



# RADIAL ANALYSIS BOND LOG

## Baker Atlas

File No: GH073685	Company Well Field County	WPX ENERGY FEDERAL RGU 423-23-198 SULPHUR CREEK RIO BLANCO	State COLORADO
API No: 06103117830000	Location SHL: 1739' FSL x 1916' FWL BHL: 1964' FSL x 1898' FWL SEC 23 TWP 1S RGE 98W		Other Services RPM
23 1S 98W RGU 23-23-198 PAD CYCLONE 29			
Permanent Datum Log Measured From Drill Measured From	OL KB KELLY BUSHING	Elevation 21 ft Above P. D.	Elevations KB 6564 ft DF GL 6543 ft

Date	05/JUL/13	
Run	ONE	
Service Order	624437	
Depth Driller	12480 ft	
Depth Logger	12439 ft	
Bottom Logged Interval	12435 ft	
Top Logged Interval	21 ft	
Time Started	1030	
Time Finished	1730	
Operator Rig Time	7 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	91 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	255 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRANDUCT
Recorded By	FLOYD RENEAU	
Witnessed By	Wayne Marcotte	

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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	3837 ft
7.875 in	3837 ft	12480 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	32.2 lbm/ft		0 ft	3837 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	12480 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 5.5 feet.
Logged with zero PSI at wellhead.
BHT = 255°F
SJ = 7159'-7178'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10163028	CENT
1	1	GRICCL	1355XA	10580209	CENT
1	2	VDL	1426XA	10124106	CENT
1	2	GRICCL	1355XA	10508209	CENT

PRIMARY PRESENTATION

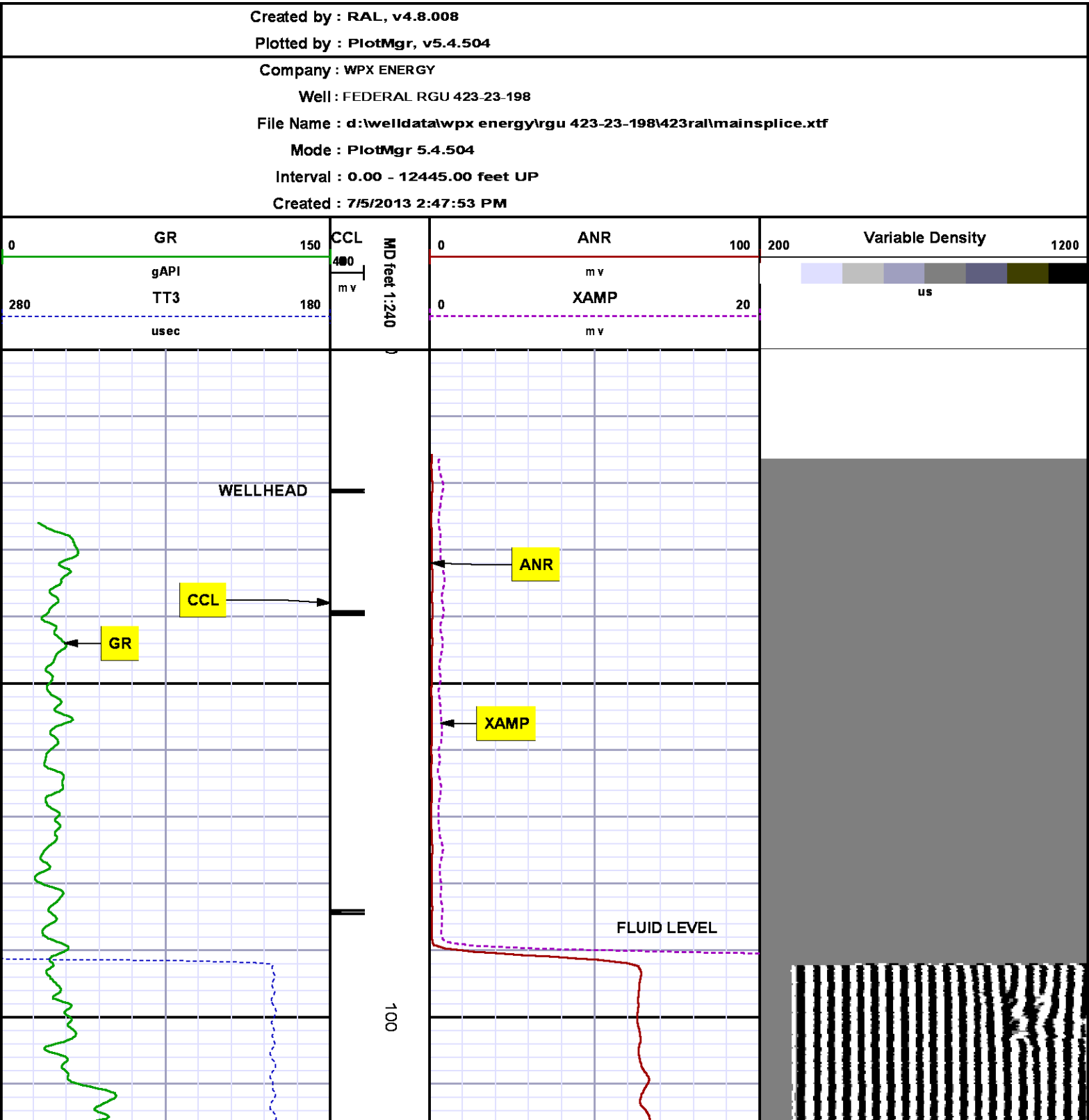
0 PSI

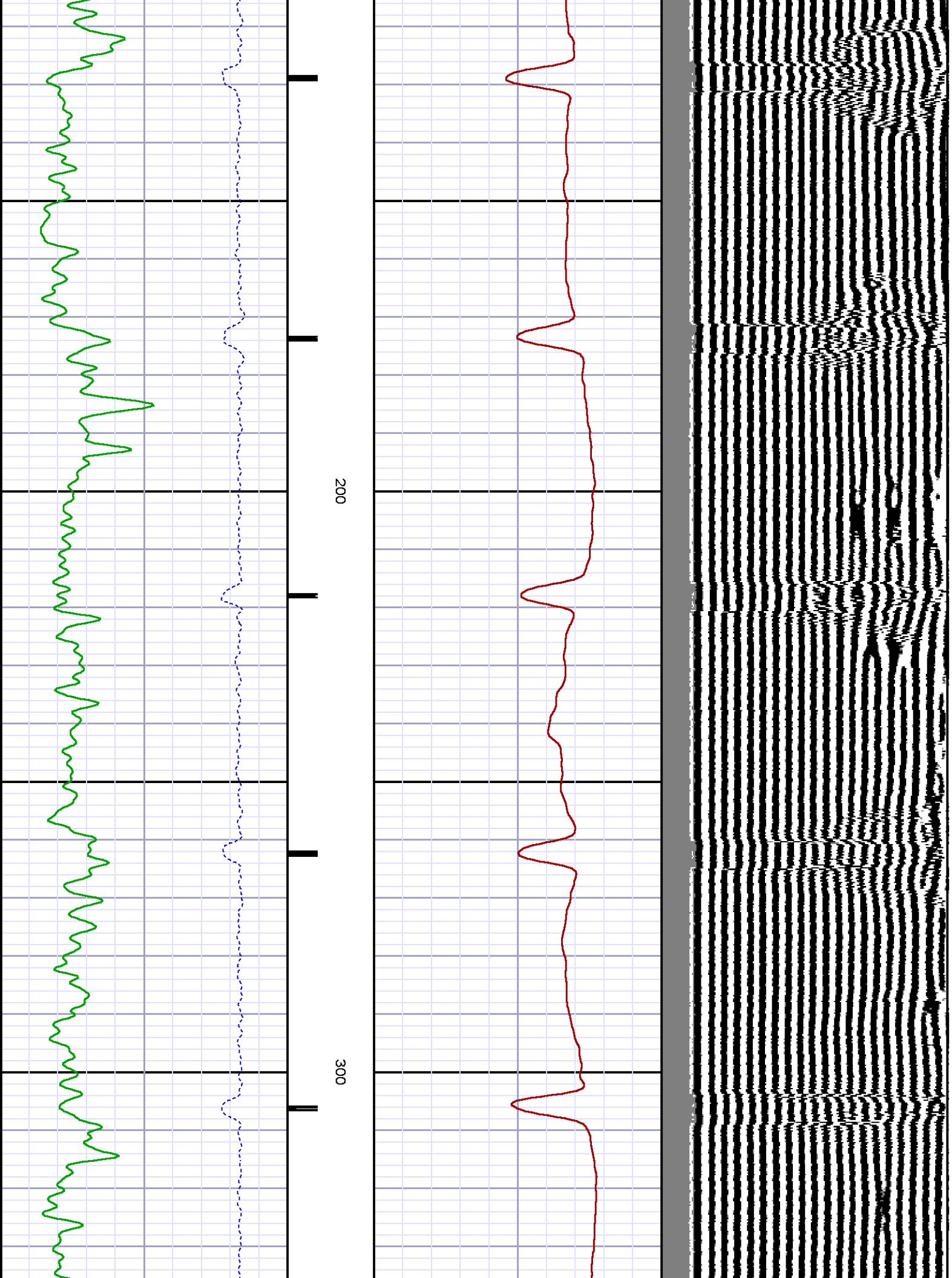
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	26.160	10941.500
RAL	Amp Gate Start Near	195.000	usec	26.160	10941.500
RAL	Amp Gate Start Radial	195.000	usec	26.160	10941.500
RAL	Amp Gate Width Far	25.000	usec	26.160	10941.500
RAL	Amp Gate Width Near	25.000	usec	26.160	10941.500
RAL	Amp Gate Width Radial	25.000	usec	26.160	10941.500
RAL	casing od	4.500	inches	26.160	10941.500
RAL	casing wt	11.600	lbm/ft	26.160	10941.500
RAL	FB Start Far	291.900	usec	26.160	10941.500
RAL	FB Start Near	180.000	usec	26.160	10941.500
RAL	FB Start Radial	180.000	usec	26.160	10941.500
RAL	FB Thresh Far	10.000	mv	26.160	10941.500
RAL	FB Thresh Near	4.000	mv	26.160	10941.500
RAL	FB Thresh Radial	4.000	mv	26.160	10941.500
RAL	Fluid Travel Time	200.000	usec/ft	26.160	10941.004

DEPTH OFFSETS

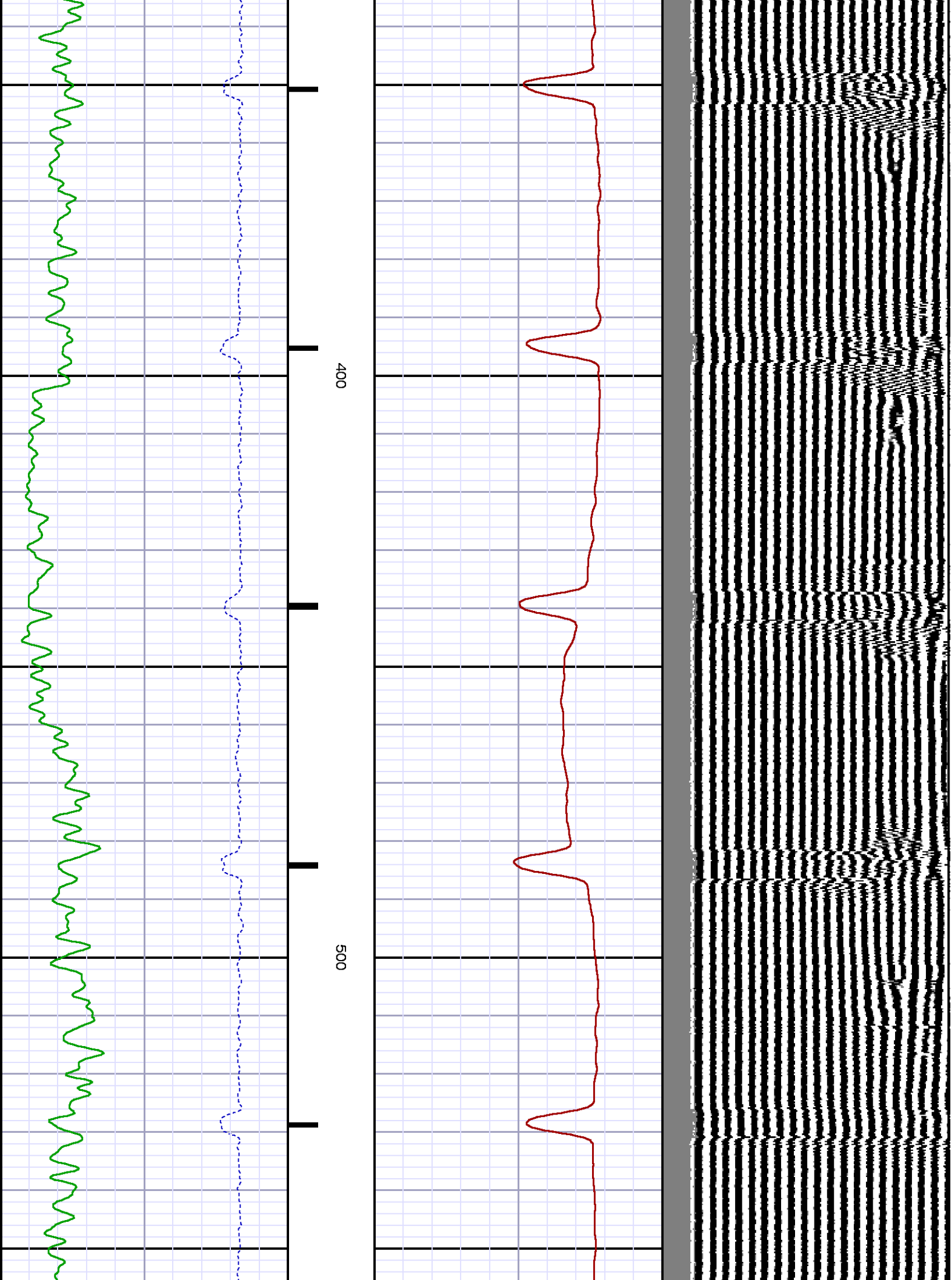
(for Acquired Curves)

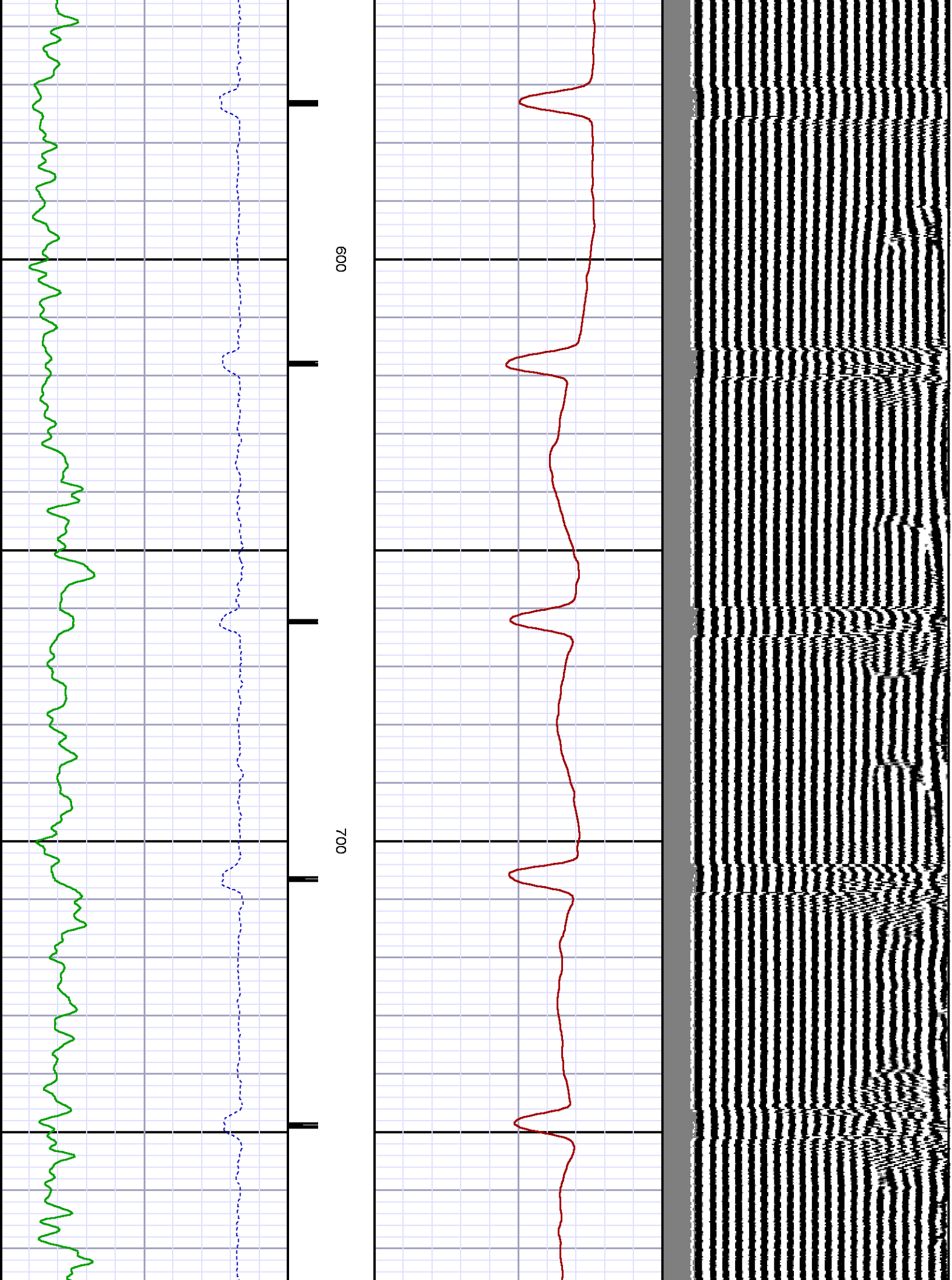
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

