



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH022856	Company Well	WPX ENERGY FEDERAL RG 312-14-298
API No: 05103117910000	Field County	SULPHUR CREEK RIO BLANCO State CO
14 2S 98W RG 12-14-298 PAD CYCLONE 29	Location SHL: 1644' FNL & 505' FWL BHL: 1671' FNL & 645' FWL SEC 14 TWP 25 RGE 98W	Other Services RPM Elevations KB 6561 ft DF GL 6560 ft
Permanent Datum Log Measured From Drill Measured From	GL KB KB Elevation 21 ft Above P. D.	

Date	20/FEB/14
Run	ONE
Service Order	US625290
Depth Driller	10897 ft
Depth Logger	10817 ft
Bottom Logged Interval	10807 ft
Top Logged Interval	21 ft
Time Started	9:00
Time Finished	13:30
Operator Rig Time	4.5 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	67 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	65 fpm
Maximum Recorded Temperature	265 degF
Reference Log	NA
Reference Log Date	NA
Equipment No.	4271
Location	GRAND JCT.
Recorded By	NEWELL
Witnessed By	WAYNE MARCOTTE

- 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	0 ft	80 ft
14.75/13.5	80 ft	3007 ft
8.75/7.875	3007 ft	10978 ft

Casing Record				
Size	Weight	Grade	From	To
18 In			0 ft	80 ft
9.625 In			0 ft	3007 ft
4.5 In	11.6 lbm/ft	P-110	0 ft	10978 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 wellhead on RG 312-14-298 is 9' above ground level elevation
The amount of linear shift is 10 feet.

Logged with zero PSI at wellhead.

BHT = 265 °F  
SJ = 5733'–5755'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10124106	CENTRALIZED
1	1	GR/CCL	2459XA	10124121	CENTRALIZED

*PRIMARY PRESENTATION*  
*0 PSI*

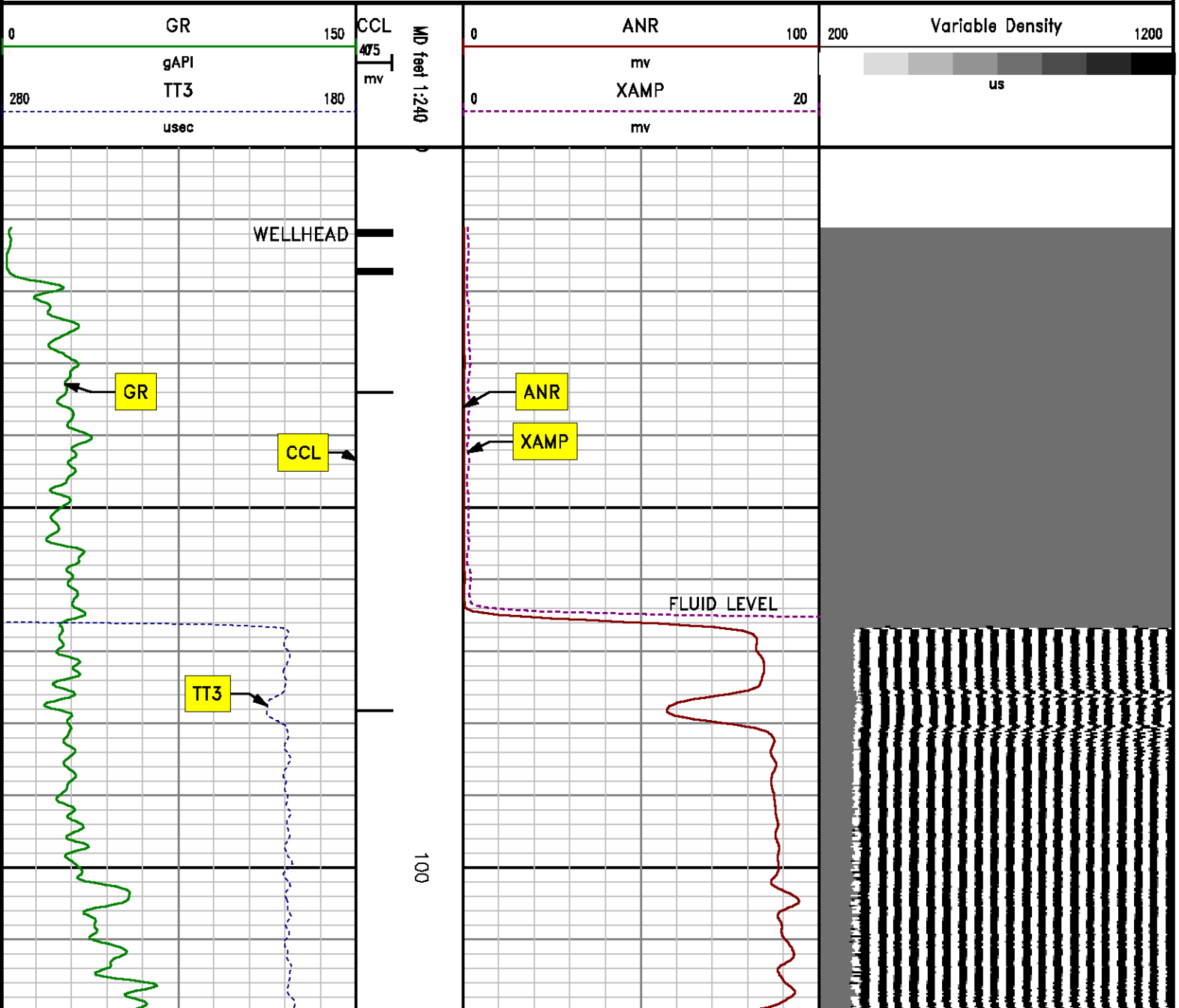
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	18.468	10818.250
RAL	Amp Gate Start Near	195.000	usec	18.468	10818.250
RAL	Amp Gate Start Radial	195.000	usec	18.468	10818.250
RAL	Amp Gate Width Far	25.000	usec	18.468	10818.250
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RAL	casing od	4.500	inches	18.468	10818.250
RAL	casing wt	11.600	lbm/ft	18.468	10818.250
RAL	FB Start Far	291.900	usec	18.468	10818.250
RAL	FB Start Near	175.391	usec	18.468	10818.250
RAL	FB Start Radial	175.391	usec	18.468	10818.250
RAL	FB Thresh Far	10.000	mv	18.468	10818.250
RAL	FB Thresh Near	4.000	mv	18.468	10818.250
RAL	FB Thresh Radial	4.000	mv	18.468	10818.250
RAL	Fluid Travel Time	200.000	usec/ft	18.468	10818.750

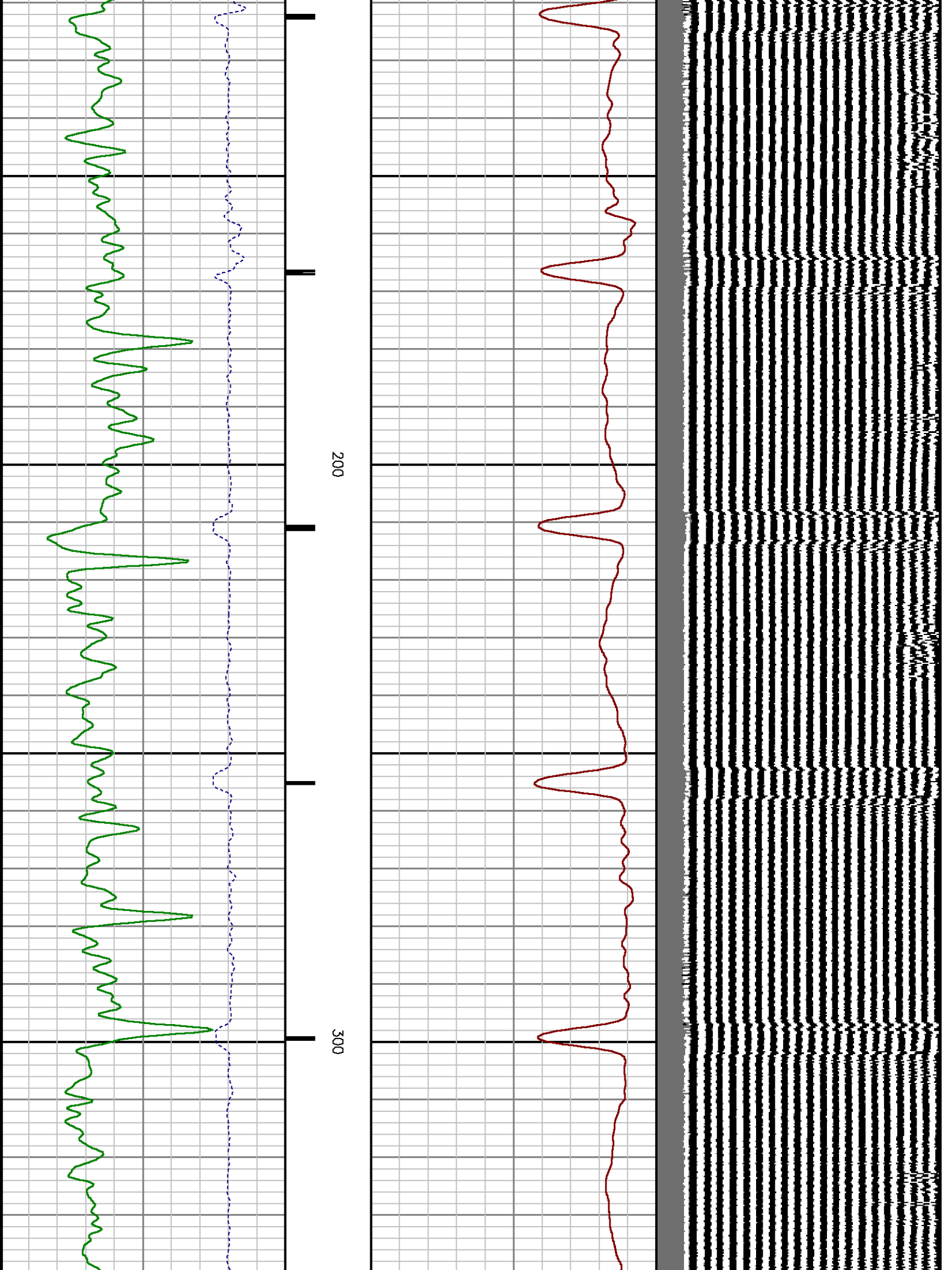
DEPTH OFFSETS  
(for Acquired Curves)

SERIES                      DEPTH OFFSET                      ACQUIRED CURVES

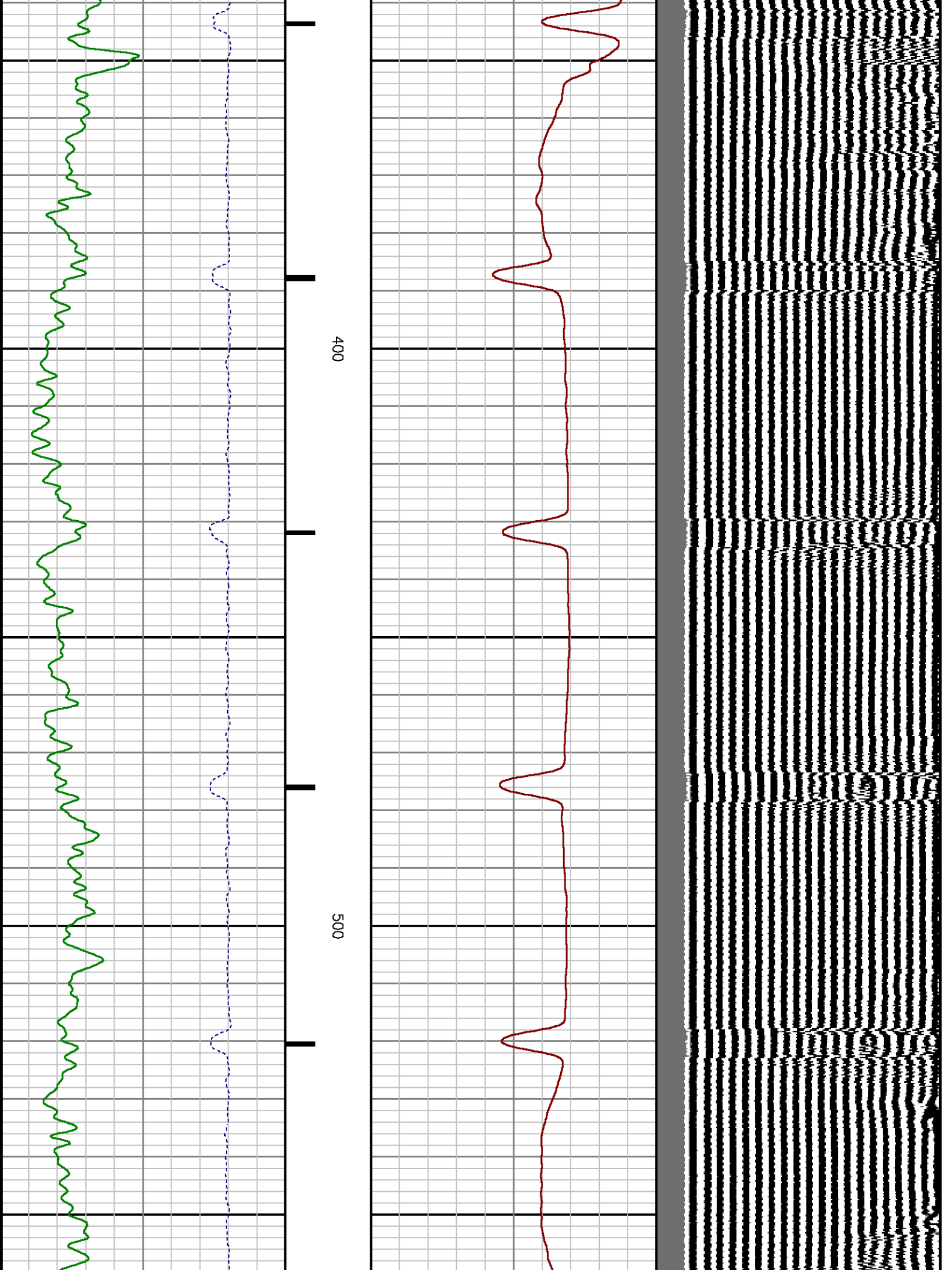
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		AR5	AR6	AR7	AR8	CHV	FPR2		
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3		
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP		
1426XA	-15.750	AFAR	SIG	TT5					
2459XA	-11.340	CCL							
2459XA	-9.490	GR							
2459XA	-4.090	NEU							

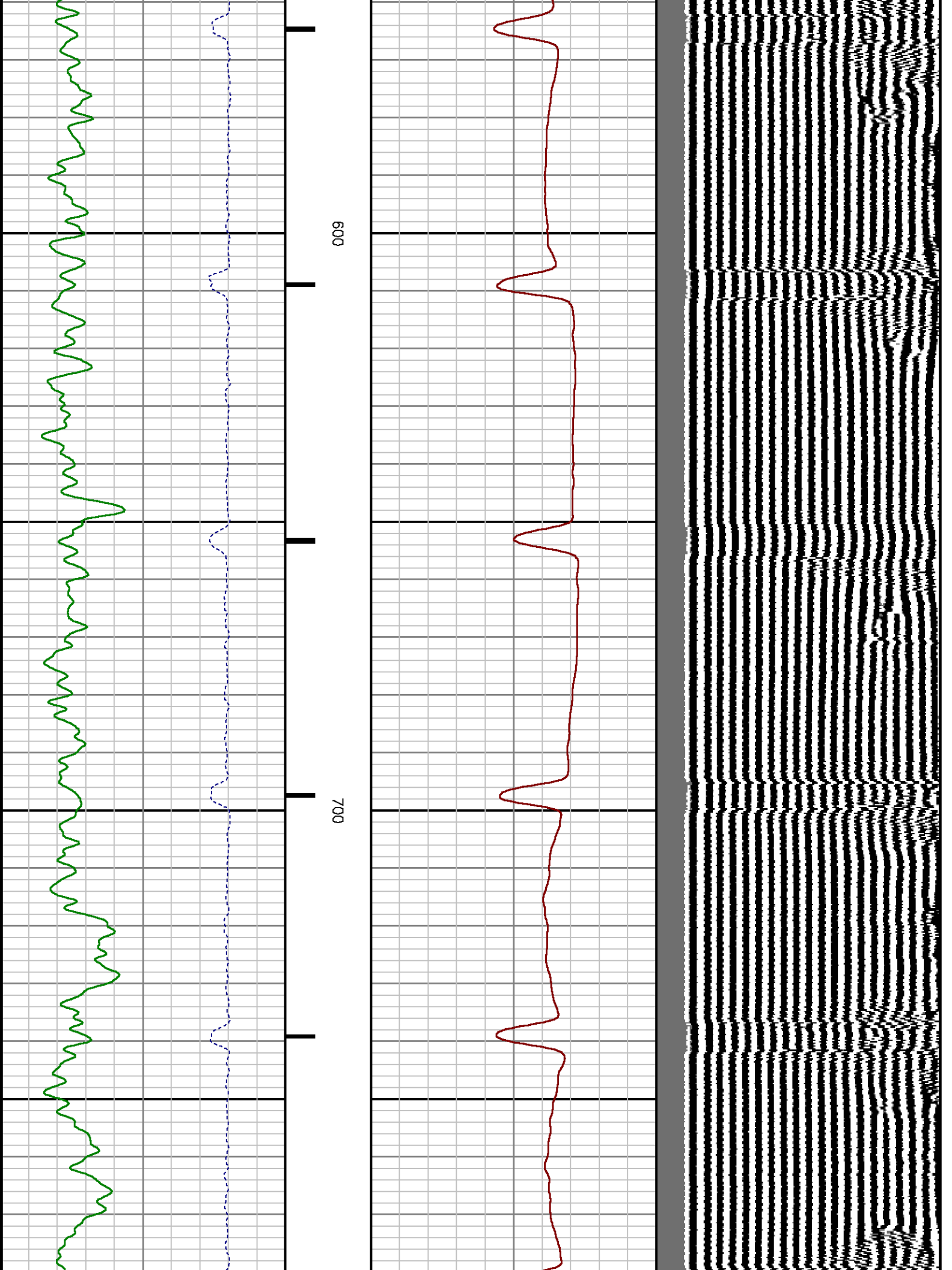
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Plotted by : PlotMgr, v5.4.504	
Company : WPX ENERGY	
Well : FEDERAL RG 312-14-298	
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Interval : 0.00 - 10822.00 feet UP	
Created : 2/20/2014 2:10:46 PM	

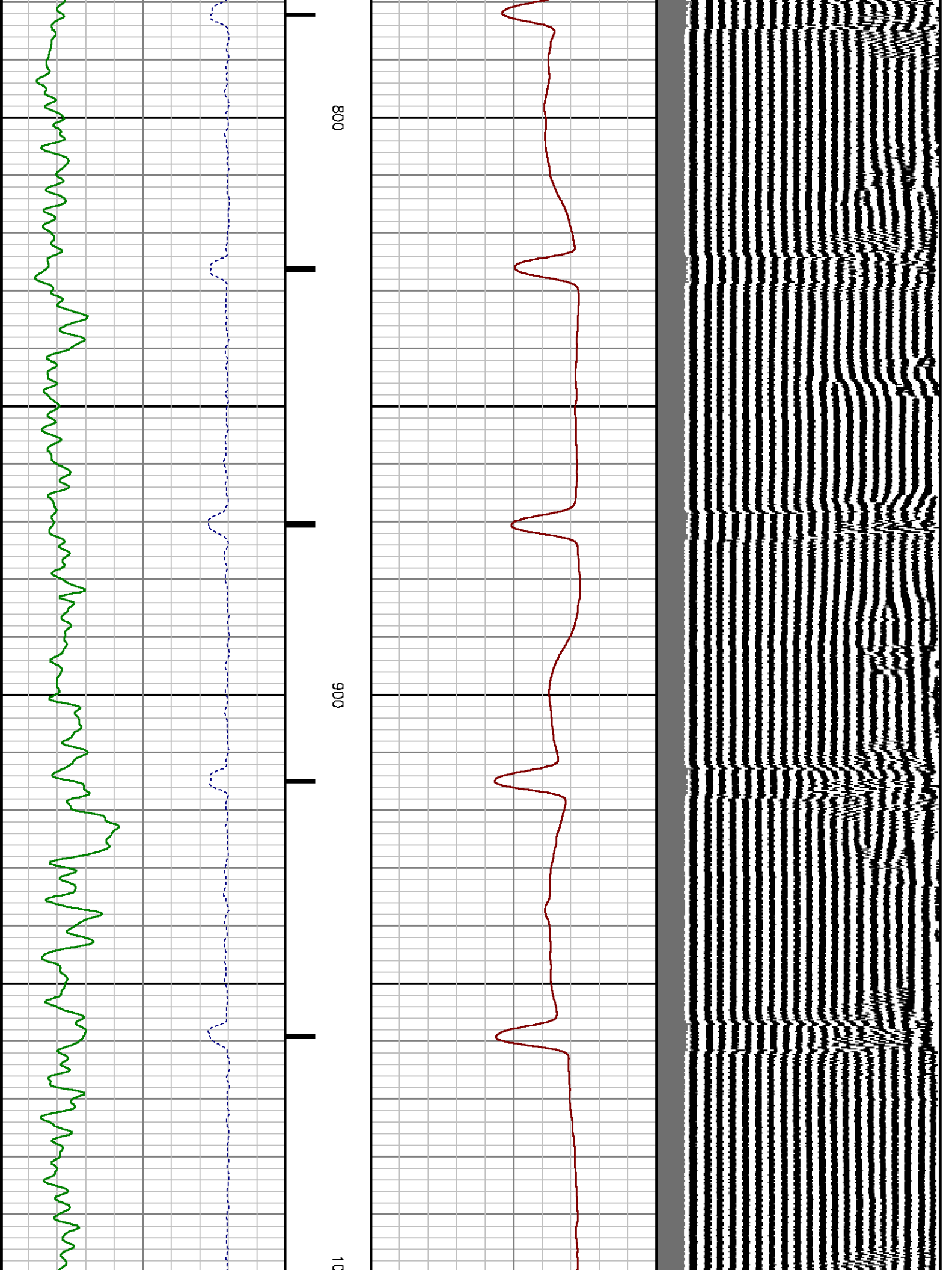


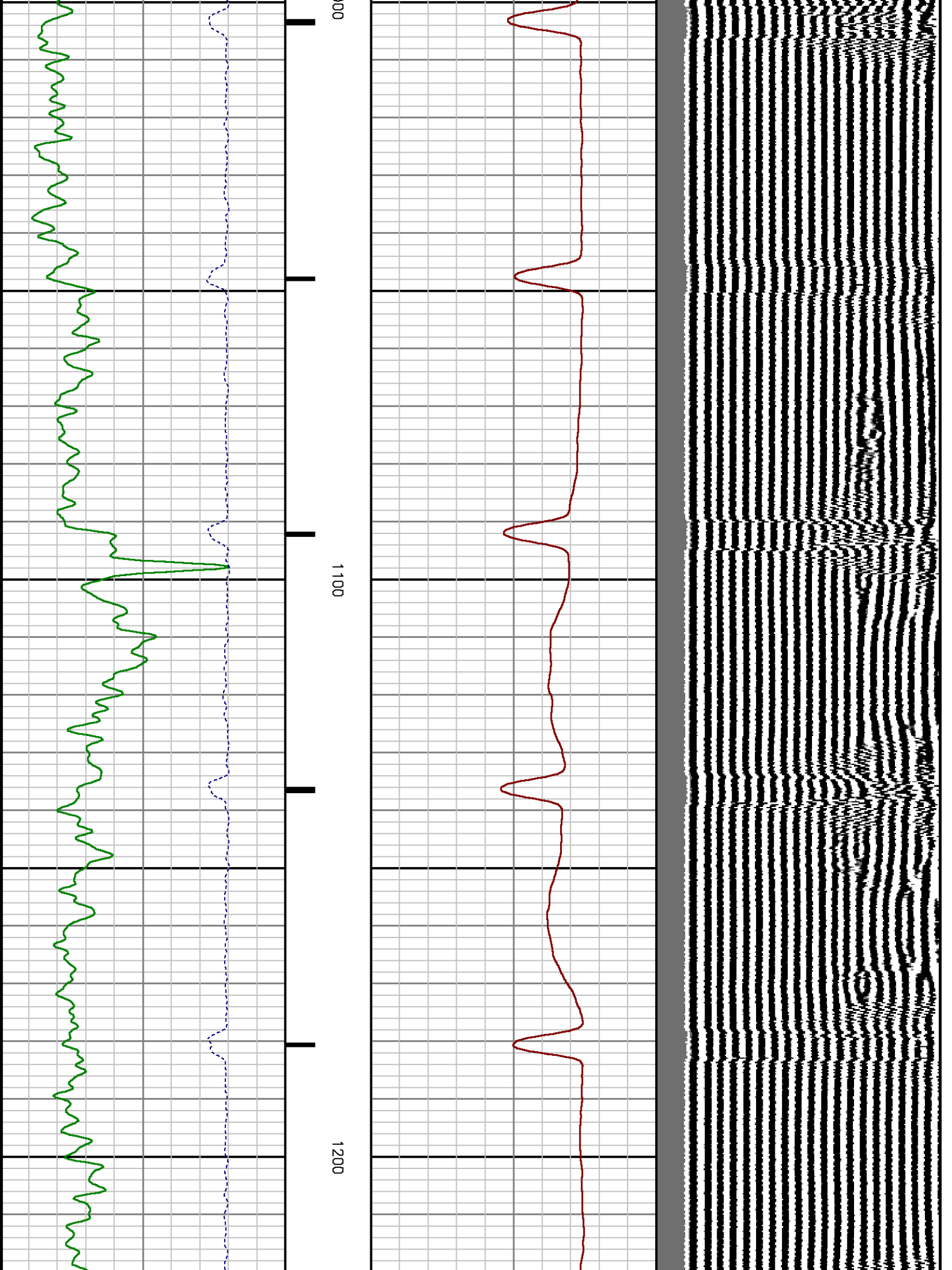


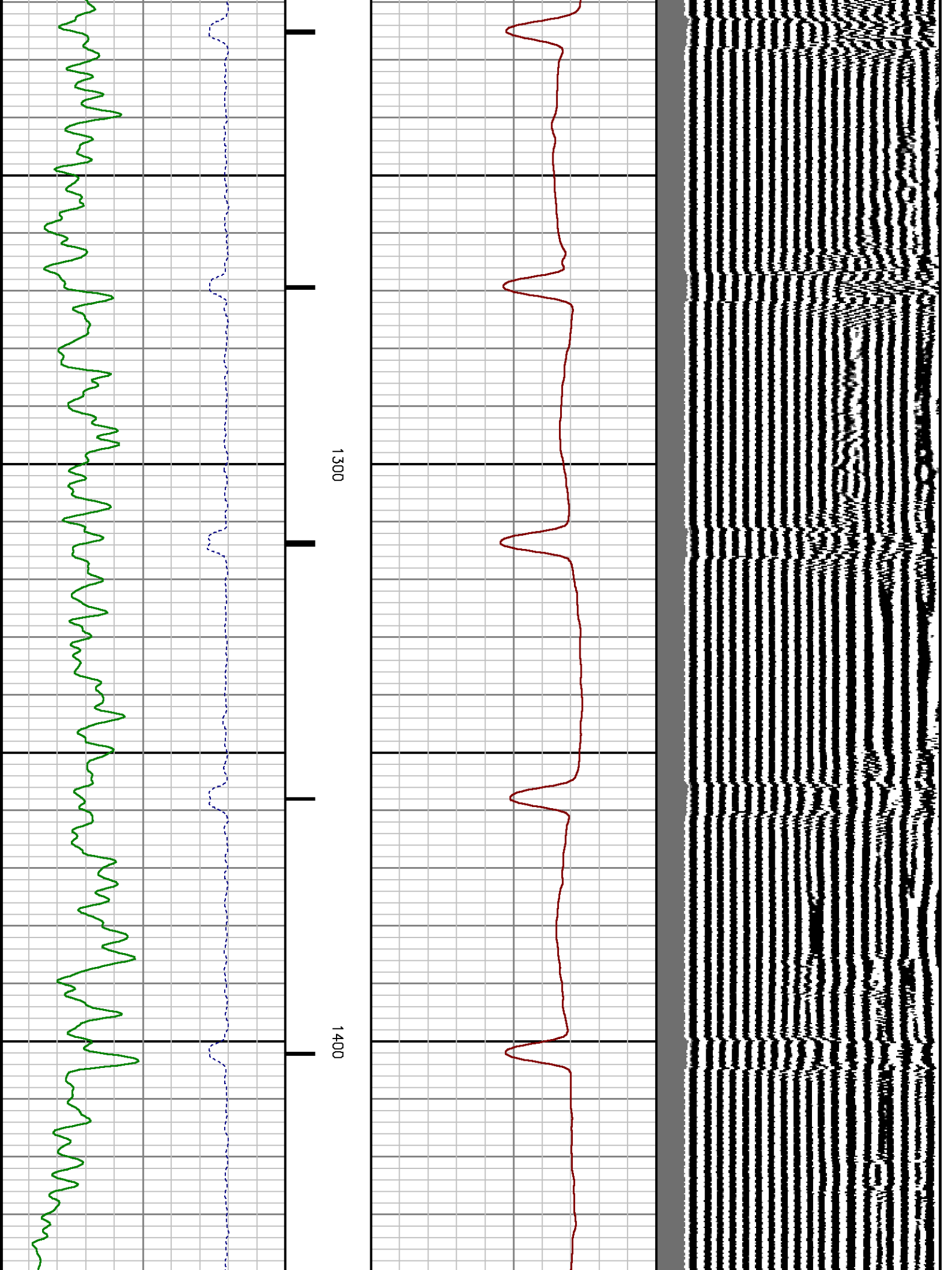


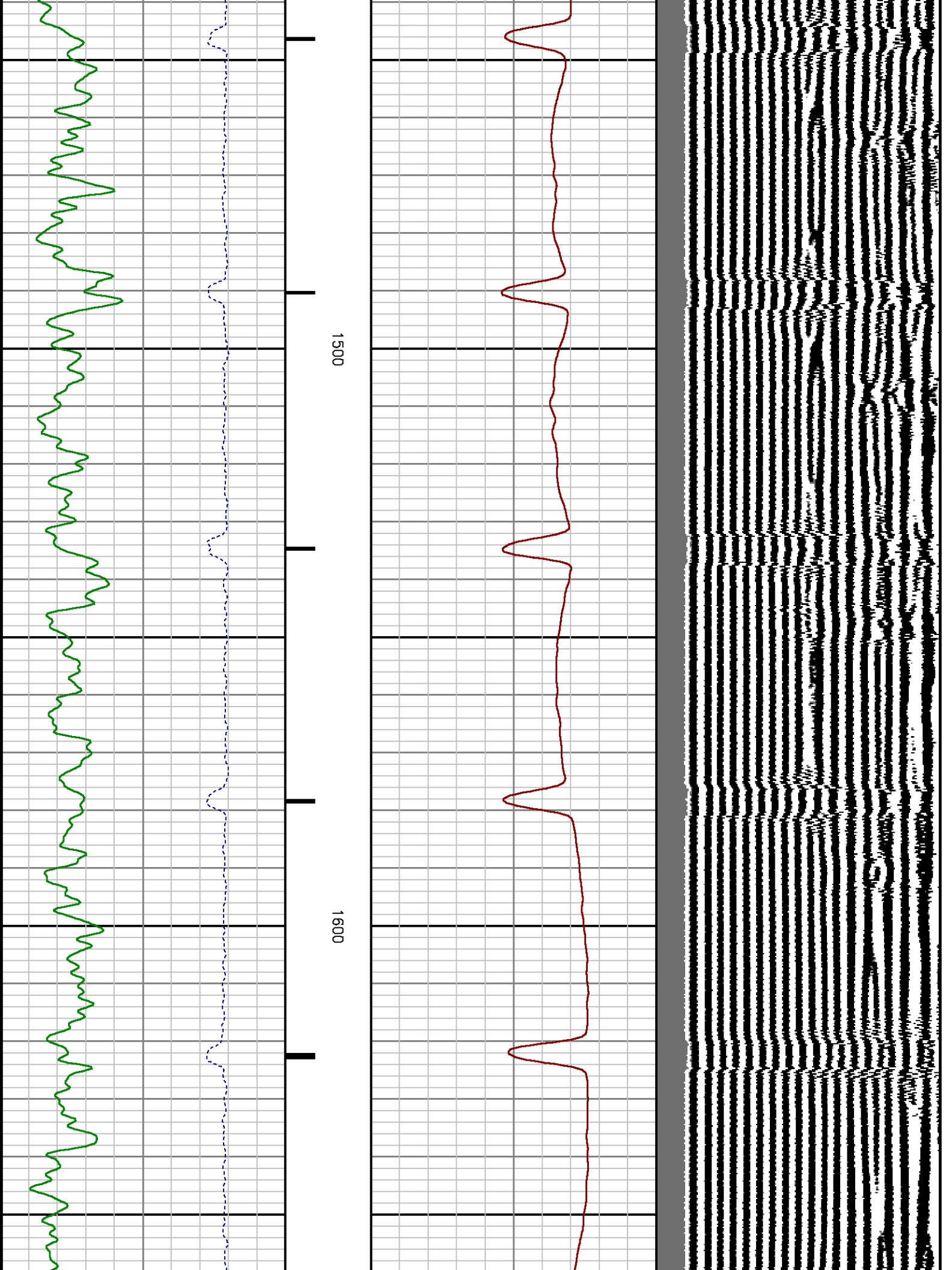




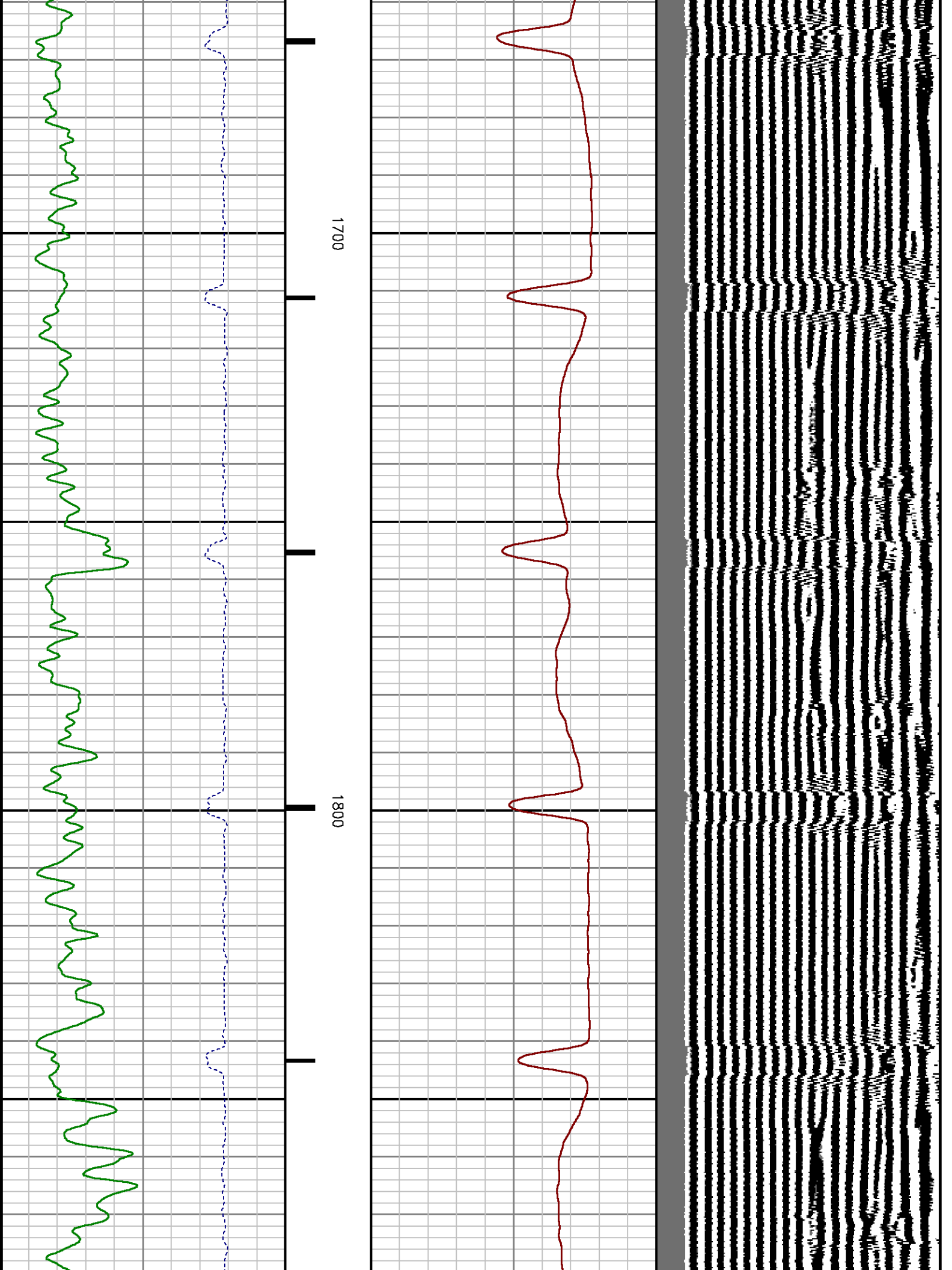


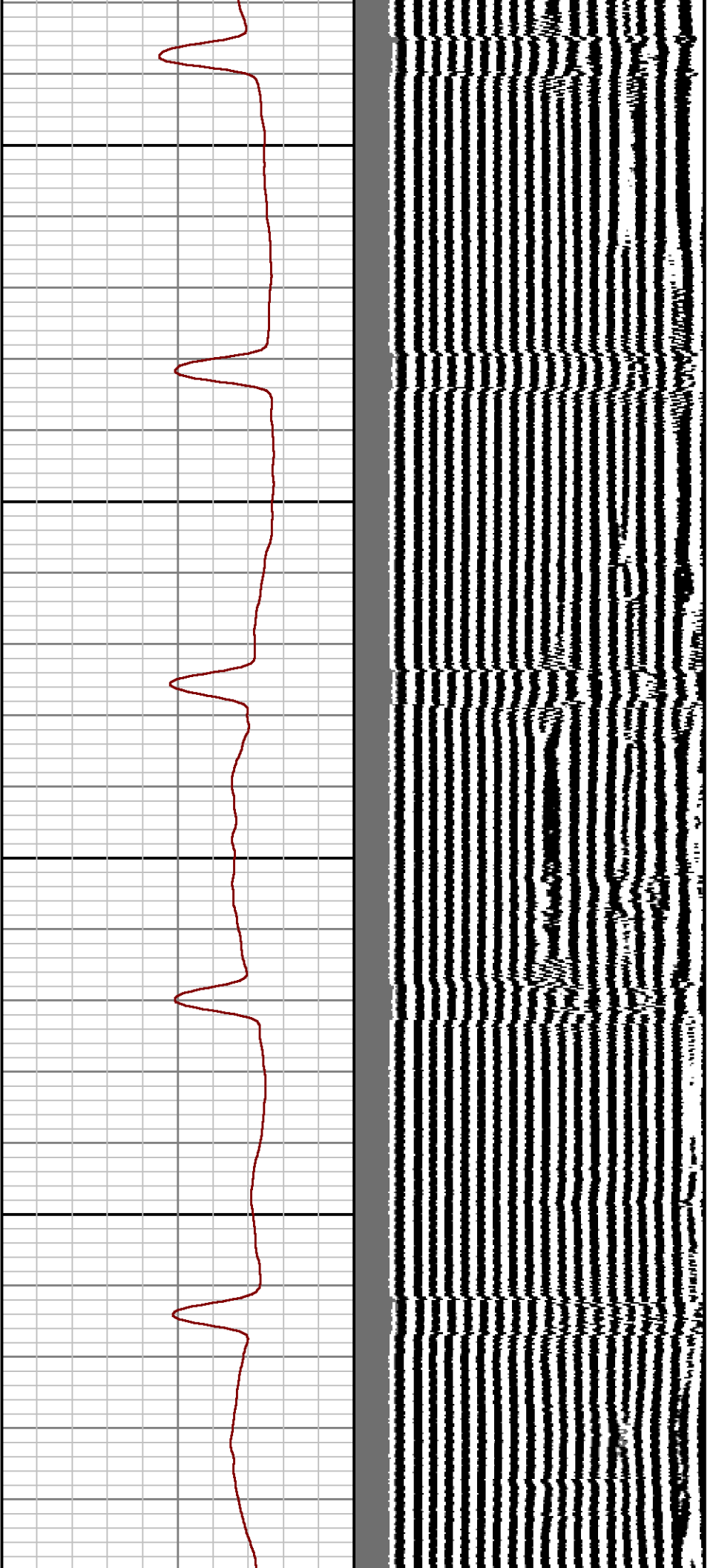








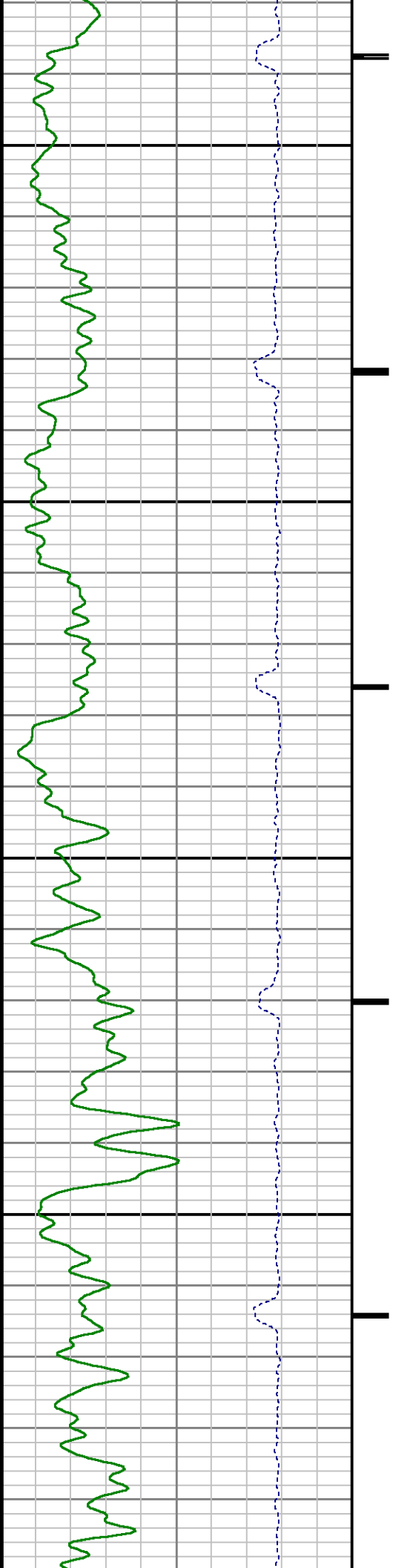




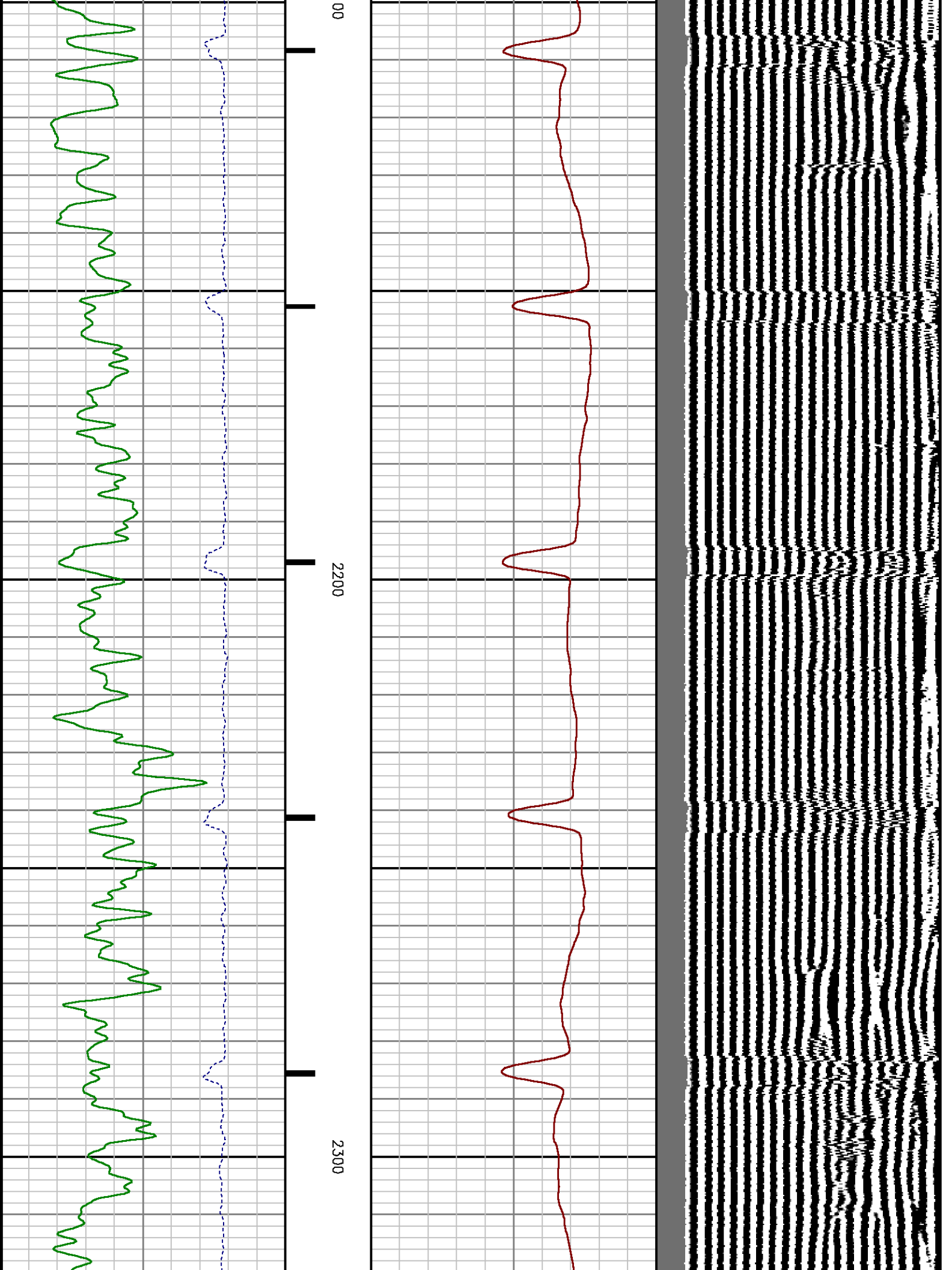
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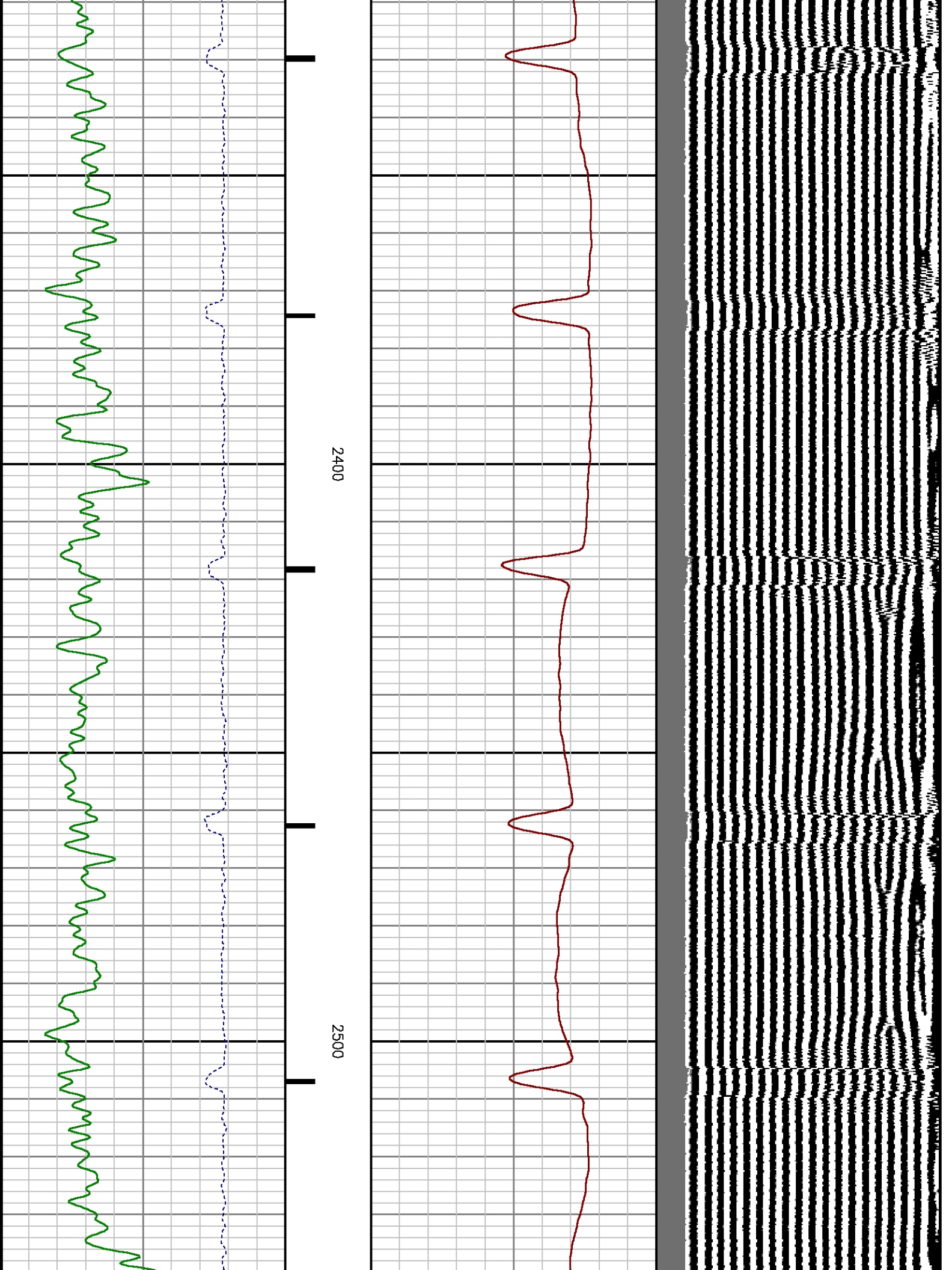
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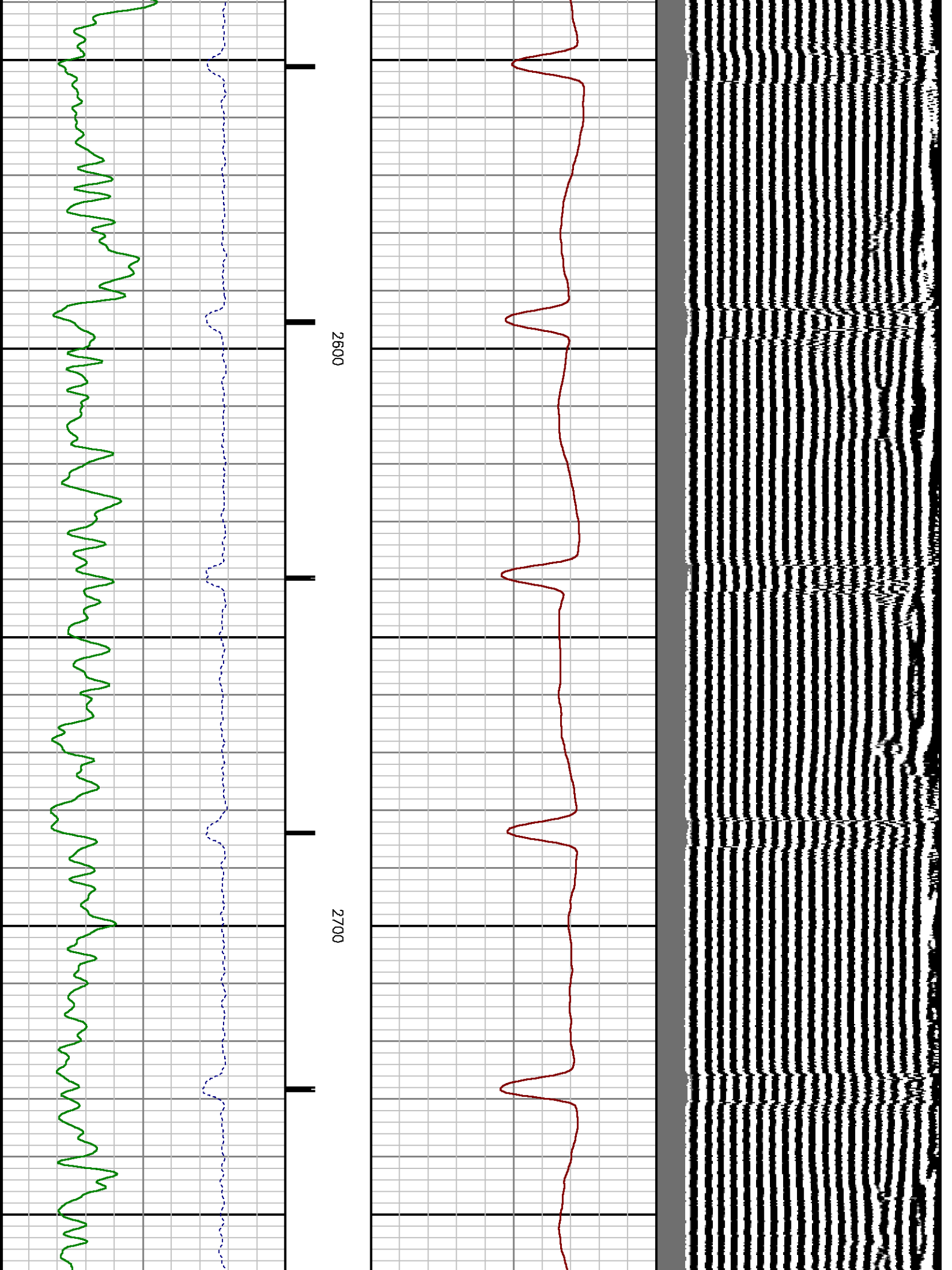
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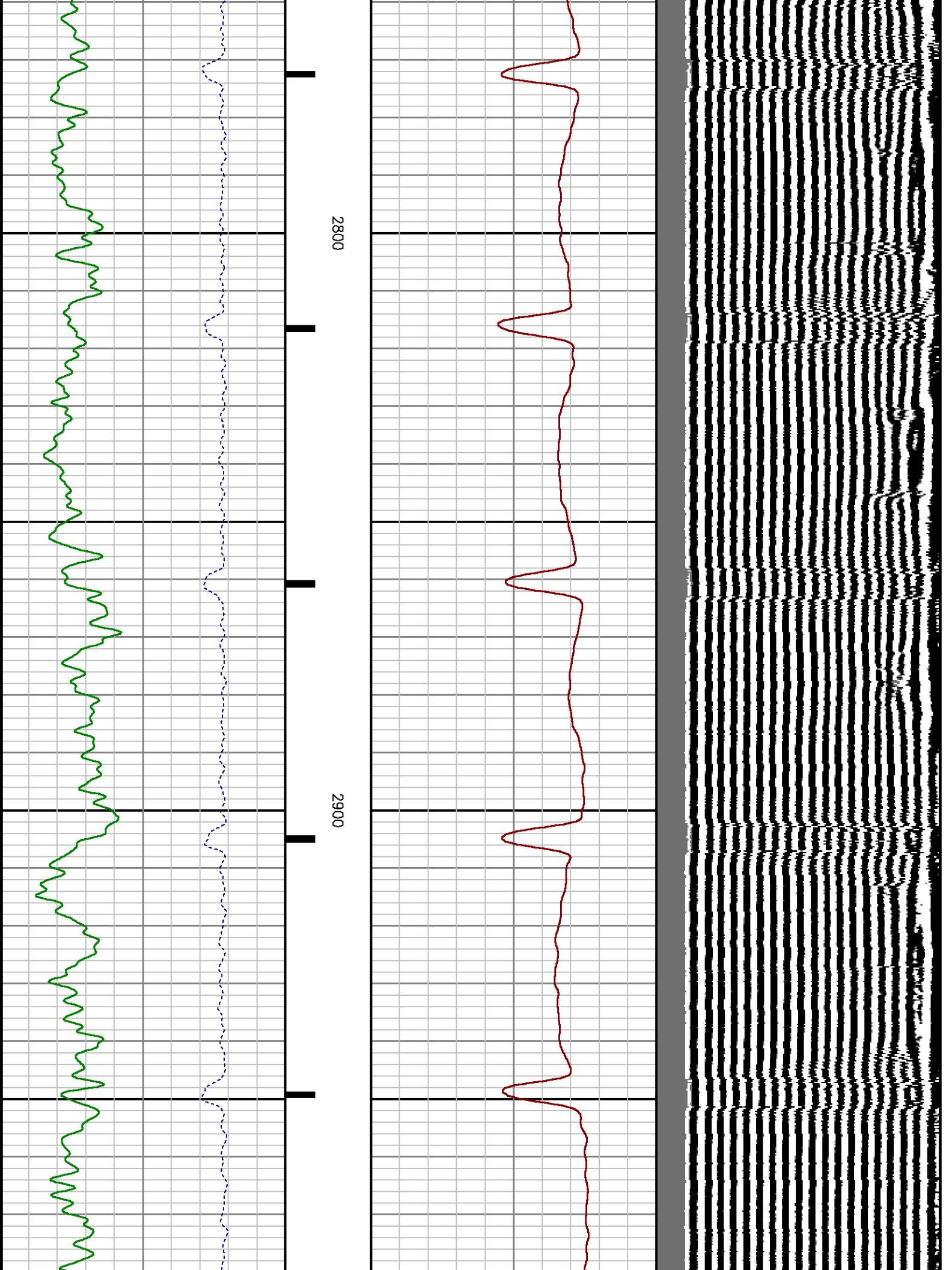


