



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH074119	Company Well Field County	WPX ENERGY DUGGAN RWF 424-29 RULISON GARFIELD	State COLORADO
API No: 05045216610000	Location SHL: 518' FSL & 608' FWL RWF: 14-29 BHL: 619' FSL & 2139' FWL SEC 29 TWP 6S RGE 94W	Other Services RPM KB 5445.2 ft DF GL 5419.2 ft	
29 GS 94W NABORS SSD 573	Permanent Datum Log Measured From Drill Measured From	E.L. Elevation 5419.2 ft K.B. 26 ft Above P. D. KELLY BUSHING	

Date	09/JUL/15	
Run	ONE	
Service Order	B24A39	
Depth Driller	8062 ft	
Depth Logger	8043 ft	
Bottom Logged Interval	8033 ft	
Top Logged Interval	26 ft	
Time Started	7:00	
Time Finished	11:00	
Operator Rig Time	4 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	67 ft	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	223 degF	
Reference Log	N/A	
Reference Log Date	N/A	
Equipment No.	4271	GRAND JUNCTION
Recorded By	W. KINSEL	9721
Witnessed By	MR. BOB CADY	GRAND JUNCTION

- 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	1140 ft
8.75 in	0 ft	8125 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	N/A	N/A	0 ft	1100 ft
4.5 in	11.6 lbm/ft	1-80	0 ft	8062 ft

Remarks
ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH THE TOP CCL MARK WITH KB LEVEL
AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 11 FEET DOWN.
SHORT JOINT: 4634' - 4655'
BHT: 223 degF
LOG DONE WITH 0 PSI ON WELLHEAD

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10404539	CENTRALIZED
1	1	GAMMA RAY/CCL	1355XA	10580209	CENTRALIZED

**MAIN LOG PRIMARY PRESENTATION**  
**0 PSI**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	306.674	usec	24.562	8067.500
RAL	Amp Gate Start Near	198.578	usec	24.562	8067.500
RAL	Amp Gate Start Radial	199.599	usec	24.562	8067.500
RAL	Amp Gate Width Far	25.000	usec	24.562	8067.500
RAL	Amp Gate Width Near	25.000	usec	24.562	8067.500
RAL	Amp Gate Width Radial	25.000	usec	24.562	8067.500
RAL	casing od	4.500	inches	24.562	8067.500
RAL	casing wt	11.600	lbm/ft	24.562	8067.500
RAL	FB Start Far	291.900	usec	24.562	8067.500
RAL	FB Start Near	175.391	usec	24.562	8067.500
RAL	FB Start Radial	175.391	usec	24.562	8067.500
RAL	FB Thresh Far	10.000	mv	24.562	8067.500
RAL	FB Thresh Near	4.000	mv	24.562	8067.500
RAL	FB Thresh Radial	4.000	mv	24.562	8067.500
RAL	Fluid Travel Time	200.000	usec/ft	24.562	8067.500

### DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

1426XA -10.040  
1355XA -5.620  
1355XA -1.500  
1355XA 0.000

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

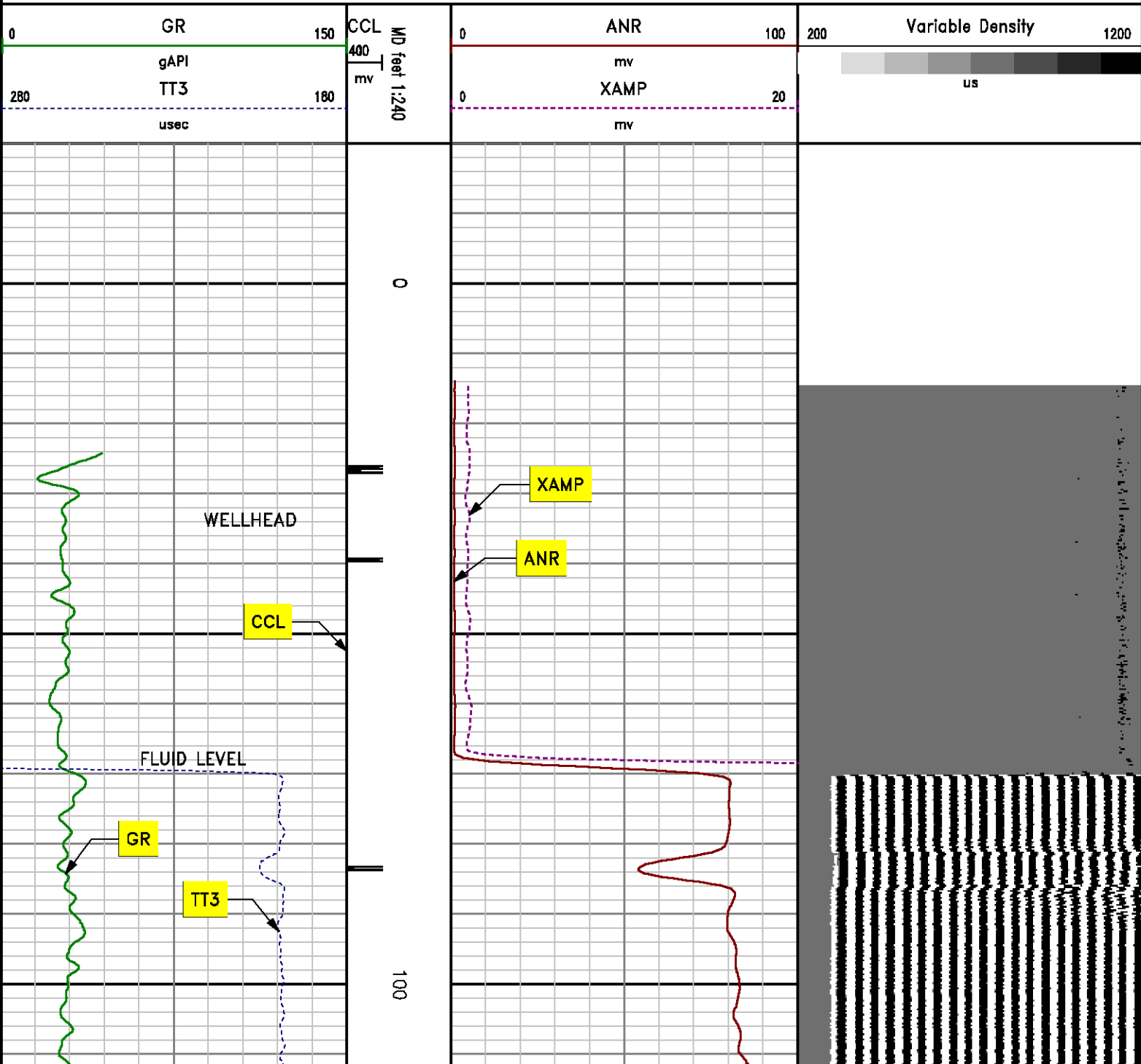
Well : DUGGAN RWF 424-29

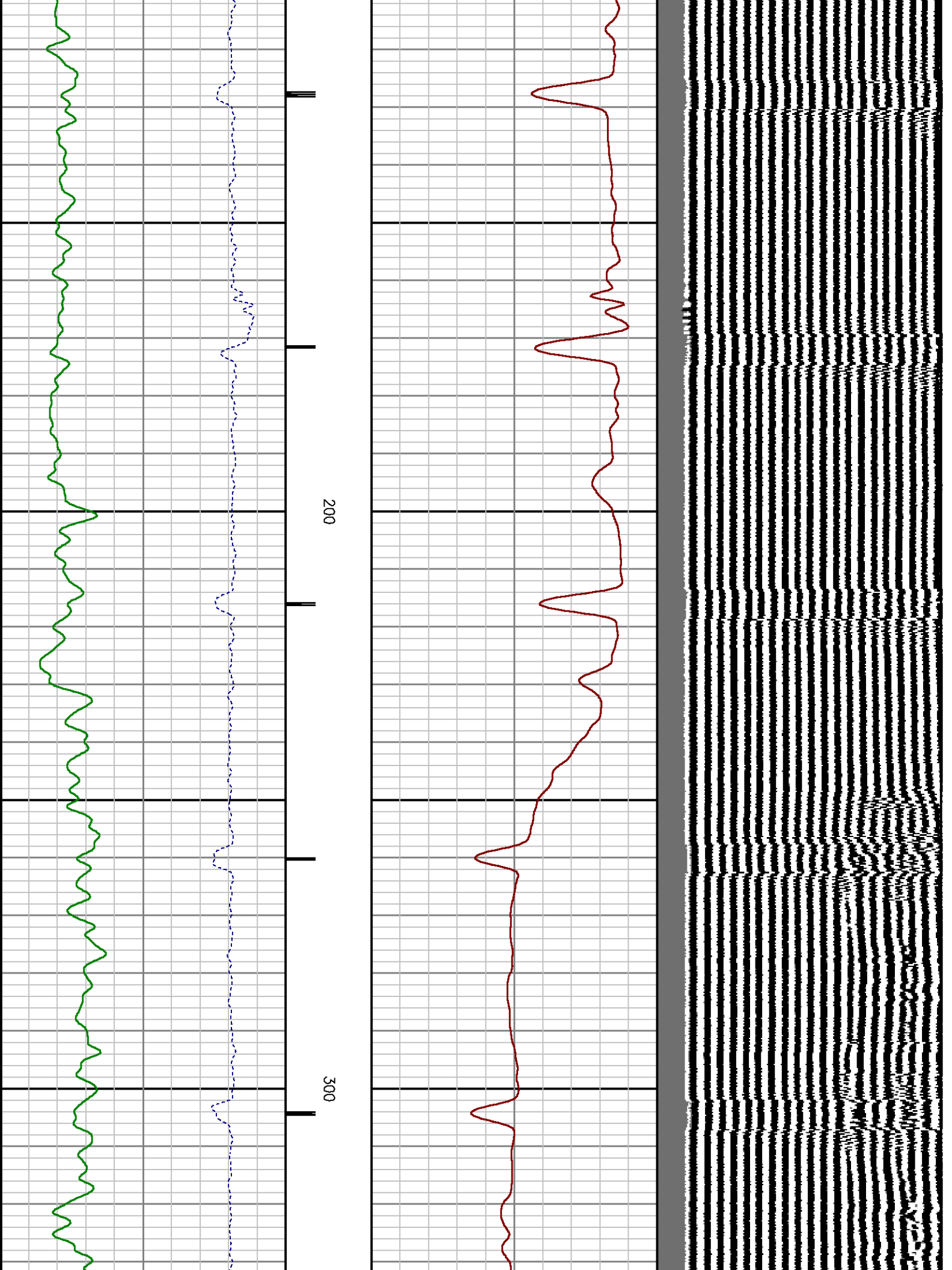
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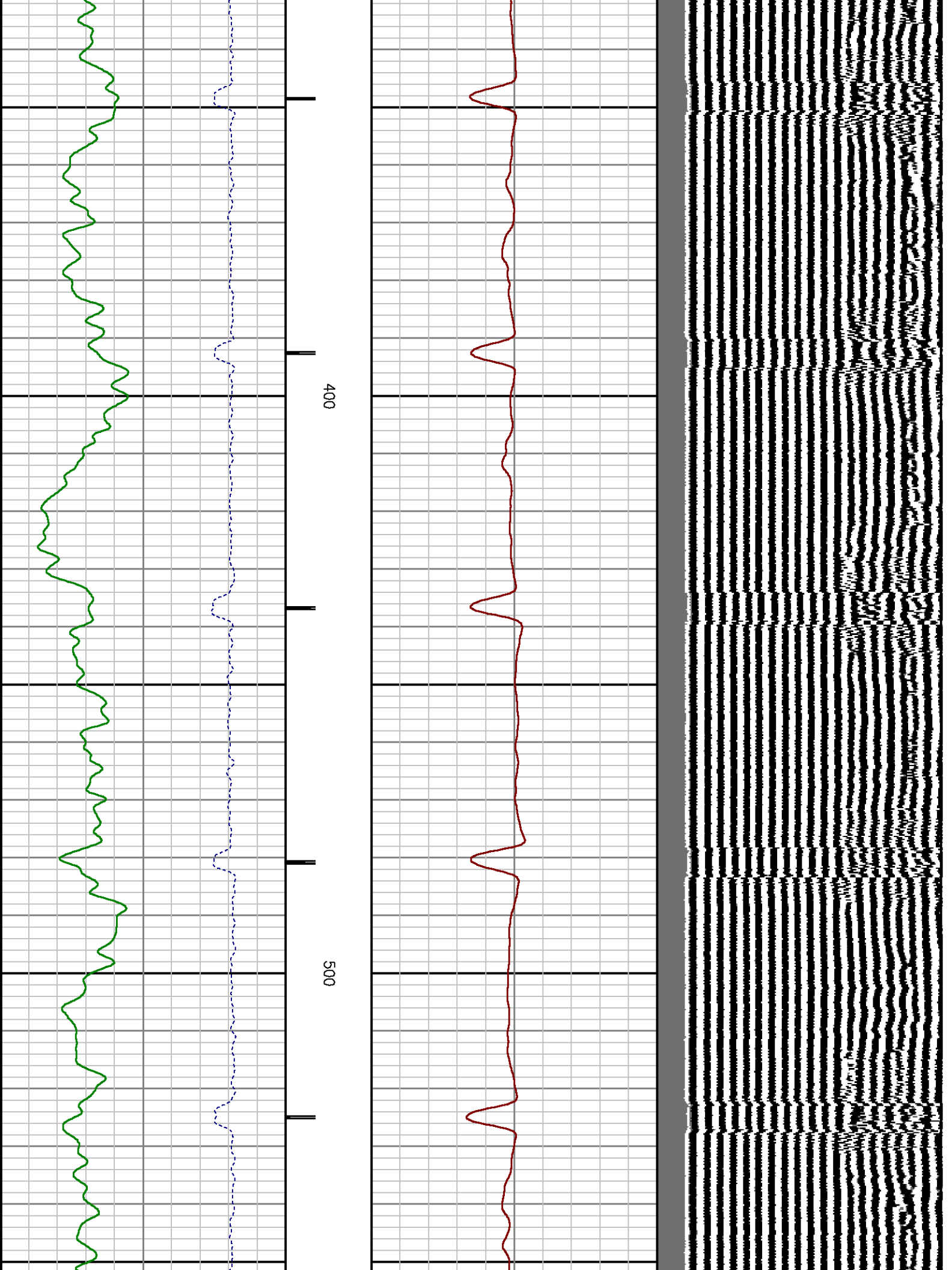
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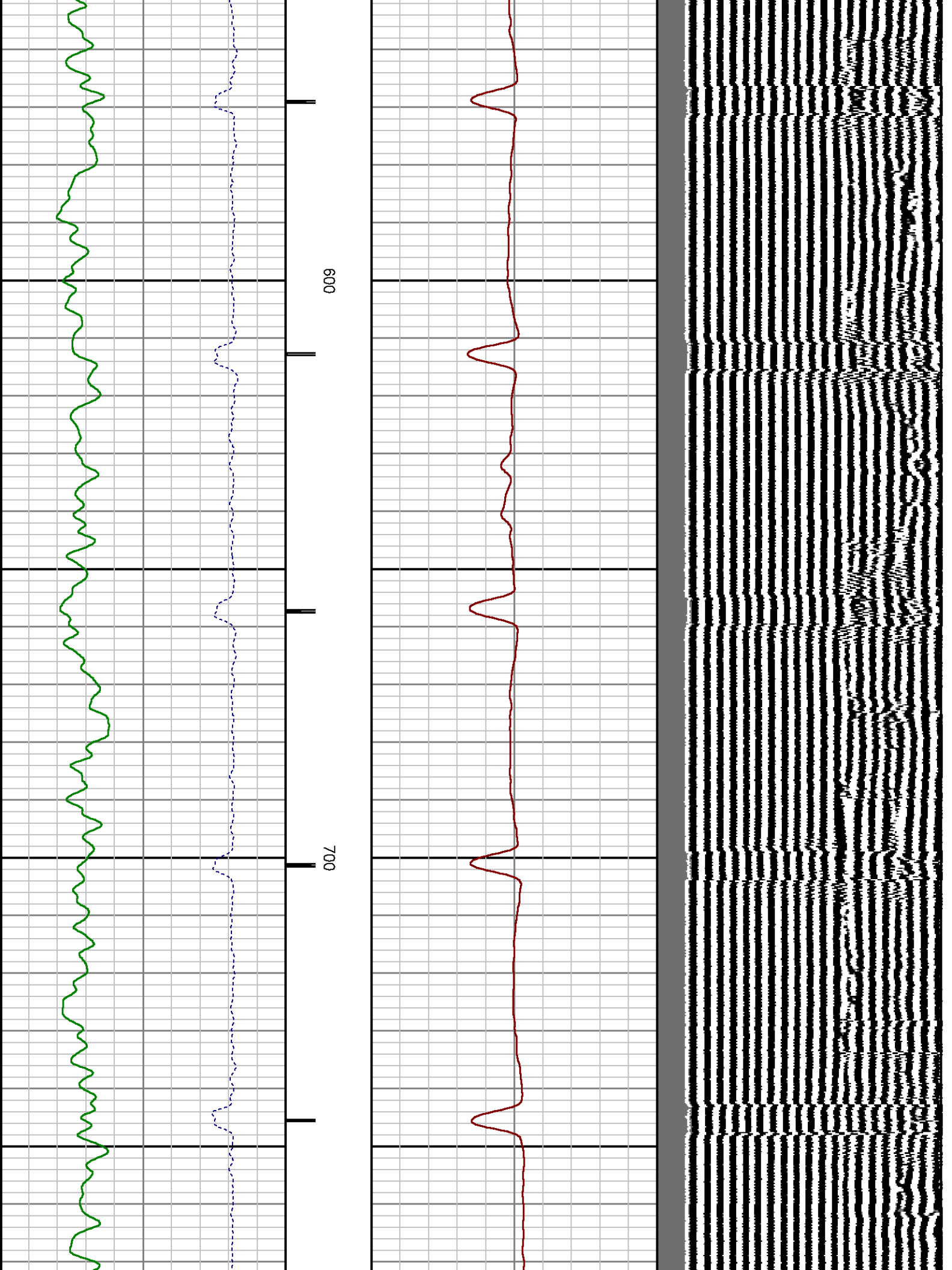
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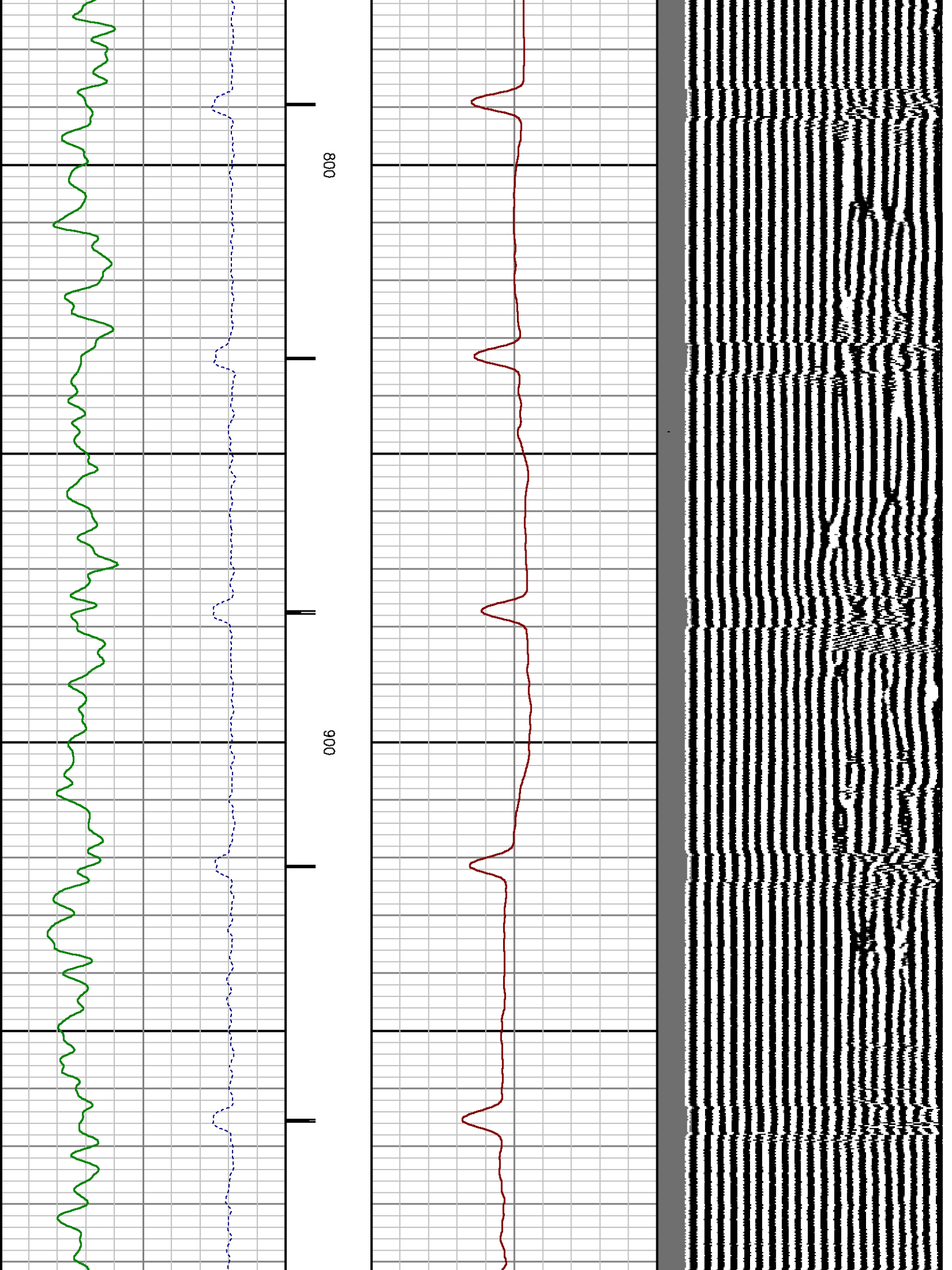
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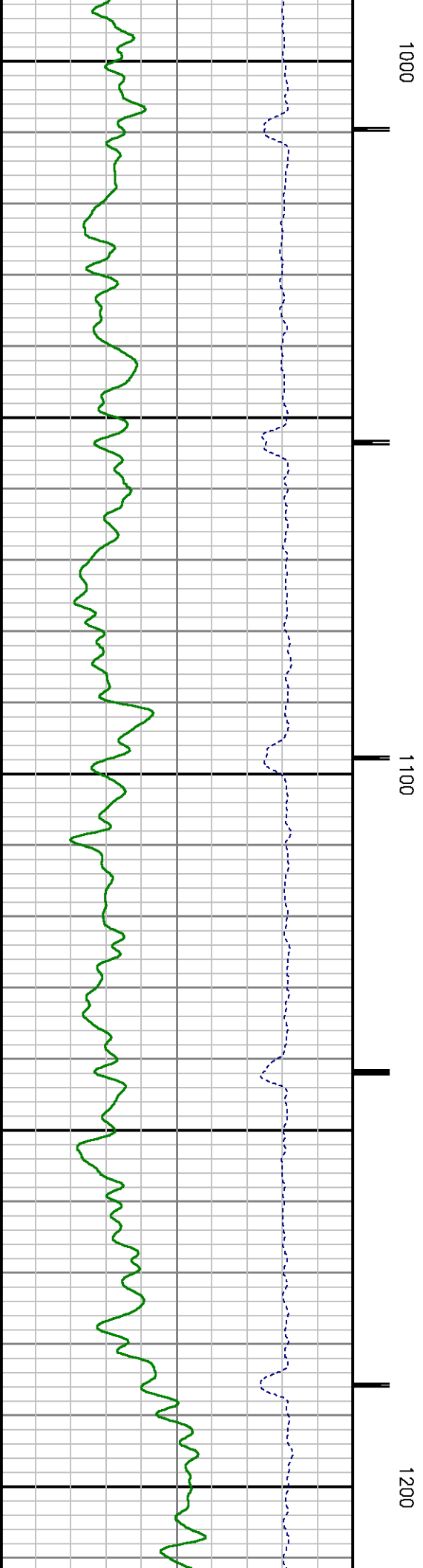
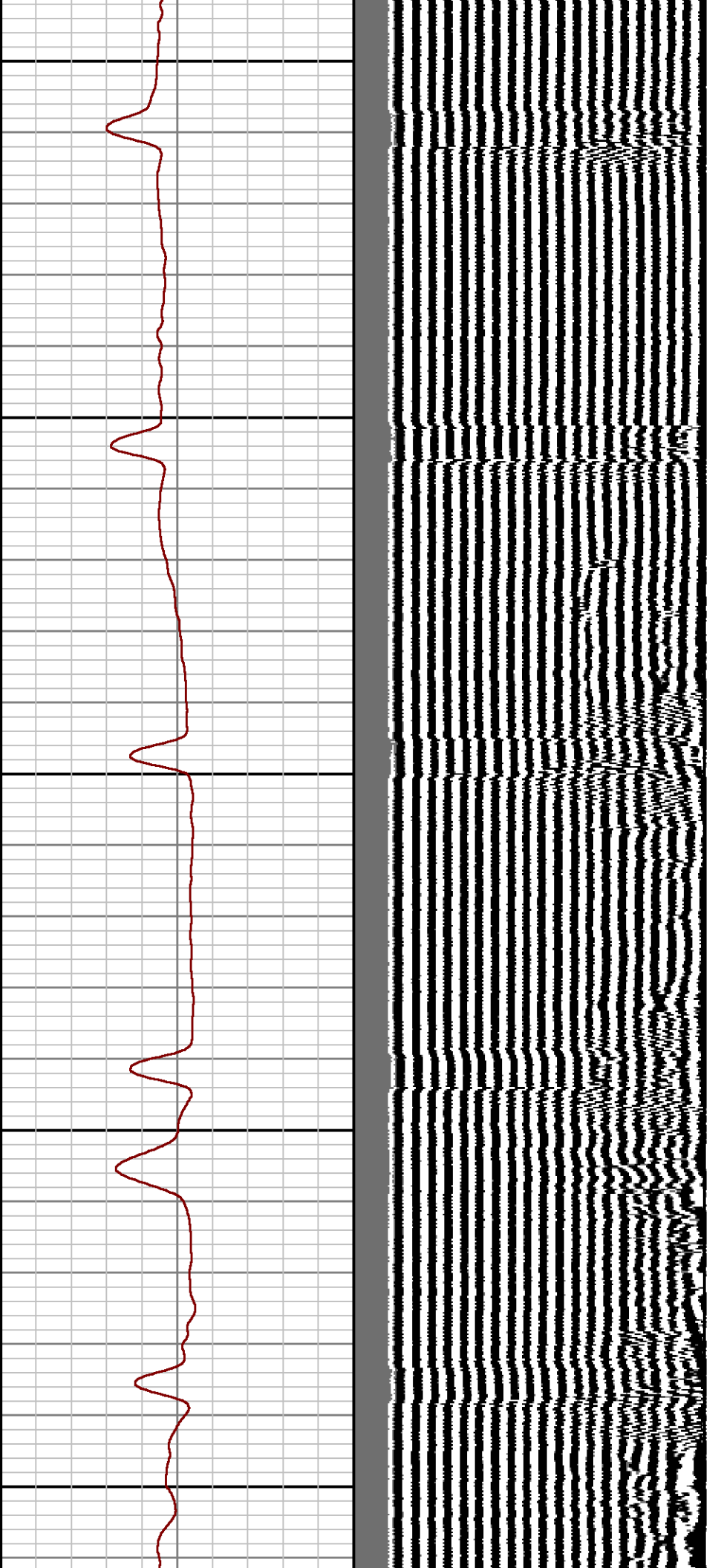




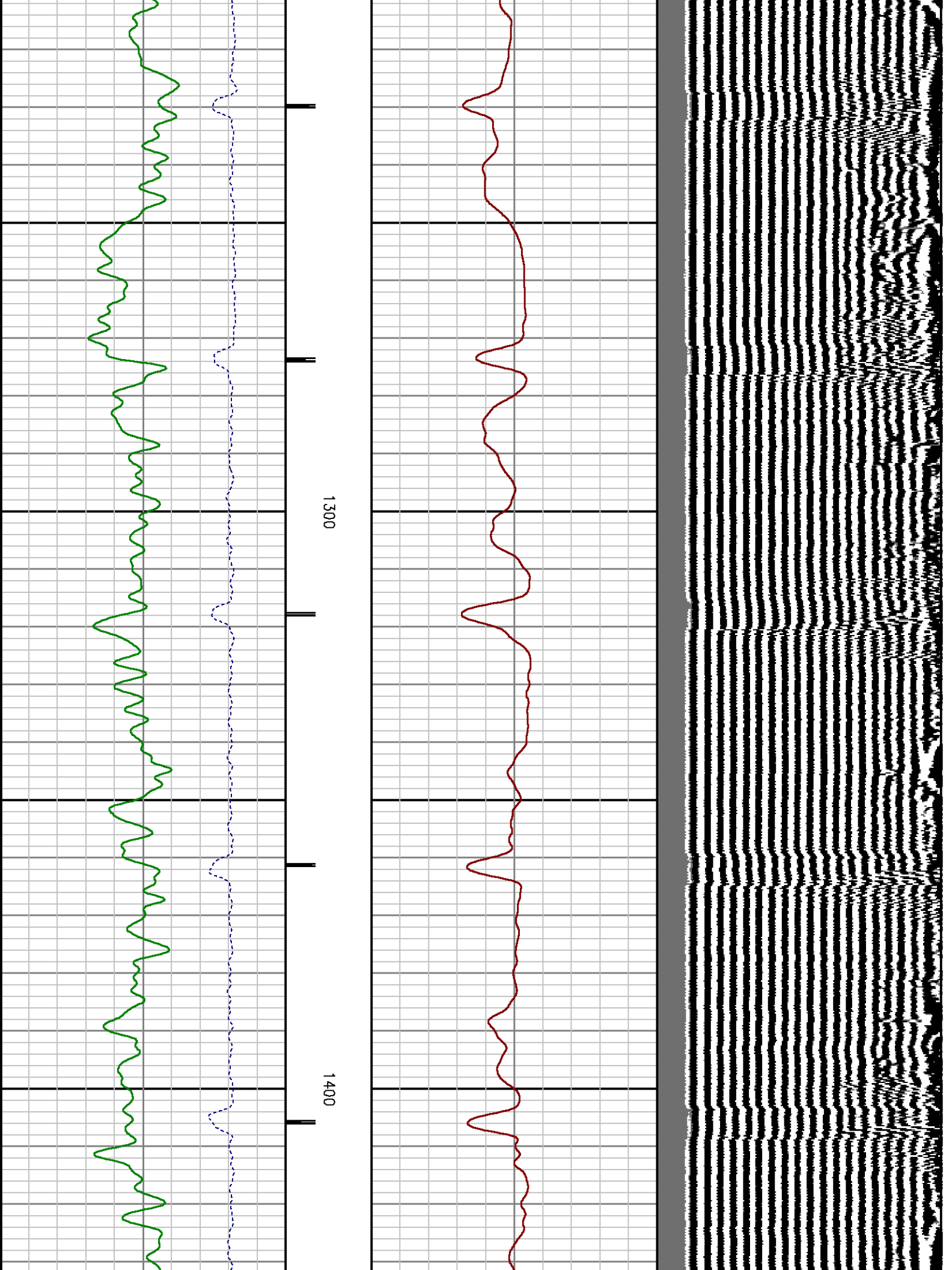


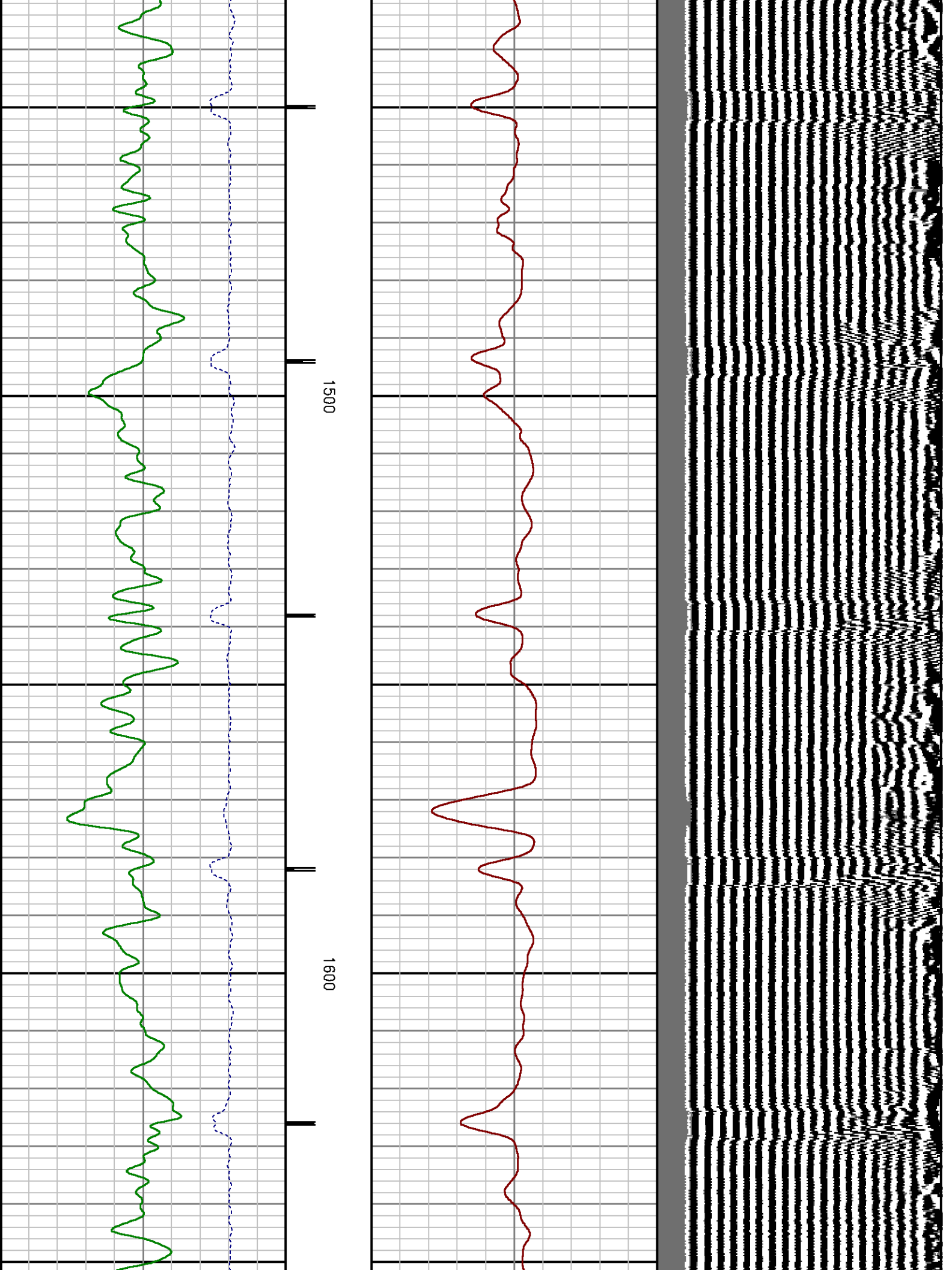


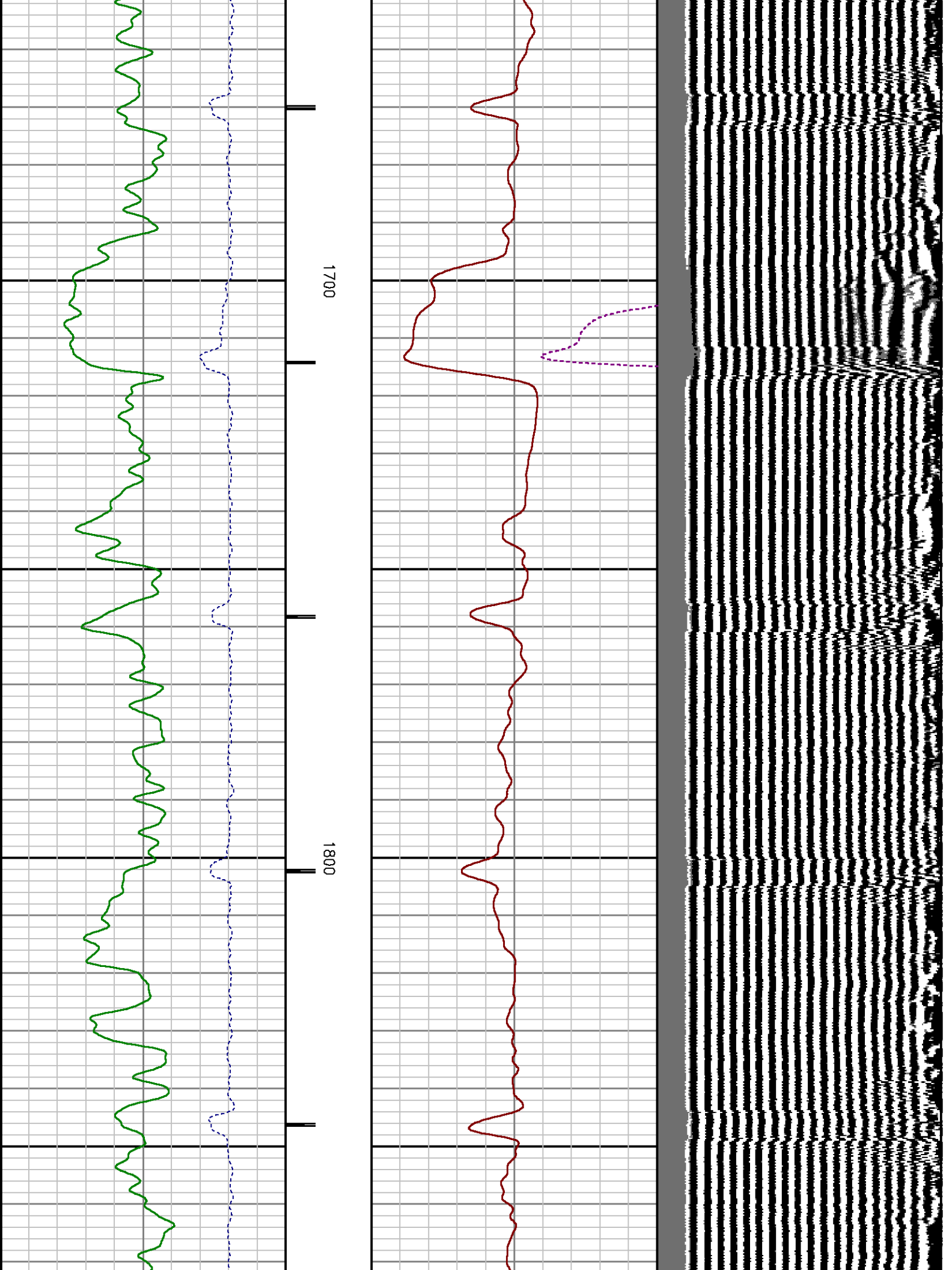


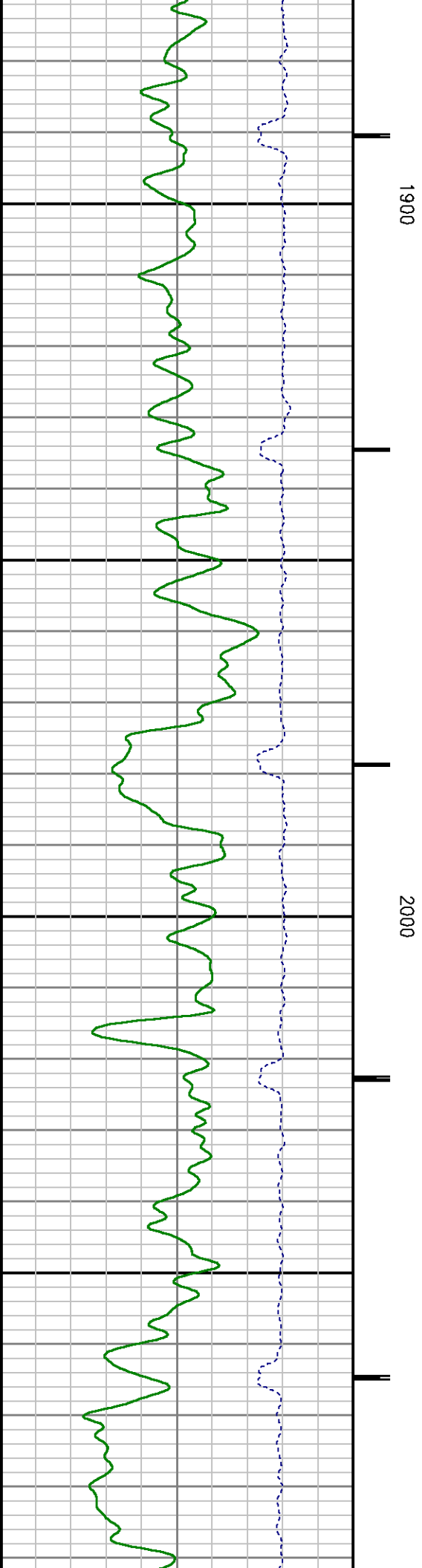
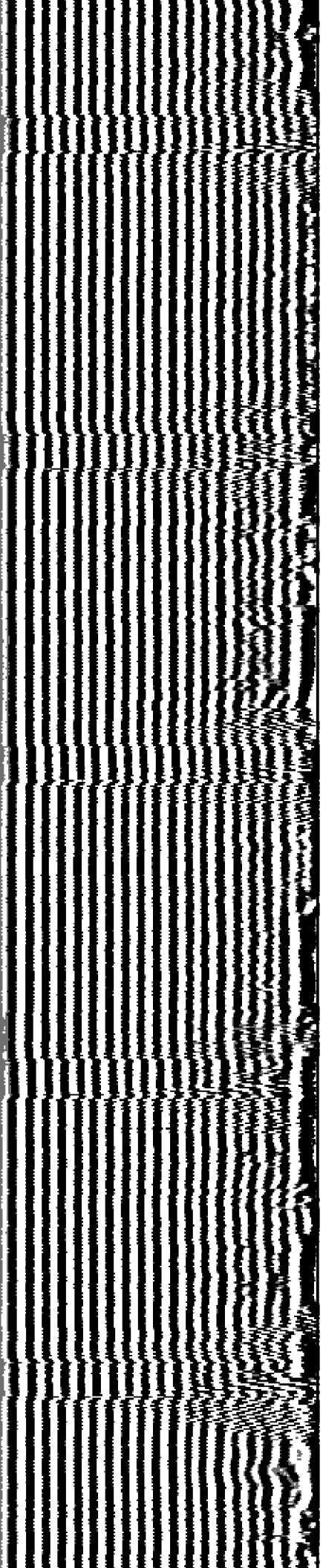


