



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH087286

Company Well WPX ENERGY FEDERAL RGU 323-24-198

API No: Field SULPHUR CREEK

County State RIO BLANCO COL ORADO

05103120820000

Location

SHL: 2150' FSL & 1708' FEL

BHL: 2116' FSL & 1903' FWL (NESW)

SEC 24 TWP 1S RGE 98W

CYCLONE 29

Other Services

NONE

Permanent Datum GL Elevation 6596 ft

Log Measured From KB 21 ft Above P. D.

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

Date	06/JUL/14	
Run	ONE	
Service Order	US087286J	
Depth Driller	12871 ft	
Depth Logger	12799 ft	
Bottom Logged Interval	12789 ft	
Top Logged Interval	21 ft	
Time Started	0730	
Time Finished	1300	
Operator Rig Time	5.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	93 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	283 degF	
Reference Log	BAKER HUGHES OPEN HOLE	
Reference Log Date	06/JUN/14	
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	3934 ft
8.75/7.875	3934 ft	12871 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			21 ft	80 ft
9.625 in			21 ft	3934 ft
4.5 in	11.6 lbm/ft	P-110	21 ft	12871 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 6/6/2014 at the clients request.
The amount of linear shift is 12 feet.
The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

Logged with zero PSI at wellhead.

SJ = 7770'-7792'

TEMP = 283°F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	2459XA	10317456	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	12.424	7531.000
RAL	Amp Gate Start Near	195.000	usec	12.424	7531.000
RAL	Amp Gate Start Radial	195.000	usec	12.424	7531.000
RAL	Amp Gate Width Far	25.000	usec	12.424	7531.000
RAL	Amp Gate Width Near	25.000	usec	12.424	7531.000
RAL	Amp Gate Width Radial	25.000	usec	12.424	7531.000
RAL	casing od	4.500	inches	12.424	7531.000
RAL	casing wt	11.600	lbm/ft	12.424	7531.000
RAL	FB Start Far	291.900	usec	12.424	7531.000
RAL	FB Start Near	180.000	usec	12.424	7531.000
RAL	FB Start Radial	180.000	usec	12.424	7531.000
RAL	FB Thresh Far	10.000	mv	12.424	7531.000
RAL	FB Thresh Near	4.000	mv	12.424	7531.000
RAL	FB Thresh Radial	4.000	mv	12.424	7531.000
RAL	Fluid Travel Time	200.000	usec/ft	12.424	7525.893

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

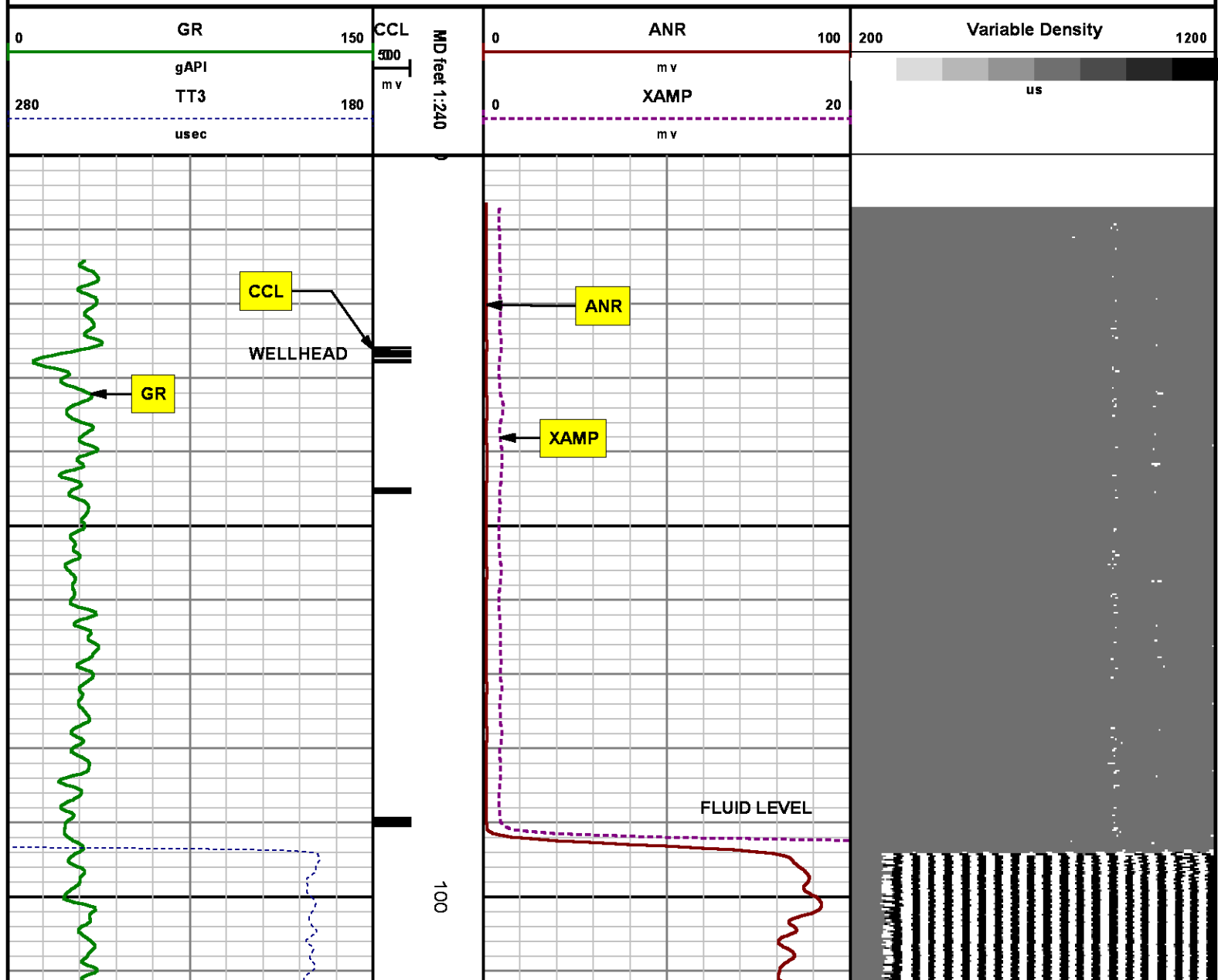
Well : FEDERAL RGU 323-24-198

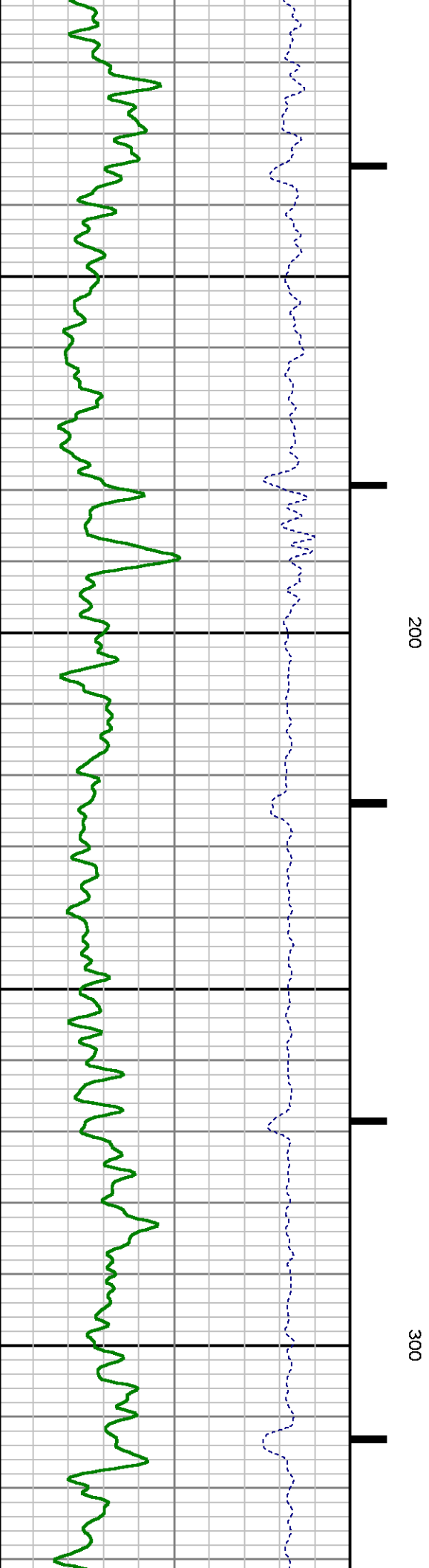
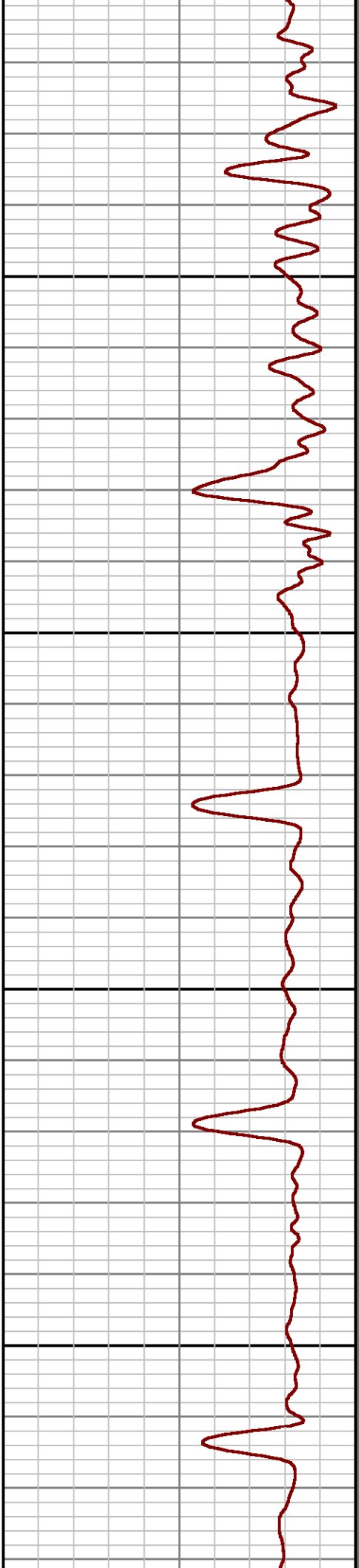
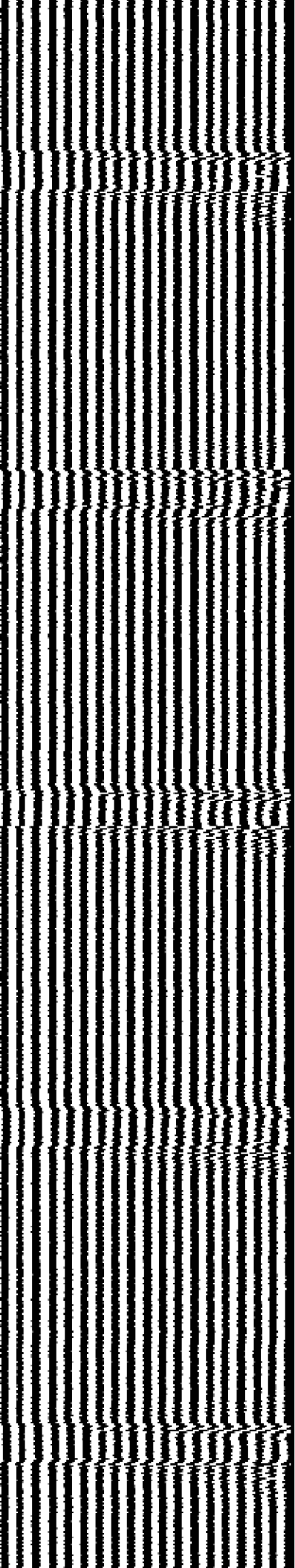
File Name : d:\well\data\wpx\rgu 323-24-198\323ral\mainsplice.xtf

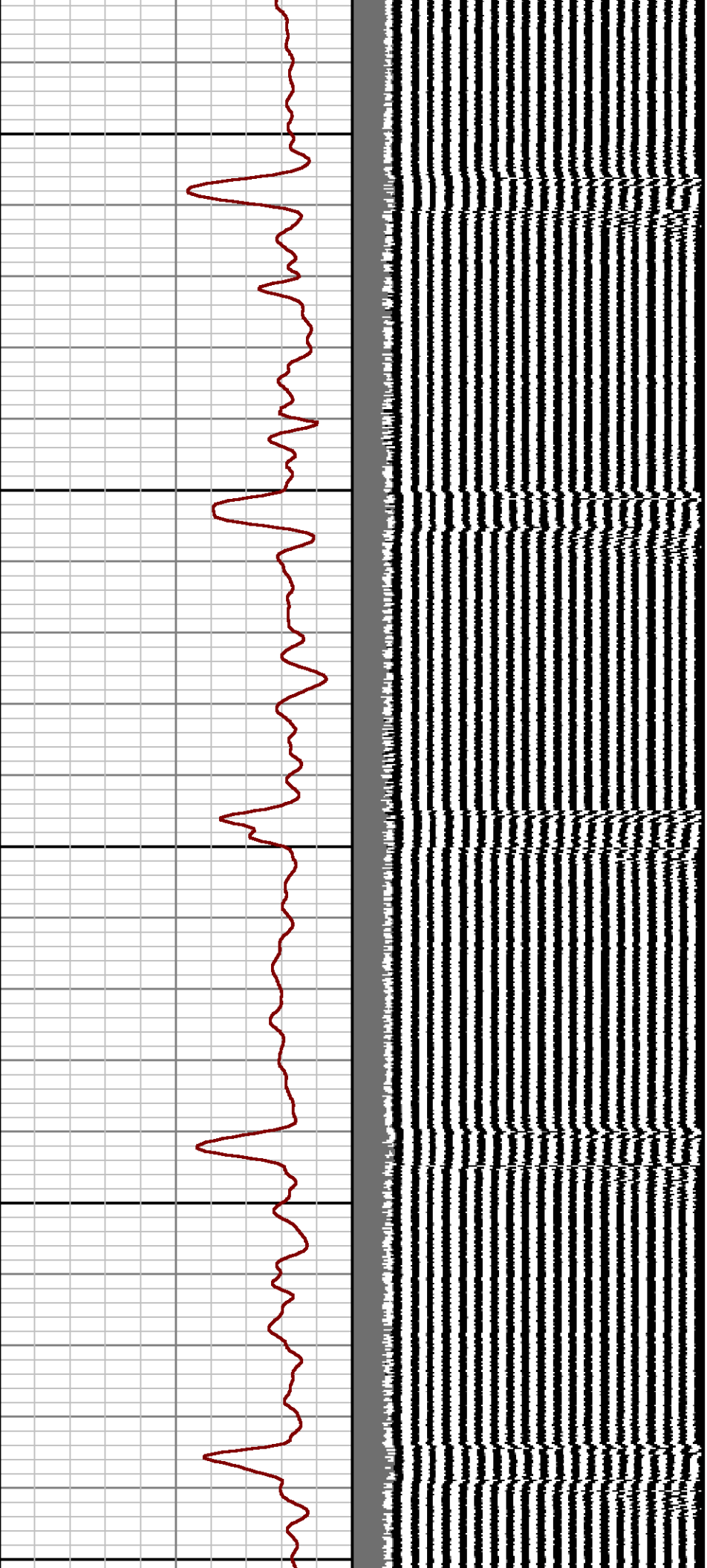
Mode : PlotMgr 5.4.504

Interval : 0.00 - 12803.00 feet UP

Created : 7/6/2014 11:03:50 AM

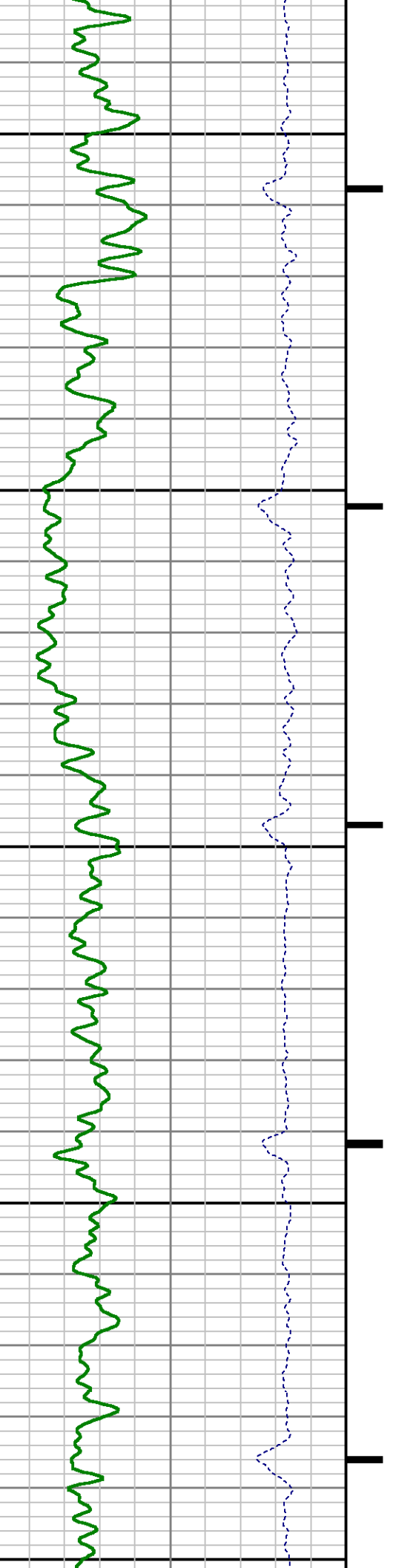


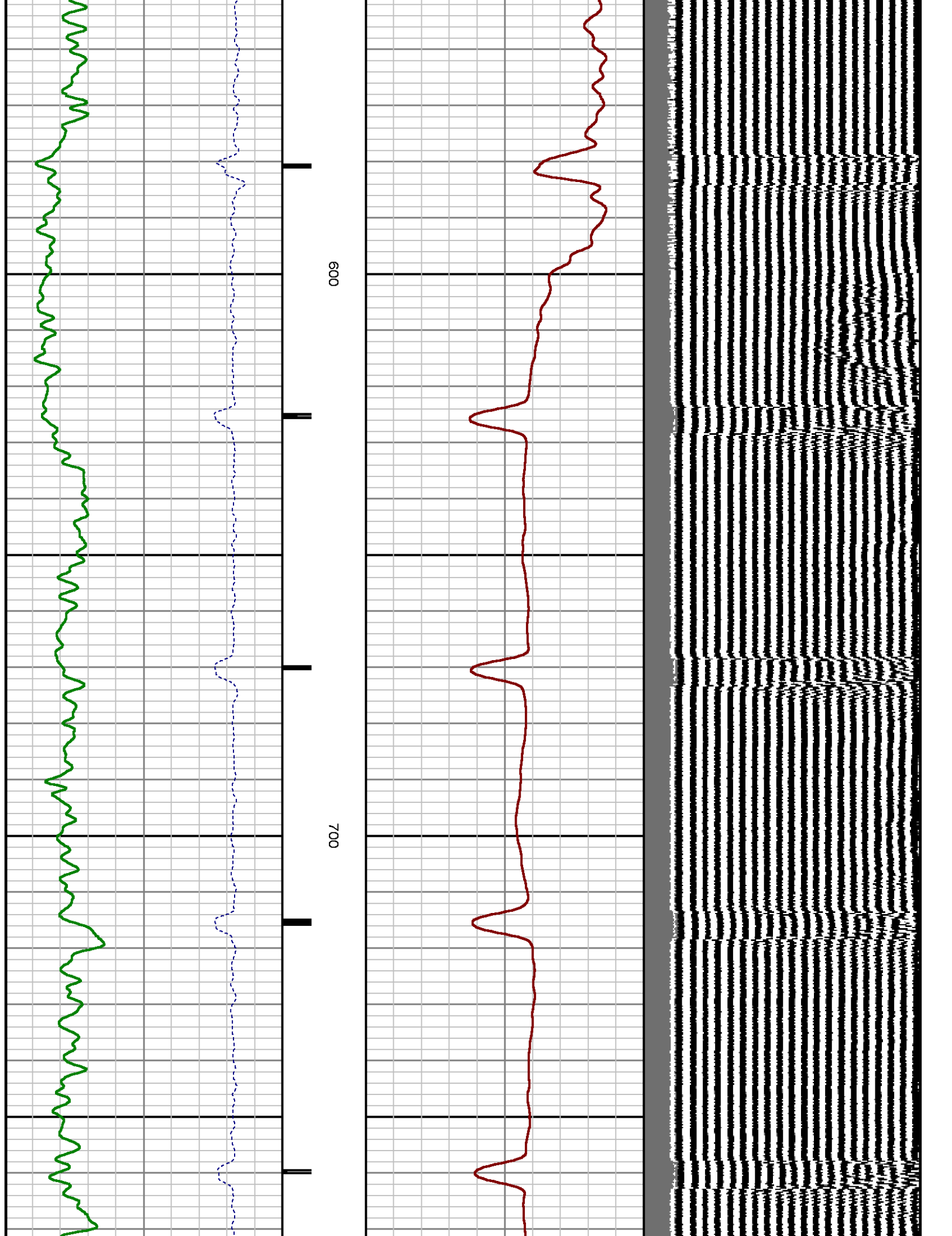


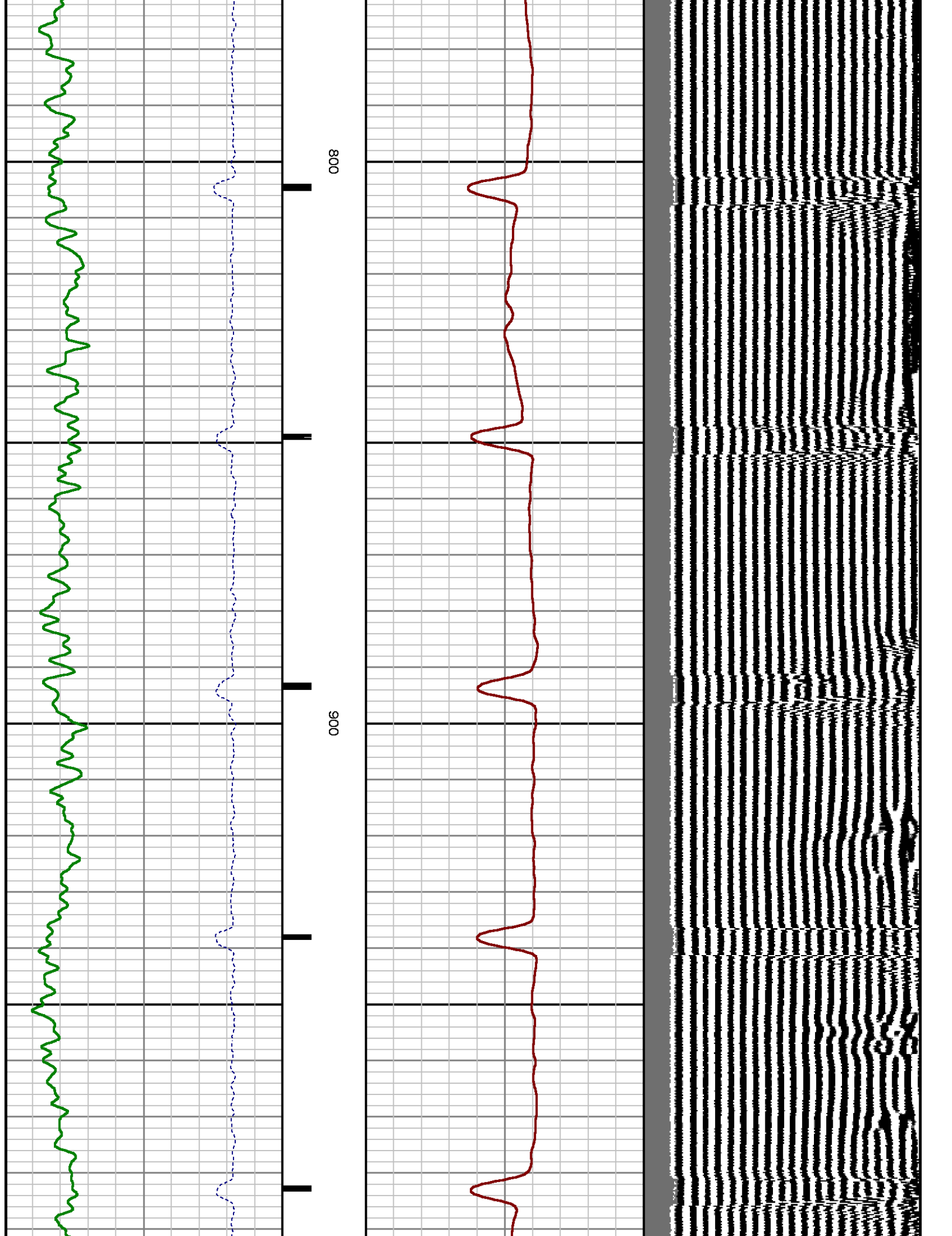


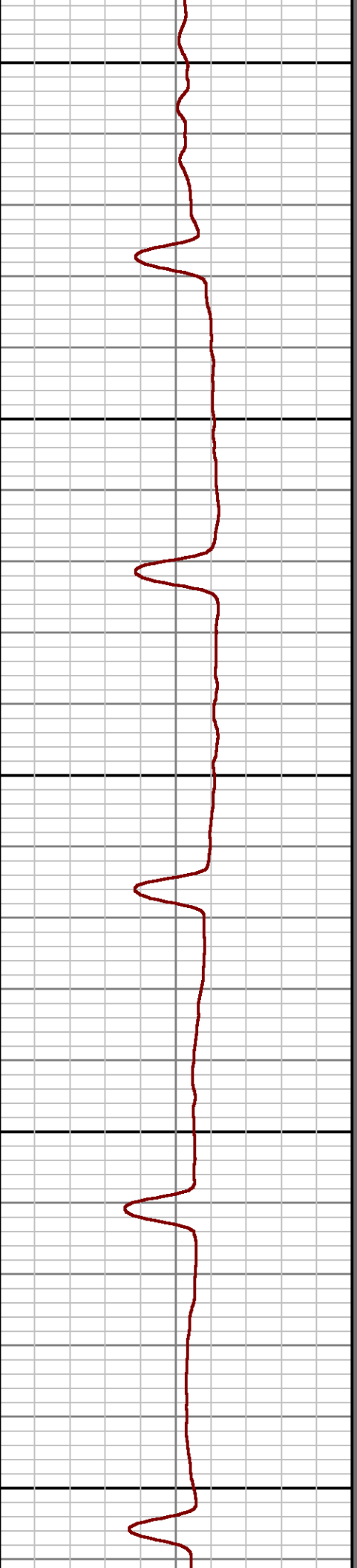
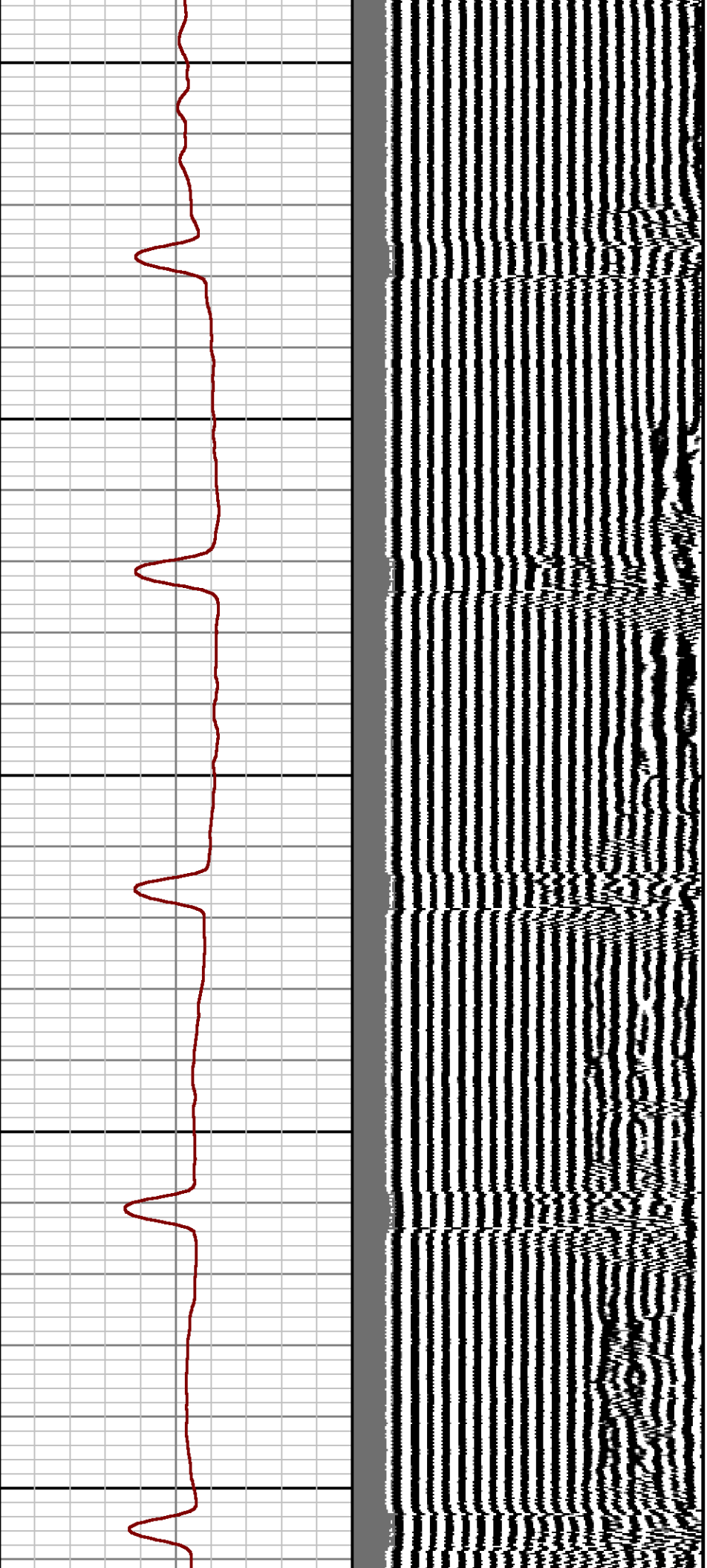
400

500





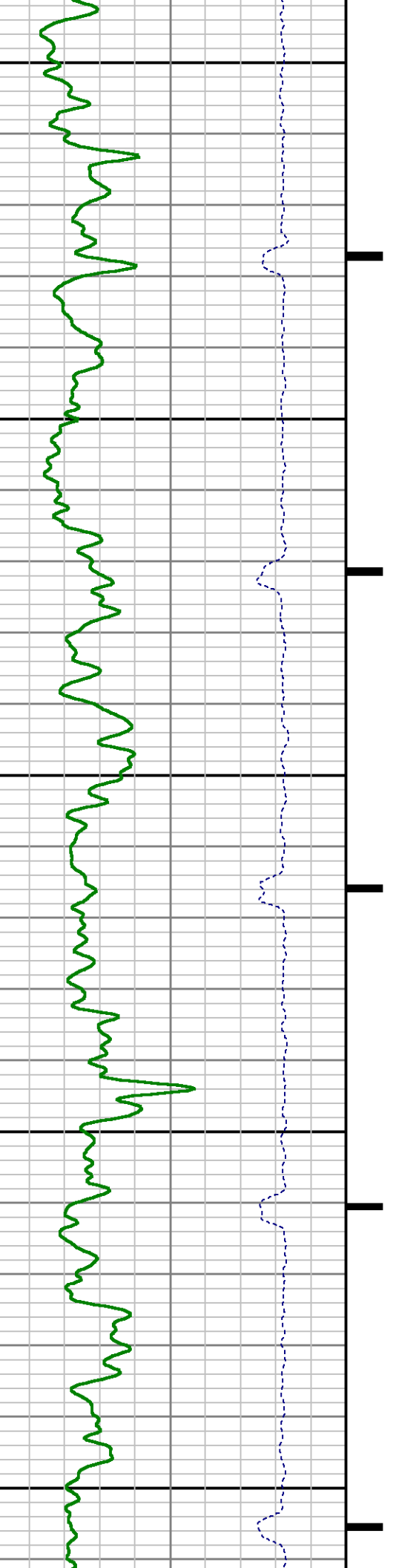


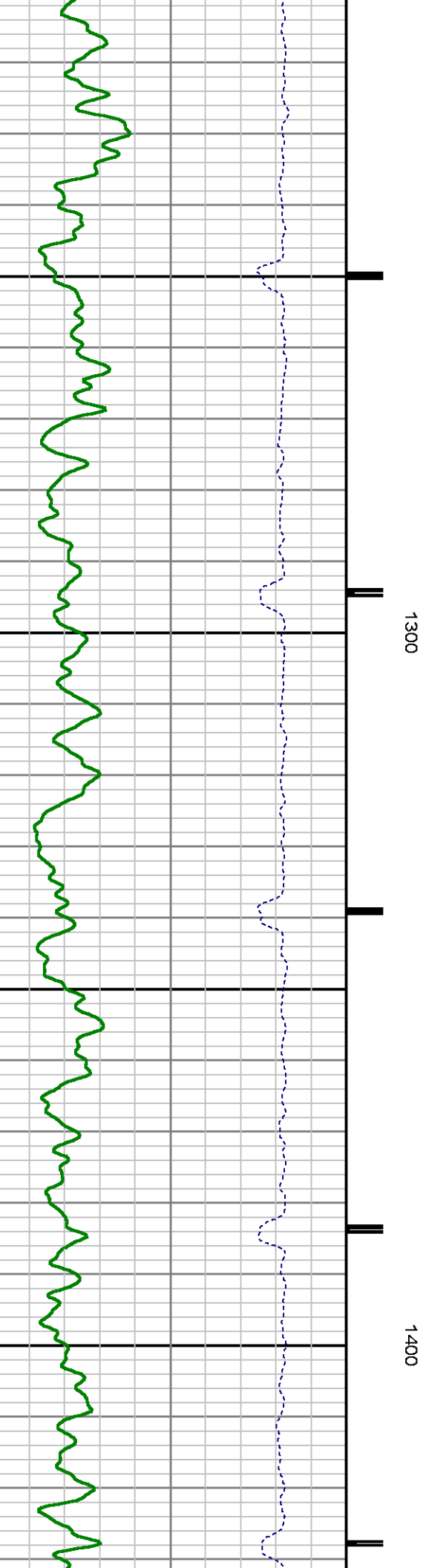
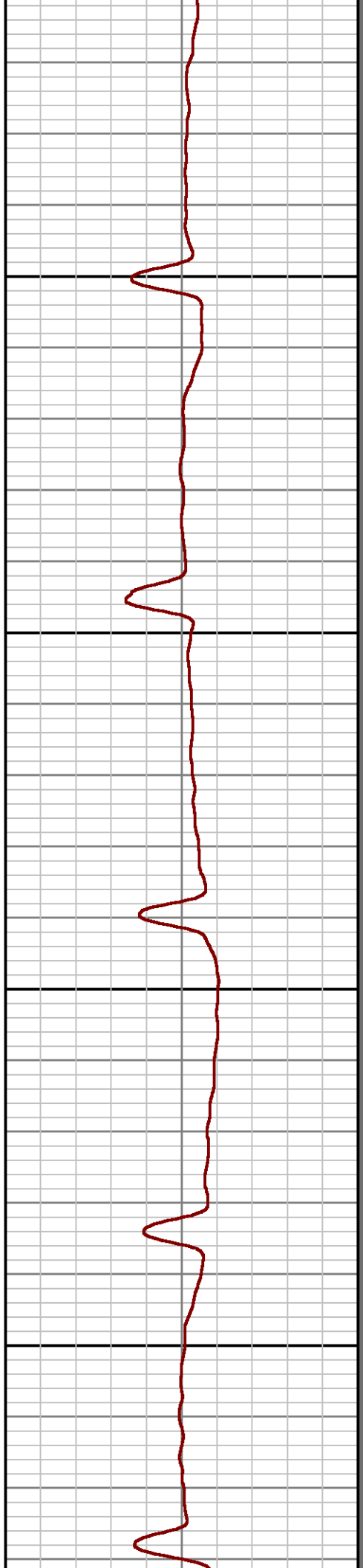
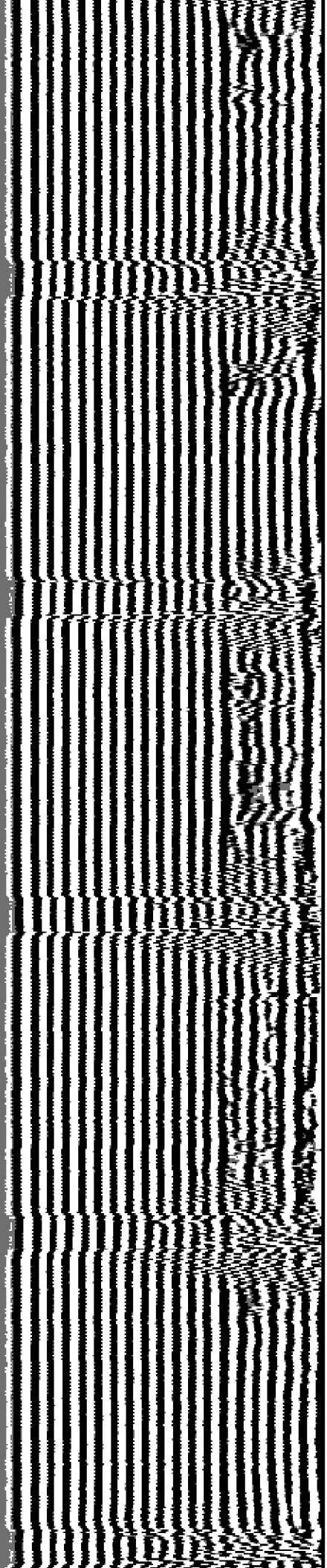


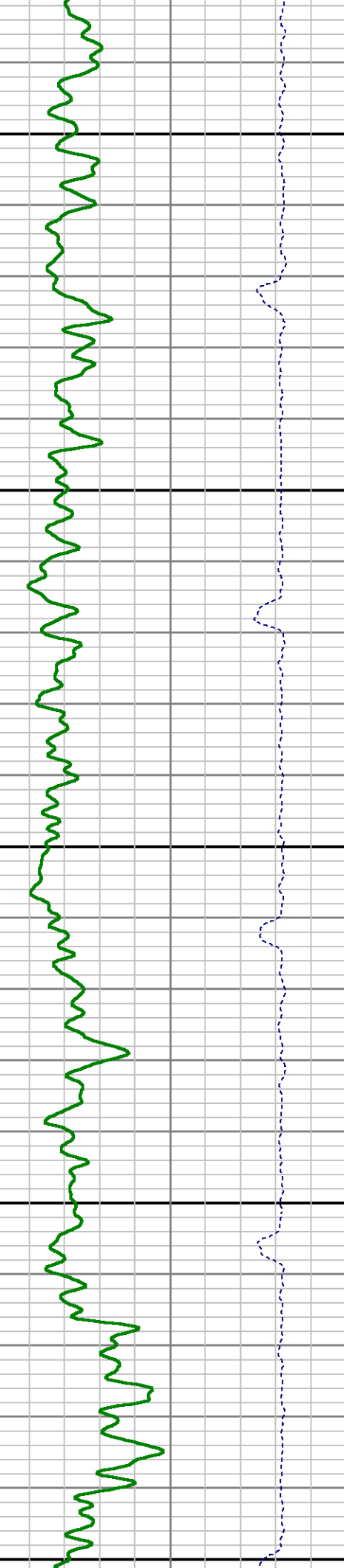
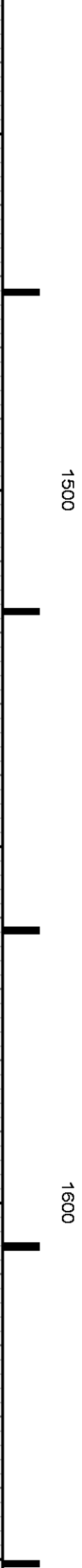
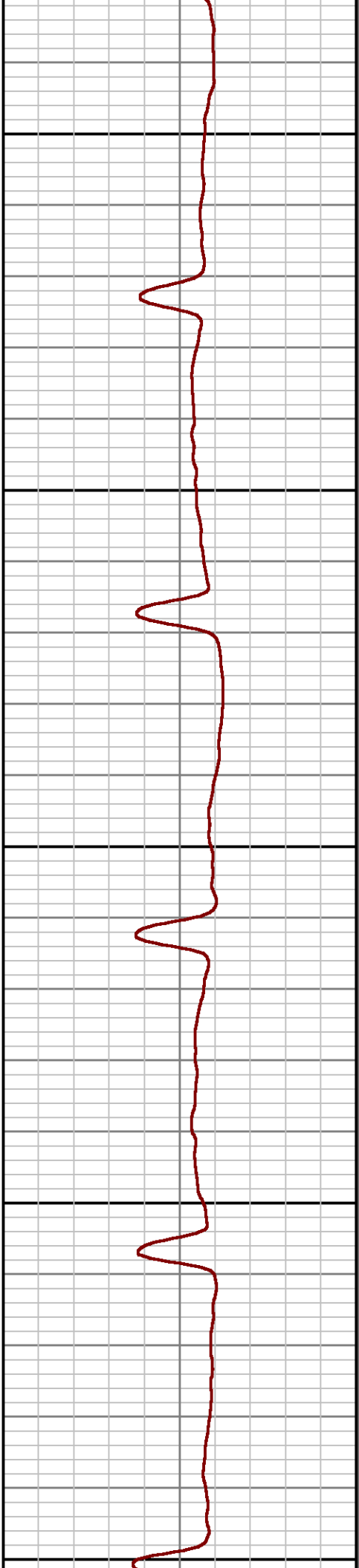
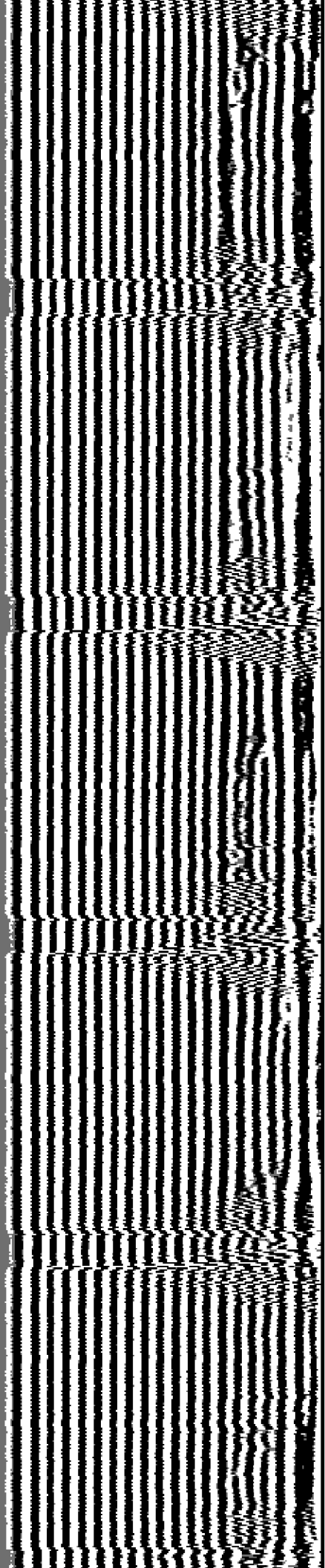
1000

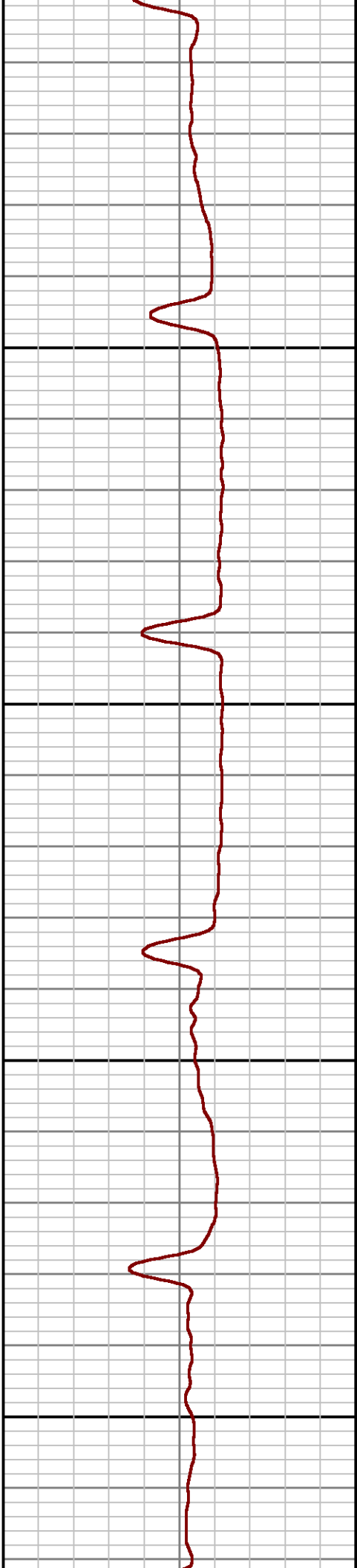
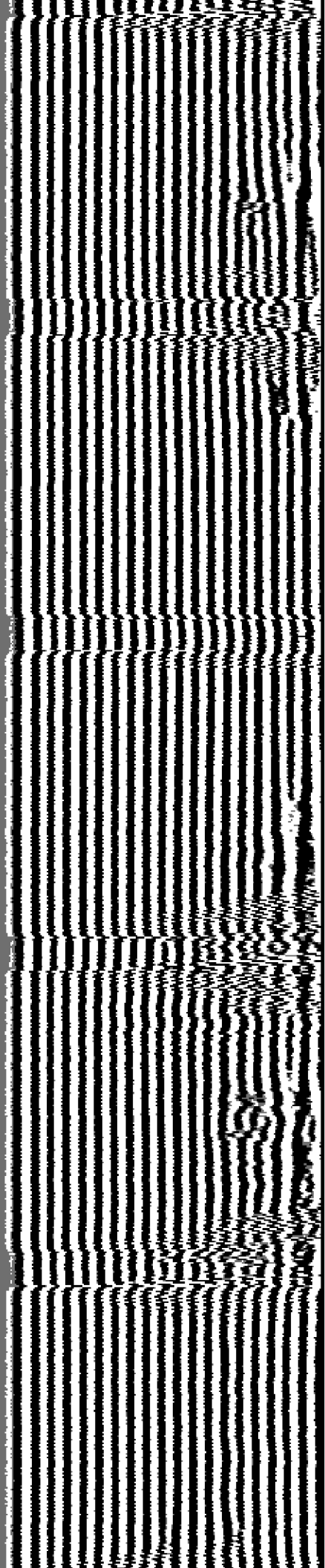
1100

1200



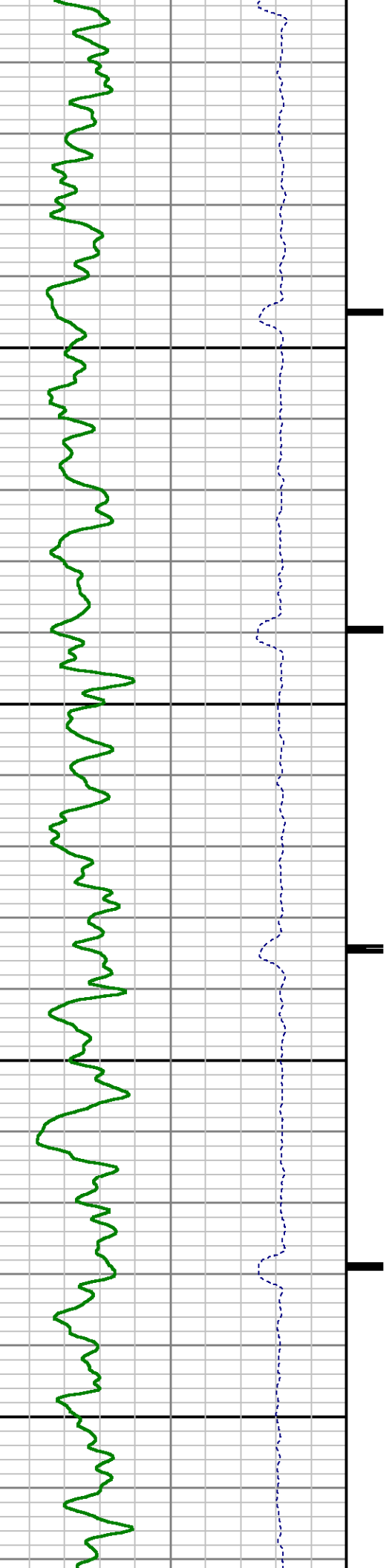


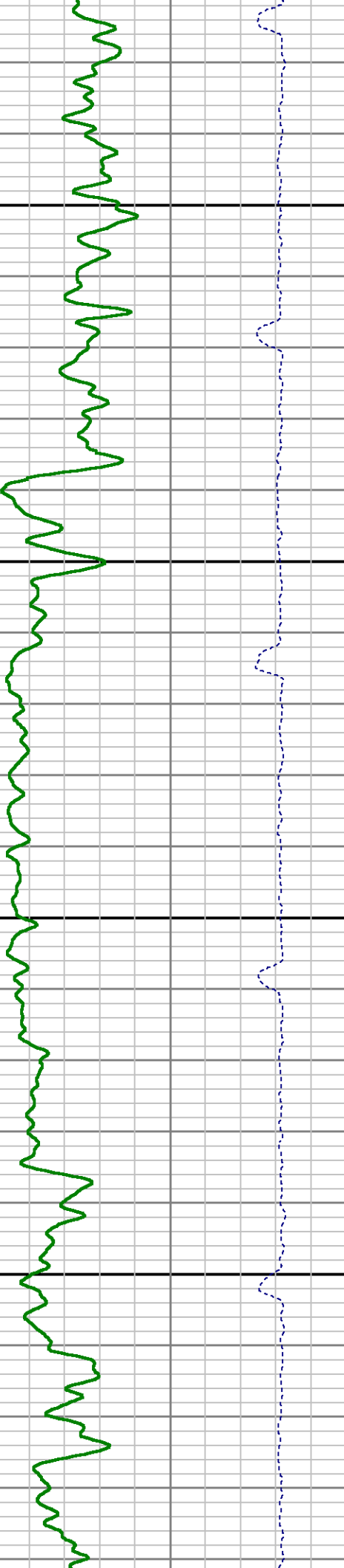
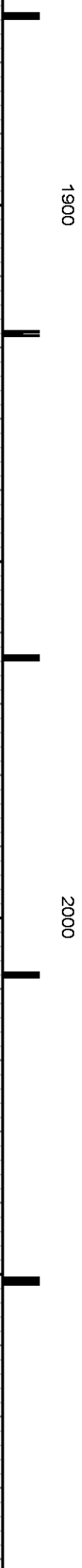
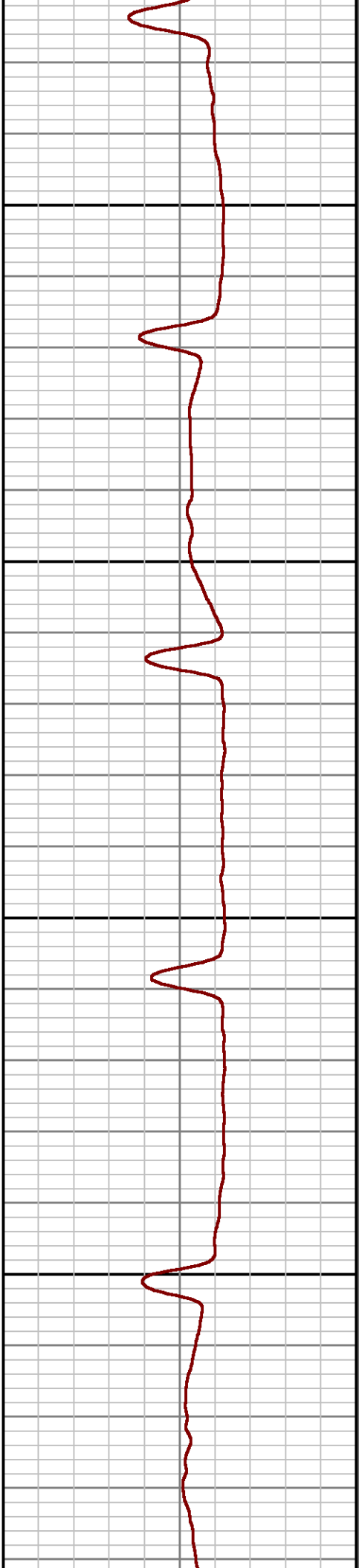
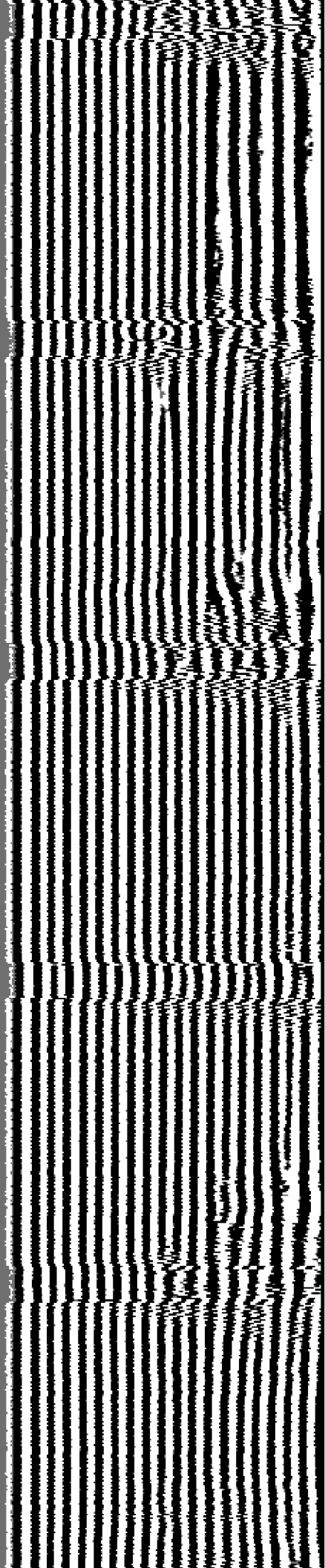


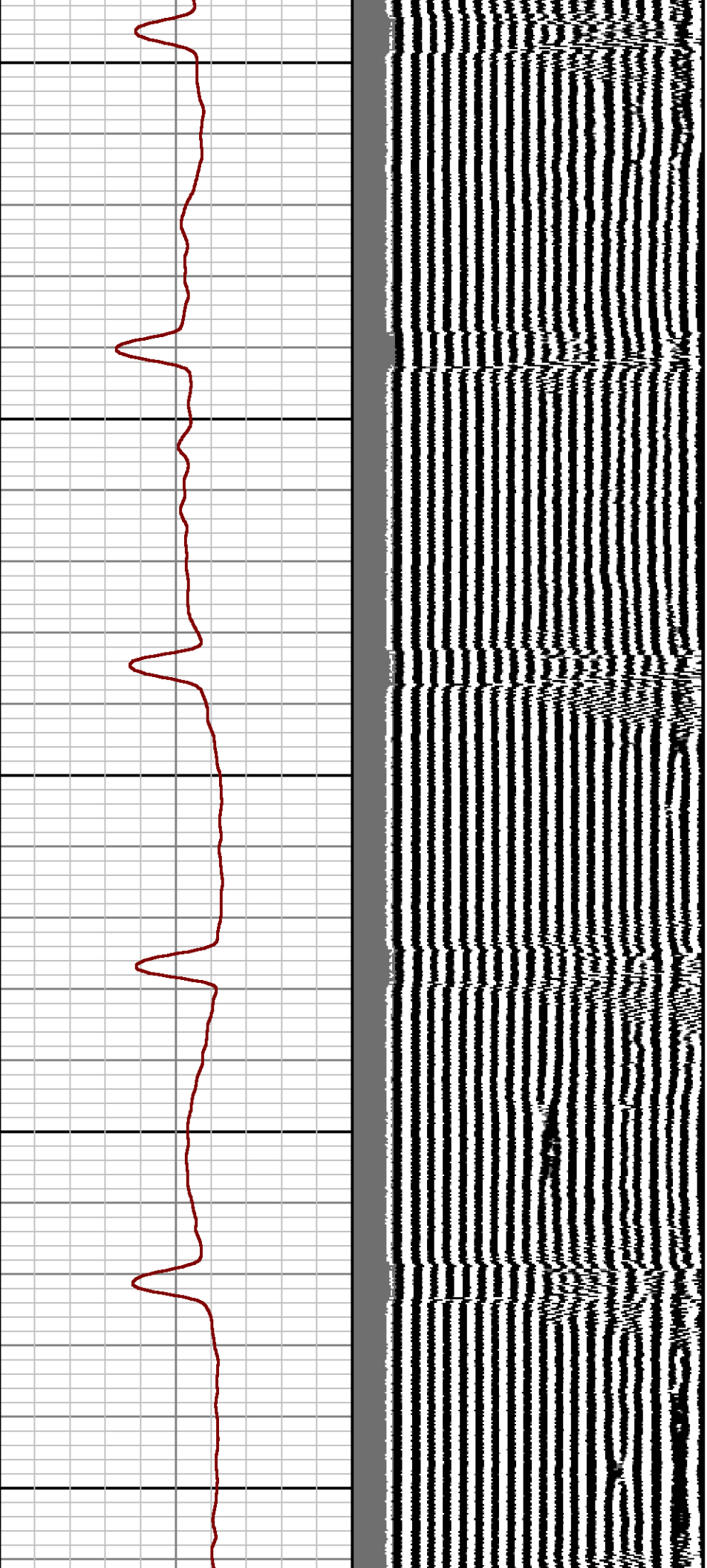


1700

1800



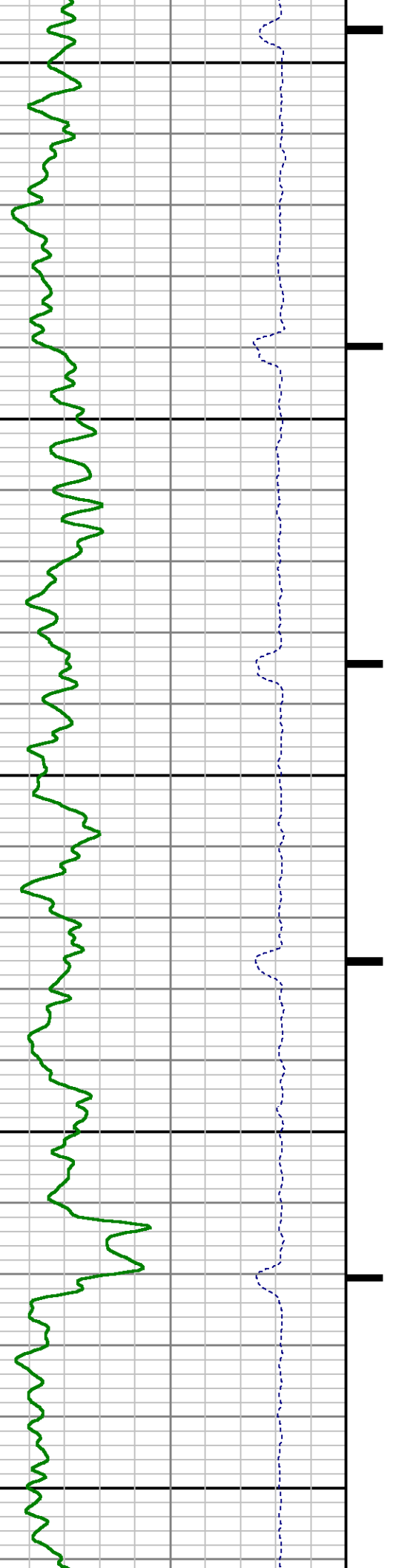


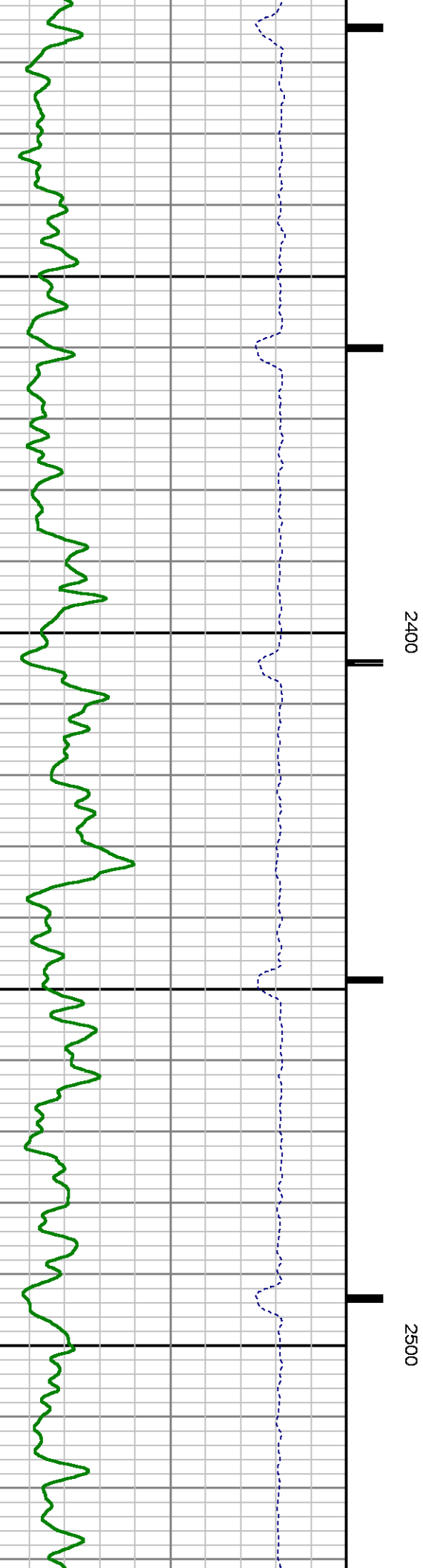
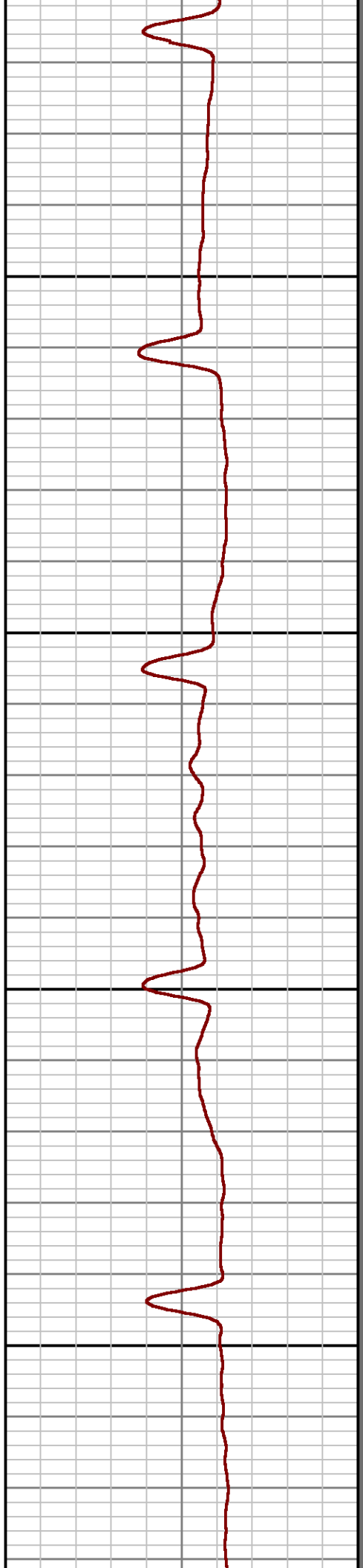
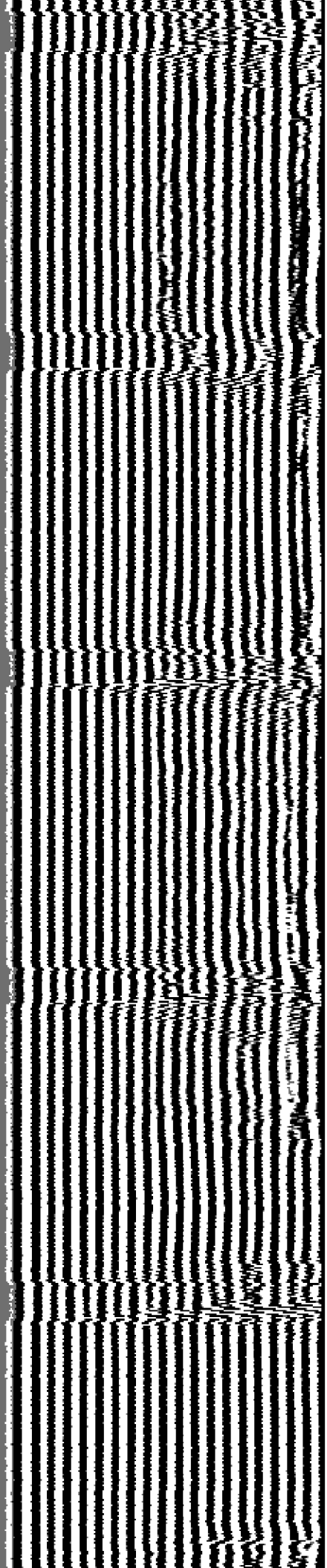


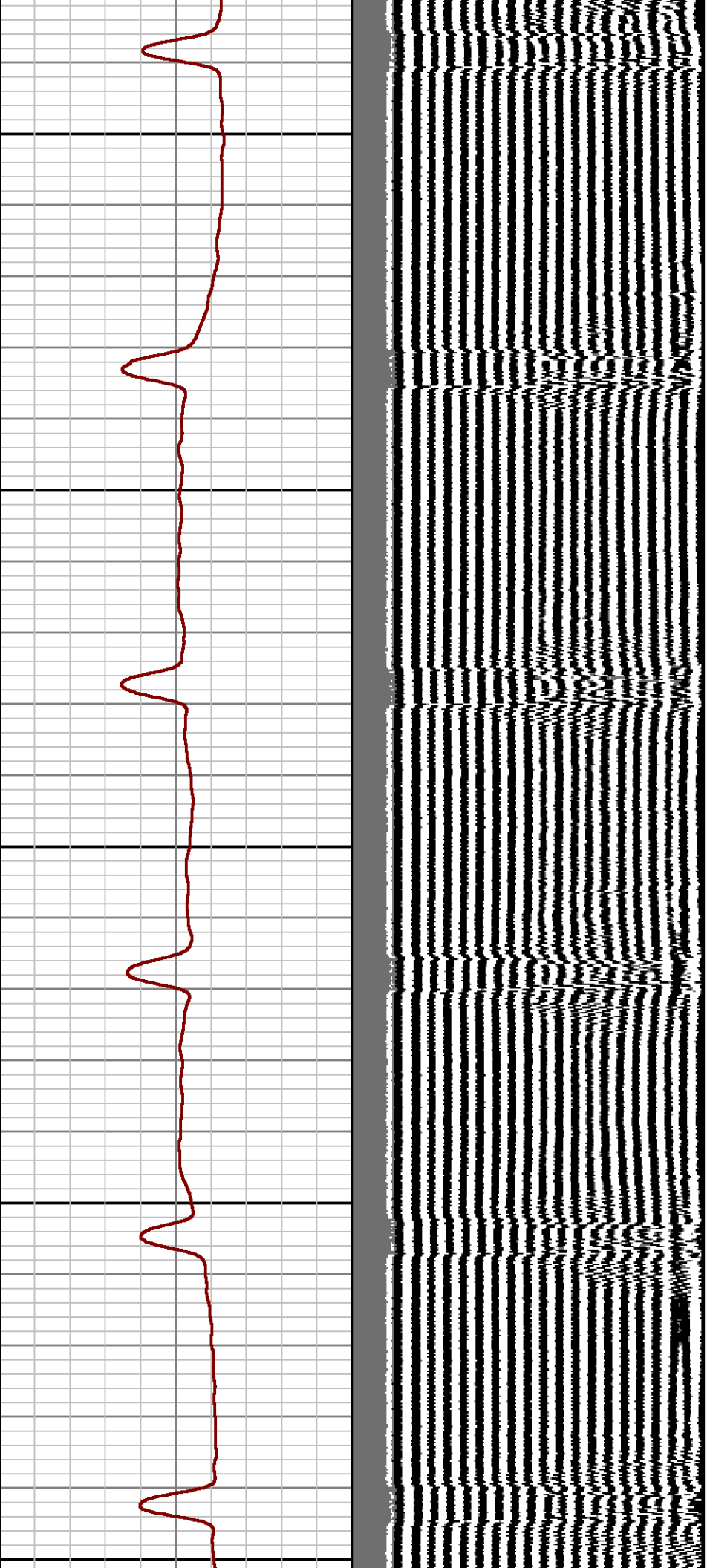
2100

2200

2300

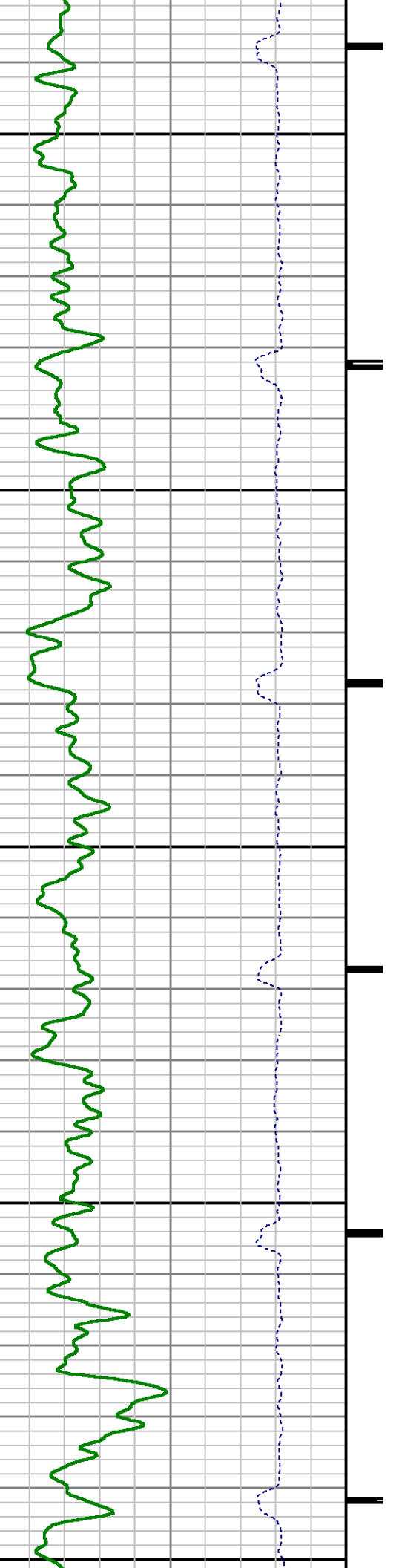


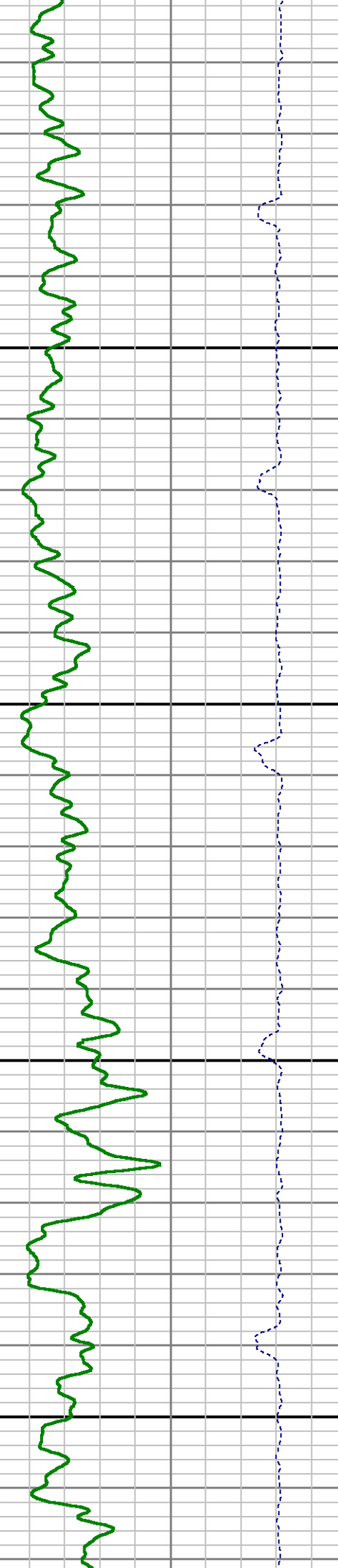
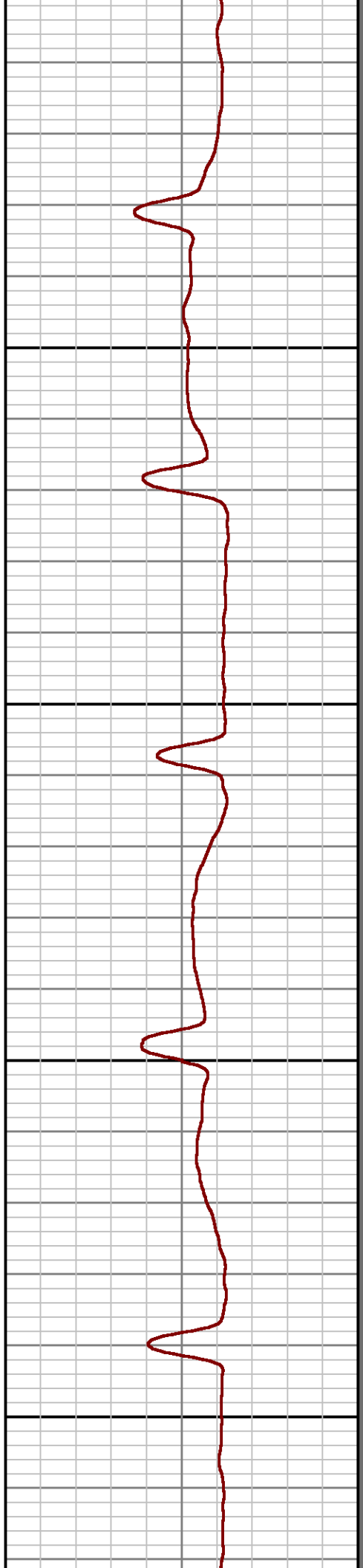
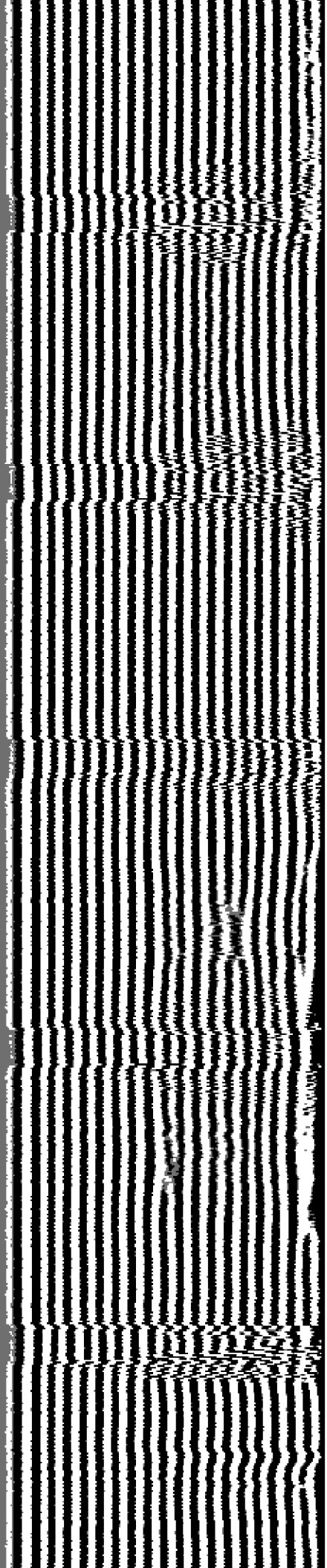


