



# RADIAL ANALYSIS BOND LOG

## Baker Atlas

File No: CH081740	Company Well	WPX ENERGY FEDERAL RG 412-14-298
API No: 05103117930000	Field County	SULPHUR CREEK RIO BLANCO State CO
14 2S 98W RG 12-14-298 PAD CYCLONE 29	Location SHL: 1563' FNL & 495' FWL BHL: 2295' FNL & 640' FWL SEC 14 TWP 25 RGE 98W	Other Services RPM
Permanent Datum Log Measured From Drill Measured From	GL KB KB Elevation 21 ft Above P. D.	Elevations KB 6561 ft DF GL 6560 ft

Date	25/JAN/14
Run	ONE
Service Order	US625095
Depth Driller	10881 ft
Depth Logger	10807 ft
Bottom Logged Interval	10797 ft
Top Logged Interval	21 ft
Time Started	19:30
Time Finished	23:30
Operator Rig Time	4 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	75 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	65 fpm
Maximum Recorded Temperature	271 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	3018 ft
8.75/7.875	3018 ft	10951 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			0 ft	80 ft
9.625 in			0 ft	3018 ft
4.5 in	11.5 lbm/ft	P-110	0 ft	10951 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 13 feet.
Logged with zero PSI at wellhead.

BHT = 271 °F  
SJ = 5619'-5641'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	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	29.449	10828.750
RAL	Amp Gate Start Near	195.000	usec	29.449	10828.750
RAL	Amp Gate Start Radial	195.000	usec	29.449	10828.750
RAL	Amp Gate Width Far	25.000	usec	29.449	10828.750
RAL	Amp Gate Width Near	25.000	usec	29.449	10828.750
RAL	Amp Gate Width Radial	25.000	usec	29.449	10828.750
RAL	casing od	4.500	inches	29.449	10828.750
RAL	casing wt	11.600	lbm/ft	29.449	10828.750
RAL	FB Start Far	291.900	usec	29.449	10828.750
RAL	FB Start Near	175.391	usec	29.449	10828.750
RAL	FB Start Radial	175.391	usec	29.449	10828.750
RAL	FB Thresh Far	10.000	mv	29.449	10828.750
RAL	FB Thresh Near	4.000	mv	29.449	10828.750
RAL	FB Thresh Radial	4.000	mv	29.449	10828.750
RAL	Fluid Travel Time	200.000	usec/ft	29.449	10828.262

DEPTH OFFSETS  
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	AR9	AR10

1426XA -15.750  
 2459XA -11.340  
 2459XA -9.490  
 2459XA -4.090

AR3	AR6	AR7	AR8	CHV	FPR2
FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

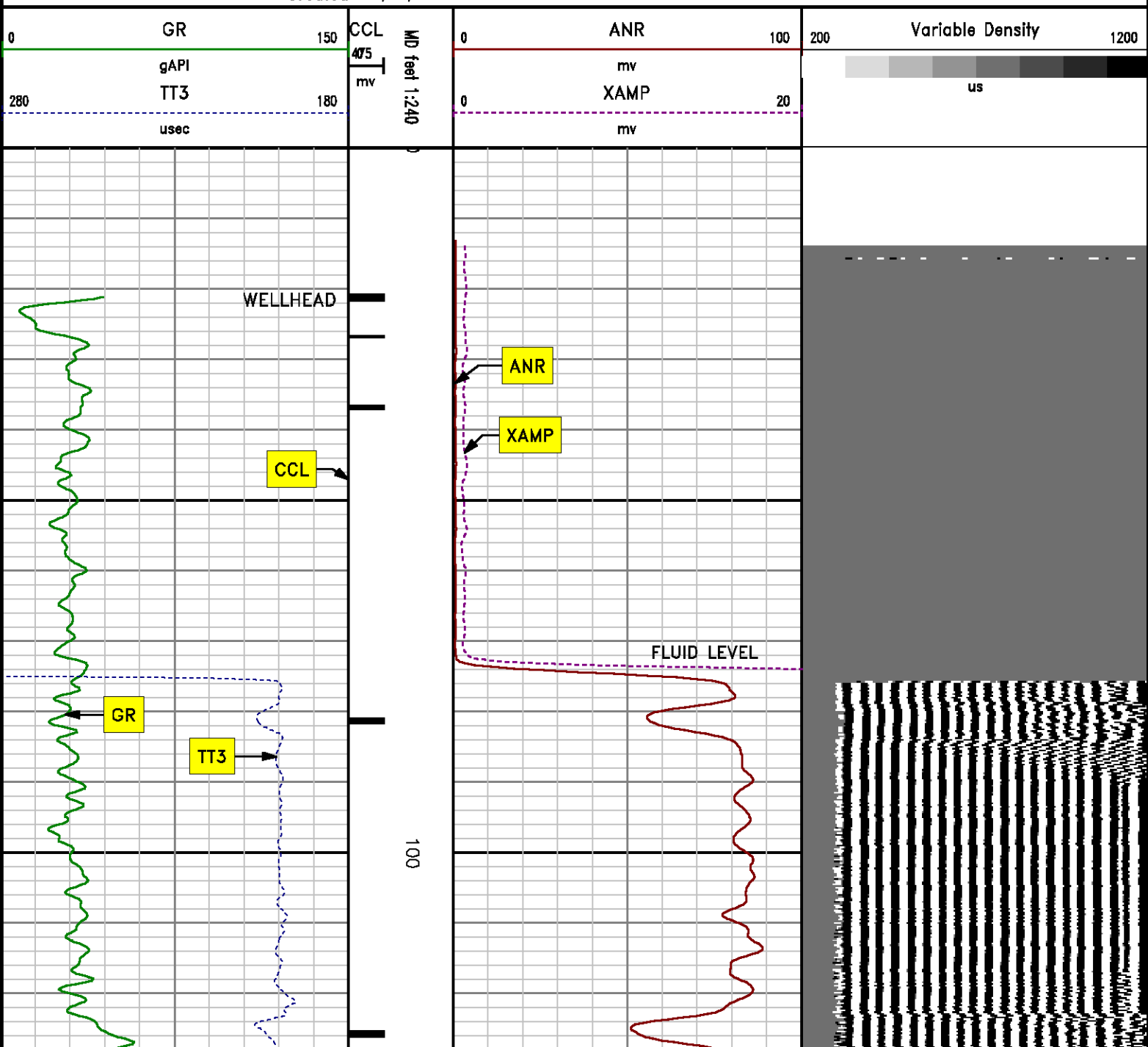
Well : FEDERAL RG 412-14-298

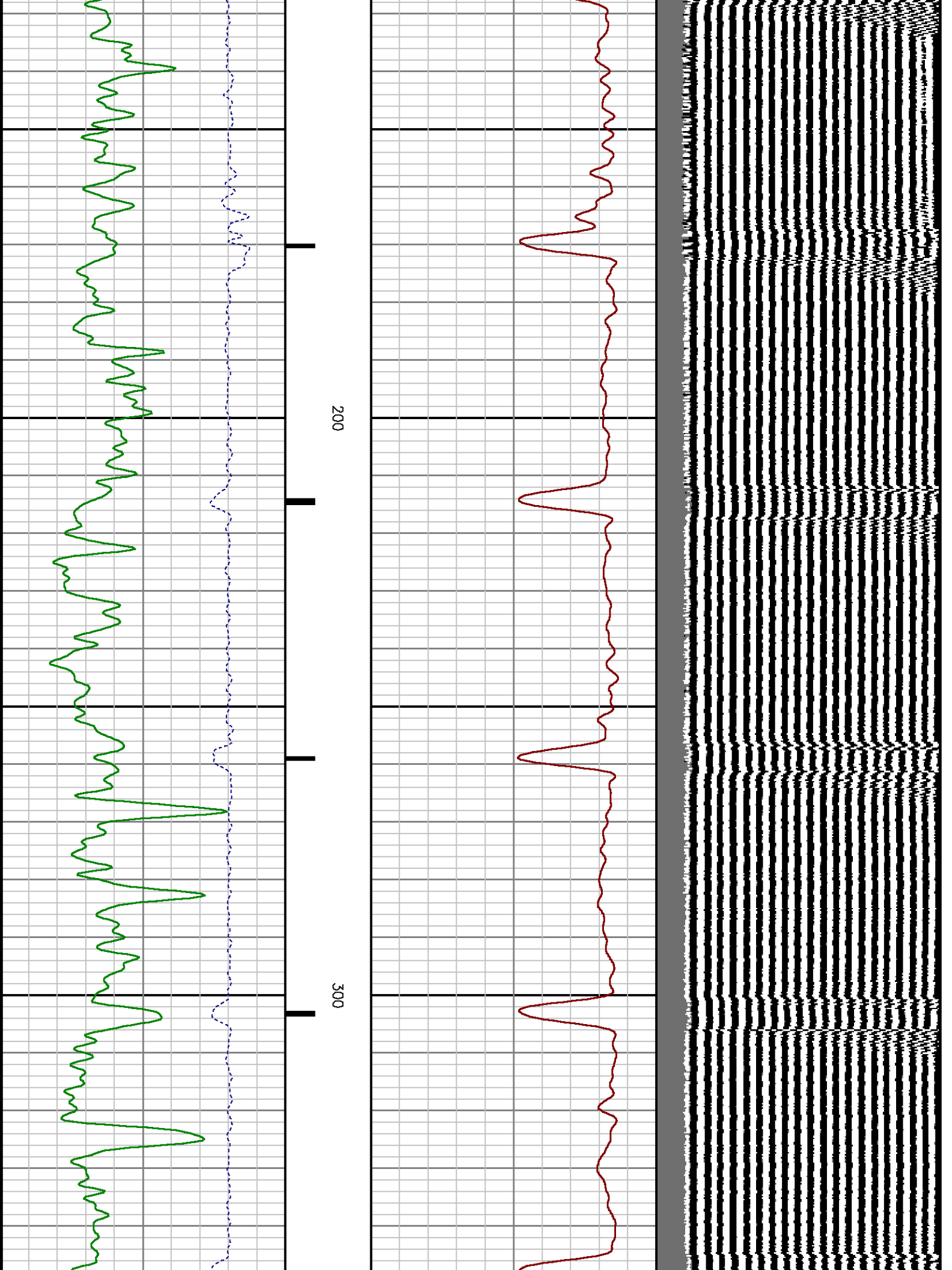
File Name : d:\welldata\wpx\federal rg 412-14-298\cbl412\main.xtf

