



# RADIAL ANALYSIS BOND LOG

## Baker Atlas

File No: CH083907	Company Well	WPX ENERGY PA 324-6
API No: 0504522210000	Field County	PARACHUTE GARFIELD
	State CO	
6 7S 95W PA 14-6 PAD MABORS 574	Location SHL: 726' FSL & 772' FWL BHL: 1177' FSL & 1098' FWL SEC 6 TWP 7S RGE 95W	Other Services
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevations KB 5179 ft DF GL 5153 ft

Date	31/MAR/14
Run	ONE
Service Order	US625369
Depth Driller	BS24 ft
Depth Logger	6510 ft
Bottom Logged Interval	6500 ft
Top Logged Interval	26 ft
Time Started	7:00
Time Finished	10:00
Operator Rig Time	3 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	80 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	65 fpm
Maximum Recorded Temperature	209 degF
Reference Log	BAKER HUGHES OPEN HOLE LOG
Reference Log Date	14/MAR/14
Equipment No.	4271
Recorded By	NEWELL
Witnessed By	CHRIS TILLER

- 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
13.5 in	0 ft	1007 ft
8.75 in	1007 ft	6552 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1007 ft
4.5 in	11.6 lbm/ft	1-80	0 ft	6552 ft

Remarks

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 3/14/2014 at the clients request.

The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

The amount of linear shift is 9 feet.

Logged with zero PSI at wellhead.

BHT = 209 °F

SJ = 3251'–3274'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	CENTRALIZED
1	1	GR/CCL	2459XA	10417456	CENTRALIZED

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

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.560	6506.750
RAL	Amp Gate Start Near	195.000	usec	35.560	6506.750
RAL	Amp Gate Start Radial	195.000	usec	35.560	6506.750
RAL	Amp Gate Width Far	25.000	usec	35.560	6506.750
RAL	Amp Gate Width Near	25.000	usec	35.560	6506.750
RAL	Amp Gate Width Radial	25.000	usec	35.560	6506.750
RAL	casing od	4.500	inches	35.560	6506.750
RAL	casing wt	11.600	lbm/ft	35.560	6506.750
RAL	FB Start Far	291.900	usec	35.560	6506.750
RAL	FB Start Near	175.391	usec	35.560	6506.750
RAL	FB Start Radial	175.391	usec	35.560	6506.750
RAL	FB Thresh Far	10.000	mv	35.560	6506.750
RAL	FB Thresh Near	4.000	mv	35.560	6506.750
RAL	FB Thresh Radial	4.000	mv	35.560	6506.750
RAL	Fluid Travel Time	200.000	usec/ft	35.560	6507.623

**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

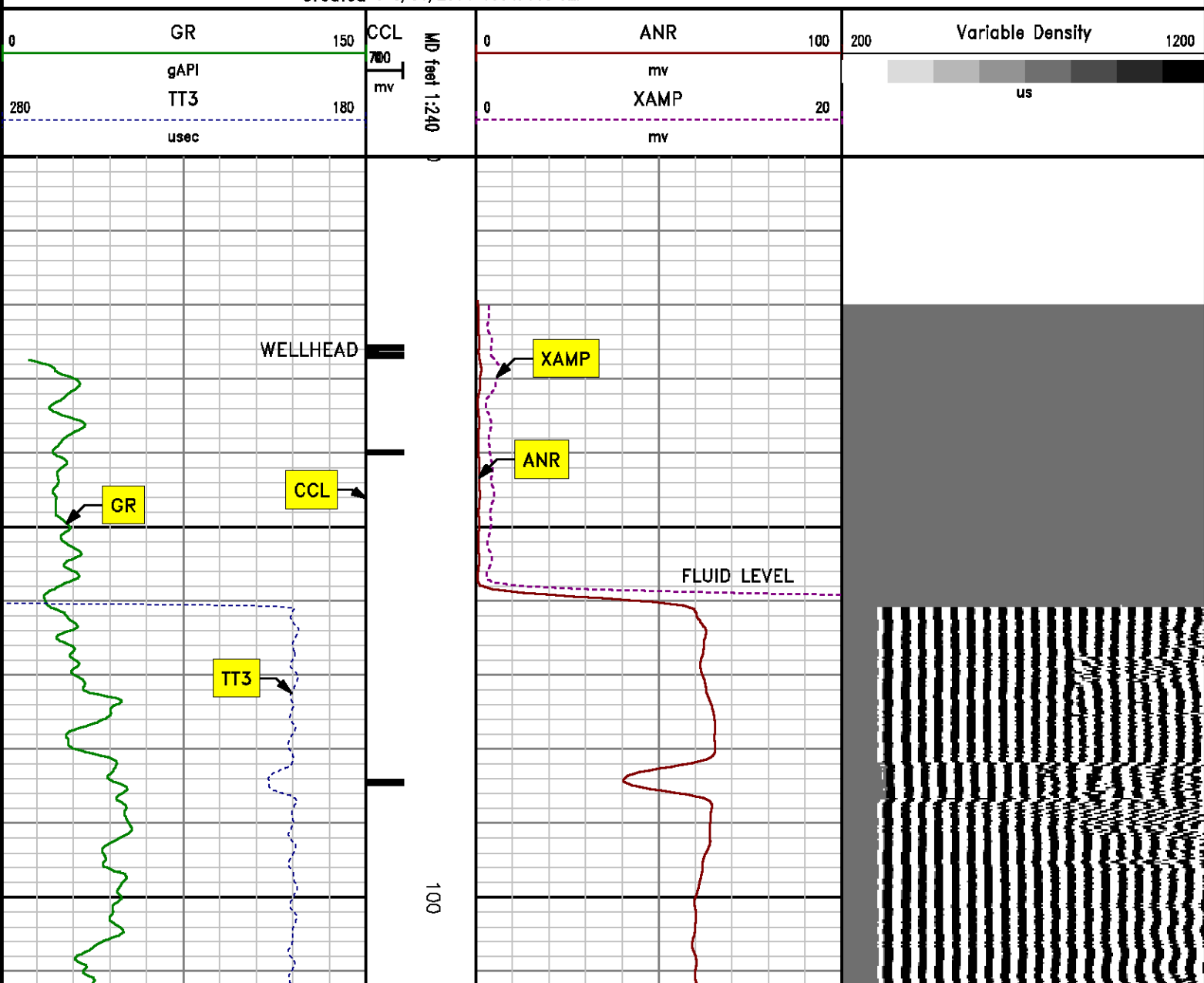
Well : PA 324-6

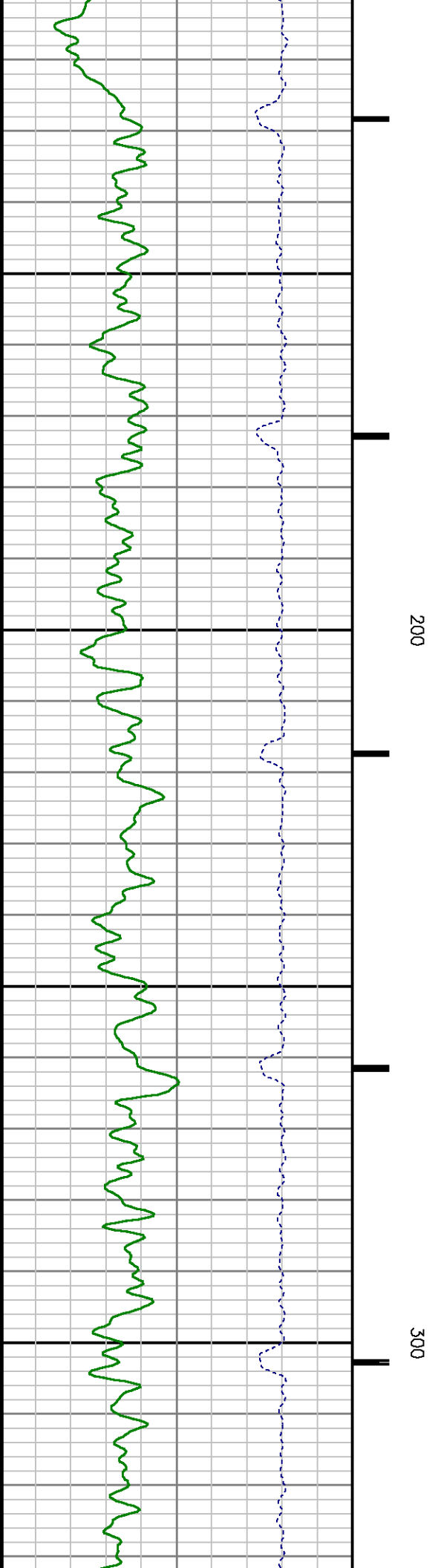
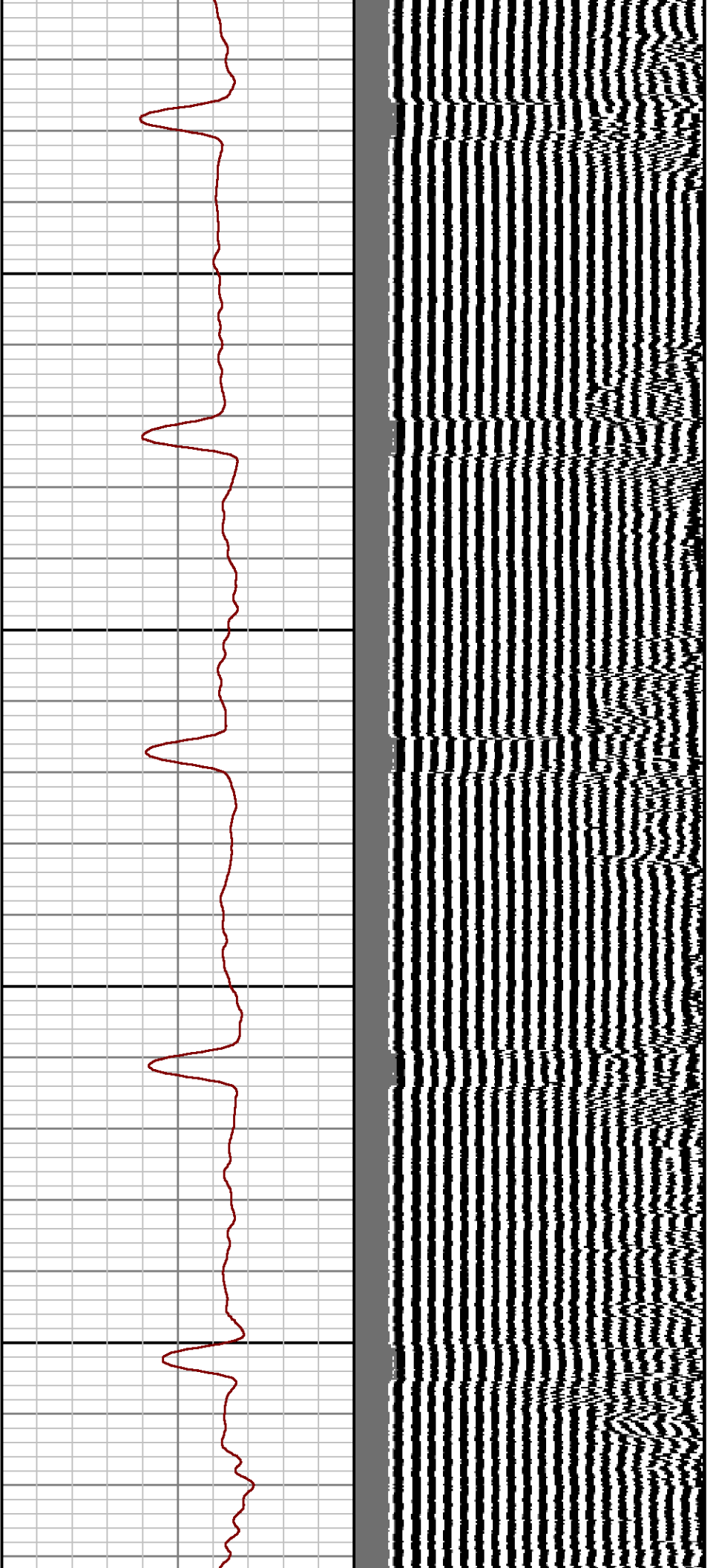
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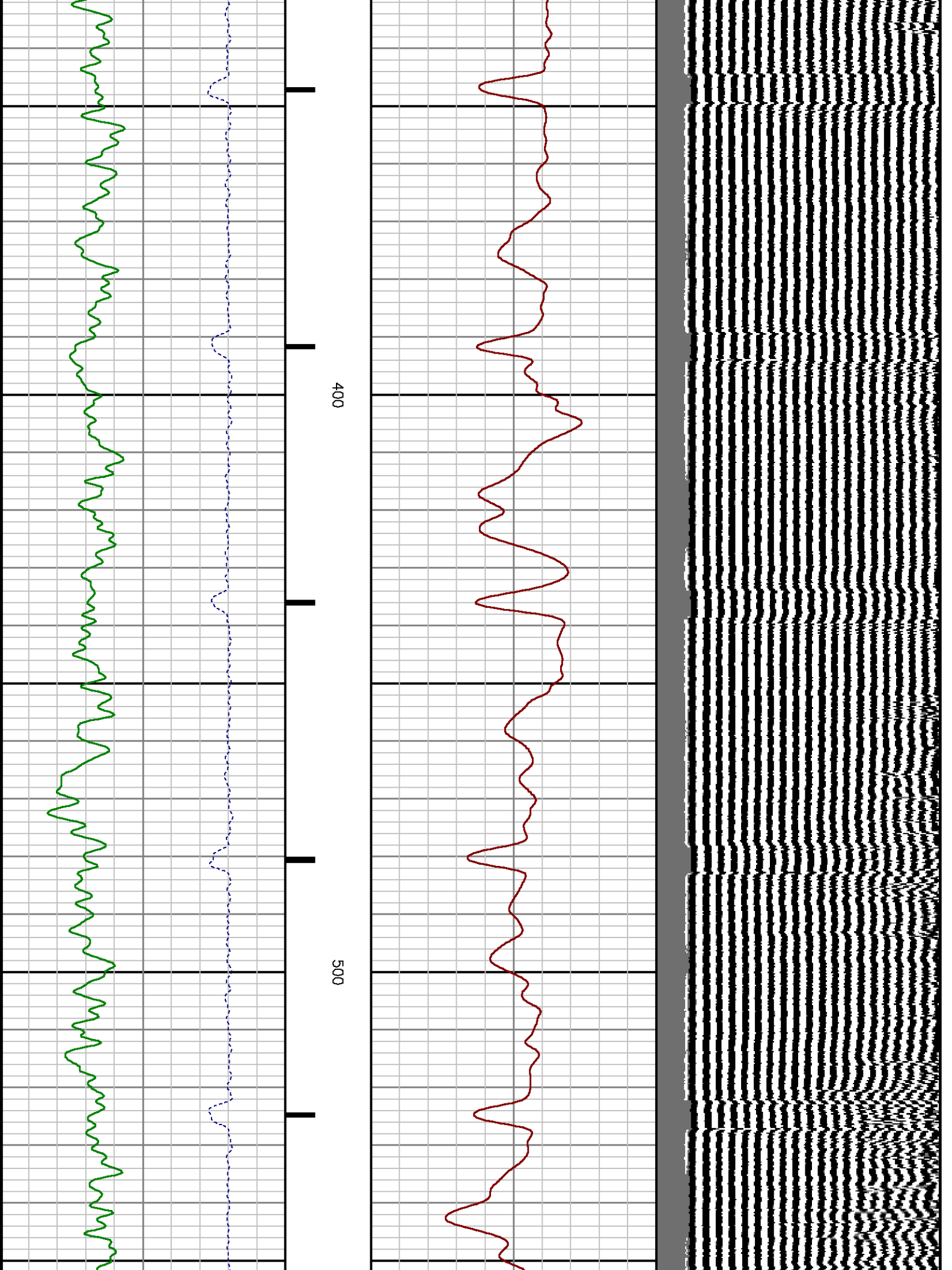
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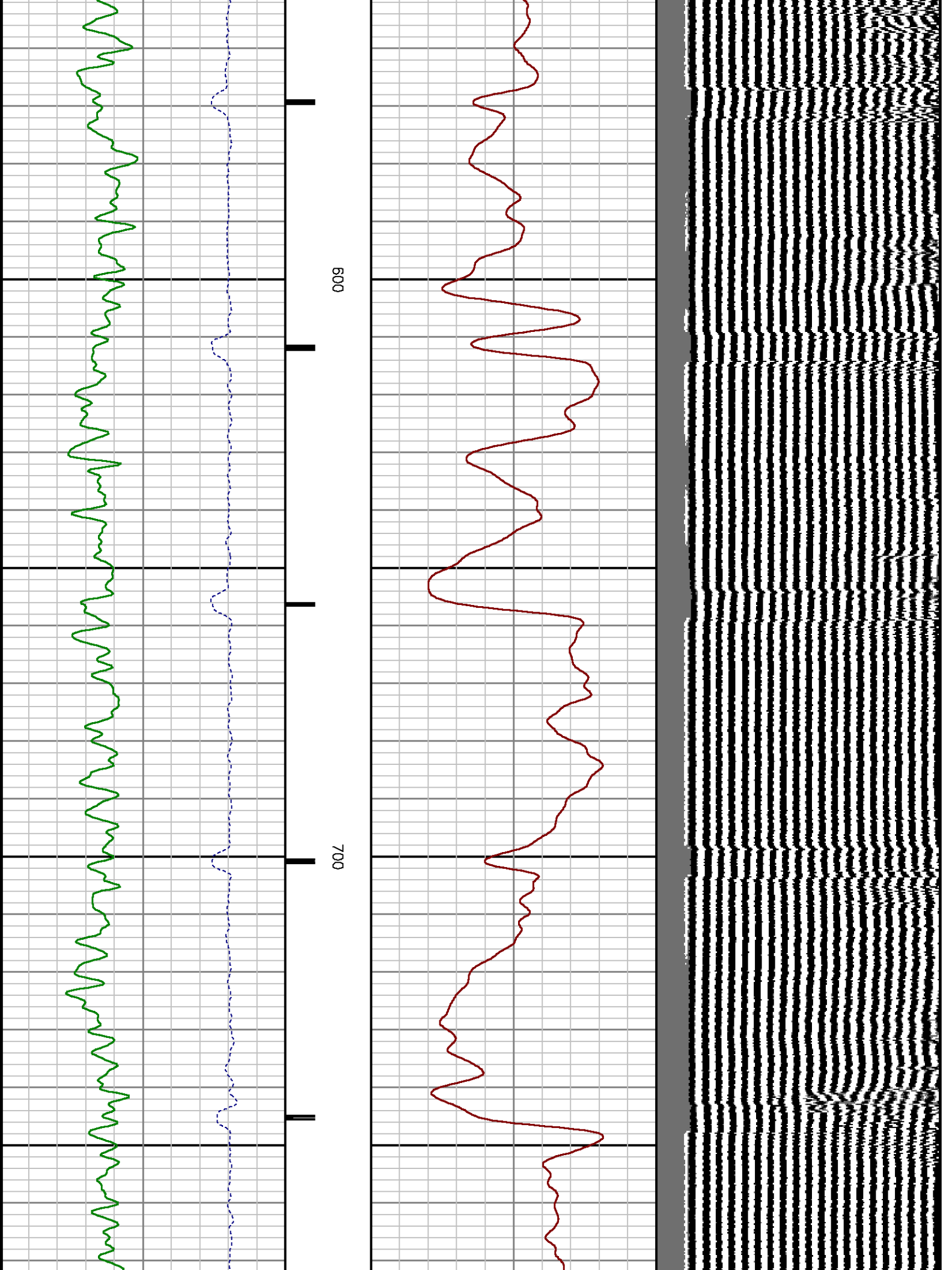
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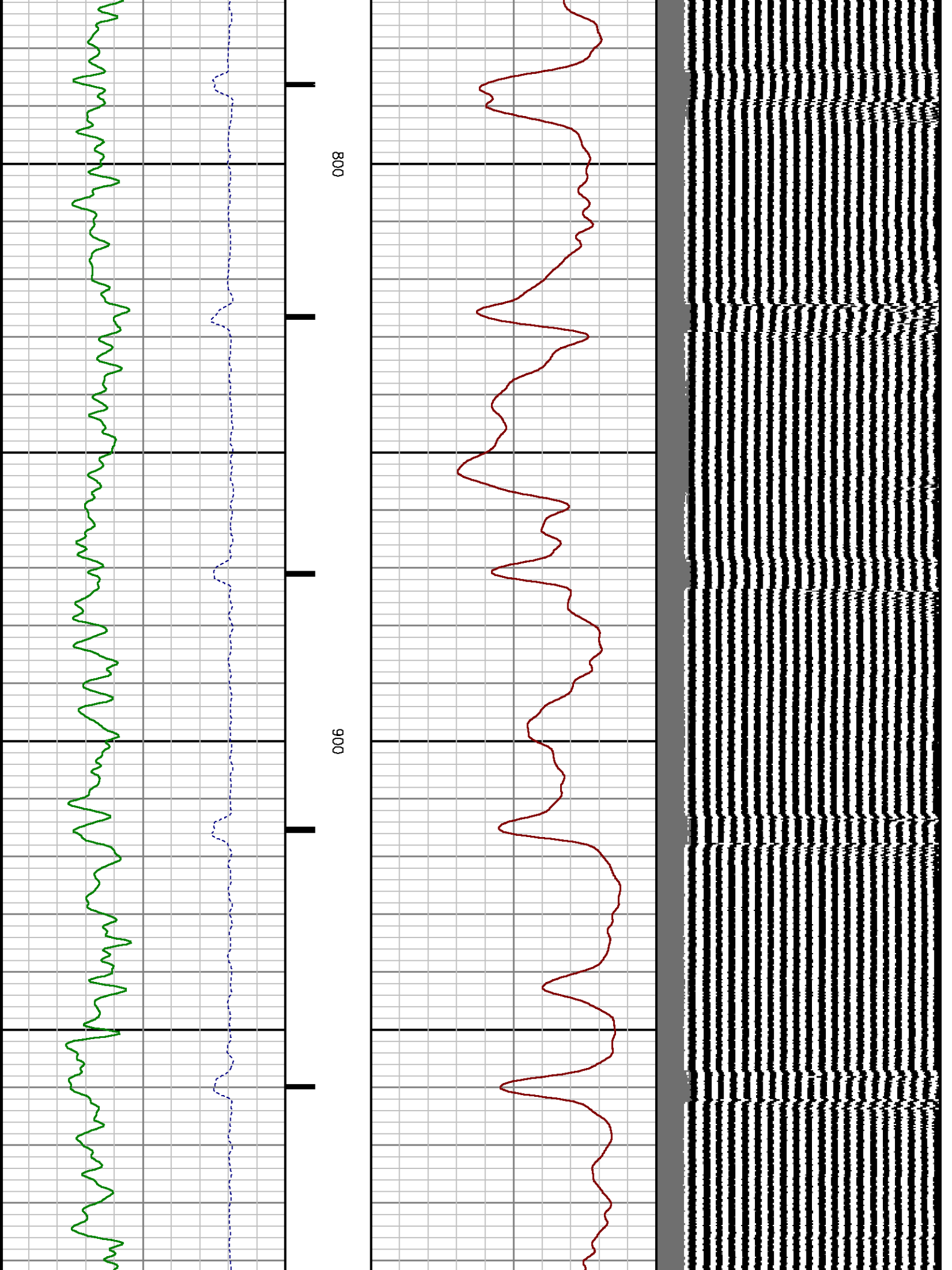
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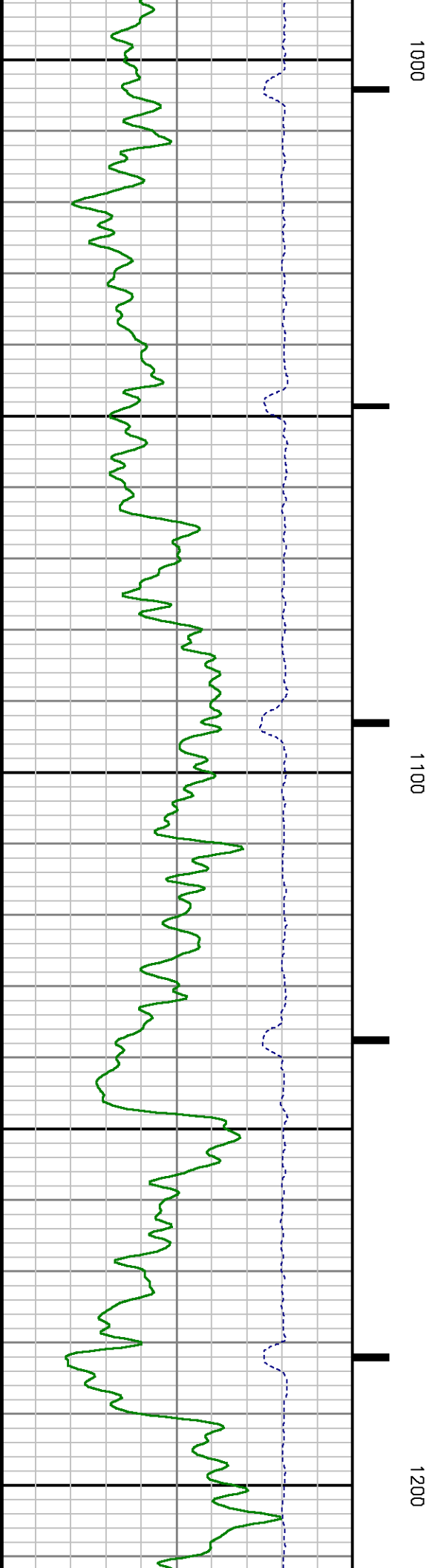
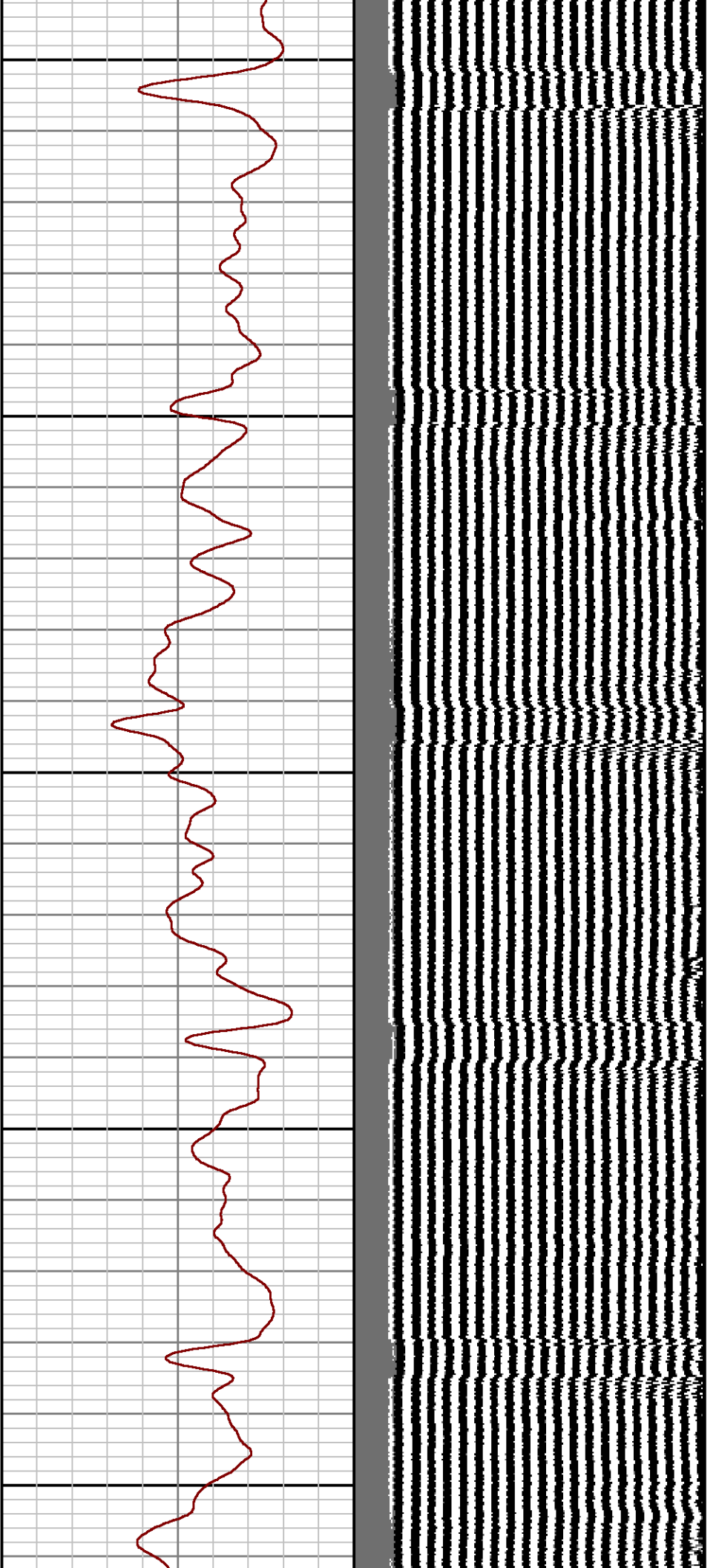