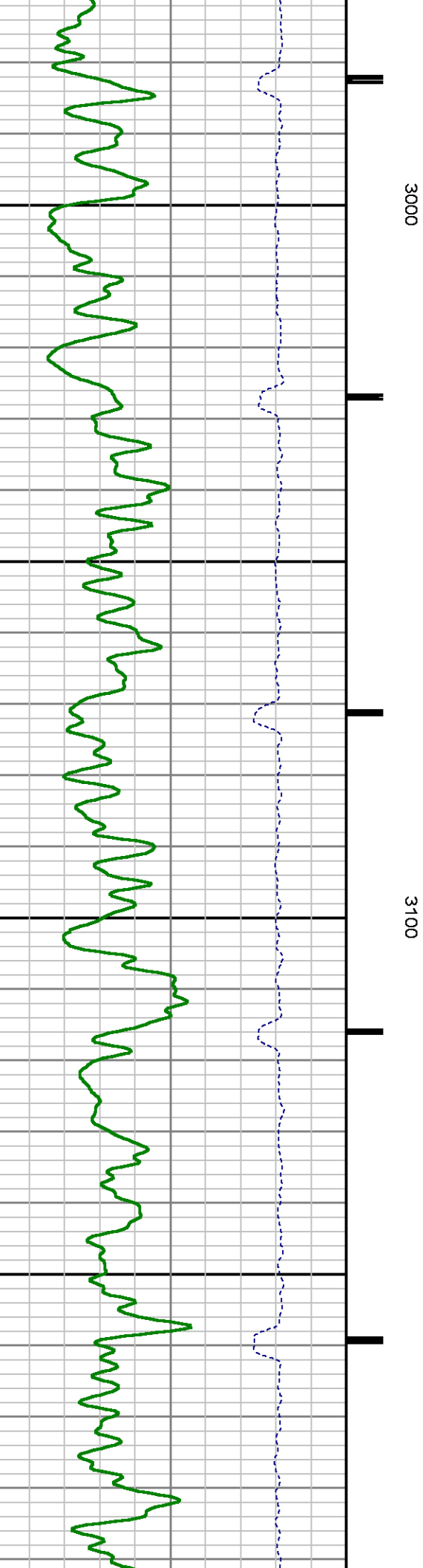
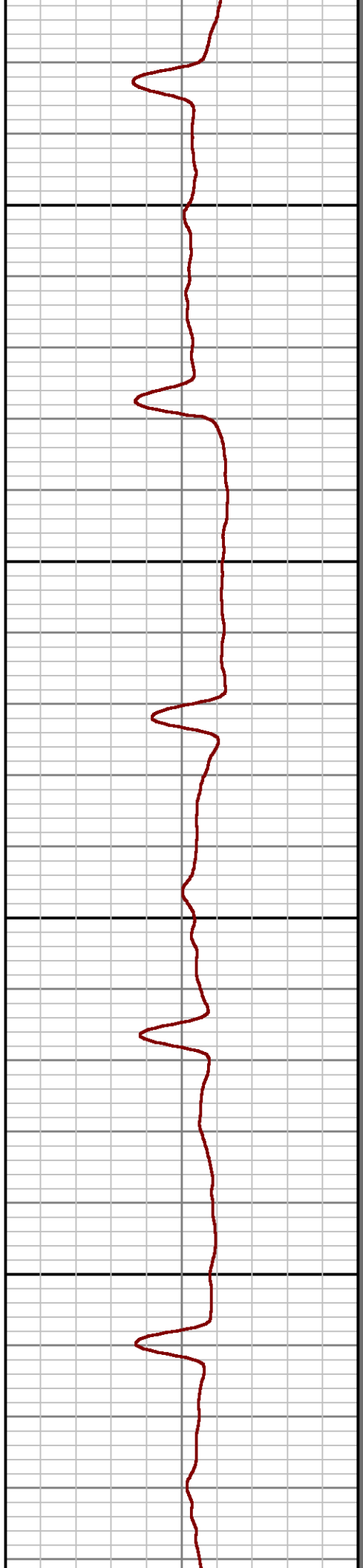
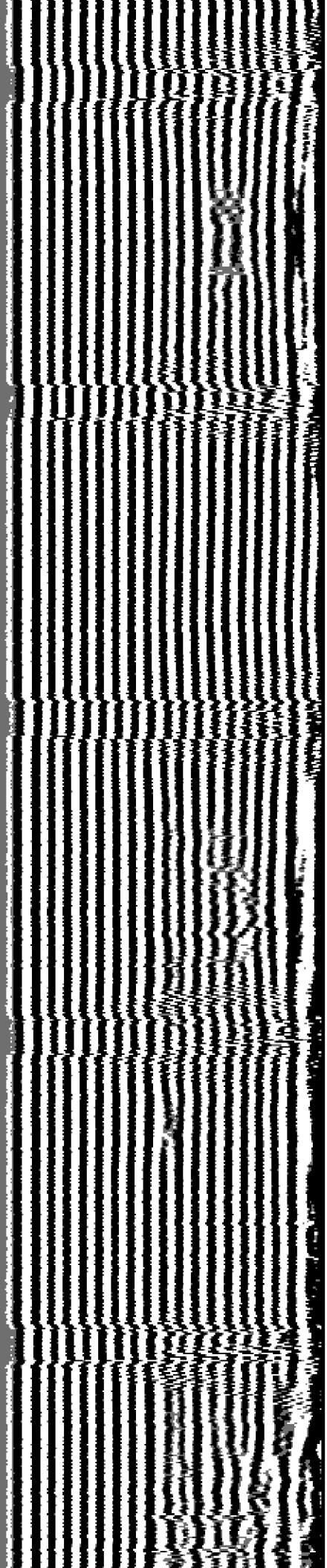


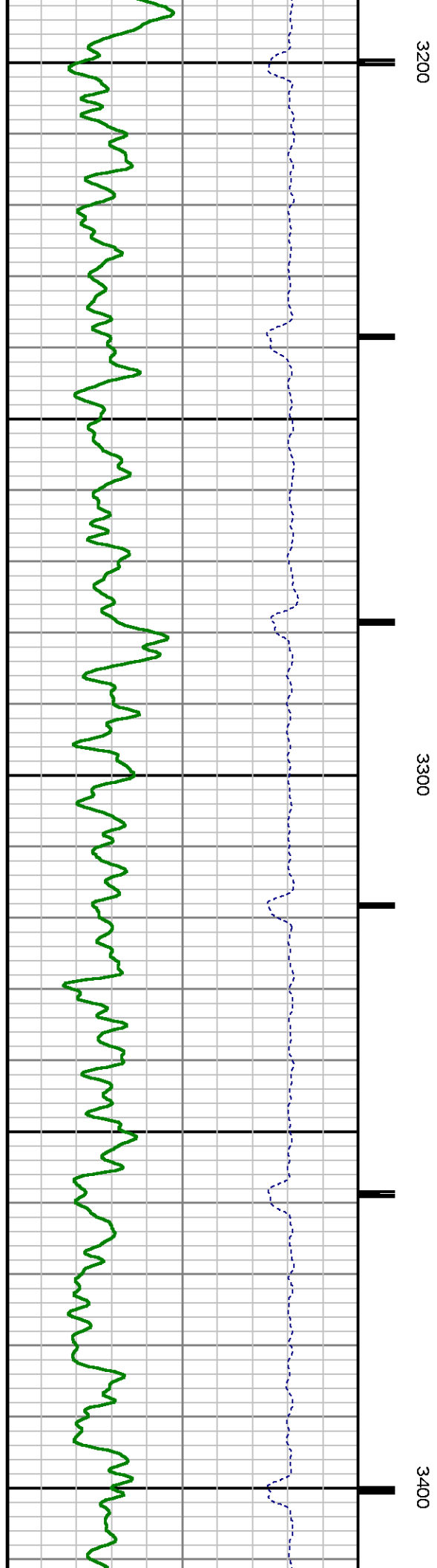
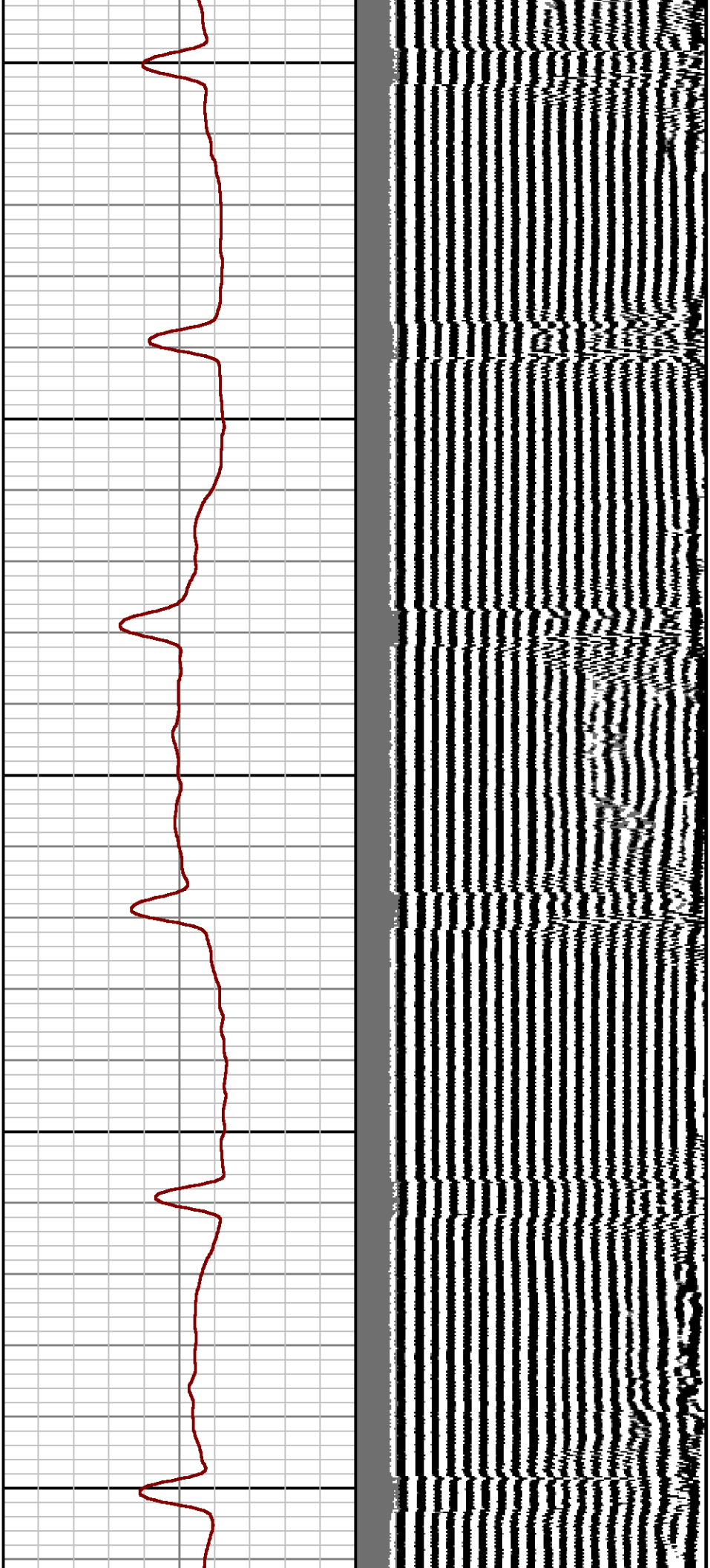
2600

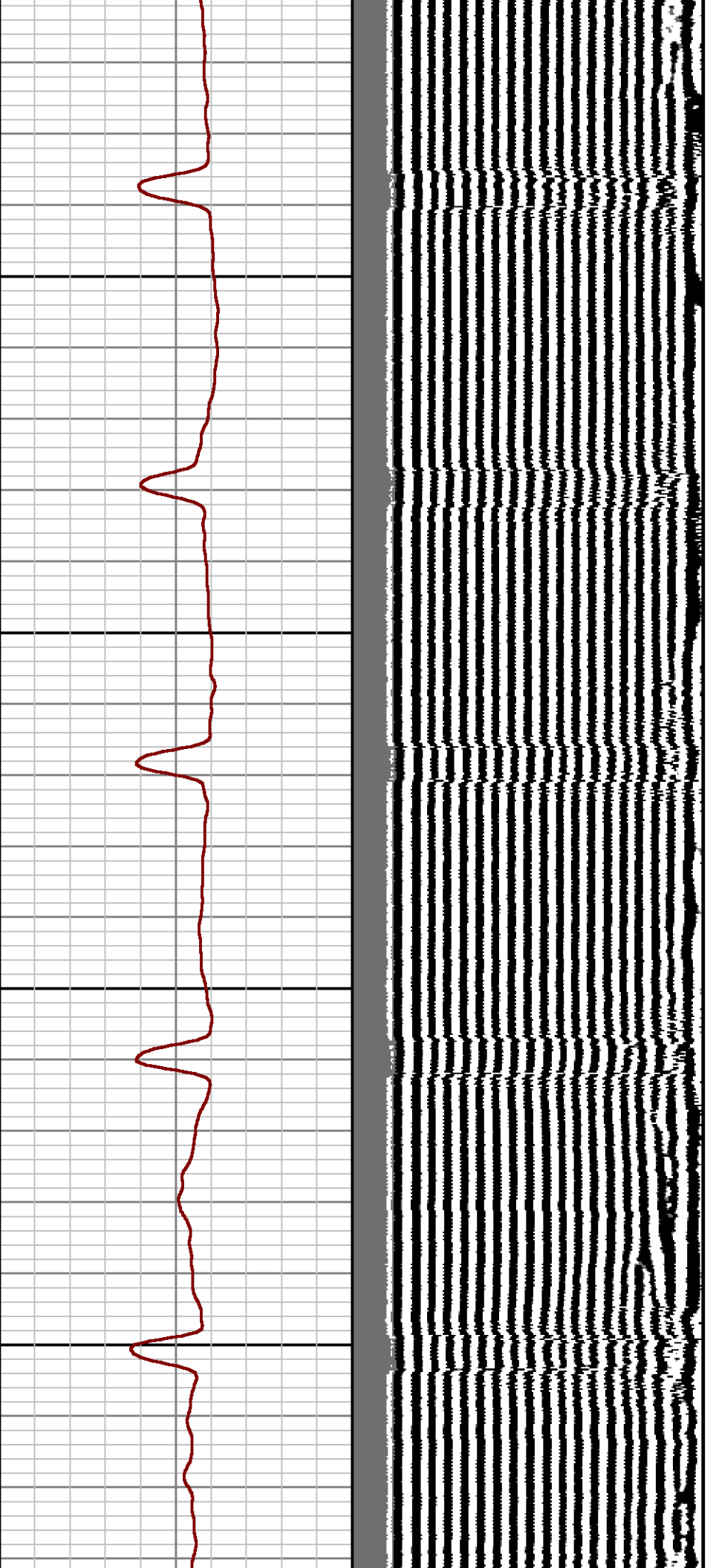
2700





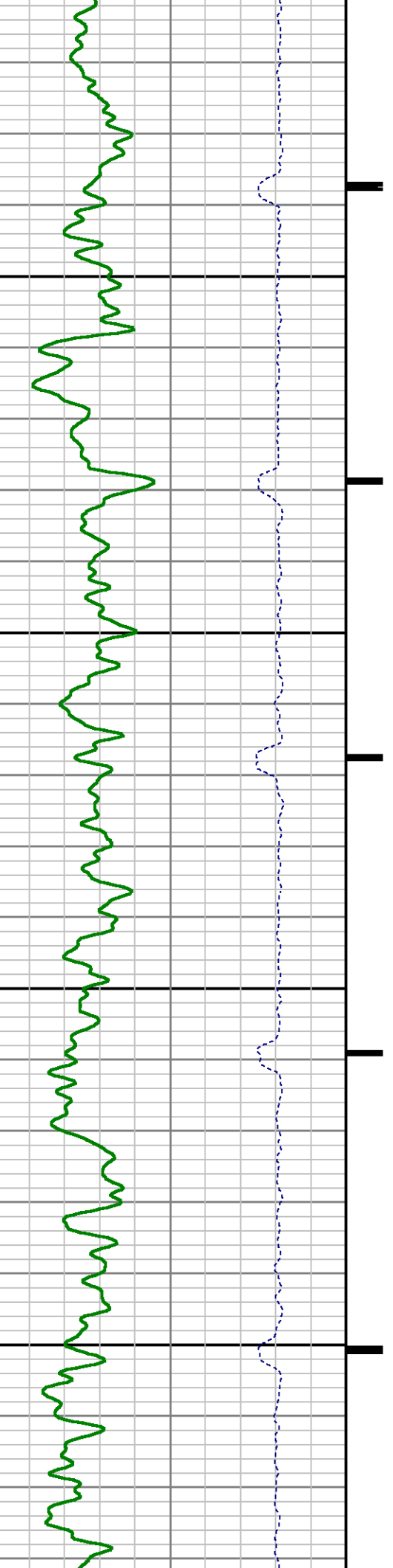


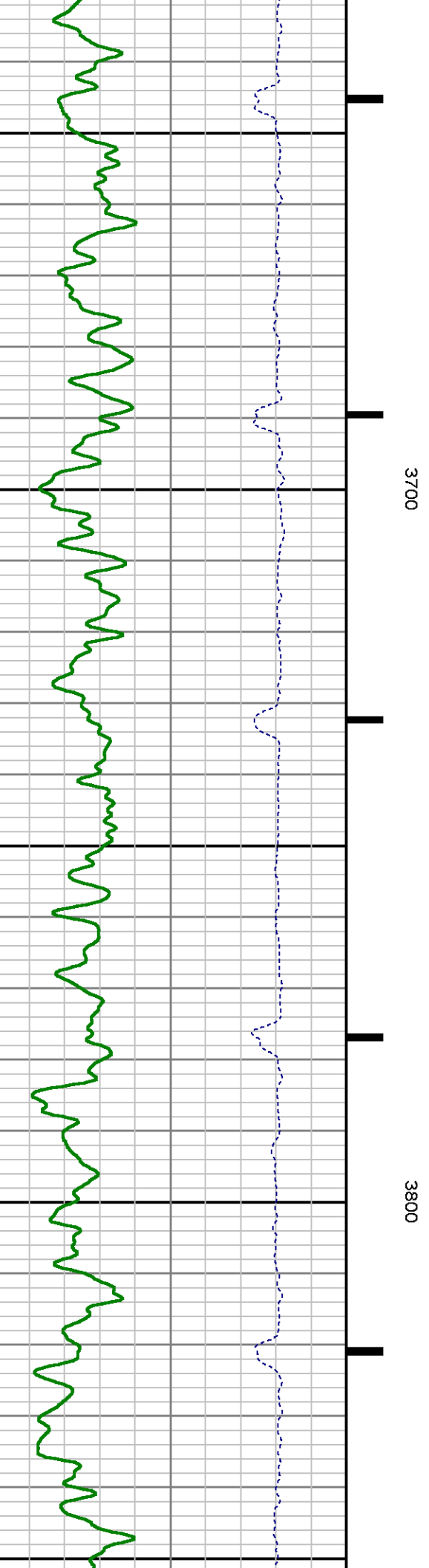
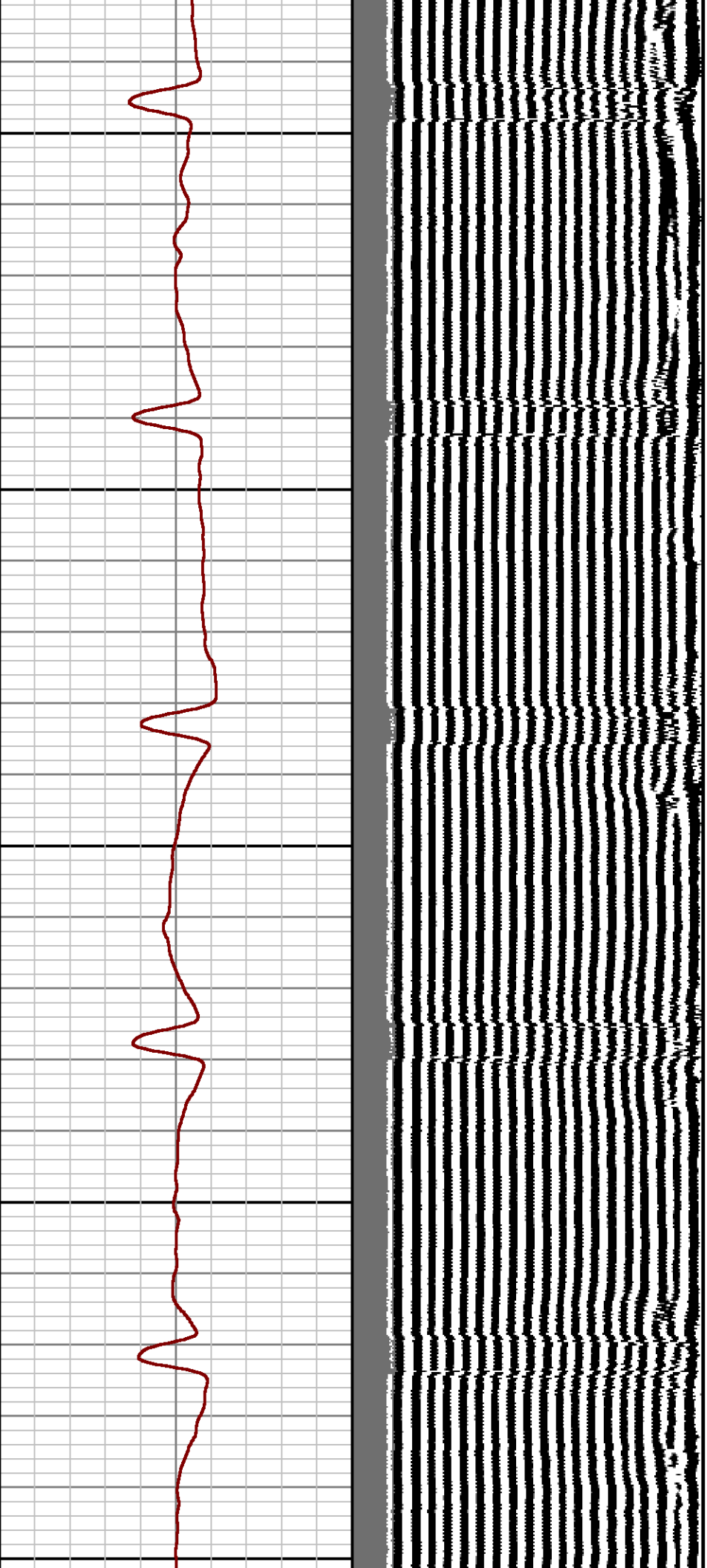


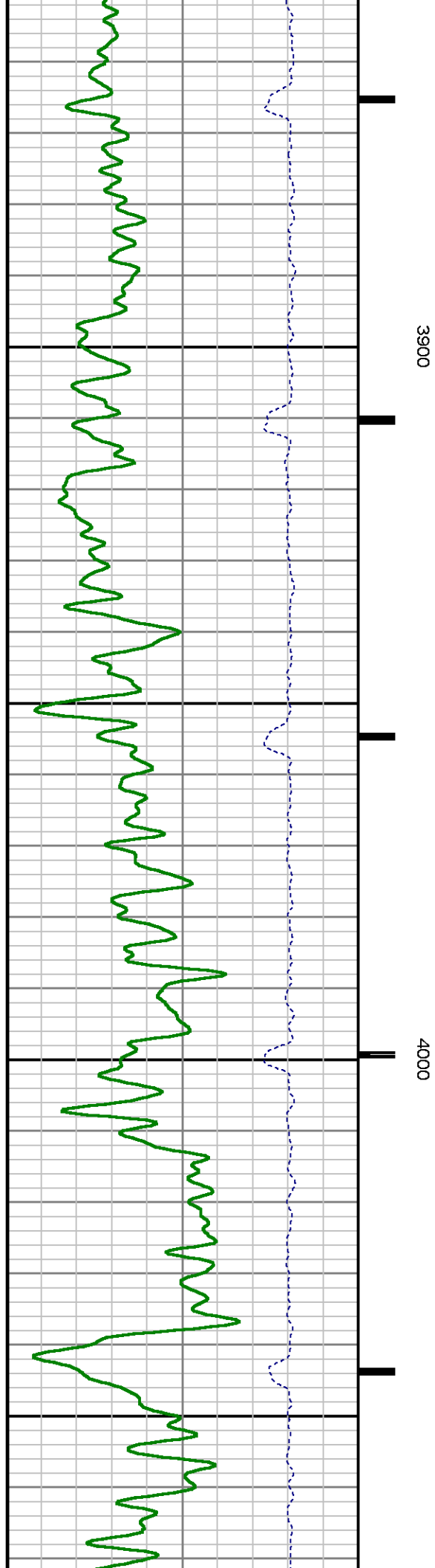
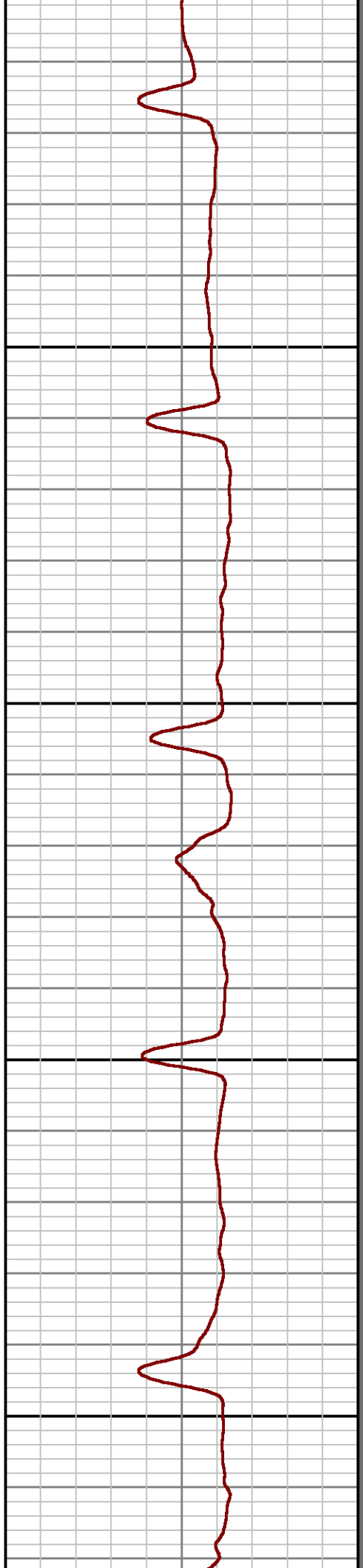
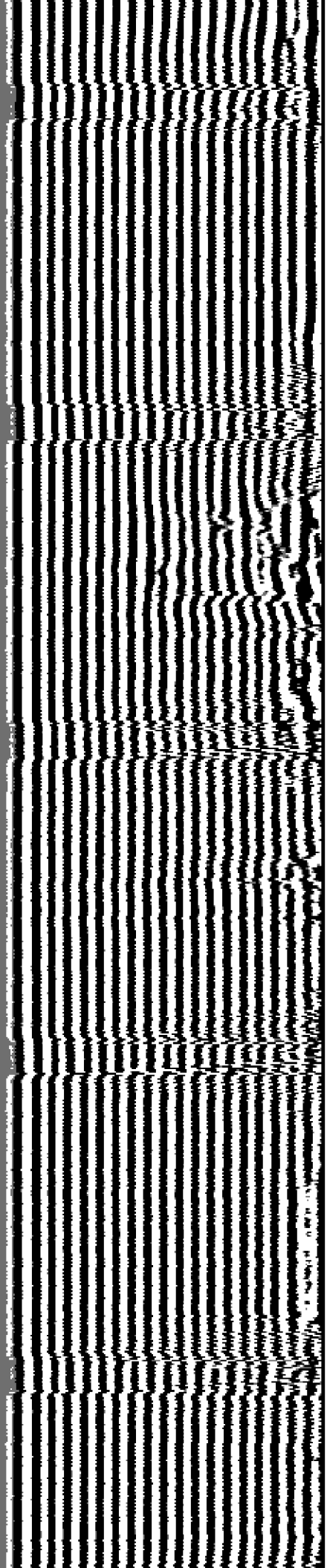


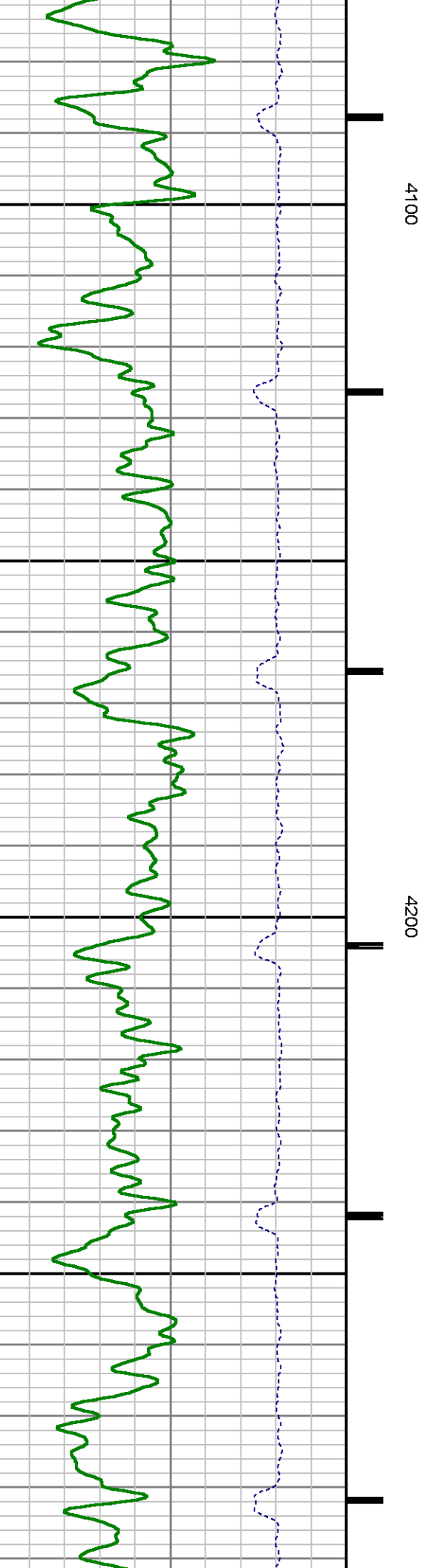
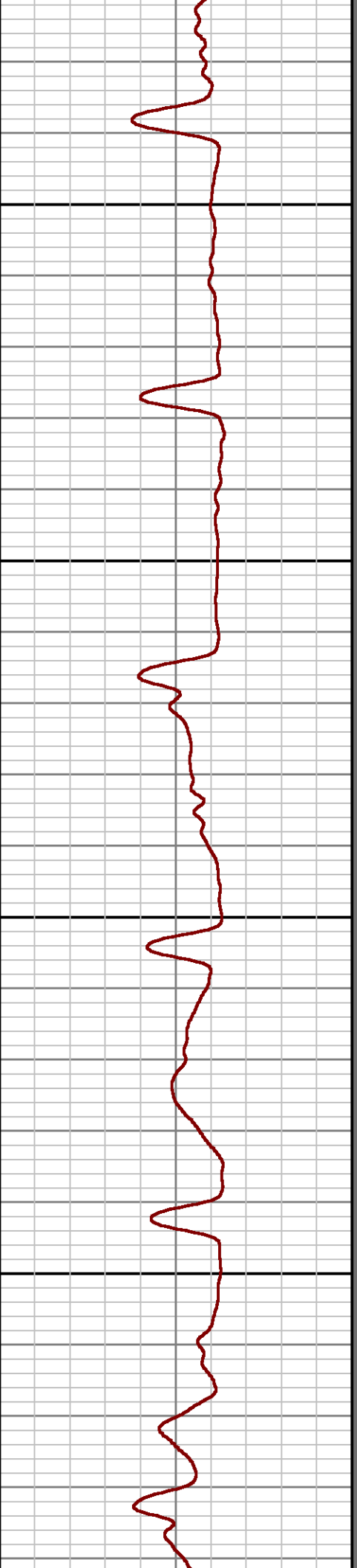
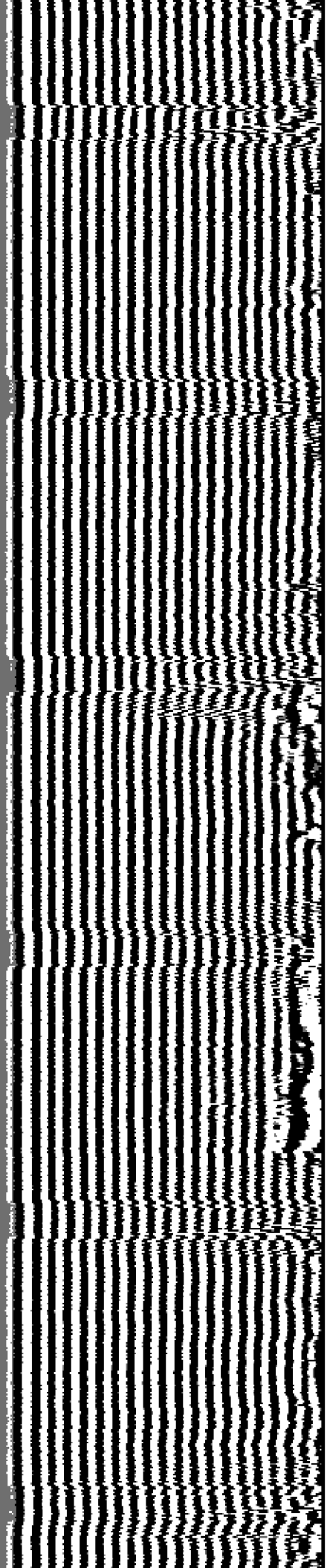
3500

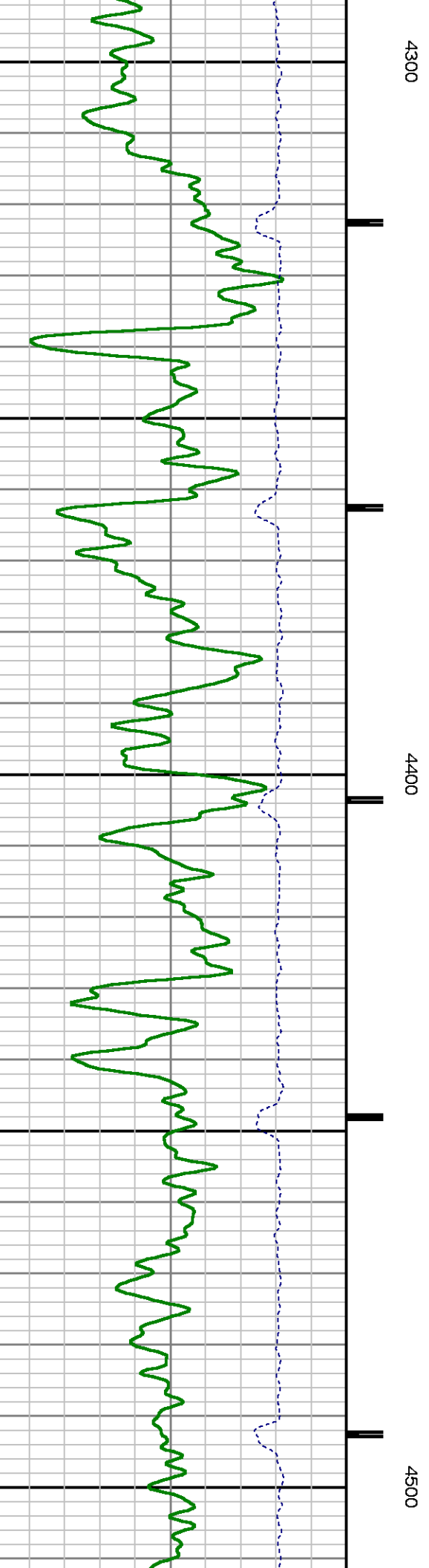
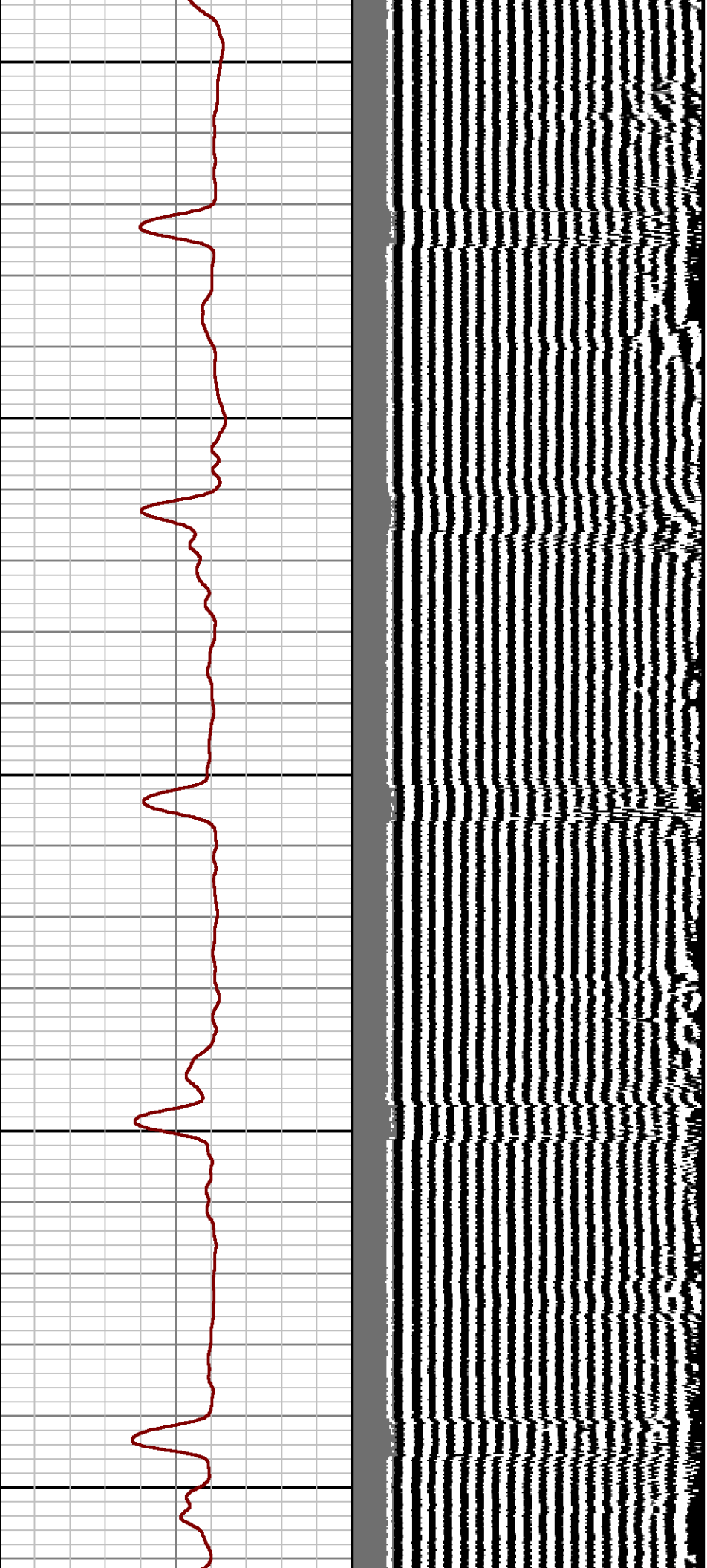
3600

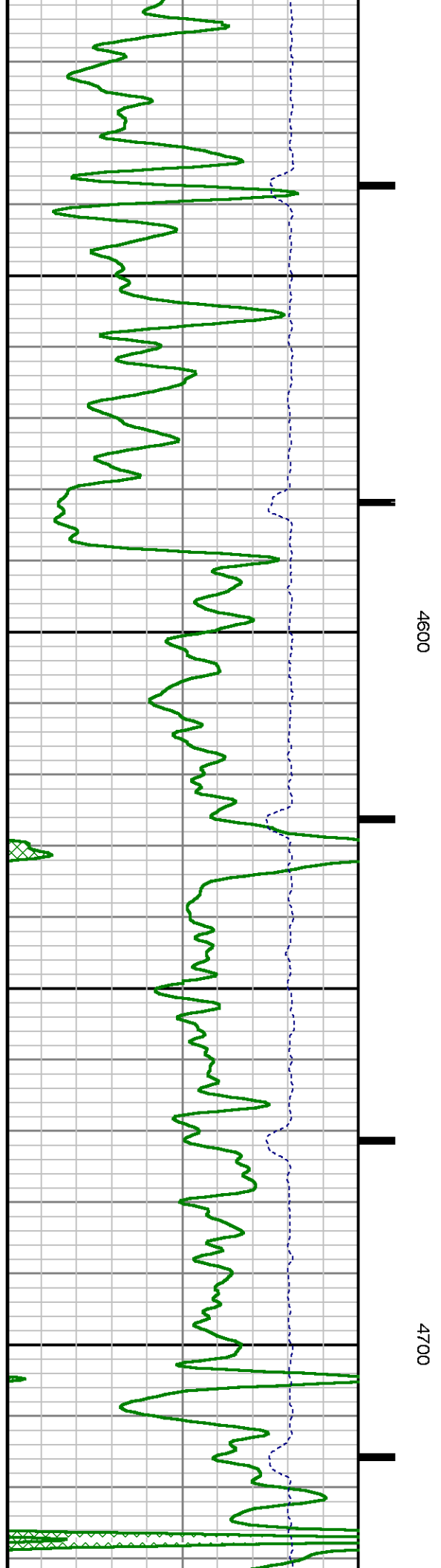
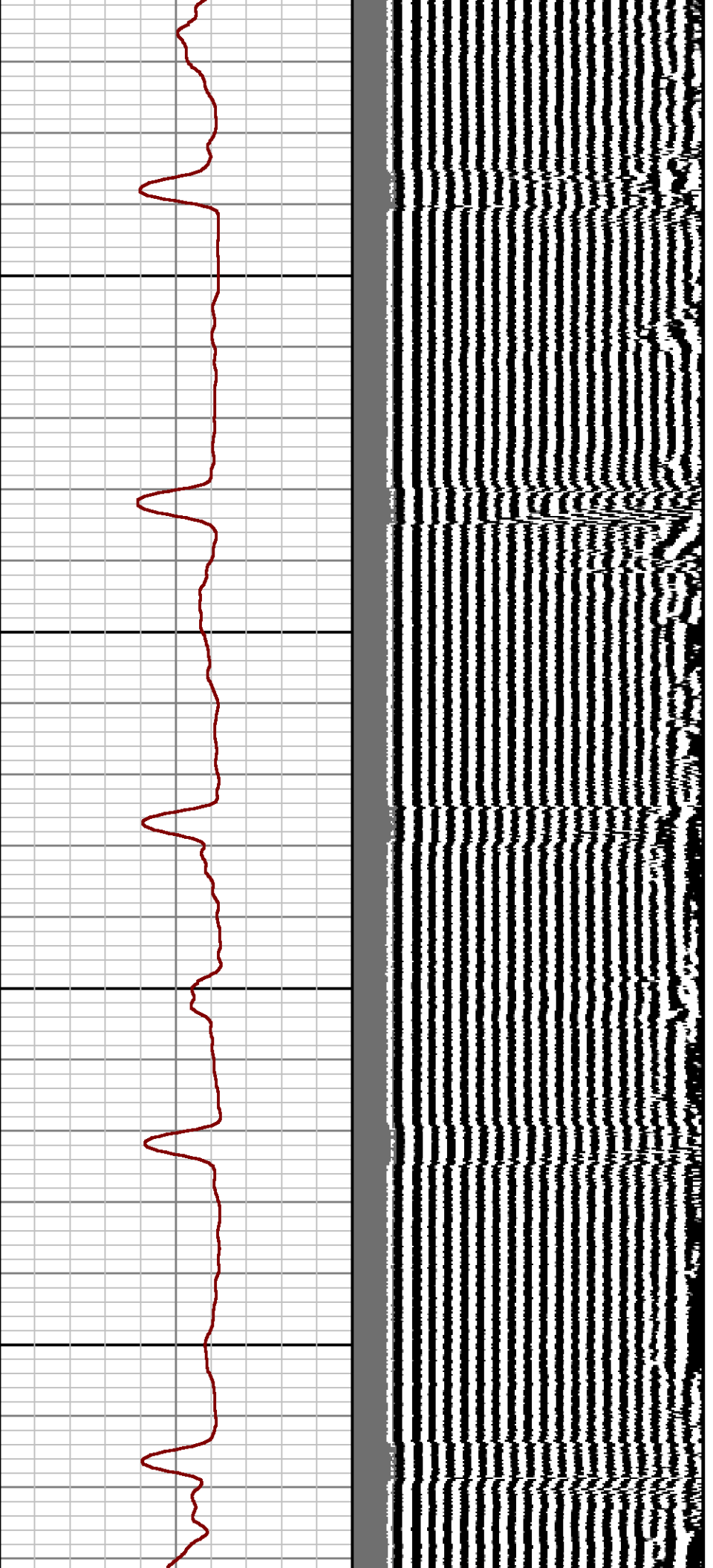


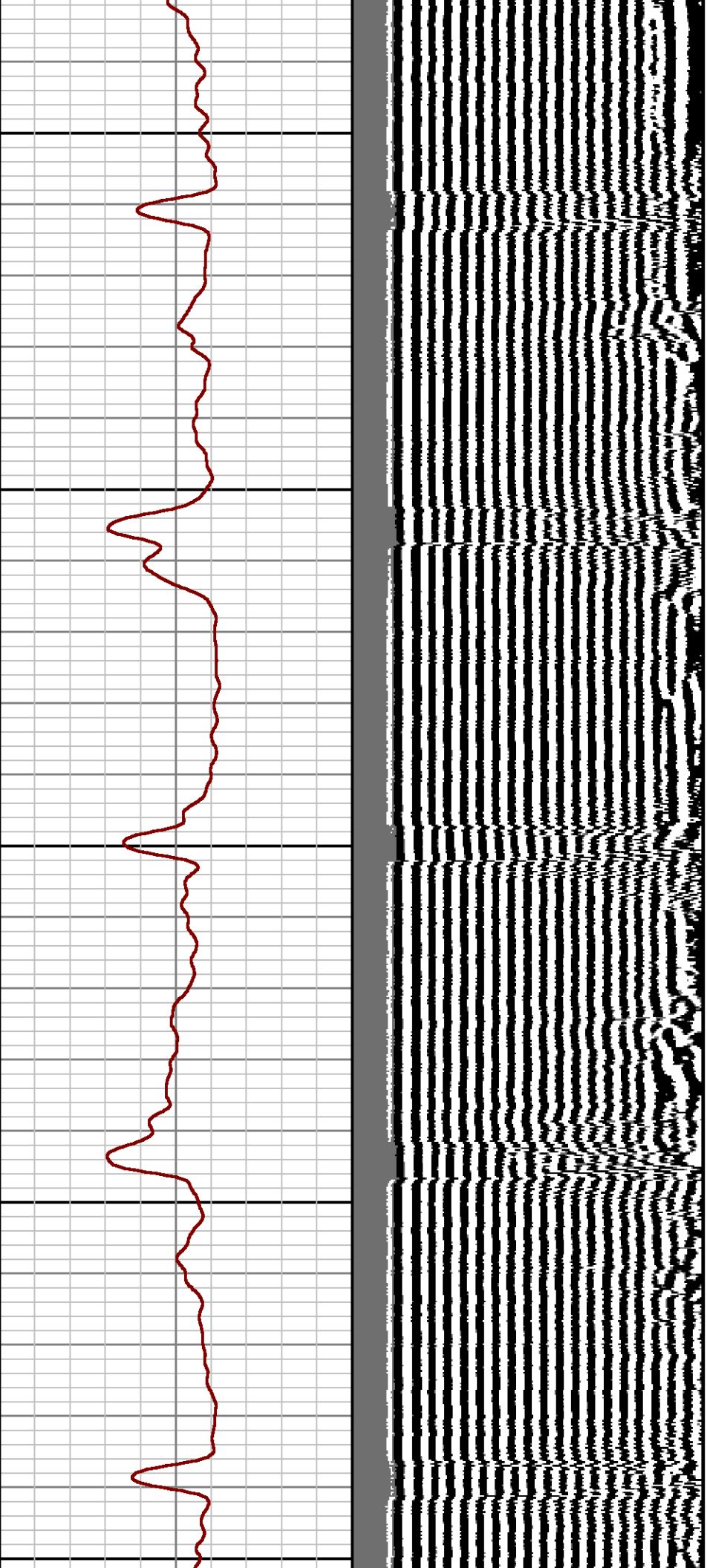






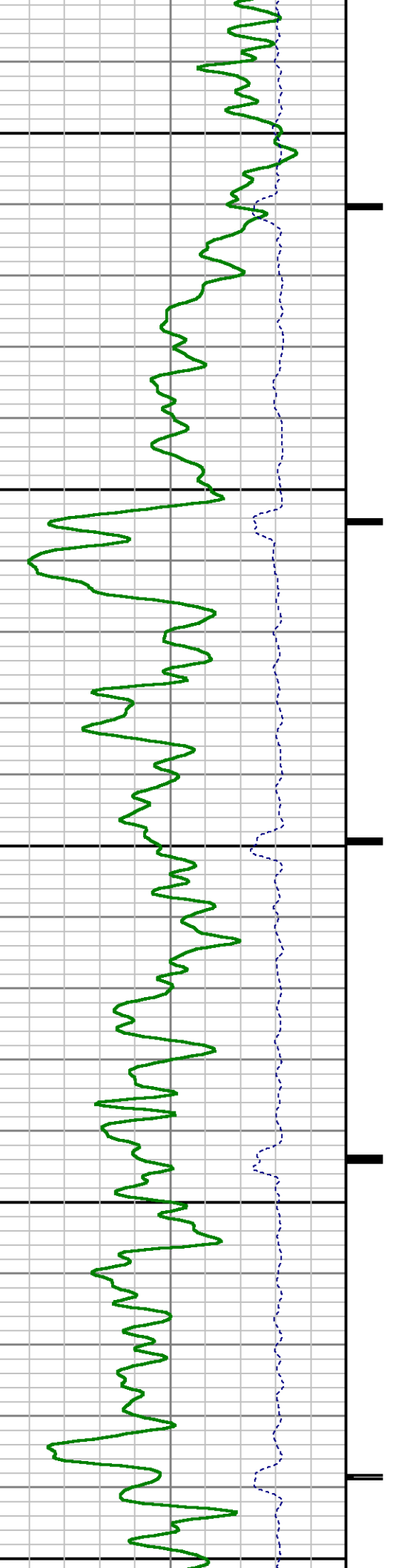


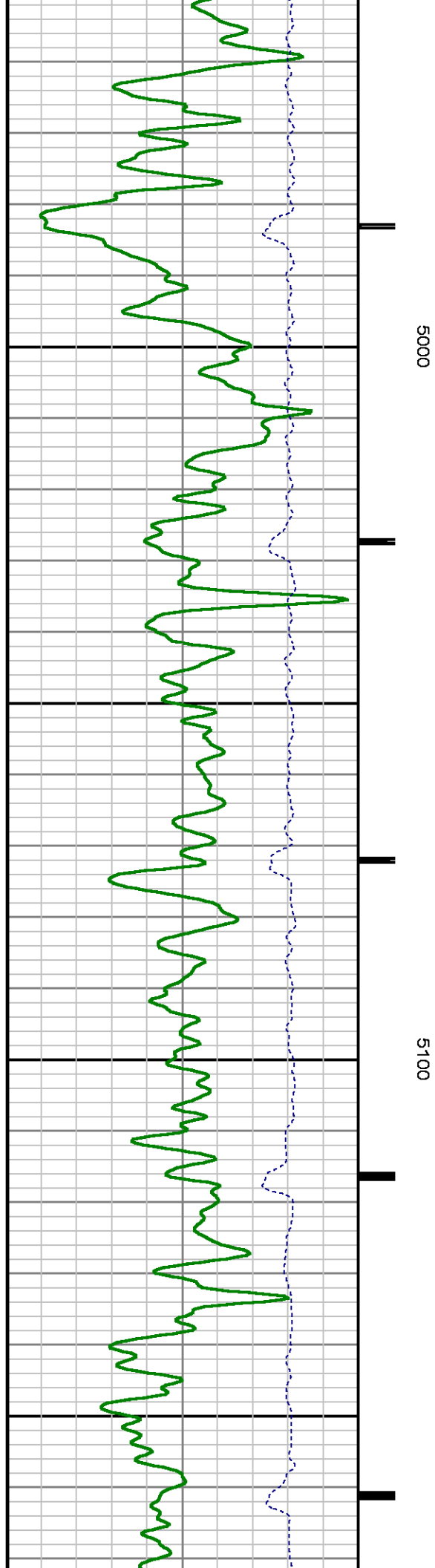
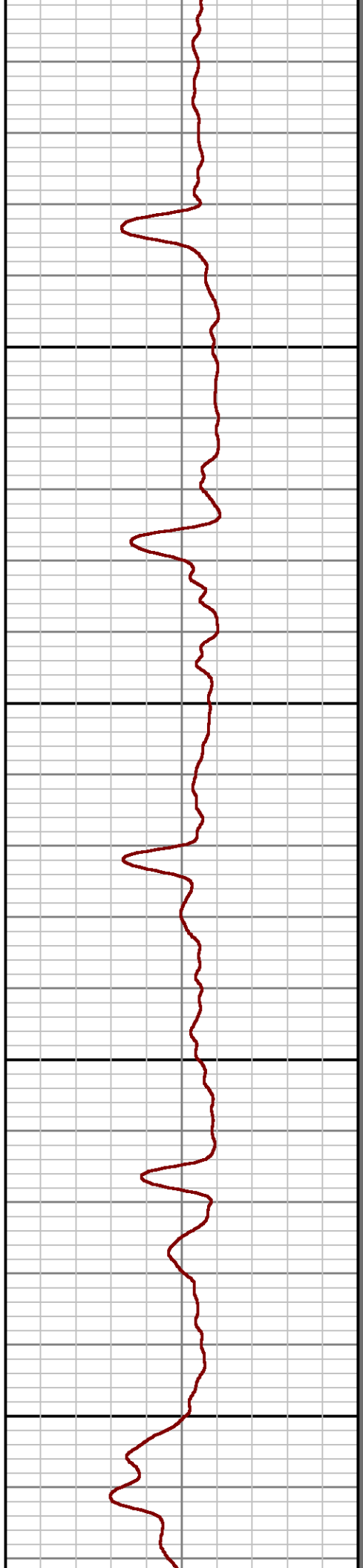
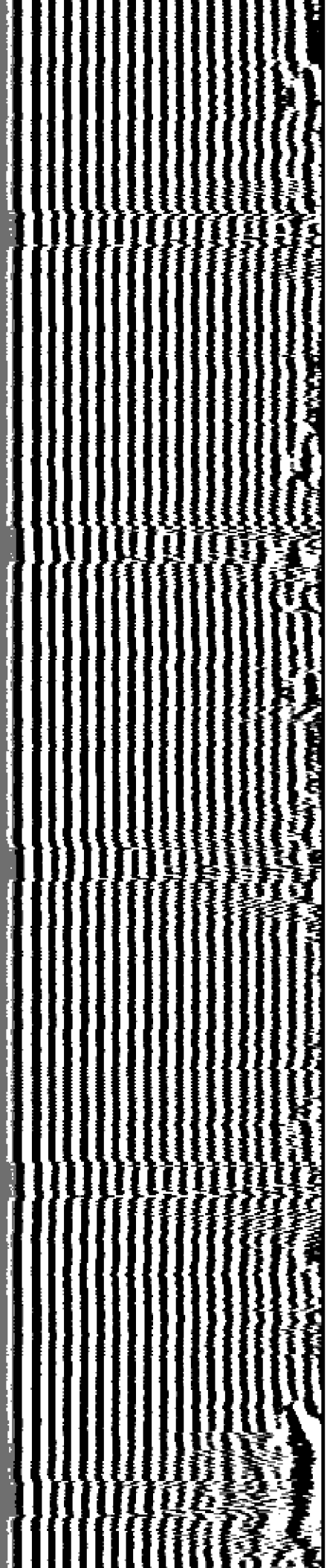


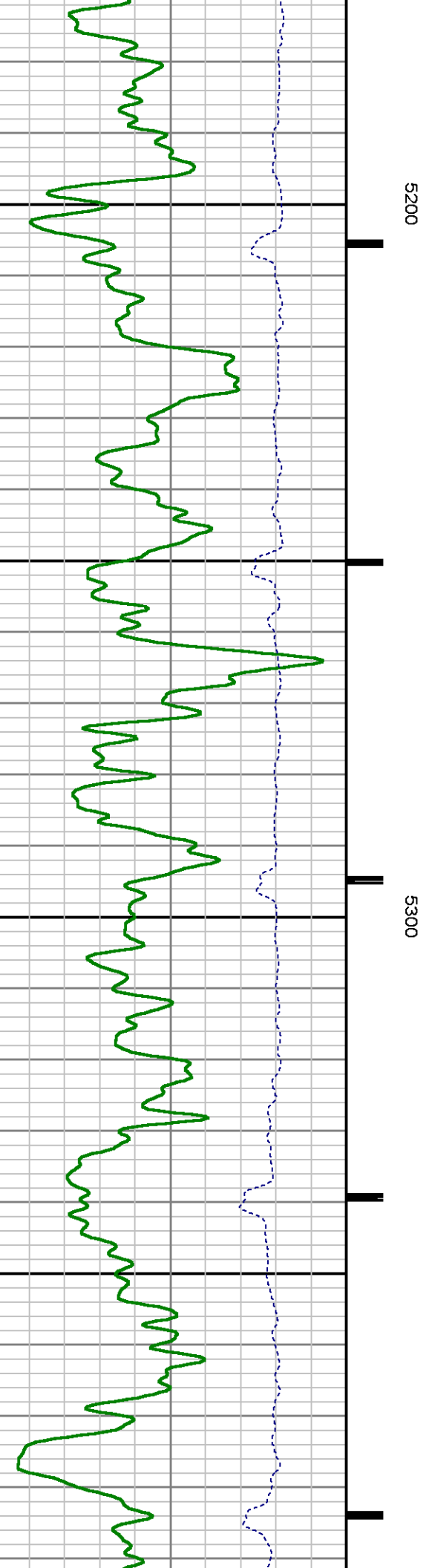
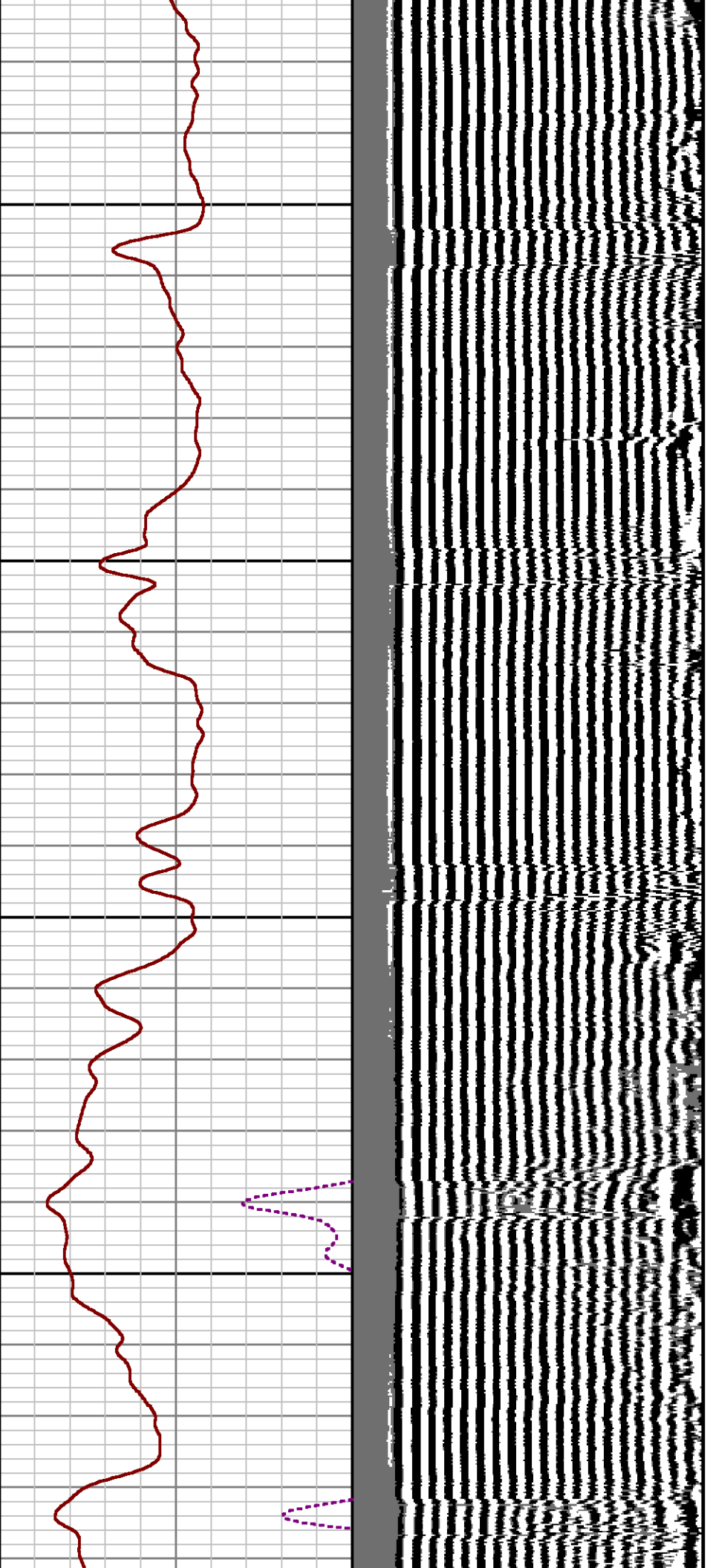


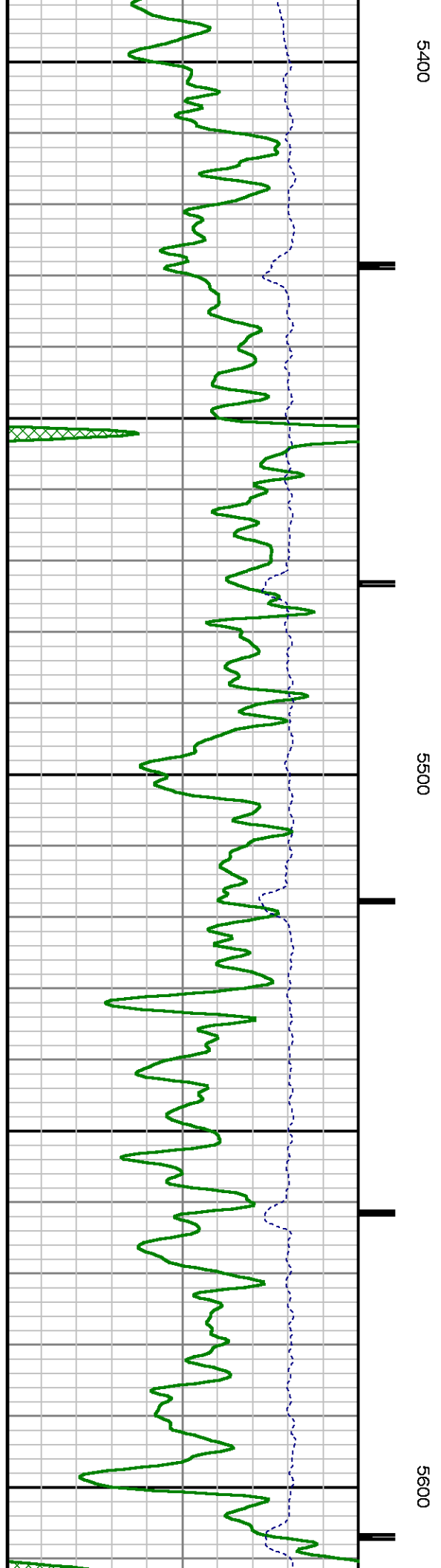
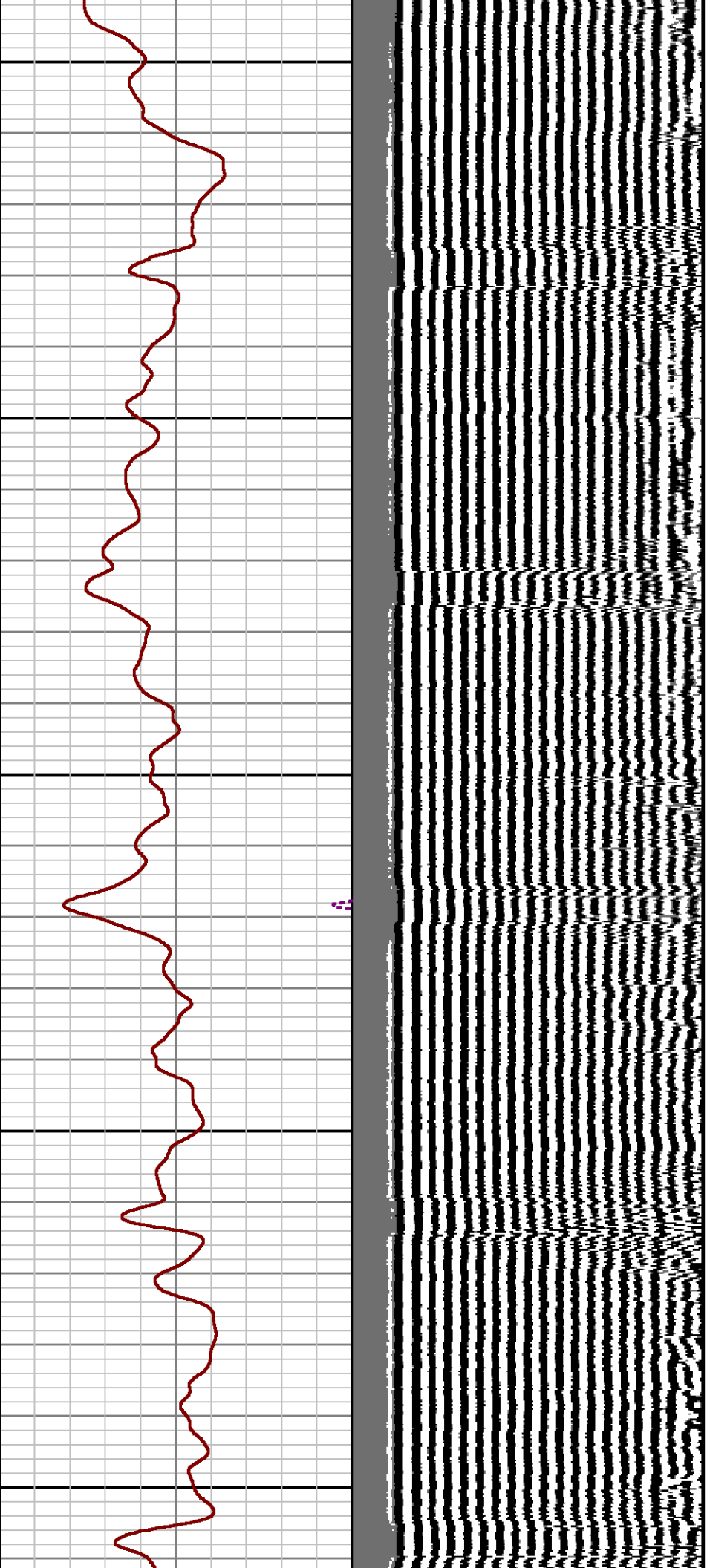
4800

