



# RADIAL ANALYSIS BOND LOG

Baker Atlas

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

CH087284 **Well** **FEDERAL RGU 442-24-198**

API No: **Field** **SULPHUR CREEK**

05103120840000 **County** **RIO BLANCO** **State** **COLORADO**

24 1 S 98W **Location** **SHL: 2156' FSL & 1700' FEL**

RGU 33-24-198 PAD **BHL: 2237' FNL & 647' FEL (SENE)**

CYCLONE 29 **SEC** **24** **TWP** **1S** **RGE** **98W**

**Other Services**  
RPM

Permanent Datum **GL** **Elevation** **6596 ft**

Log Measured From **KB** **21 ft** **Above P. D.**

Drill Measured From **KELLY BUSHING** **Elevations**  
**KB** **6617 ft**  
**DF**  
**GL** **6596 ft**

Date	06/JUL/14	
Run	ONE	
Service Order	US087286J	
Depth Driller	12868 ft	
Depth Logger	12812 ft	
Bottom Logged Interval	12792 ft	
Top Logged Interval	21 ft	
Time Started	1300	
Time Finished	1730	
Operator Rig Time	4.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	87 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	288 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	WAYNE MARGOTTE	

- 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
30 in	21 ft	80 ft
14.73/13.5	80 ft	3914 ft
8.75/7.875	3914 ft	12868 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			21 ft	80 ft
9.625 in			21 ft	3914 ft
4.5 in	11.6 lbm/ft	P-110	21 ft	12868 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 = 280°F
MAX TEMP = 288°F @ 12,769'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GRICCL	2459XA	10417465	CENT

PRIMARY PRESENTATION

0 PSI

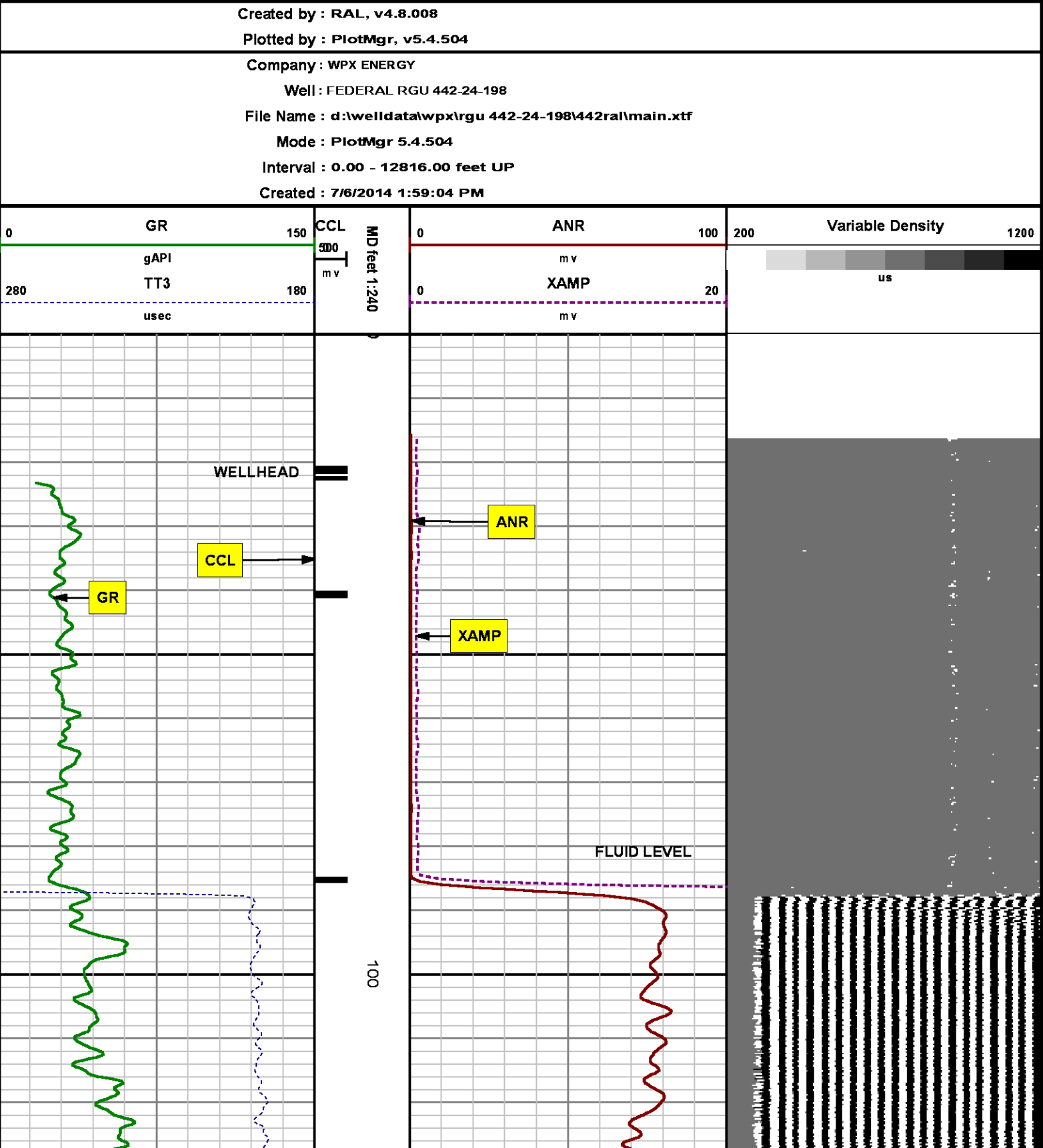
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	27.437	12820.000
RAL	Amp Gate Start Near	195.000	usec	27.437	12820.000
RAL	Amp Gate Start Radial	195.000	usec	27.437	12820.000
RAL	Amp Gate Width Far	25.000	usec	27.437	12820.000
RAL	Amp Gate Width Near	25.000	usec	27.437	12820.000
RAL	Amp Gate Width Radial	25.000	usec	27.437	12820.000
RAL	casing od	4.500	inches	27.437	12820.000
RAL	casing wt	11.600	lbm/ft	27.437	12820.000
RAL	FB Start Far	291.900	usec	27.437	12820.000
RAL	FB Start Near	180.000	usec	27.437	12820.000
RAL	FB Start Radial	180.000	usec	27.437	12820.000
RAL	FB Thresh Far	10.000	mv	27.437	12820.000
RAL	FB Thresh Near	4.000	mv	27.437	12820.000
RAL	FB Thresh Radial	4.000	mv	27.437	12820.000
RAL	Fluid Travel Time	200.000	usec/ft	27.437	12819.874

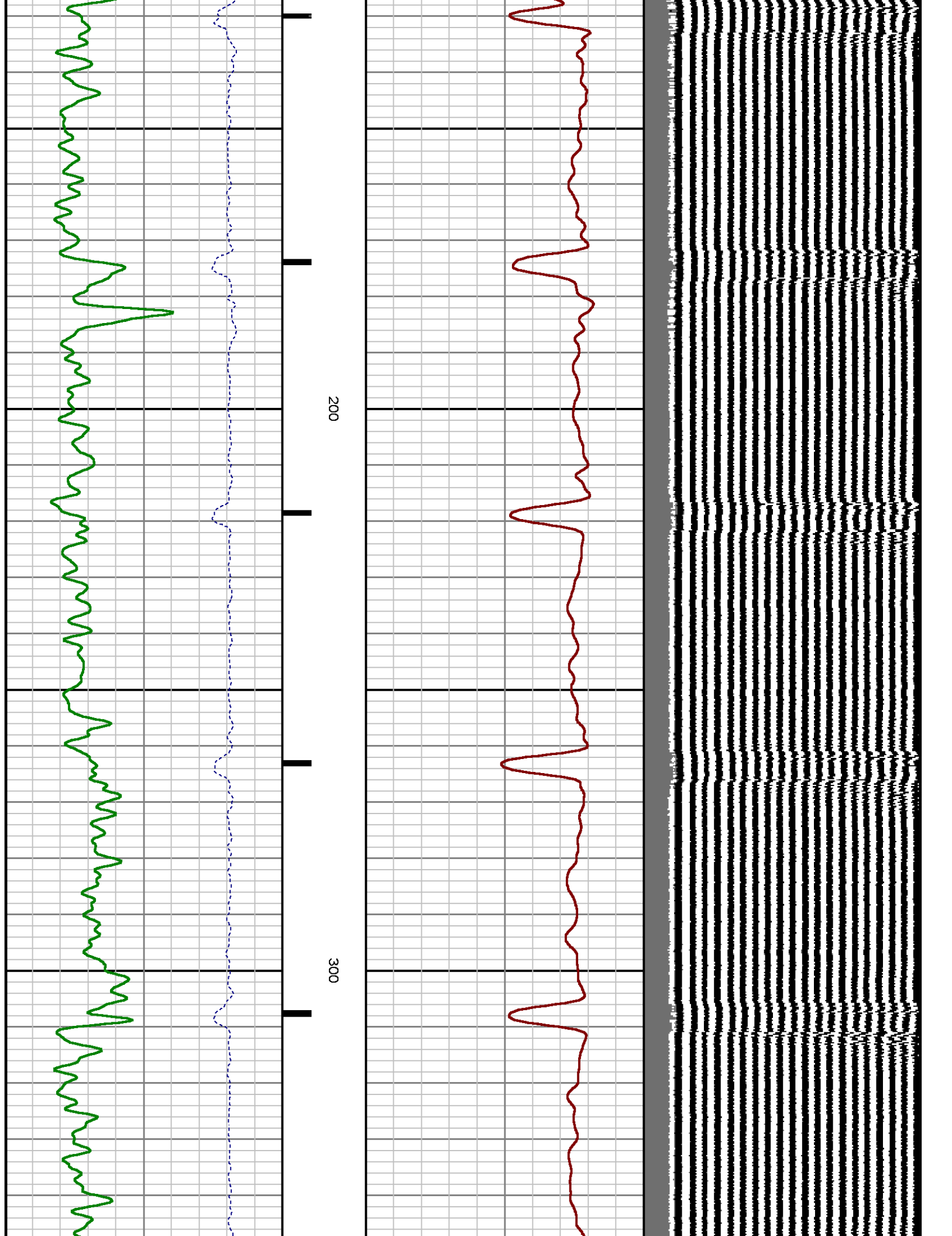
DEPTH OFFSETS

(for Acquired Curves)

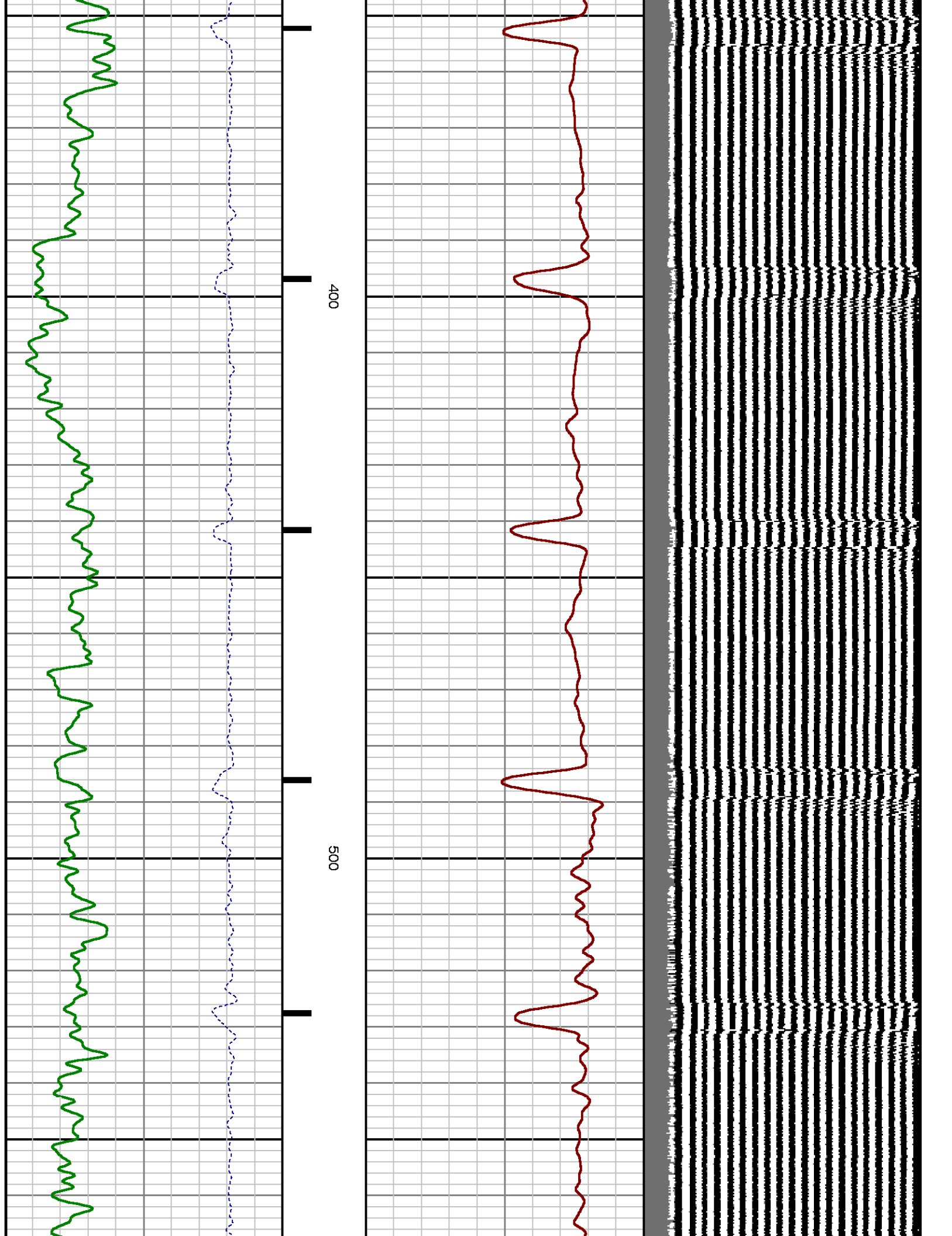
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4

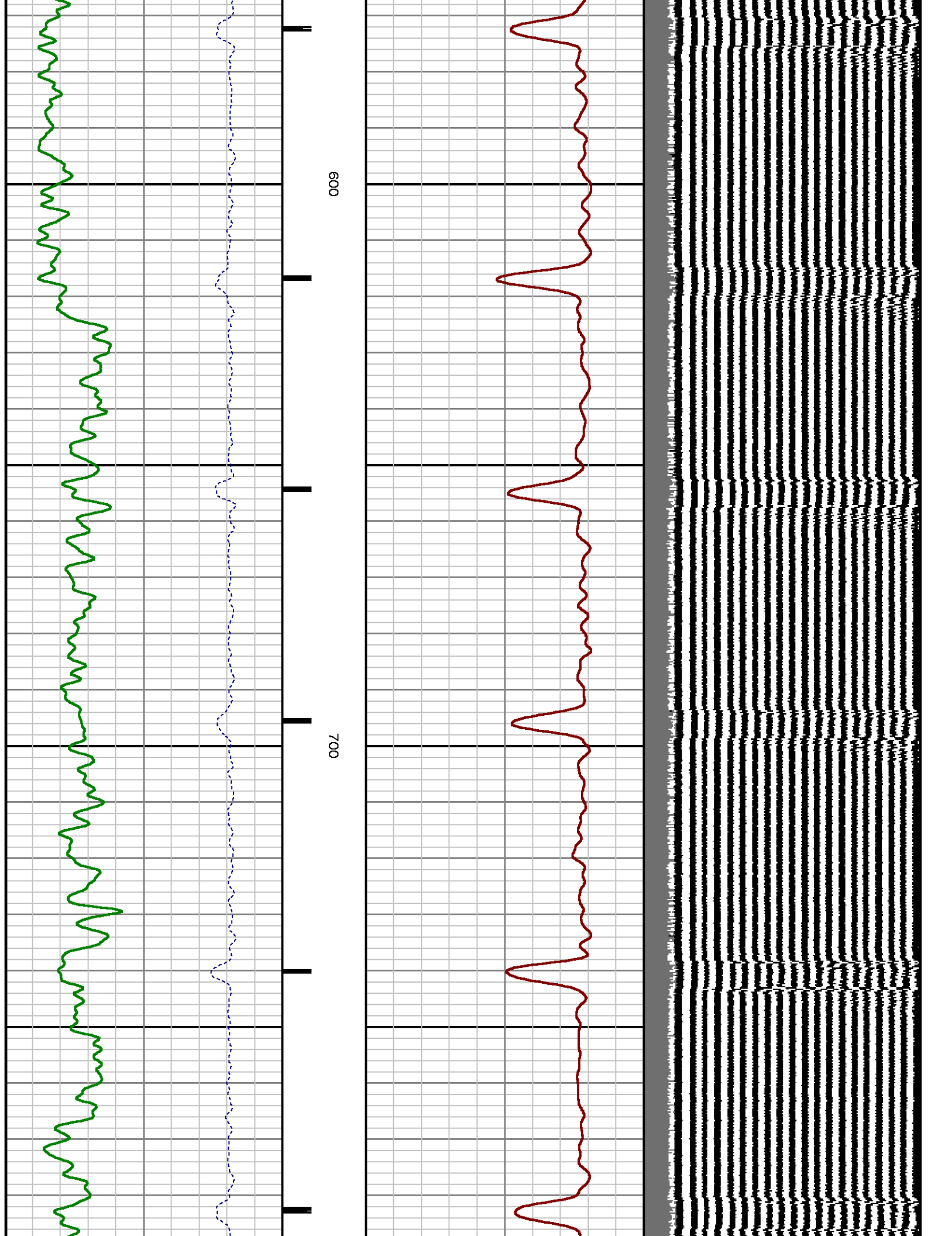
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
2459XA	-7.250	CCL					
2459XA	-5.390	GR					
2459XA	0.000	NEU					

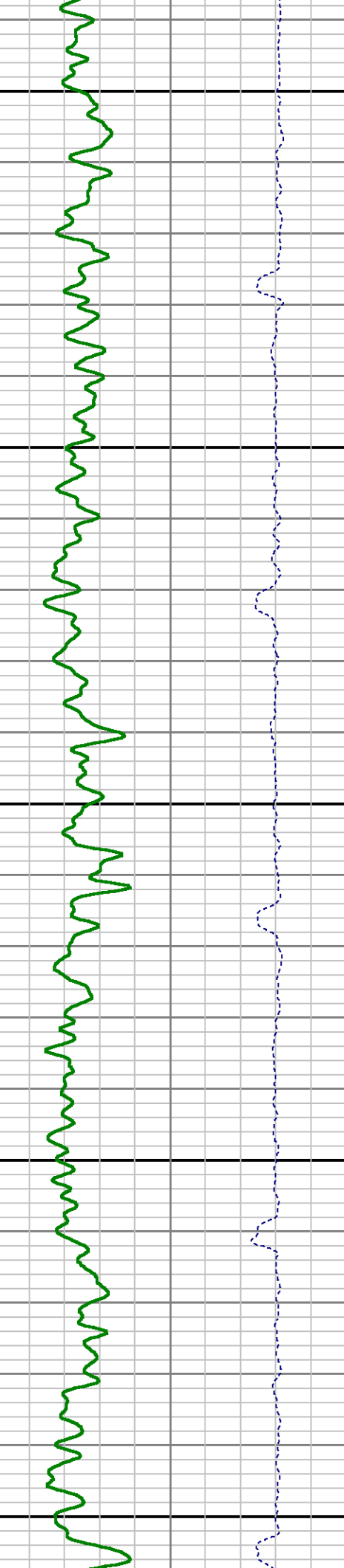
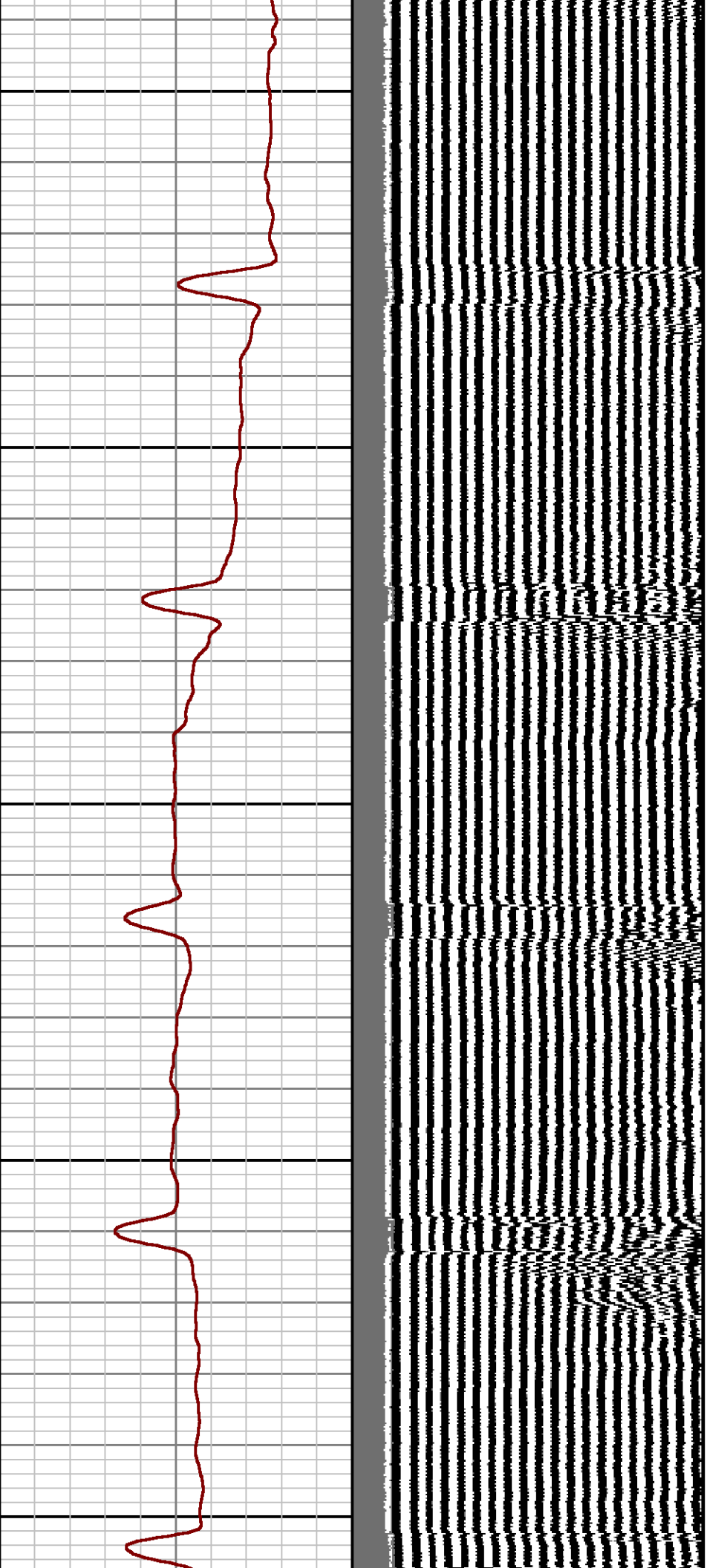


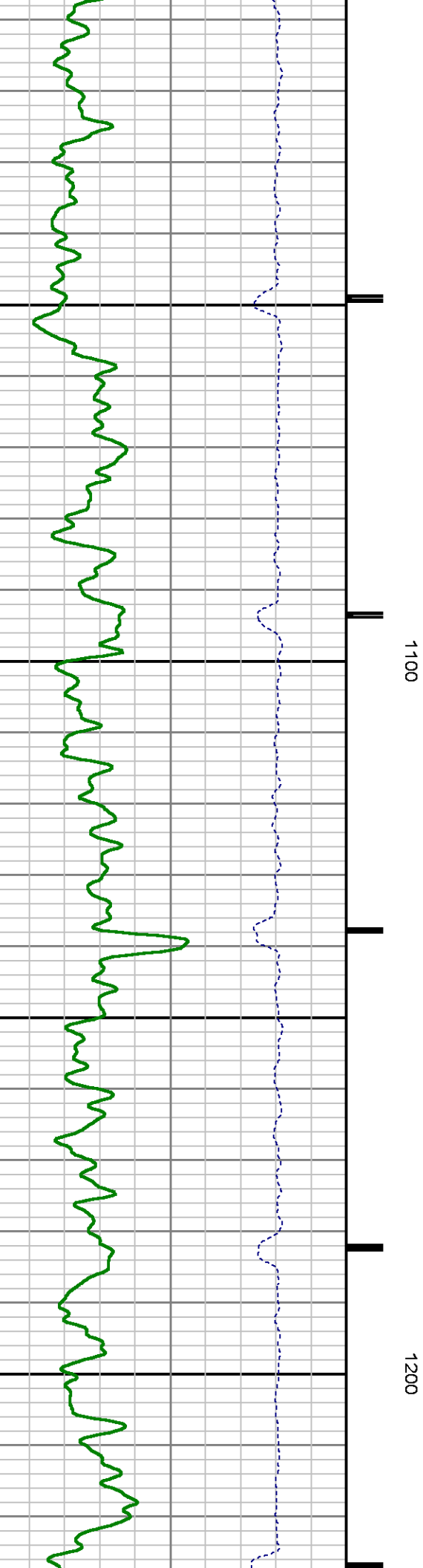
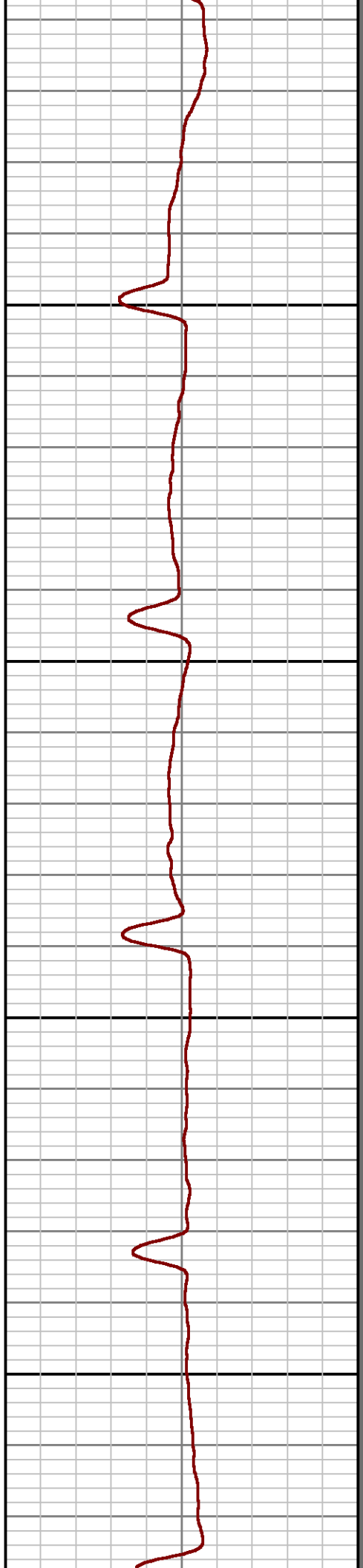
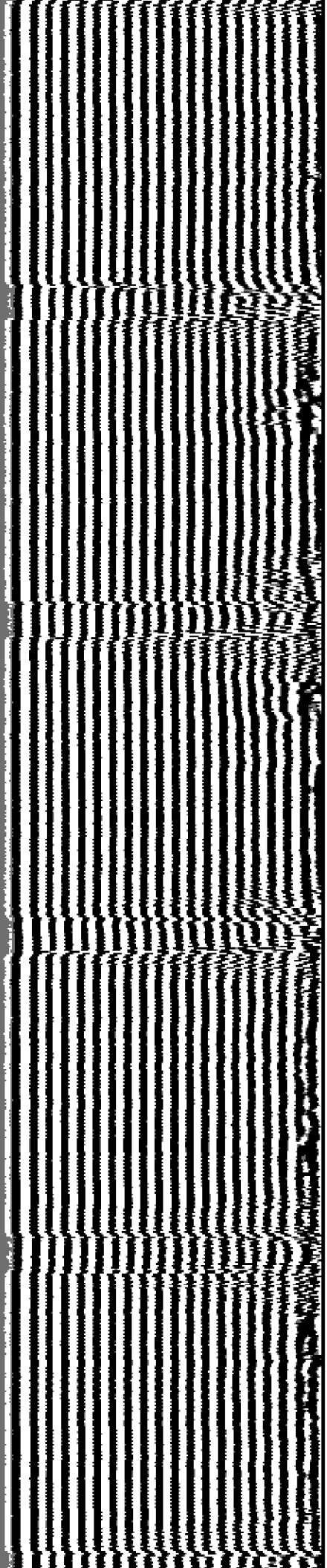


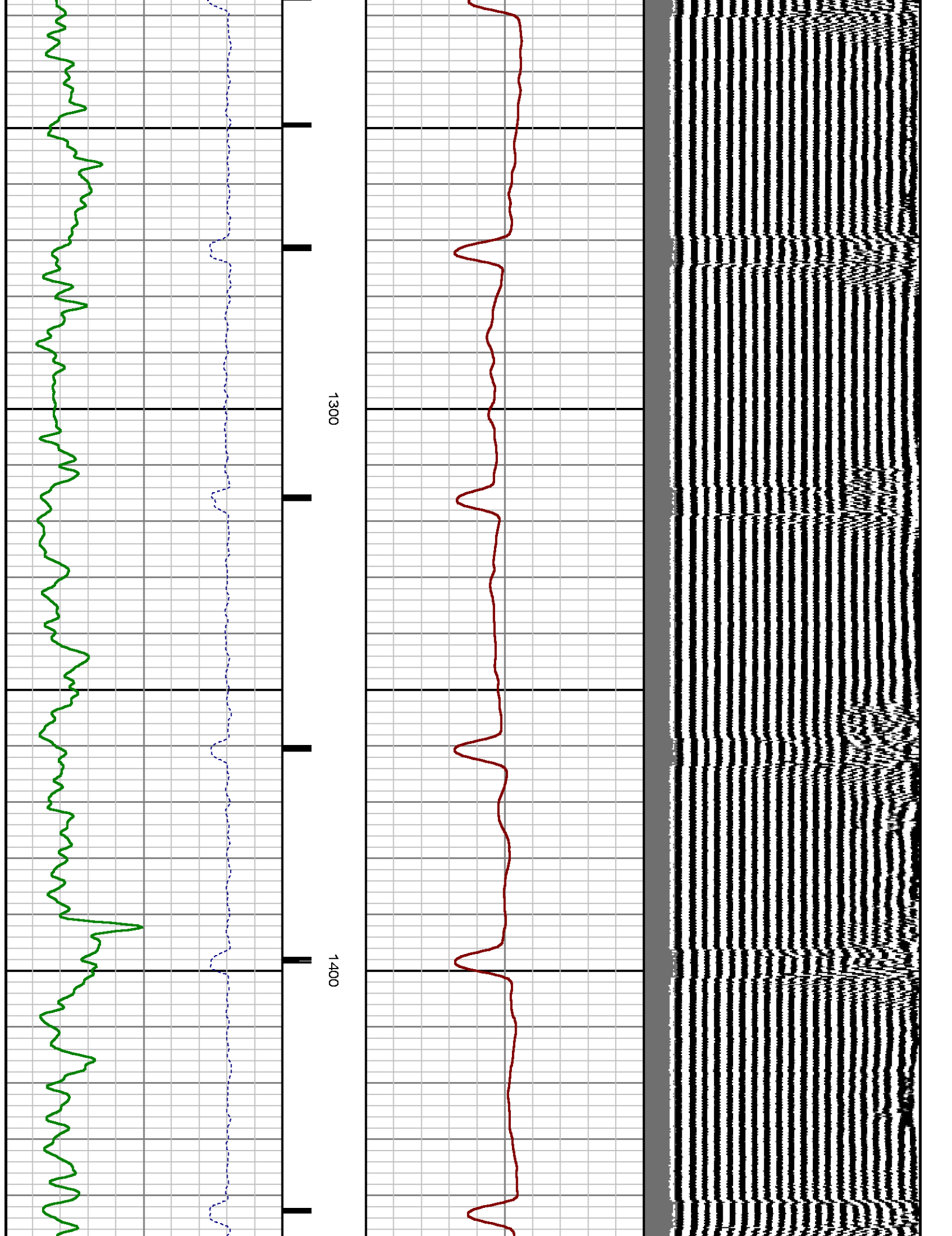


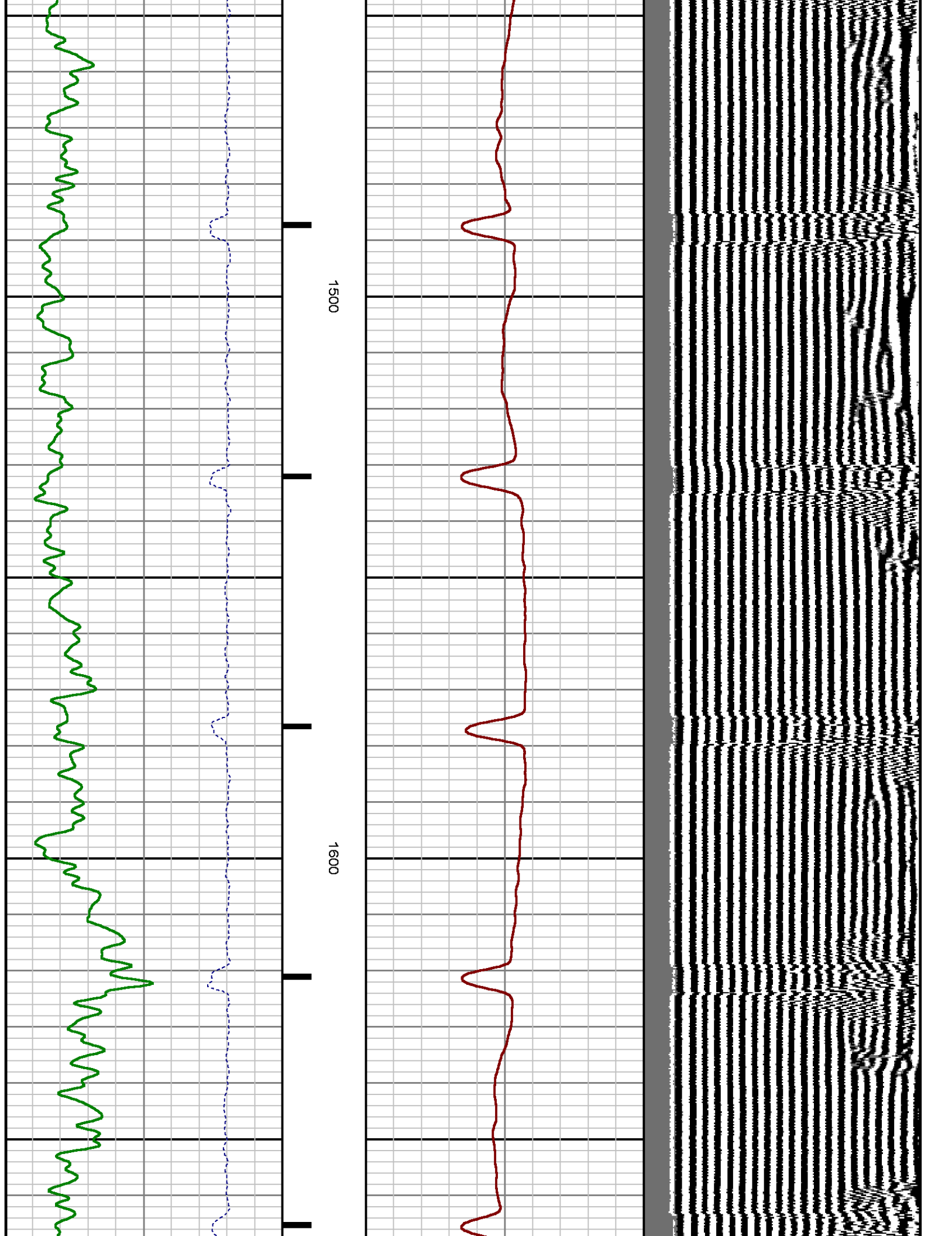




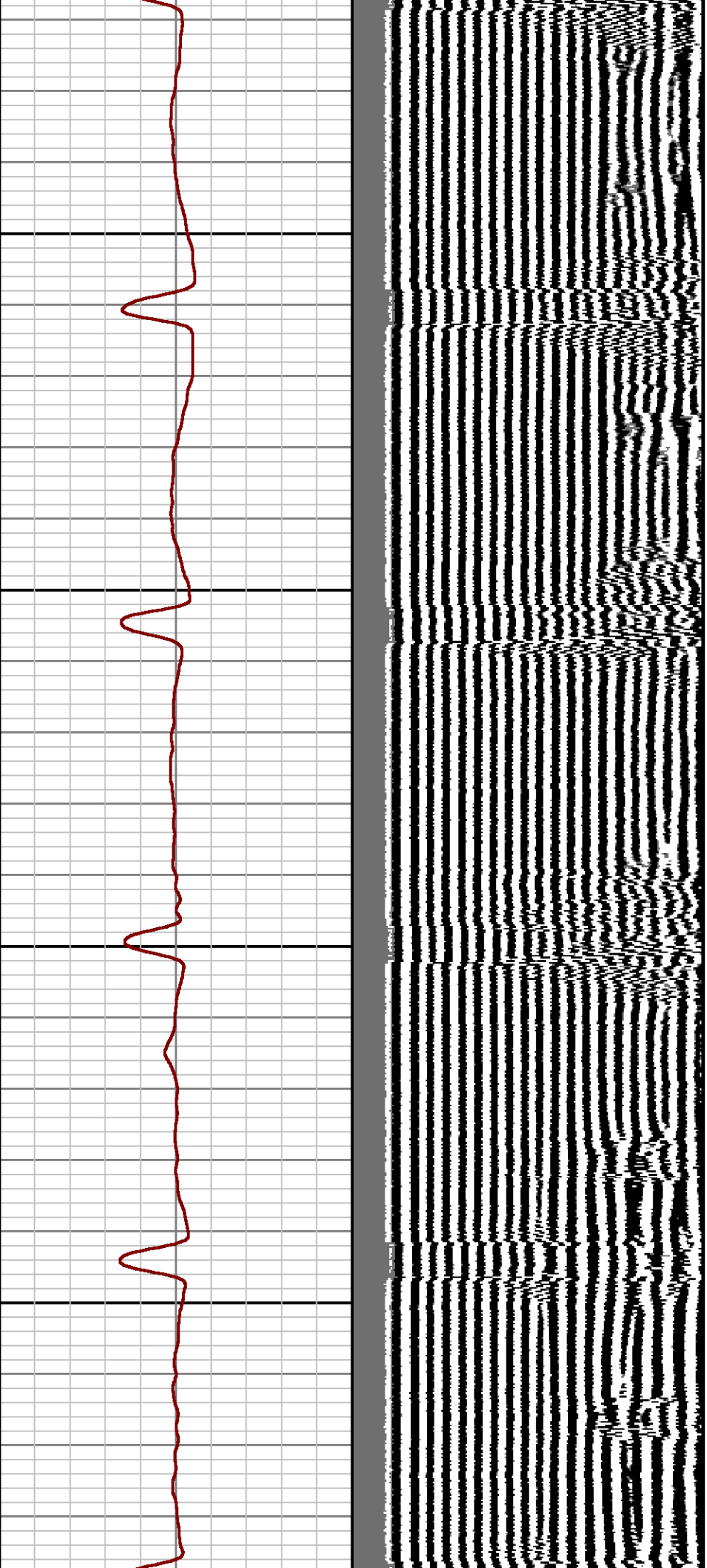






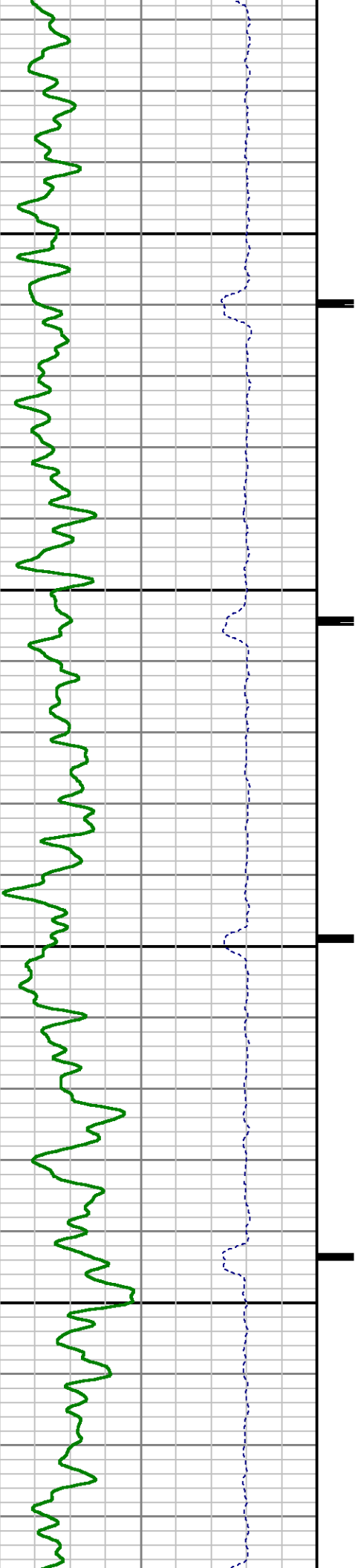


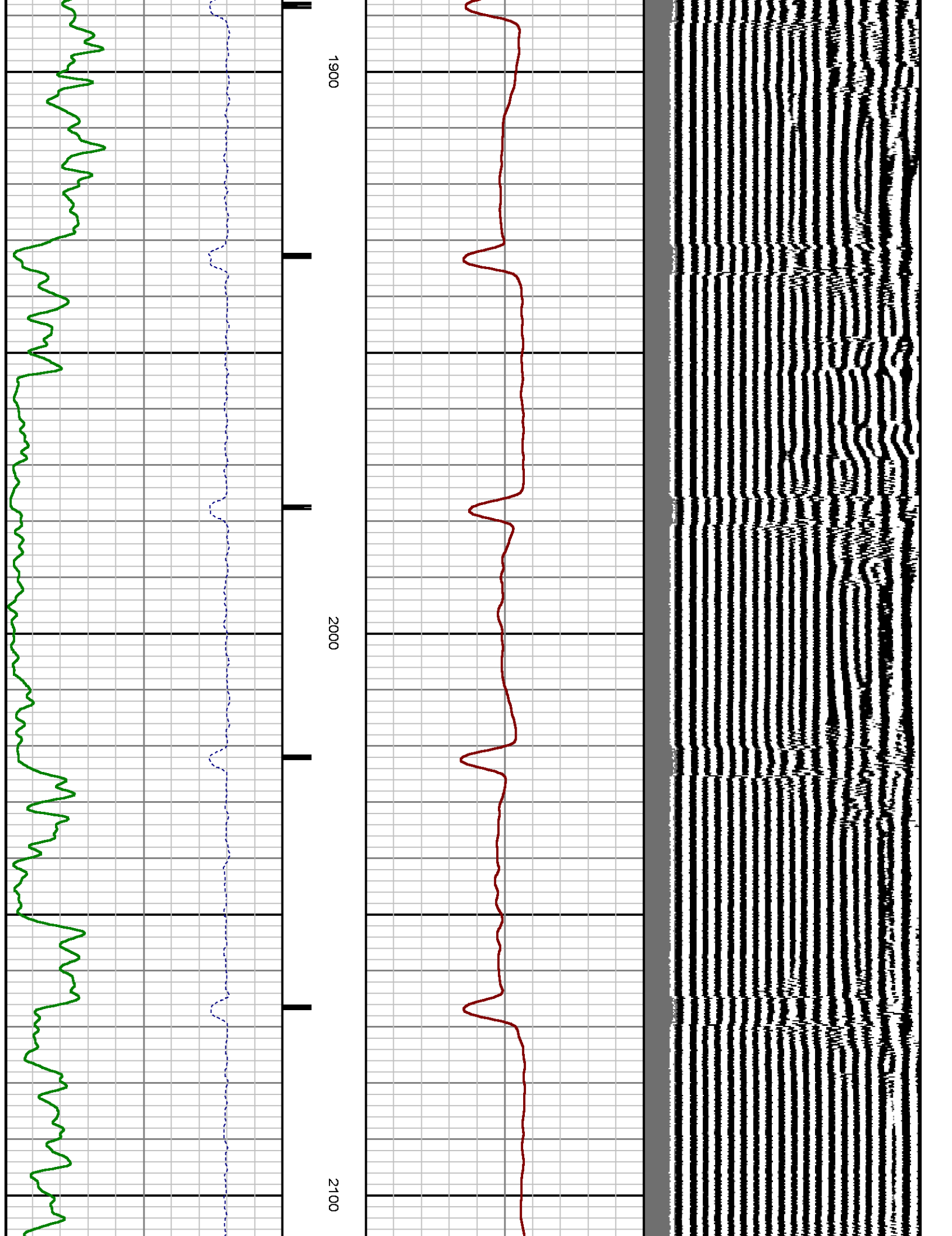




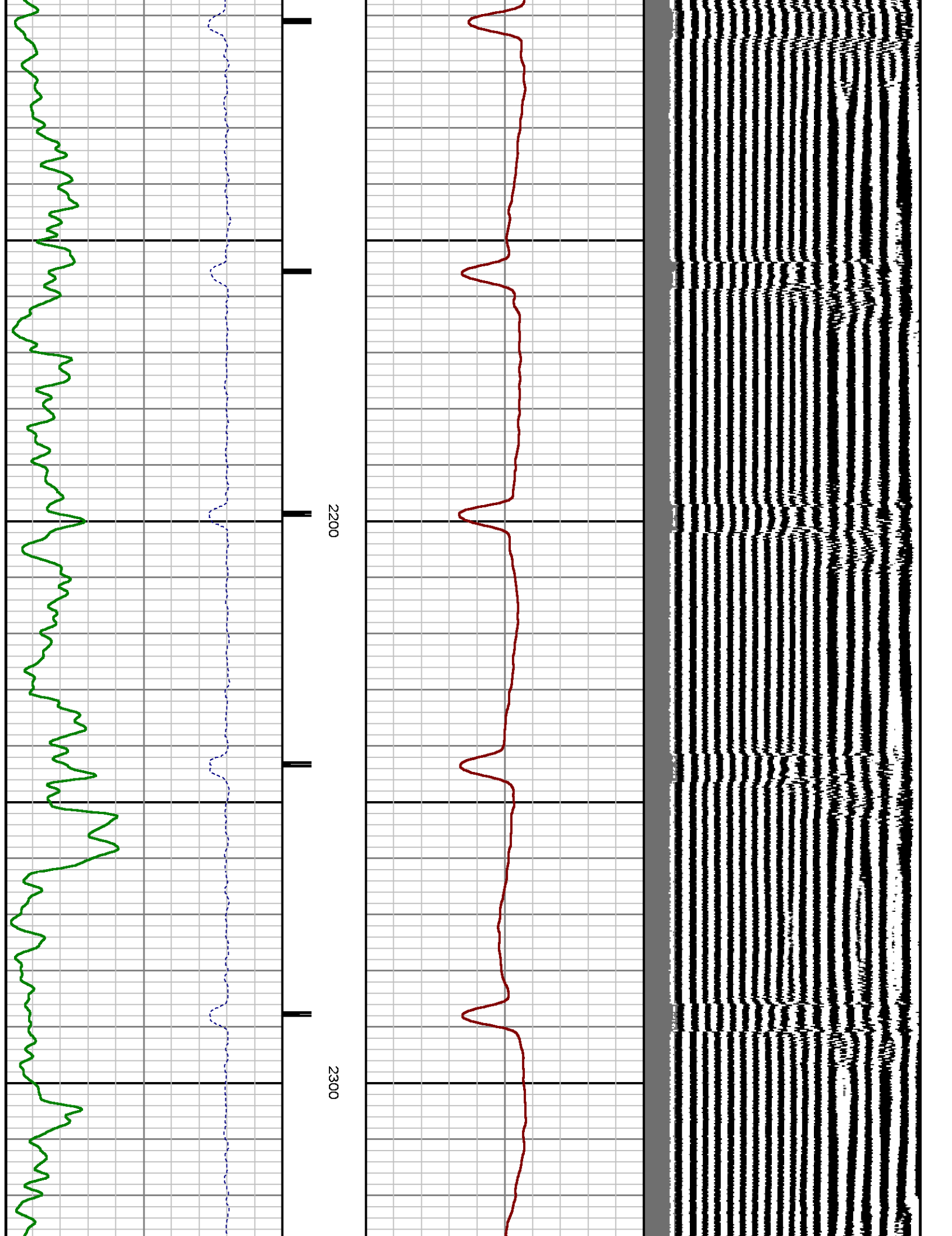
1700

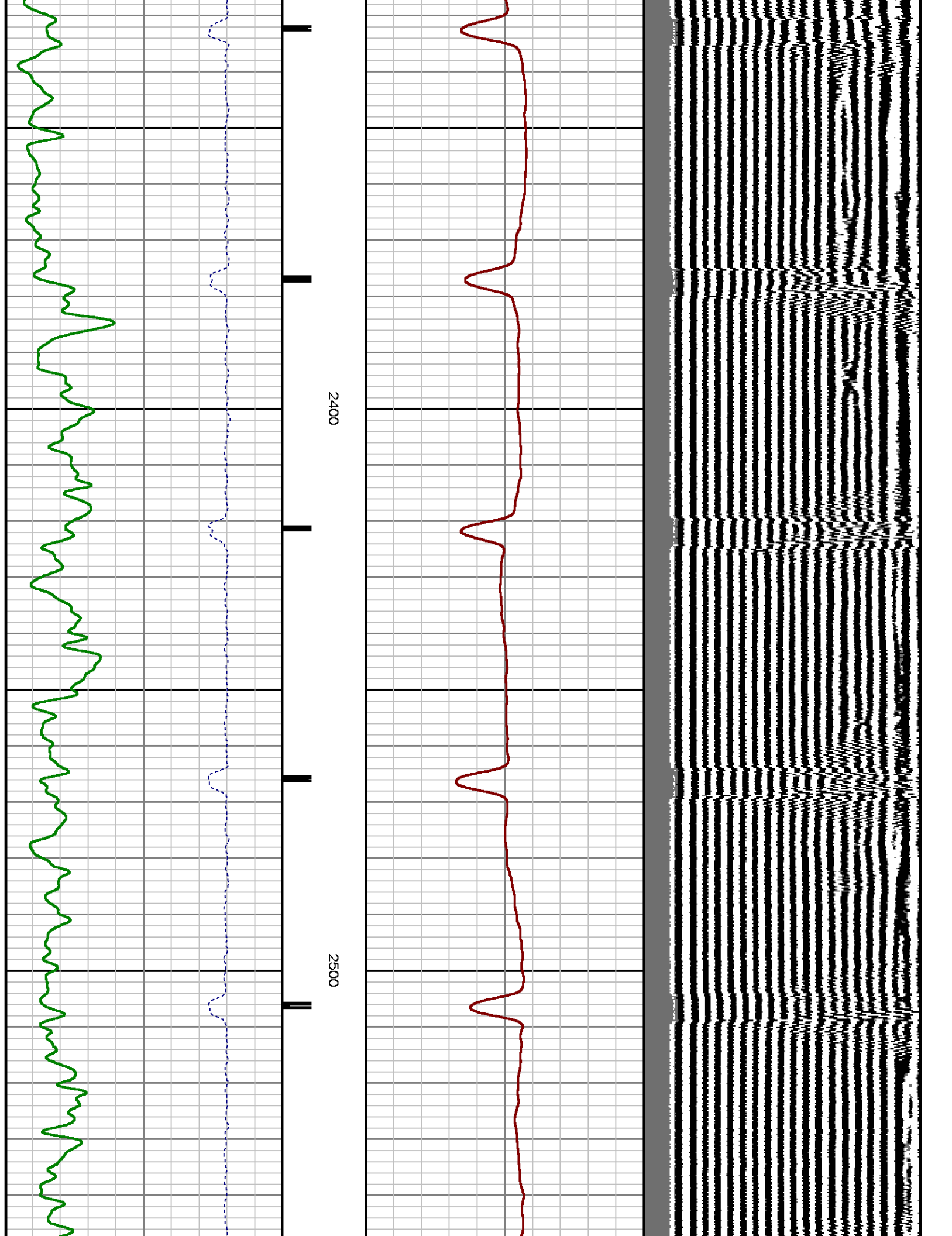
1800

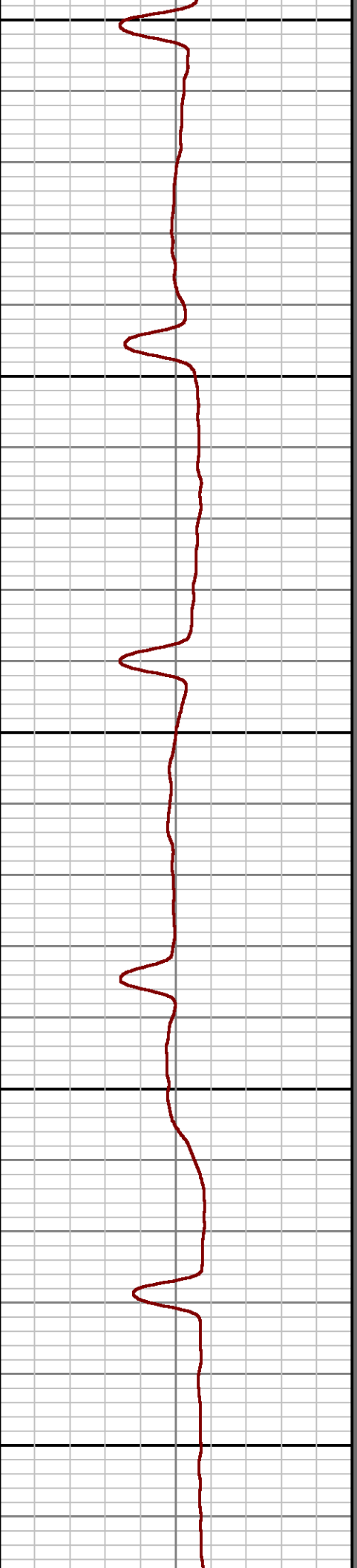
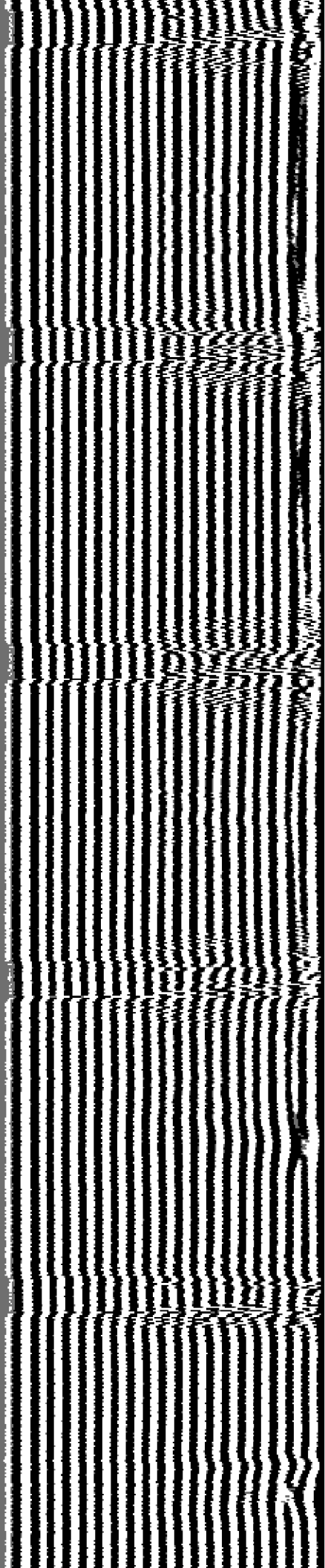








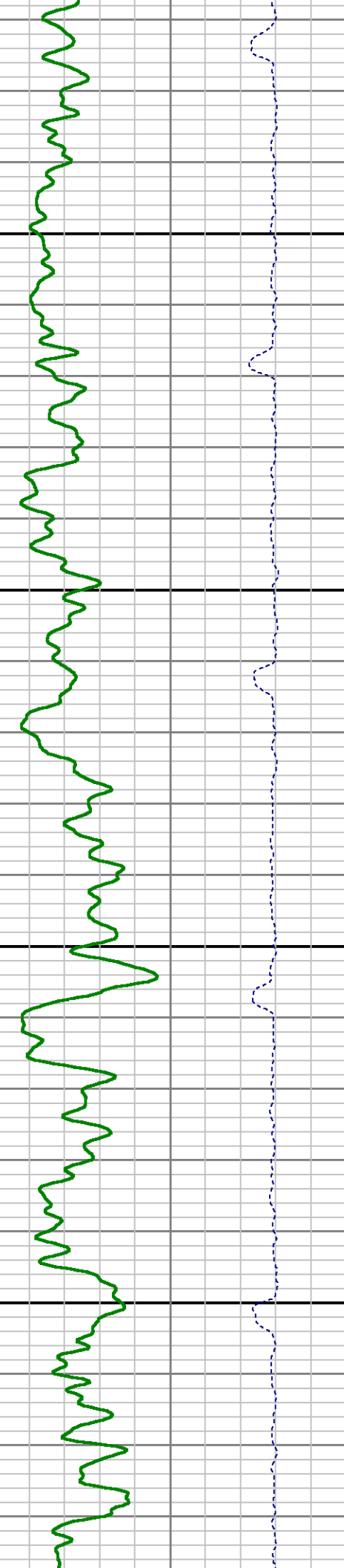
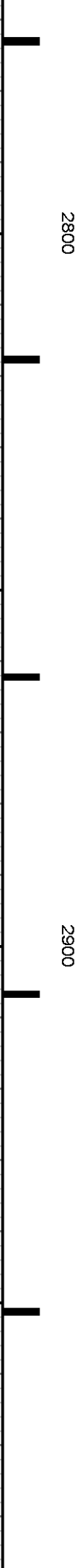
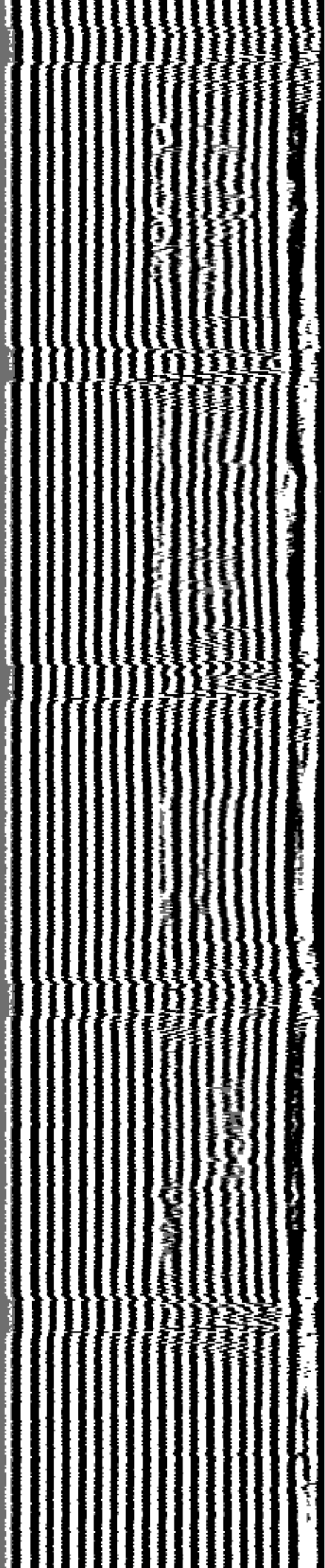


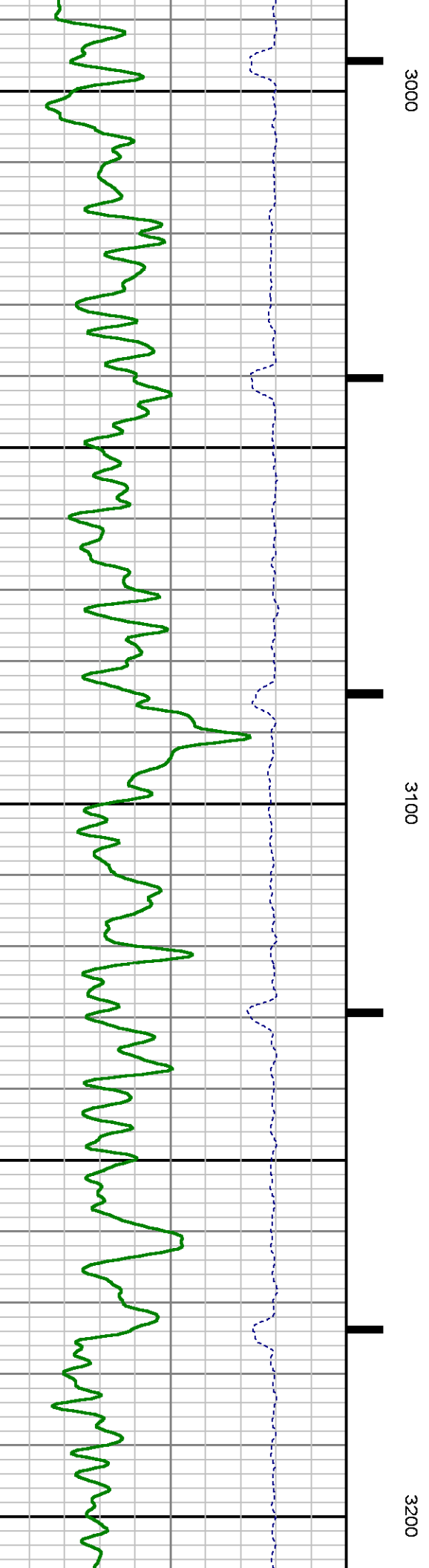
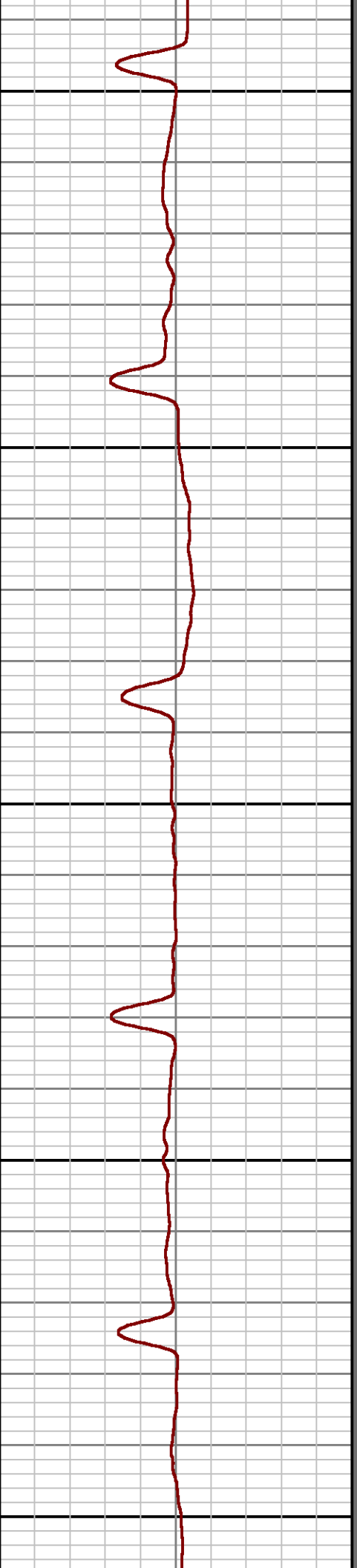
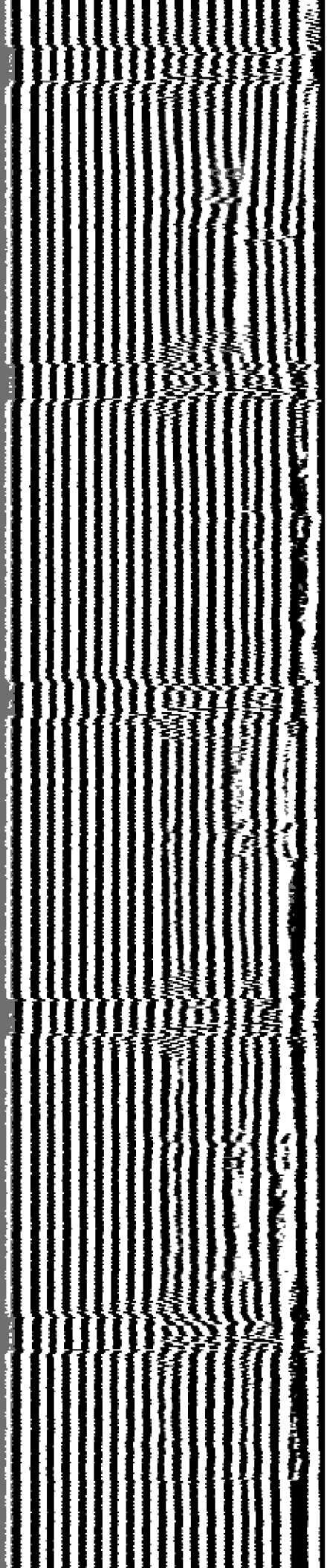


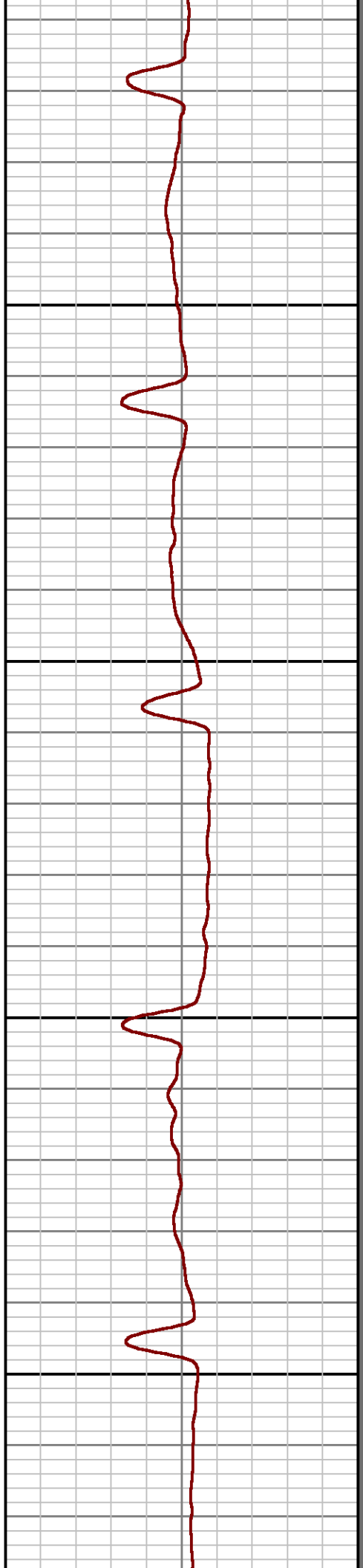
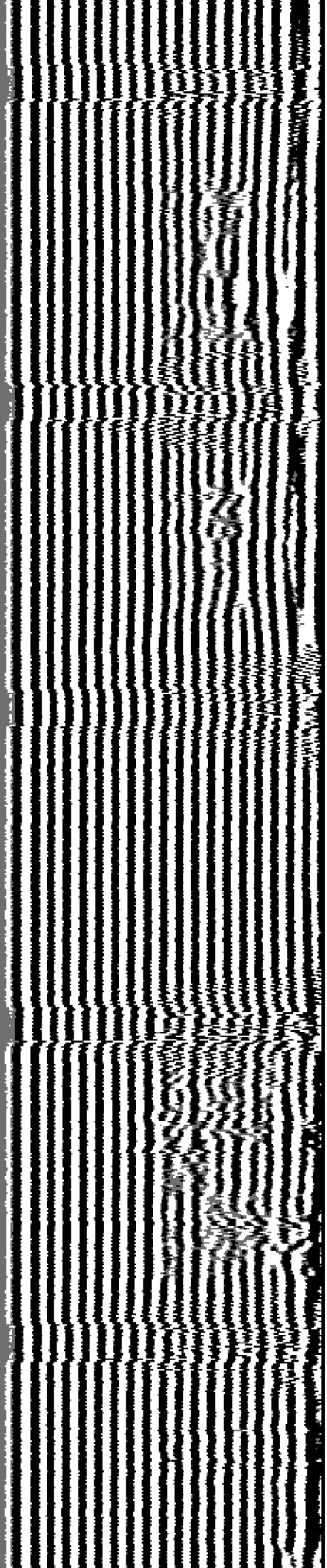
2600