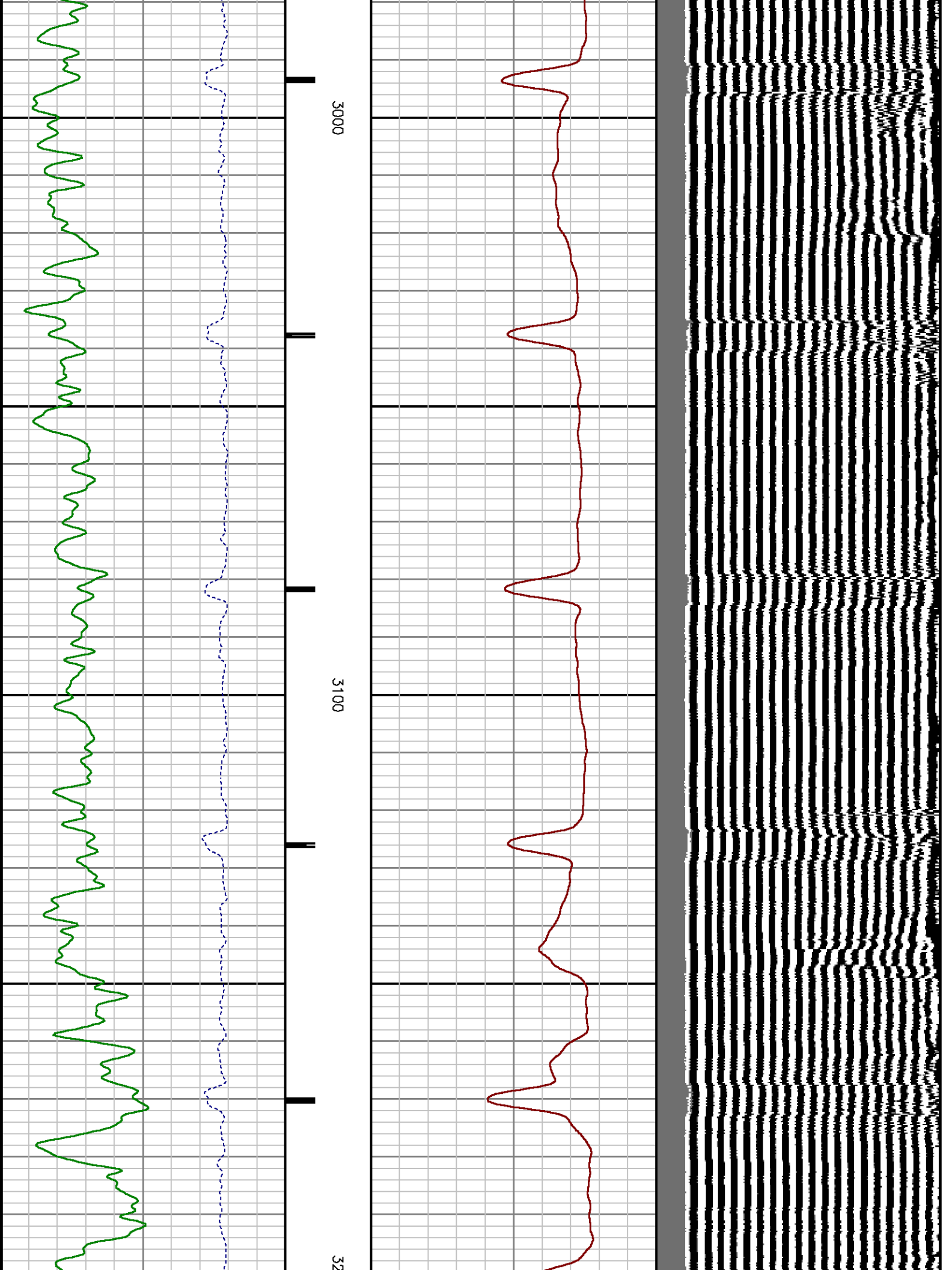


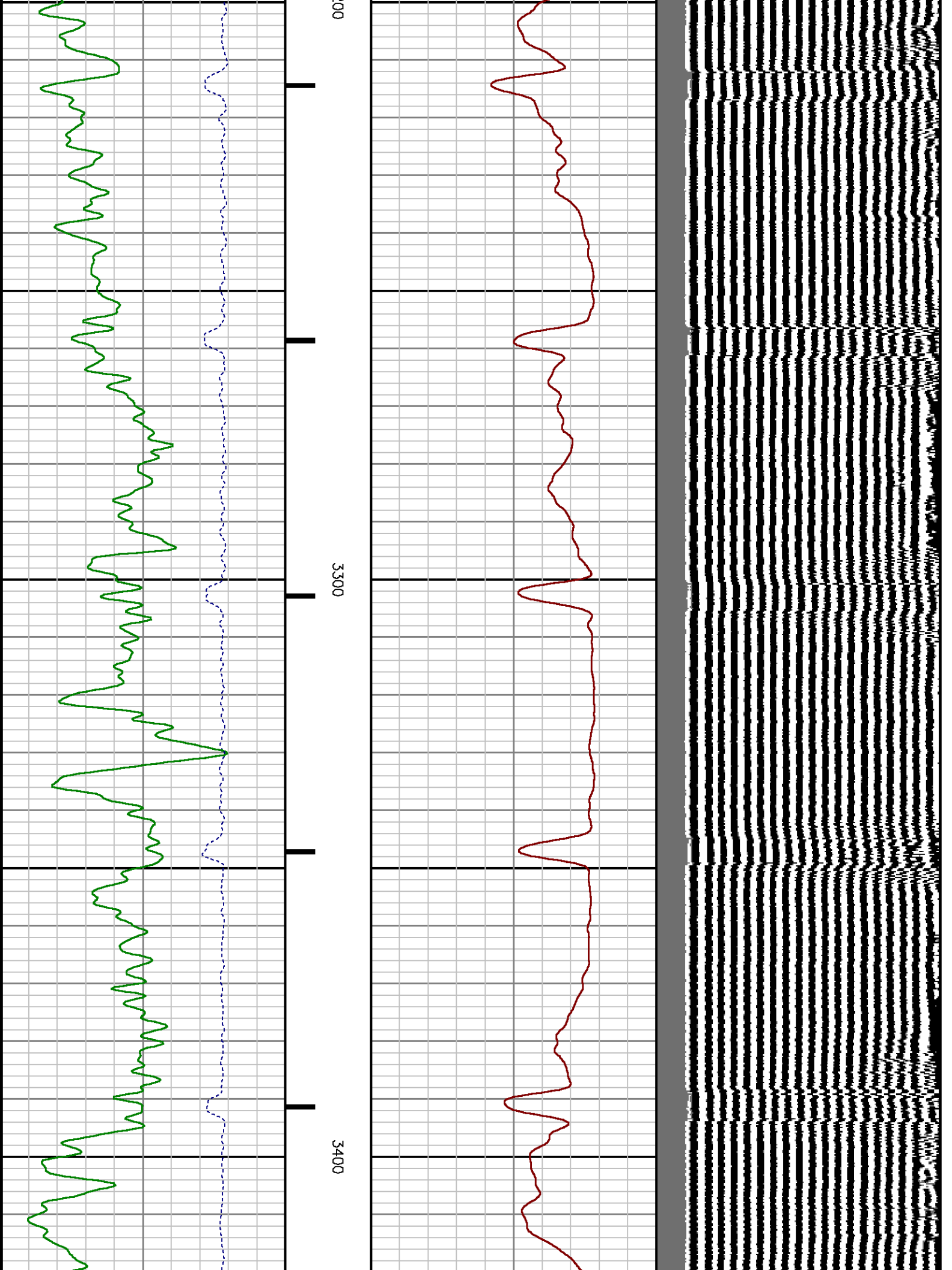




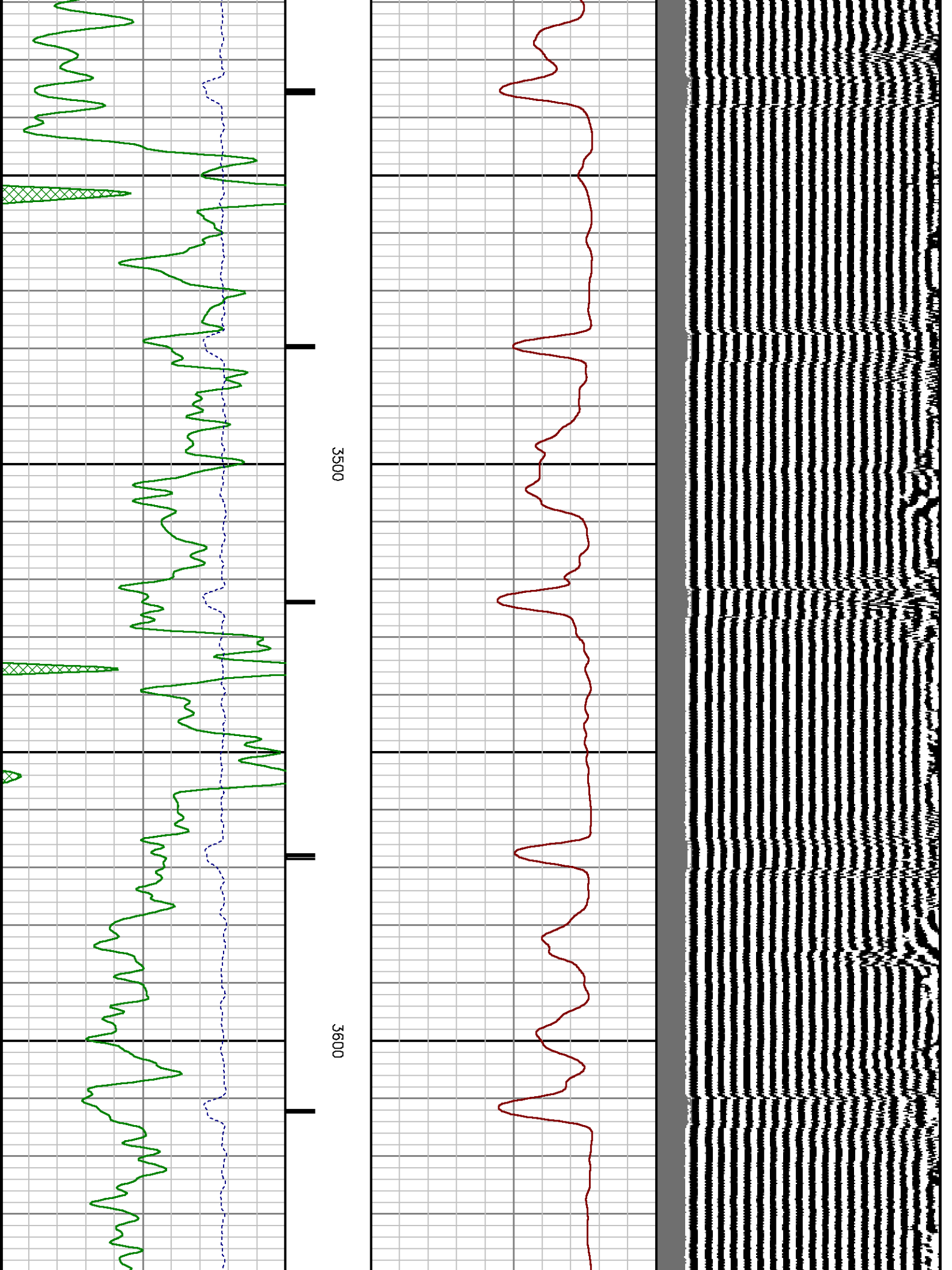


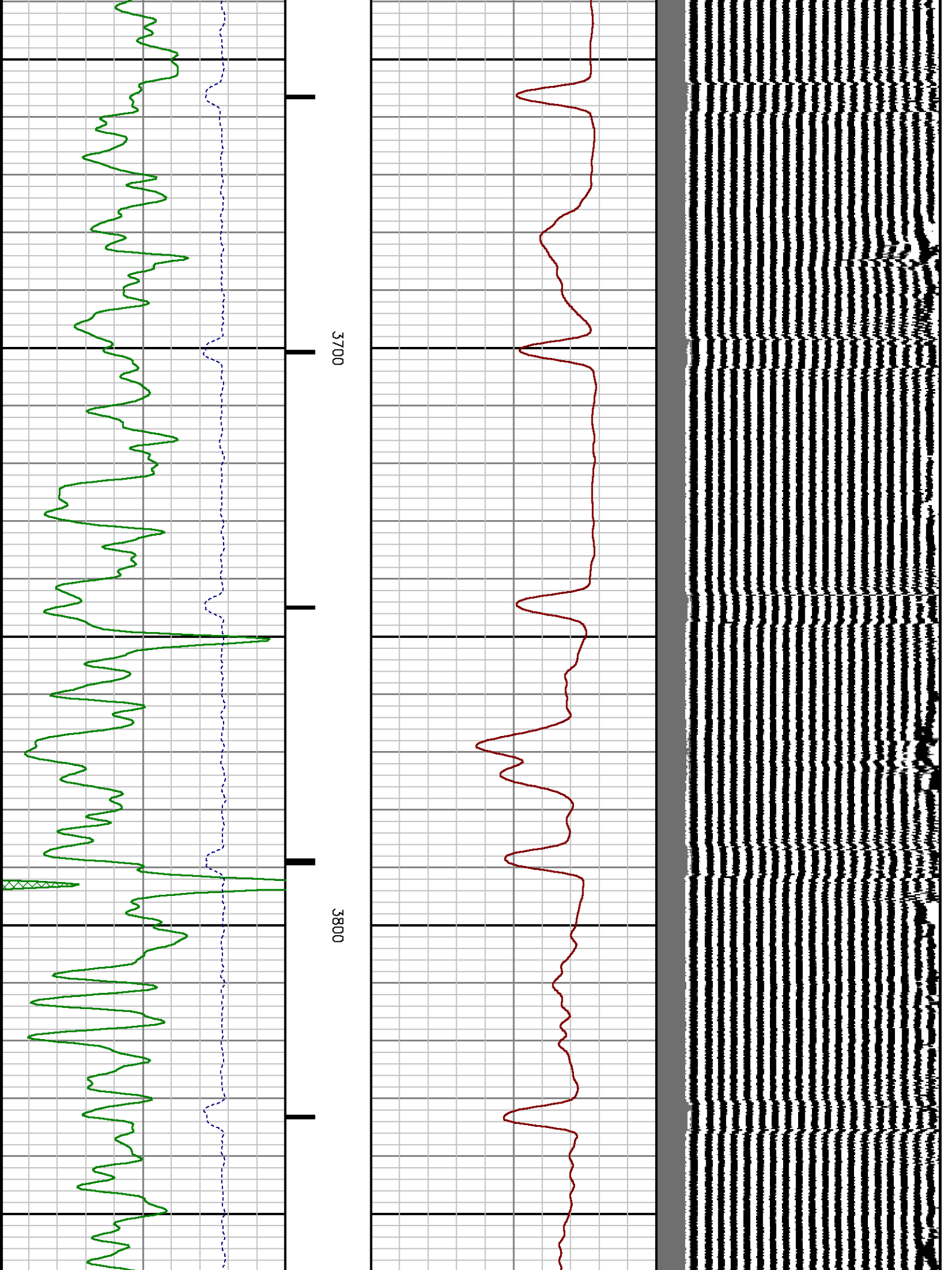




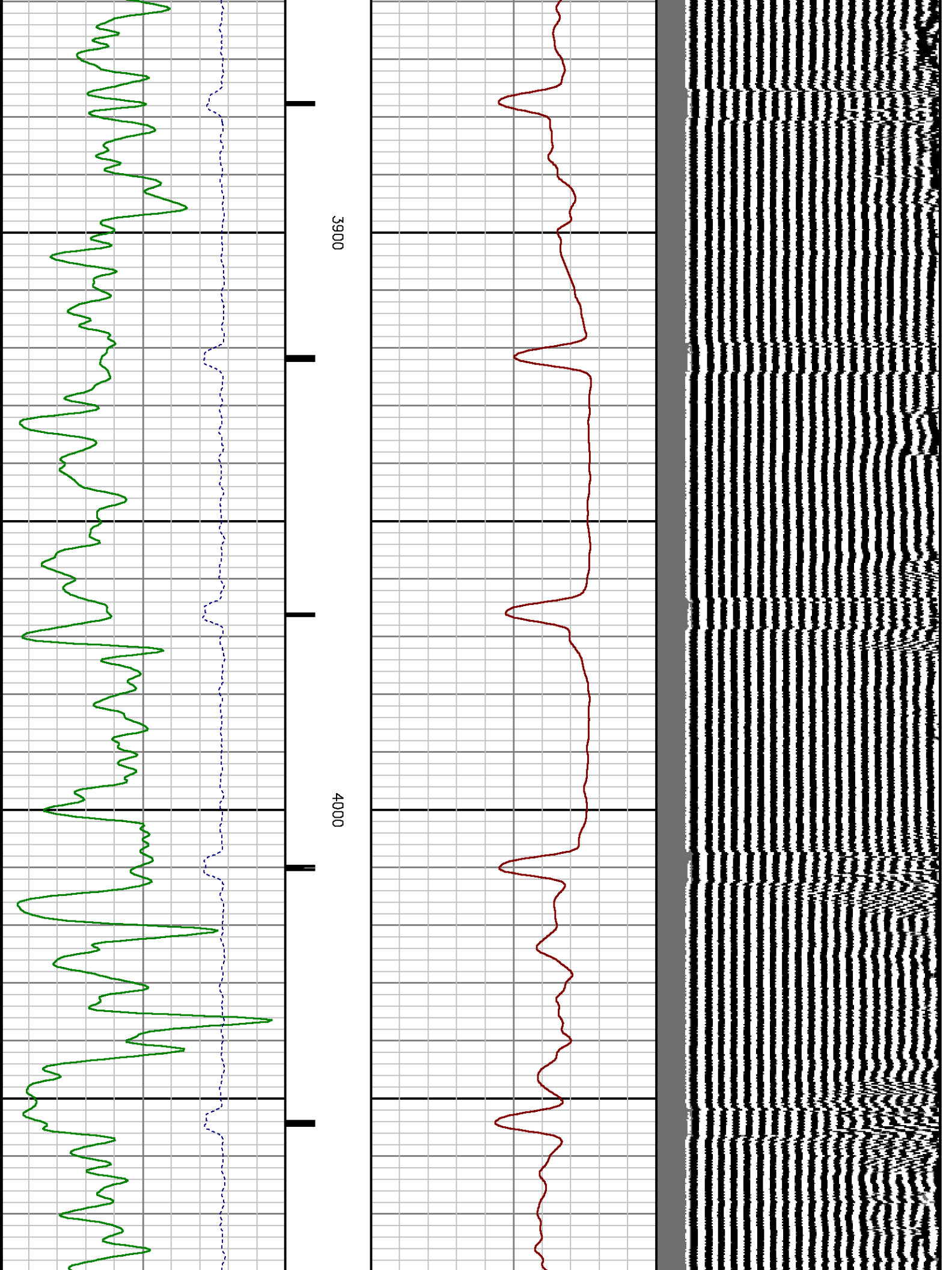


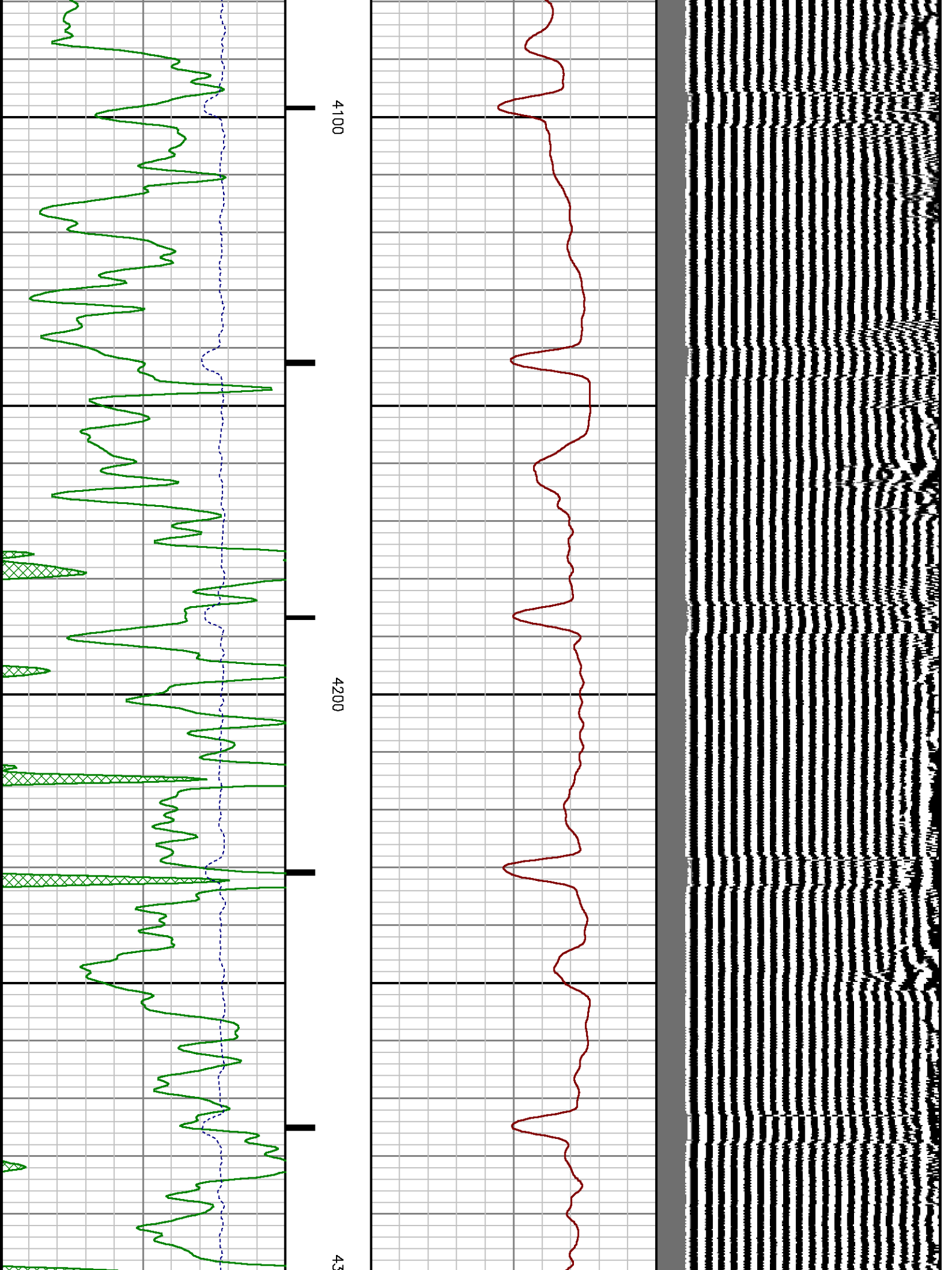


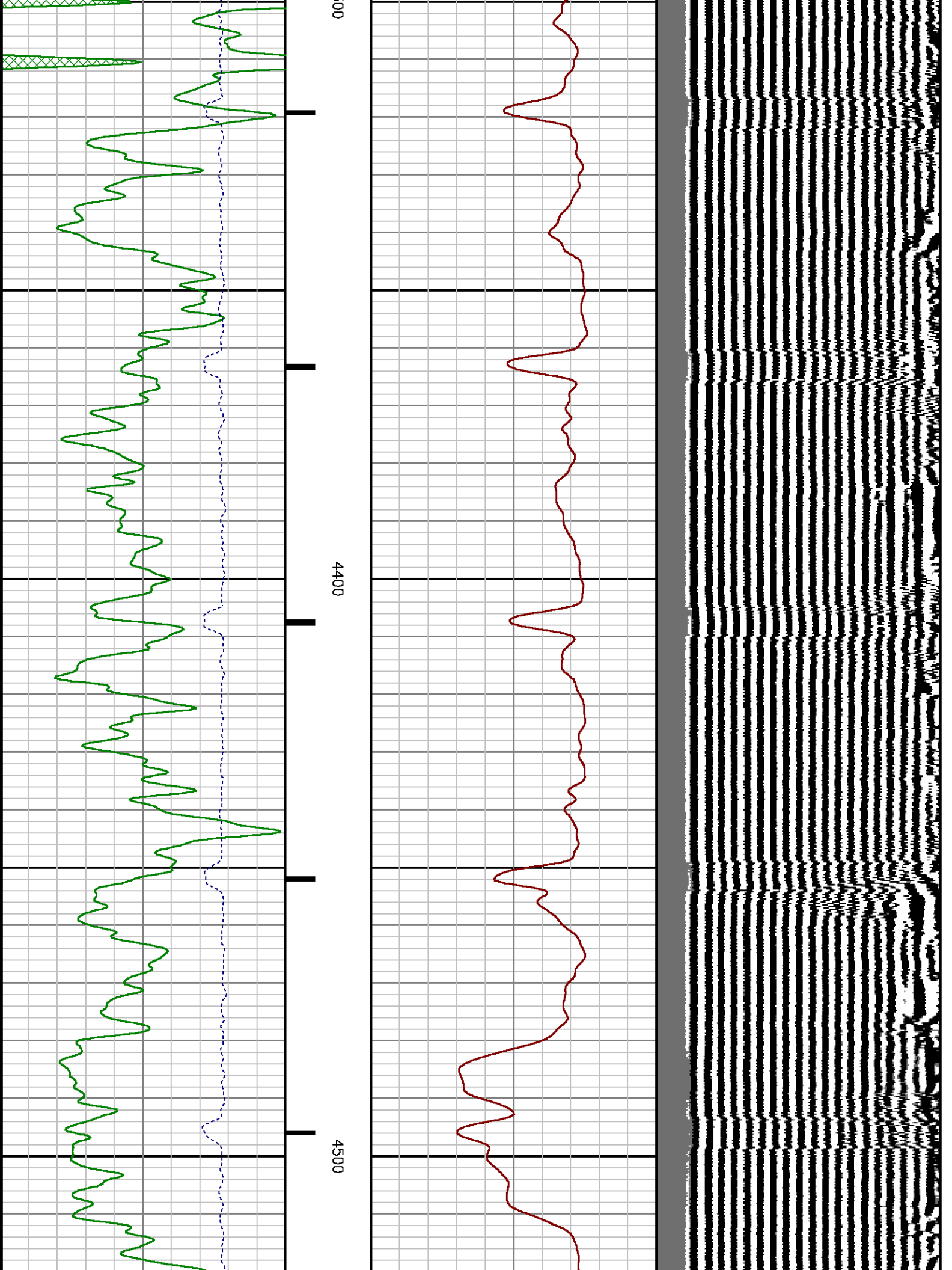


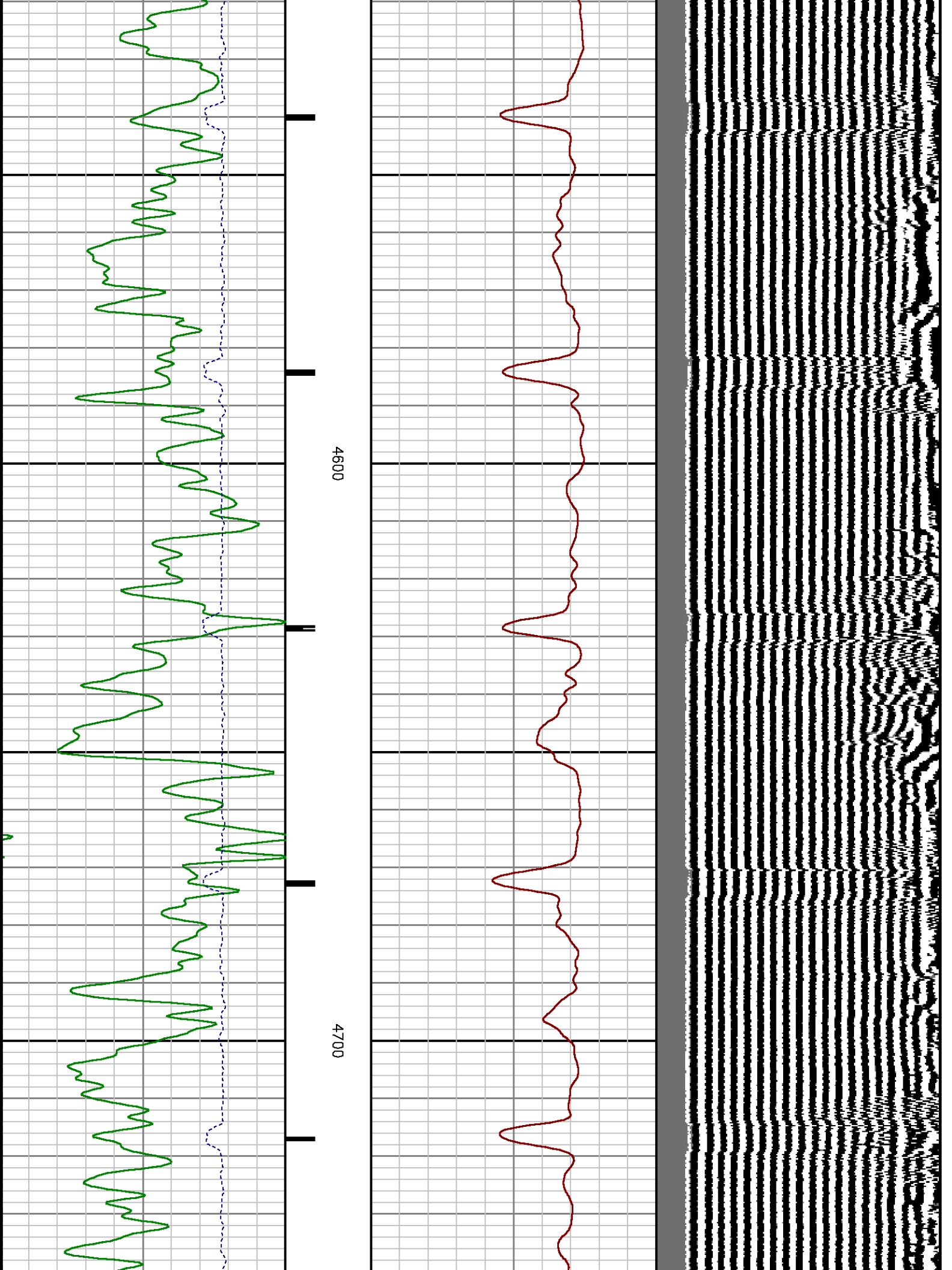


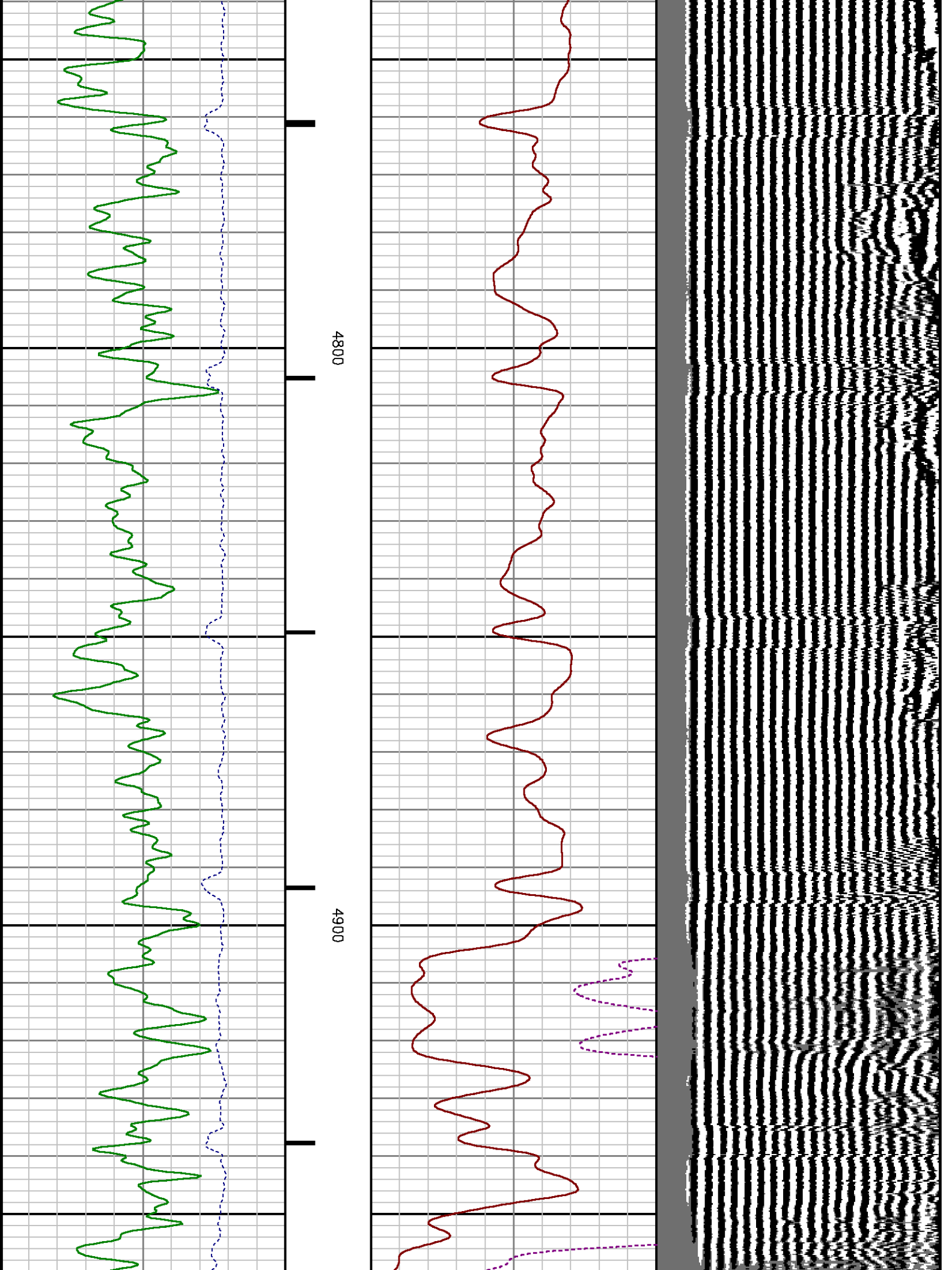




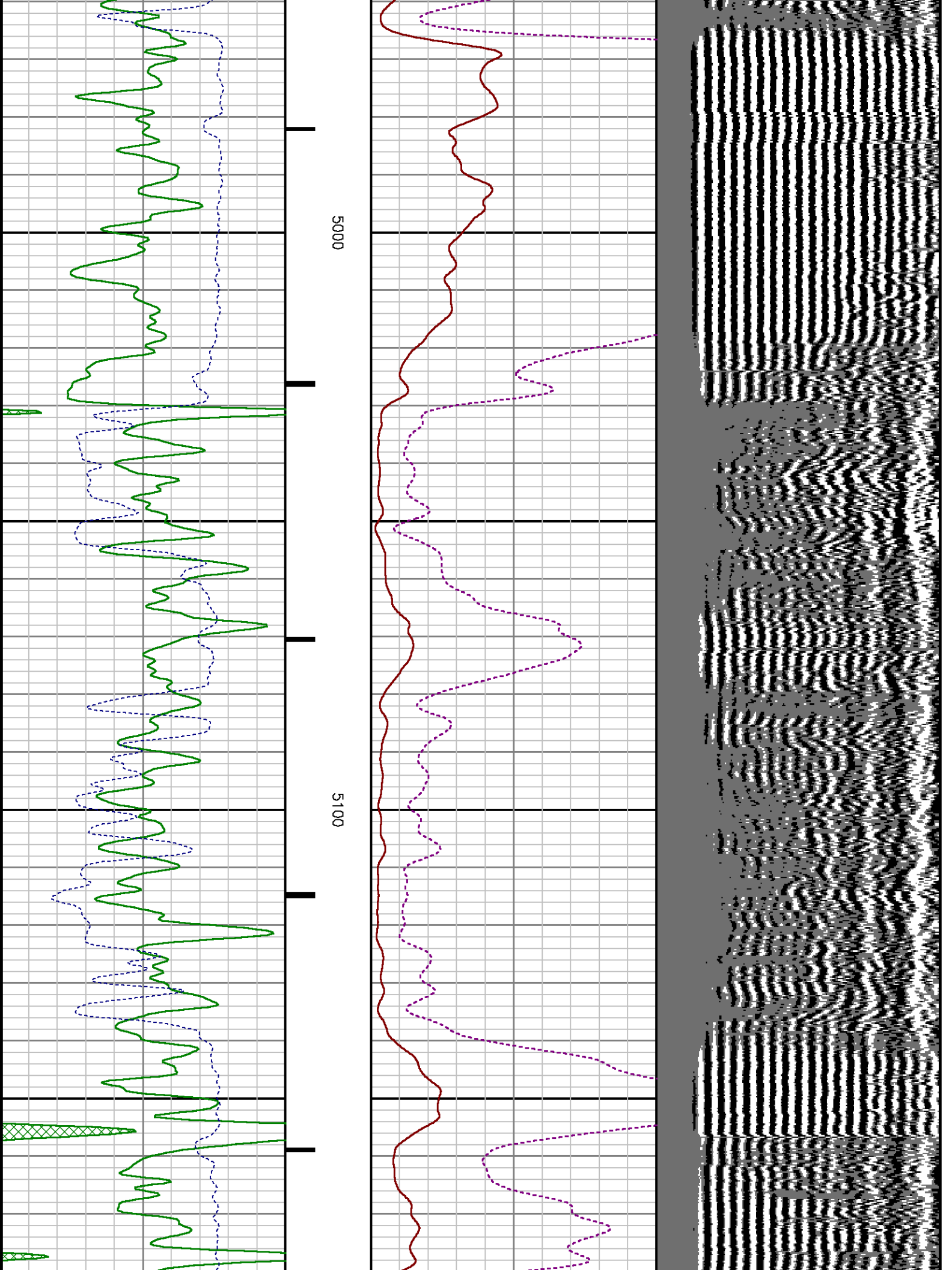


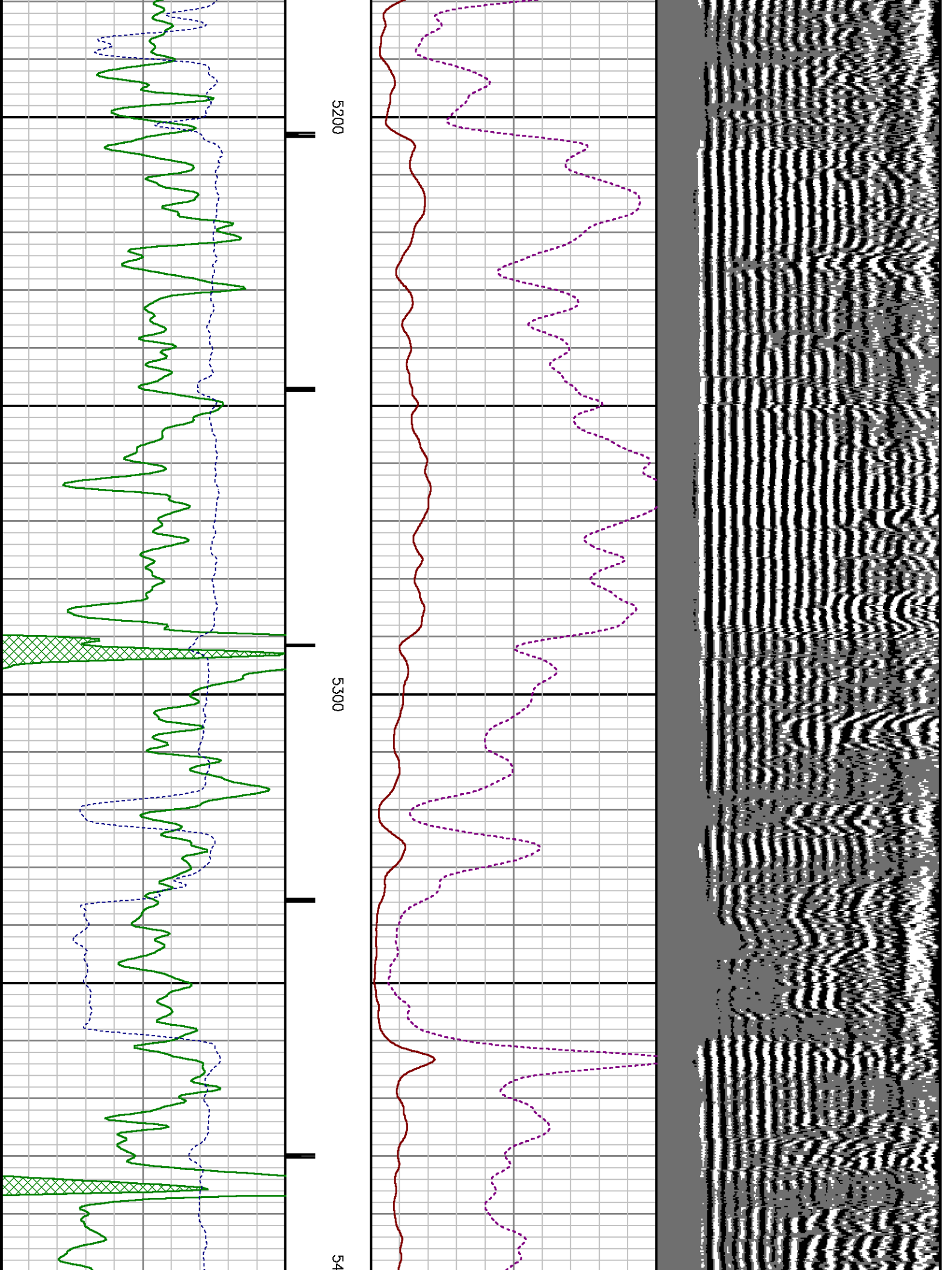


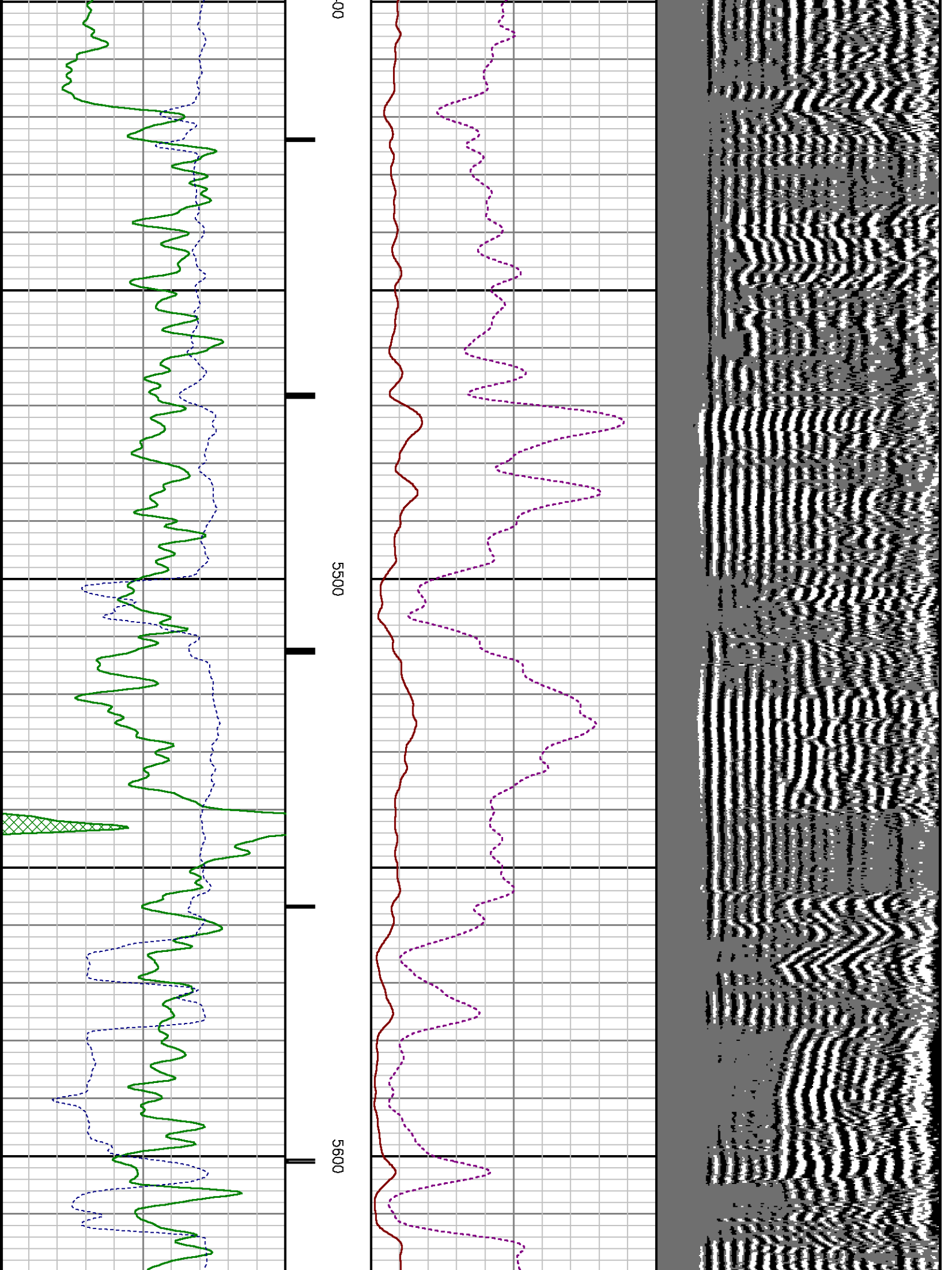




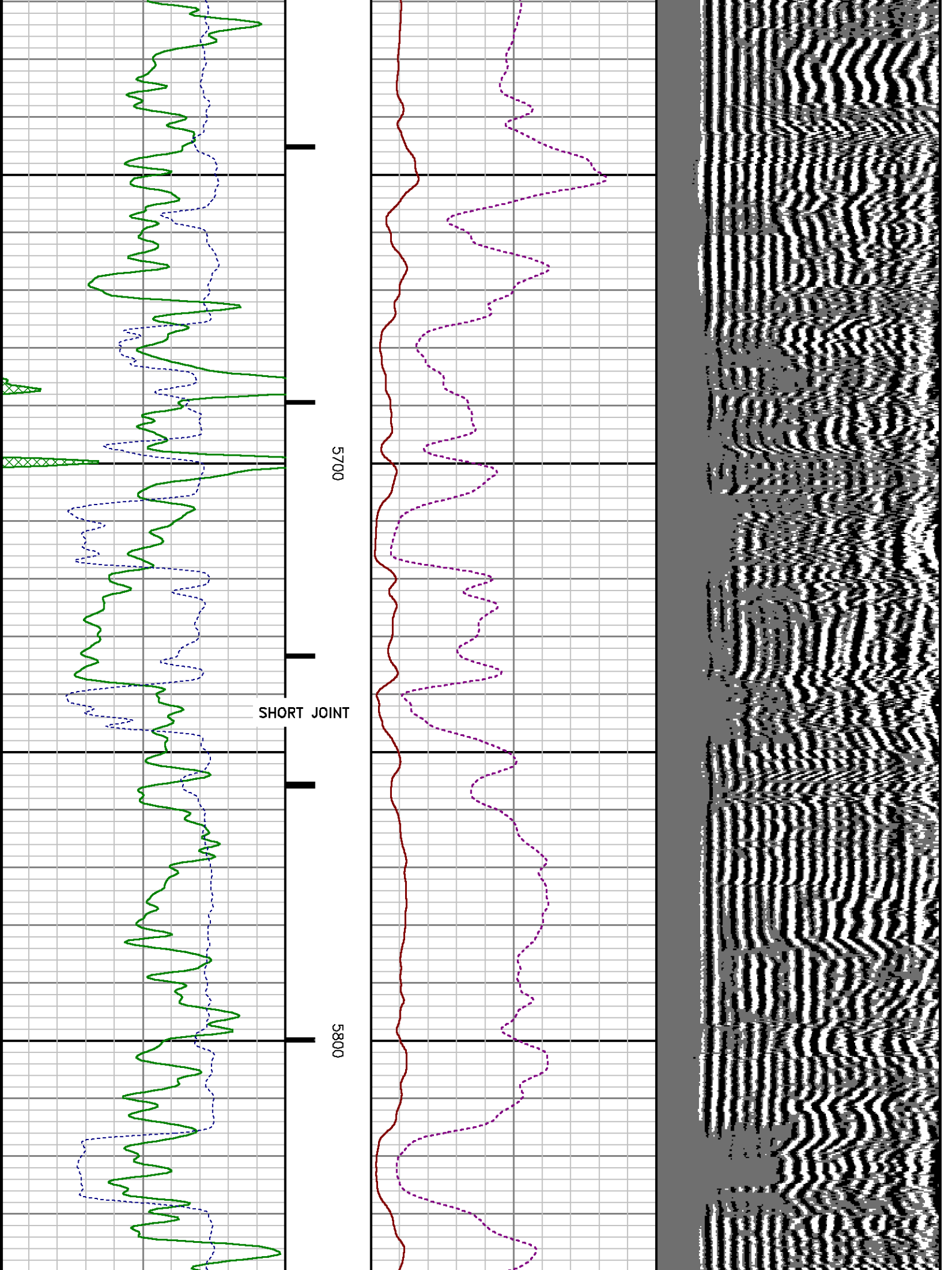


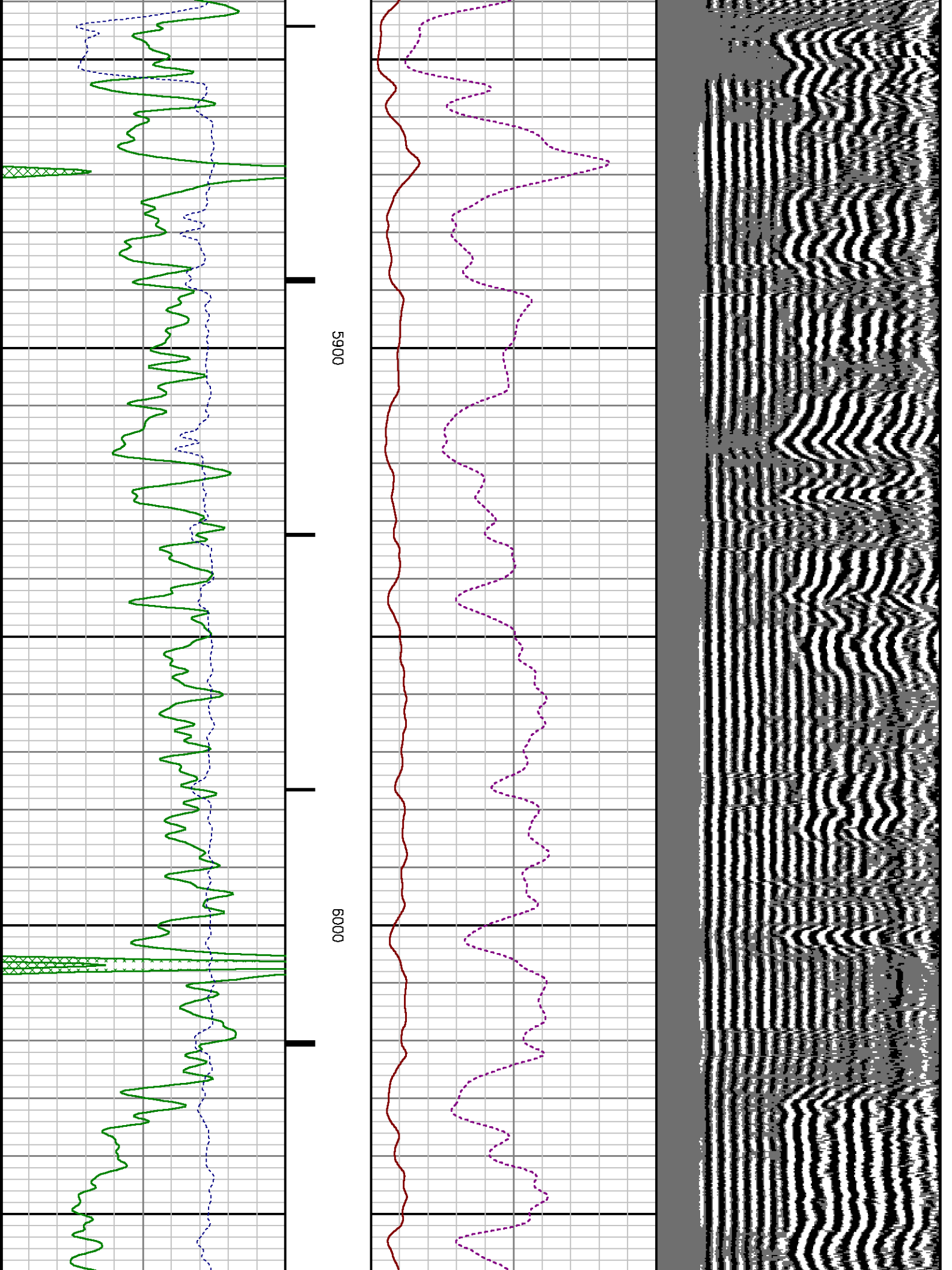


