



Baker Atlas

# RADIAL ANALYSIS BOND LOG

File No:	CH088827	Company	WPX ENERGY
API No:	05045217910000	Well	FEDERAL NER 343-32
		Field	RULISON
		County	GARFIELD
		State	CO

32 6S 93W RU 23-5 PAD NABORS 576	Location	SHL: 139' FNL & 2989' FWL (9 7S 93W) BHL: 1927' FSL & 681' FEL (32 6S 93W)	Other Services	RPM
Permanent Datum	GL	Elevation	7603 ft	
Log Measured From	KB	26 ft	Above P. D.	KB 7629 ft DF GL 7603 ft
Drill Measured From	KB			
	SEC 32	TWP 6S	RGE 93W	

Date	26/JUL/14
Run	ONE
Service Order	US088827
Depth Driller	10701 ft
Depth Logger	10664 ft
Bottom Logged Interval	10654 ft
Top Logged Interval	26 ft
Time Started	0700
Time Finished	1200
Operator Rig Time	5 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	107 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	66 fpm
Maximum Recorded Temperature	234 degF
Reference Log	NA
Reference Log Date	NA
Equipment No.	4271
Recorded By	FLYOD RENEAU
Witnessed By	JEFF DUCY

- 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.

Bit Size	From	To
13.5 in	0 ft	1162 ft
8.75 in	1162 ft	10701 ft

Size	Weight	Grade	From	To
9.625 in			0 ft	1162 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	10701 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 6 feet.

Logged with zero PSI at wellhead.

BHT = 234°F

SJ = 7292'-7314'

**Equipment Data**

Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENT
1	1	GR/CCL	2459XA	10124121	CENT

**PRIMARY PRESENTATION**  
**0 PSI**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	31.374	10672.000
RAL	Amp Gate Start Near	195.000	usec	31.374	10672.000
RAL	Amp Gate Start Radial	195.000	usec	31.374	10672.000
RAL	Amp Gate Width Far	25.000	usec	31.374	10672.000
RAL	Amp Gate Width Near	25.000	usec	31.374	10672.000
RAL	Amp Gate Width Radial	25.000	usec	31.374	10672.000
RAL	casing od	4.500	inches	31.374	10672.000
RAL	casing wt	11.600	lbm/ft	31.374	10672.000
RAL	FB Start Far	291.900	usec	31.374	10672.000
RAL	FB Start Near	180.000	usec	31.374	10672.000
RAL	FB Start Radial	180.000	usec	31.374	10672.000
RAL	FB Thresh Far	10.000	mv	31.374	10672.000
RAL	FB Thresh Near	4.000	mv	31.374	10672.000
RAL	FB Thresh Radial	4.000	mv	31.374	10672.000
RAL	Fluid Travel Time	200.000	usec/ft	31.374	10671.905

**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

1426XA -11.360  
 2459XA -7.250  
 2459XA -5.390  
 2459XA 0.000

FPR3 FPR5 TT3 TTR1 TTR2 TTR3  
 TTR4 TTR5 TTR6 TTR7 TTR8 XAMP  
 AFAR SIG TT5  
 CCL  
 GR  
 NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

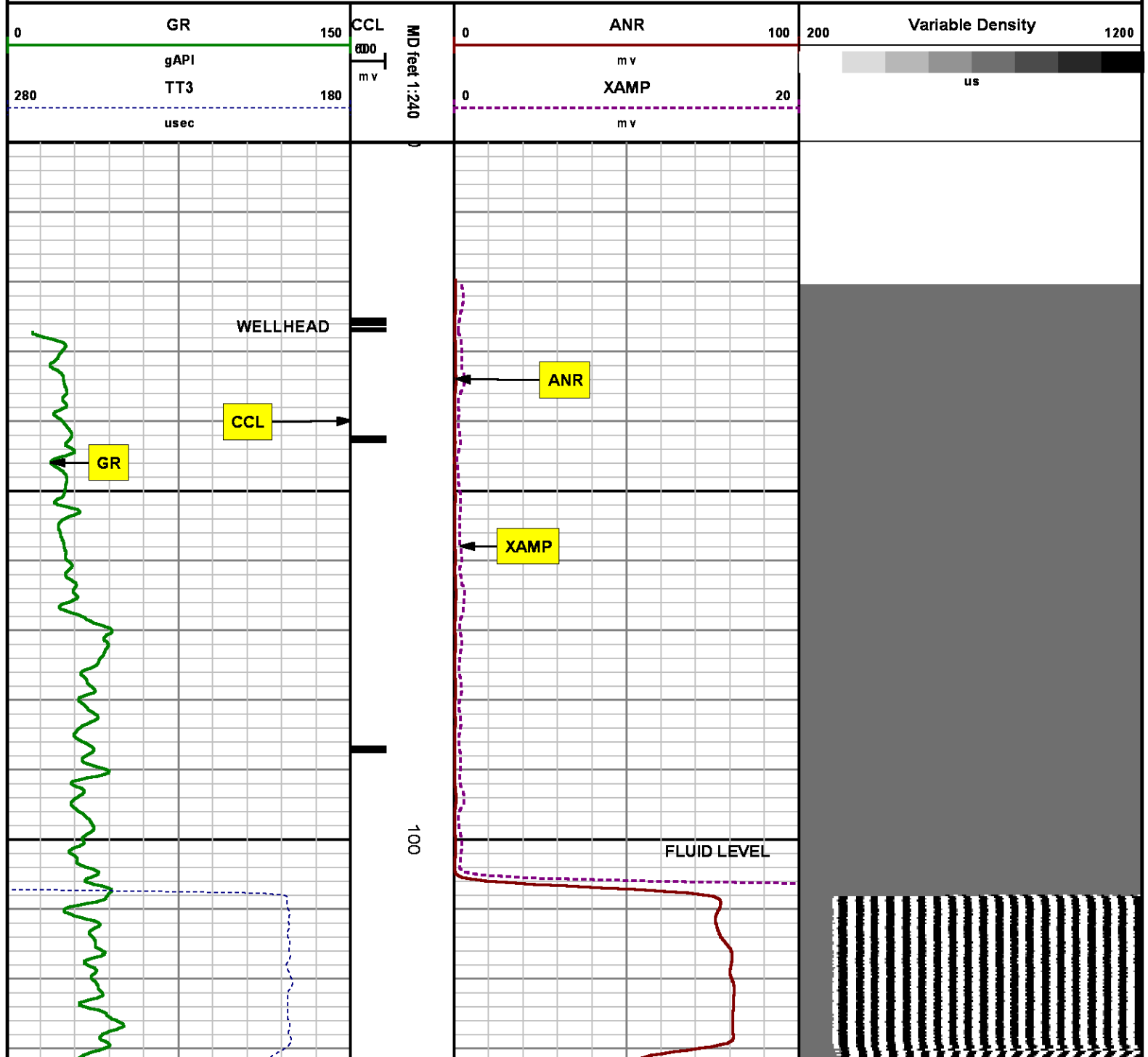
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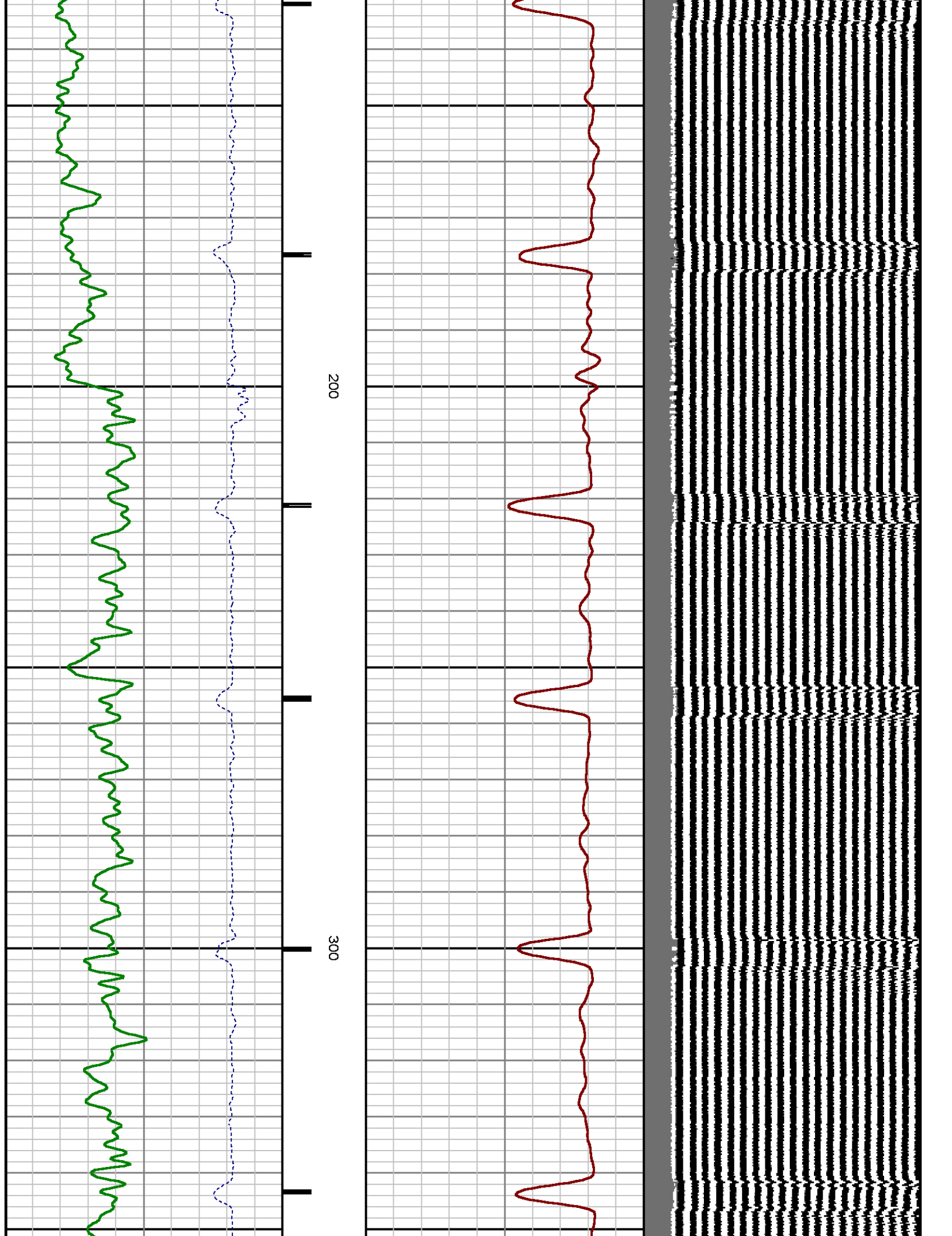
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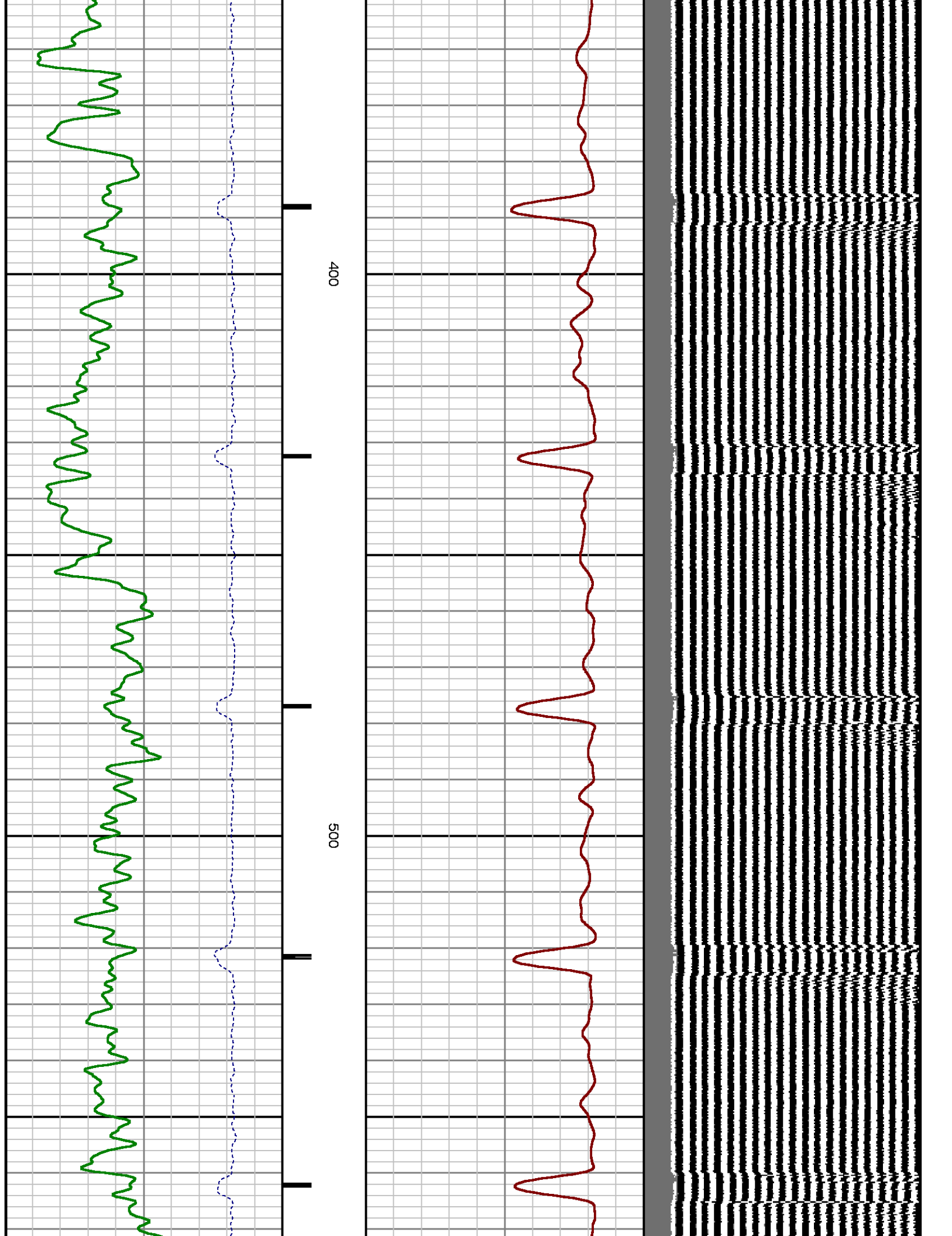
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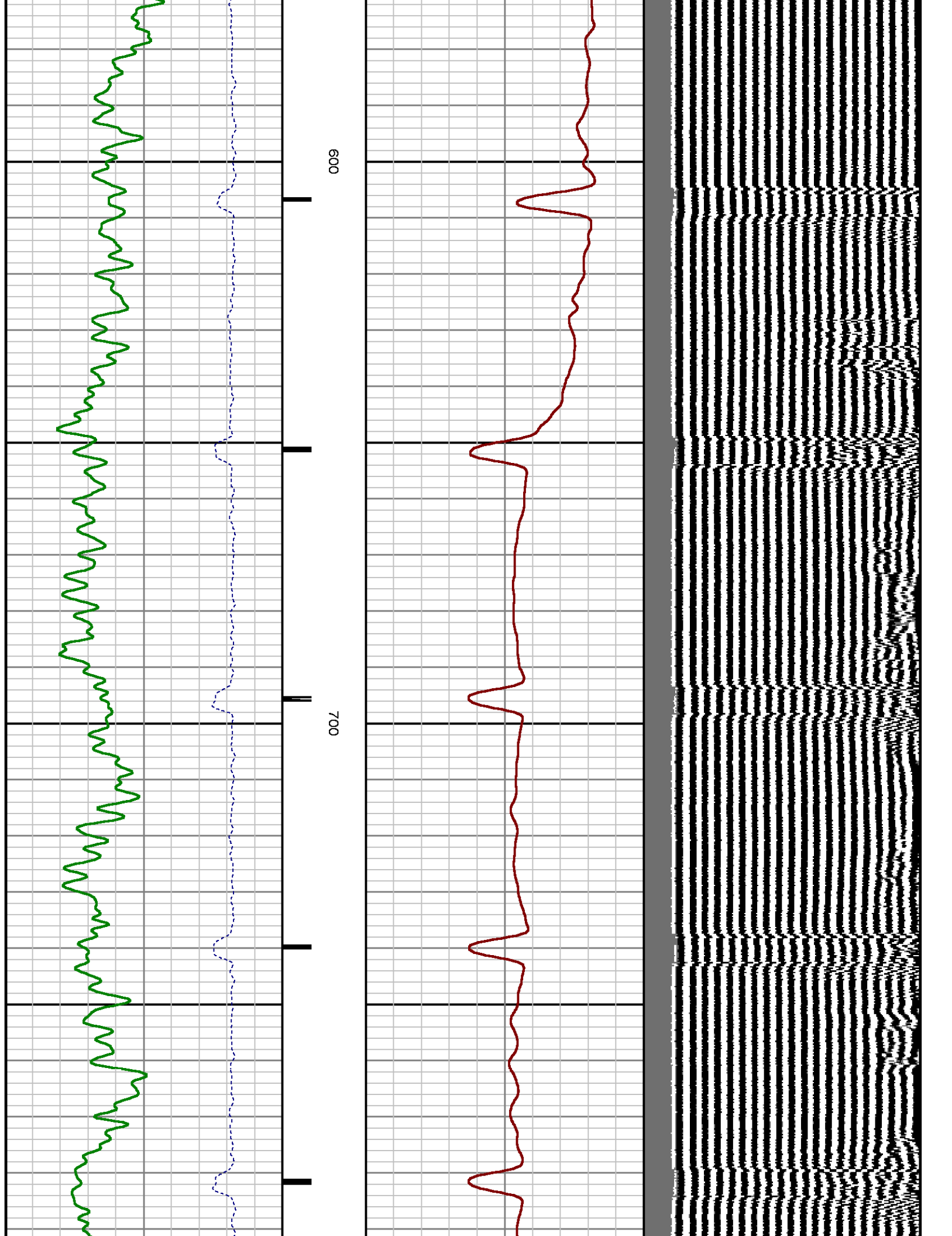
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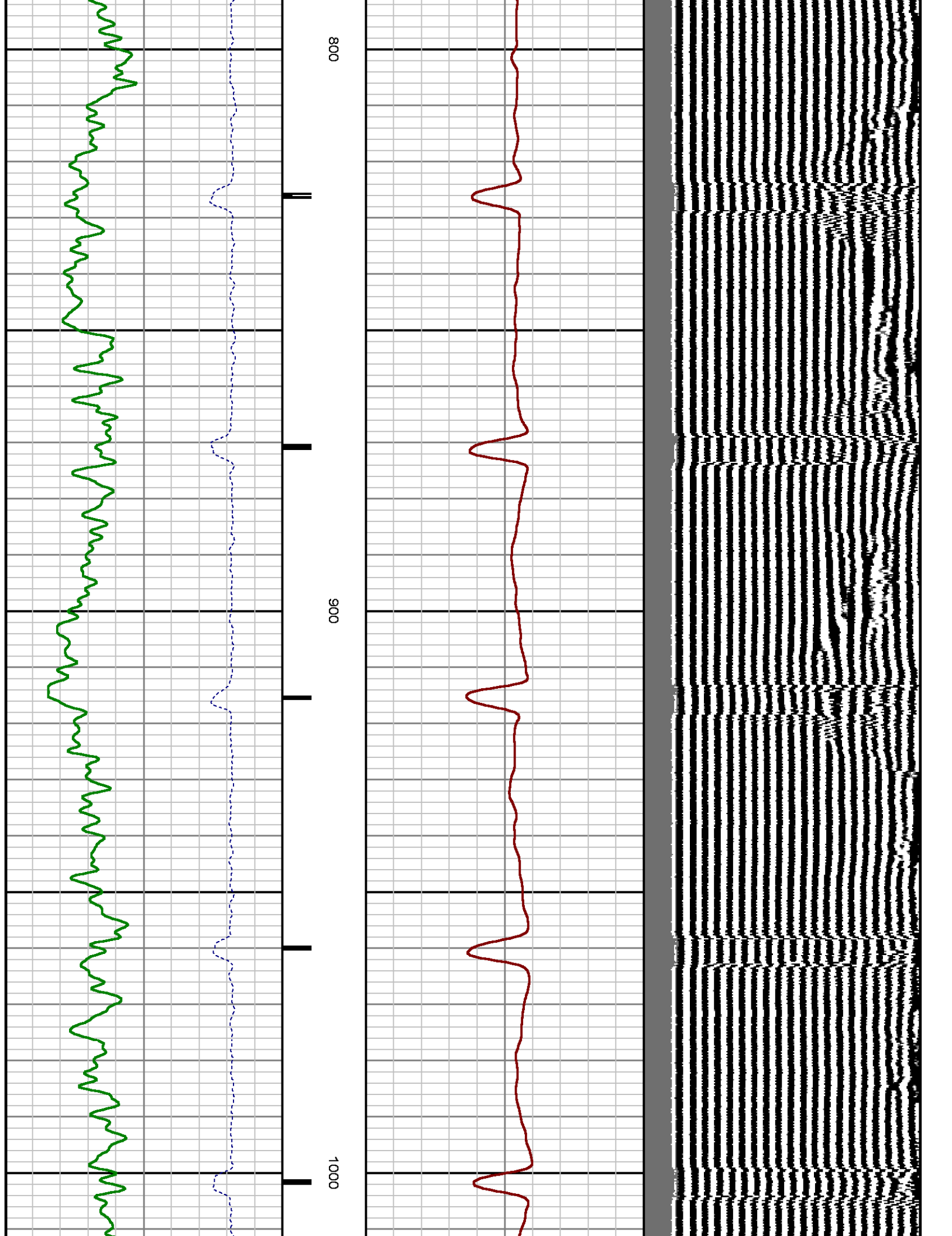
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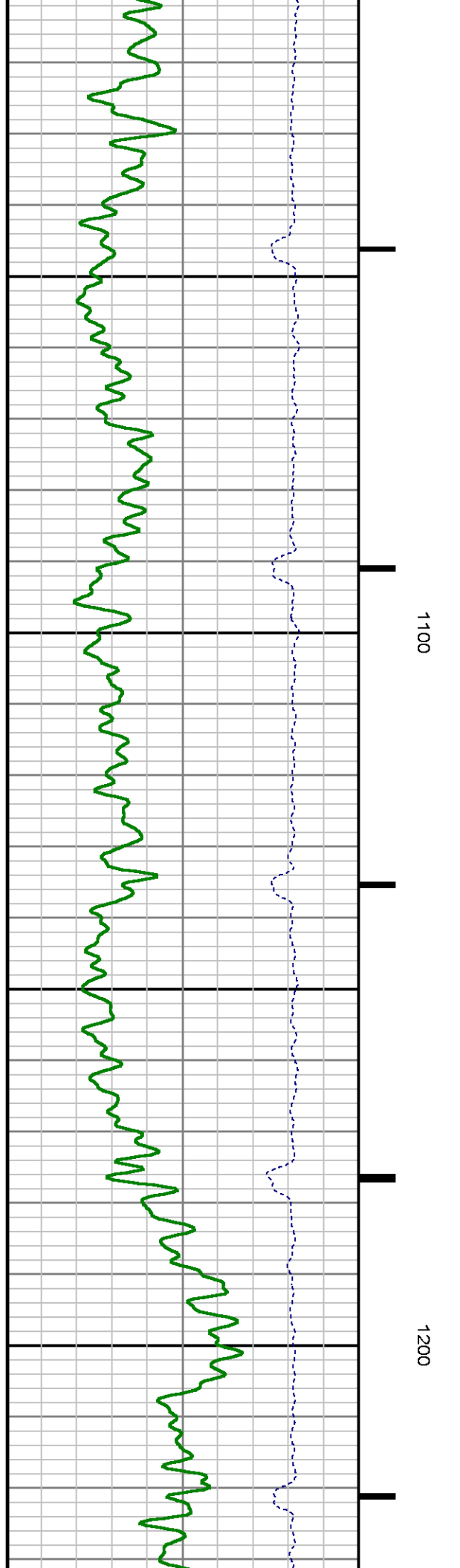
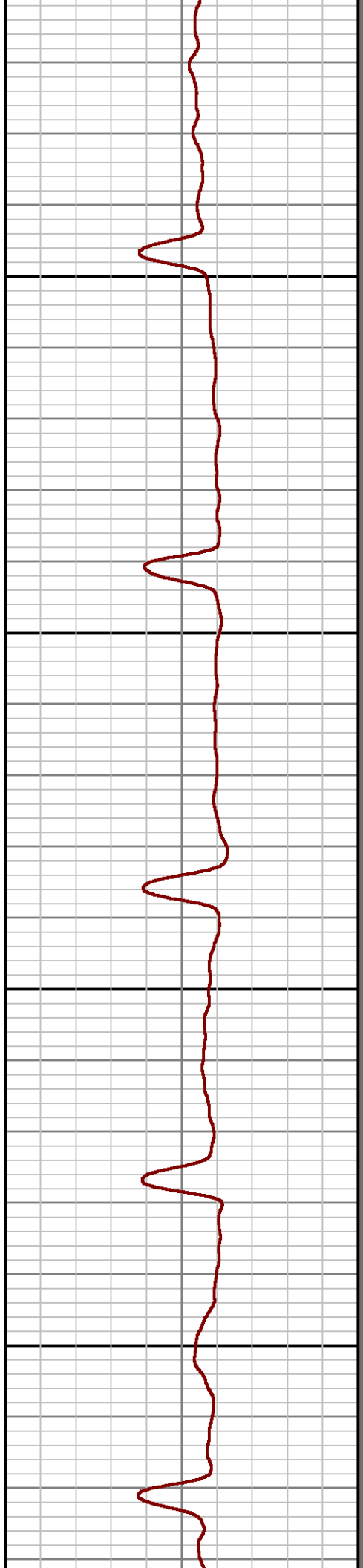
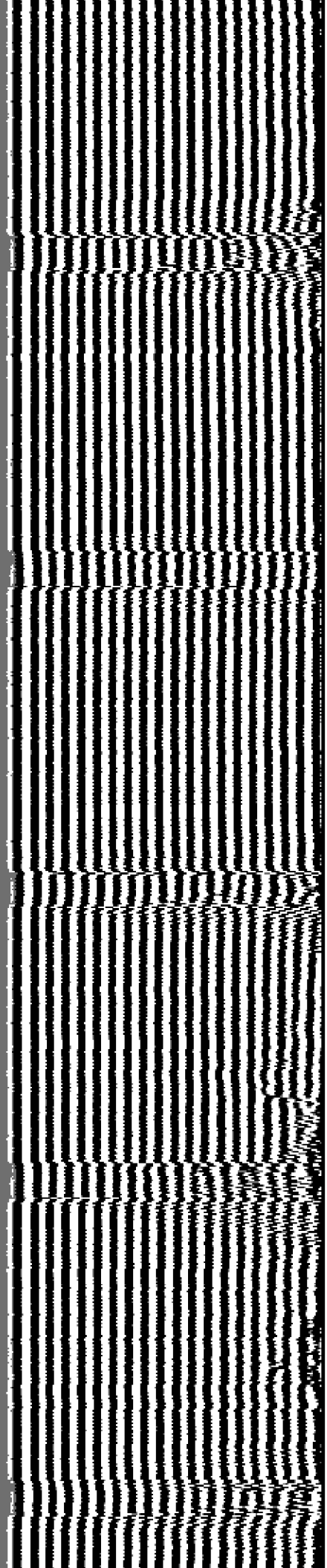


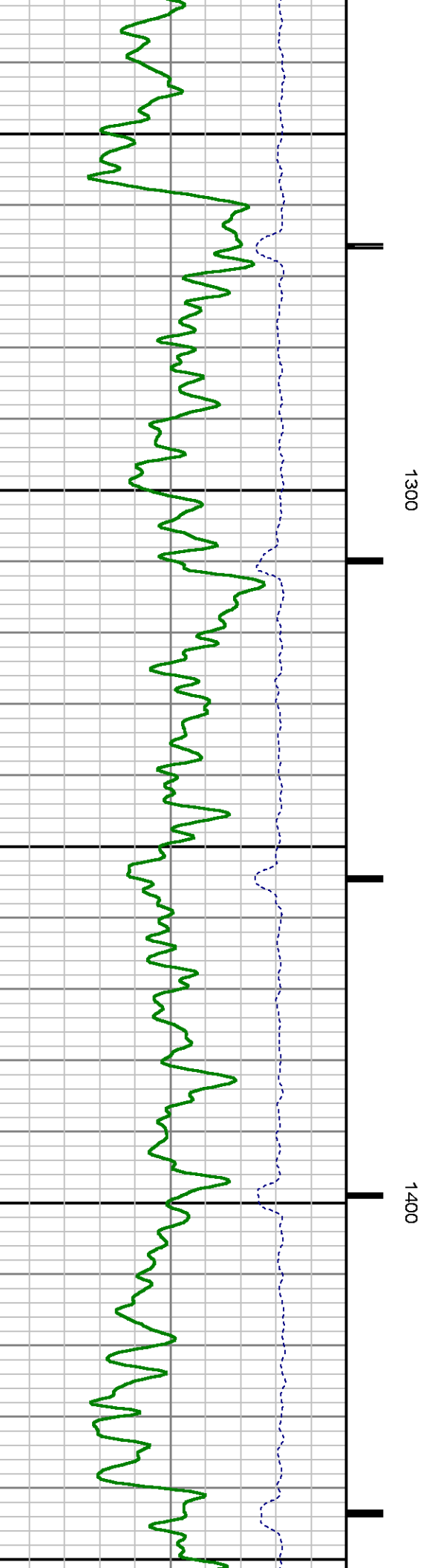
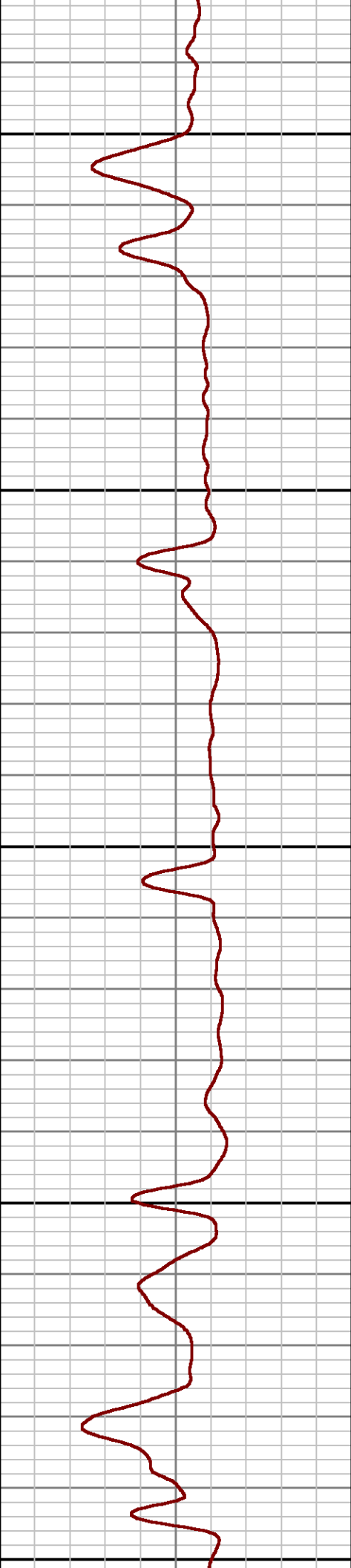
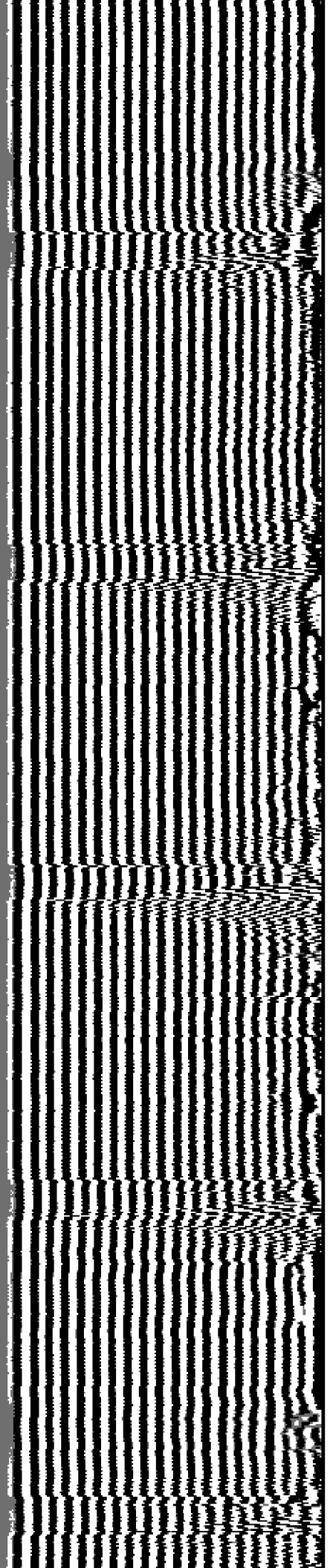


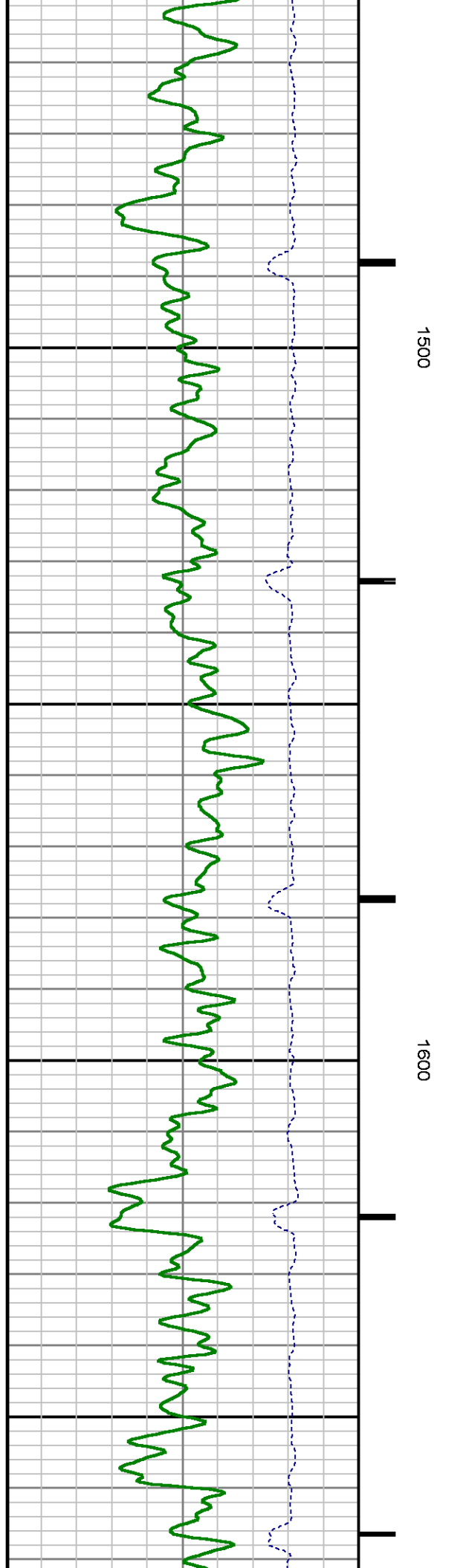
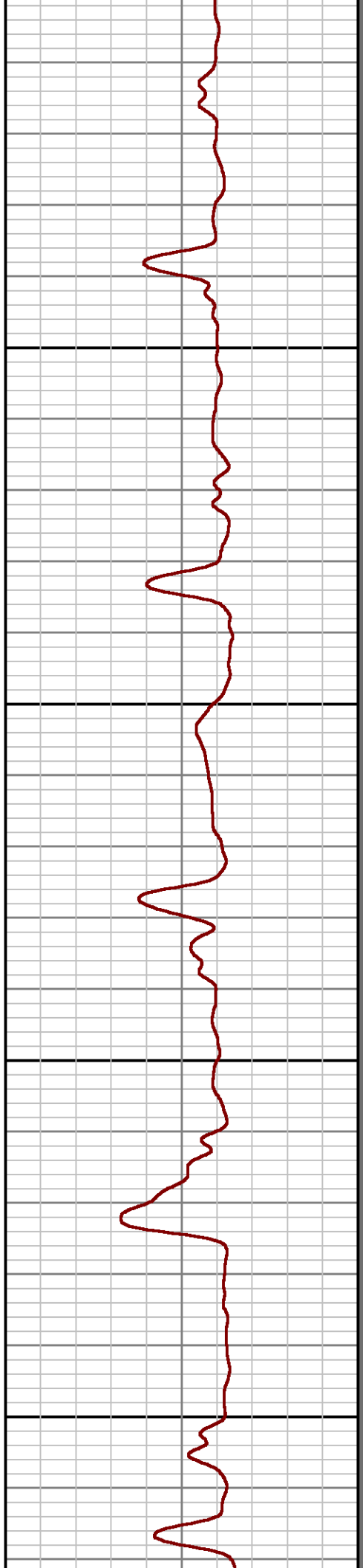
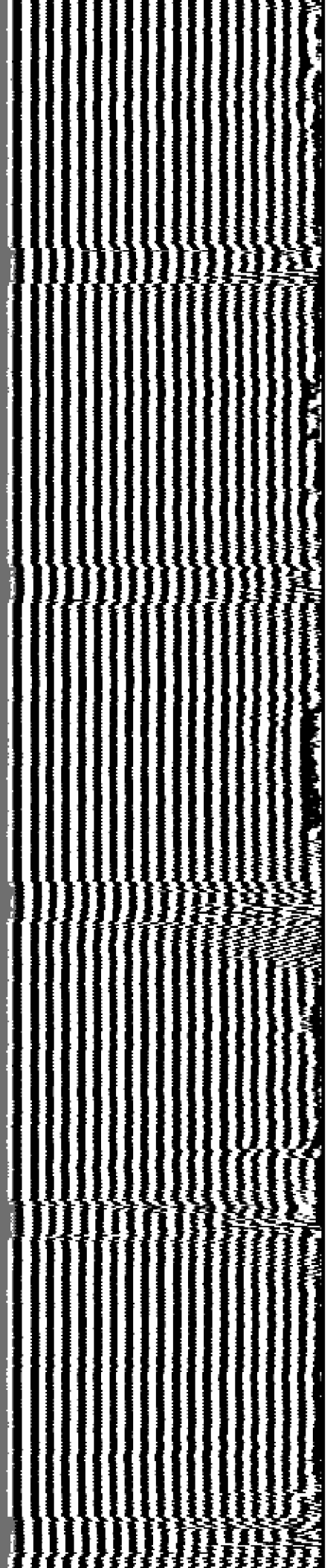


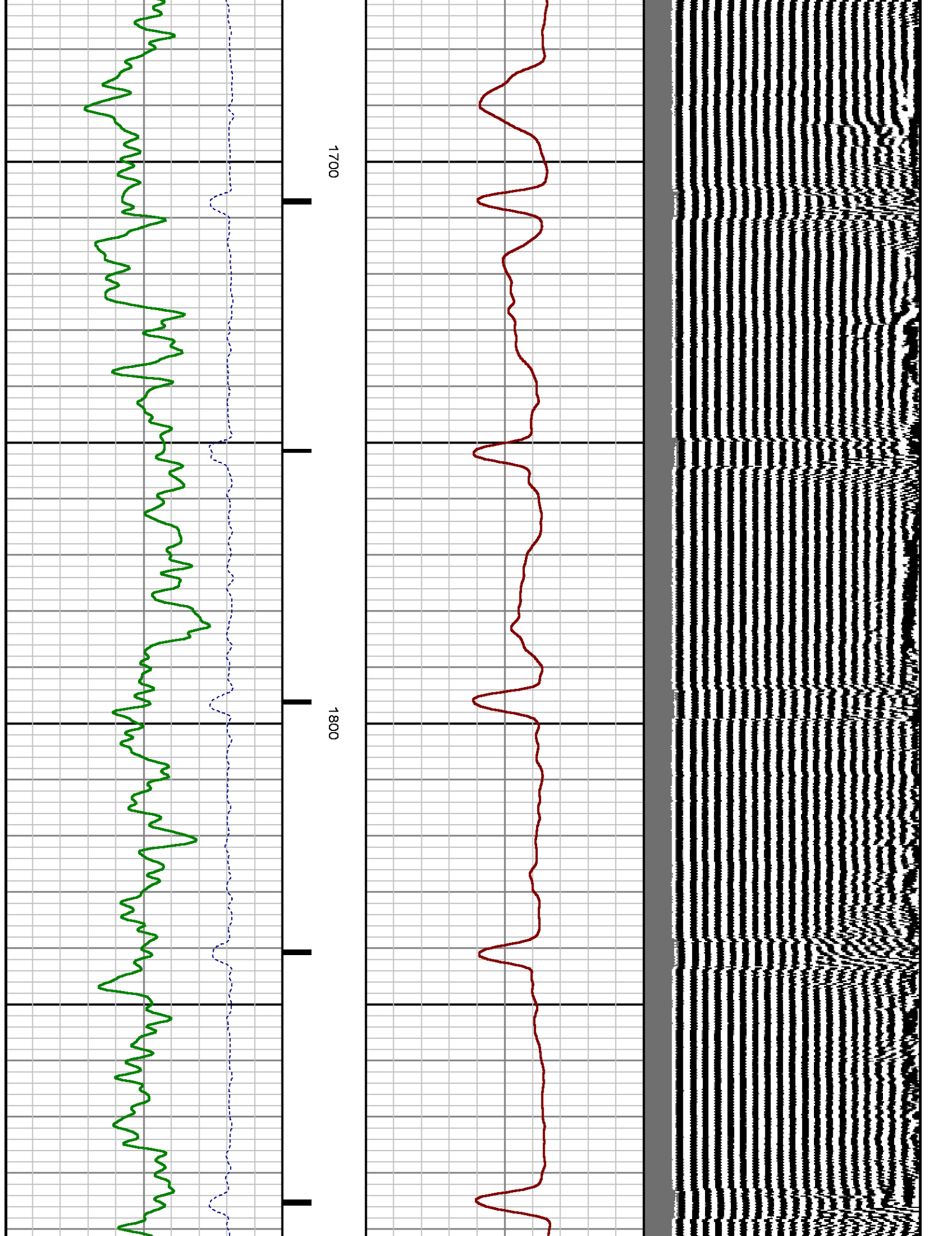


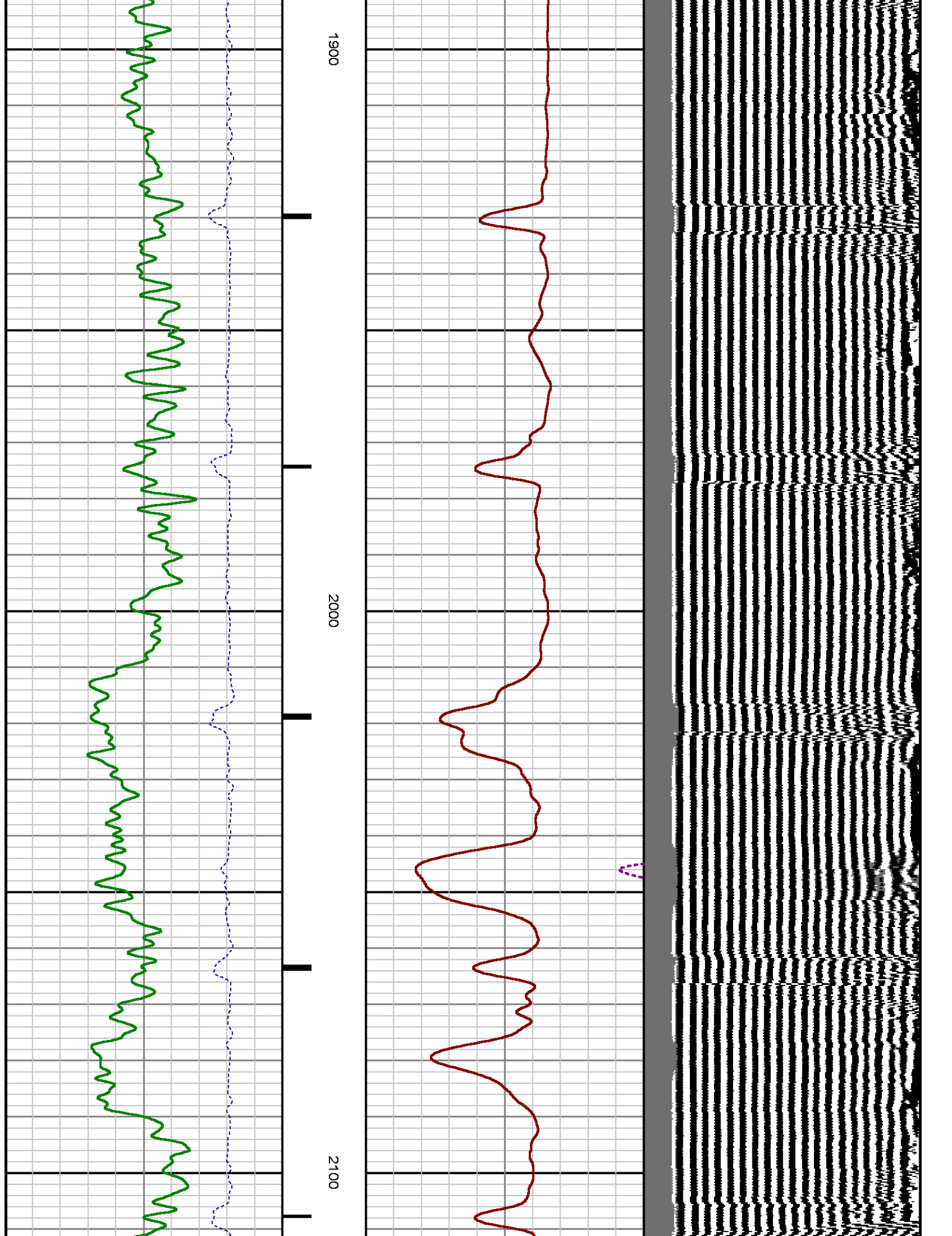


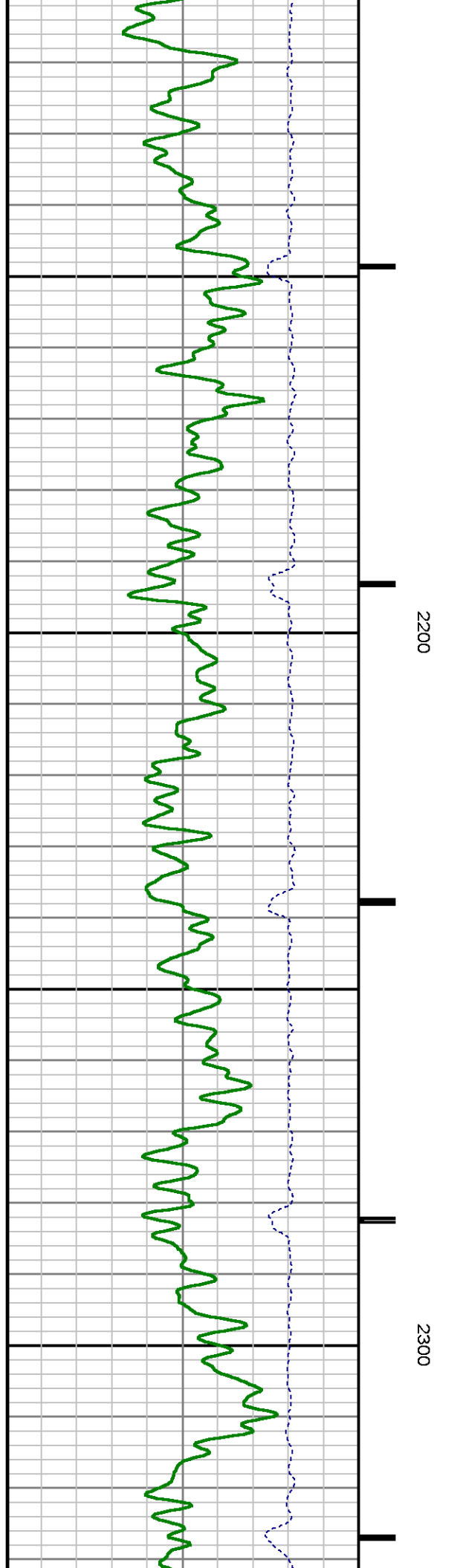
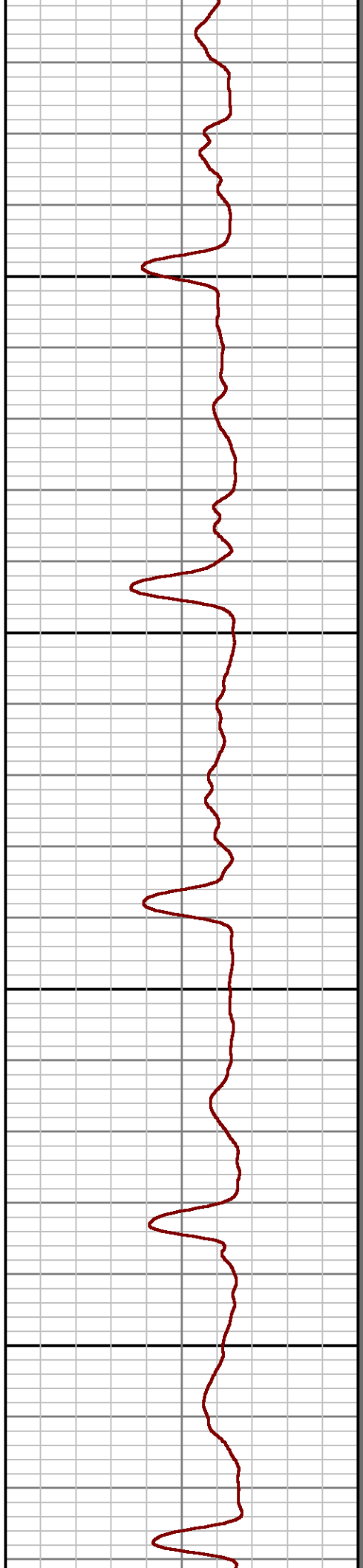
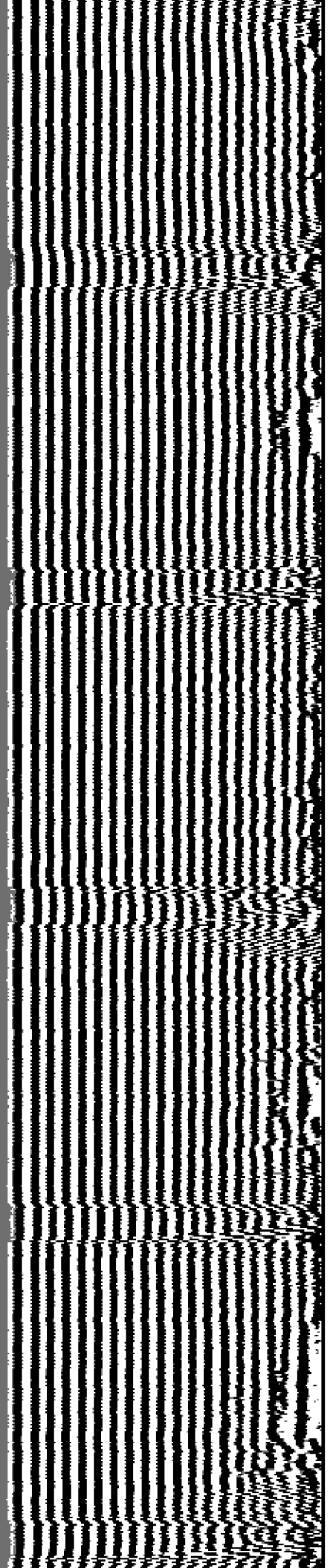


