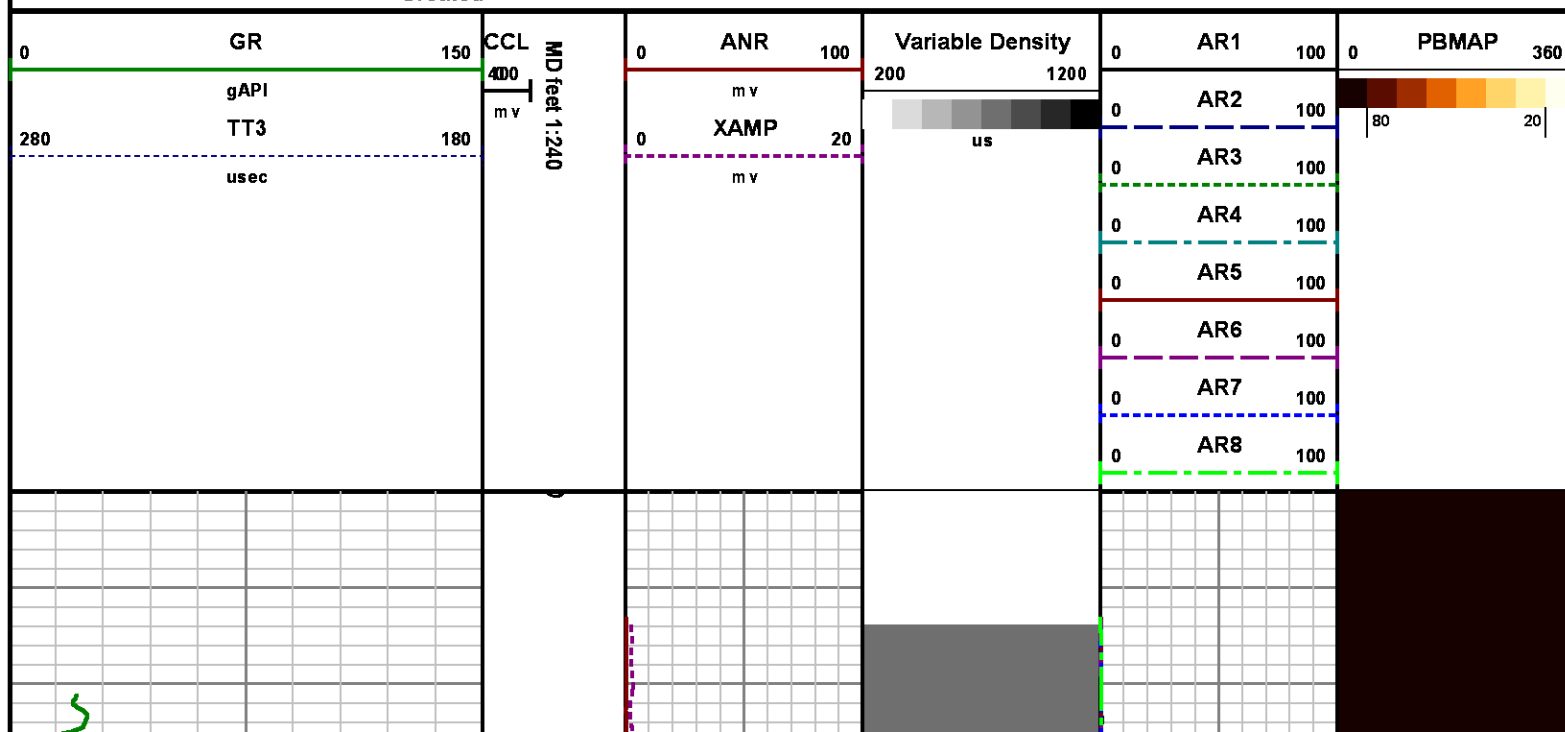
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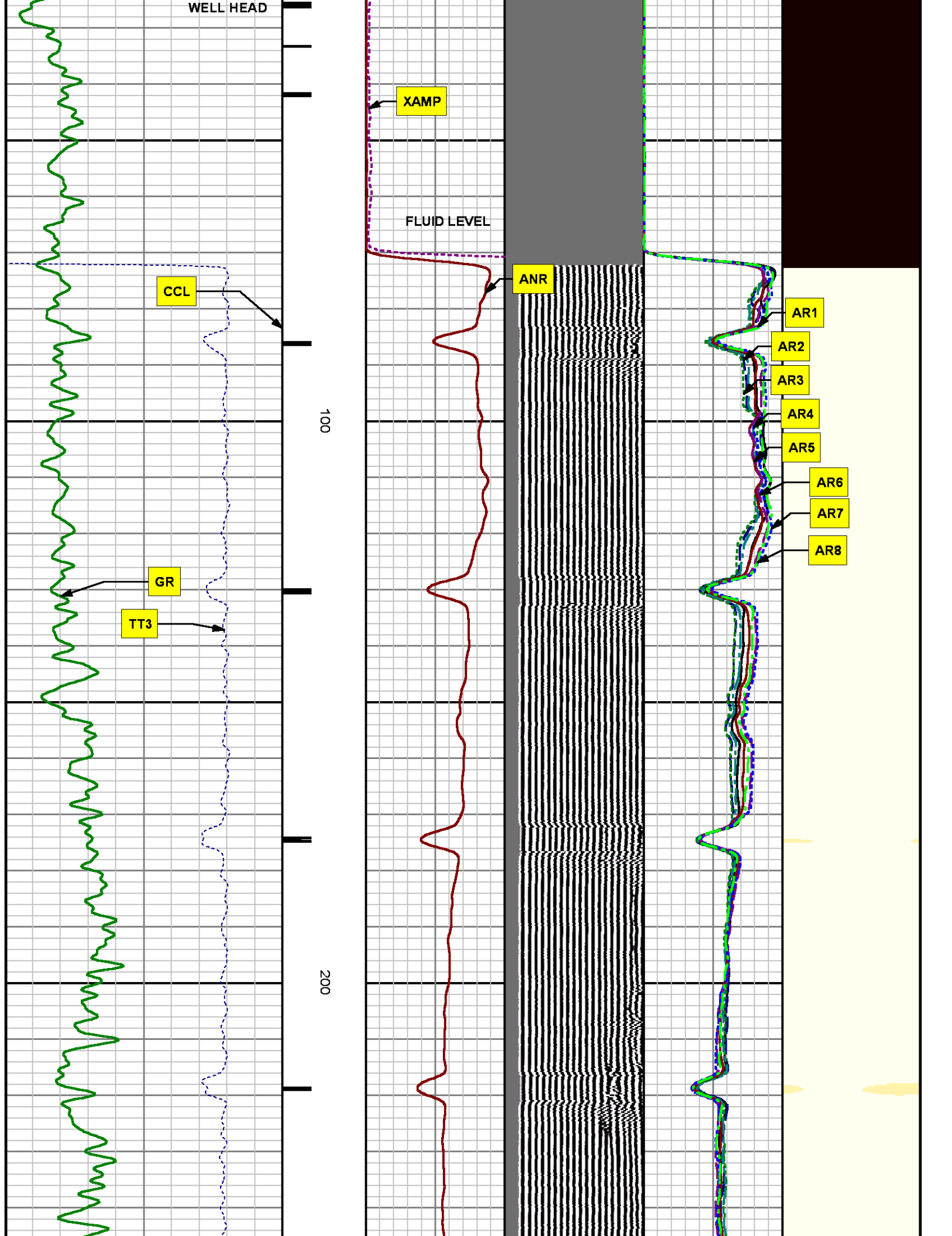
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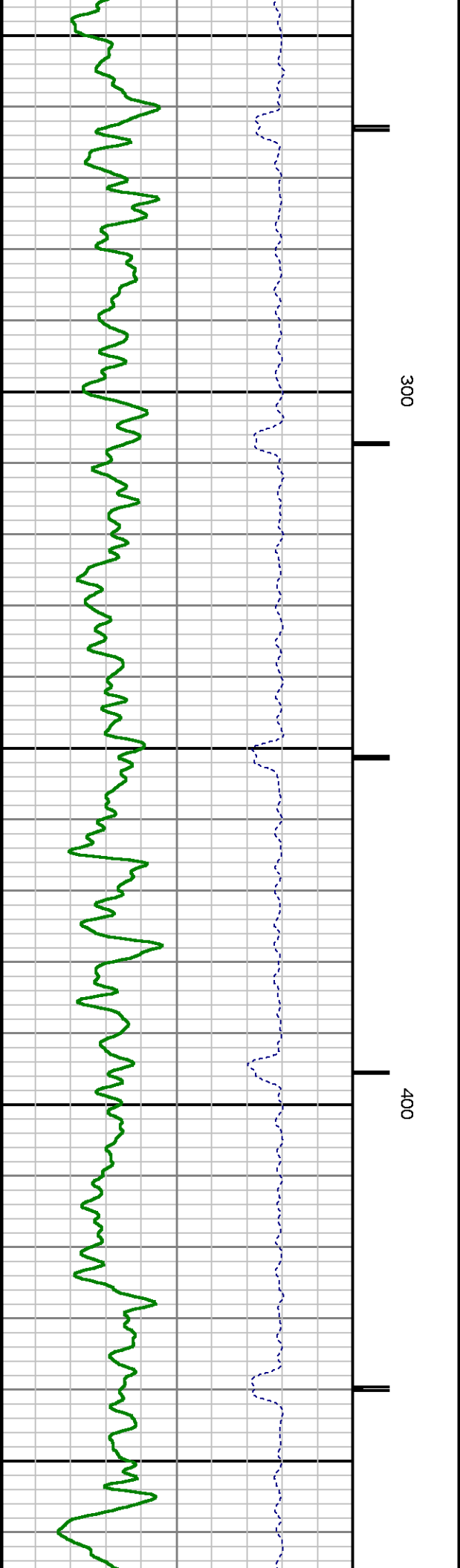
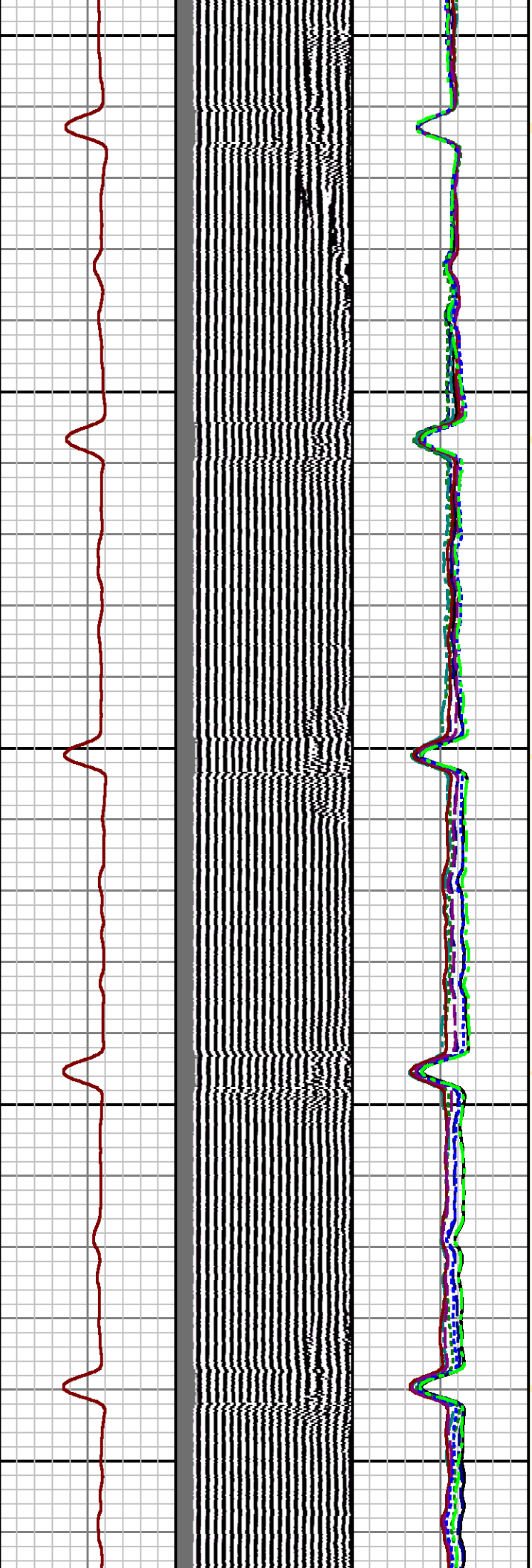
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Interval : 0.00 - 8802.00 feet UP

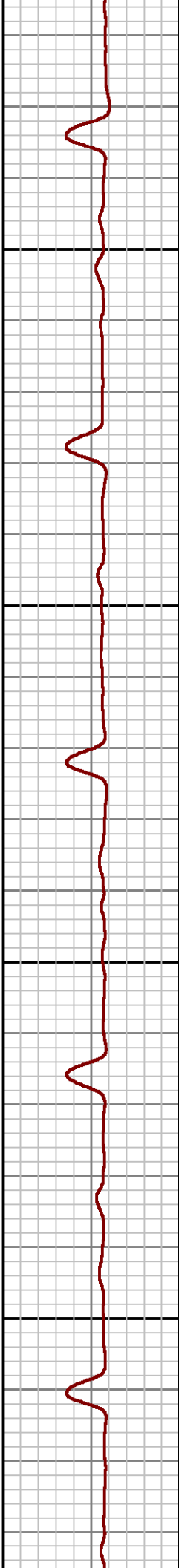
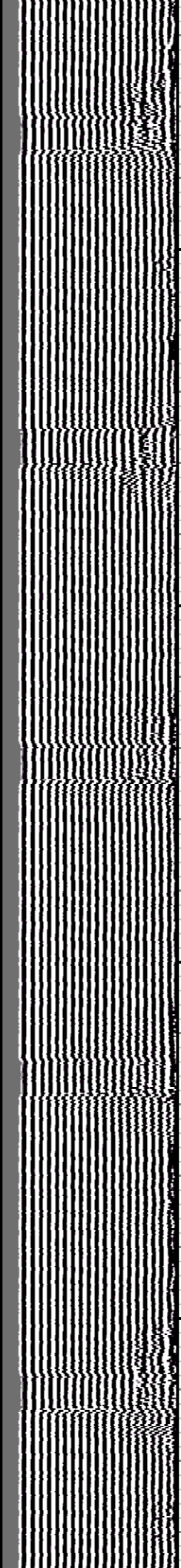
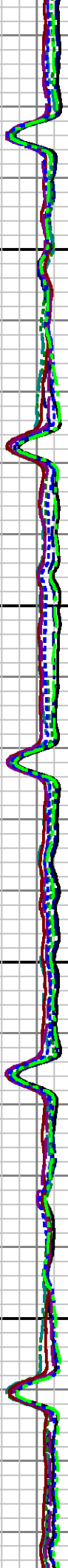
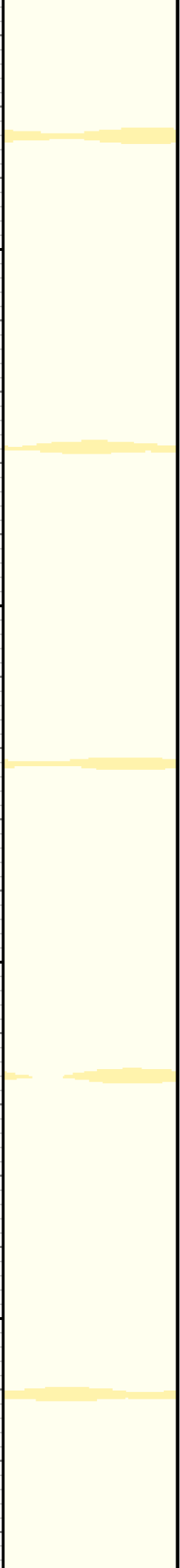
Created : 1/31/2014 9:11:38 AM





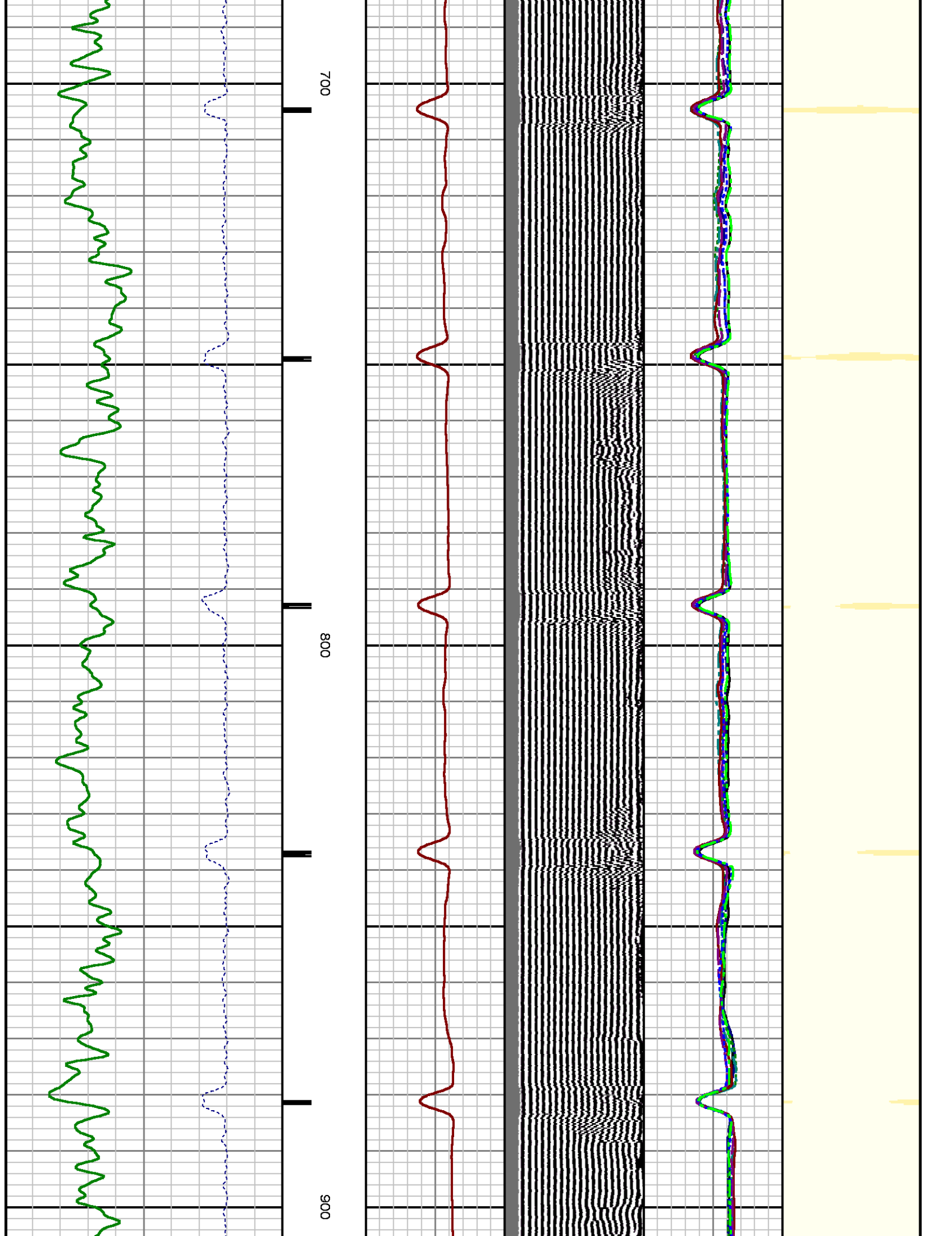


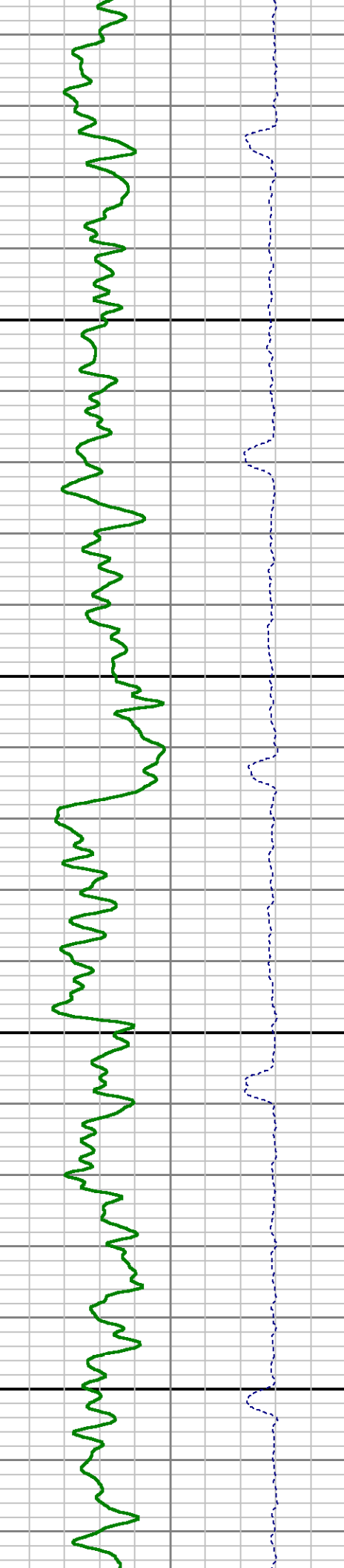
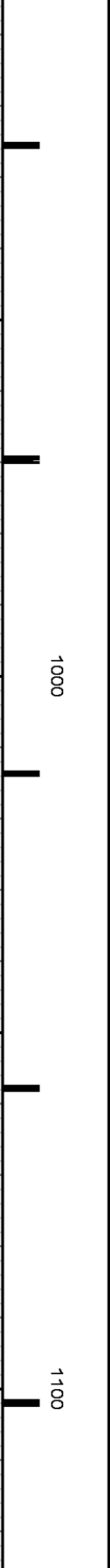
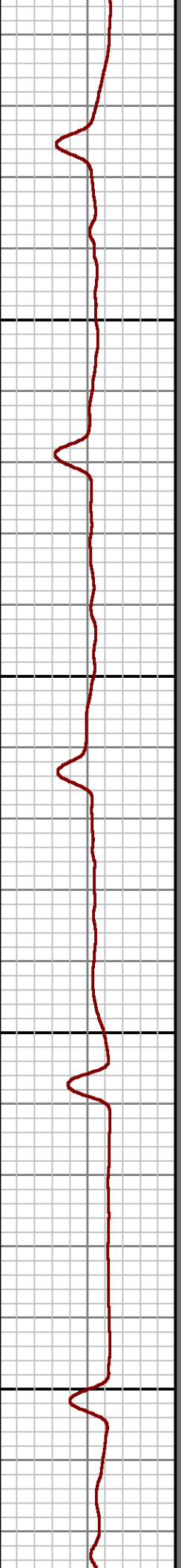
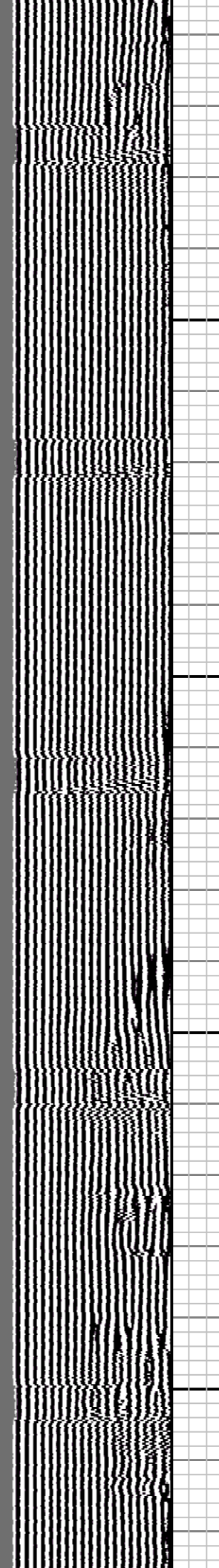
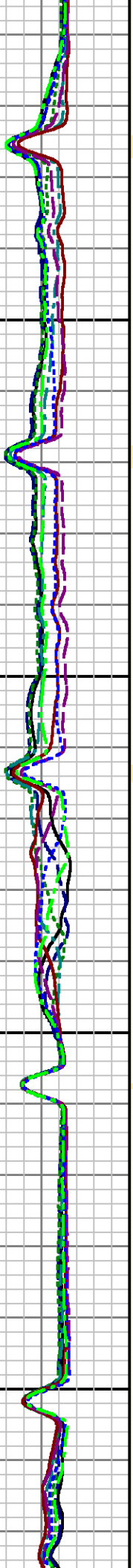
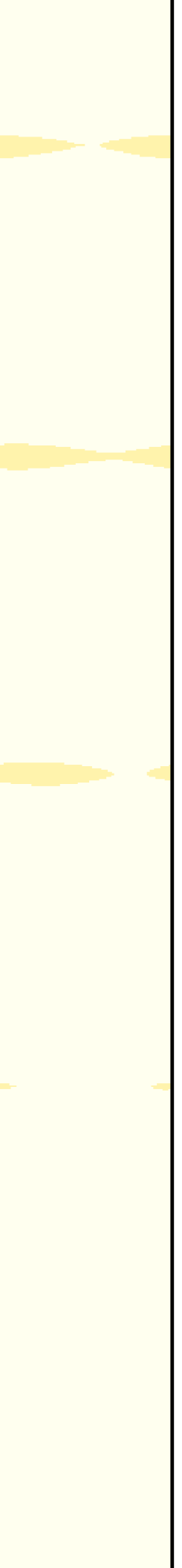