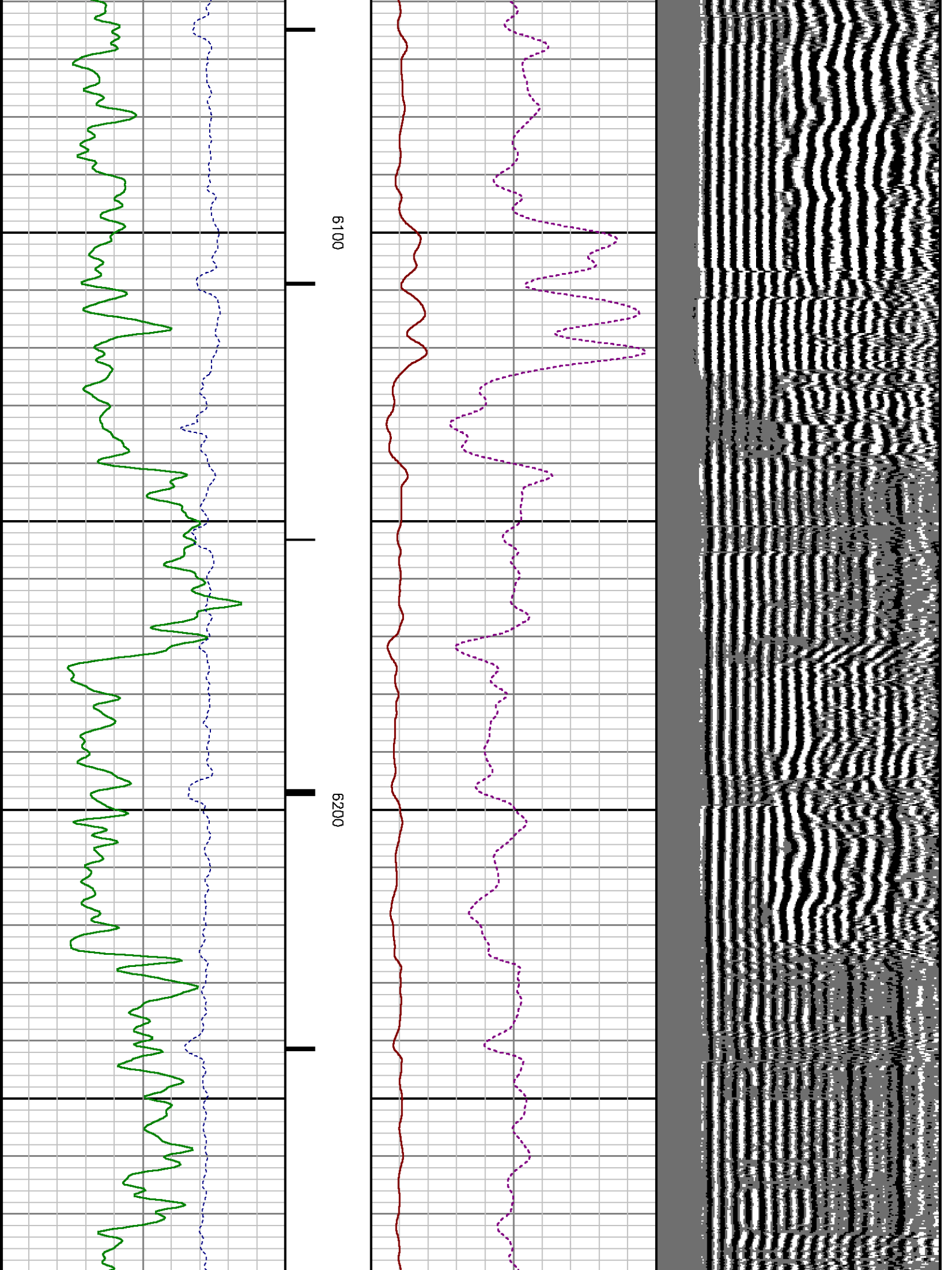


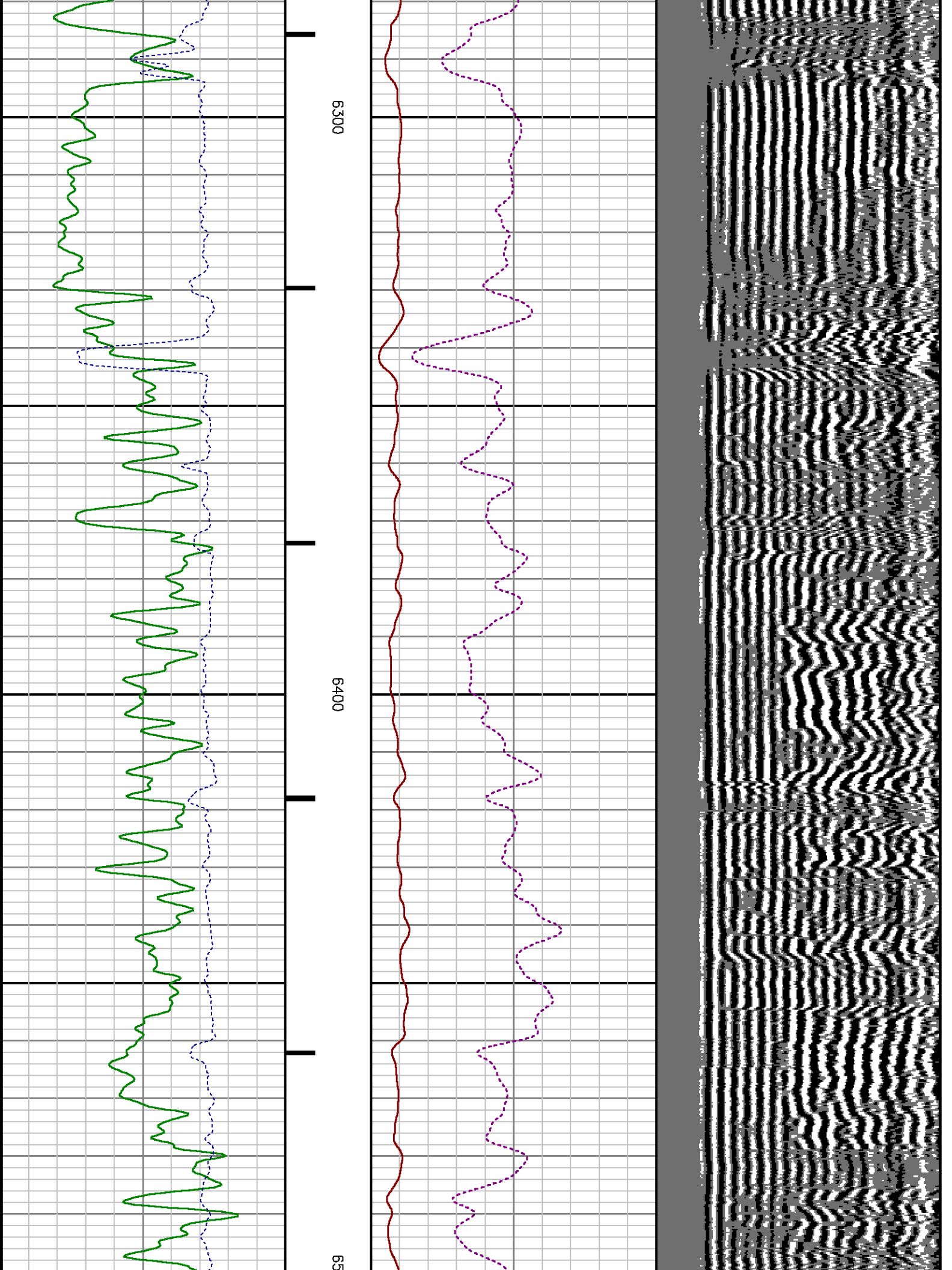


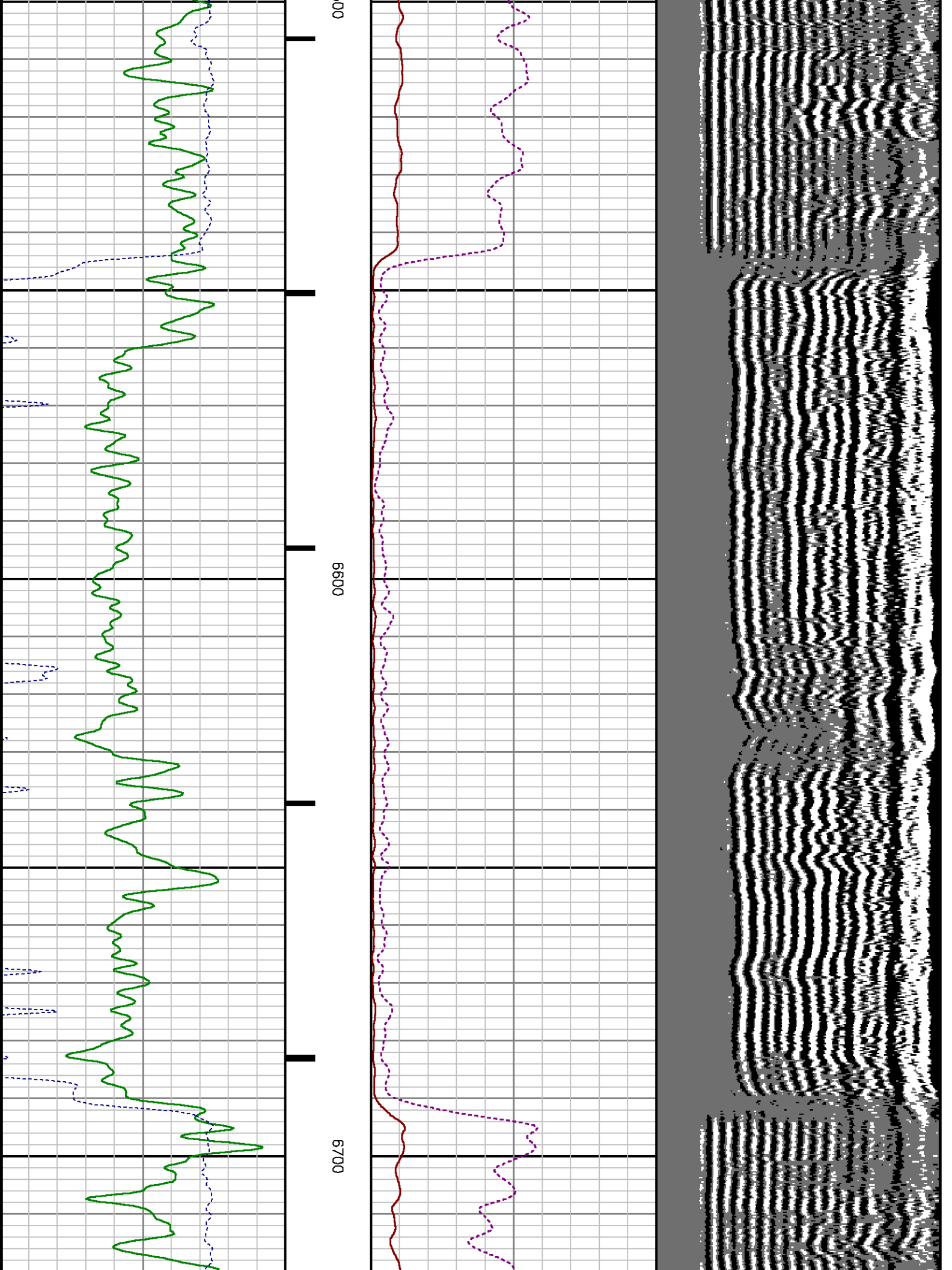




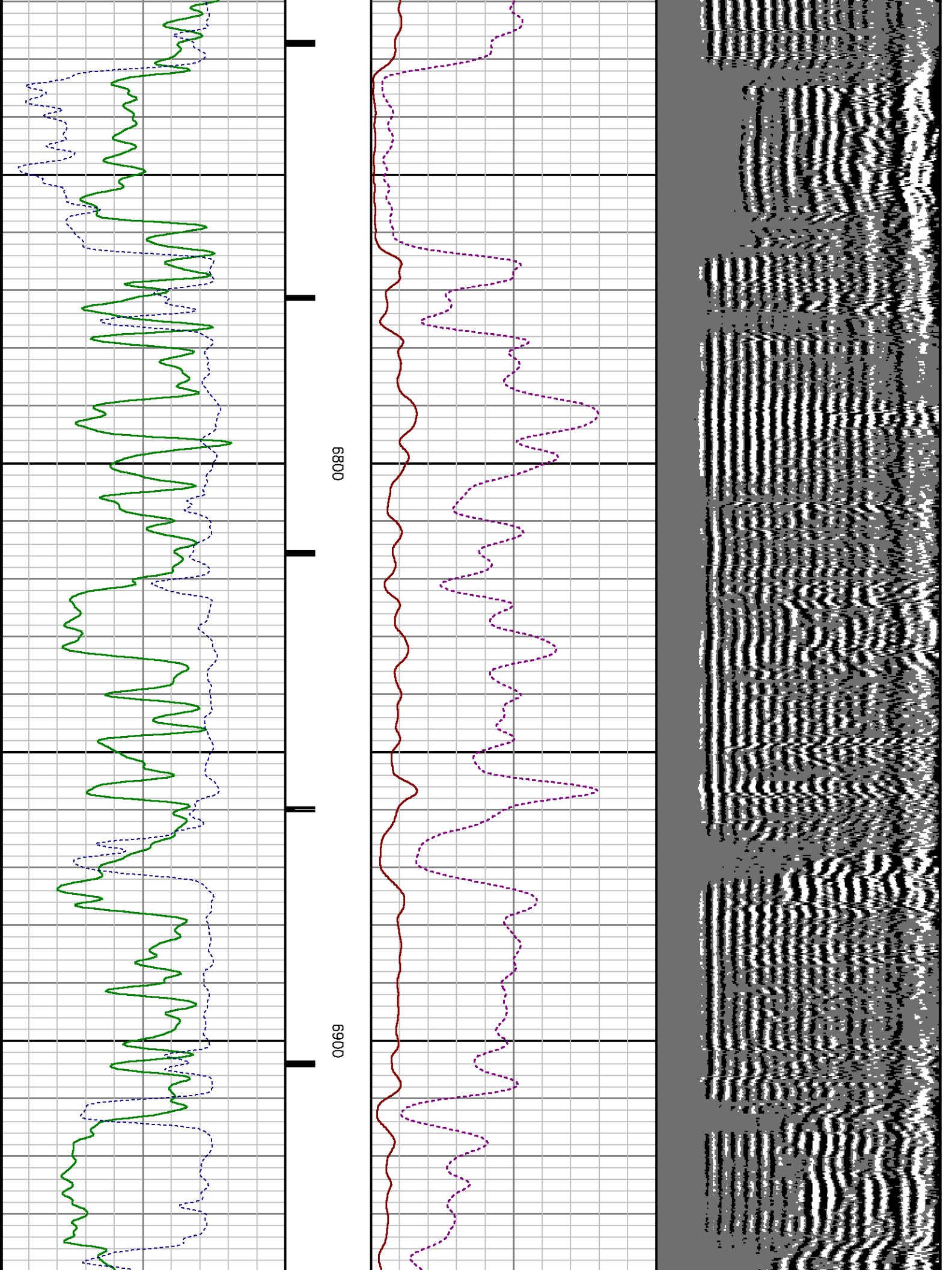


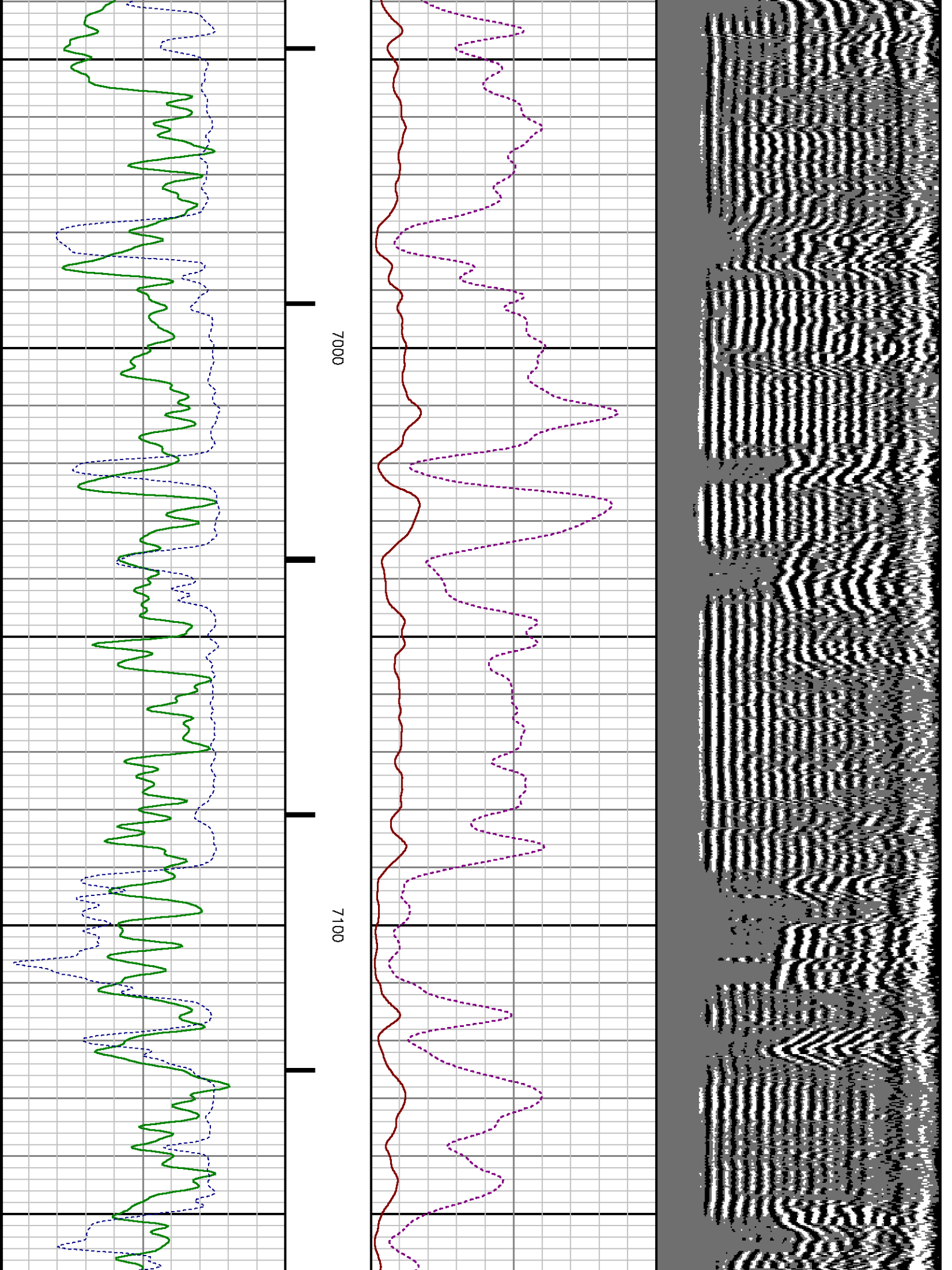


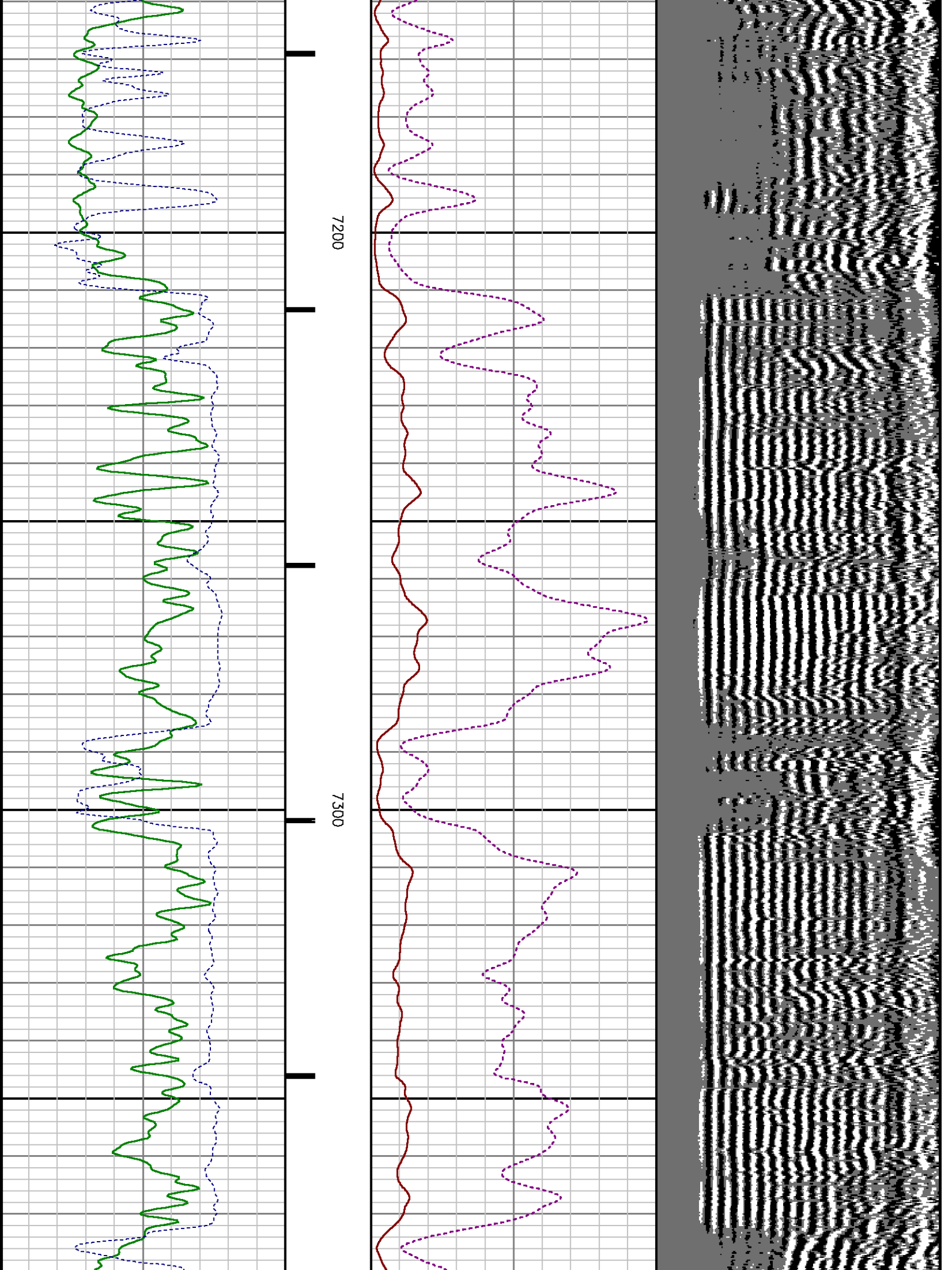




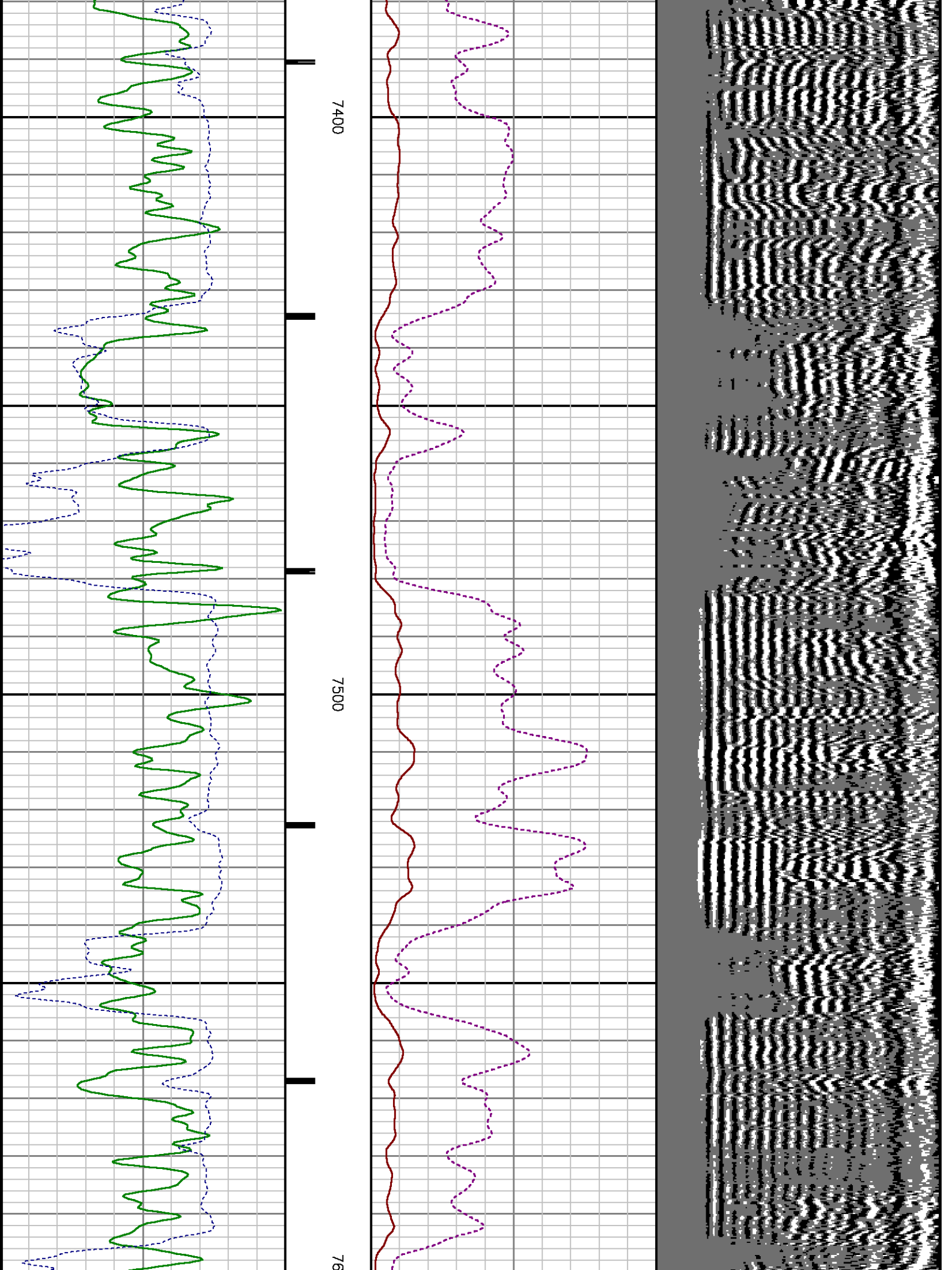


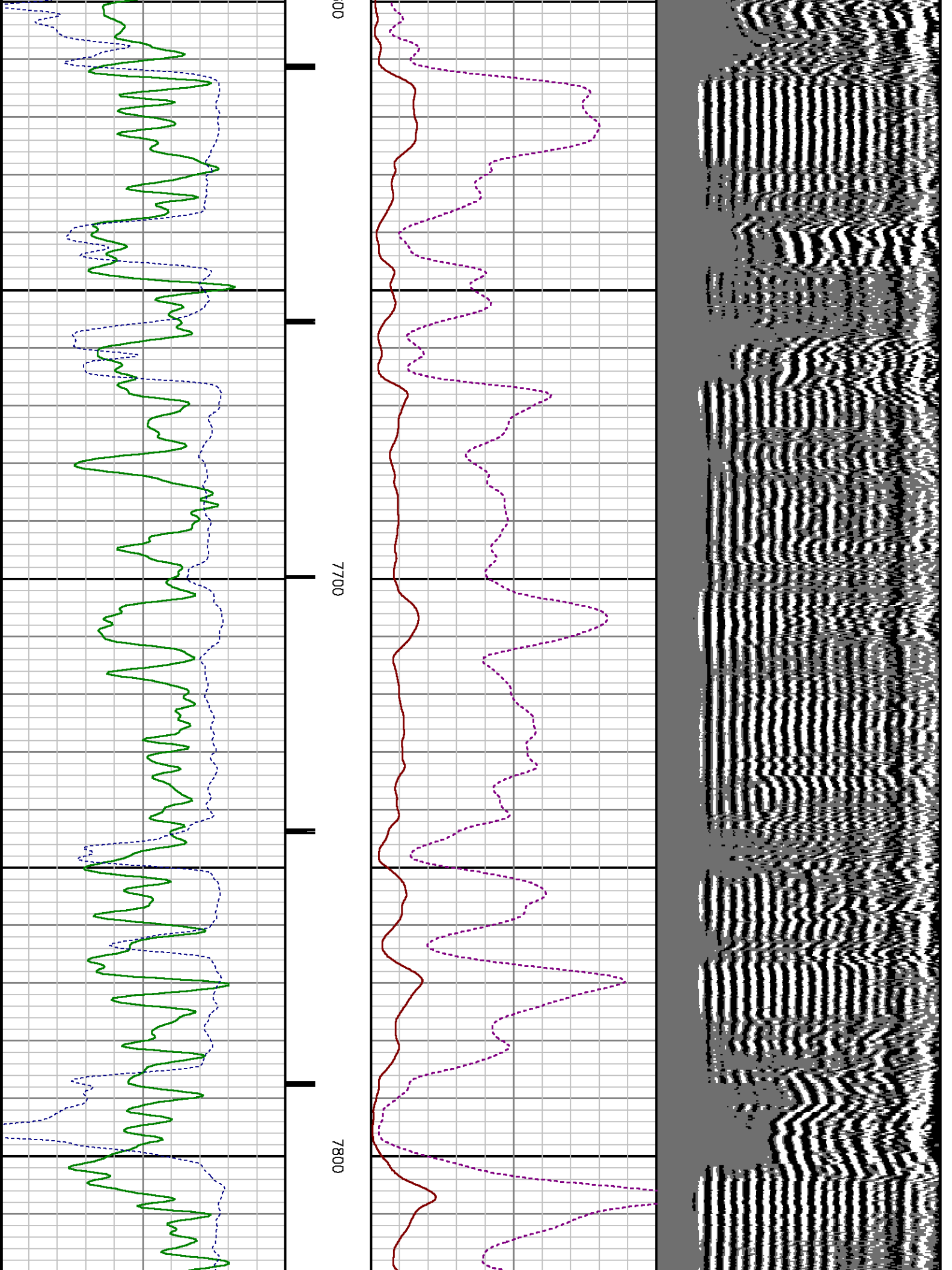


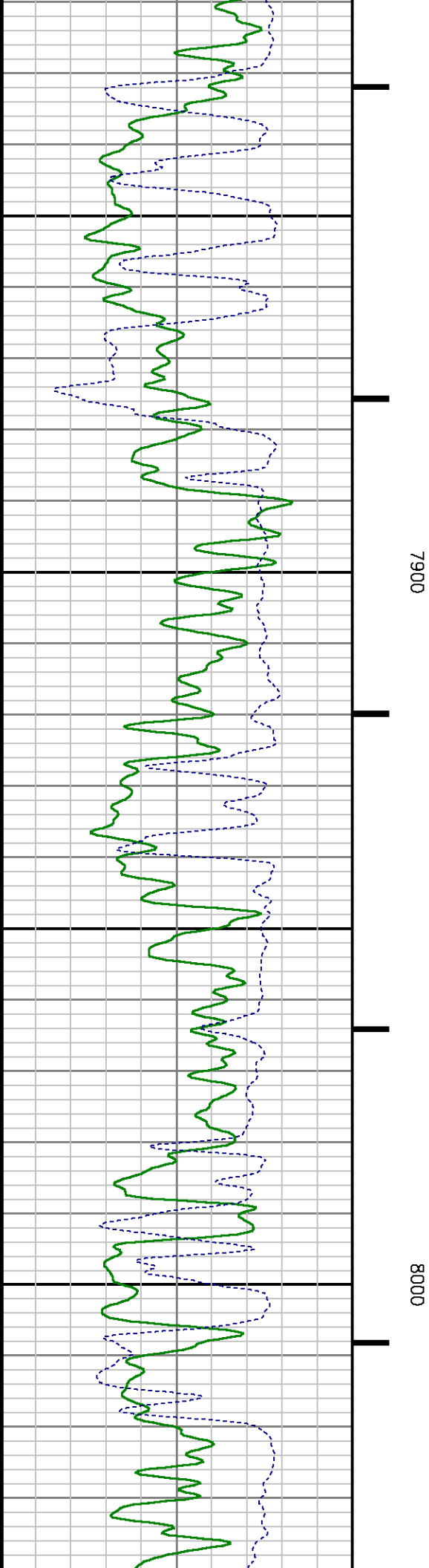
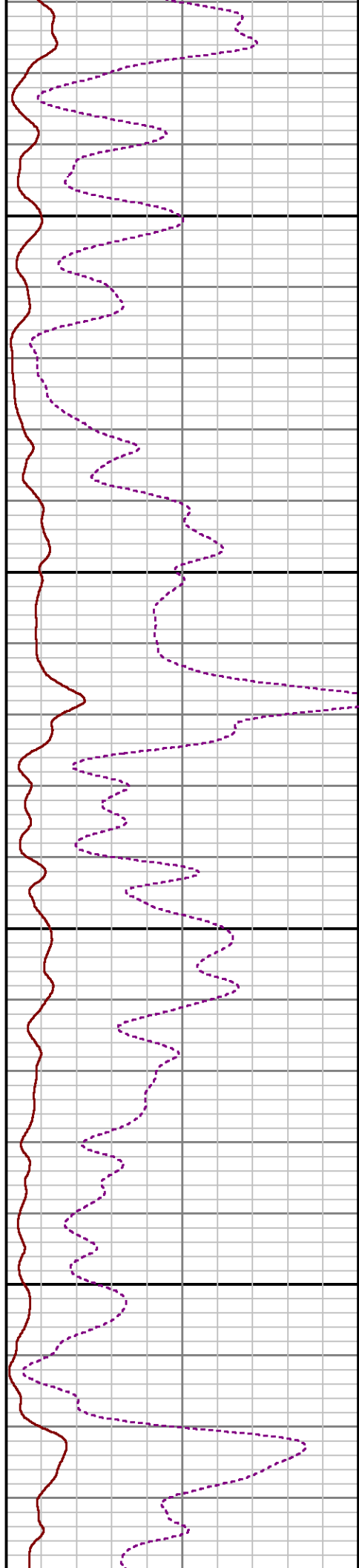
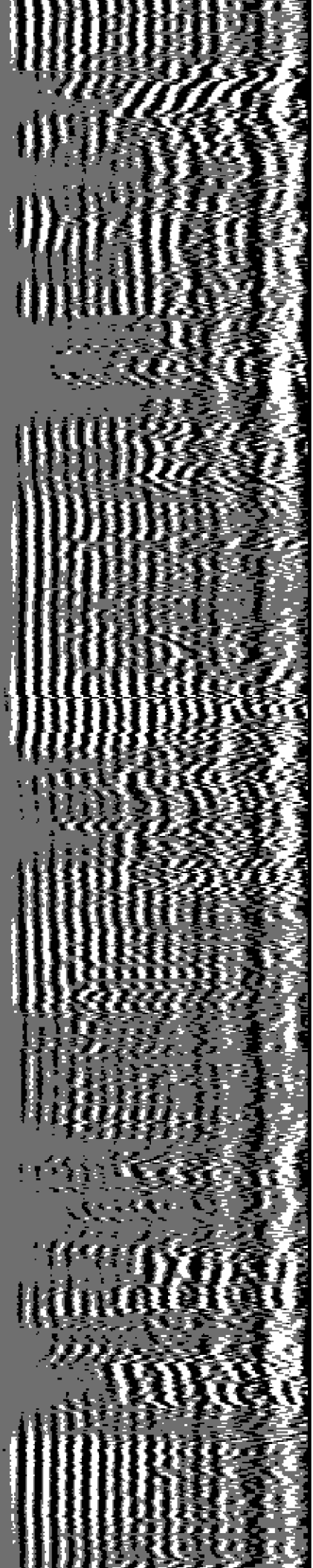


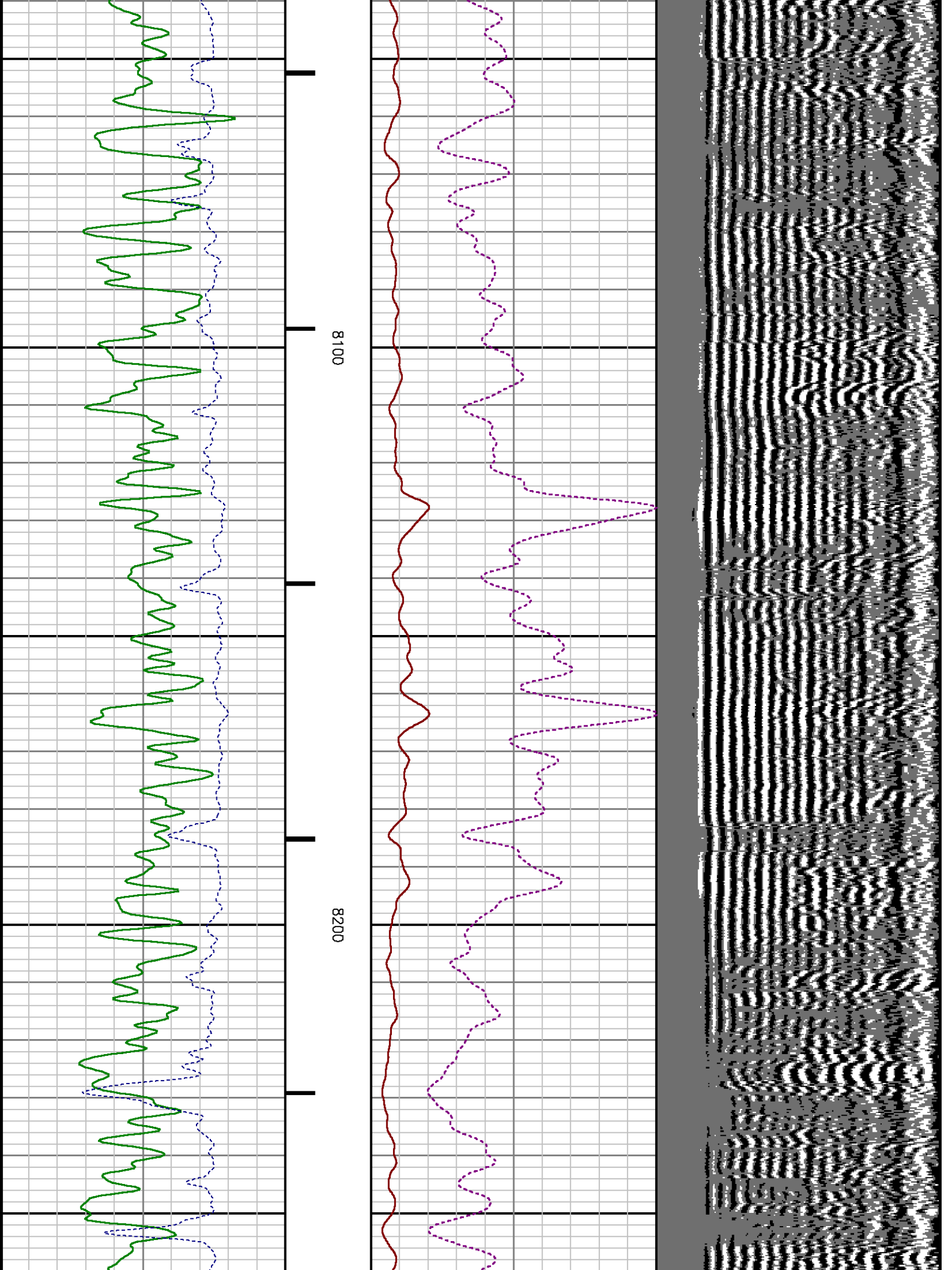


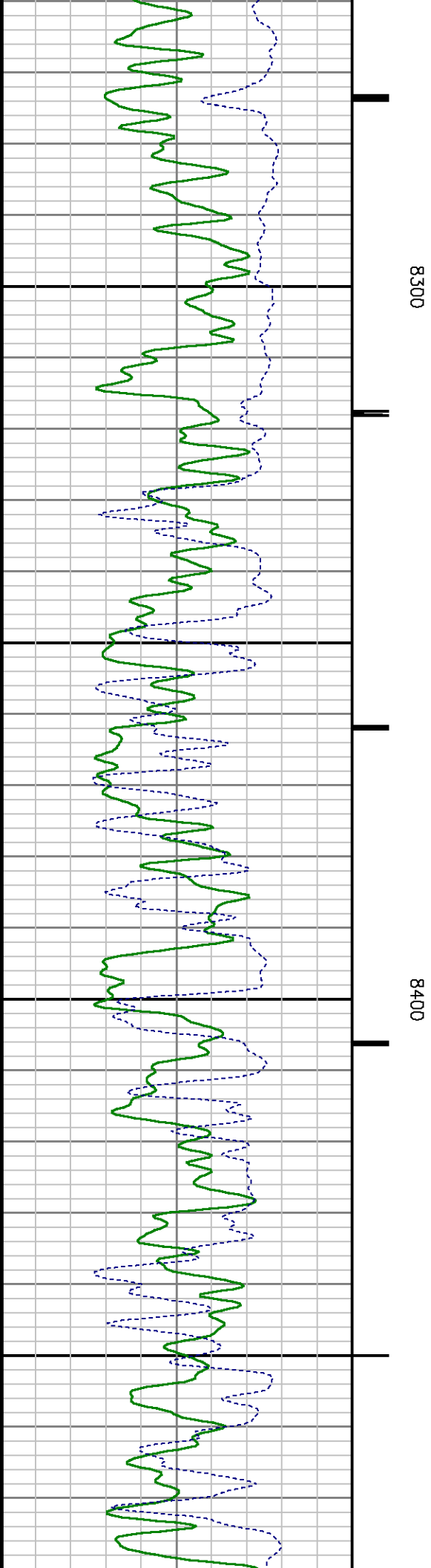
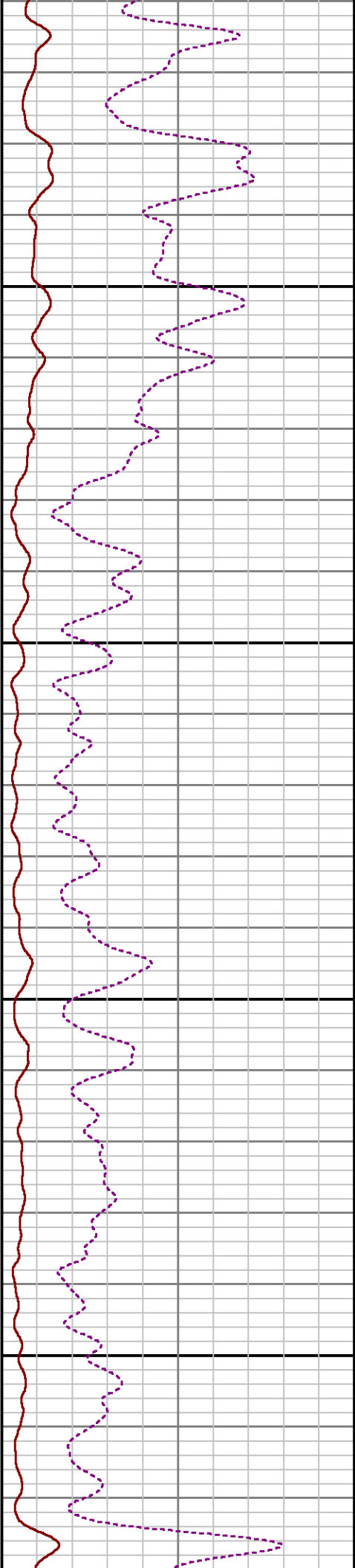
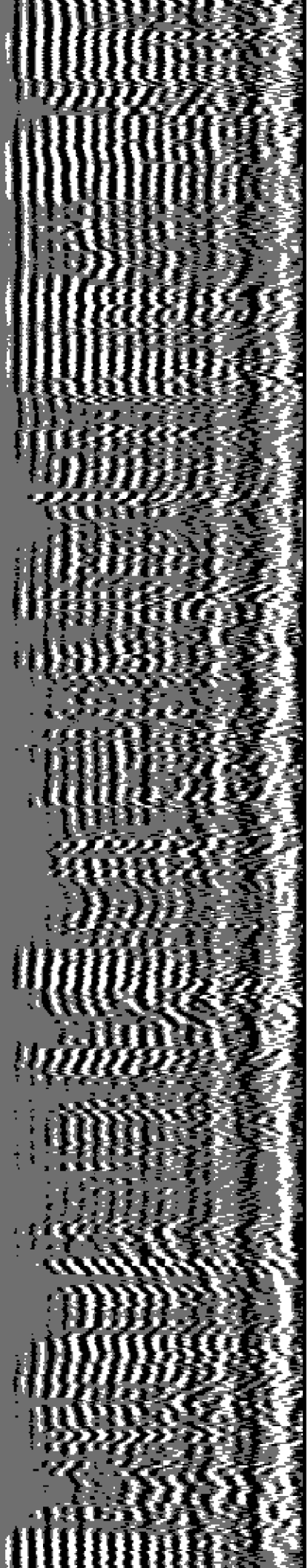