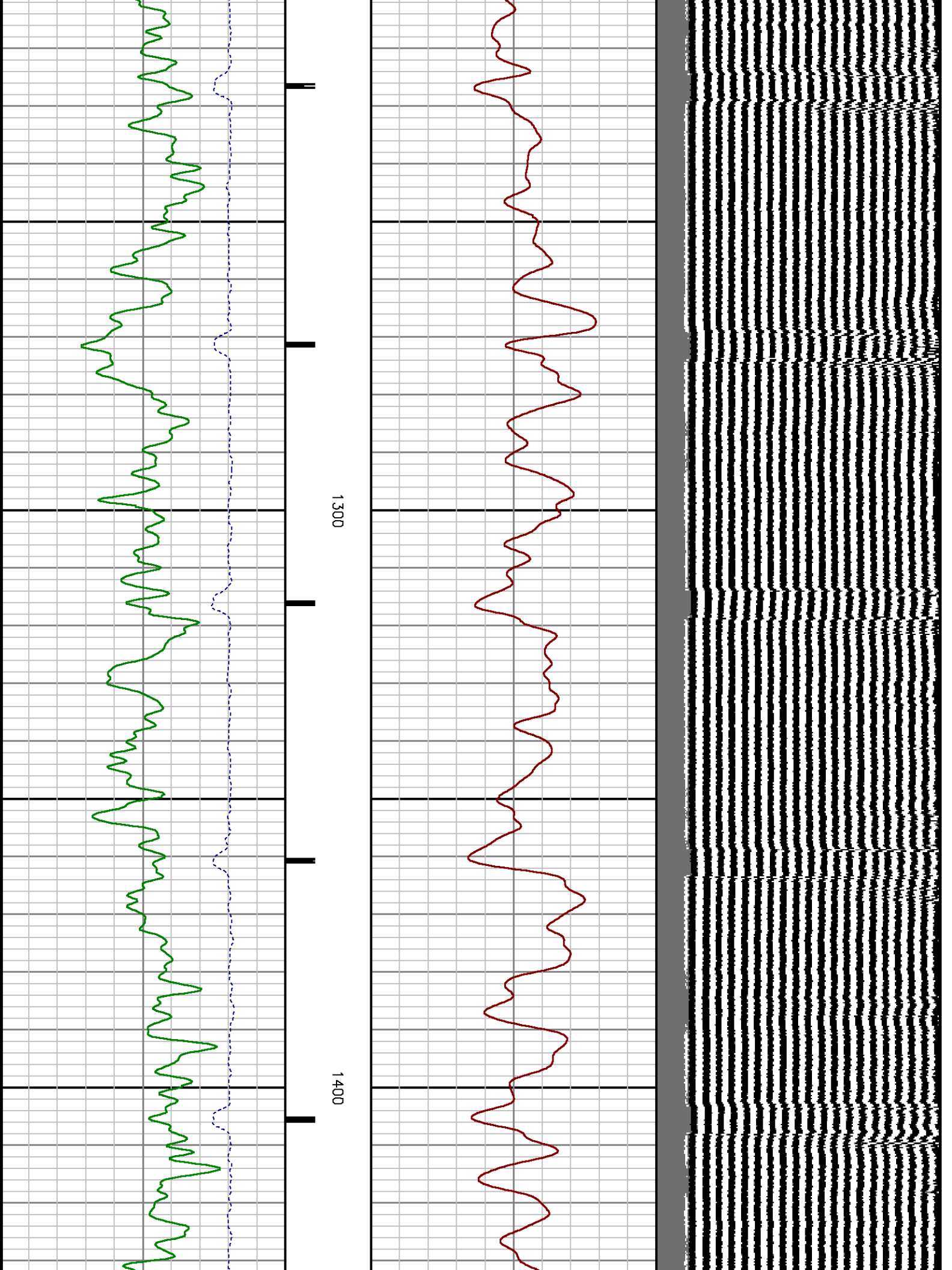


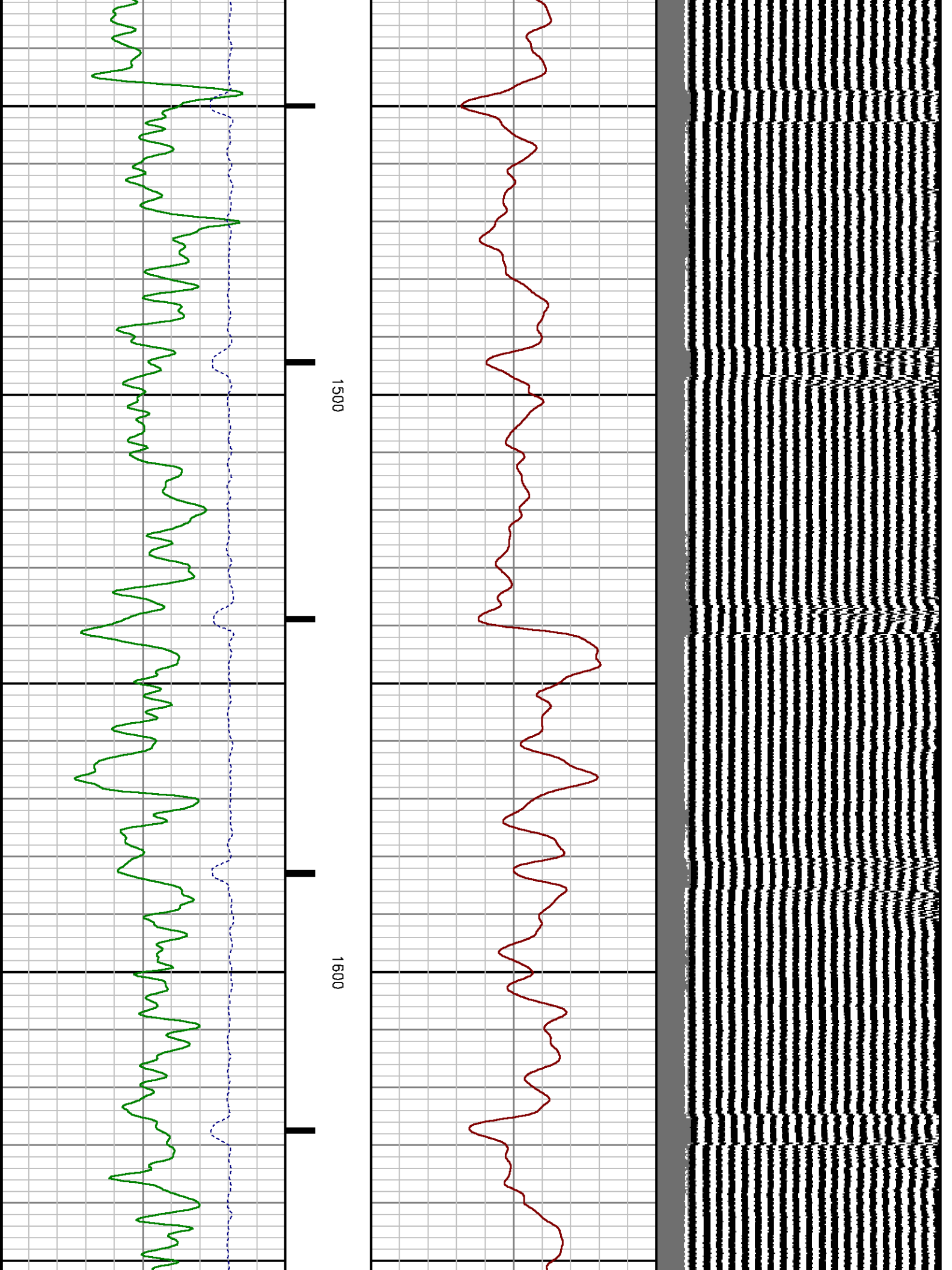


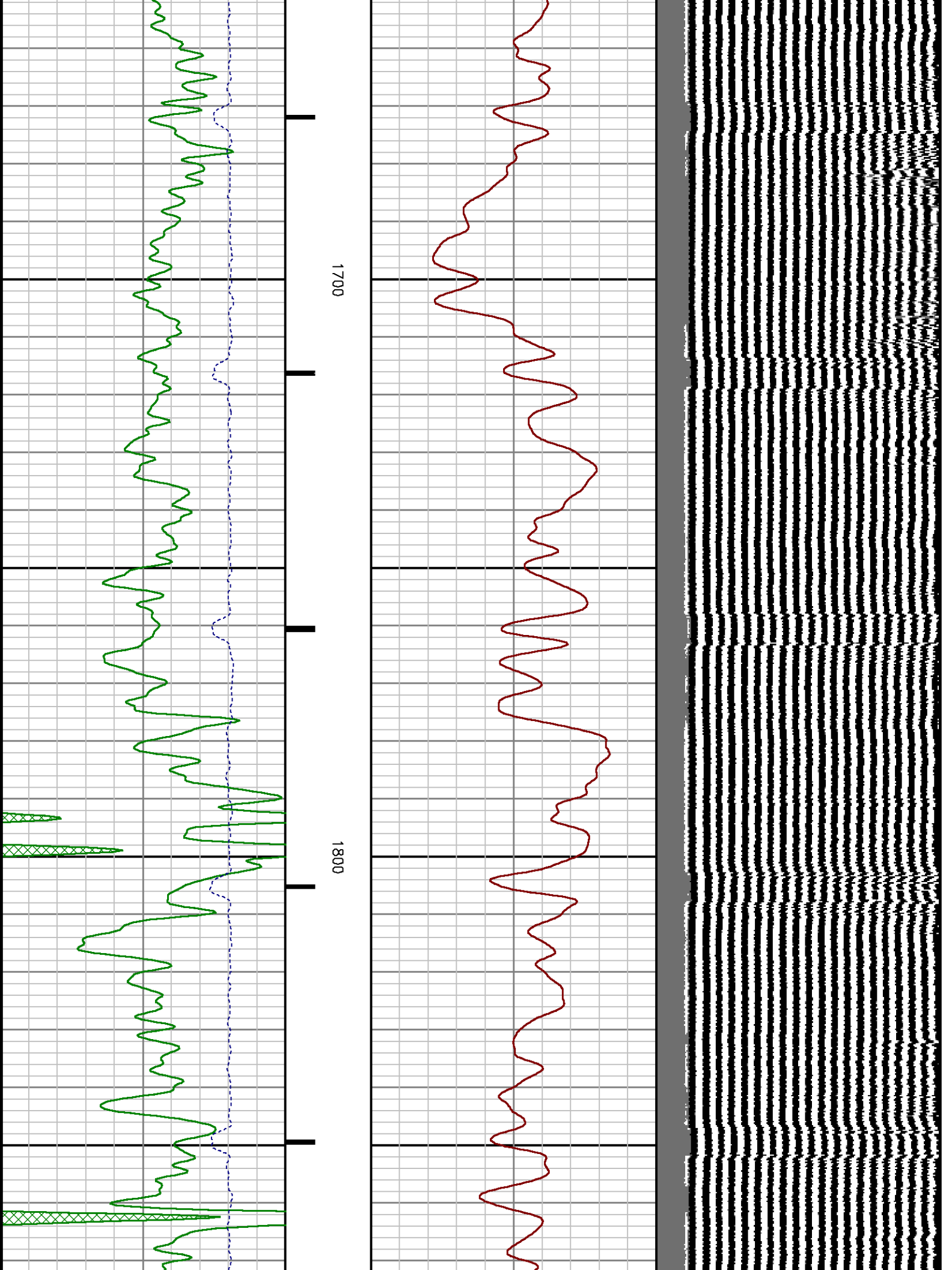


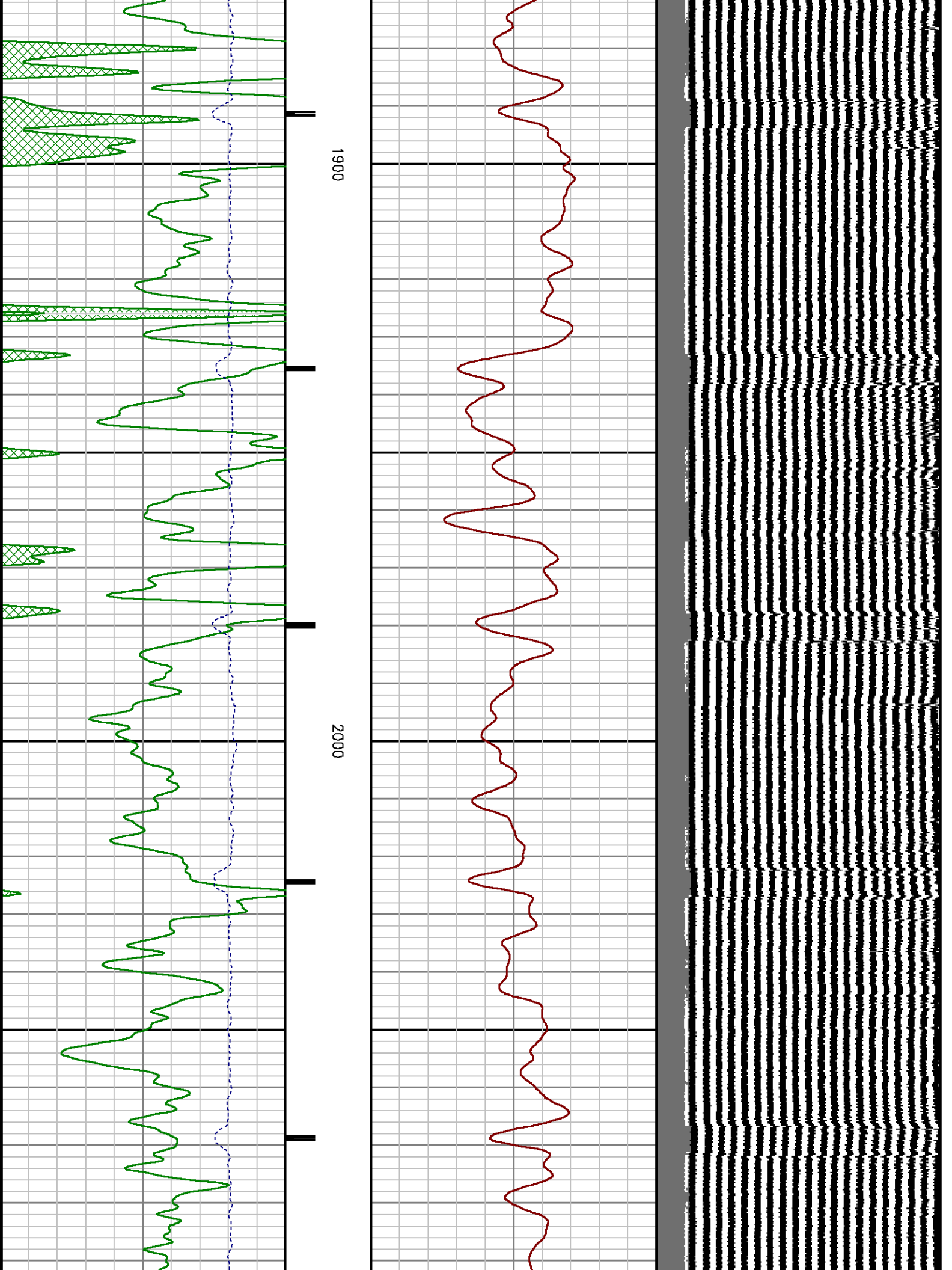


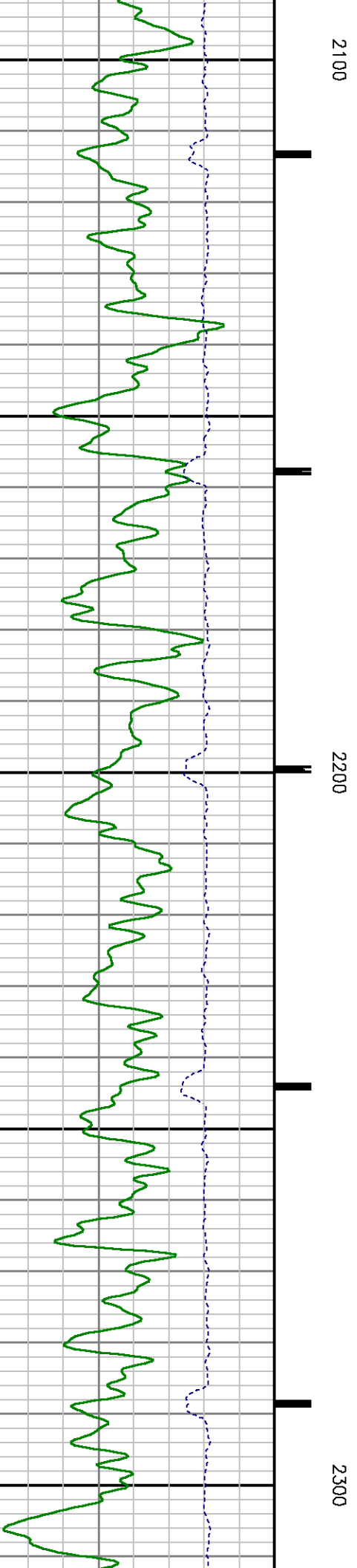
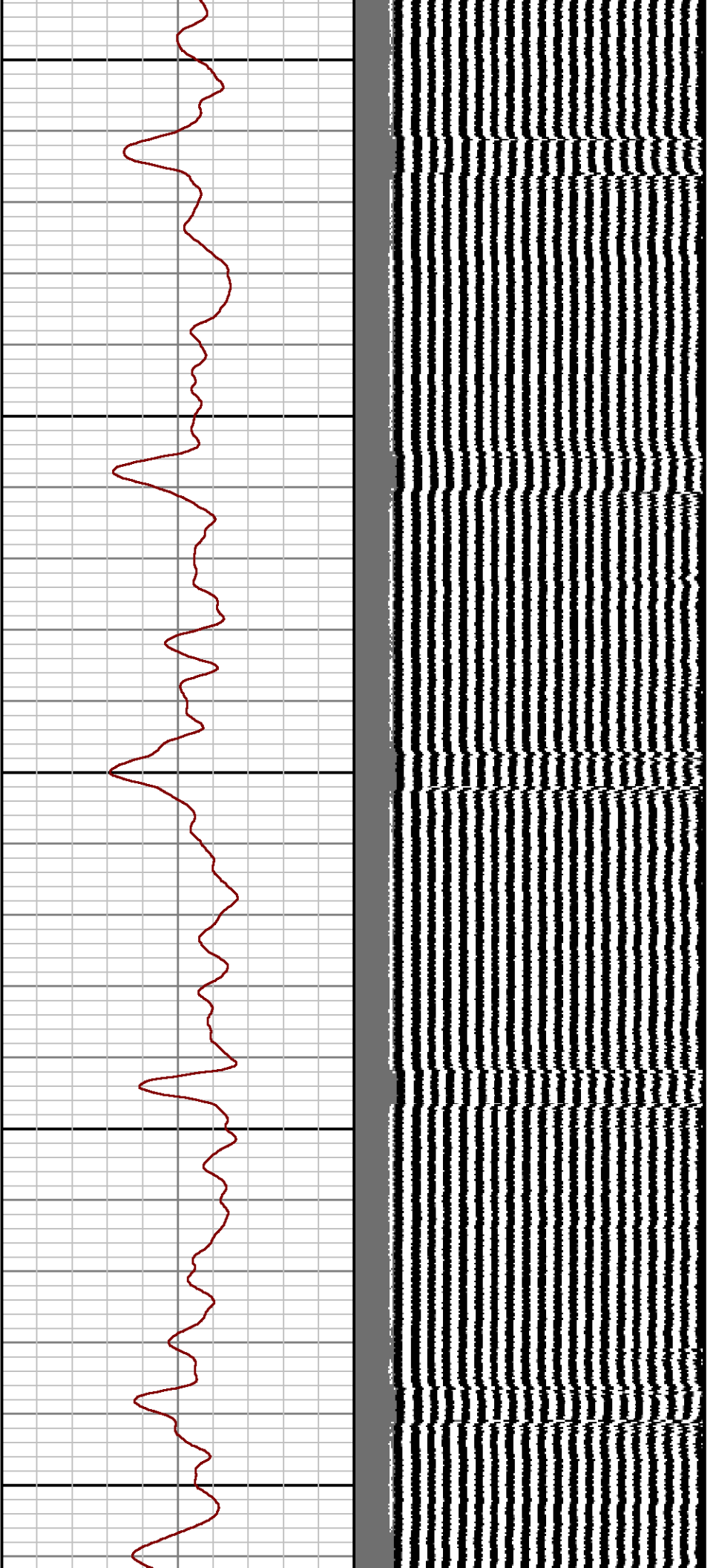


