



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH79535	Company Well Field County	WPX ENERGY FEDERAL PA 414-12 PARACHUTE GARFIELD	State CO
API No: 05045206680000	Location SHL: 2577' FSL & 1724' FWL BHL: 522' FSL & 267' FWL SEC 12 TWP 7S RGE 9SW		
12 7S 9SW PA 23-12 PAD MABORS 577	Other Services RPM		Elevations KB 6533 ft DF GL 6507 ft
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevation 26 ft Above P. D.	

Date	22/NOV/13	
Run	ONE	
Service Order	US625035	
Depth Driller	B631 ft	
Depth Logger	B528 ft	
Bottom Logged Interval	B518 ft	
Top Logged Interval	26 ft	
Time Started	7:30	
Time Finished	11:00	
Operator Rig Time	3.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	70 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	238 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT.
Recorded By	TIM NEWELL	
Witnessed By	BILL CADY	

- 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	1030 ft
7.875 In	1030 ft	8689 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1030 ft
4.5 In	11.5 lbm/ft	1-80	0 ft	8689 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 4 feet.
Logged with zero PSI at wellhead.
BHT = 238 °F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218495	CENTRALIZED
1	1	GR/CCL	1355XA	10580209	CENTRALIZED

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

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	24.093	8551.000
RAL	Amp Gate Start Near	195.000	usec	24.093	8551.000
RAL	Amp Gate Start Radial	195.000	usec	24.093	8551.000
RAL	Amp Gate Width Far	25.000	usec	24.093	8551.000
RAL	Amp Gate Width Near	25.000	usec	24.093	8551.000
RAL	Amp Gate Width Radial	25.000	usec	24.093	8551.000
RAL	casing od	4.500	inches	24.093	8551.000
RAL	casing wt	11.600	lbm/ft	24.093	8551.000
RAL	FB Start Far	291.900	usec	24.093	8551.000
RAL	FB Start Near	180.000	usec	24.093	8551.000
RAL	FB Start Radial	180.000	usec	24.093	8551.000
RAL	FB Thresh Far	10.000	mv	24.093	8551.000
RAL	FB Thresh Near	4.000	mv	24.093	8551.000
RAL	FB Thresh Radial	4.000	mv	24.093	8551.000
RAL	Fluid Travel Time	200.000	usec/ft	24.093	8551.000

**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
		FPR3	FPR5	TT3	TTD1	TTD2	TTD3

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

TTR4  
AFAR  
CCL  
GR  
TEMP

TTR5  
SIG  
TT5

TTR6  
TT5

TTR7

TTR8

XAMP

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

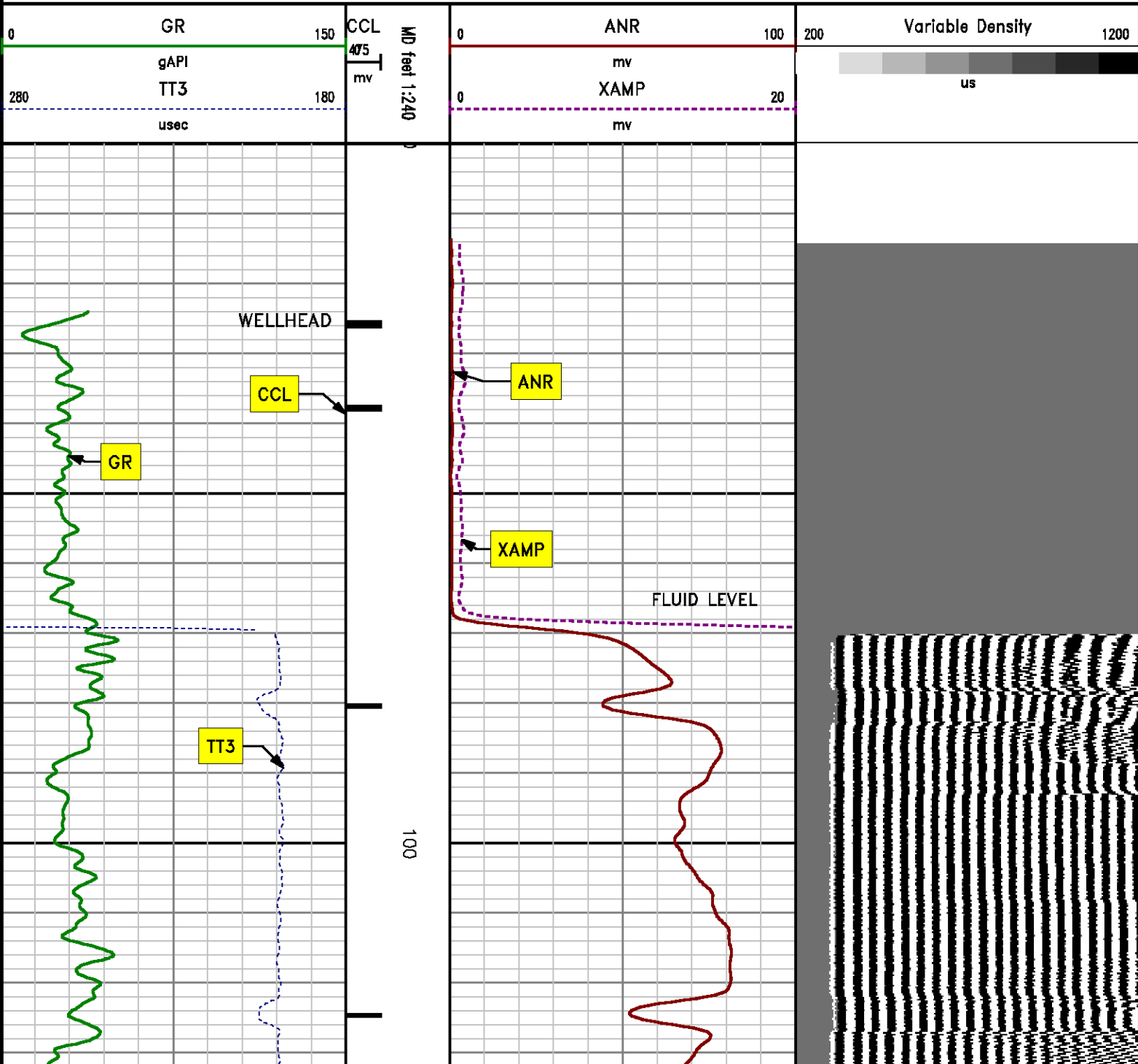
Well : FEDERAL PA 414-12

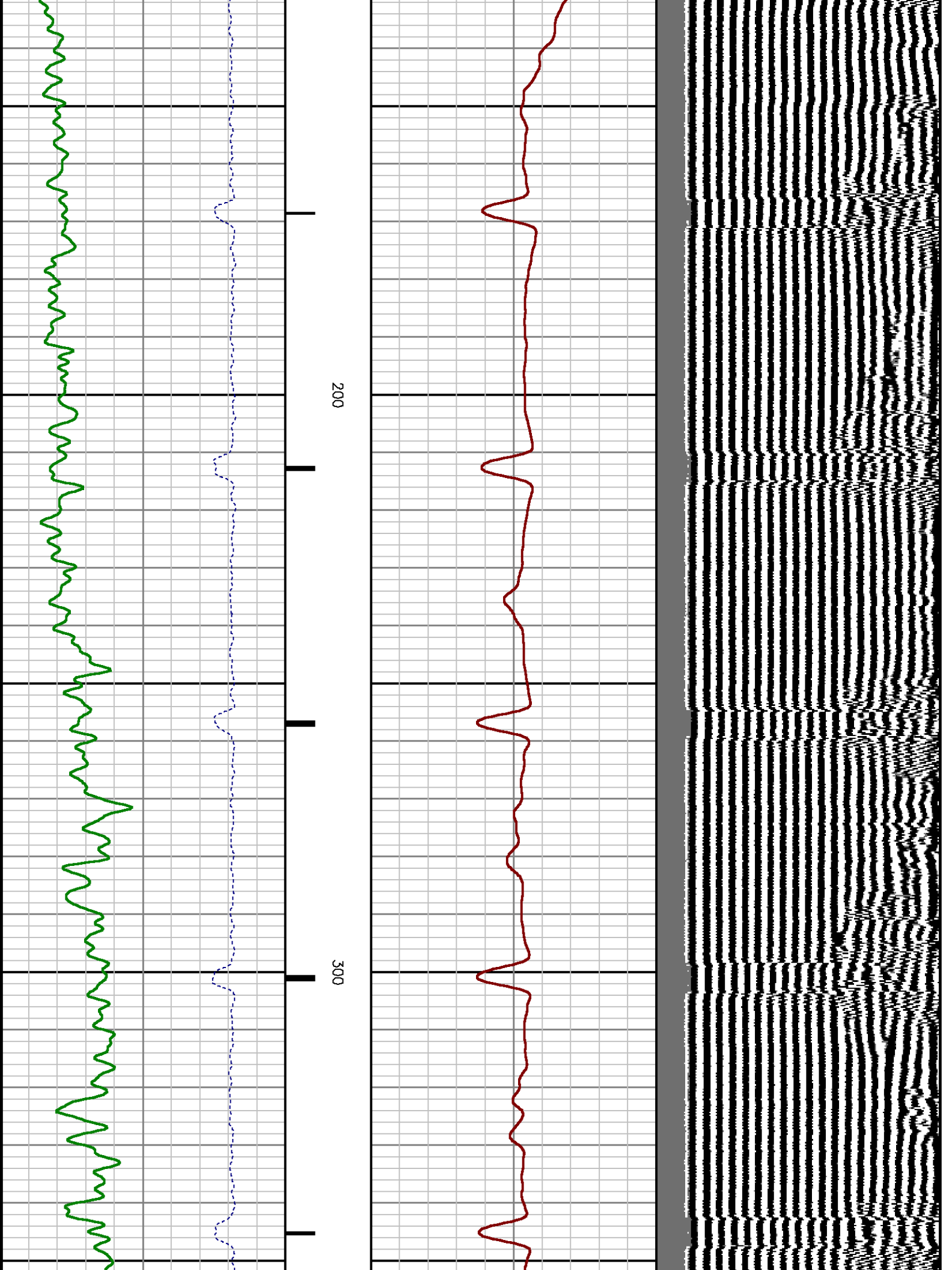
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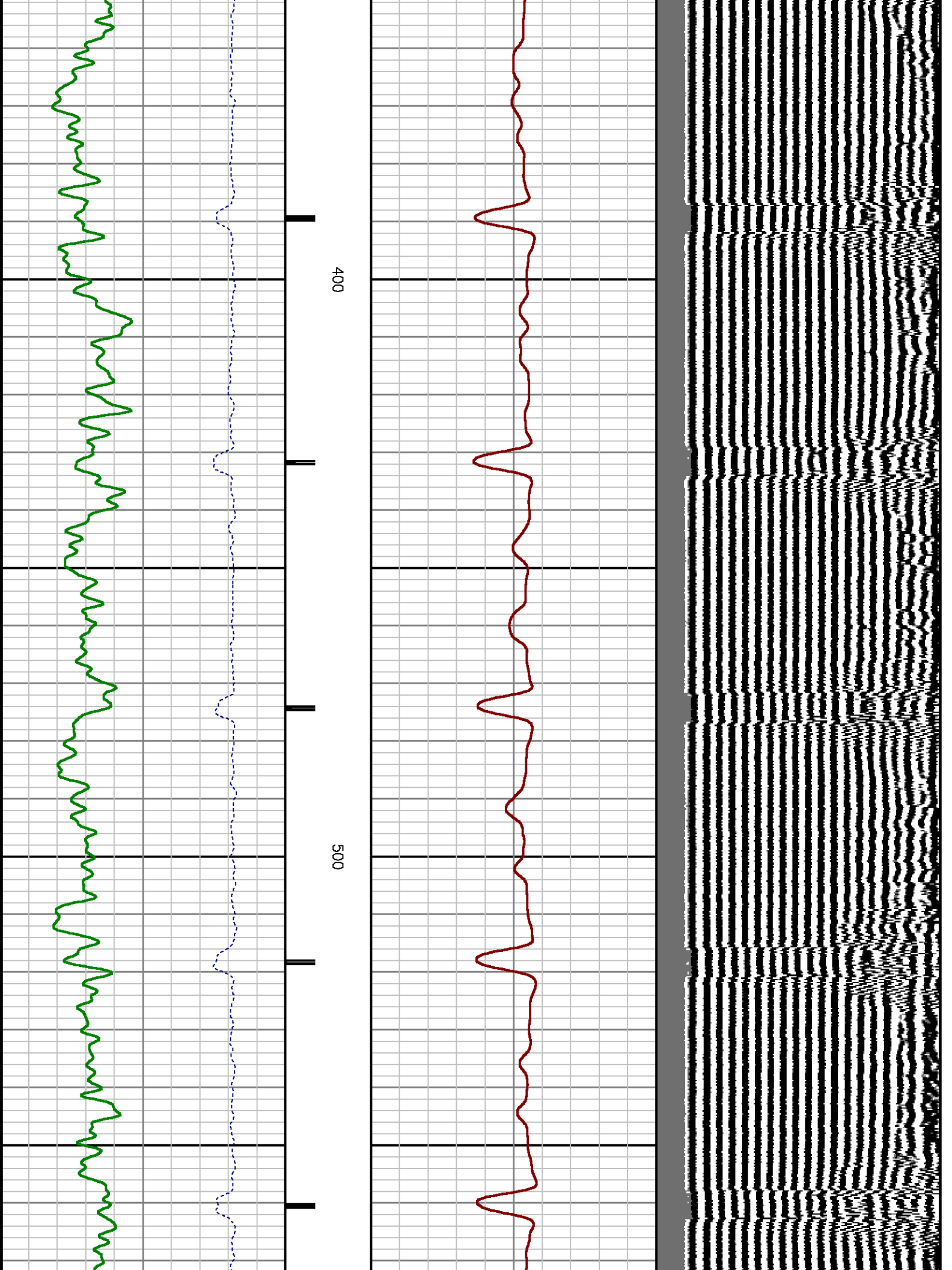
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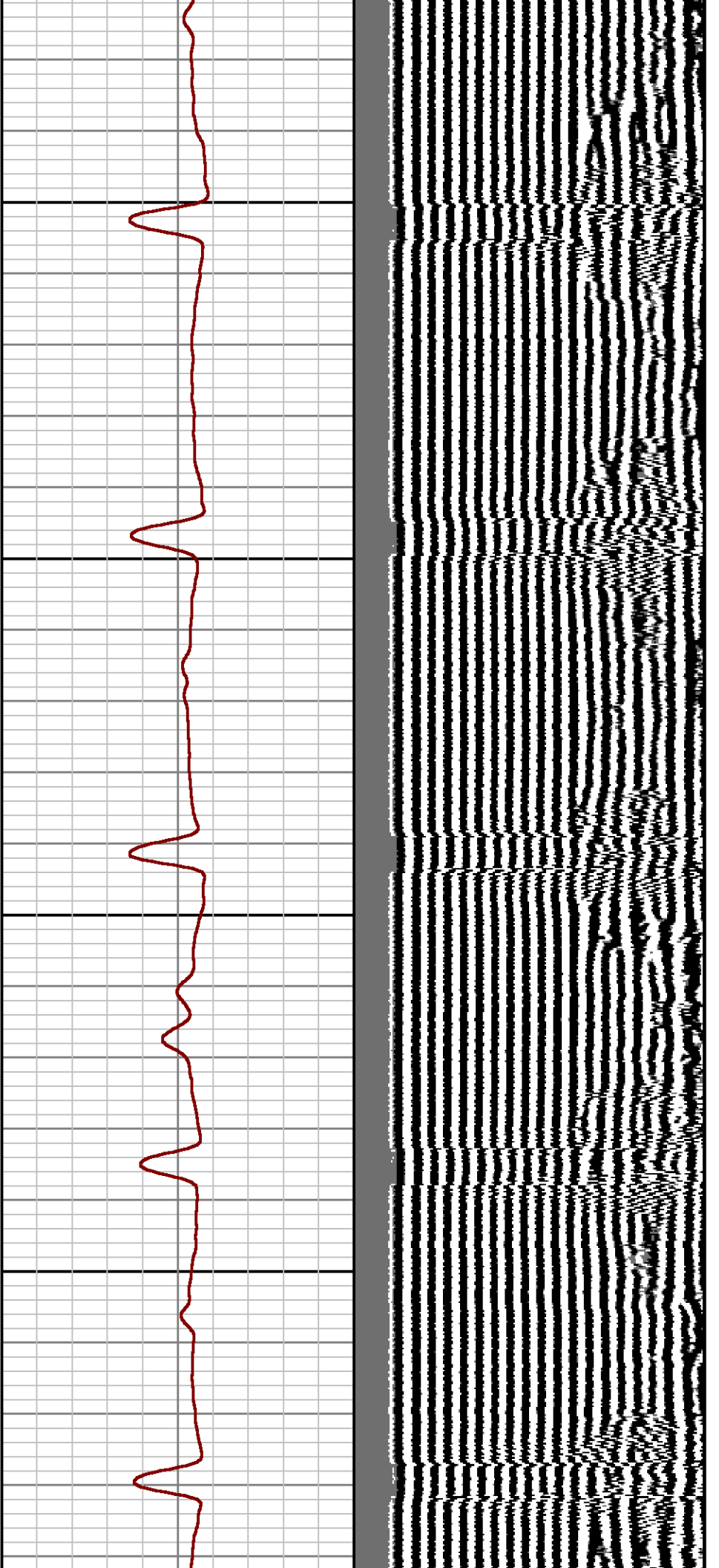
Interval : 0.00 - 8533.00 feet UP

Created : 11/22/2013 8:36:58 AM



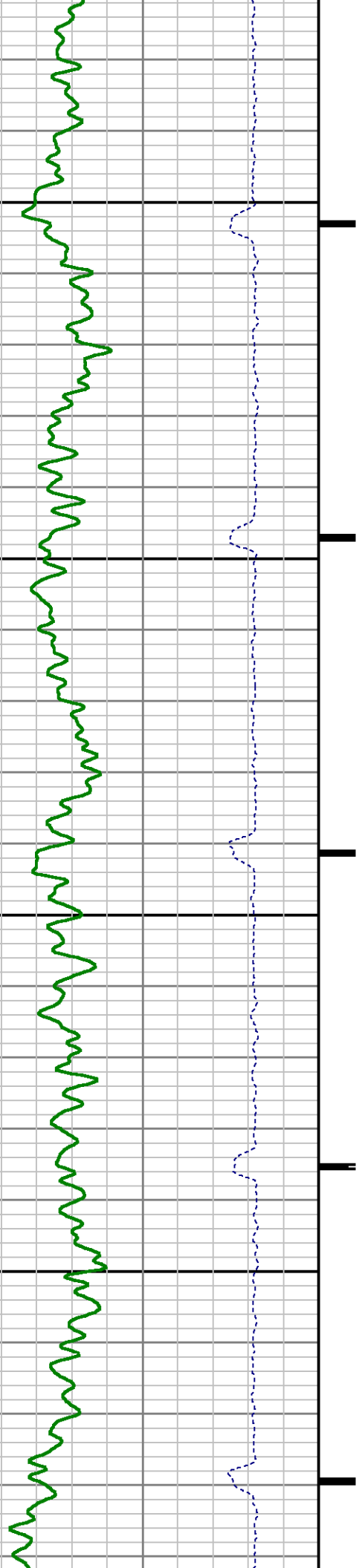


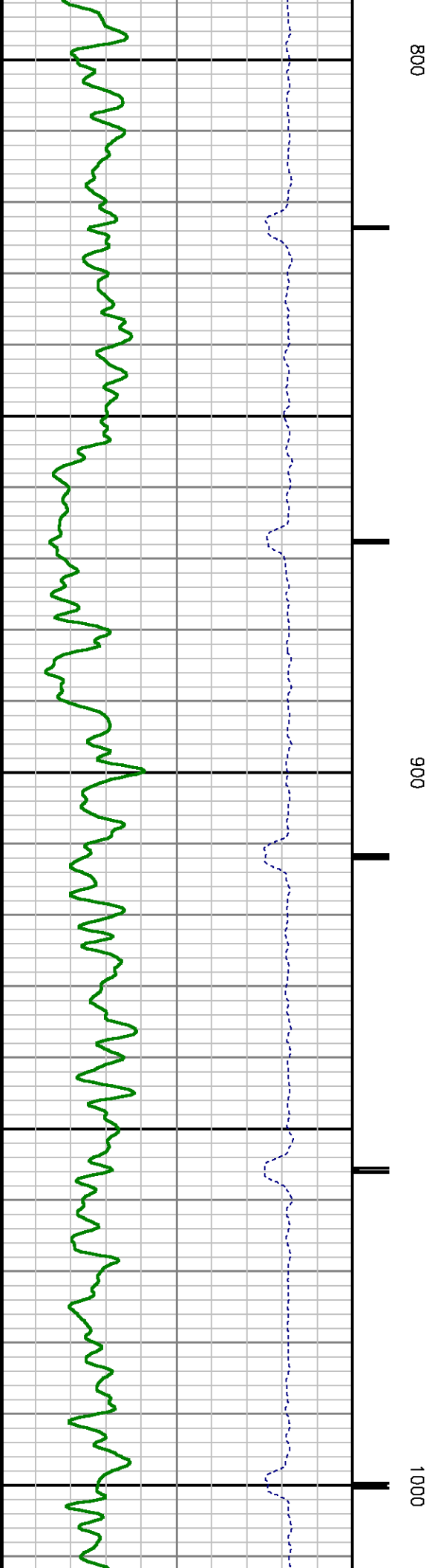
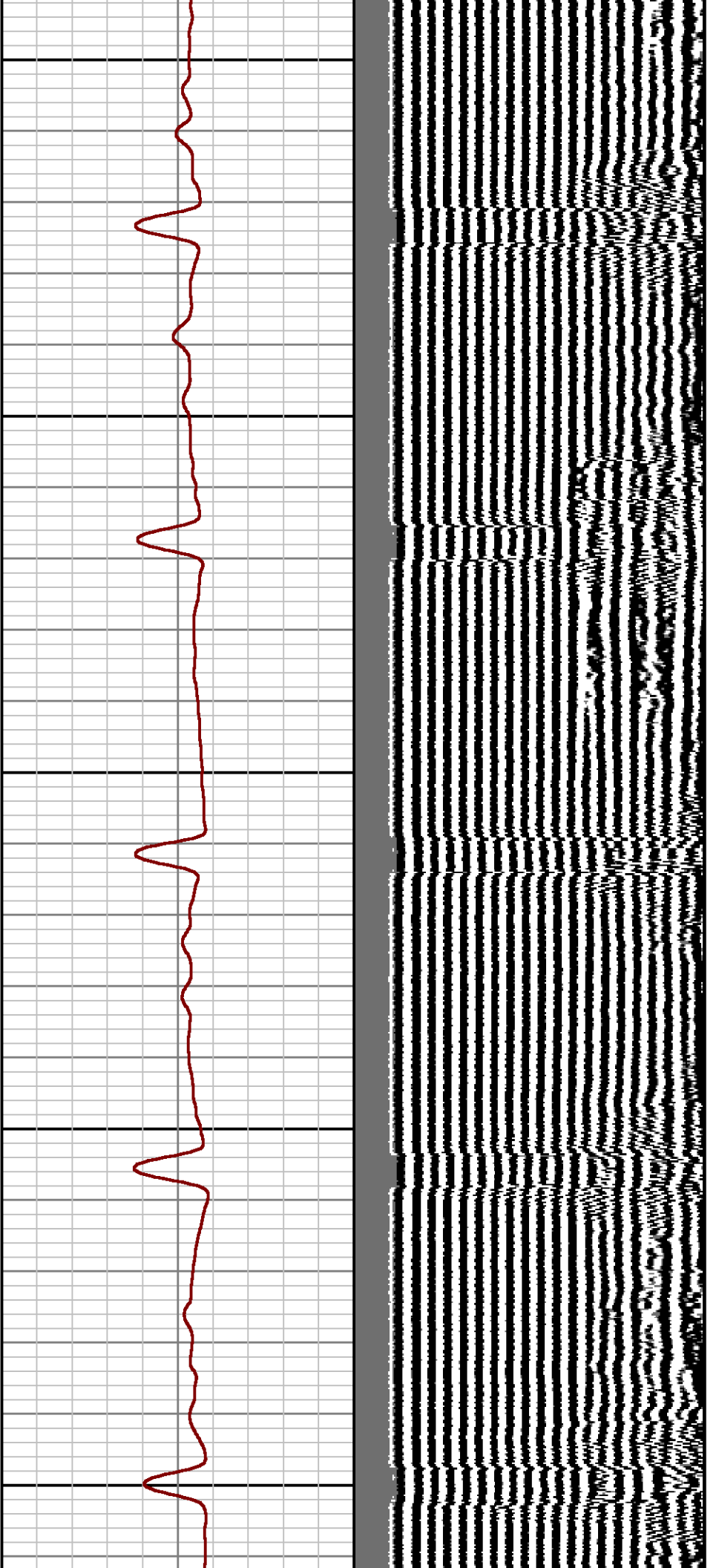




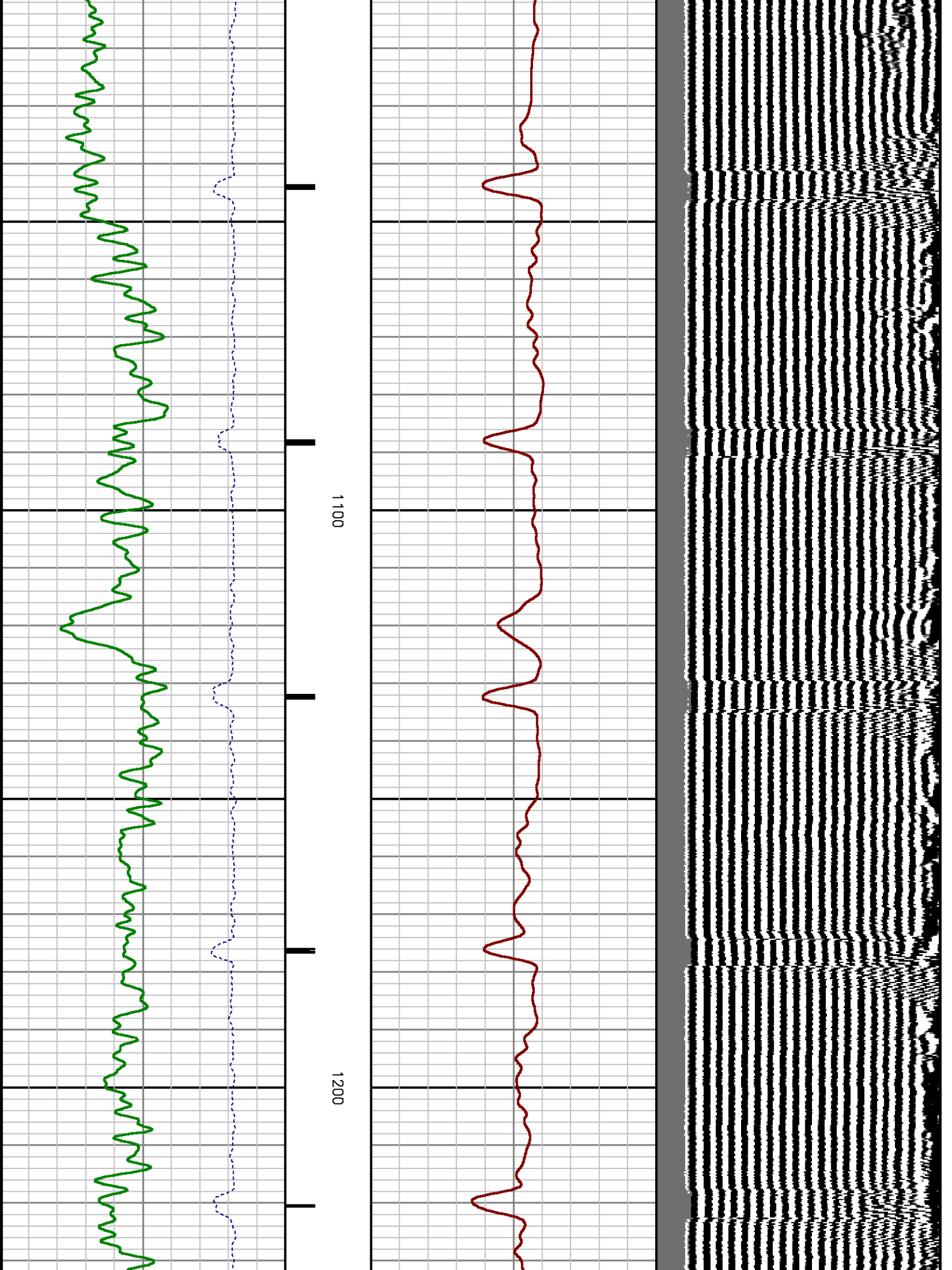
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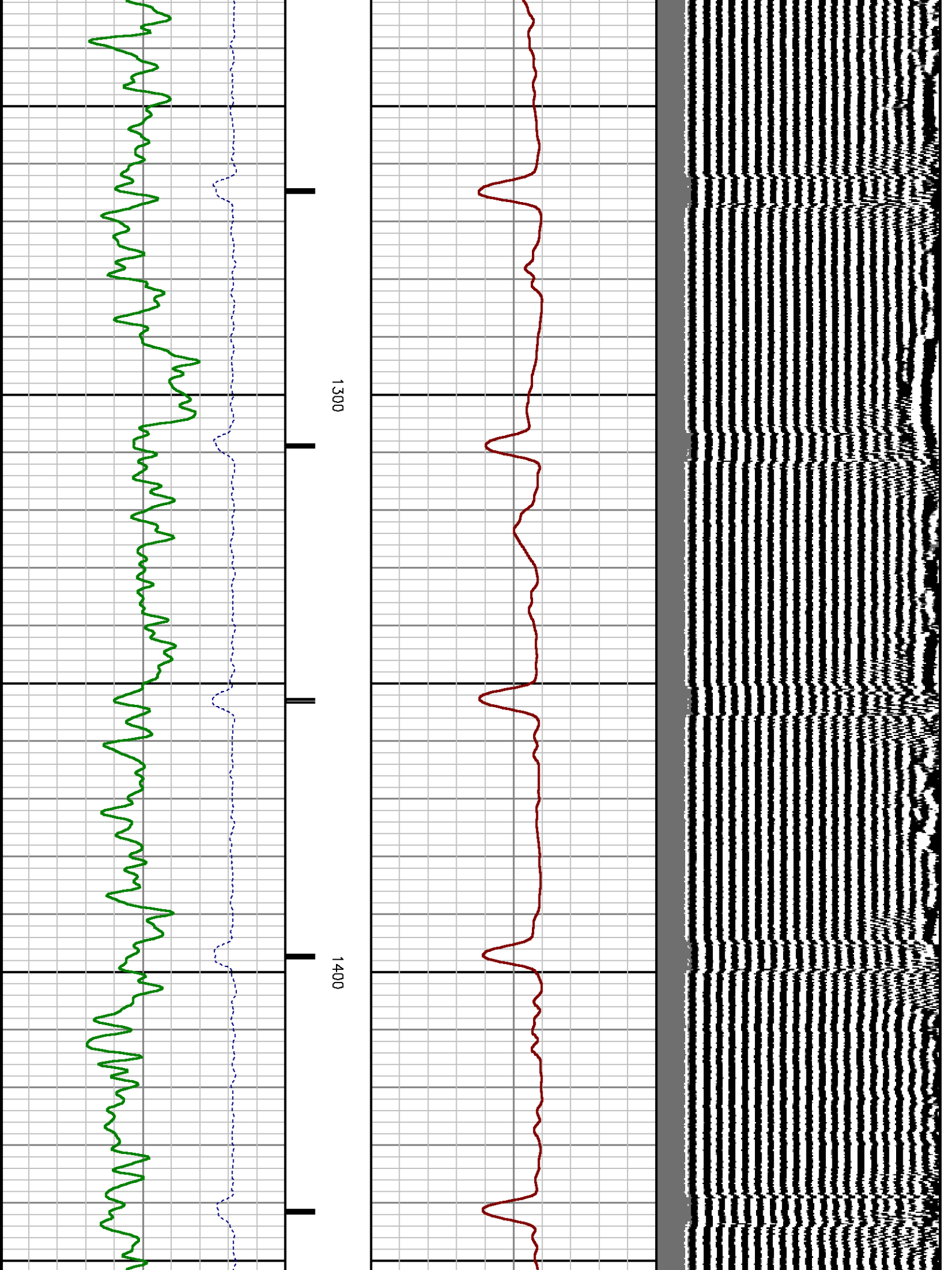


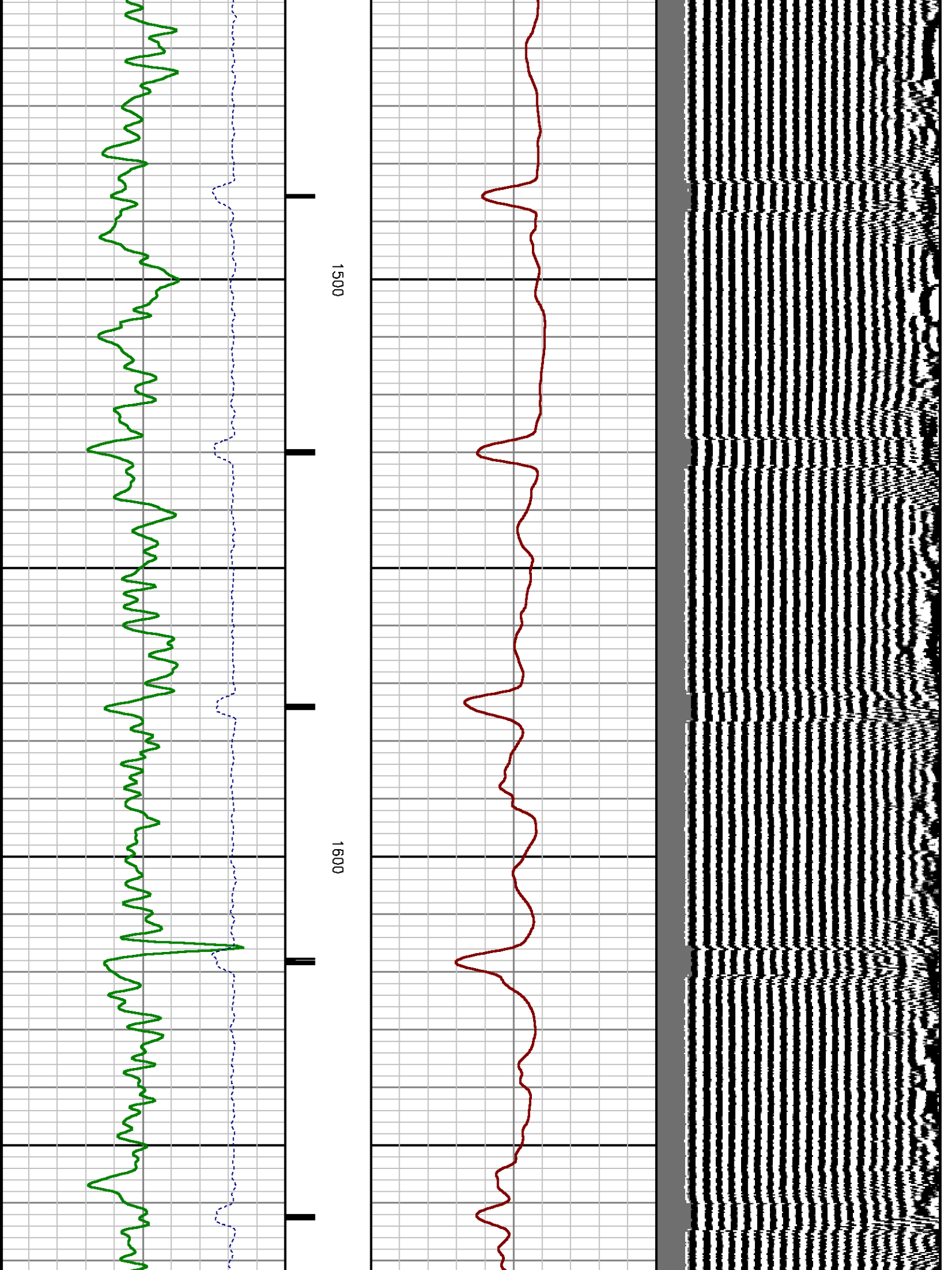


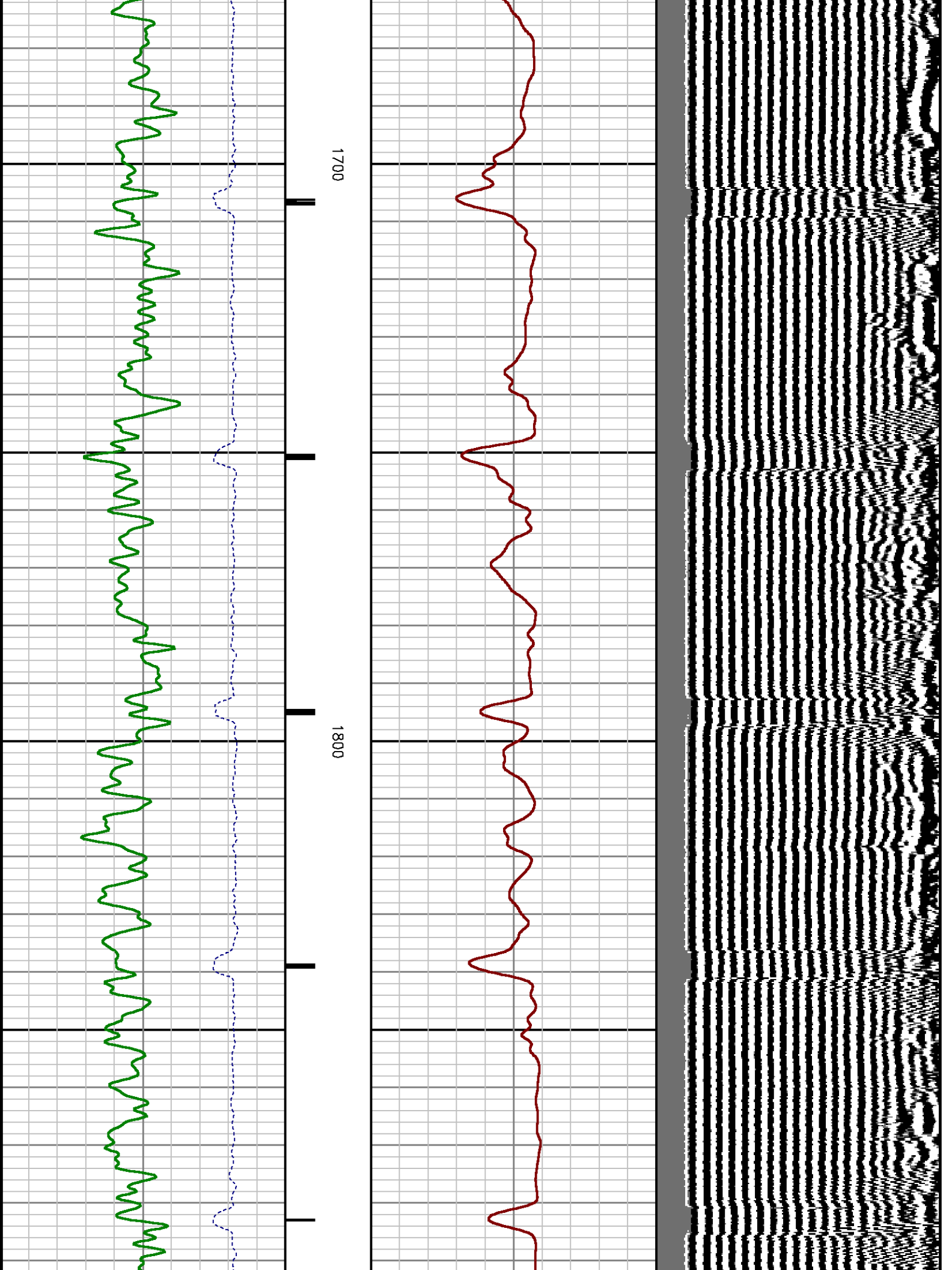


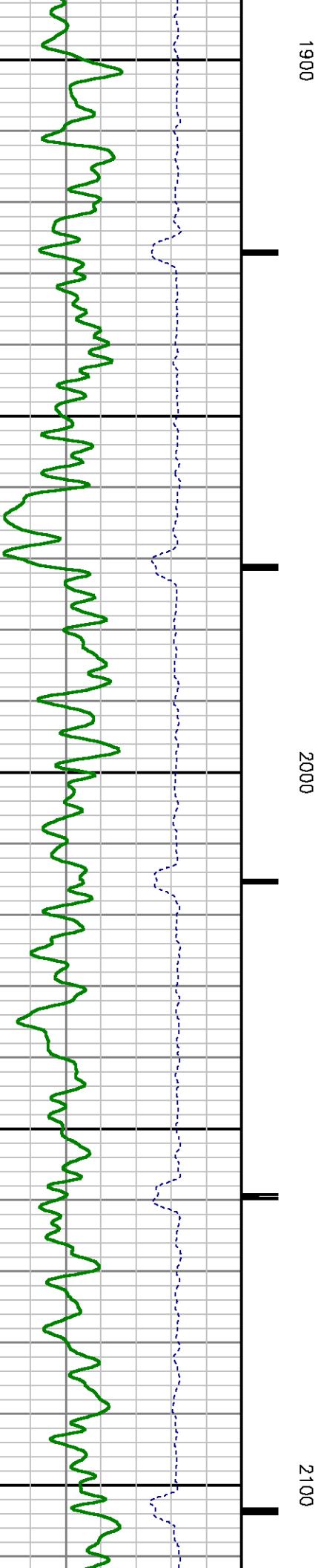
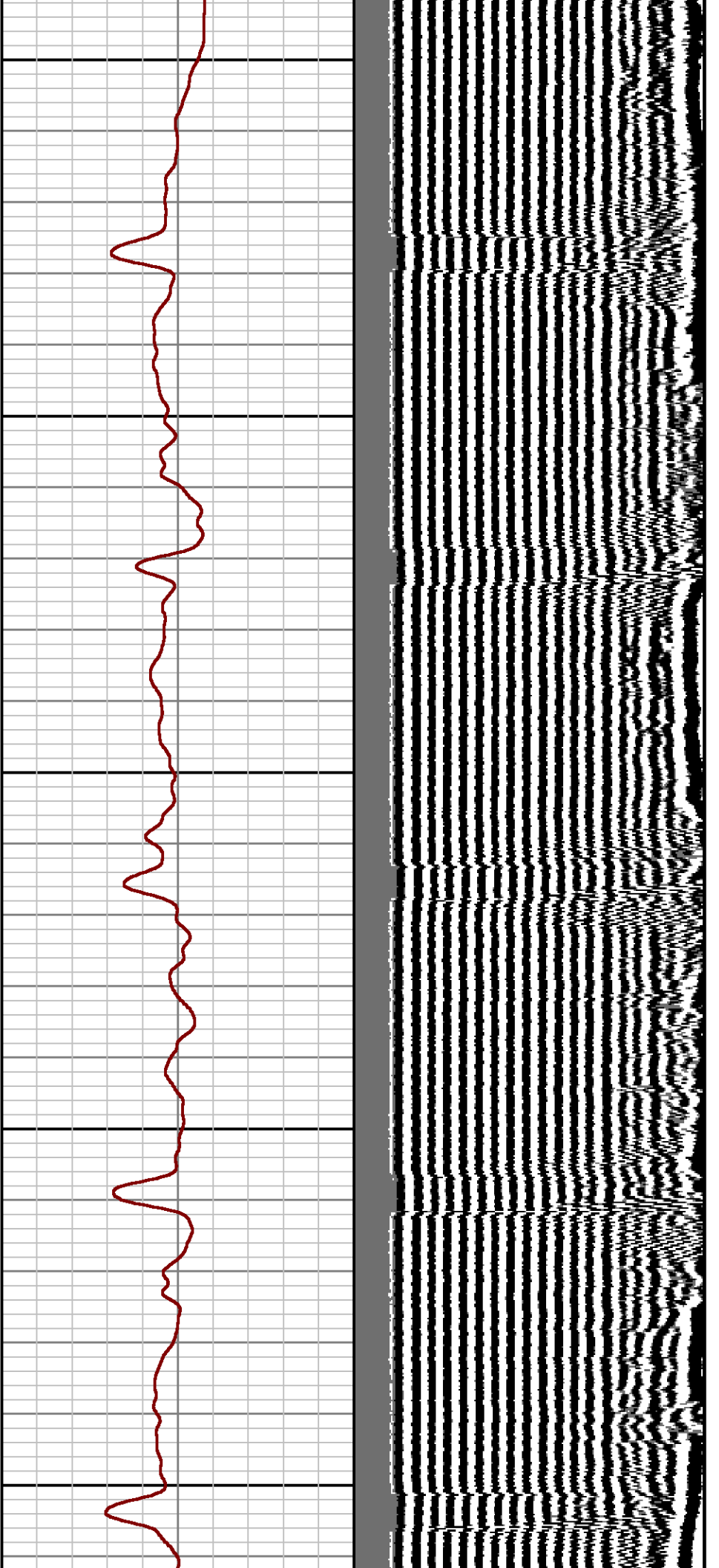