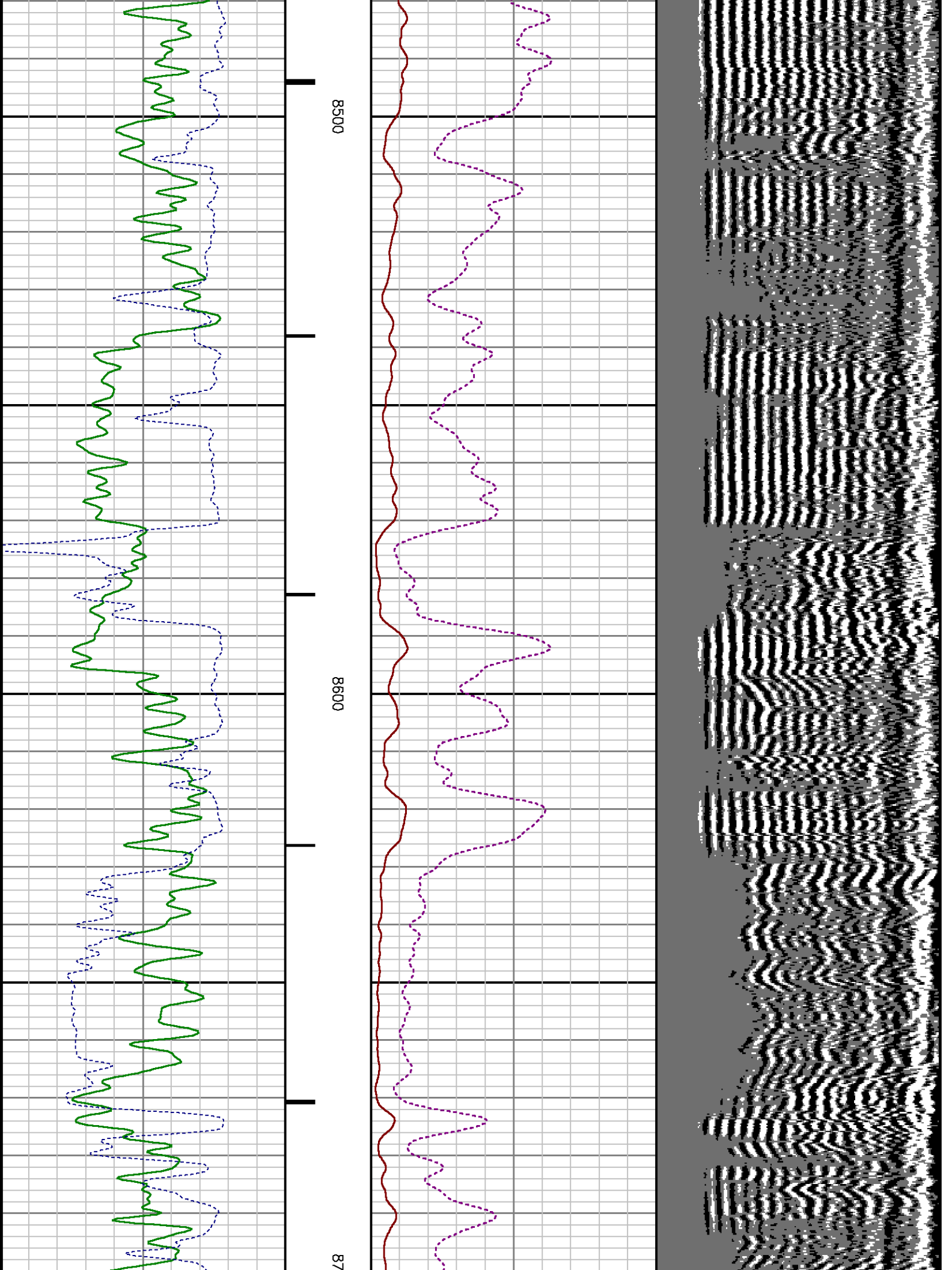




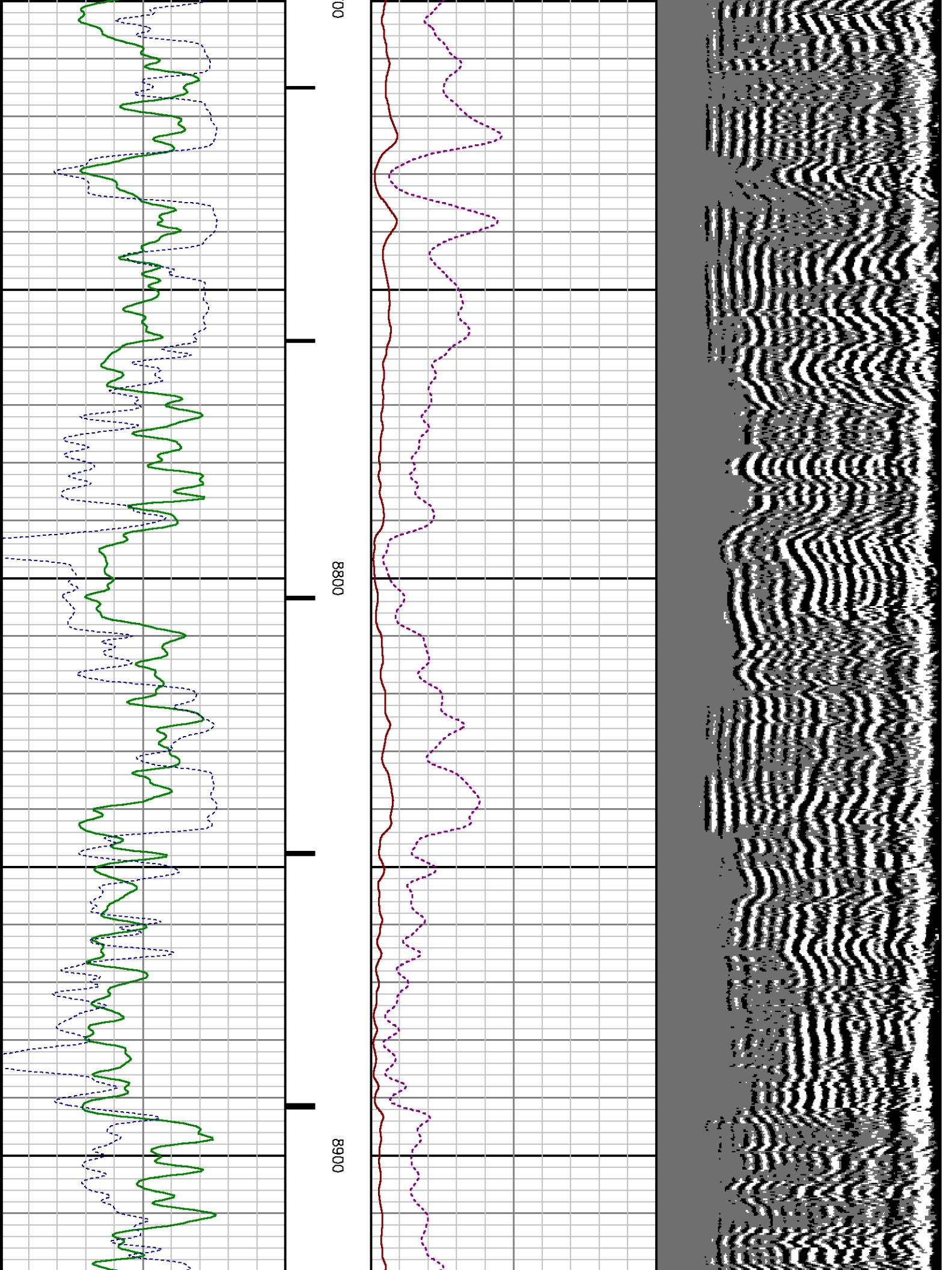


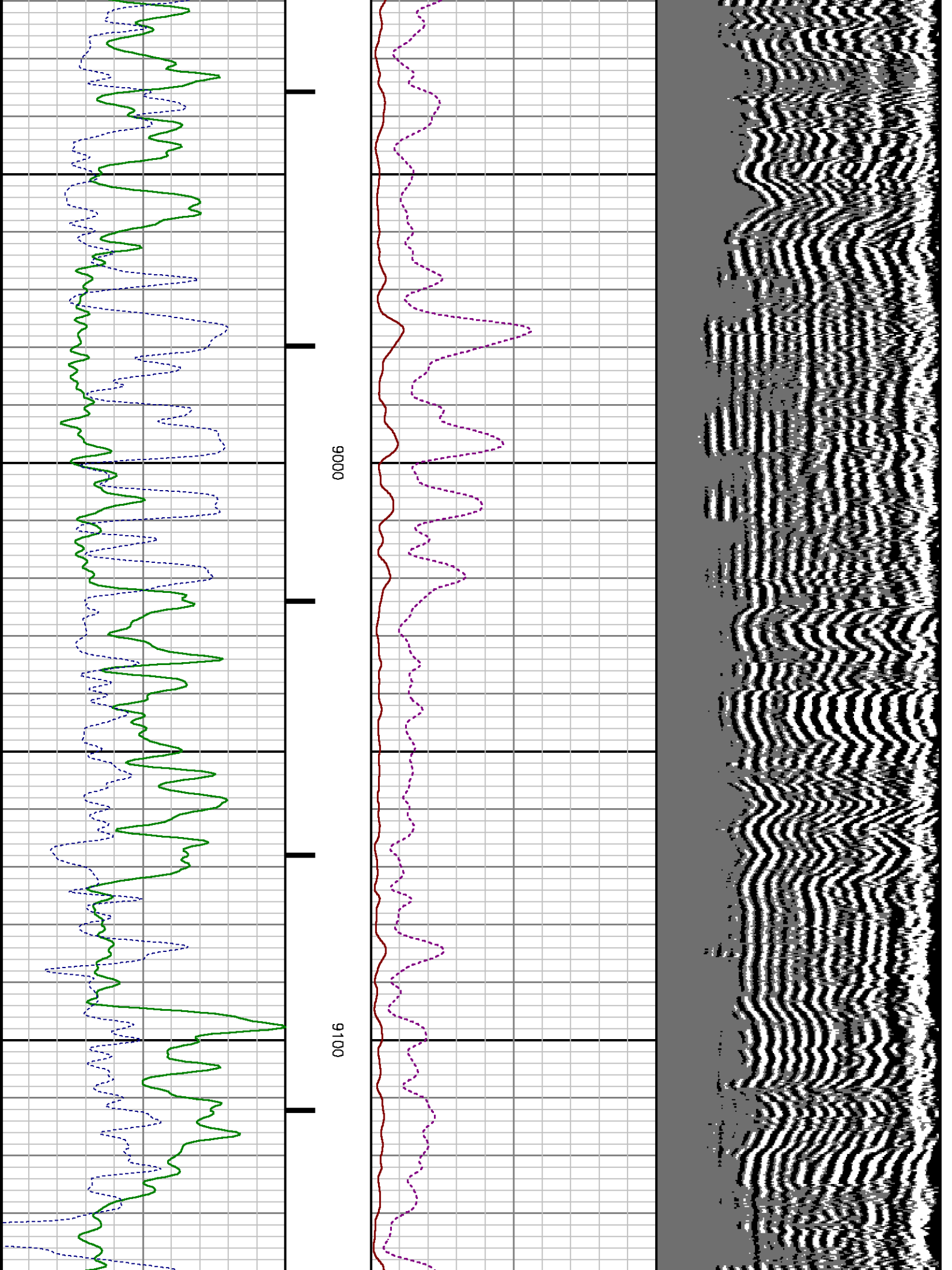


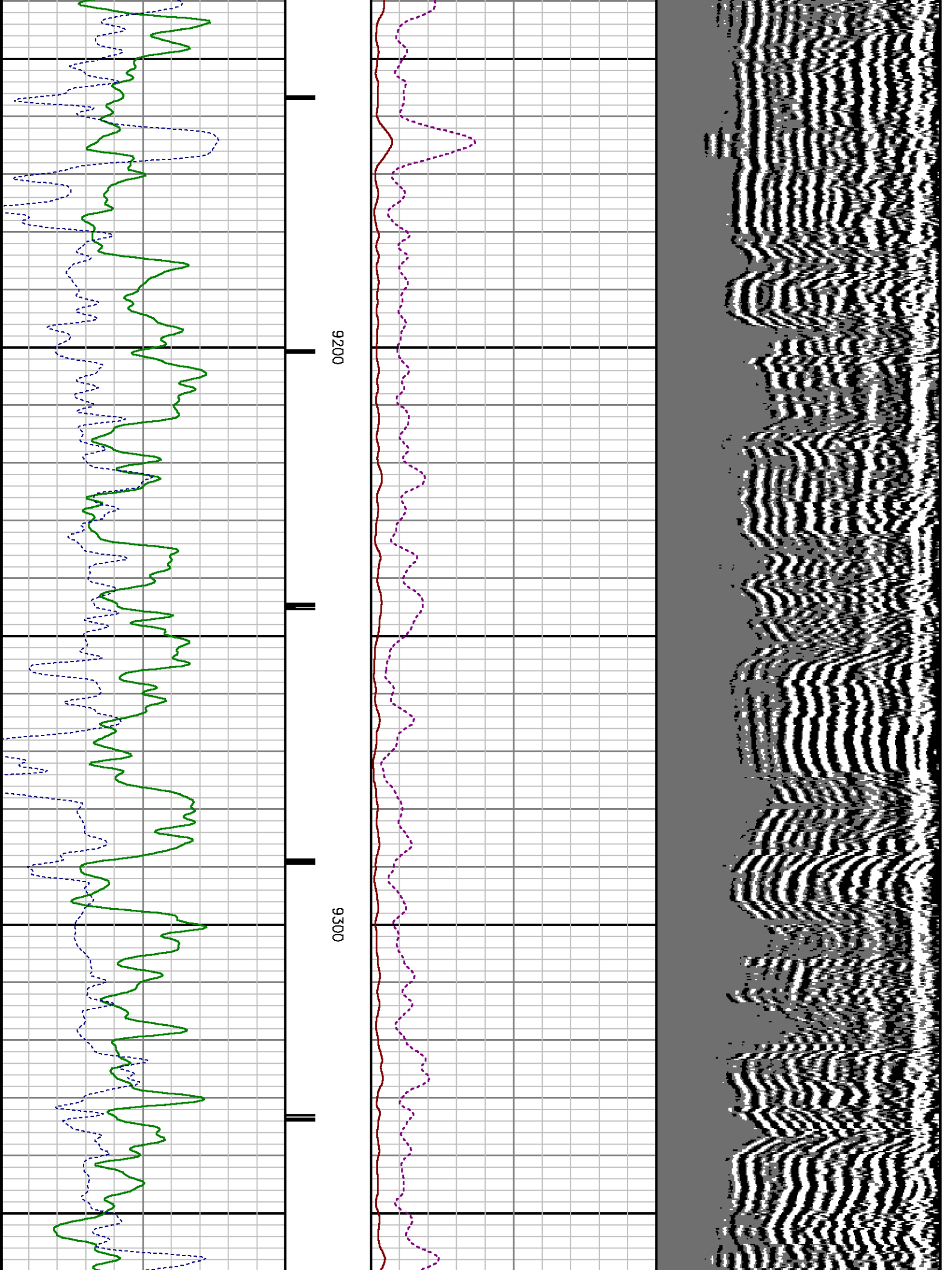


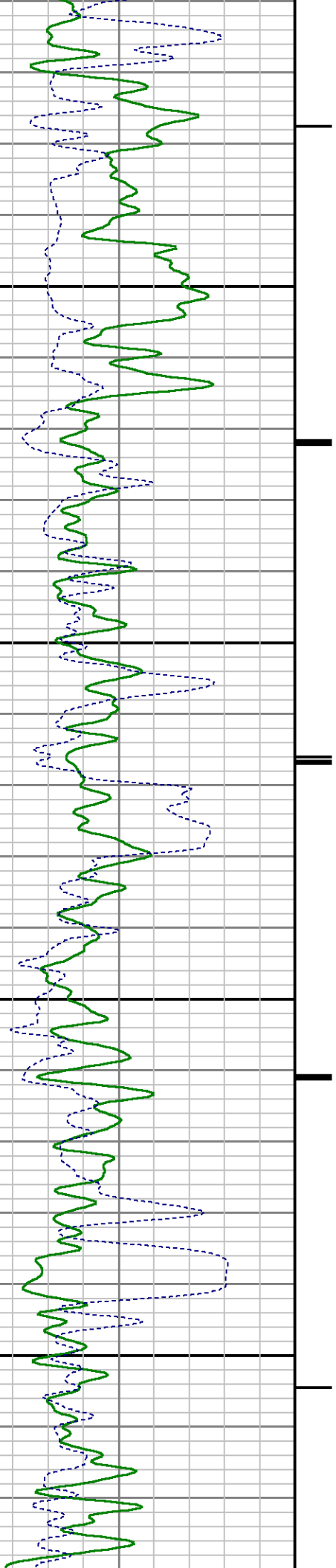
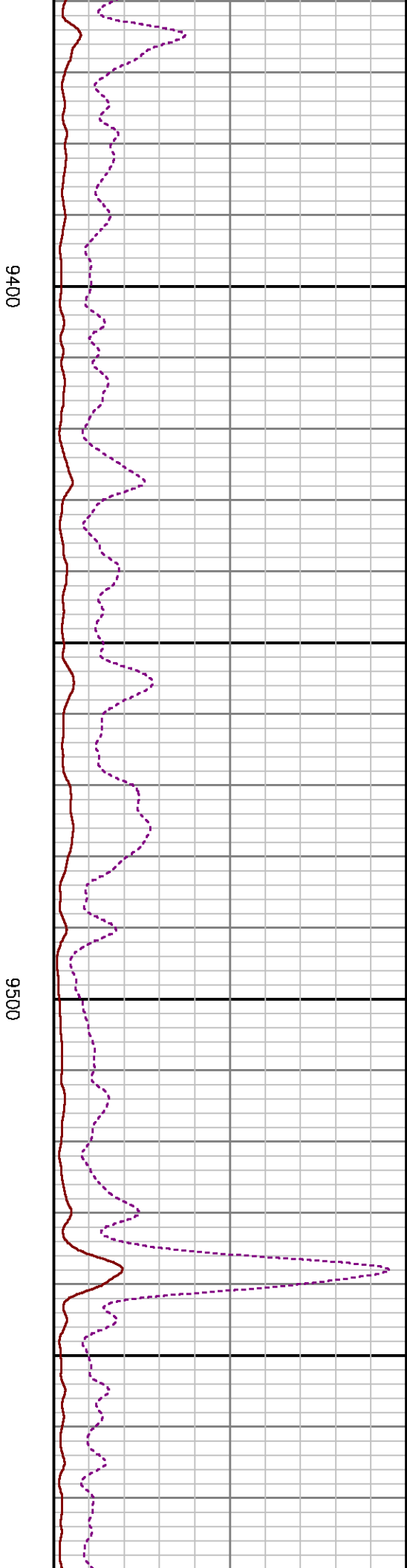
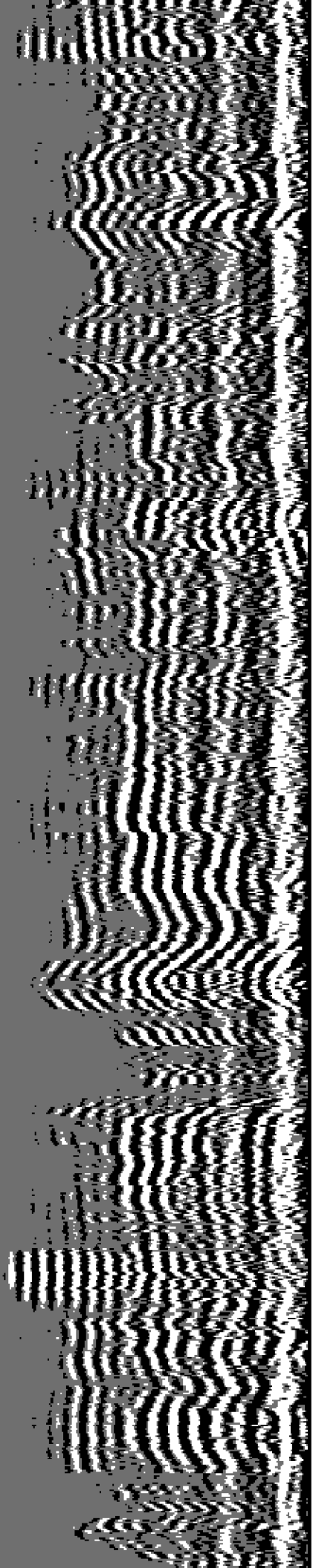


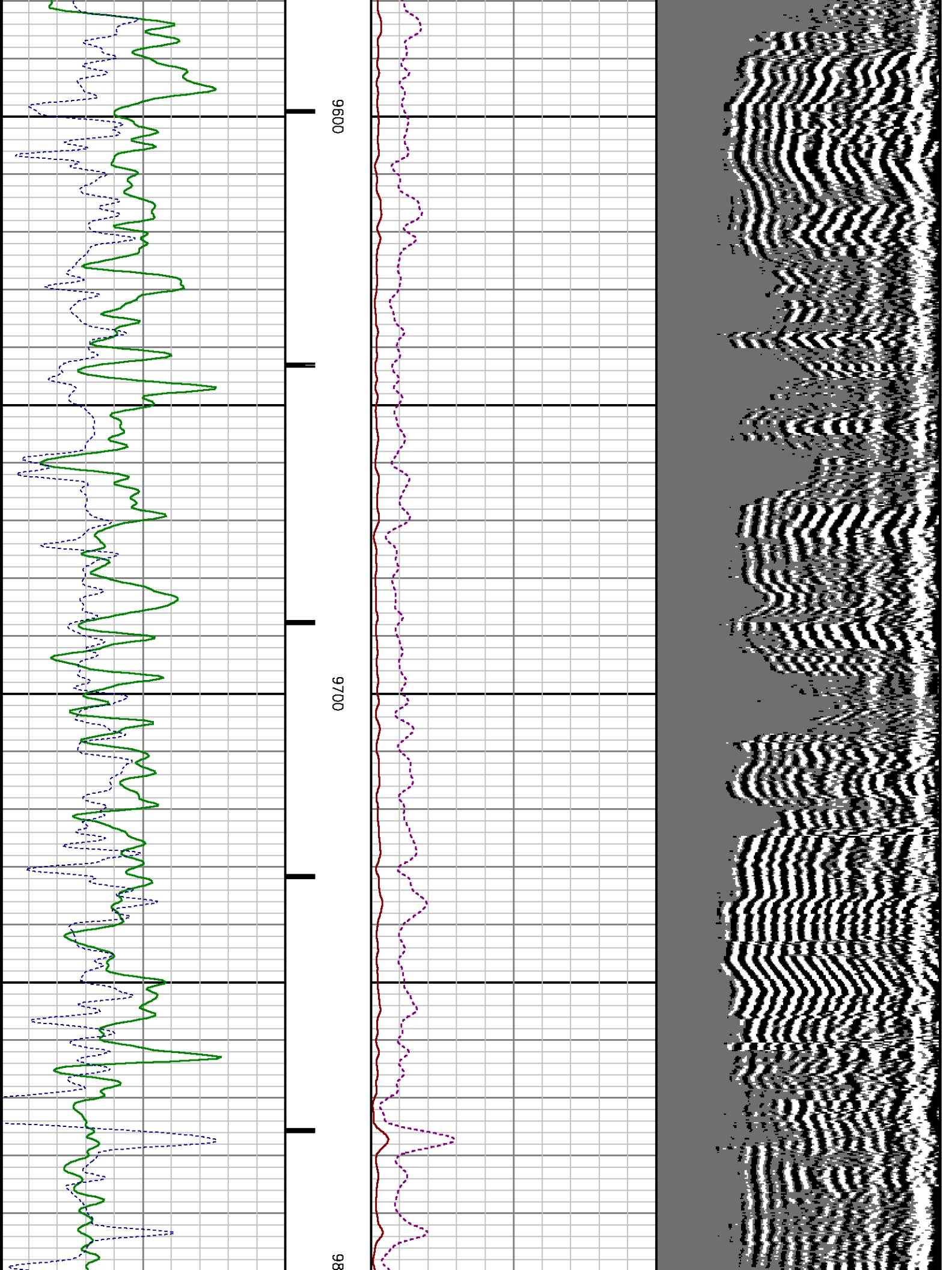




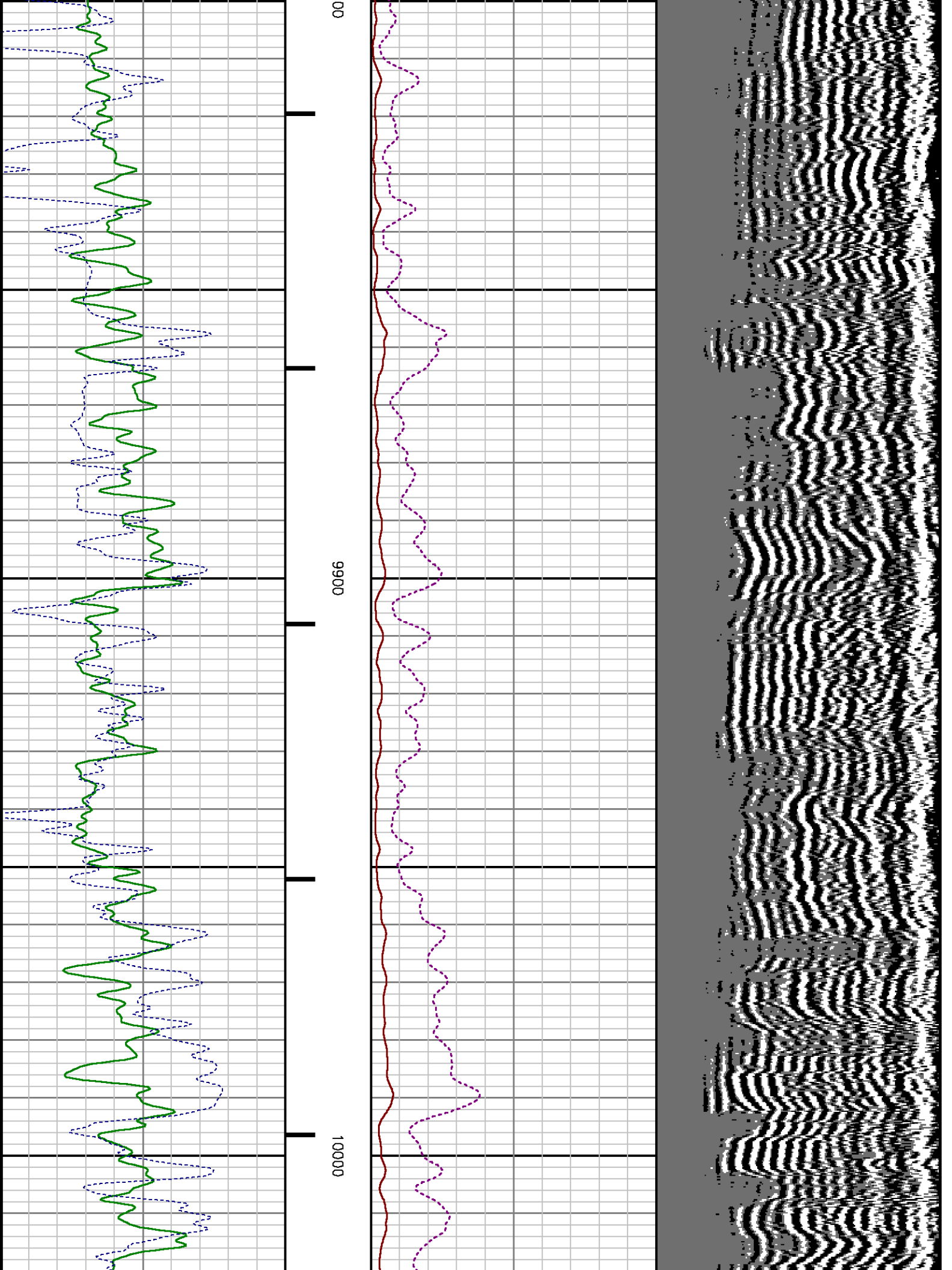




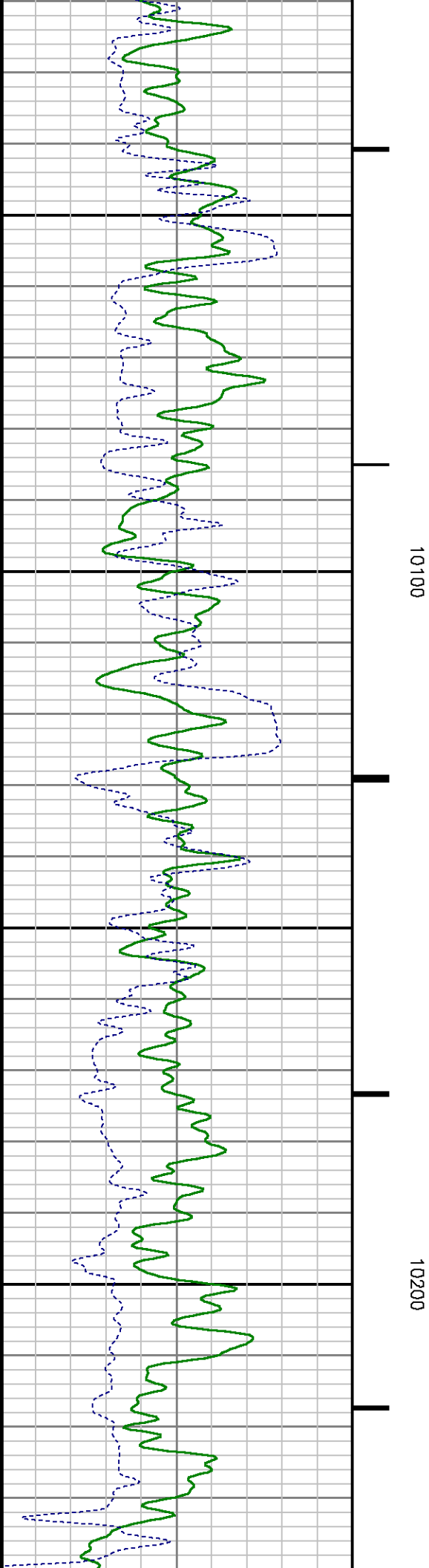
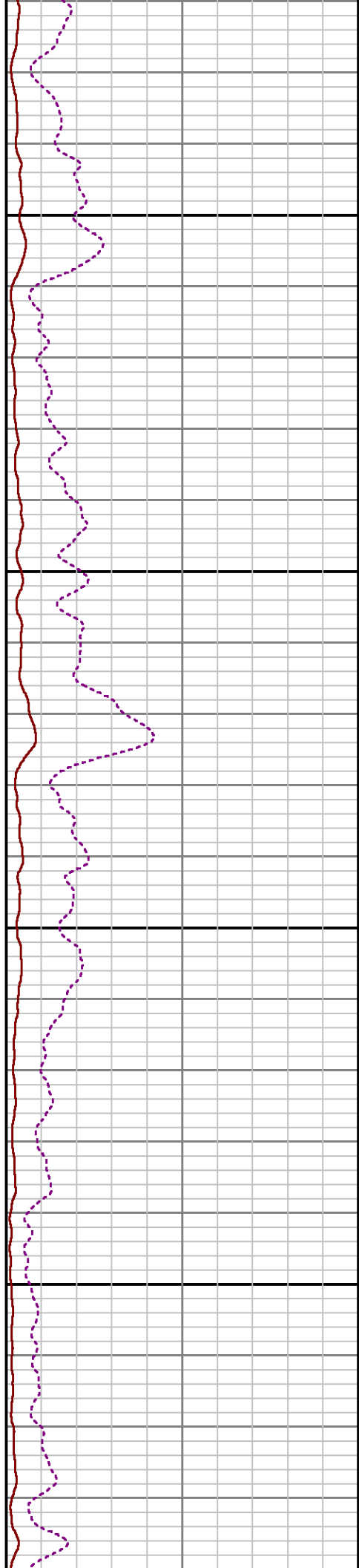
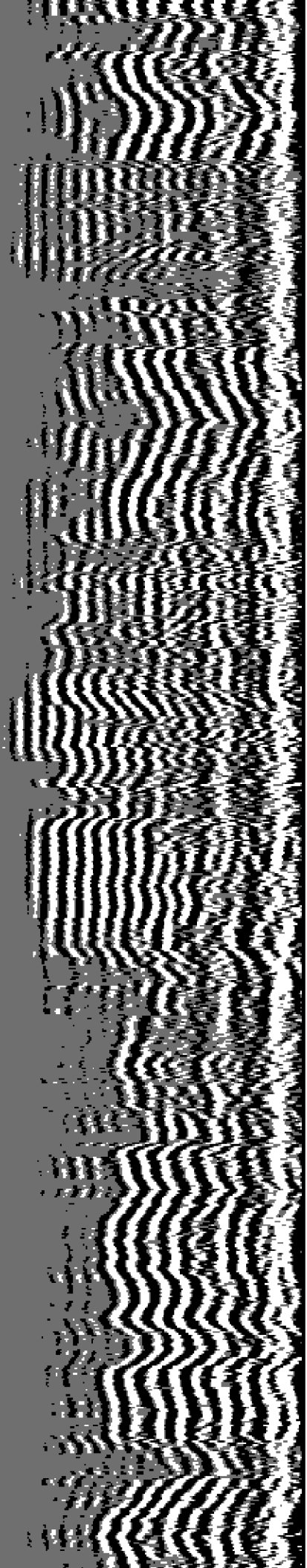


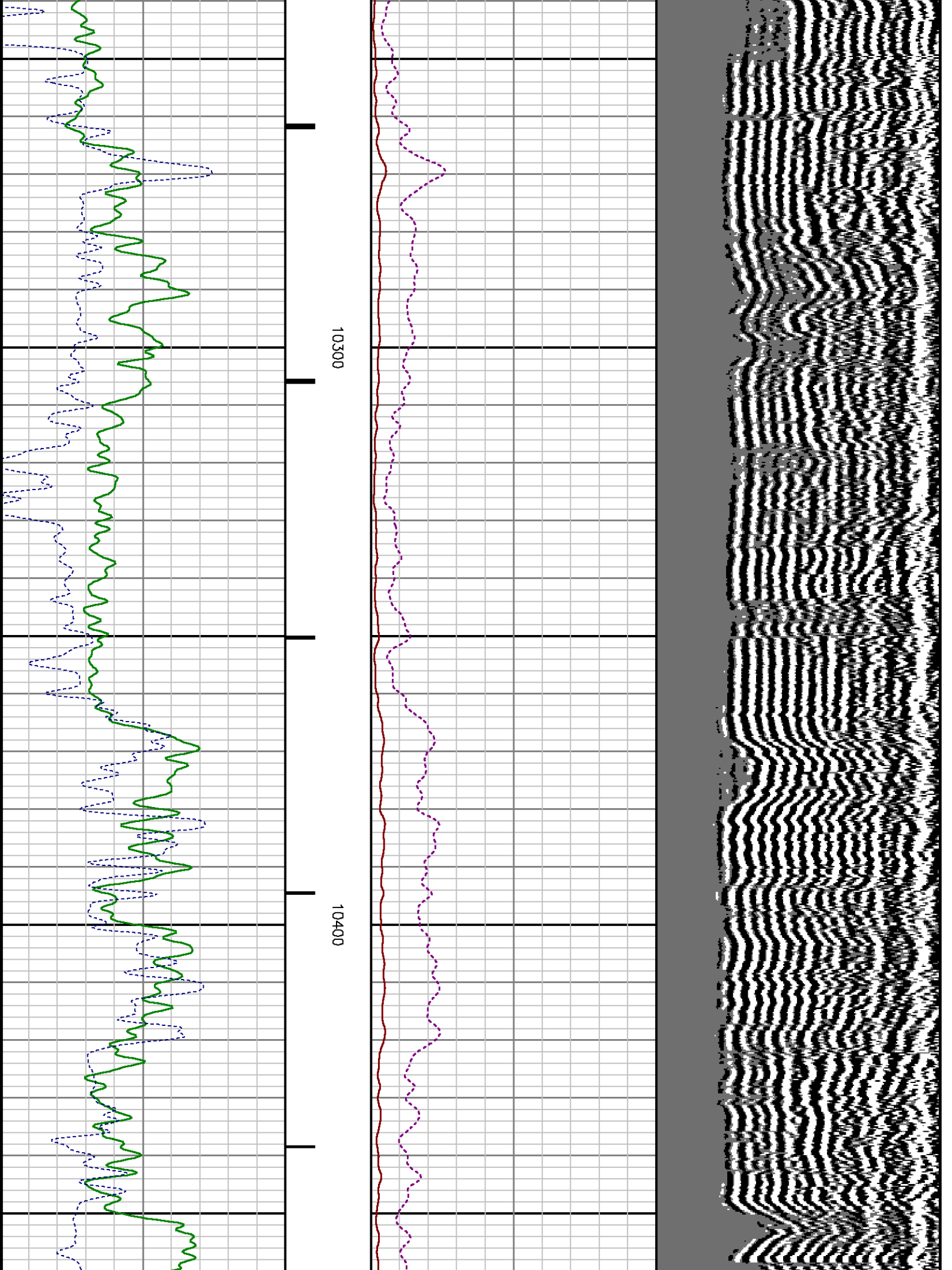


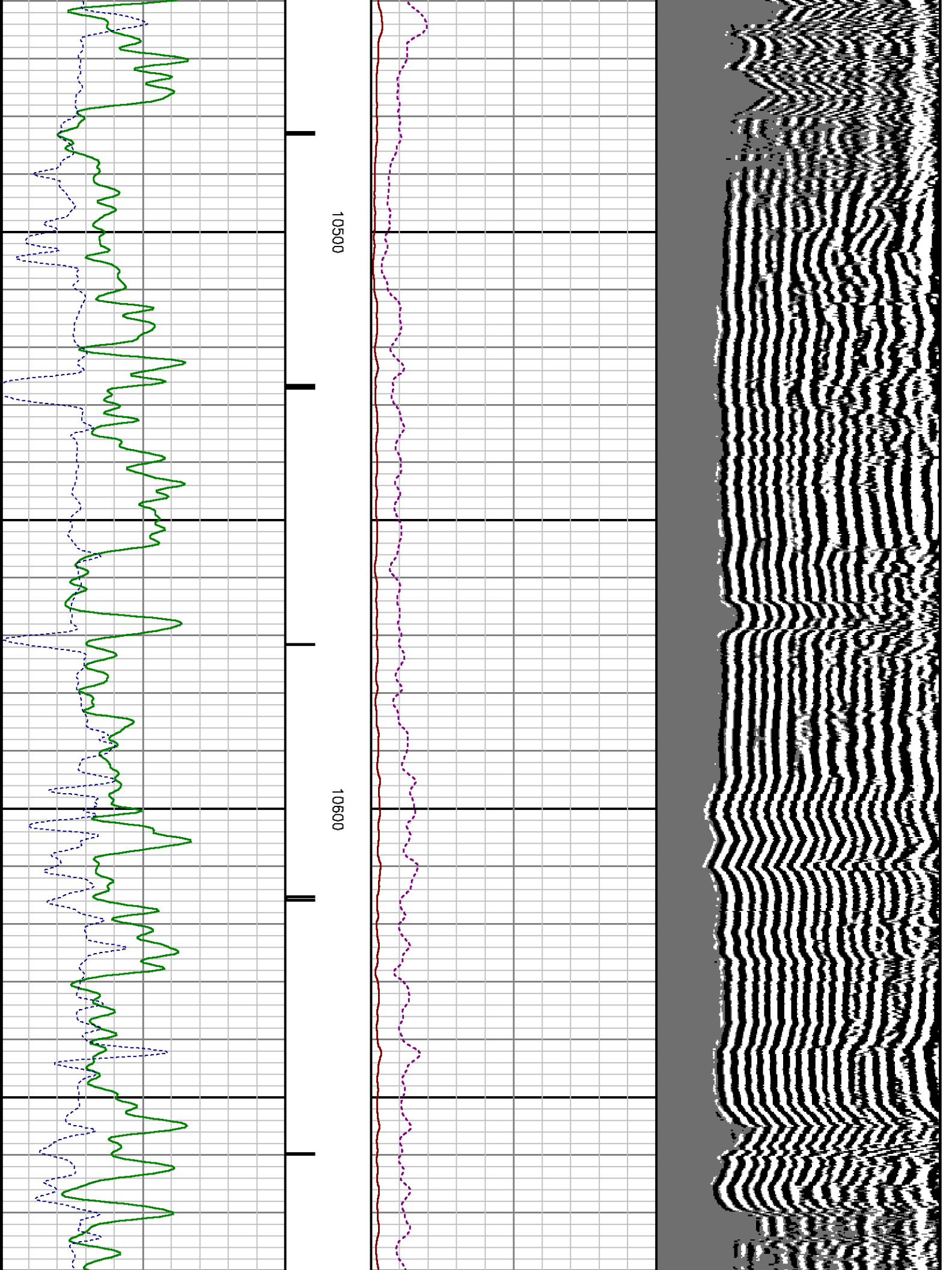


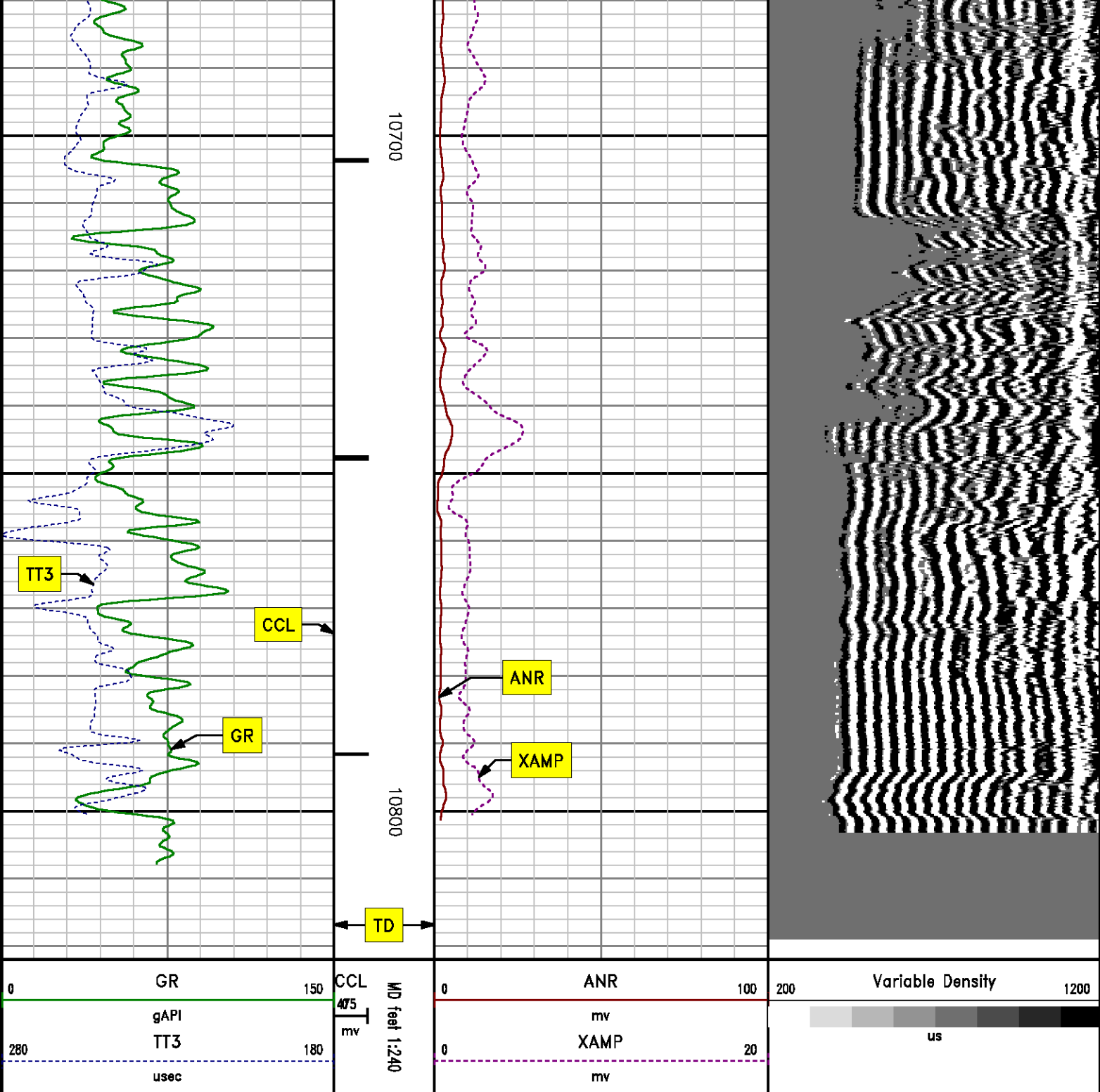












***SECONDARY PRESENTATION***  
***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
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RAL	FB Thresh Far	10.000	mv	18.468	10818.250
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RAL	FB Thresh Radial	4.000	mv	18.468	10818.250
RAL	Fluid Travel Time	200.000	usec/ft	18.468	10818.750

### DEPTH OFFSETS (for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
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		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
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Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