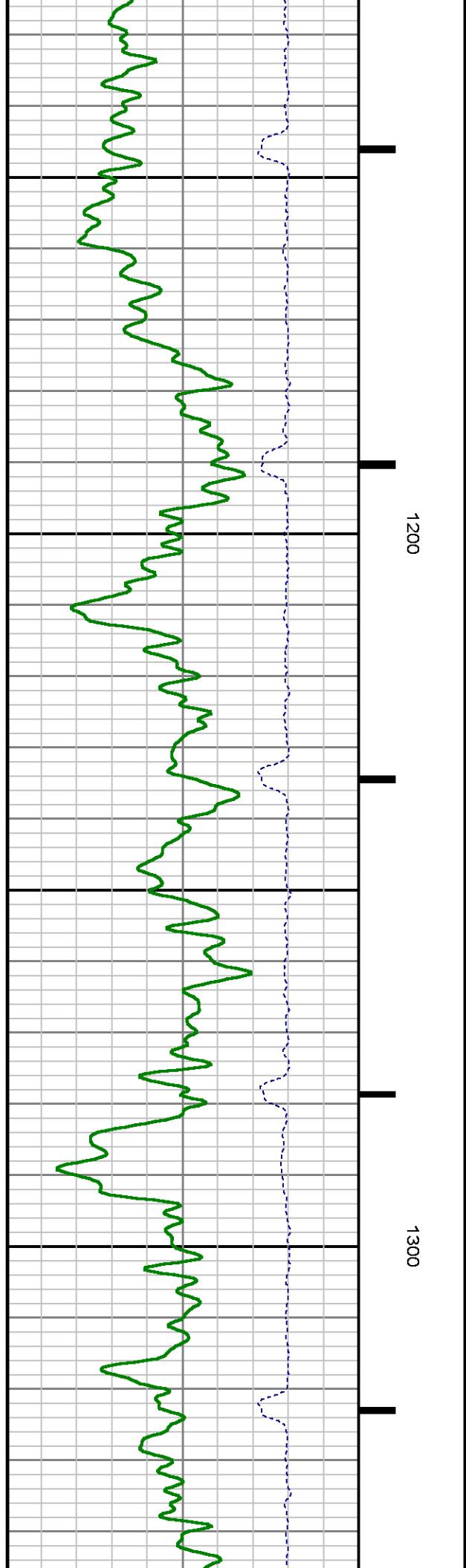
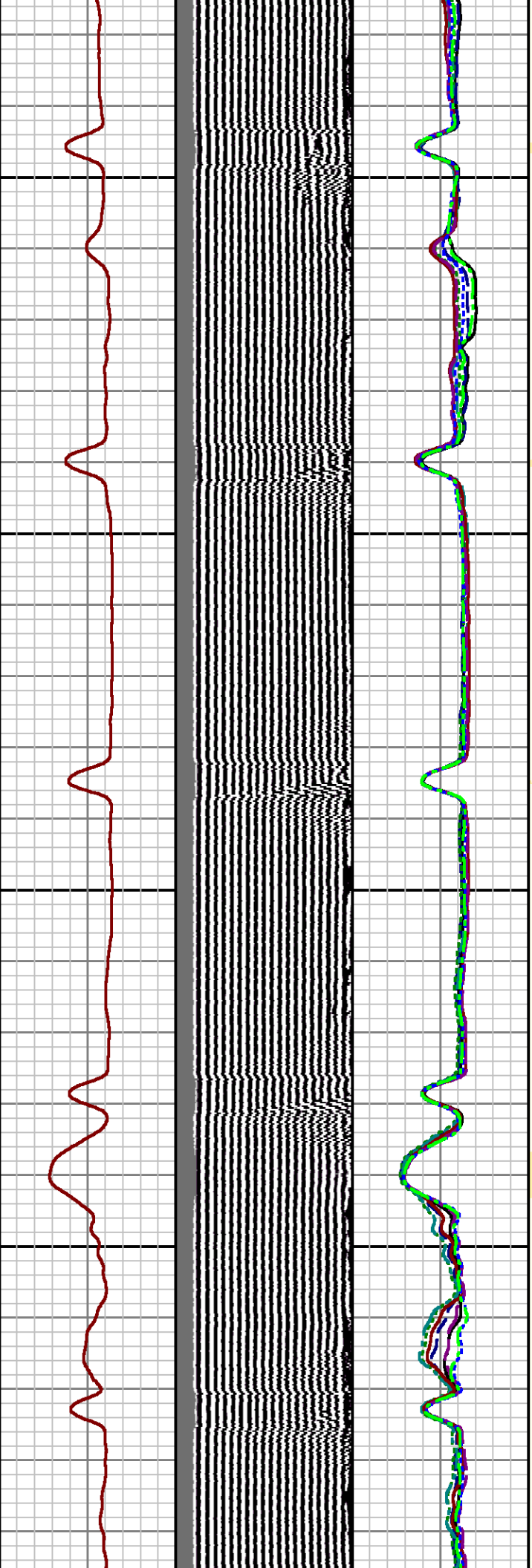


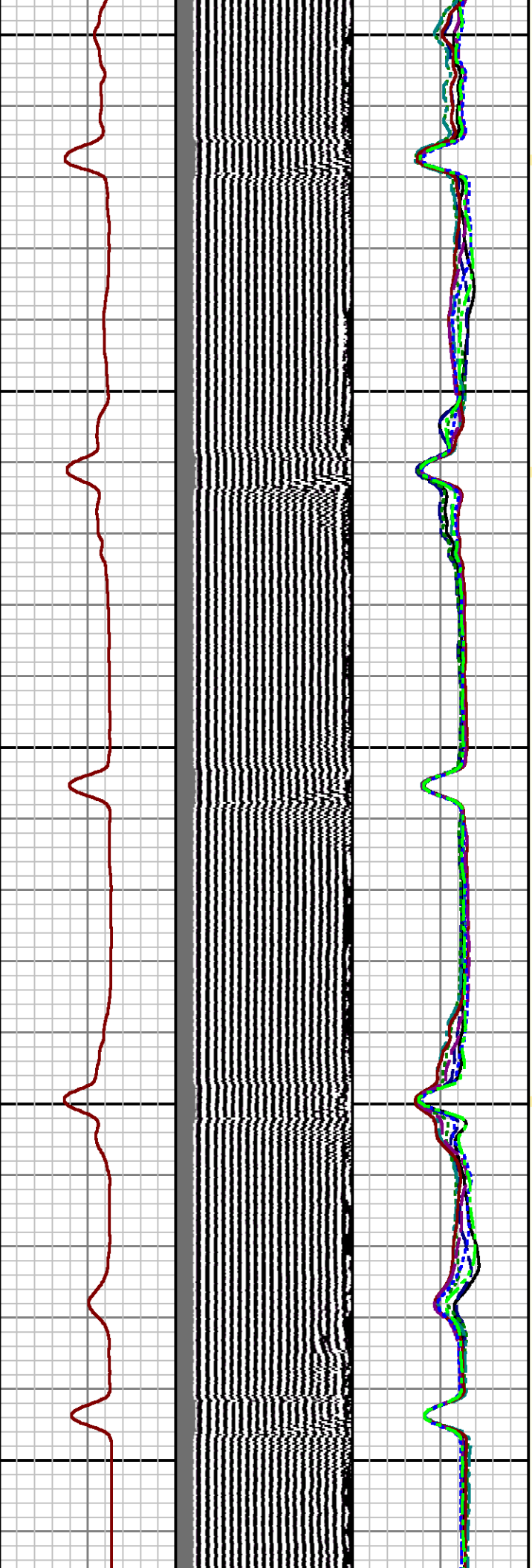
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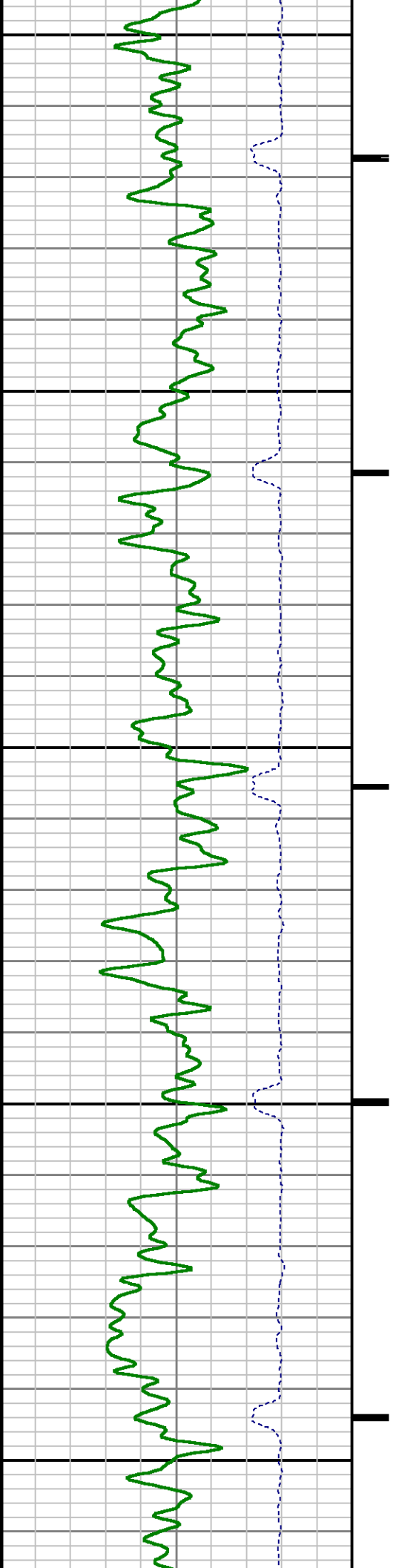


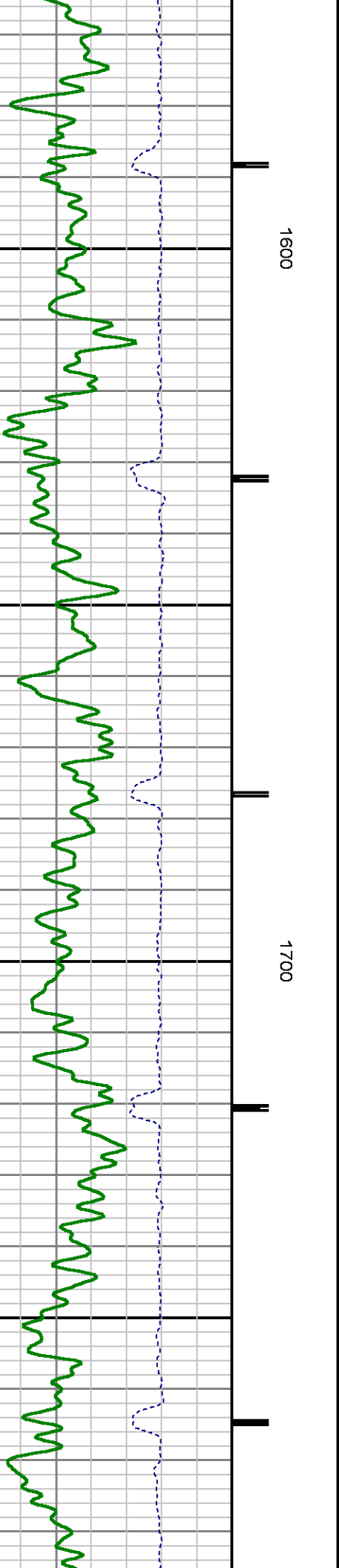
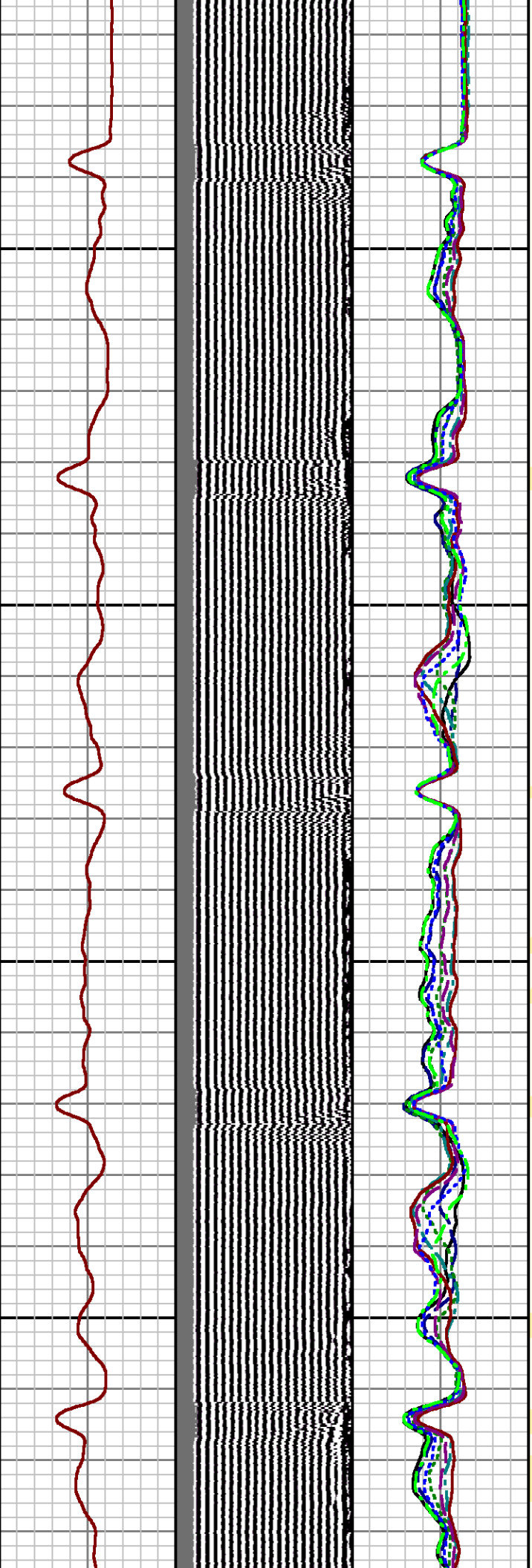




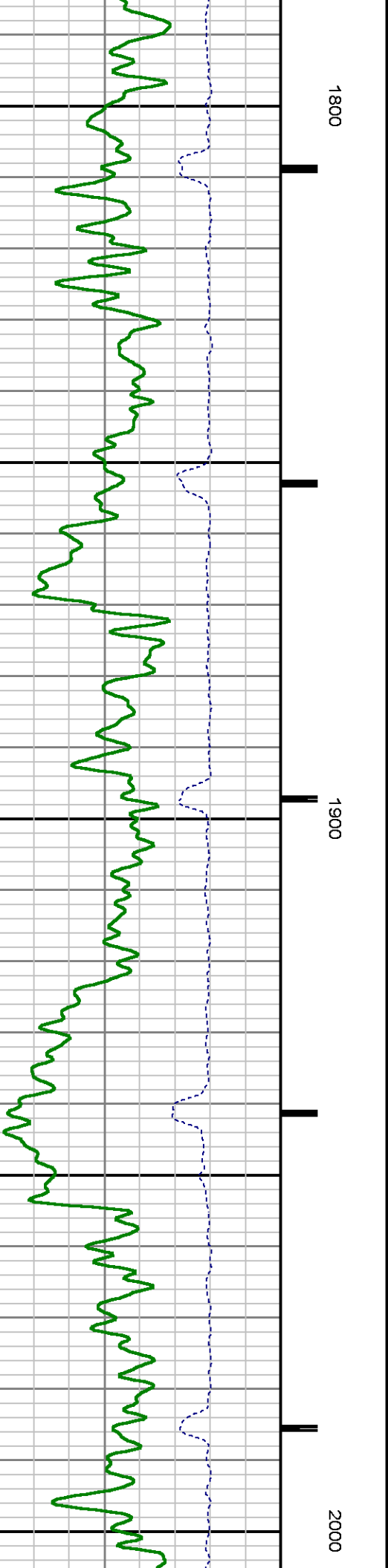
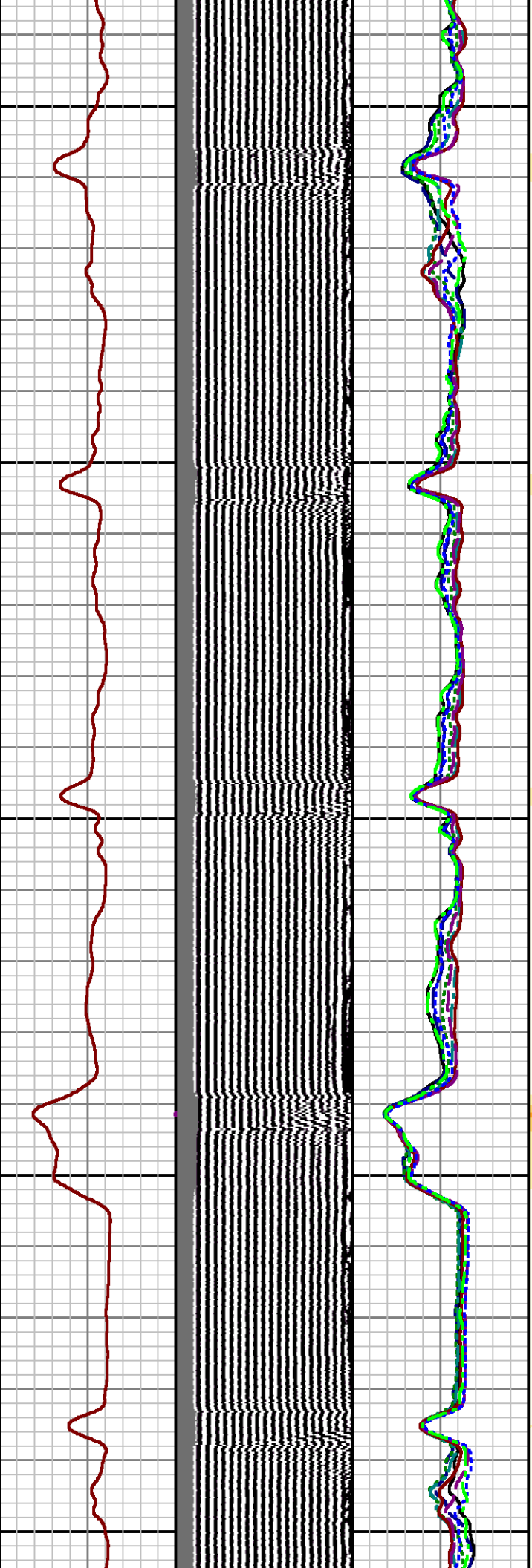
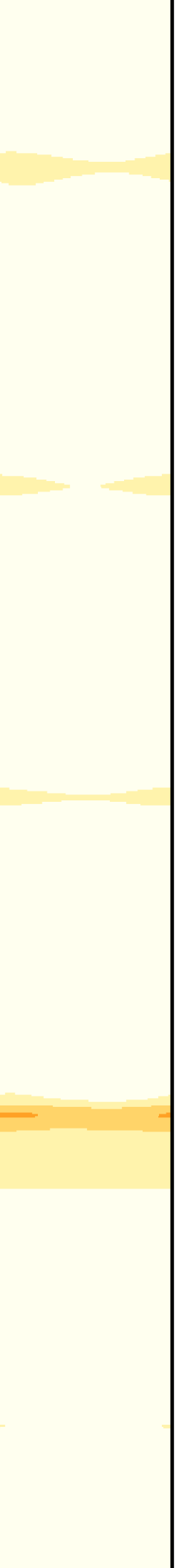
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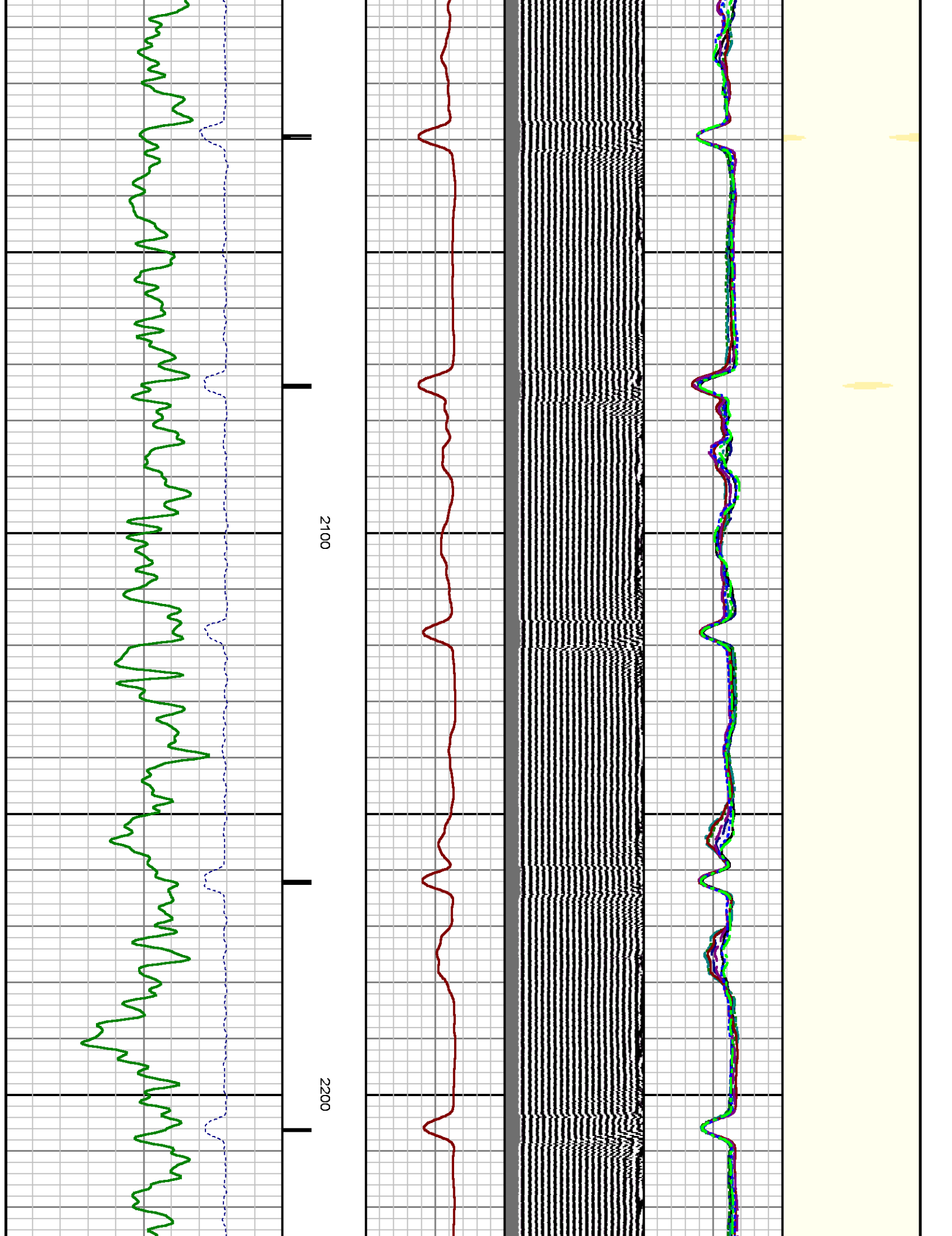
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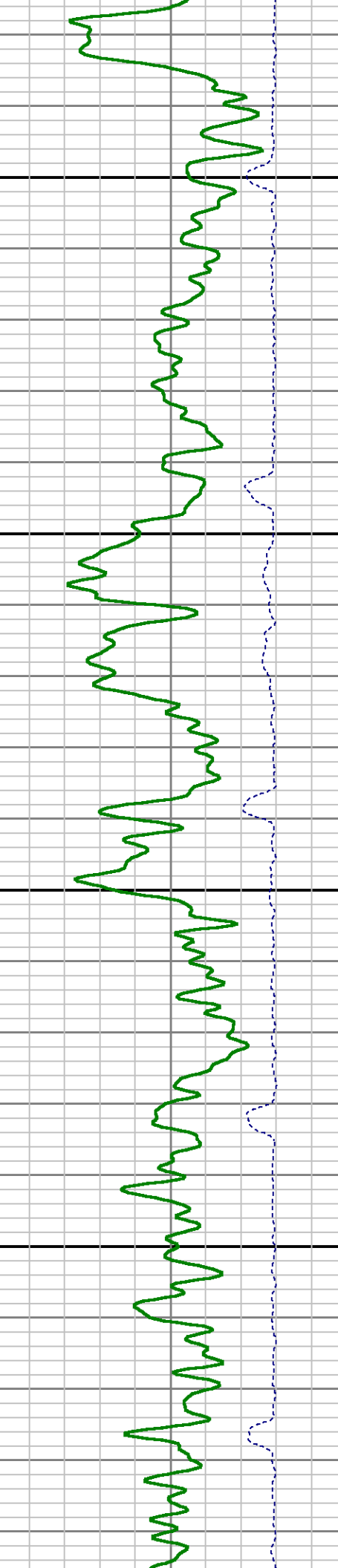
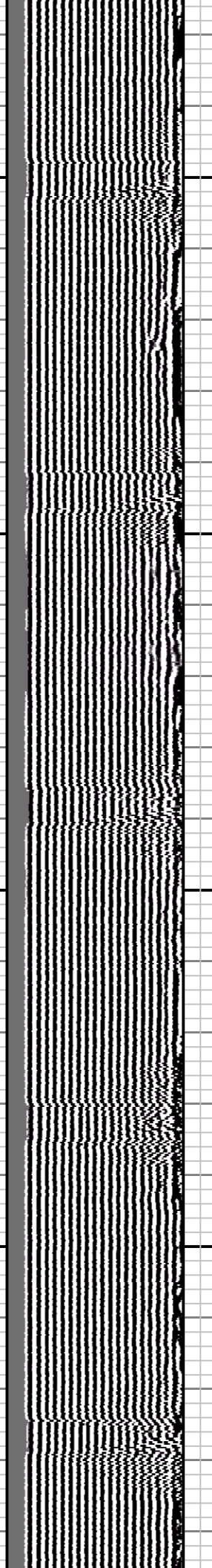
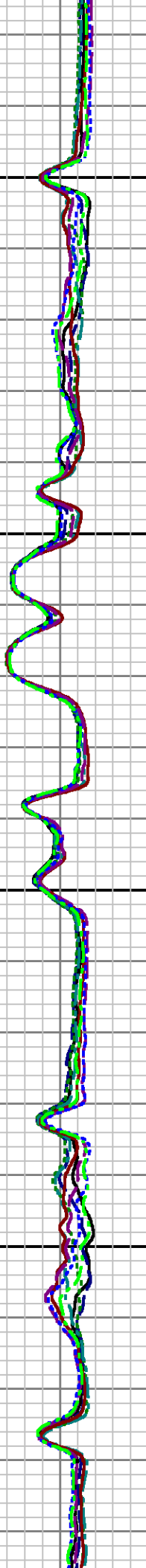
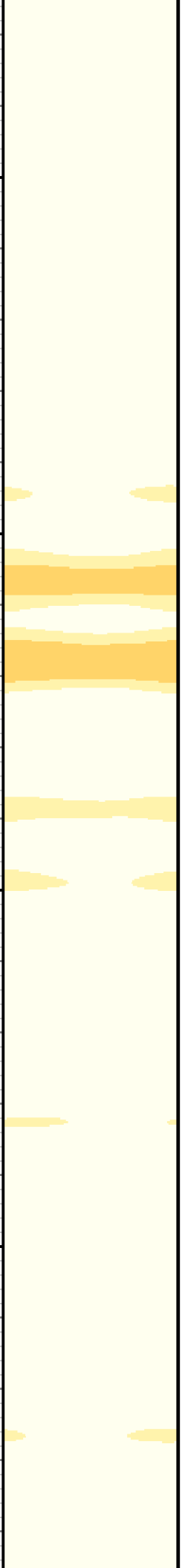