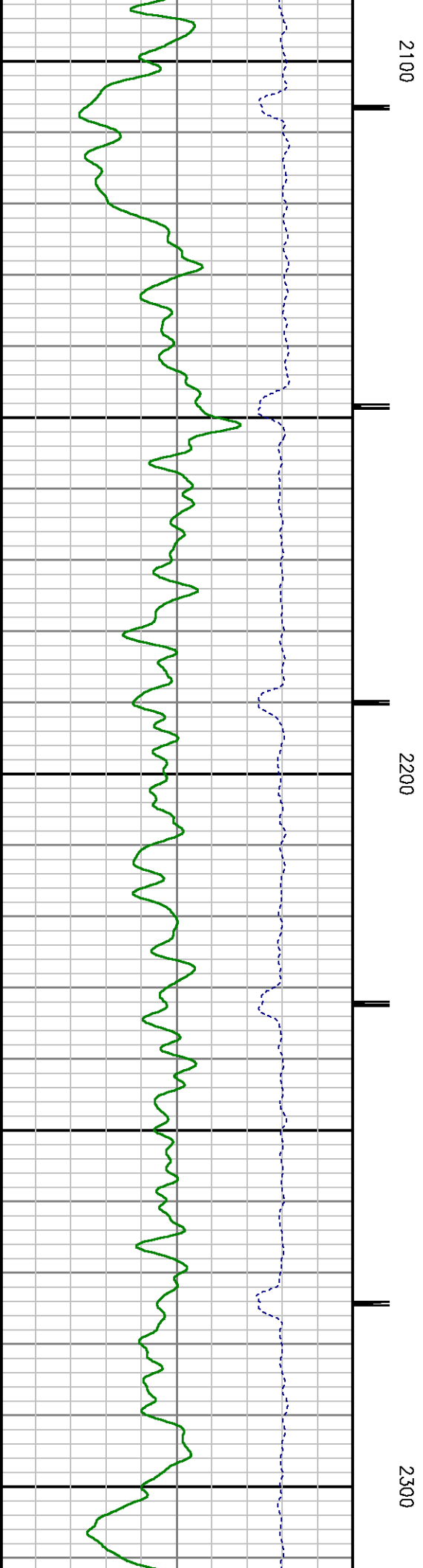
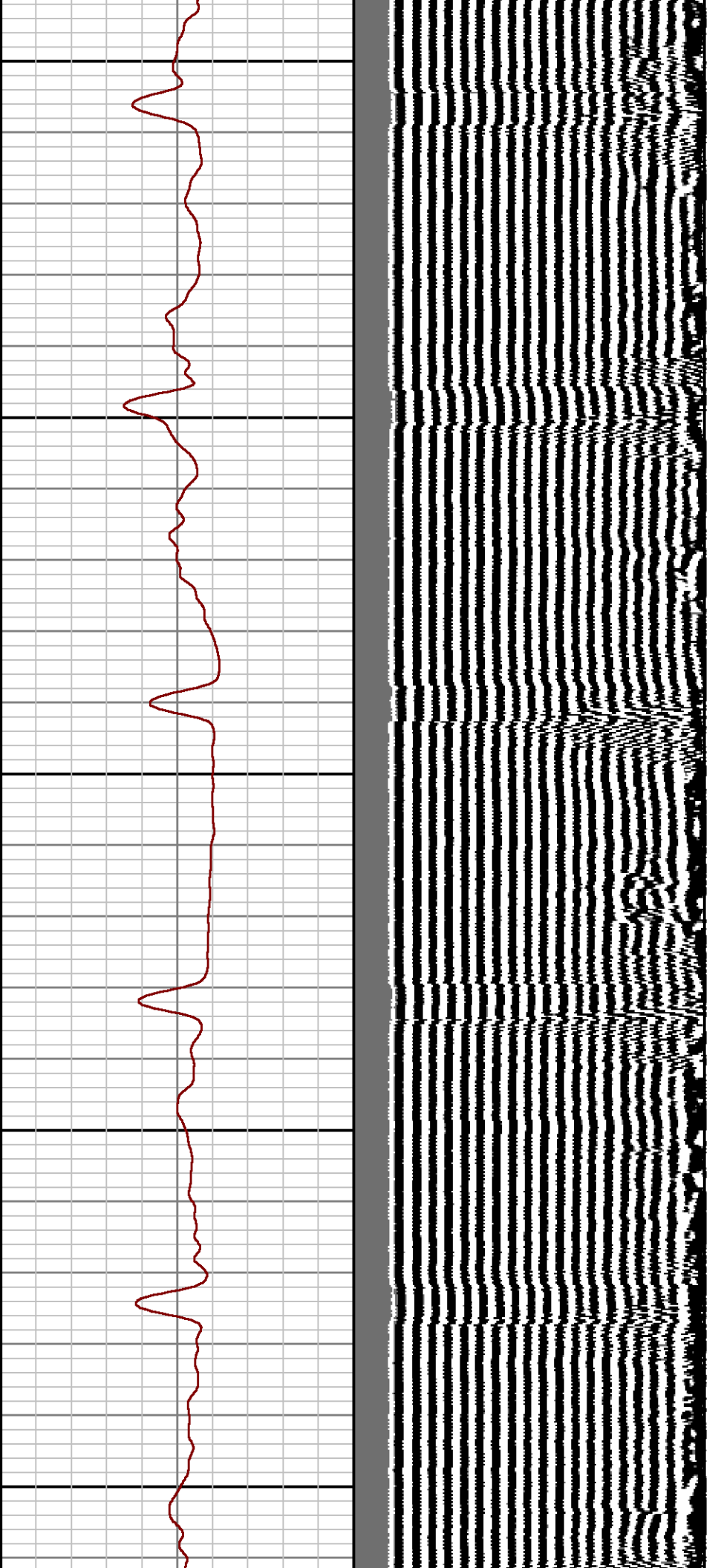


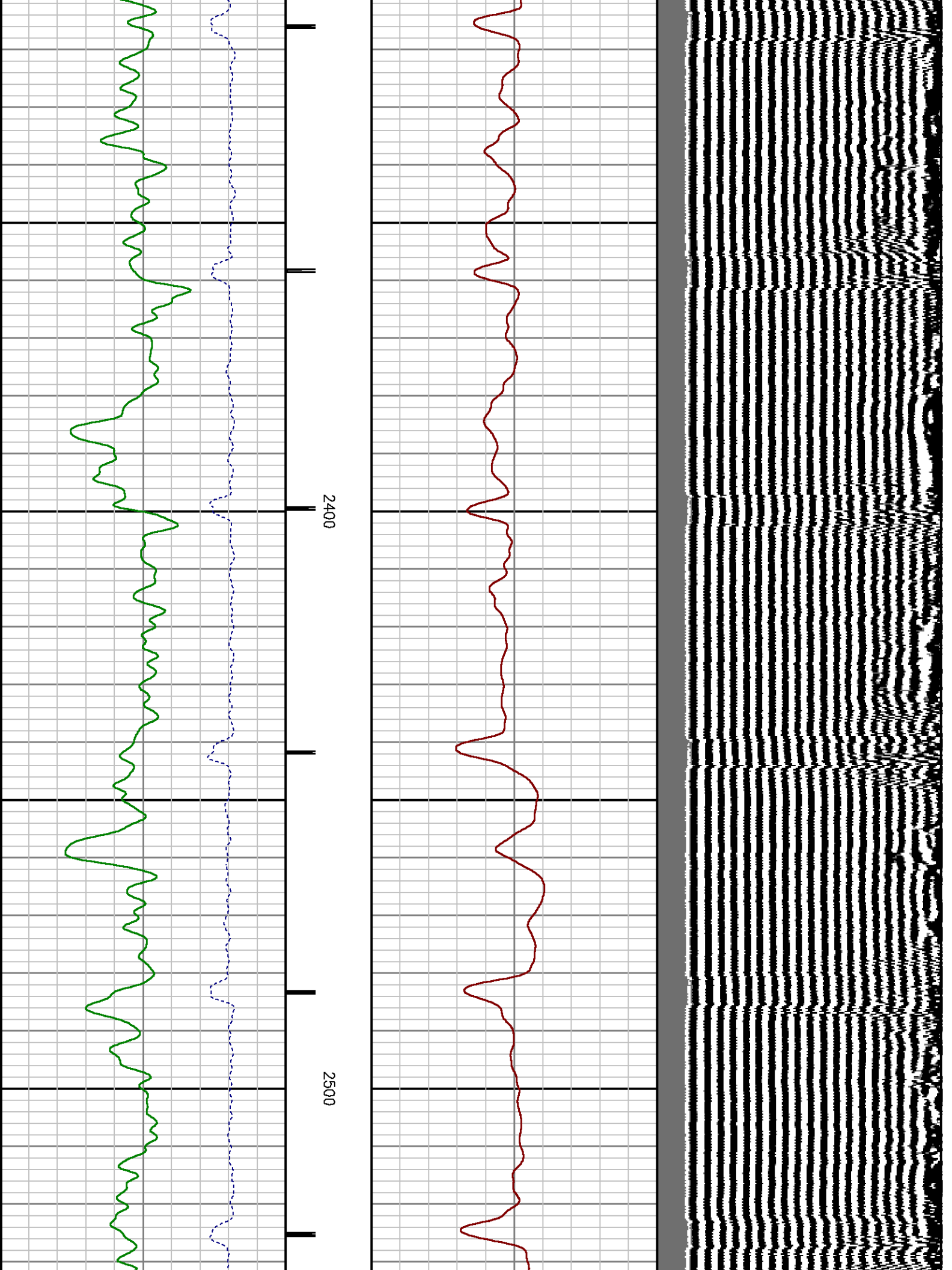




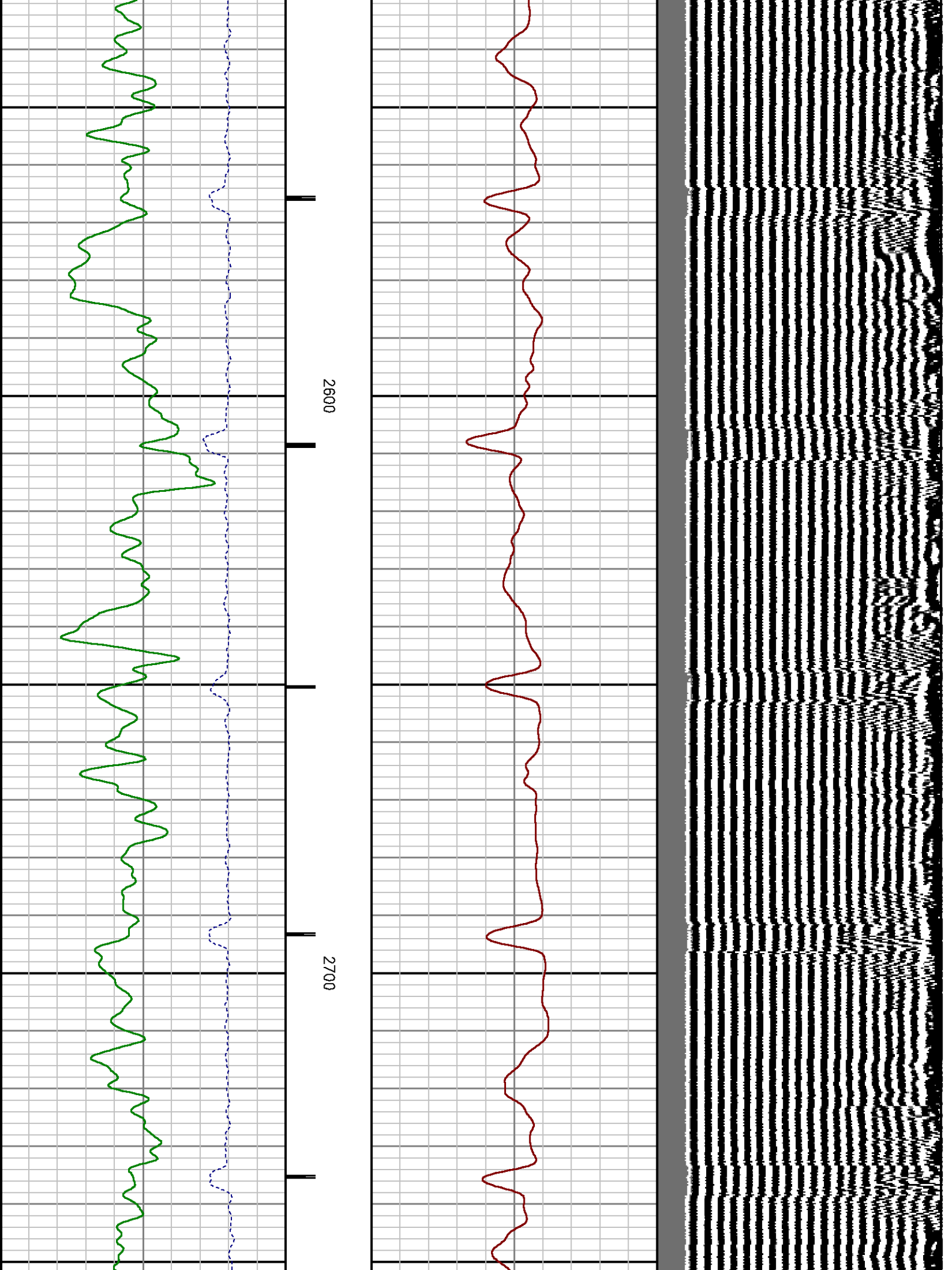


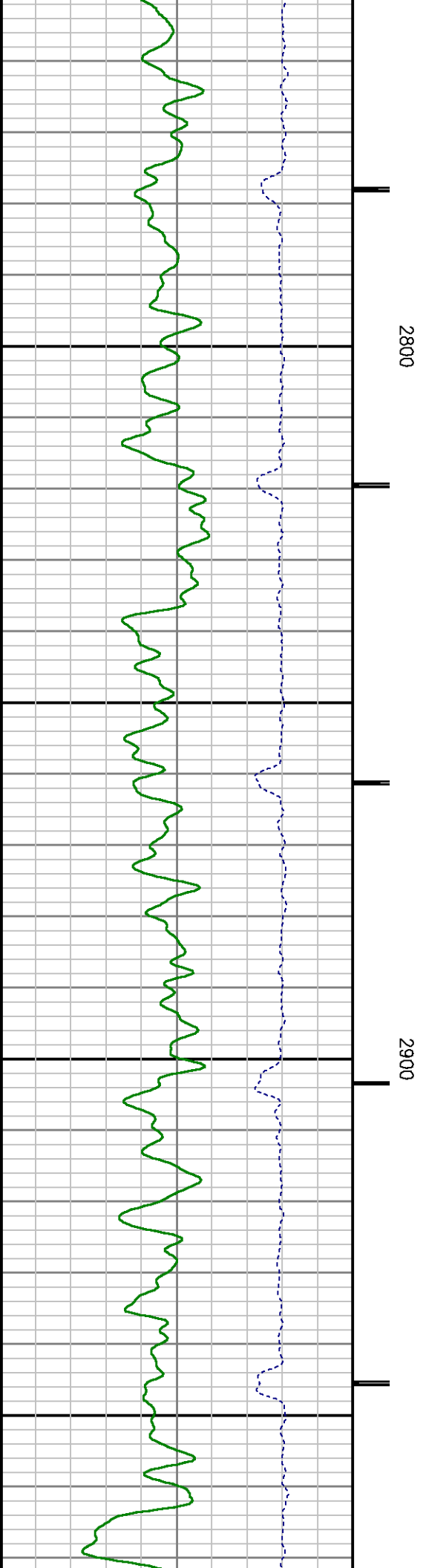
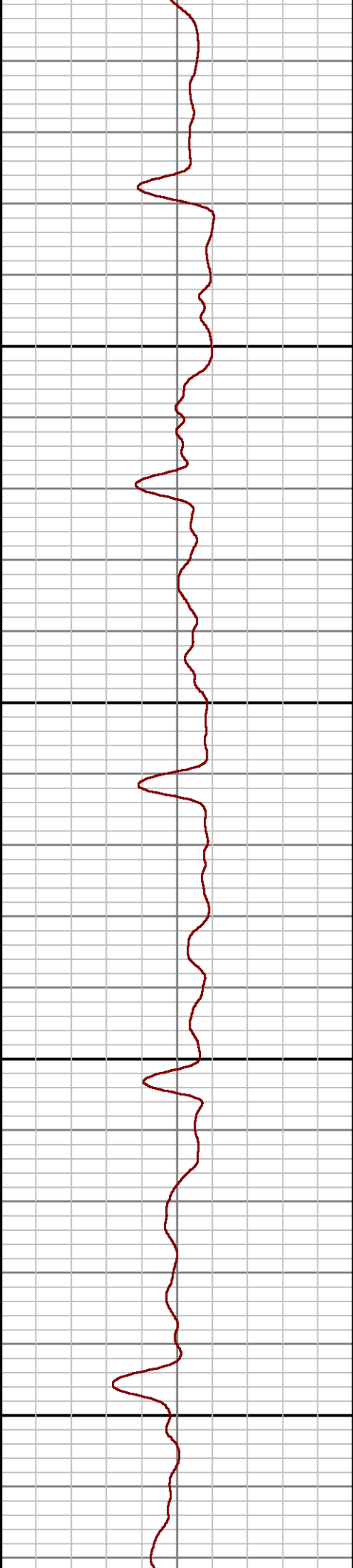
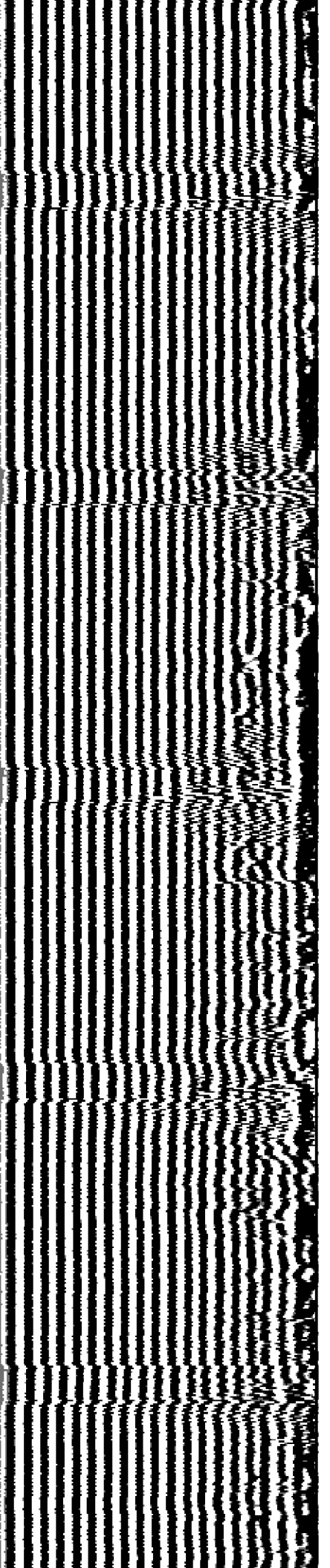