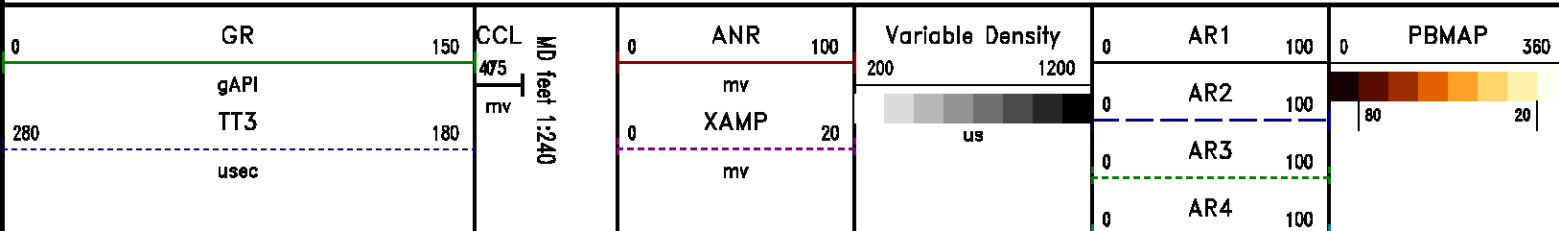
Well : FEDERAL RG 312-14-298

File Name : d:\welldata\wp\rfederal rg 312-14-298\312cbl\main.xtf

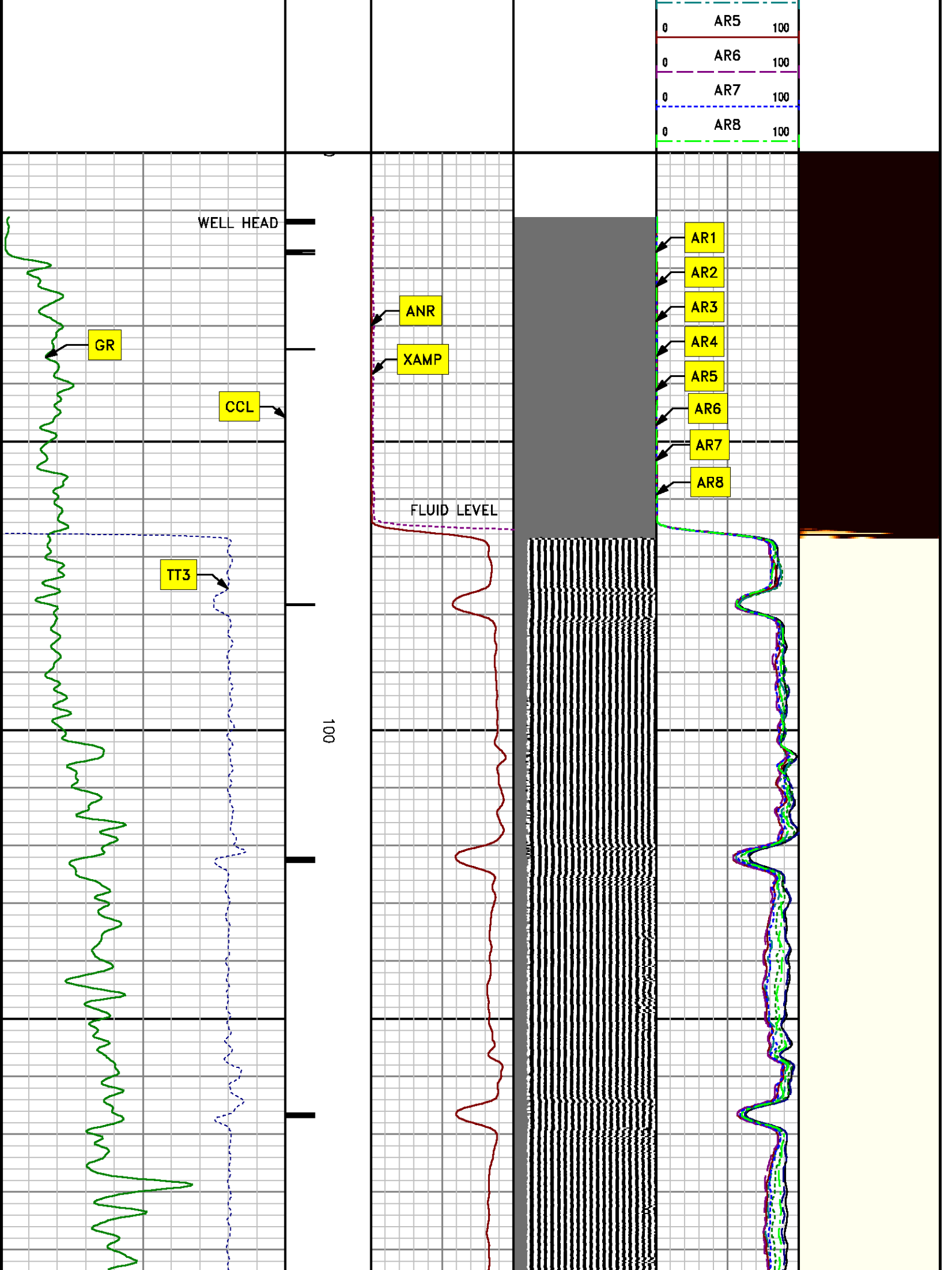
Mode : PlotMgr 5.4.504

Interval : 0.00 - 10822.00 feet UP

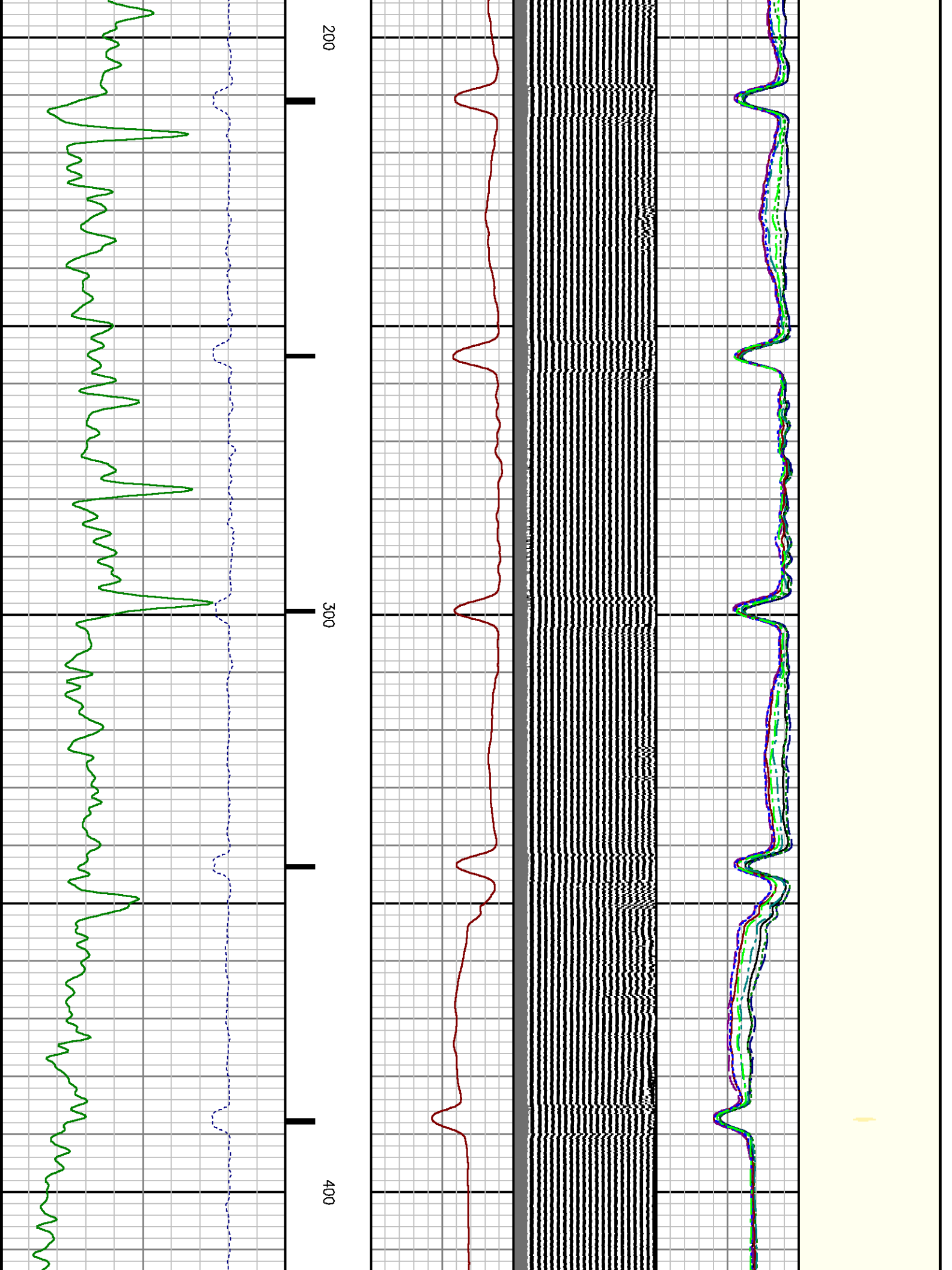
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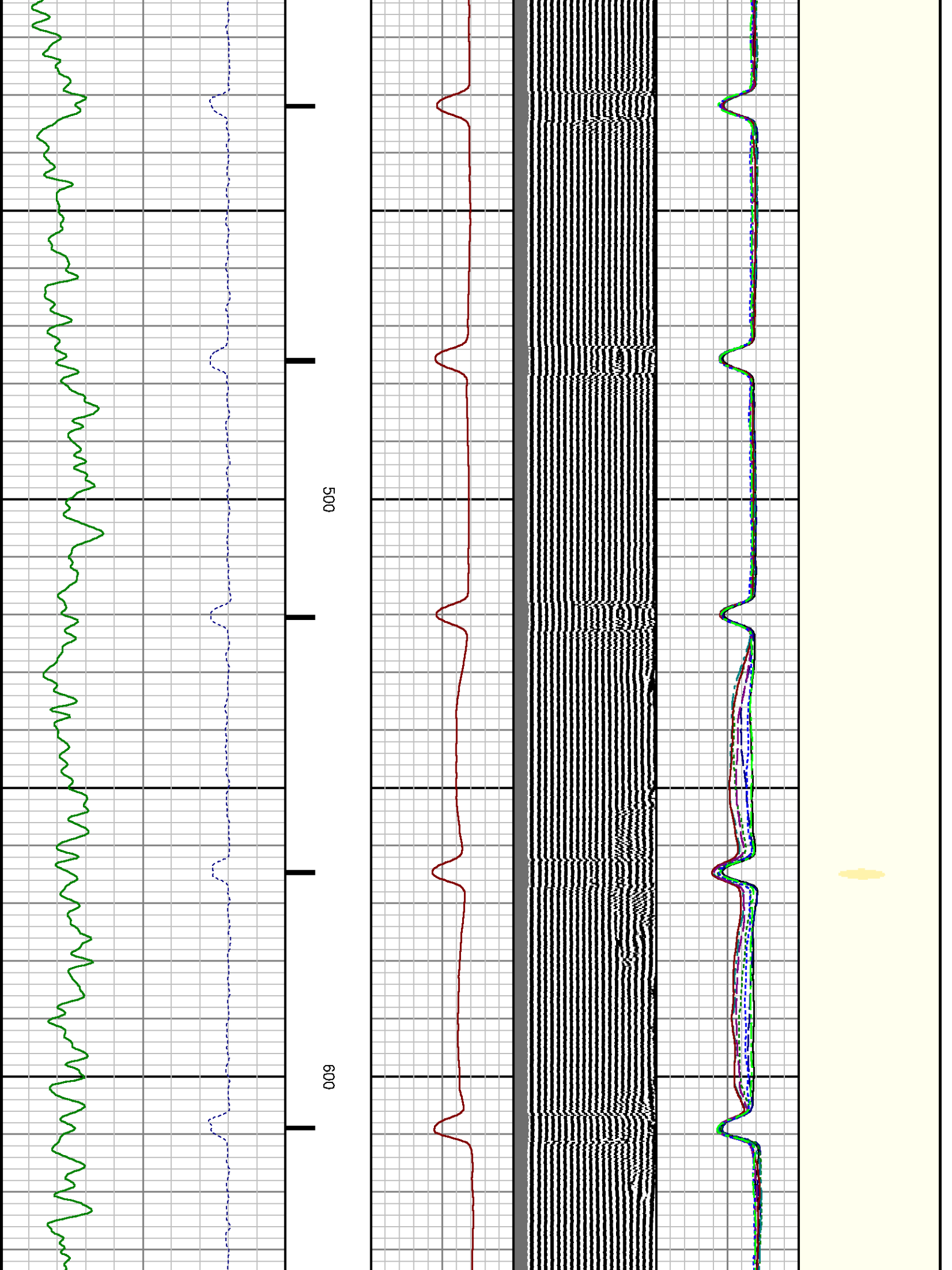


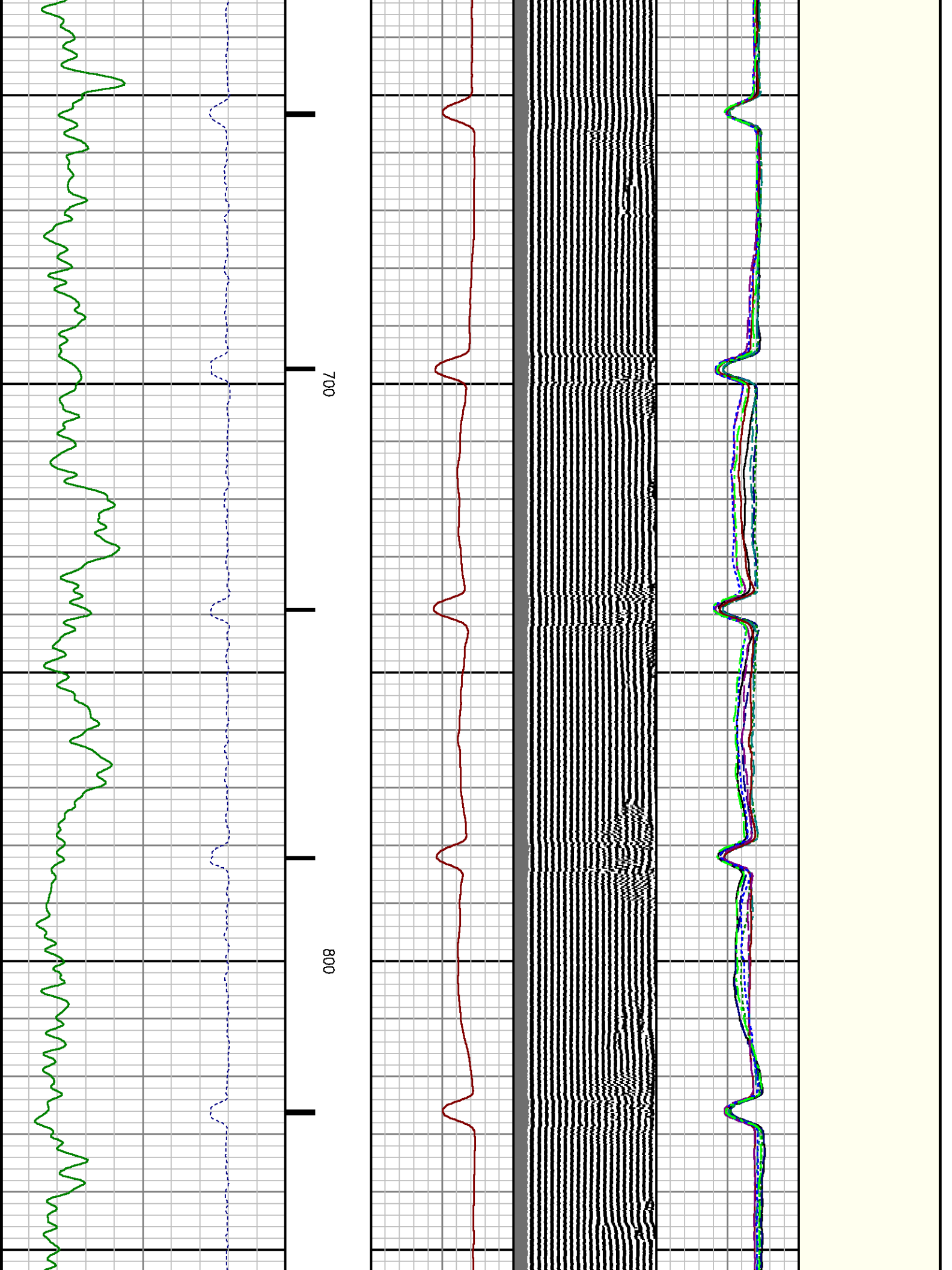
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0	AR6	100
0	AR7	100
0	AR8	100

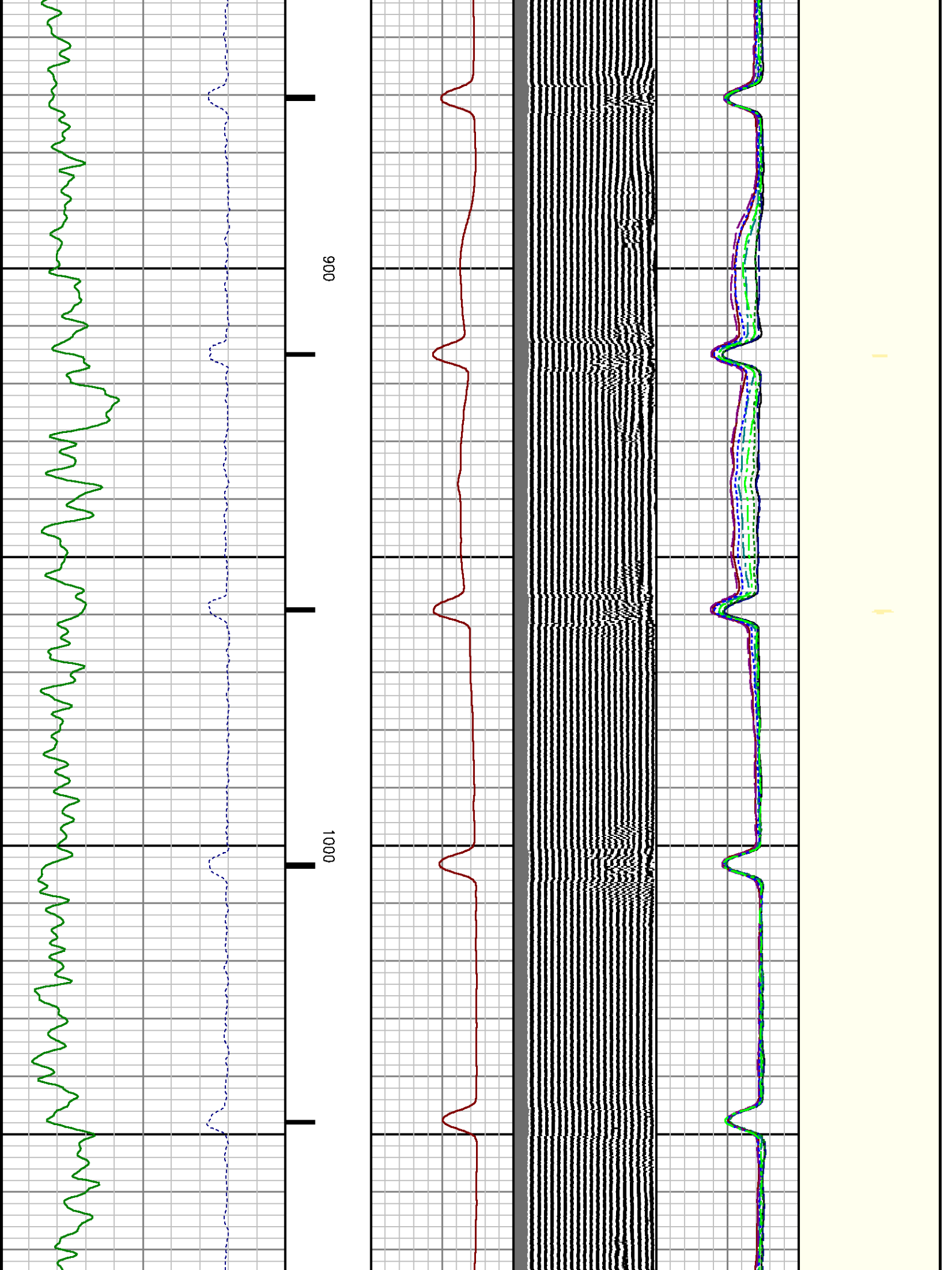


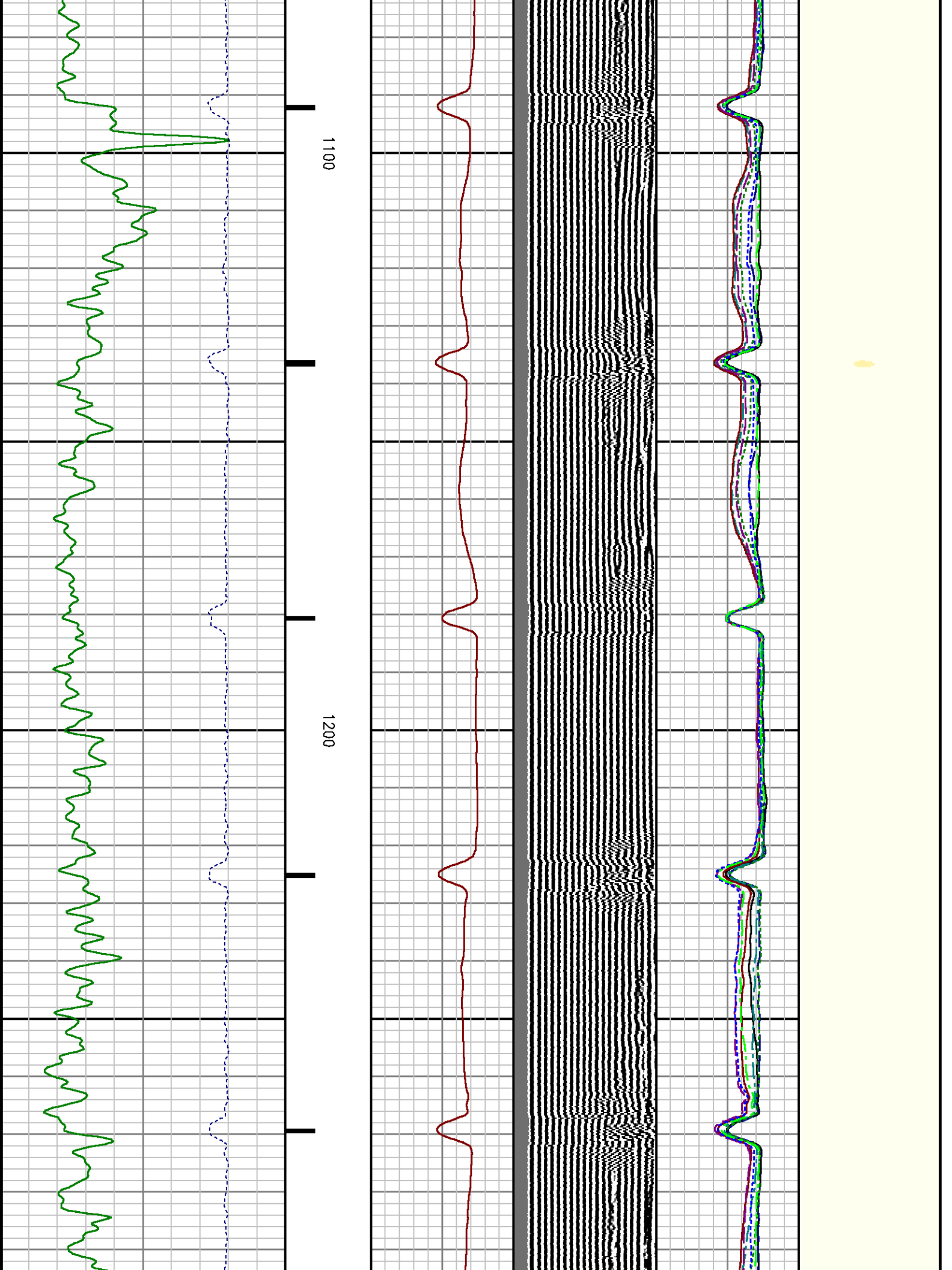


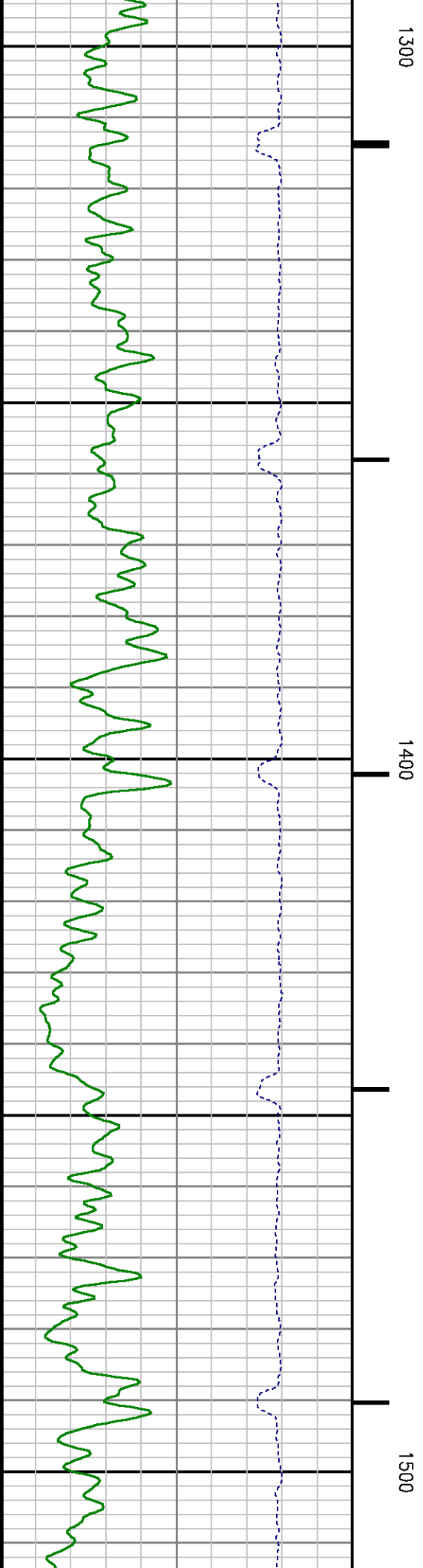
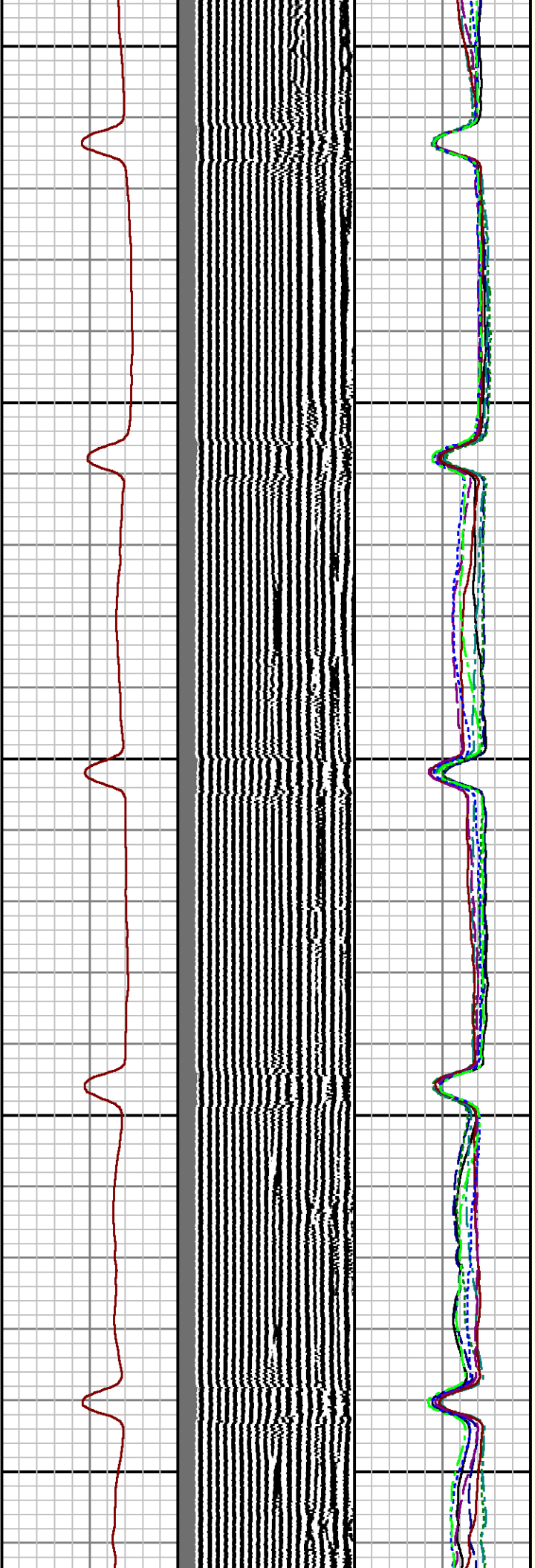




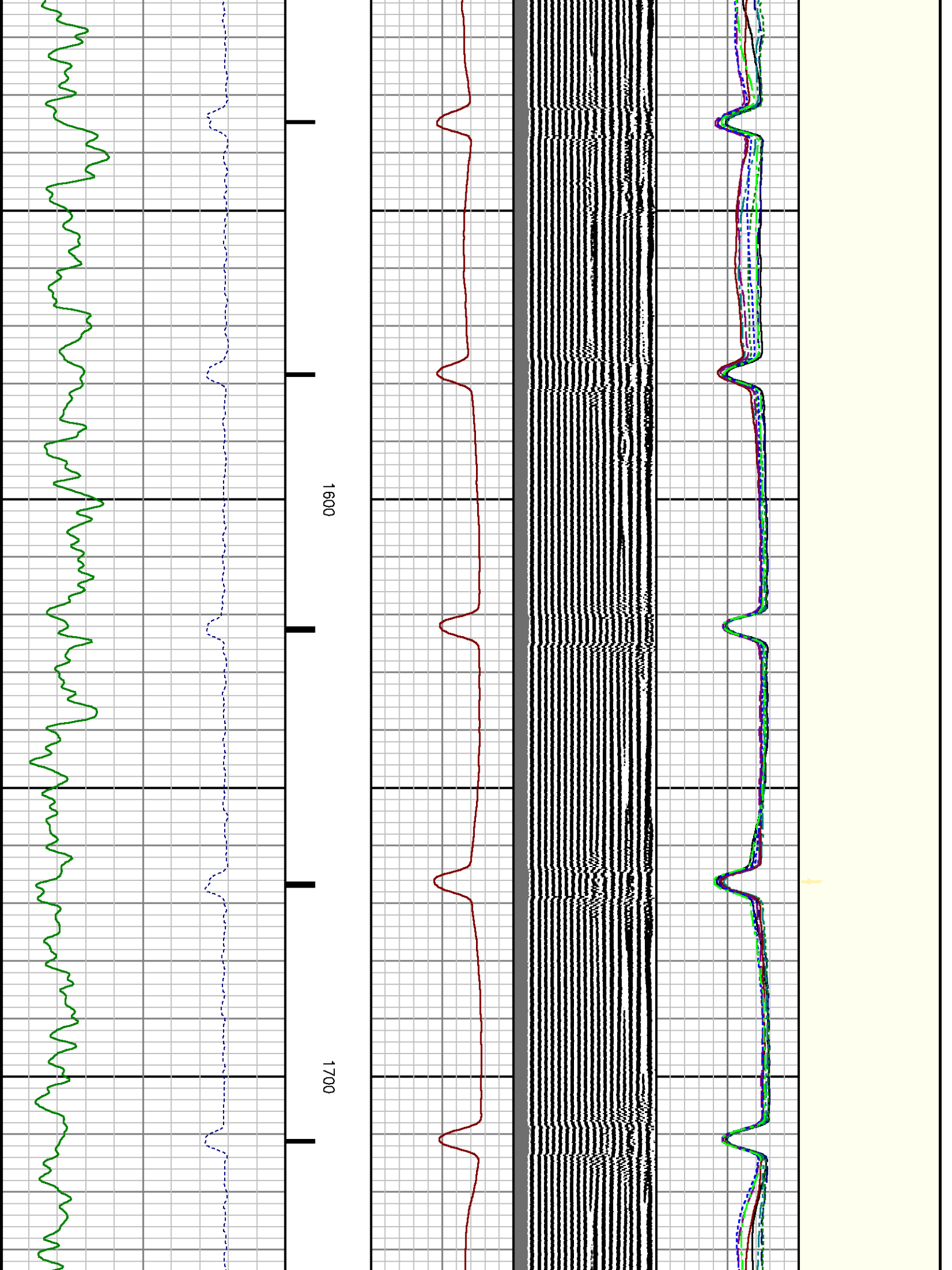


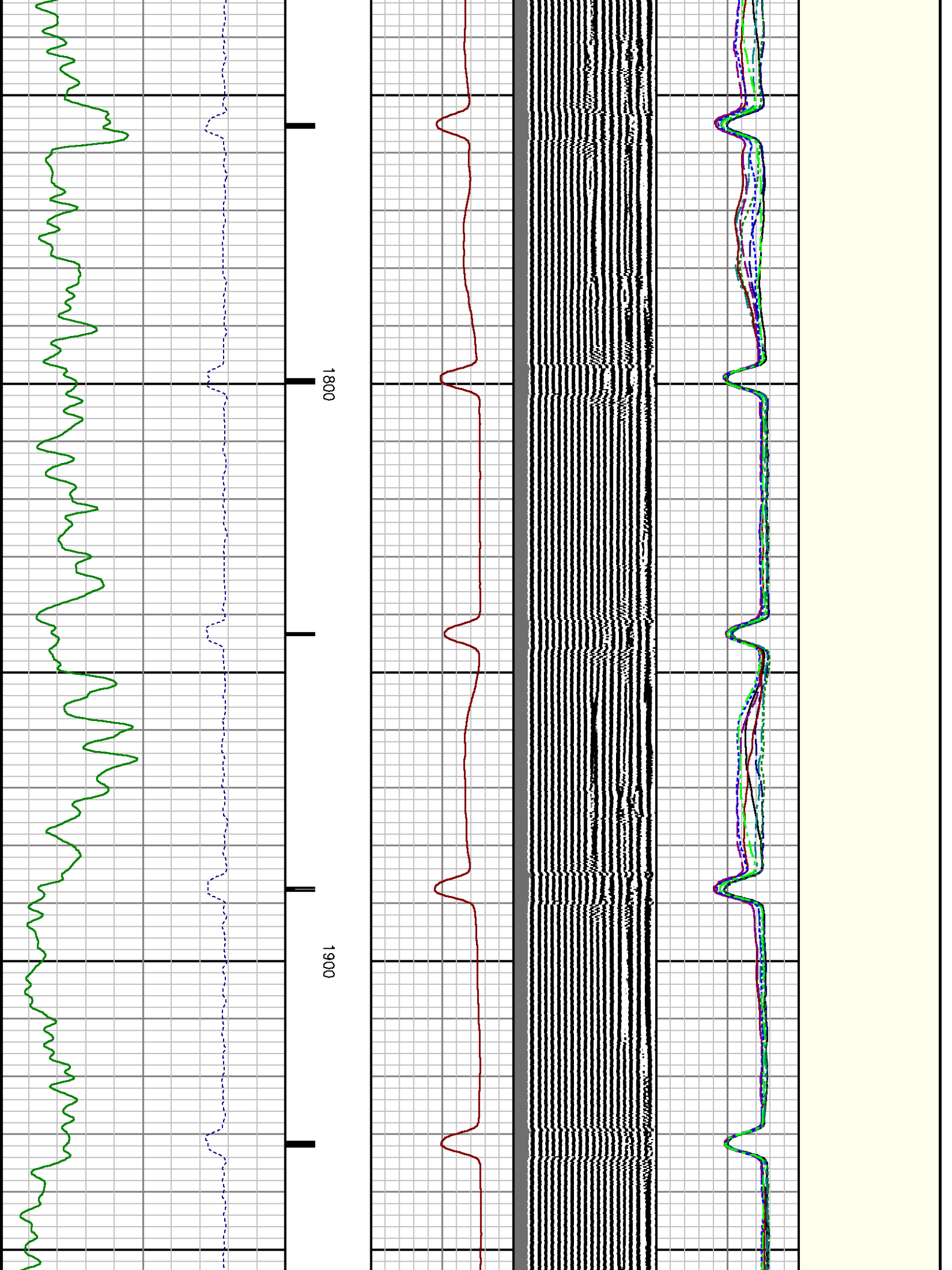


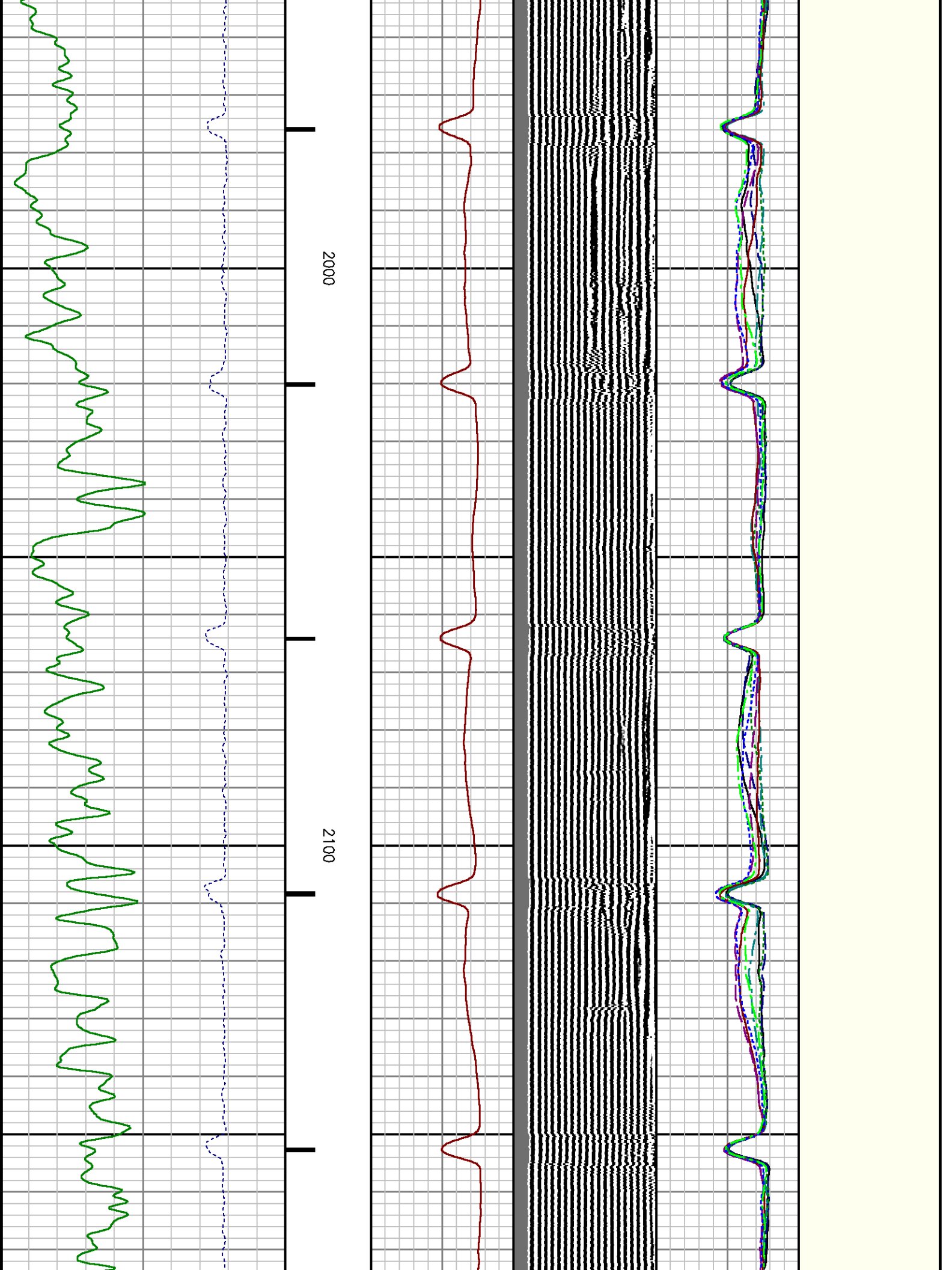


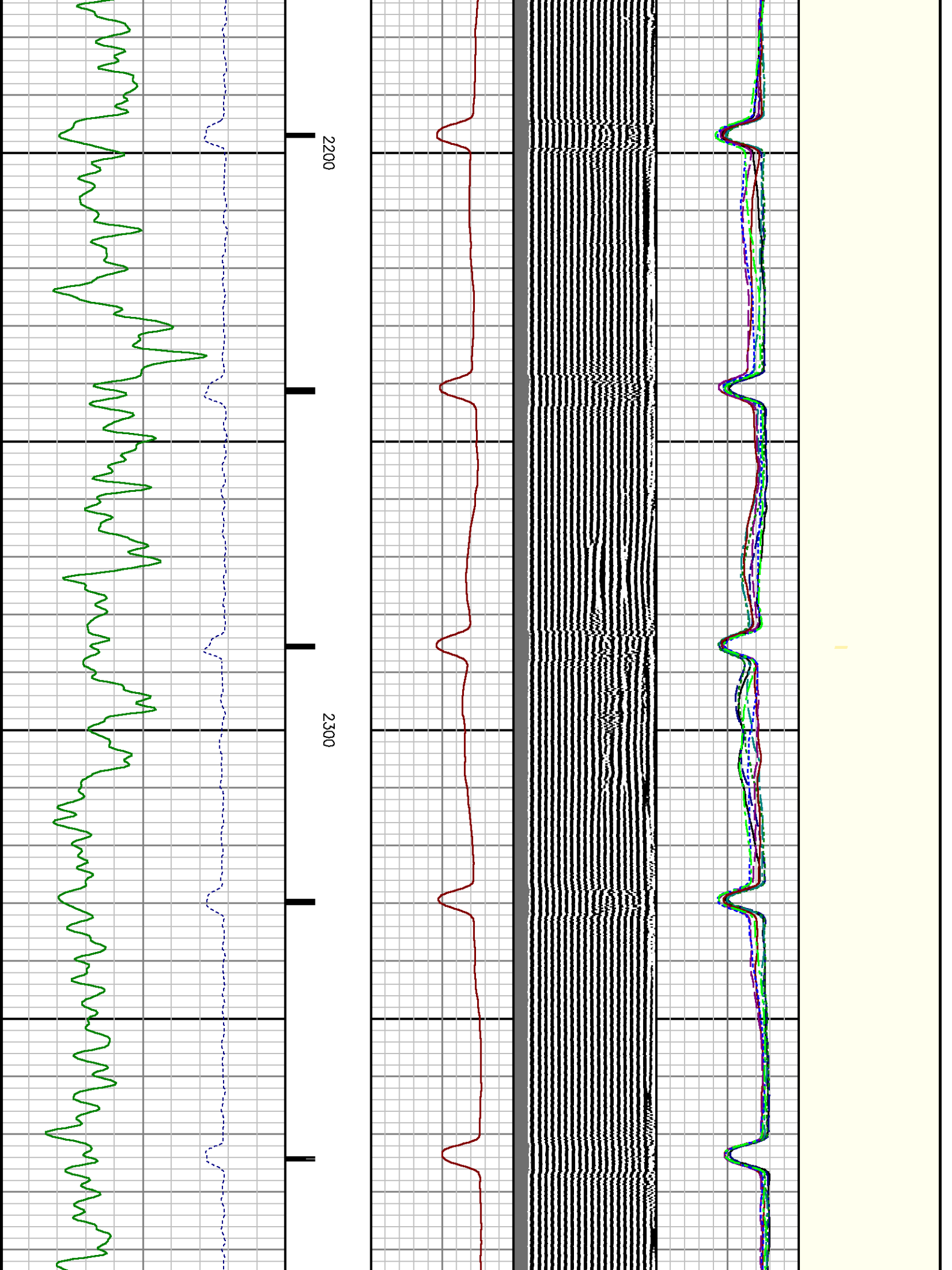


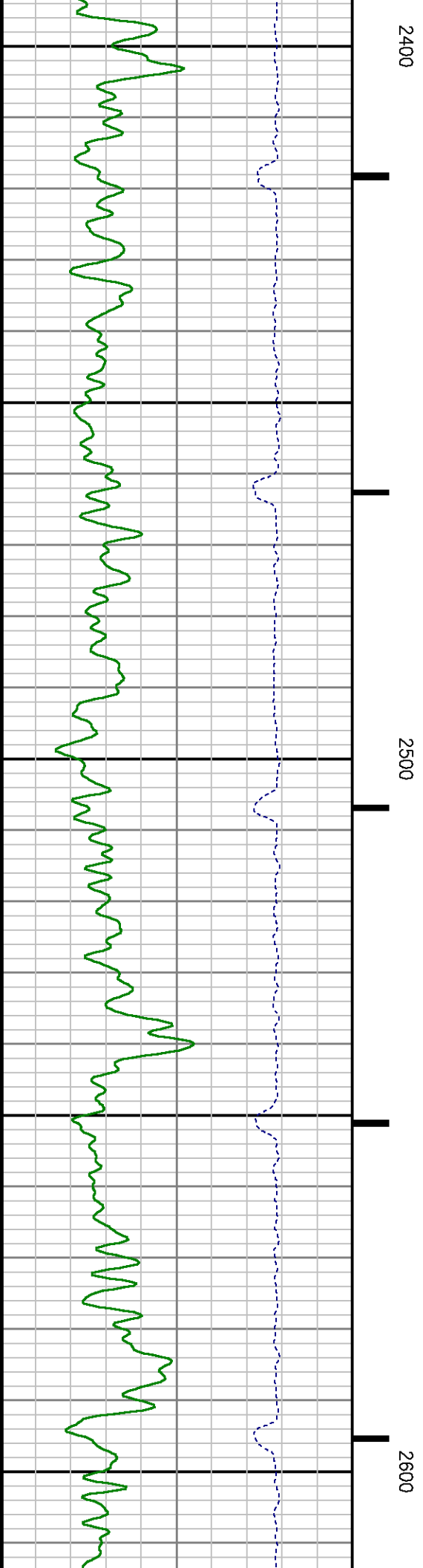
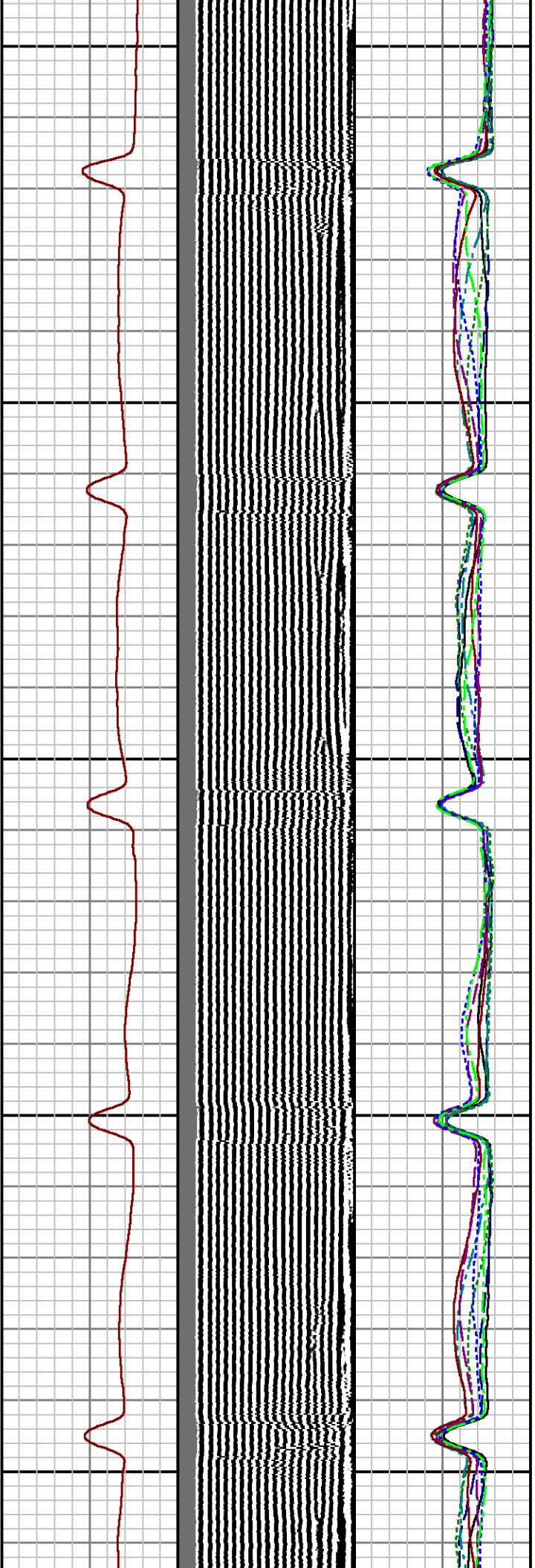