Mode : PlotMgr 5.4.504

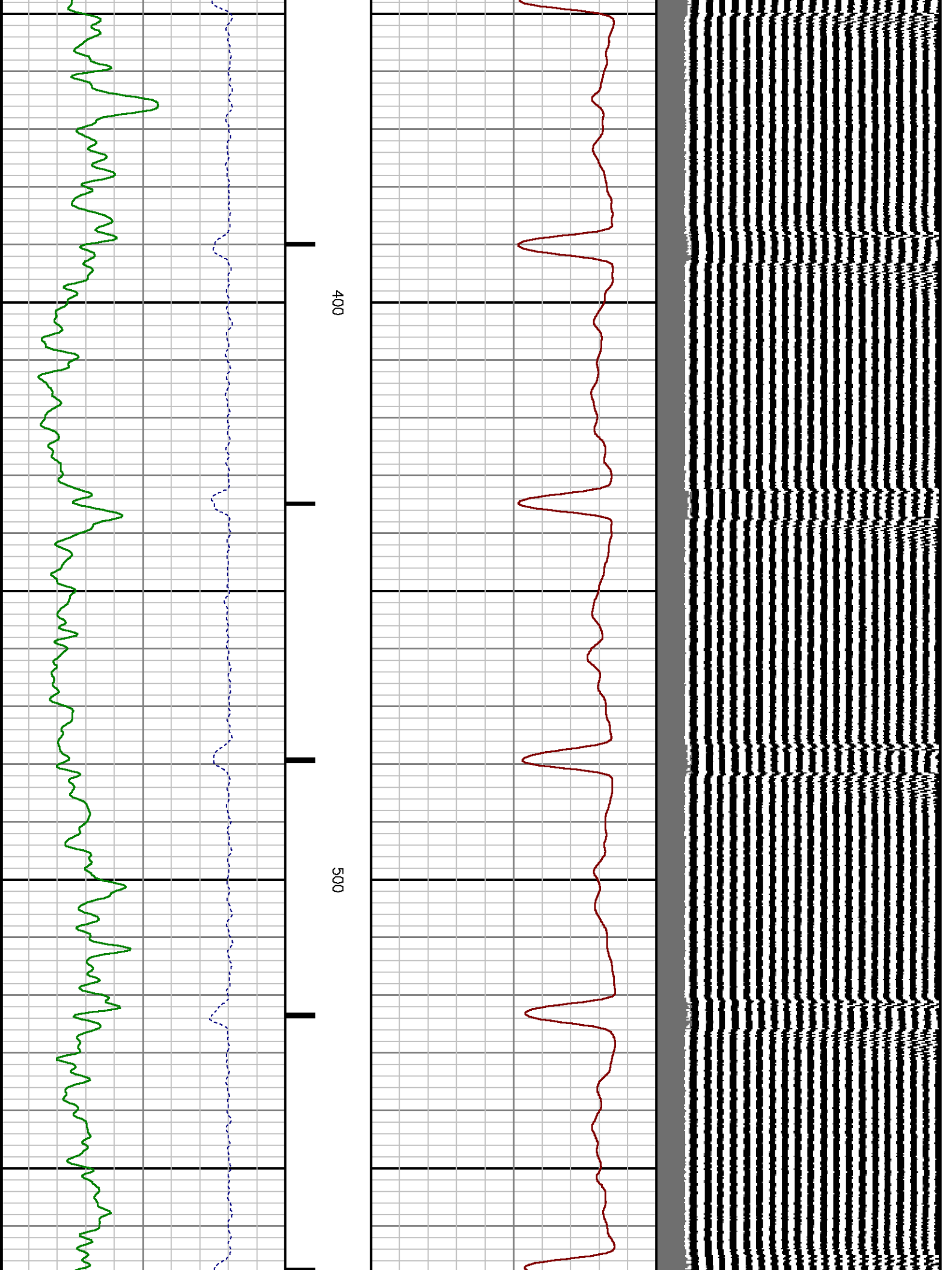
Interval : 0.00 - 10812.00 feet UP

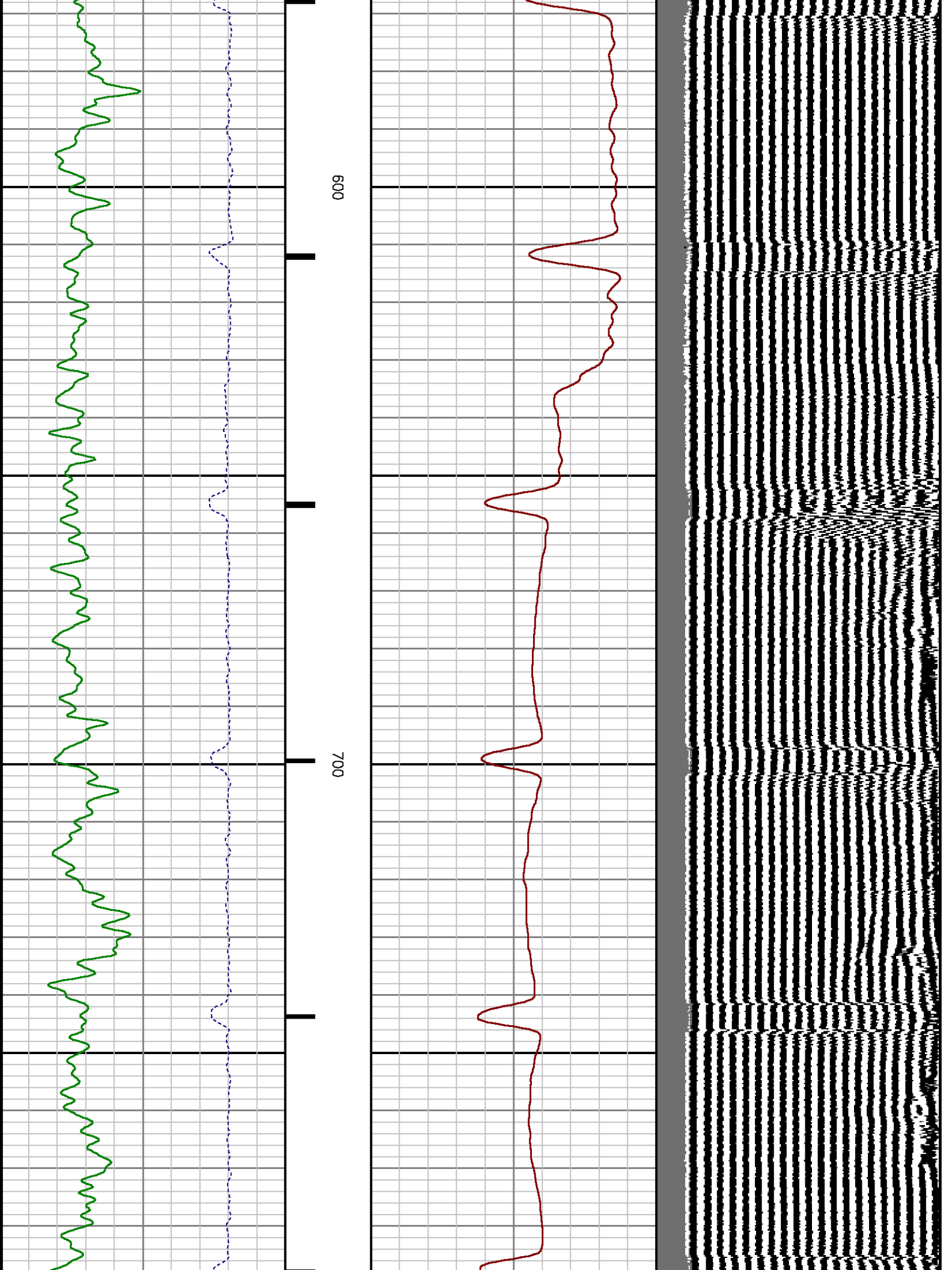
Created : 1/25/2014 8:26:03 PM

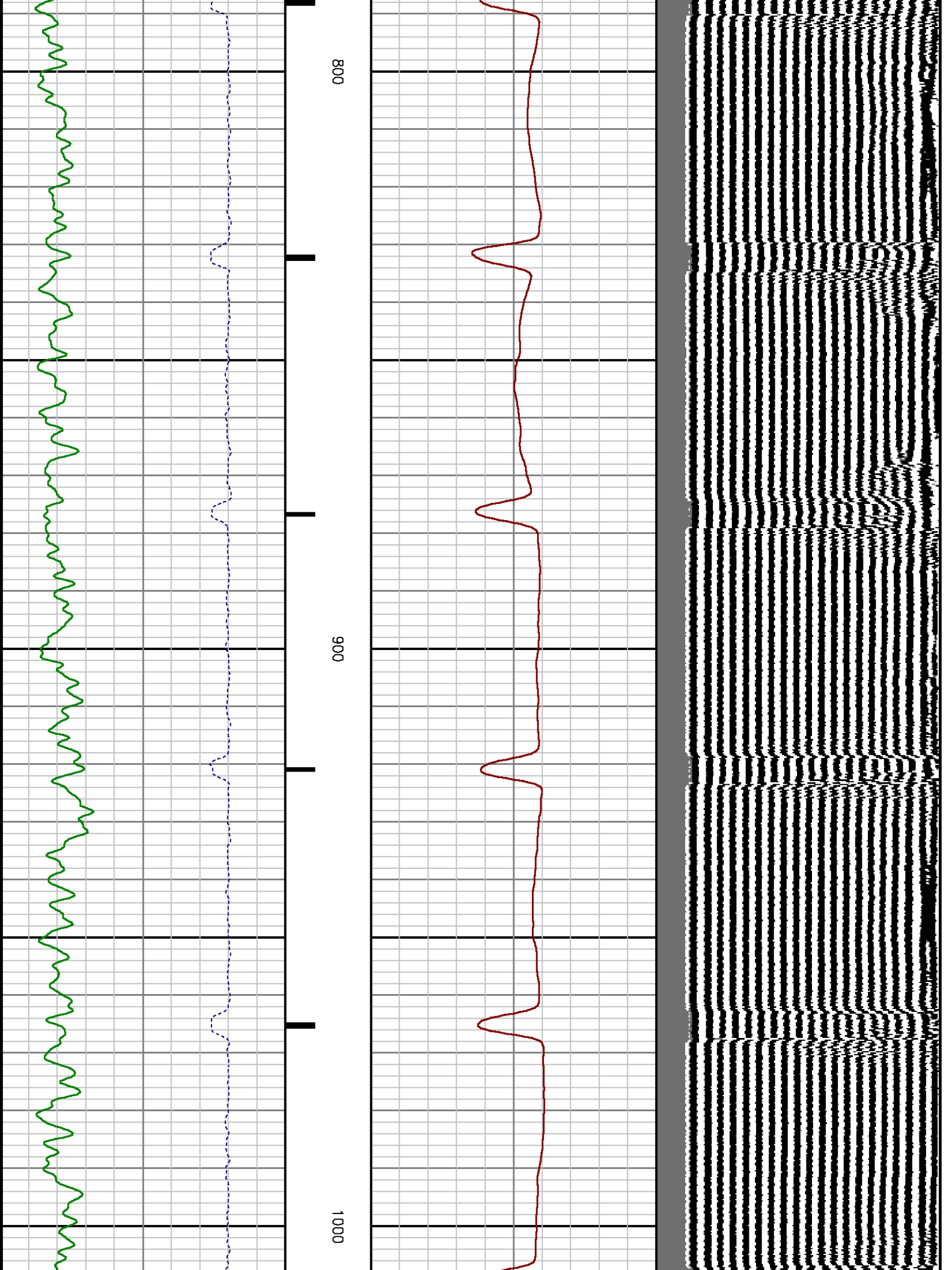


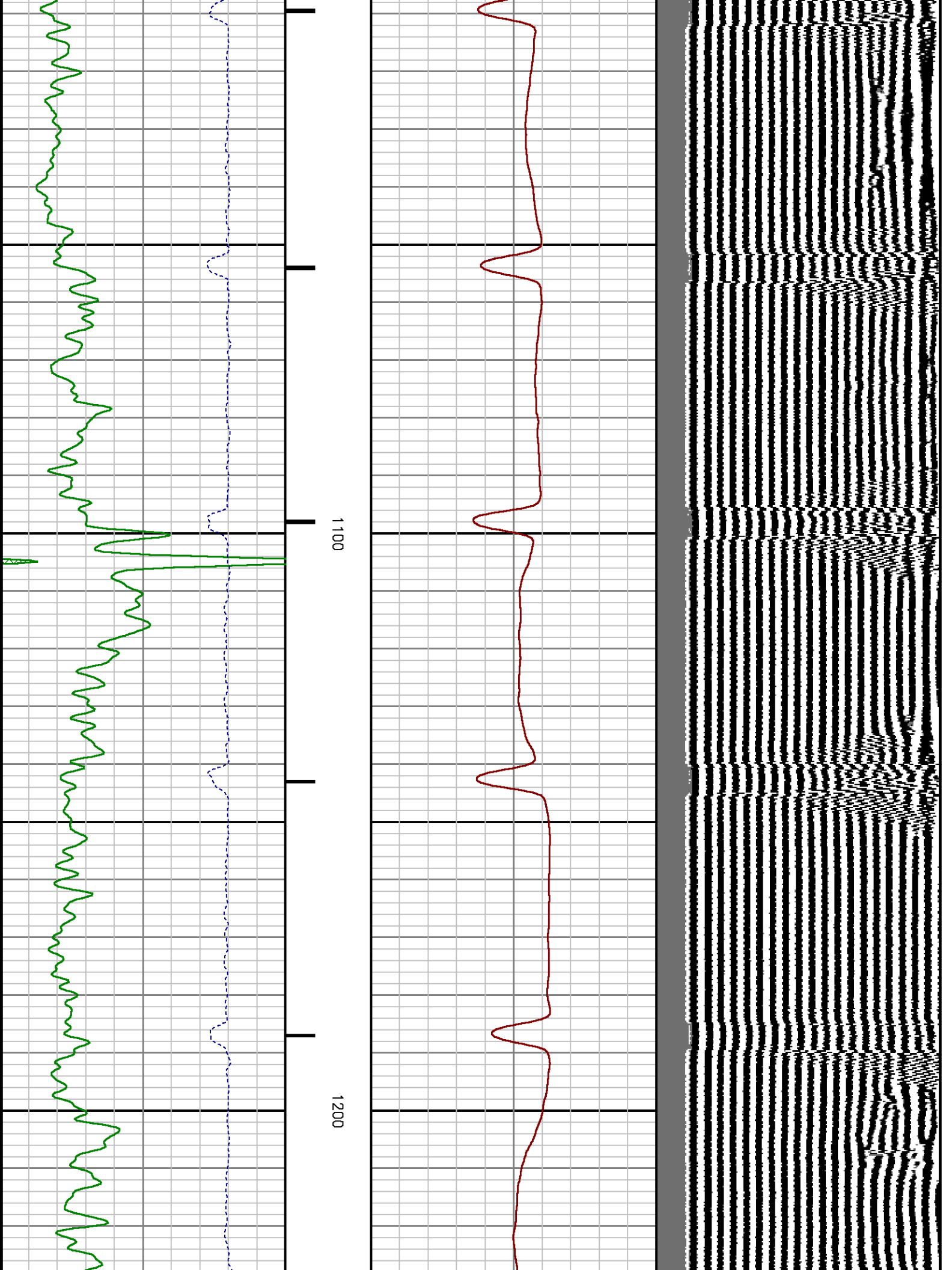


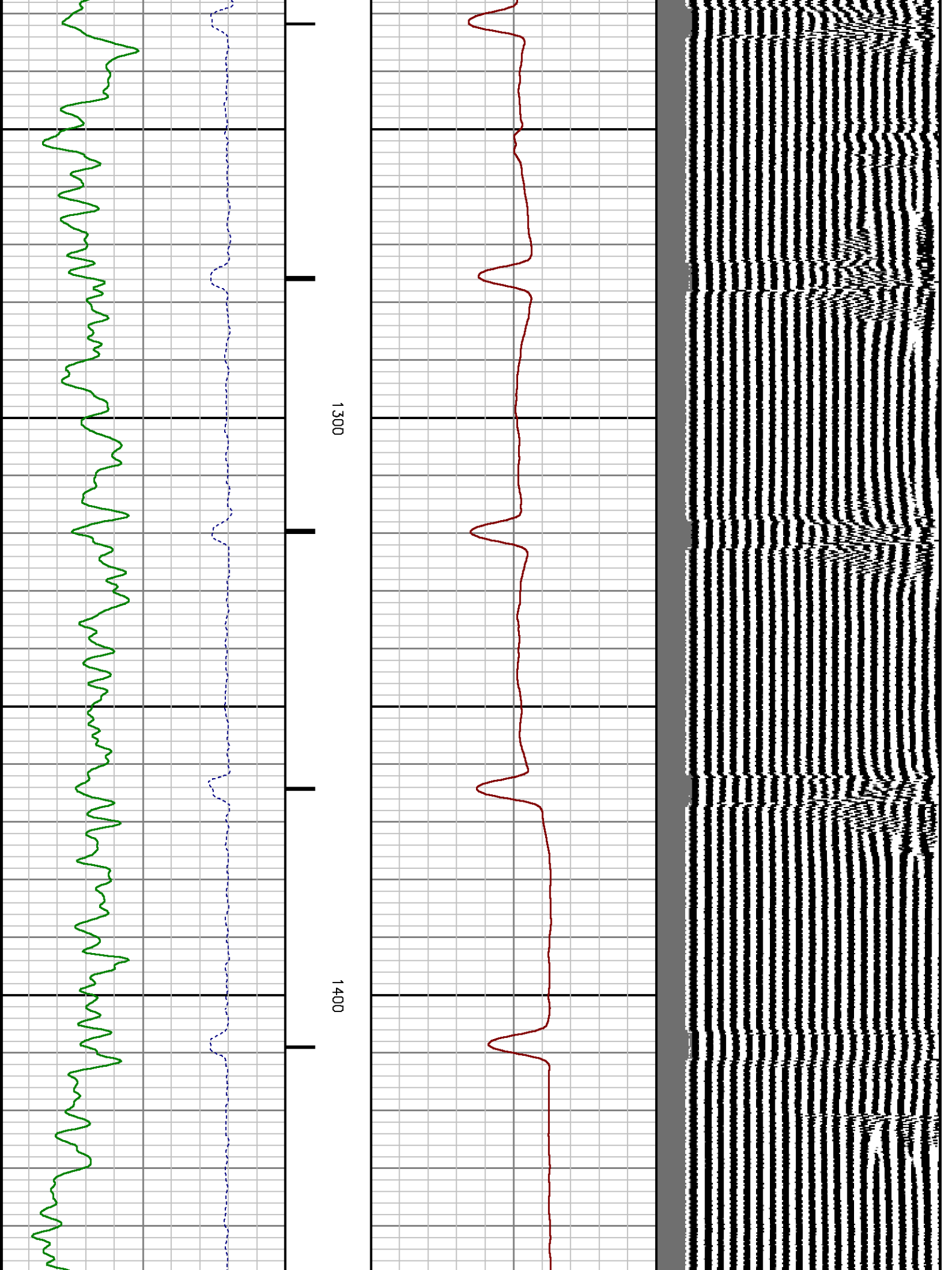


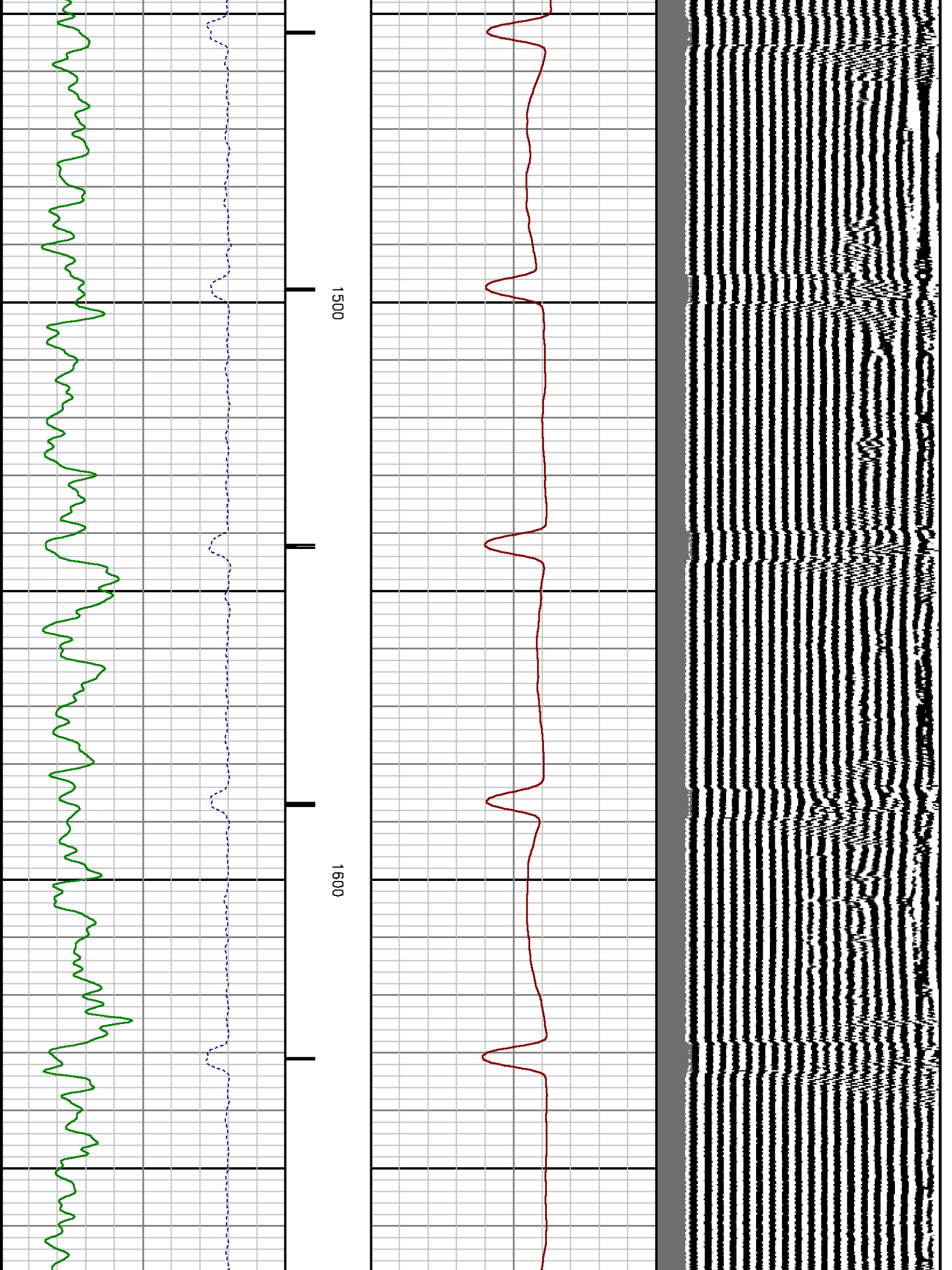




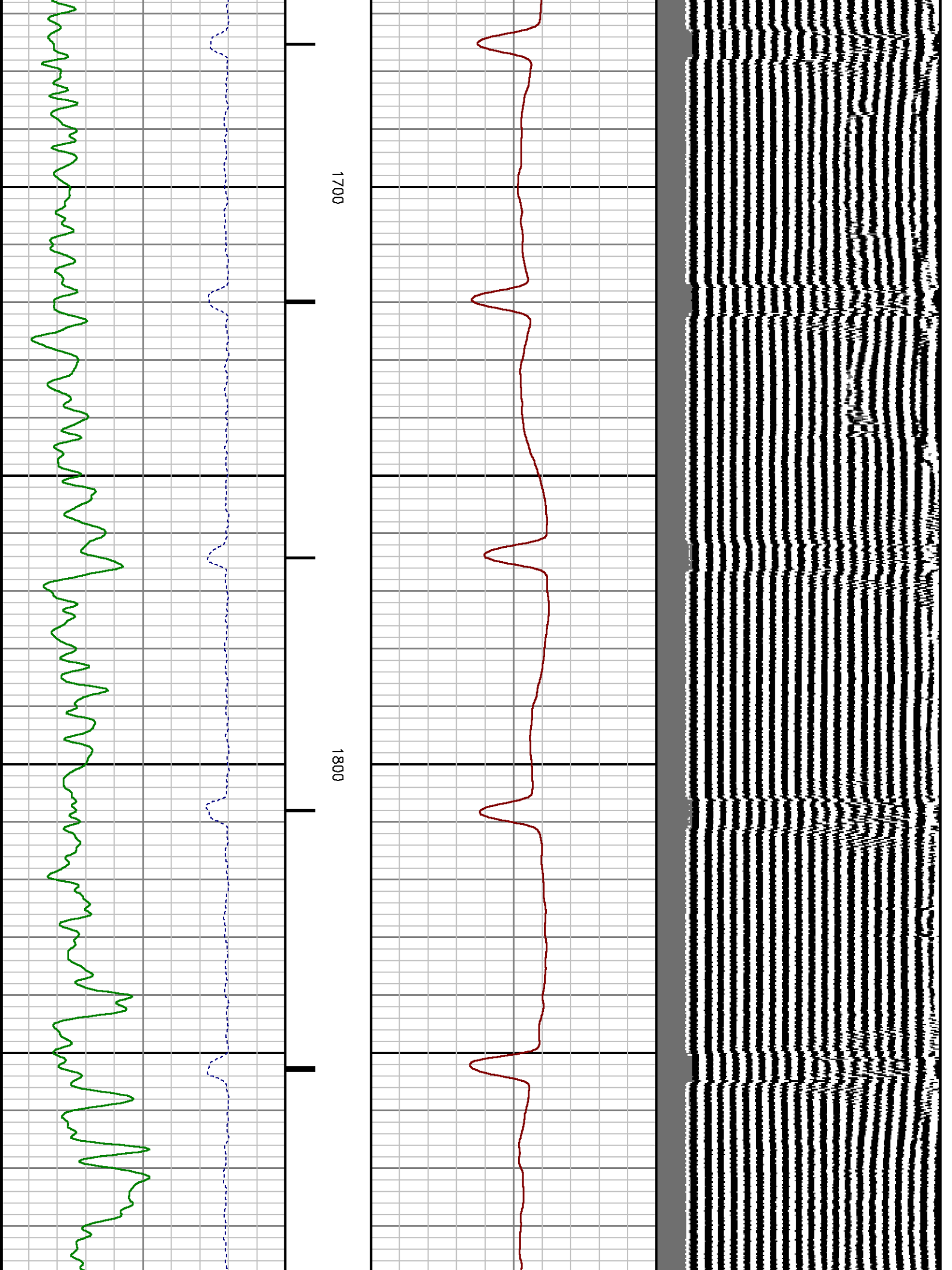


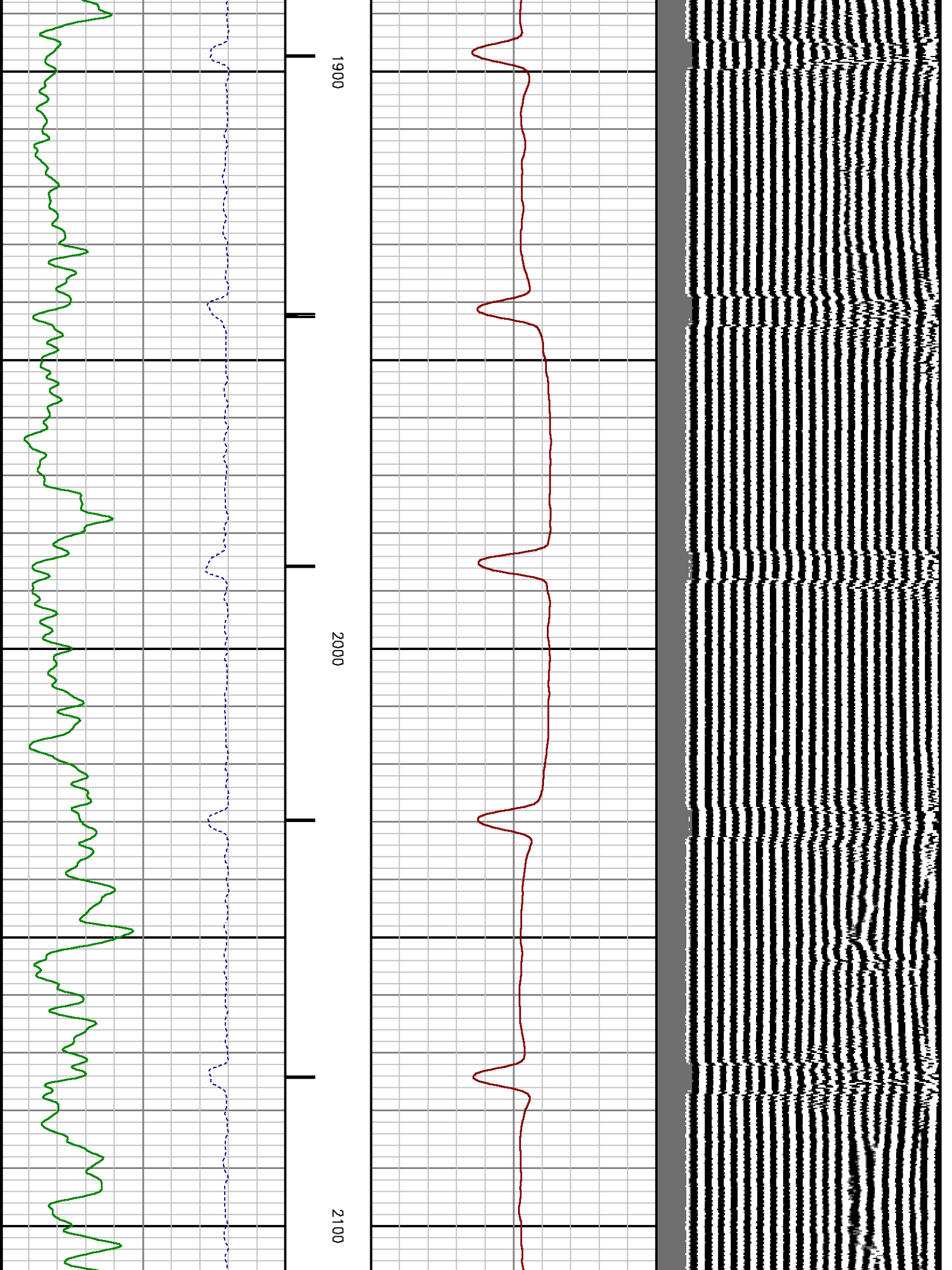




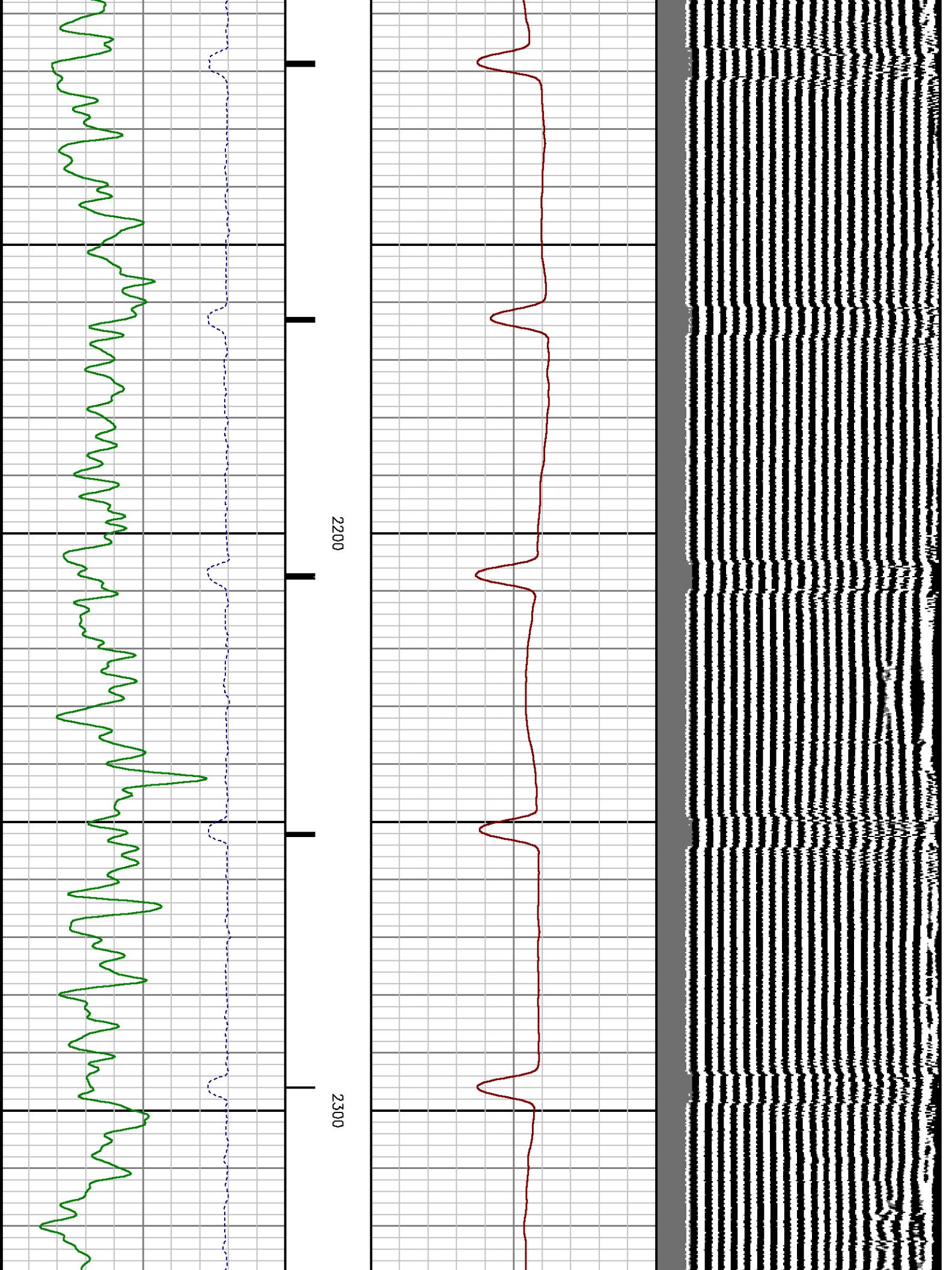


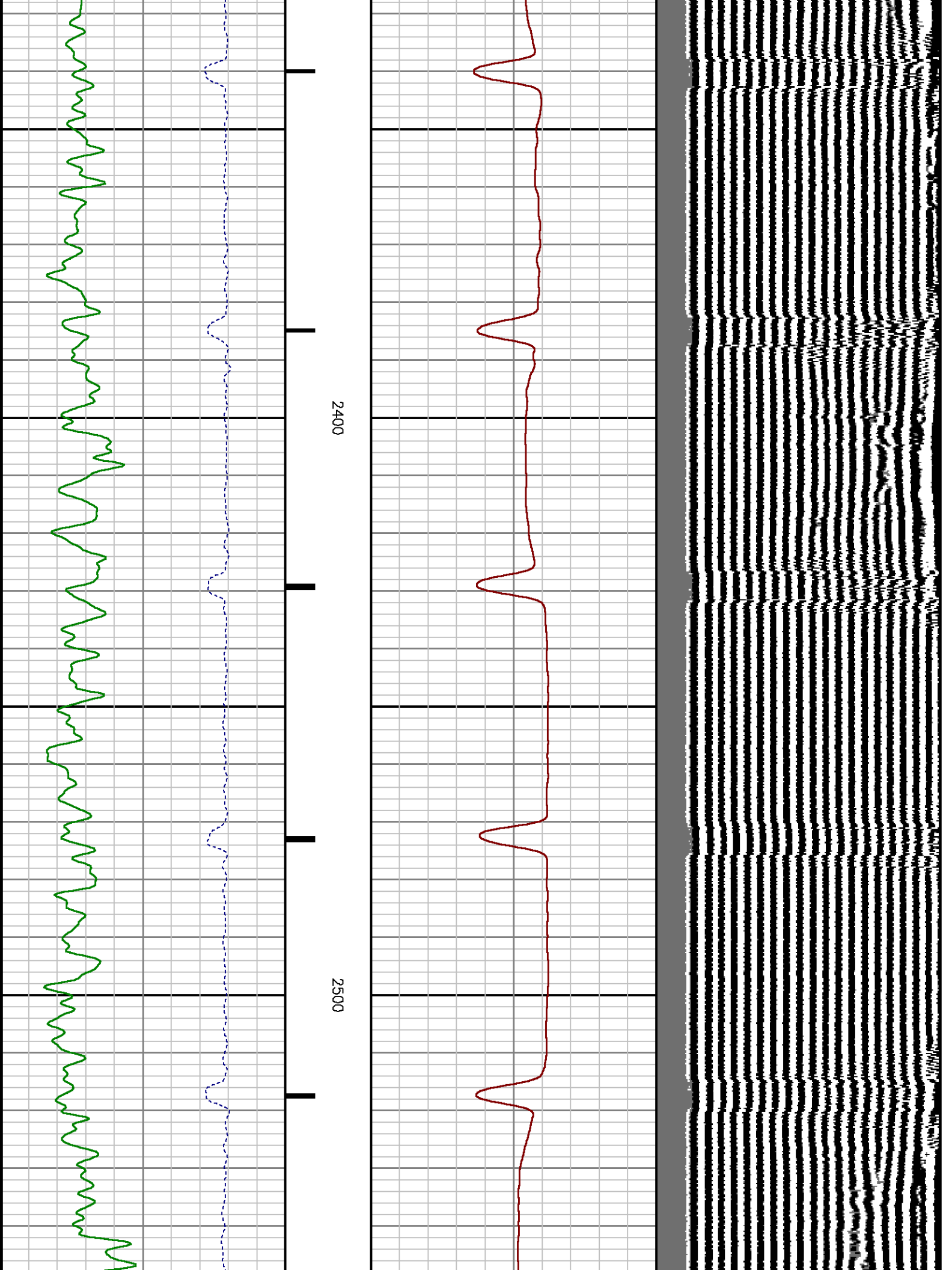


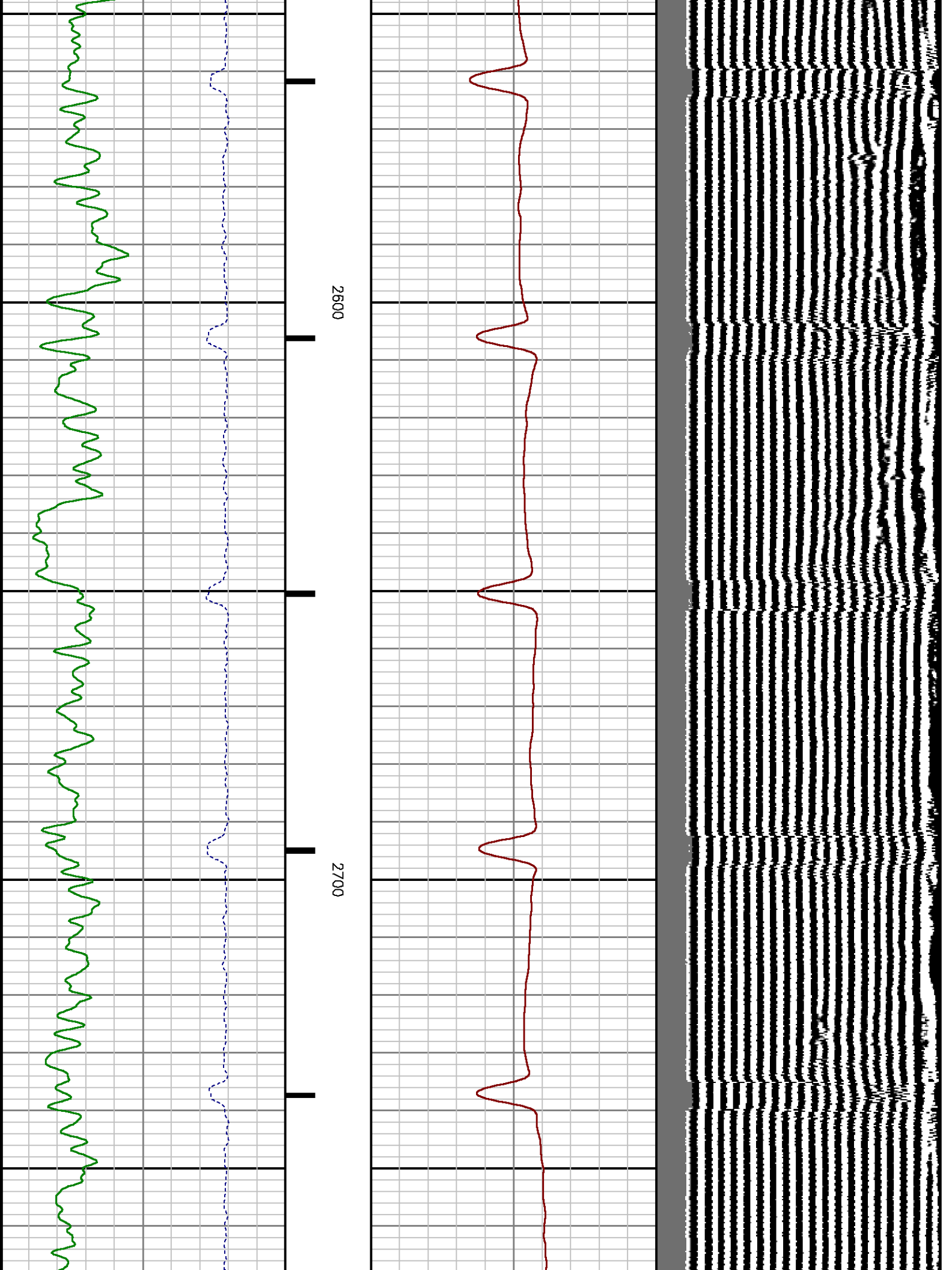


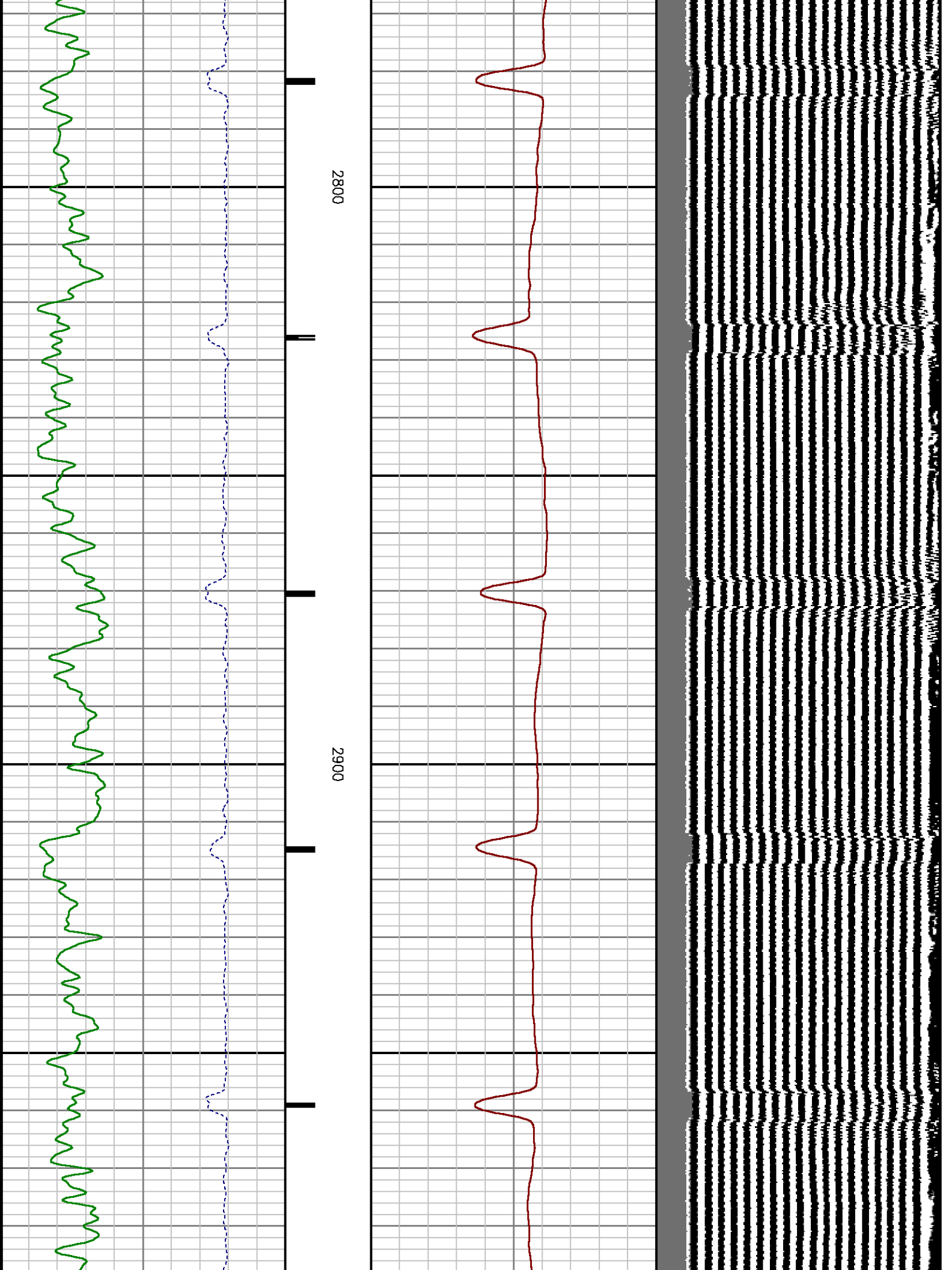


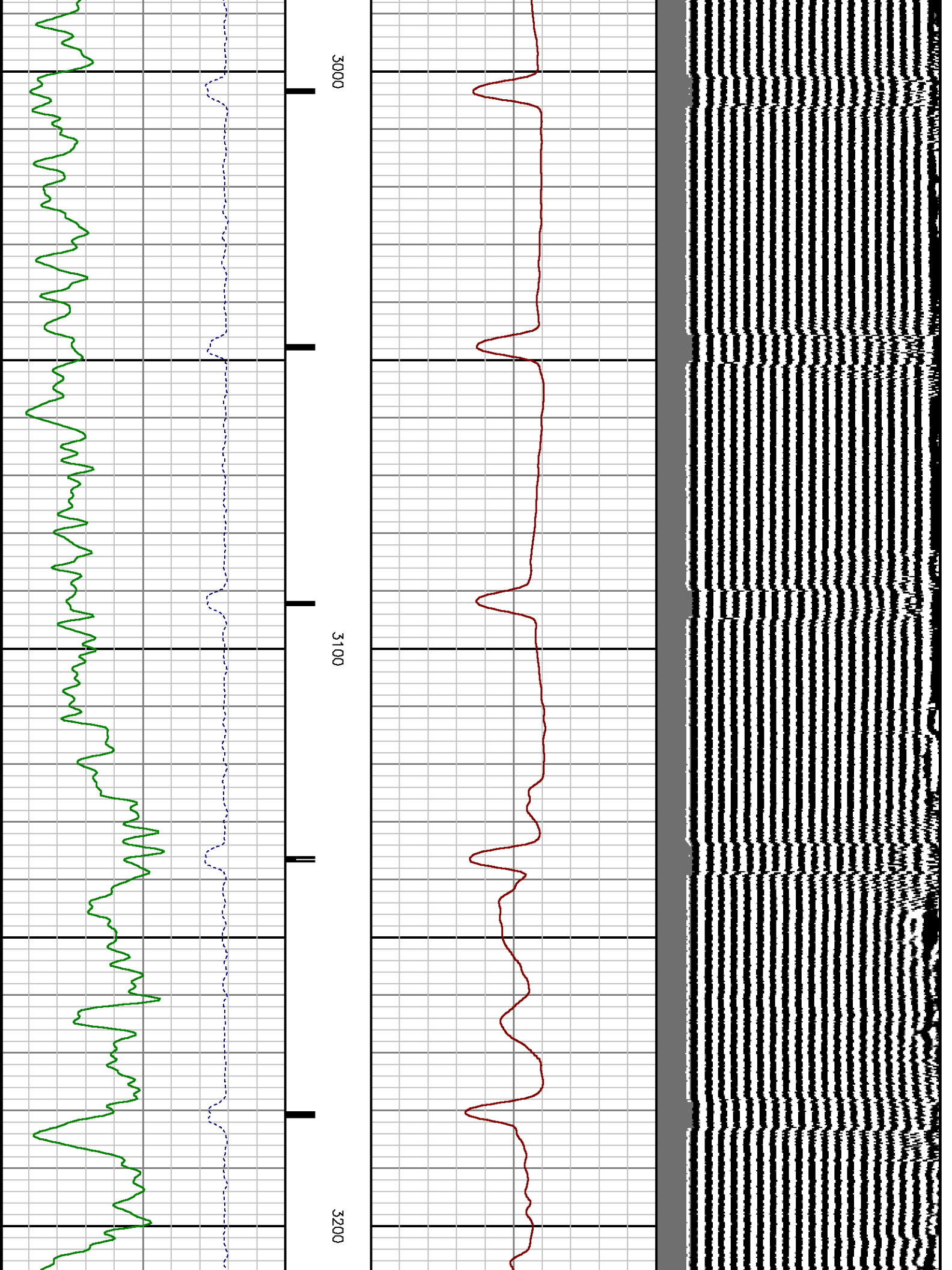