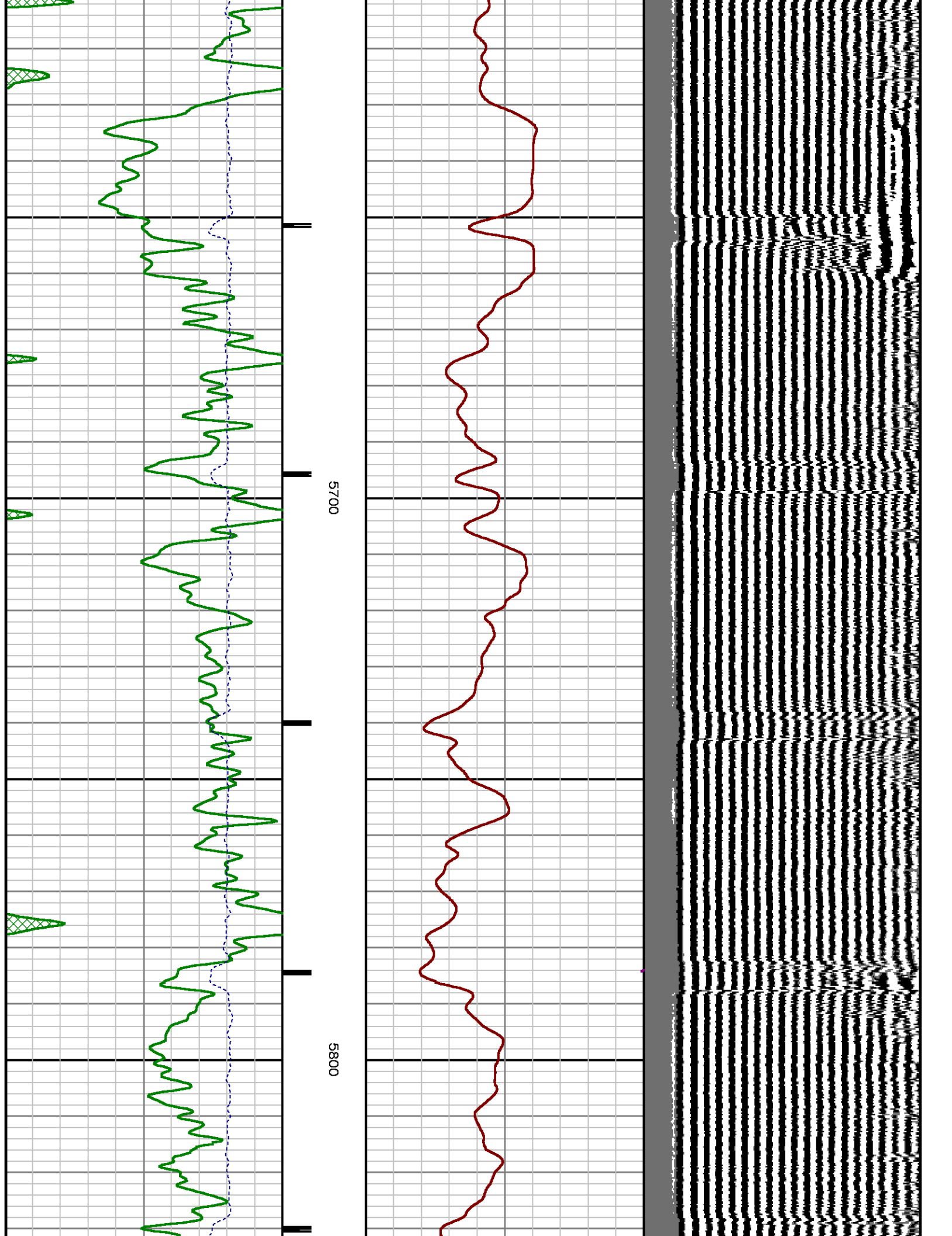
4900

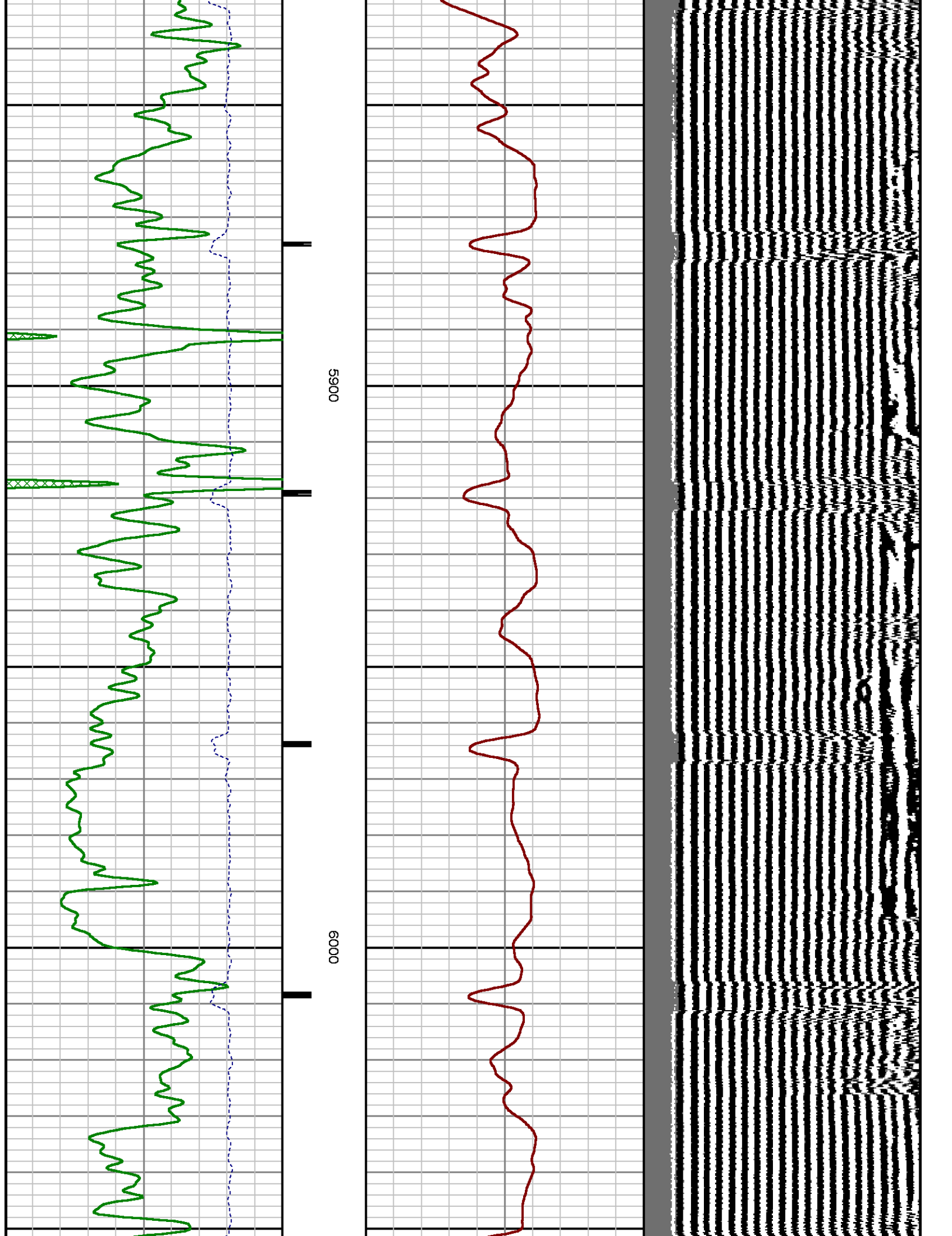


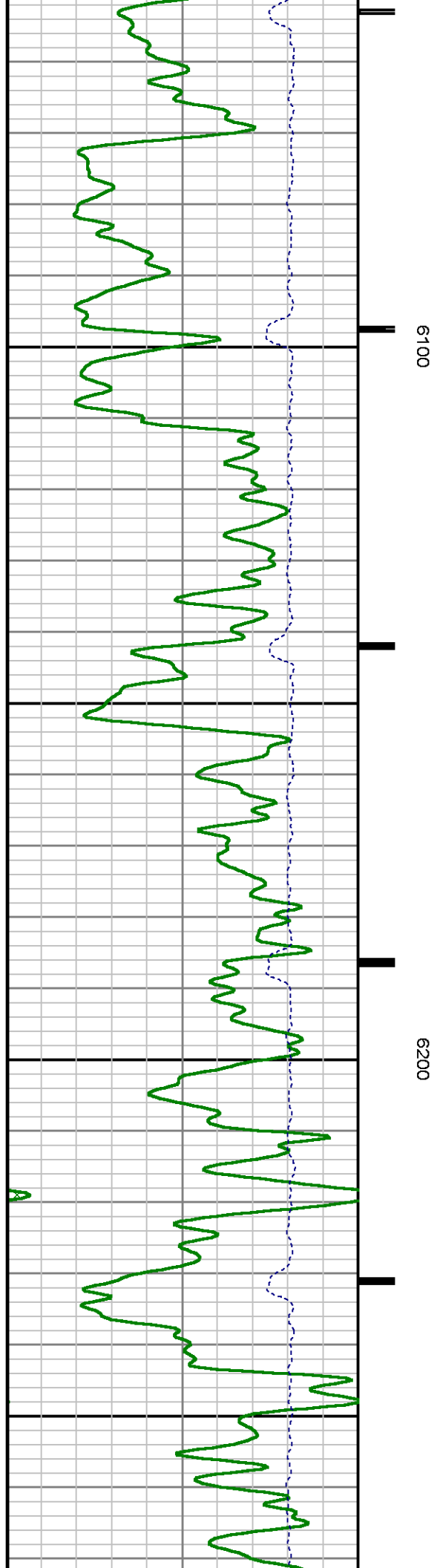
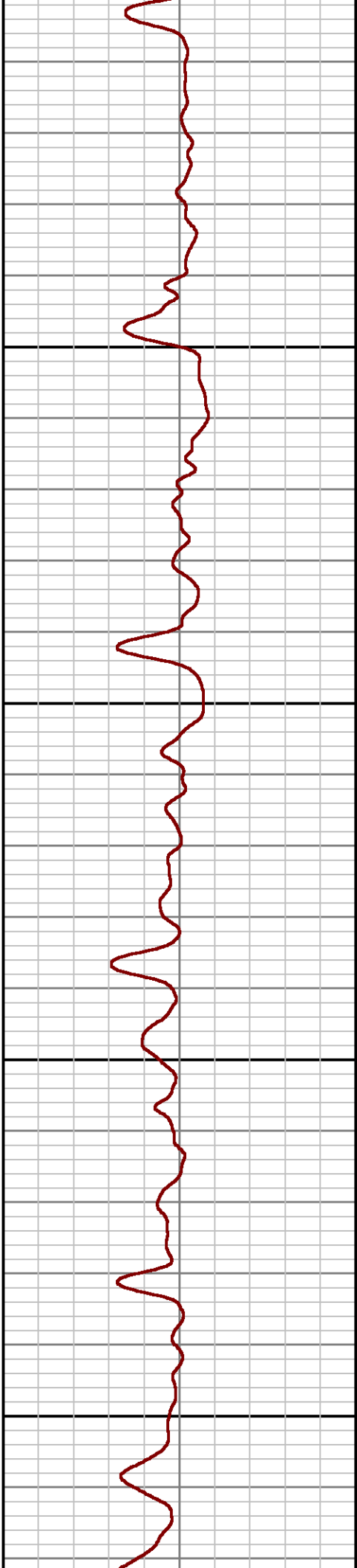
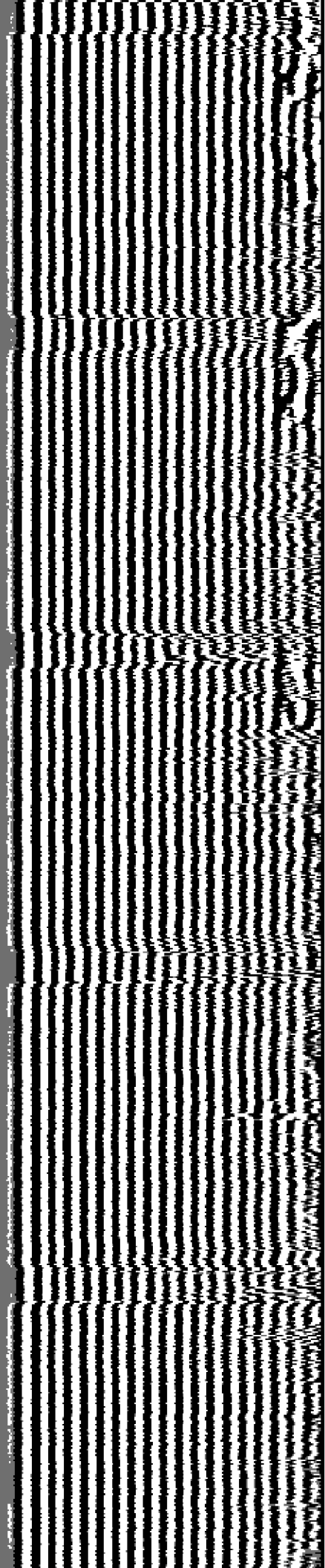


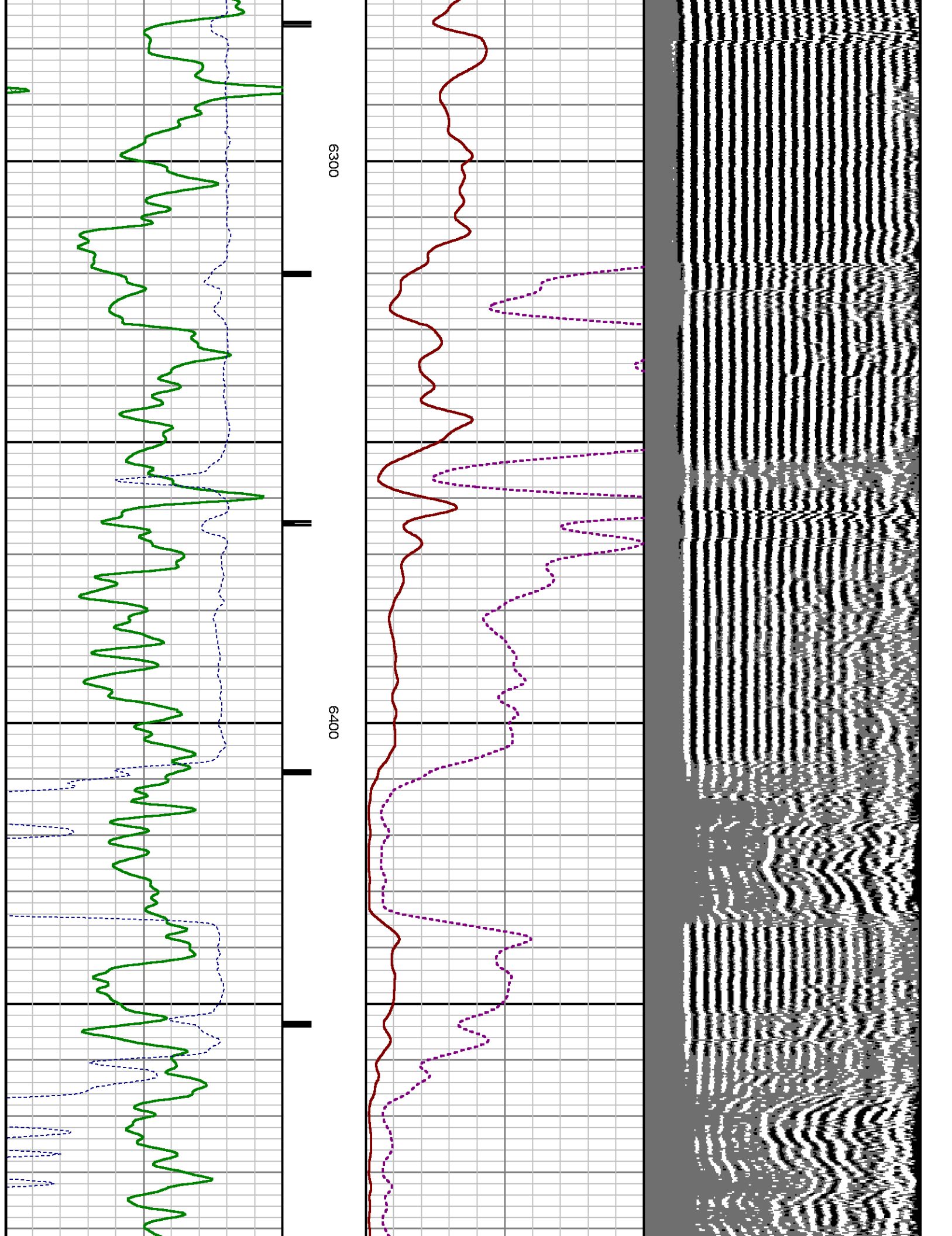


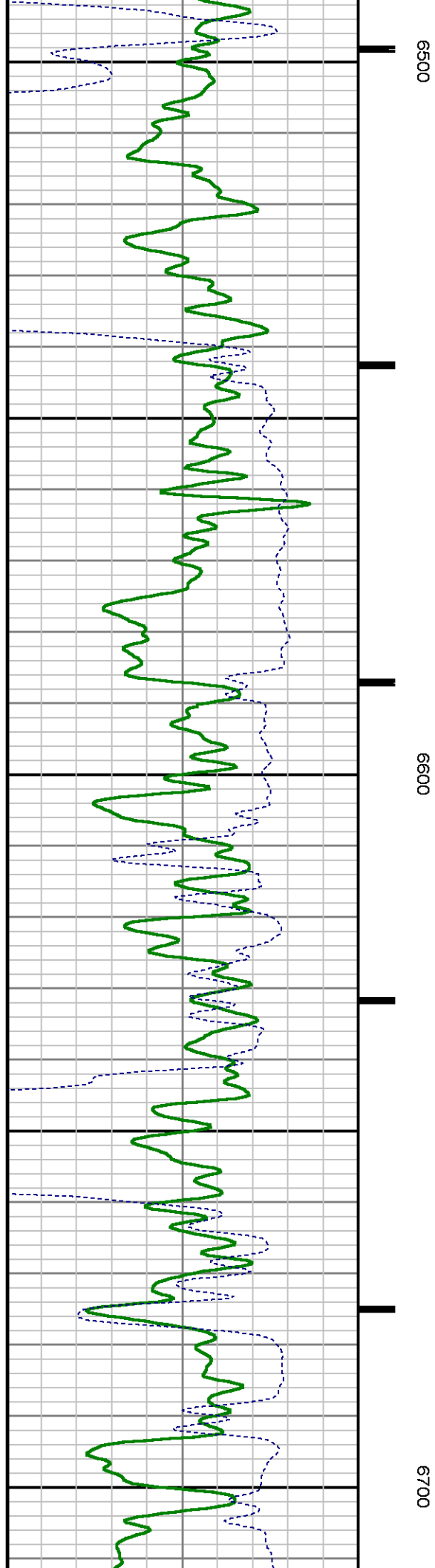
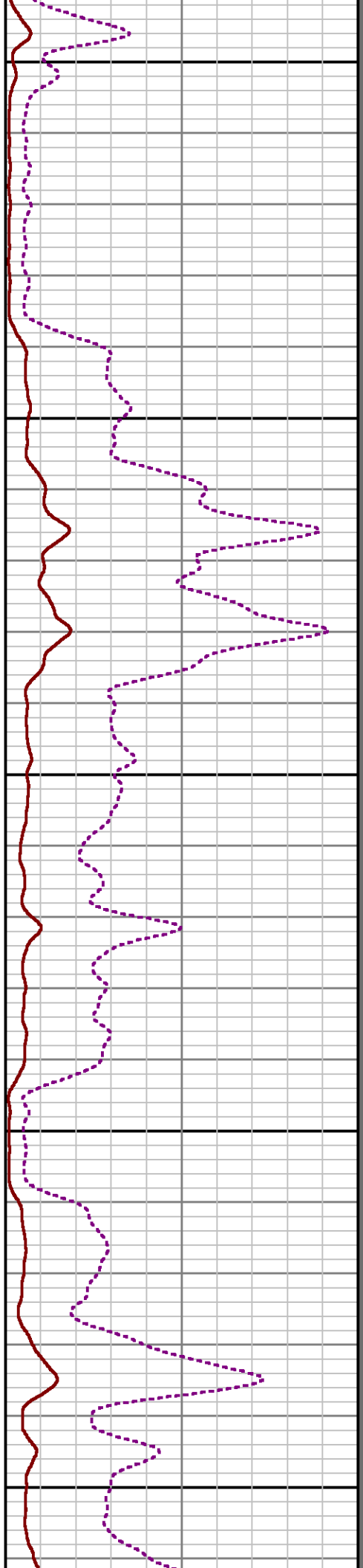
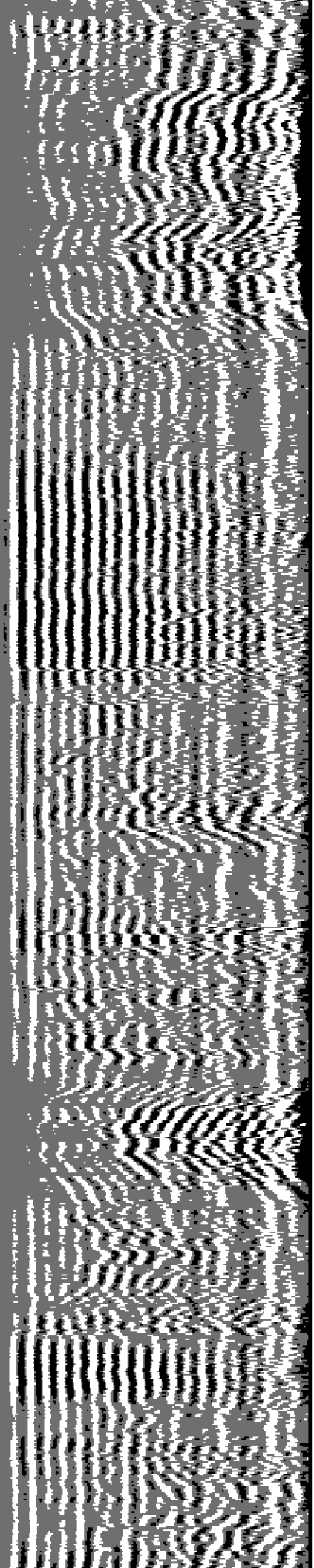


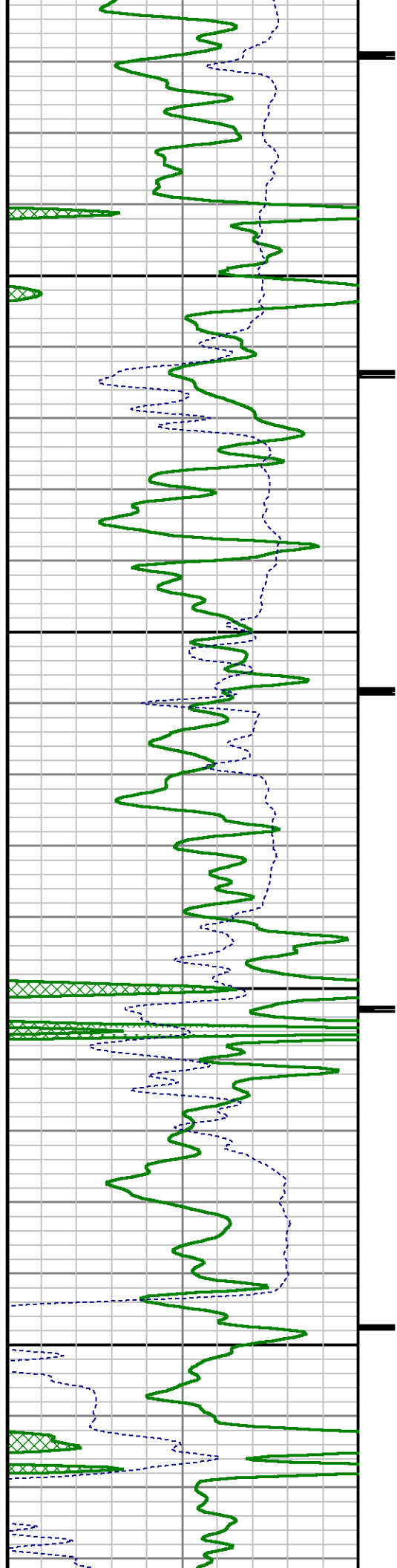






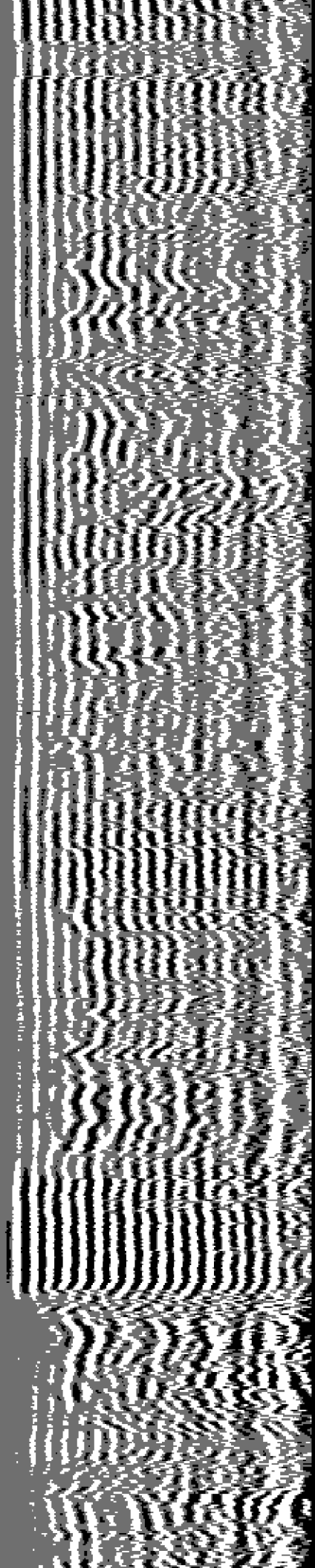
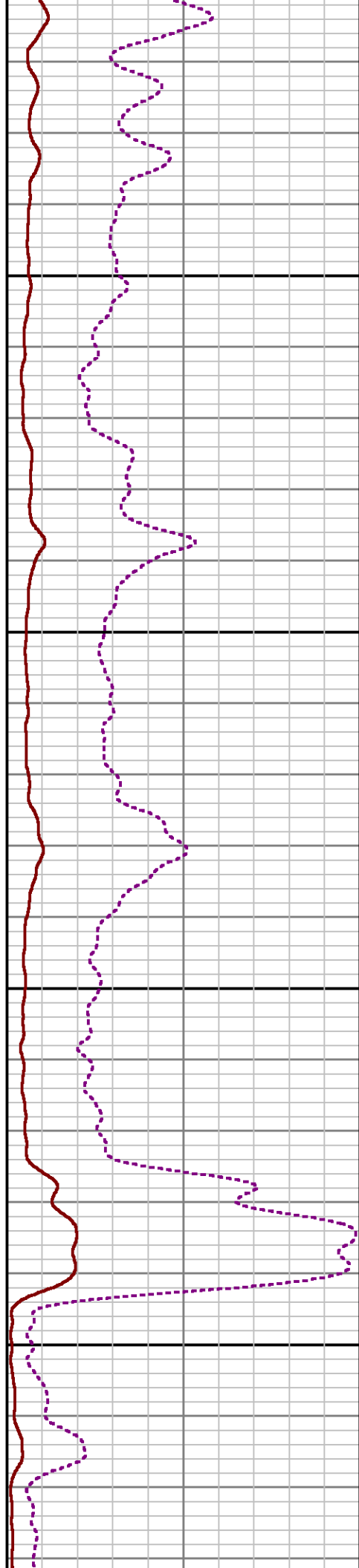


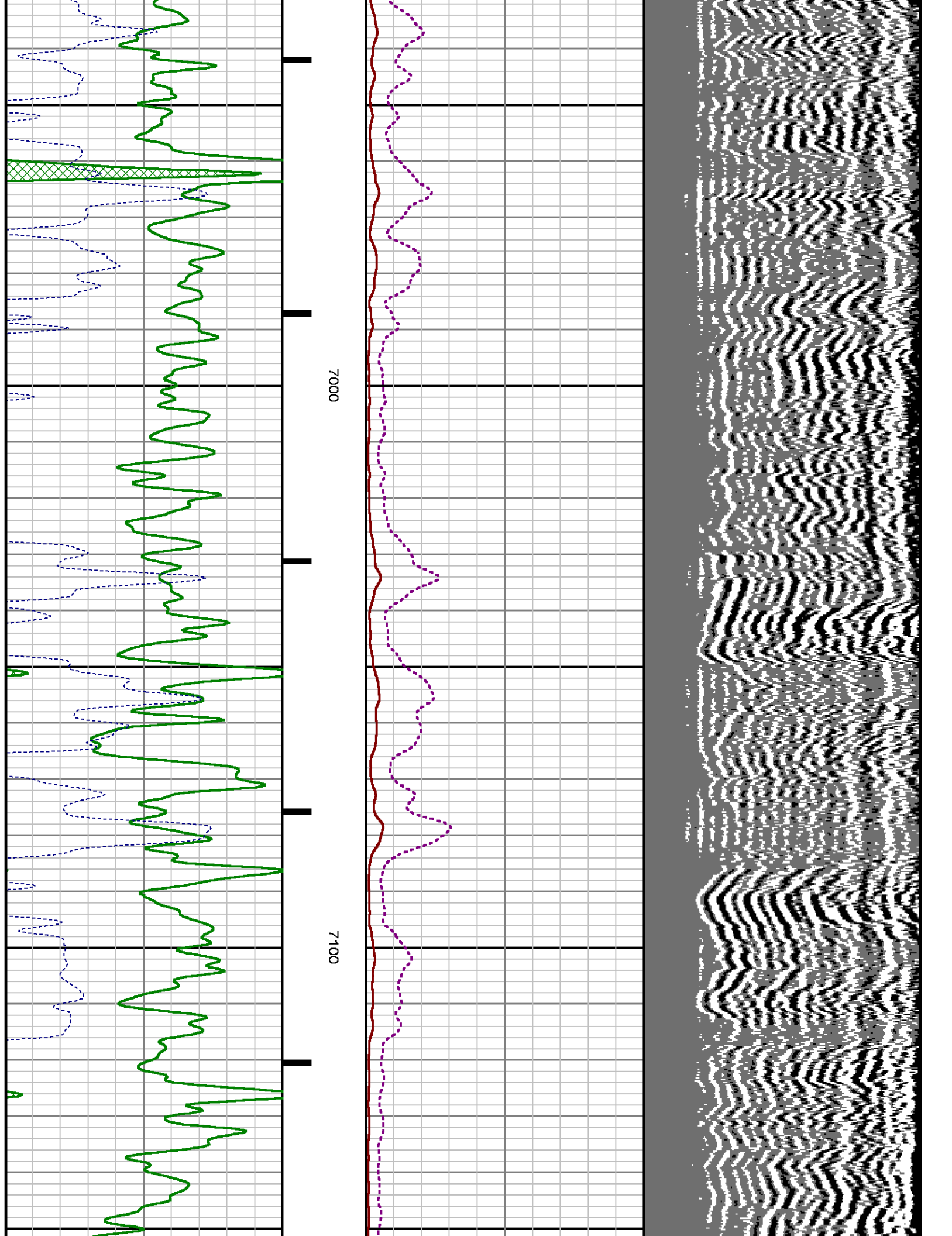


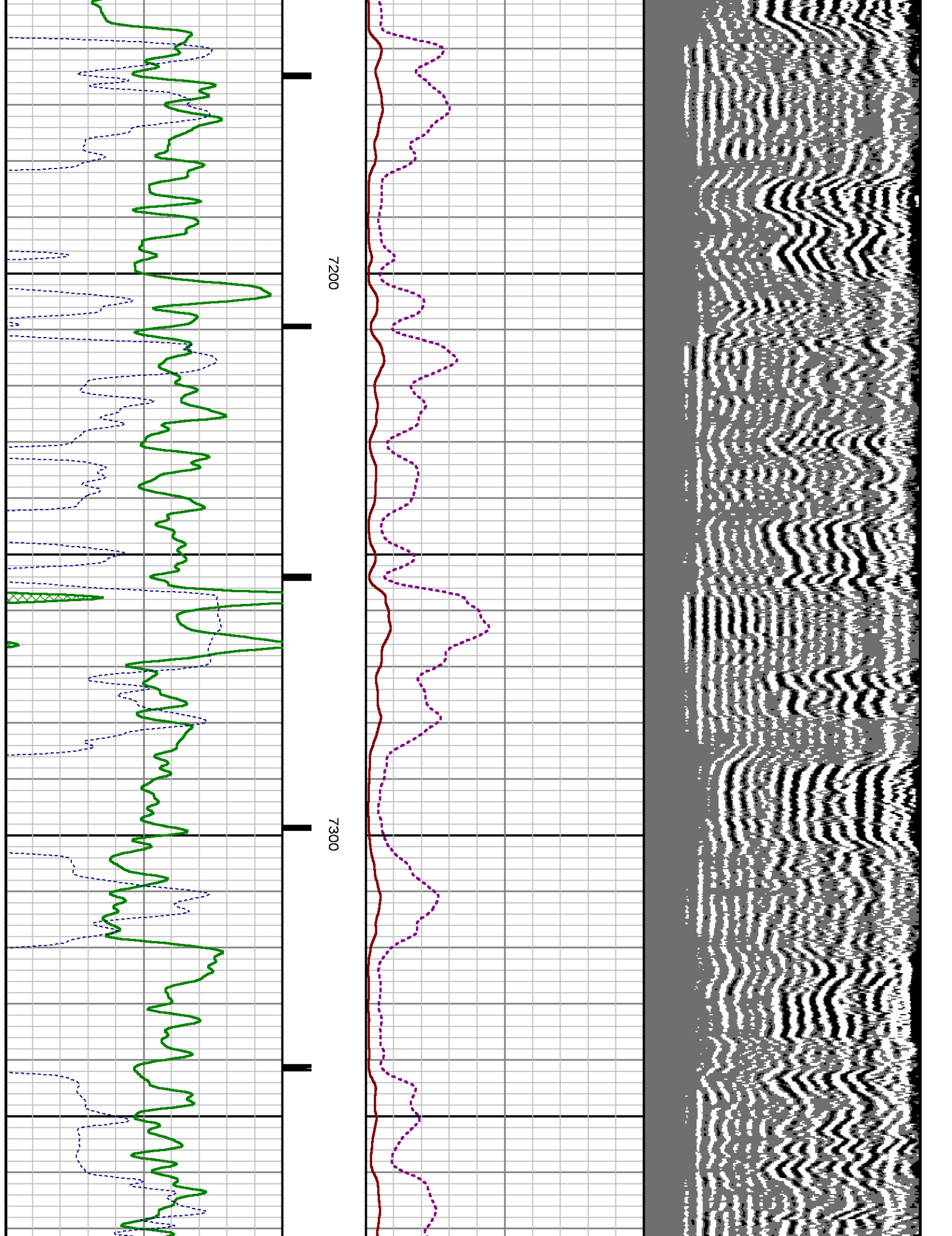


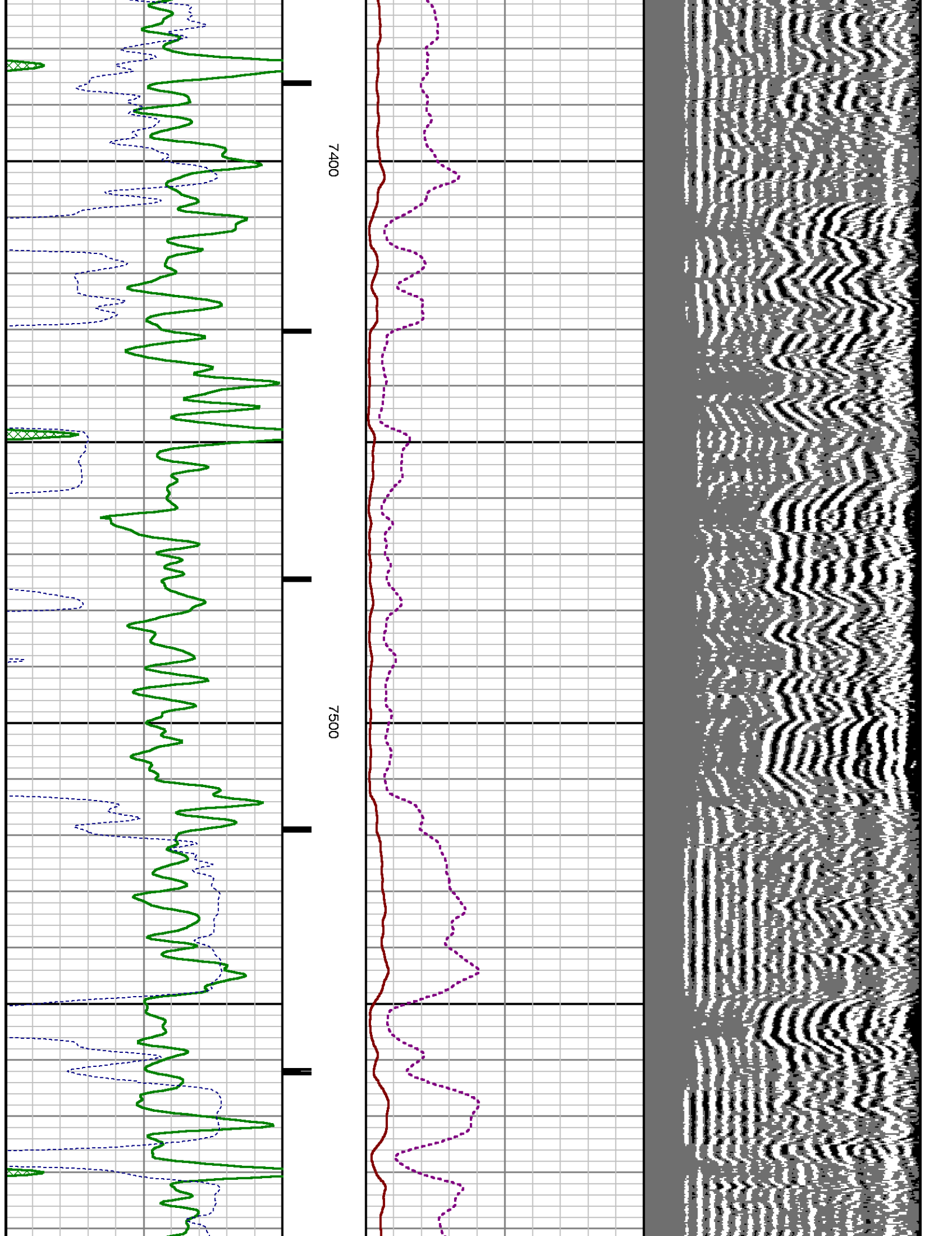
0089

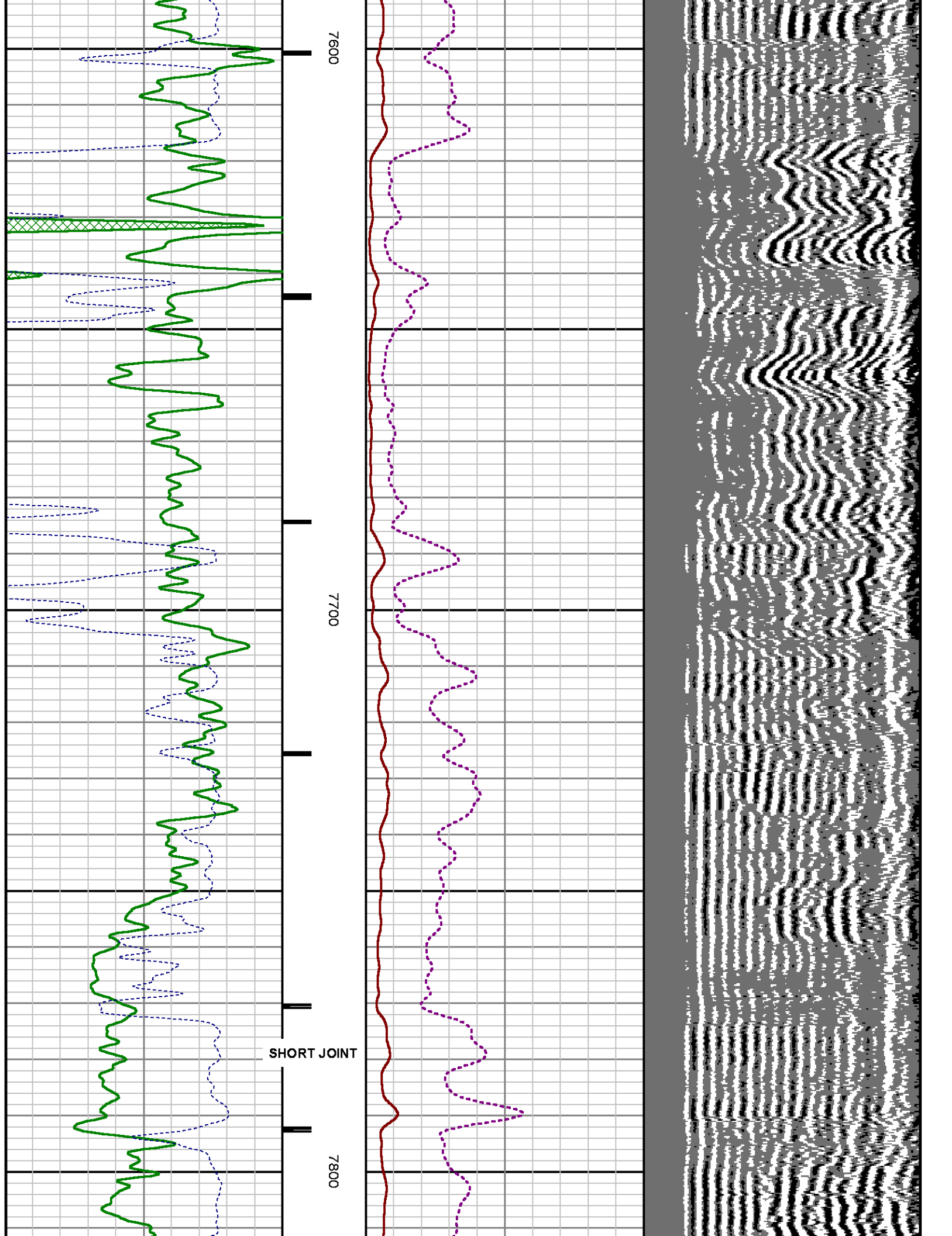
0069

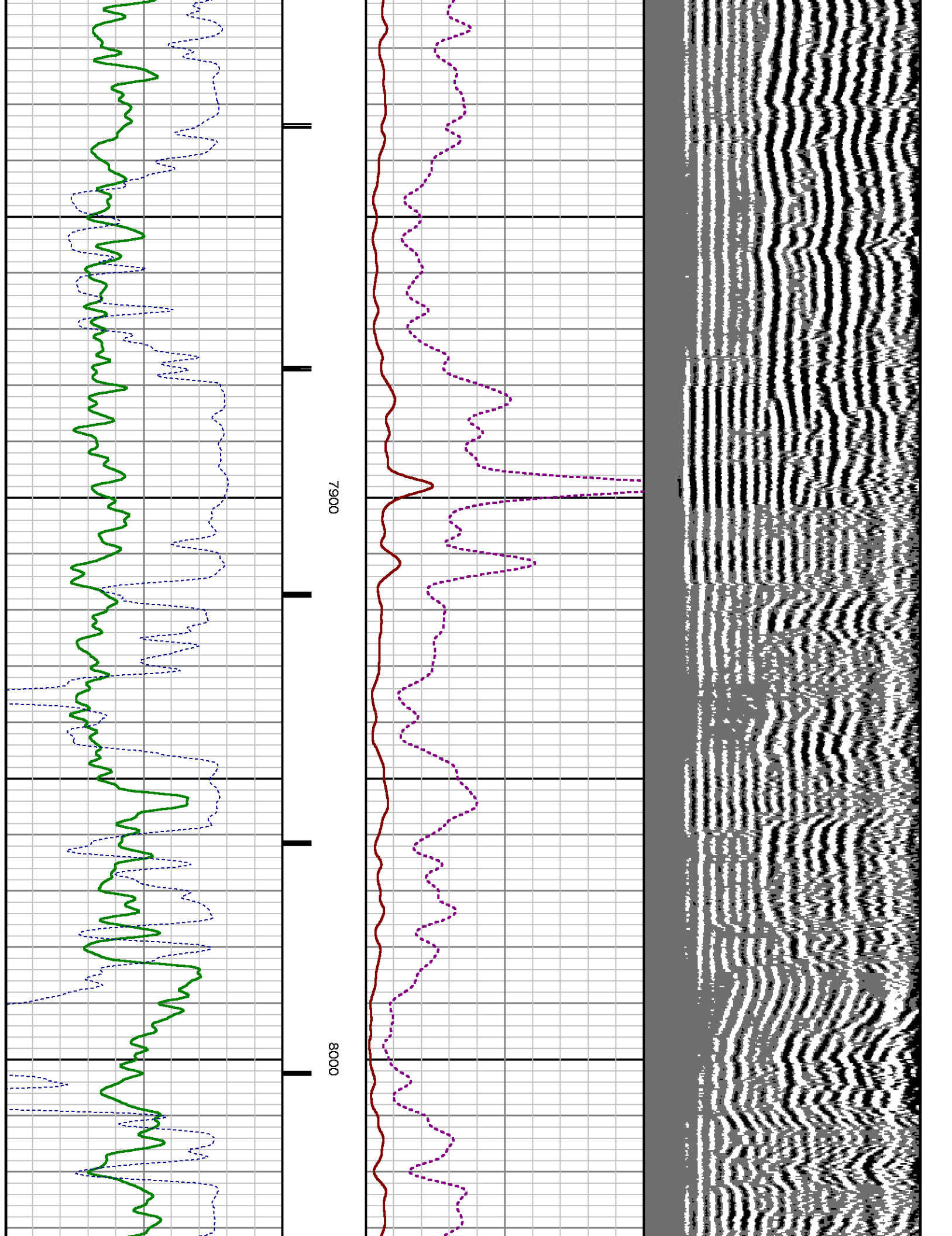


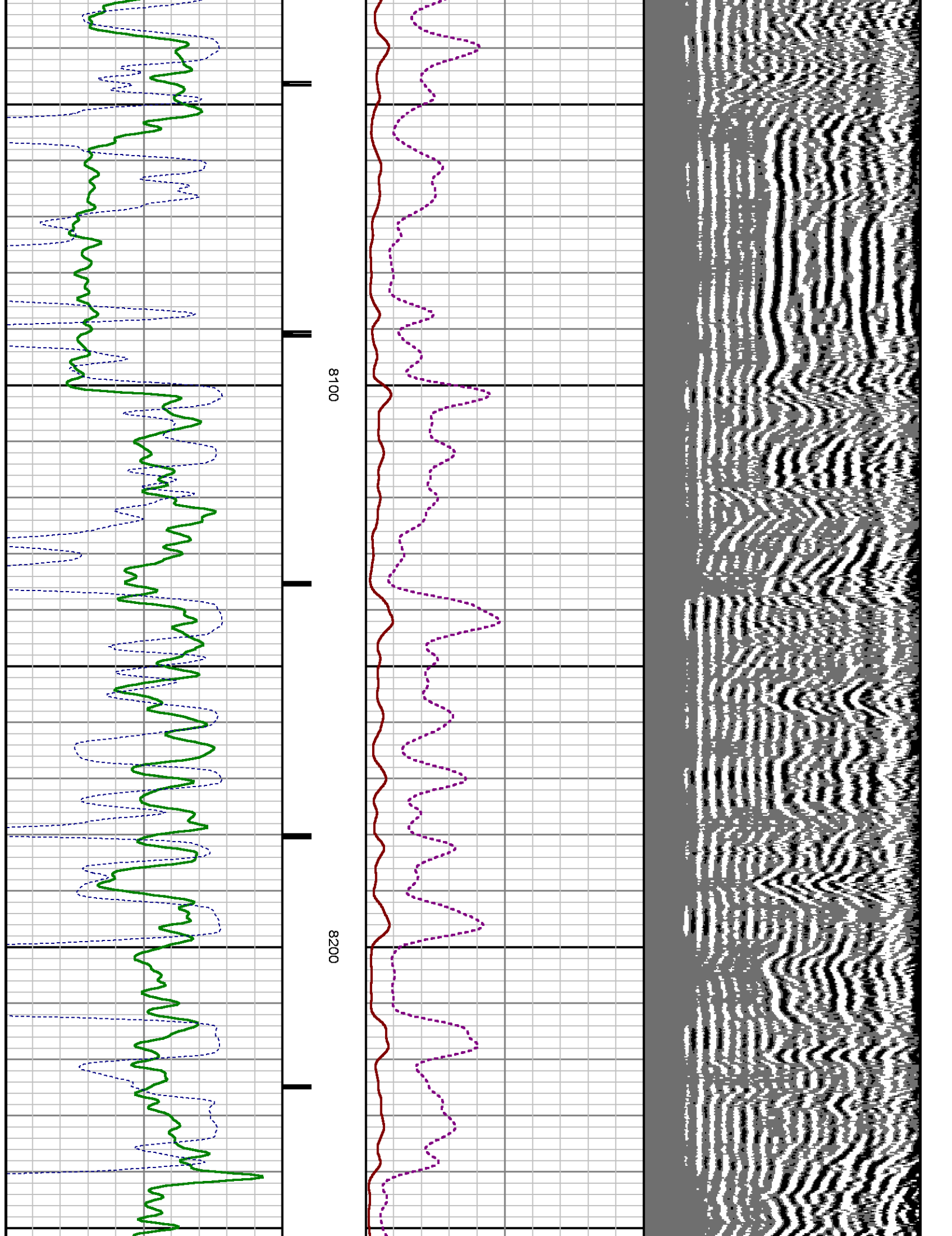


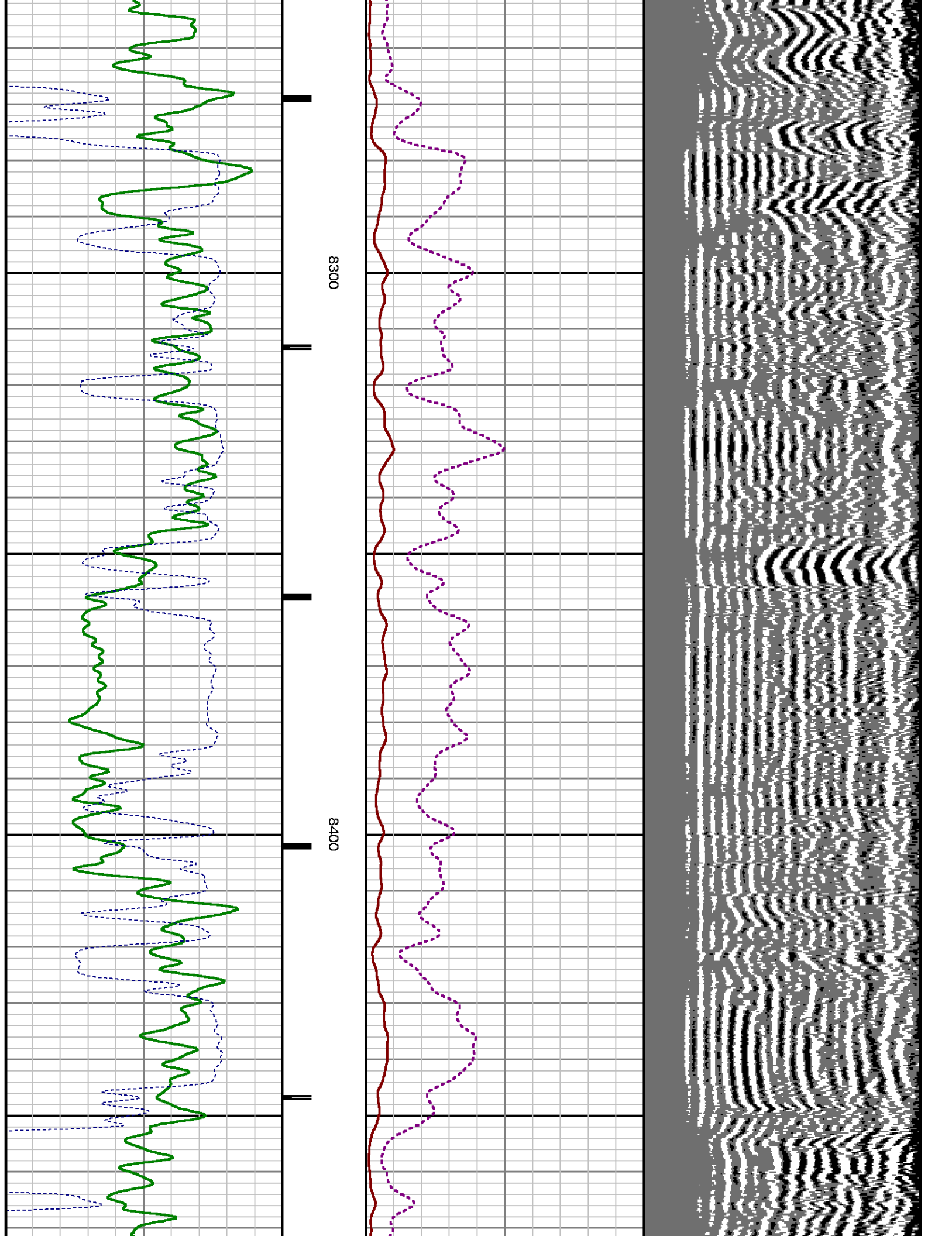


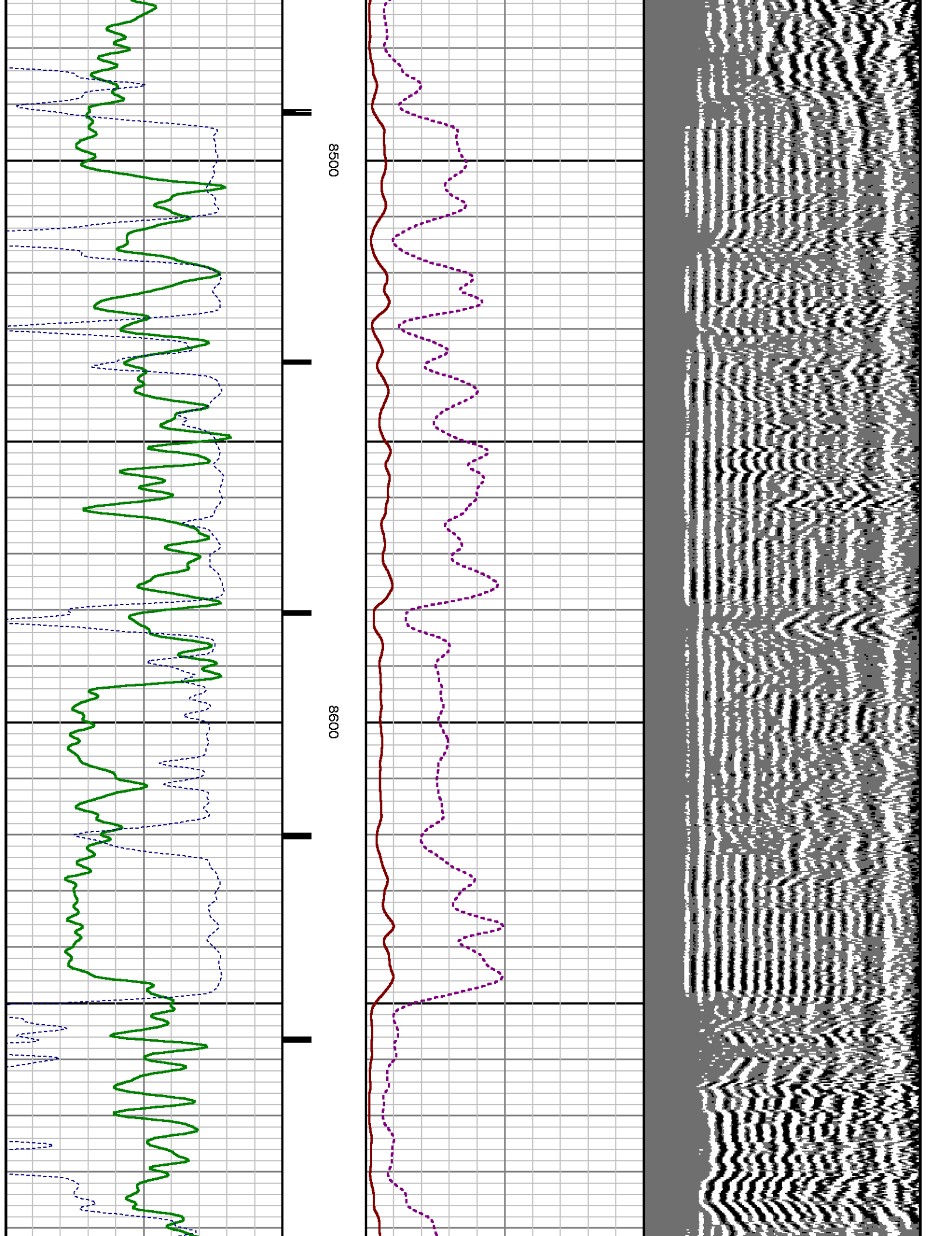


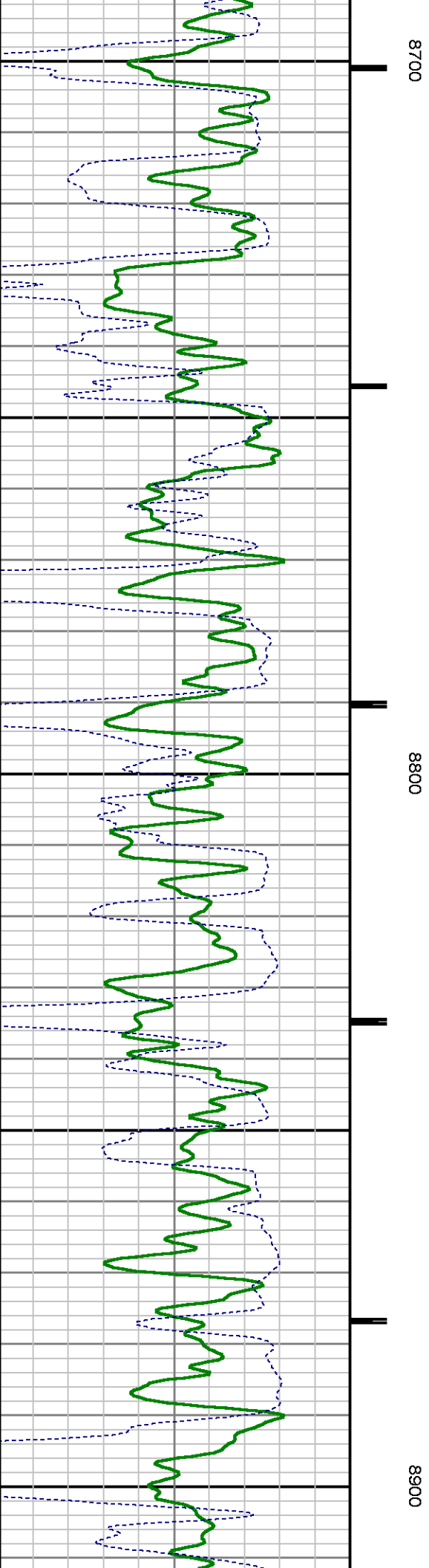
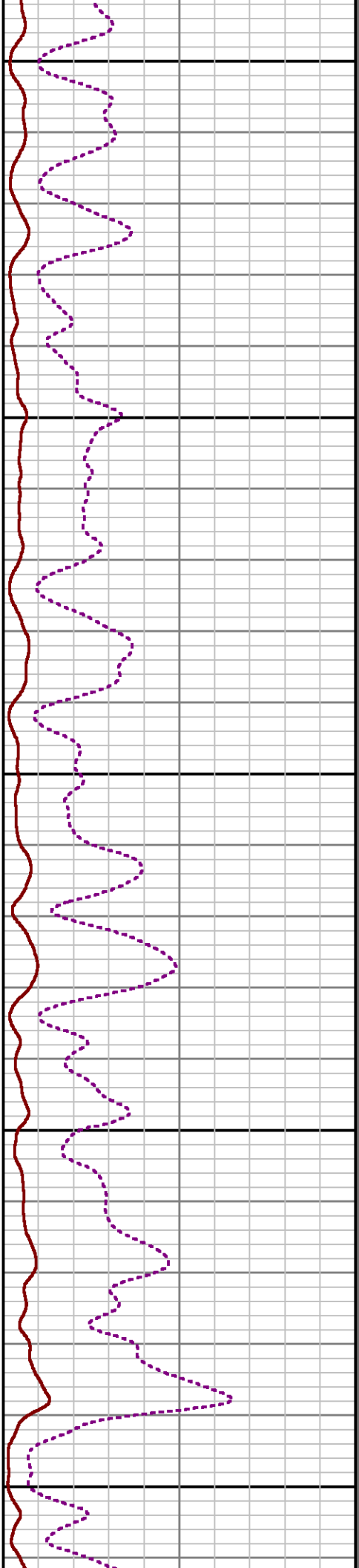
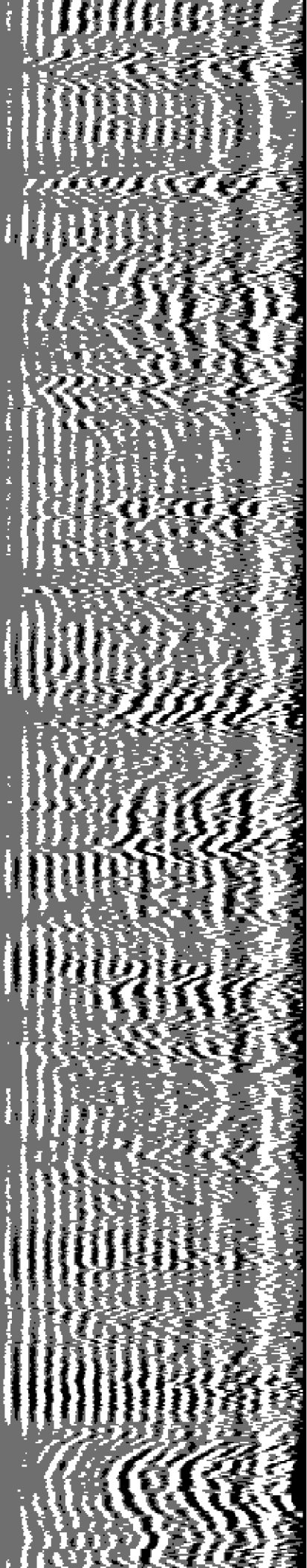