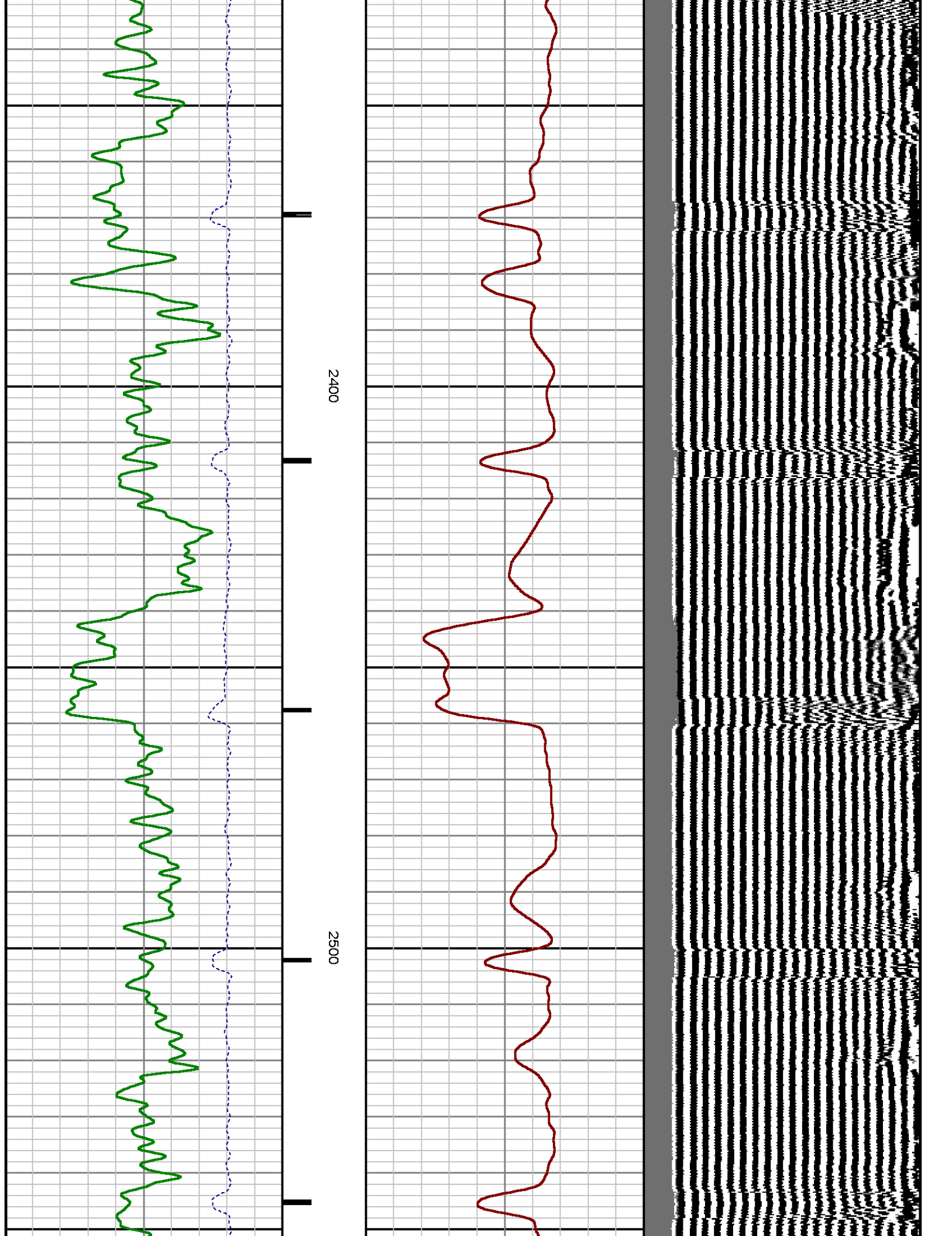


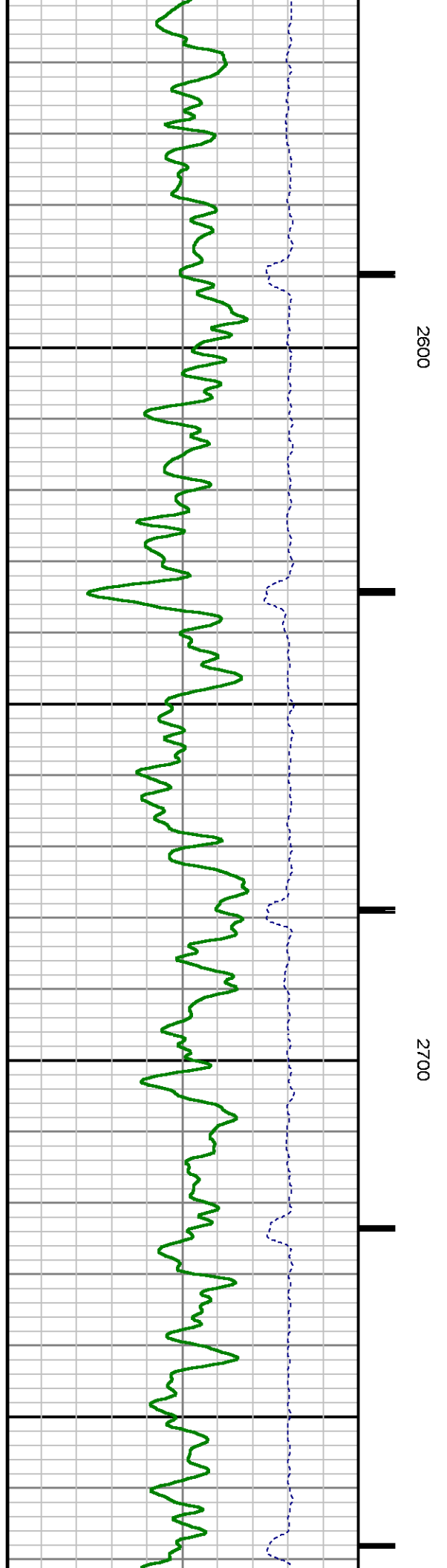
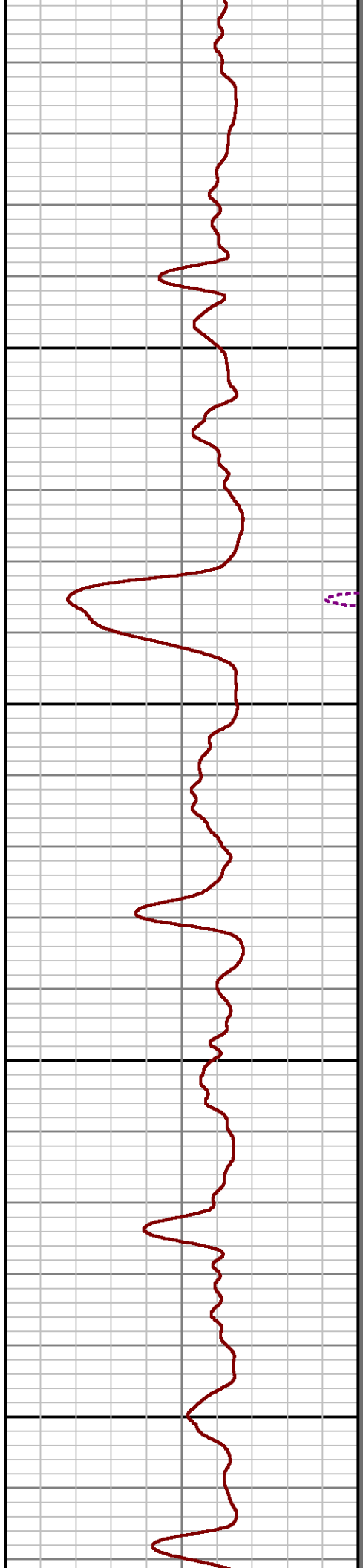
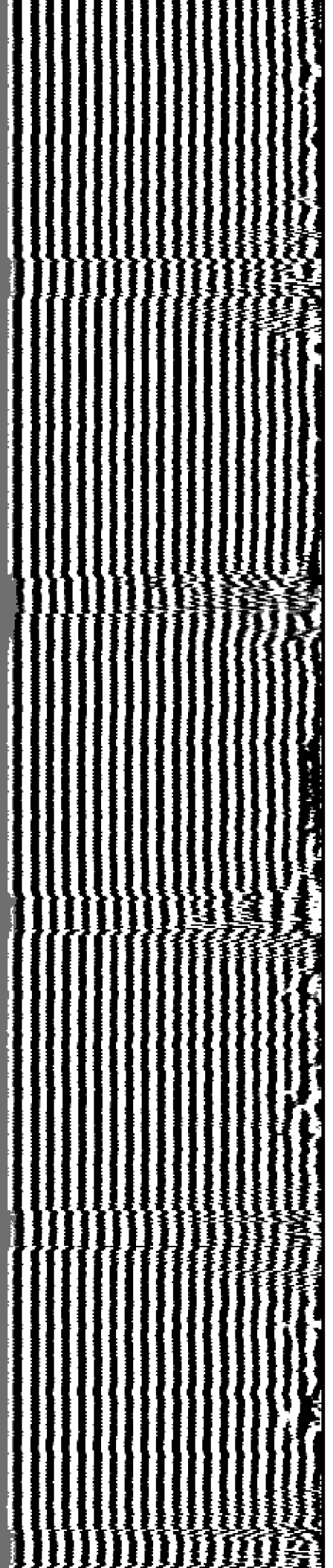


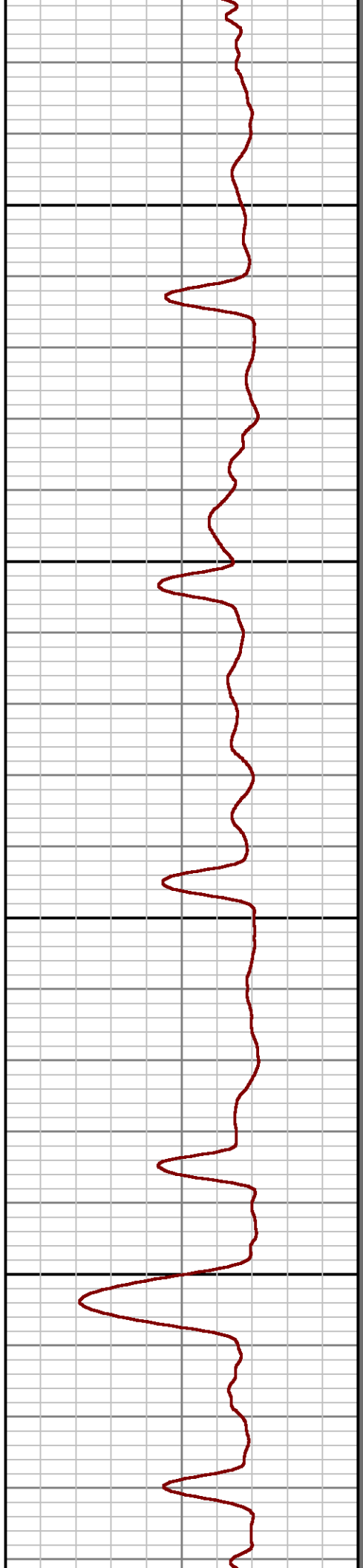
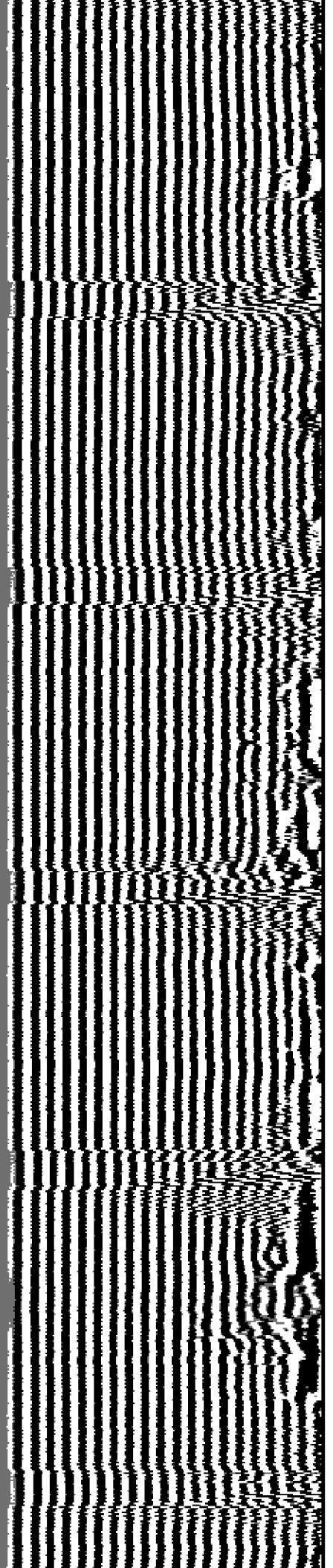






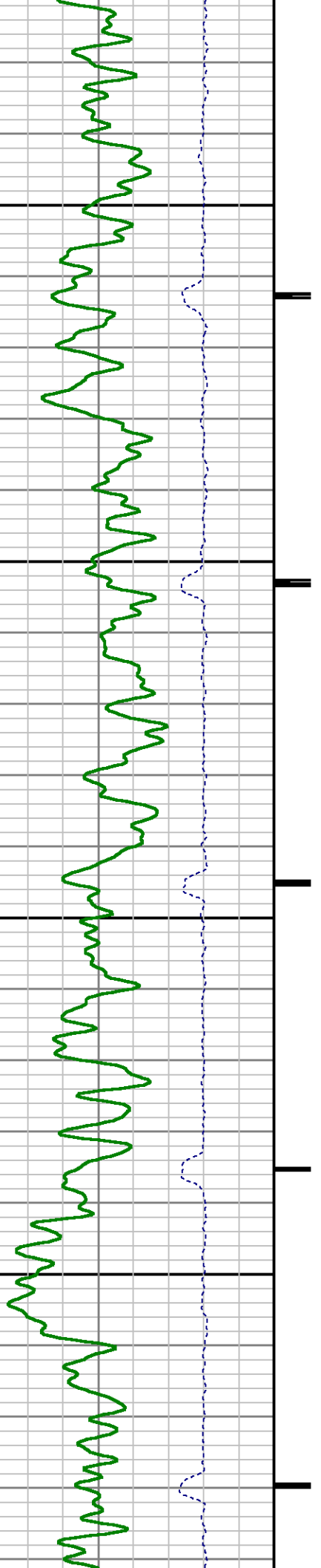


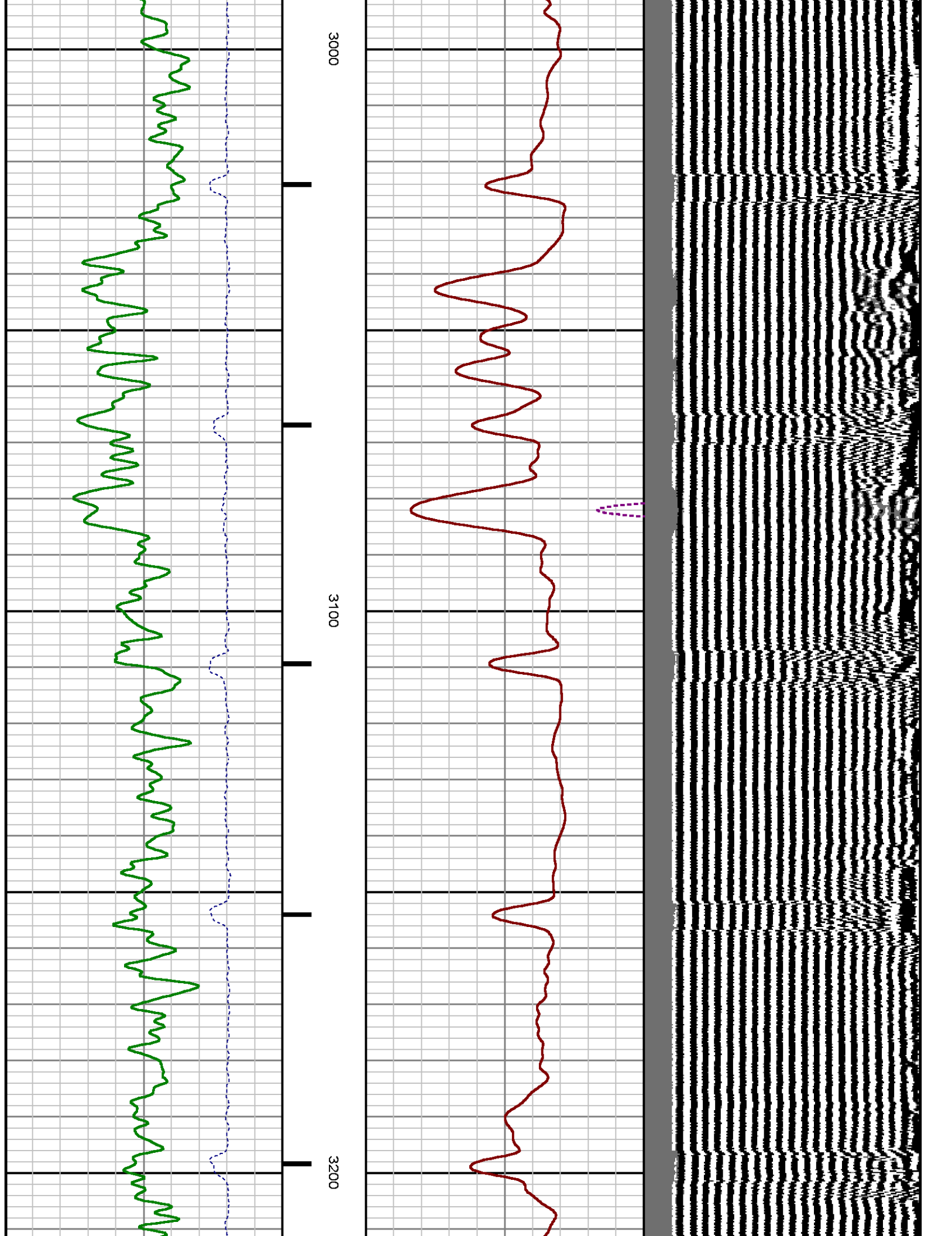


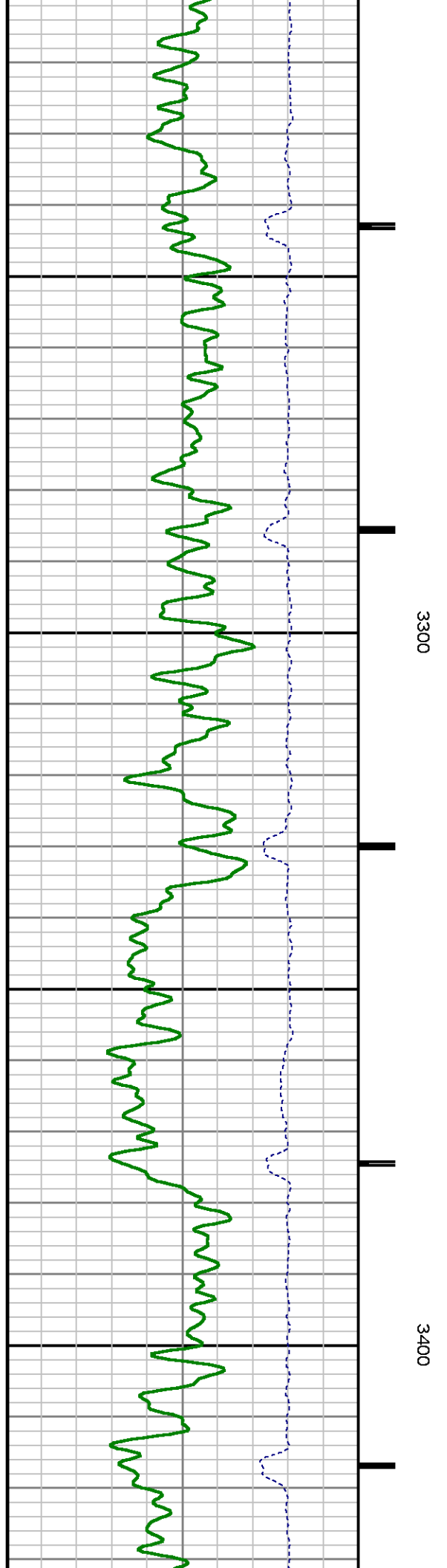
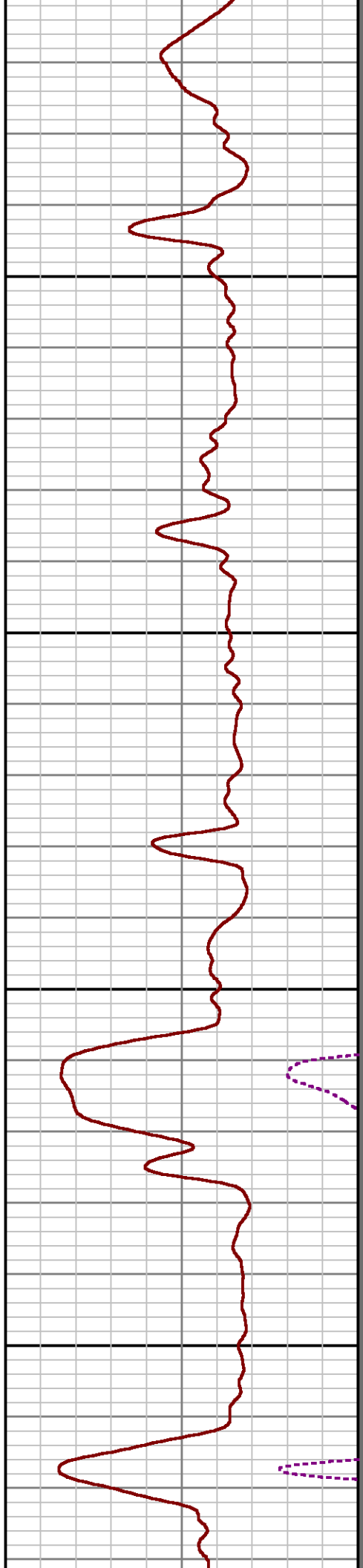
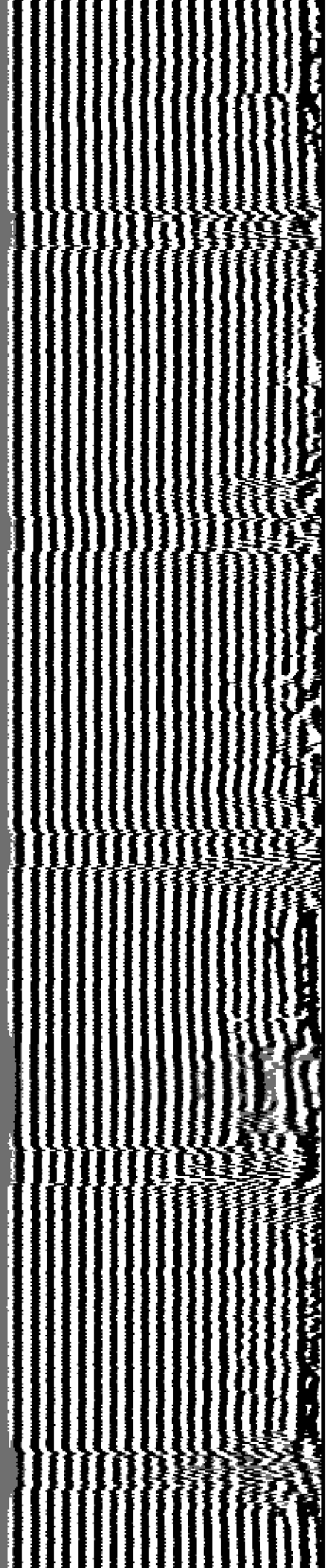


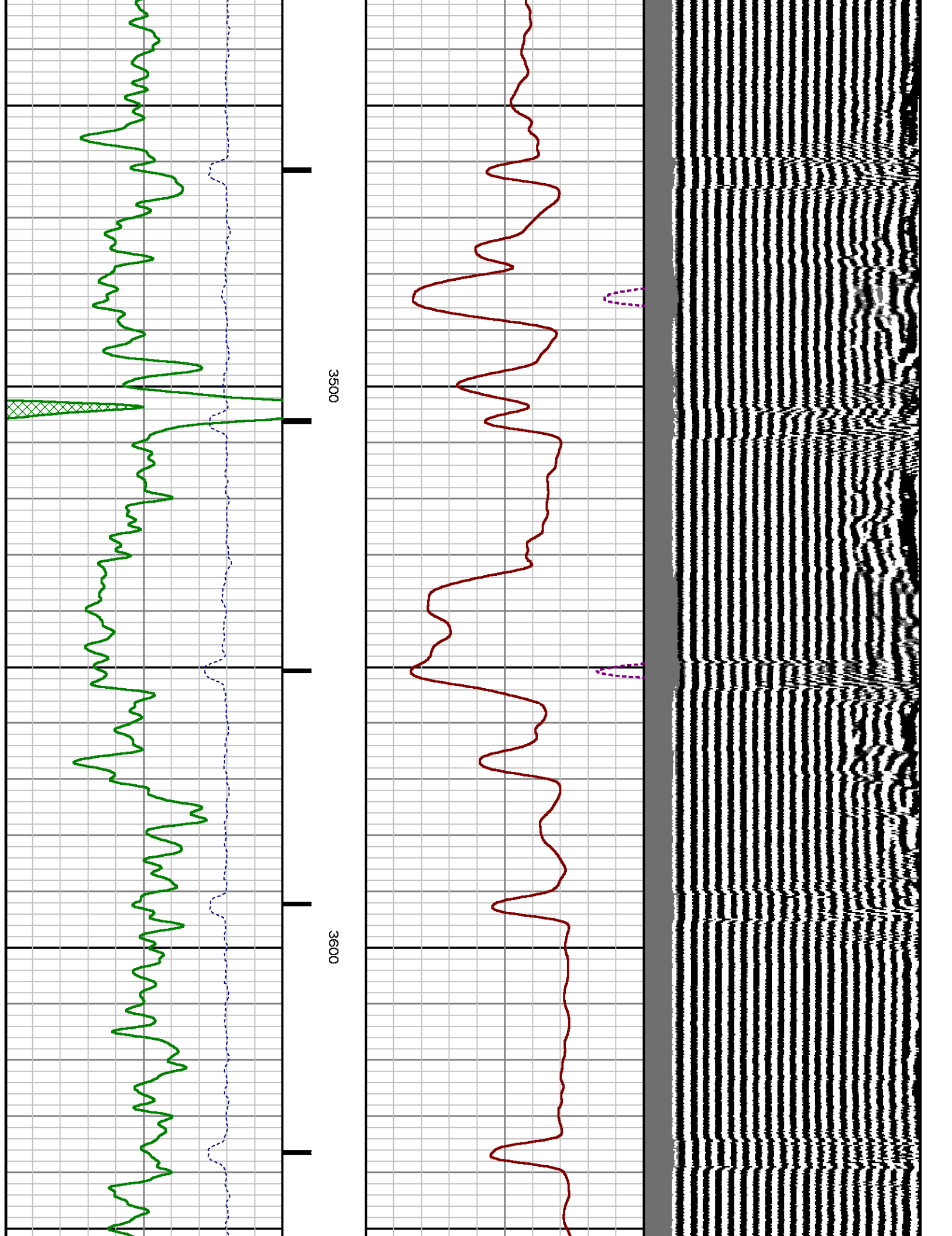
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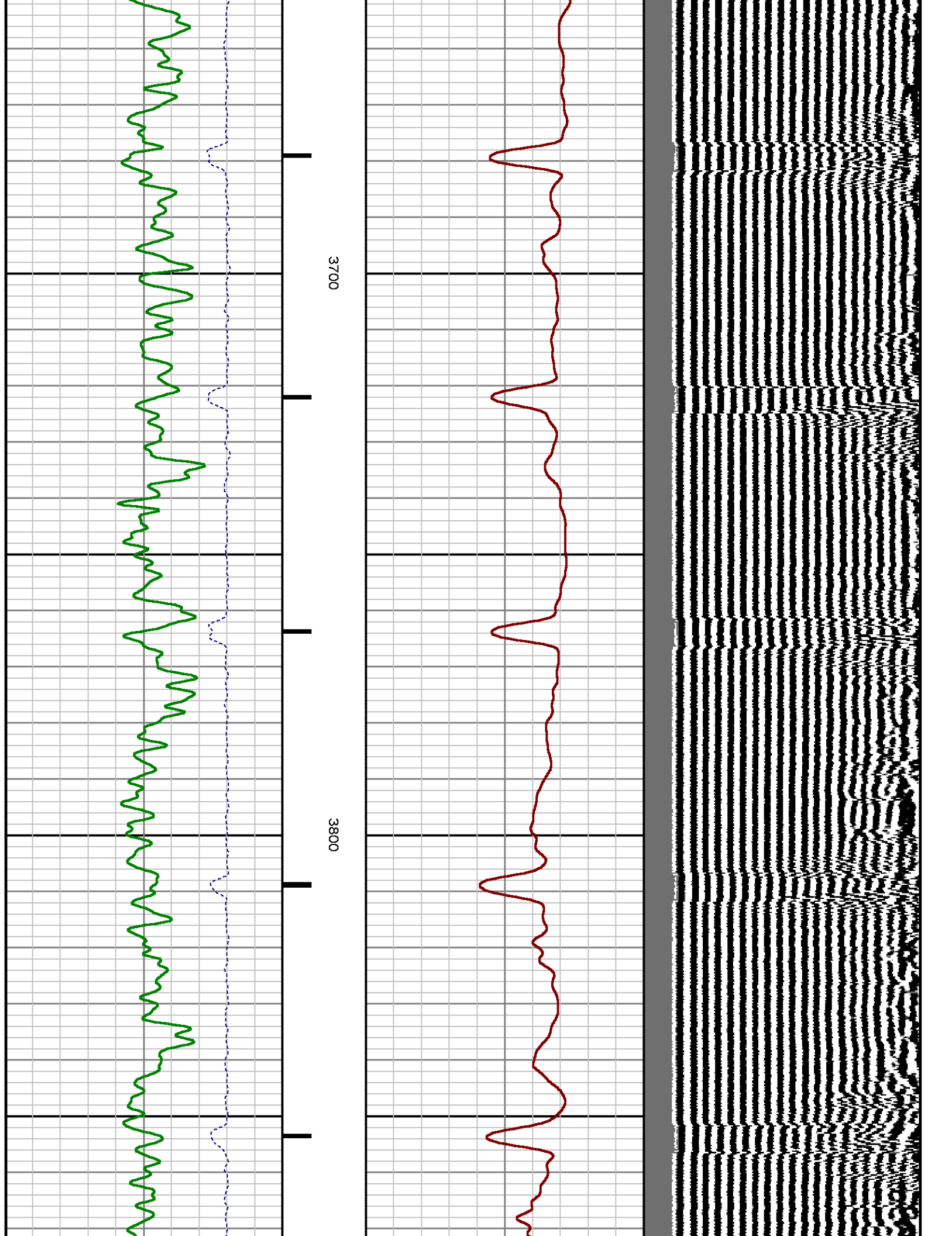
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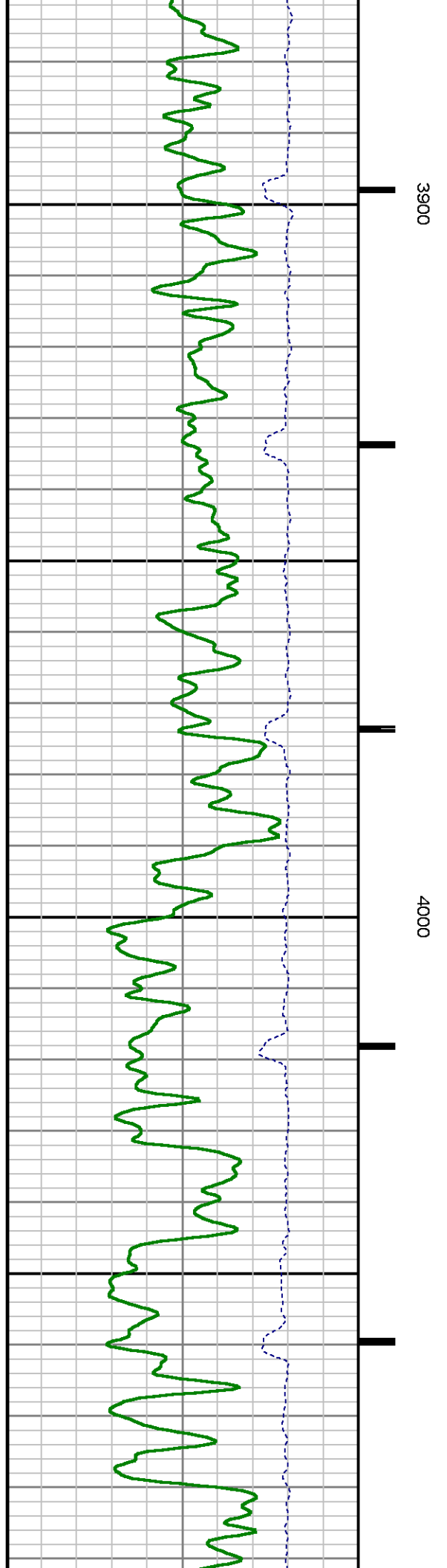
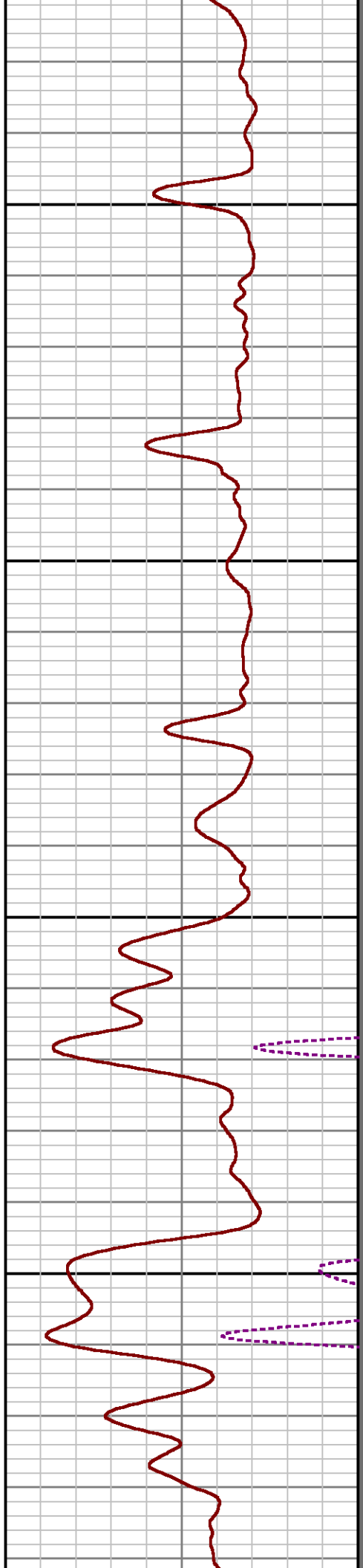
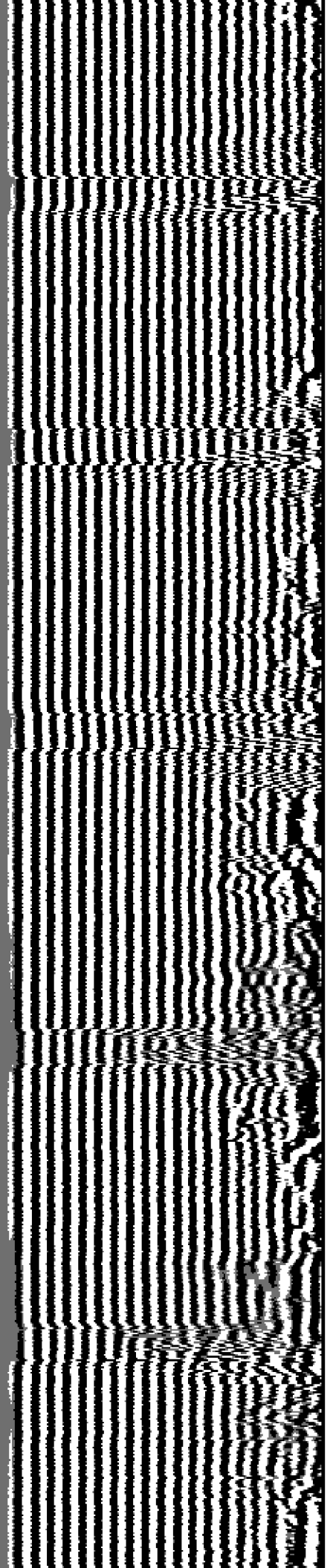


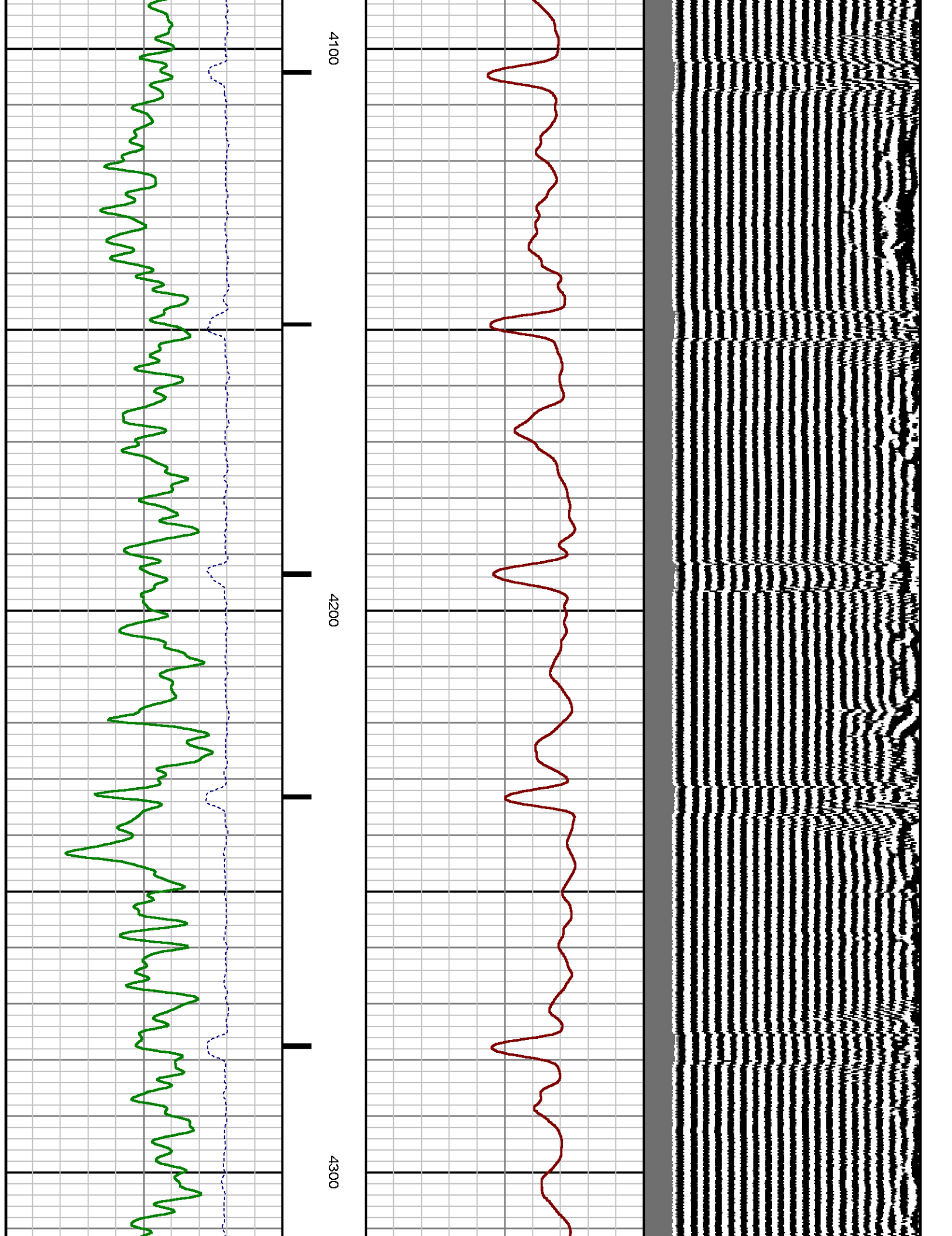


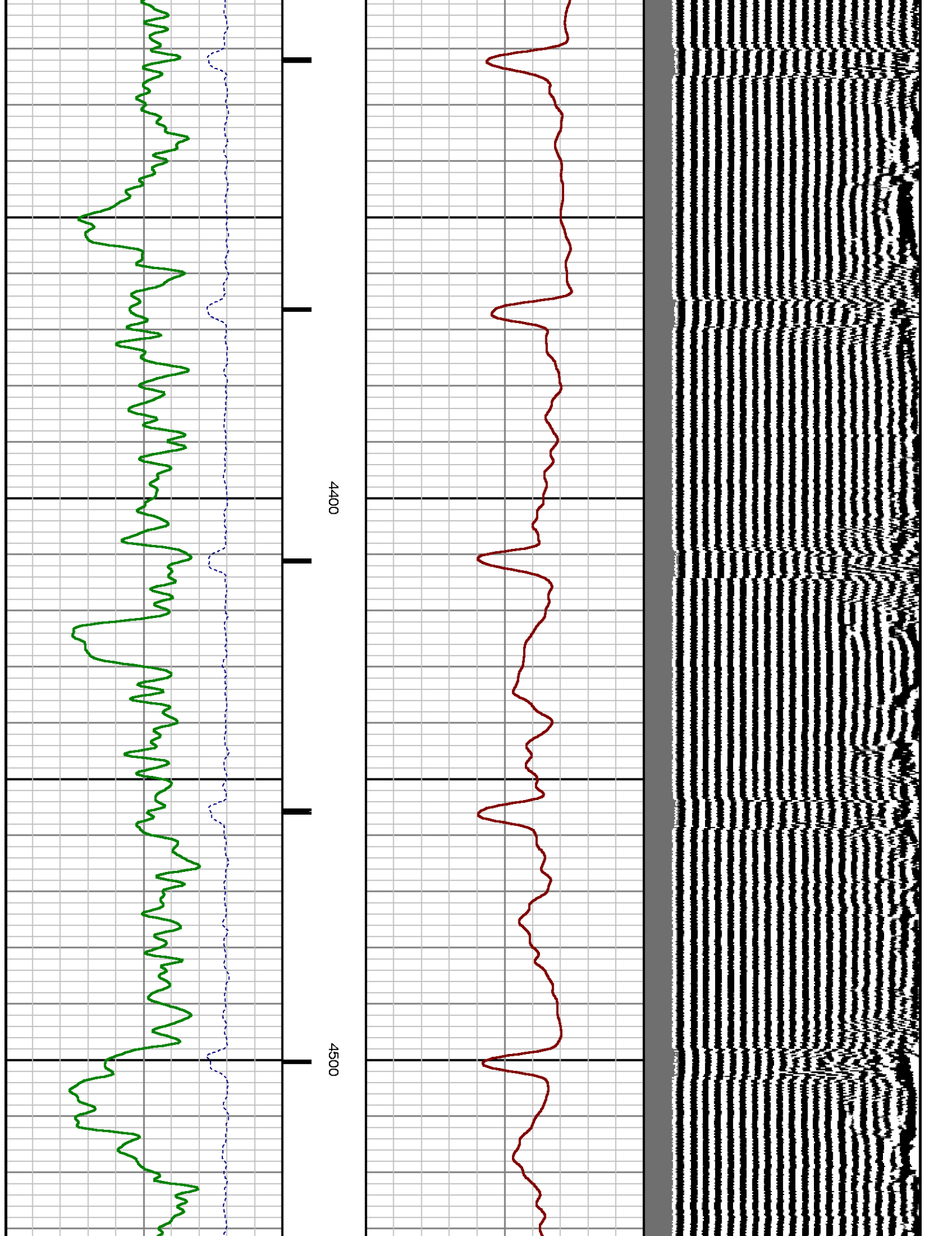


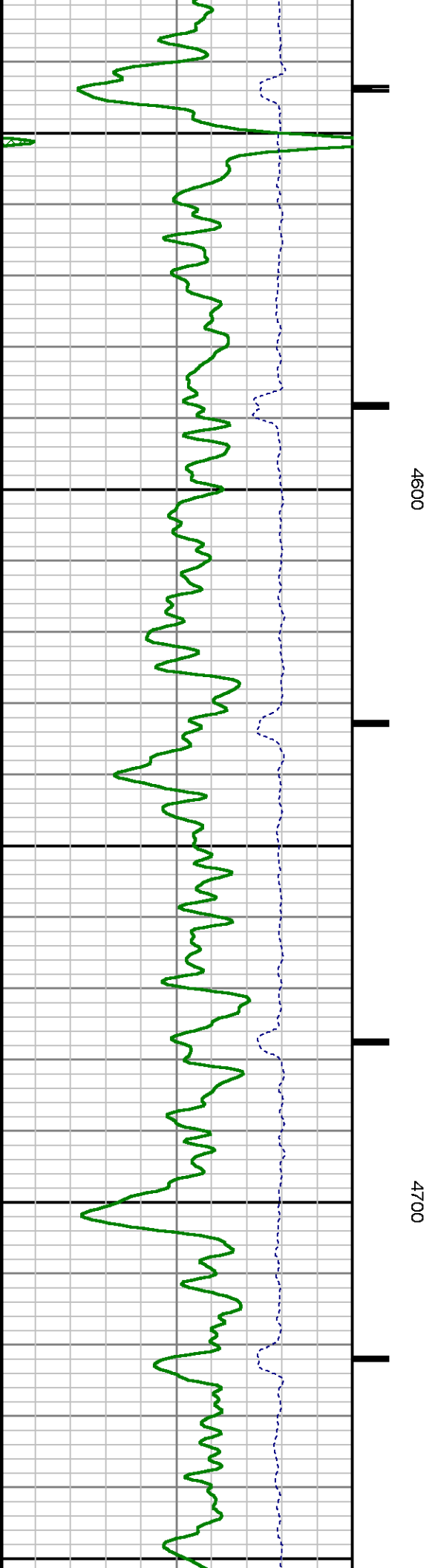
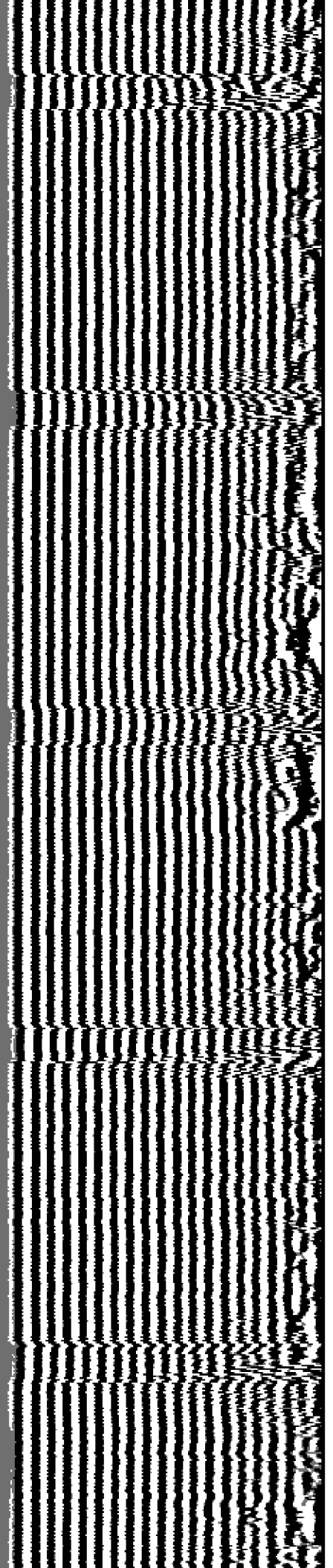