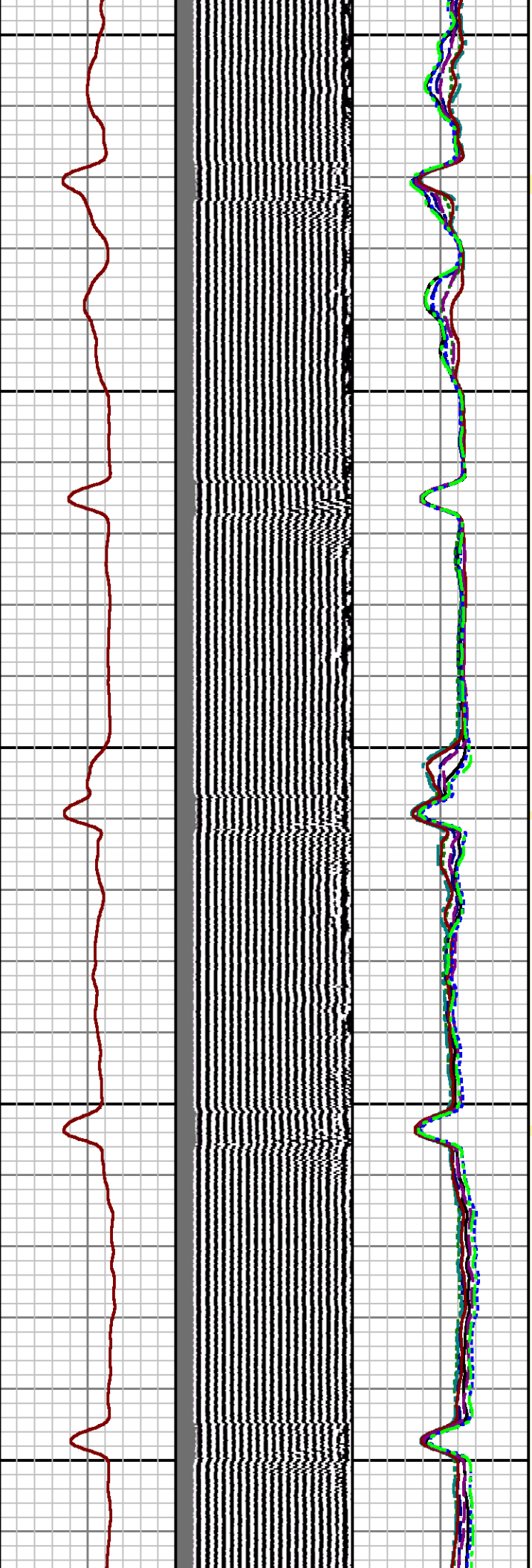






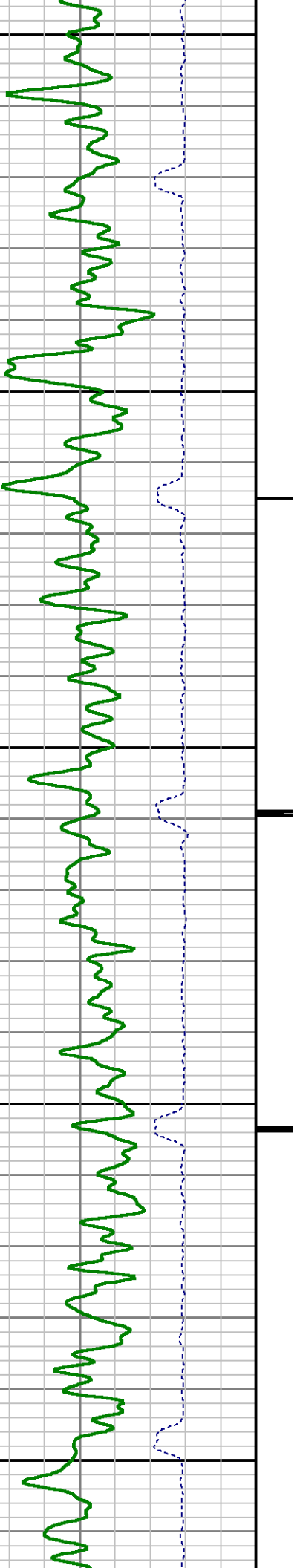


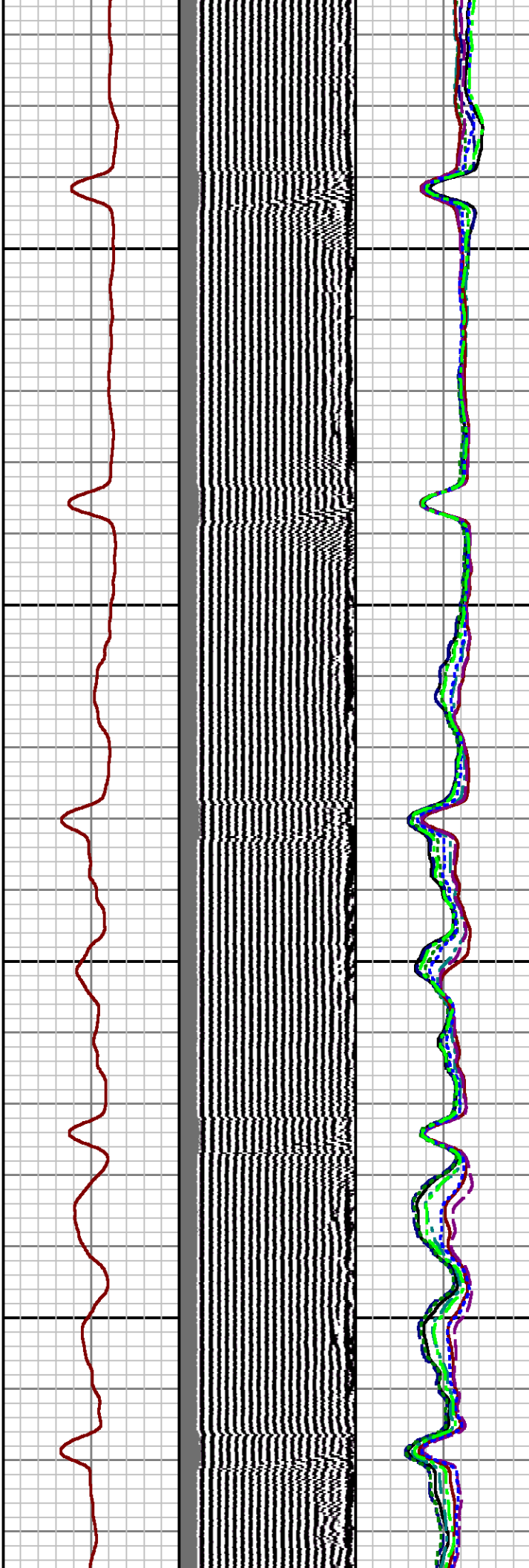
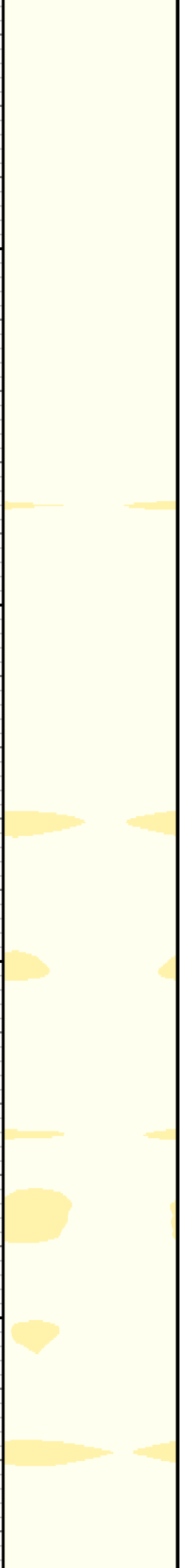




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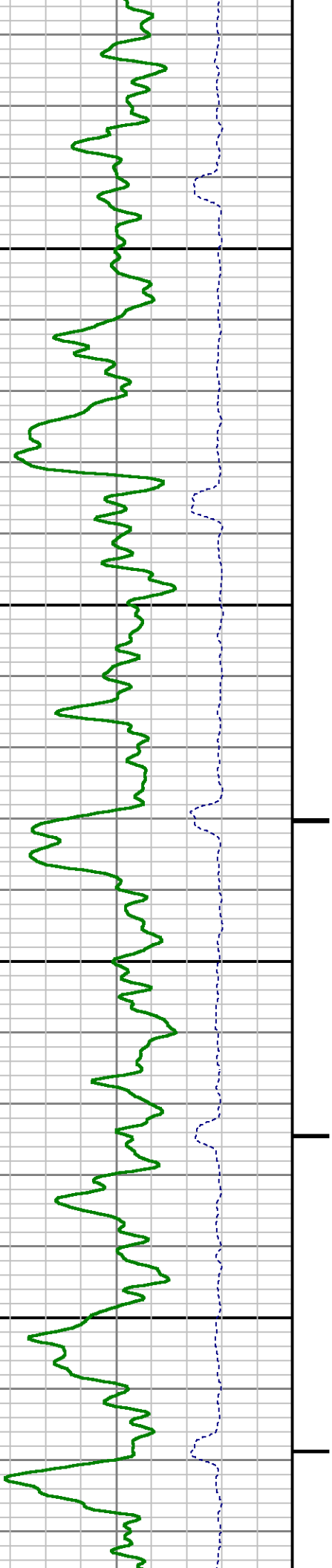
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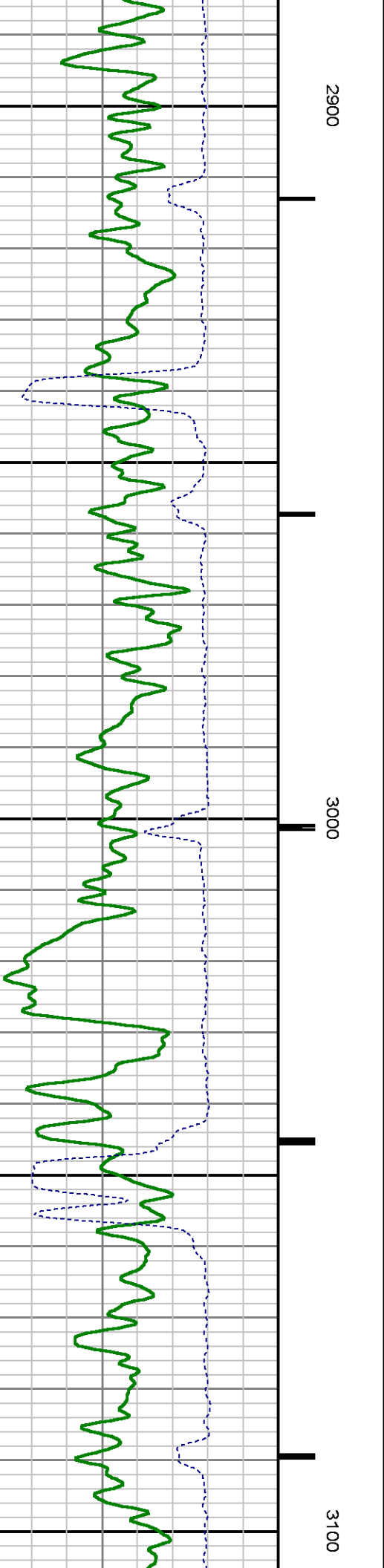
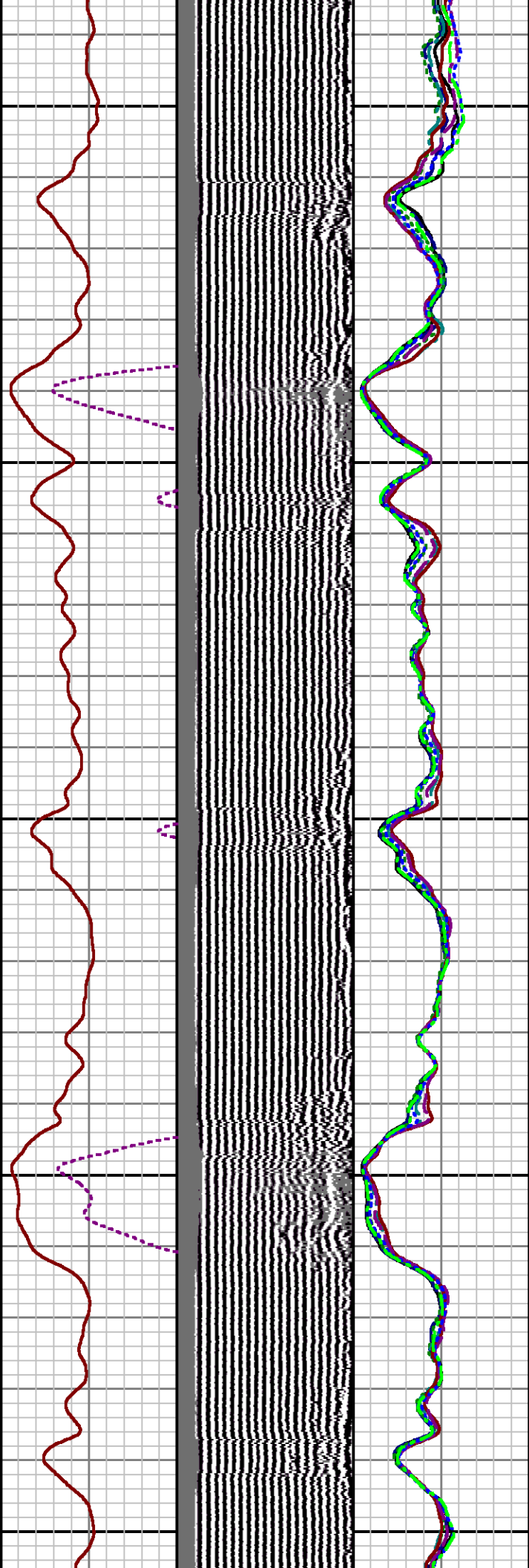
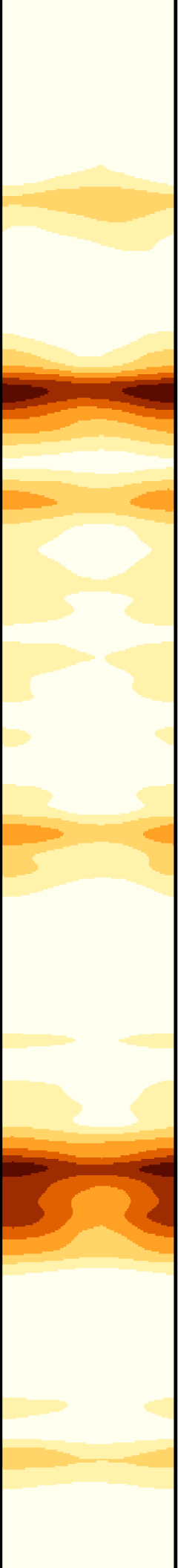


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2800





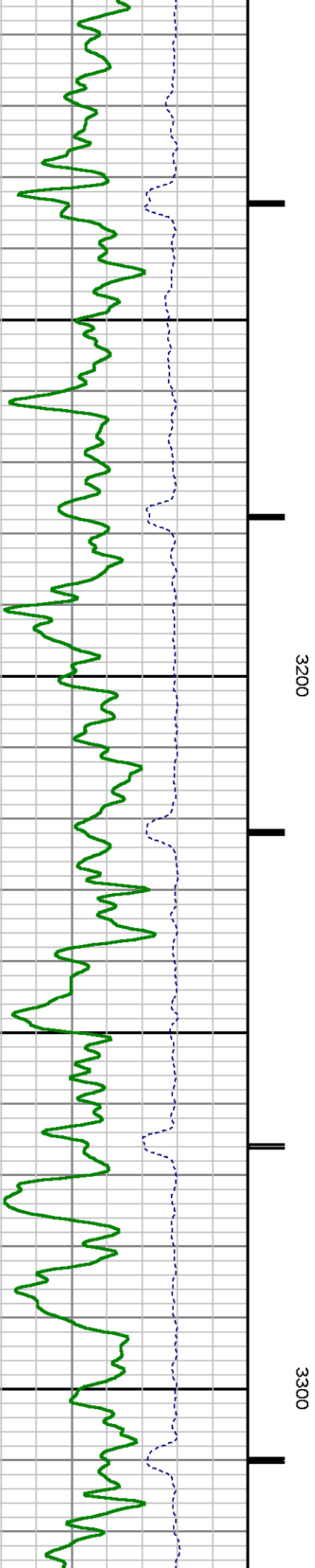
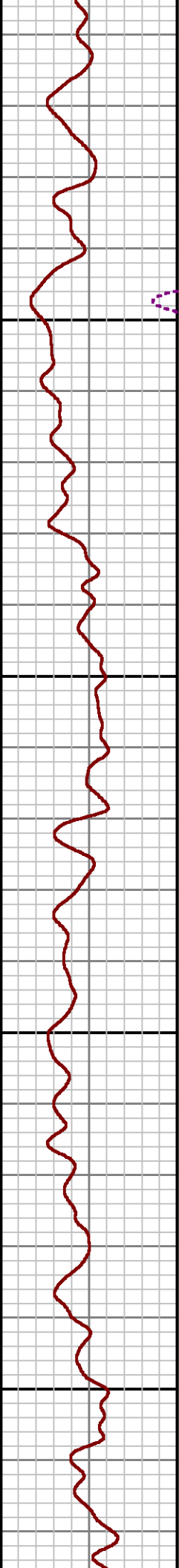
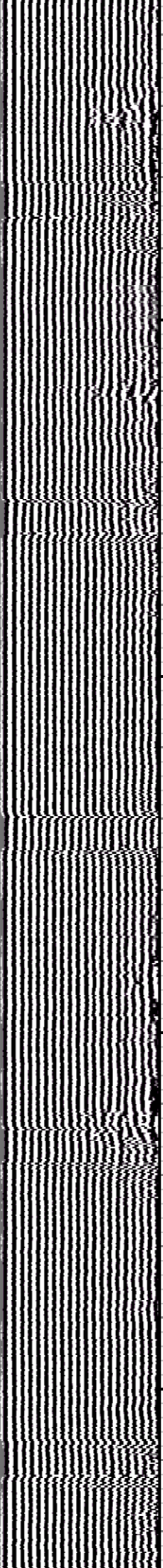
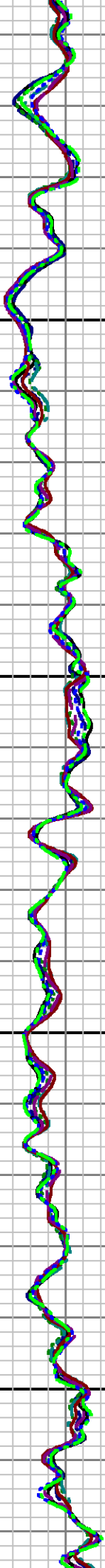
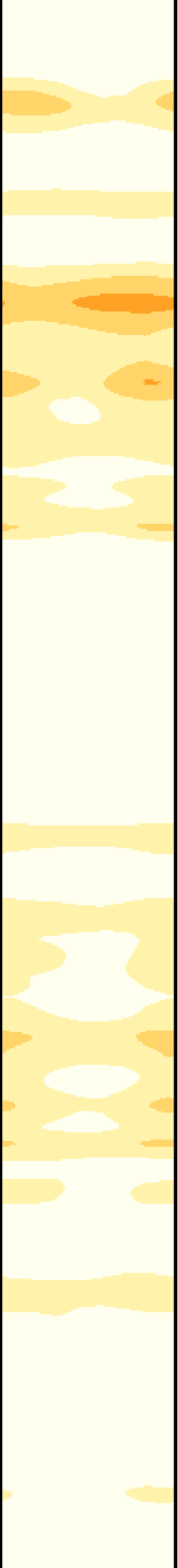