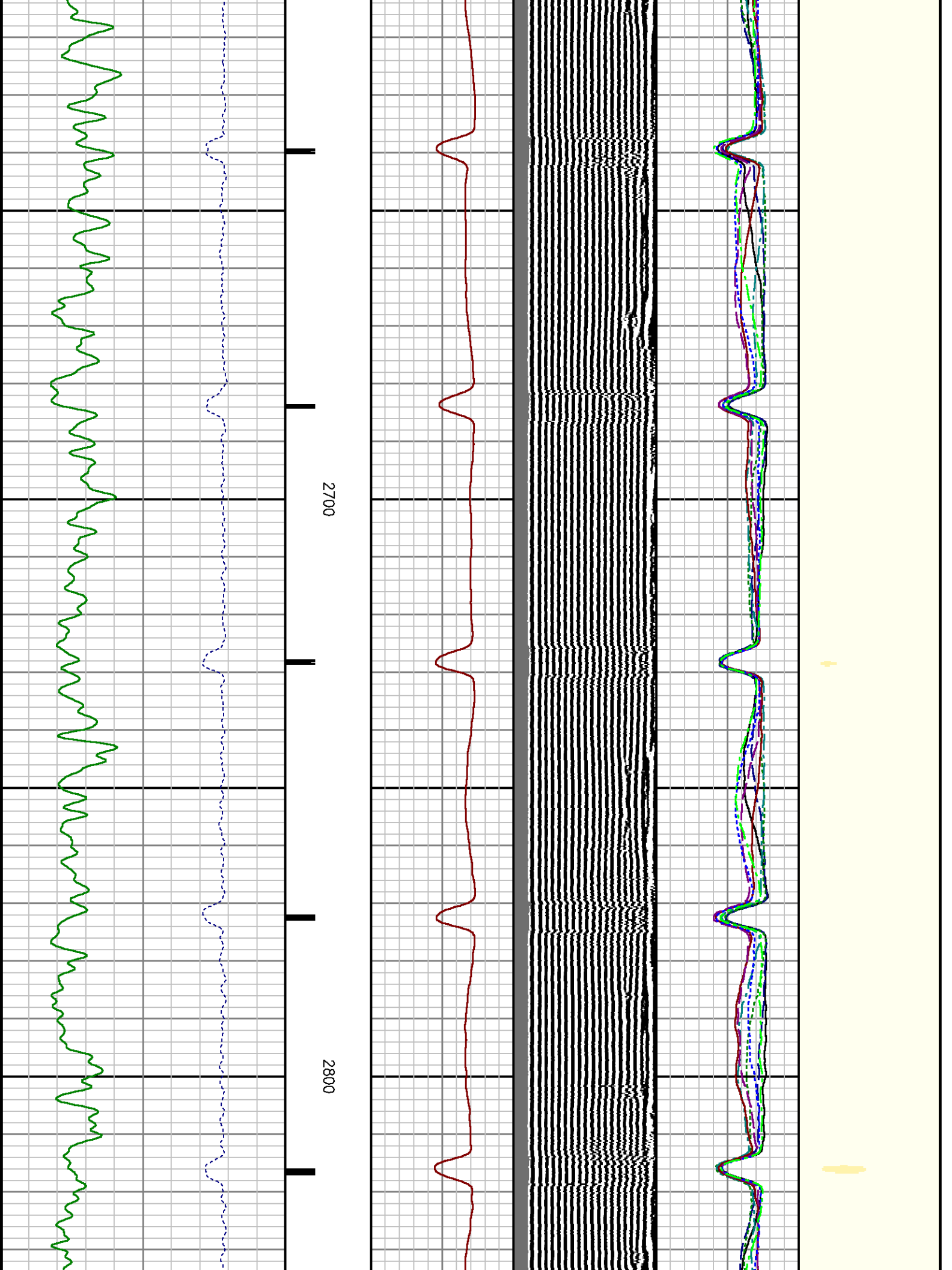




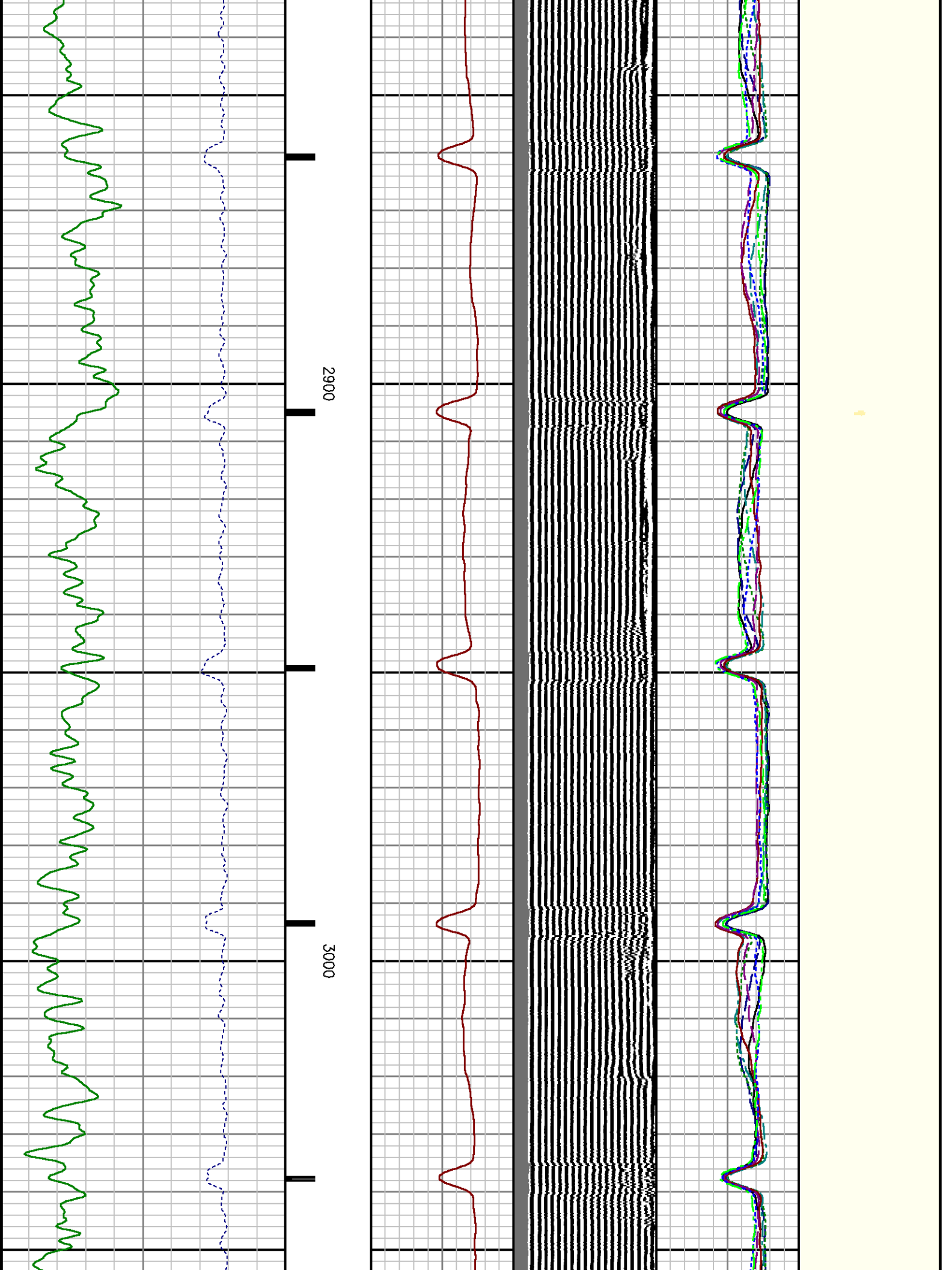


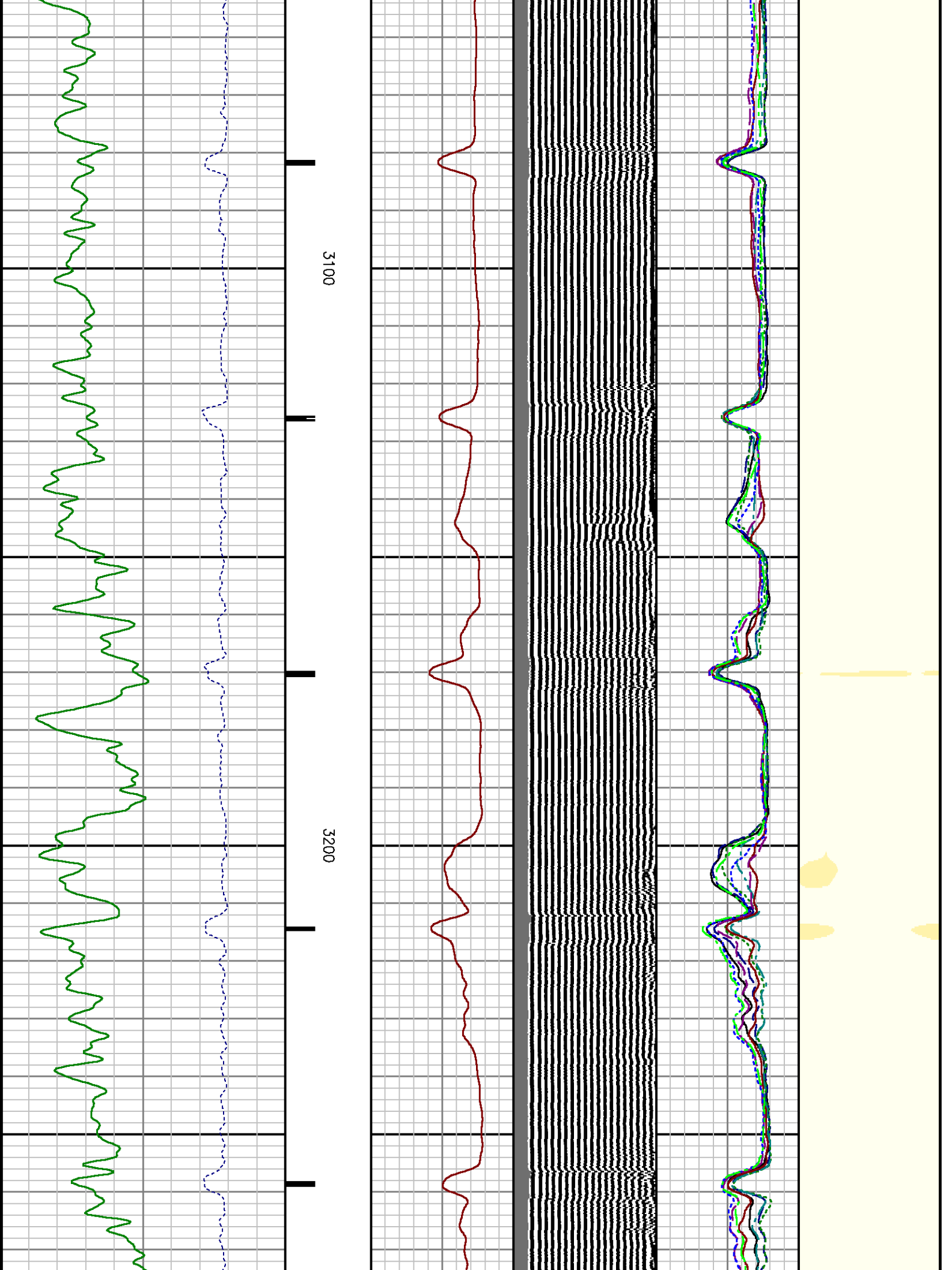


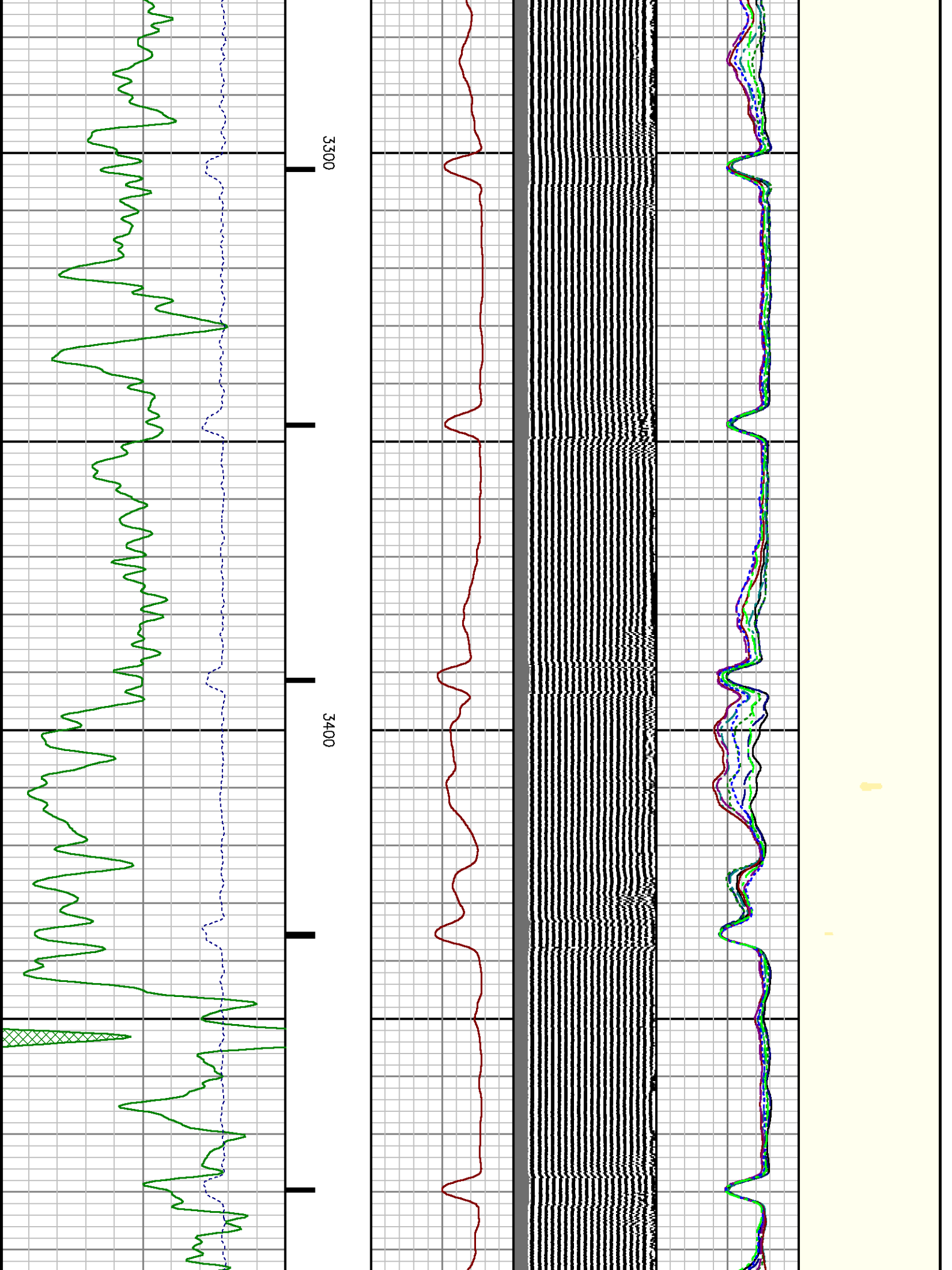


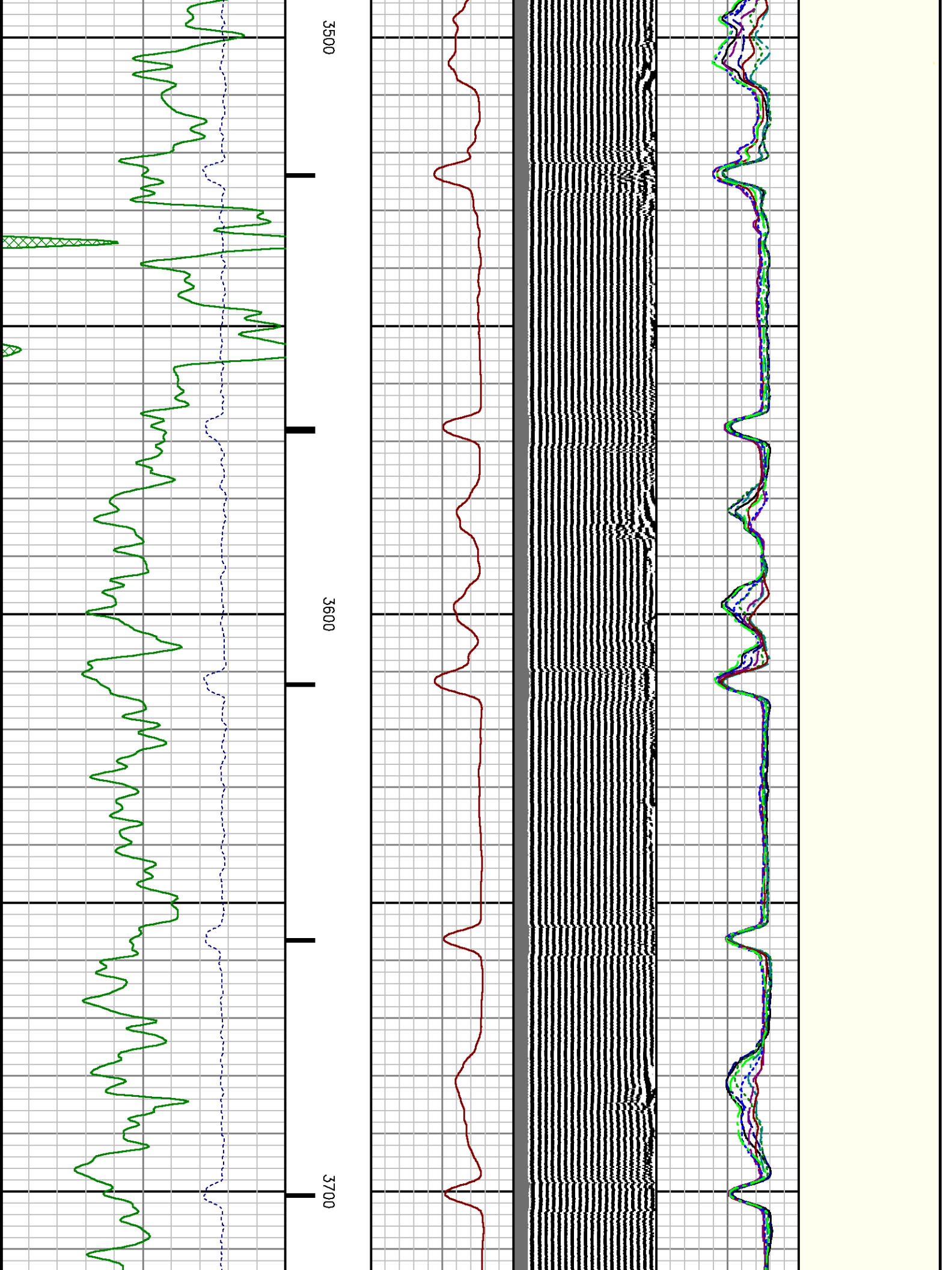


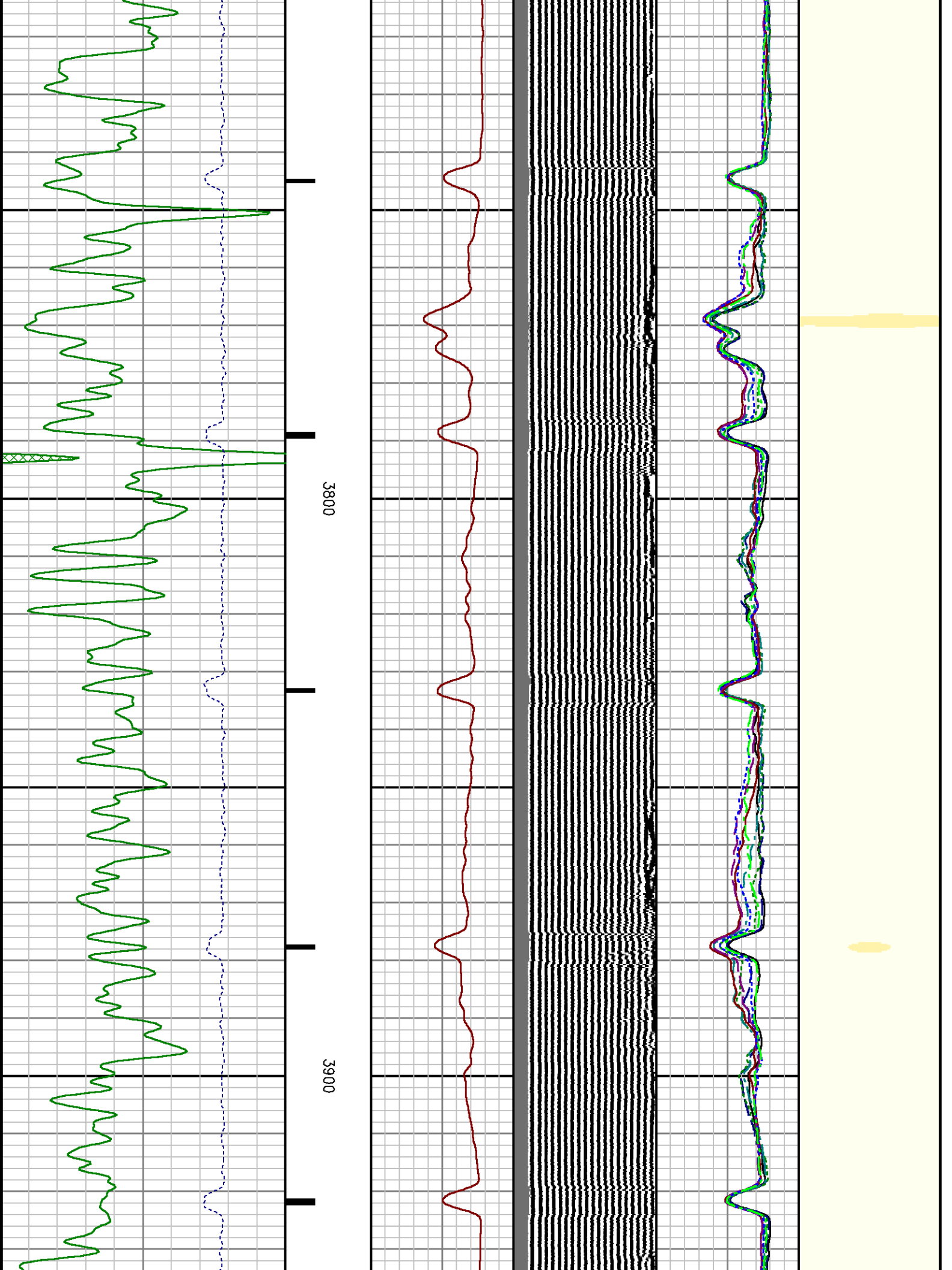


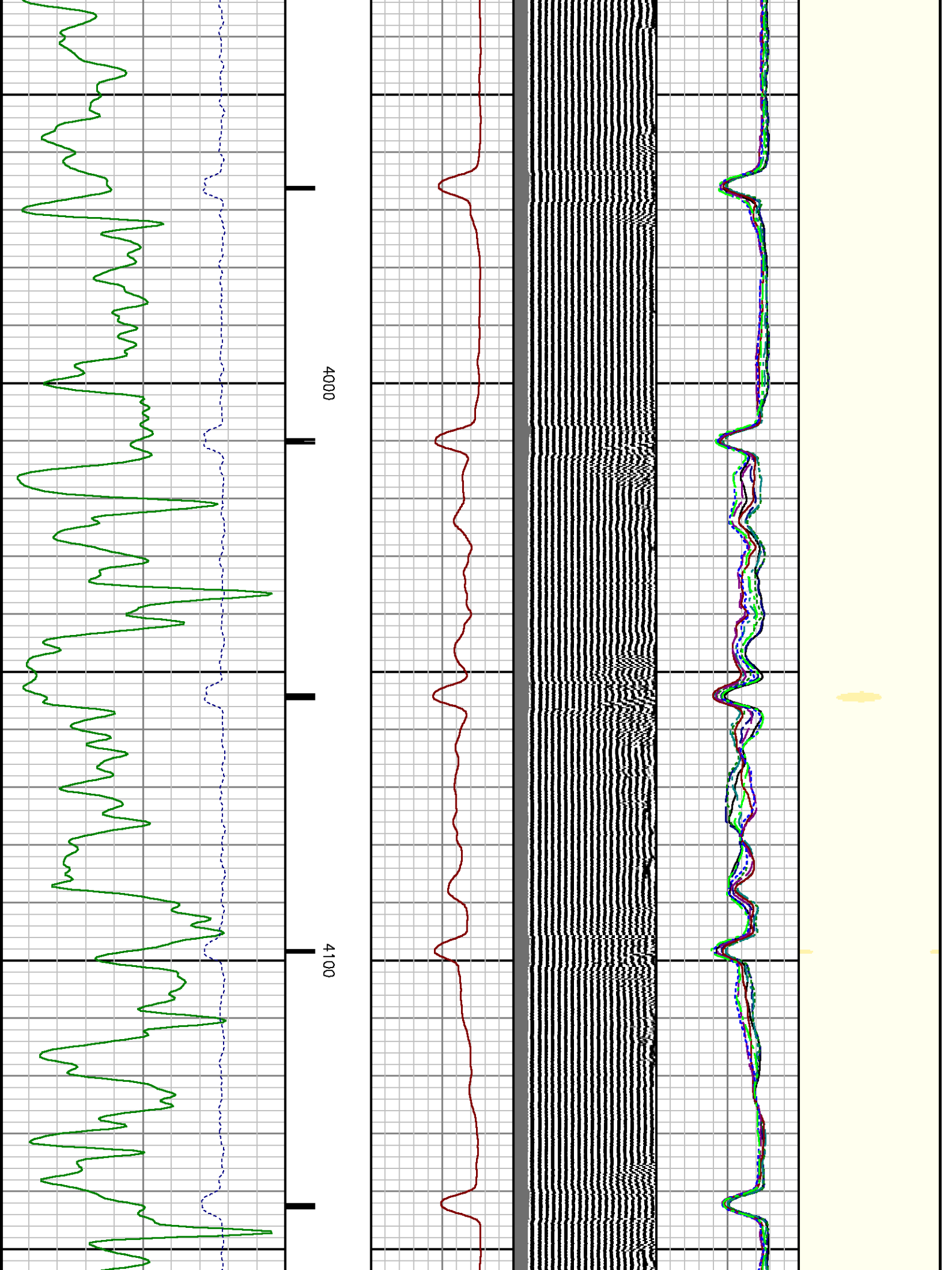




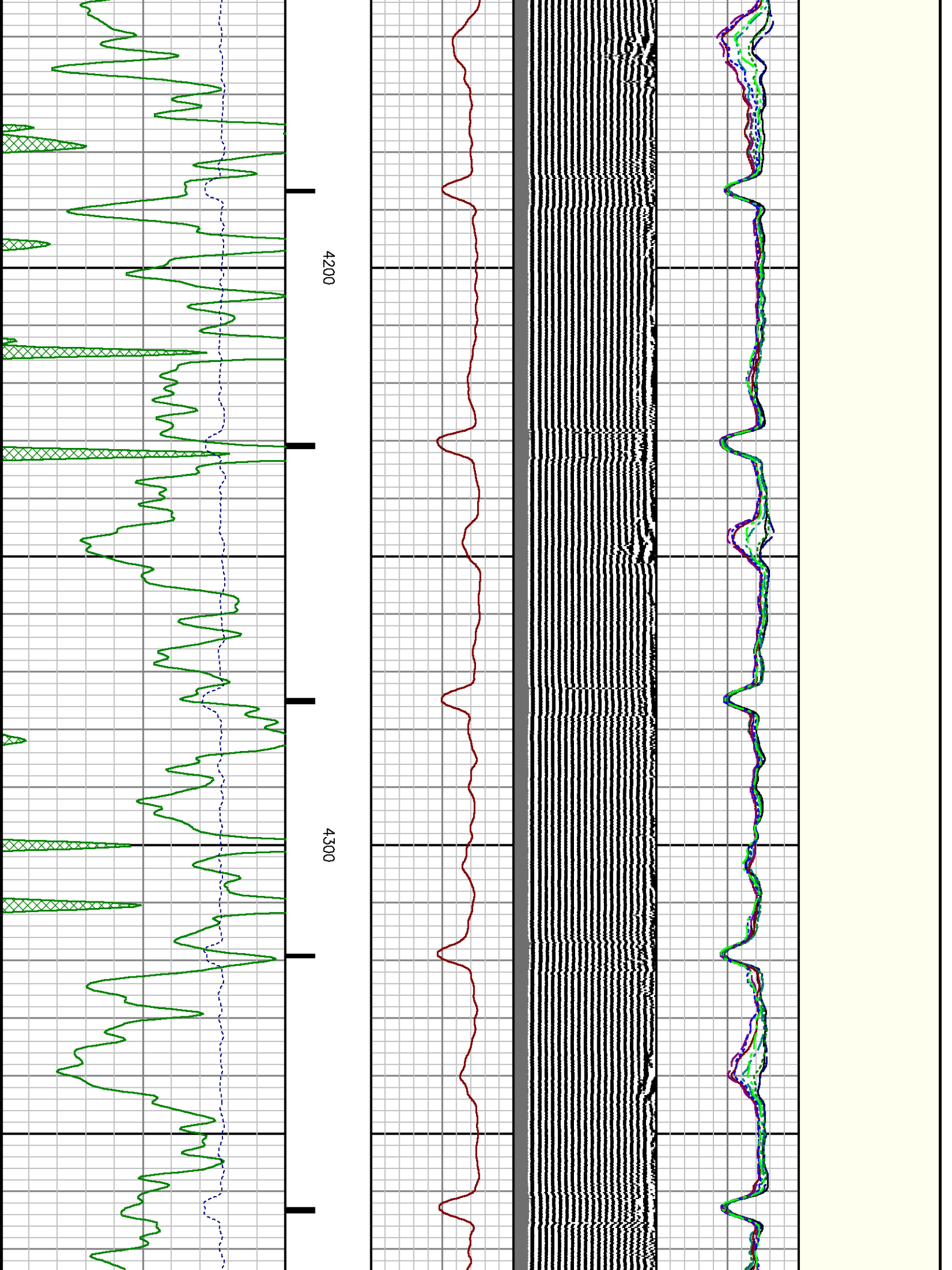


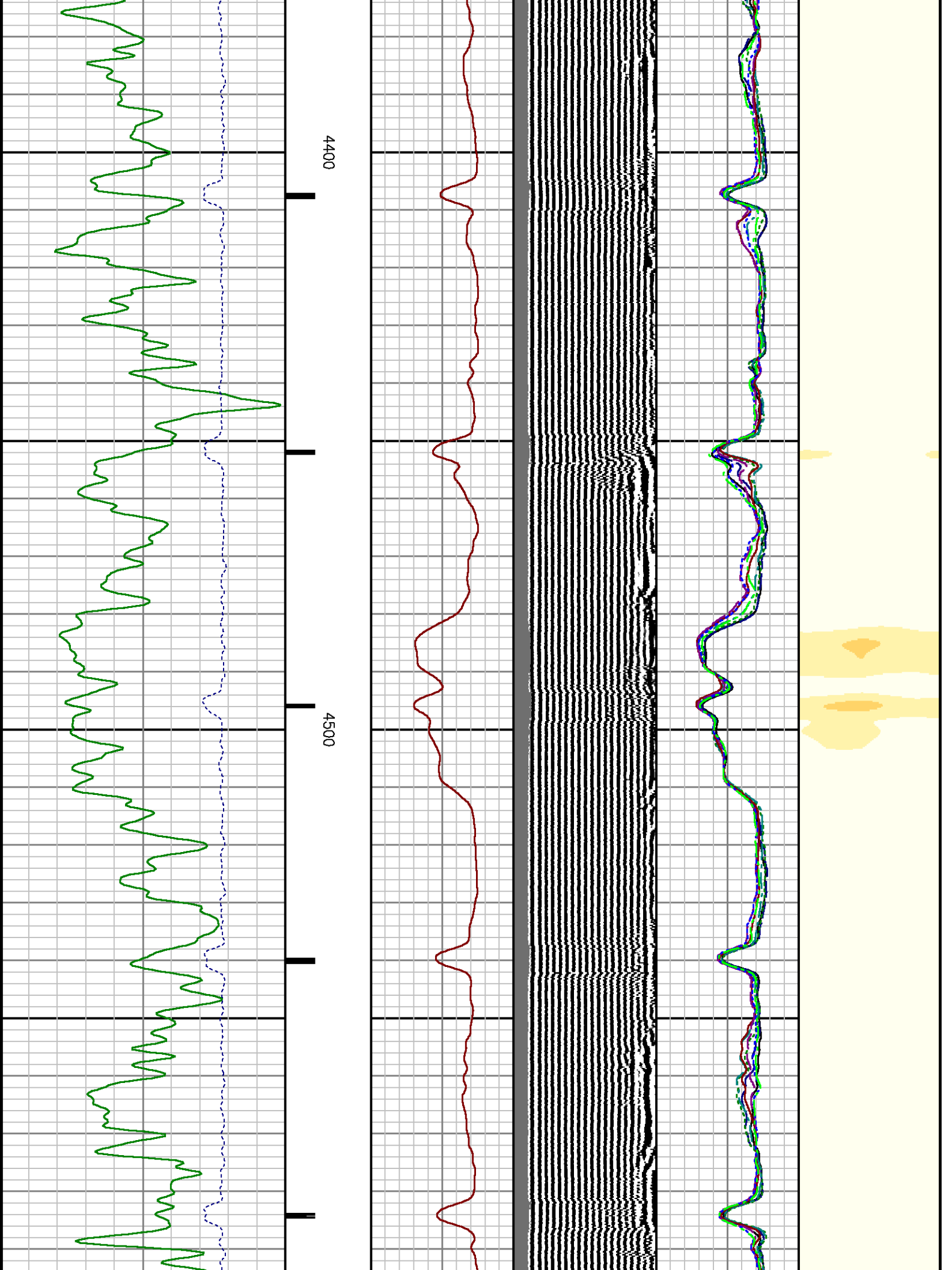


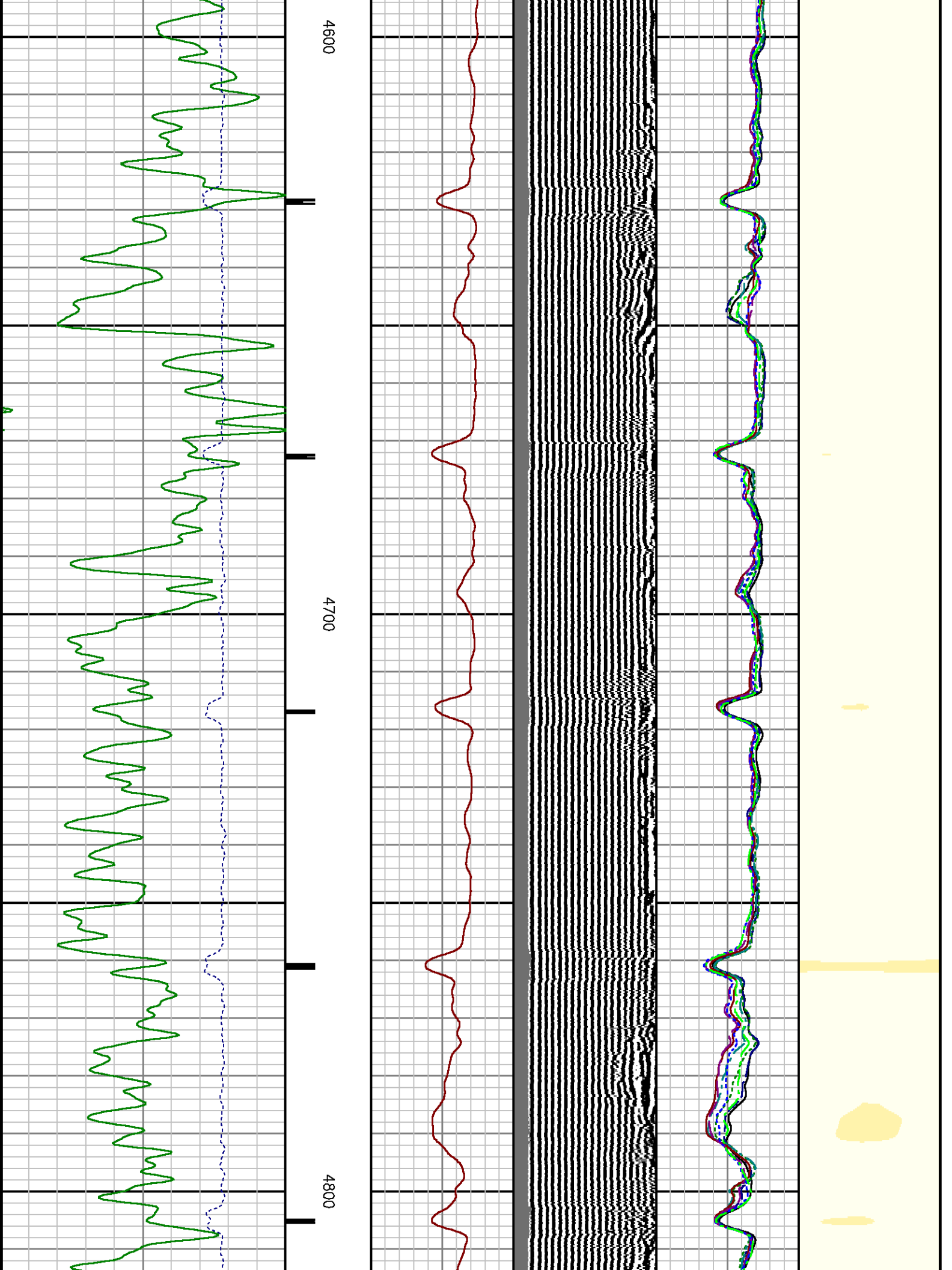


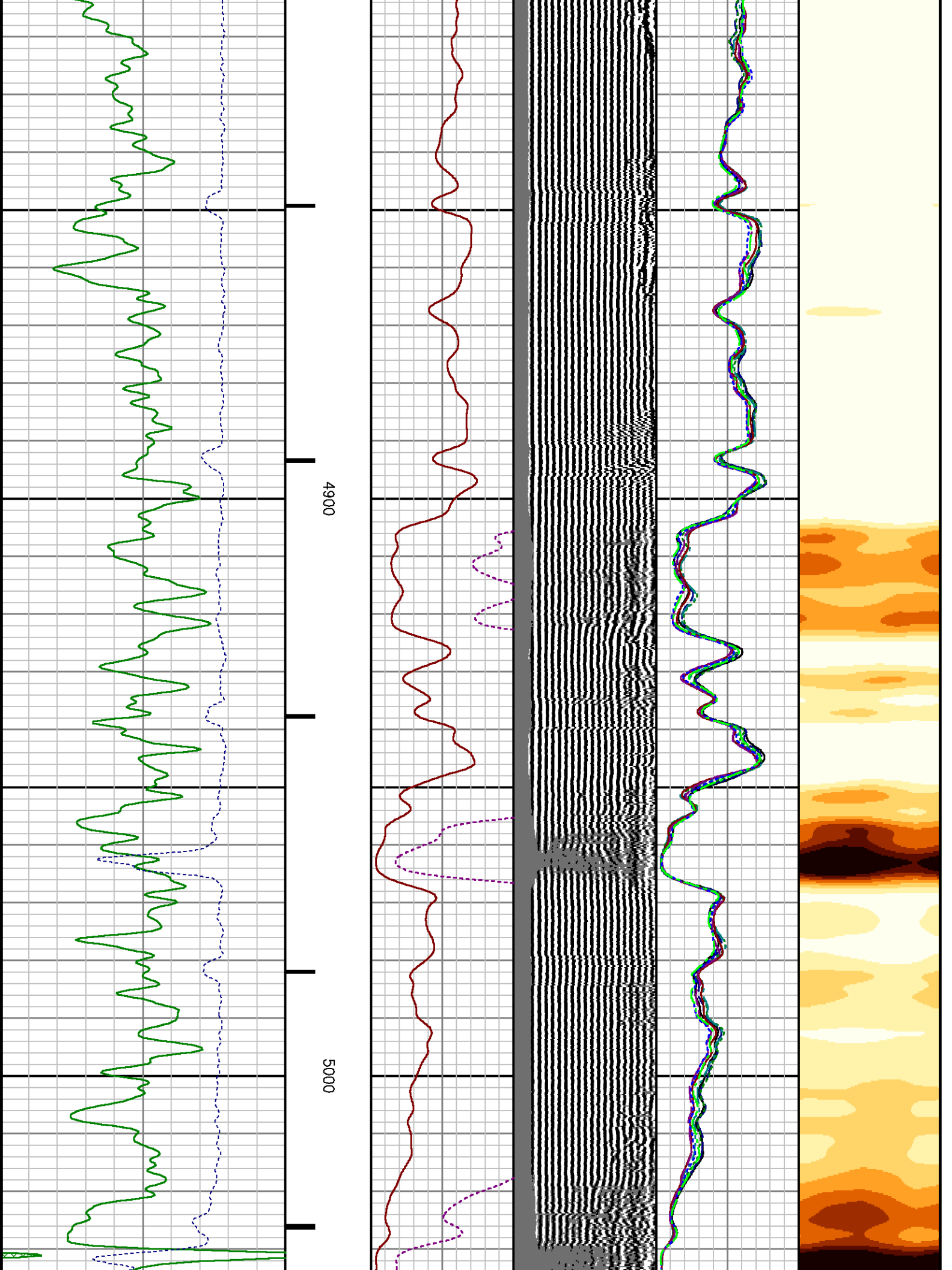


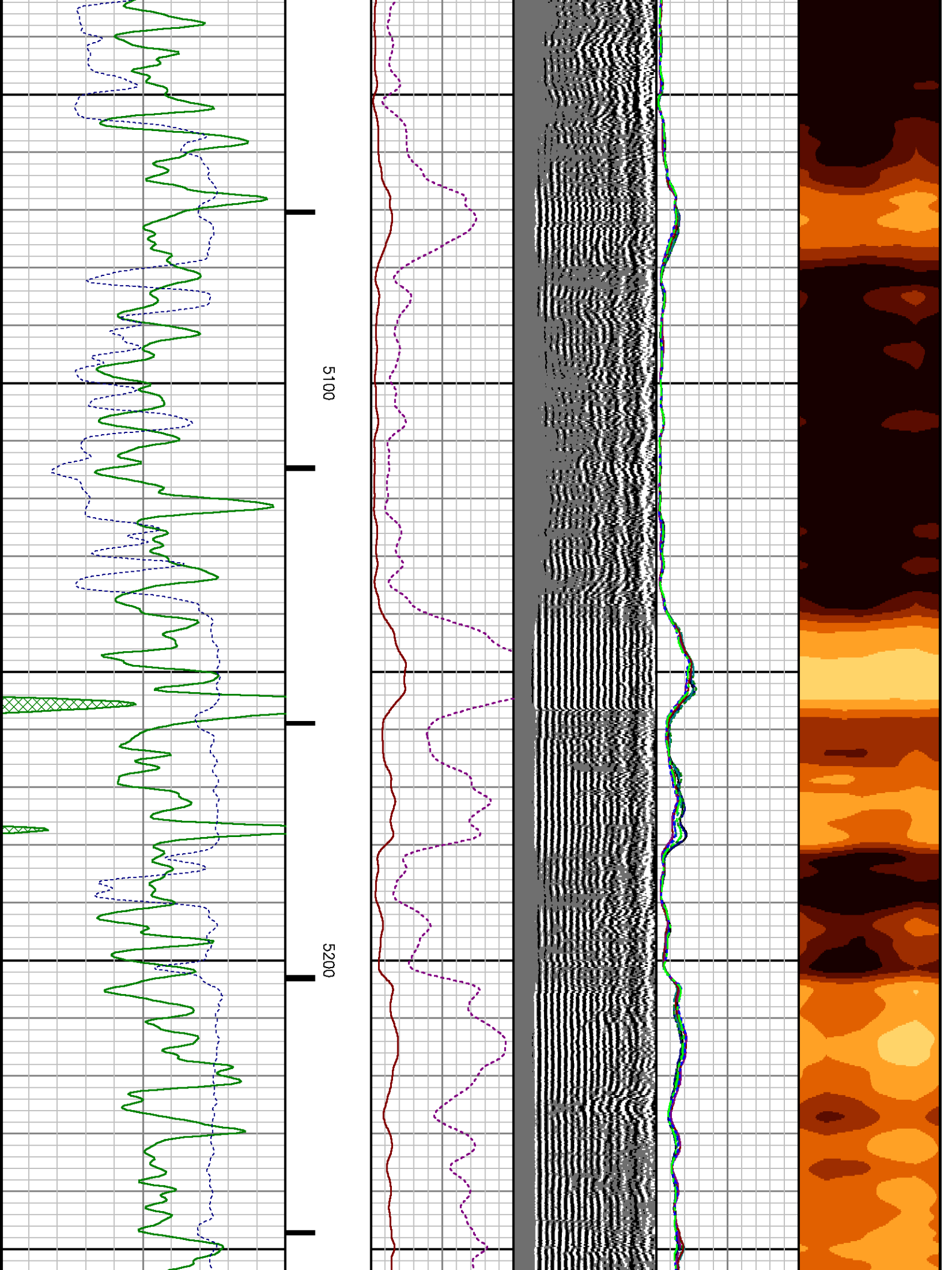




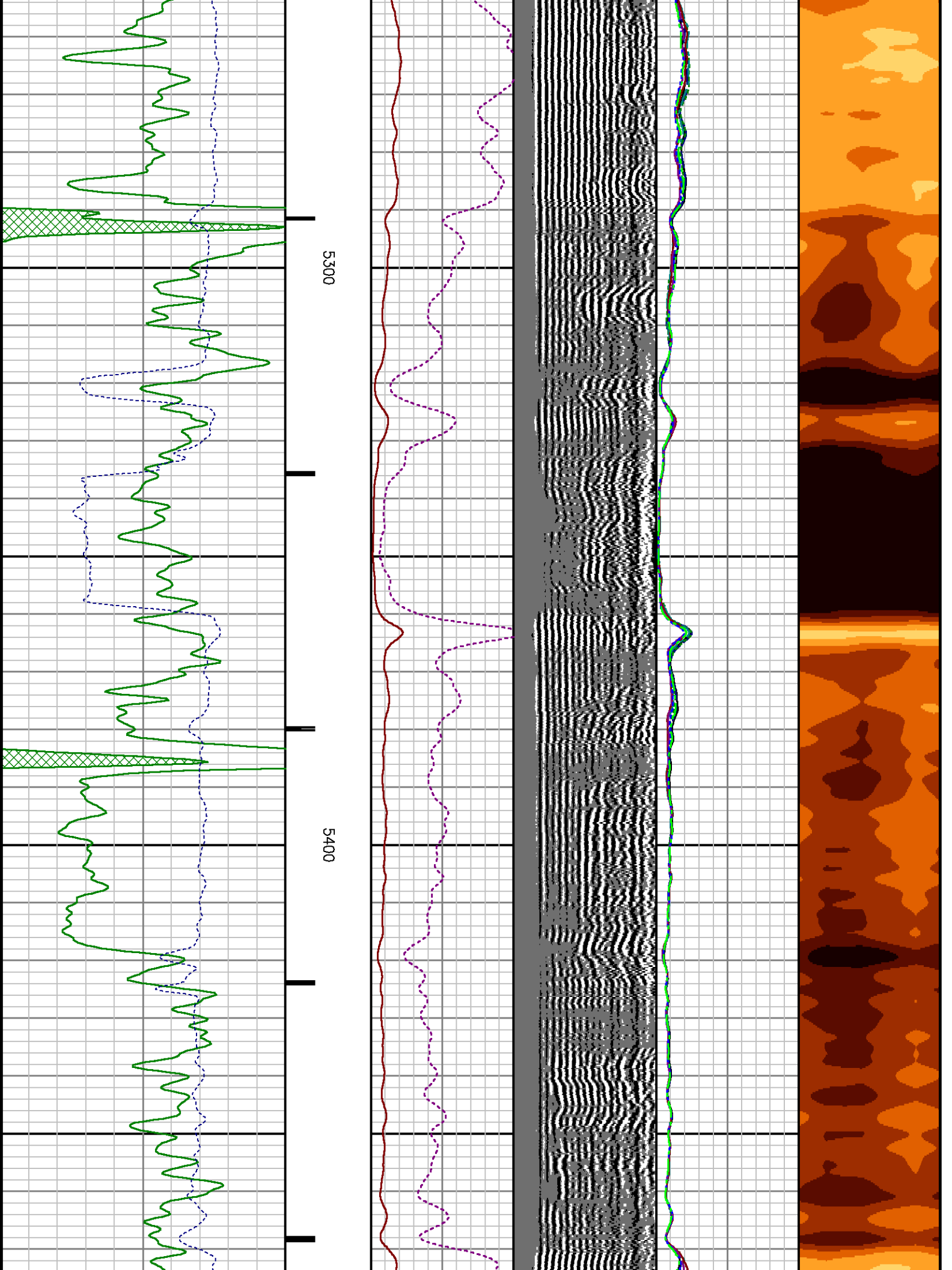




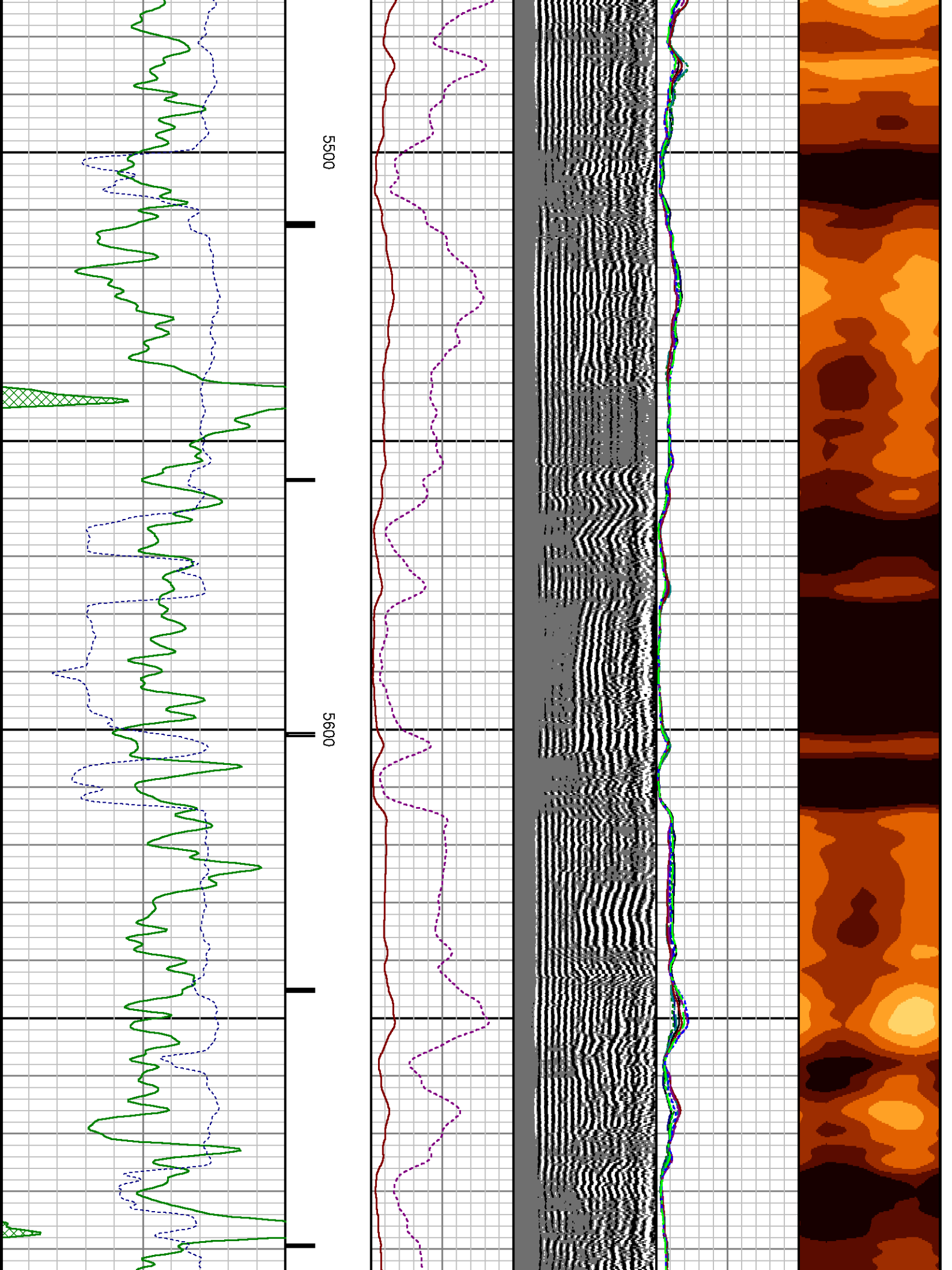


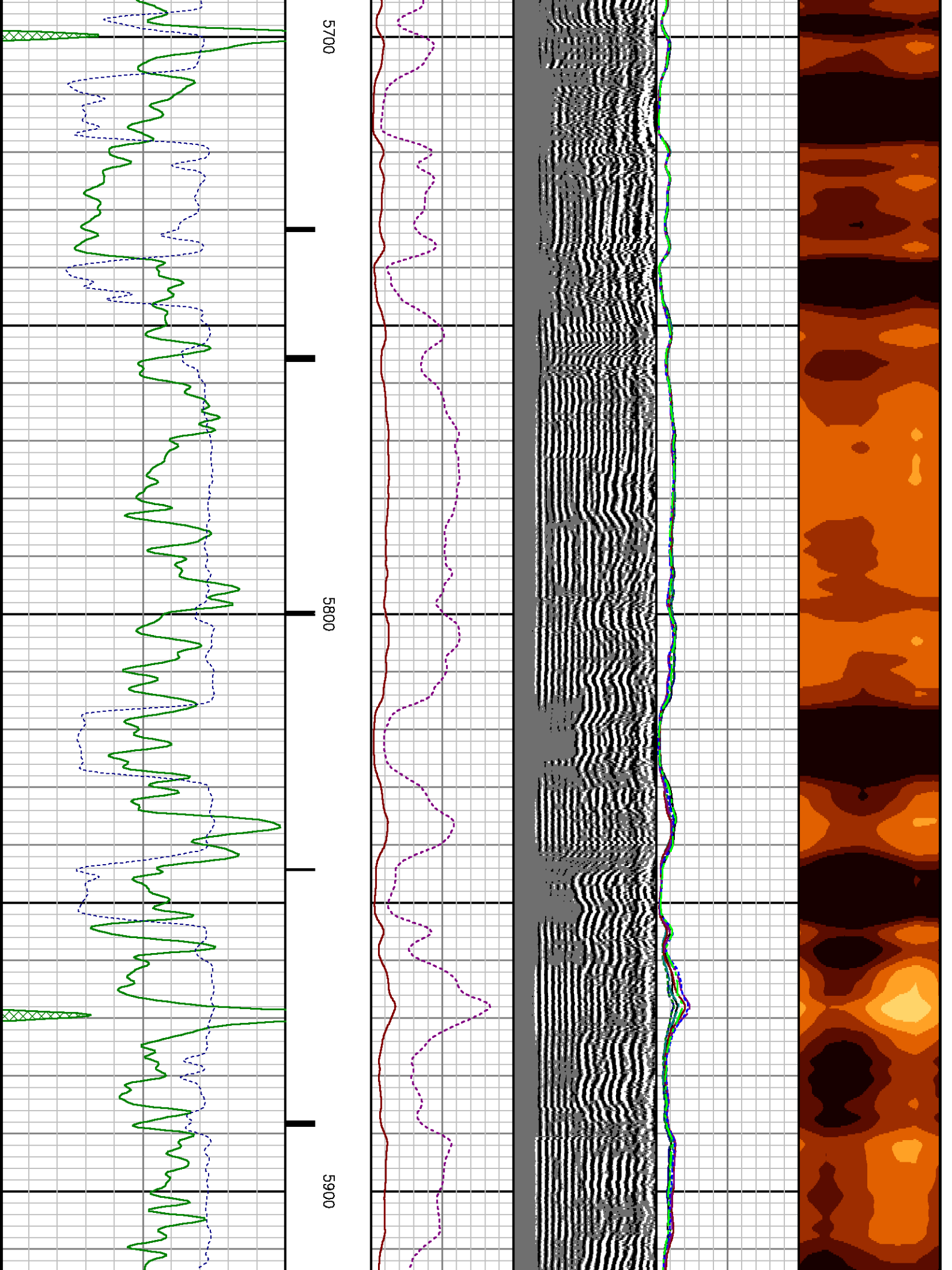


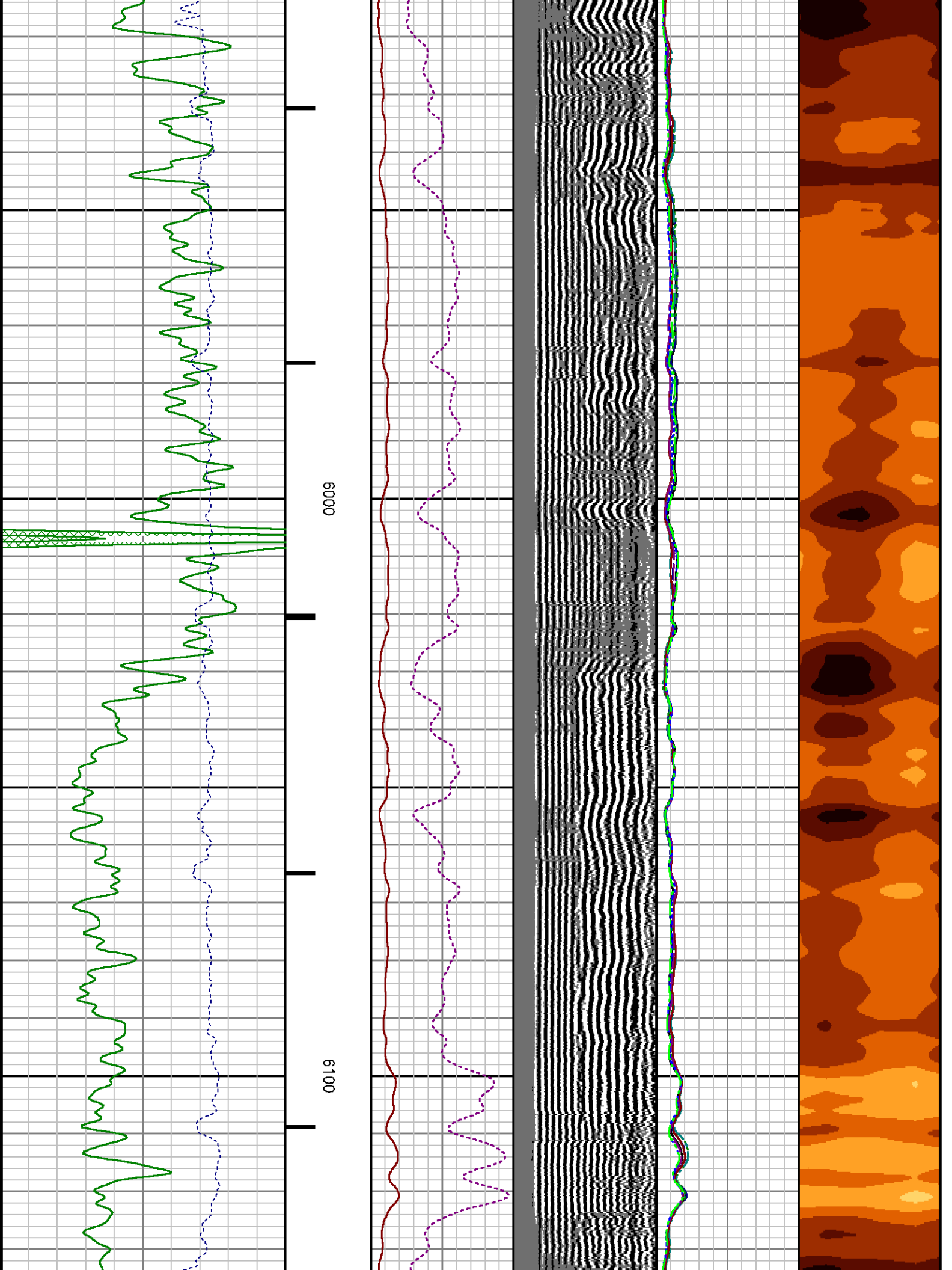


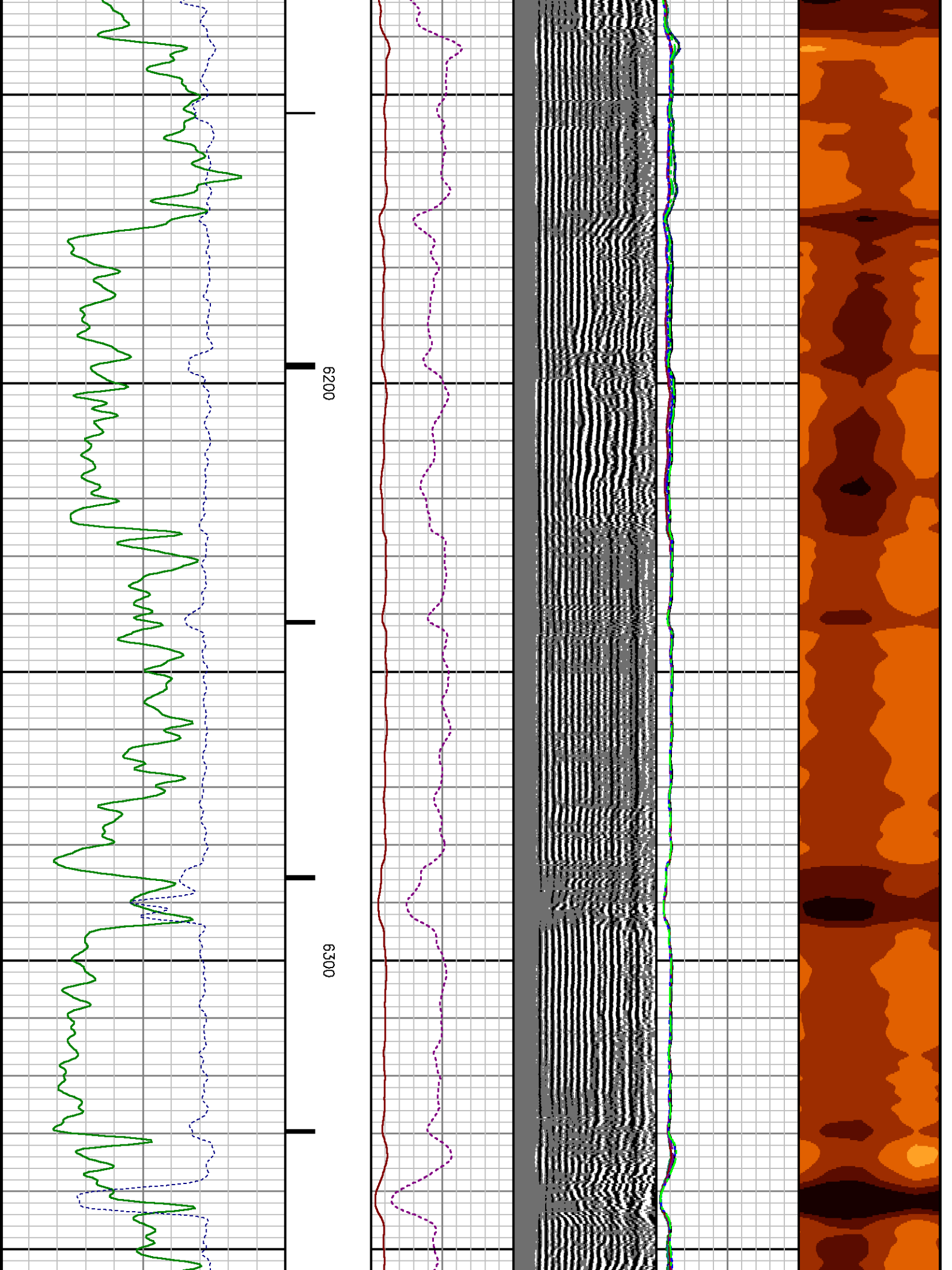


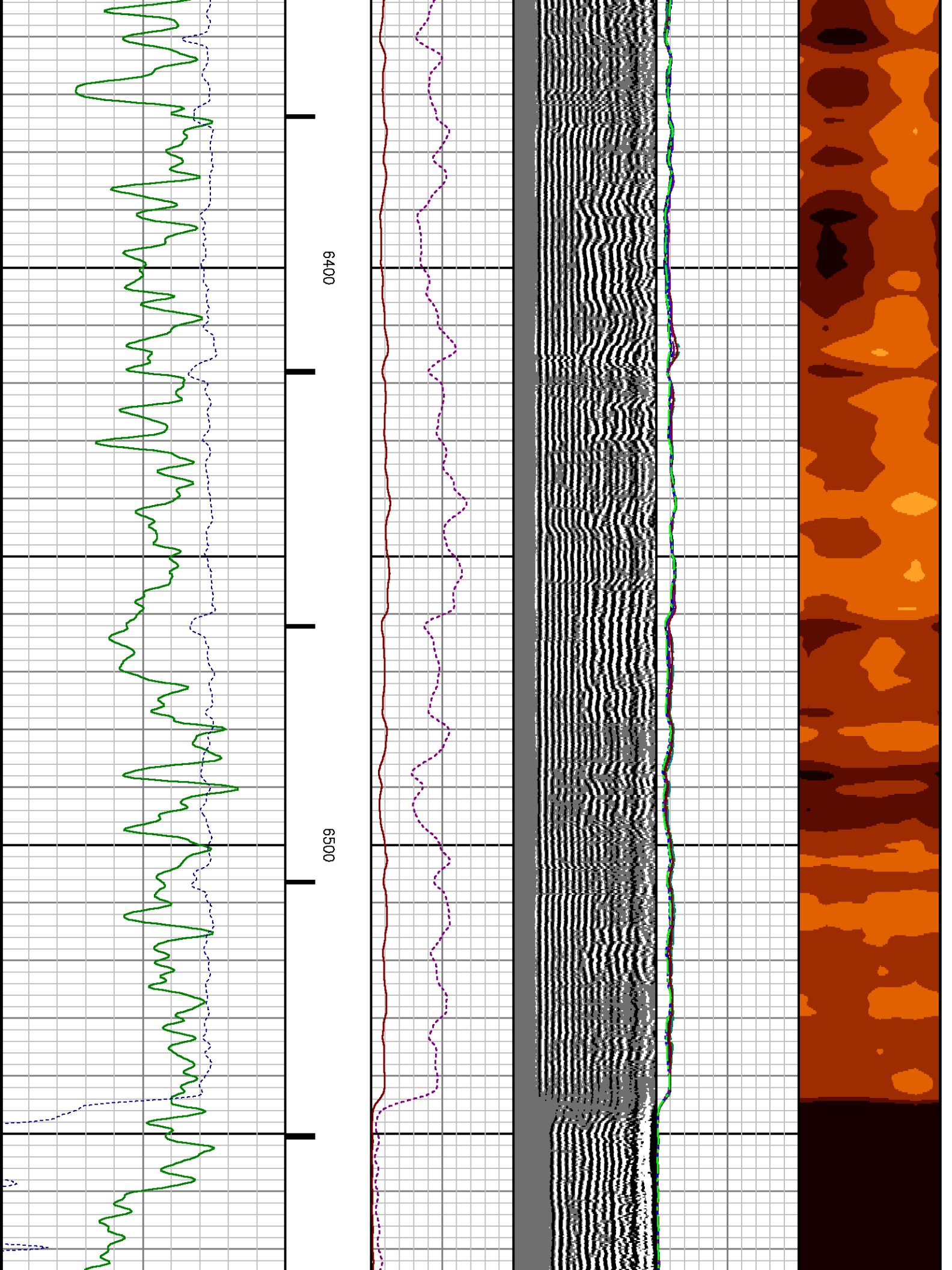




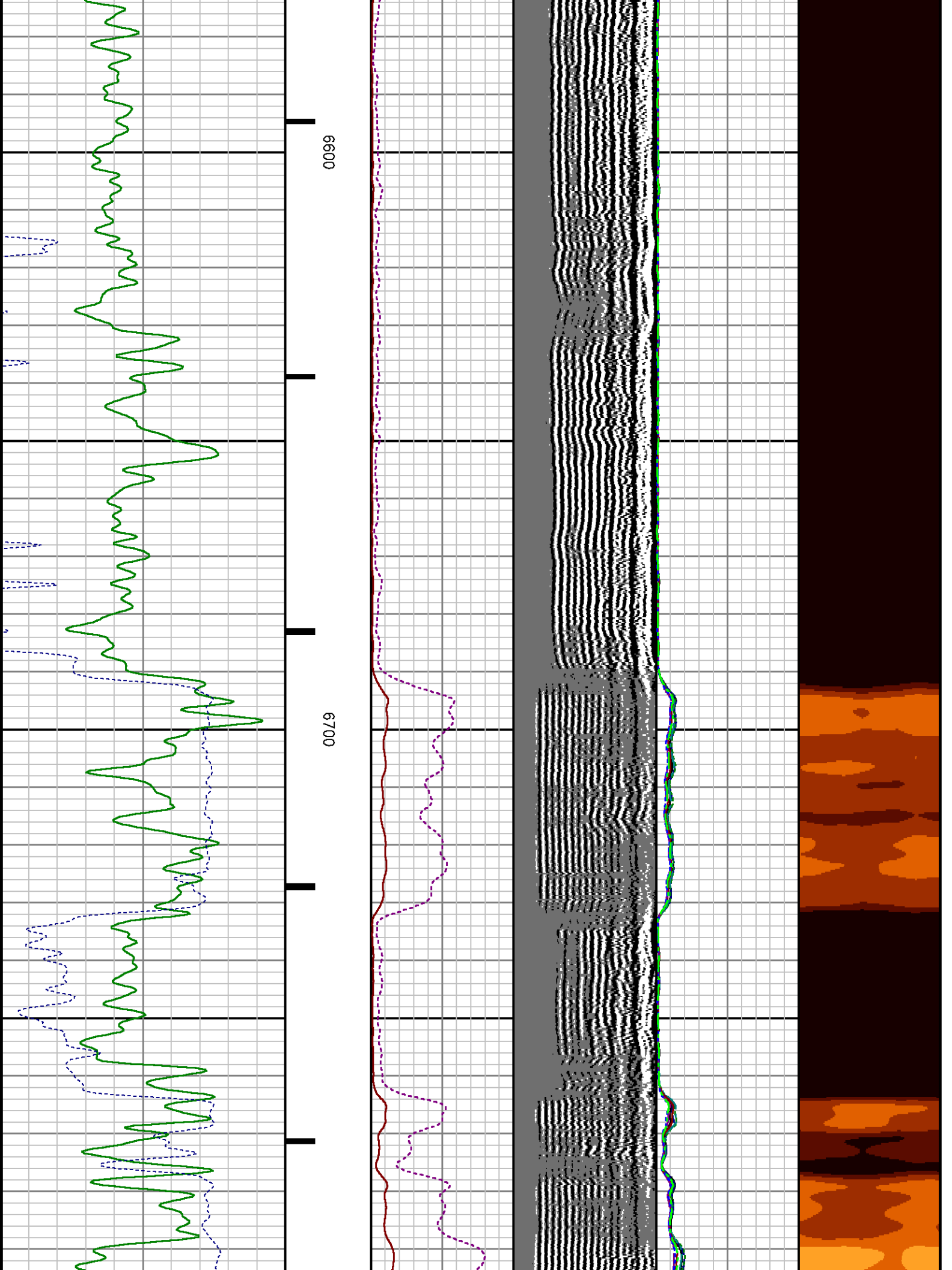




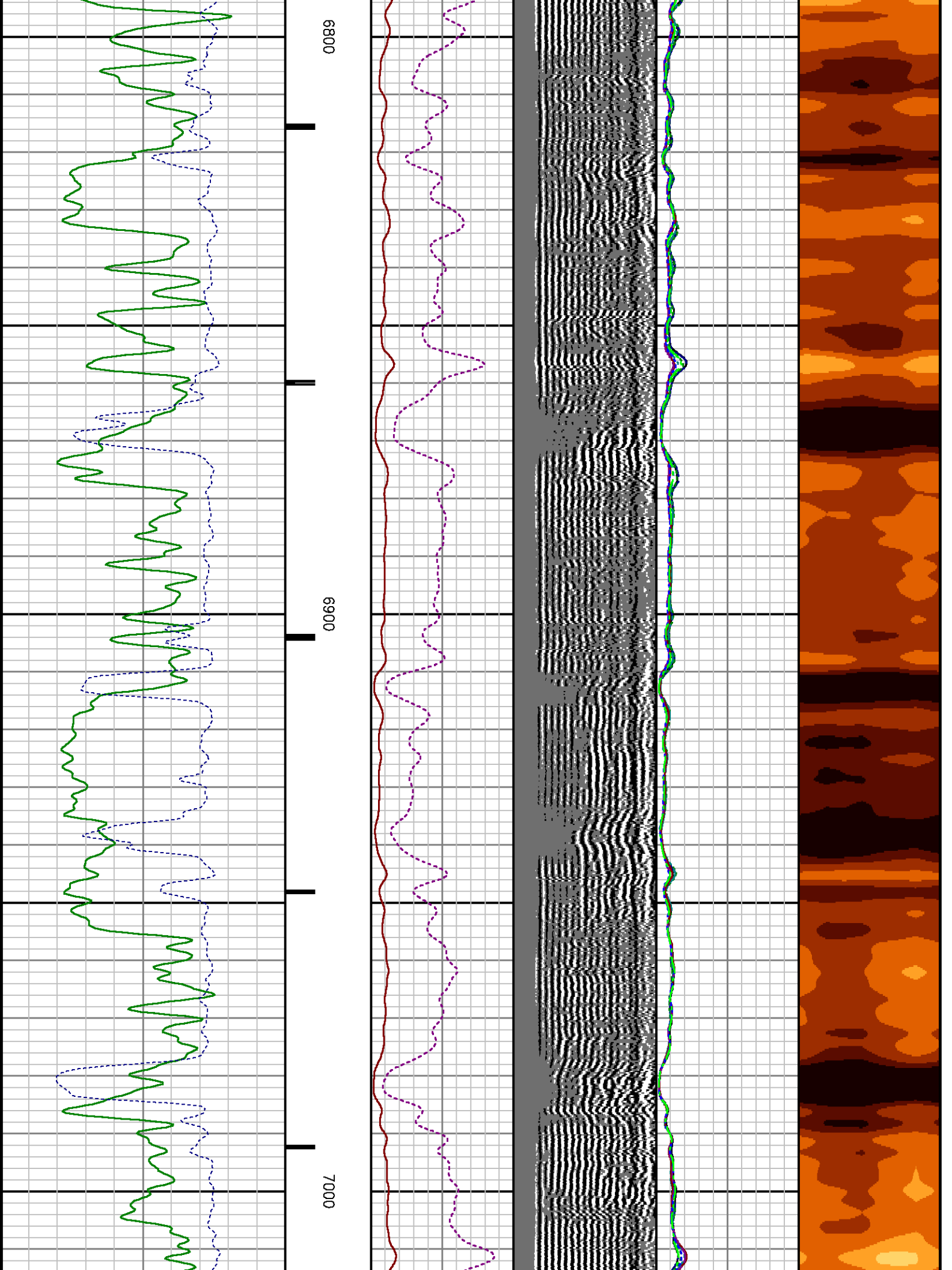