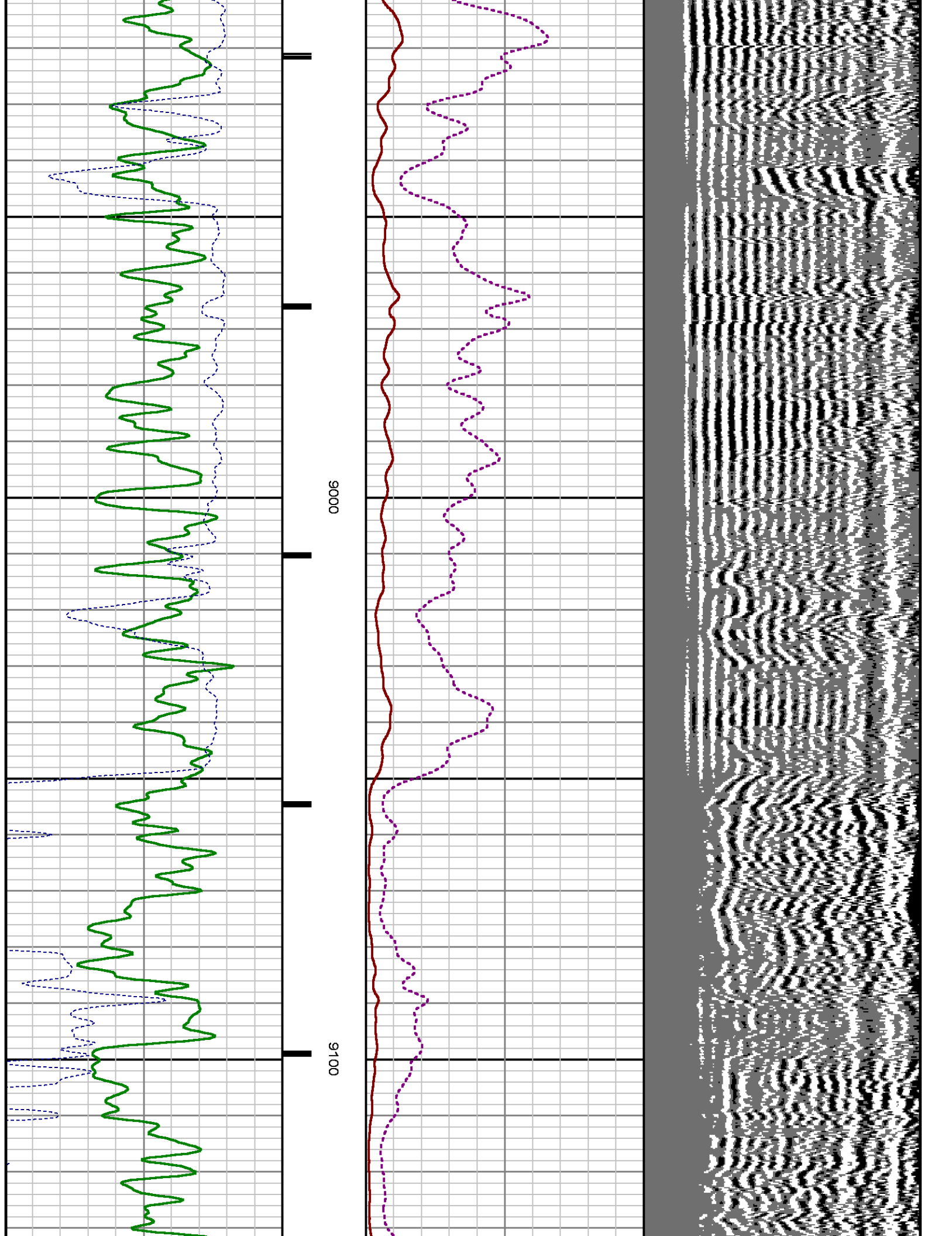


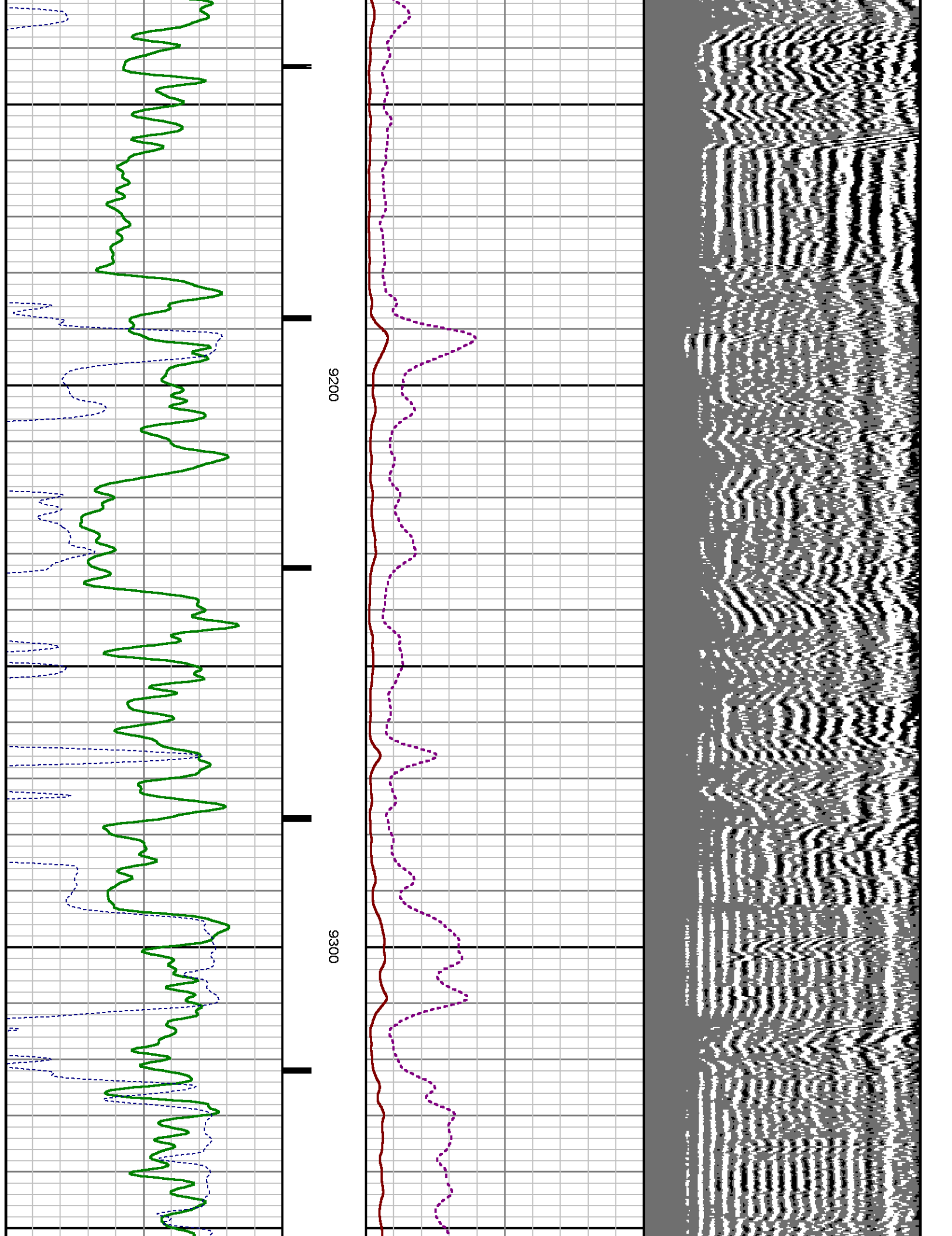


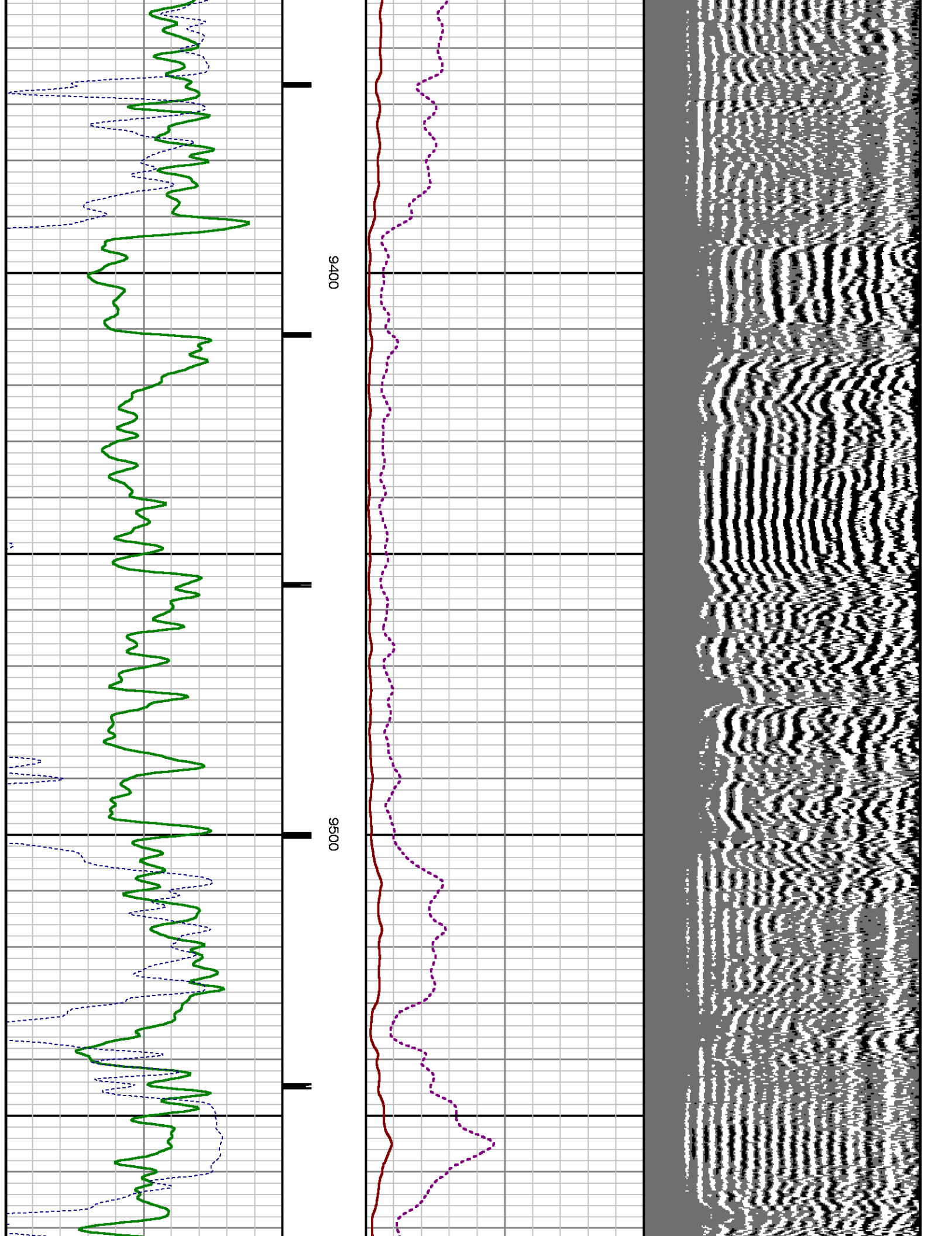


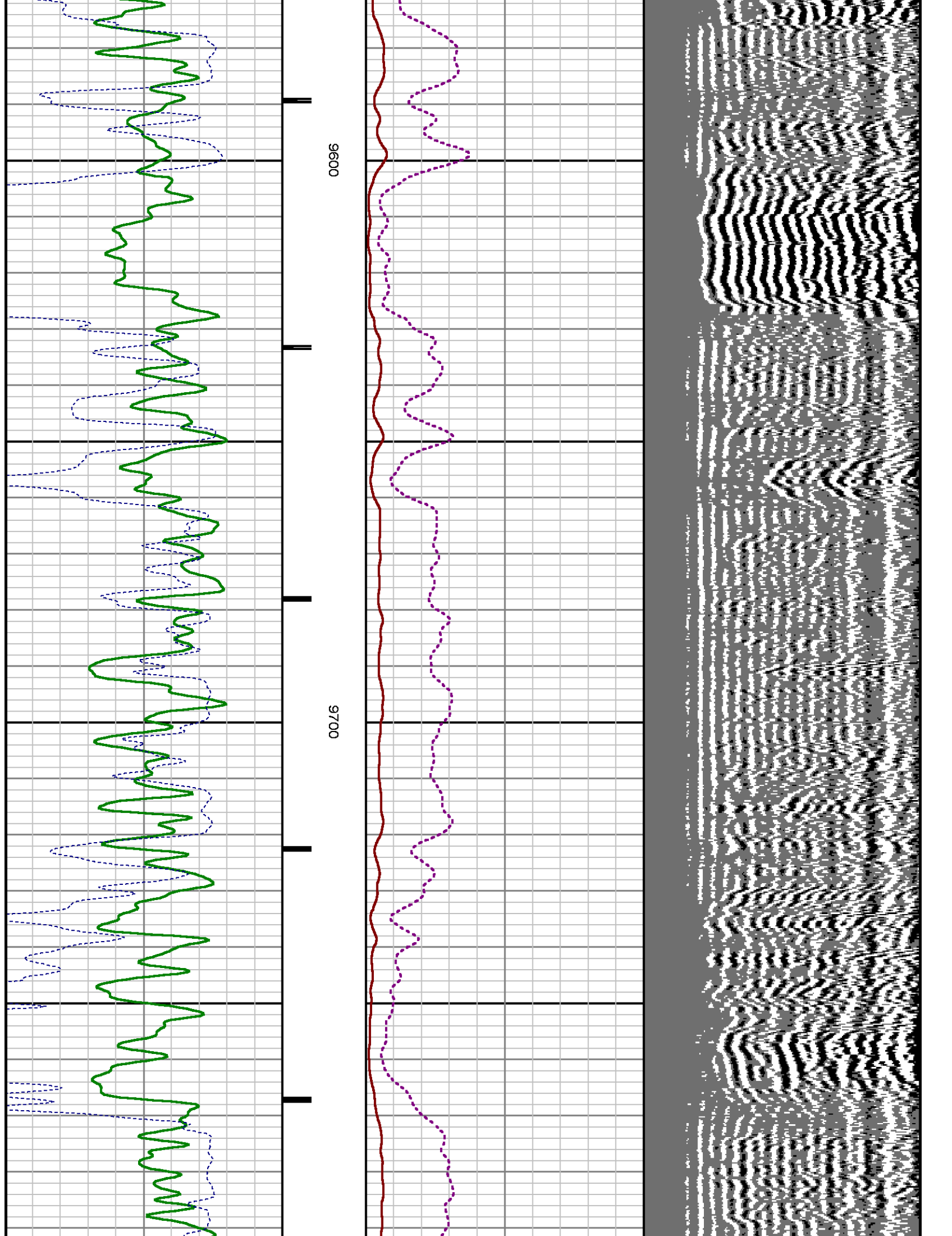


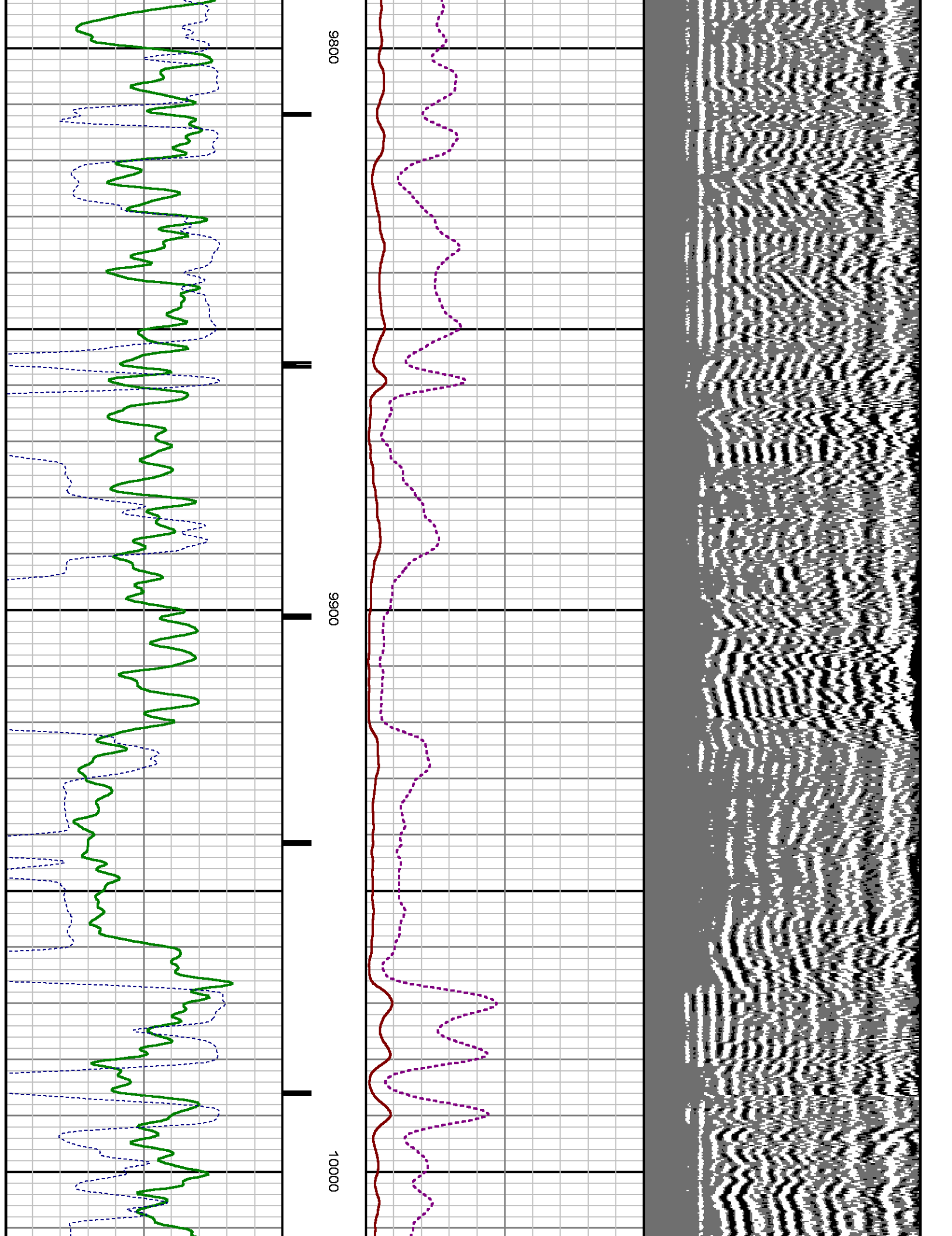


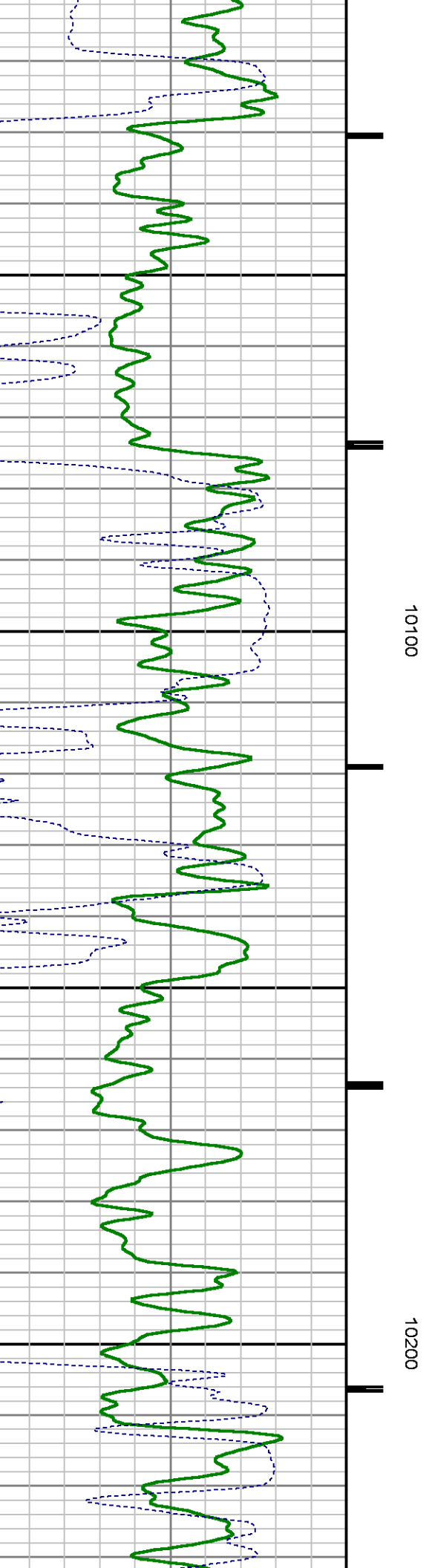
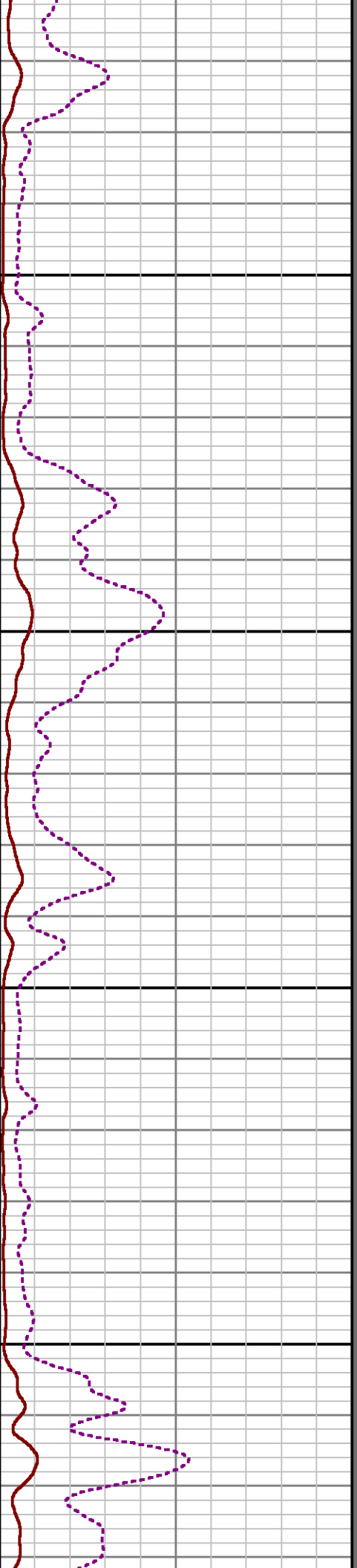
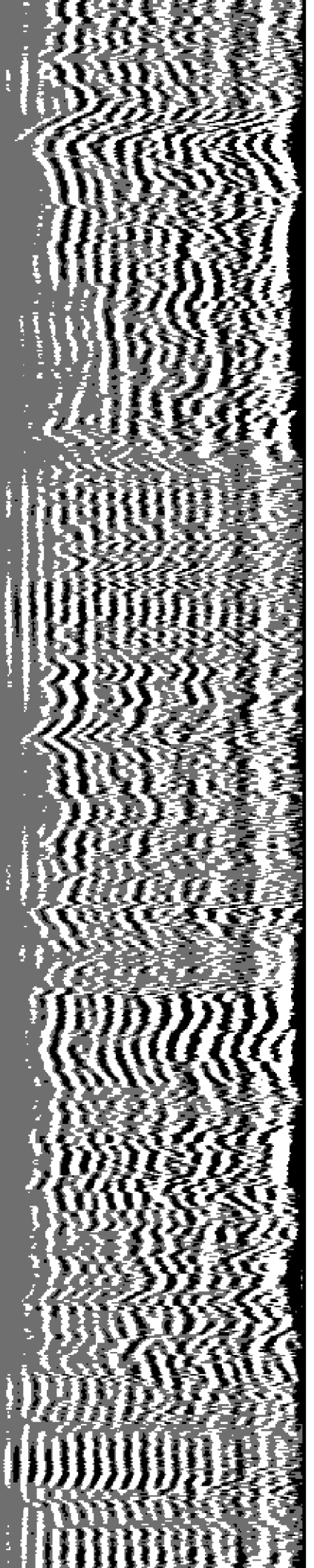


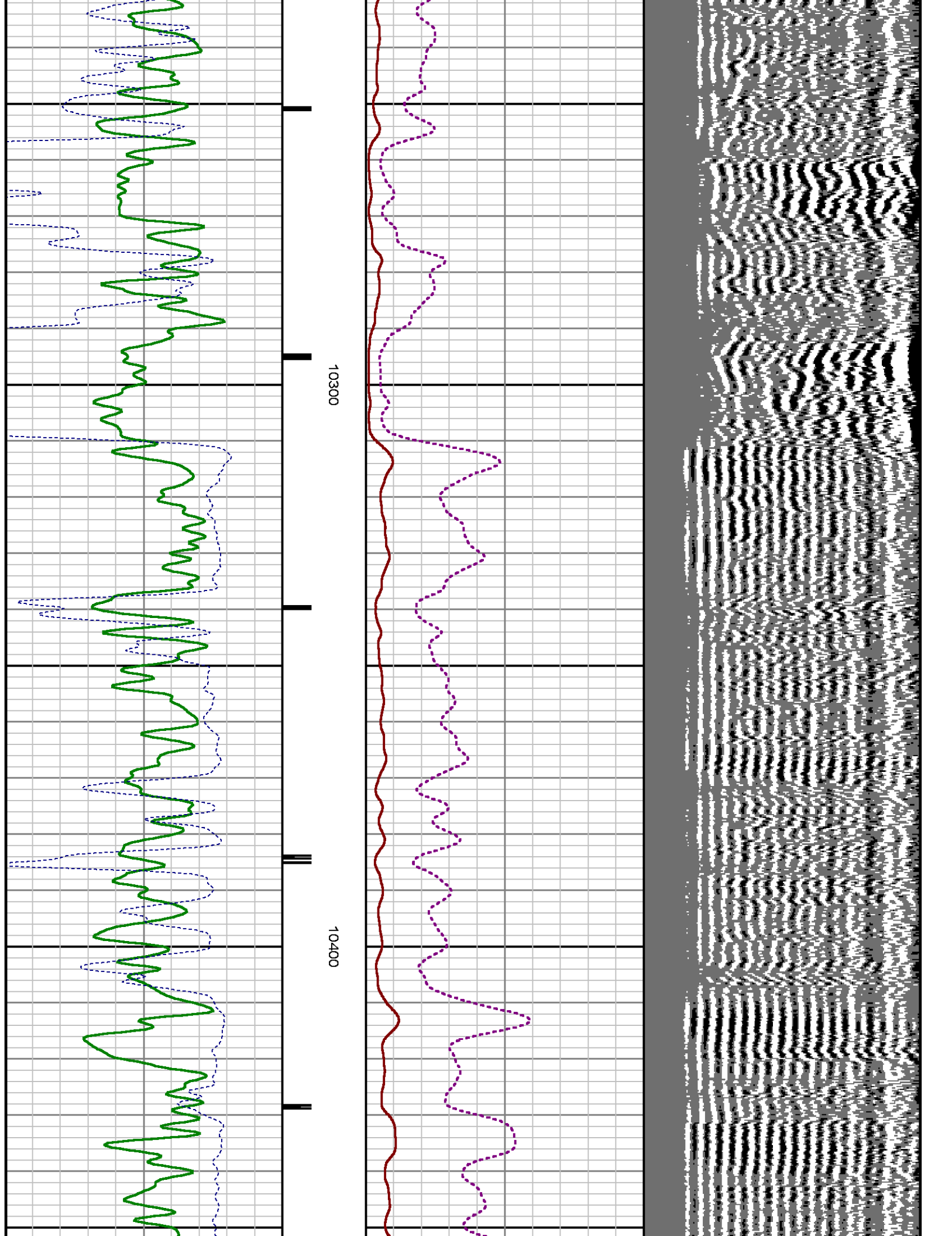


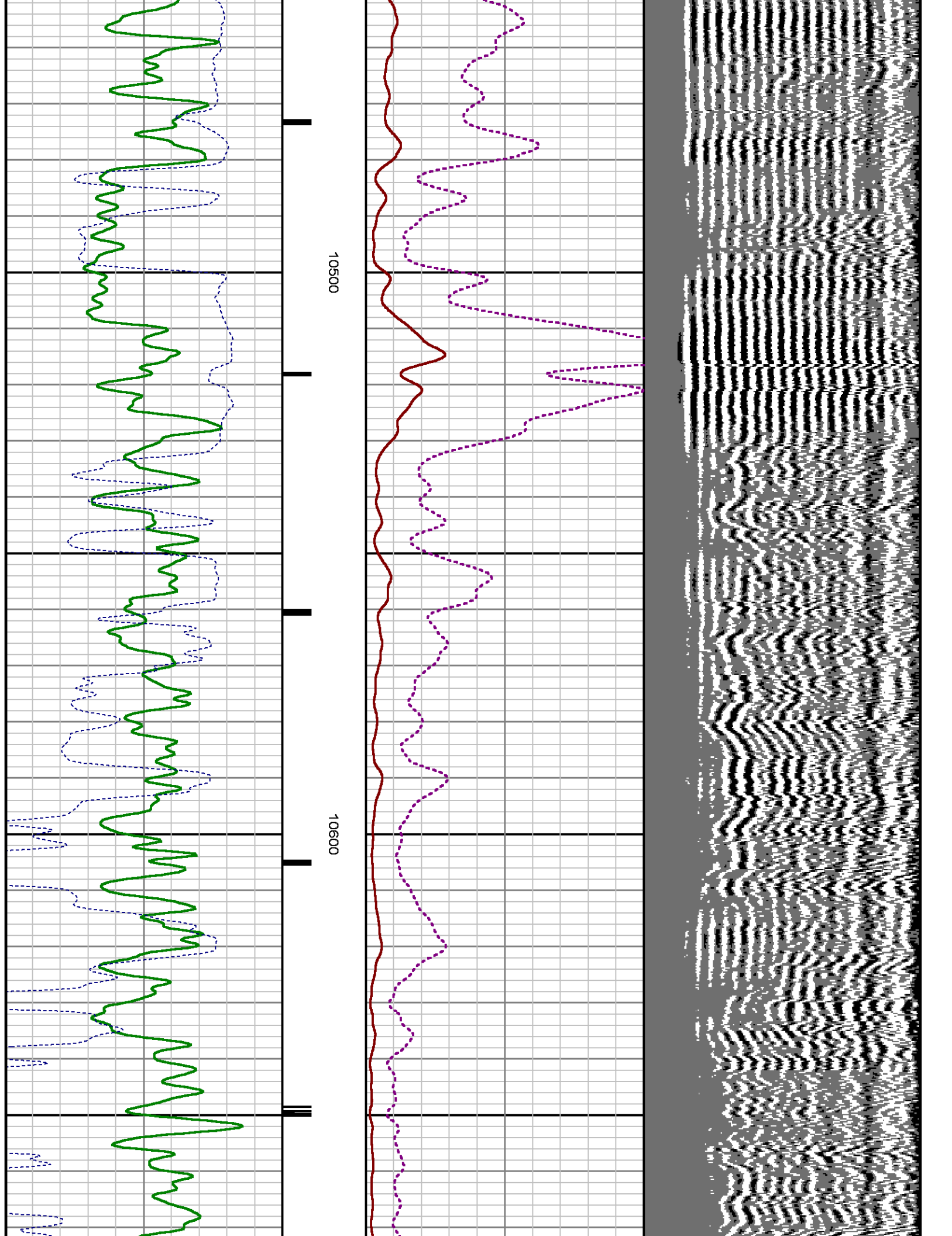


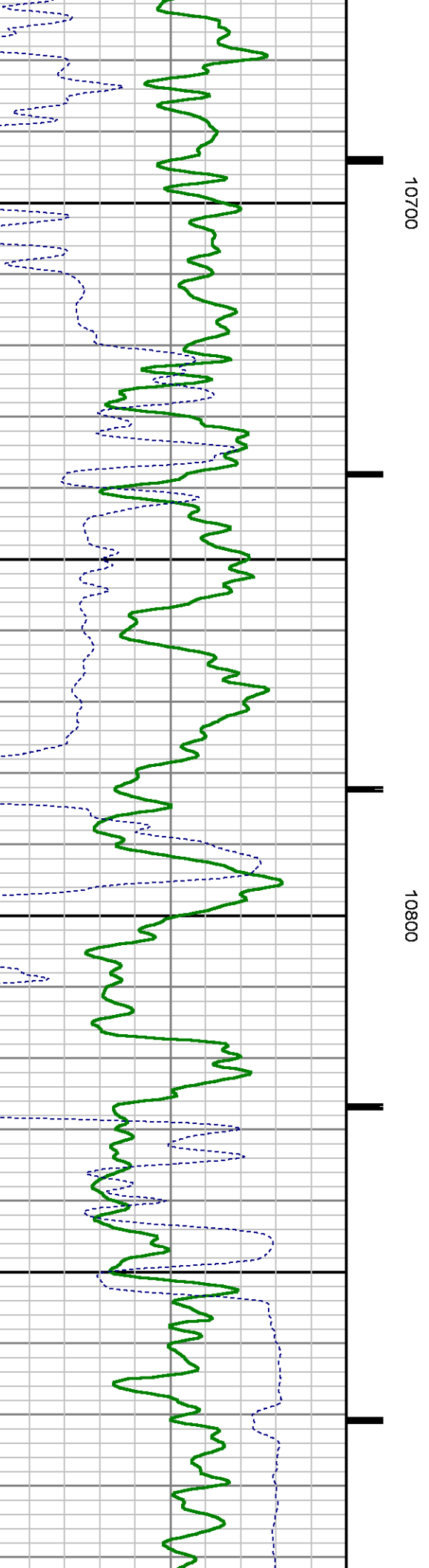
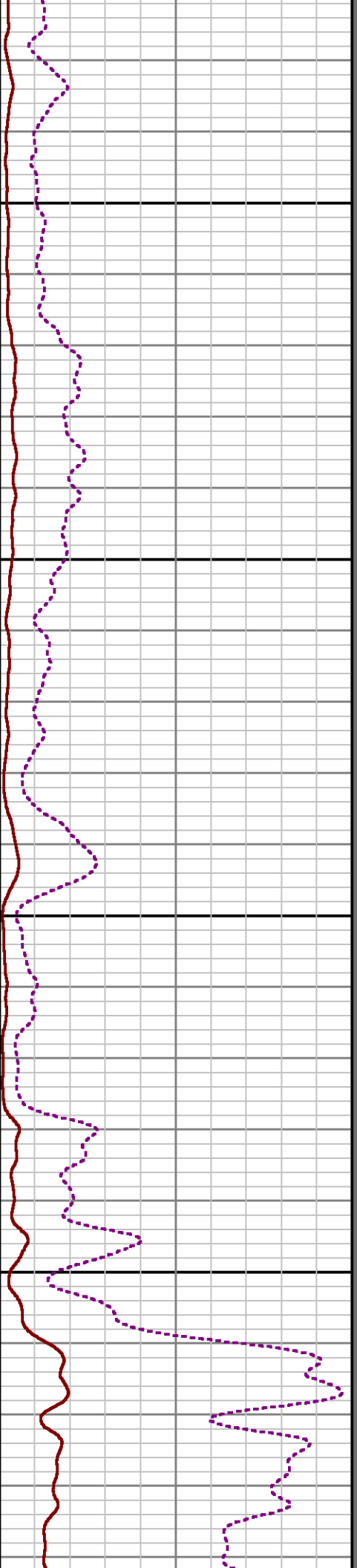
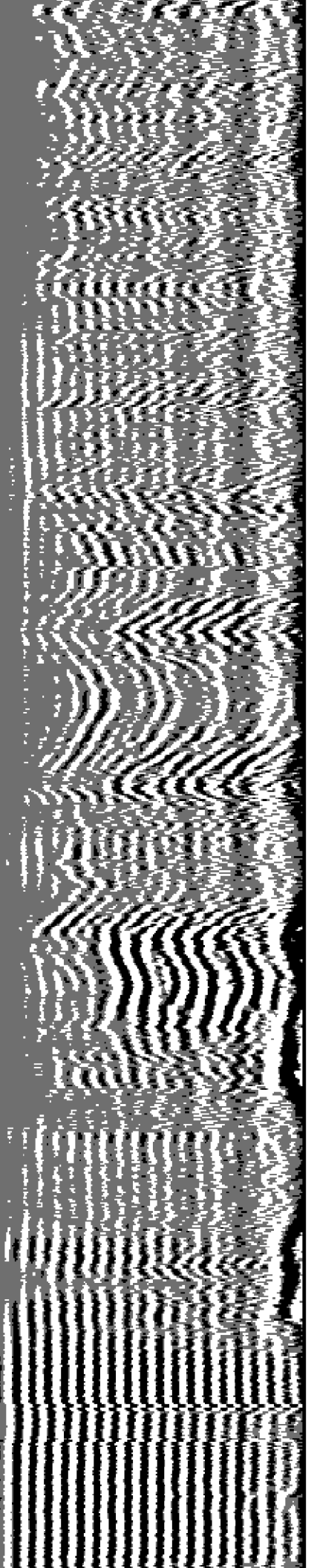


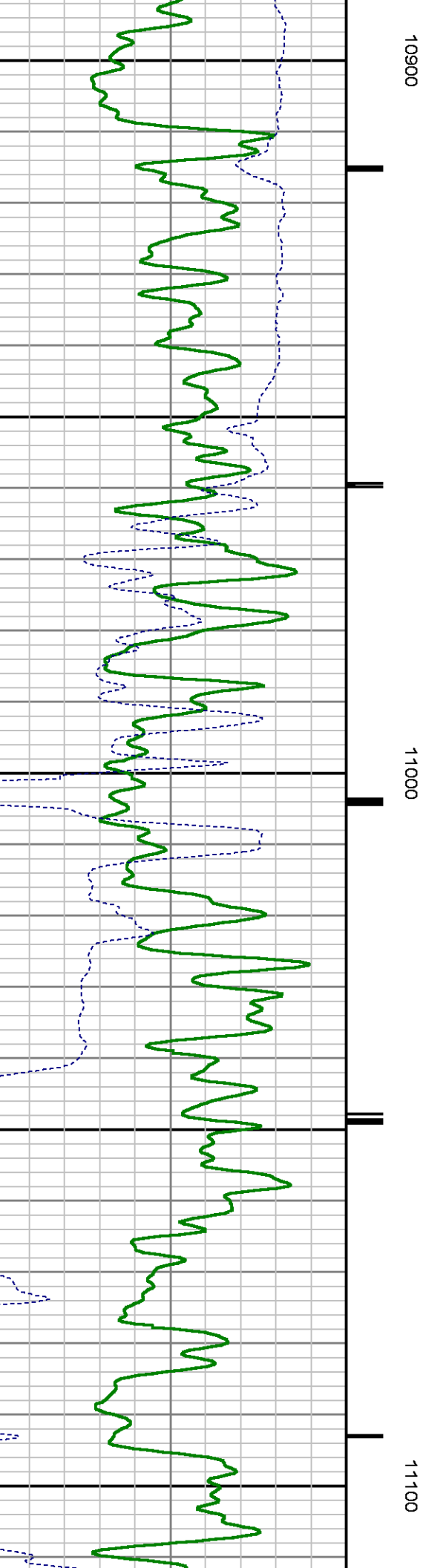
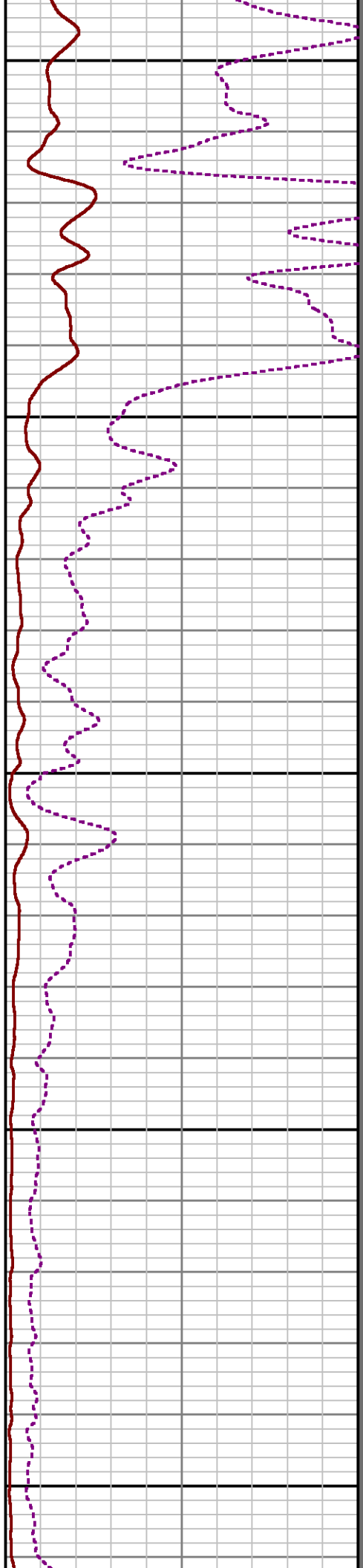
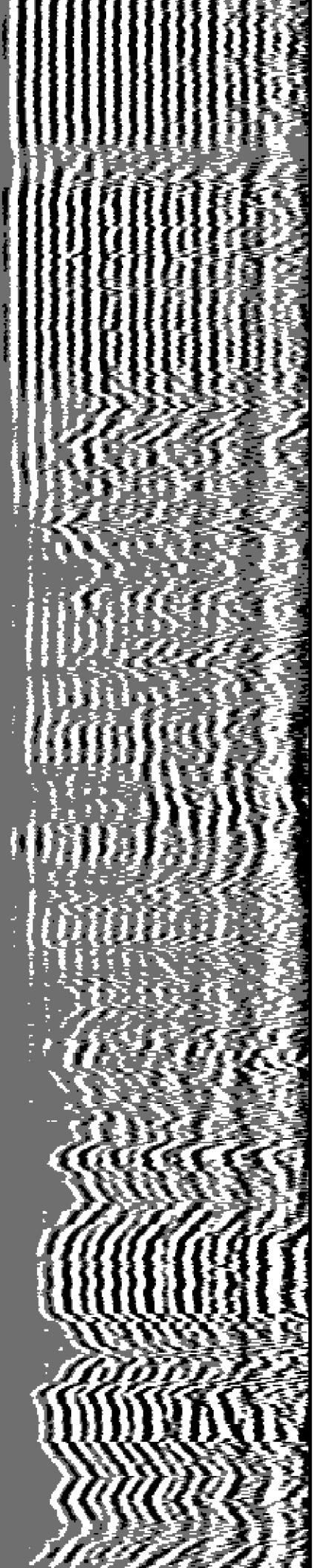


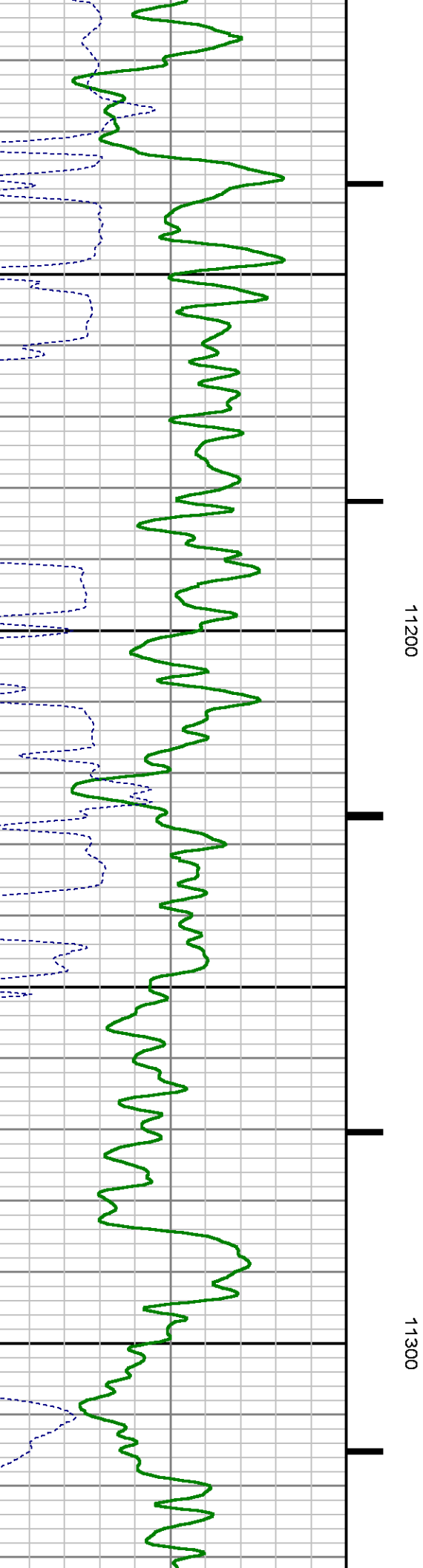
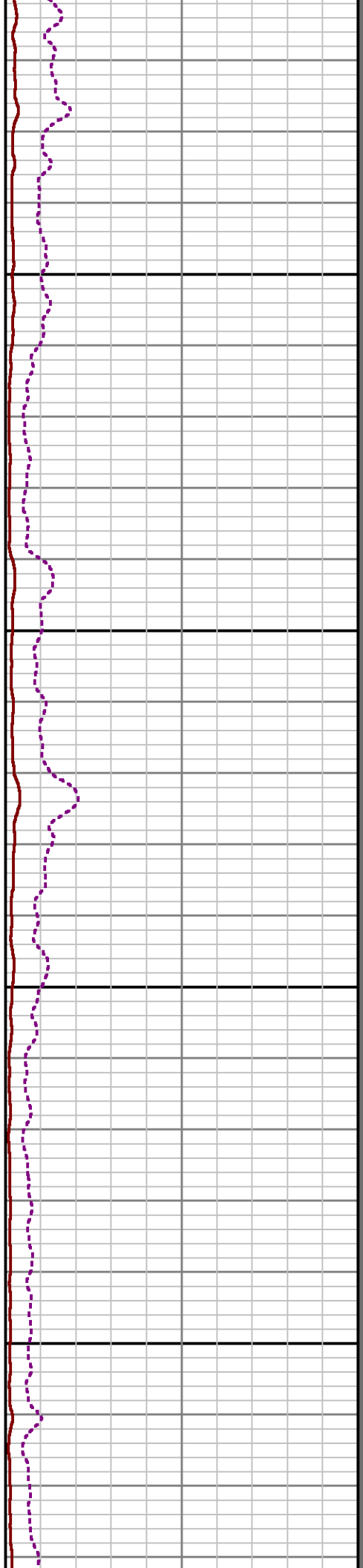
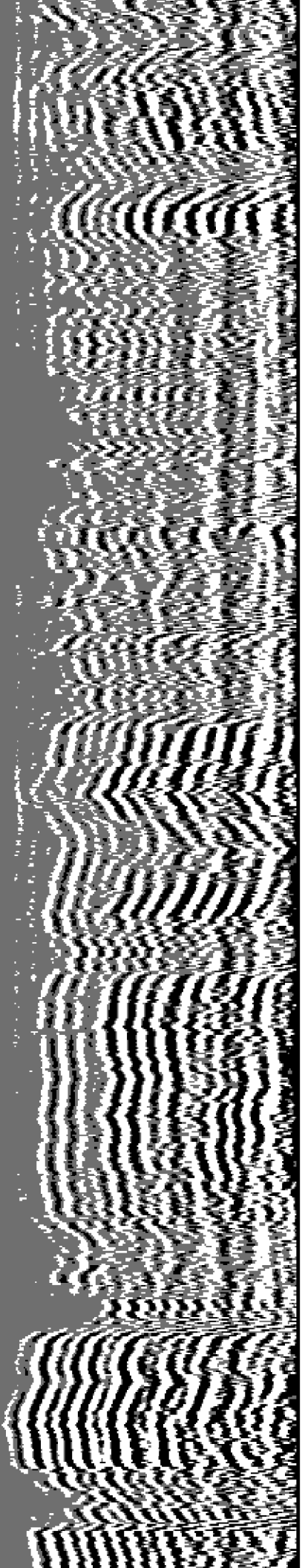


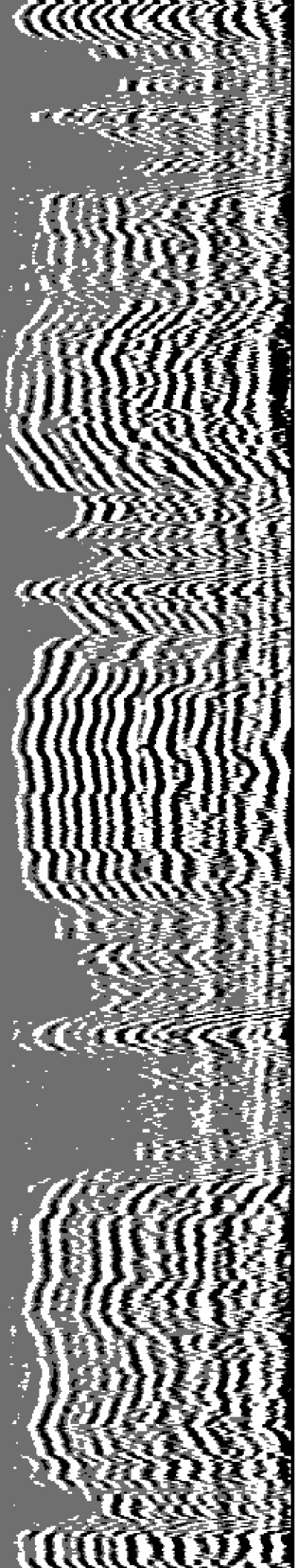






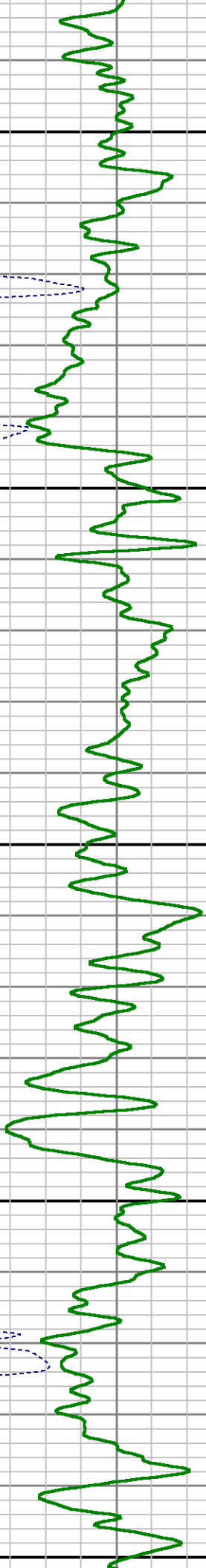


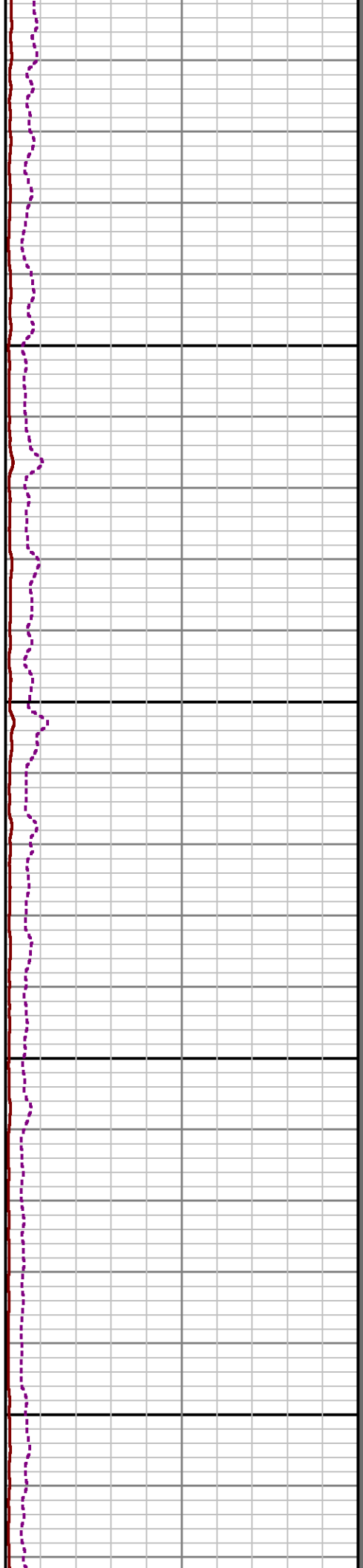
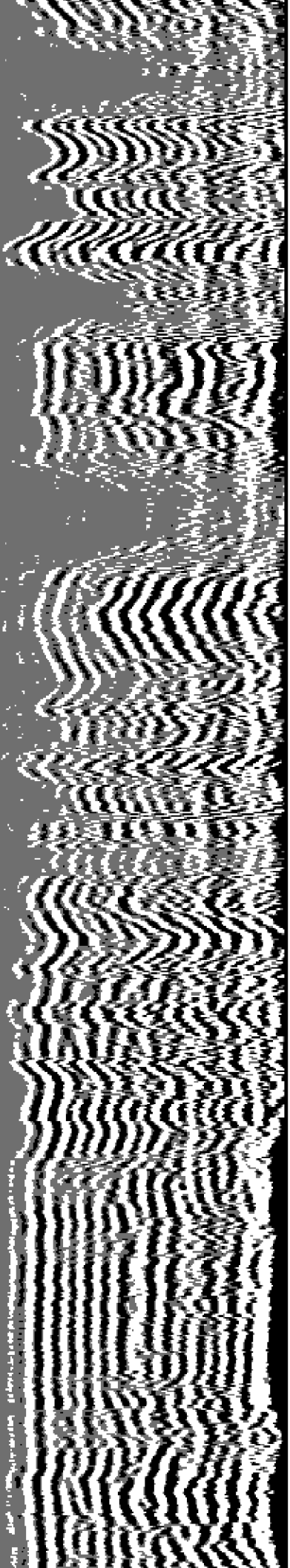




11400

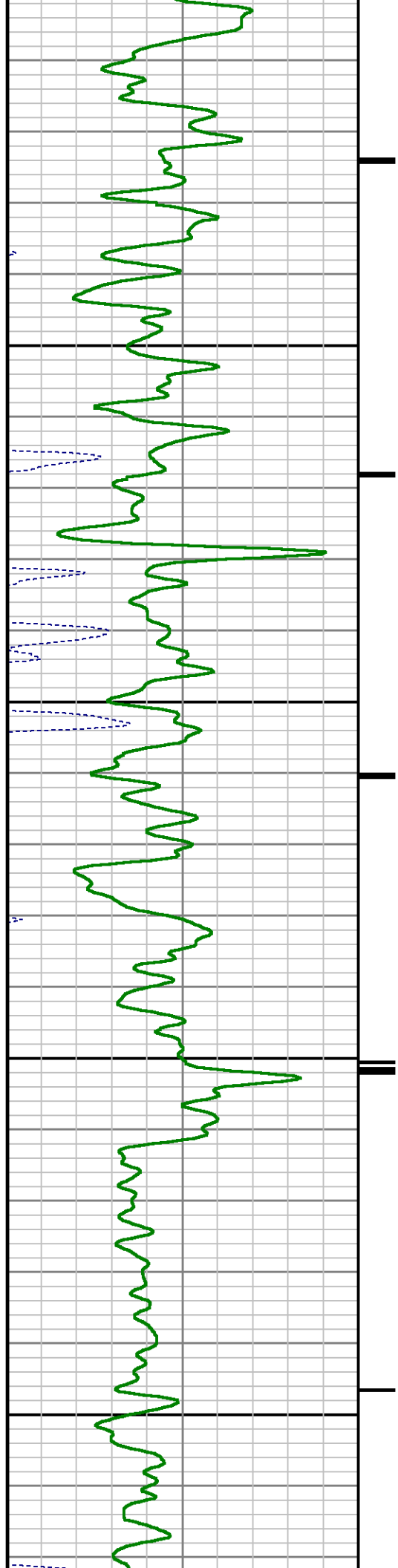
11500

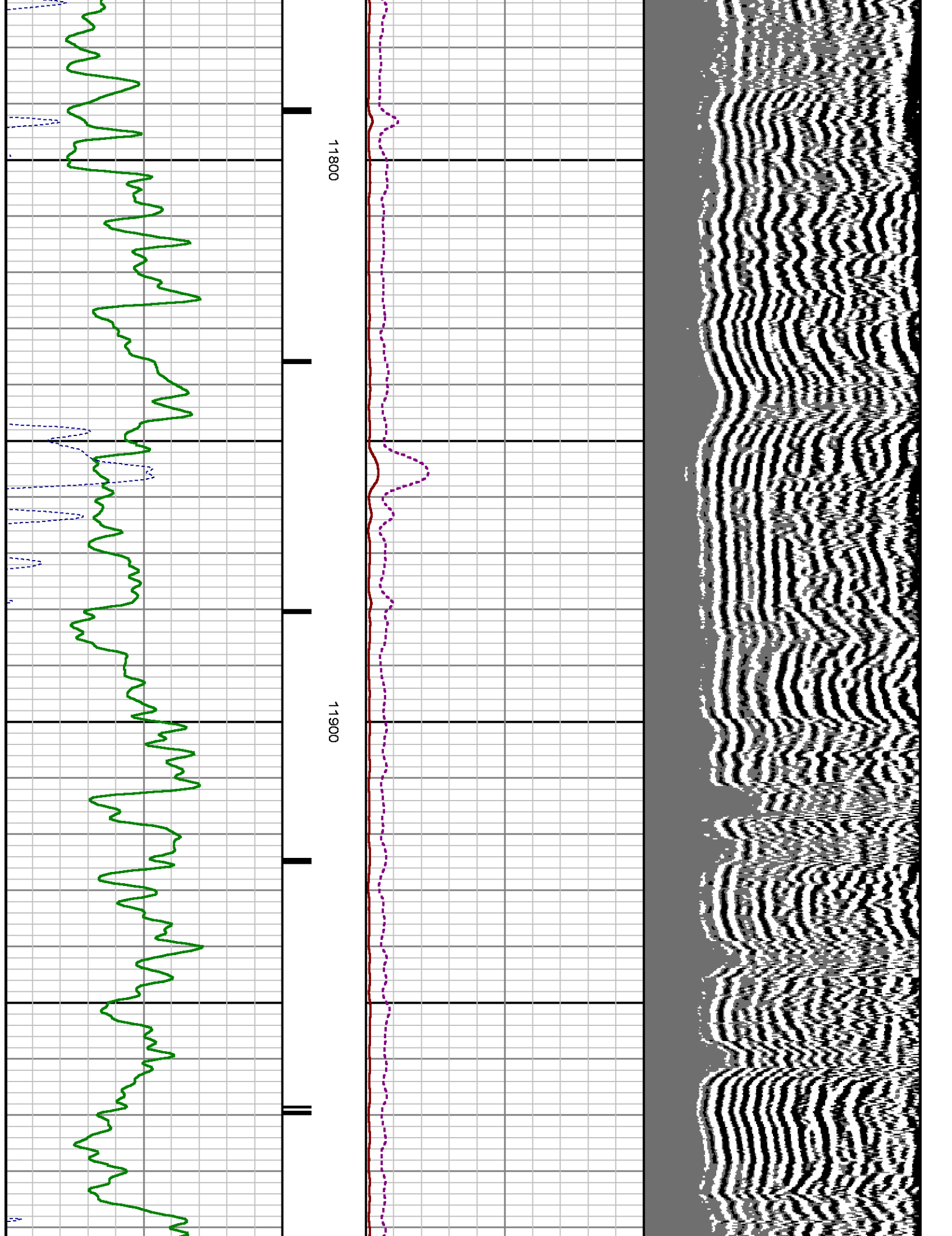


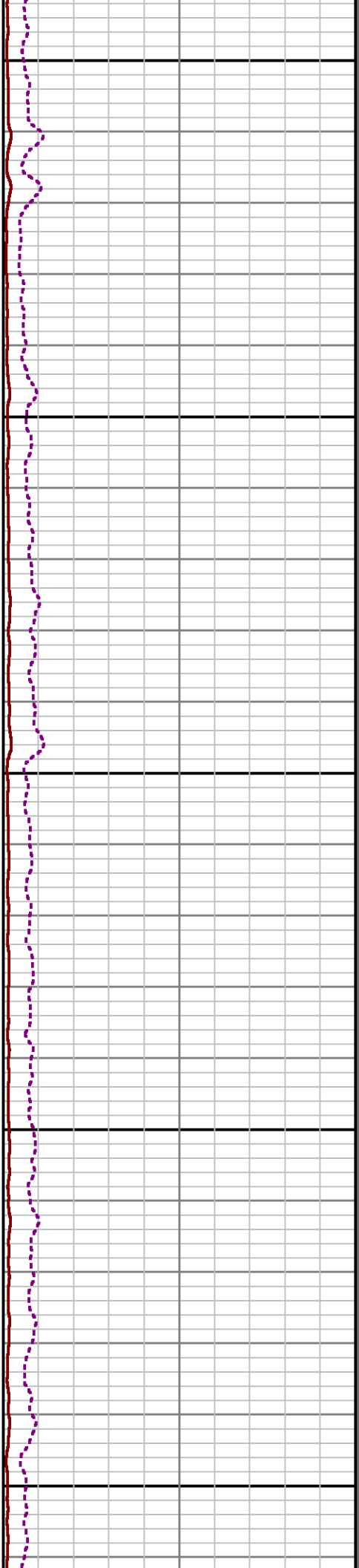
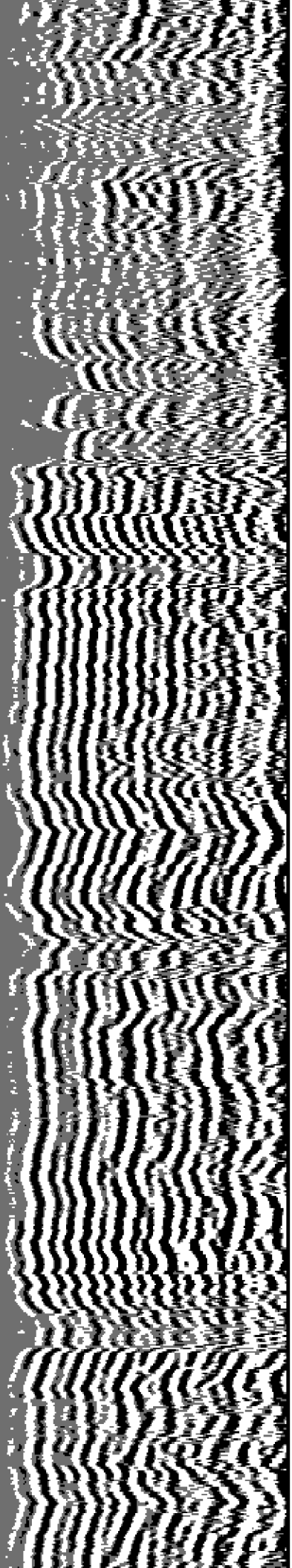


11600

11700



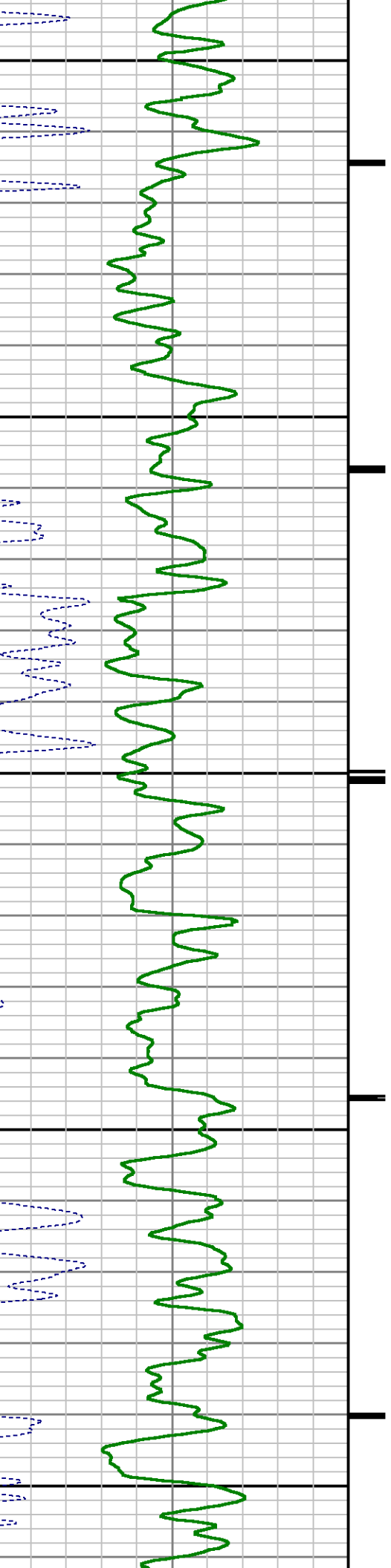


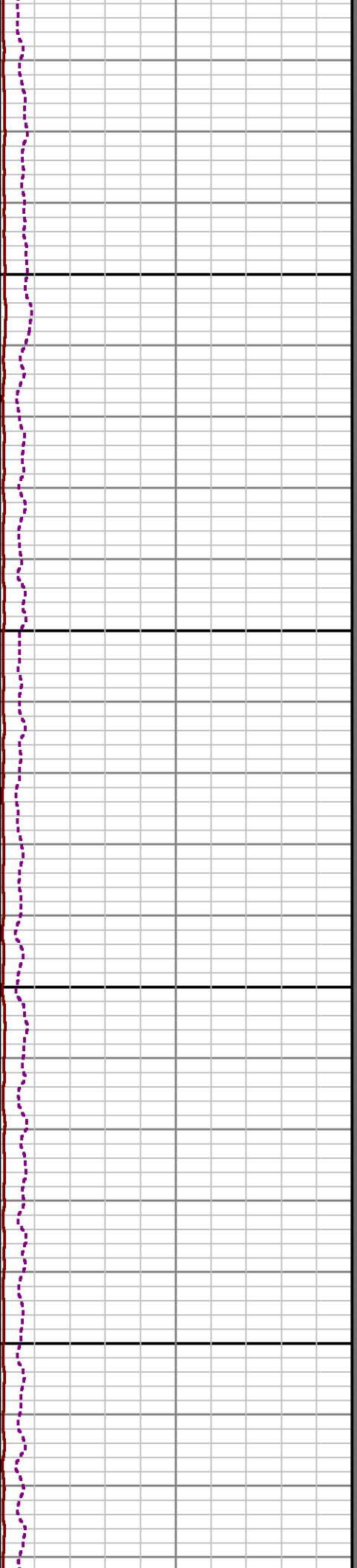
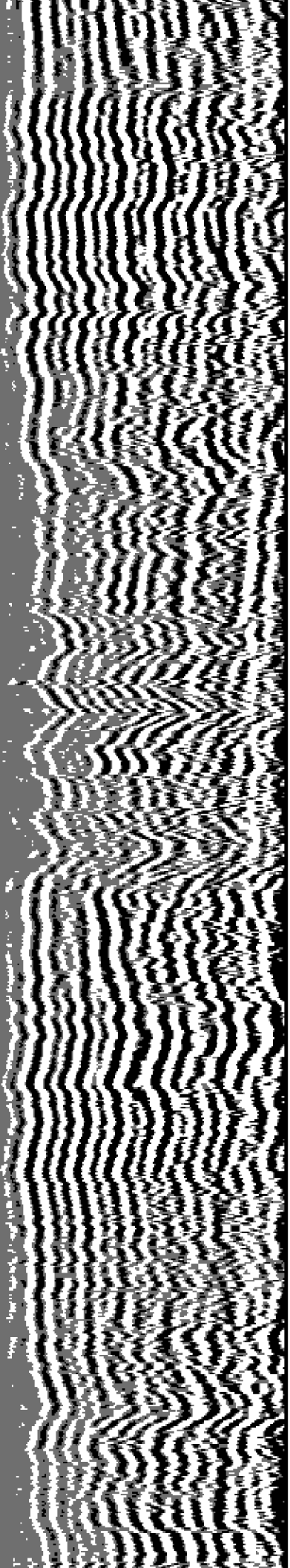


12000

12100

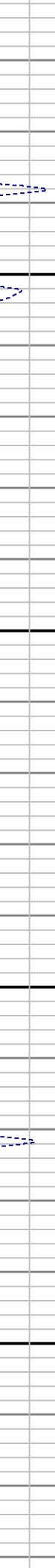
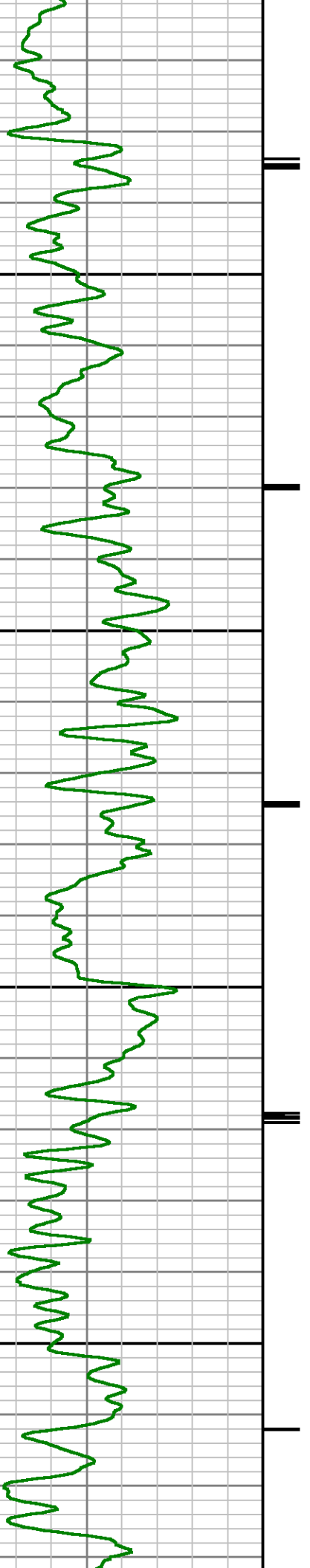
12200

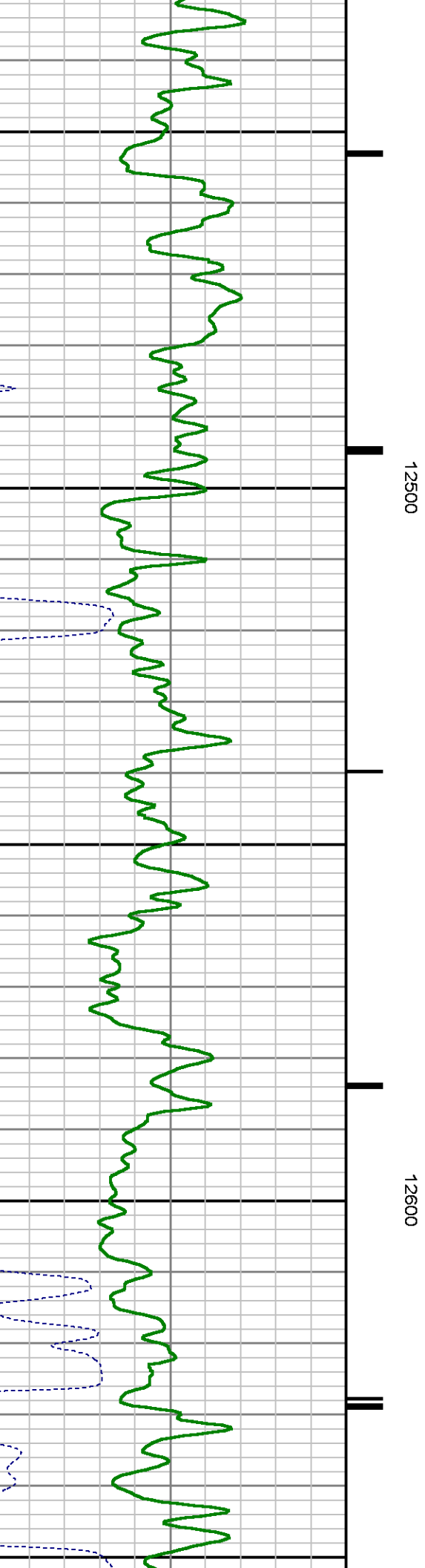
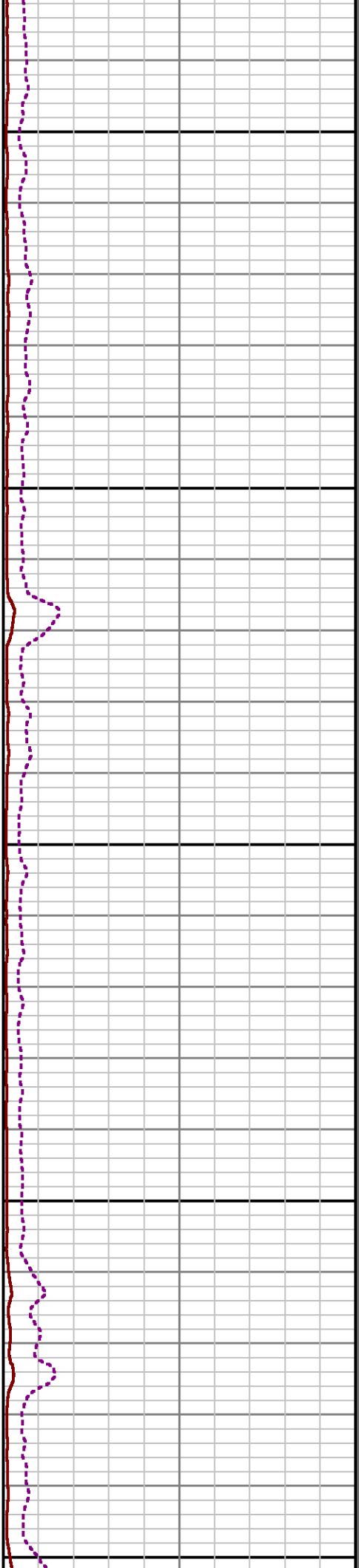
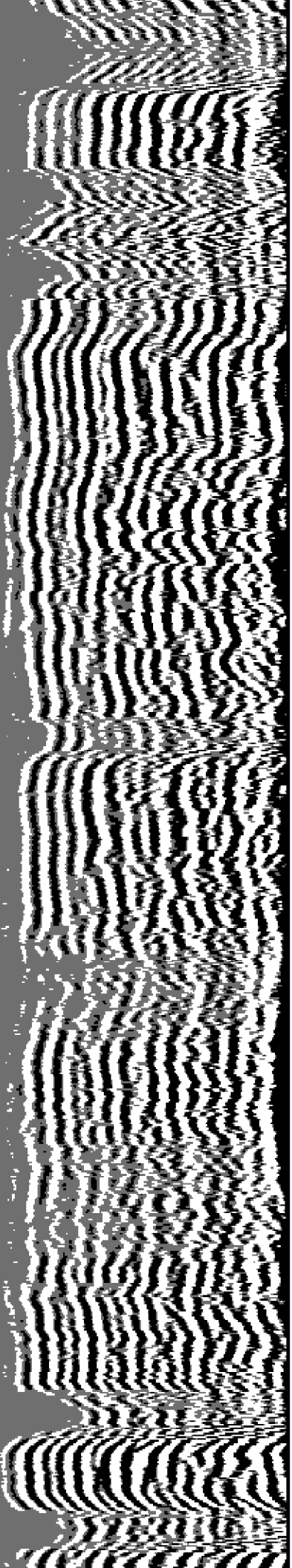