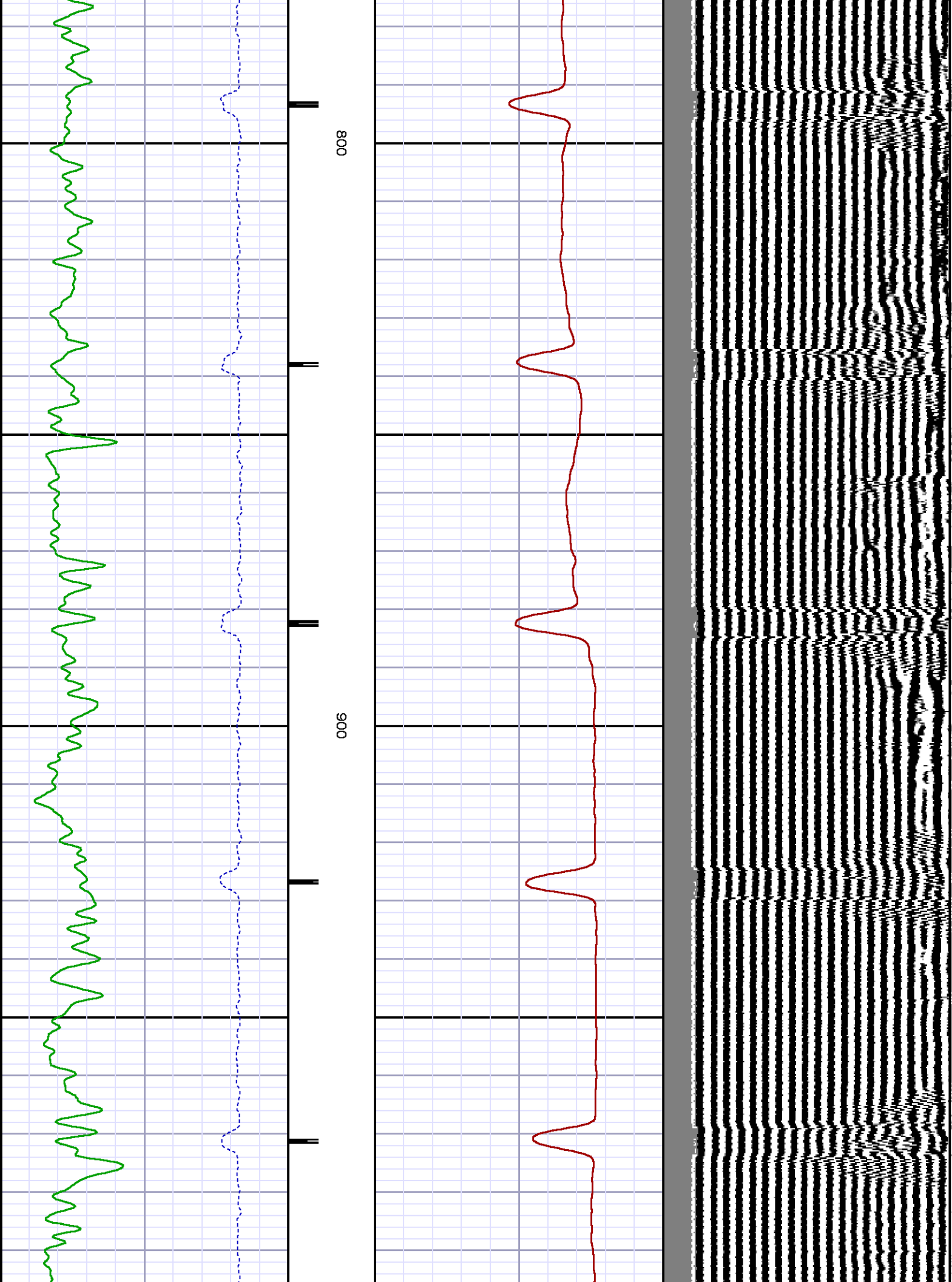


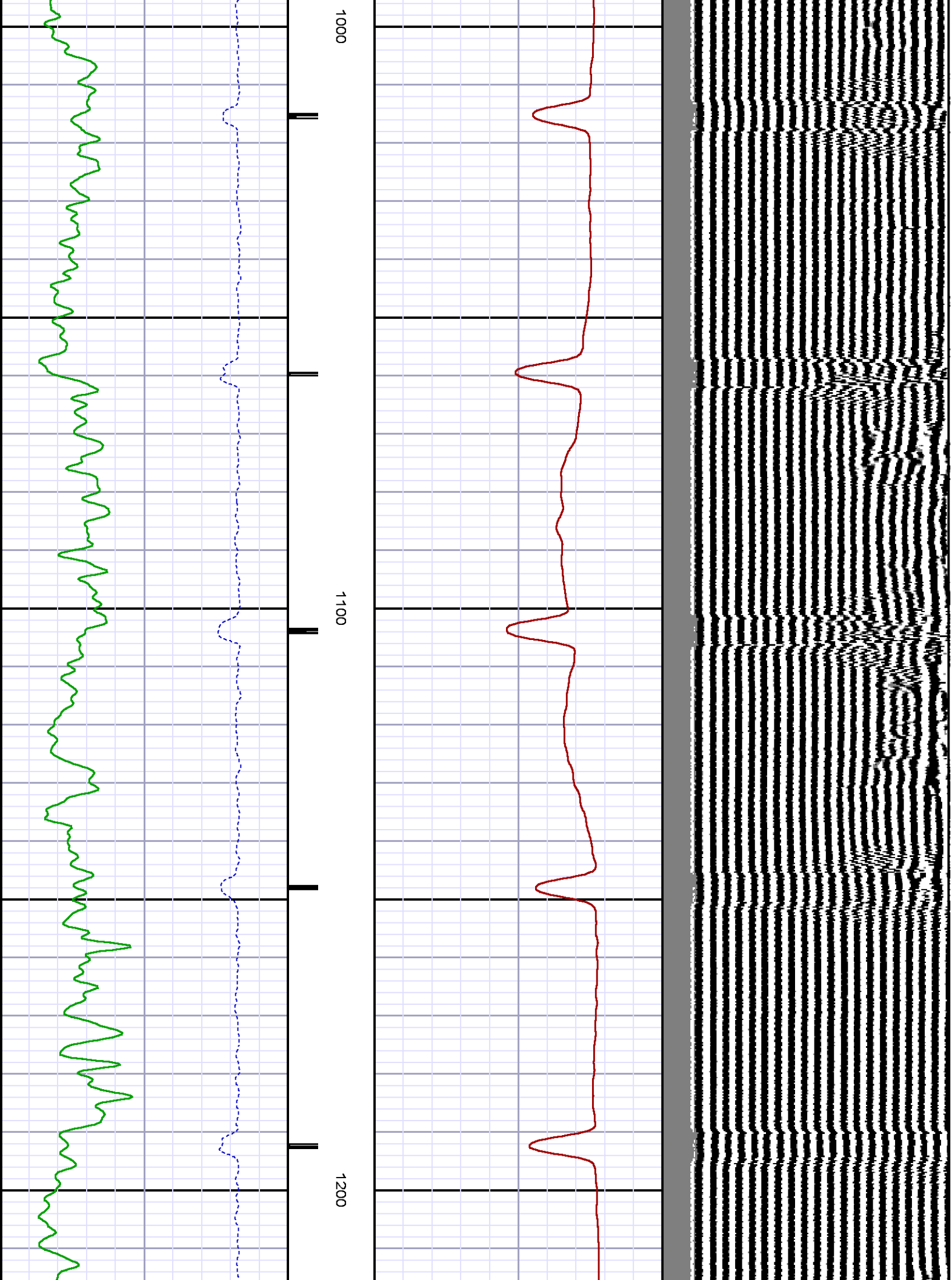


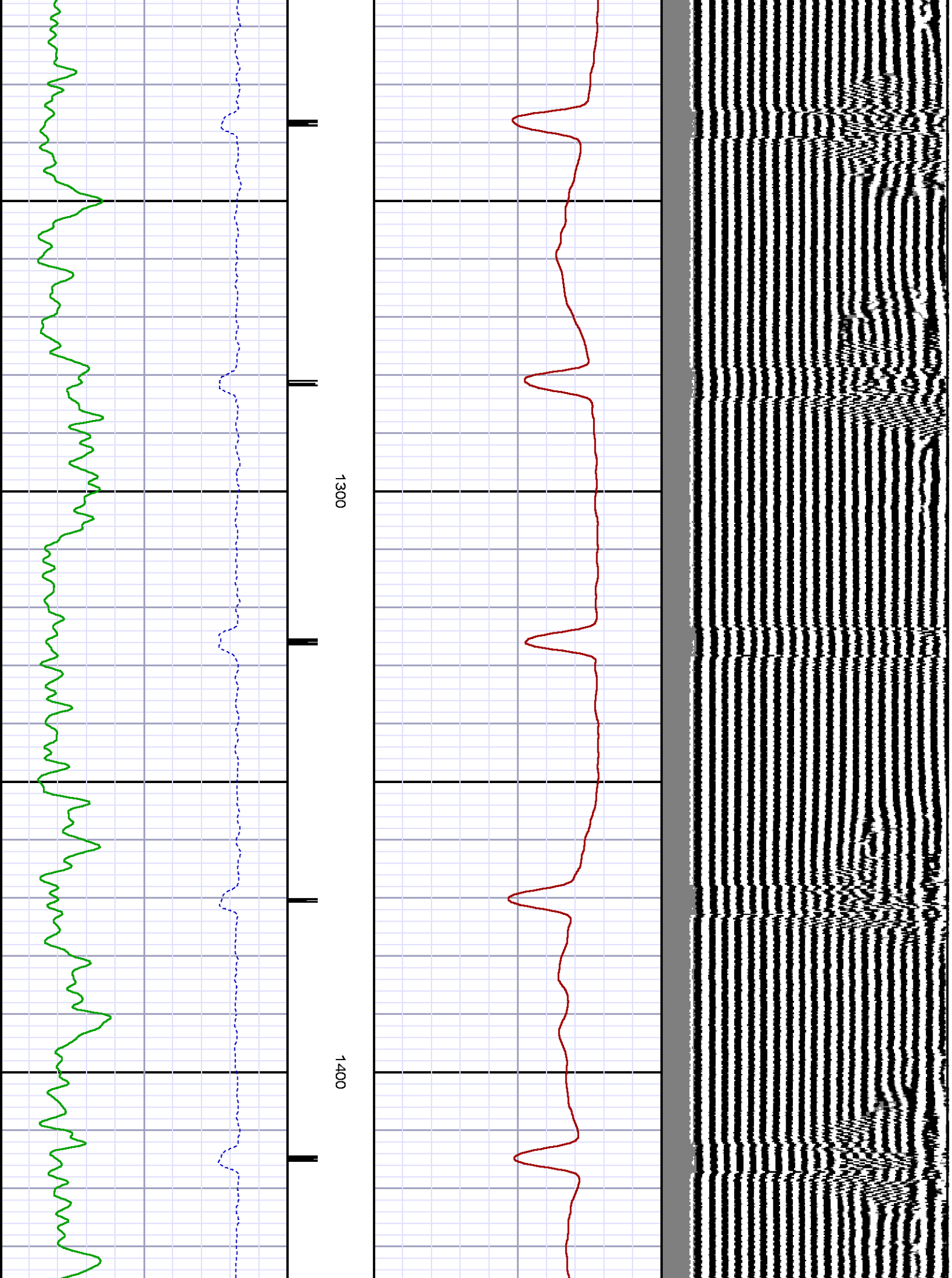


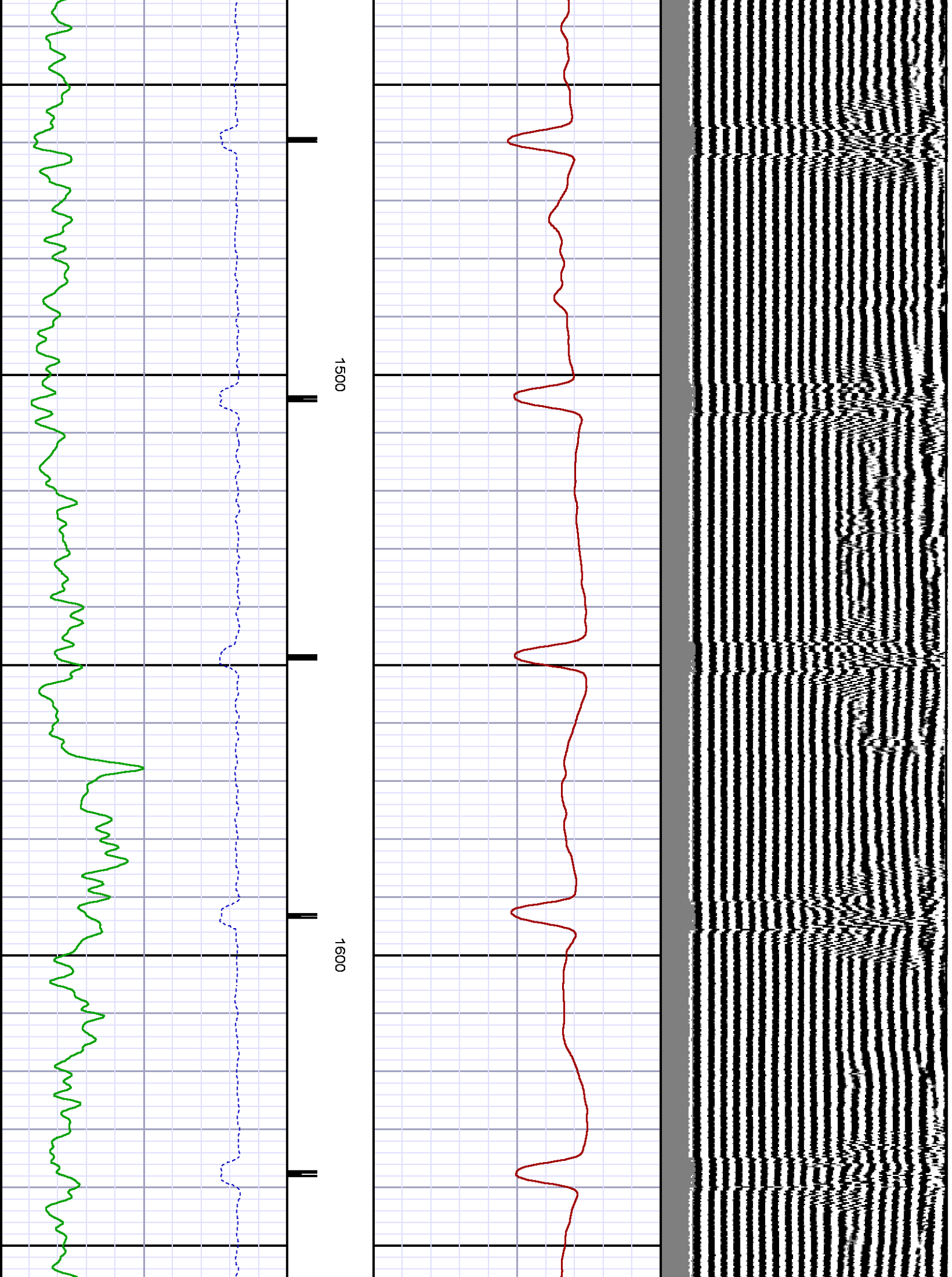




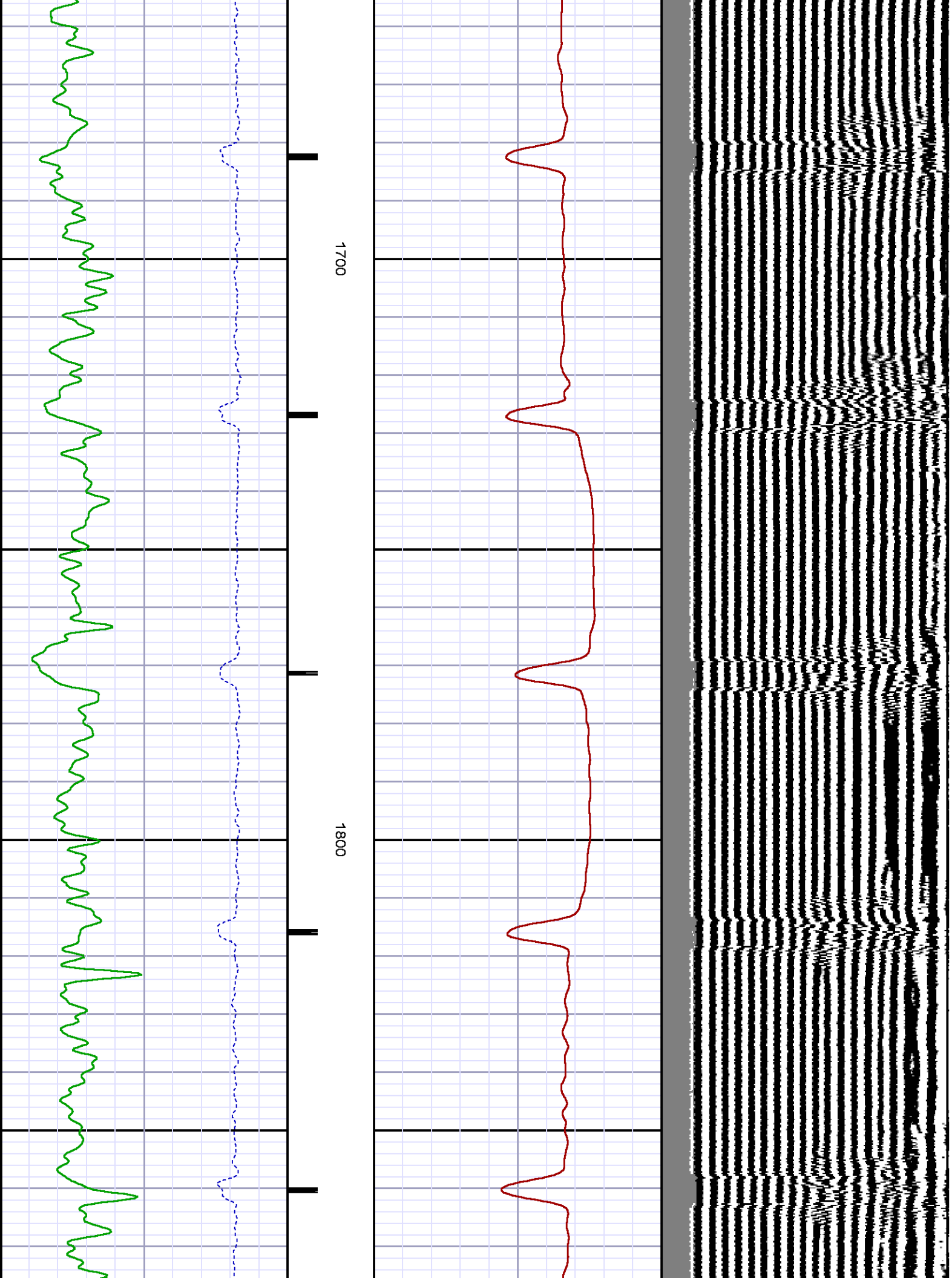