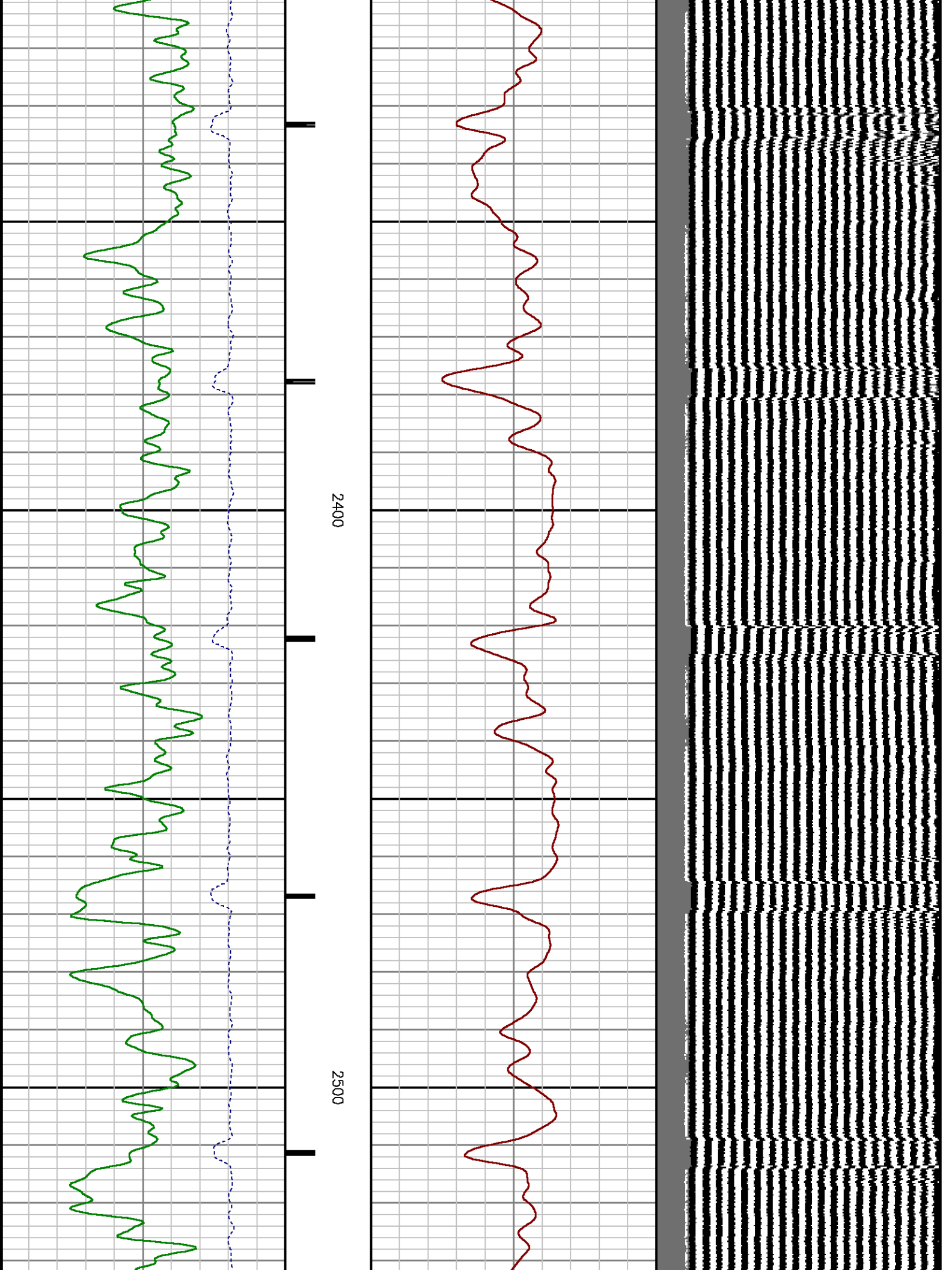




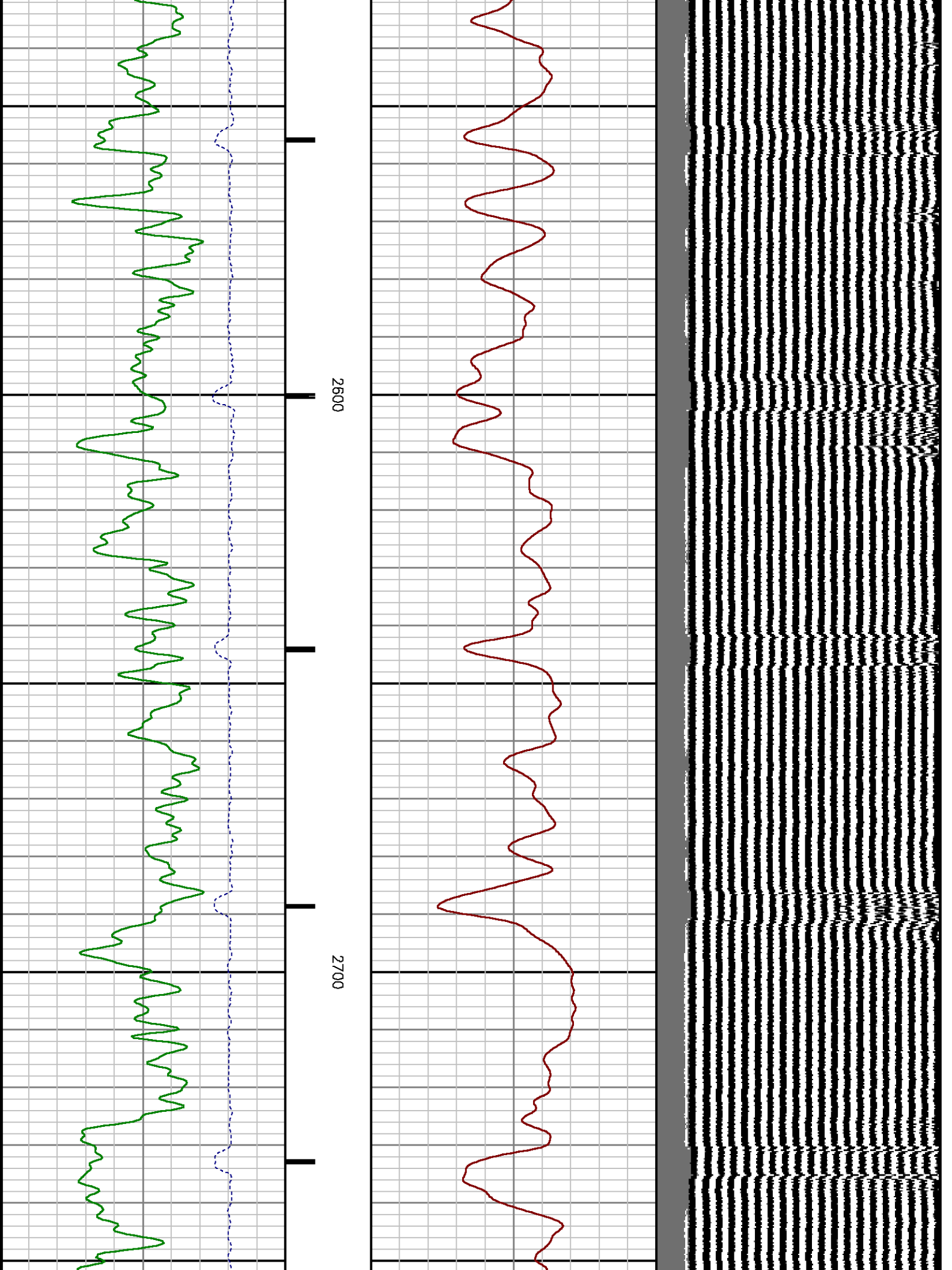


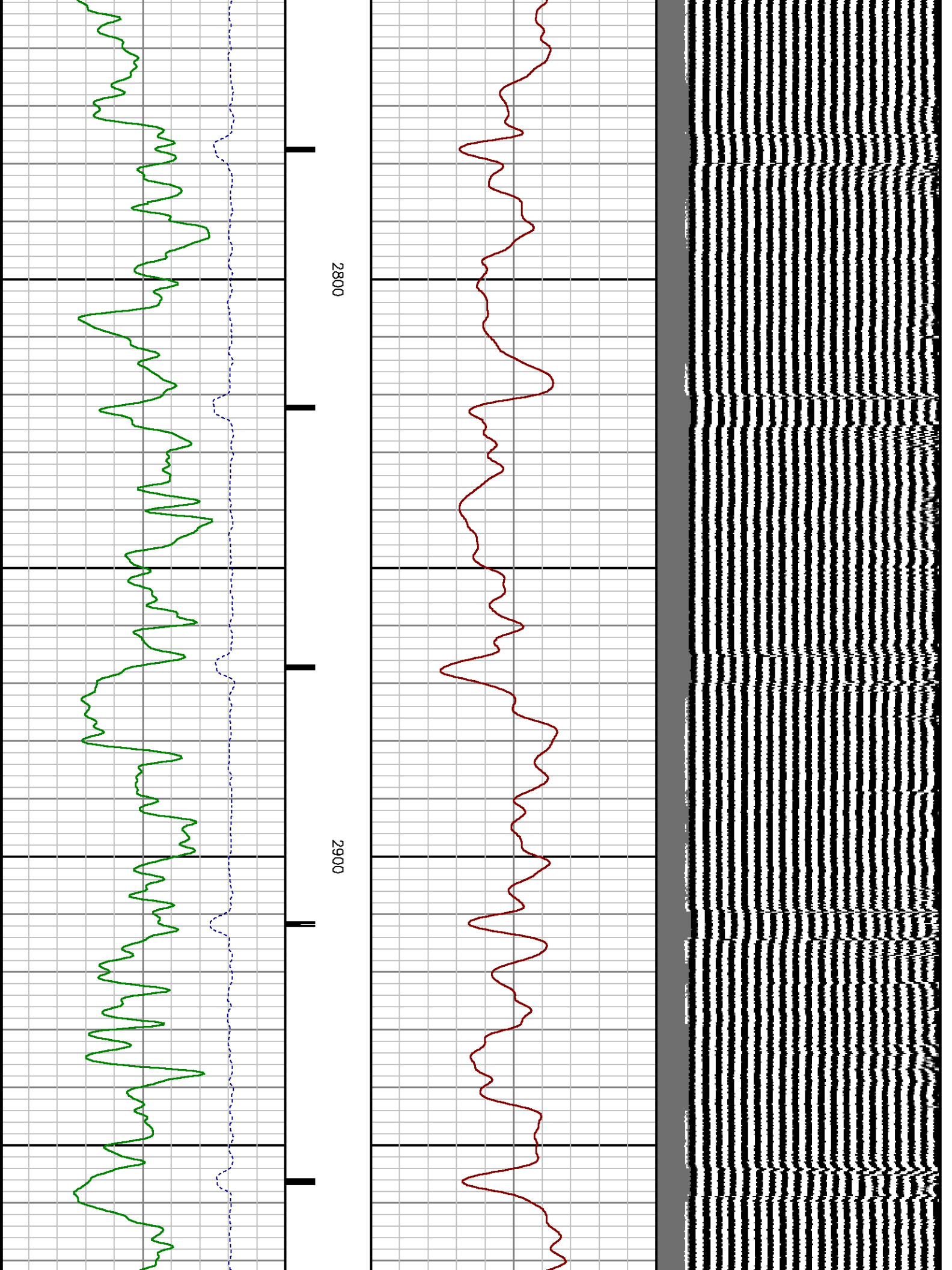




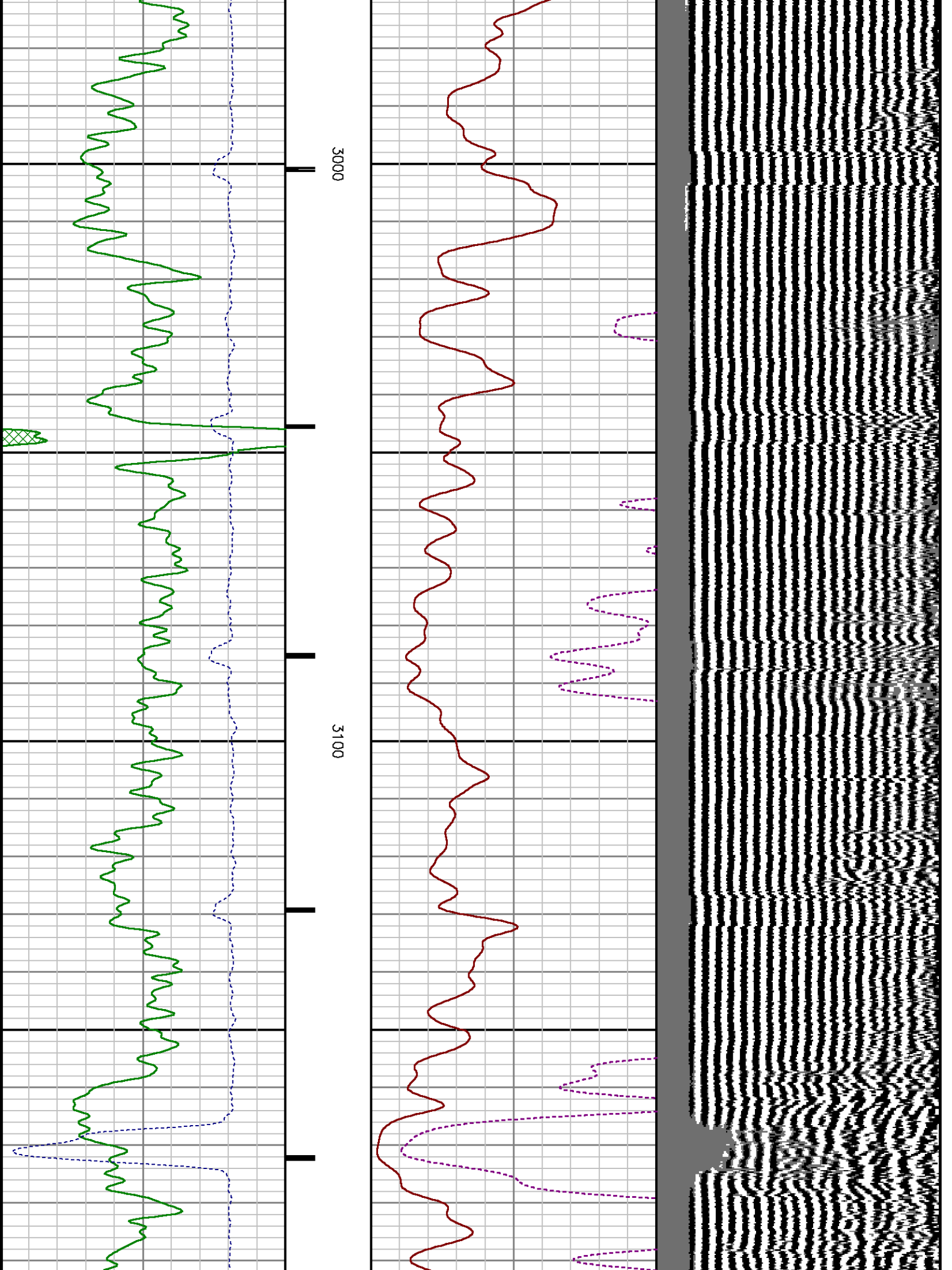


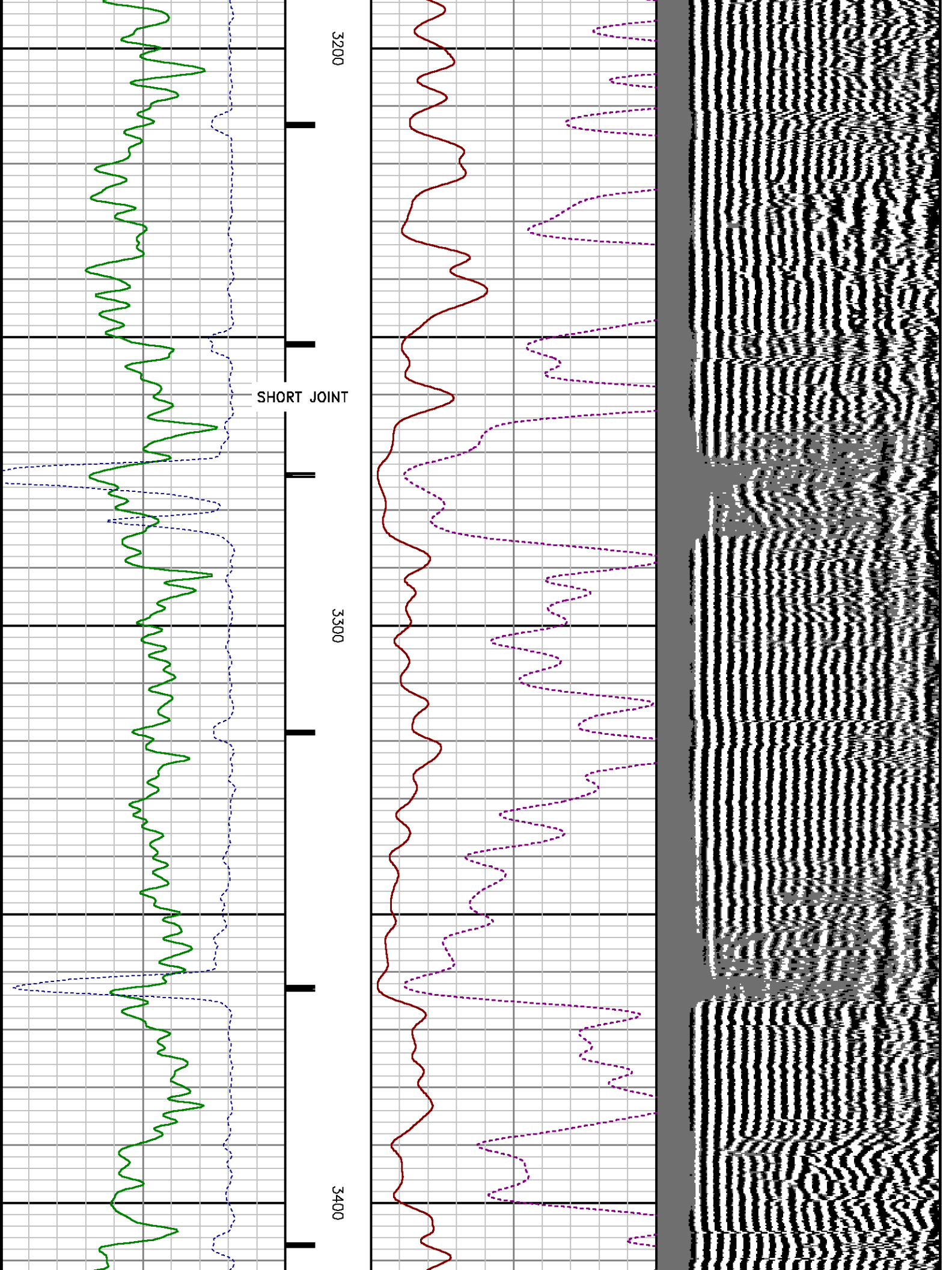


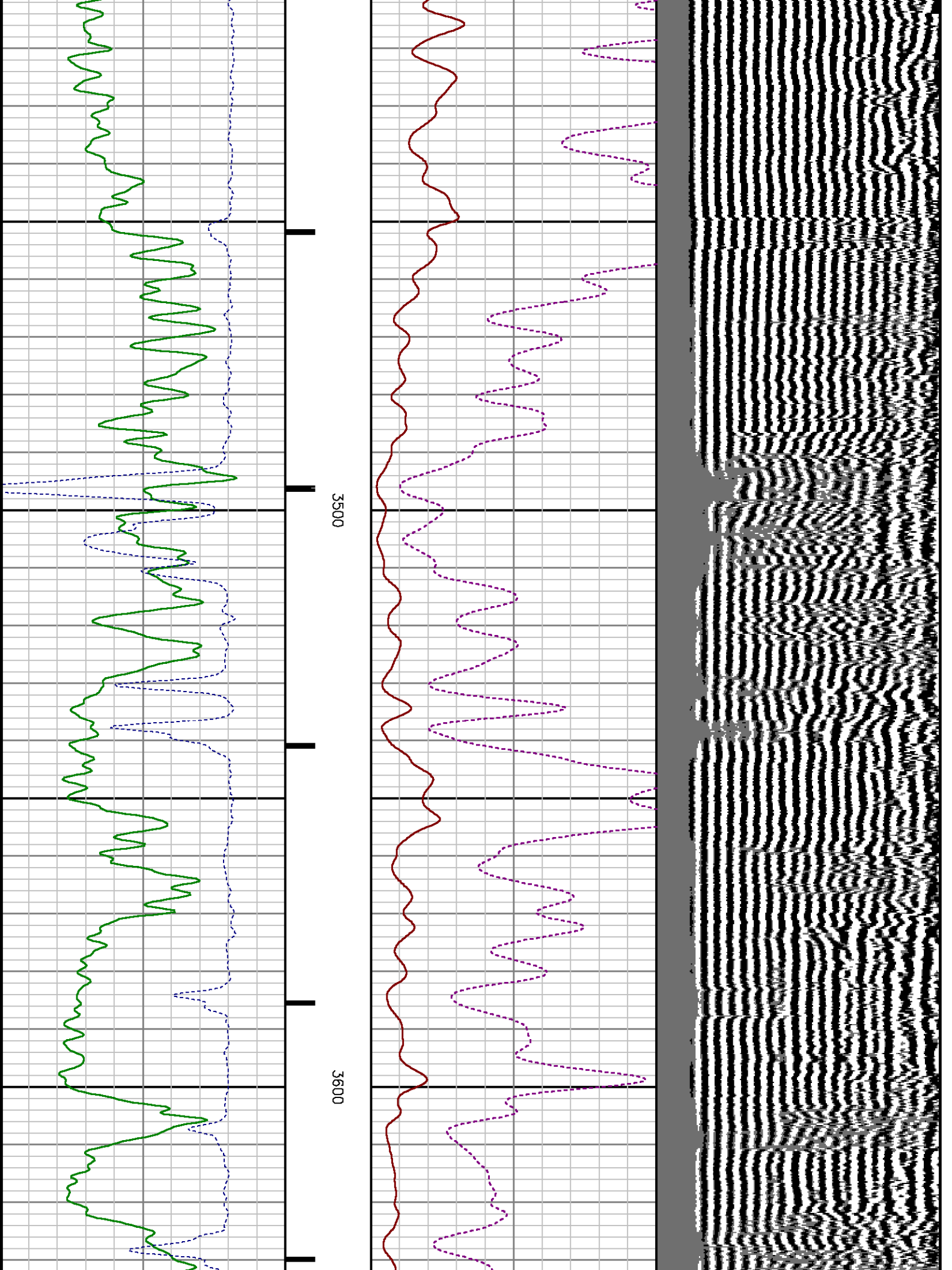


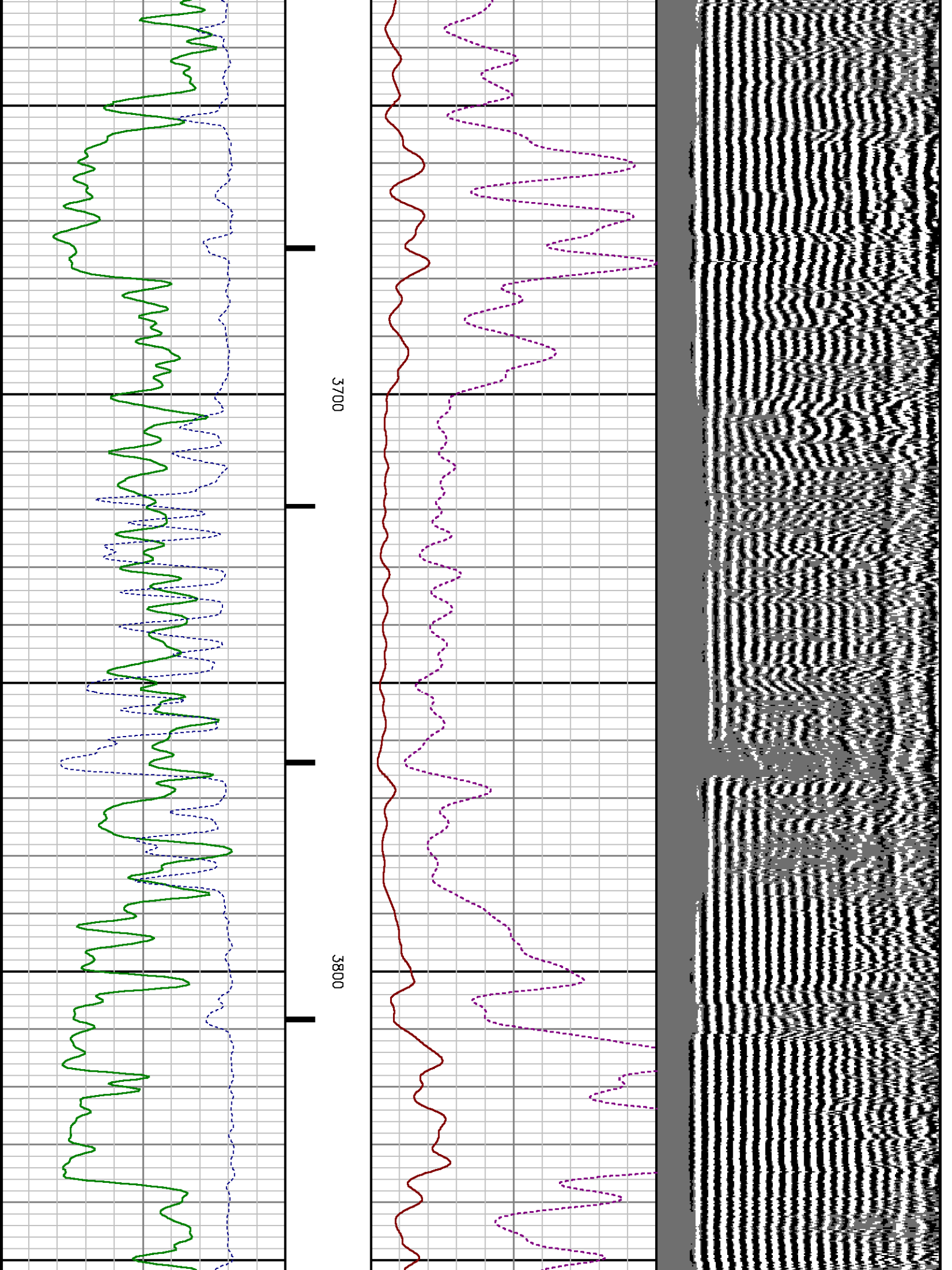




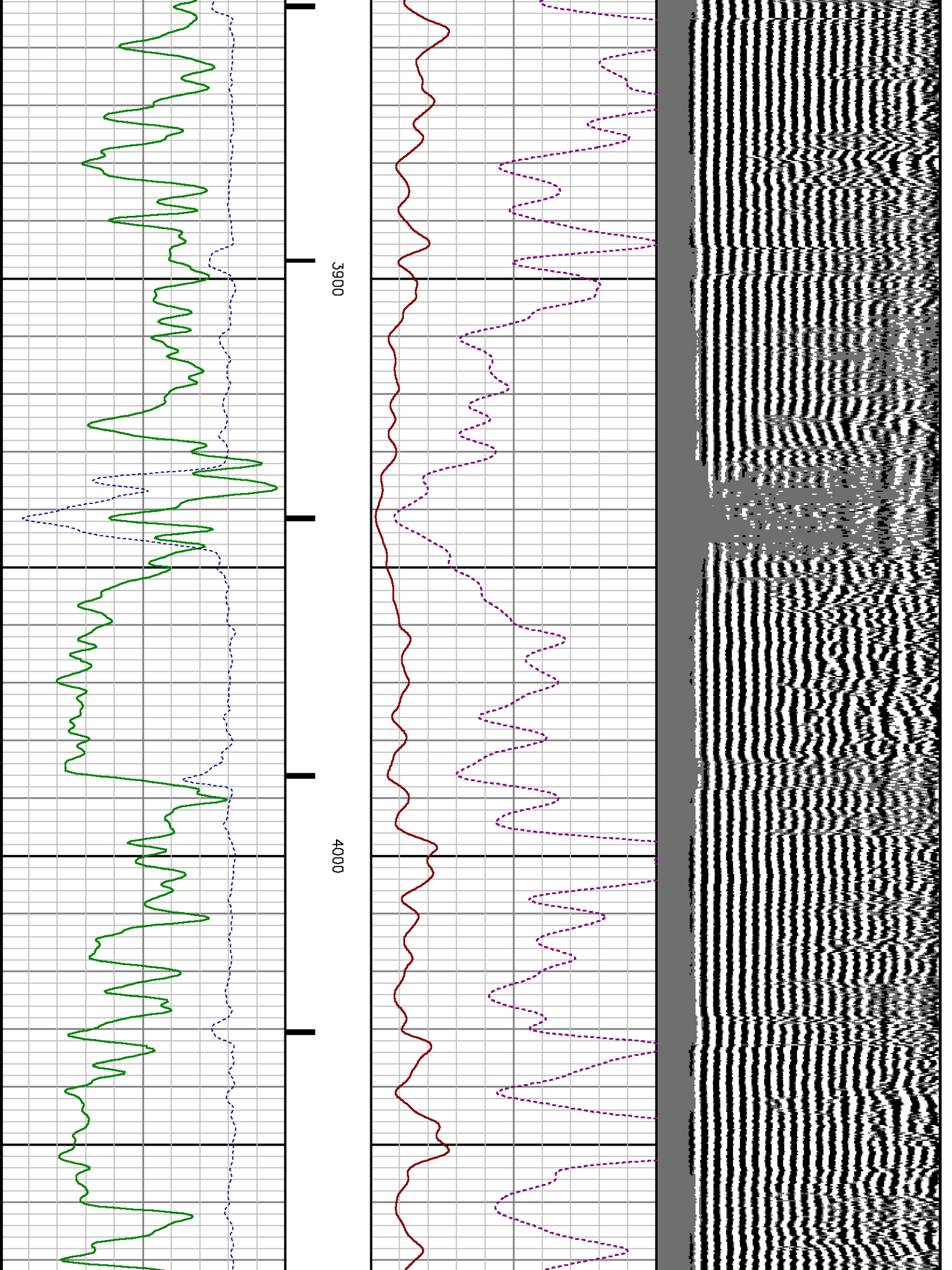


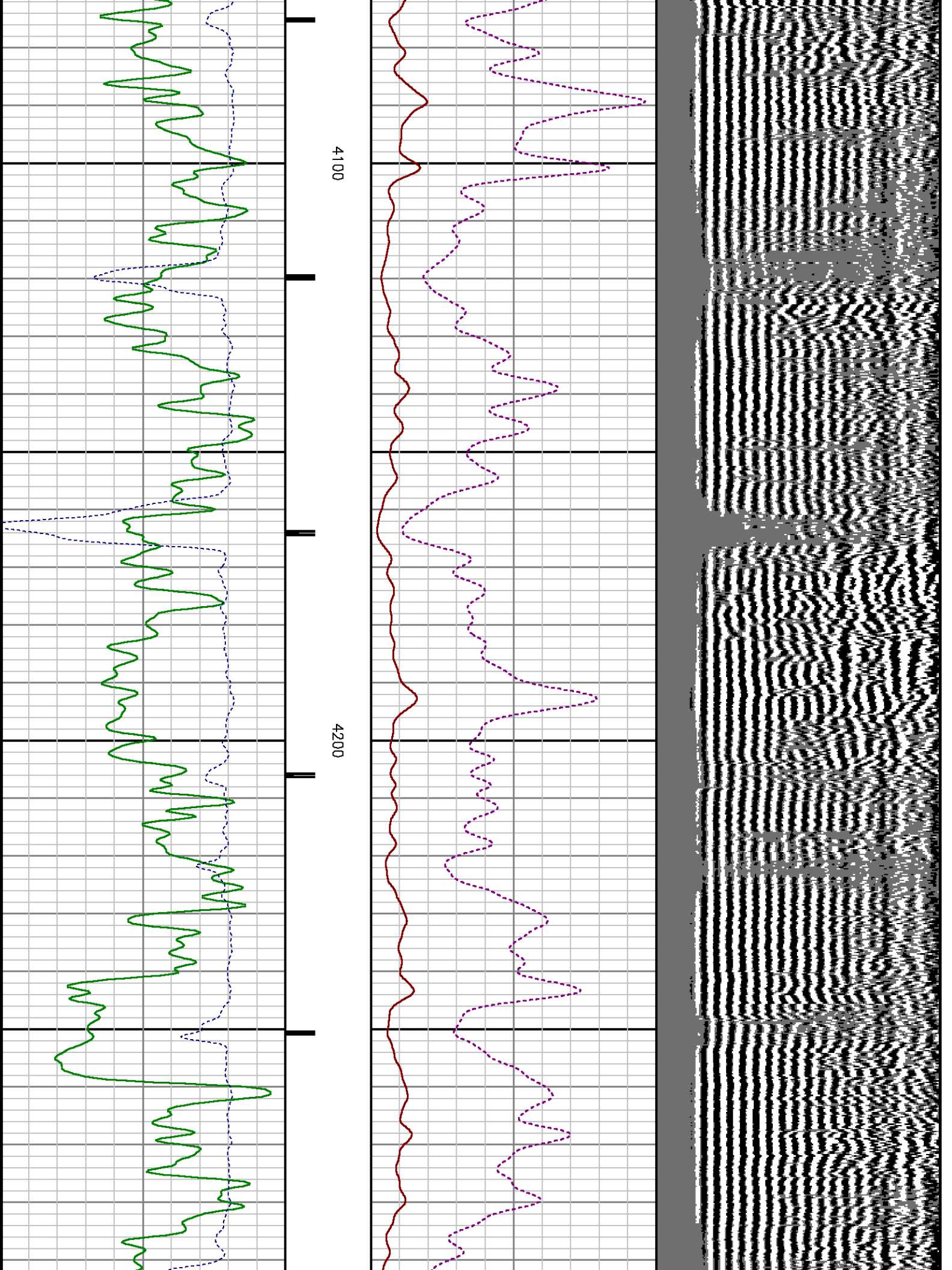


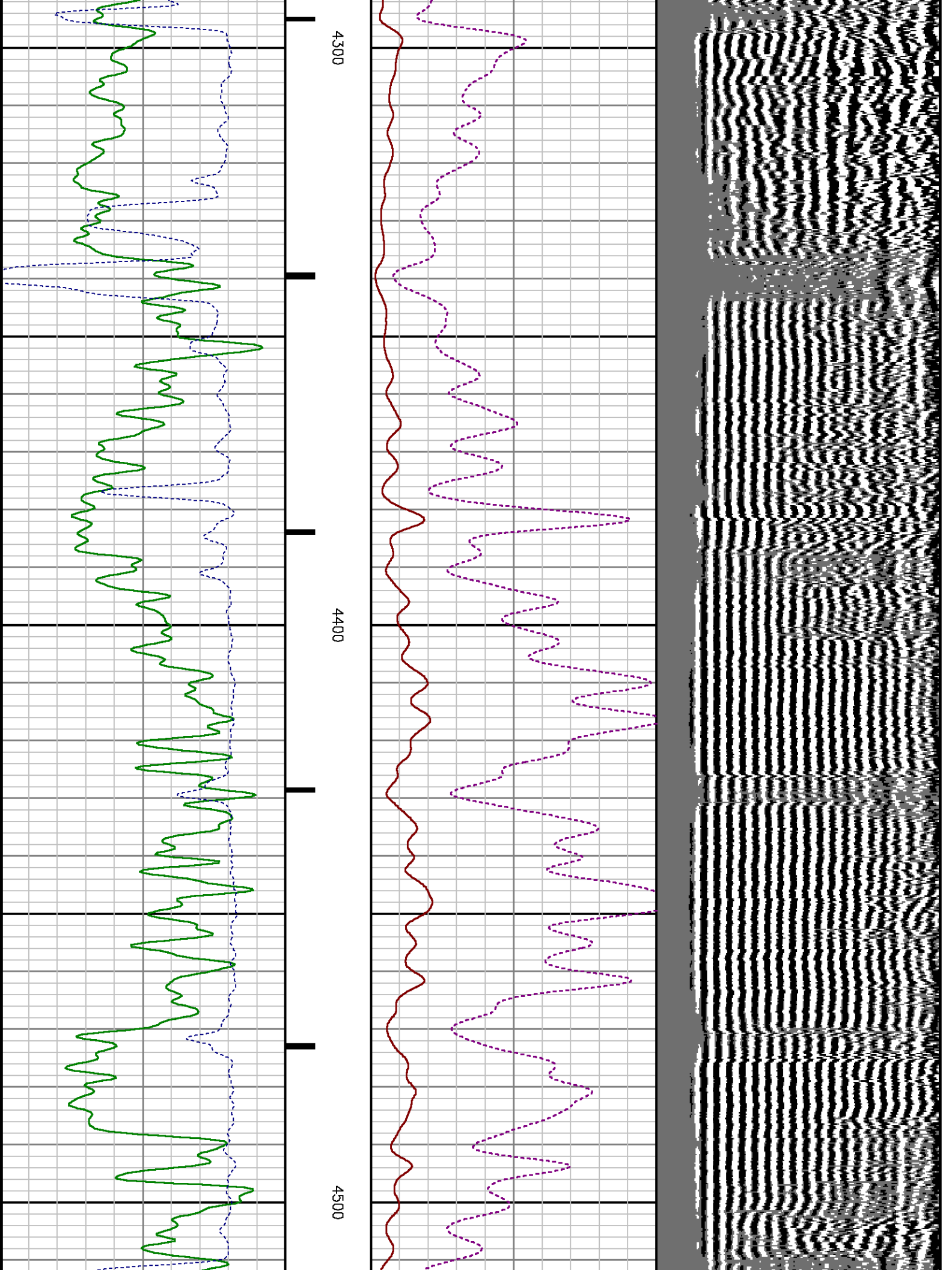


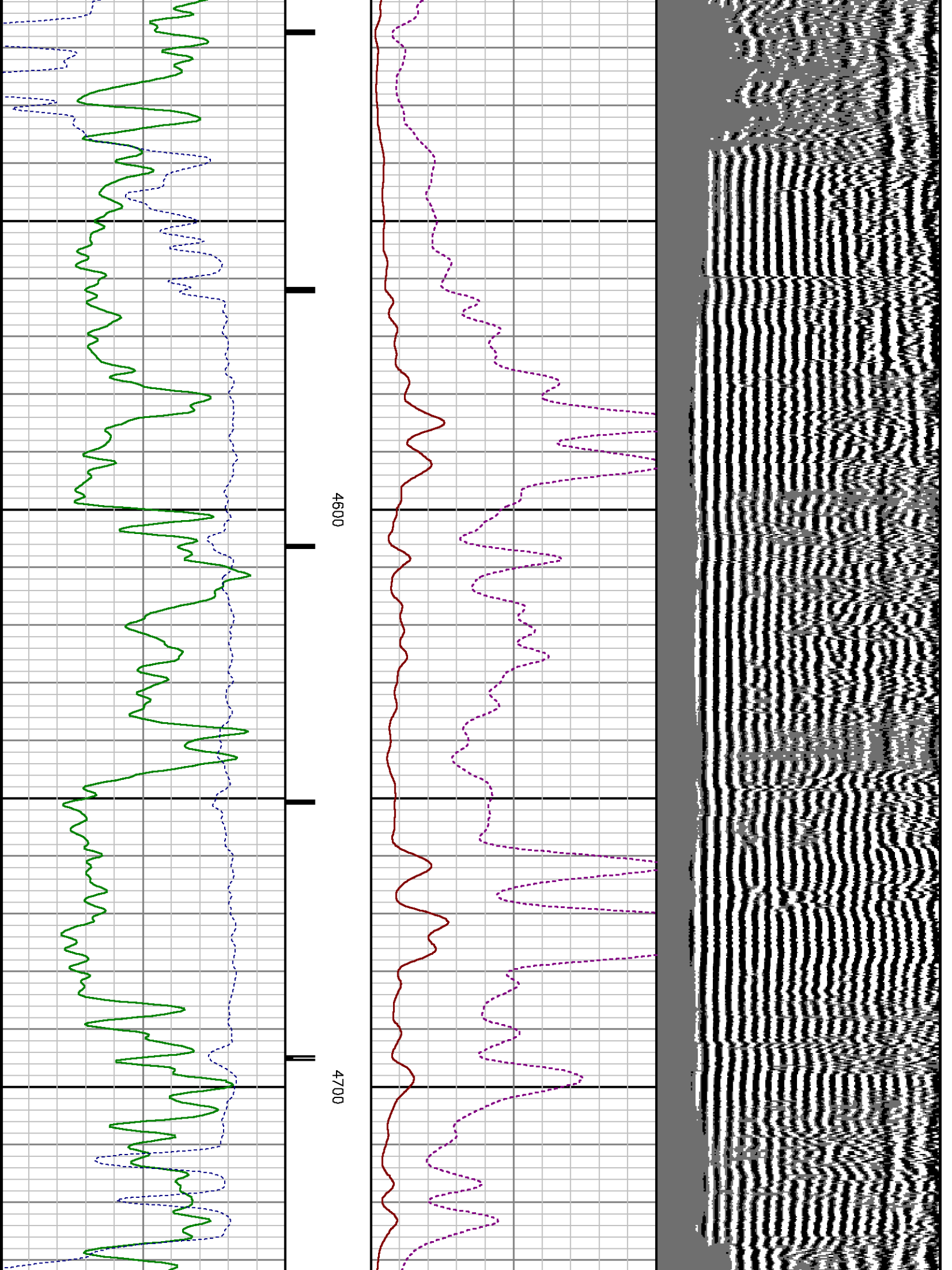




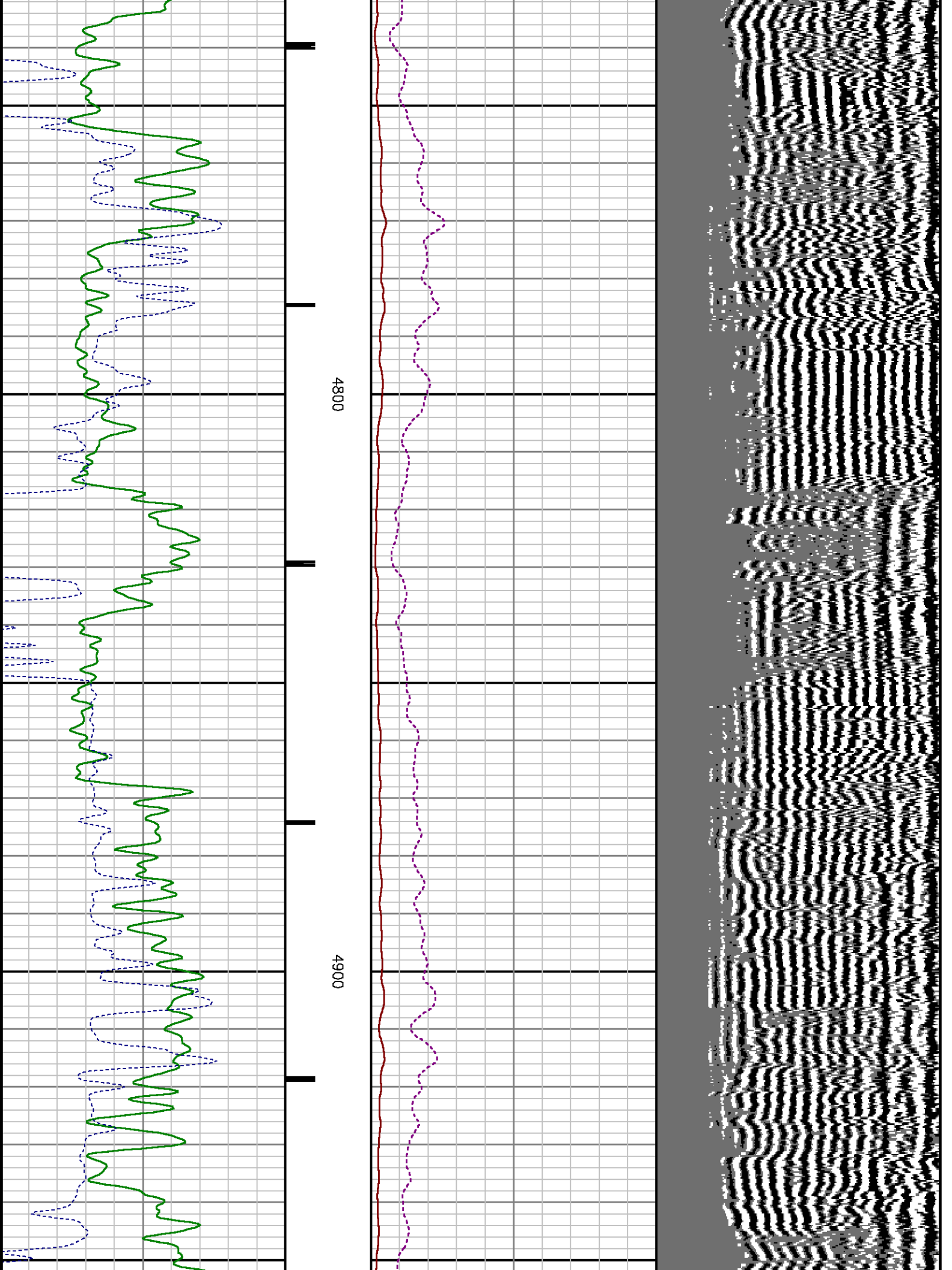


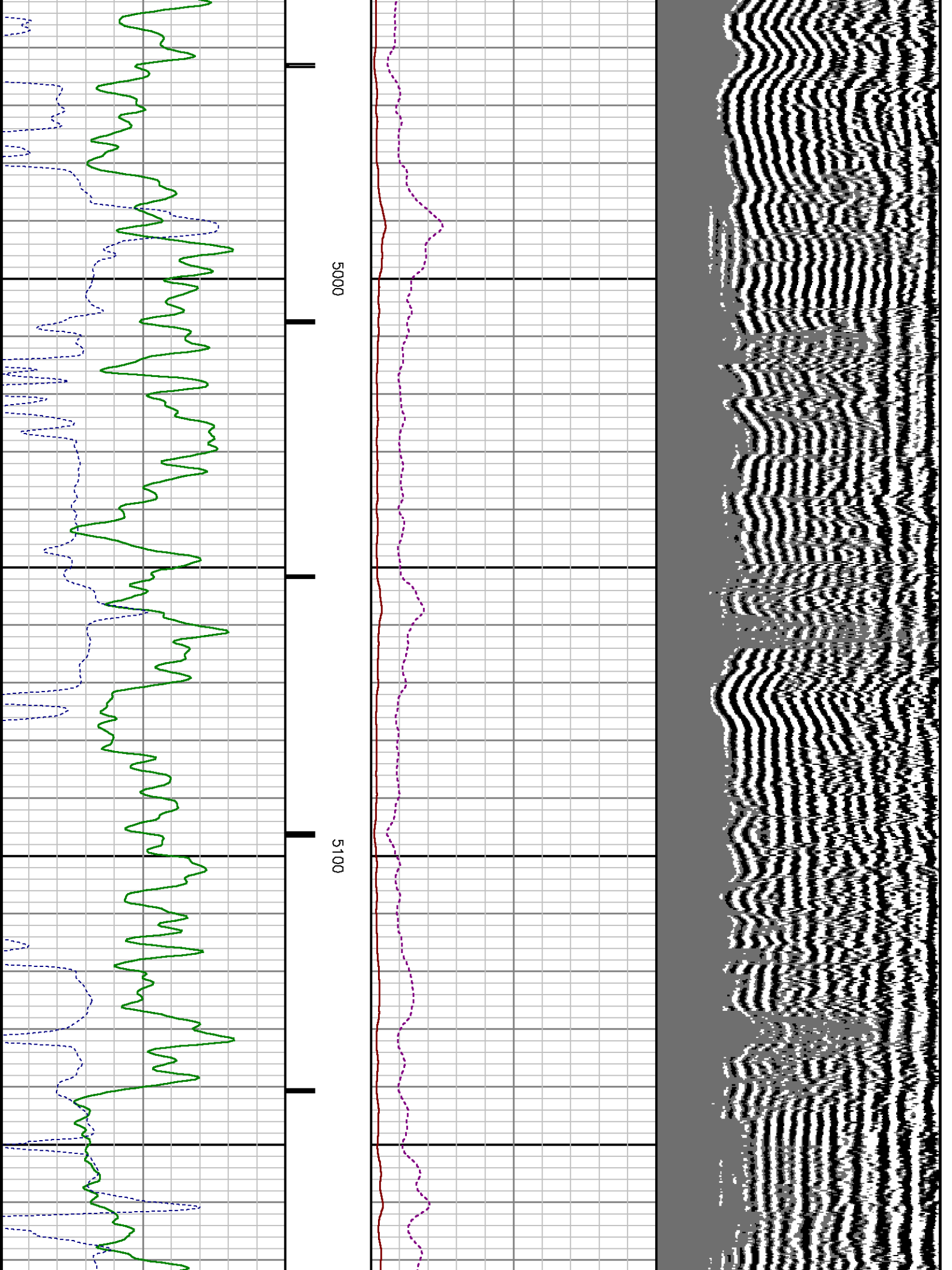


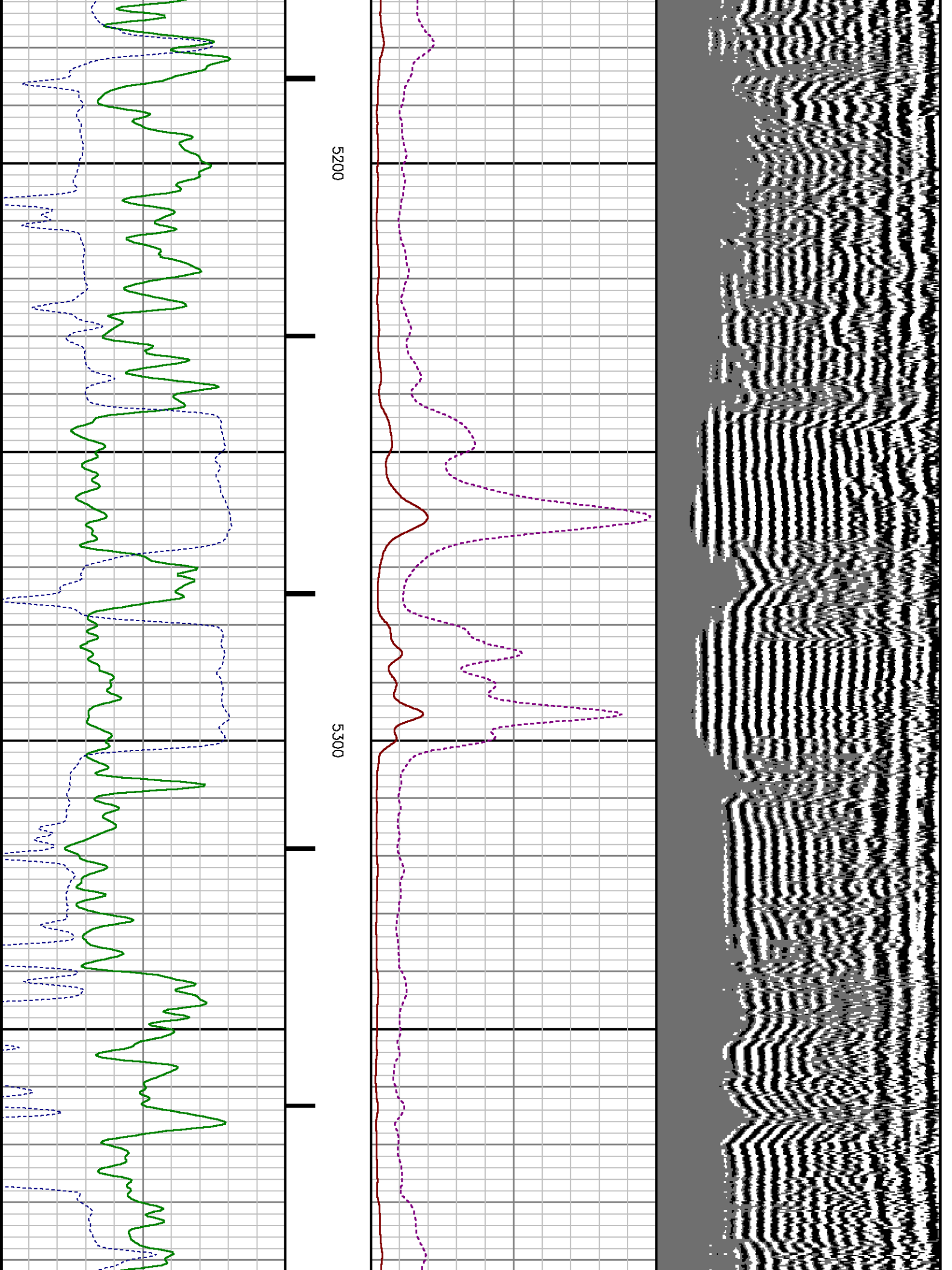


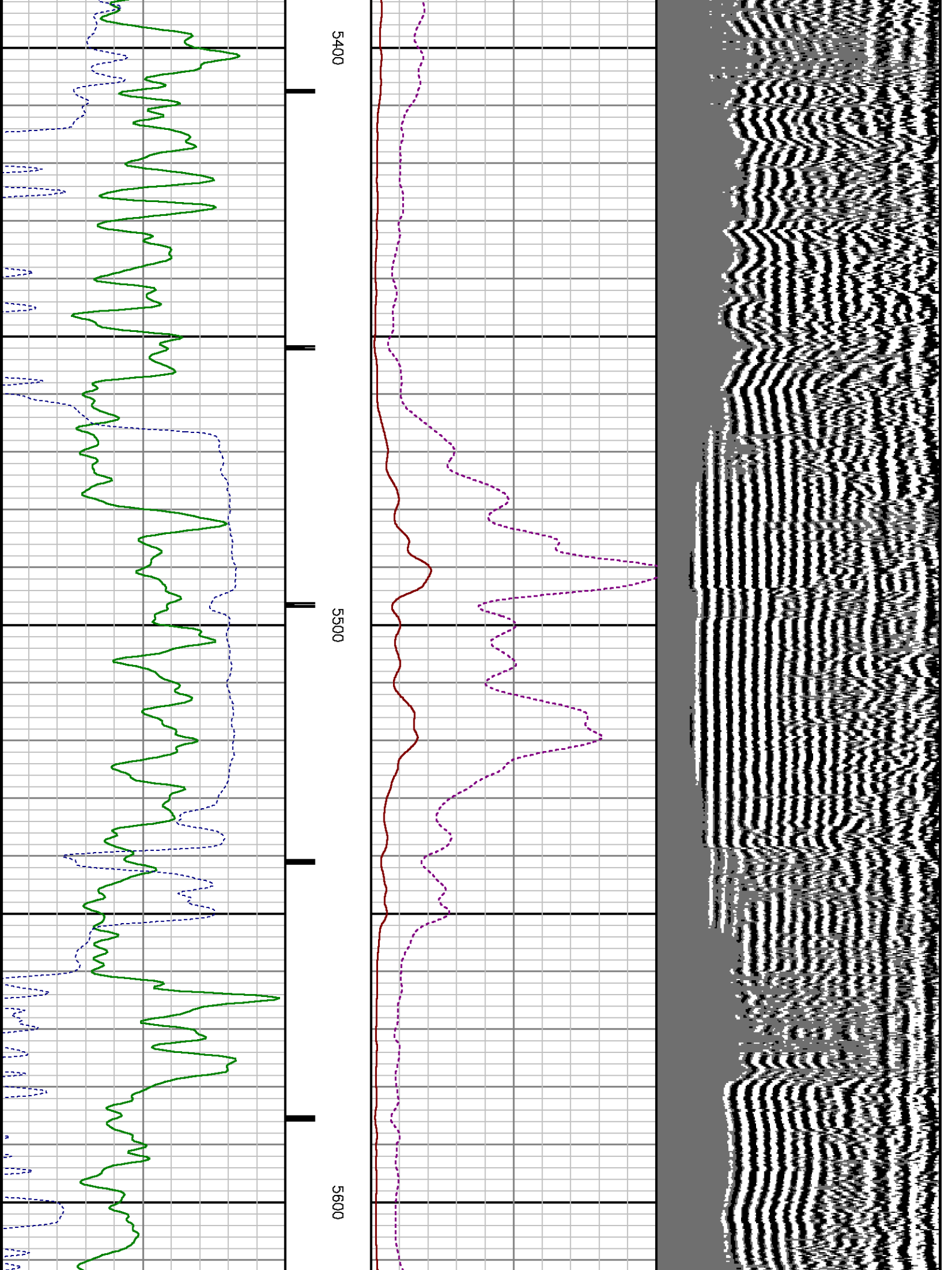


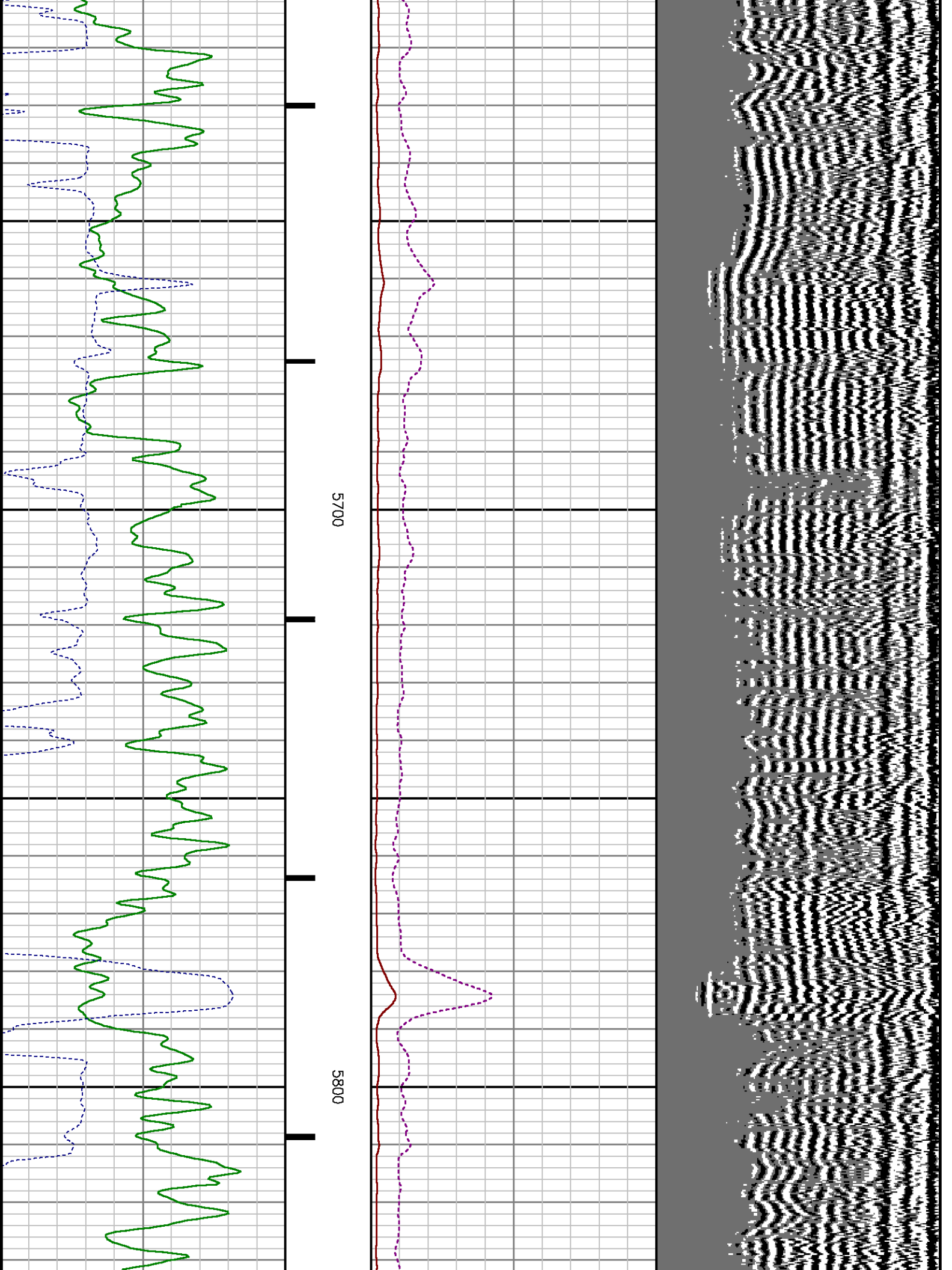




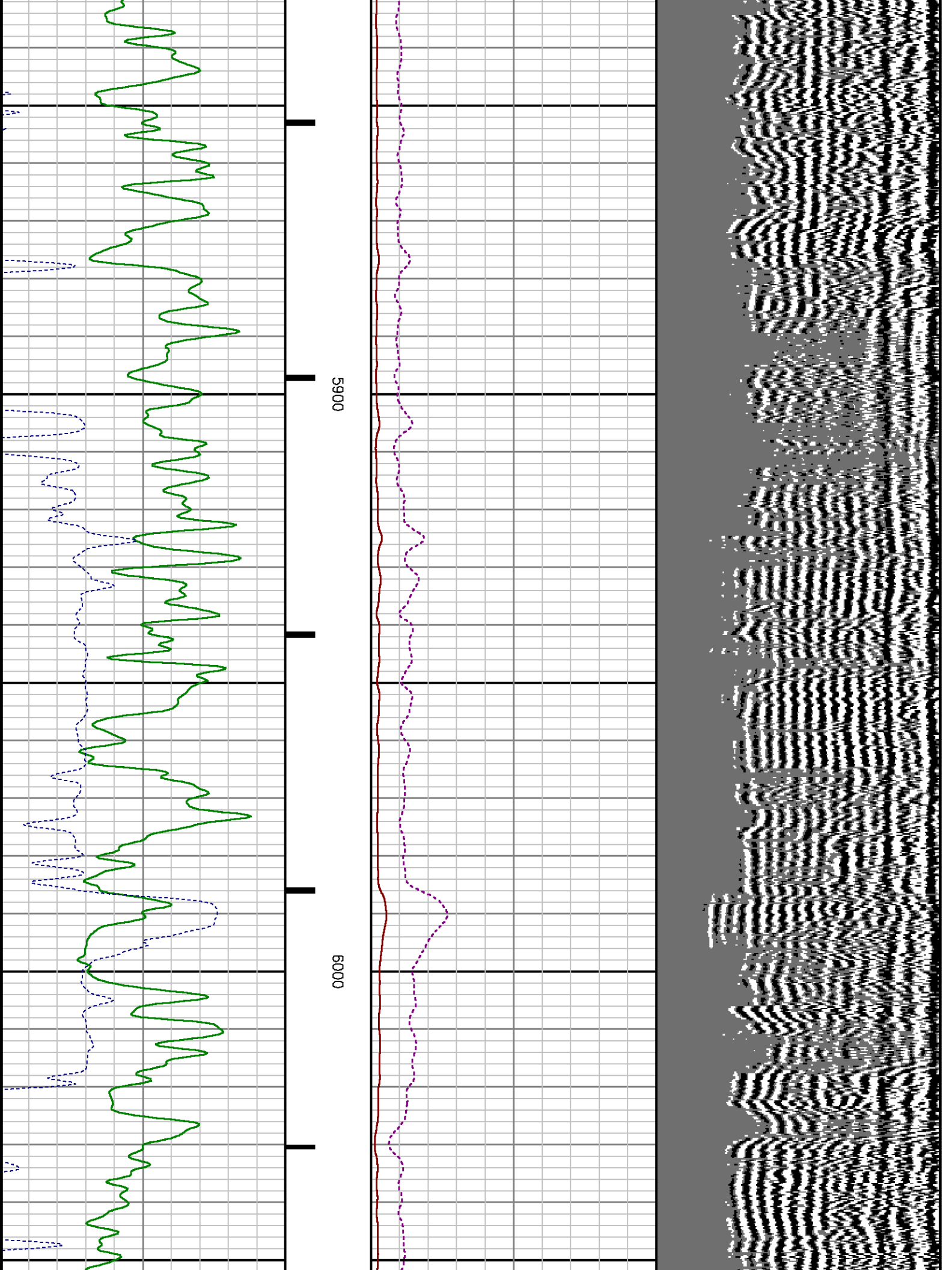


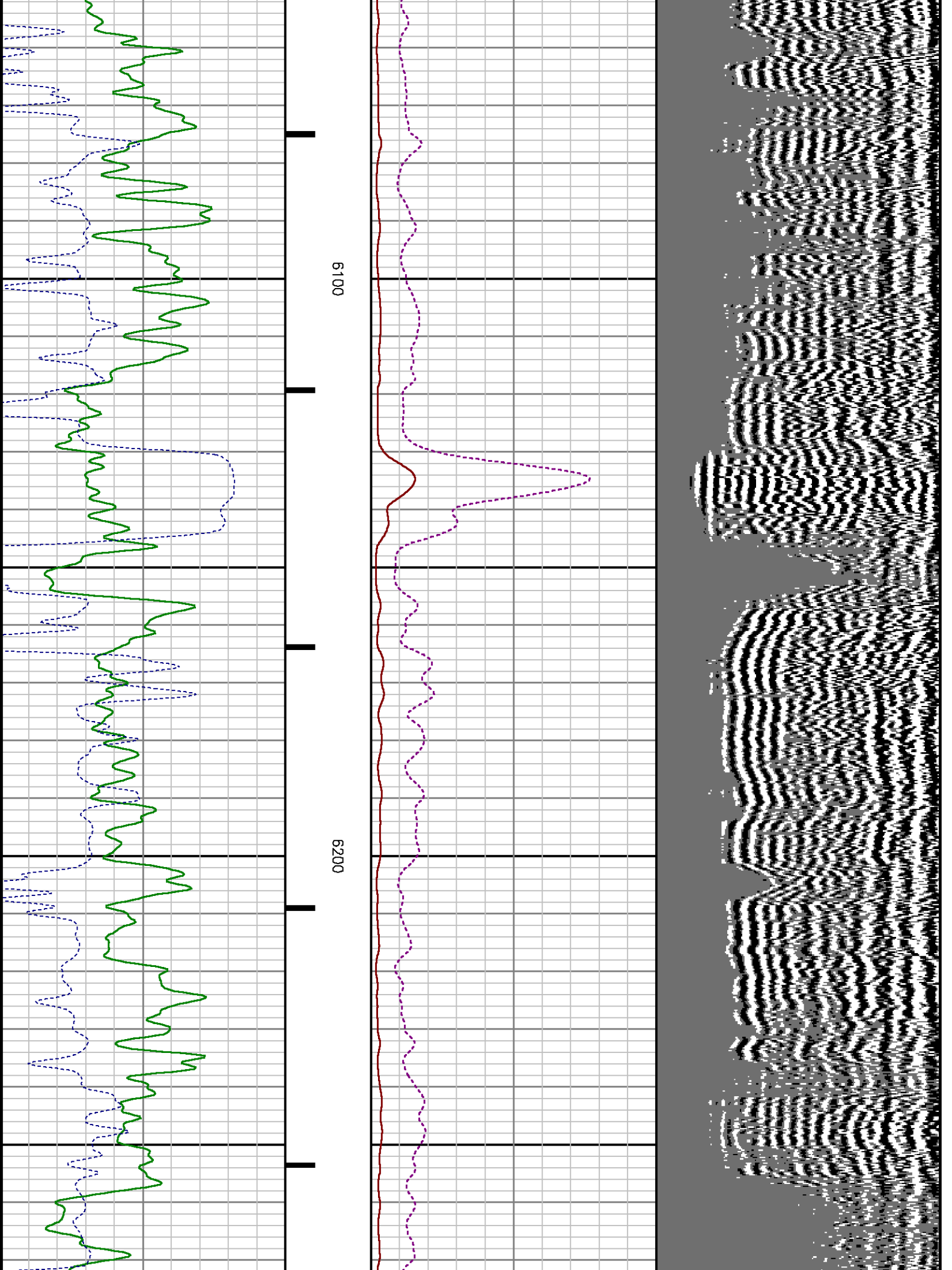


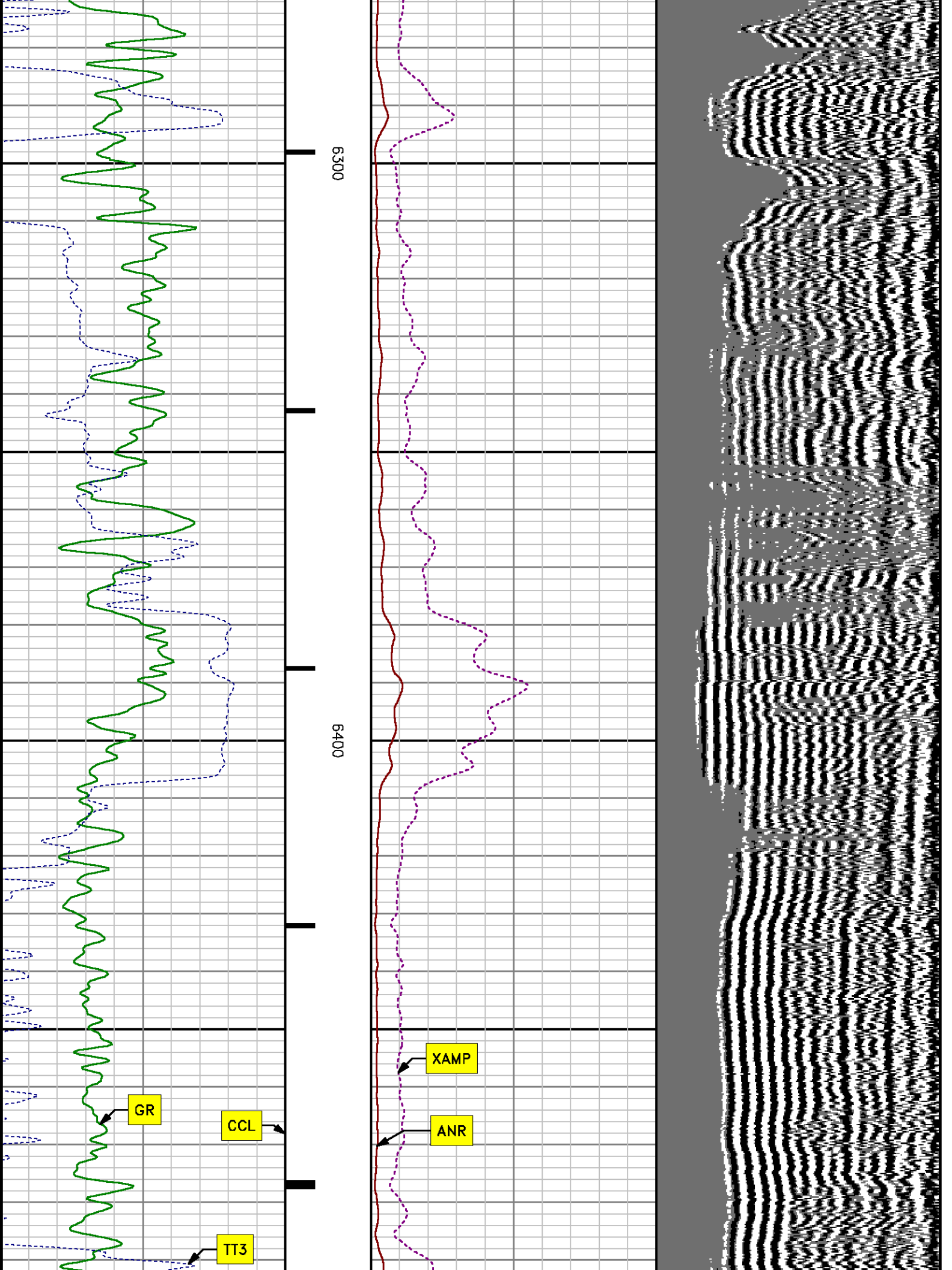








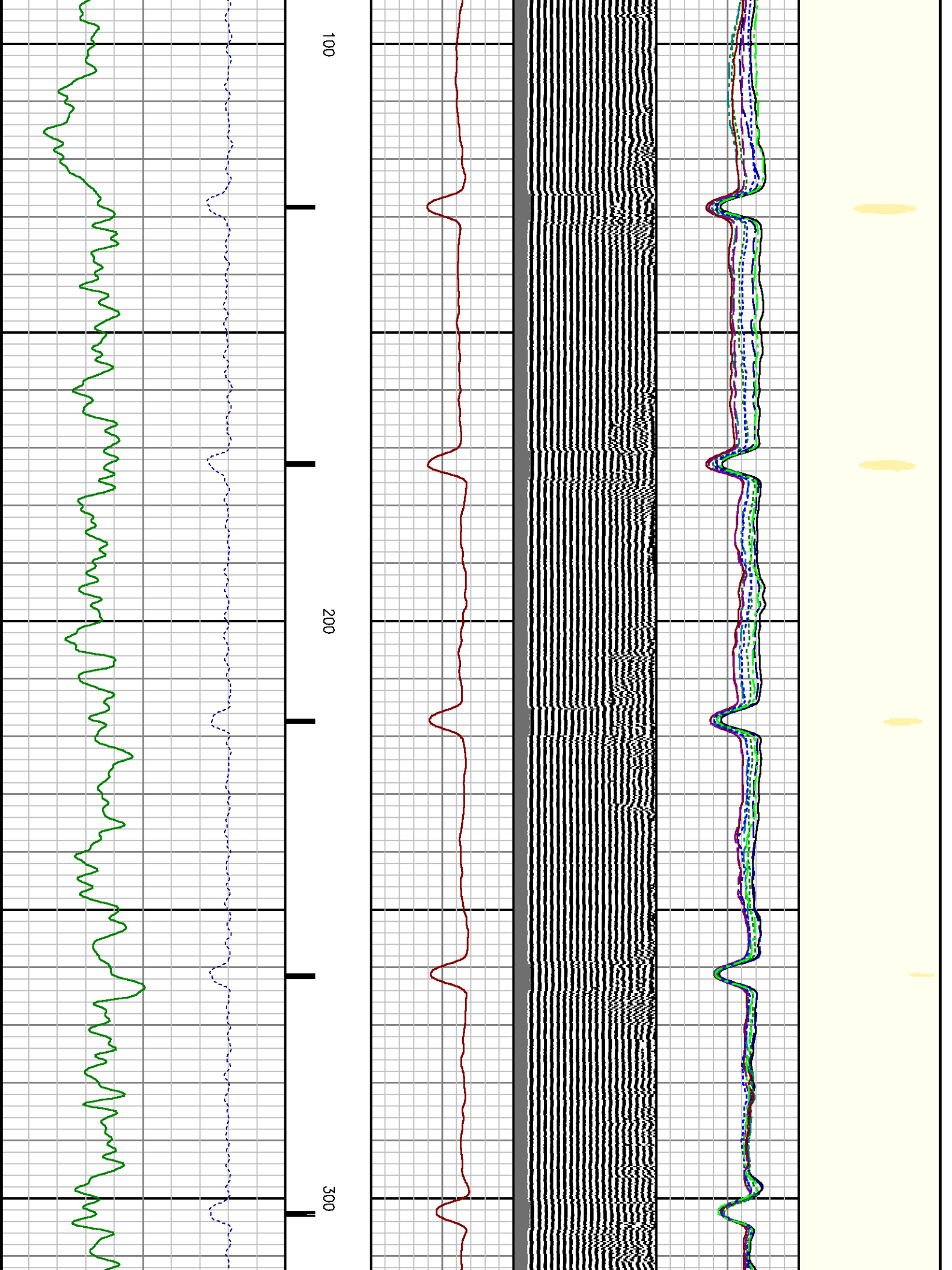


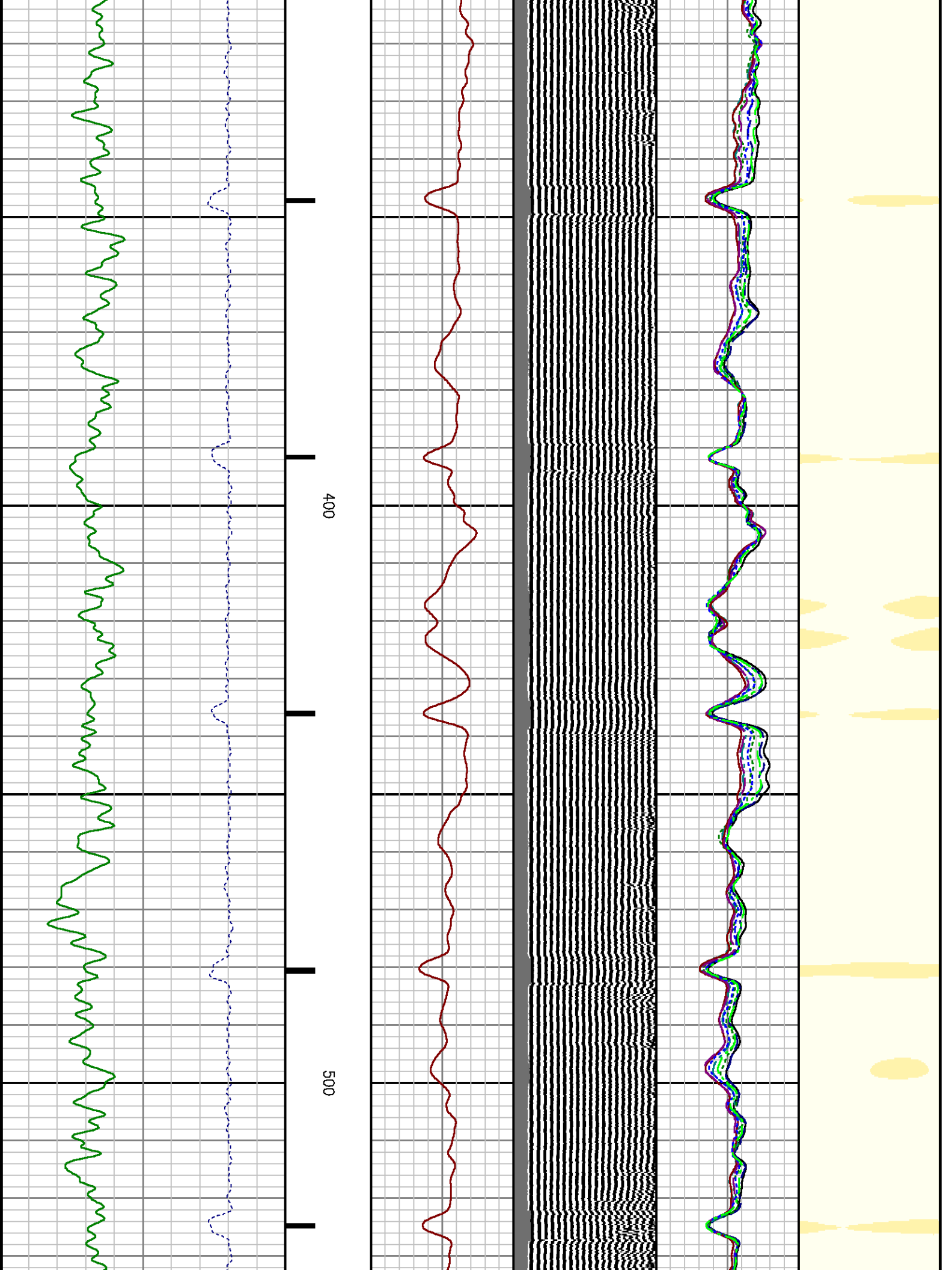


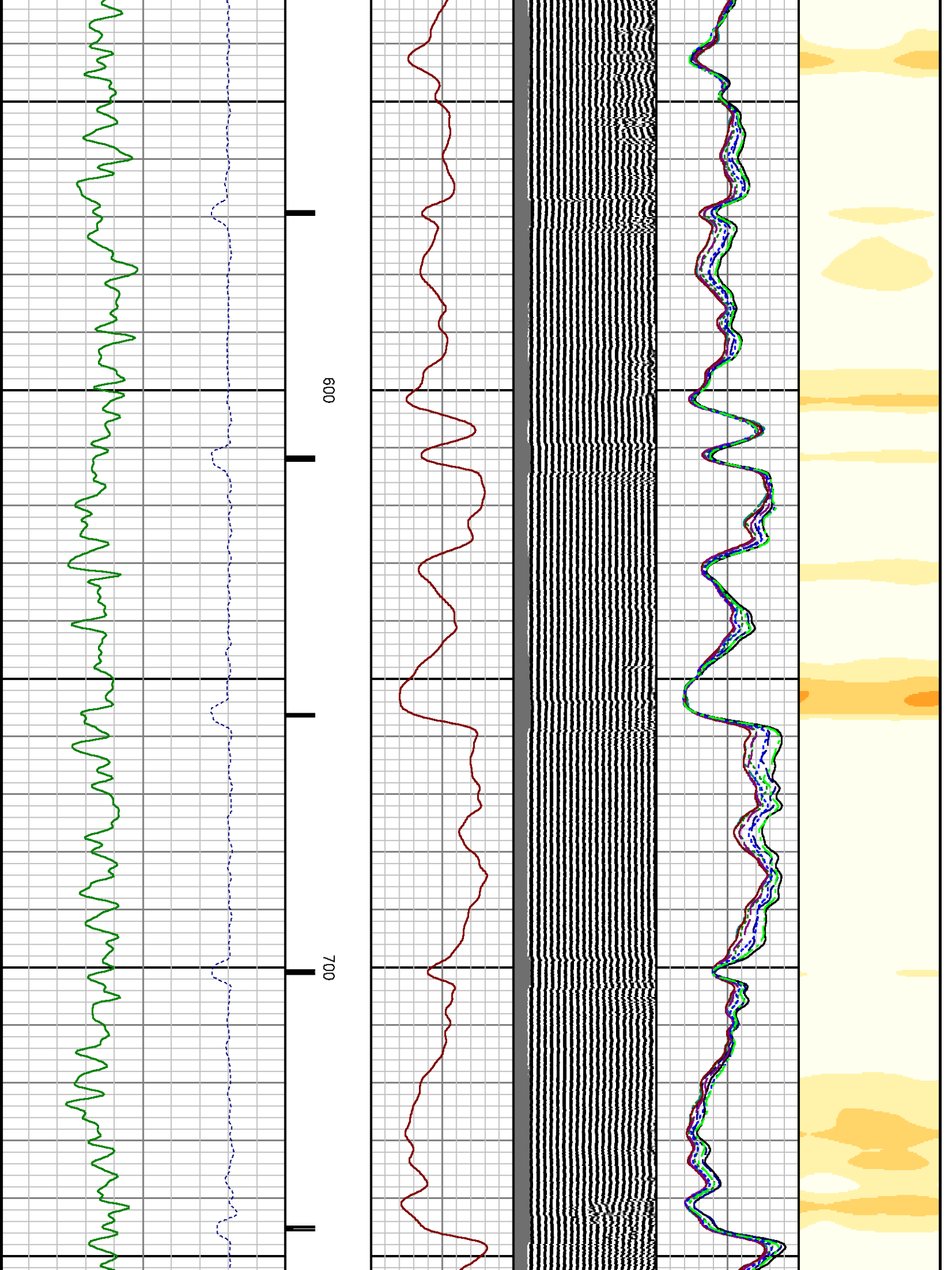


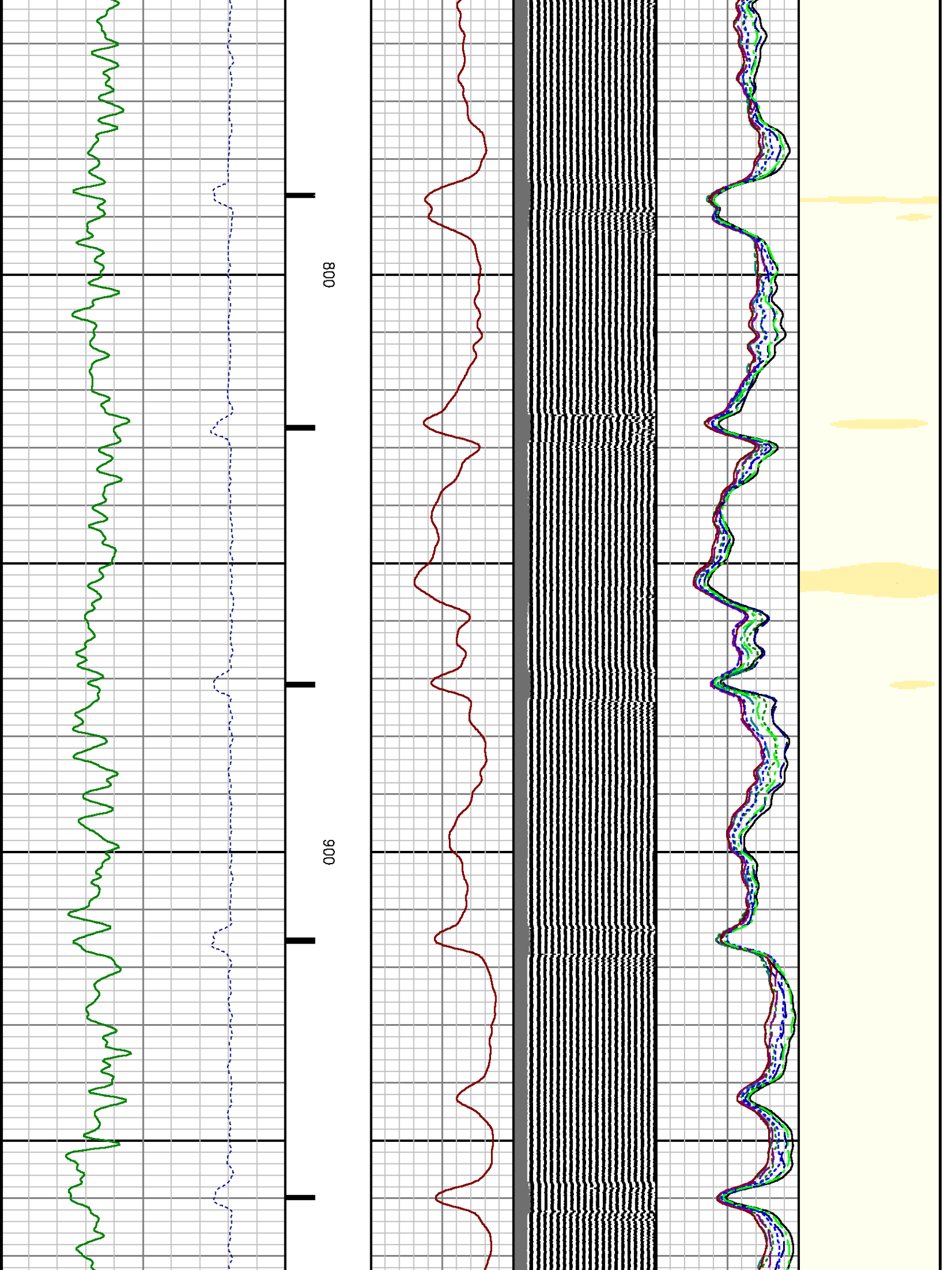


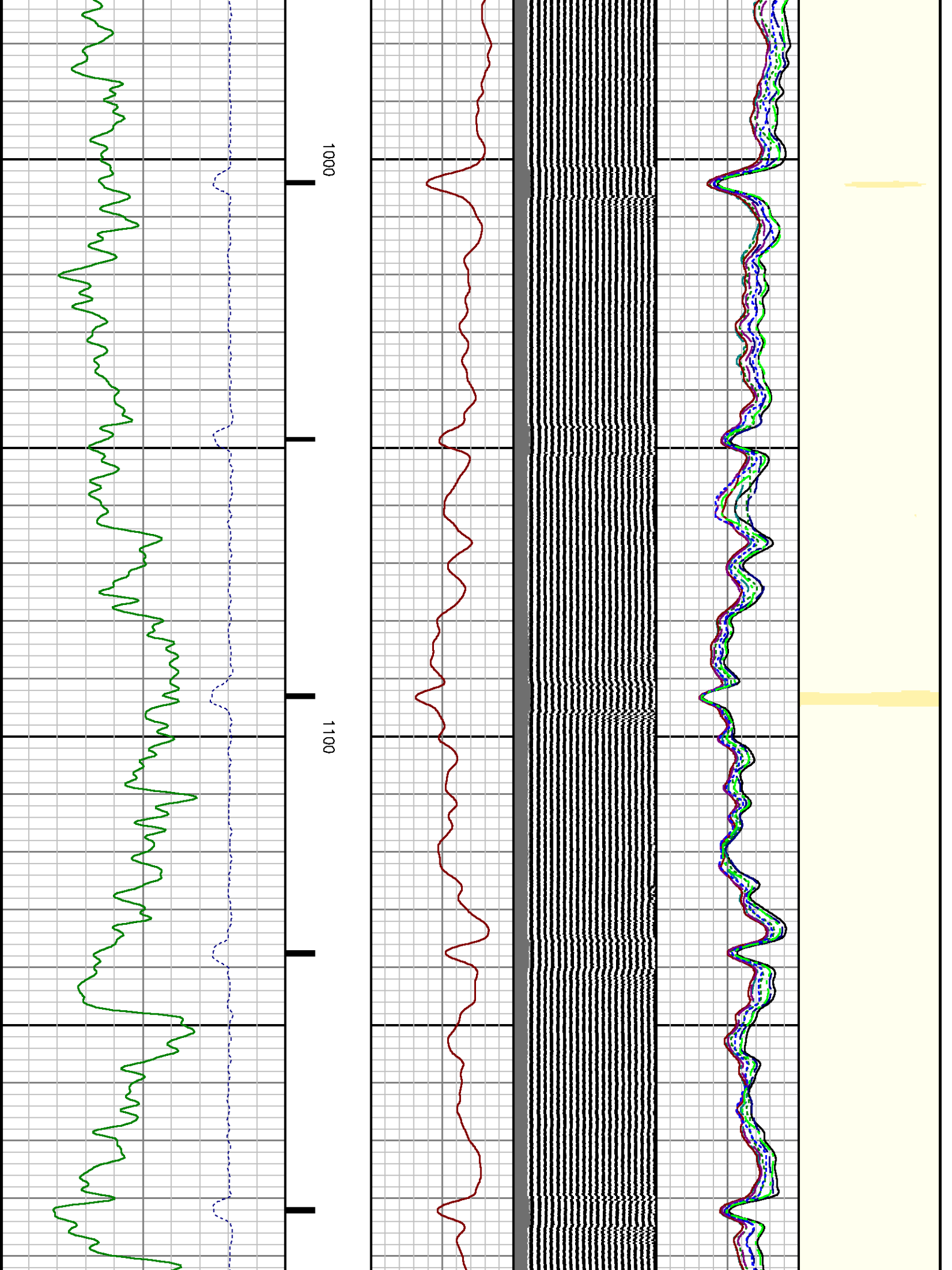




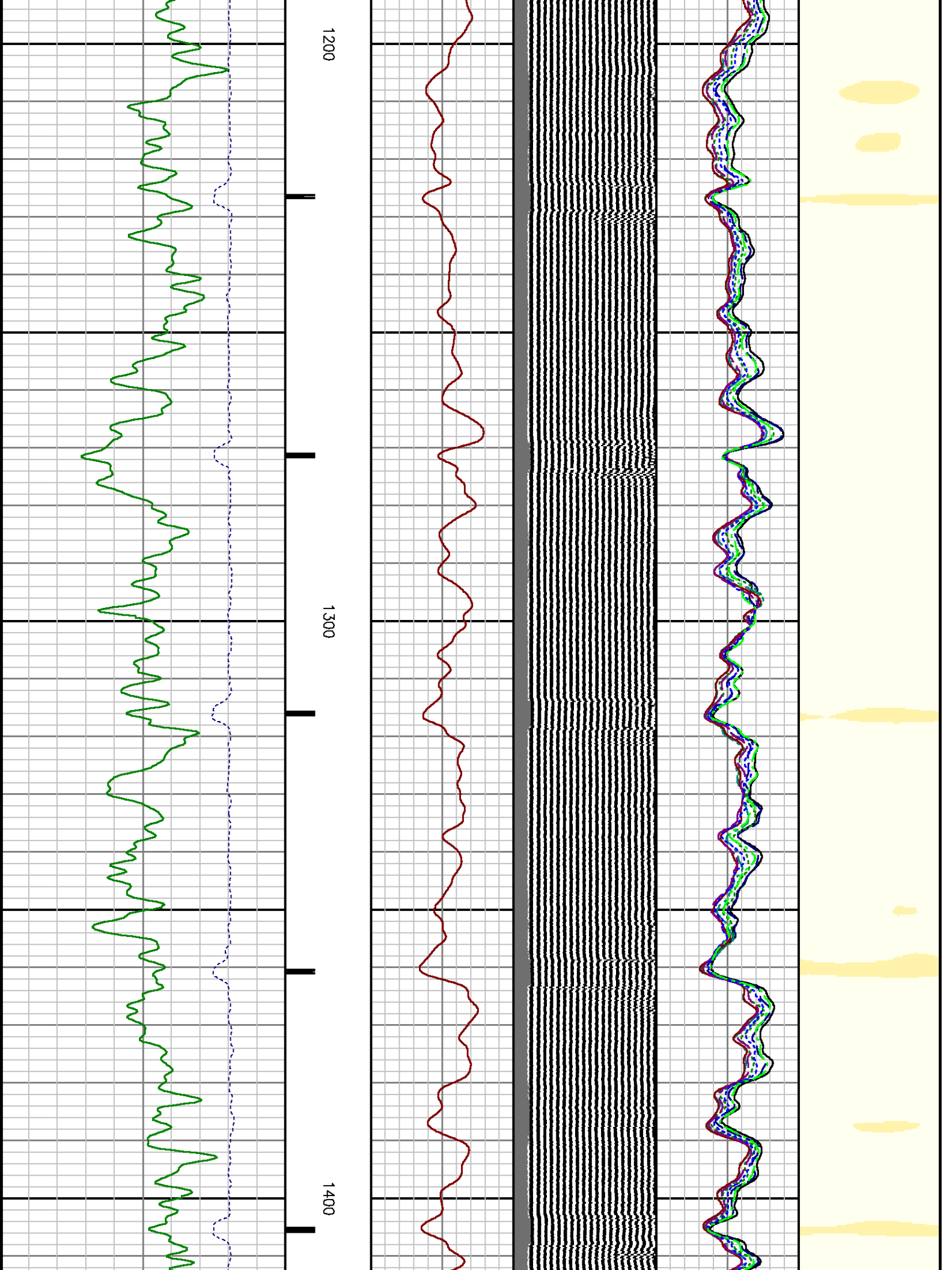




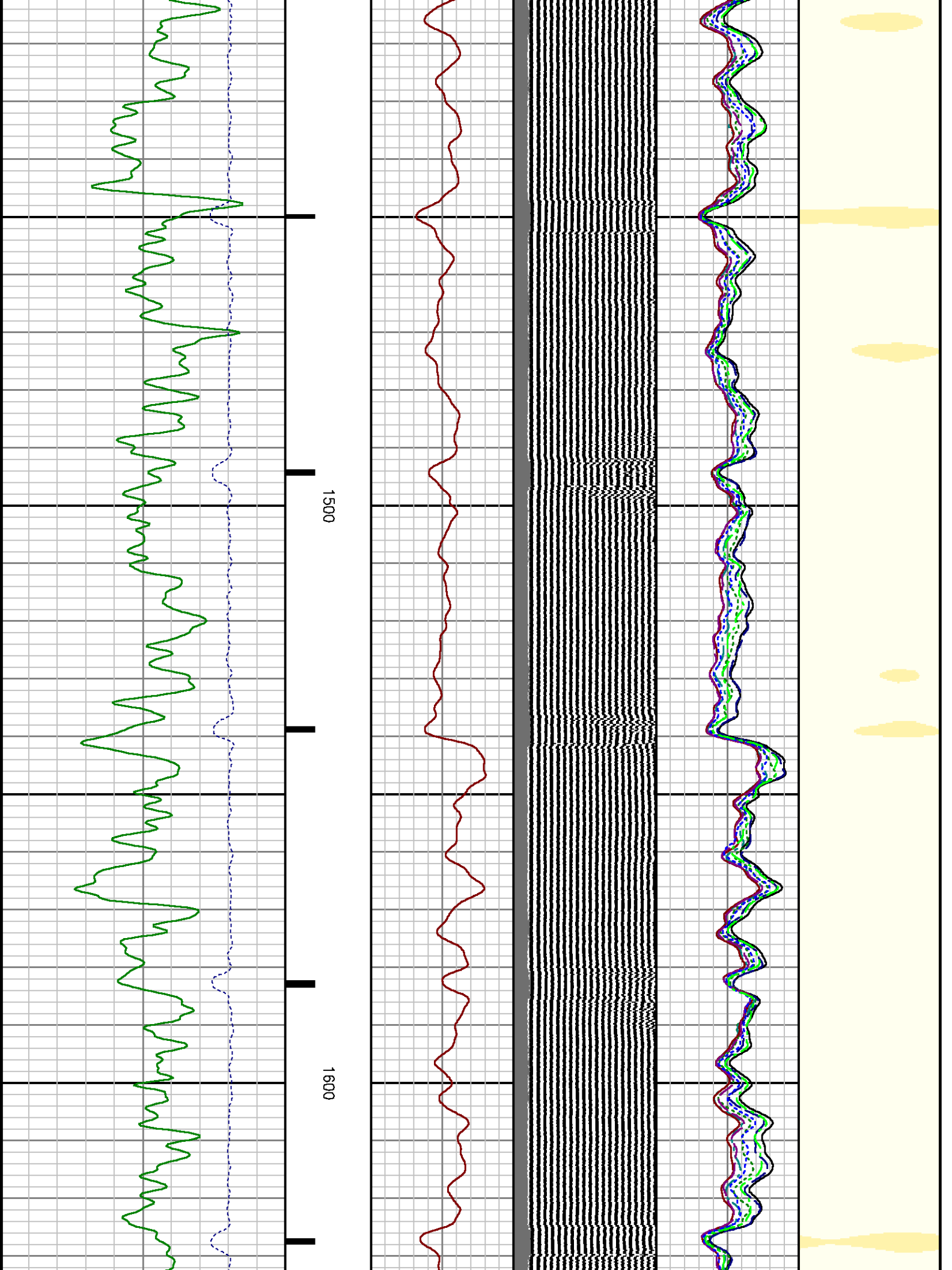


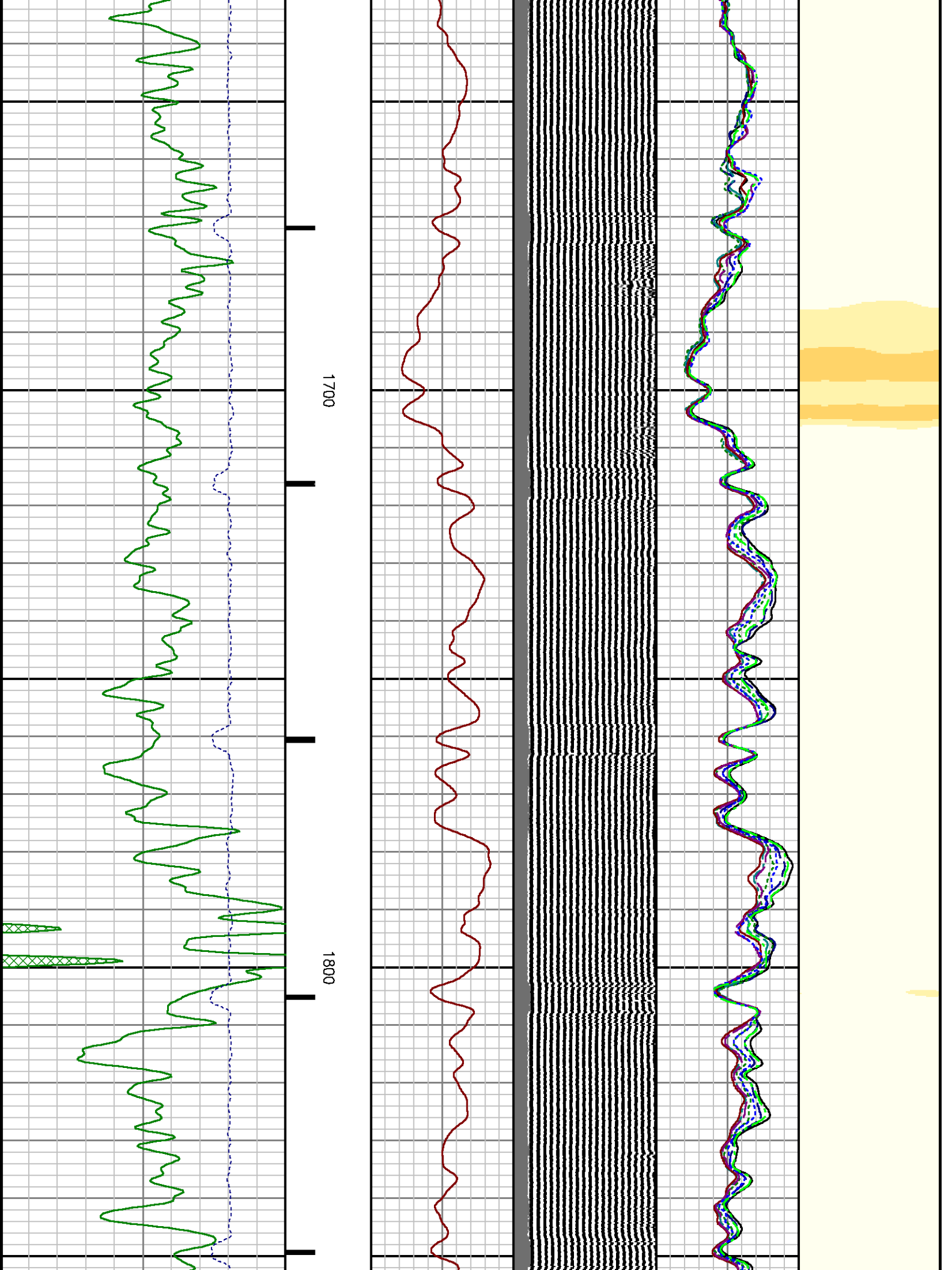