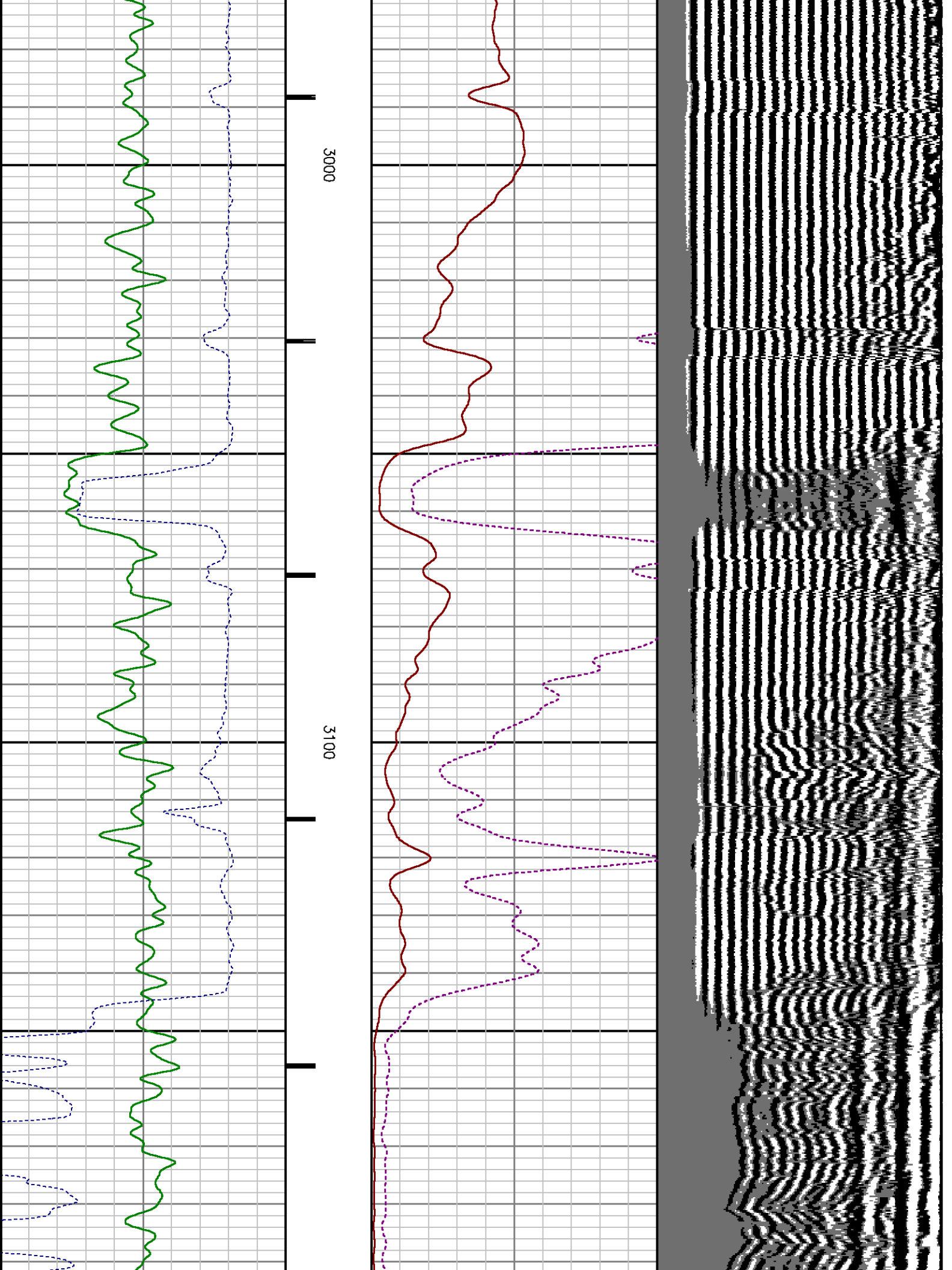


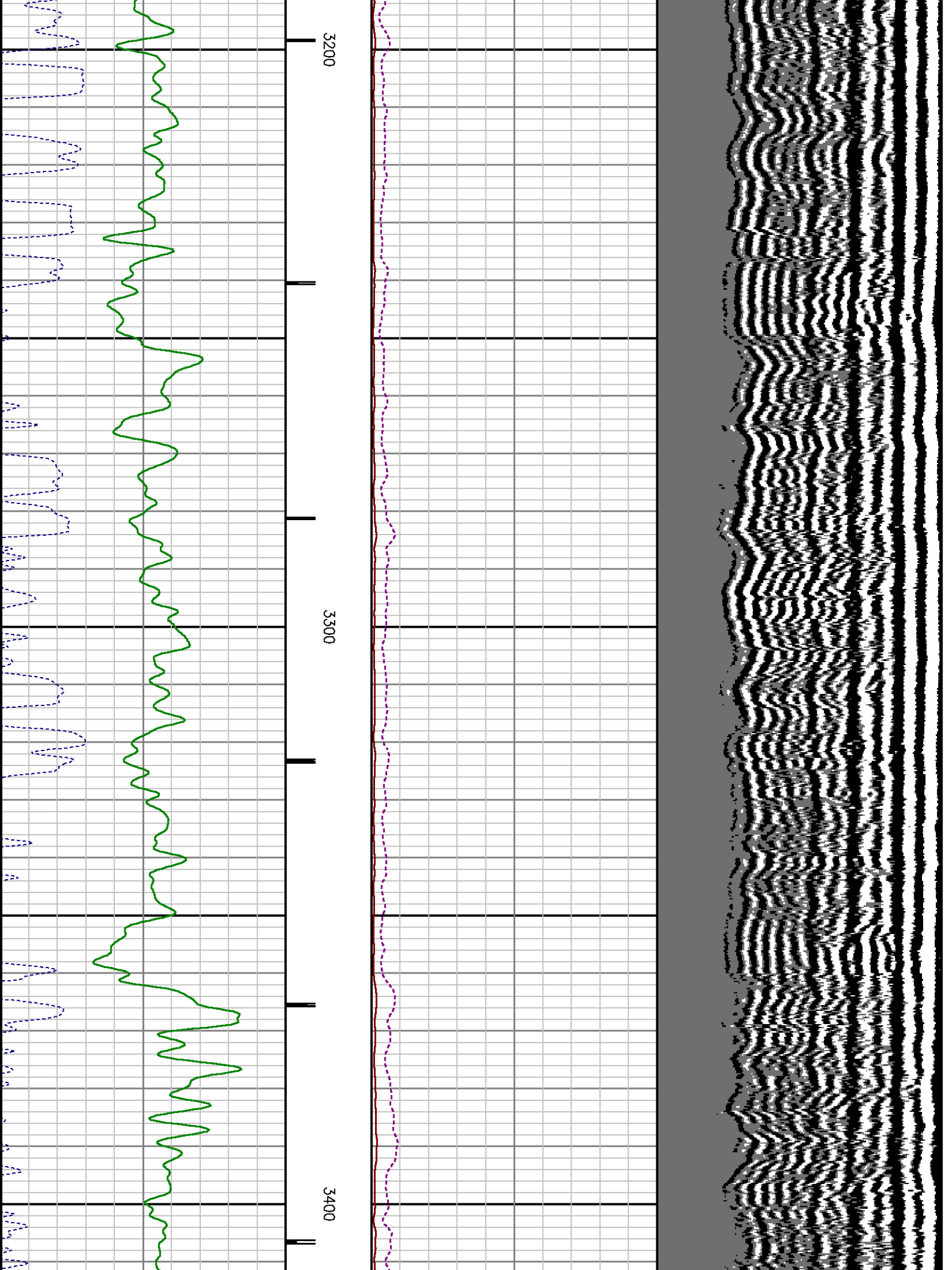


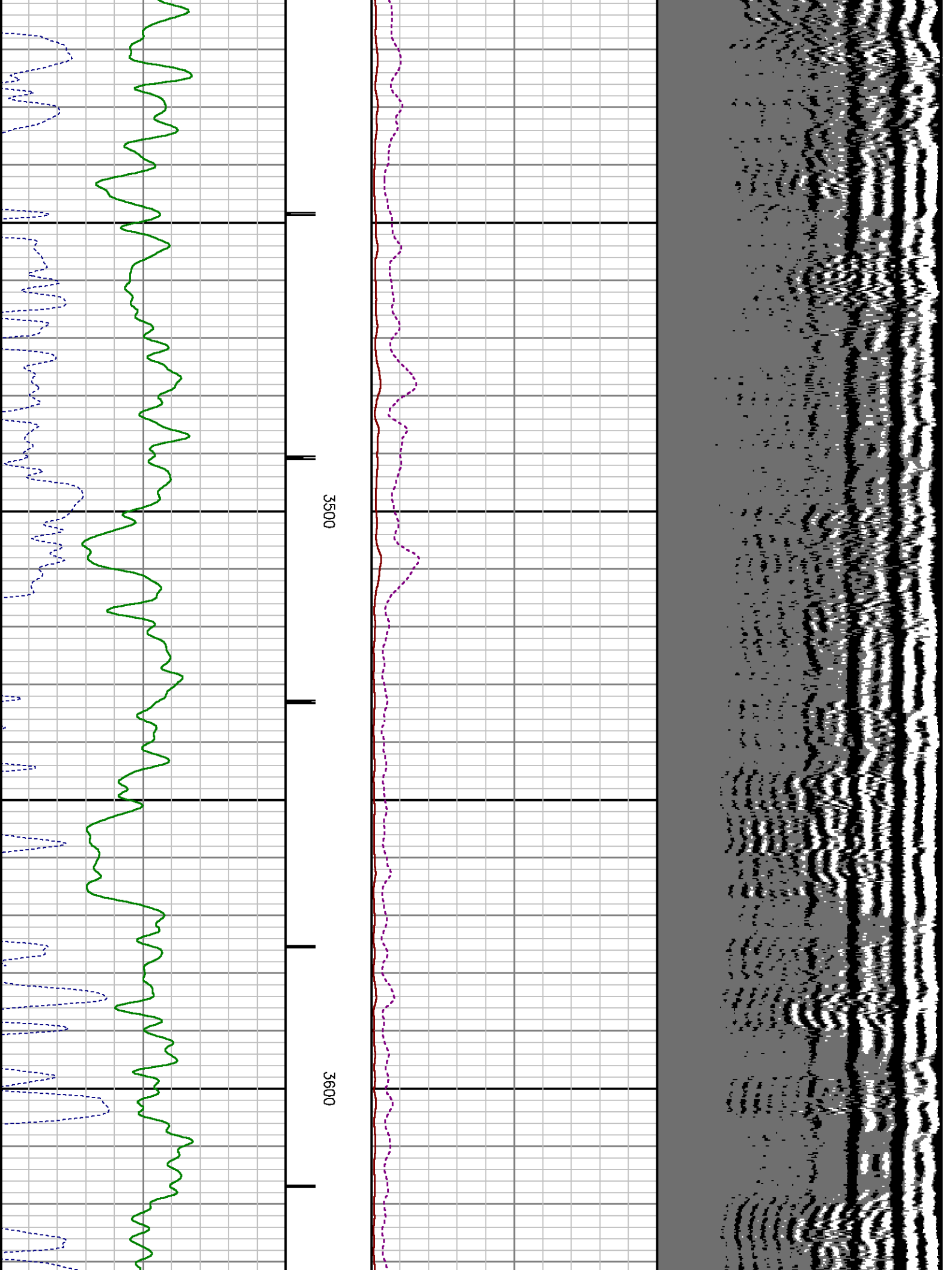


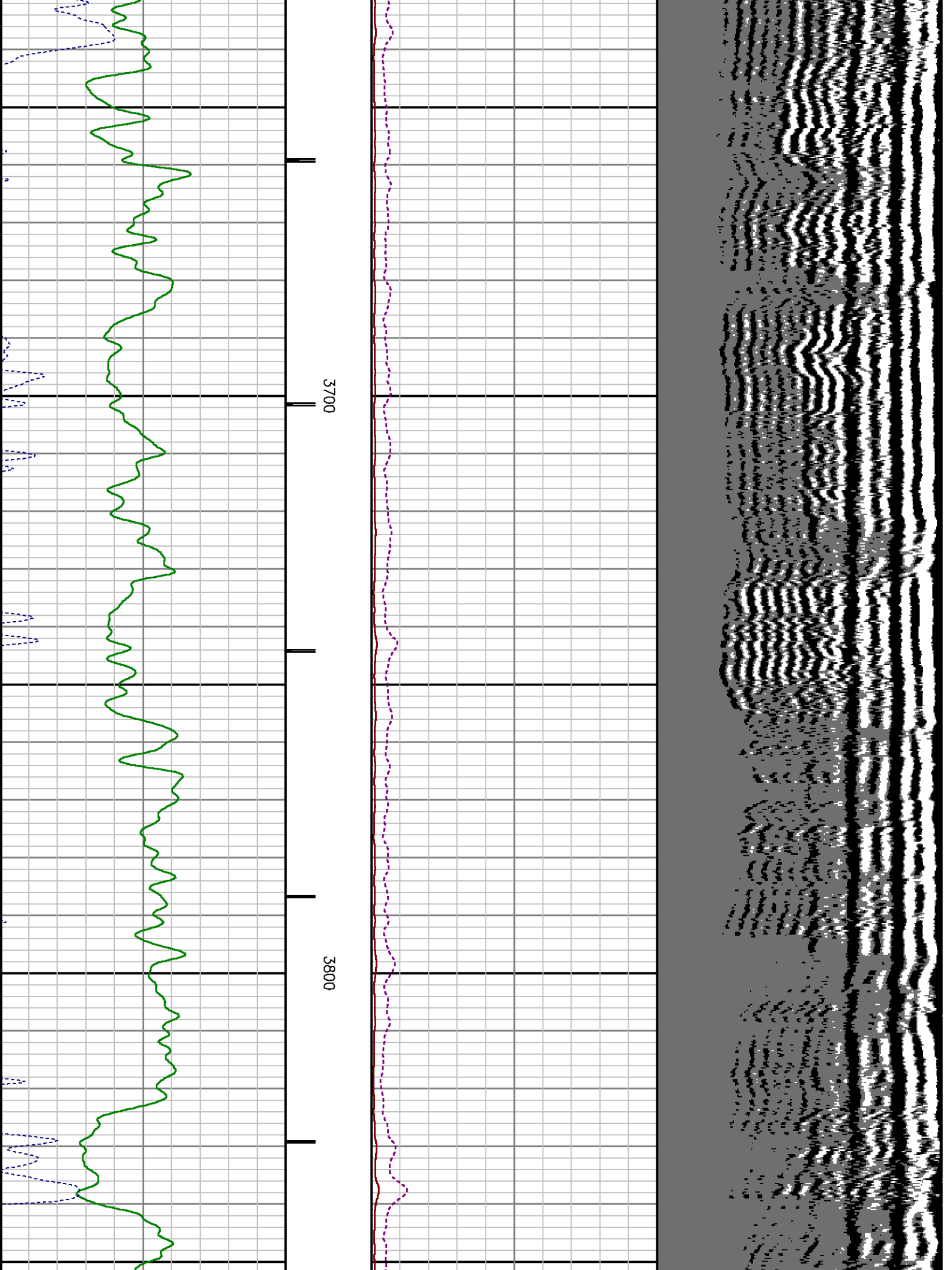


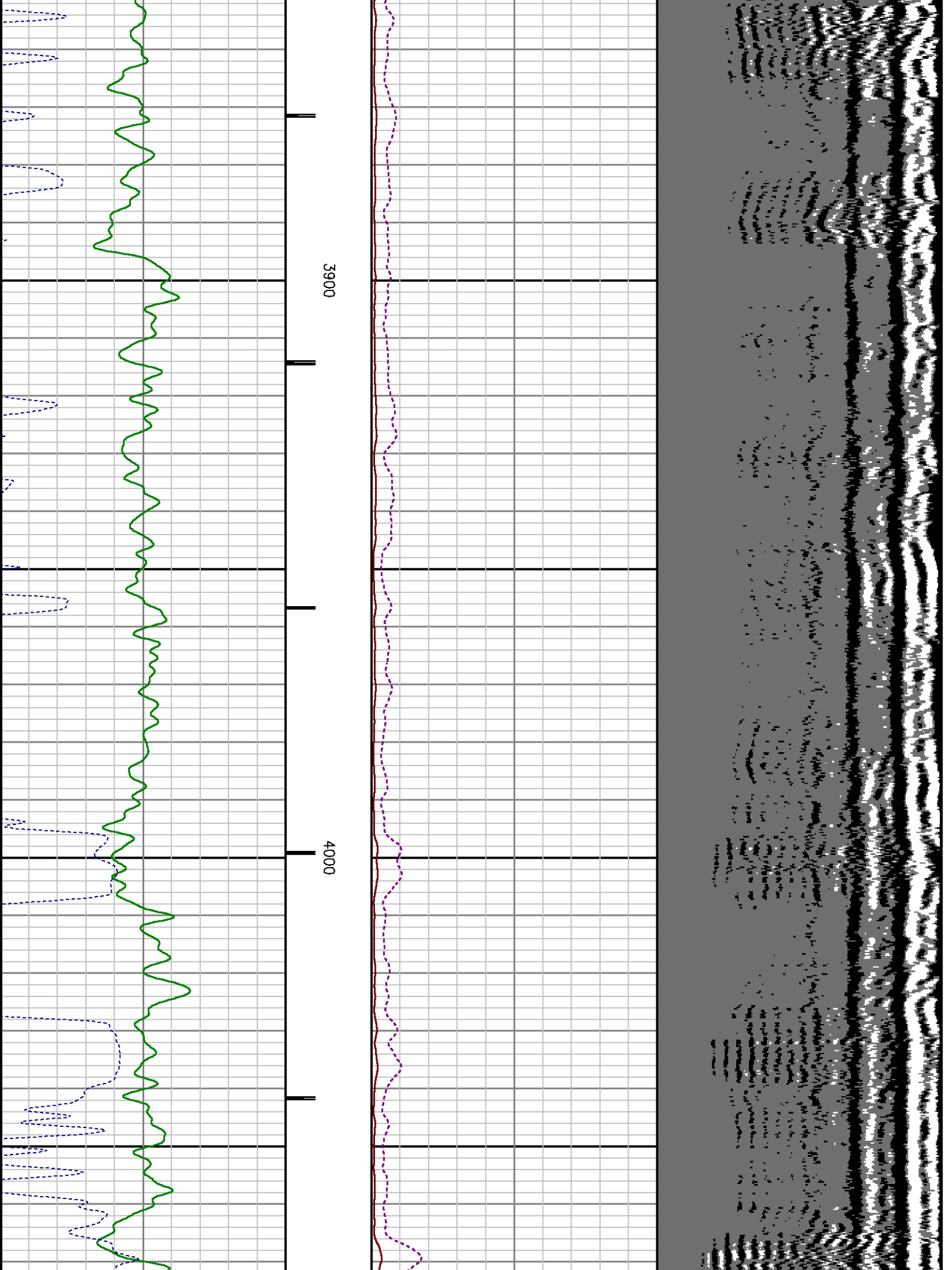


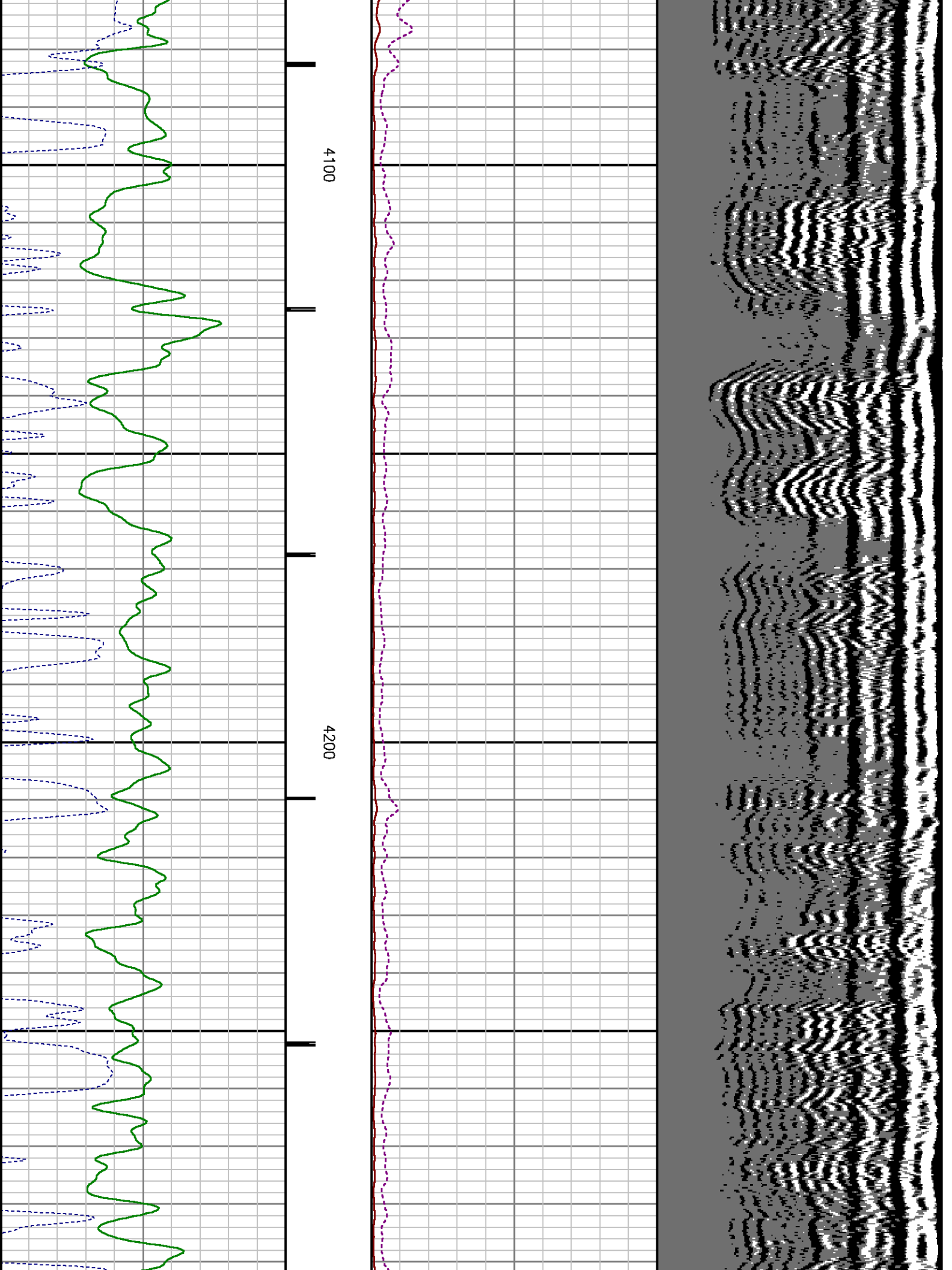


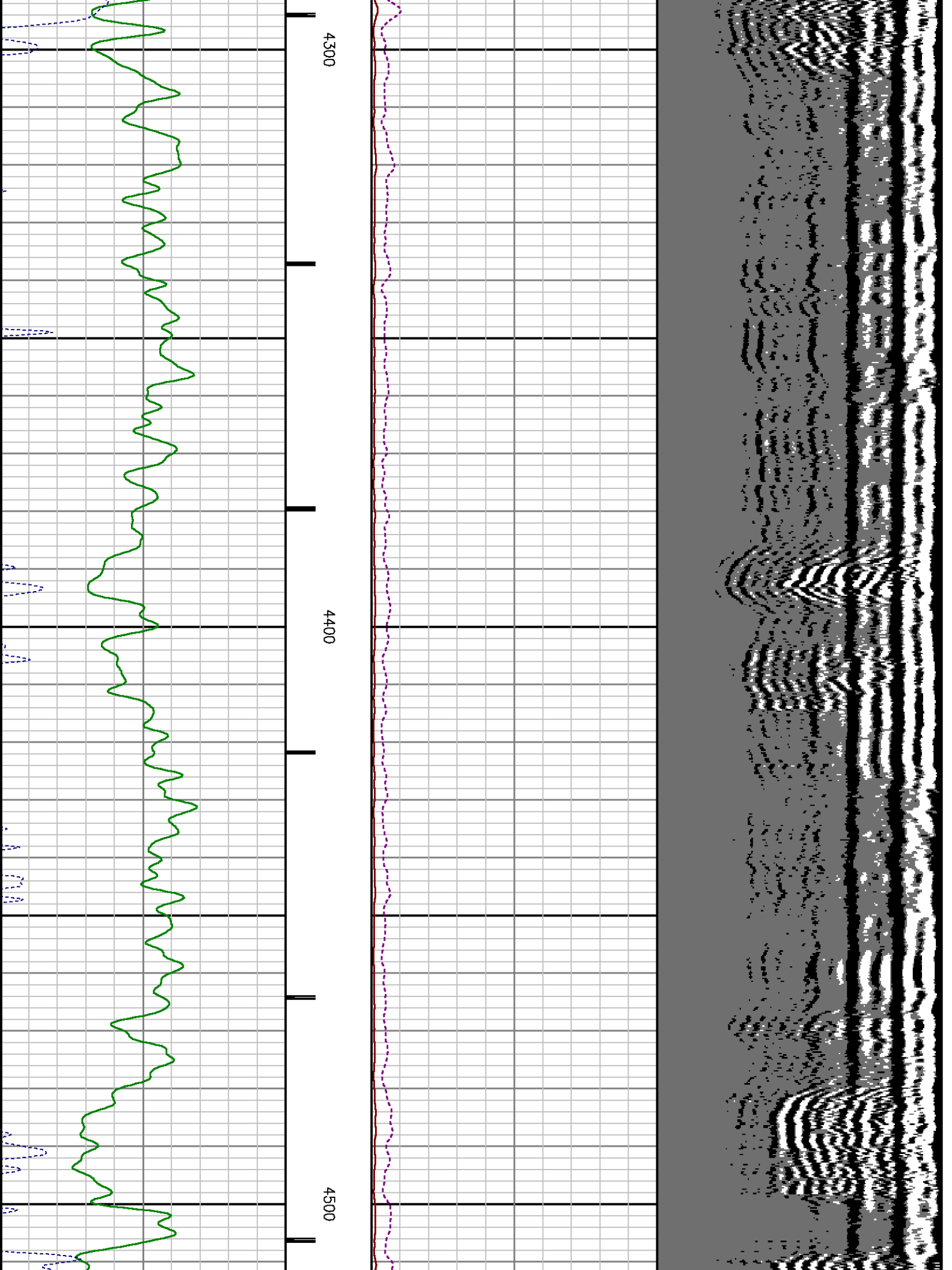




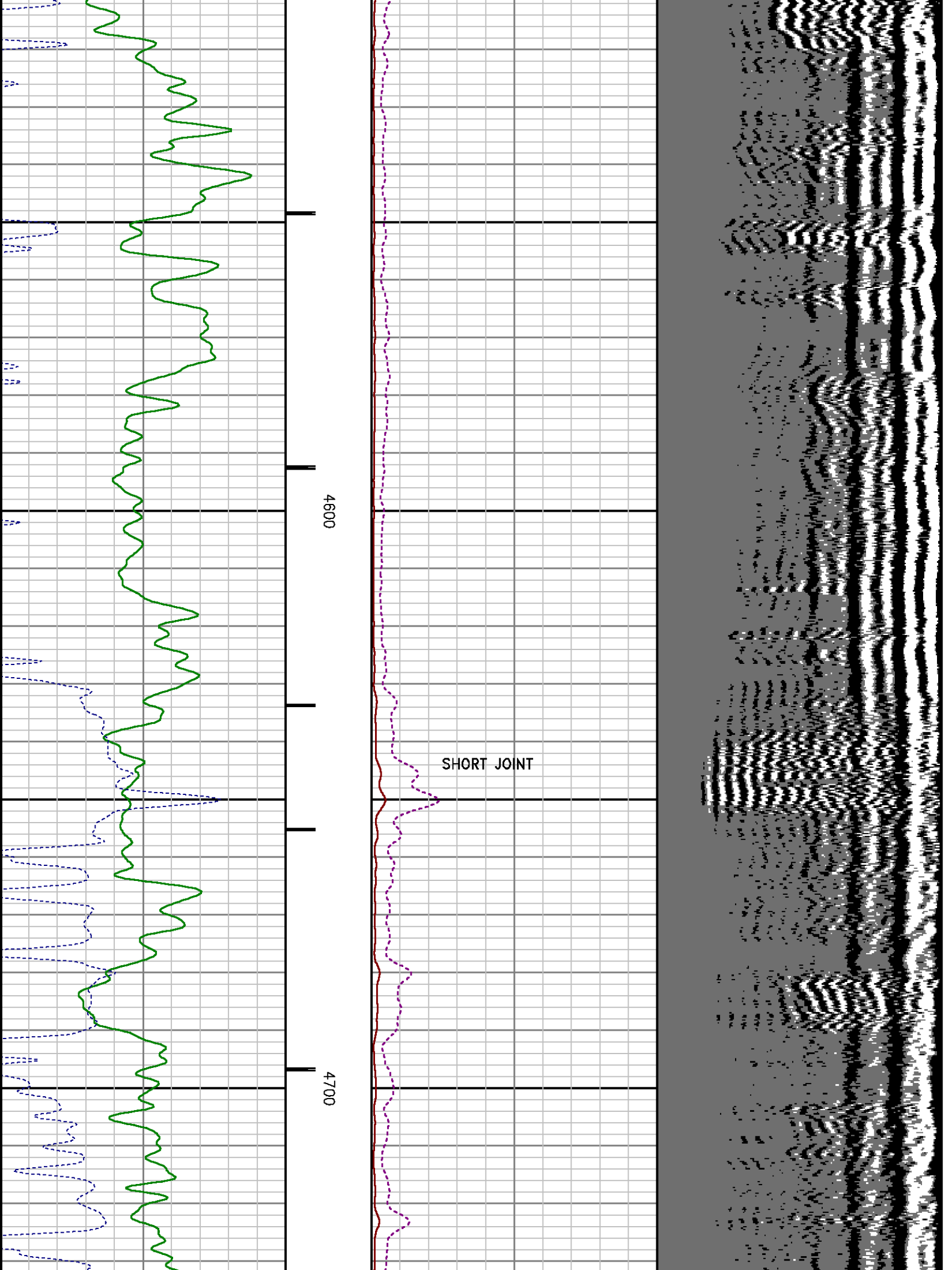




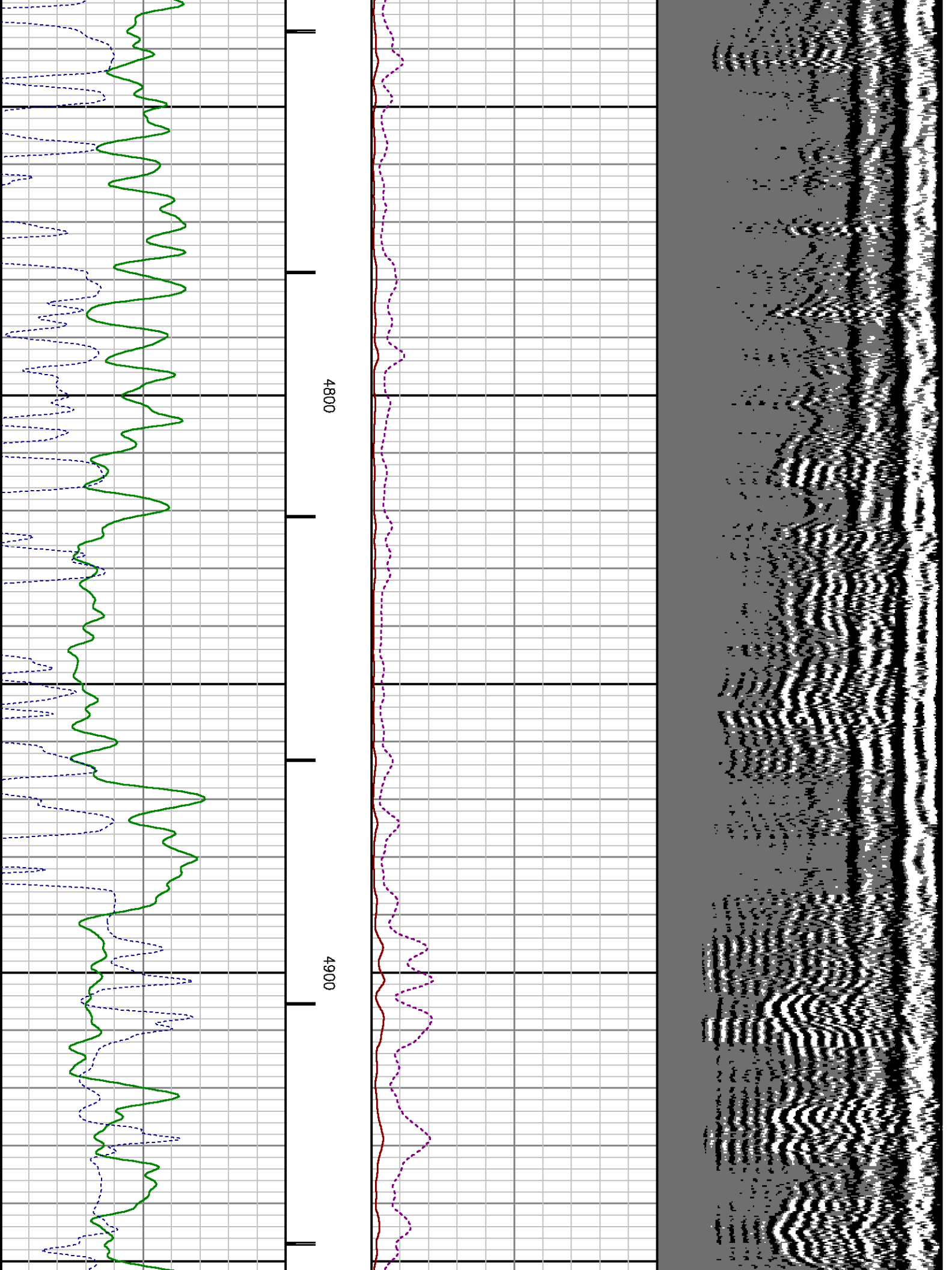


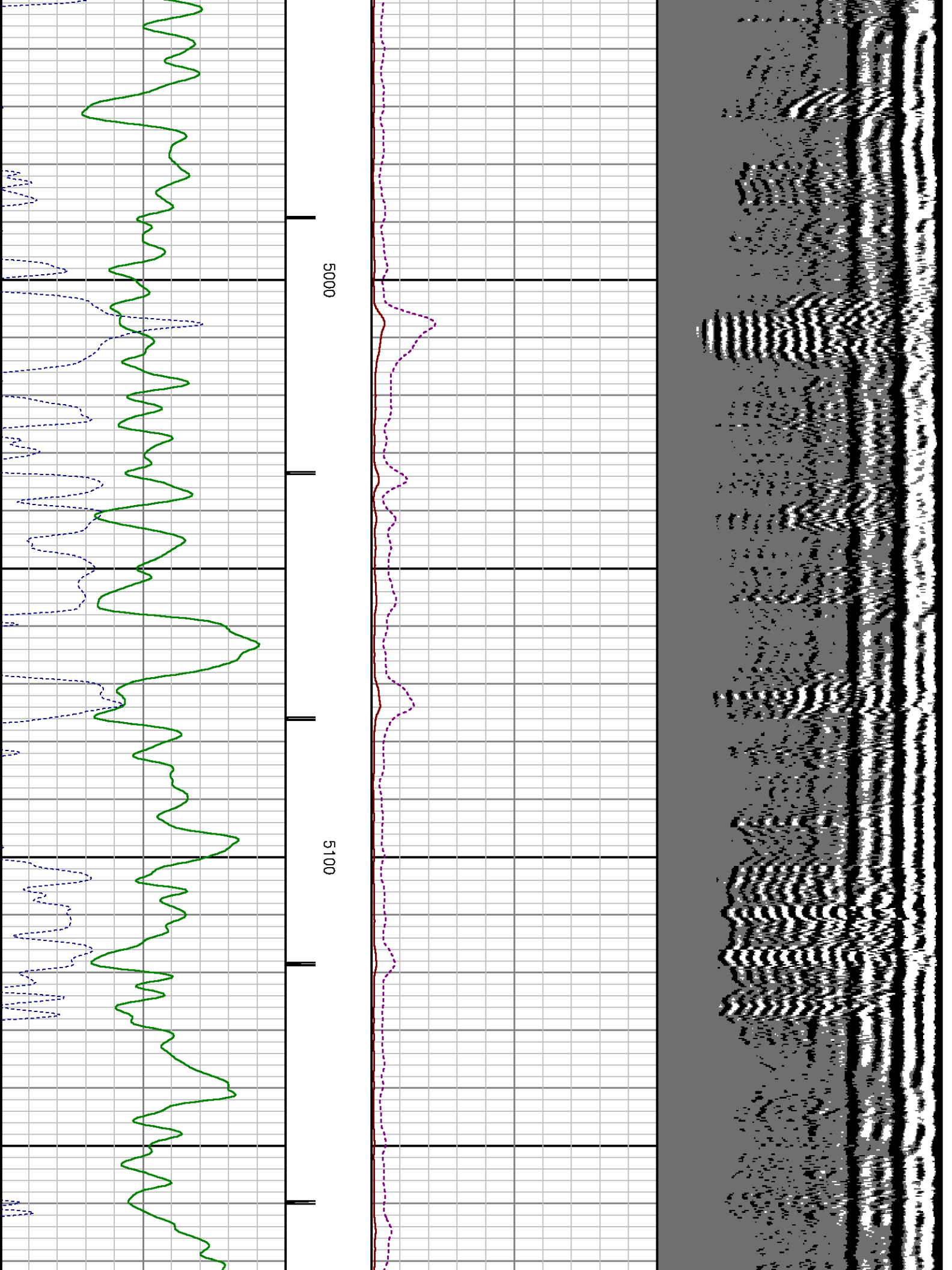


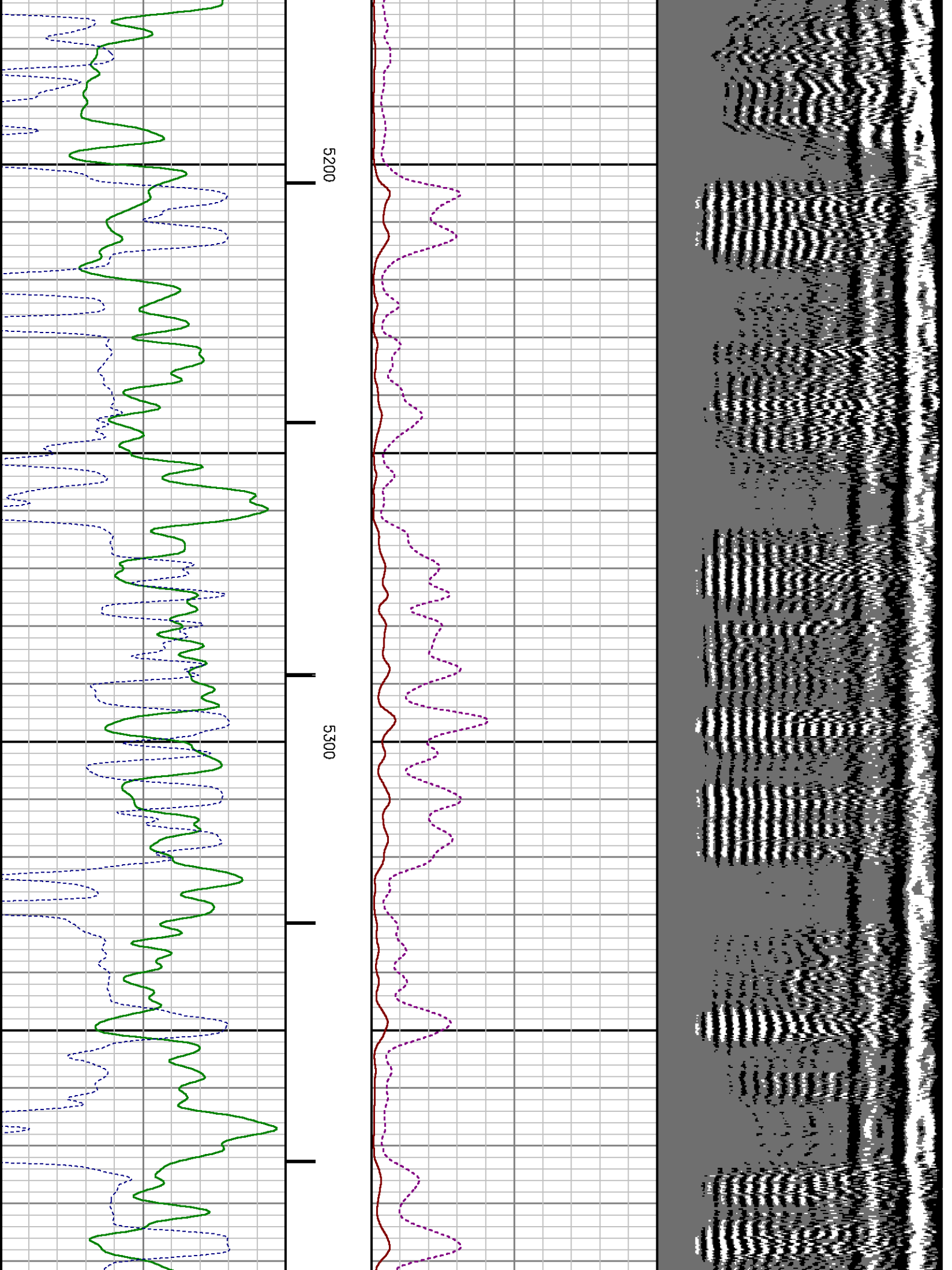


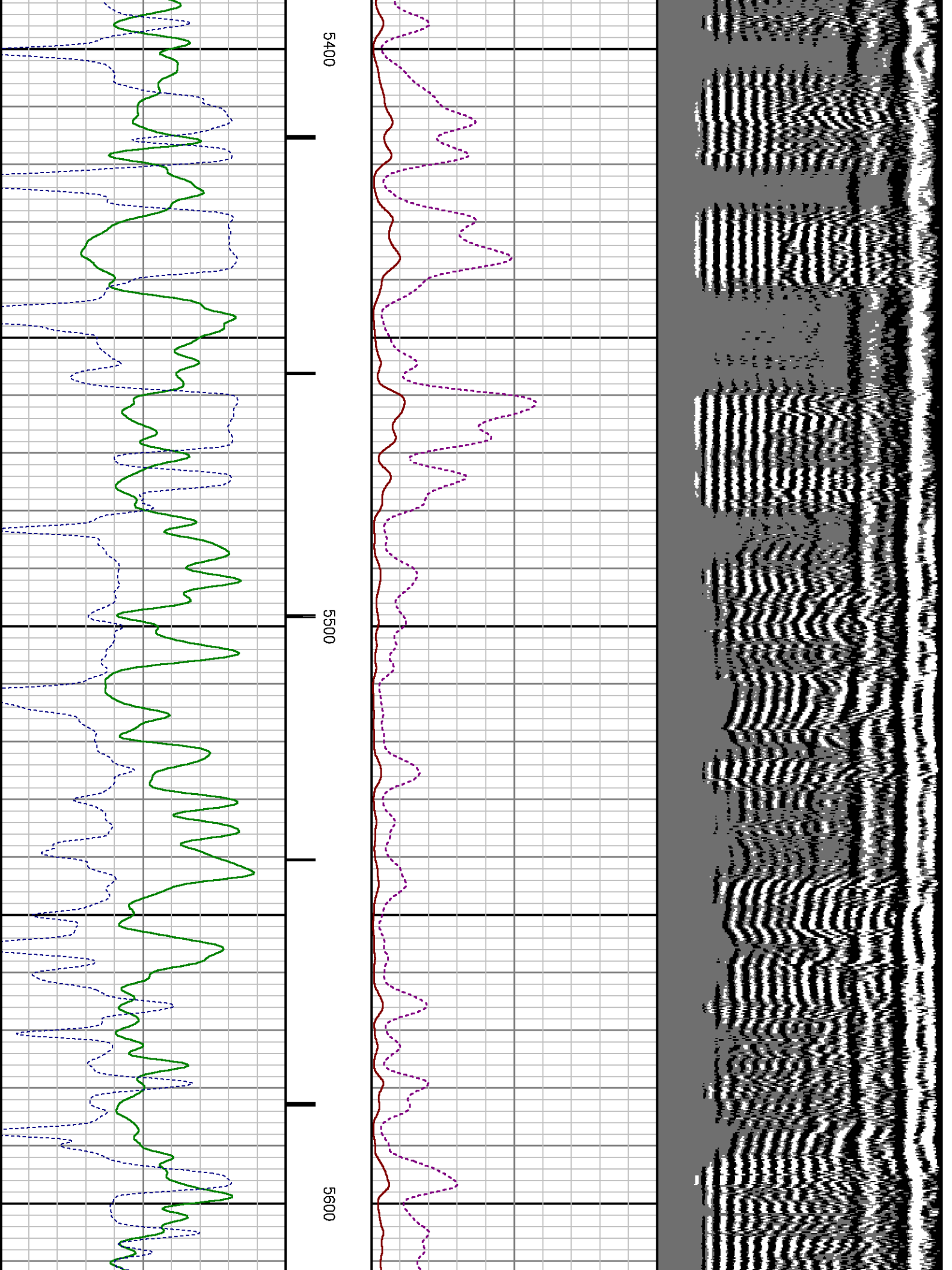


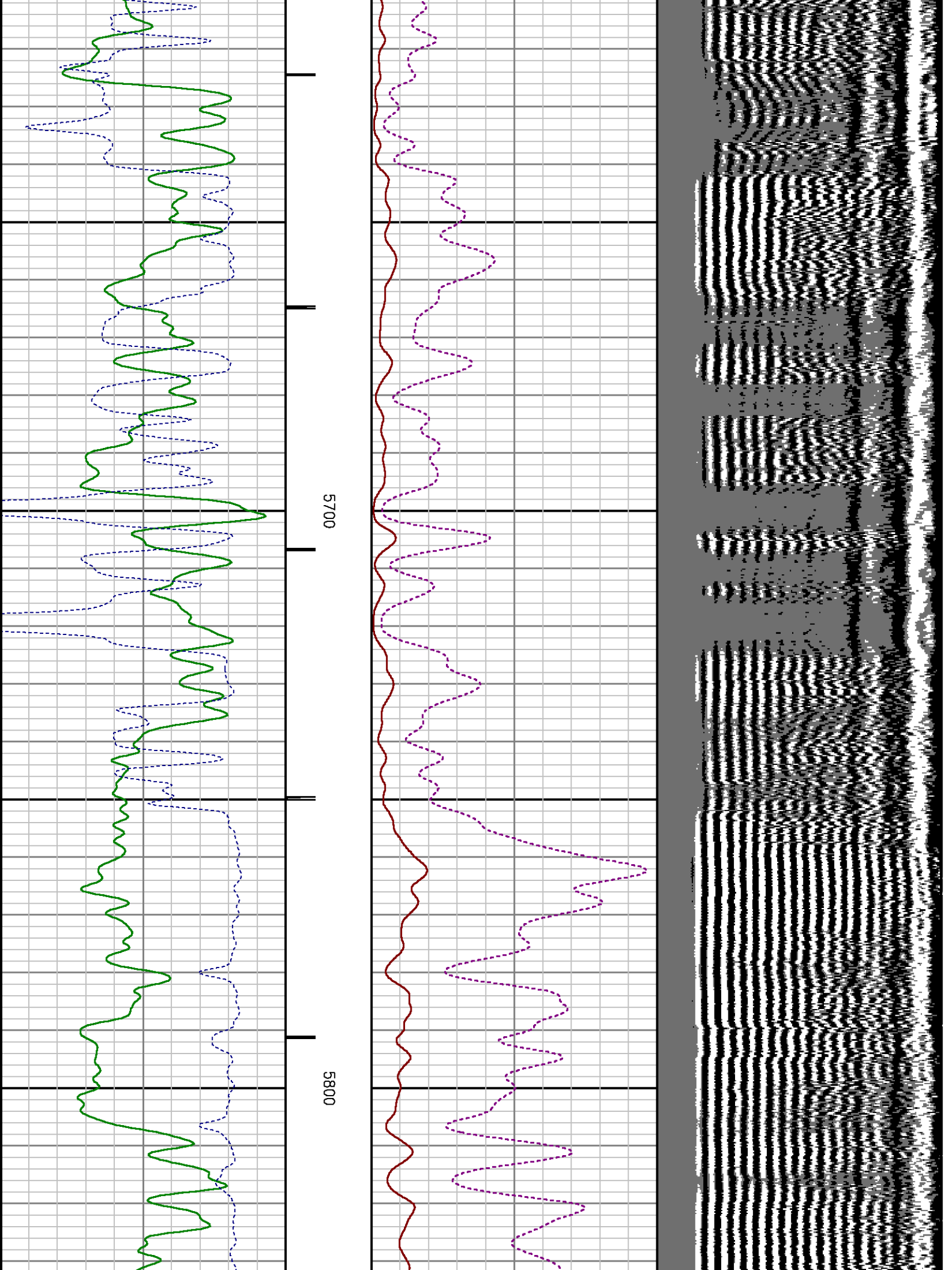




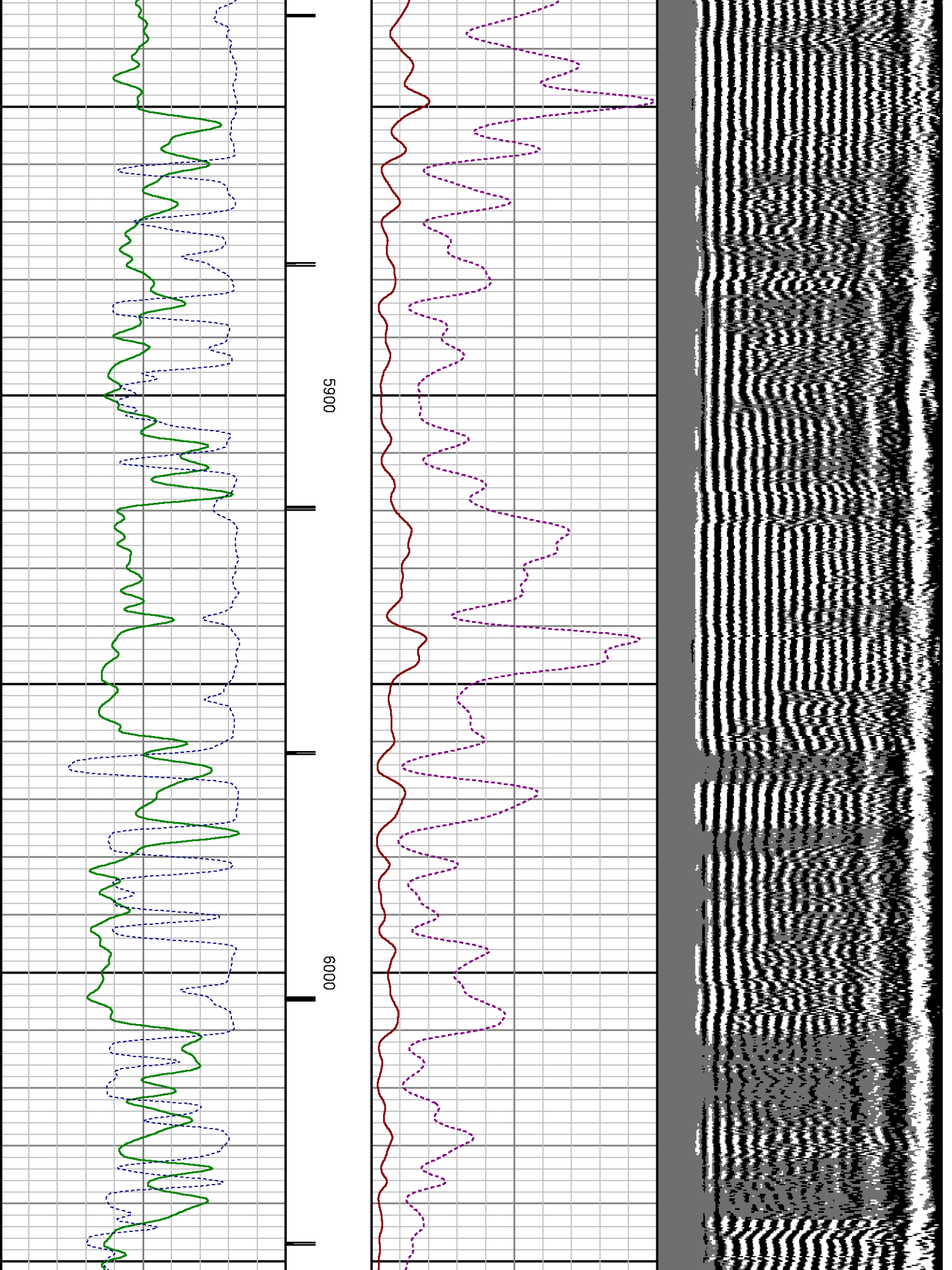


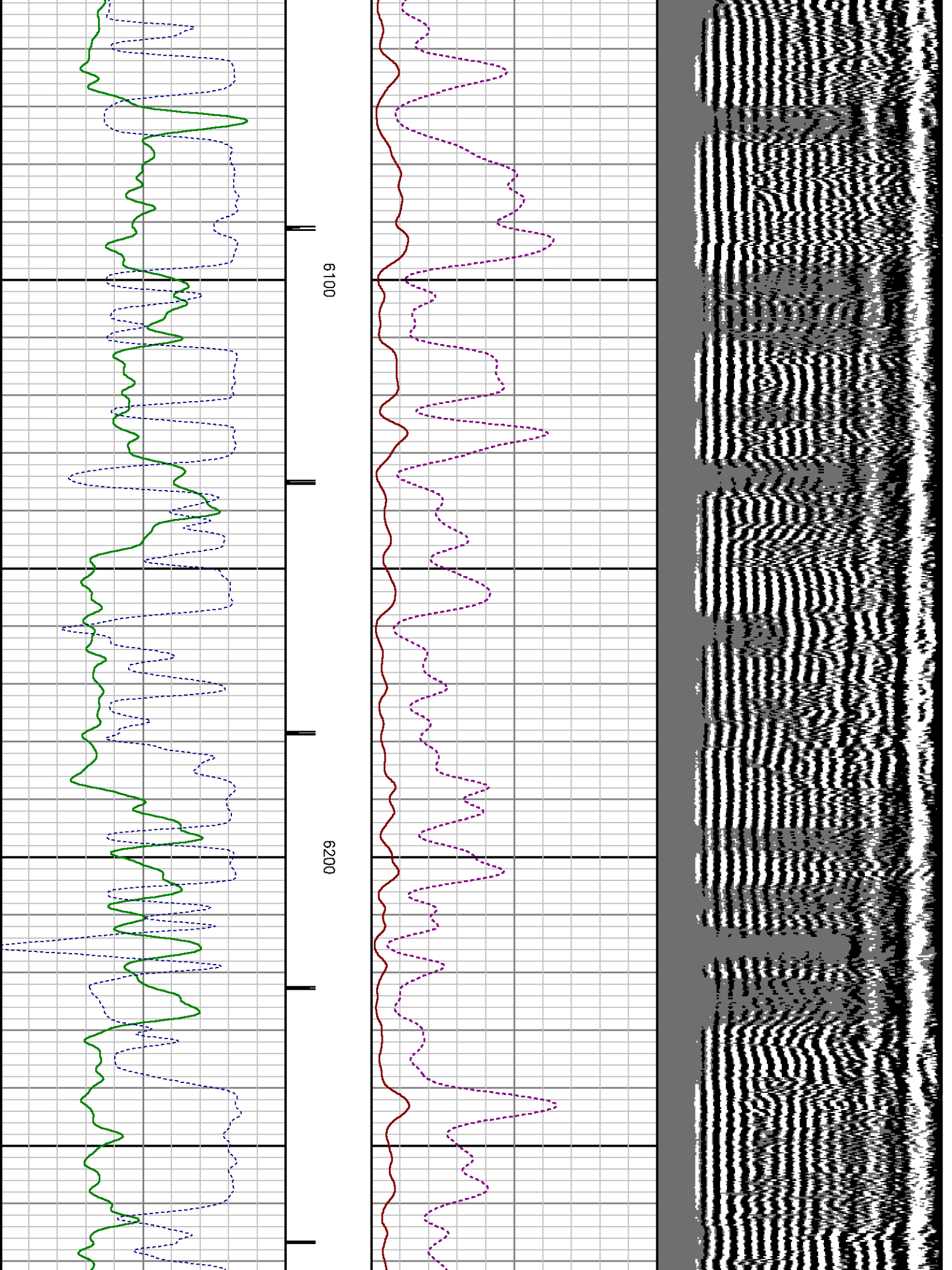


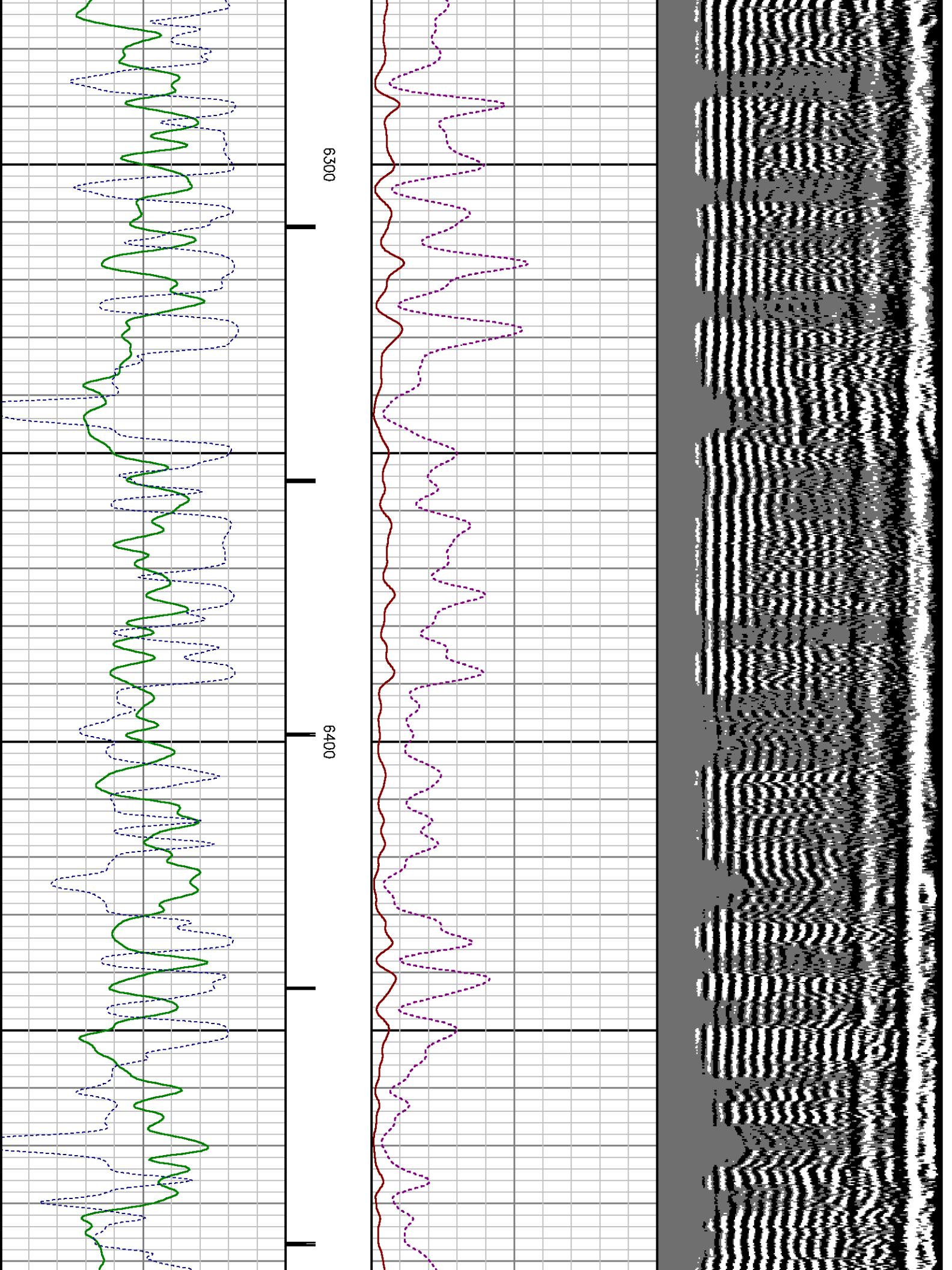




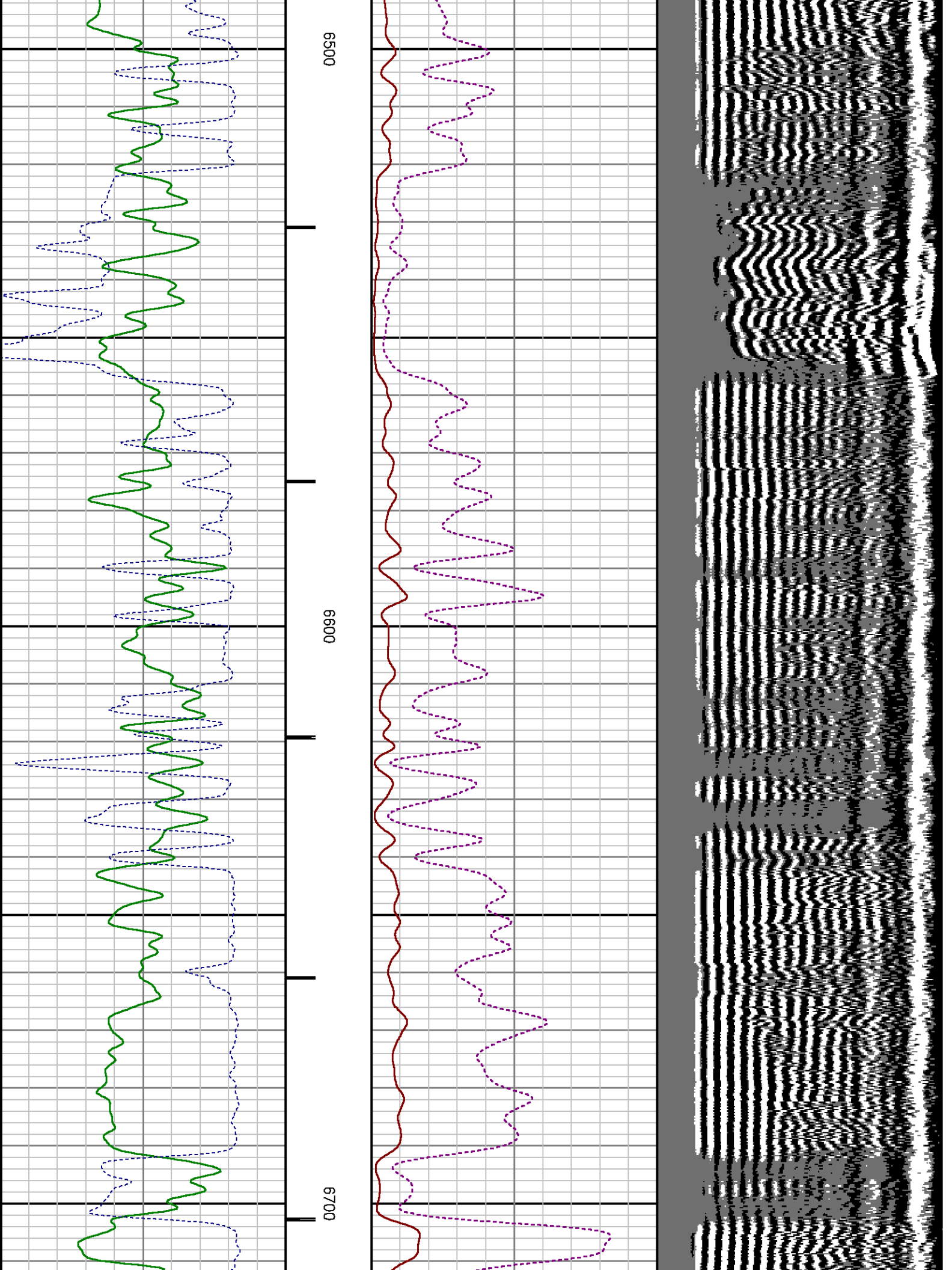


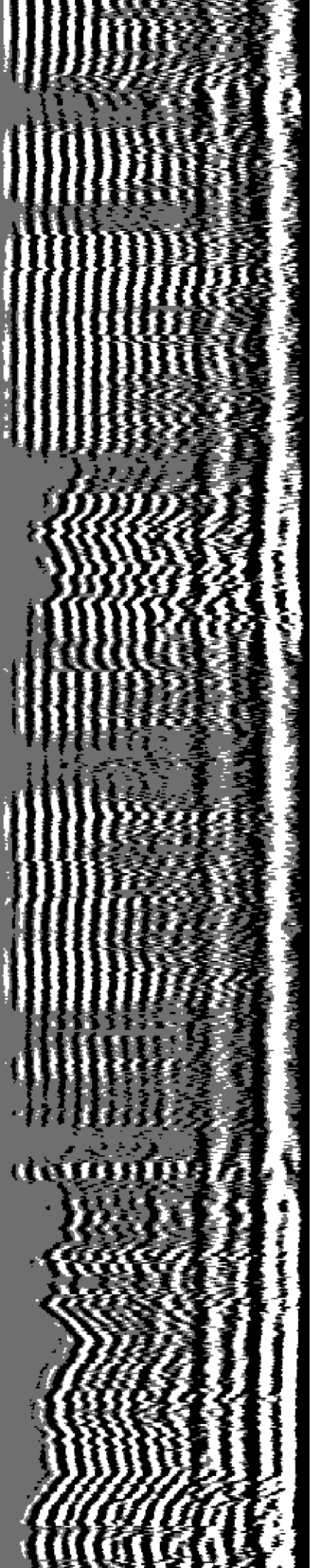
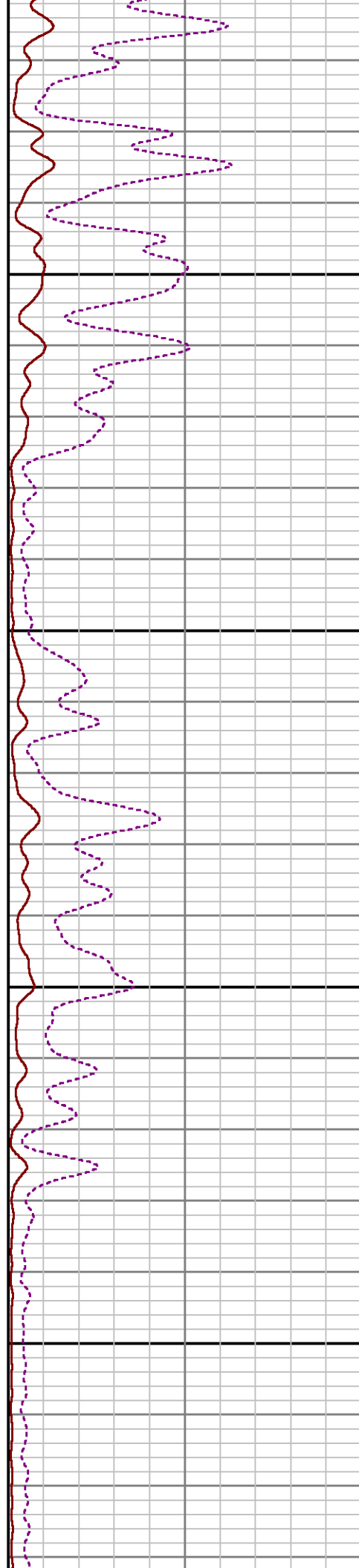
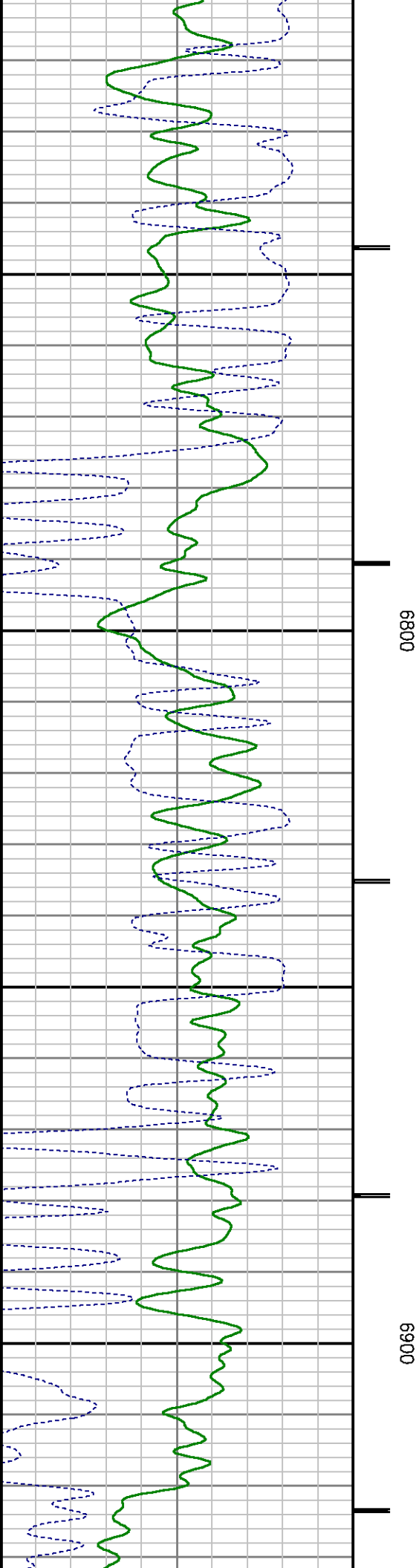


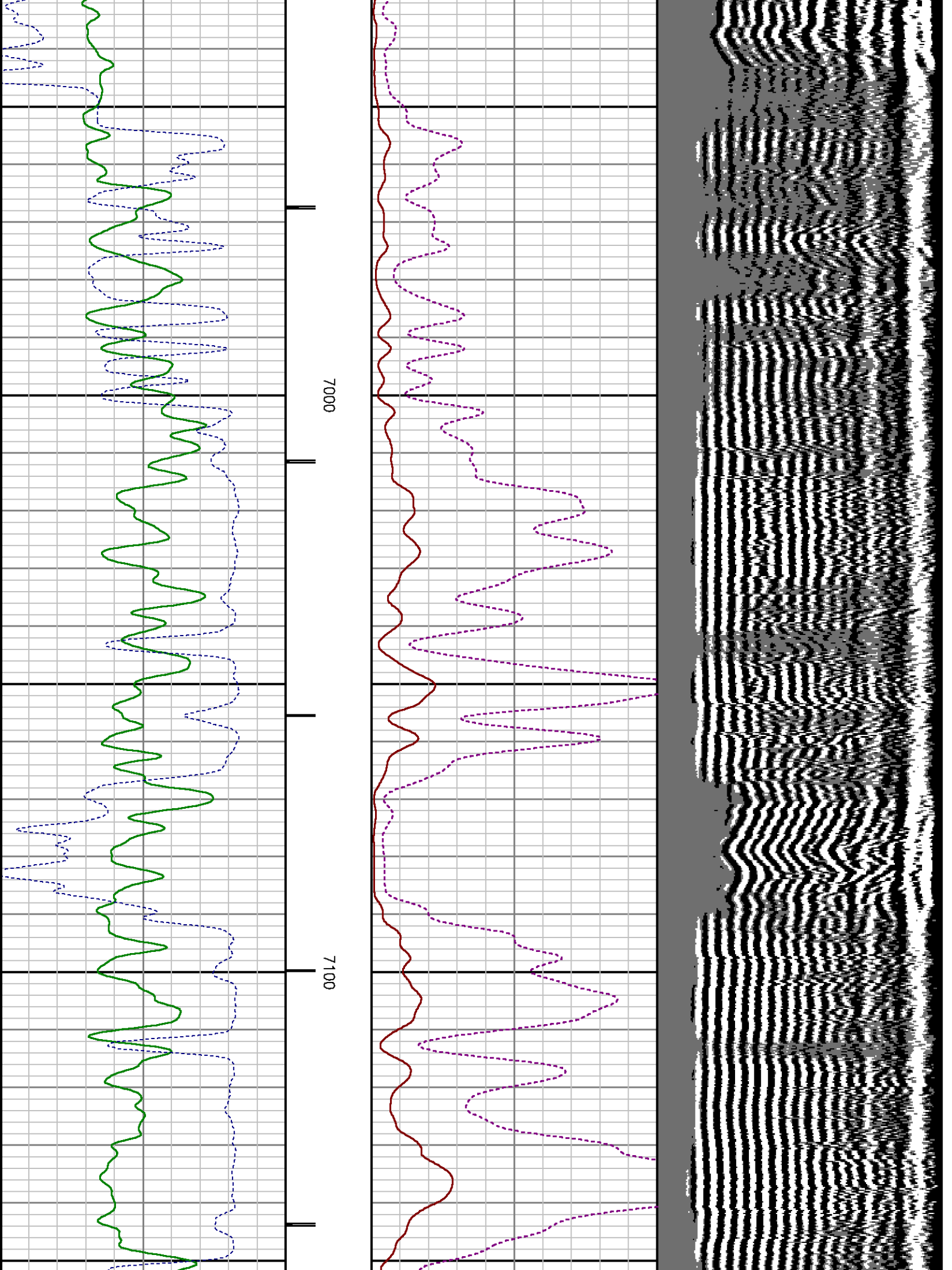


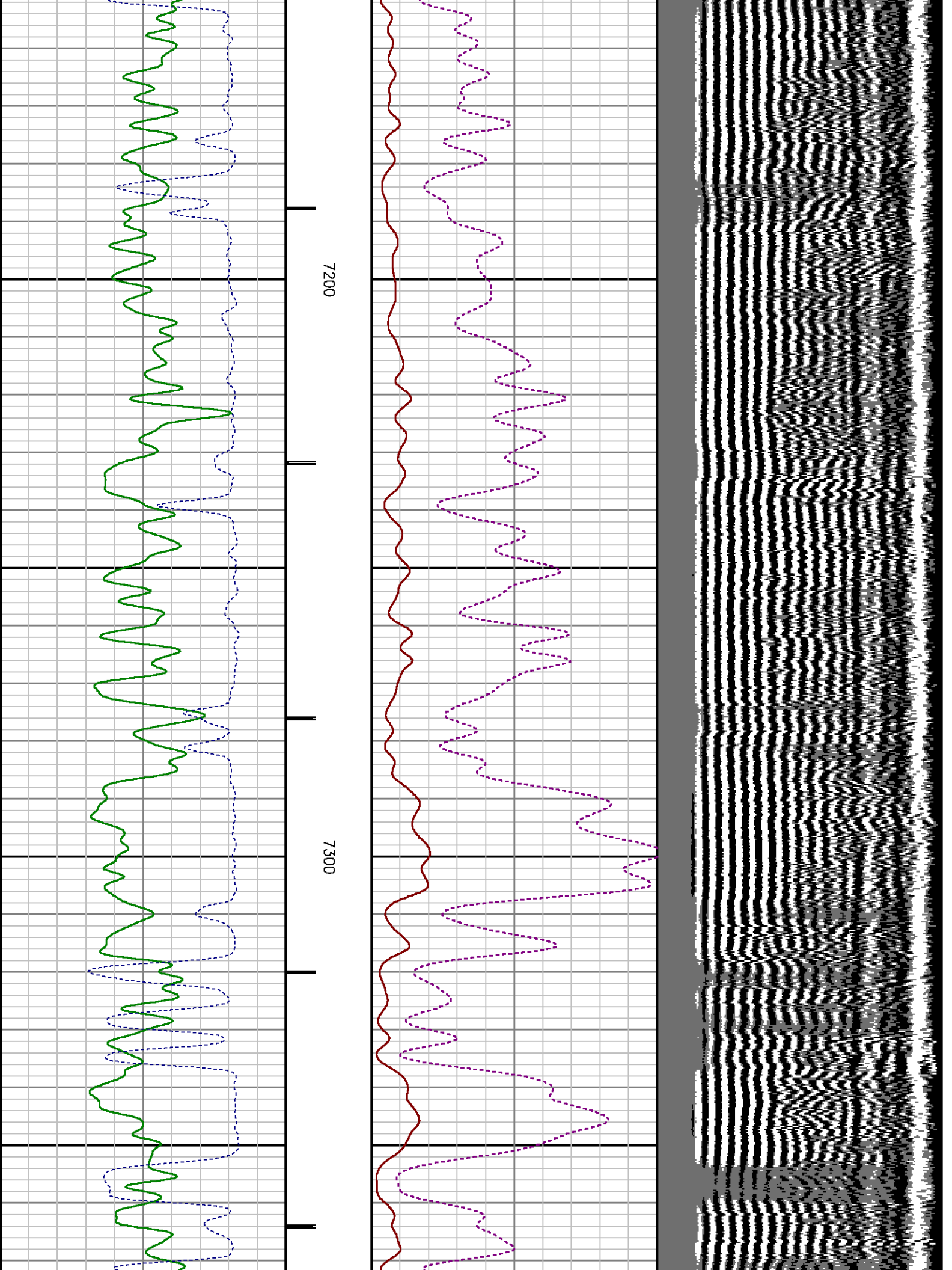


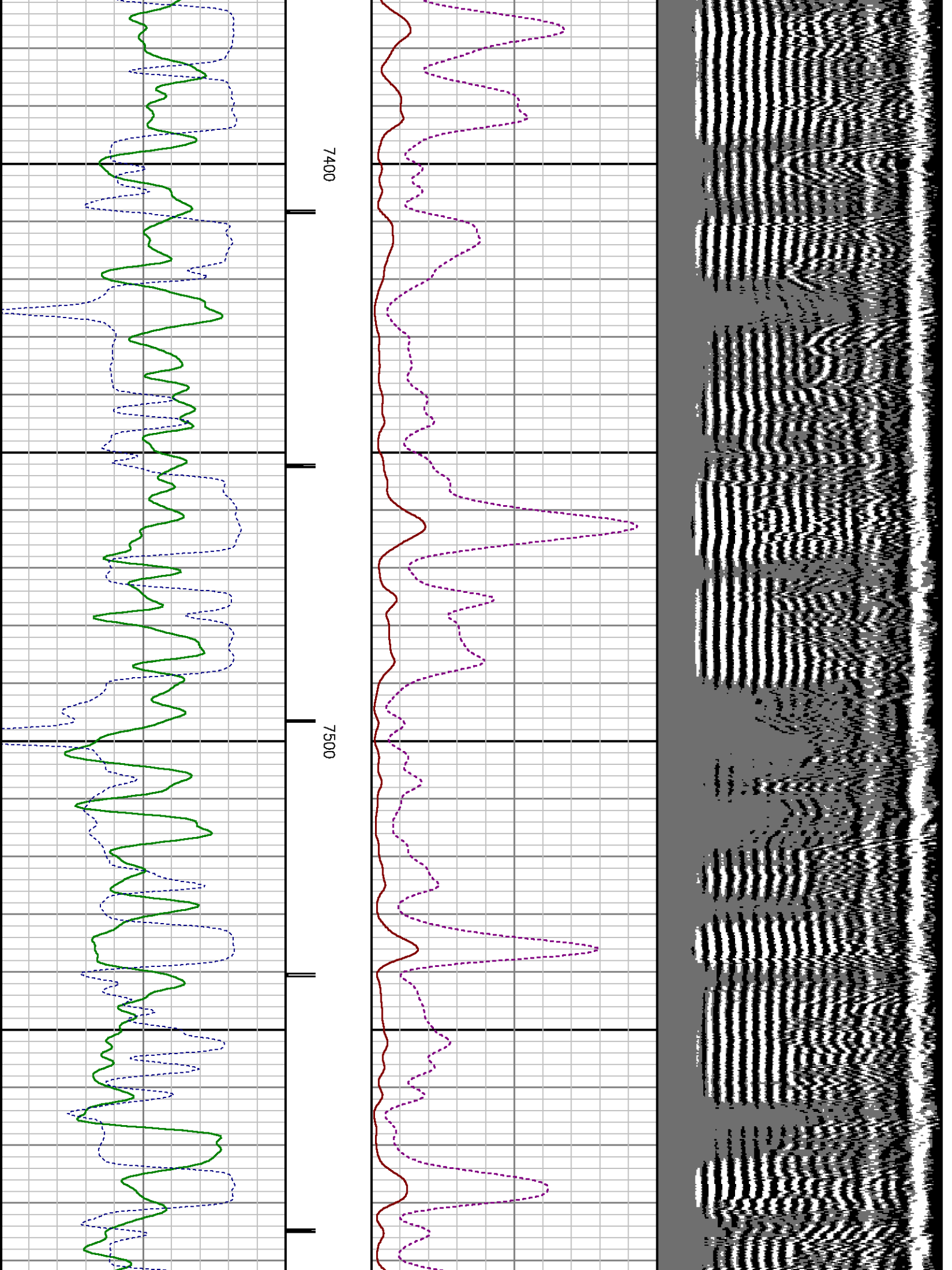