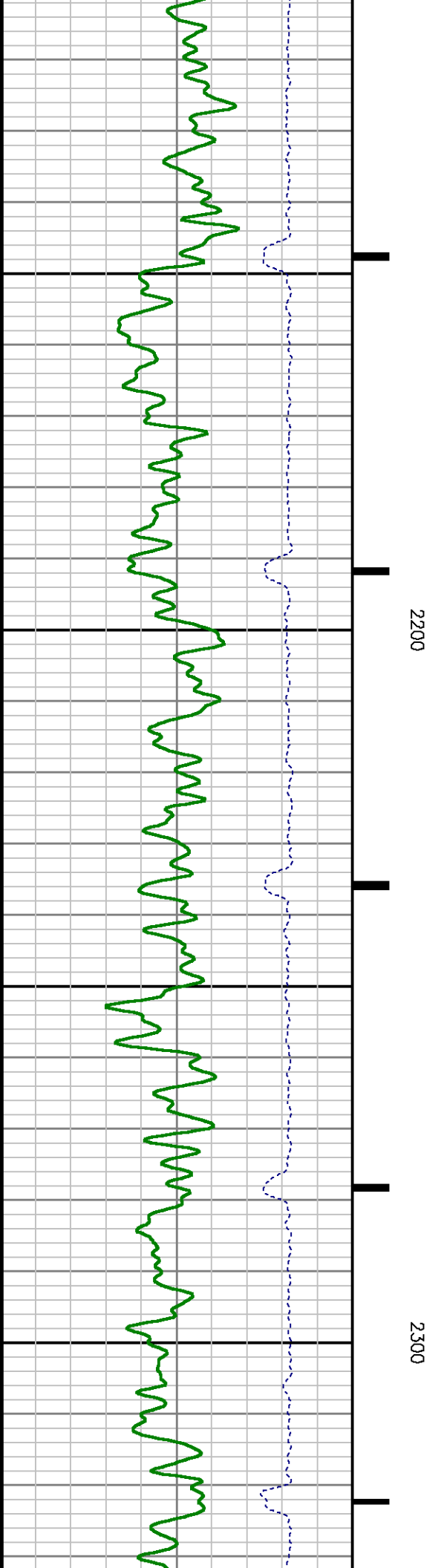
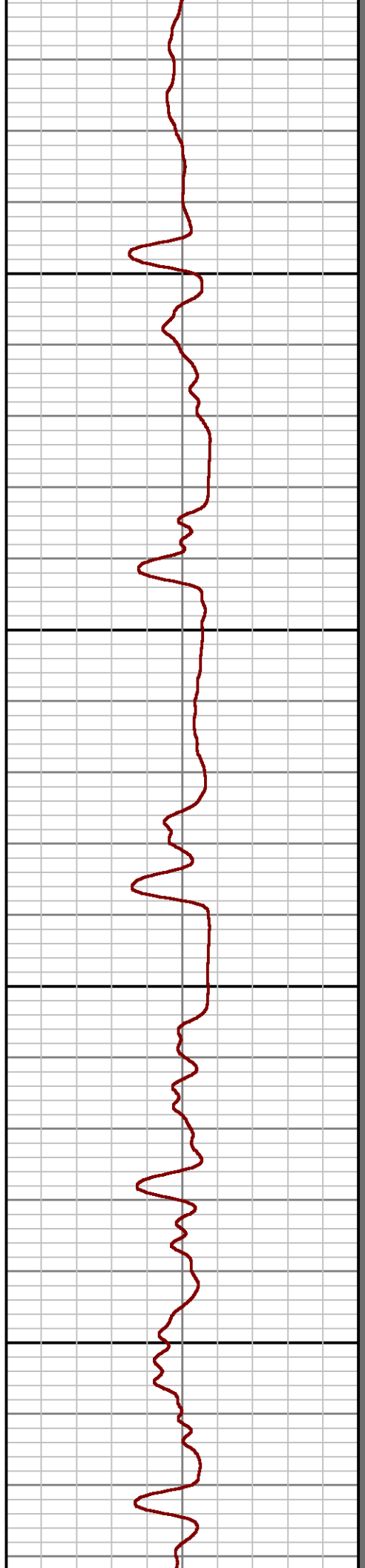
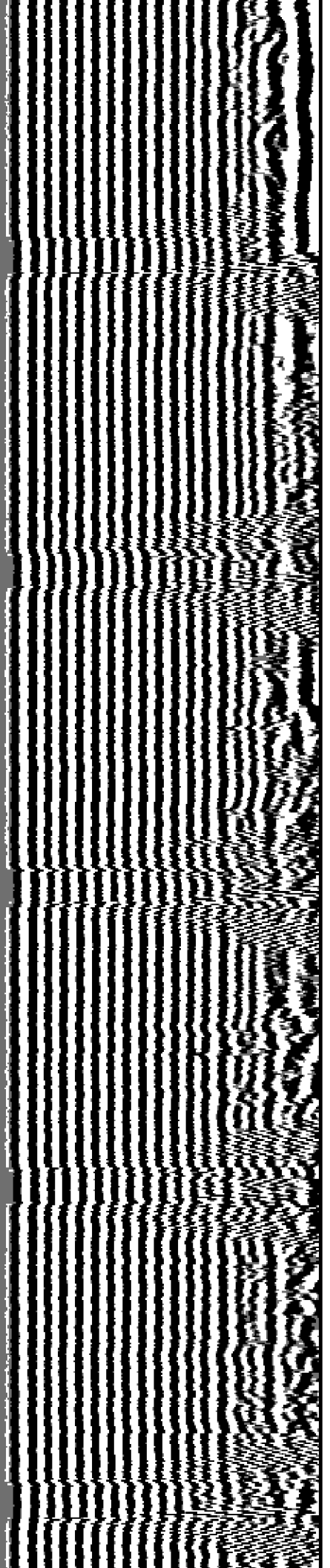


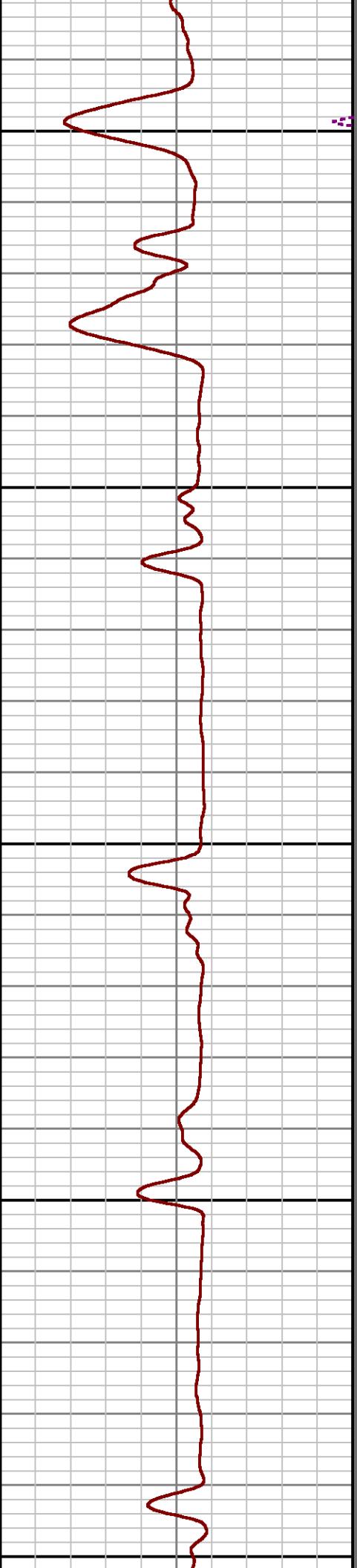
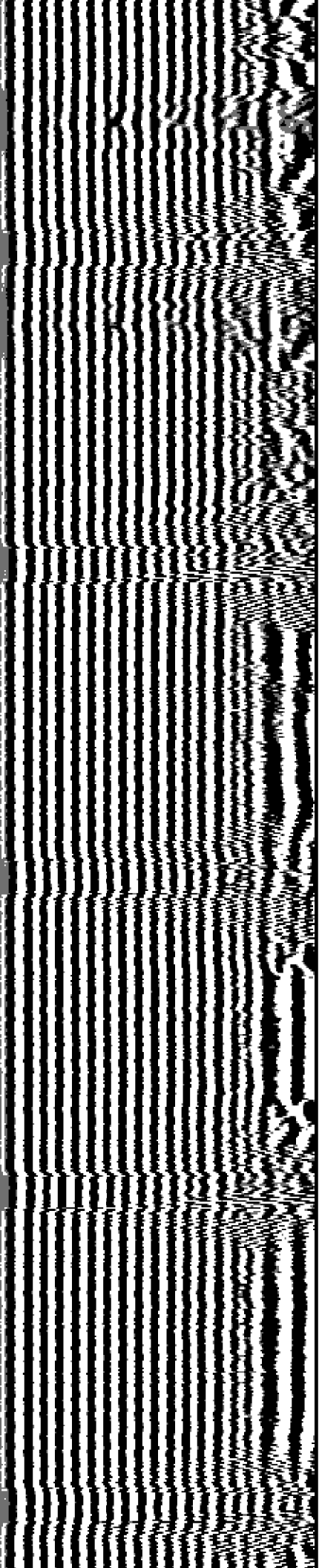






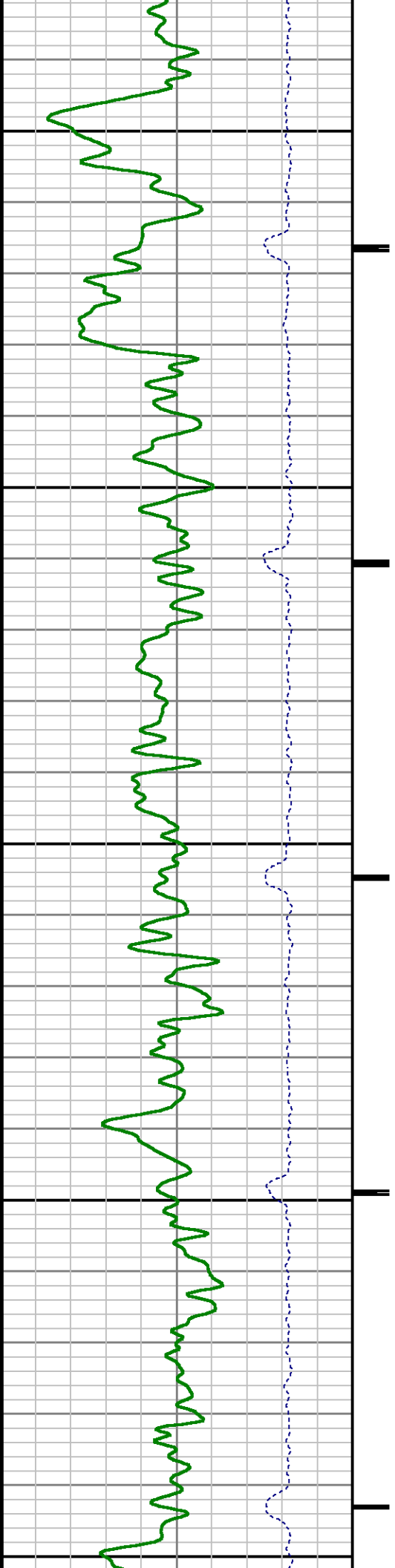




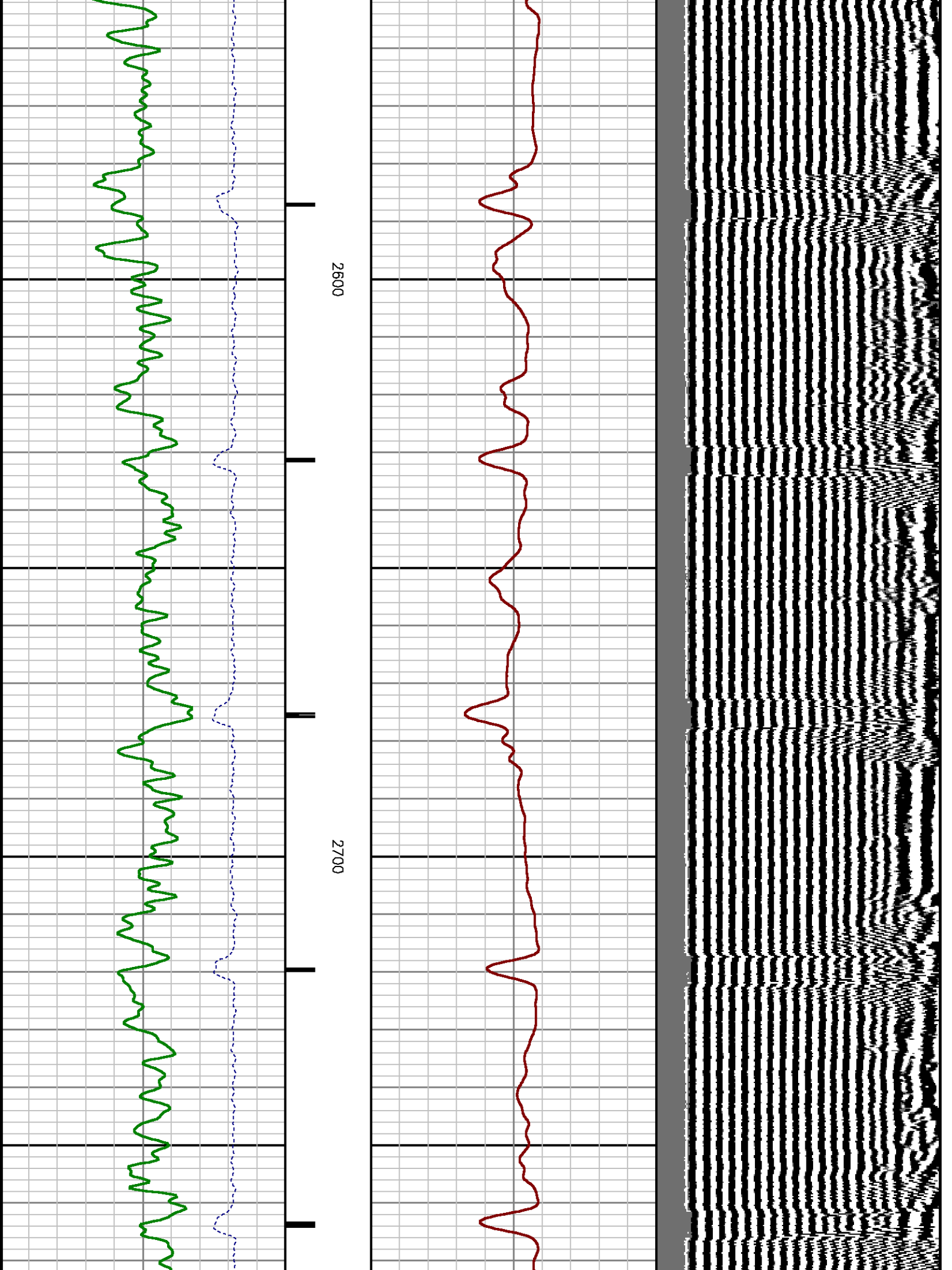


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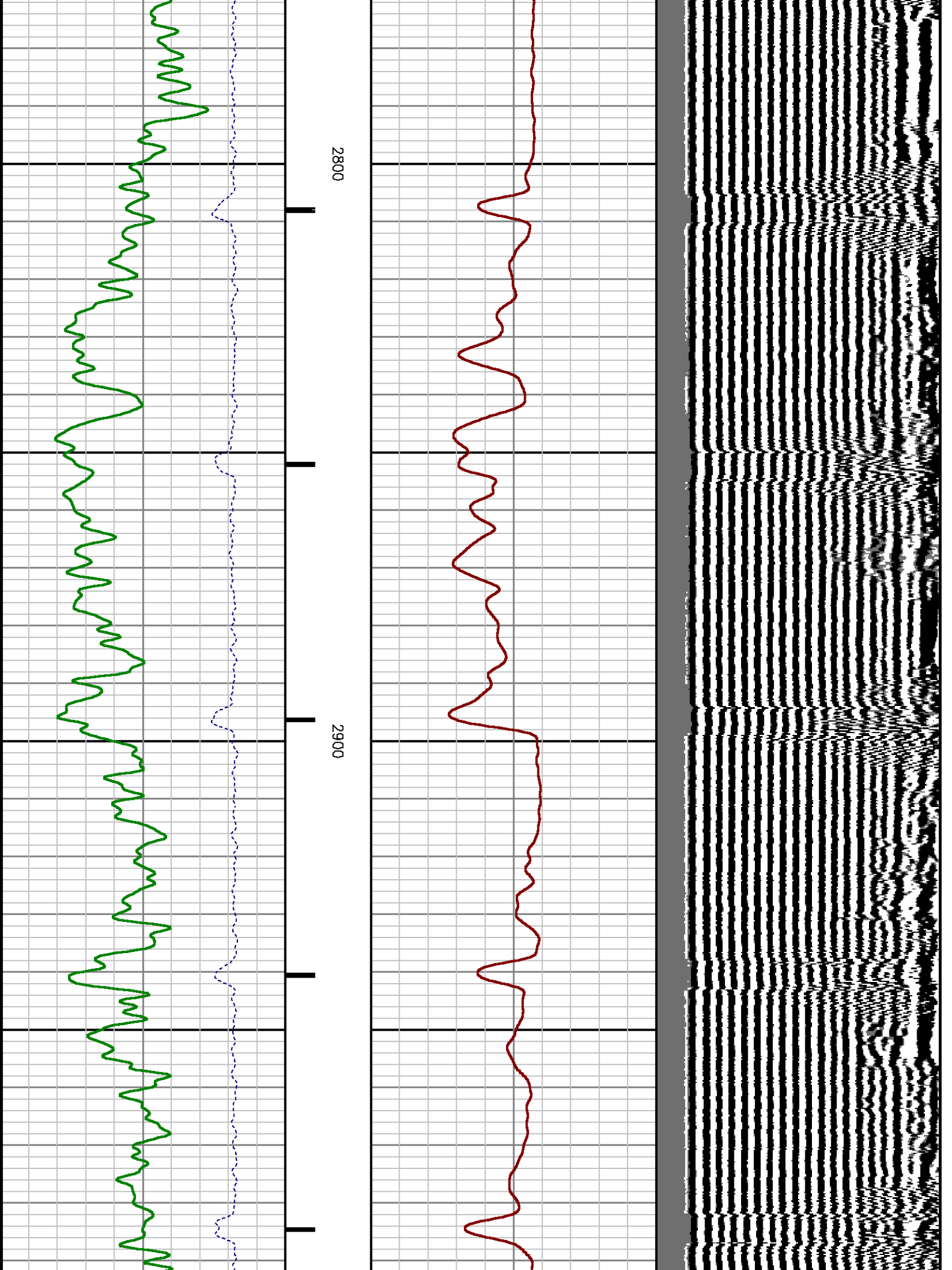
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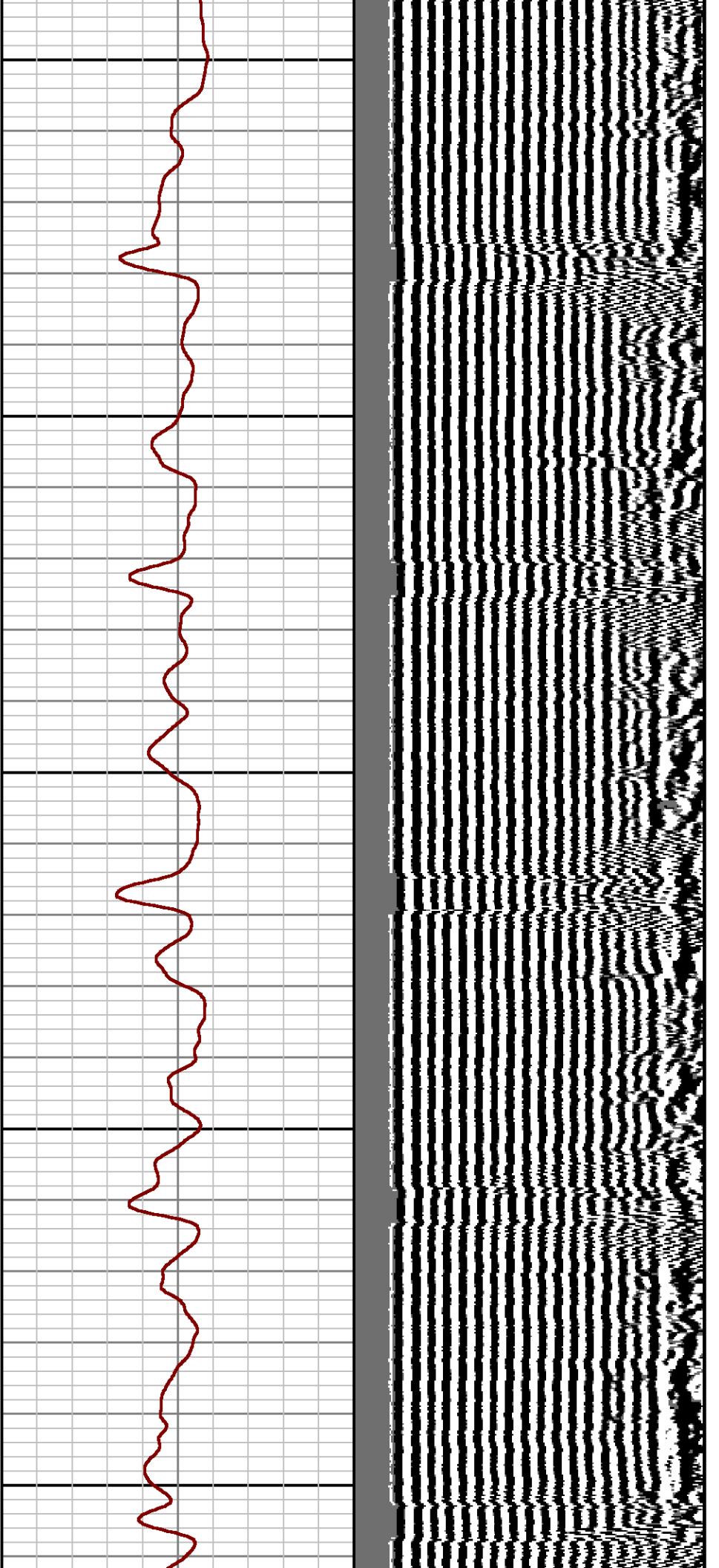








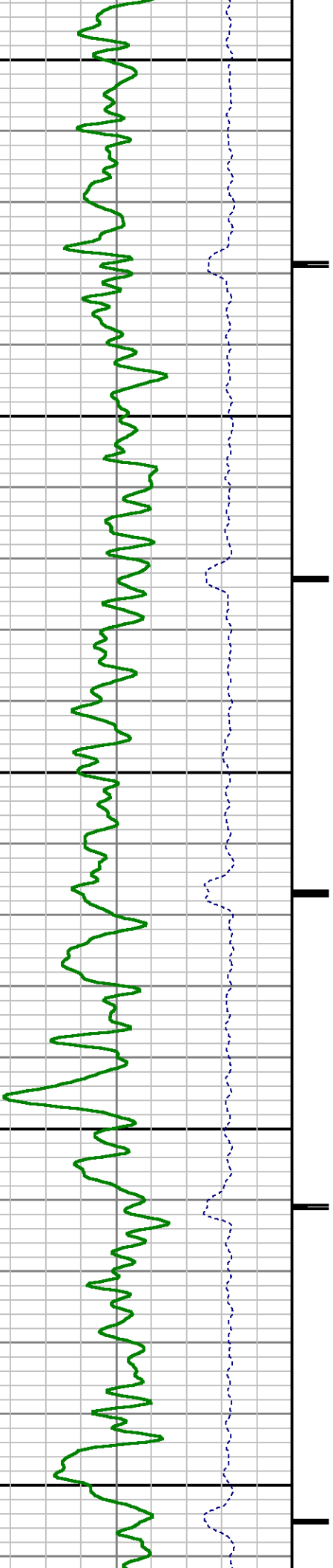


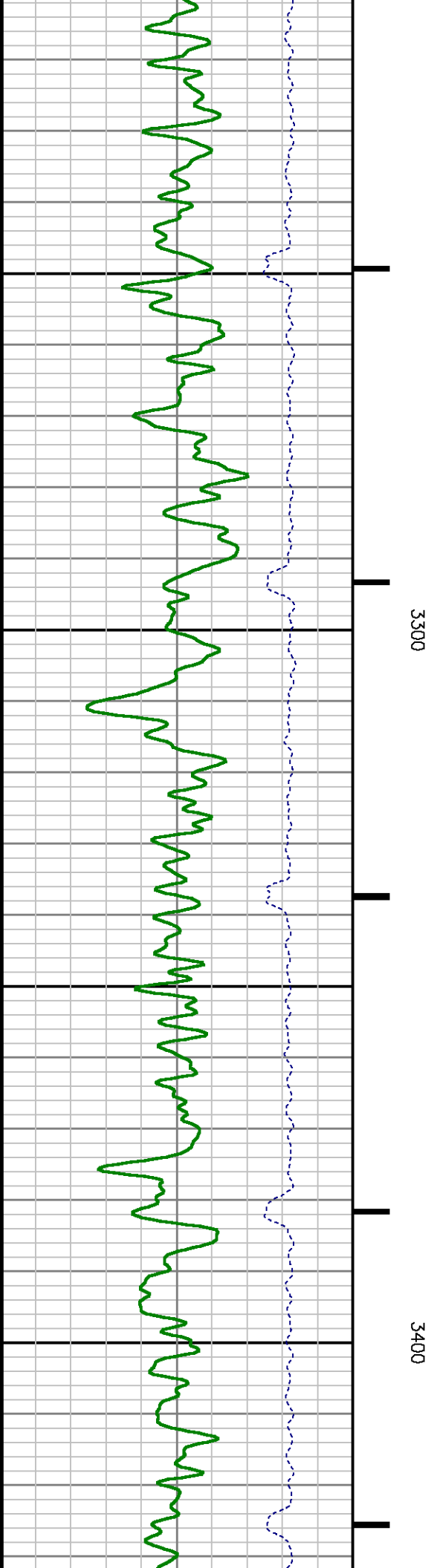
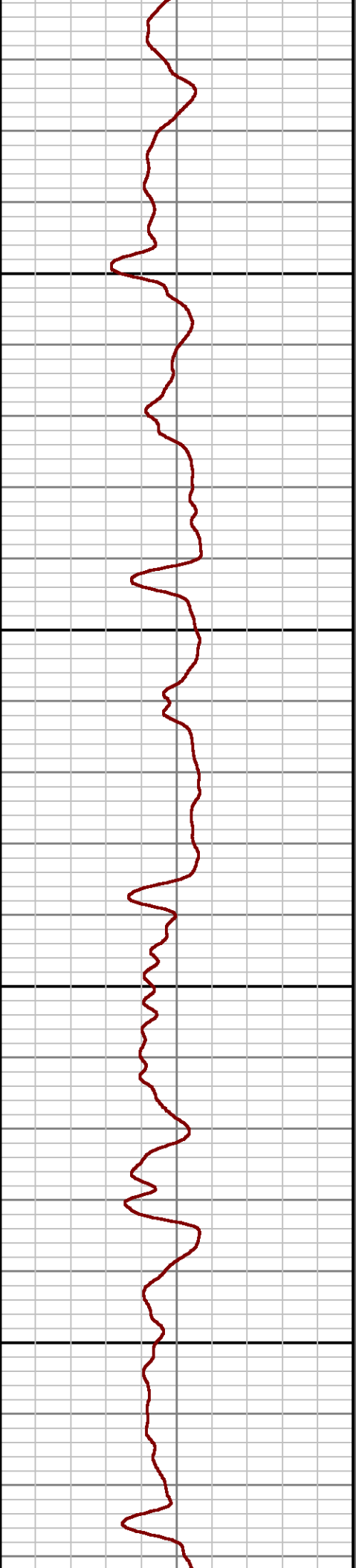
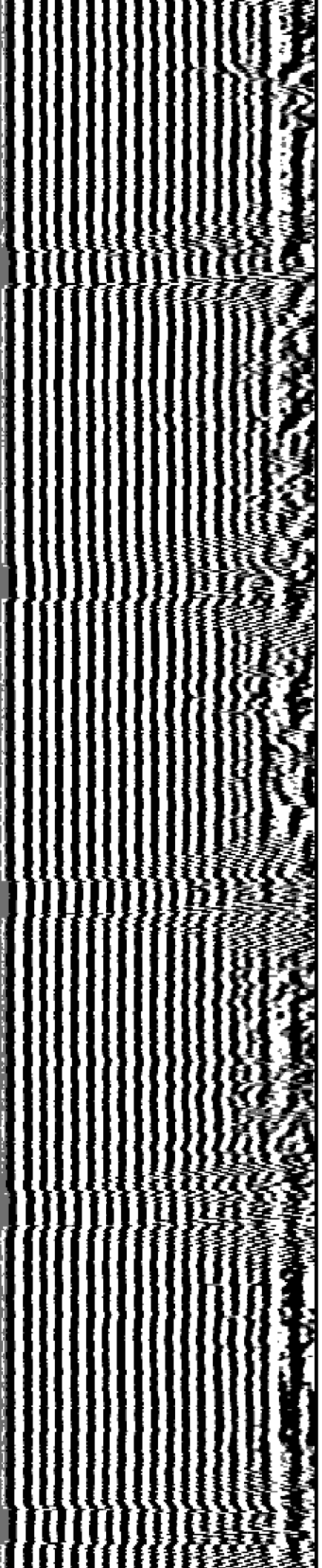


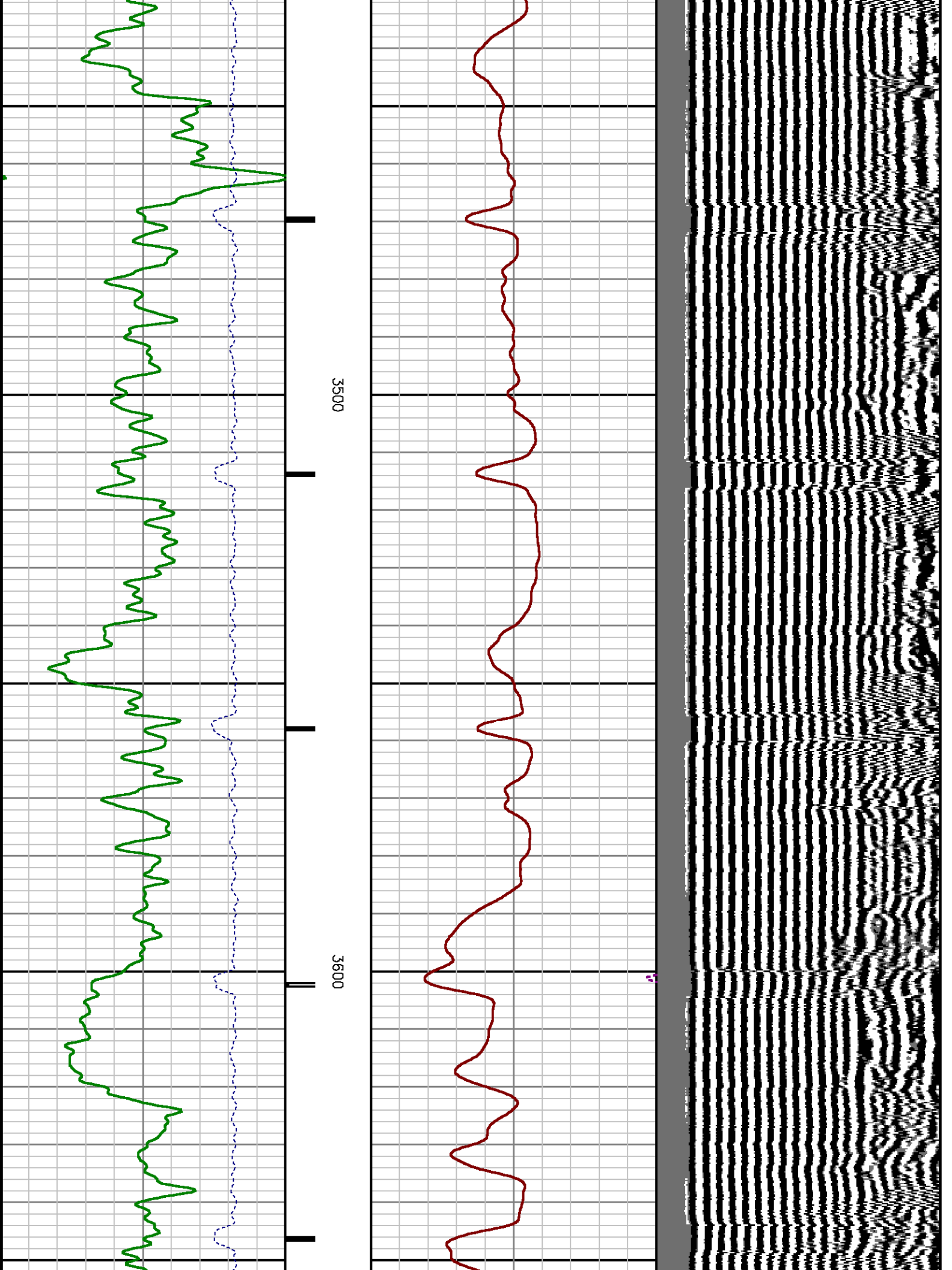
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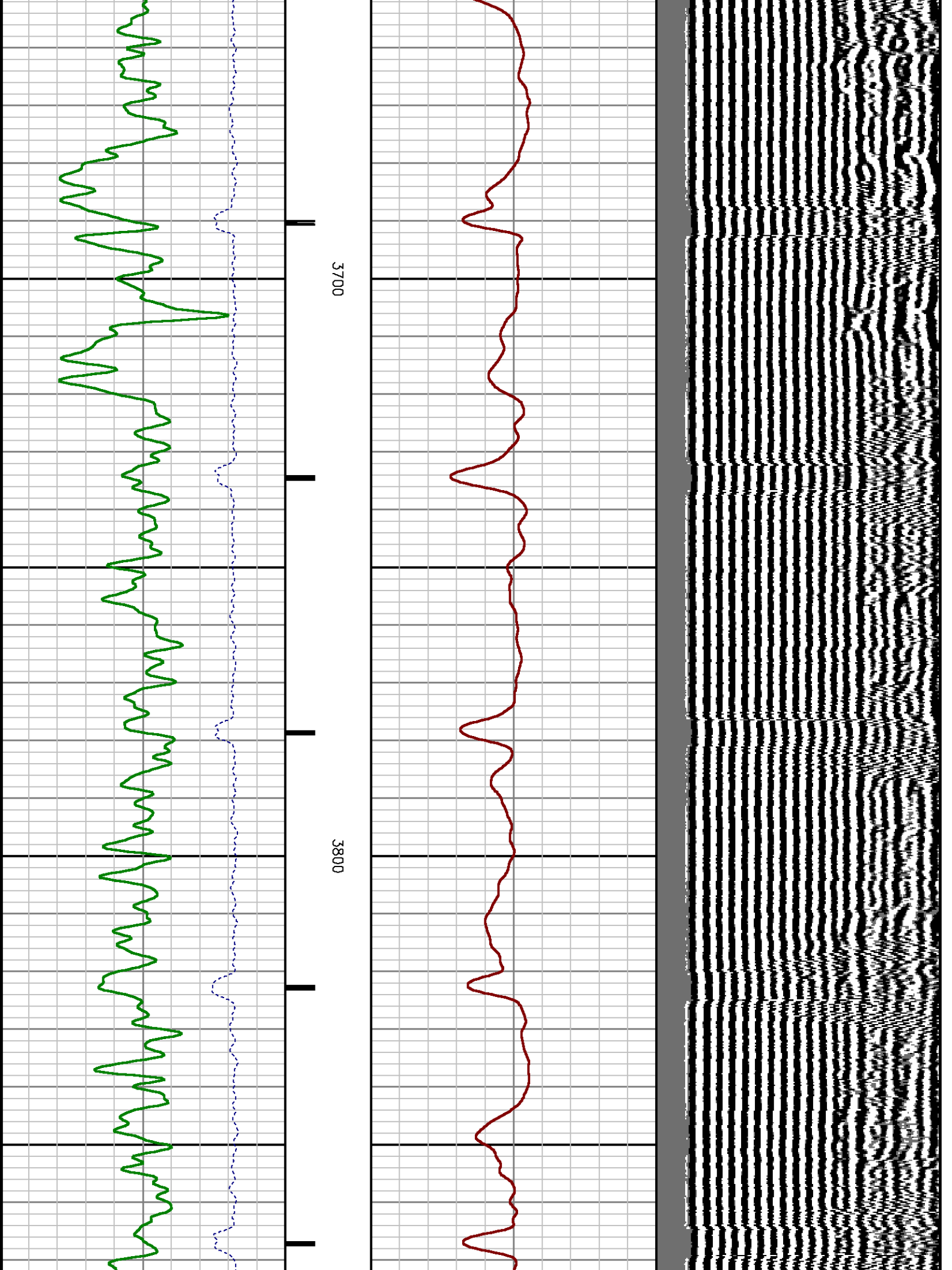
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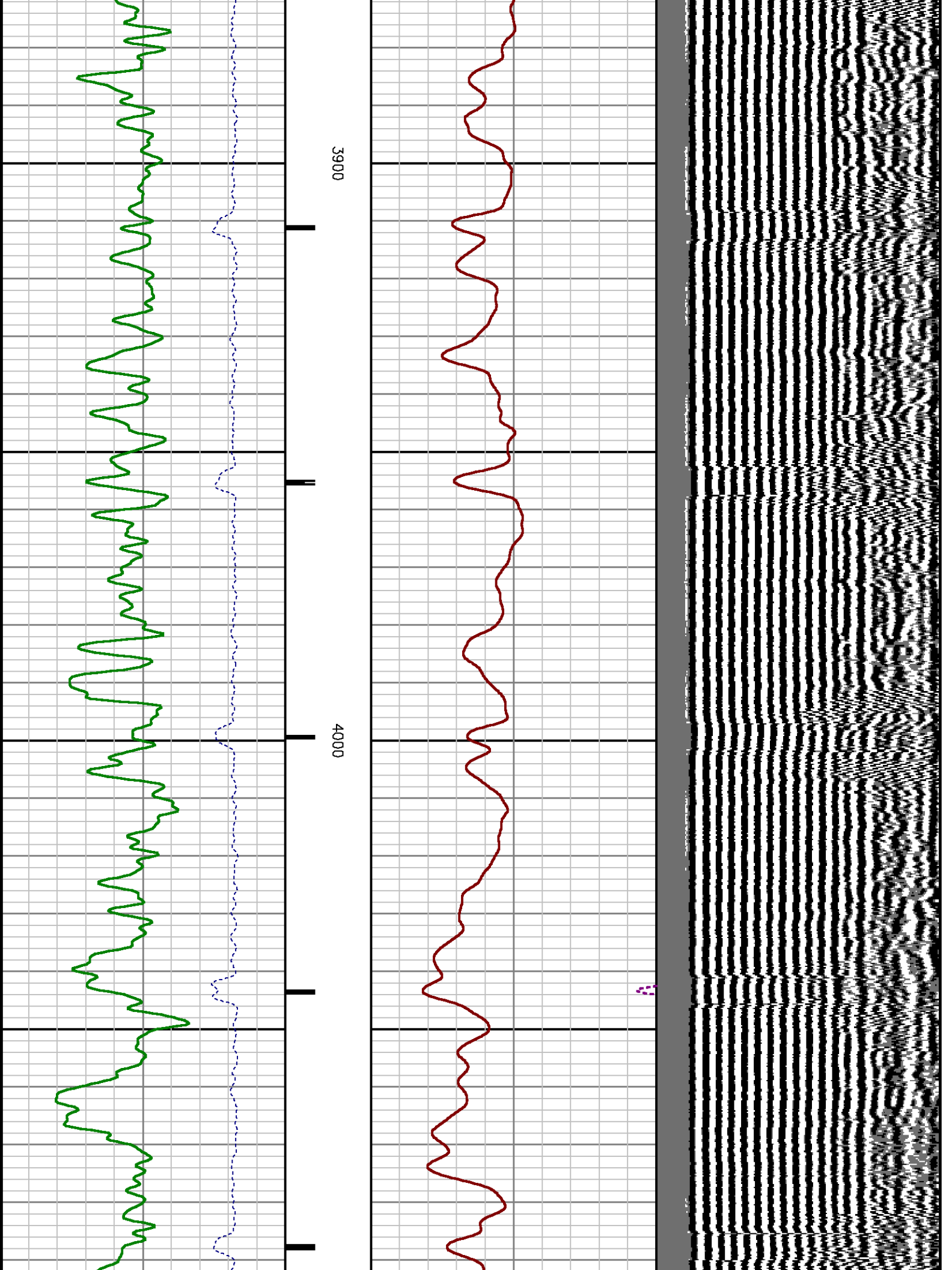