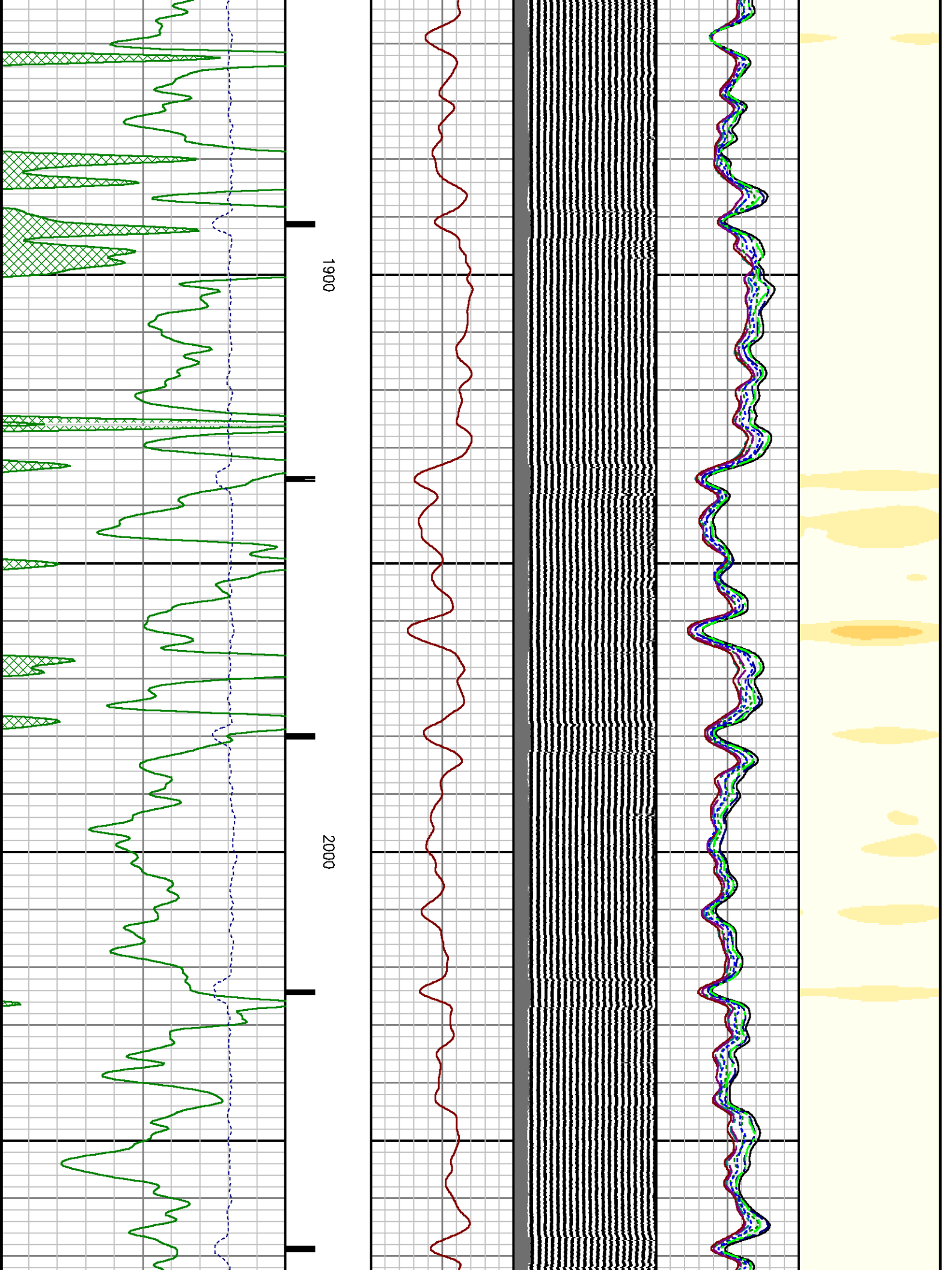


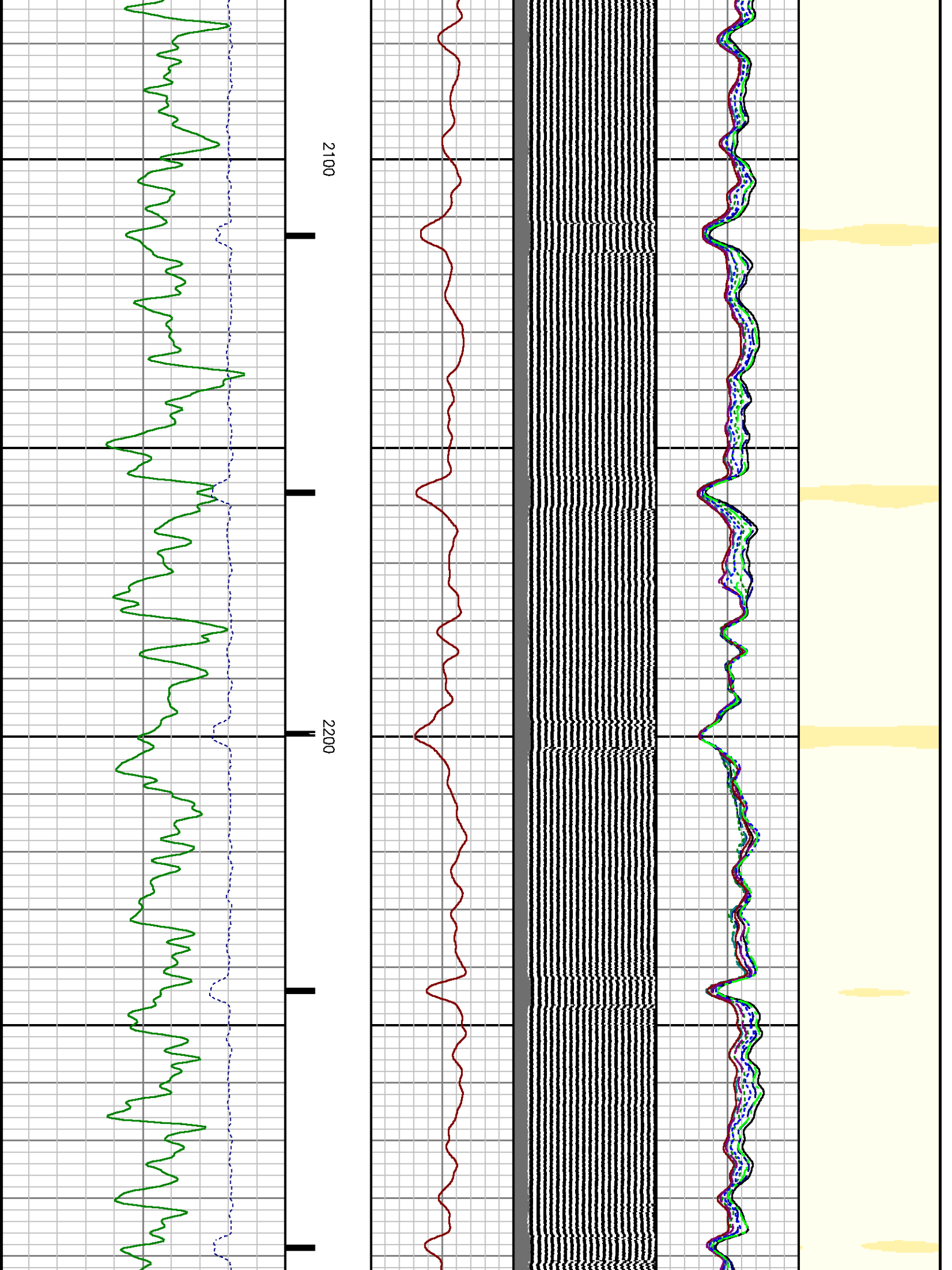


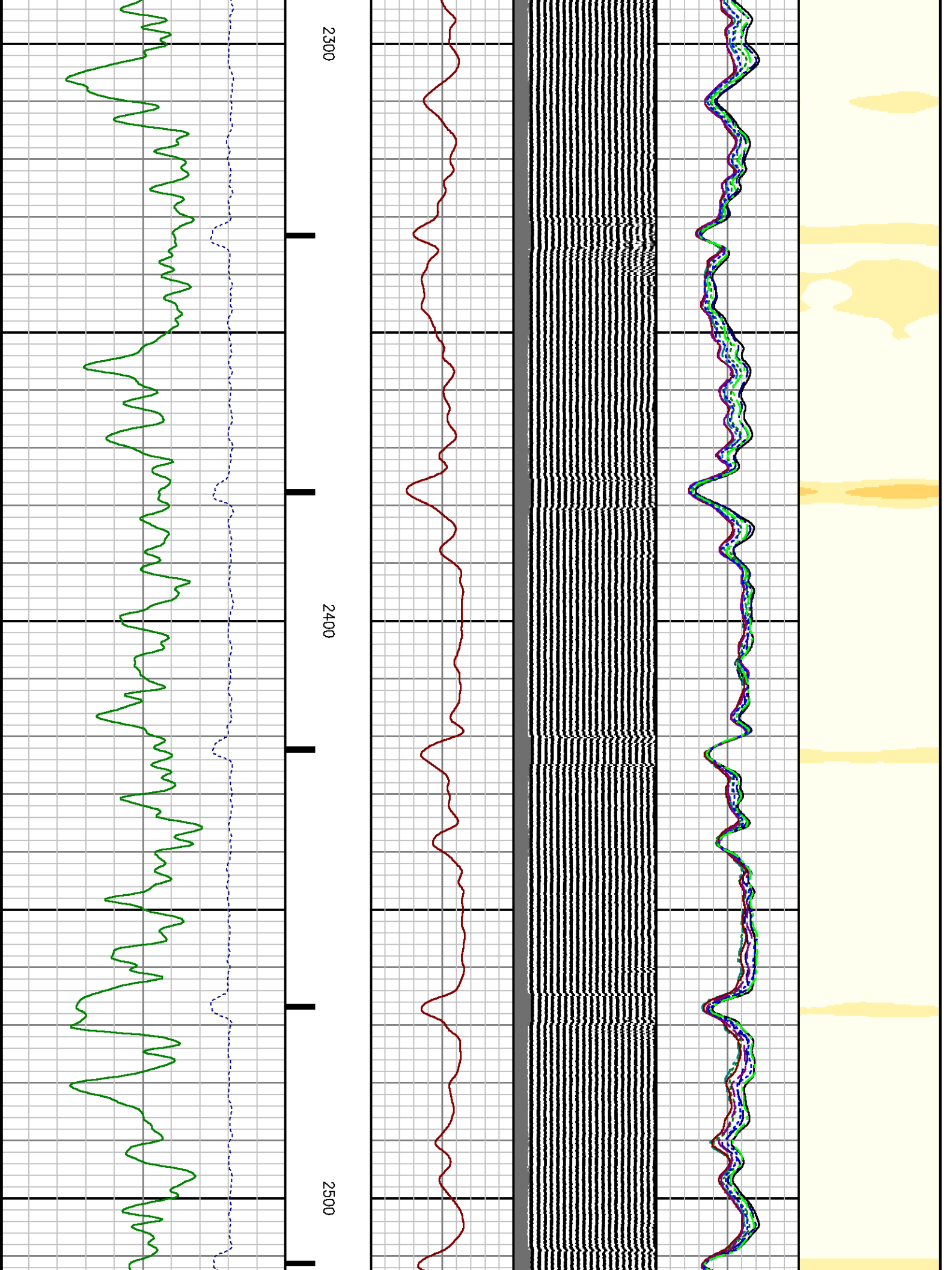




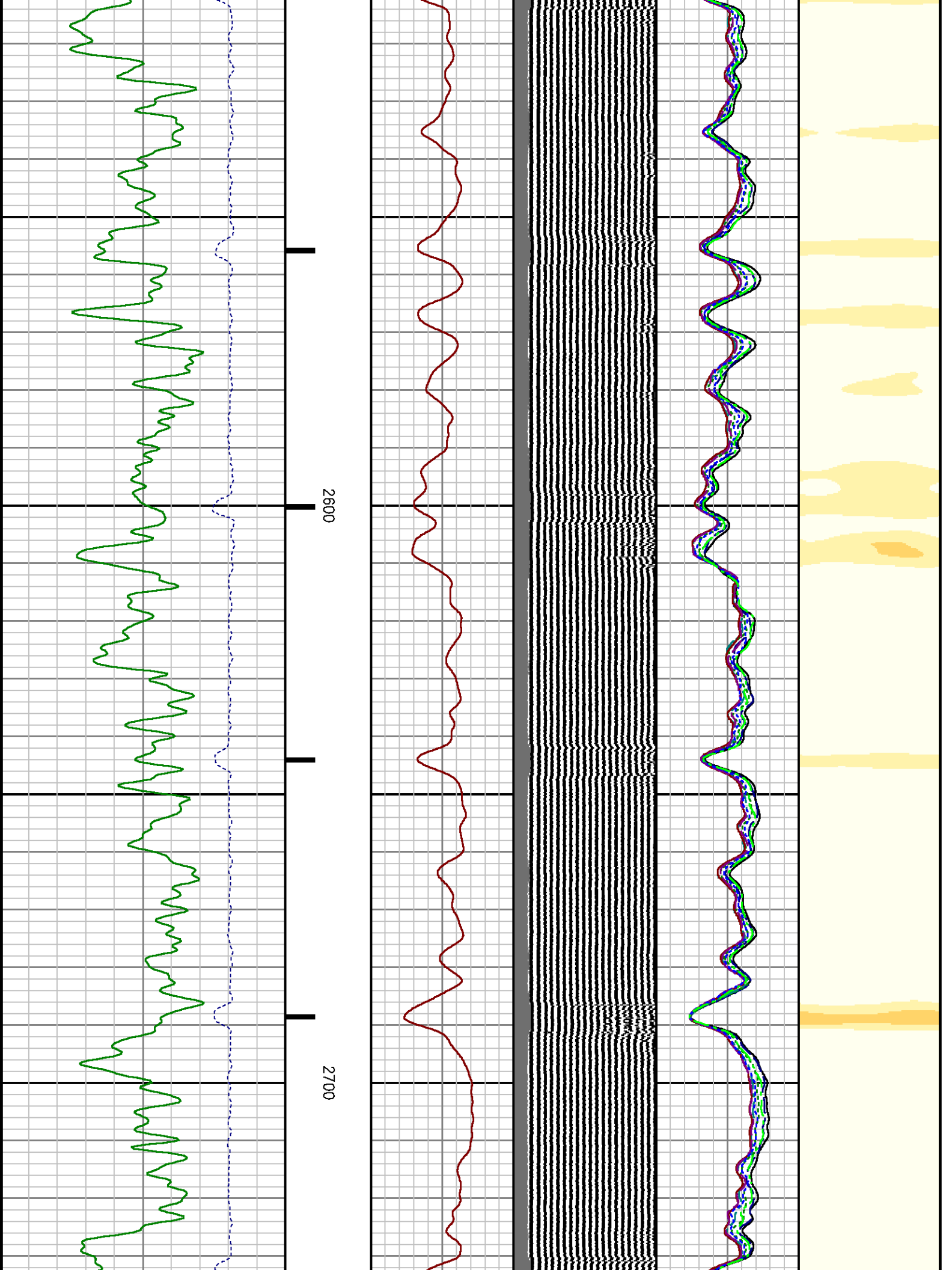




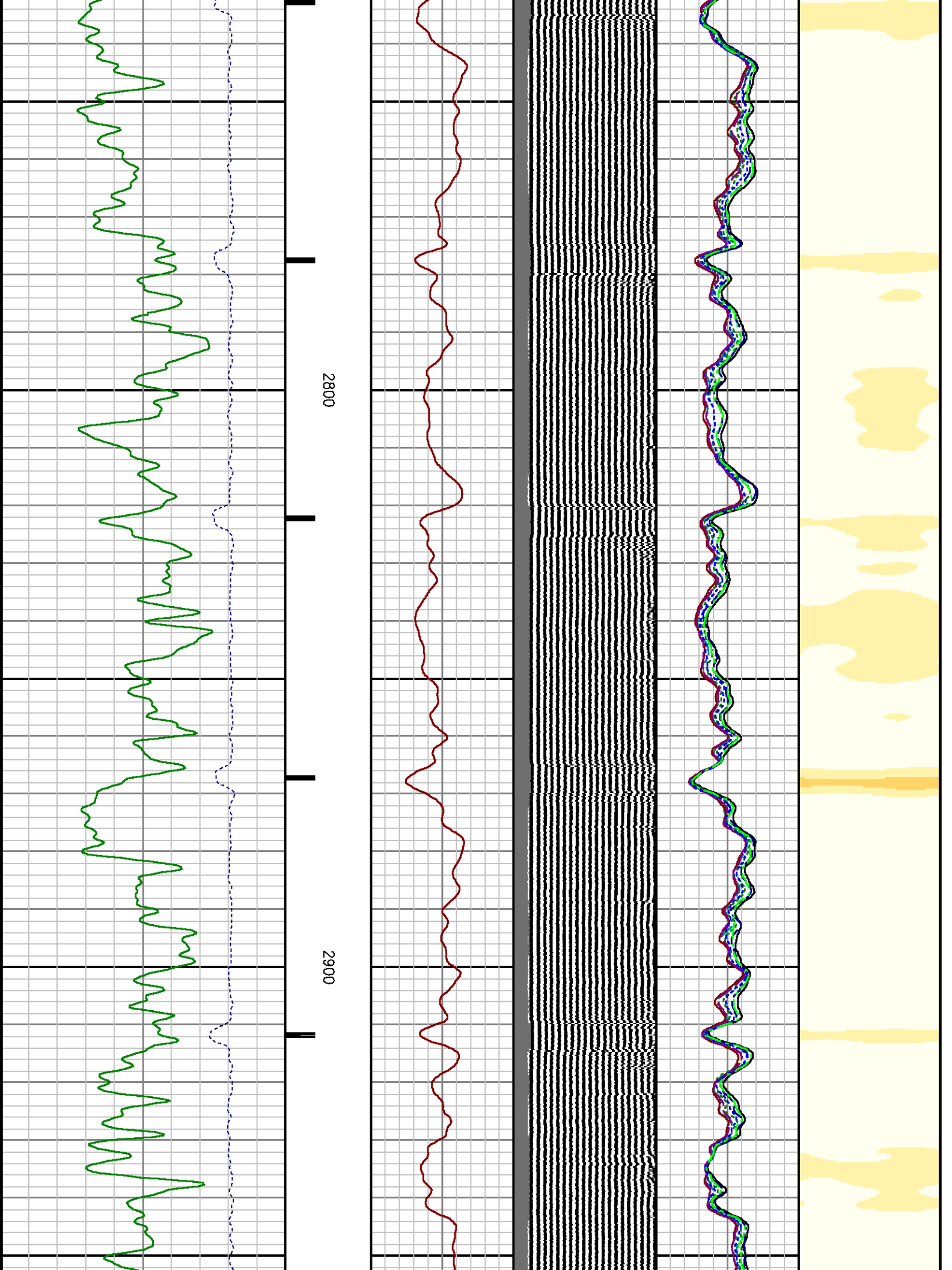


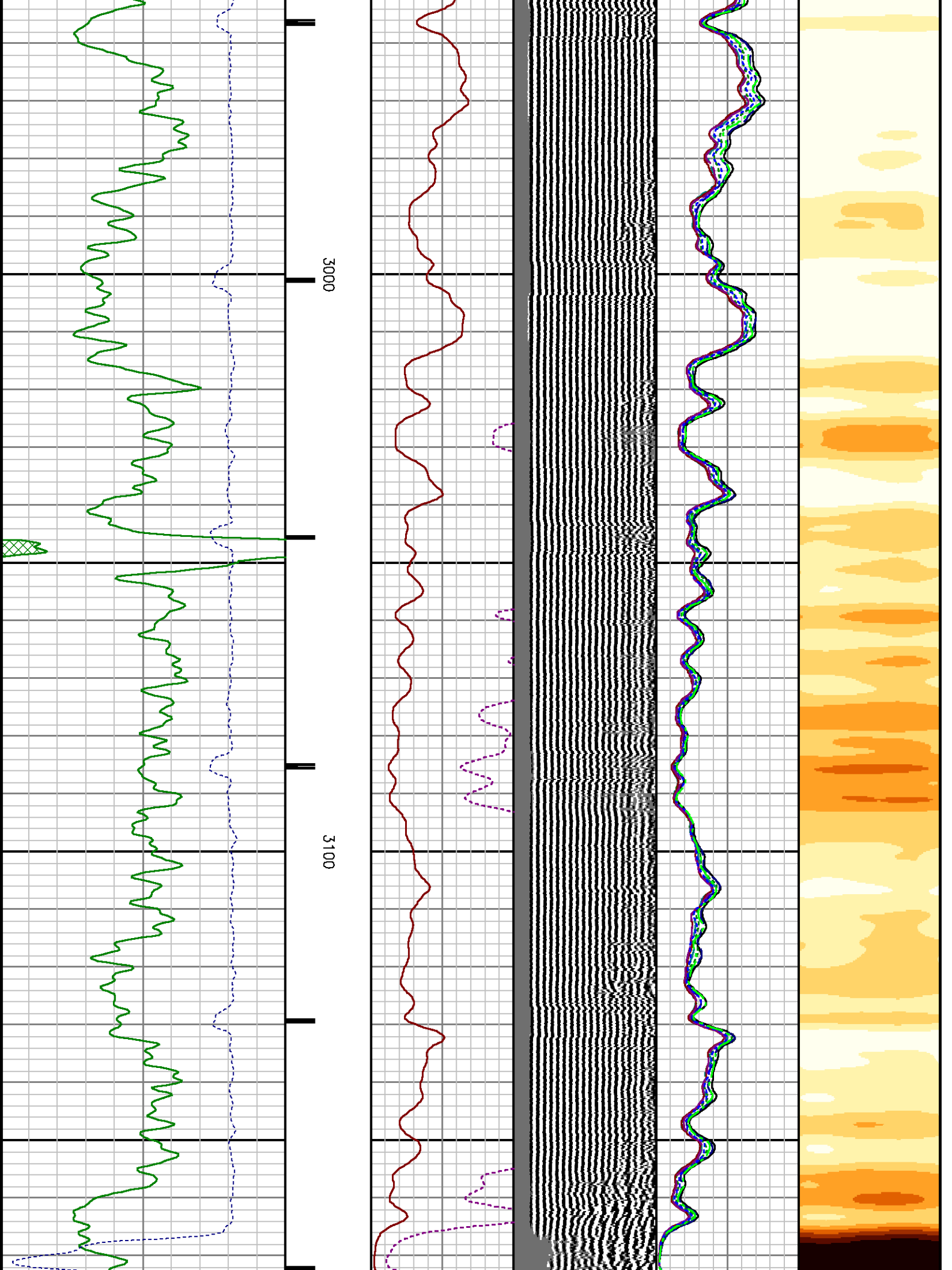


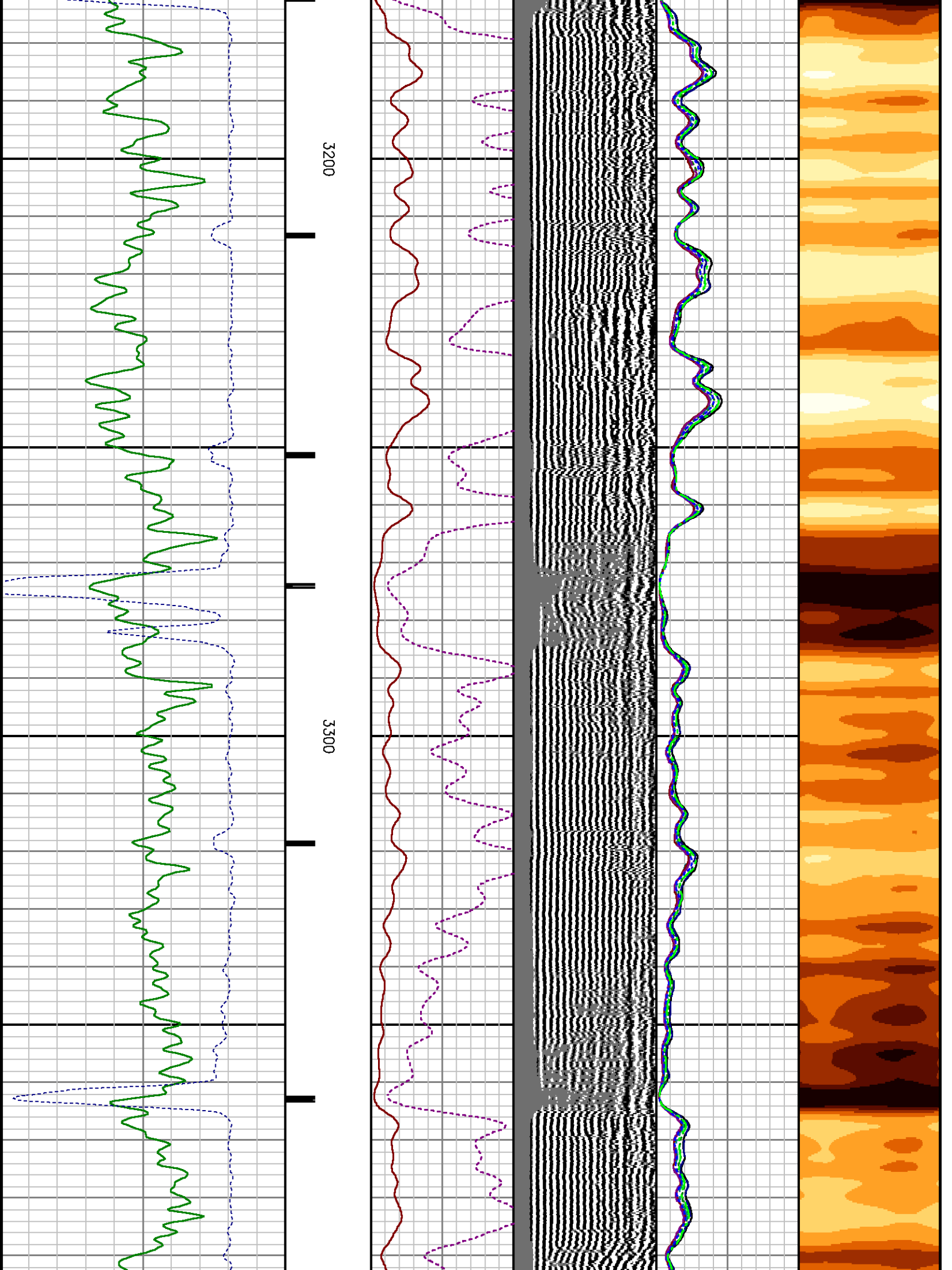


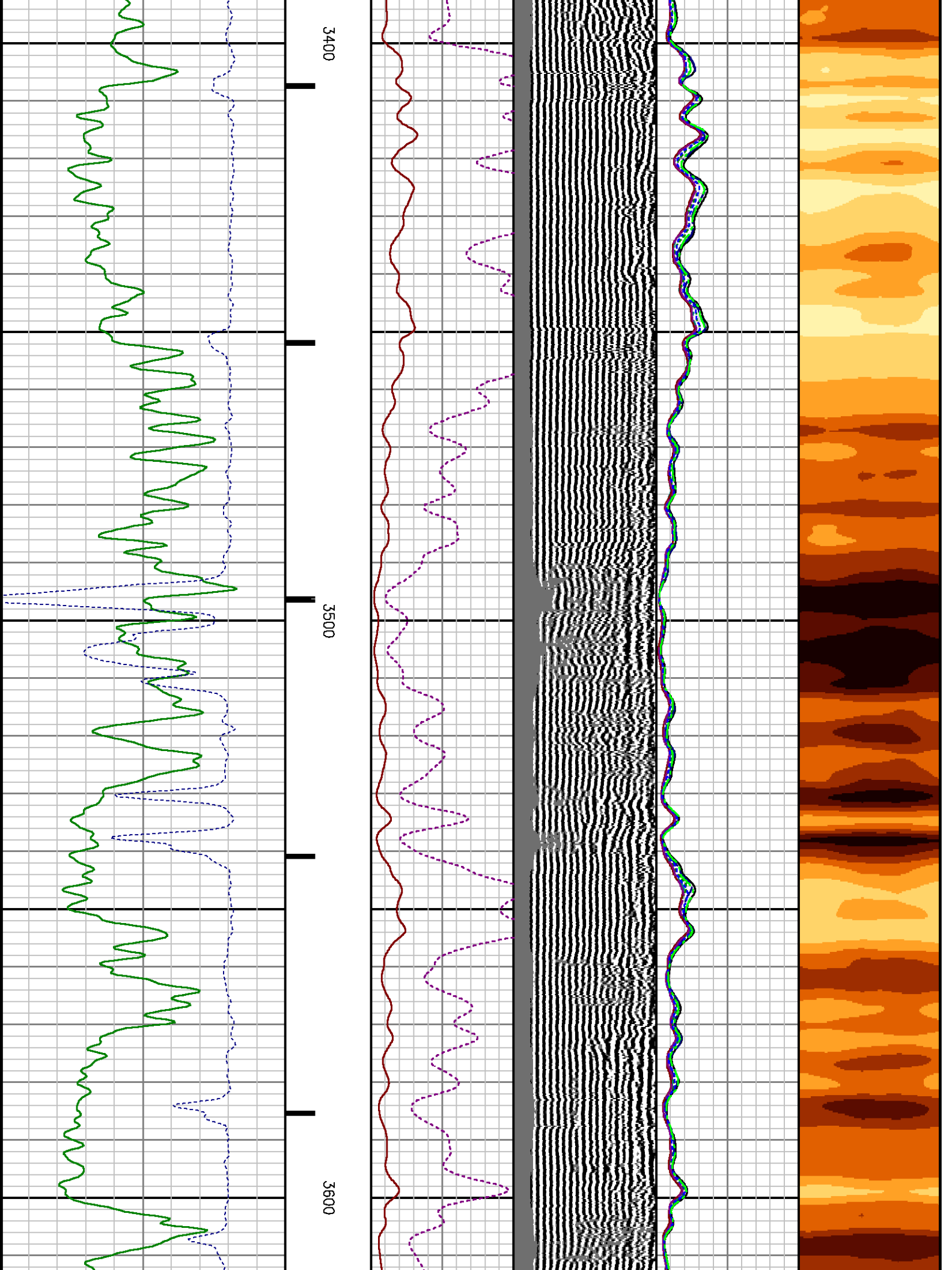


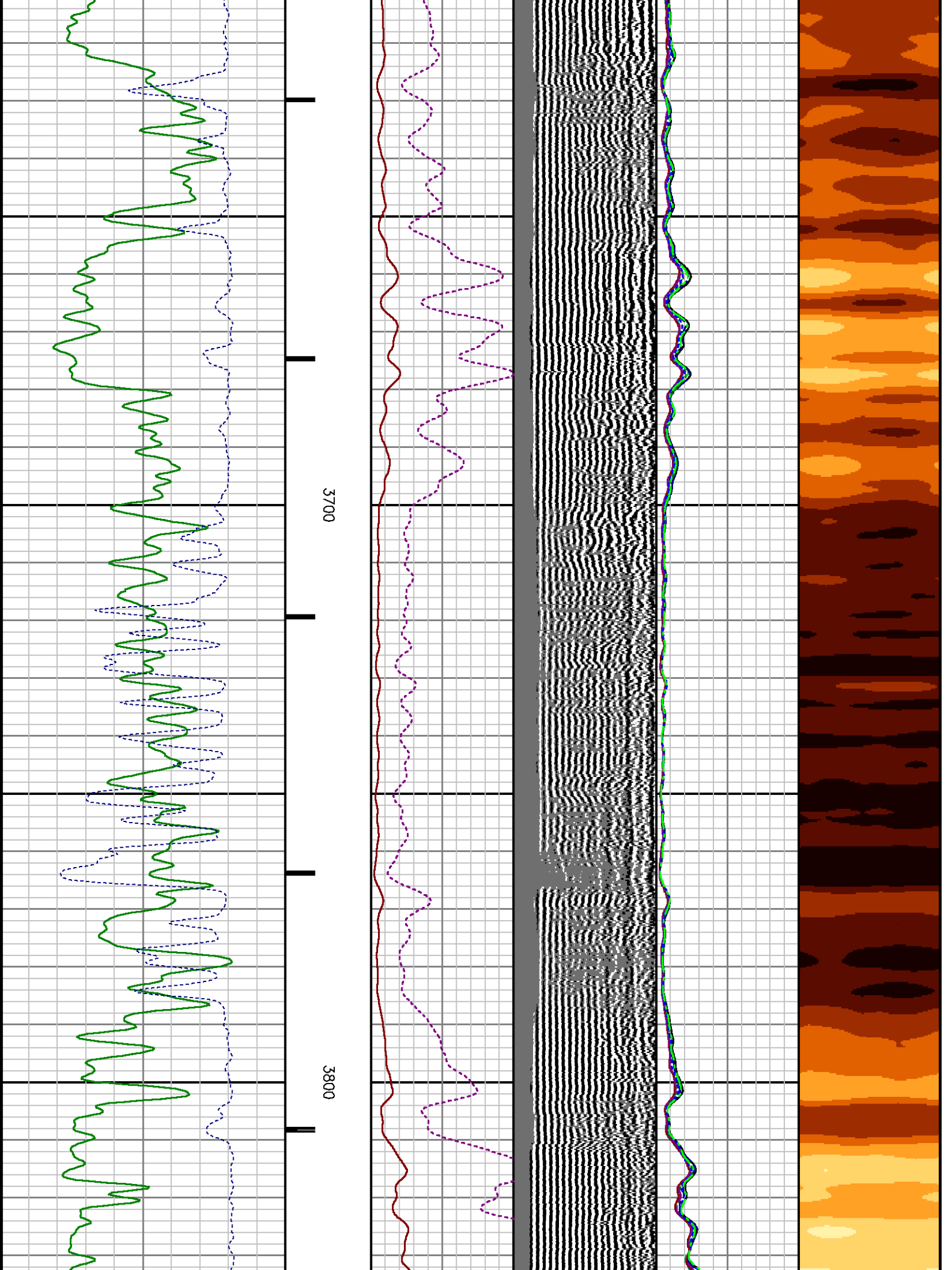




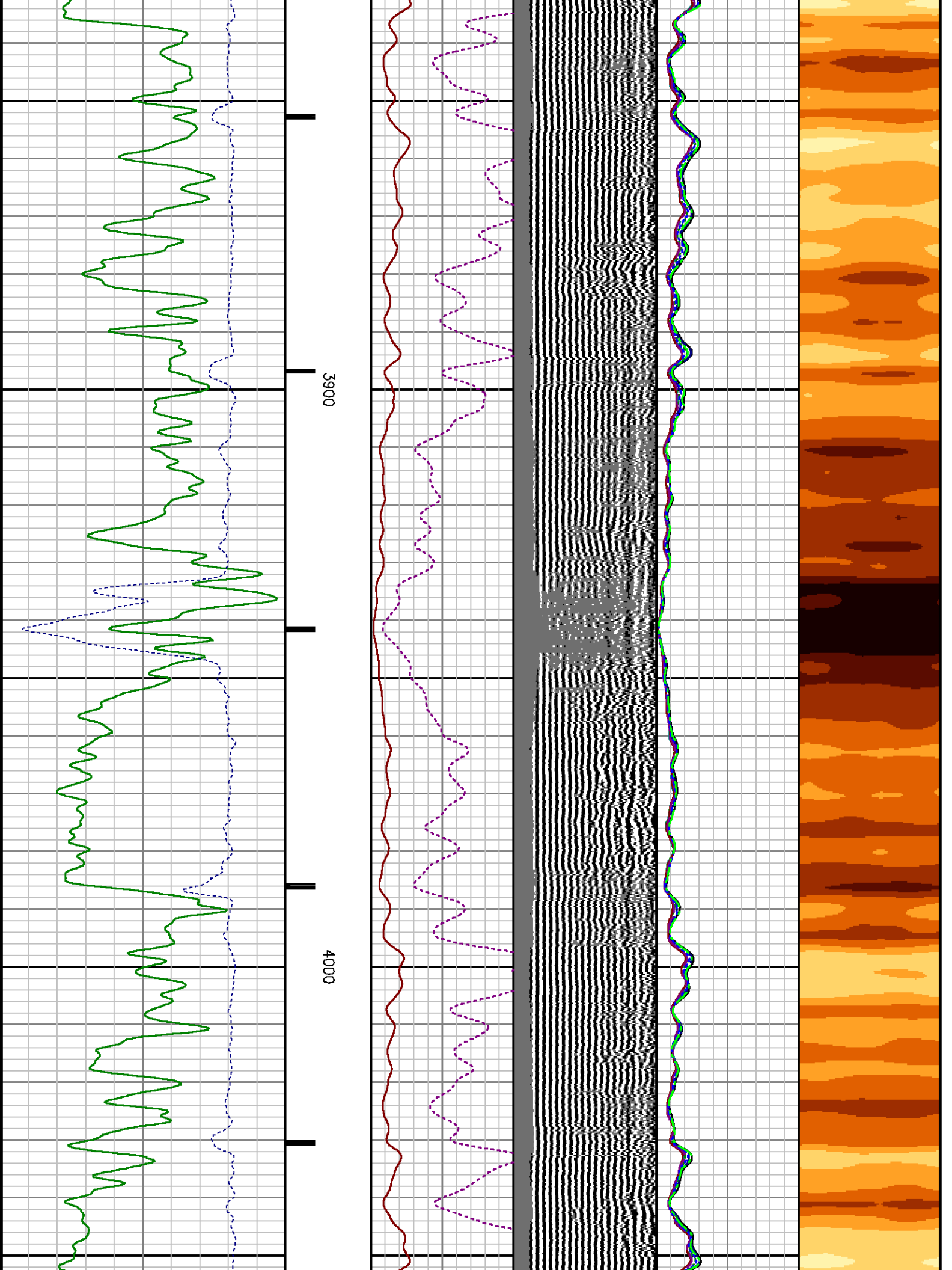




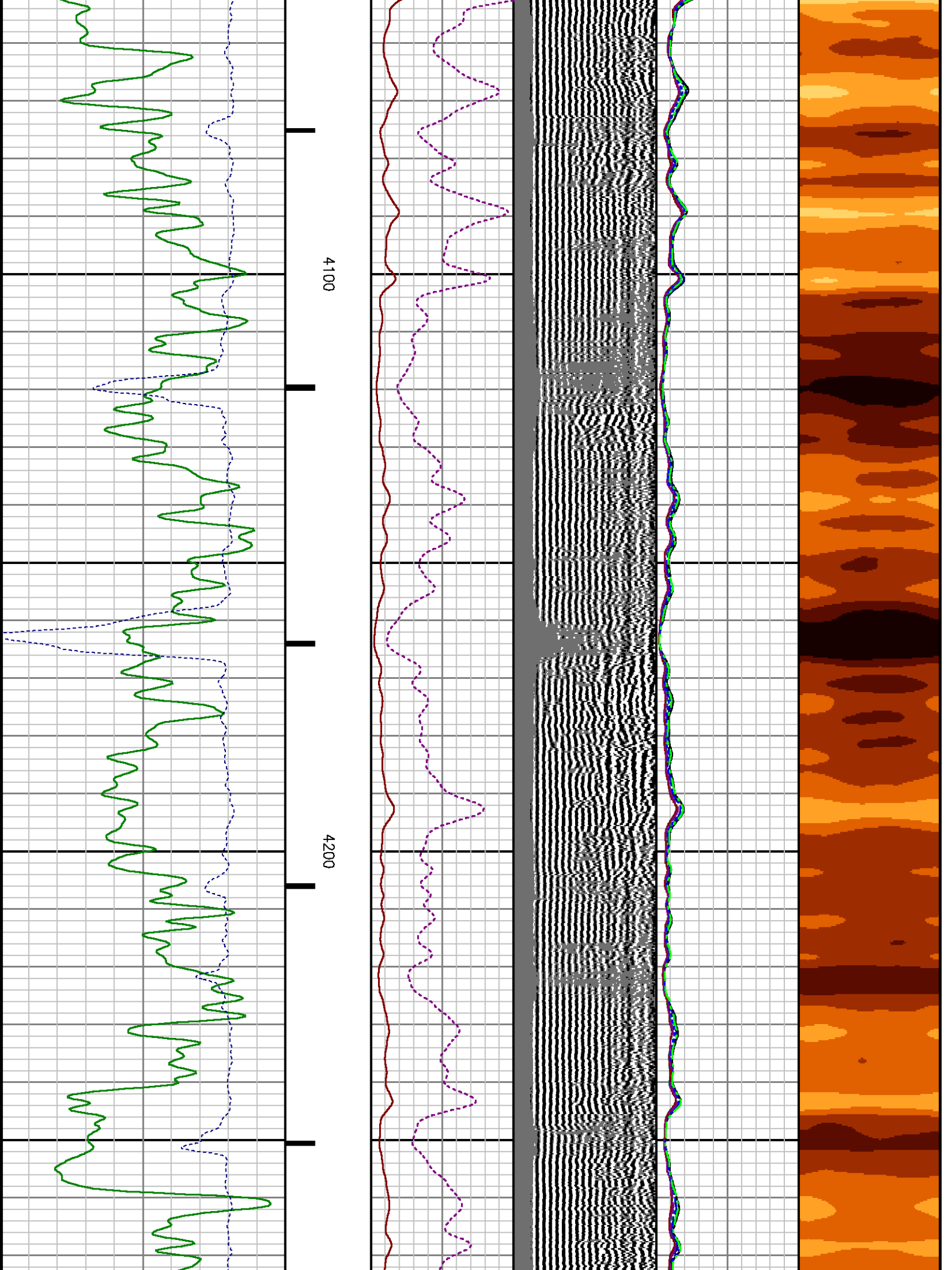


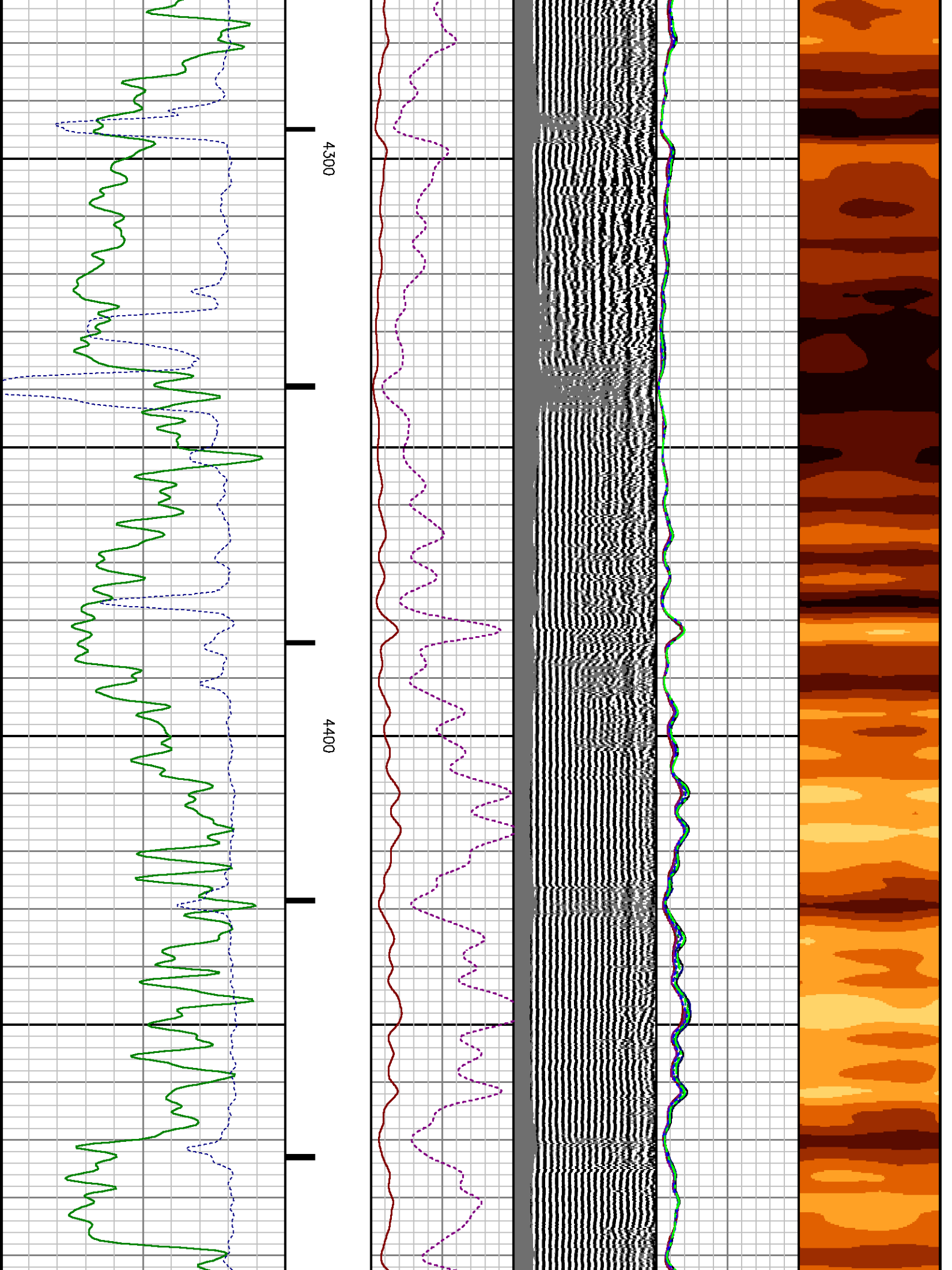


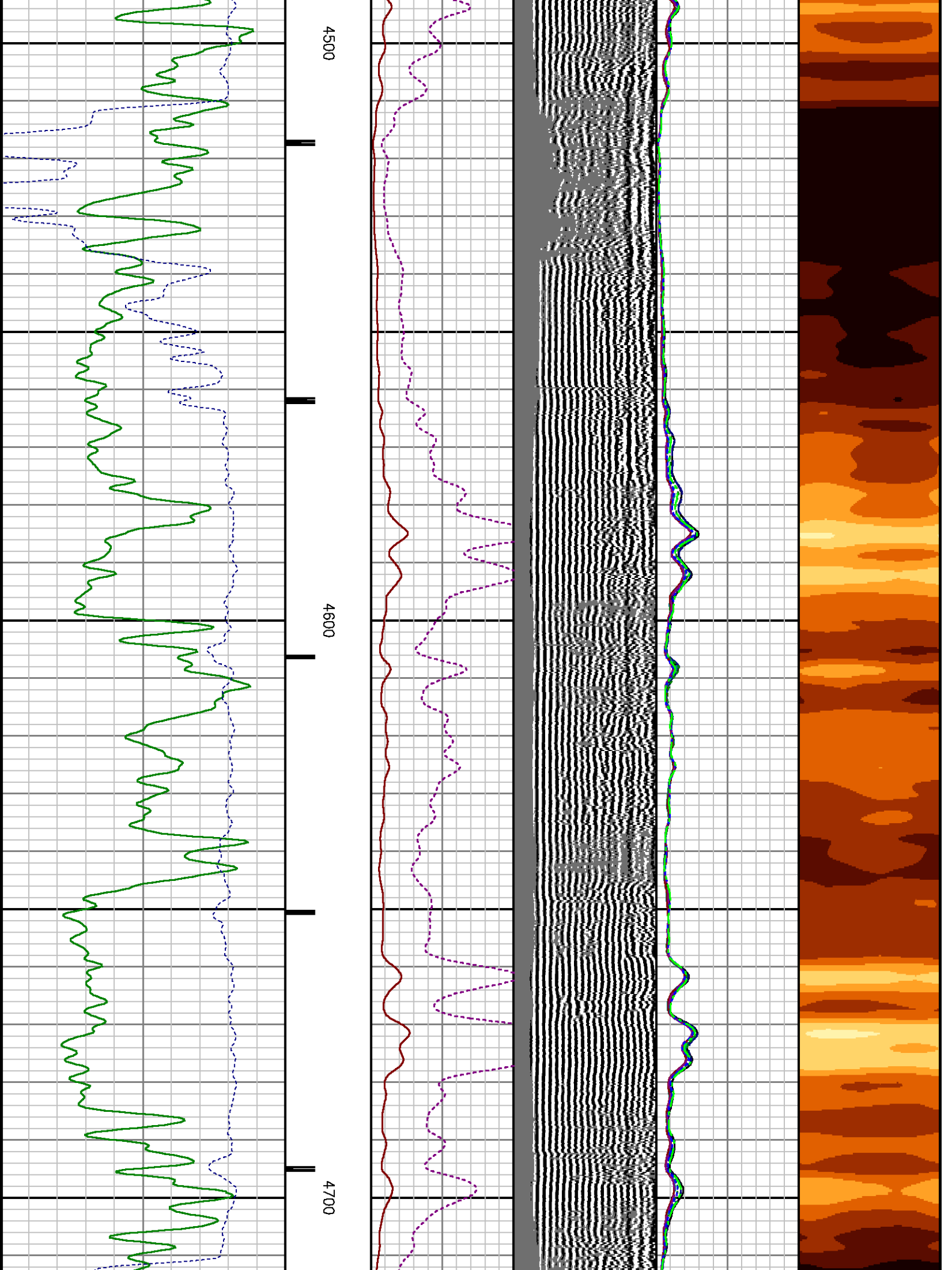


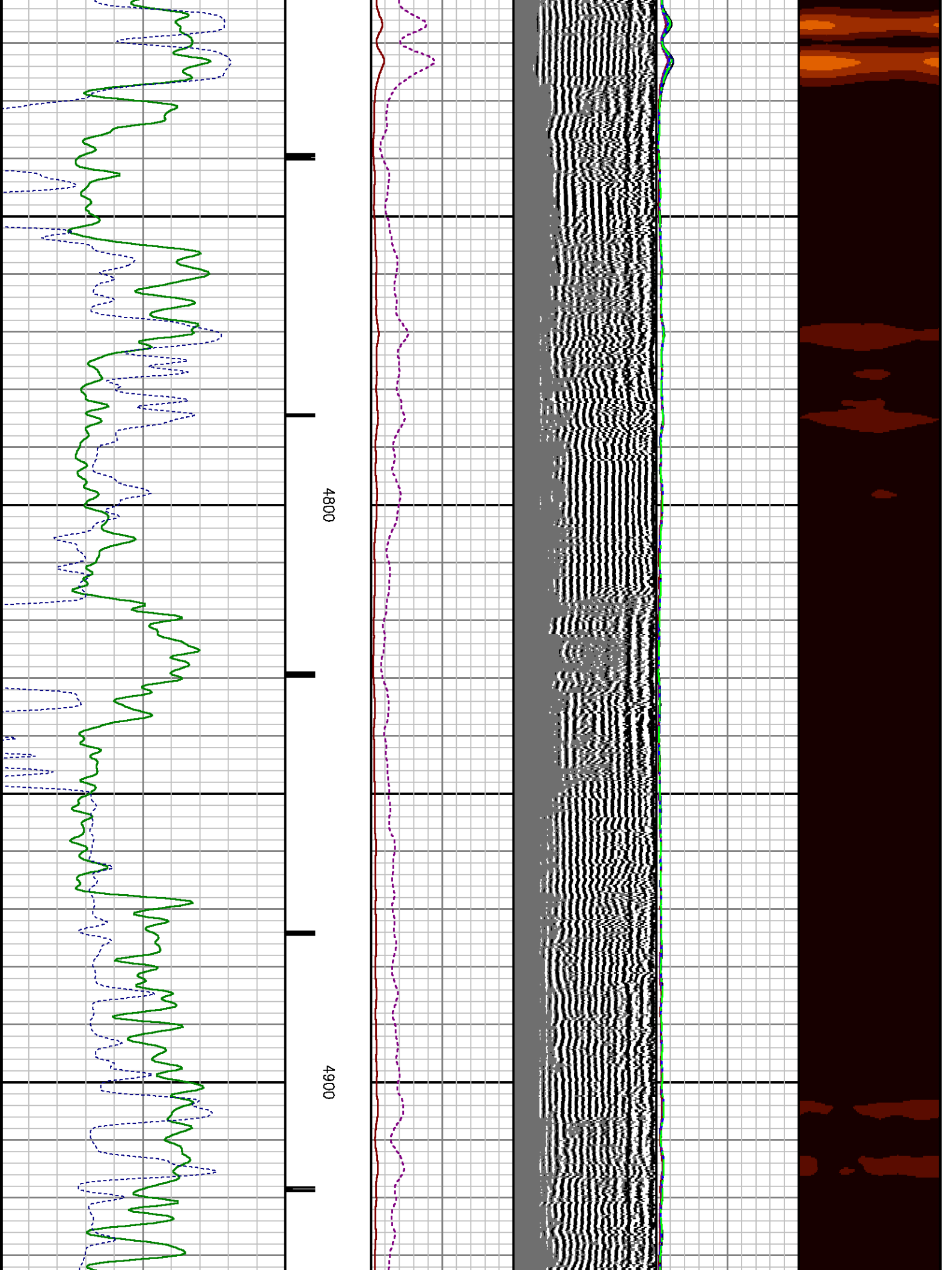


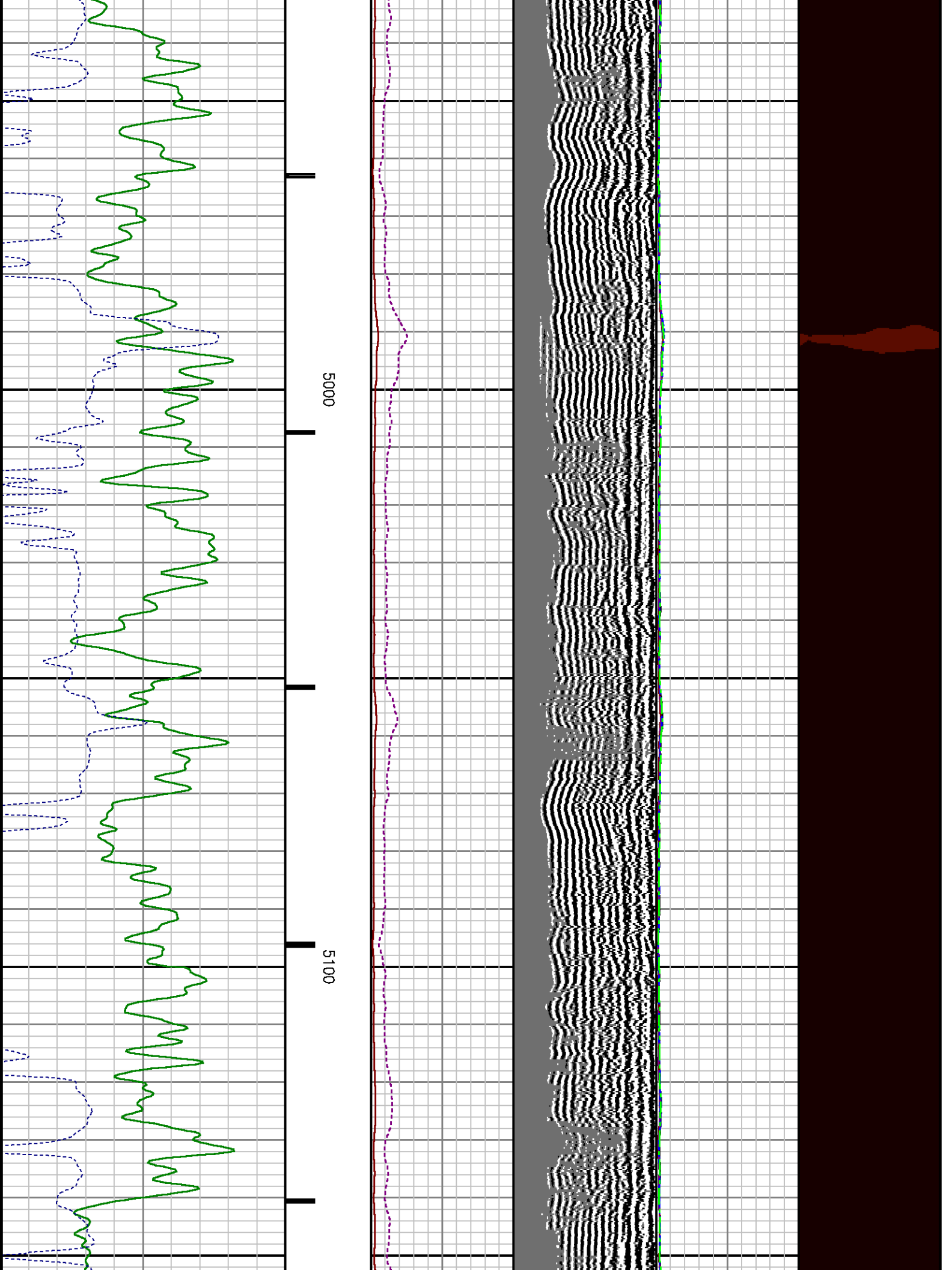




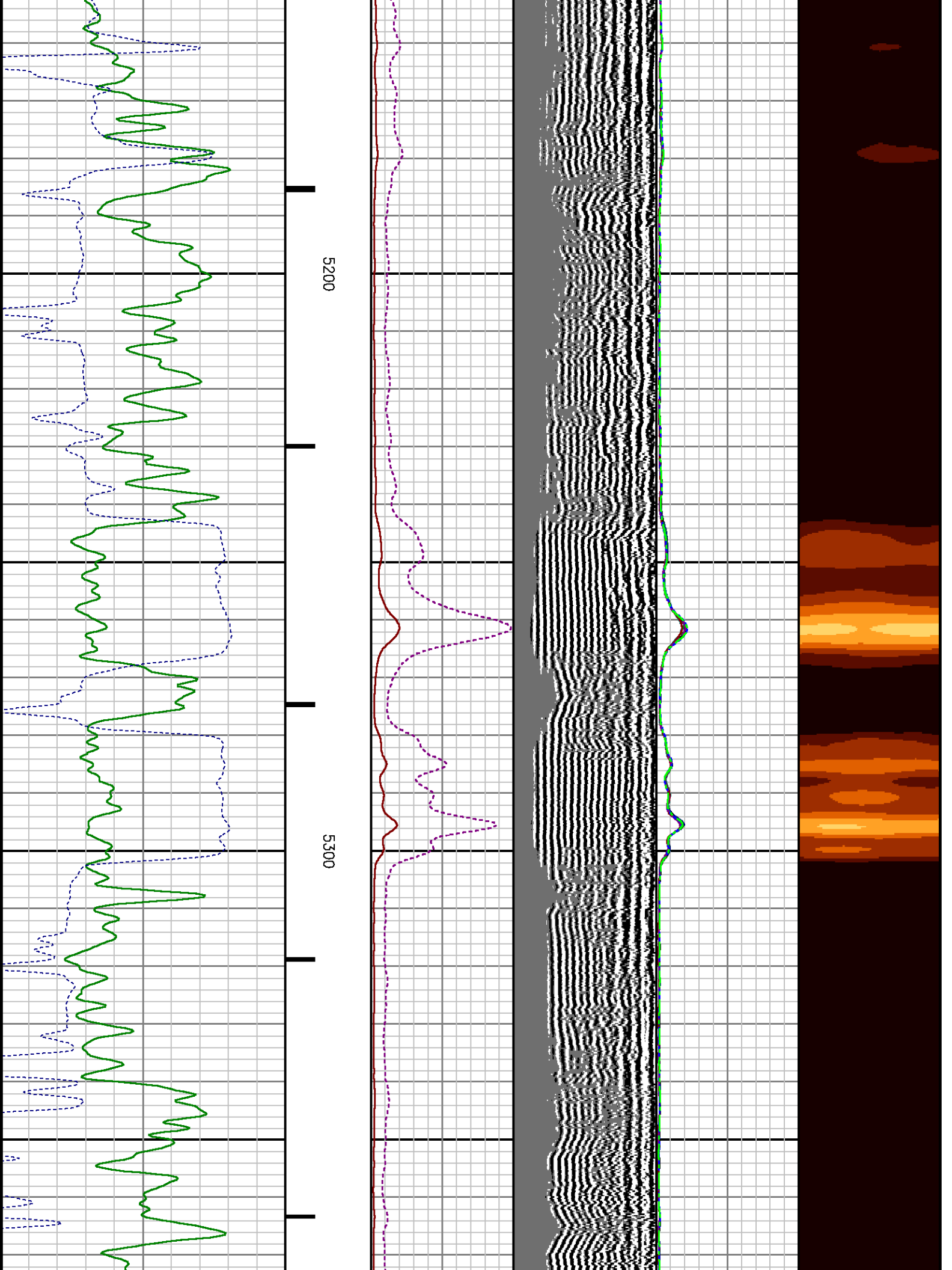




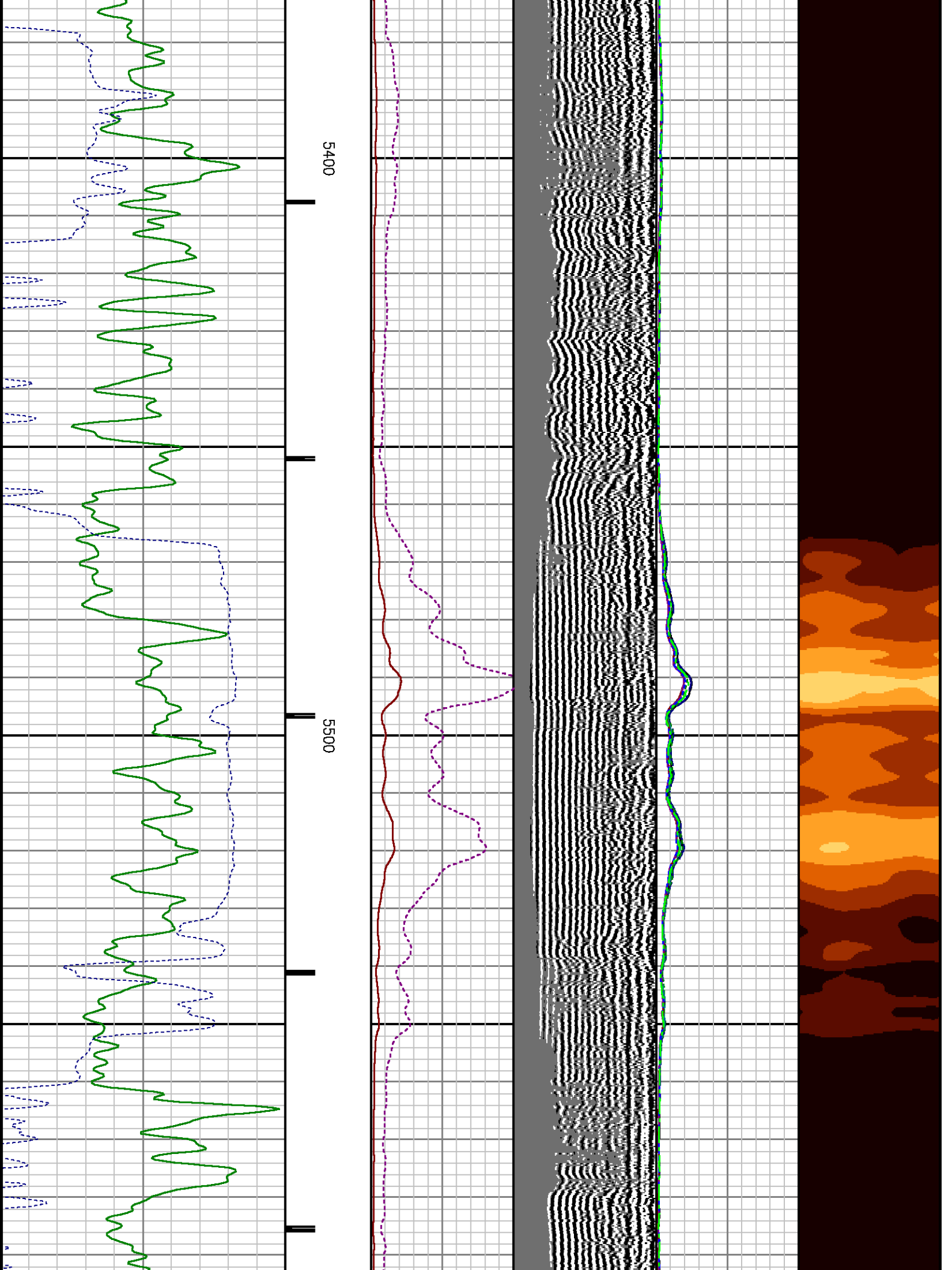


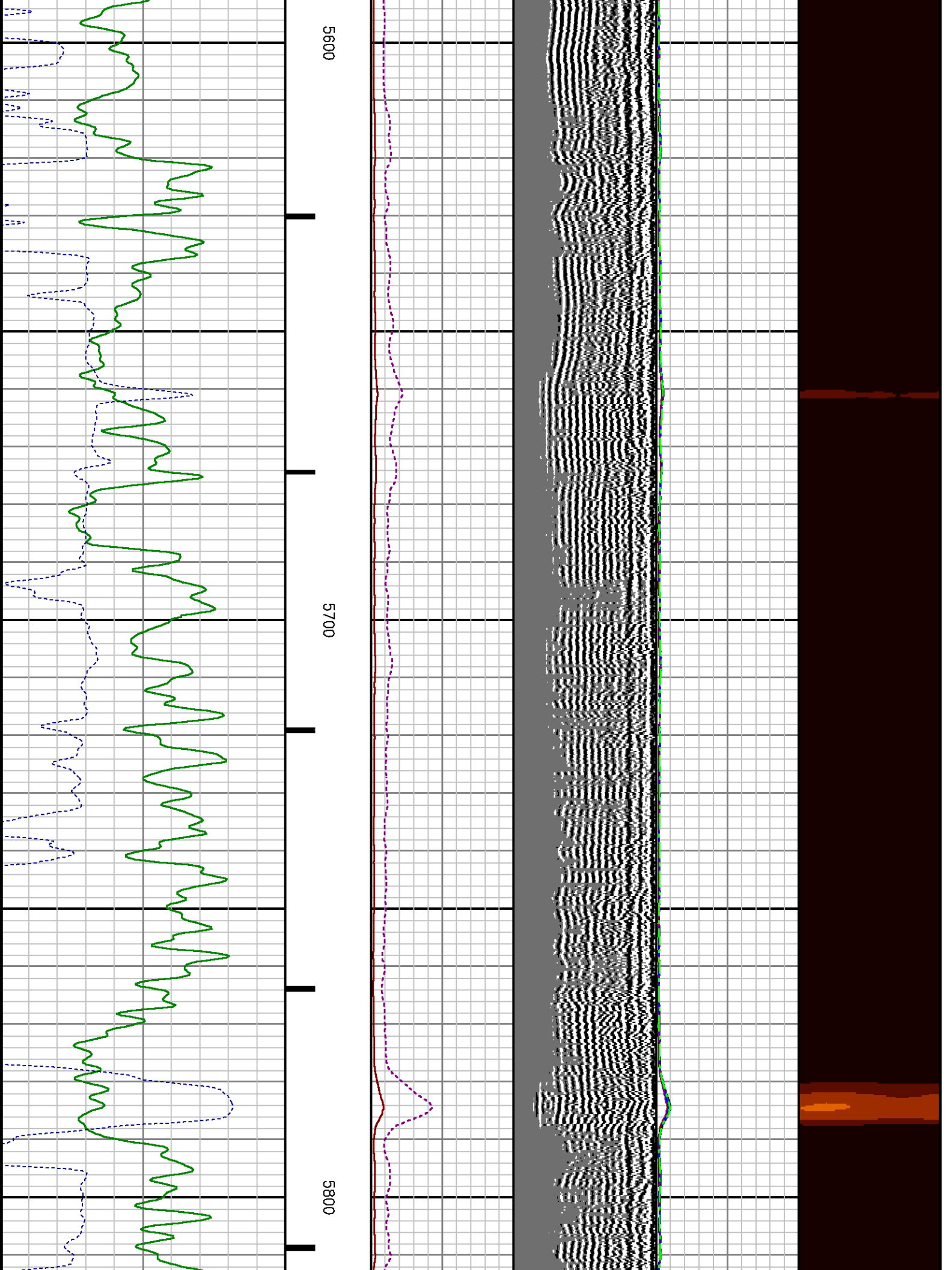


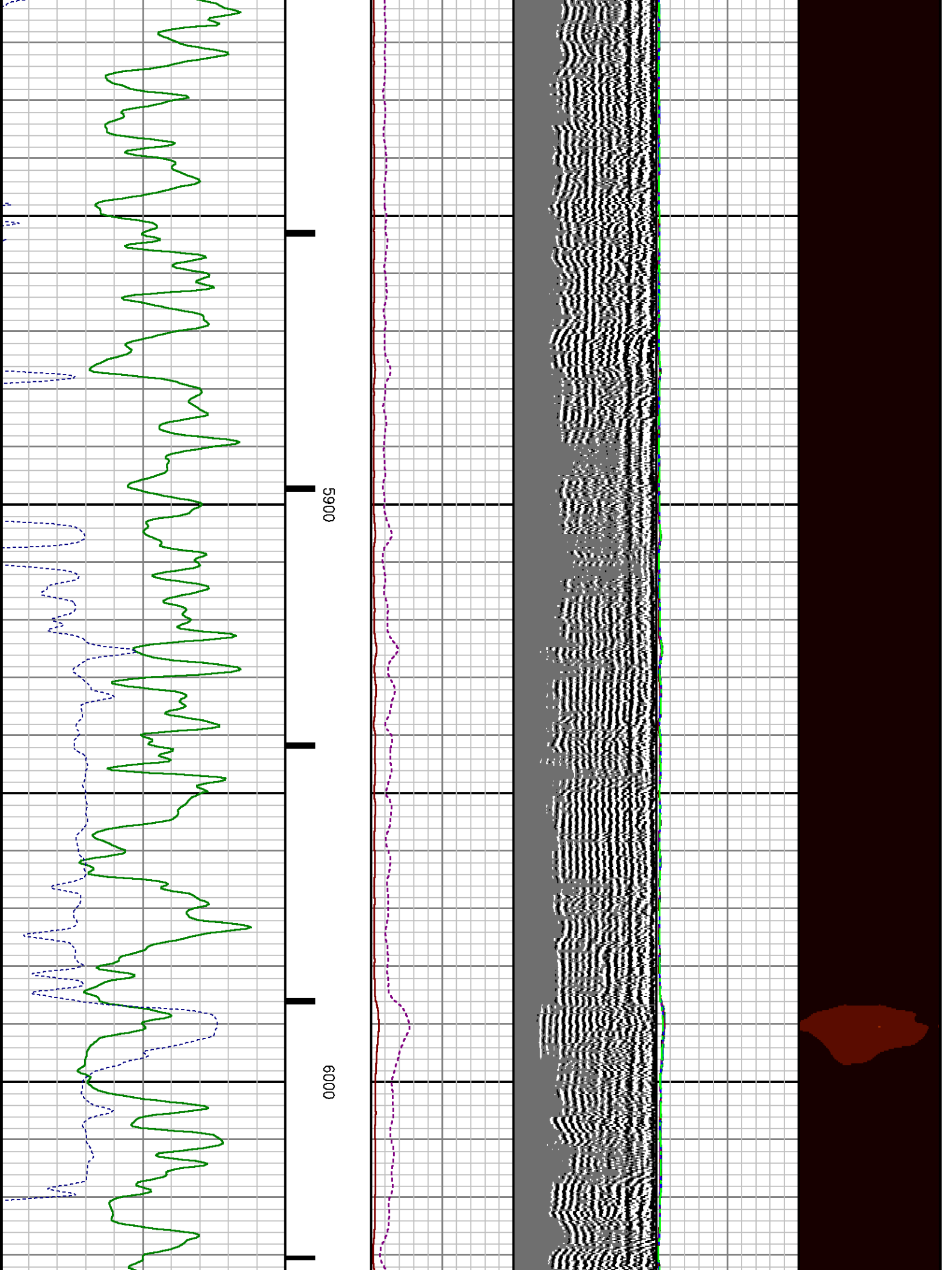


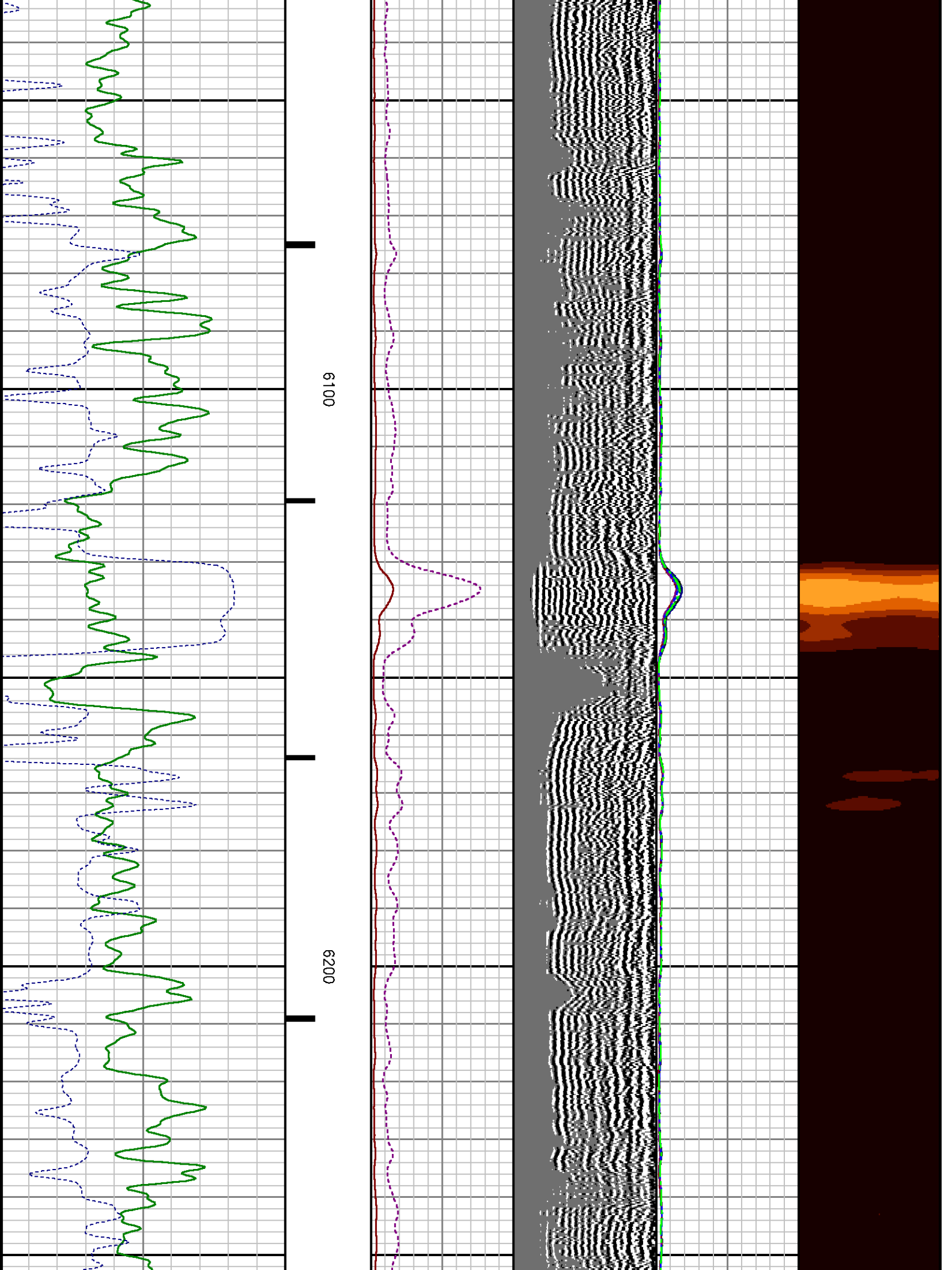


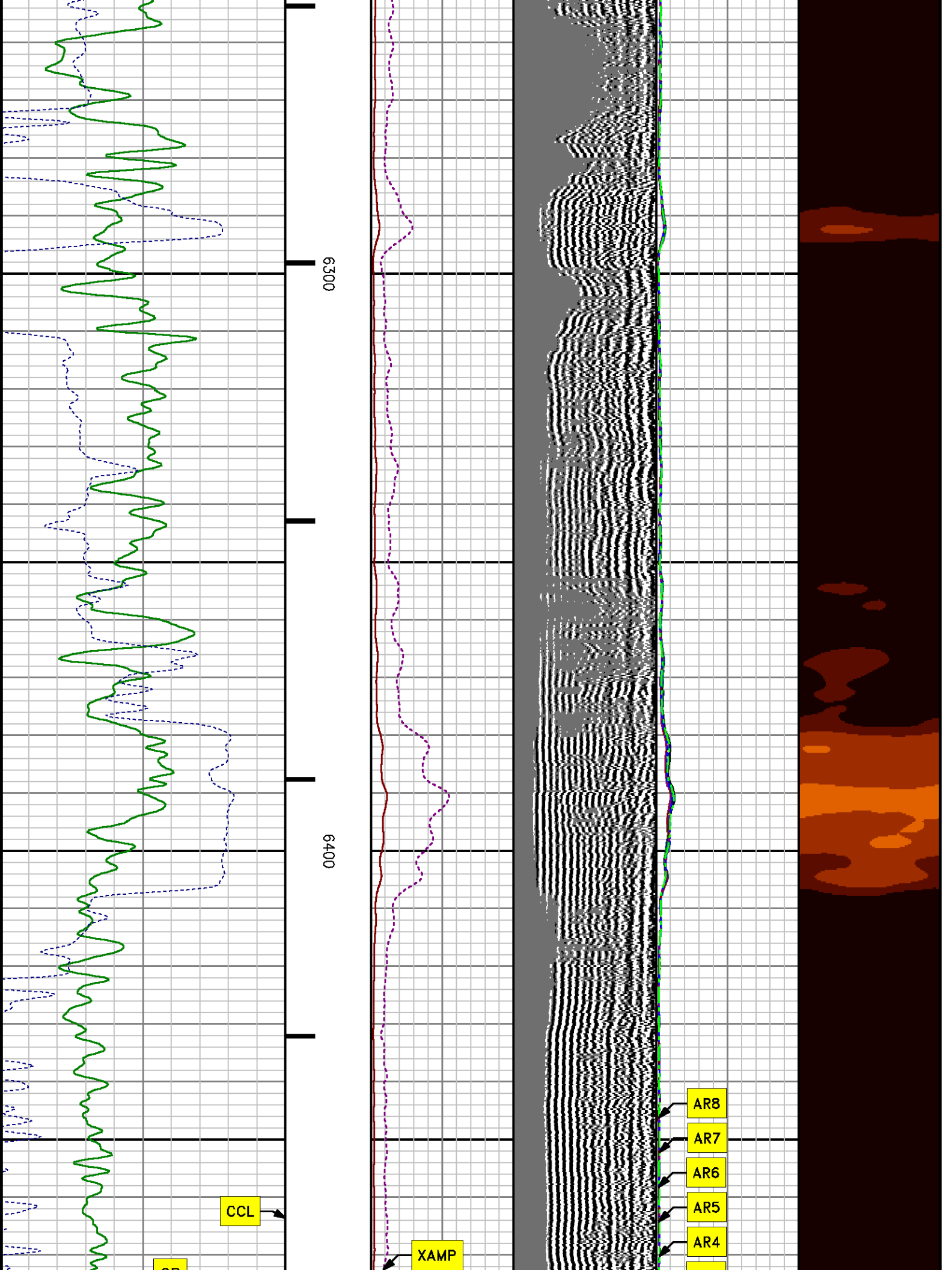


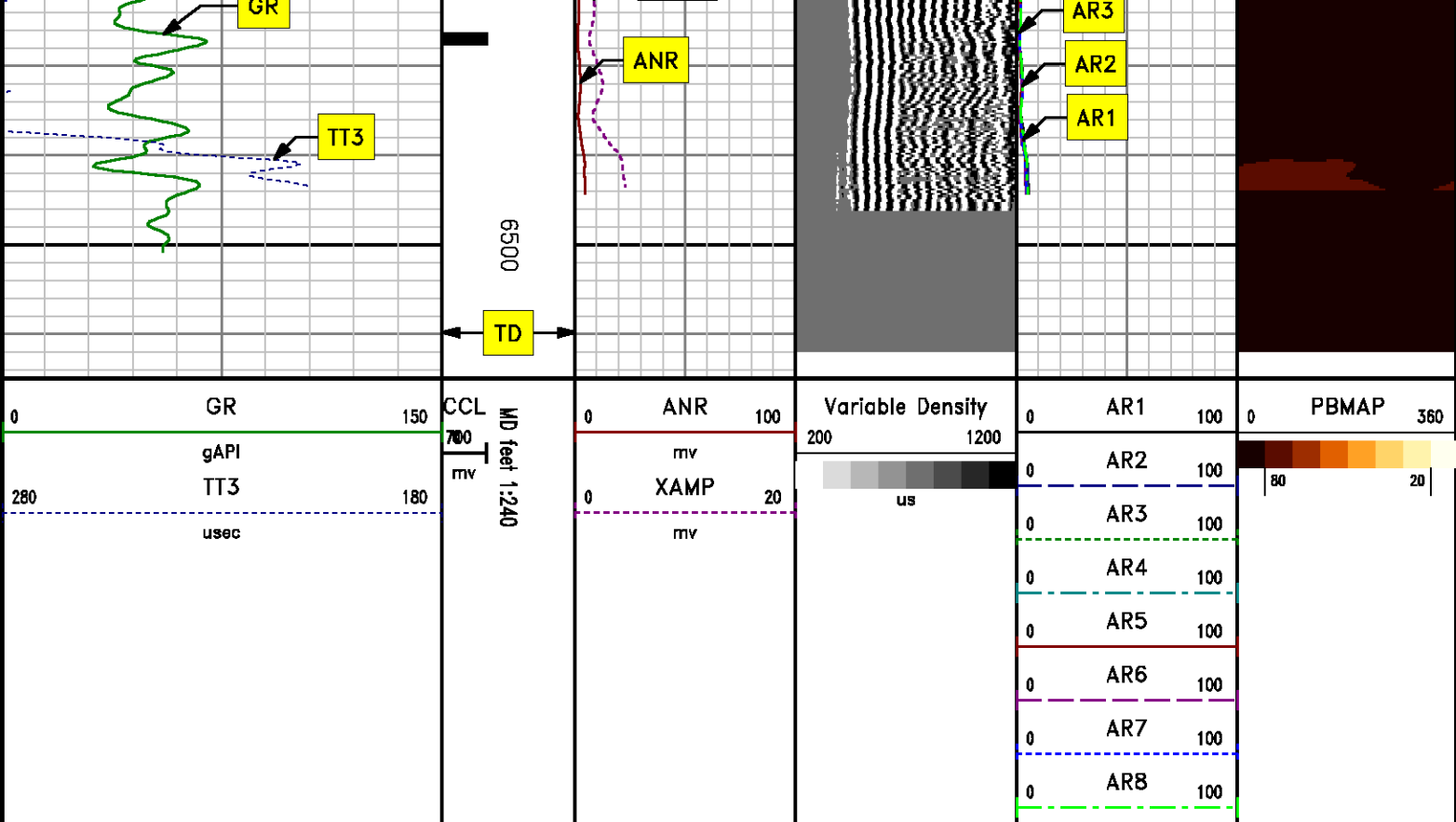












***REPEAT SECTION***  
***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	uSec	6178.091	6510.091
RAL	Amp Gate Start Near	195.000	uSec	6178.091	6510.091
RAL	Amp Gate Start Radial	195.000	uSec	6178.091	6510.091