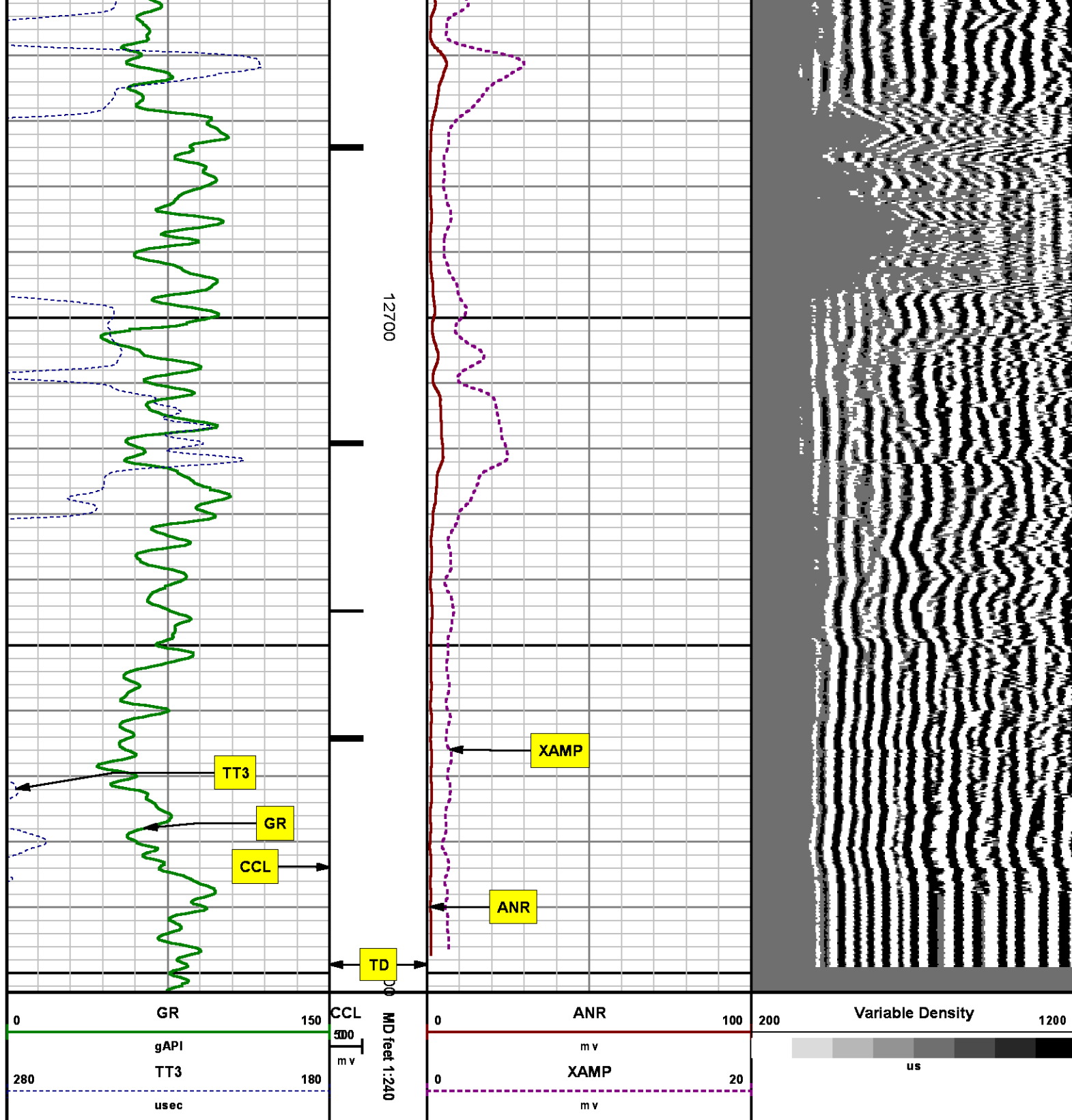


12300

12400







SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	12.424	7531.000
RAL	Amp Gate Start Near	195.000	usec	12.424	7531.000
RAL	Amp Gate Start Radial	195.000	usec	12.424	7531.000
RAL	Amp Gate Width Far	25.000	usec	12.424	7531.000
RAL	Amp Gate Width Near	25.000	usec	12.424	7531.000
RAL	Amp Gate Width Radial	25.000	usec	12.424	7531.000
RAL	casing od	4.500	inches	12.424	7531.000
RAL	casing wt	11.600	lbm/ft	12.424	7531.000
RAL	FB Start Far	291.900	usec	12.424	7531.000
RAL	FB Start Near	180.000	usec	12.424	7531.000
RAL	FB Start Radial	180.000	usec	12.424	7531.000
RAL	FB Thresh Far	10.000	mV	12.424	7531.000
RAL	FB Thresh Near	4.000	mV	12.424	7531.000
RAL	FB Thresh Radial	4.000	mV	12.424	7531.000
RAL	Fluid Travel Time	200.000	usec/ft	12.424	7525.893

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

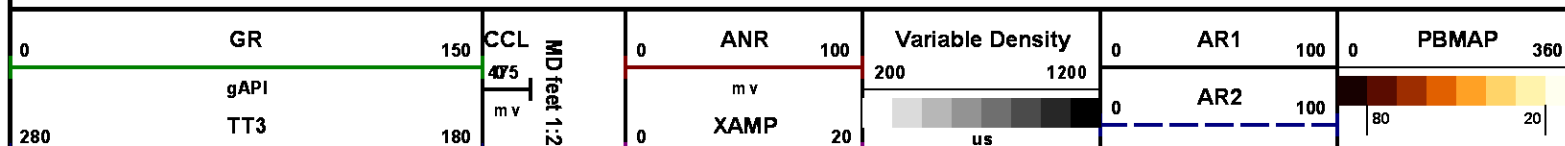
Well : FEDERAL RGU 323-24-198

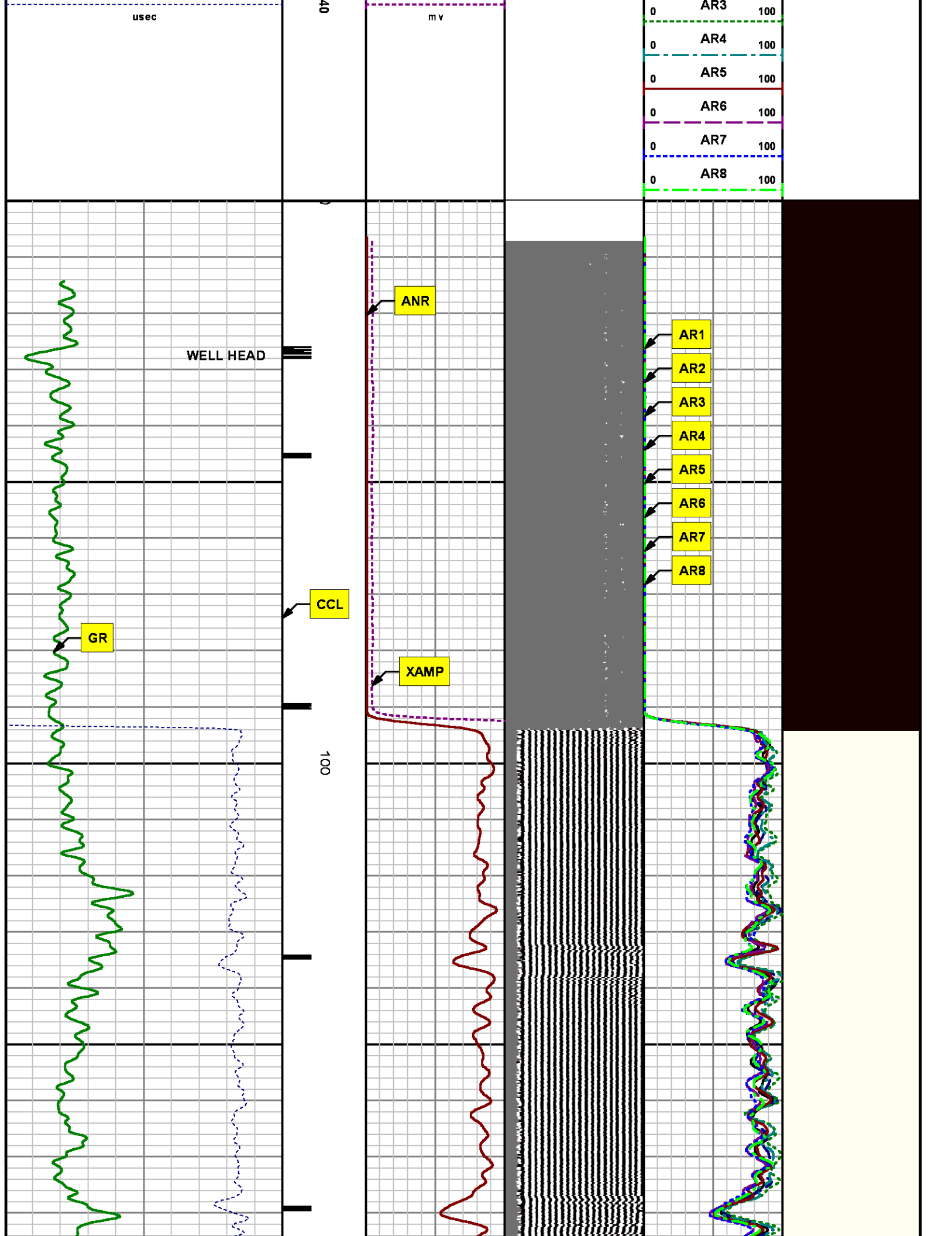
File Name : d:\well\data\wpx\rgu 323-24-198\323ral\mainsplice.xtf

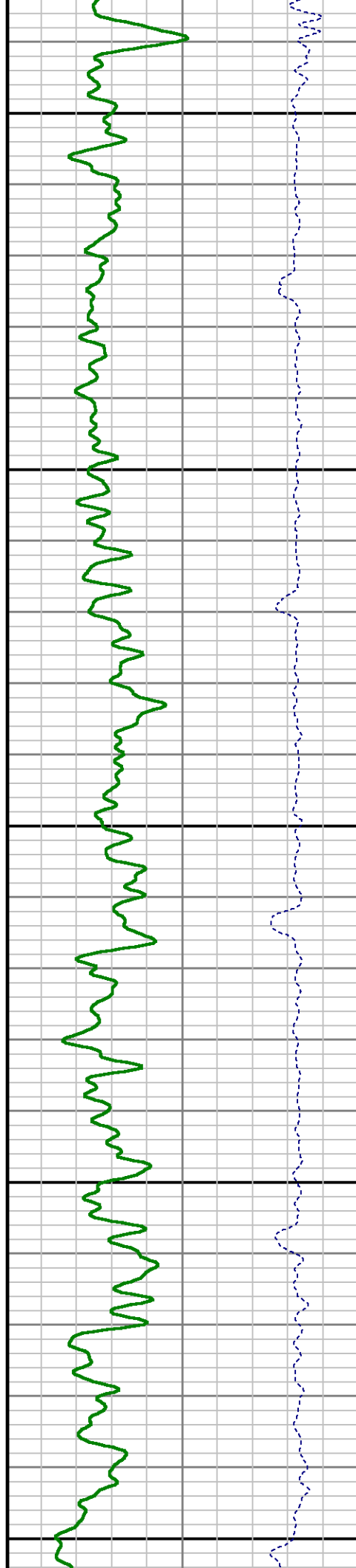
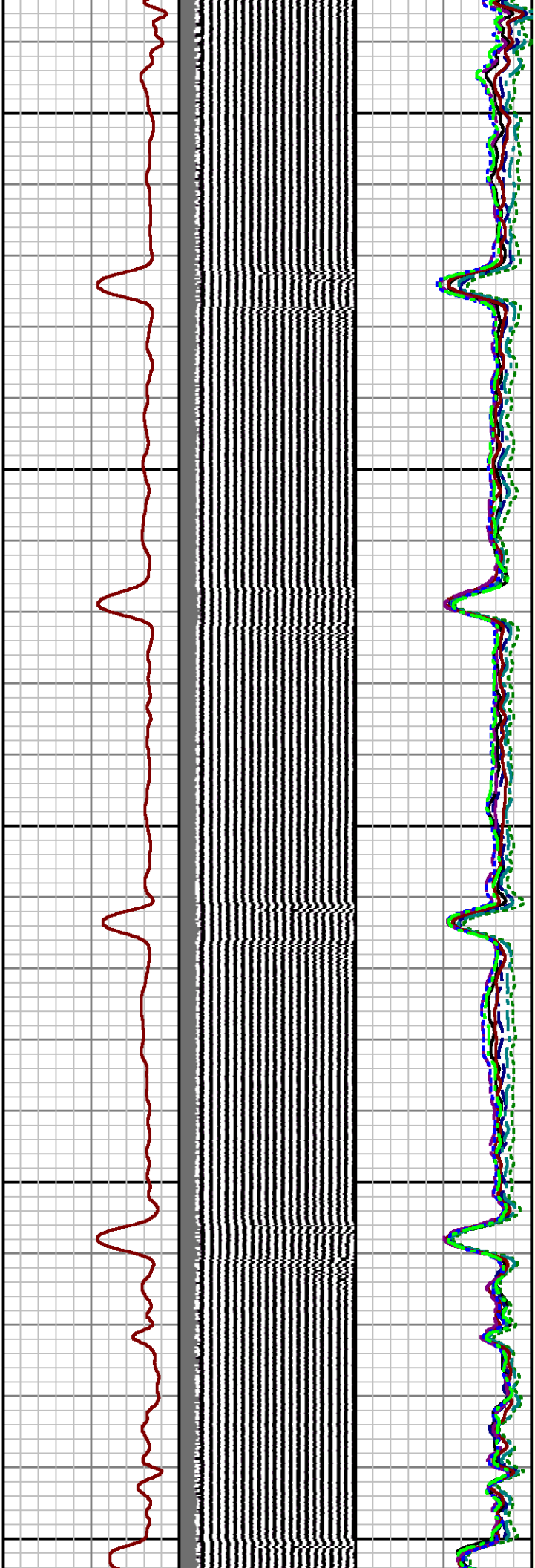
Mode : PlotMgr 5.4.504

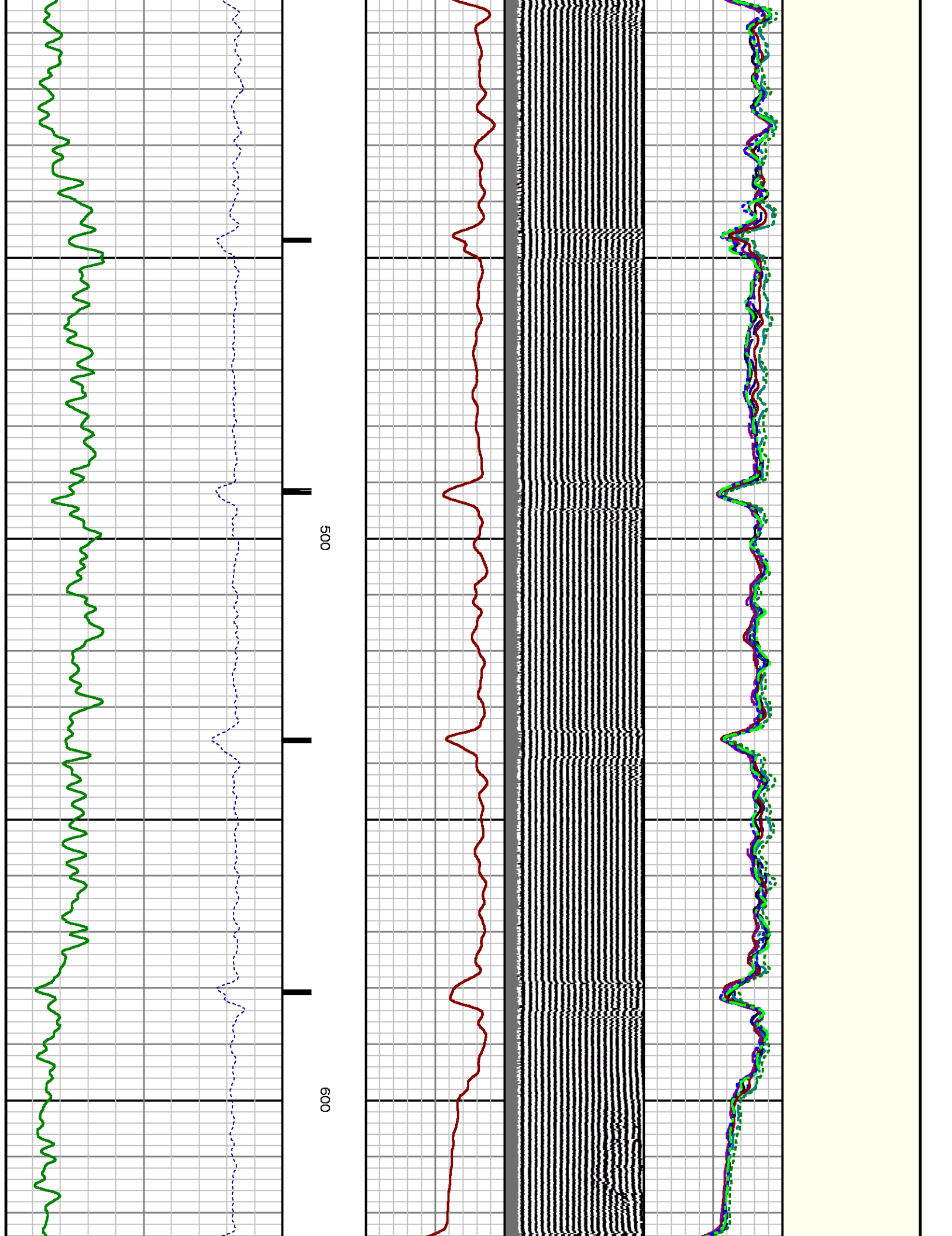
Interval : 0.00 - 12803.00 feet UP

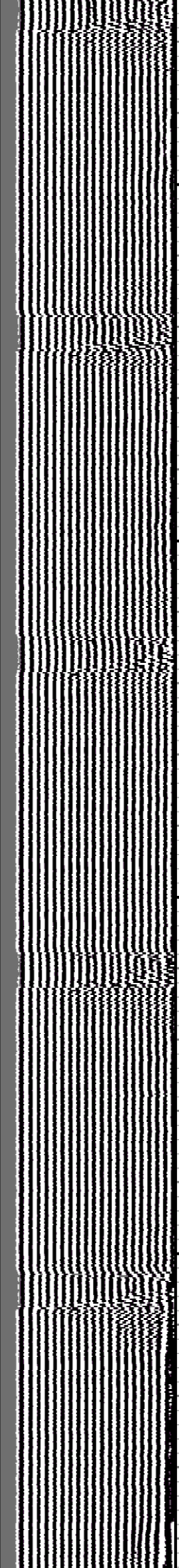
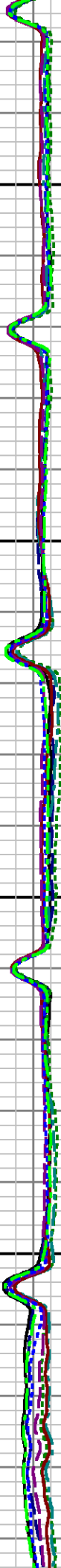
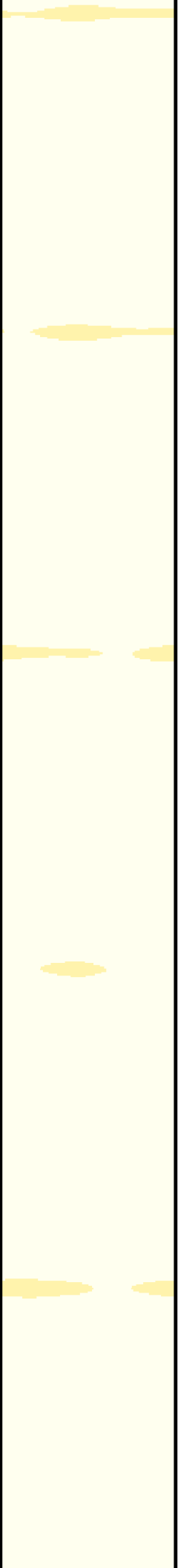
Created : 7/6/2014 11:03:50 AM







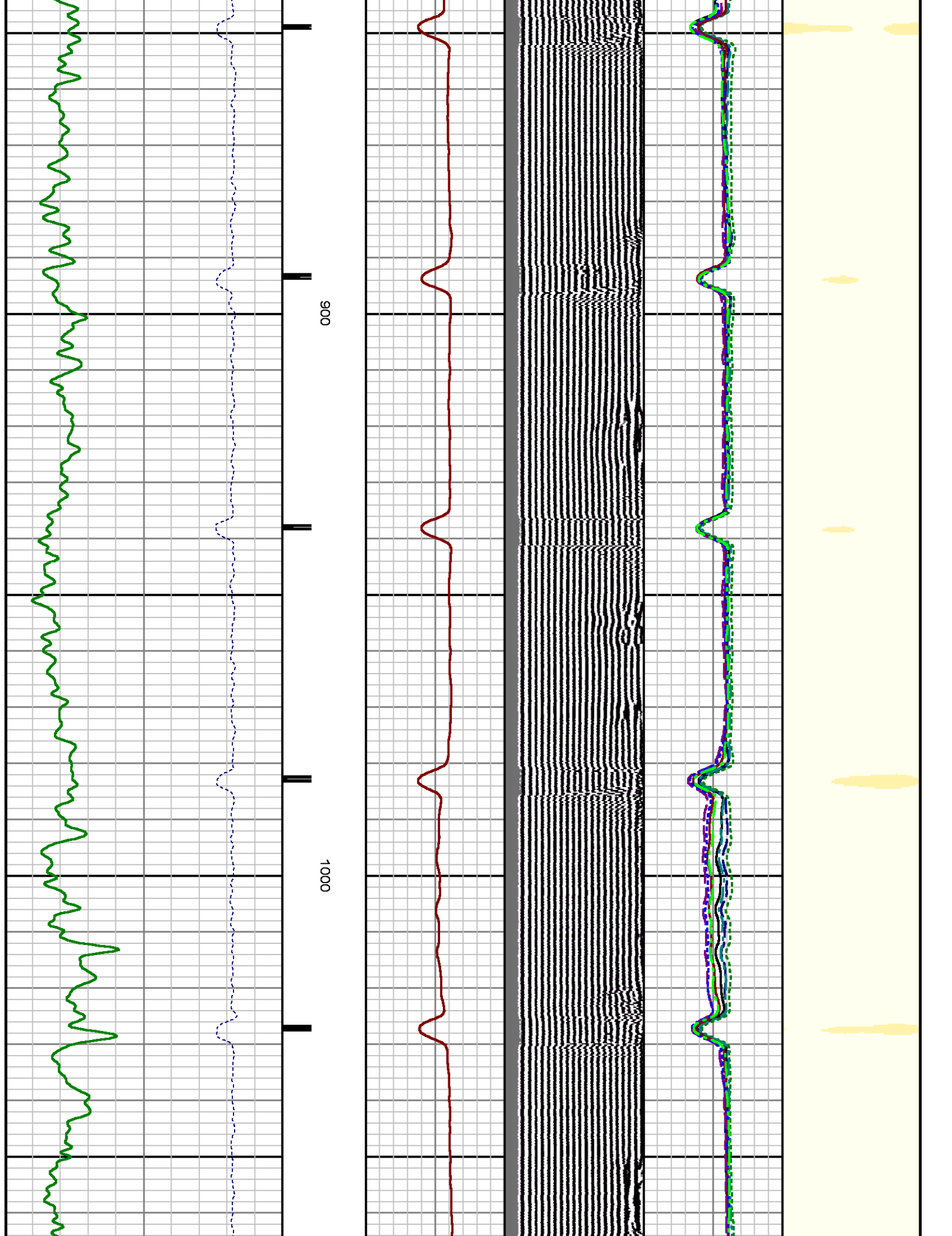


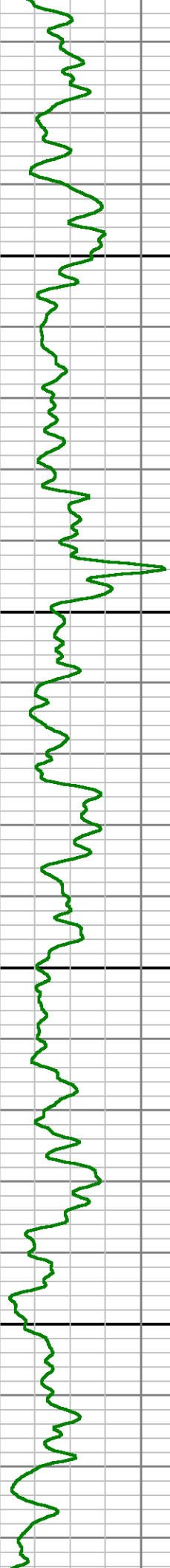
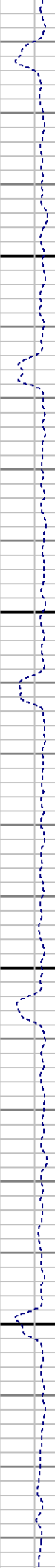
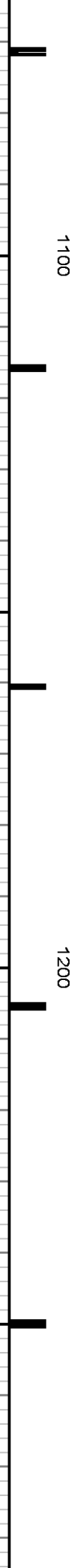
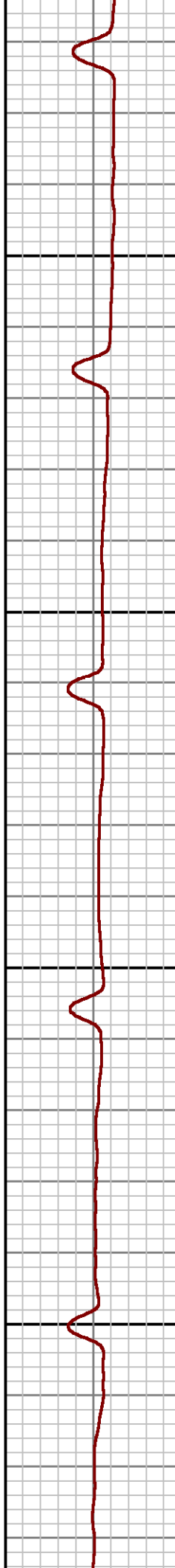
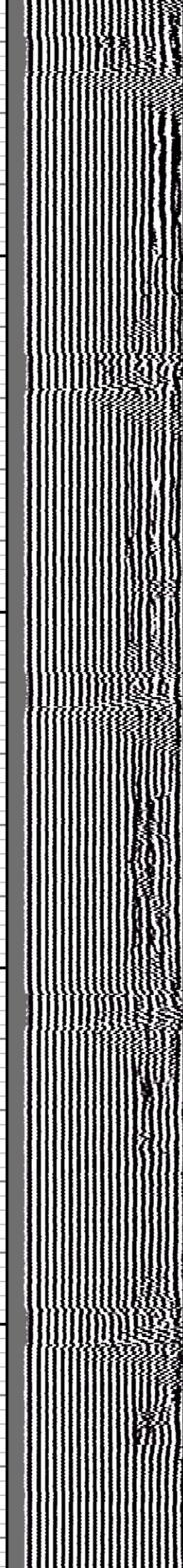
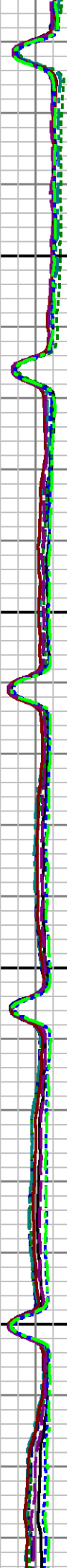
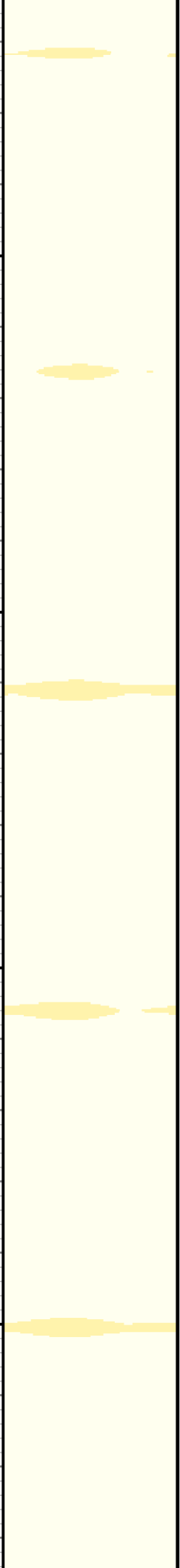


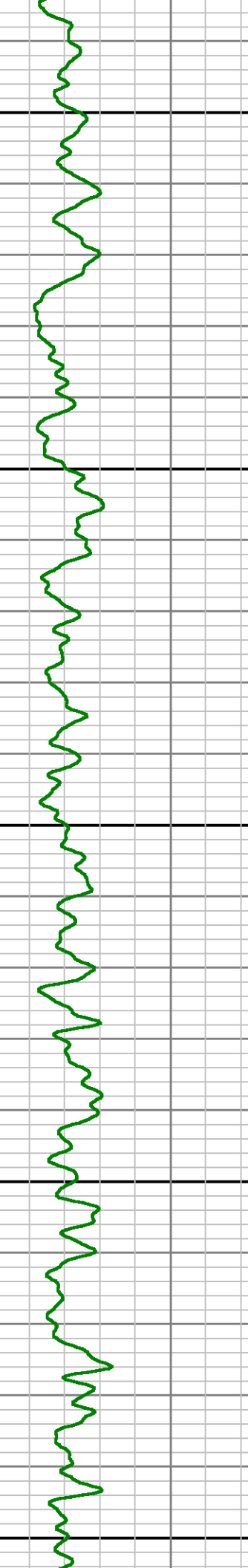
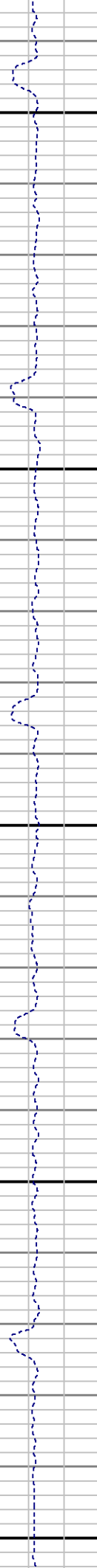
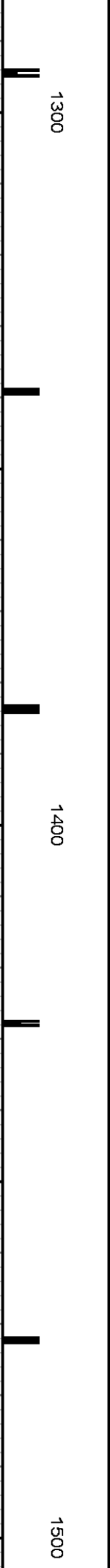
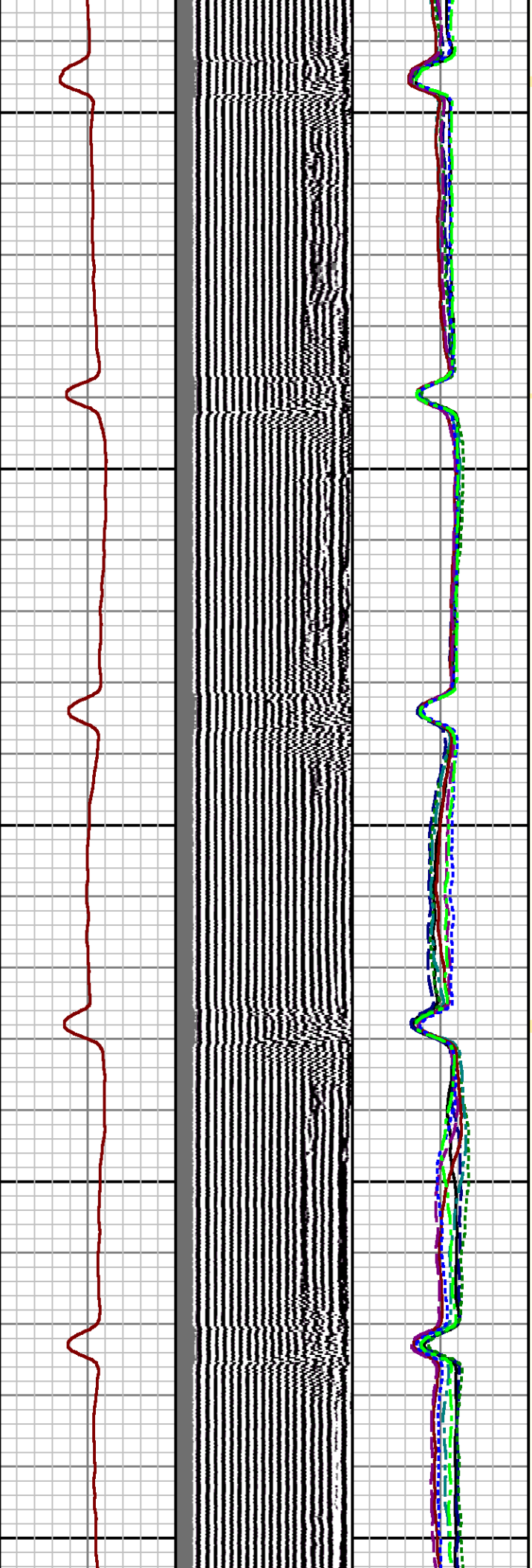
700

800





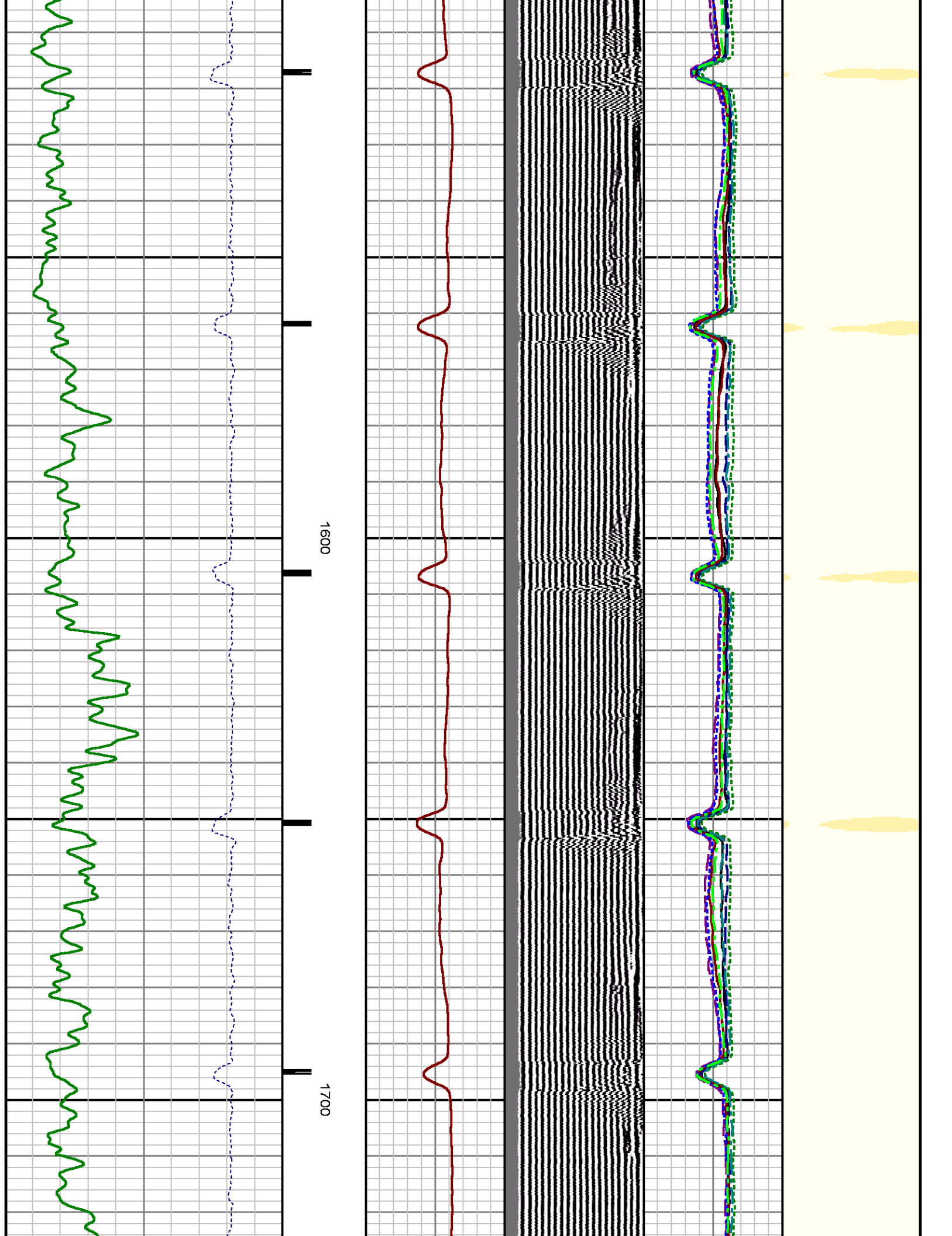


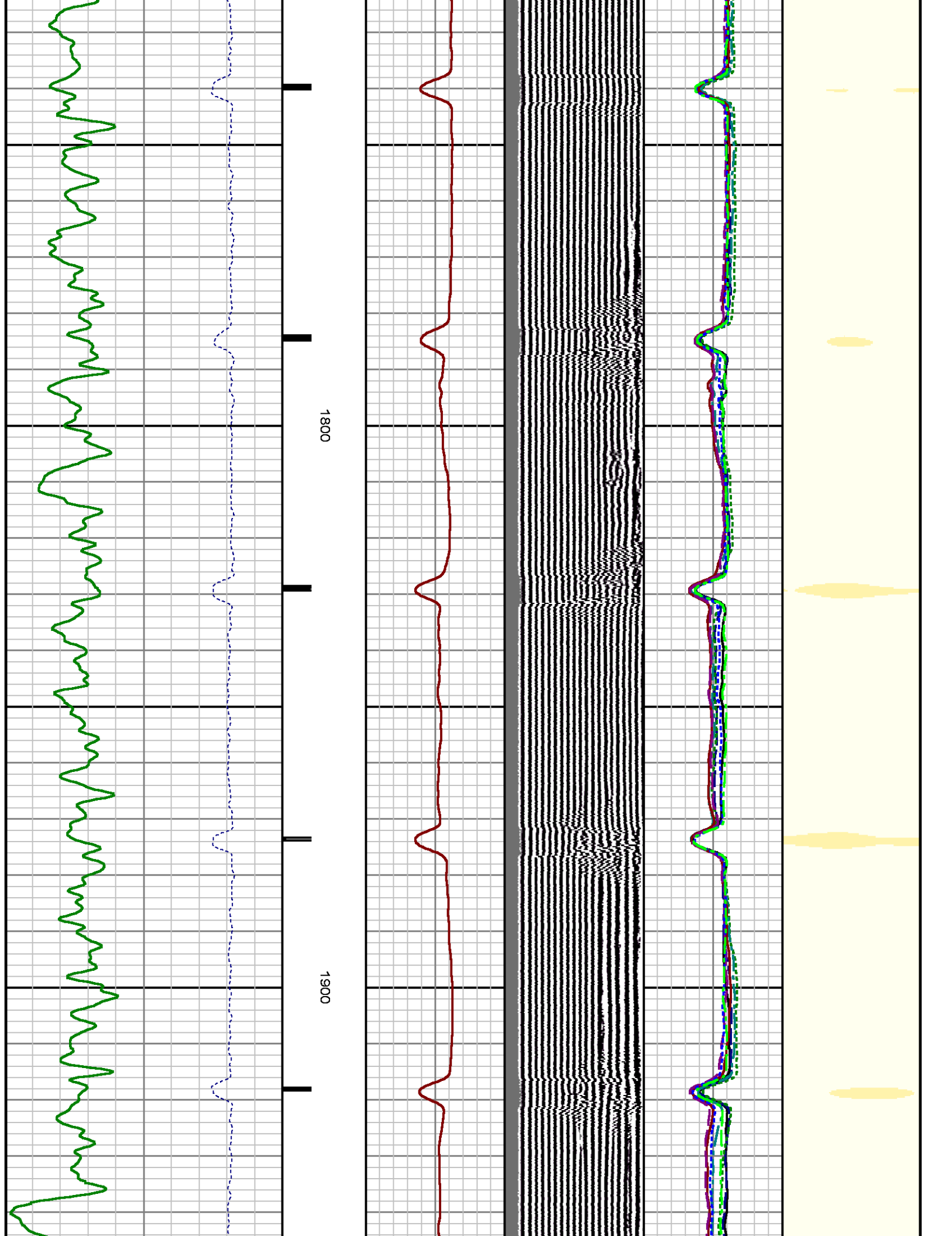


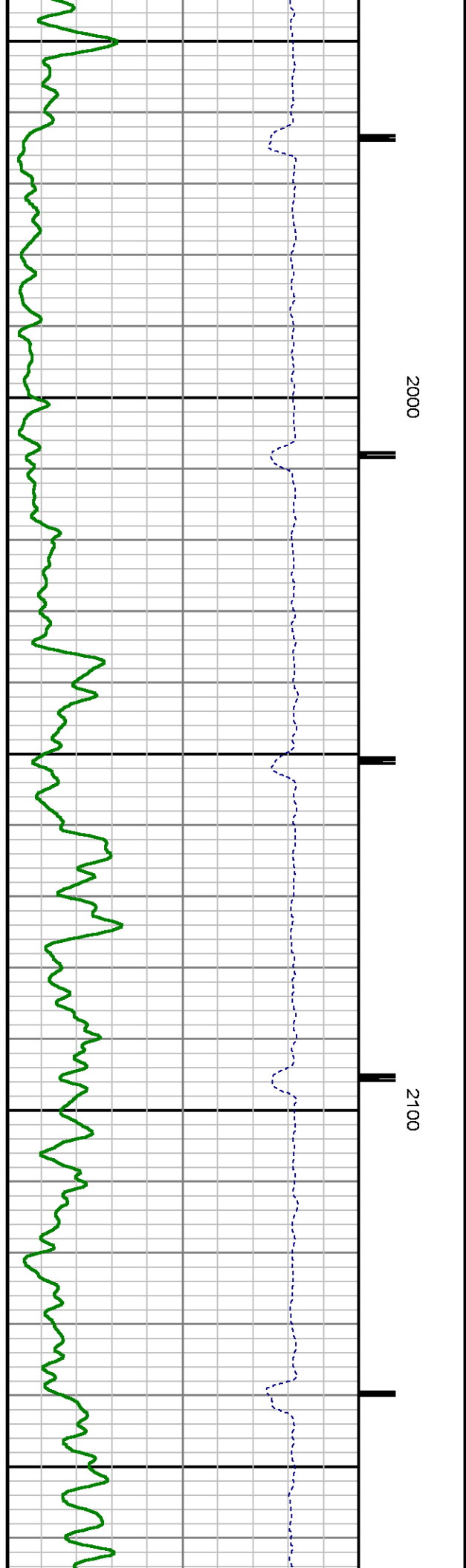
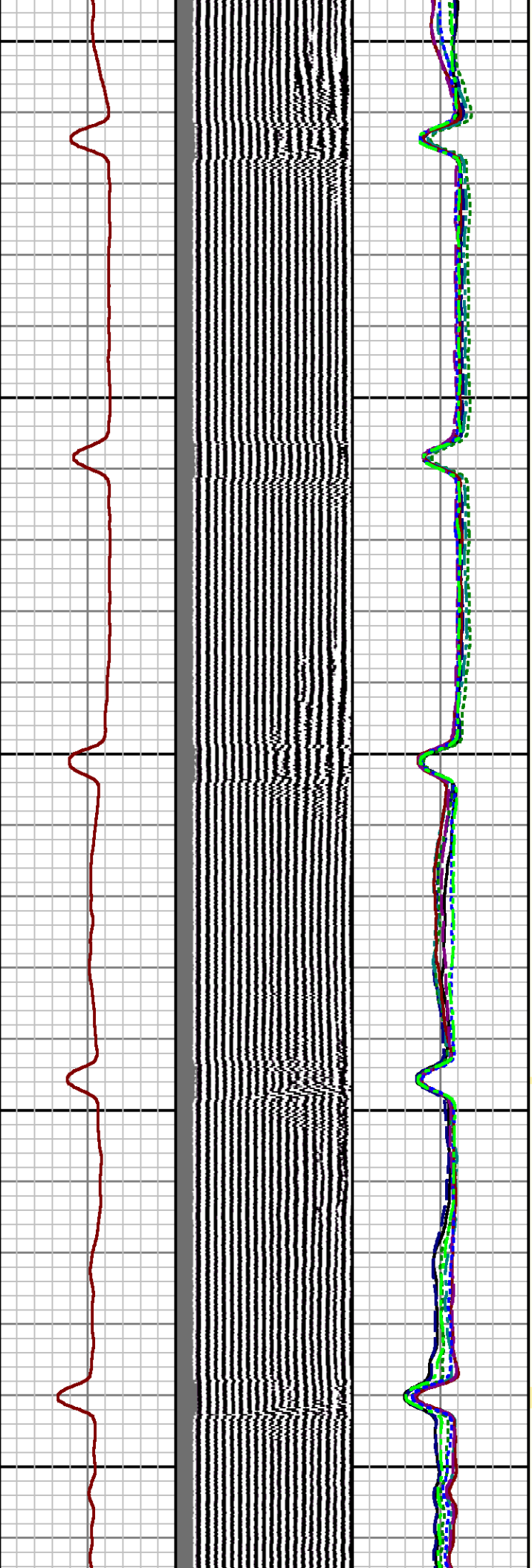
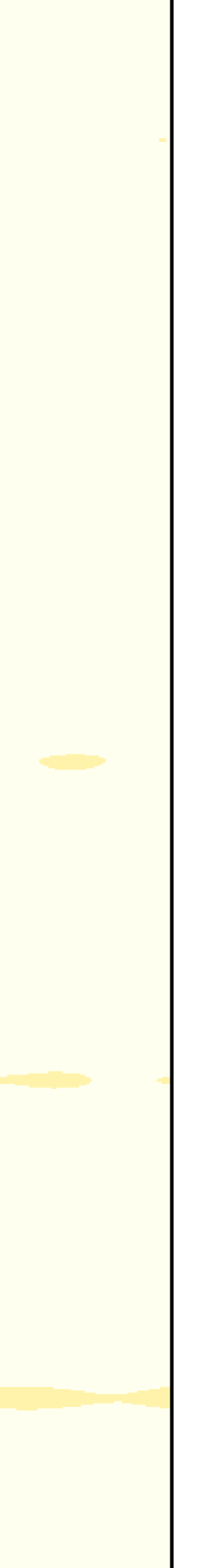
1300

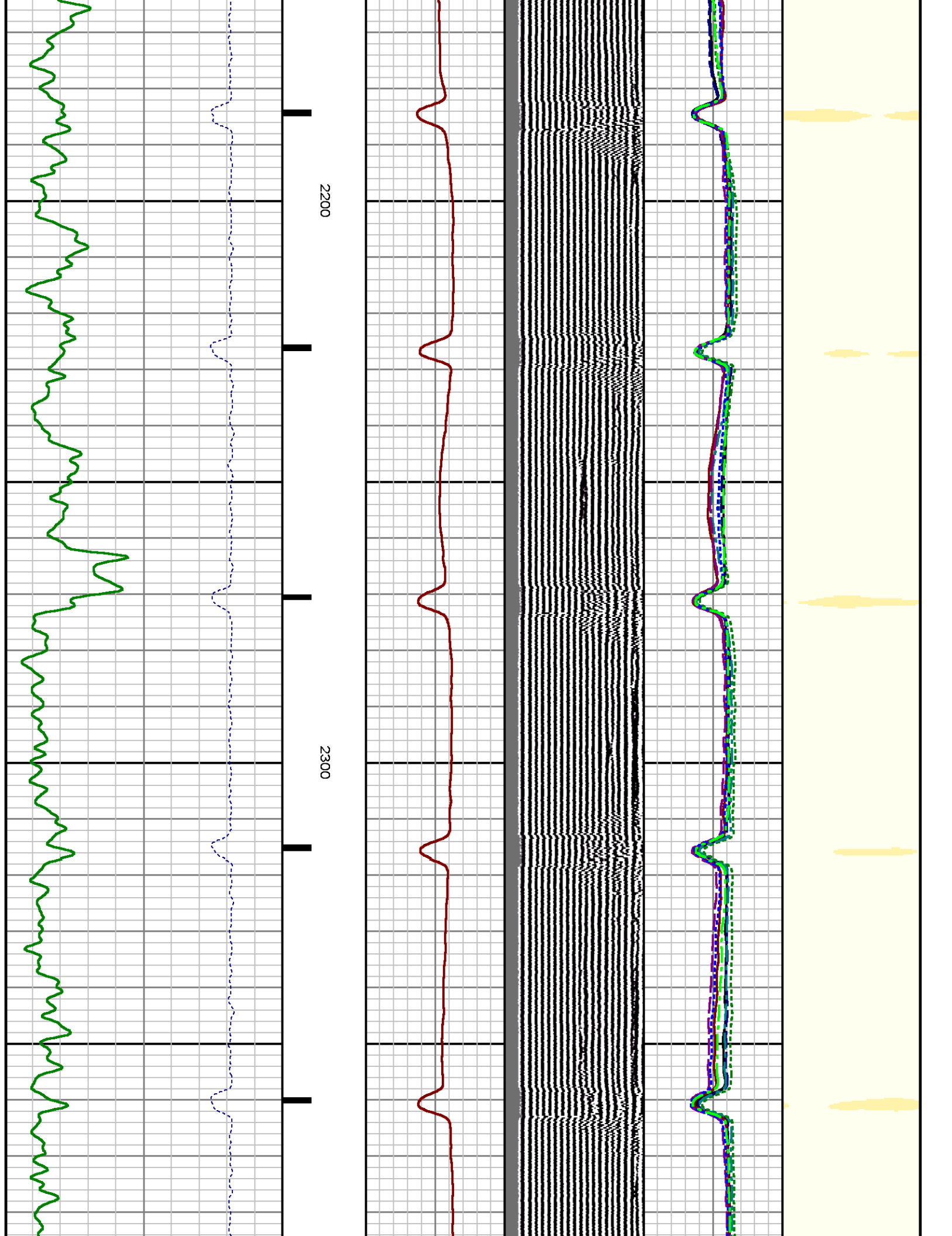
1400

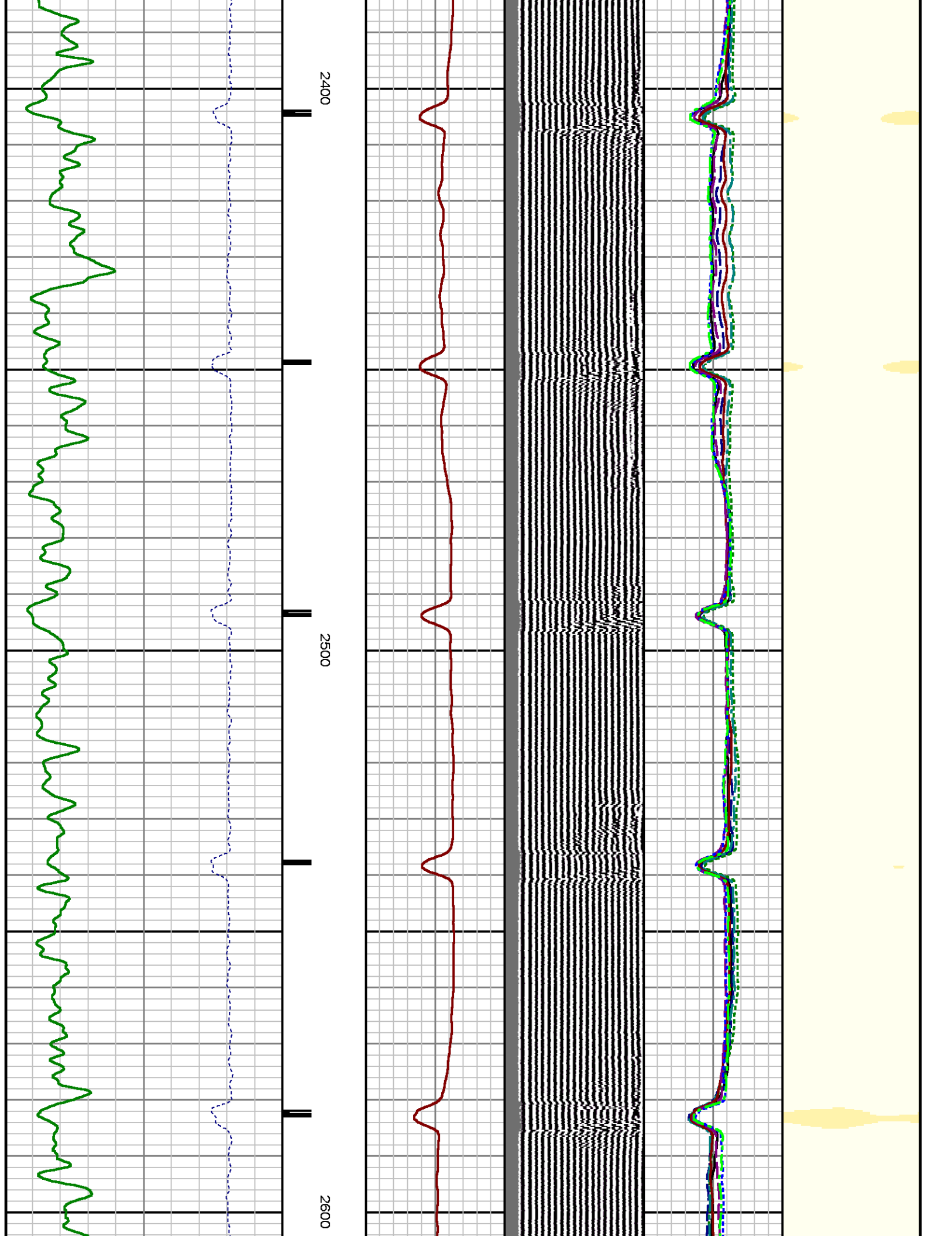
1500

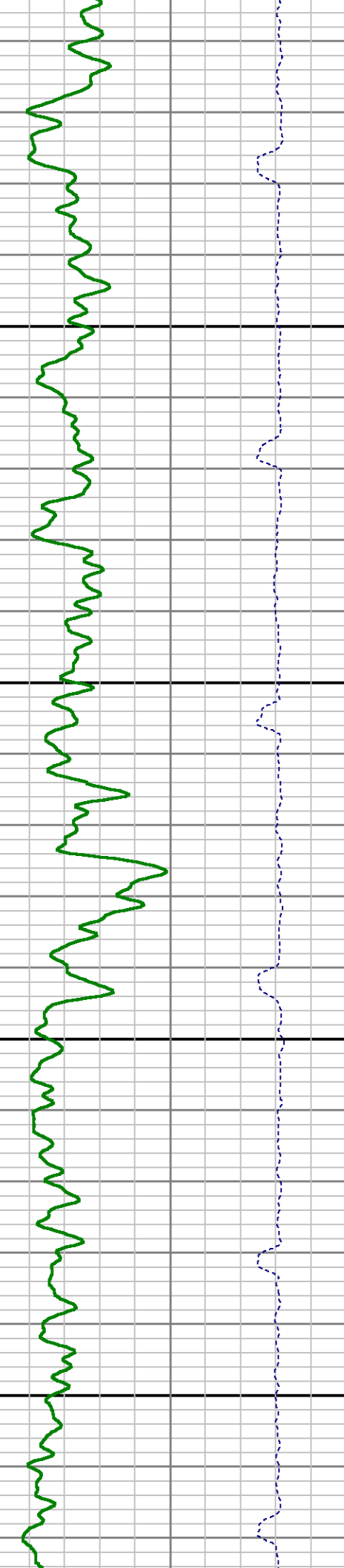
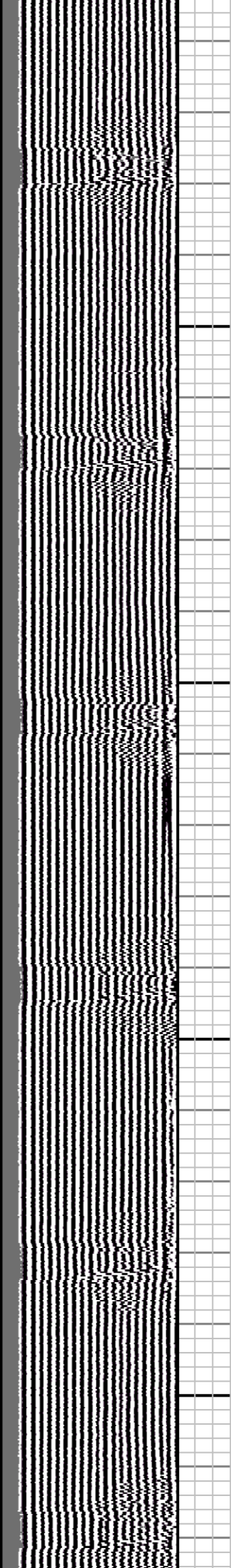
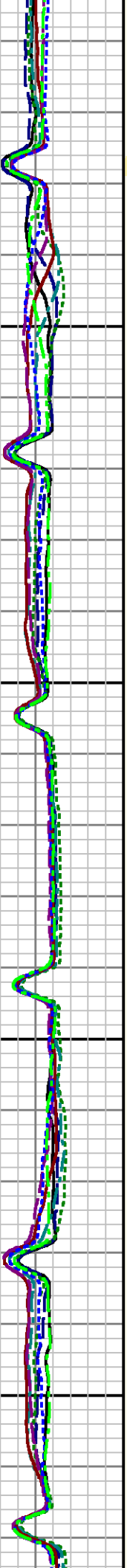
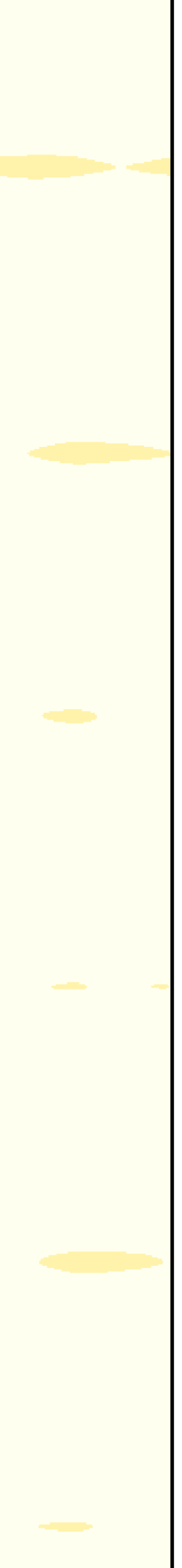






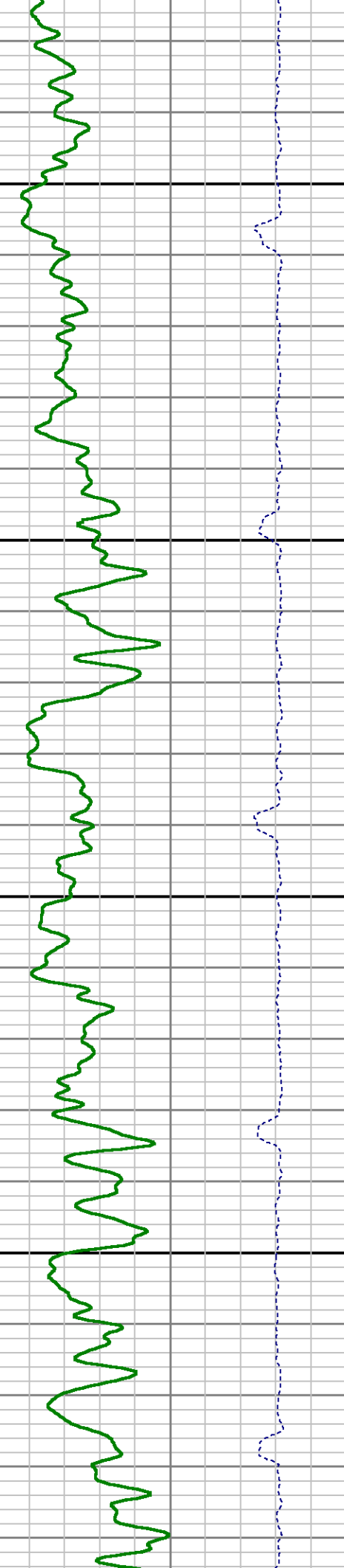
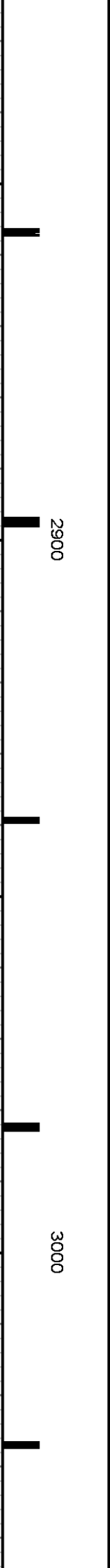
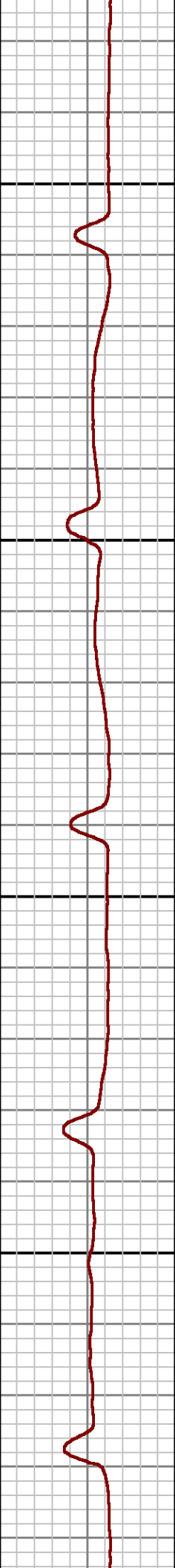
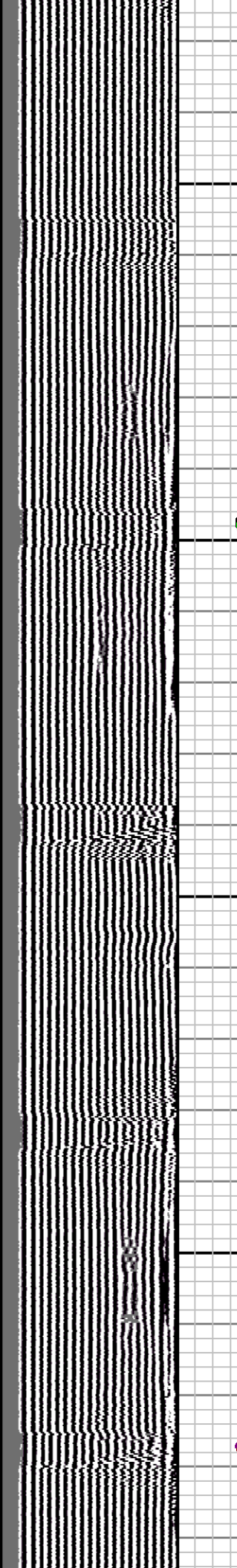
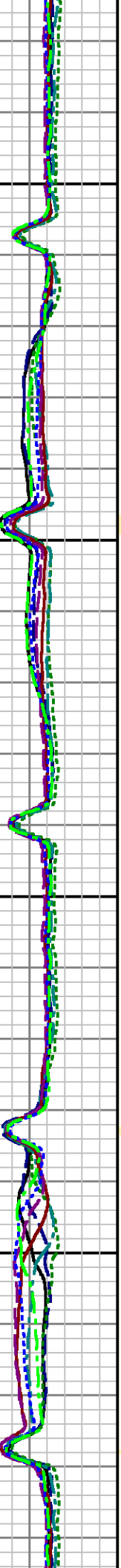






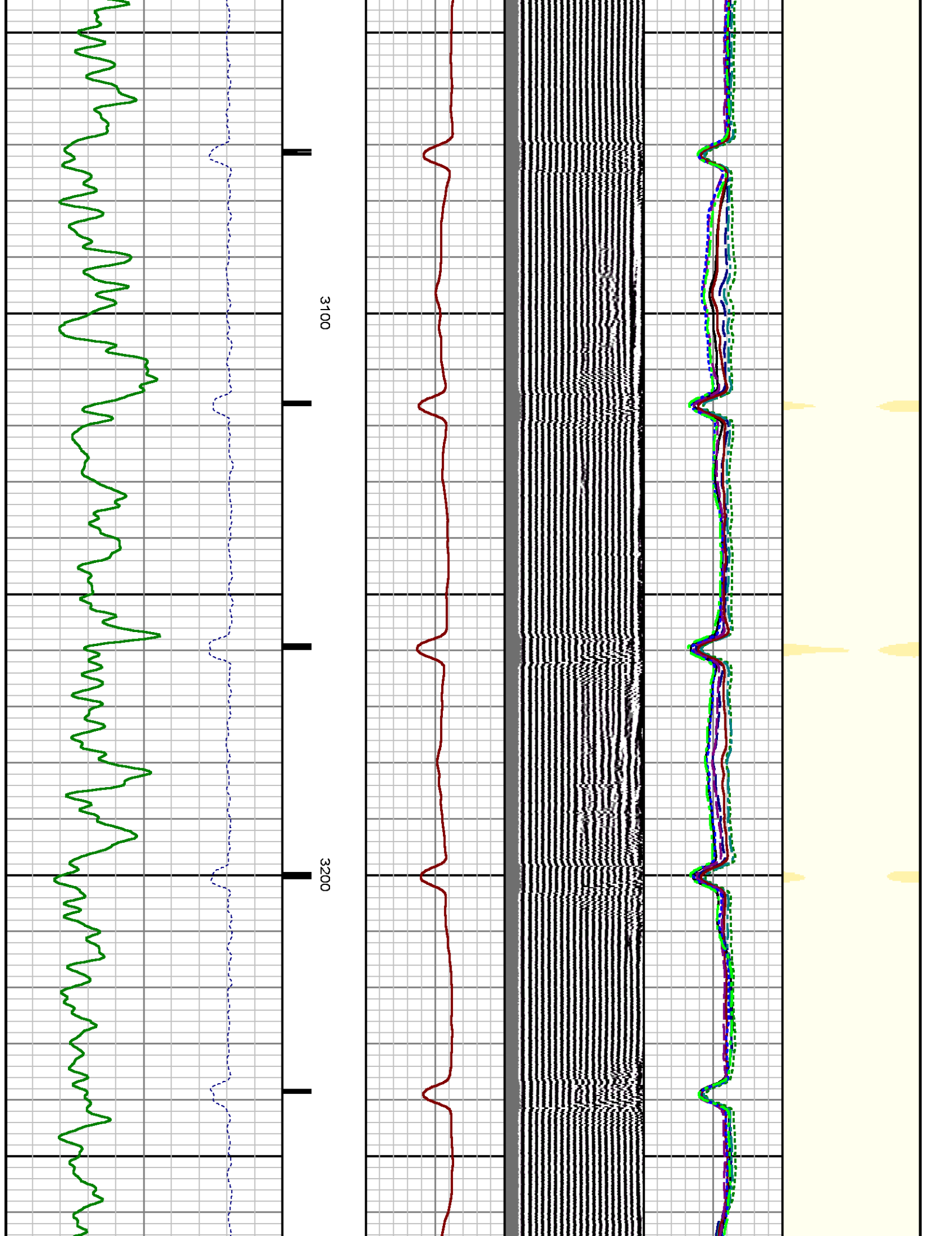
2700

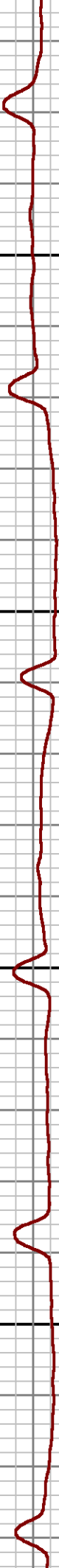
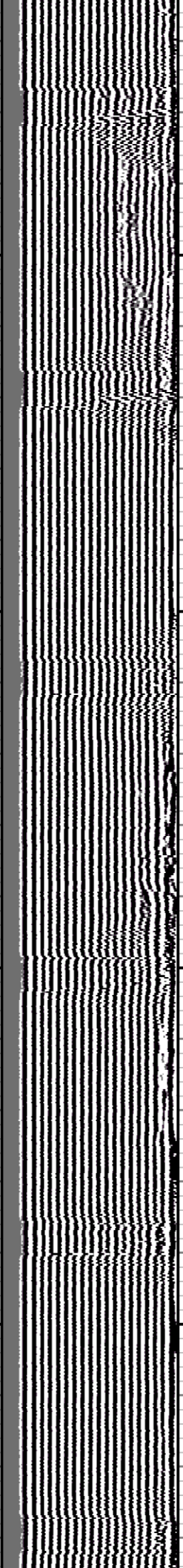
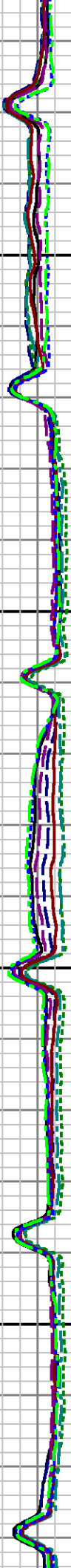
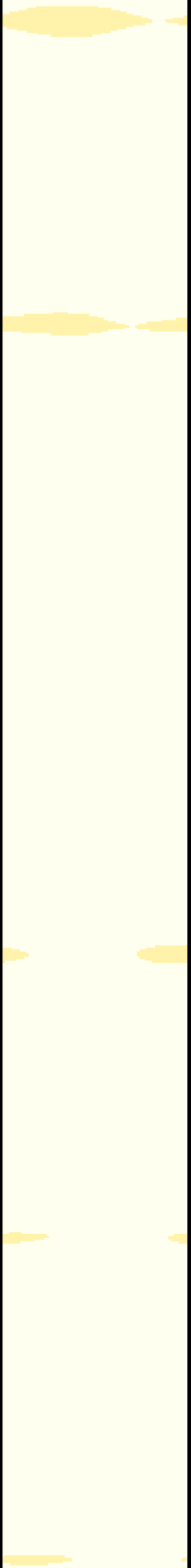
2800