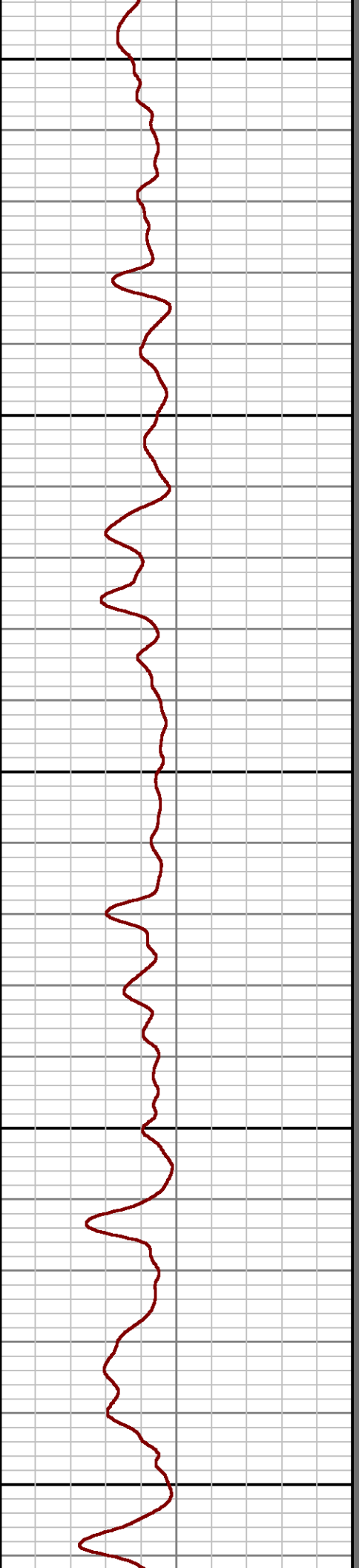
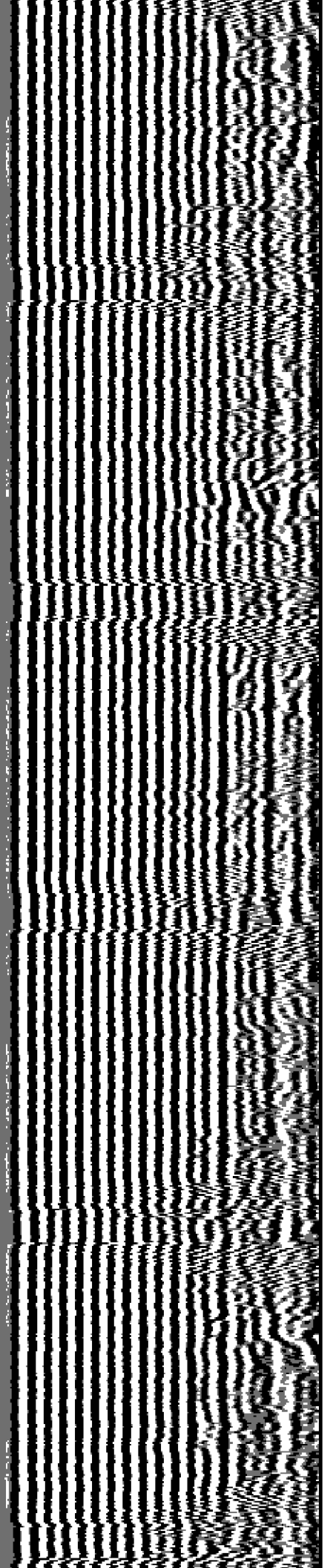








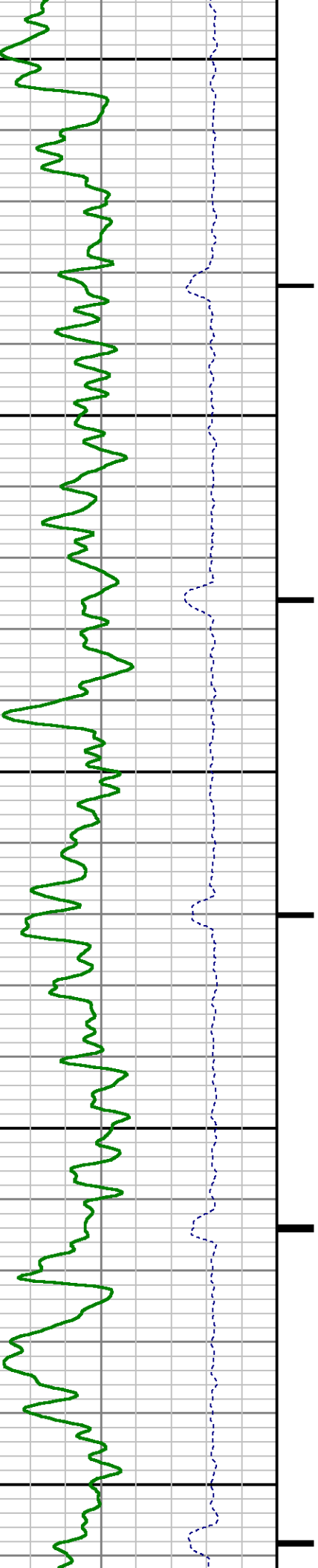




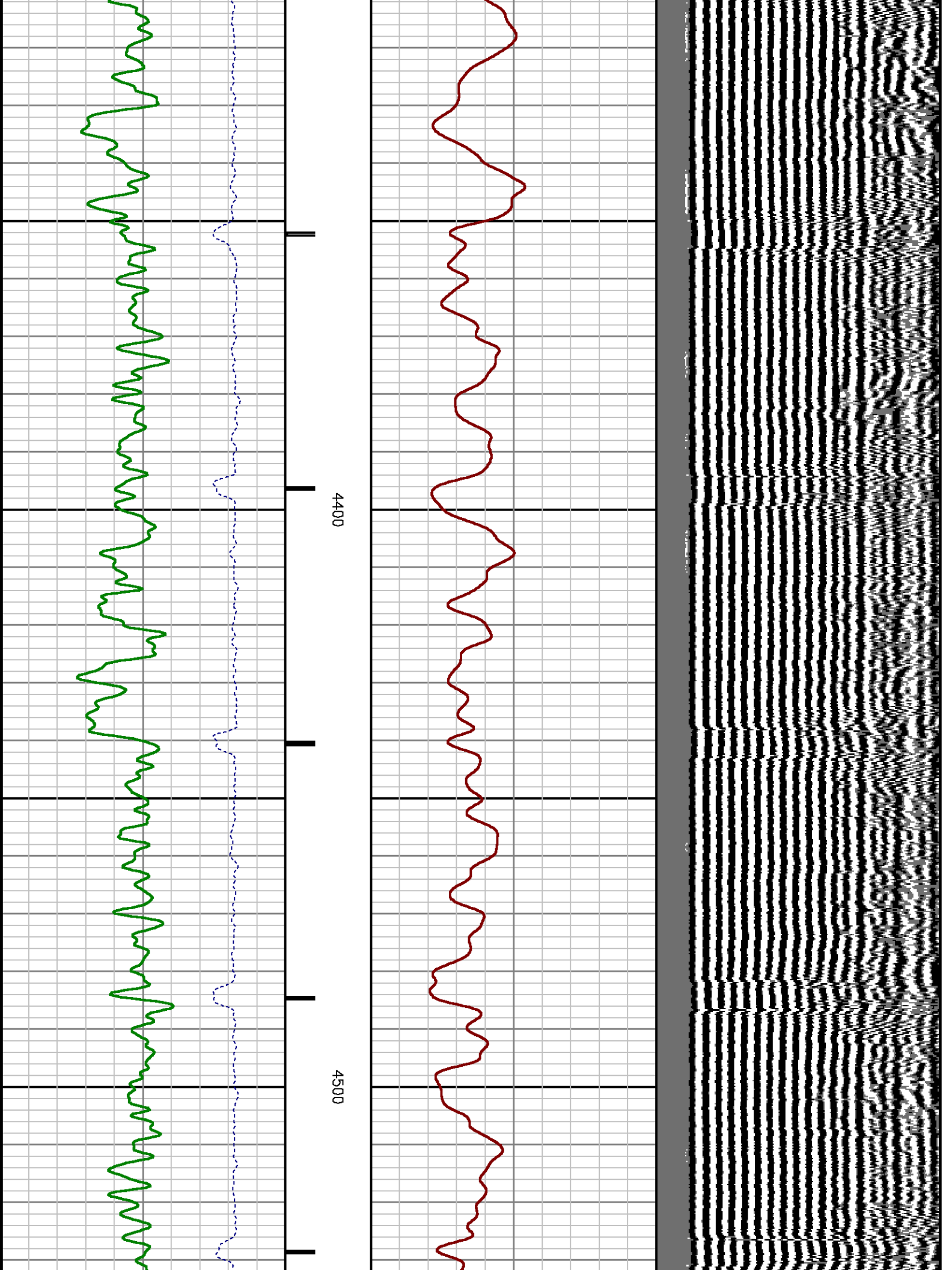
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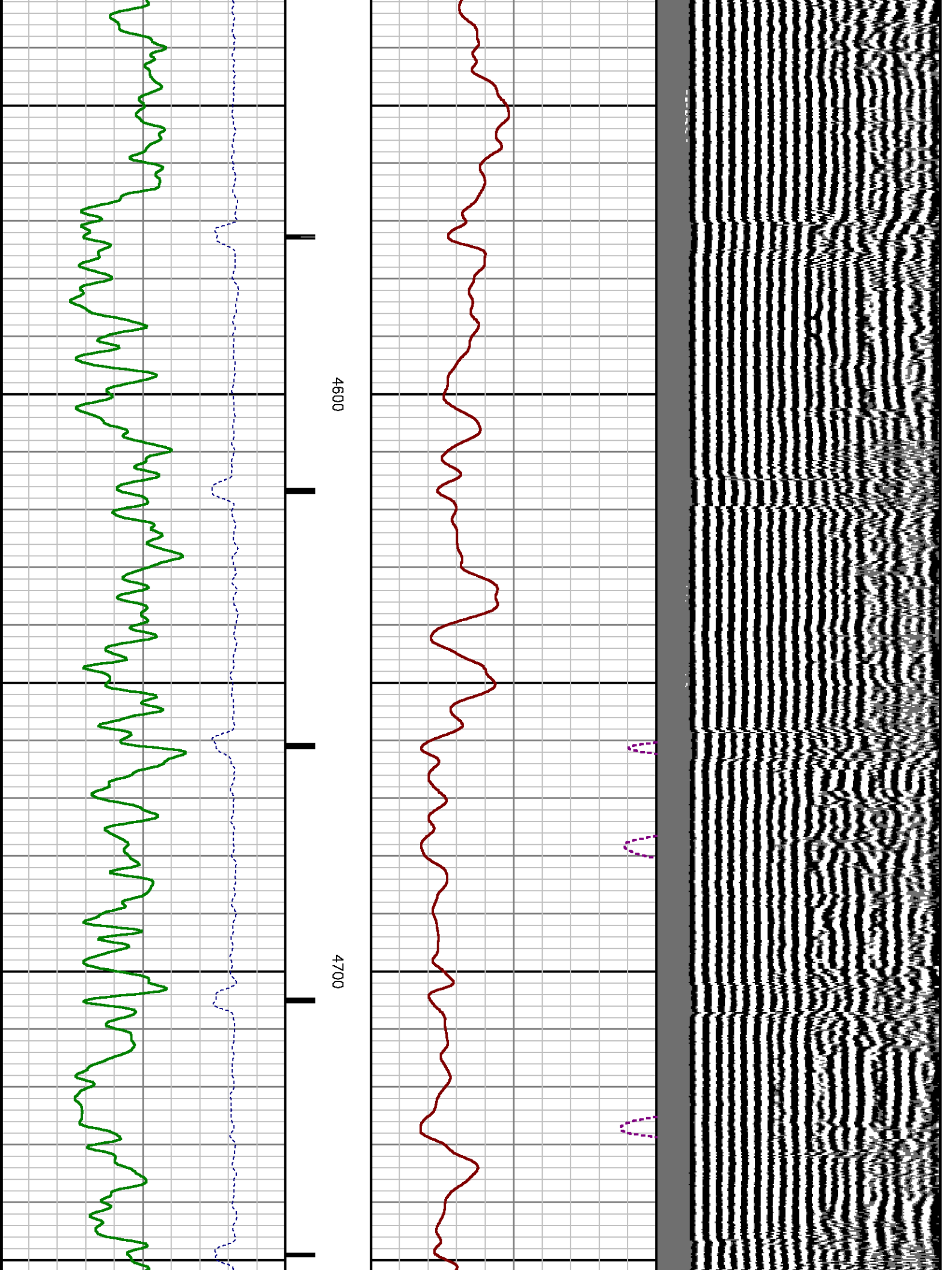
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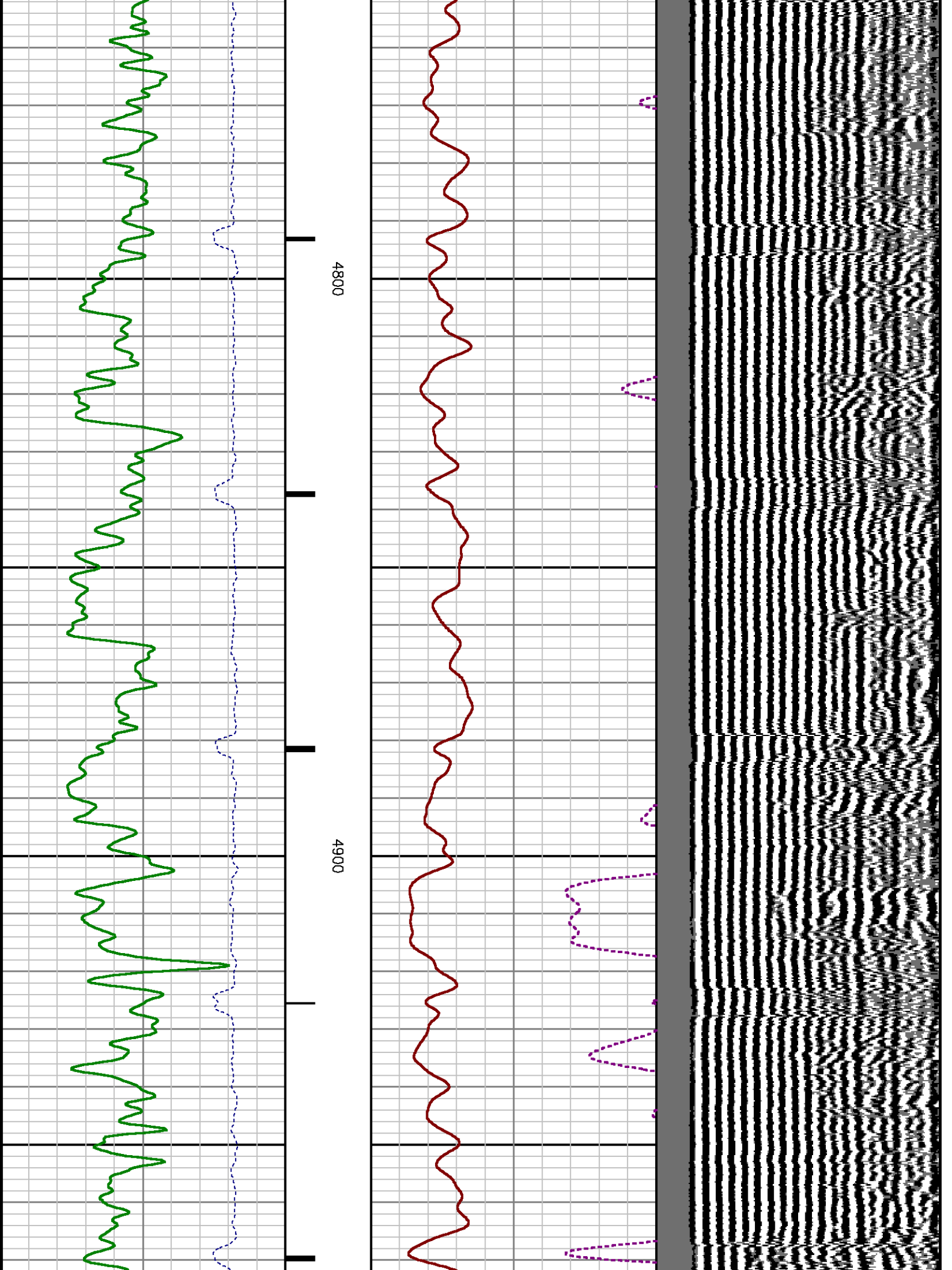
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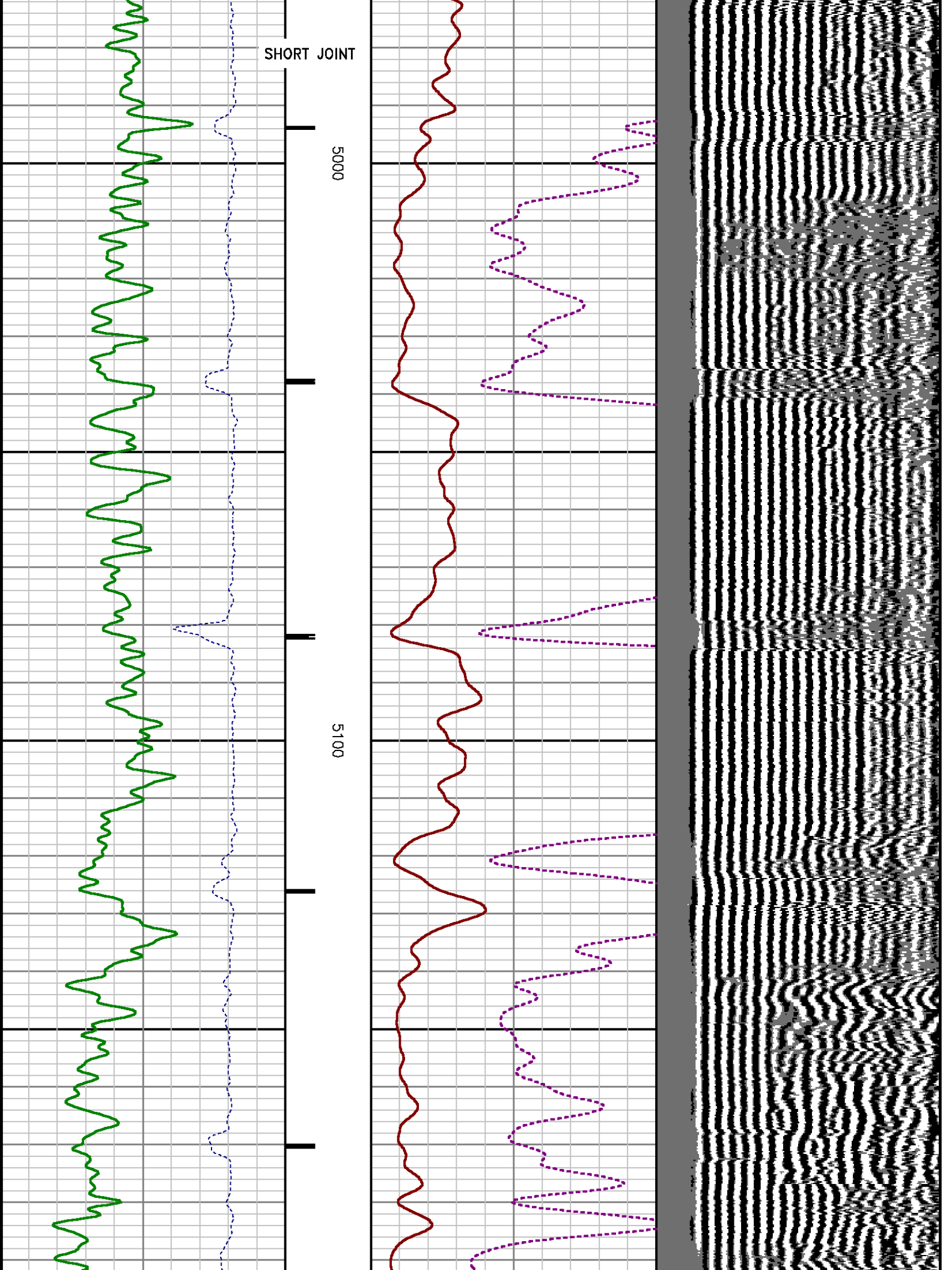