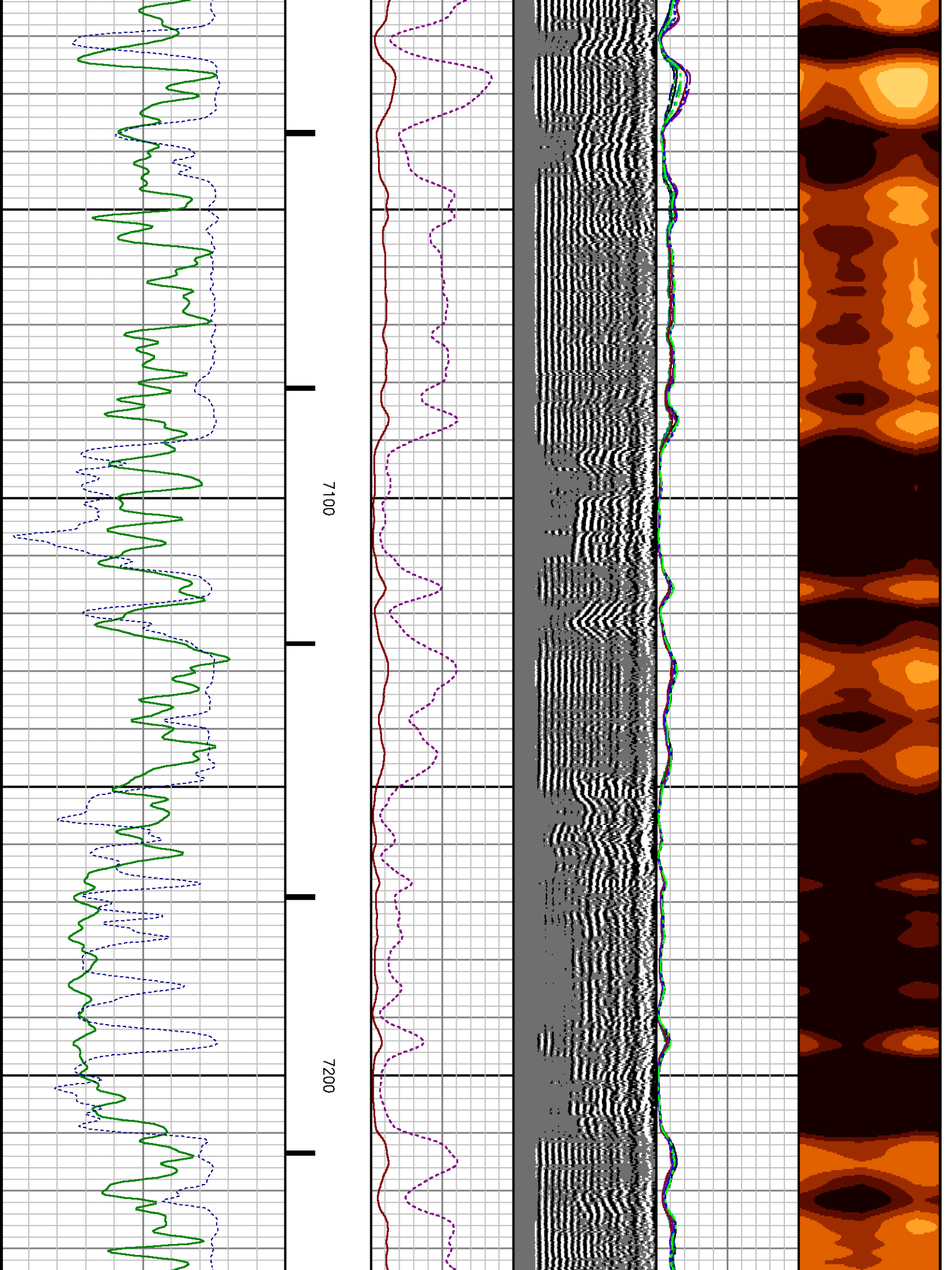


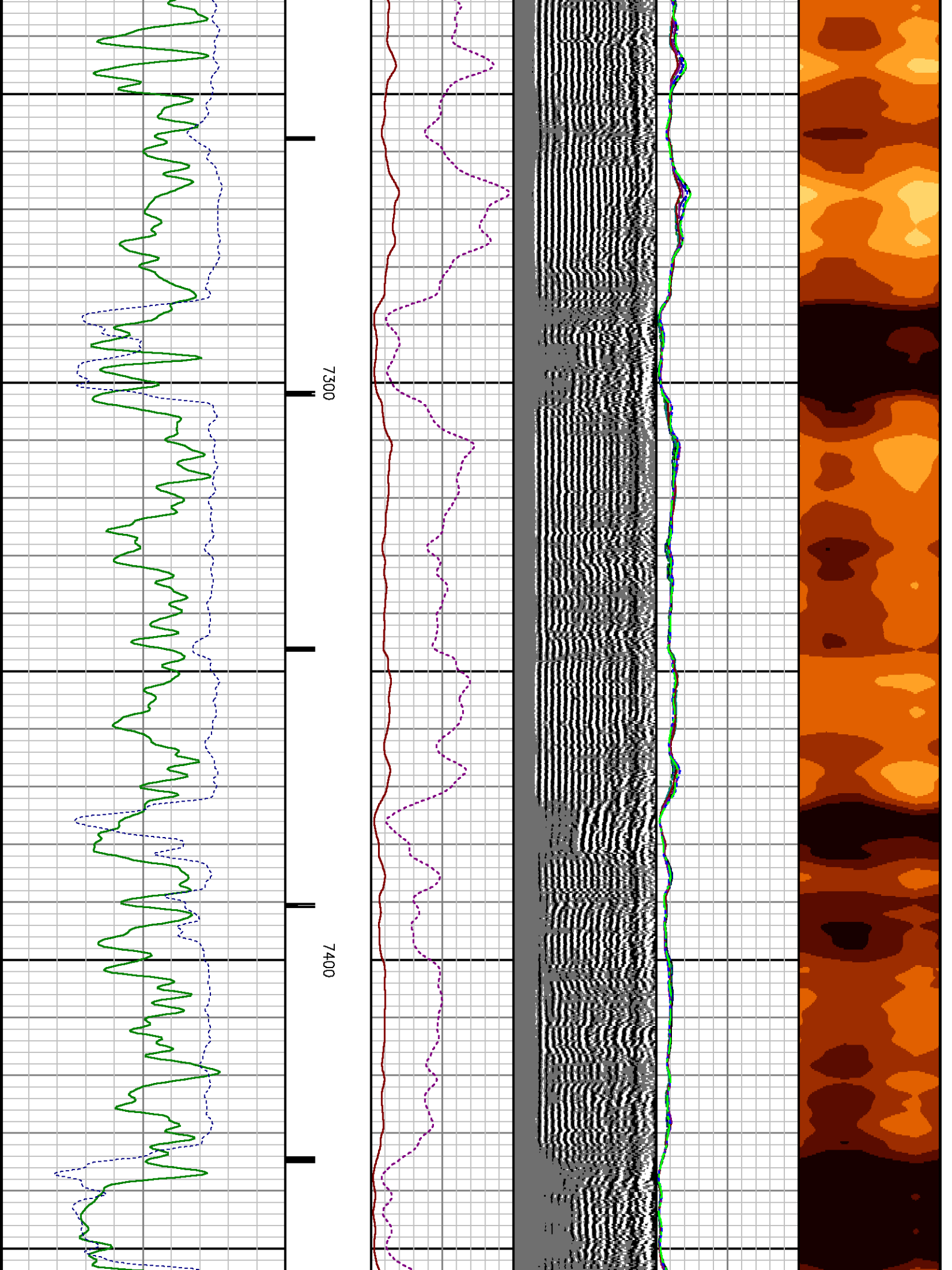


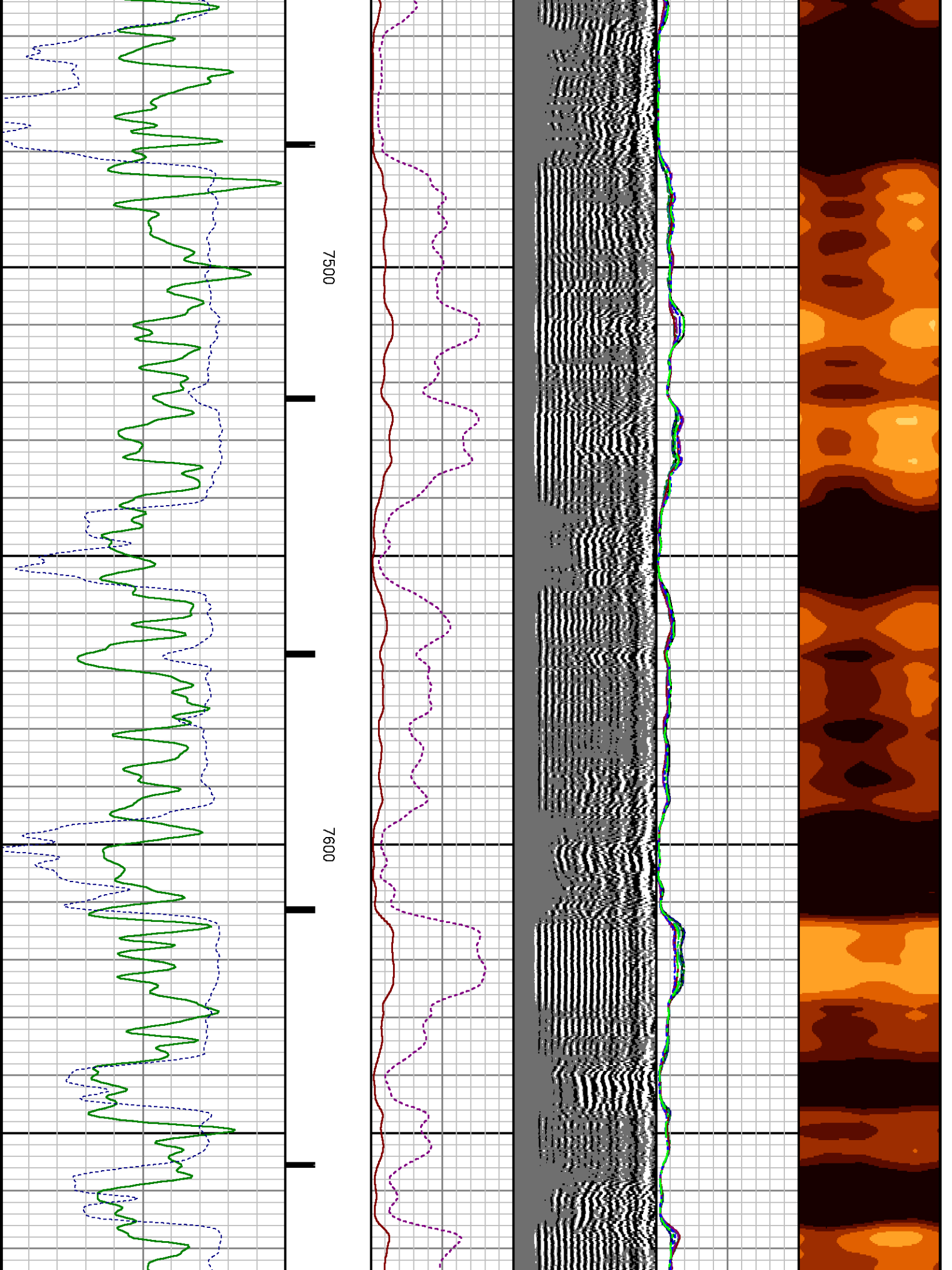


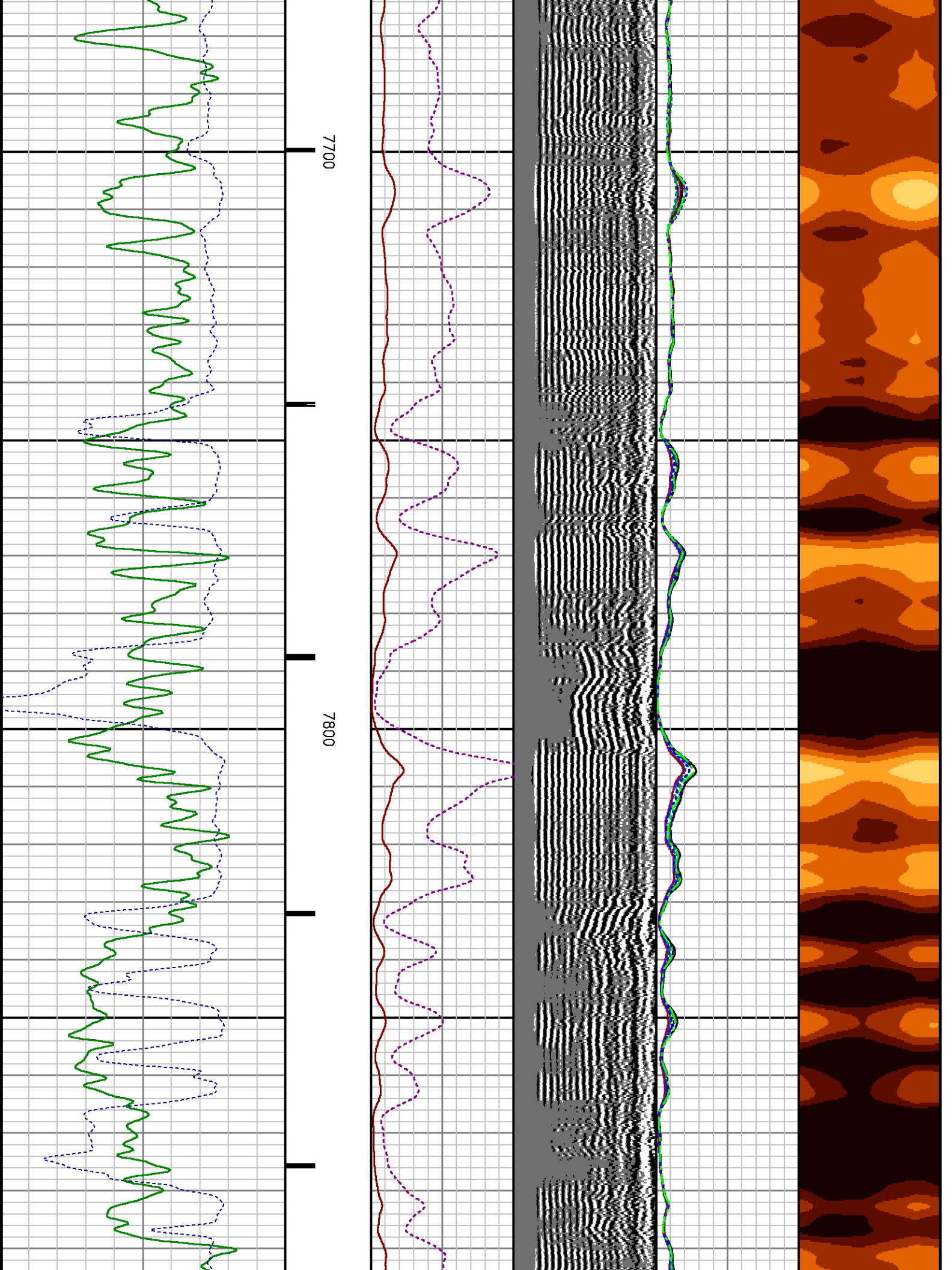




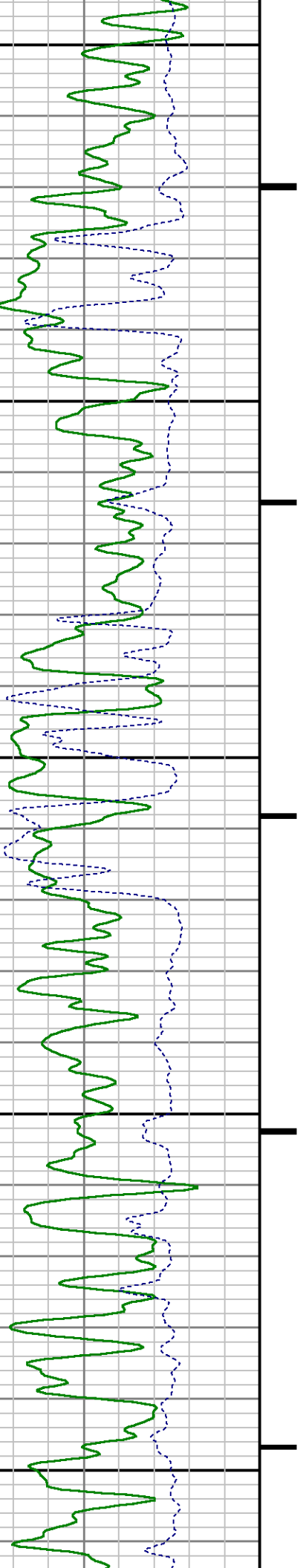
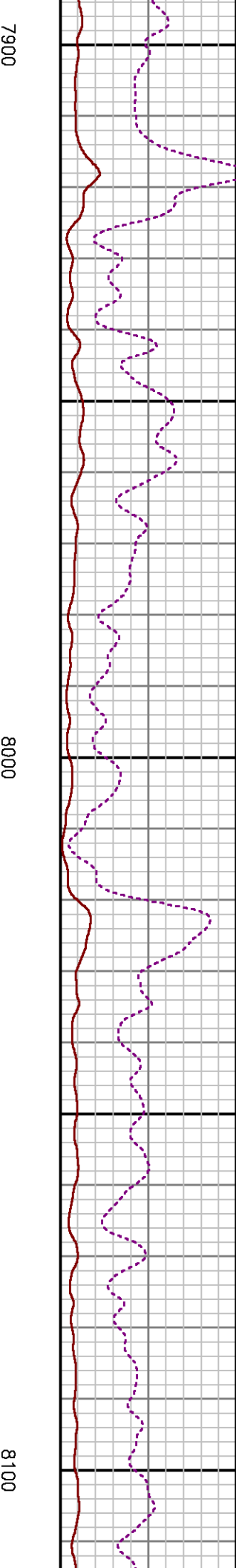
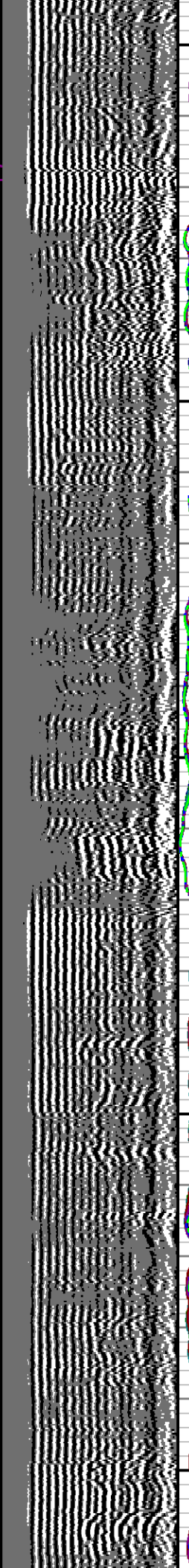
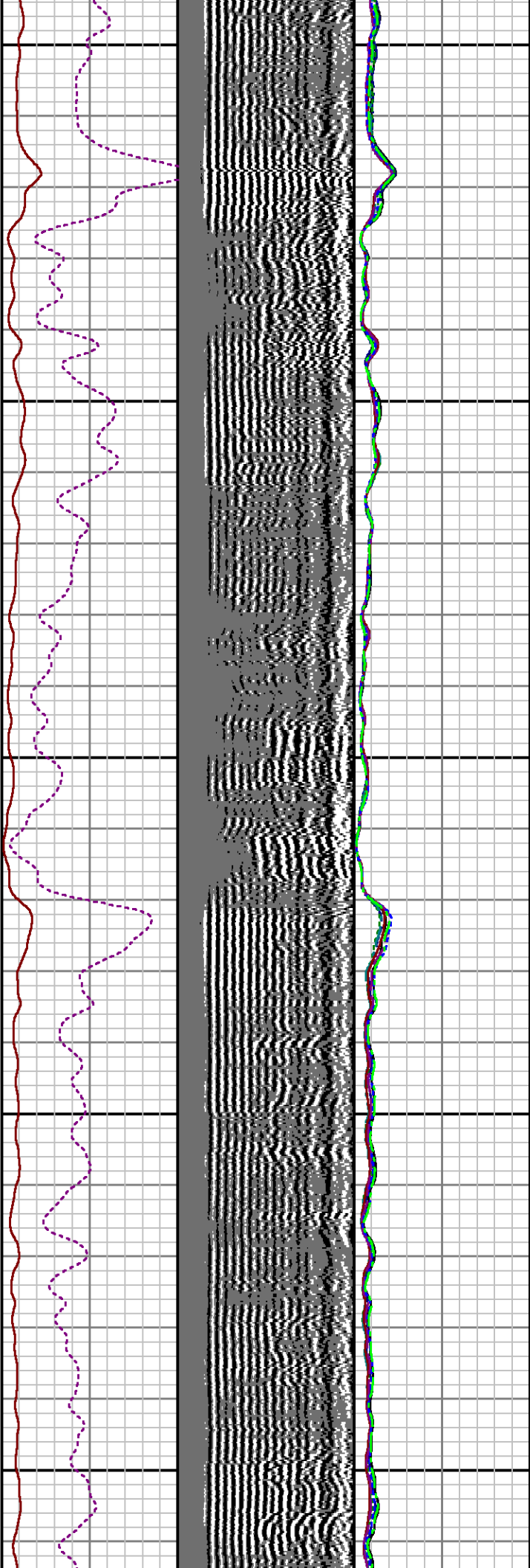
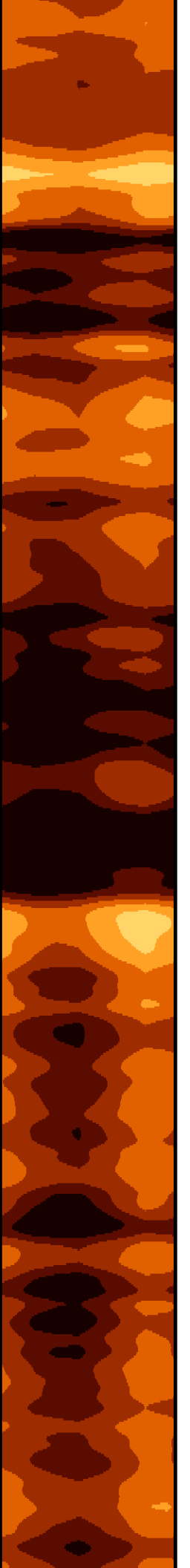










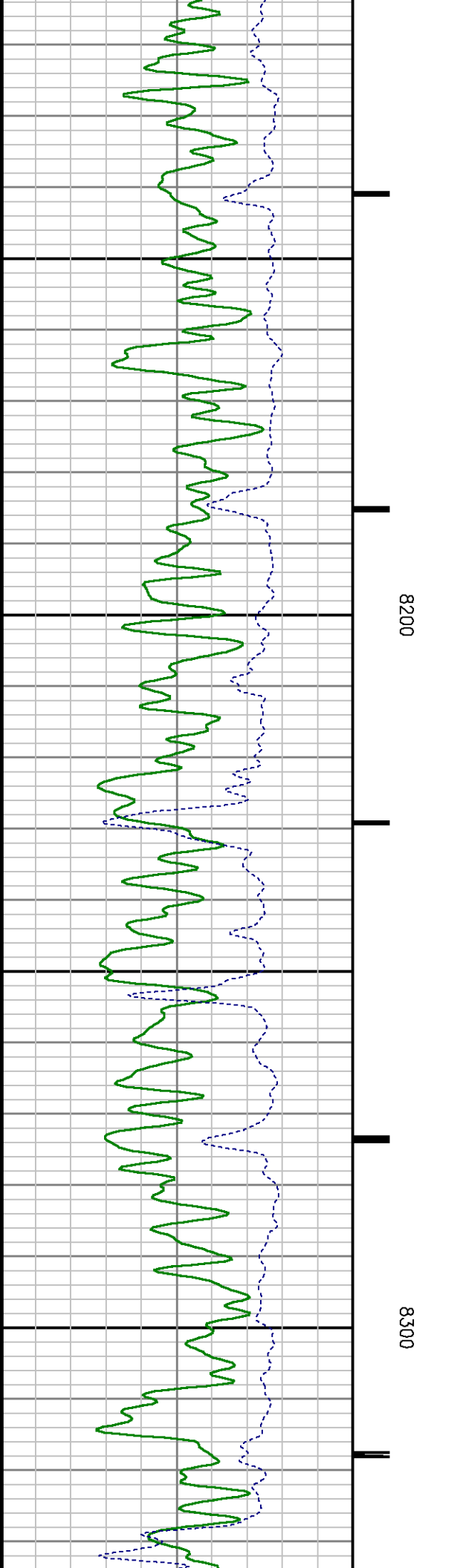
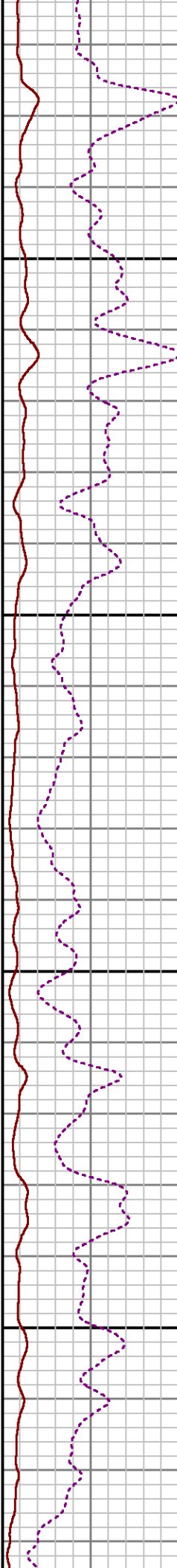
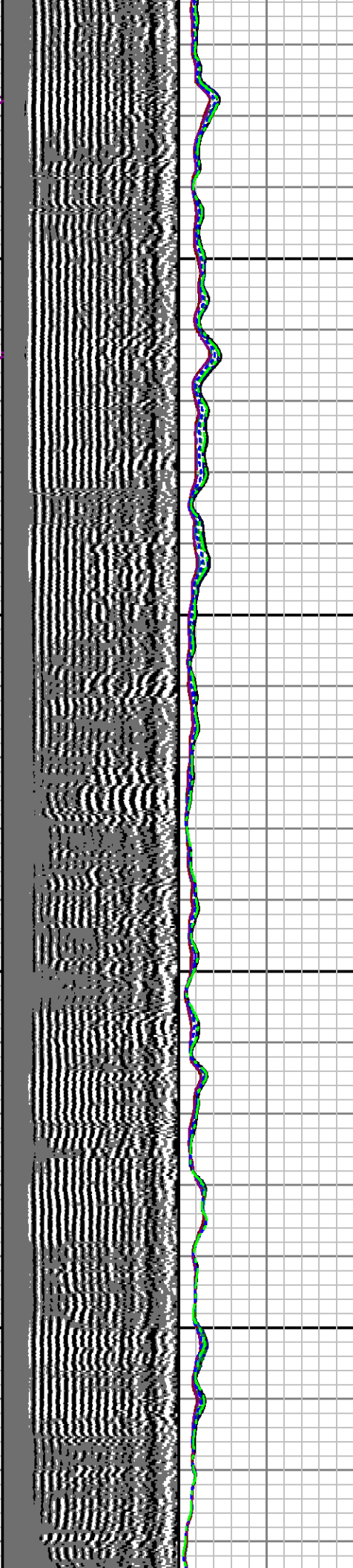


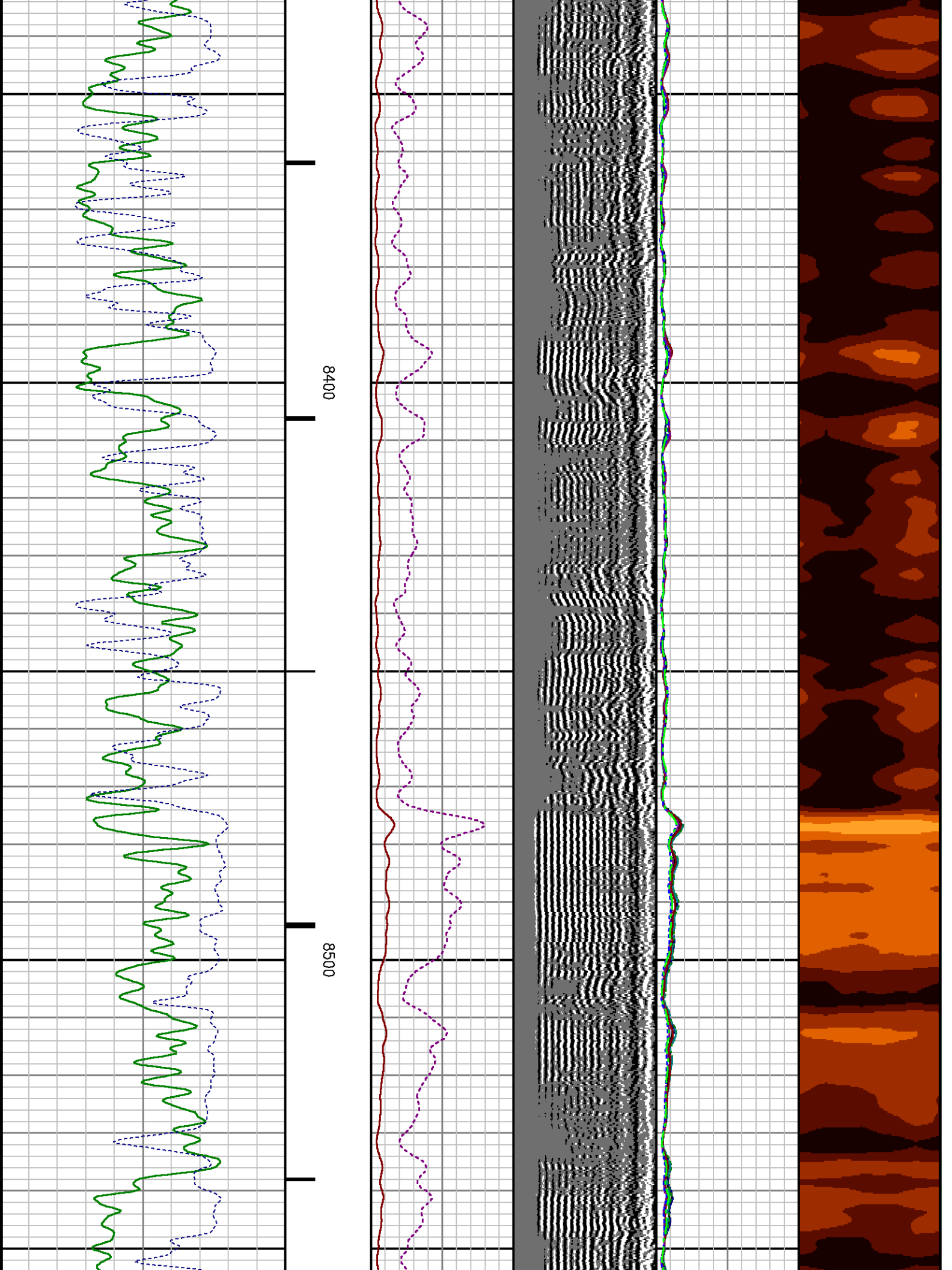
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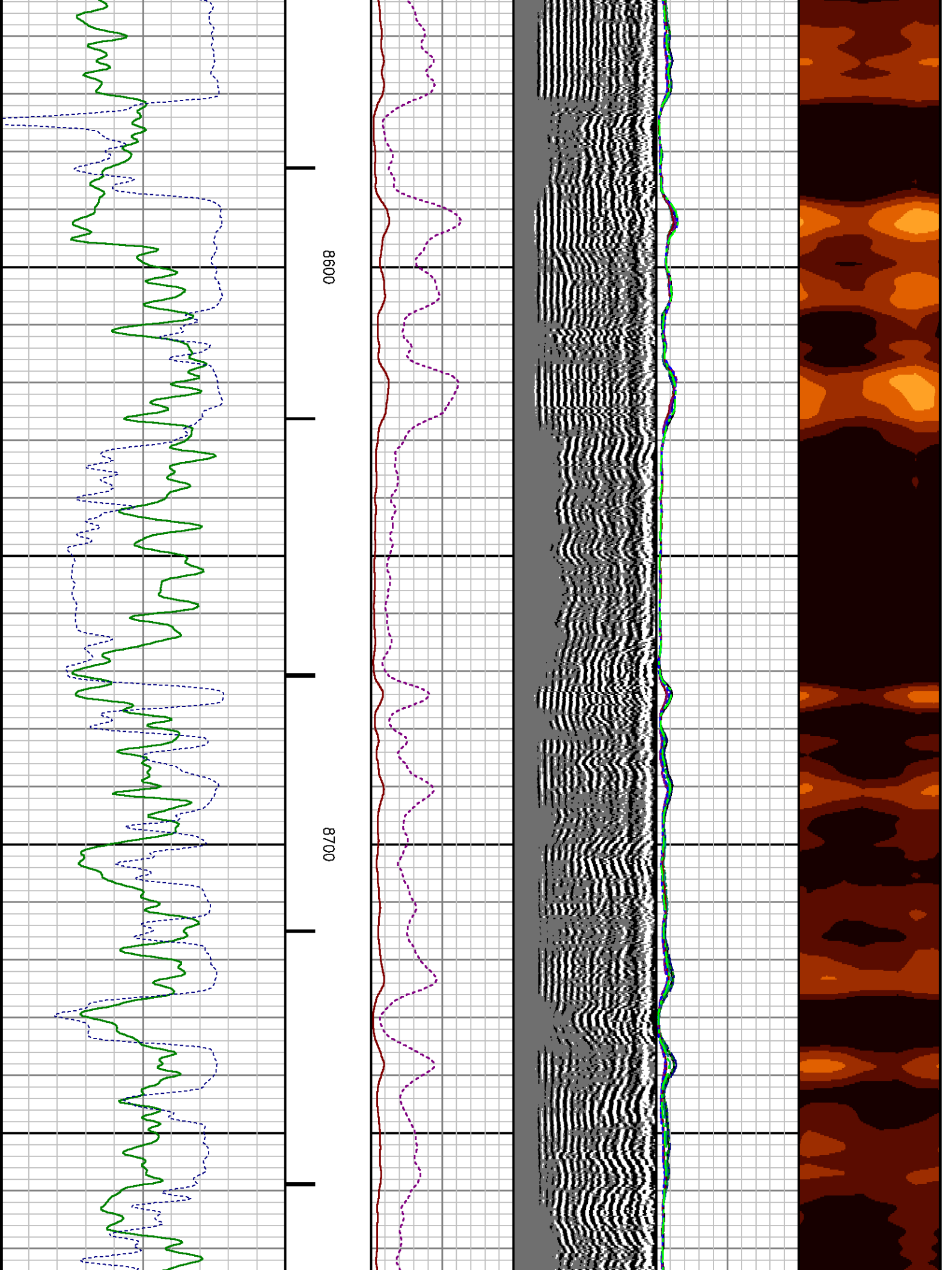
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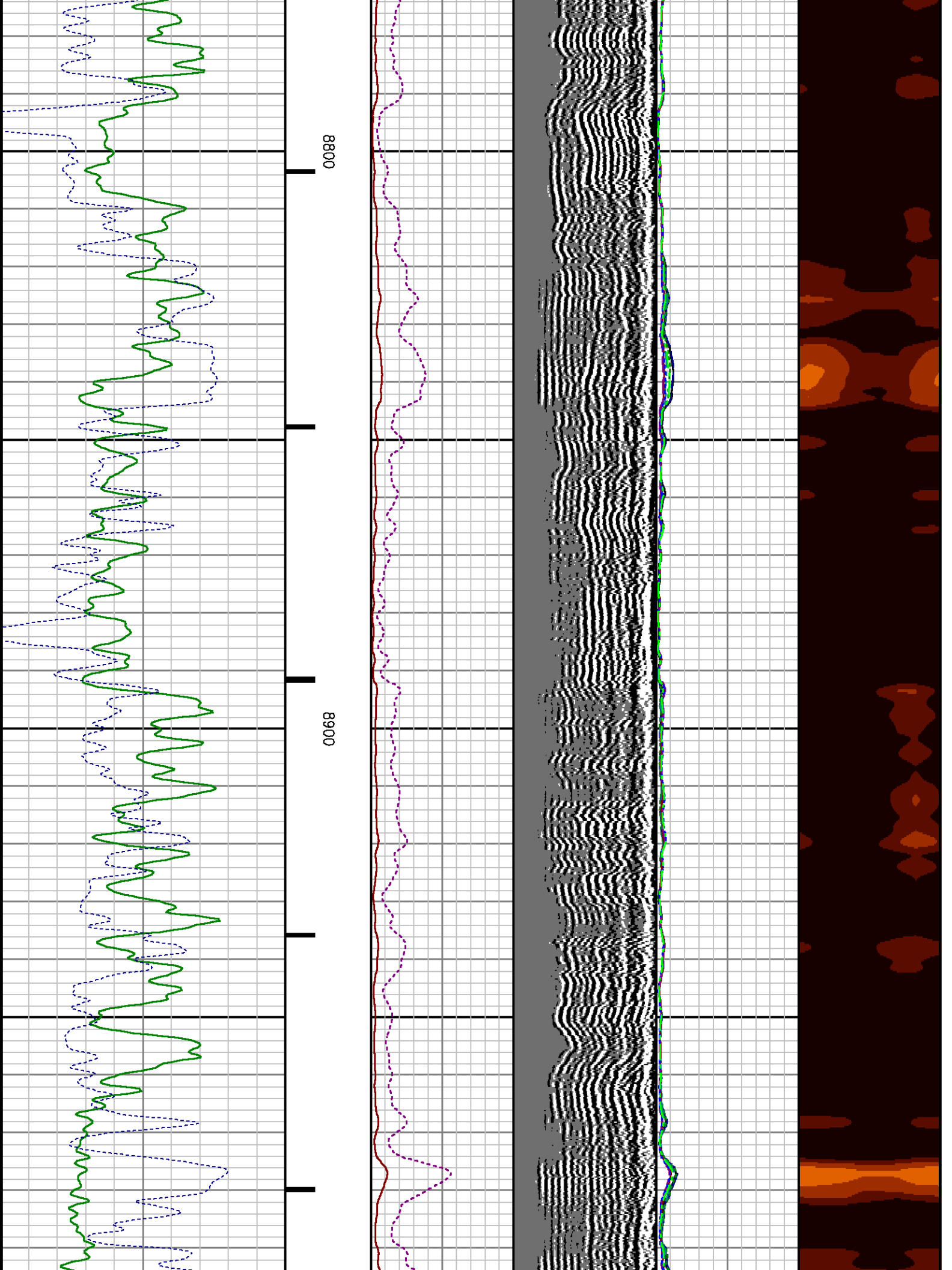
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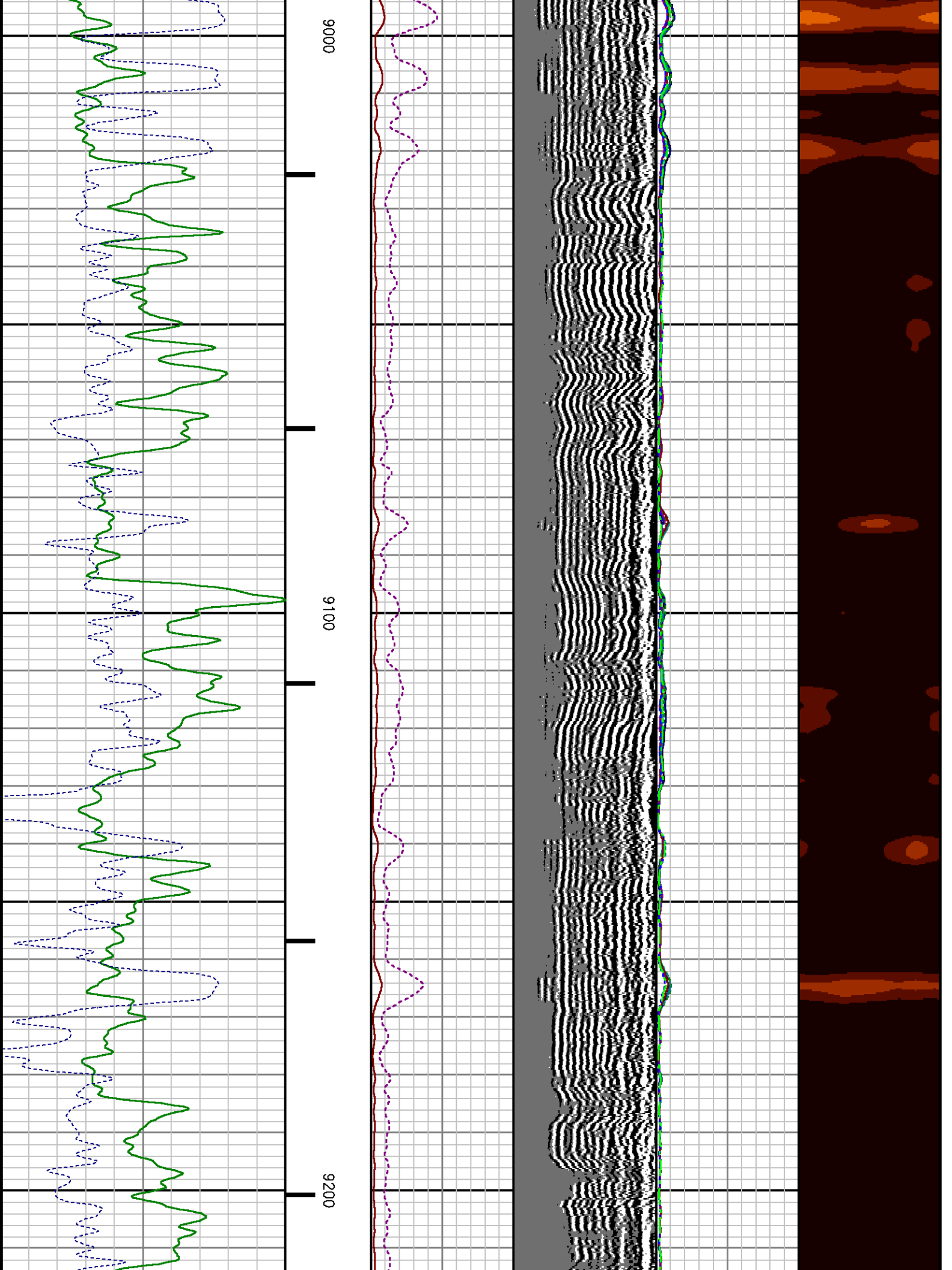