2700



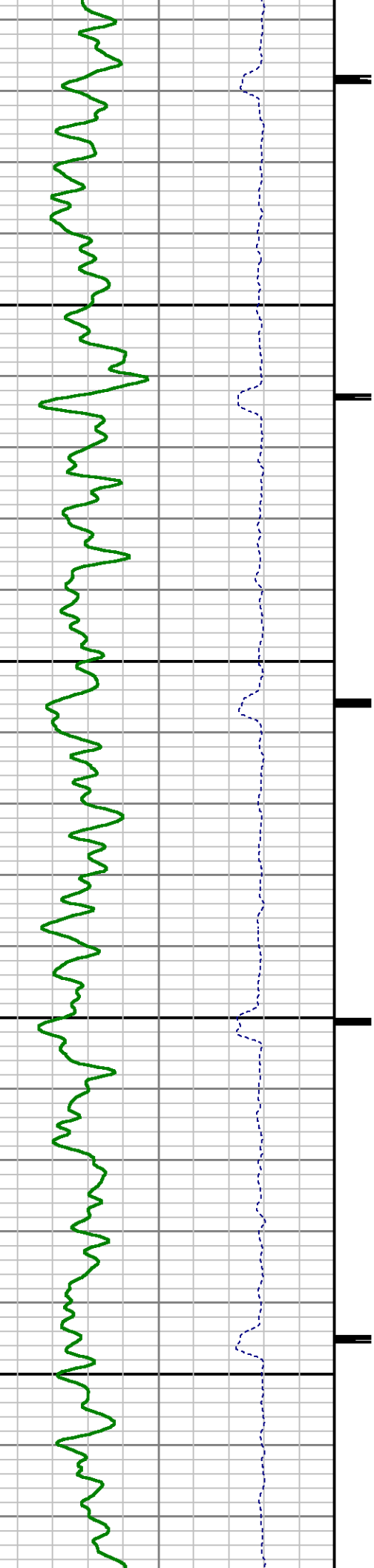




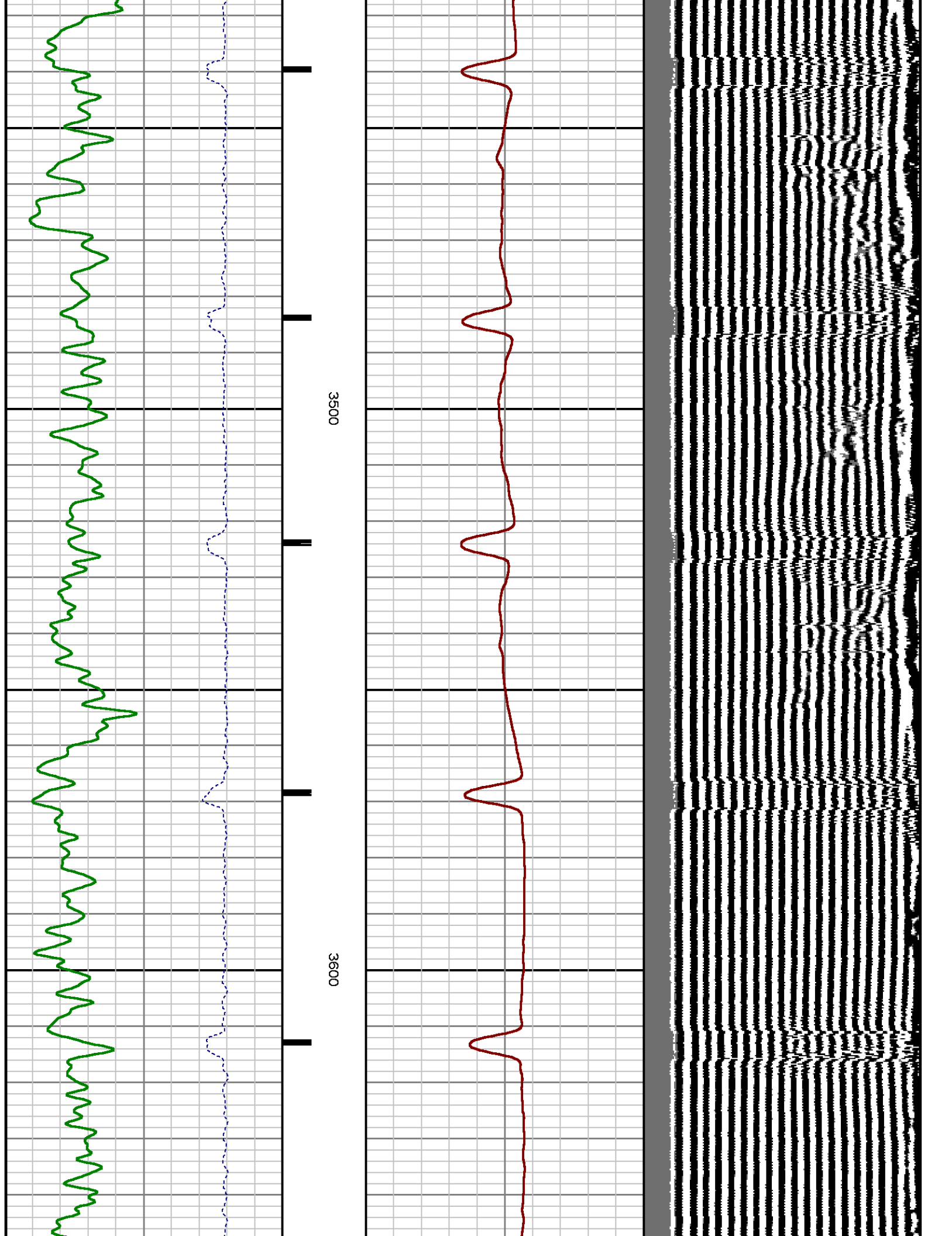


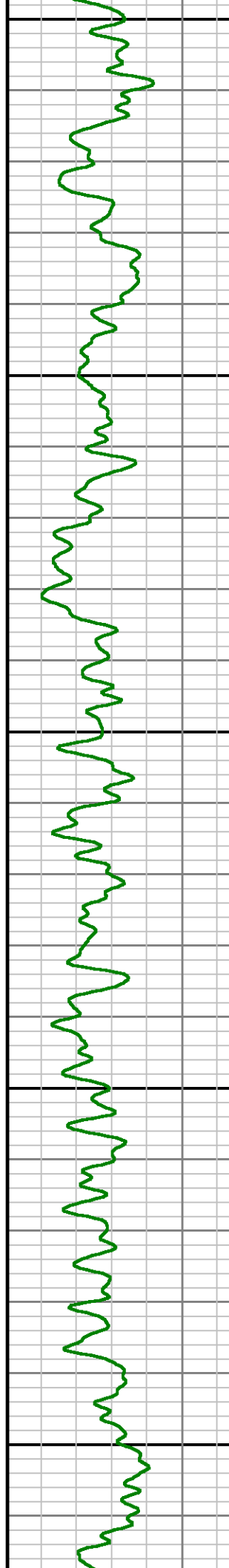
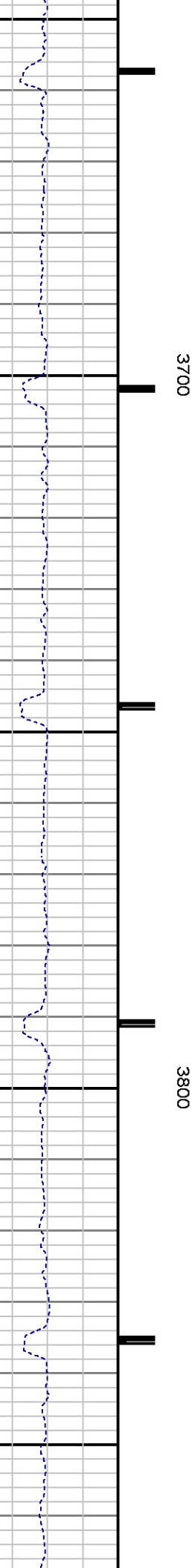
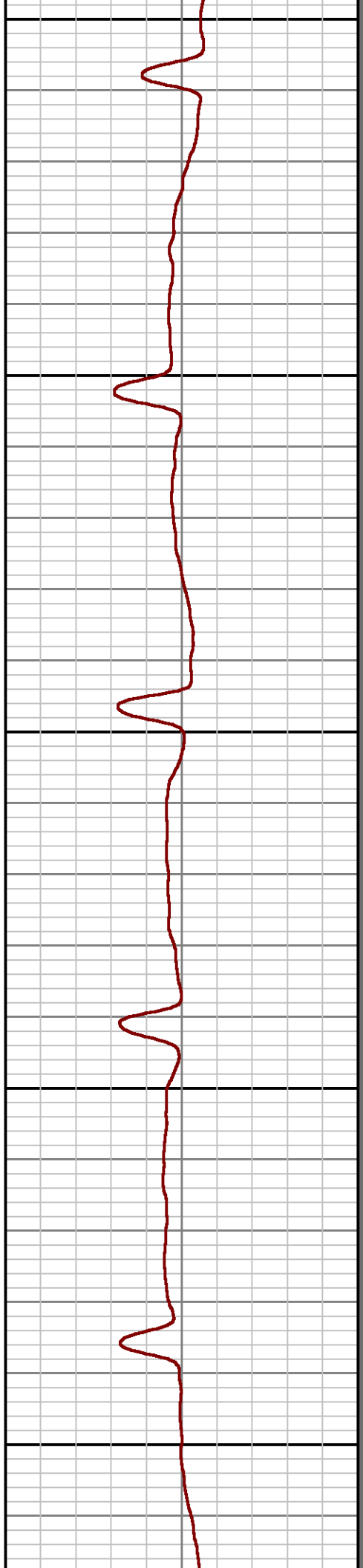
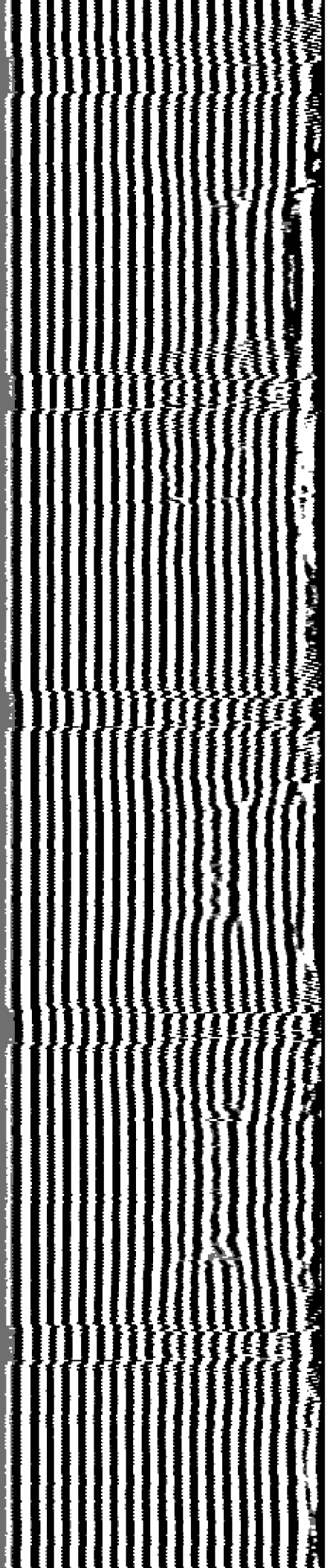
3300

3400

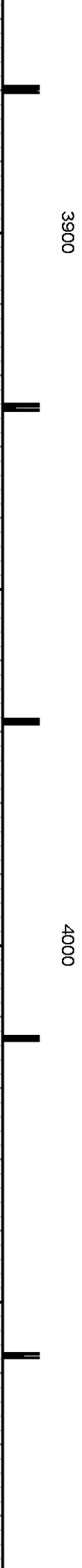
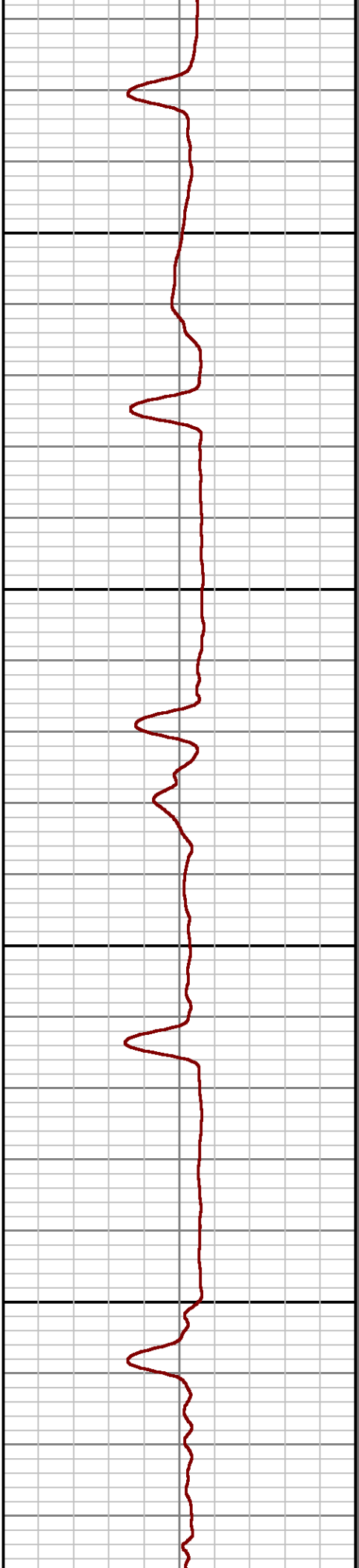
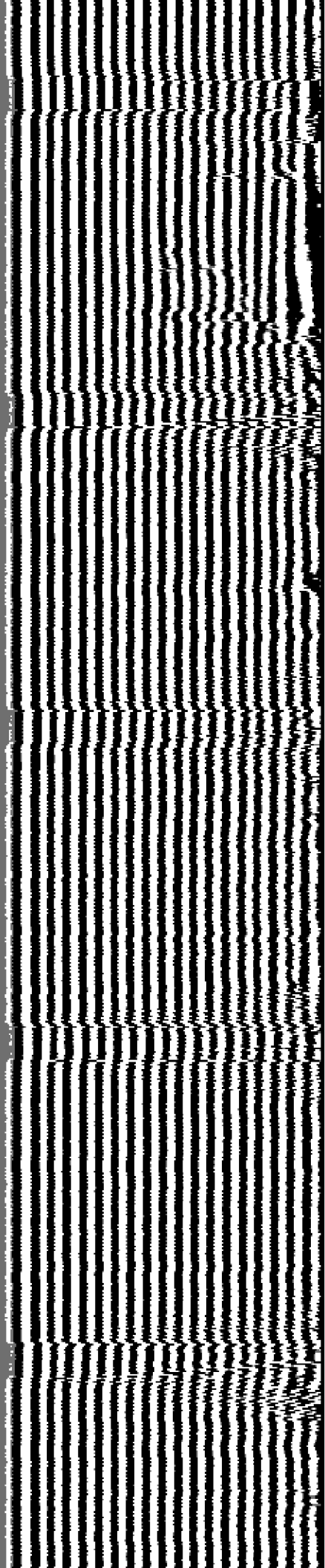






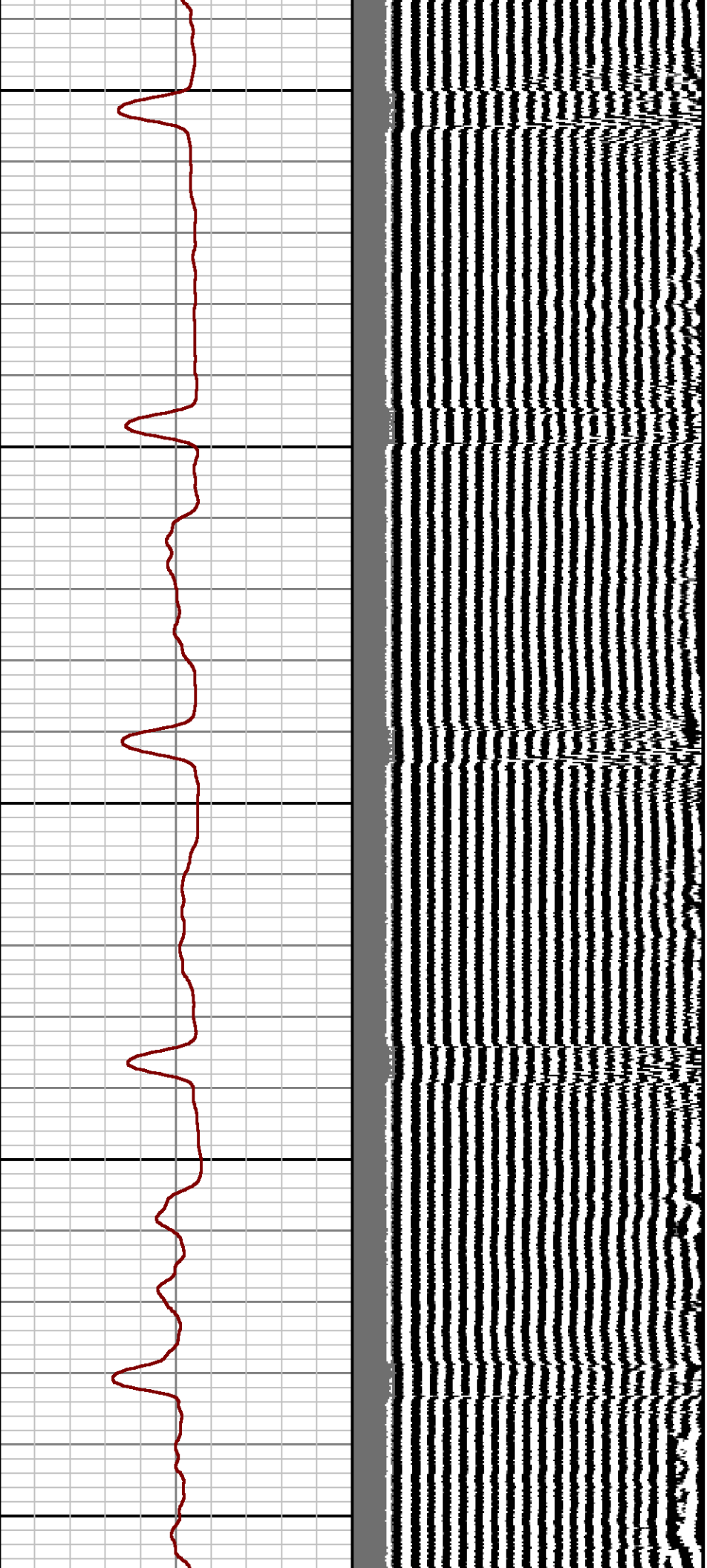






3900

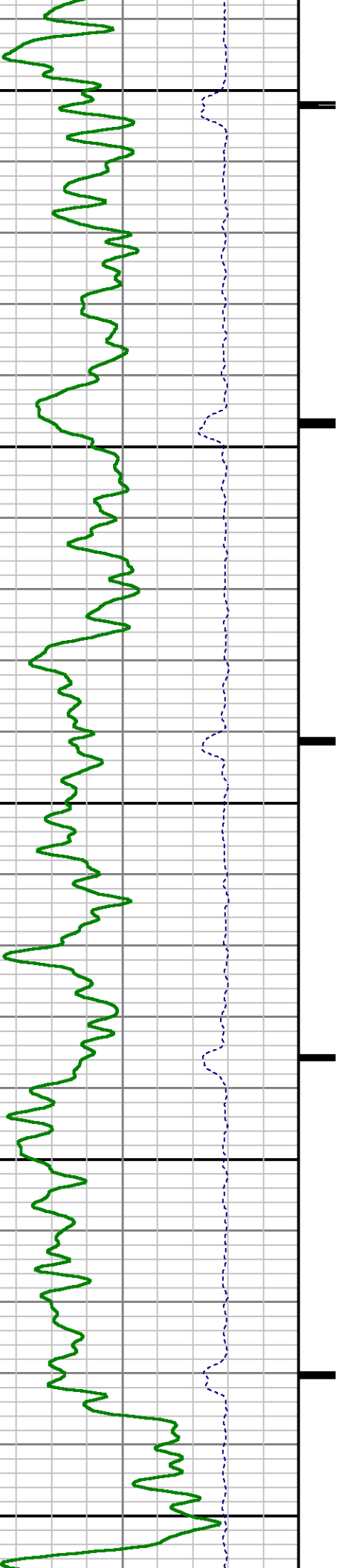
4000

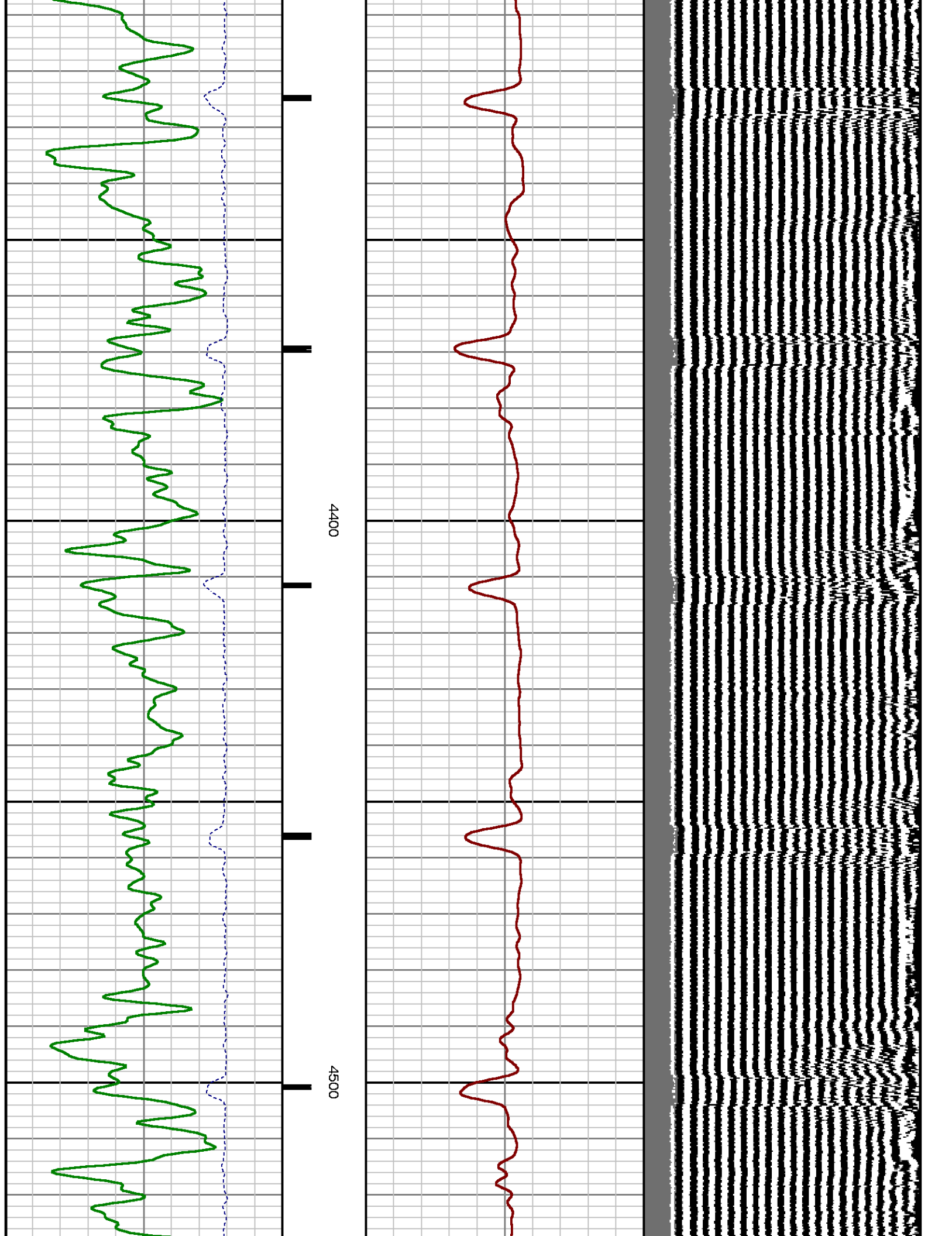


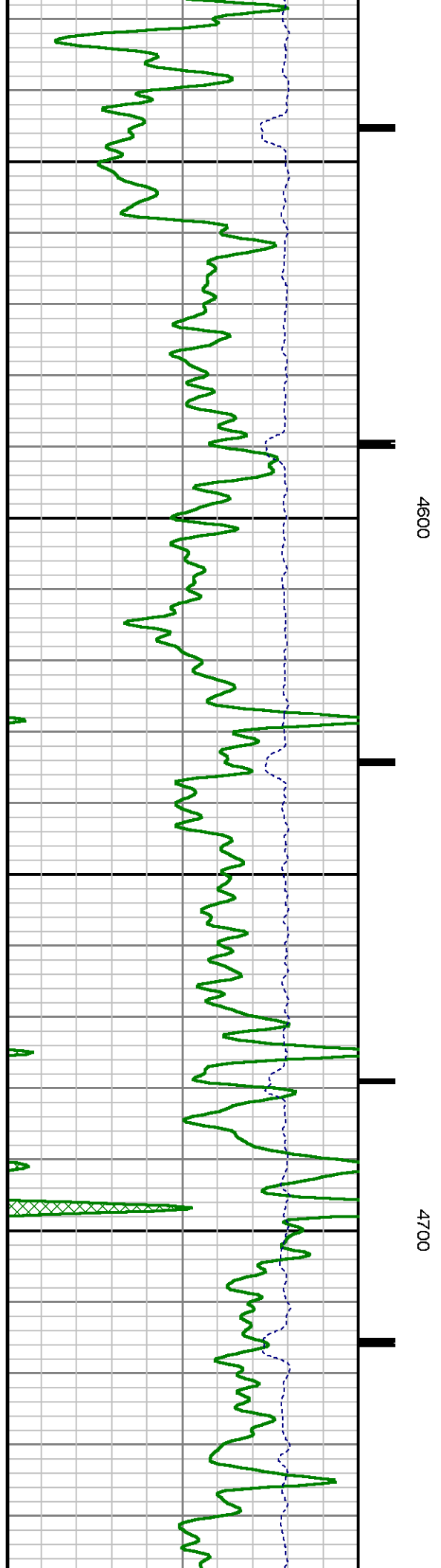
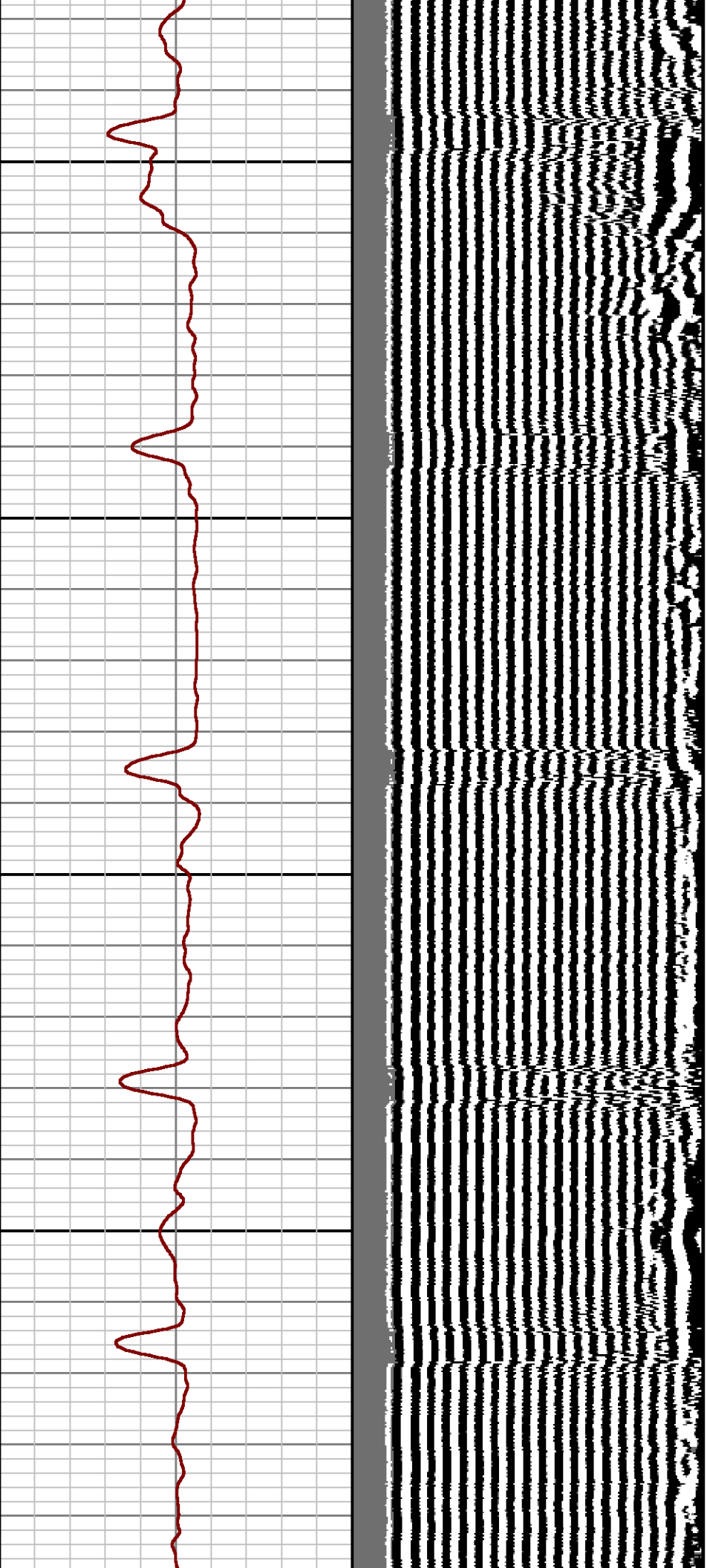
4100

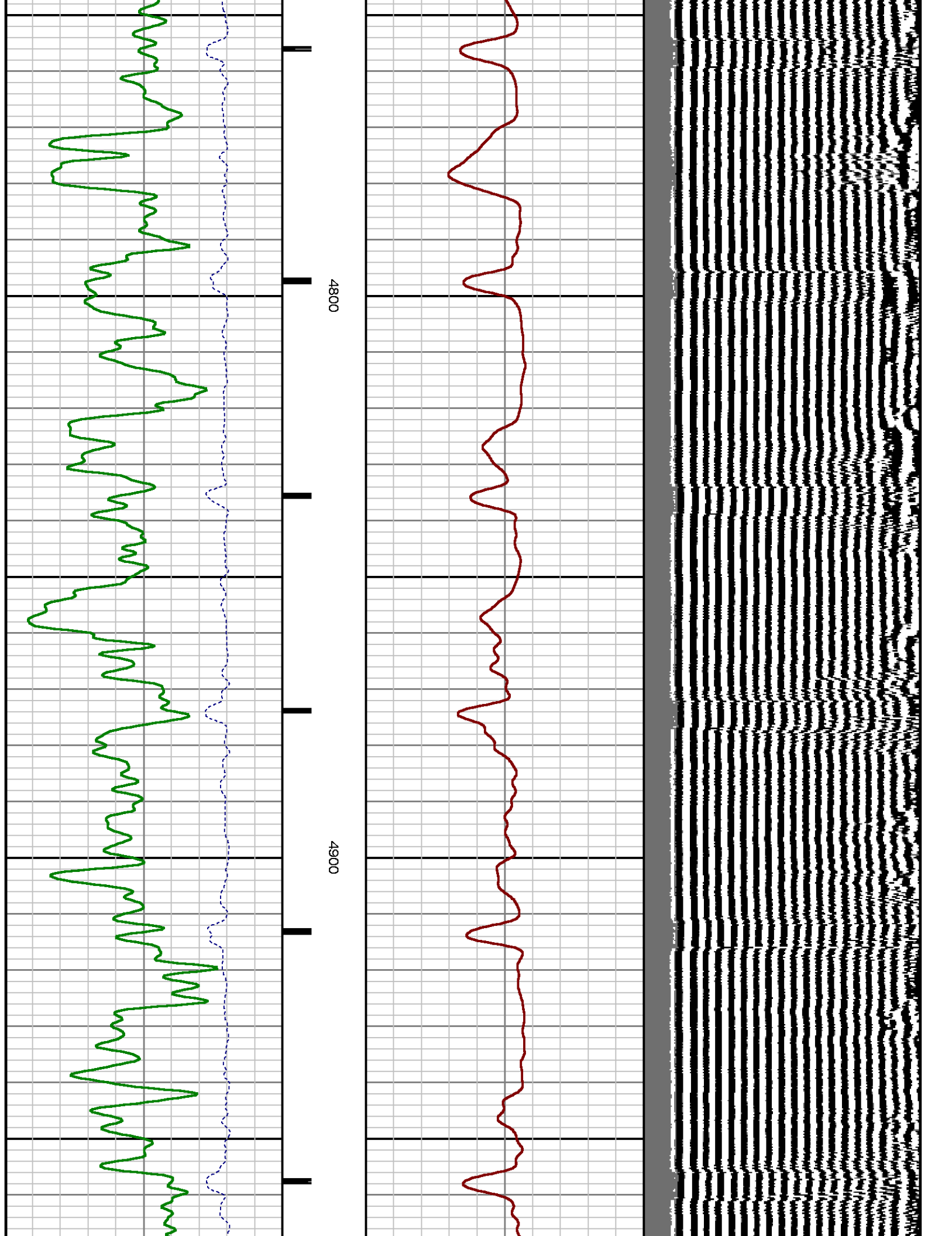
4200

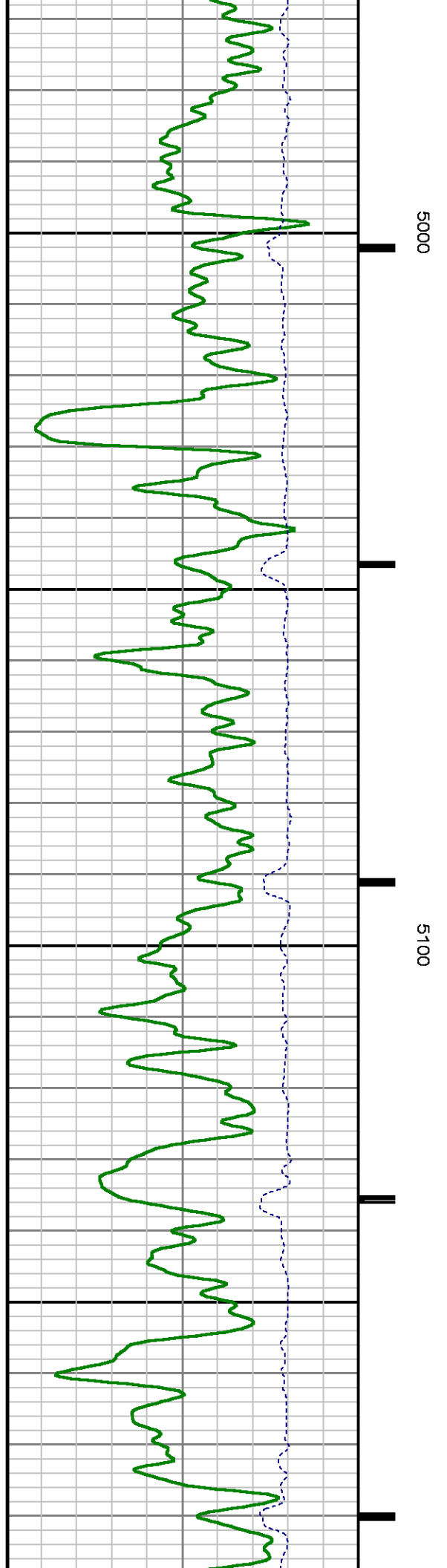
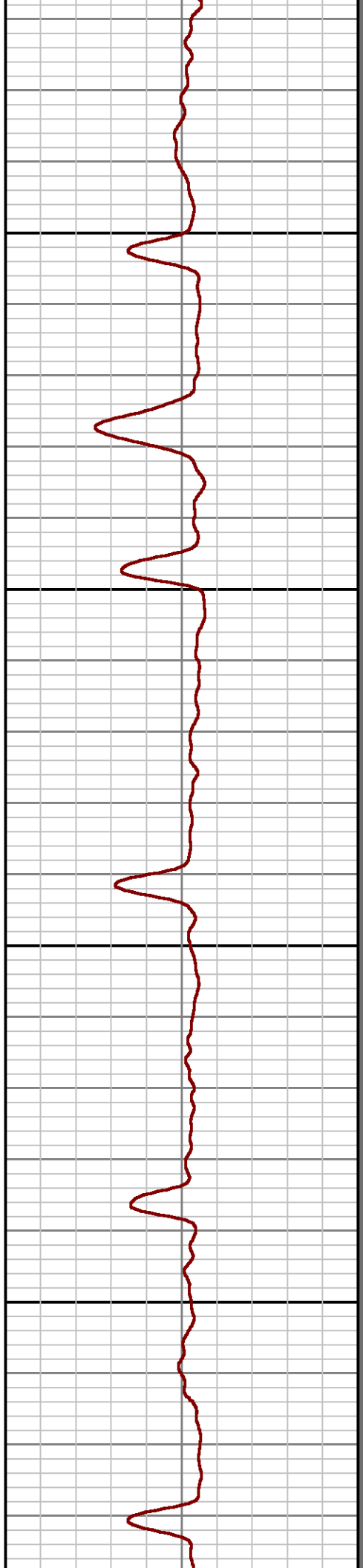
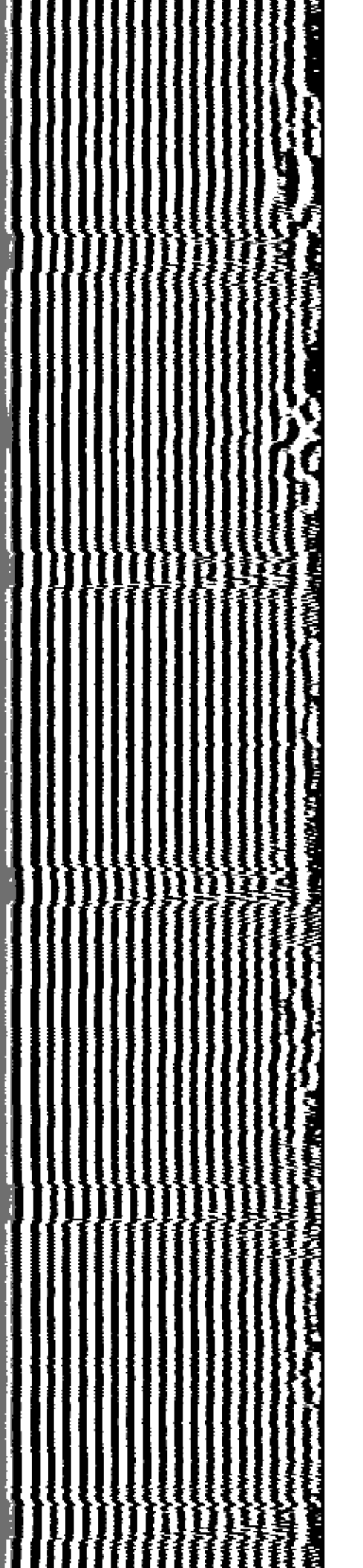
4300



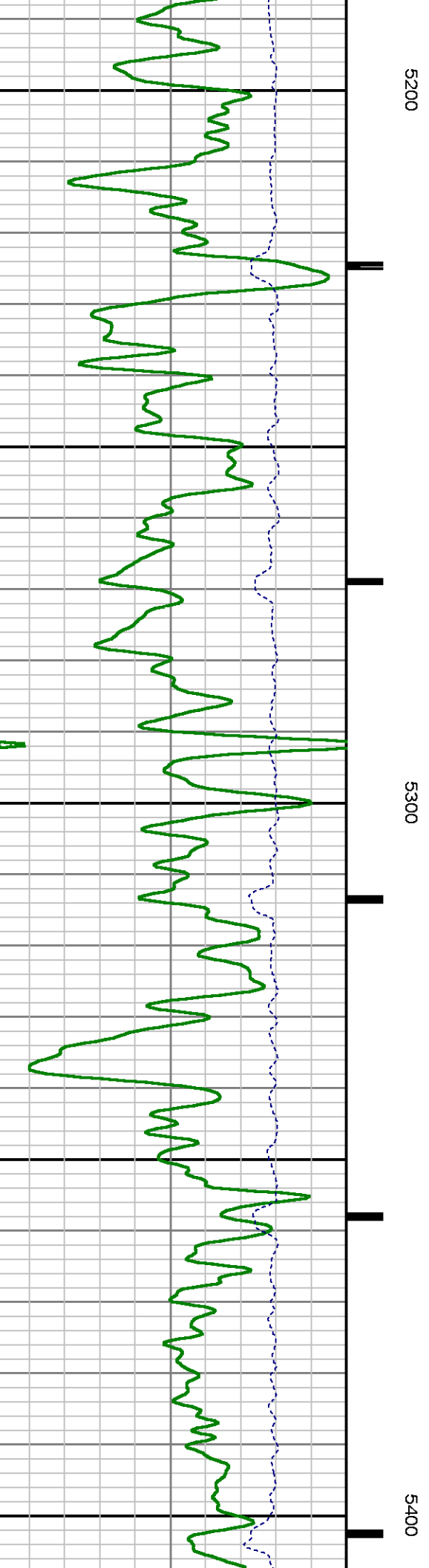
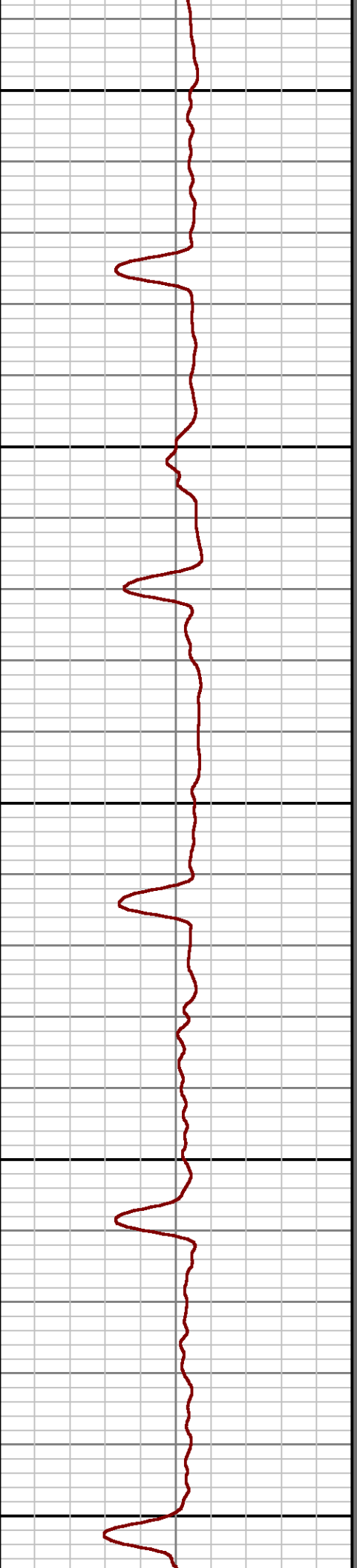
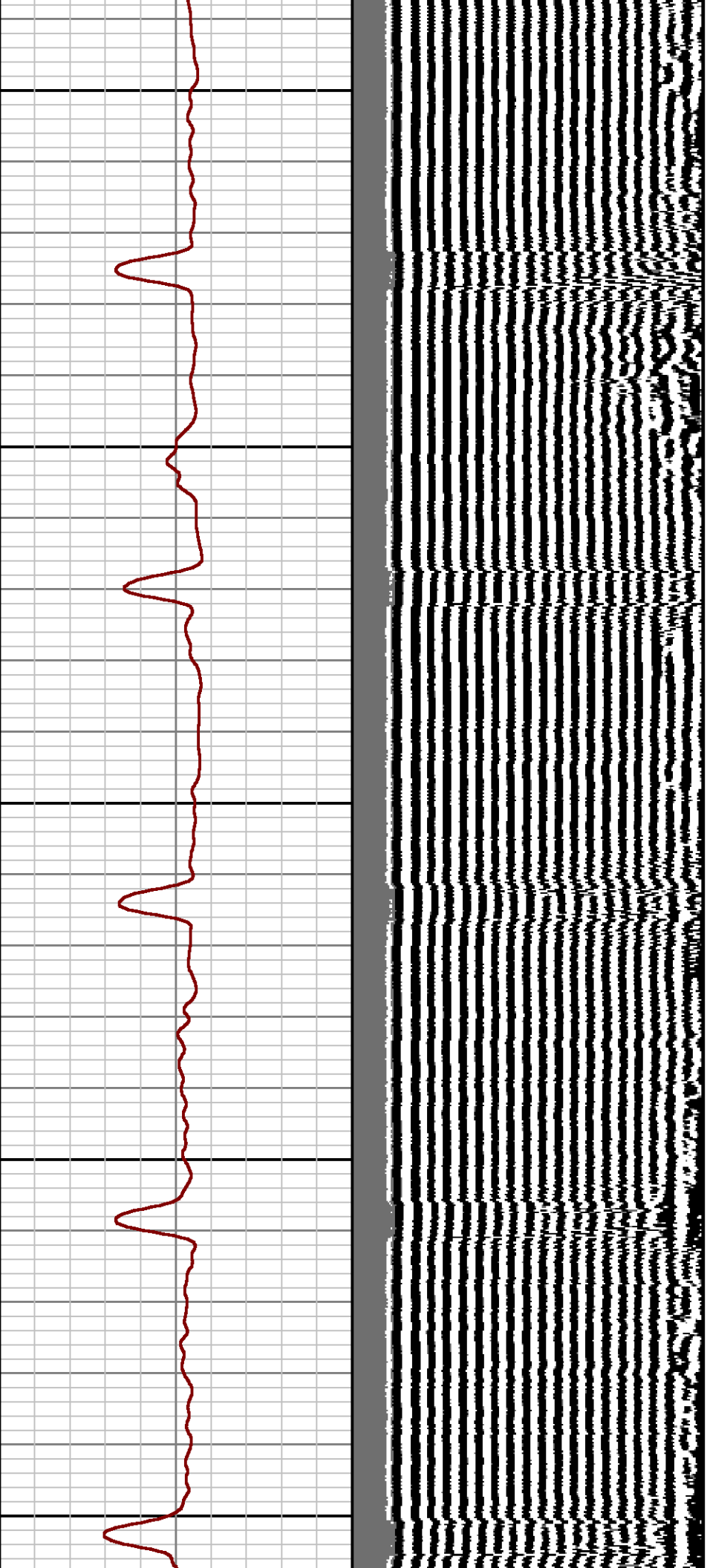


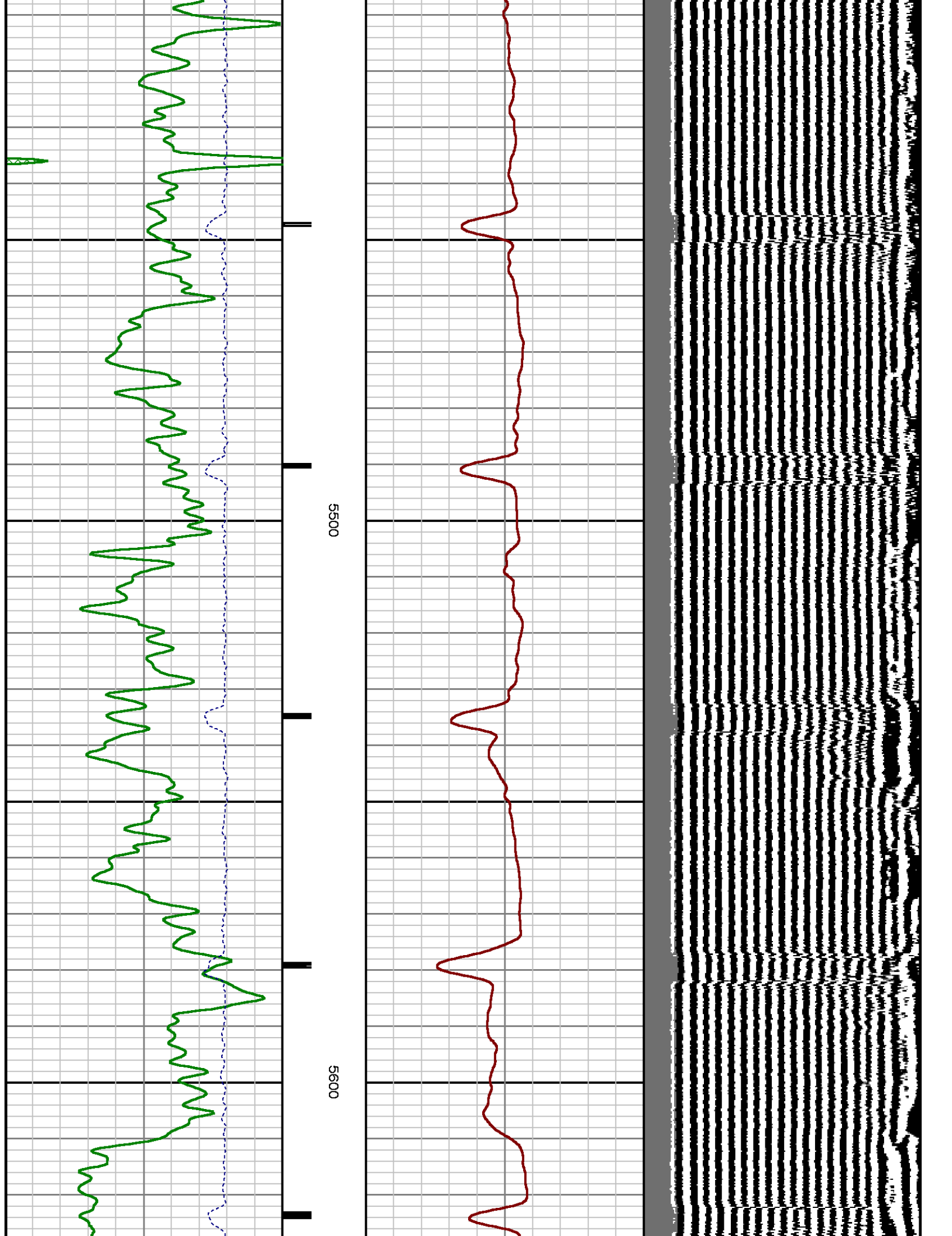




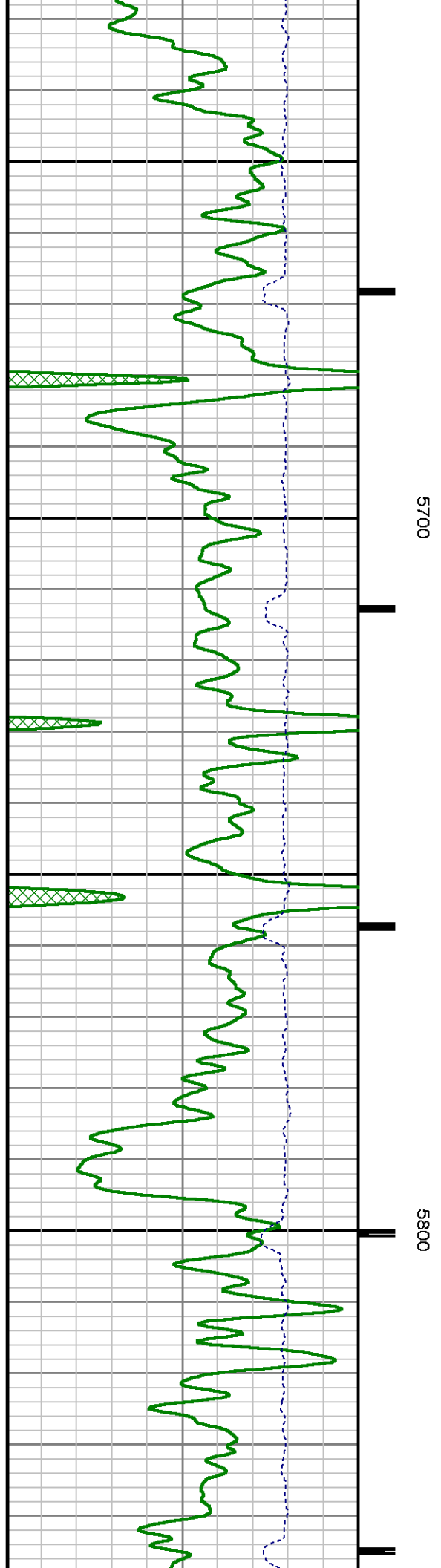
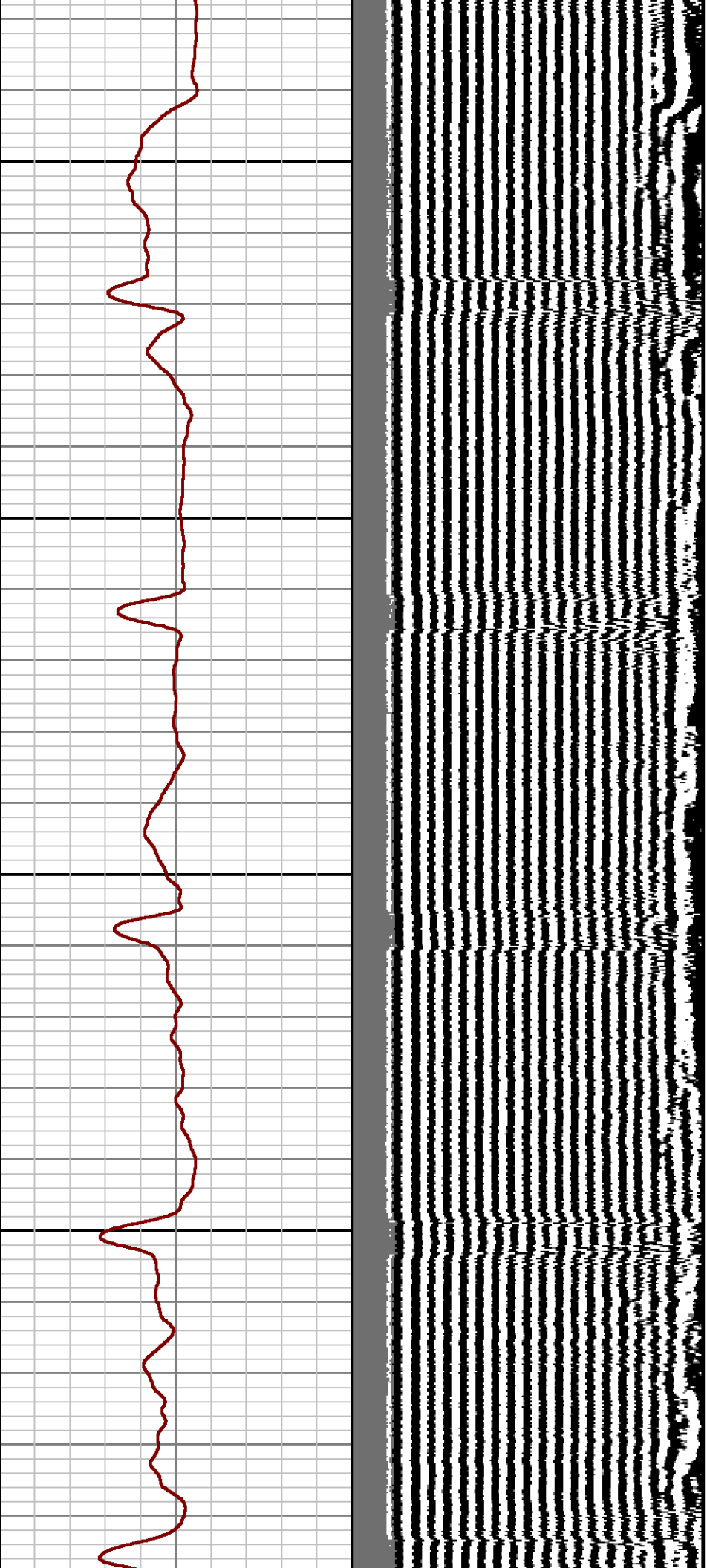