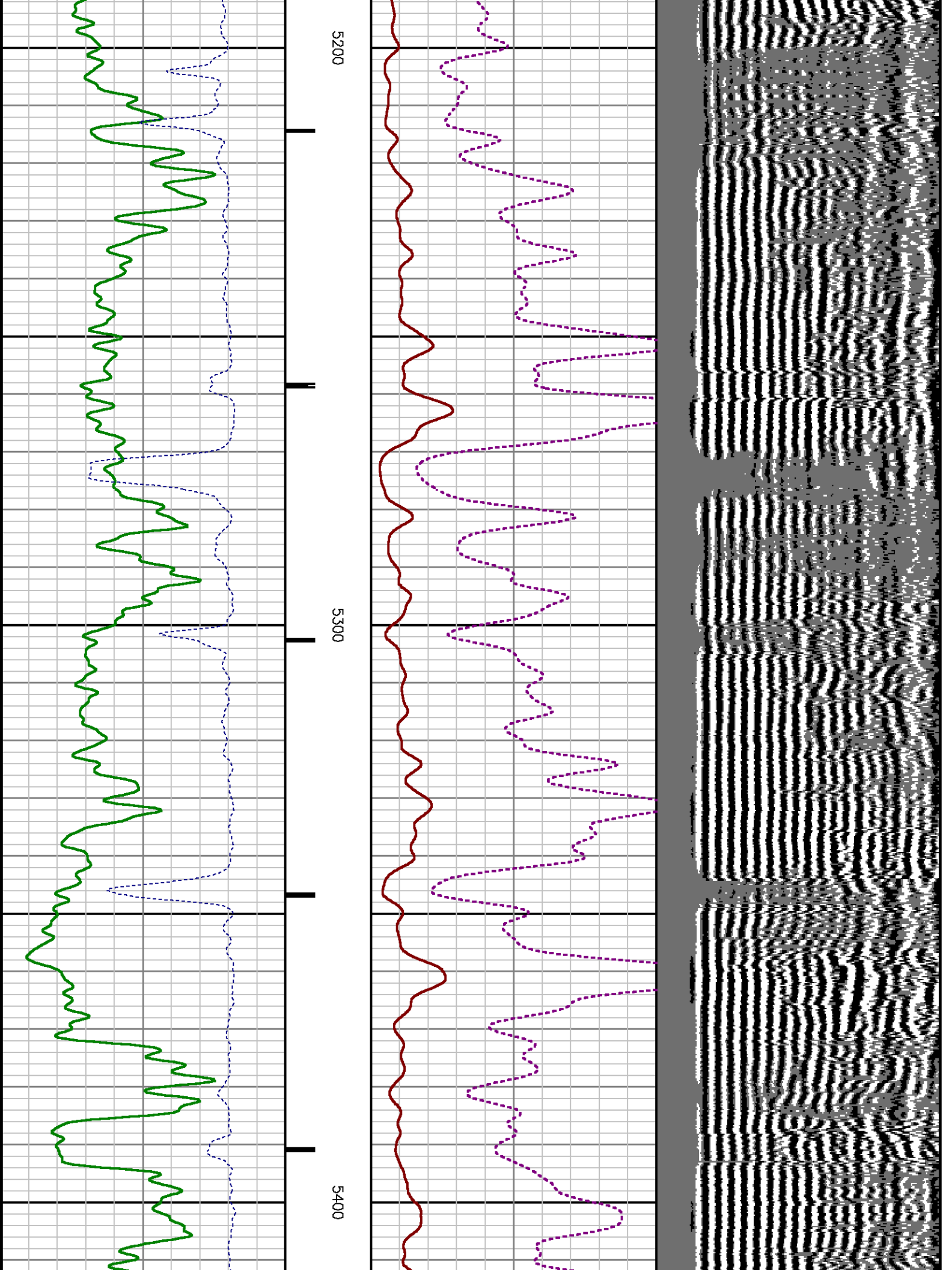




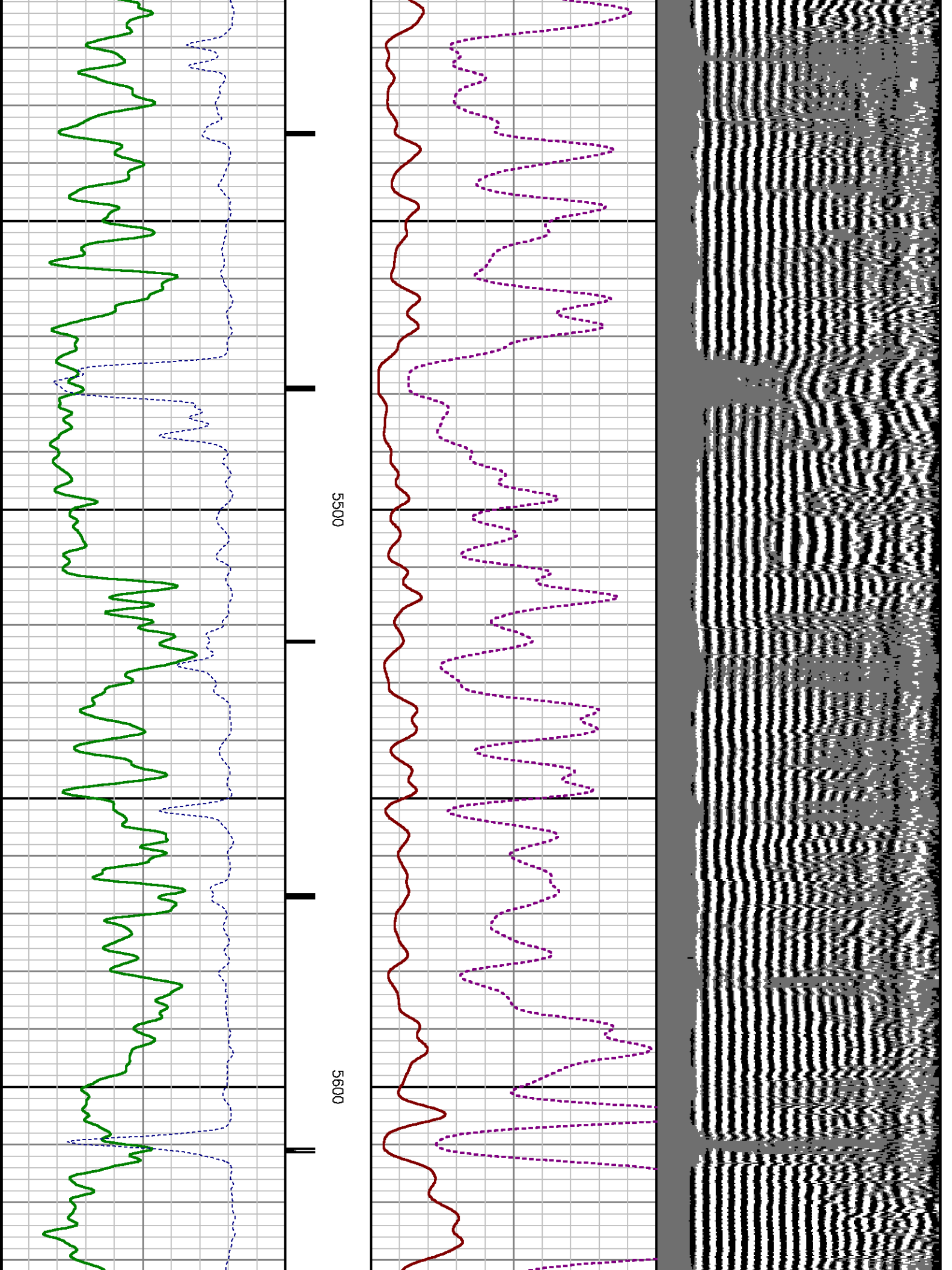


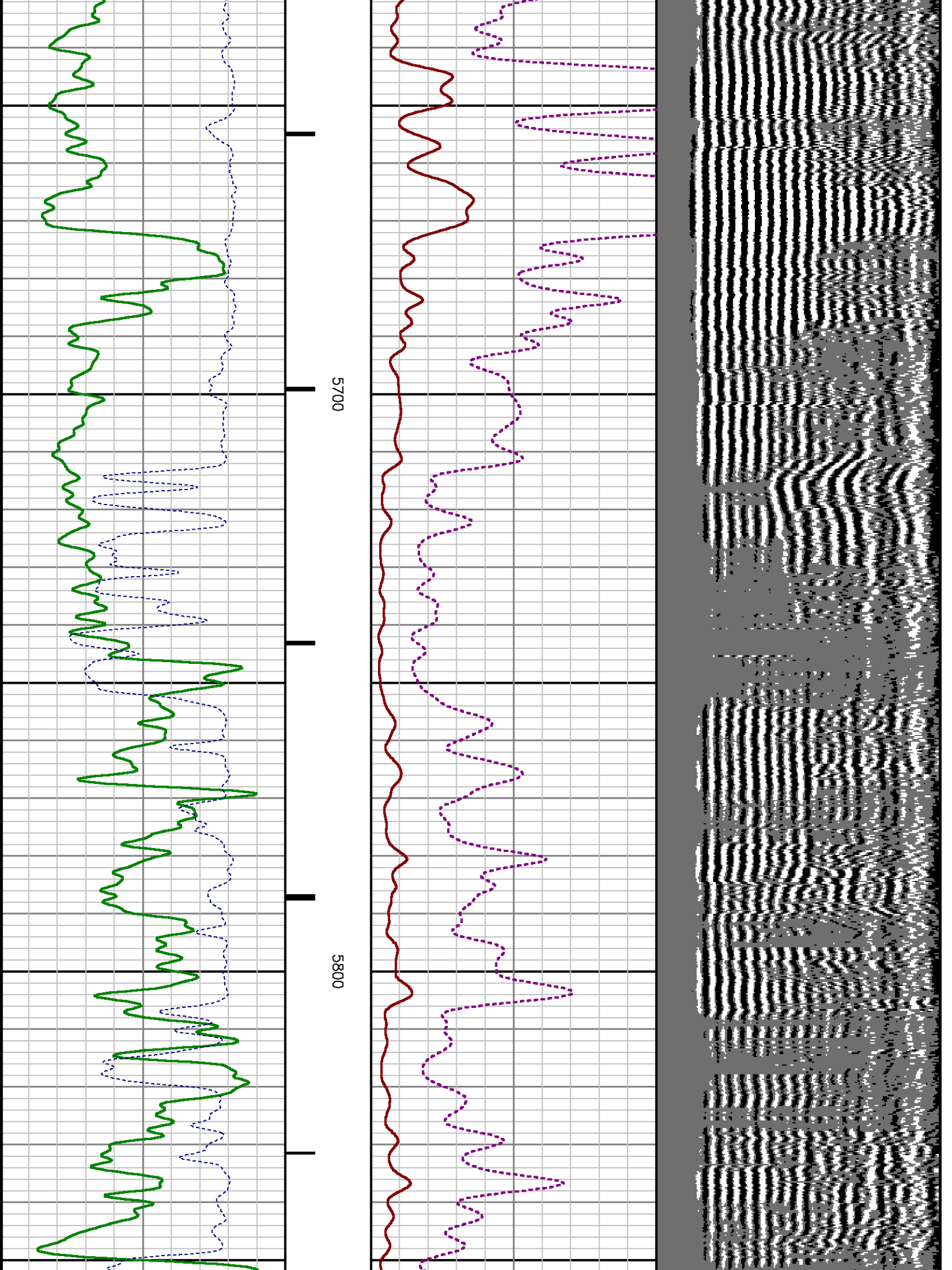




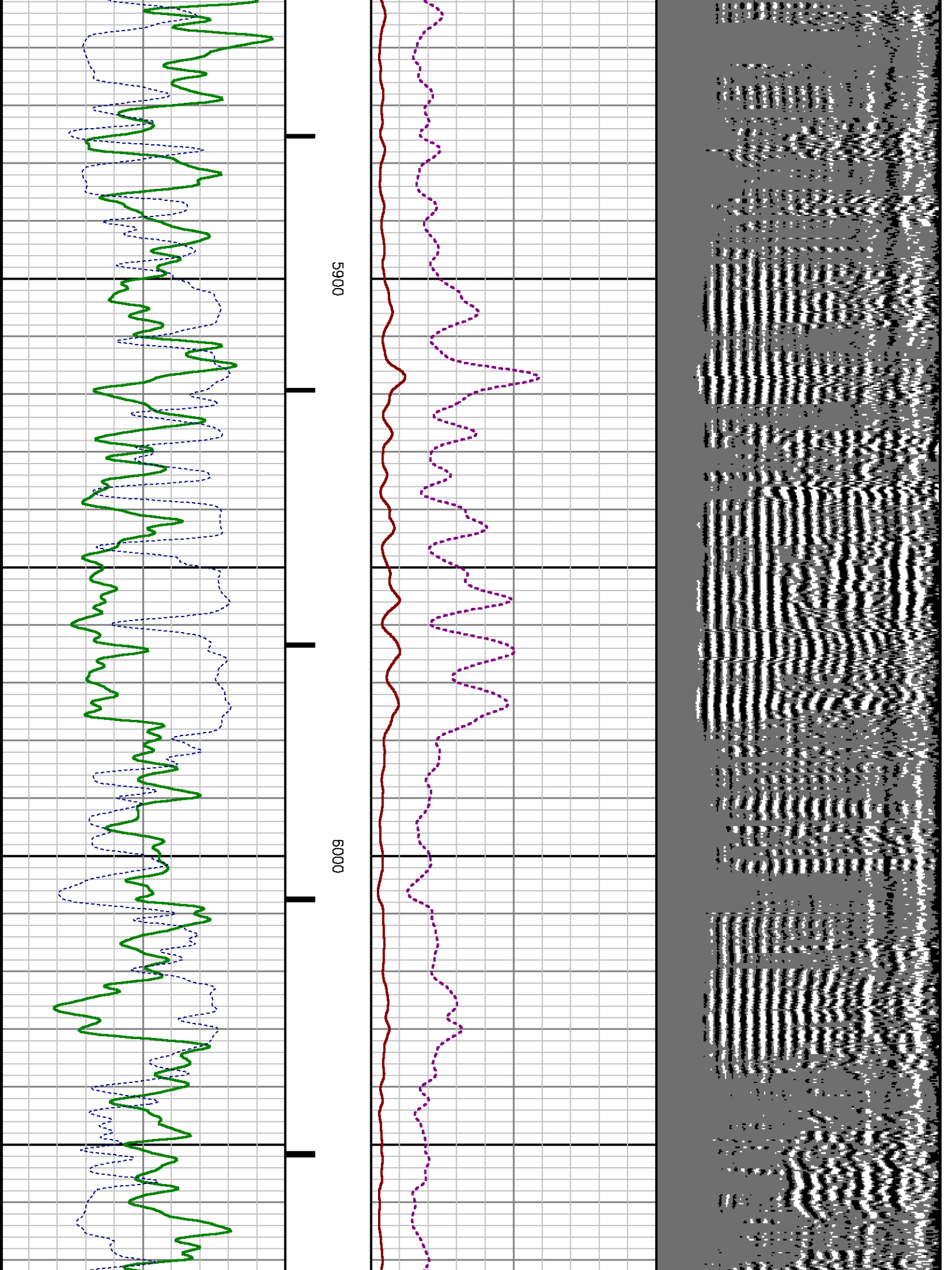


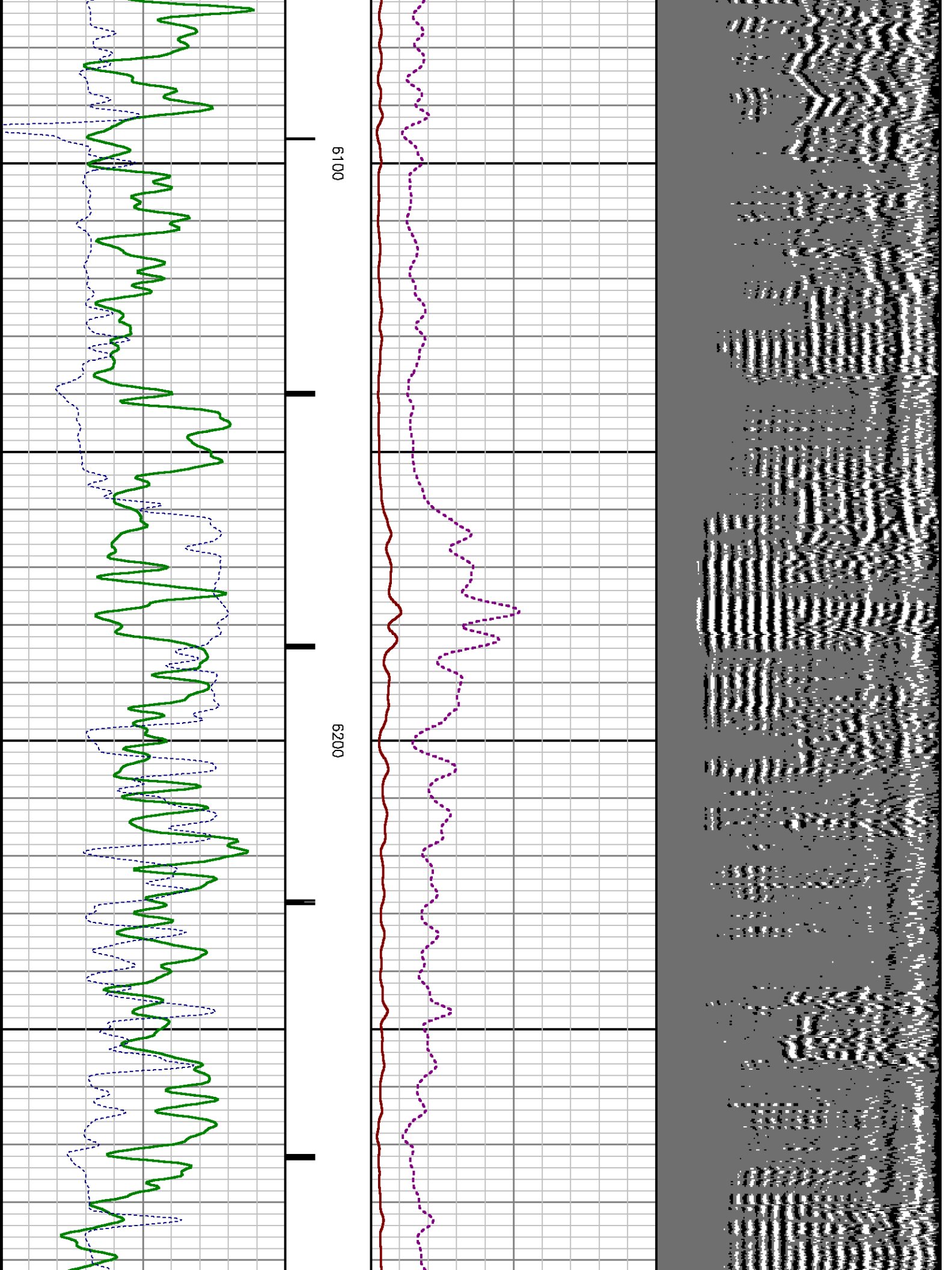


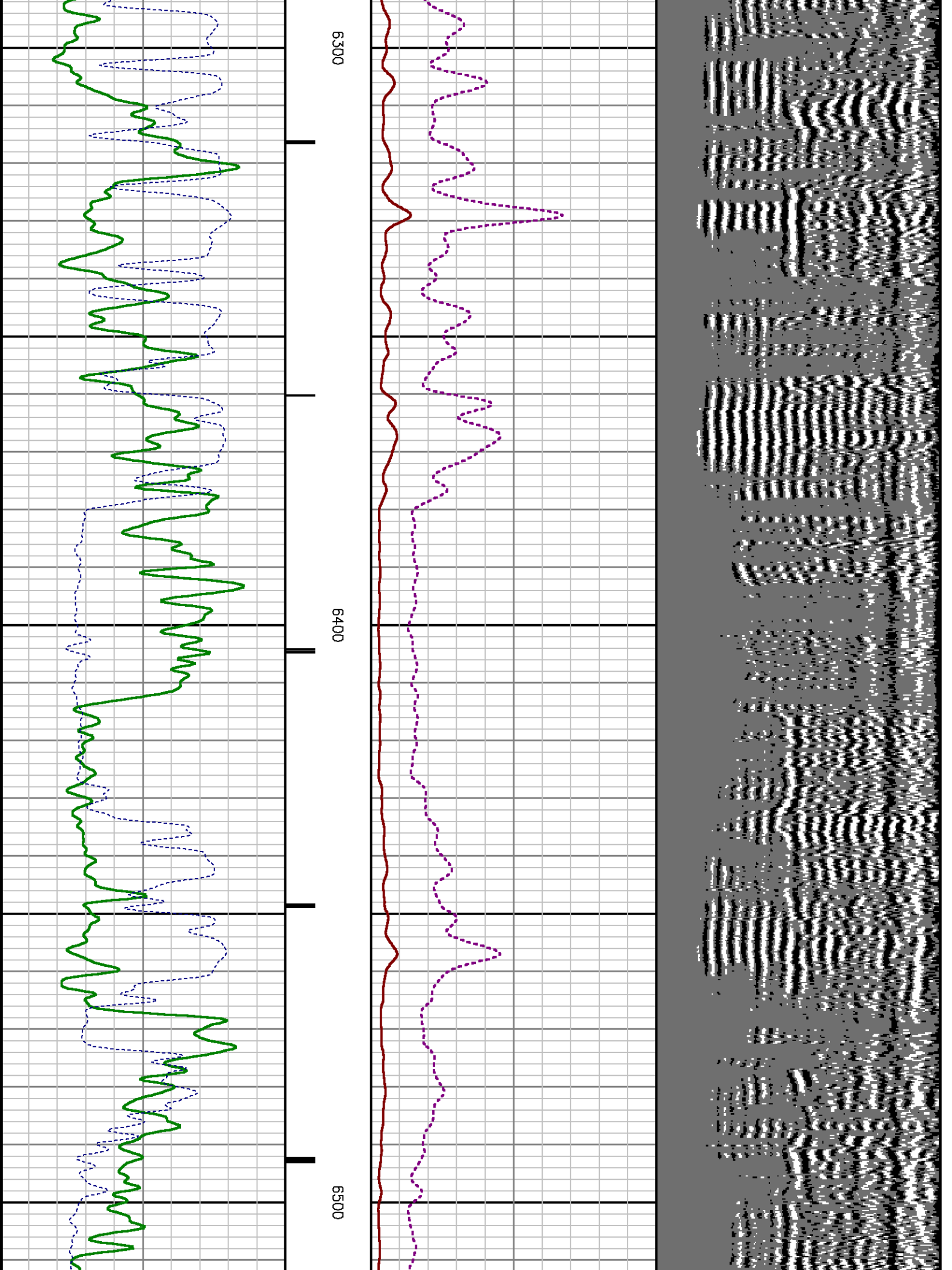


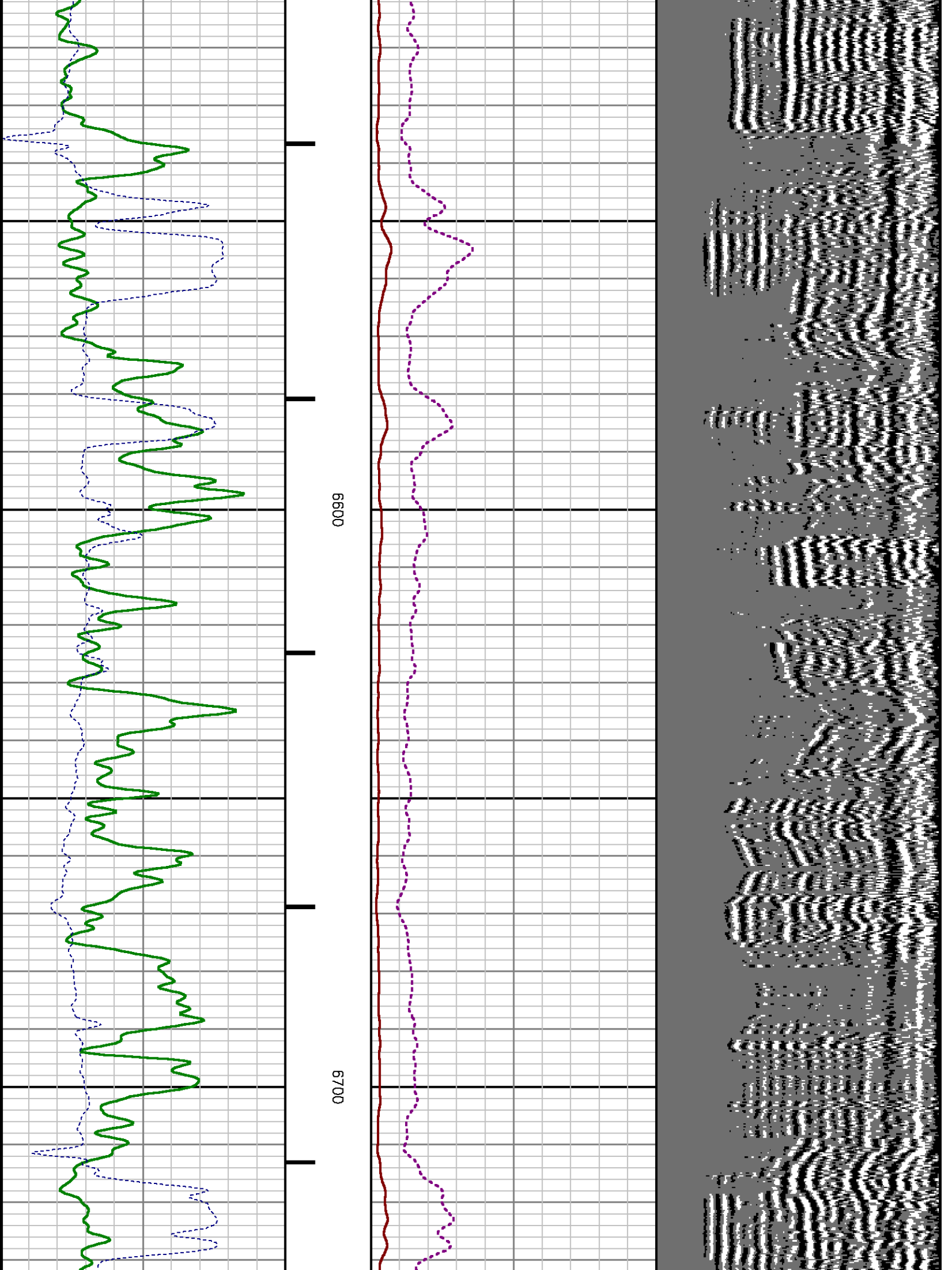


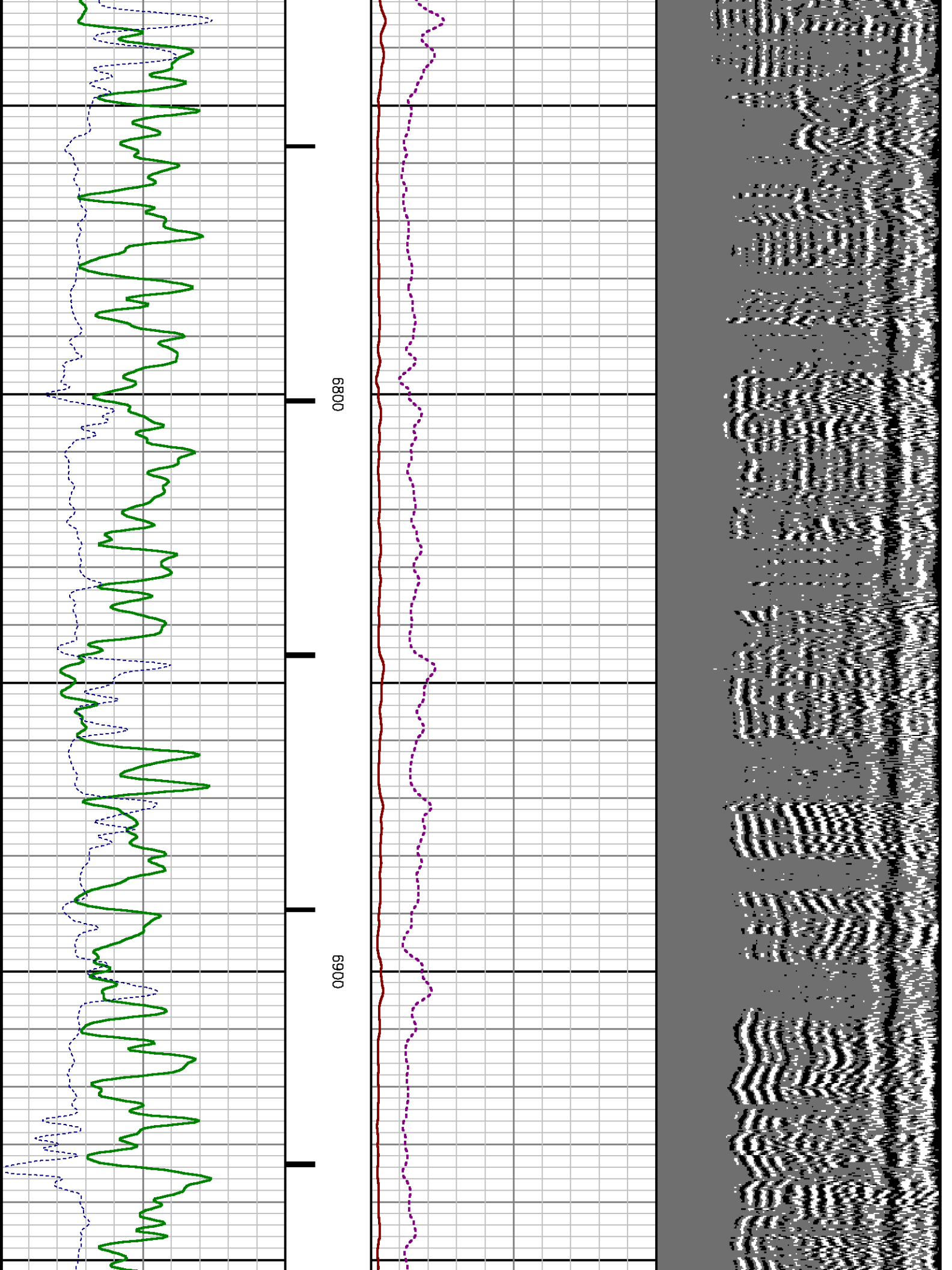


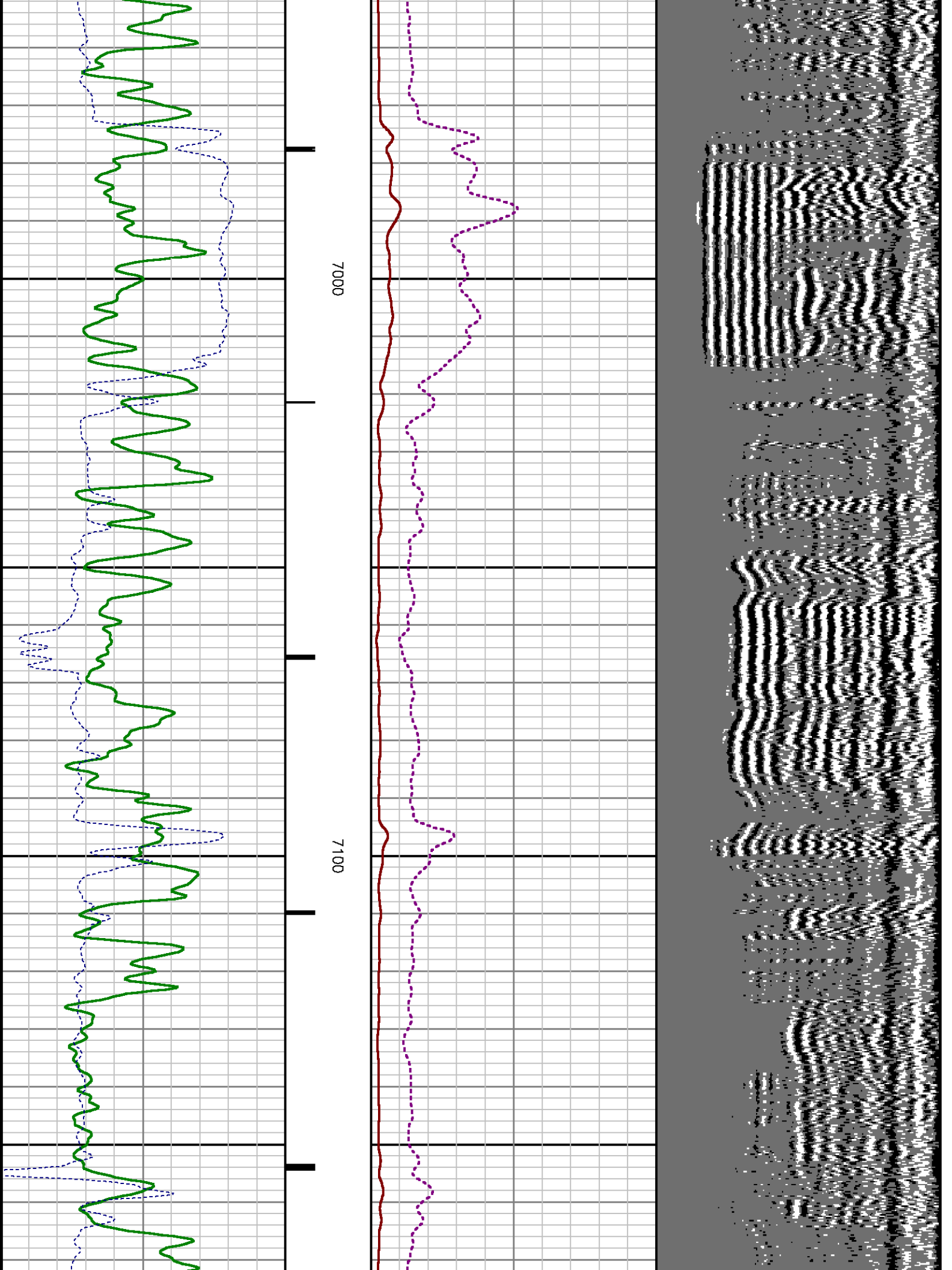




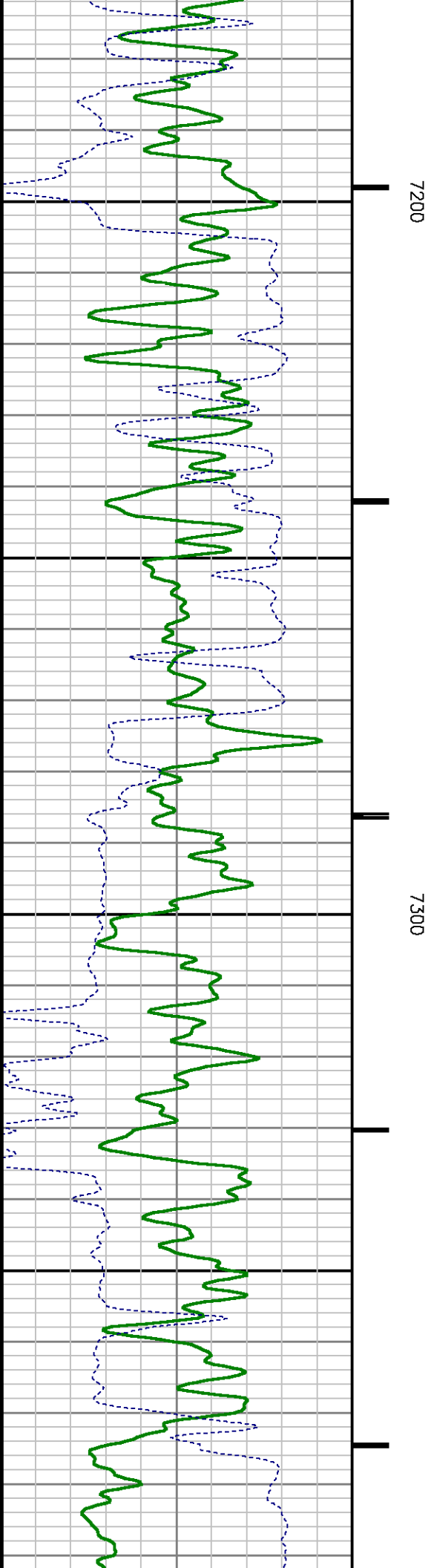
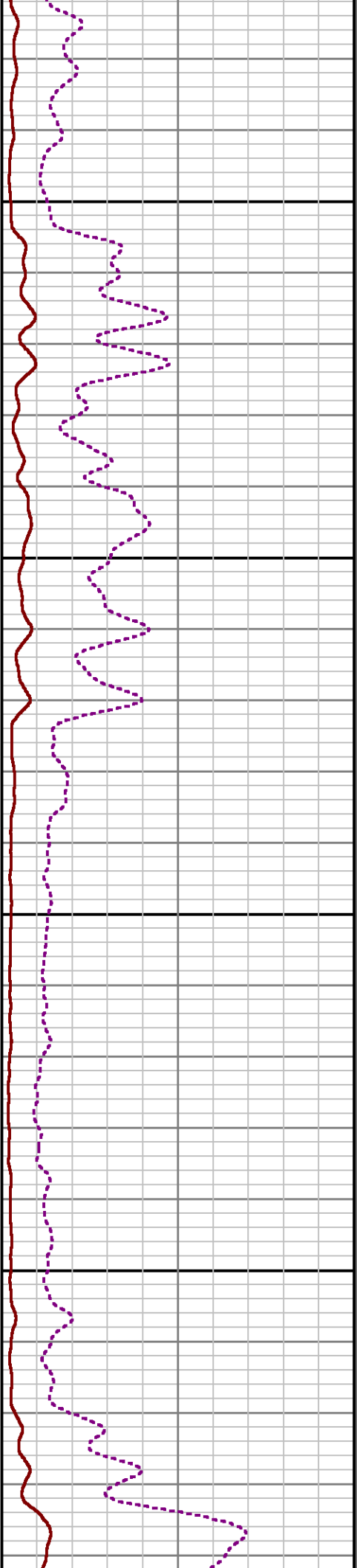
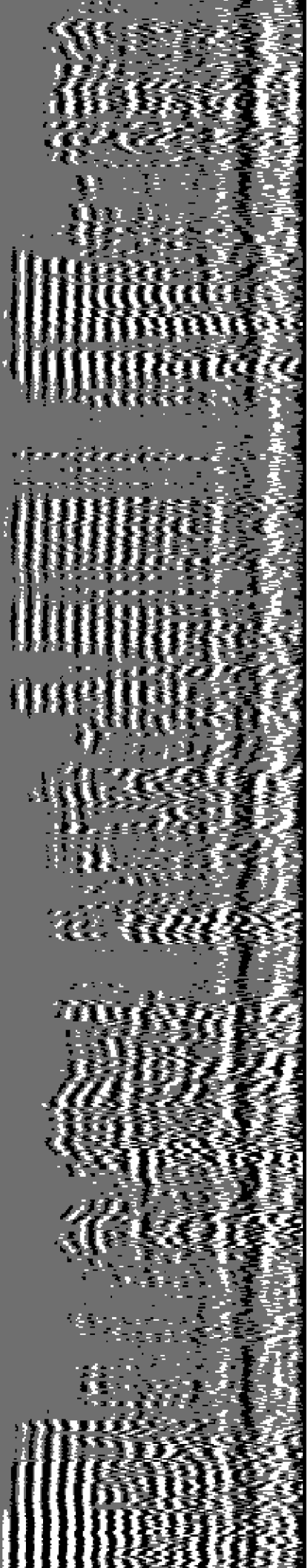




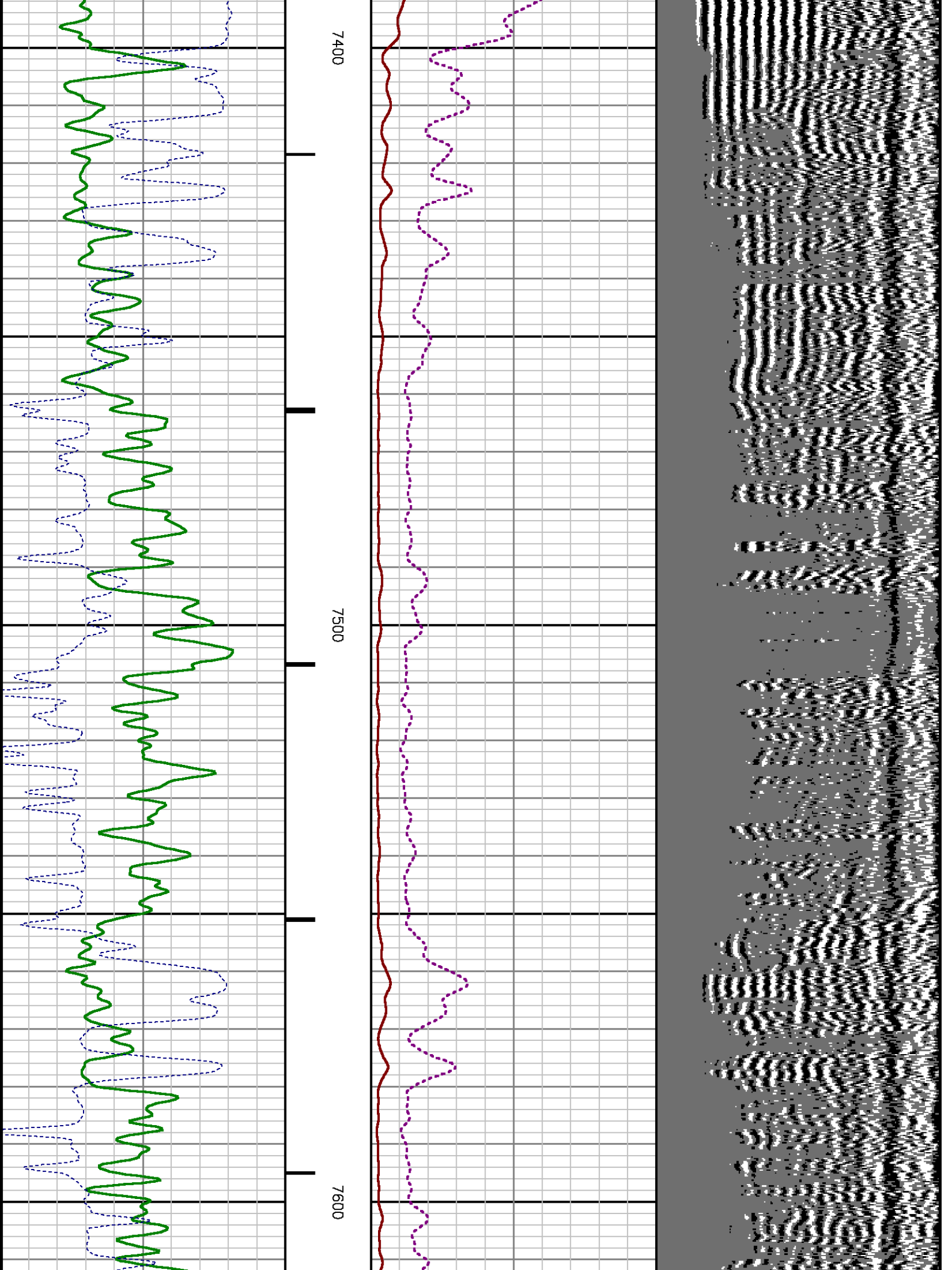


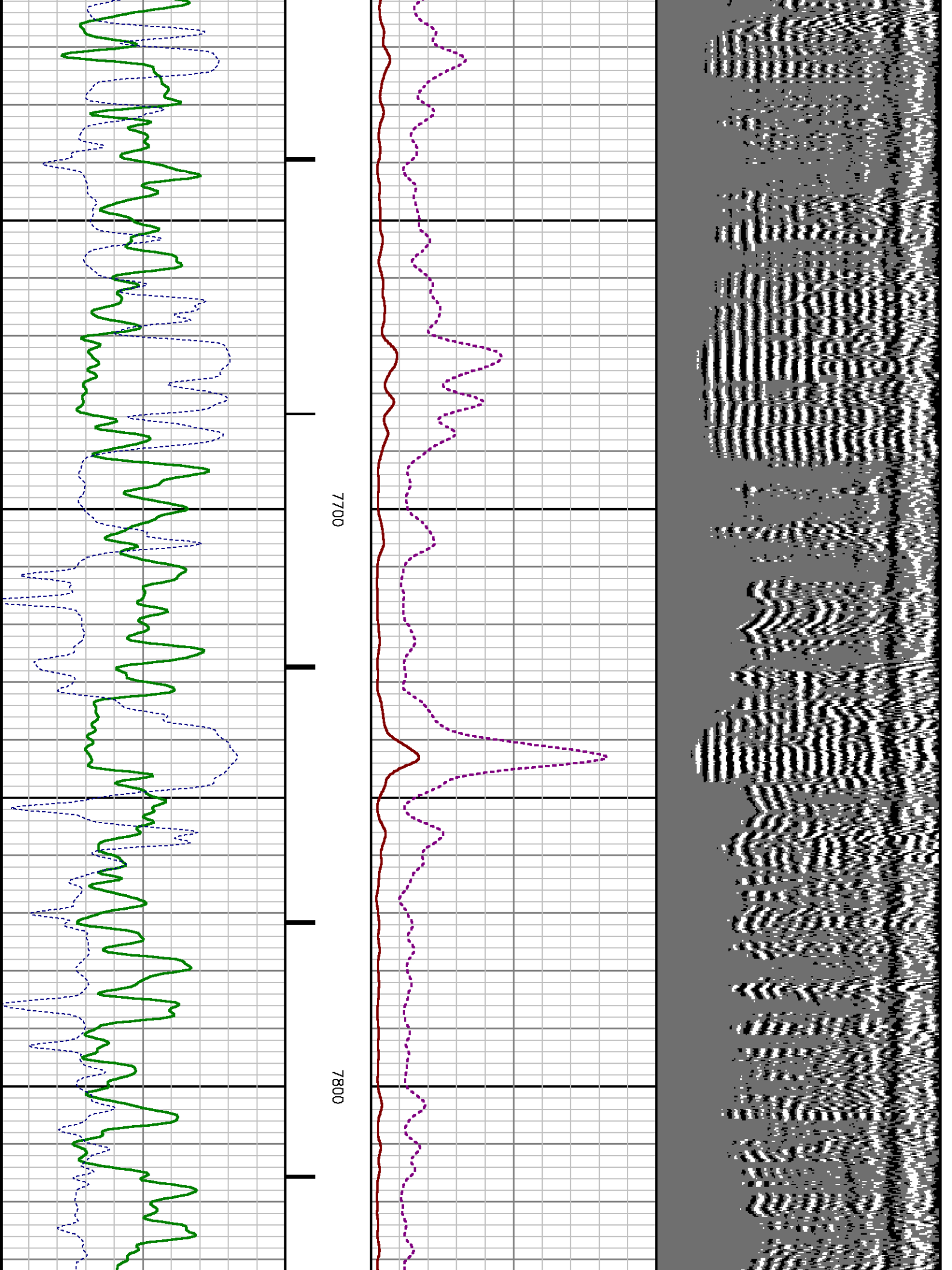


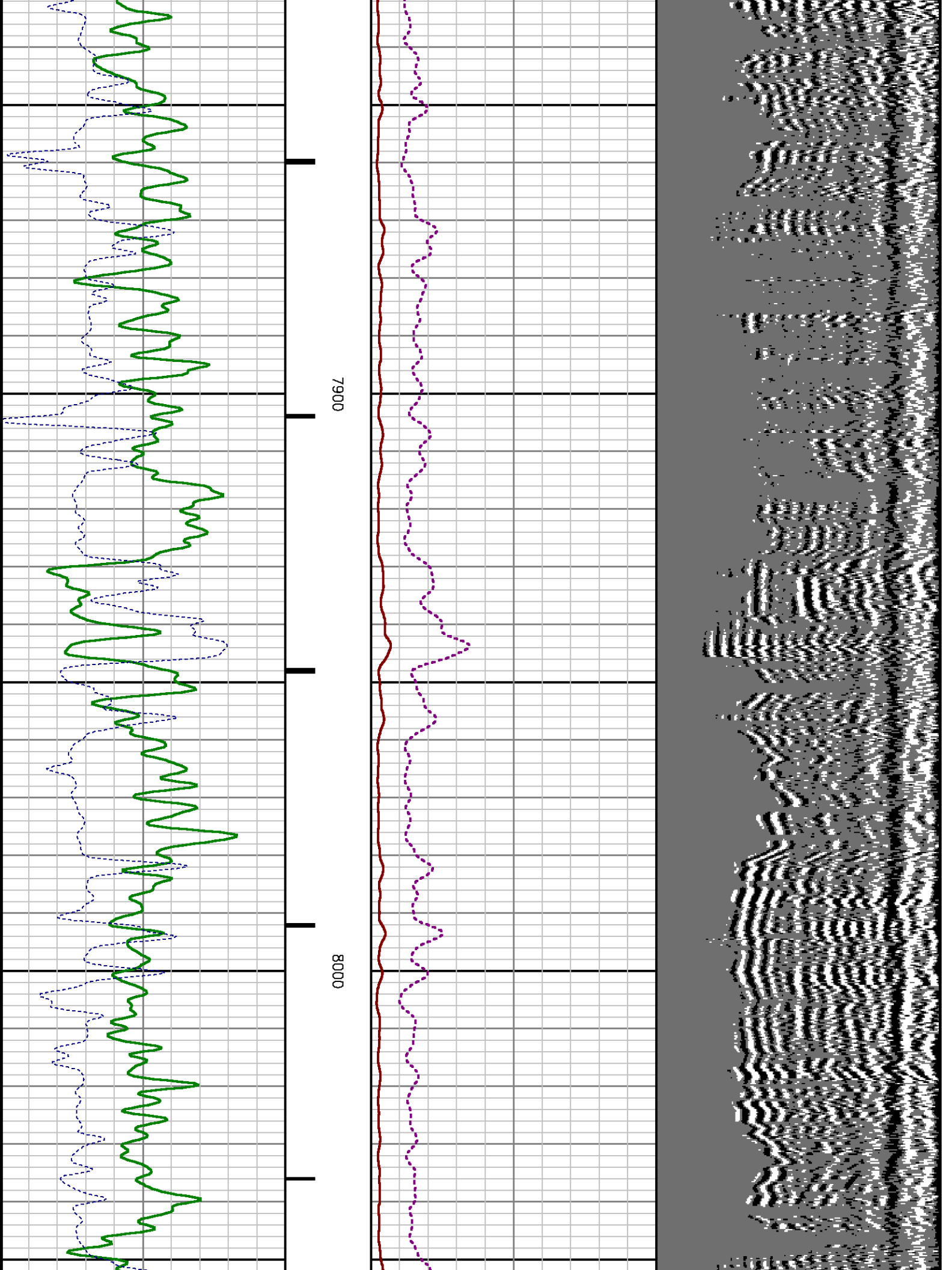


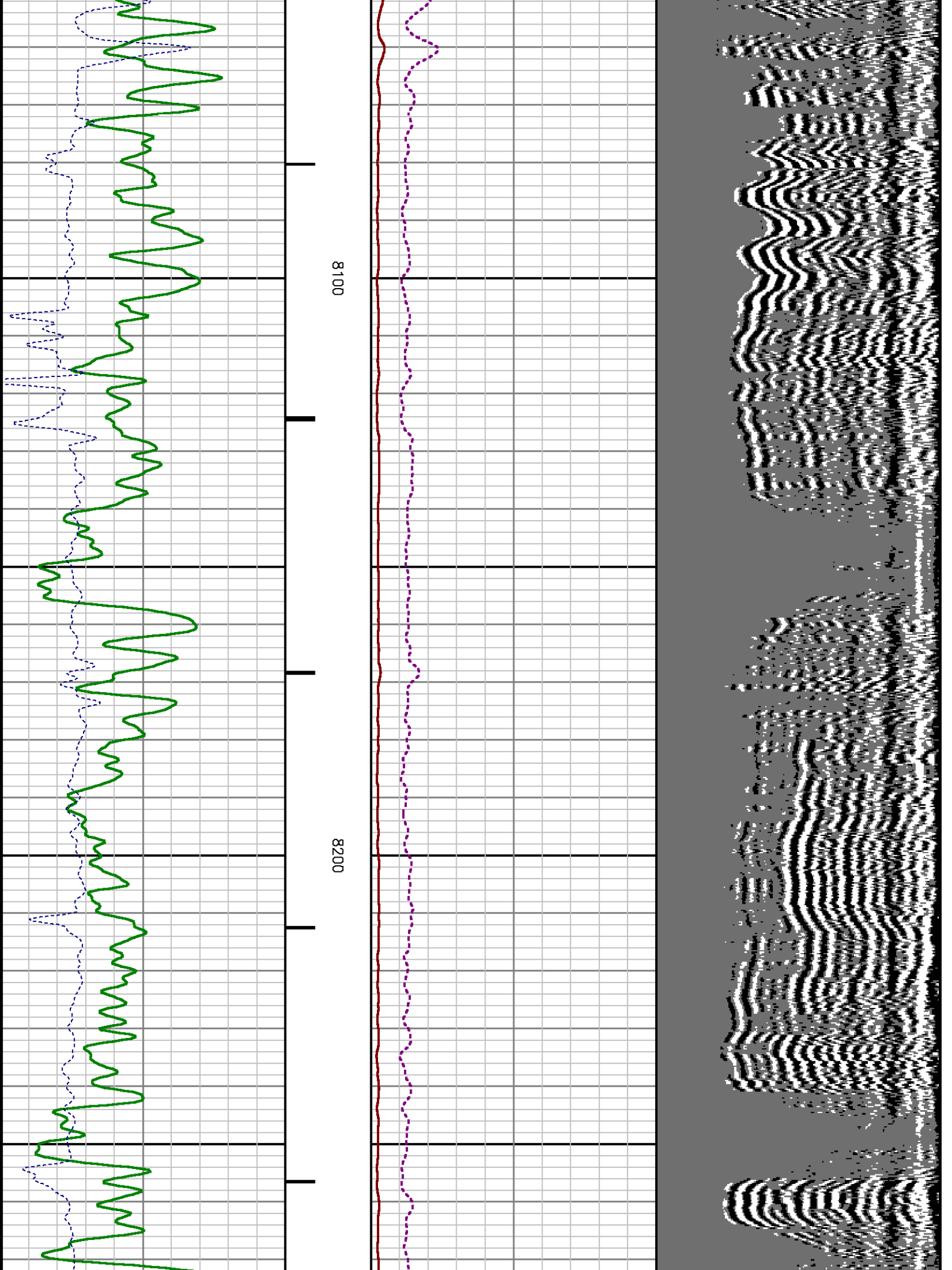


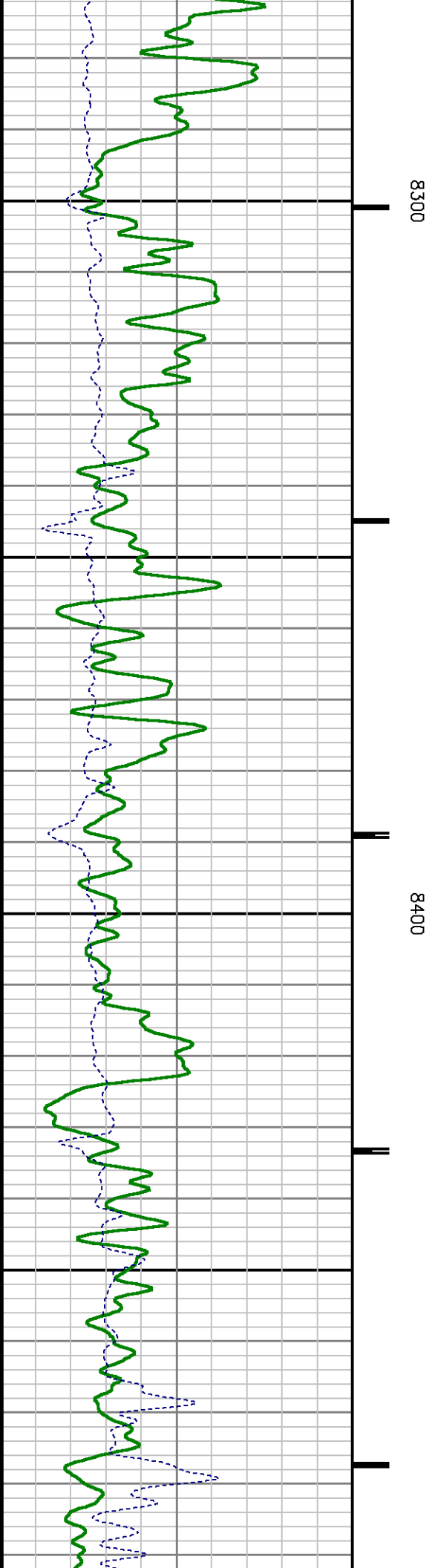
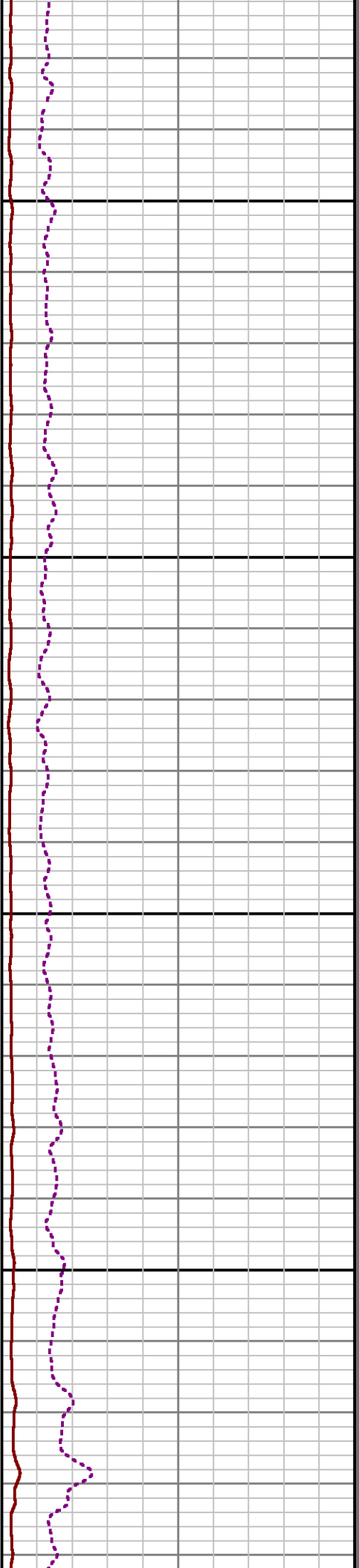
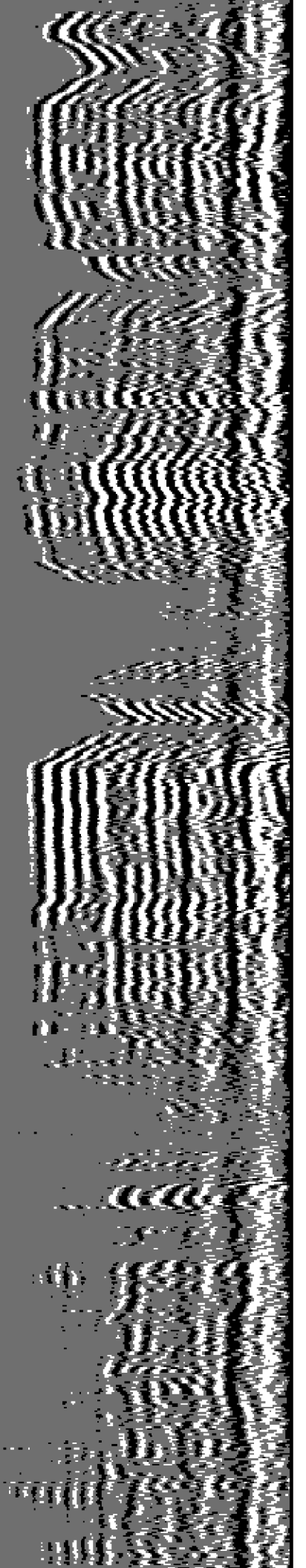


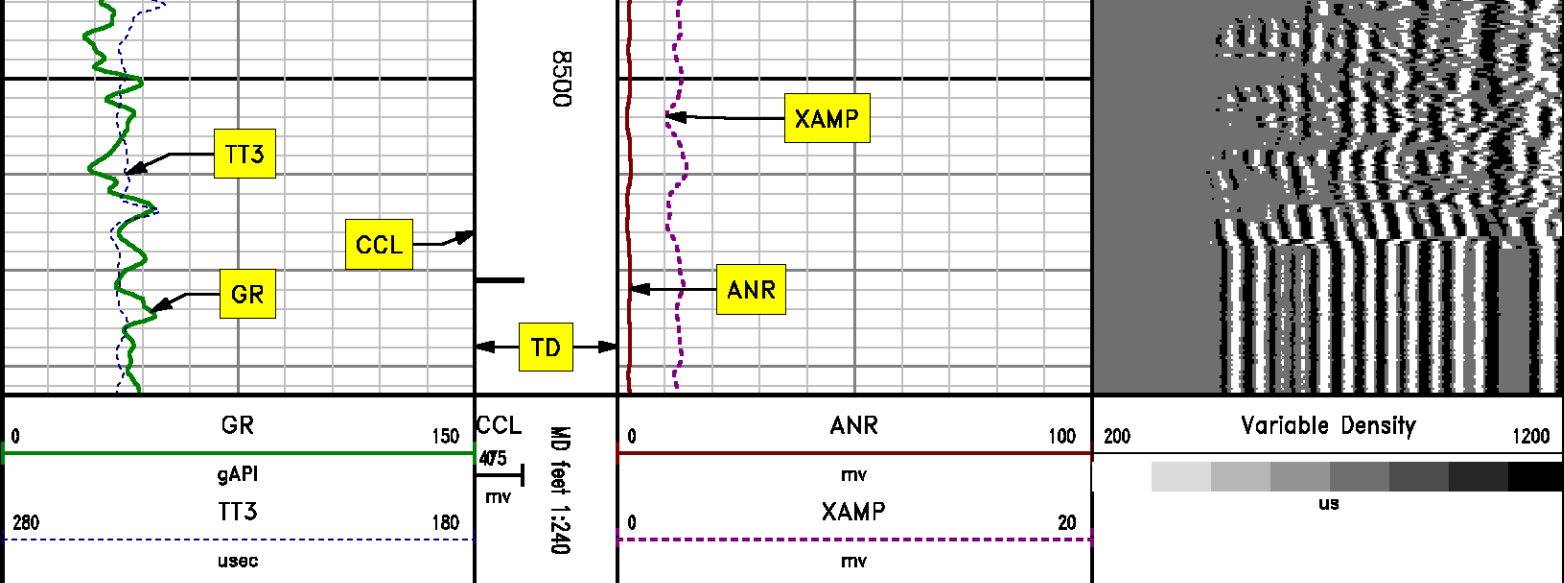












## SECONDARY PRESENTATION

### 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	24.093	8551.000
RAL	Amp Gate Start Near	195.000	usec	24.093	8551.000
RAL	Amp Gate Start Radial	195.000	usec	24.093	8551.000
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RAL	casing od	4.500	inches	24.093	8551.000
RAL	casing wt	11.600	lbm/ft	24.093	8551.000
RAL	FB Start Far	291.900	usec	24.093	8551.000
RAL	FB Start Near	180.000	usec	24.093	8551.000
RAL	FB Start Radial	180.000	usec	24.093	8551.000
RAL	FB Thresh Far	10.000	mv	24.093	8551.000
RAL	FB Thresh Near	4.000	mv	24.093	8551.000
RAL	FB Thresh Radial	4.000	mv	24.093	8551.000
RAL	Fluid Travel Time	200.000	usec/ft	24.093	8551.000