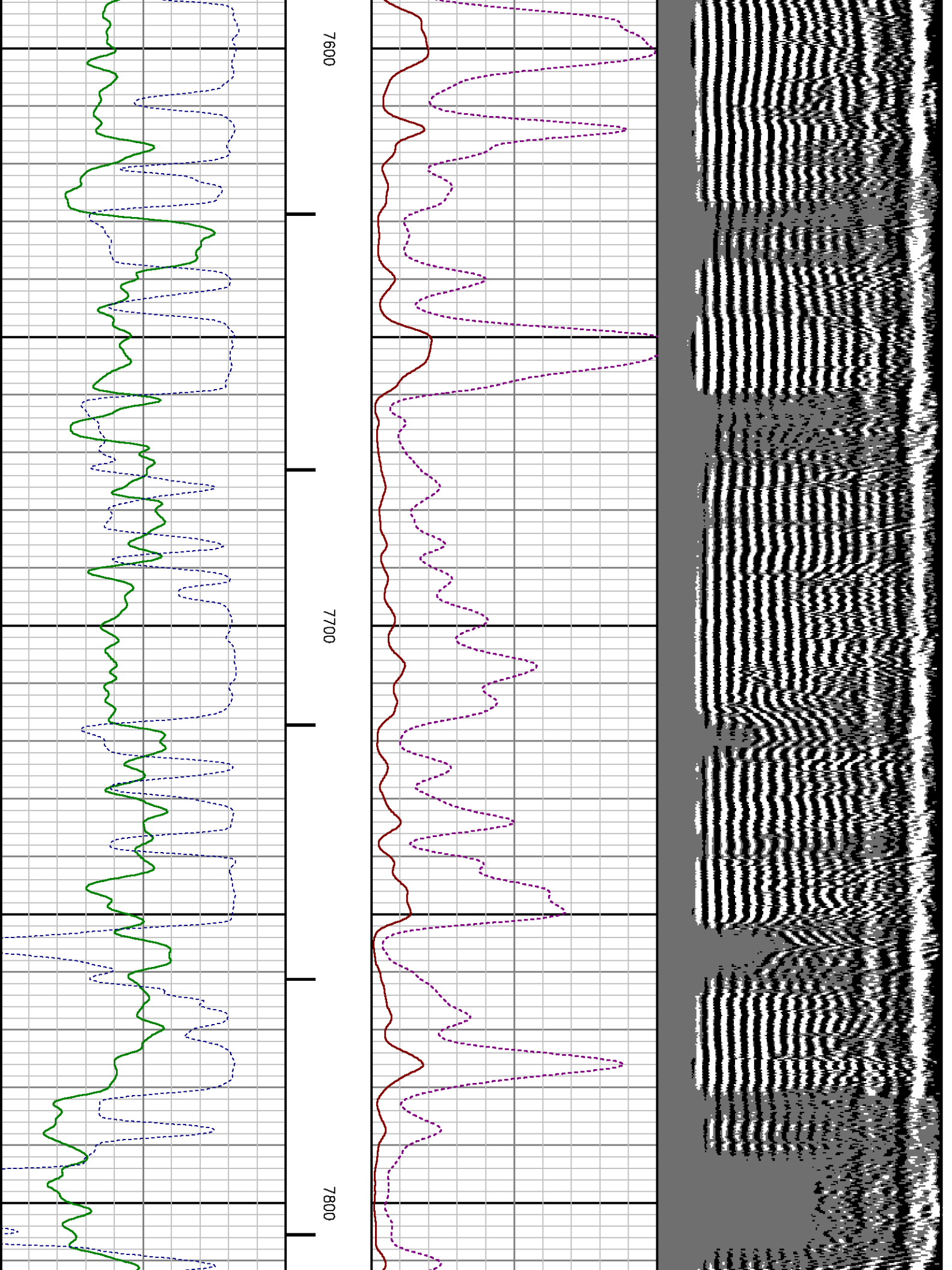


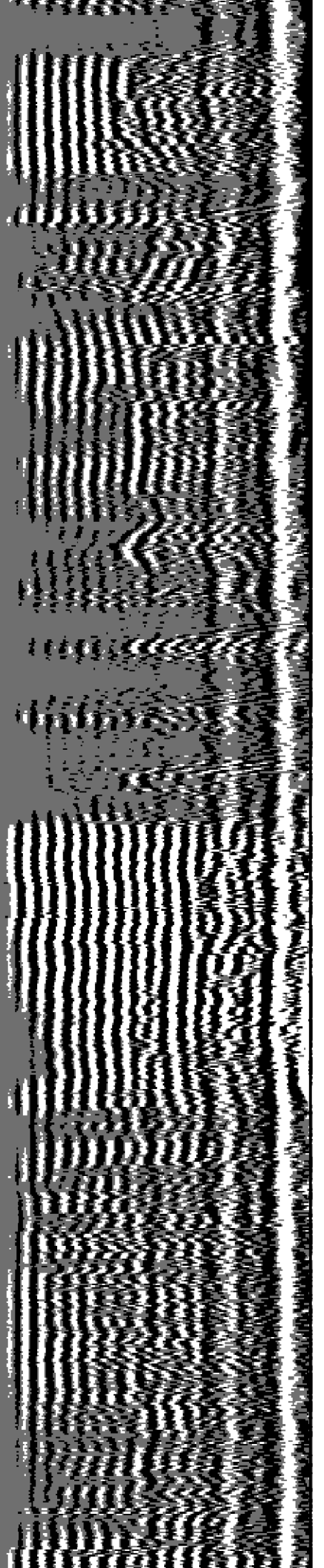
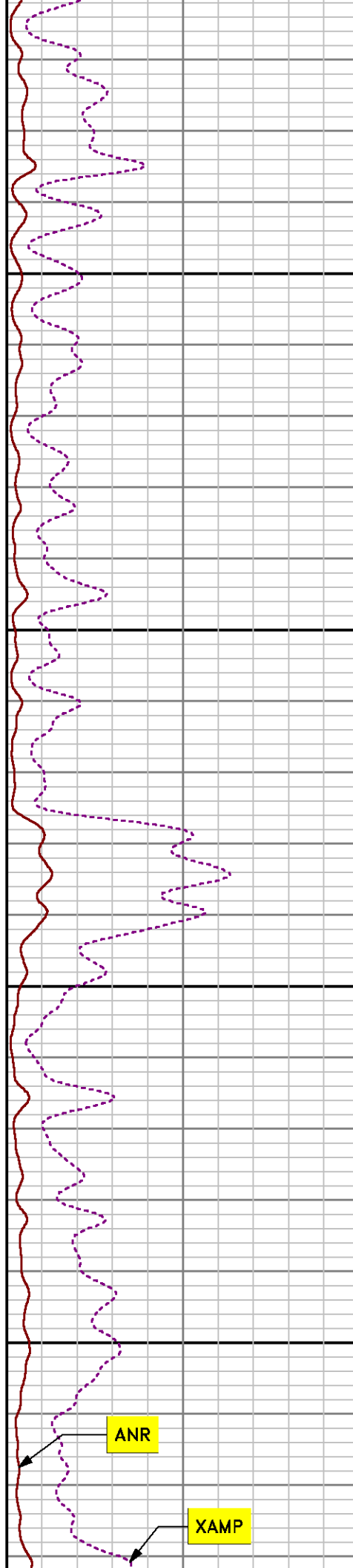
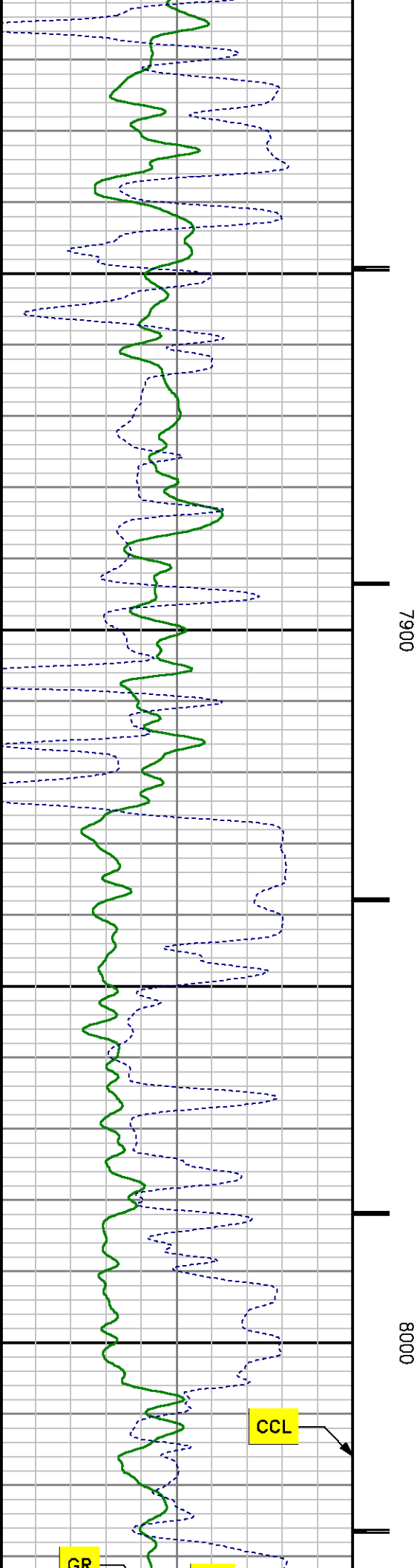


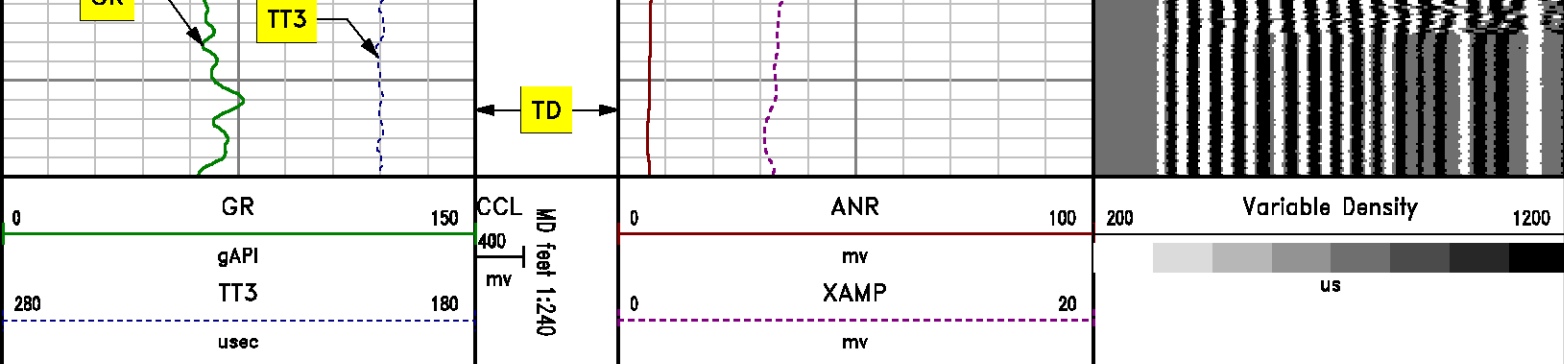












## MAIN LOG SECONDARY PRESENTATION

### 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	306.674	u sec	24.562	8067.500
RAL	Amp Gate Start Near	198.578	u sec	24.562	8067.500
RAL	Amp Gate Start Radial	199.599	u sec	24.562	8067.500
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RAL	FB Thresh Far	10.000	mv	24.562	8067.500
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RAL	FB Thresh Radial	4.000	mv	24.562	8067.500
RAL	Fluid Travel Time	200.000	u sec/ft	24.562	8067.500

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4



1426XA -10.040  
1355XA -5.620  
1355XA -1.500  
1355XA 0.000

AR5	AR6	AR7	AR8	CHV	FPR2
FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
TEMP					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