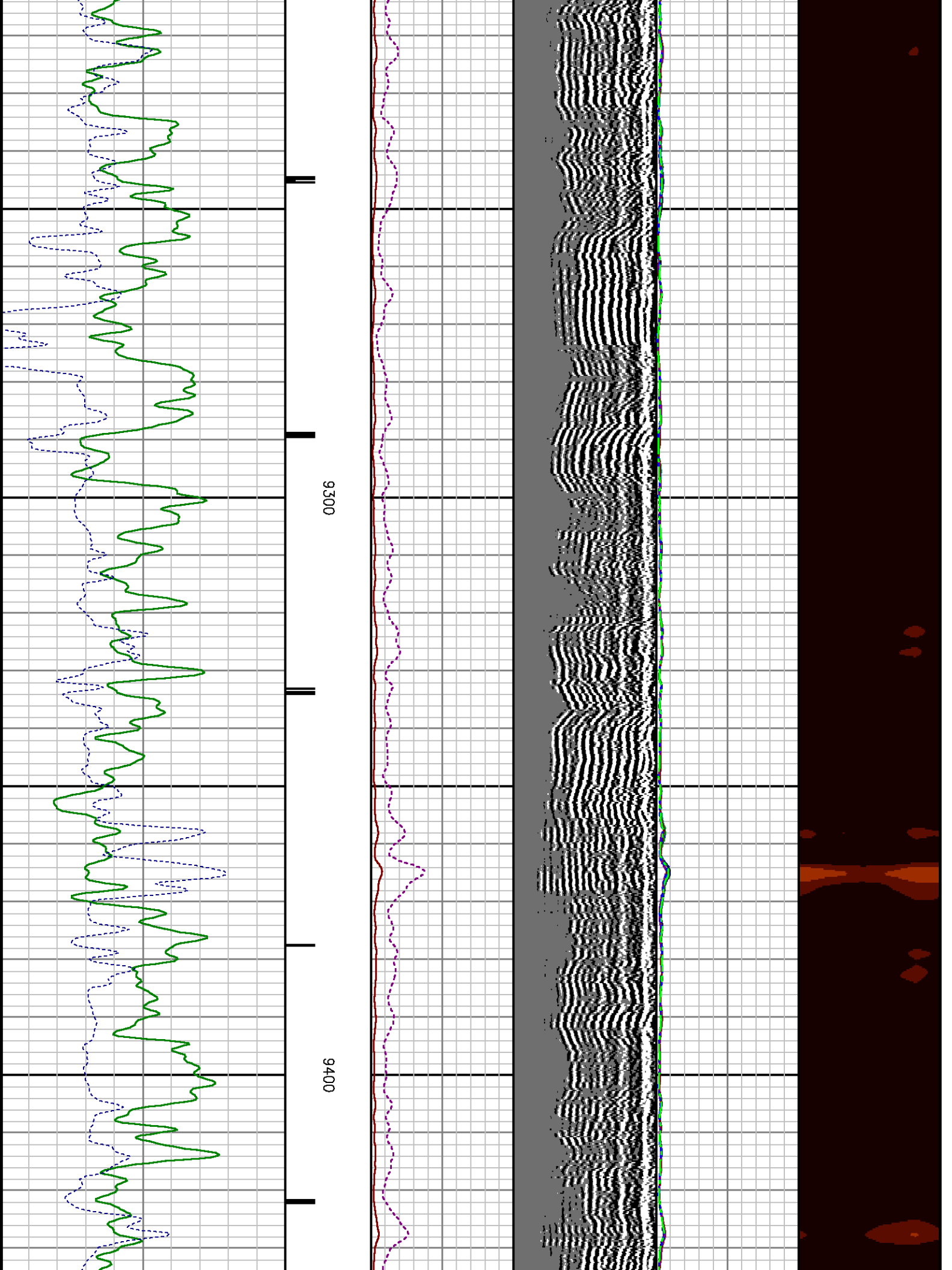




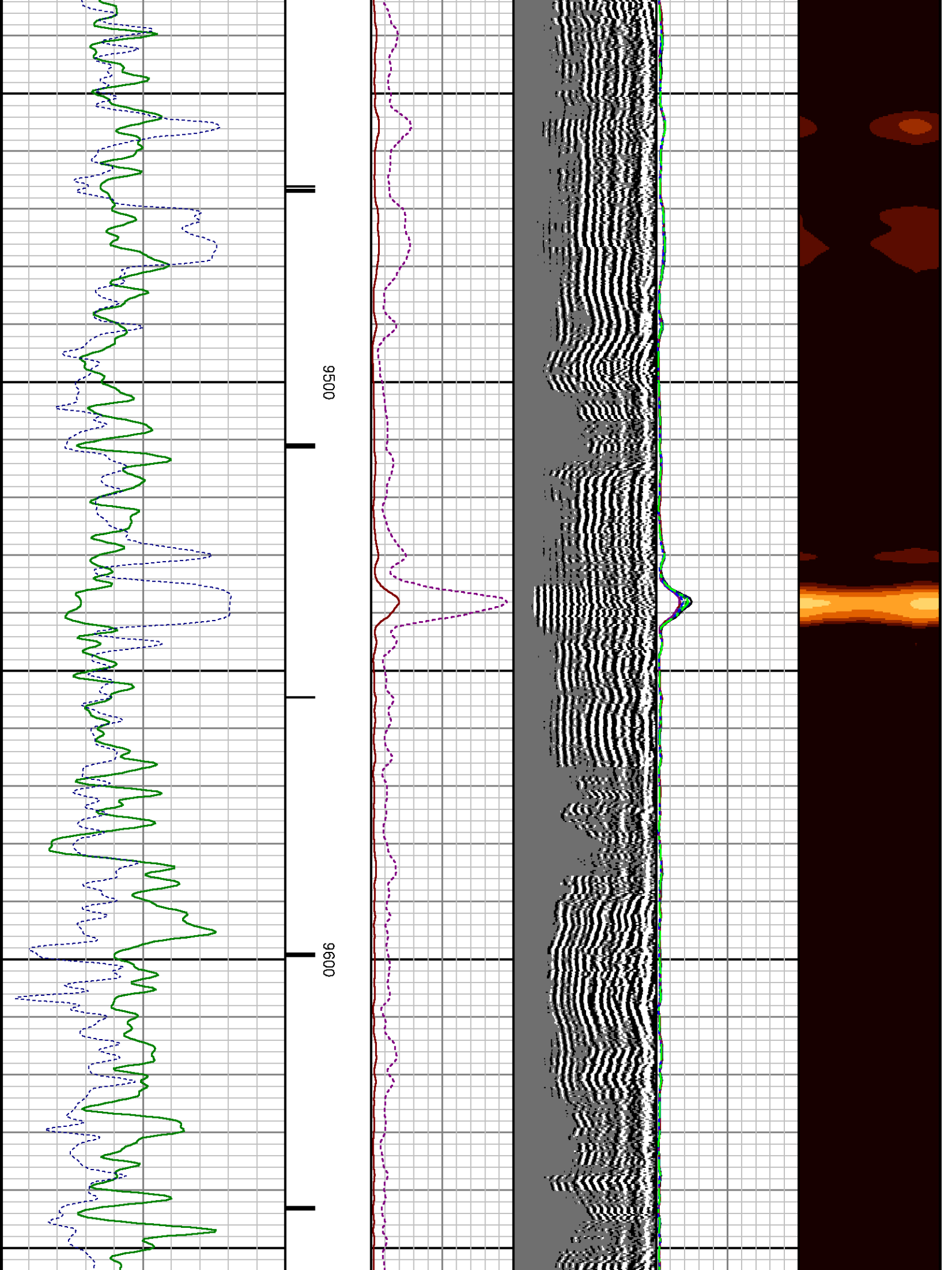


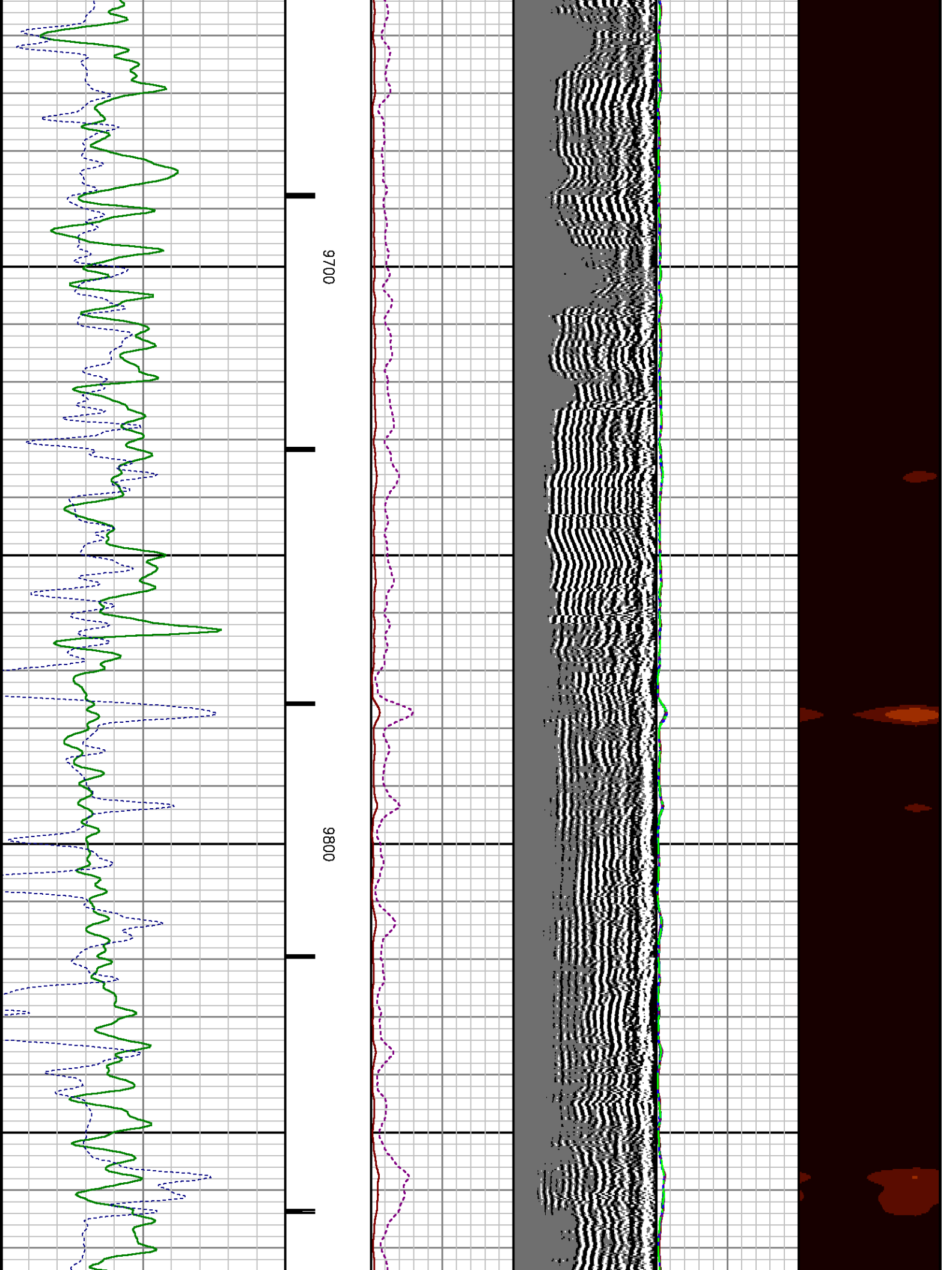


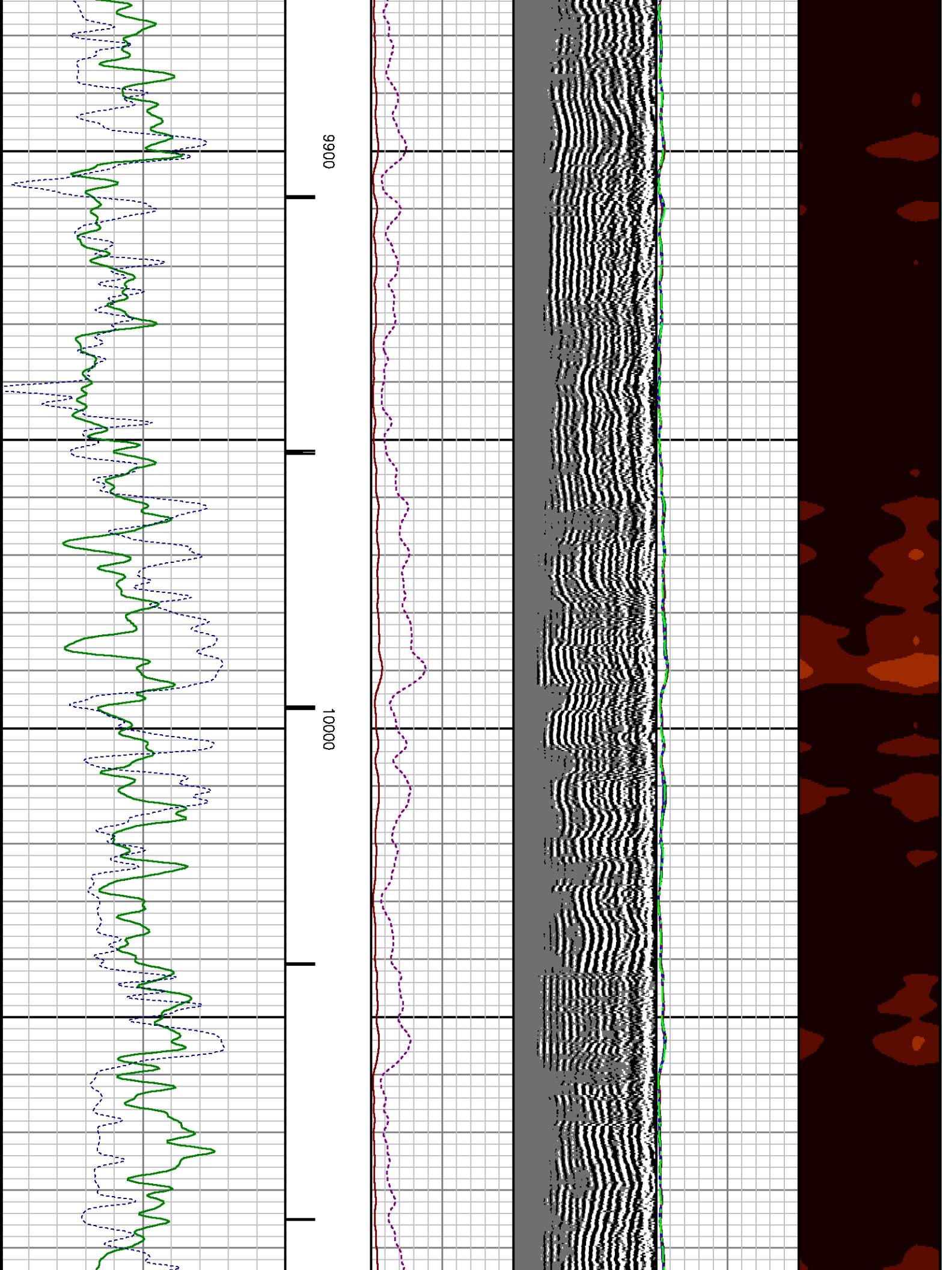


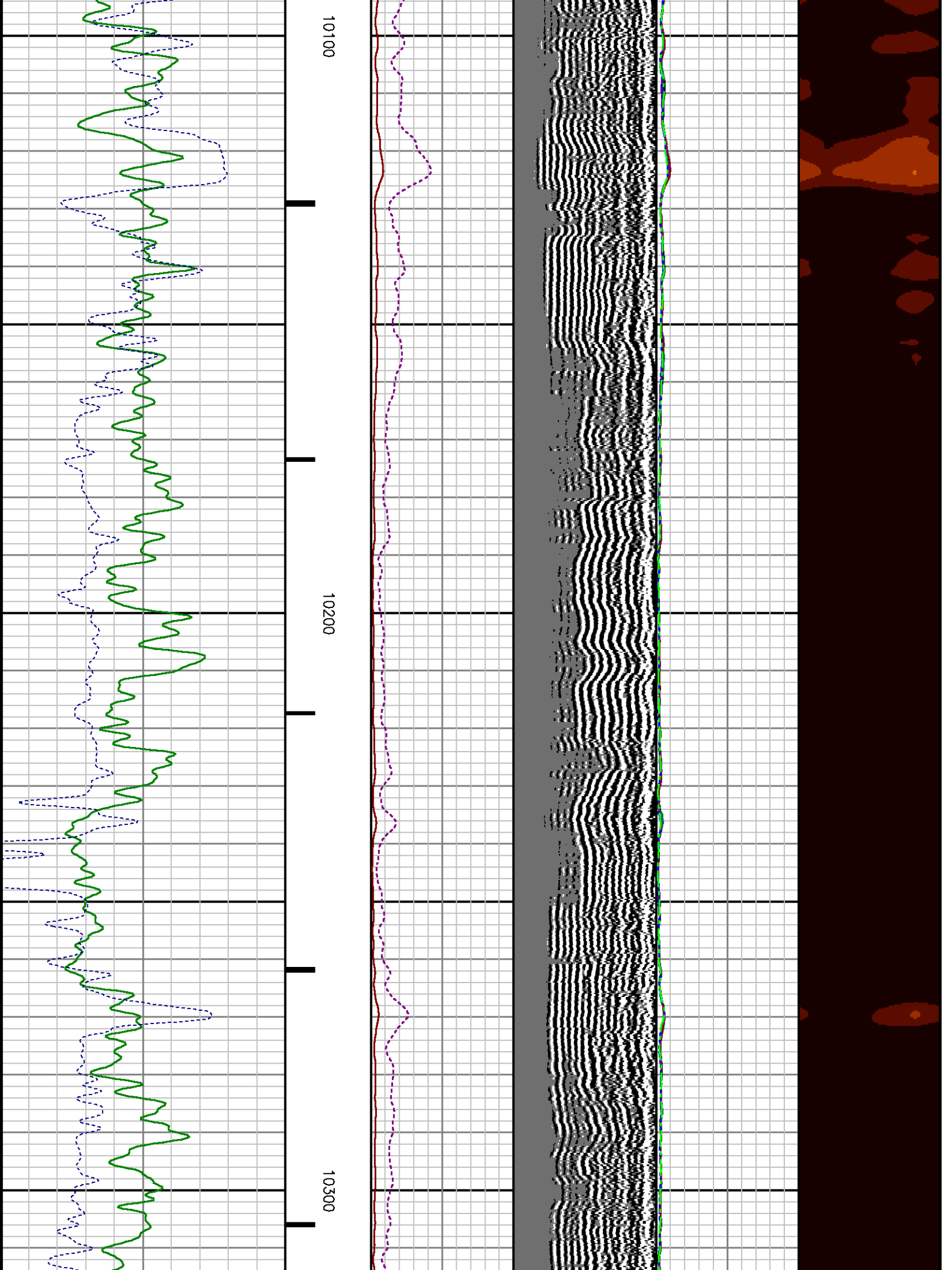


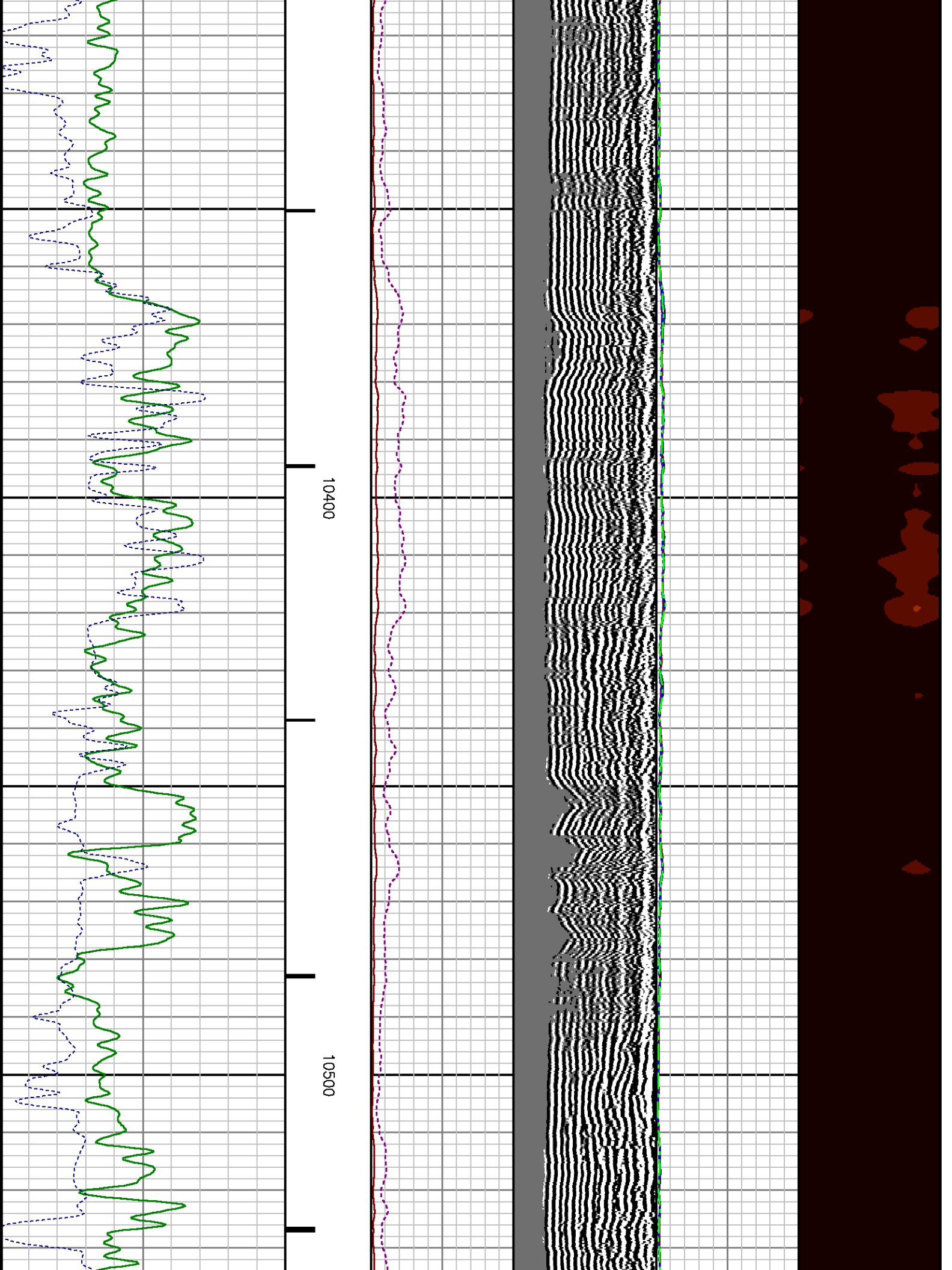




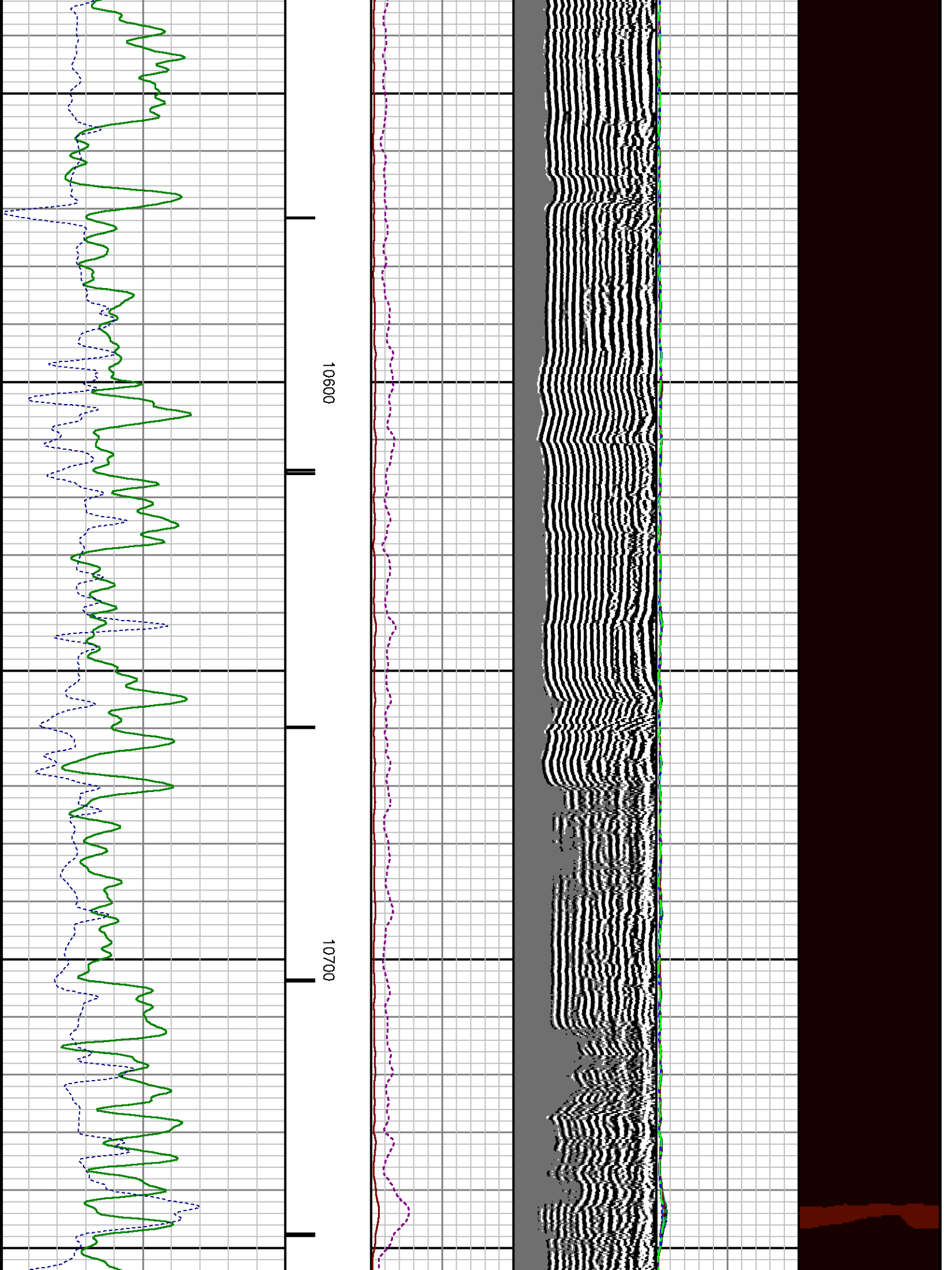




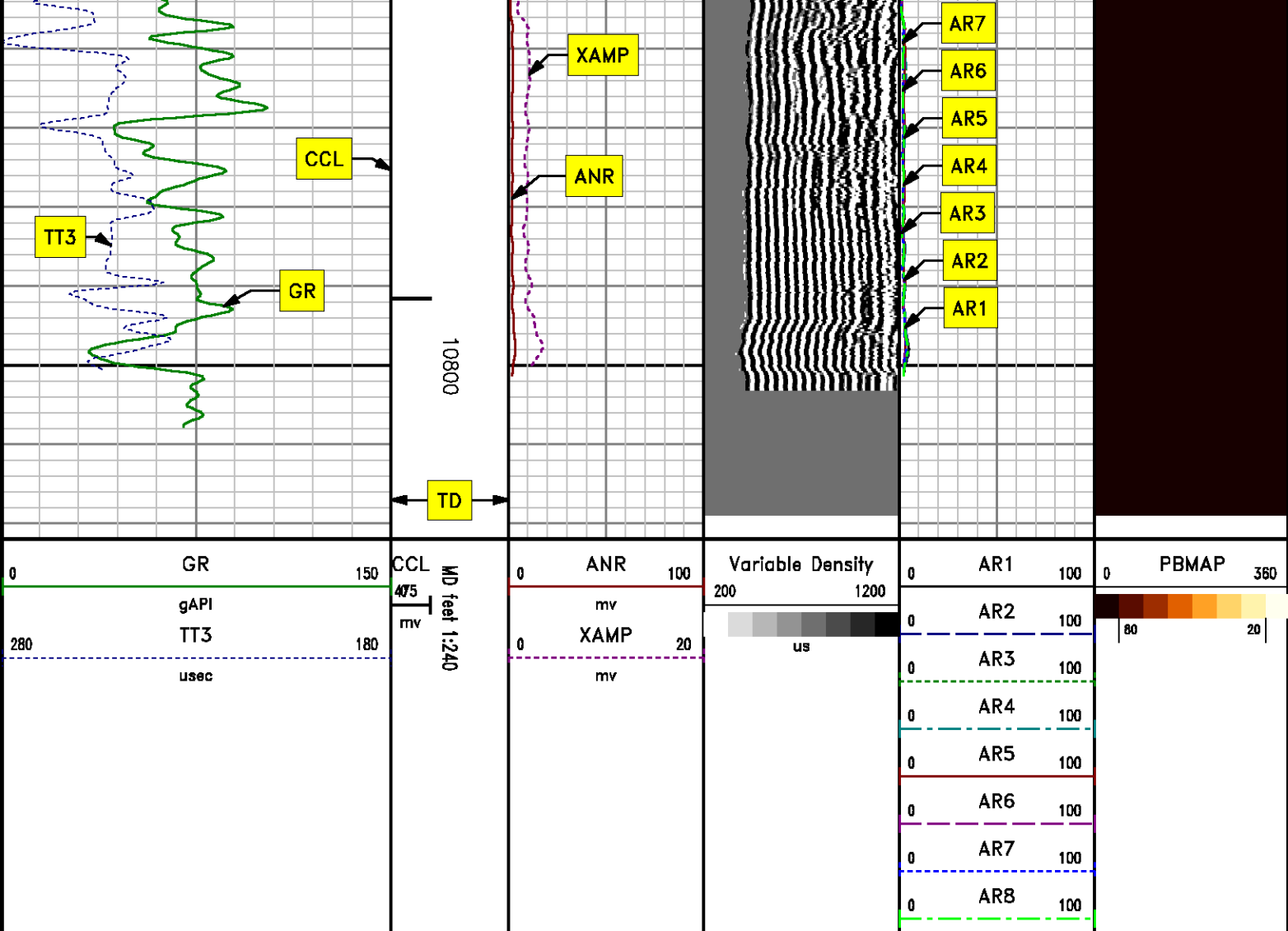












**REPEAT SECTION**  
**0 PSI**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	uSec	10480.560	10818.560
RAL	Amp Gate Start Near	195.000	uSec	10480.560	10818.560
RAL	Amp Gate Start Radial	195.000	uSec	10480.560	10818.560
RAL	Amp Gate Width Far	25.000	uSec	10480.560	10818.560
RAL	Amp Gate Width Near	25.000	uSec	10480.560	10818.560
RAL	Amp Gate Width Radial	25.000	uSec	10480.560	10818.560

RAL	casing od	4.500	Inches	10480.560	10818.560
RAL	casing wt	11.600	lbm/ft	10480.560	10818.560
RAL	FB Start Far	291.900	usec	10480.560	10818.560
RAL	FB Start Near	175.391	usec	10480.560	10818.560
RAL	FB Start Radial	175.391	usec	10480.560	10818.560
RAL	FB Thresh Far	10.000	mv	10480.560	10818.560
RAL	FB Thresh Near	4.000	mv	10480.560	10818.560
RAL	FB Thresh Radial	4.000	mv	10480.560	10818.560
RAL	Fluid Travel Time	200.000	usec/ft	10480.560	10819.060

## DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

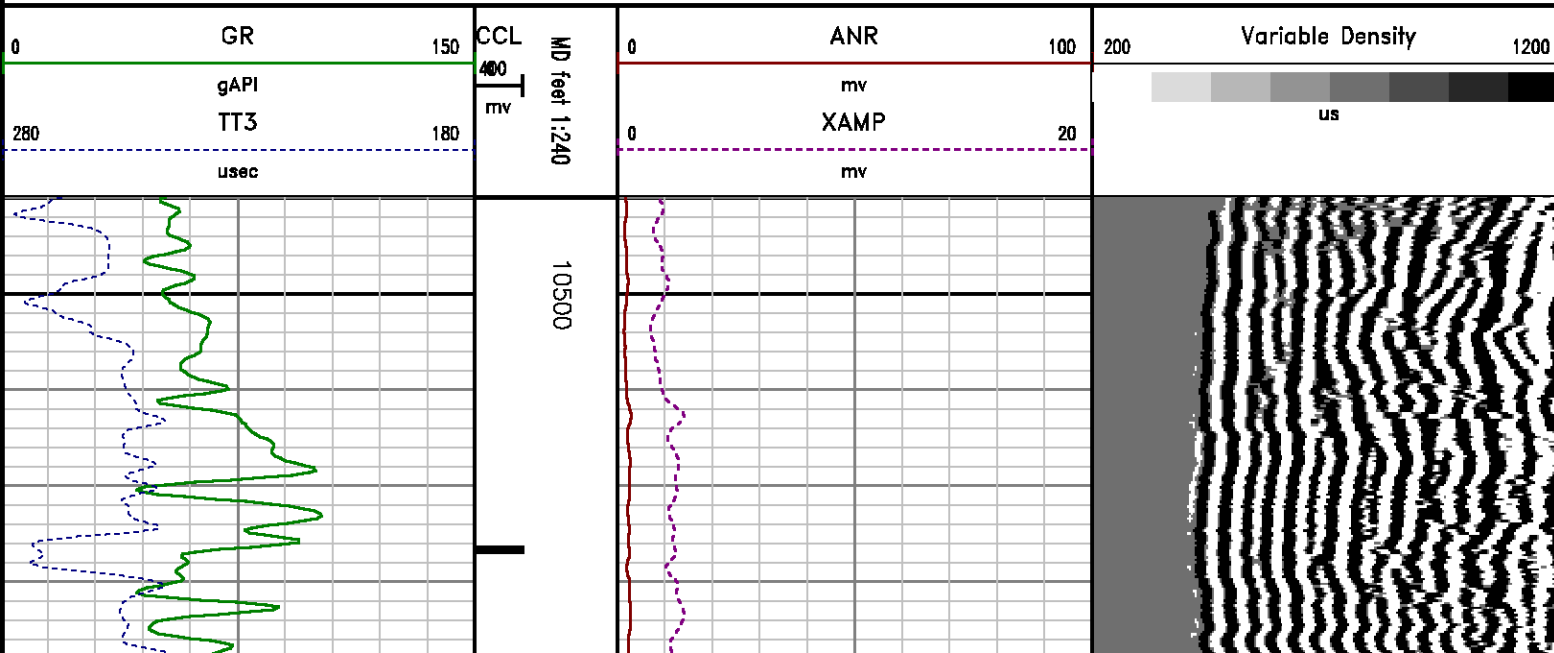
Well : FEDERAL RG 312-14-298

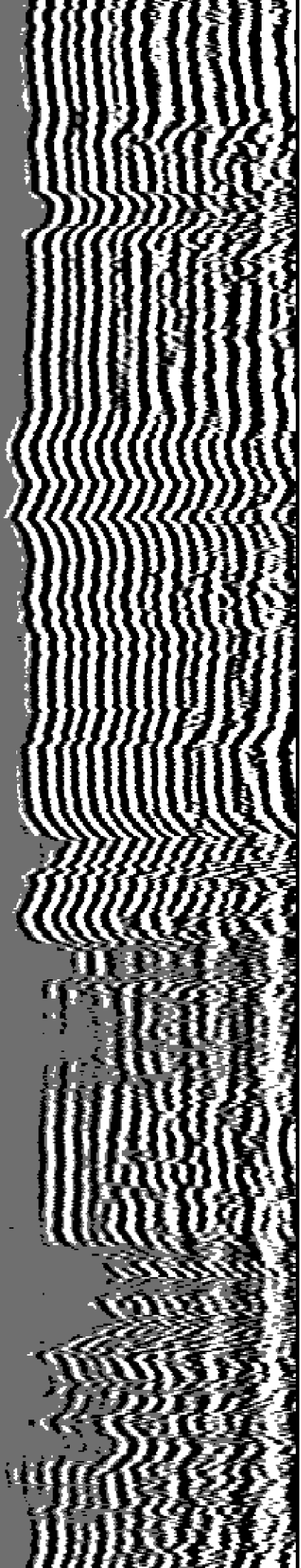
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Mode : PlotMgr 5.4.504

Interval : 10490.00 - 10790.00 feet UP

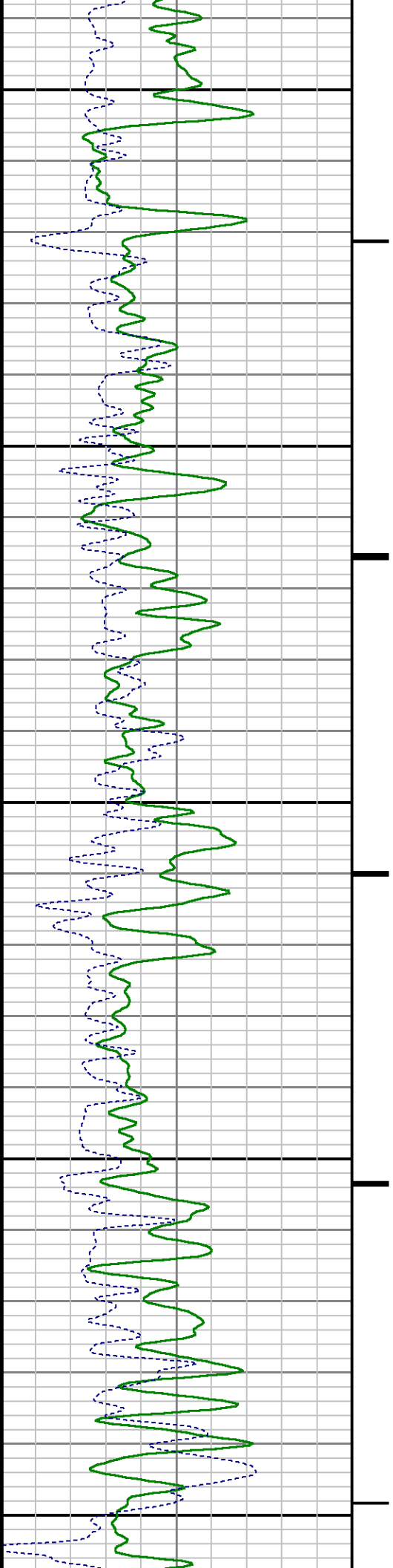
Created : 2/21/2014 11:11:11 AM

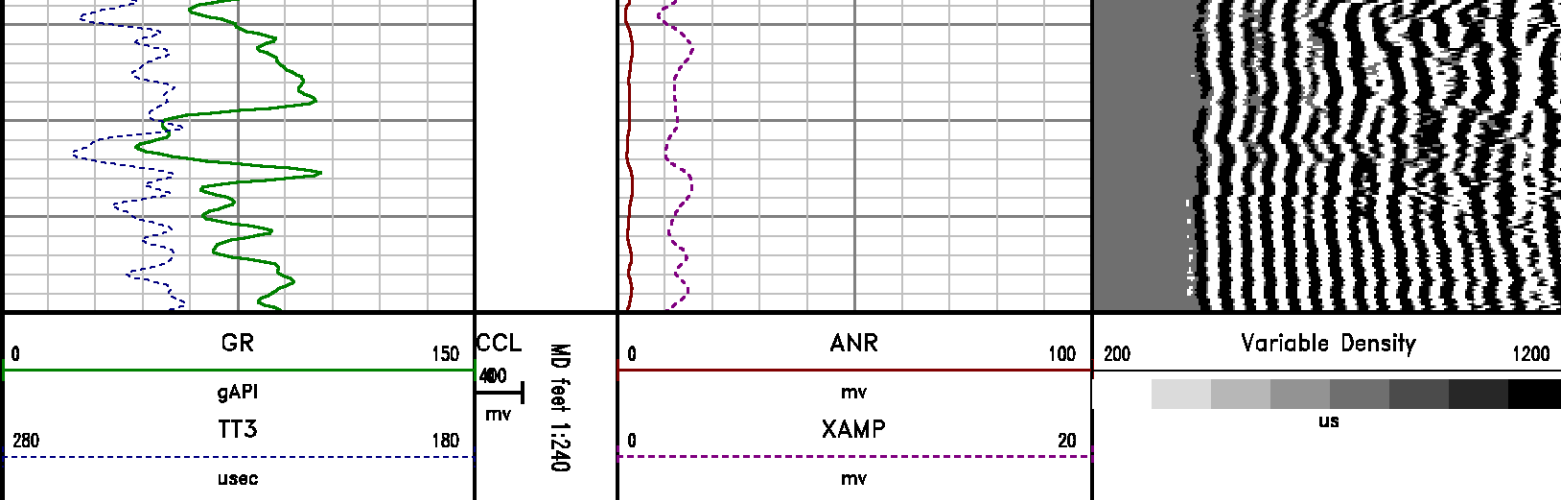




10600

10700





## CALIBRATION SUMMARY

**RALSHP**

Shop Calibration: C:\case\calver\RALSHP\10620\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Feb 20 10:07:15 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: 20

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

RECEIVER	Travel Time [u sec]	Amp. Gate Start [u sec]	Amp. Gate Width [u sec]	Zero Gate Start [u sec]	Zero Gate Width [u sec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	219	216	30	166	25	0.143	100.00	0.16
3 Ft. Receiver	219	216	30	166	20	-0.300	100.00	0.15
5 Ft. Receiver	327	325	30	257	20	0.045	150.00	0.16
Radial #1	218	216	30	166	18	-0.369	100.00	0.15
Radial #2	218	216	30	166	18	-0.150	100.00	0.15
Radial #3	218	216	30	166	18	-0.113	100.00	0.15
Radial #4	218	216	30	166	18	0.242	100.00	0.15
Radial #5	219	216	30	166	18	-0.363	100.00	0.15
Radial #6	219	216	30	166	18	-0.702	100.00	0.15
Radial #7	218	216	30	166	18	-0.444	100.00	0.15
Radial #8	220	216	30	166	18	-0.627	100.00	0.15

**RALFLD**

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Feb 20 13:35:18 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: 20

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="-0.068"/>	<input type="text" value="0.000"/>	<input type="text" value="1.07"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-1.719"/>			
5 Ft. Receiver	<input type="text" value="317"/>	<input type="text" value="30"/>	<input type="text" value="-1.828"/>			
Radial #1	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-2.669"/>			
Radial #2	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-2.410"/>			
Radial #3	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-2.118"/>			
Radial #4	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-2.292"/>			
Radial #5	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-2.016"/>			
Radial #6	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-1.847"/>			
Radial #7	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-1.344"/>			
Radial #8	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-1.759"/>			

# GAMMA RAY

## CALIBRATION SUMMARY

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

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	<input type="text" value="71.78"/>	<input type="text" value="314.67"/>	<input type="text" value="0.762"/>	<input type="text" value="54.67"/>	<input type="text" value="239.67"/>	<input type="text" value="185.00"/>

## PRIMARY LOG VERIFICATION

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

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	<input type="text" value="74.22"/>	<input type="text" value="316.93"/>	<input type="text" value="0.762"/>	<input type="text" value="56.53"/>	<input type="text" value="241.40"/>	<input type="text" value="184.86"/>

# TOOL DIAGRAM



# OTA SHORT CABLE HEAD

## PROBE 2 3/4 DUAL RECEIVER RADII

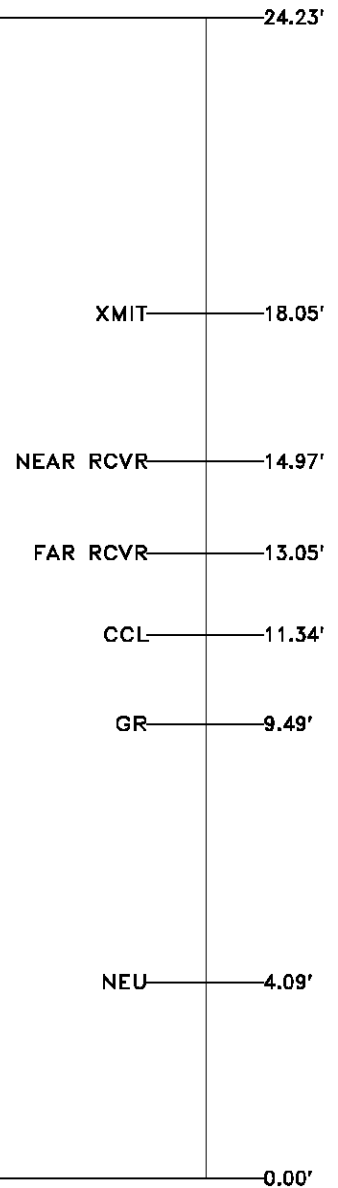
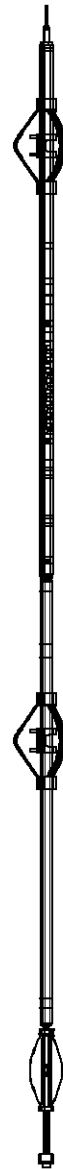
Series 1426XA  
Mnemonic PROB  
Diameter 2.75"  
Length 11.17'  
Measure Point 0.75' FAR RCVR  
Measure Point 2.67' NEAR RCVR  
Measure Point 5.75' XMIT  
Temp Rating 350.00 °F  
Press Rating 18000.00 PSI

## Probe GR/CCL/NEU

Series 2459XA  
Mnemonic PROB  
Diameter 2.75"  
Length 9.42'  
Measure Point 1.21' NEU  
Measure Point 6.60' GR  
Measure Point 8.46' CCL

## CENTRALIZER

Series RALCENT  
Mnemonic CENT  
Diameter 3.12"  
Weight 20.00 lb



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



Company WPX ENERGY  
Well FEDERAL RG 312-14-298  
Field SULPHUR CREEK  
County RIO BLANCO State CO

File No: CH082856  
API No: 05103117910000

## Location

SHL: 1644' FNL & 505' FWL  
BHL: 1671' FNL & 645' FWL

## Elevations

KB 6581 ft  
DF  
GL 6560 ft

14 2S 98W  
RG 12-14-298 PAD  
CYCLONE 29

SEC 14 TWP 2S RGE 98W

CASE

Baker Atlas