RAL	Amp Gate Width Far	25.000	uSec	6178.091	6510.091
RAL	Amp Gate Width Near	25.000	uSec	6178.091	6510.091
RAL	Amp Gate Width Radial	25.000	uSec	6178.091	6510.091
RAL	casing od	4.500	inches	6178.091	6510.091
RAL	casing wt	11.600	lbm/ft	6178.091	6510.091
RAL	FB Start Far	291.900	uSec	6178.091	6510.091
RAL	FB Start Near	175.391	uSec	6178.091	6510.091
RAL	FB Start Radial	175.391	uSec	6178.091	6510.091
RAL	FB Thresh Far	10.000	mv	6178.091	6510.091
RAL	FB Thresh Near	4.000	mv	6178.091	6510.091

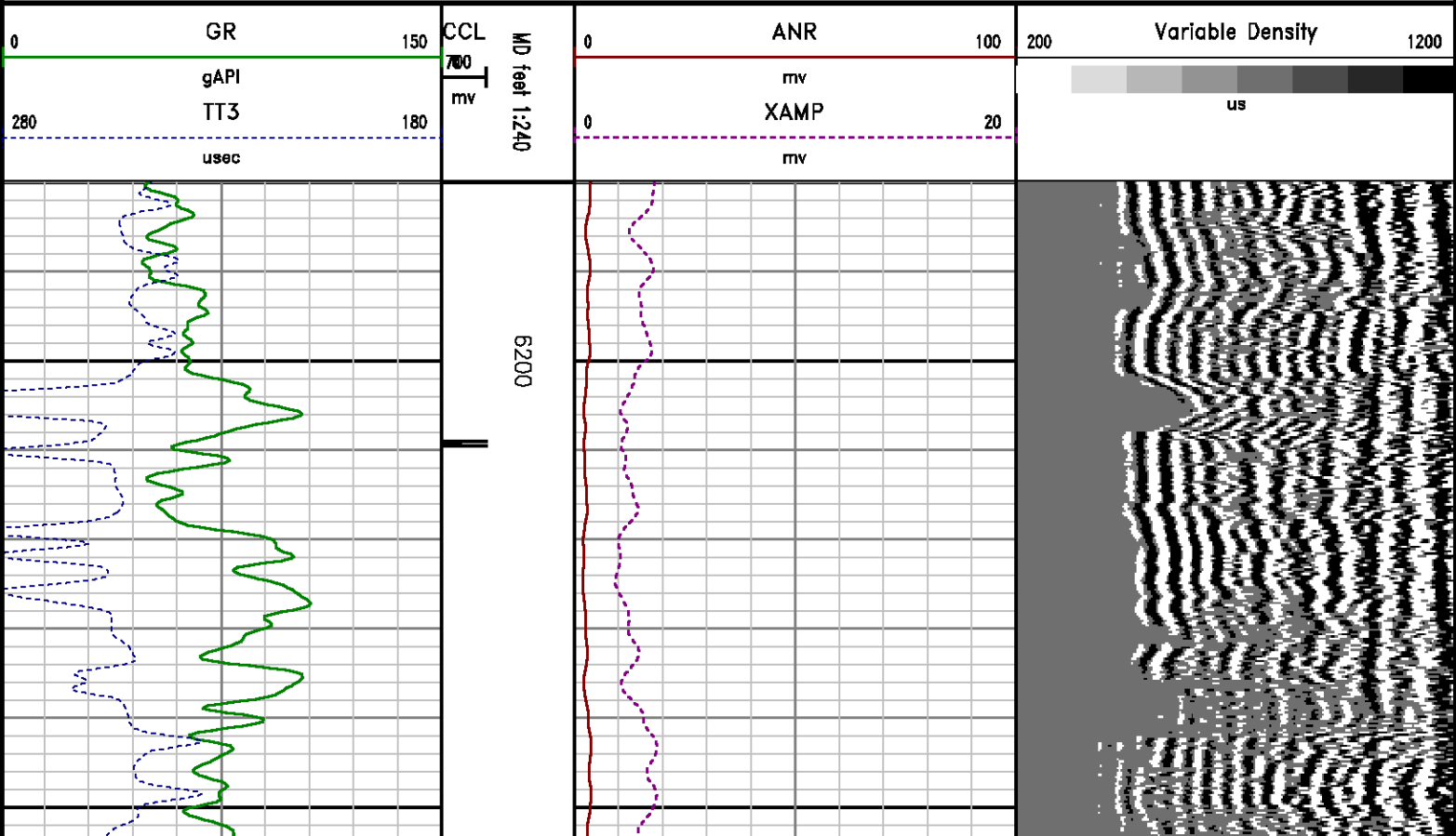


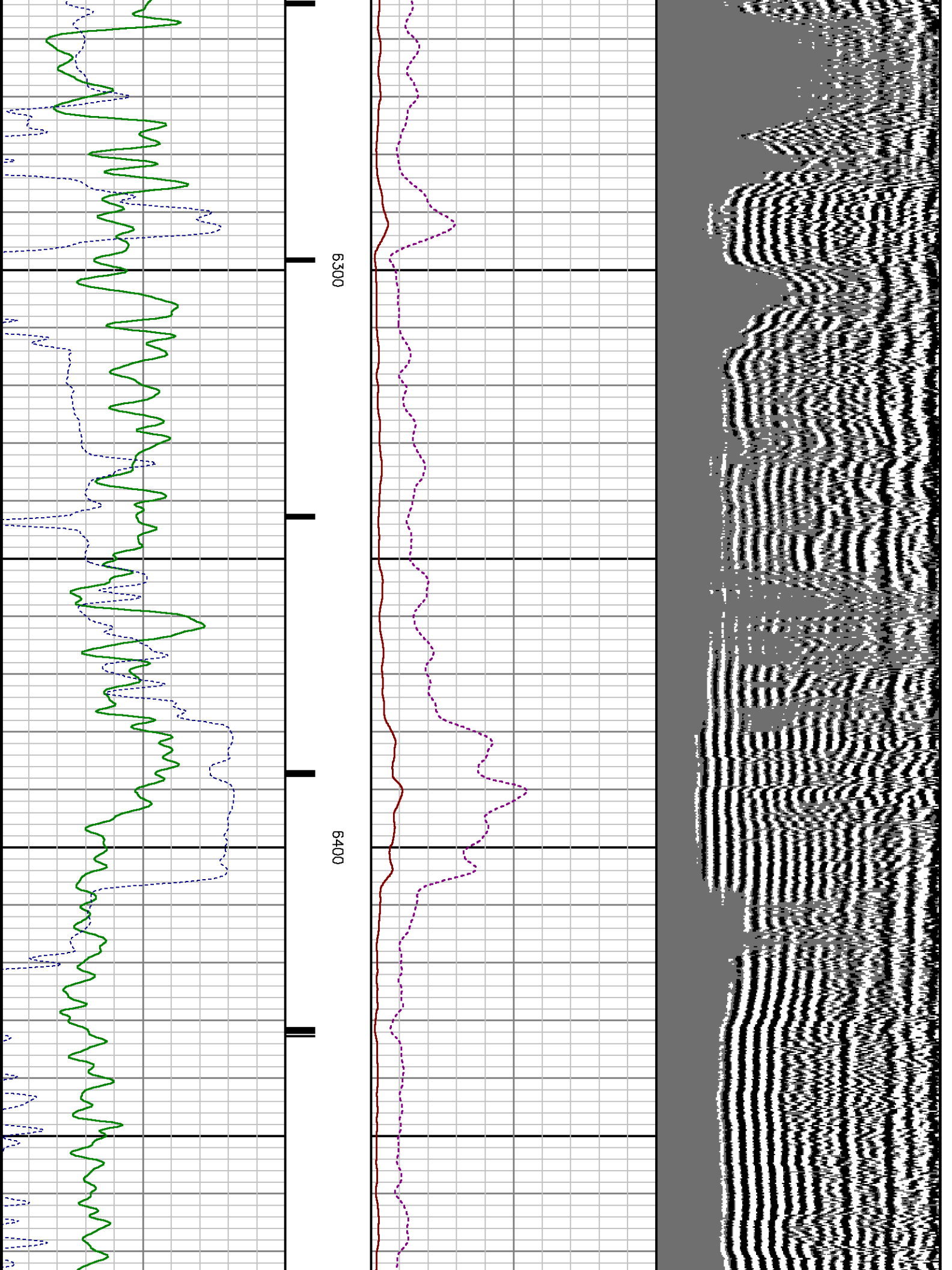
RAL	FB Thresh Radial	4.000	mv	6178.091	6510.091
RAL	Fluid Travel Time	200.000	usec/ft	6178.091	6510.091

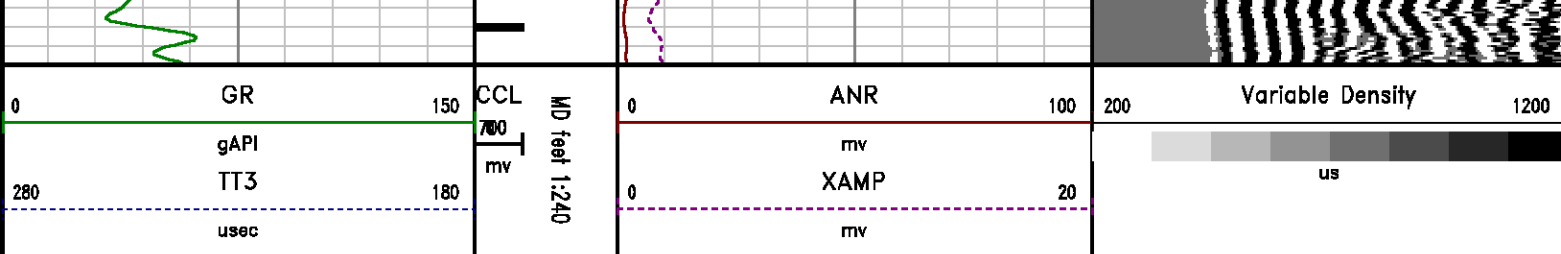
# DEPTH OFFSETS (for Acquired Curves)

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 : PA 324-6  
 File Name : D:\WELLDATA\WPX\PA 324-6\324cb1\REPEAT.XTF  
 Mode : PlotMgr 5.4.504  
 Interval : 6180.00 - 6480.00 feet UP  
 Created : 3/31/2014 10:52:17 AM







## CALIBRATION SUMMARY

**RALSHP**

Shop Calibration: C:\case\calver\RALSHP\496M31\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Mar 31 08:02:52 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M31