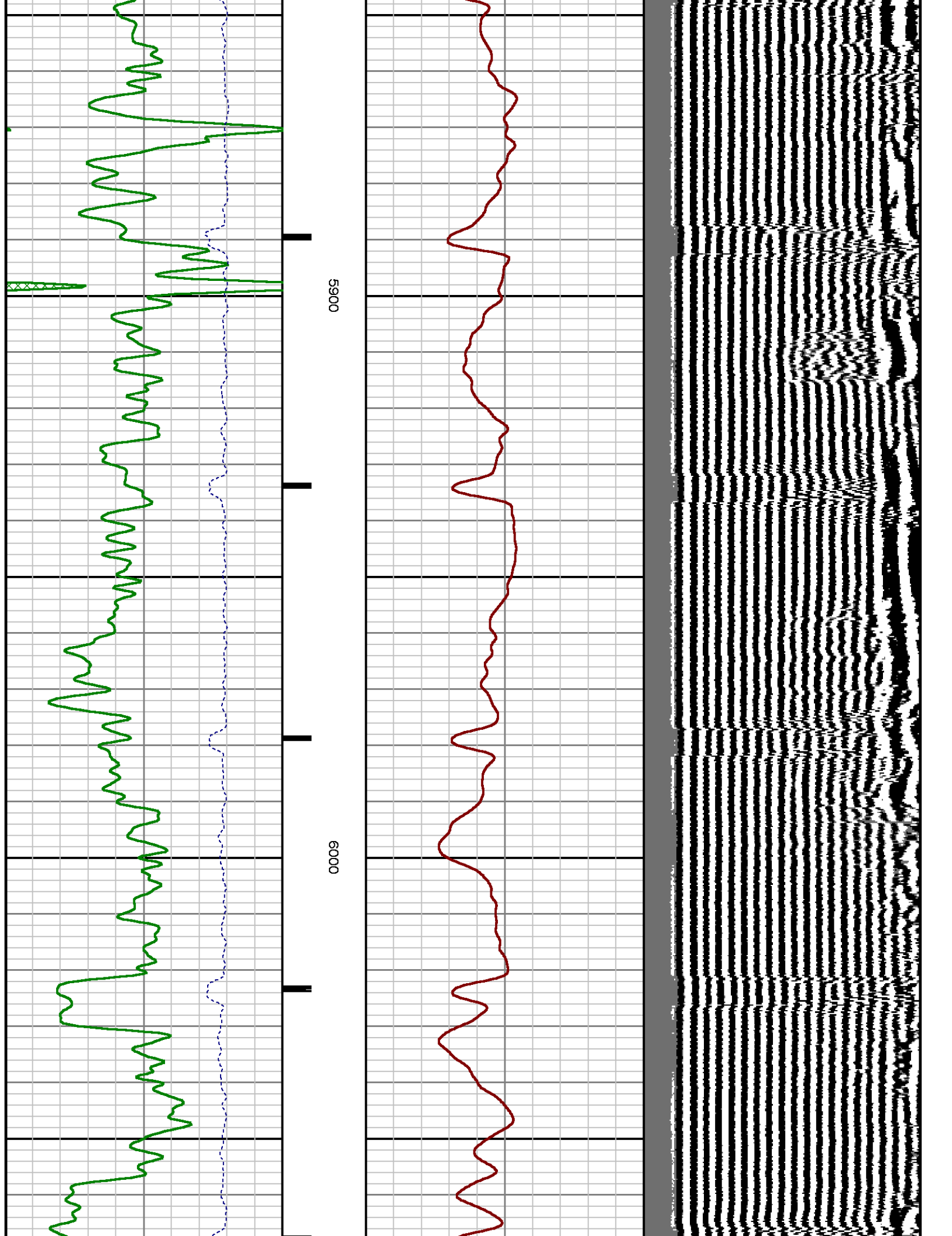


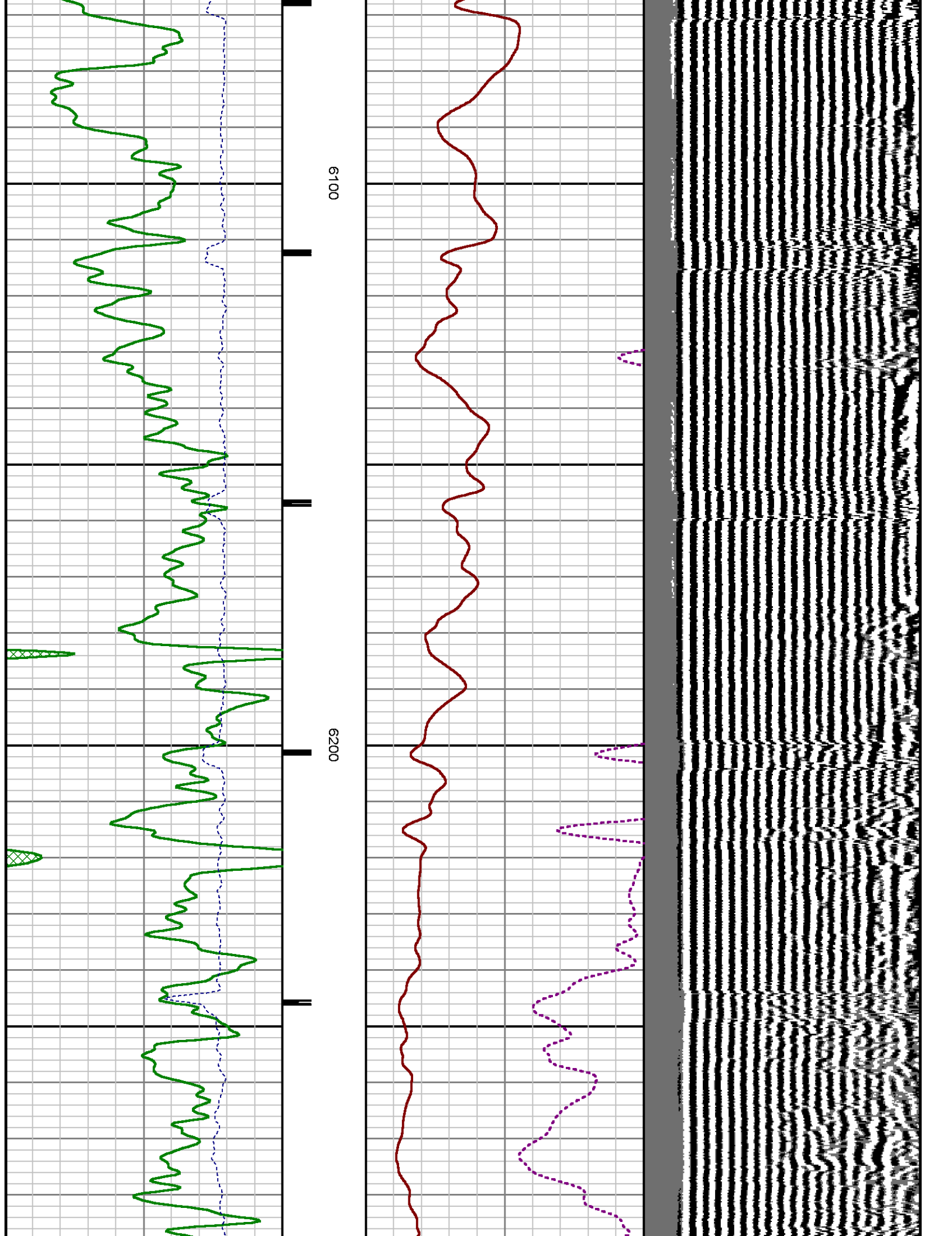


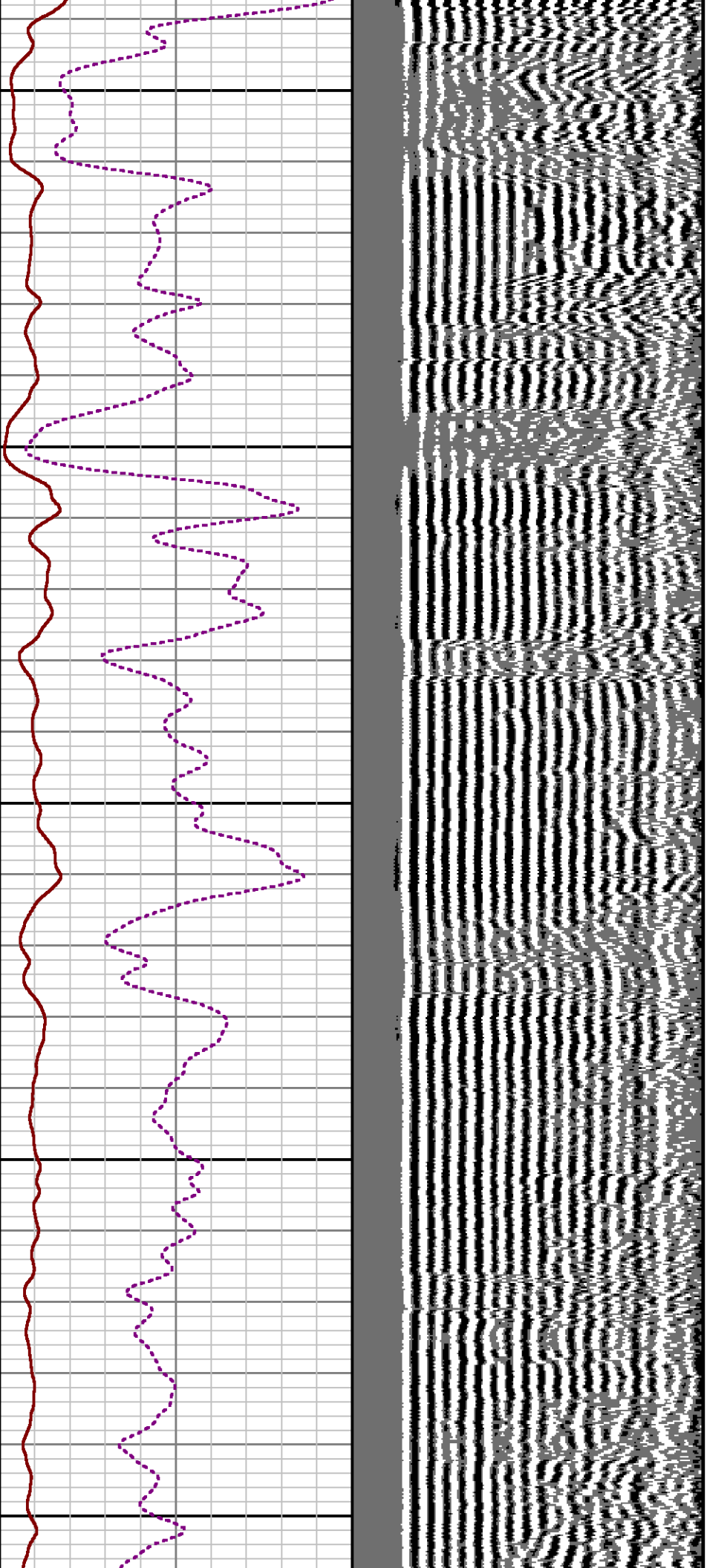








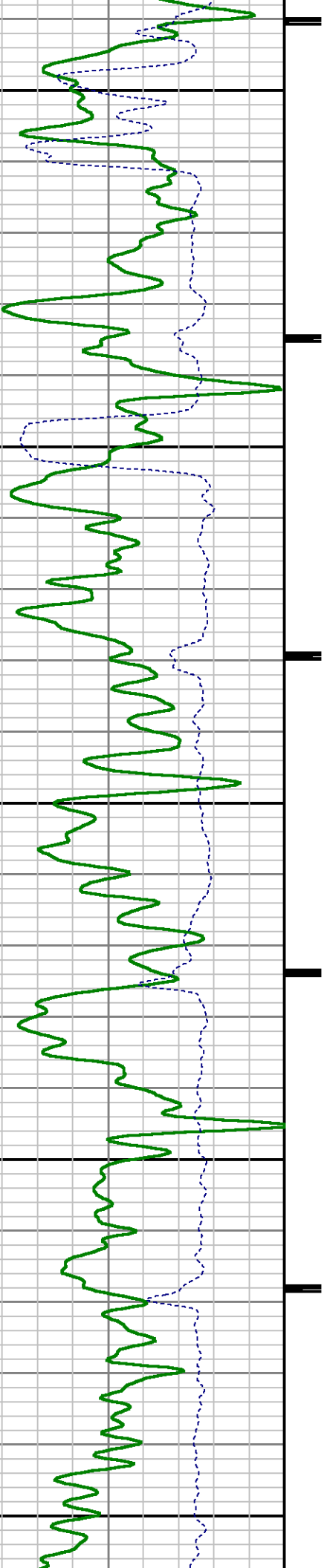


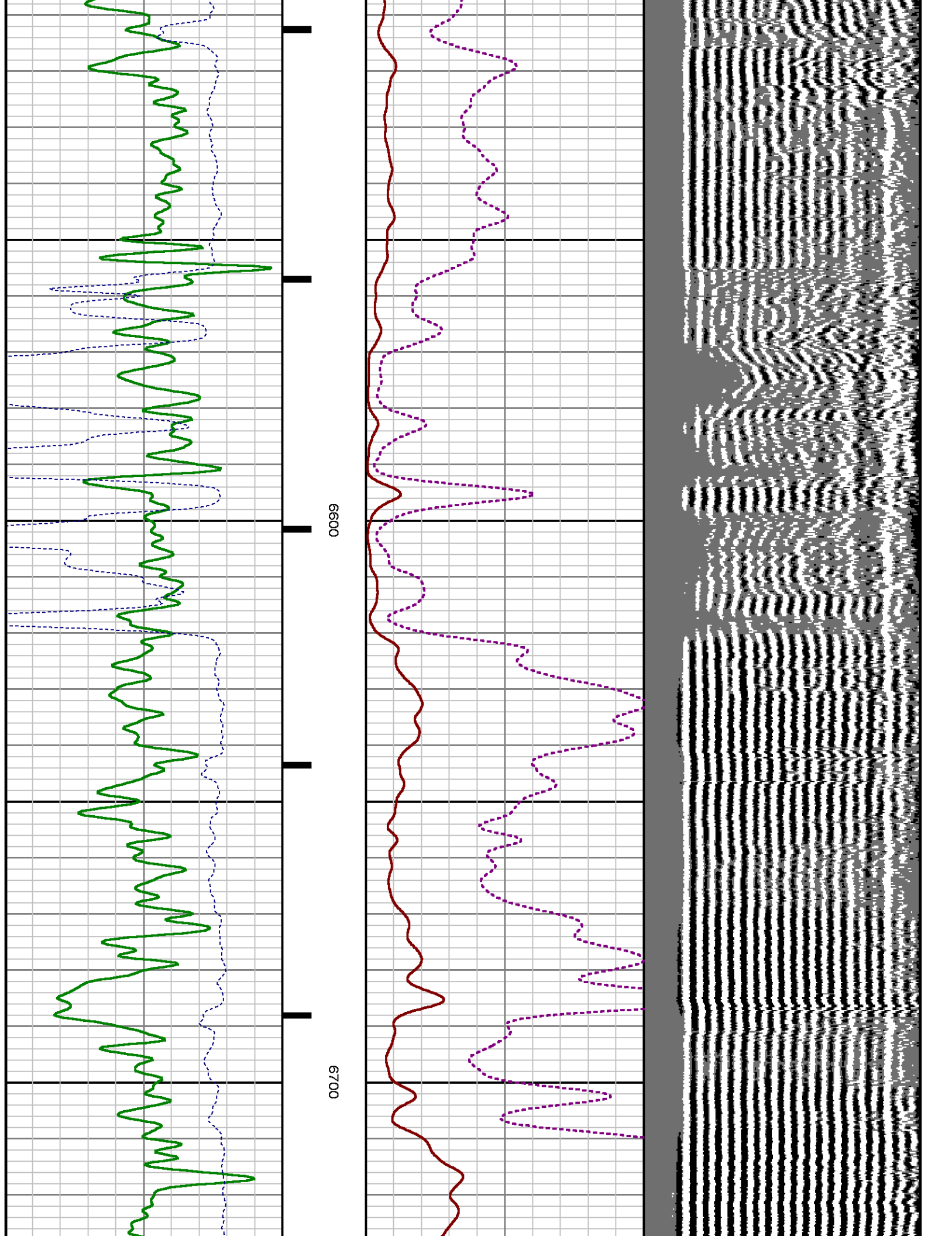


6300

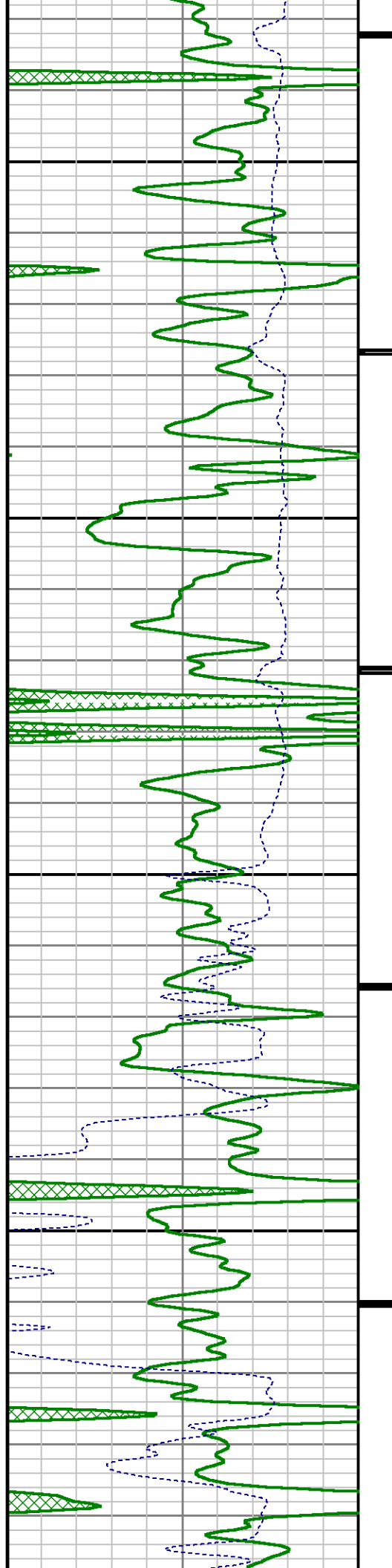
6400

6500



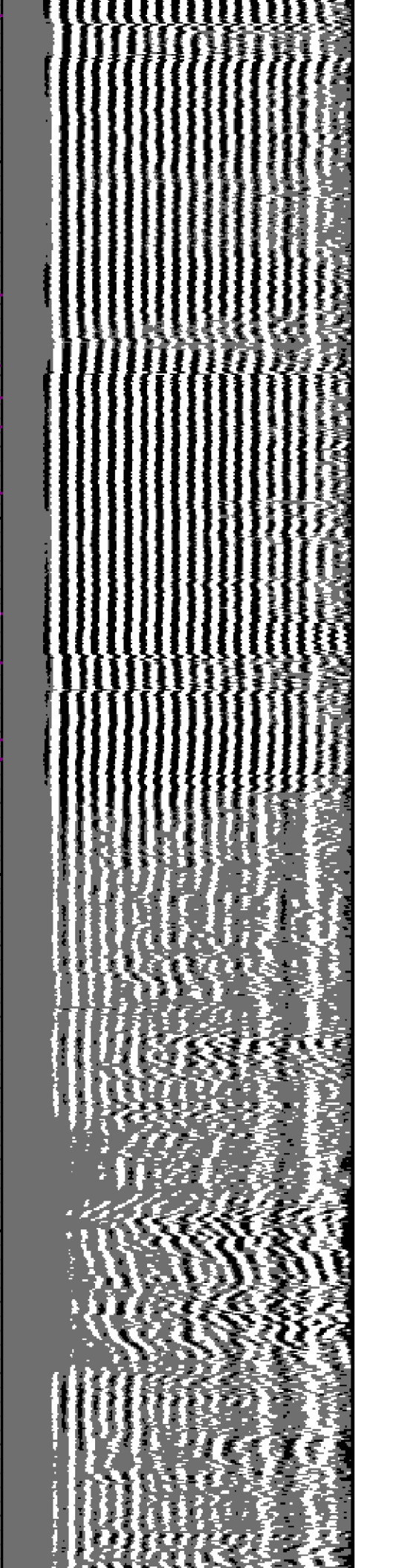
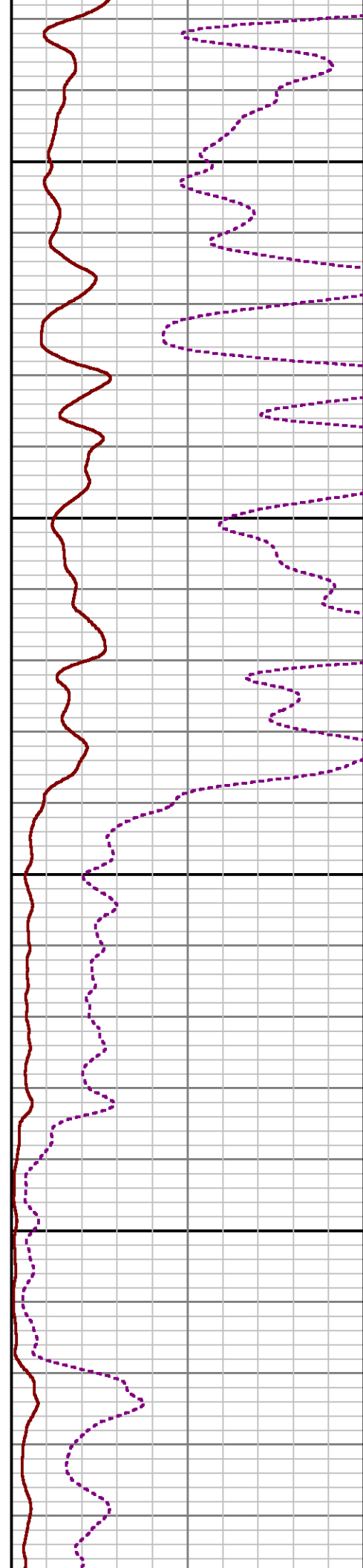


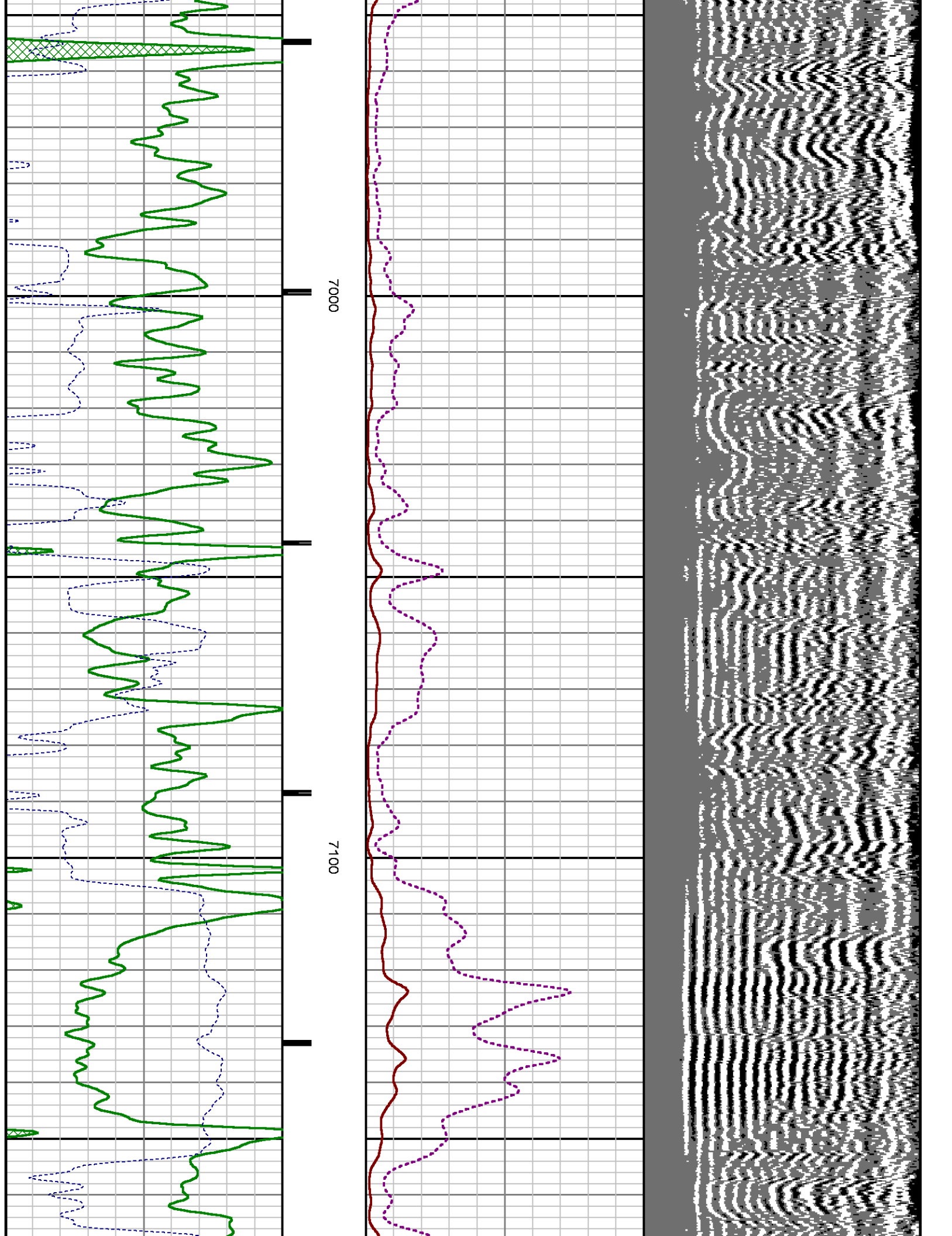


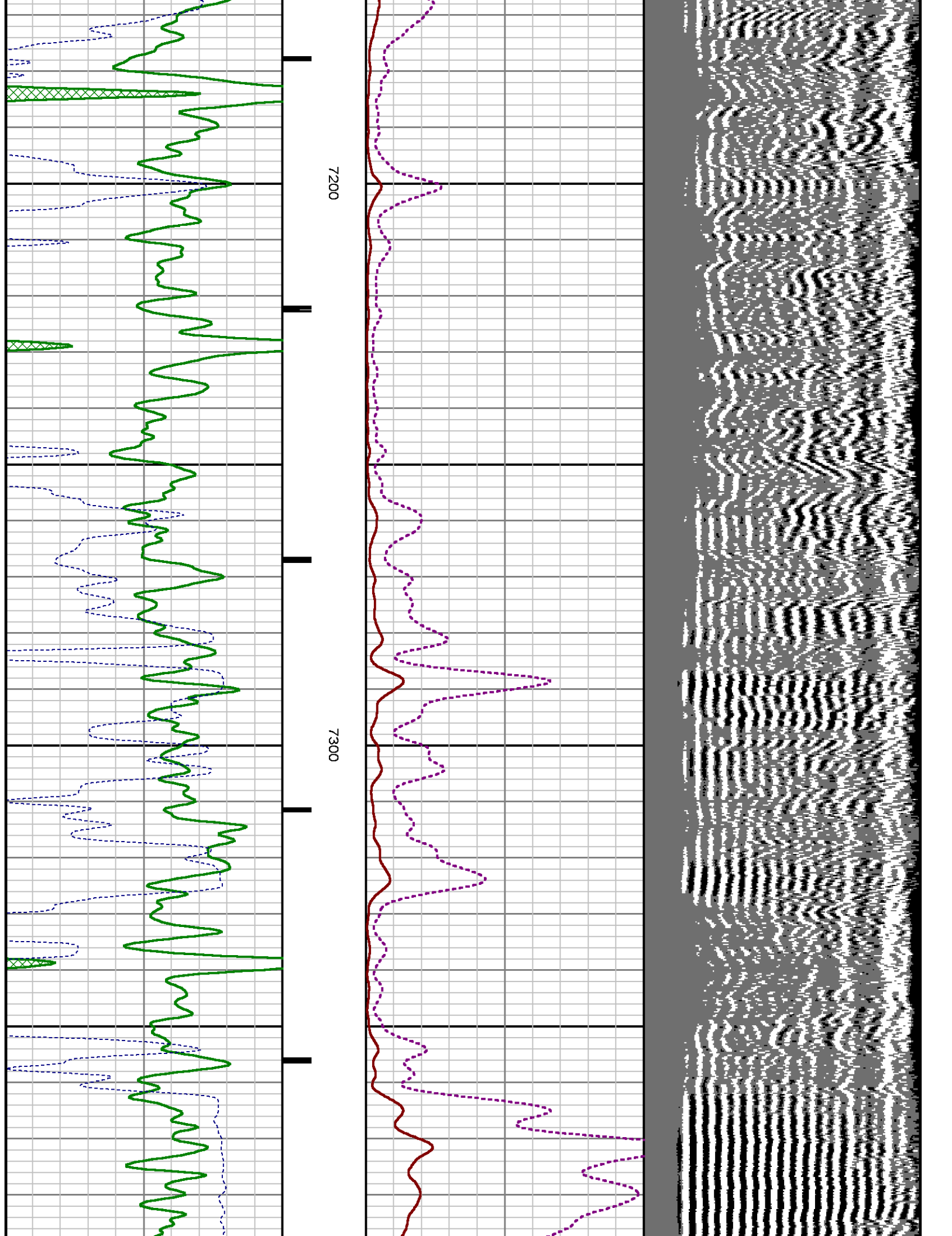


0089

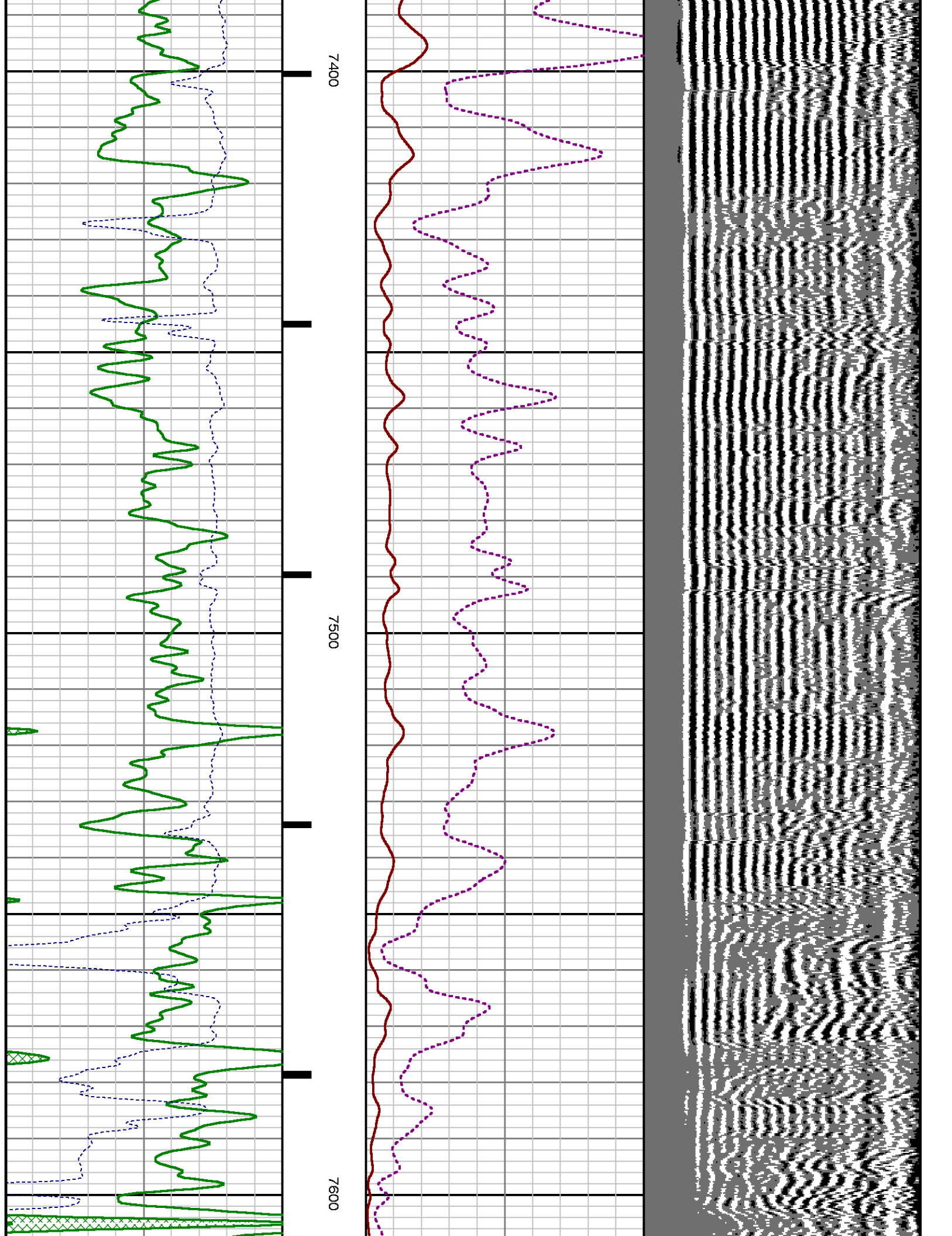
0069

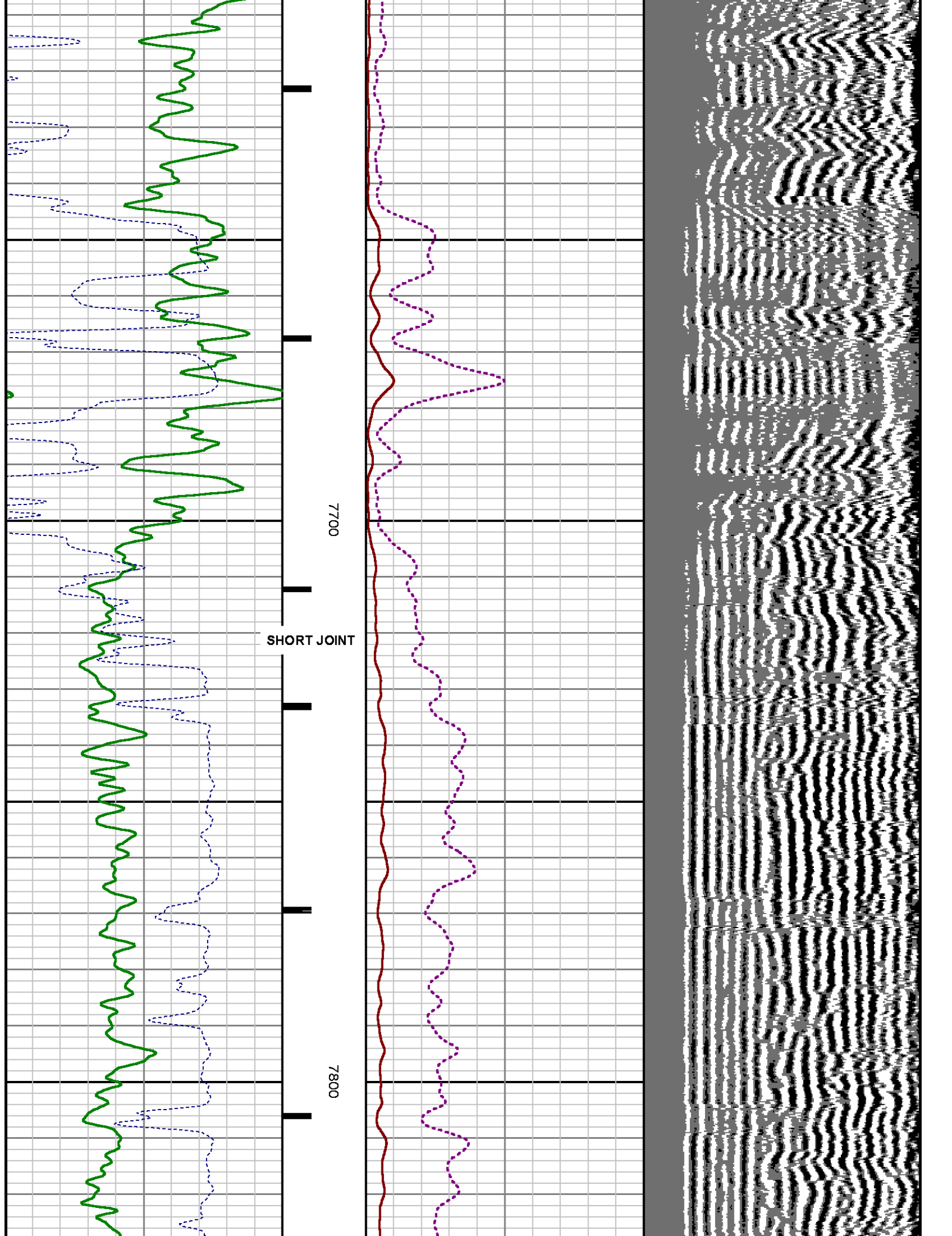


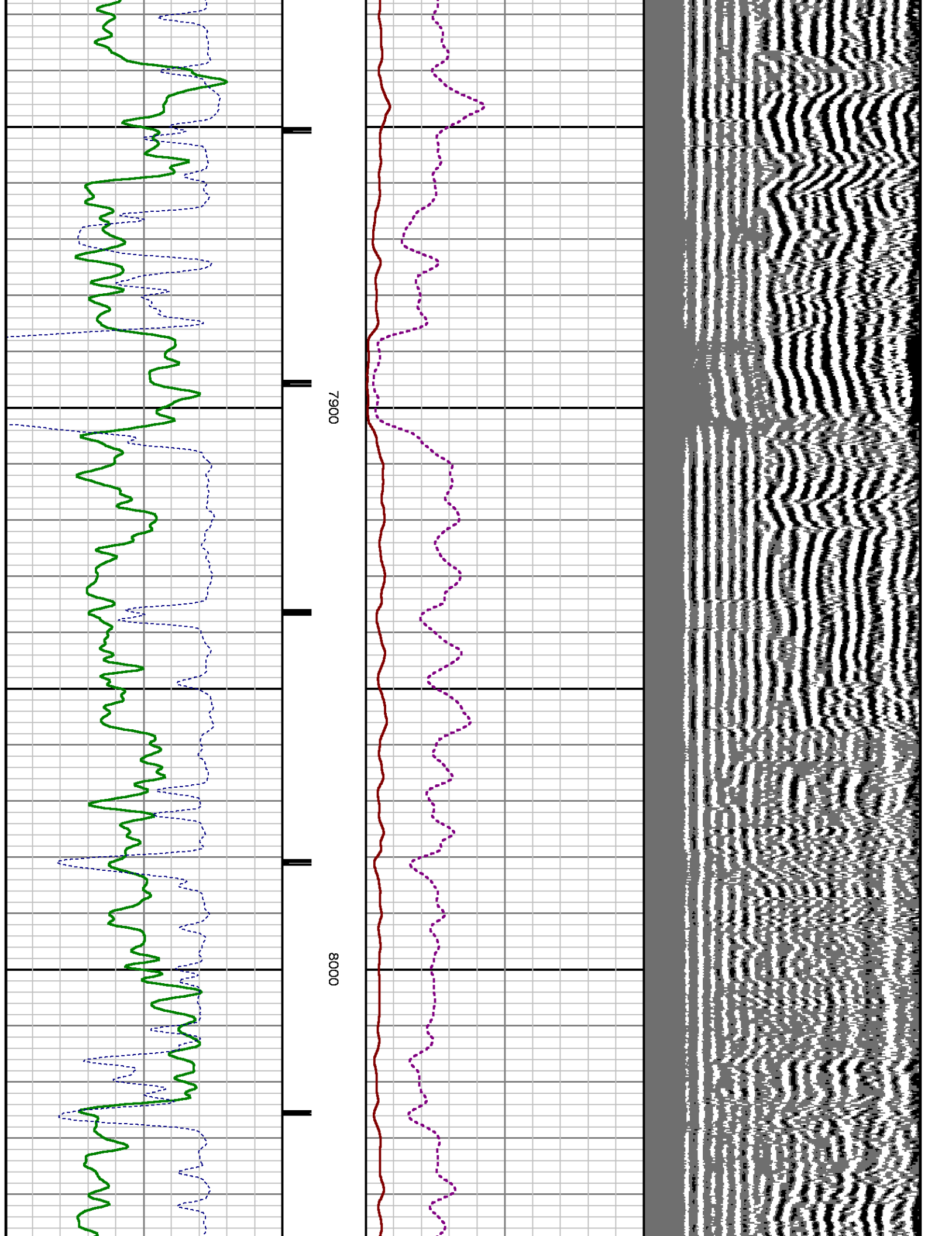


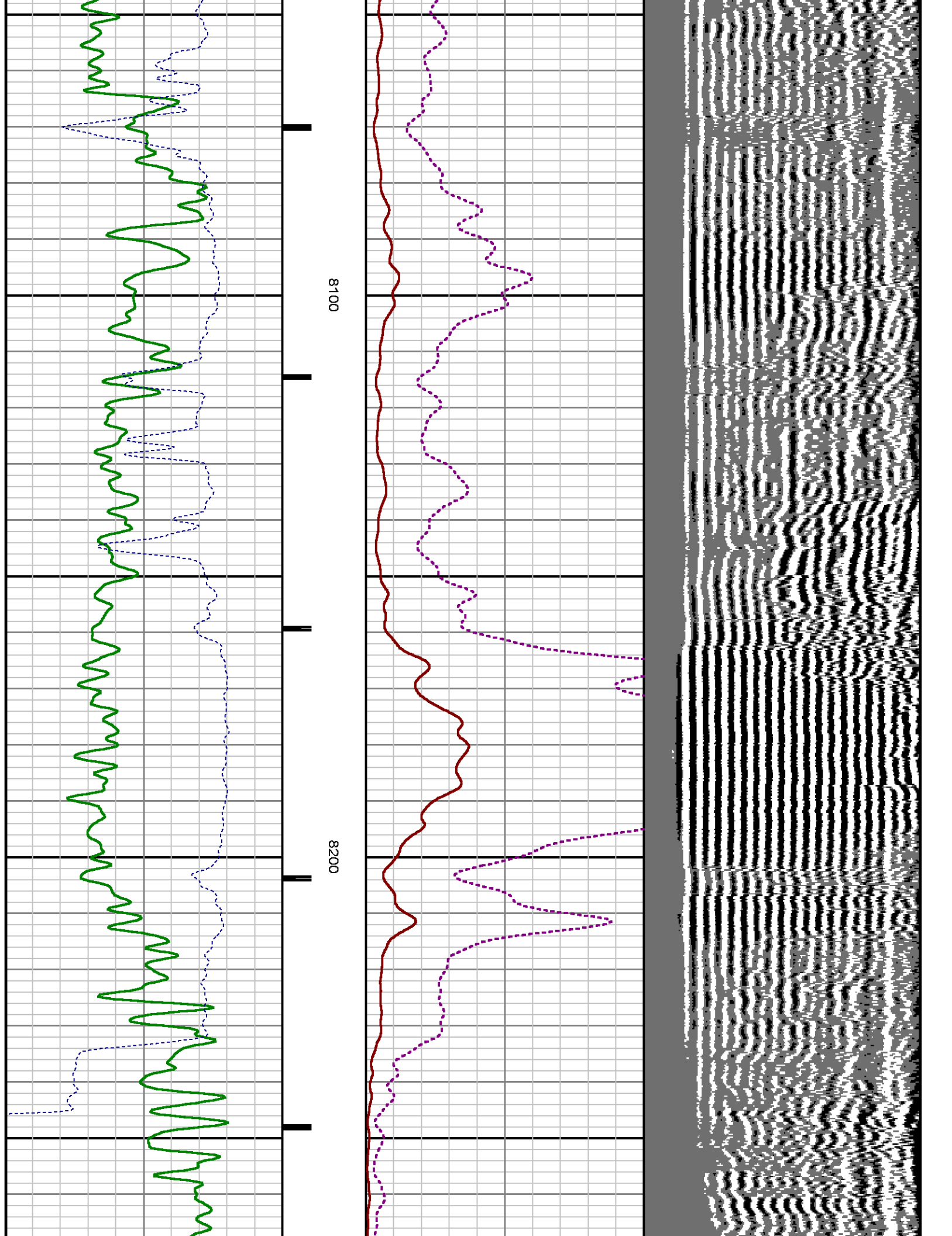


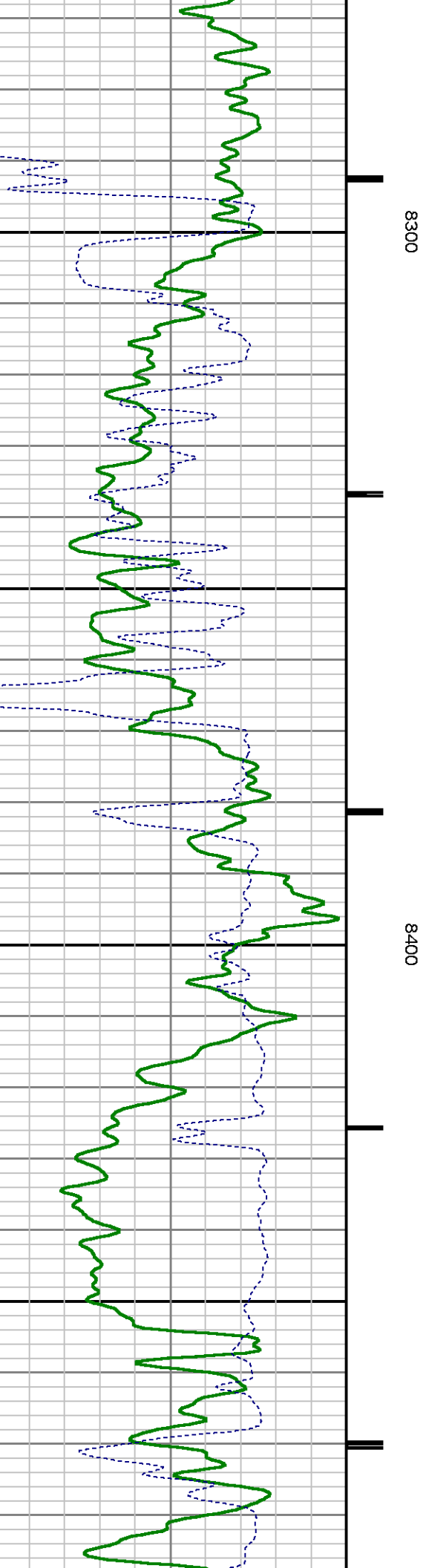
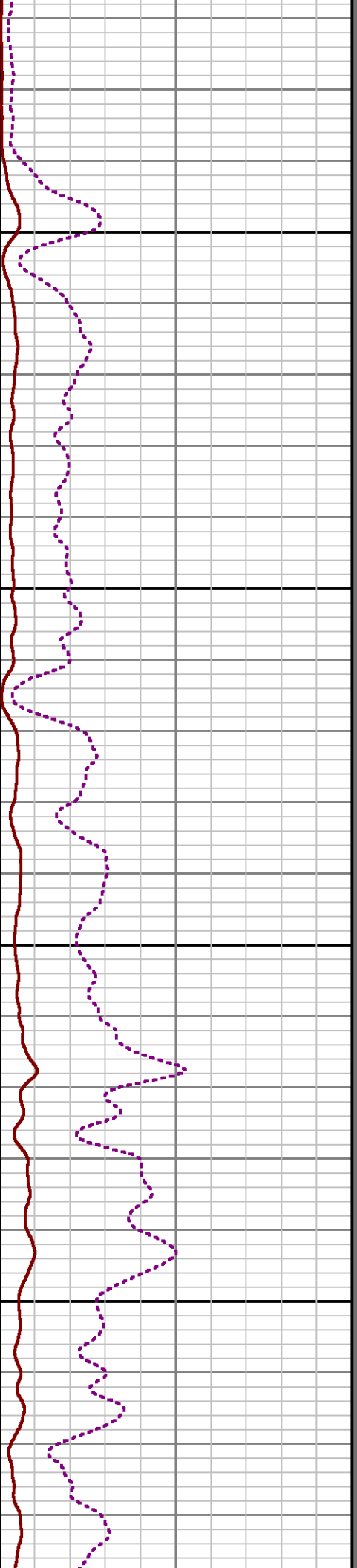
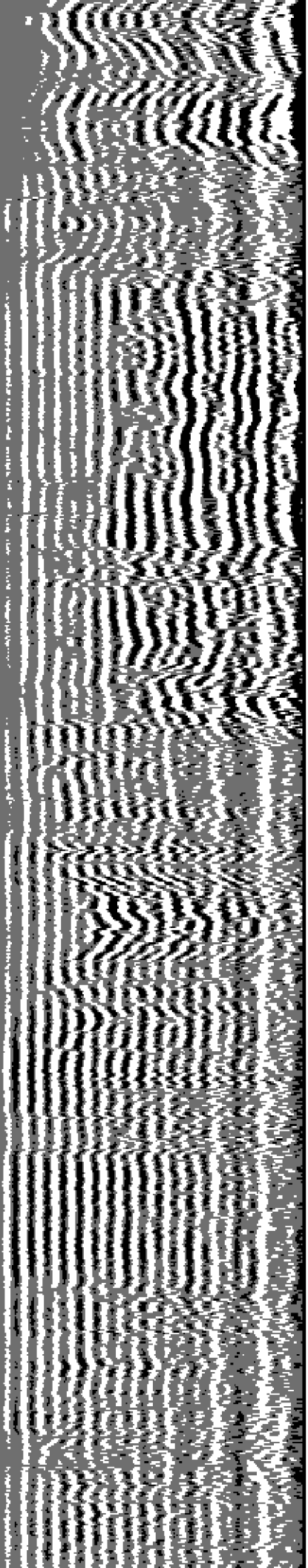




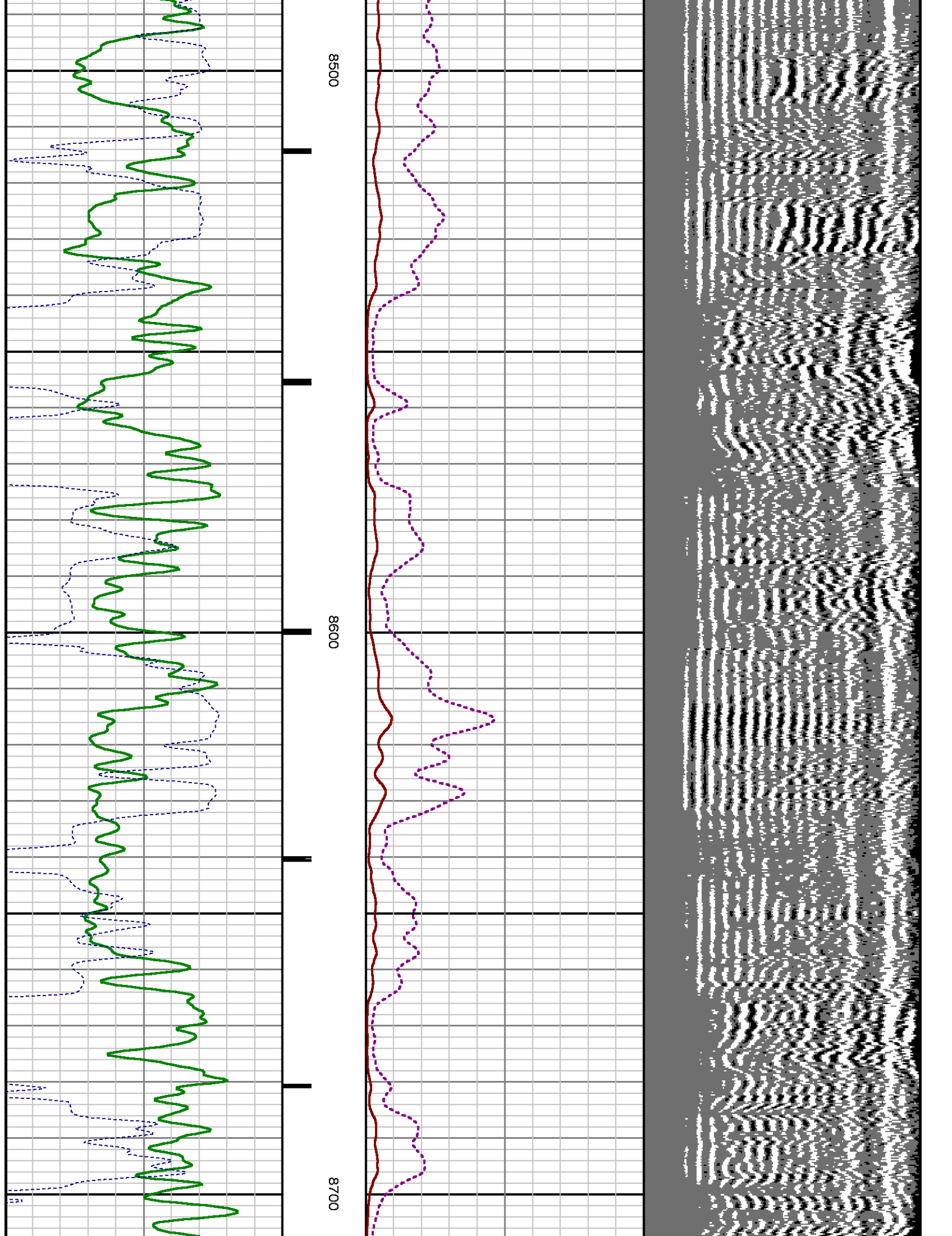




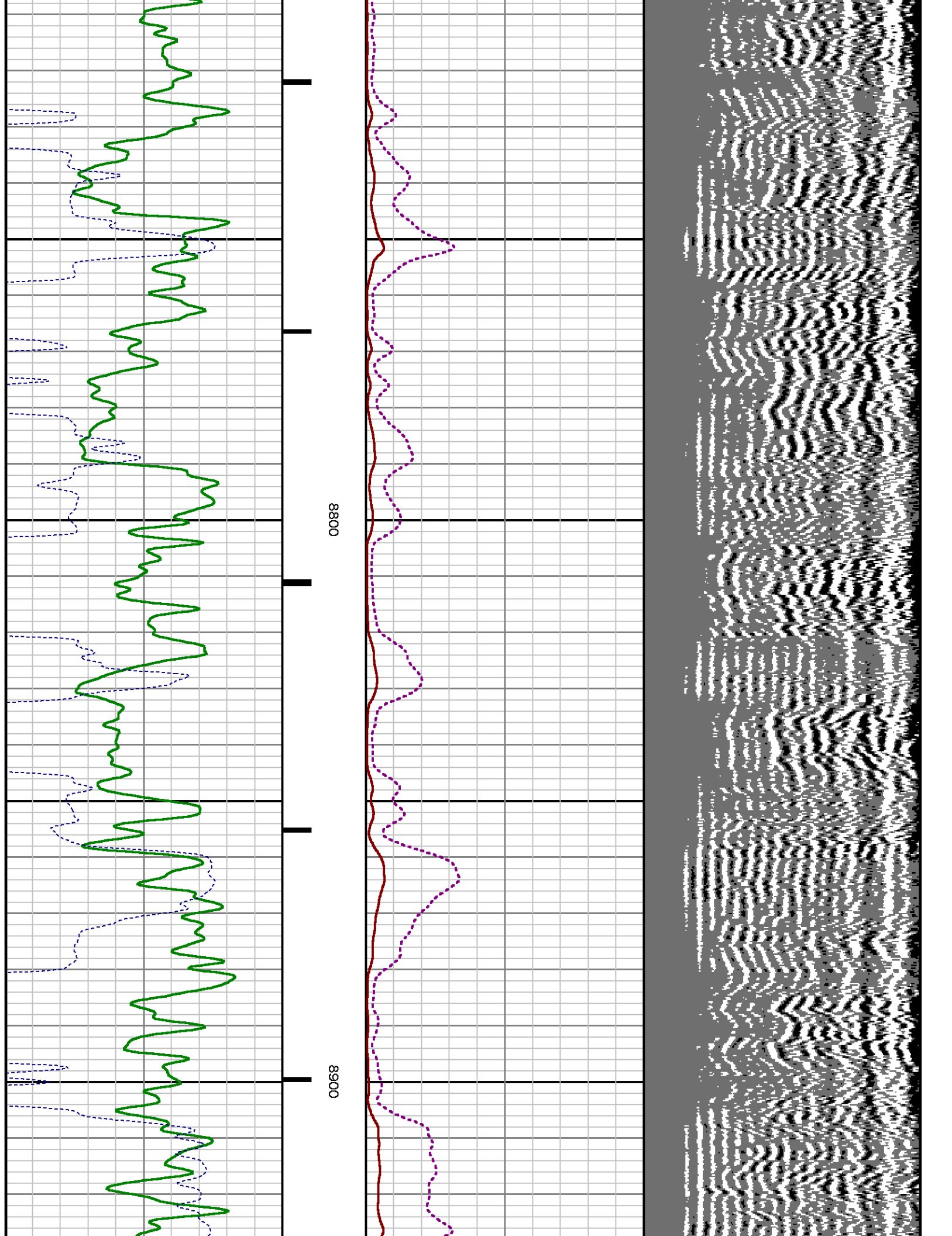


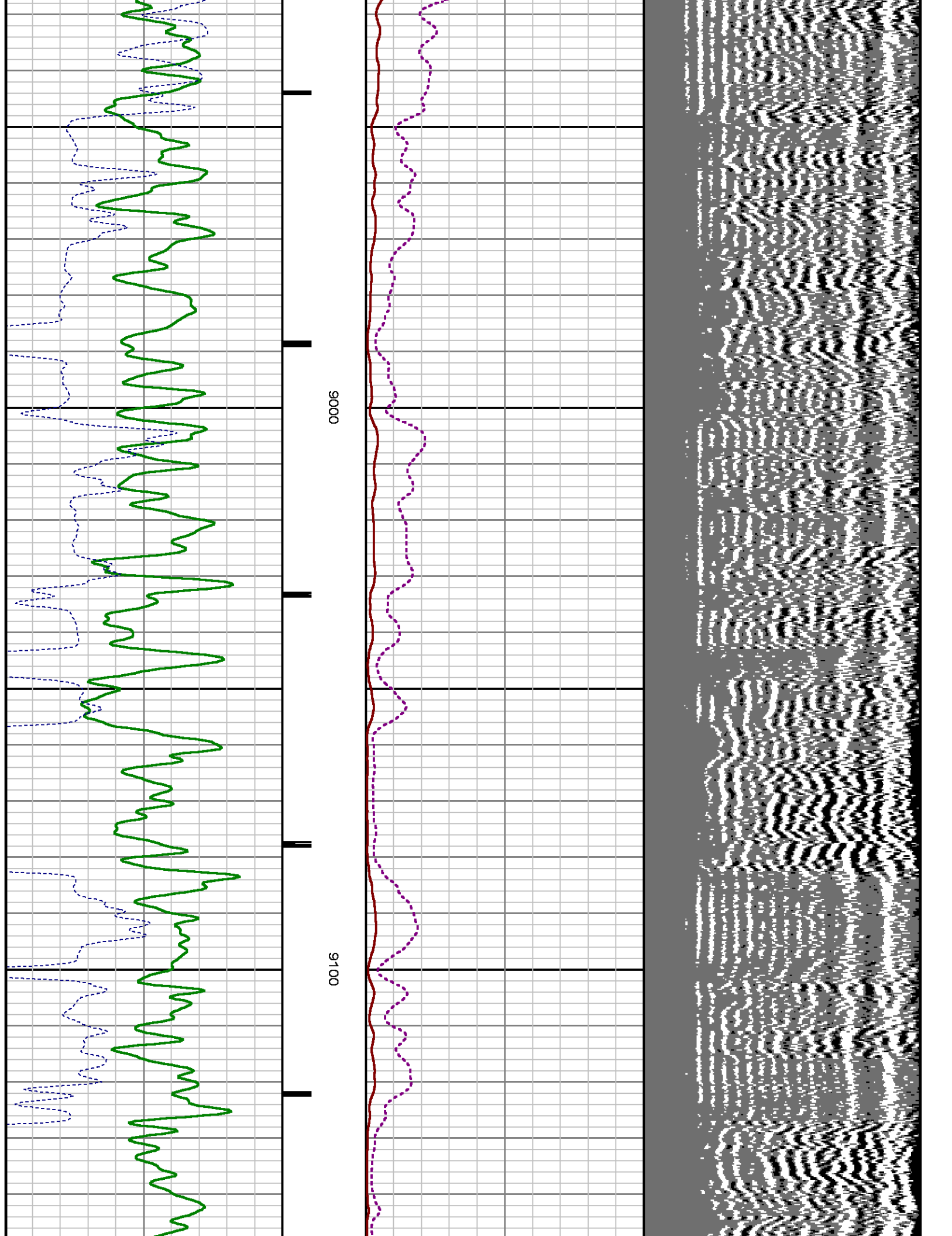


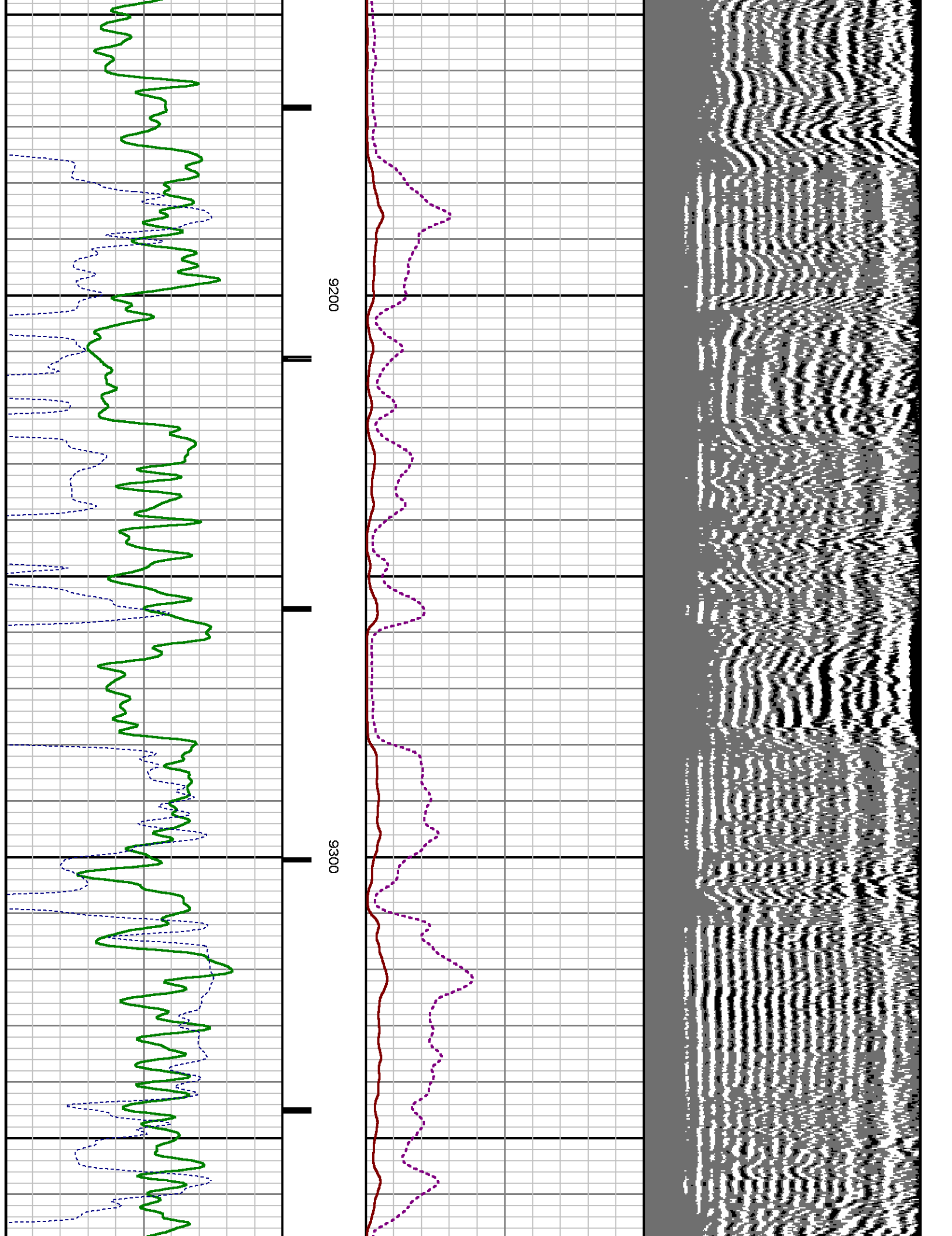


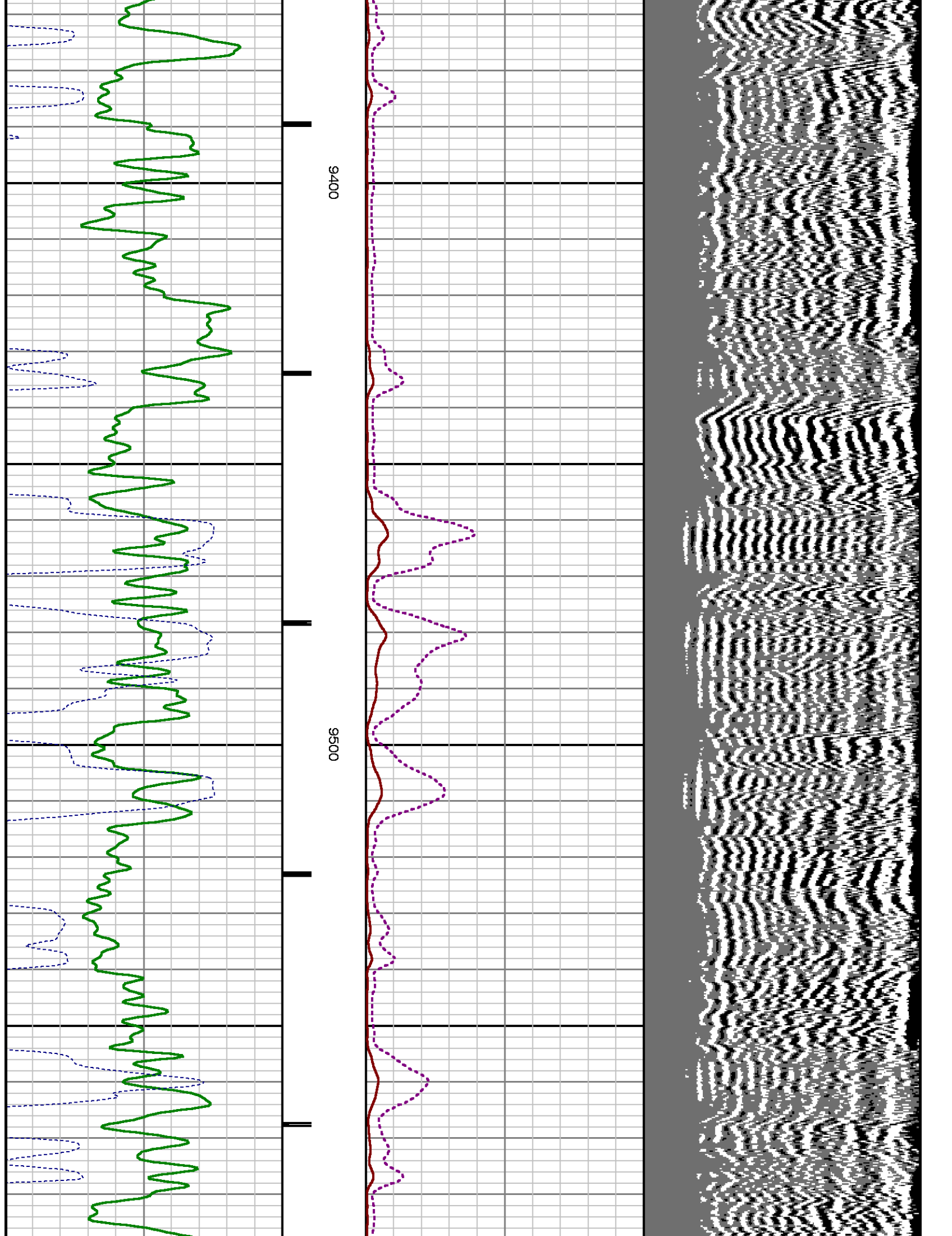


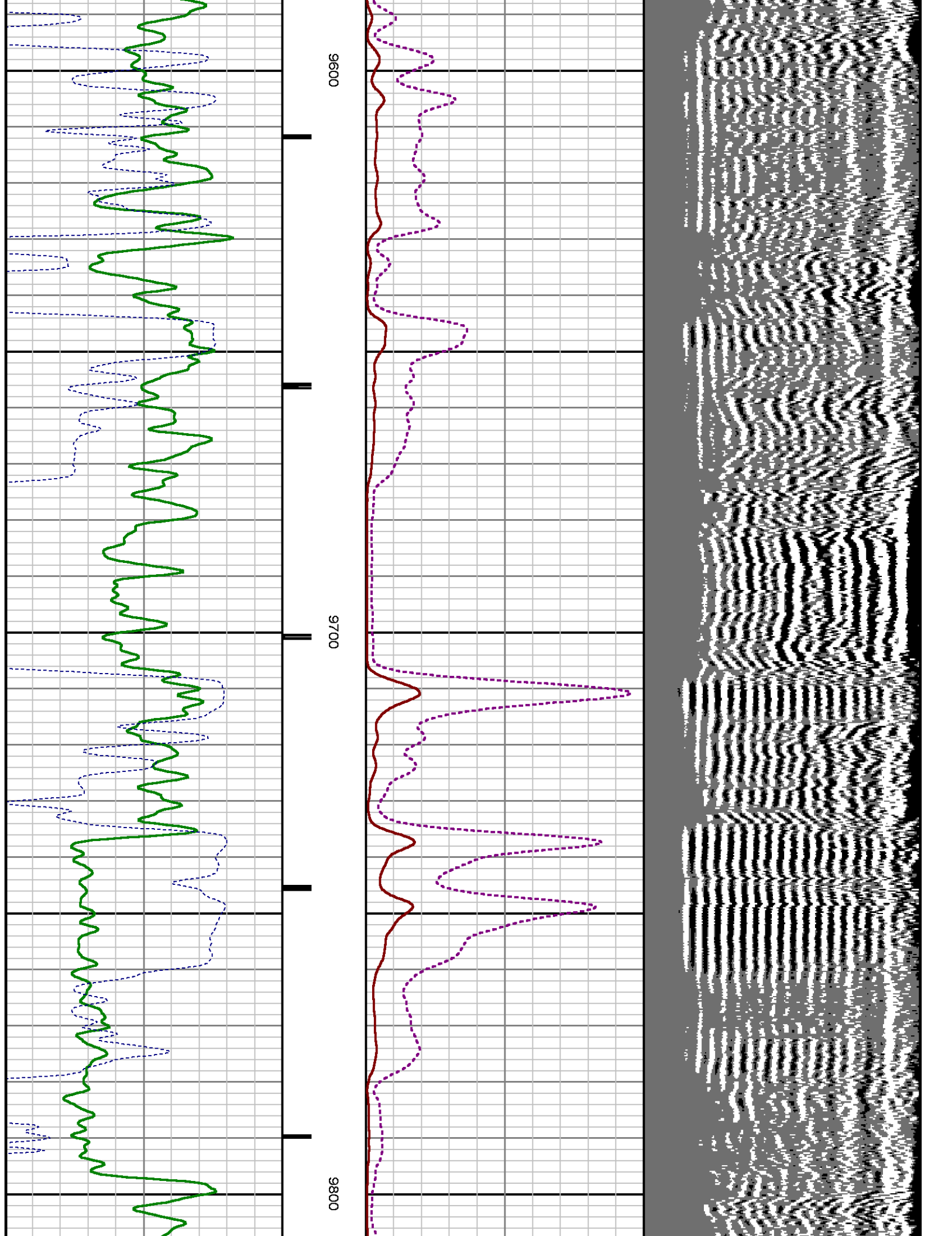




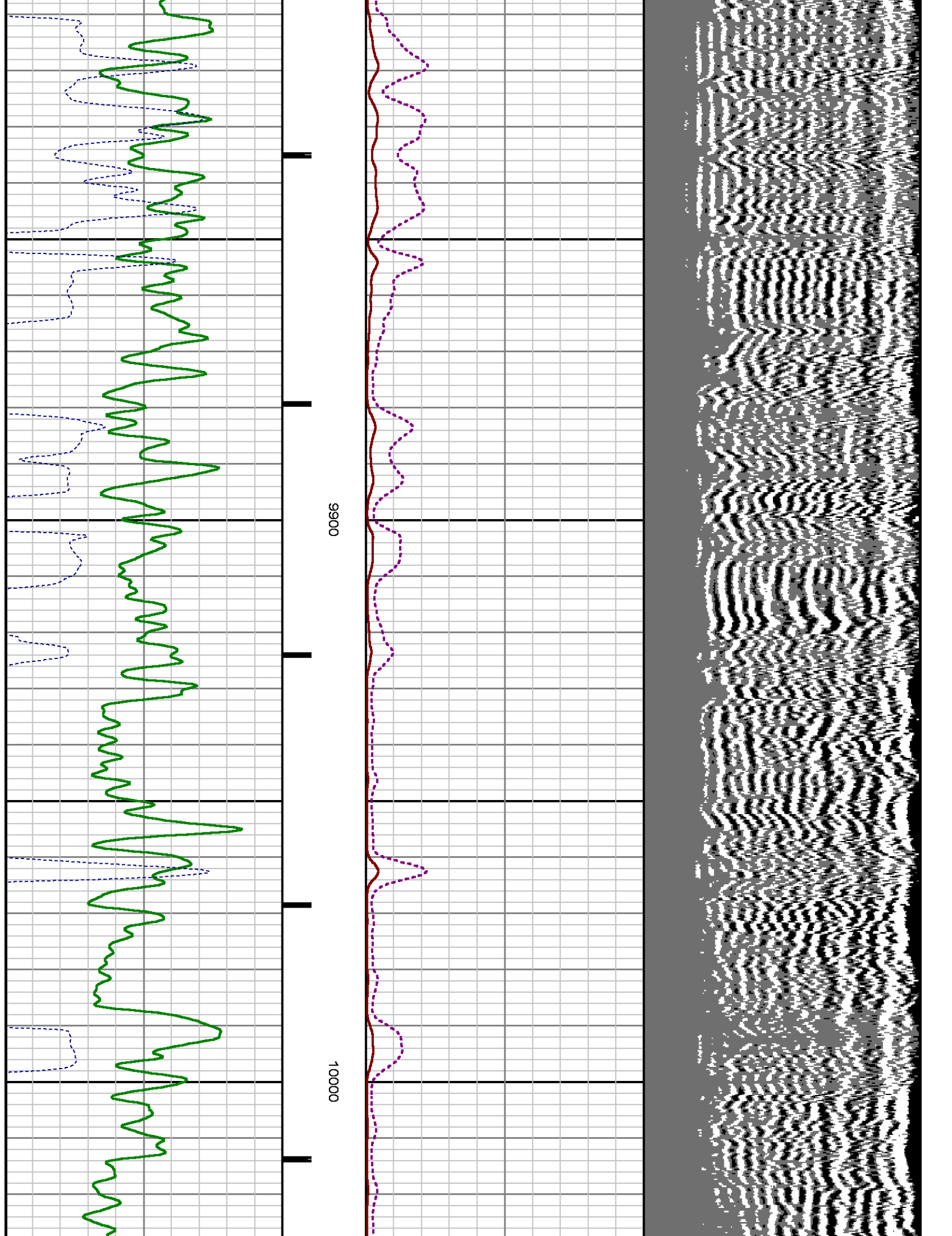




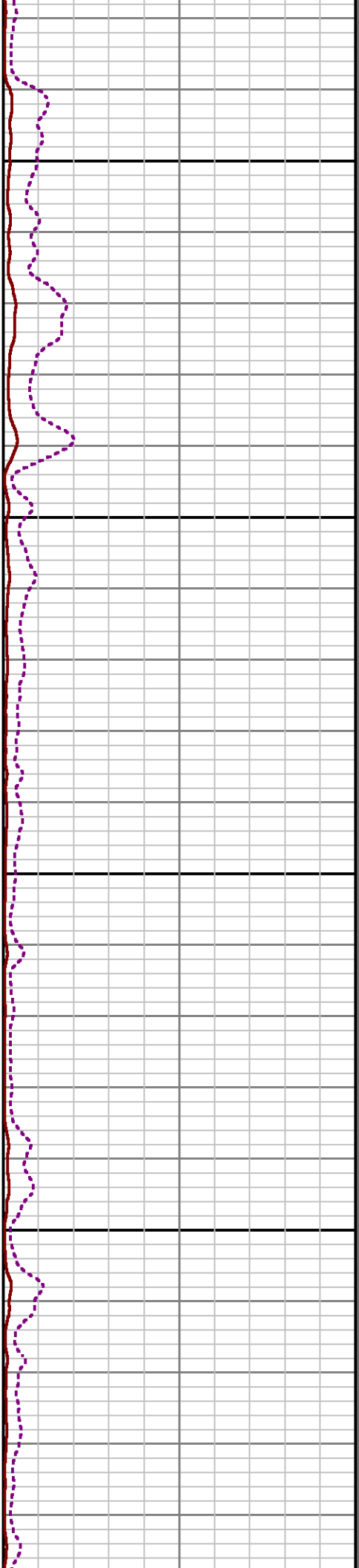
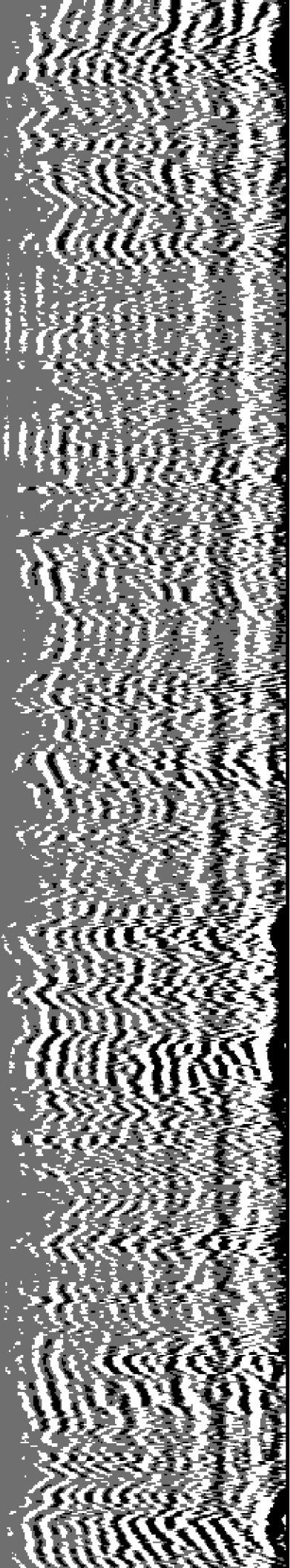