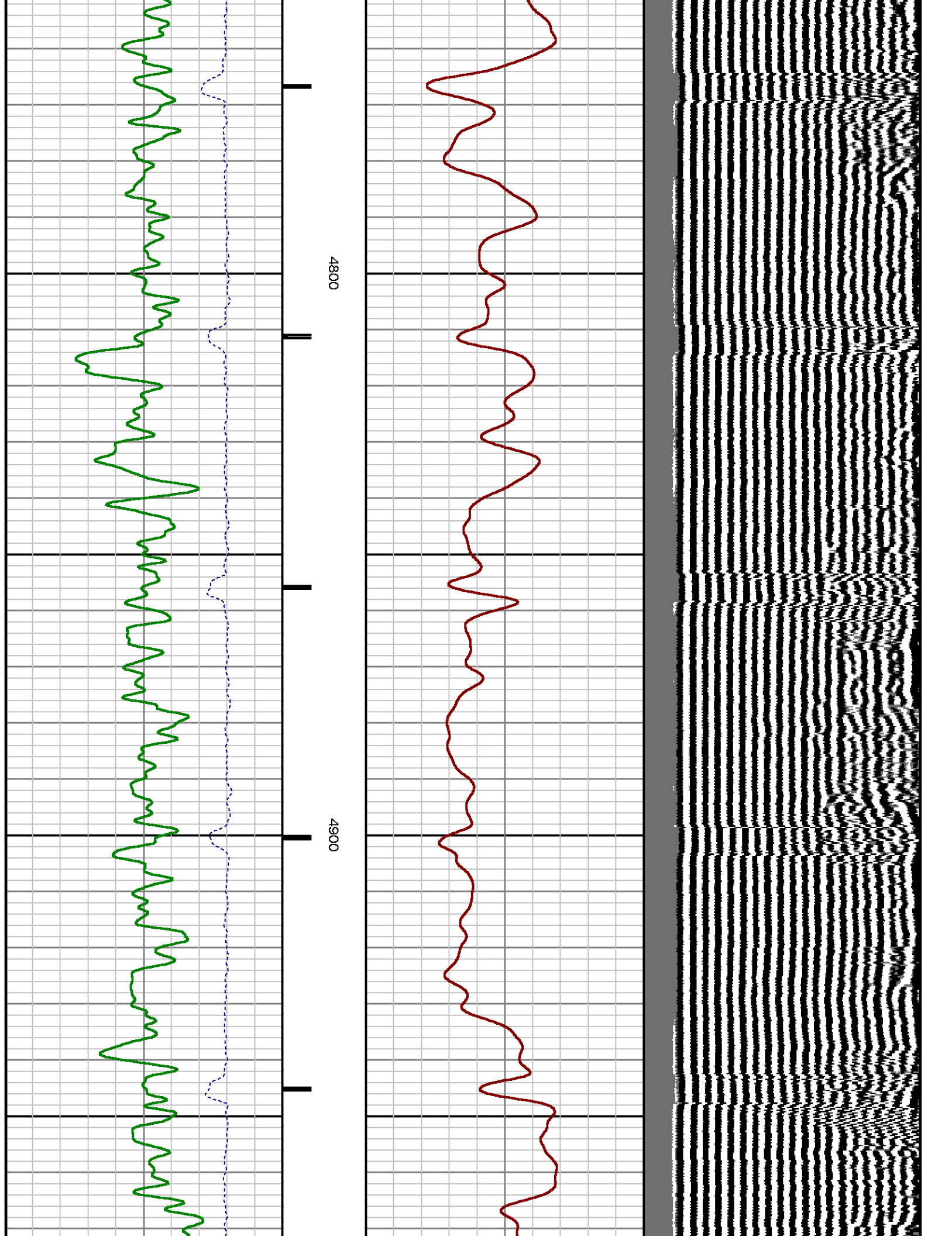


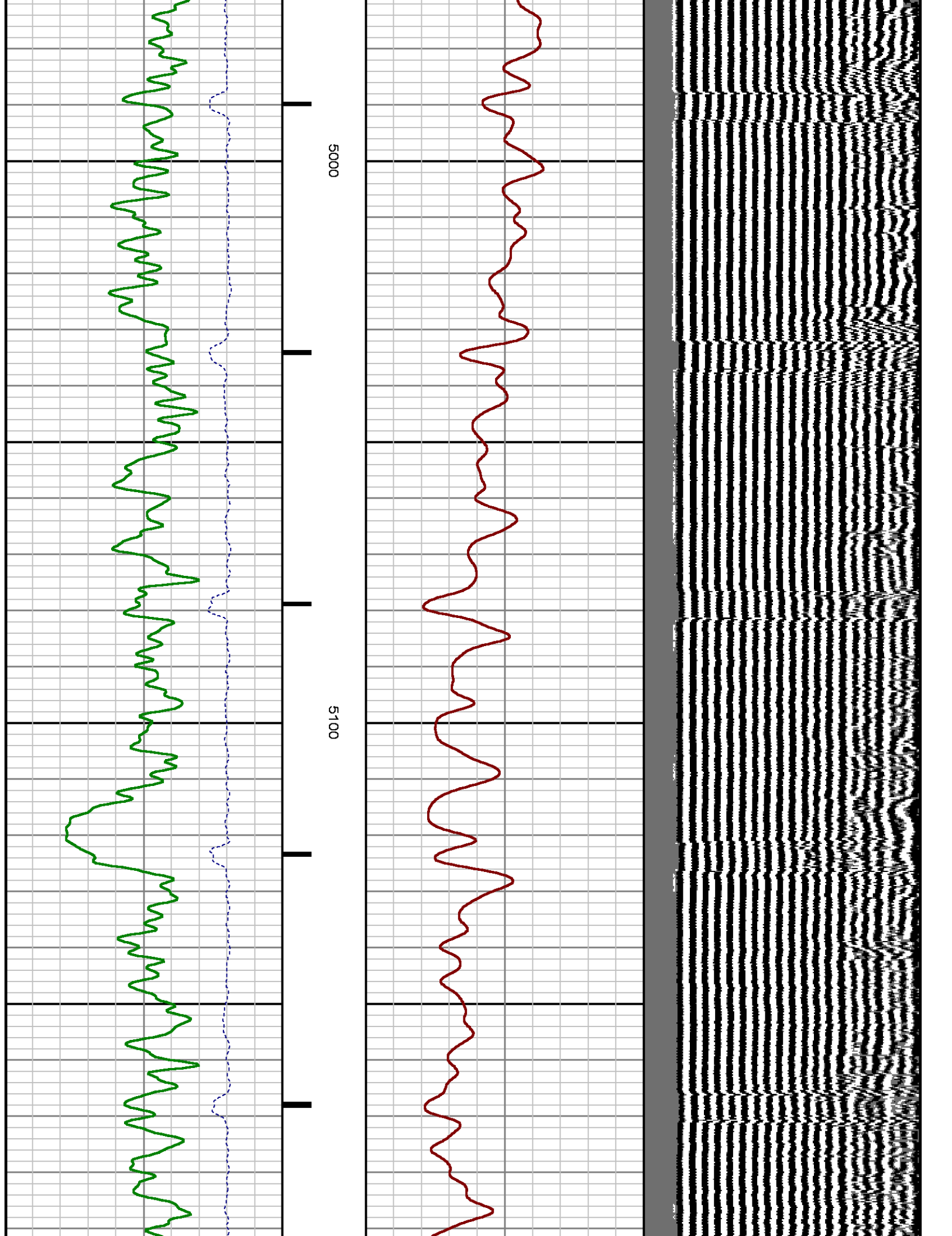


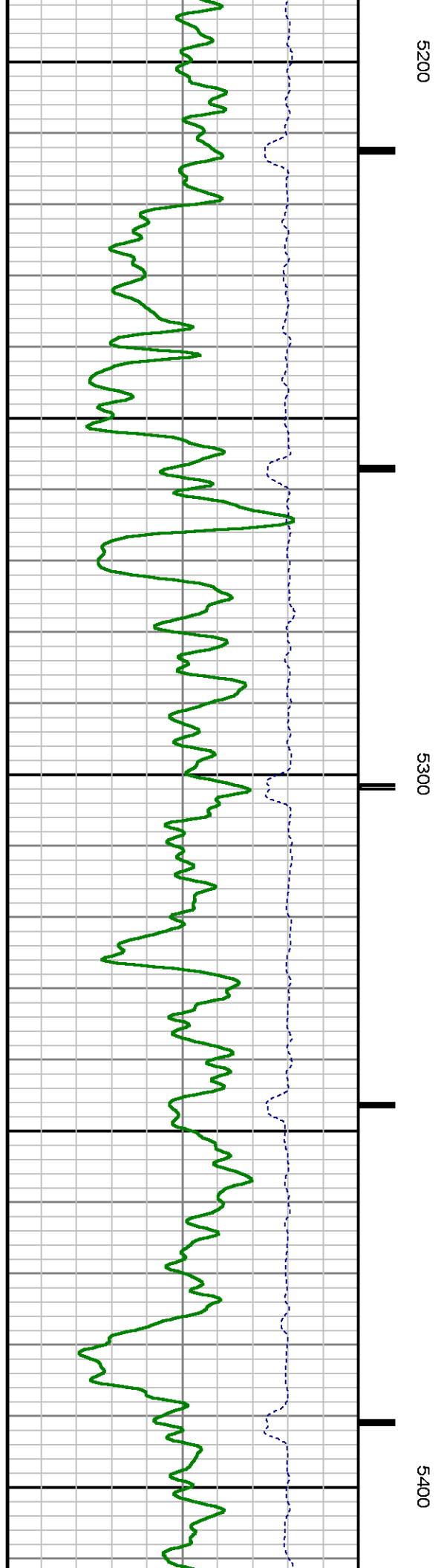
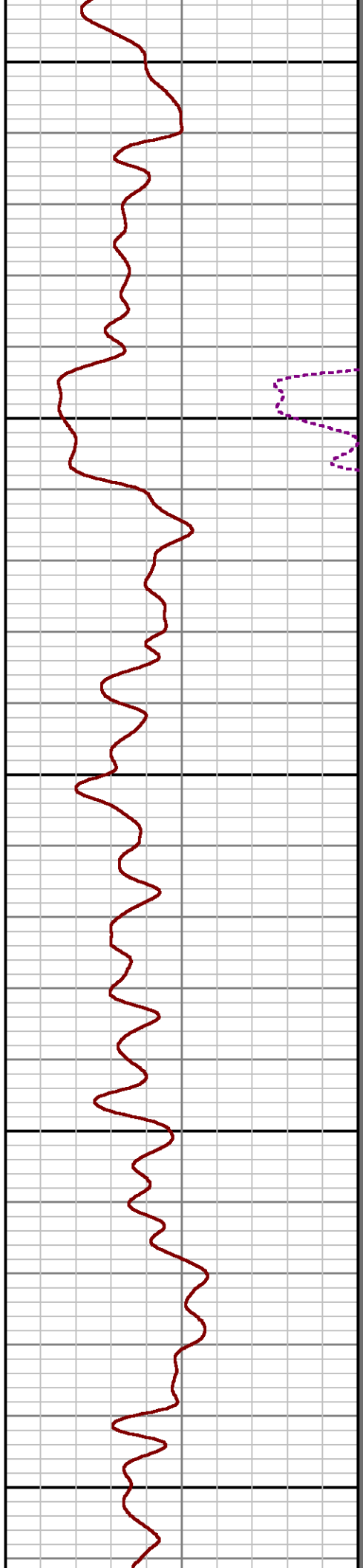
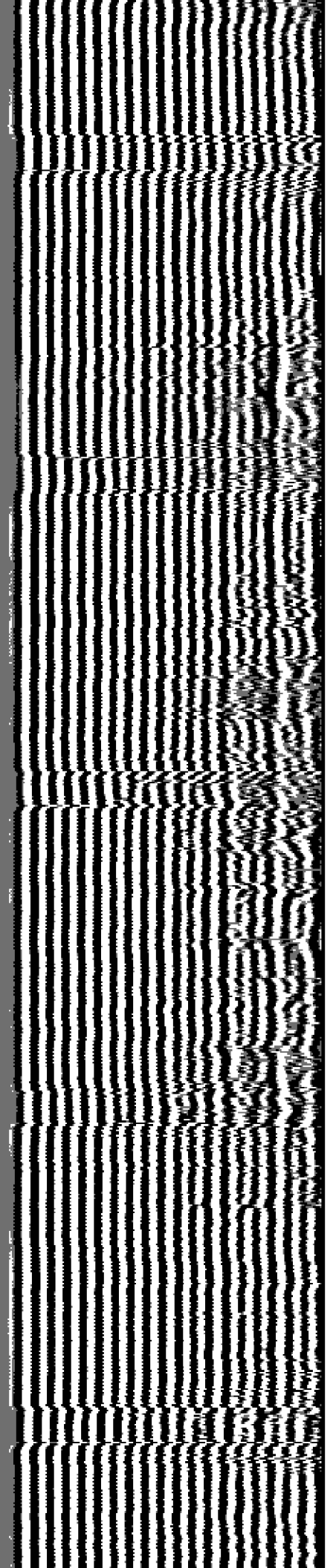


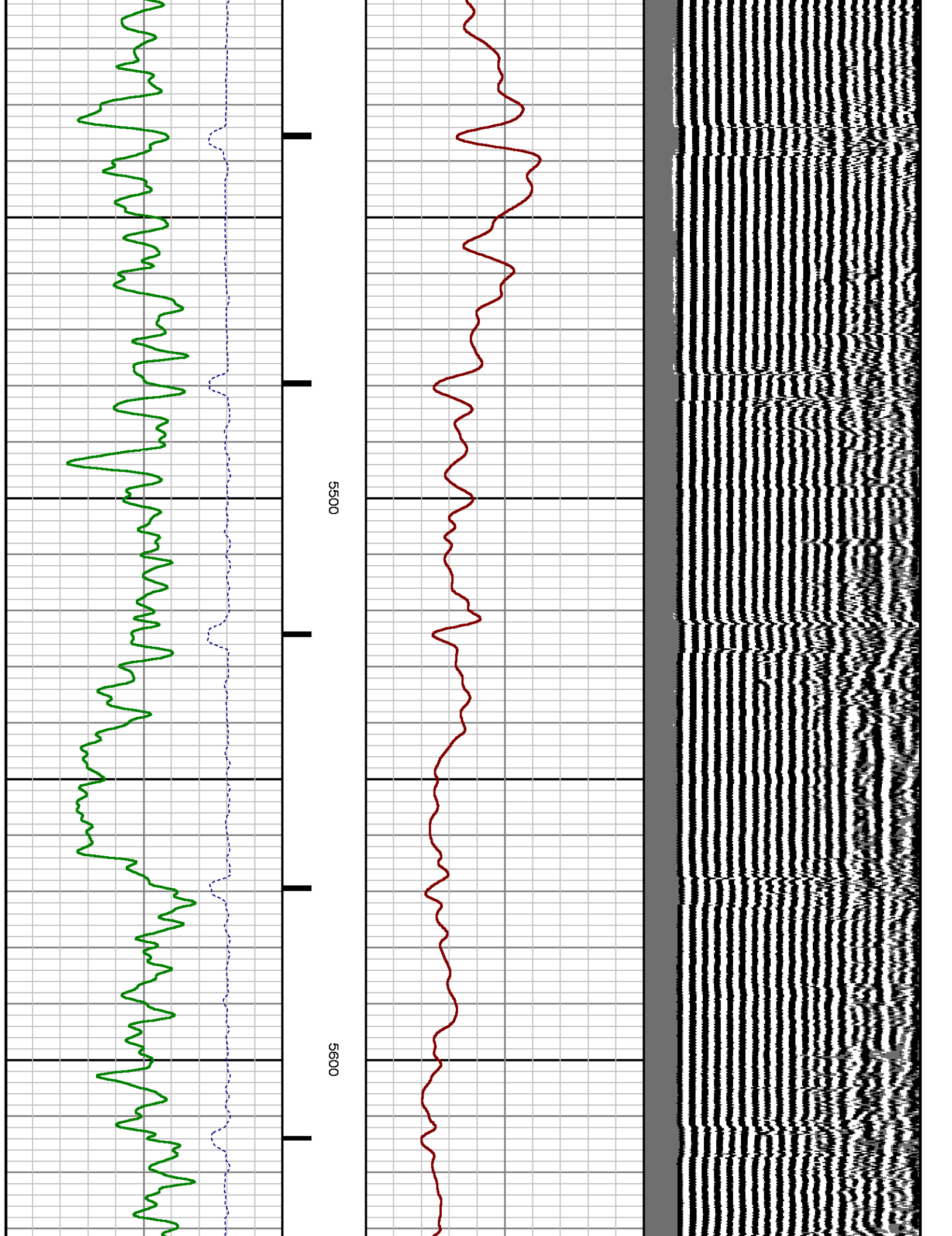


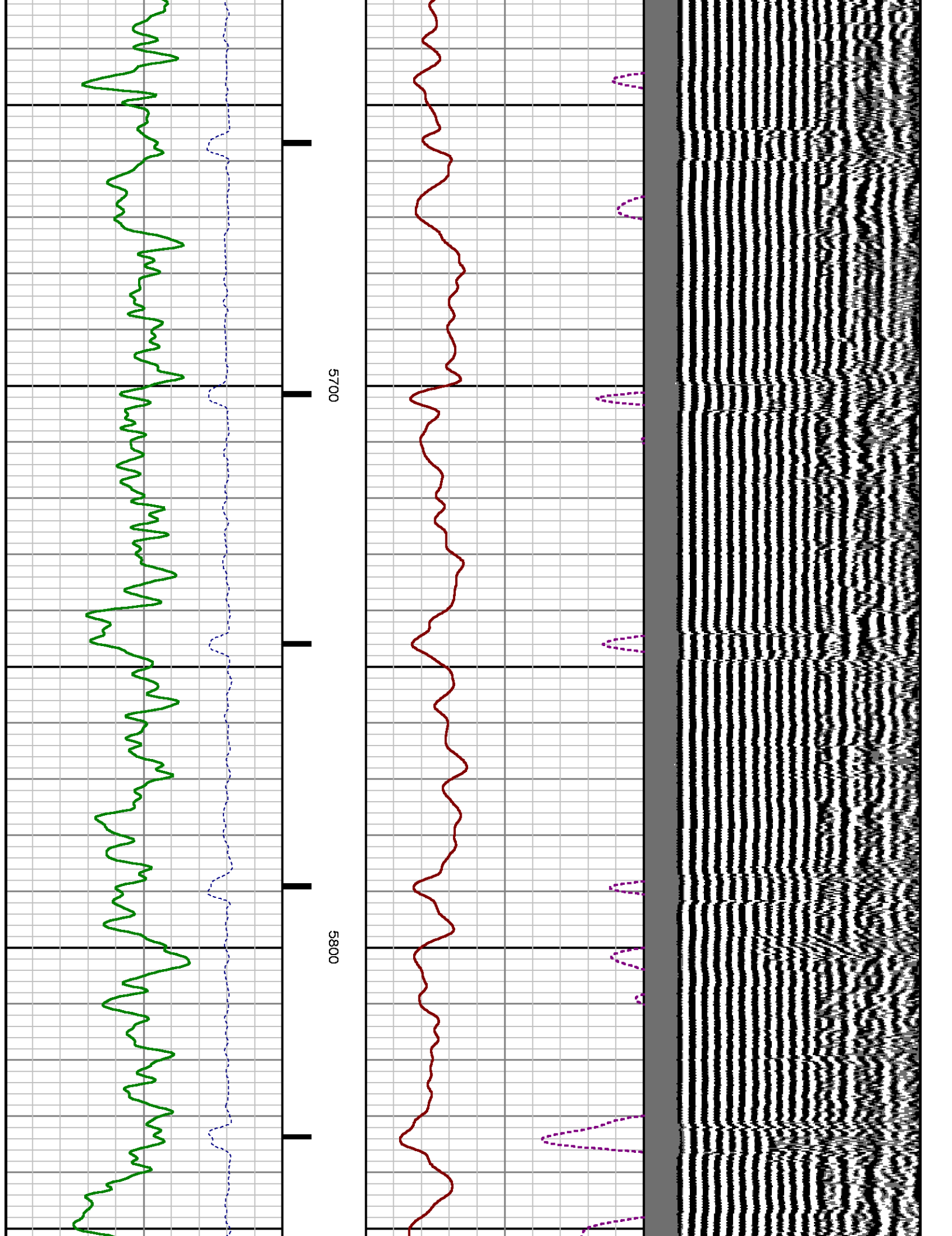


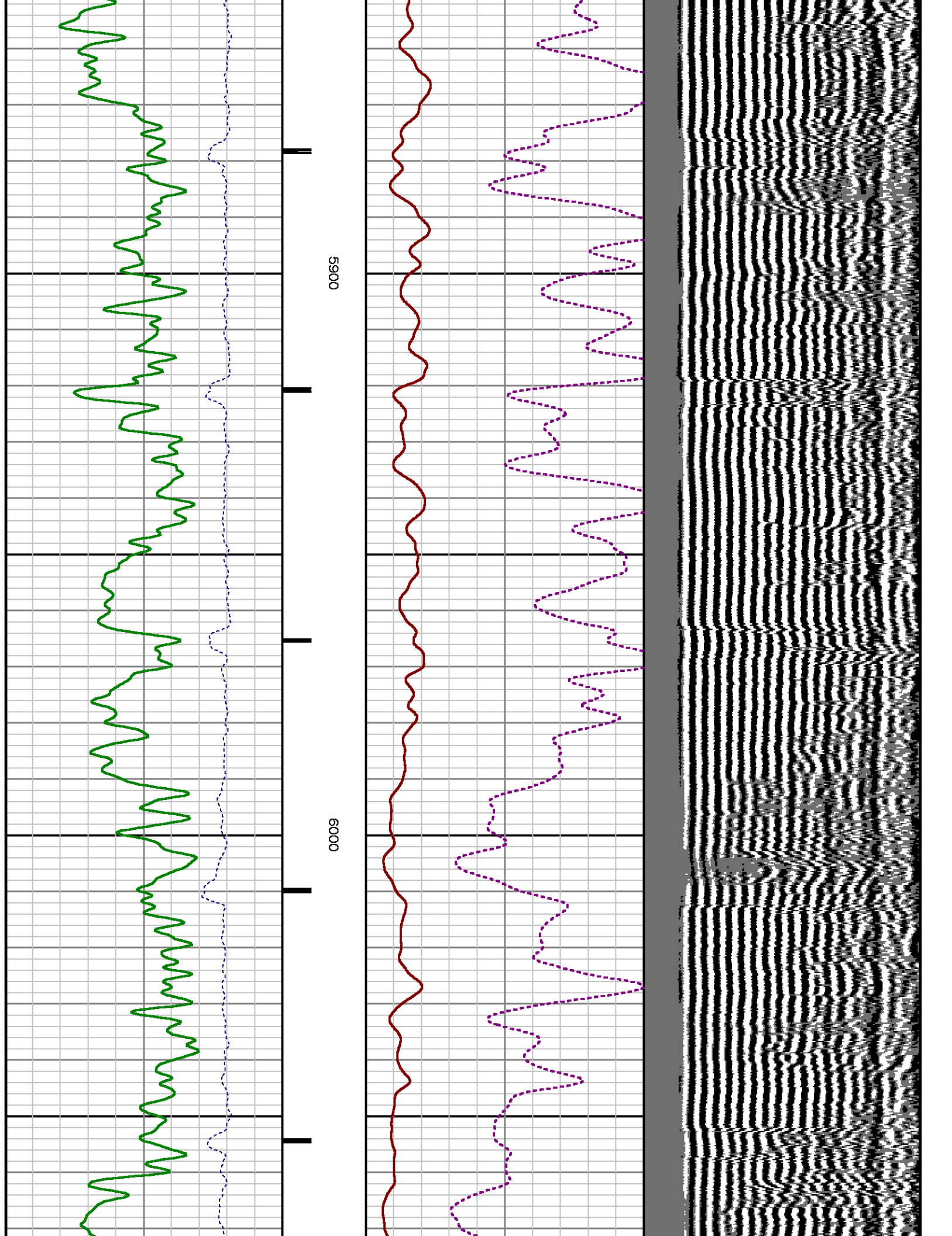


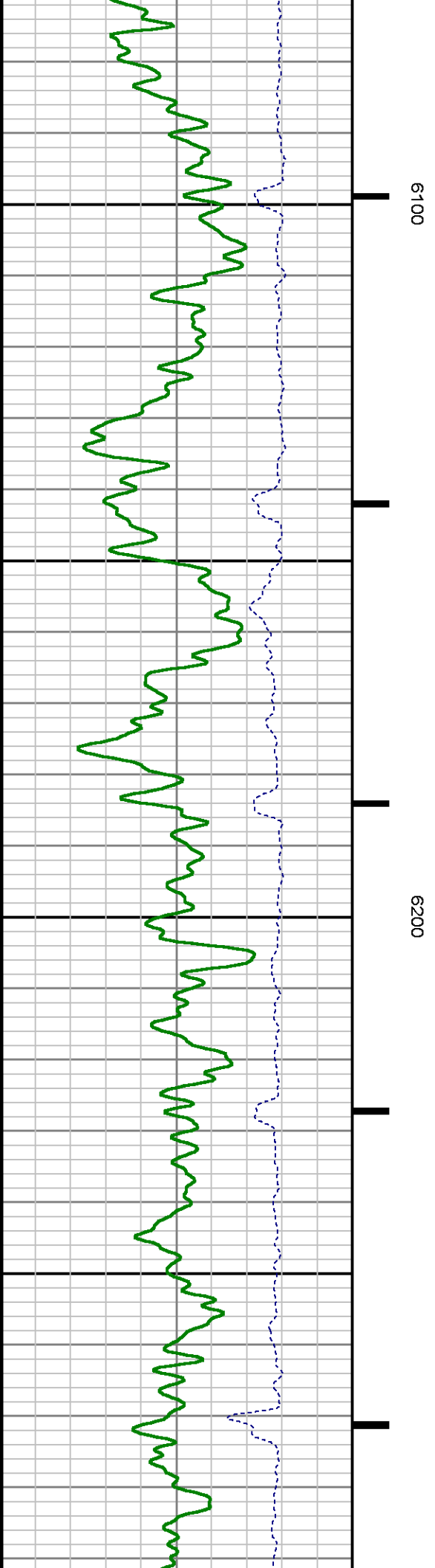
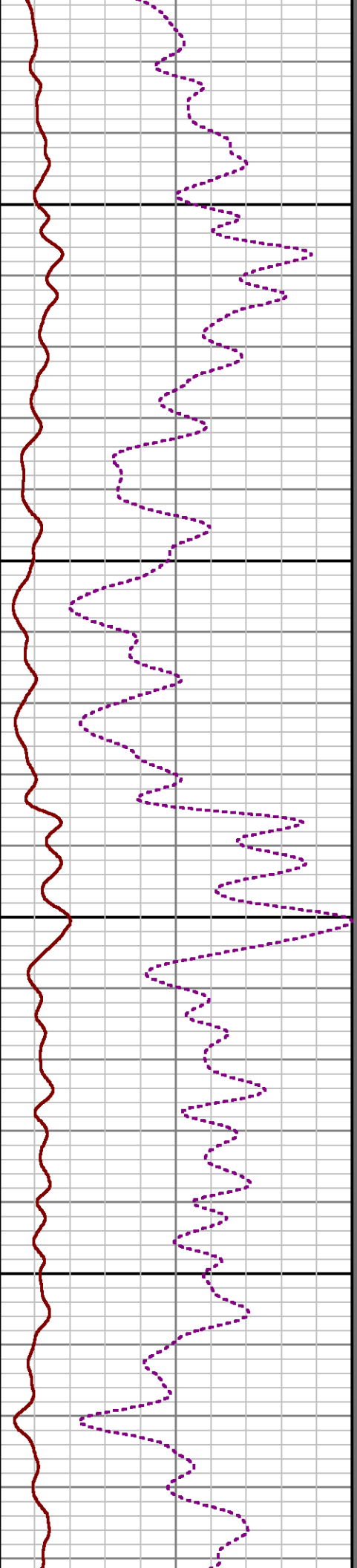
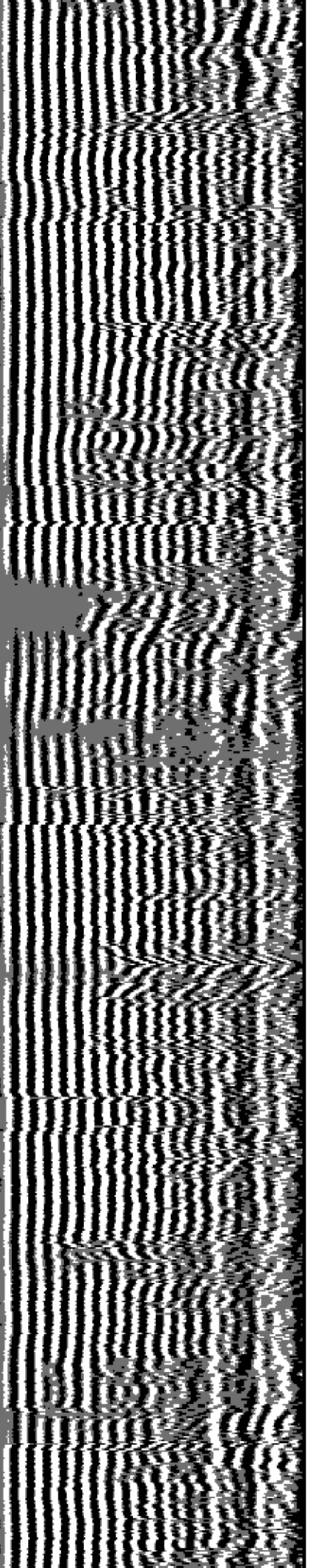


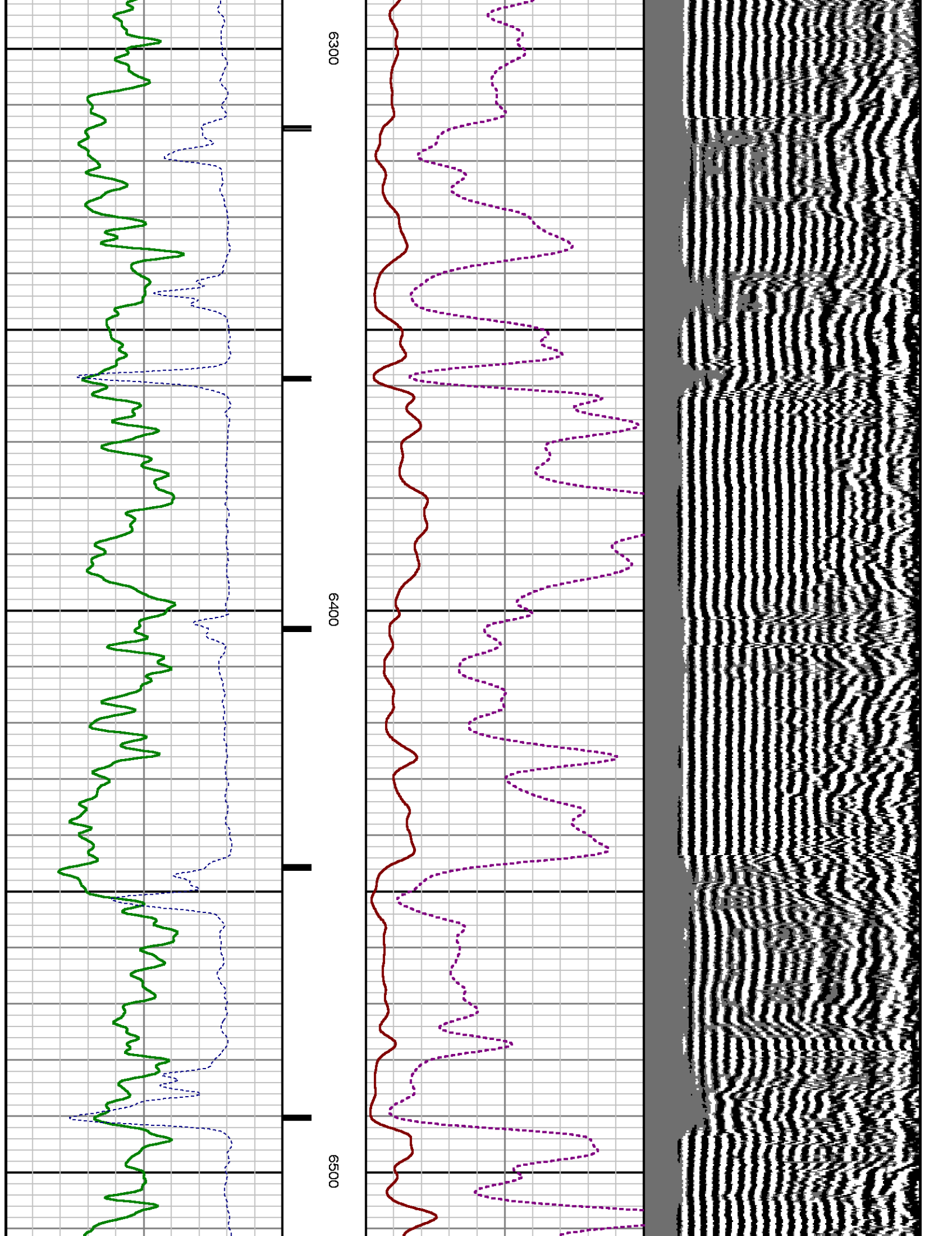


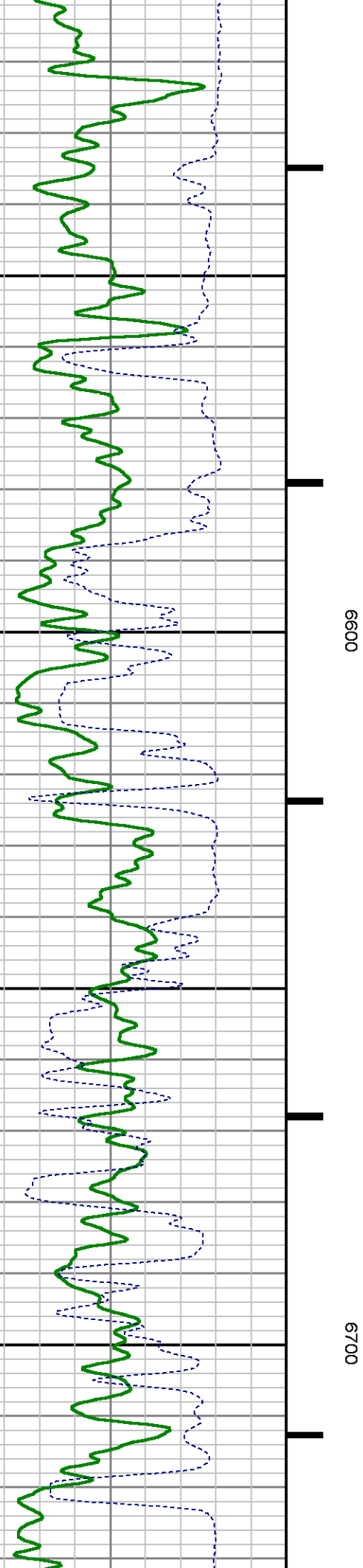
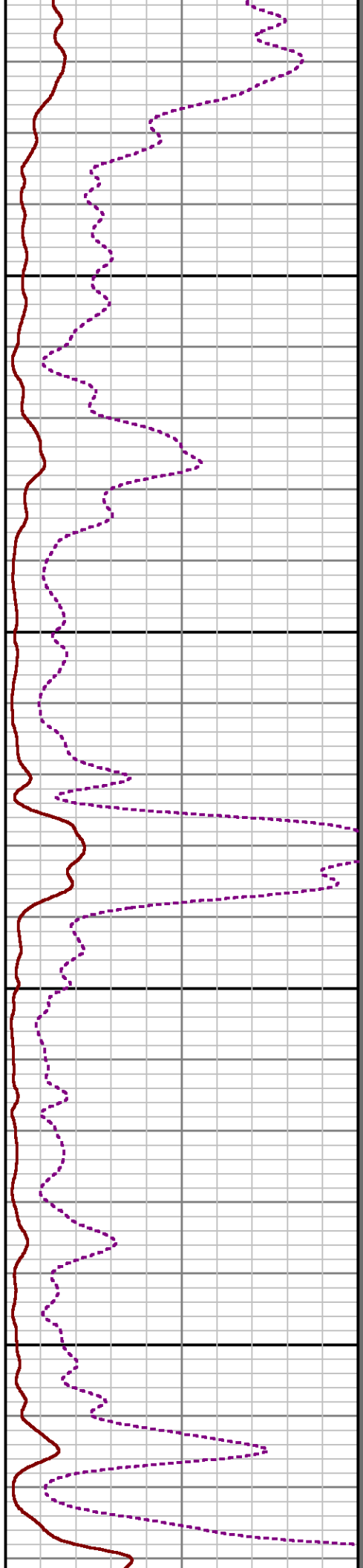
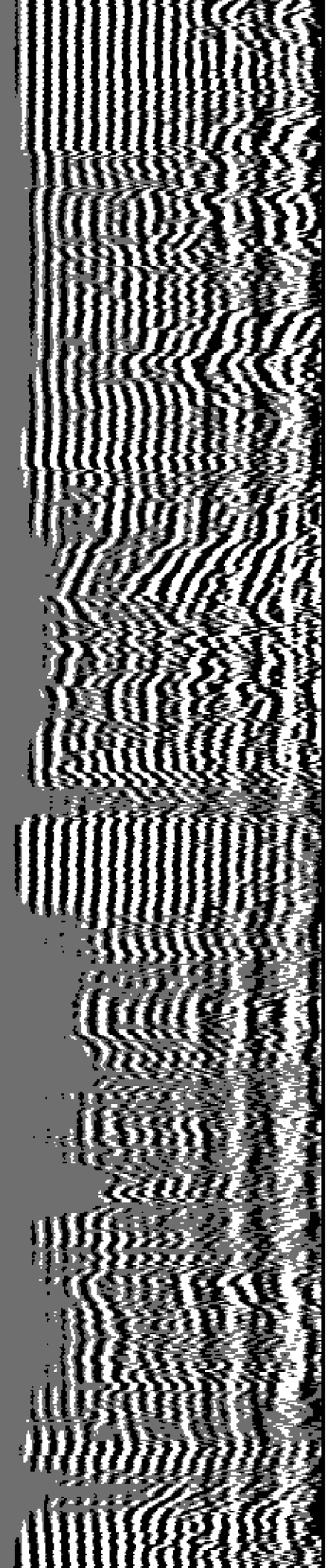






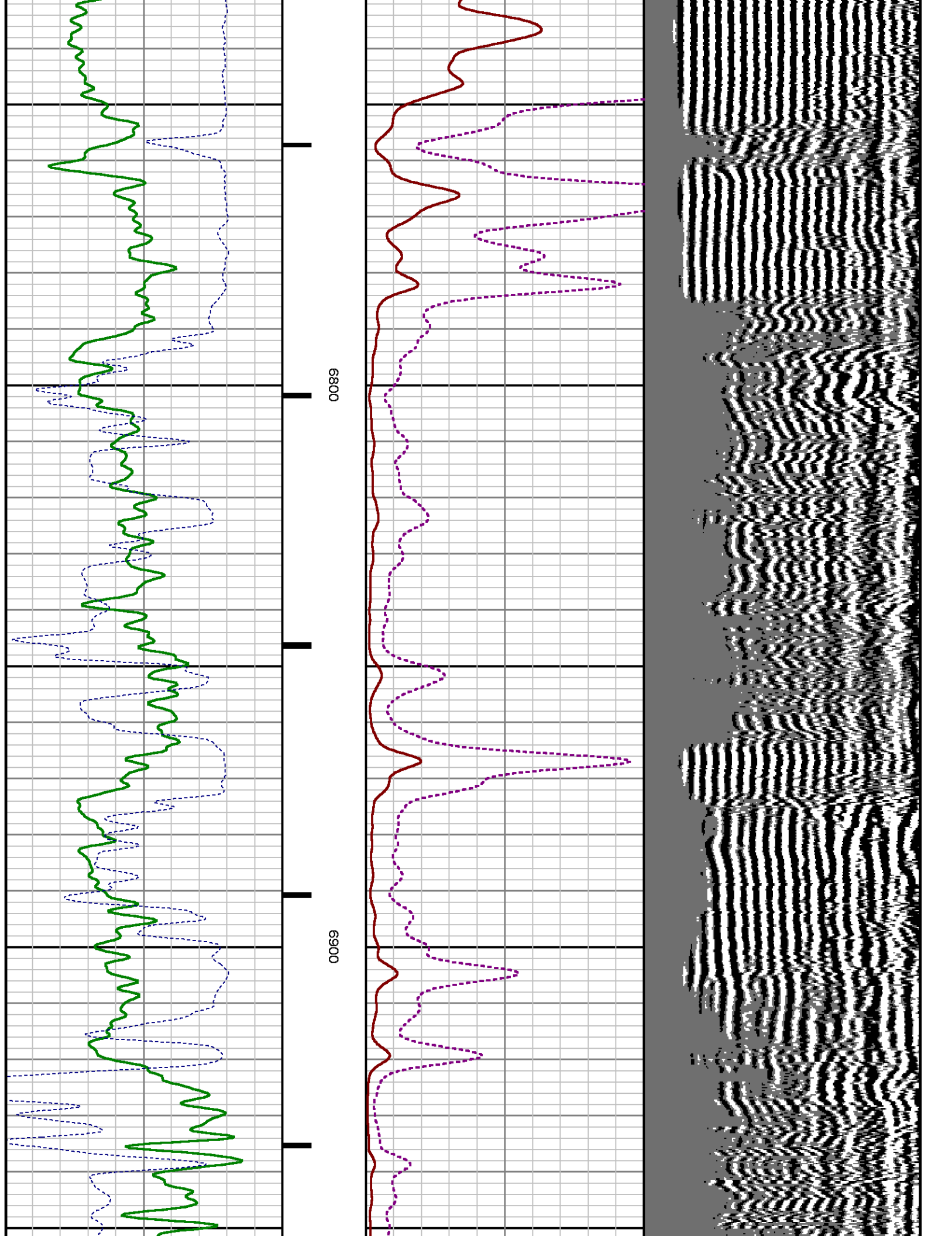


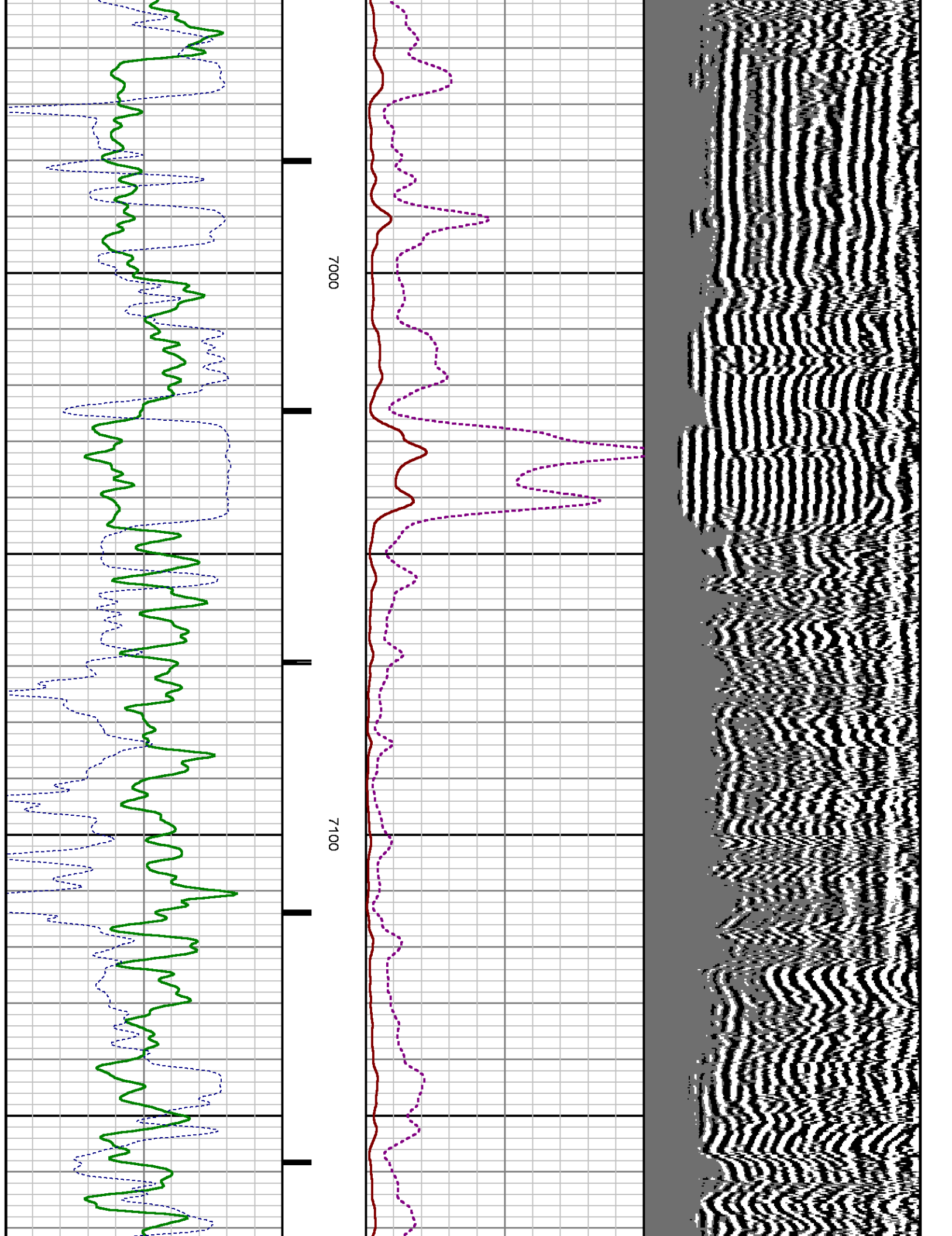


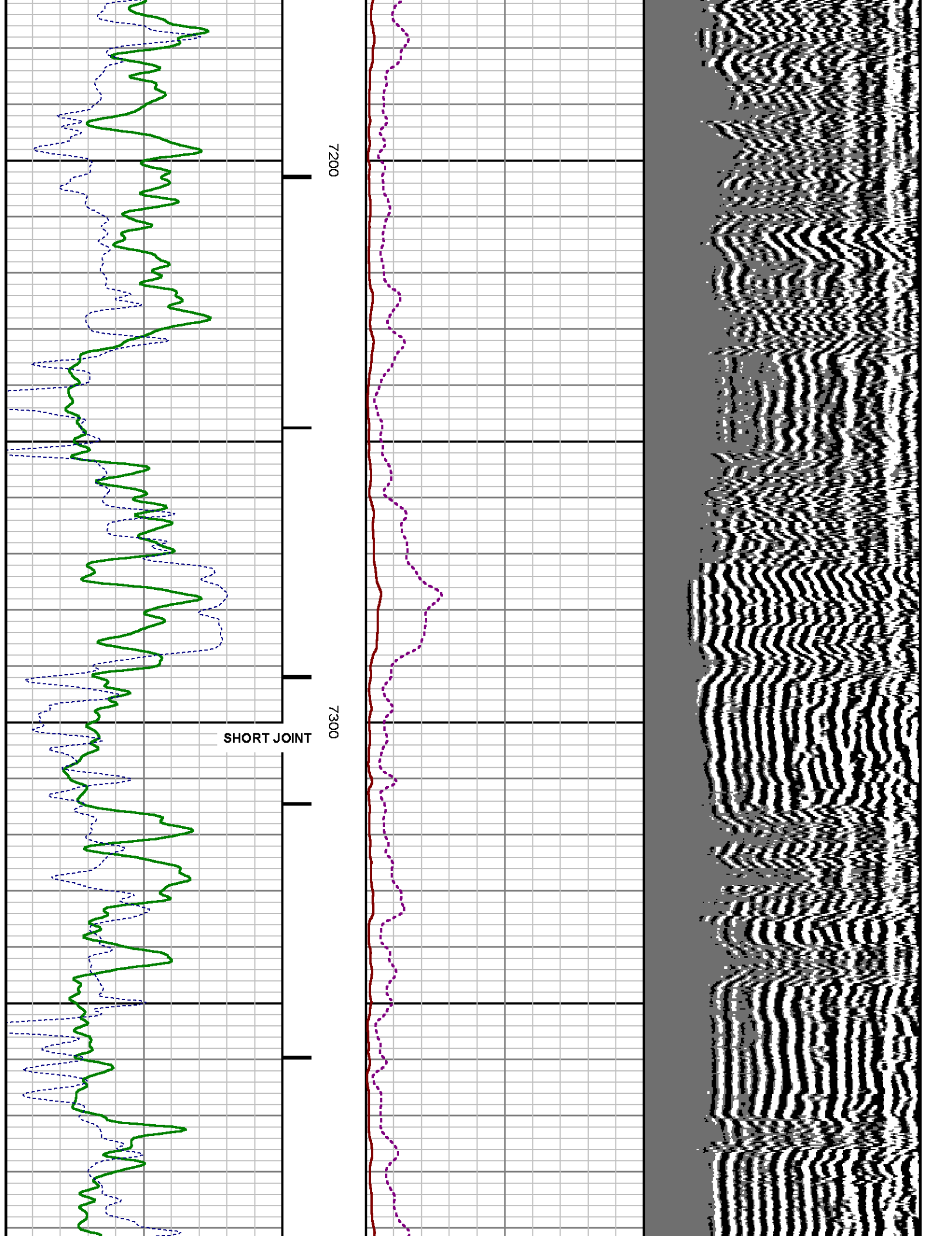


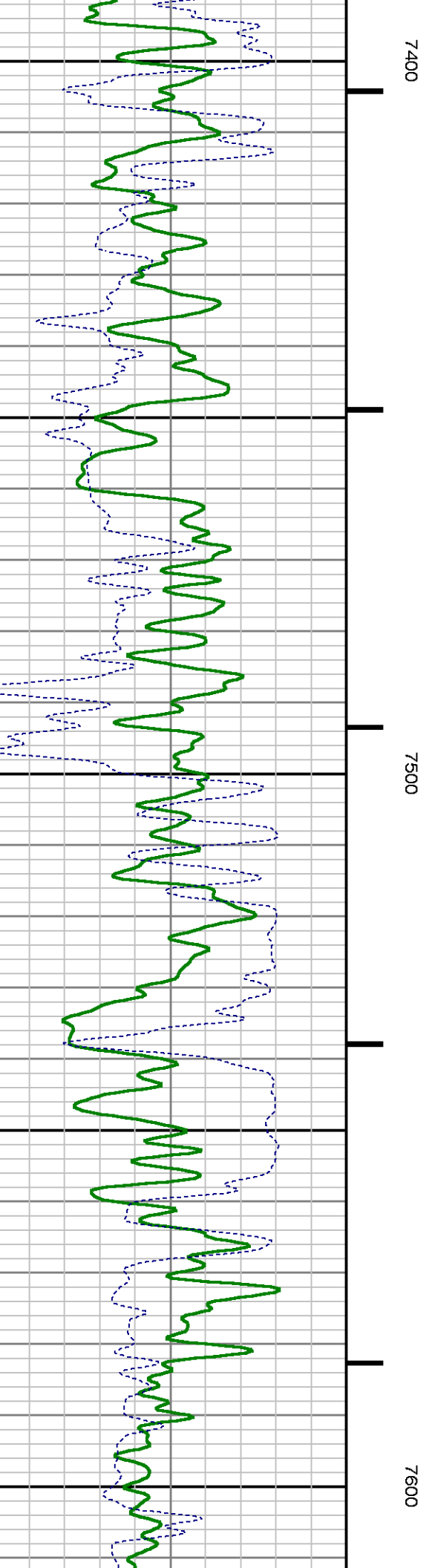
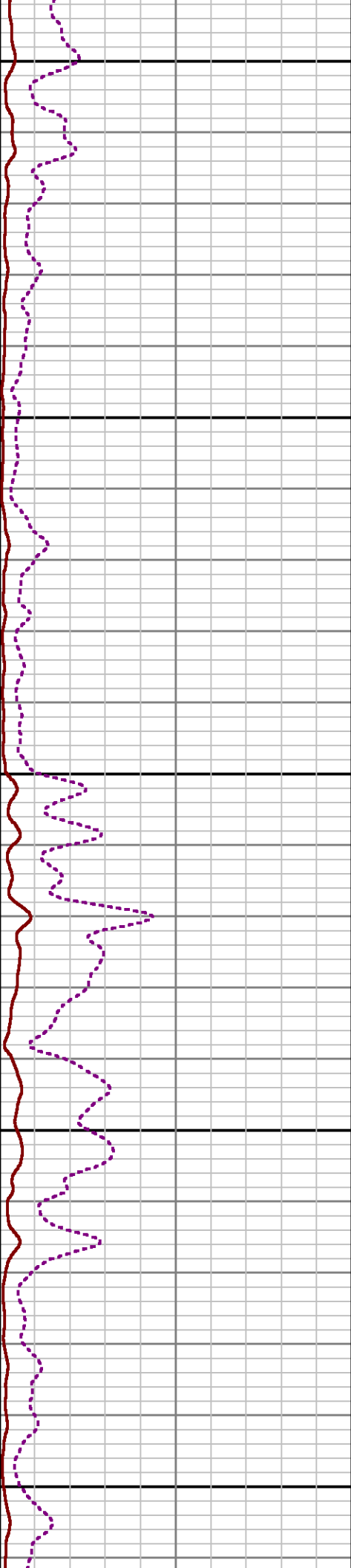
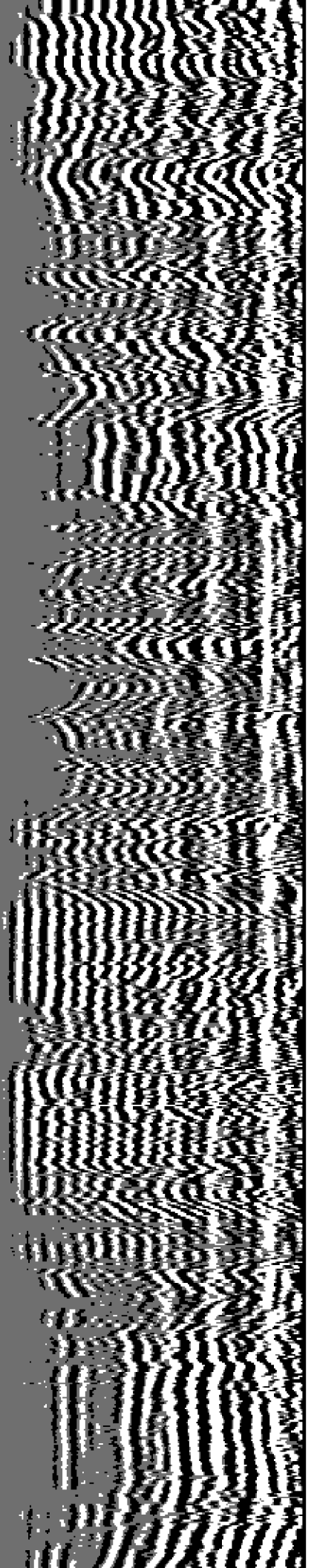
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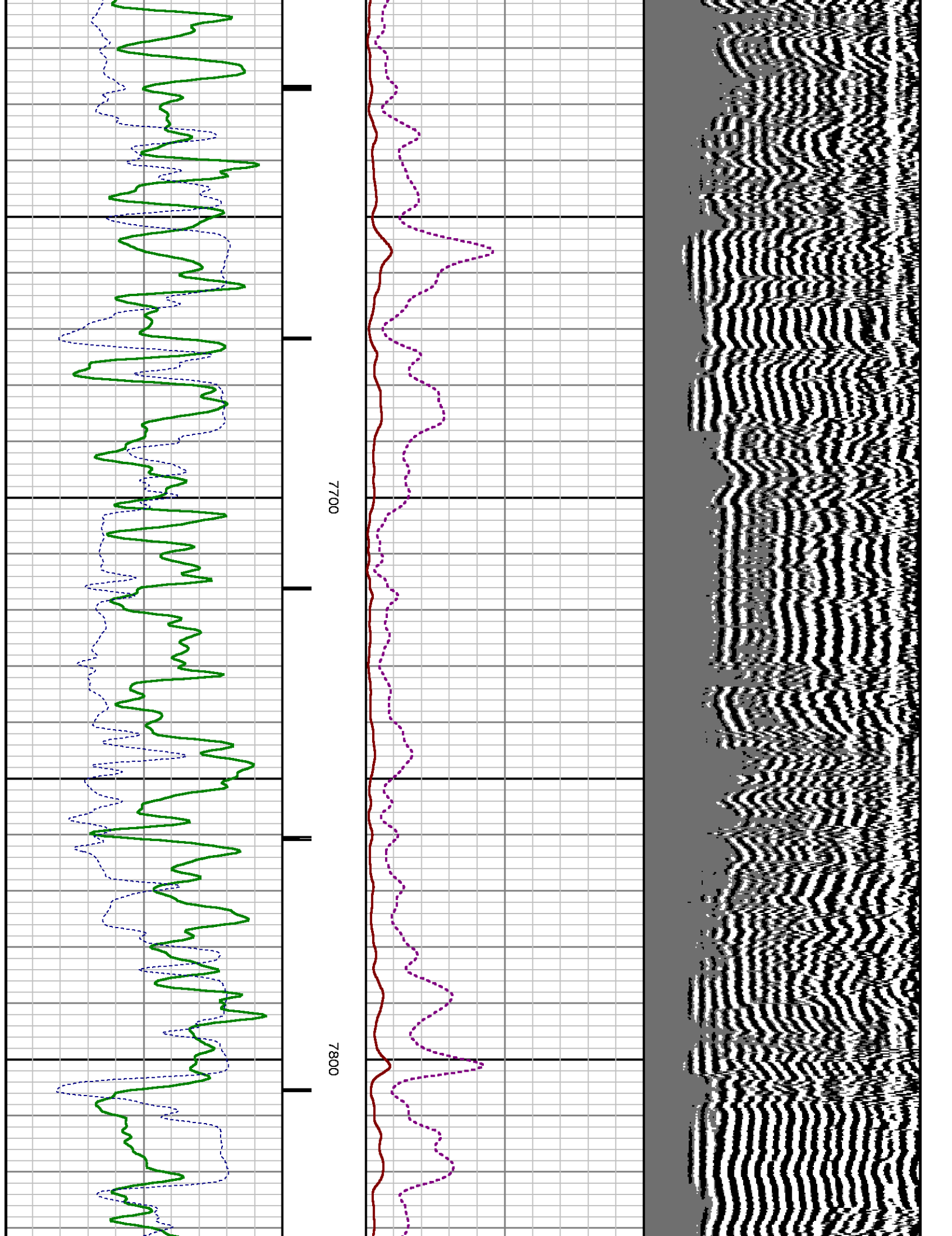