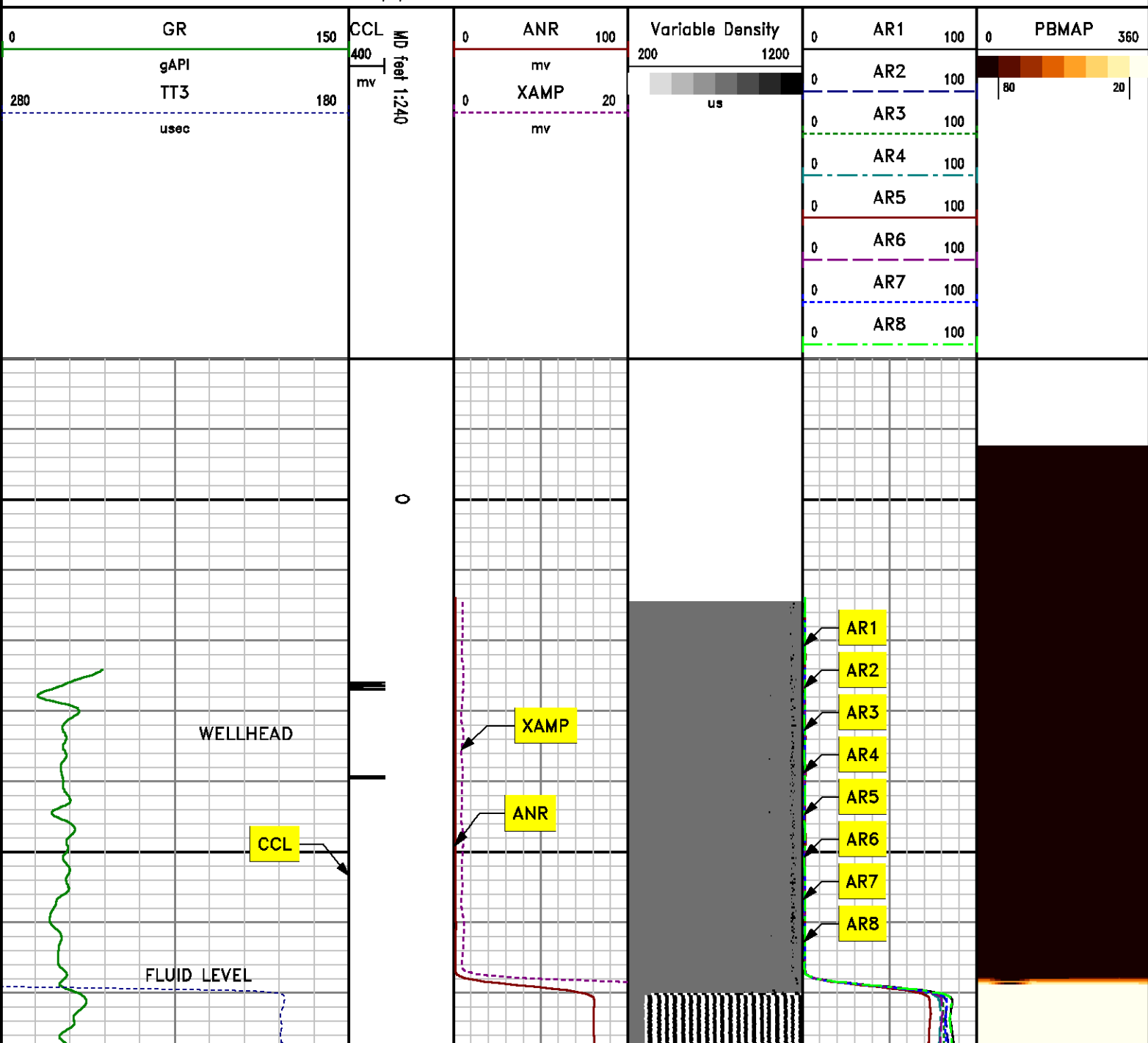
Well : DUGGAN RWF 424-29

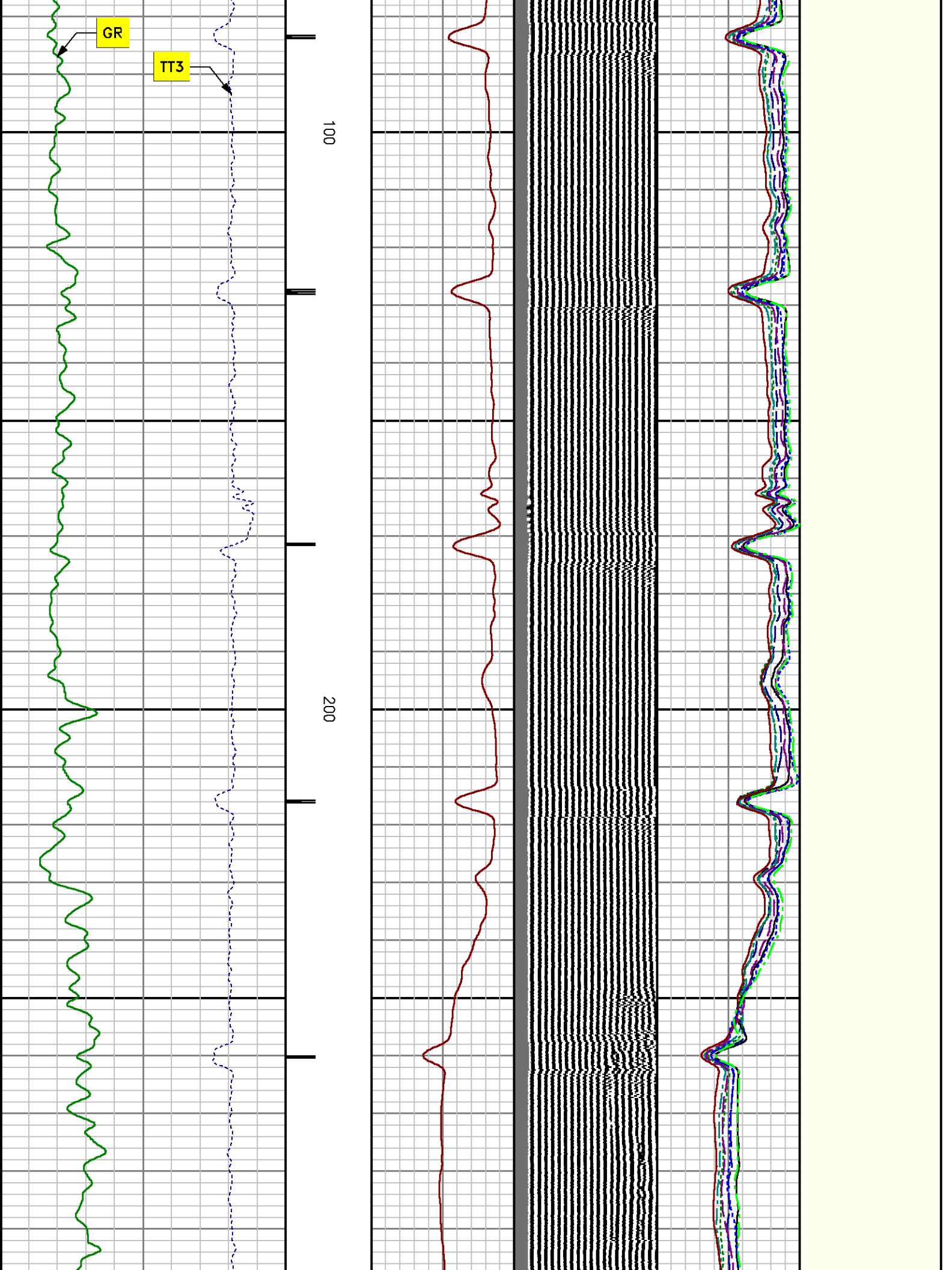
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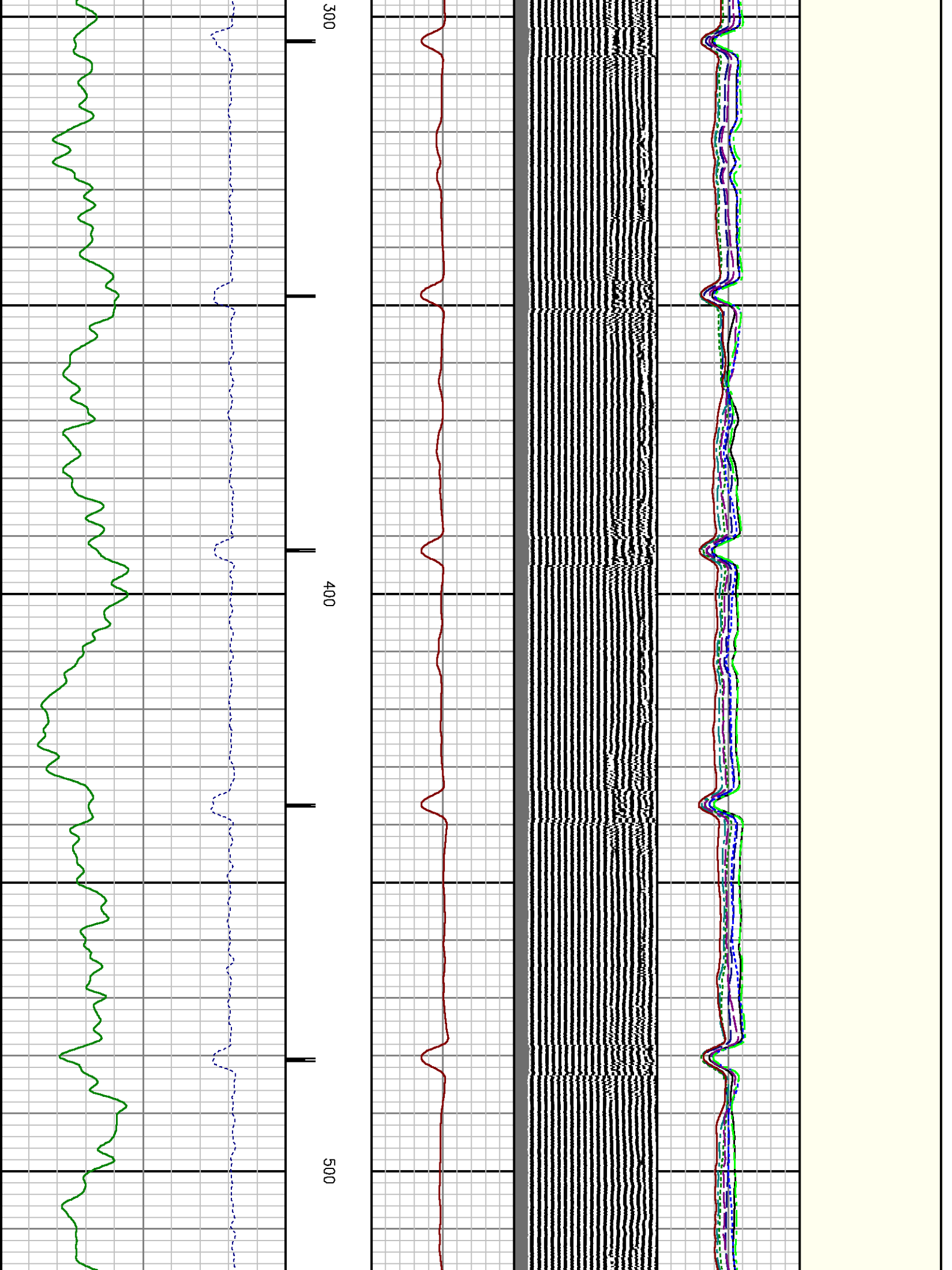
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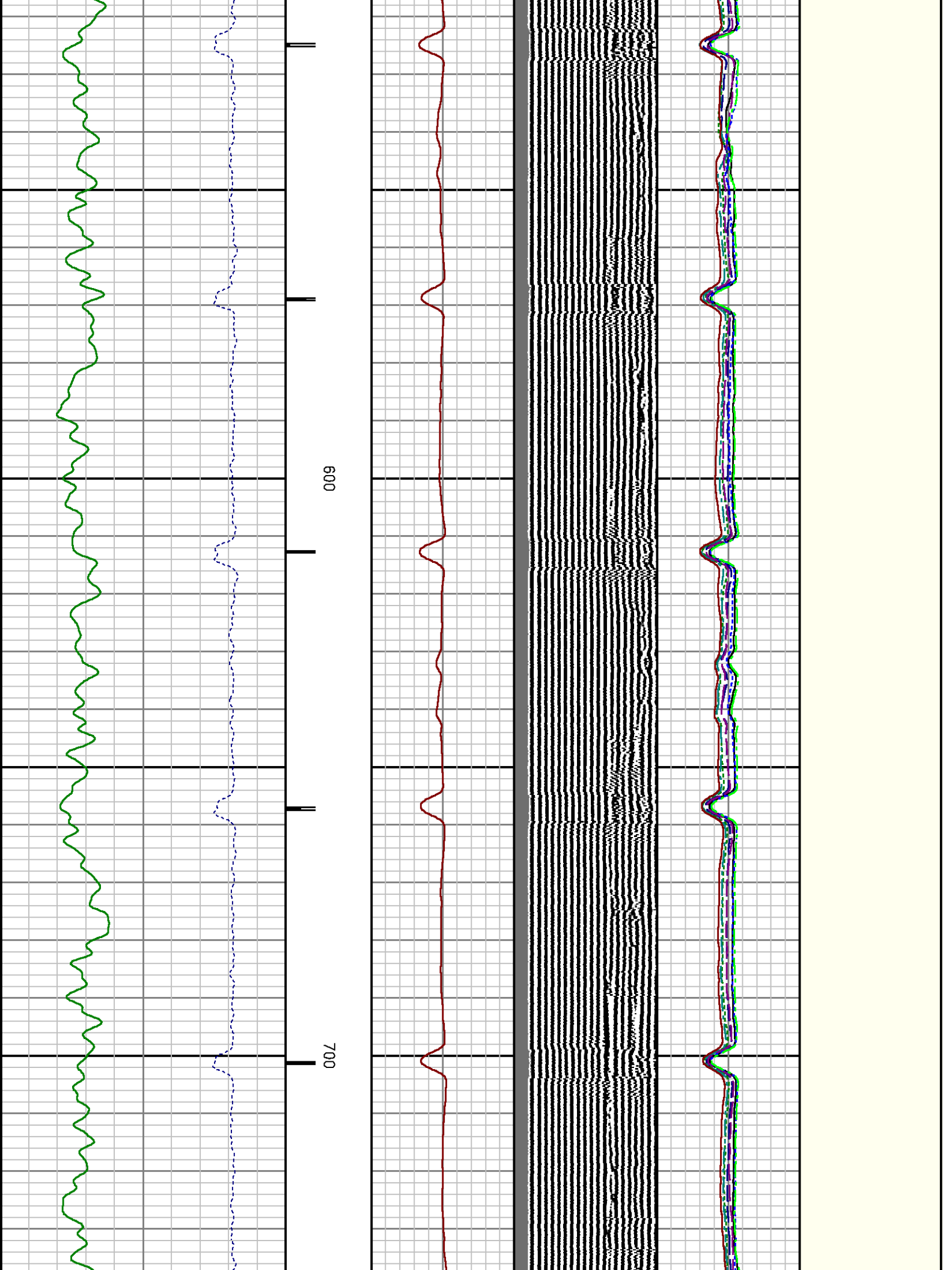
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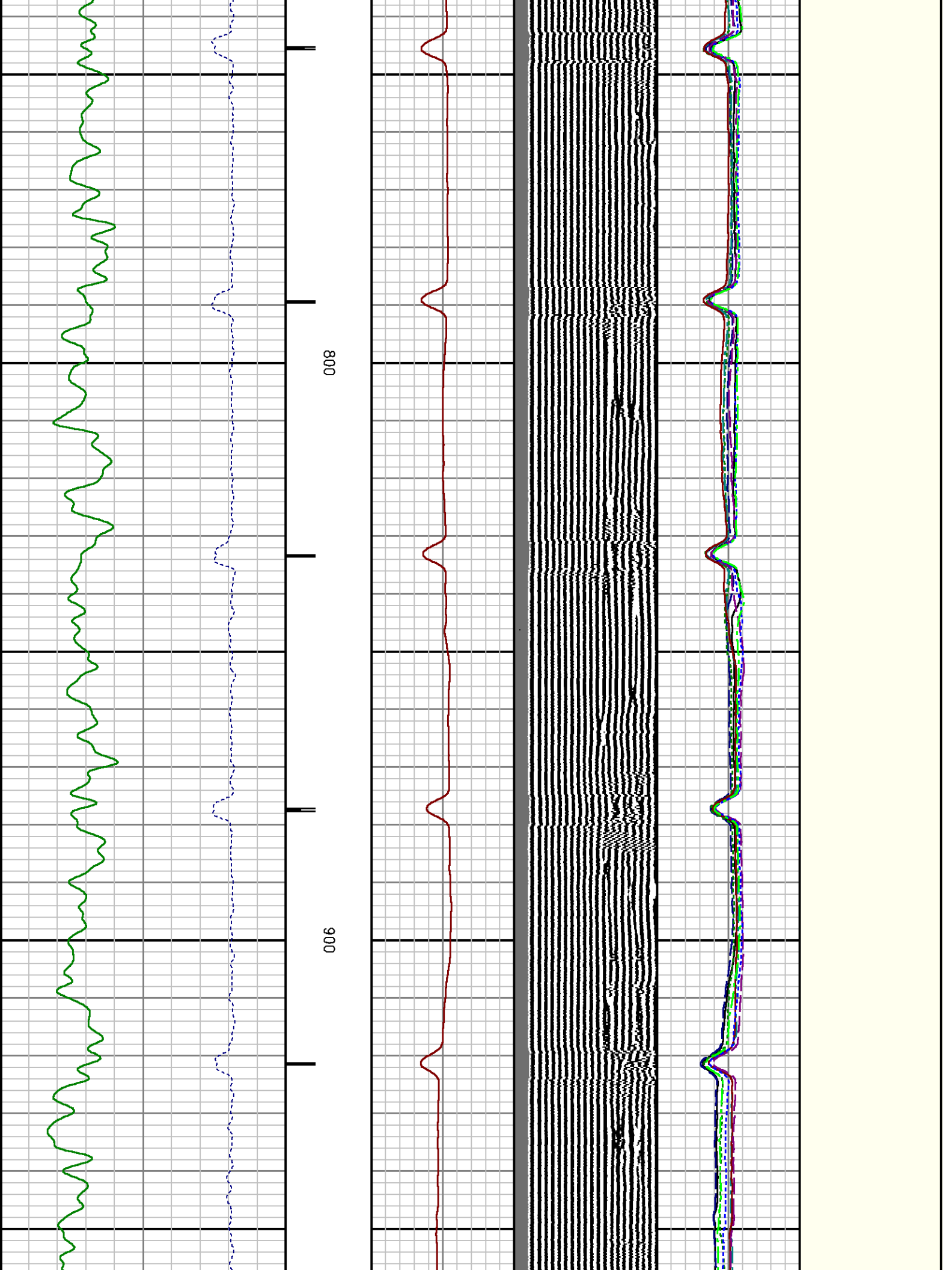
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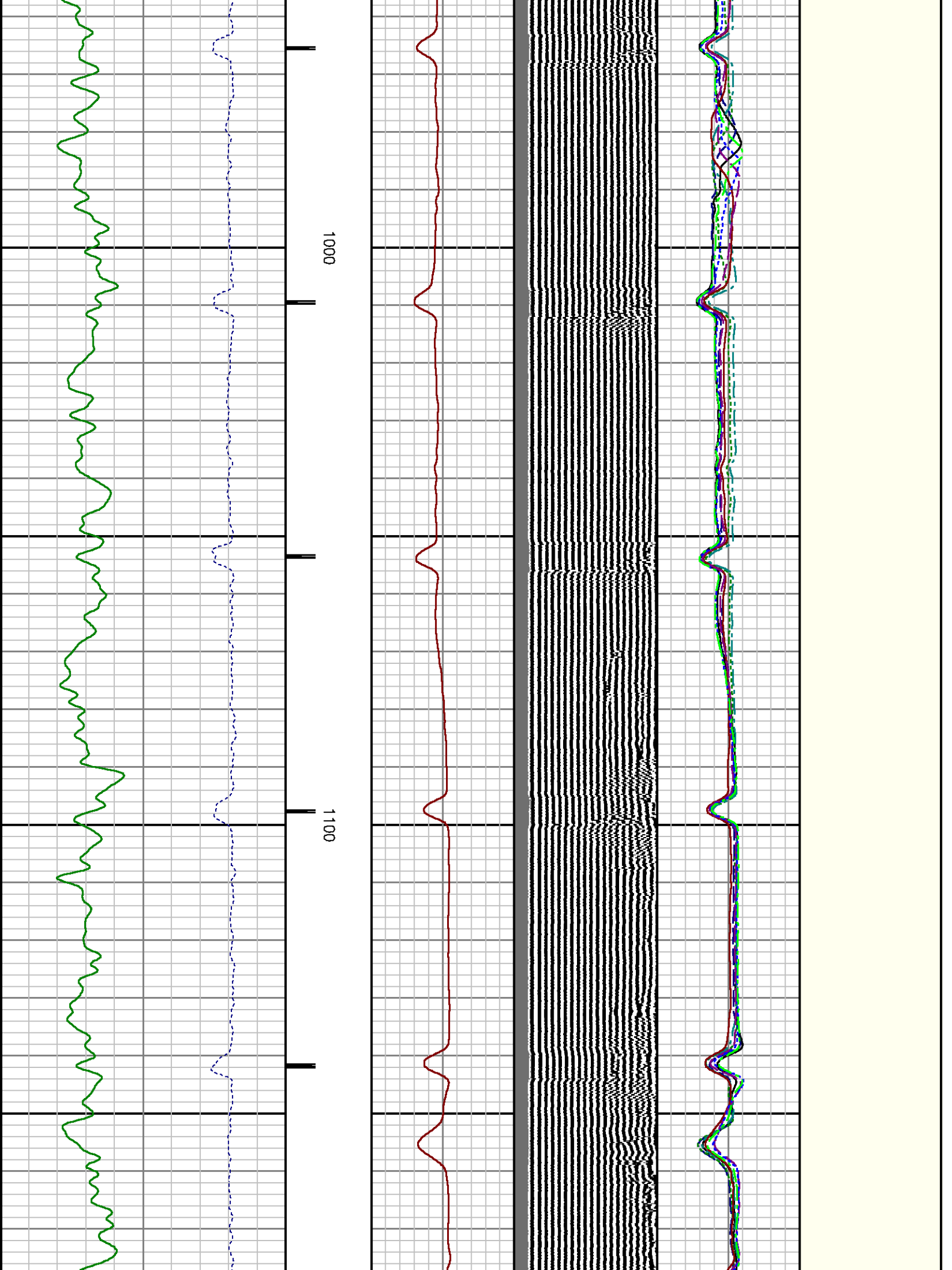