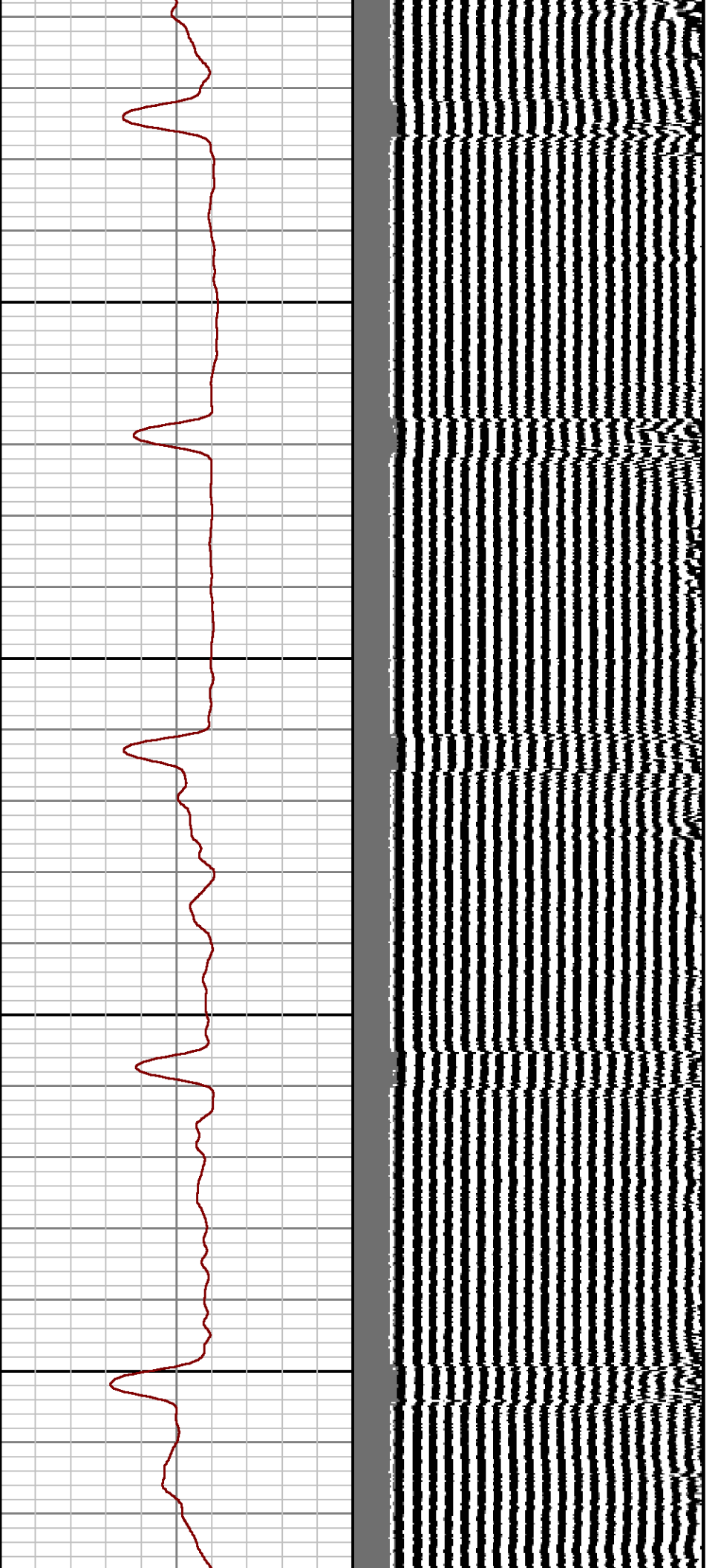






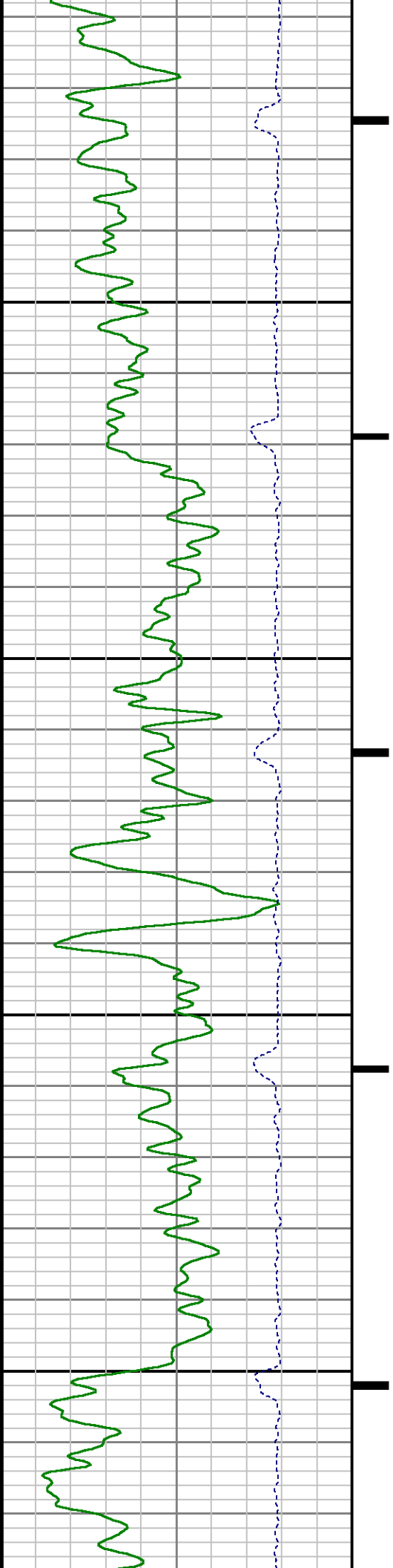




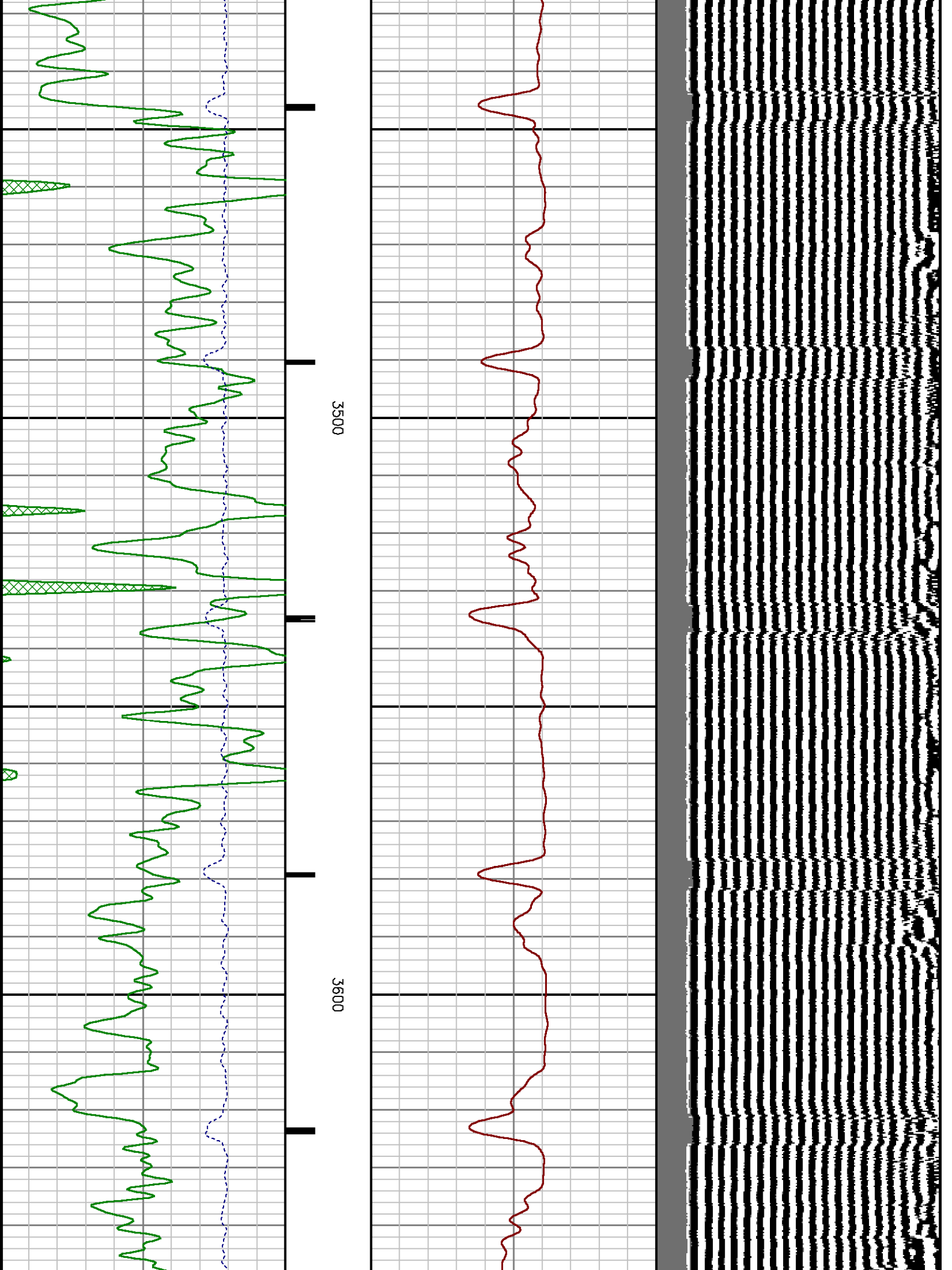


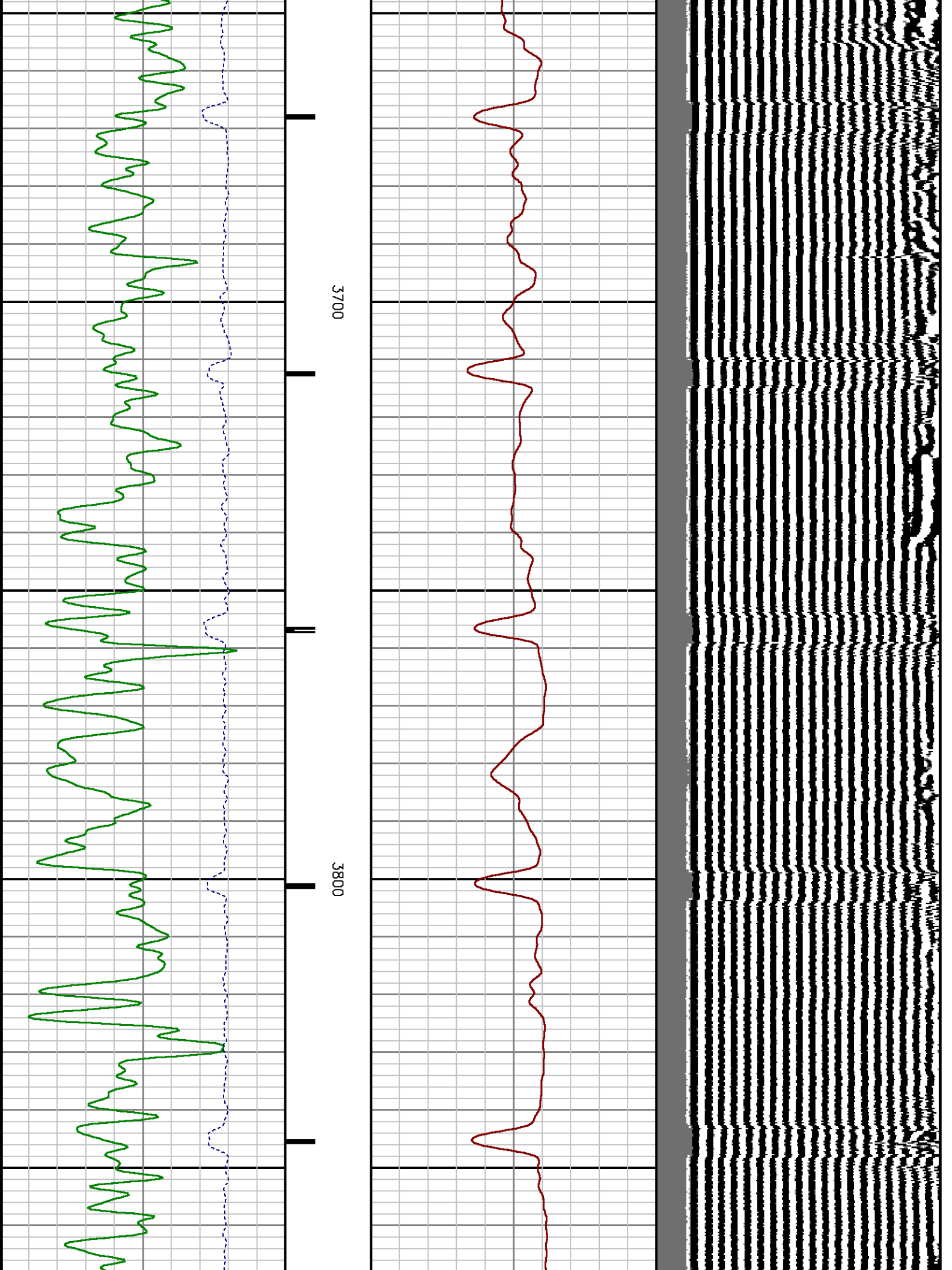
3300

3400

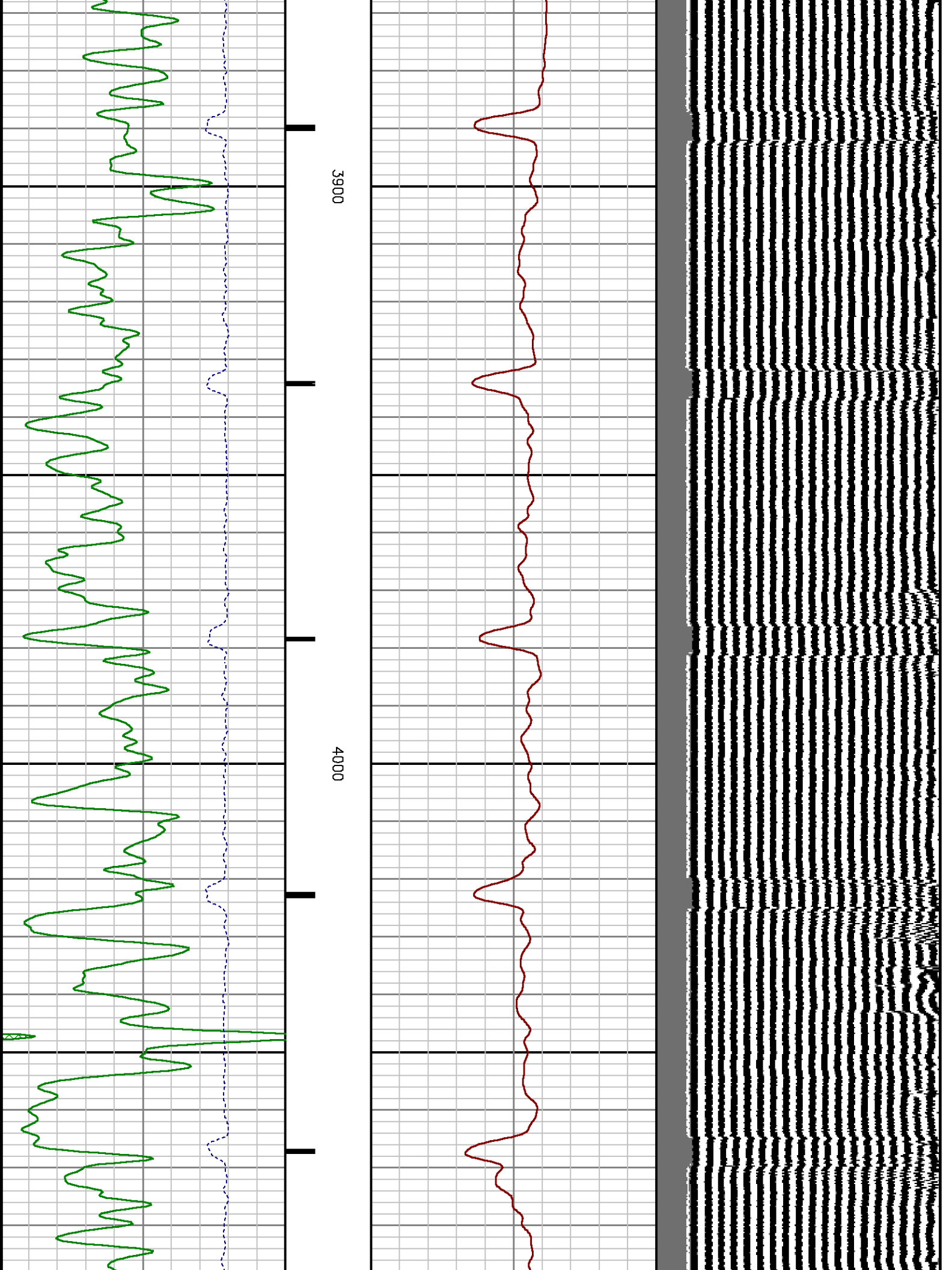


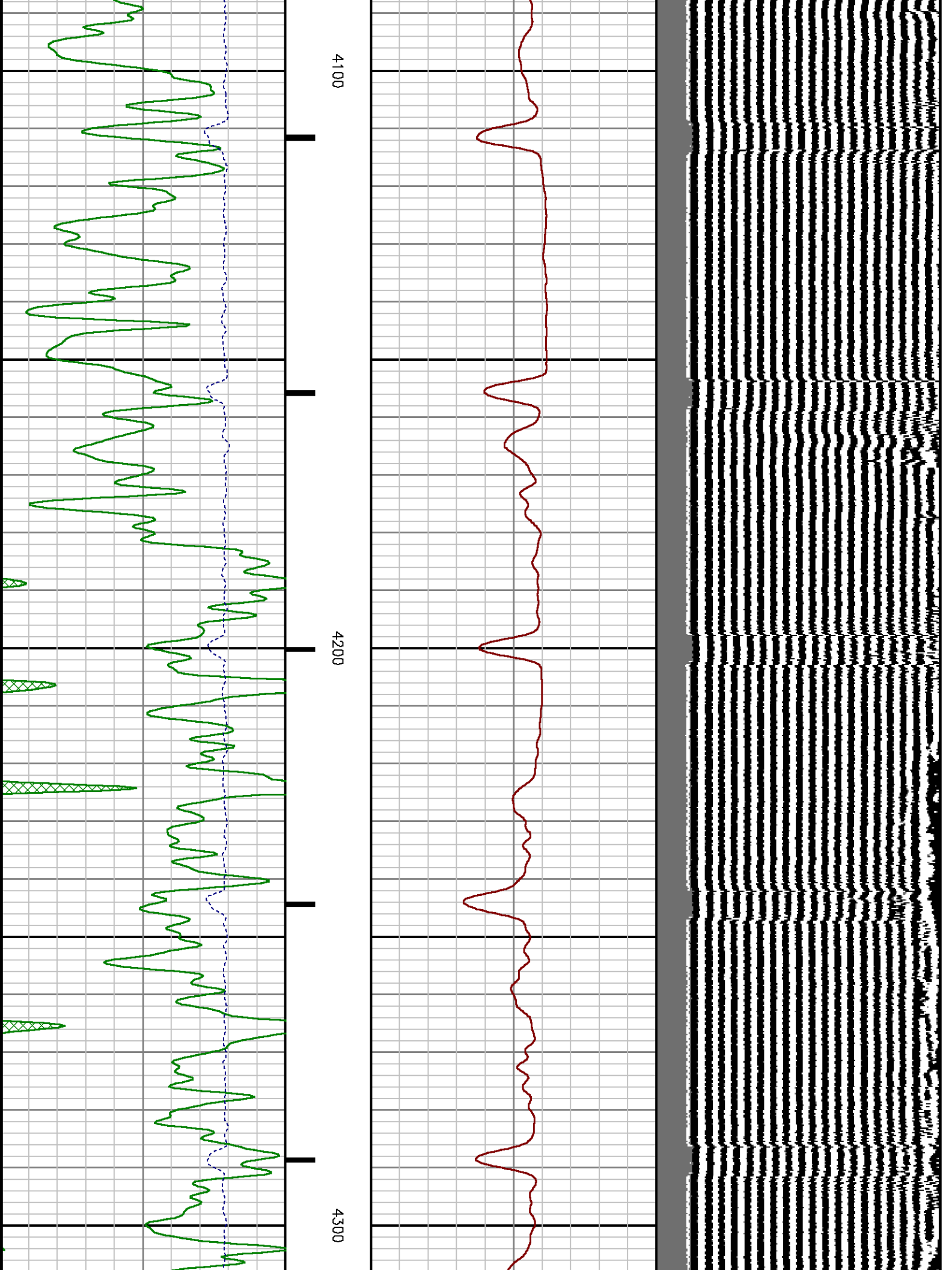


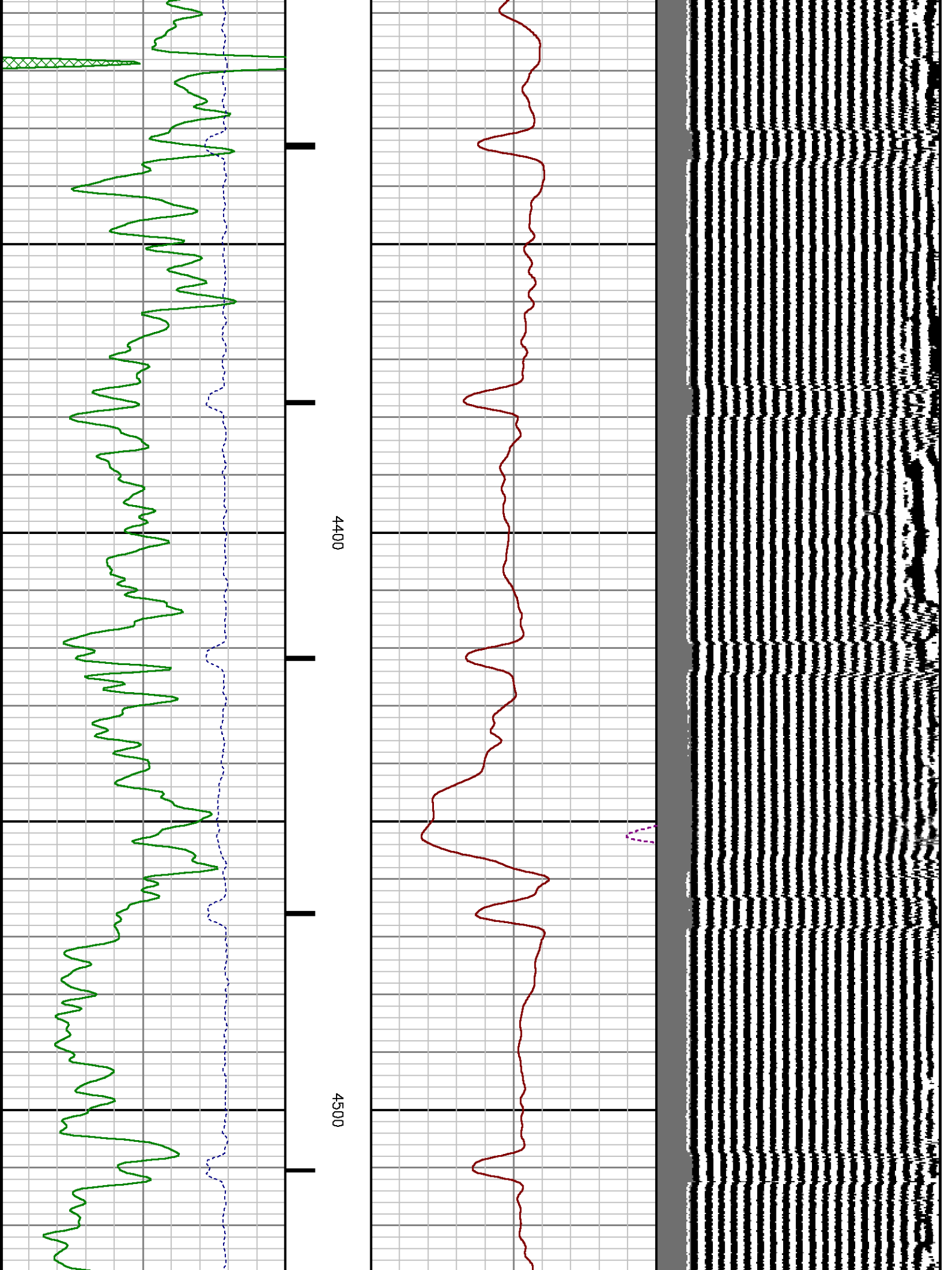


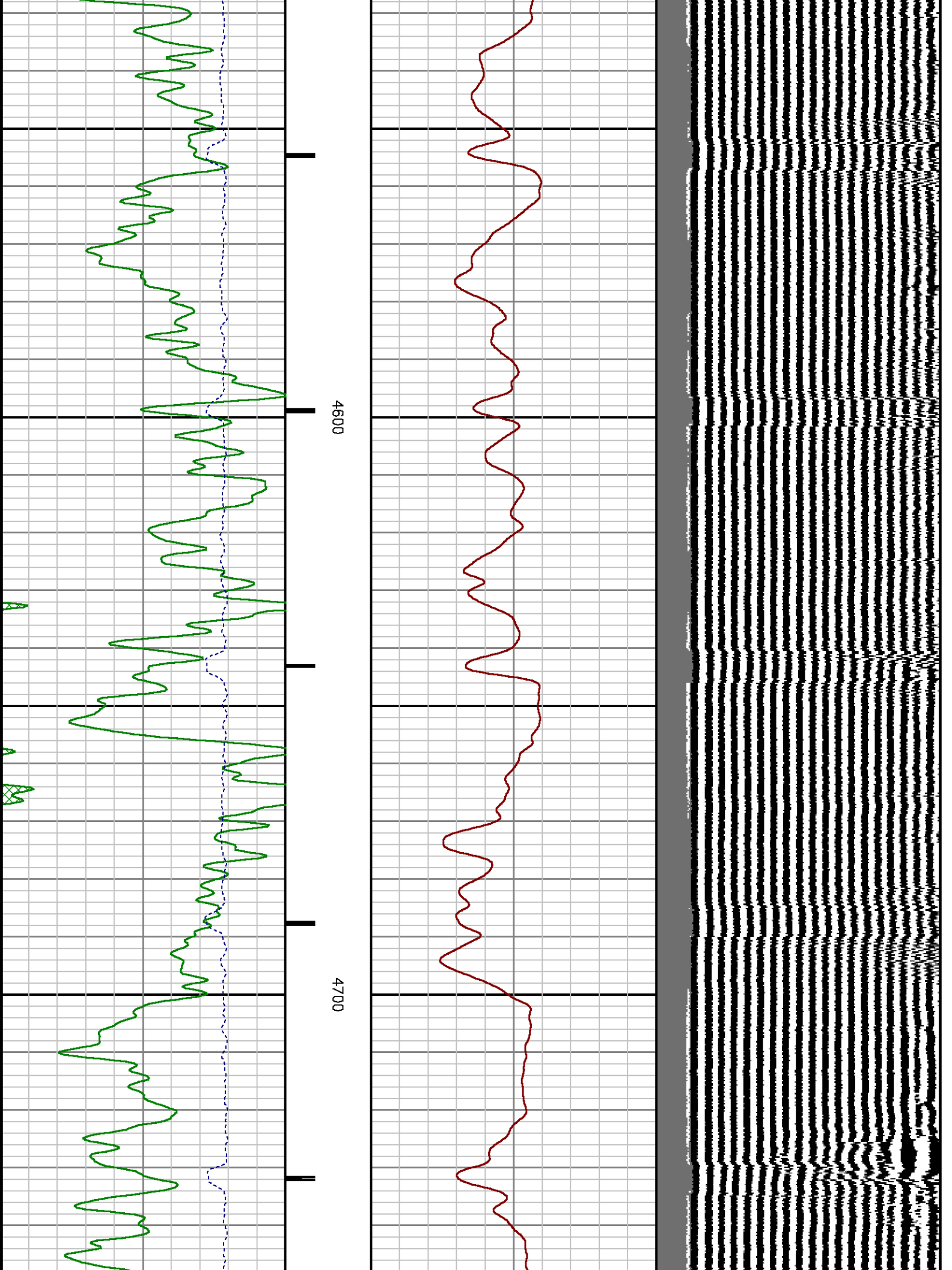


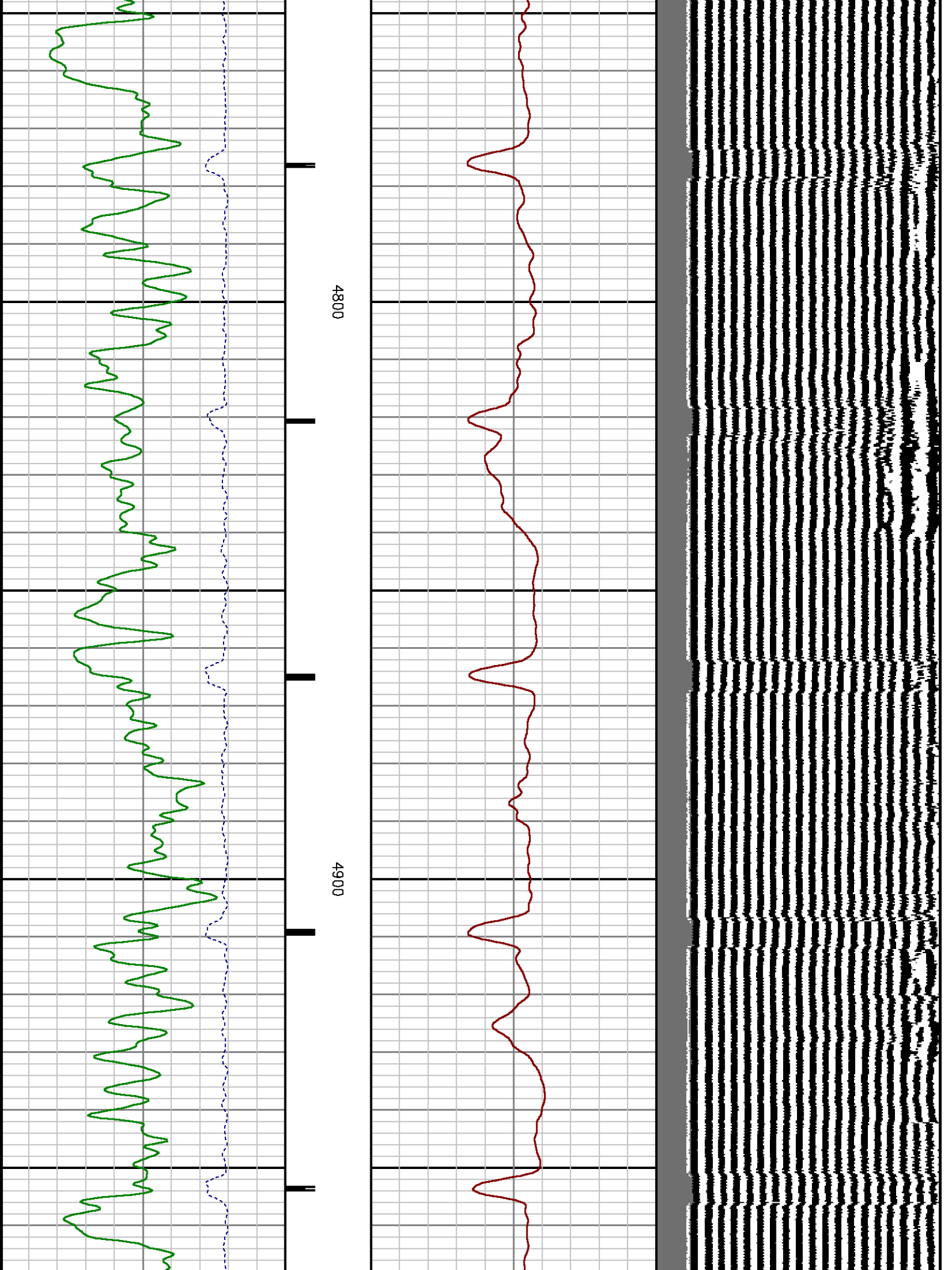


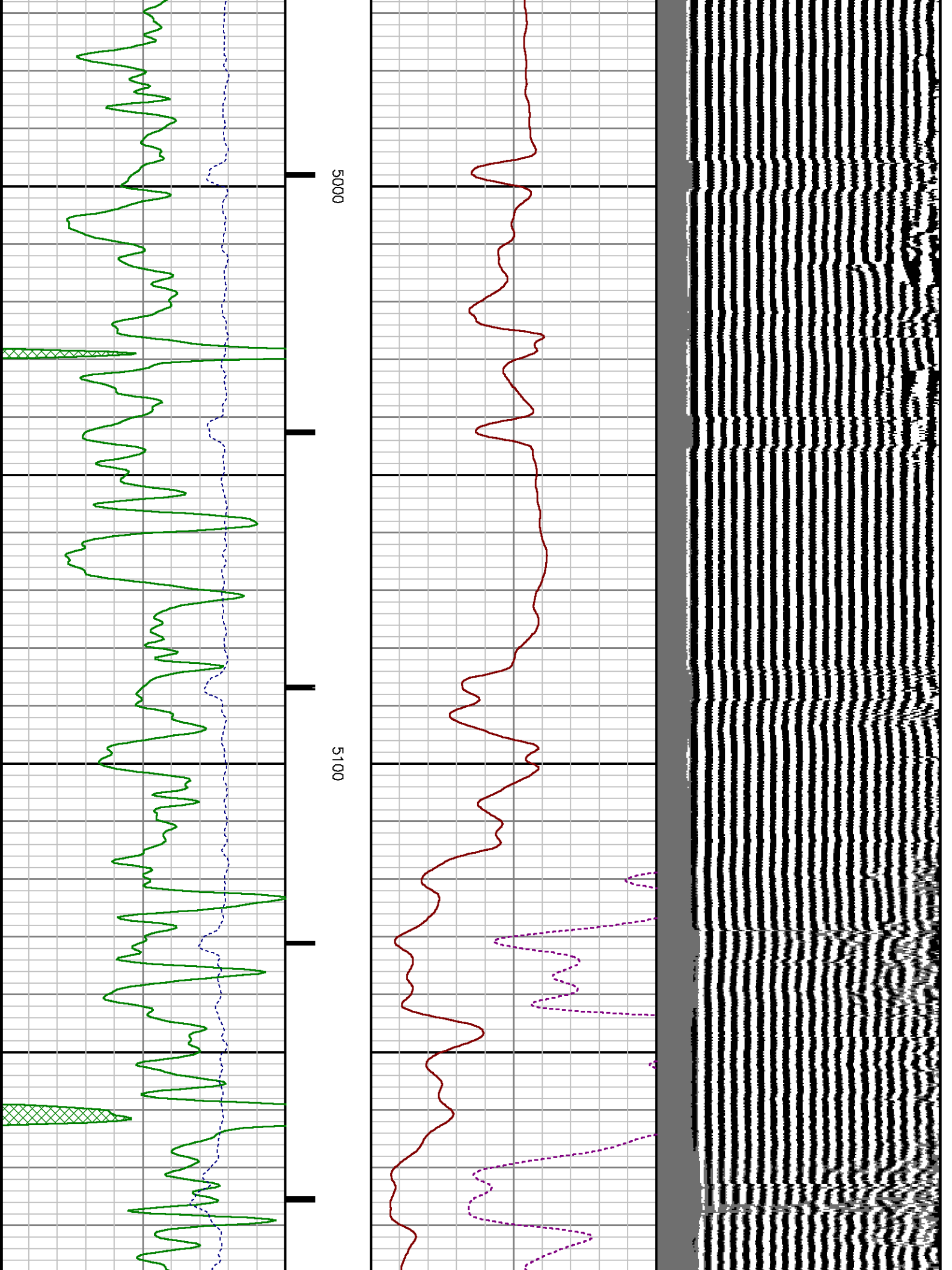




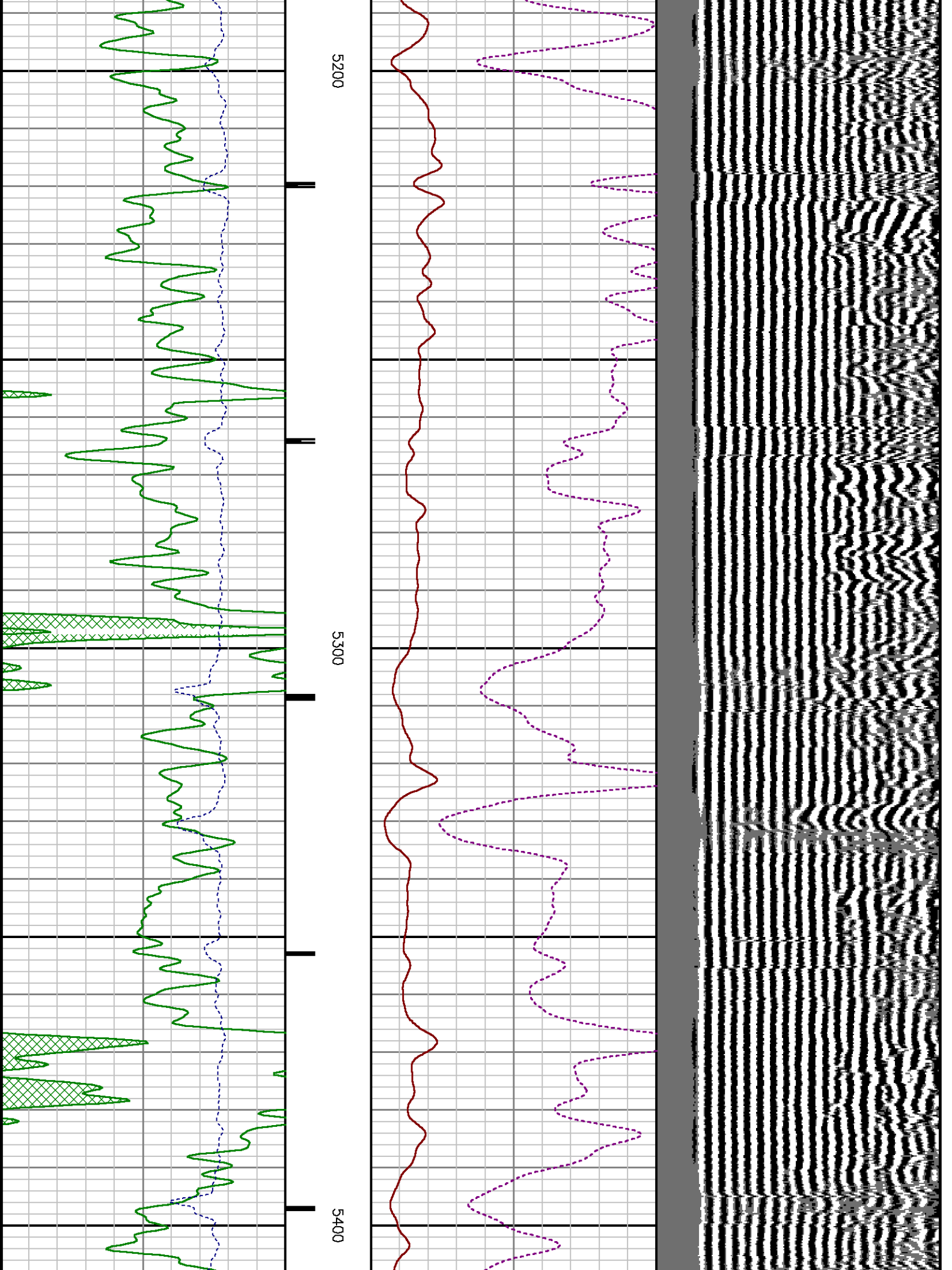


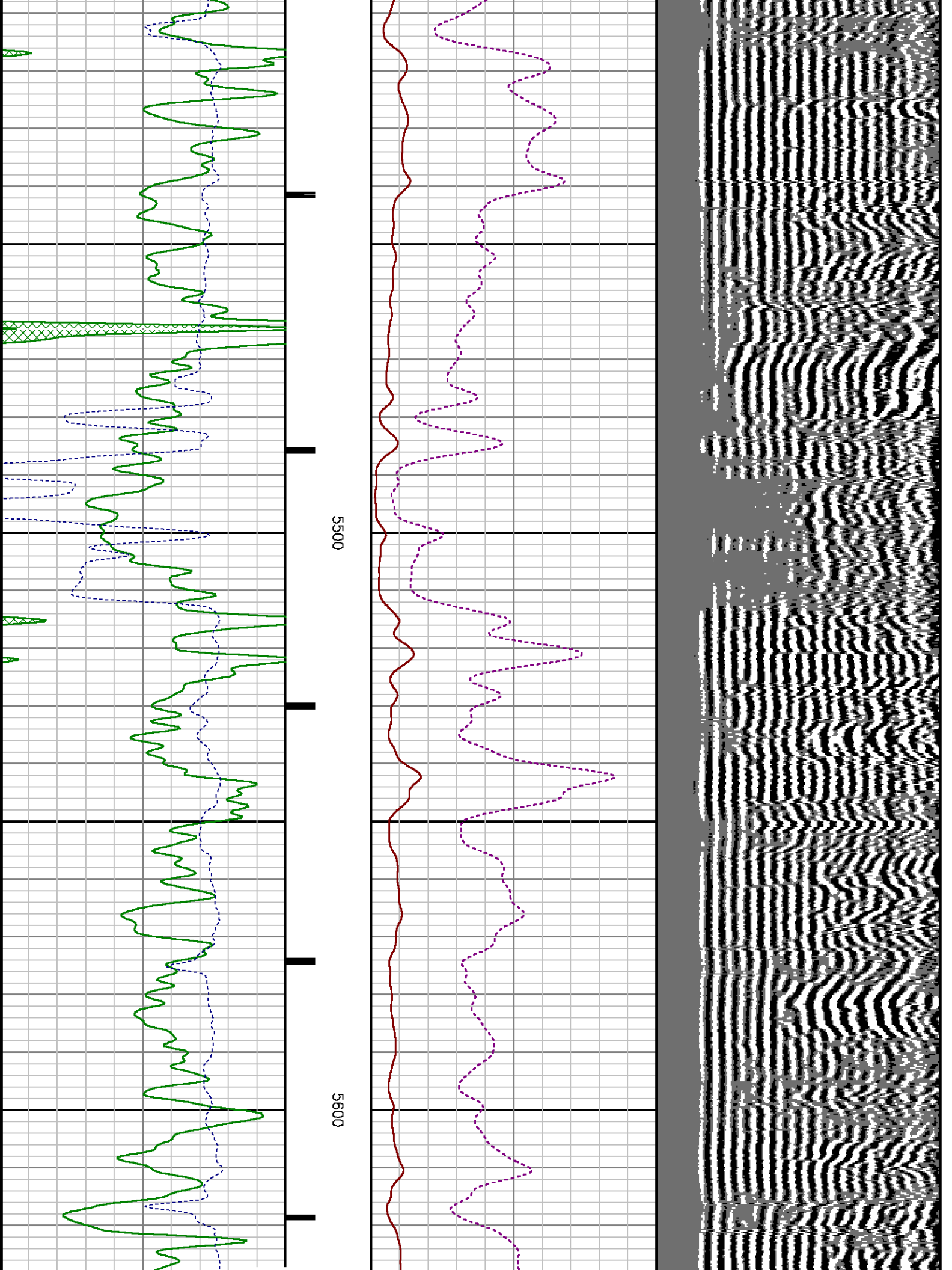




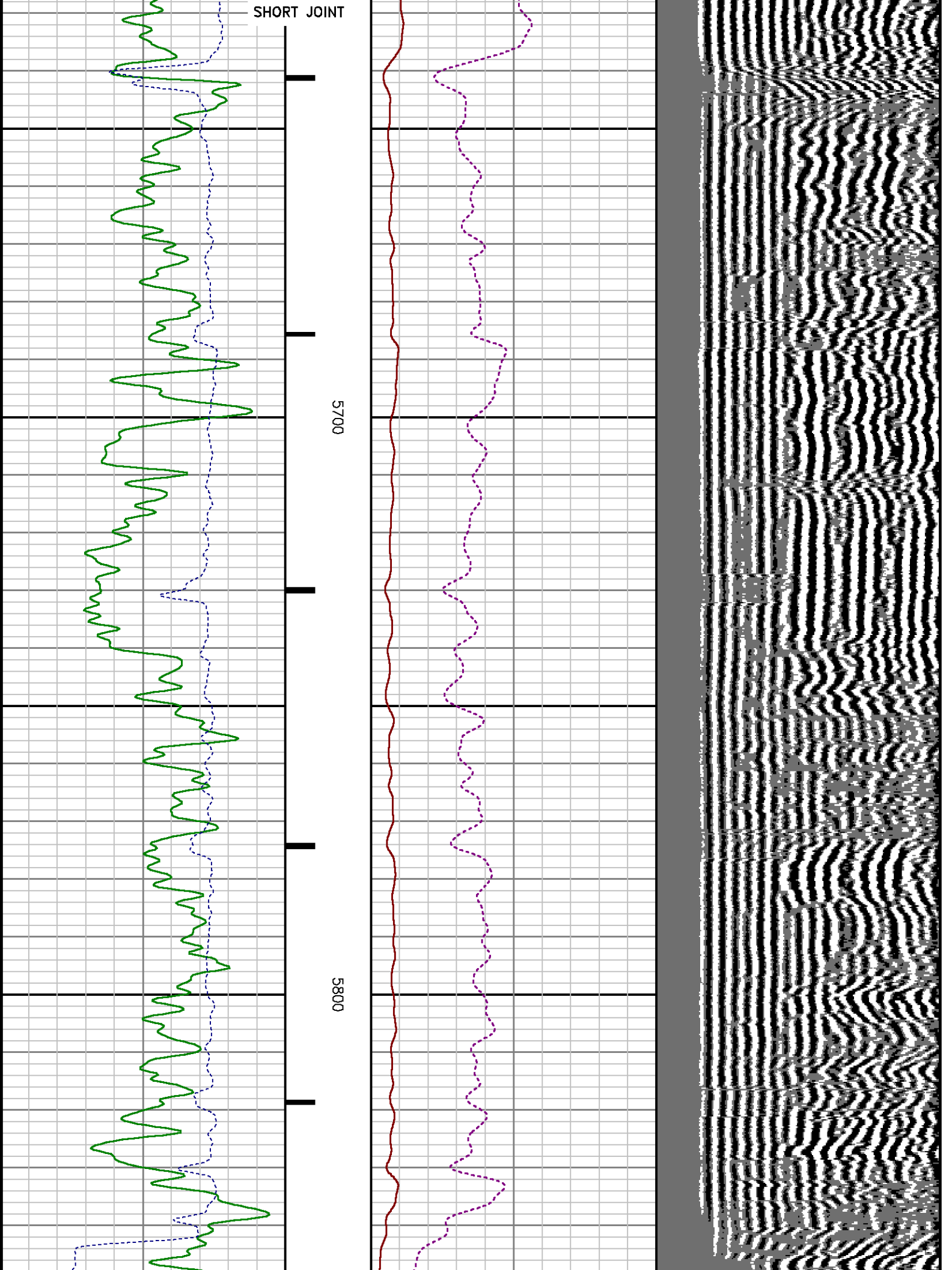


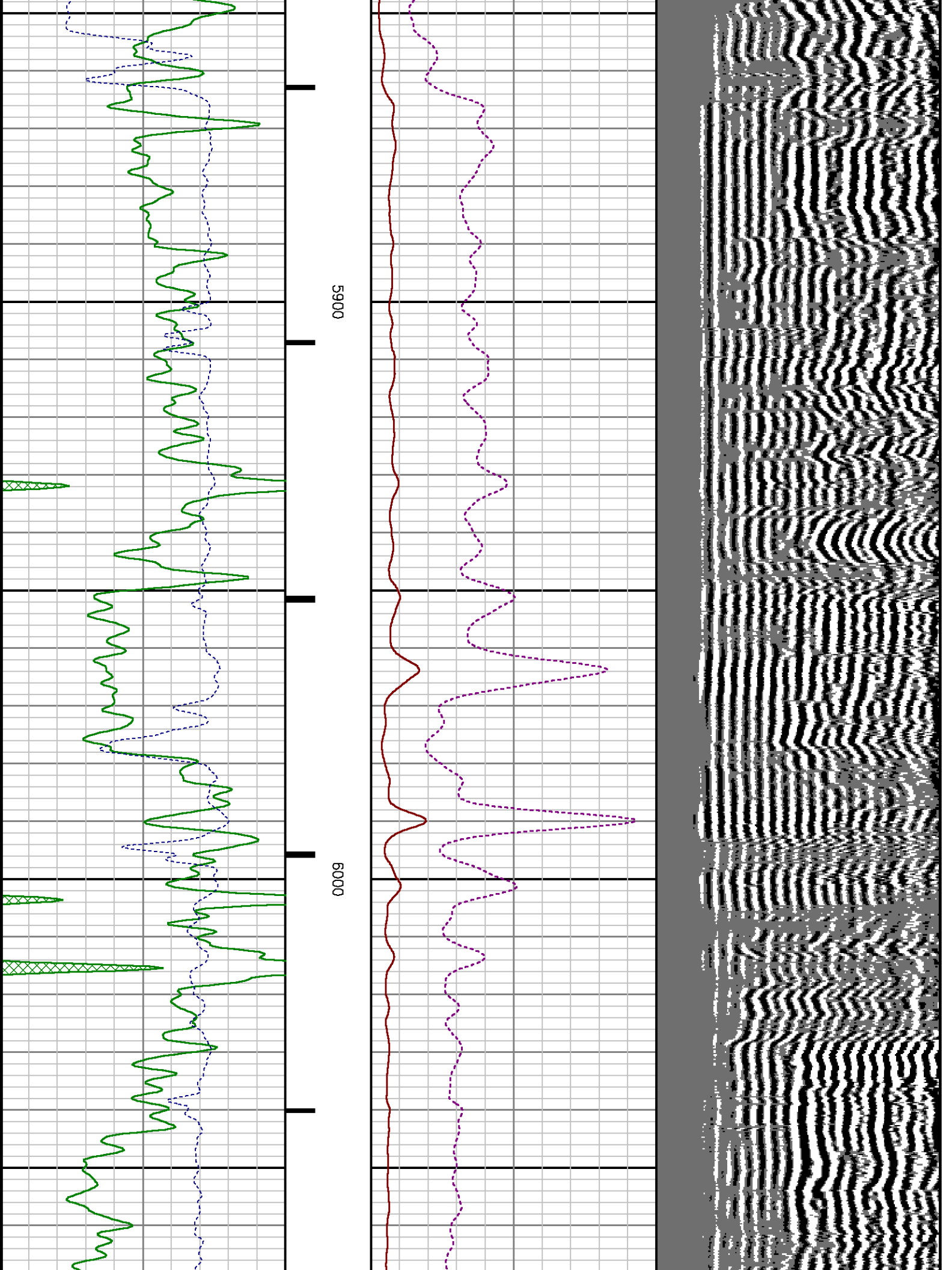


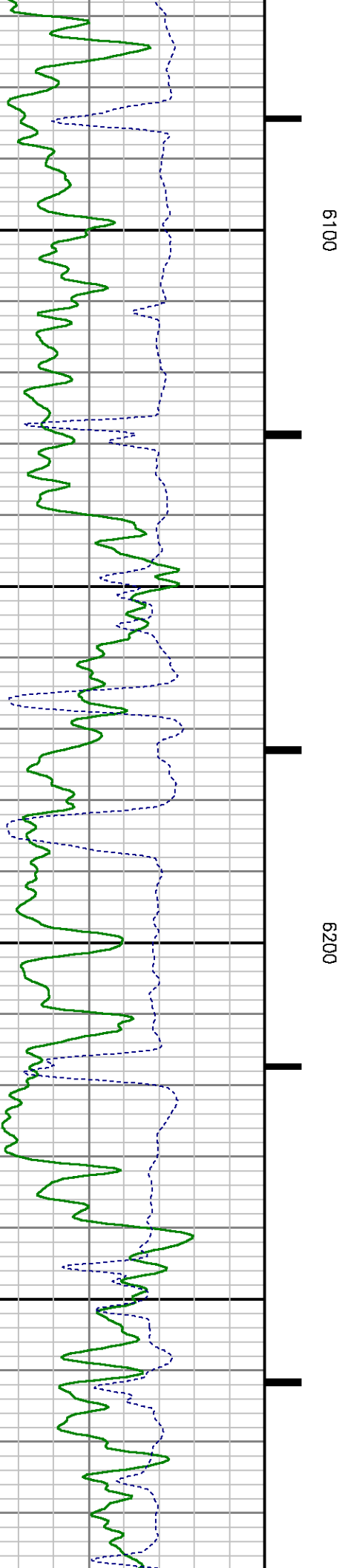