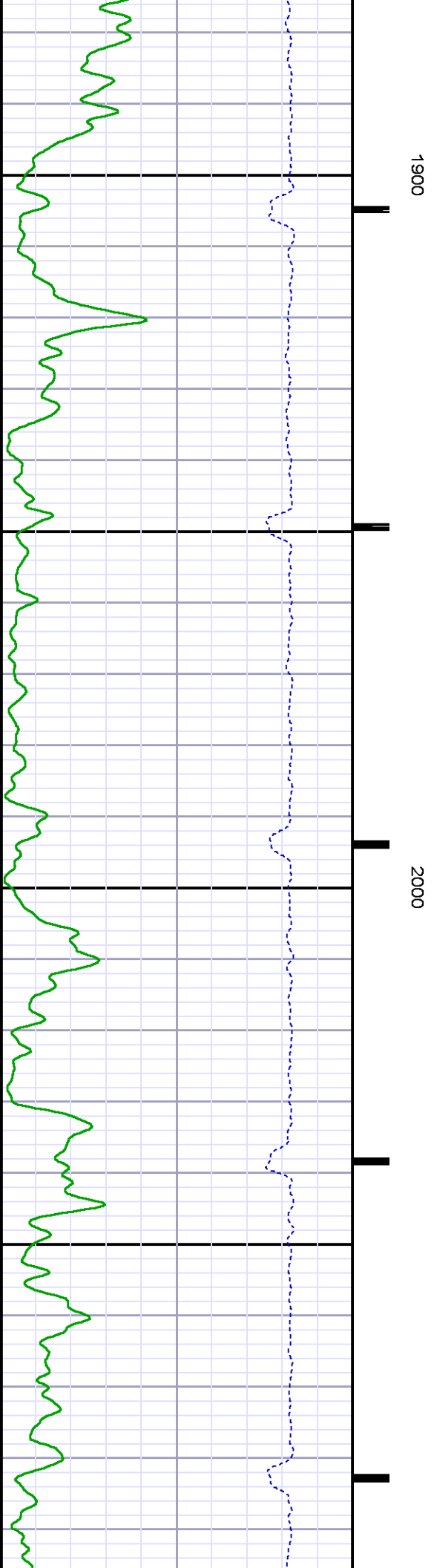
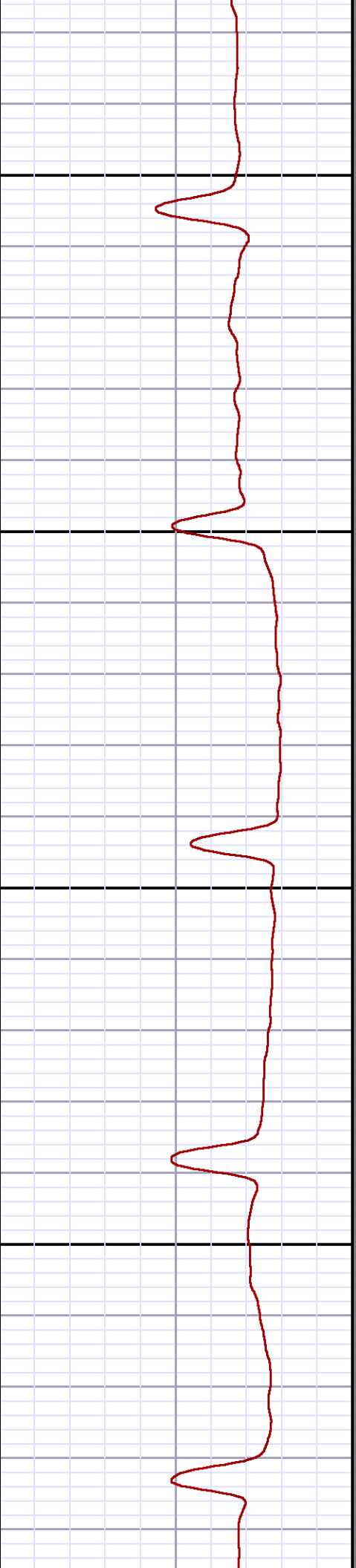
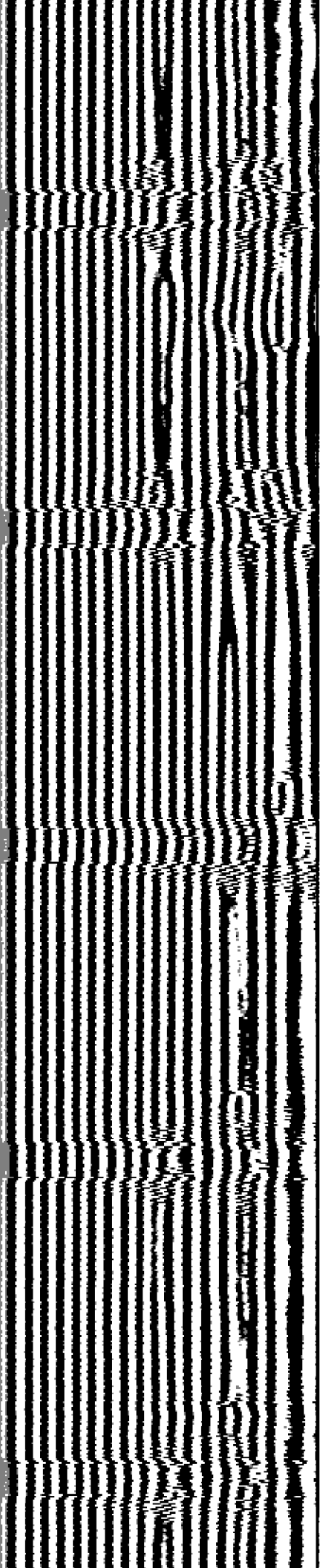




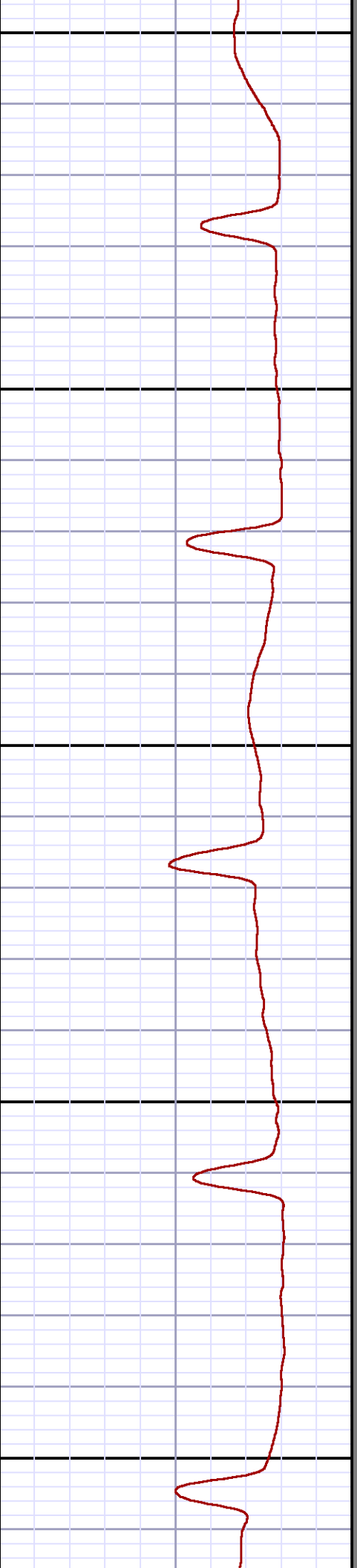
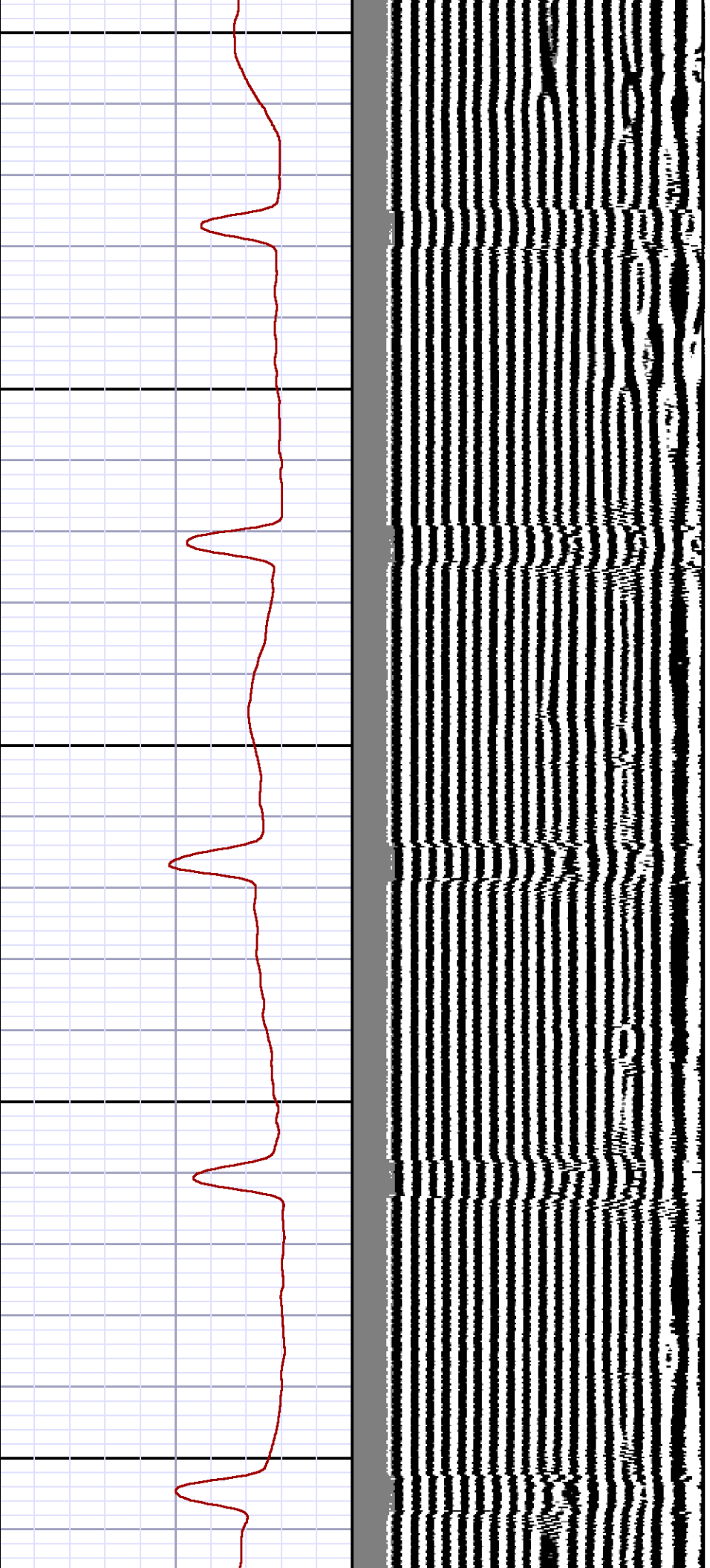