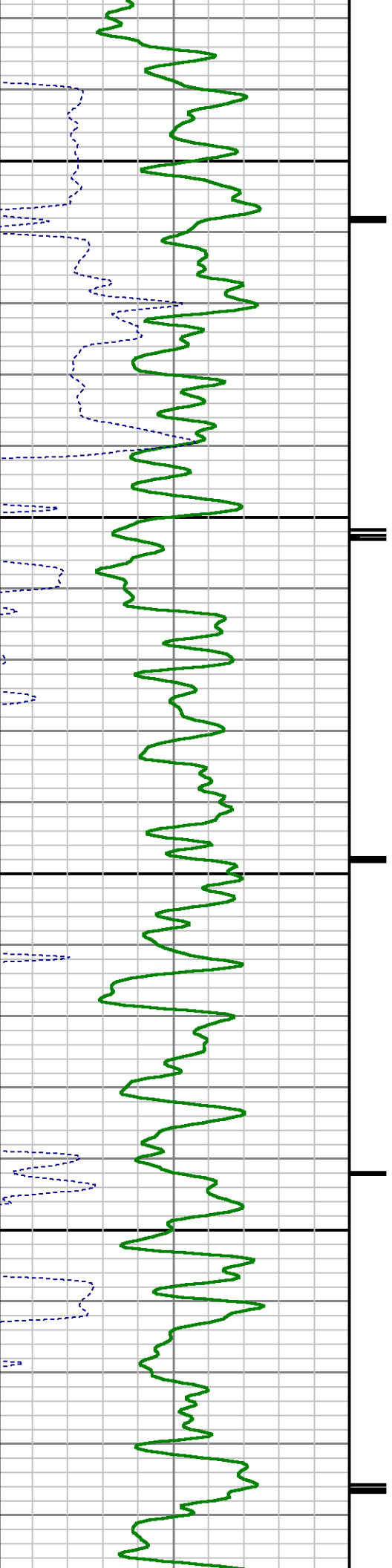


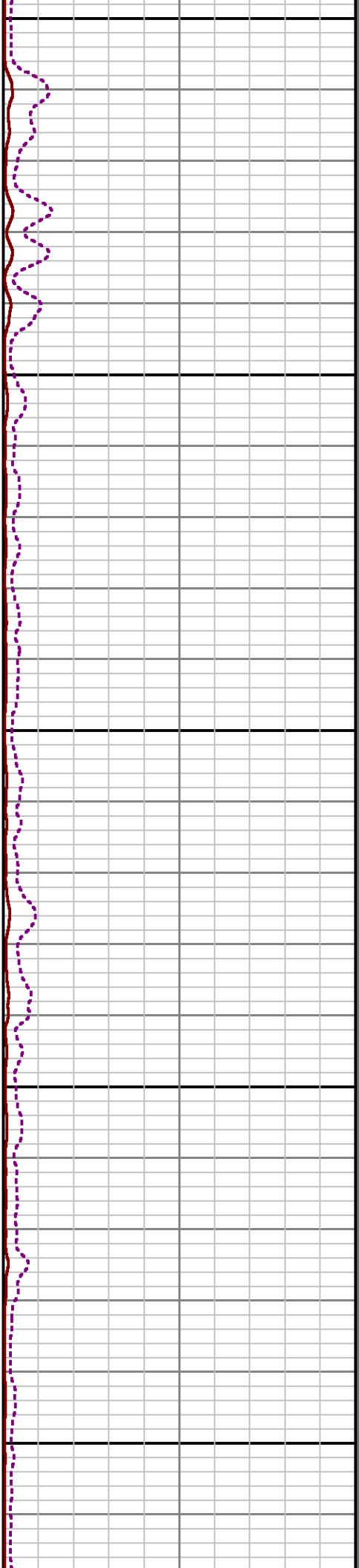
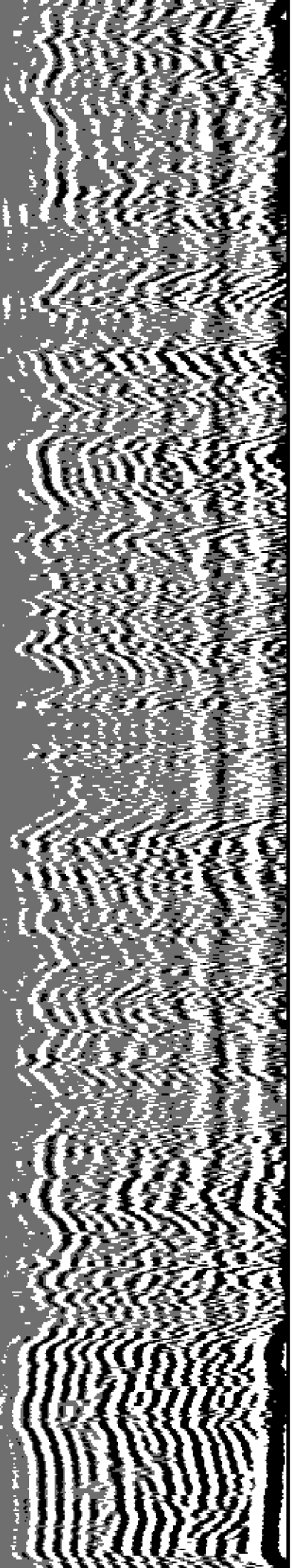




10100

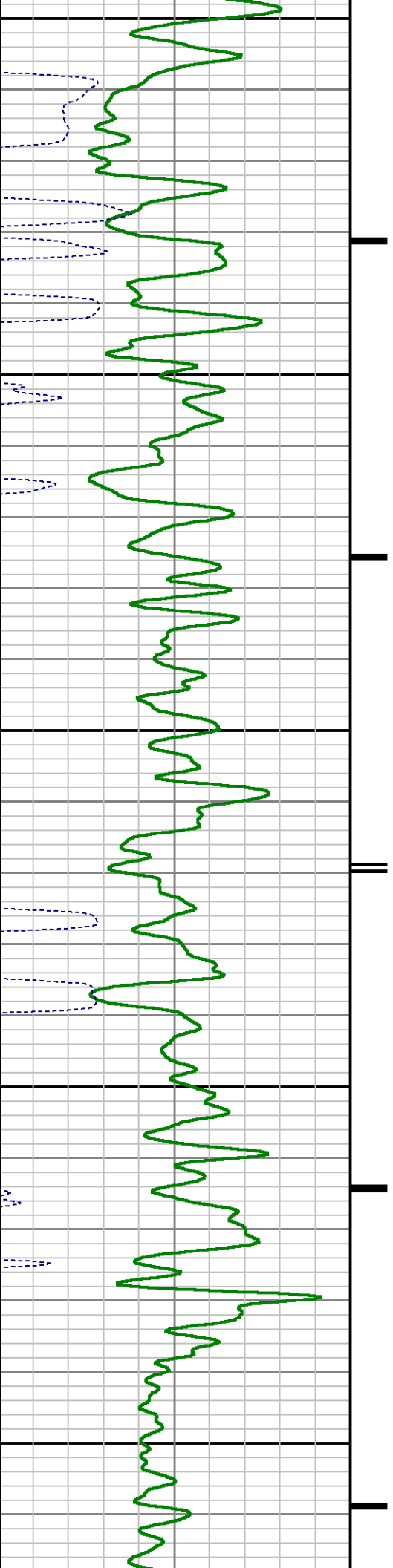
10200

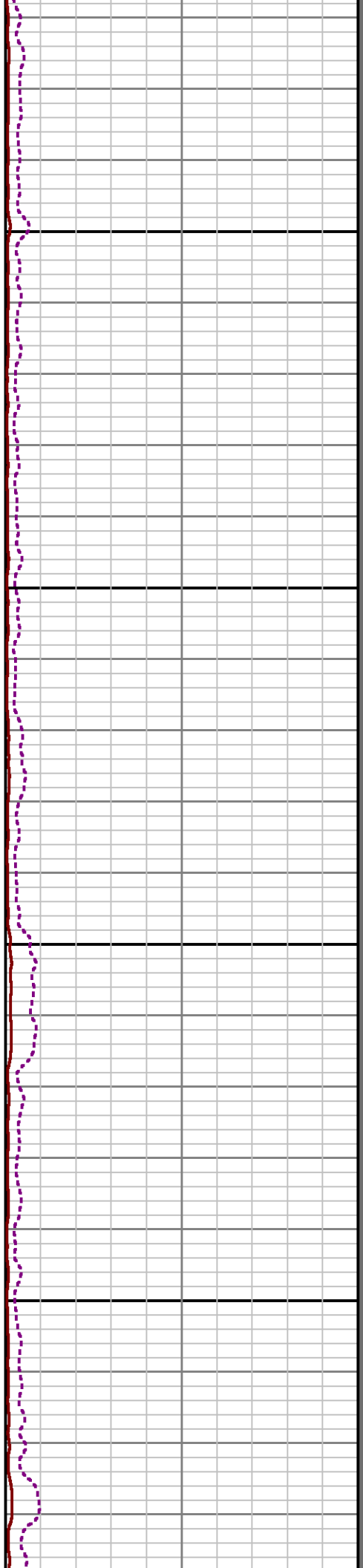
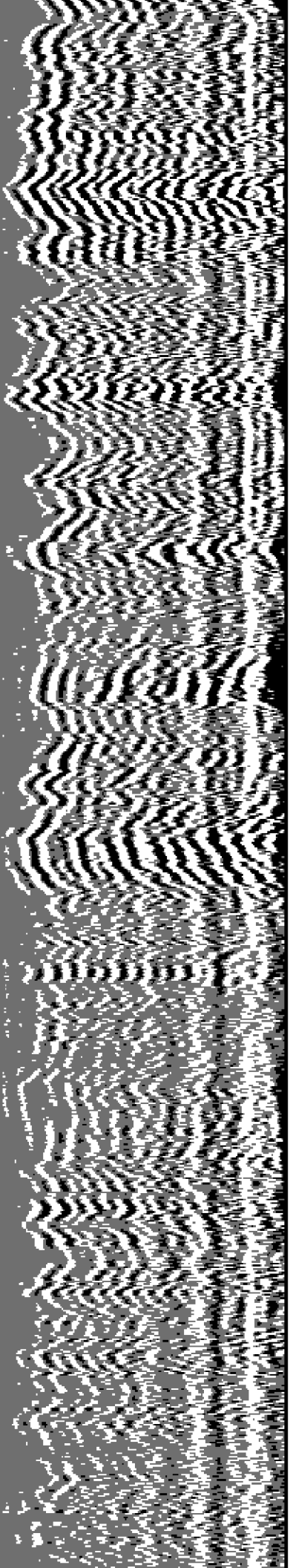




10300

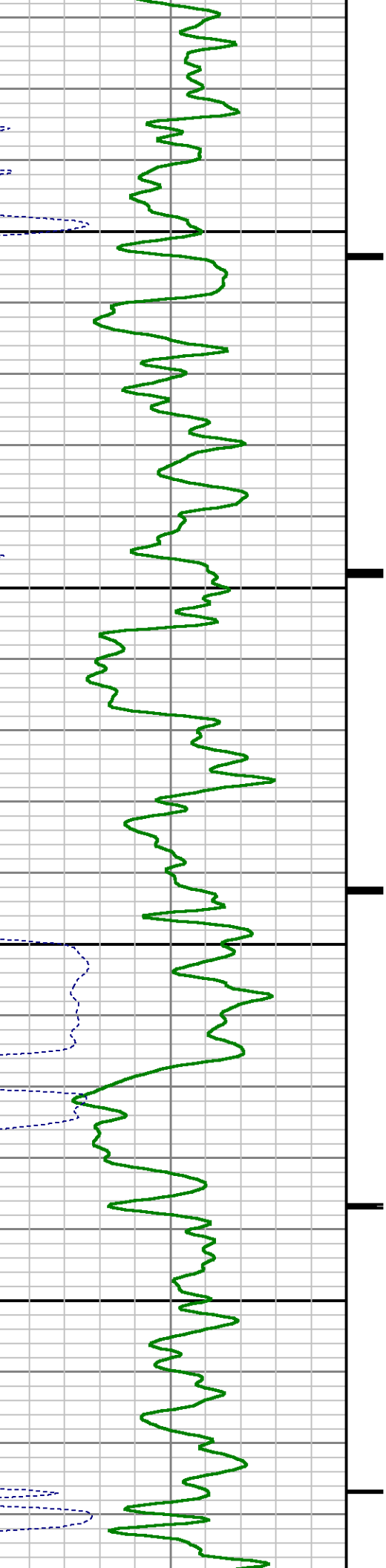
10400

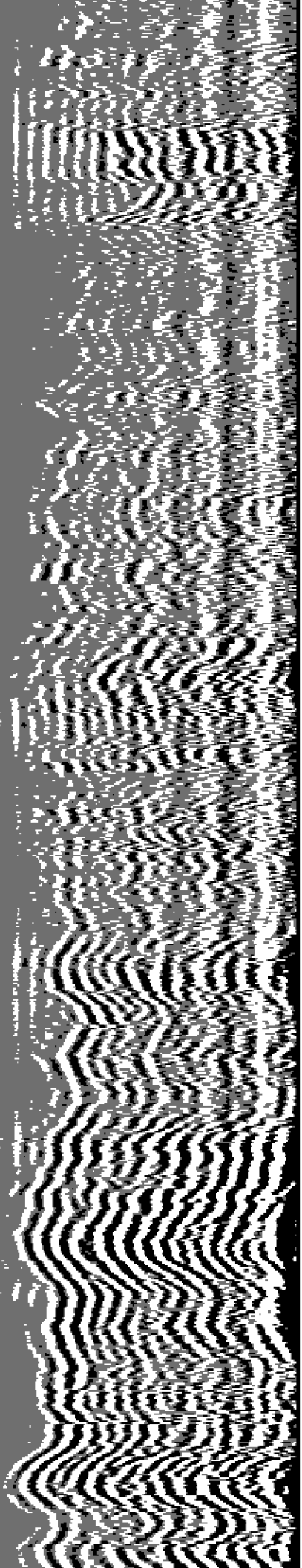




10500

10600

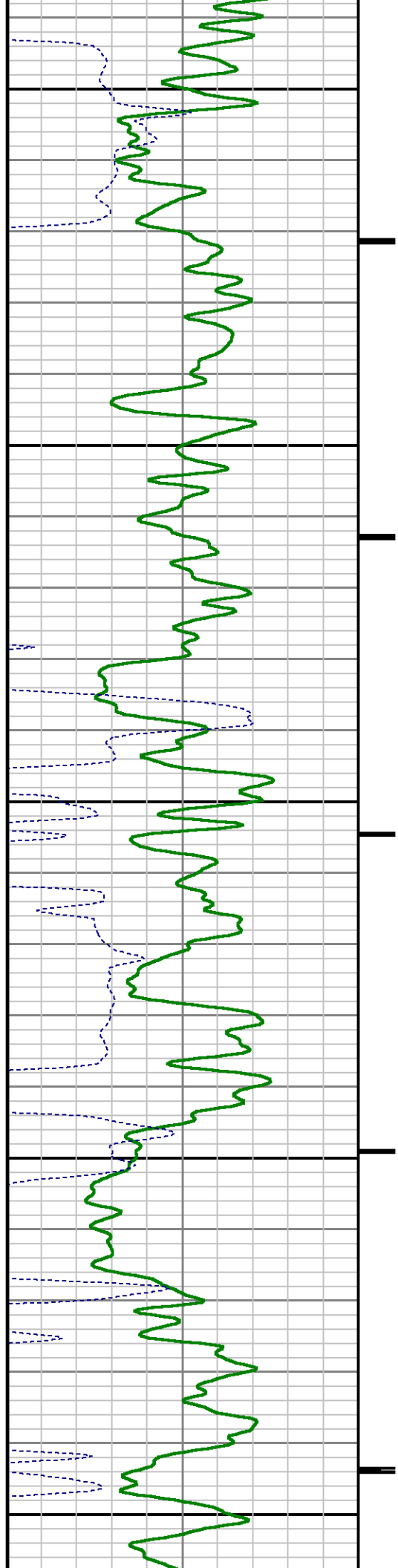


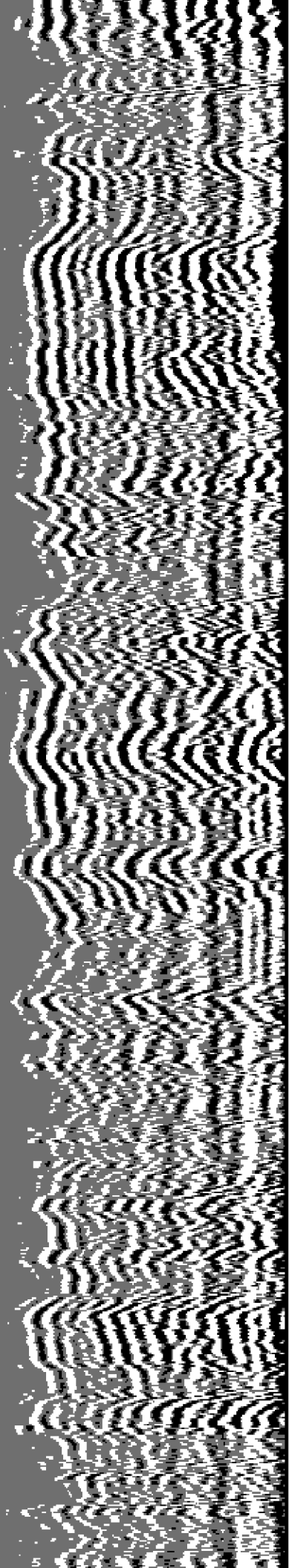


10700

10800

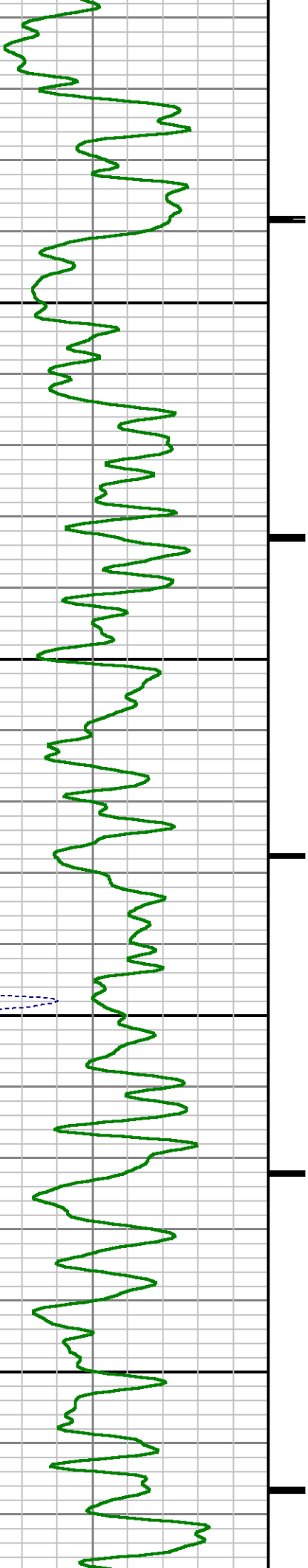
10900



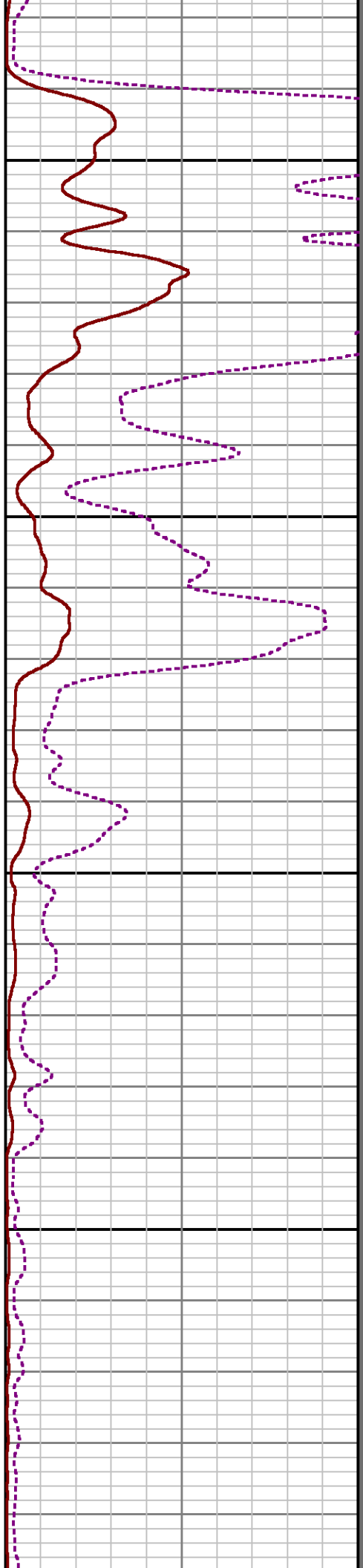
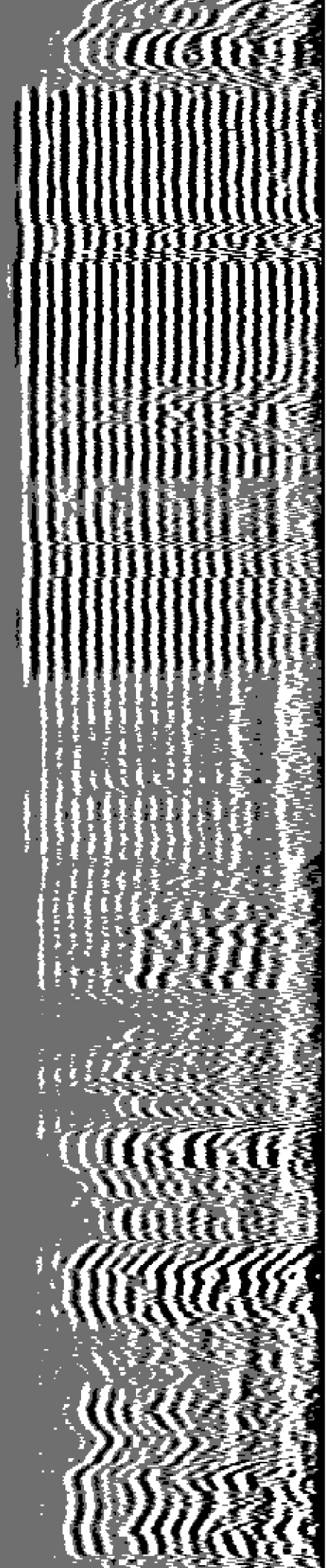


11000

11100

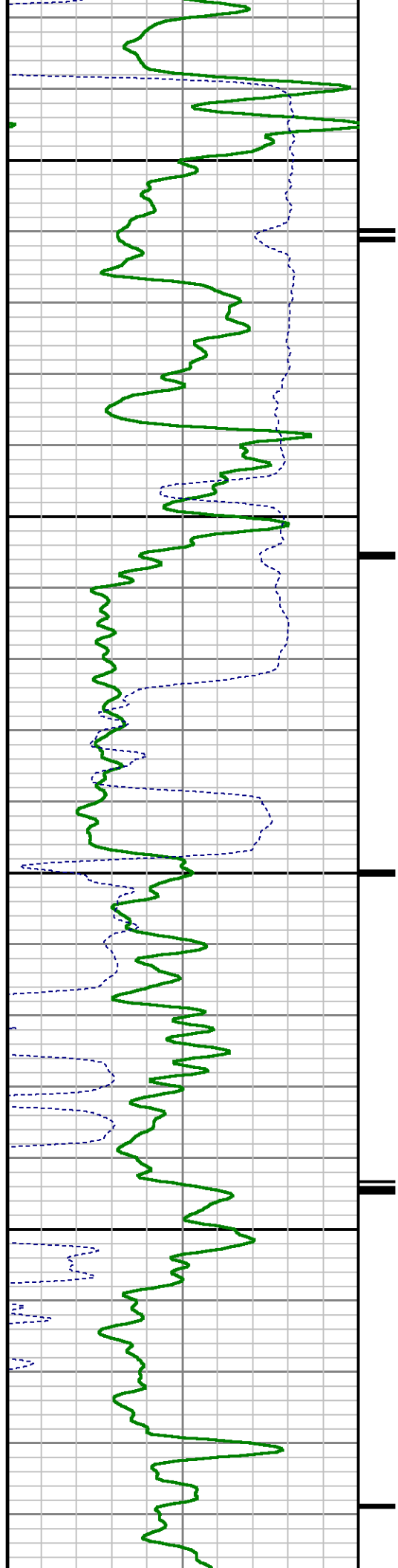




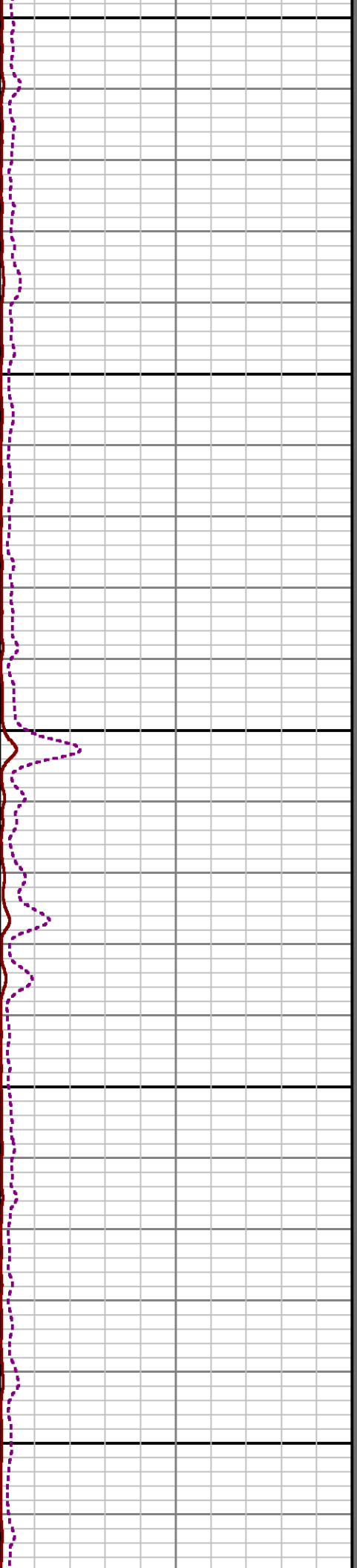
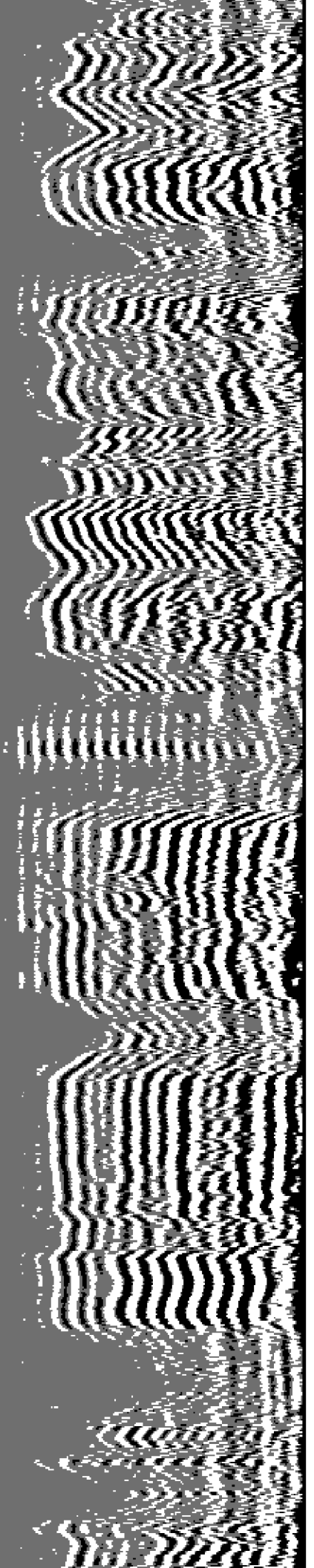


11200

11300

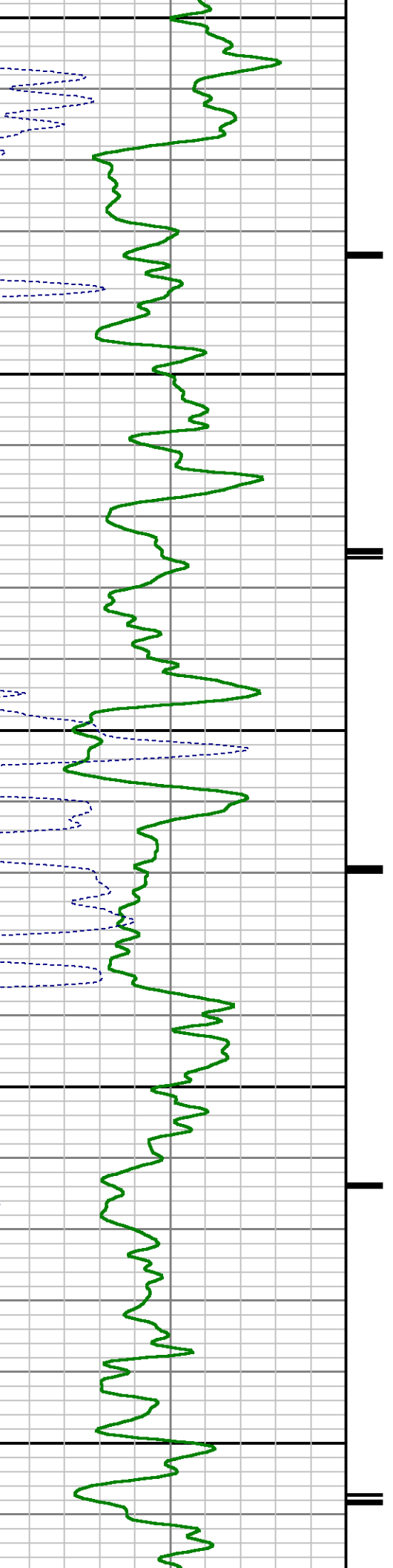


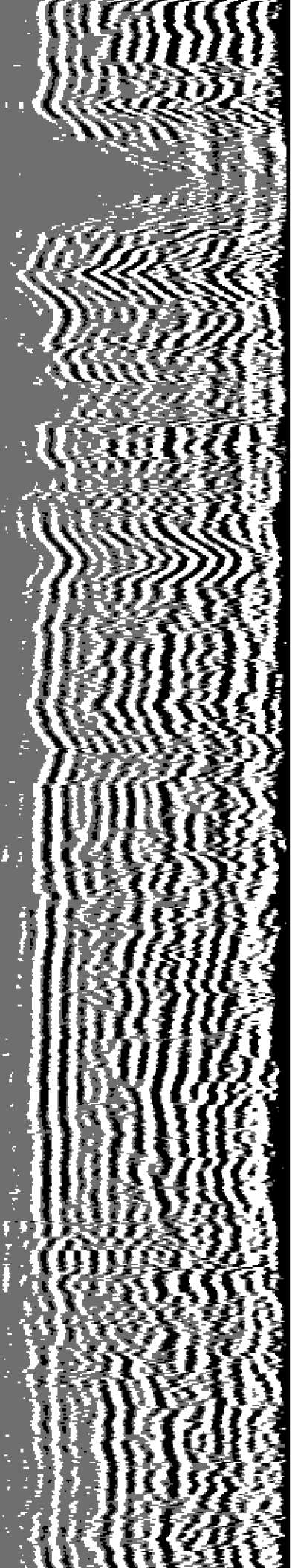




11400

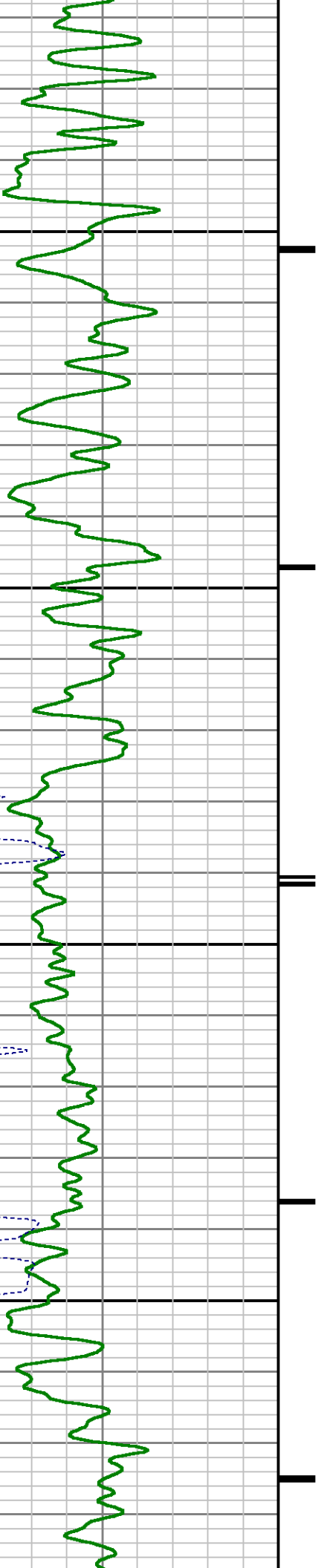
11500

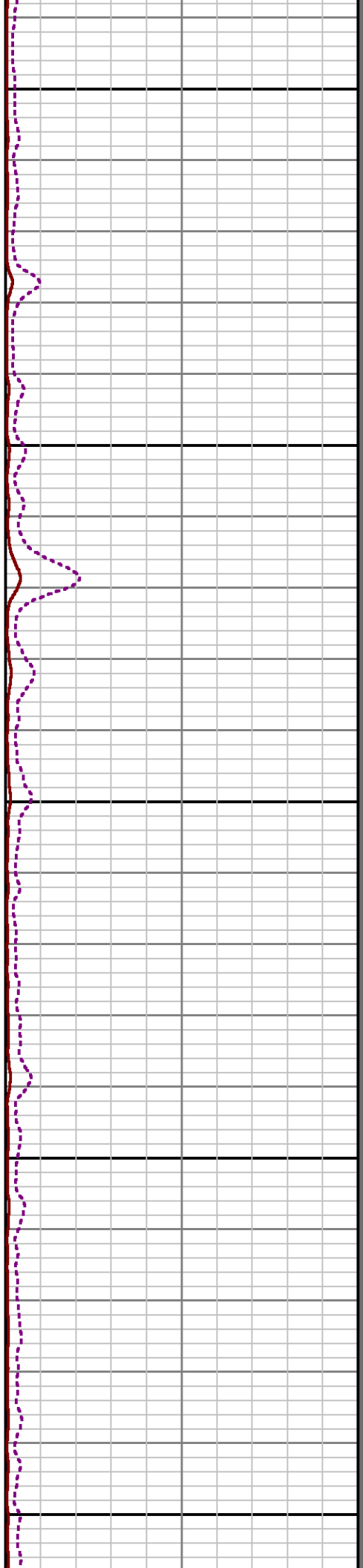
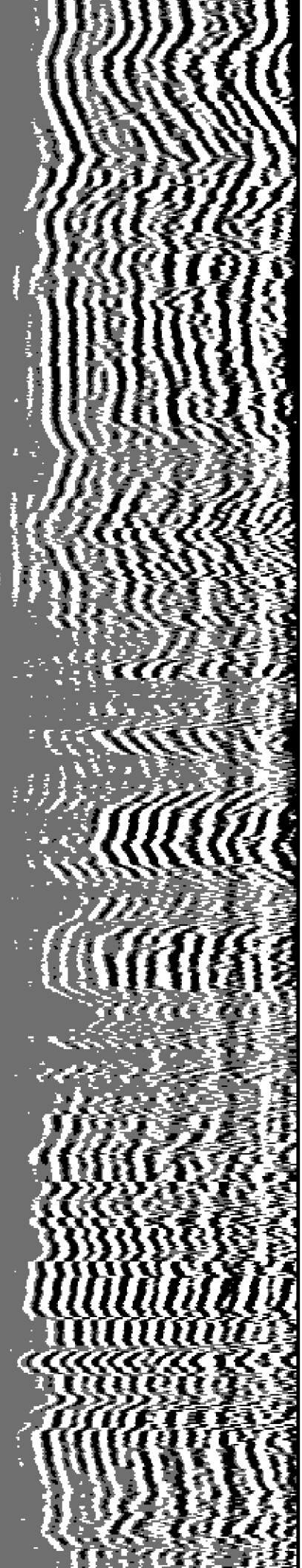




11600

11700

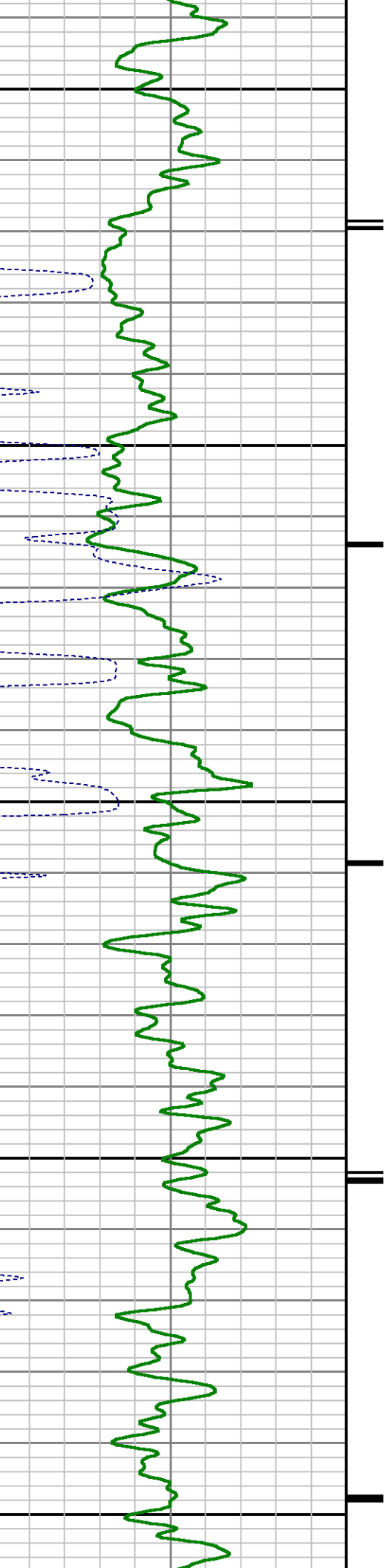


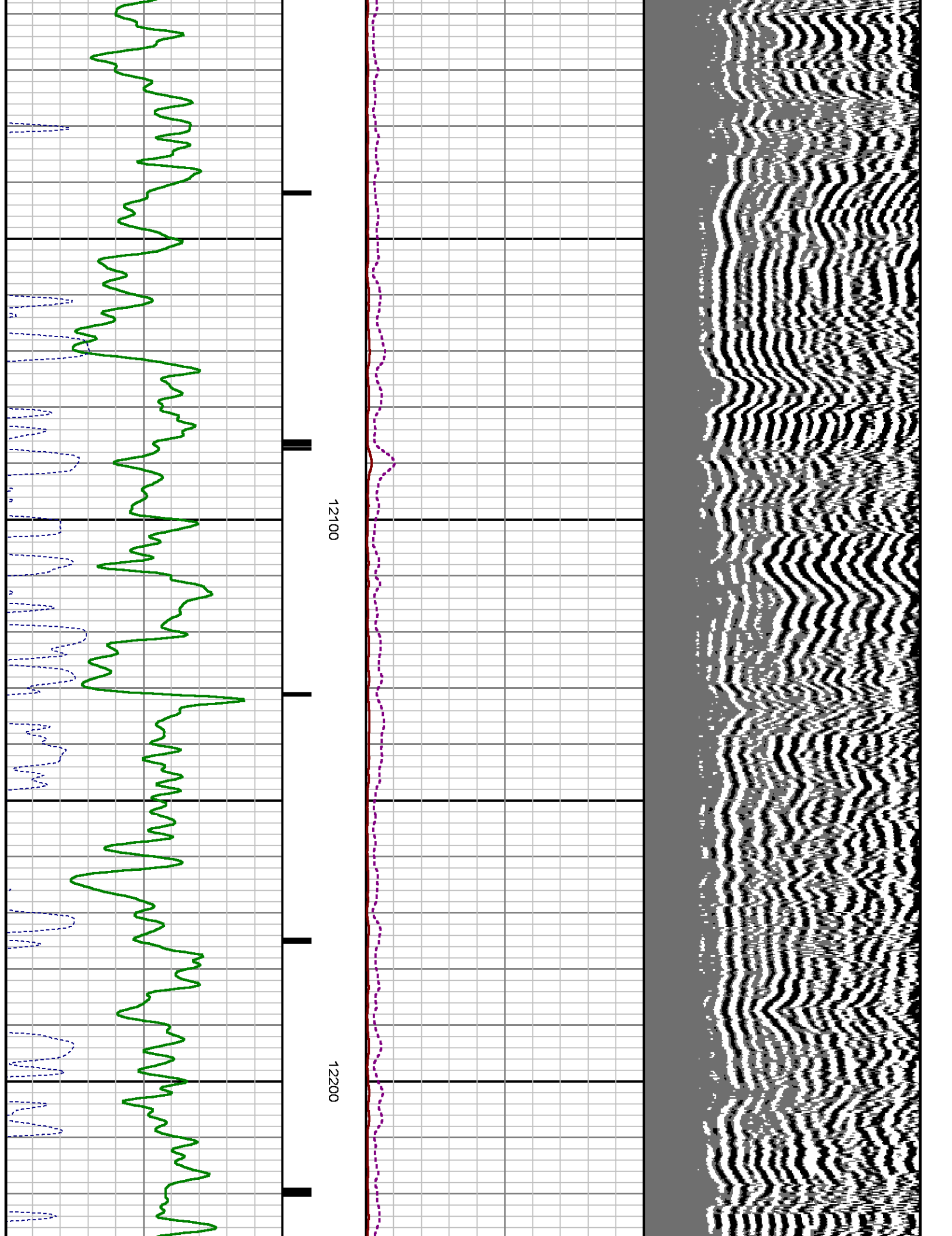


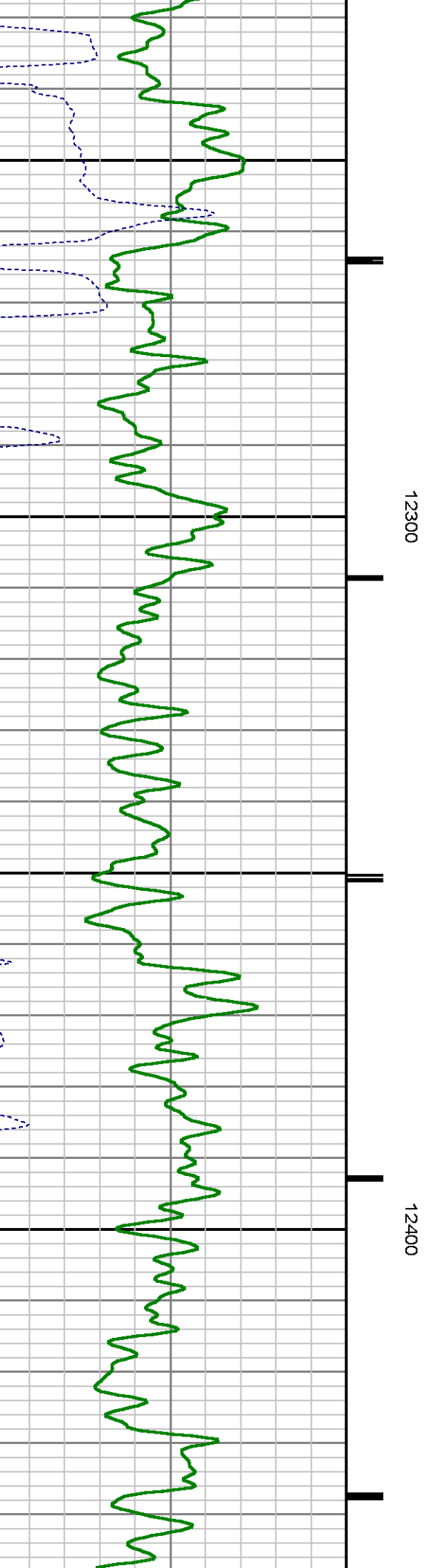
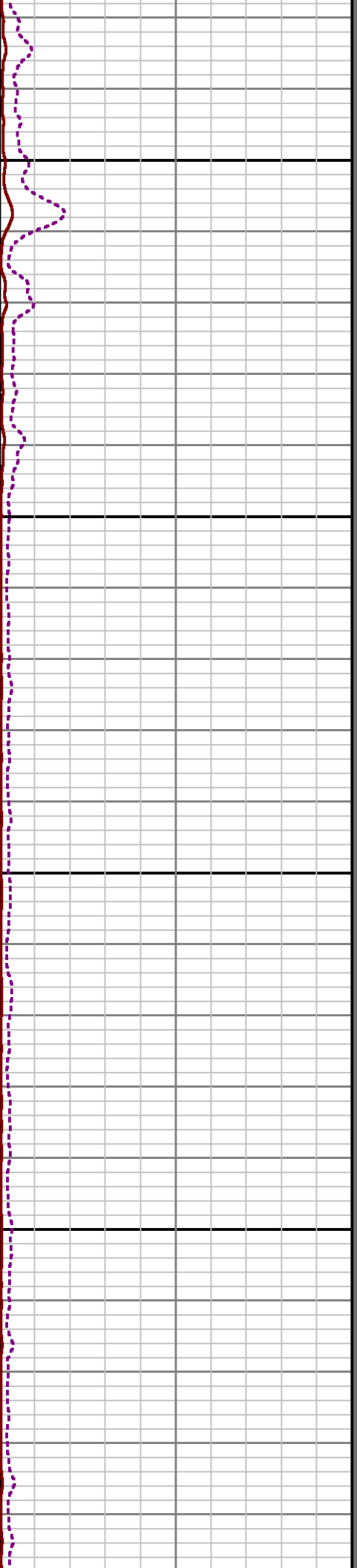
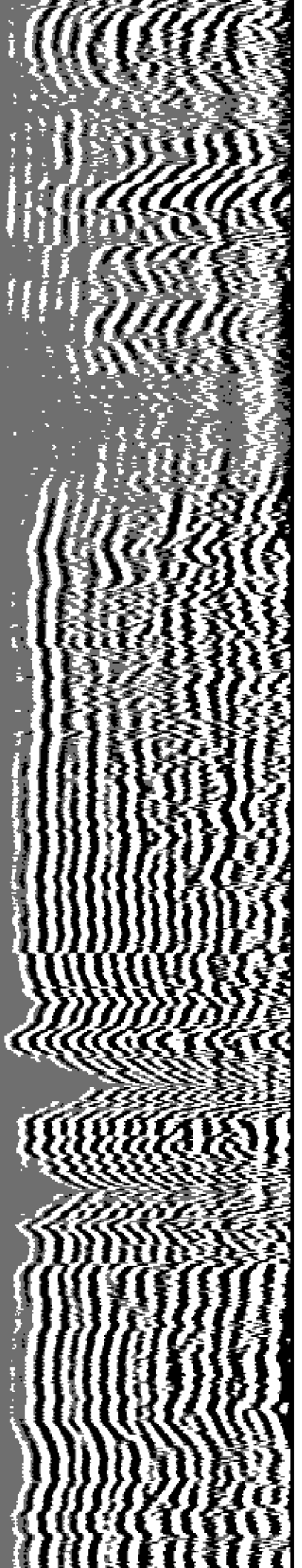
11800

11900

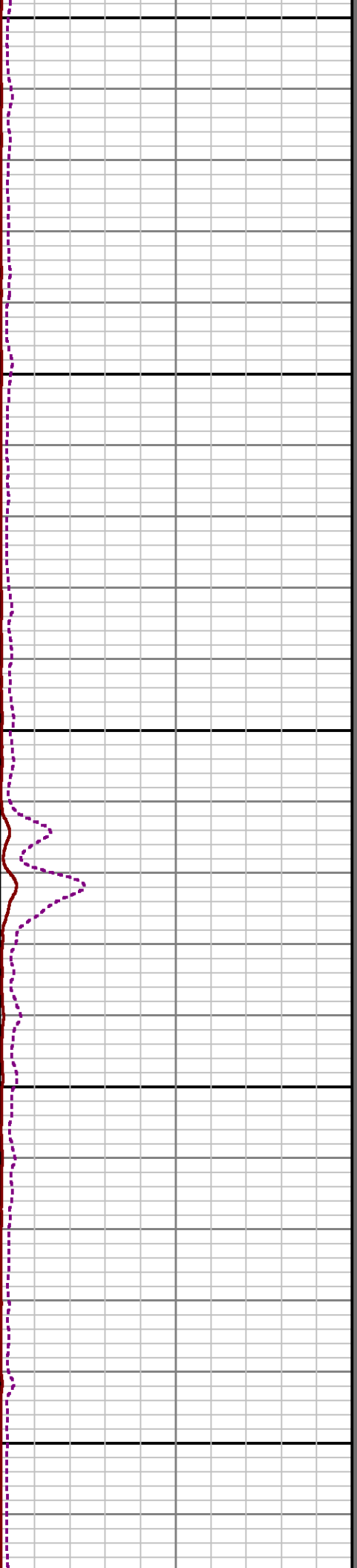
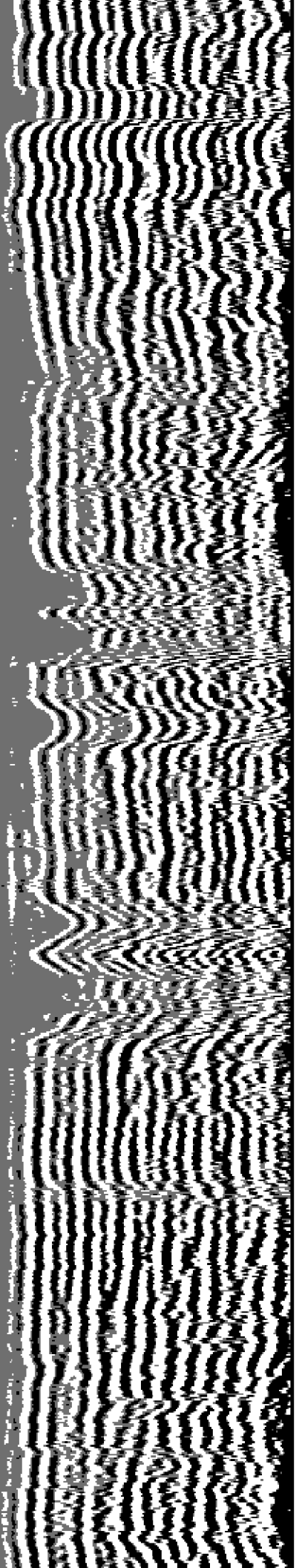
12000





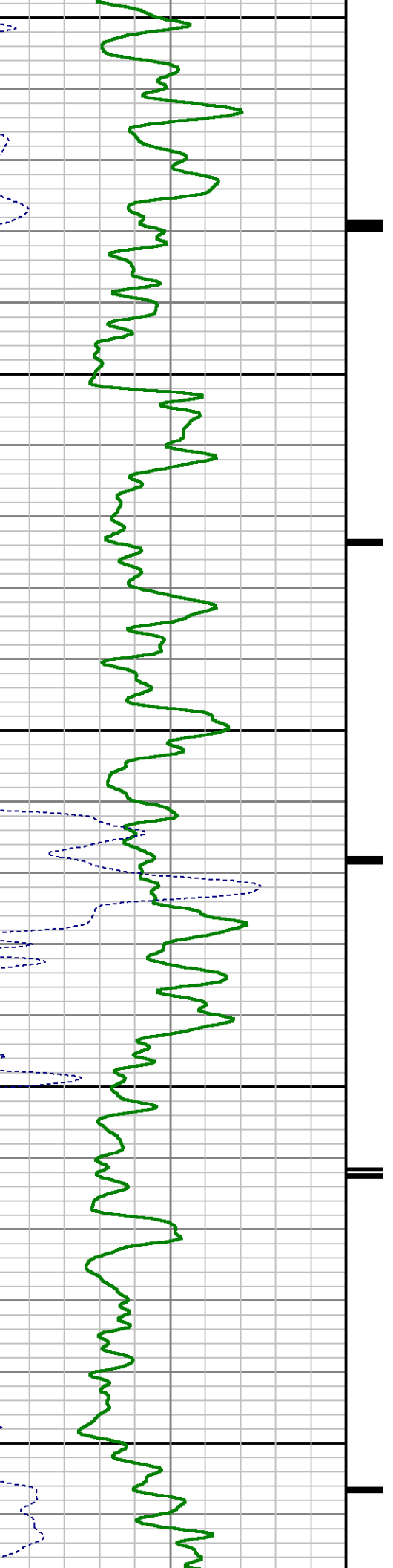




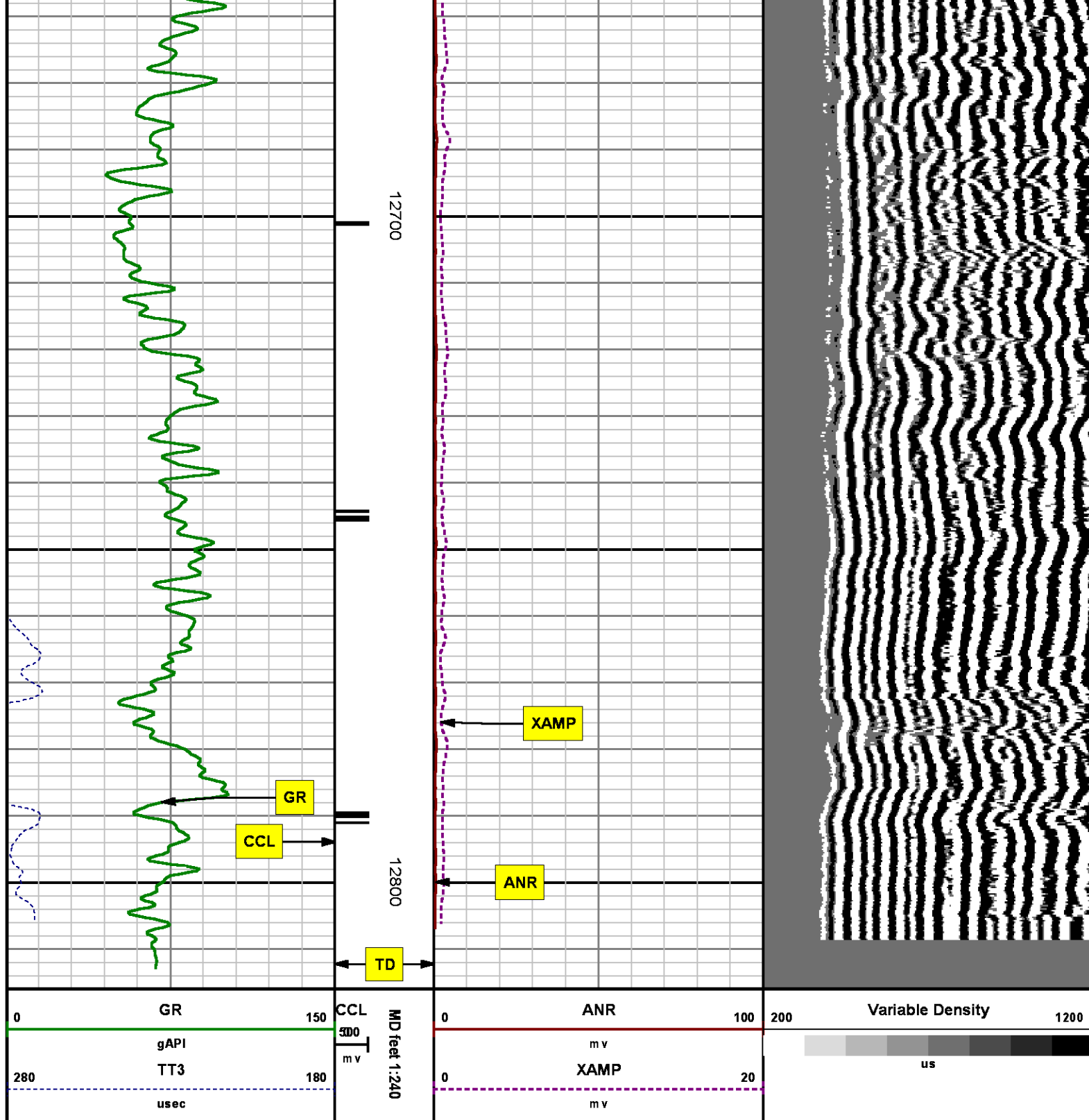


12500

12600







SECONDARY PRESENTATION  
O PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	27.437	12820.000
RAL	Amp Gate Start Near	195.000	usec	27.437	12820.000
RAL	Amp Gate Start Radial	195.000	usec	27.437	12820.000
RAL	Amp Gate Width Far	25.000	usec	27.437	12820.000
RAL	Amp Gate Width Near	25.000	usec	27.437	12820.000
RAL	Amp Gate Width Radial	25.000	usec	27.437	12820.000
RAL	casing od	4.500	inches	27.437	12820.000
RAL	casing wt	11.600	lbm/ft	27.437	12820.000
RAL	FB Start Far	291.900	usec	27.437	12820.000
RAL	FB Start Near	180.000	usec	27.437	12820.000
RAL	FB Start Radial	180.000	usec	27.437	12820.000
RAL	FB Thresh Far	10.000	mv	27.437	12820.000
RAL	FB Thresh Near	4.000	mv	27.437	12820.000
RAL	FB Thresh Radial	4.000	mv	27.437	12820.000
RAL	Fluid Travel Time	200.000	usec/ft	27.437	12819.874

## DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

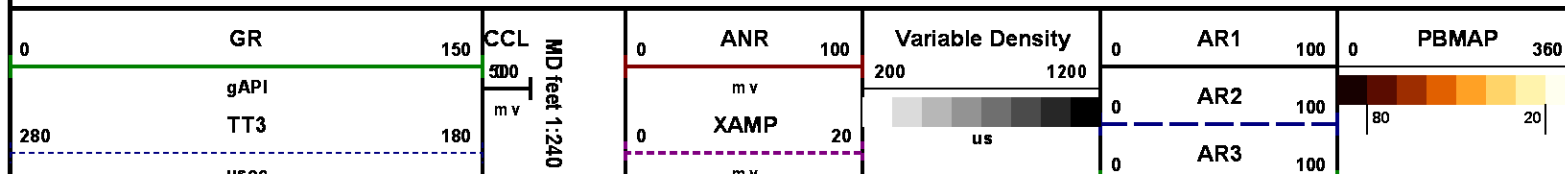
Well : FEDERAL RGU 442-24-198

File Name : d:\welldata\wpx\rgu 442-24-198\442ral\main.xtf

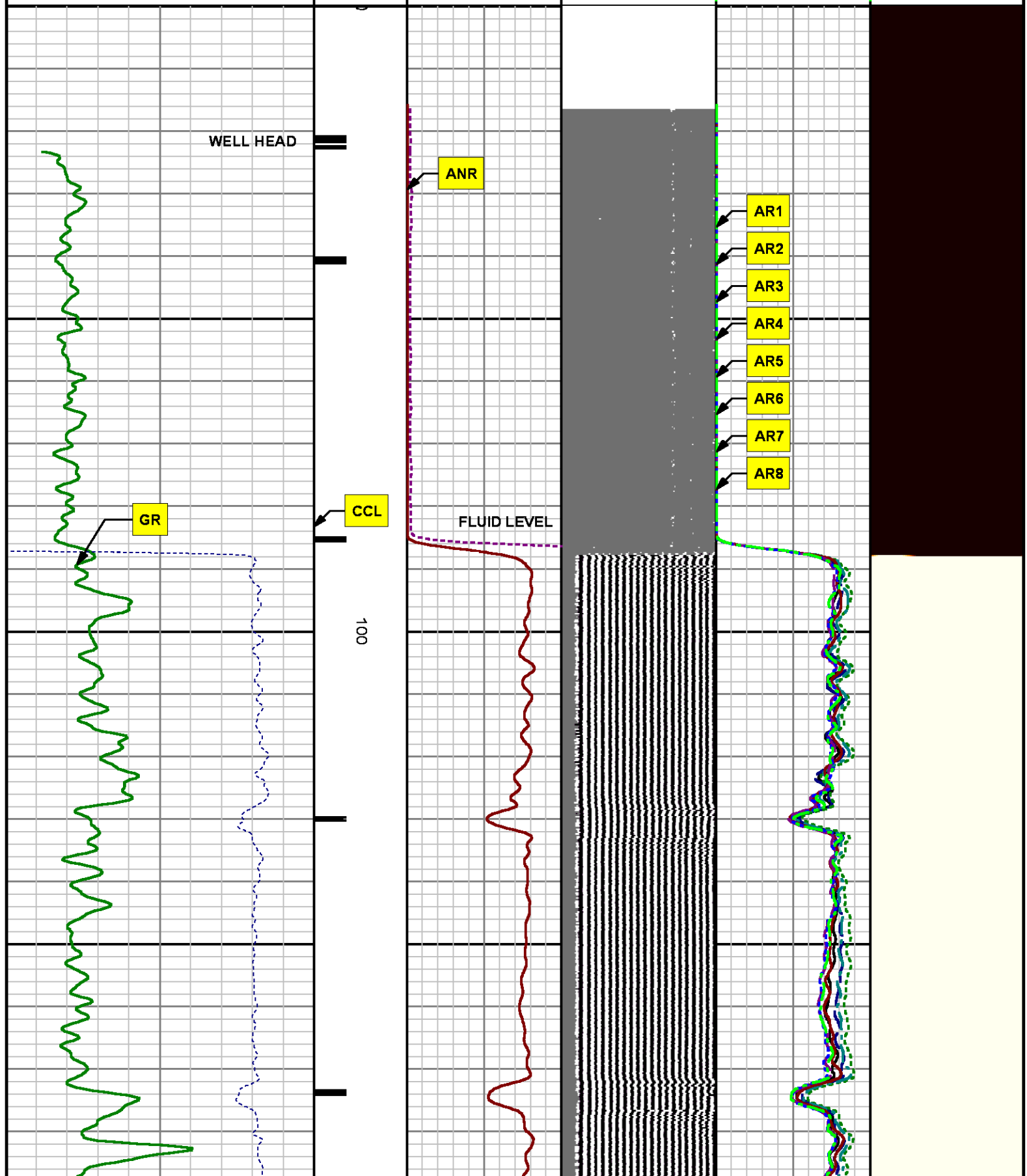
Mode : PlotMgr 5.4.504

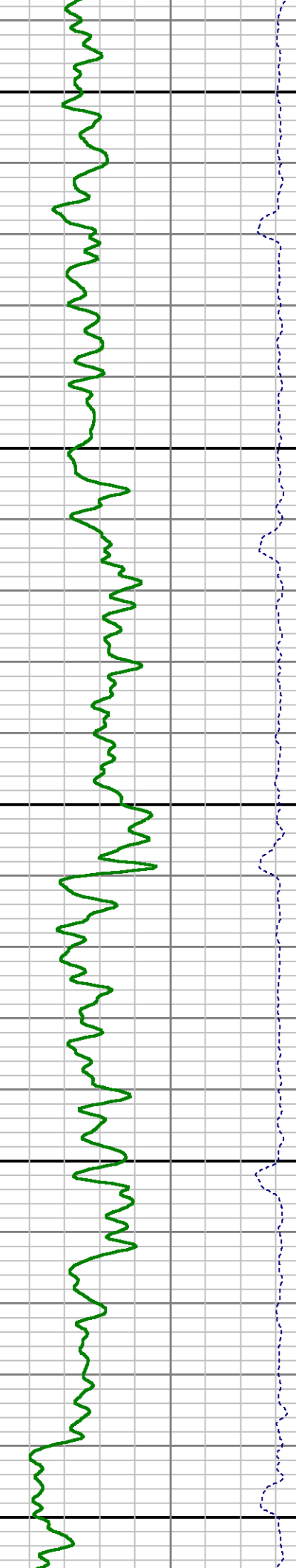
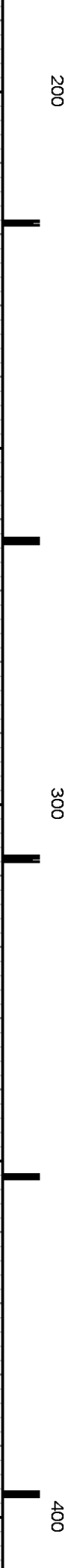
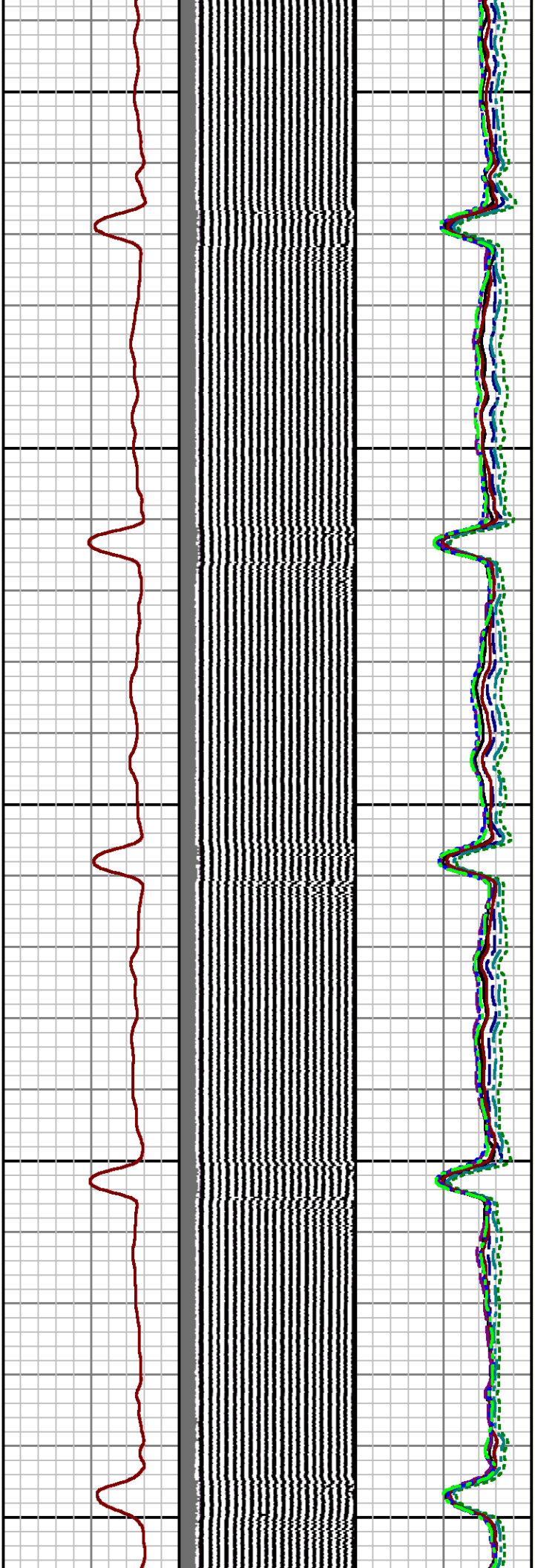
Interval : 0.00 - 12816.00 feet UP