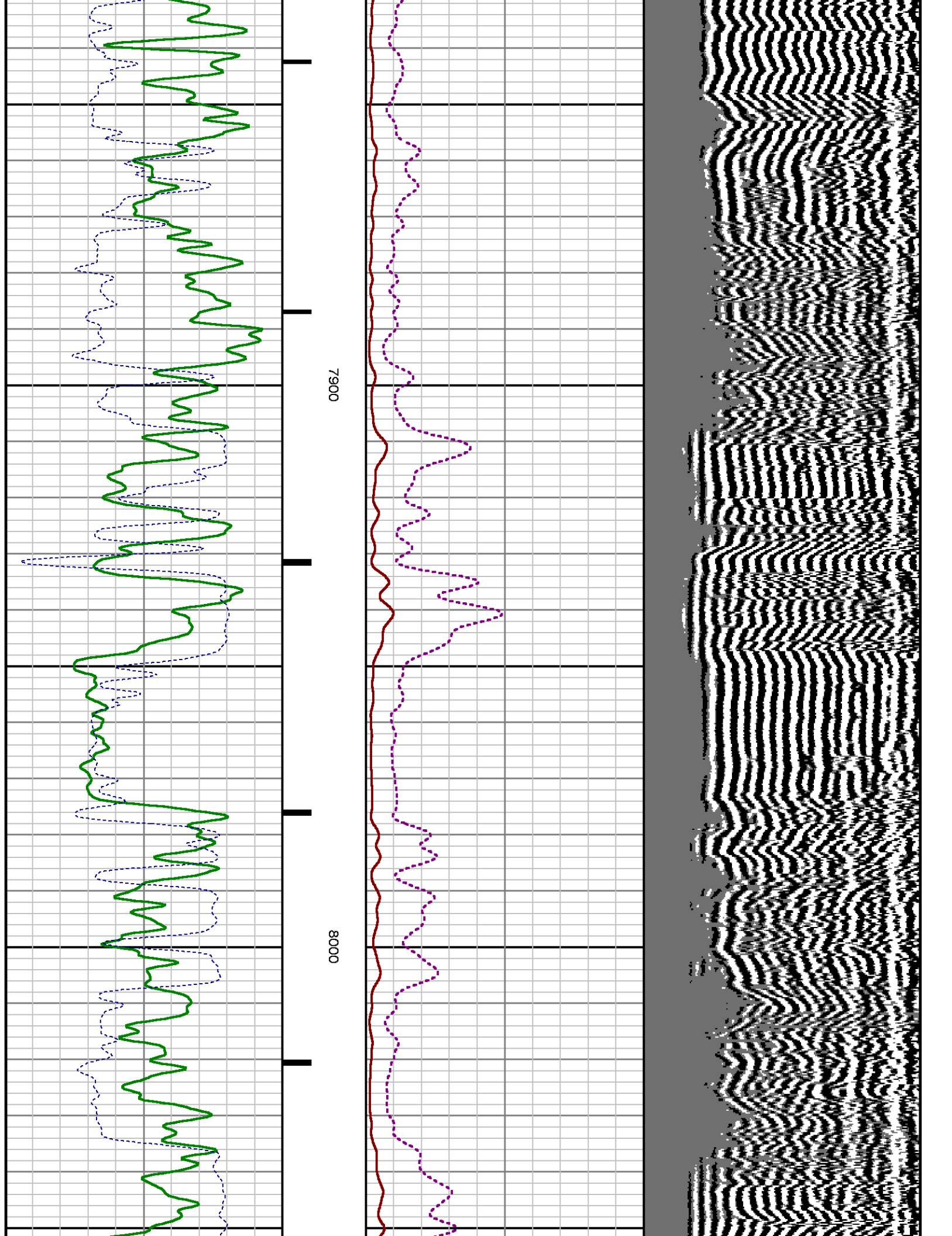


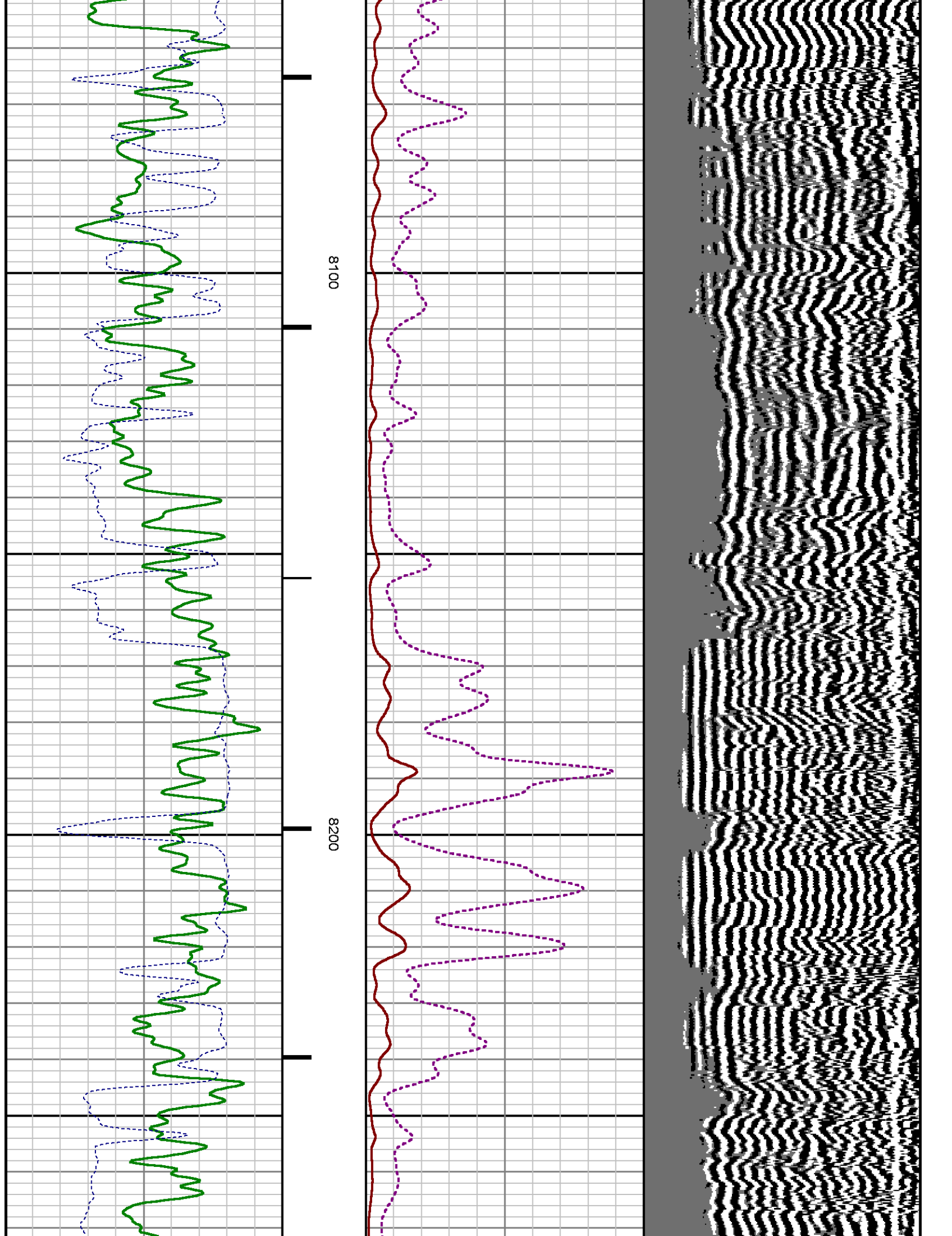
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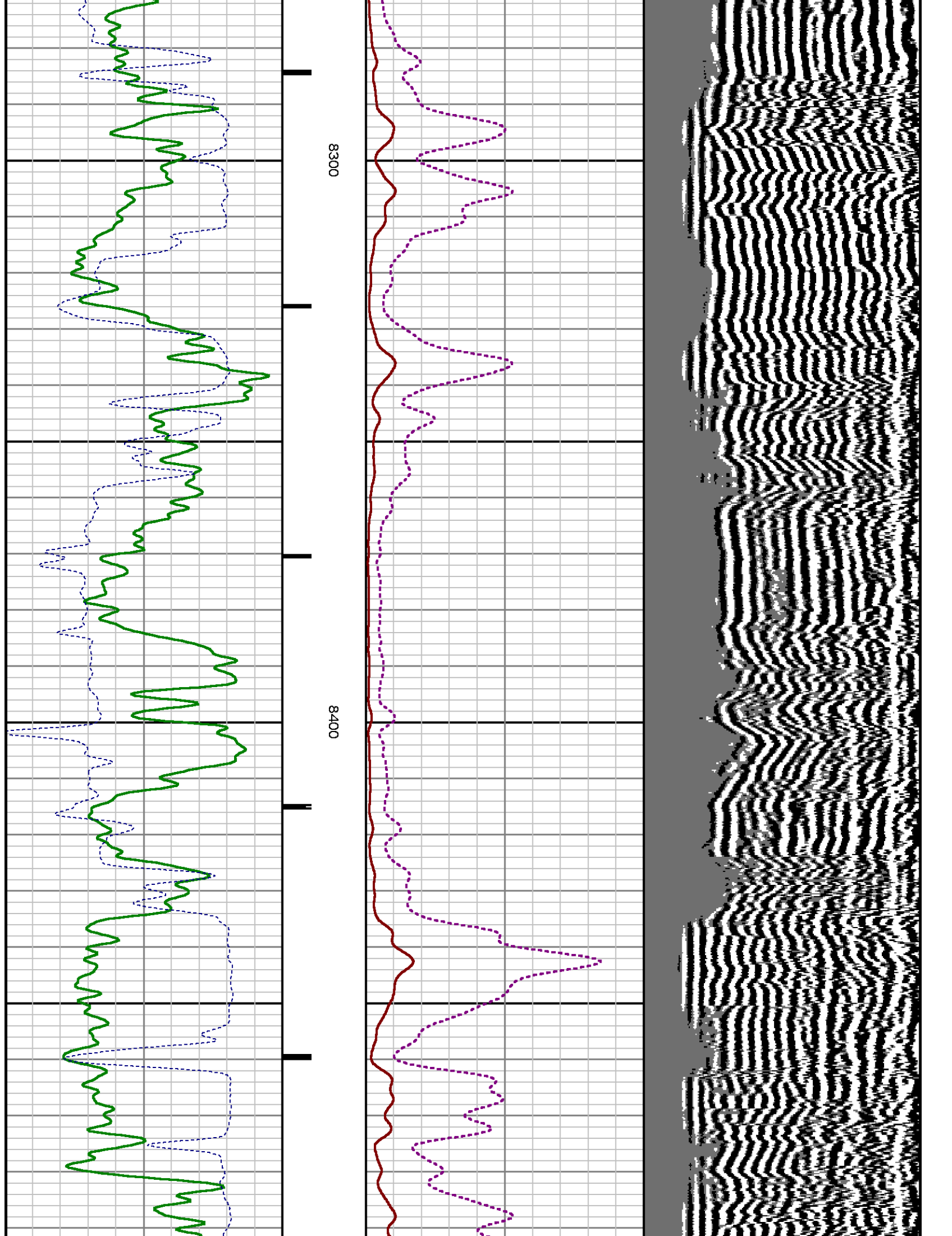
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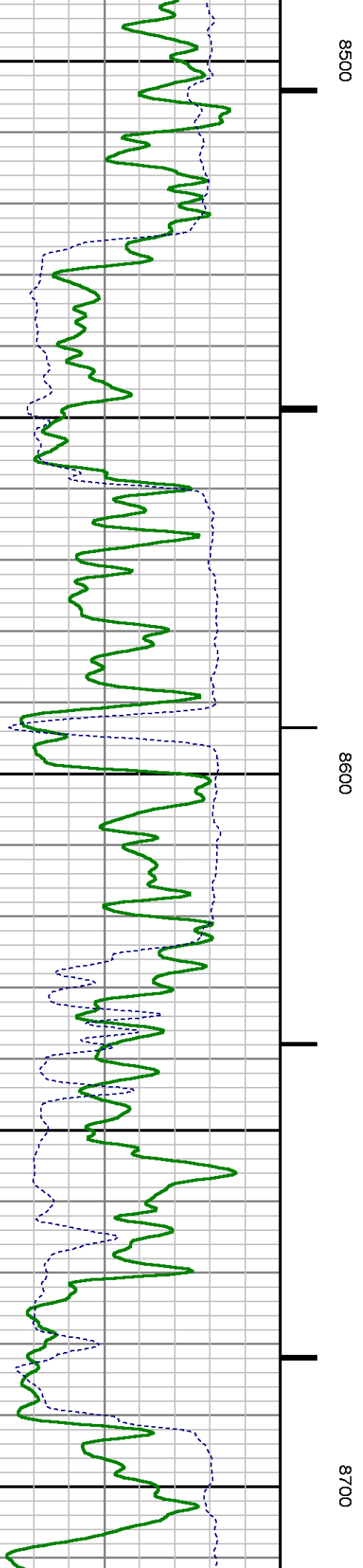
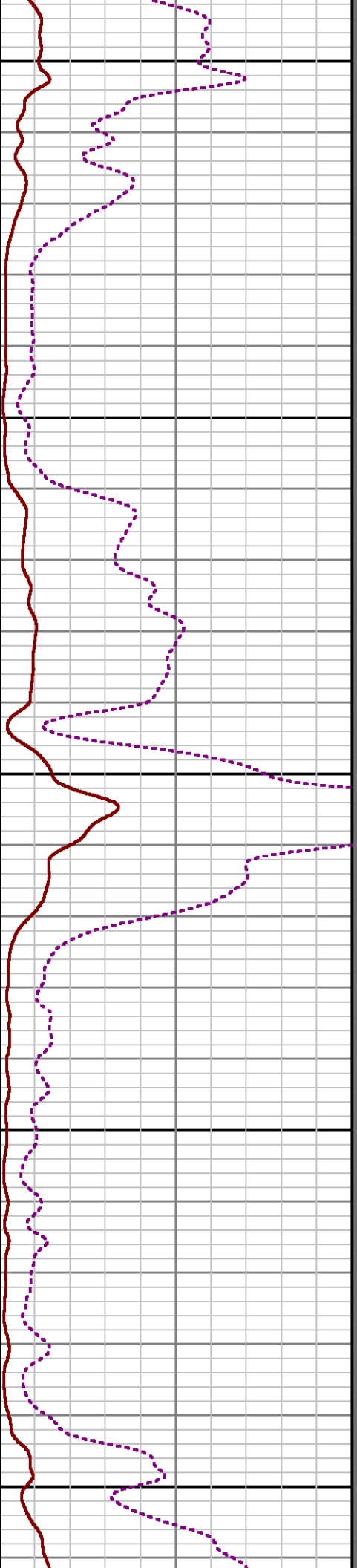
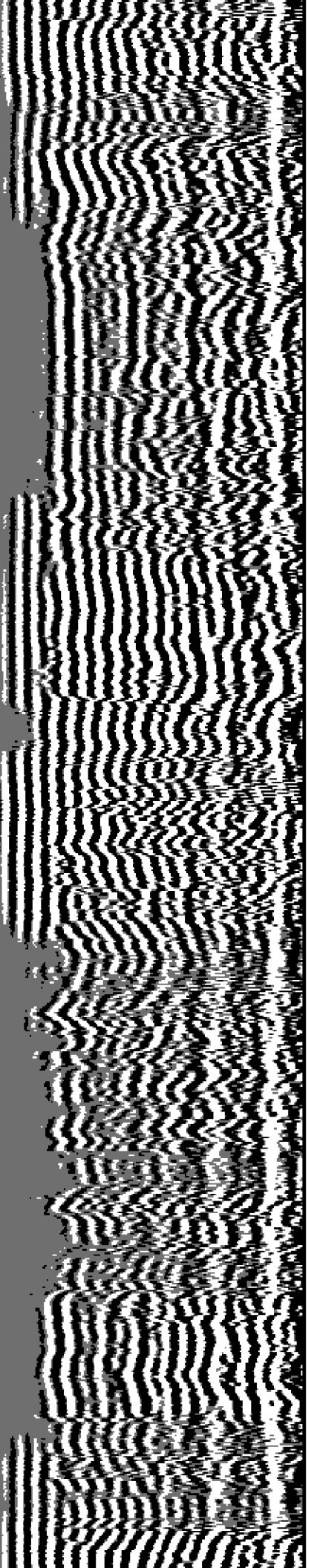
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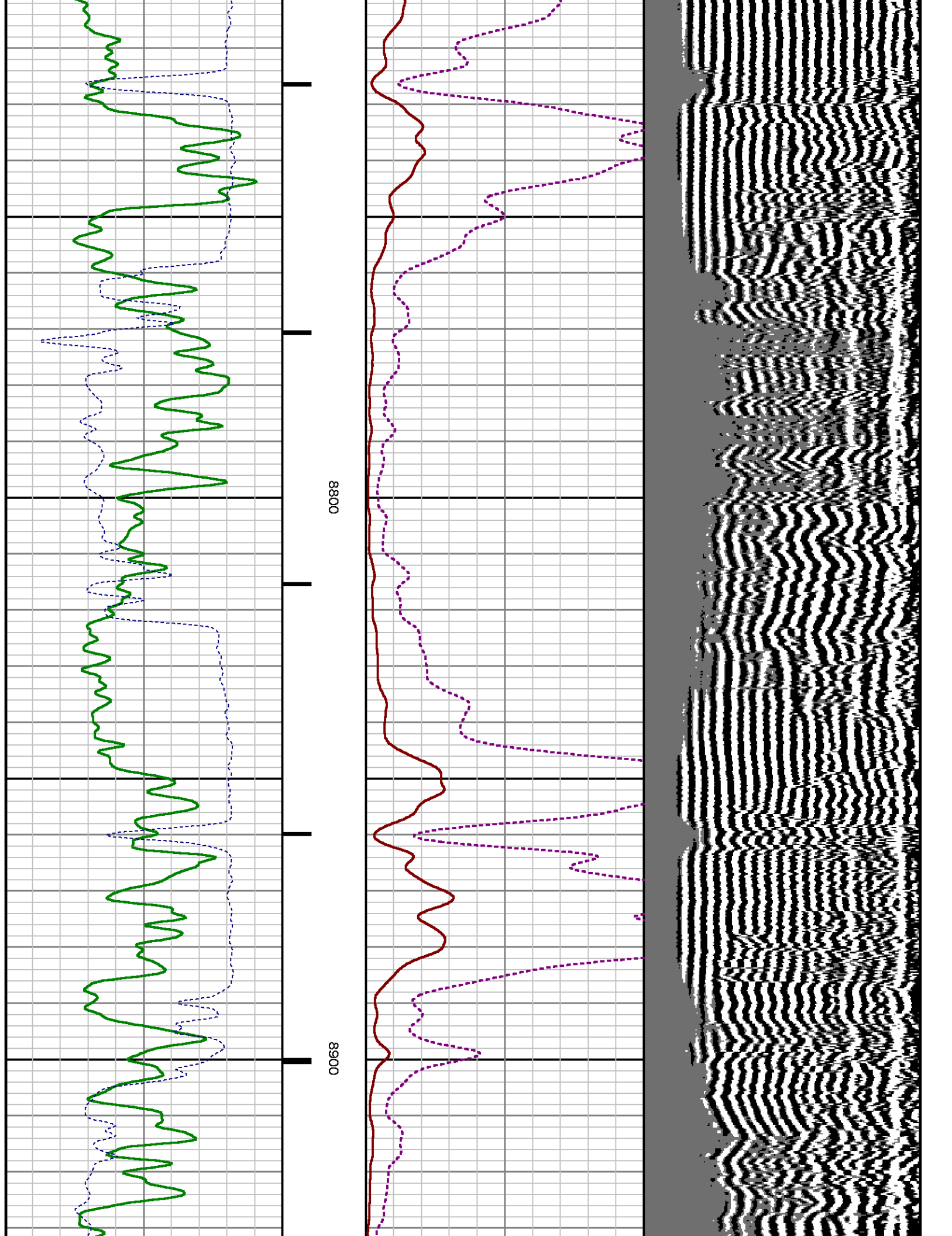


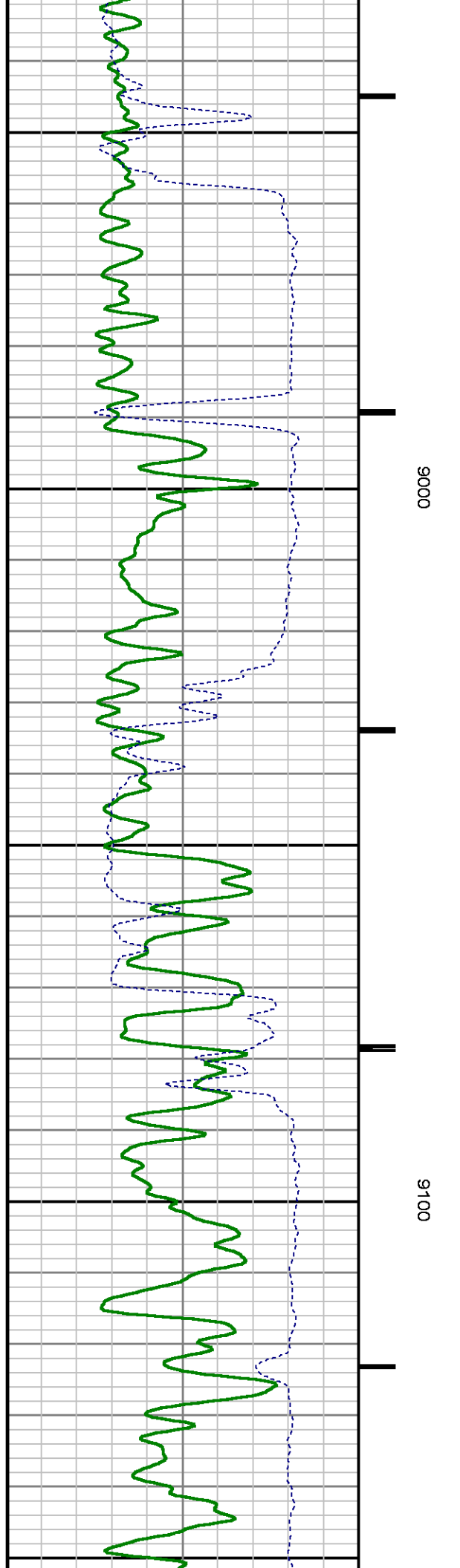
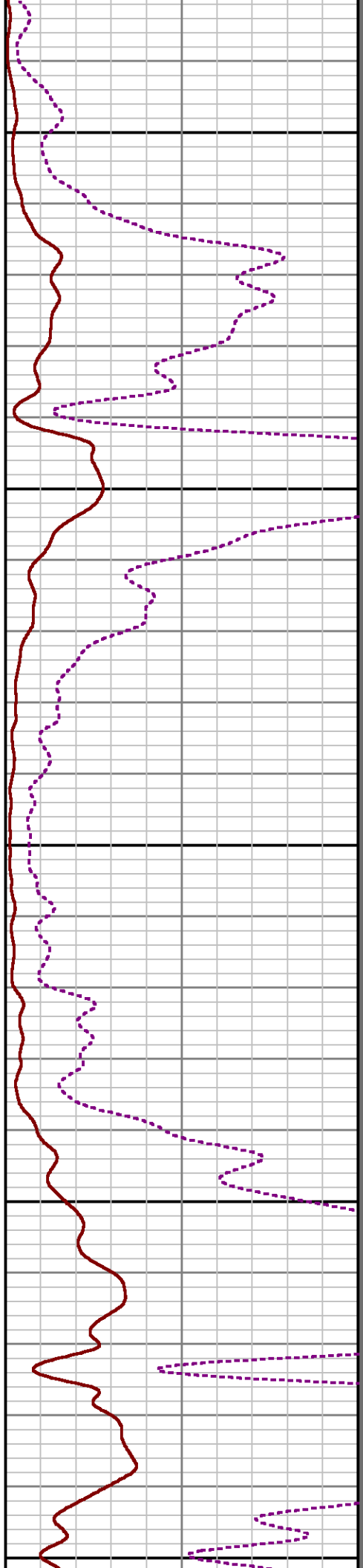
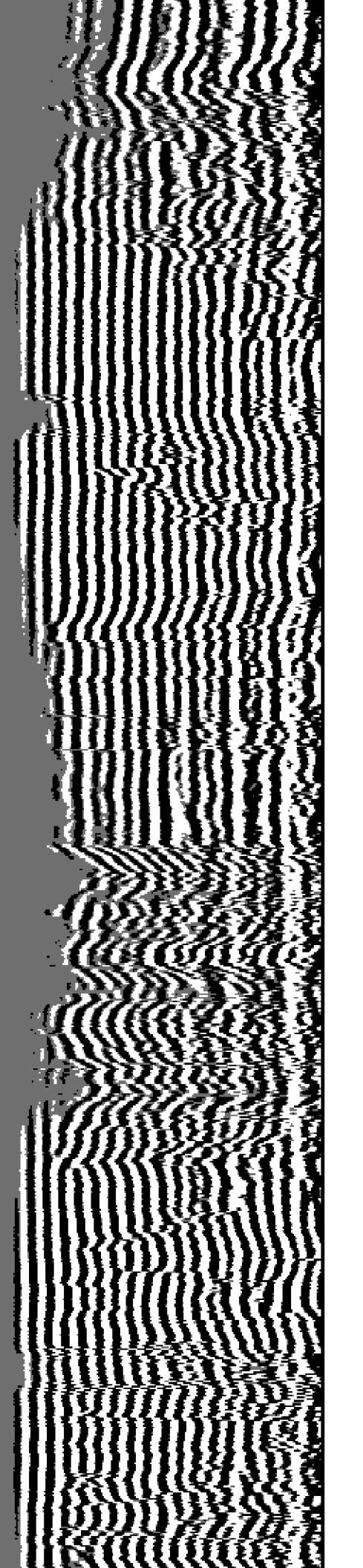


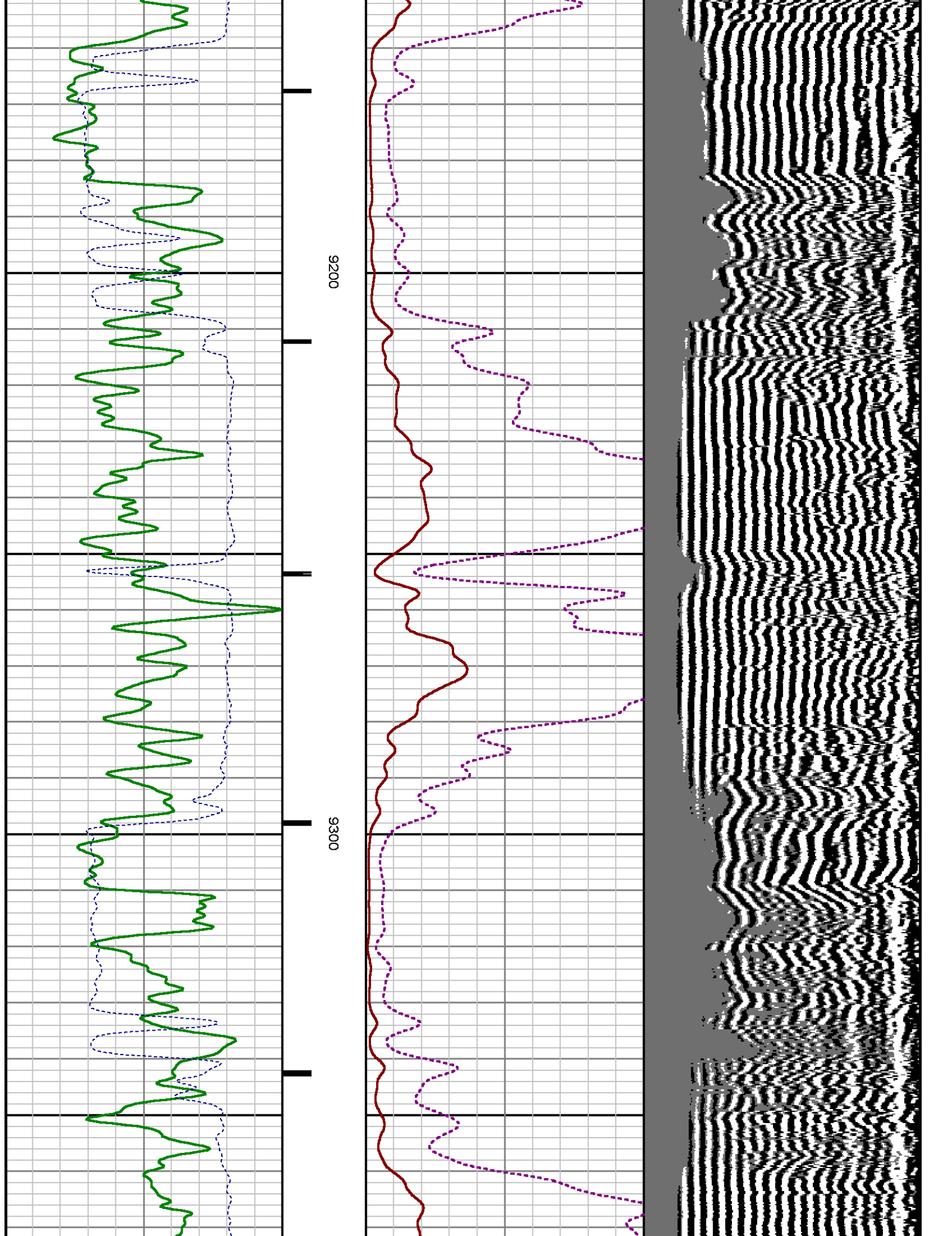


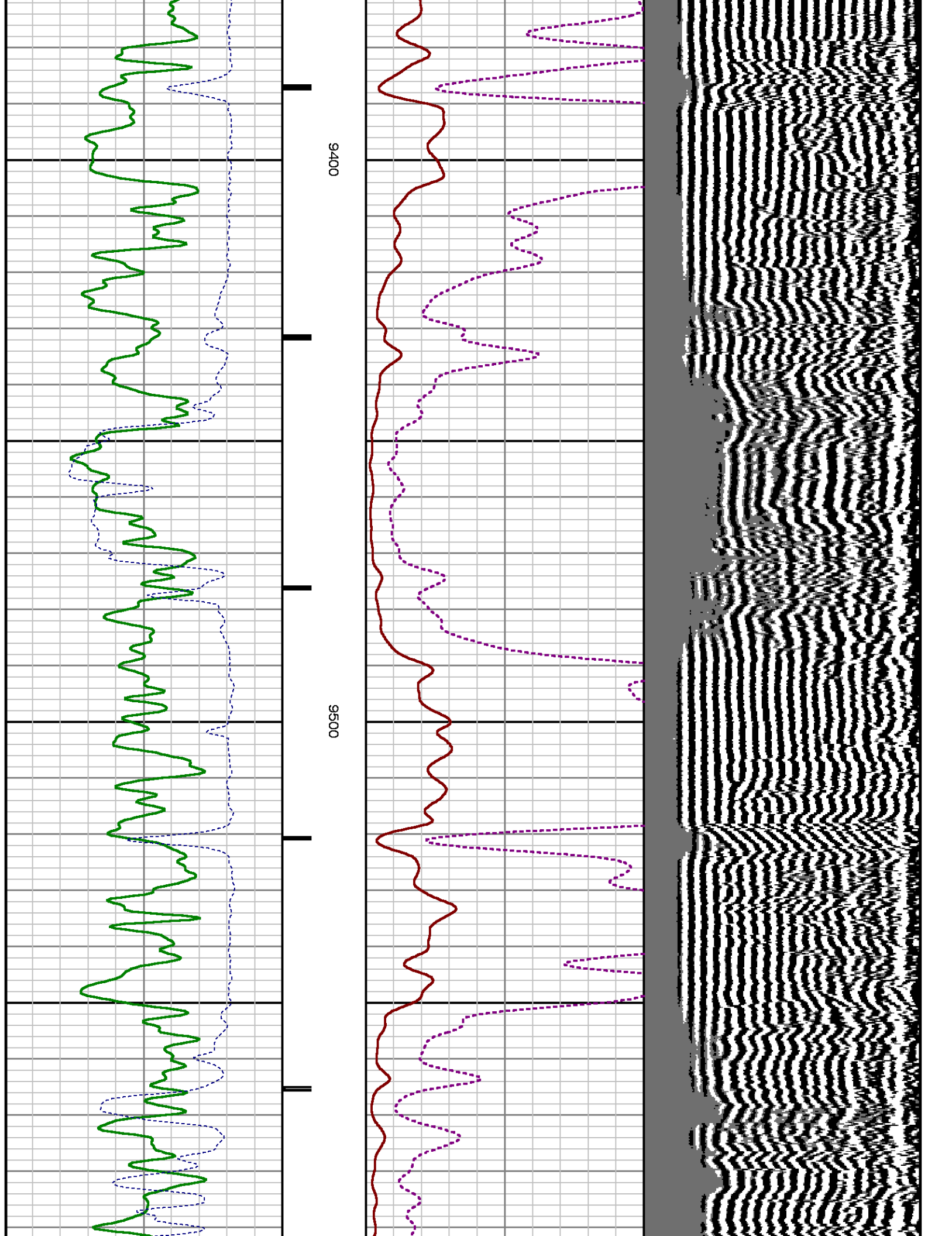


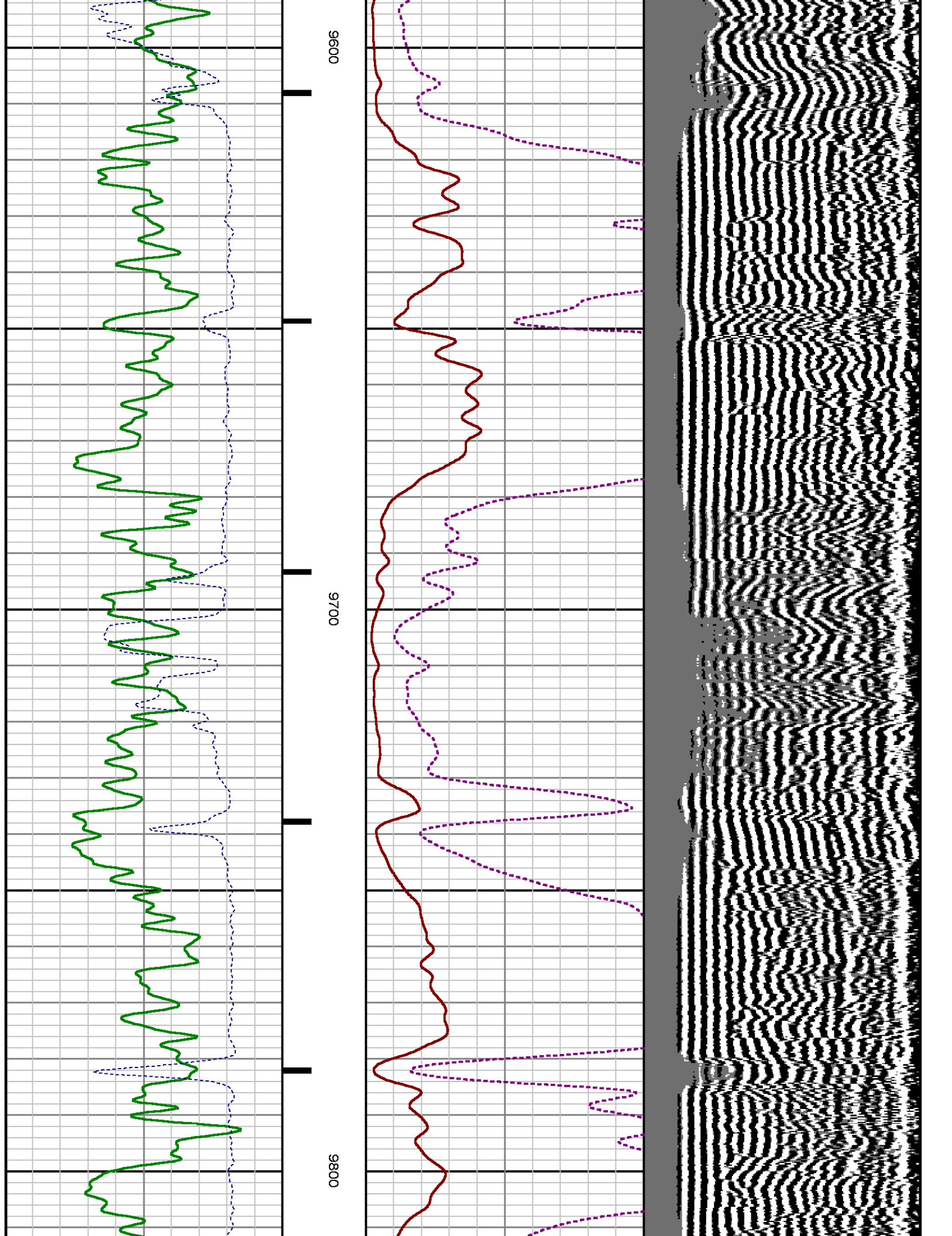


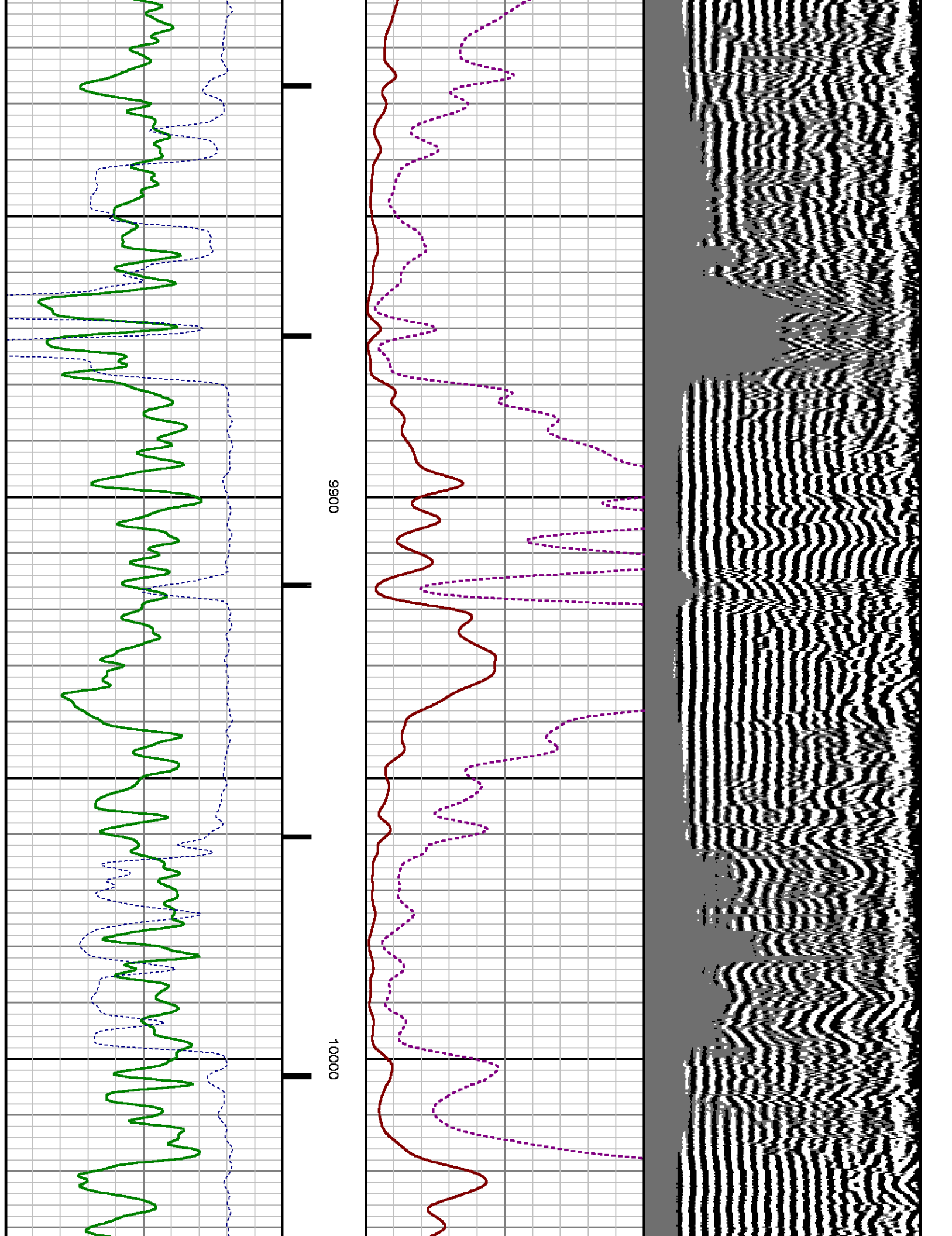


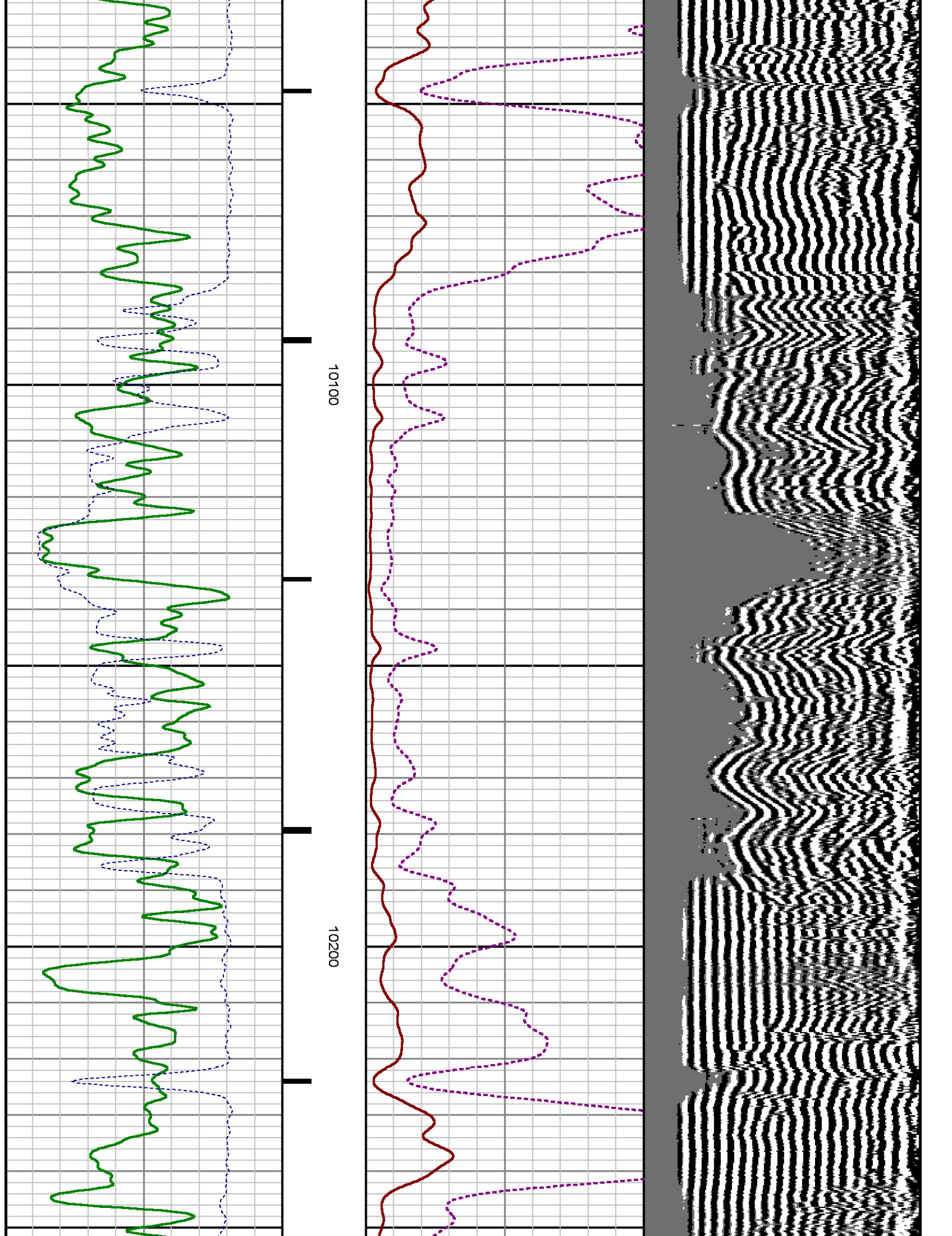


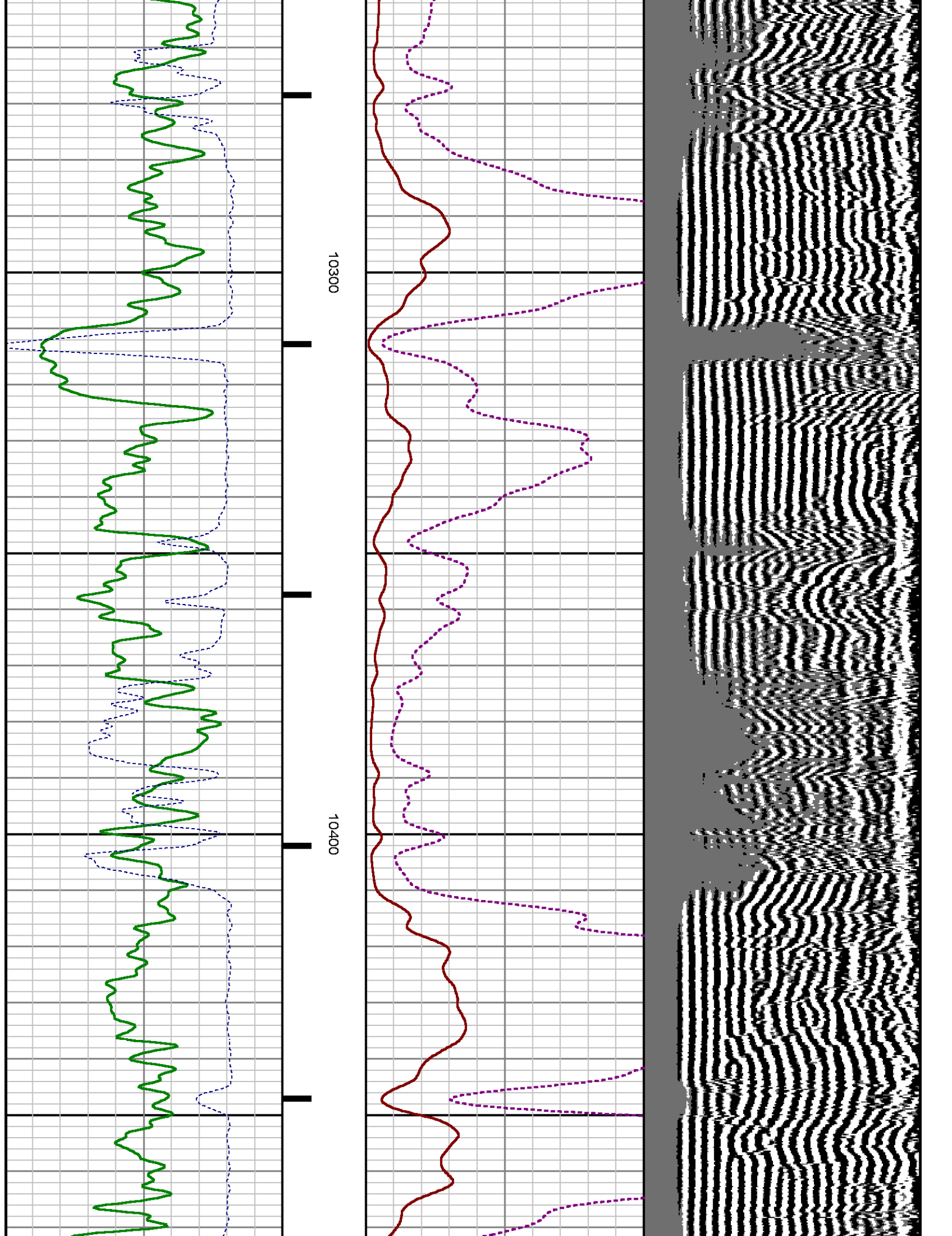














# SECONDARY PRESENTATION

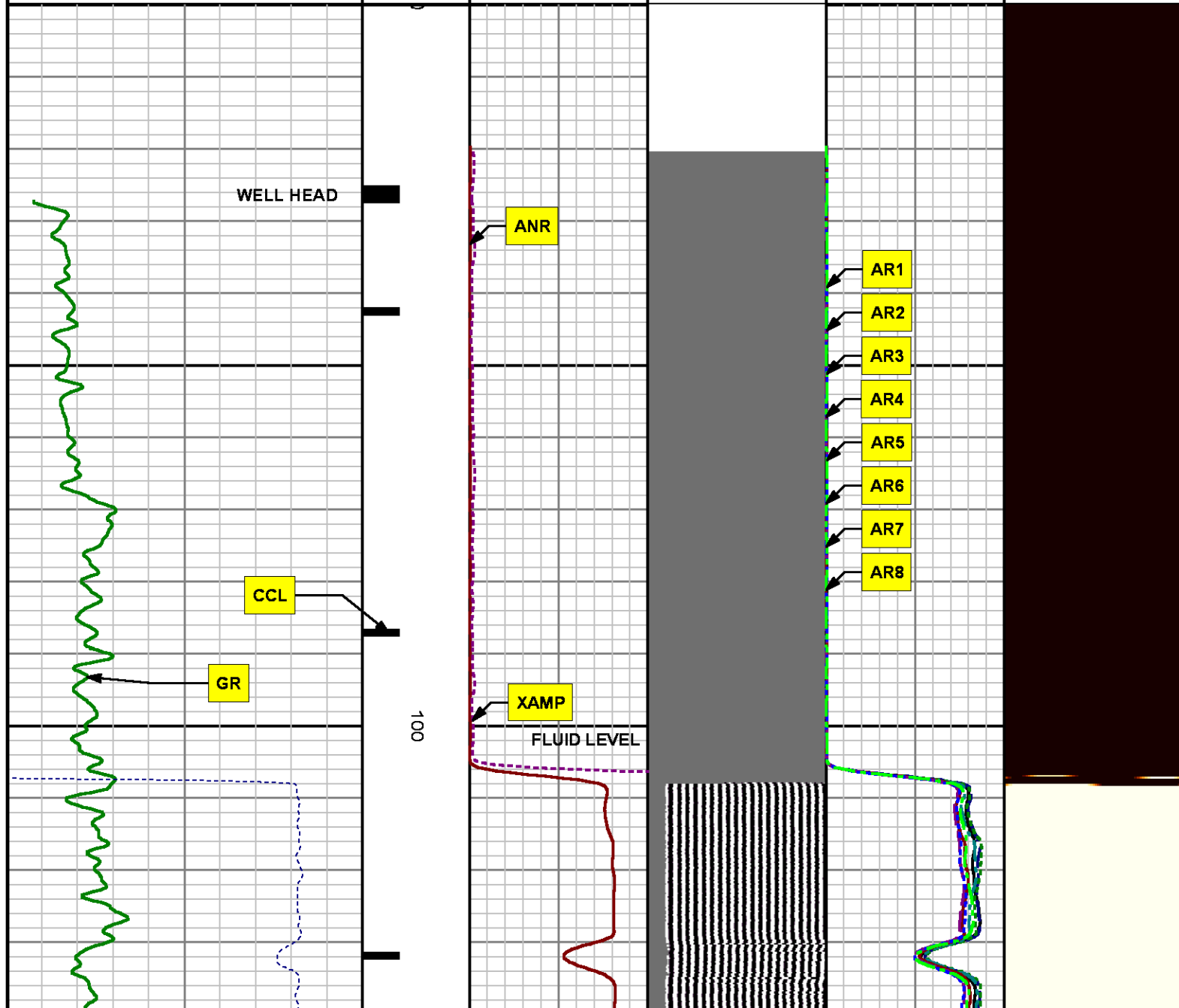
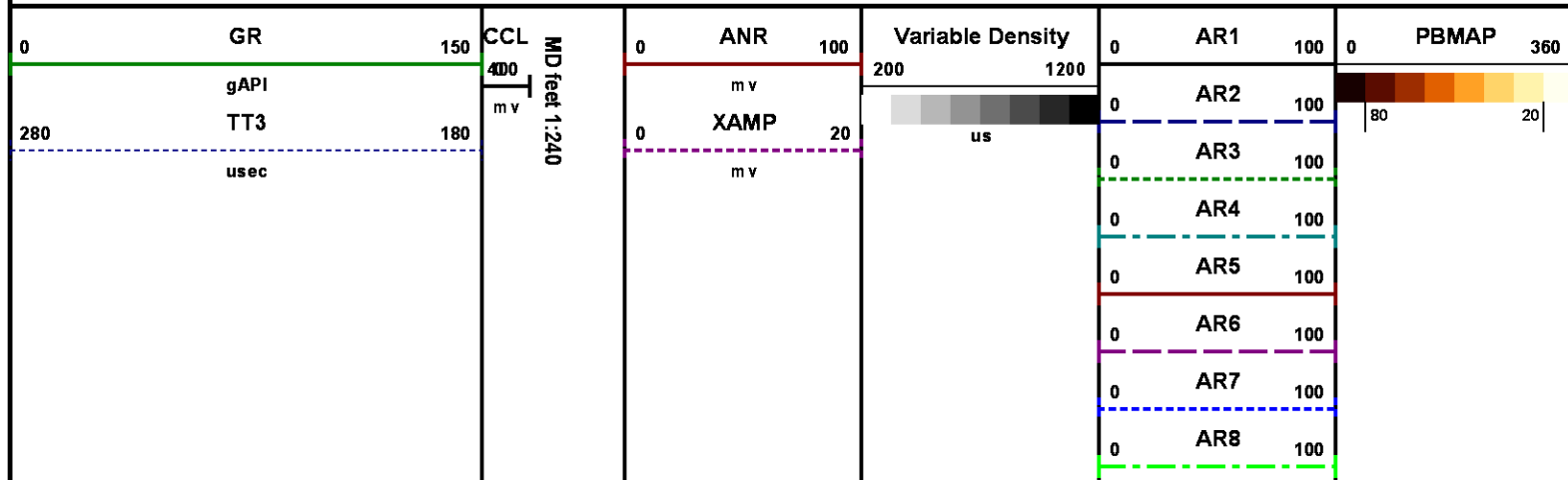
## 0 PSI