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="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="0.078"/>	<input type="text" value="100.00"/>	<input type="text" value="0.16"/>
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="23"/>	<input type="text" value="1.513"/>	<input type="text" value="100.00"/>	<input type="text" value="0.15"/>
5 Ft. Receiver	<input type="text" value="326"/>	<input type="text" value="325"/>	<input type="text" value="30"/>	<input type="text" value="262"/>	<input type="text" value="31"/>	<input type="text" value="2.021"/>	<input type="text" value="150.00"/>	<input type="text" value="0.17"/>
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="20"/>	<input type="text" value="1.191"/>	<input type="text" value="100.00"/>	<input type="text" value="0.15"/>
Radial #2	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="1.055"/>	<input type="text" value="100.00"/>	<input type="text" value="0.15"/>
Radial #3	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="1.093"/>	<input type="text" value="100.00"/>	<input type="text" value="0.15"/>
Radial #4	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="1.438"/>	<input type="text" value="100.00"/>	<input type="text" value="0.16"/>
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="20"/>	<input type="text" value="1.747"/>	<input type="text" value="100.00"/>	<input type="text" value="0.16"/>
Radial #6	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="1.825"/>	<input type="text" value="100.00"/>	<input type="text" value="0.16"/>
Radial #7	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="0.848"/>	<input type="text" value="100.00"/>	<input type="text" value="0.15"/>
Radial #8	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="1.111"/>	<input type="text" value="100.00"/>	<input type="text" value="0.15"/>

**RALFLD**

Well-site Calibration: C:\case\calver\RALFLD\496M31 fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Mar 31 10:03:36 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M31

Tool Delay [usec]  Casing OD  Casing Wt  Casing ID

[usec]

In

lbm/ft

In

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.052	0.000	1.00	100.000
3 Ft. Receiver	195	25	1.700			
5 Ft. Receiver	305	25	1.974			
Radial #1	195	25	1.172			
Radial #2	195	25	1.189			
Radial #3	195	25	1.317			
Radial #4	195	25	1.378			
Radial #5	195	25	1.528			
Radial #6	195	25	1.605			
Radial #7	195	25	1.340			
Radial #8	195	25	1.281			

## GAMMA RAY

Calibration File: C:\case\calver\GR\45609.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Mar 09 11:17:29 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 09

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	52.36	330.13	0.666	34.87	219.87	185.00

Verification File: C:\case\calver\GR\45609.VP

### PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sun Mar 09 11:18:54 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 09

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	56.49	331.07	0.666	37.62	220.49	182.87

## TOOL DIAGRAM

OTA SHORT CABLE HEAD



24.23'

**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

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

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

**BAKER  
HUGHES**

Company WPX ENERGY

Well PA 324-6

Field PARACHUTE

County GARFIELD State CO

File No:

CH083907

API No:

05045222210000

**Location**

SHL: 726' FSL & 772' FWL

BHL: 1177' FSL & 1098' FWL

**Elevations**

KB 5179 ft

DF

GL 5153 ft

6 7S 95W

PA 14-6 PAD

NABORS 574

SEC 6 TWP 7S RGE 95W

**CASE**

**Baker Atlas**