# 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
		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

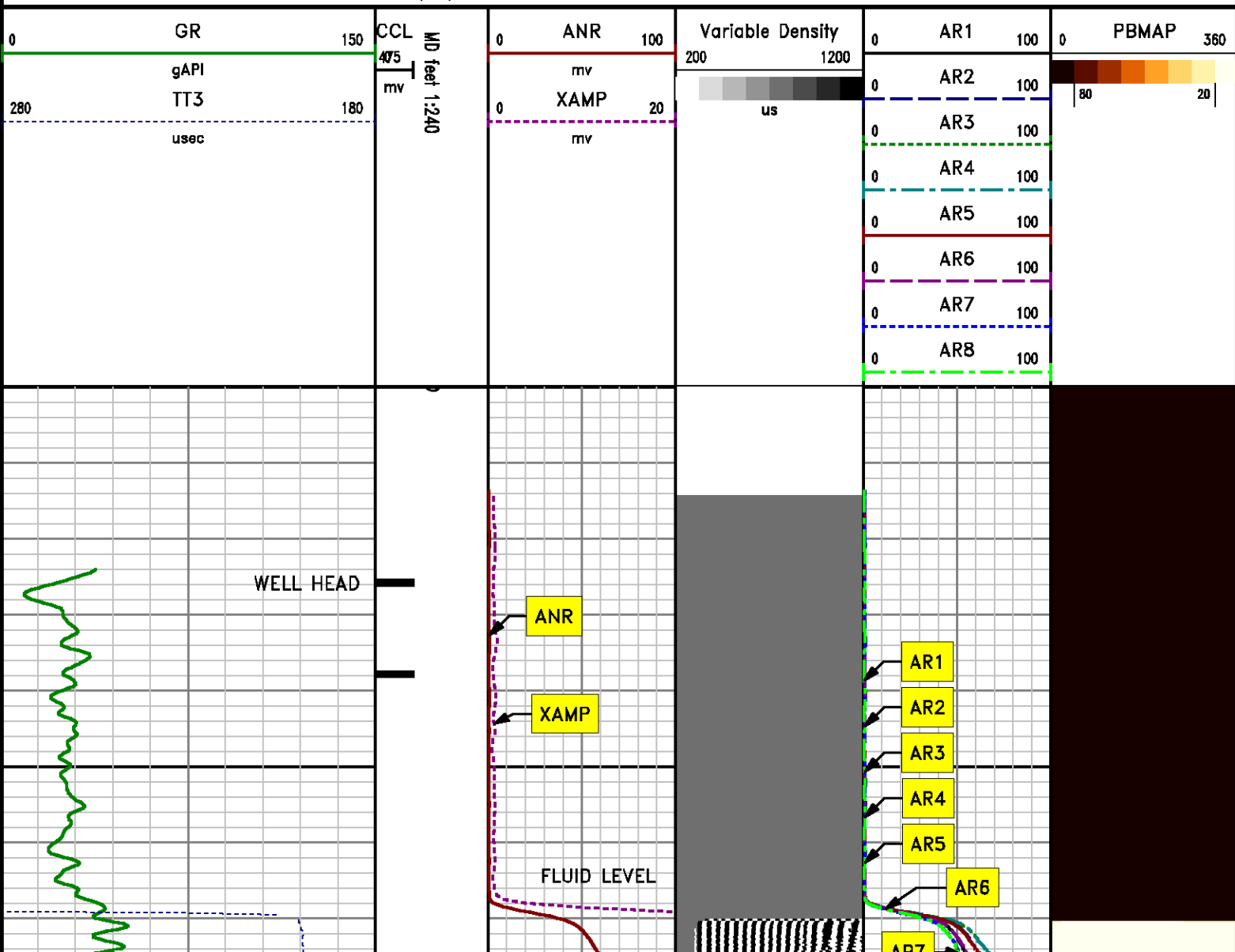
Well : FEDERAL PA 414-12

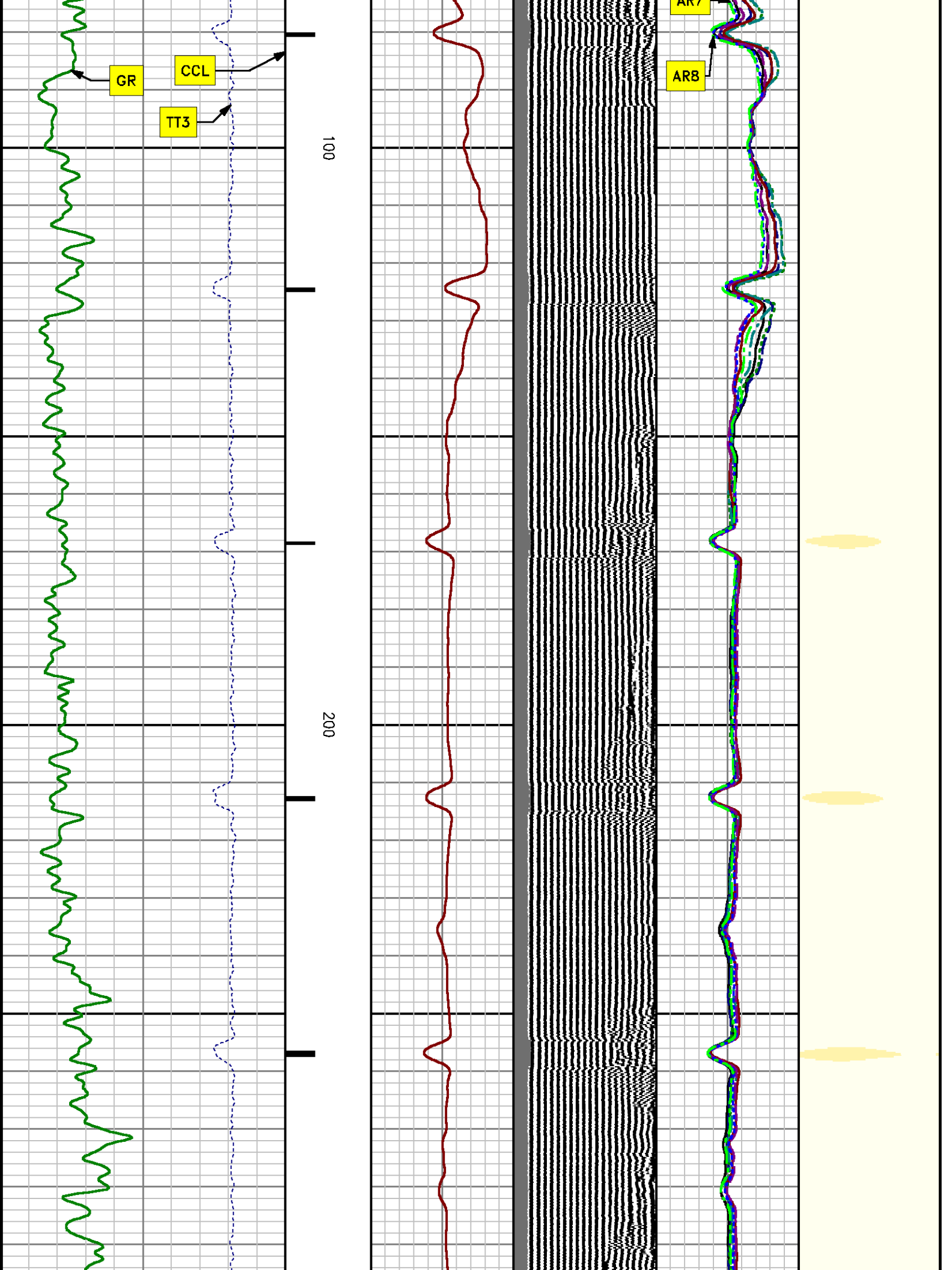
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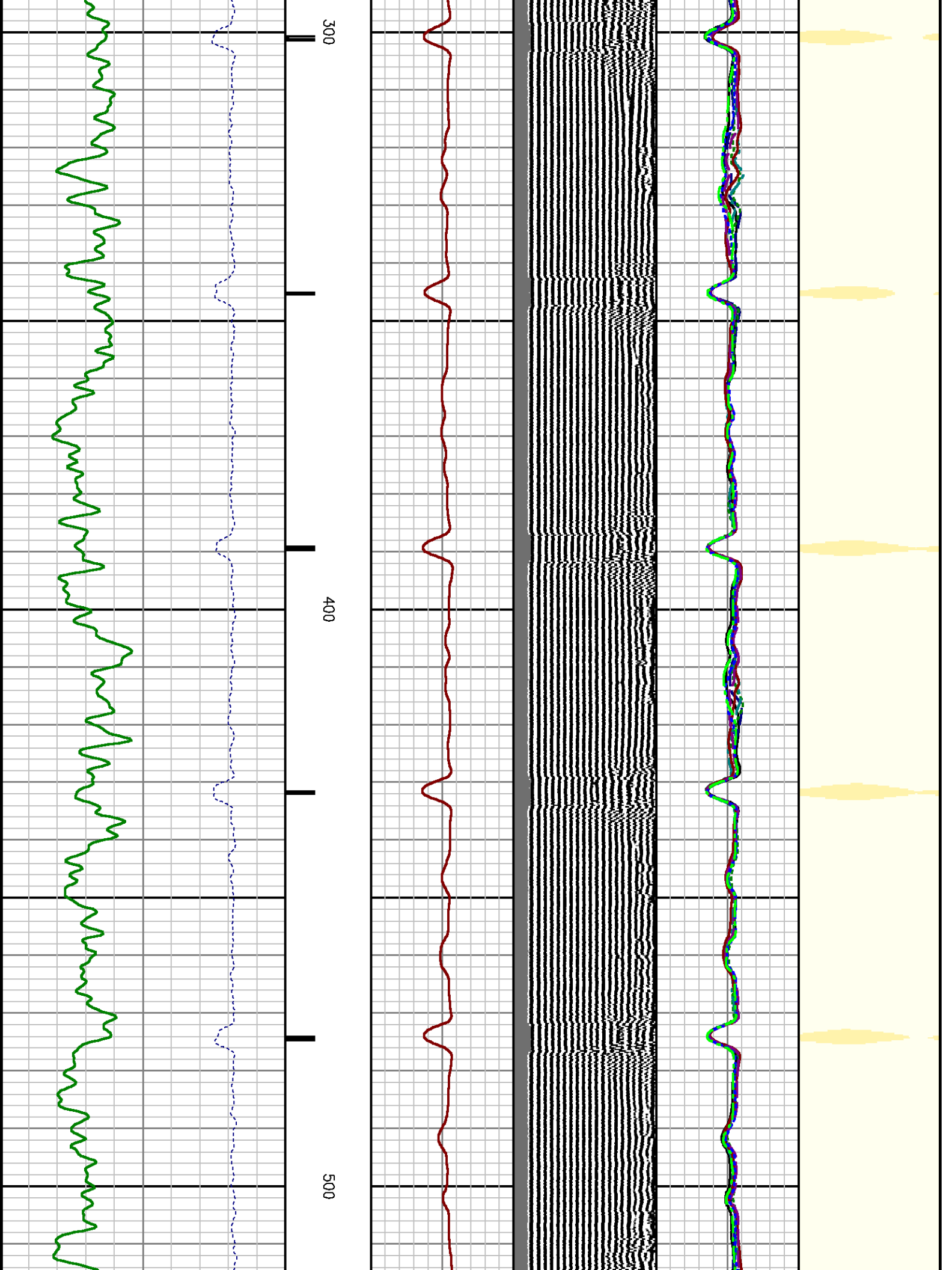
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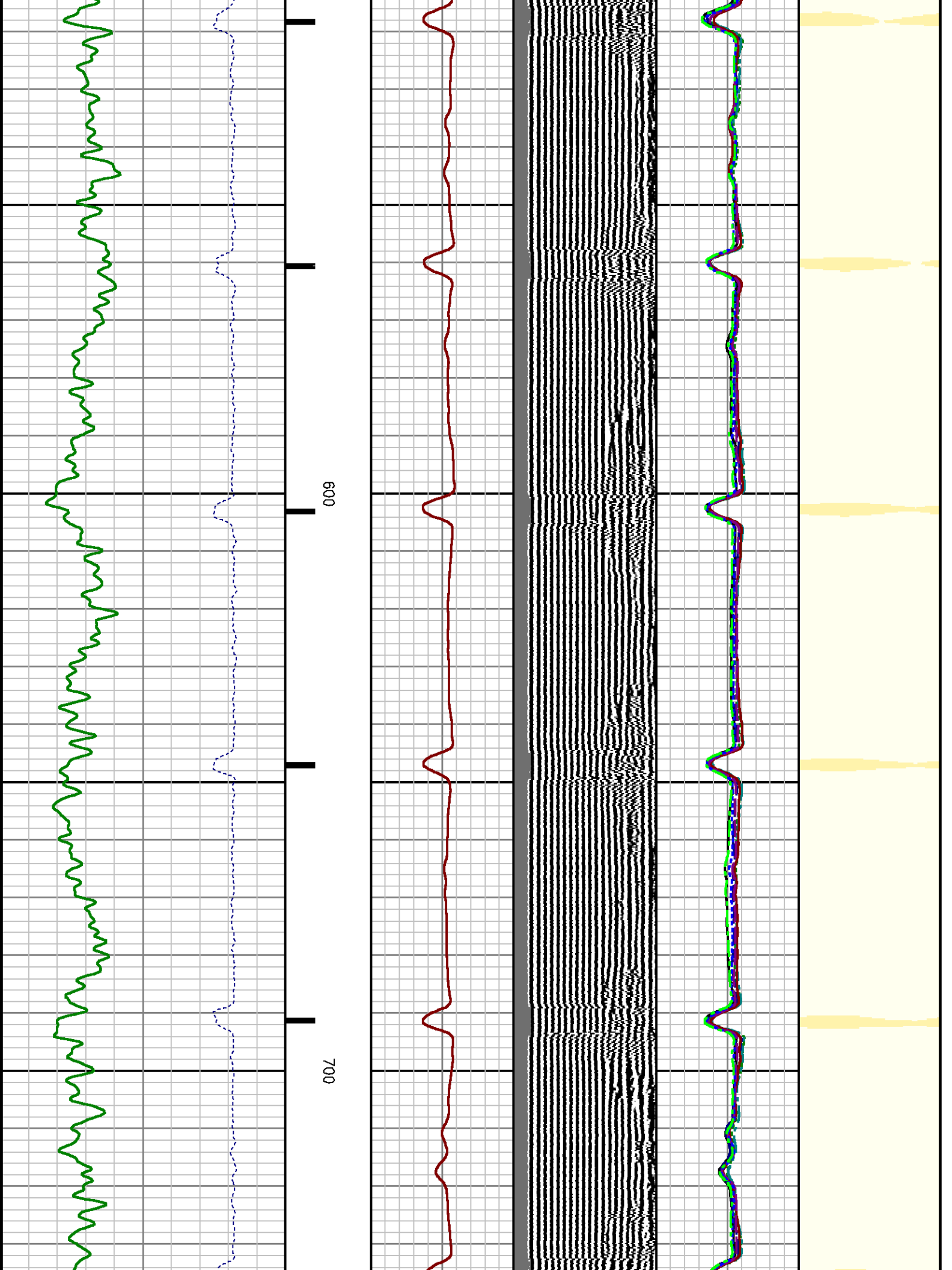
Interval : 0.00 - 8533.00 feet UP

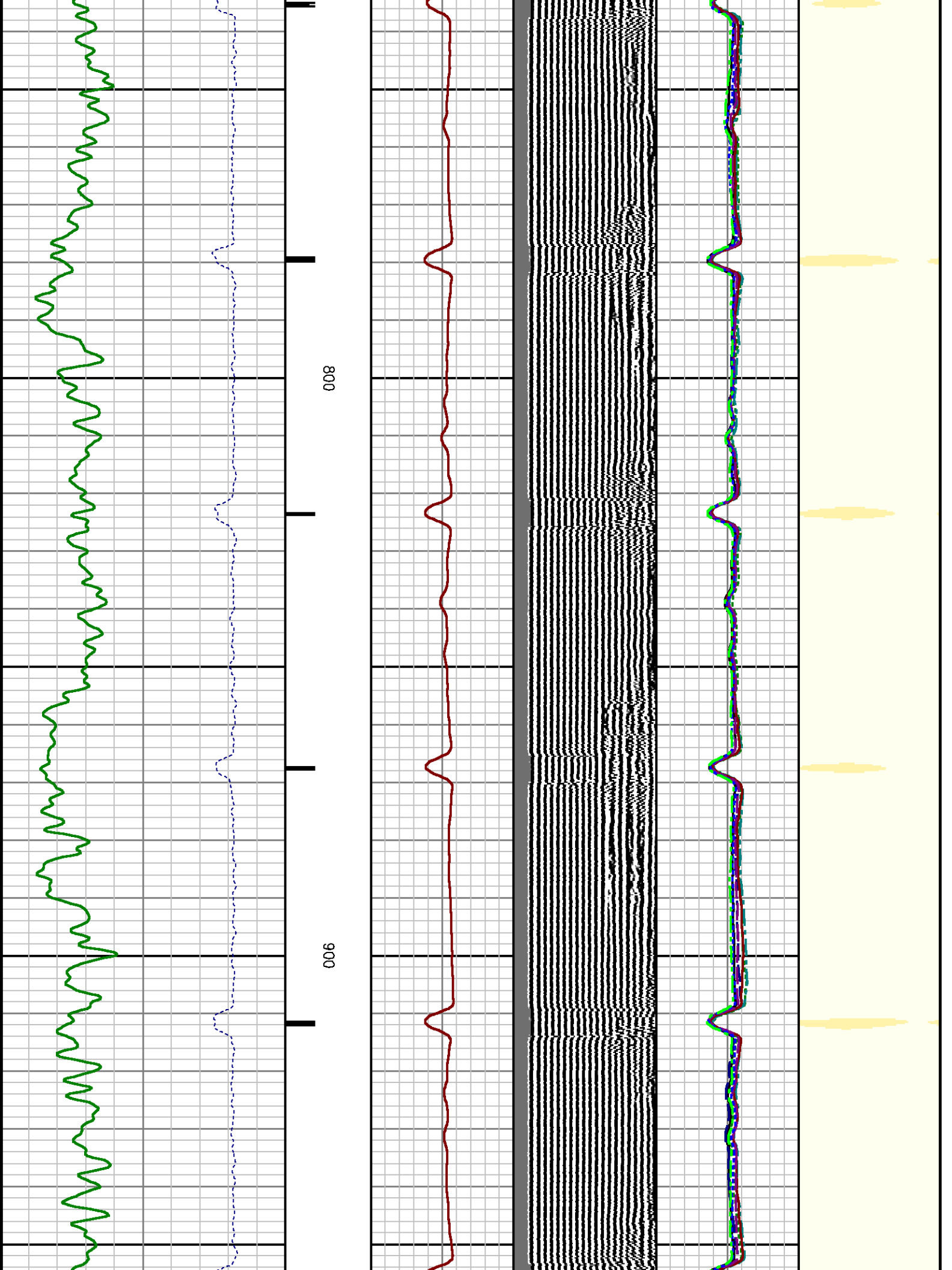
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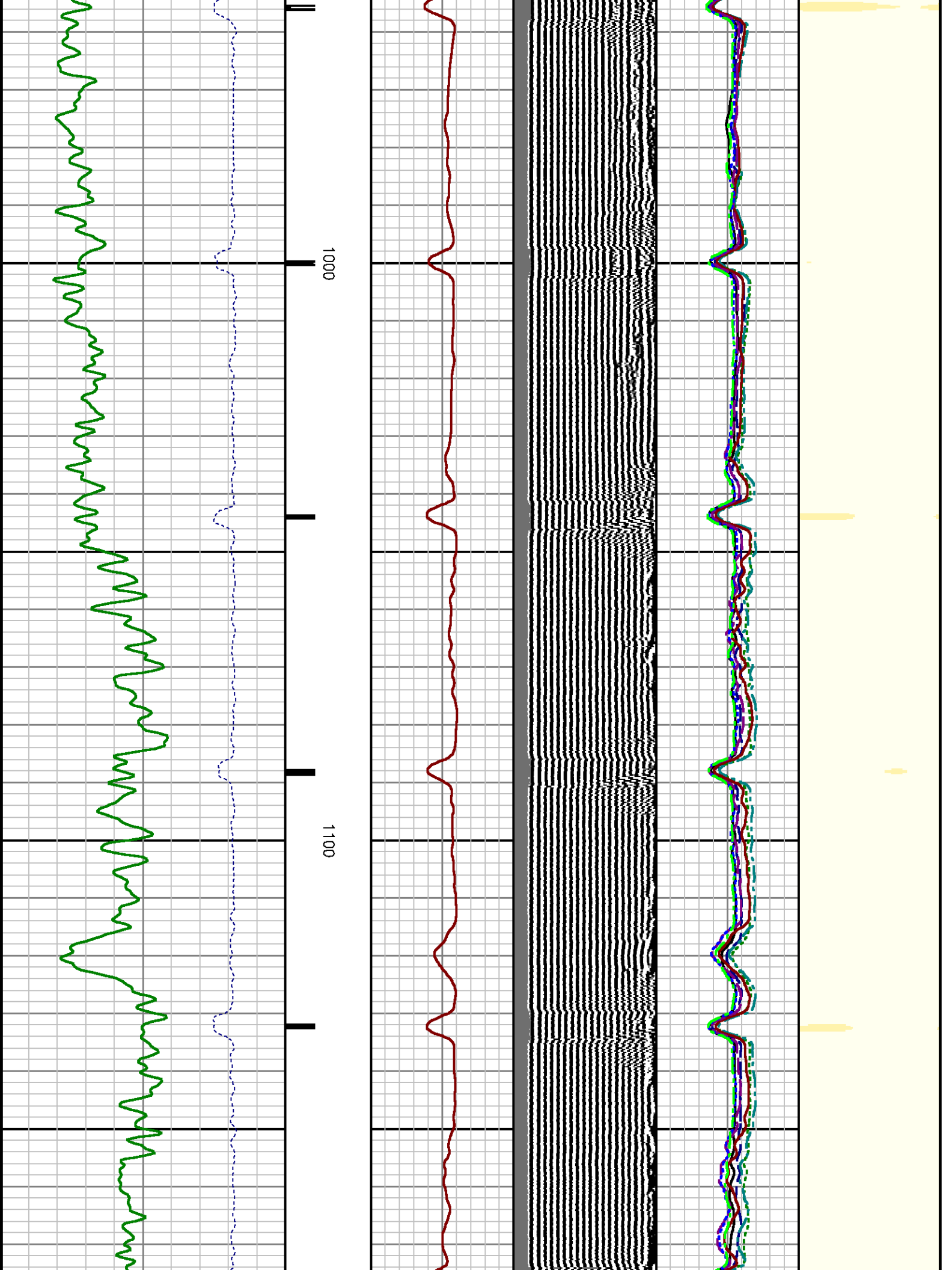




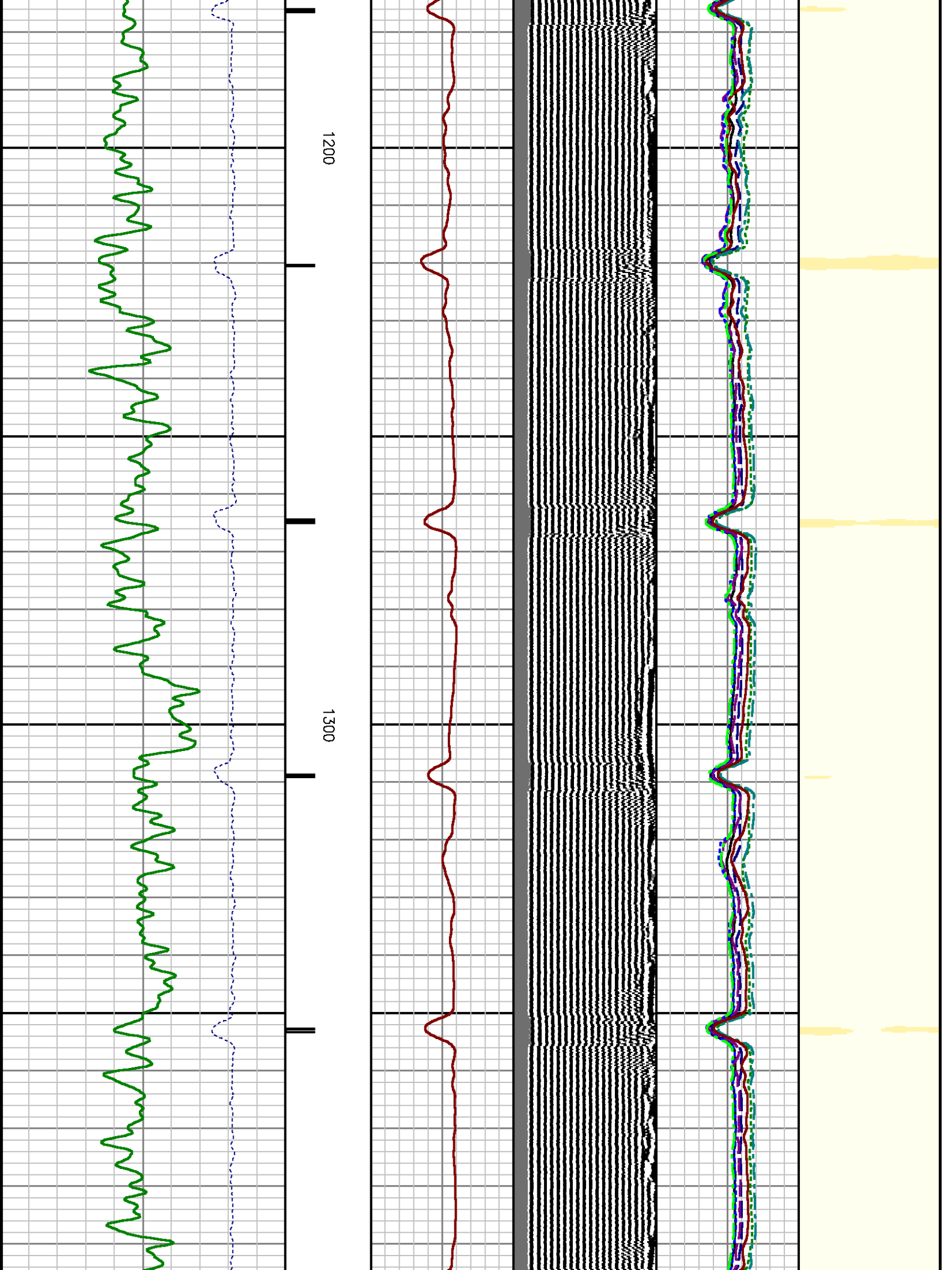


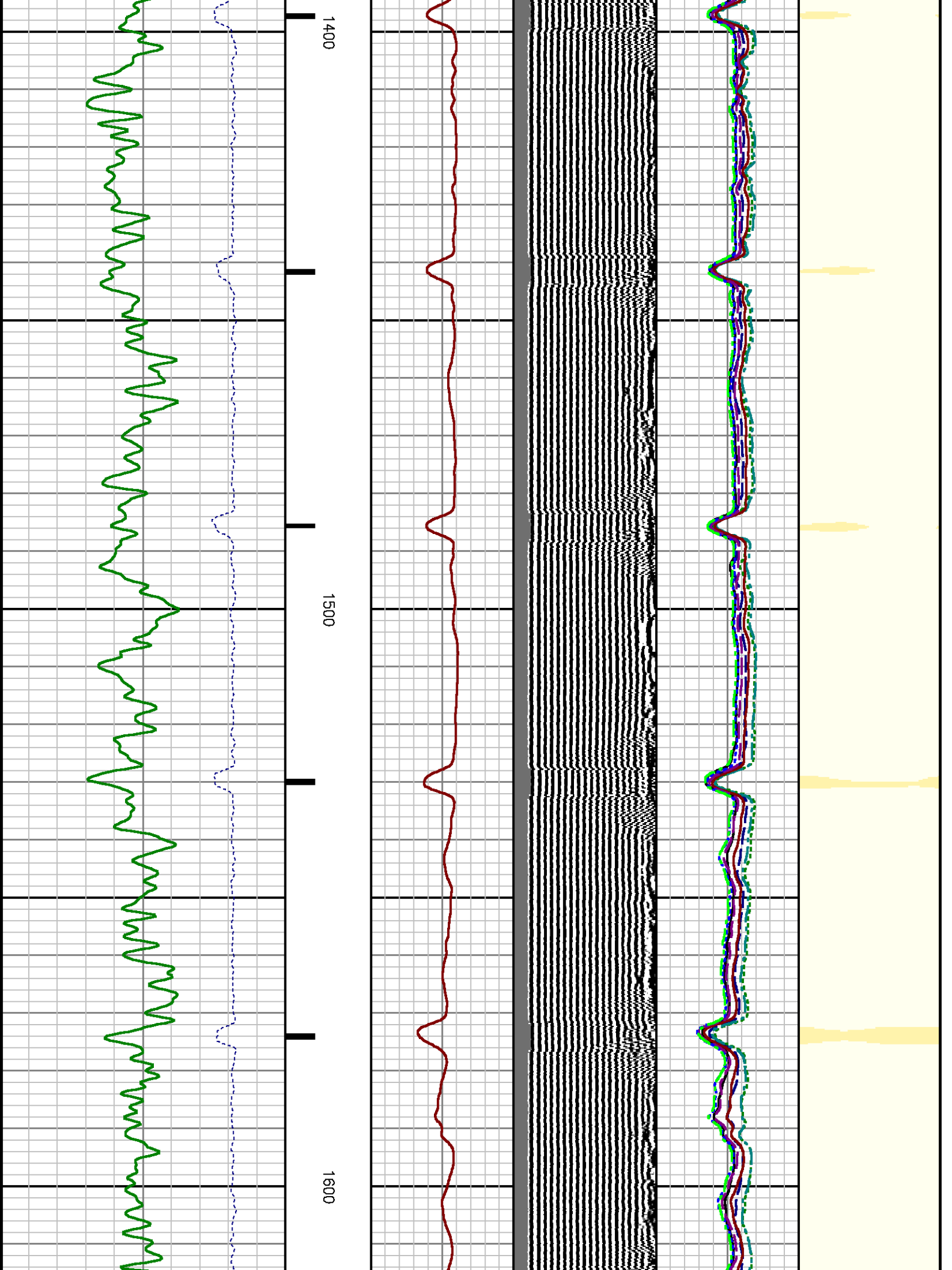


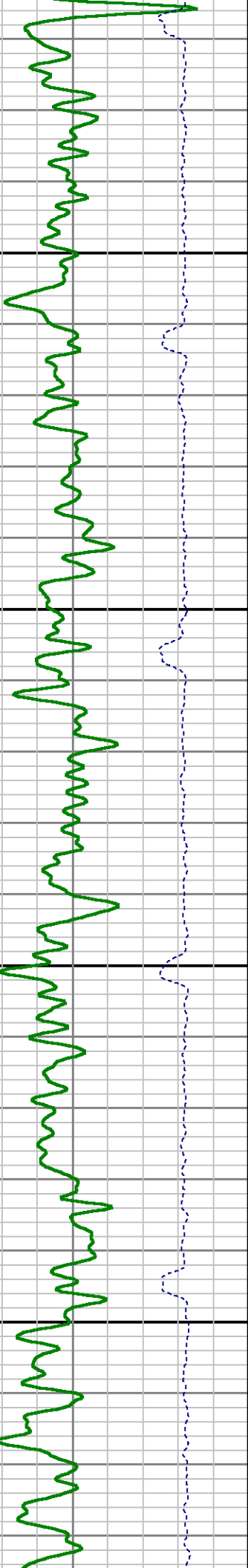
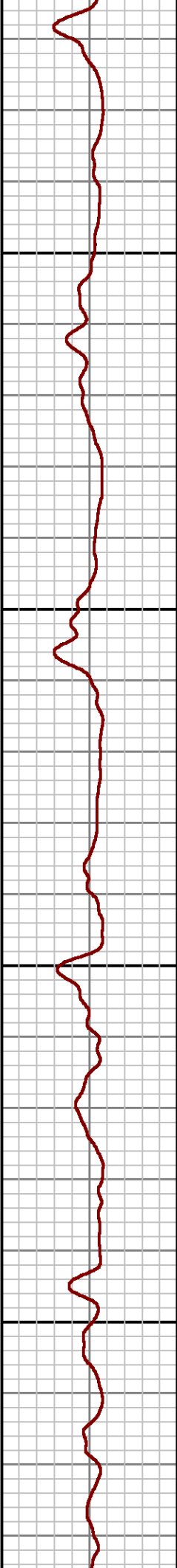
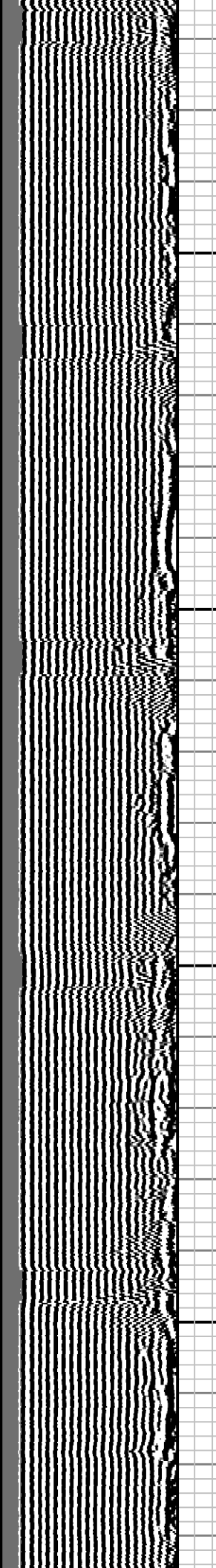
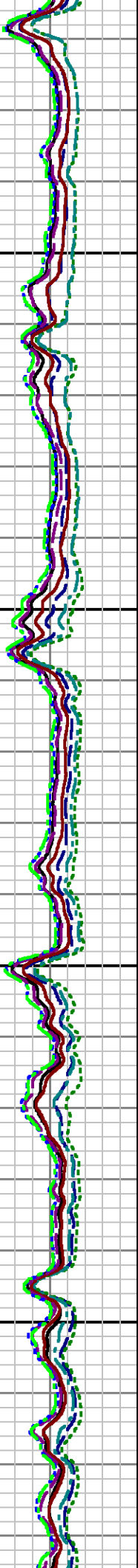
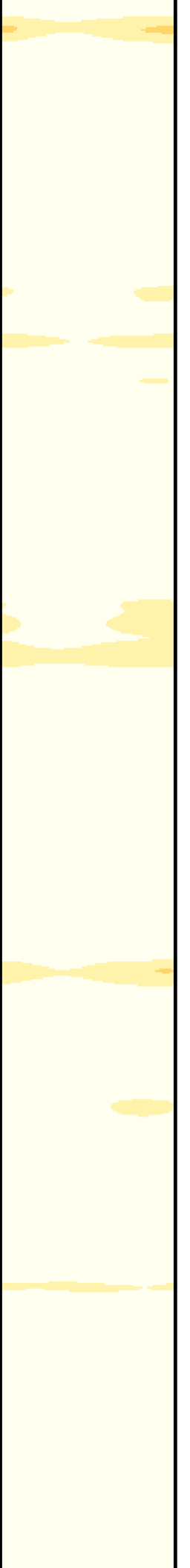


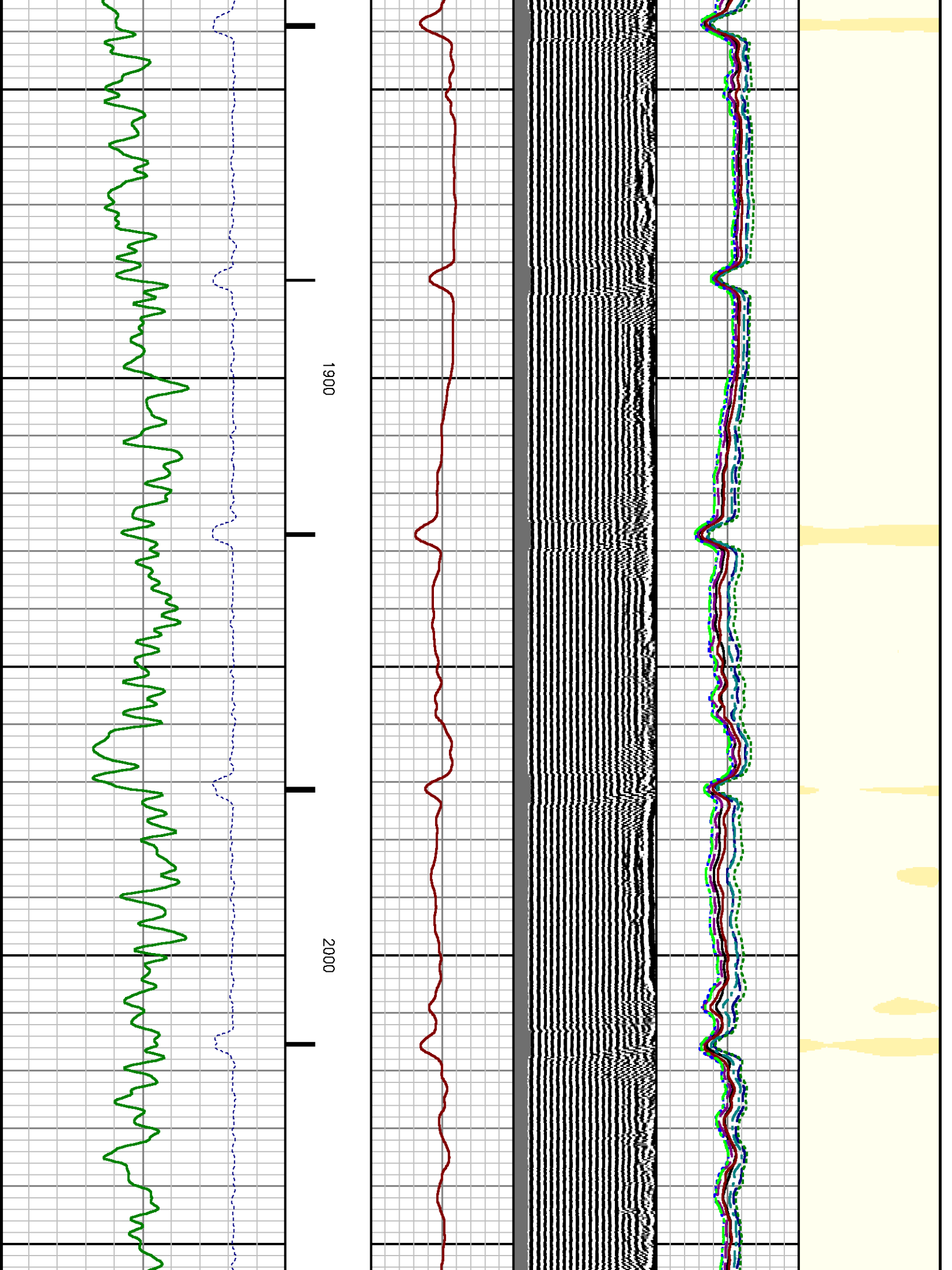


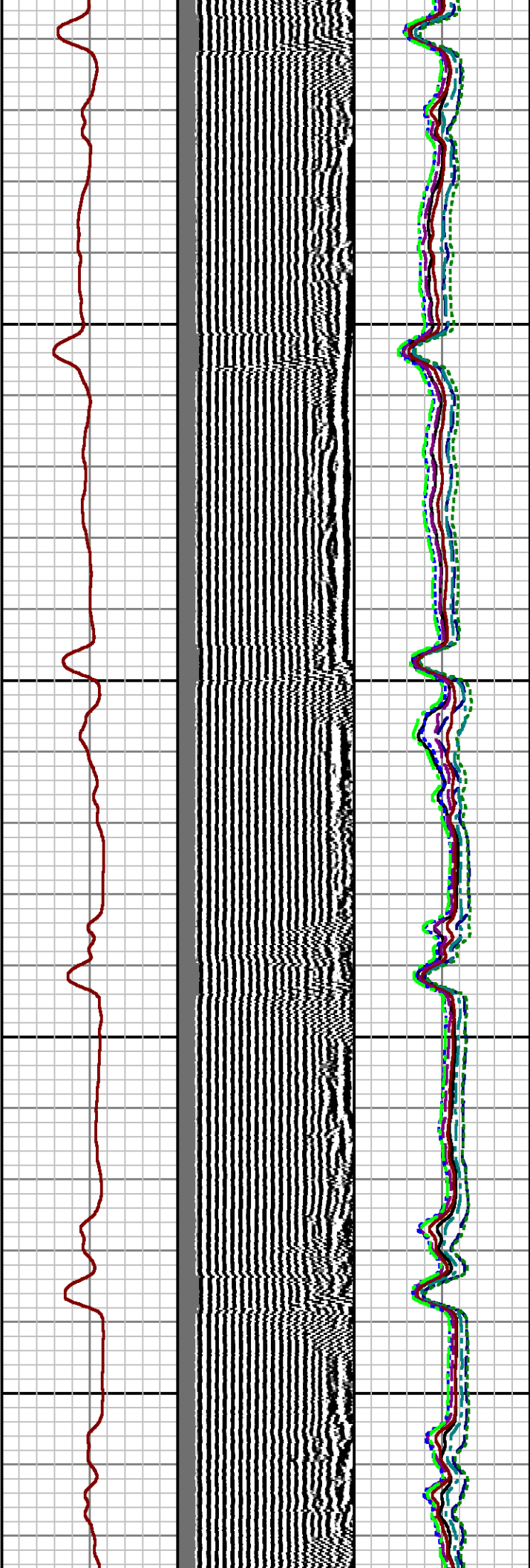
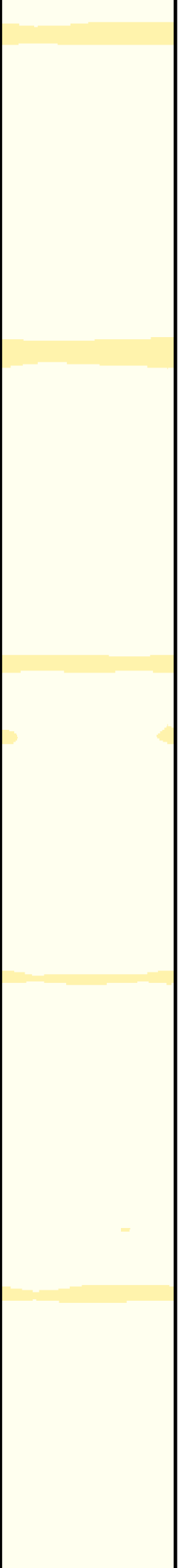