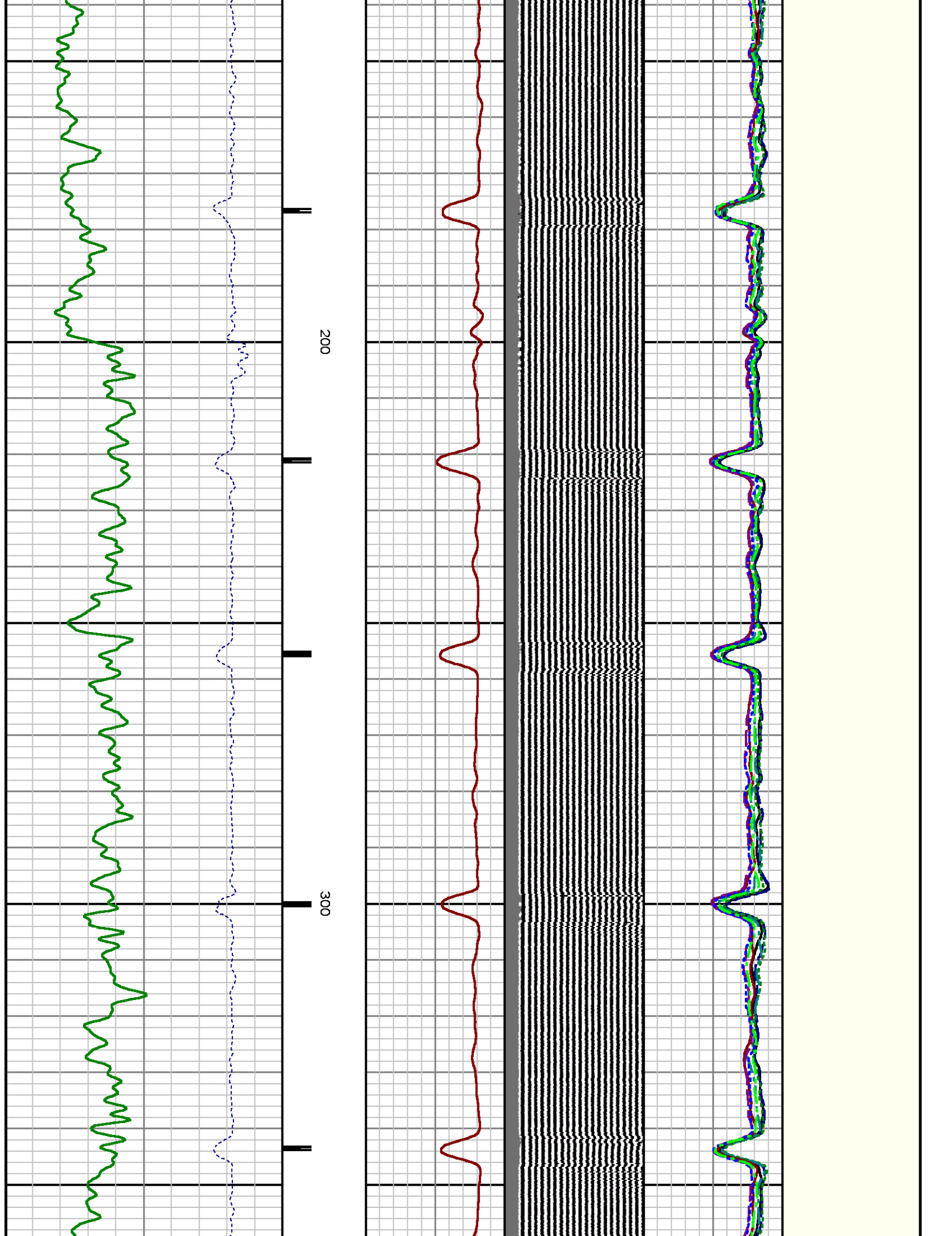
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	31.374	10672.000
RAL	Amp Gate Start Near	195.000	usec	31.374	10672.000
RAL	Amp Gate Start Radial	195.000	usec	31.374	10672.000
RAL	Amp Gate Width Far	25.000	usec	31.374	10672.000
RAL	Amp Gate Width Near	25.000	usec	31.374	10672.000
RAL	Amp Gate Width Radial	25.000	usec	31.374	10672.000
RAL	casing od	4.500	inches	31.374	10672.000
RAL	casing wt	11.600	lbm/ft	31.374	10672.000
RAL	FB Start Far	291.900	usec	31.374	10672.000
RAL	FB Start Near	180.000	usec	31.374	10672.000
RAL	FB Start Radial	180.000	usec	31.374	10672.000
RAL	FB Thresh Far	10.000	mv	31.374	10672.000
RAL	FB Thresh Near	4.000	mv	31.374	10672.000
RAL	FB Thresh Radial	4.000	mv	31.374	10672.000
RAL	Fluid Travel Time	200.000	usec/ft	31.374	10671.905

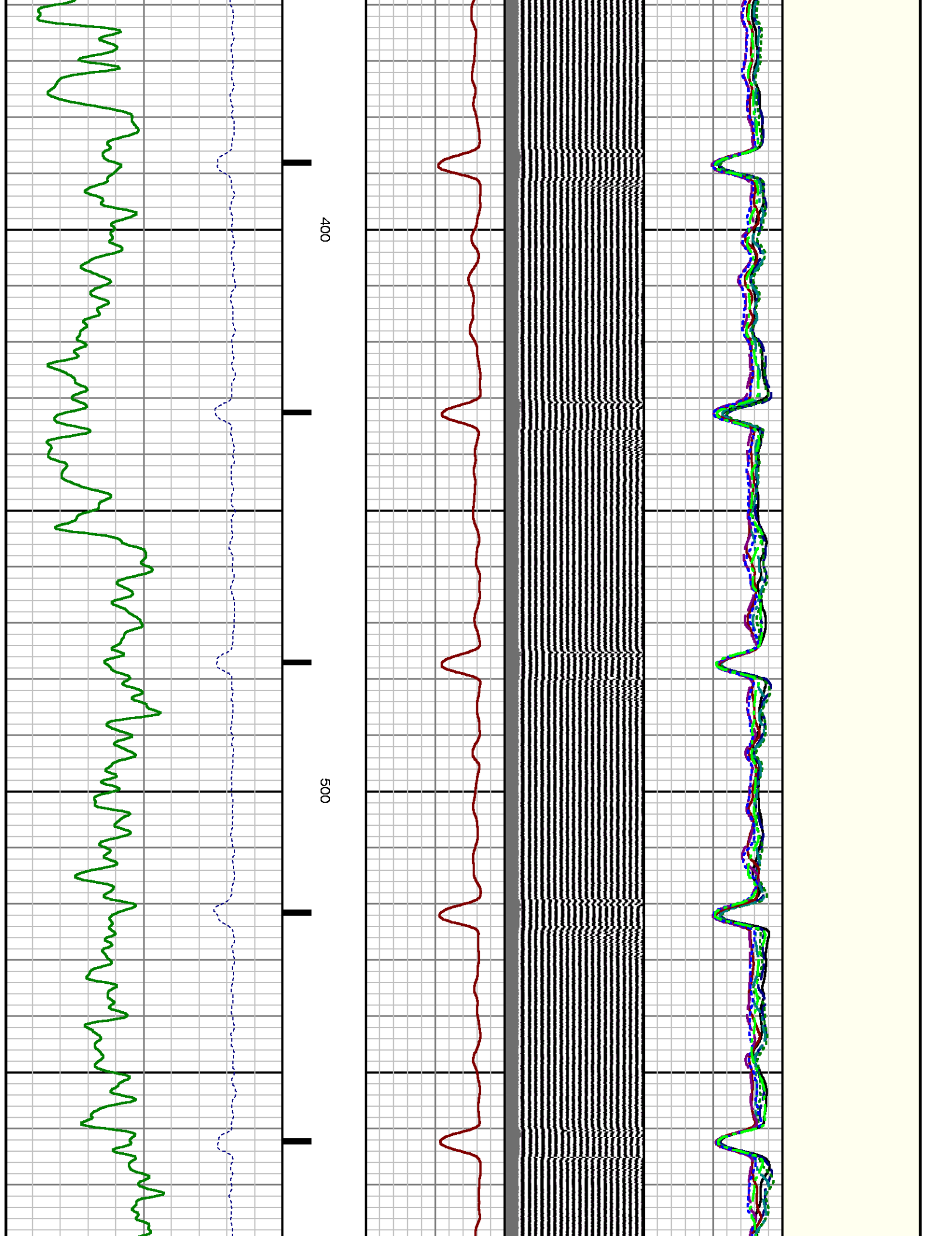
### DEPTH OFFSETS

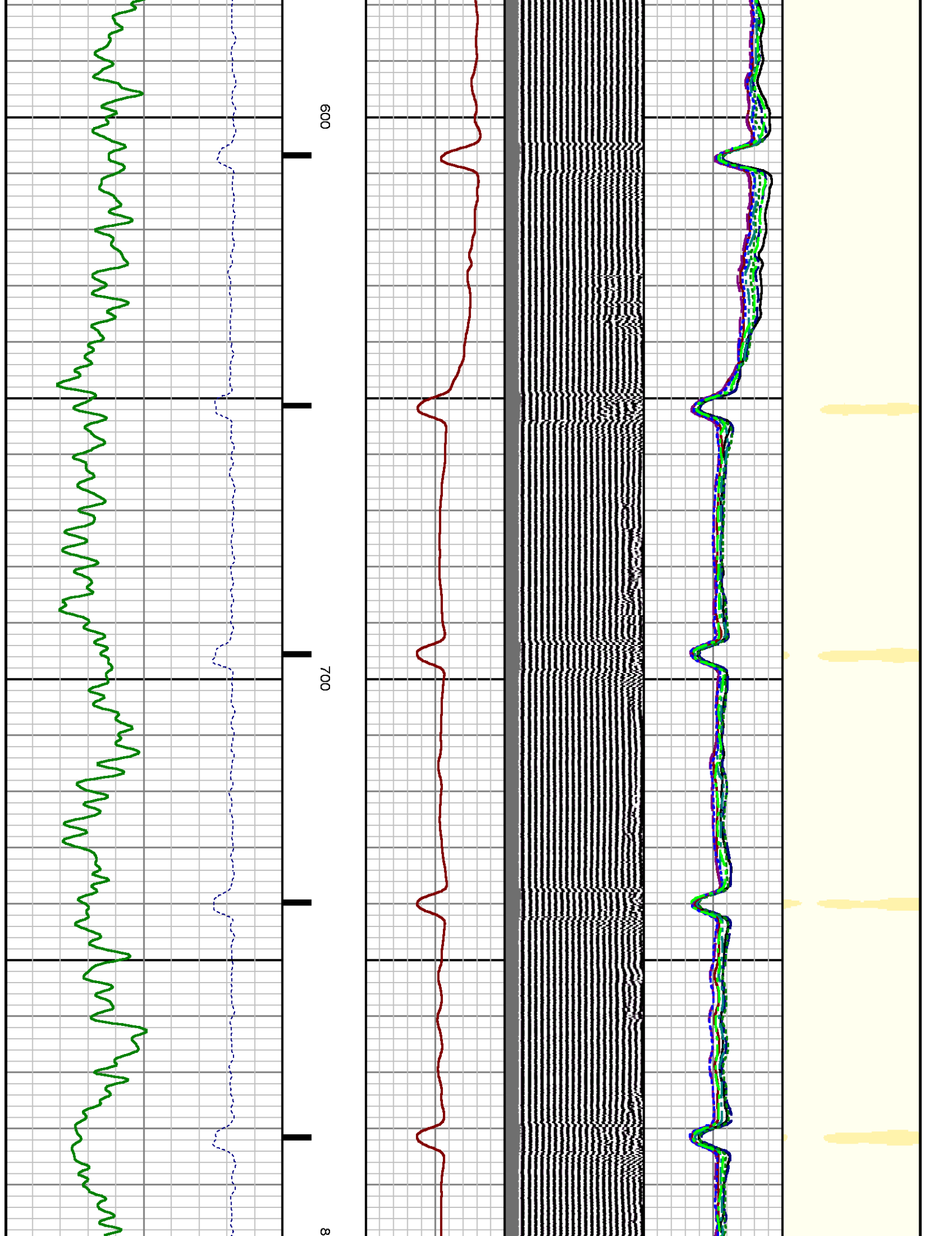
(for Acquired Curves)

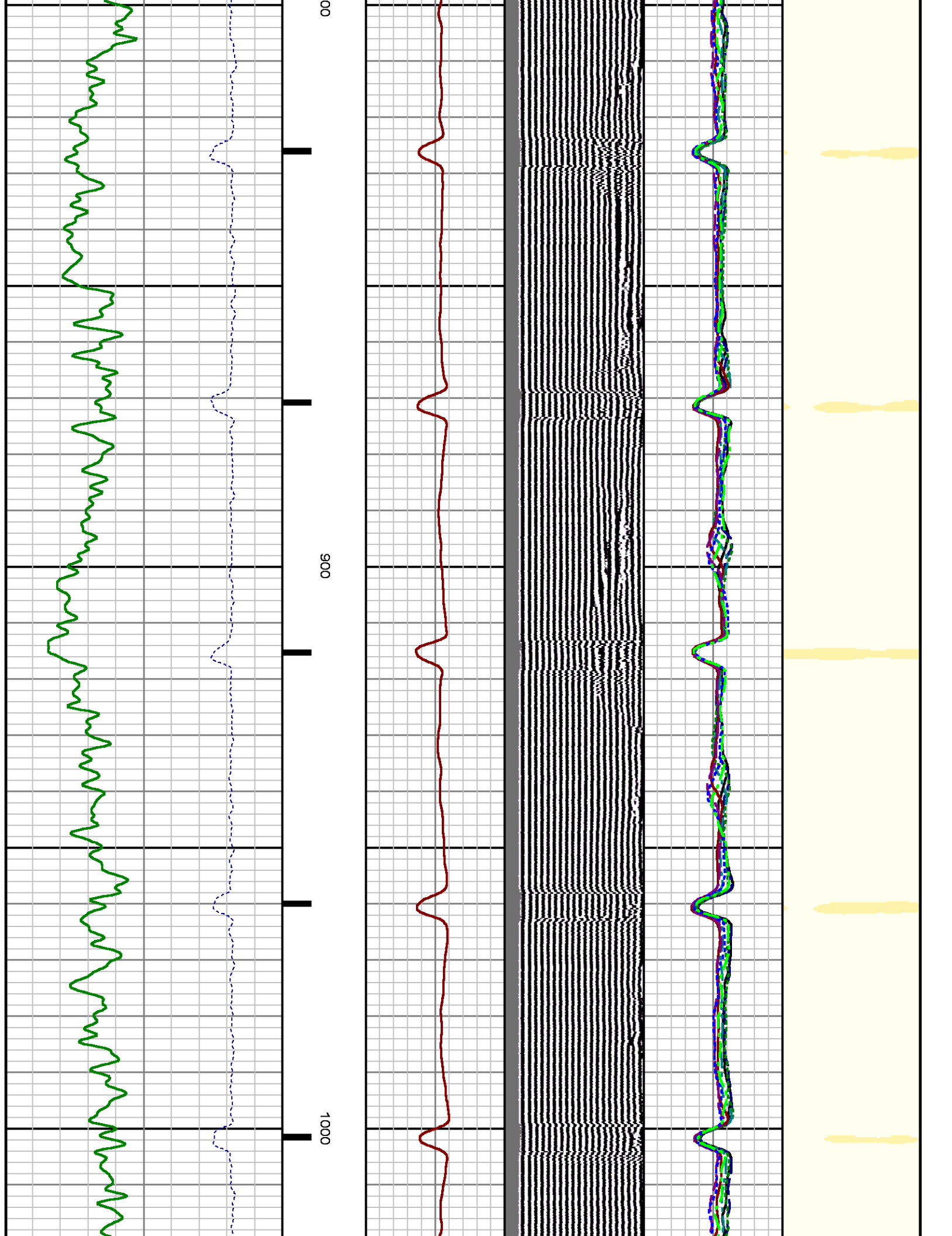
SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	-12.360	ACAL ANR AR1 AR2 AR3 AR4 AR5 AR6 AR7 AR8 CHV FPR2 FPR3 FPR5 TT3 TTR1 TTR2 TTR3 TTR4 TTR5 TTR6 TTR7 TTR8 XAMP
1426XA	-11.360	AFAR SIG TT5
2459XA	-7.250	CCL
2459XA	-5.390	GR
2459XA	0.000	NEU

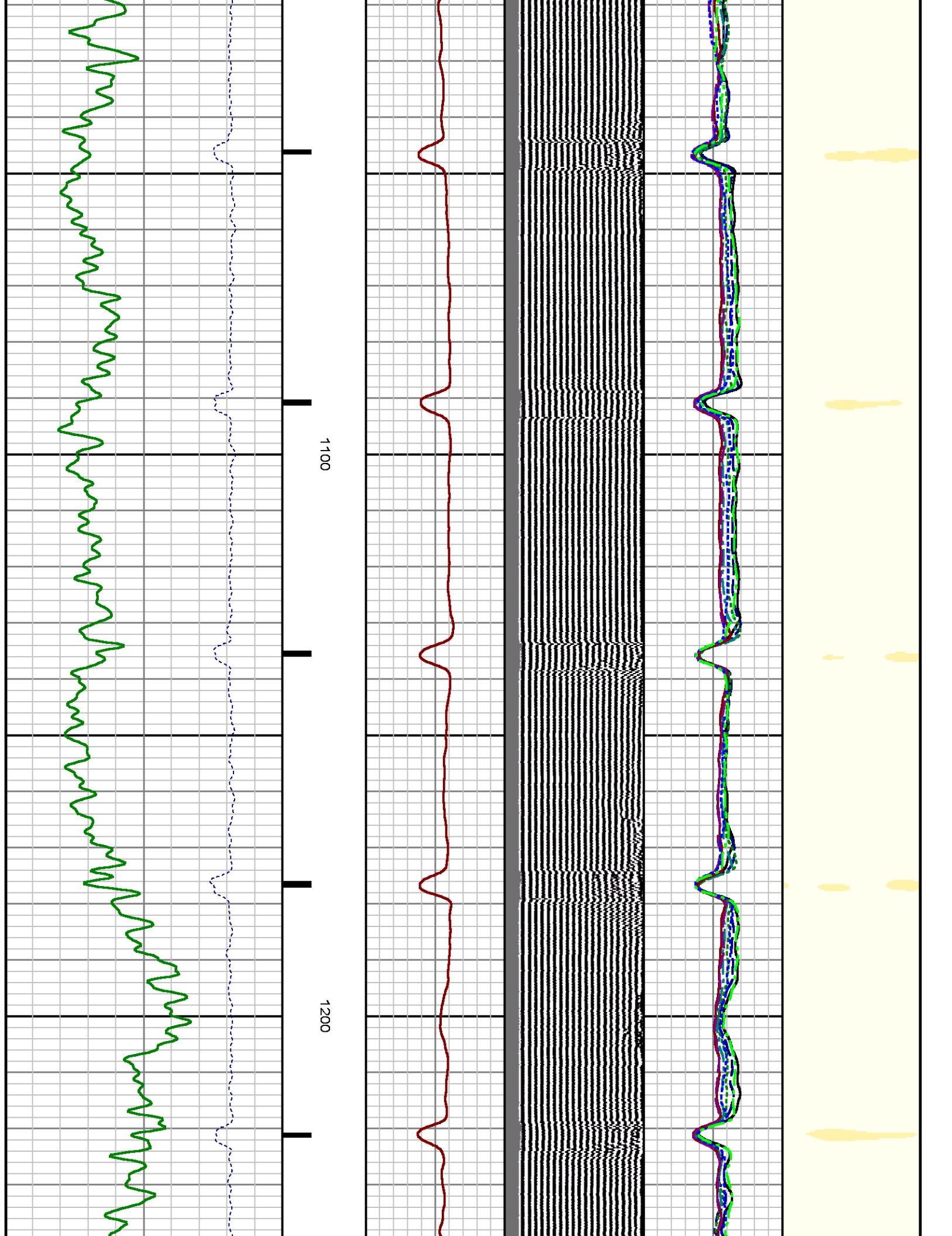


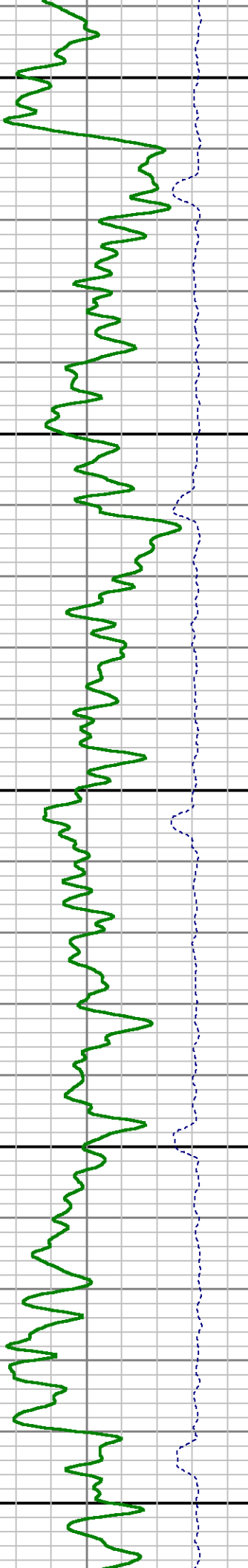
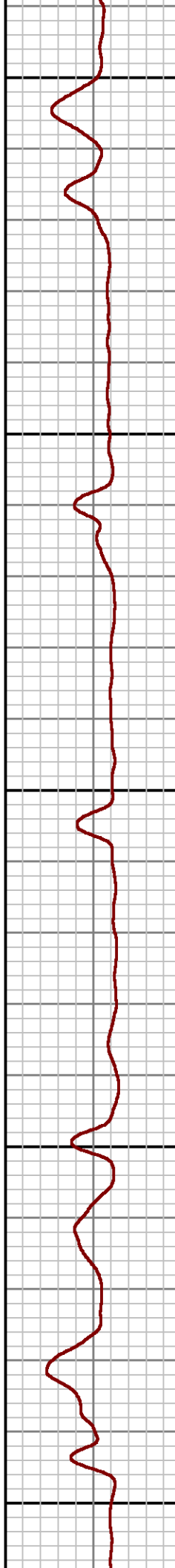
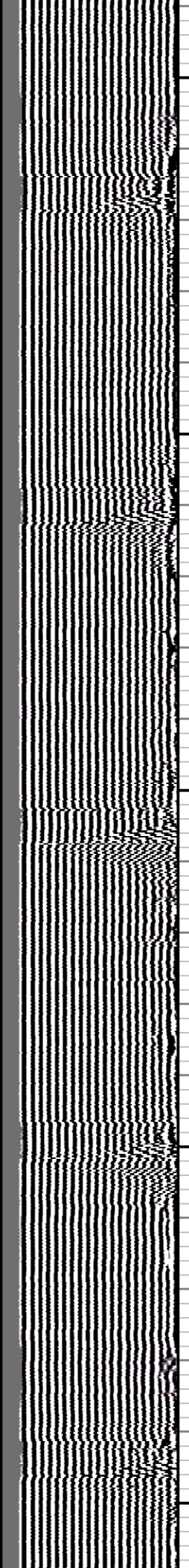
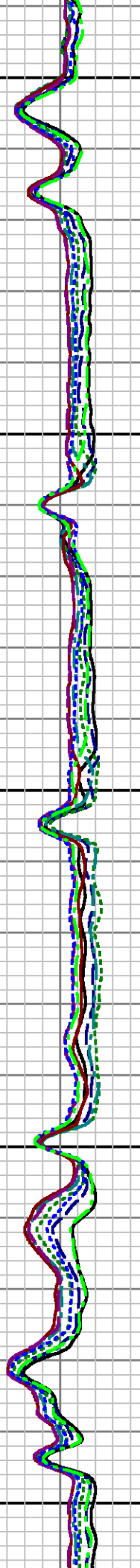
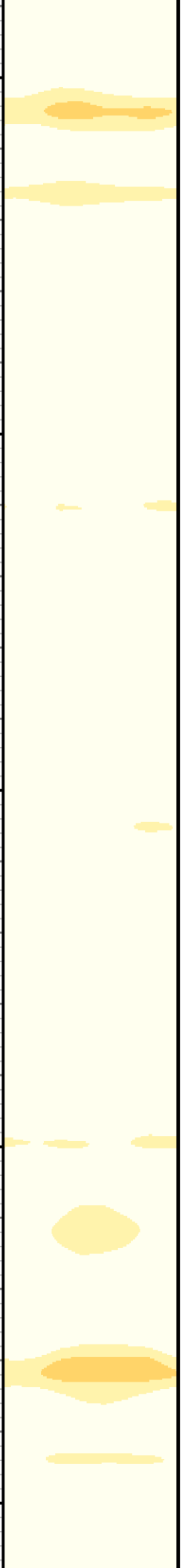






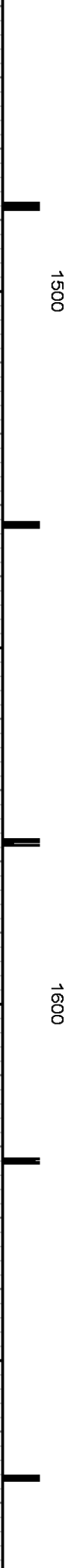
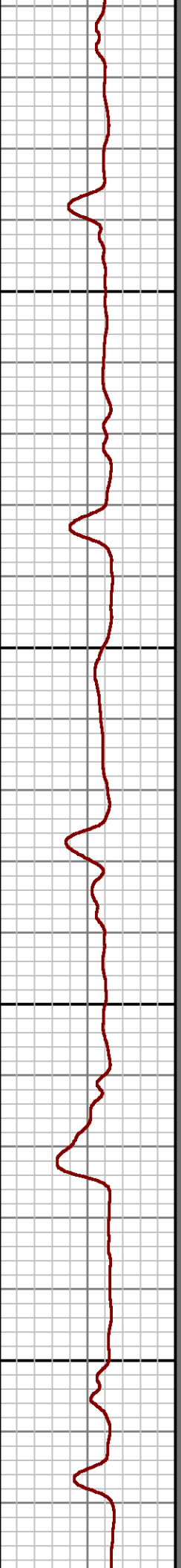
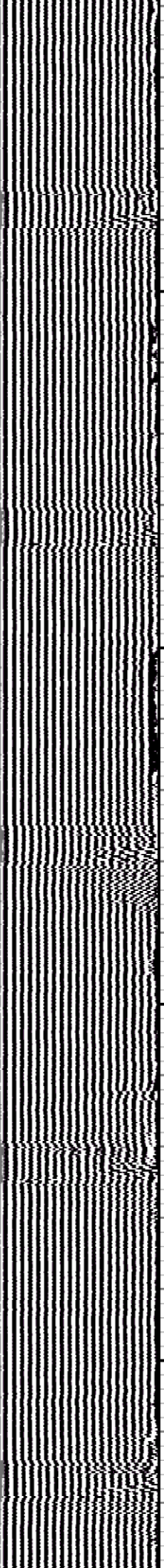
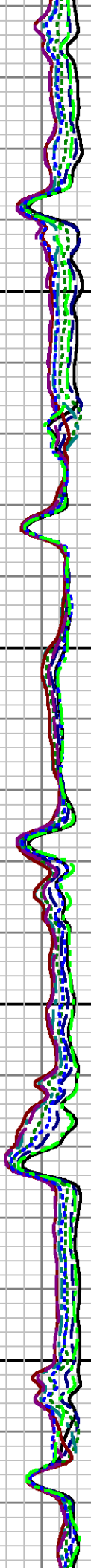






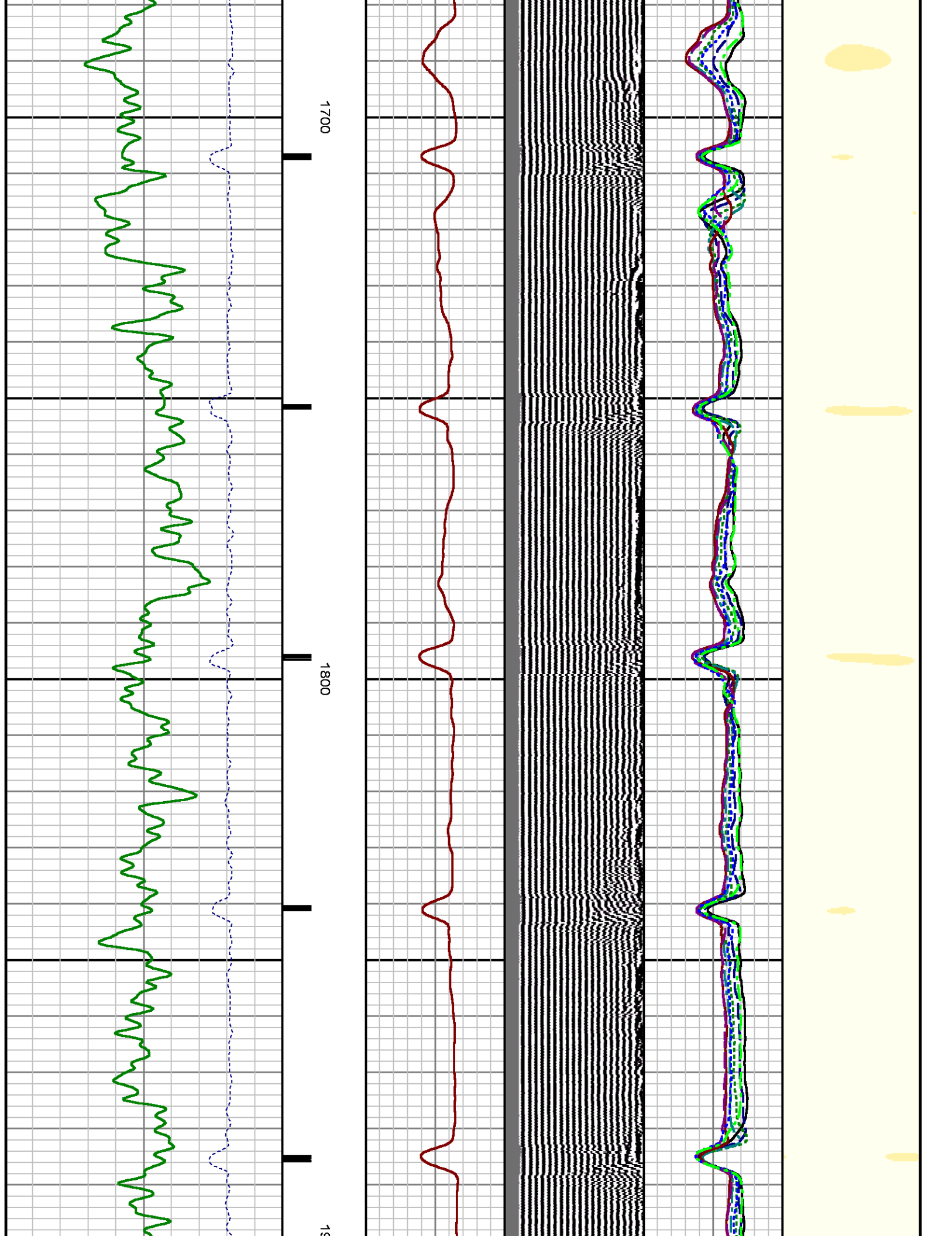
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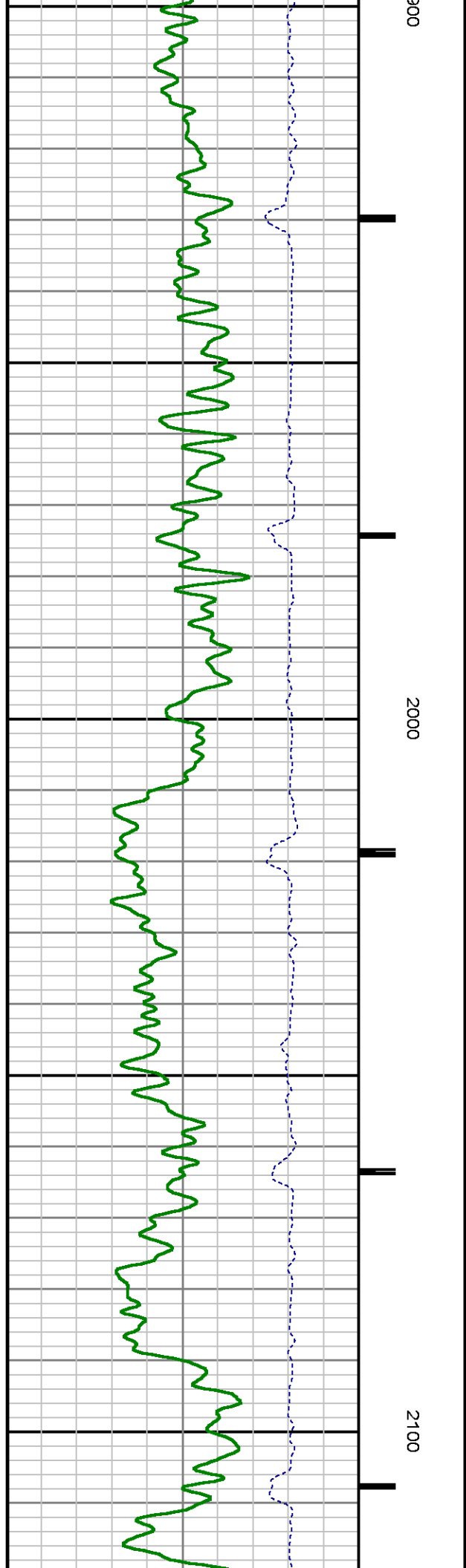
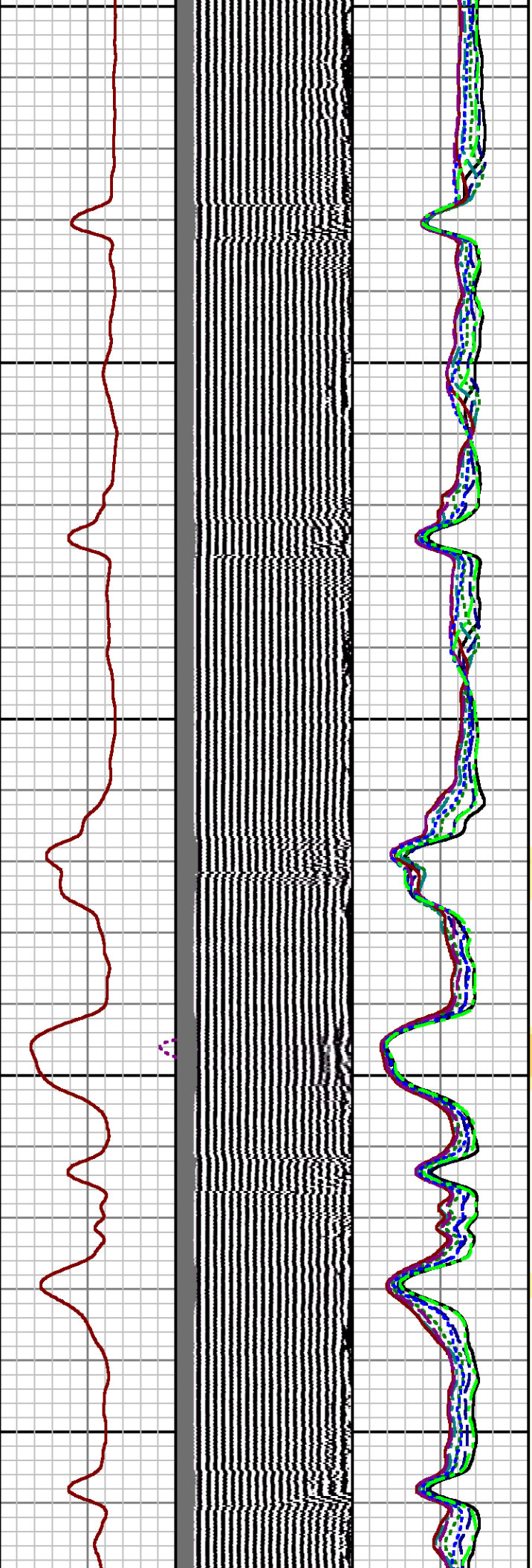
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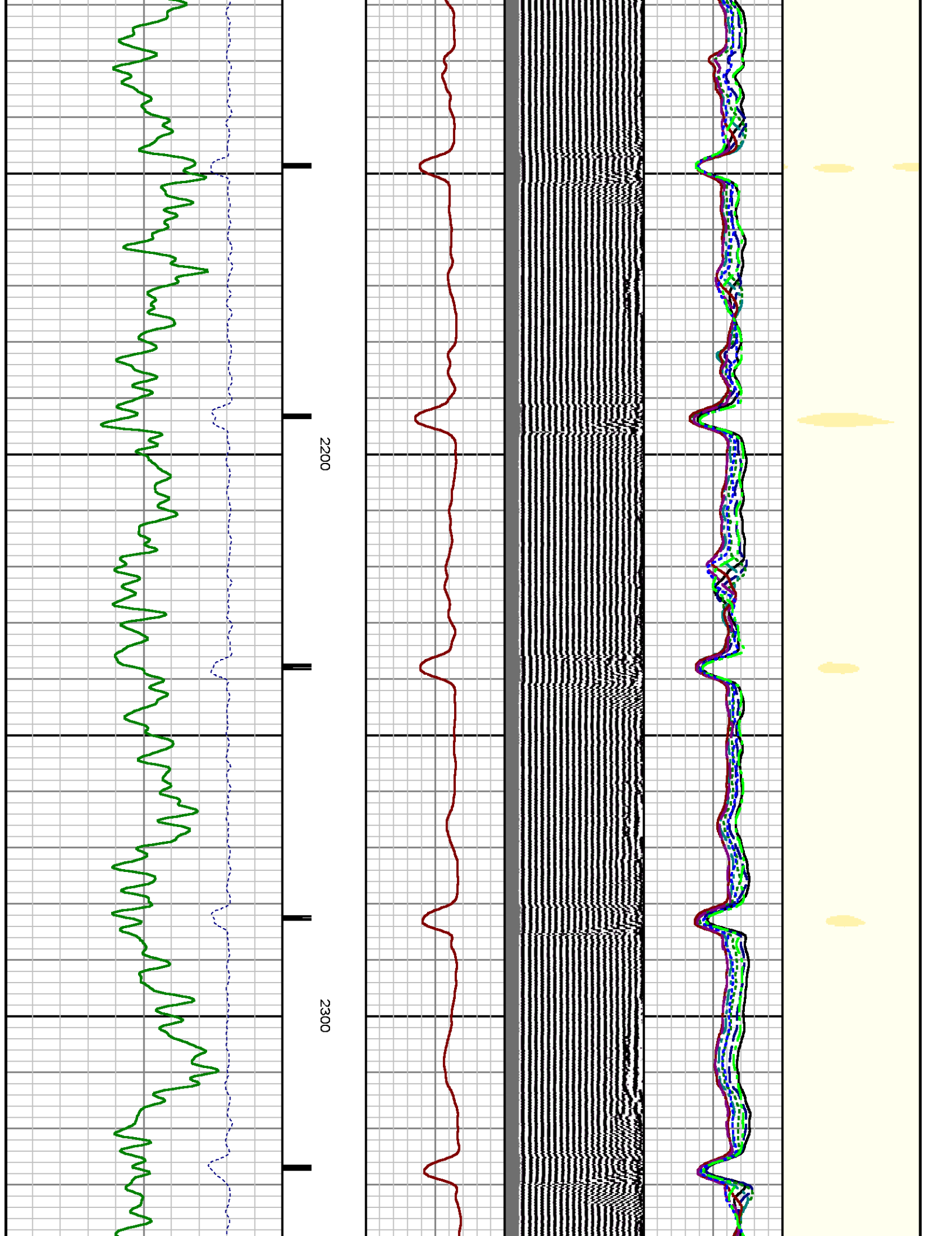


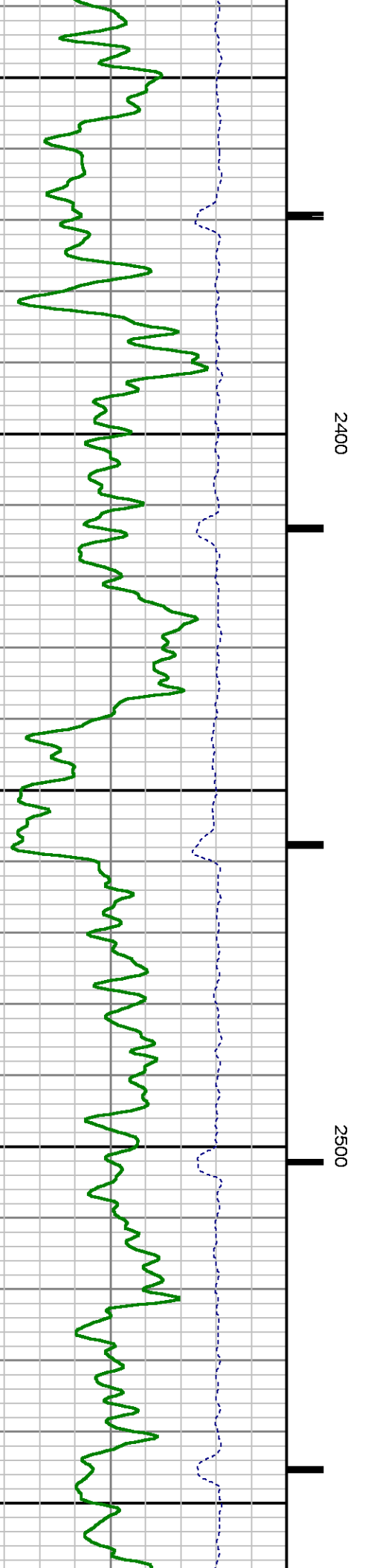
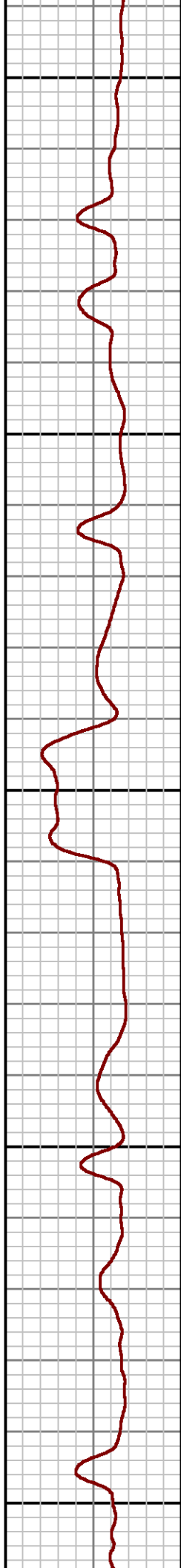
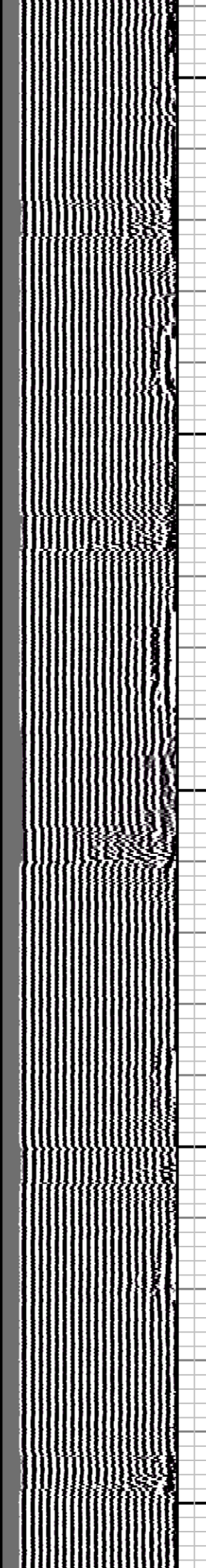
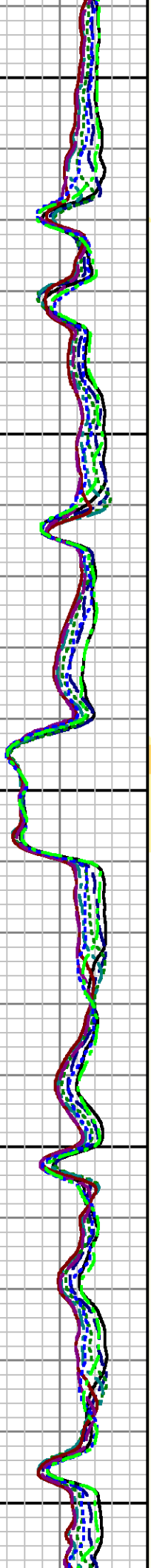
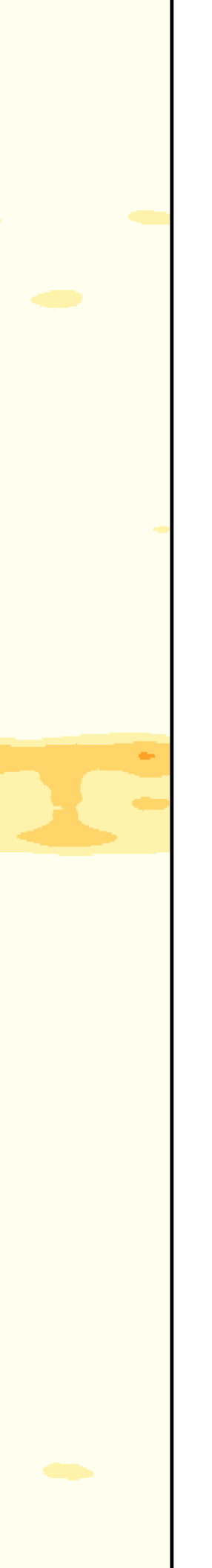
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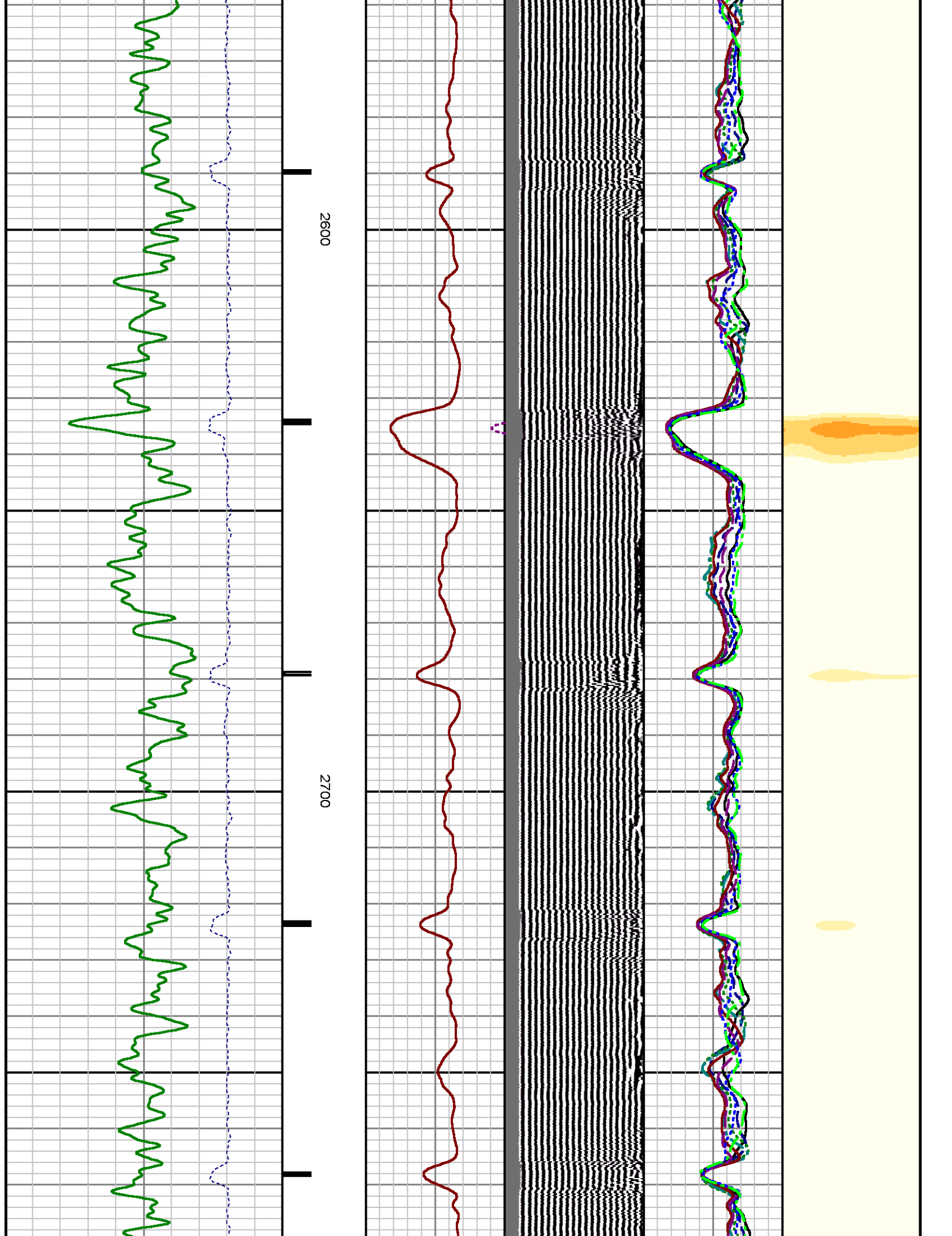