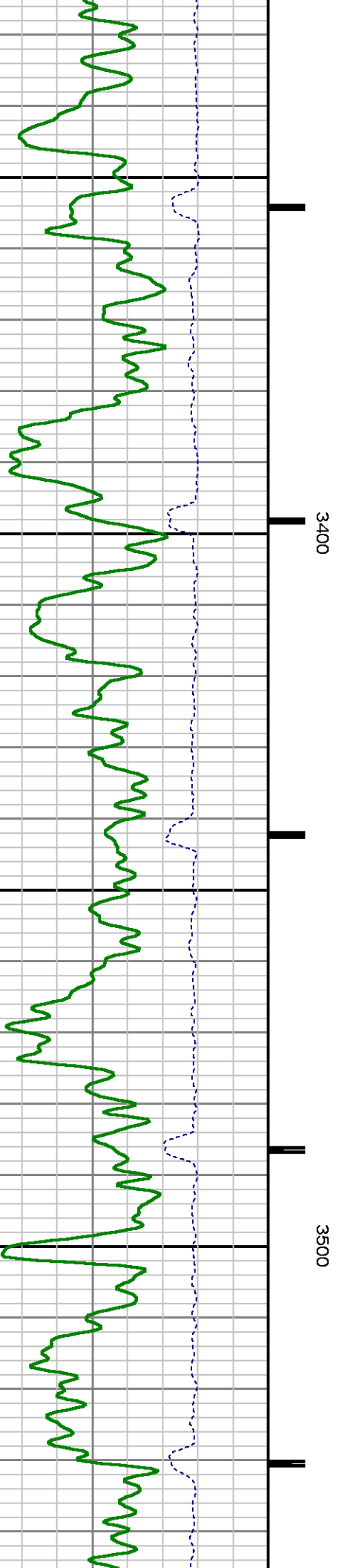
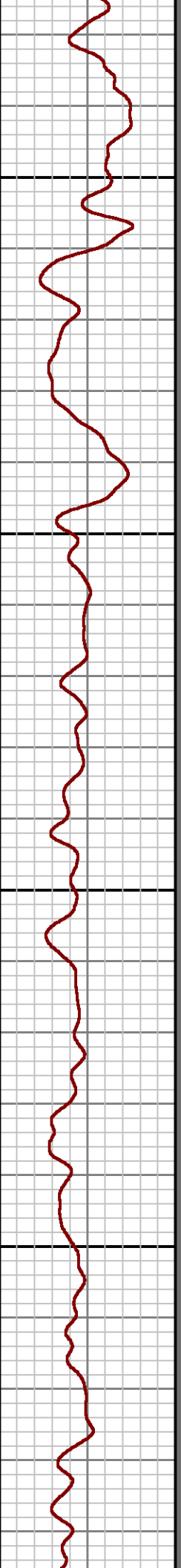
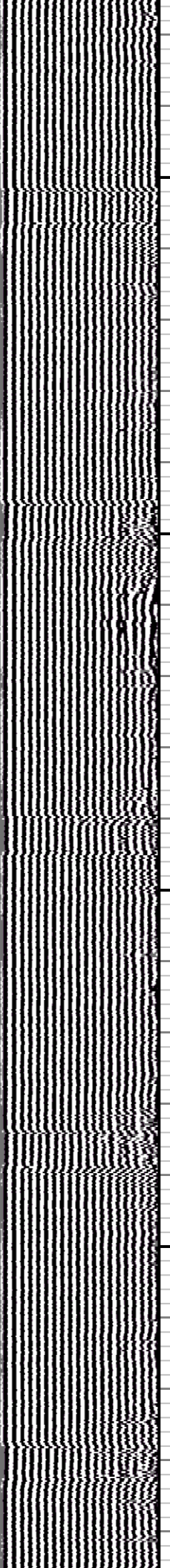
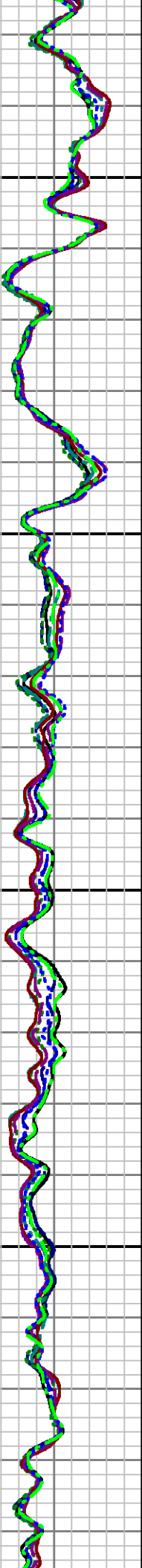
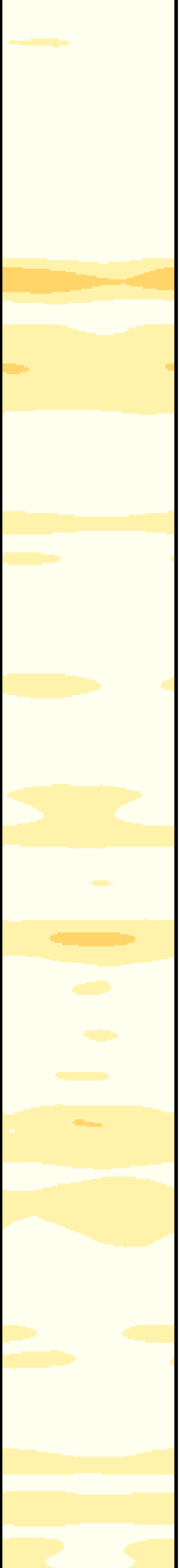
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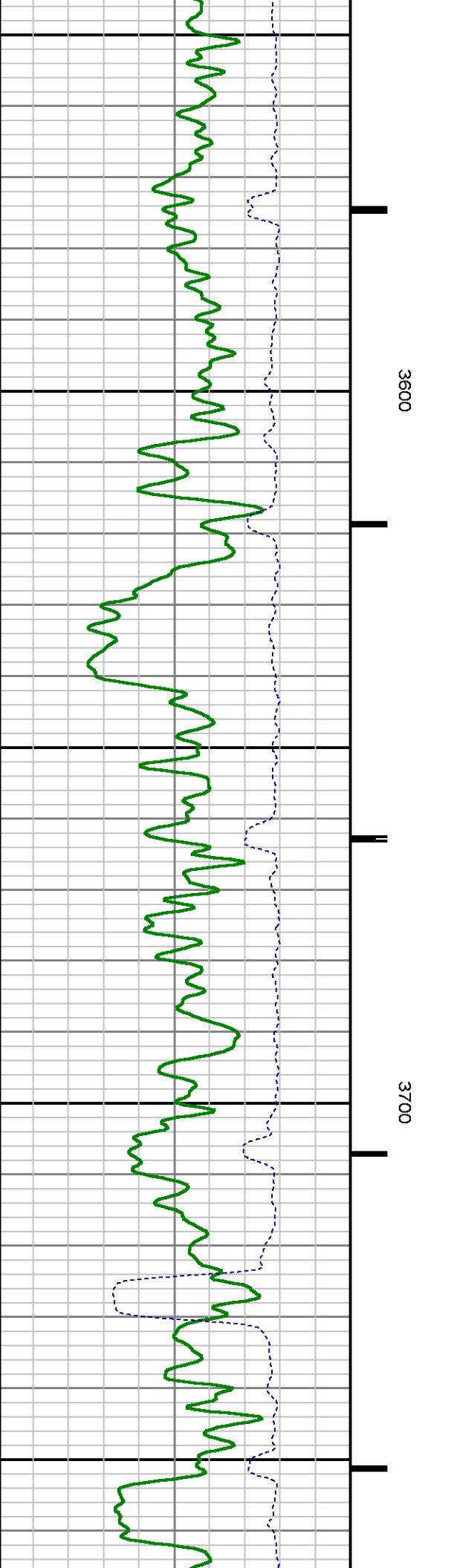
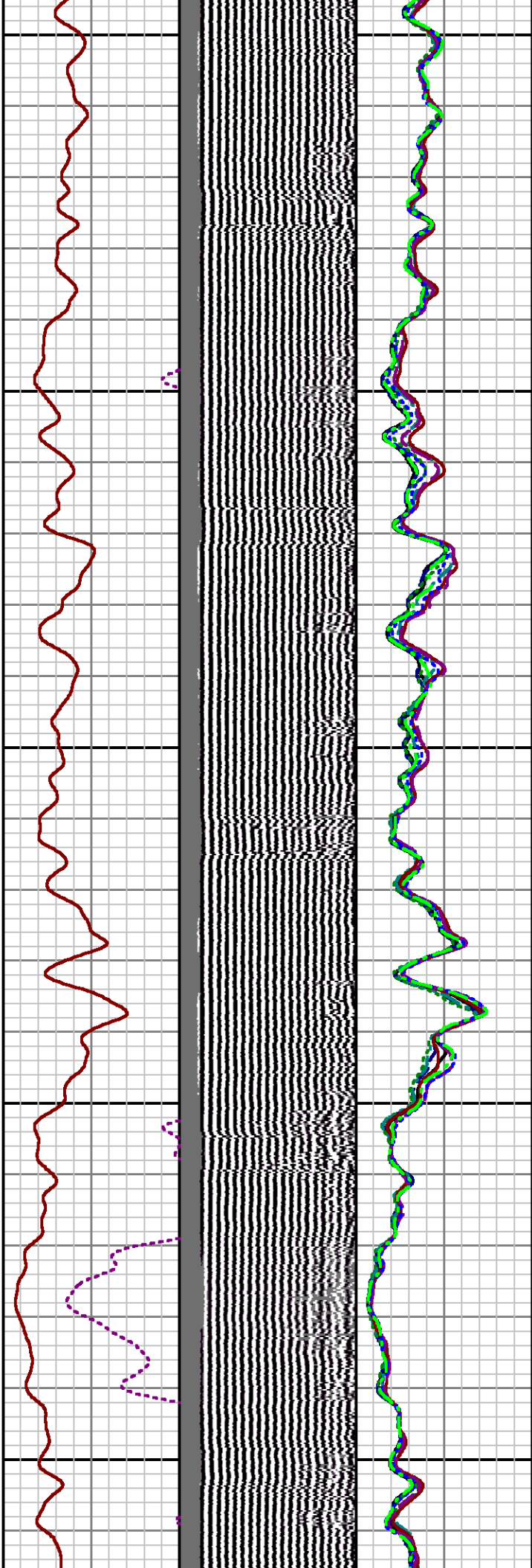
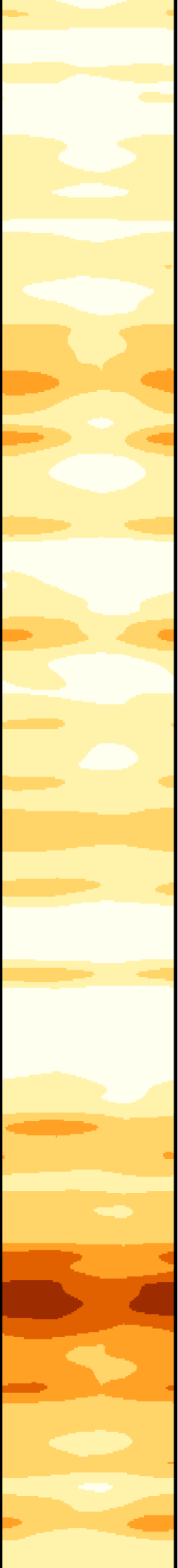
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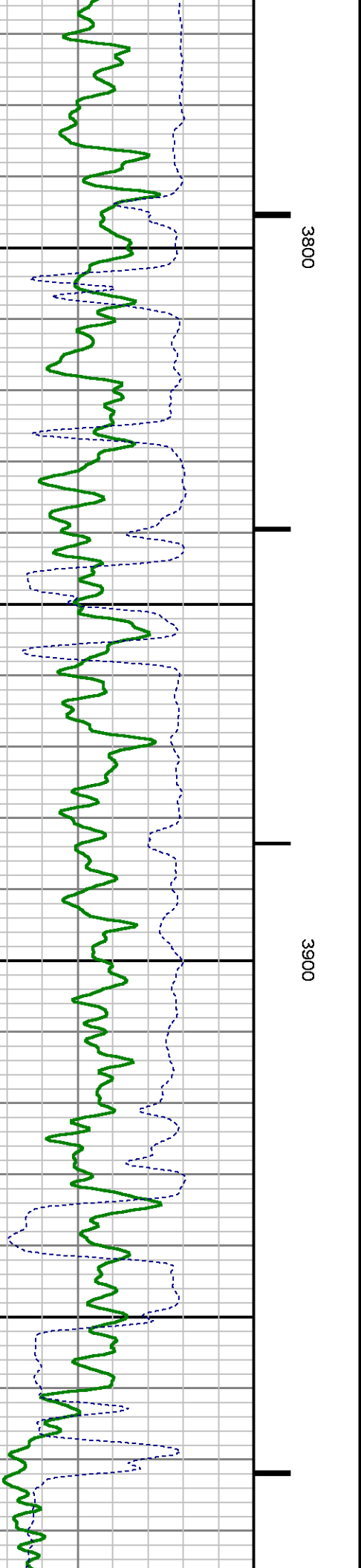
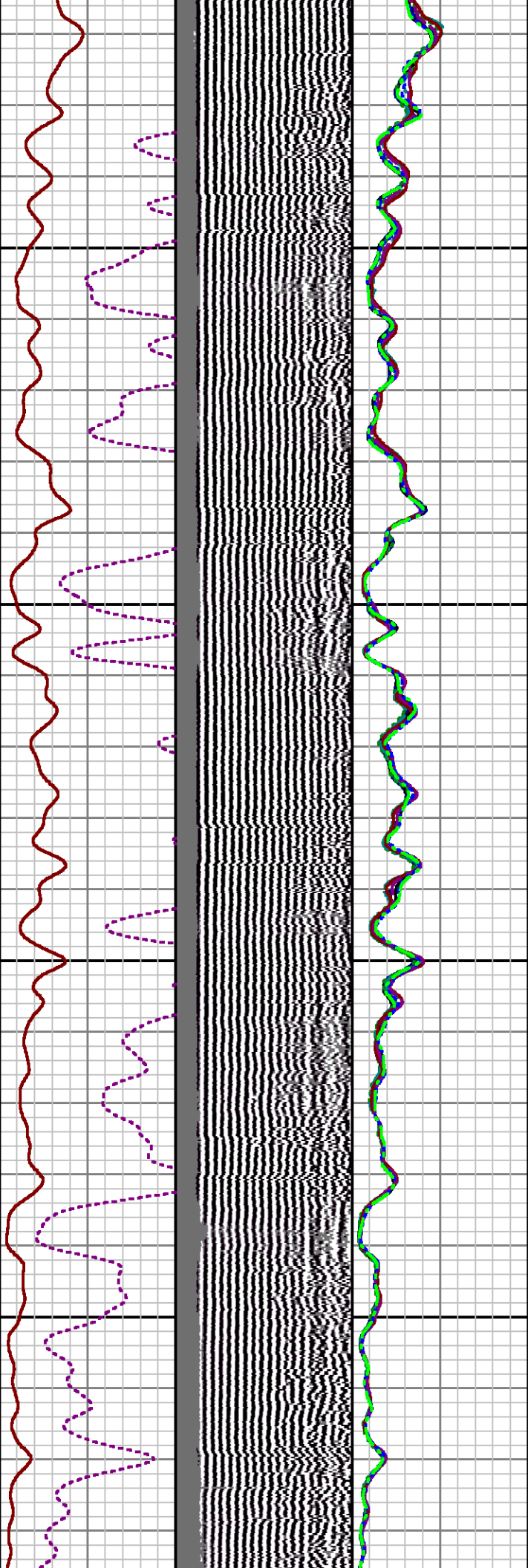
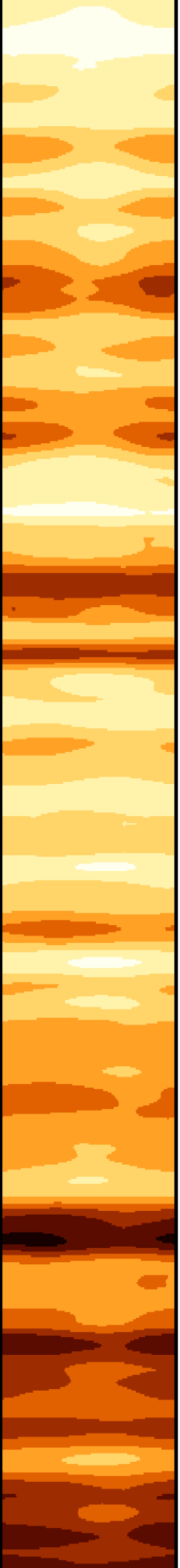
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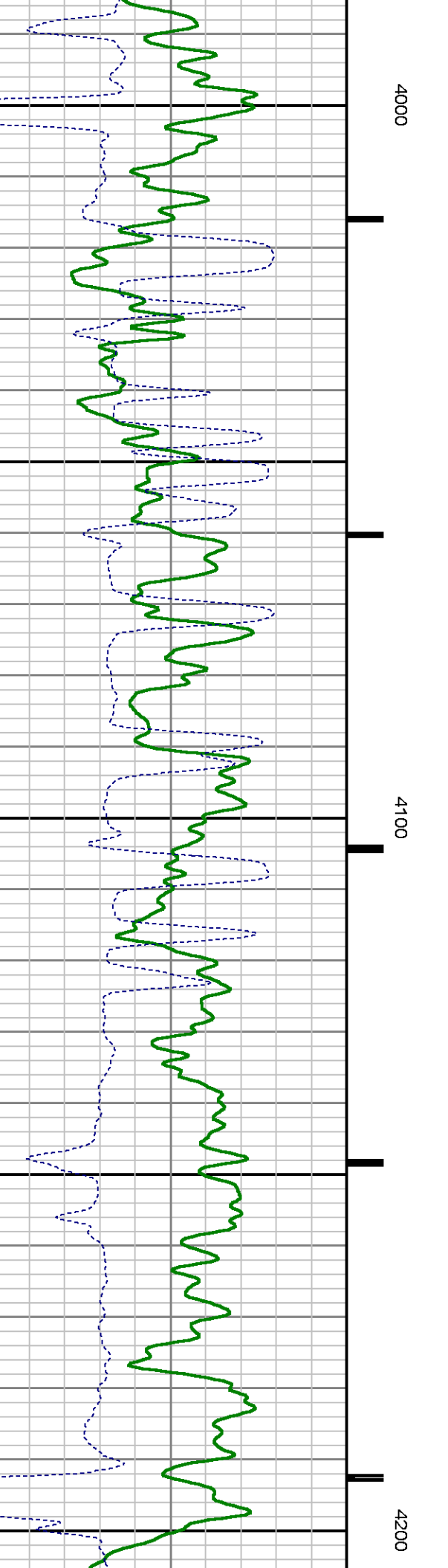
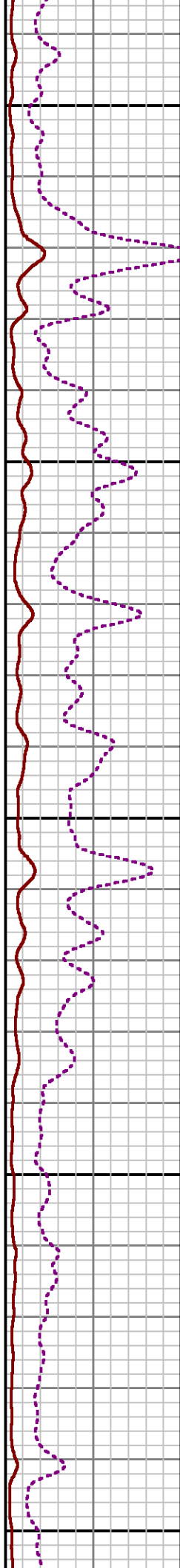
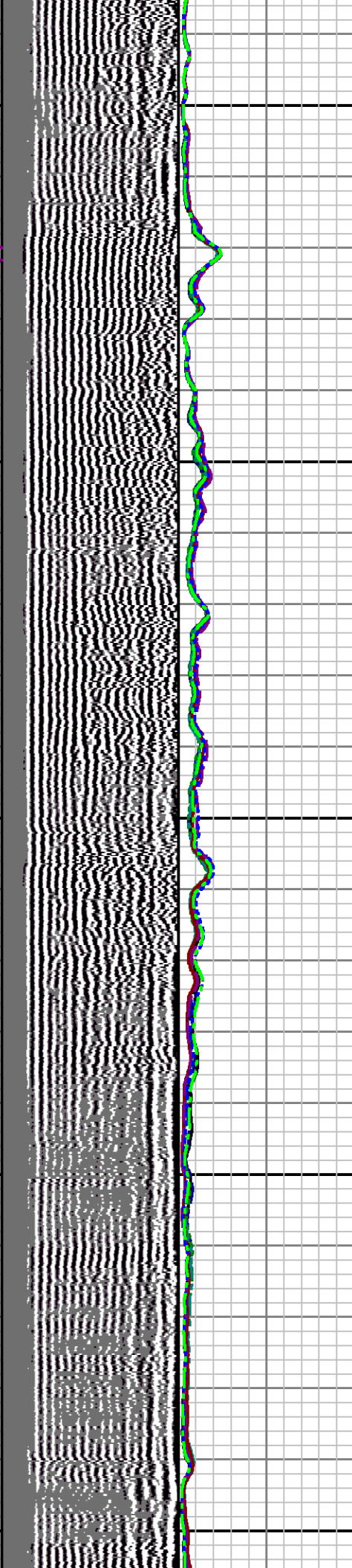


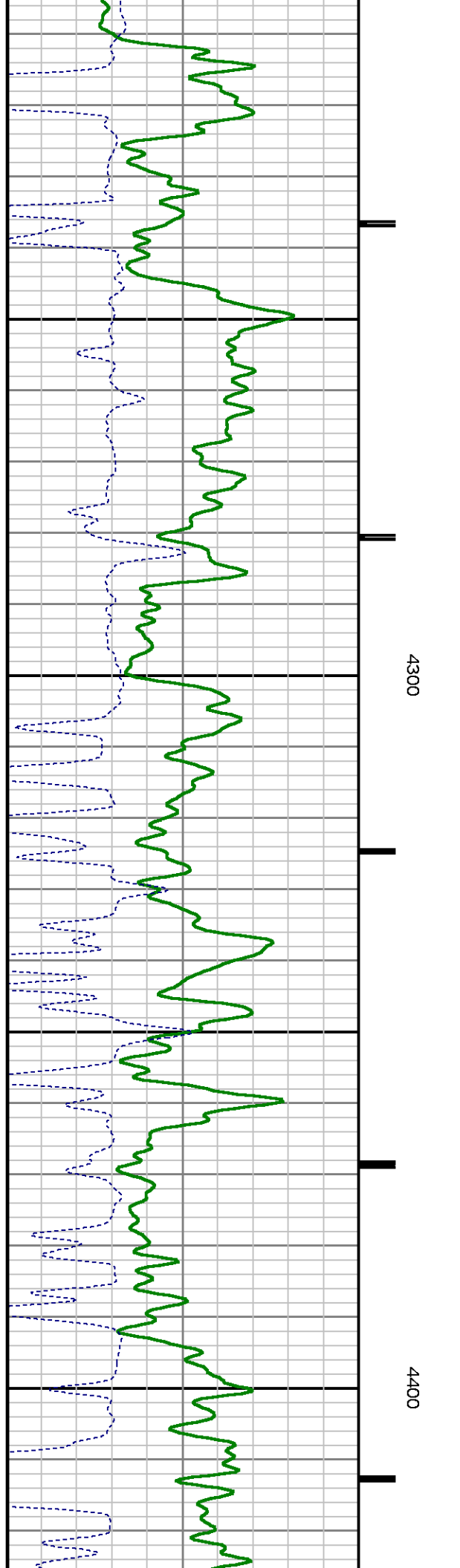
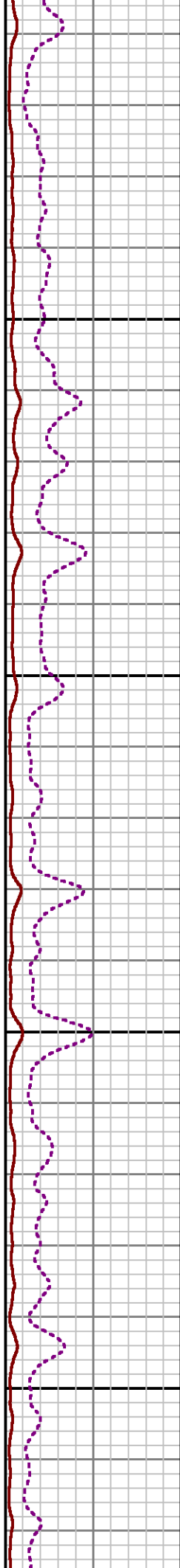
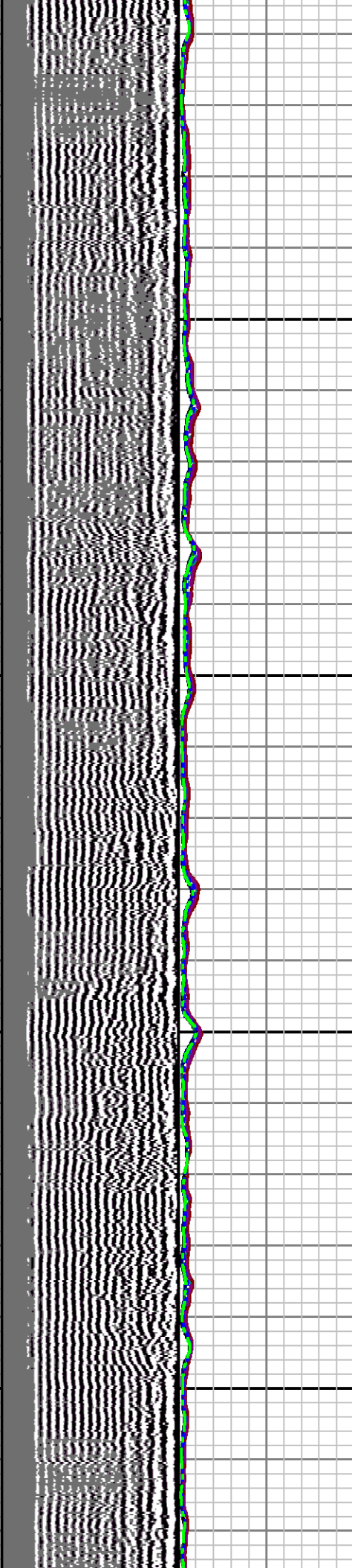