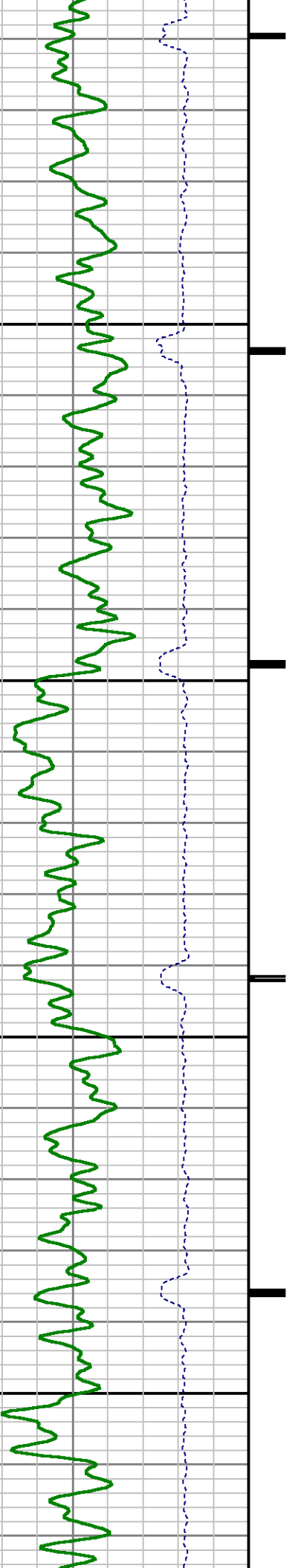


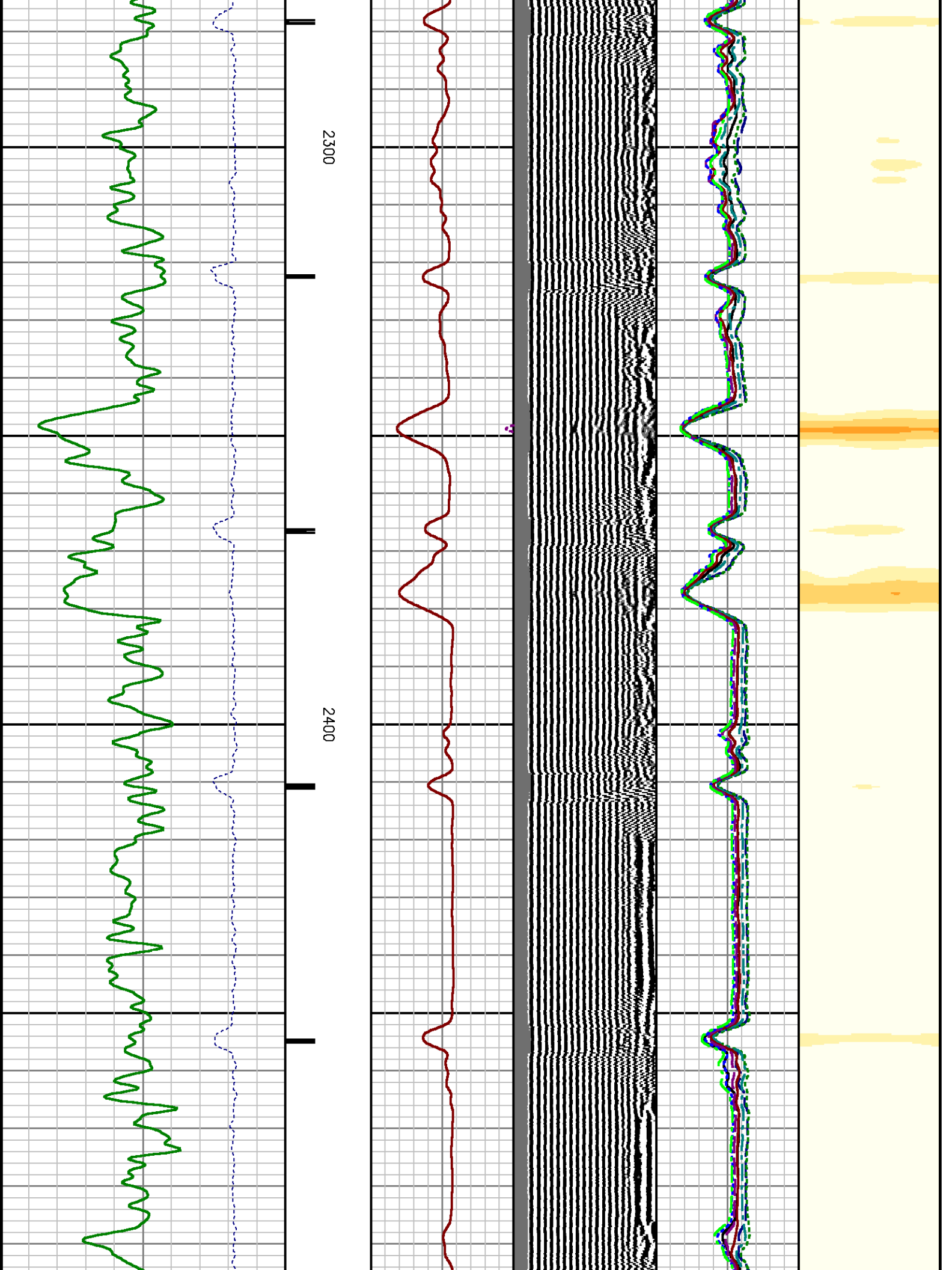




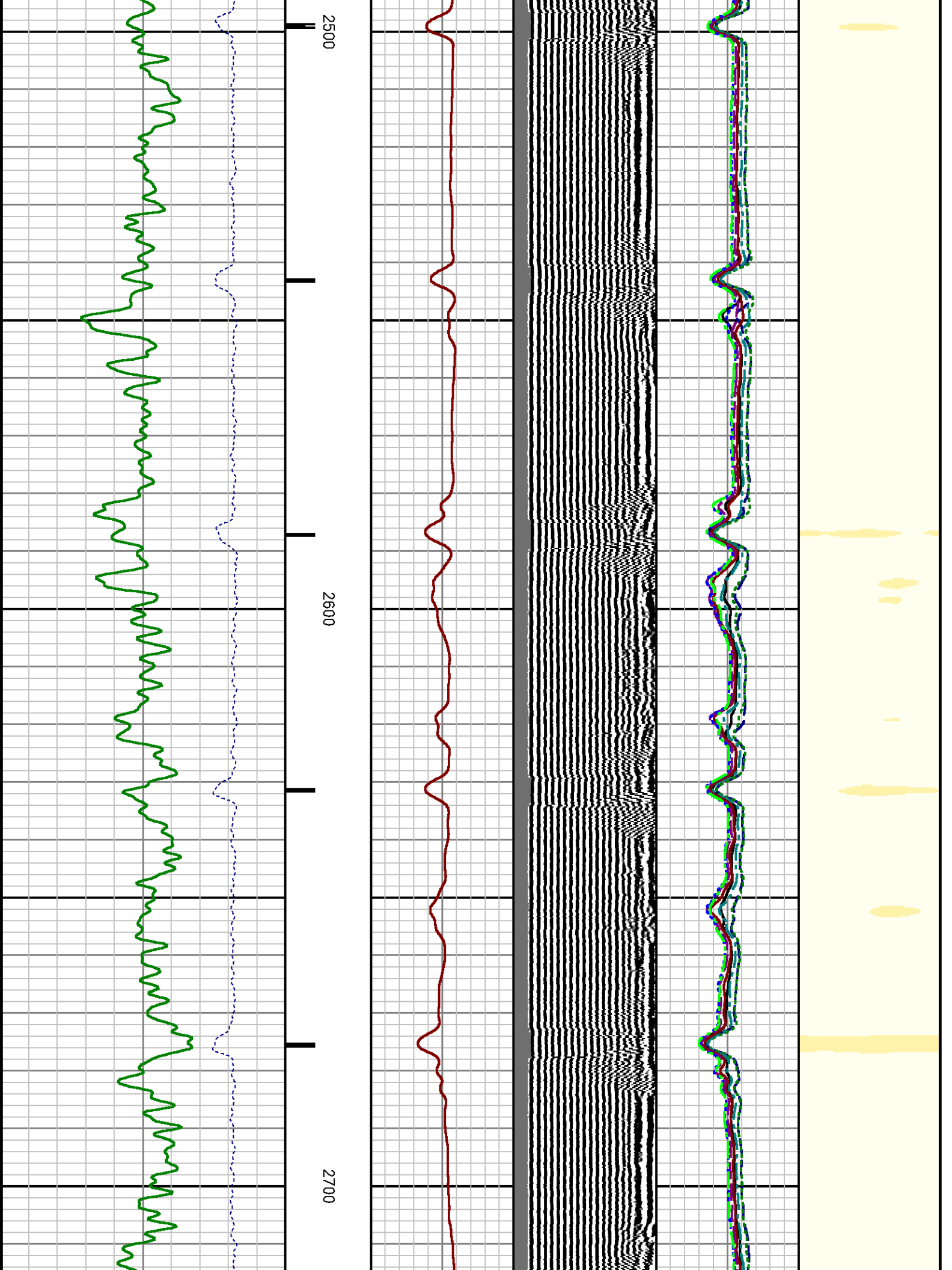
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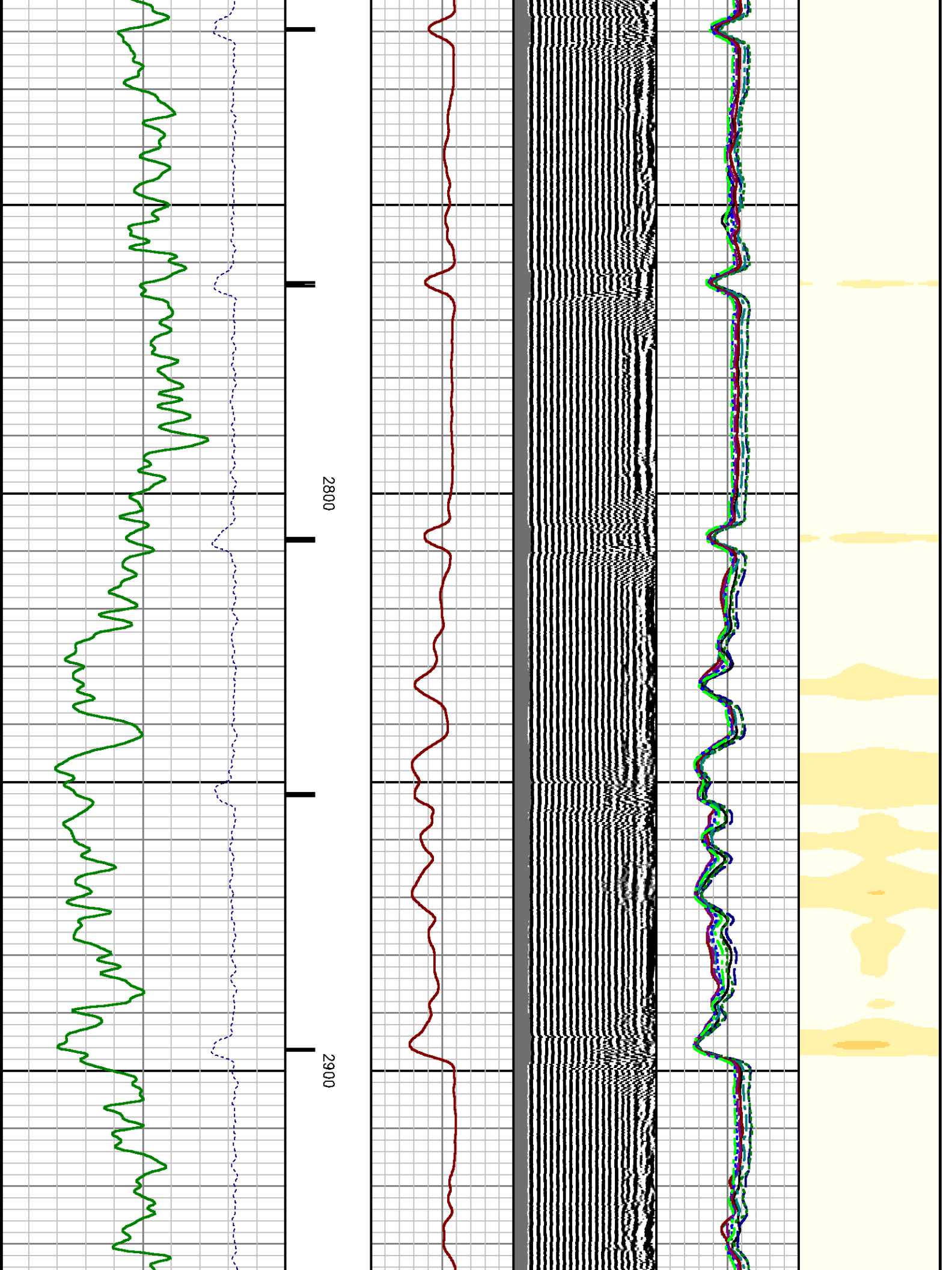
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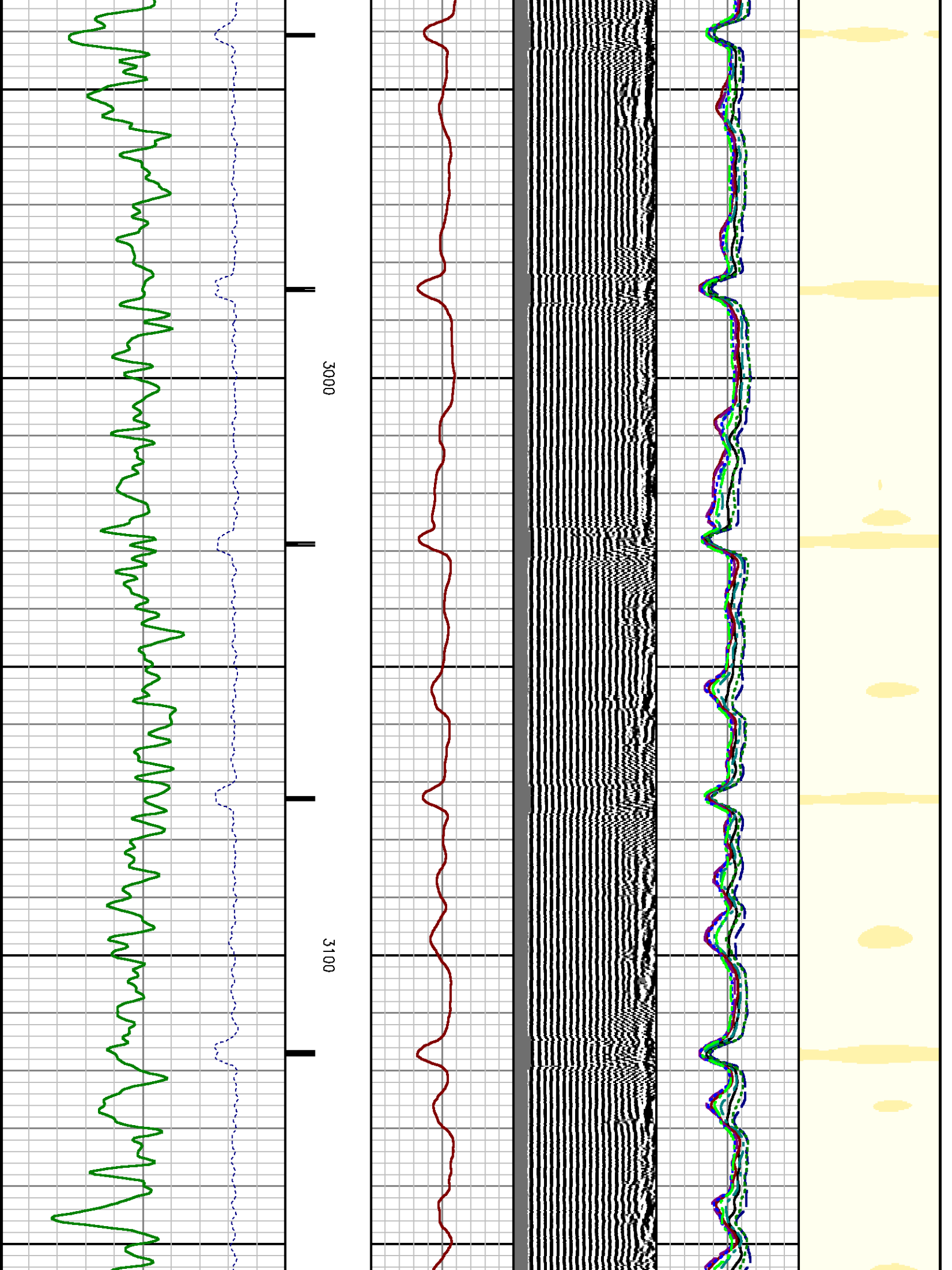