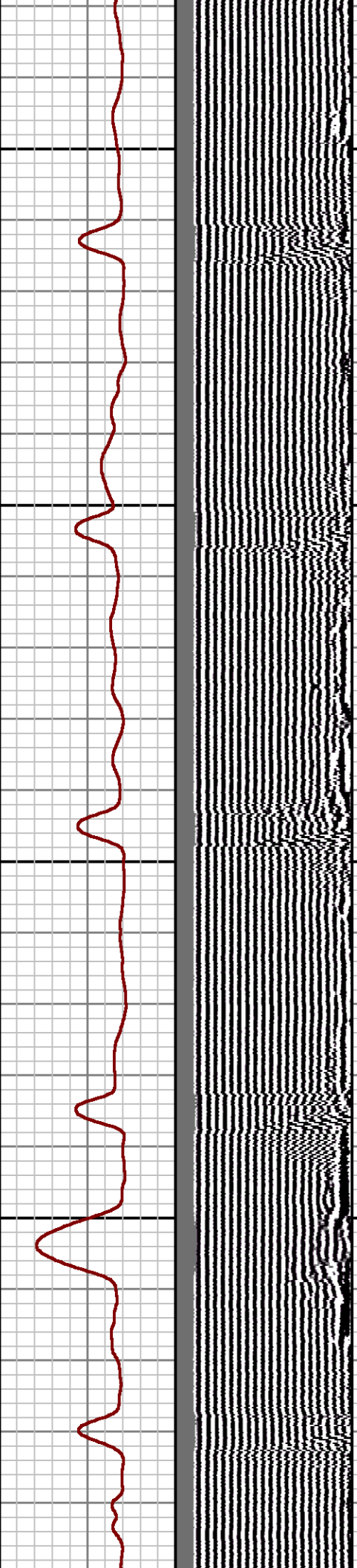
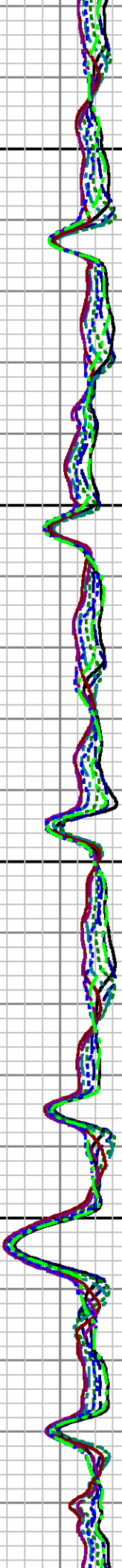
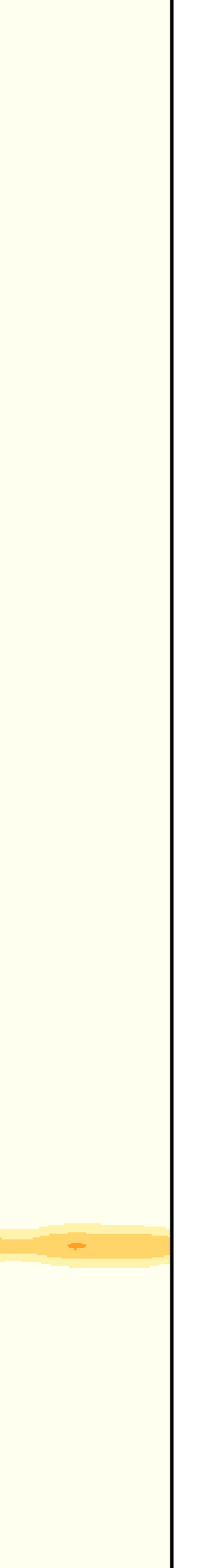




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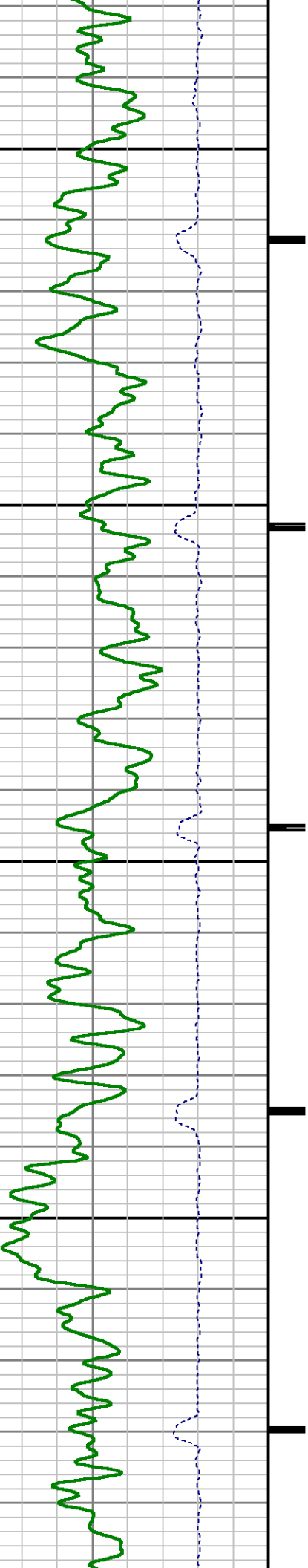


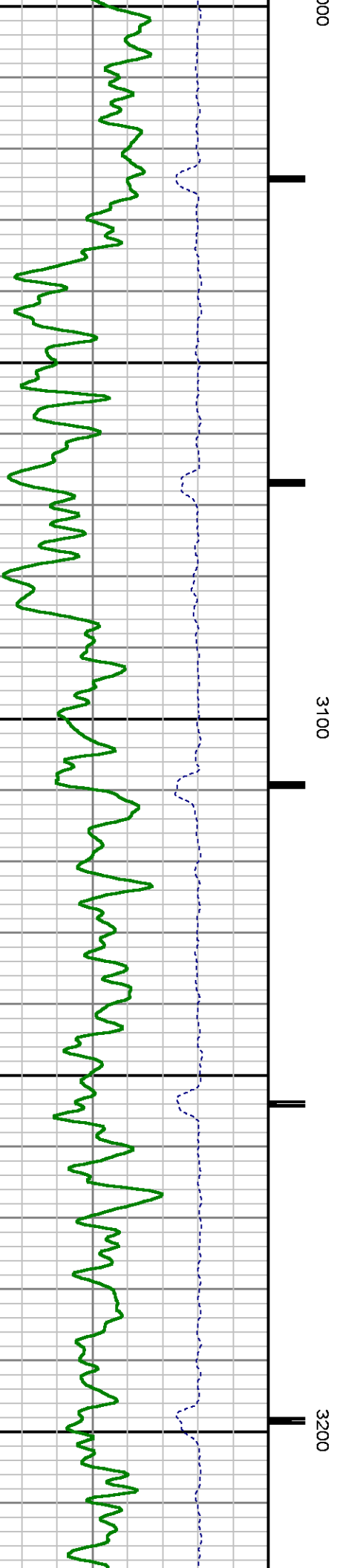
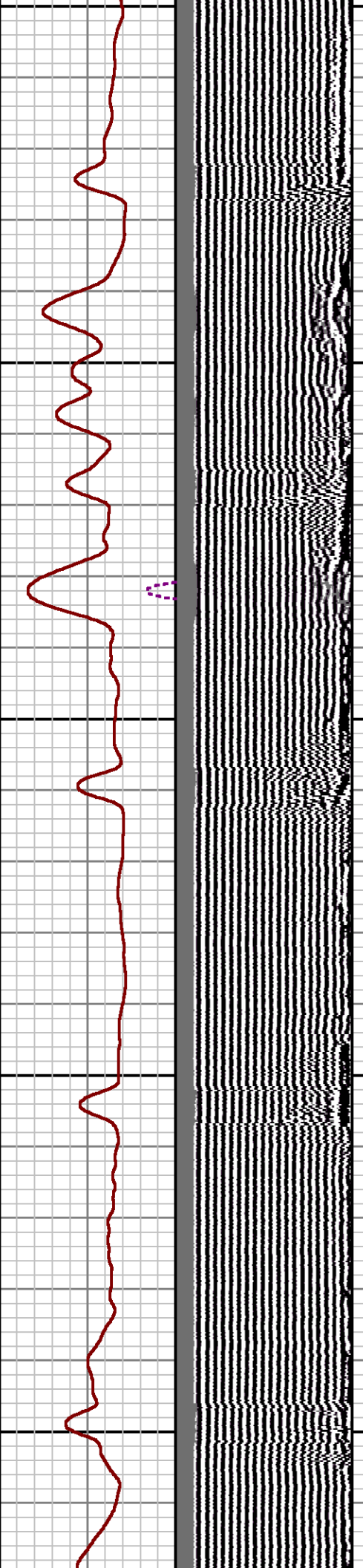
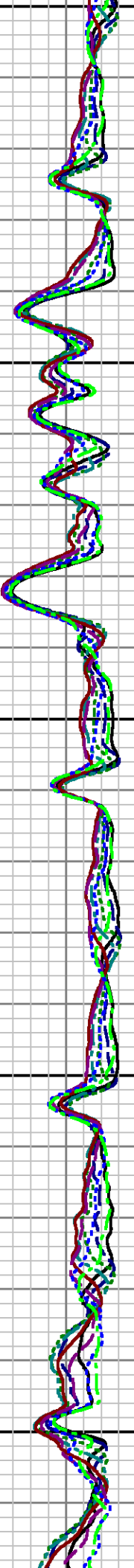


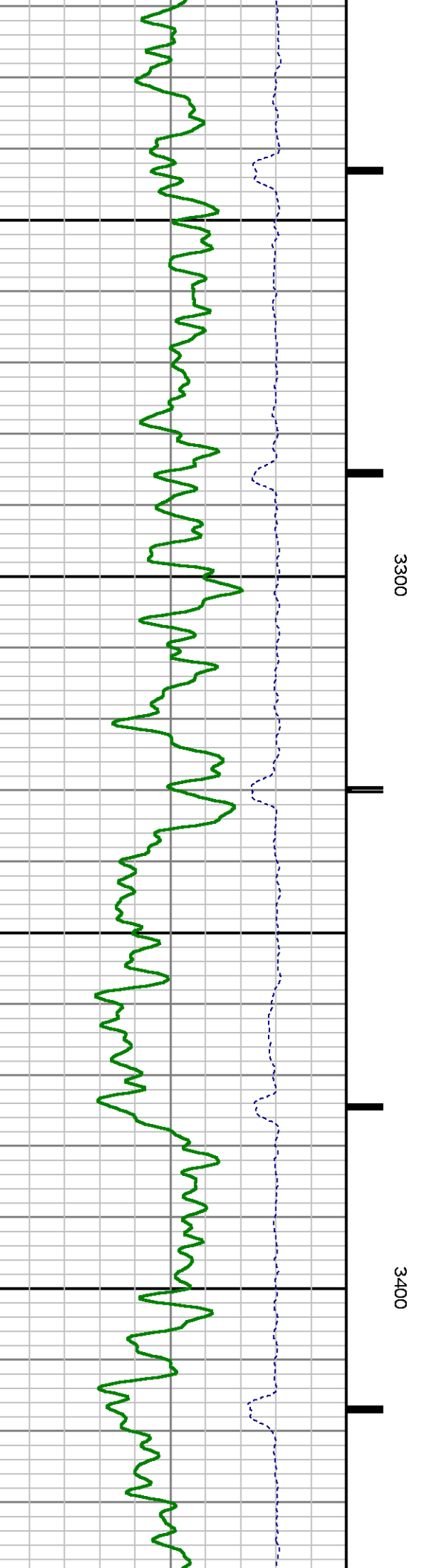
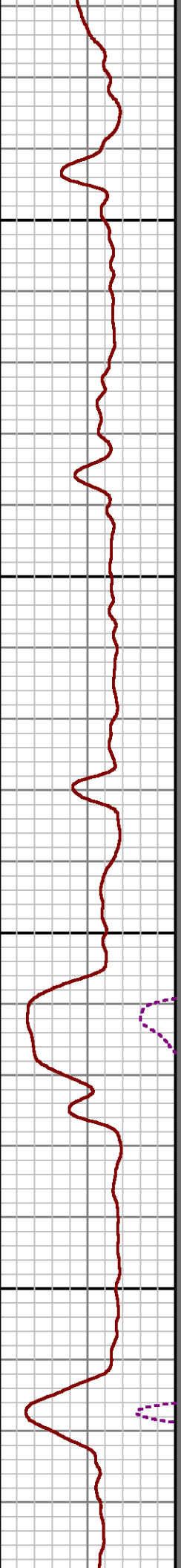
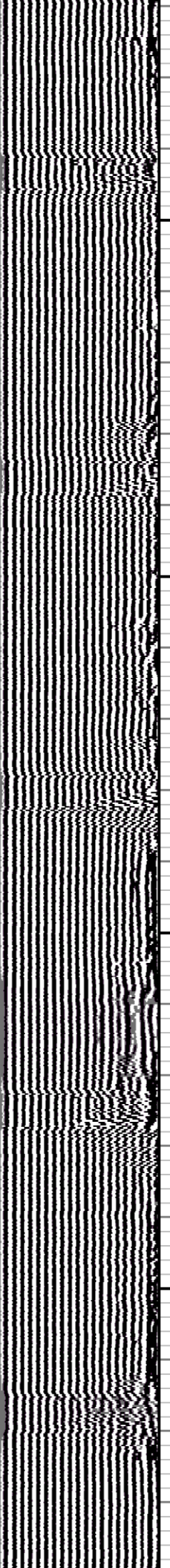
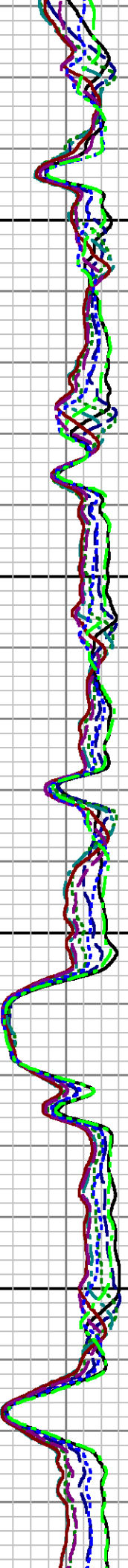
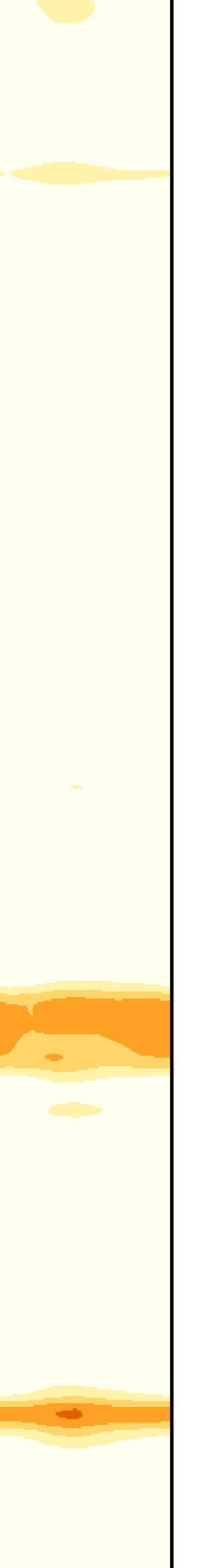
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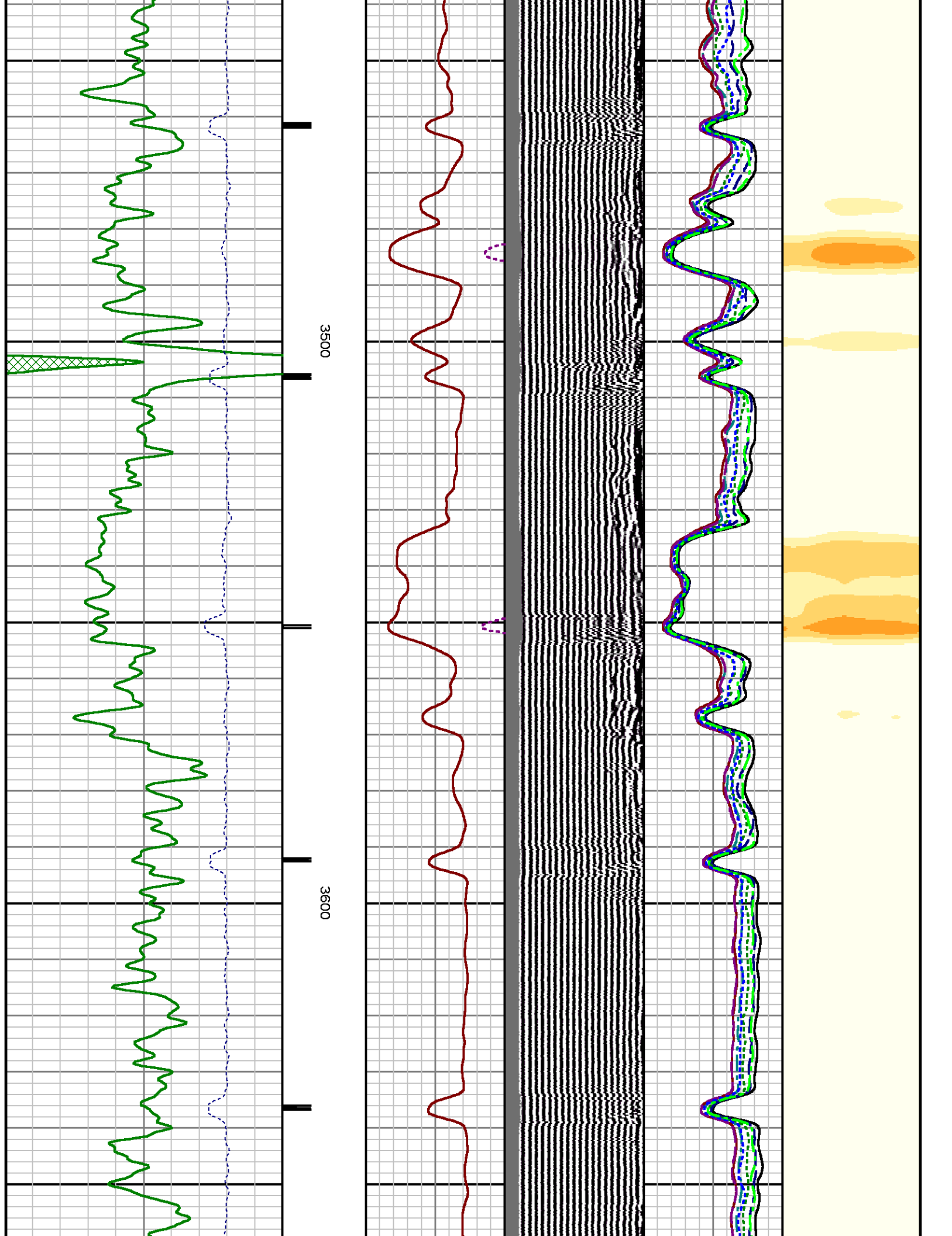
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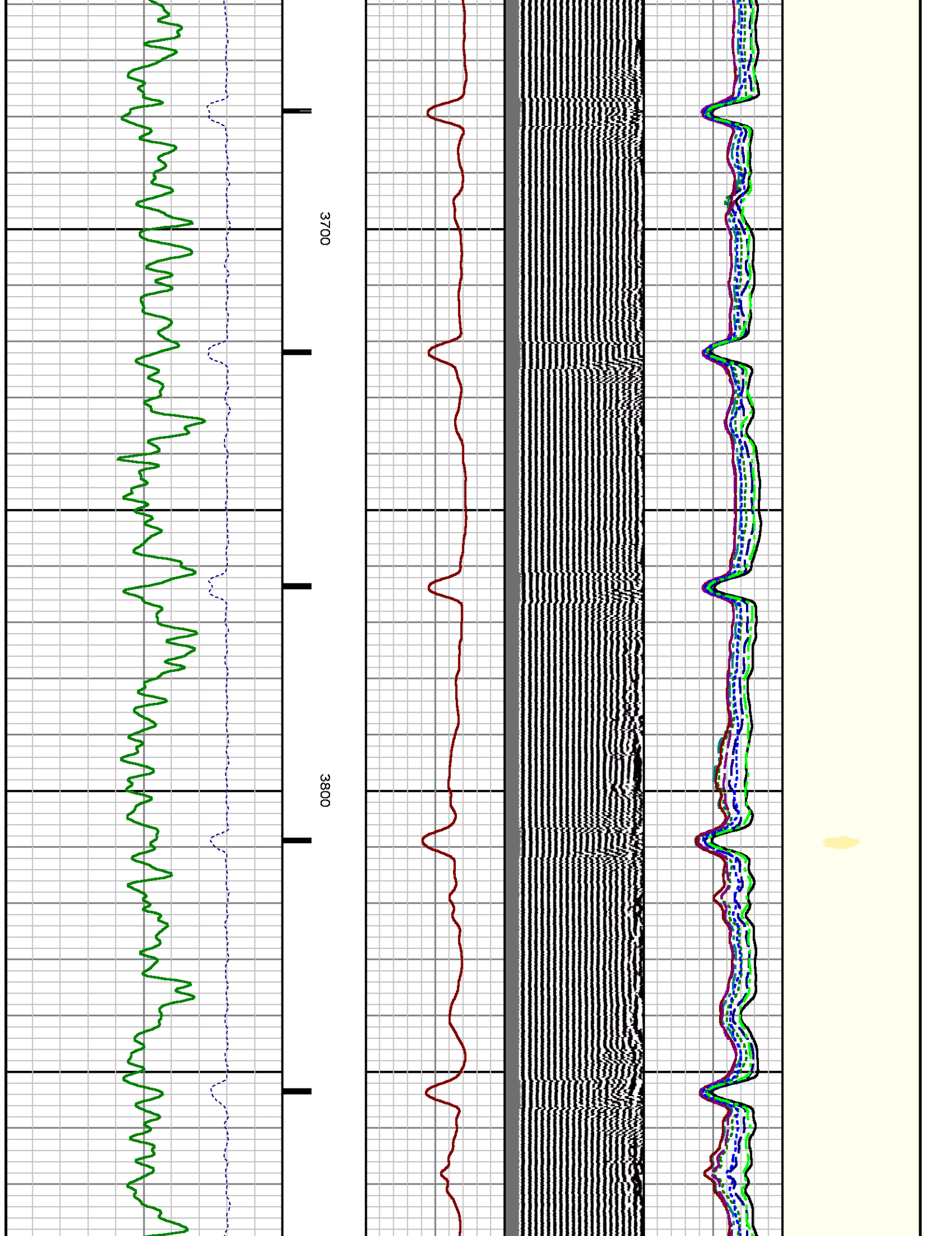
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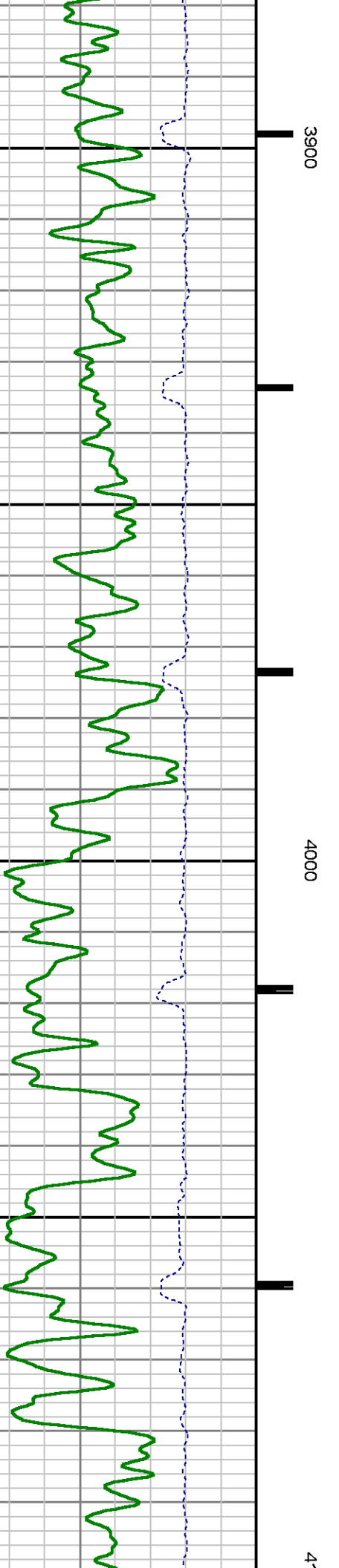
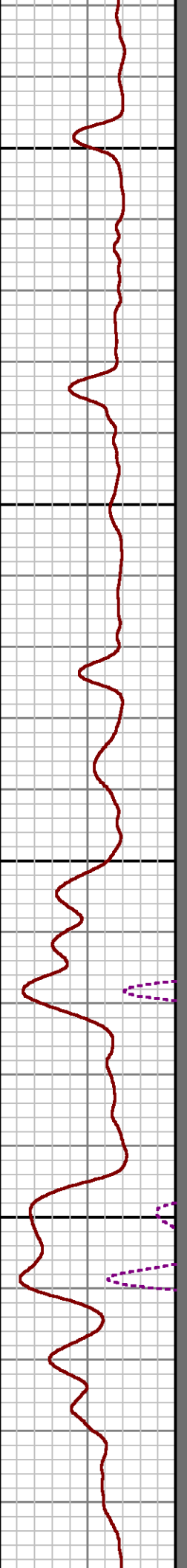
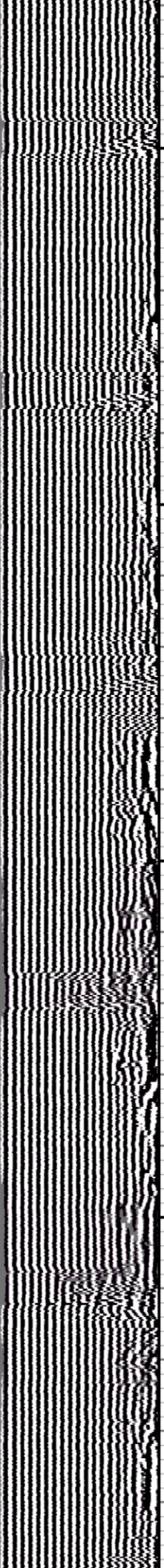
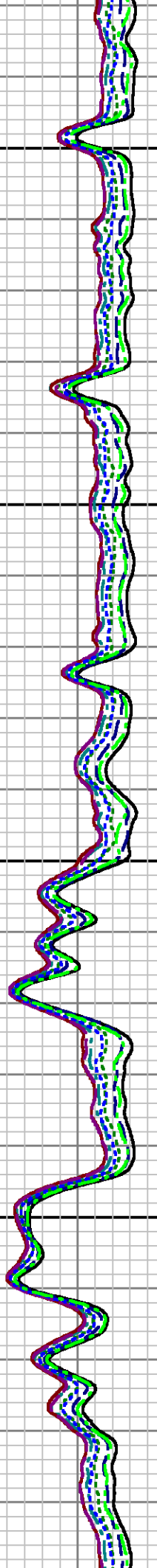
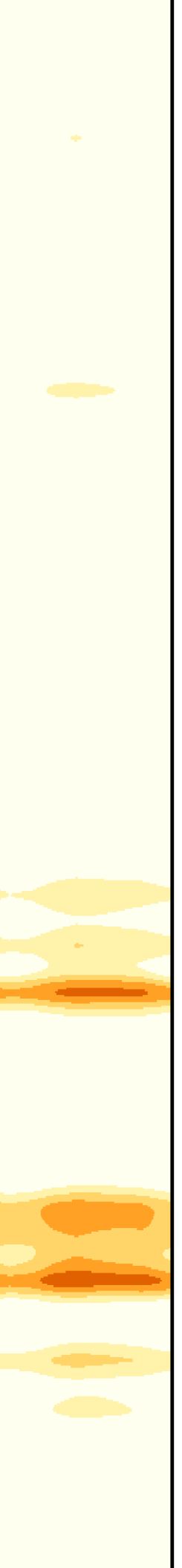


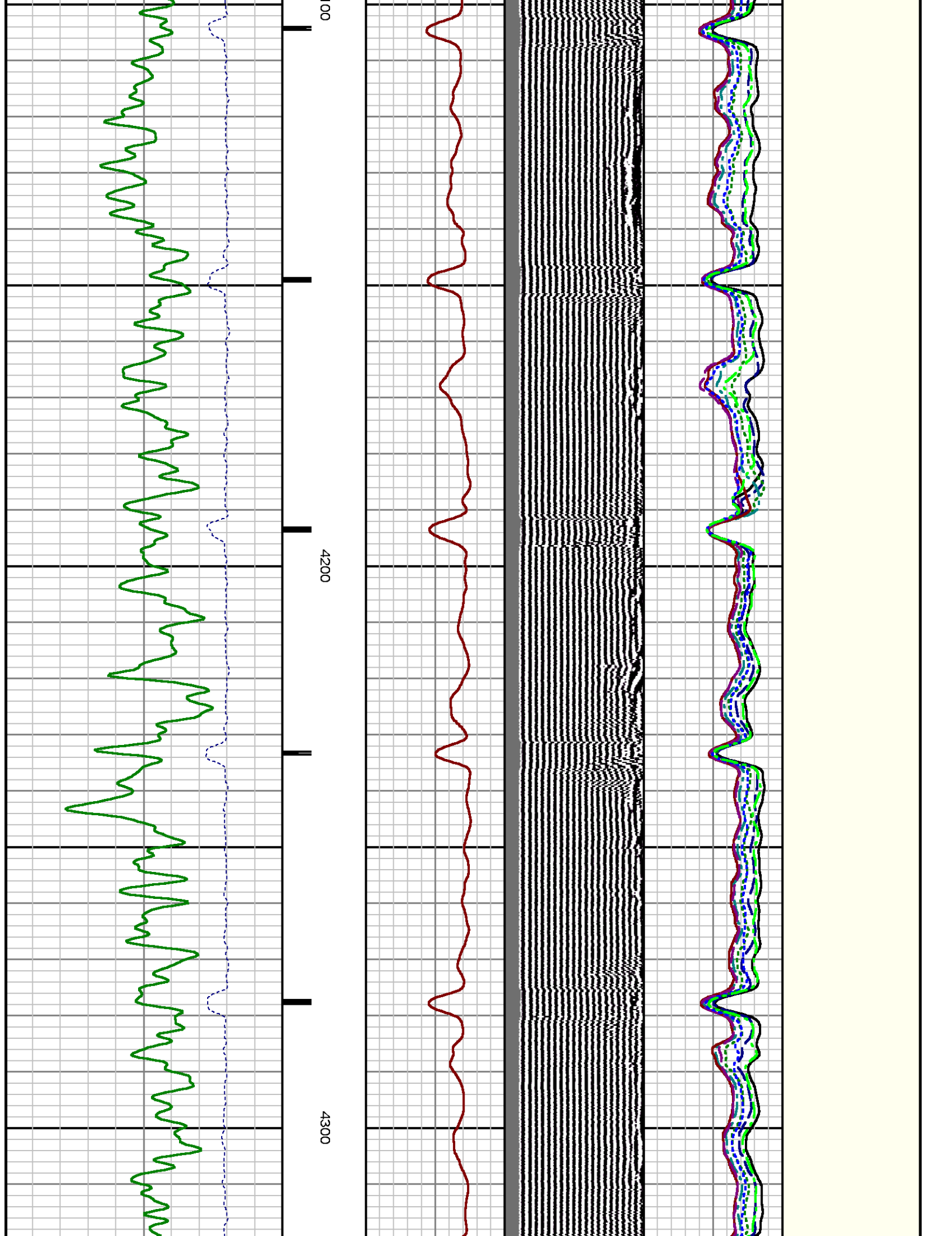


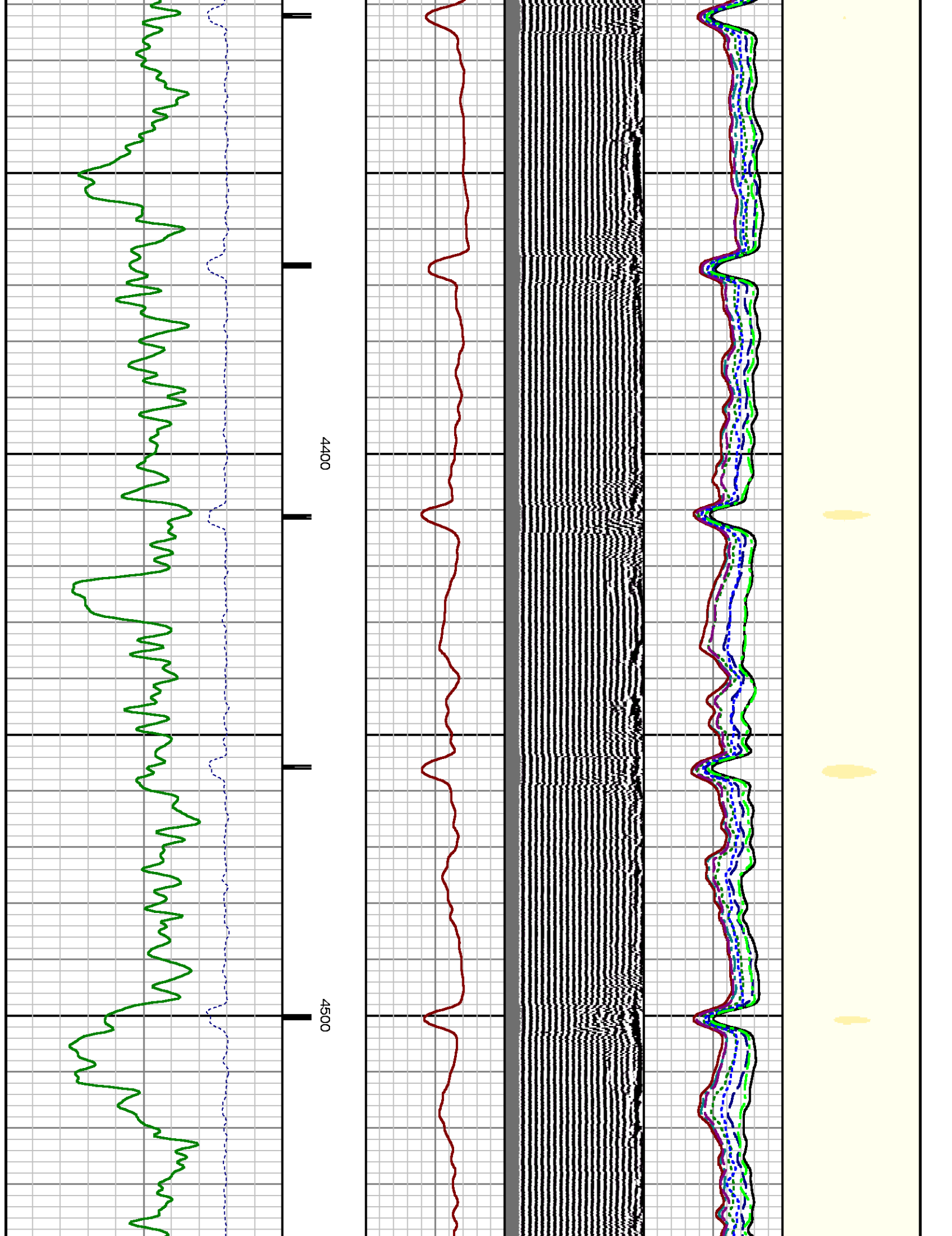


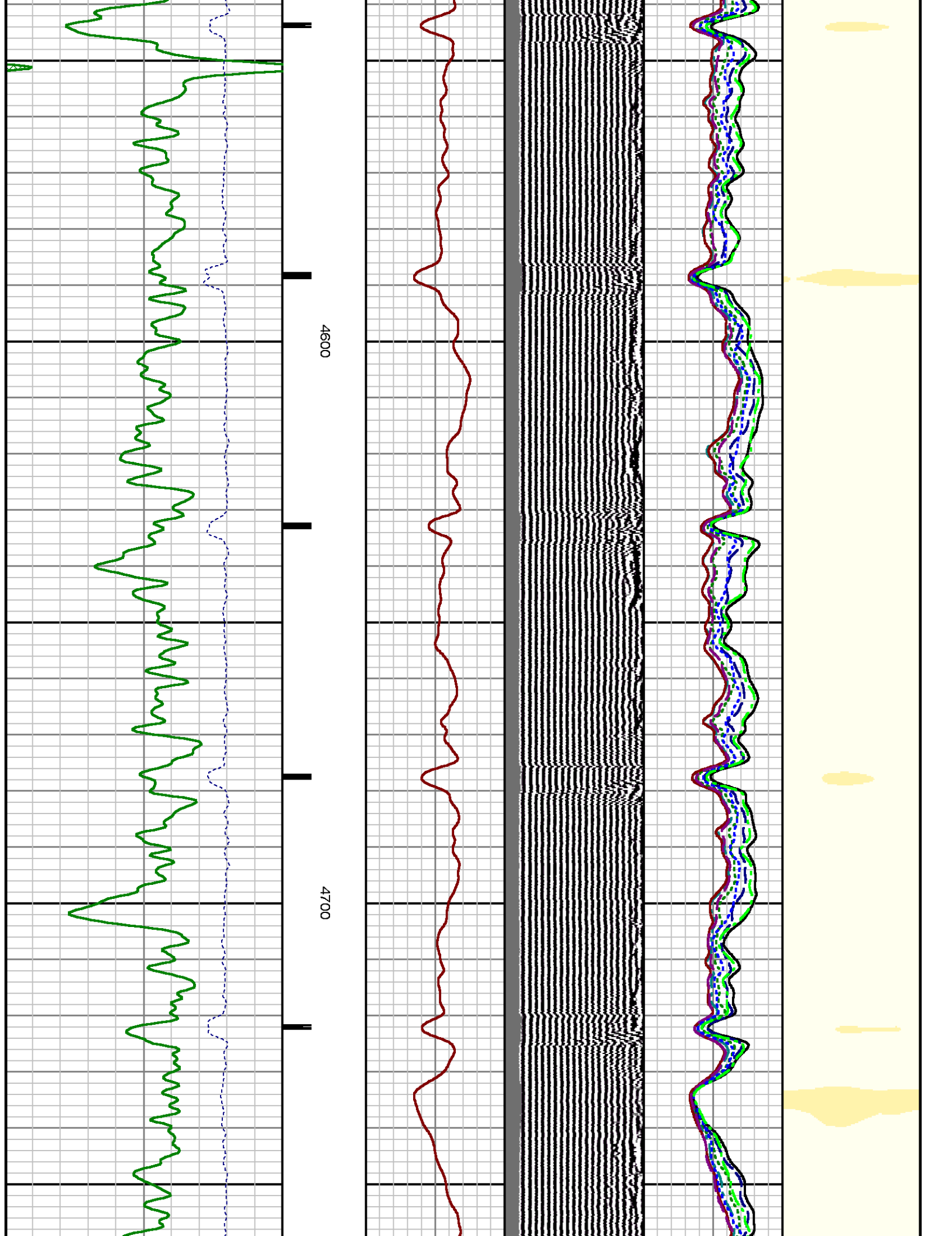


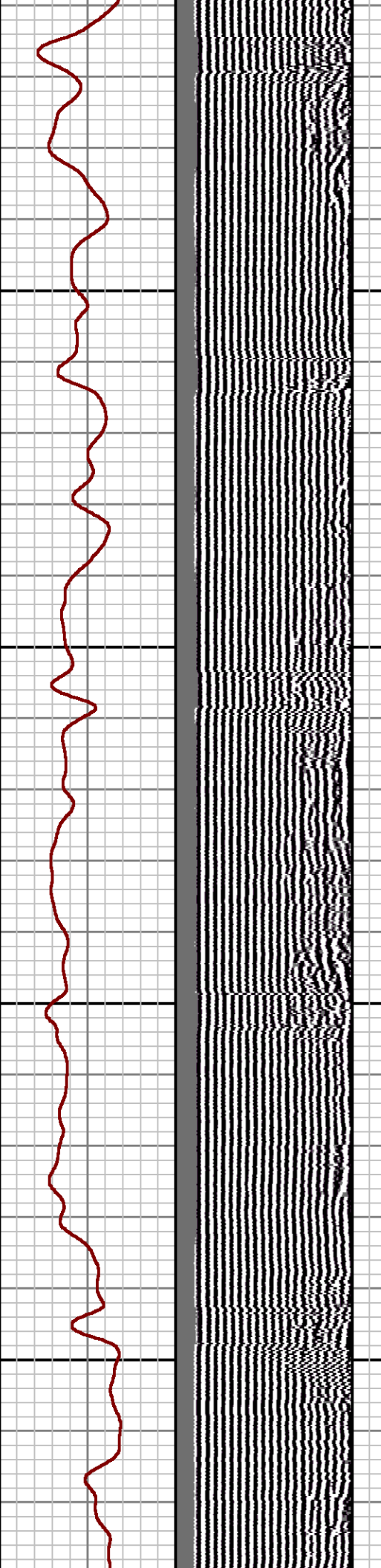
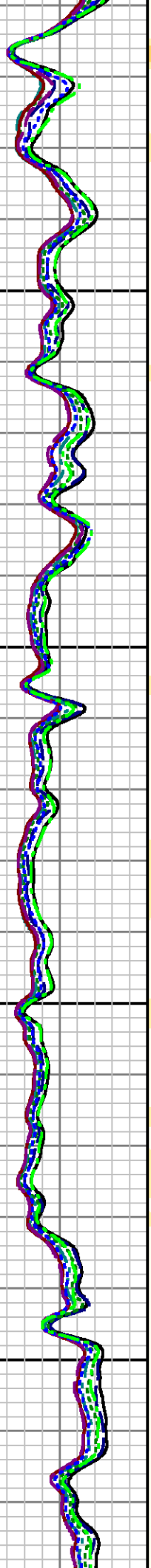
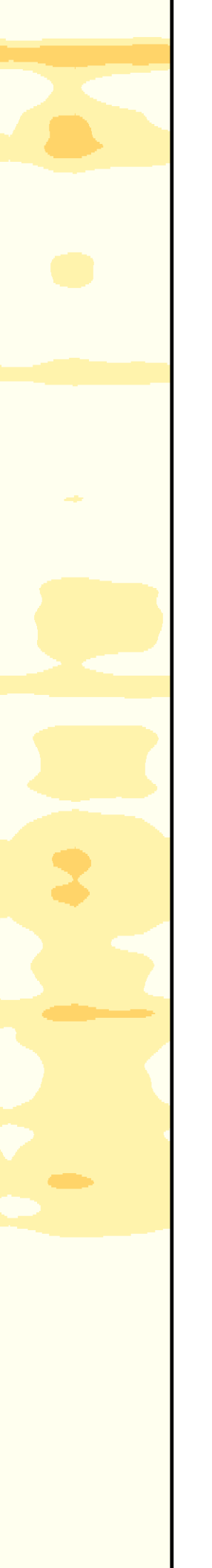






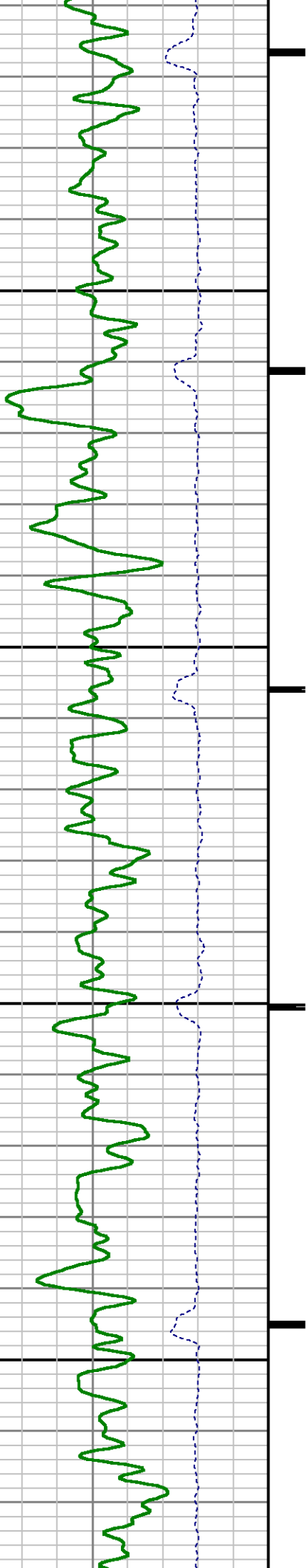


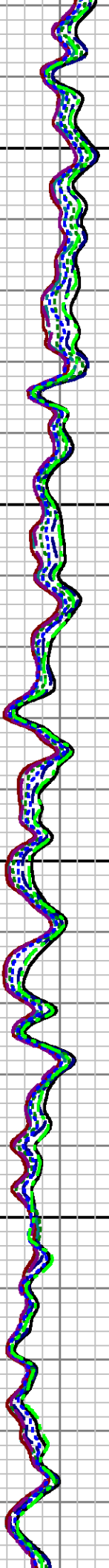
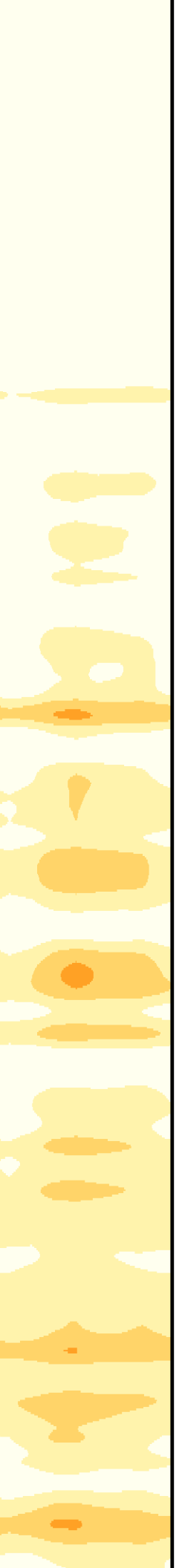




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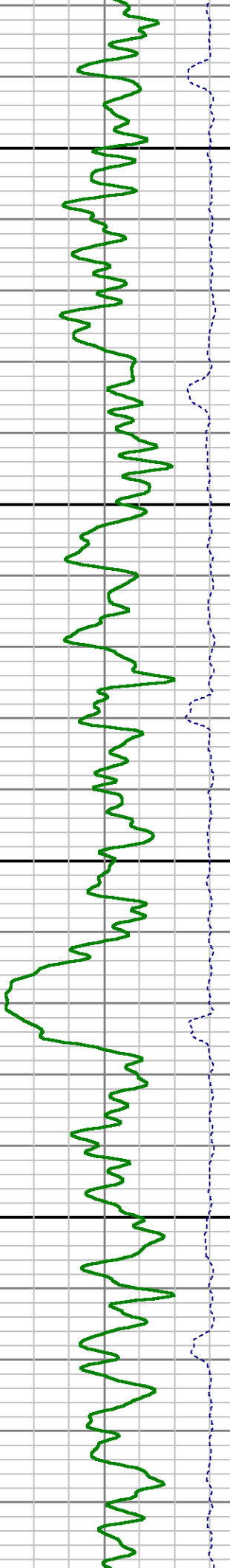


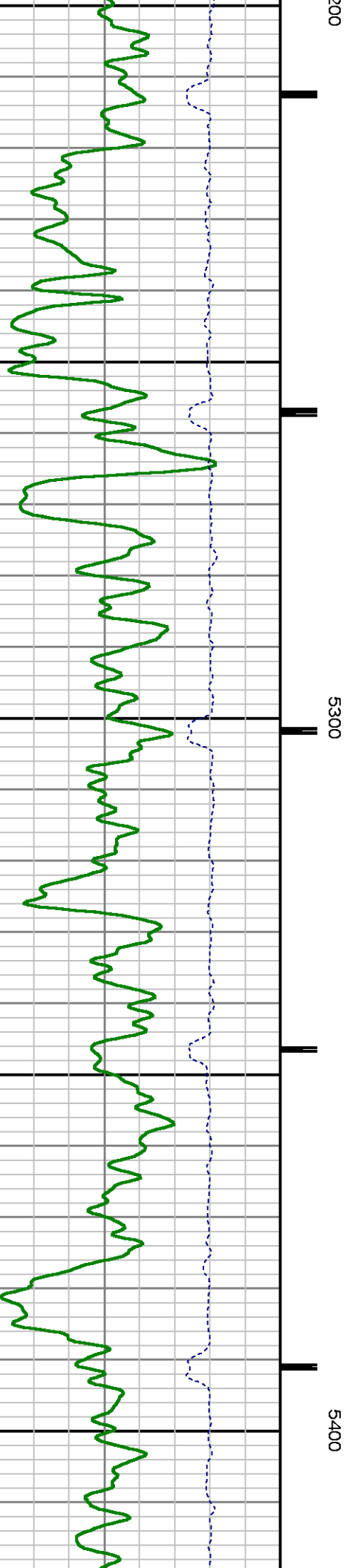
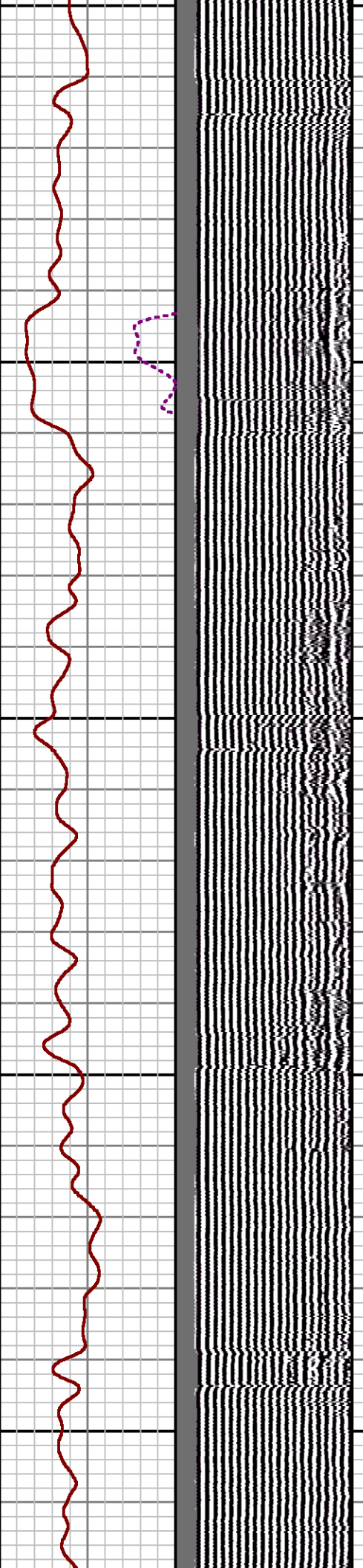
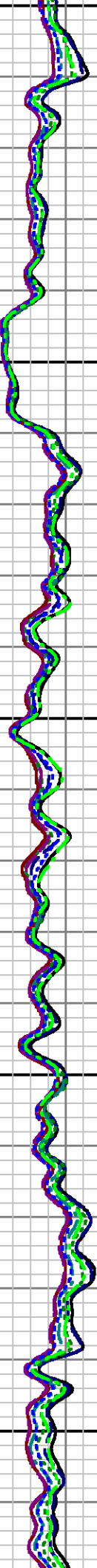
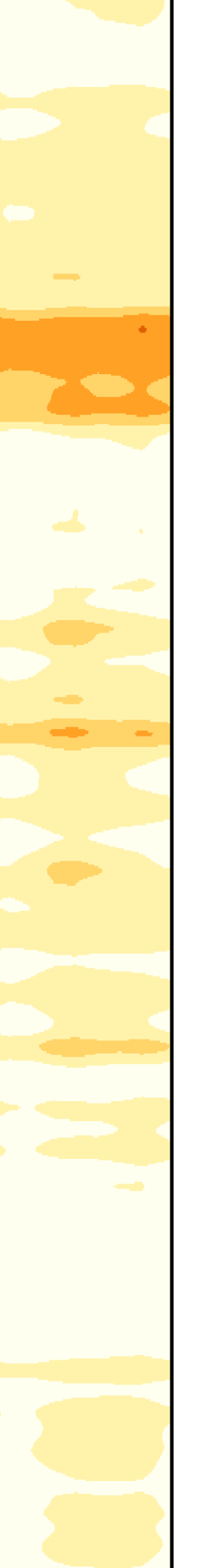