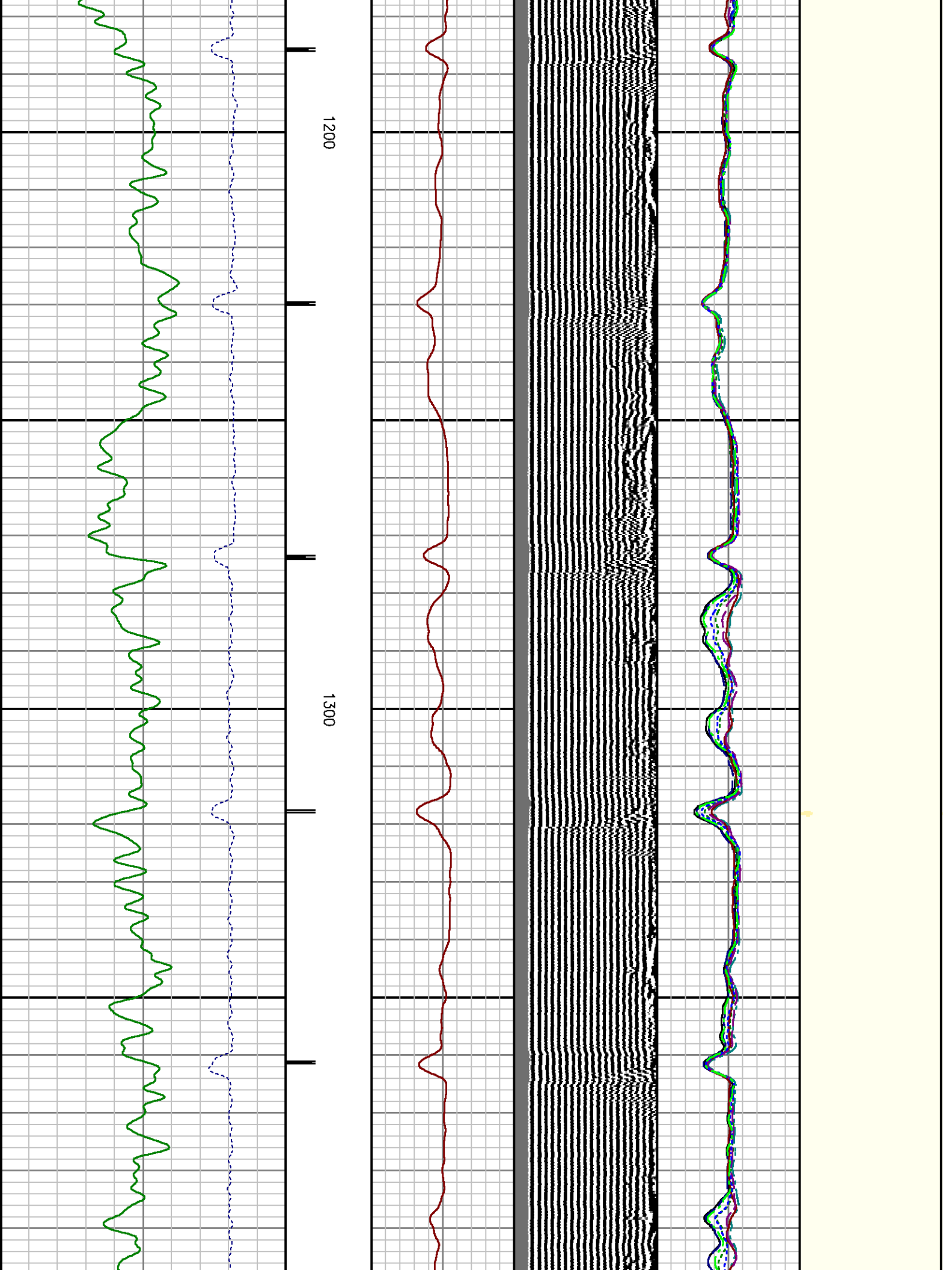


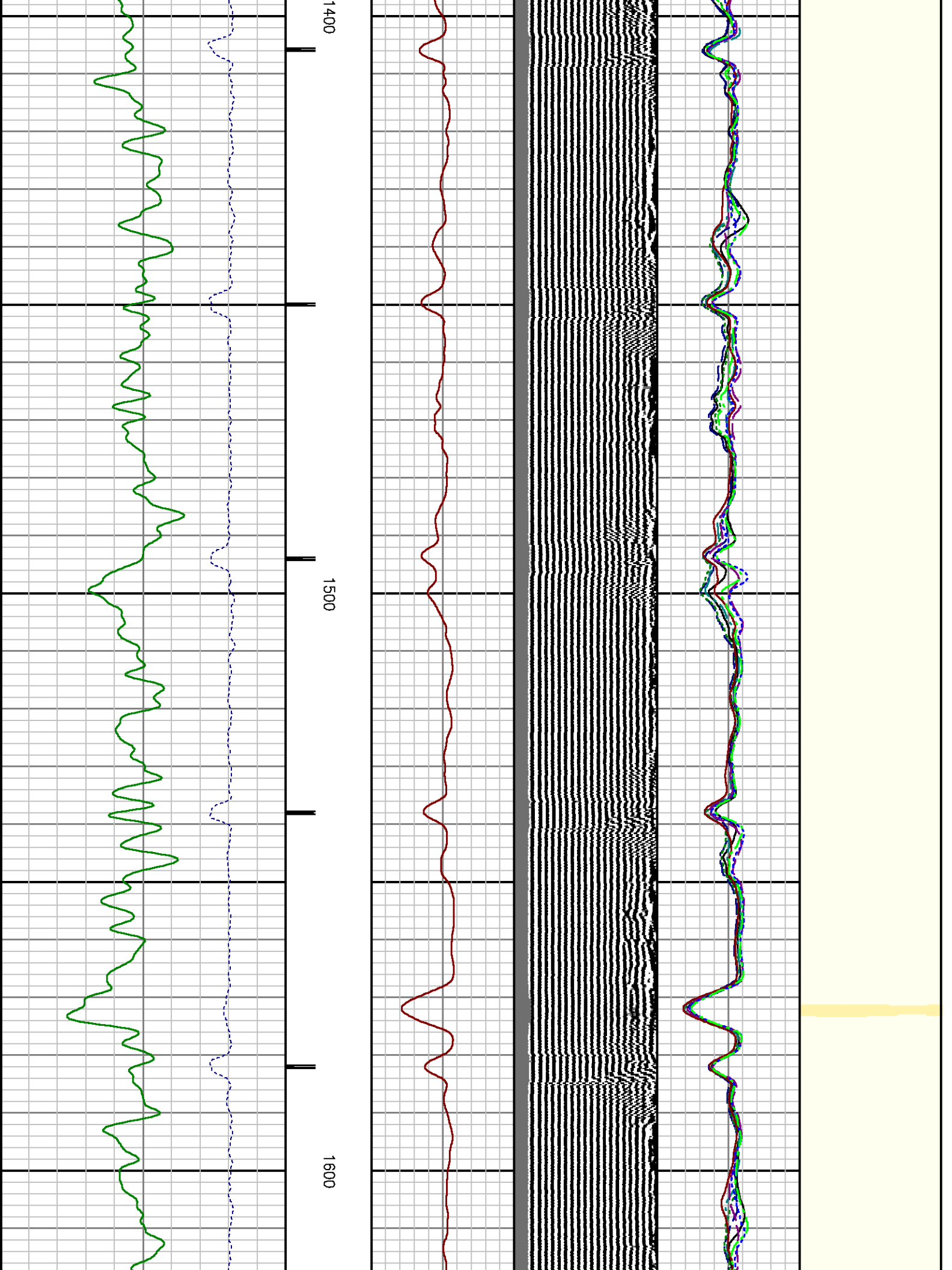


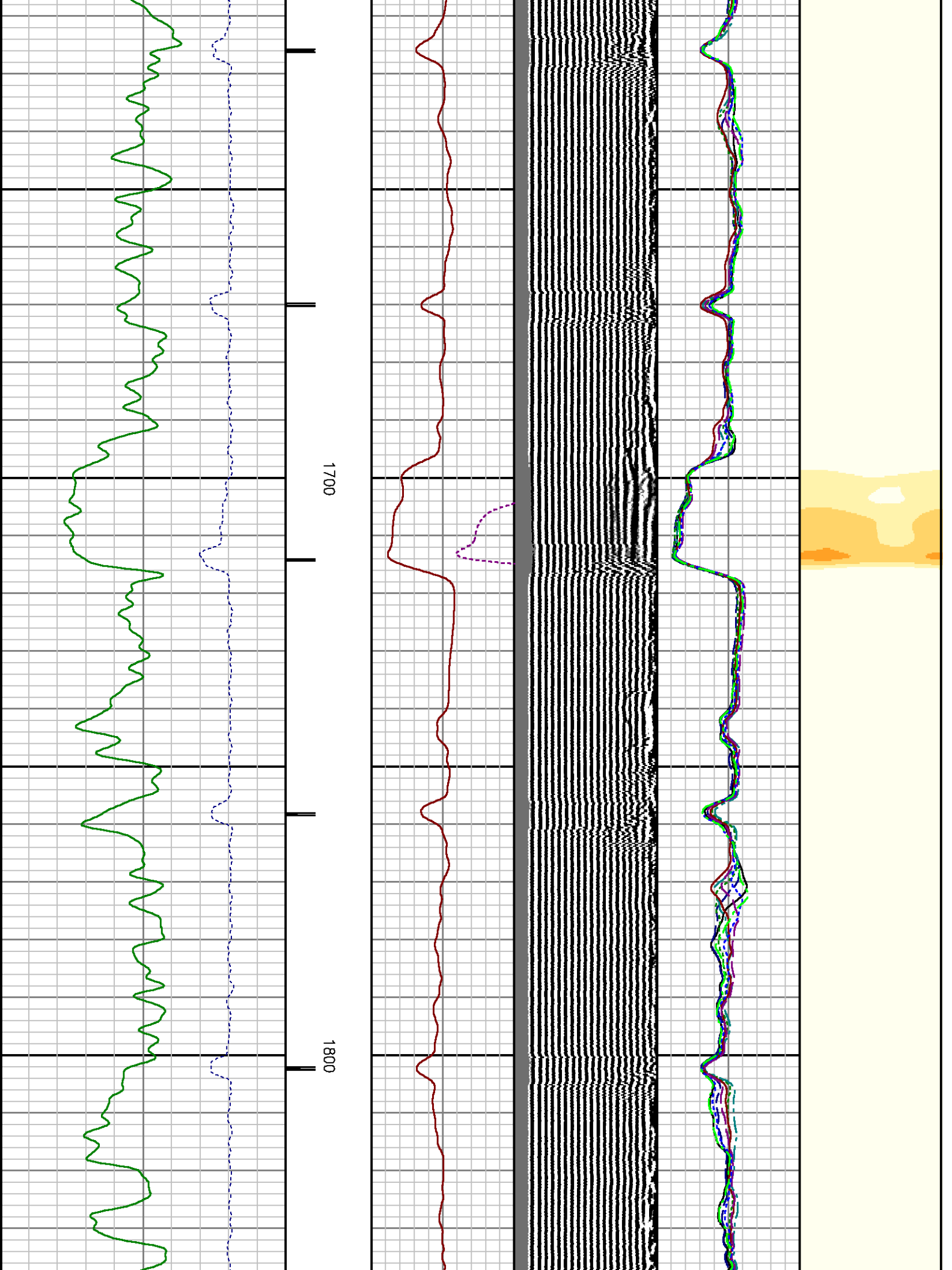


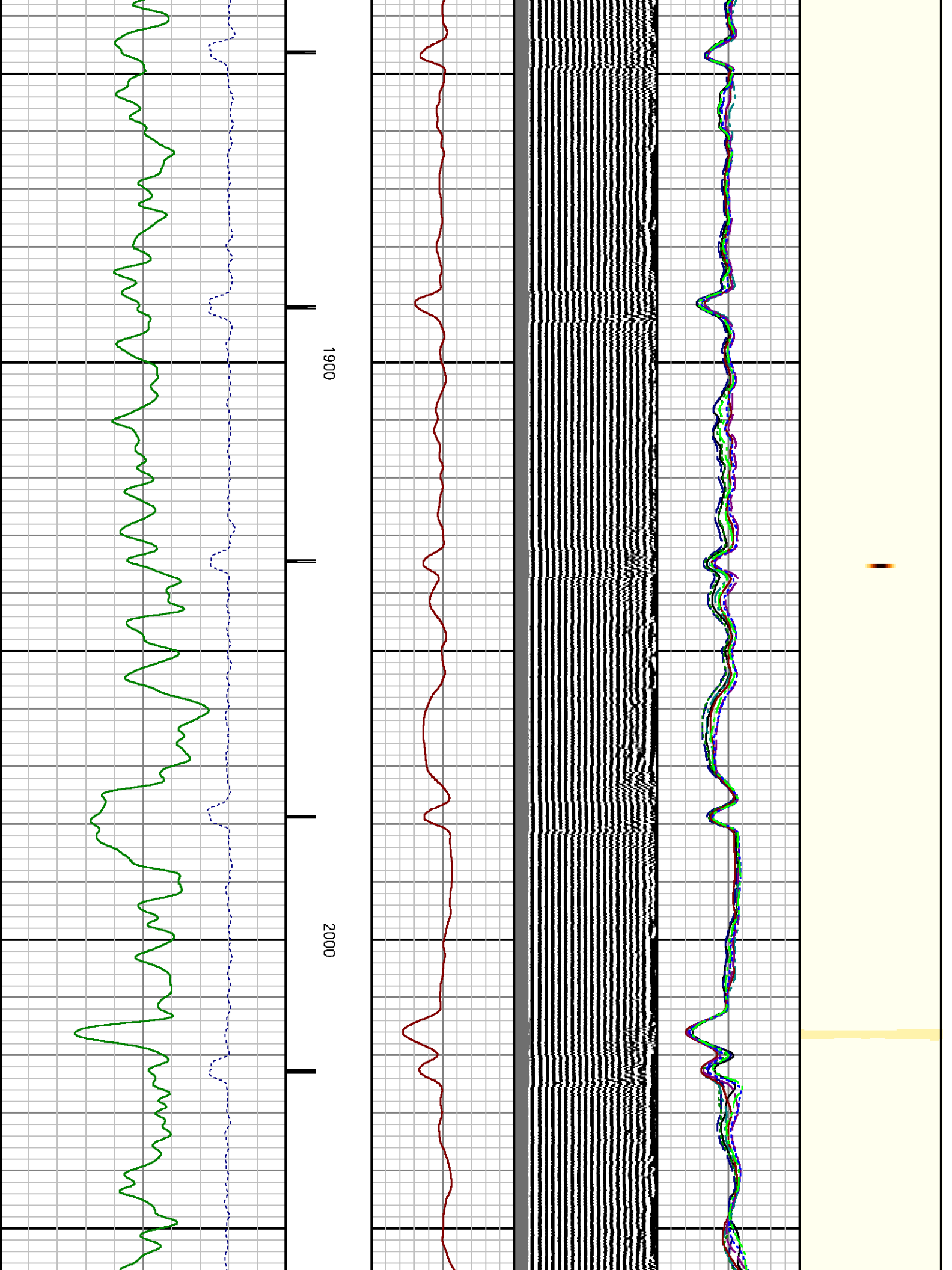


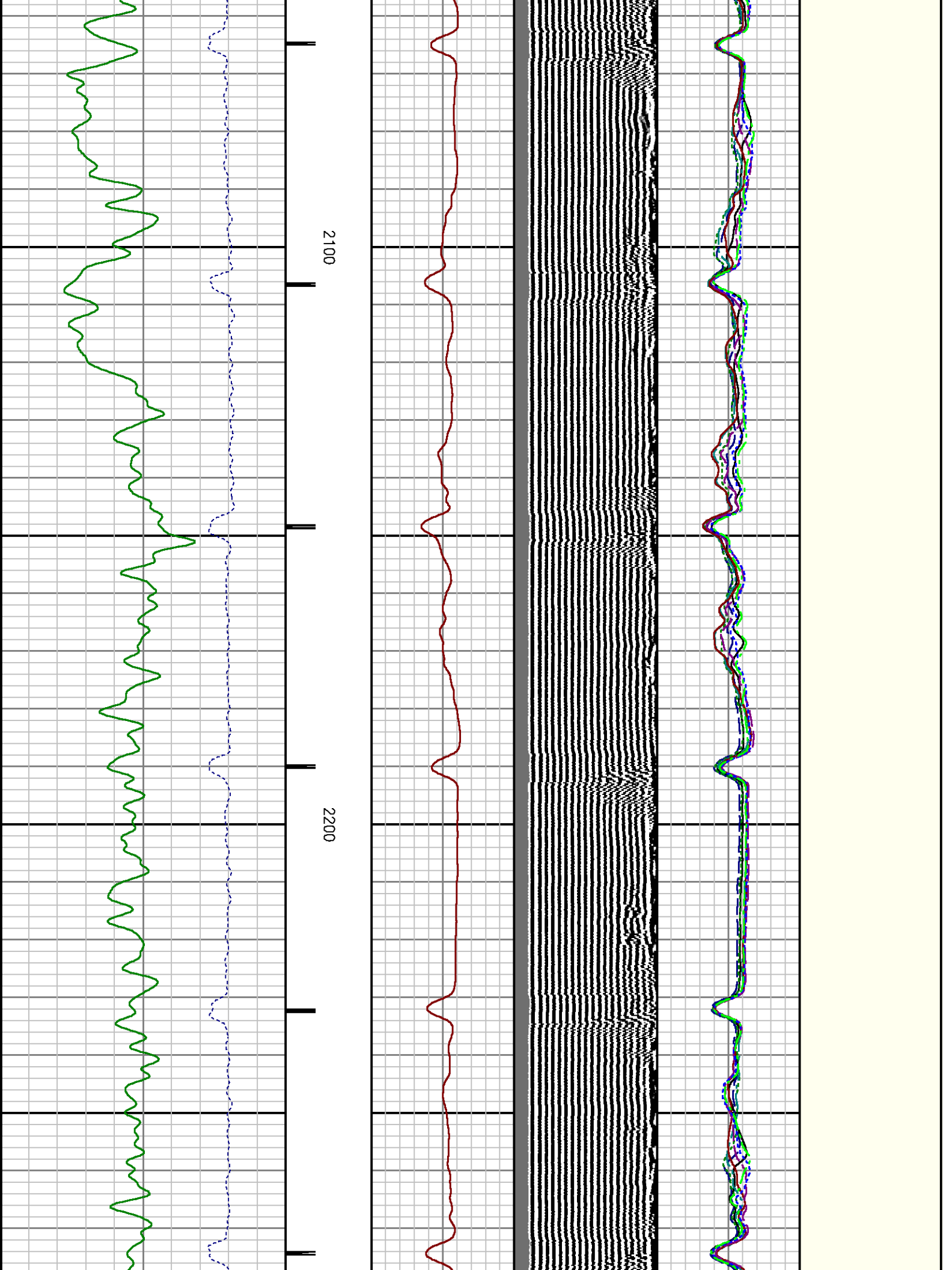


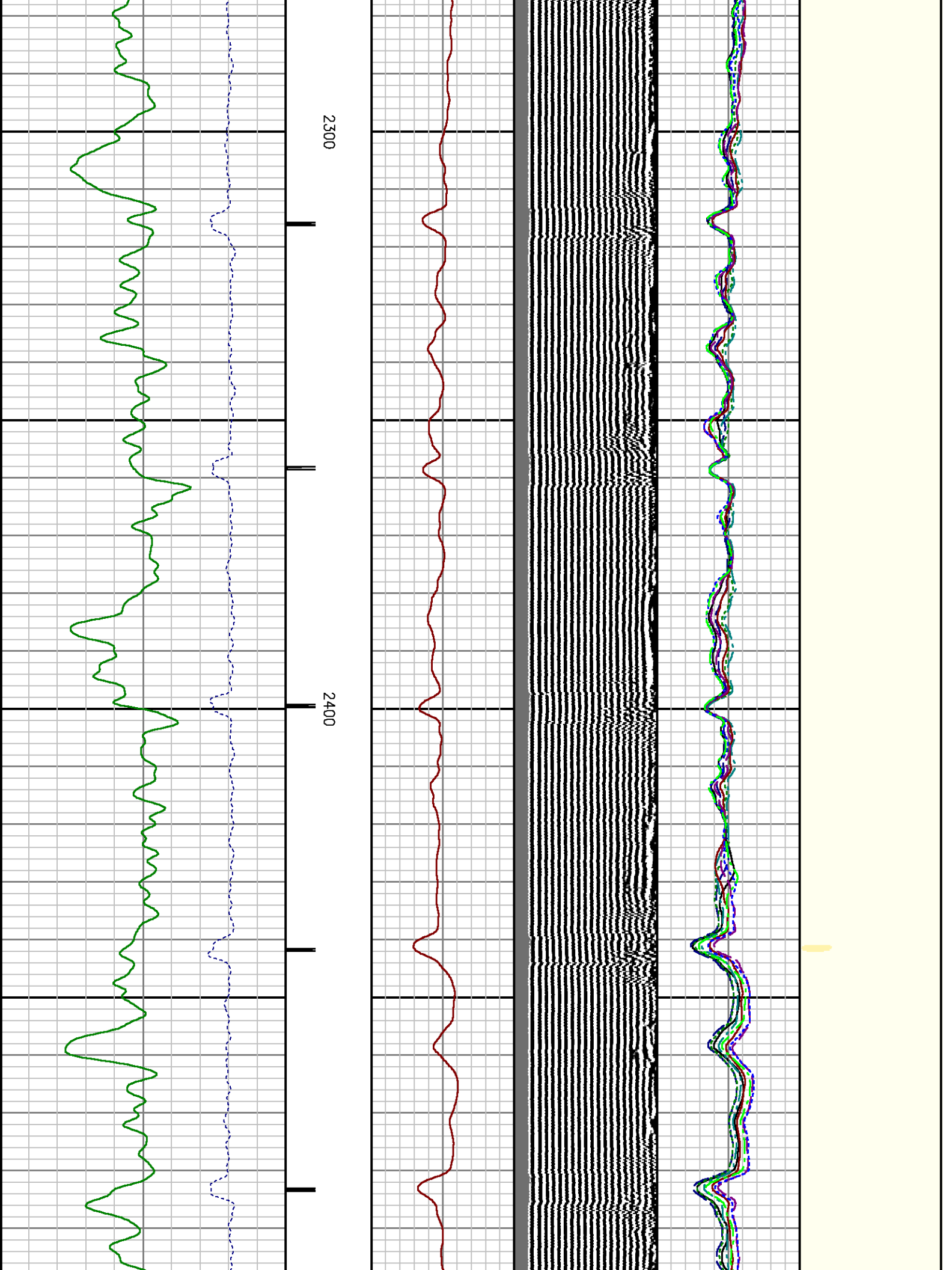




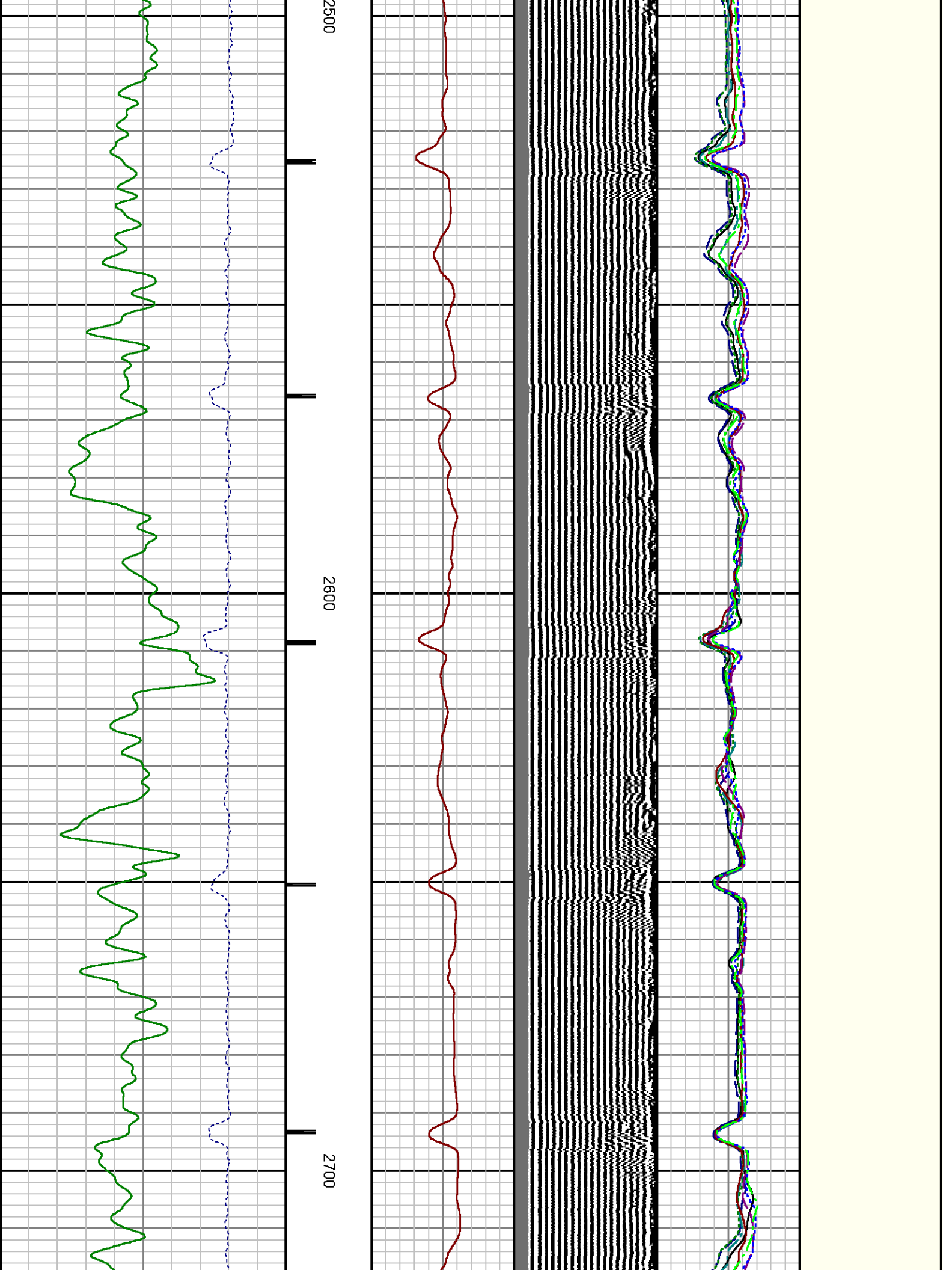


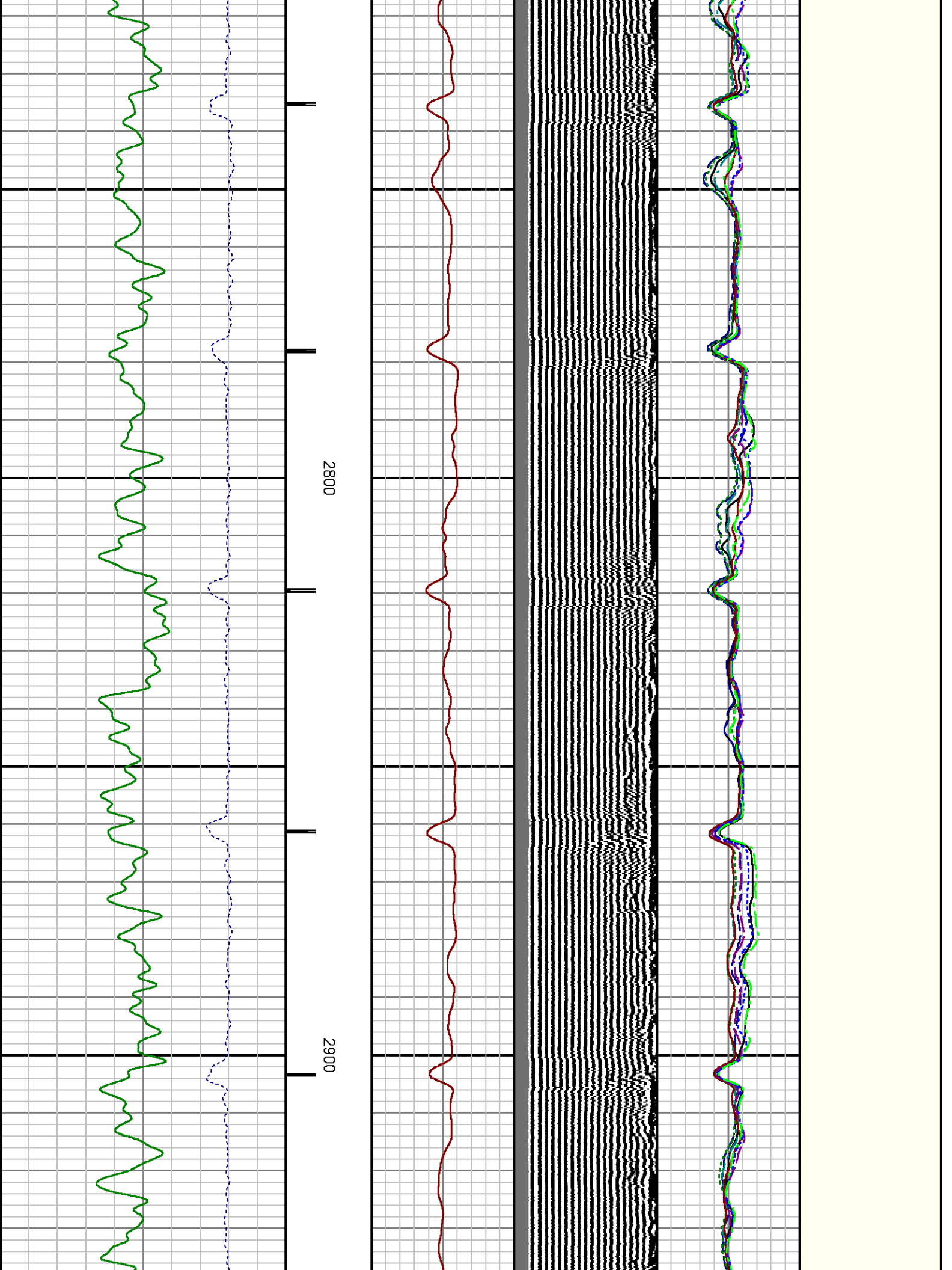


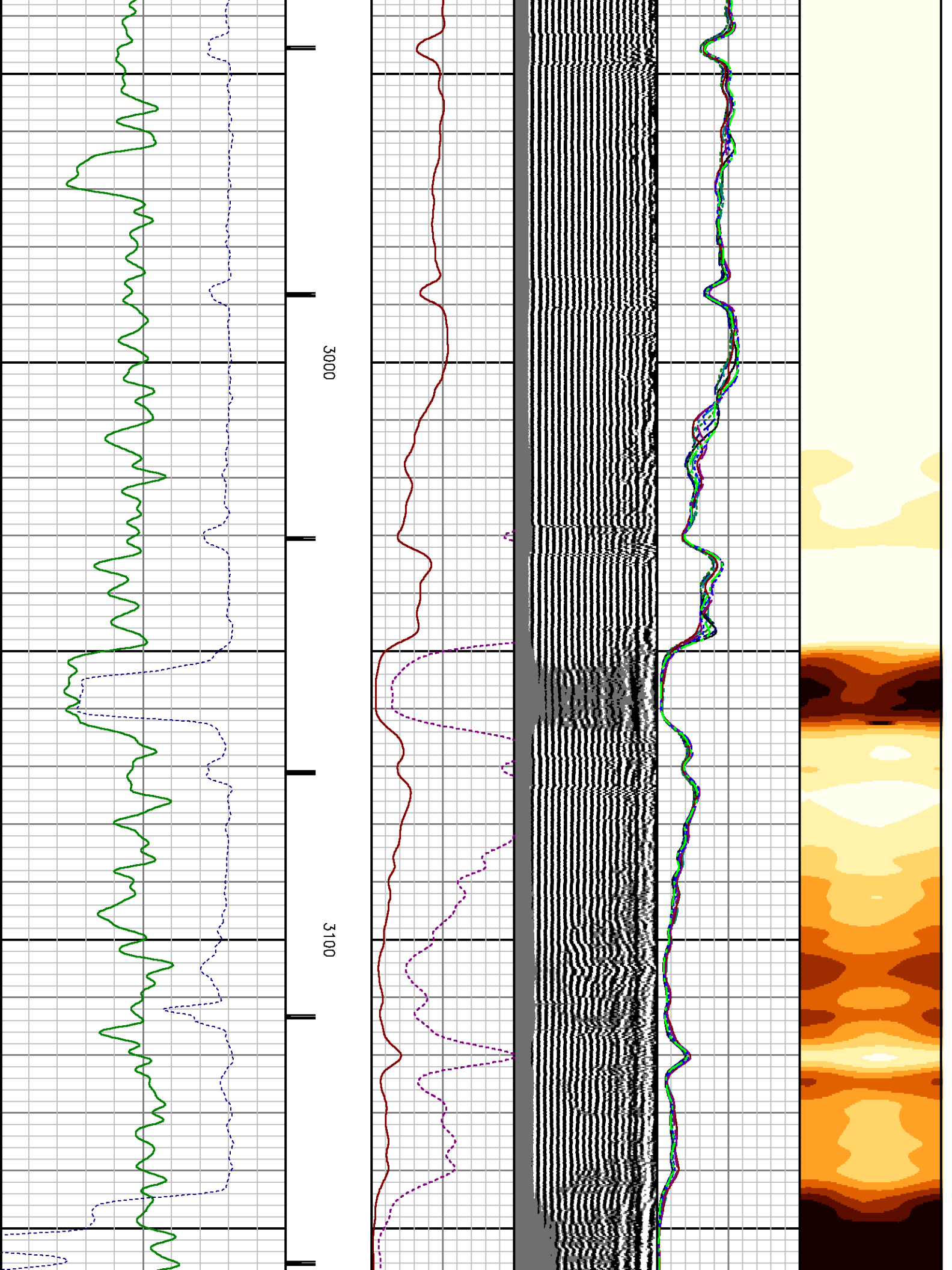


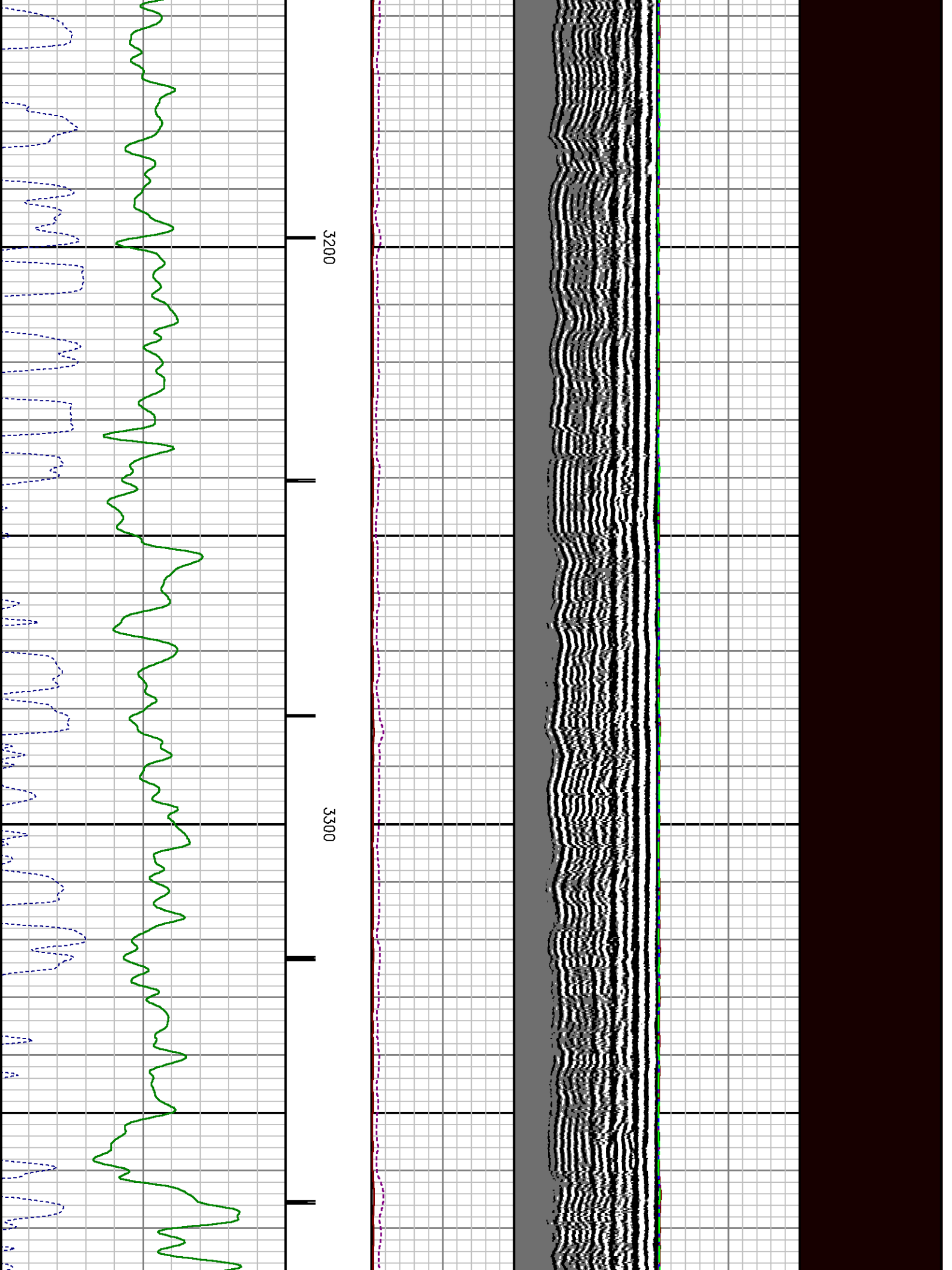


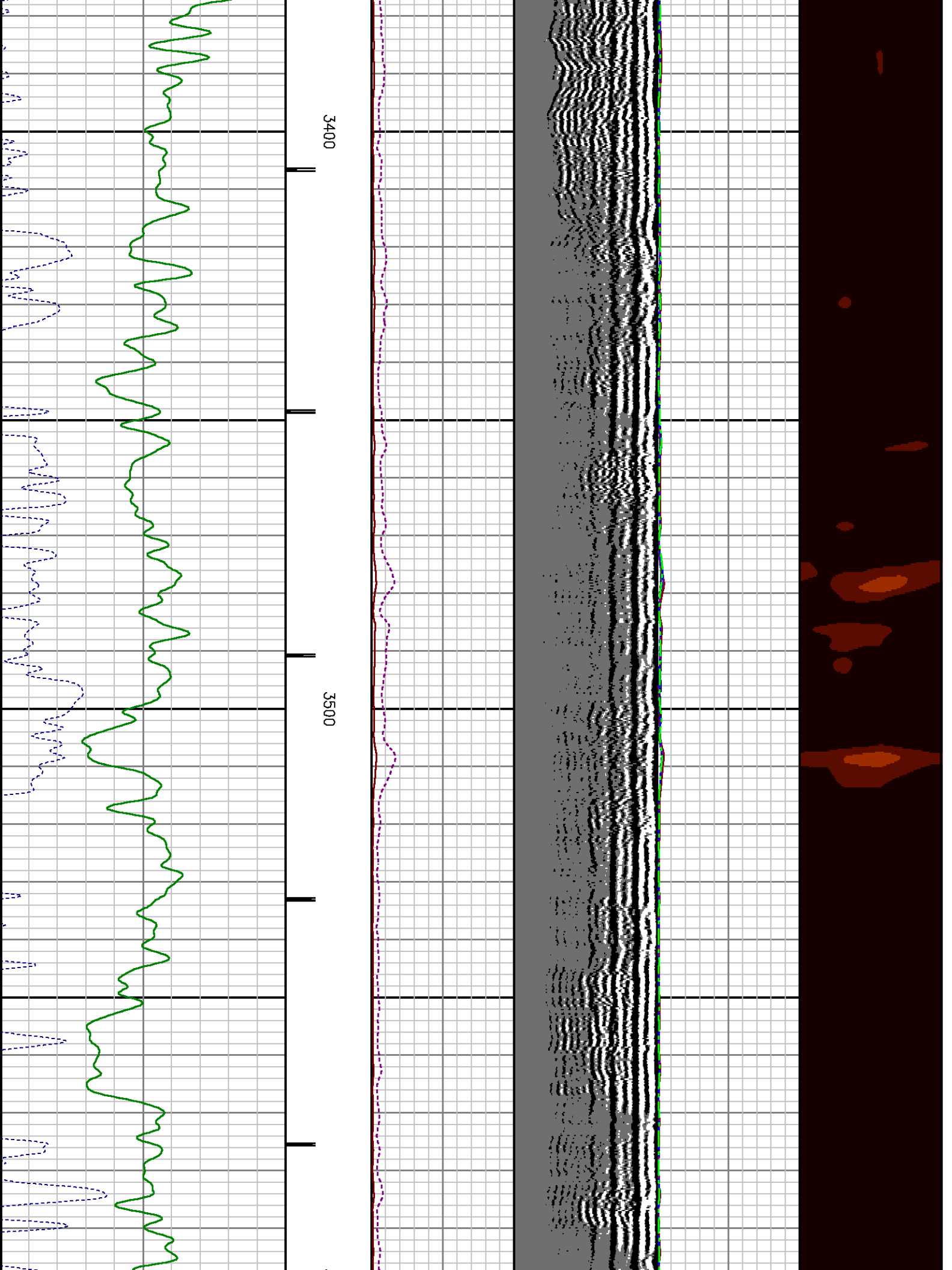


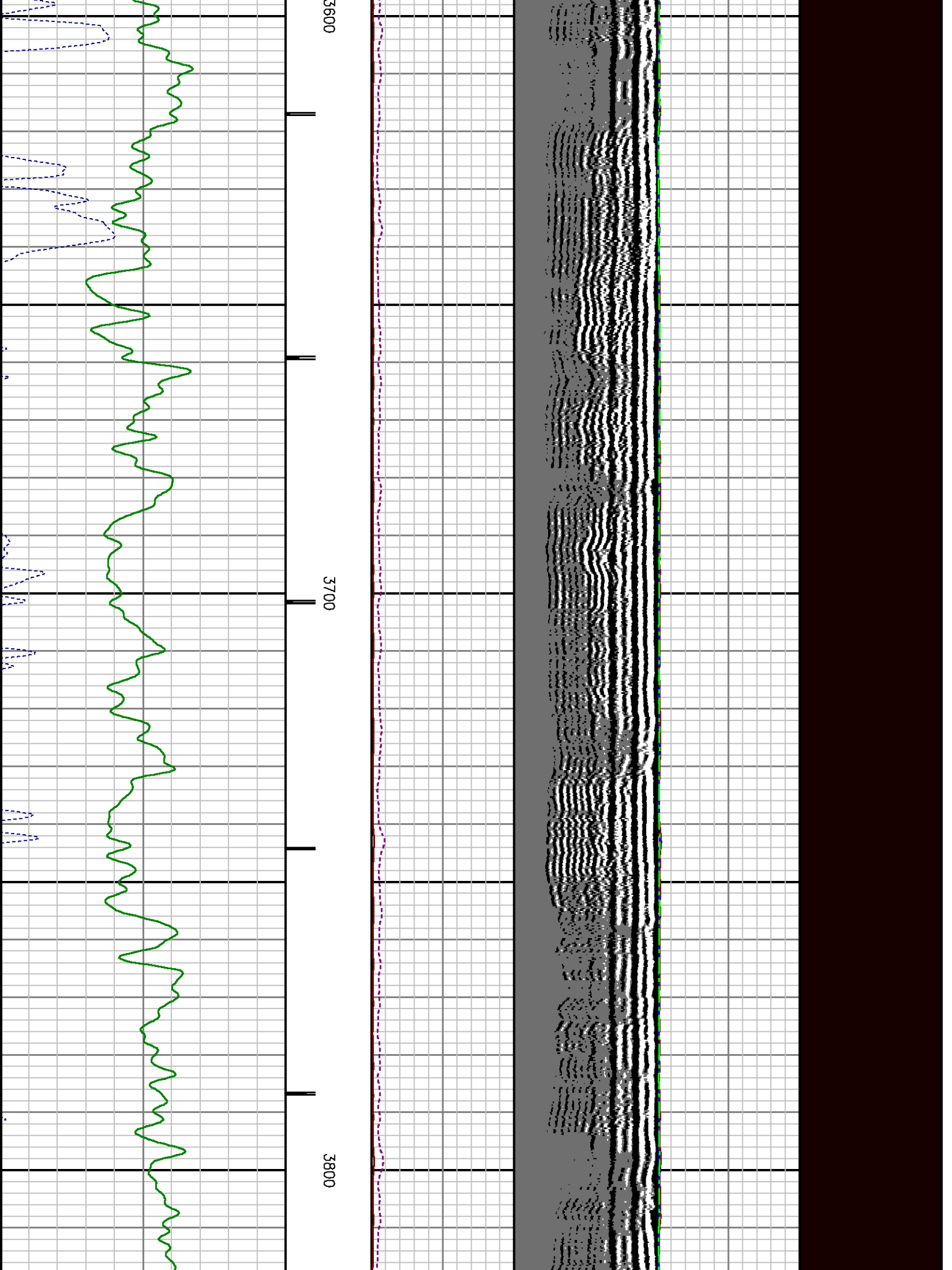




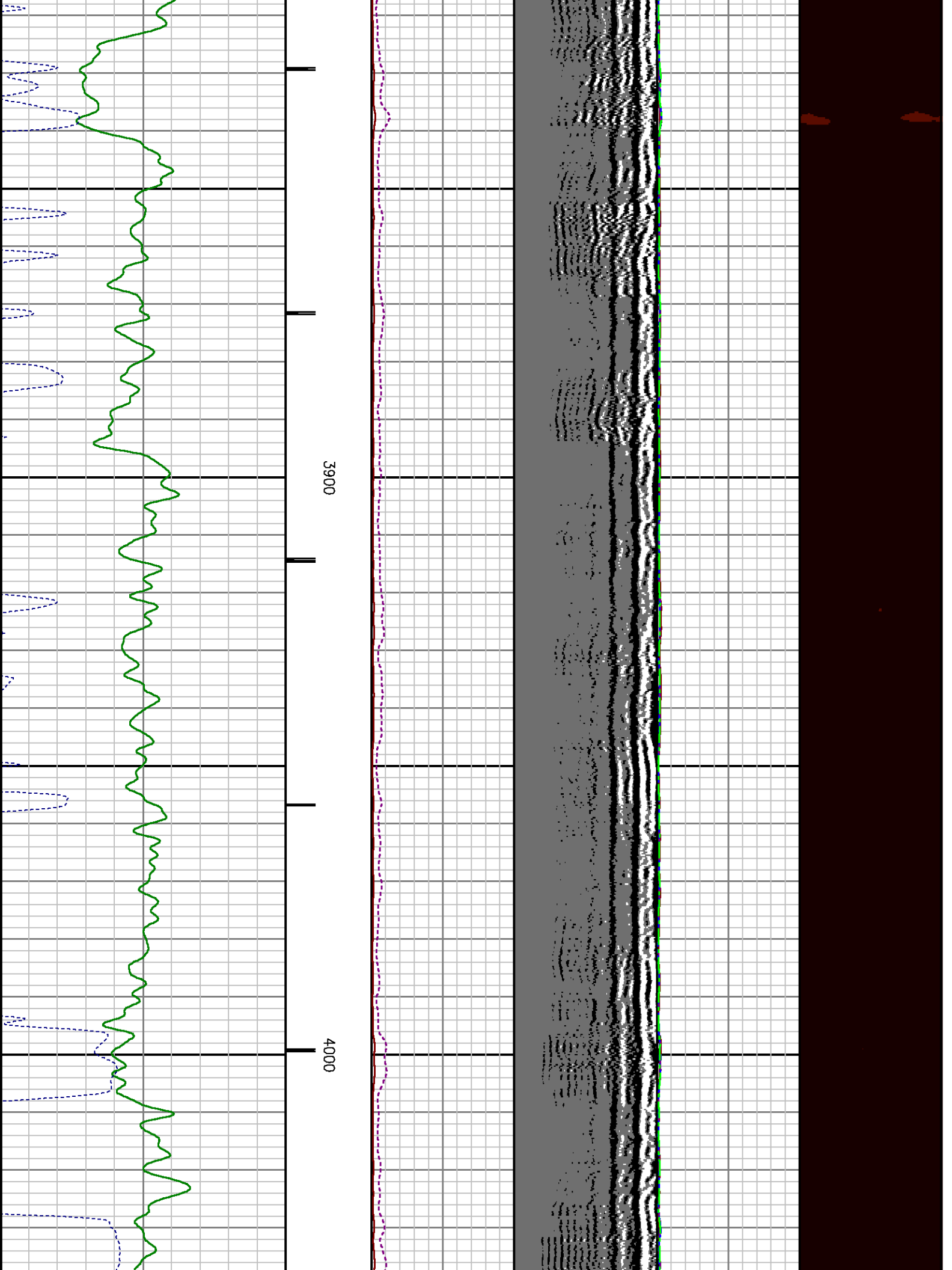