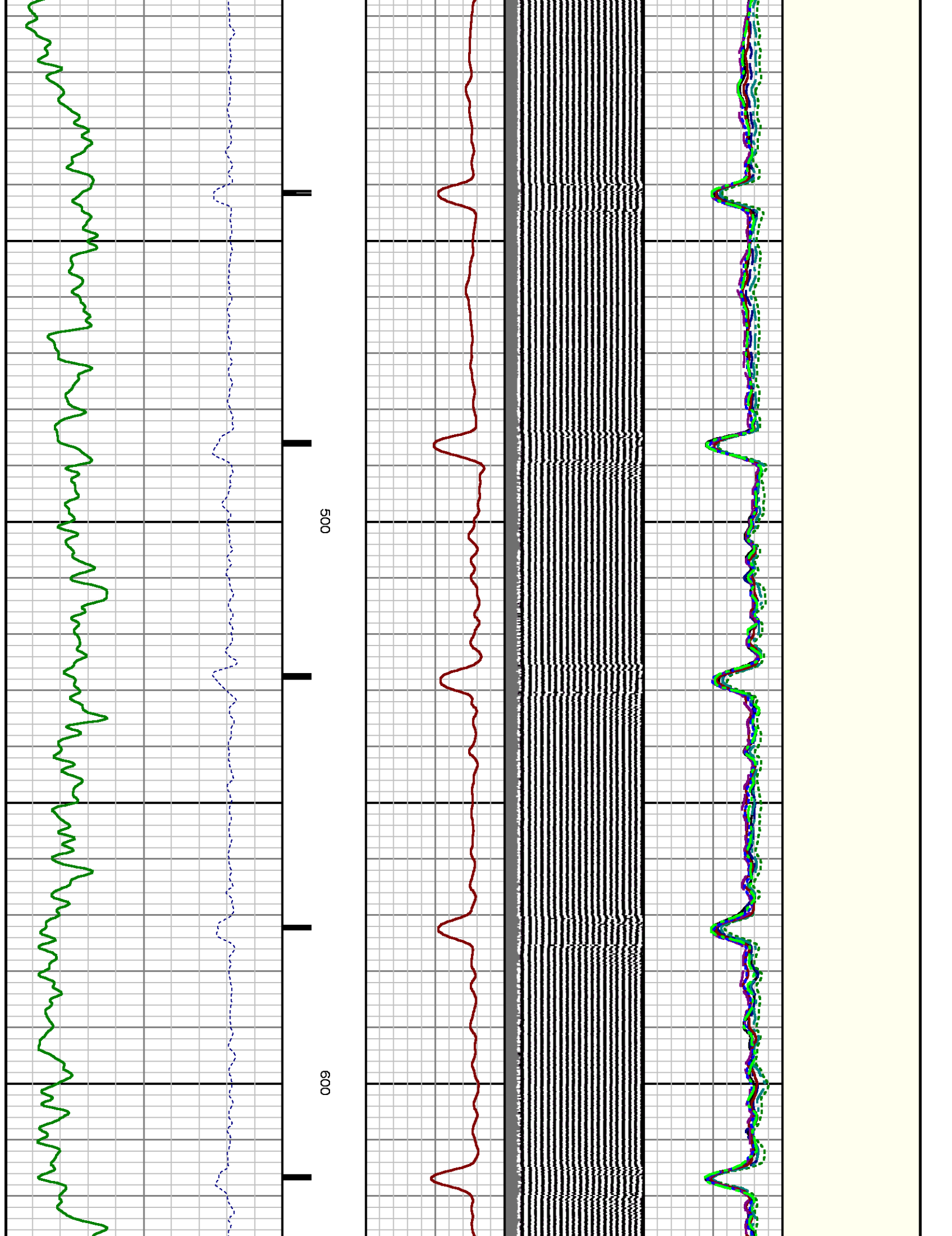
Created : 7/6/2014 1:59:04 PM

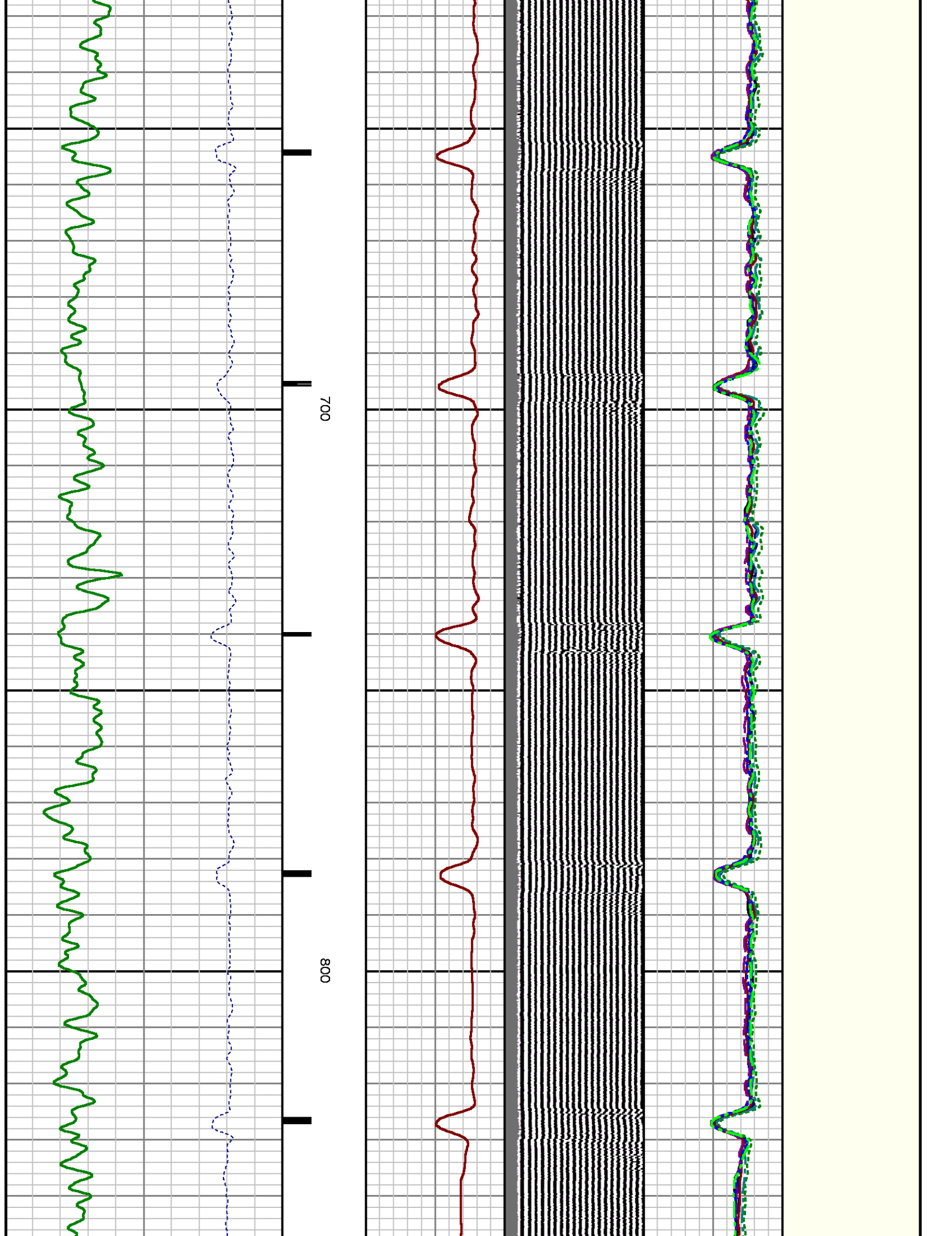


0	AR4	100
0	AR5	100
0	AR6	100
0	AR7	100
0	AR8	100

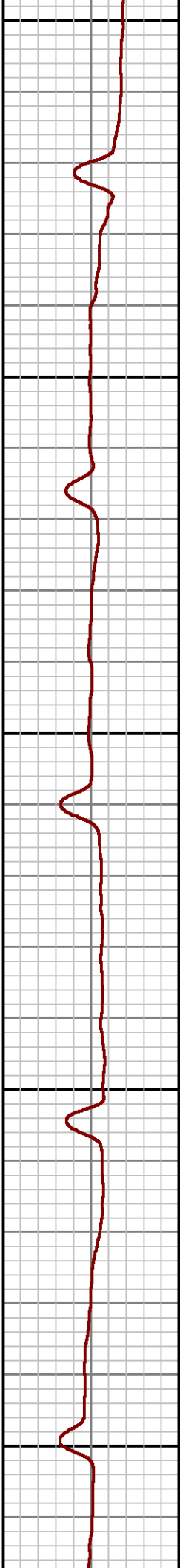
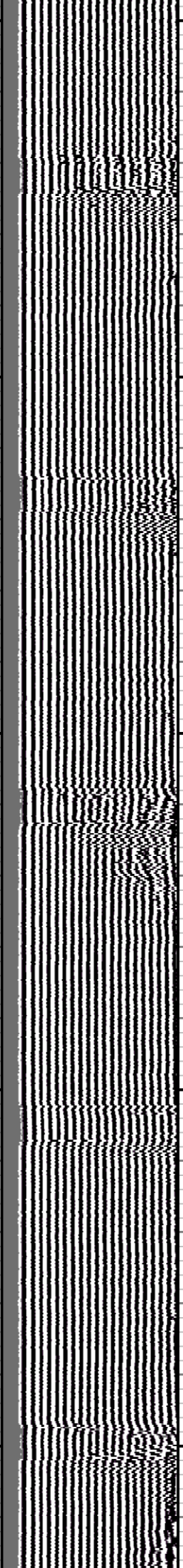
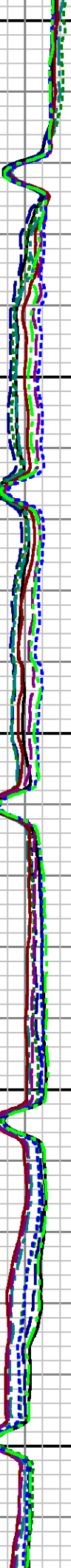
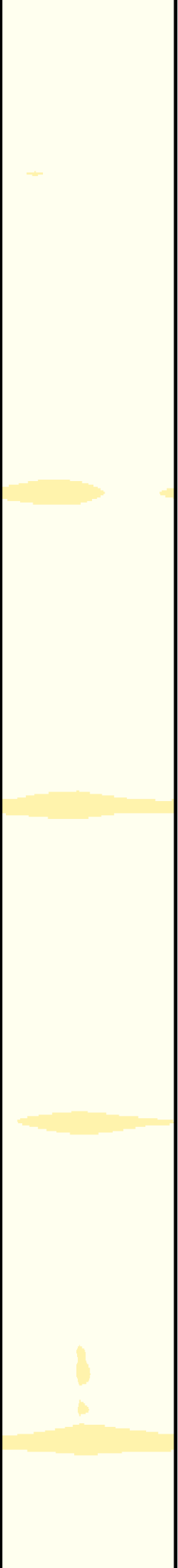






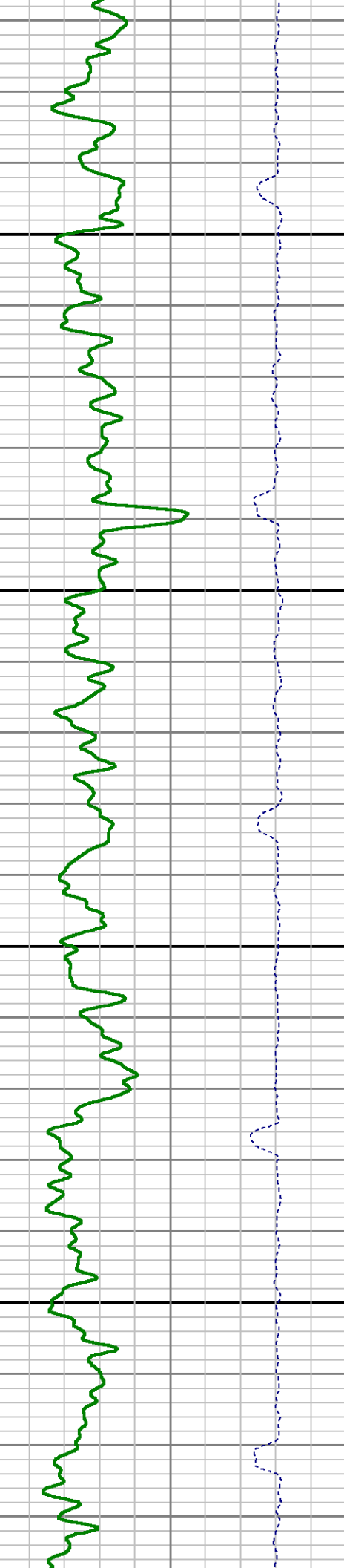
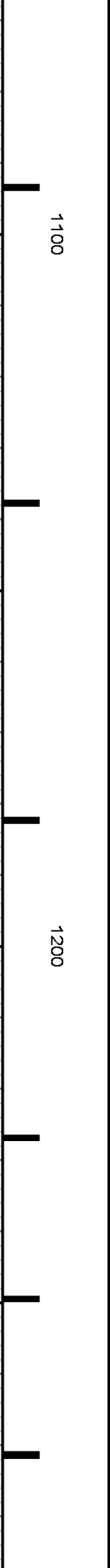
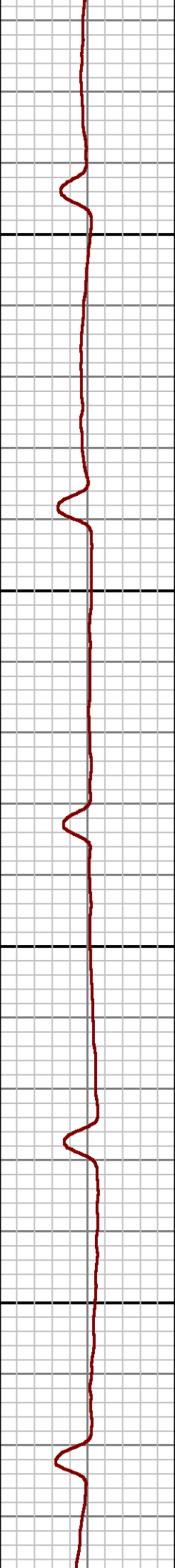
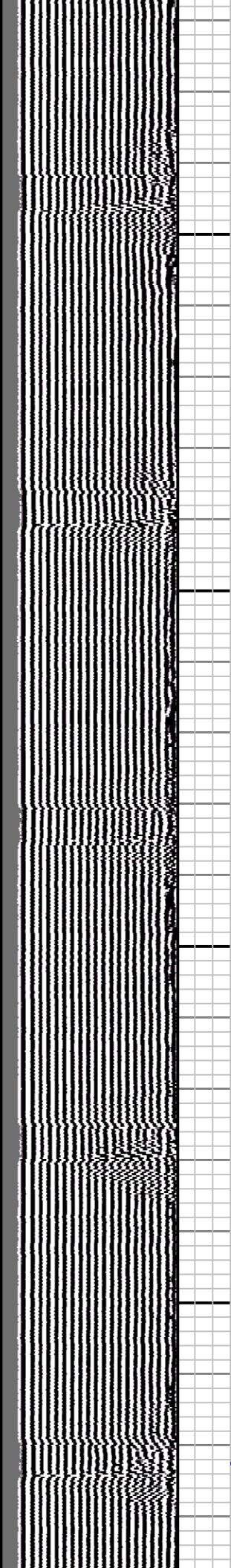
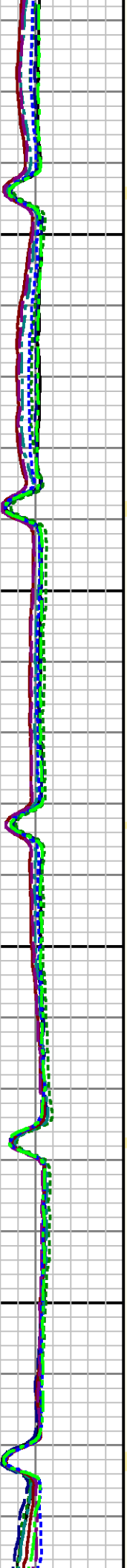






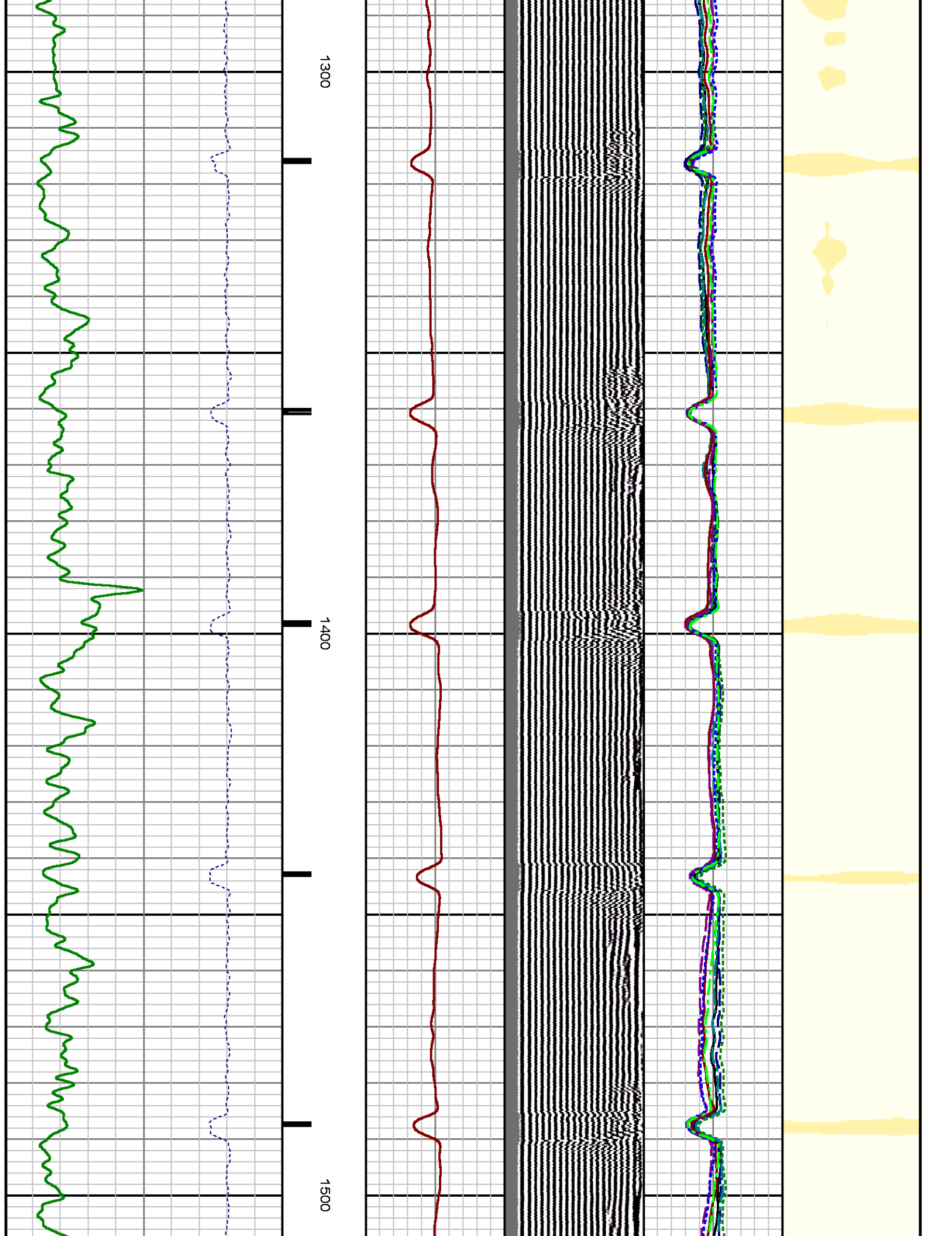
900

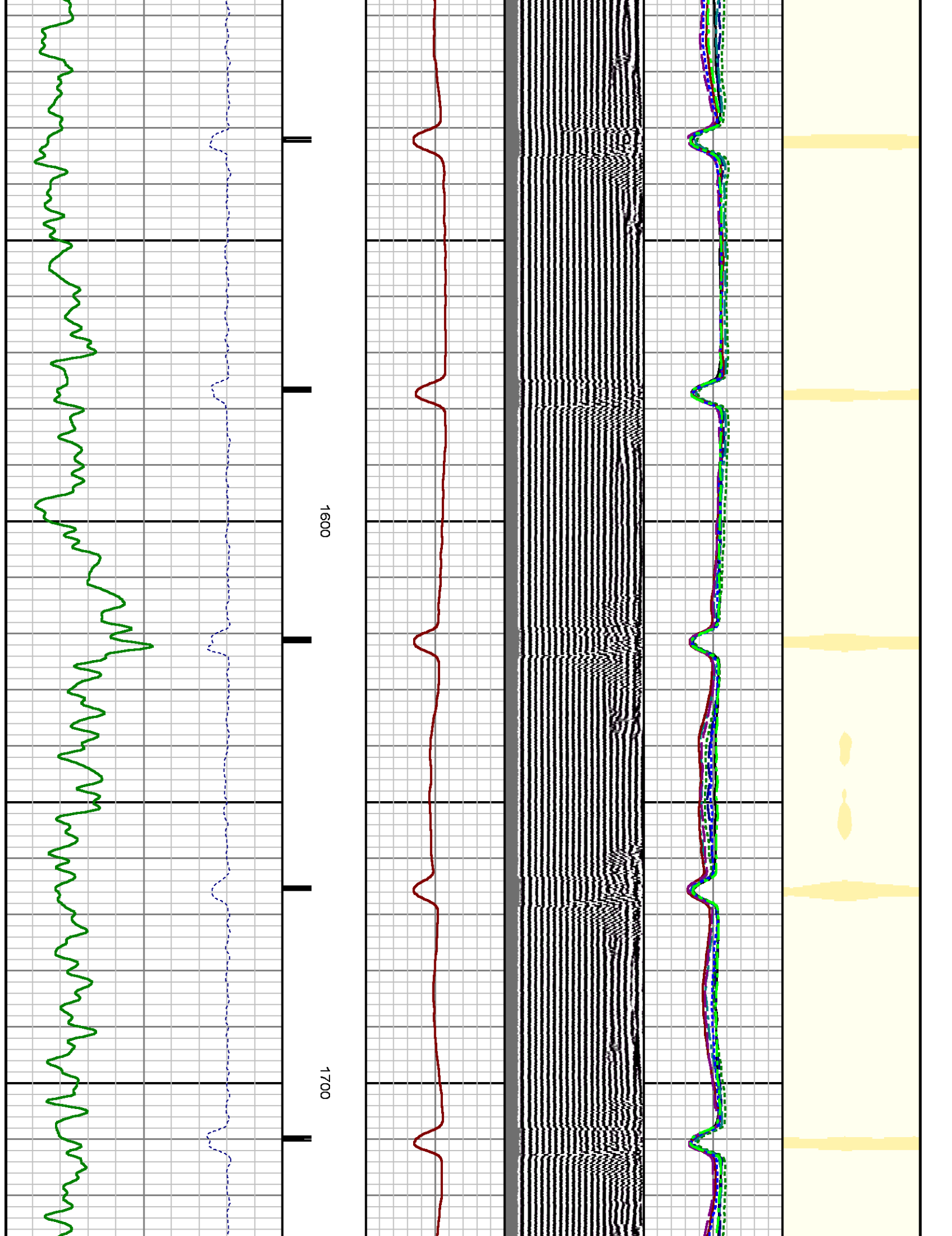
1000

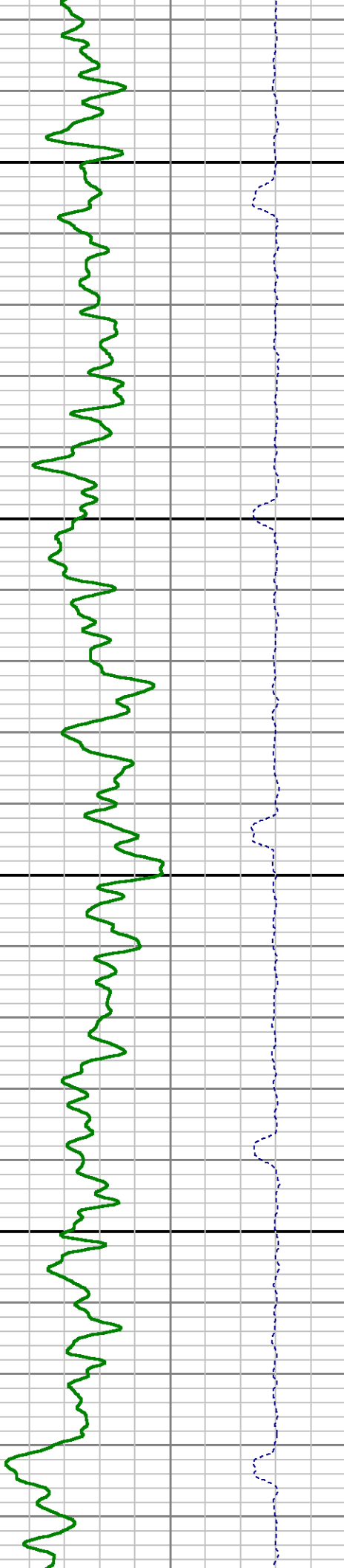
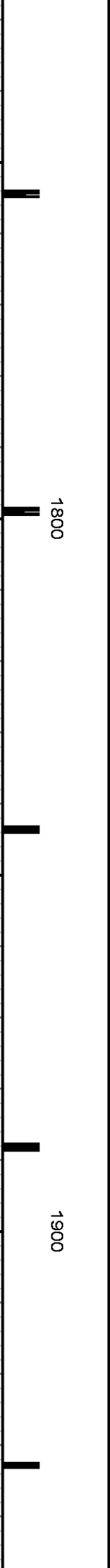
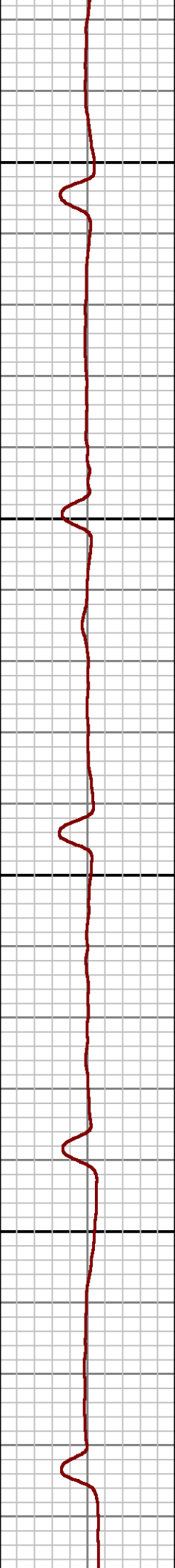
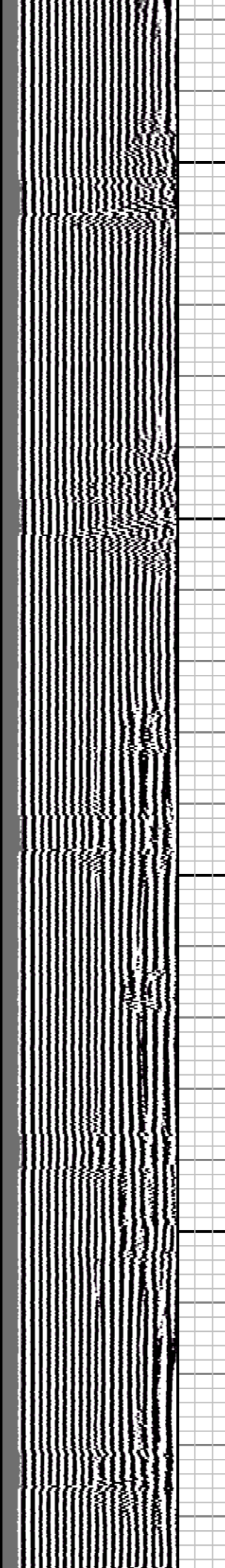
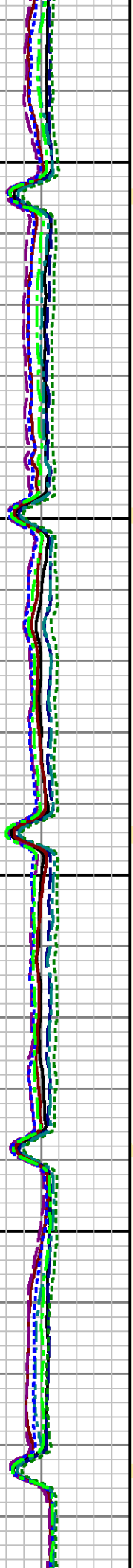


1100

1200



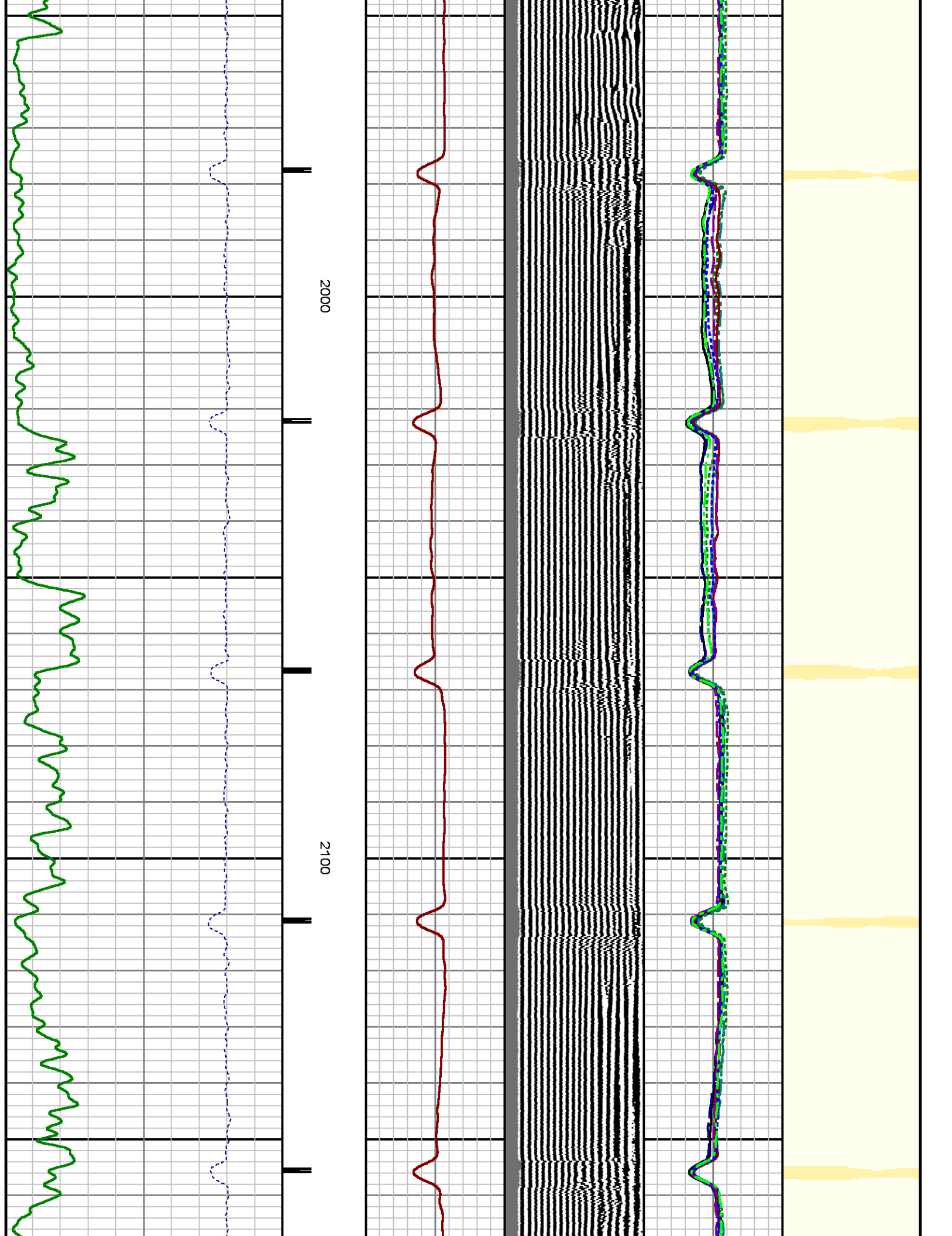




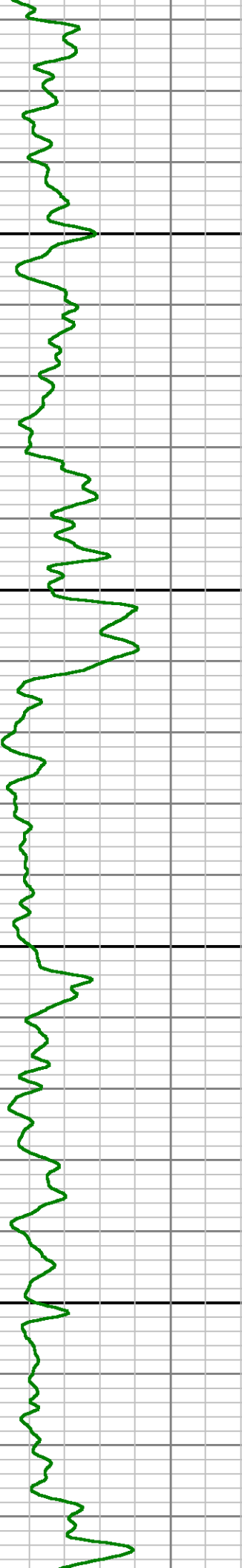
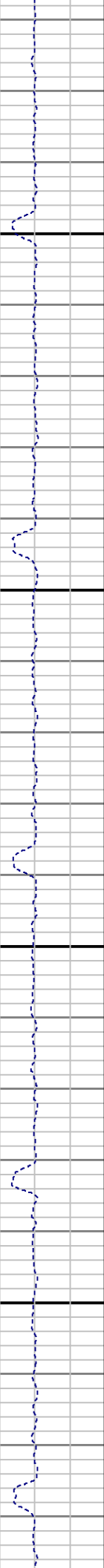
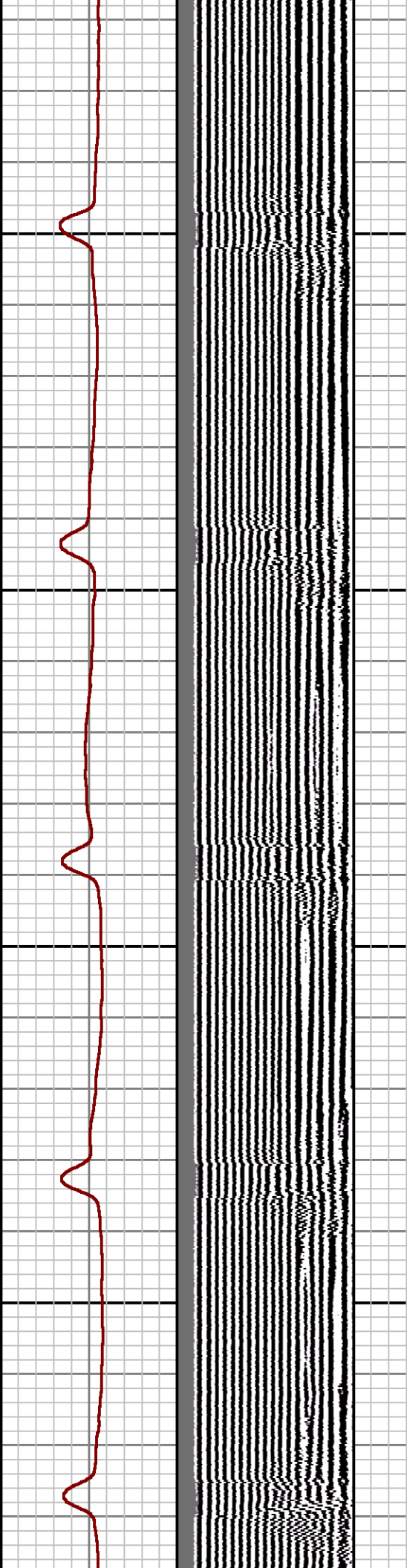
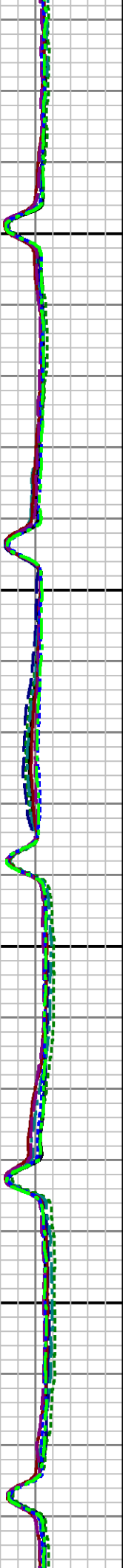
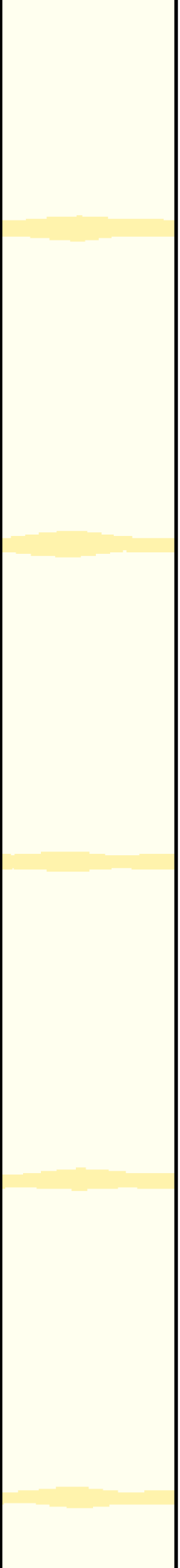
1800

1900



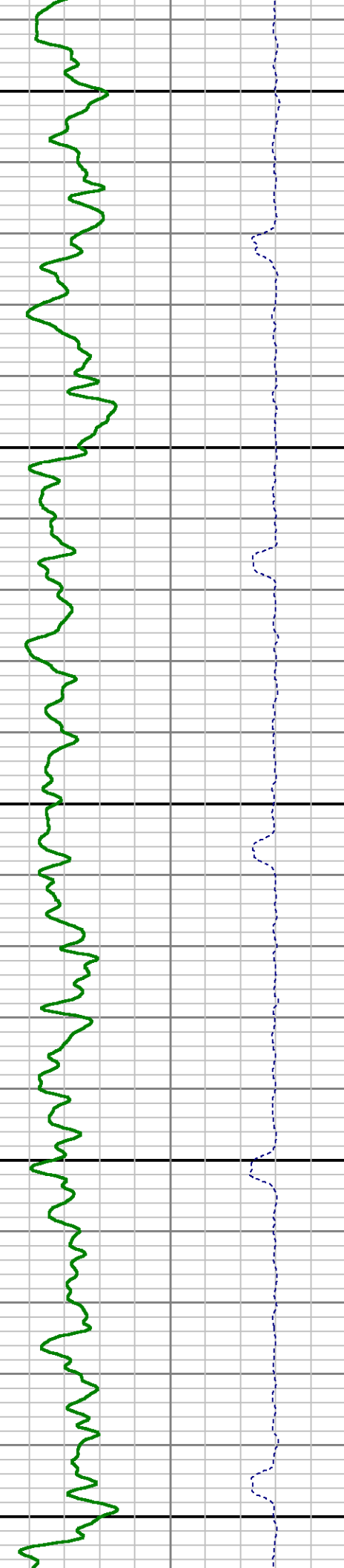
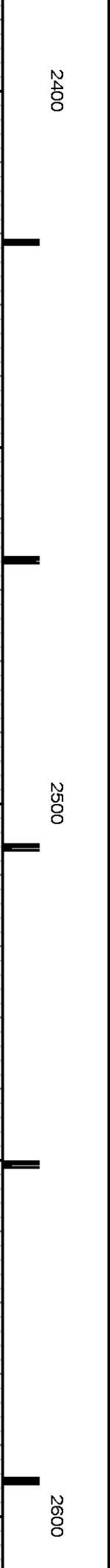
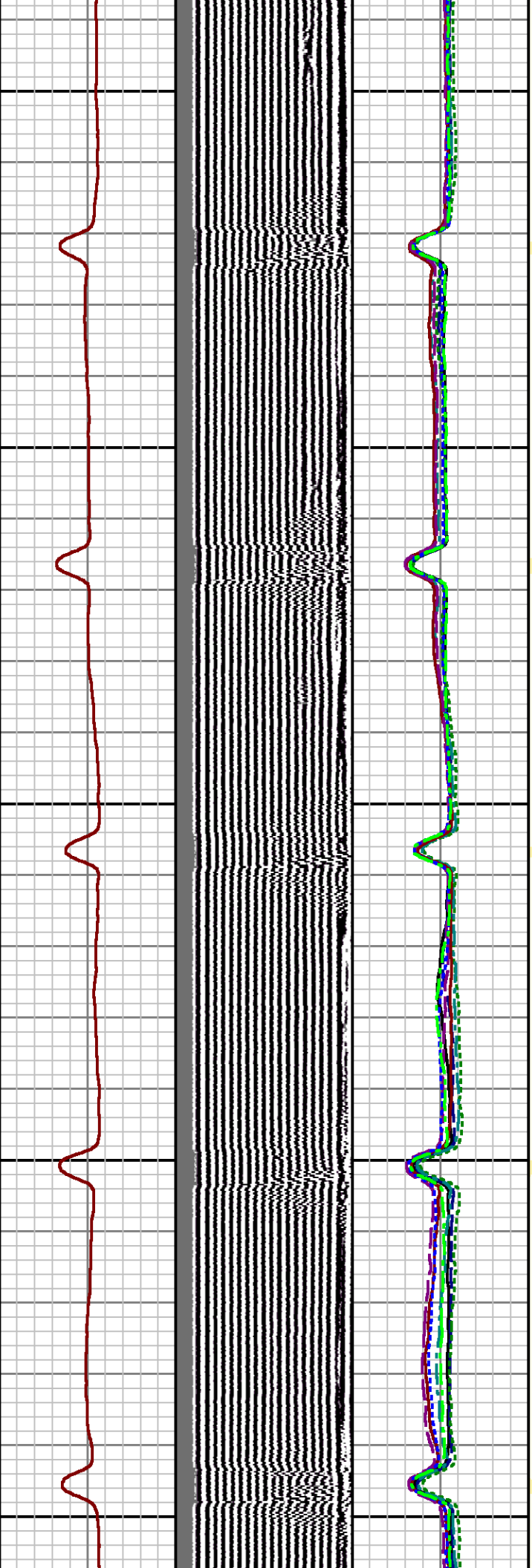


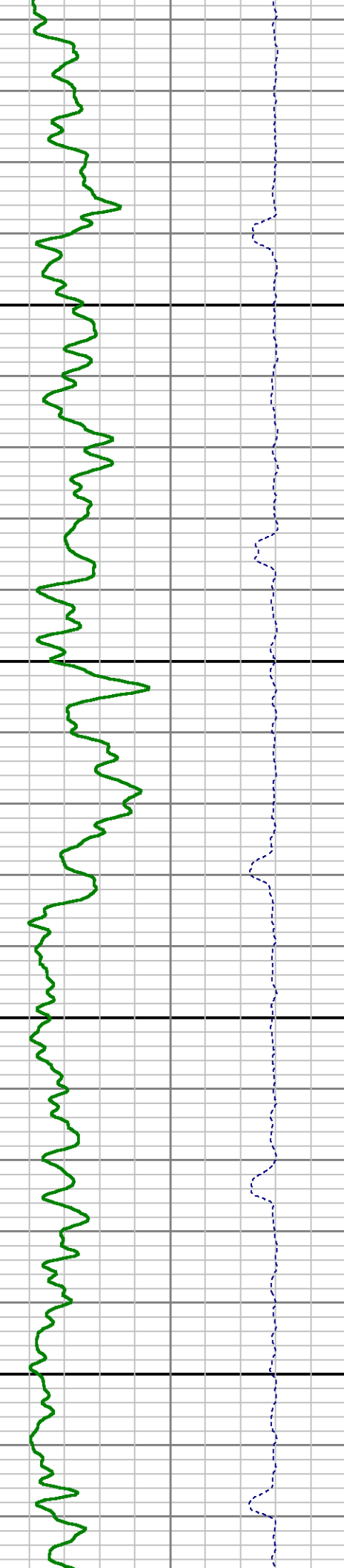
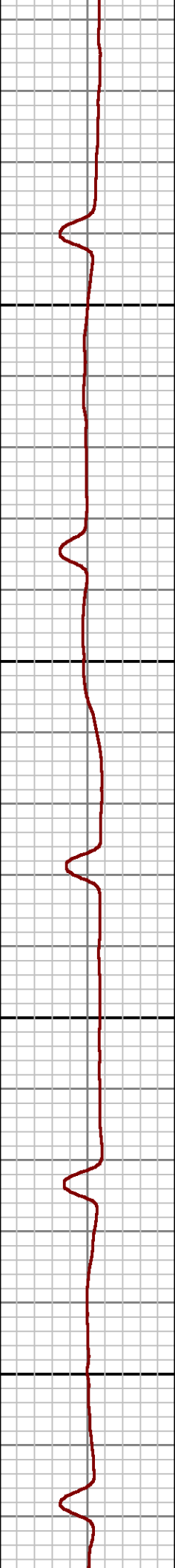
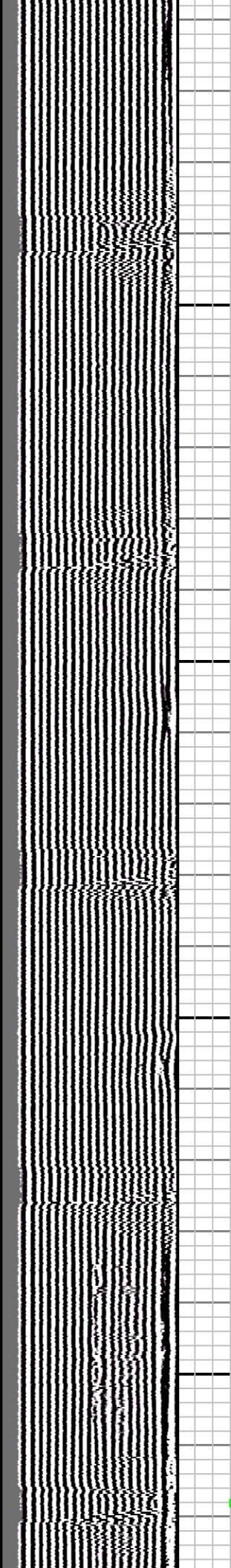
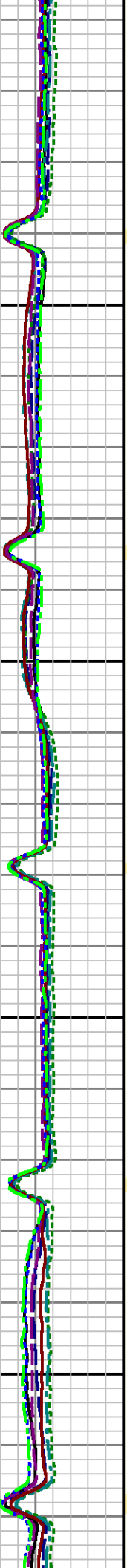




2200

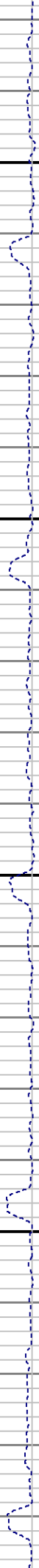
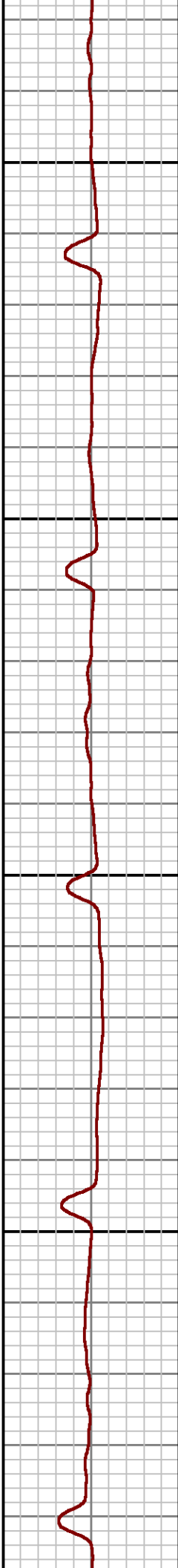
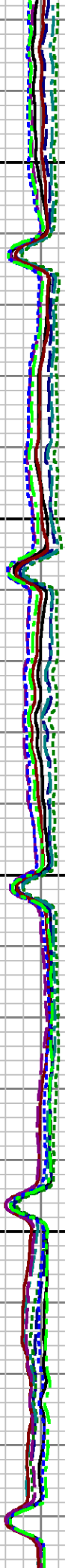
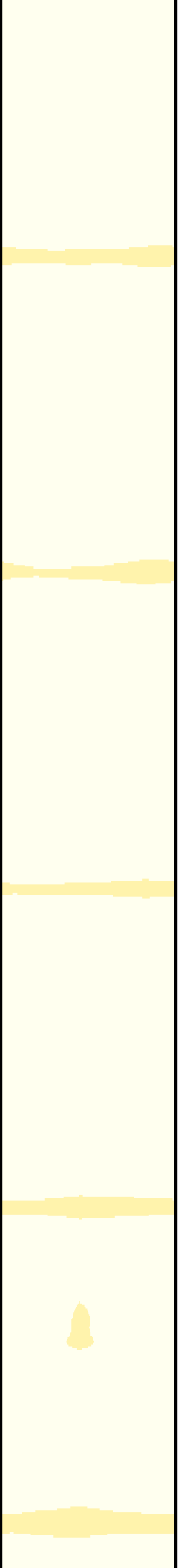
2300

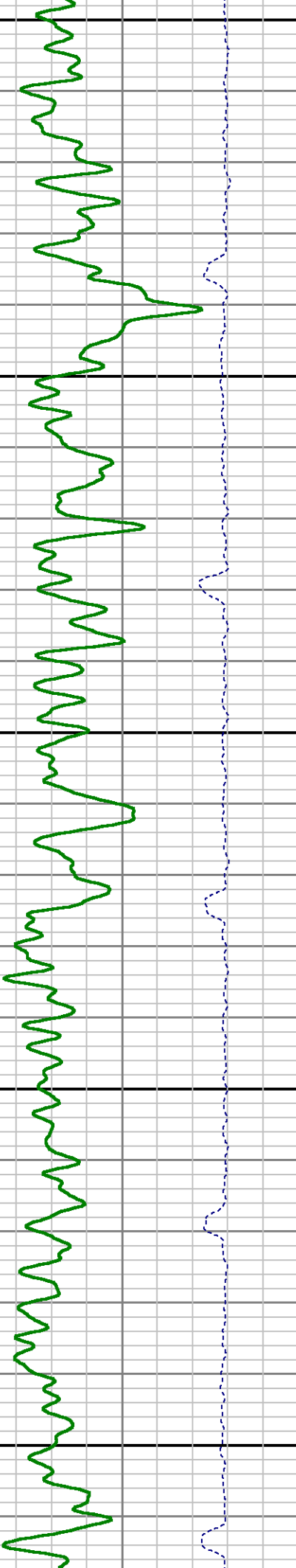
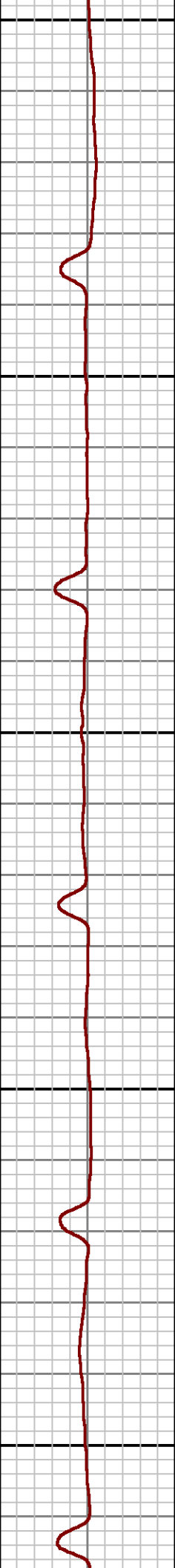
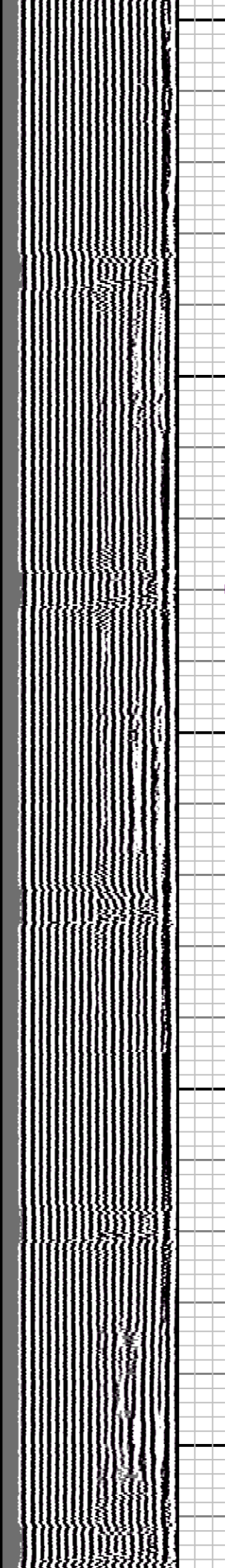
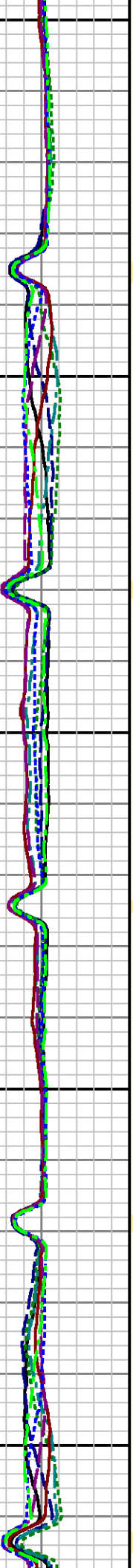
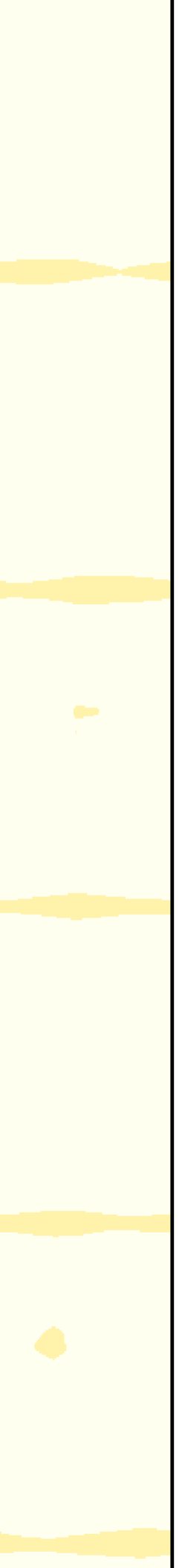




2700

2800

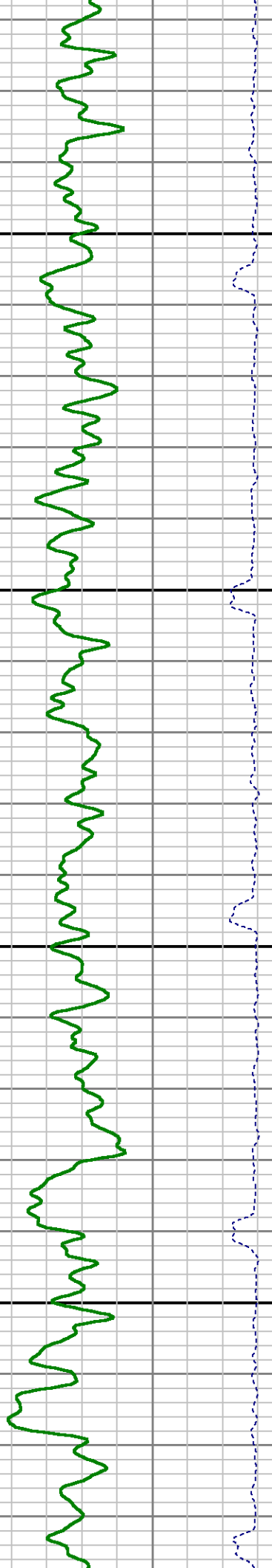
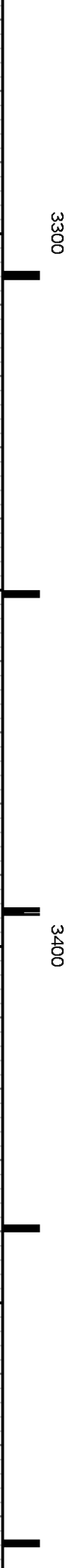
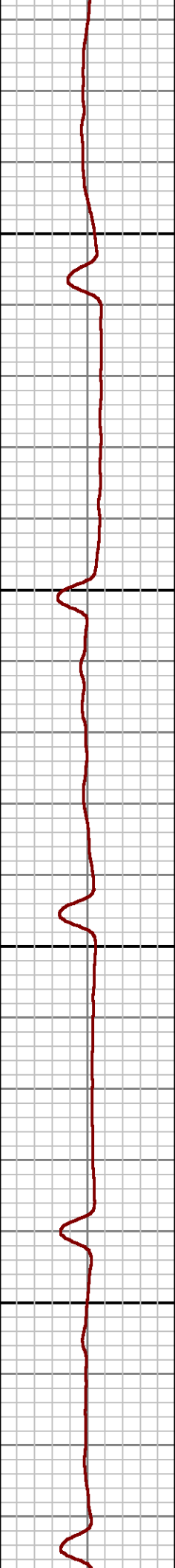
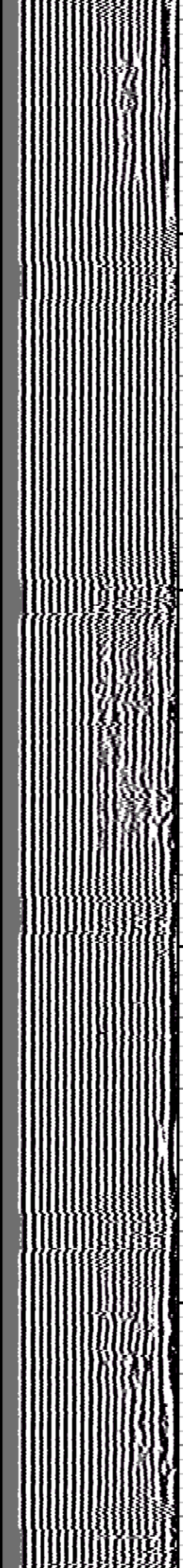
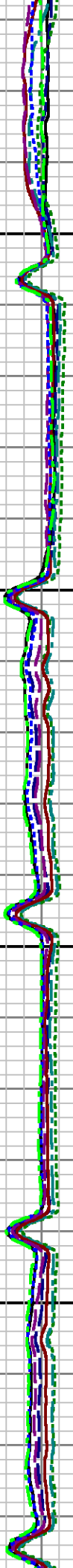
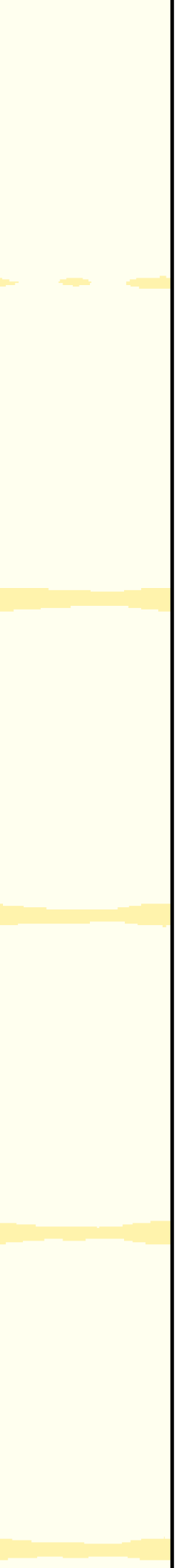




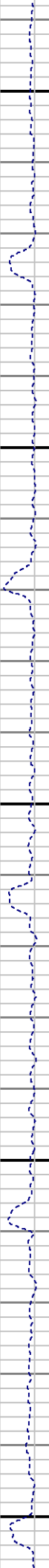
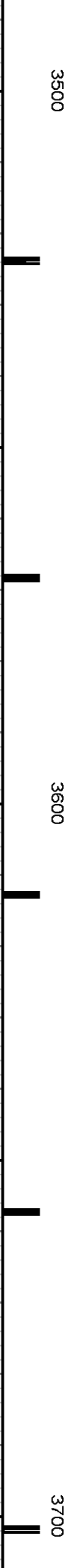
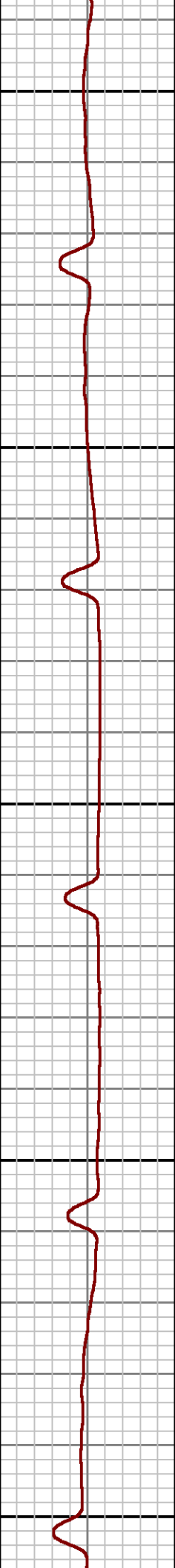
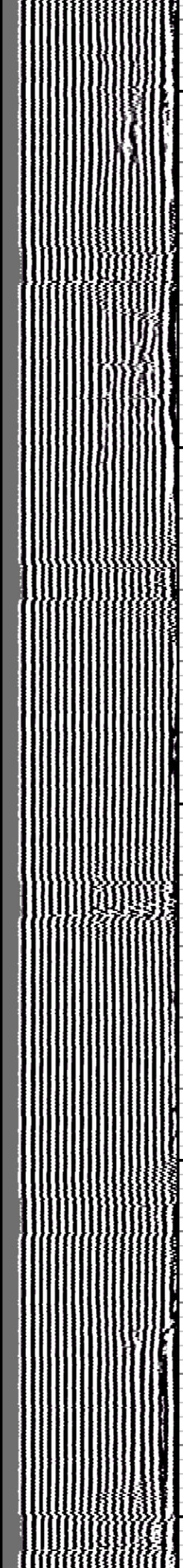
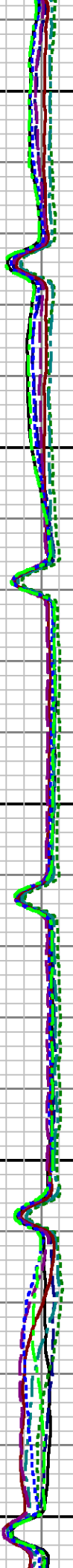
3100

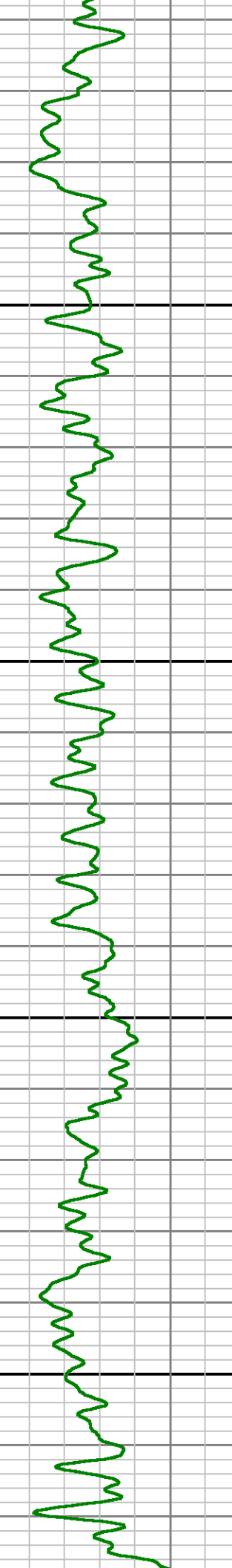
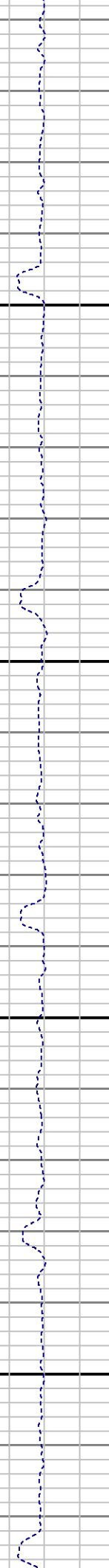
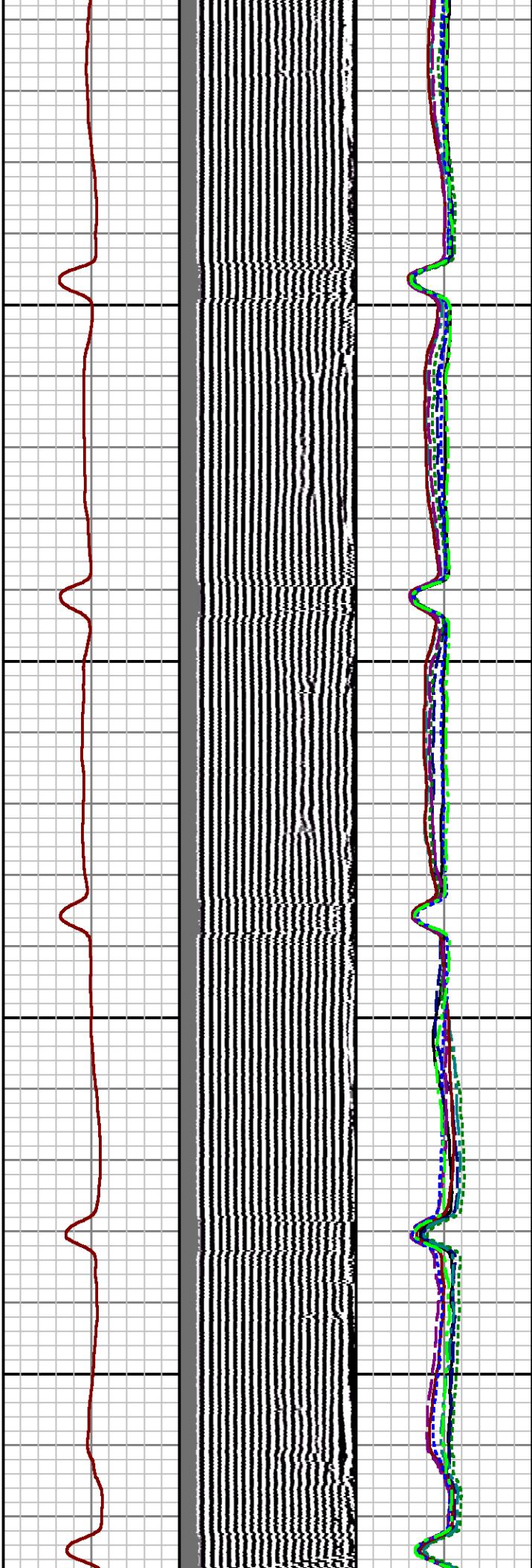
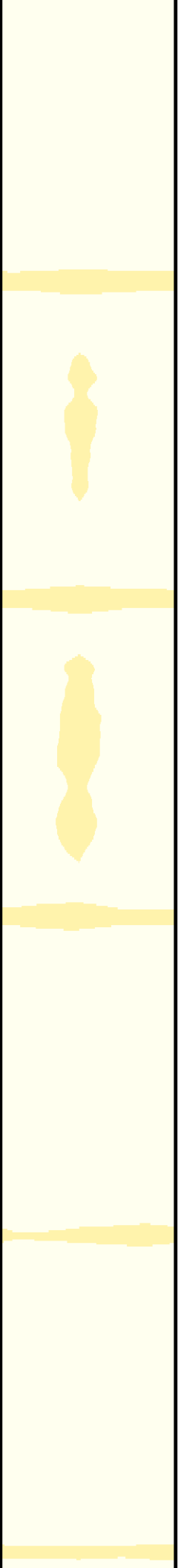
3200