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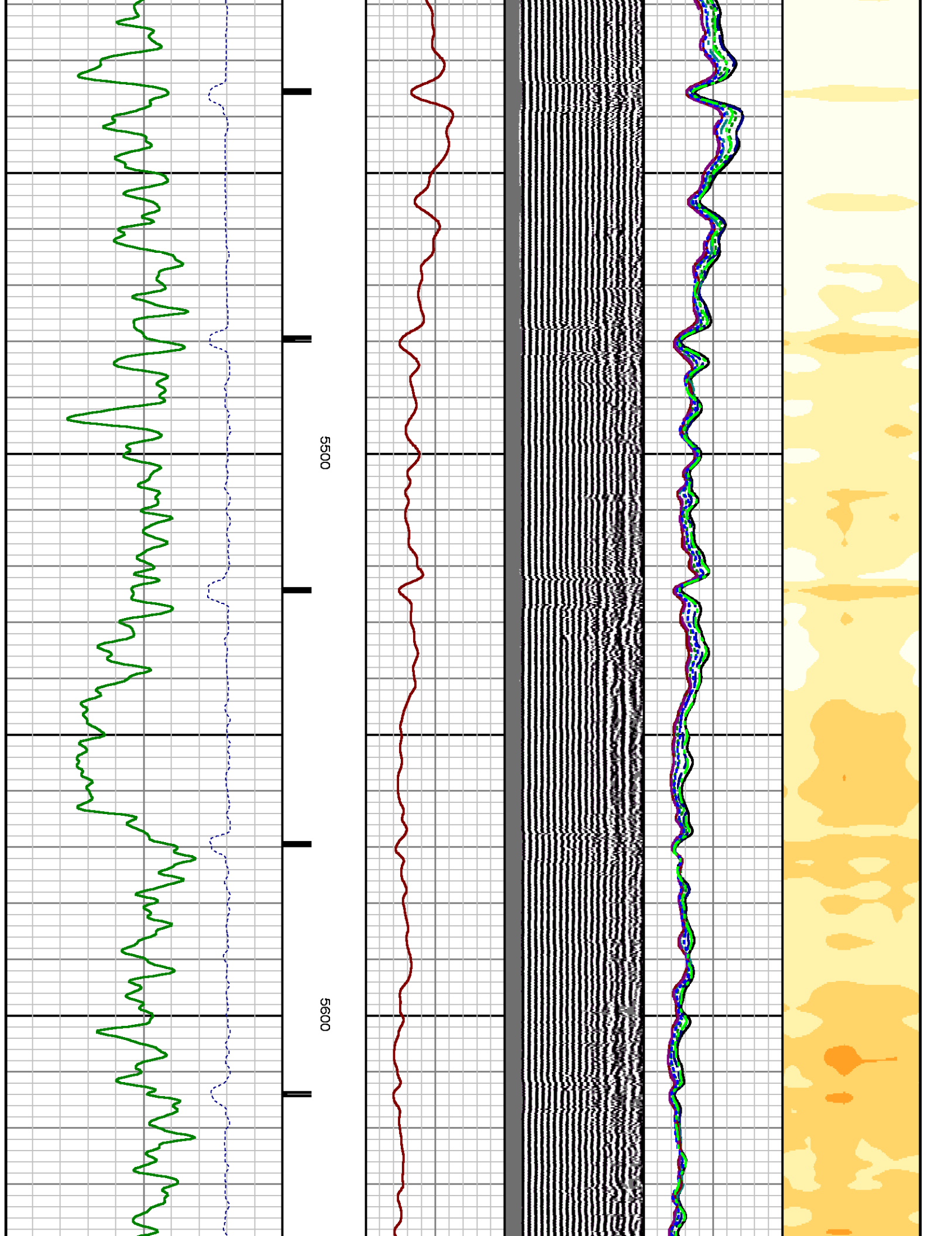


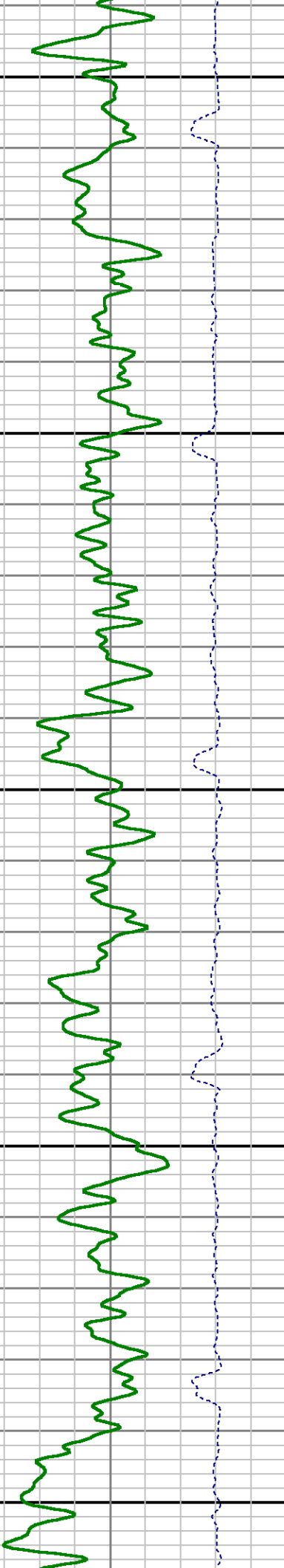
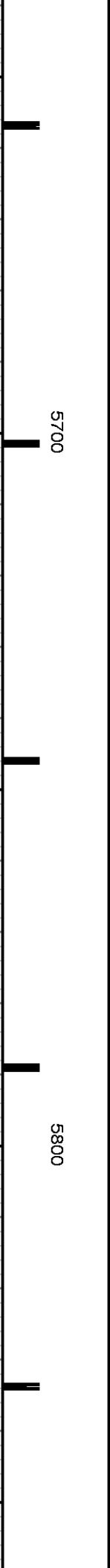
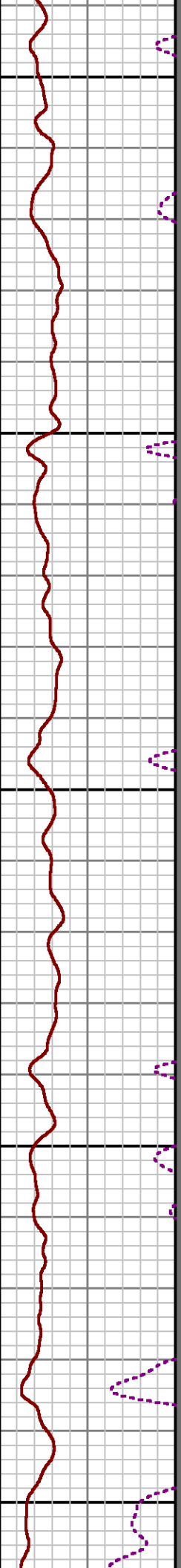
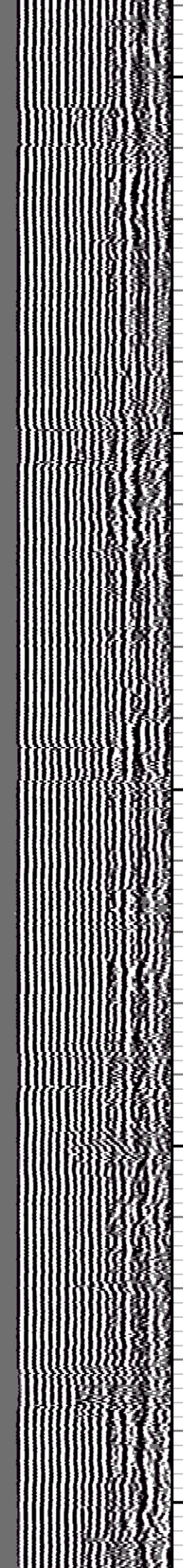
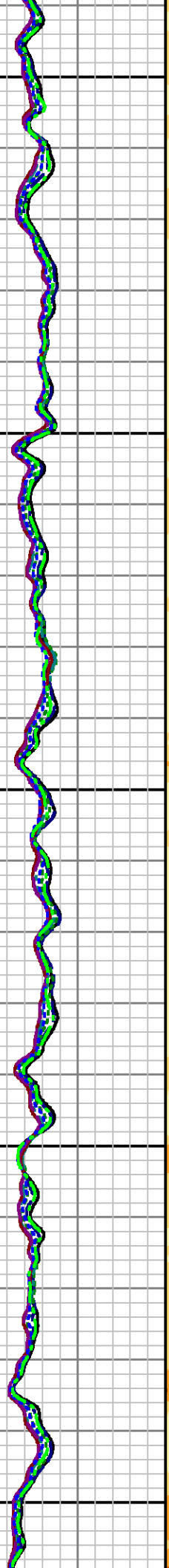
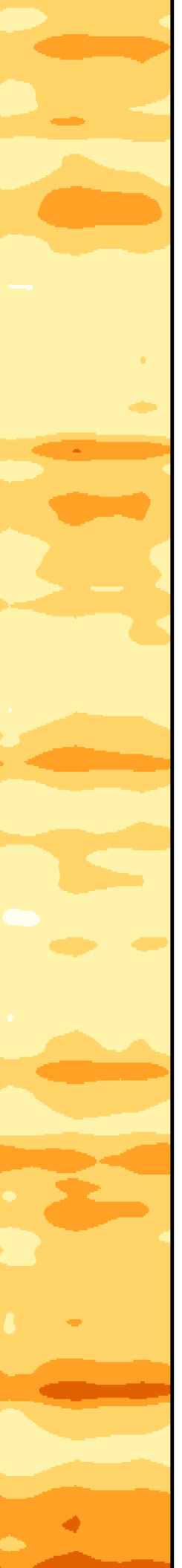


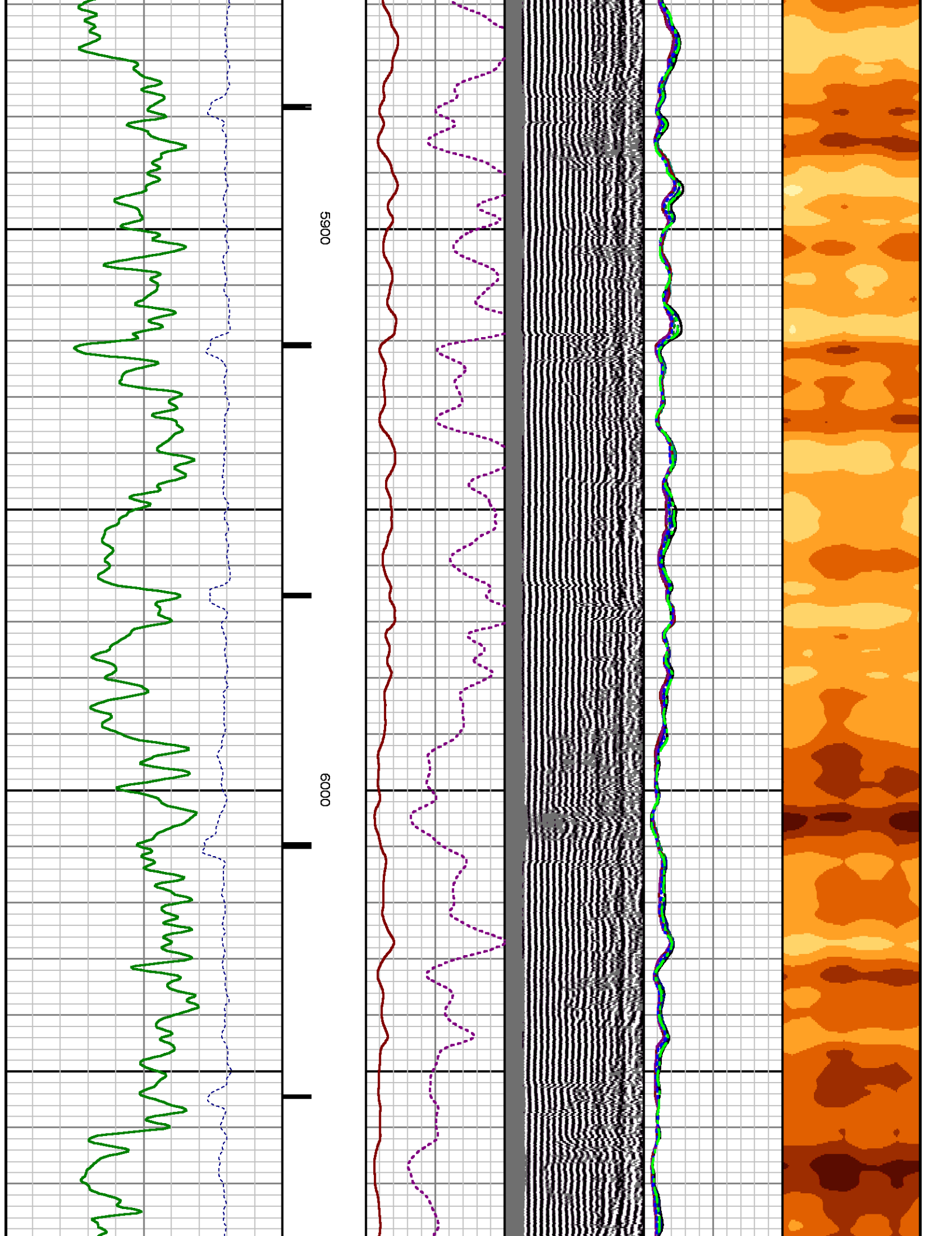
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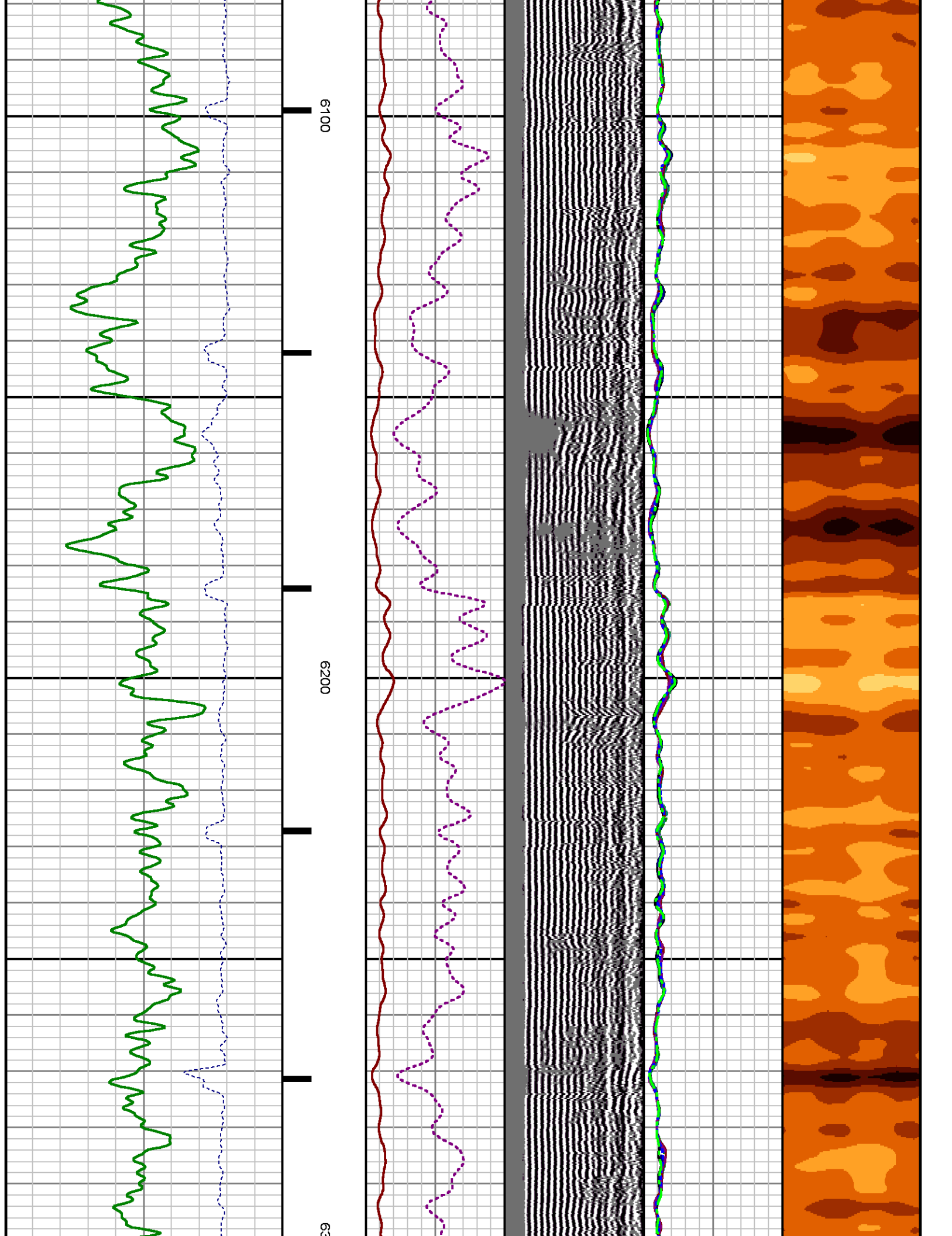
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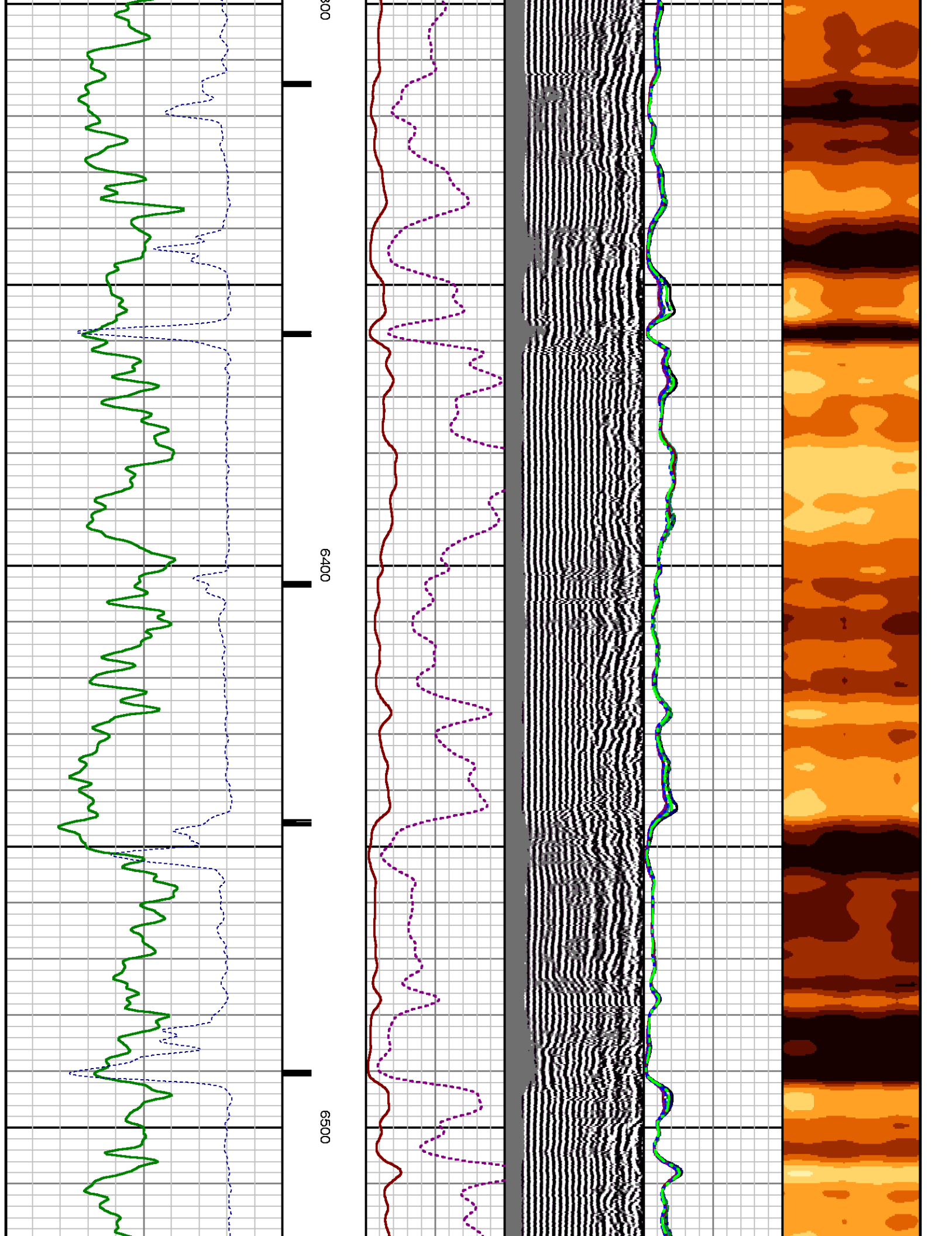
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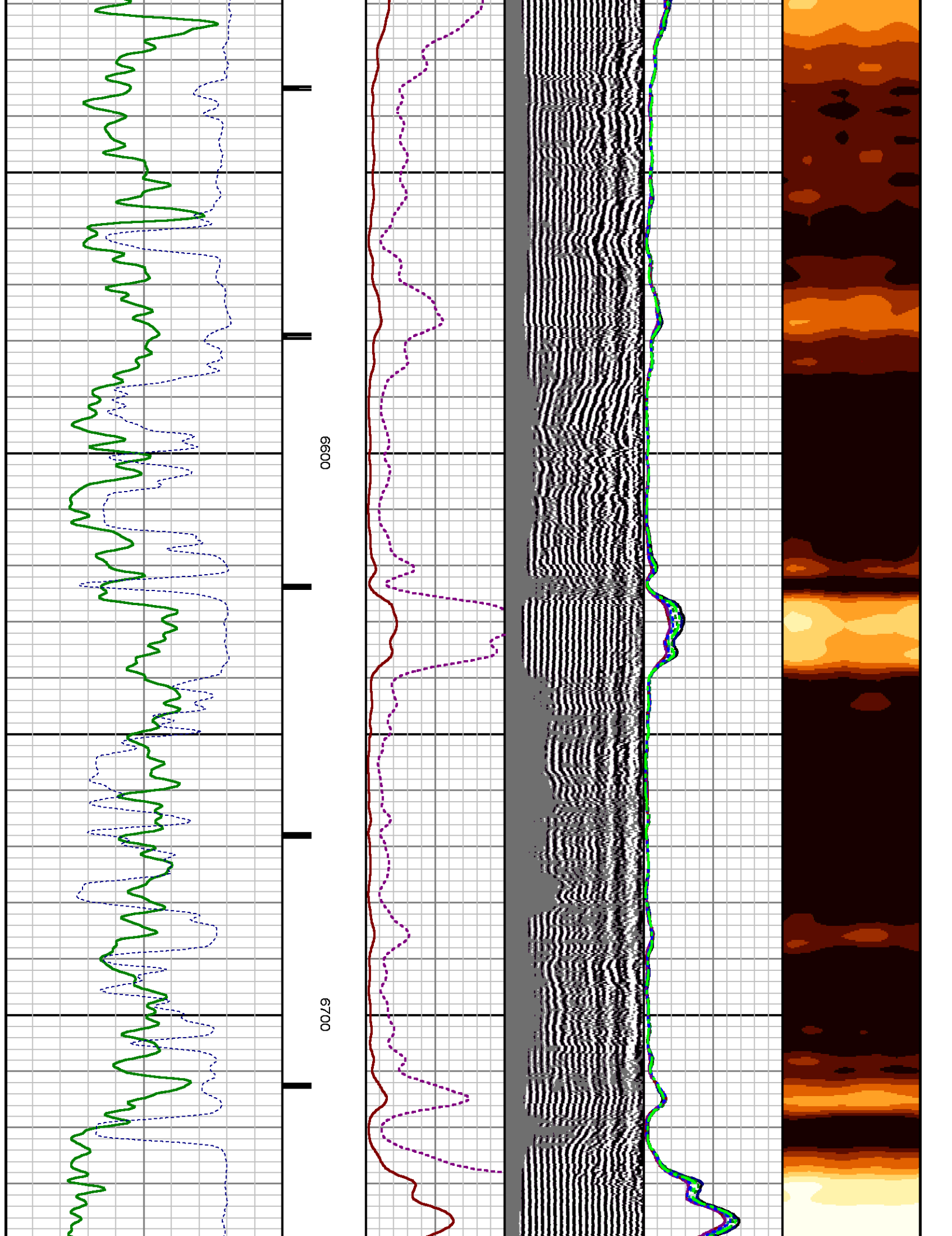