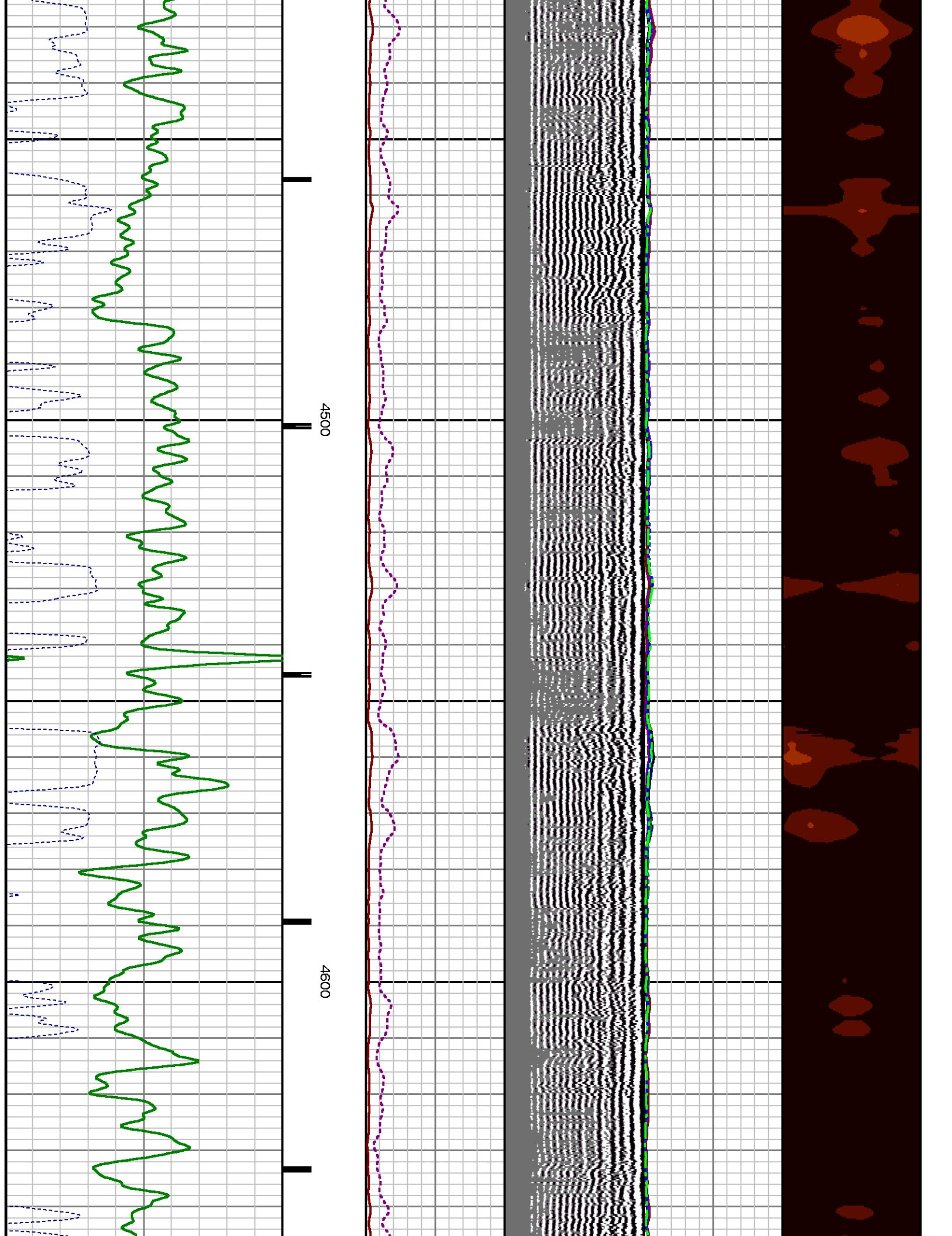


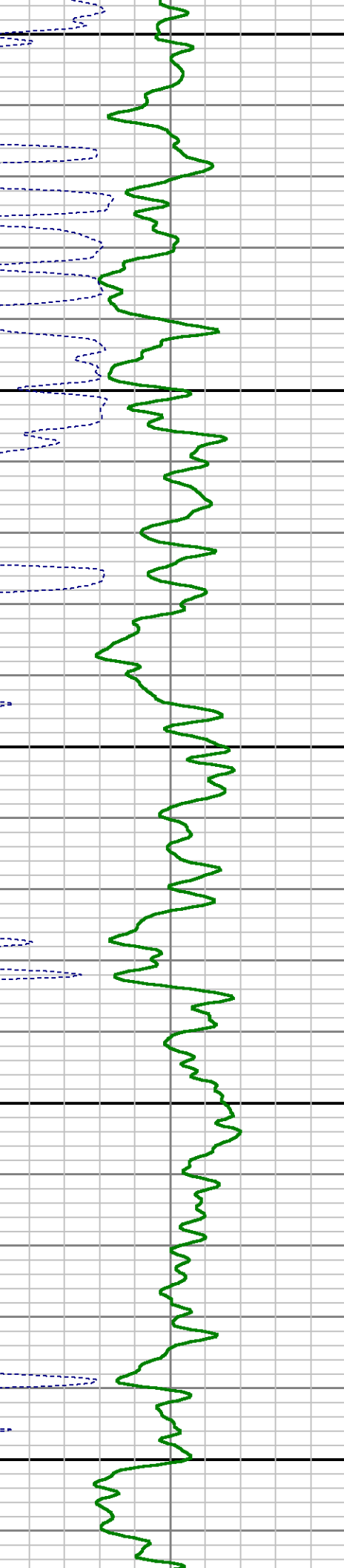
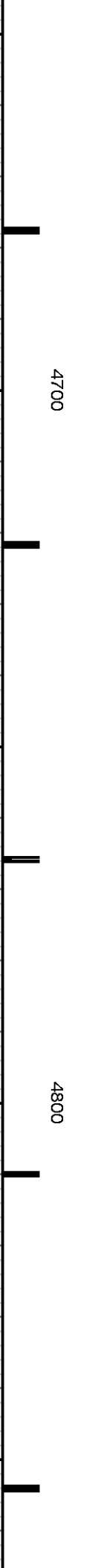
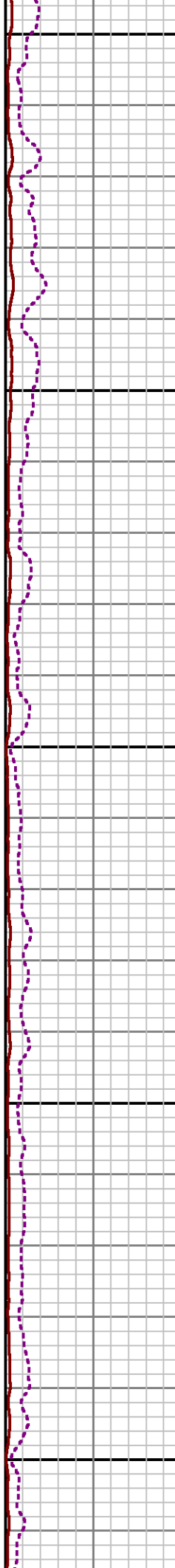
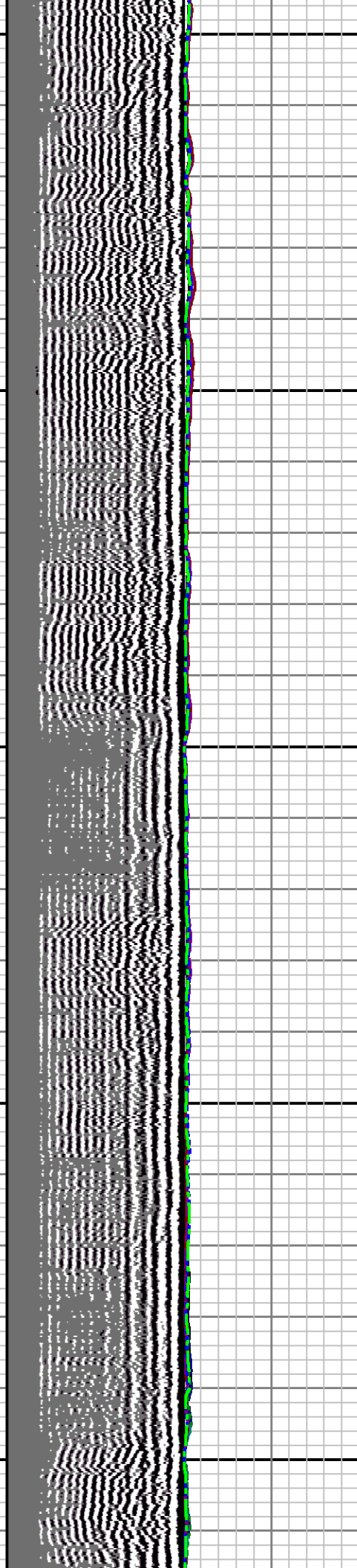


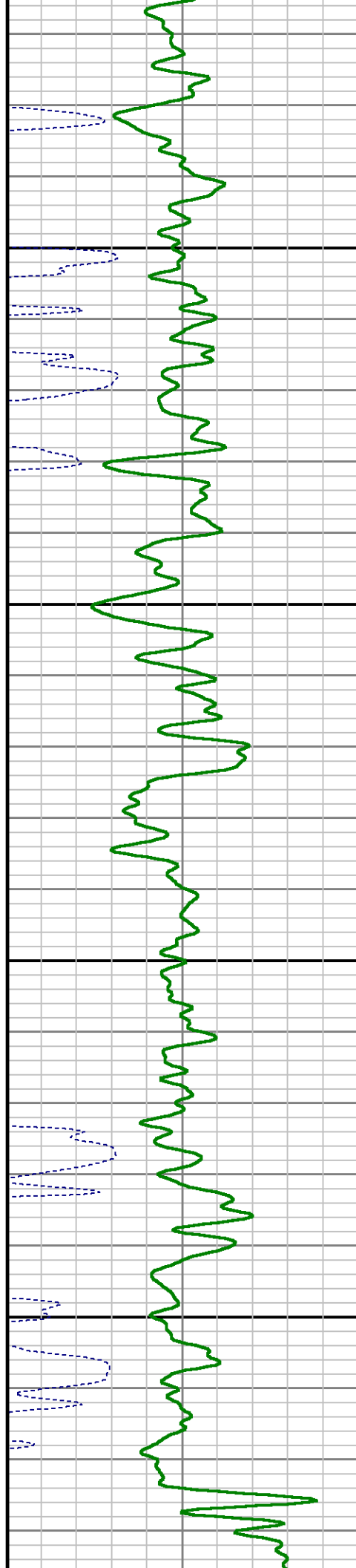
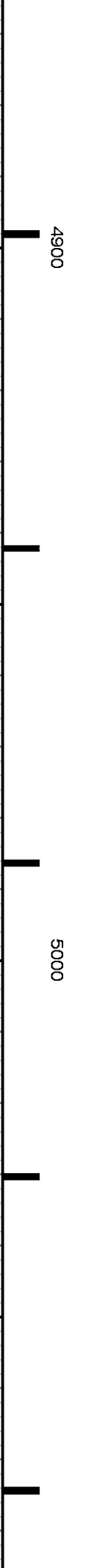
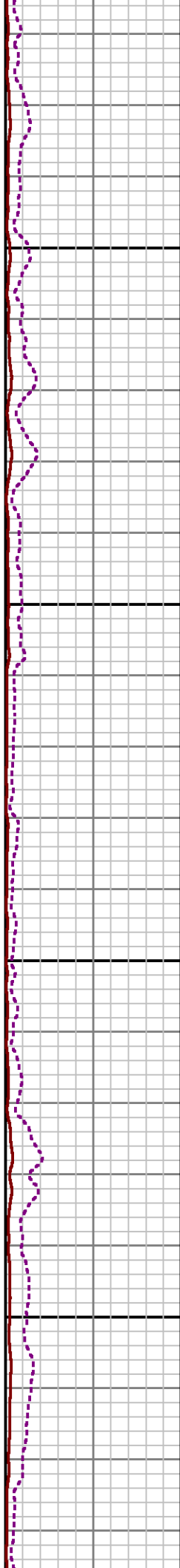
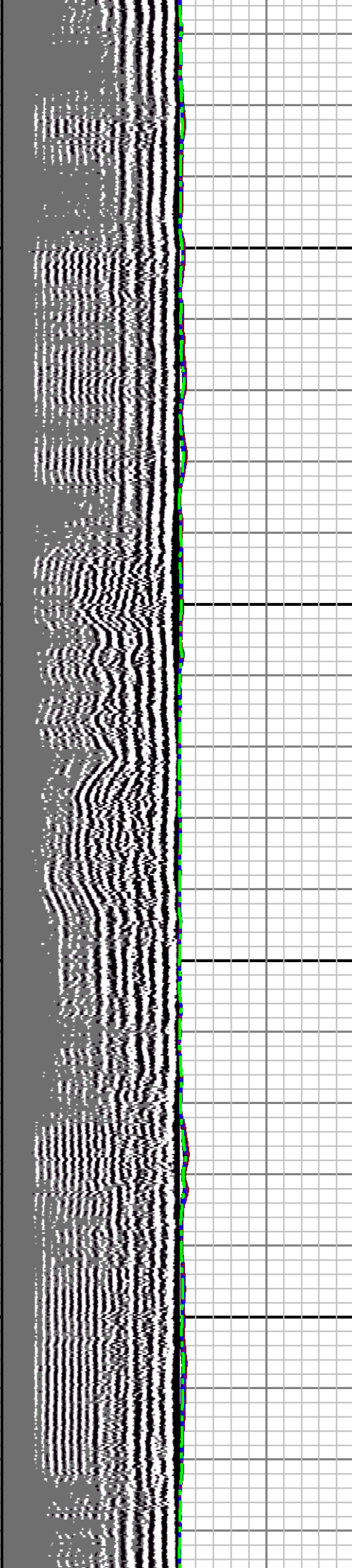


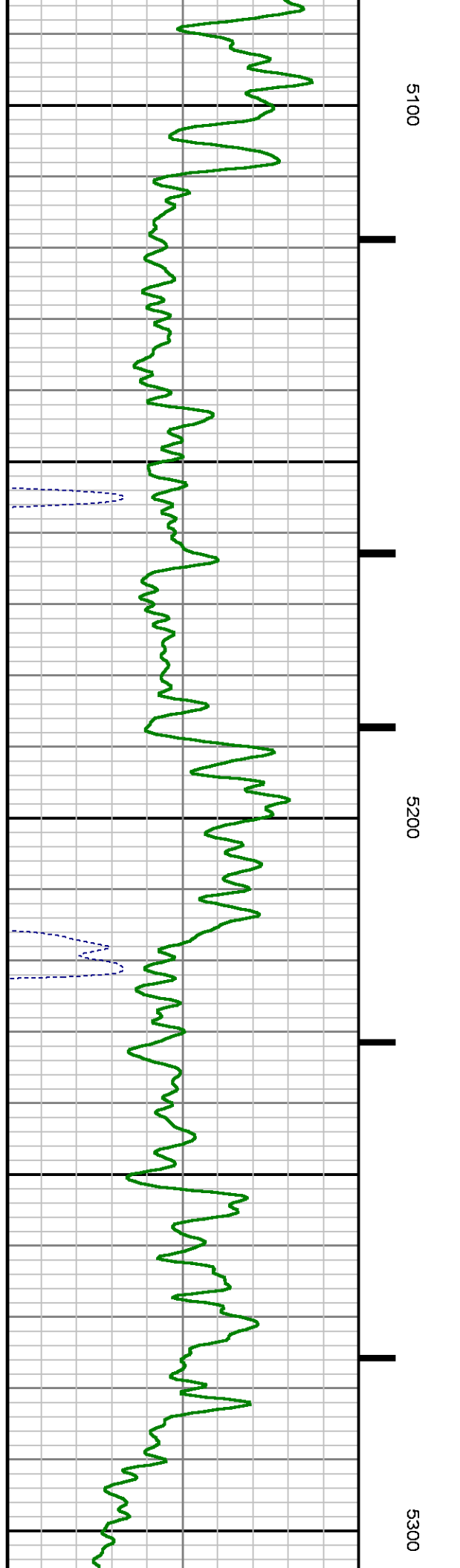
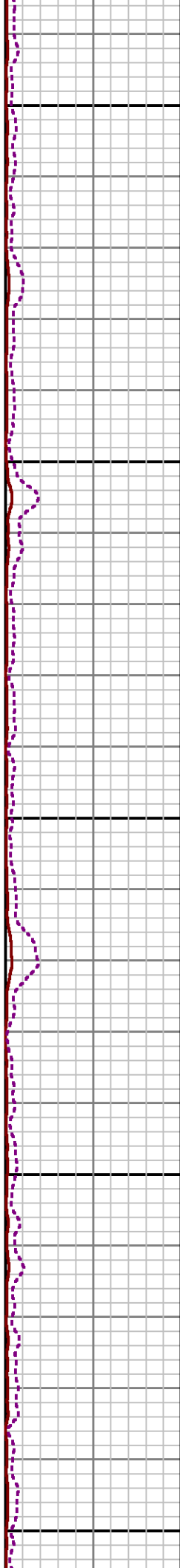
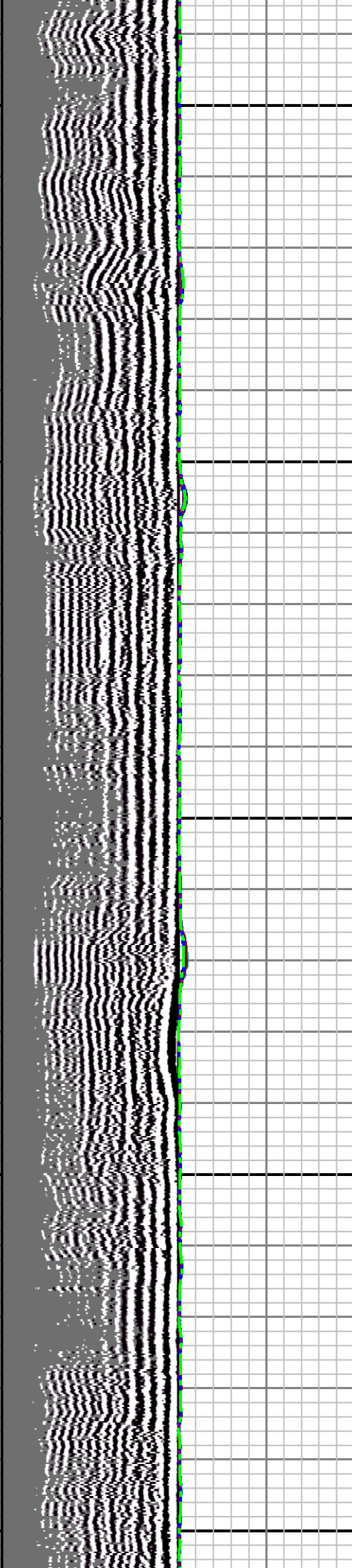