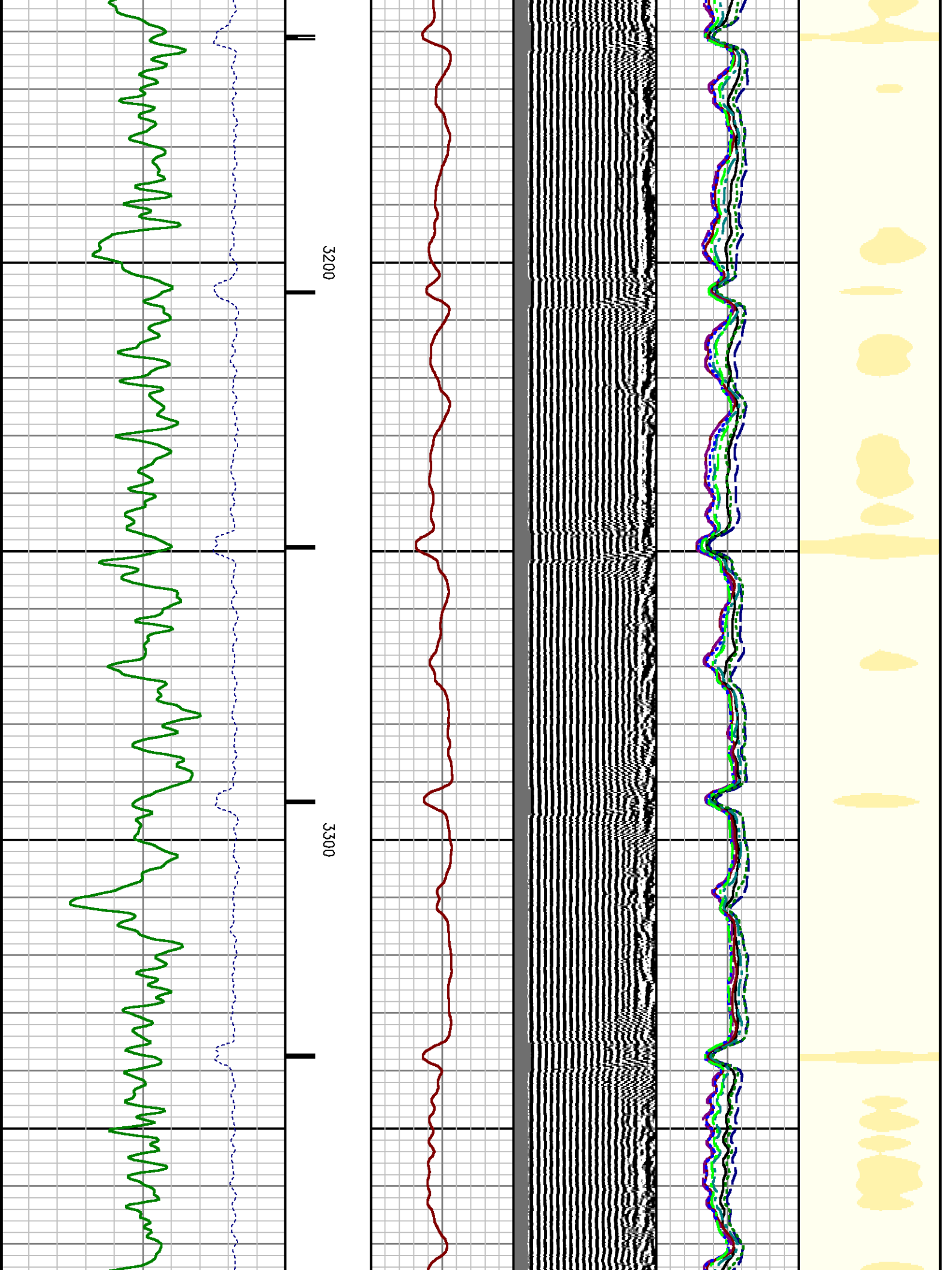


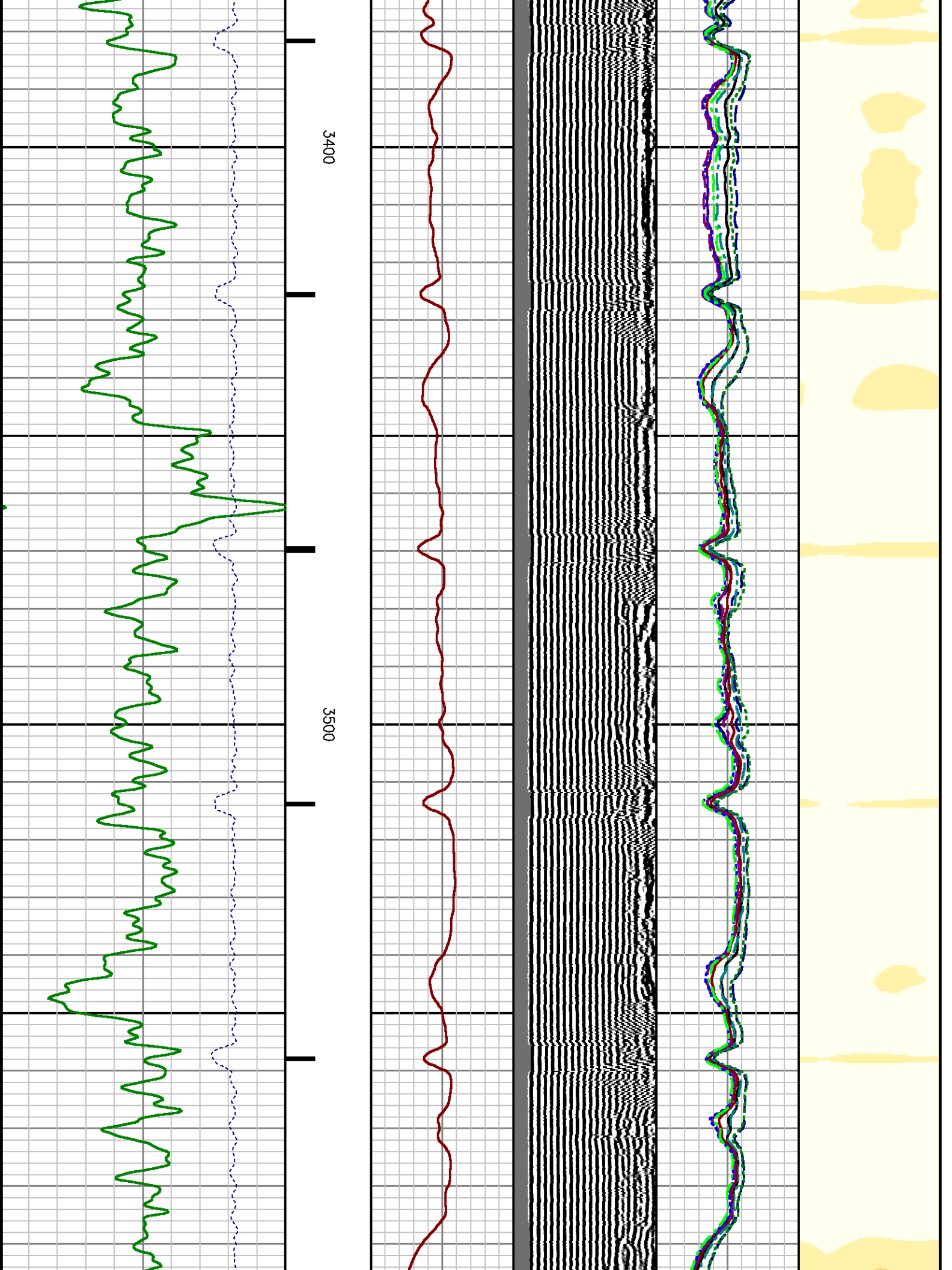


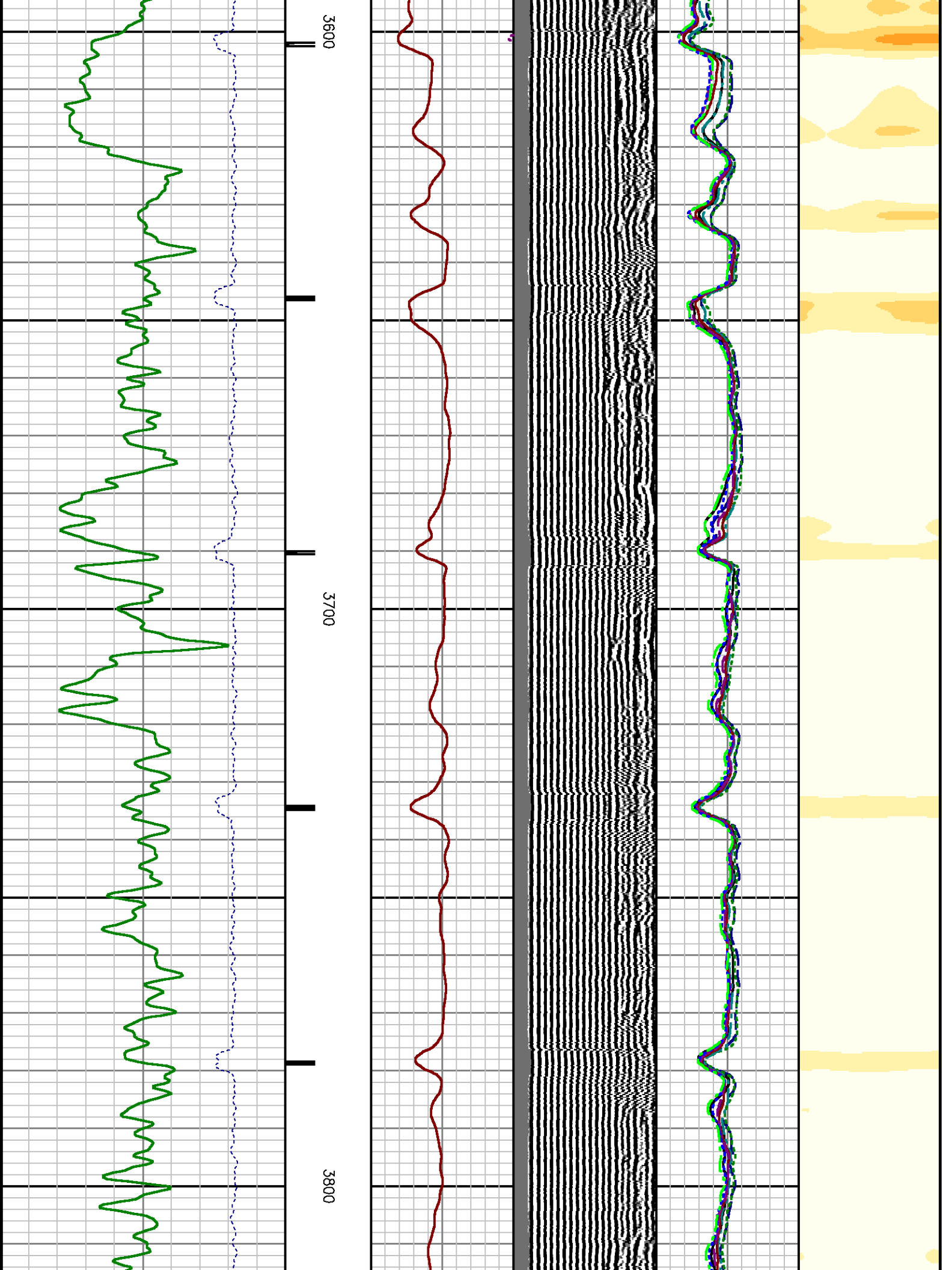




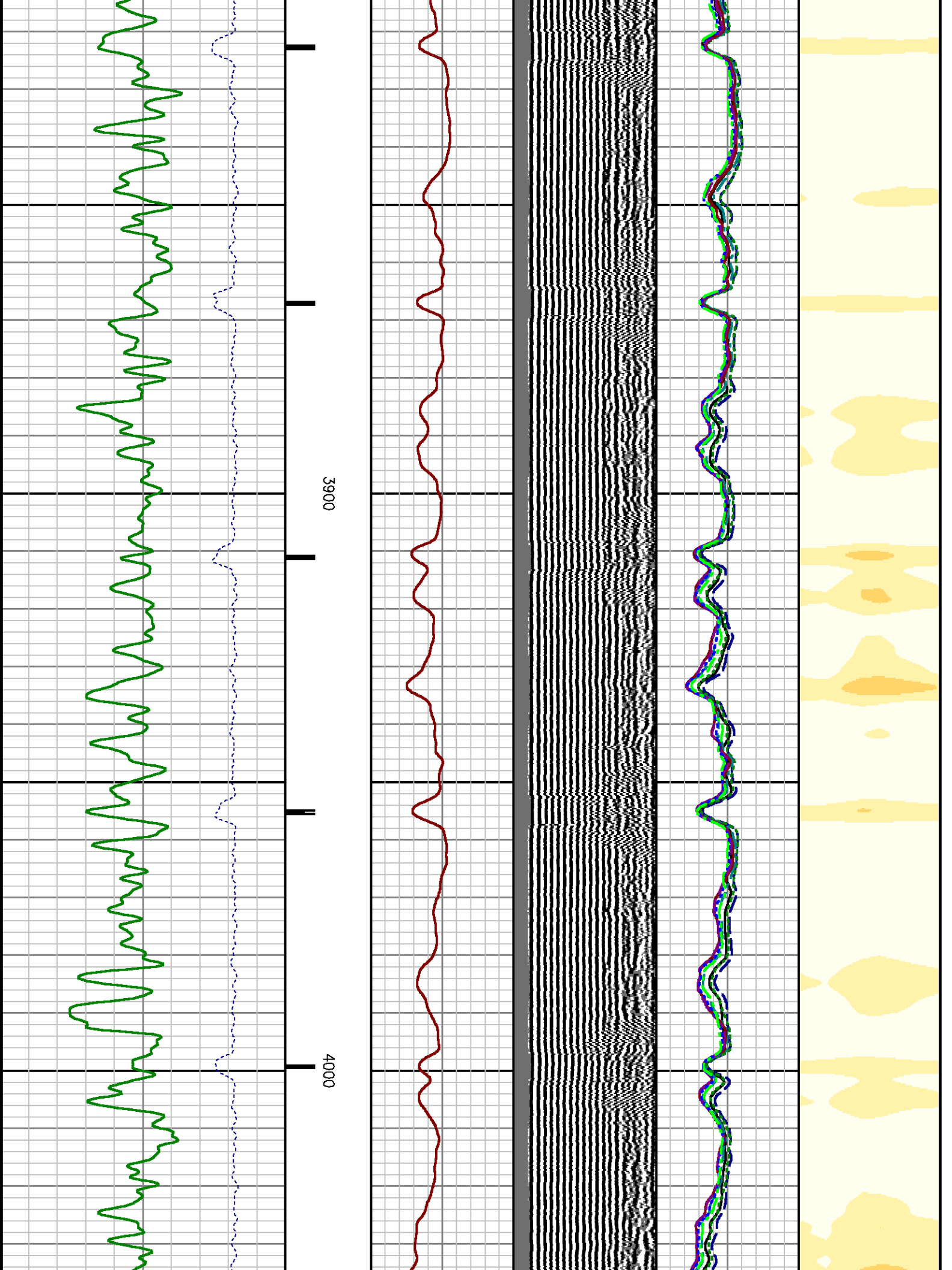


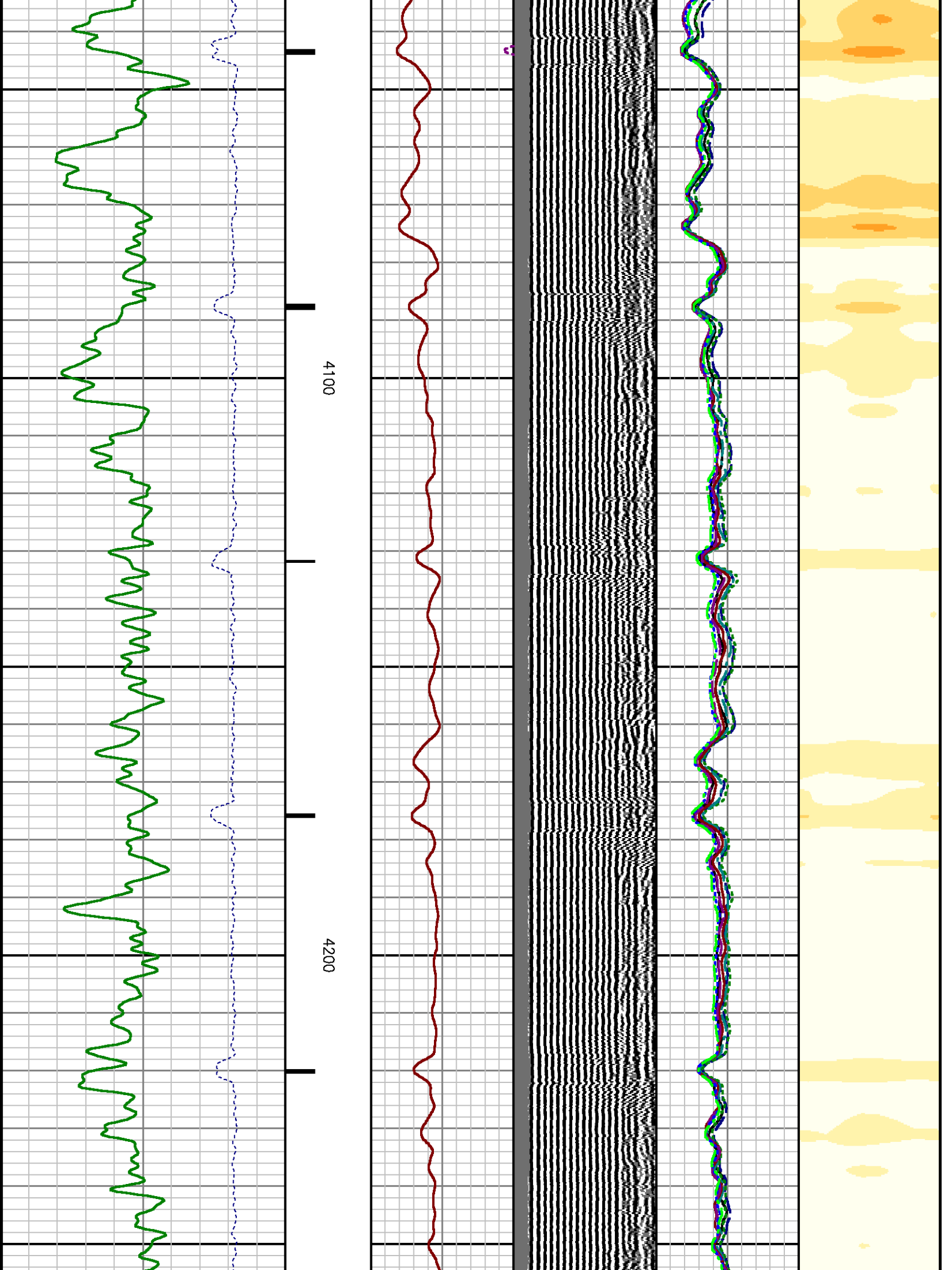


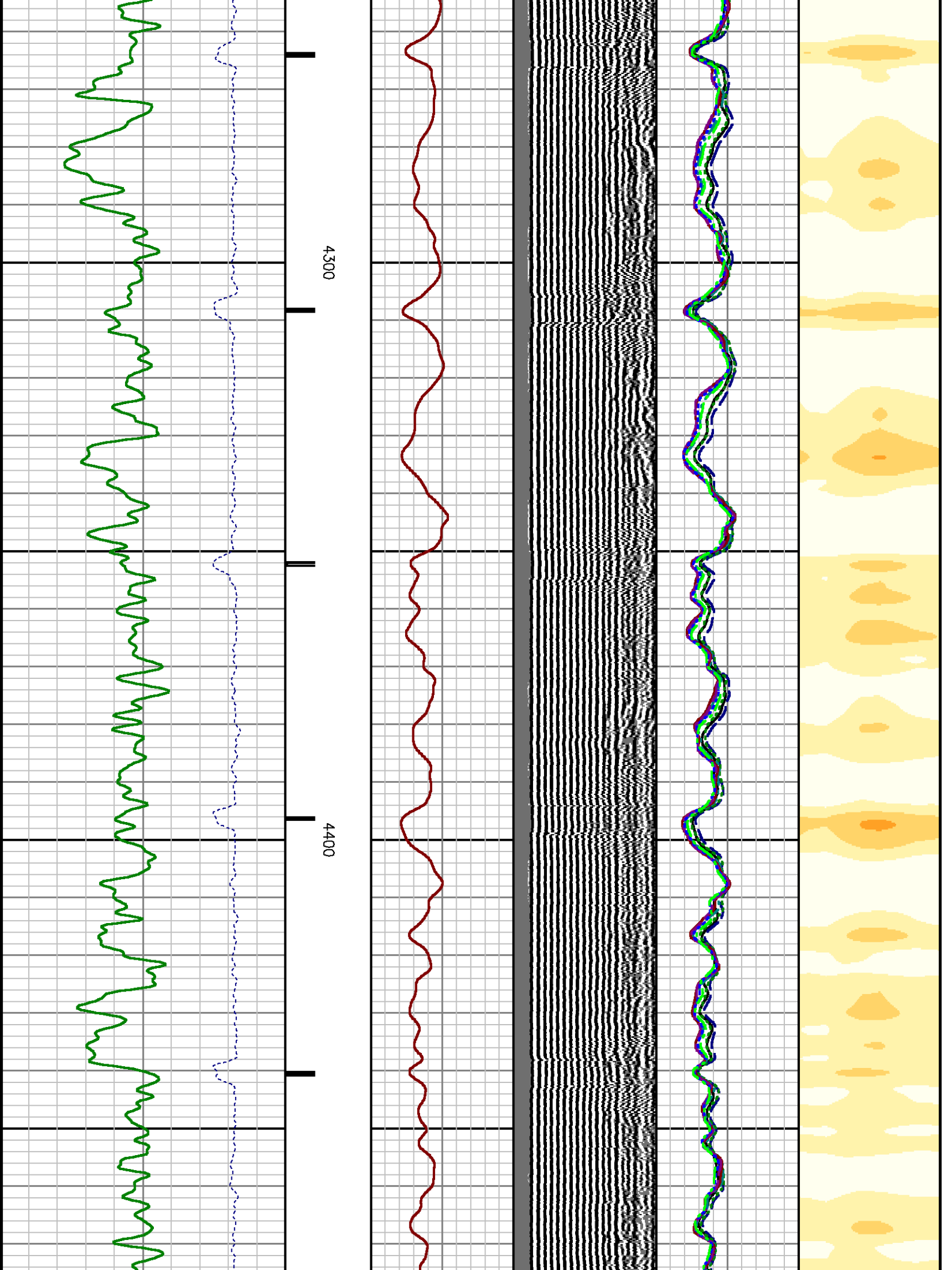


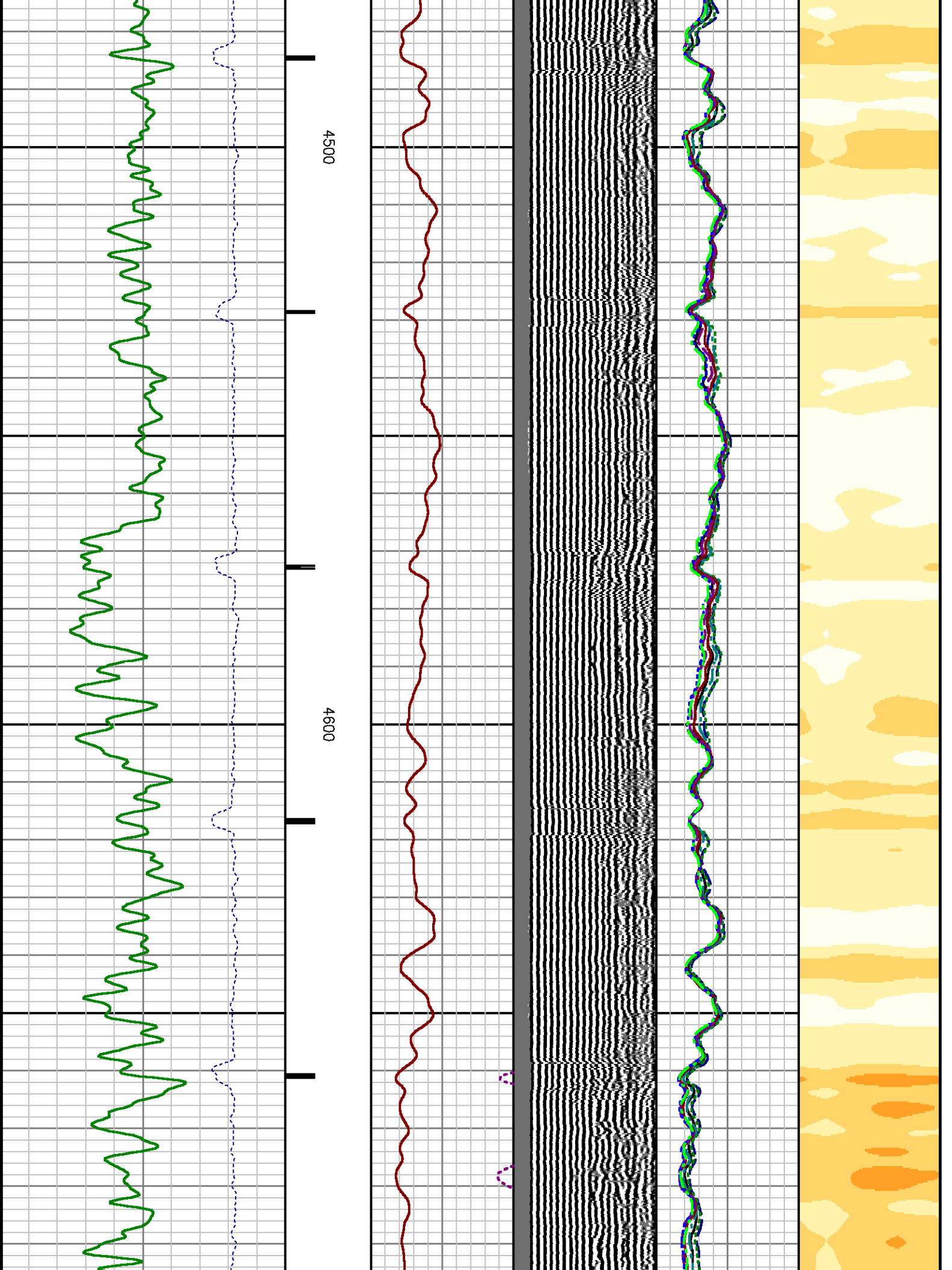


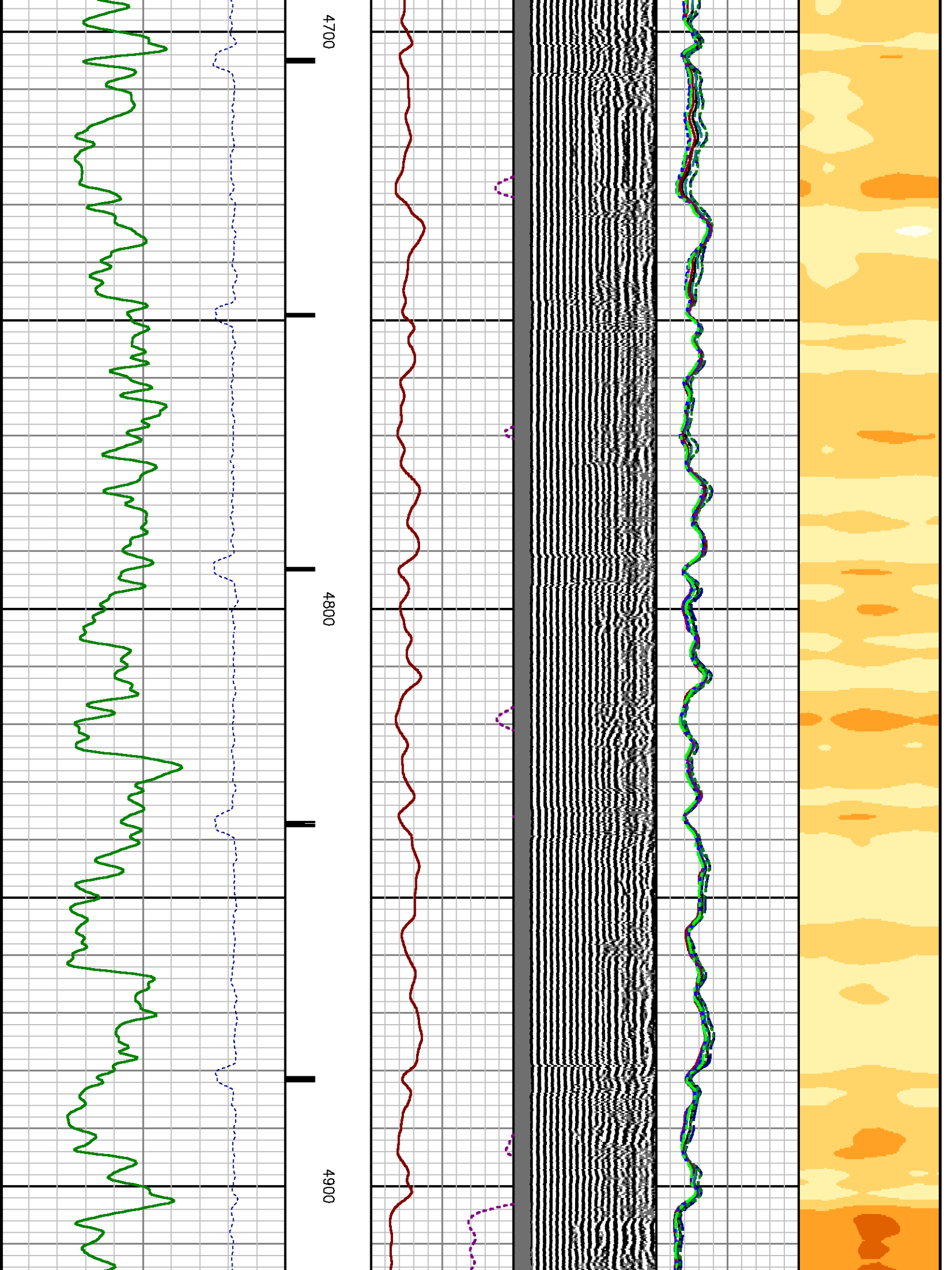




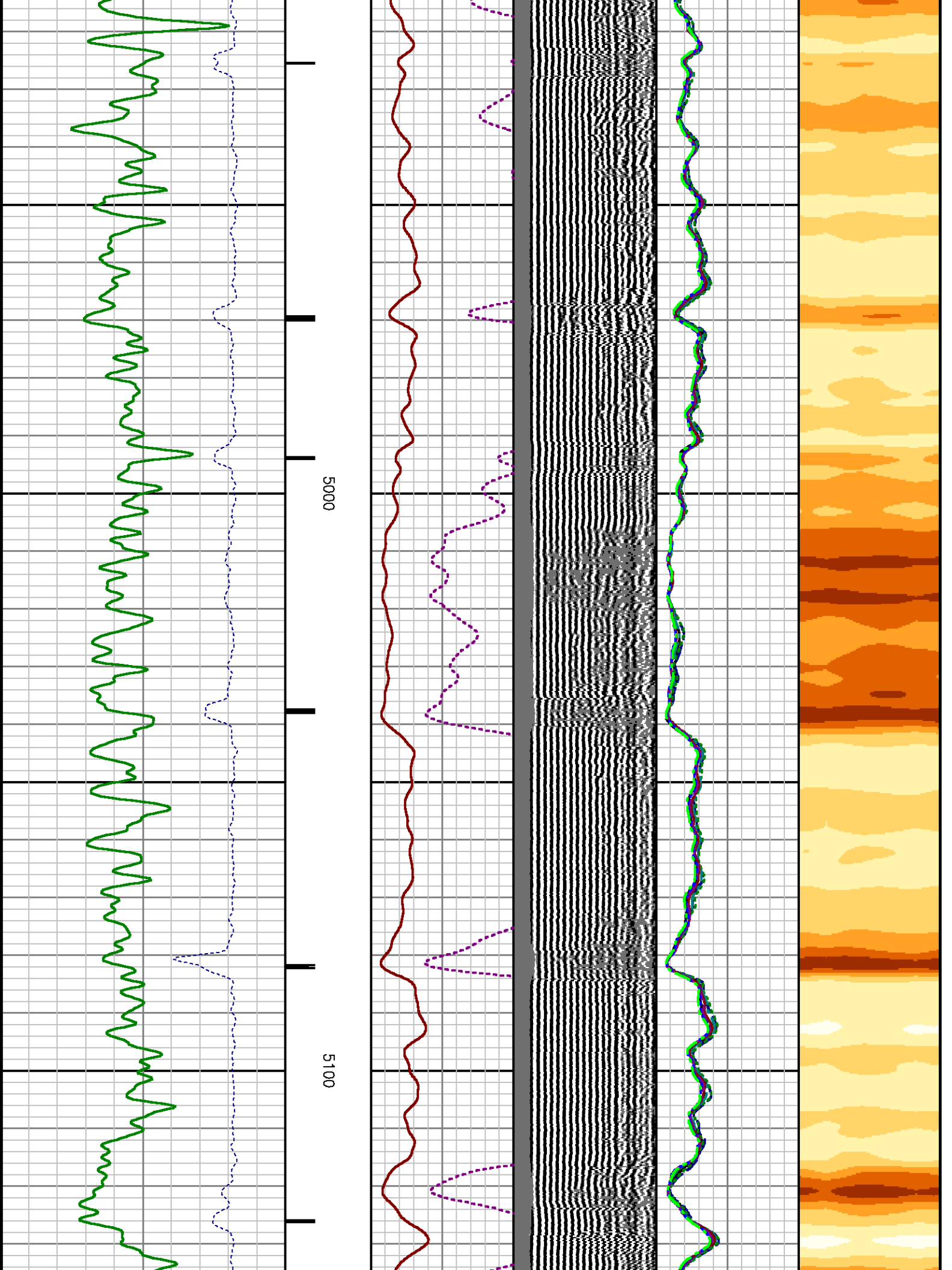




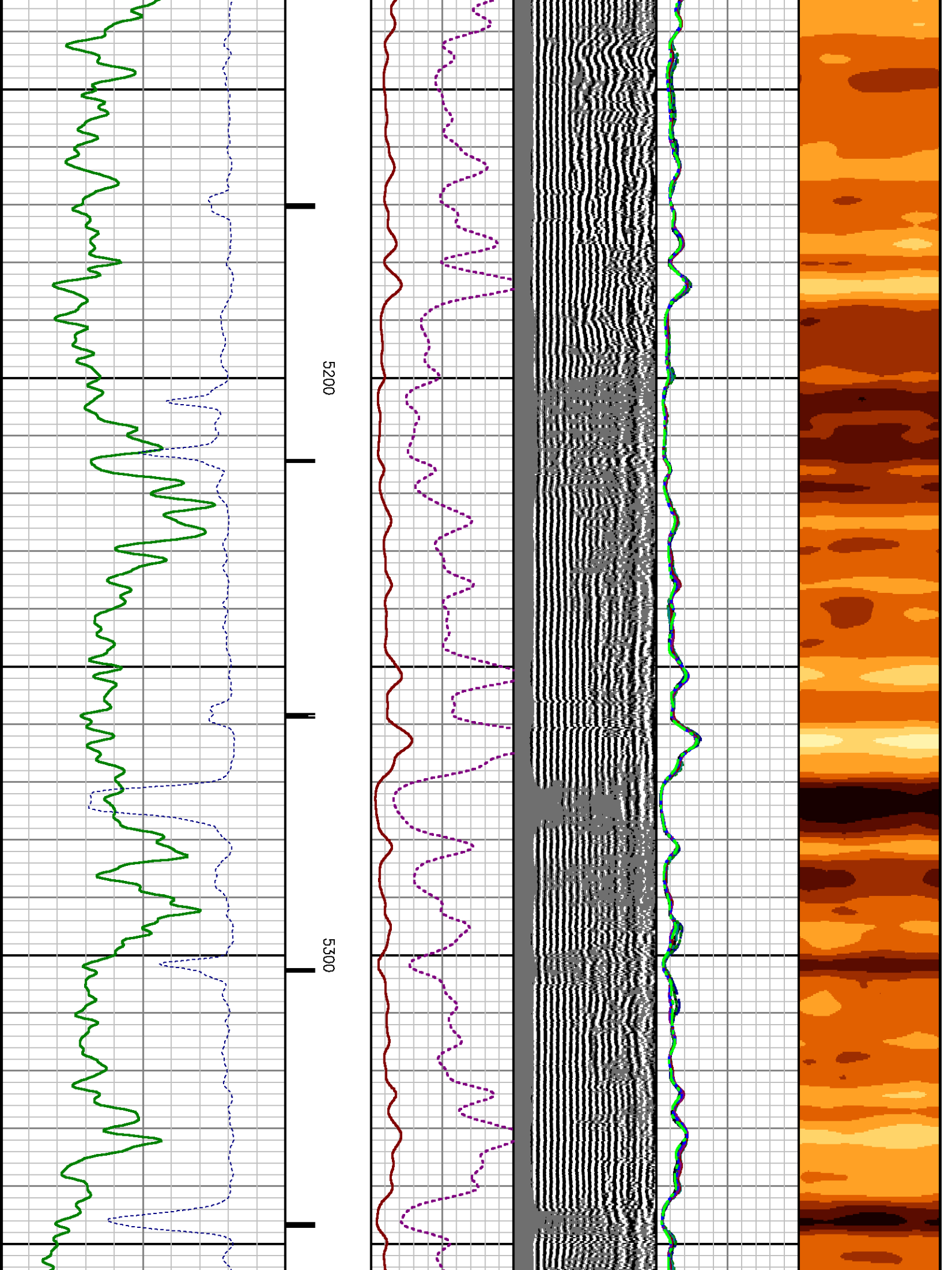


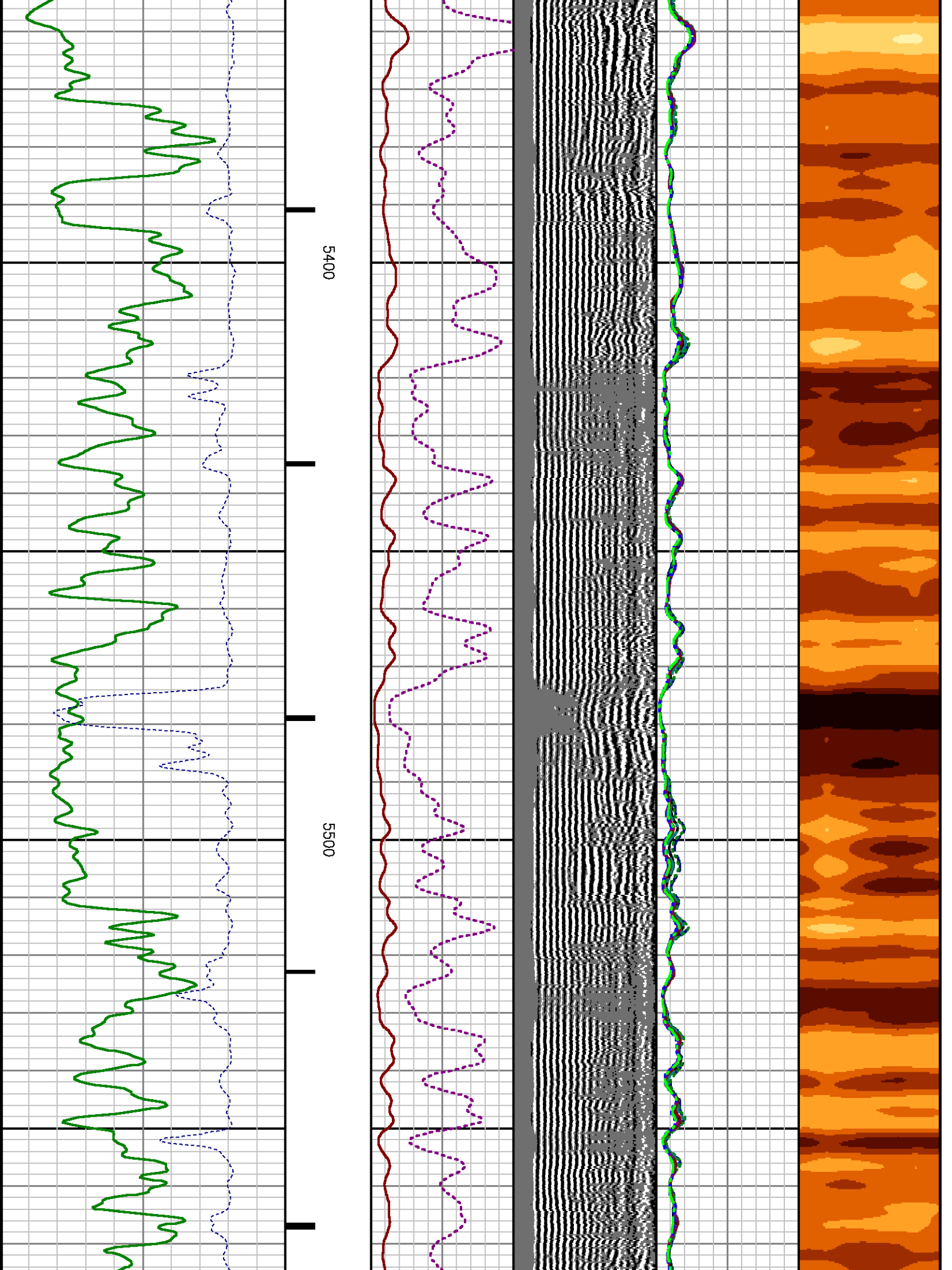


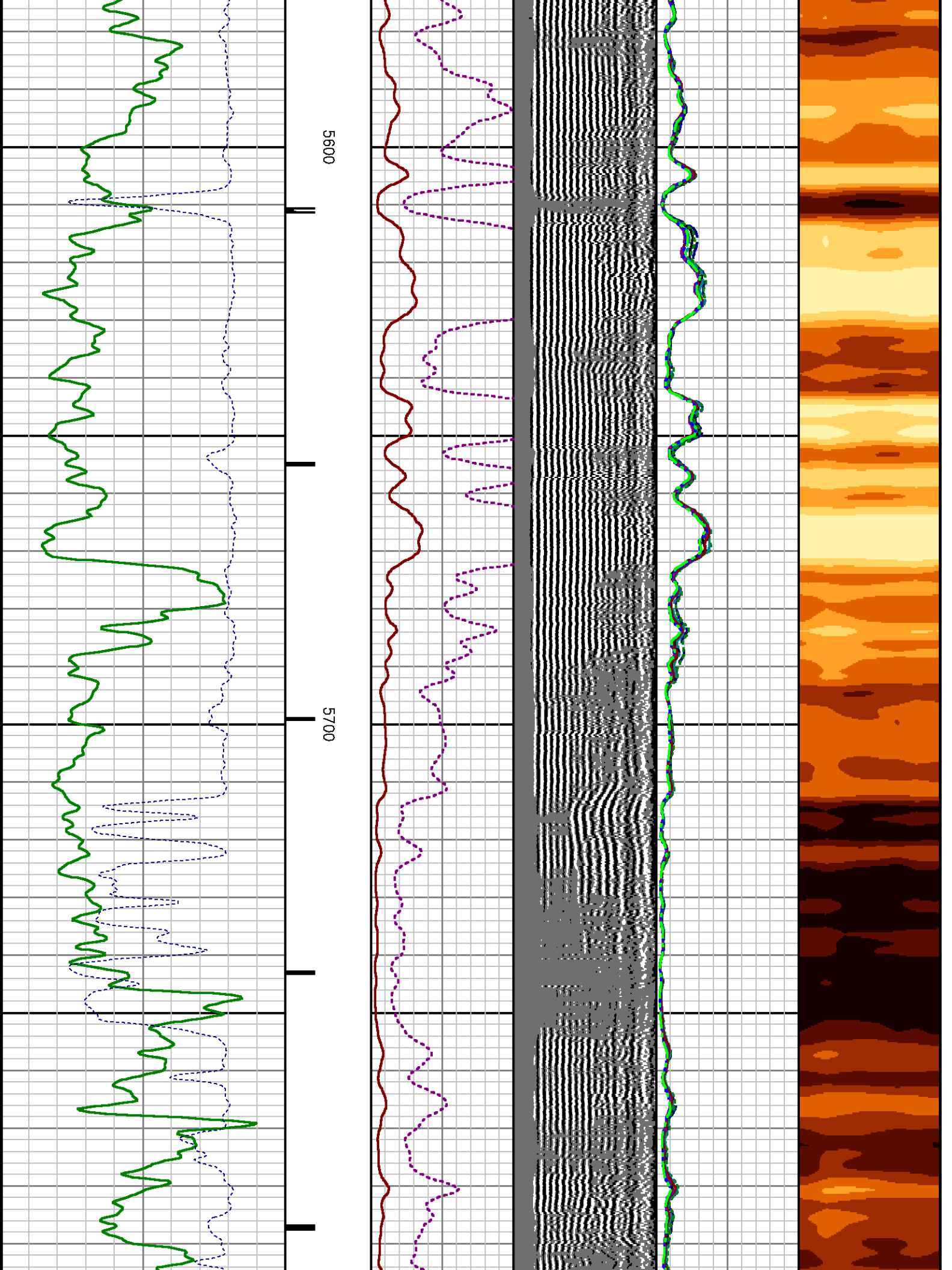


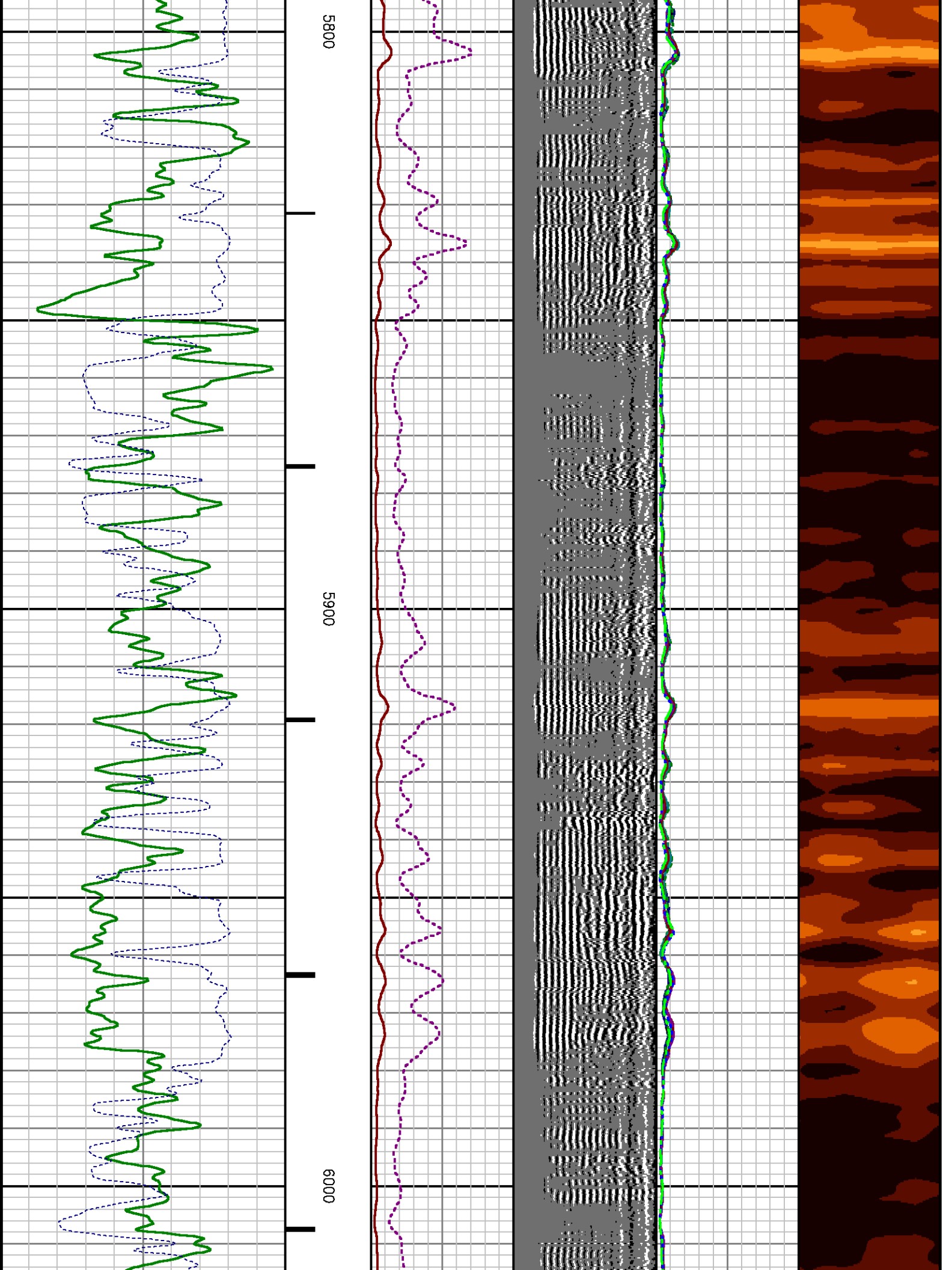


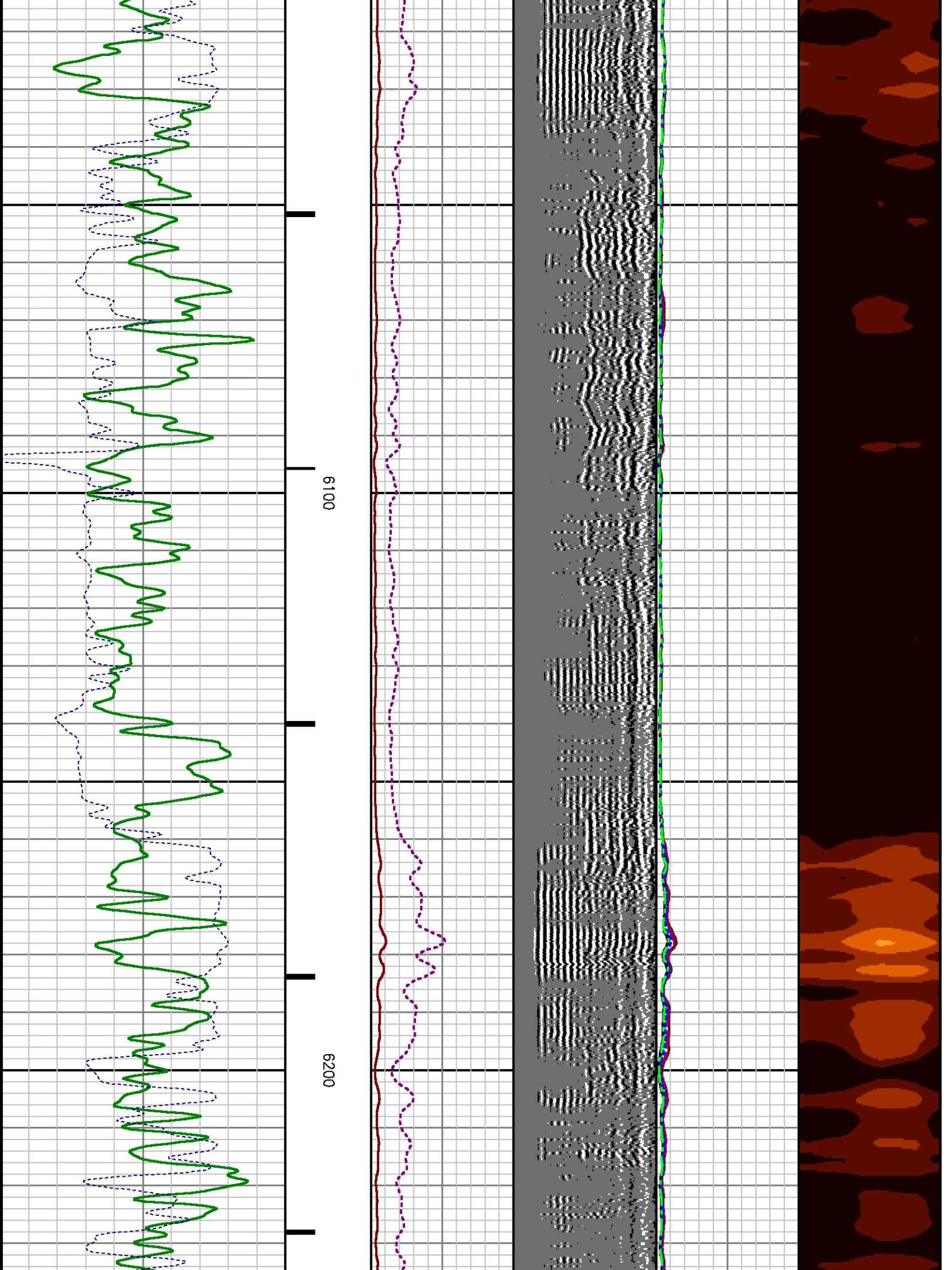




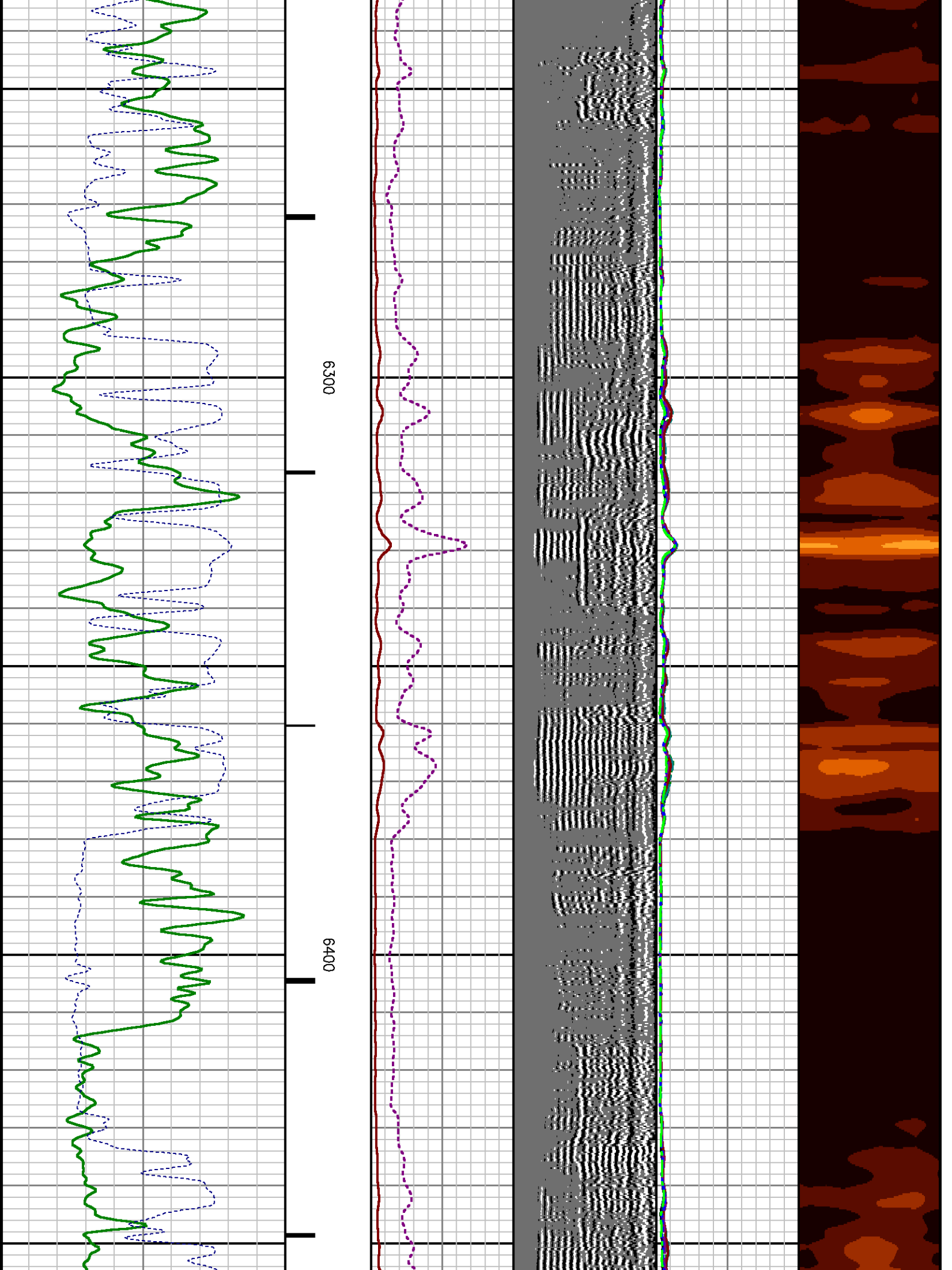




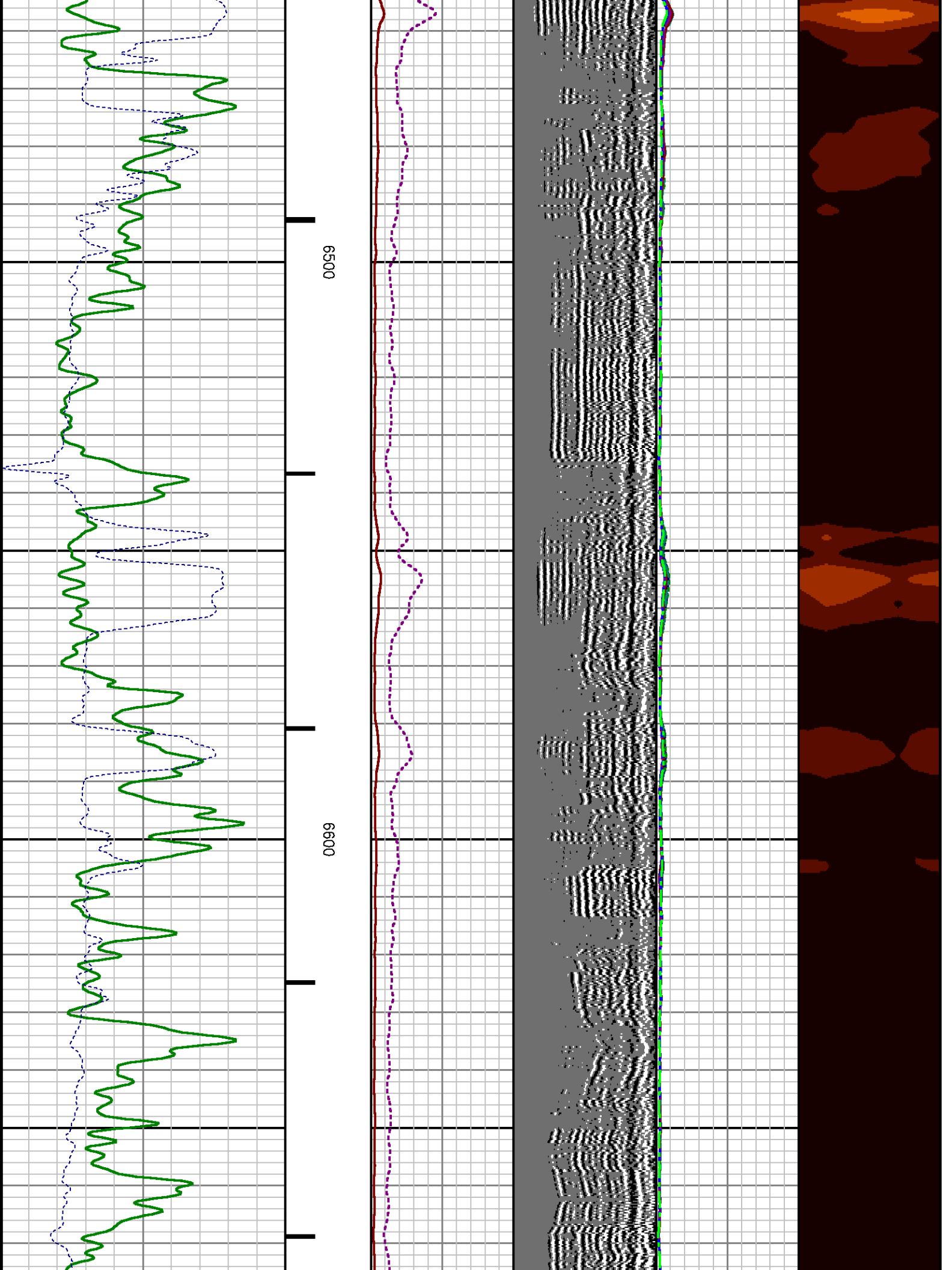


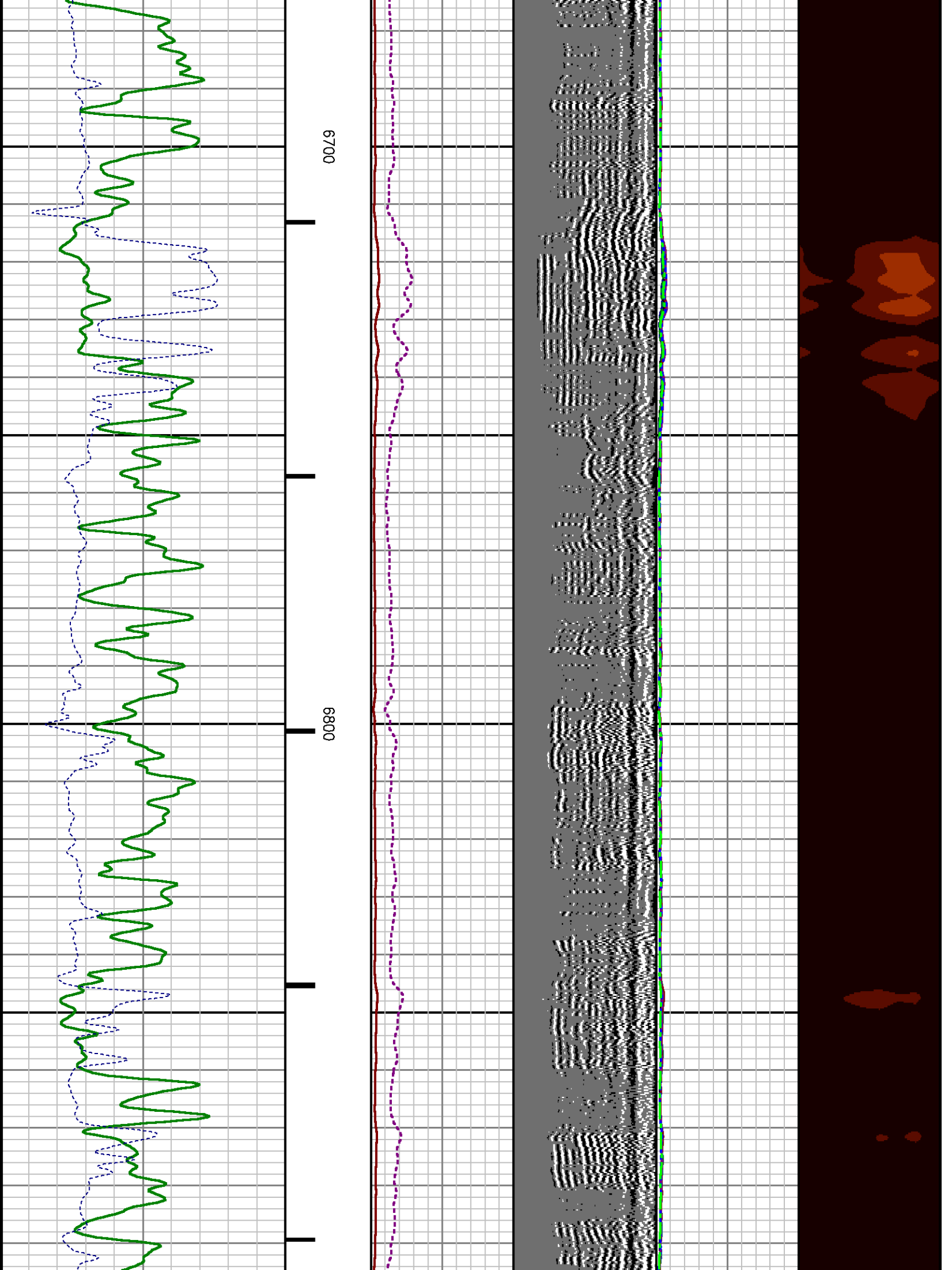


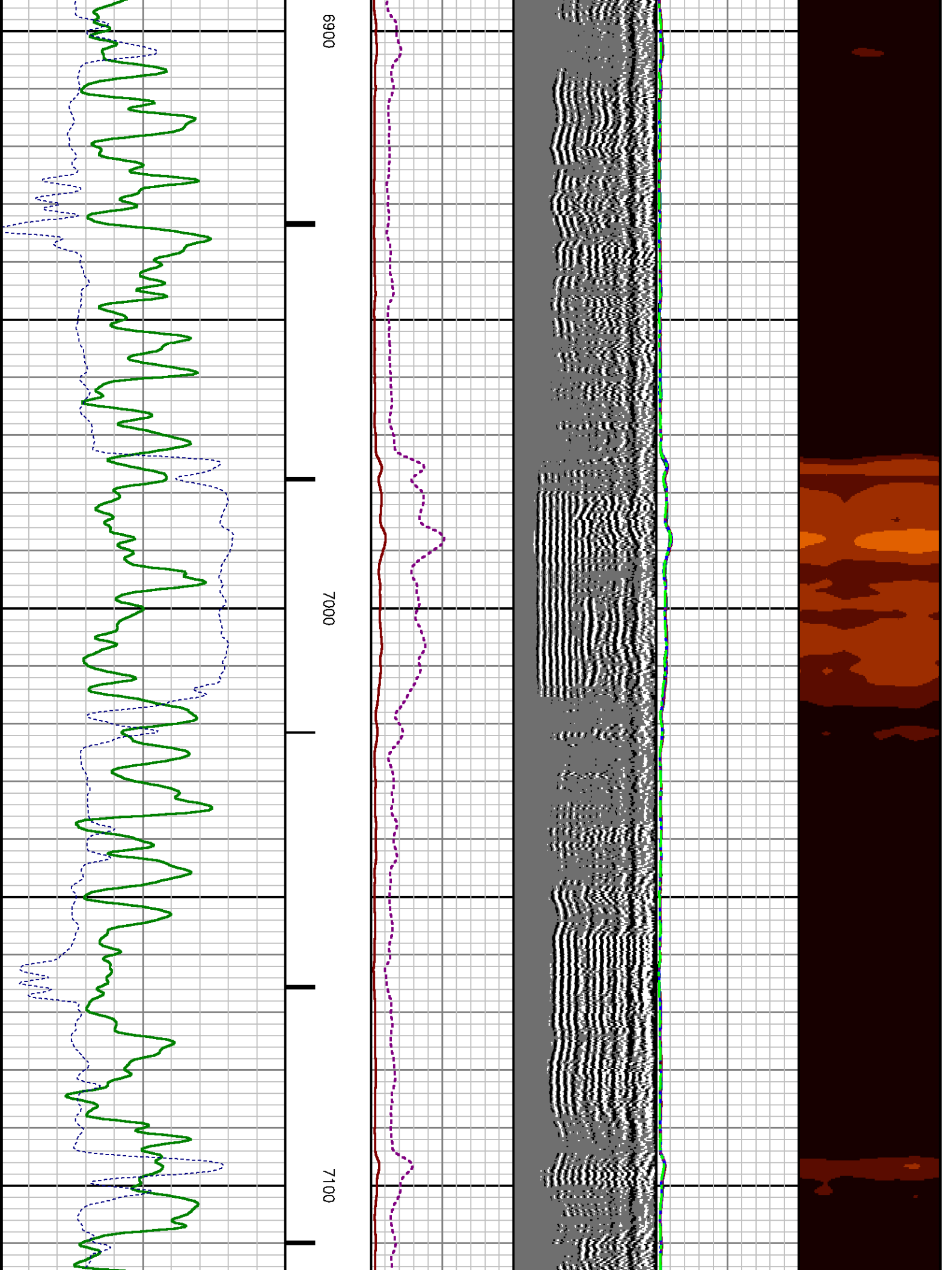


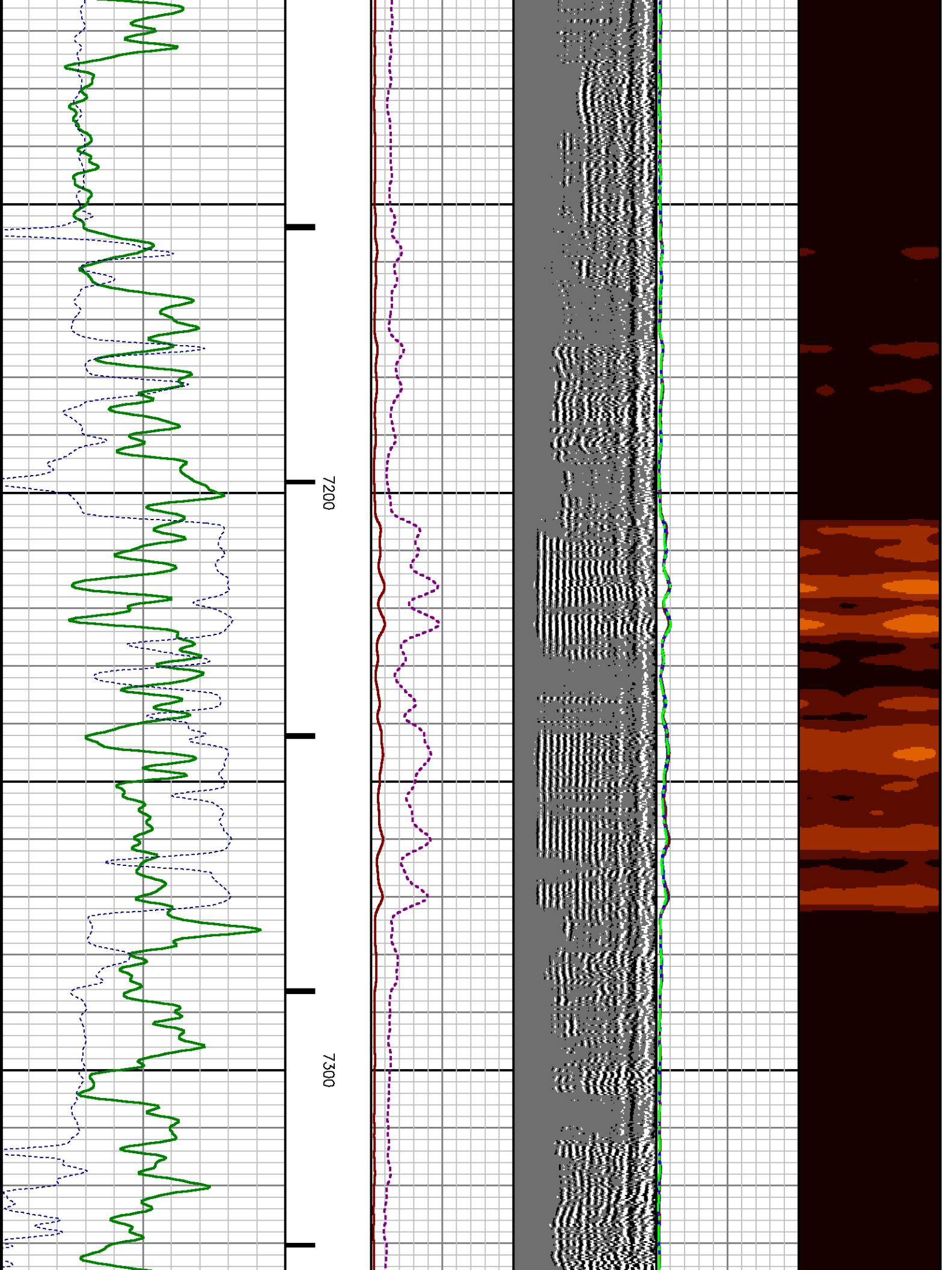


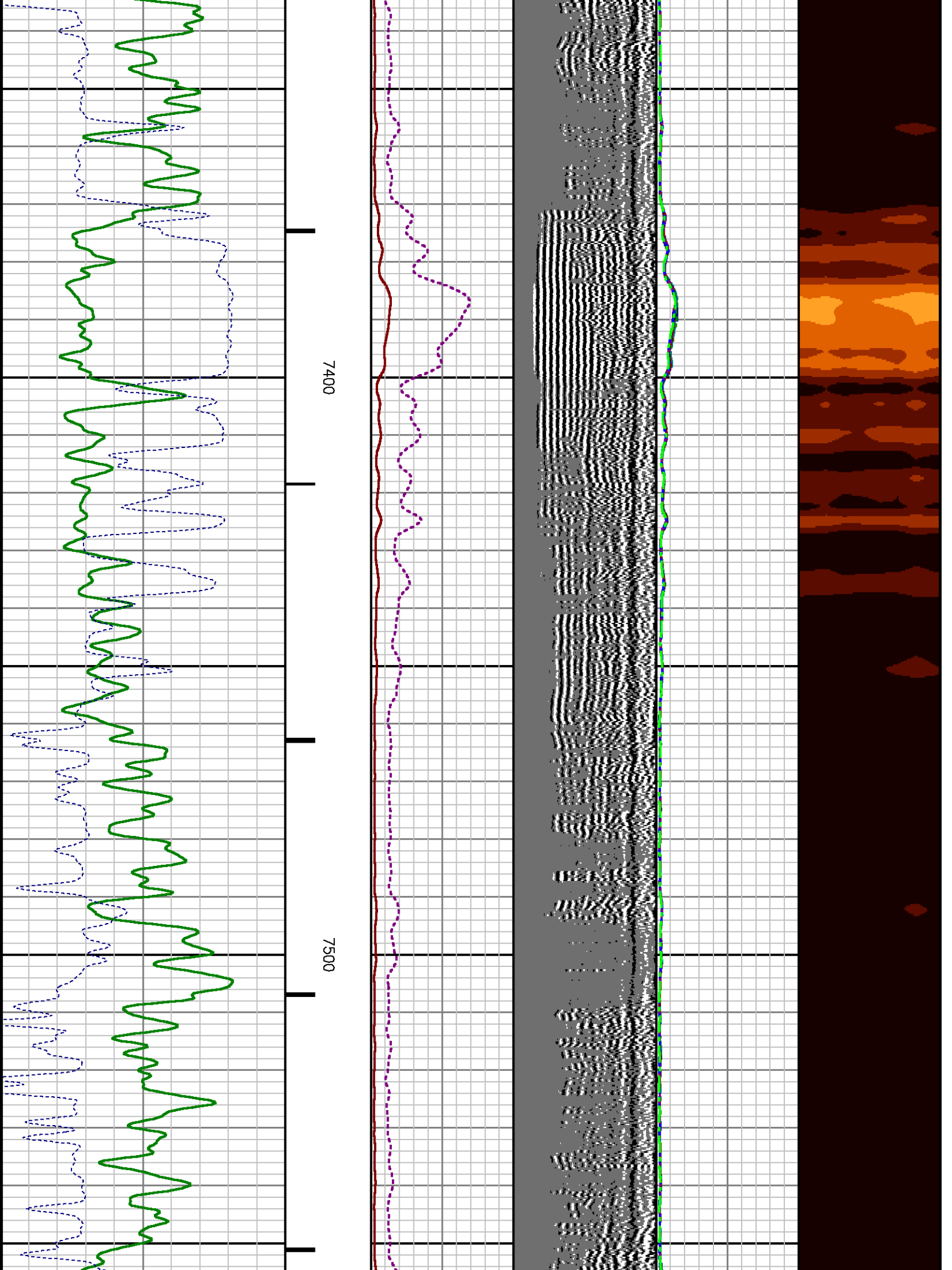


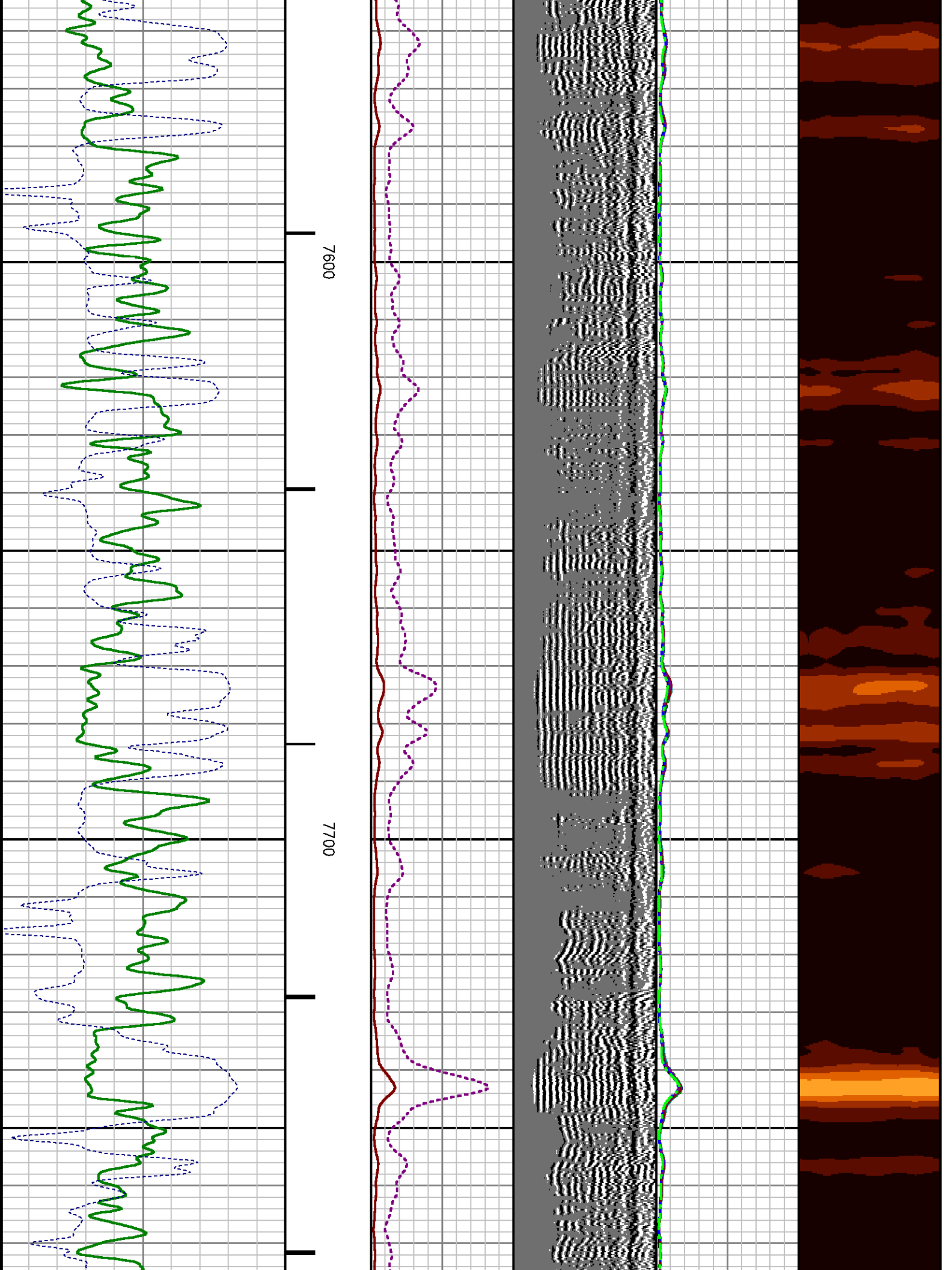




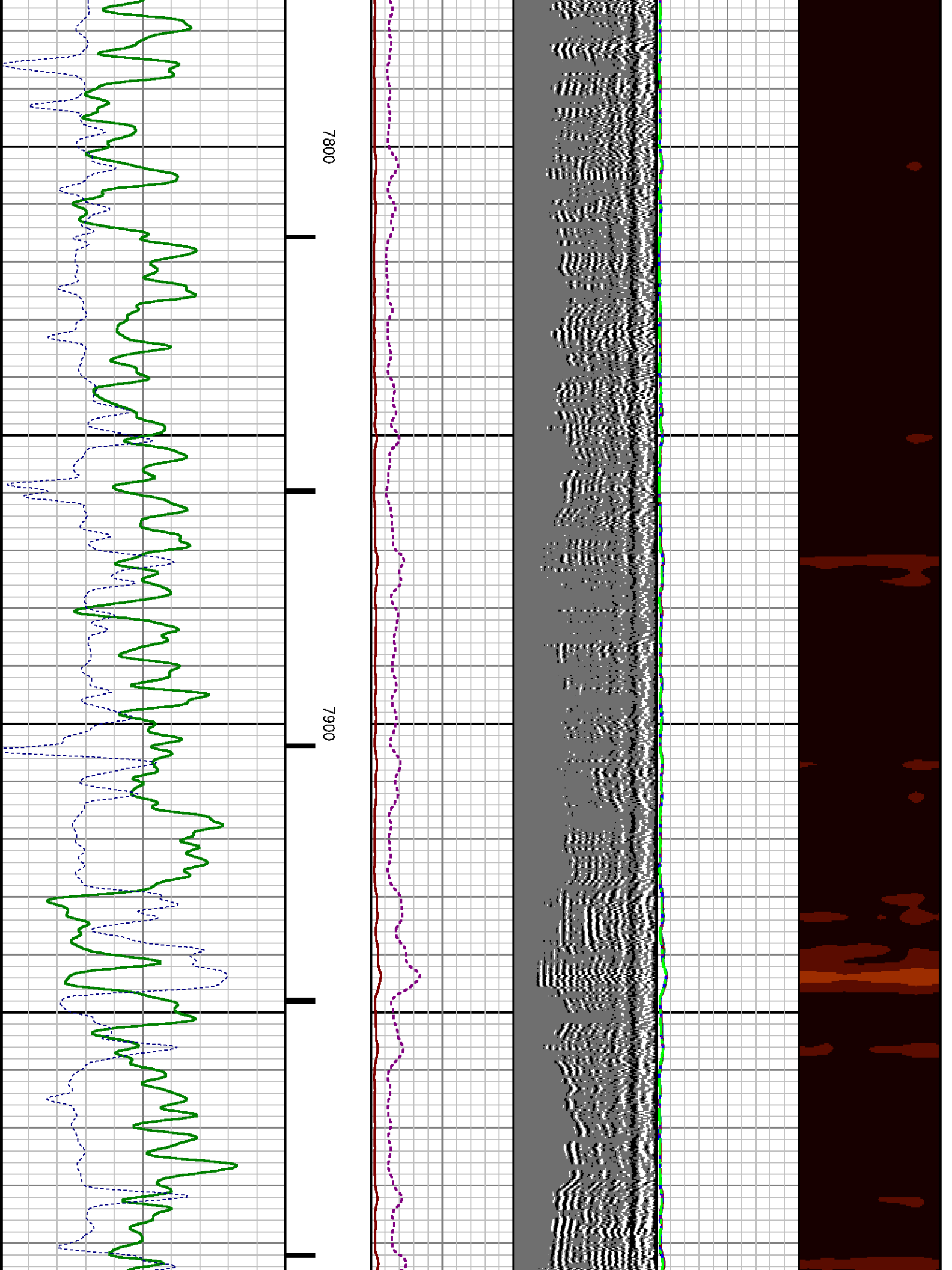


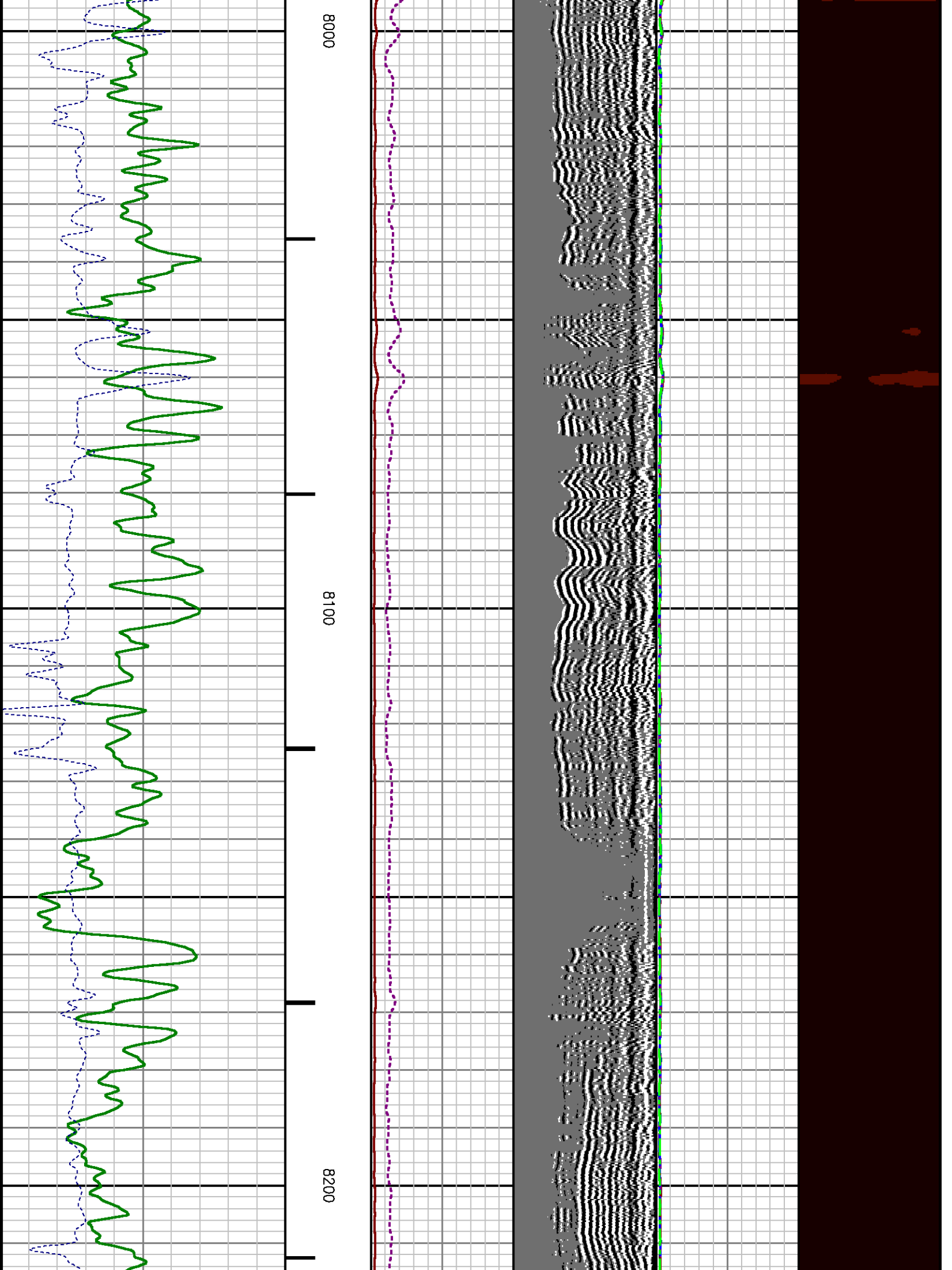


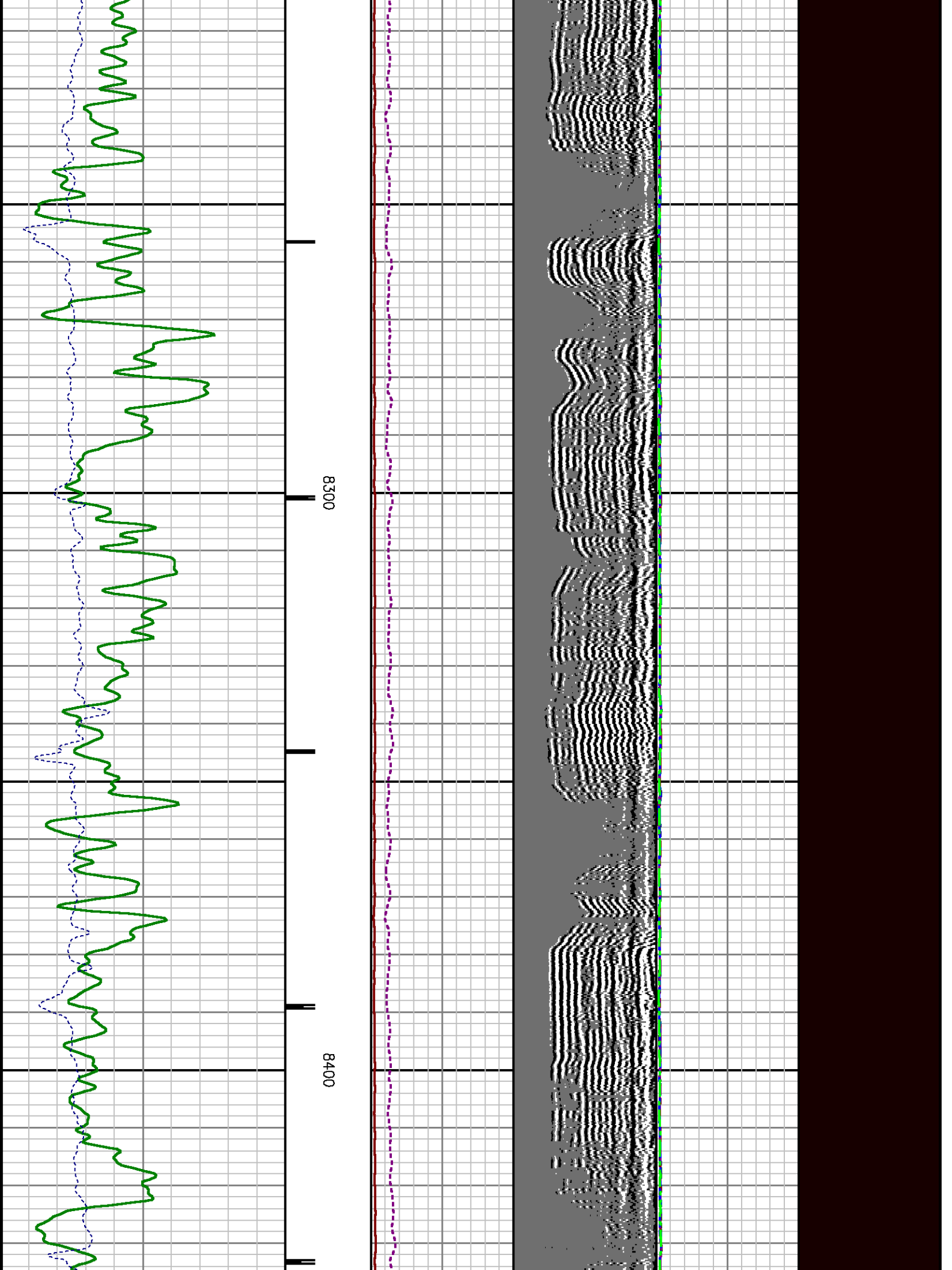


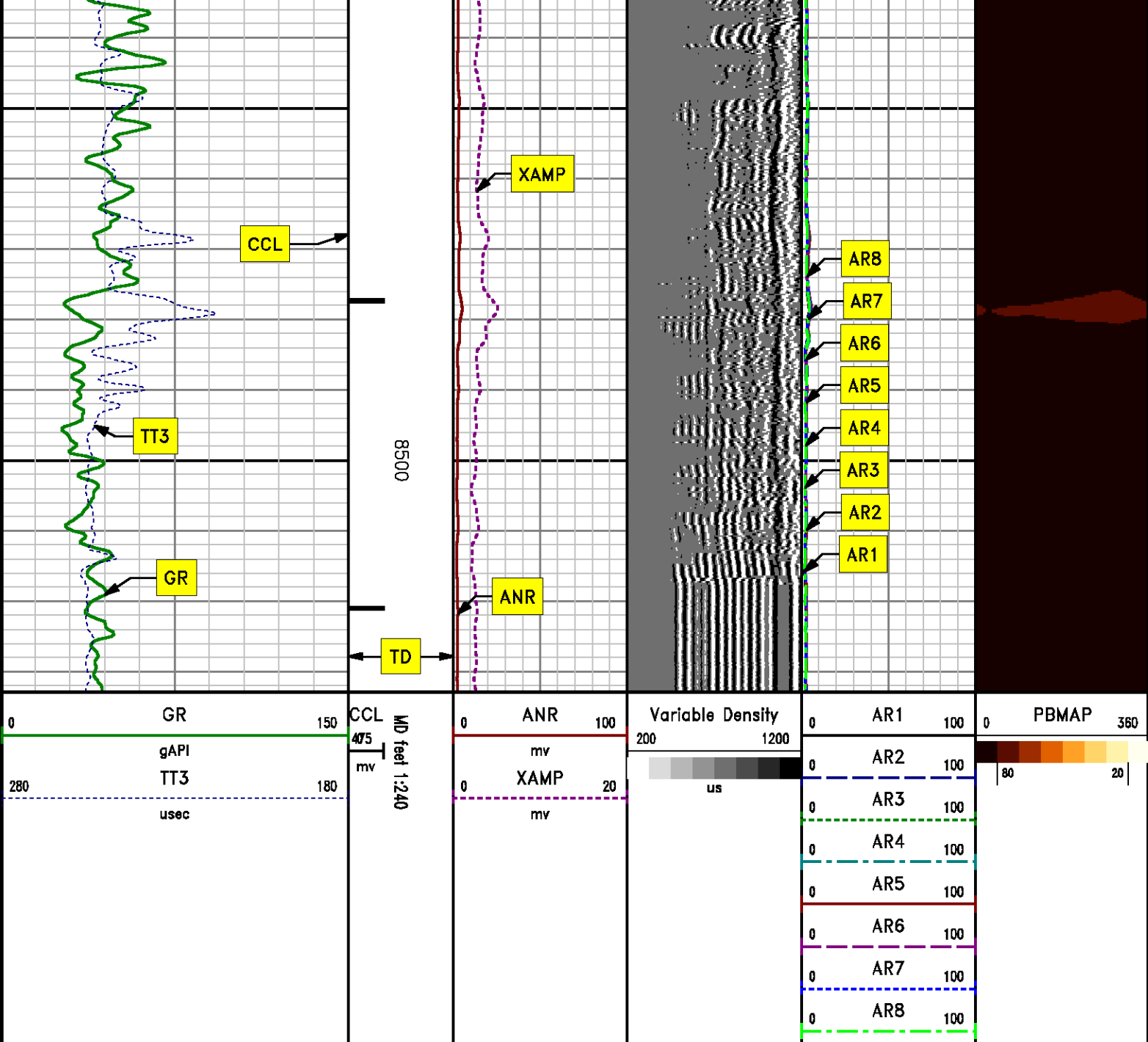








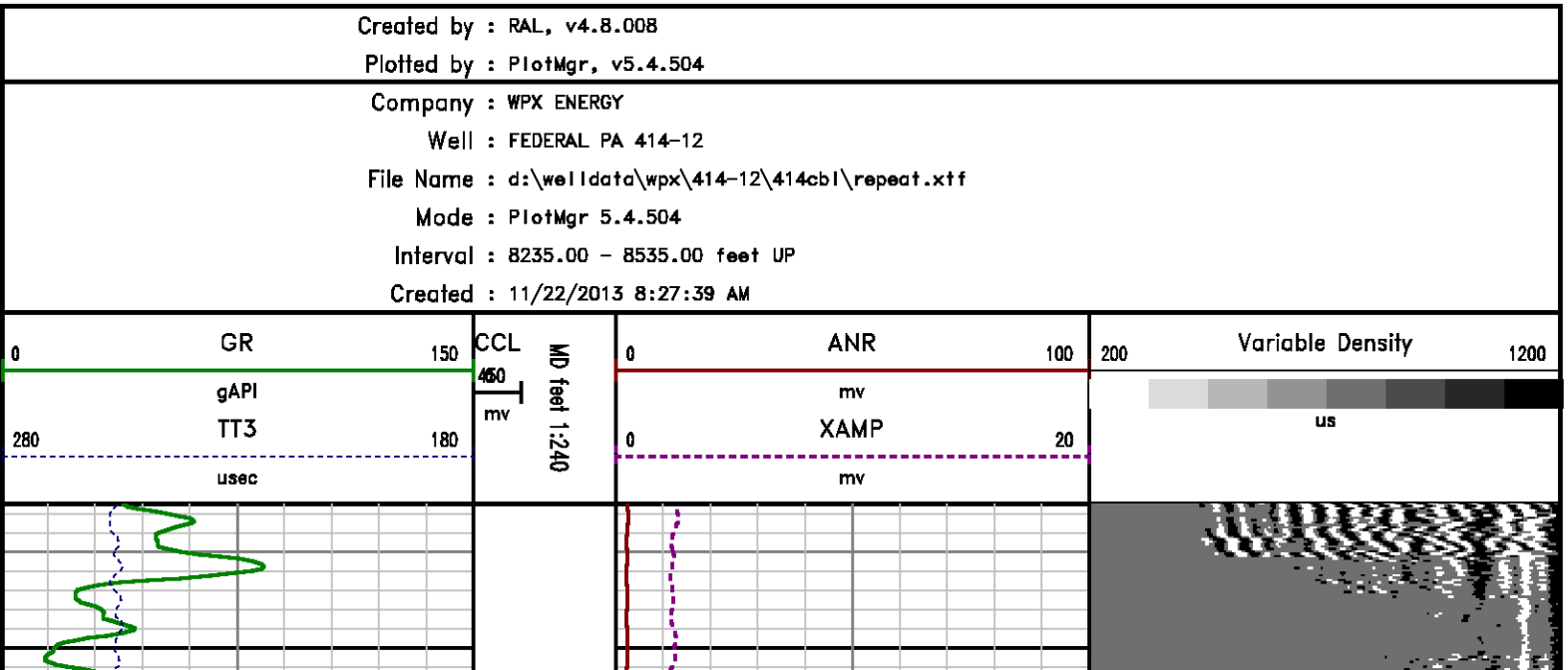


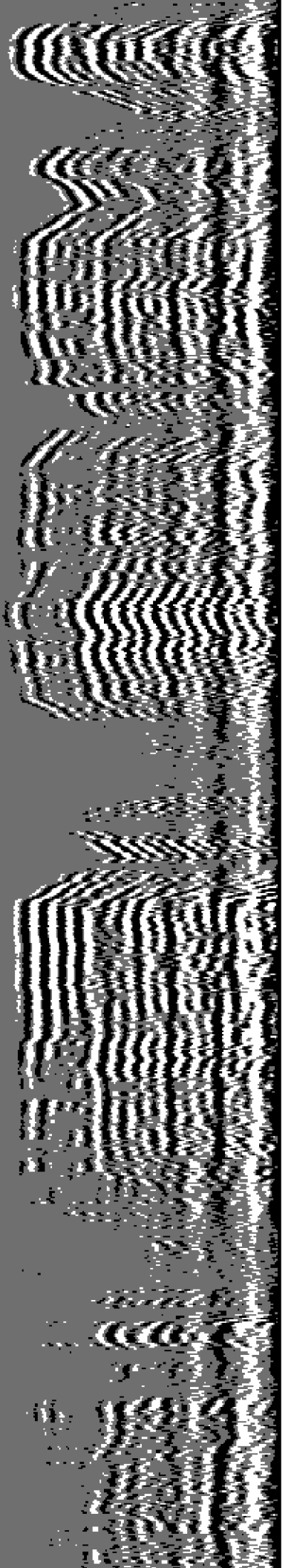


**REPEAT SECTION**  
**0 PSI**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8233.070	8553.320
RAL	Amp Gate Start Near	195.000	usec	8233.070	8553.320
RAL	Amp Gate Start Radial	195.000	usec	8233.070	8553.320
RAL	Amp Gate Width Far	25.000	usec	8233.070	8553.320
RAL	Amp Gate Width Near	25.000	usec	8233.070	8553.320
RAL	Amp Gate Width Radial	25.000	usec	8233.070	8553.320
RAL	casing od	4.500	inches	8233.070	8553.320
RAL	casing wt	11.600	lbm/ft	8233.070	8553.320
RAL	FB Start Far	291.900	usec	8233.070	8553.320
RAL	FB Start Near	180.000	usec	8233.070	8553.320
RAL	FB Start Radial	180.000	usec	8233.070	8553.320
RAL	FB Thresh Far	10.000	mv	8233.070	8553.320
RAL	FB Thresh Near	4.000	mv	8233.070	8553.320
RAL	FB Thresh Radial	4.000	mv	8233.070	8553.320
RAL	Fluid Travel Time	200.000	usec/ft	8233.070	8553.320

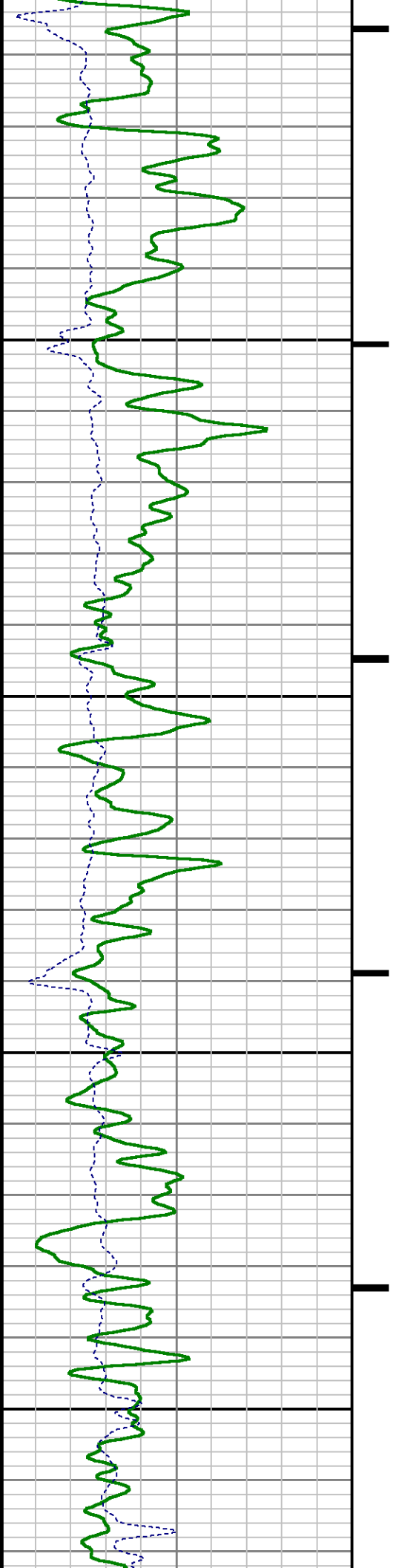
DEPTH OFFSETS (for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000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



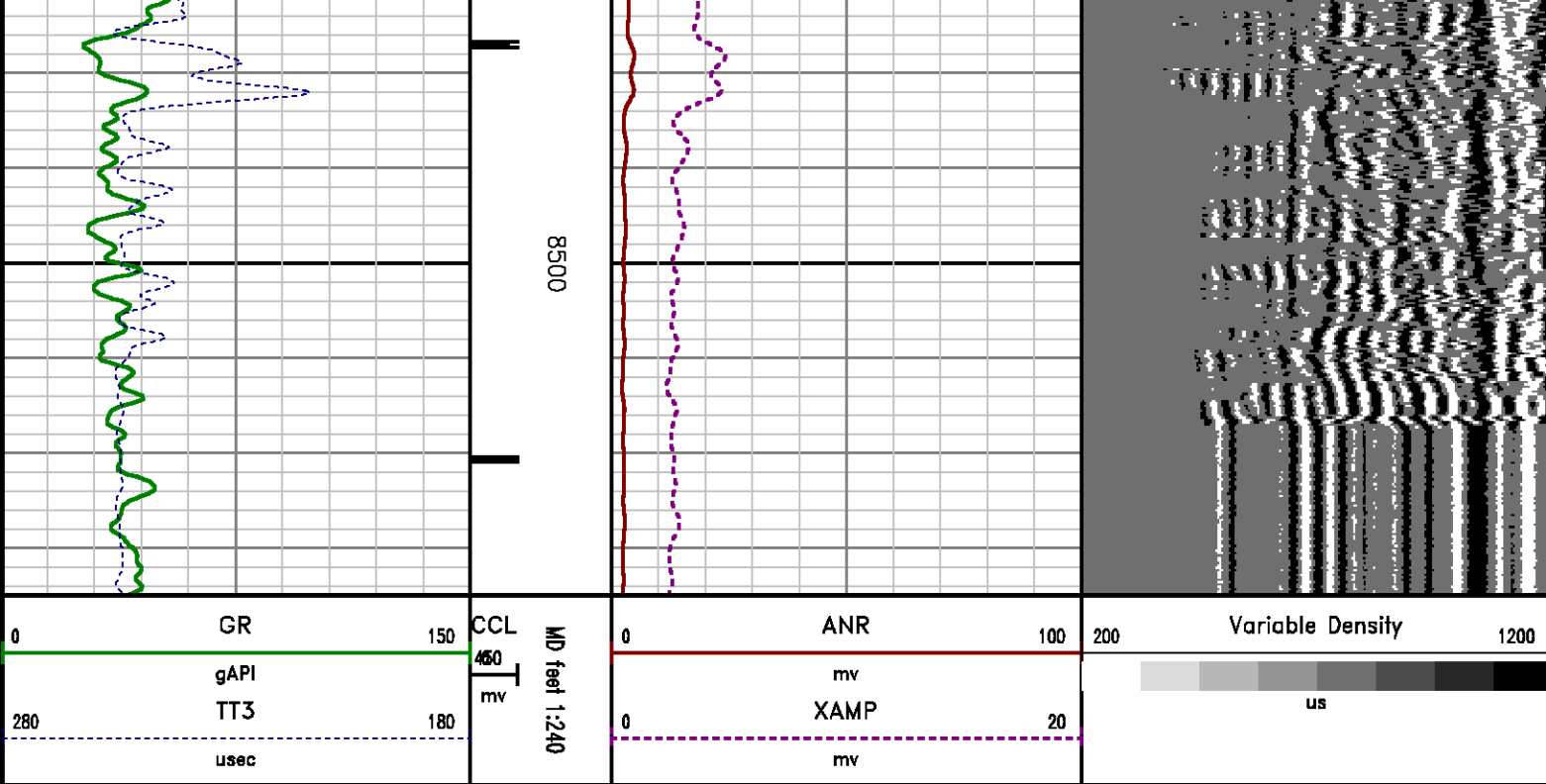


8300

8400







## CALIBRATION SUMMARY

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\49521\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Nov 21 12:27:33 2013 TOOL SERIES: 1426XA ASSET: 495 SEQ: 21