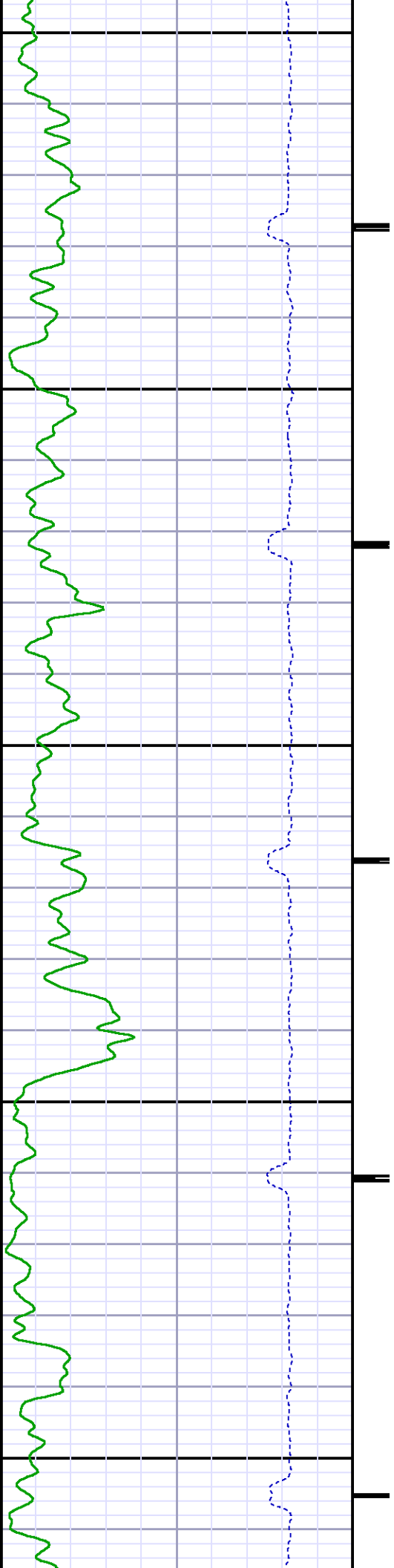


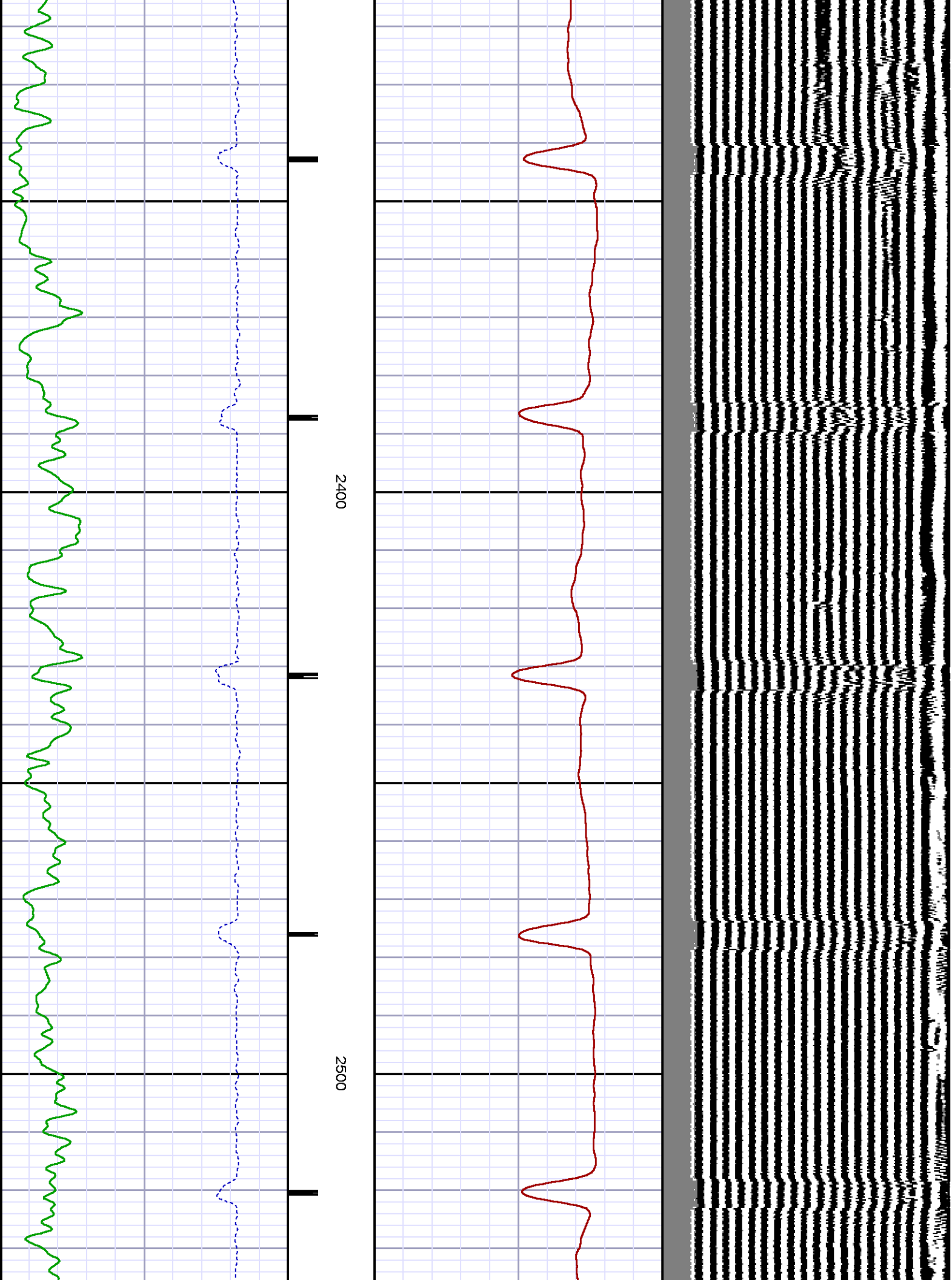


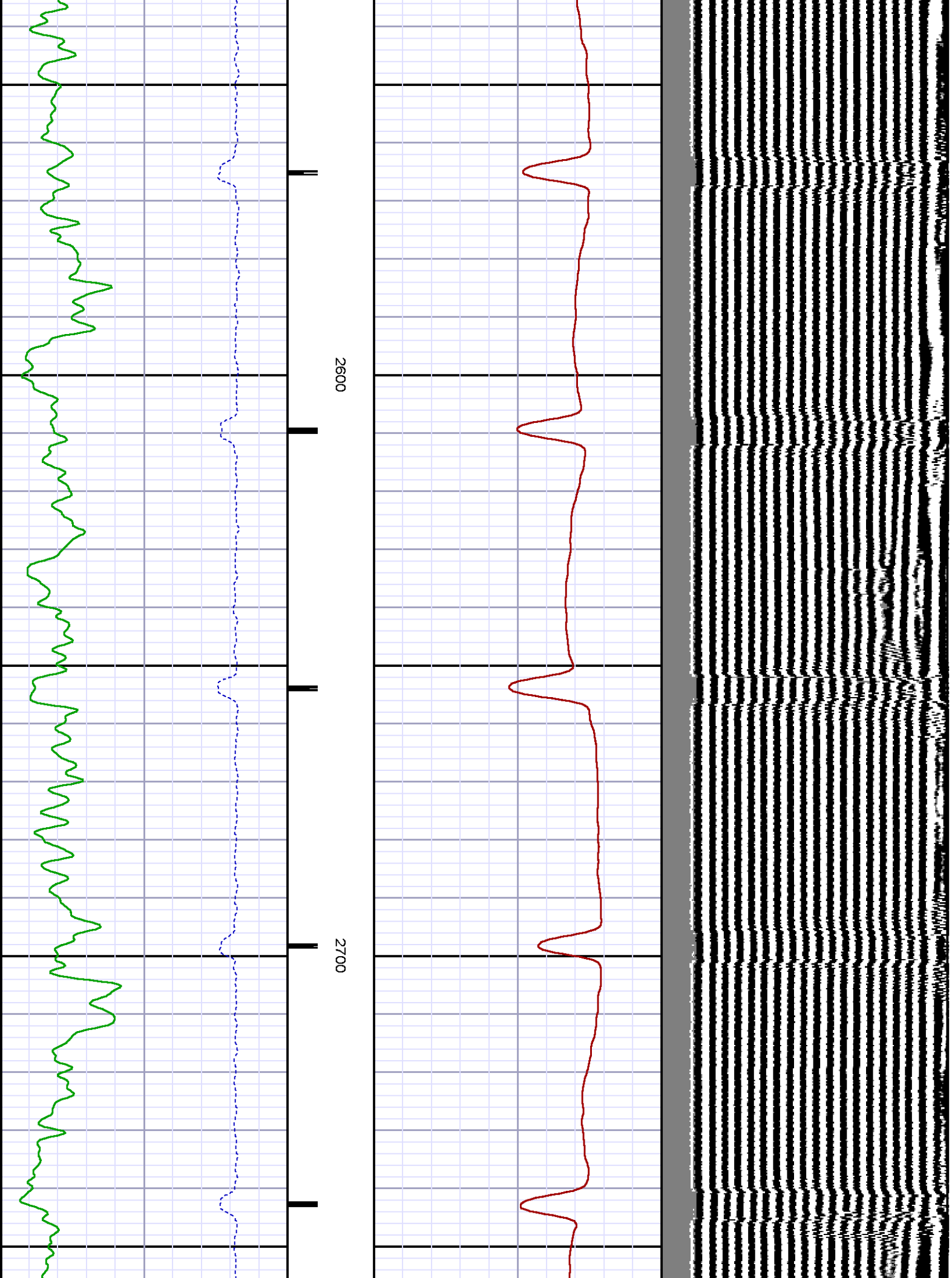
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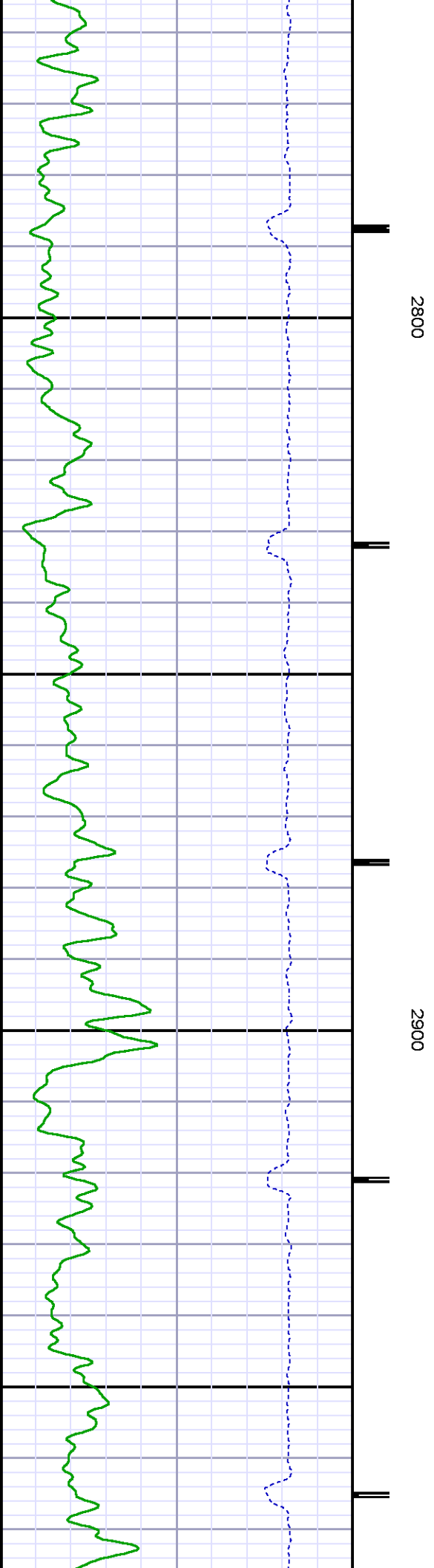
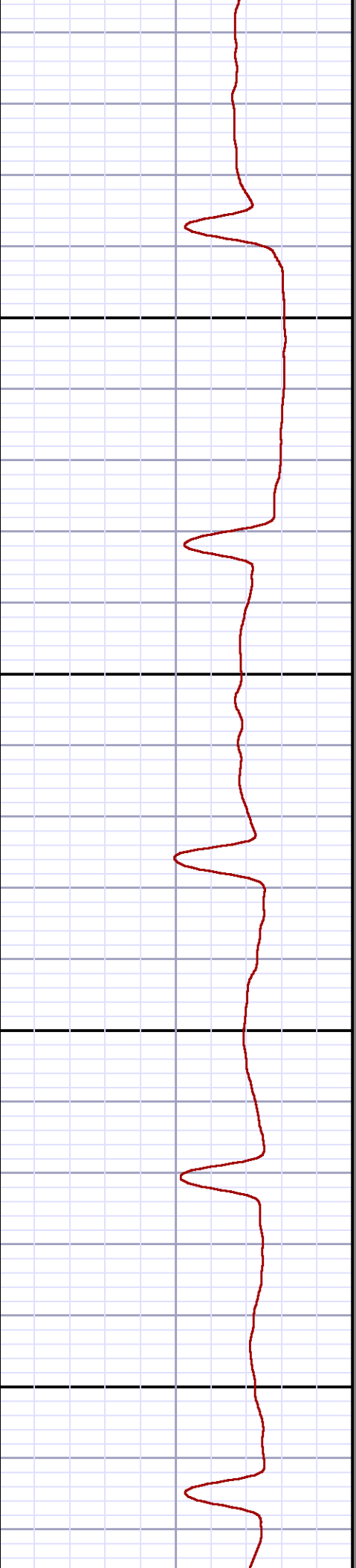
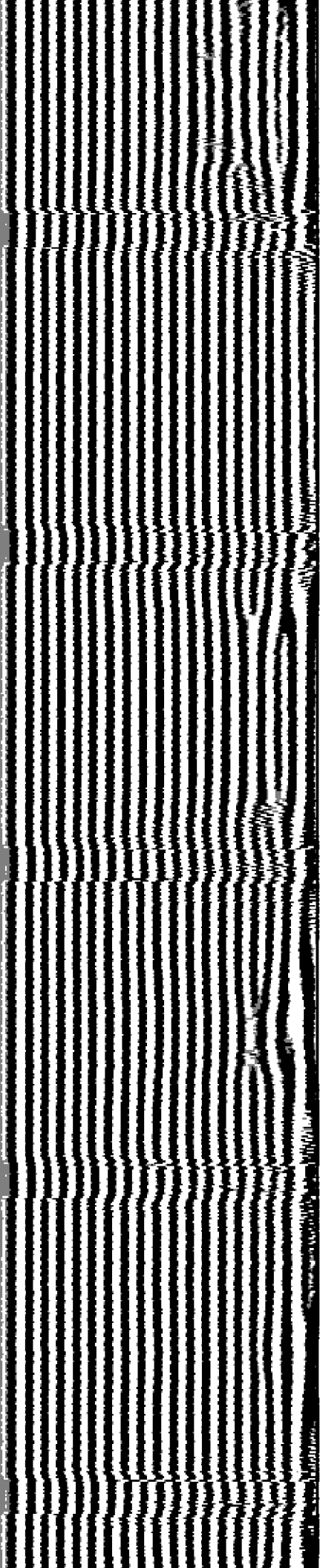
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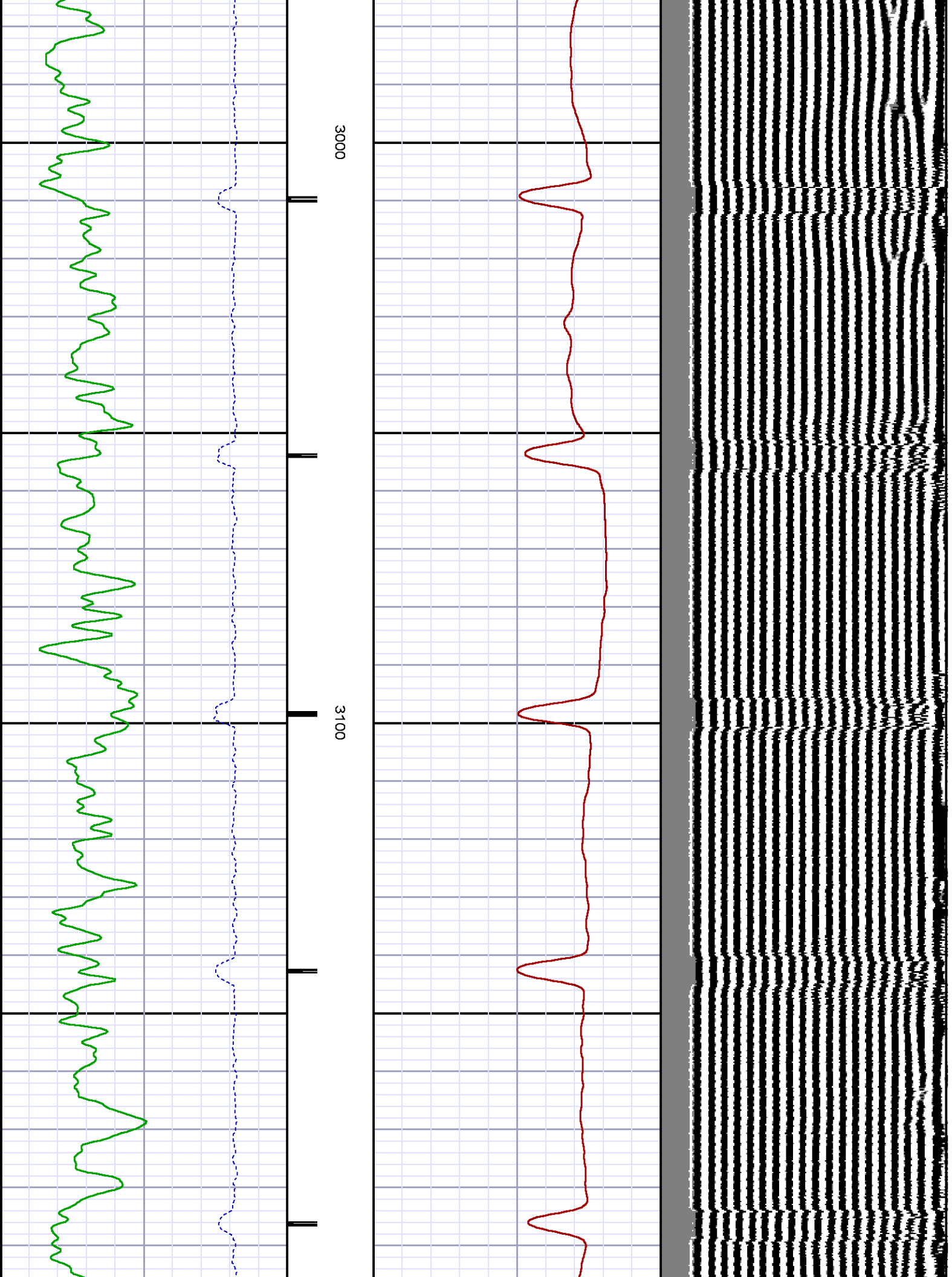
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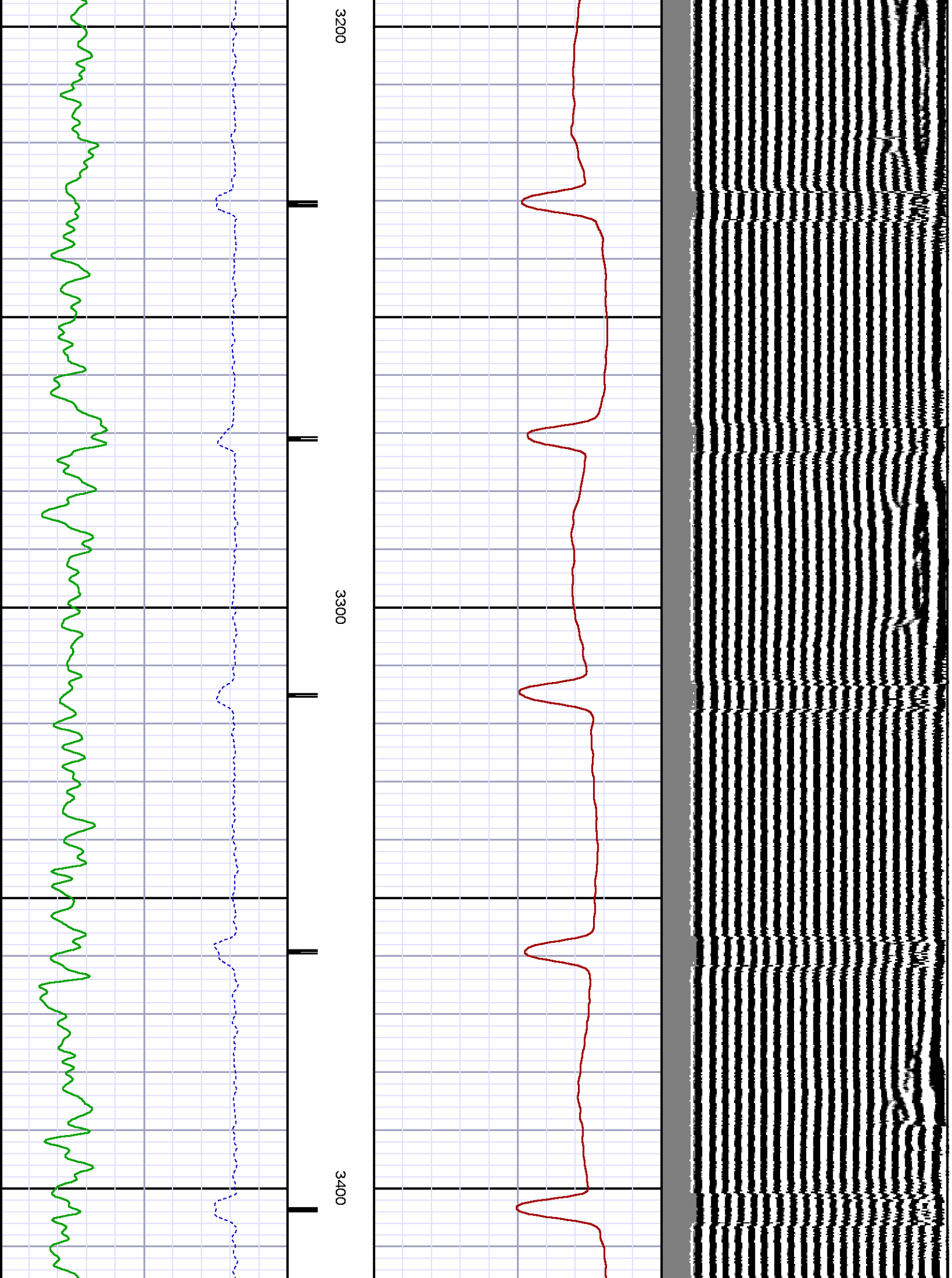