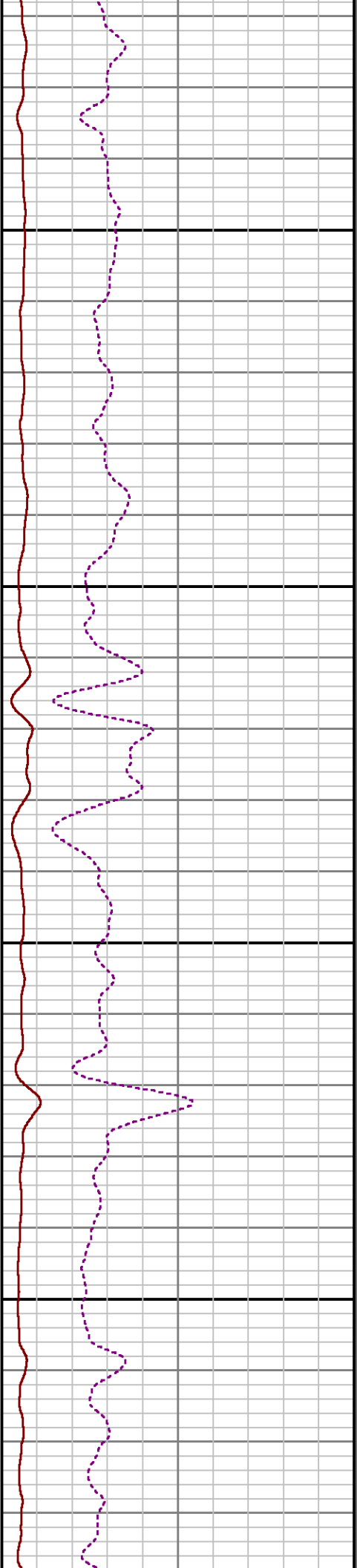
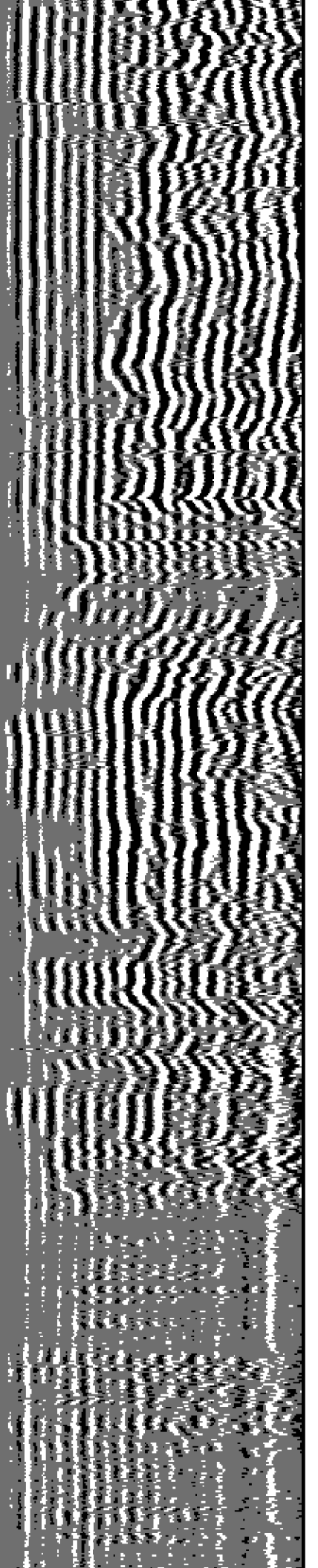


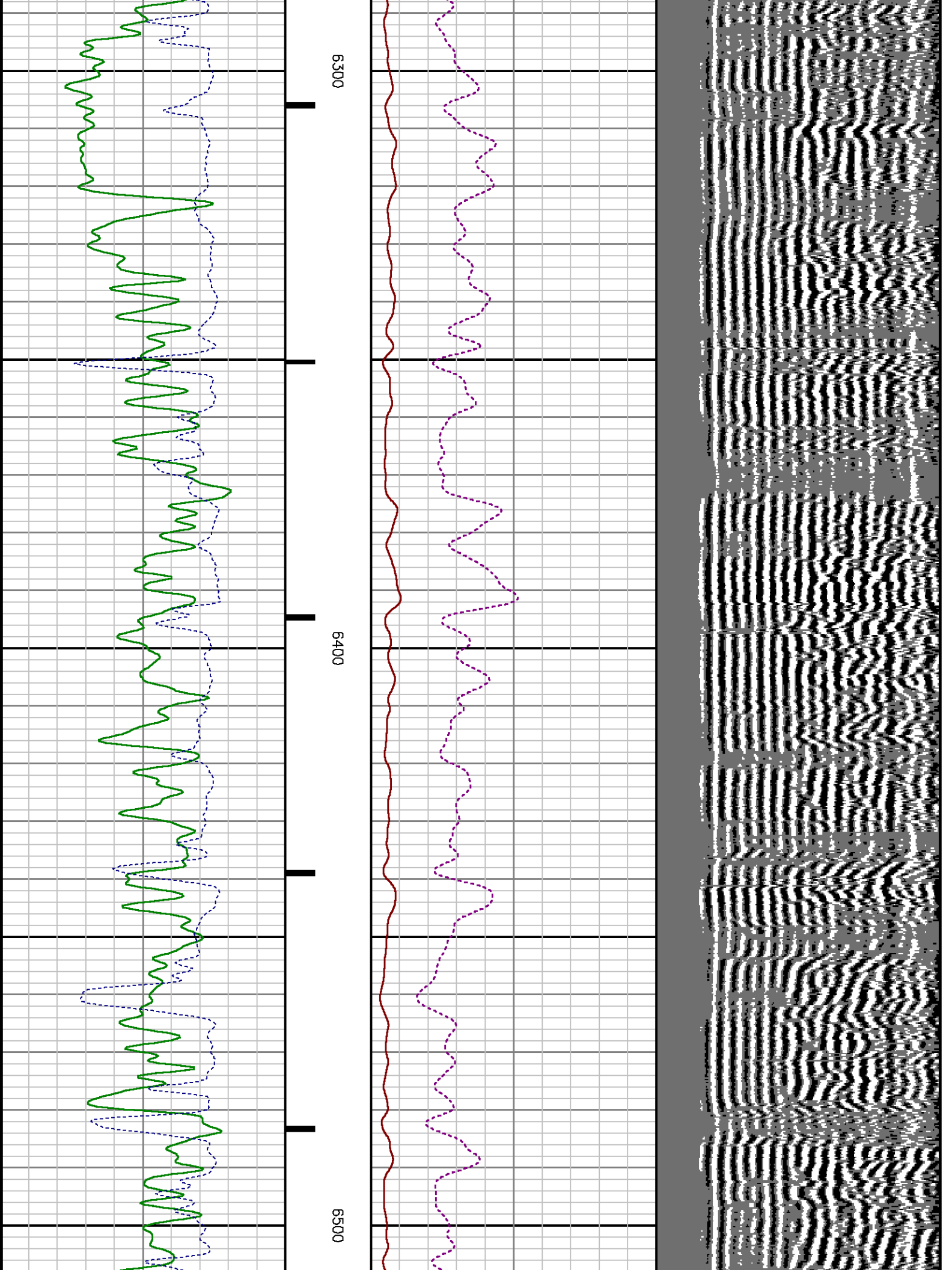


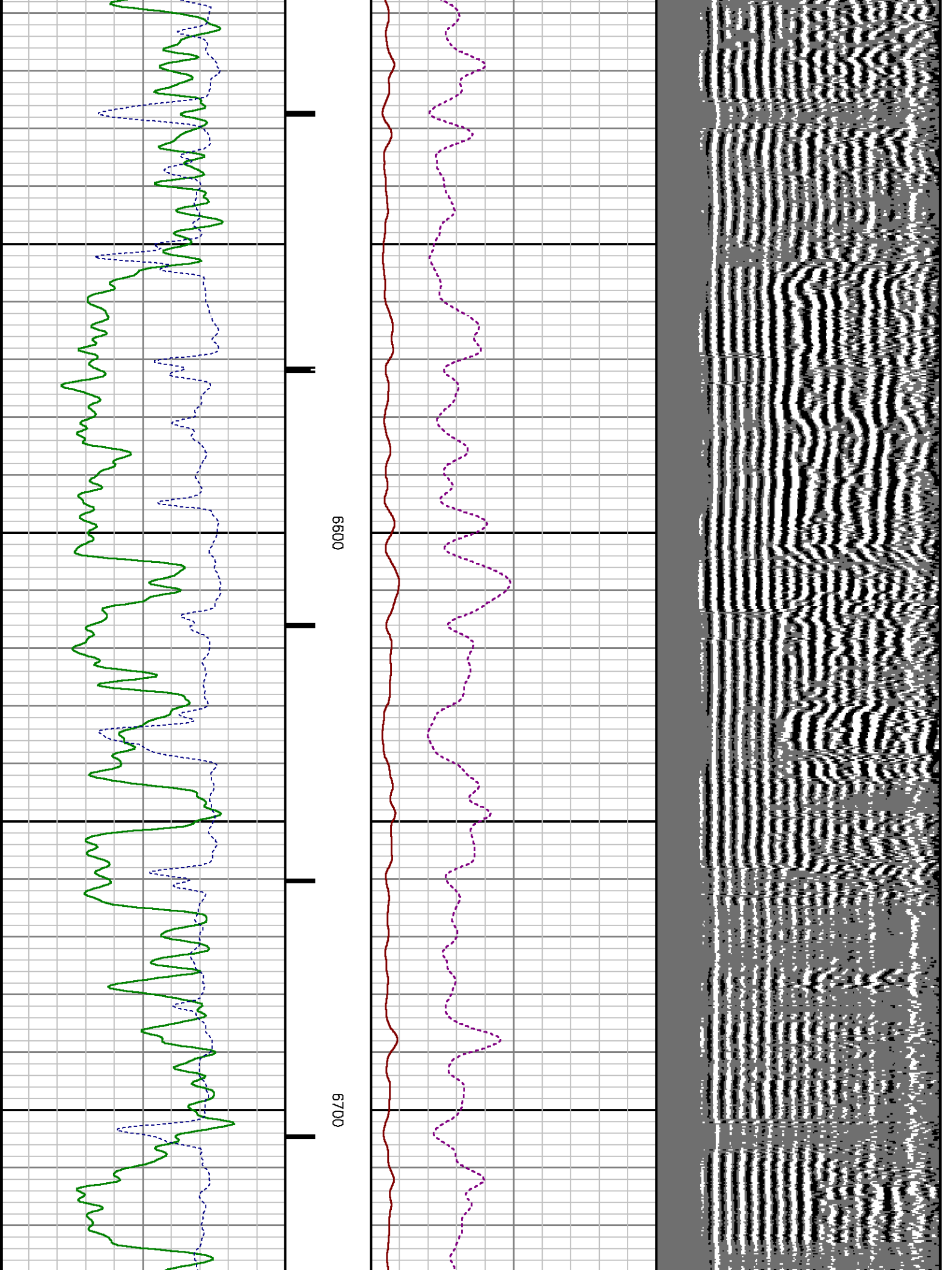




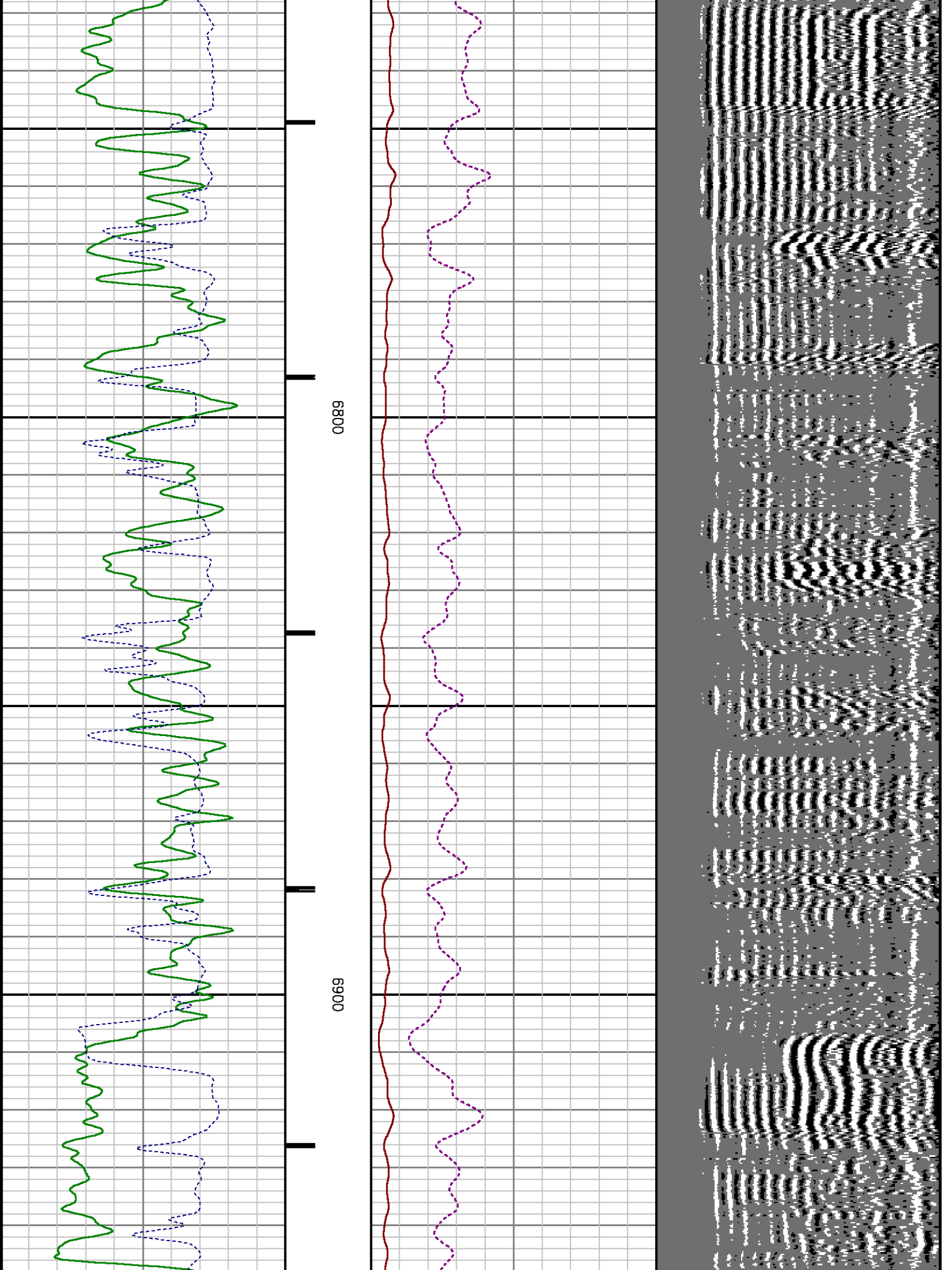


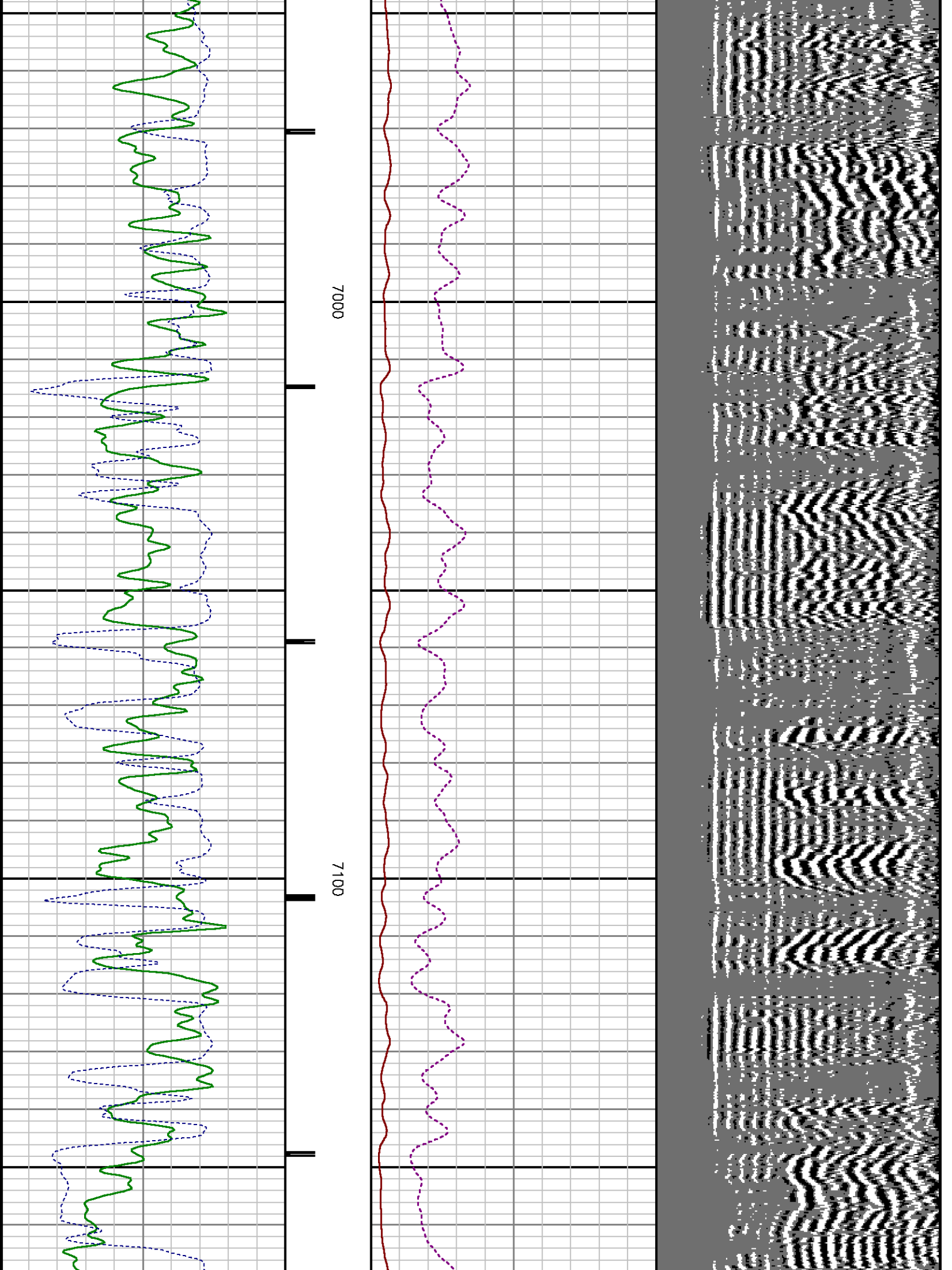


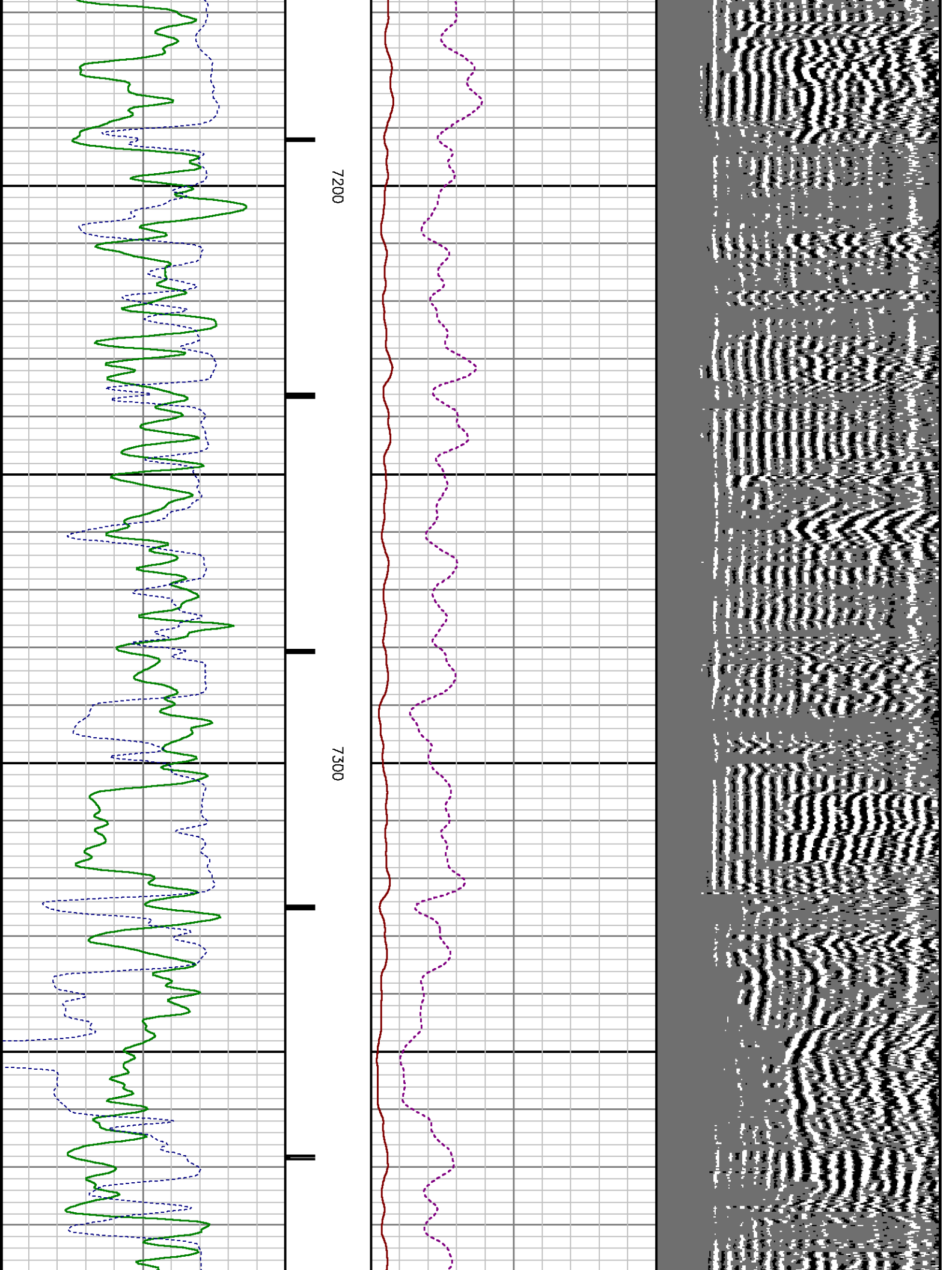




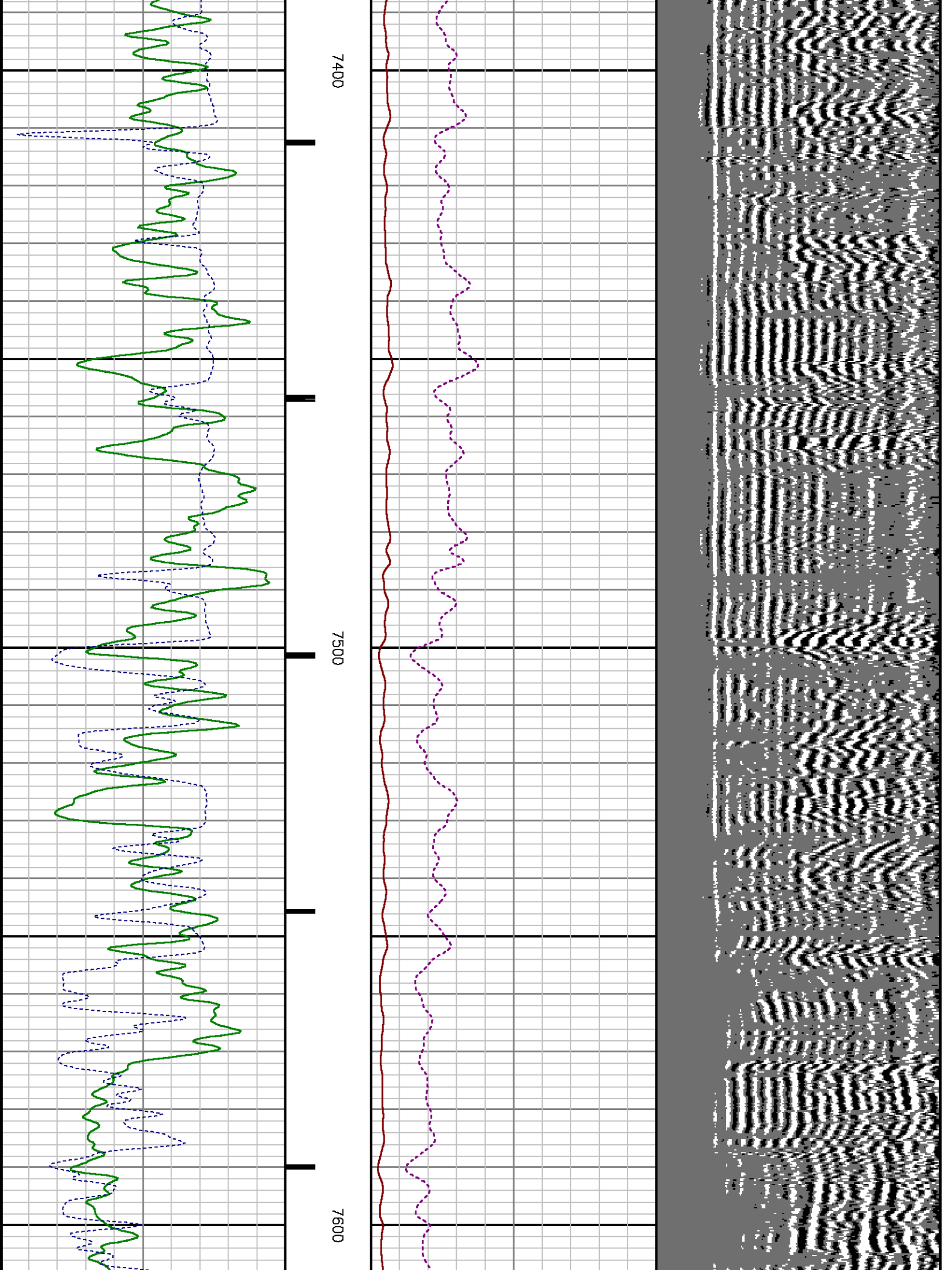


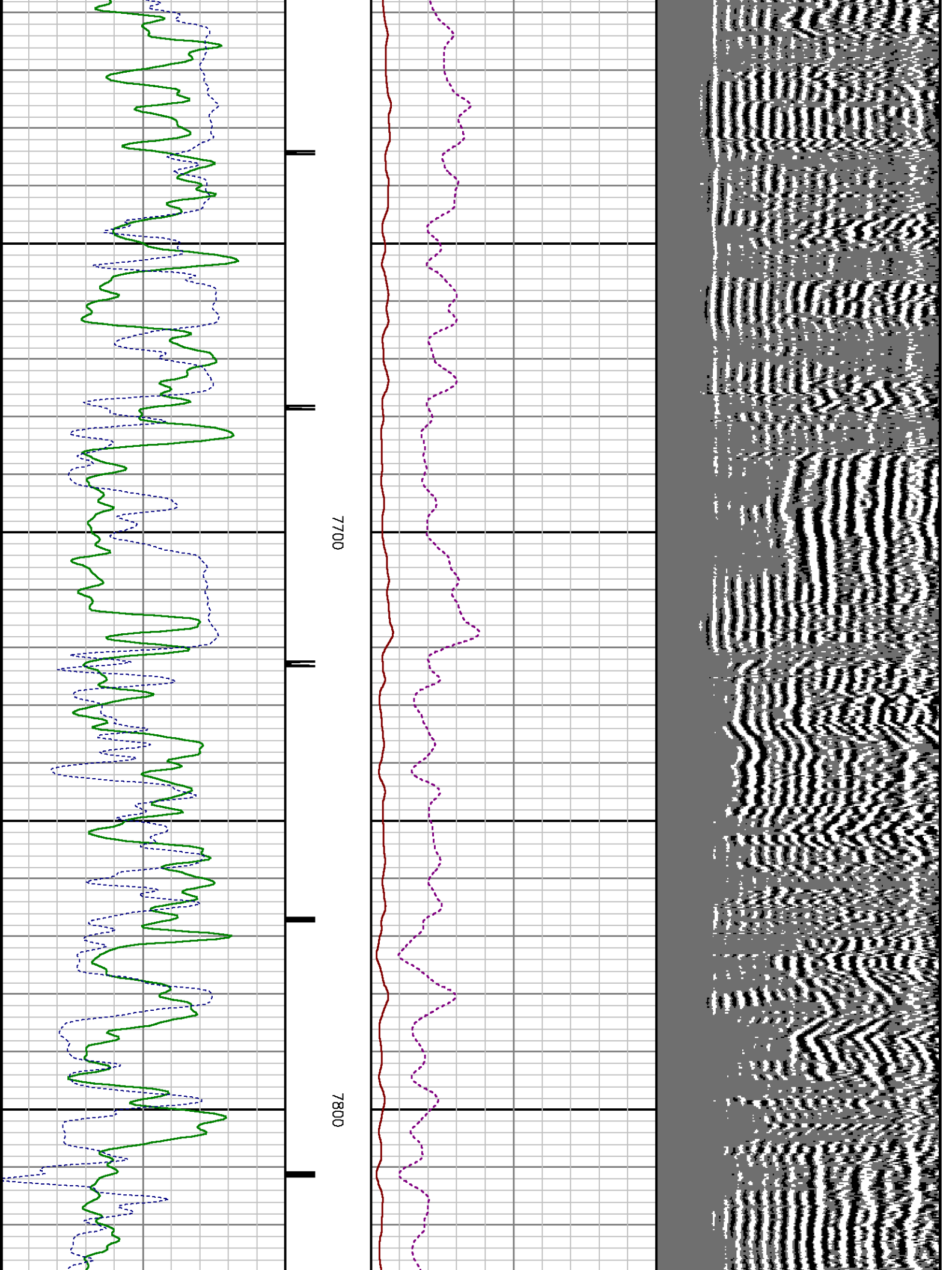


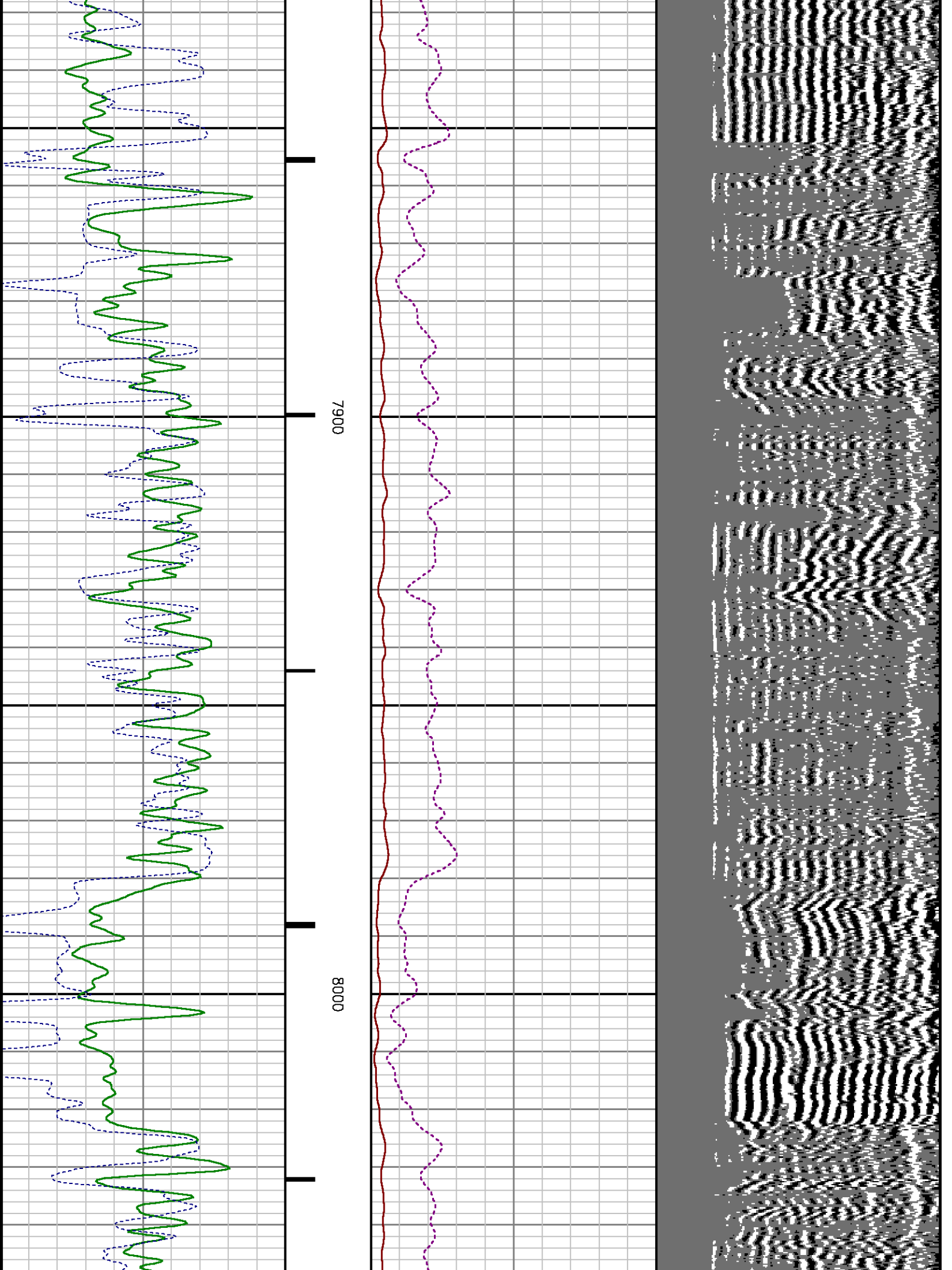


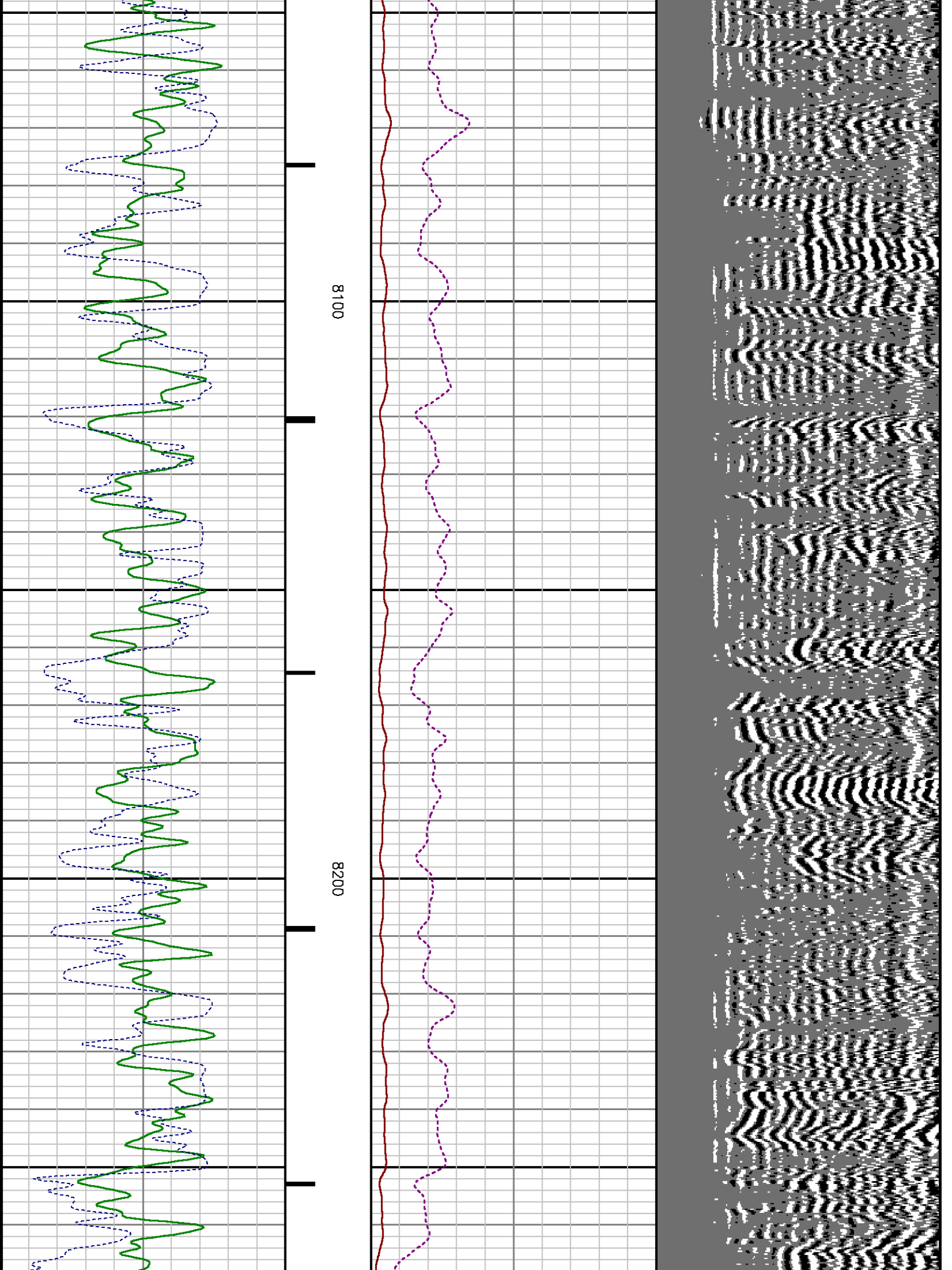


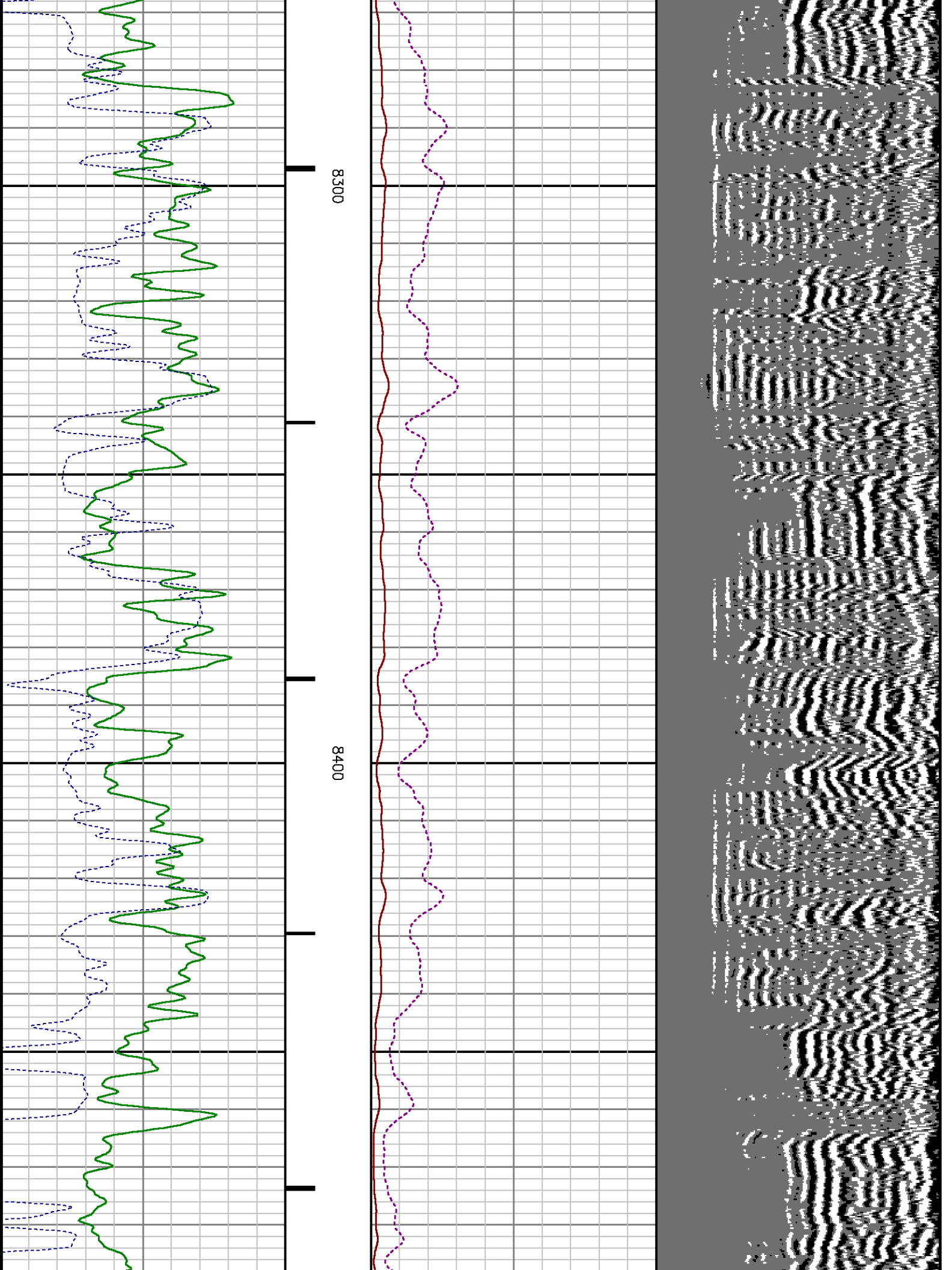




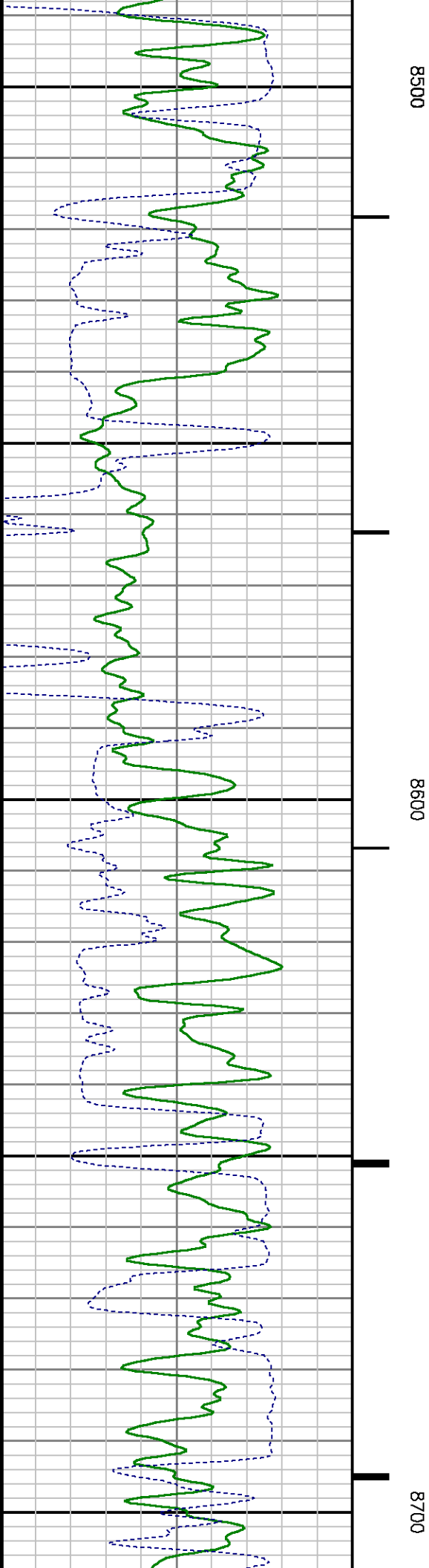
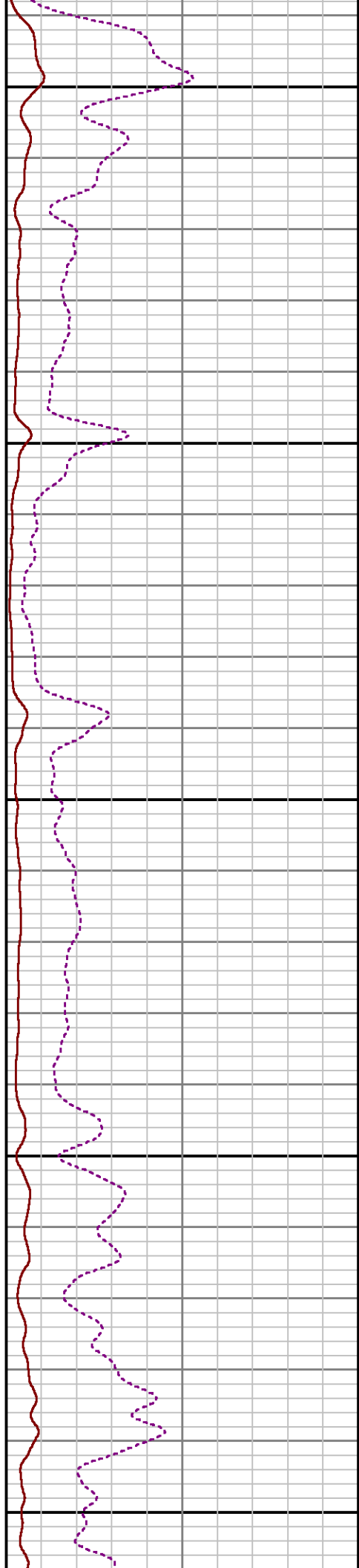
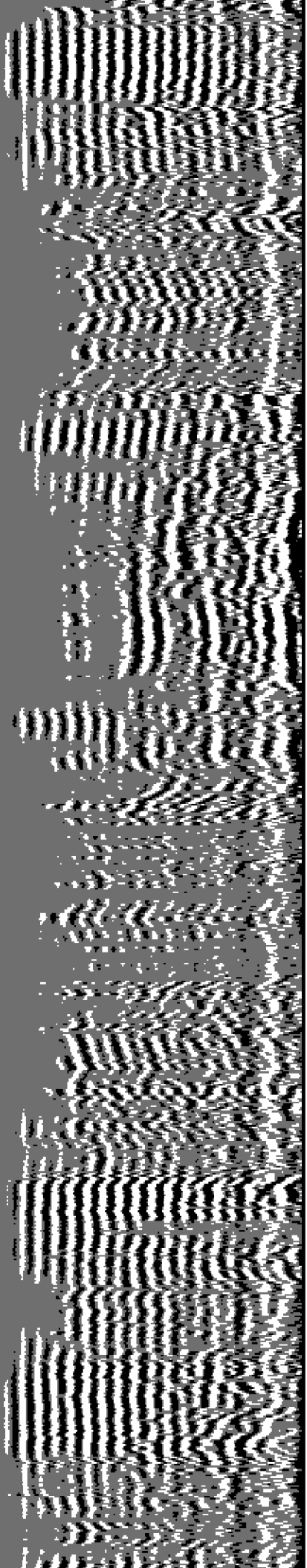