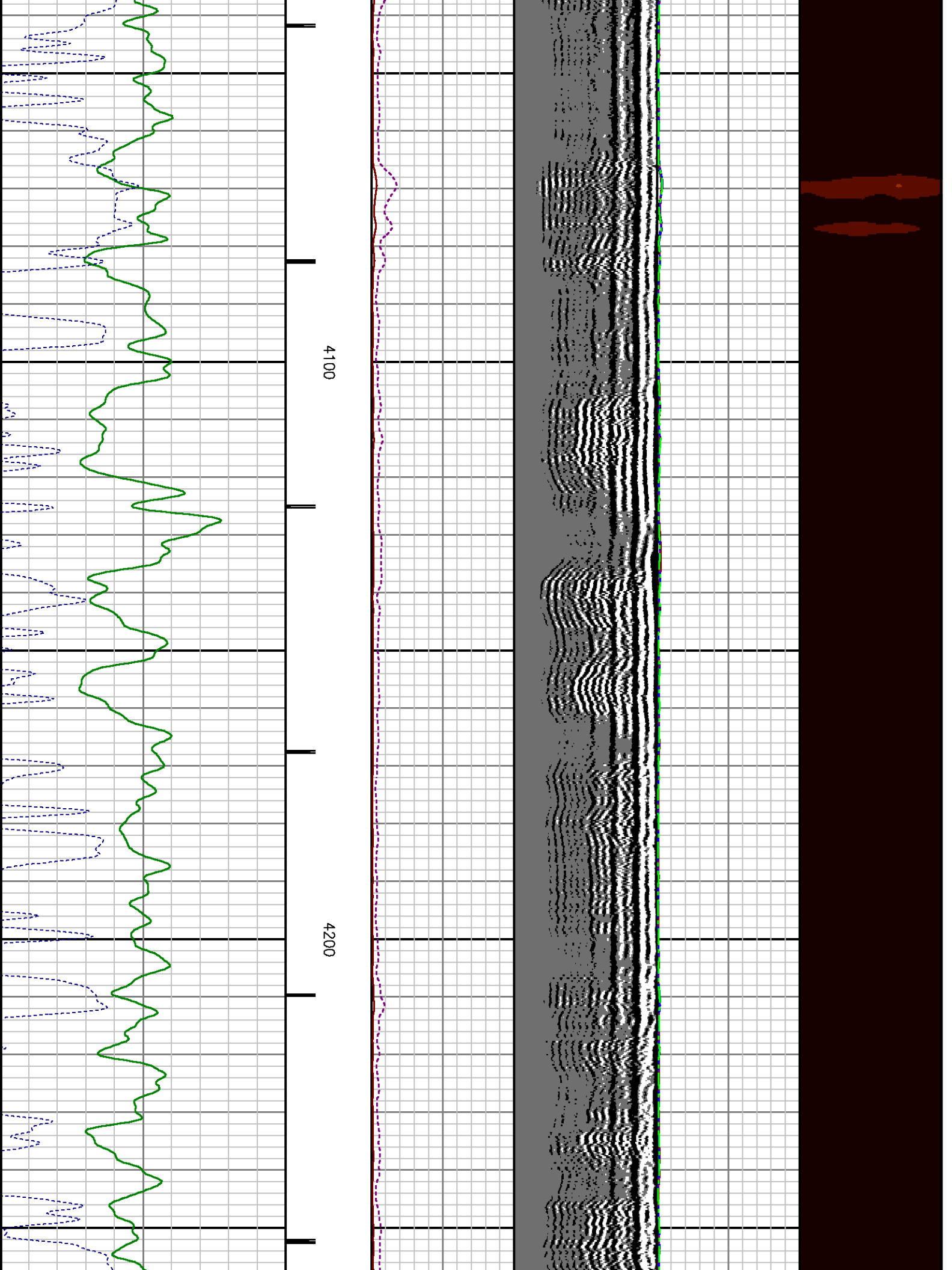


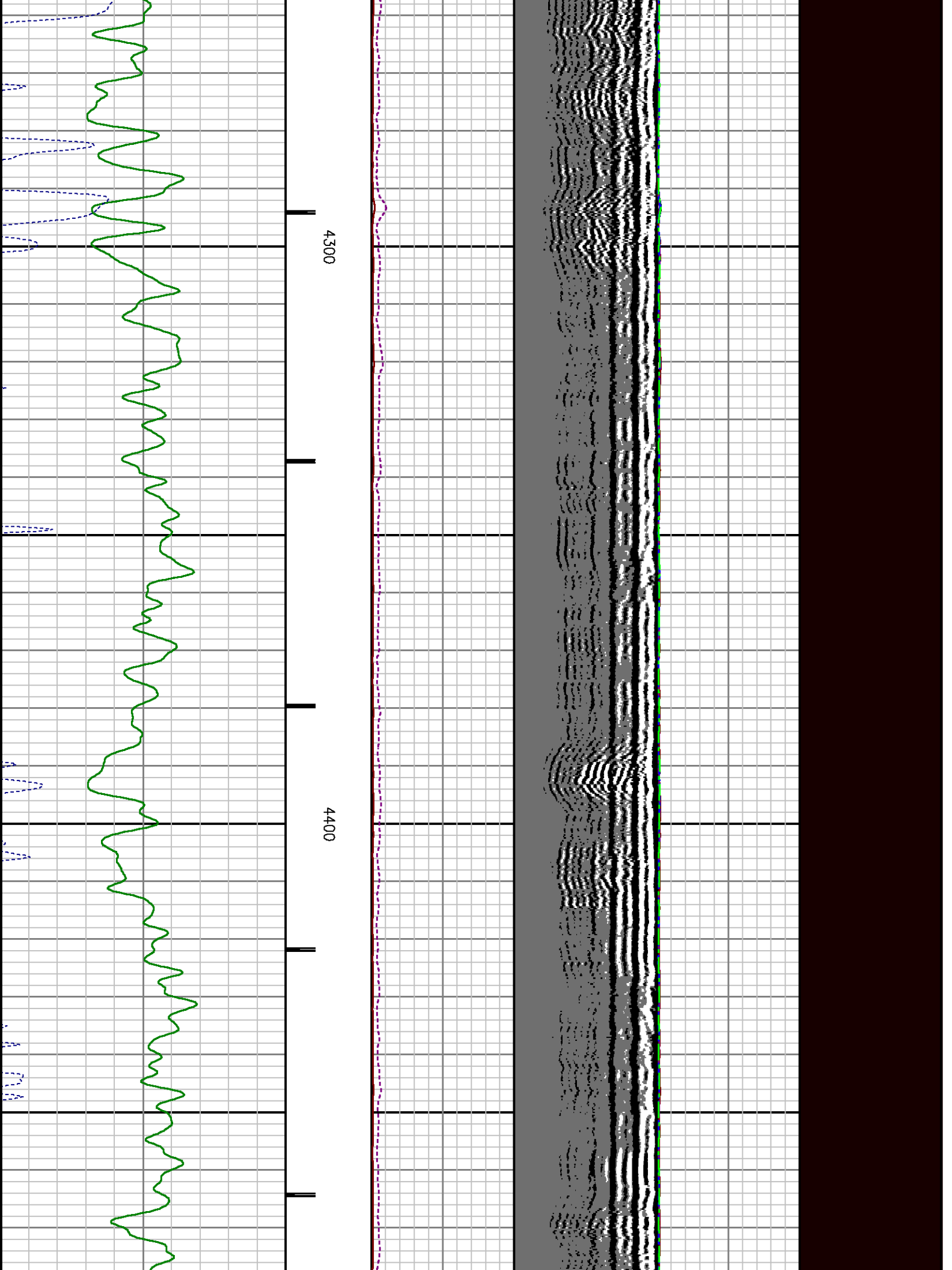


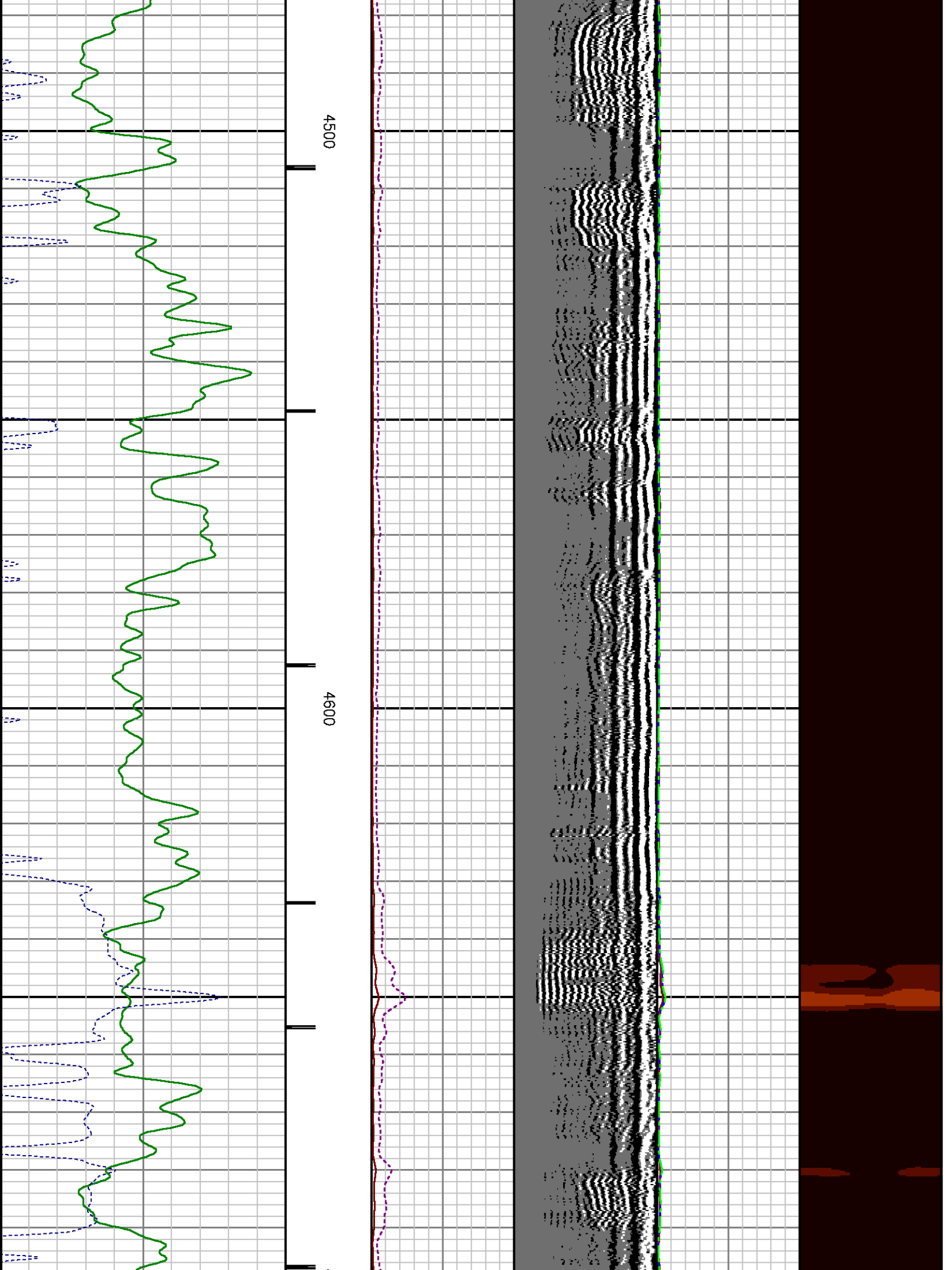


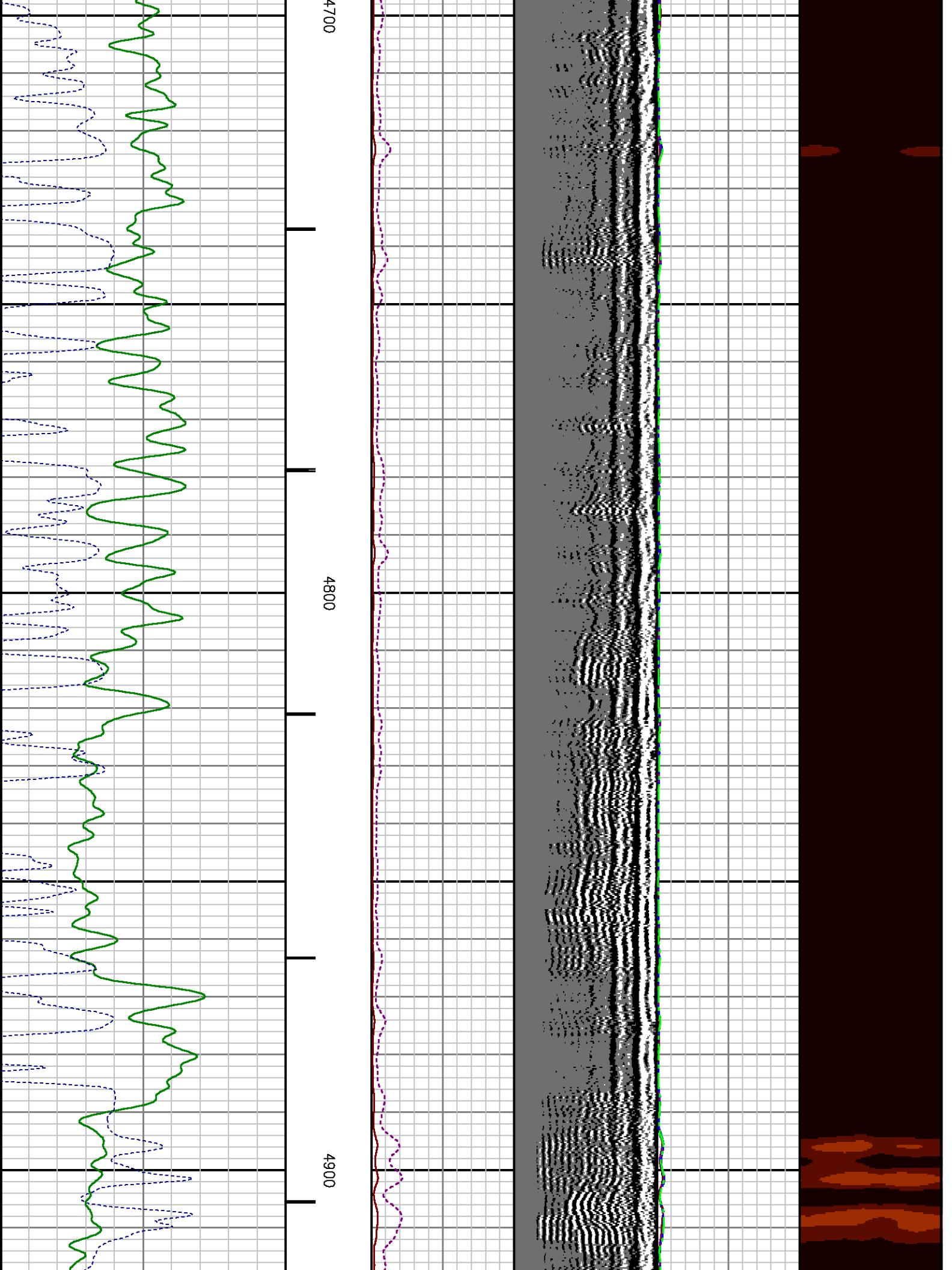


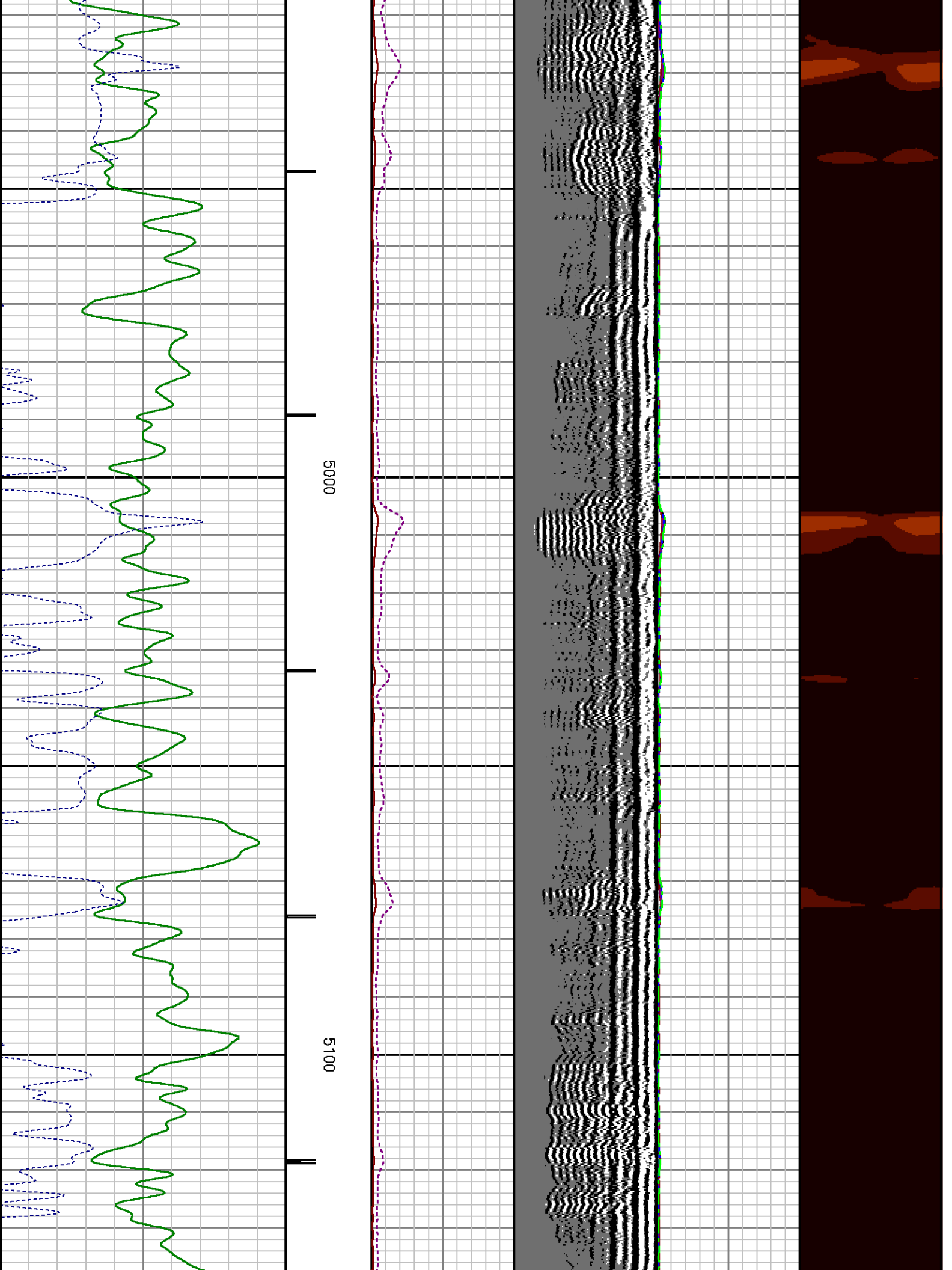




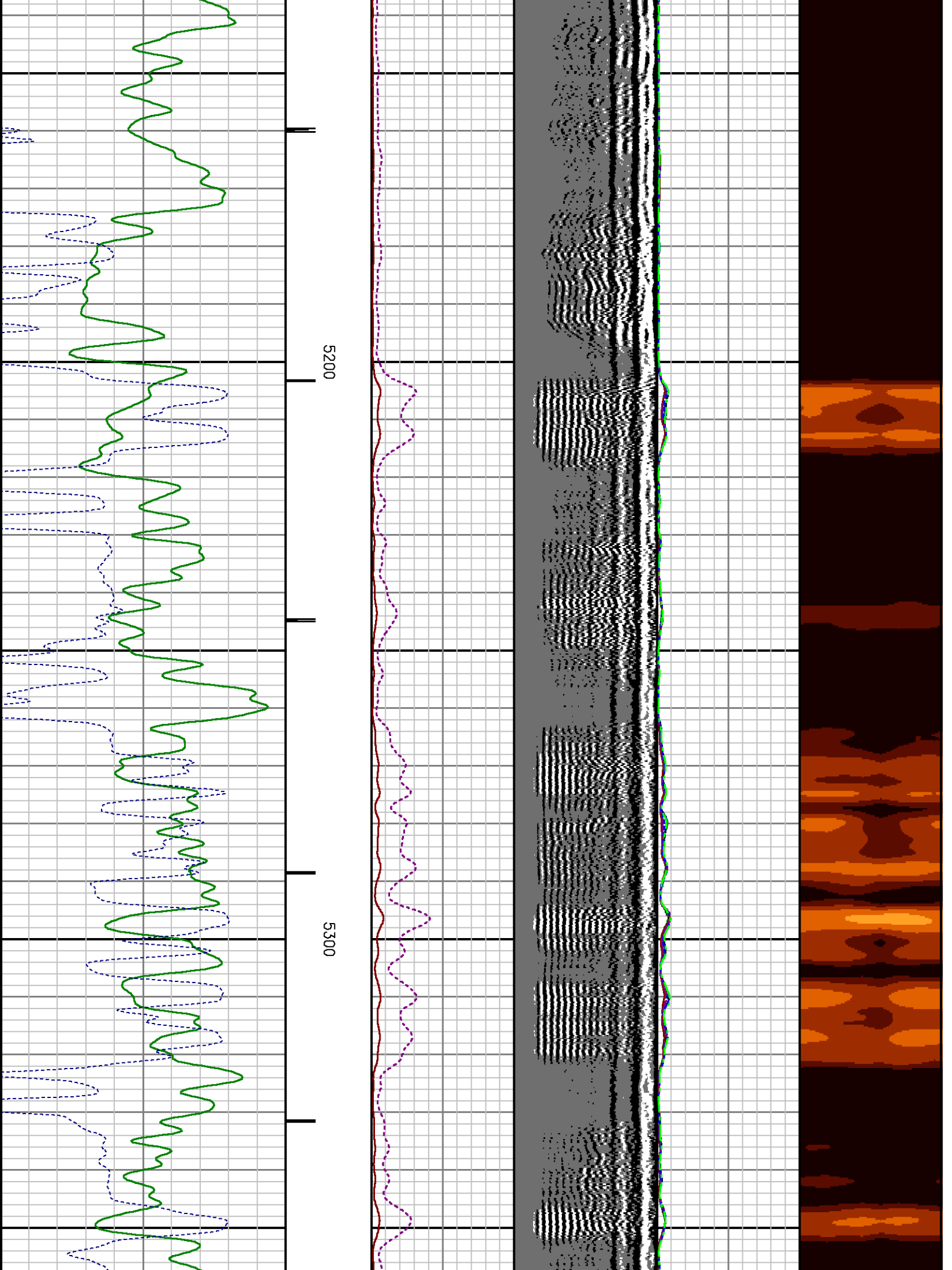


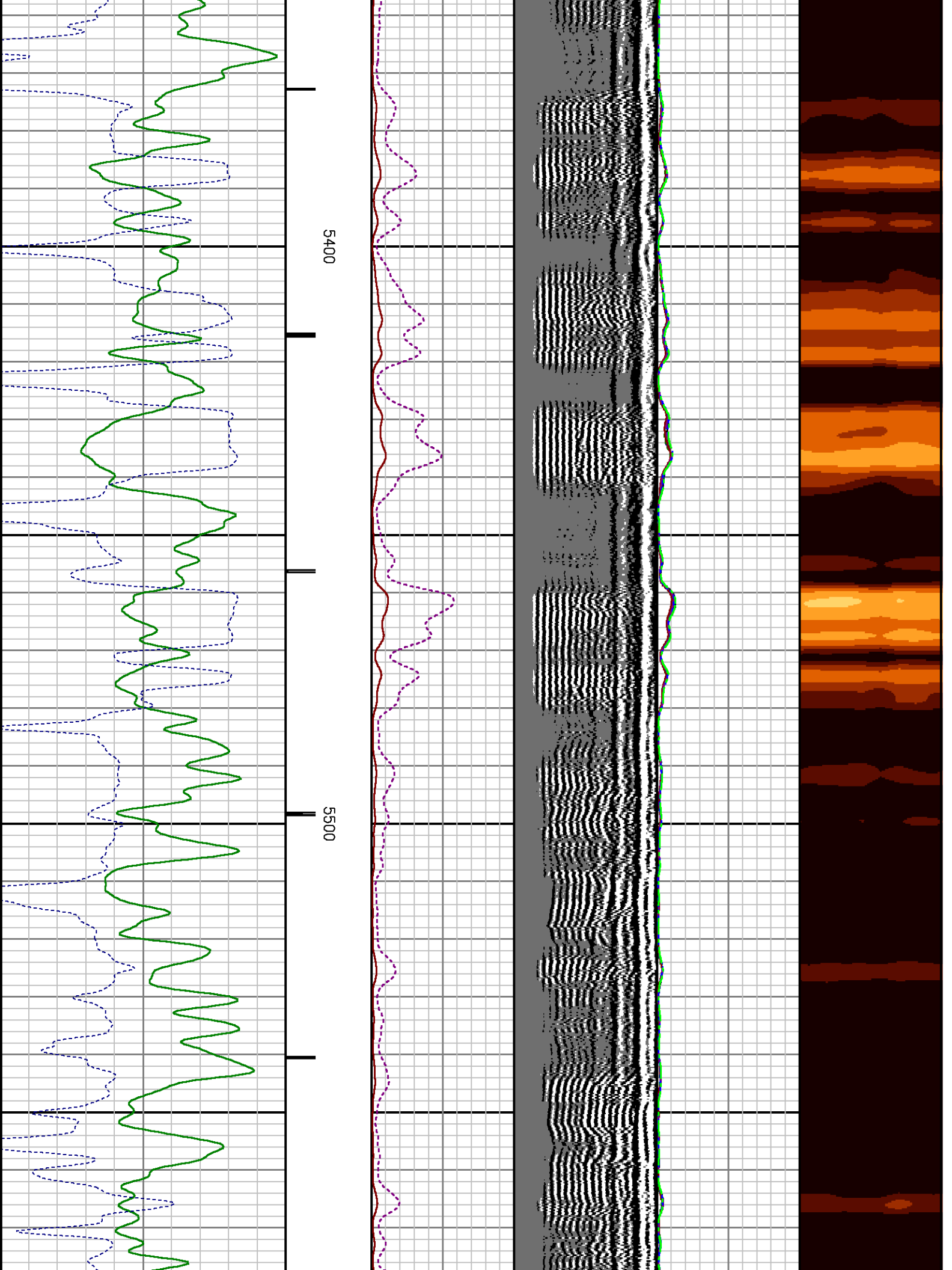


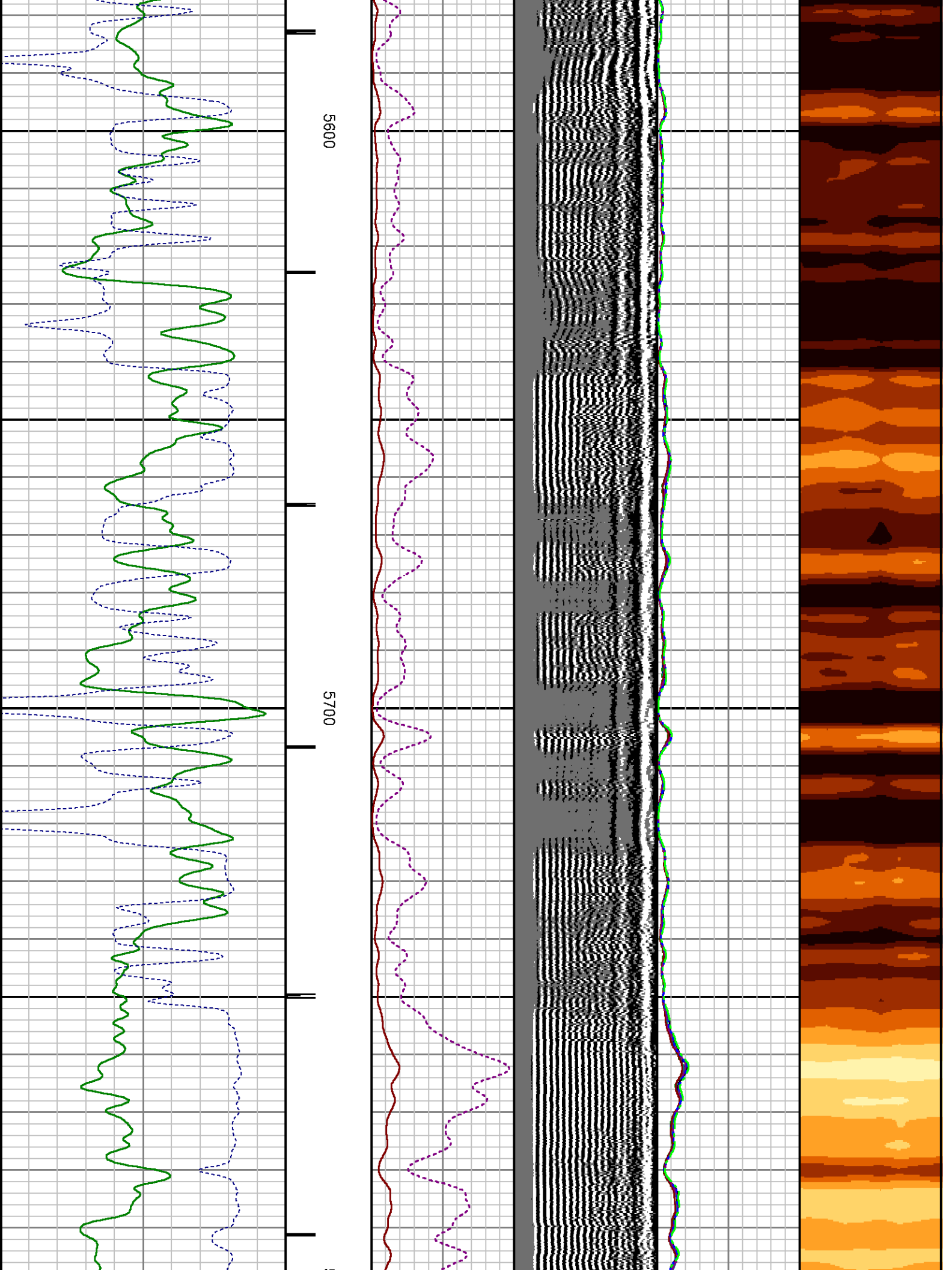


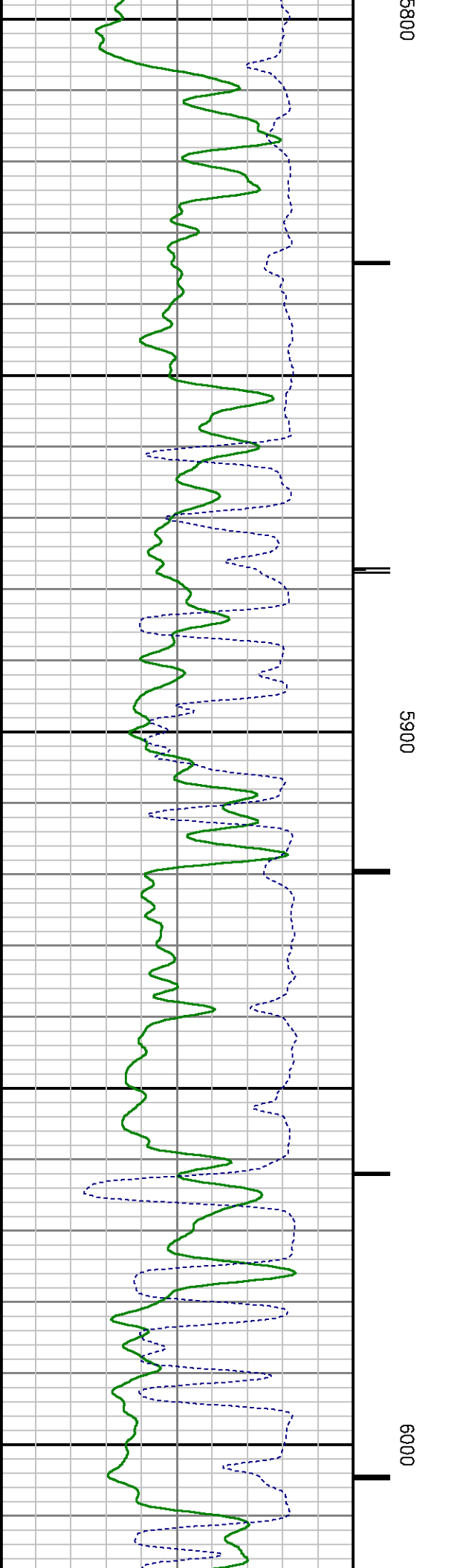
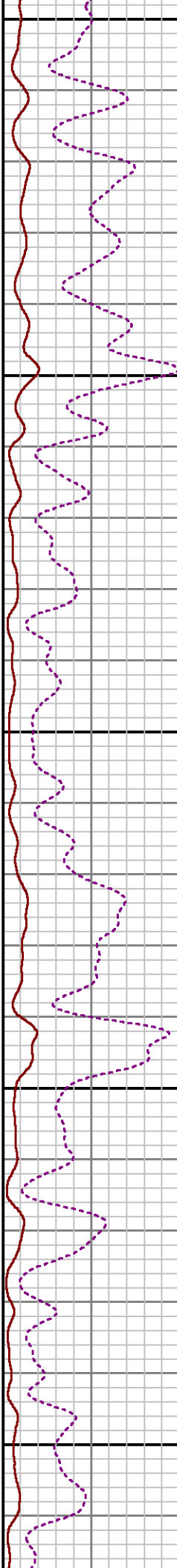
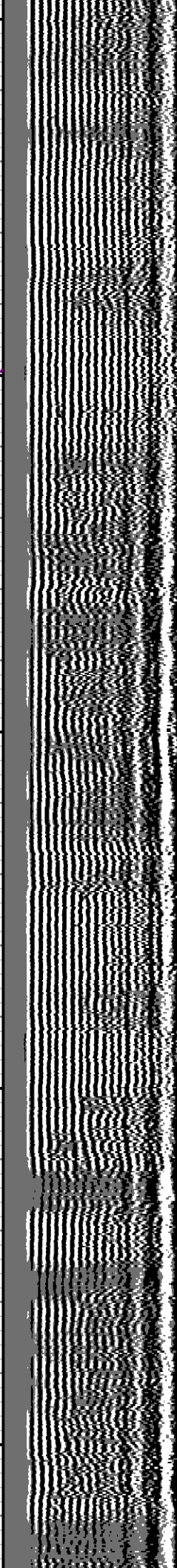
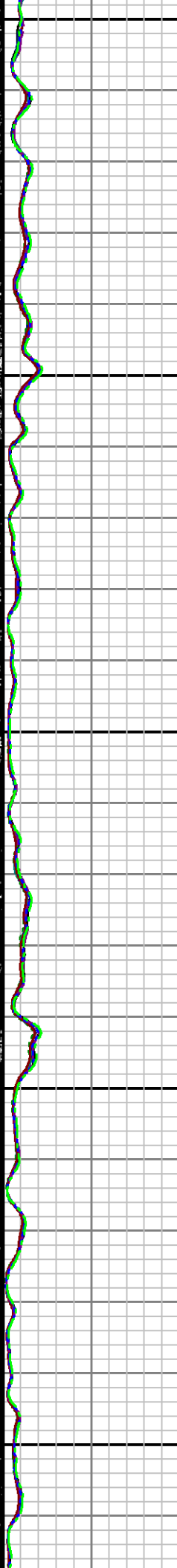
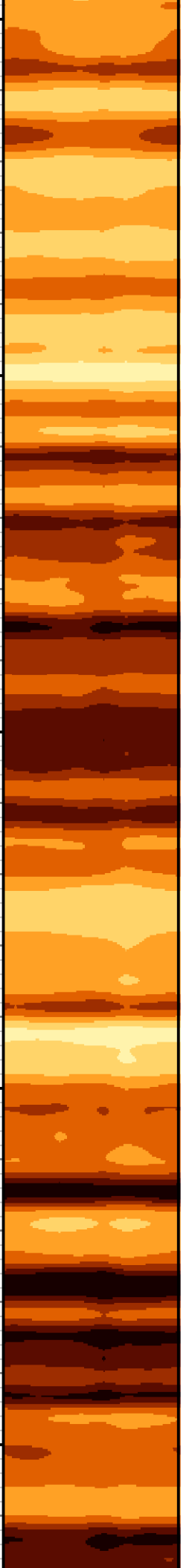