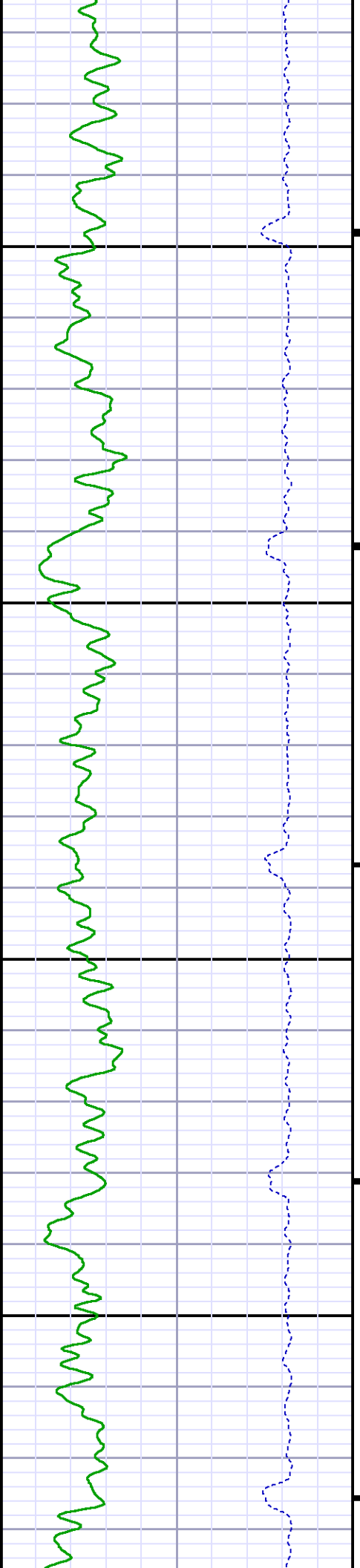
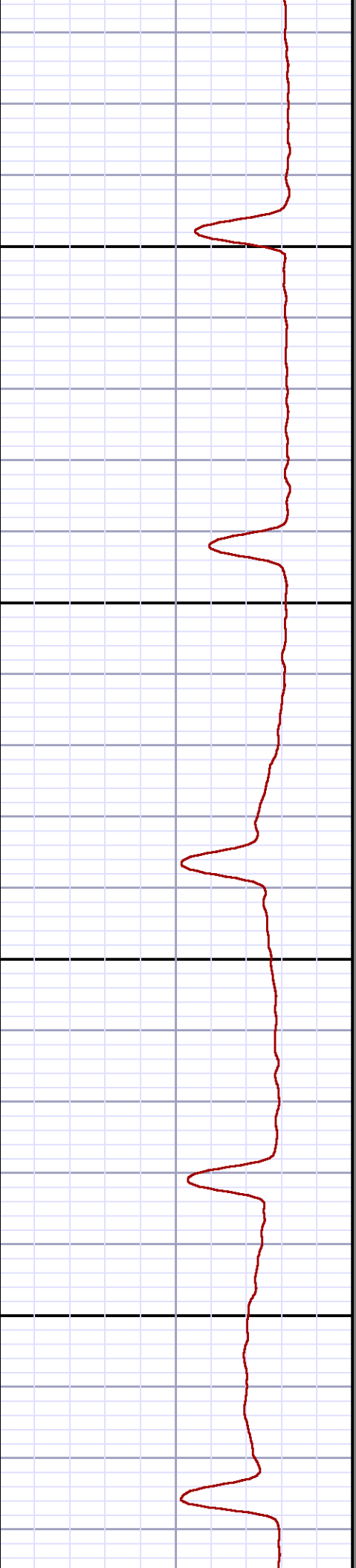
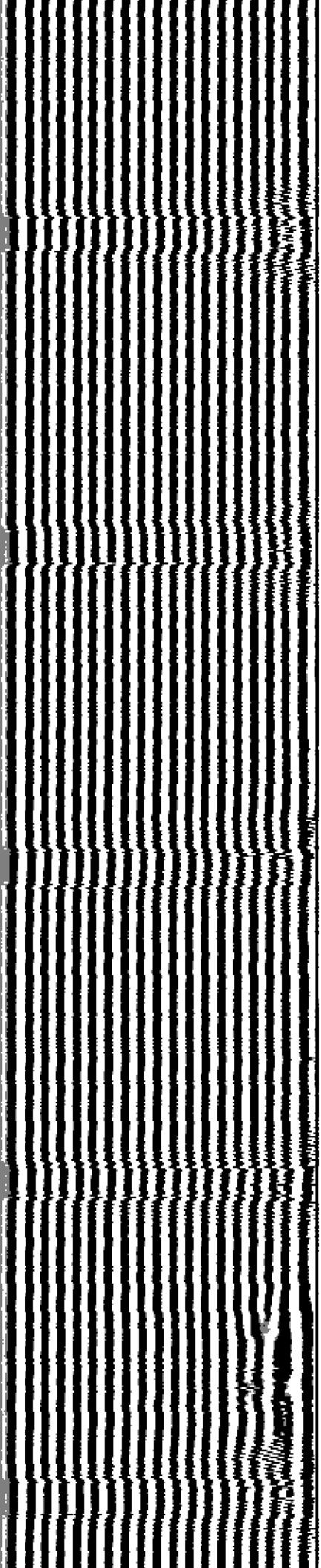