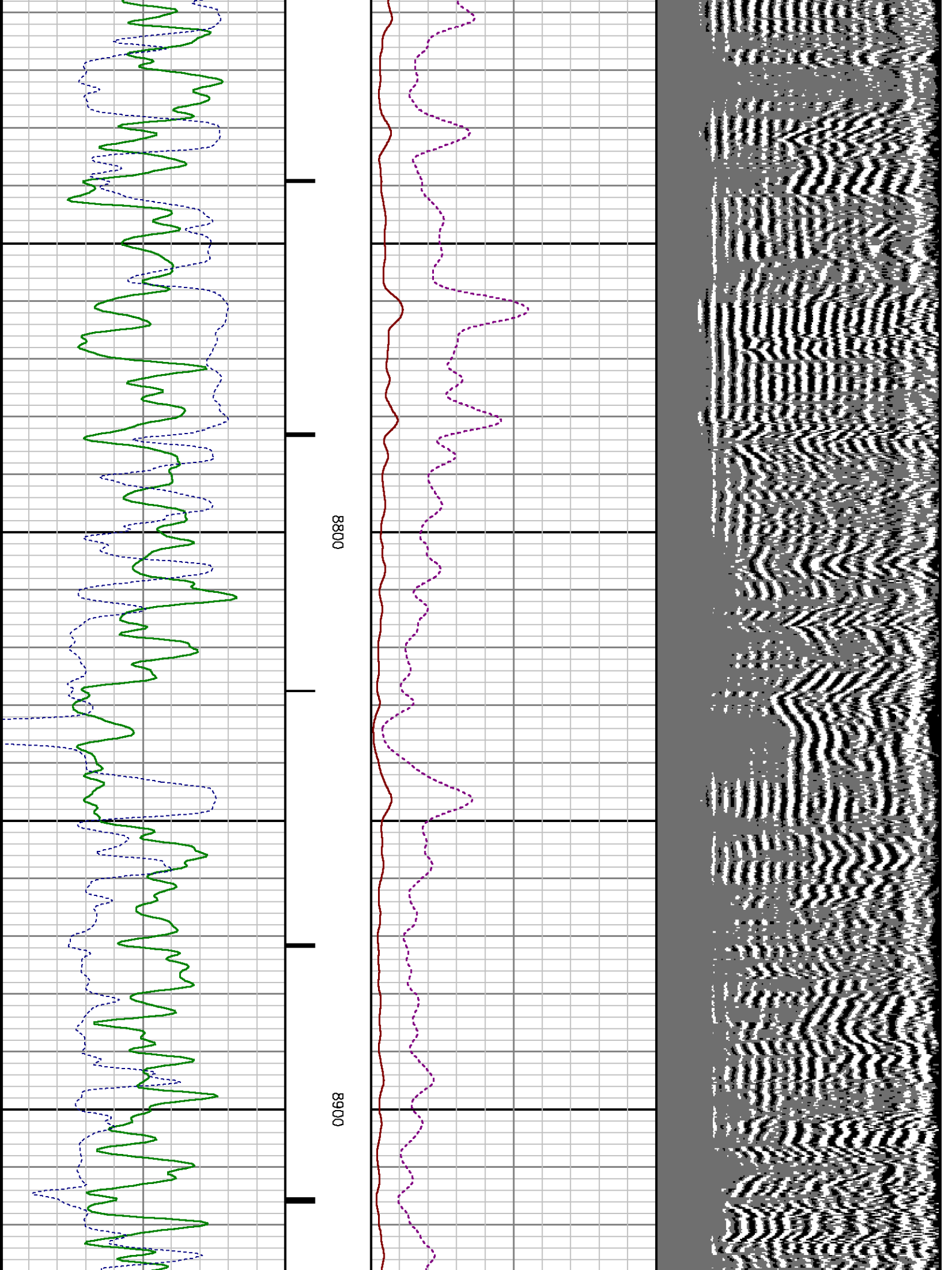


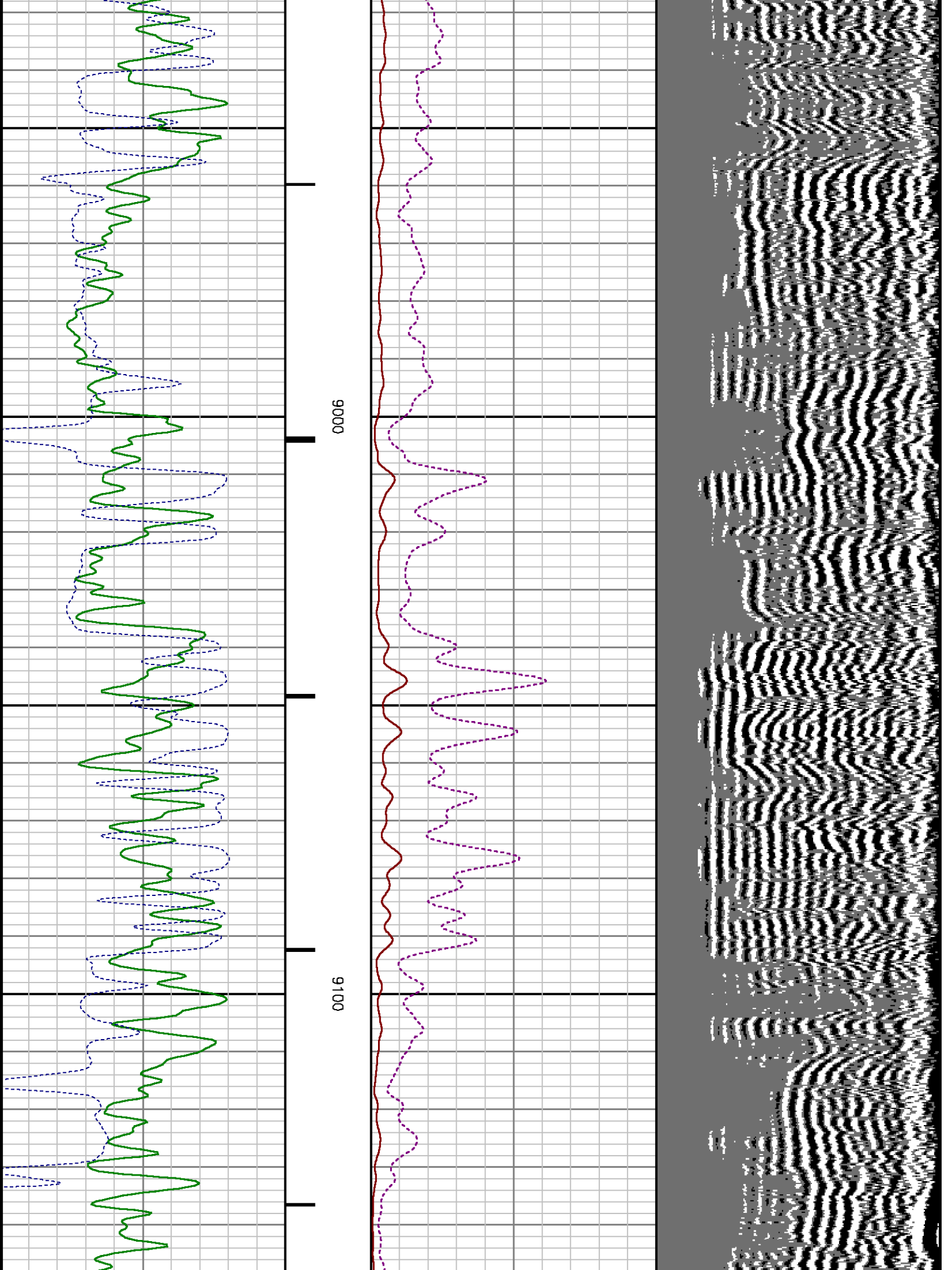


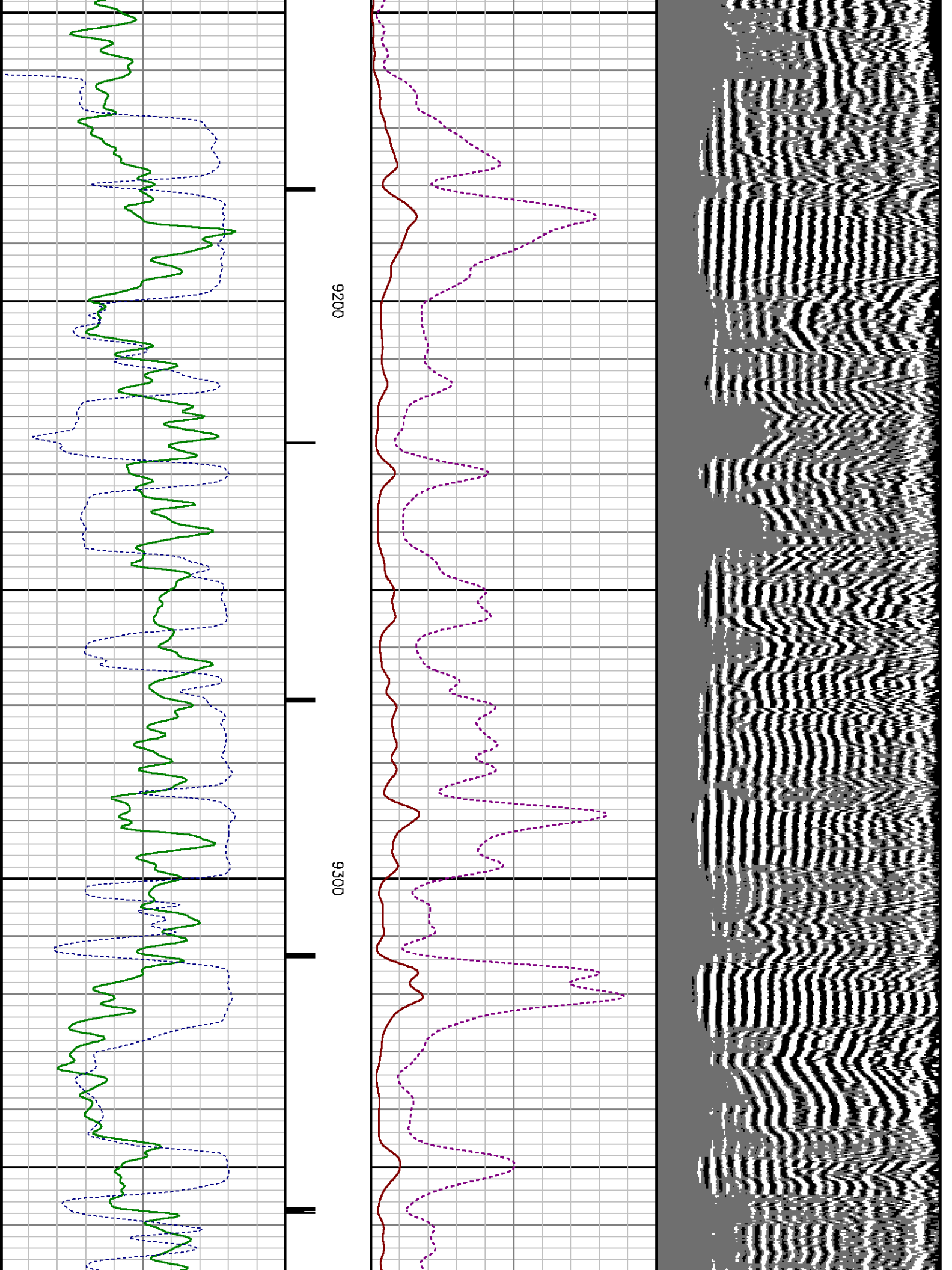


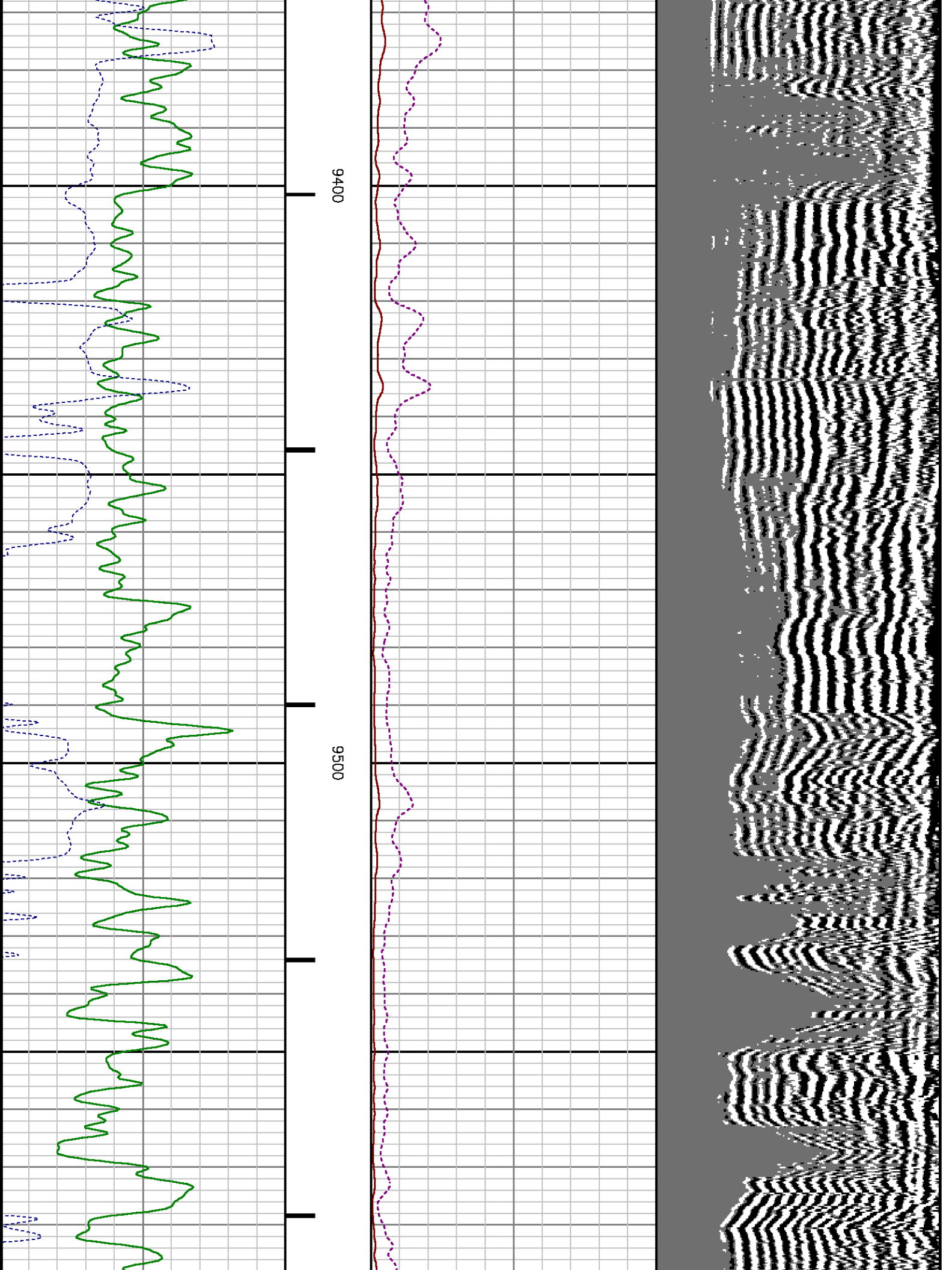


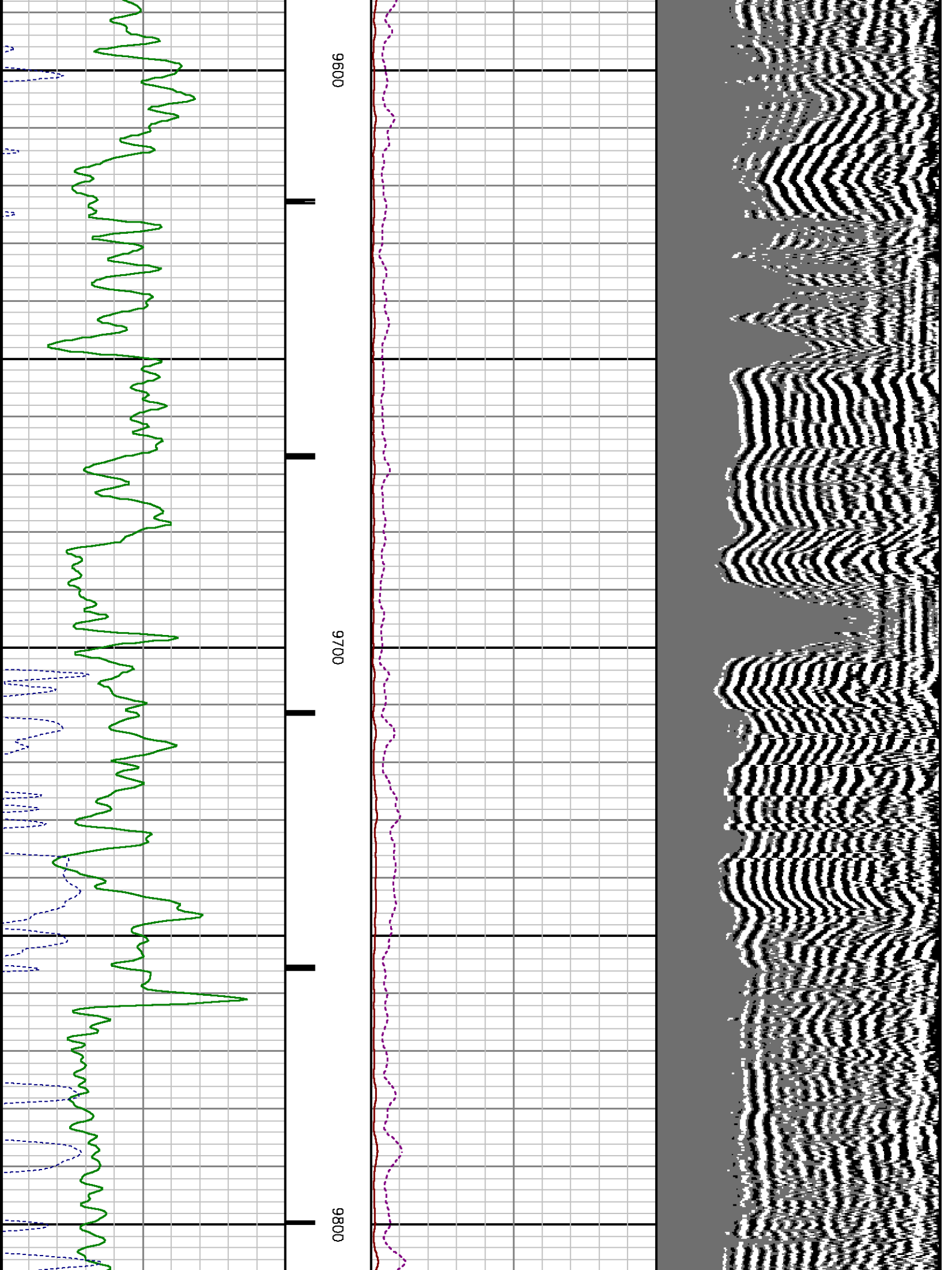




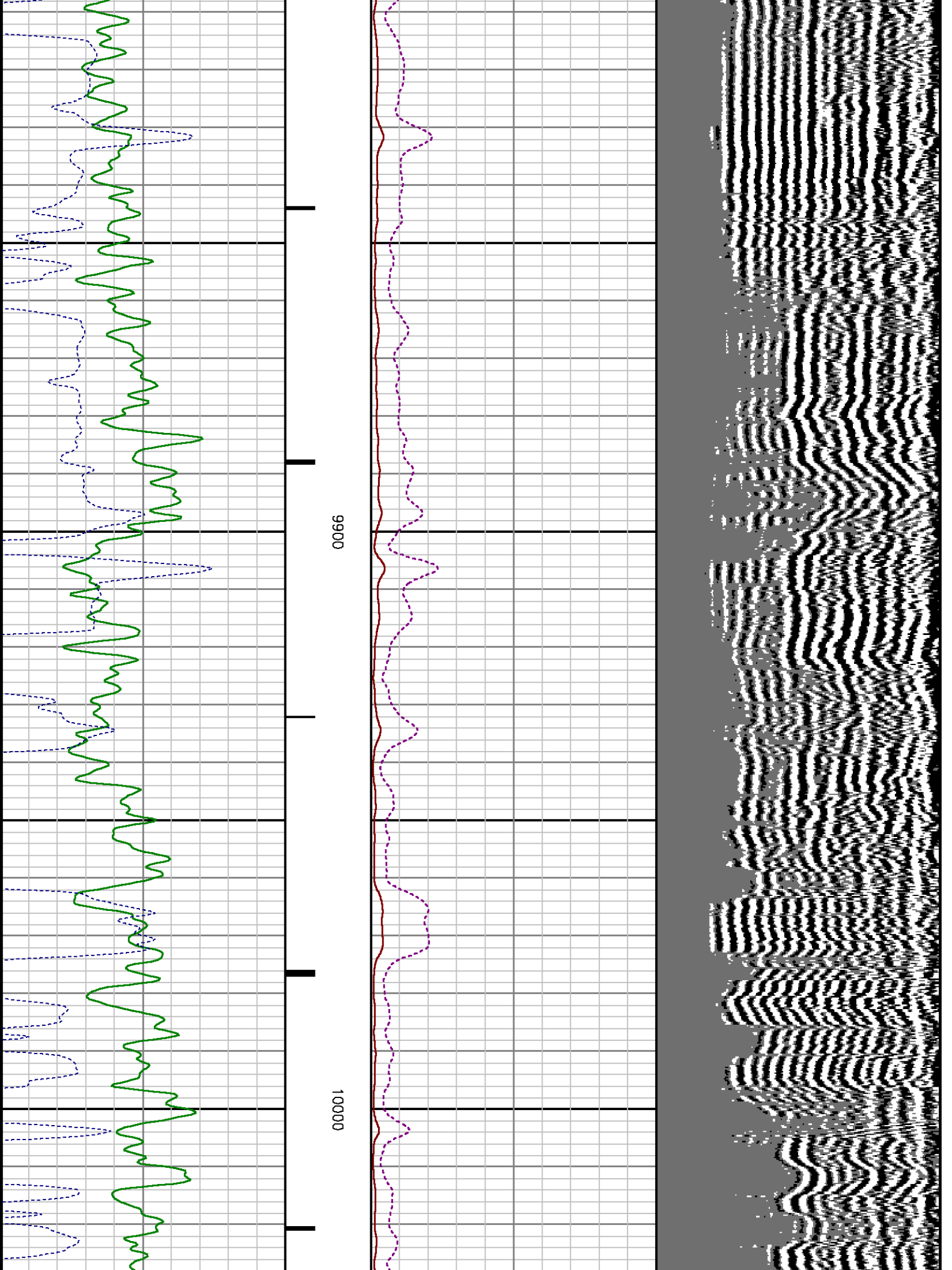




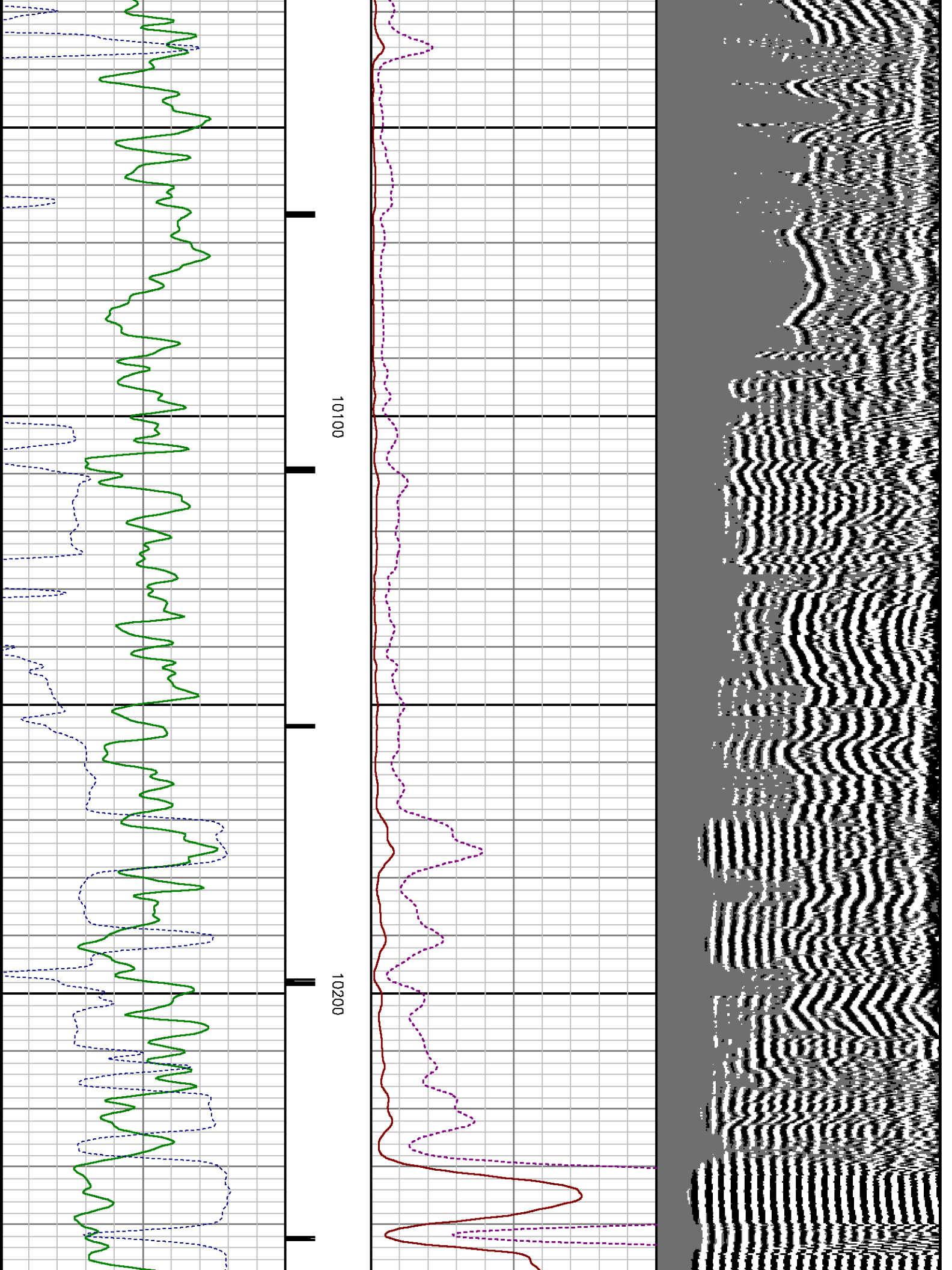


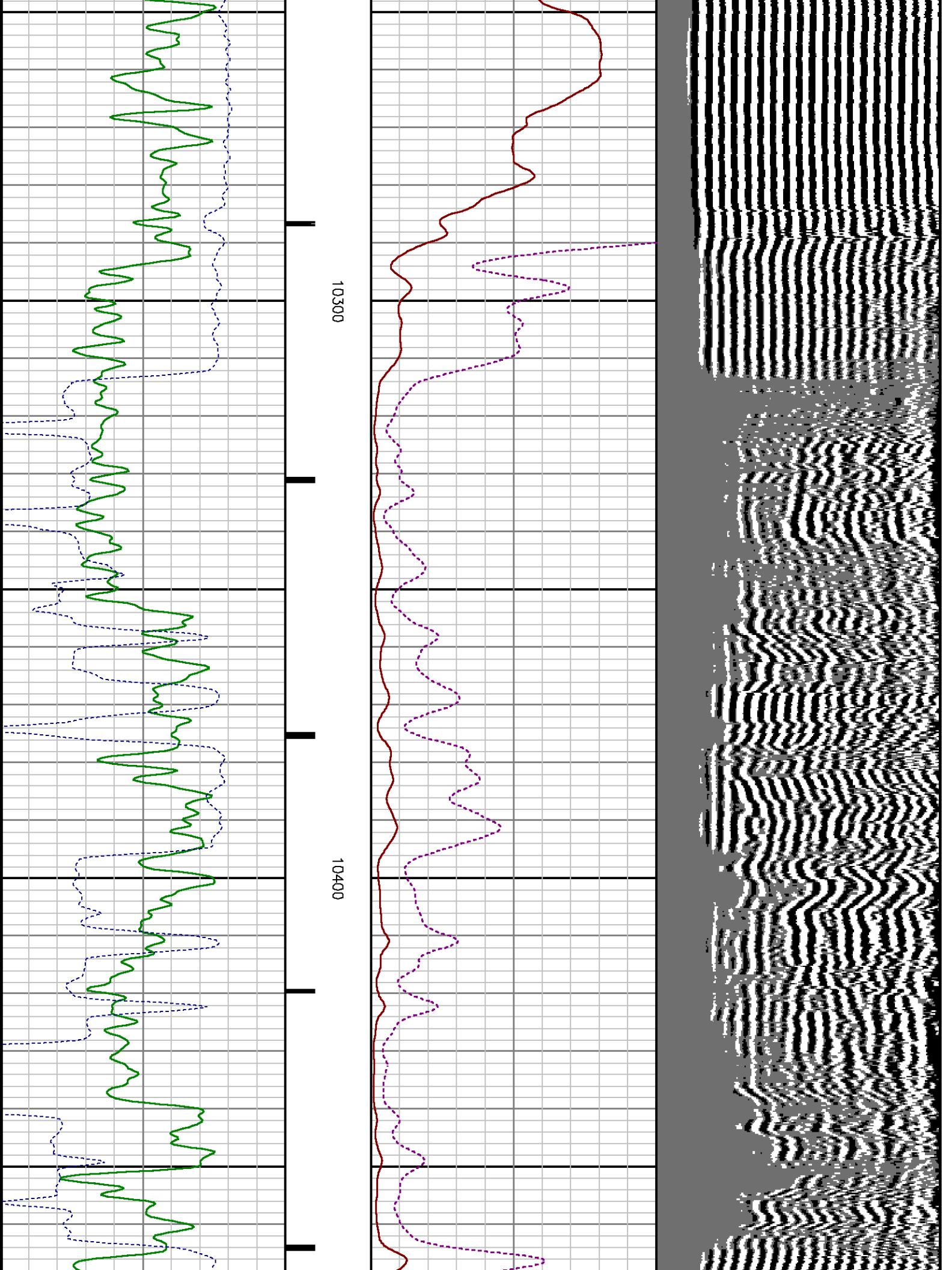


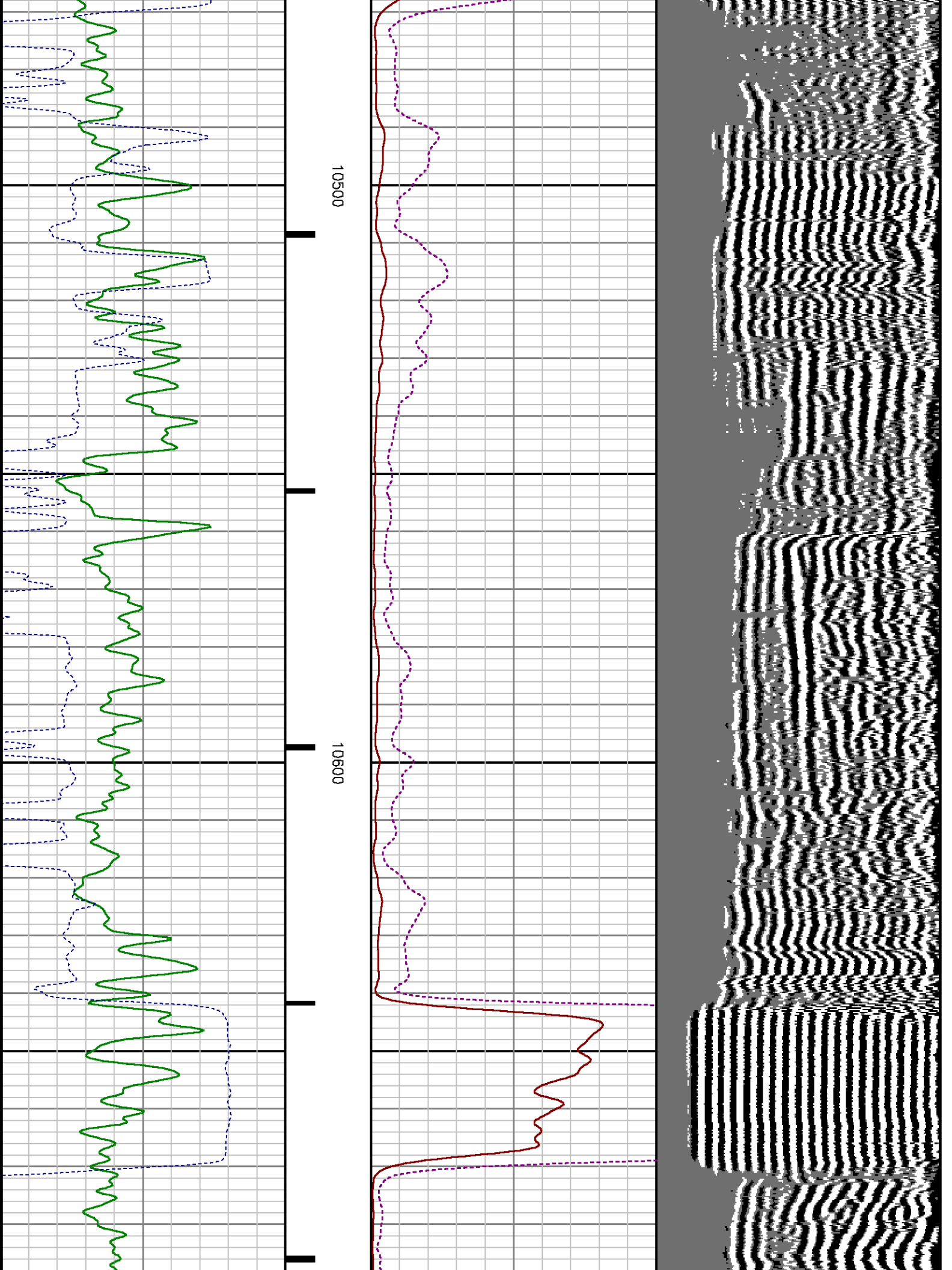


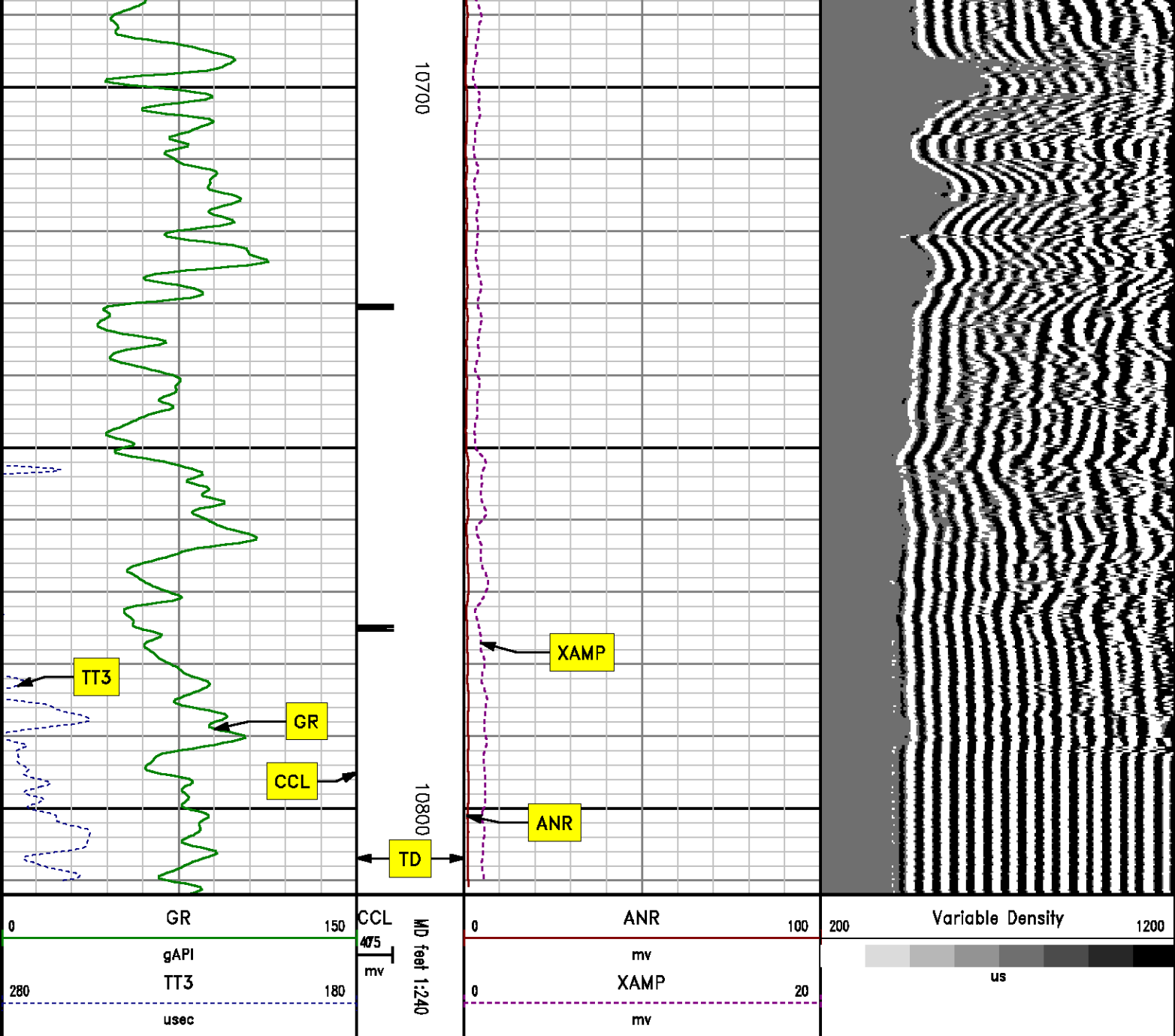












## SECONDARY PRESENTATION

### 0 PSI

MEASUREMENT TYPE

PARAMETER

VALUE

UNITS

TOP

BOTTOM

RAL	Amp Gate Start Far	305.000	usec	29.449	10828.750
RAL	Amp Gate Start Near	195.000	usec	29.449	10828.750
RAL	Amp Gate Start Radial	195.000	usec	29.449	10828.750
RAL	Amp Gate Width Far	25.000	usec	29.449	10828.750
RAL	Amp Gate Width Near	25.000	usec	29.449	10828.750
RAL	Amp Gate Width Radial	25.000	usec	29.449	10828.750
RAL	casing od	4.500	inches	29.449	10828.750
RAL	casing wt	11.600	lbm/ft	29.449	10828.750
RAL	FB Start Far	291.900	usec	29.449	10828.750
RAL	FB Start Near	175.391	usec	29.449	10828.750
RAL	FB Start Radial	175.391	usec	29.449	10828.750
RAL	FB Thresh Far	10.000	mv	29.449	10828.750
RAL	FB Thresh Near	4.000	mv	29.449	10828.750
RAL	FB Thresh Radial	4.000	mv	29.449	10828.750
RAL	Fluid Travel Time	200.000	usec/ft	29.449	10828.262

## 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

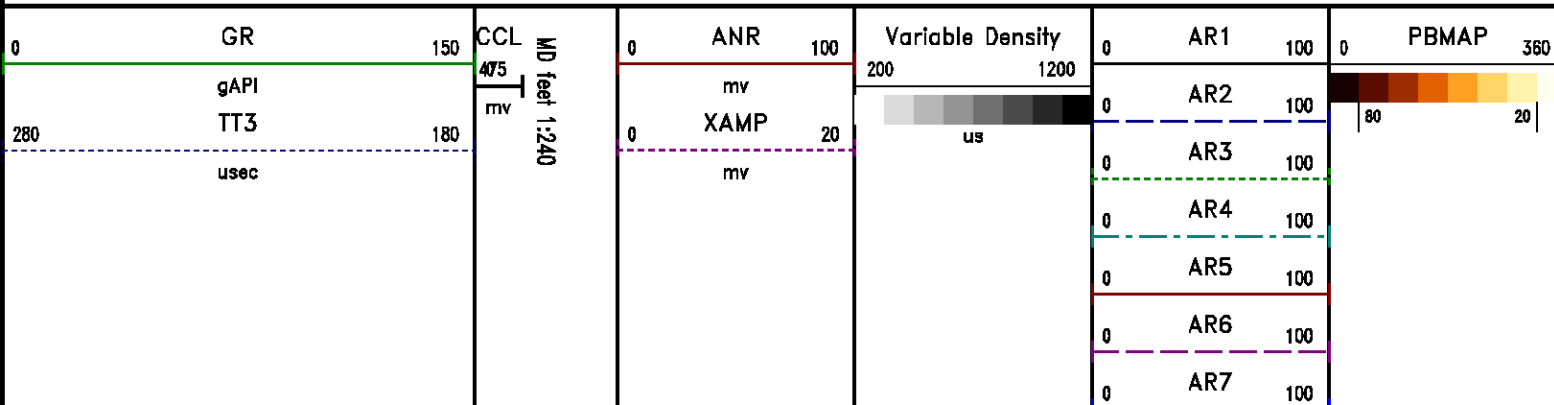
Well : FEDERAL RG 412-14-298

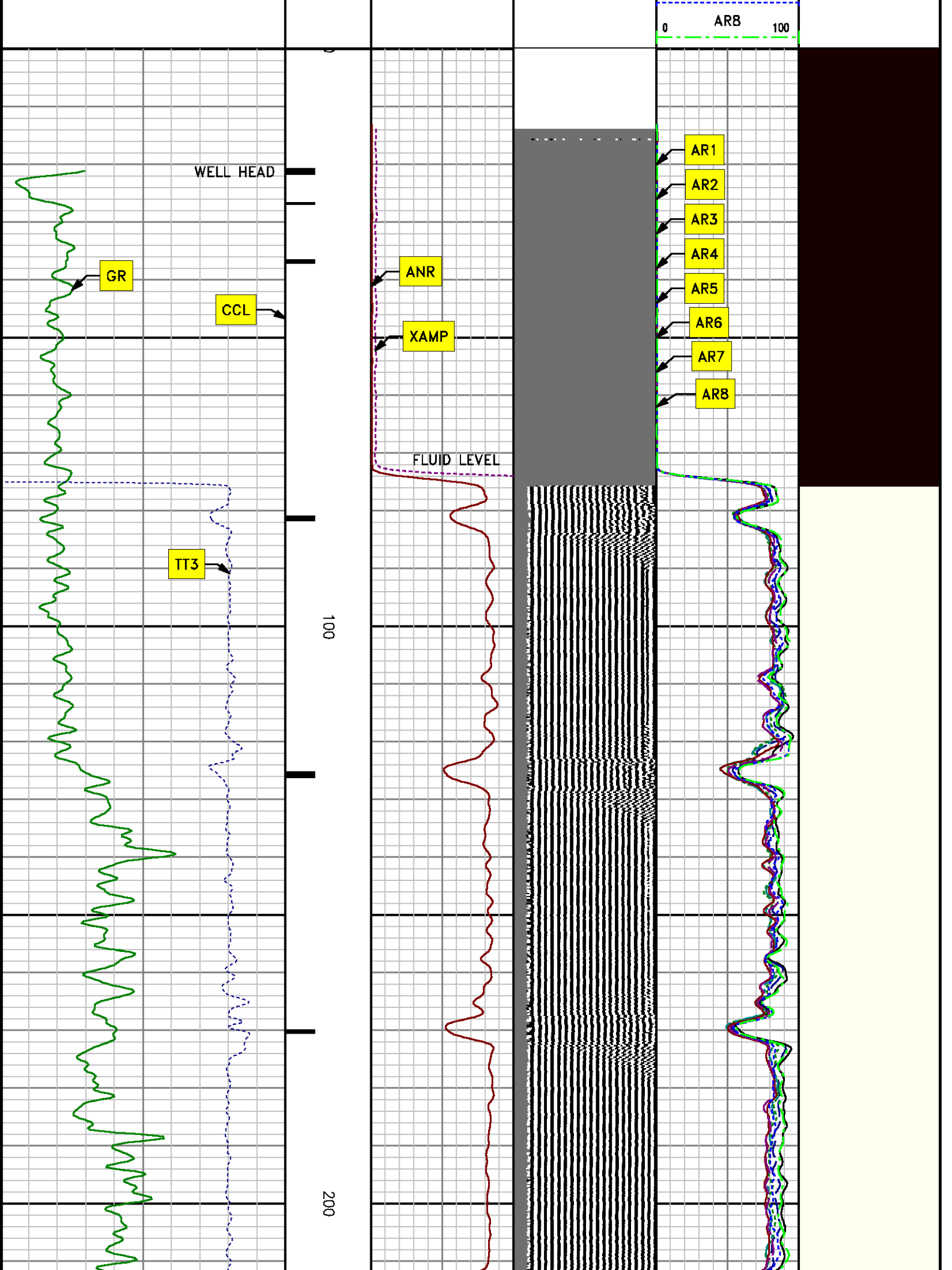
File Name : d:\welldata\wpx\federal rg 412-14-298\cbl412\main.xtf