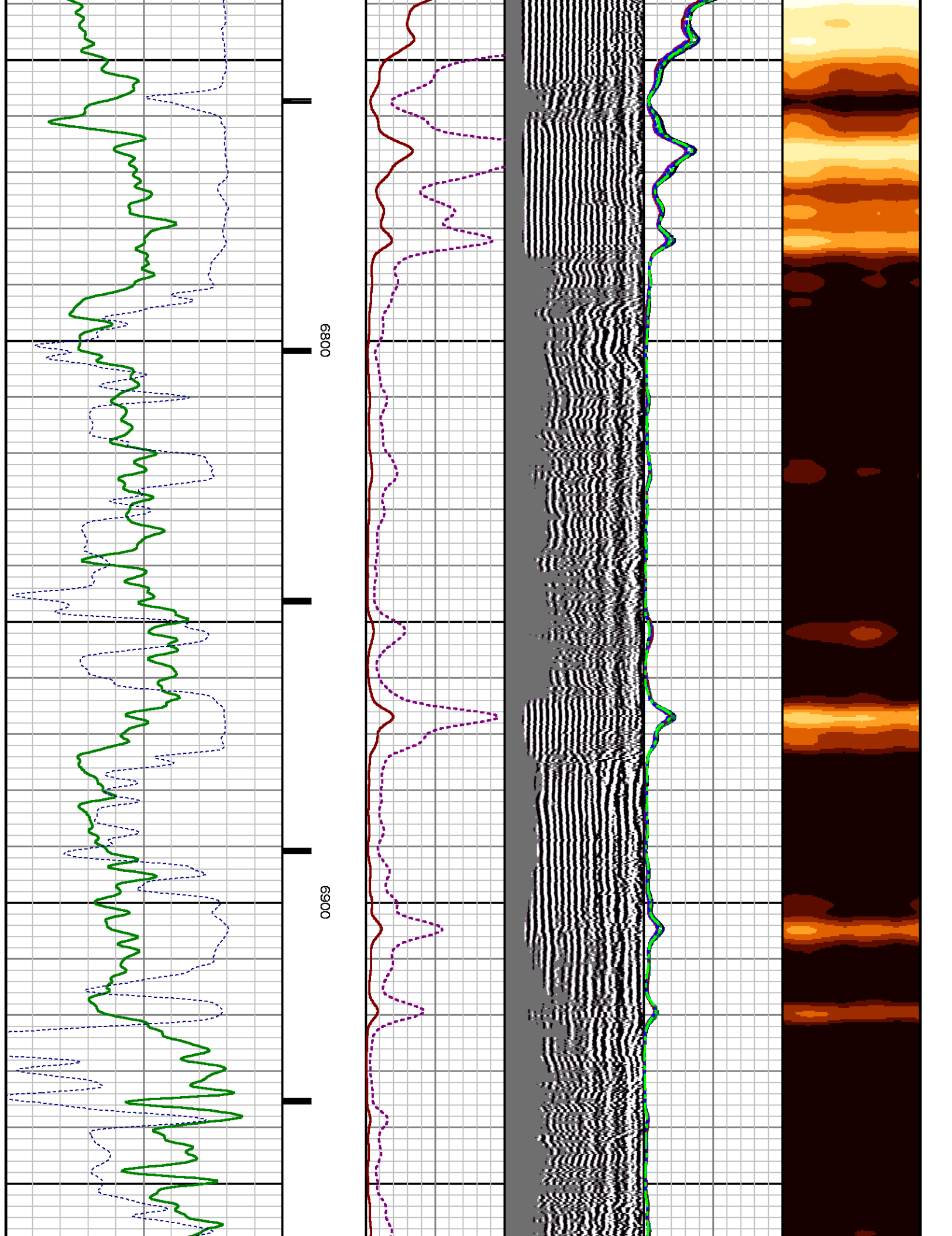


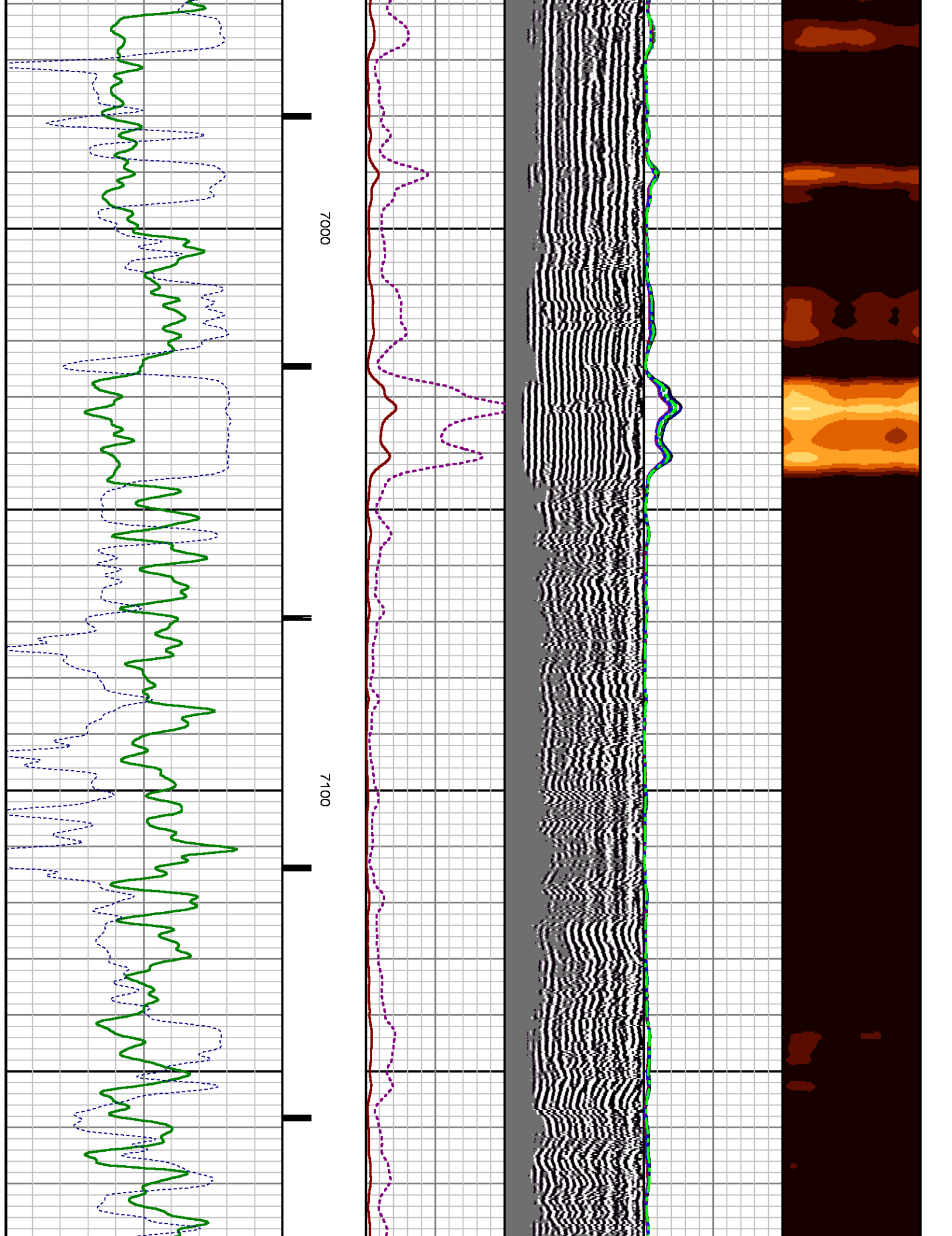


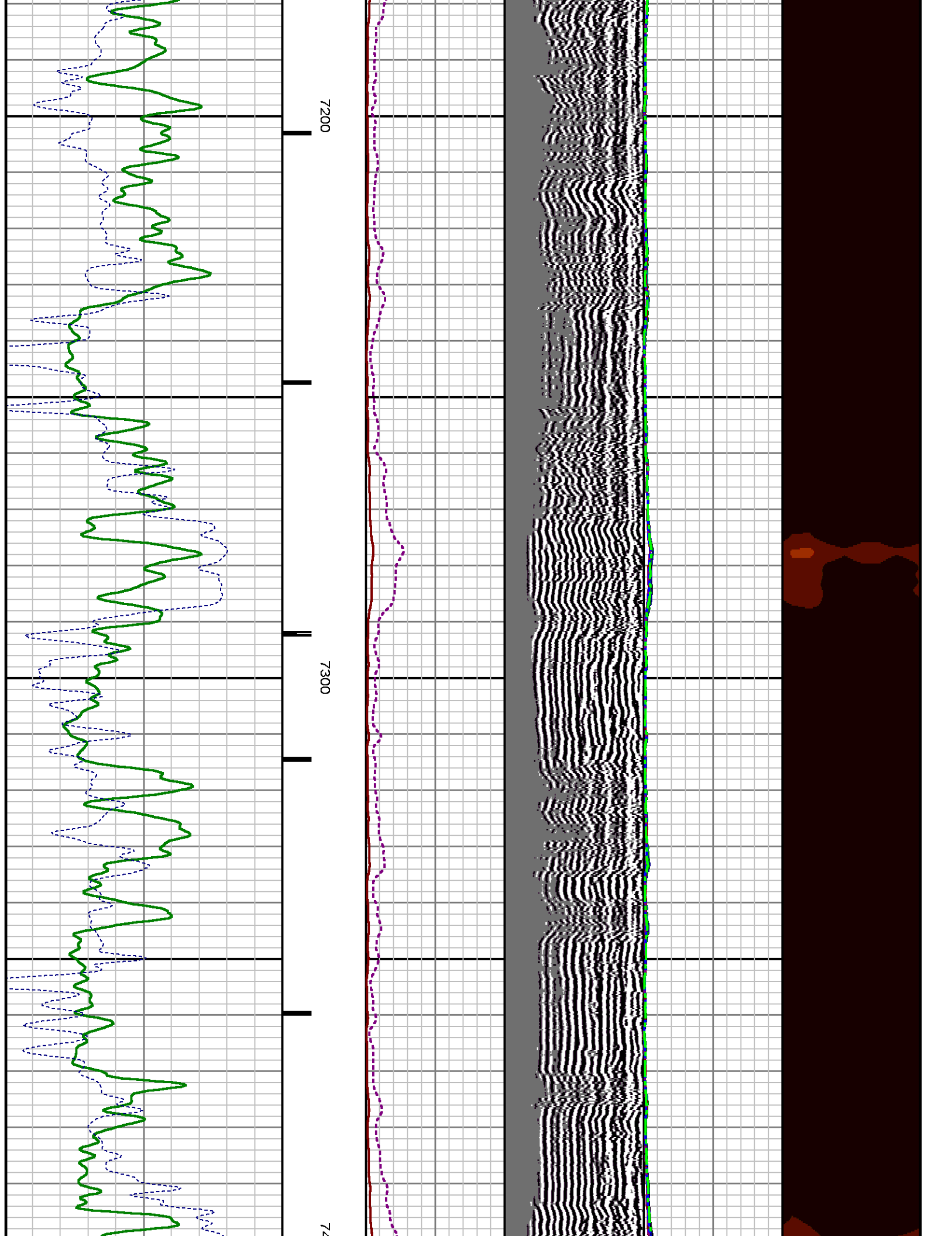


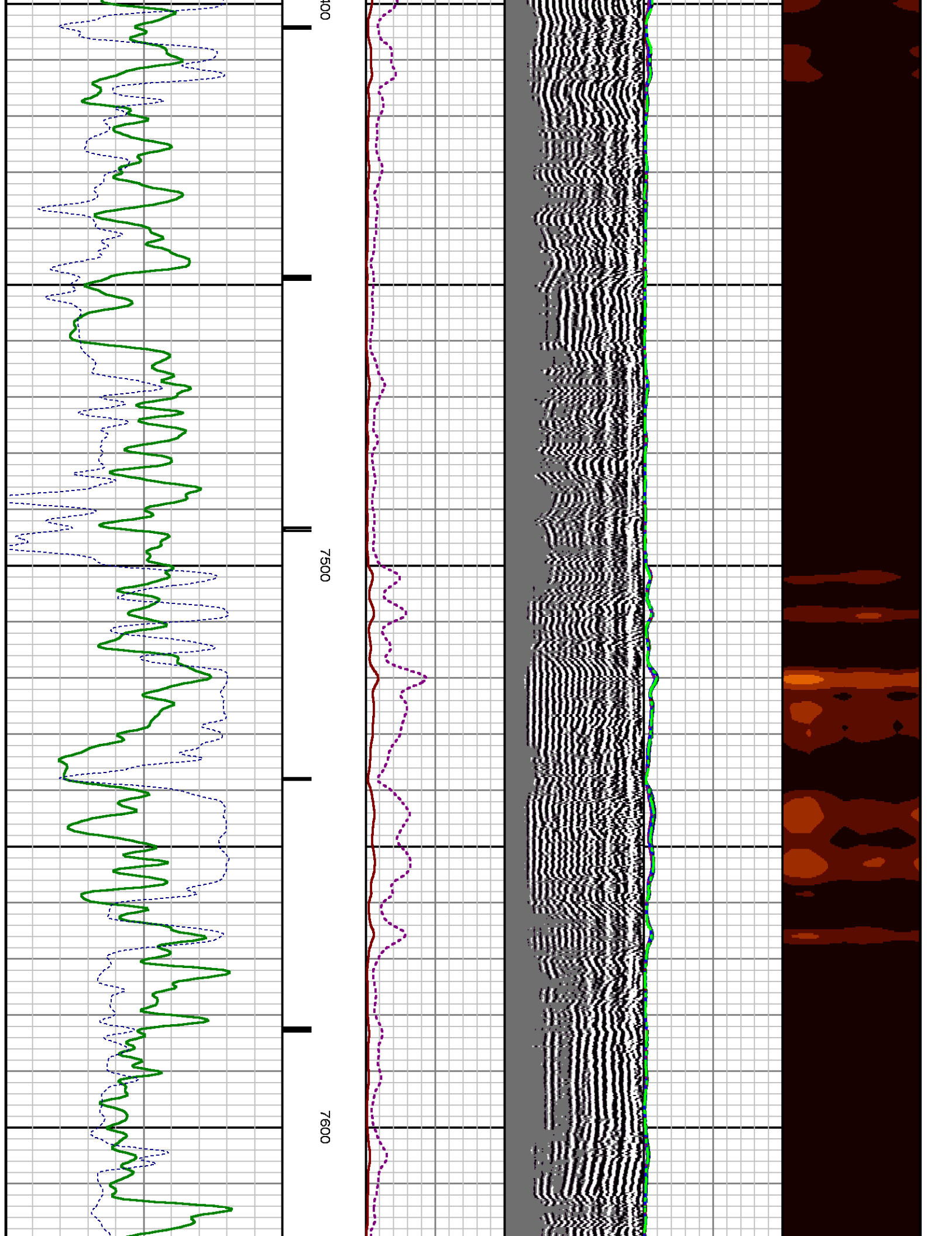


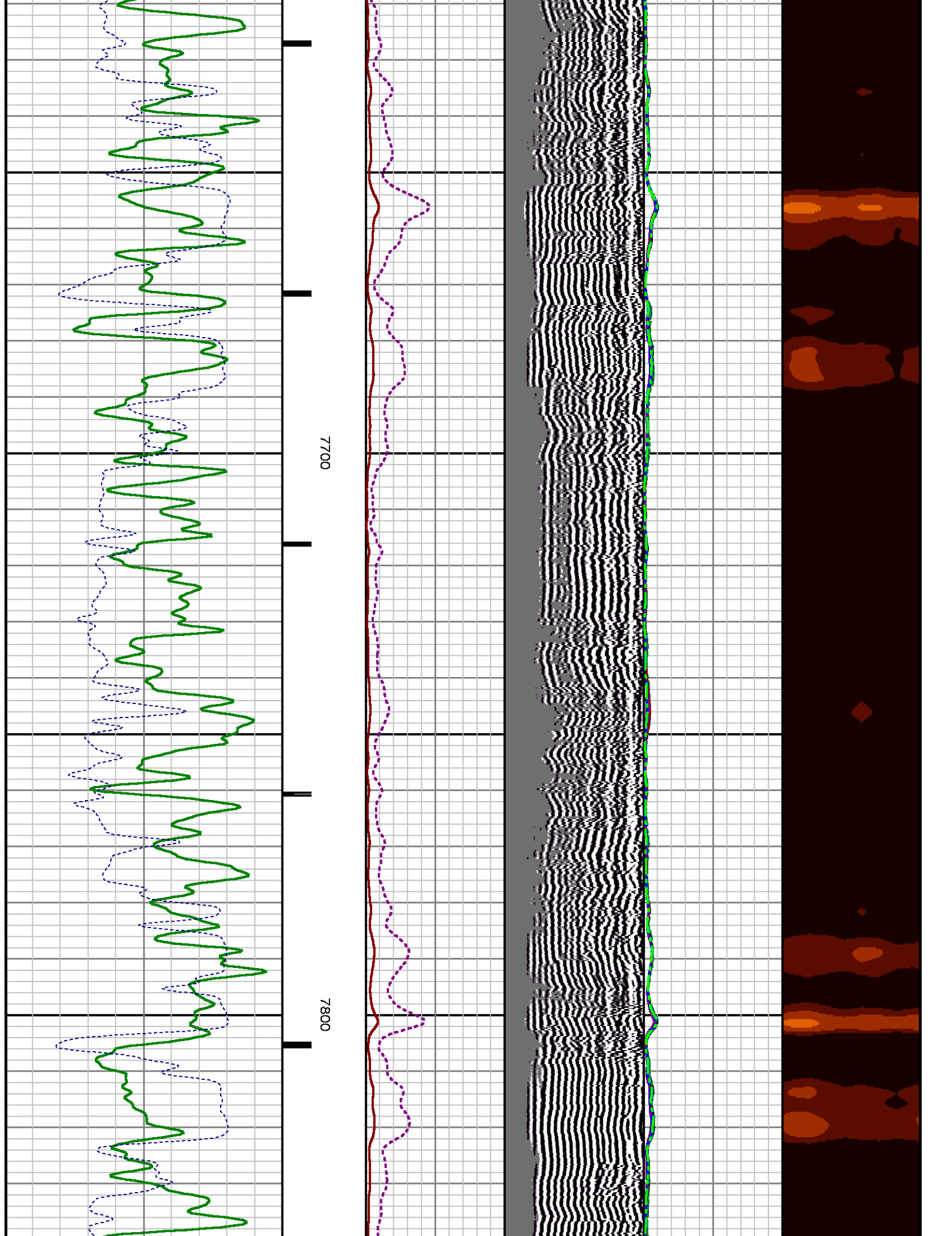


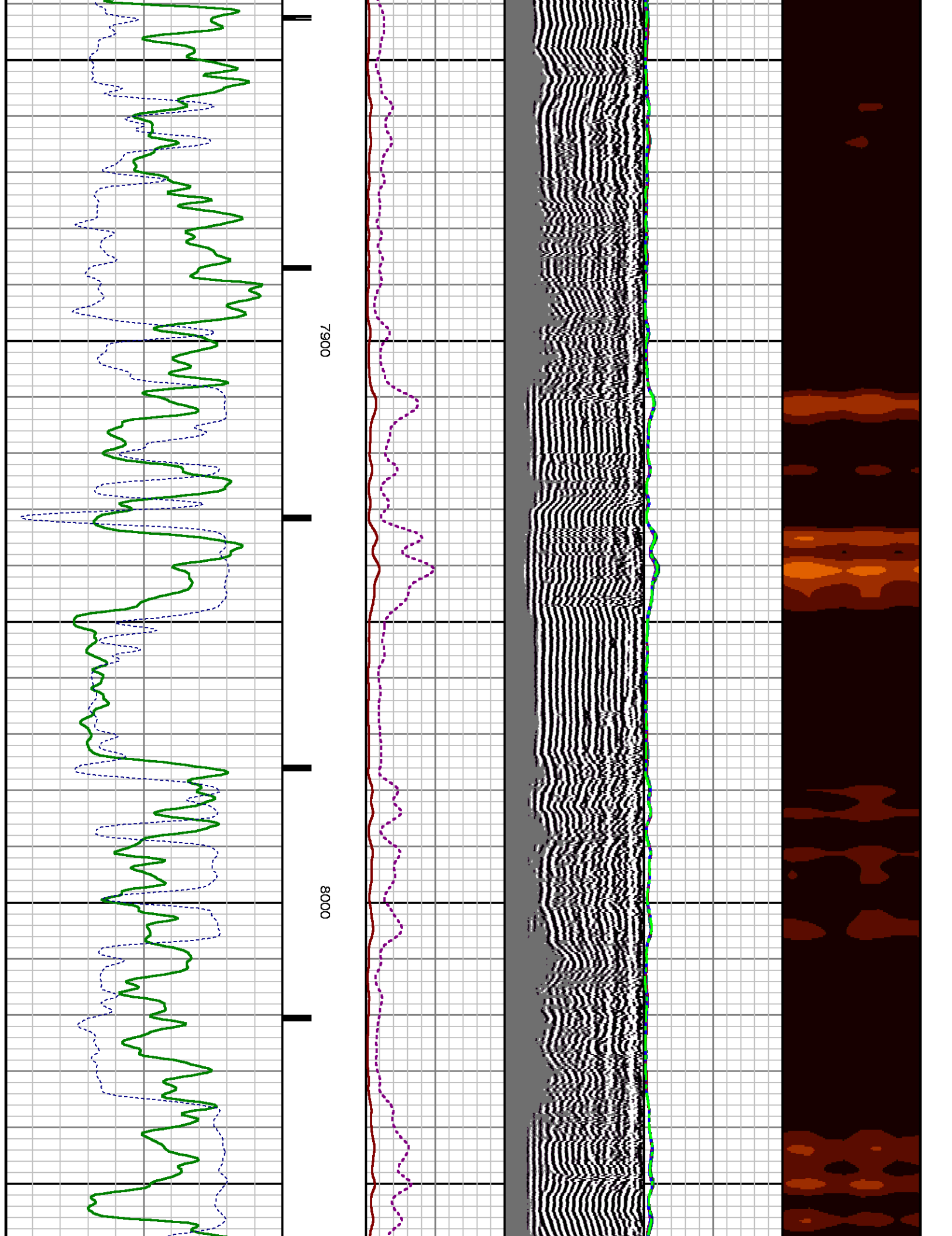


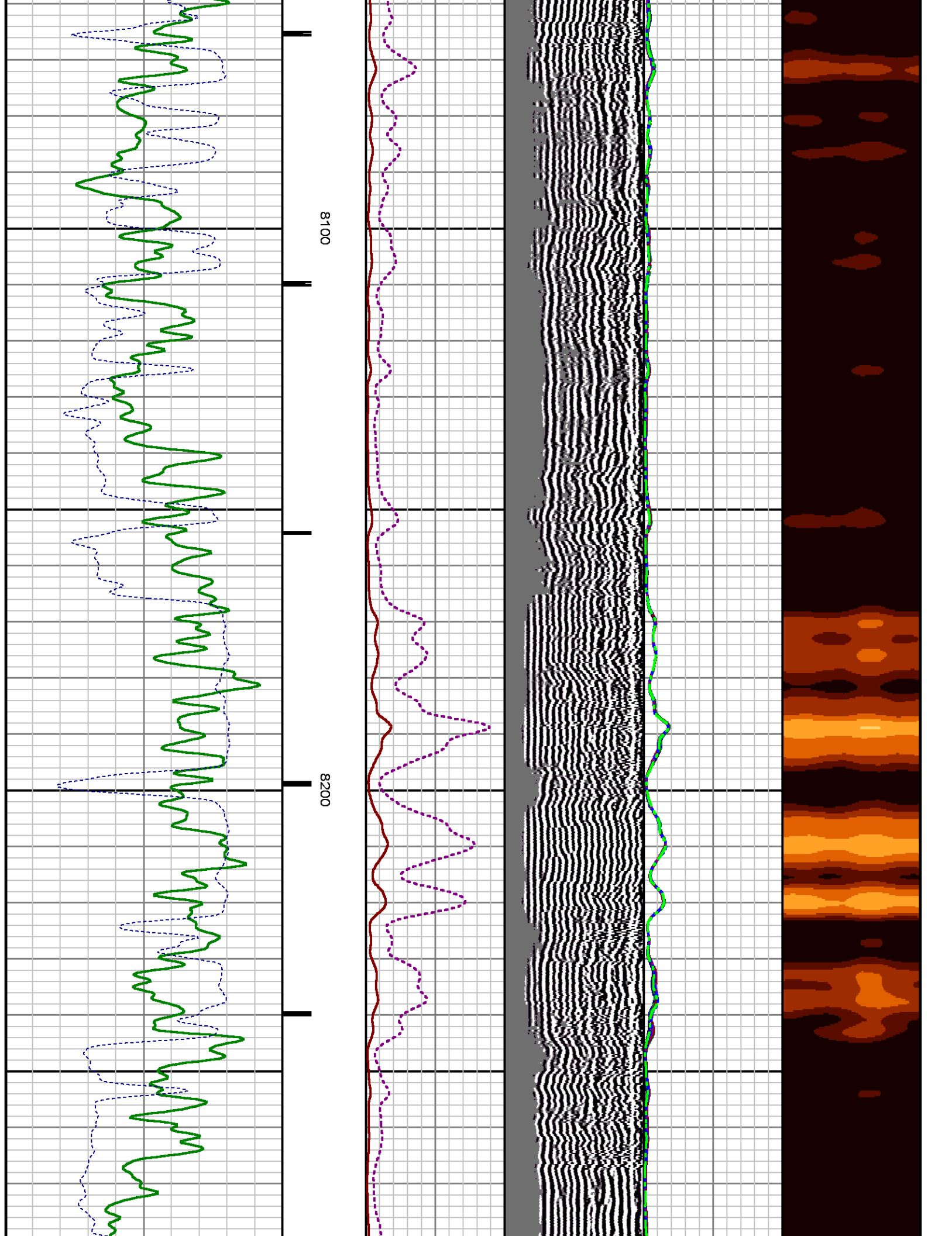


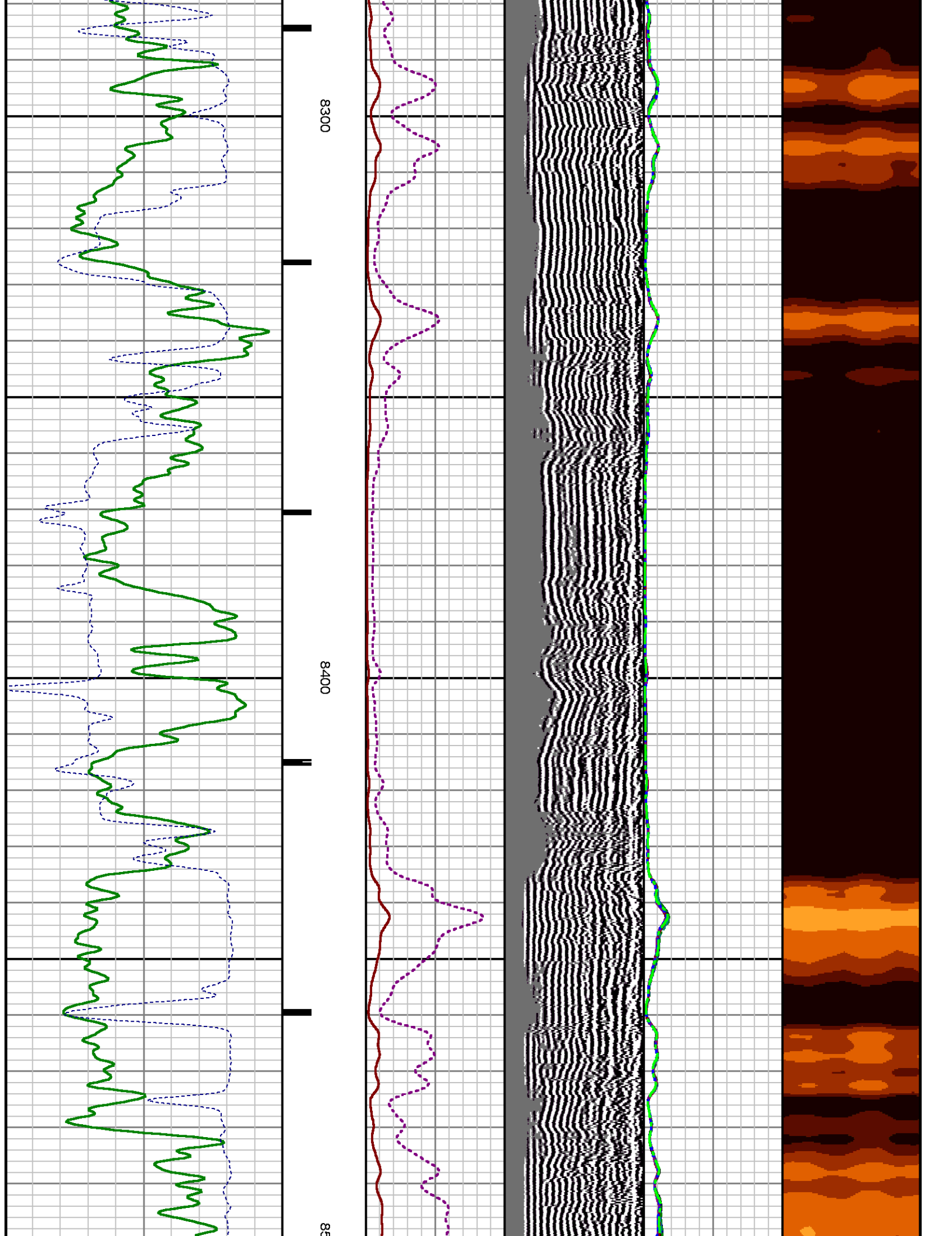


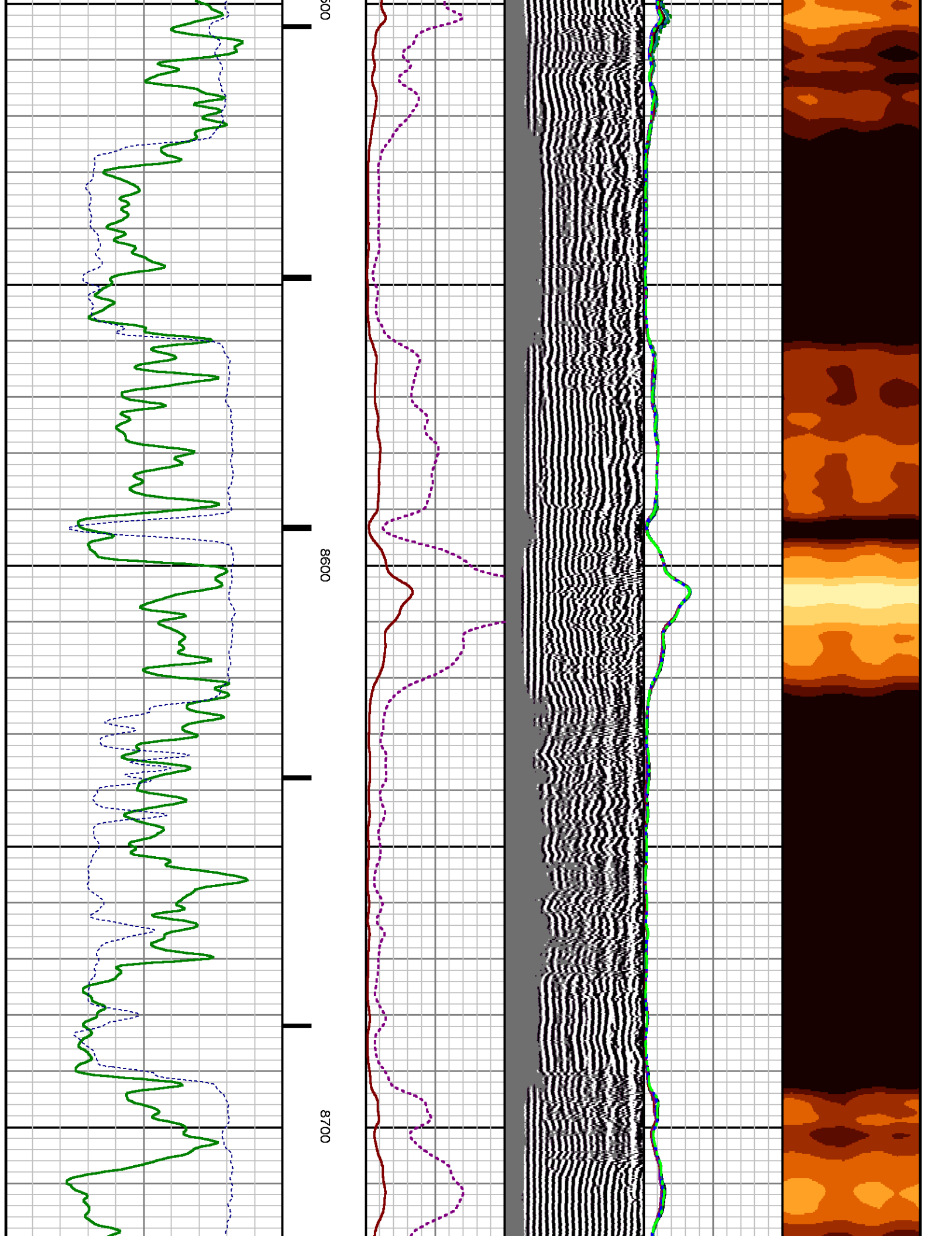


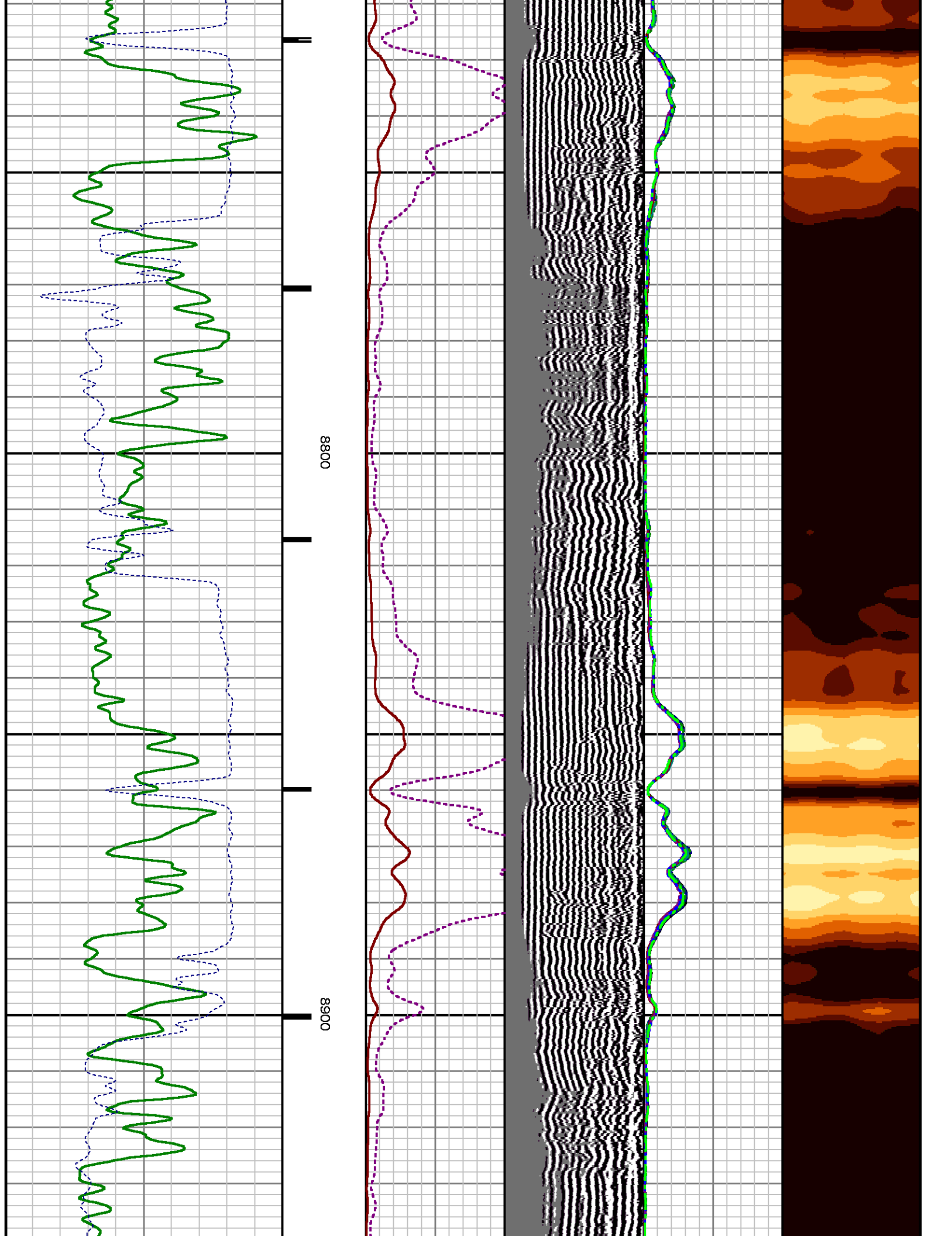


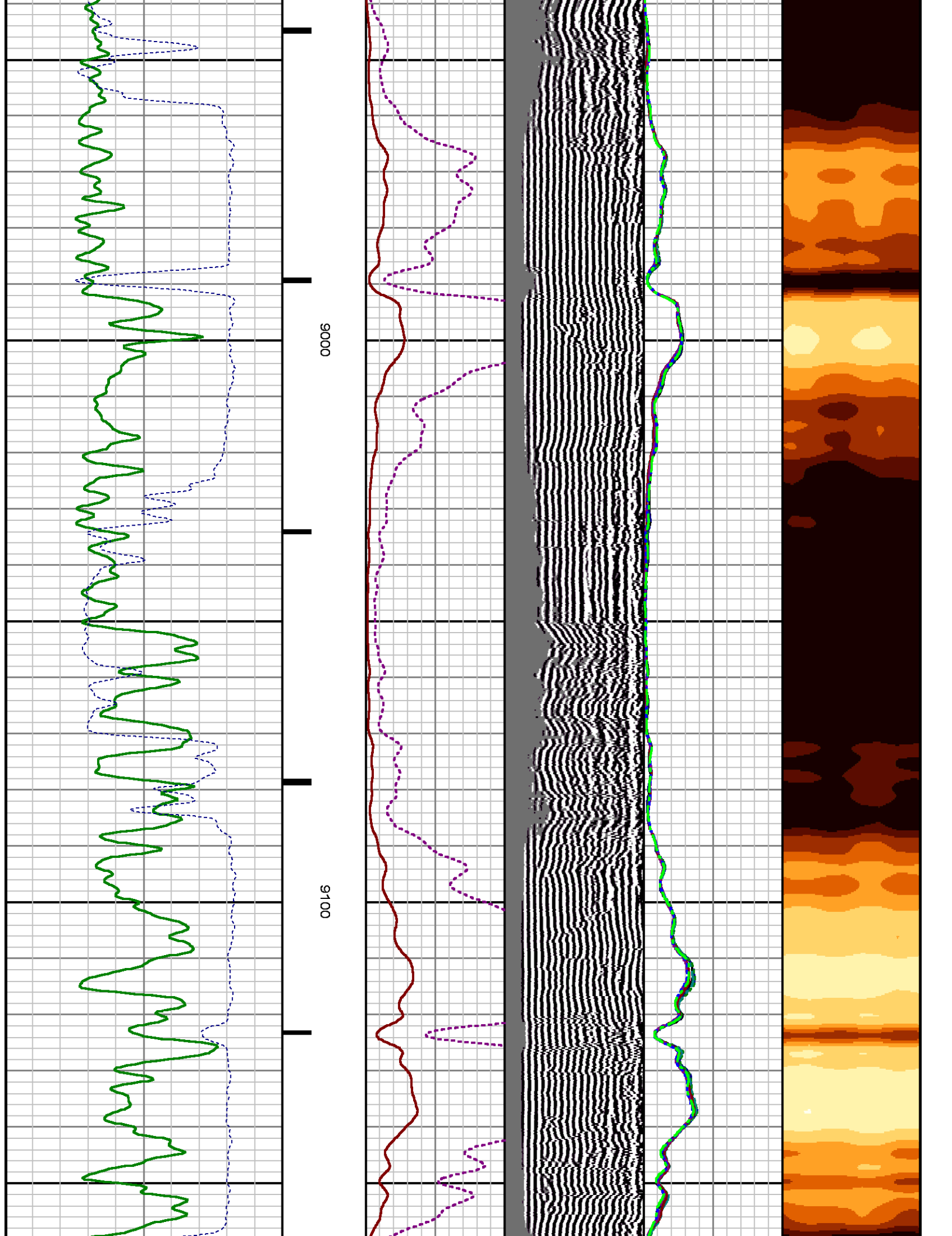


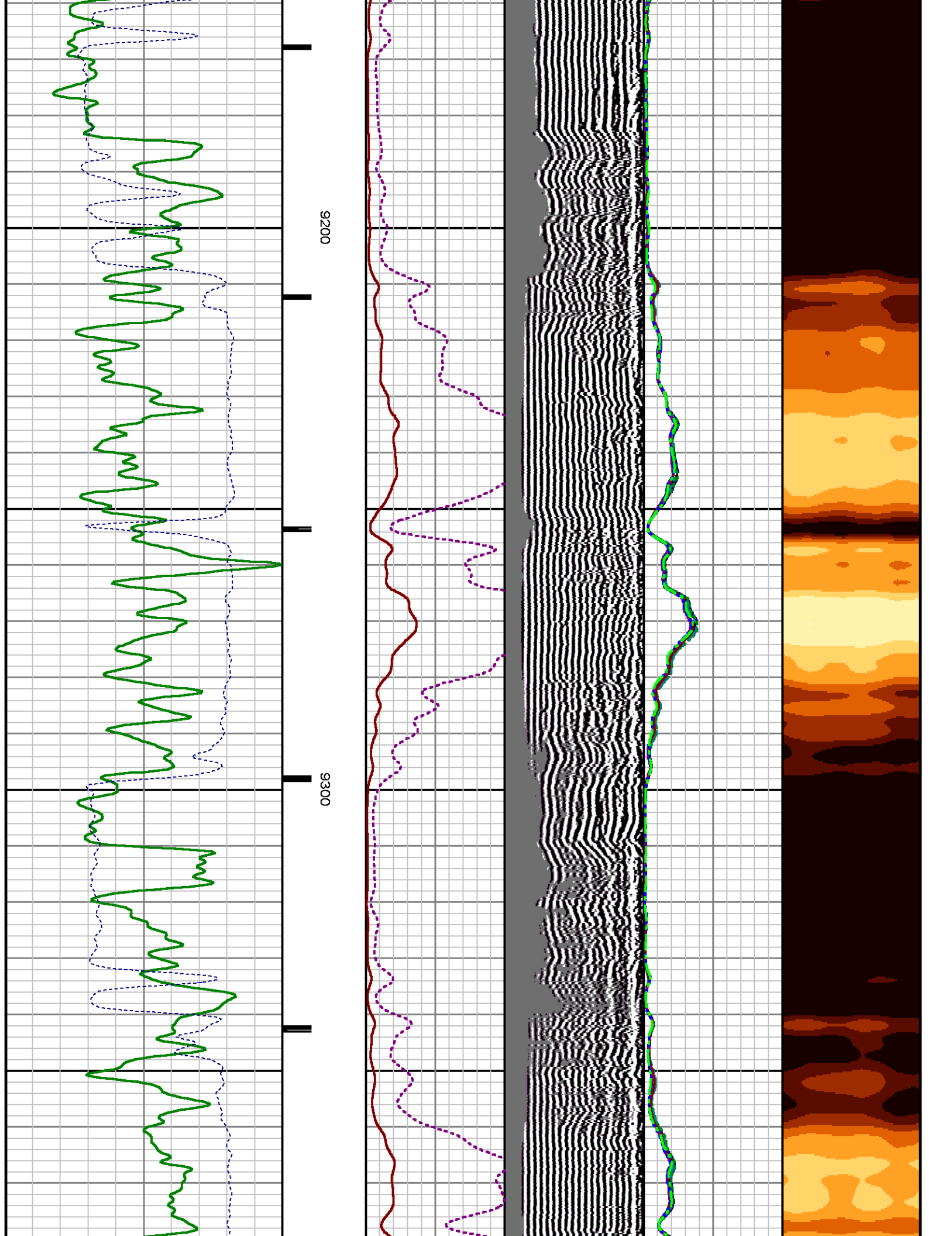


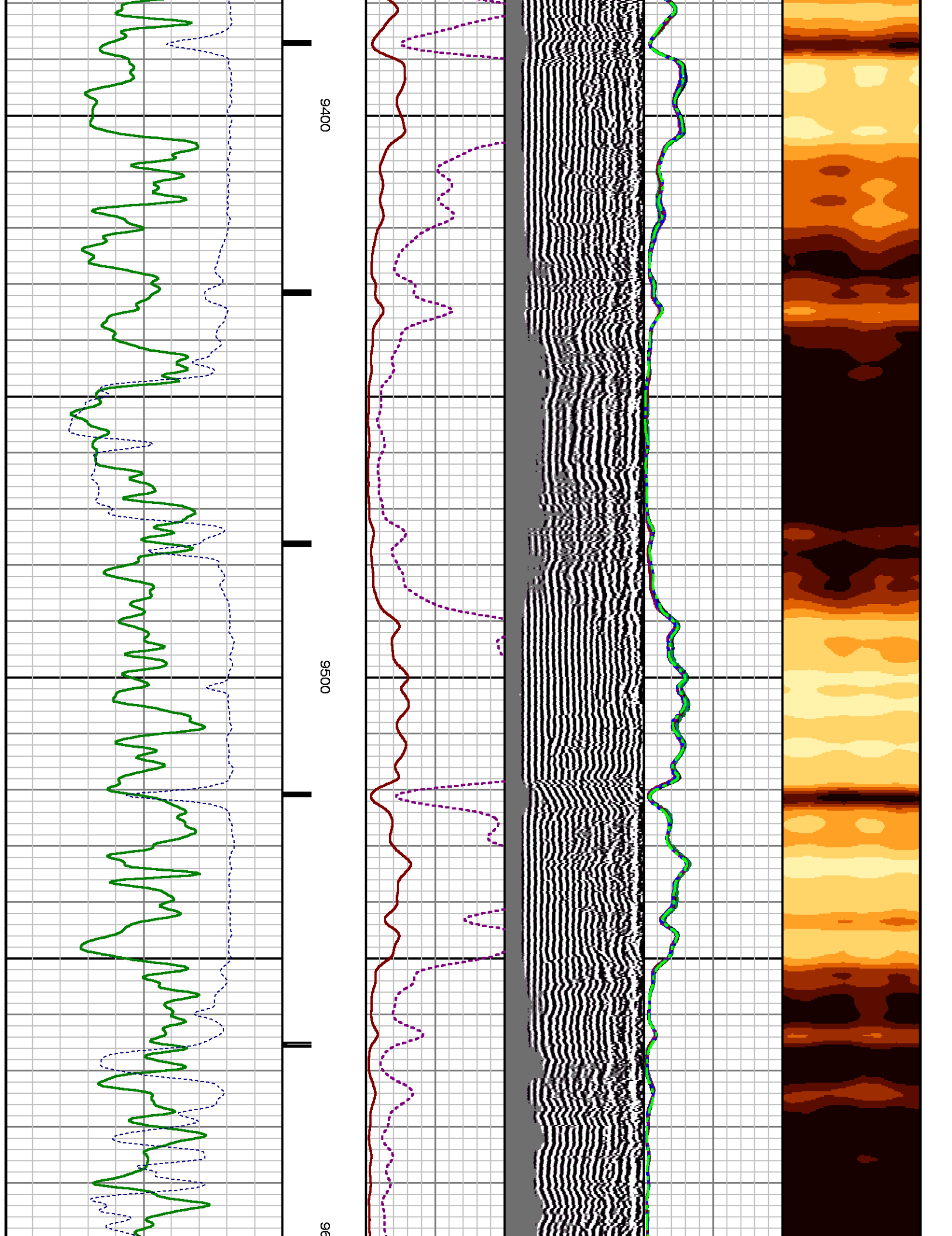


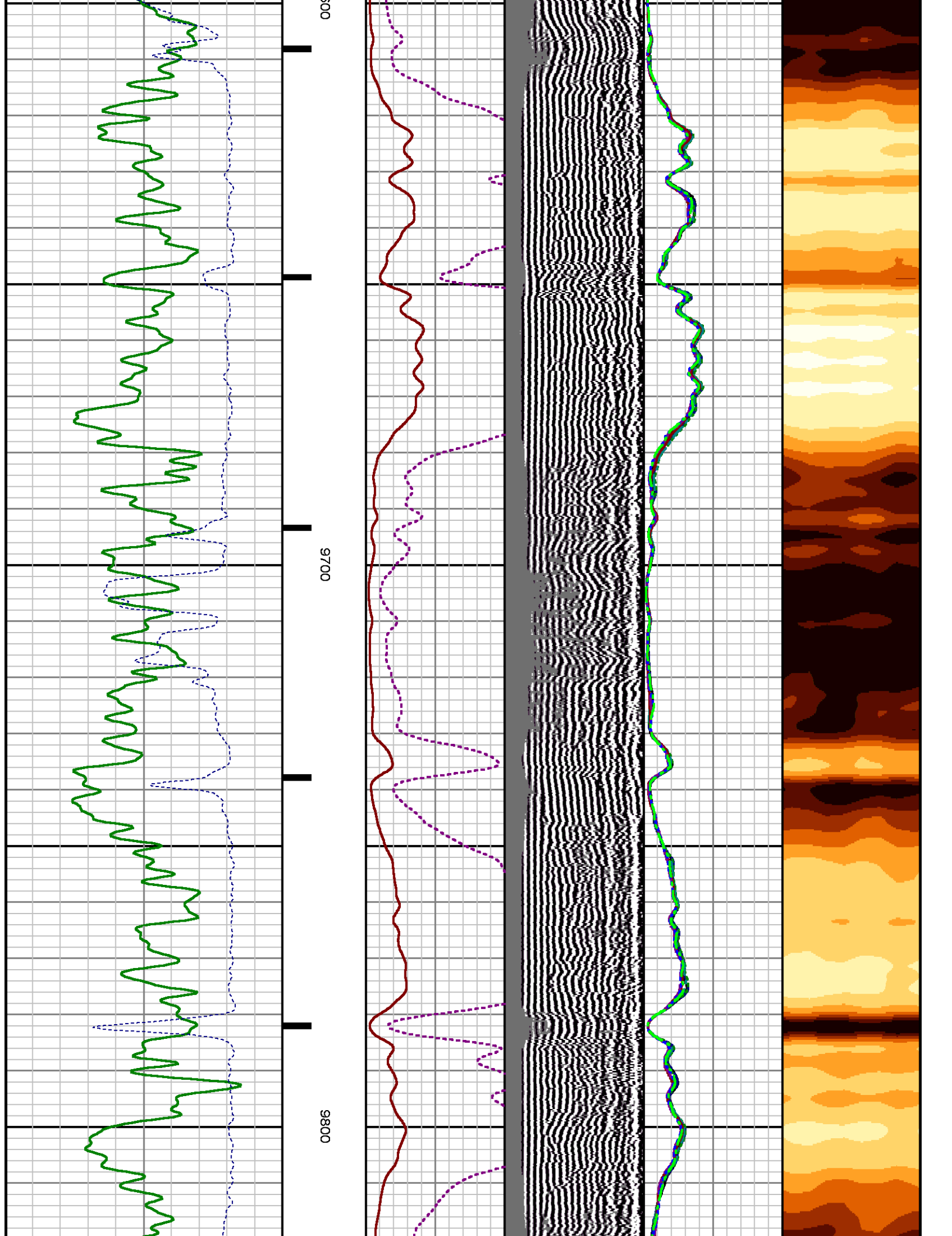


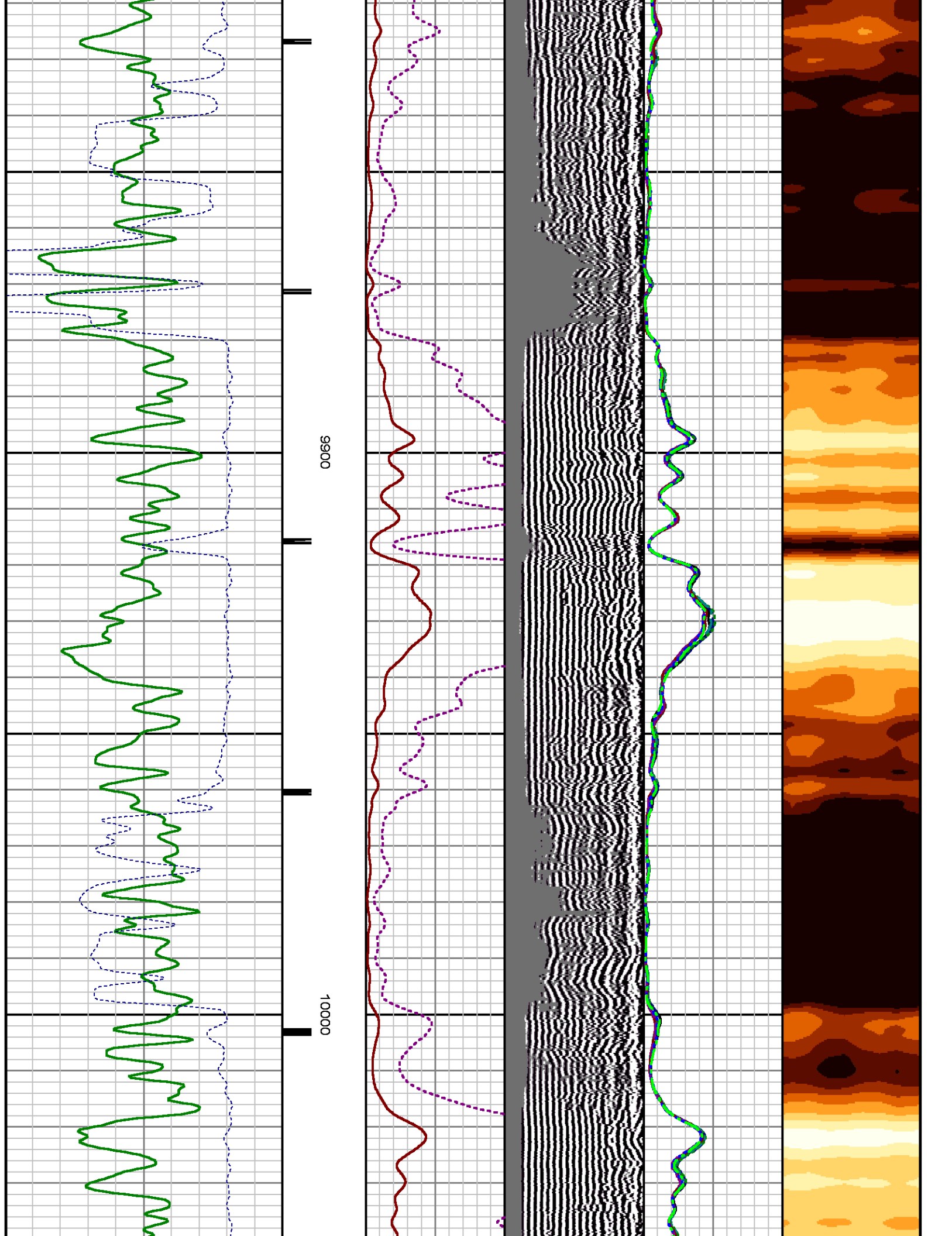


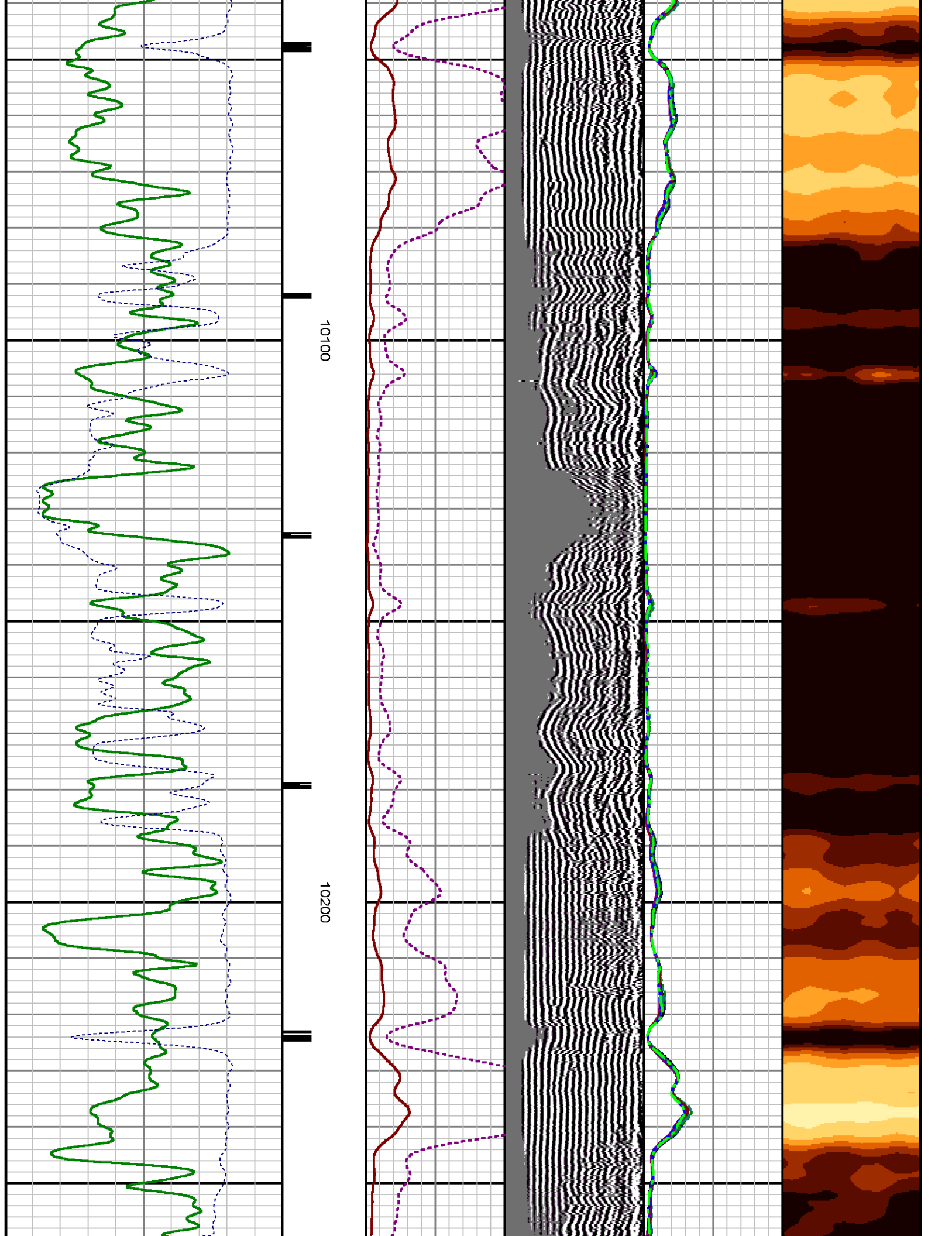


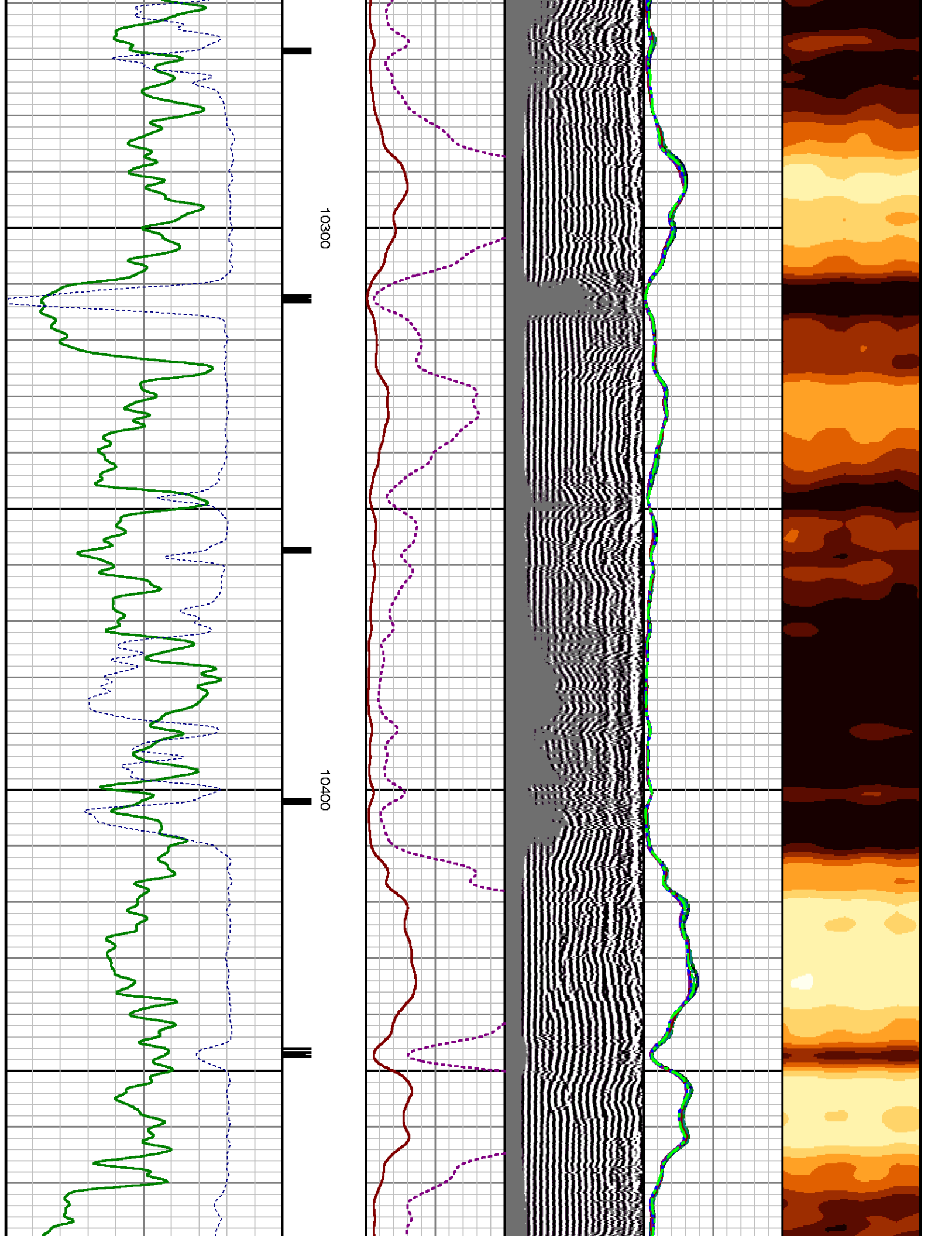


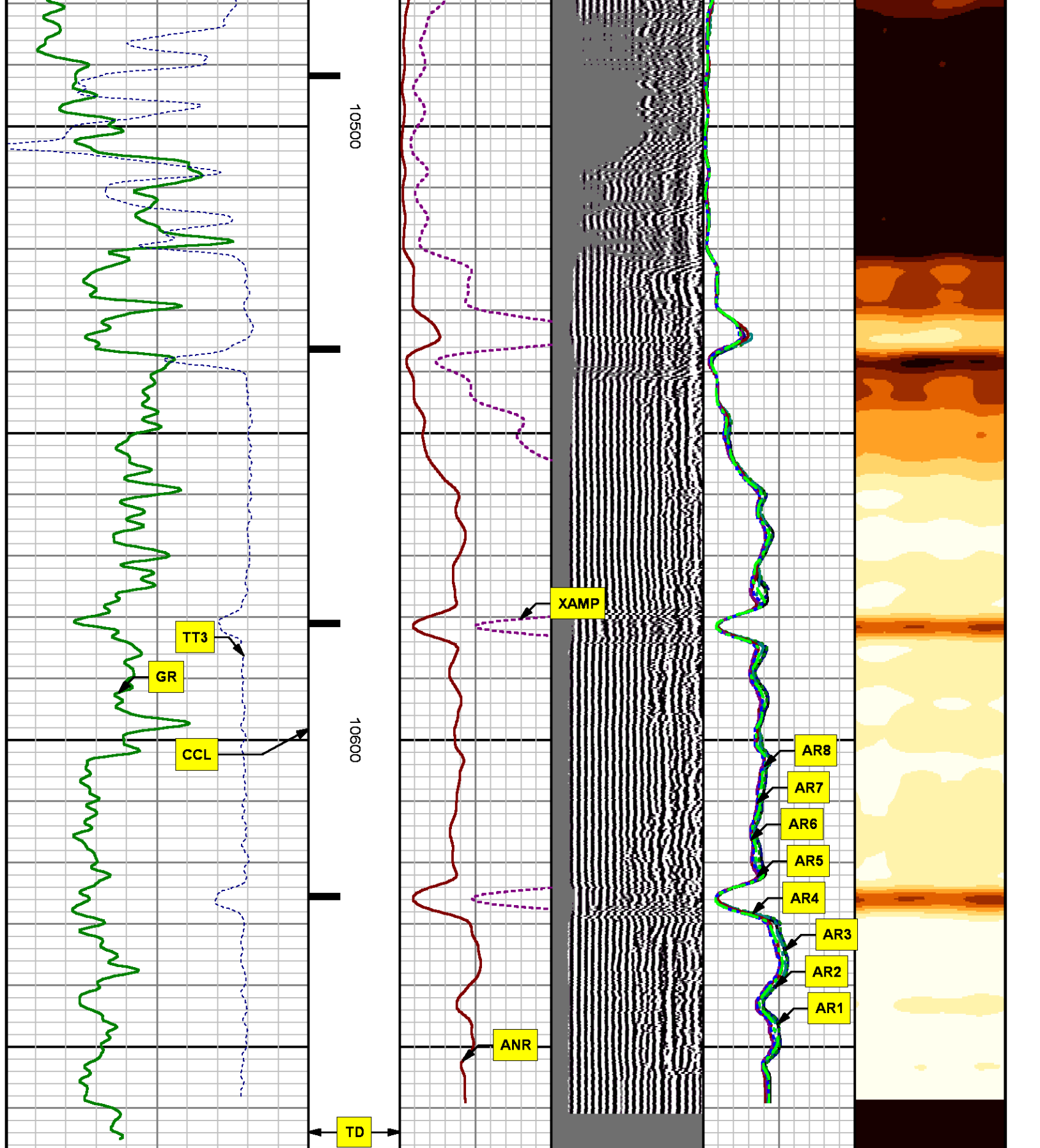












0	GR	150	CCL	MD feet 1:240	0	ANR	100	Variable Density	0	AR1	100	0	PBMAP	360
	gAPI		400			m v		200			100			
280	TT3	180	m v		0	XAMP	20	1200			100			
	usec					m v		us			100		80	20
											100			
											100			
											100			
											100			
											100			

0	AR6	100
0	AR7	100
0	AR8	100

**REPEAT SECTION**  
**0 PSI**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	10335.130	10665.380
RAL	Amp Gate Start Near	195.000	usec	10335.130	10665.380
RAL	Amp Gate Start Radial	195.000	usec	10335.130	10665.380
RAL	Amp Gate Width Far	25.000	usec	10335.130	10665.380
RAL	Amp Gate Width Near	25.000	usec	10335.130	10665.380
RAL	Amp Gate Width Radial	25.000	usec	10335.130	10665.380
RAL	casing od	4.500	inches	10335.130	10665.380
RAL	casing wt	11.600	lbm/ft	10335.130	10665.380
RAL	FB Start Far	291.900	usec	10335.130	10665.380
RAL	FB Start Near	180.000	usec	10335.130	10665.380
RAL	FB Start Radial	180.000	usec	10335.130	10665.380
RAL	FB Thresh Far	10.000	mv	10335.130	10665.380
RAL	FB Thresh Near	4.000	mv	10335.130	10665.380
RAL	FB Thresh Radial	4.000	mv	10335.130	10665.380
RAL	Fluid Travel Time	200.000	usec/ft	10335.130	10665.379

**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

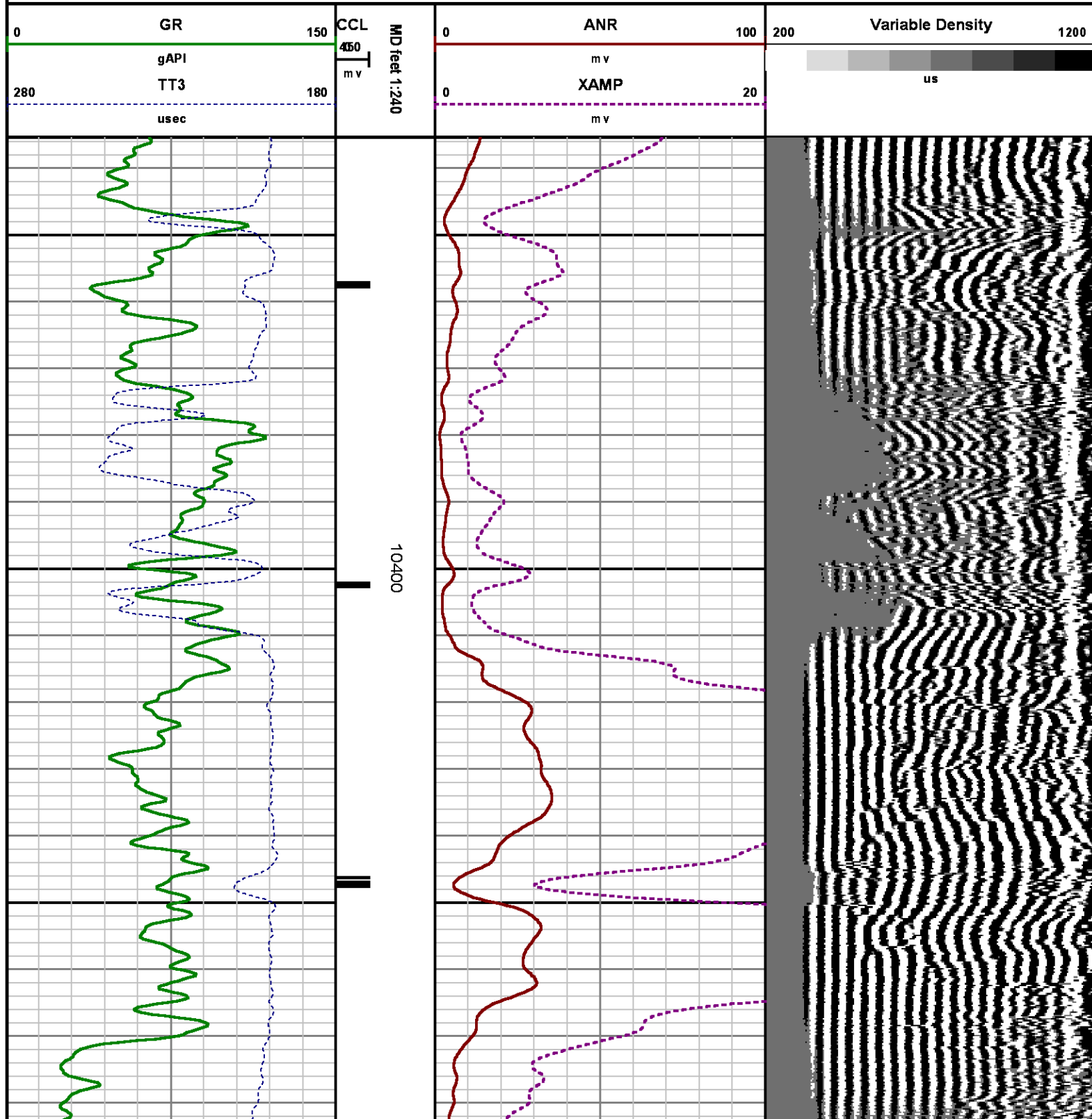
Well : FEDERAL NER 343-32

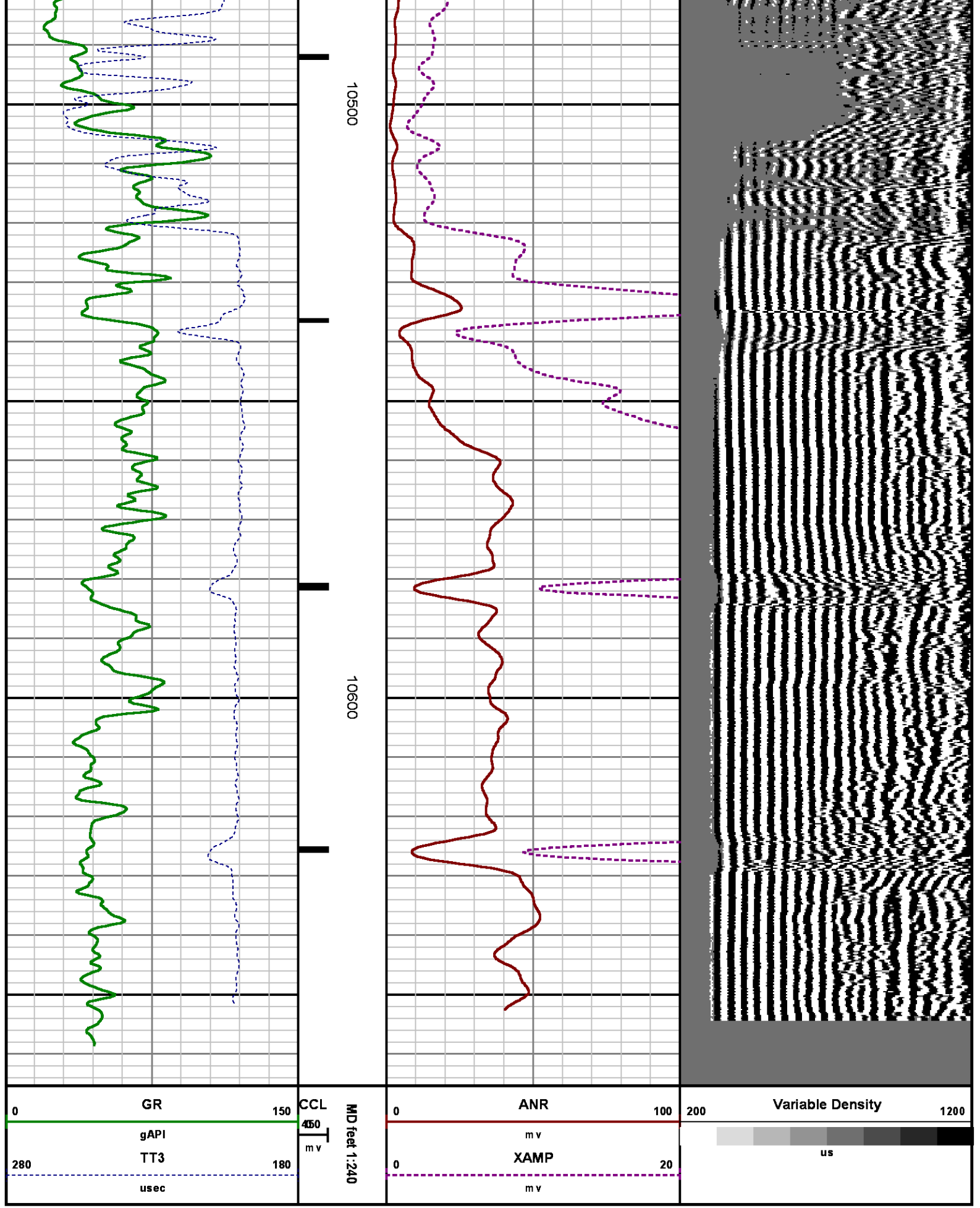
File Name : d:\welldata\wpx\ner 343-32\343cbl\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 10335.38 - 10665.38 feet UP

Created : 7/26/2014 9:03:27 AM





# CALIBRATION SUMMARY

## RALSHP

Shop Calibration: C:\case\calver\RALSHP\106JY26\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jul 26 08:14:15 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: JY26

Tool Delay [usec]  Tank OD  in Tank Wt  lbm/ft Tank ID  in

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	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.099"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
3 Ft. Receiver	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.238"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
5 Ft. Receiver	<input type="text" value="325"/>	<input type="text" value="324"/>	<input type="text" value="30"/>	<input type="text" value="221"/>	<input type="text" value="25"/>	<input type="text" value="-0.232"/>	<input type="text" value="150.00"/>	<input type="text" value="0.18"/>
Radial #1	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-1.224"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #2	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.201"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #3	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="0.178"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #4	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.791"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #5	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.072"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #6	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.003"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #7	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.441"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>
Radial #8	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.468"/>	<input type="text" value="100.00"/>	<input type="text" value="0.17"/>

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\106JY26\_fid.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jul 26 08:16:20 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: JY26

Tool Delay [usec]  Casing OD  in Casing Wt  lbm/ft Casing ID  in

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.070"/>	<input type="text" value="0.000"/>	<input type="text" value="0.99"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-0.763"/>			
5 Ft. Receiver	<input type="text" value="305"/>	<input type="text" value="25"/>	<input type="text" value="-1.085"/>			
Radial #1	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-1.710"/>			
Radial #2	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-1.306"/>			
Radial #3	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-1.016"/>			
Radial #4	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-0.995"/>			
Radial #5	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-0.802"/>			

Radial #6	195	25	-0.805
Radial #7	195	25	-0.639
Radial #8	195	25	-0.791

## TOOL DIAGRAM

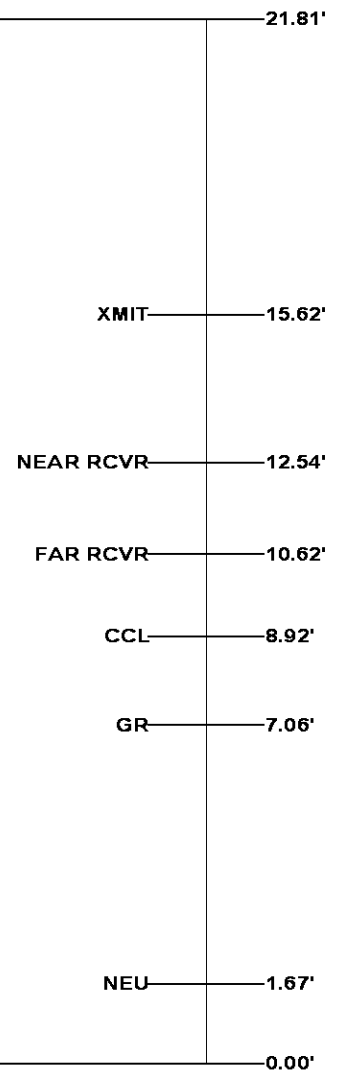
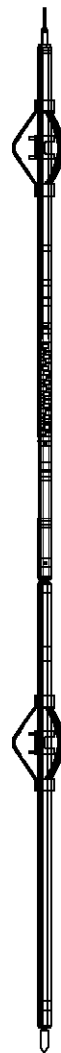
### OTA SHORT CABLE HEAD

### 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"**

HUGHES

Well: FEDERAL WEN 010 02

Baker Atlas

Field

RULISON

API No:

County

GARFIELD

State

CO

05045217910000

CASE

Location

Elevations

SHL: 139' FNL & 2589' FWL (5 7S 93W)

KB 7629 ft

32 6S 93W

BHL: 1927' FSL & 681' FEL (32 6S 93W)

DF

RU 23-5 PAD

GL 7603 ft

NABORS 576

SEC 32 TWP 6S RGE 93W