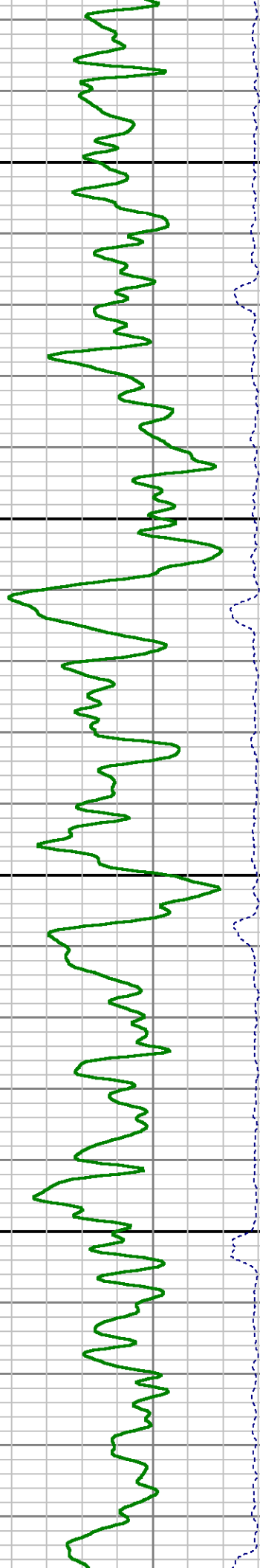
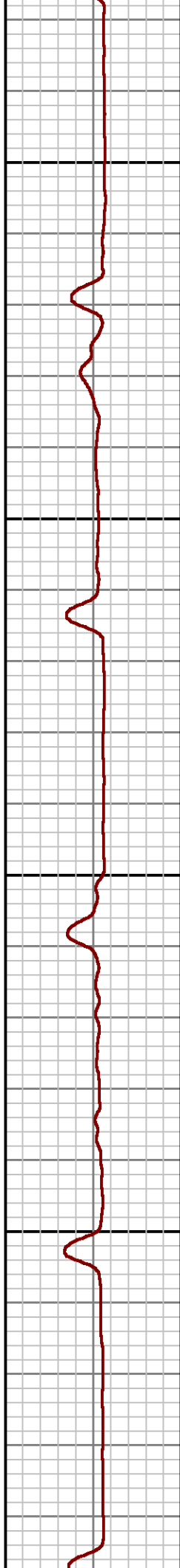
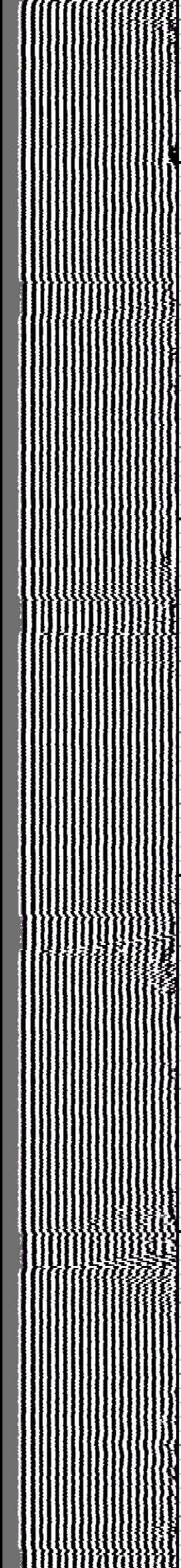
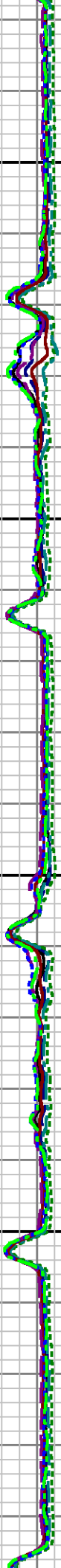
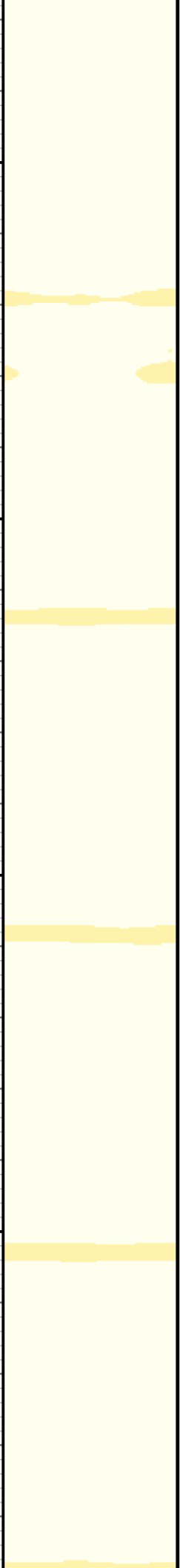


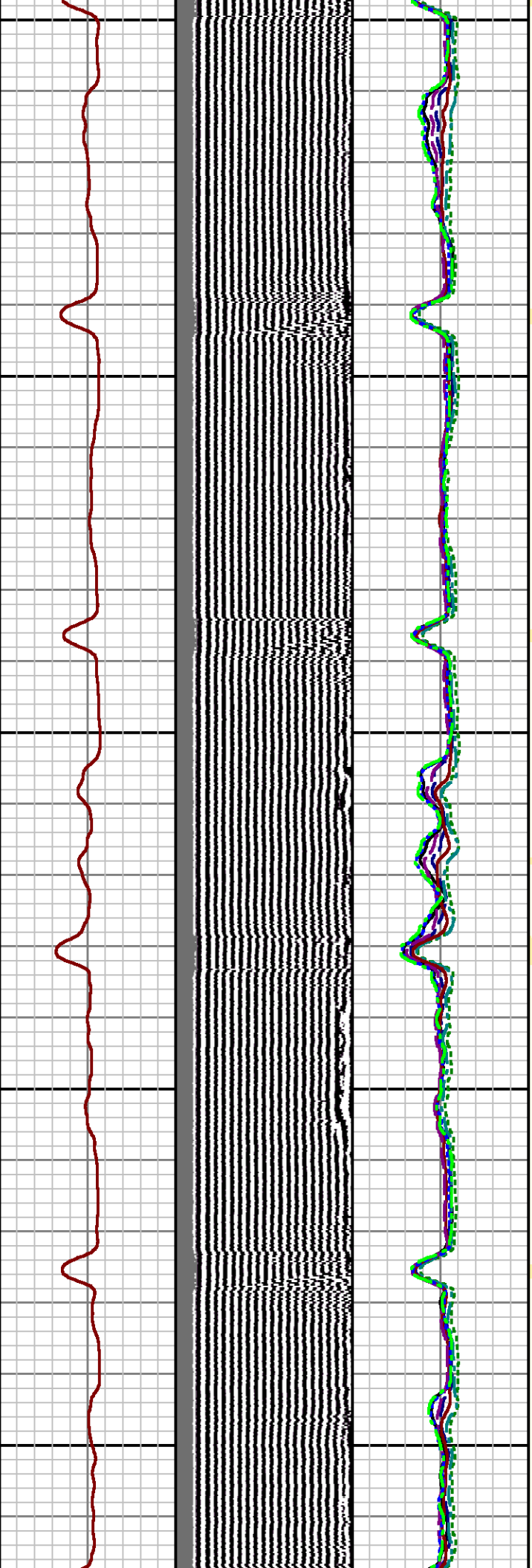






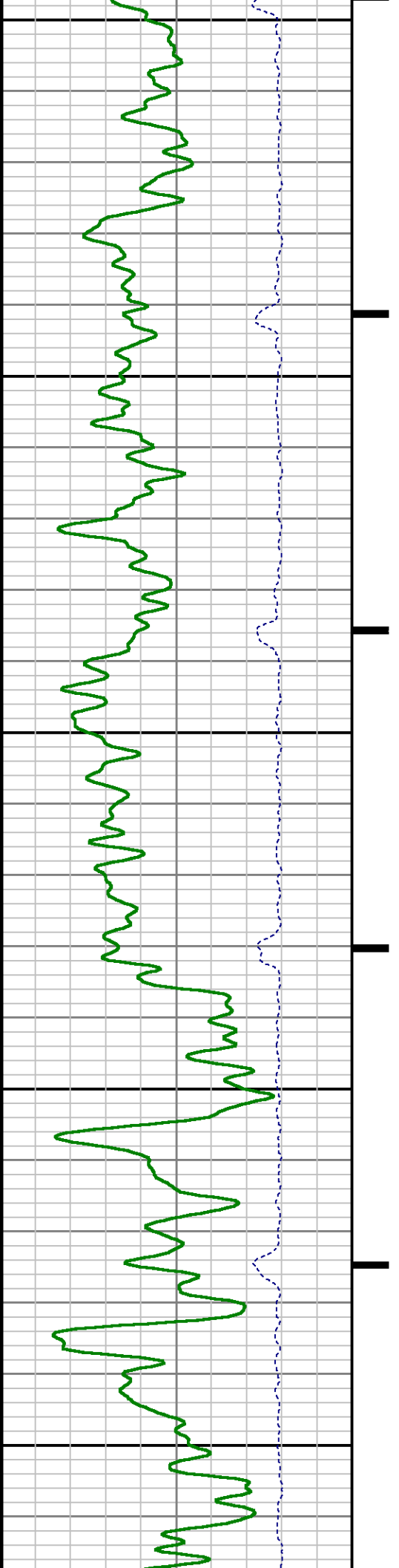


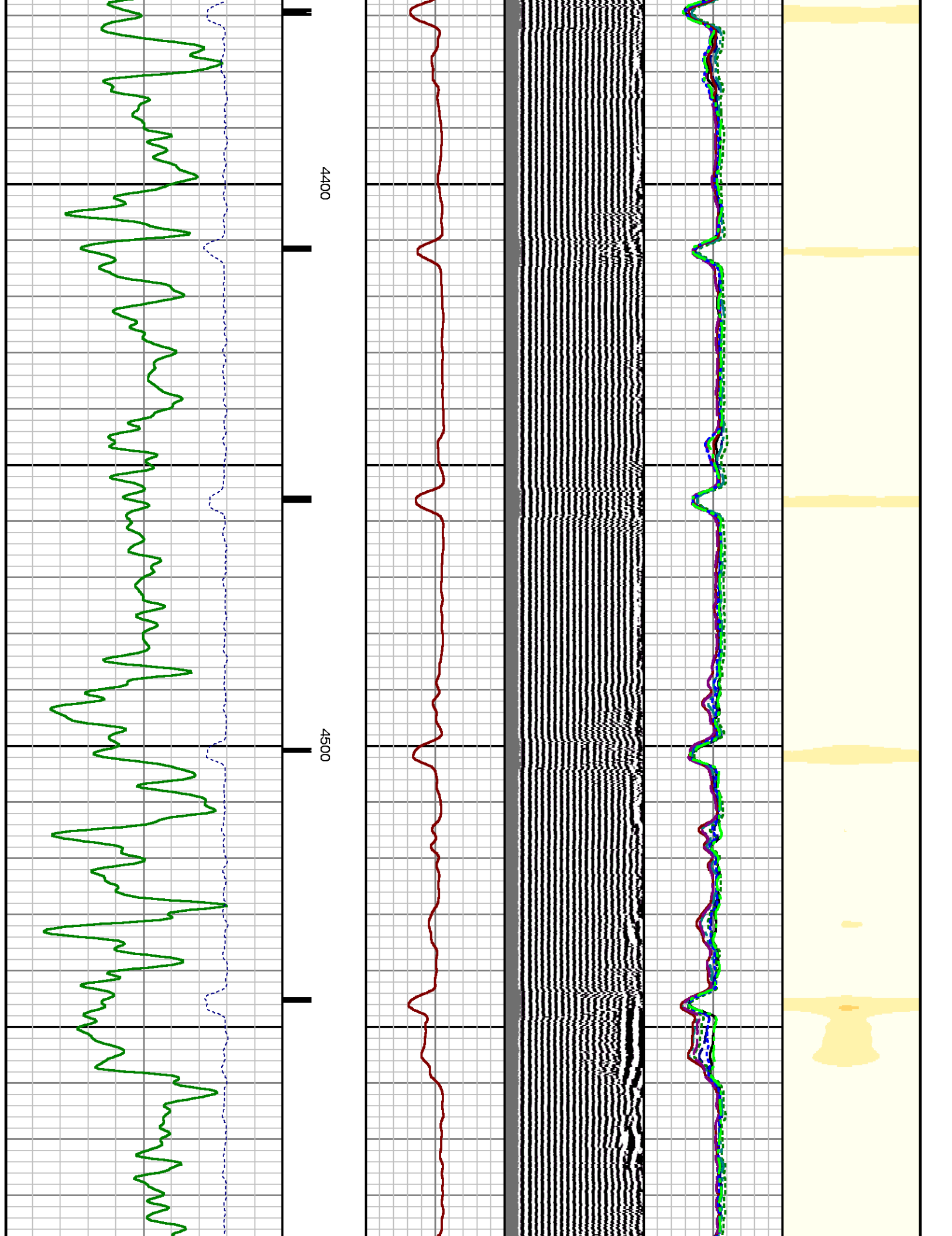




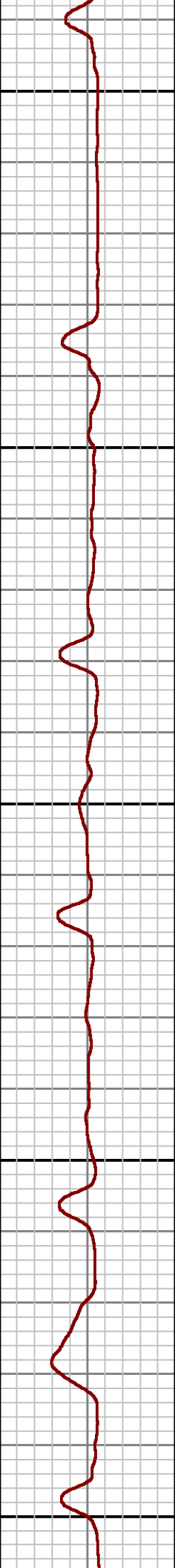
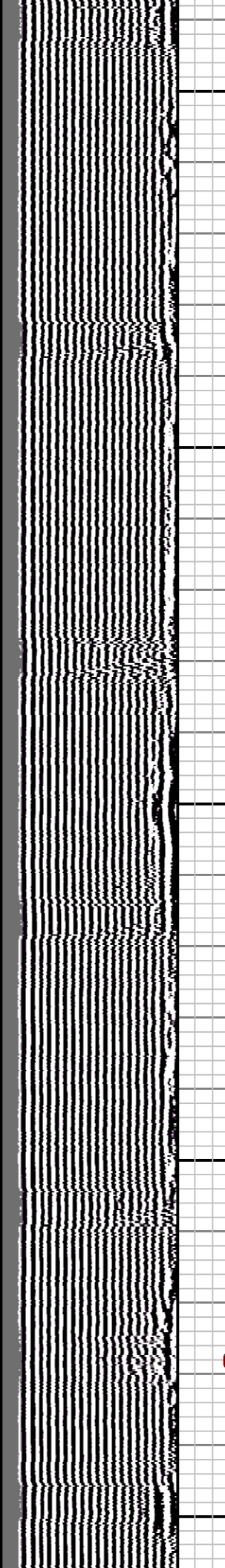
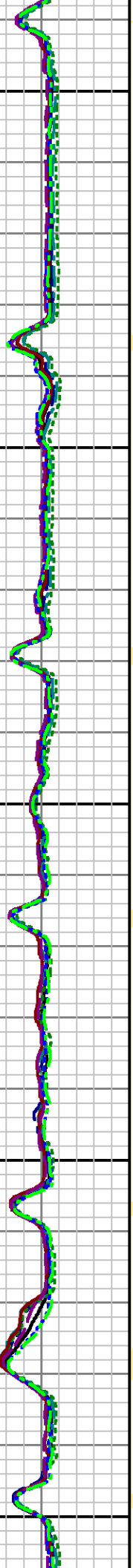
4200

4300





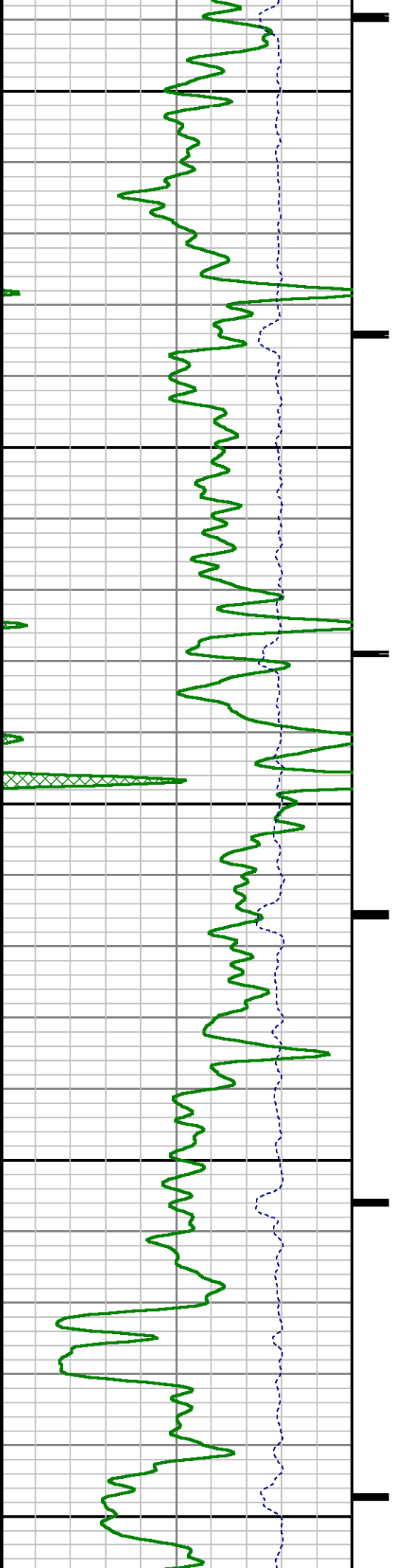




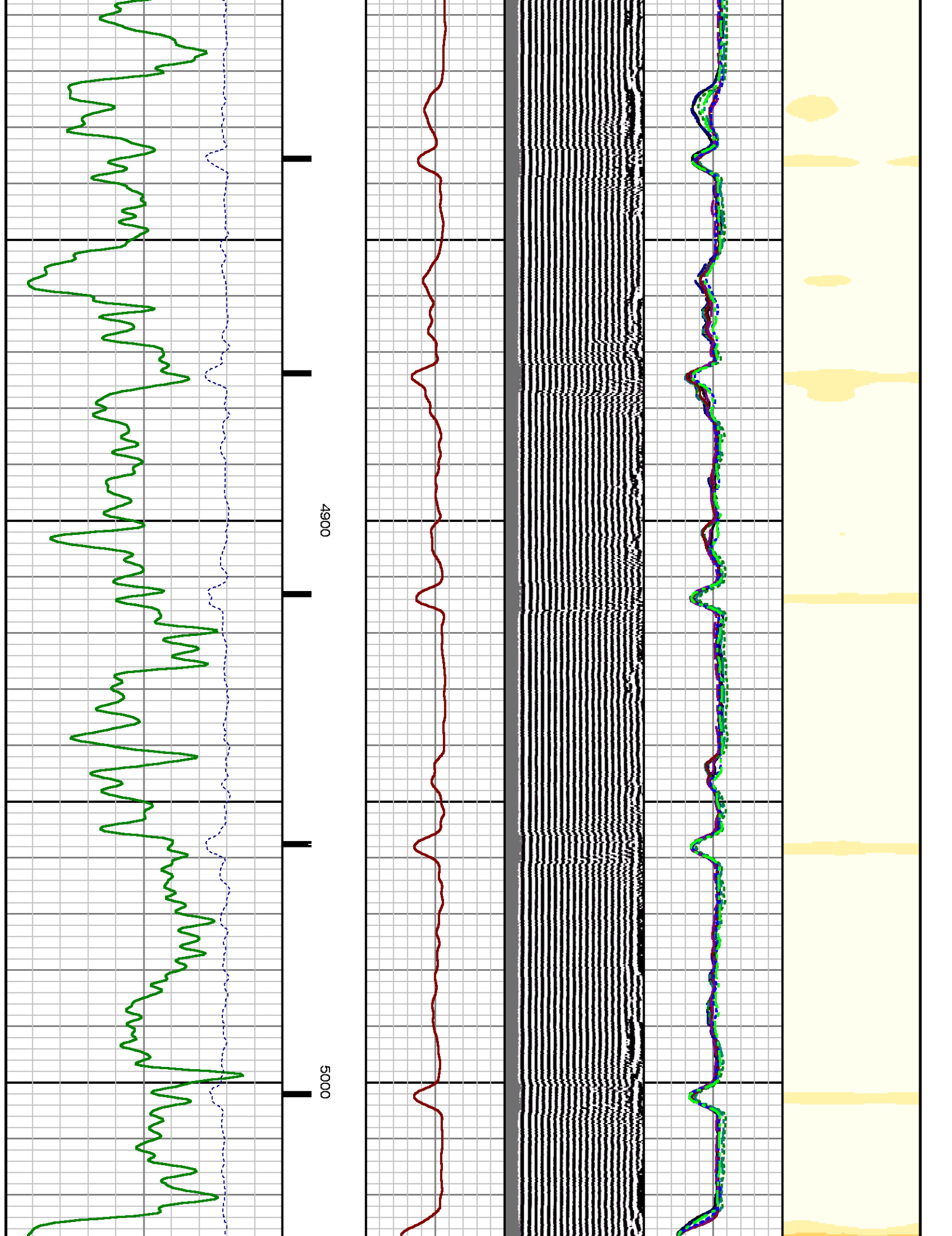
4600

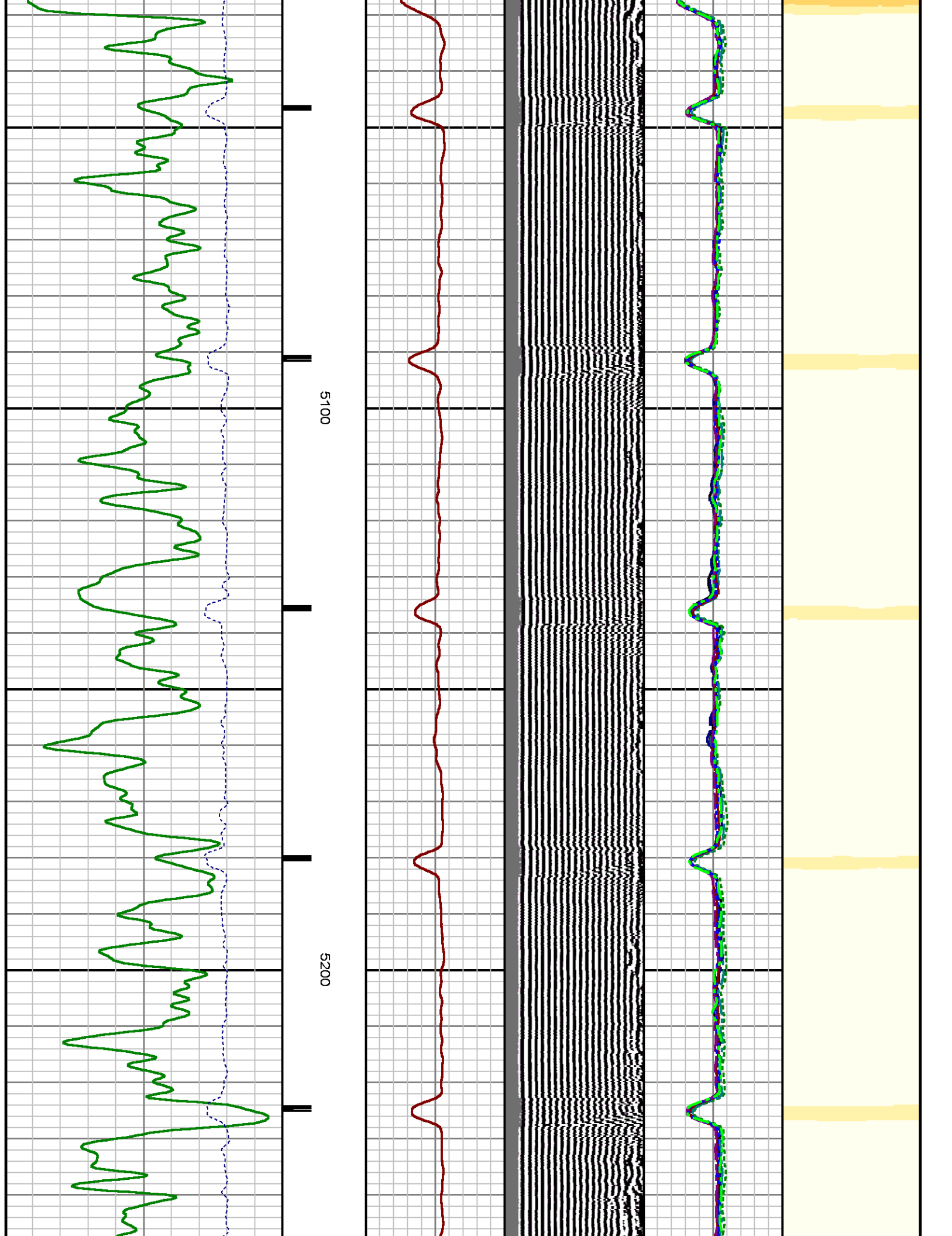
4700

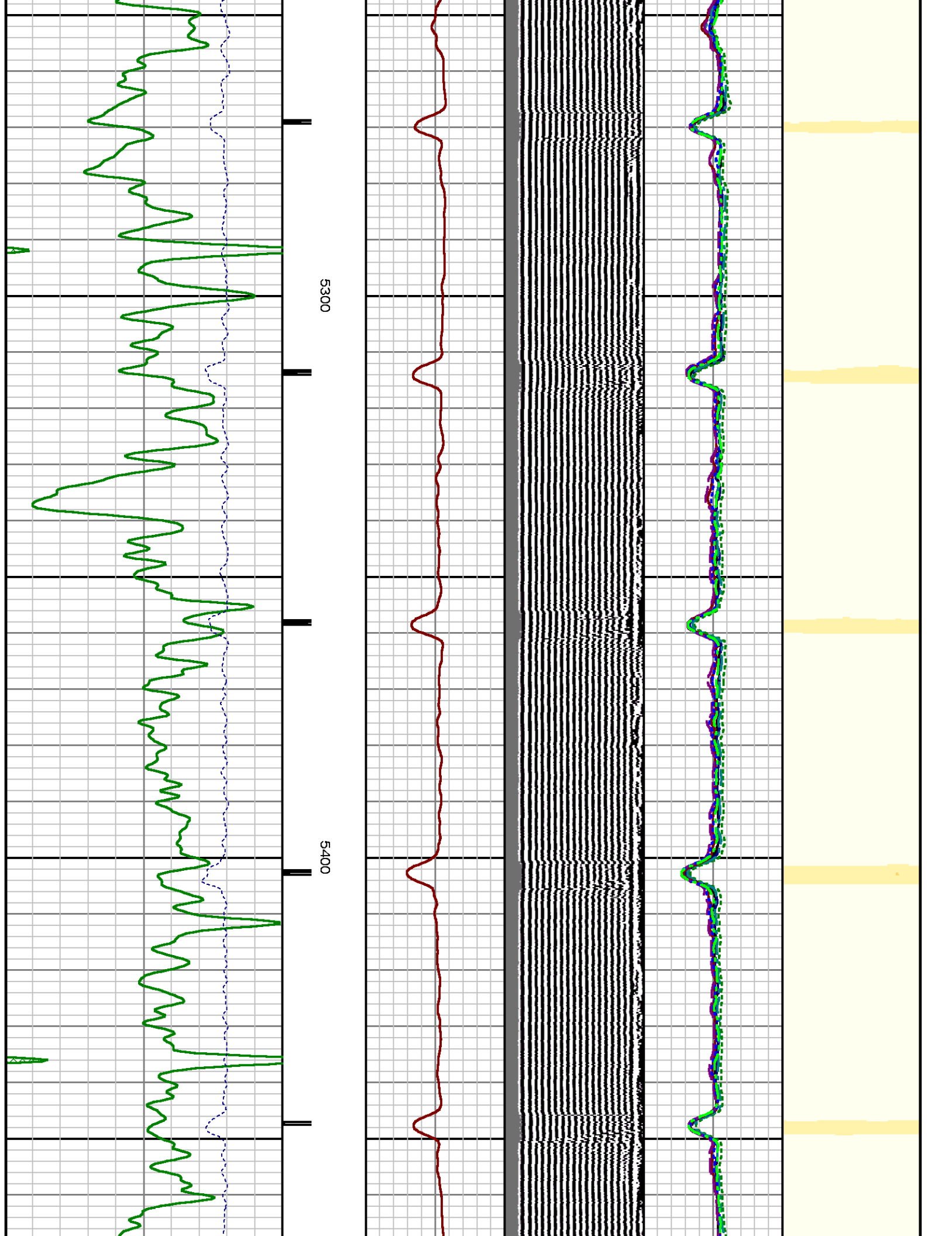
4800

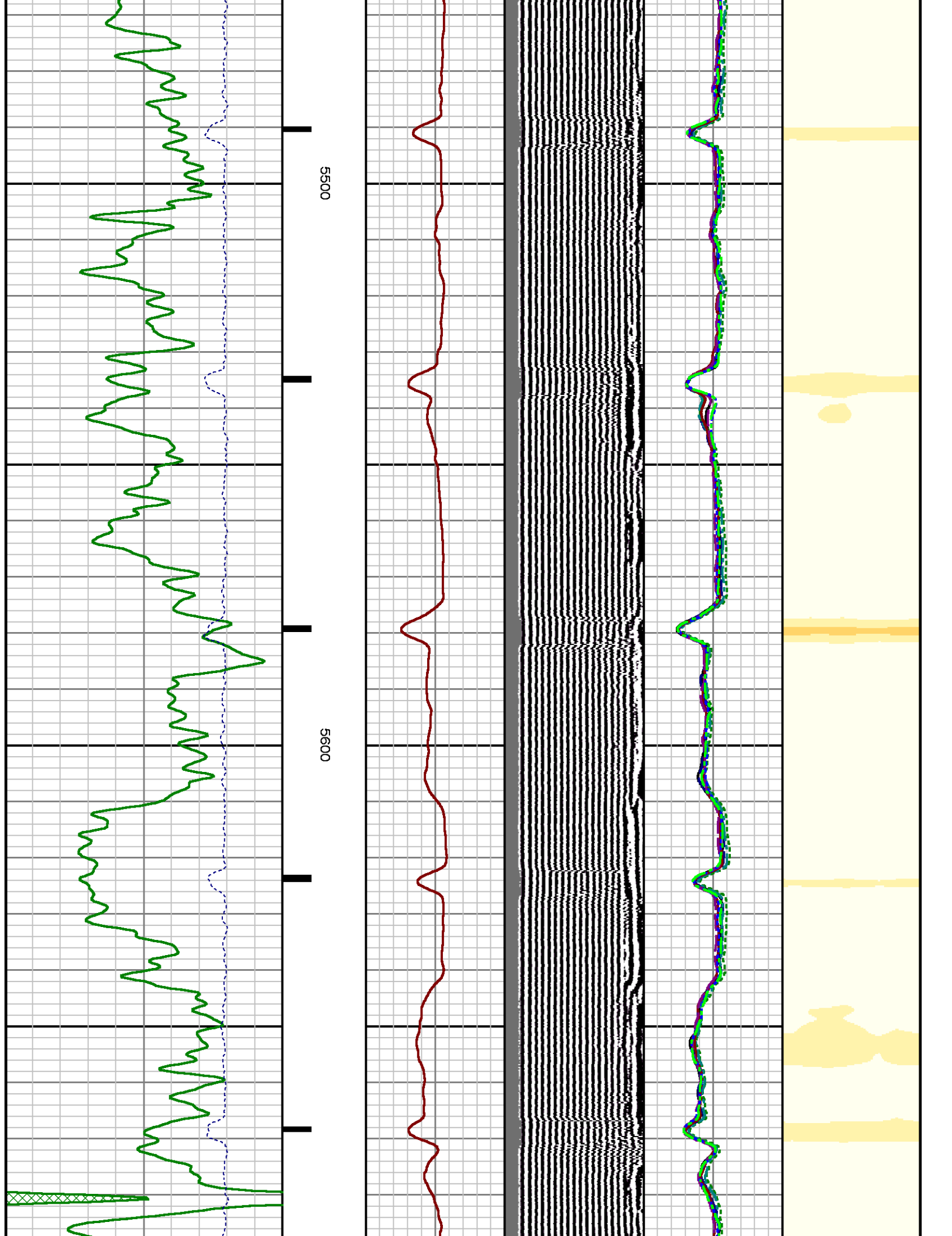


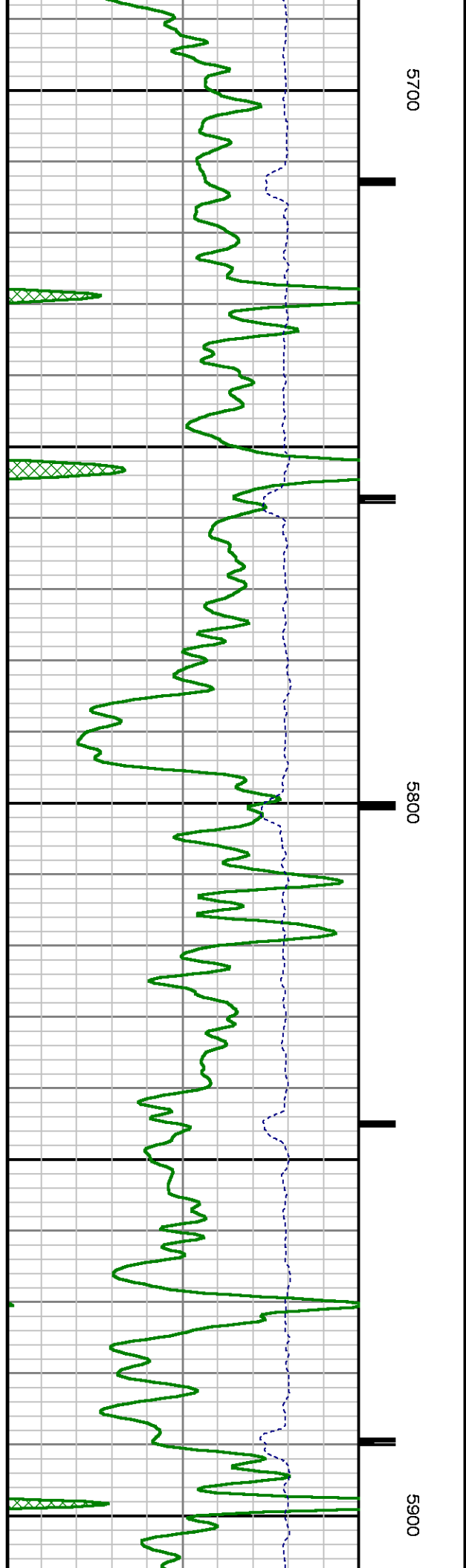
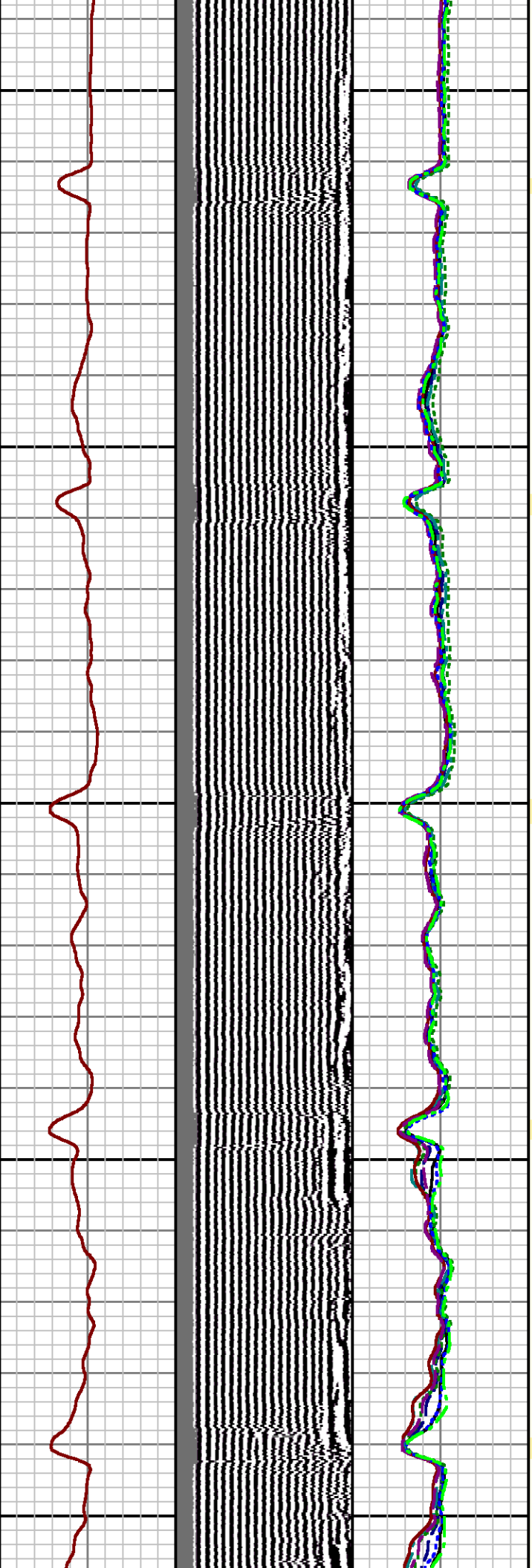
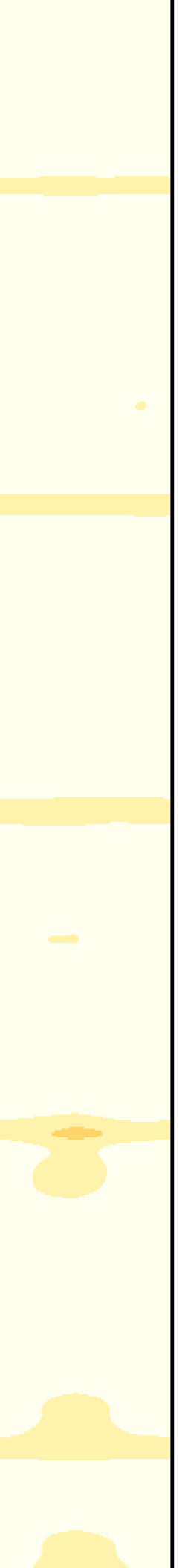




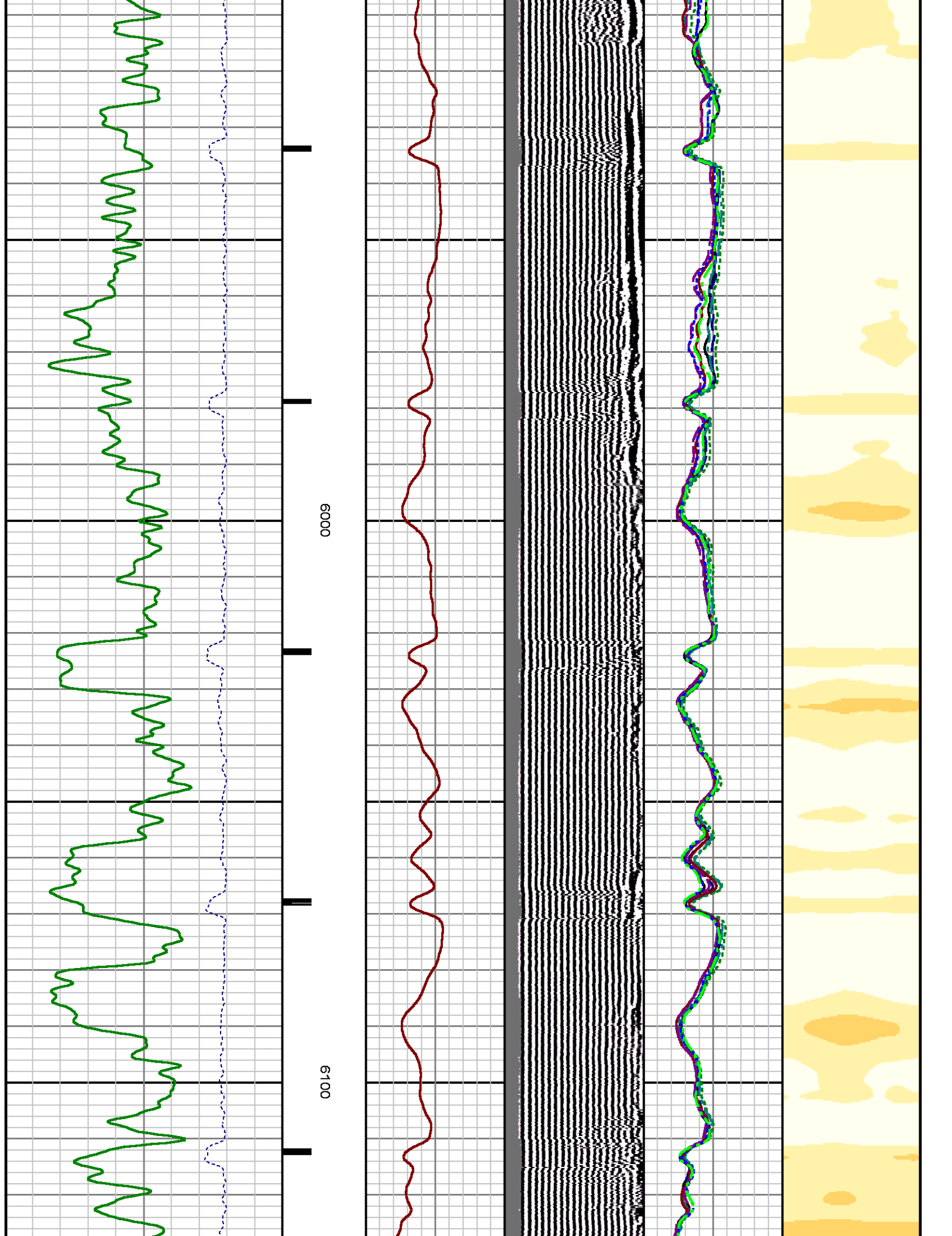




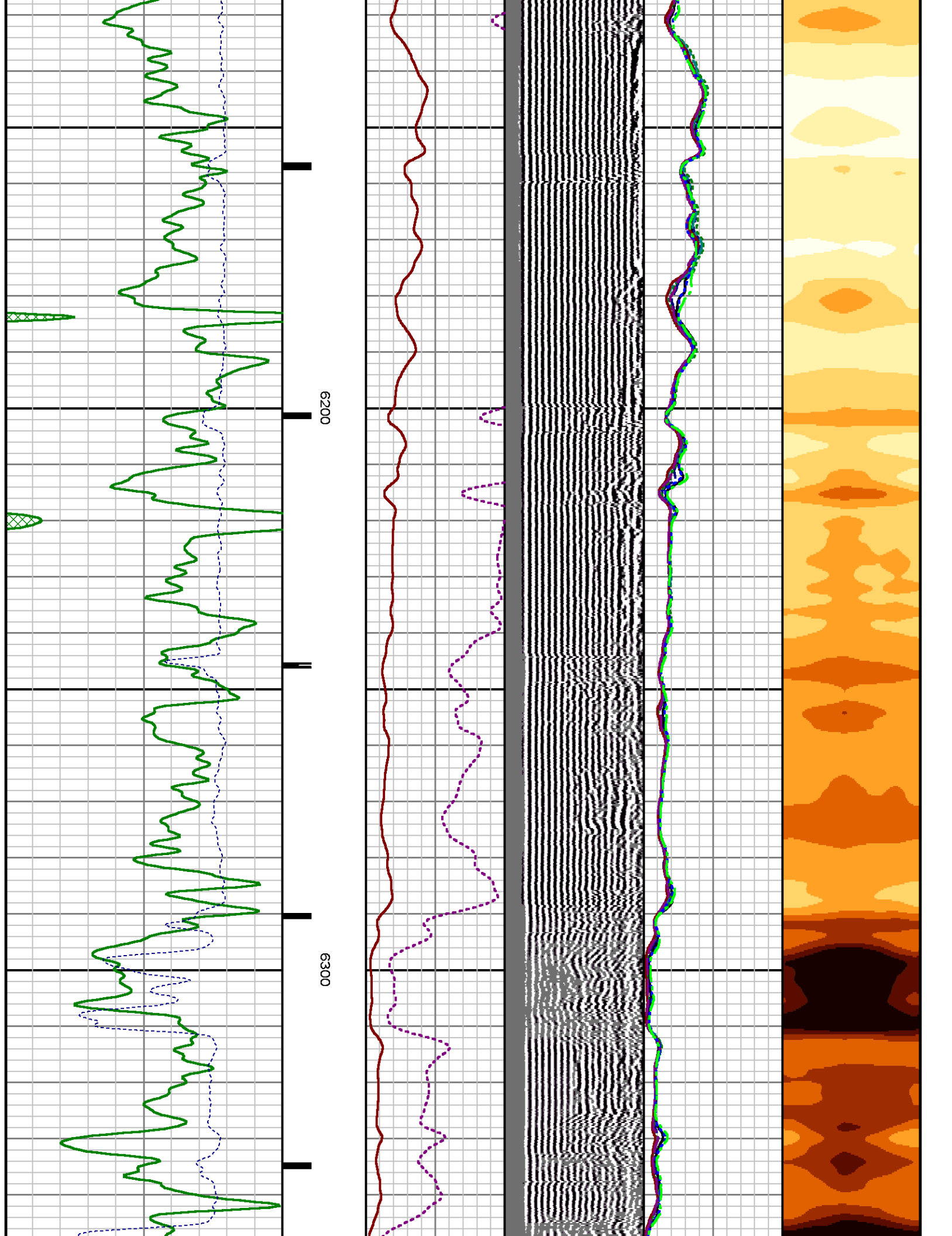


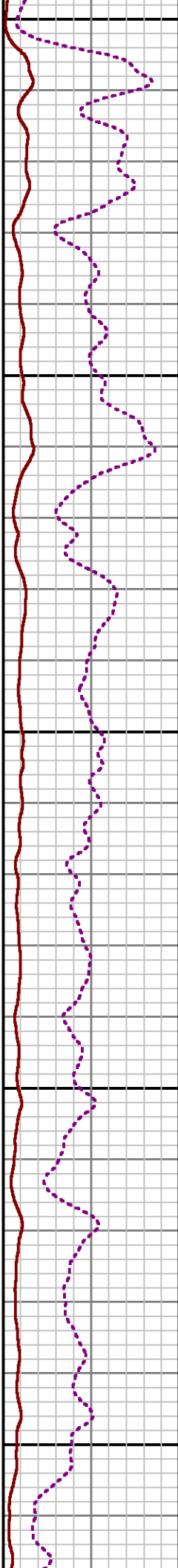
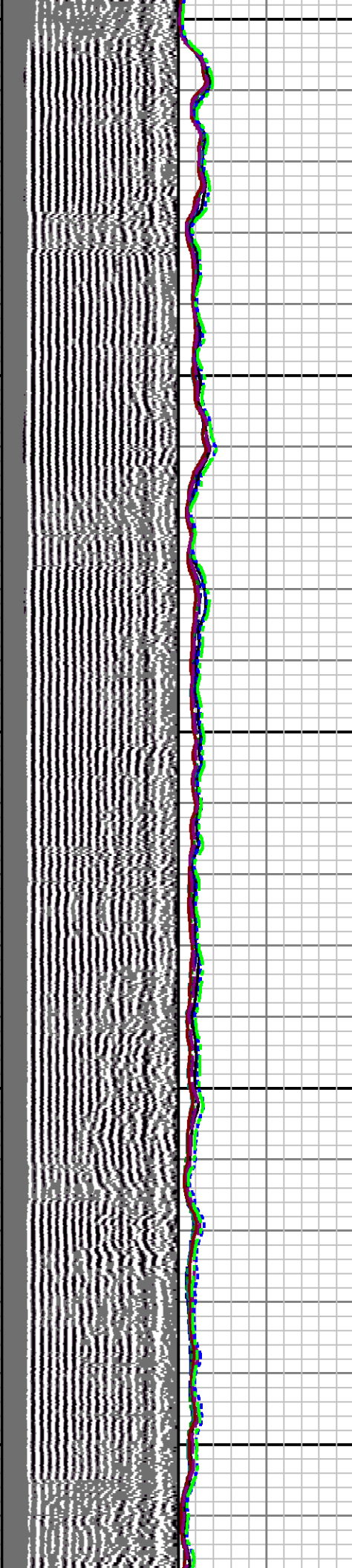
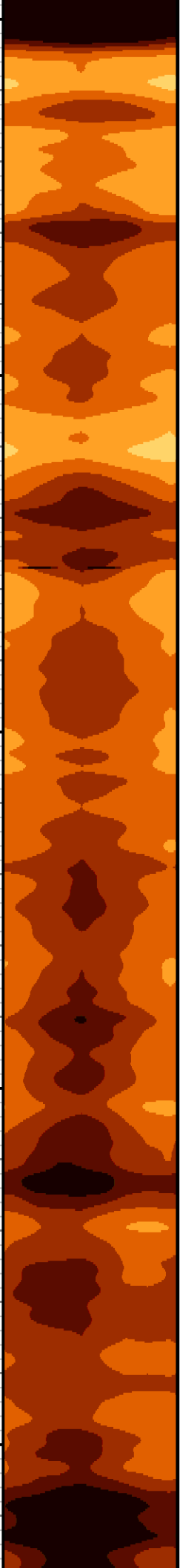






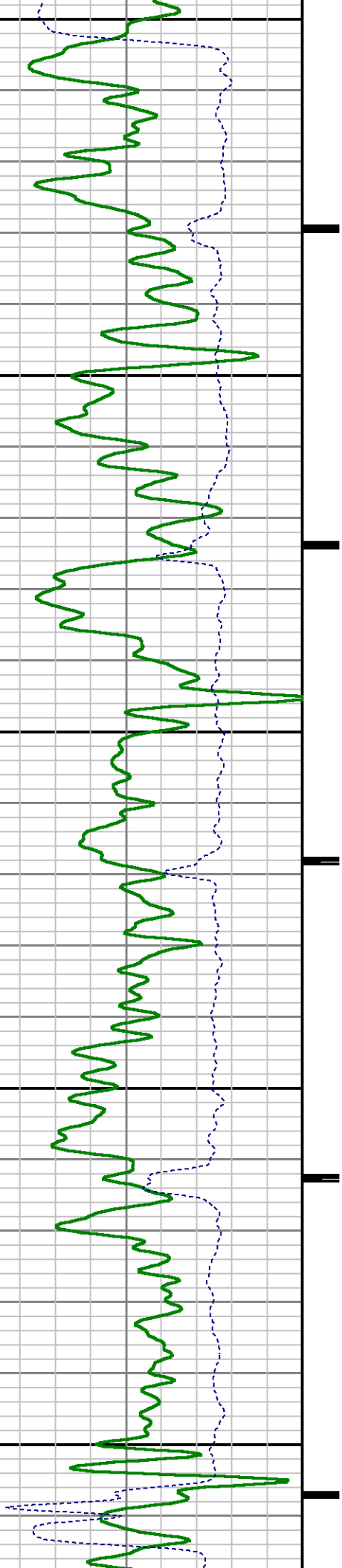


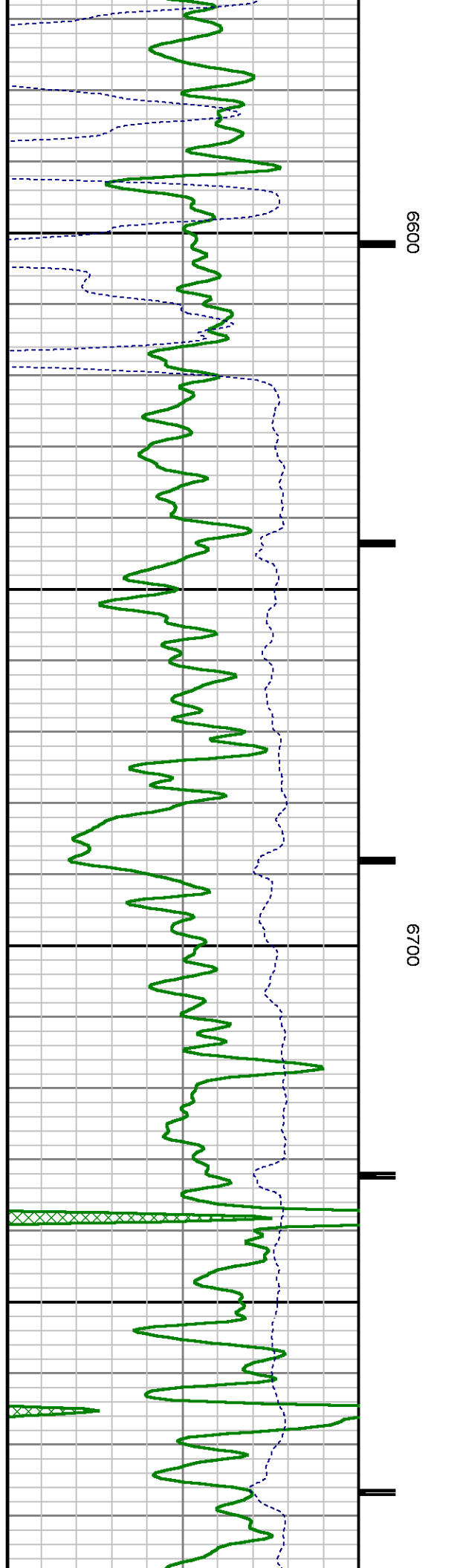
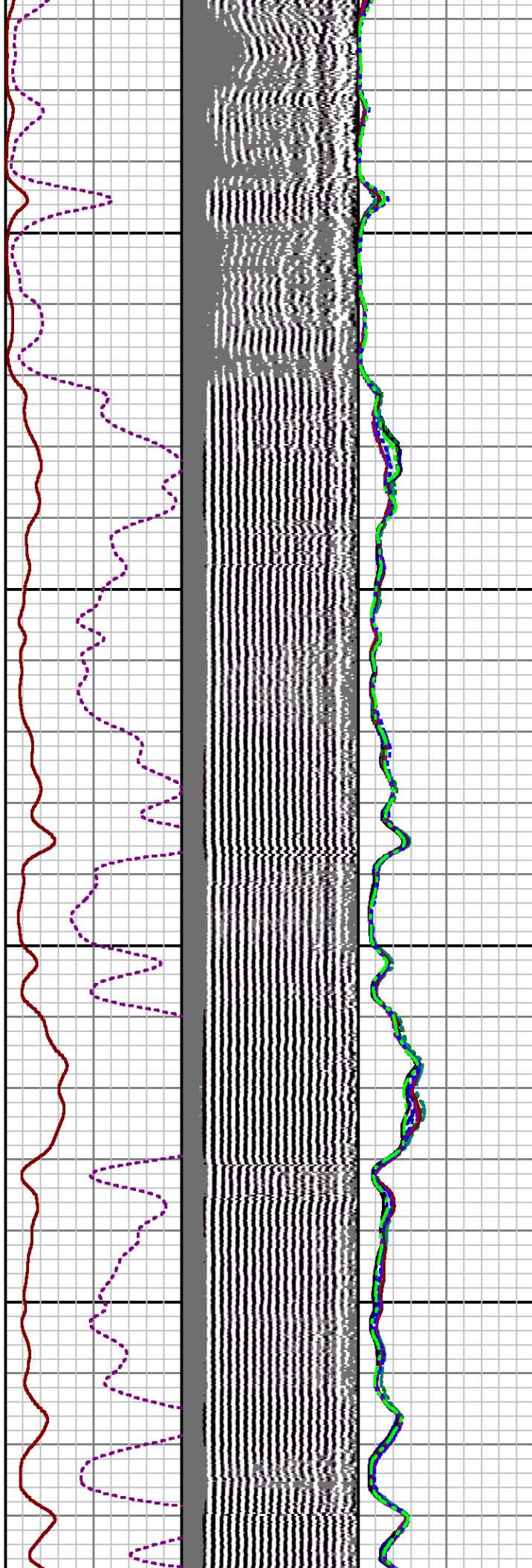


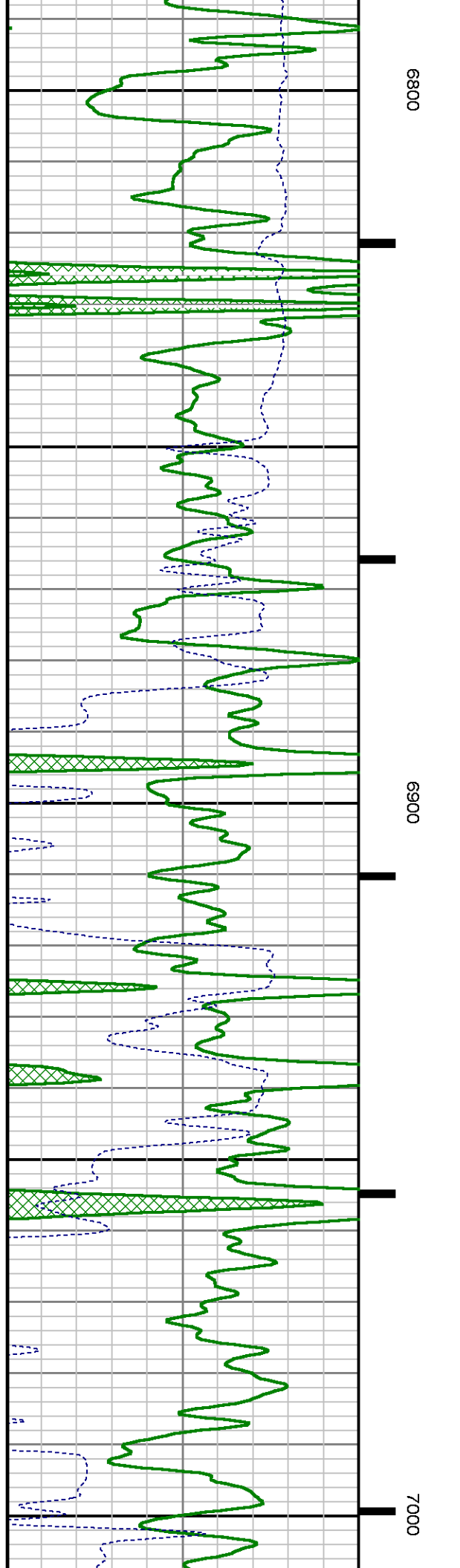
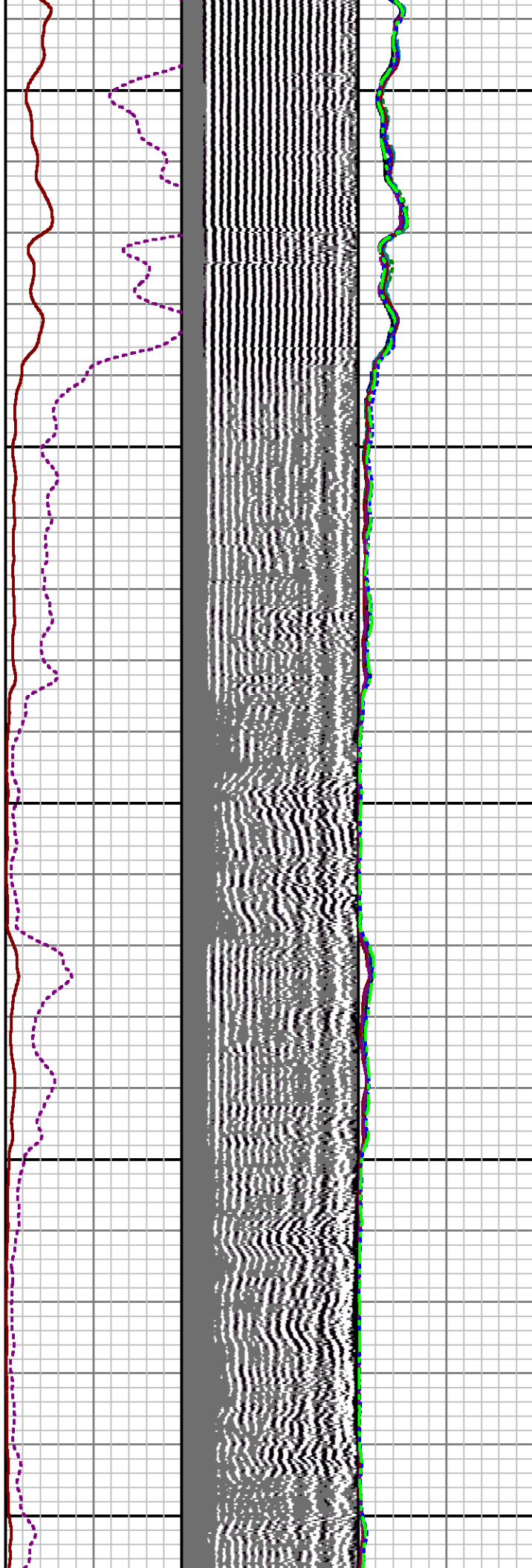


6400

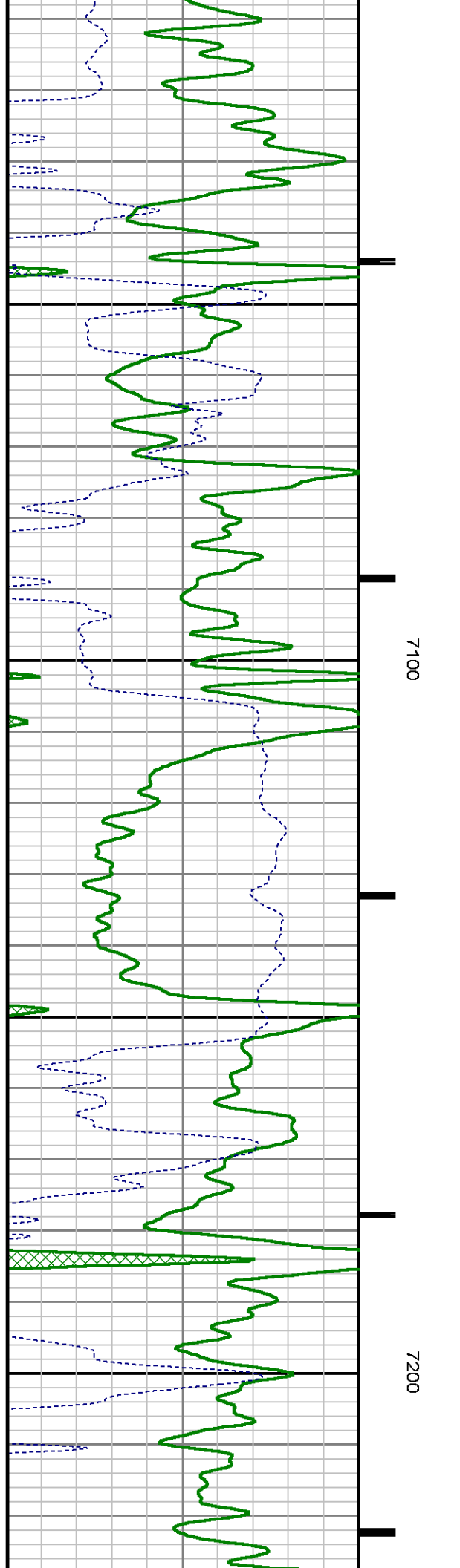
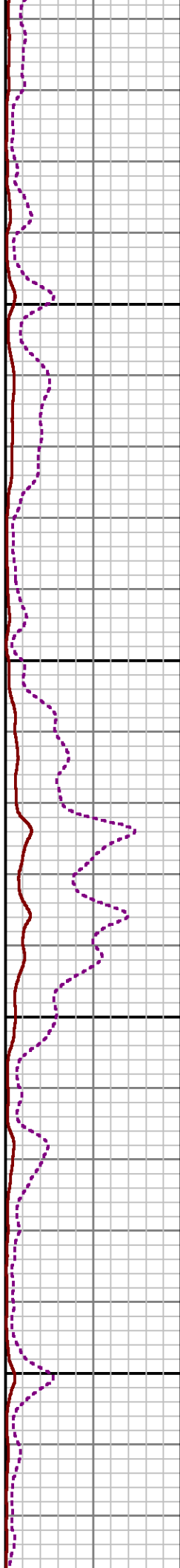
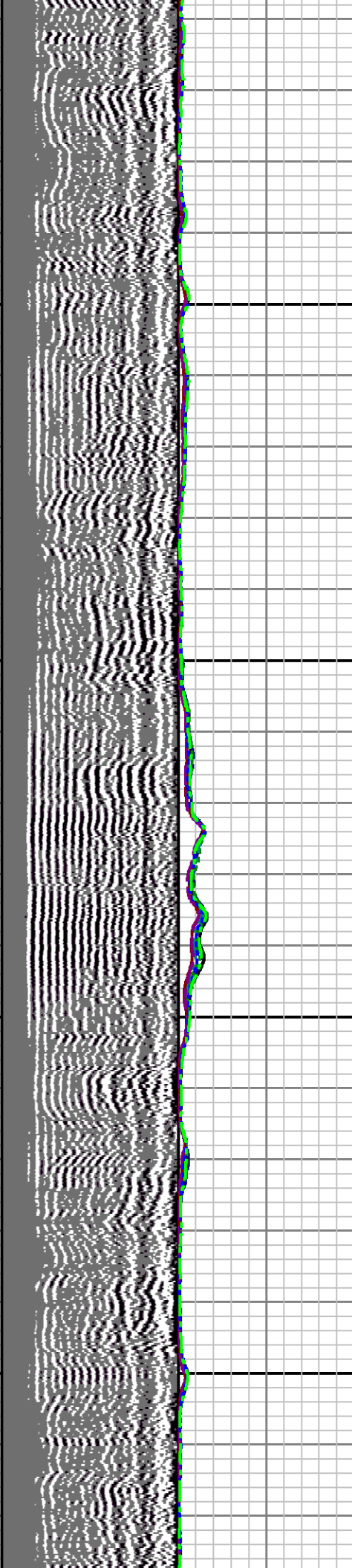
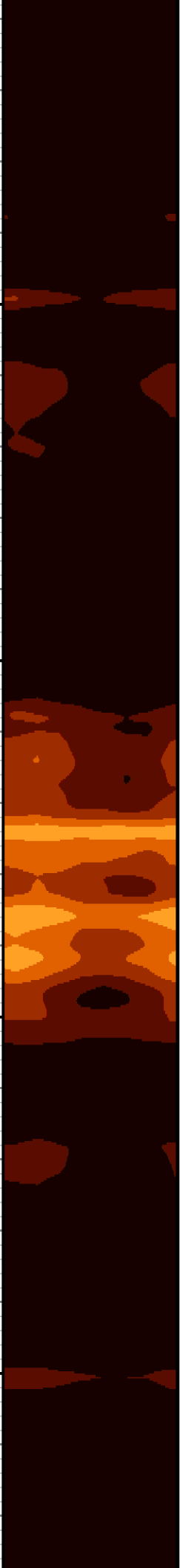
6500