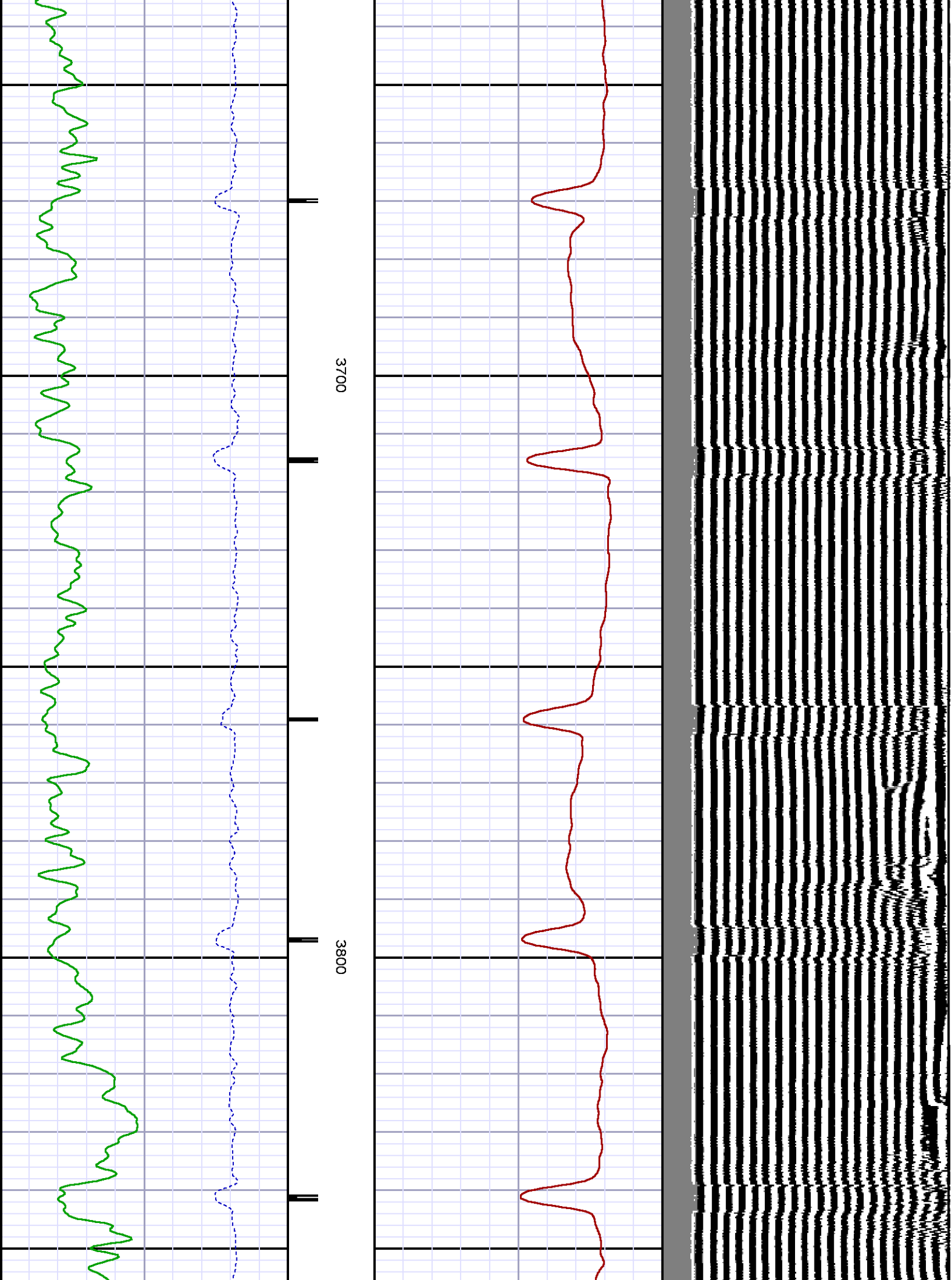




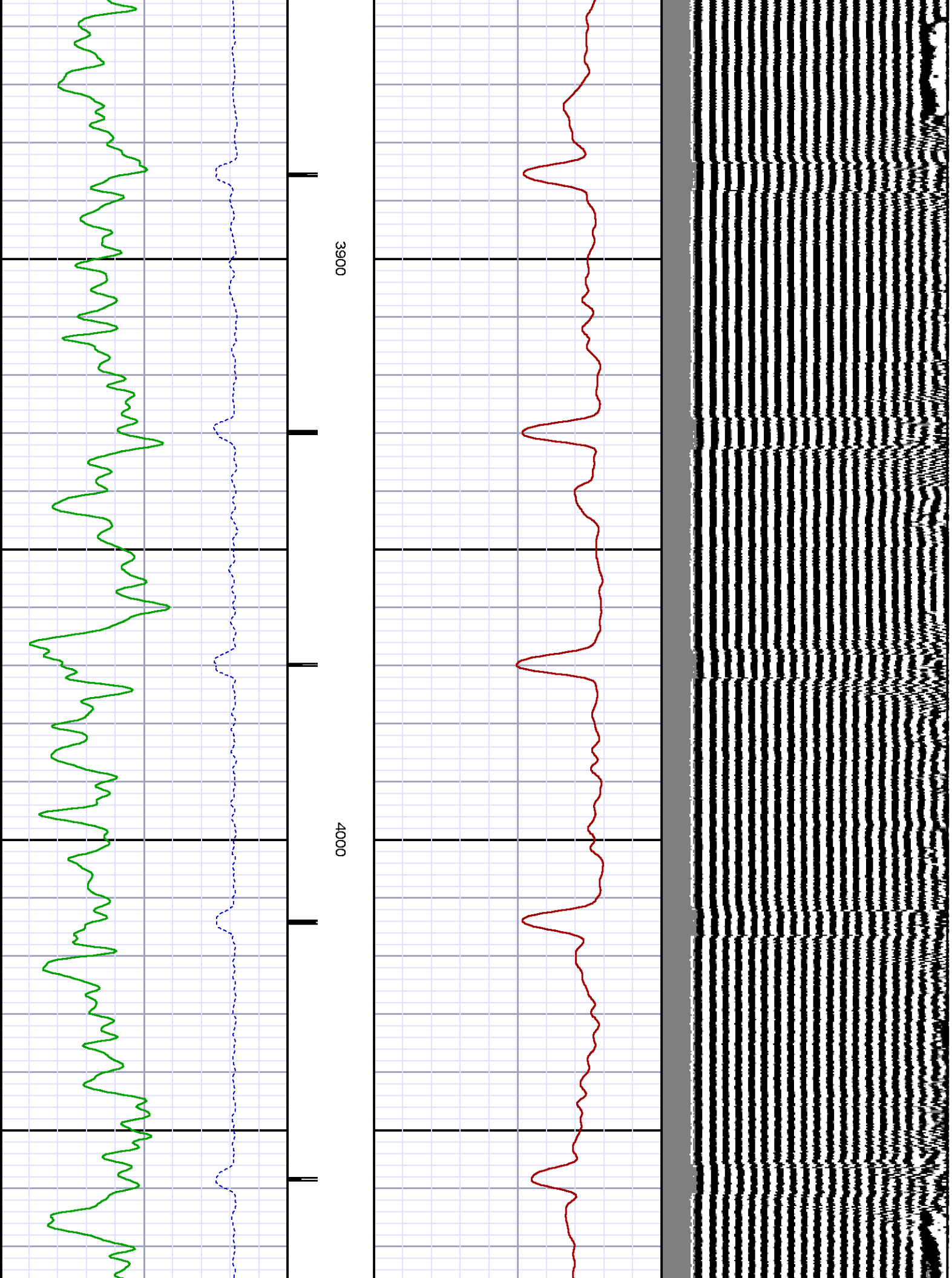


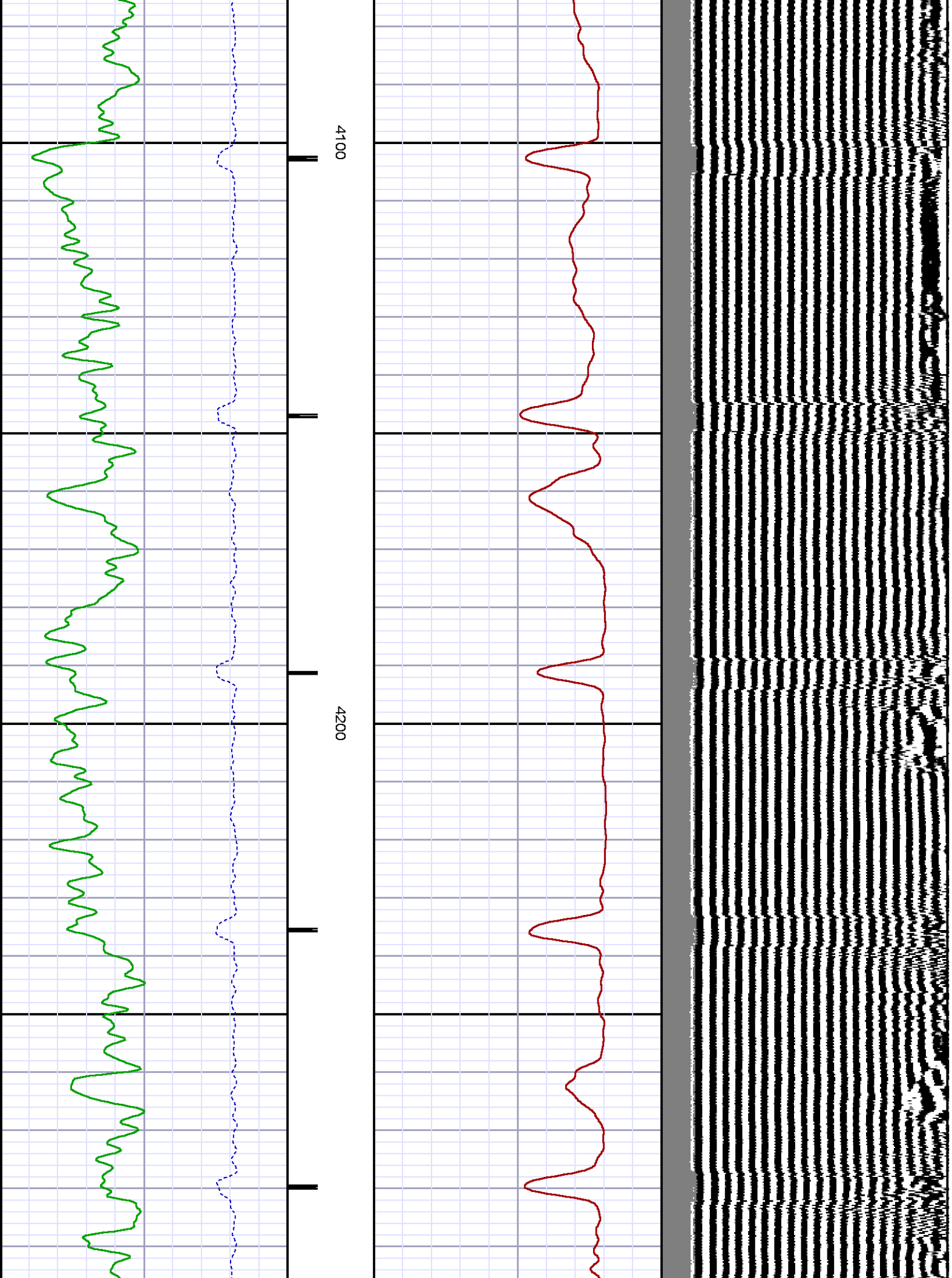


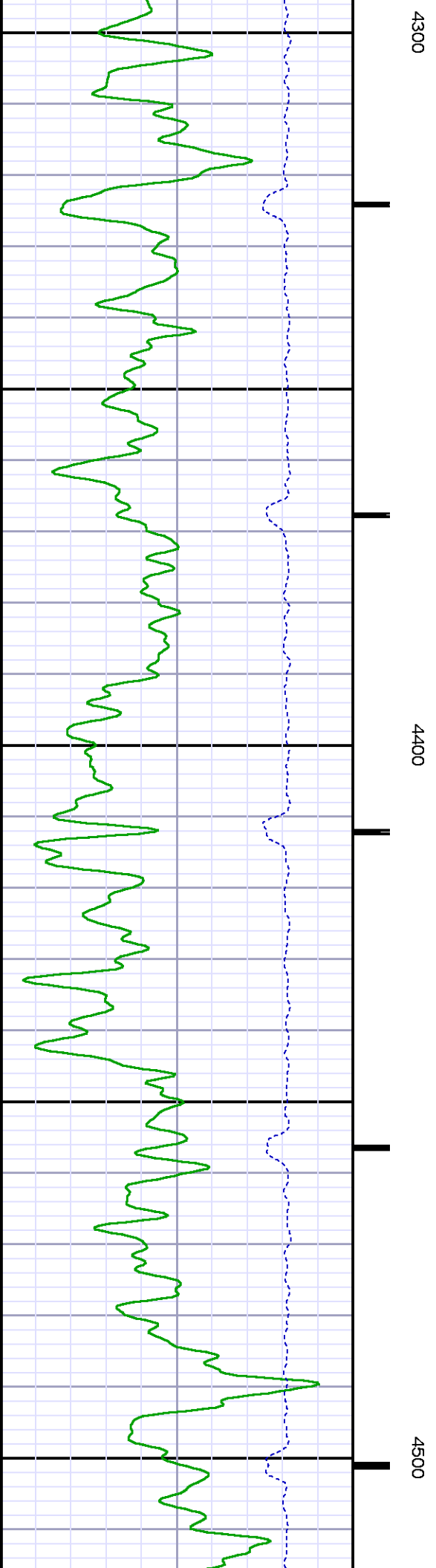
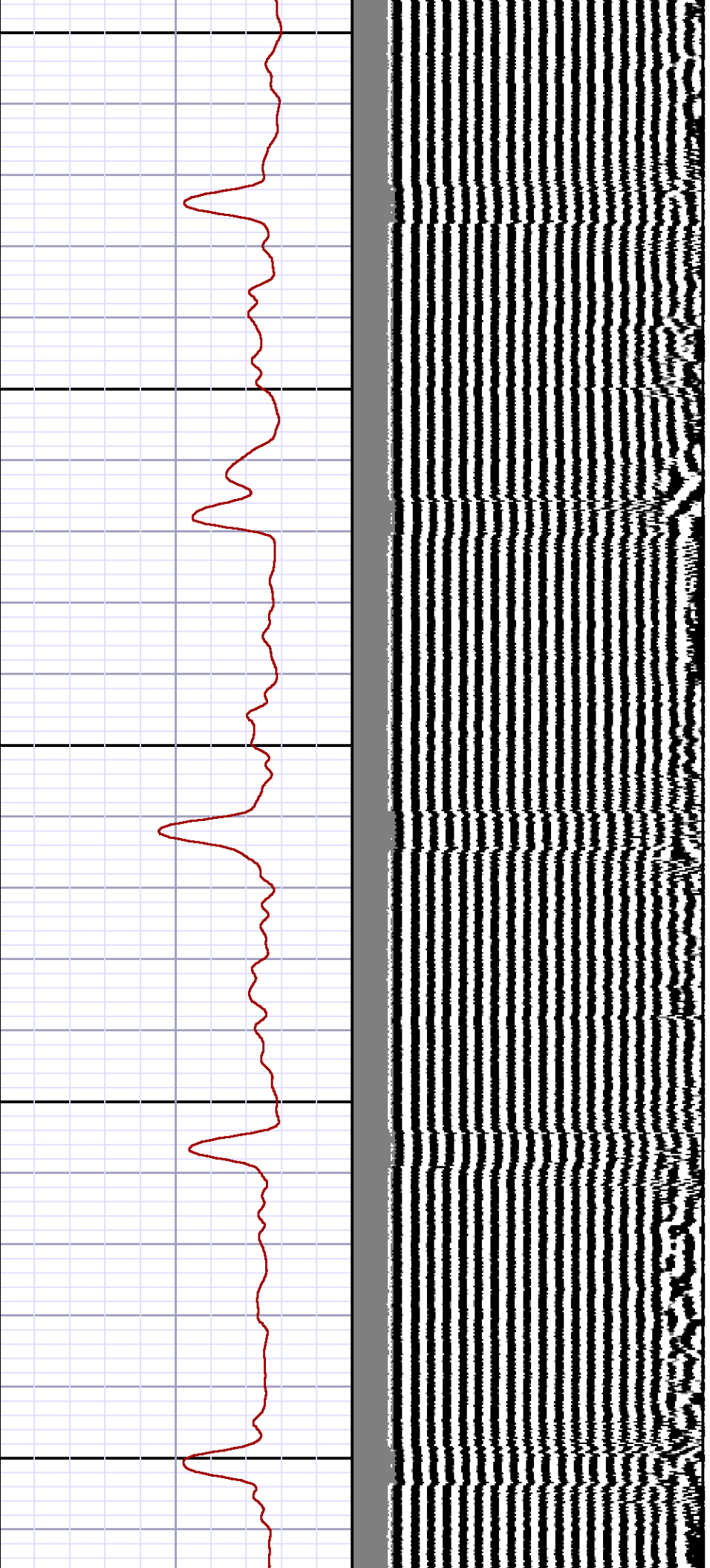