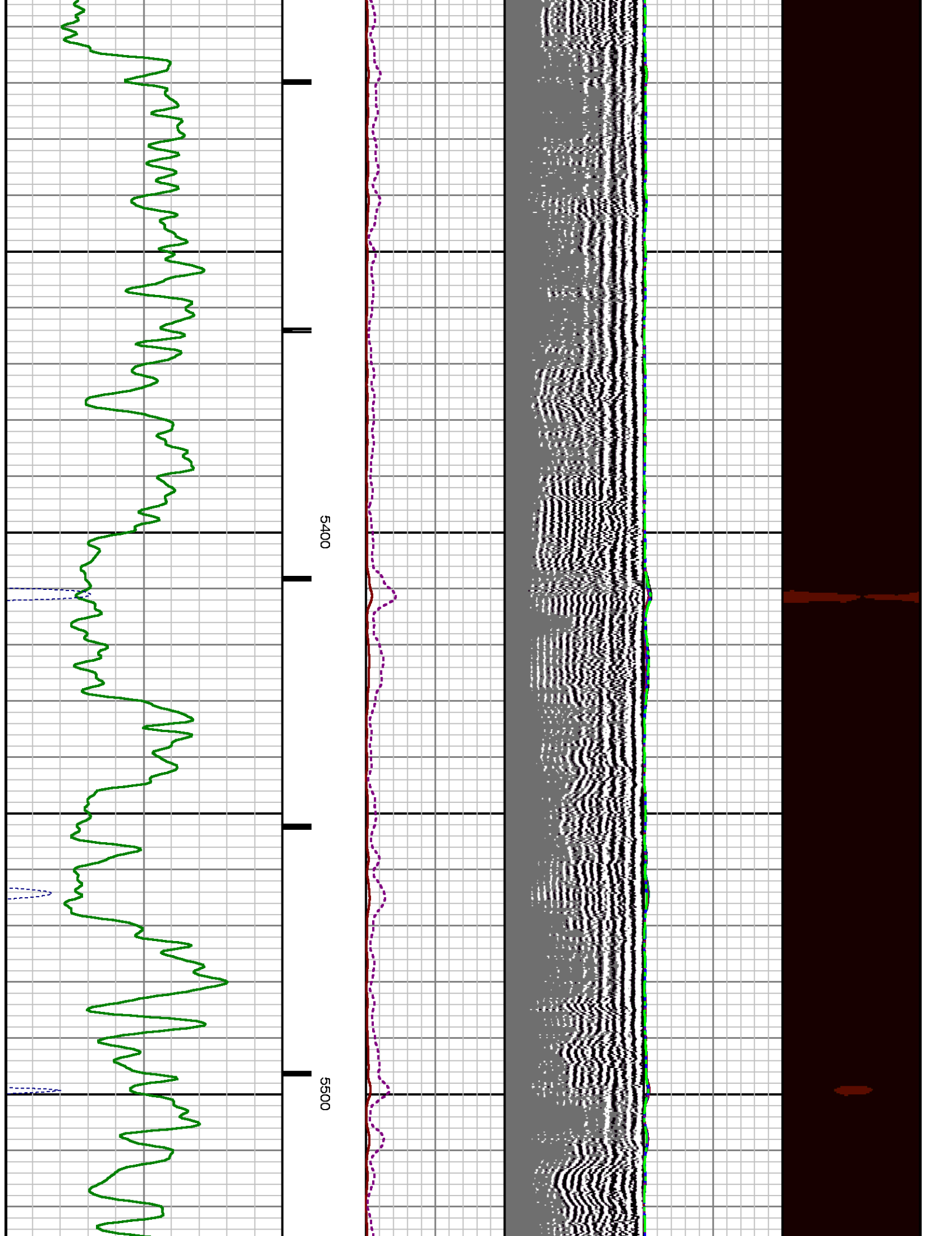




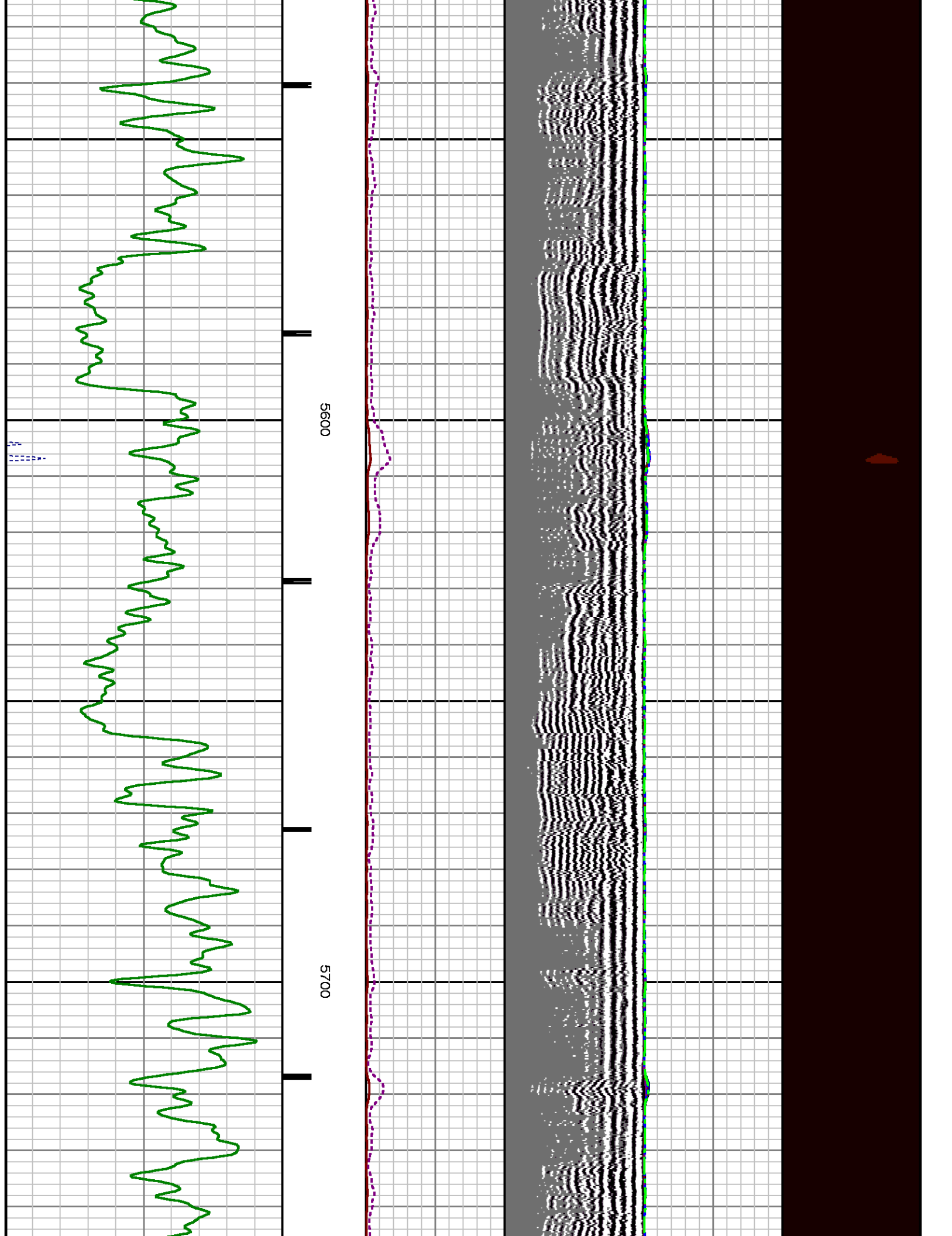




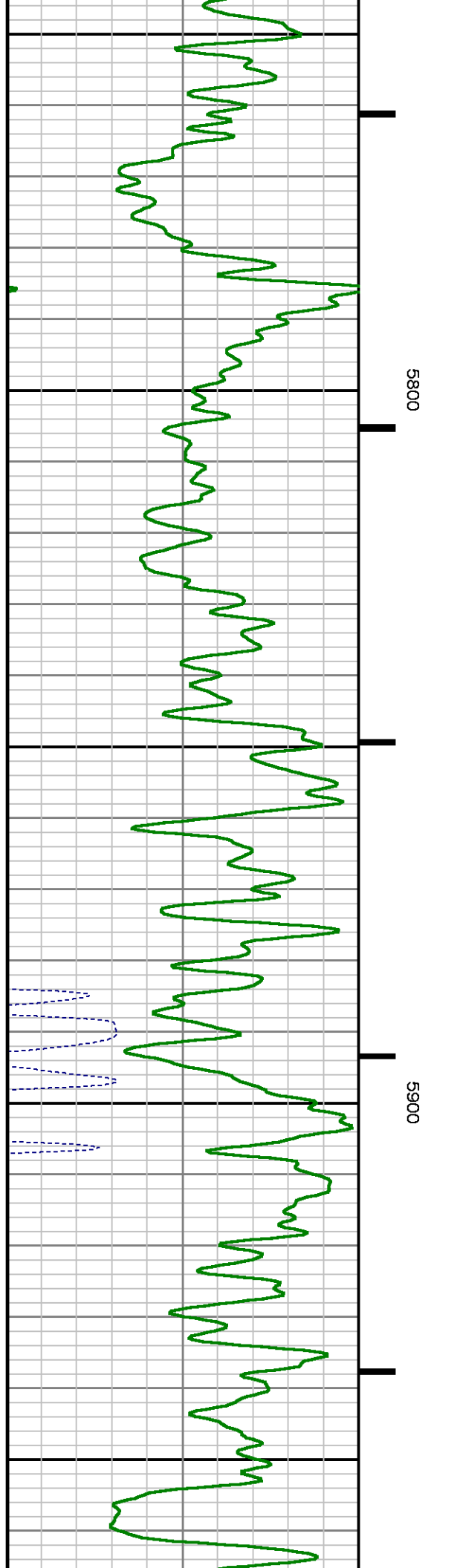
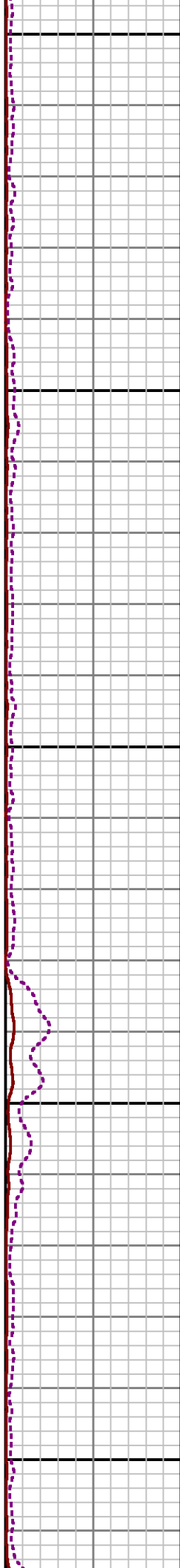
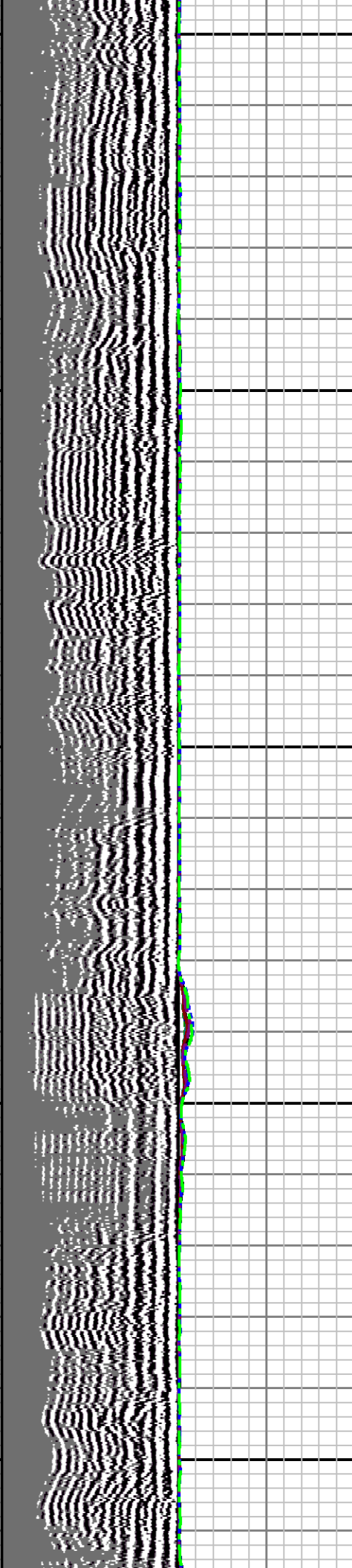


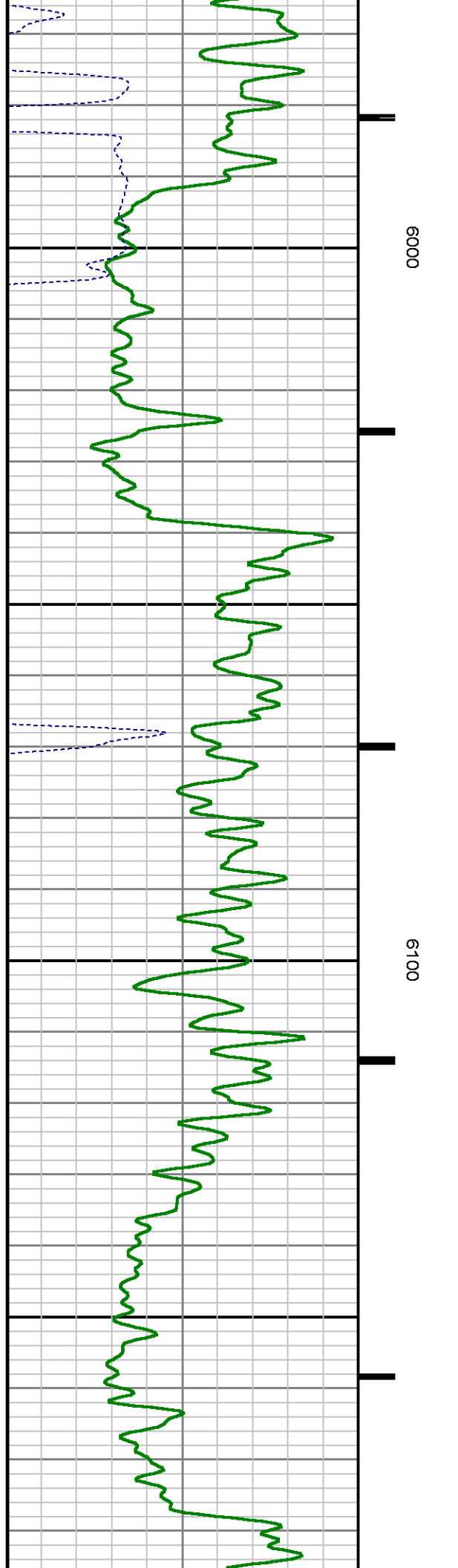
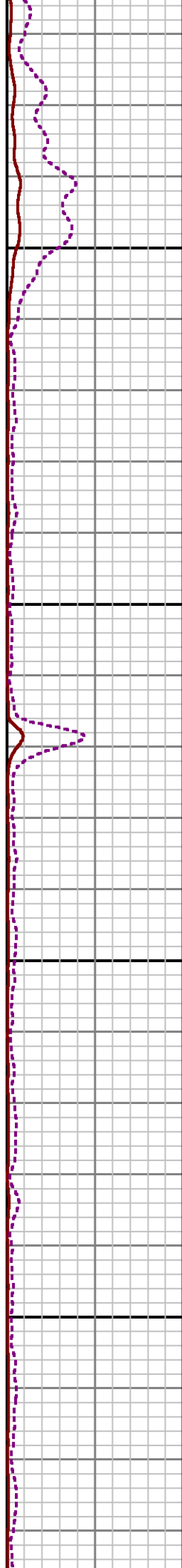
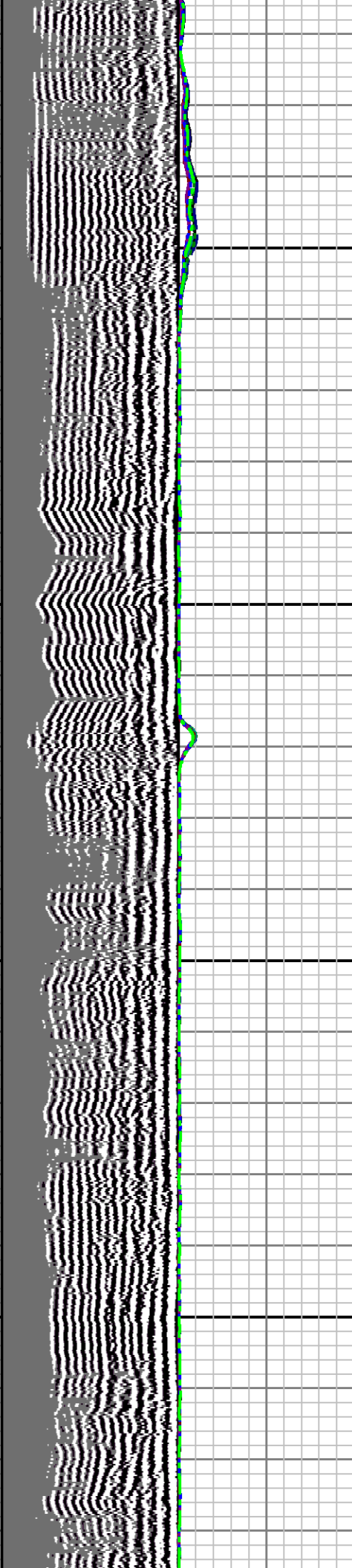


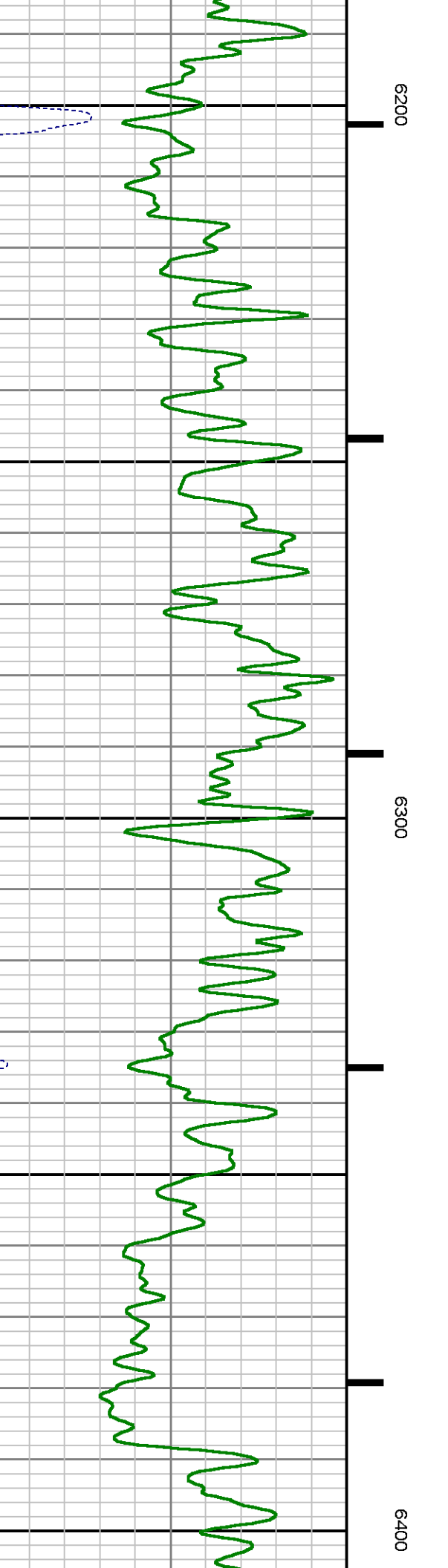
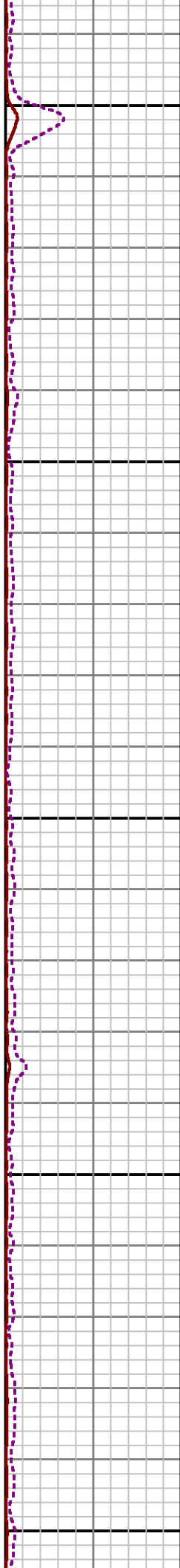
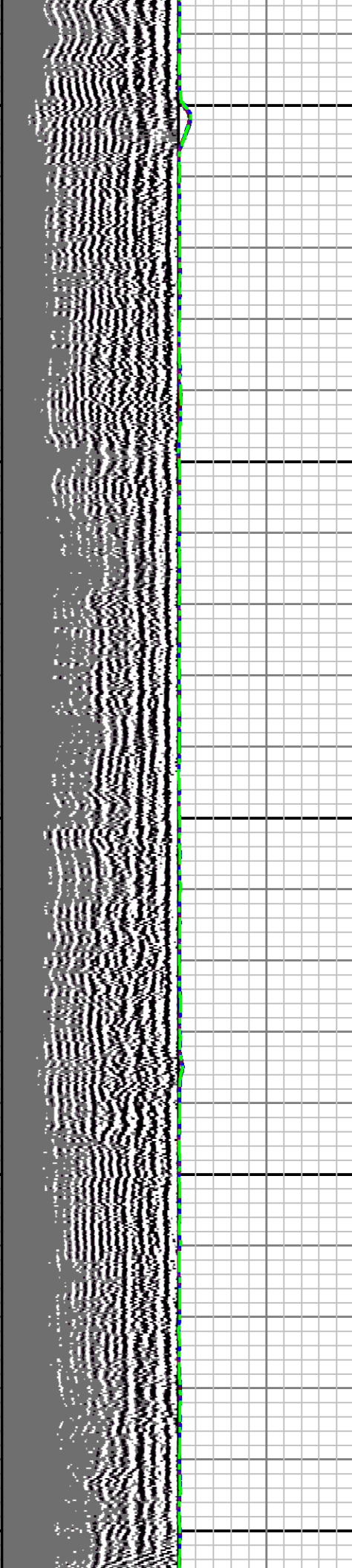