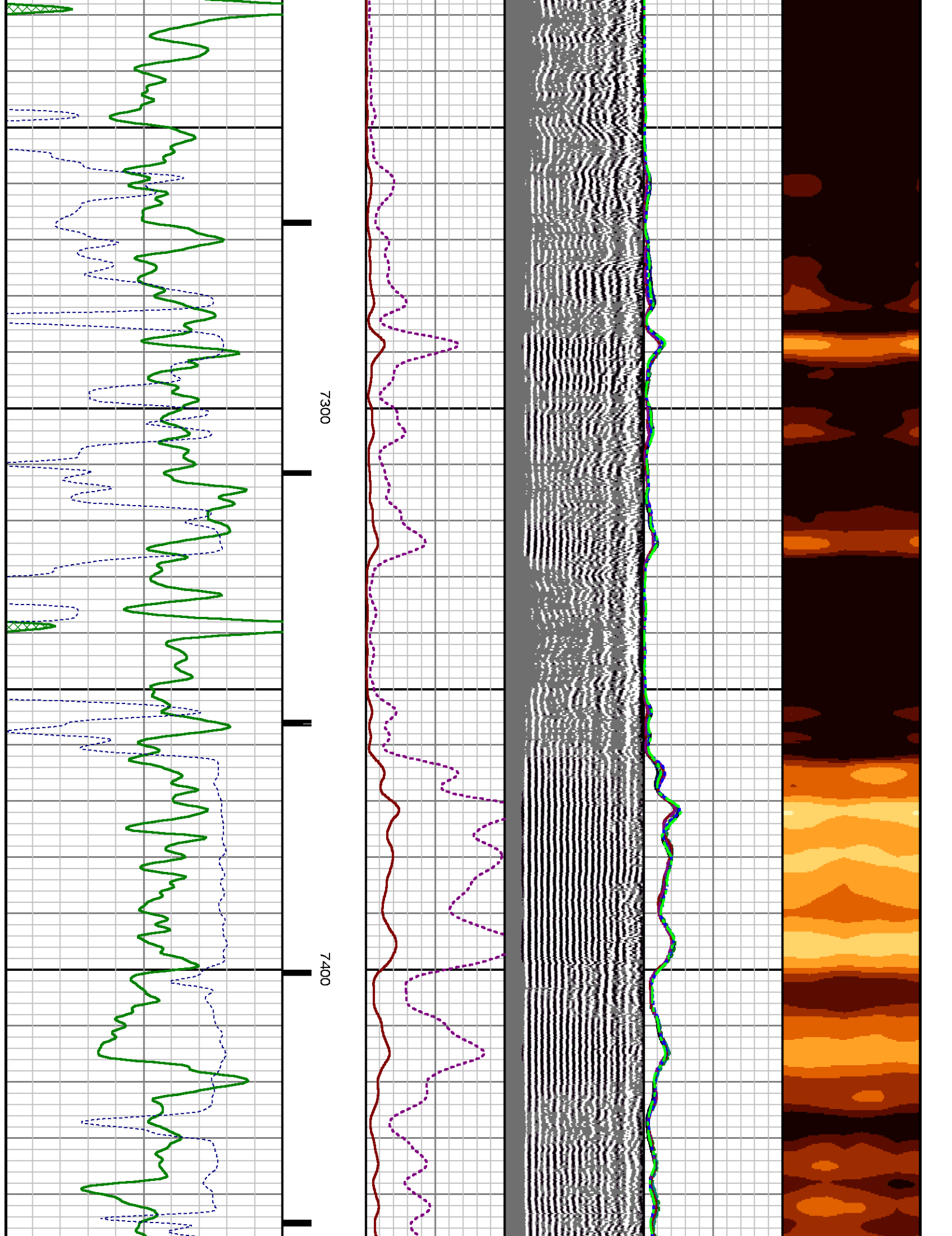




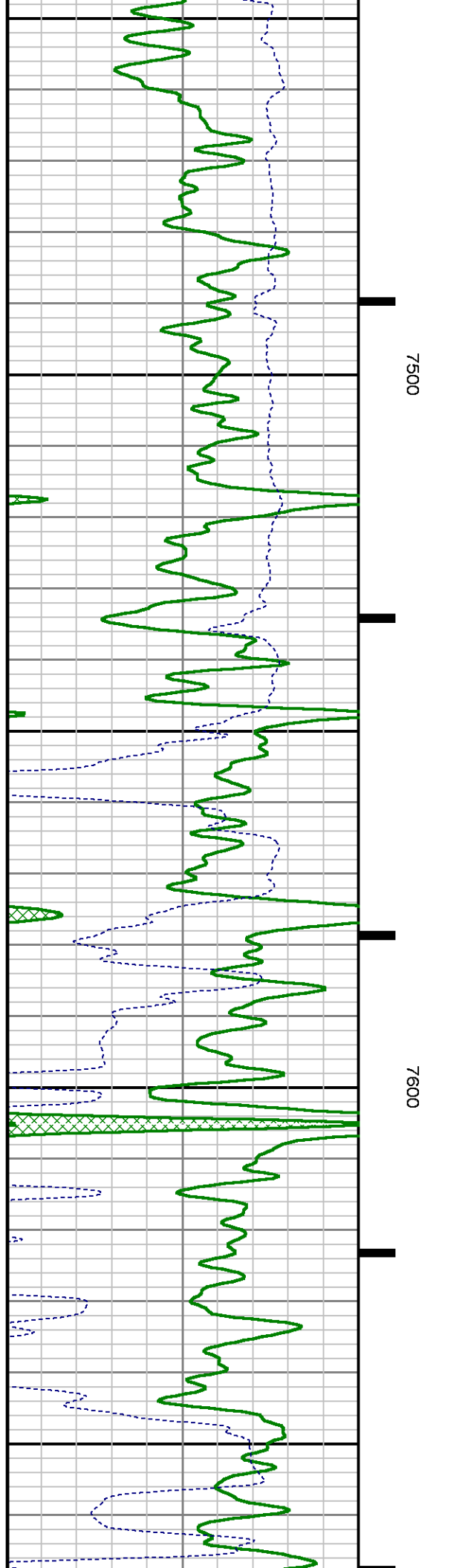
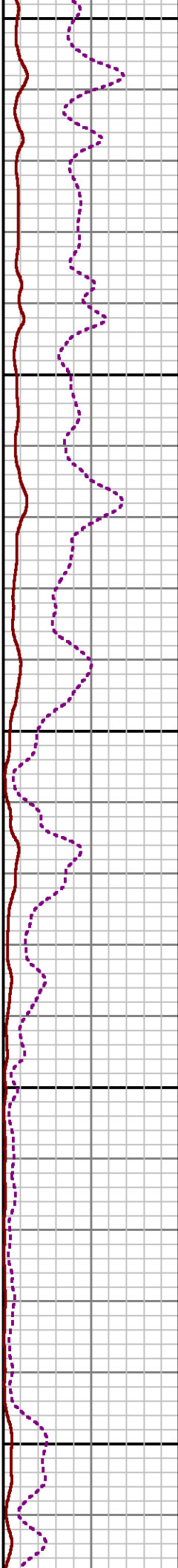
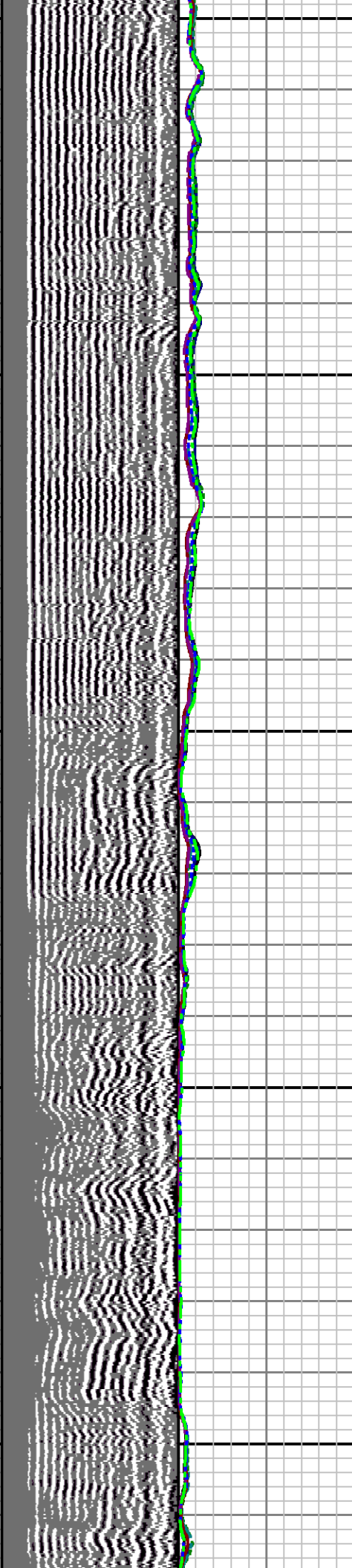
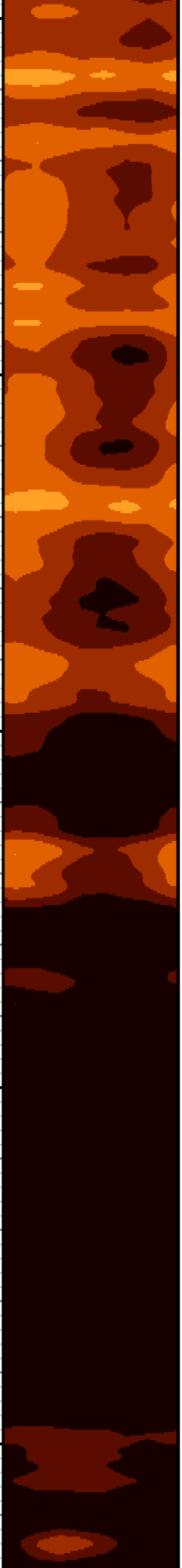


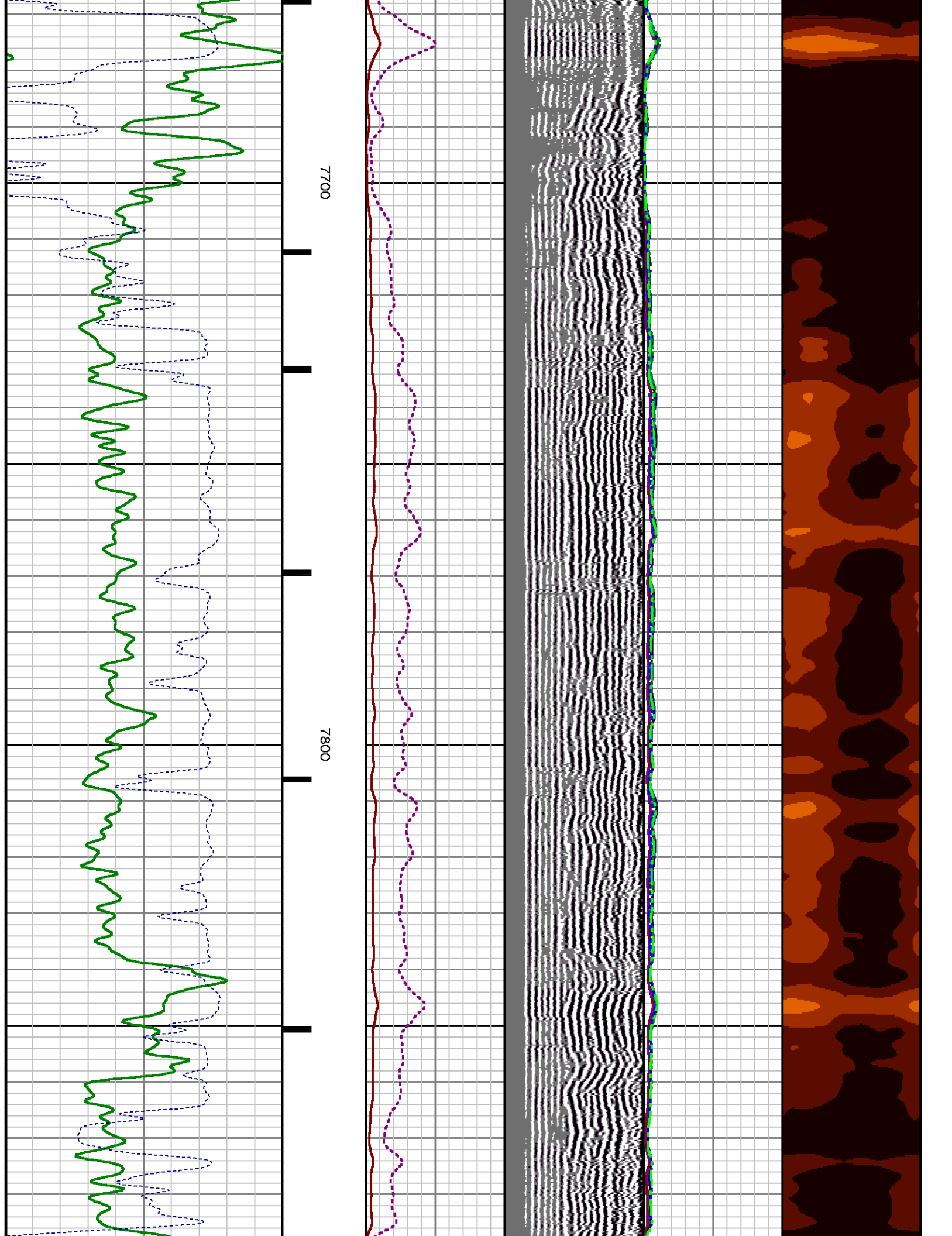


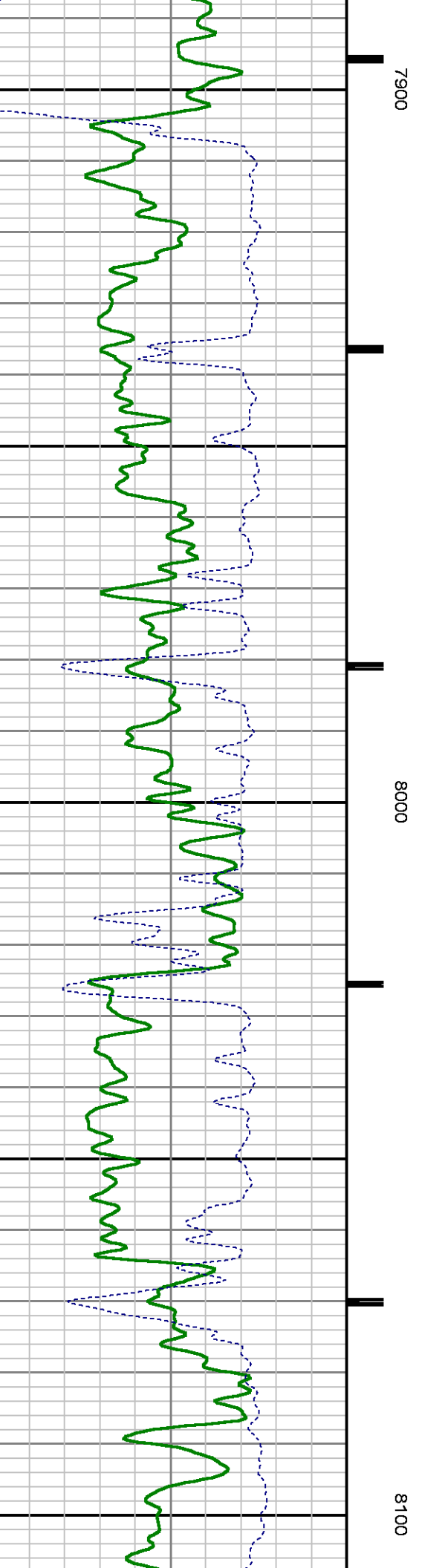
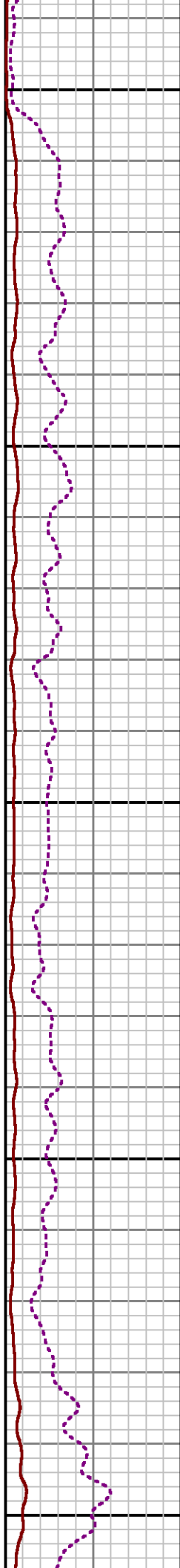
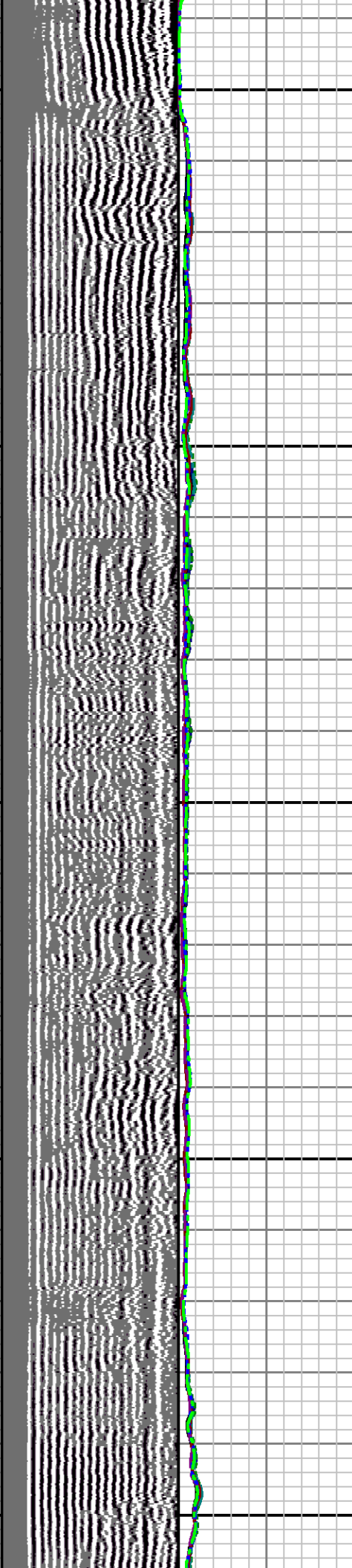


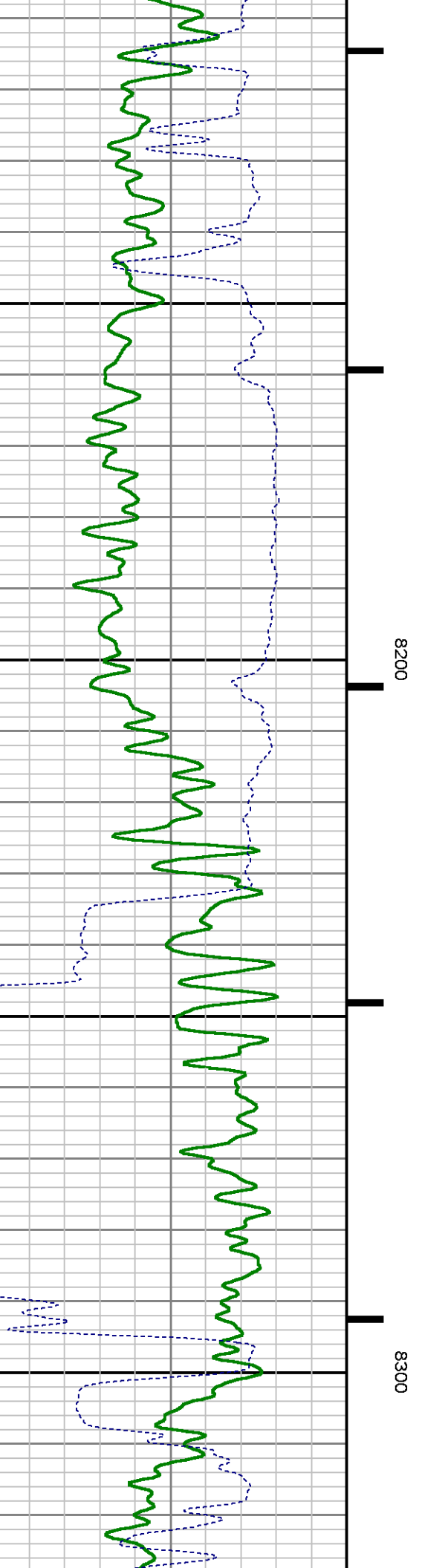
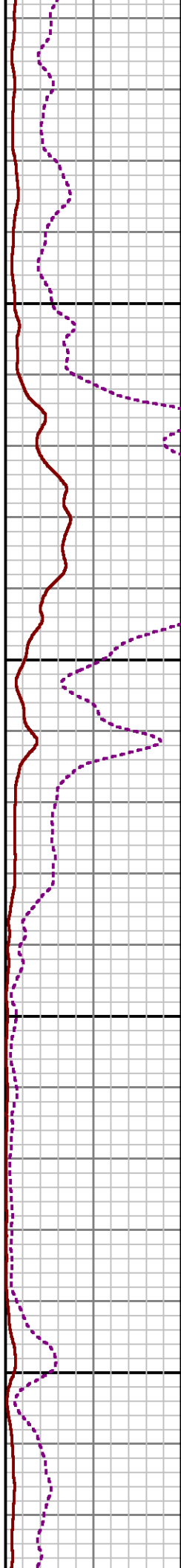
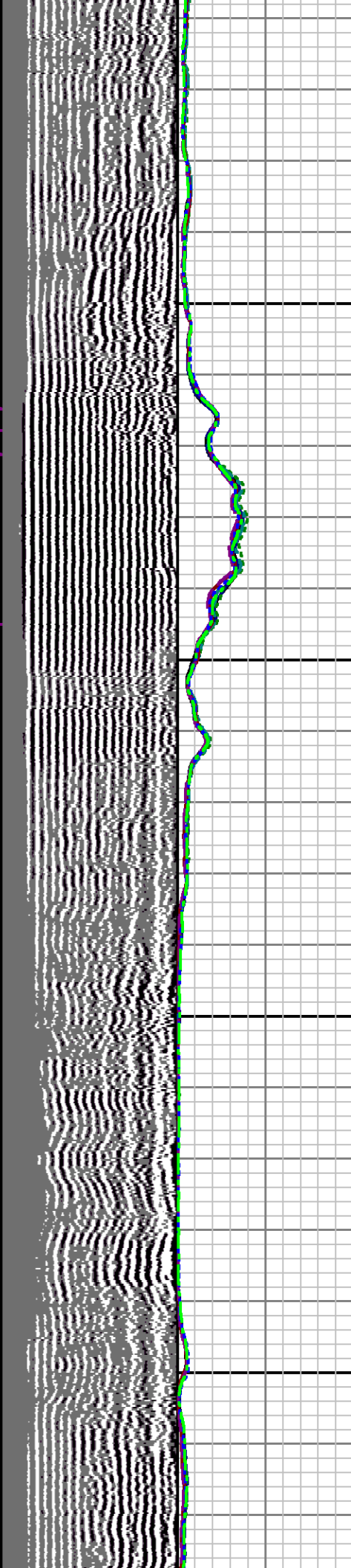




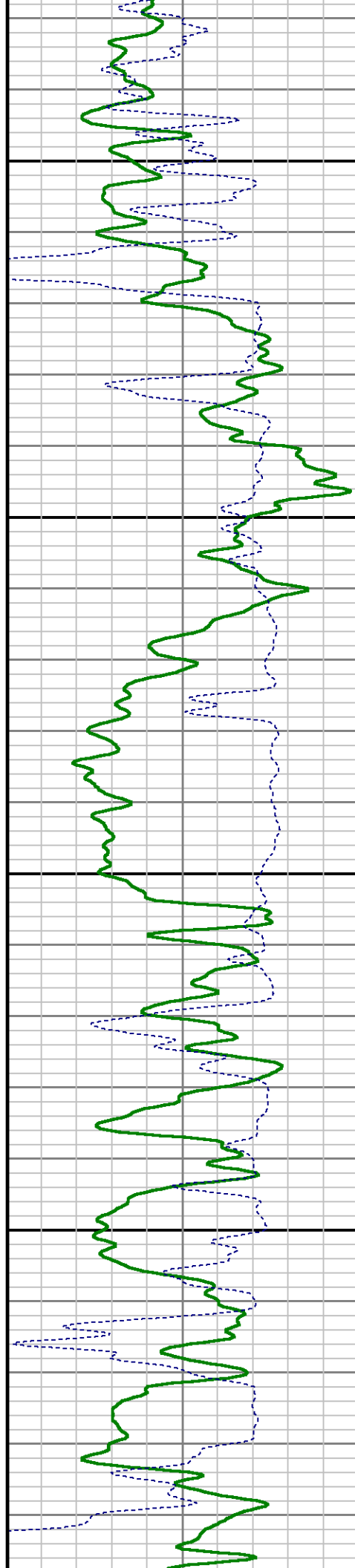
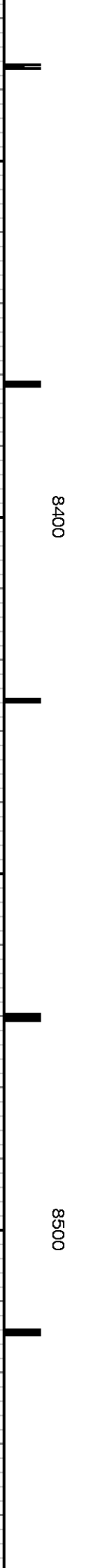
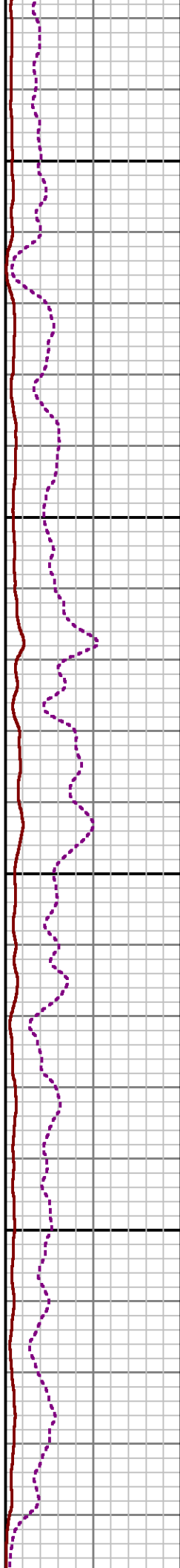
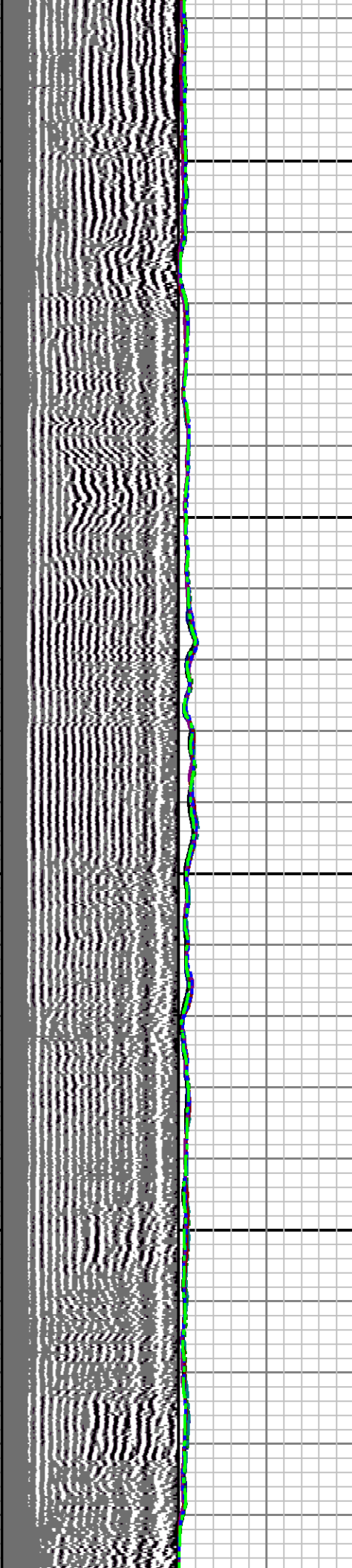




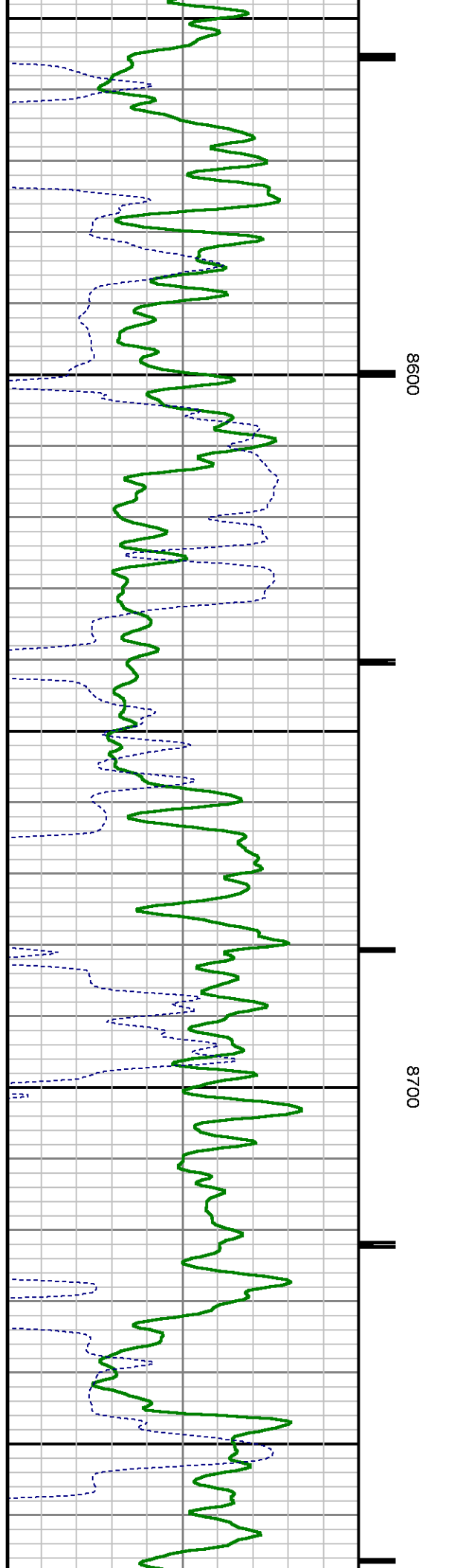
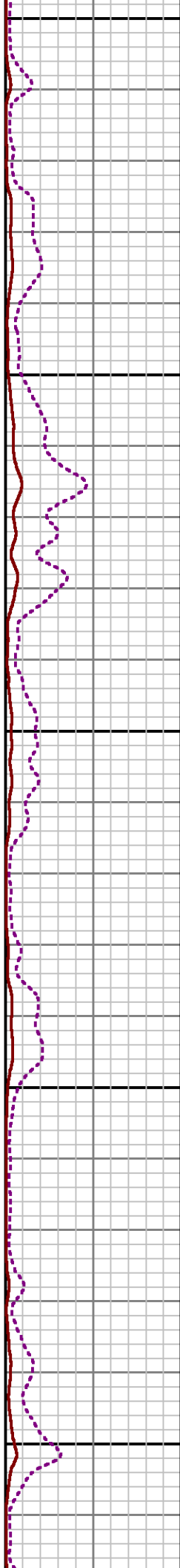
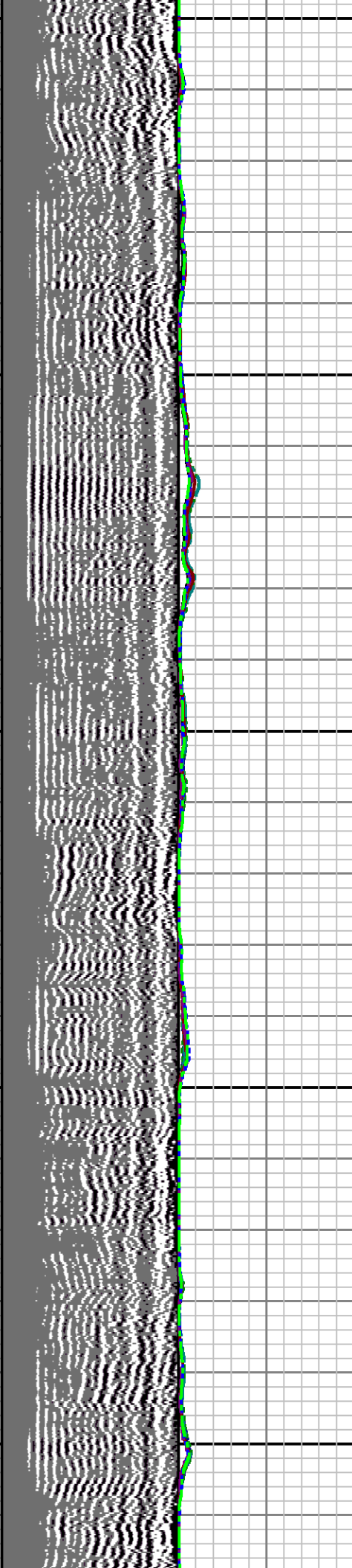


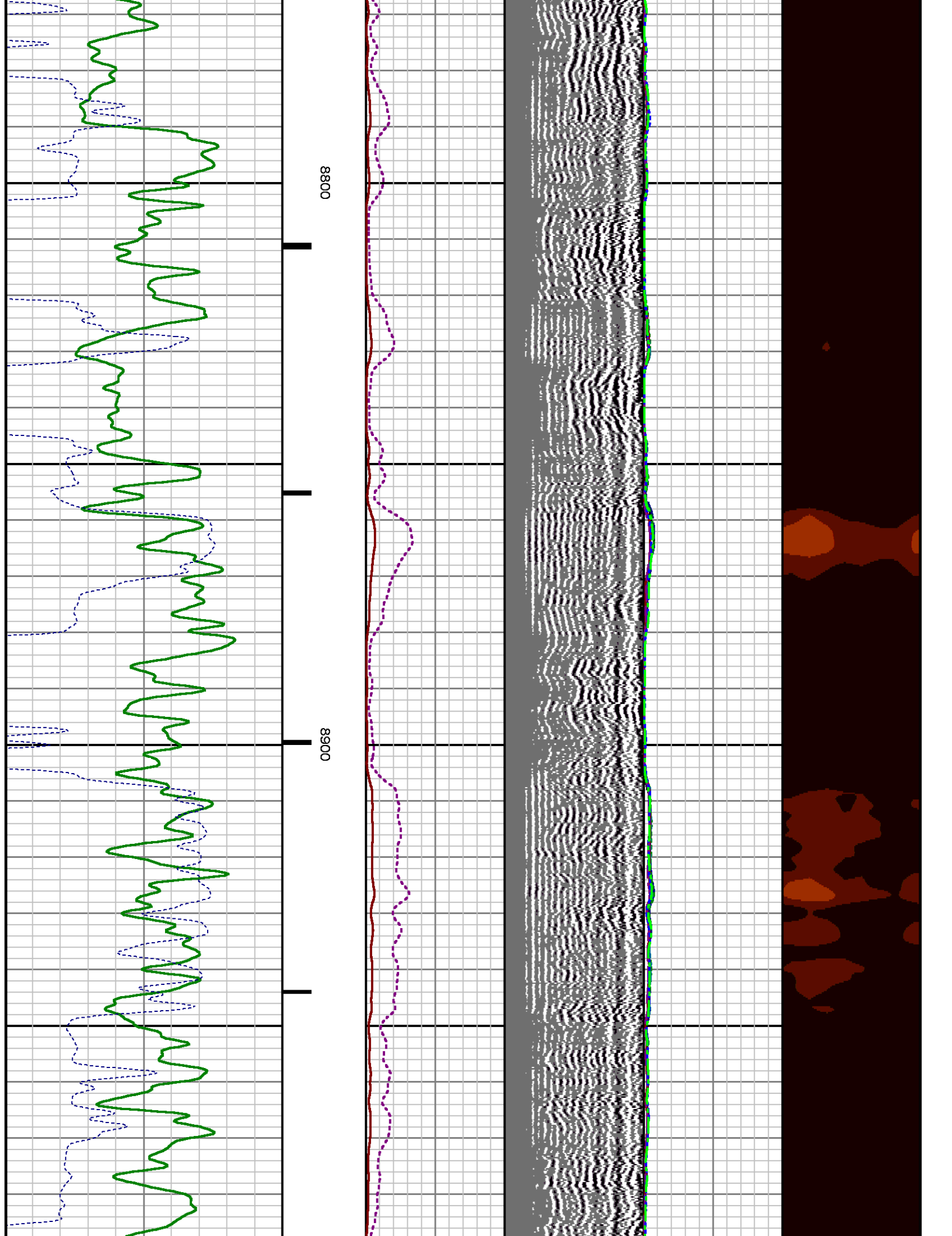


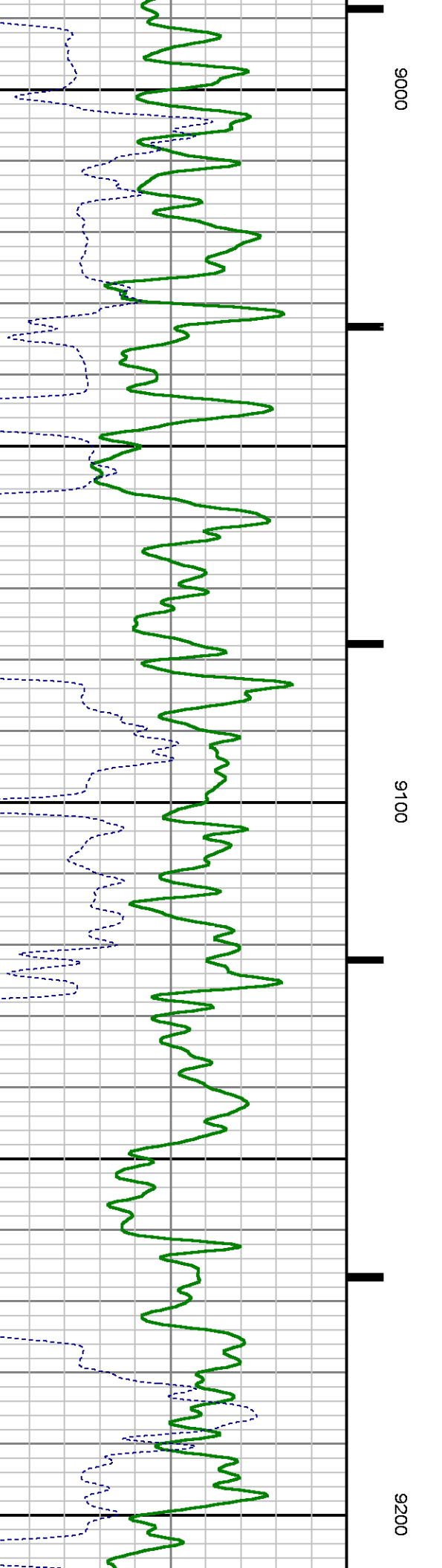
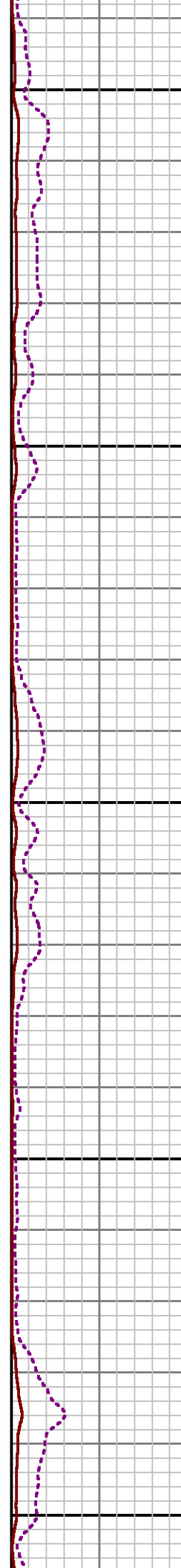
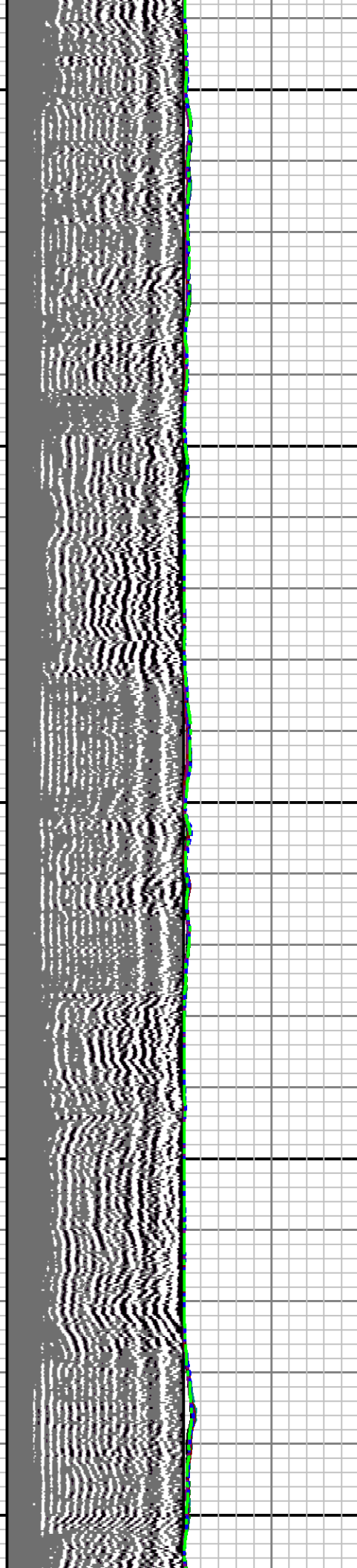
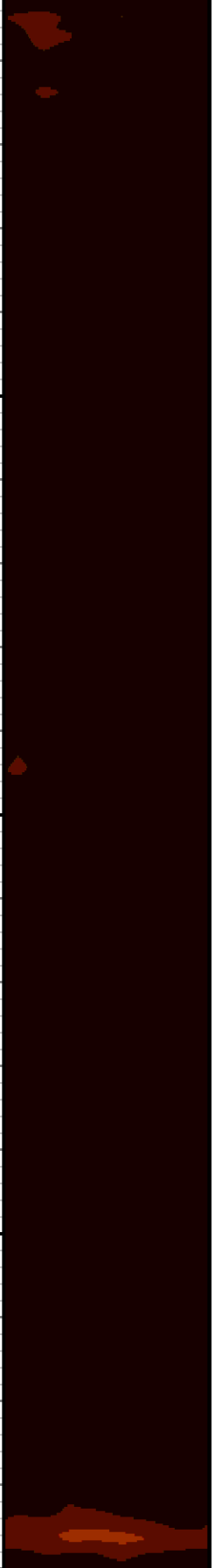








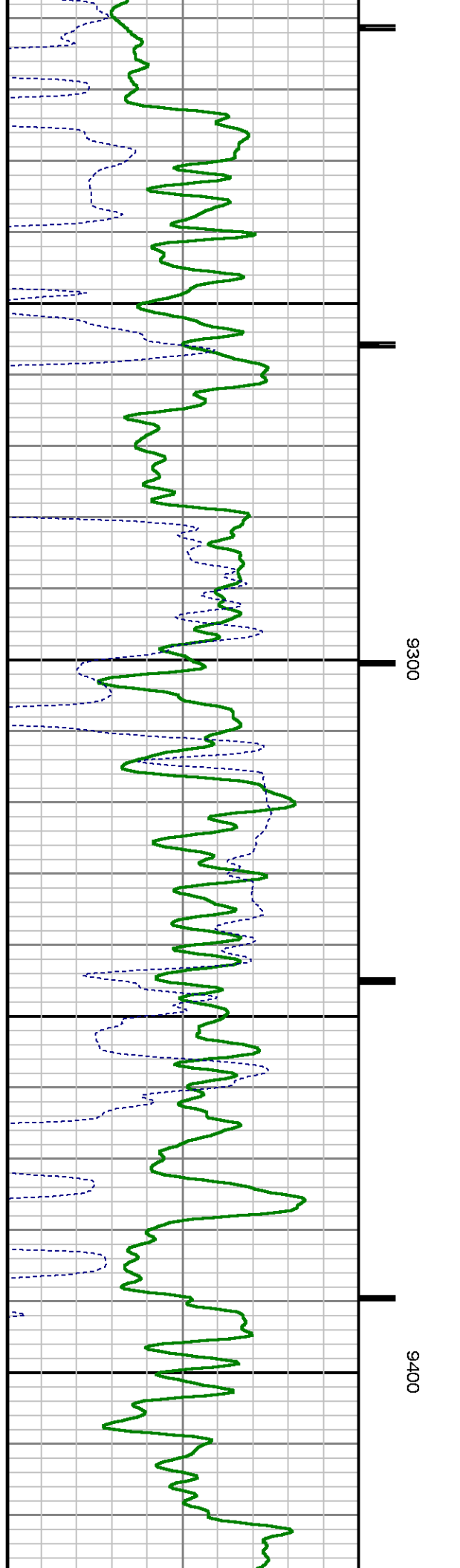
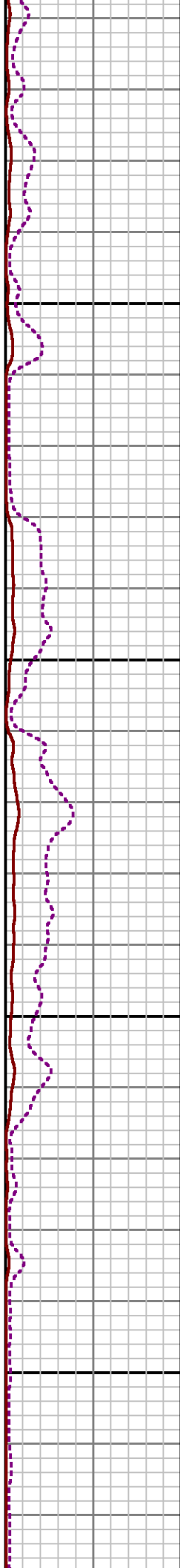
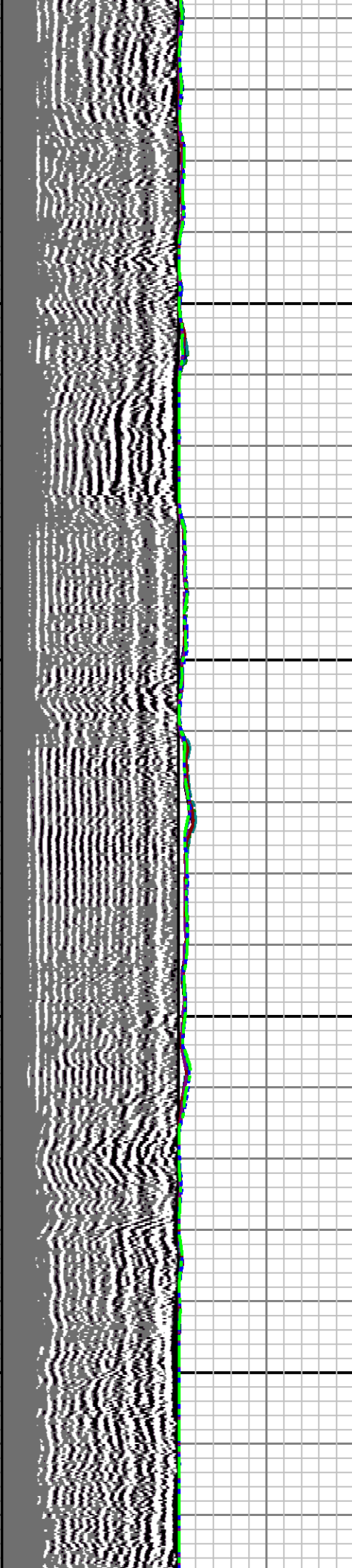
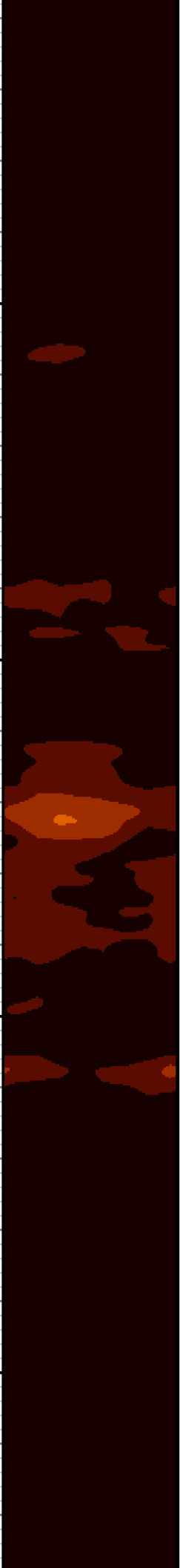


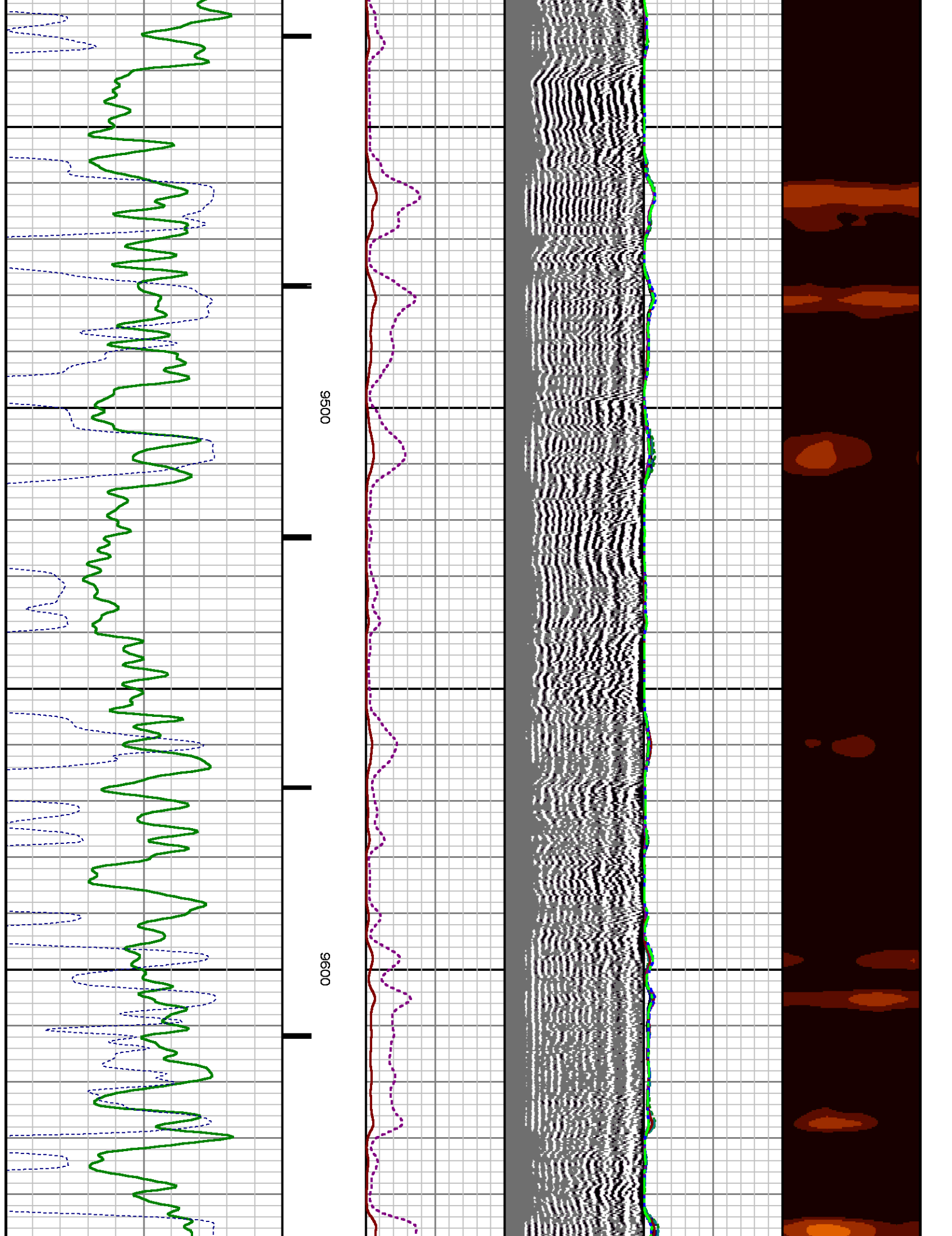


9000

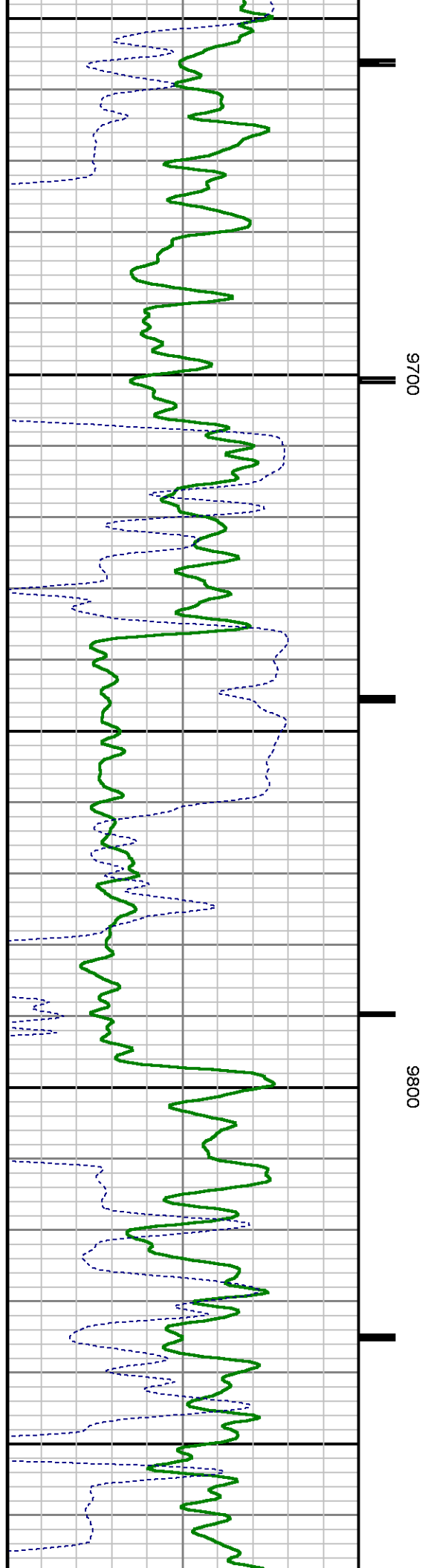
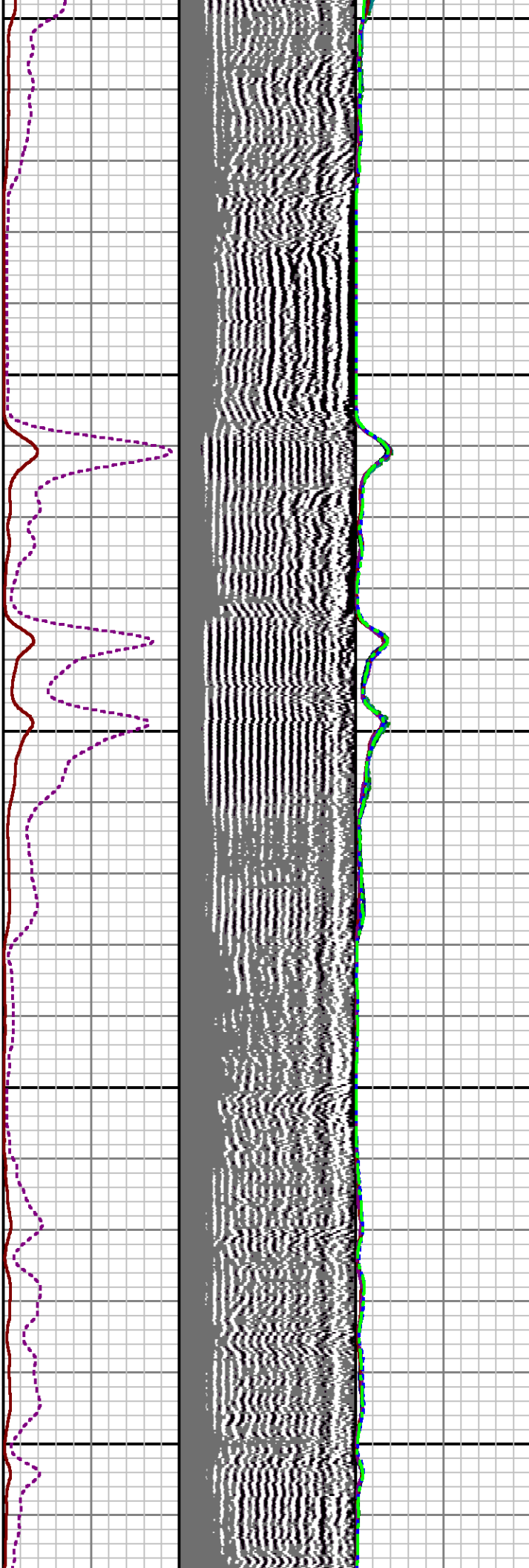
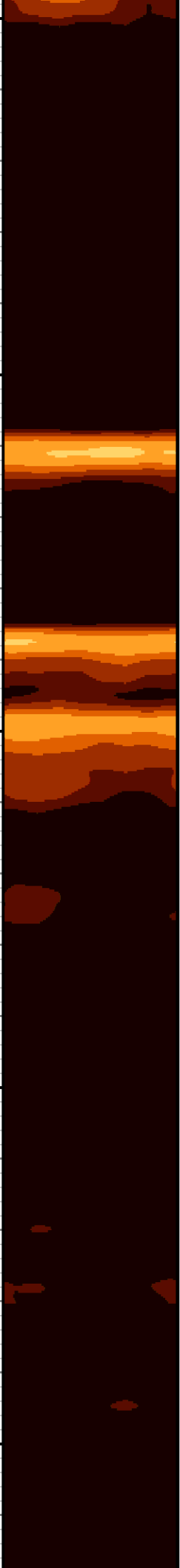
9100

9200

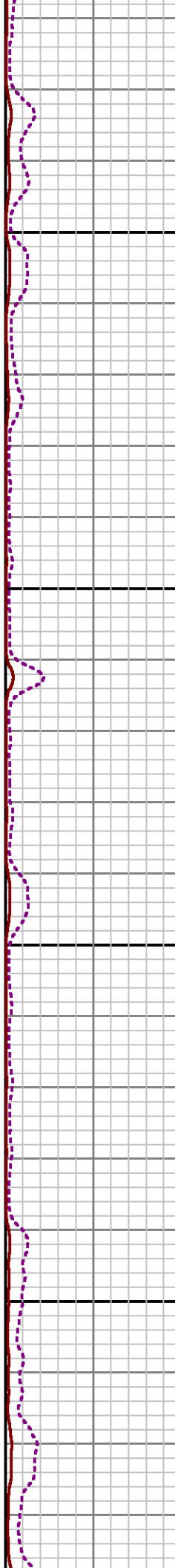
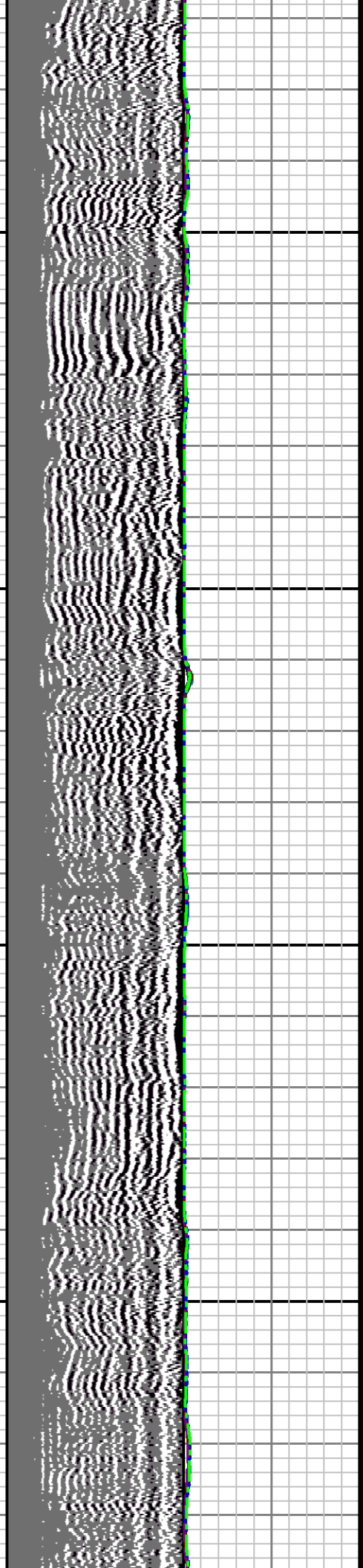