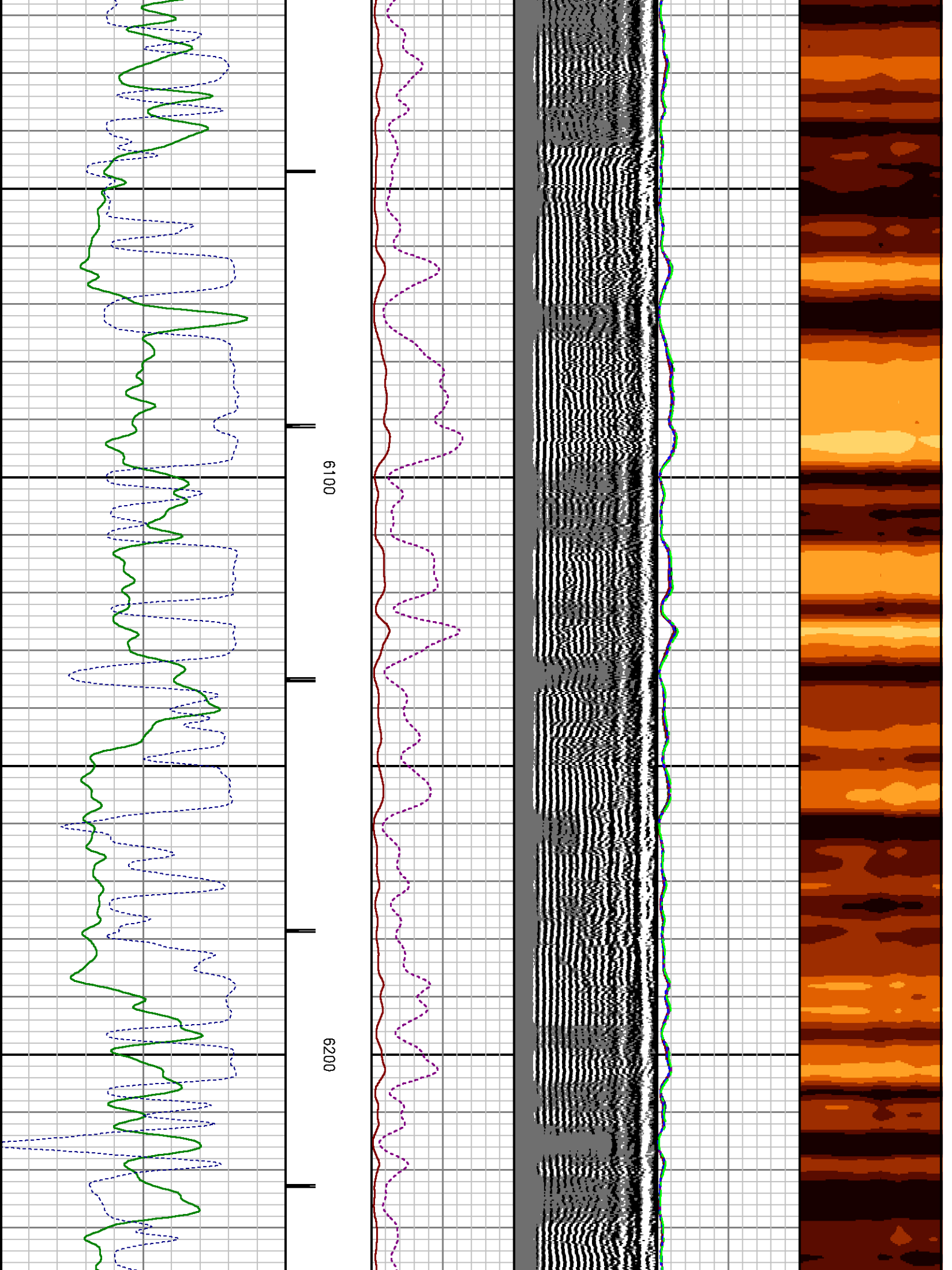




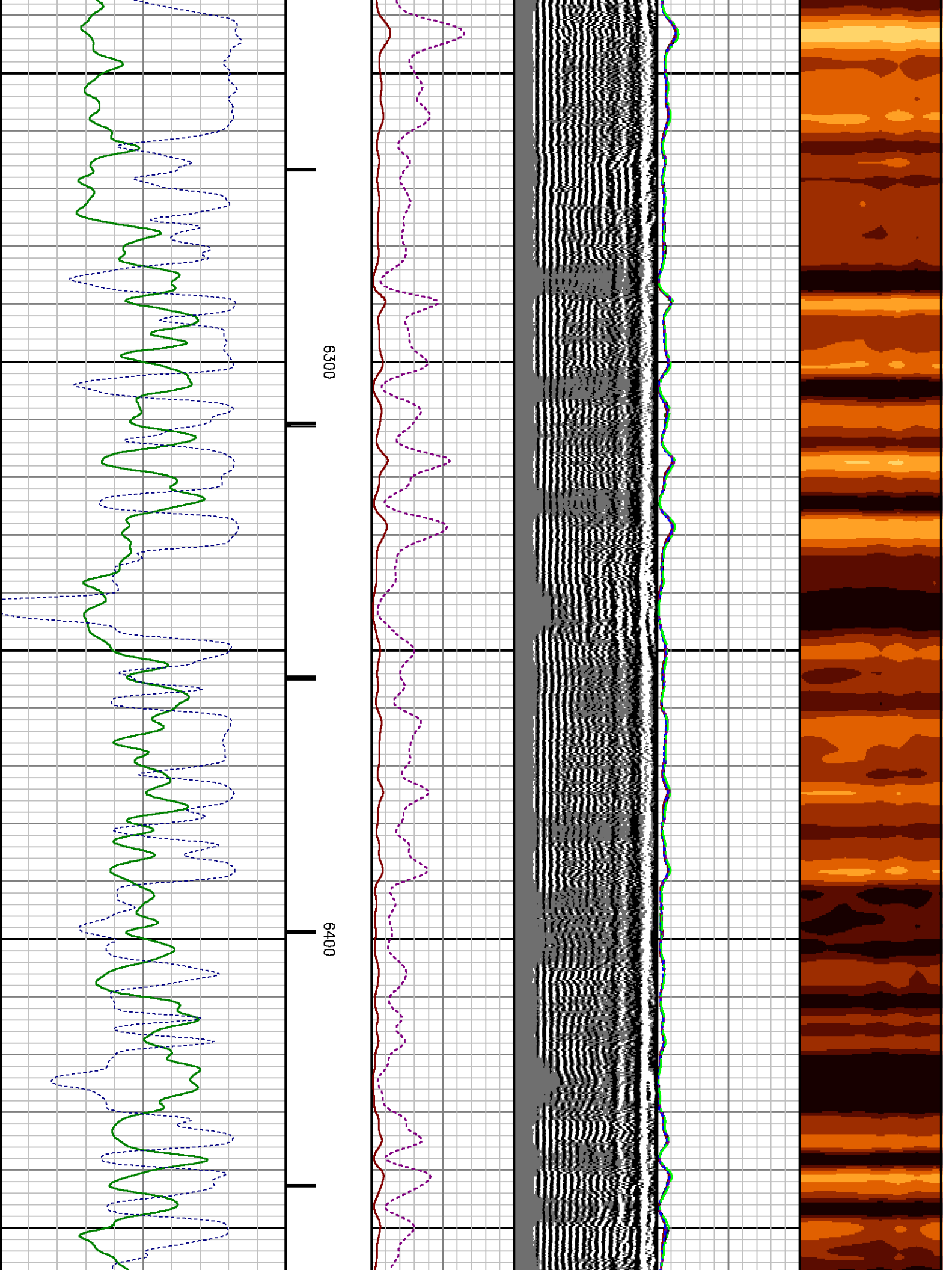




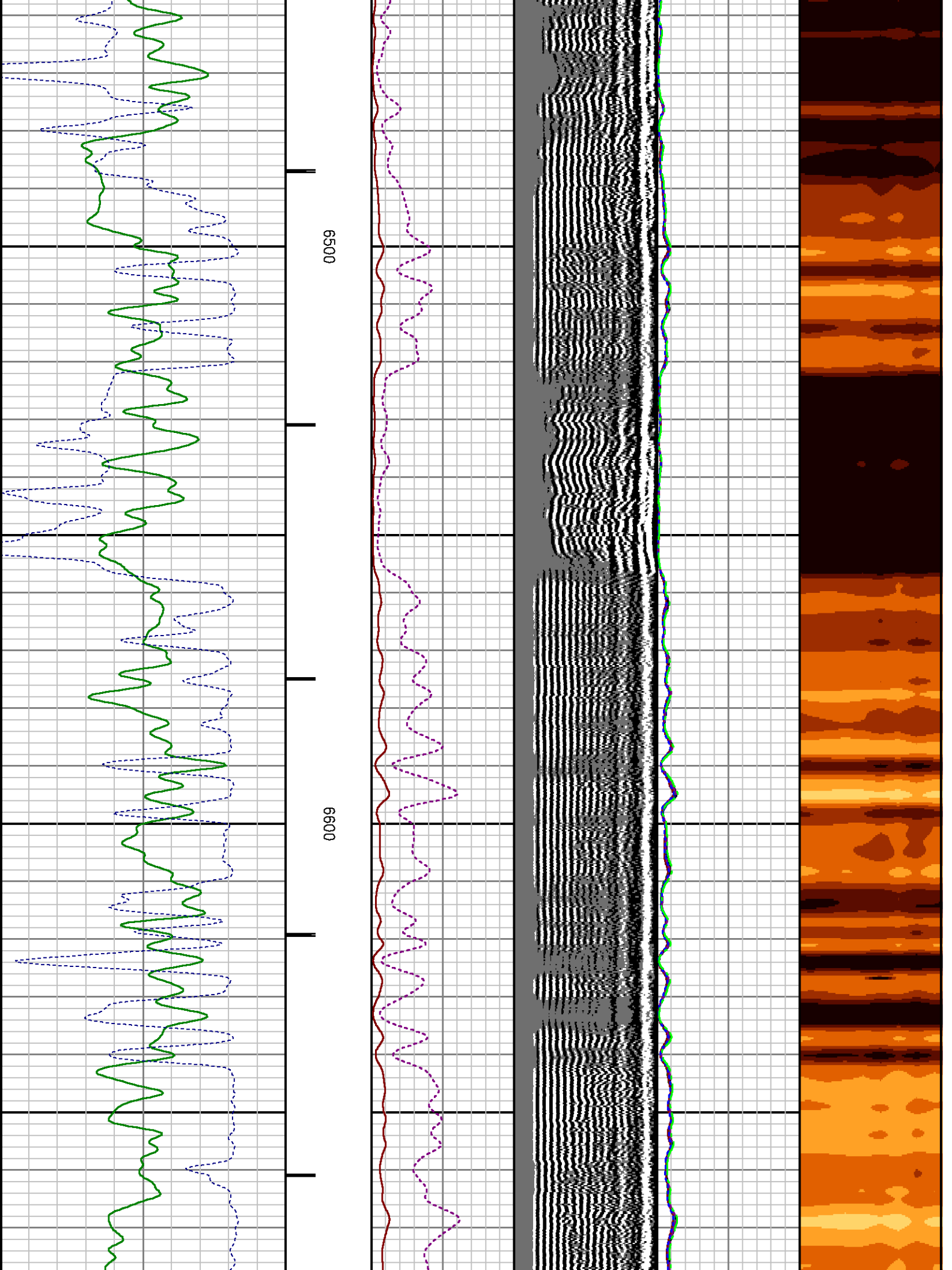


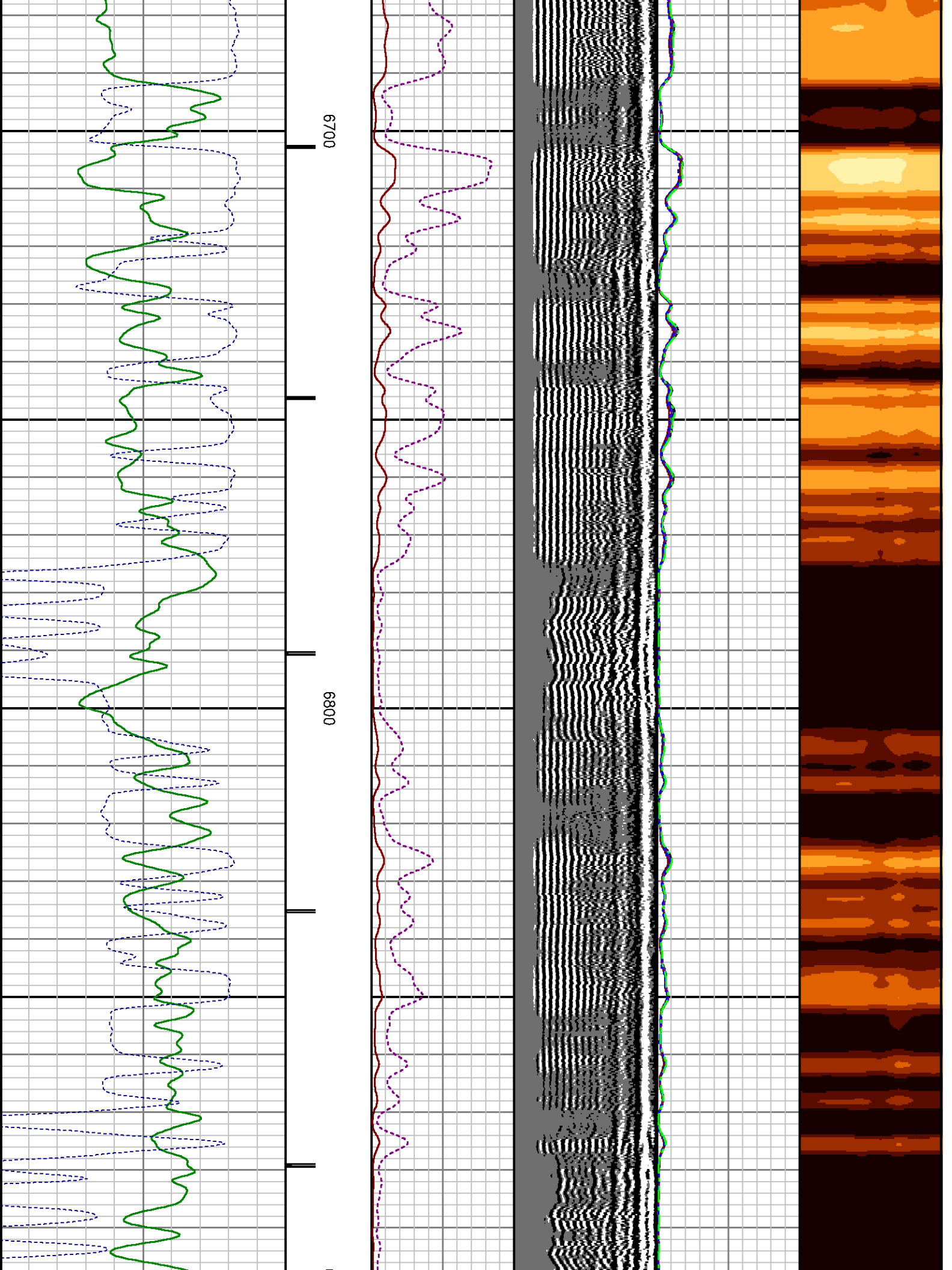


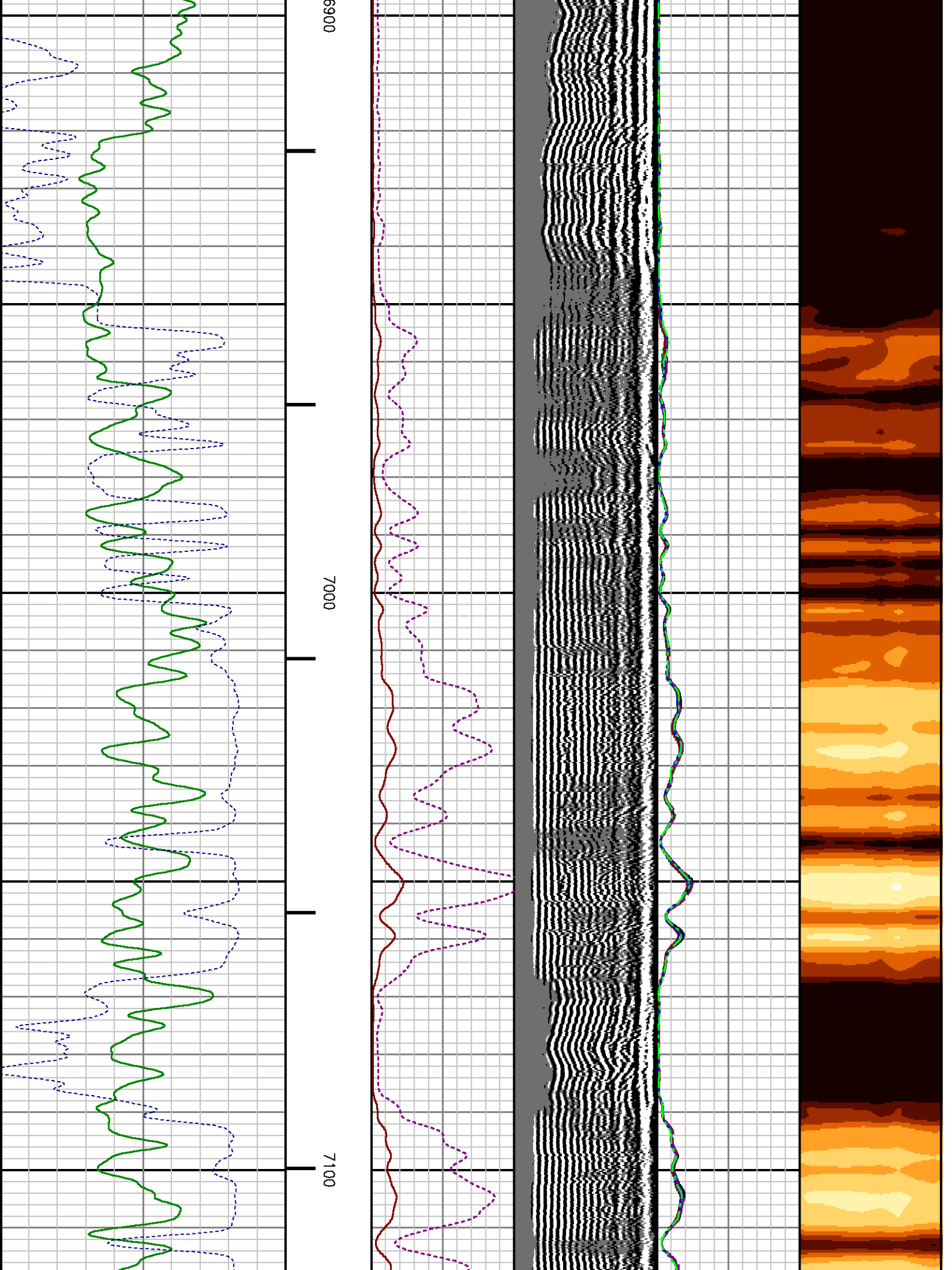


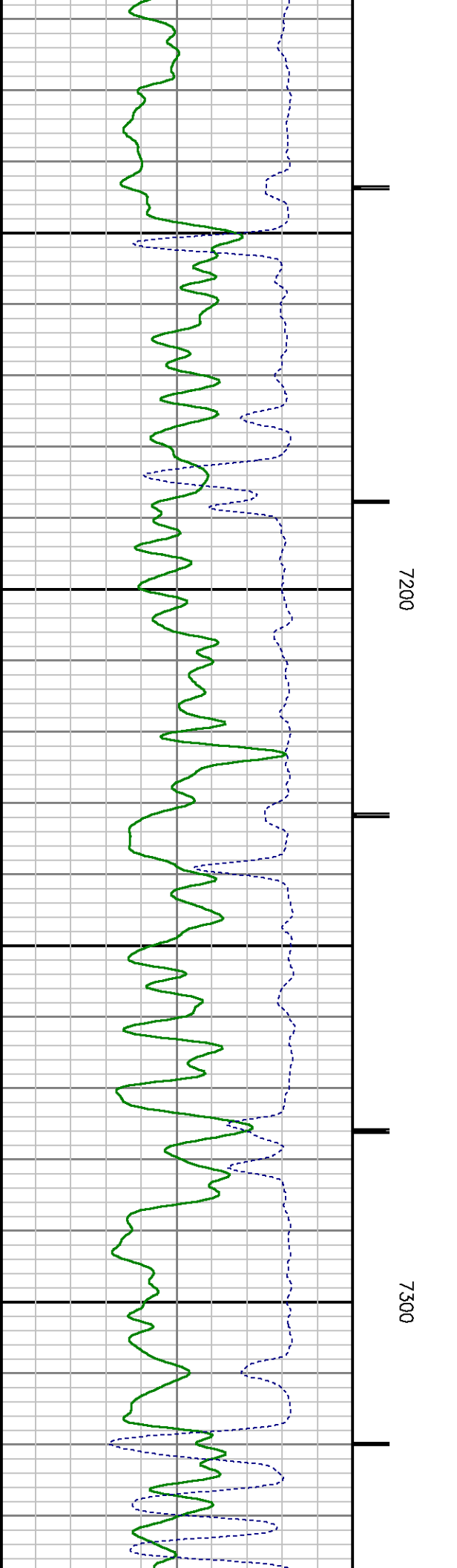
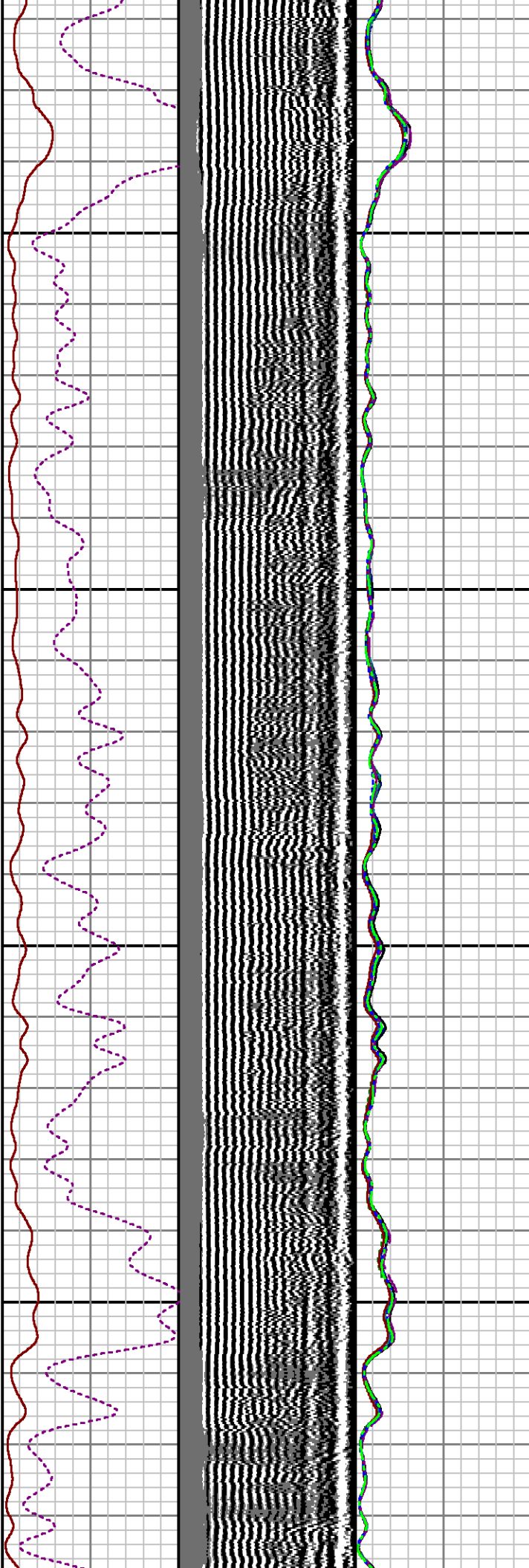


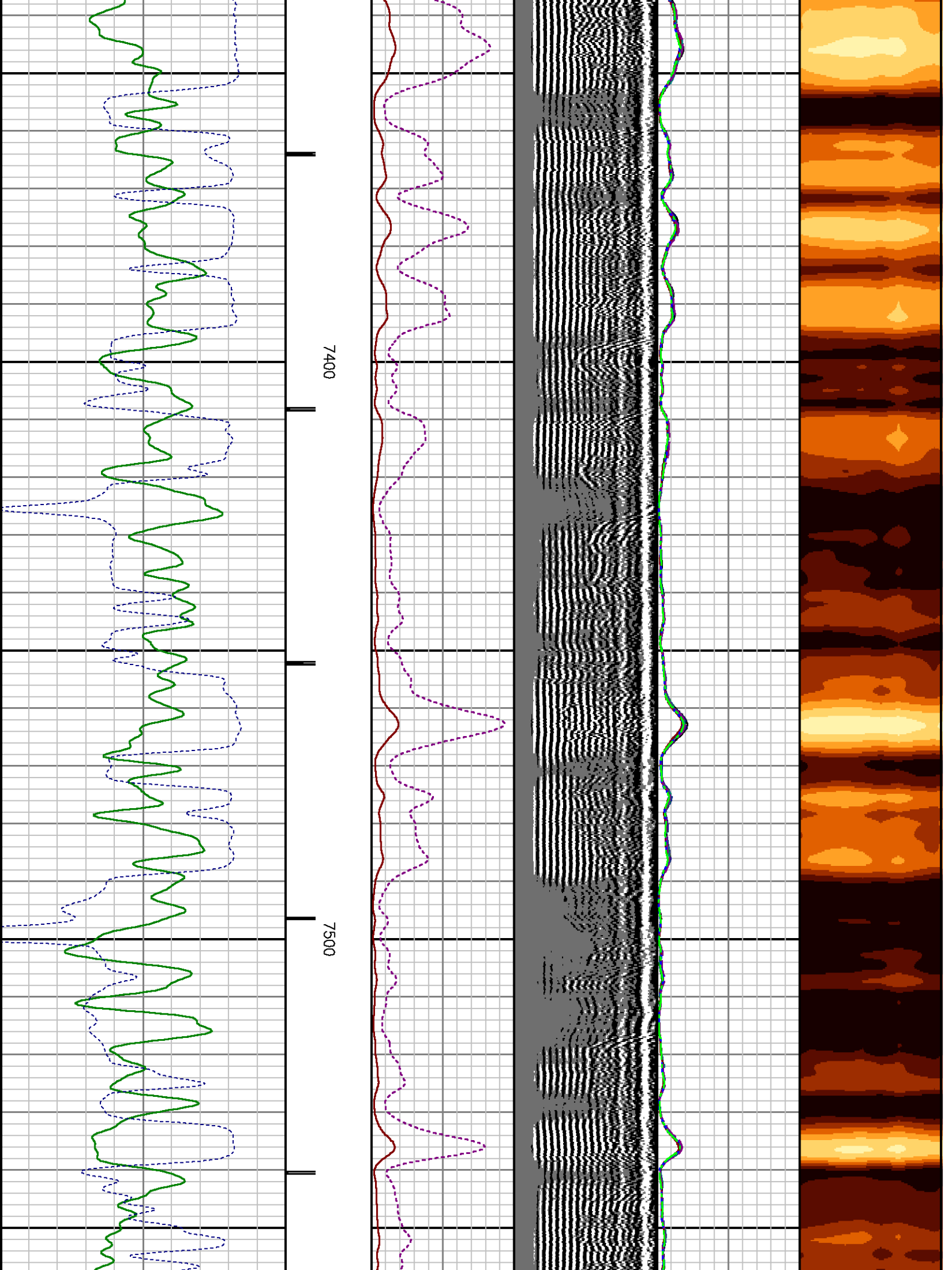




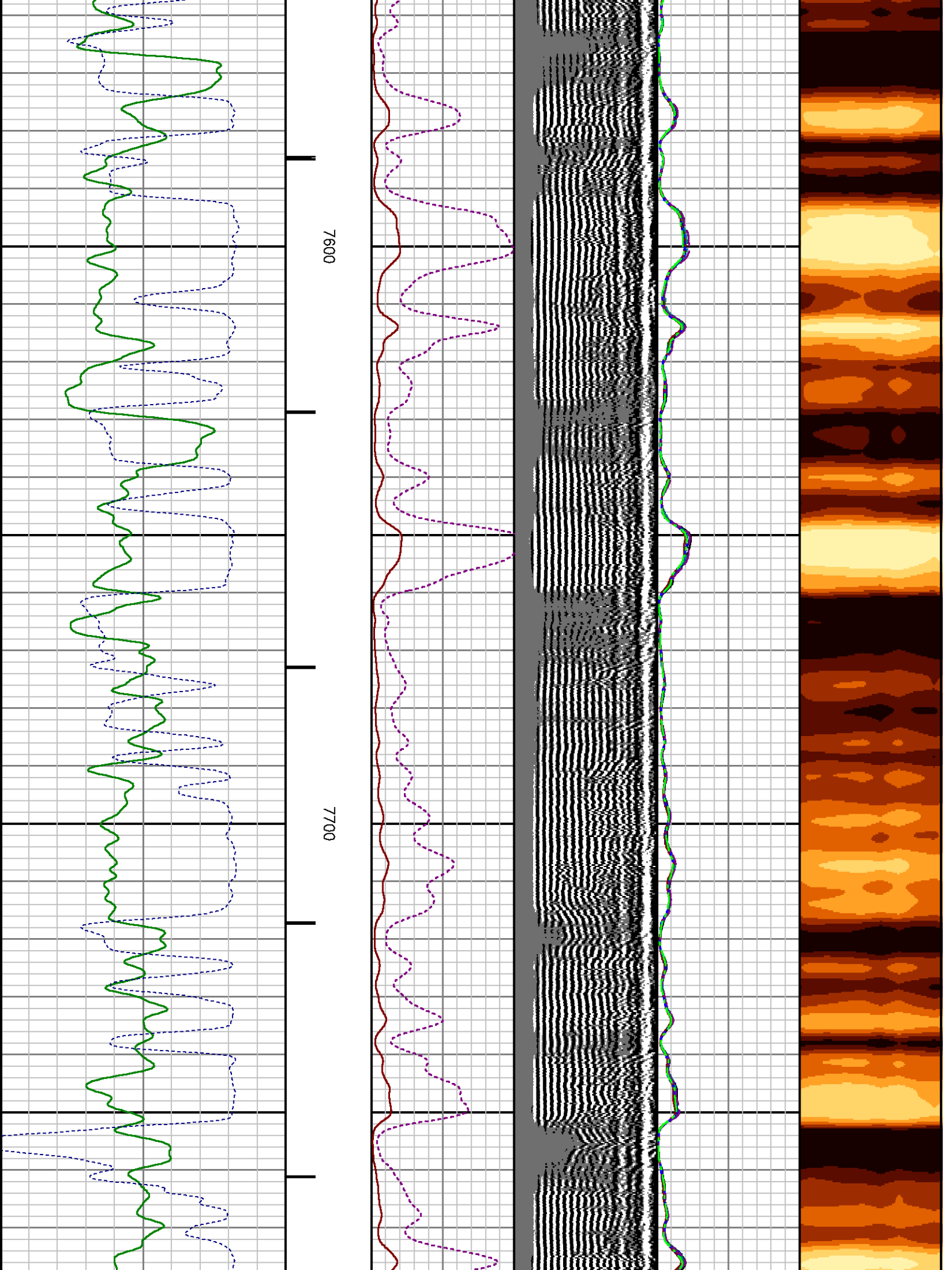




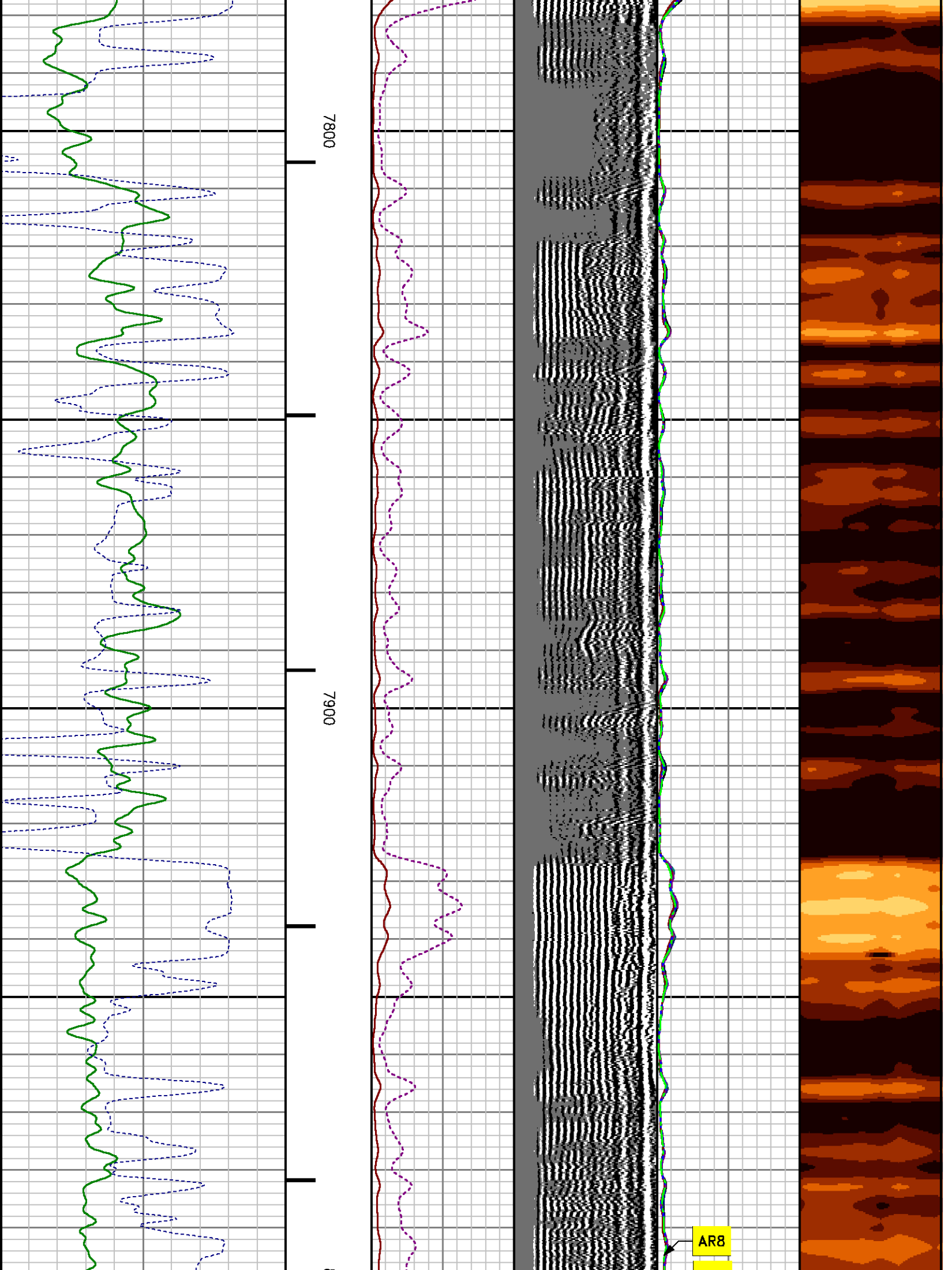


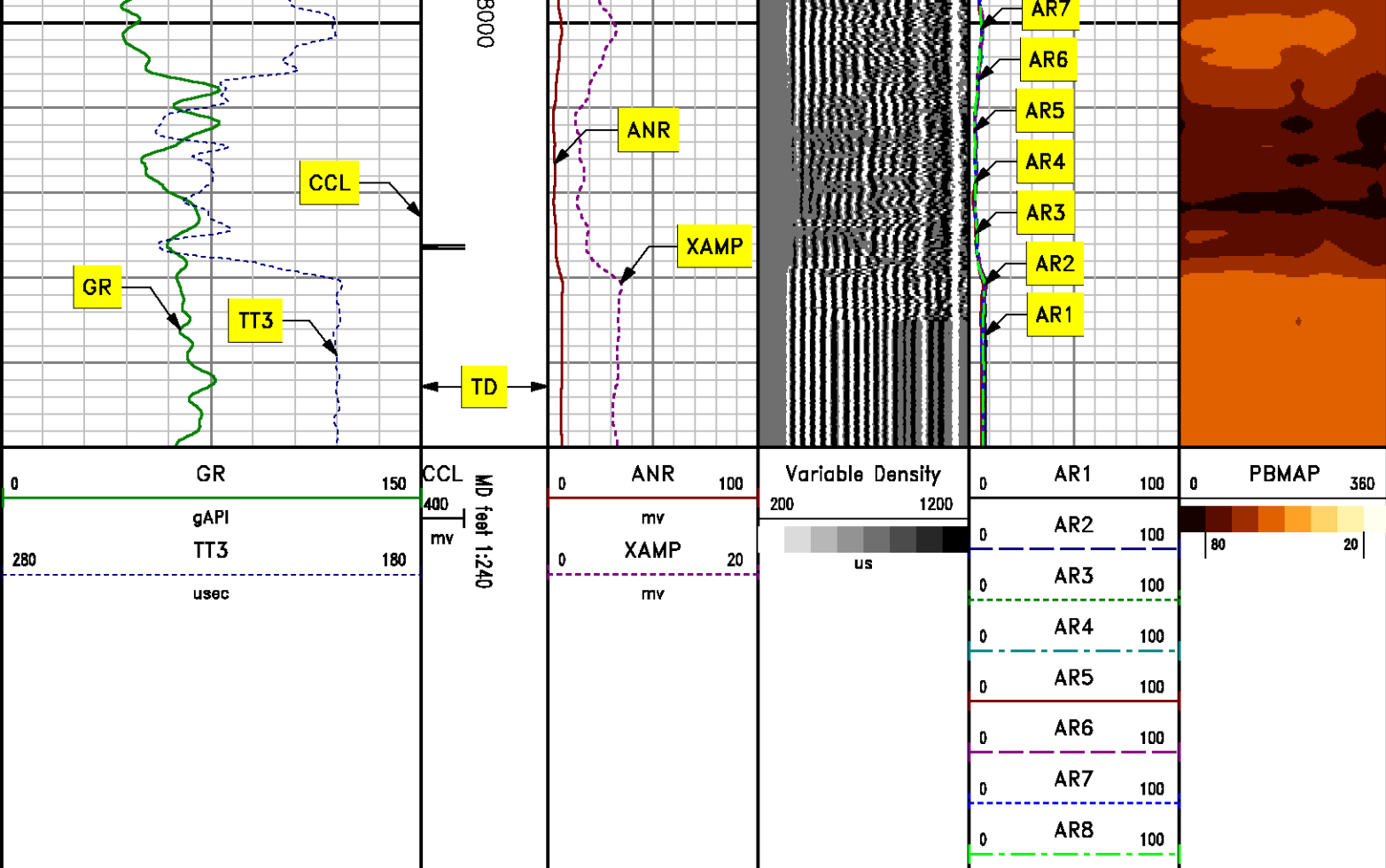












*REPEAT PASS*  
*0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	306.674	usec	7729.750	8057.000
RAL	Amp Gate Start Near	198.578	usec	7729.750	8057.000
RAL	Amp Gate Start Radial	199.599	usec	7729.750	8057.000
RAL	Amp Gate Width Far	25.000	usec	7729.750	8057.000
RAL	Amp Gate Width Near	25.000	usec	7729.750	8057.000
RAL	Amp Gate Width Radial	25.000	usec	7729.750	8057.000
RAL	casing od	4.500	inches	7729.750	8057.000
RAL	casing wt	11.600	lbm/ft	7729.750	8057.000
RAL	FB Start Far	291.900	usec	7729.750	8057.000
RAL	FB Start Near	175.391	usec	7729.750	8057.000

RAL	FB Start Radial	175.391	usec	7729.750	8057.000
RAL	FB Thresh Far	10.000	mv	7729.750	8057.000
RAL	FB Thresh Near	4.000	mv	7729.750	8057.000
RAL	FB Thresh Radial	4.000	mv	7729.750	8057.000
RAL	Fluid Travel Time	200.000	usec/ft	7729.750	8056.937

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
		ACAL	ANR	AR1	AR2	AR3	AR4	AR5	AR6
1426XA	-11.000								
		AR5	AR6	AR7	AR8	CHV	FPR2		
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3		
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP		
1426XA	-10.040	AFAR	SIG	TT5					
1355XA	-5.620	CCL							
1355XA	-1.500	GR							
1355XA	0.000	TEMP							

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

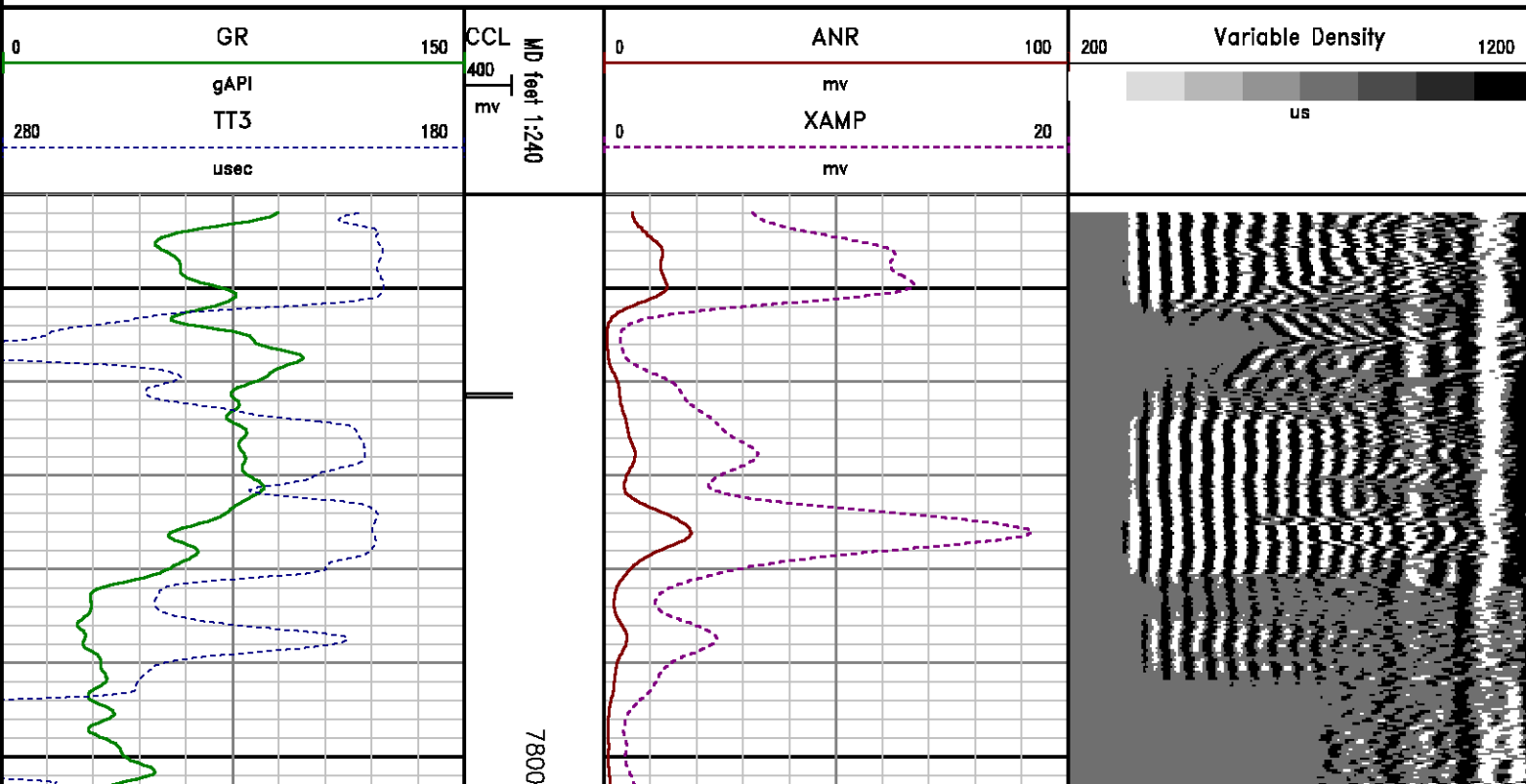
Well : DUGGAN RWF 424-29

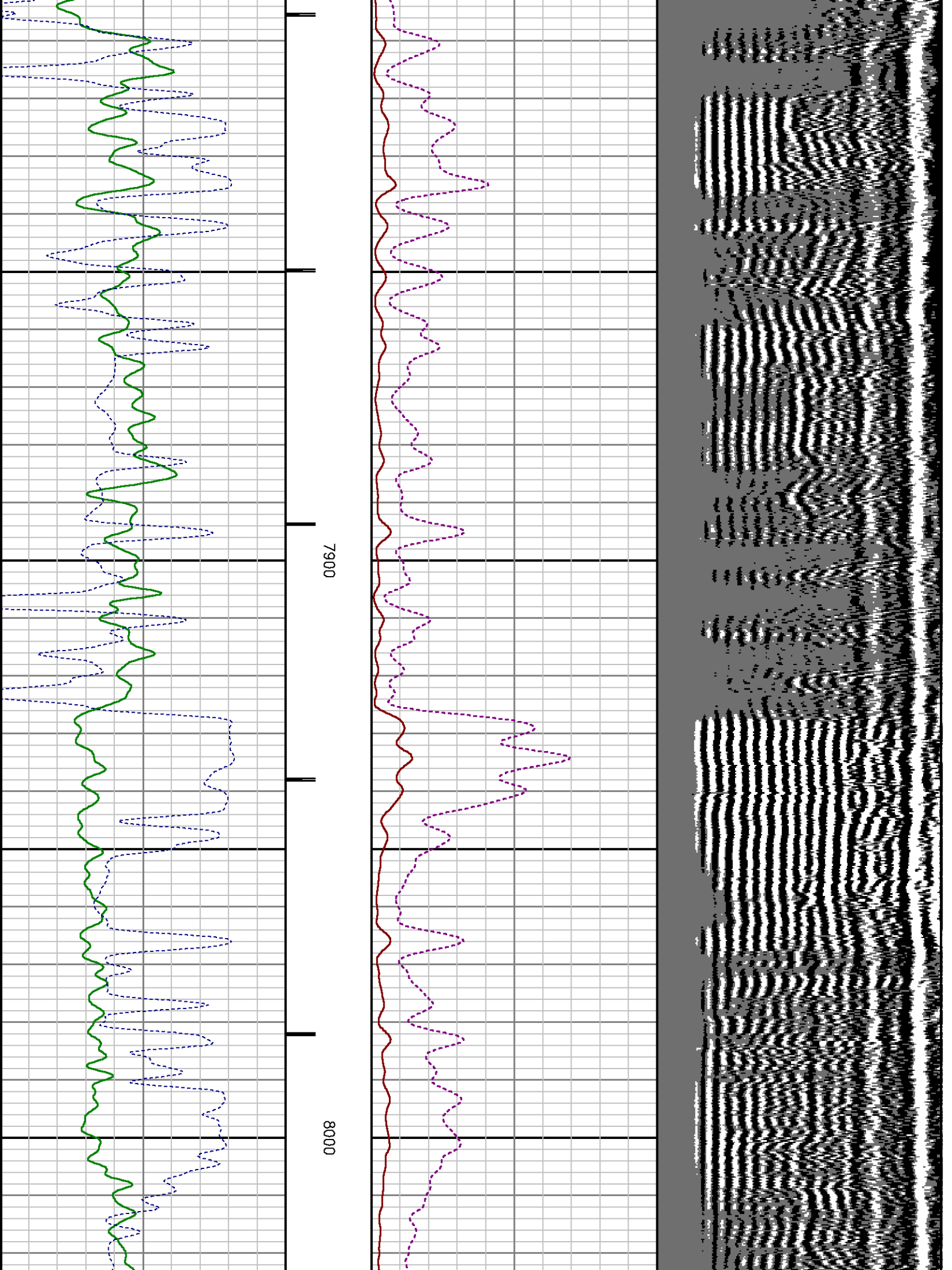
File Name : d:\welldata\424cbl\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 7740.00 - 8050.00 feet UP

Created : 7/9/2013 8:56:04 AM







## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Jul 09 08:20:22 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: JUL9

Tool Delay [usec]	-62.00	Casing OD in	4.50	Casing Wt lbm/ft	11.60	Casing ID in	4.00
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RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.060	0.000	1.00	100.000
3 Ft. Receiver	200	30	-2.491			
5 Ft. Receiver	317	30	-3.283			
Radial #1	200	30	-4.083			
Radial #2	200	30	-3.268			
Radial #3	200	30	-3.495			
Radial #4	200	30	-3.553			
Radial #5	200	30	-5.091			
Radial #6	200	30	-3.649			
Radial #7	200	30	-3.686			
Radial #8	200	30	-3.697			

## GAMMA RAY

Calibration File: C:\case\calver\GR\209J7.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jun 27 10:51:00 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: J7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	132.31	583.42	0.410	54.26	239.26	185.00

Verification File: C:\case\calver\GR\209J7.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Jun 27 10:52:46 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: J7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	140.71	580.31	0.410	57.71	237.98	180.28

## 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

## RAL GR/TEMP/CCL/CHV DETECTOR

Series	1355XA
Mnemonic	RAL
Diameter	2.75"
Weight	85.00 lb
Length	6.96'
Measure Point	0.17' TEMP
Measure Point	1.67' GR
Measure Point	5.79' CCL
Temp Rating	400.00 °F
Press Rating	20000.00 PSI



	18.89'
XMIT	12.71'
NEAR RCVR	9.63'
FAR RCVR	7.71'
CCL	5.79'
GR	1.67'
TEMP	0.17'
	0.00'

Total Length: 18.89'  
Total Weight: Not Available  
Max Diameter: 0' 2.75"



Company  
Well  
Field  
County

WPX ENERGY  
DUGGAN RWF 424-29  
RULISON  
GARFIELD

State

COLORADO

File No:

CH074119

API No:

05045216610000

Location

SHL: 518' FSL & 608' FWL

BHL: 619' FSL & 2139' FWL

Elevations

KB 5445.2 ft

DF

GL 5419.2 ft

29 6S 94W

RWF 14-29

NABORS SSD 573

SEC 29

TWP 6S

RGE 94W

Baker Atlas