Mode : PlotMgr 5.4.504

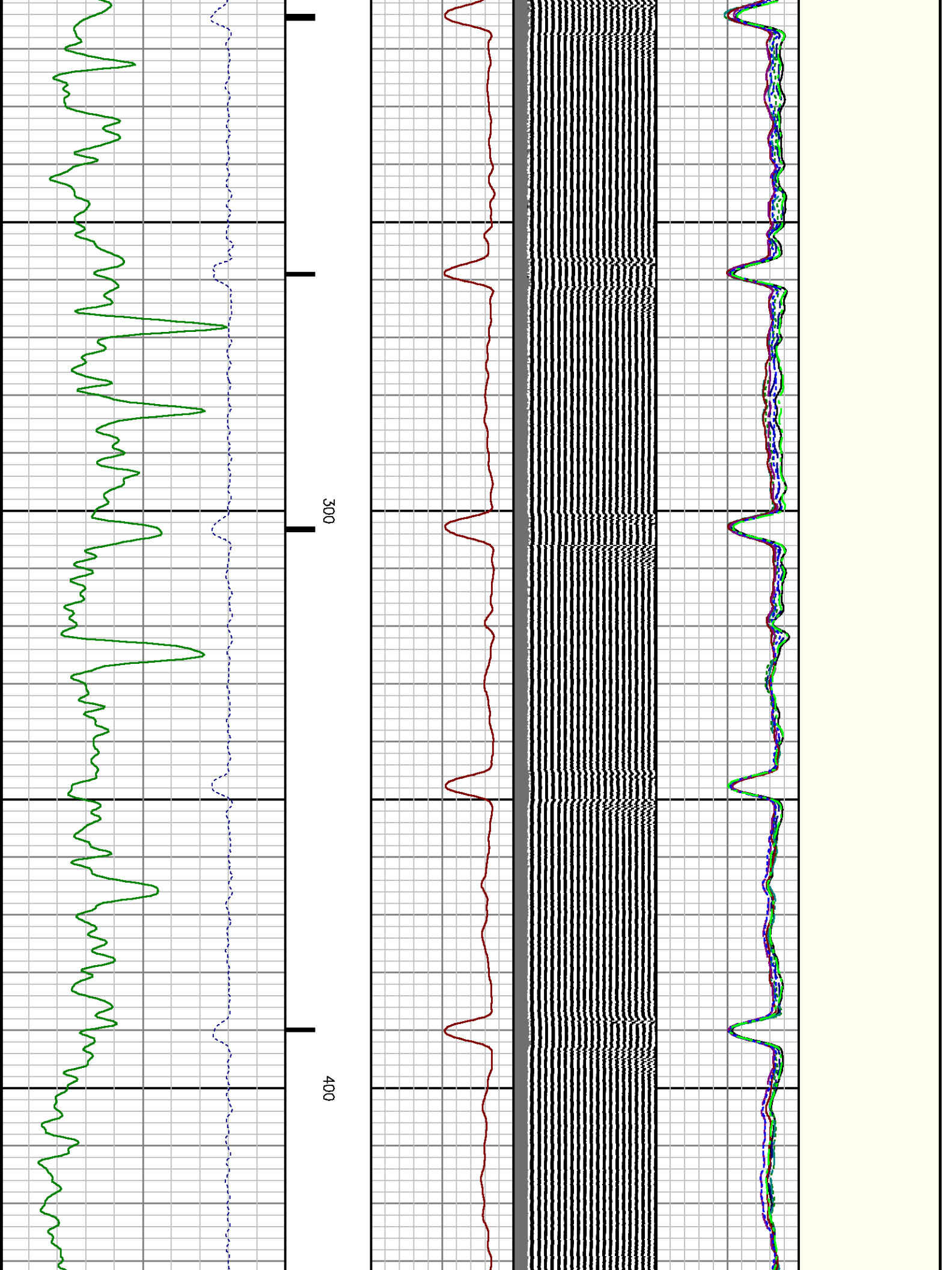
Interval : 0.00 - 10812.00 feet UP

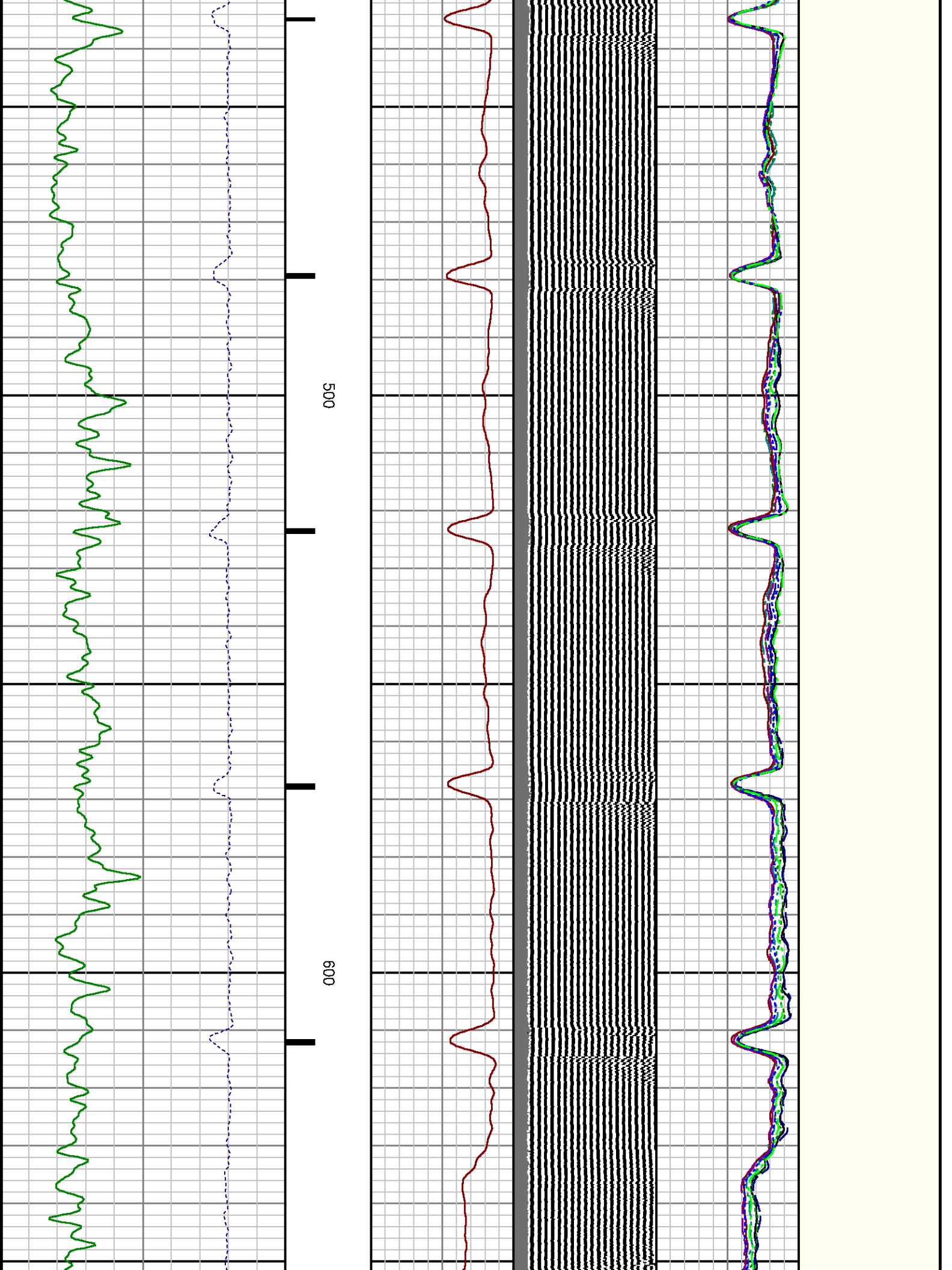
Created : 1/25/2014 8:26:03 PM

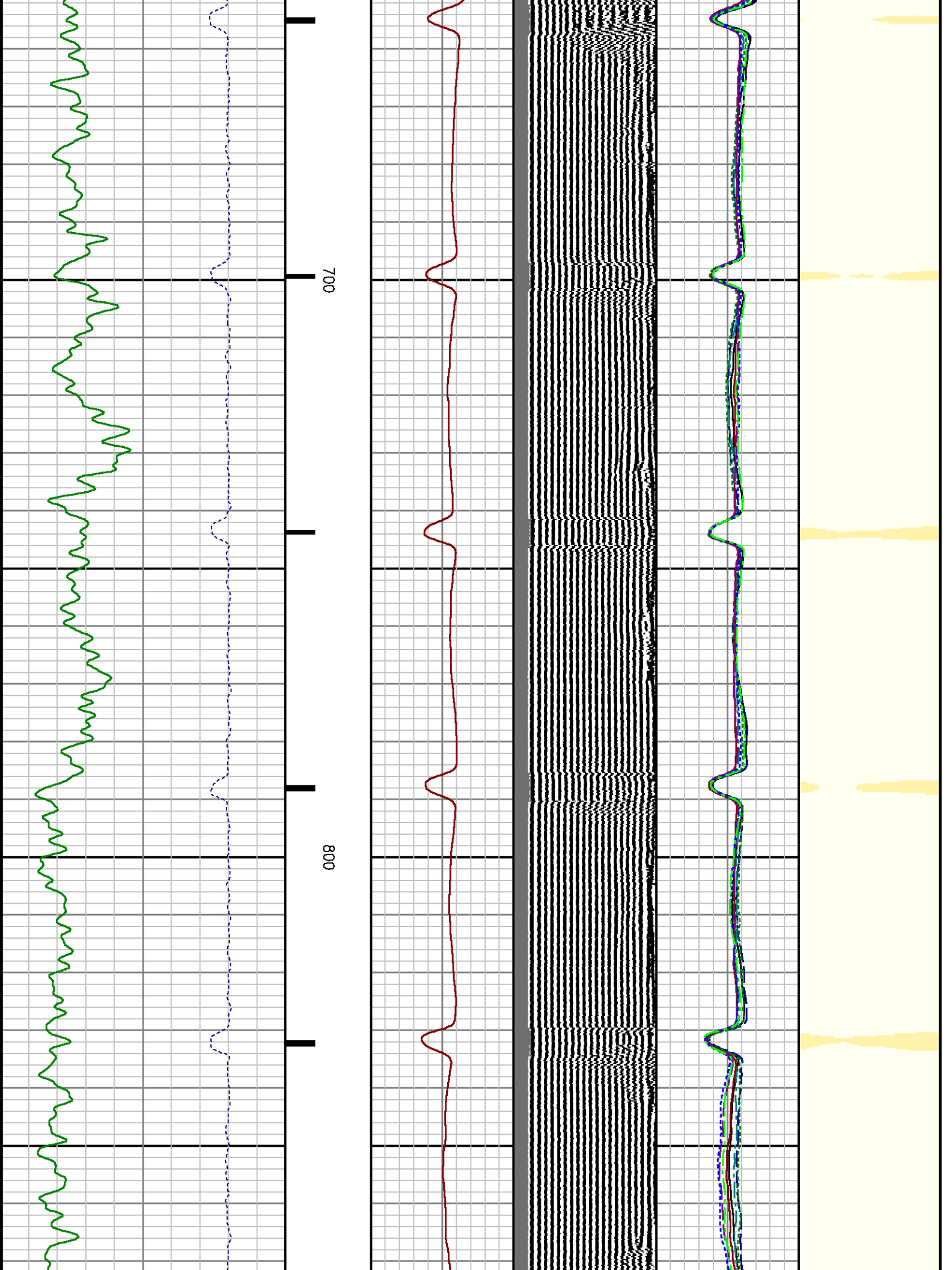


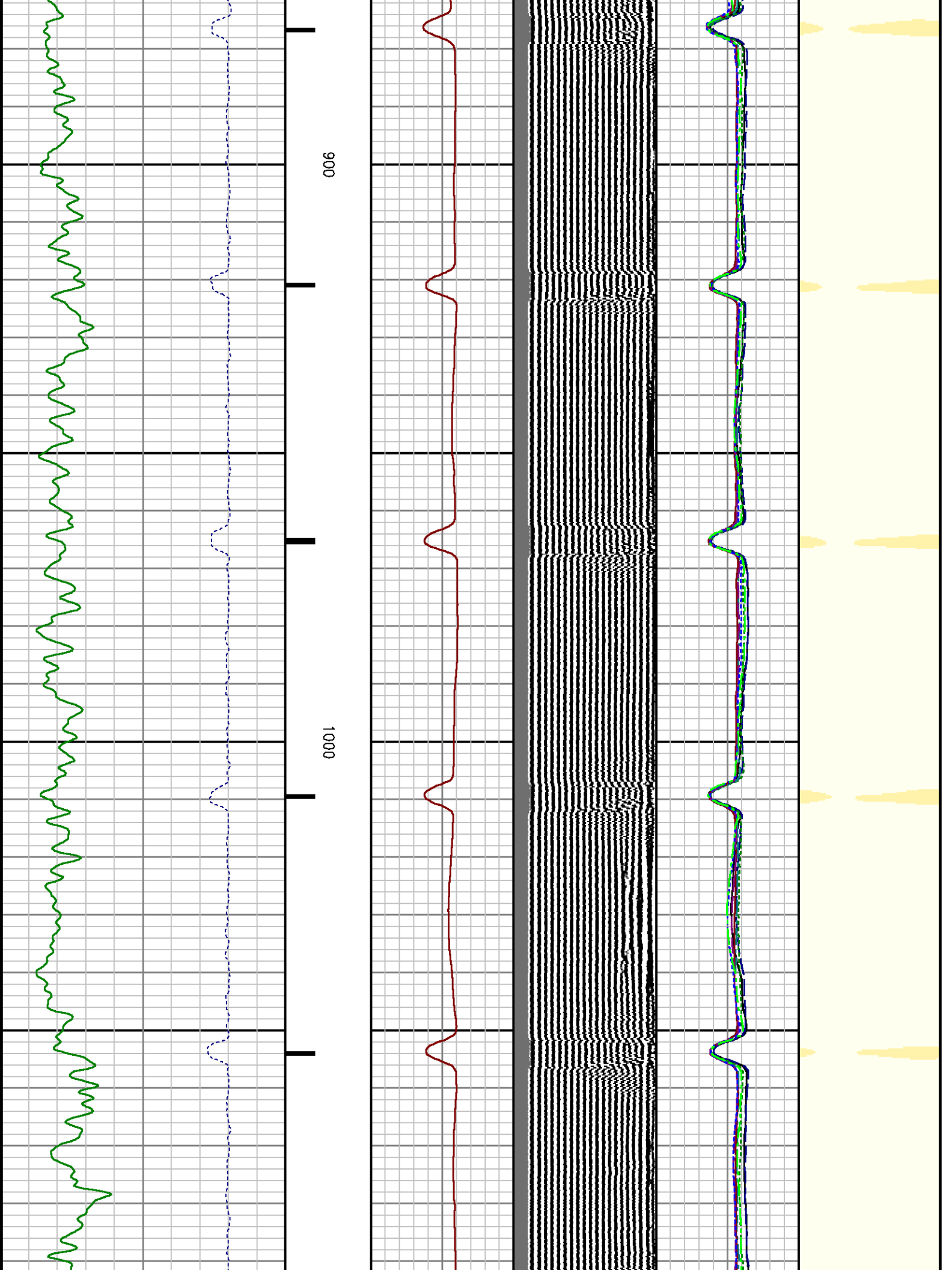


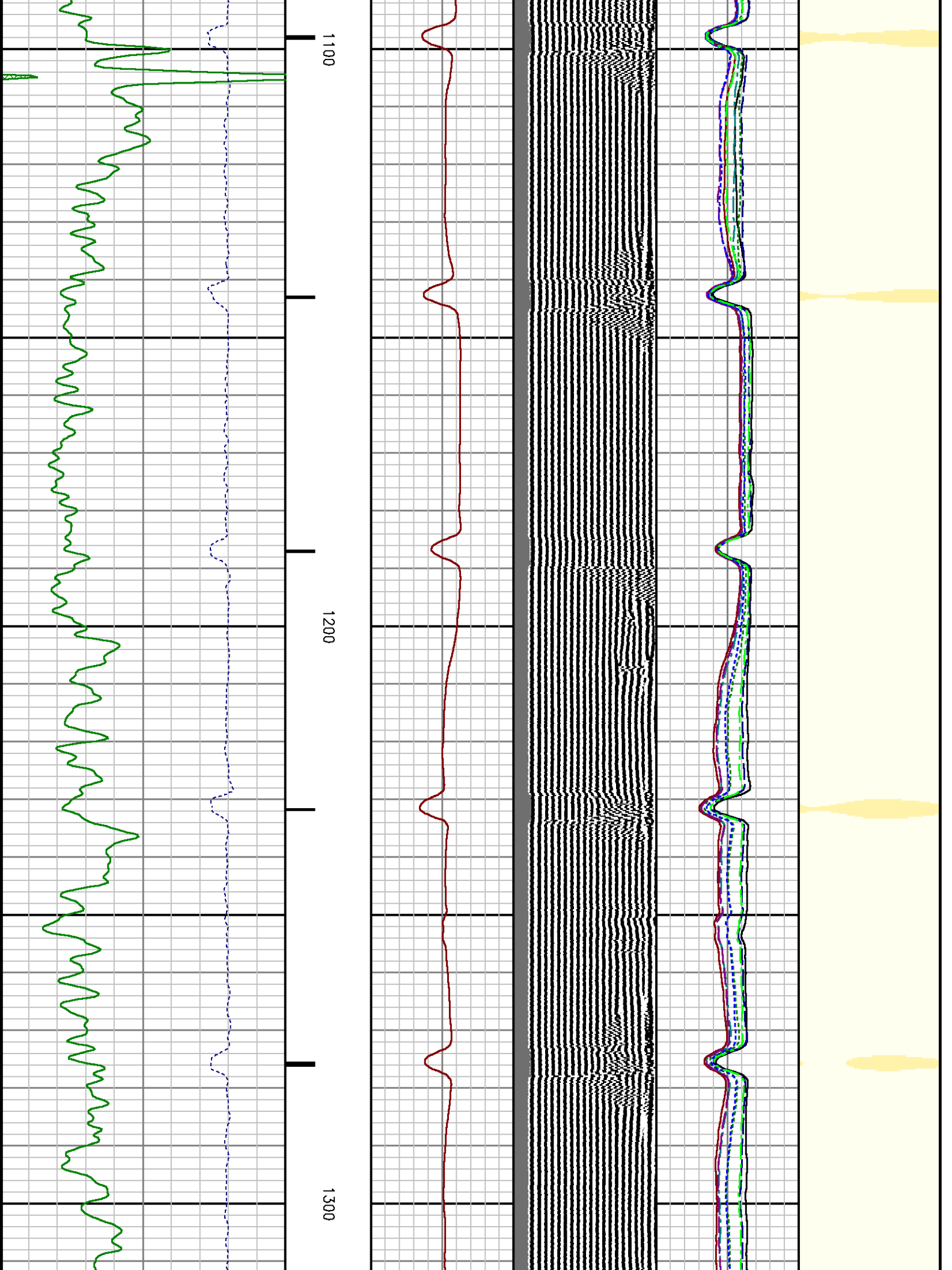


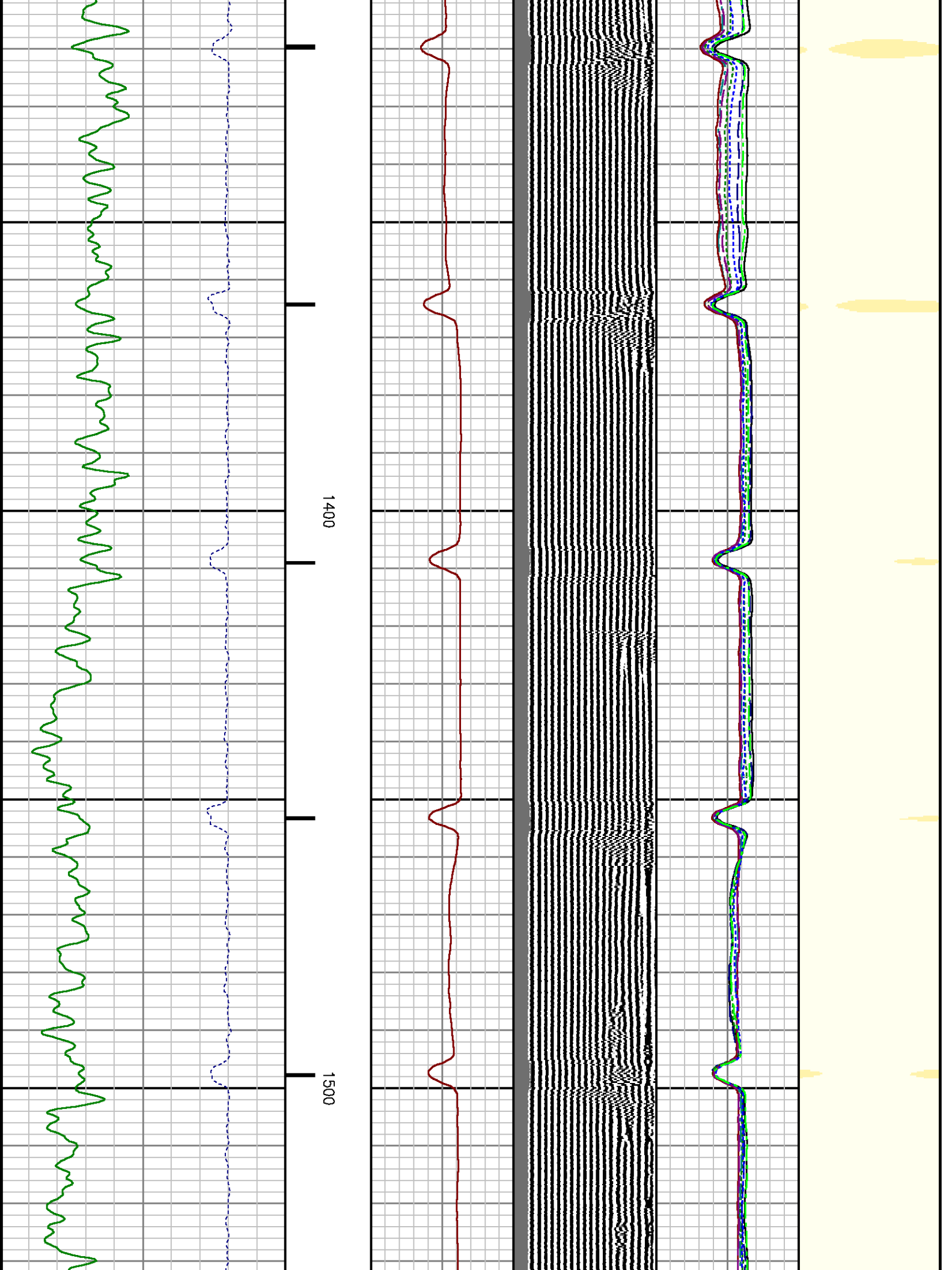




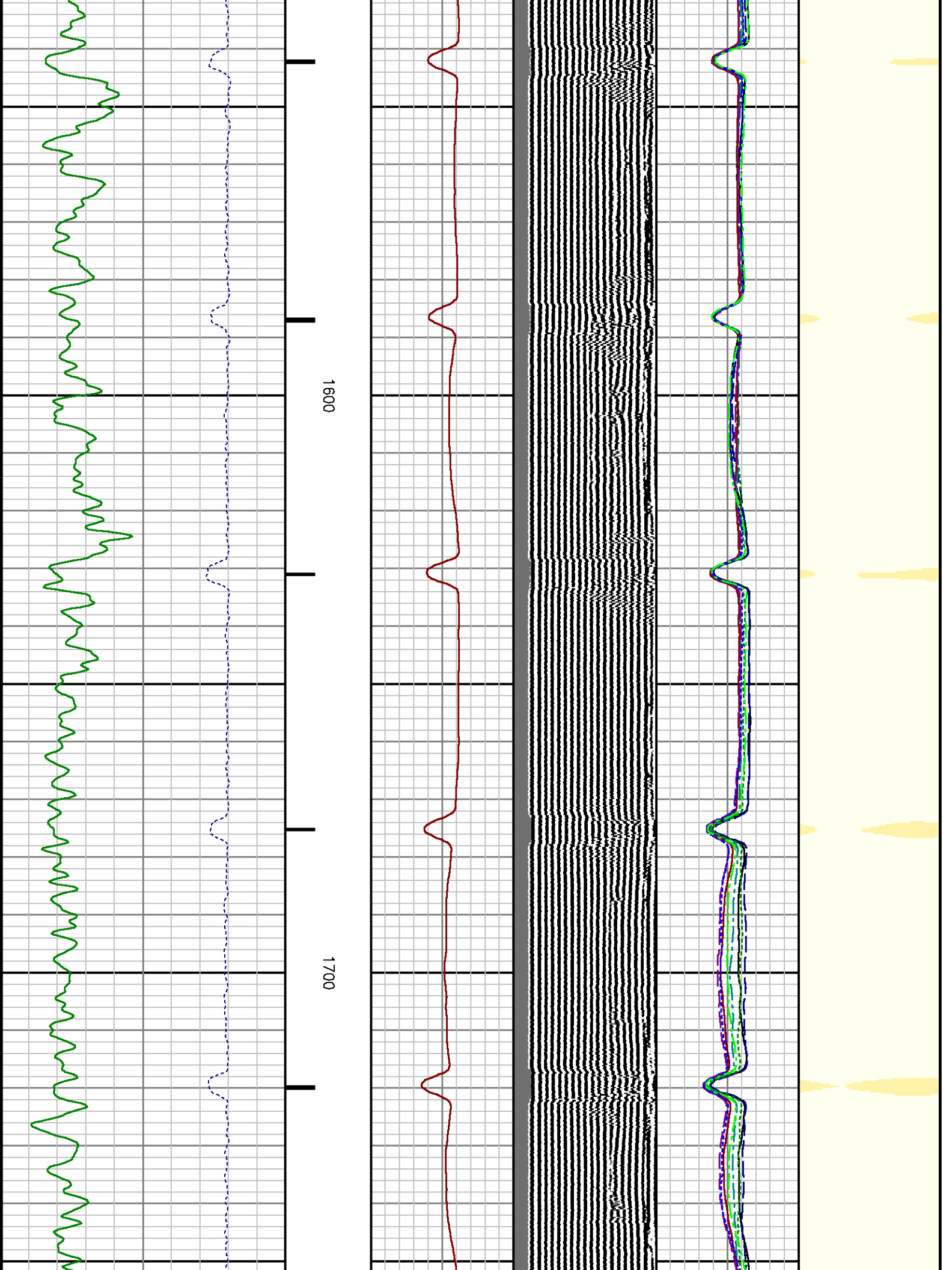


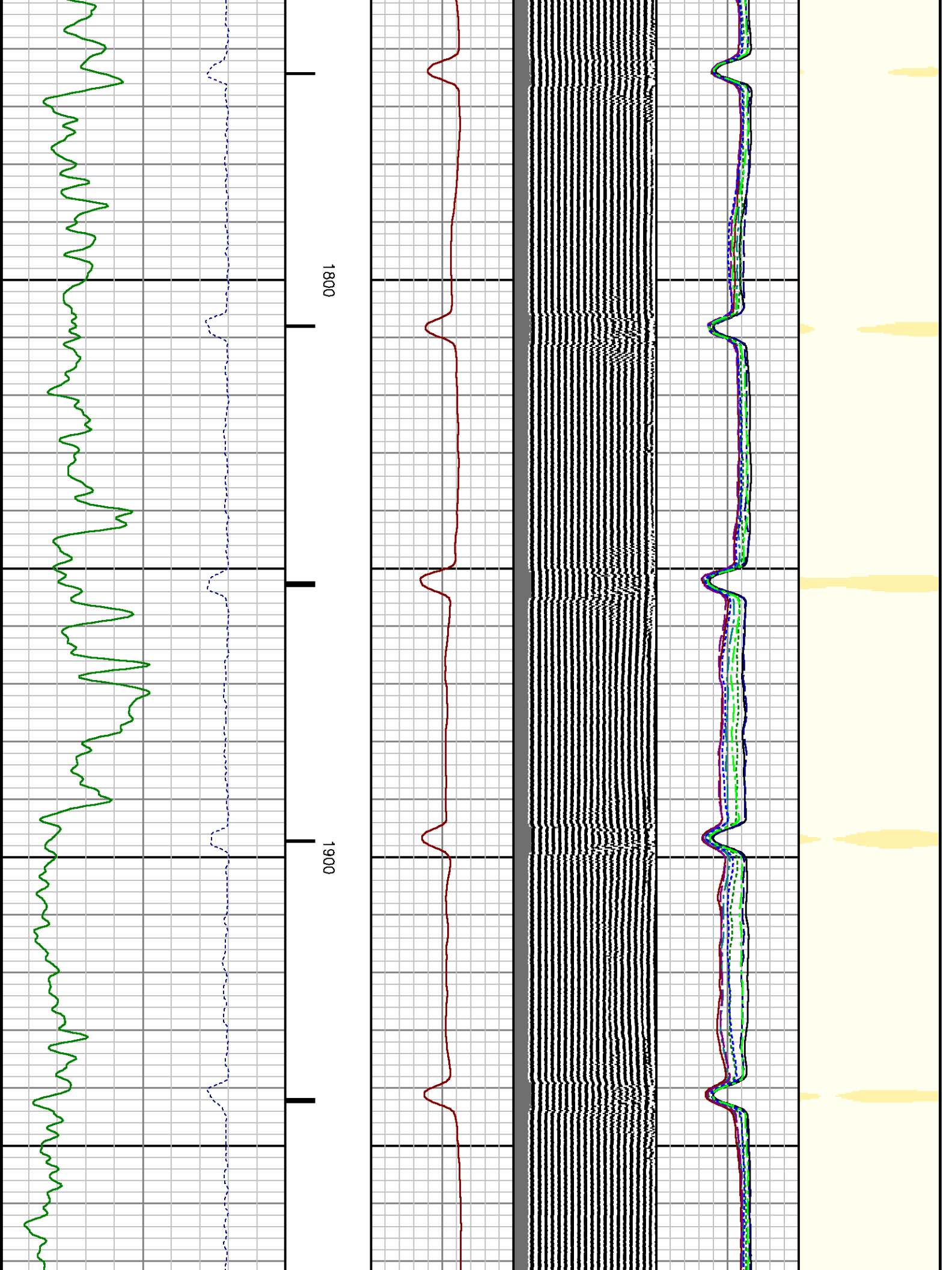


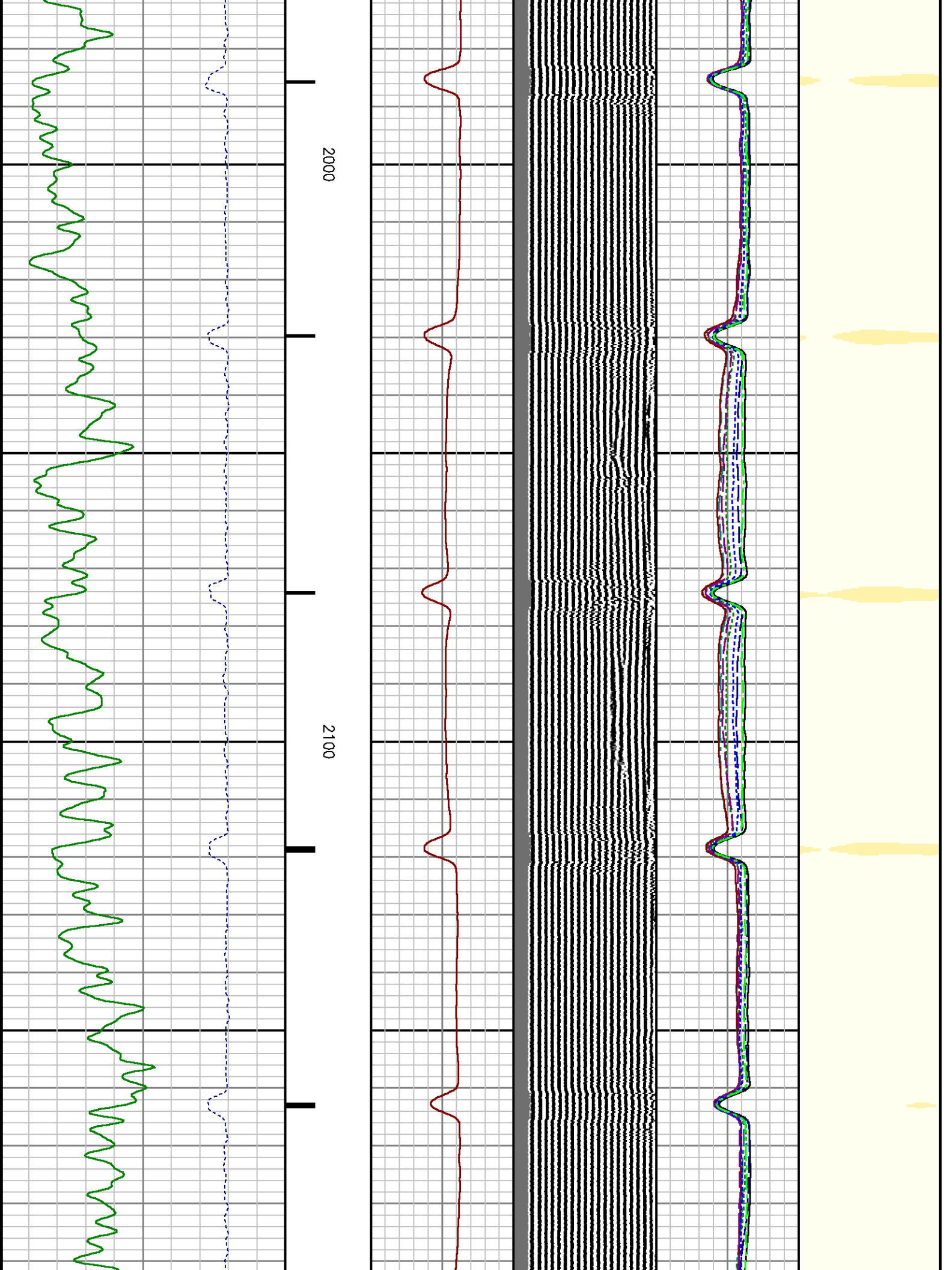


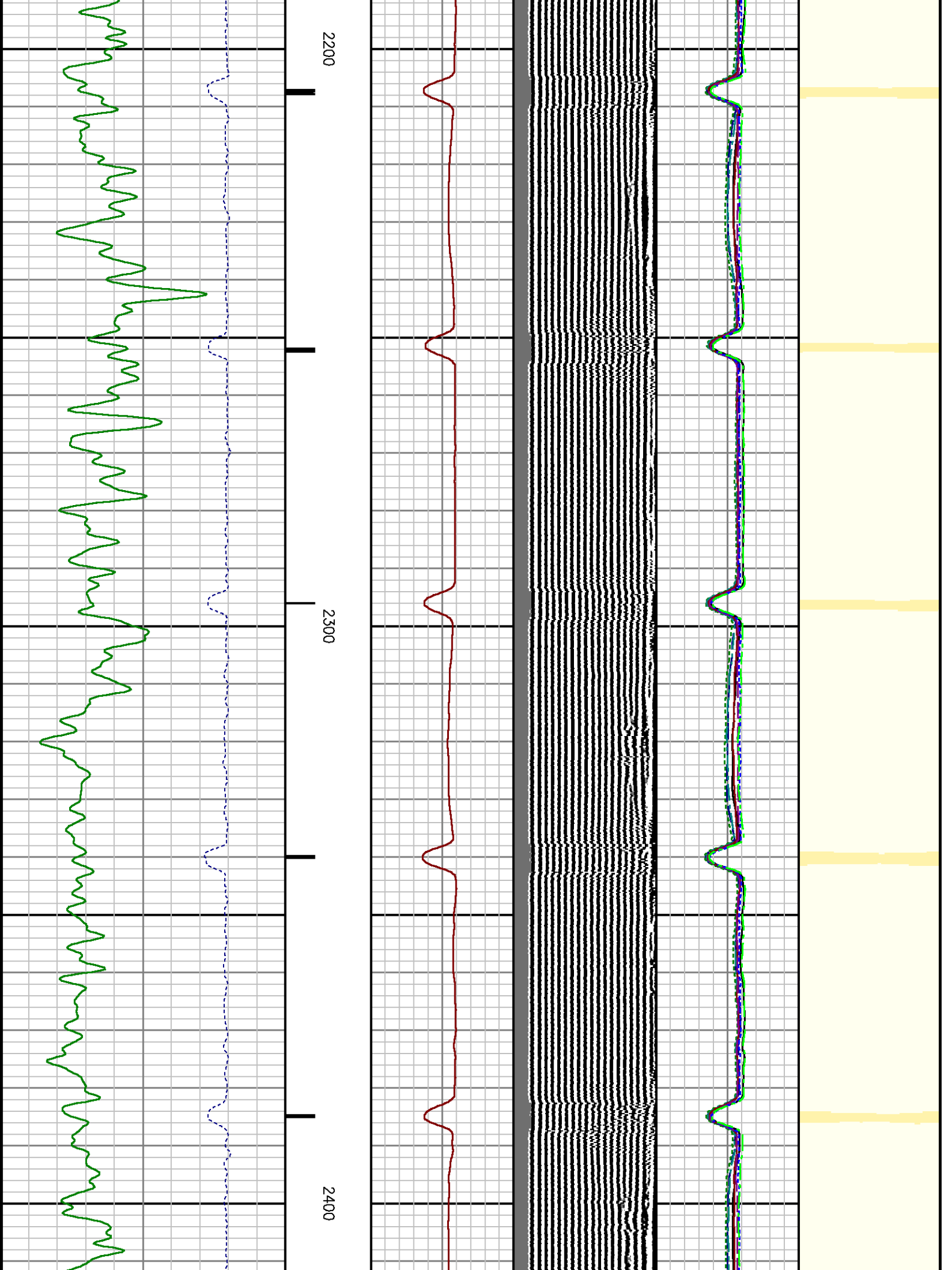


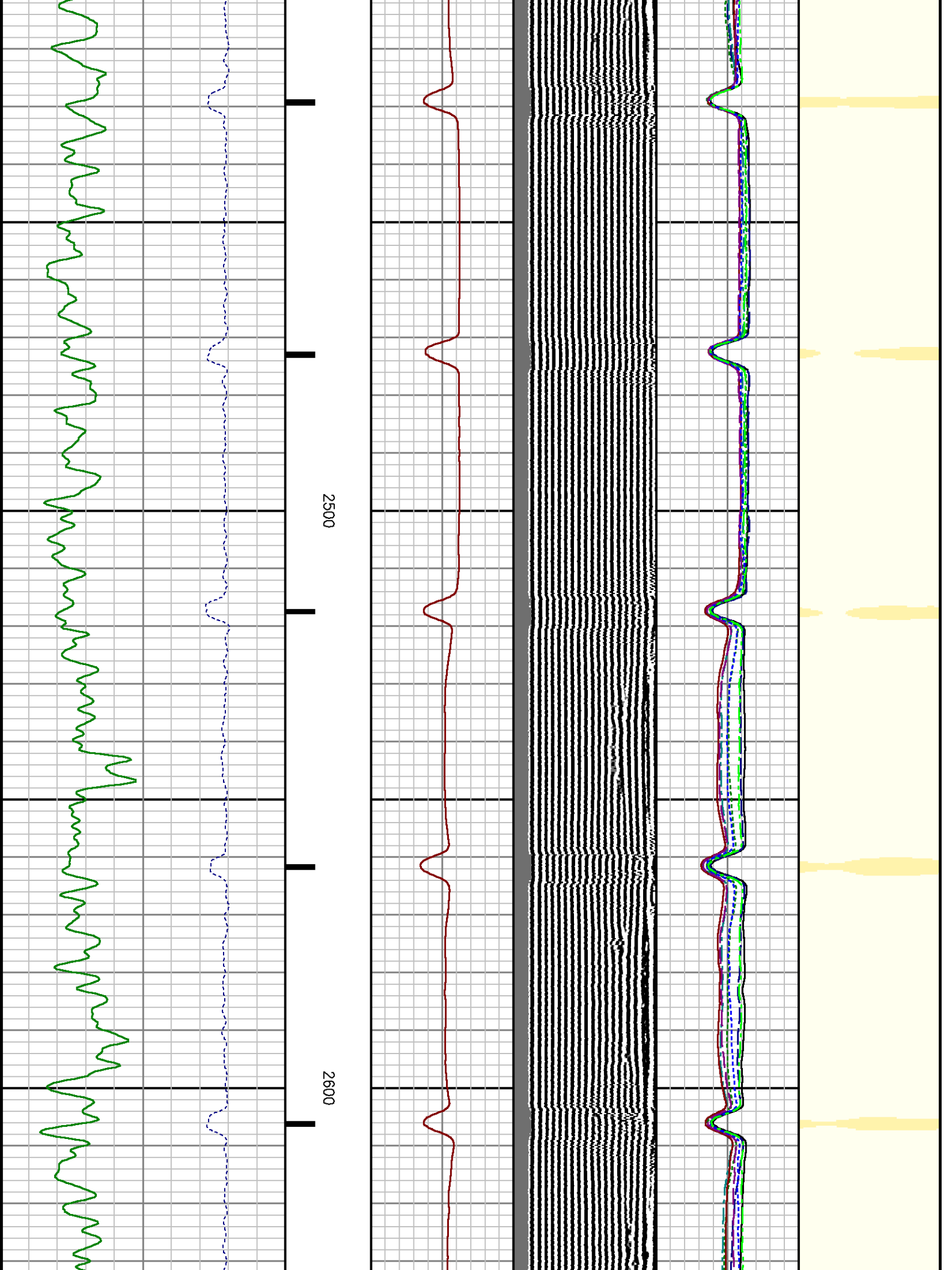


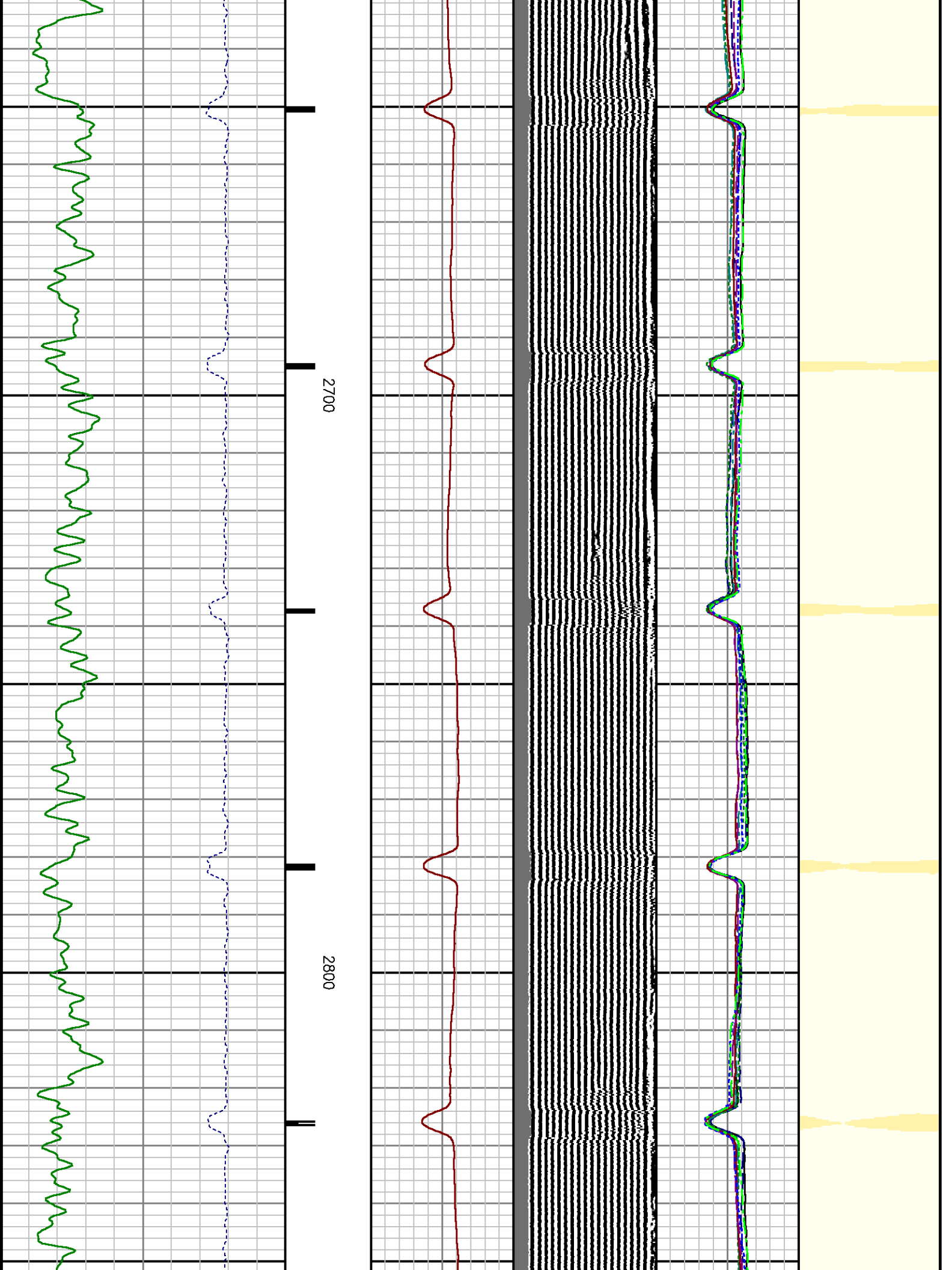




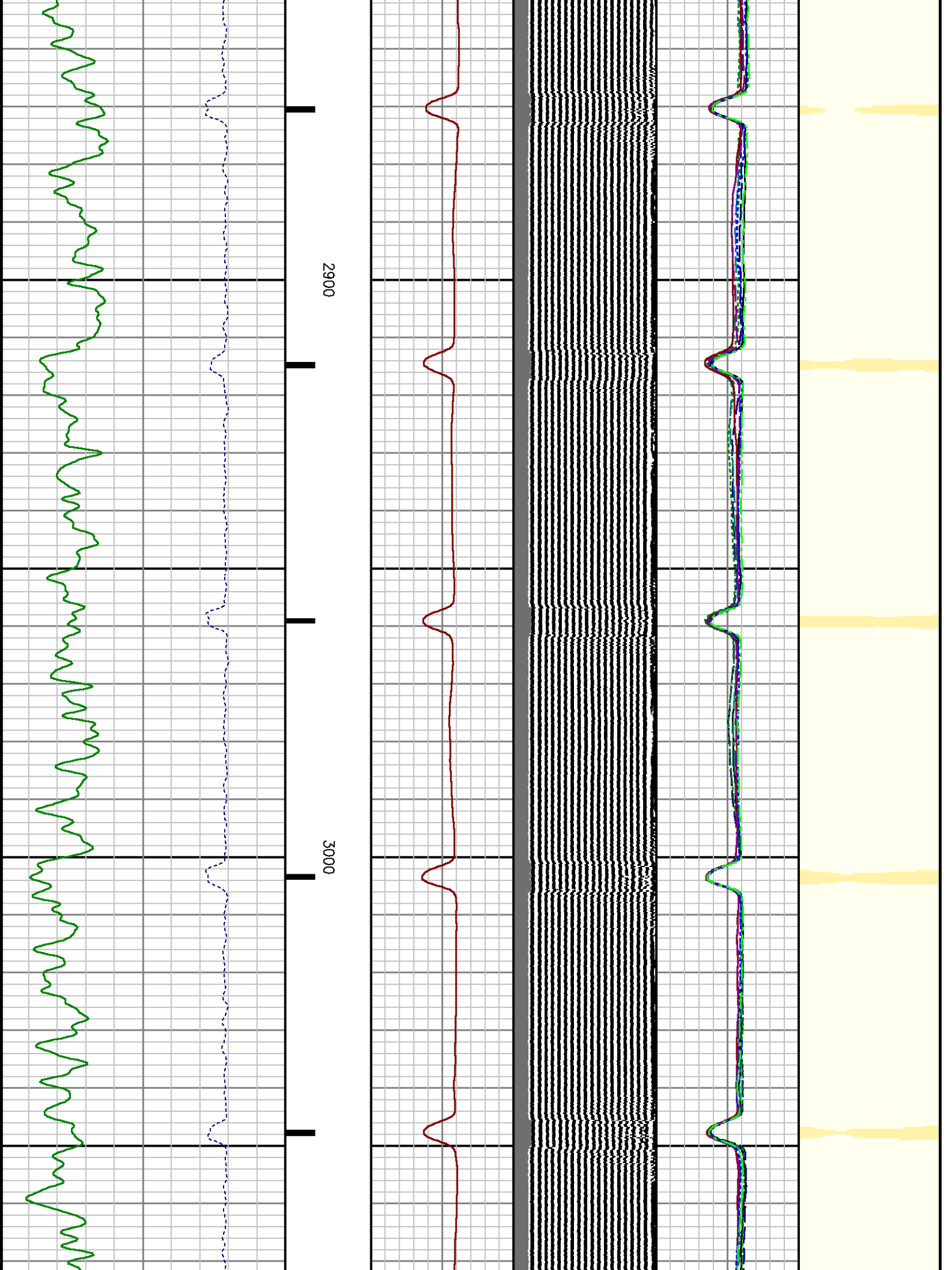


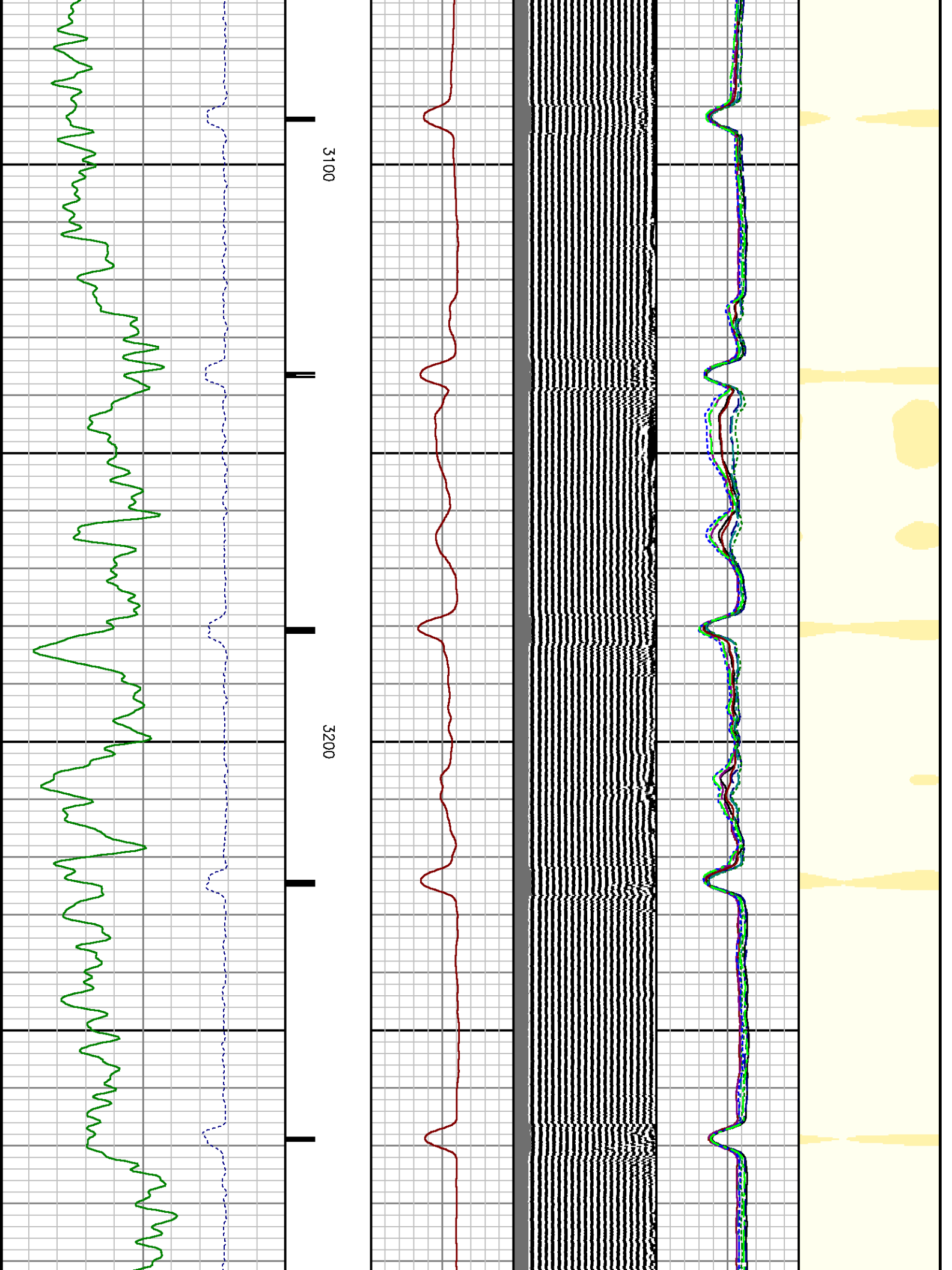


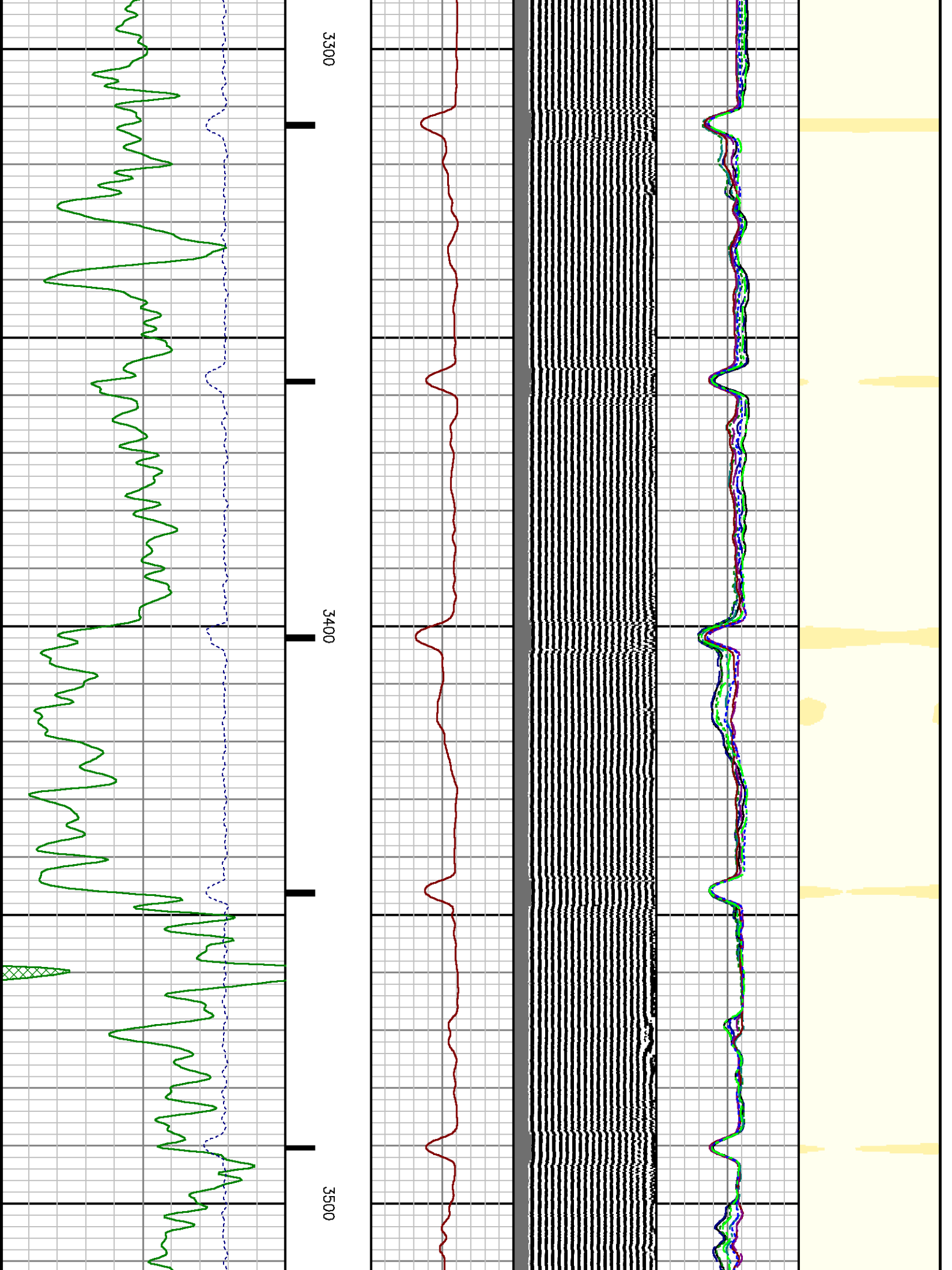


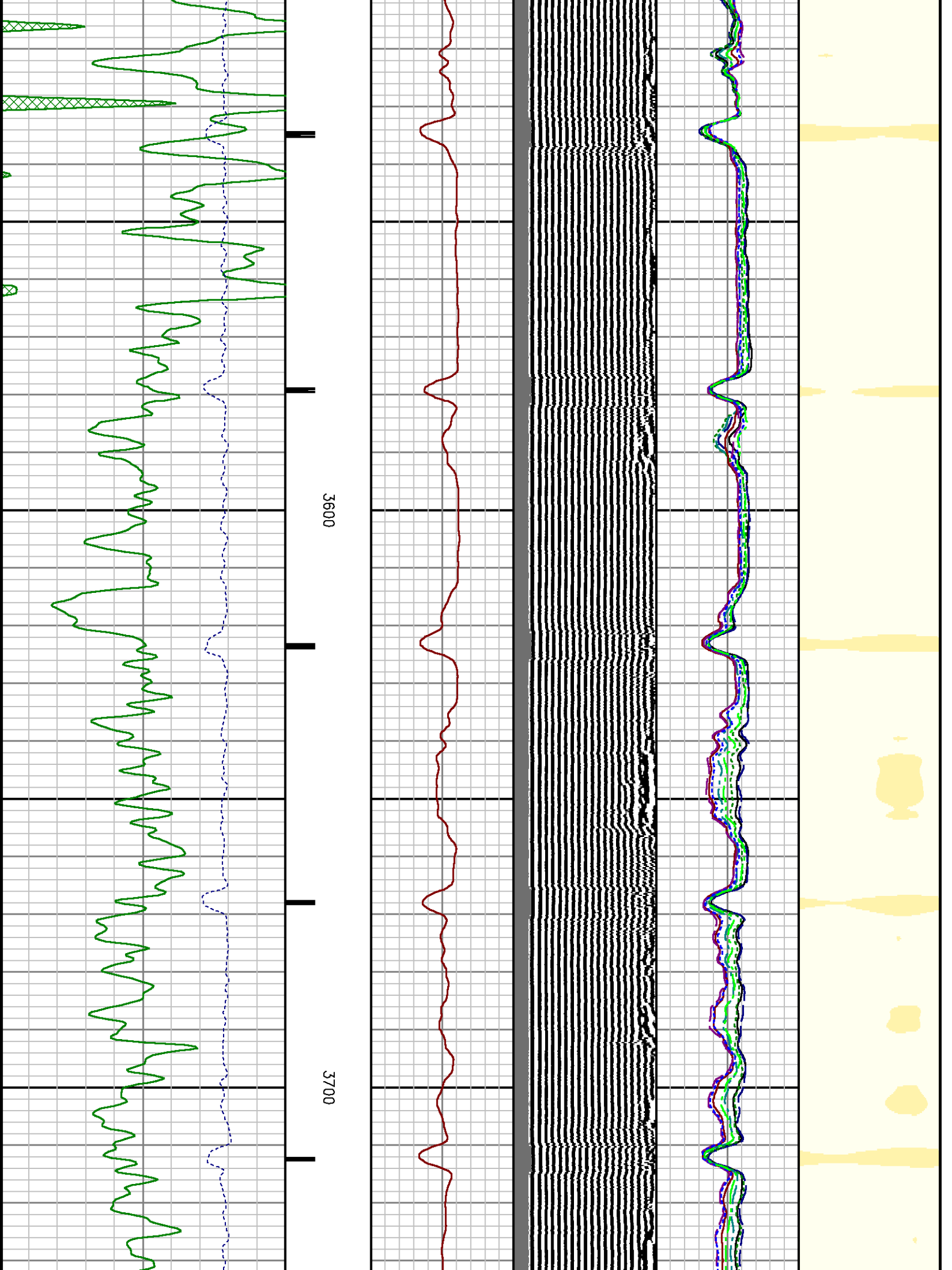


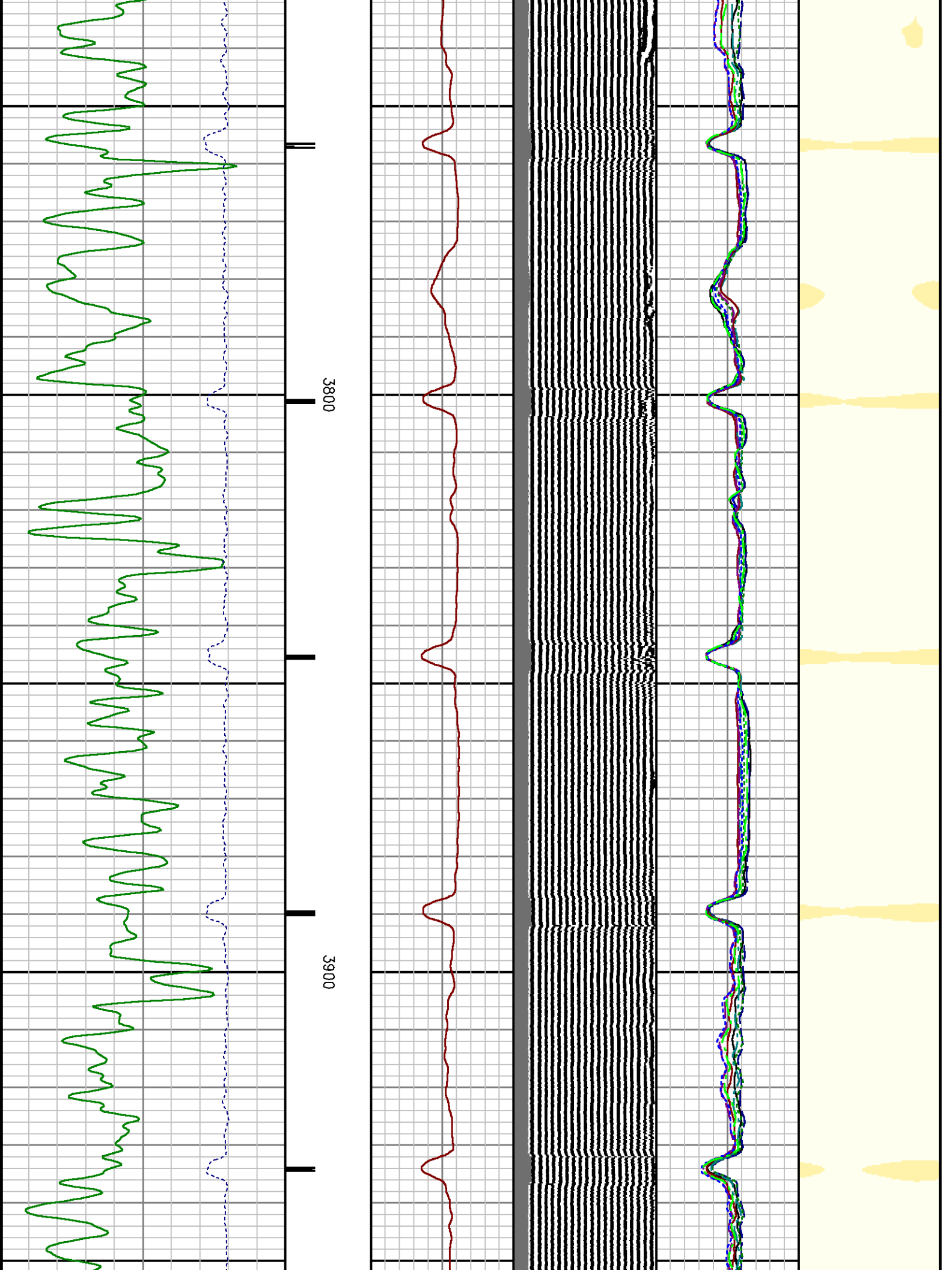


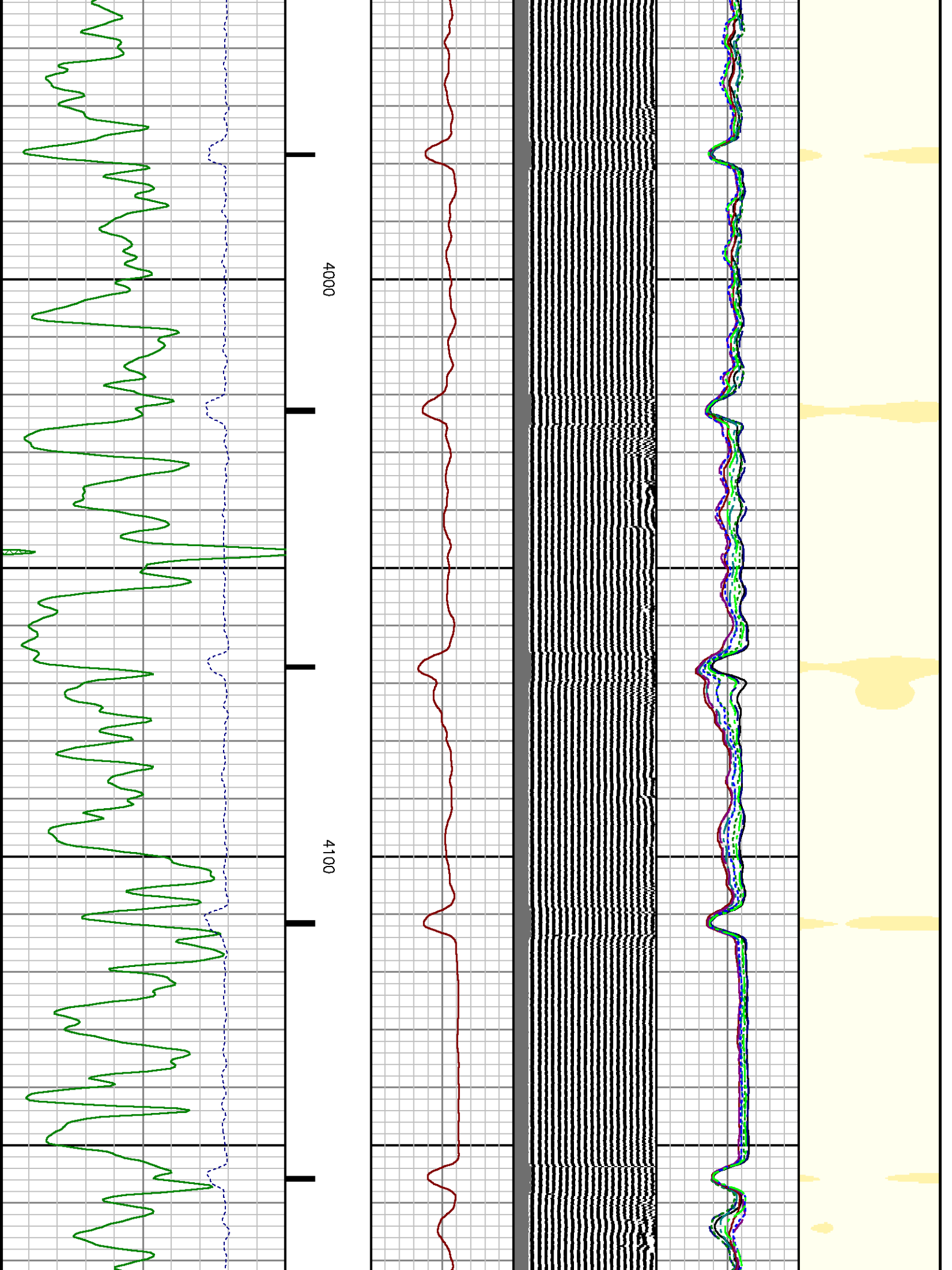




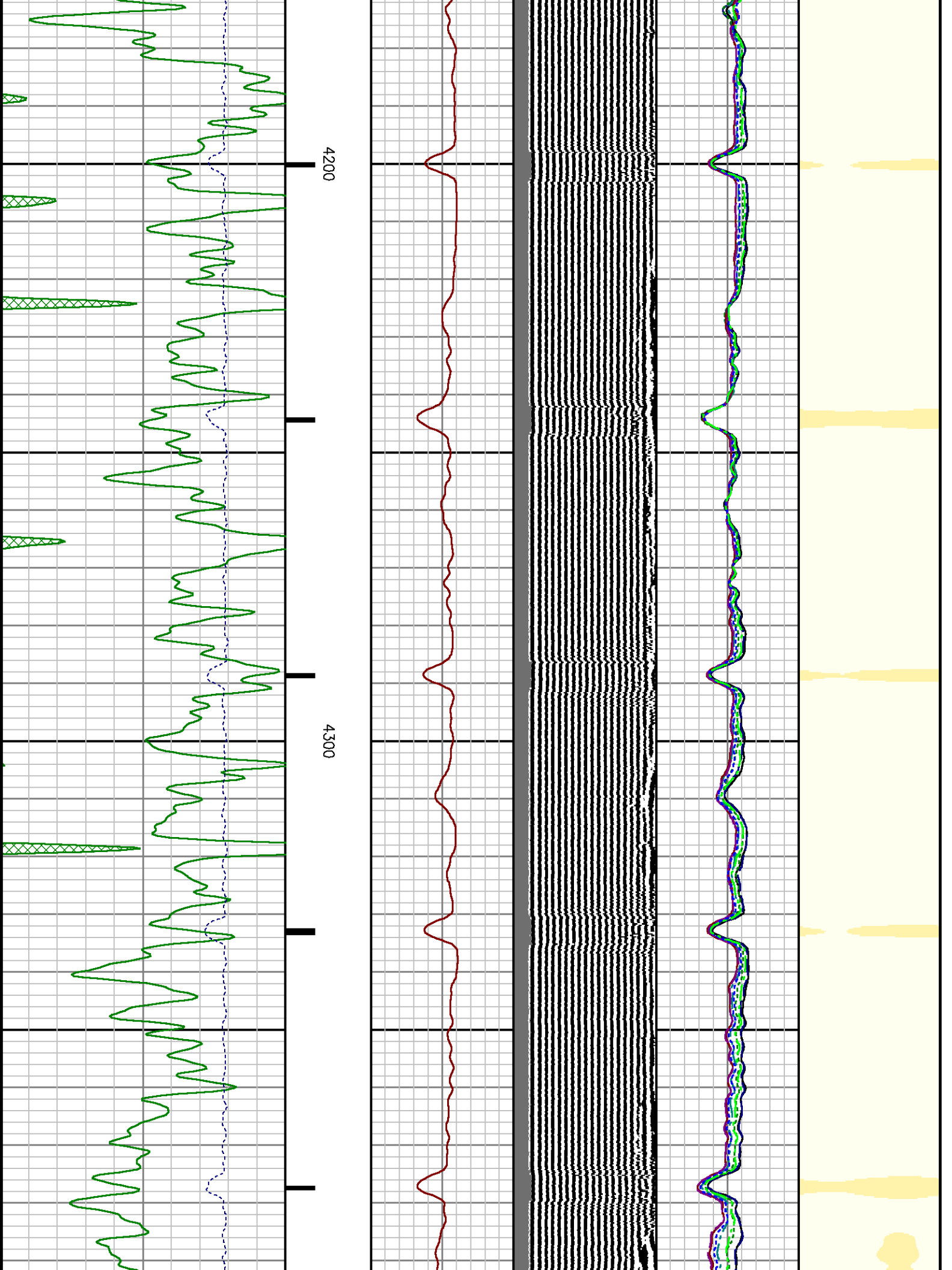


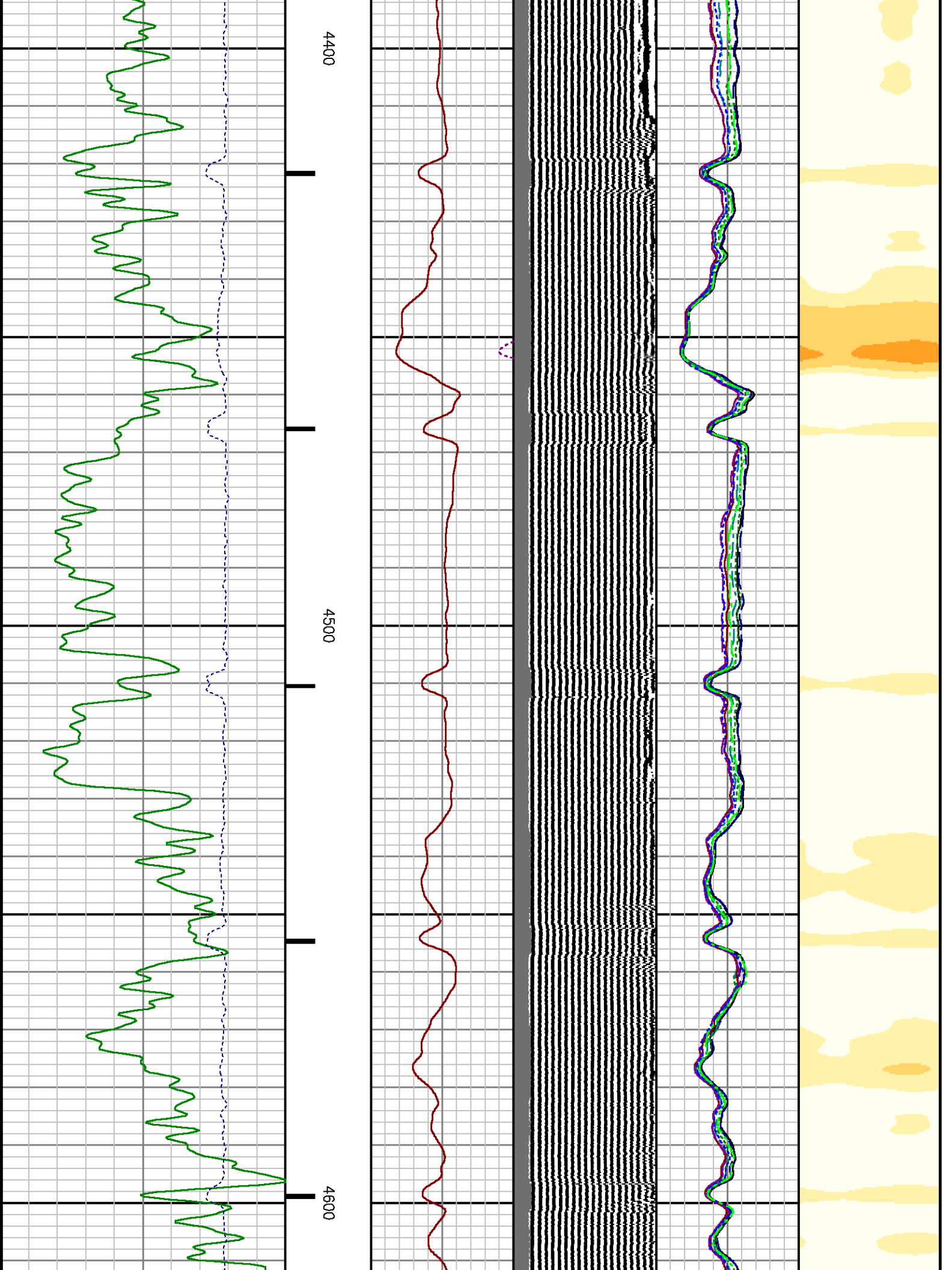


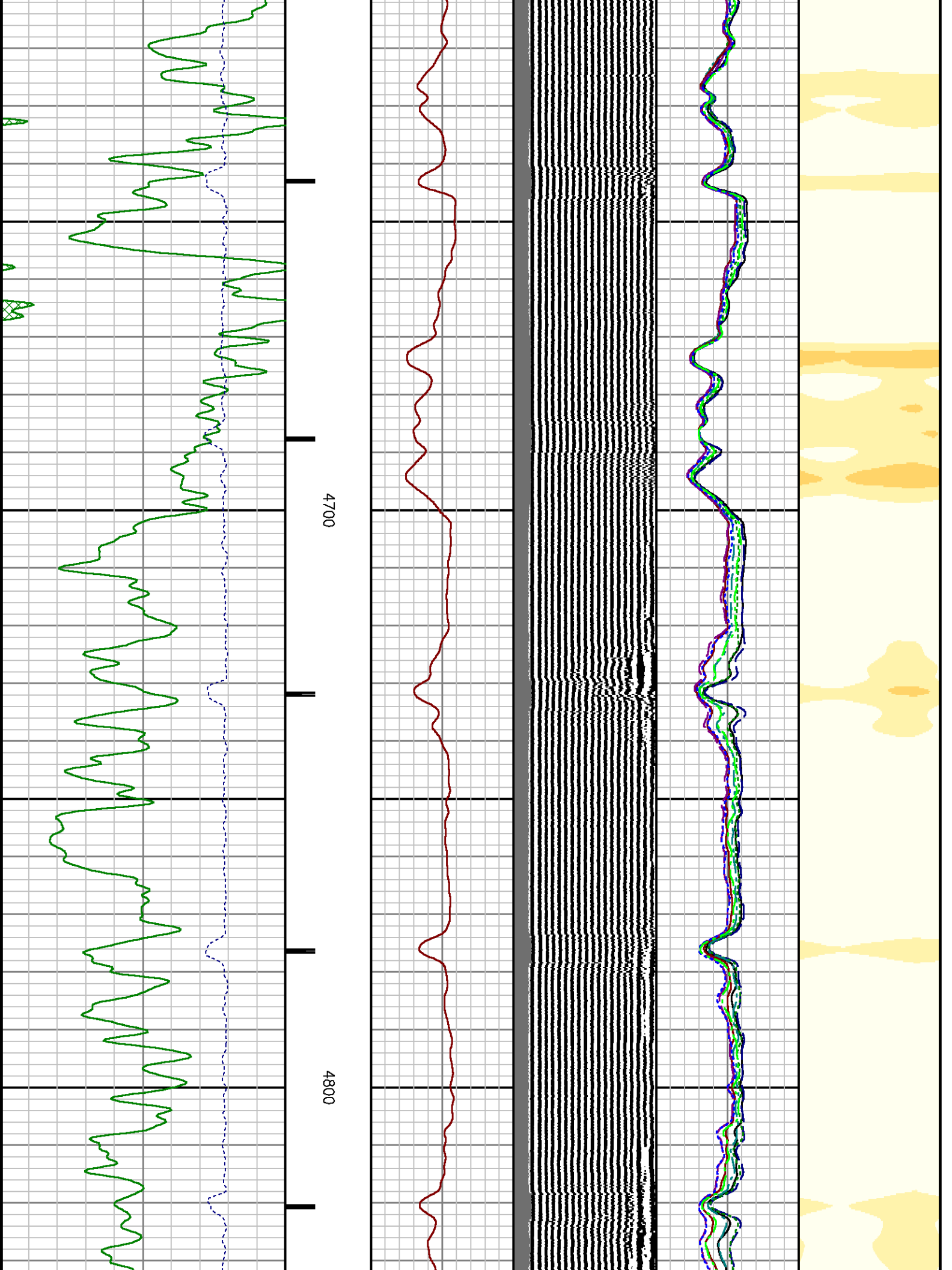


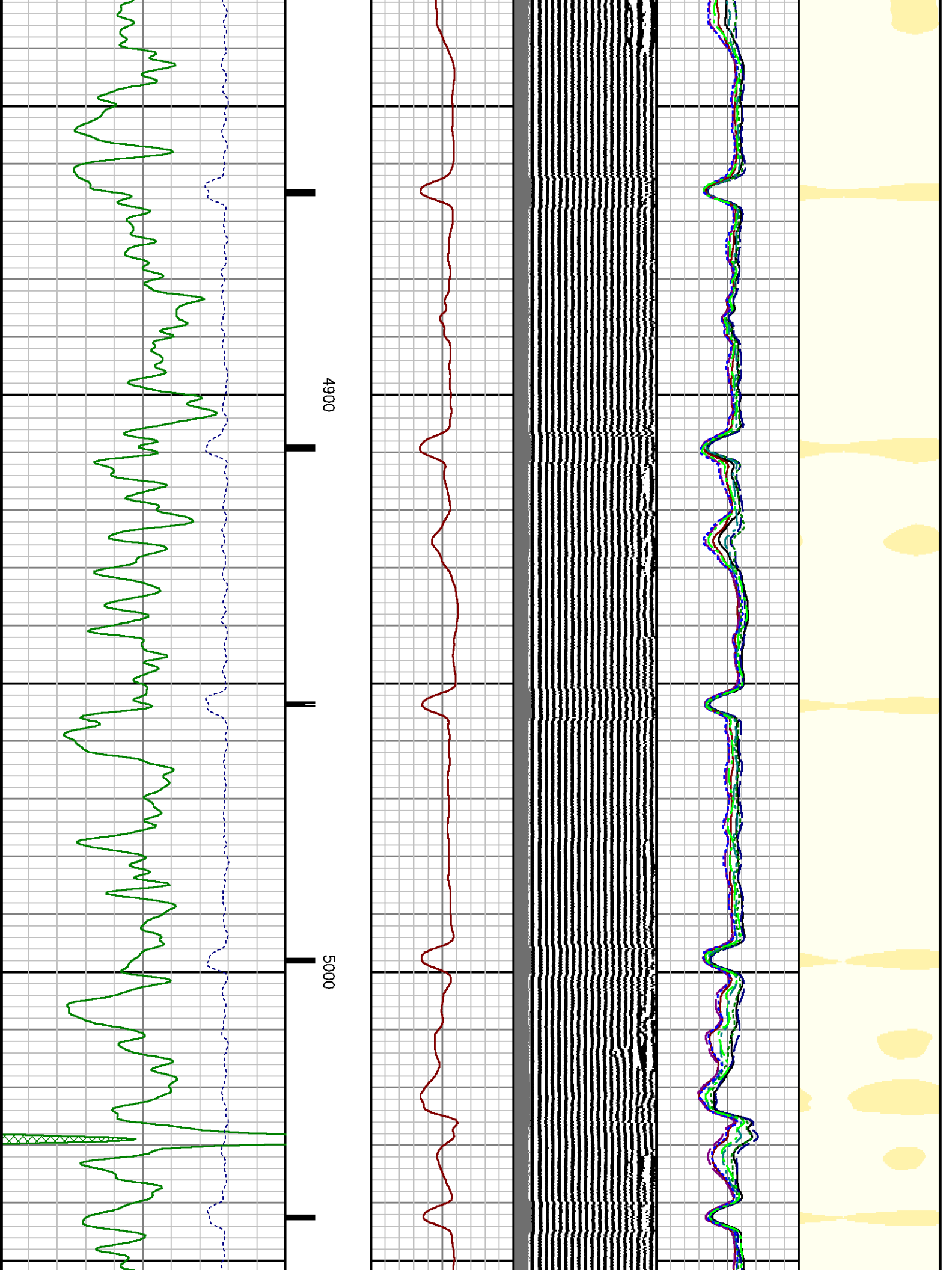


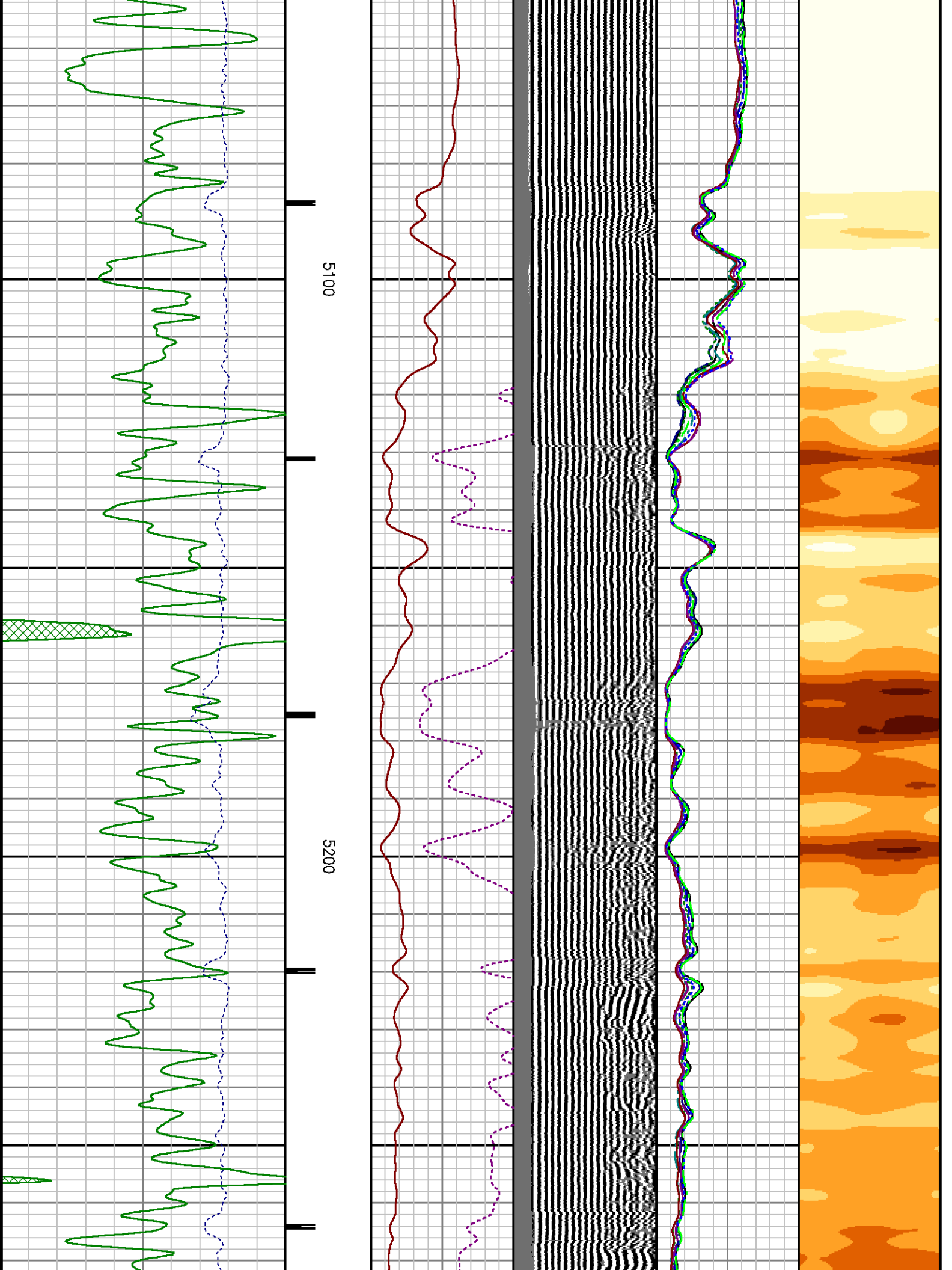




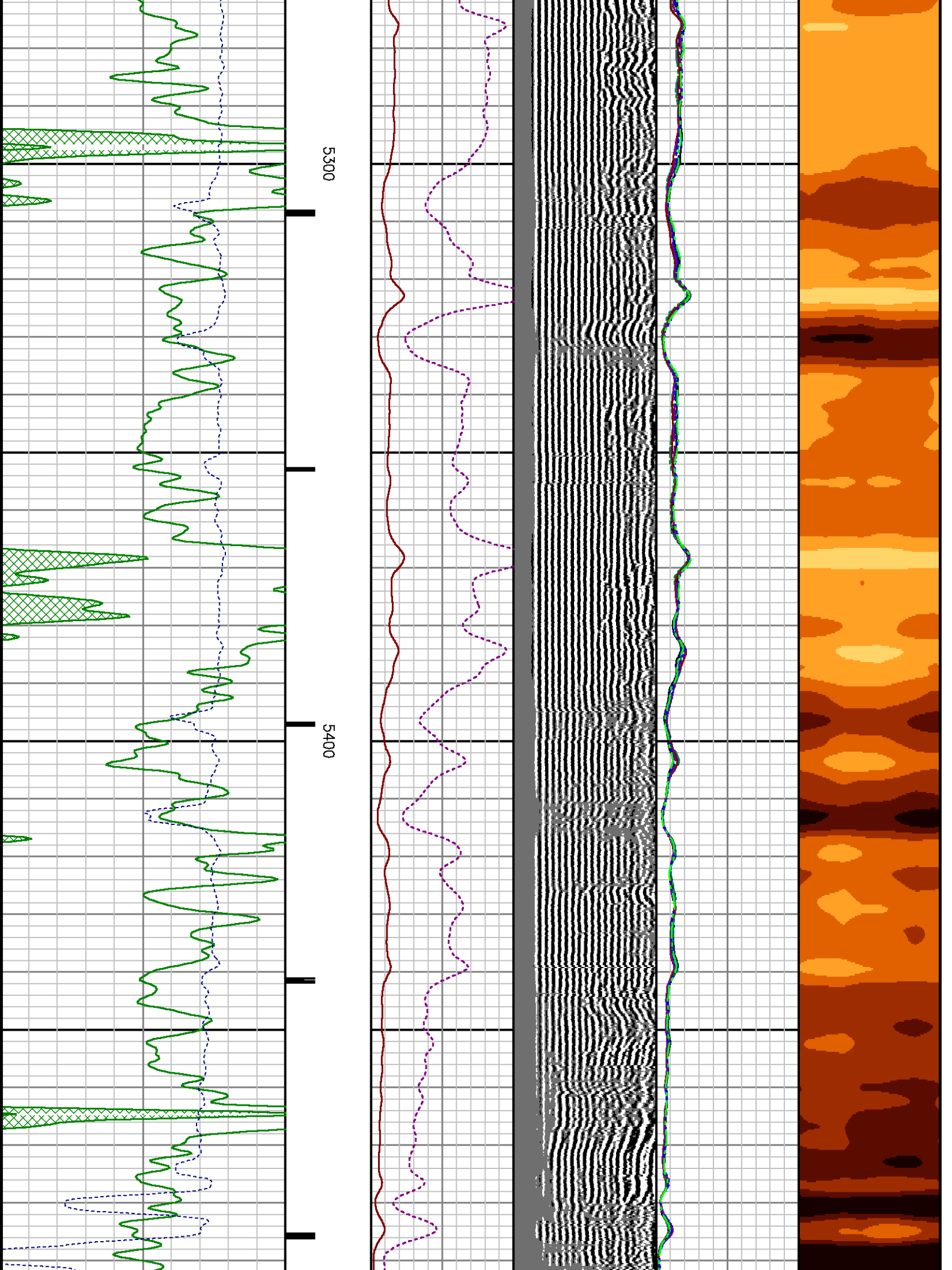




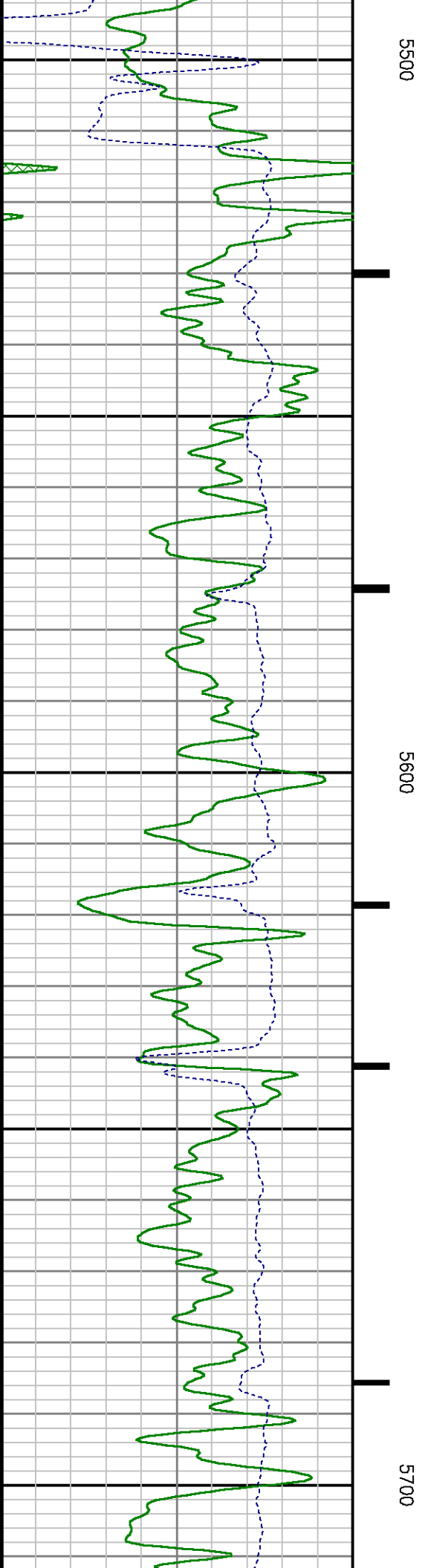
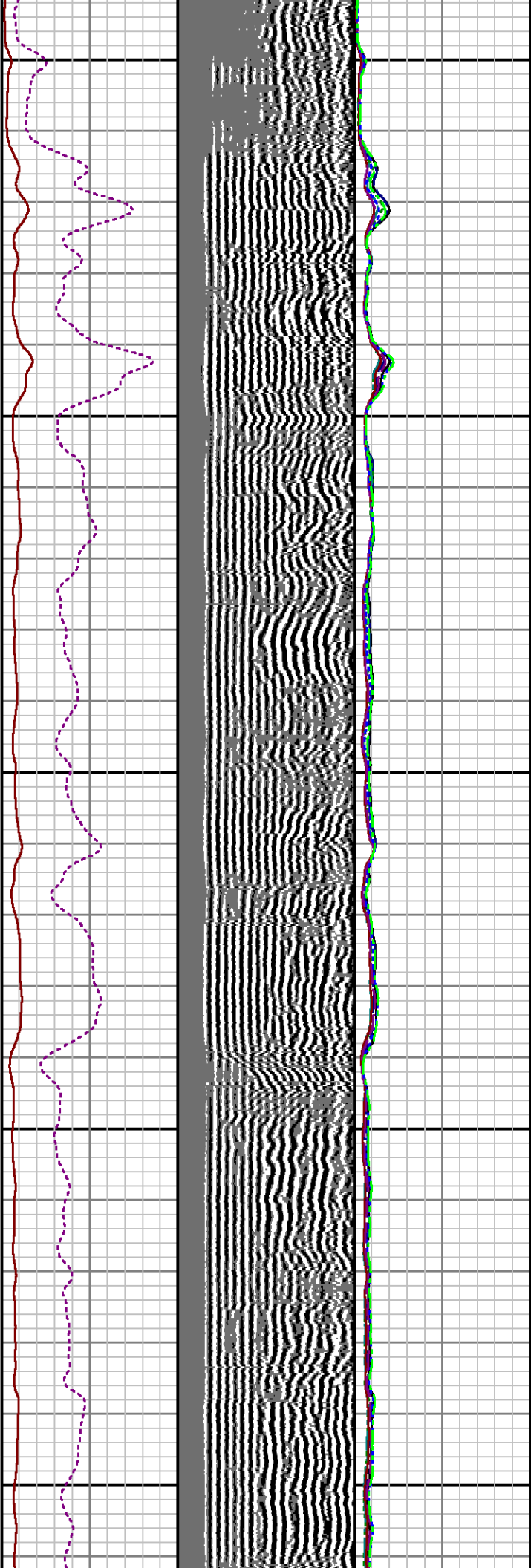
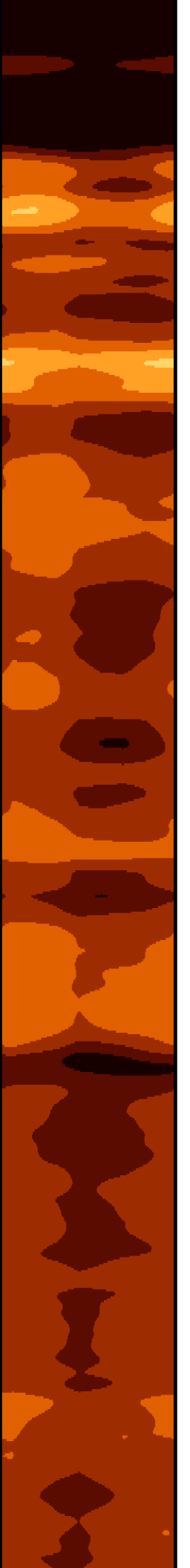