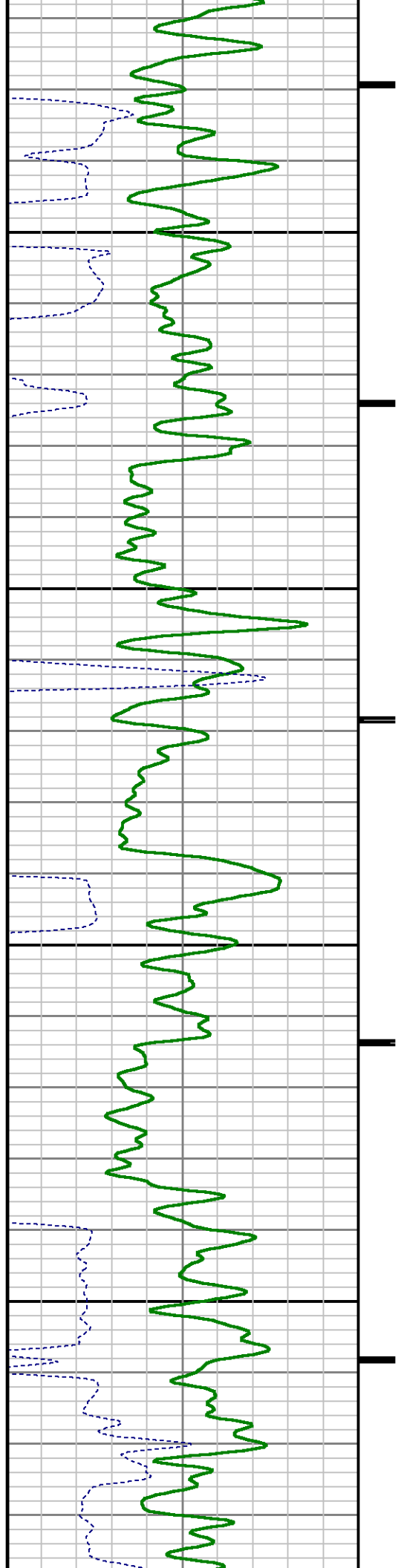


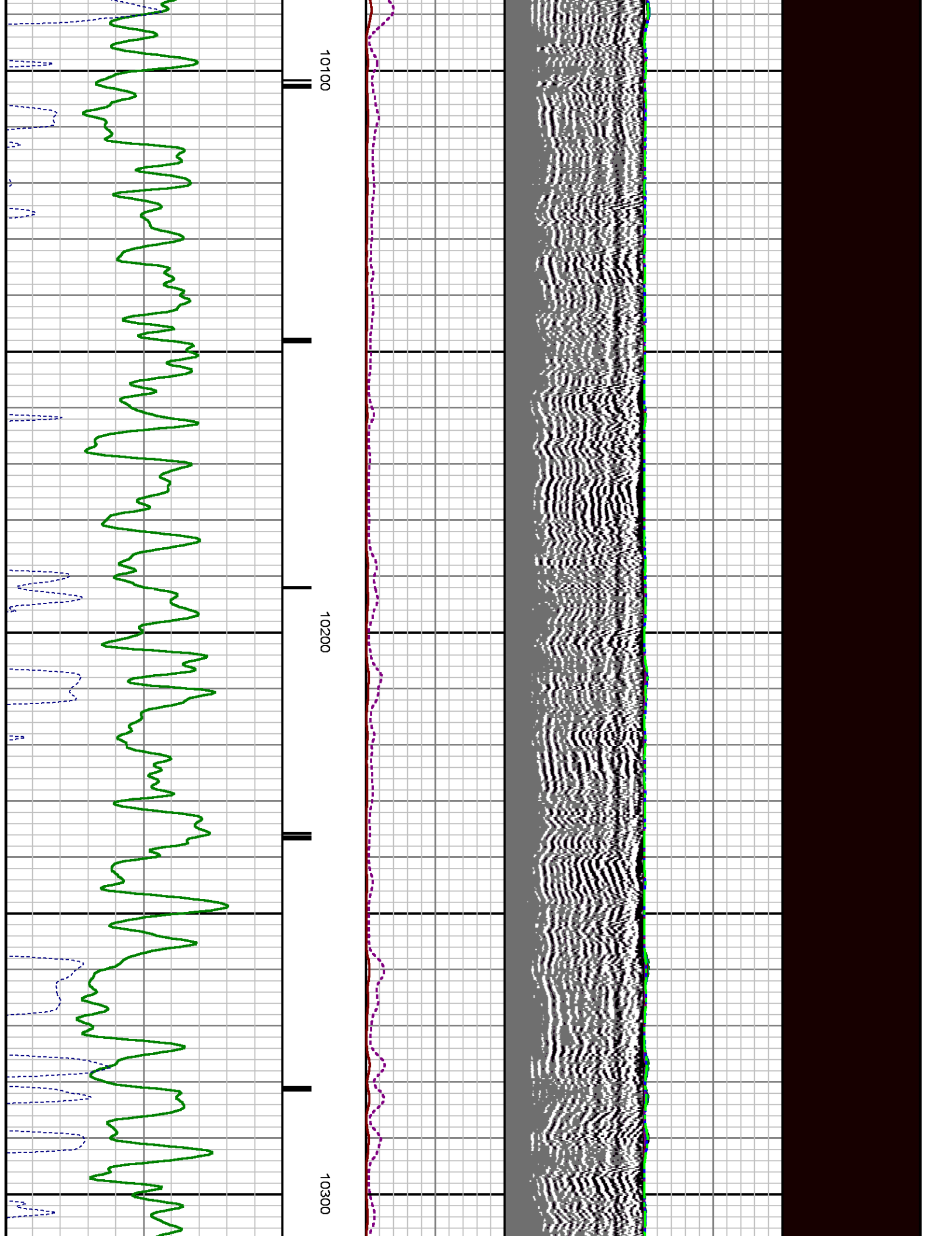
1

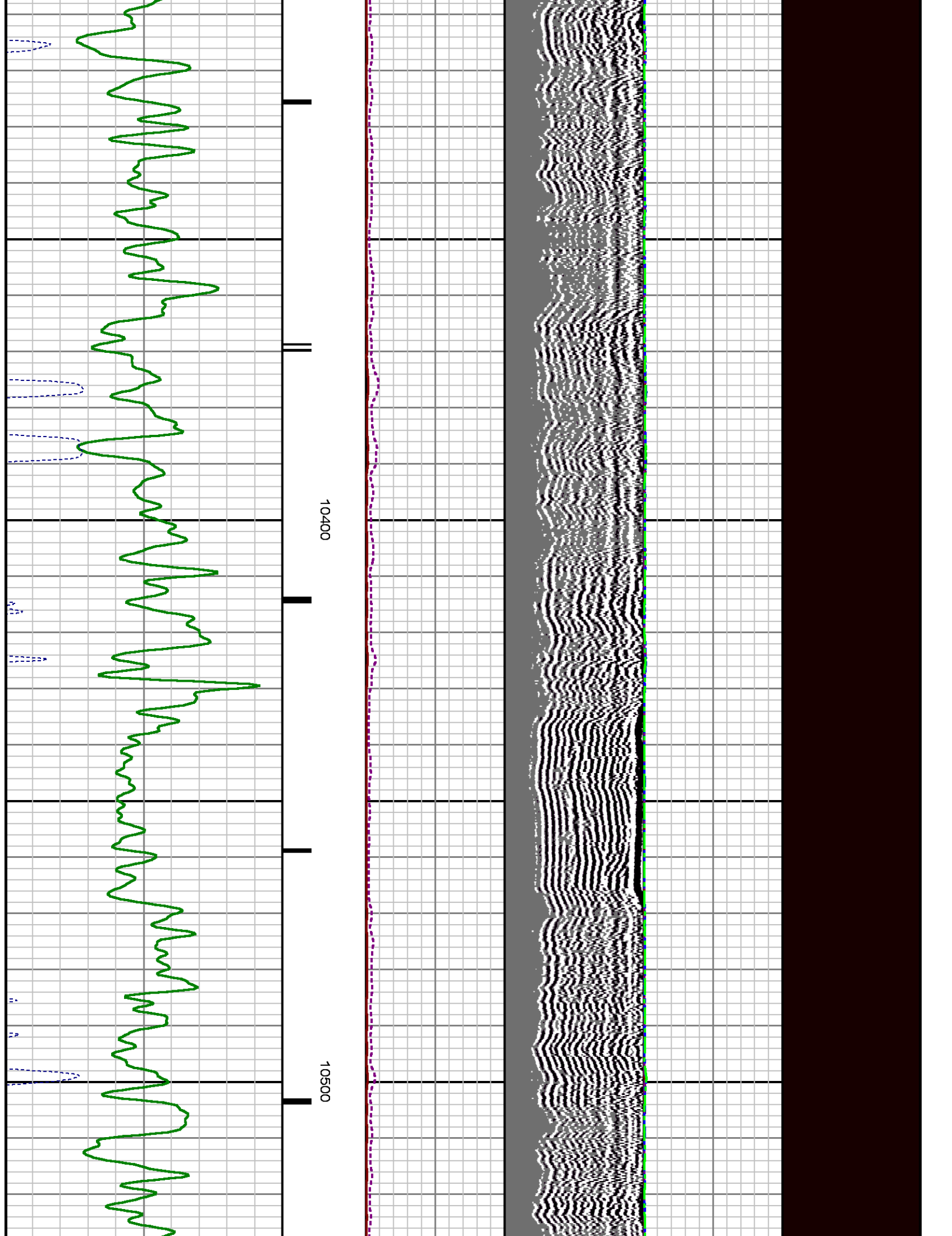


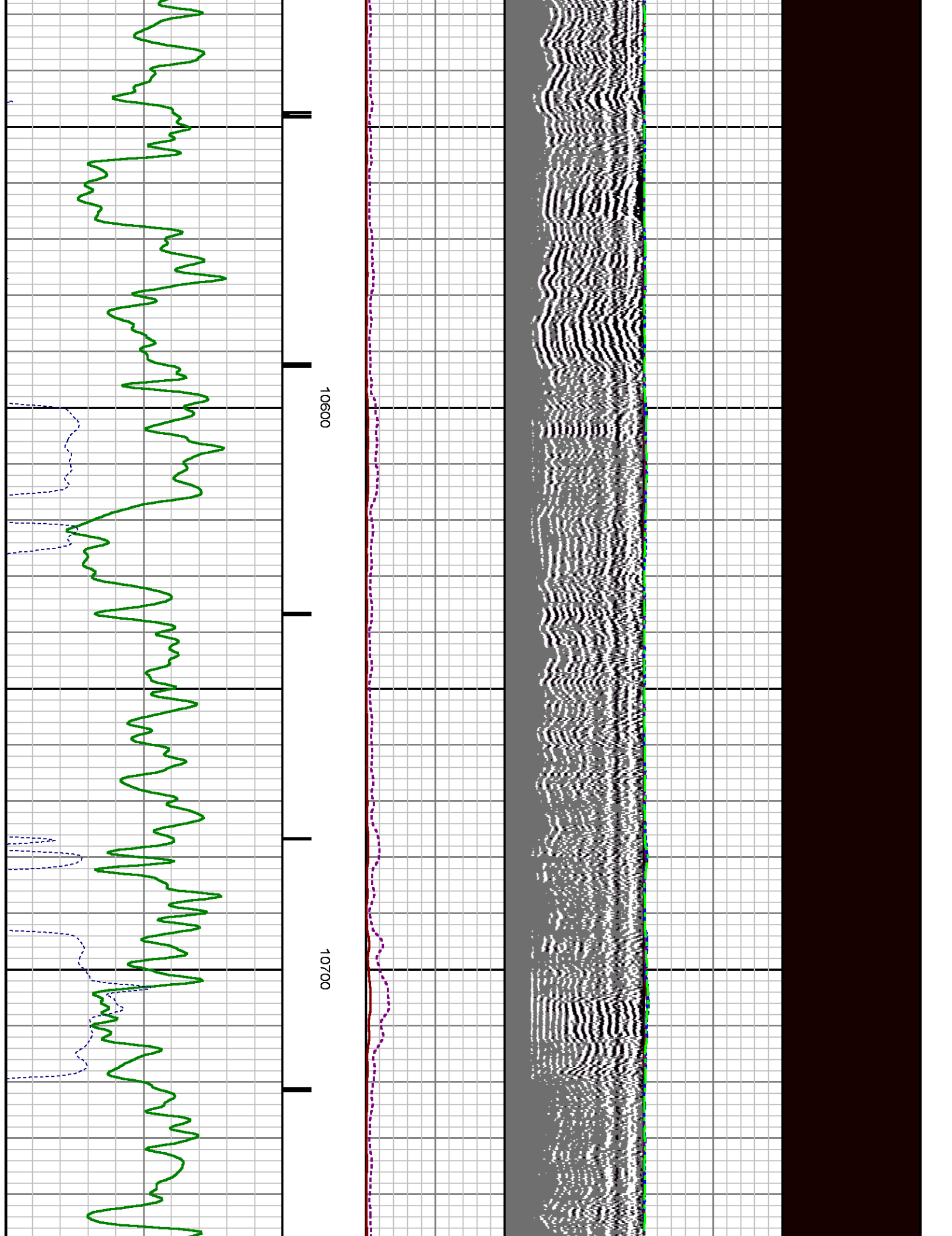
9900

10000

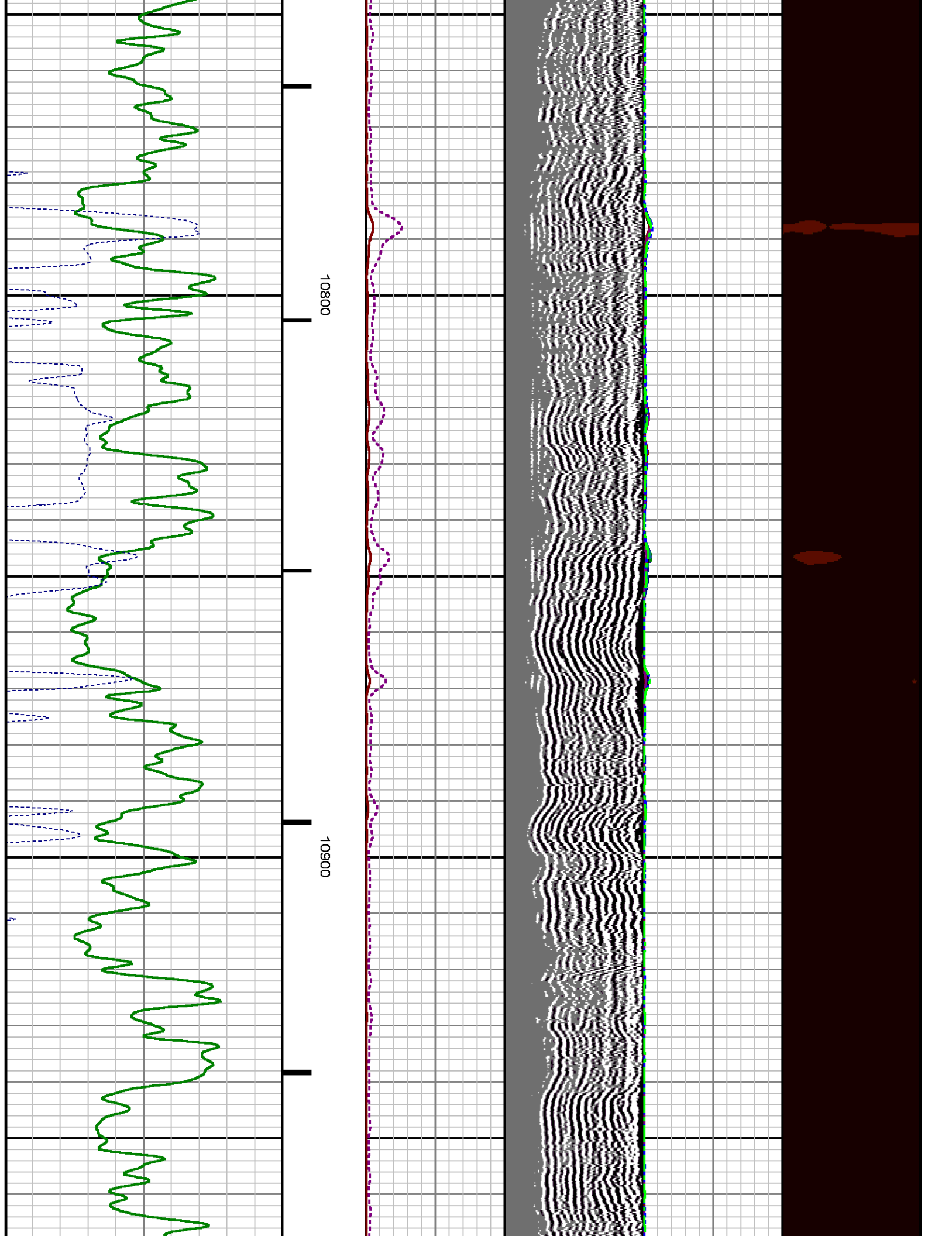


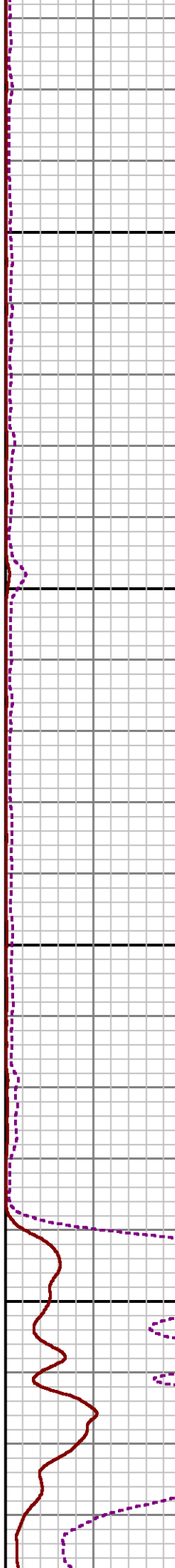
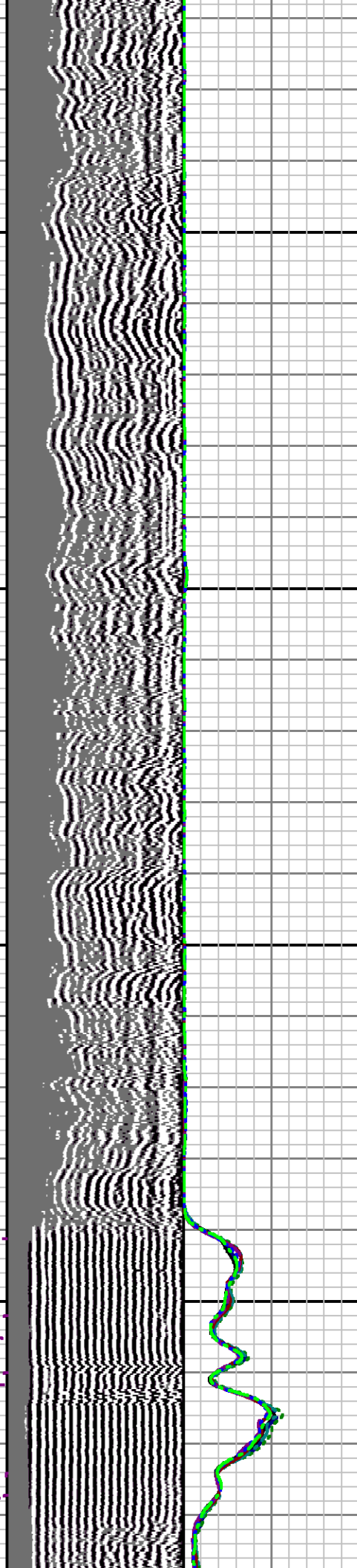
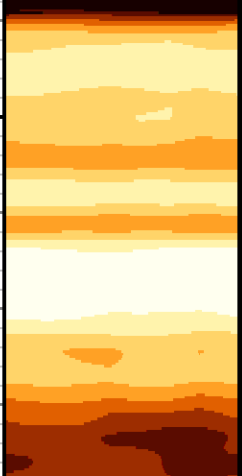






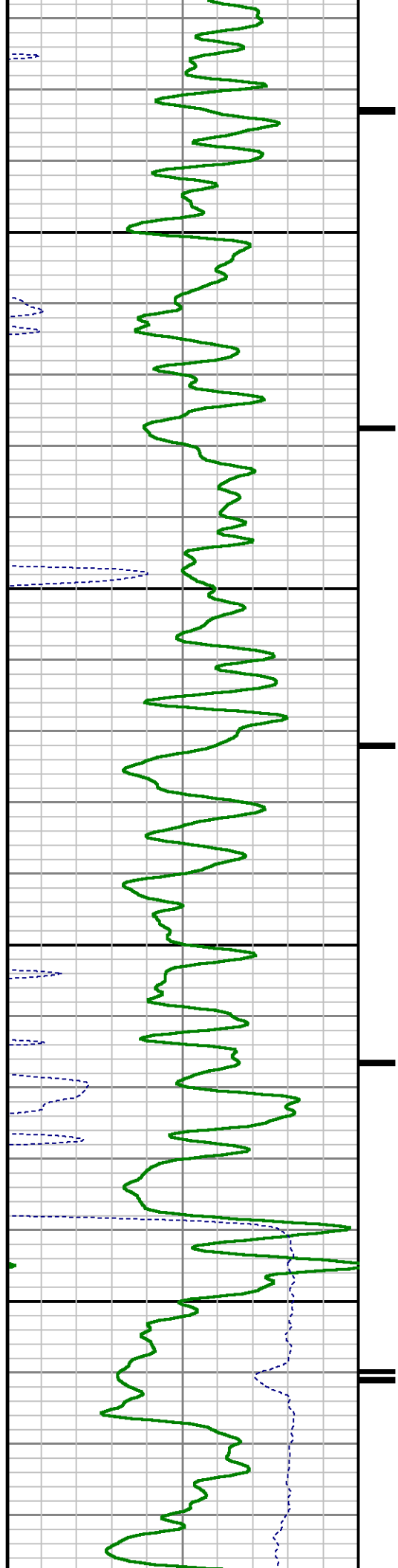


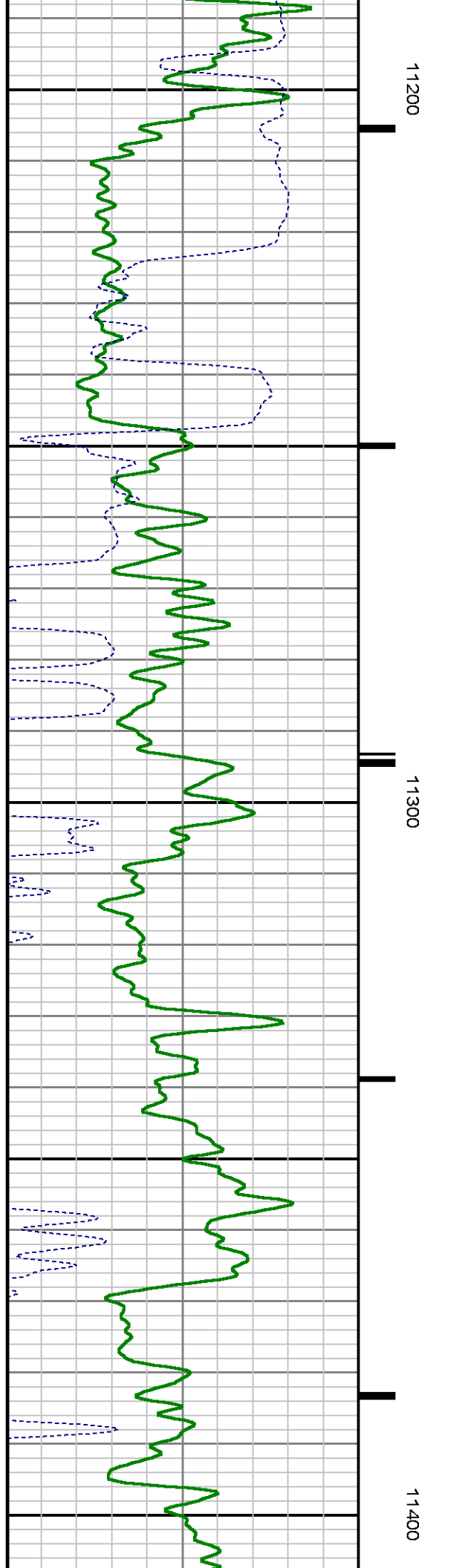
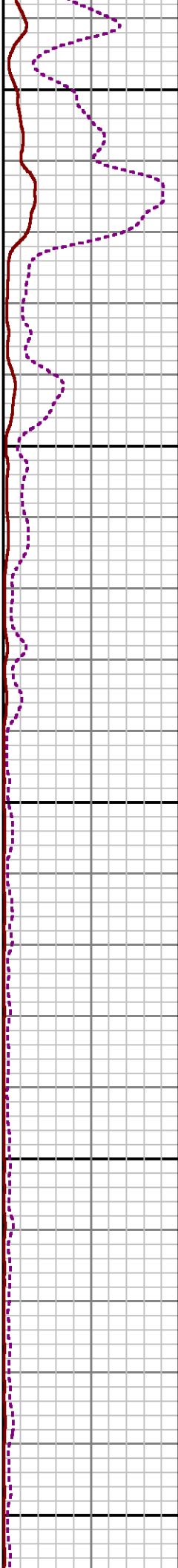
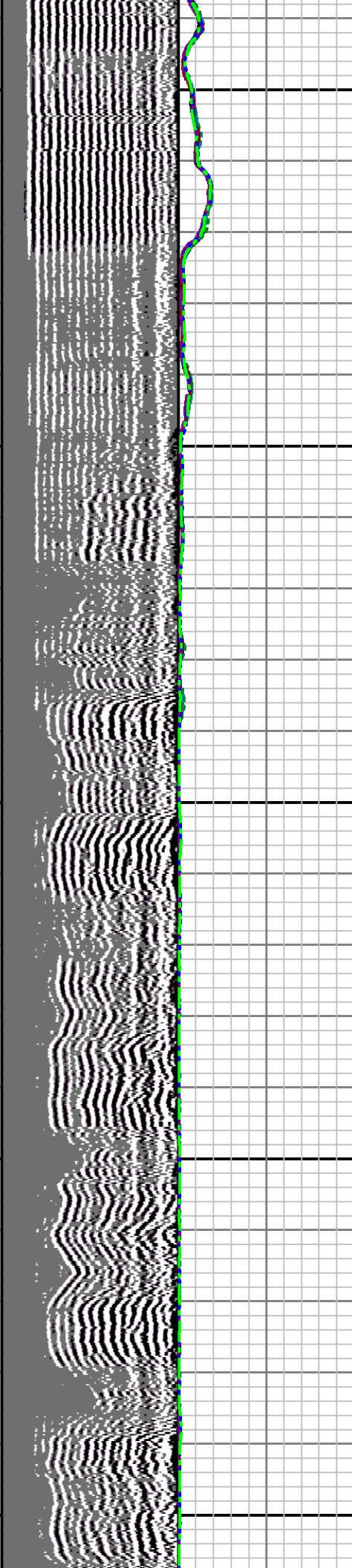
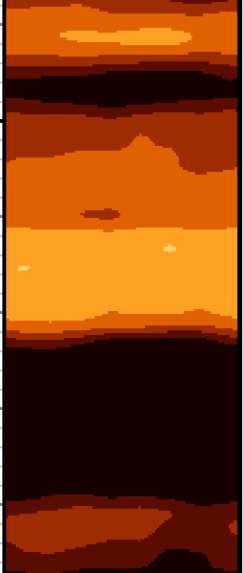


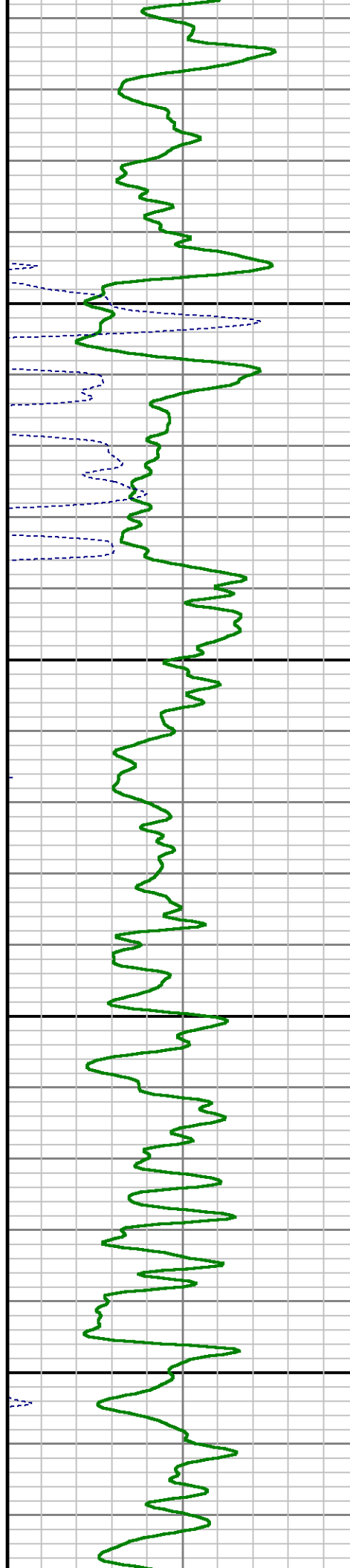
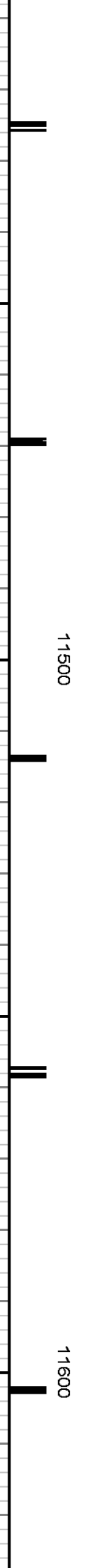
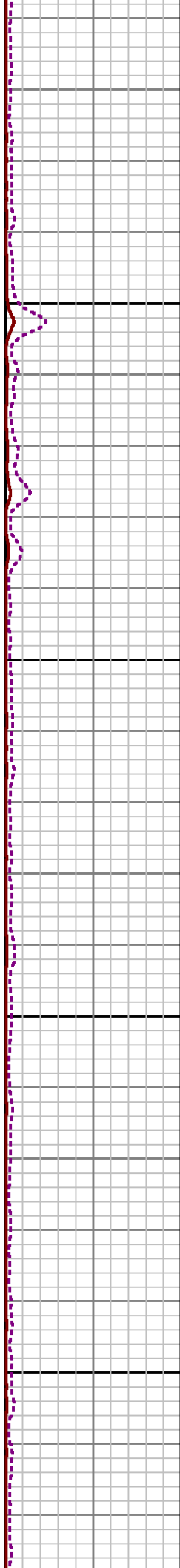
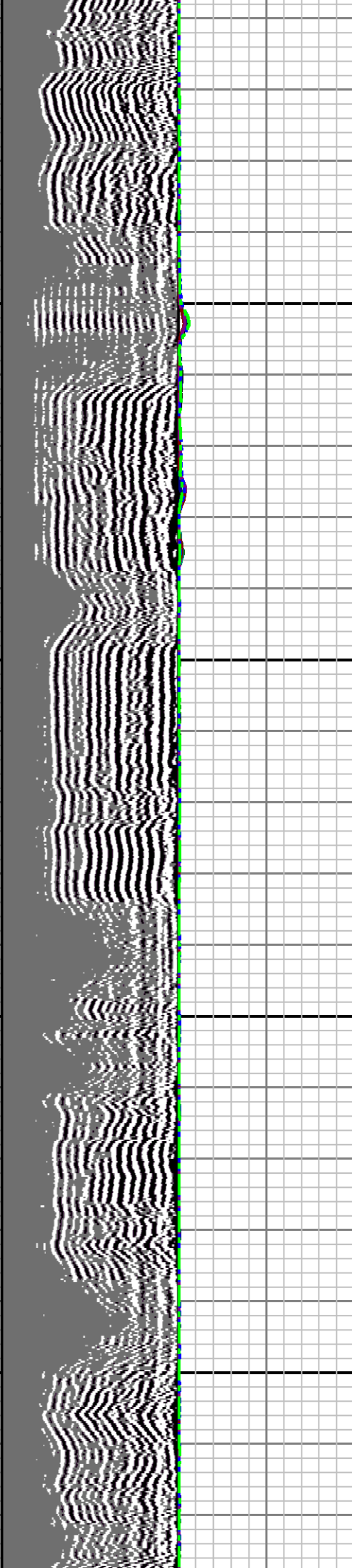
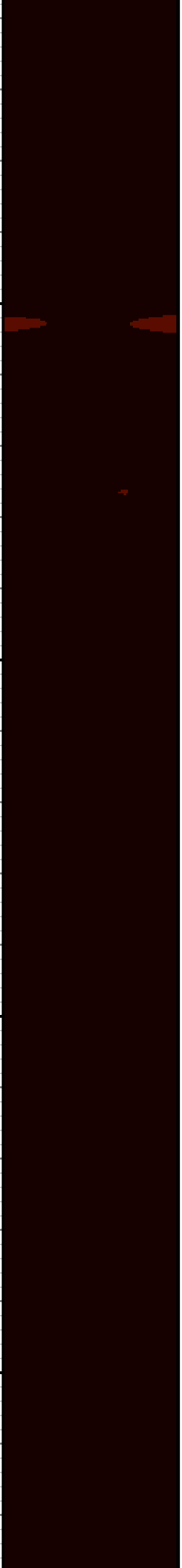


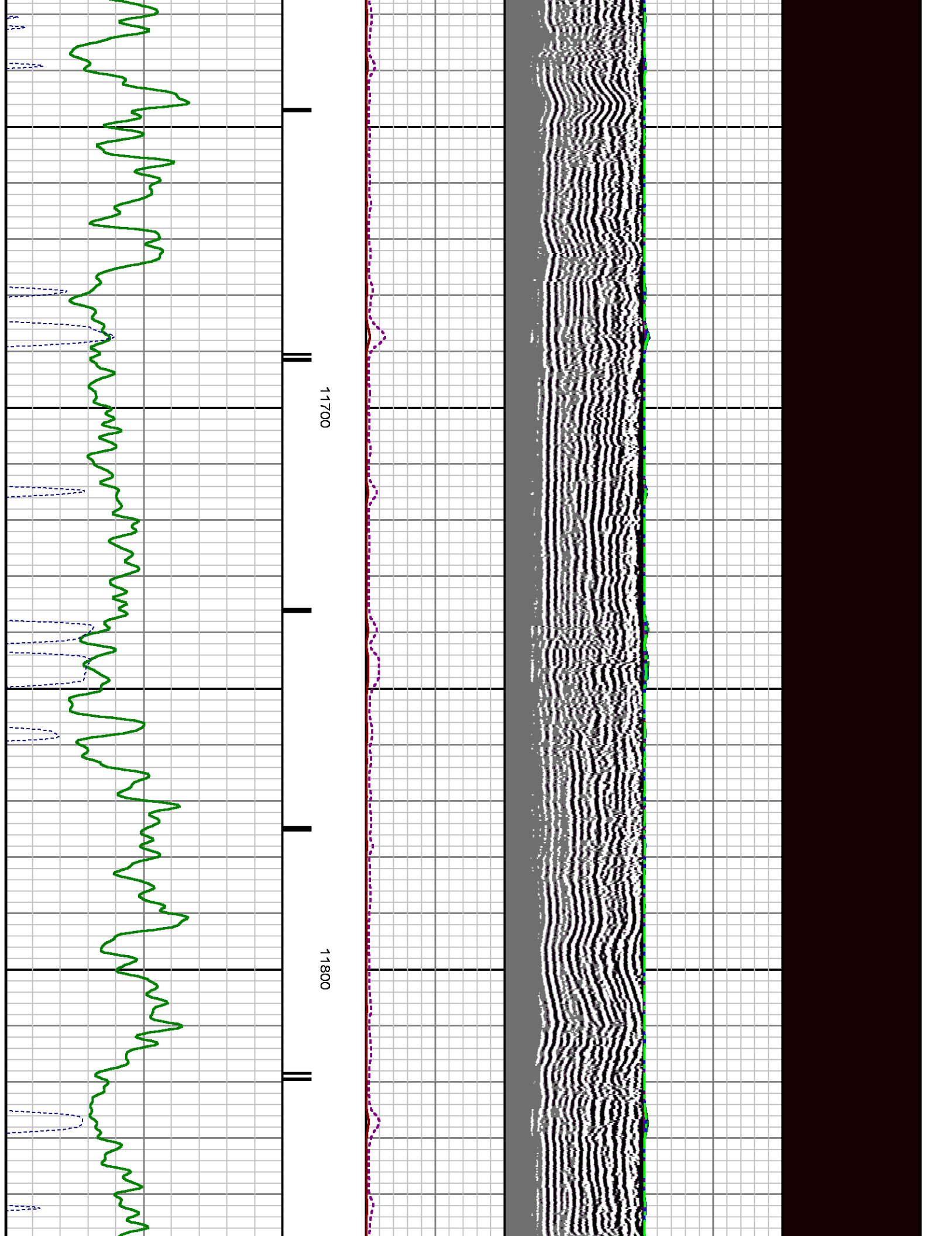
11000

11100

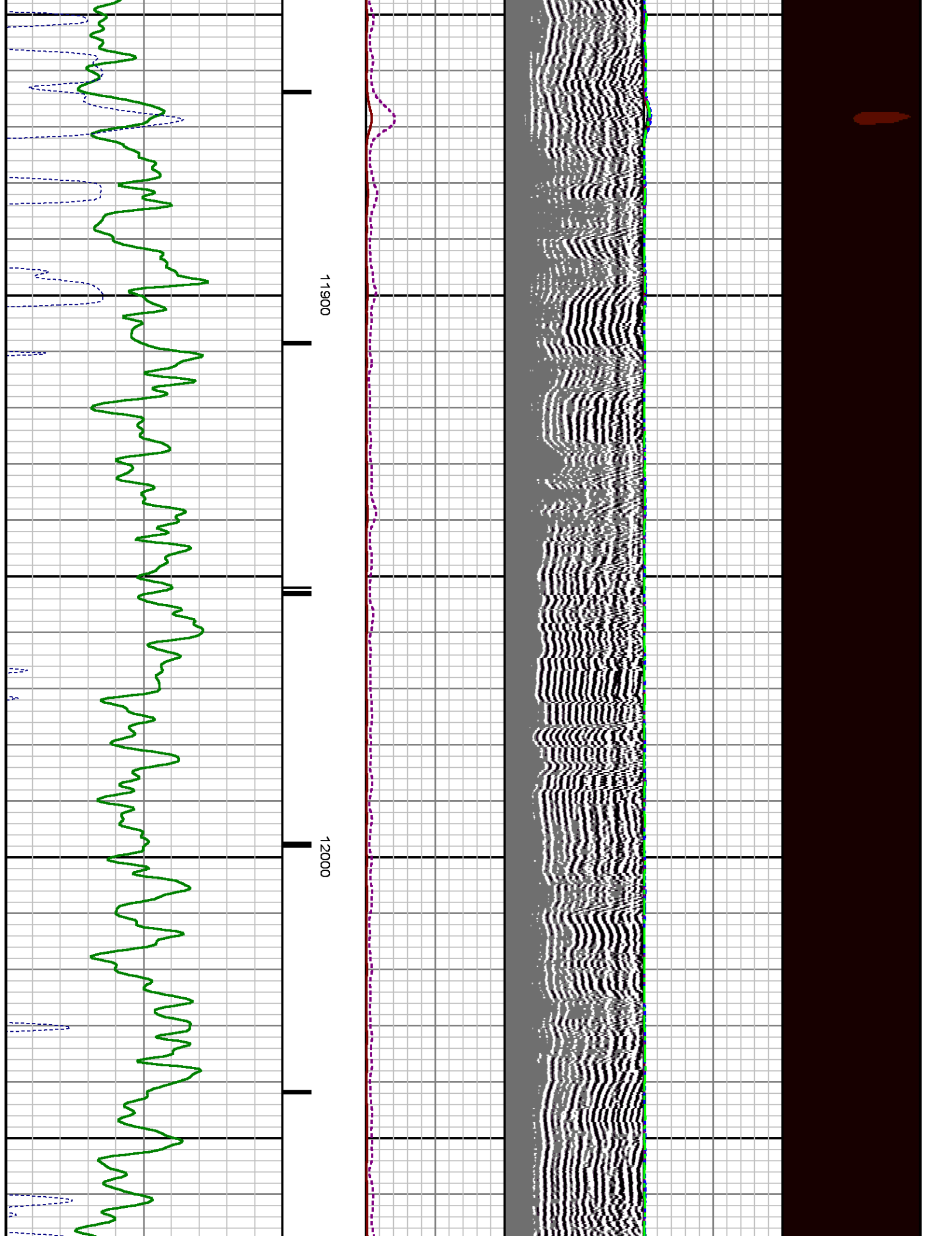


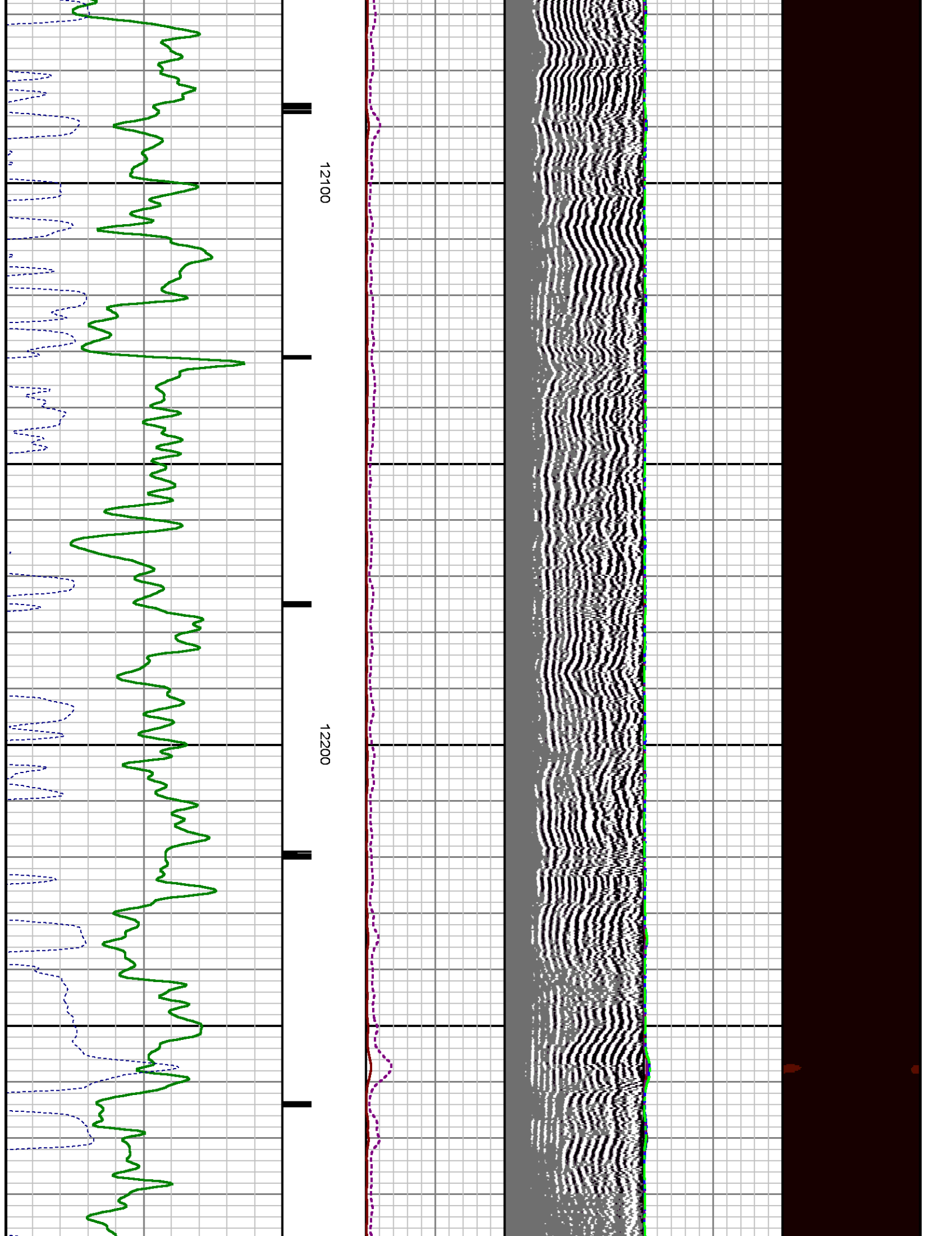


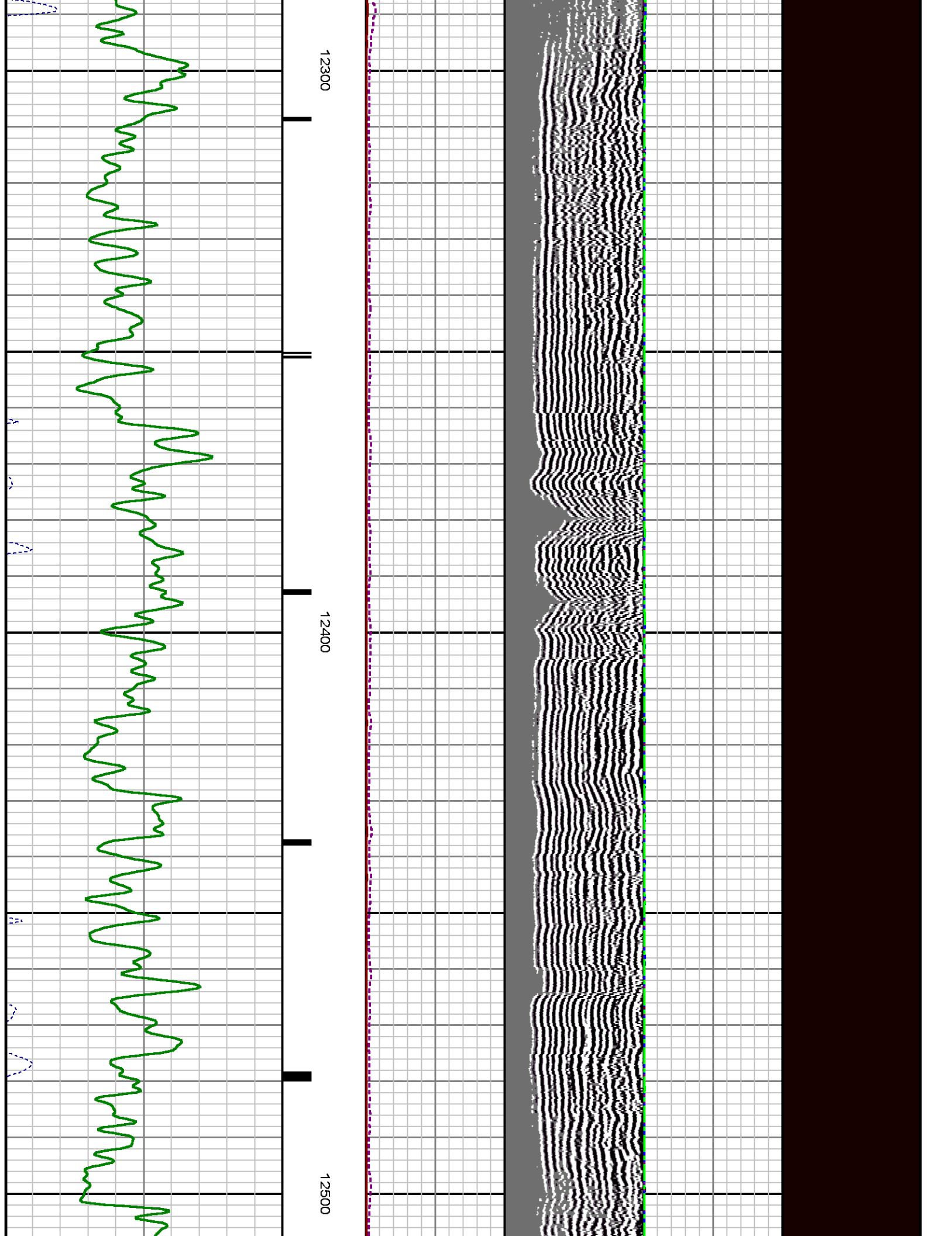


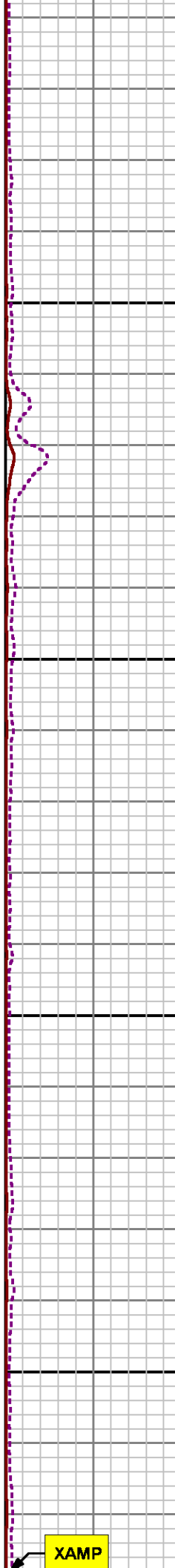
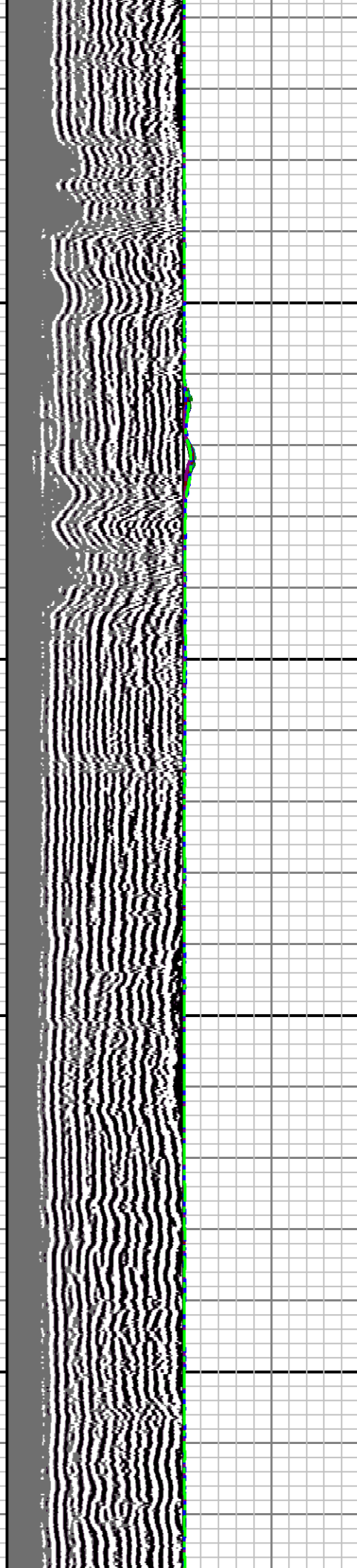








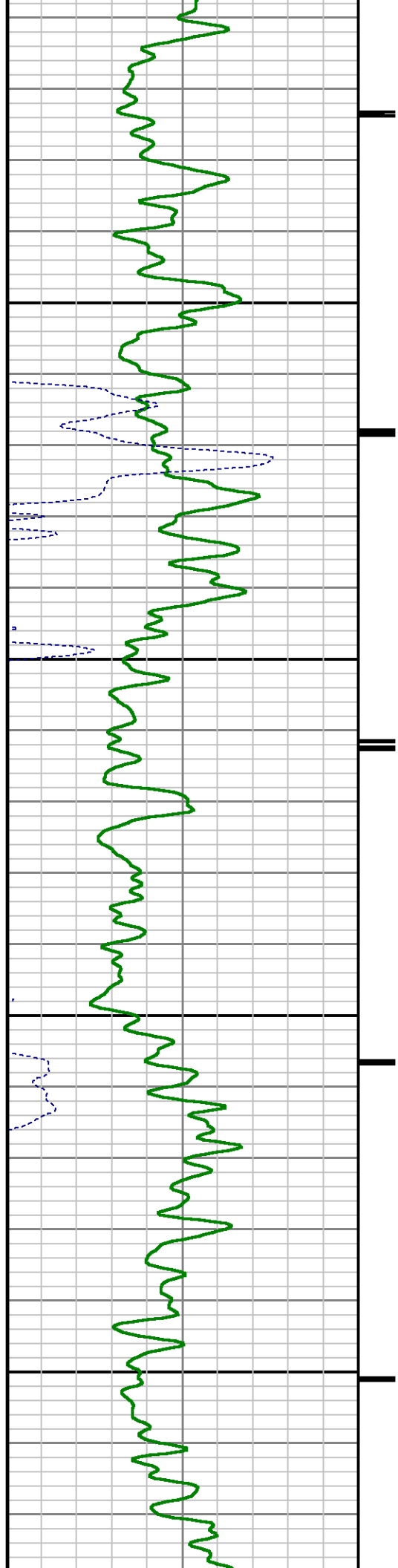


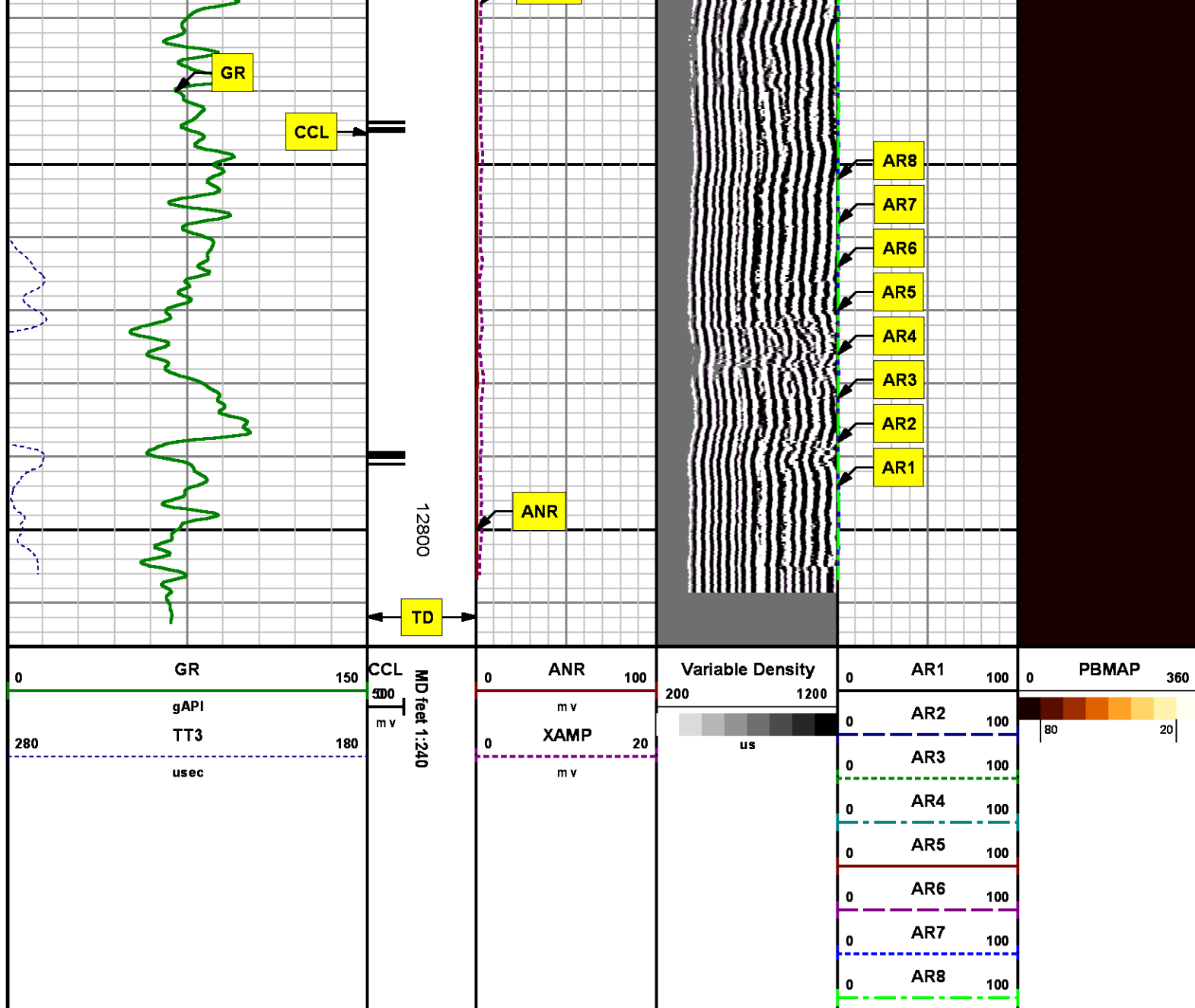


12600

12700

XAMP





REPEAT SECTION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	12465.270	12815.520



RAL	Amp Gate Start Near	195.000	usec	12465.270	12815.520
RAL	Amp Gate Start Radial	195.000	usec	12465.270	12815.520
RAL	Amp Gate Width Far	25.000	usec	12465.270	12815.520
RAL	Amp Gate Width Near	25.000	usec	12465.270	12815.520
RAL	Amp Gate Width Radial	25.000	usec	12465.270	12815.520
RAL	casing od	4.500	inches	12465.270	12815.520
RAL	casing wt	11.600	lbm/ft	12465.270	12815.520
RAL	FB Start Far	291.900	usec	12465.270	12815.520
RAL	FB Start Near	180.000	usec	12465.270	12815.520
RAL	FB Start Radial	180.000	usec	12465.270	12815.520
RAL	FB Thresh Far	10.000	mv	12465.270	12815.520
RAL	FB Thresh Near	4.000	mv	12465.270	12815.520
RAL	FB Thresh Radial	4.000	mv	12465.270	12815.520
RAL	Fluid Travel Time	200.000	usec/ft	12465.270	12815.520

### DEPTH OFFSETS (for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

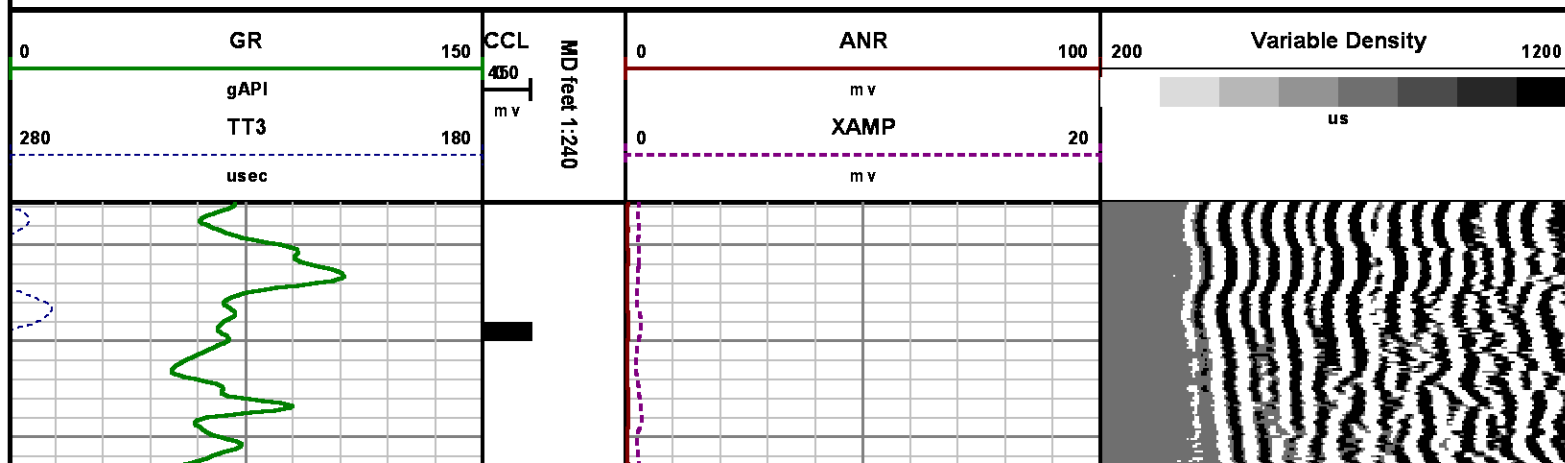
Well : FEDERAL RGU 442-24-198

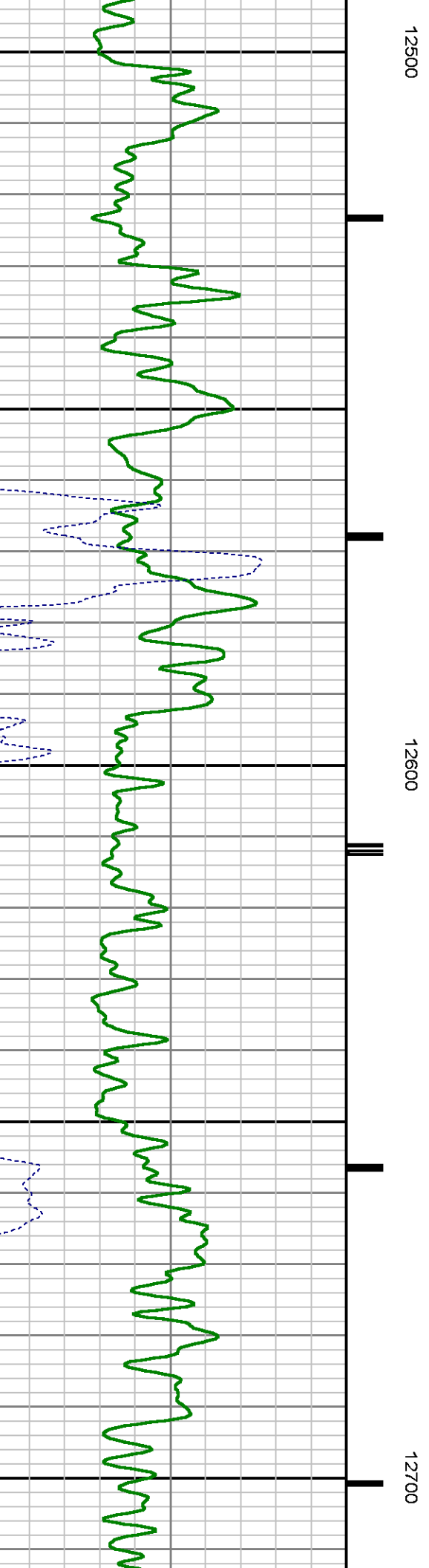
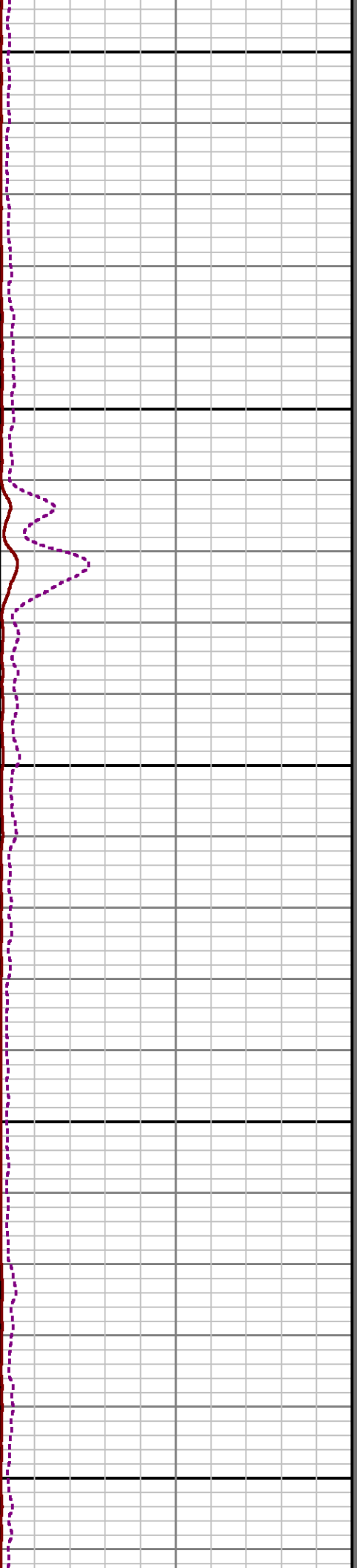
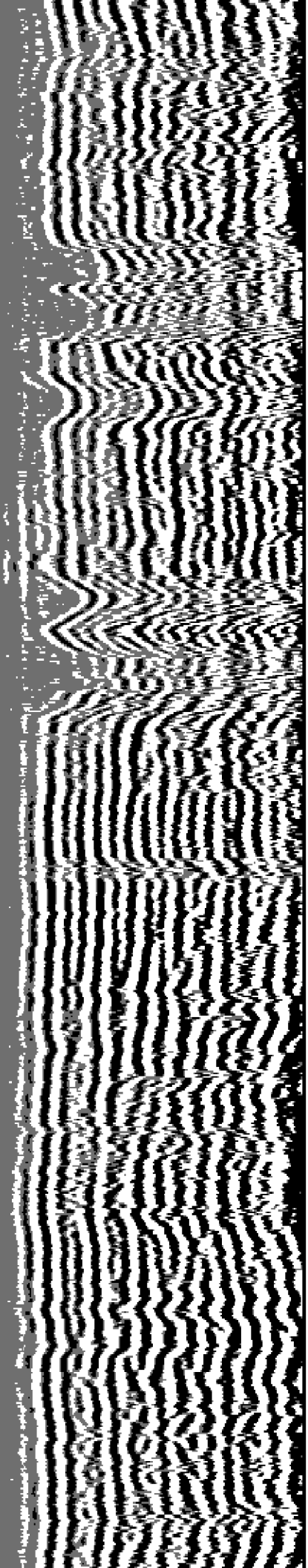
File Name : d:\wellldata\wpx\rgu 442-24-198\442ralrepeat.xtf

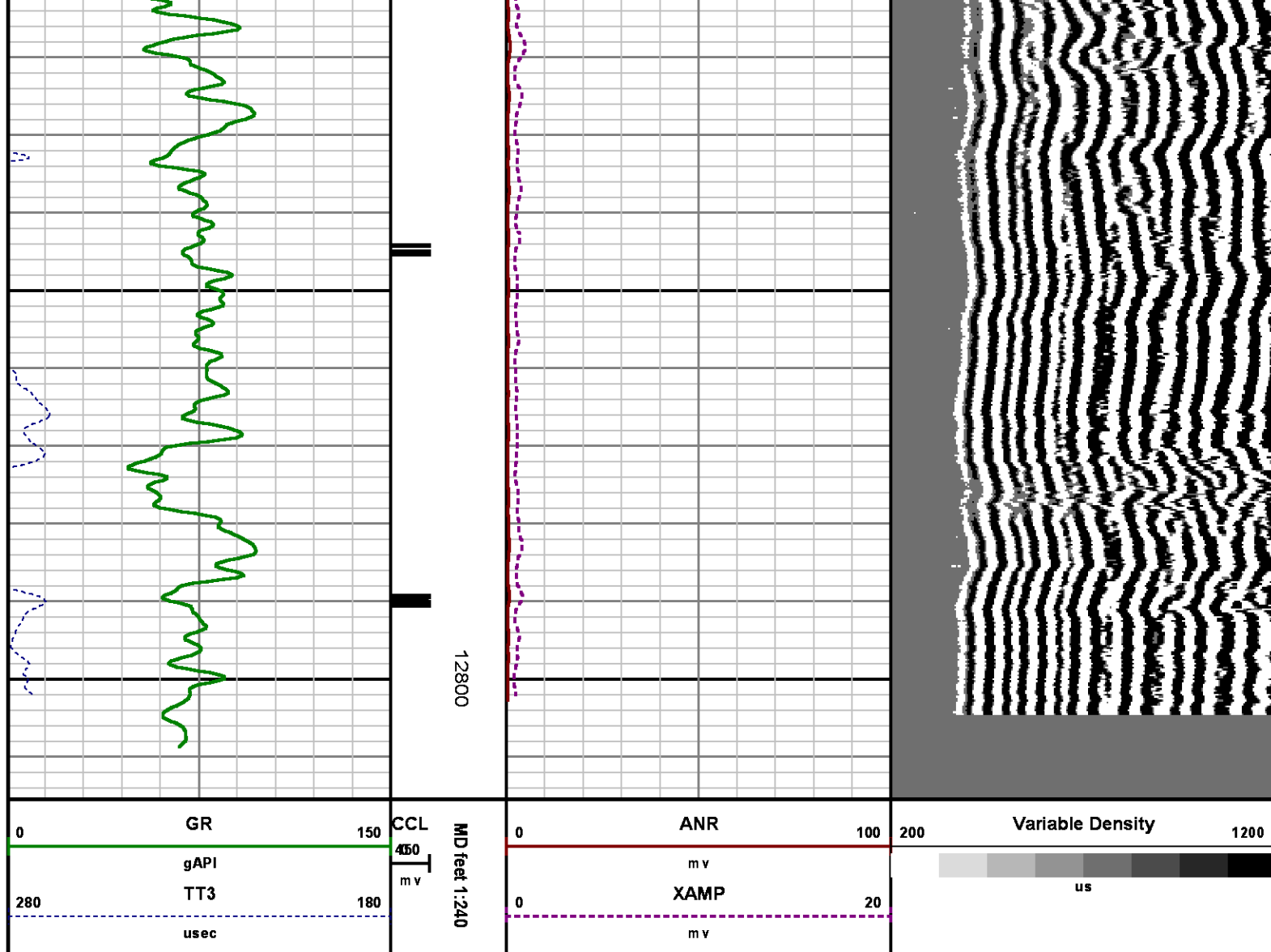
Mode : PlotMgr 5.4.504

Interval : 12465.52 - 12815.52 feet UP

Created : 7/6/2014 1:51:20 PM







## CALIBRATION SUMMARY

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\496JY06\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Jul 06 08:20:57 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: JY06

Tool Delay [usec] -54.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	217	216	30	166	25	0.221	100.00	0.32

3 Ft. Receiver	217	216	30	166	25	2.540	100.00	0.31
5 Ft. Receiver	325	325	30	230	25	0.076	150.00	0.35
Radial #1	218	216	30	166	25	1.999	100.00	0.32
Radial #2	217	216	30	166	25	1.732	100.00	0.31
Radial #3	216	216	30	166	25	2.413	100.00	0.31
Radial #4	216	216	30	166	25	2.758	100.00	0.31
Radial #5	217	216	30	166	25	2.451	100.00	0.31
Radial #6	218	216	30	166	25	2.625	100.00	0.32
Radial #7	218	216	30	166	25	2.049	100.00	0.32
Radial #8	220	216	30	166	25	1.815	100.00	0.32

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496JY06\_fid.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Jul 06 08:24:20 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: JY06

Tool Delay [usec] -54.00 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	0.127	0.000	1.00	100.000
3 Ft. Receiver	195	25	3.522			
5 Ft. Receiver	305	25	5.192			
Radial #1	195	25	3.305			
Radial #2	195	25	3.335			
Radial #3	195	25	3.784			
Radial #4	195	25	3.912			
Radial #5	195	25	4.089			
Radial #6	195	25	4.089			
Radial #7	195	25	2.824			
Radial #8	195	25	2.921			

## GAMMA RAY

Calibration File: C:\case\calver\GR\456J1.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Jun 10 11:37:19 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: J1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	93.20	369.51	0.670	62.40	247.40	185.00

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Tue Jun 10 11:38:30 2014

TOOL SERIES: 2459XA ASSET: 456 SEQ: J1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	101.16	371.24	0.670	67.73	248.56	180.83

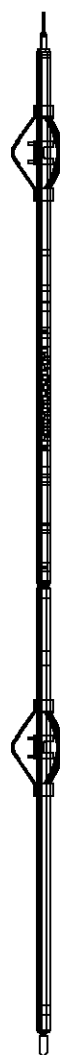
## TOOL DIAGRAM

**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"**



<div></div> <div>Baker Atlas</div> <div></div>	Company		WPX ENERGY		File No:	
	Well		FEDERAL RGU 442-24-198		CH087284	
	Field		SULPHUR CREEK		API No:	
	County		RIO BLANCO	State	COLORADO	05103120840000
<div><div>Location</div><div>SHL: 2166' FSL &amp; 1700' FEL</div><div>BHL: 2237' FNL &amp; 647' FEL (SENE)</div><div>SEC 24TWP 1SRGE 98W</div></div> <div><div>Elevations</div><div>KB 6617 ft</div><div>DF</div><div>GL 6596 ft</div></div> <div><div>24 1S 98W</div><div>RGU 33-24-198 PAD</div><div>CYCLONE 29</div></div>						