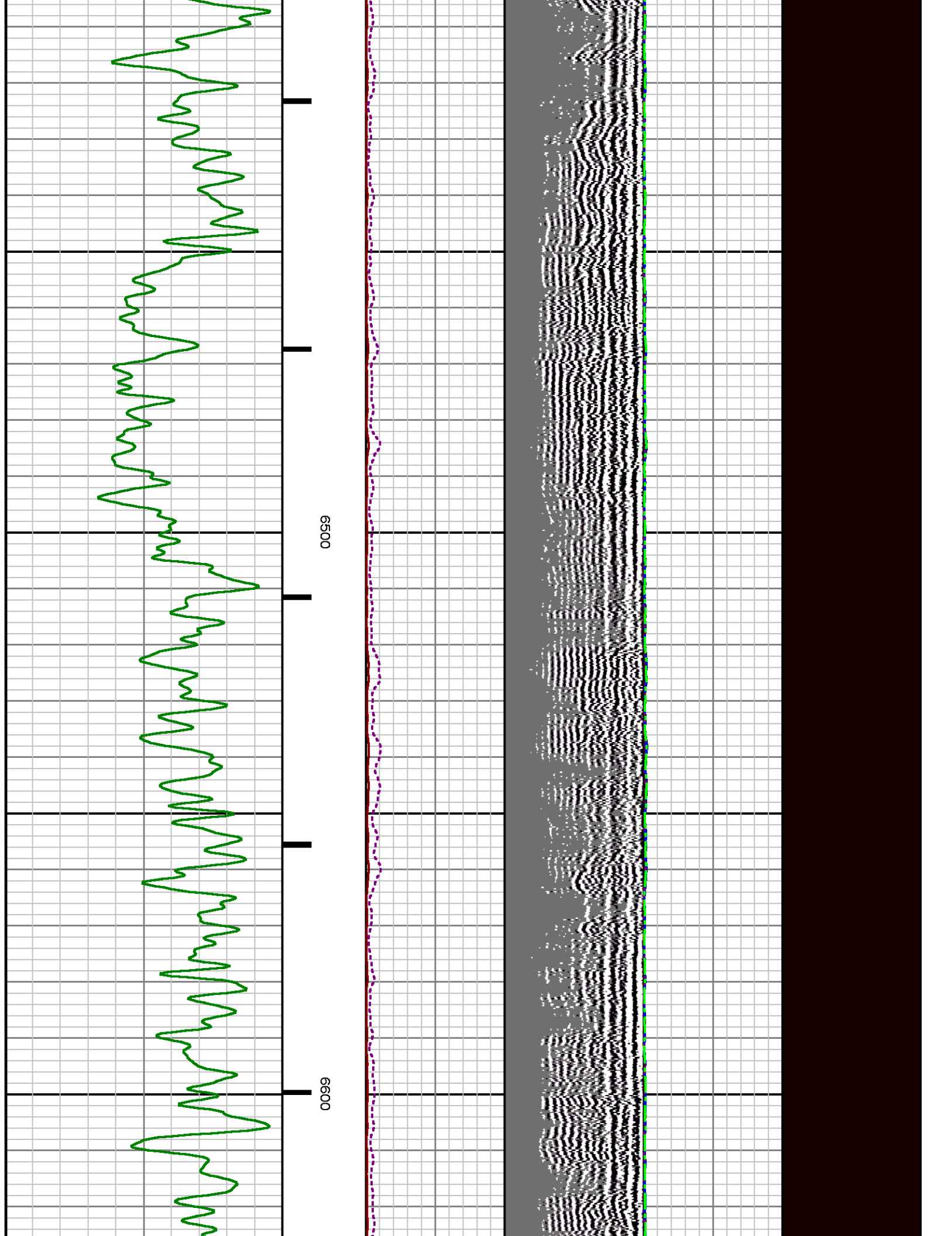


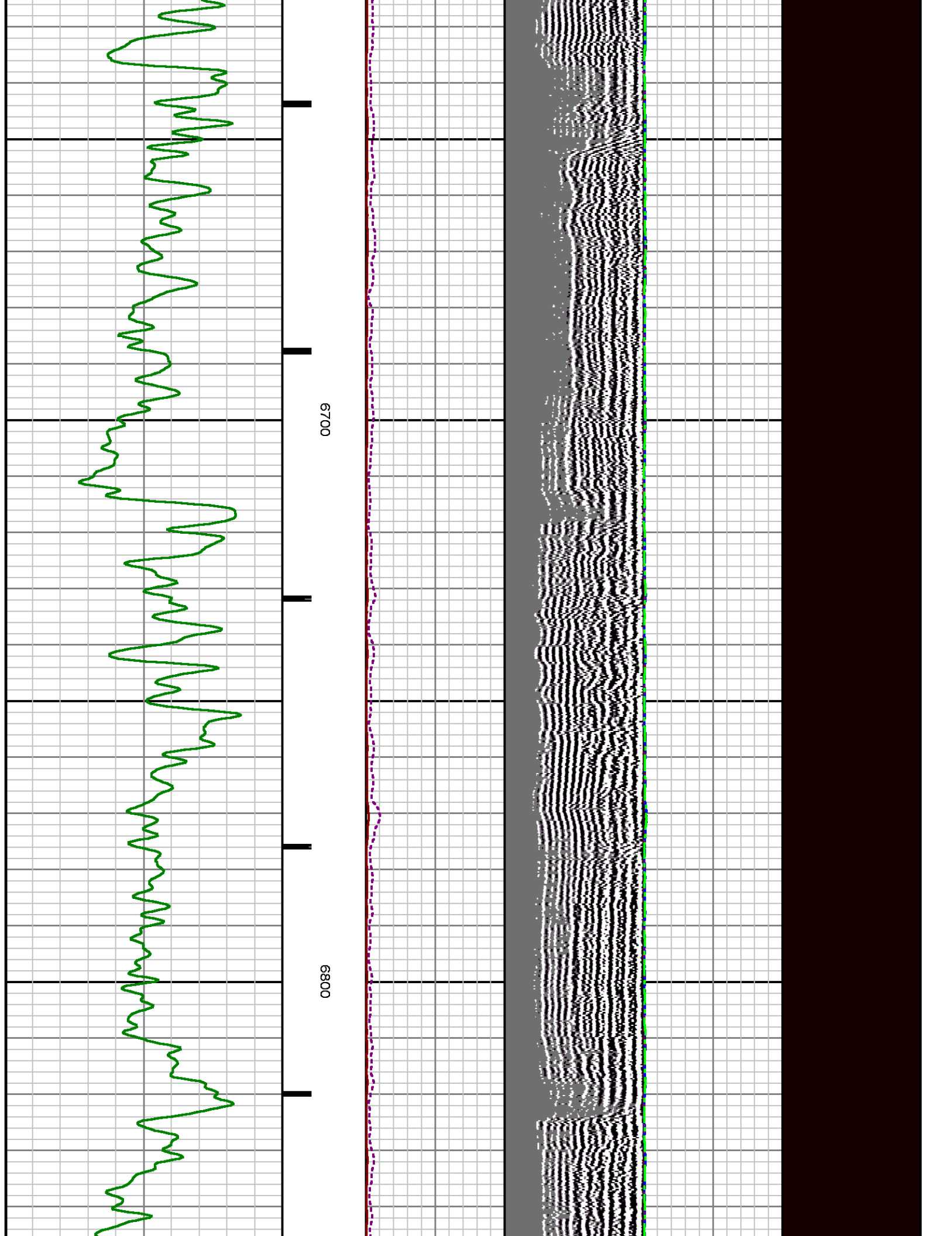




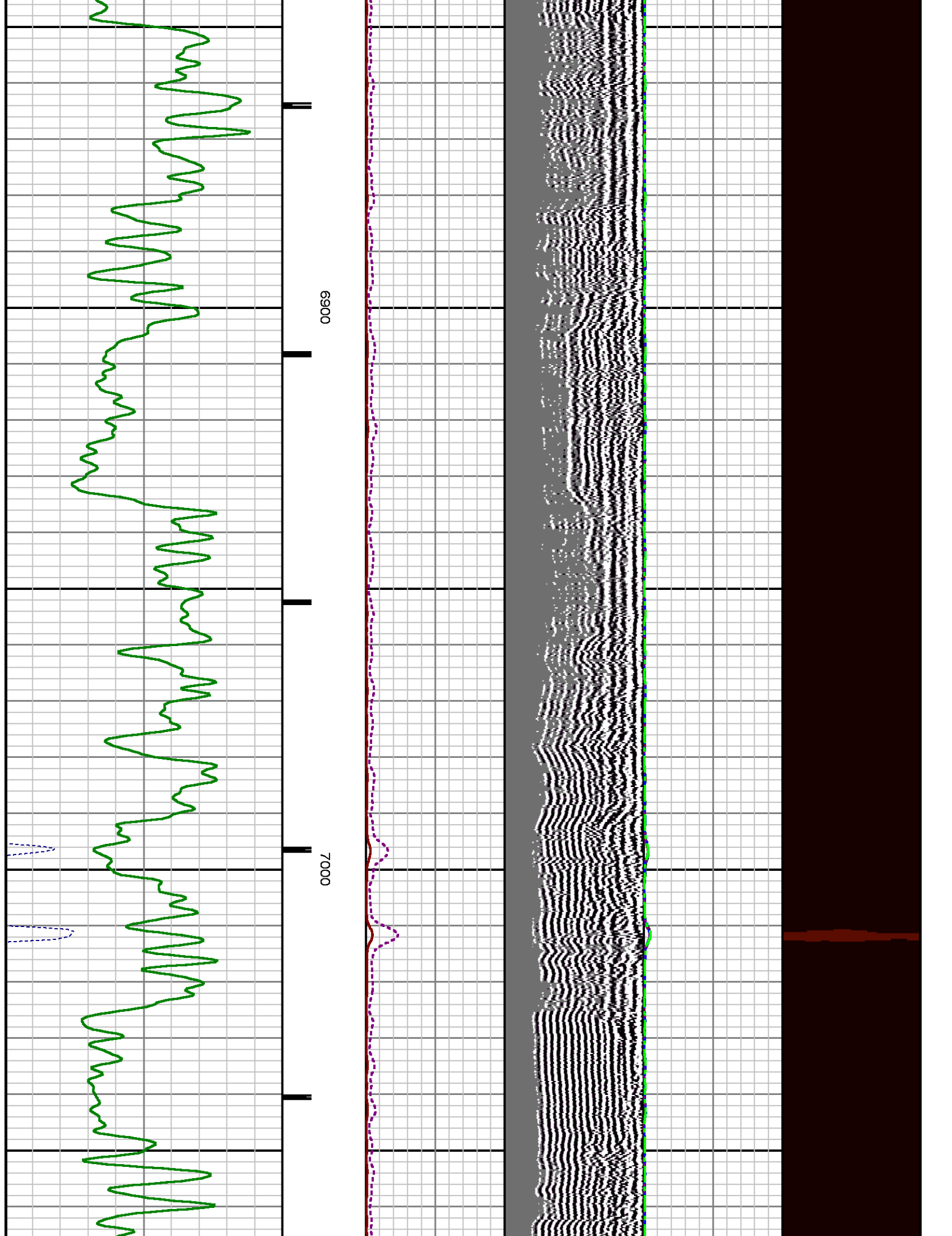




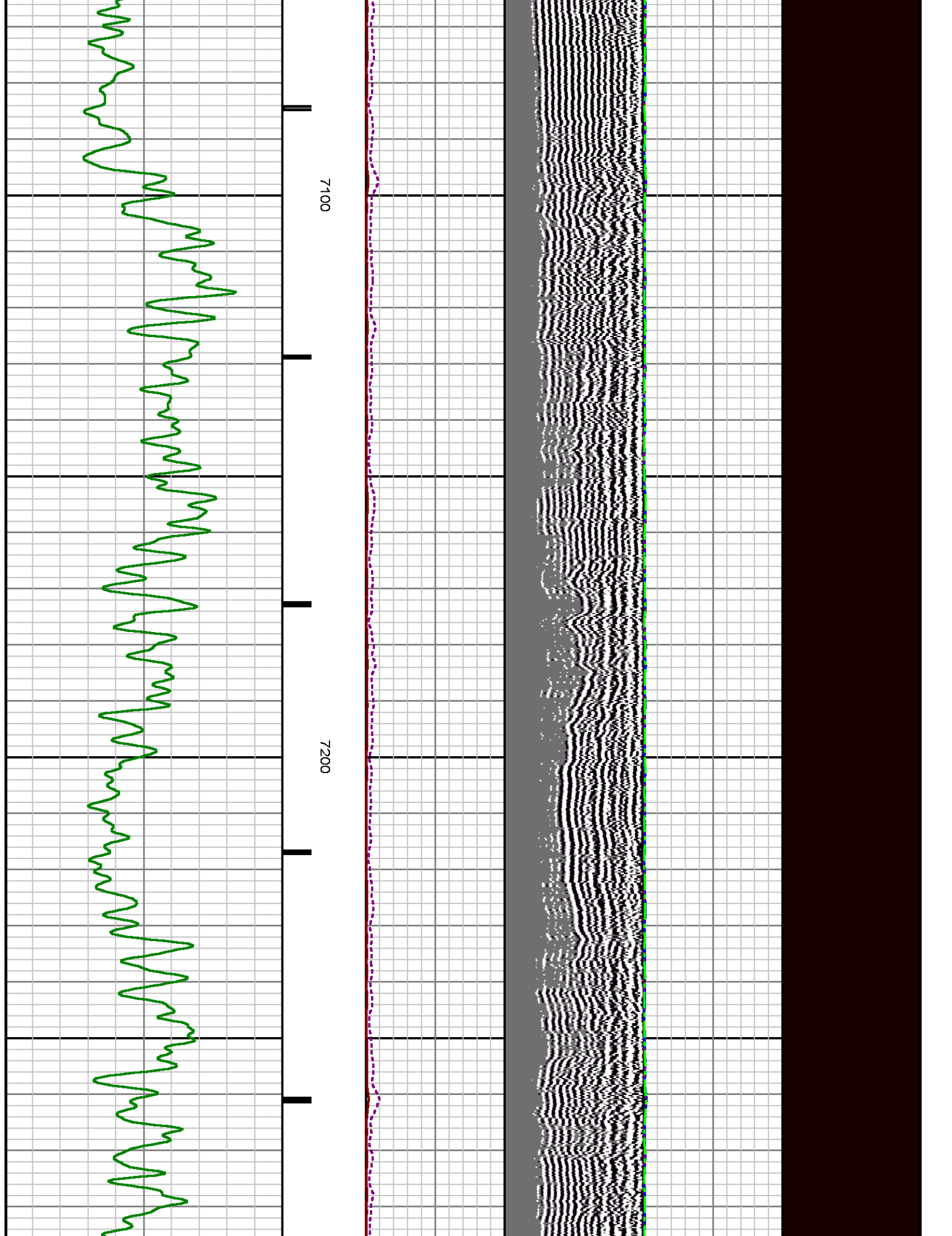


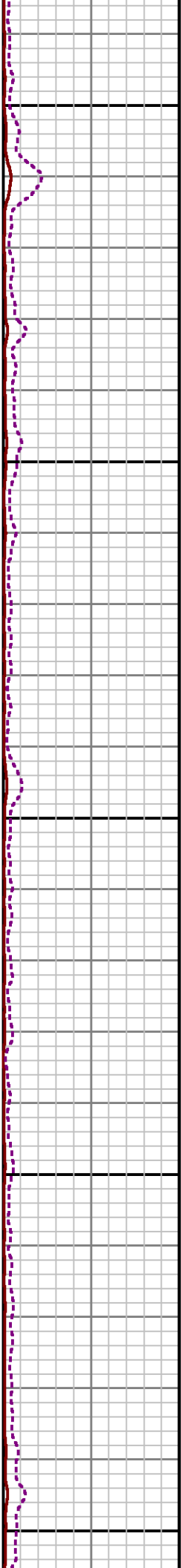
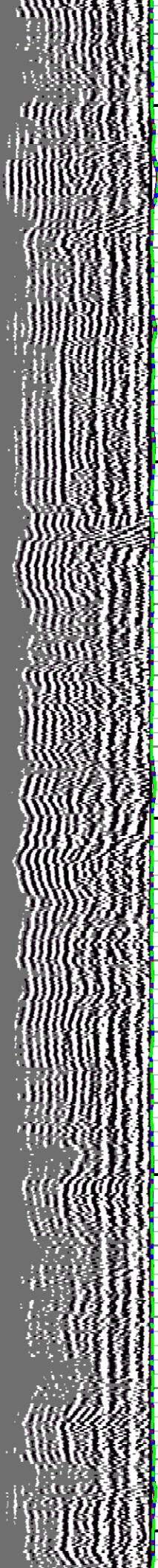








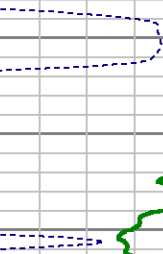


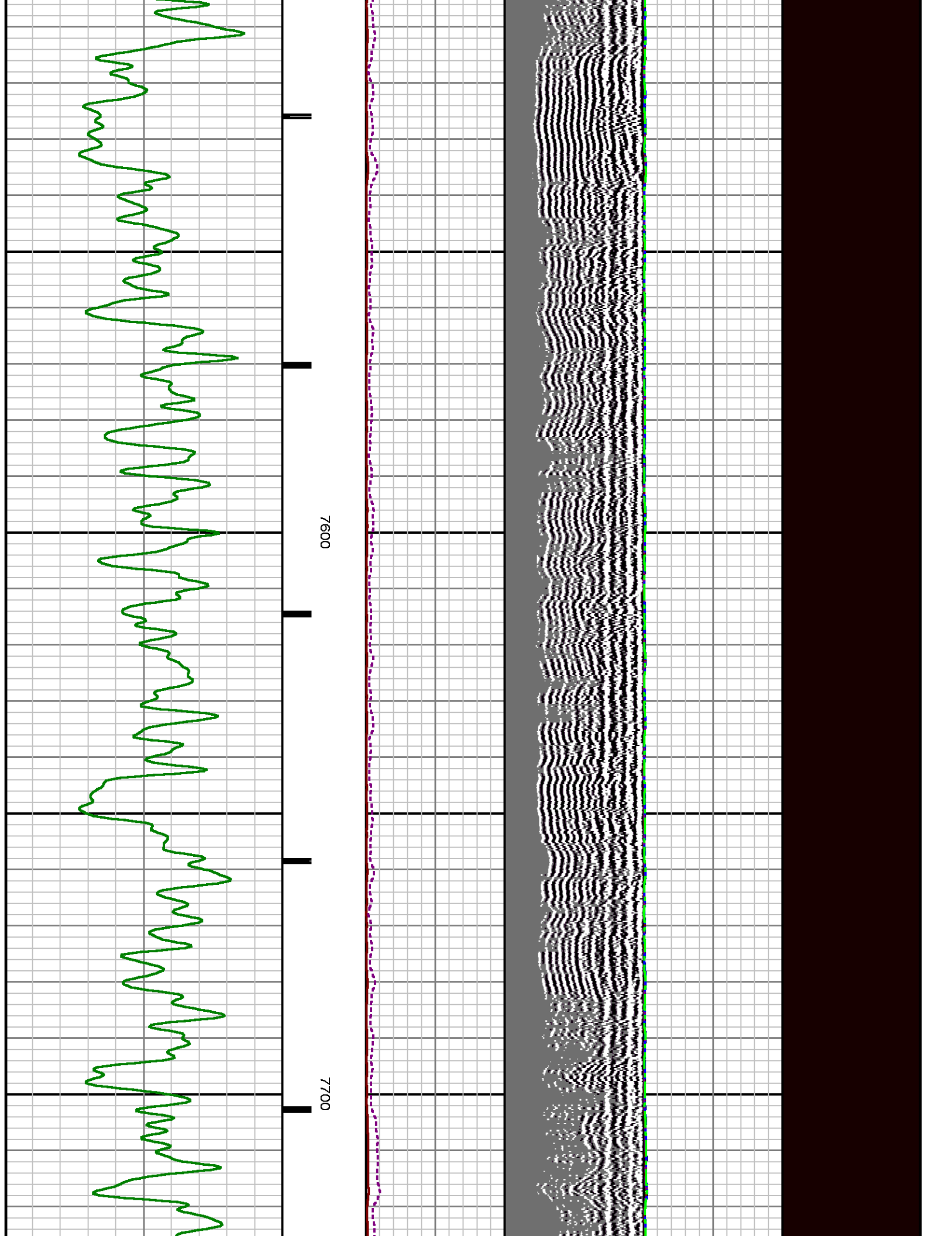


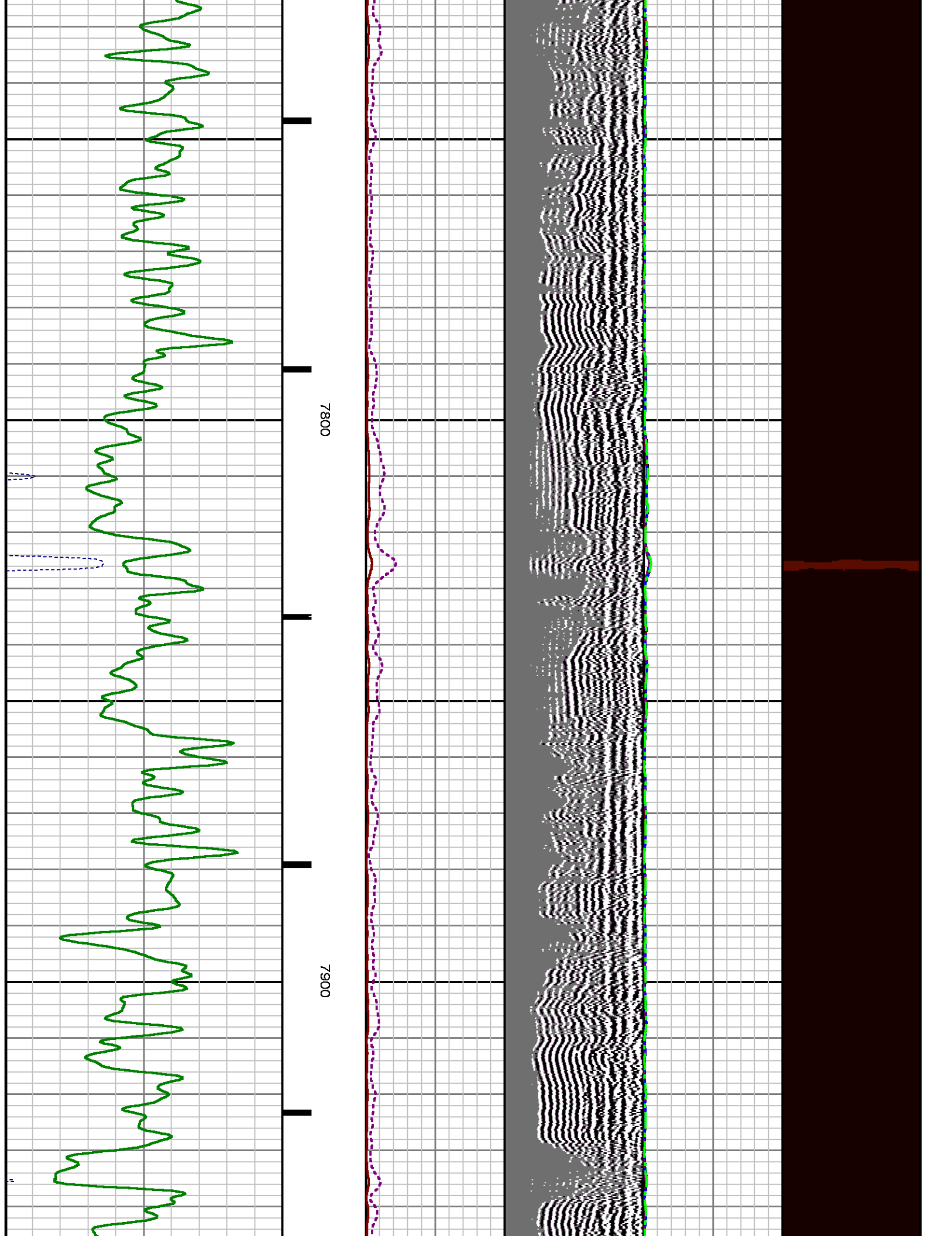
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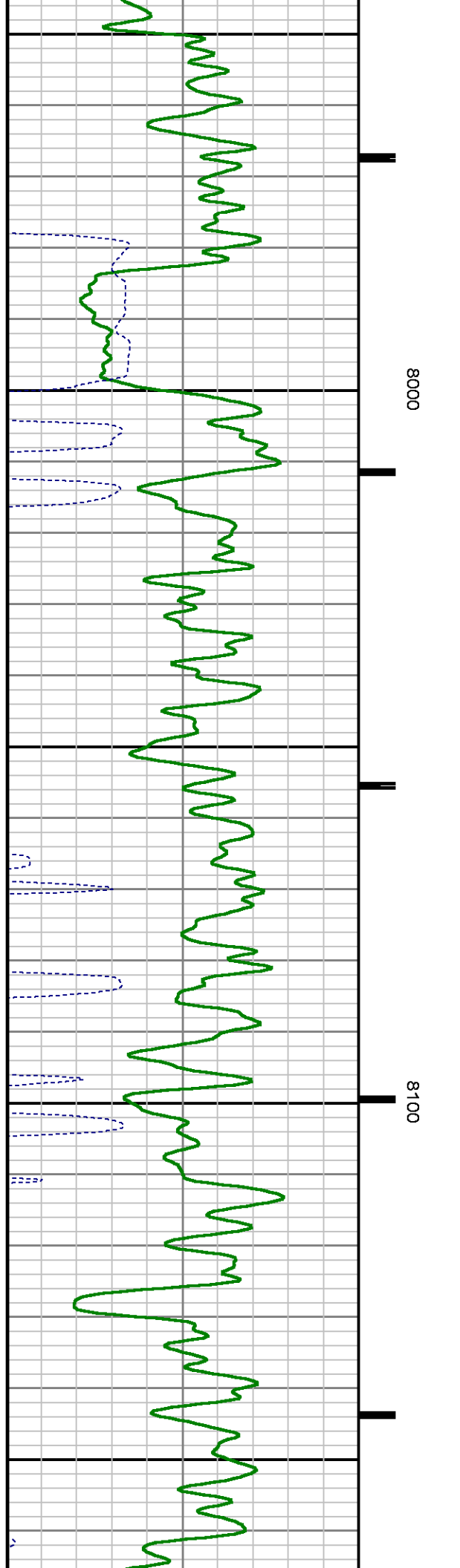
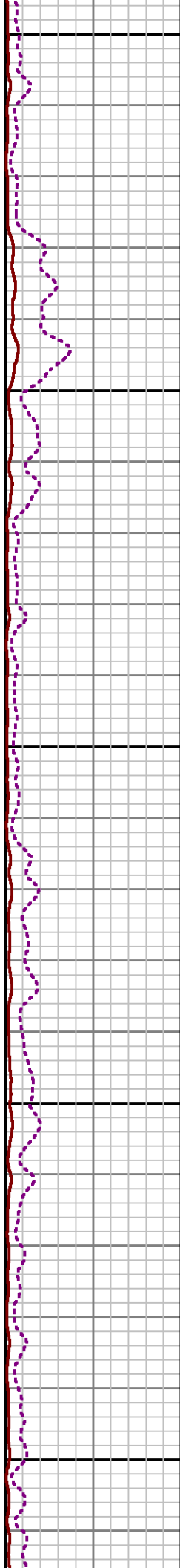
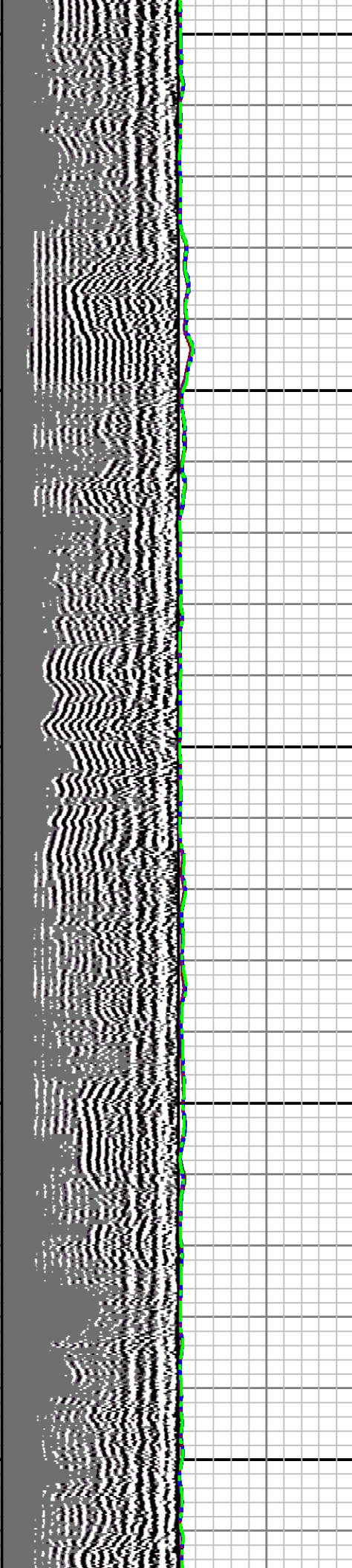
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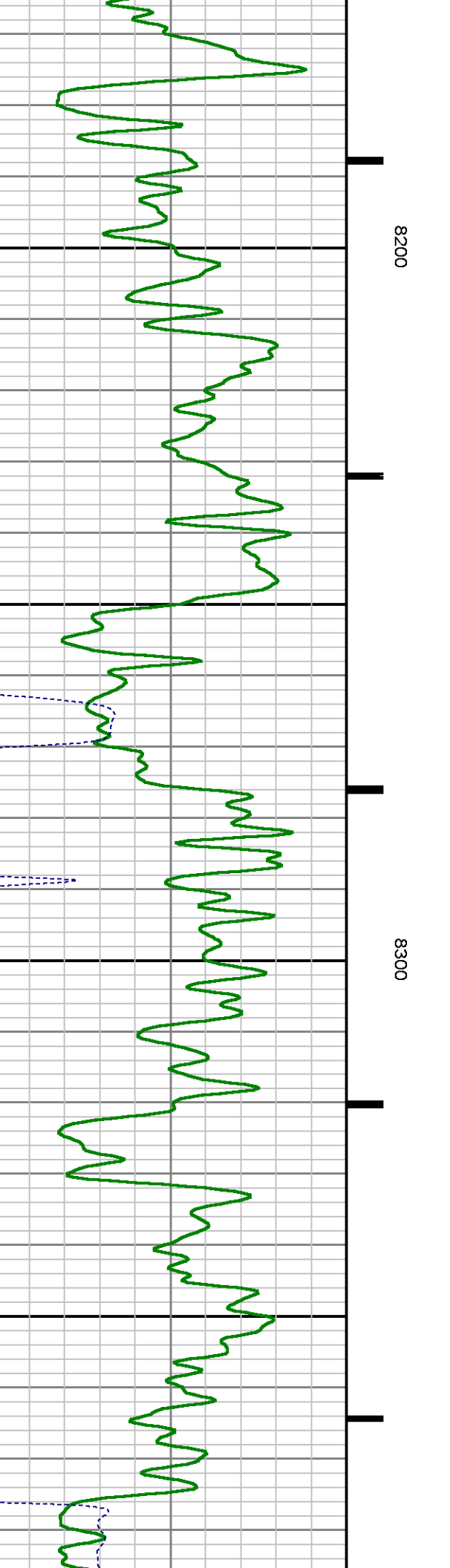
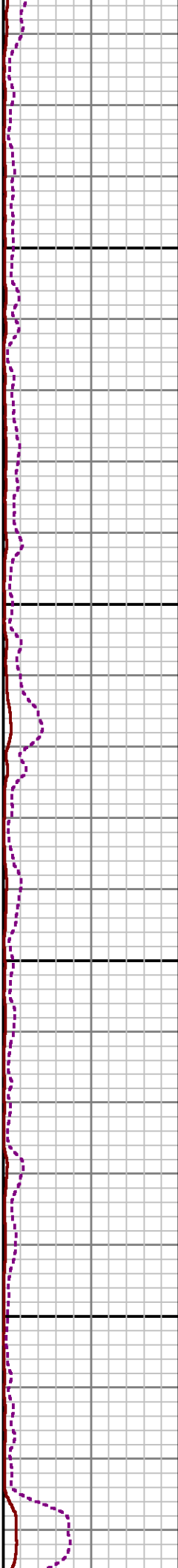
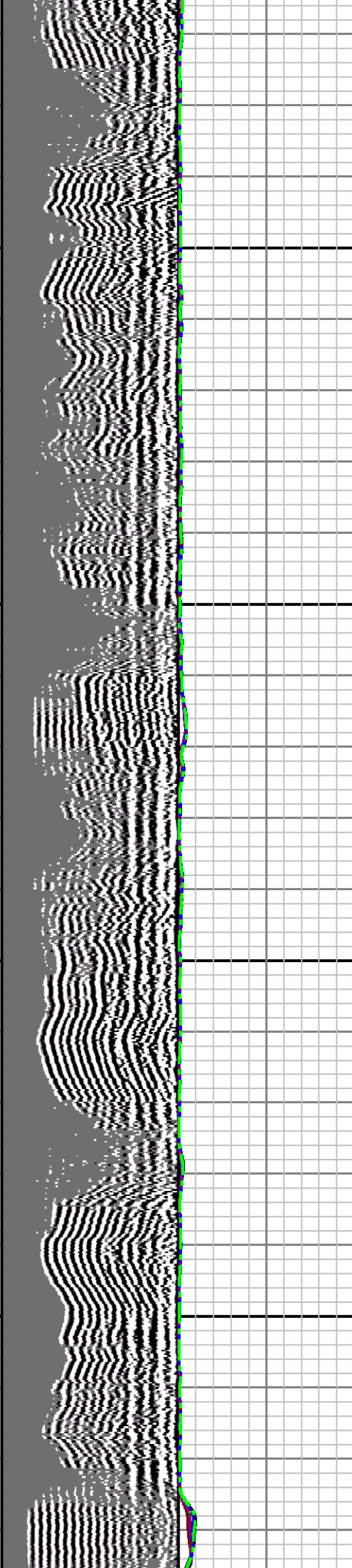