2900

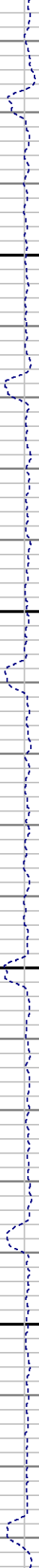
3000

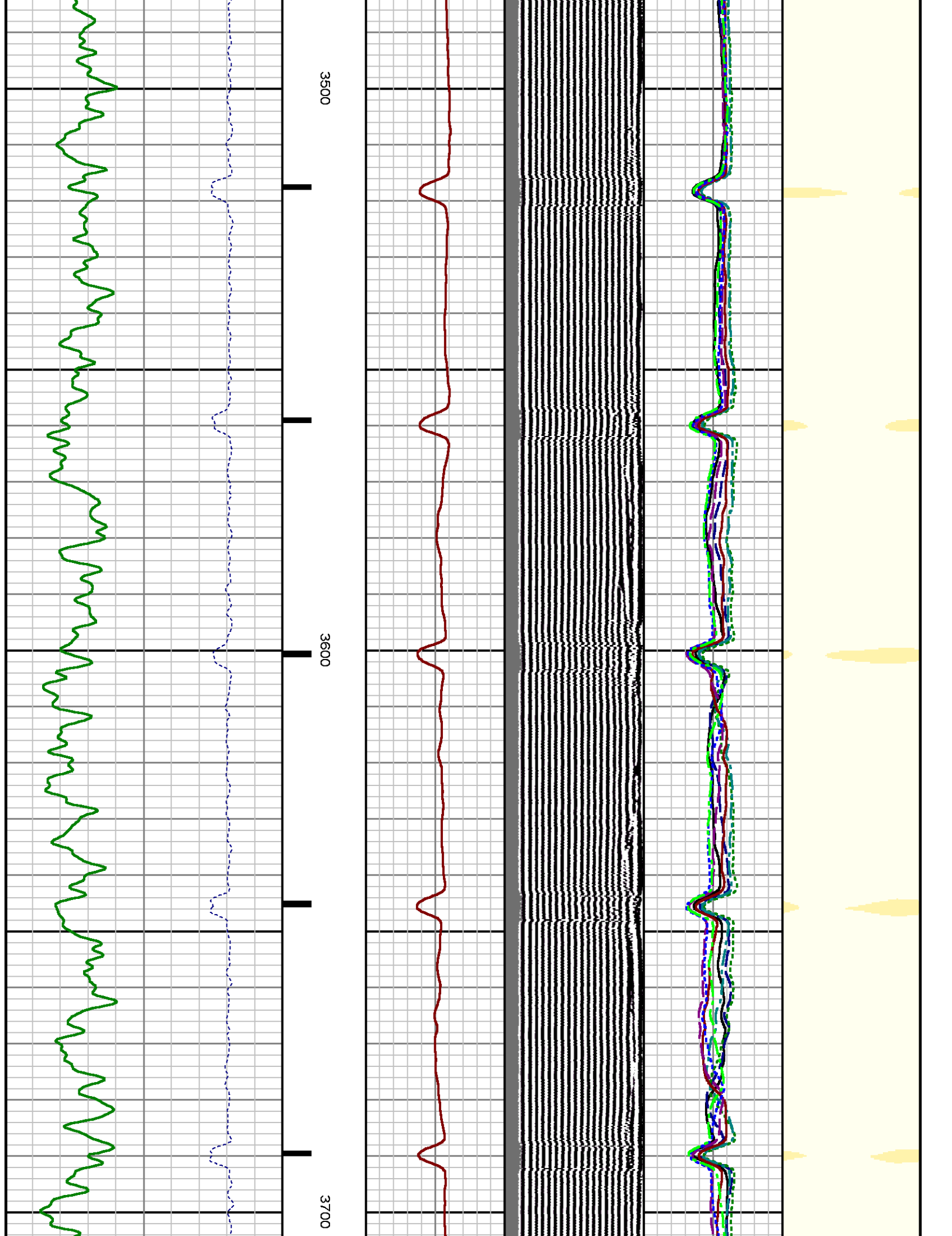


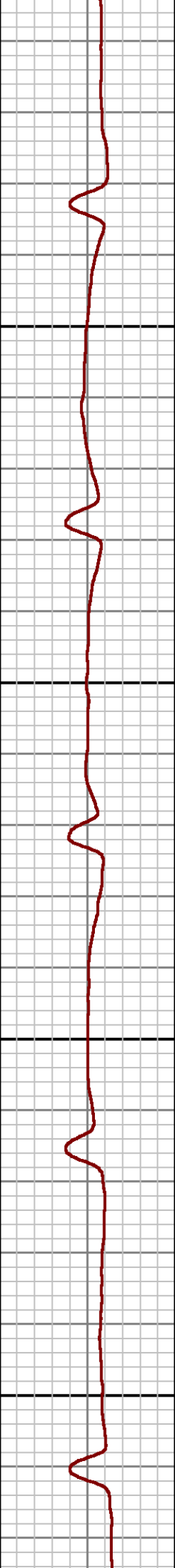
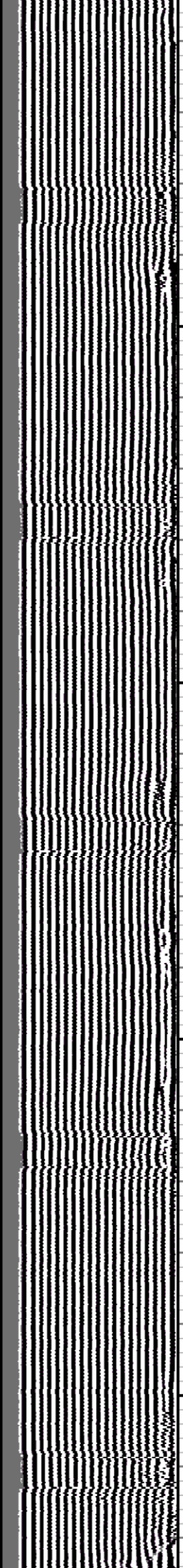
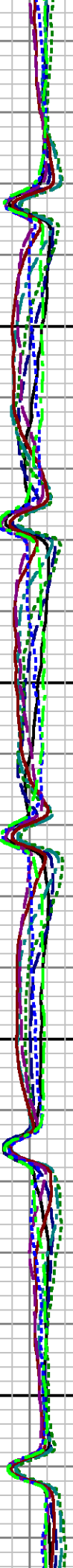
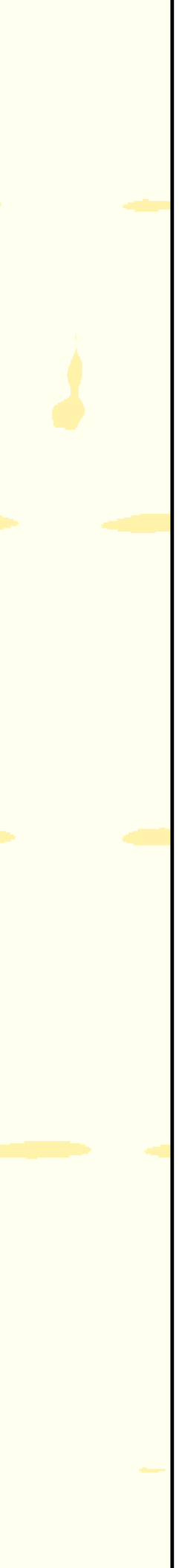


3300

3400



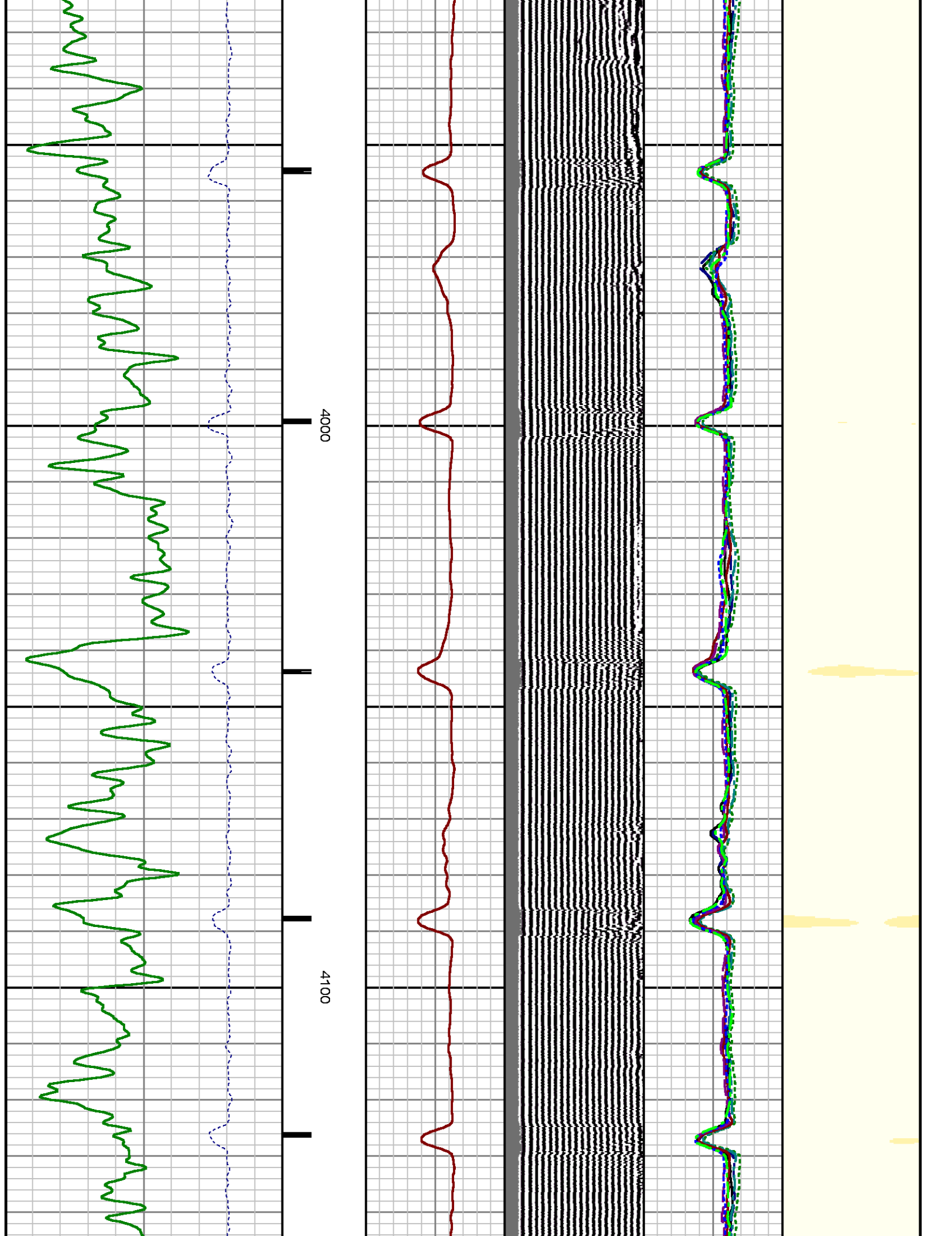


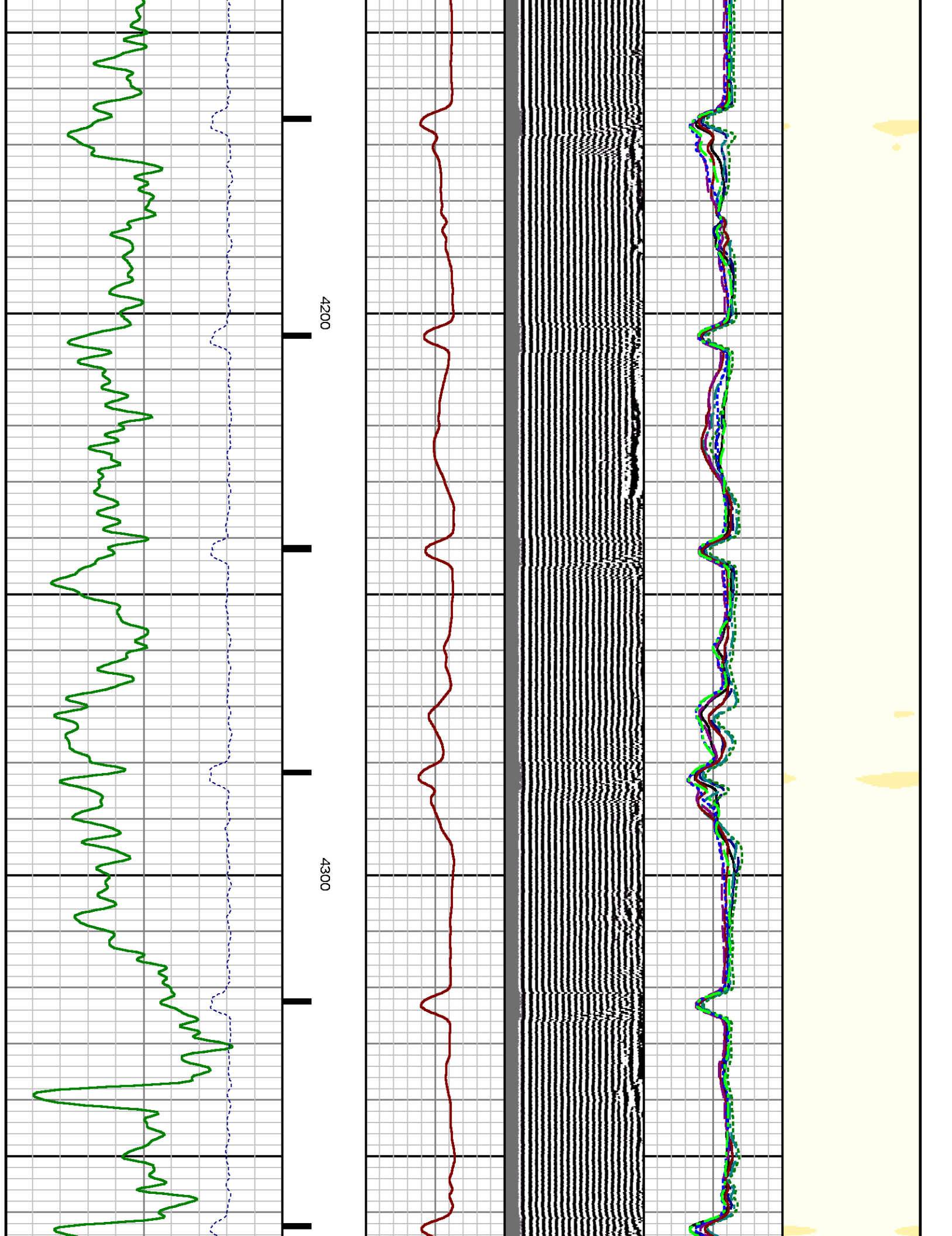


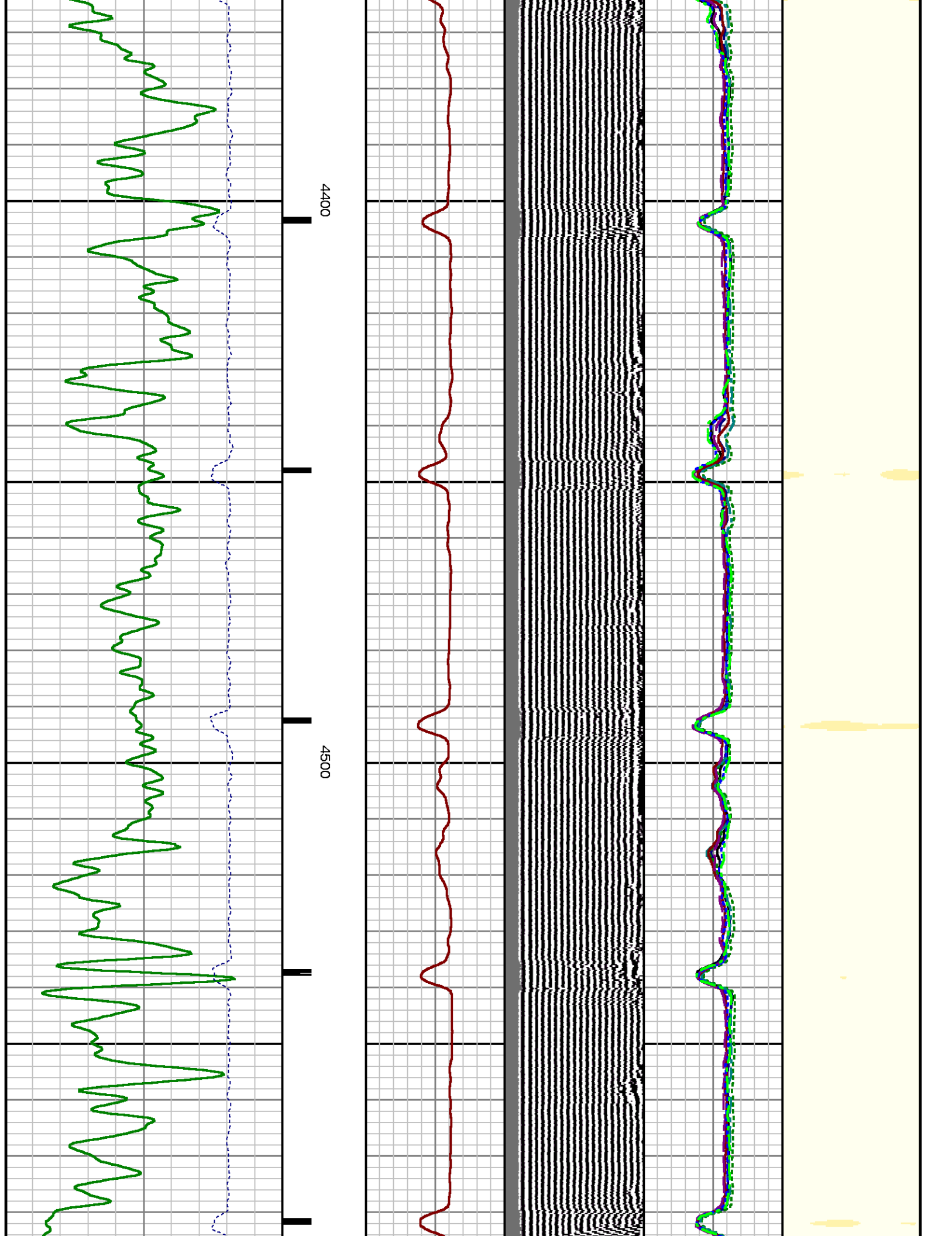
3800

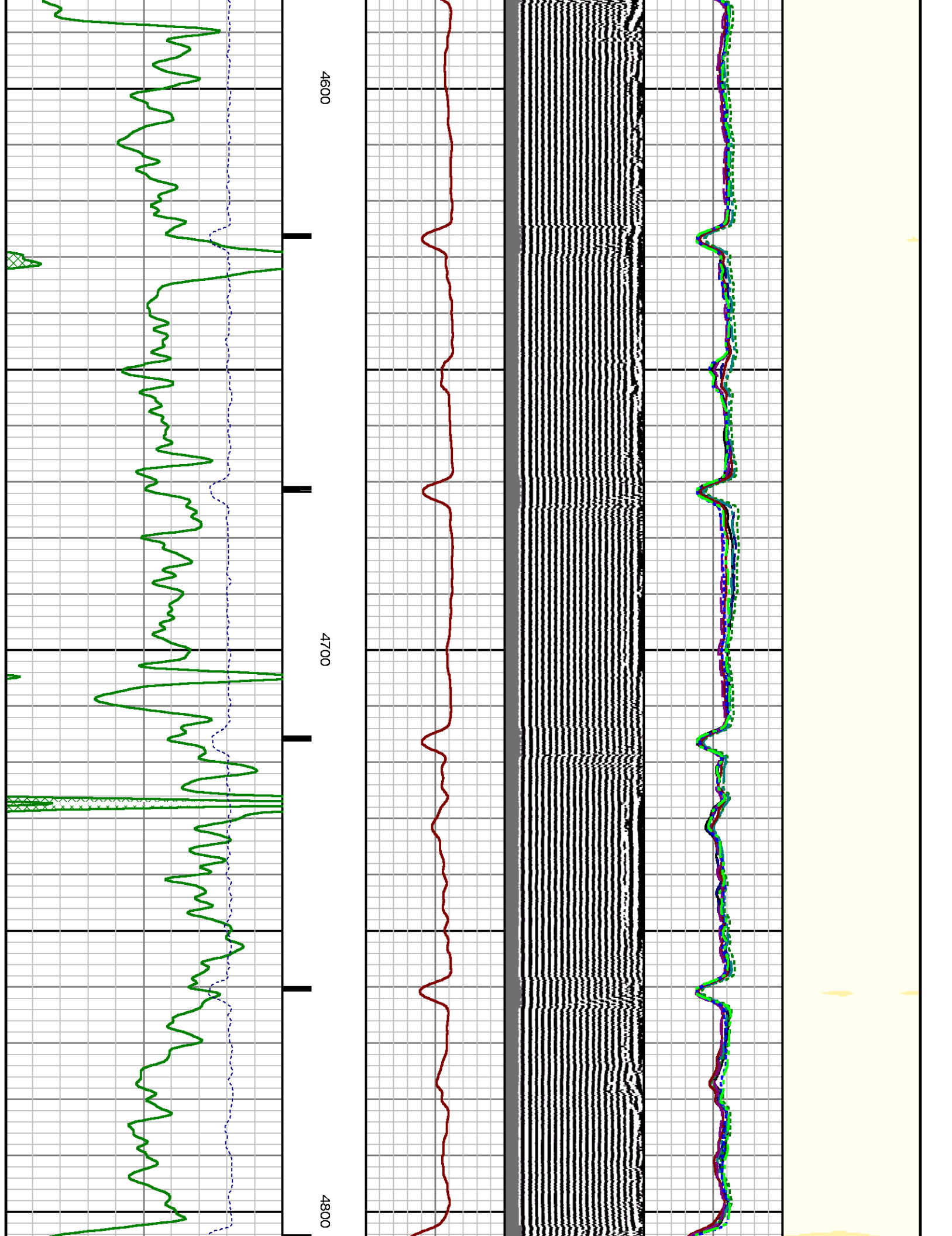
3900

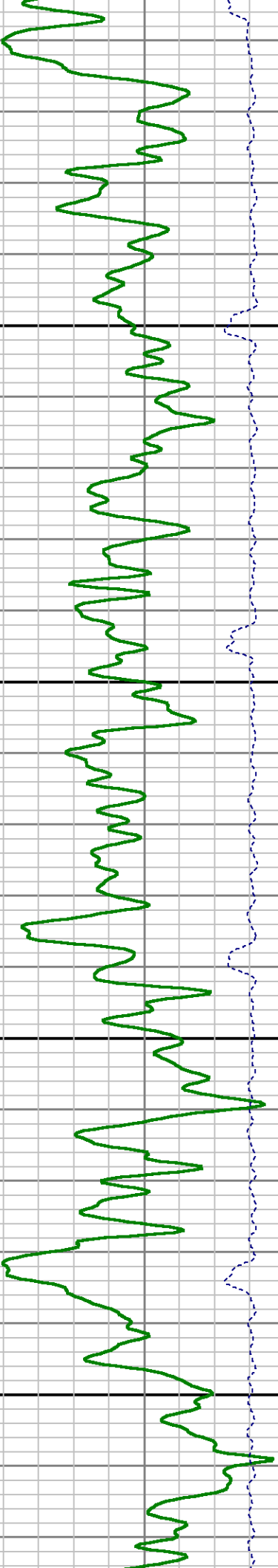
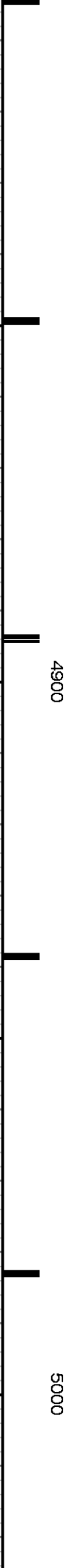
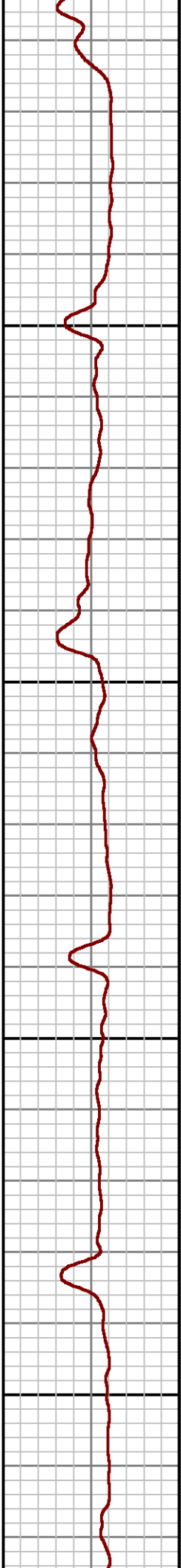
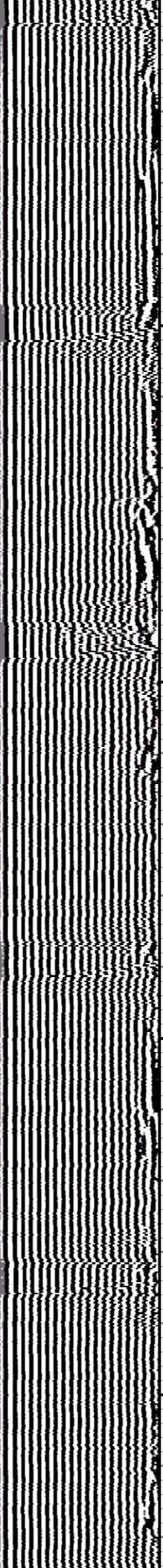
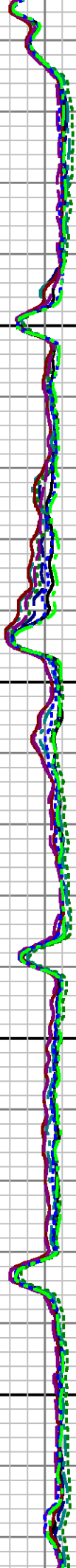
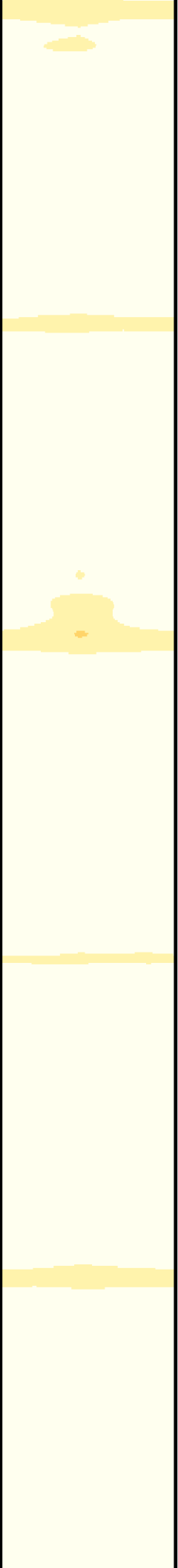


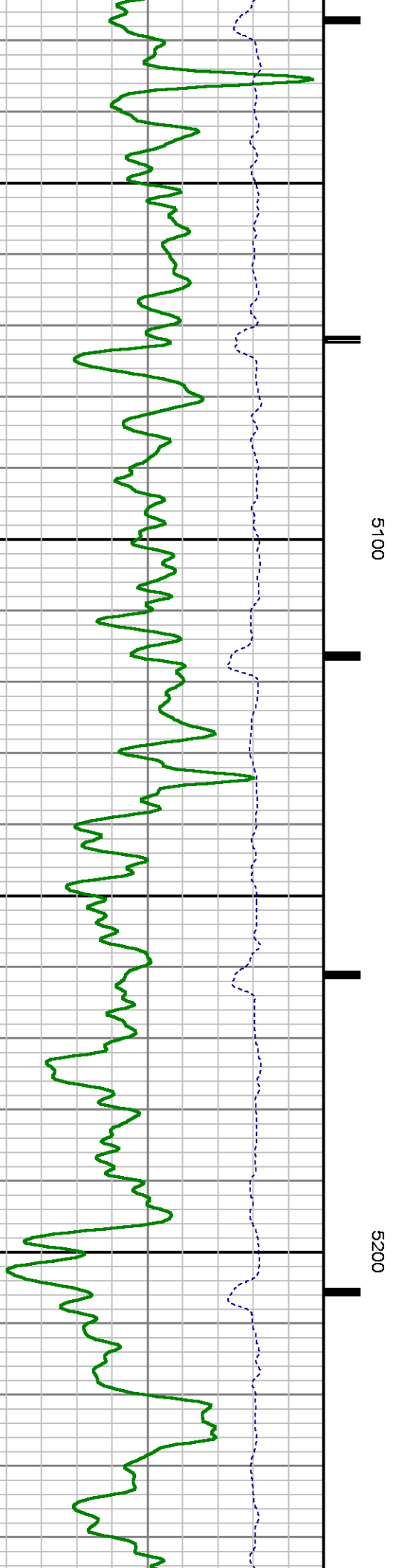
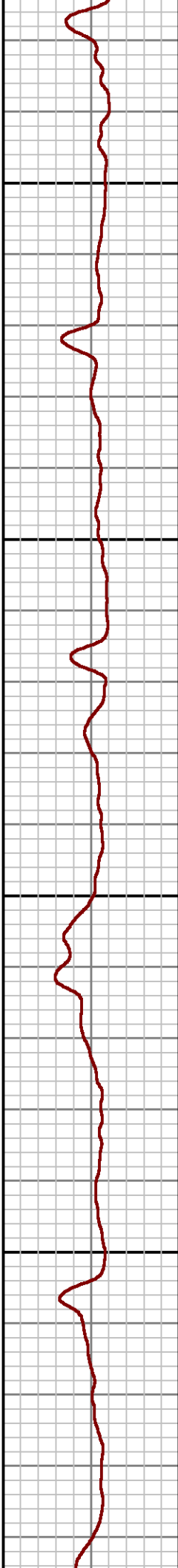
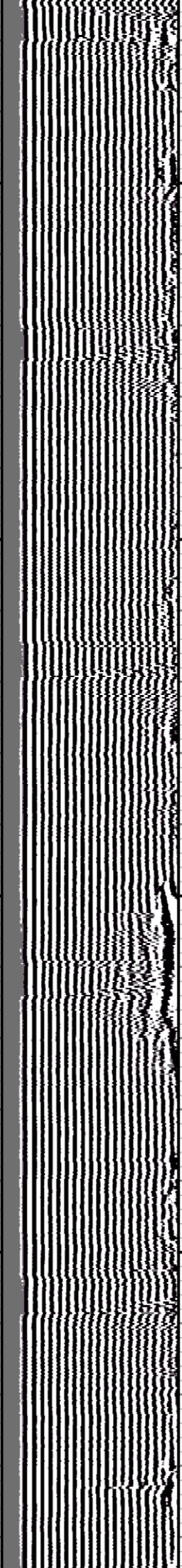
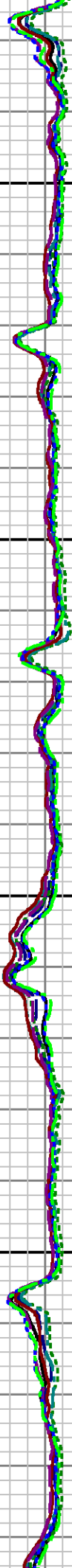
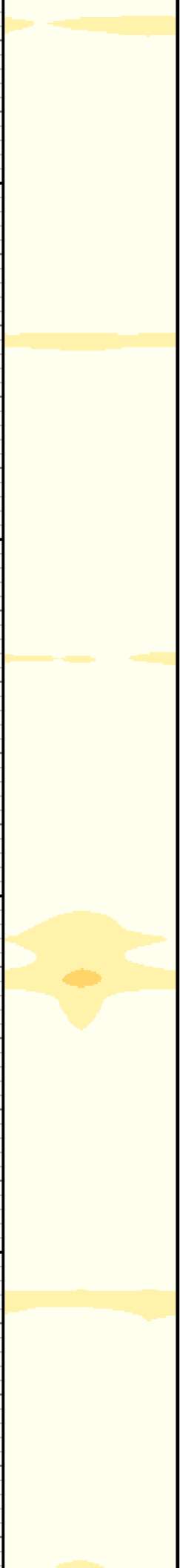


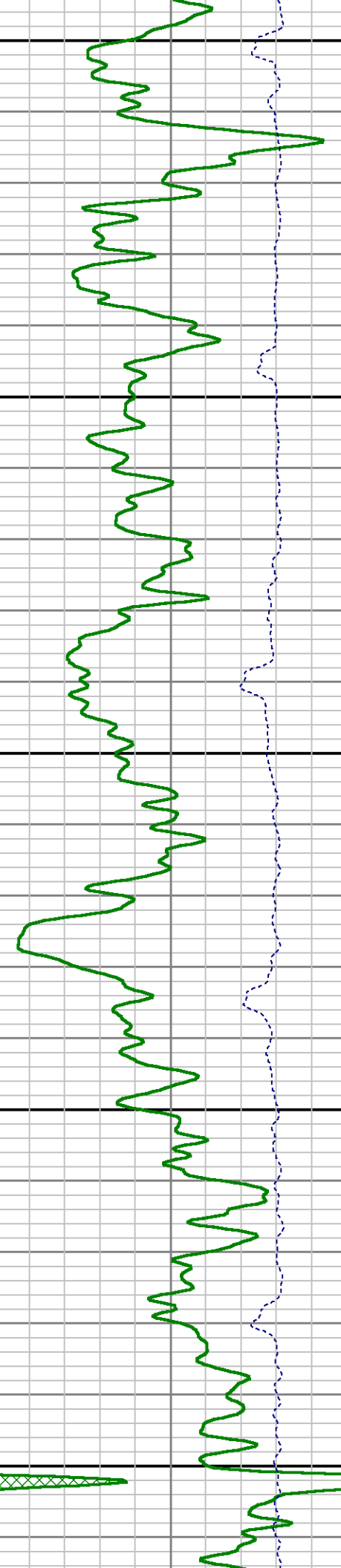
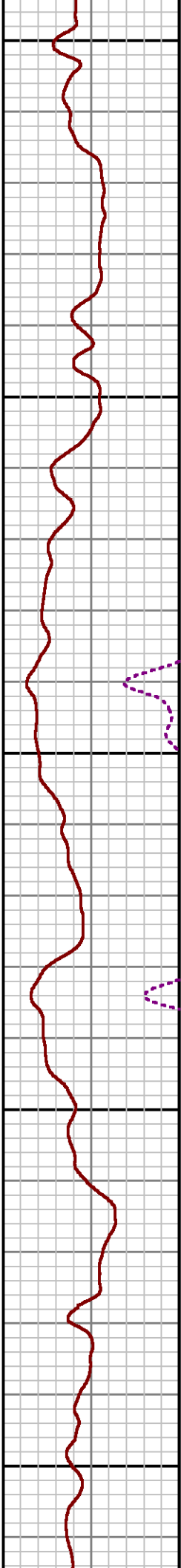
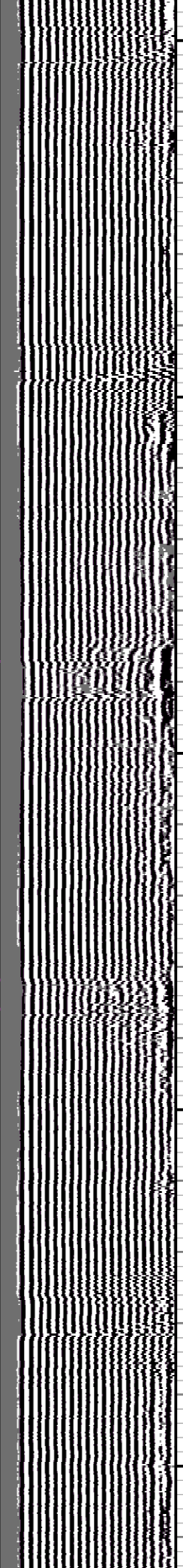
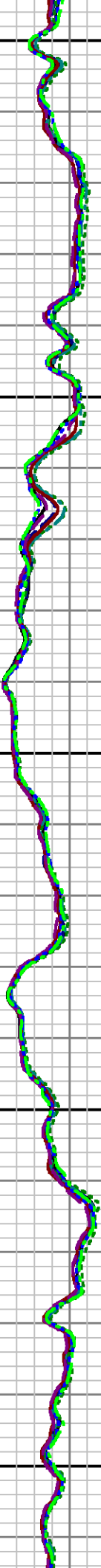
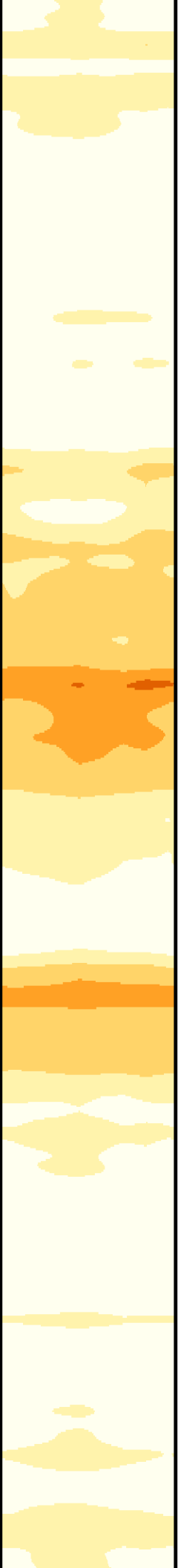


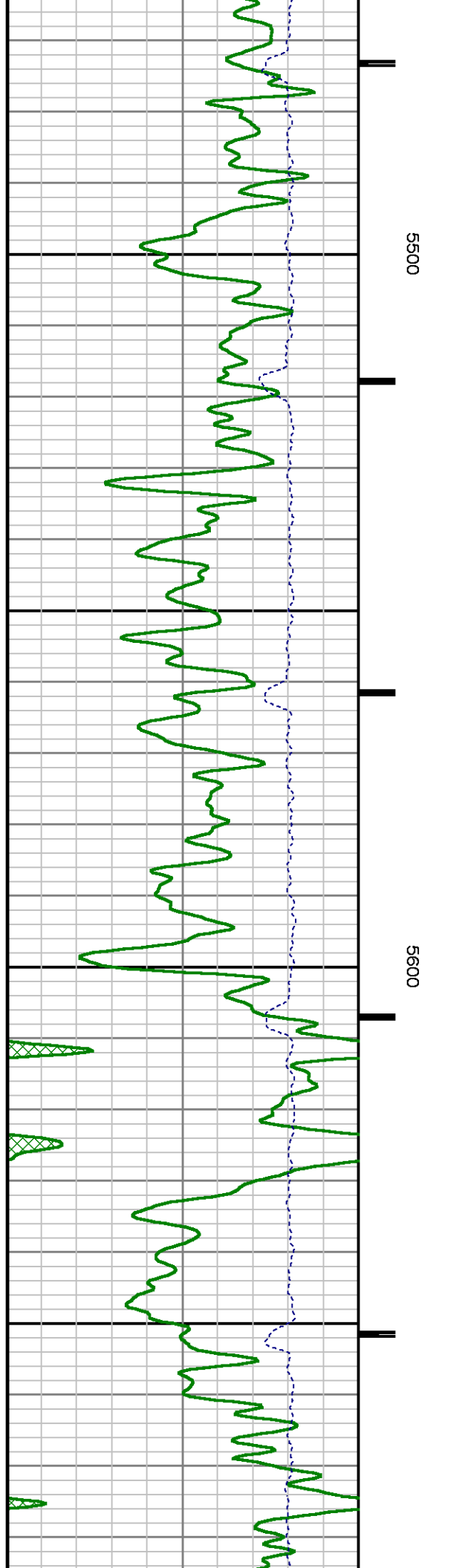
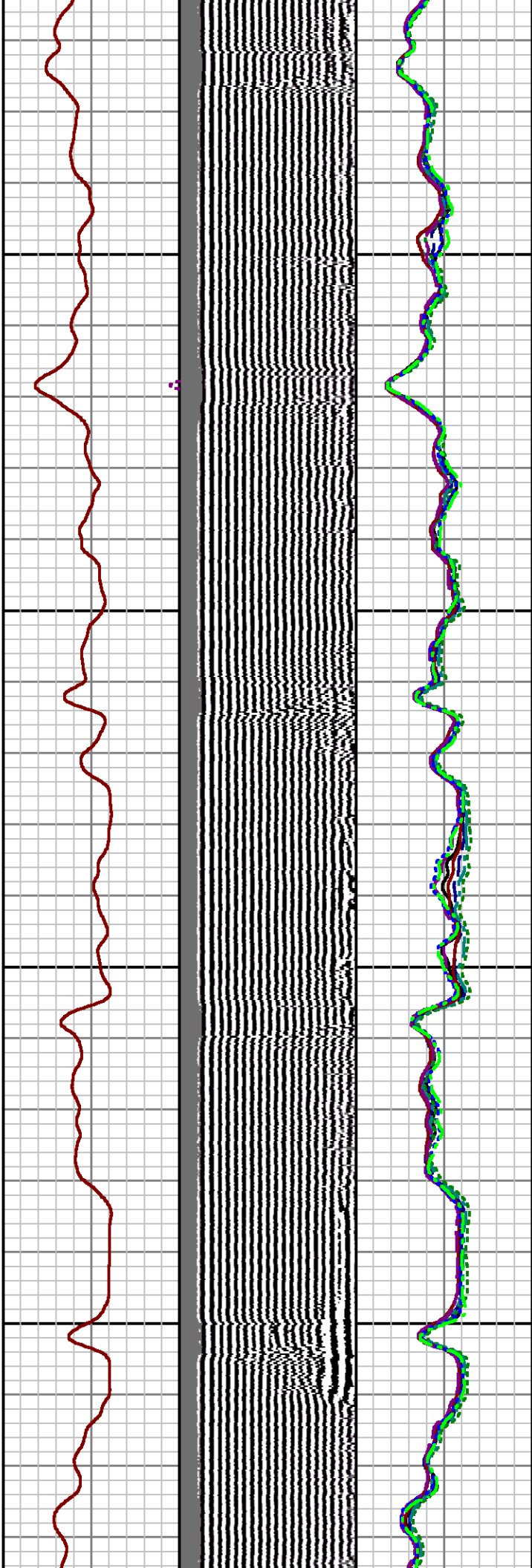
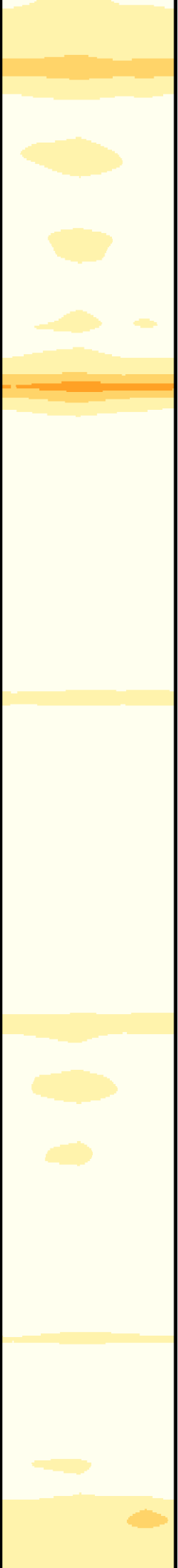


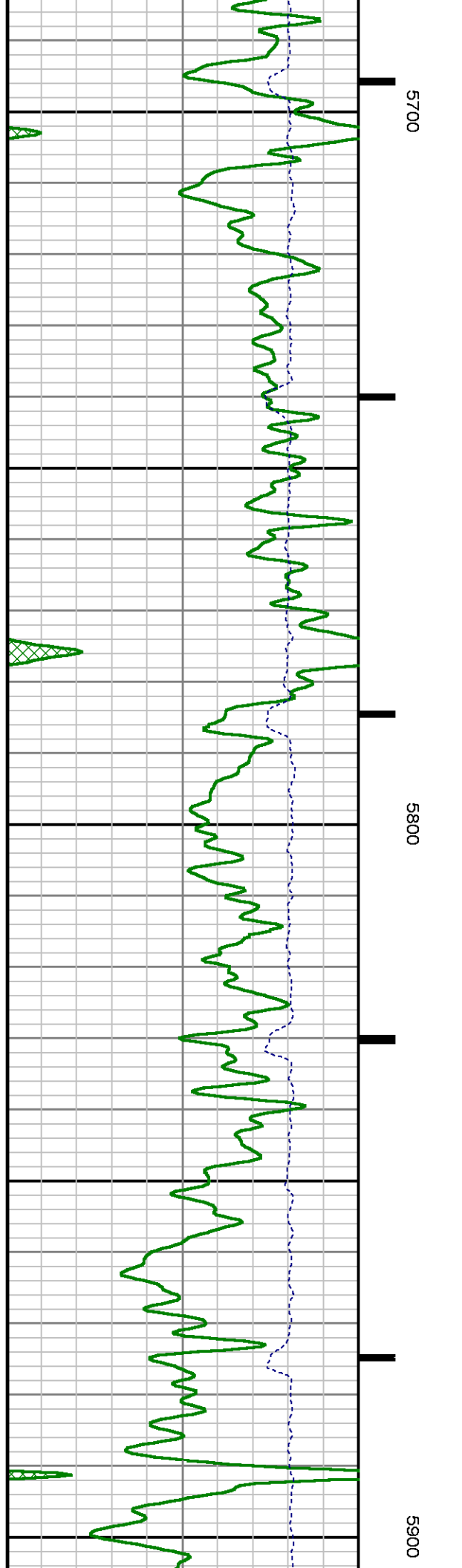
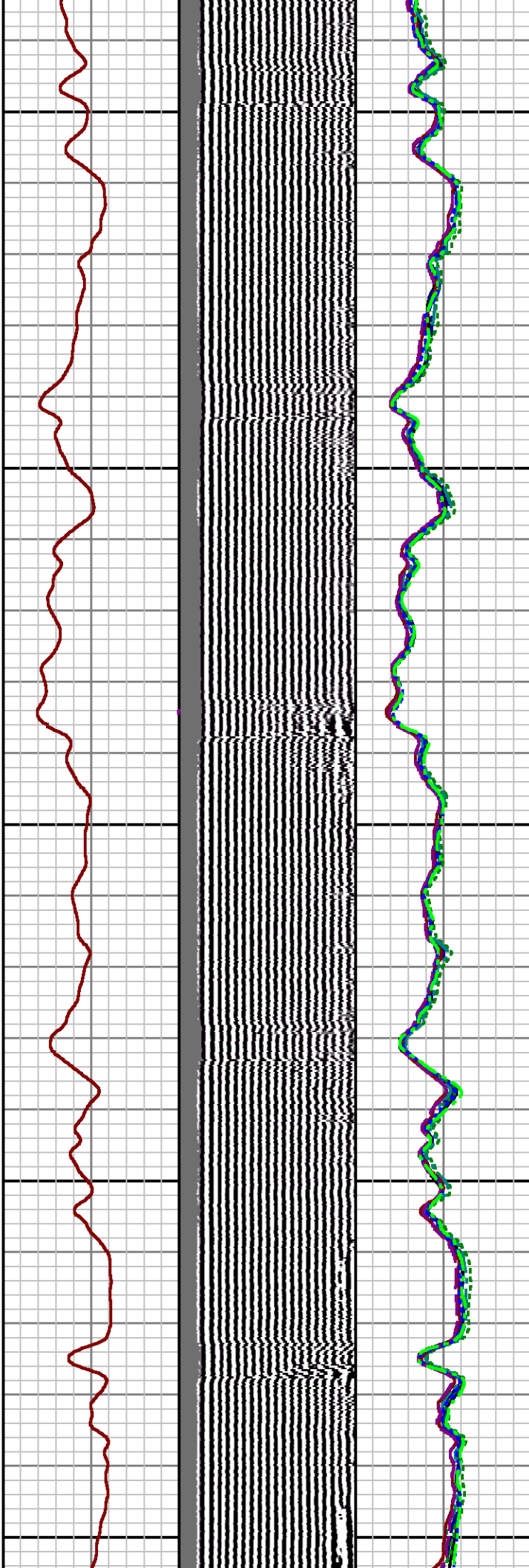
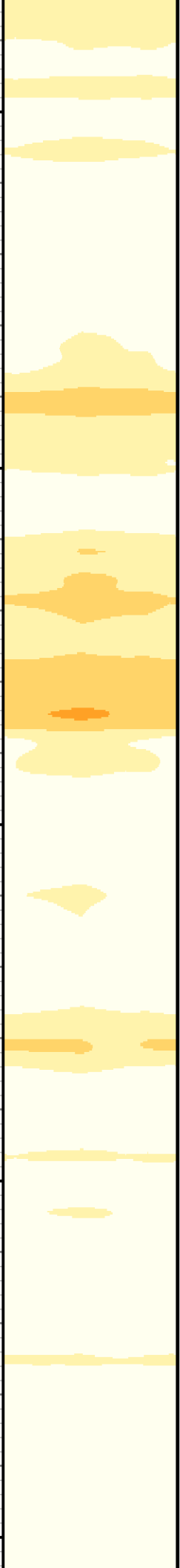


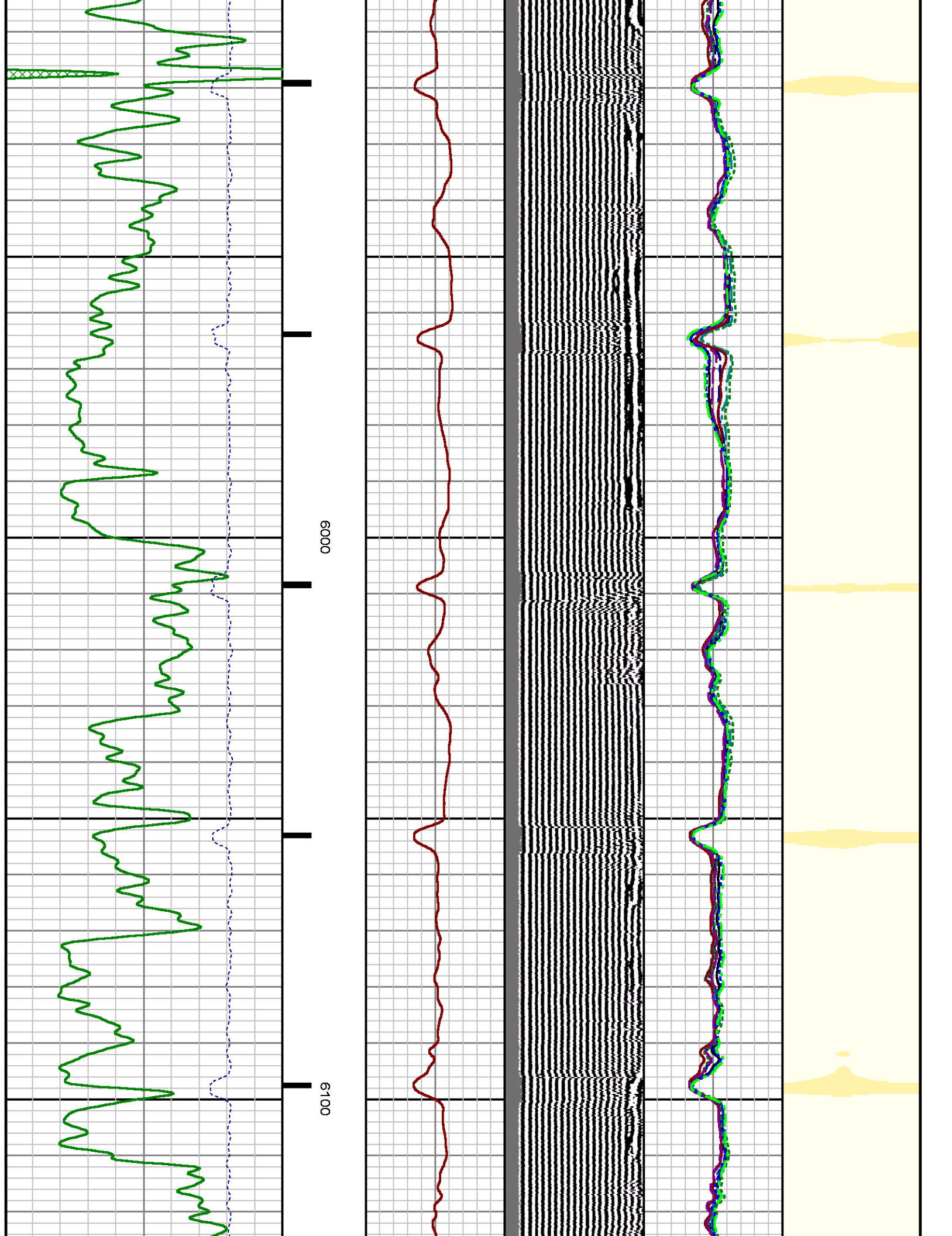


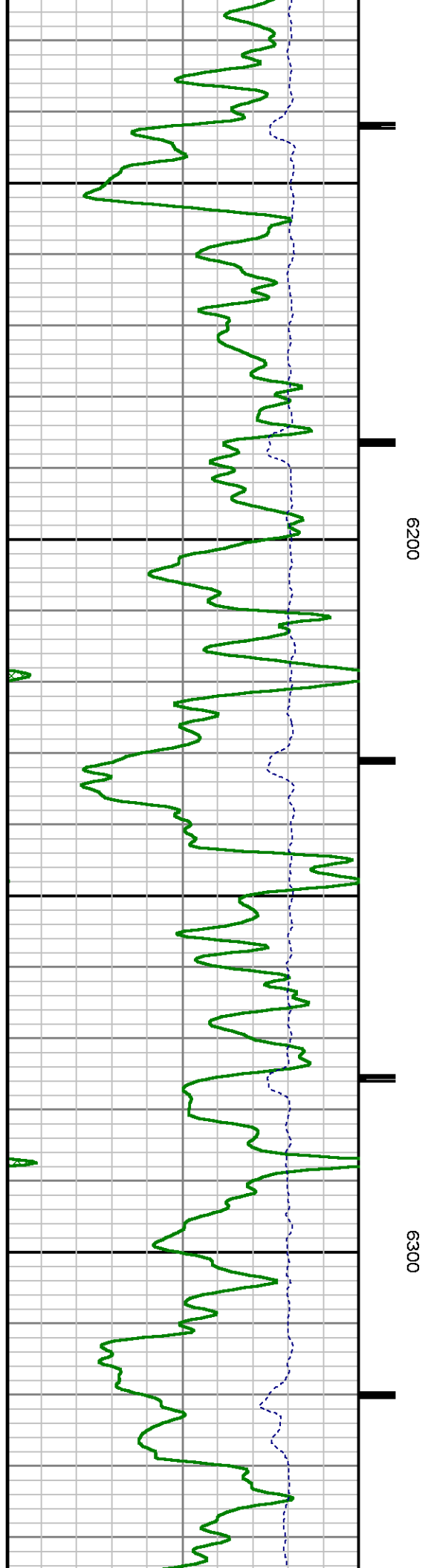
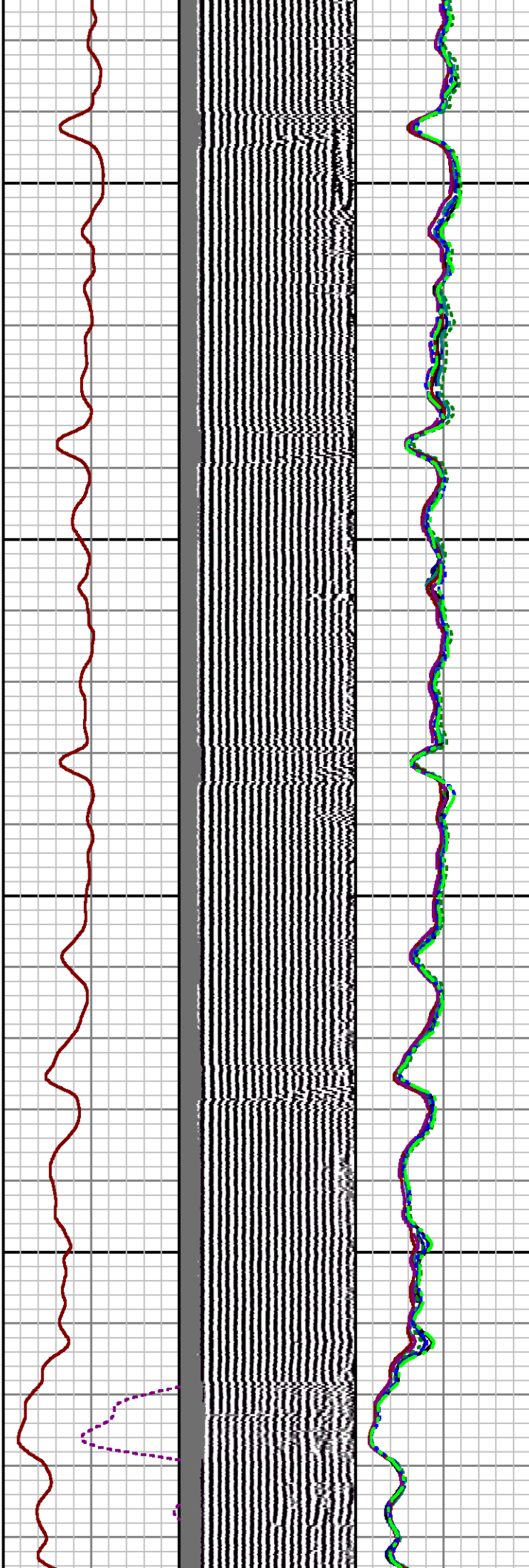
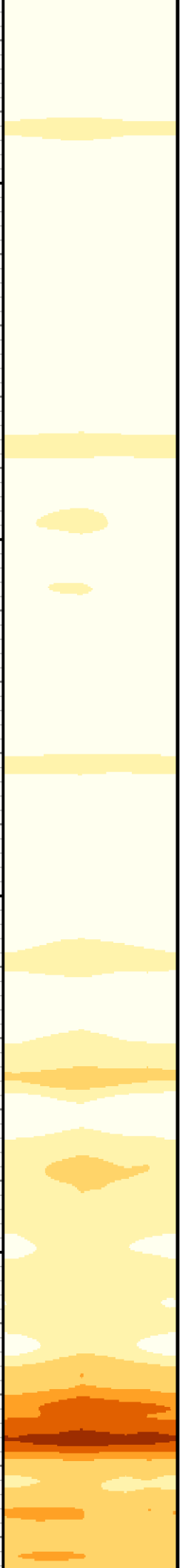


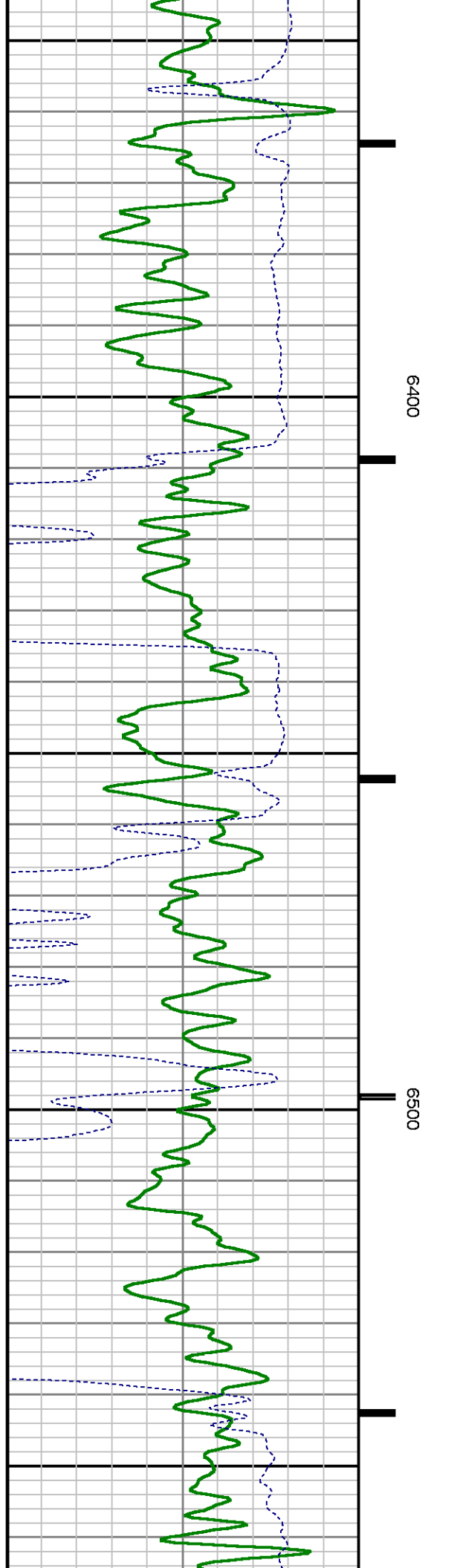
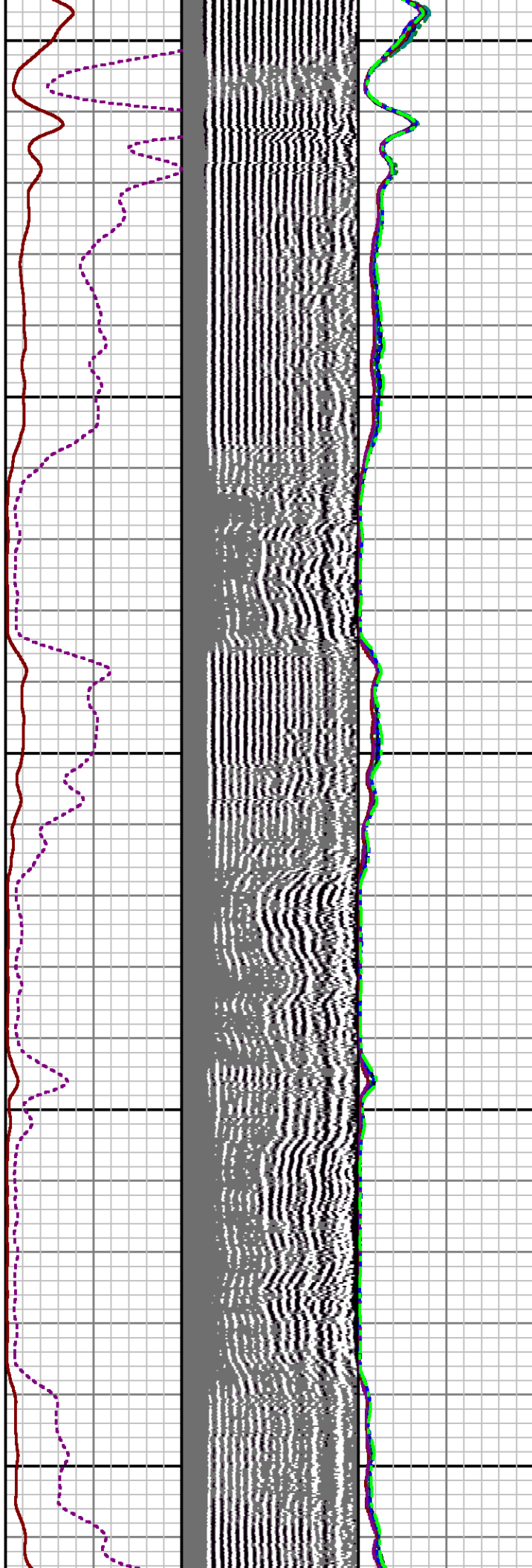
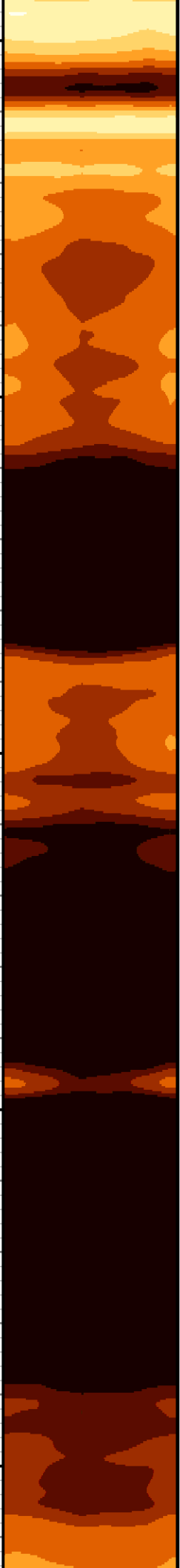


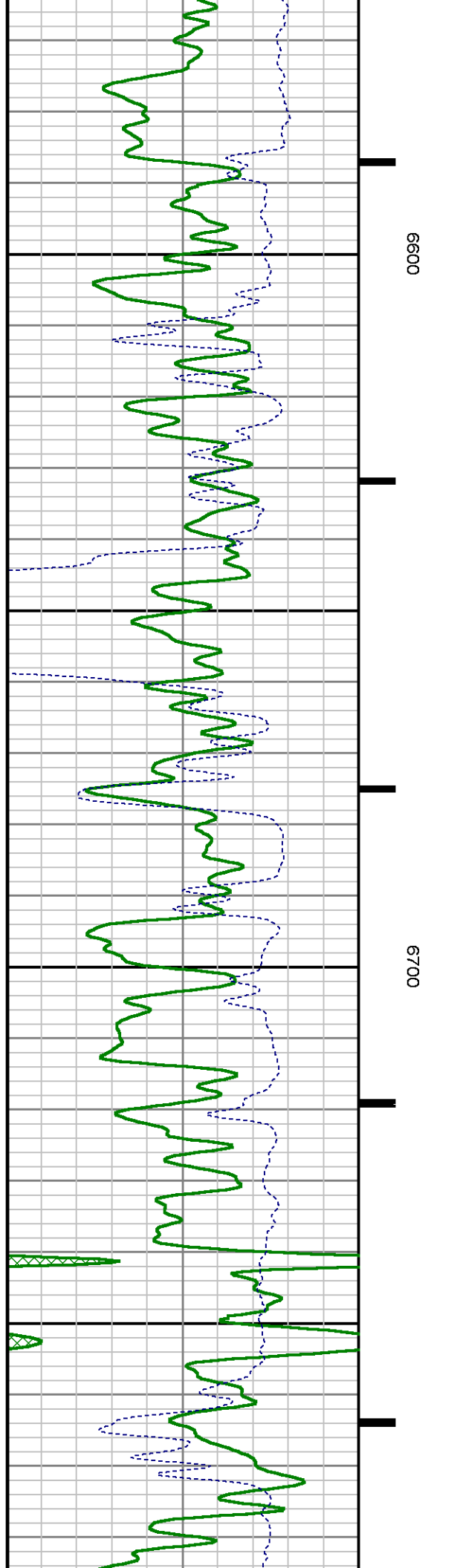
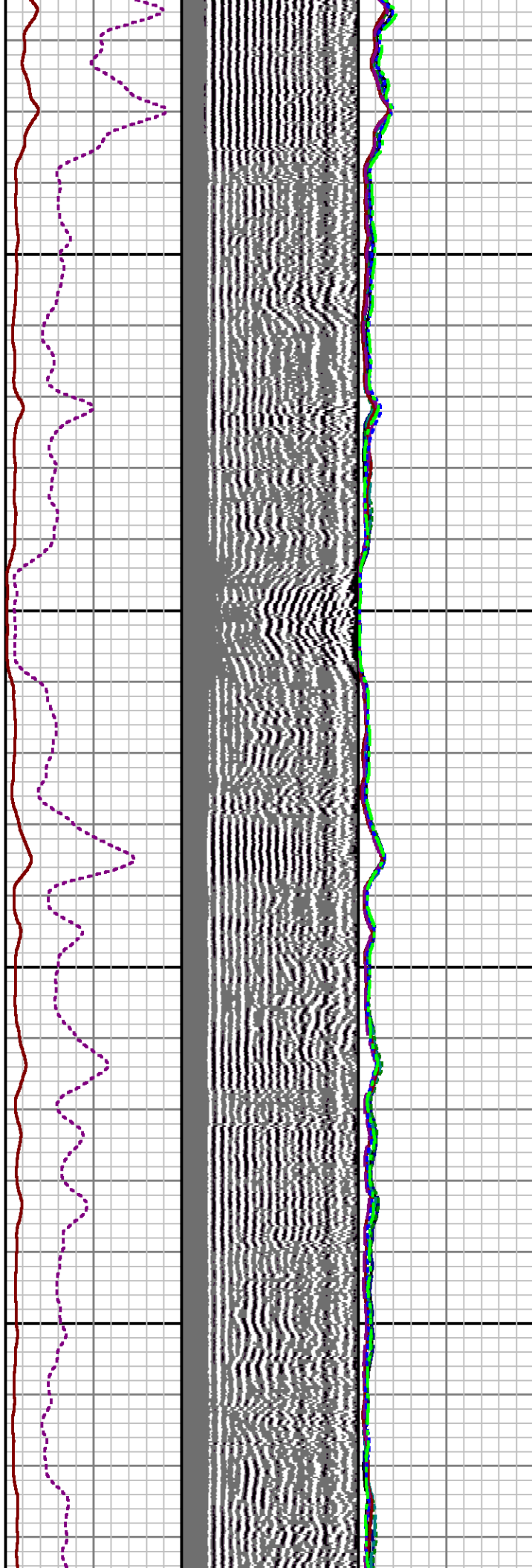
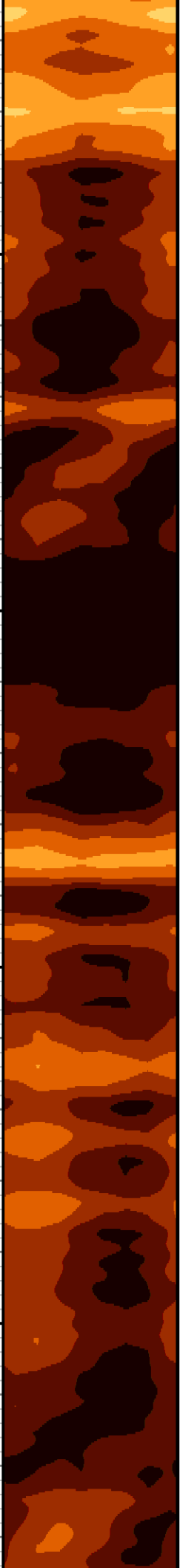