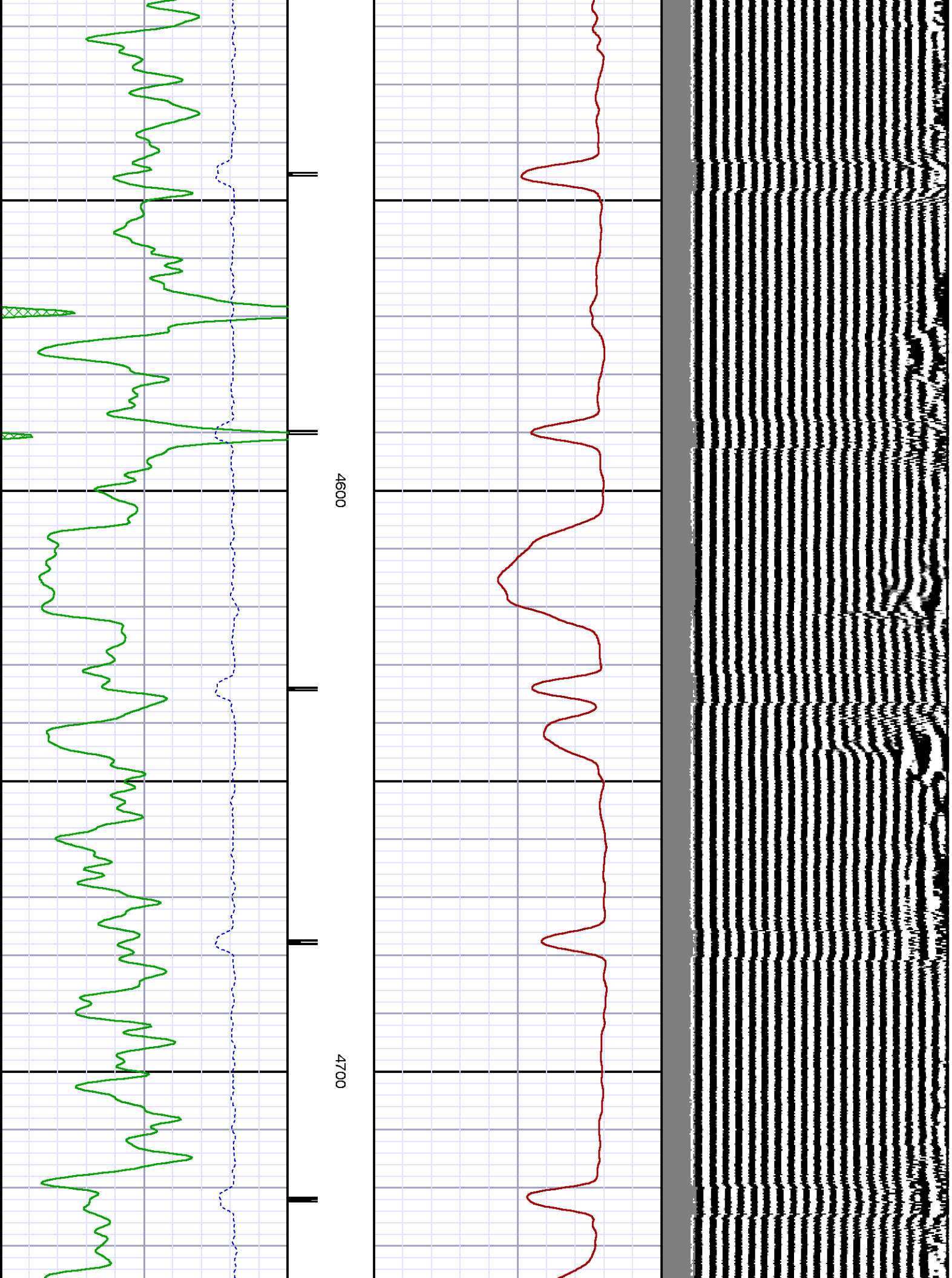


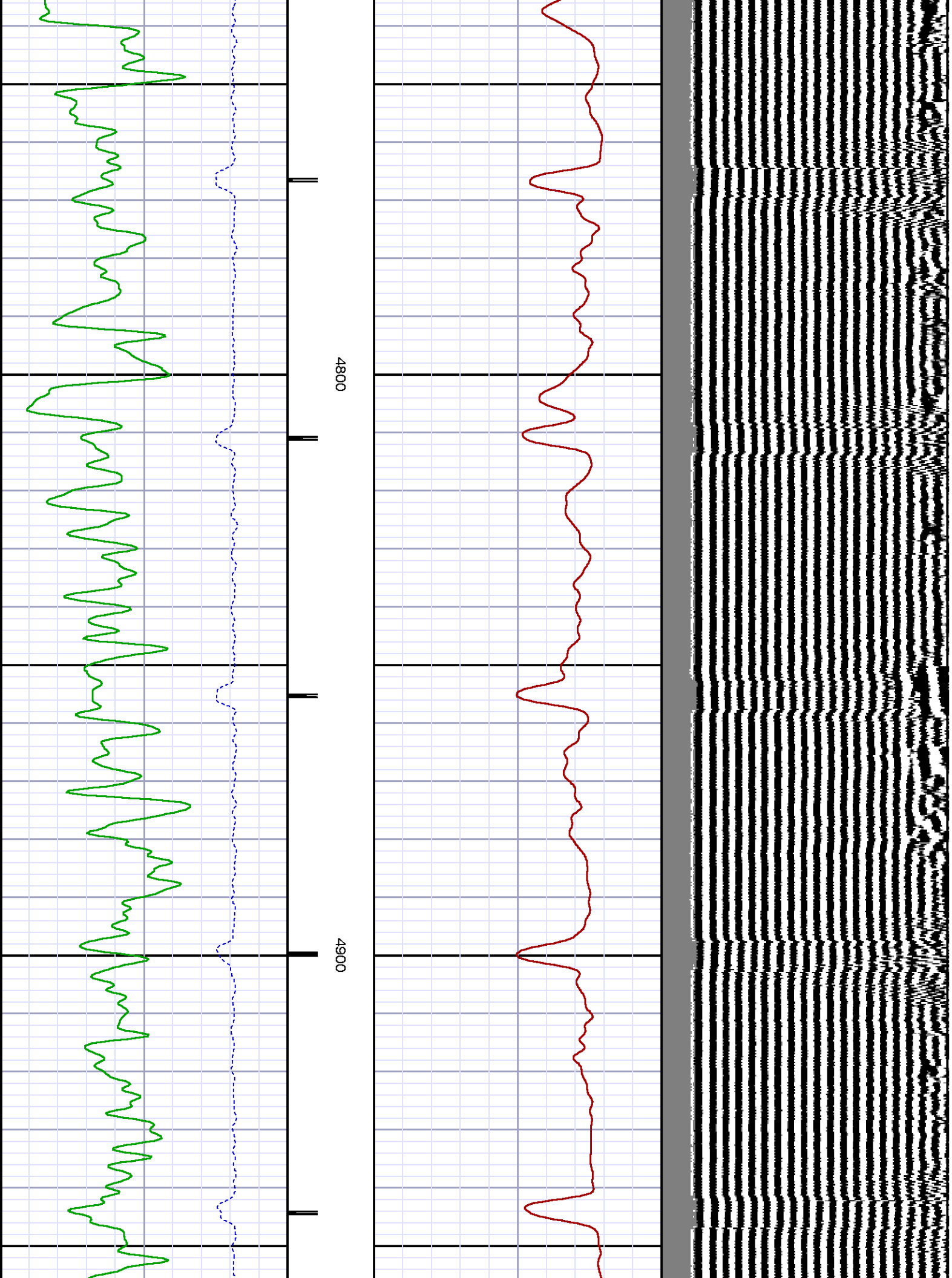




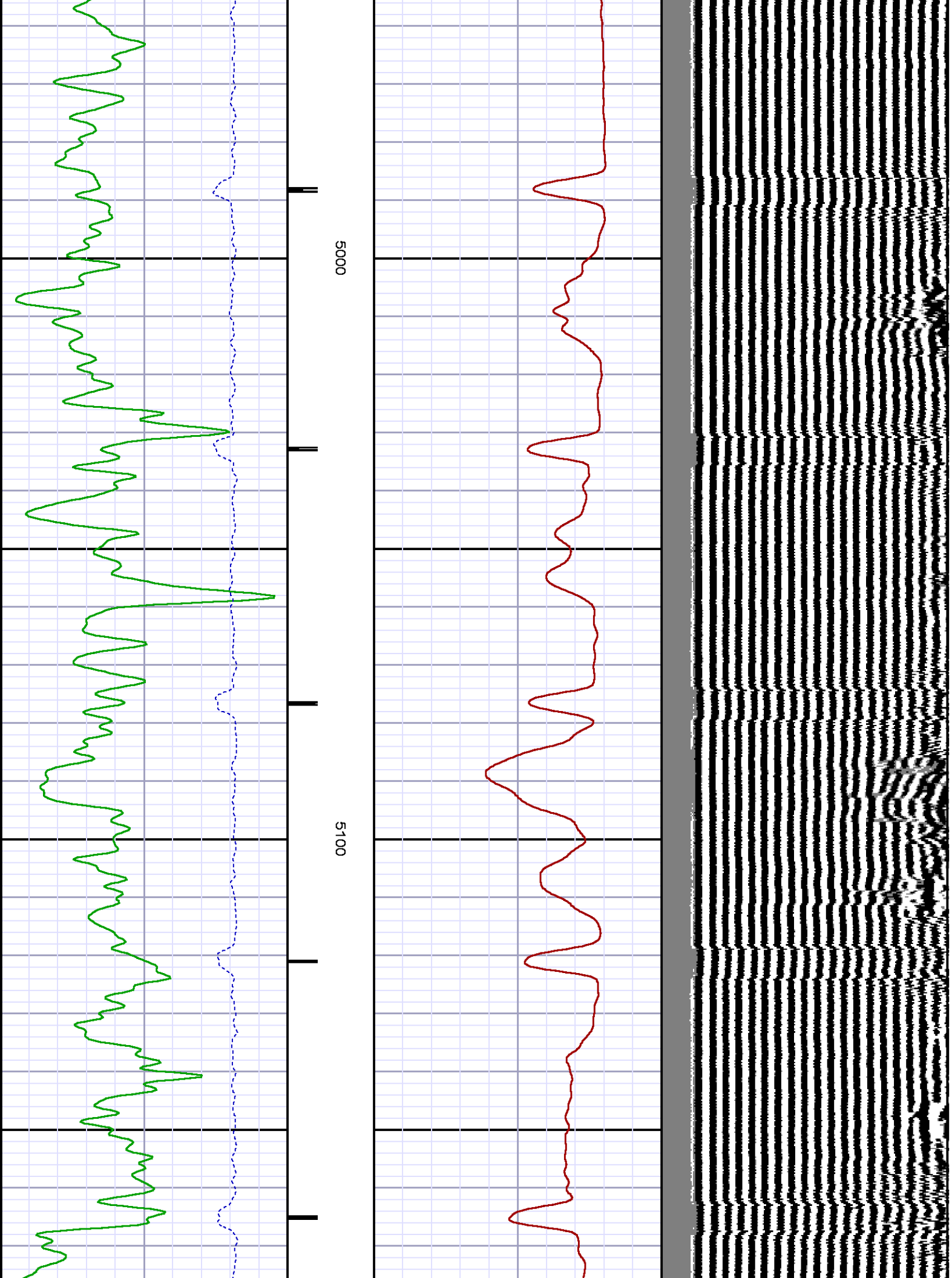


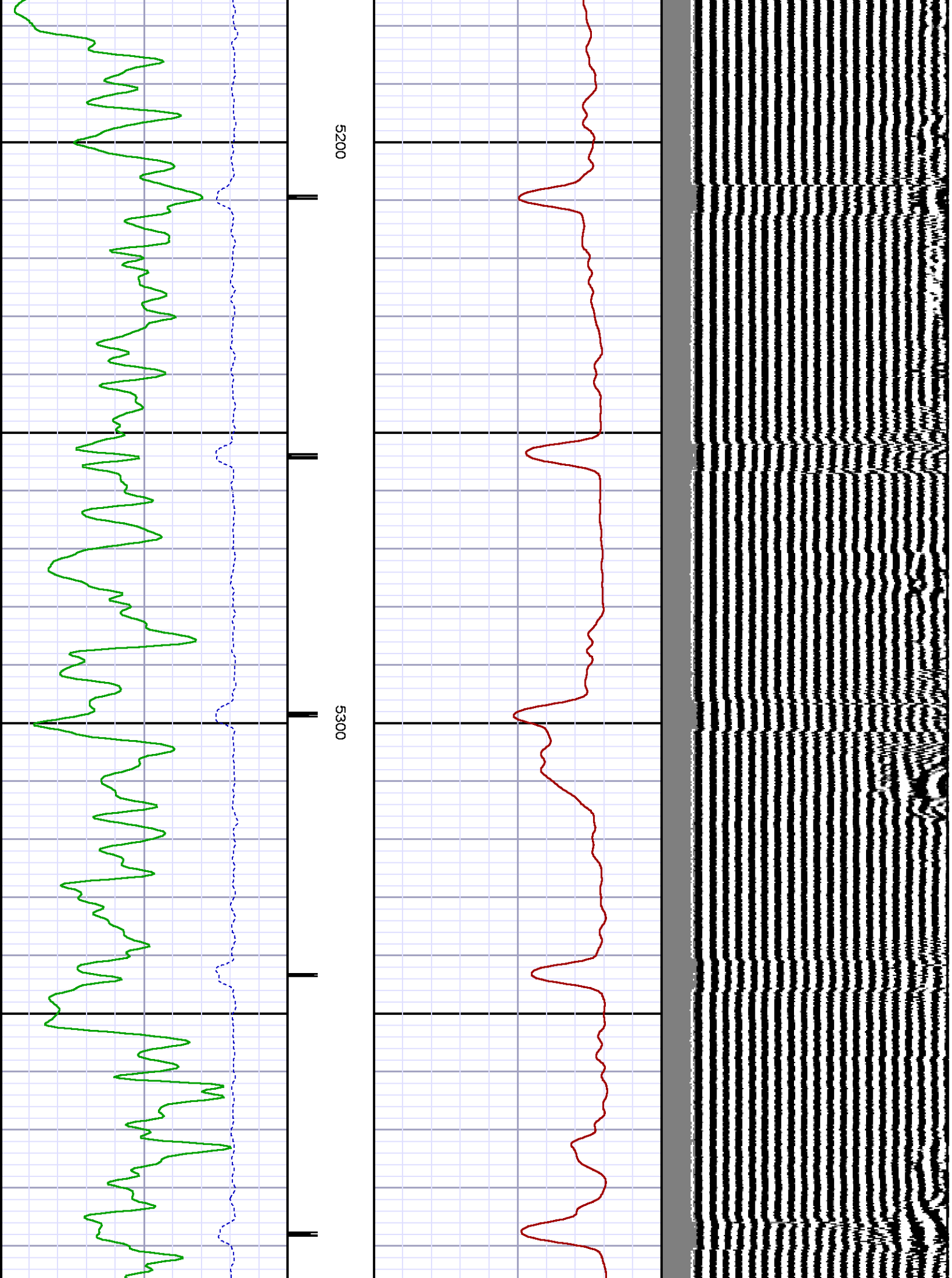


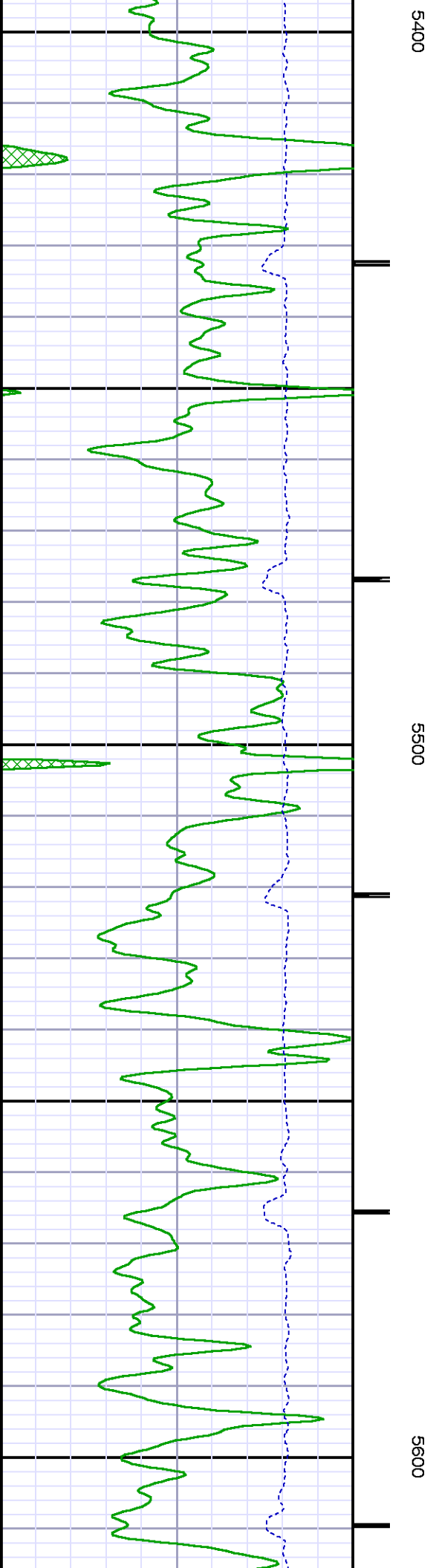
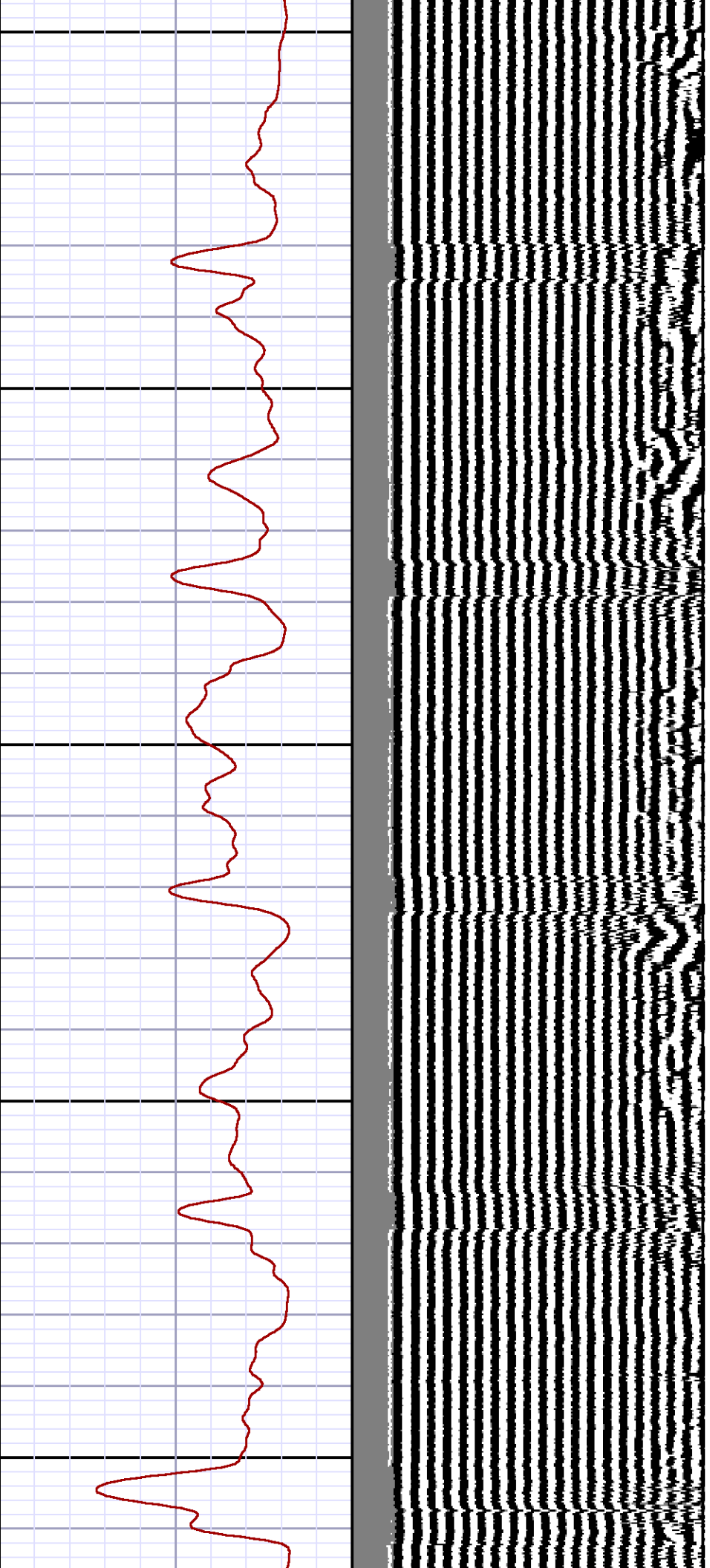