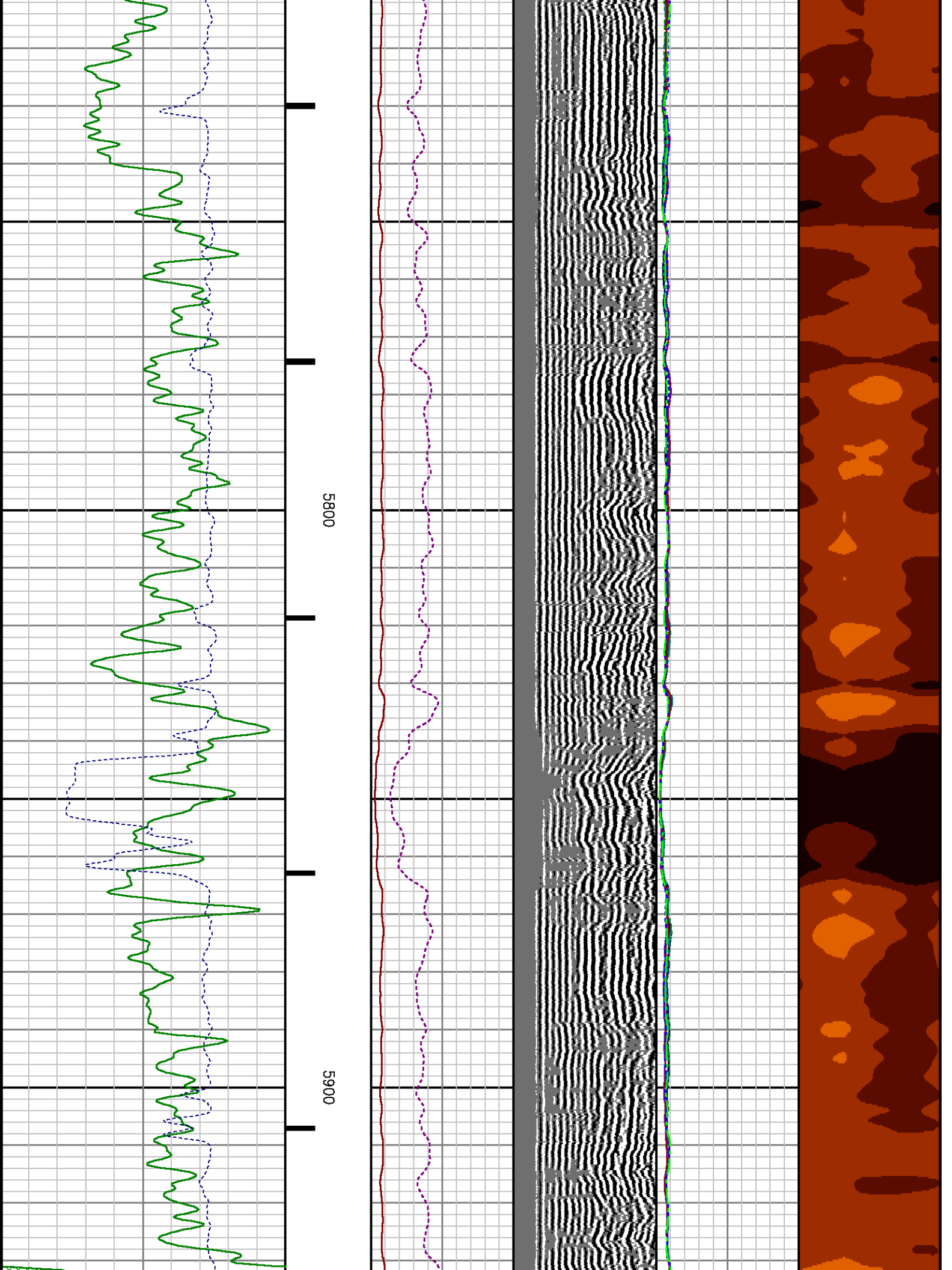


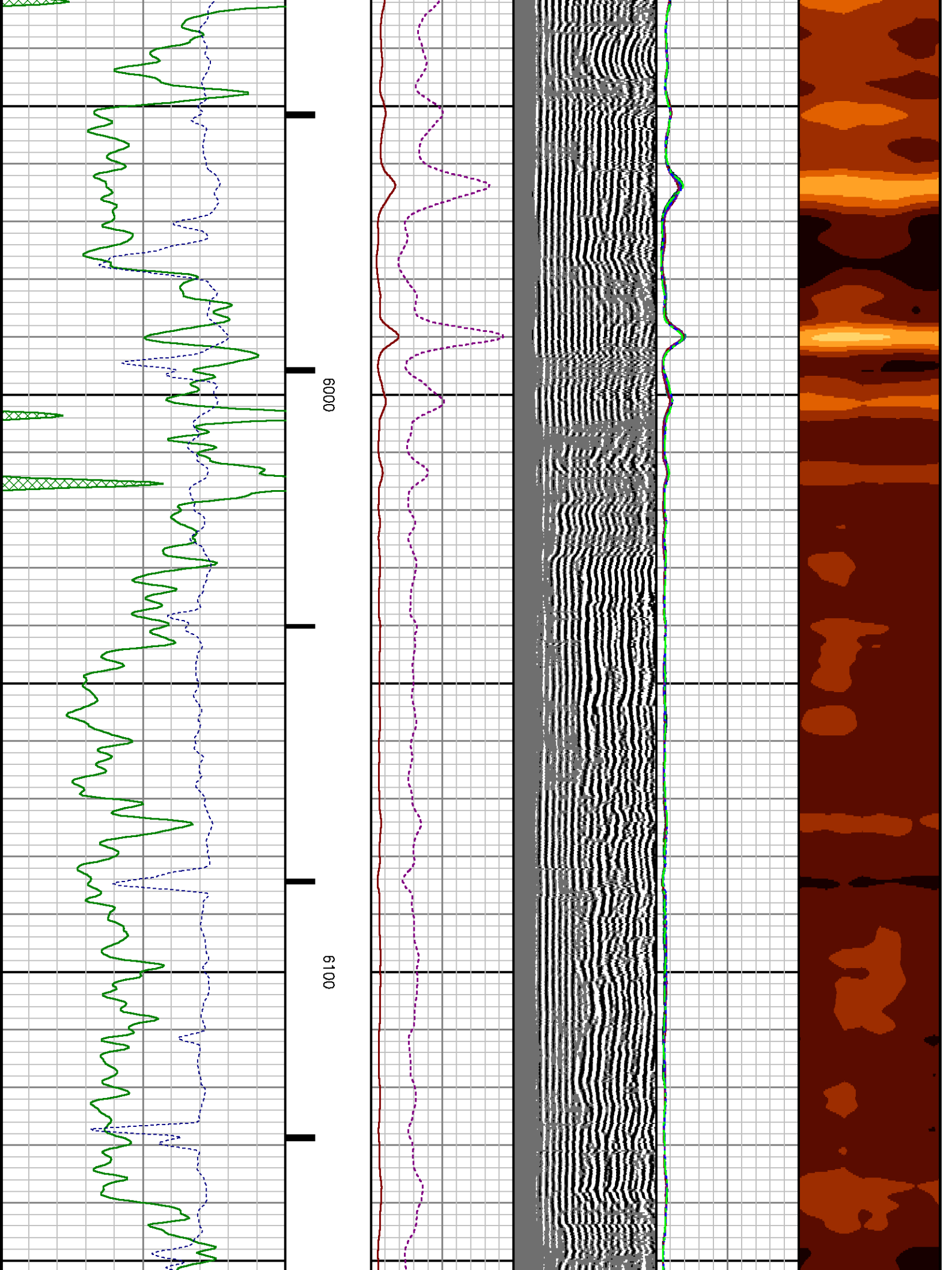


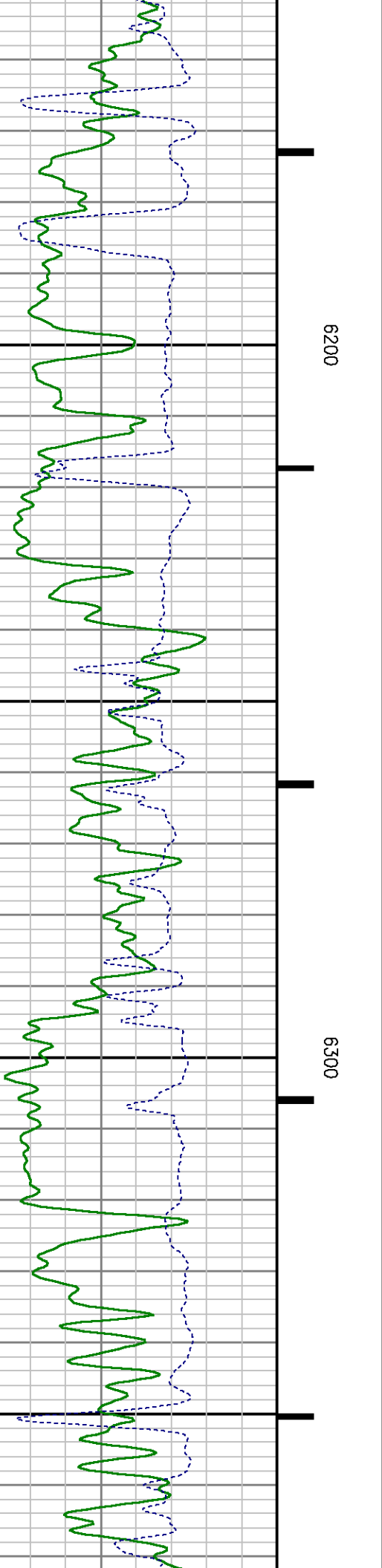
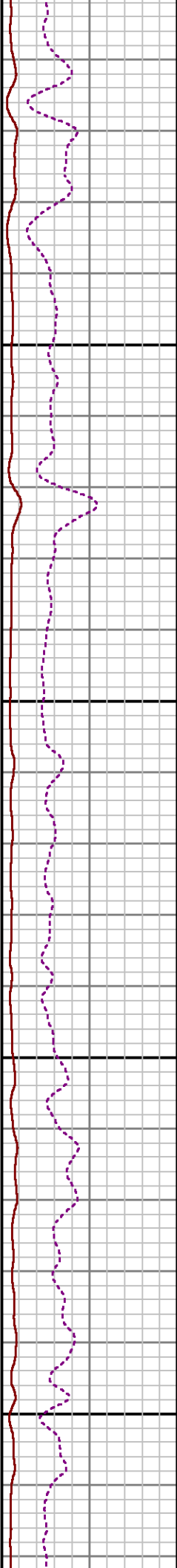
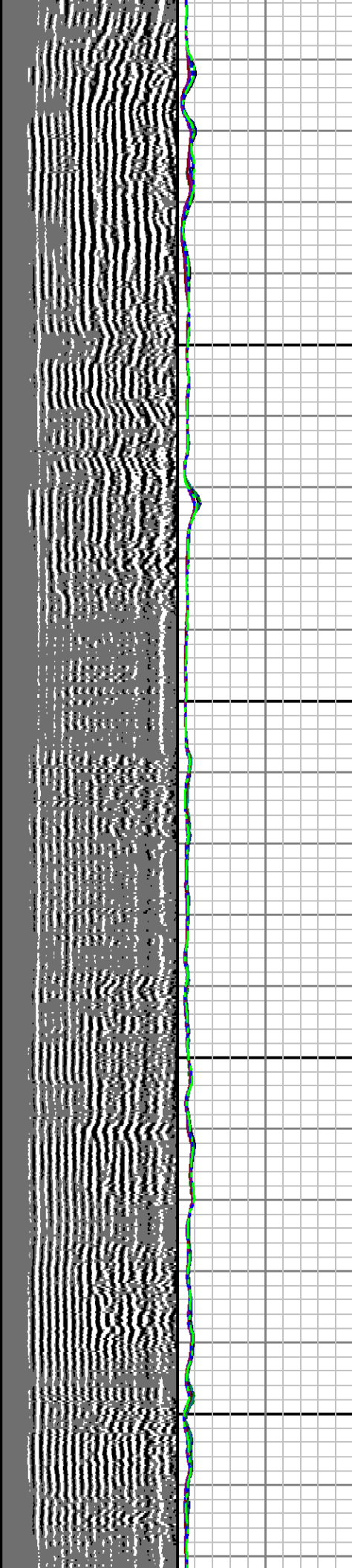


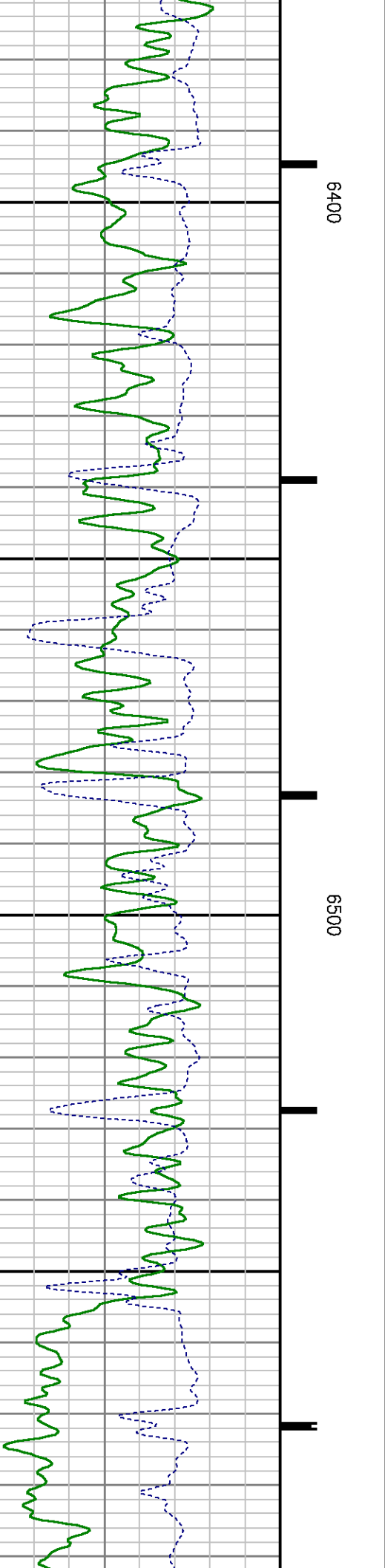
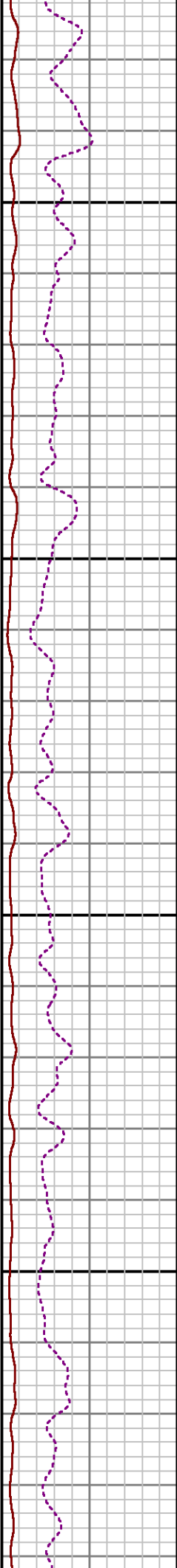
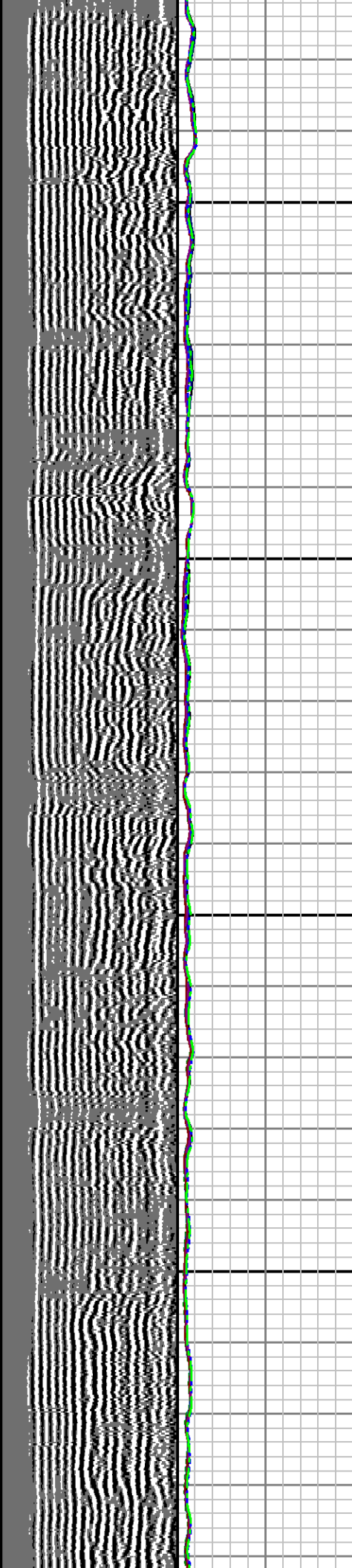




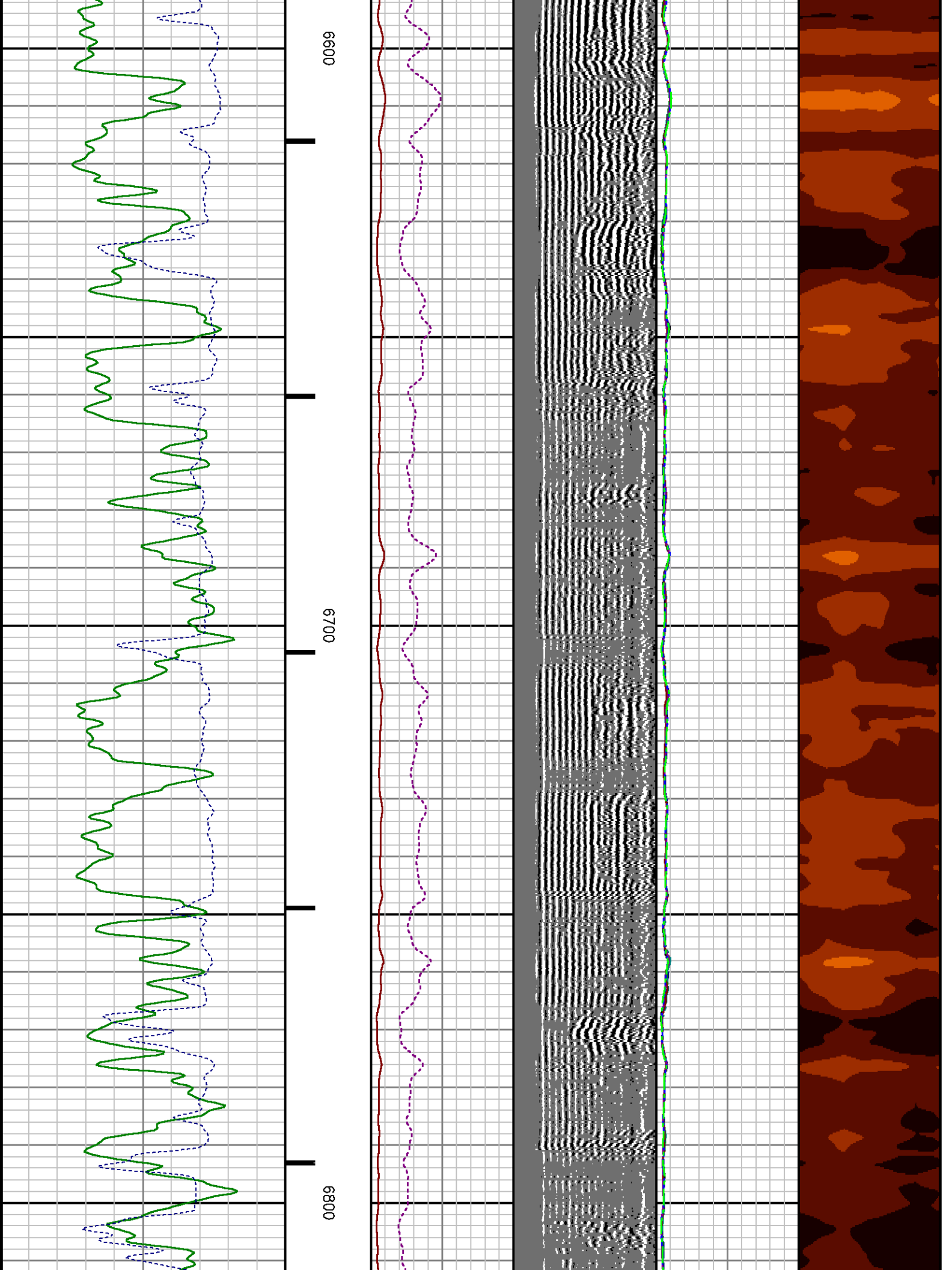




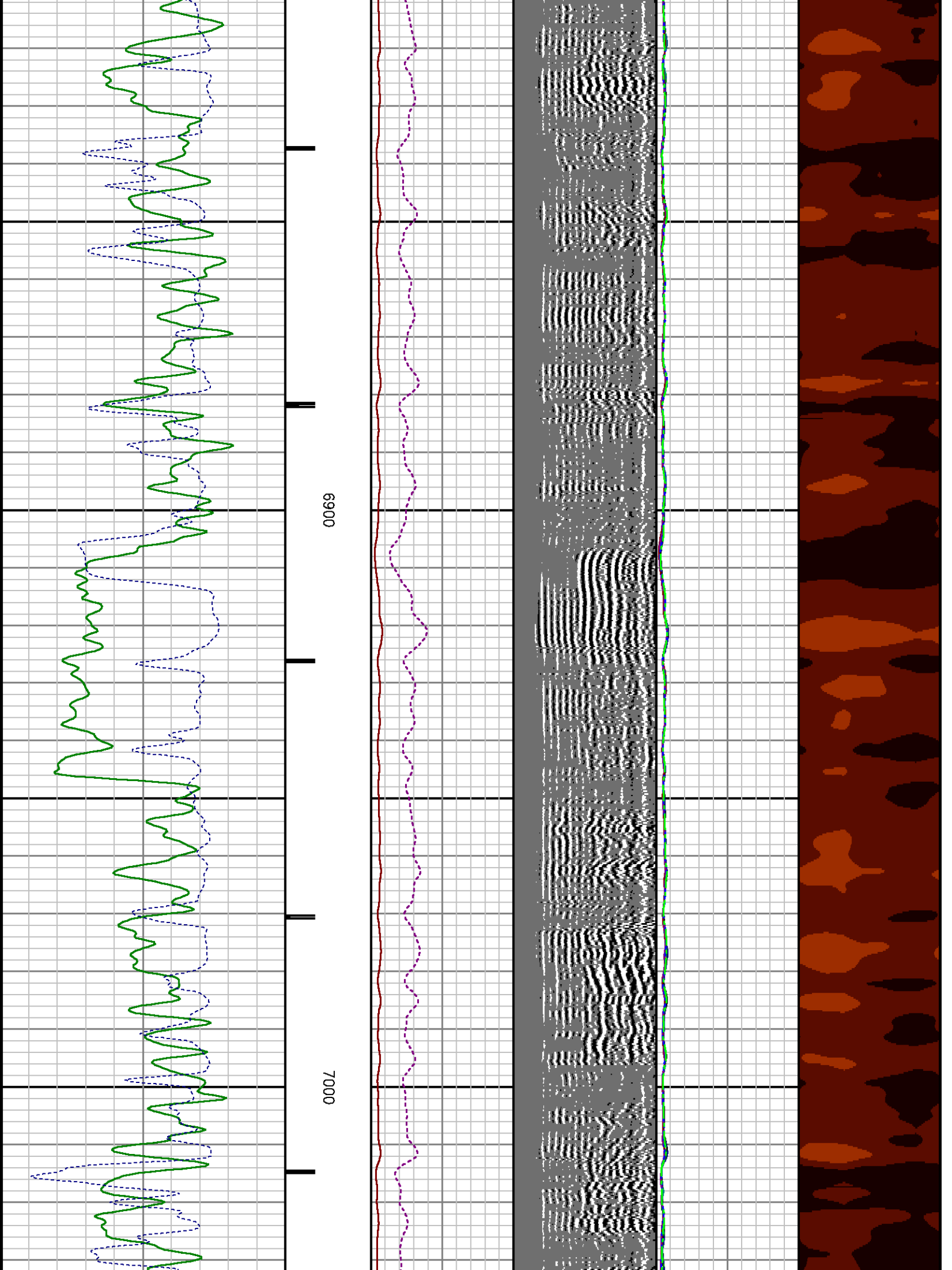


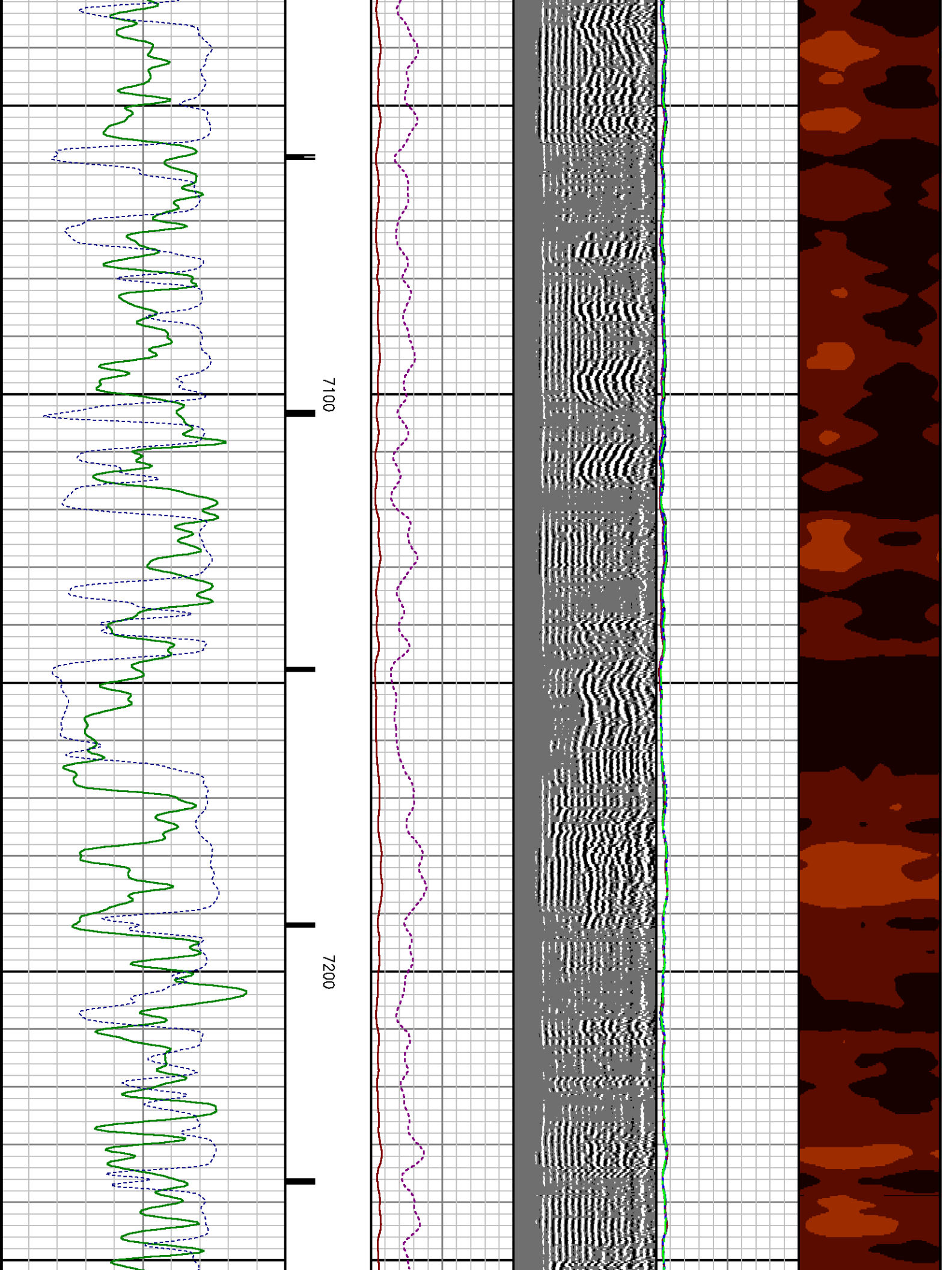


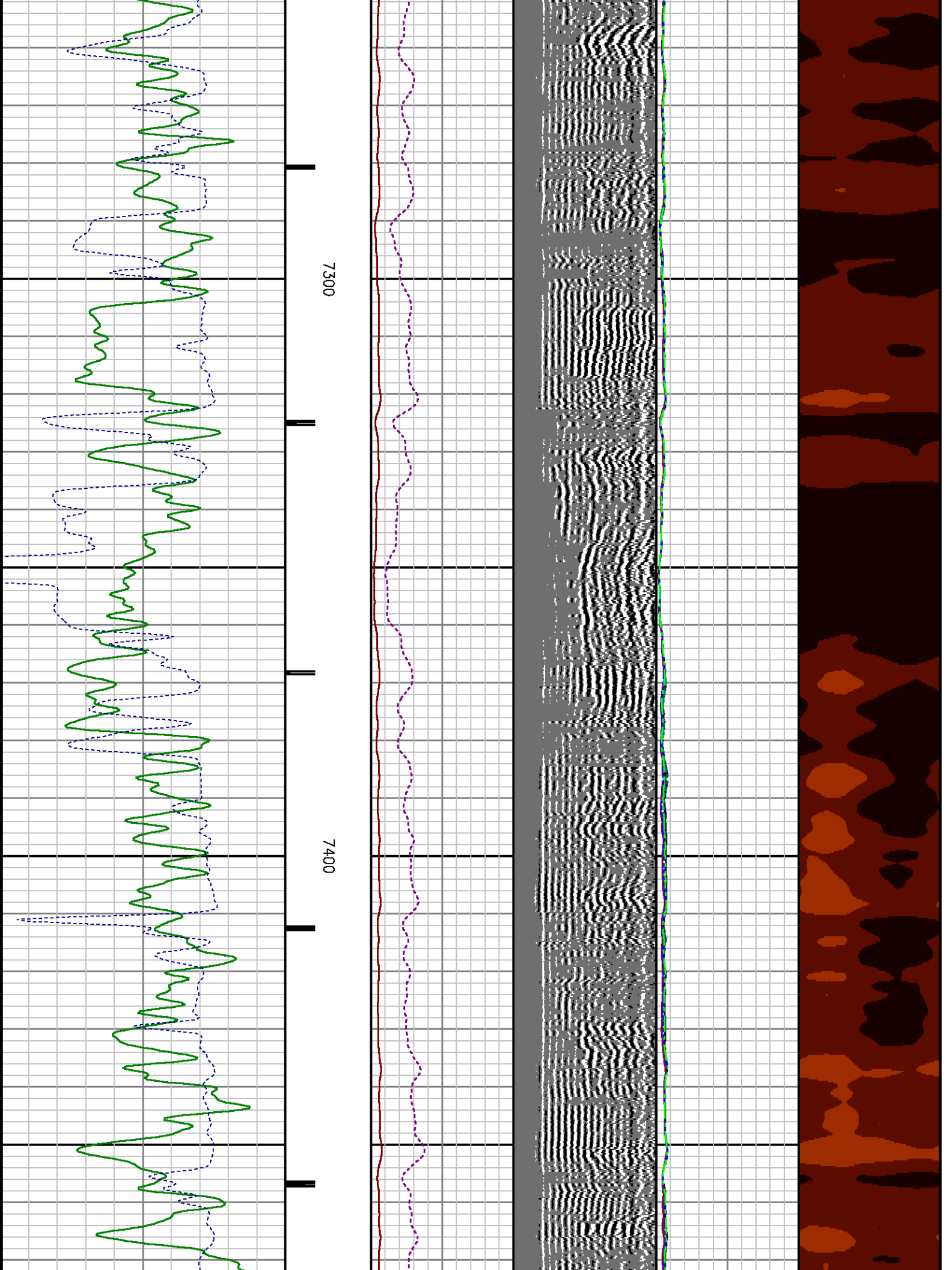


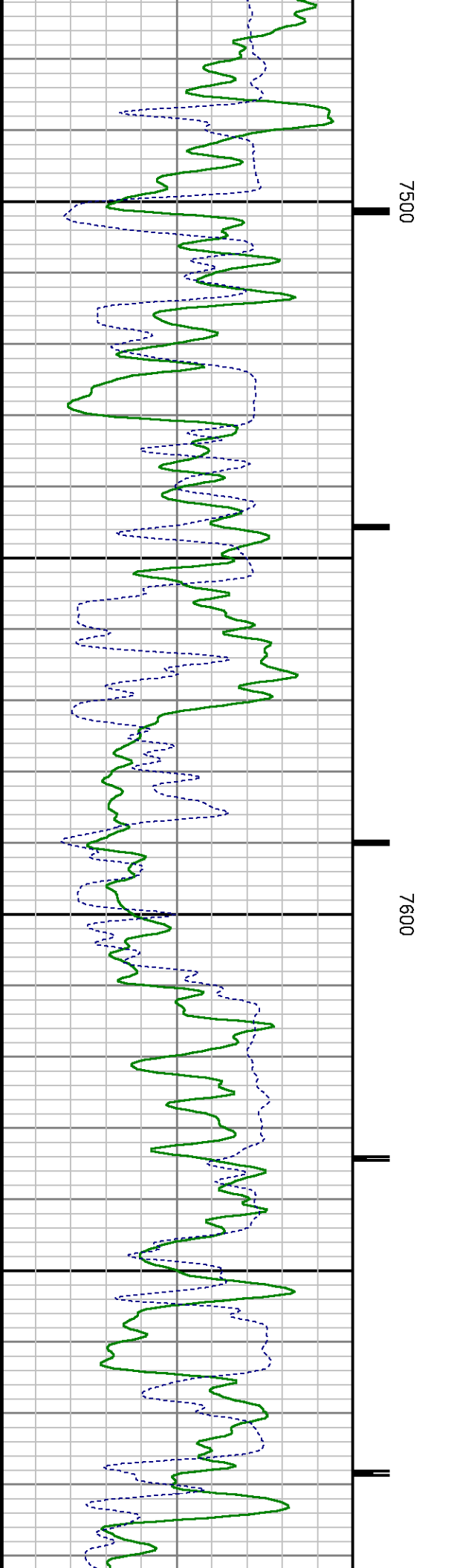
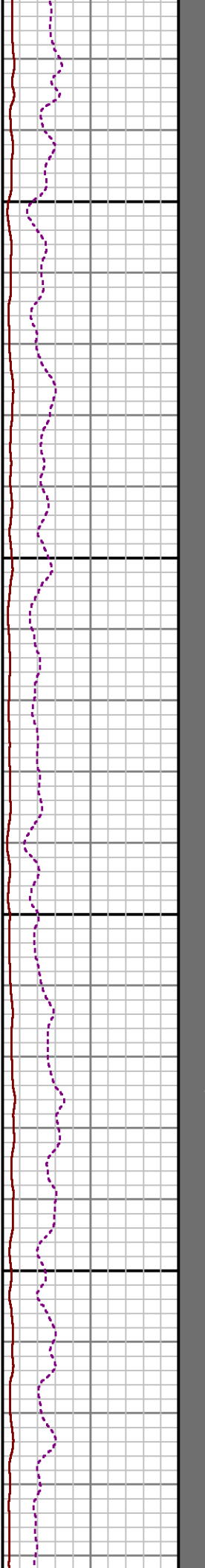
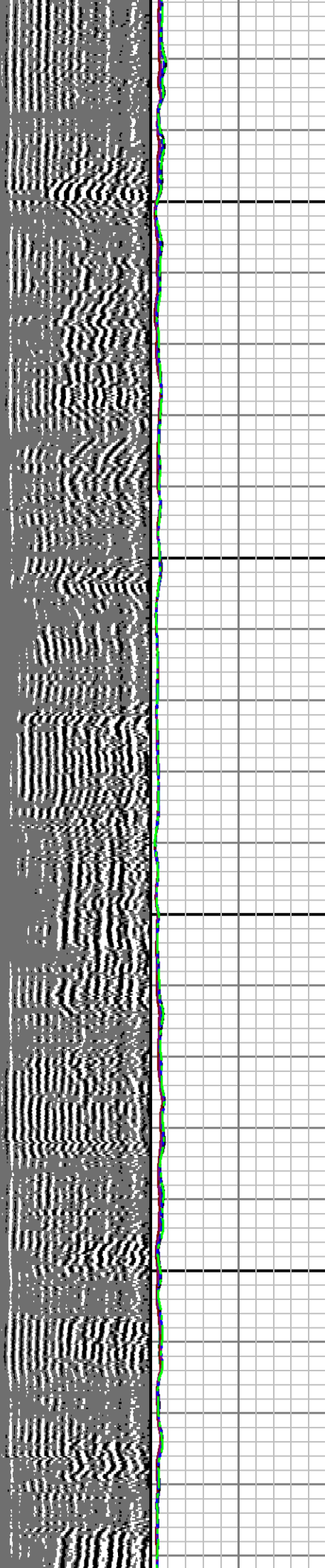