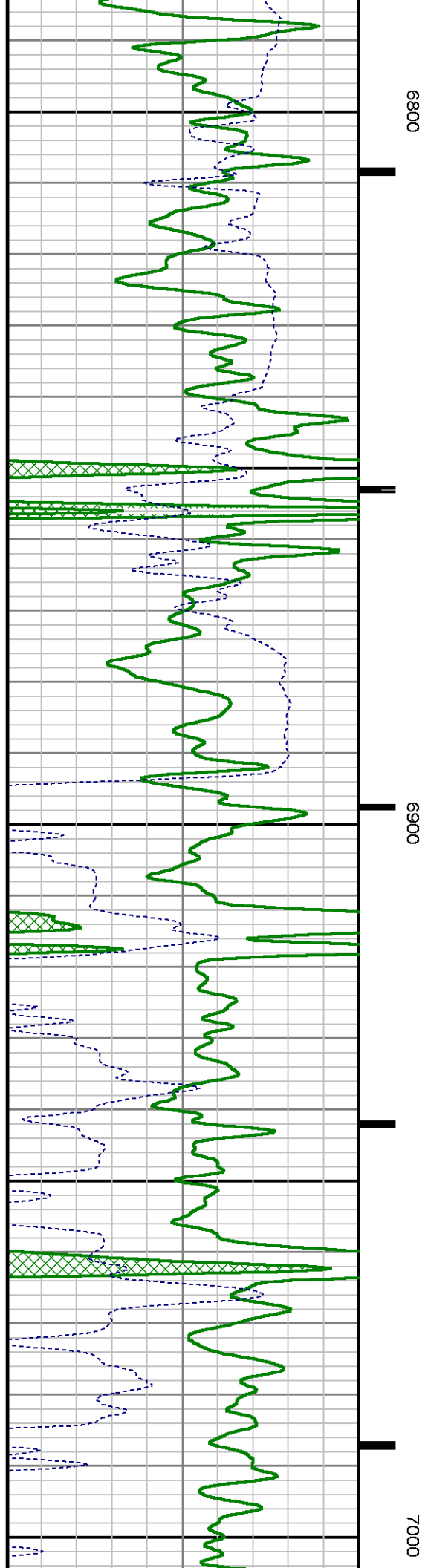
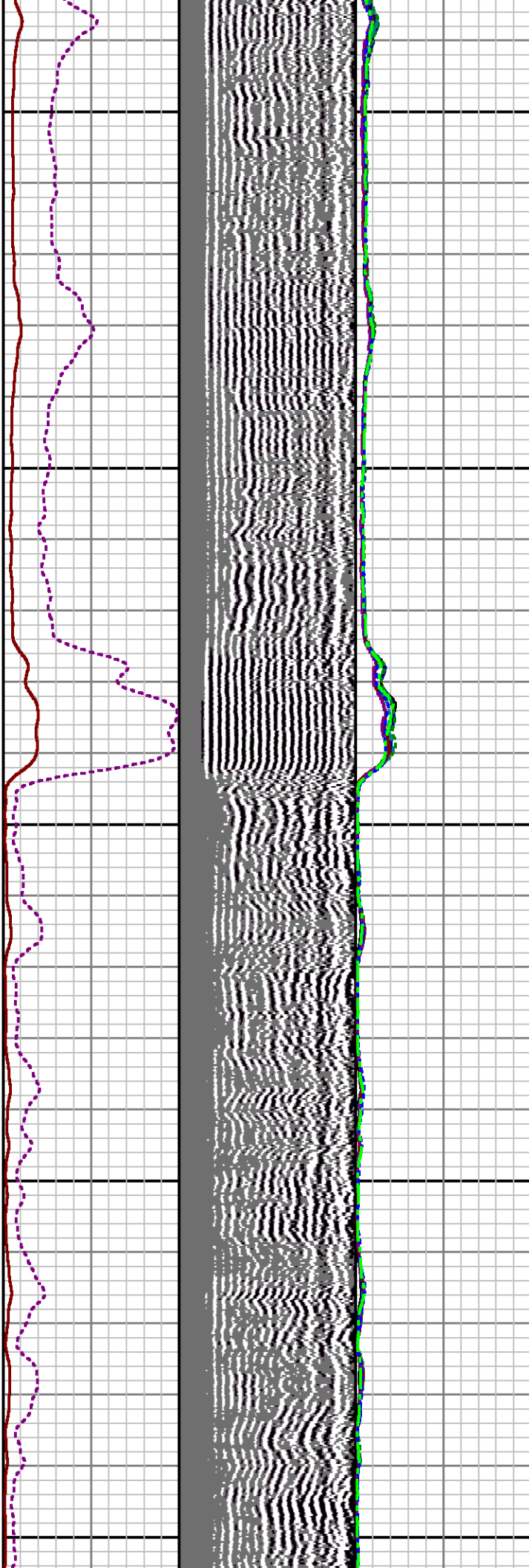
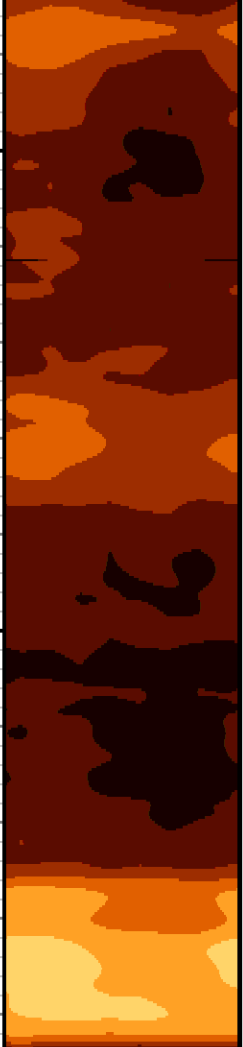


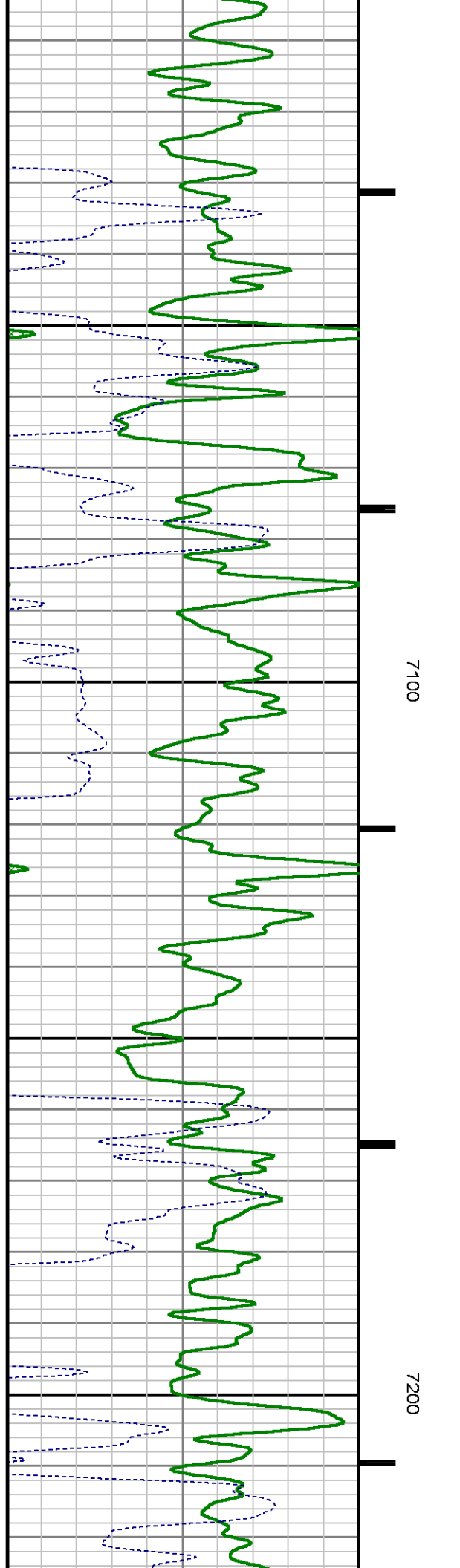
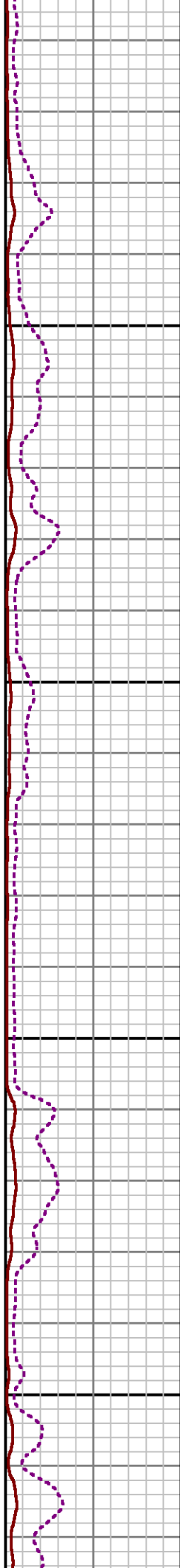
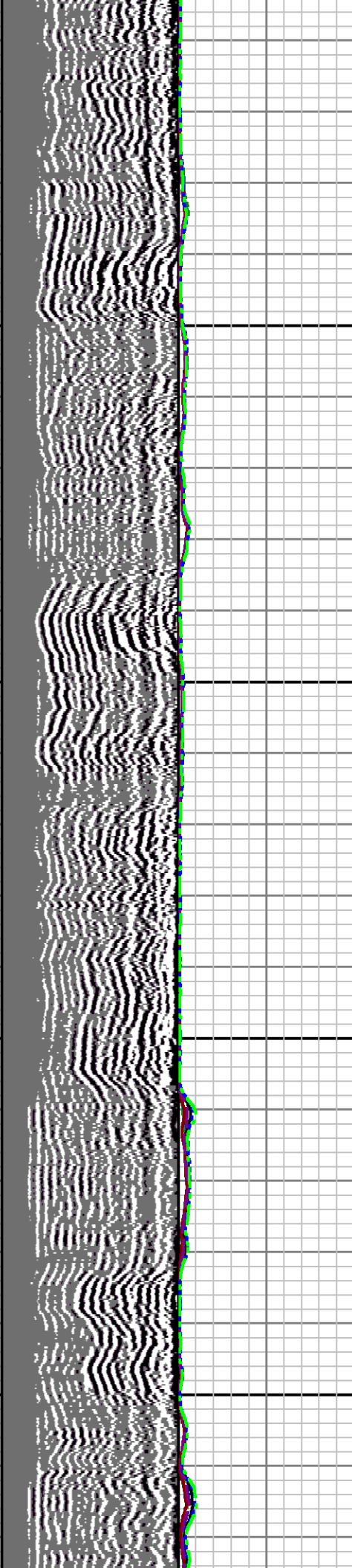


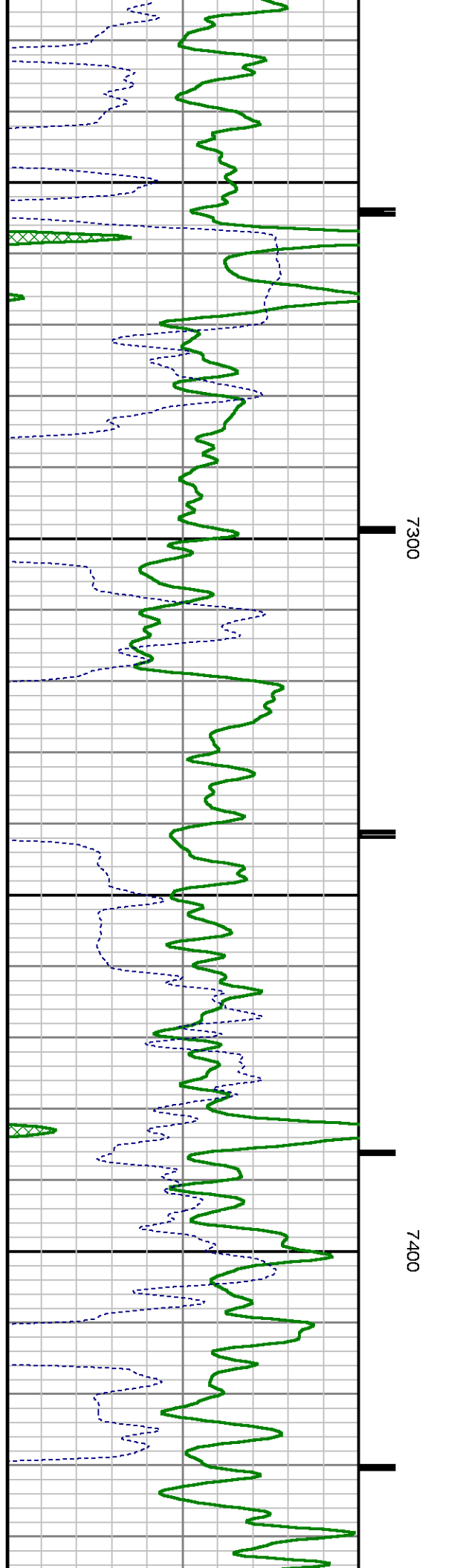
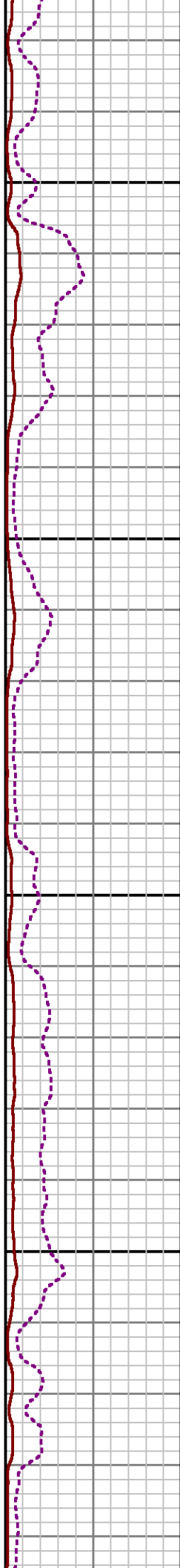
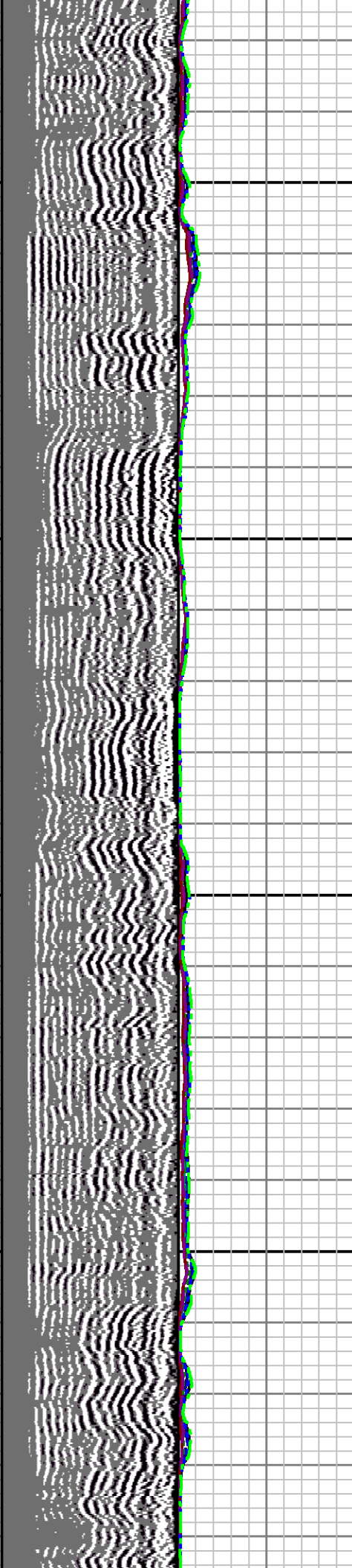
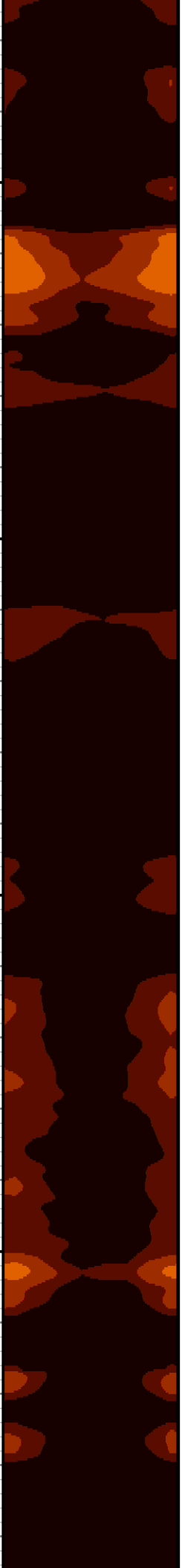


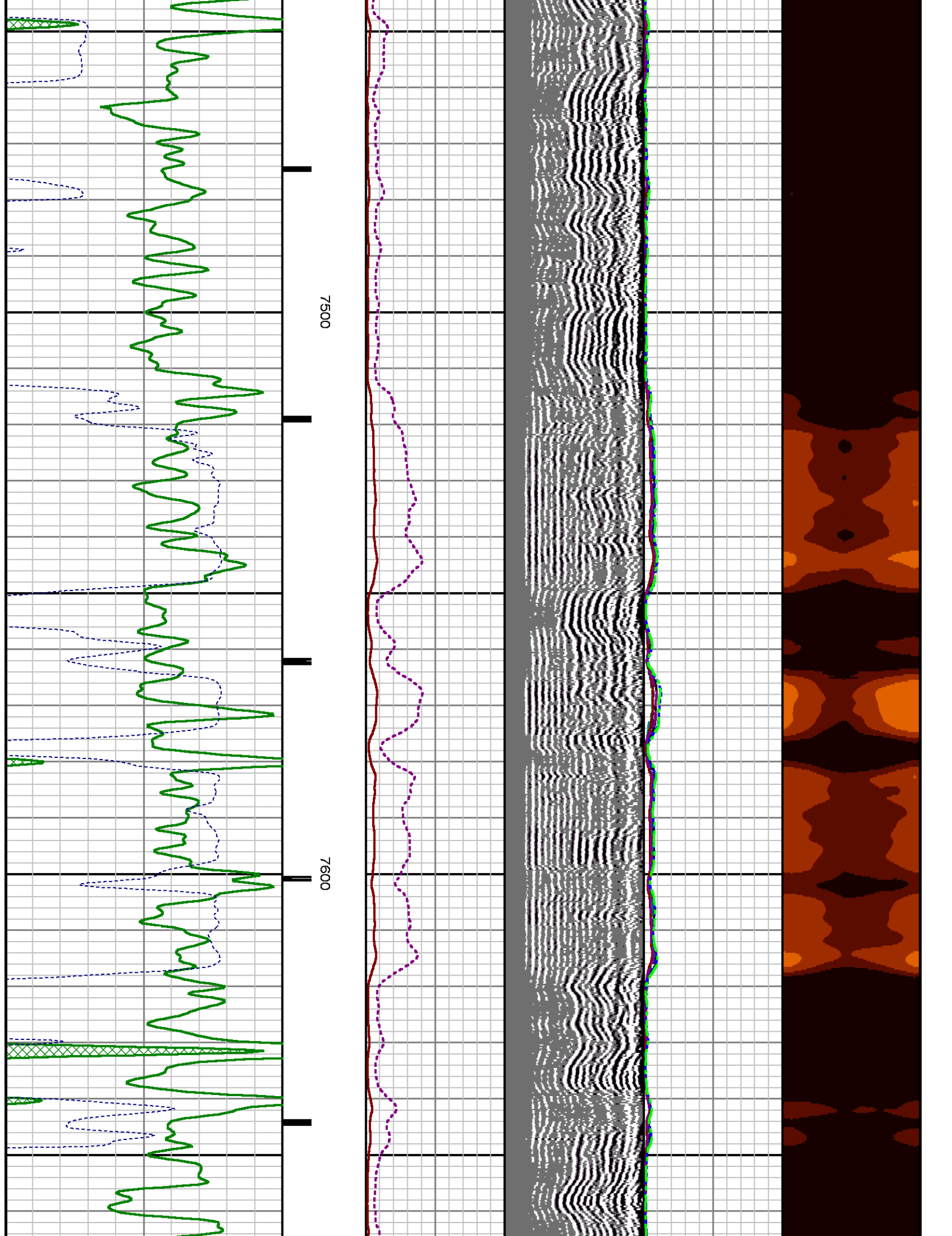


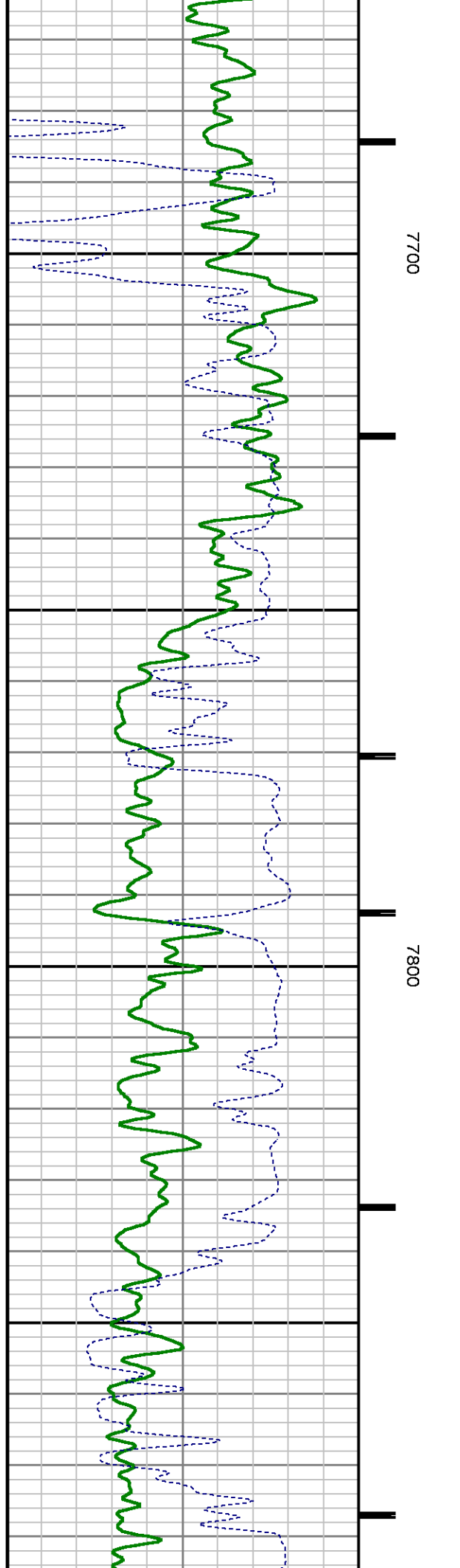
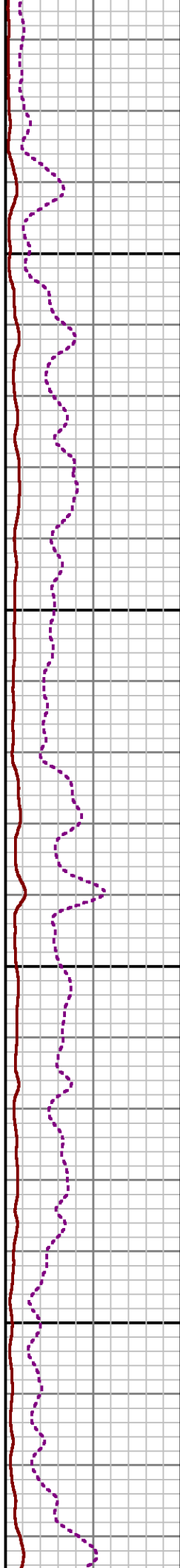
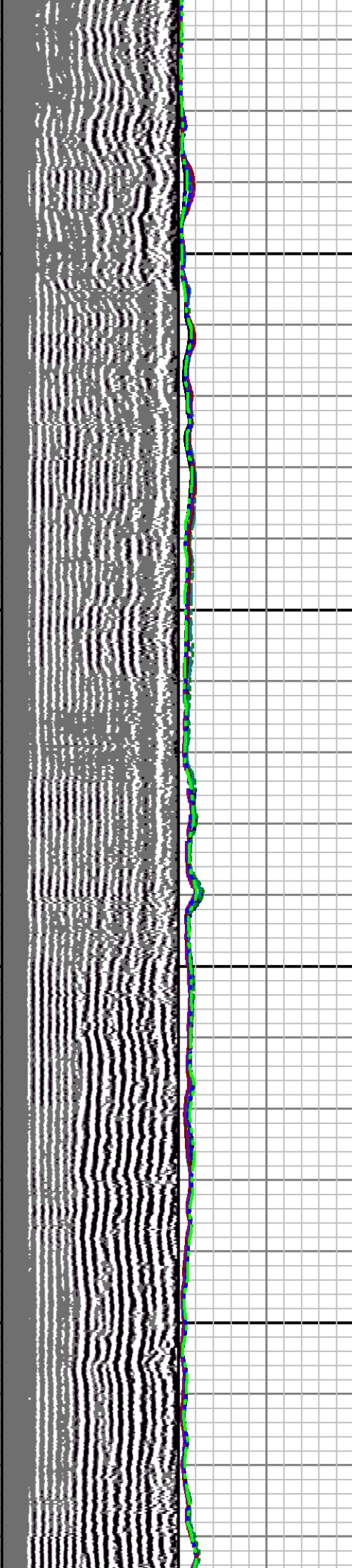


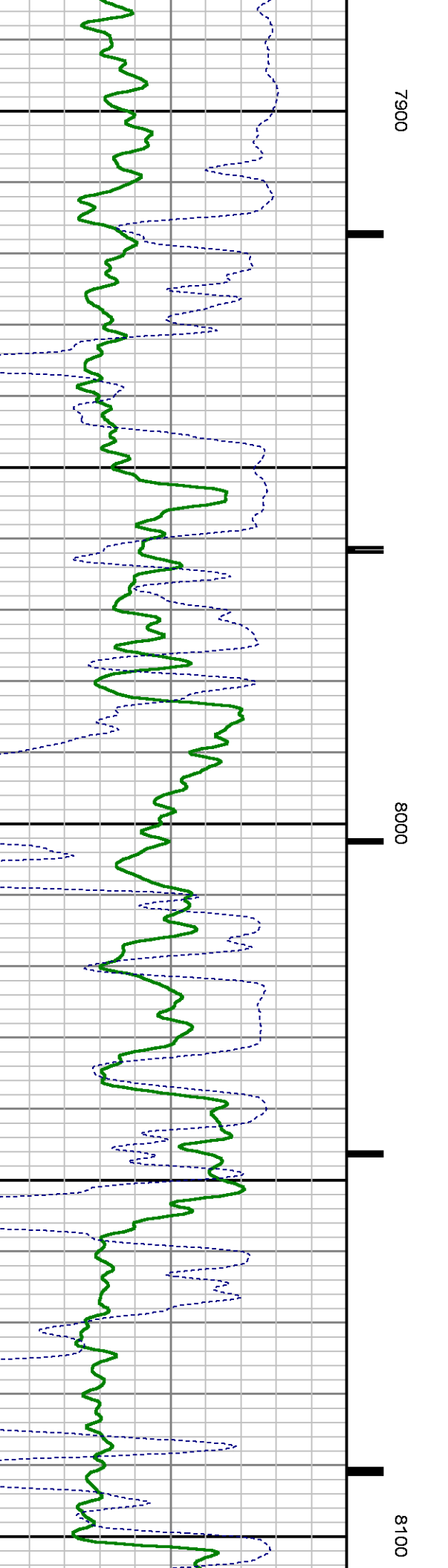
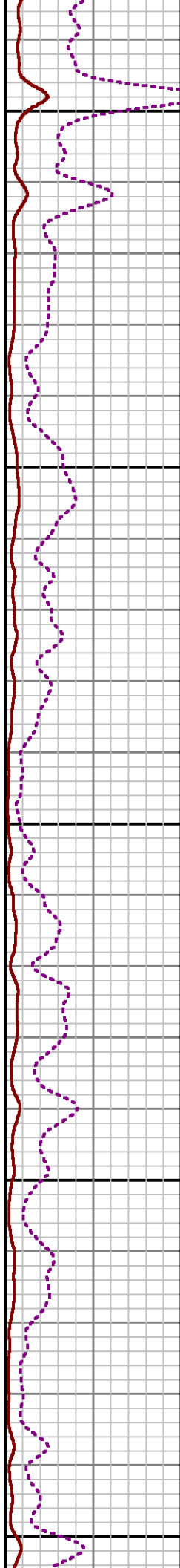
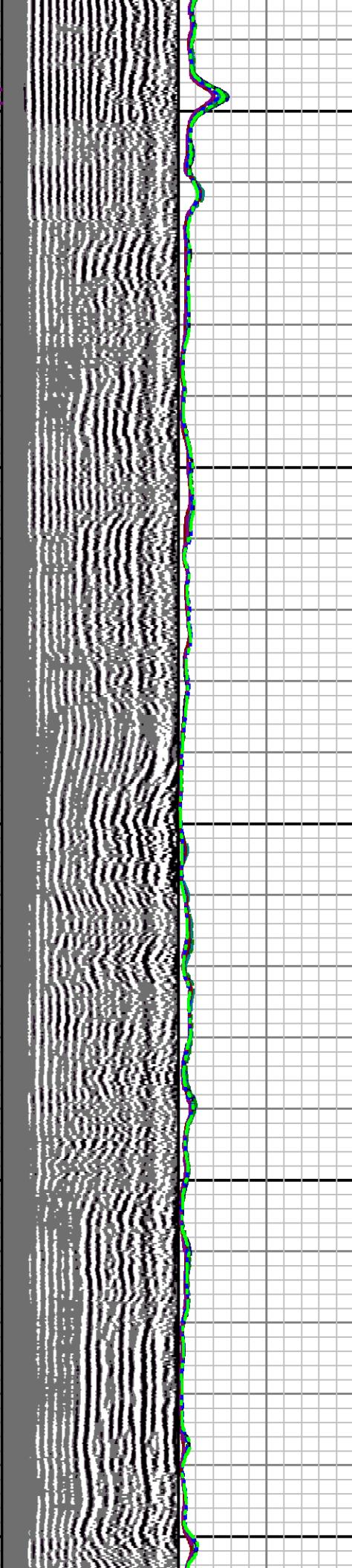


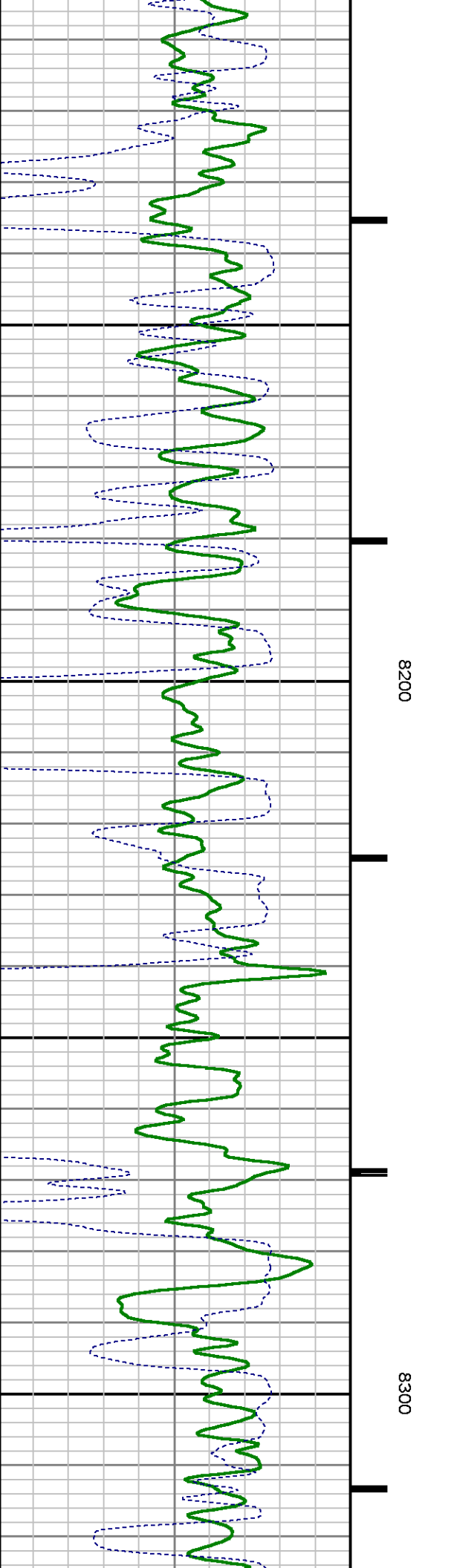
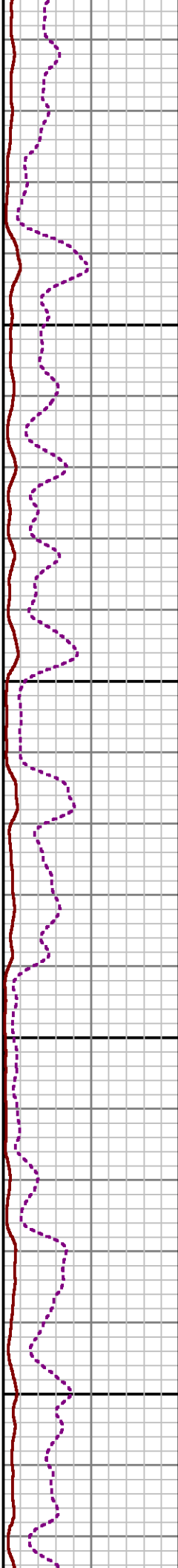
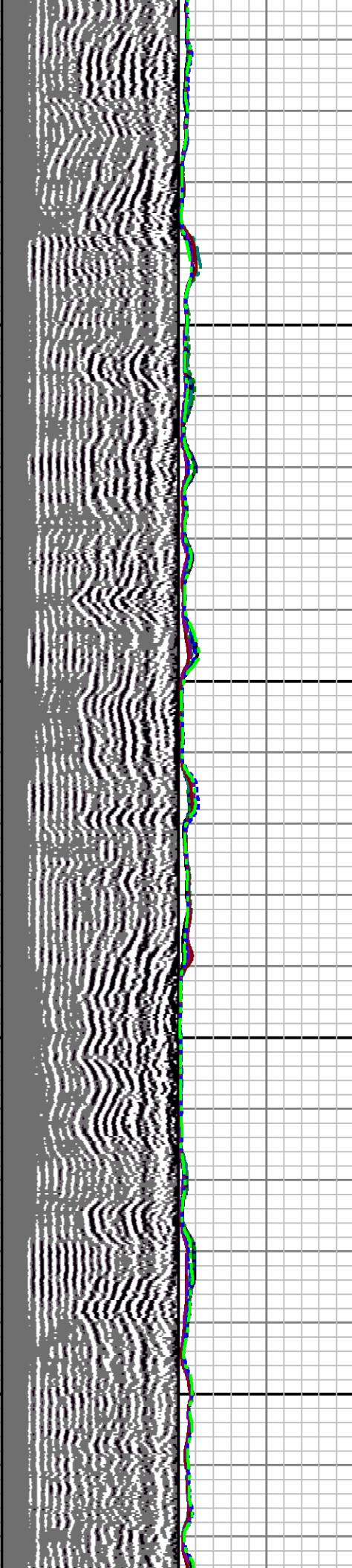


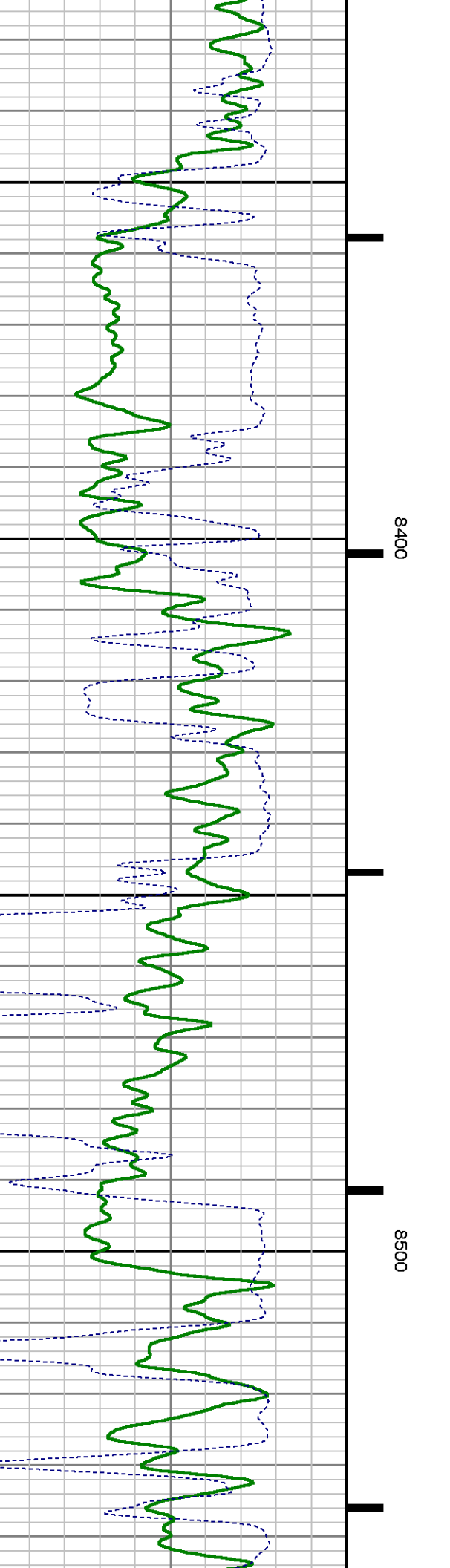
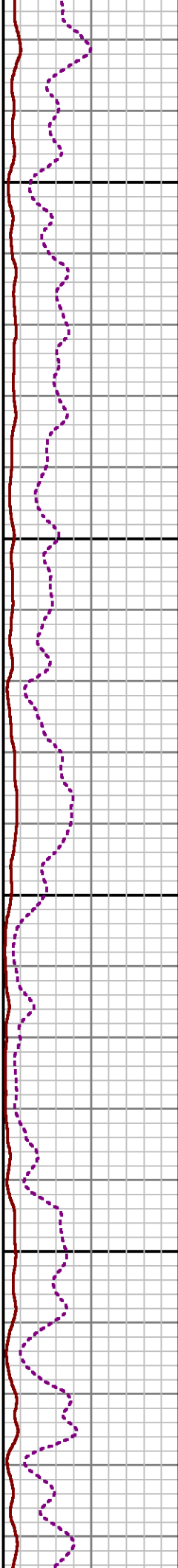
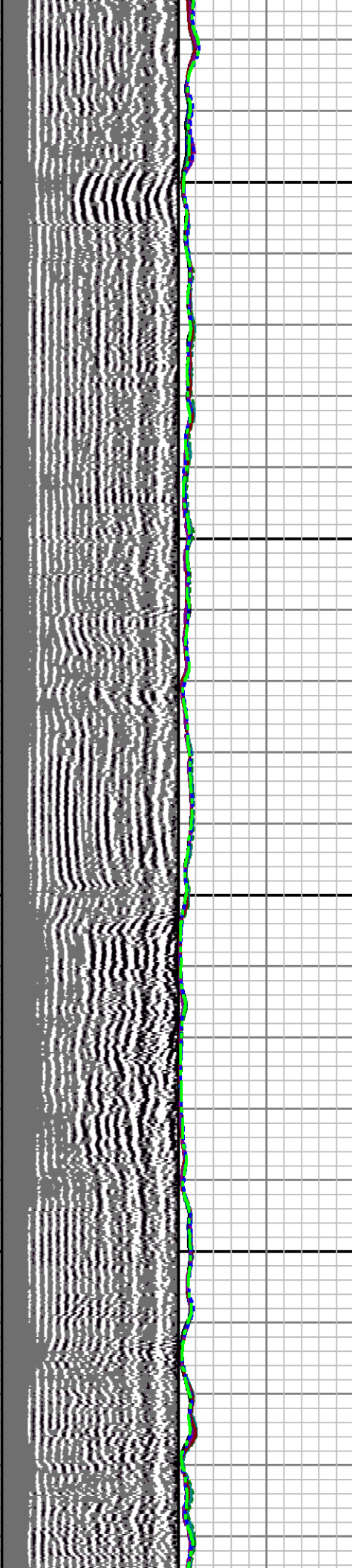
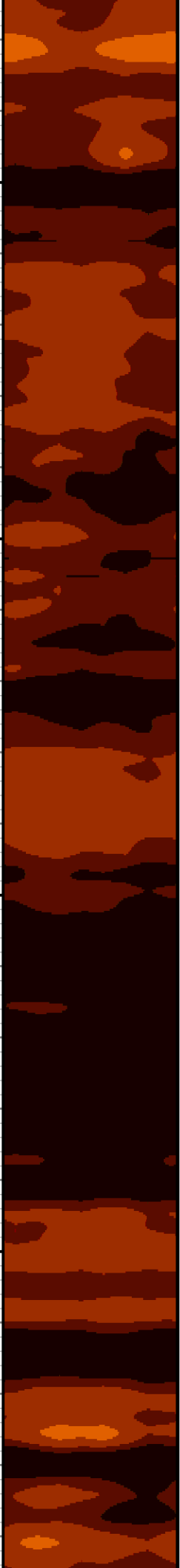


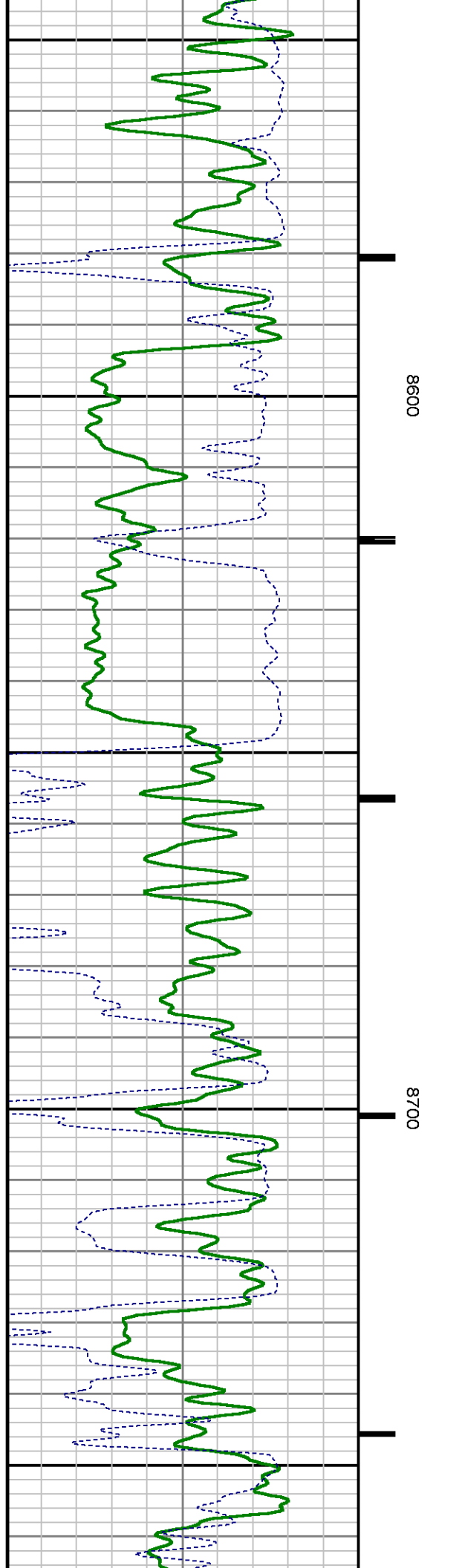
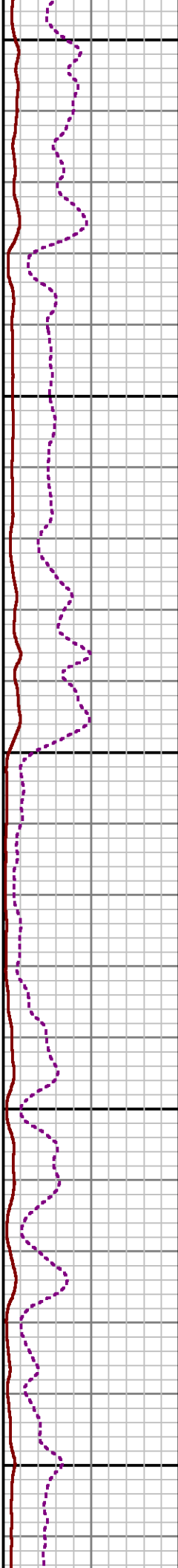
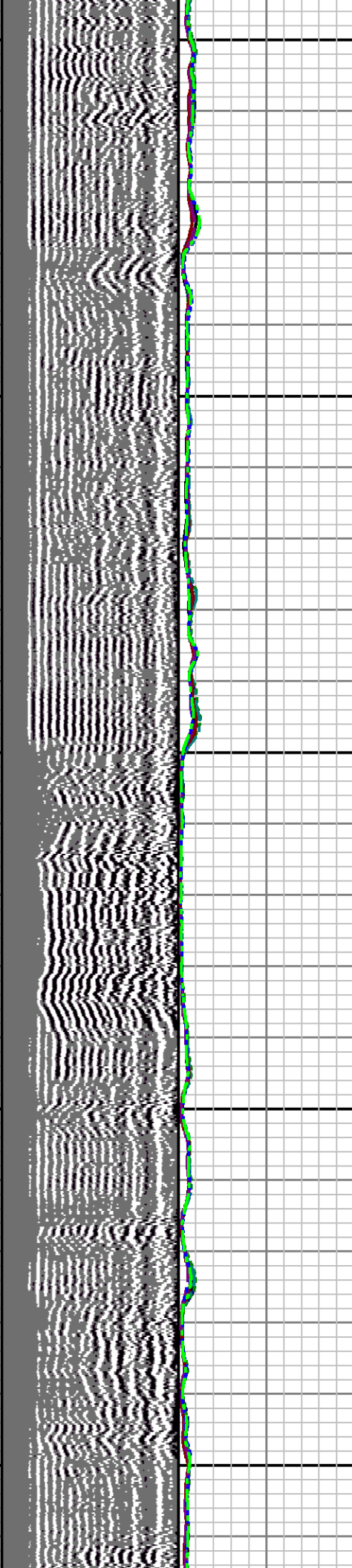


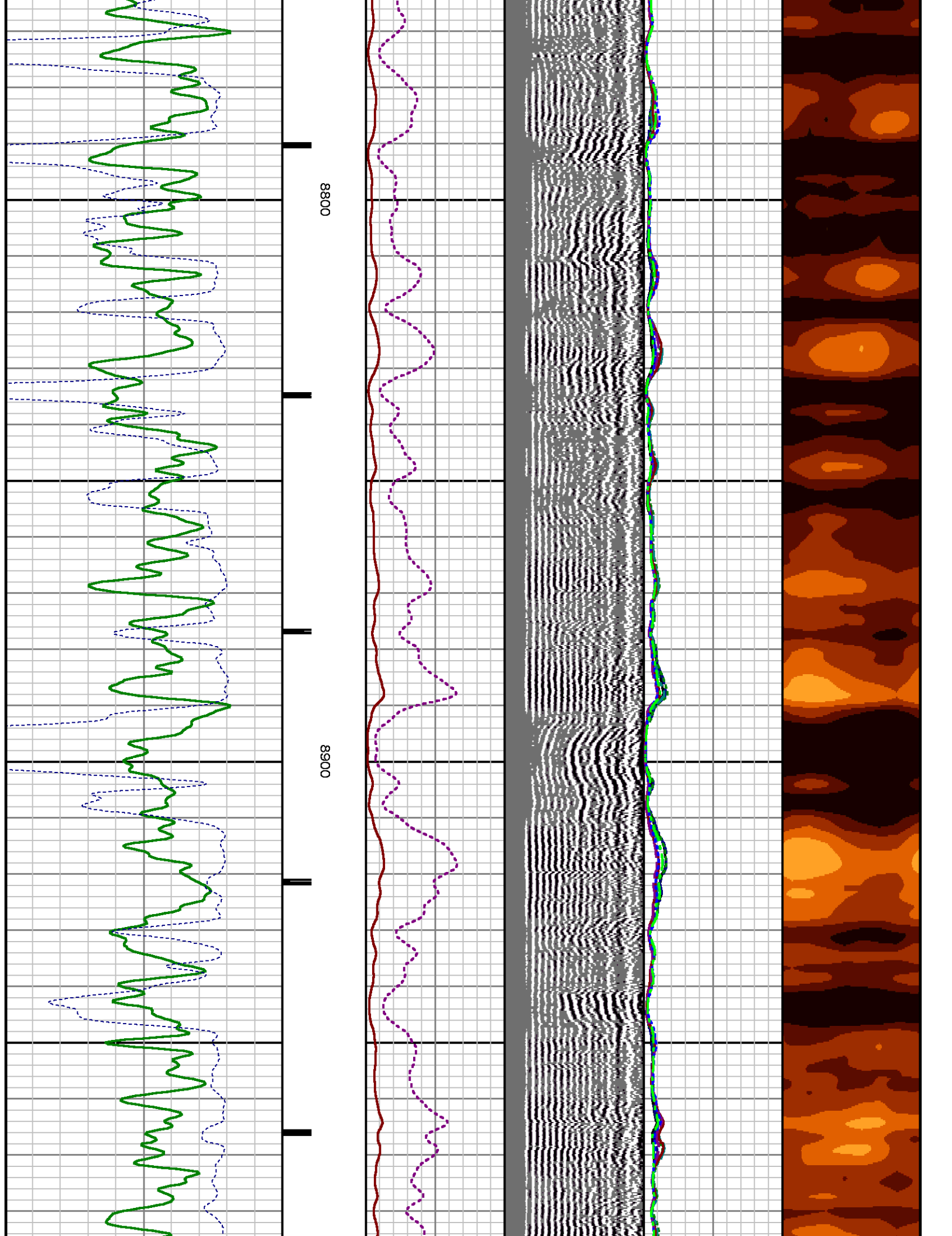


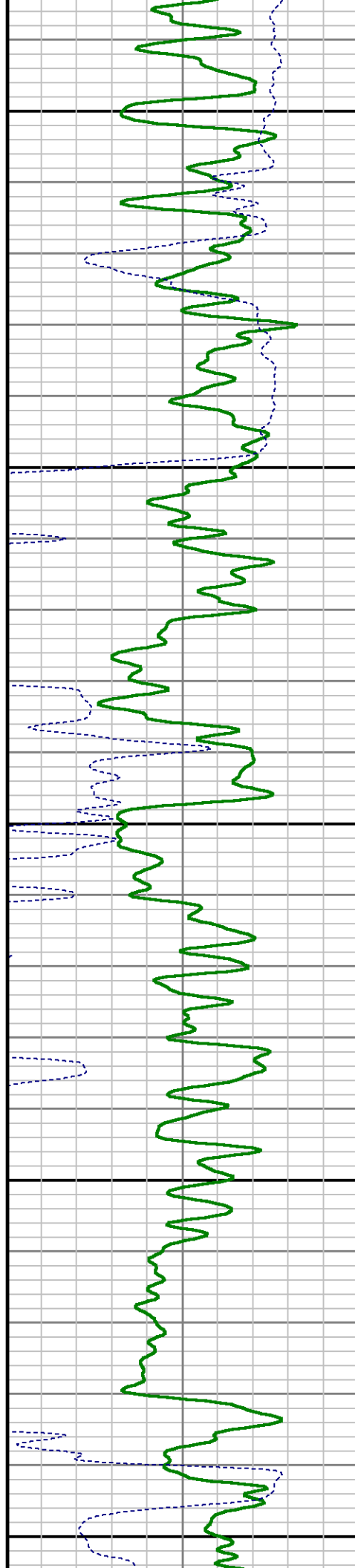
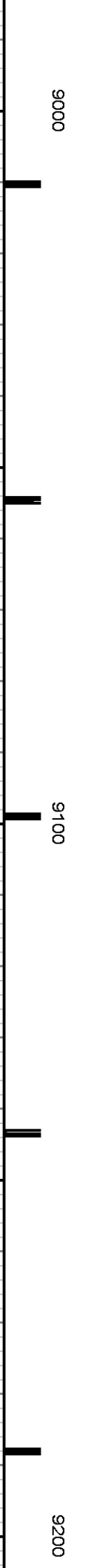
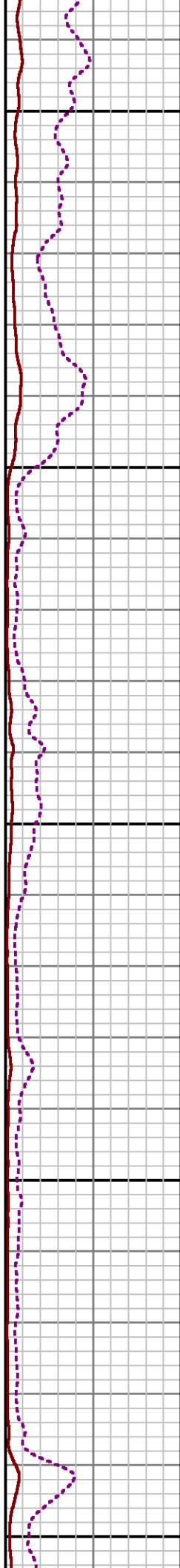
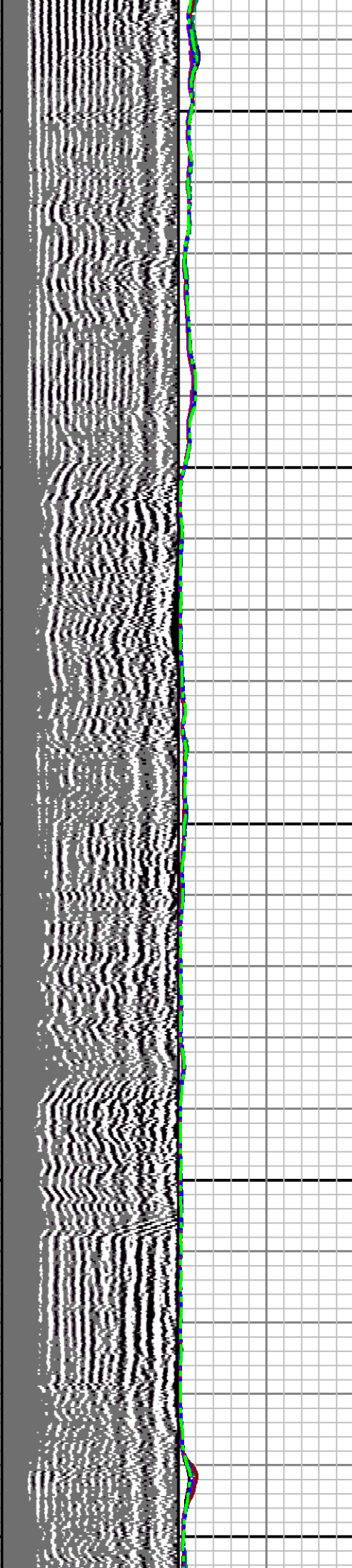


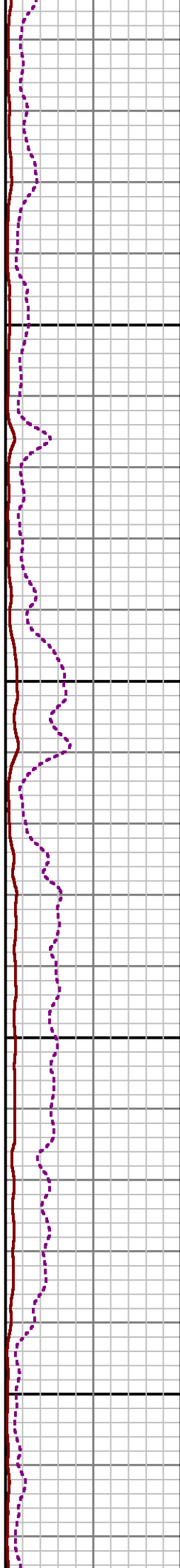
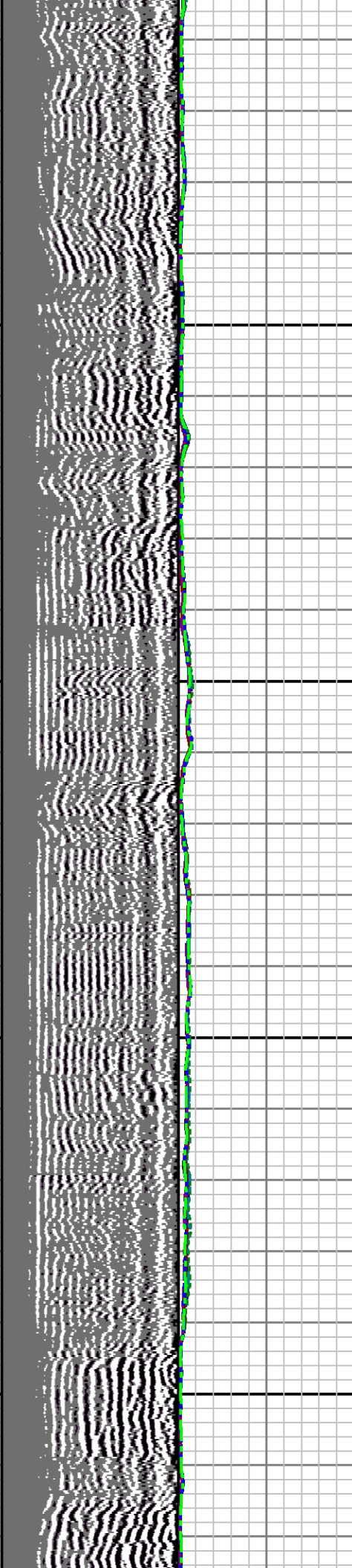






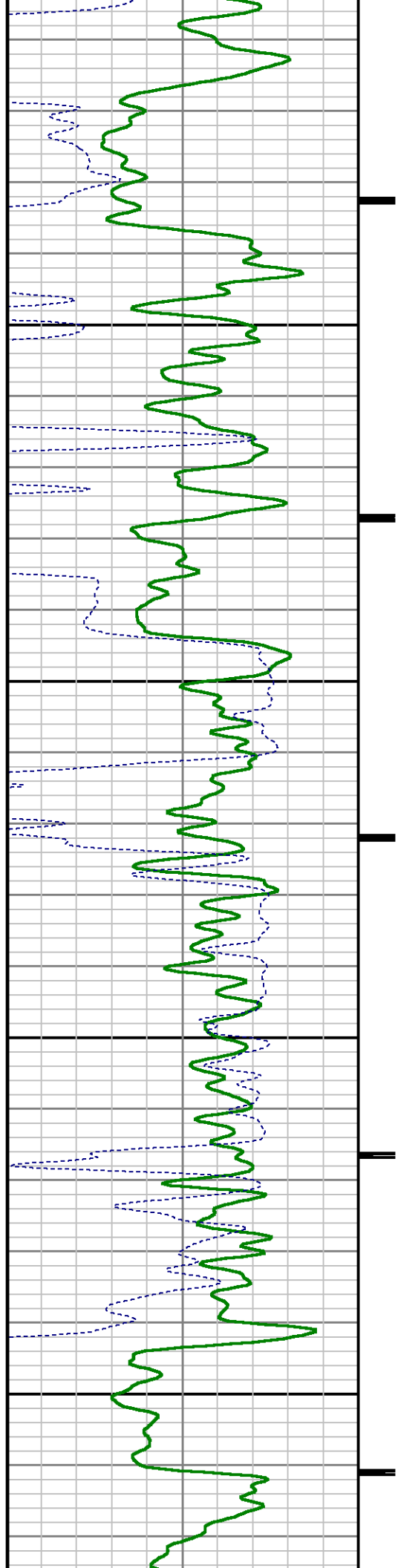


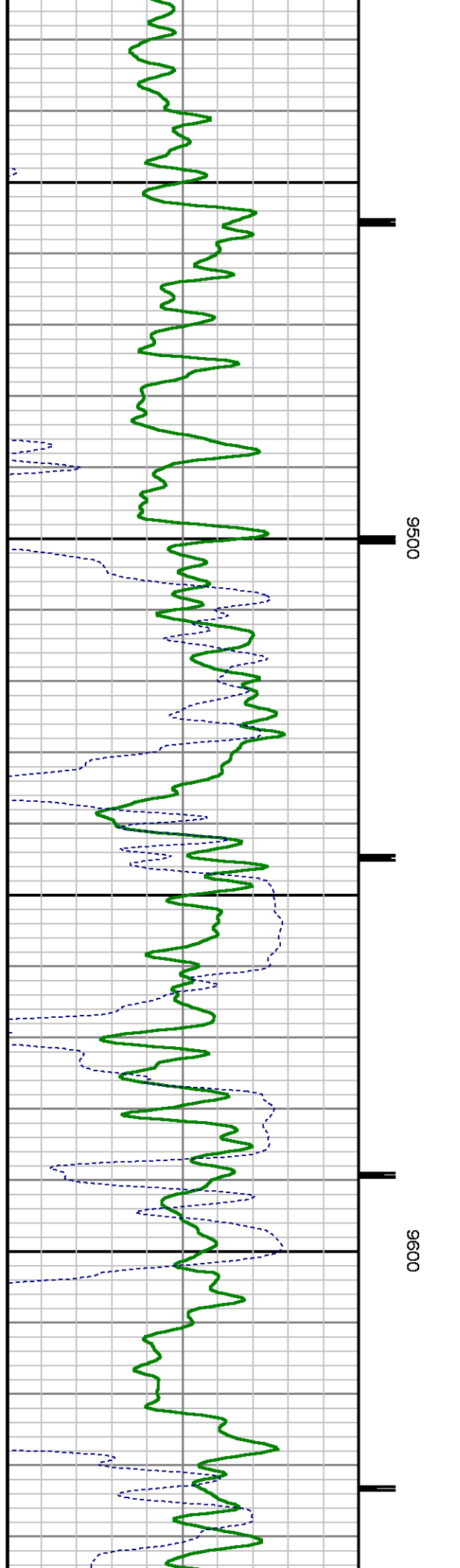
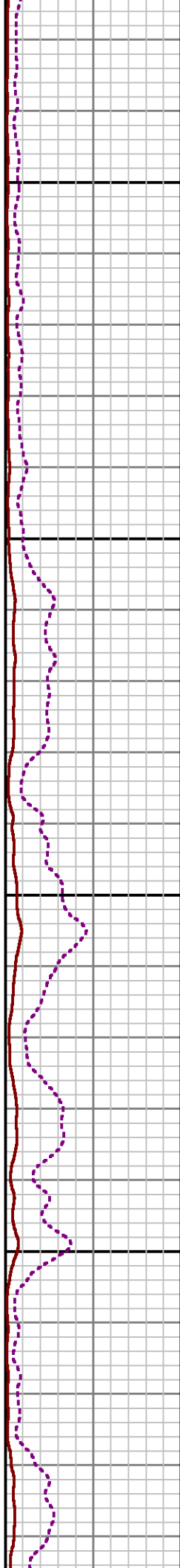
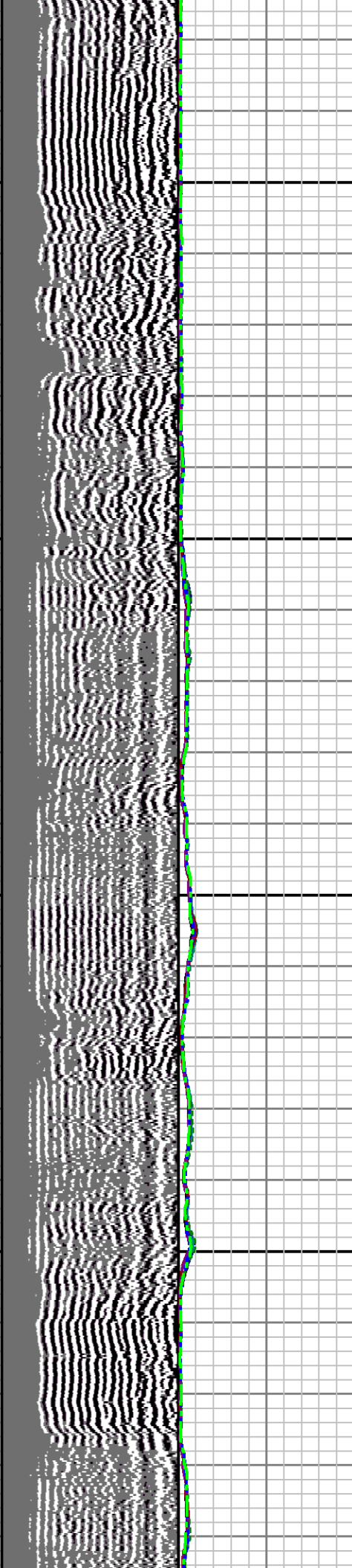


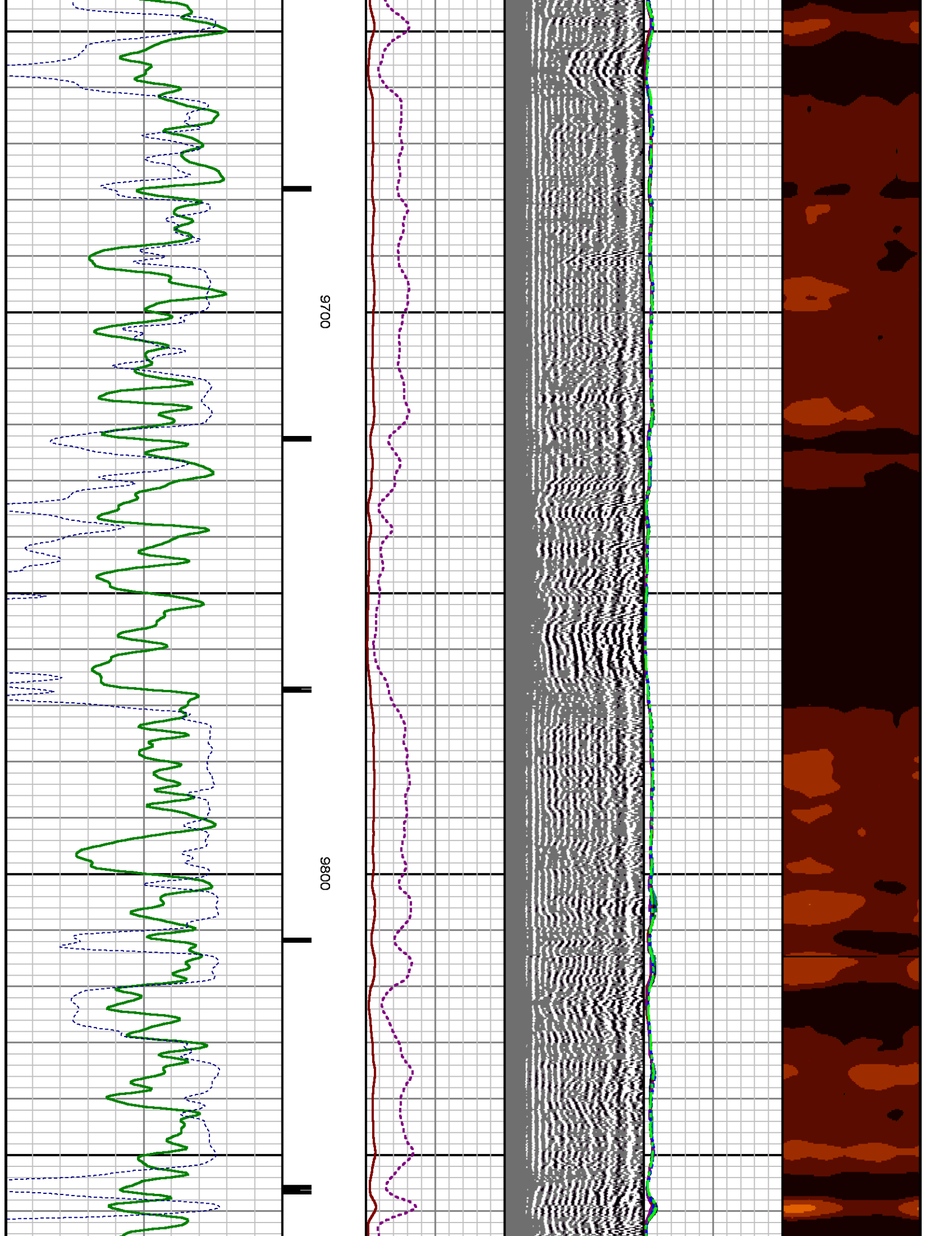


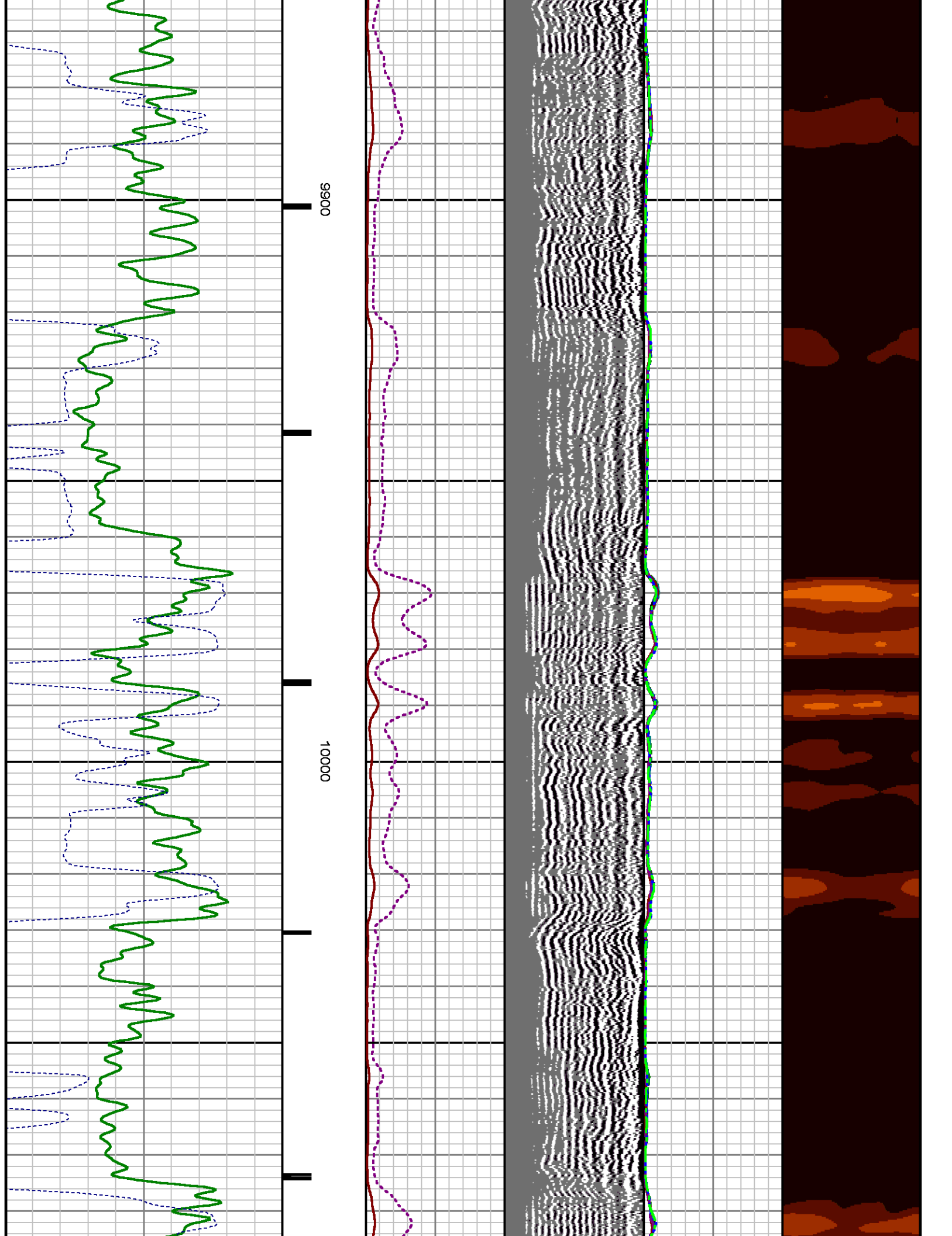
9300

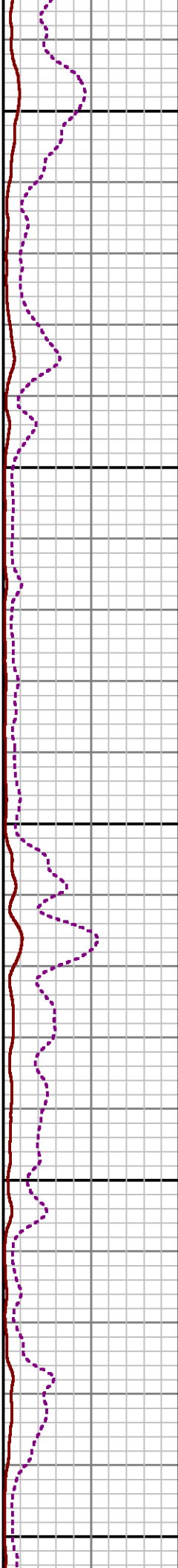
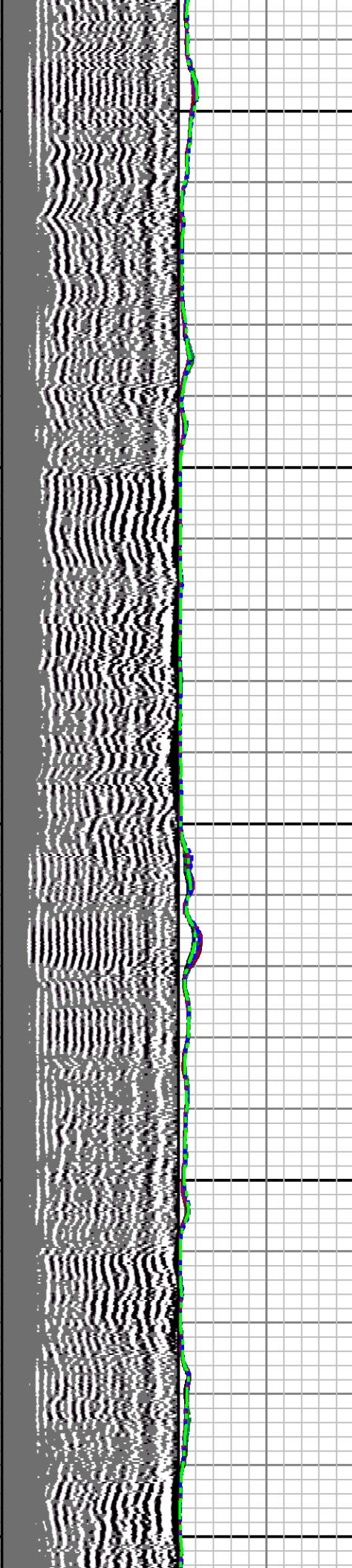
9400