Tool Delay [u sec] -57.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [u sec]	Amp. Gate Start [u sec]	Amp. Gate Width [u sec]	Zero Gate Start [u sec]	Zero Gate Width [u sec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	219	216	30	166	25	-0.247	100.00	0.14
3 Ft. Receiver	218	216	30	166	25	-2.108	100.00	0.14
5 Ft. Receiver	328	325	30	258	25	-1.445	150.00	0.15
Radial #1	219	216	30	166	25	1.815	100.00	0.14
Radial #2	218	216	30	166	25	1.790	100.00	0.14
Radial #3	217	216	30	166	25	-0.283	100.00	0.14
Radial #4	216	216	30	166	25	-0.760	100.00	0.14
Radial #5	216	216	30	166	25	-1.378	100.00	0.14
Radial #6	216	216	30	166	25	-1.844	100.00	0.14
Radial #7	217	216	30	166	25	-1.149	100.00	0.14
Radial #8	219	216	30	166	25	-1.184	100.00	0.14

# RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\49521 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Nov 21 12:29:31 2013 TOOL SERIES: 1426XA ASSET: 495 SEQ: 21

Tool Delay [usec] -57.00 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	0.015	0.000	1.00	100.000
3 Ft. Receiver	195	25	-0.356			
5 Ft. Receiver	305	25	-0.460			
Radial #1	195	25	-0.309			
Radial #2	195	25	-0.391			
Radial #3	195	25	-0.332			
Radial #4	195	25	-0.358			
Radial #5	195	25	-0.353			
Radial #6	195	25	-0.373			
Radial #7	195	25	-0.311			
Radial #8	195	25	-0.307			

# GAMMA RAY

Calibration File: C:\case\calver\GR\20903.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Nov 03 10:29:26 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: 03

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	152.76	595.33	0.418	63.85	248.85	185.00

Verification File: C:\case\calver\GR\20903.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sun Nov 03 10:31:05 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: 03

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	151.02	589.38	0.418	63.13	246.36	183.24

# TOOL DIAGRAM

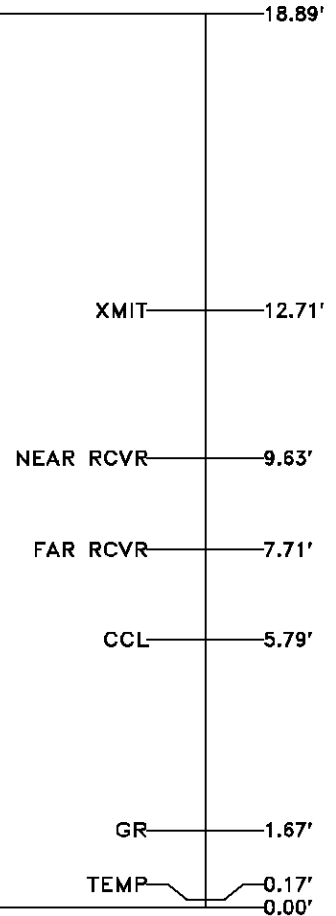
## OTA SHORT CABLE HEAD

## 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



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



Company WPX ENERGY  
 Well FEDERAL PA 414-12  
 Field PARACHUTE  
 County GARFIELD State CO

File No: CH79535  
 API No: 05045206660000

### Location

SHL: 2577' FSL & 1724' FWL  
 BHL: 522' FSL & 267' FWL

### Elevations

KB 6553 ft  
 DF  
 GL 6507 ft

12 7S 95W  
 PA 23-12 PAD  
 NABORS 577

SEC 12 TWP 7S RGE 95W

CASE

Baker Atlas