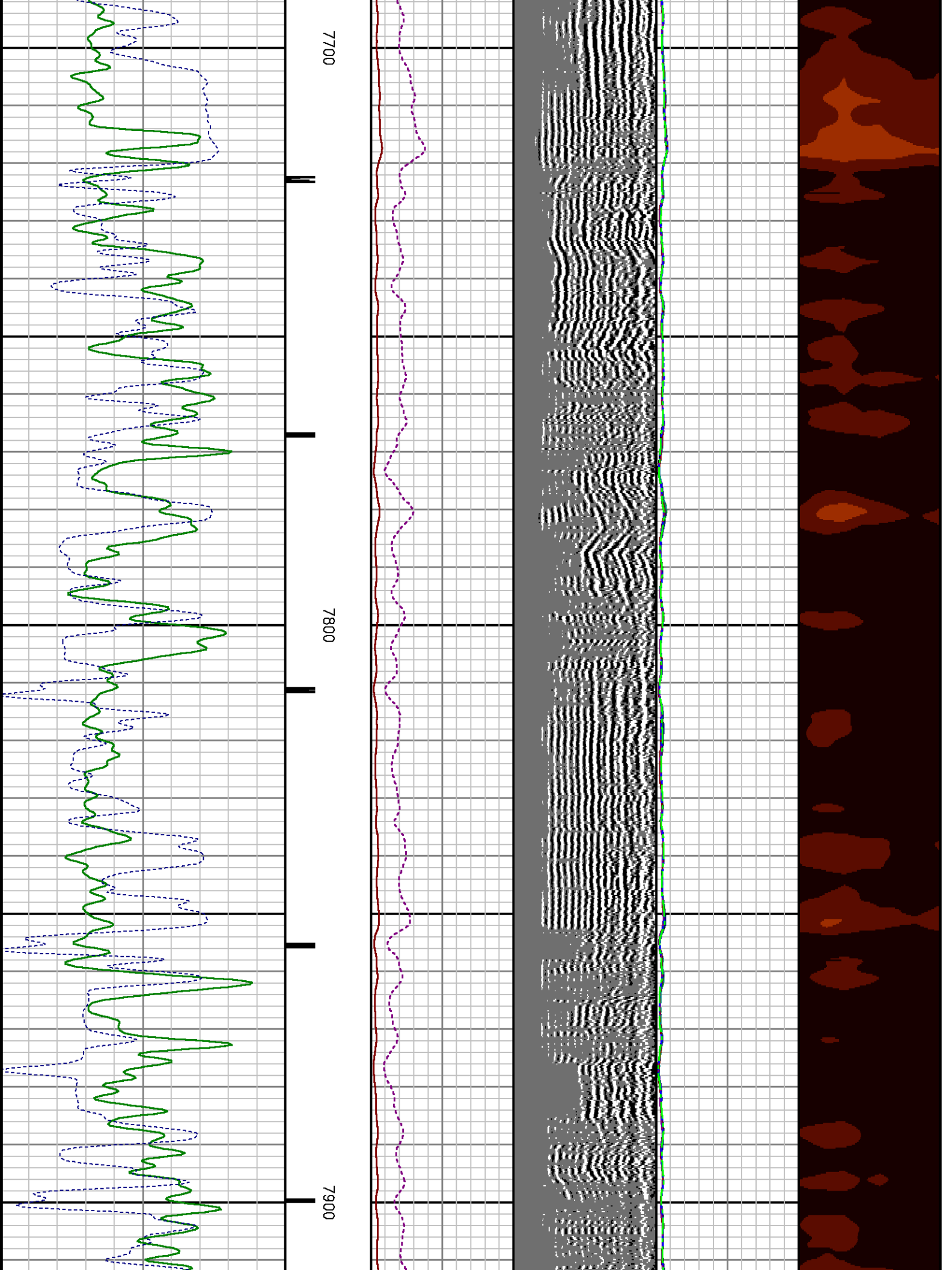




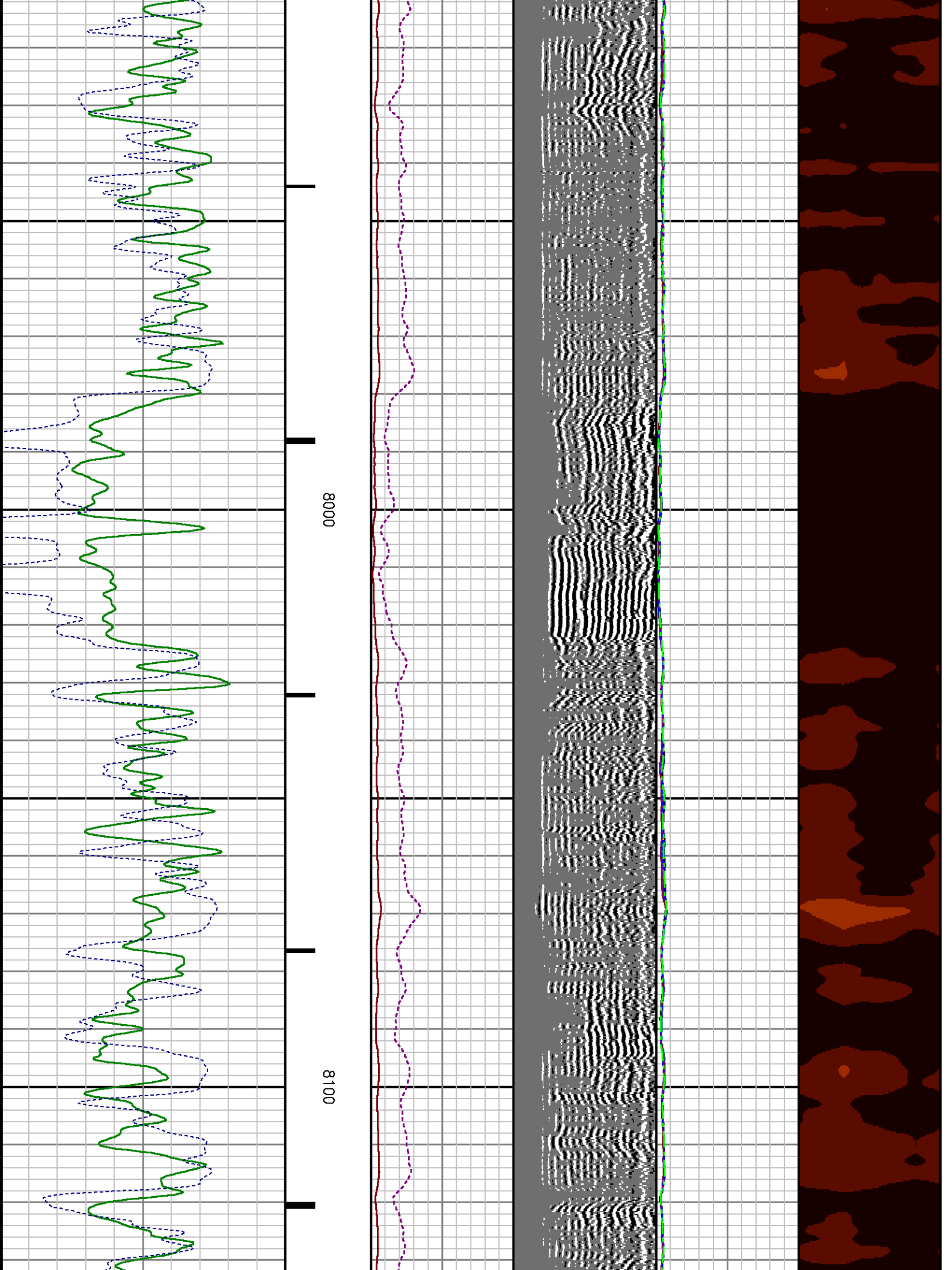




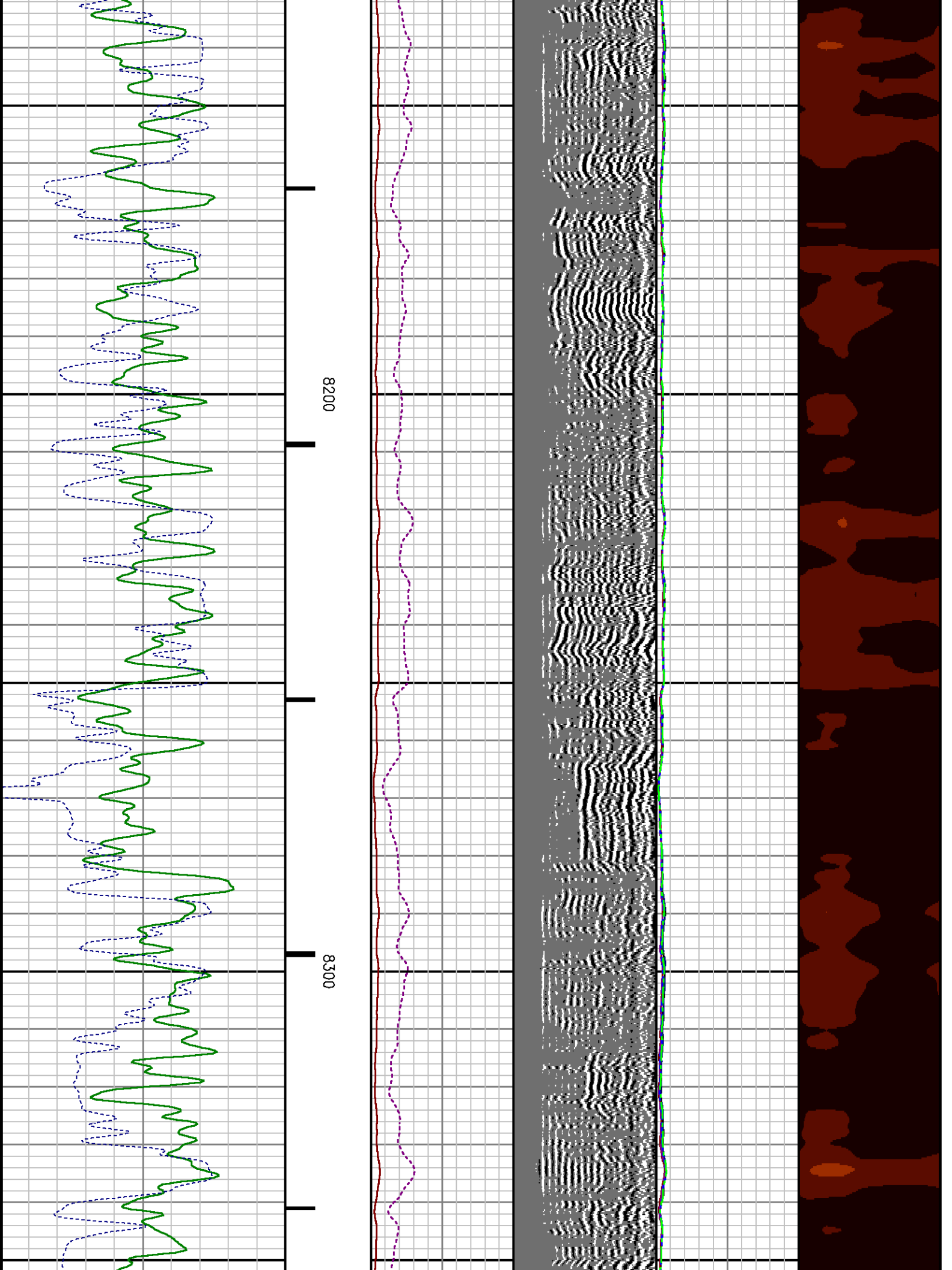


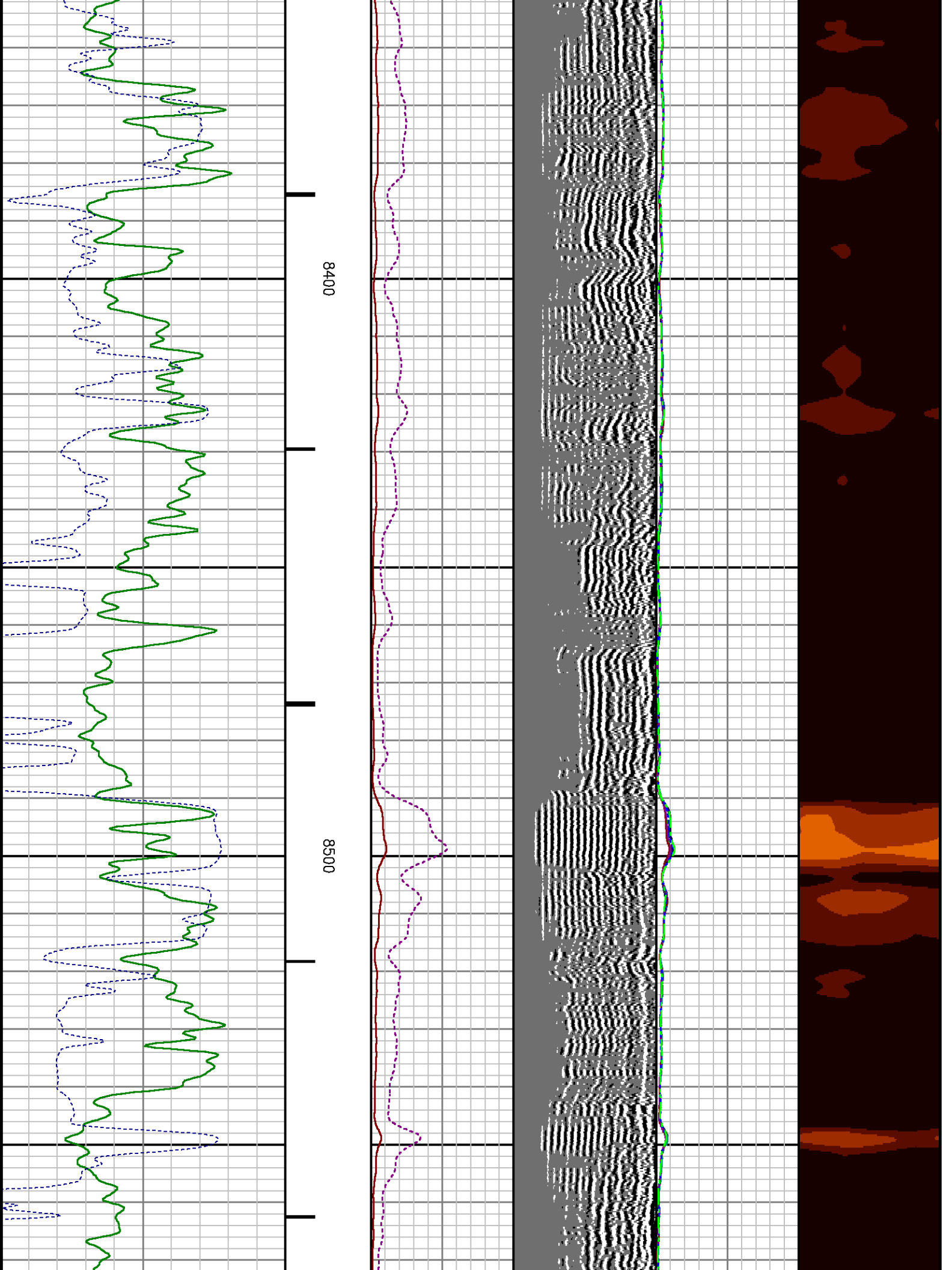


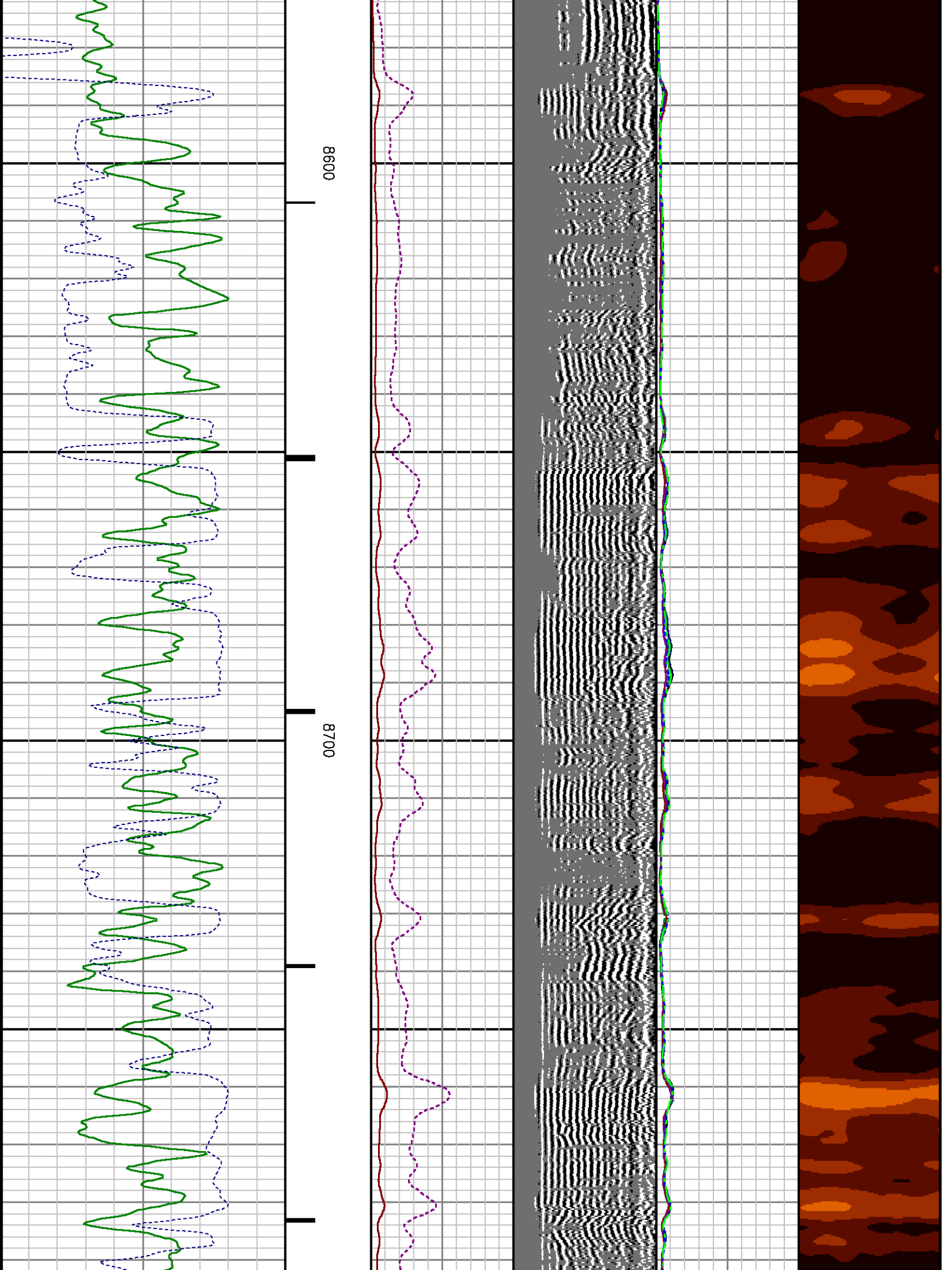


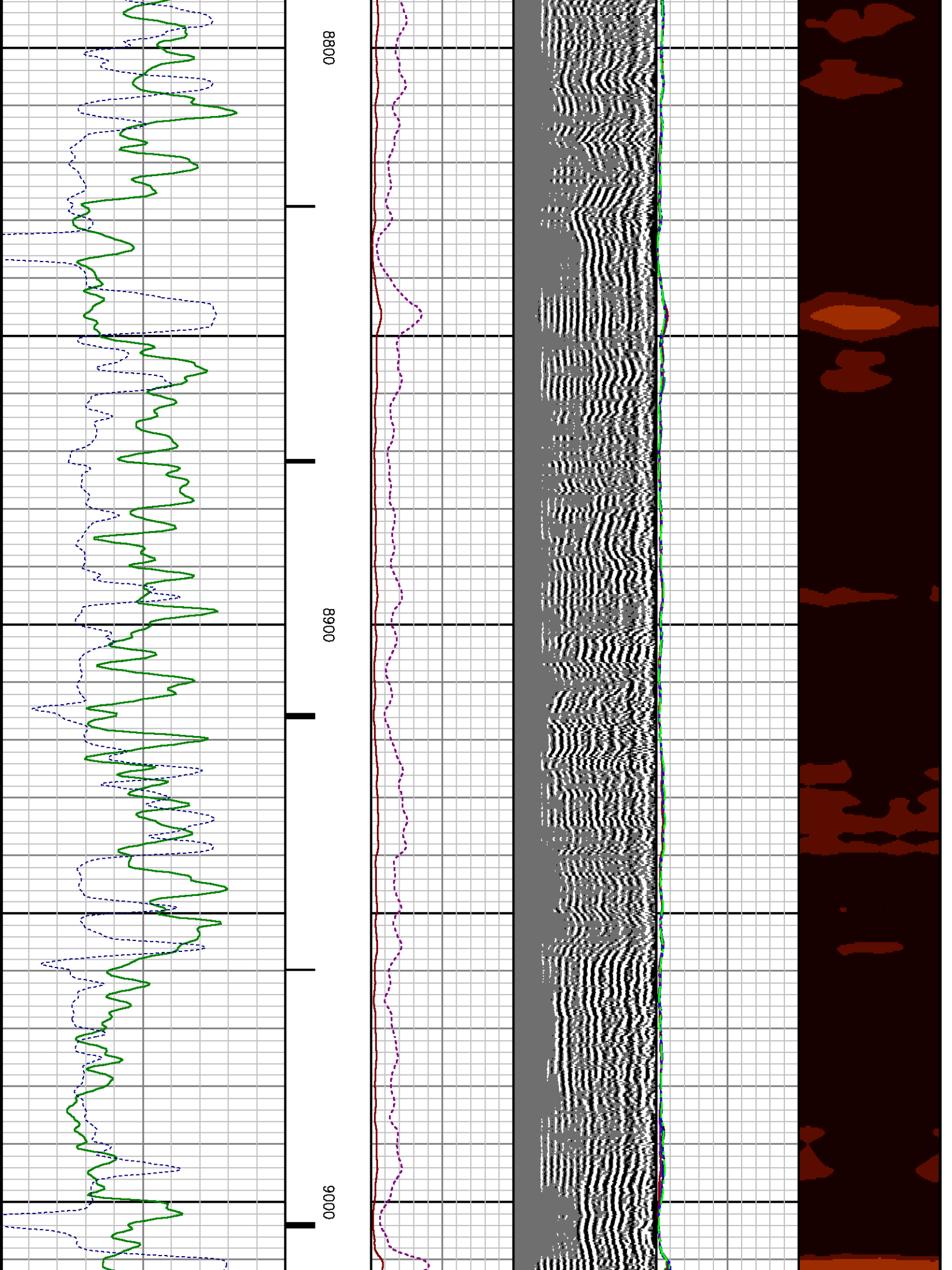


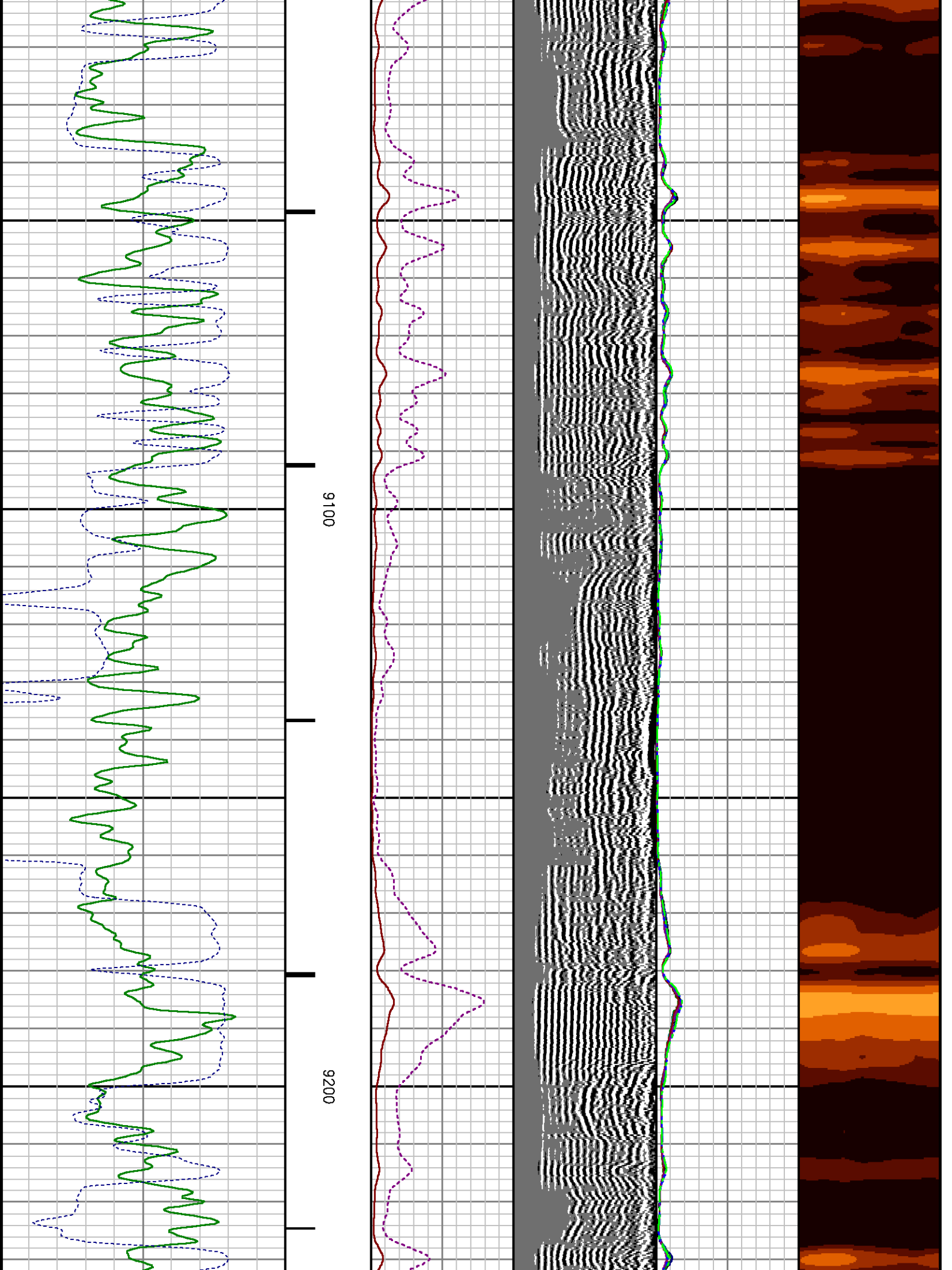




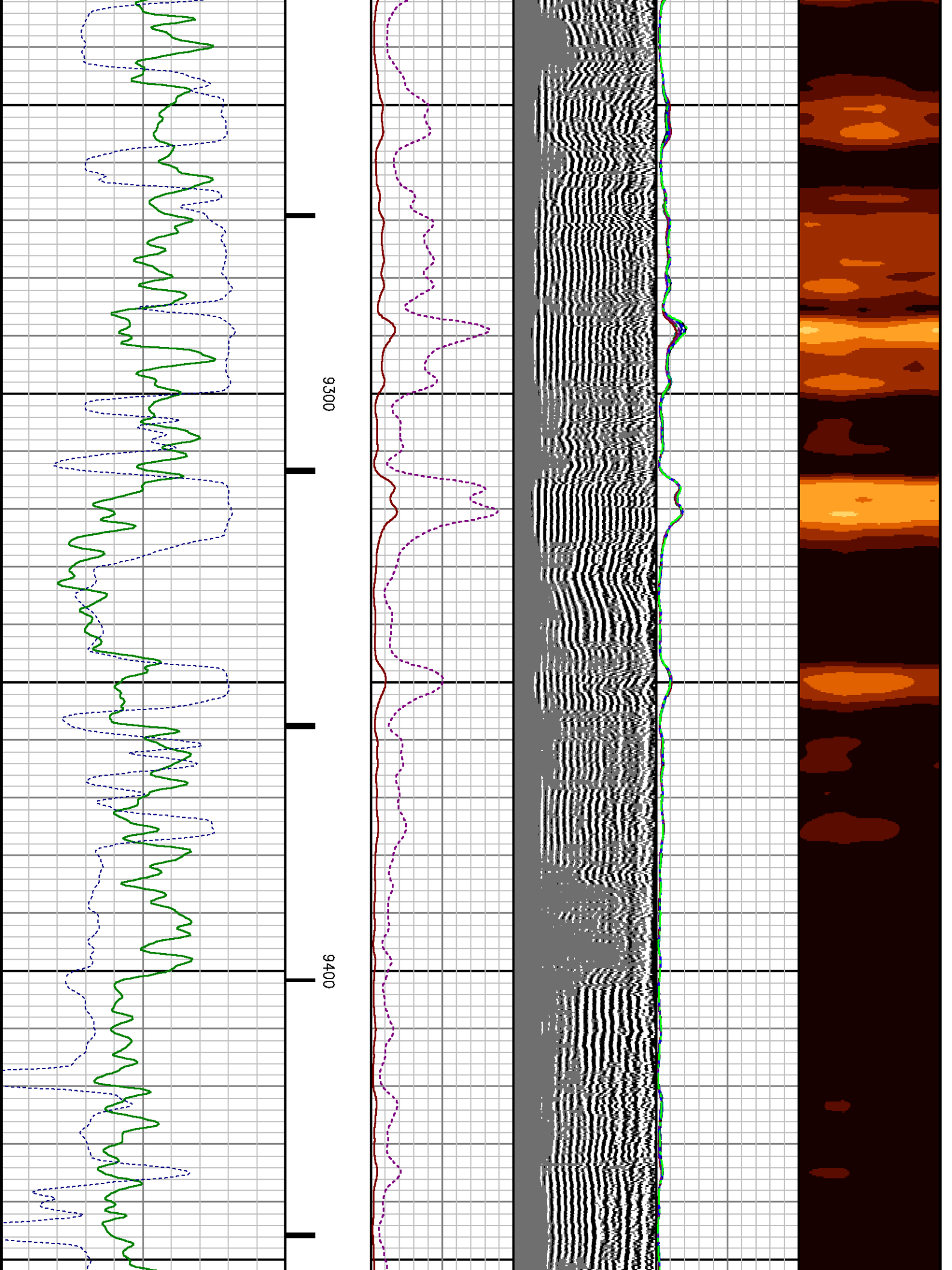




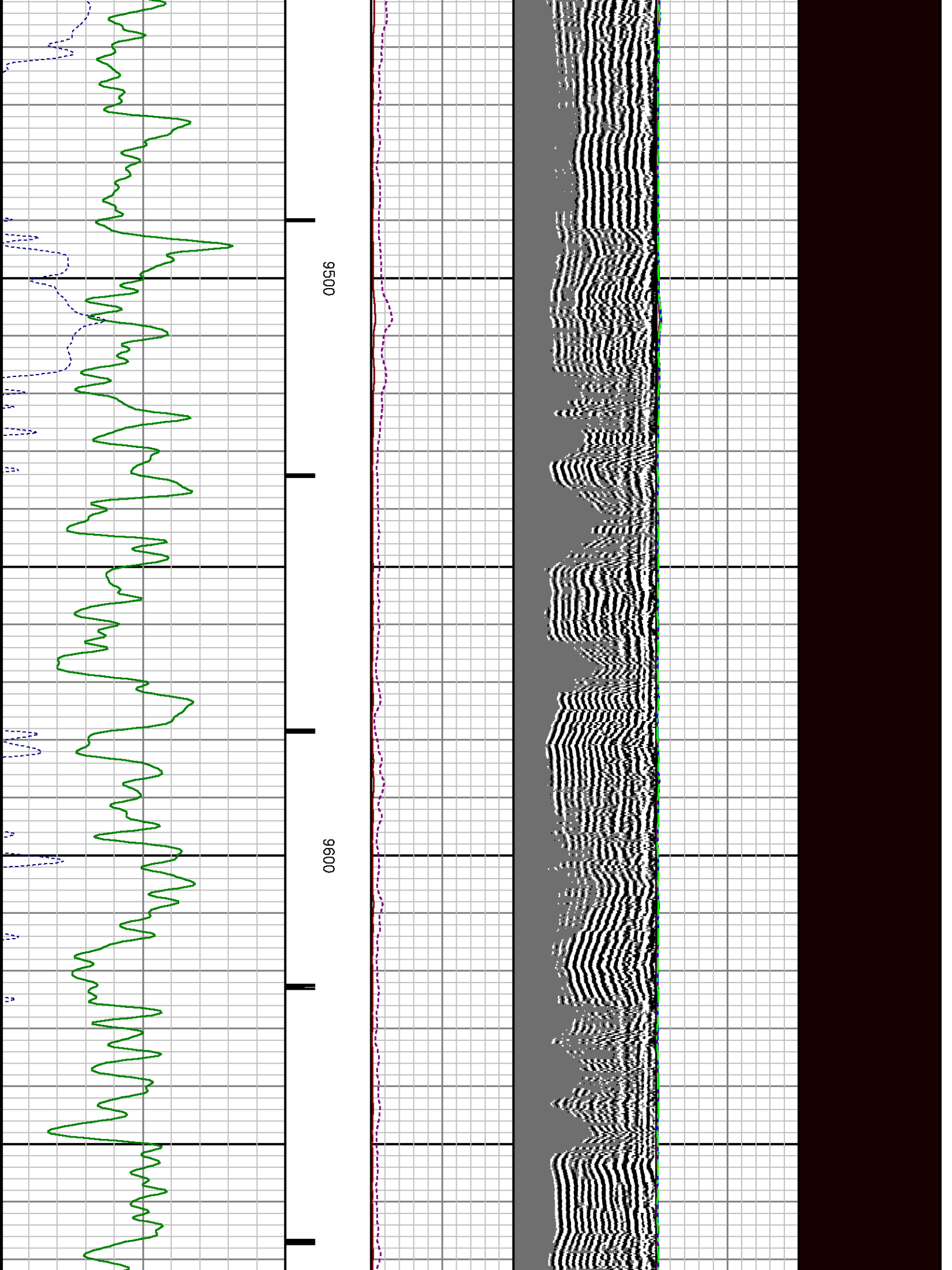


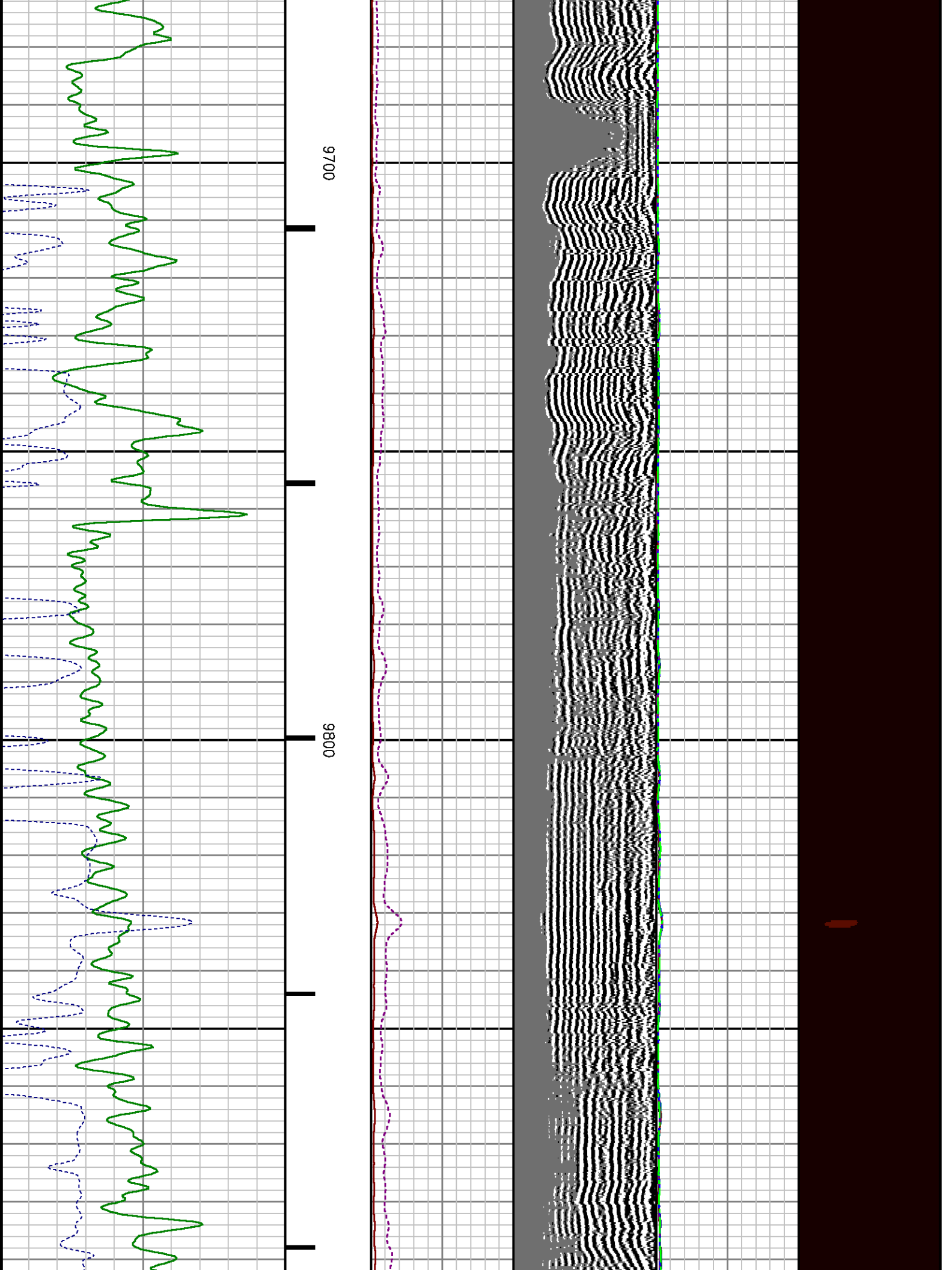


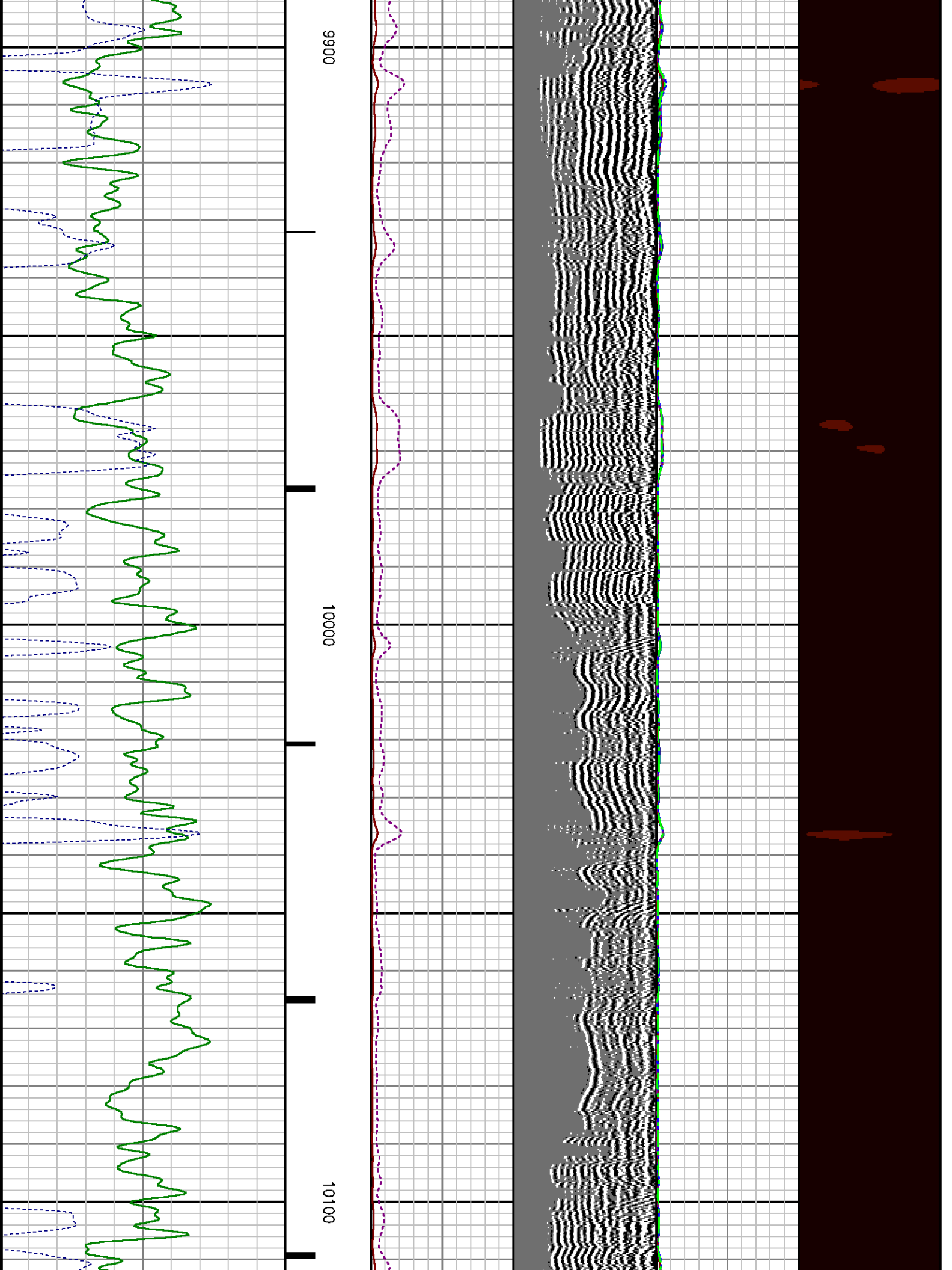


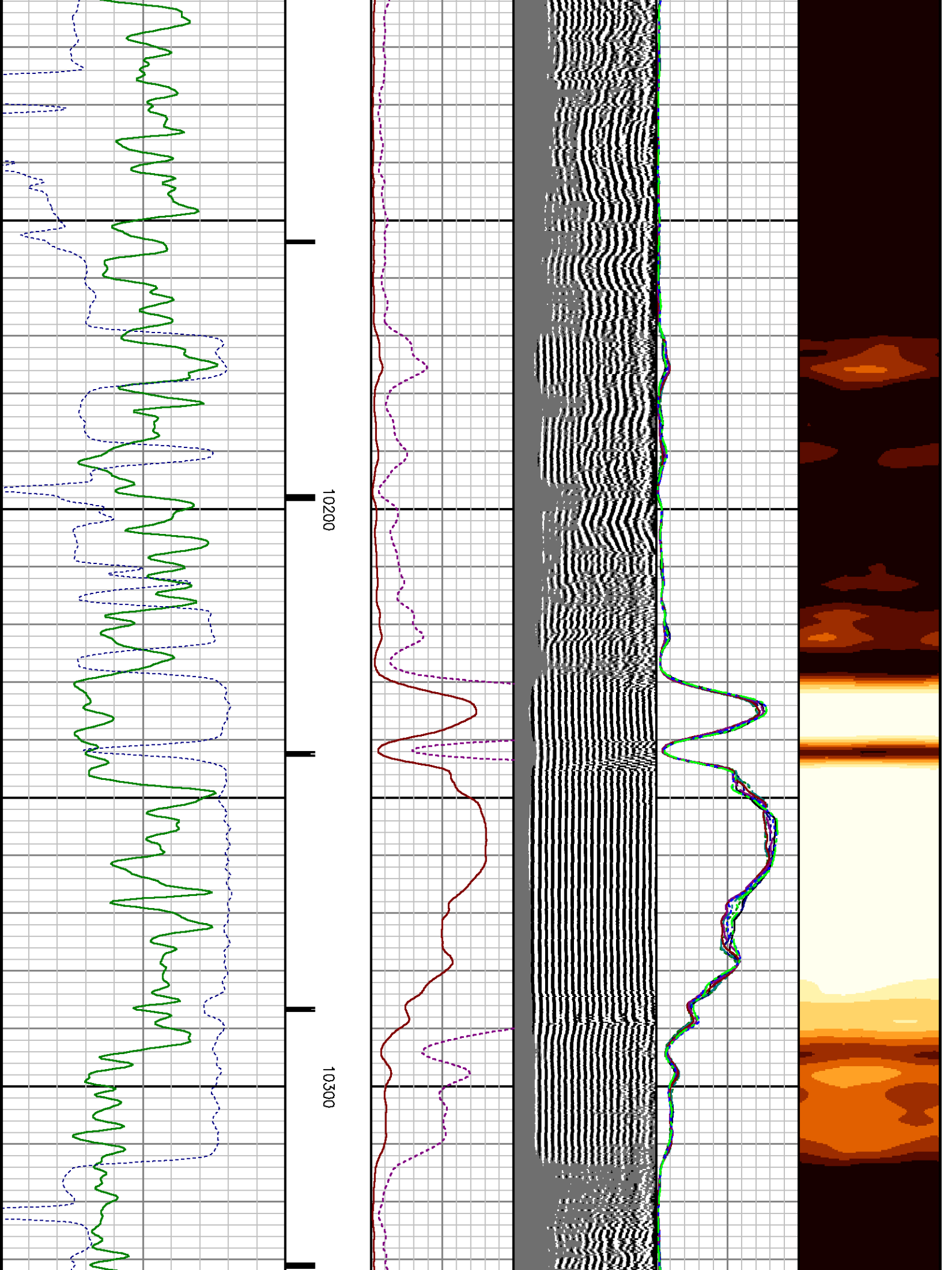


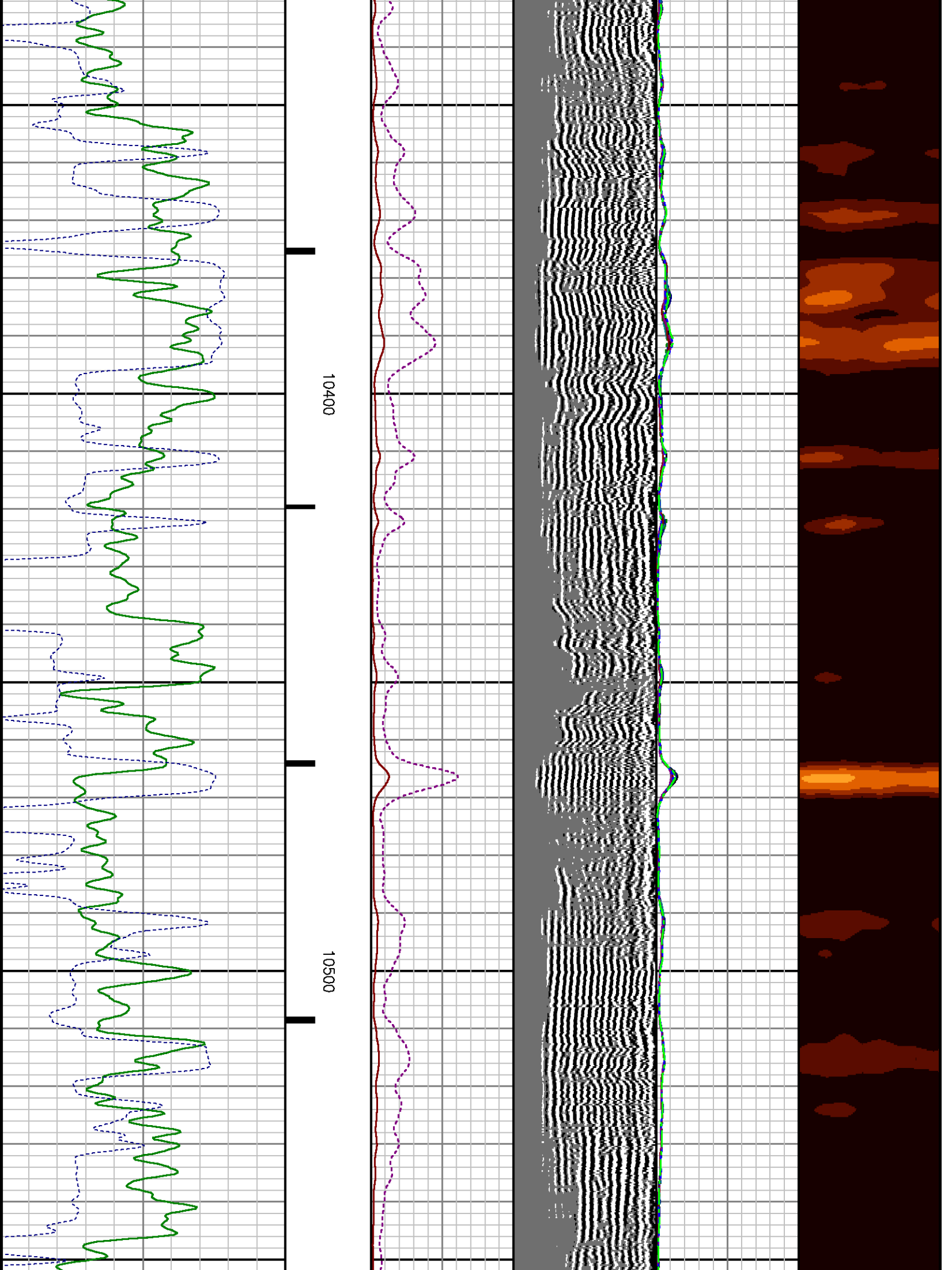




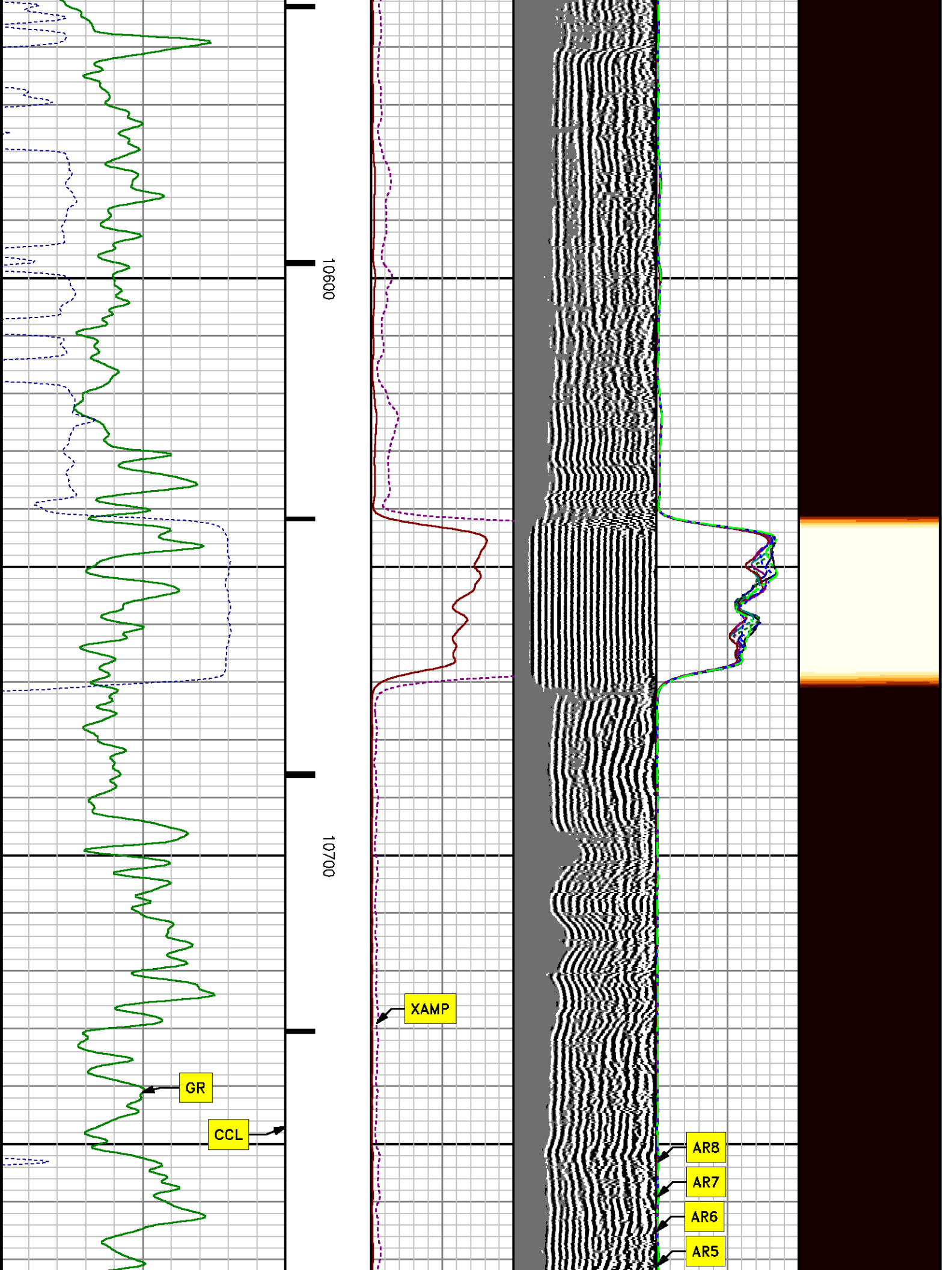




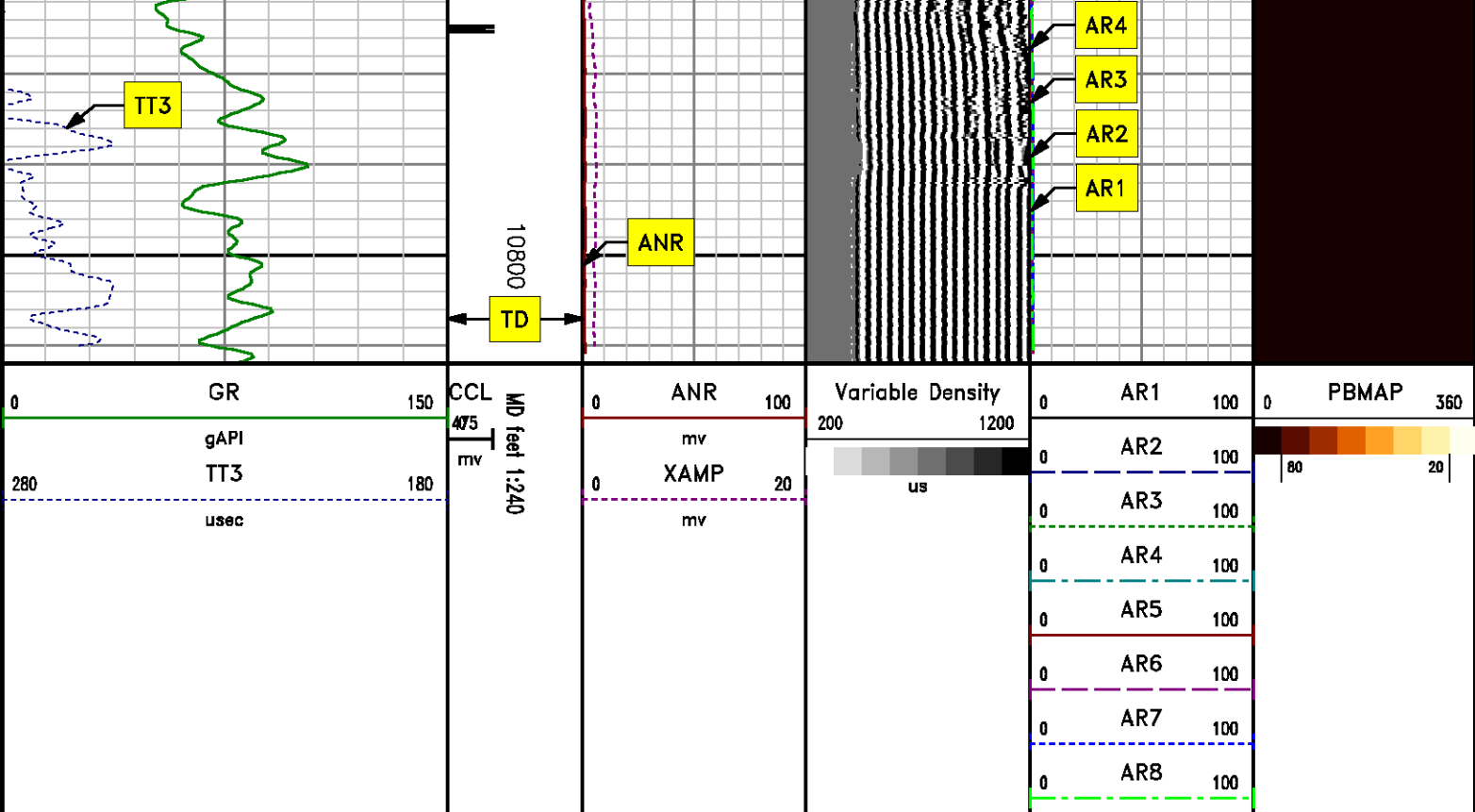












## ***REPEAT SECTION***

### ***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	10483.160	10829.410
RAL	Amp Gate Start Near	195.000	usec	10483.160	10829.410
RAL	Amp Gate Start Radial	195.000	usec	10483.160	10829.410
RAL	Amp Gate Width Far	25.000	usec	10483.160	10829.410
RAL	Amp Gate Width Near	25.000	usec	10483.160	10829.410
RAL	Amp Gate Width Radial	25.000	usec	10483.160	10829.410
RAL	casing od	4.500	inches	10483.160	10829.410
RAL	casing wt	11.600	lbm/ft	10483.160	10829.410
RAL	FB Start Far	291.900	usec	10483.160	10829.410
RAL	FB Start Near	175.391	usec	10483.160	10829.410
RAL	FB Start Radial	175.391	usec	10483.160	10829.410
RAL	FB Thresh Far	10.000	mv	10483.160	10829.410
RAL	FB Thresh Near	4.000	mv	10483.160	10829.410
RAL	FB Thresh Radial	4.000	mv	10483.160	10829.410

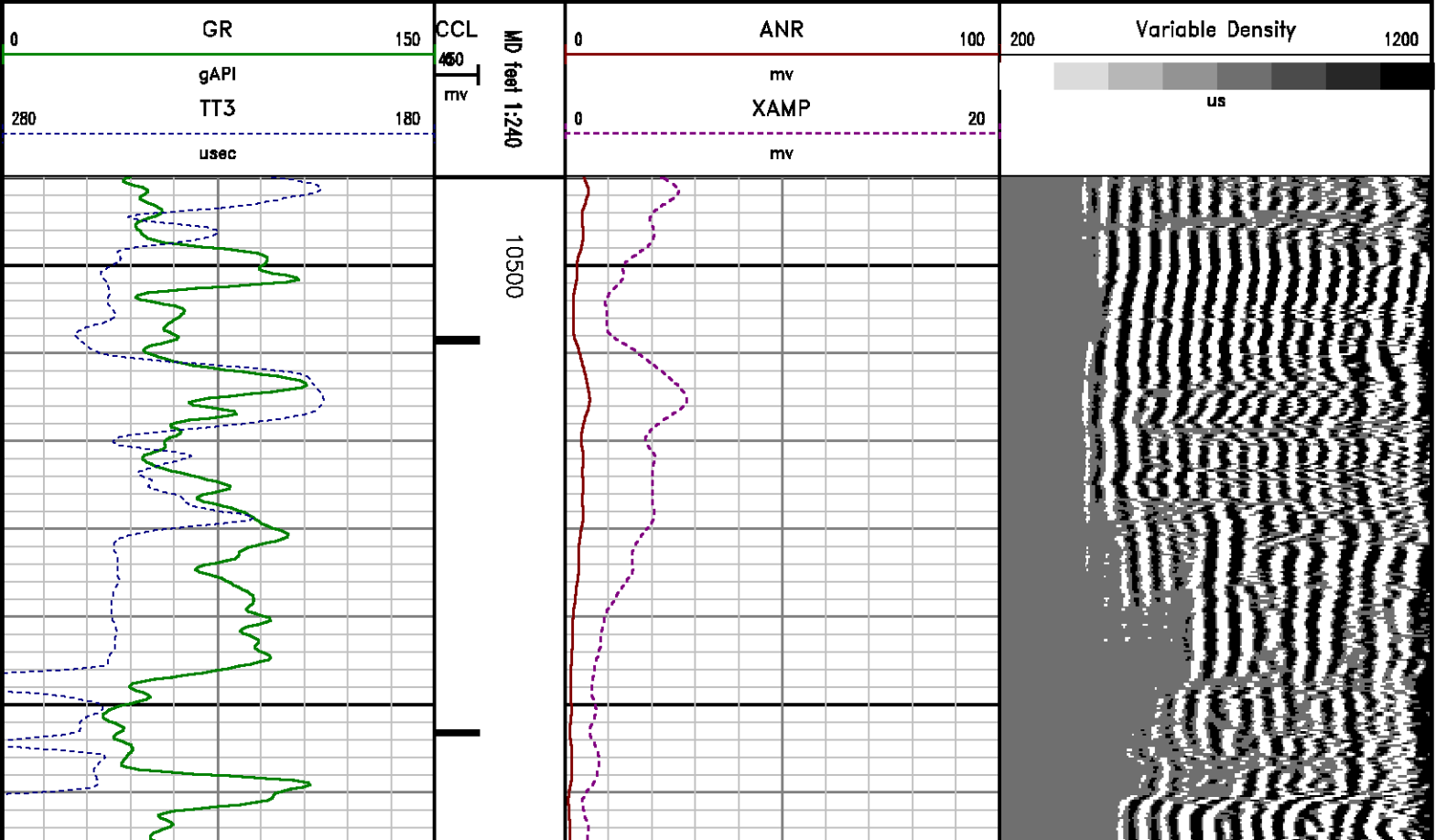
RAL	FB Inresh Radial	4.000	mv	10483.160	10829.410
RAL	Fluid Travel Time	200.000	usec/ft	10483.160	10829.110

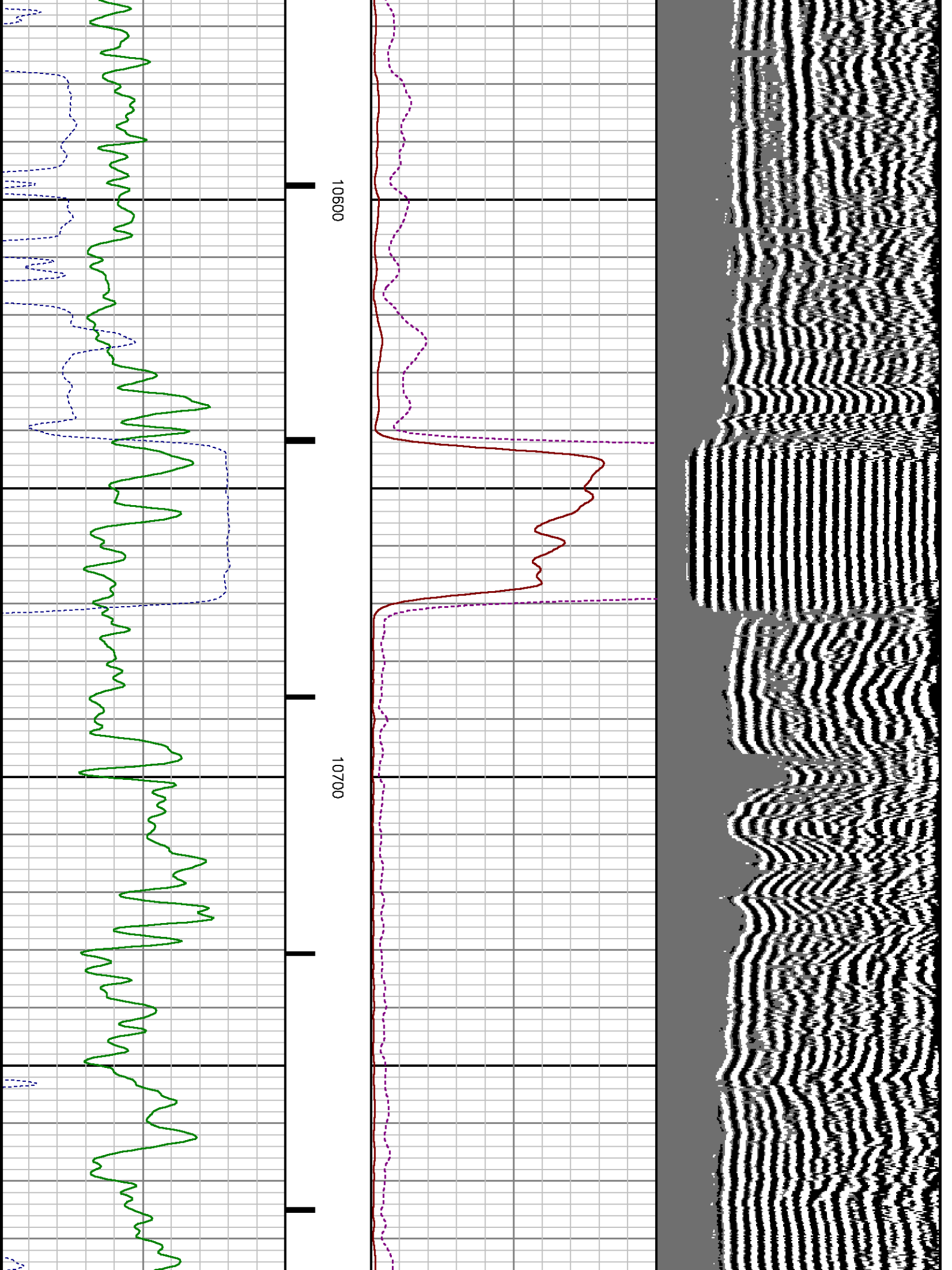
DEPTH OFFSETS

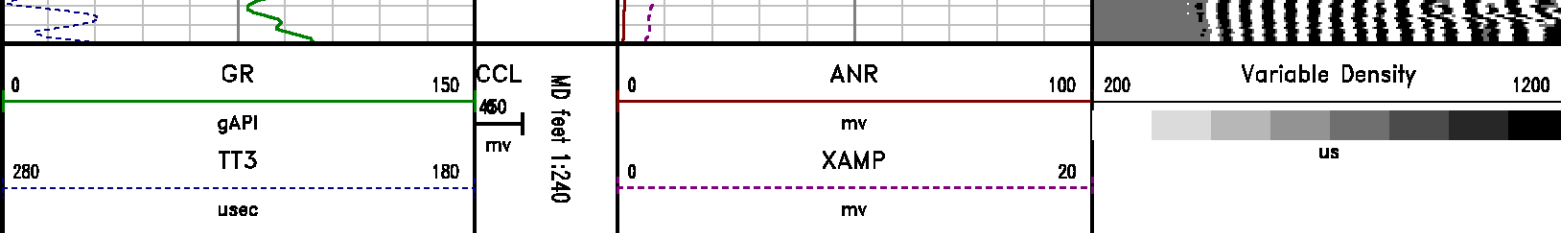
(for Acquired Curves)

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 412-14-298			
File Name : d:\welldata\wpx\federal rg 412-14-298\cbl412\repeat.xtf			
Mode : PlotMgr 5.4.504			
Interval : 10490.00 - 10790.00 feet UP			
Created : 1/25/2014 8:18:31 PM			







## CALIBRATION SUMMARY

**RALSHP**

Shop Calibration: C:\case\calver\RALSHP\496TN.shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jan 25 23:10:56 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: TN

Tool Delay [usec] -55.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	0.020	100.00	0.17
3 Ft. Receiver	218	216	30	166	14	-0.261	100.00	0.16
5 Ft. Receiver	327	325	30	258	25	0.398	150.00	0.18
Radial #1	218	216	30	166	16	0.440	100.00	0.16
Radial #2	218	216	30	166	16	-0.007	100.00	0.16
Radial #3	218	216	30	166	16	0.120	100.00	0.16
Radial #4	218	216	30	166	16	0.483	100.00	0.16
Radial #5	218	216	30	166	16	0.446	100.00	0.17
Radial #6	217	216	30	166	16	0.275	100.00	0.16
Radial #7	216	216	30	166	16	0.154	100.00	0.16
Radial #8	218	216	30	166	16	0.700	100.00	0.16

**RALFLD**

Well site Calibration: C:\case\calver\RALFLD\496TN.fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jan 25 23:12:02 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: TN

Tool Delay [usec] -55.00 Casing OD in 4.50 Casing Wt lbm/ft 11.60 Casing ID in 4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.035	0.000	1.00	100.000
3 Ft. Receiver	200	30	1.541			
5 Ft. Receiver	317	30	1.228			
Radial #1	200	30	1.052			
Radial #2	200	30	1.074			
Radial #3	200	30	1.272			
Radial #4	200	30	1.288			
Radial #5	200	30	1.388			
Radial #6	200	30	1.509			
Radial #7	200	30	1.244			
Radial #8	200	30	1.150			

## GAMMA RAY

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

### CALIBRATION SUMMARY

DATE/TIME PERFORMED:		Tue Jan 21 14:45:39 2014		TOOL SERIES:	2459XA	ASSET:	121	SEQ:	J2
Calibrator #	Background [cps]	Calibrator On [cps]		Multiplicative	Background [api]	Calibrator On [api]		Differential [api]	
SK2 WA612	71.78	314.67		0.762	54.67	239.67		185.00	

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

### PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED:		Tue Jan 21 14:46:51 2014		TOOL SERIES:	2459XA	ASSET:	121	SEQ:	J2
Calibrator #	Background [cps]	Calibrator On [cps]		Multiplicative	Background [api]	Calibrator On [api]		Differential [api]	
SK2 WA612	74.22	316.93		0.762	56.53	241.40		184.86	

## TOOL DIAGRAM

OTA SHORT CABLE HEAD



24.23'

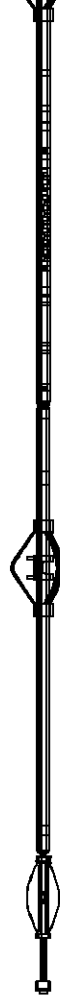
<b>PROBE 2 3/4 DUAL RECEIVER RADII</b>	
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI



XMIT	18.05'
NEAR RCVR	14.97'
FAR RCVR	13.05'
CCL	11.34'
GR	9.49'
NEU	4.09'
	0.00'

<b>Probe GR/CCL/NEU</b>	
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

<b>CENTRALIZER</b>	
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

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



 <b>Baker Atlas</b> 	<b>Company</b> WPX ENERGY <b>Well</b> FEDERAL RG 412-14-298 <b>Field</b> SULPHUR CREEK <b>County</b> RIO BLANCO <b>State</b> CO	<b>File No:</b> CH081740 <b>API No:</b> 05103117950000
	<b>Location</b> SHL: 1863' FNL & 495' FWL BHL: 2295' FNL & 640' FWL  SEC 14 TWP 2S RGE 98W	<b>Elevations</b> KB 6581 ft DF GL 6560 ft  14 2S 98W RG 12-14-298 PAD CYCLONE 29