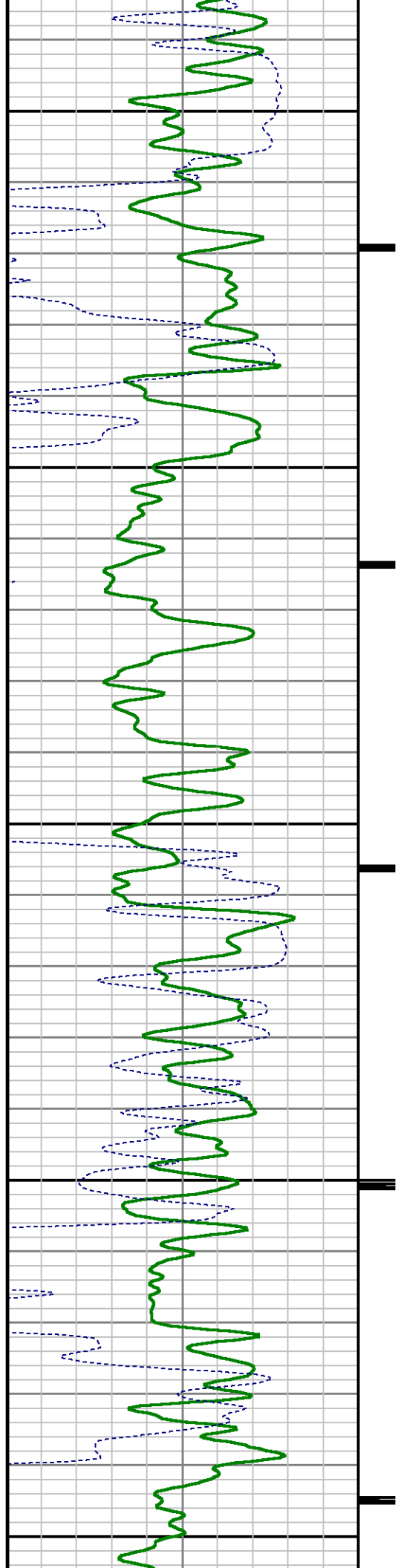


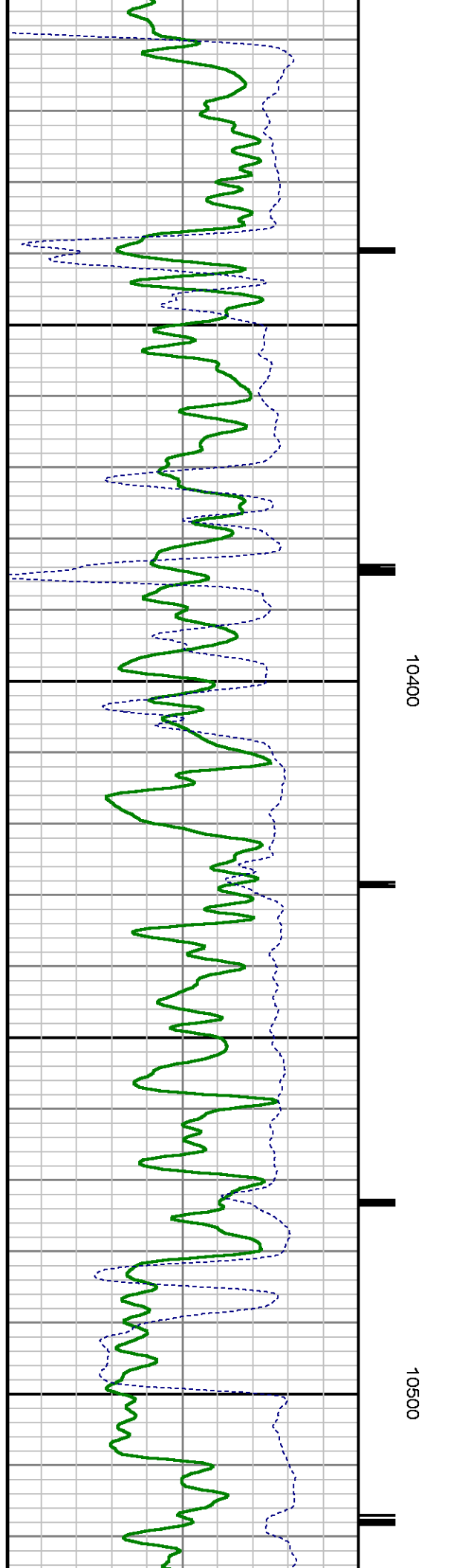
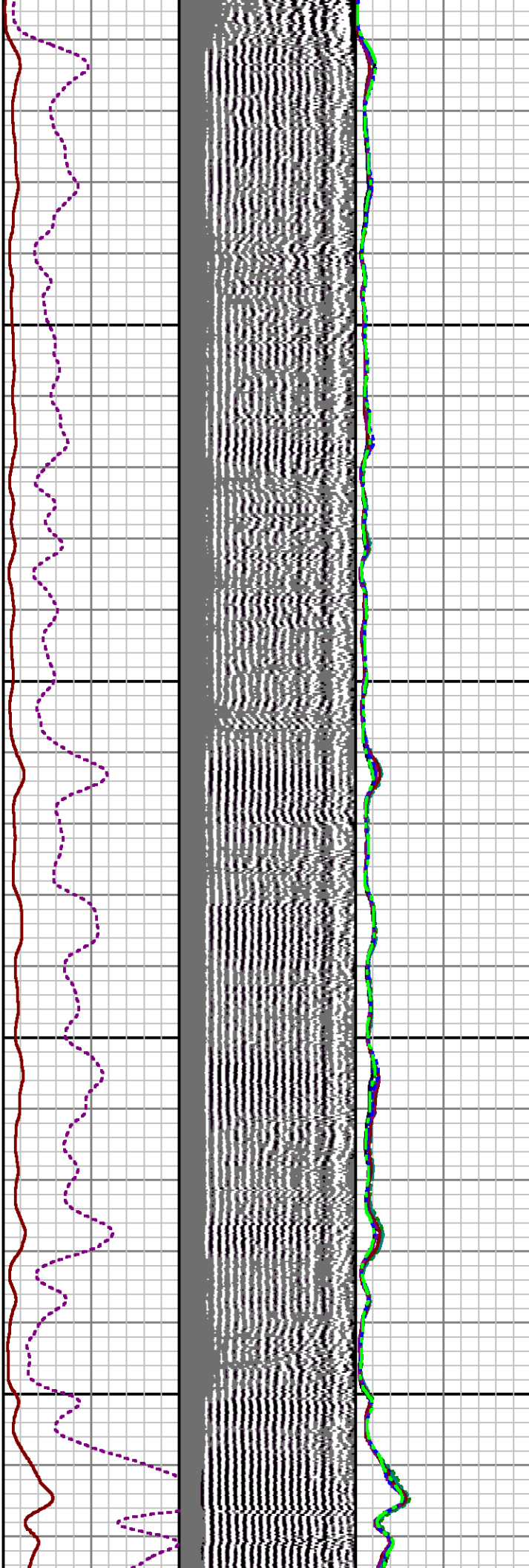
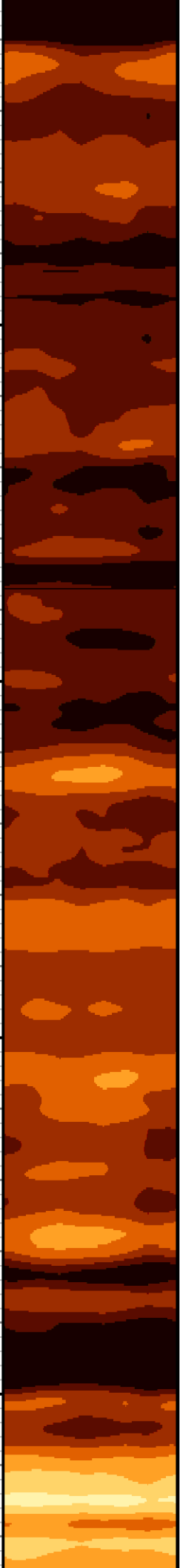


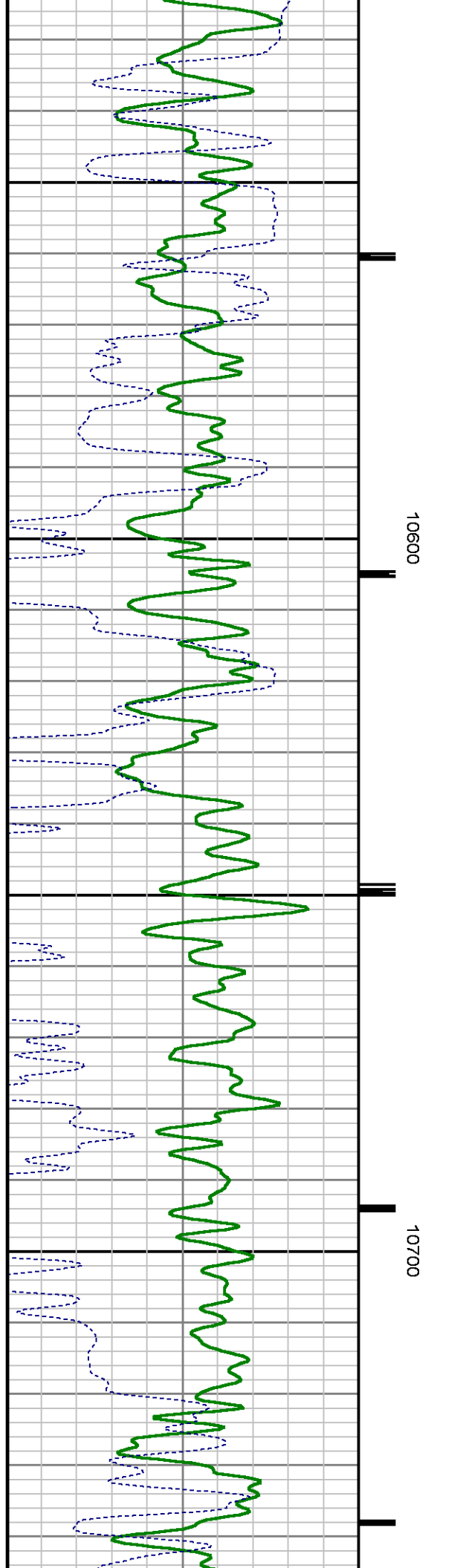
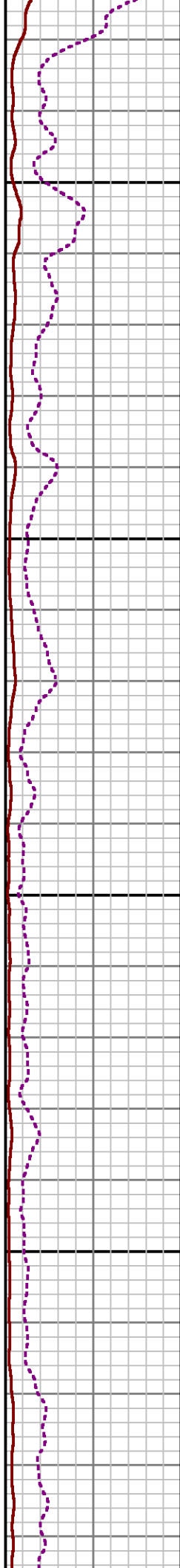
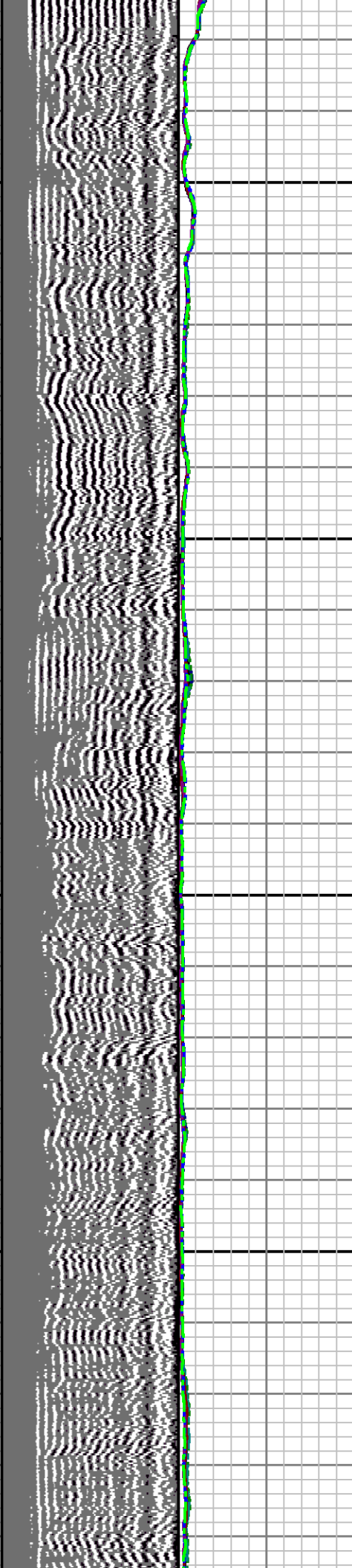
10100

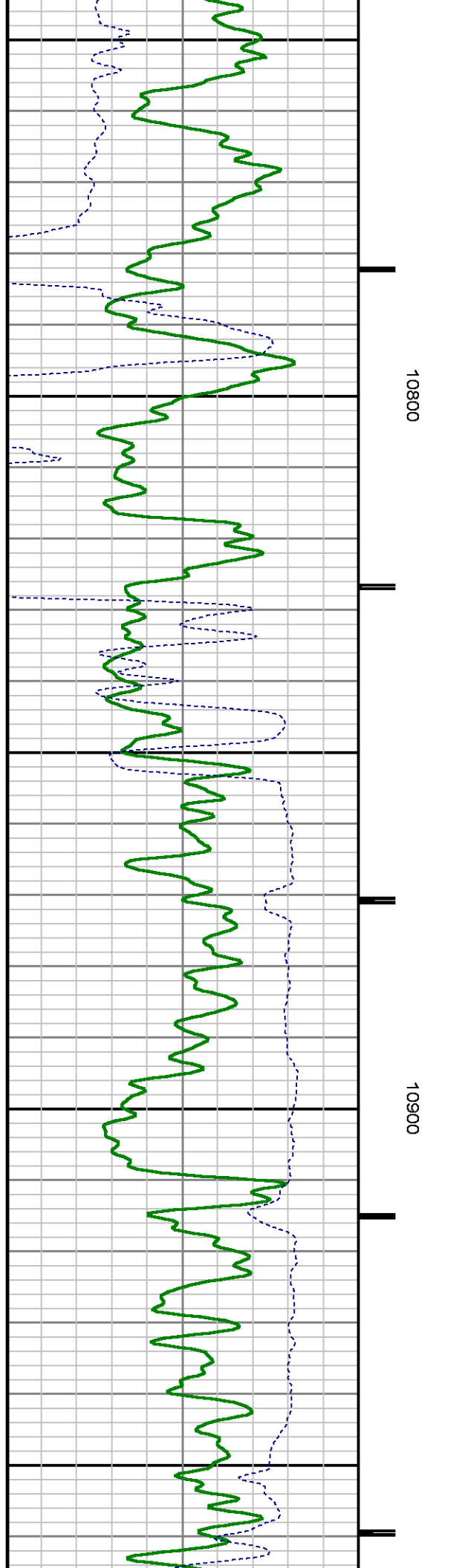
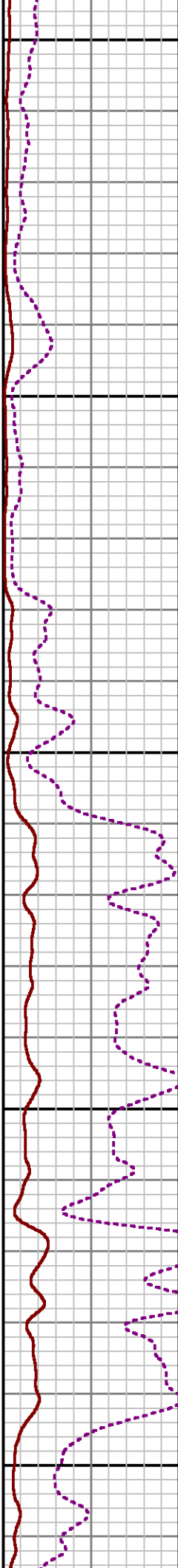
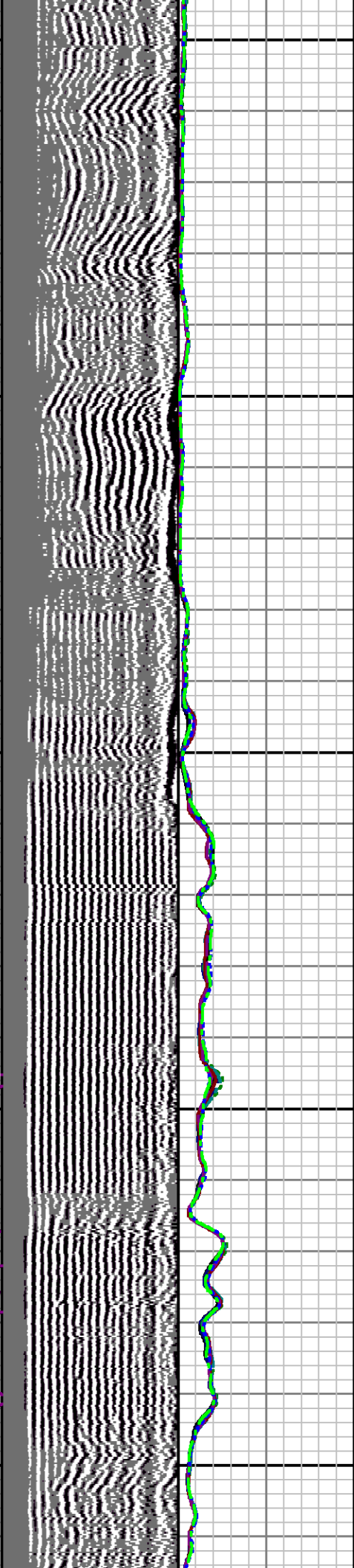
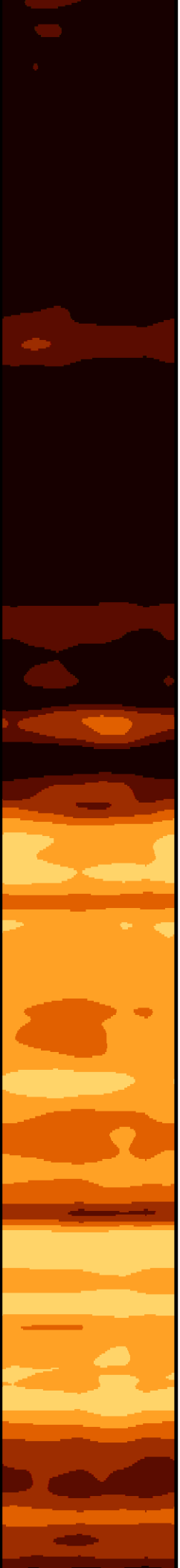
10200

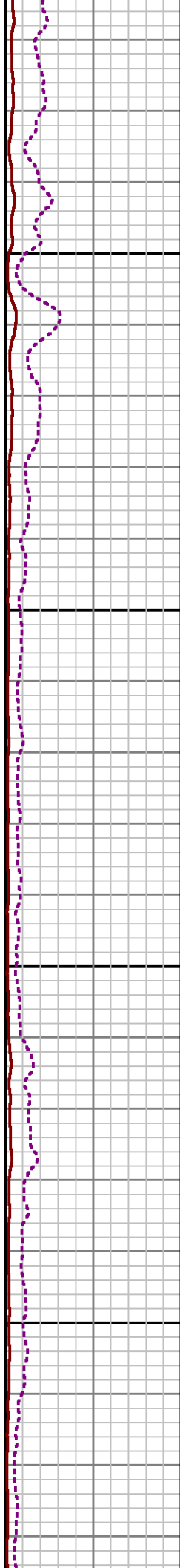
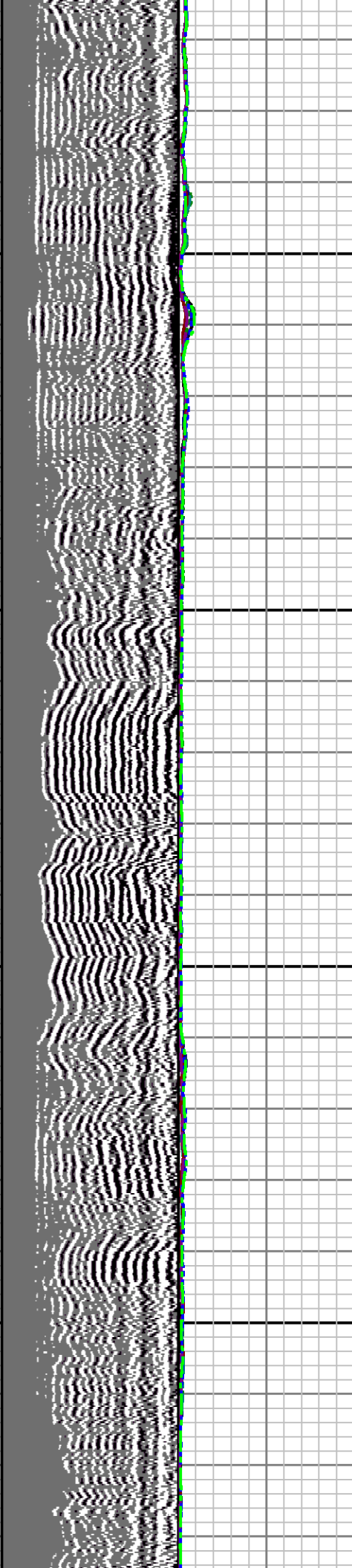
10300





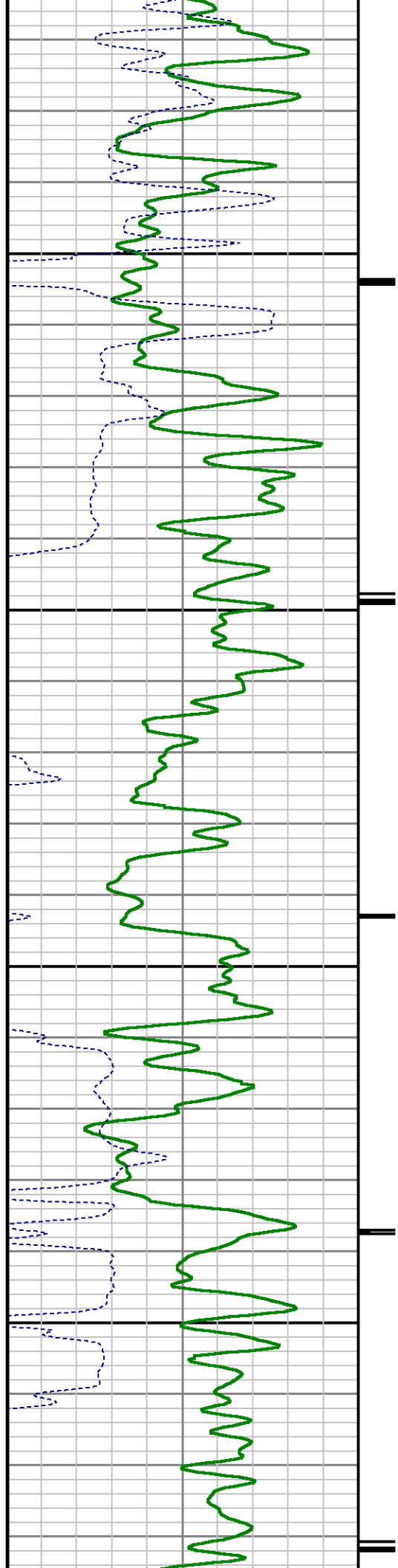


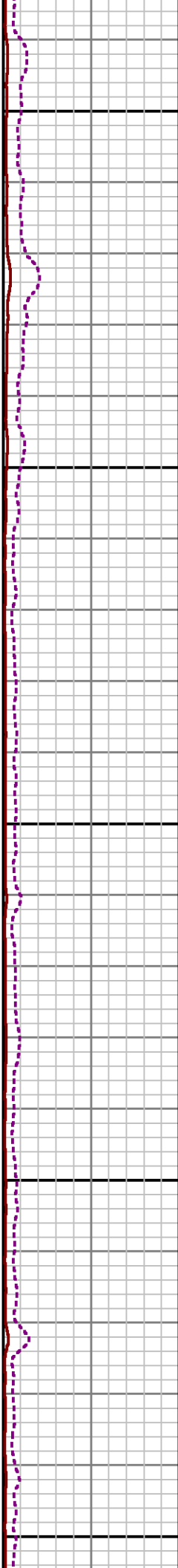
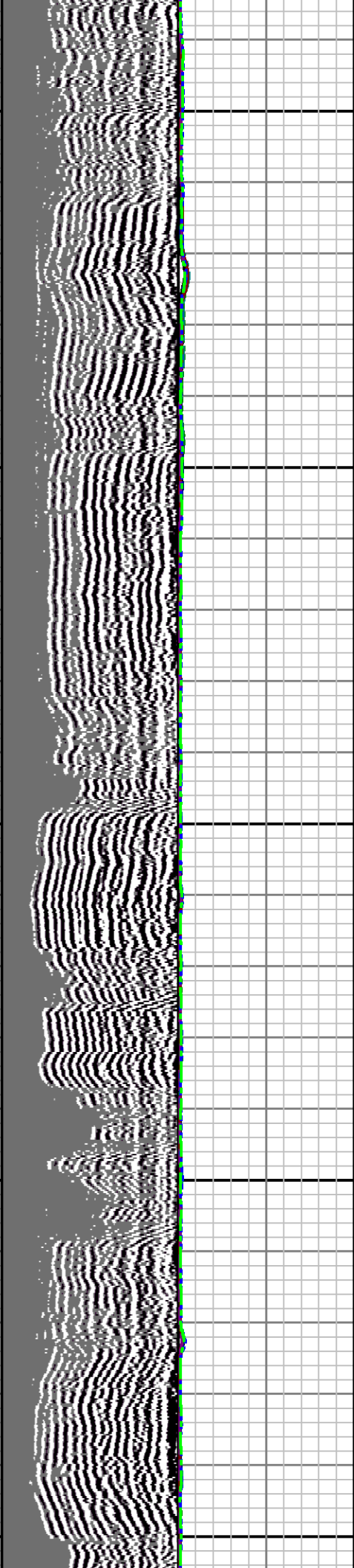




11000

11100

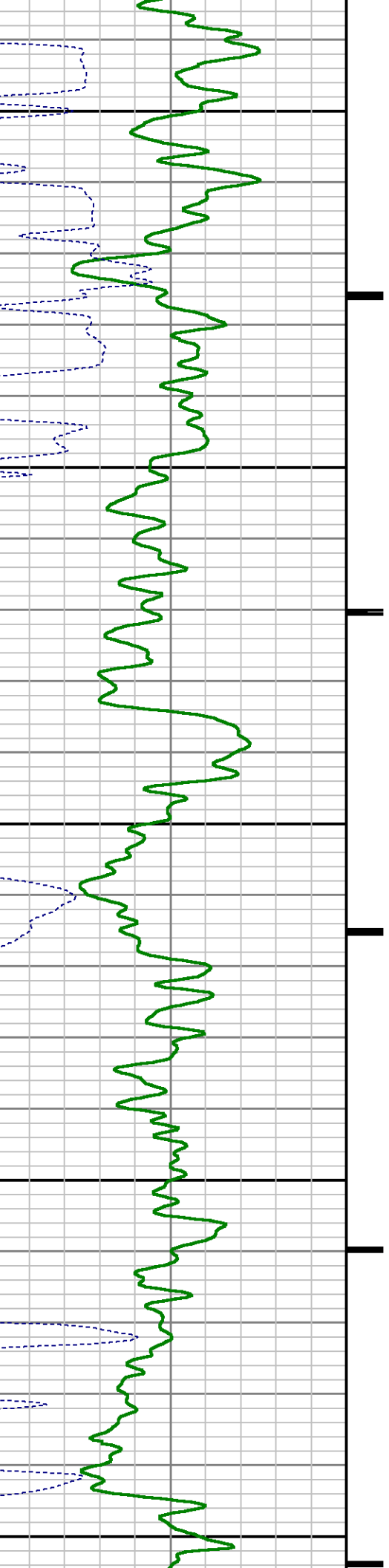


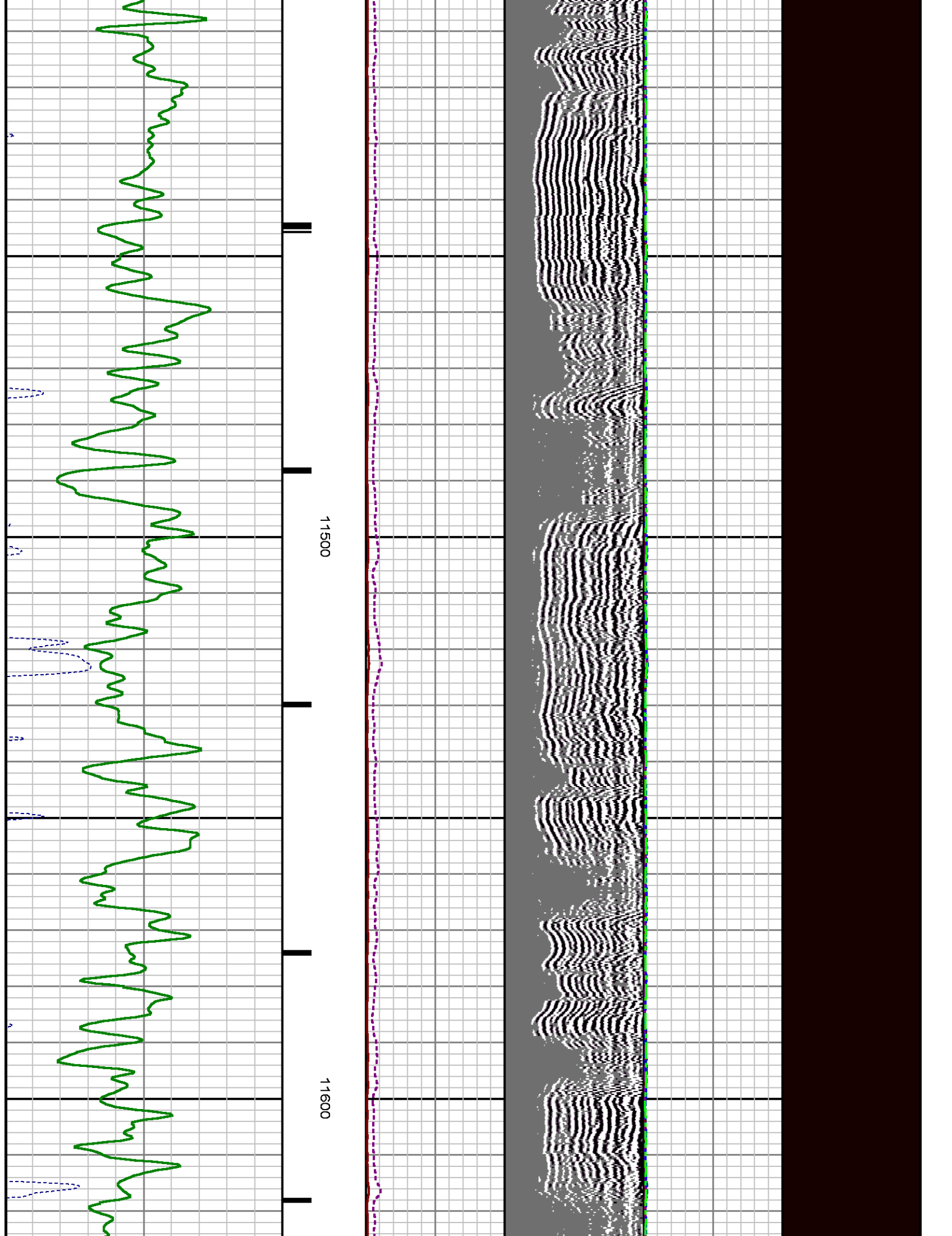


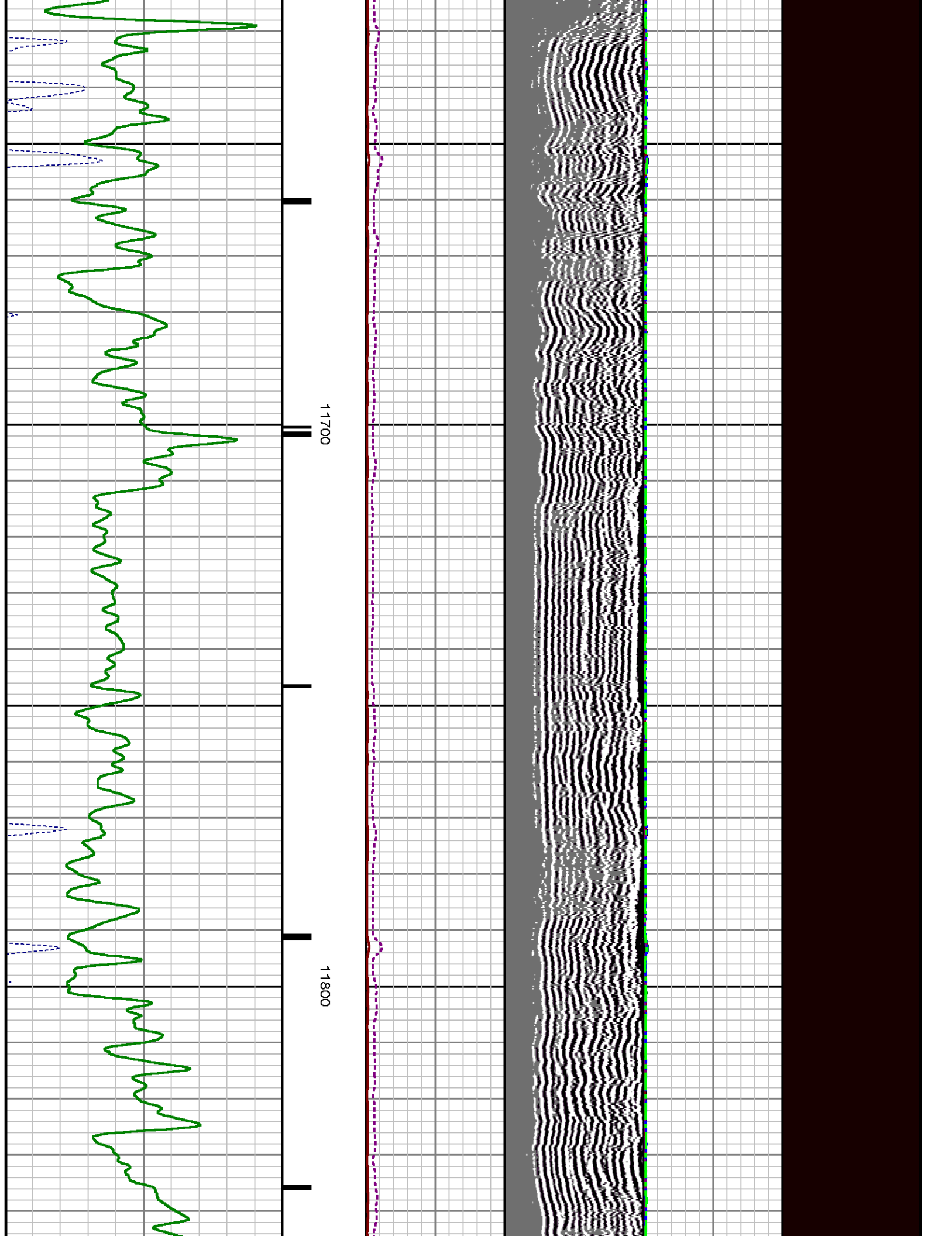
11200

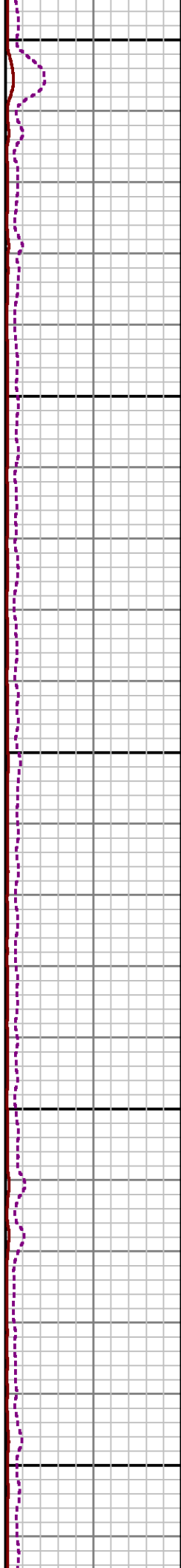
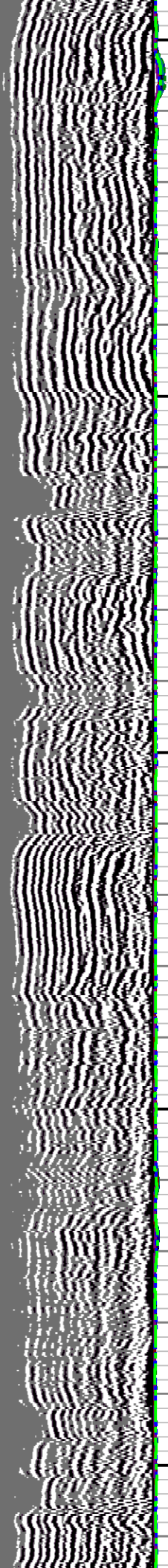
11300

11400



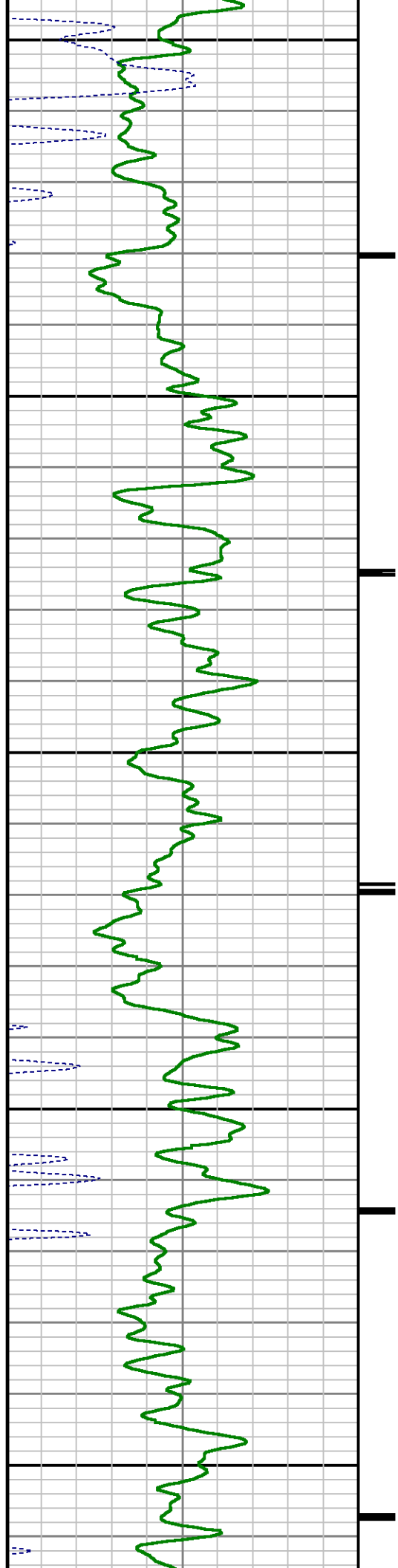


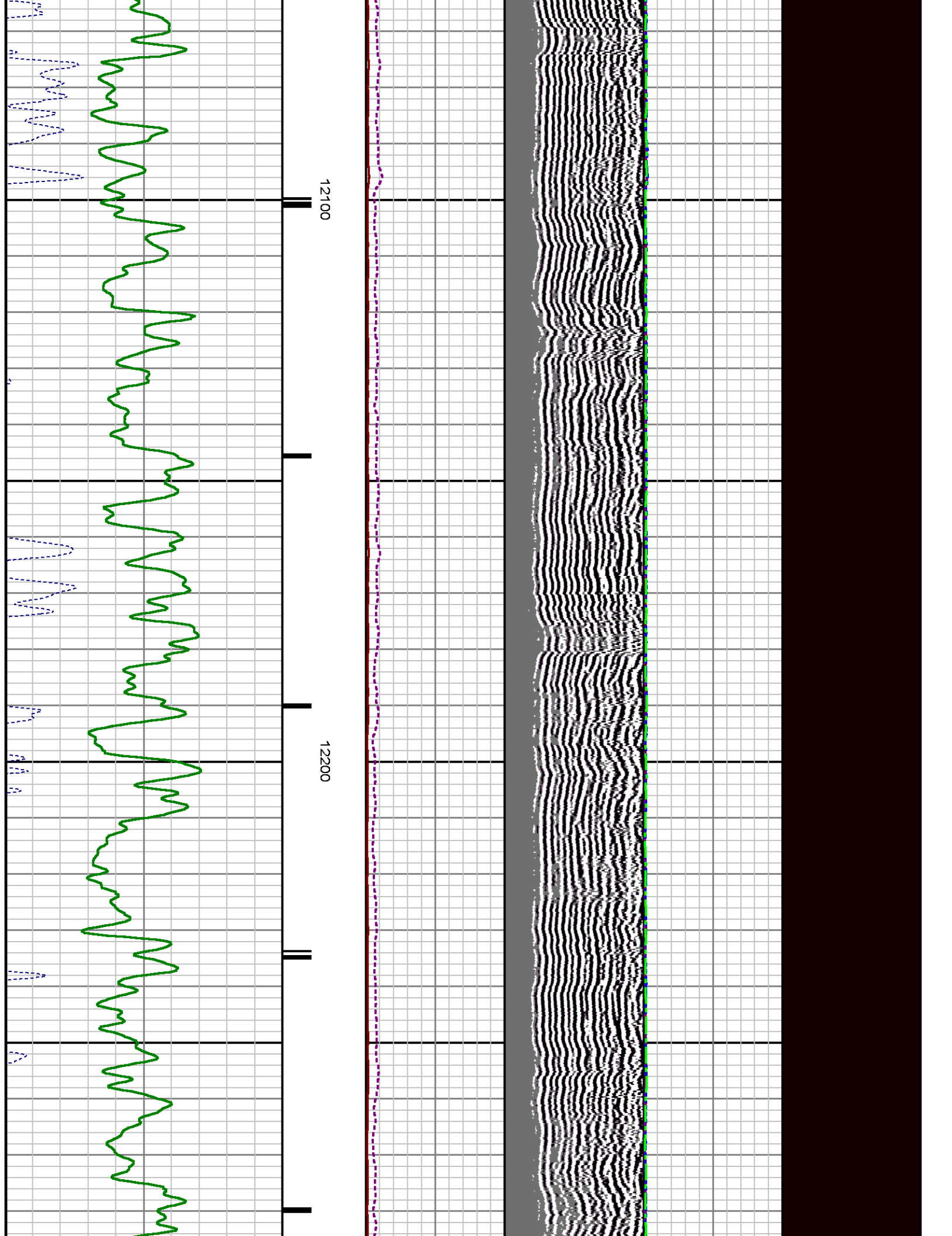


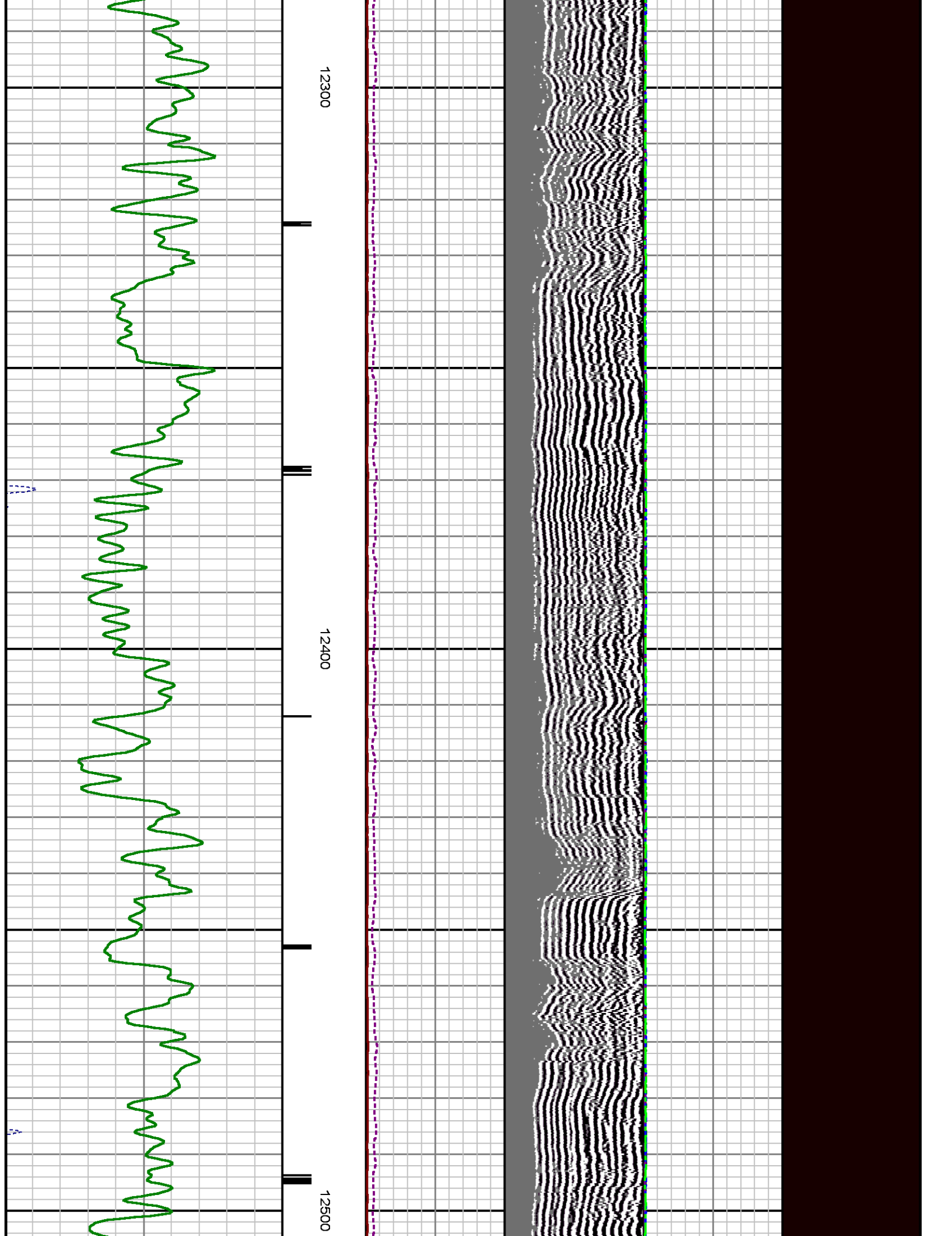


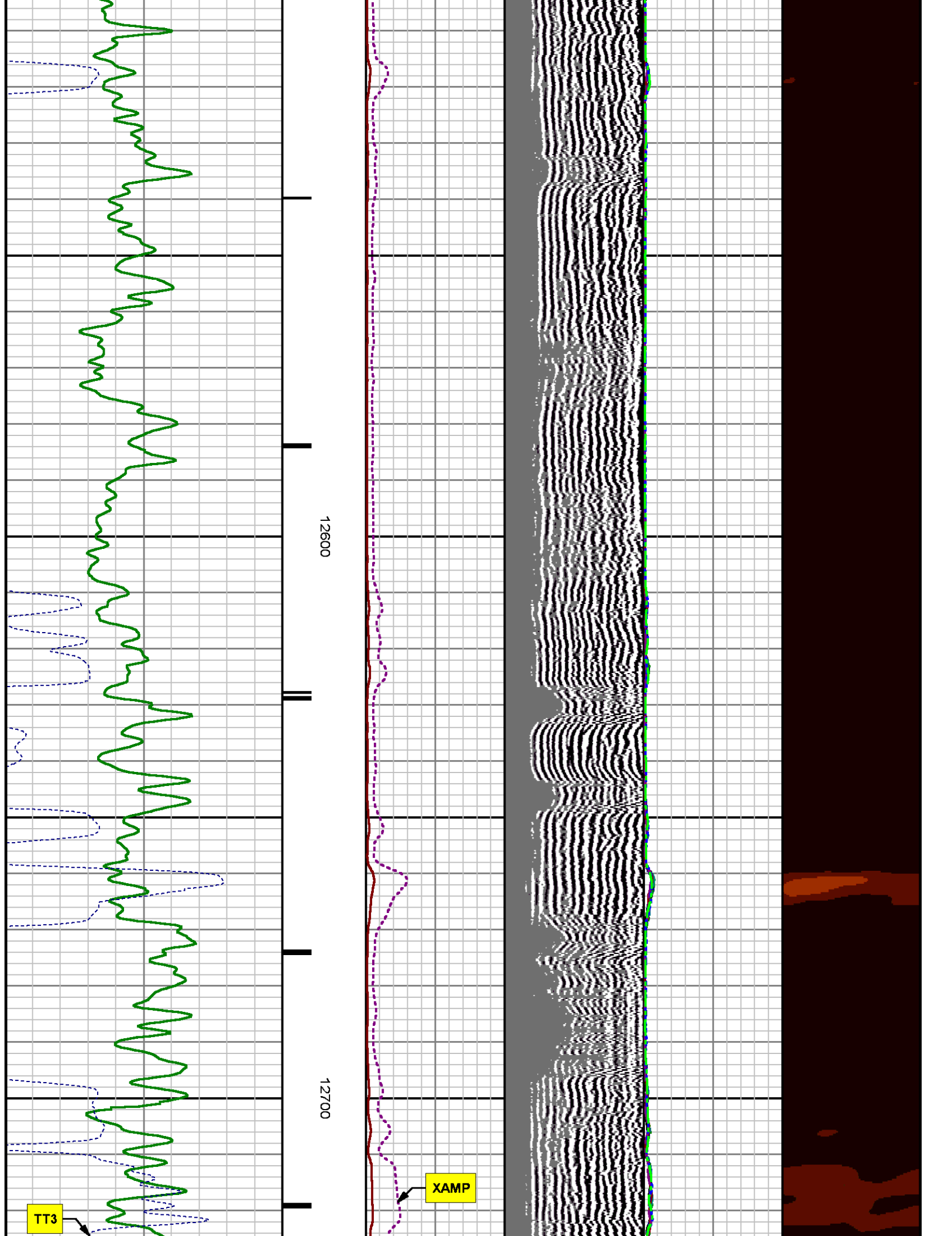
11900

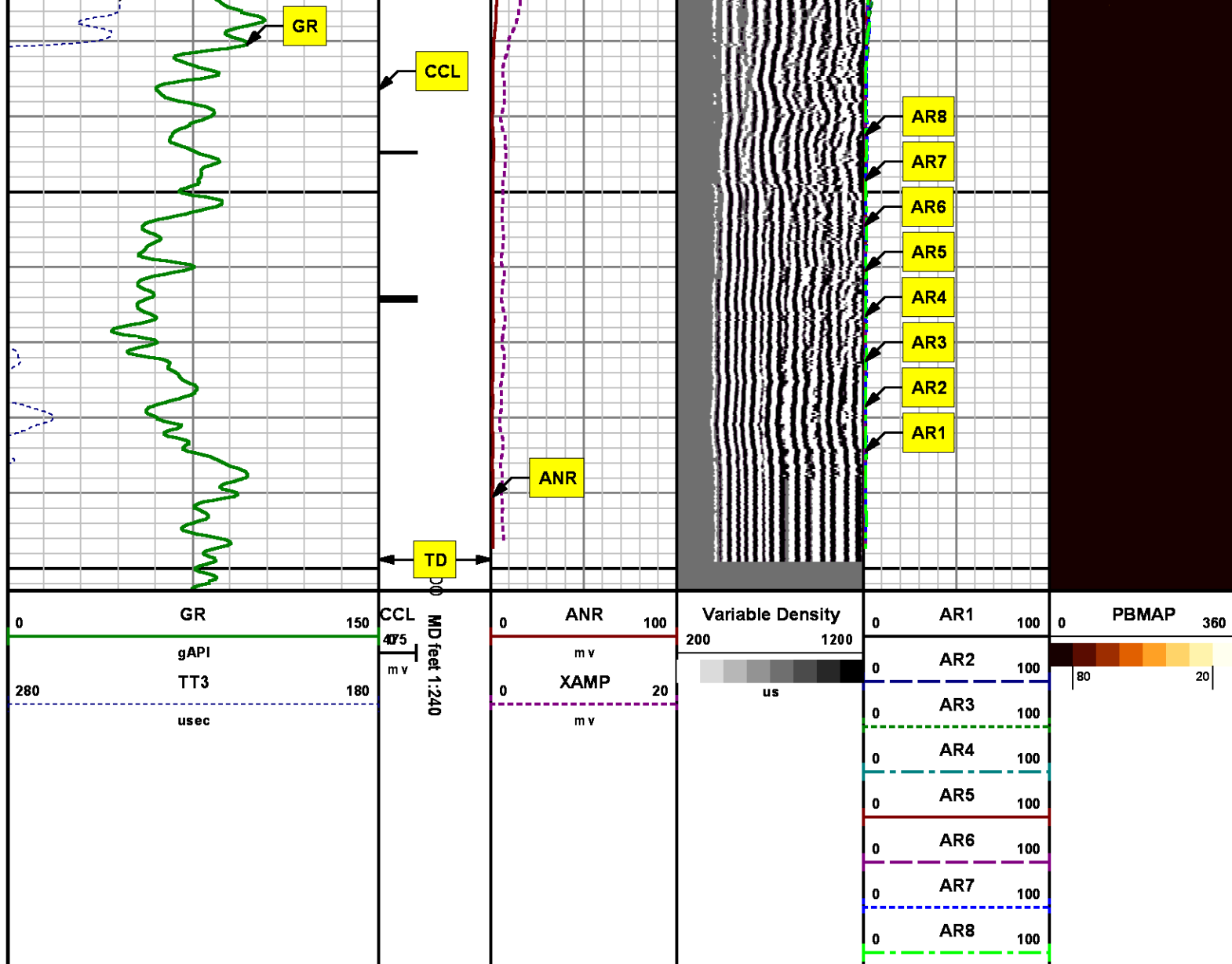
12000











REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	12482.081	12805.200
RAL	Amp Gate Start Near	195.000	usec	12482.081	12805.200
RAL	Amp Gate Start Radial	195.000	usec	12482.081	12805.200
RAL	Amp Gate Width Far	25.000	usec	12482.081	12805.200

RAL	Amp Gate Width Near	25.000	usec	12482.081	12805.200
RAL	Amp Gate Width Radial	25.000	usec	12482.081	12805.200
RAL	casing od	4.500	inches	12482.081	12805.200
RAL	casing wt	11.600	lbm/ft	12482.081	12805.200
RAL	FB Start Far	291.900	usec	12482.081	12805.200
RAL	FB Start Near	180.000	usec	12482.081	12805.200
RAL	FB Start Radial	180.000	usec	12482.081	12805.200
RAL	FB Thresh Far	10.000	mv	12482.081	12805.200
RAL	FB Thresh Near	4.000	mv	12482.081	12805.200
RAL	FB Thresh Radial	4.000	mv	12482.081	12805.200
RAL	Fluid Travel Time	200.000	usec/ft	12482.081	12805.200

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

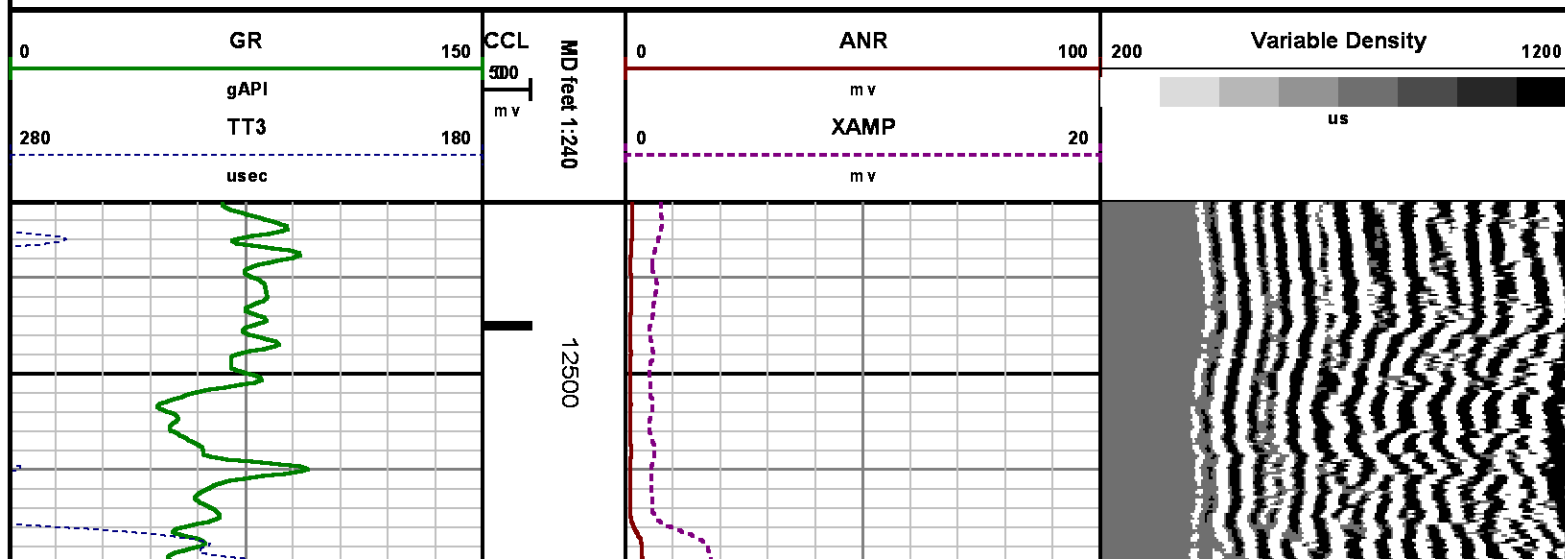
Well : FEDERAL RGU 323-24-198

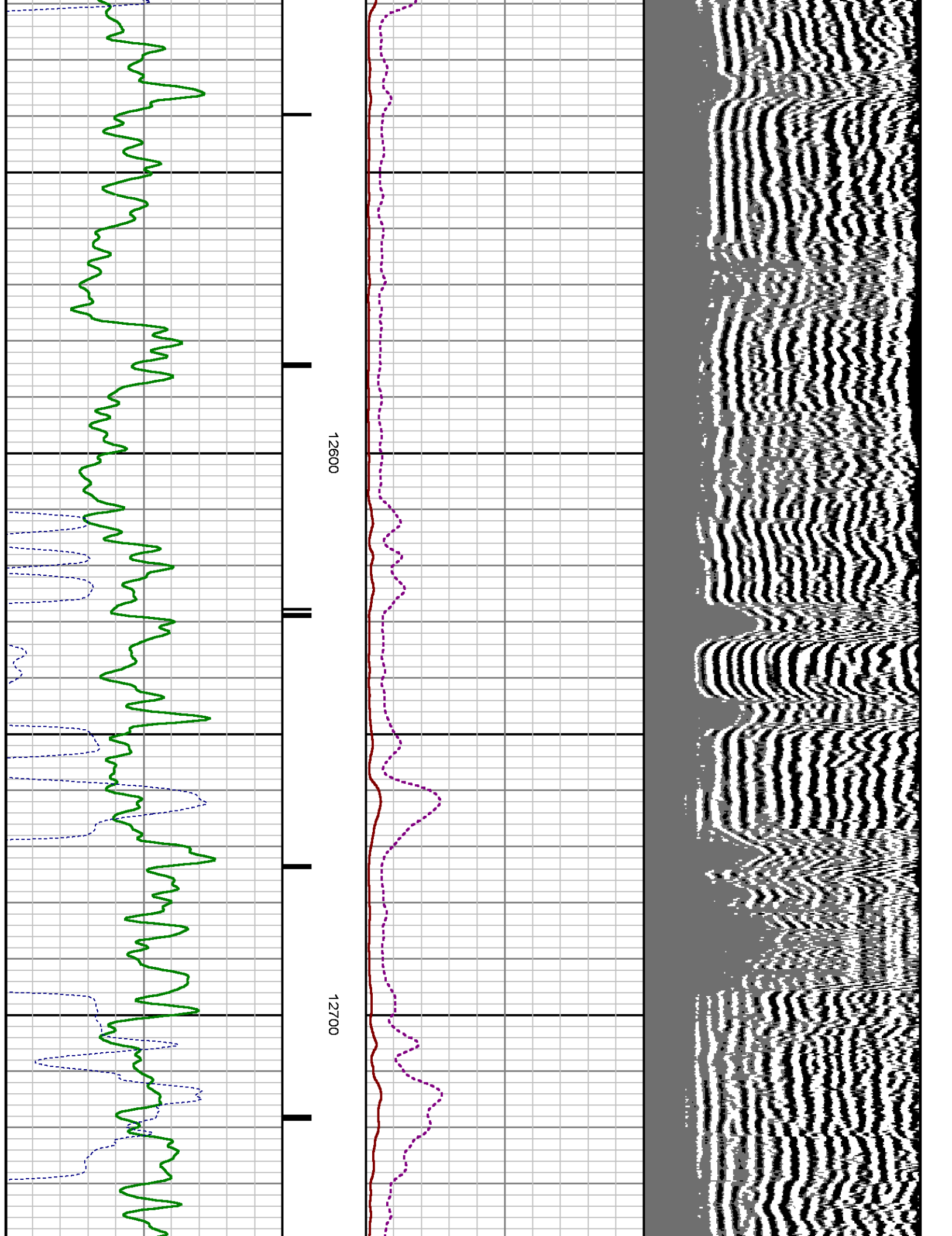
File Name : d:\welldata\wpx\rgu 323-24-198\323ralrepeat.xtf

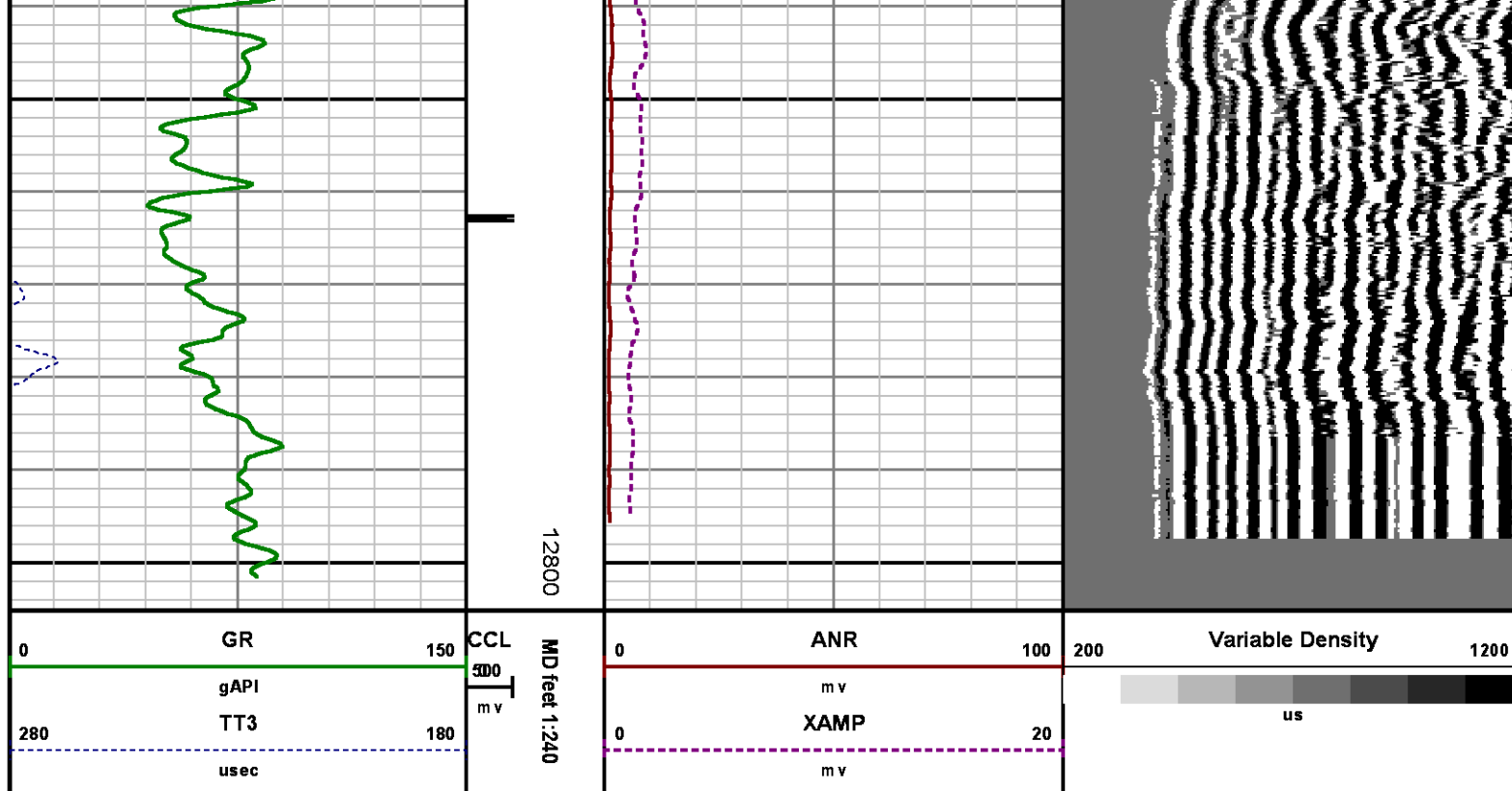
Mode : PlotMgr 5.4.504

Interval : 12482.20 - 12805.20 feet UP

Created : 7/6/2014 9:13:49 AM







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 fld.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

Verification File: C:\case\calver\GR\456J1.VP

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

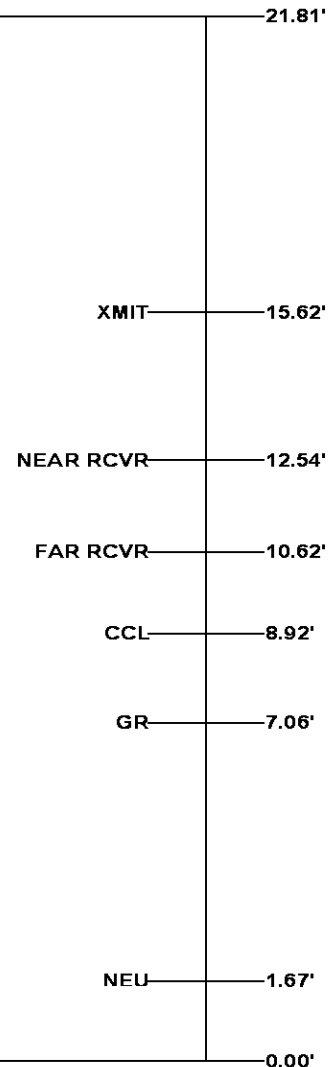
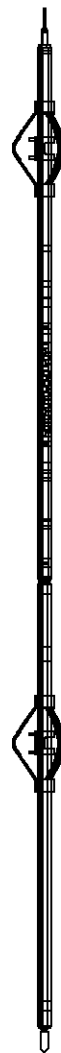
PROBE 2 3/4 DUAL RECEIVER RADII

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

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



Baker Atlas

CASE

Company

WPX ENERGY

Well

FEDERAL RGU 323-24-198

Field

SULPHUR CREEK

County

RIO BLANCO

State

COLORADO

Location

SHL: 2150' FSL & 1708' FEL

BHL: 2116' FSL & 1903' FWL (NESW)

Elevations

KB 6617 ft

DF

GL 6596 ft

File No:

CH087286

API No:

05103120820000

24 1S 98W

RGU 33-24-198 PAD

CYCLONE 29