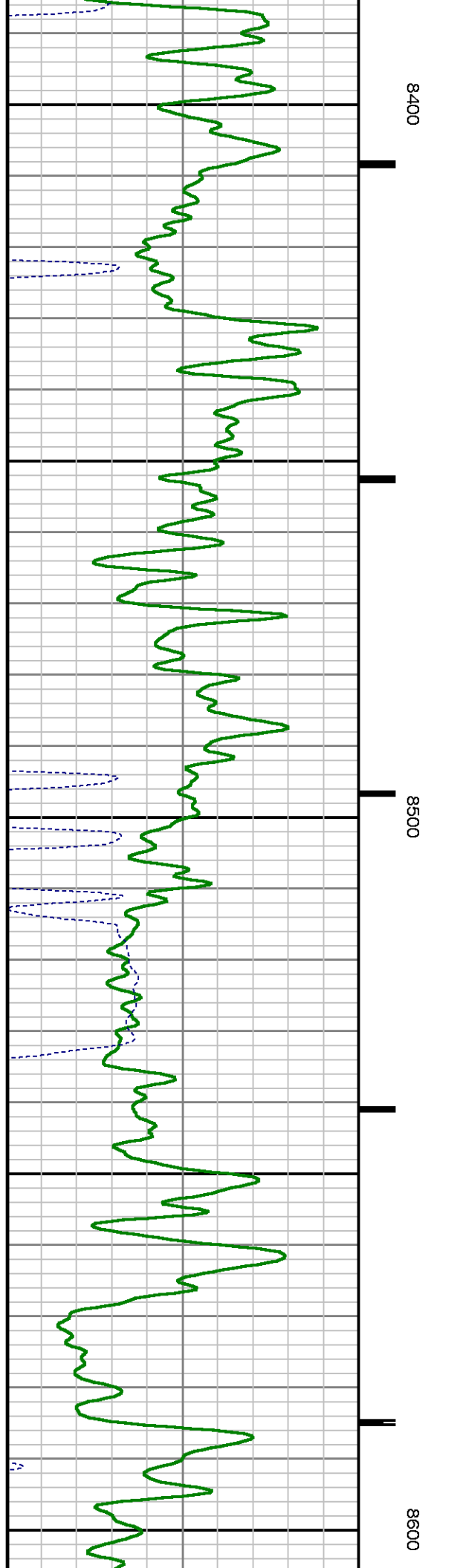
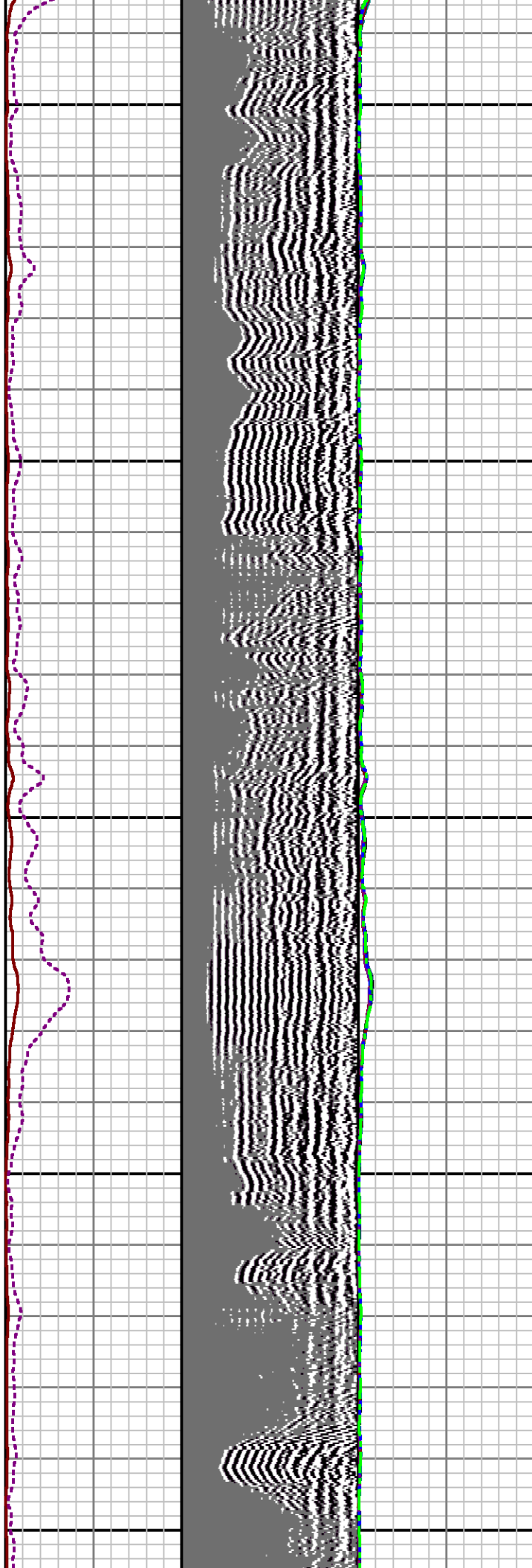


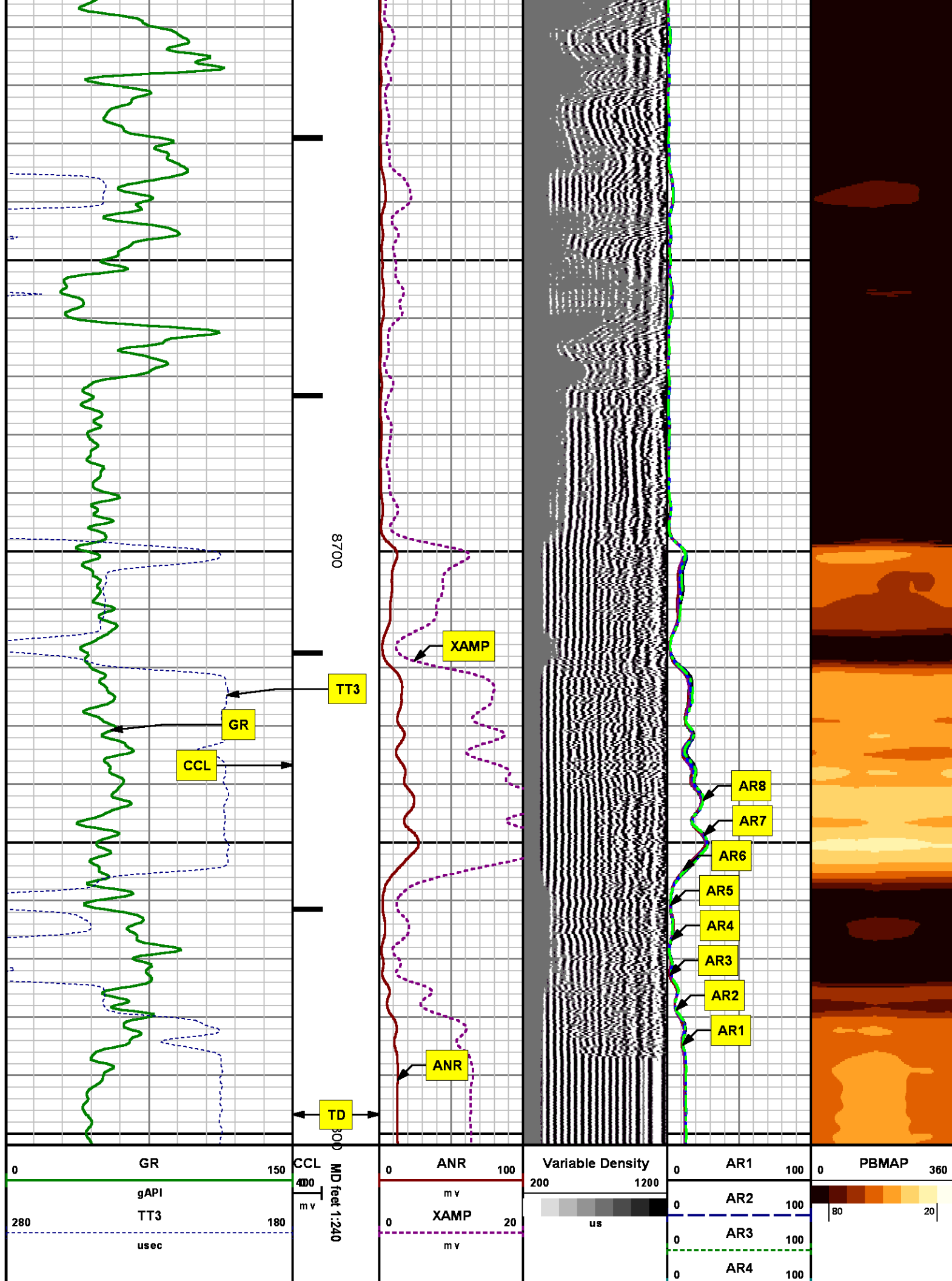












0	AR5	100
0	AR6	100
0	AR7	100
0	AR8	100

REPEAT SECTION  
 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8483.784	8820.010
RAL	Amp Gate Start Near	195.000	usec	8483.784	8820.010
RAL	Amp Gate Start Radial	195.000	usec	8483.784	8820.010
RAL	Amp Gate Width Far	25.000	usec	8483.784	8820.010
RAL	Amp Gate Width Near	25.000	usec	8483.784	8820.010
RAL	Amp Gate Width Radial	25.000	usec	8483.784	8820.010
RAL	casing od	4.500	inches	8483.784	8820.010
RAL	casing wt	11.600	lbm/ft	8483.784	8820.010
RAL	FB Start Far	291.900	usec	8483.784	8820.010
RAL	FB Start Near	175.391	usec	8483.784	8820.010
RAL	FB Start Radial	175.391	usec	8483.784	8820.010
RAL	FB Thresh Far	15.000	mv	8483.784	8820.010
RAL	FB Thresh Near	10.000	mv	8483.784	8820.010
RAL	FB Thresh Radial	10.000	mv	8483.784	8820.010
RAL	Fluid Travel Time	200.000	usec/ft	8483.784	8819.565

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

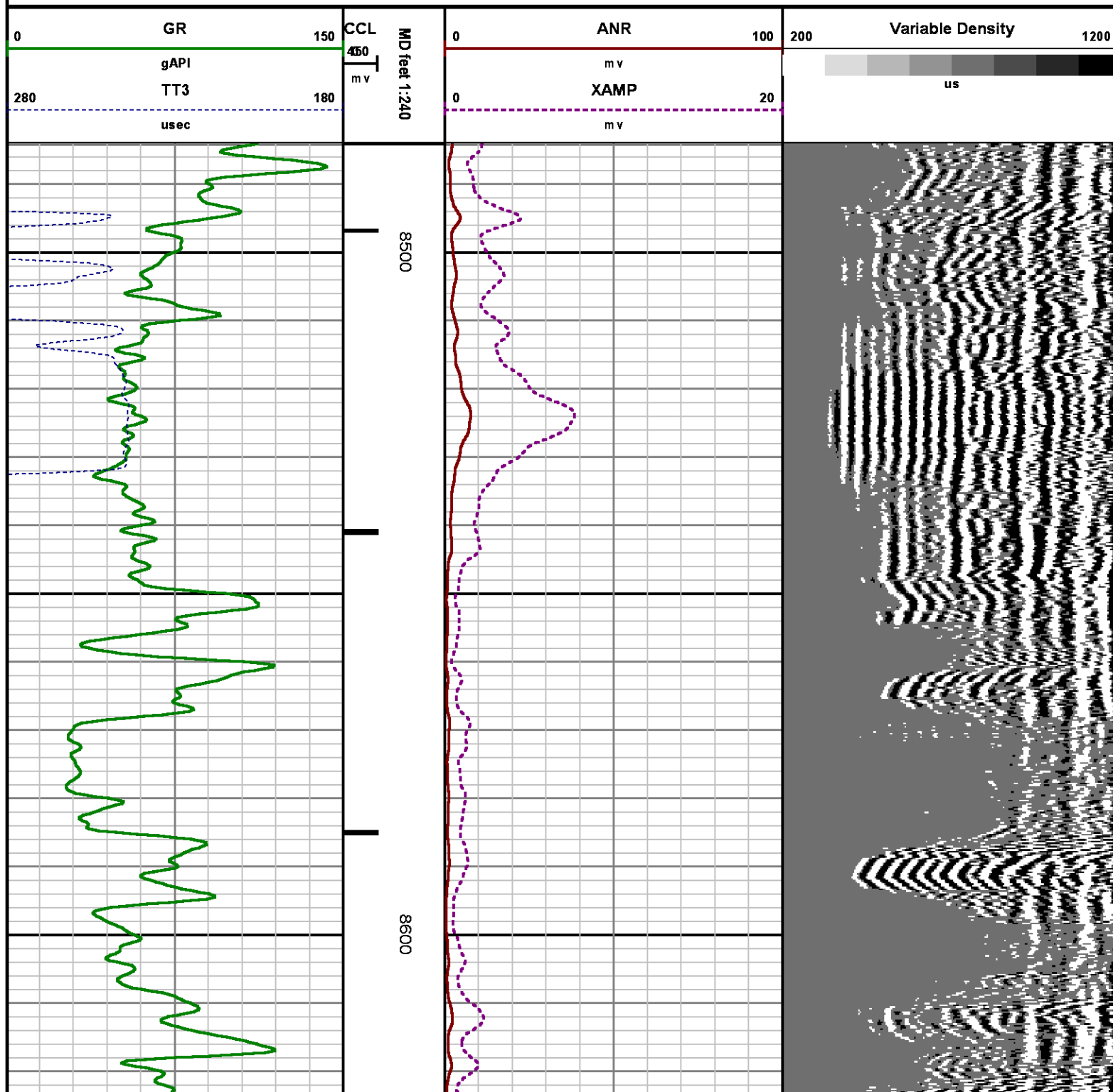
Well : SAVAGE RWF 14-25

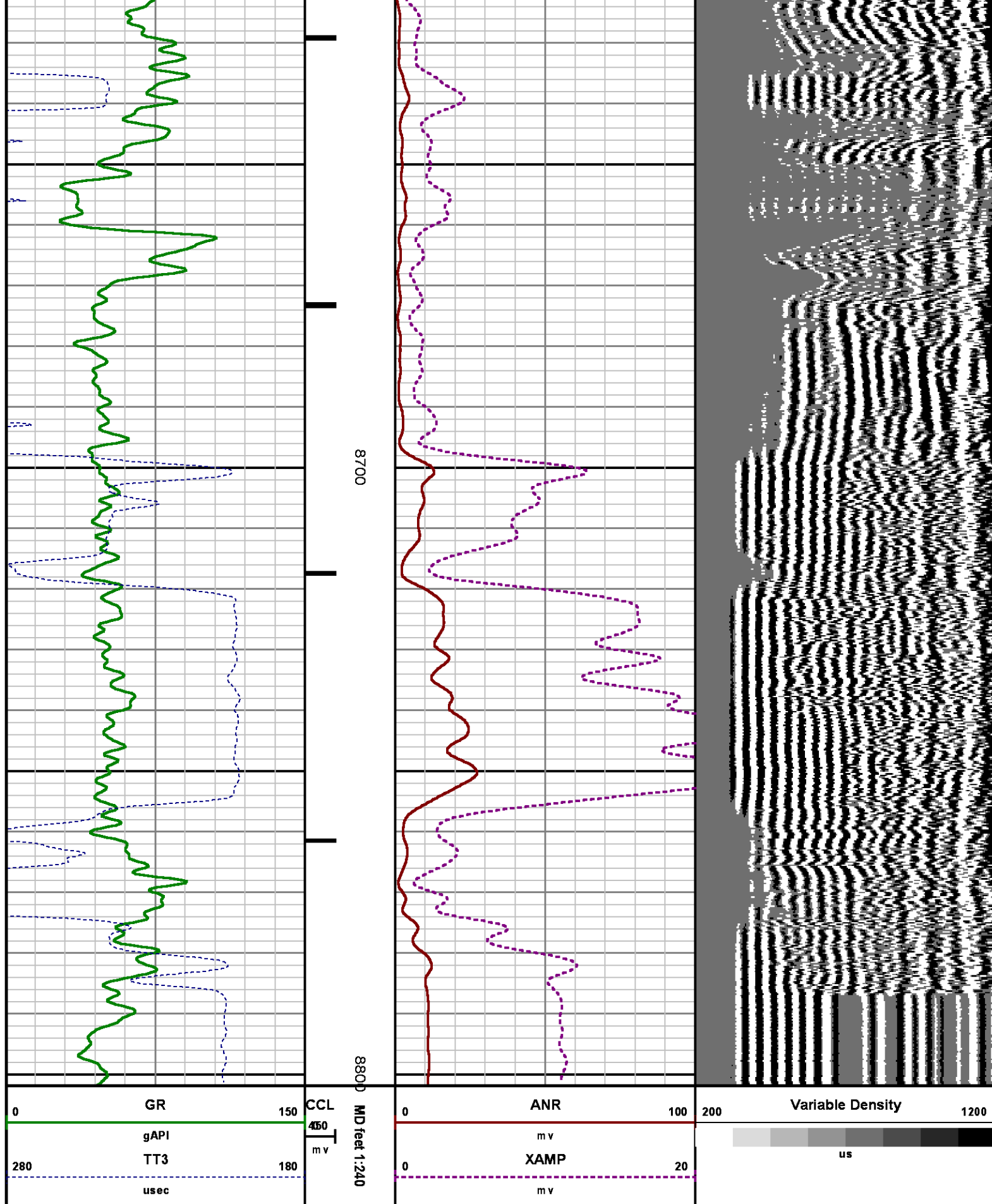
File Name : d:\well\data\wpx\rwf 14-25\ral14\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8484.01 - 8802.00 feet UP

Created : 1/31/2014 9:03:15 AM





# CALIBRATION SUMMARY

## RALSHP

Shop Calibration: C:\case\calver\RALSHP\496J29\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jan 29 11:54:03 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: J29

Tool Delay [usec]	-55.00	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	218	216	30	166	25	-0.208	100.00	0.17
3 Ft. Receiver	218	216	30	155	25	-0.097	100.00	0.17
5 Ft. Receiver	326	325	30	235	25	0.056	150.00	0.19
Radial #1	217	216	30	152	25	-0.090	100.00	0.17
Radial #2	218	216	30	152	25	-0.296	100.00	0.17
Radial #3	218	216	30	152	25	-0.363	100.00	0.17
Radial #4	218	216	30	152	25	-0.277	100.00	0.17
Radial #5	217	216	30	152	25	-0.042	100.00	0.17
Radial #6	217	216	30	152	25	-0.444	100.00	0.17
Radial #7	216	216	30	152	25	-0.275	100.00	0.17
Radial #8	218	216	30	152	25	0.000	100.00	0.17

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496J29 fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jan 29 11:56:20 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: J29

Tool Delay [usec]	-55.00	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	-0.002	0.000	1.00	100.000		
3 Ft. Receiver	195	25	1.878					
5 Ft. Receiver	305	25	2.369					
Radial #1	195	25	1.328					
Radial #2	195	25	1.338					
Radial #3	195	25	1.515					
Radial #4	195	25	1.527					
Radial #5	195	25	1.751					
Radial #6	195	25	1.807					



Radial #6	195	25	1.507
Radial #7	195	25	1.511
Radial #8	195	25	1.479

## GAMMA RAY

Calibration File: C:\case\calver\GR\121J2.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Jan 21 14:45:39 2014 TOOL SERIES: 2459XA ASSET: 121 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	71.78	314.67	0.762	54.67	239.67	185.00

Verification File: C:\case\calver\GR\121J2.VP

### PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Tue Jan 21 14:46:51 2014 TOOL SERIES: 2459XA ASSET: 121 SEQ: J2

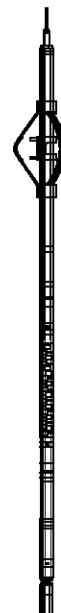
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	74.22	316.93	0.762	56.53	241.40	184.86

## 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



	24.23'
XMIT	18.05'
NEAR RCVR	14.97'
FAR RCVR	13.05'

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

CENTRALIZER	
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



CCL	11.34'
GR	9.49'
NEU	4.09'
	0.00'

**Total Length: 24.23'**  
**Total Weight: Not Available**  
**Max Diameter: 0' 3.12"**



**Baker Atlas**

*CASE*

<b>Company</b>	WPX ENERGY		
<b>Well</b>	SAVAGE RWF 14-25		
<b>Field</b>	RULISON		
<b>County</b>	GARFIELD	<b>State</b>	COLORADO

<b>Location</b>	<b>Elevations</b>
SHL: 1595' FSL & 2295' FWL	KB 6122 ft
BHL: 501' FSL & 836' FWL (SWSW)	DF
	GL 6096 ft
SEC 25 TWP 6S RGE 94W	

<b>File No:</b>
CH082309
<b>API No:</b>
05045219800000

25 6S 94W
RWF 23-25 PAD
NABORS 577