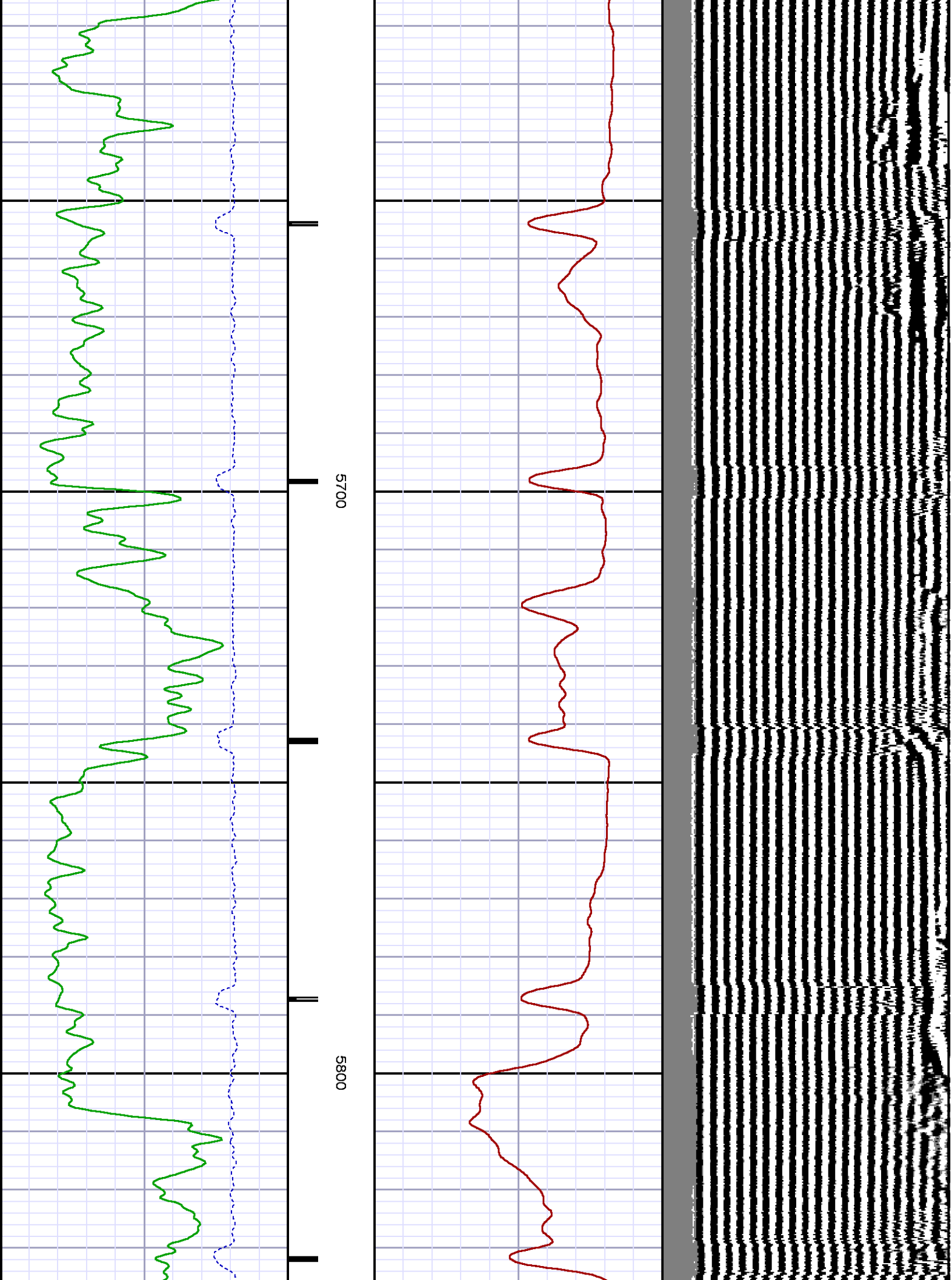


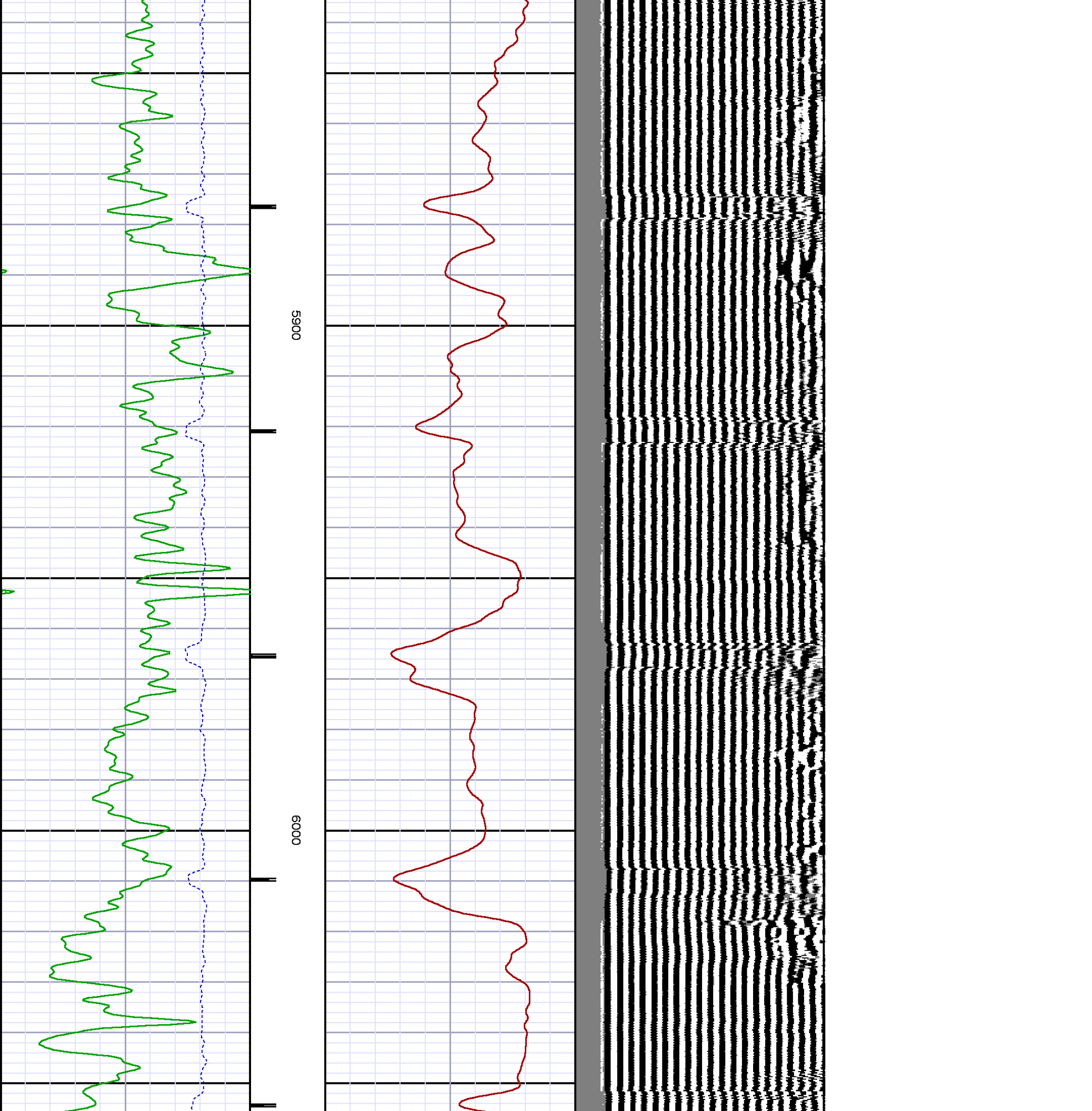


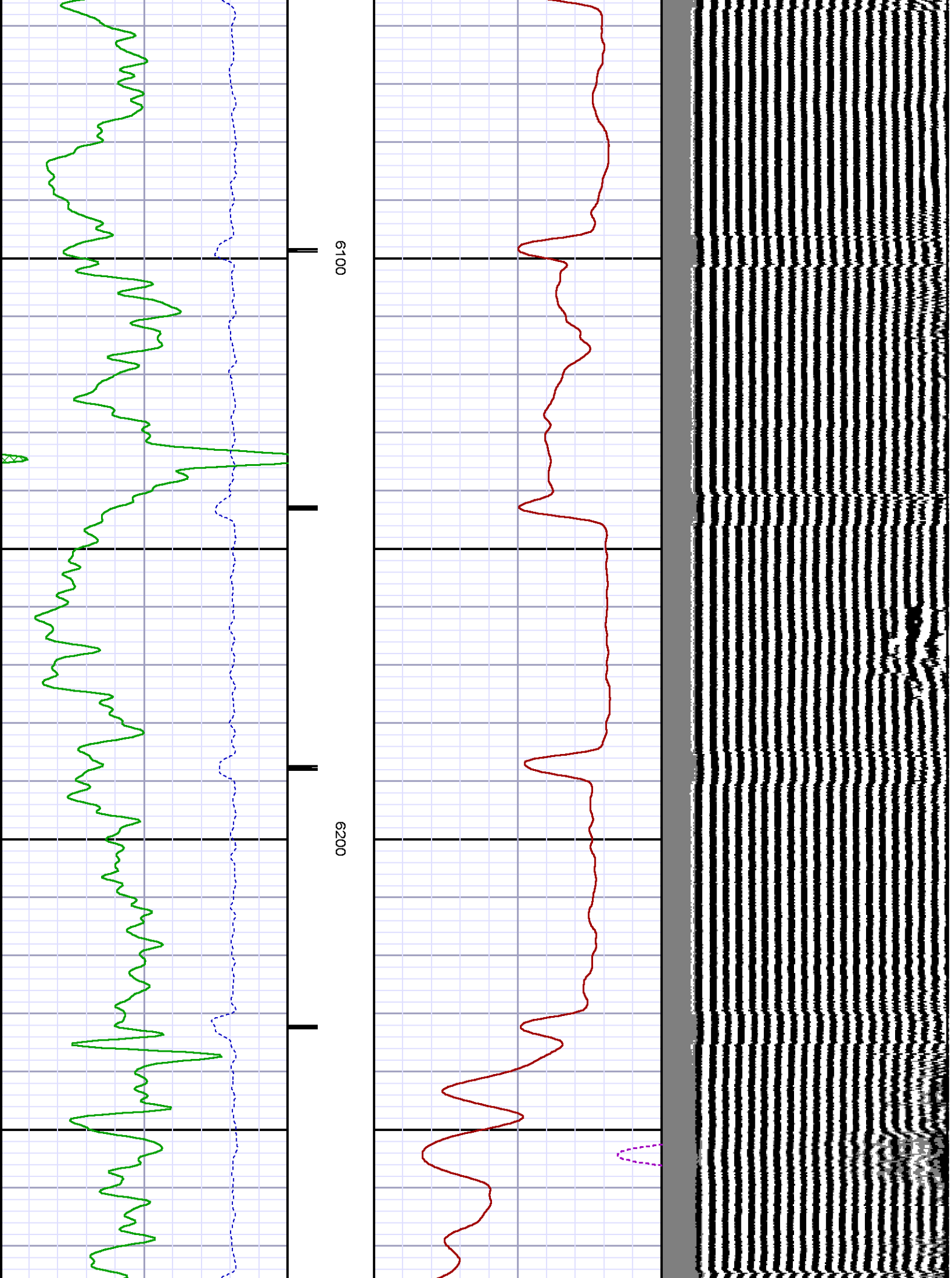


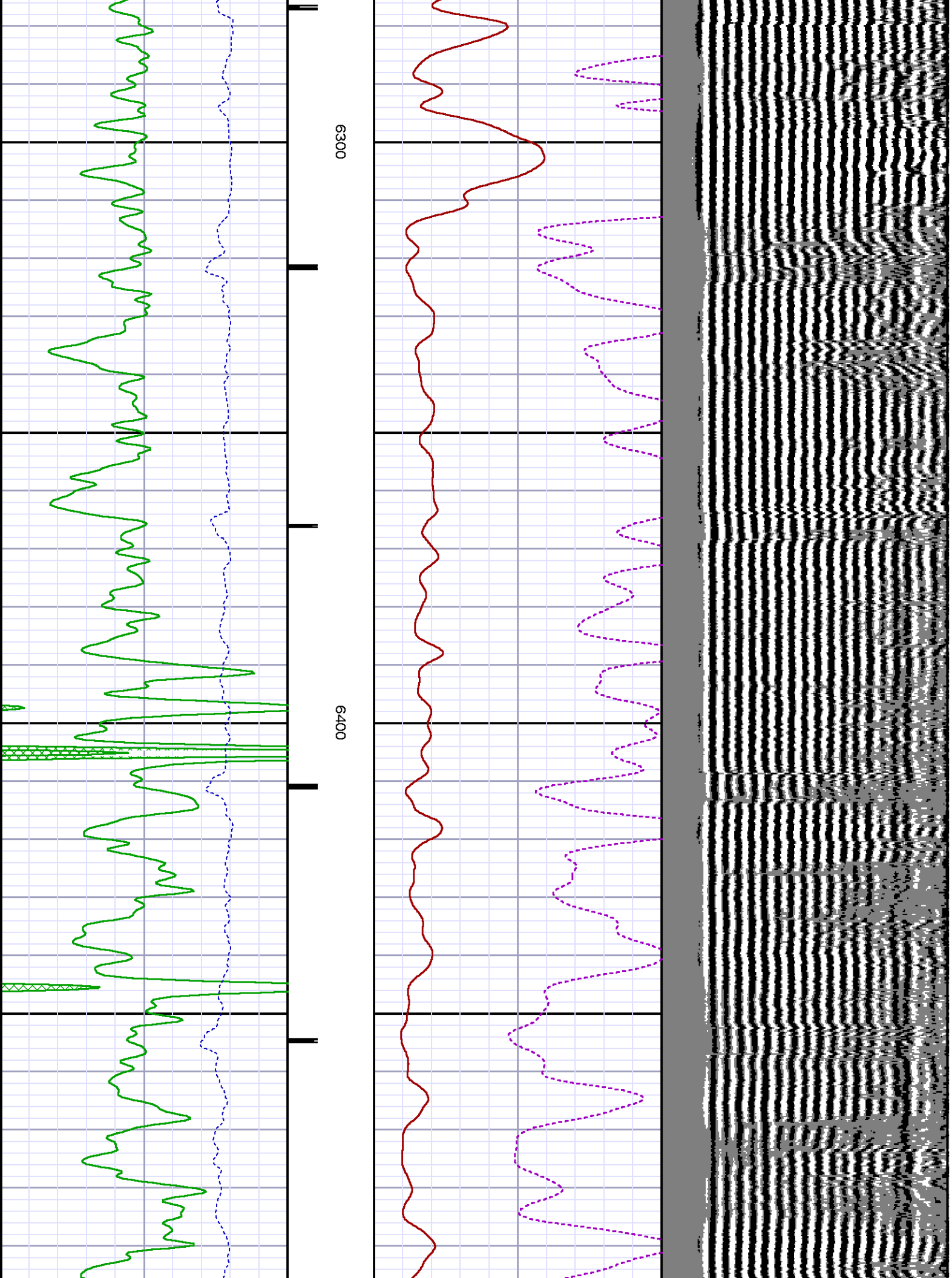


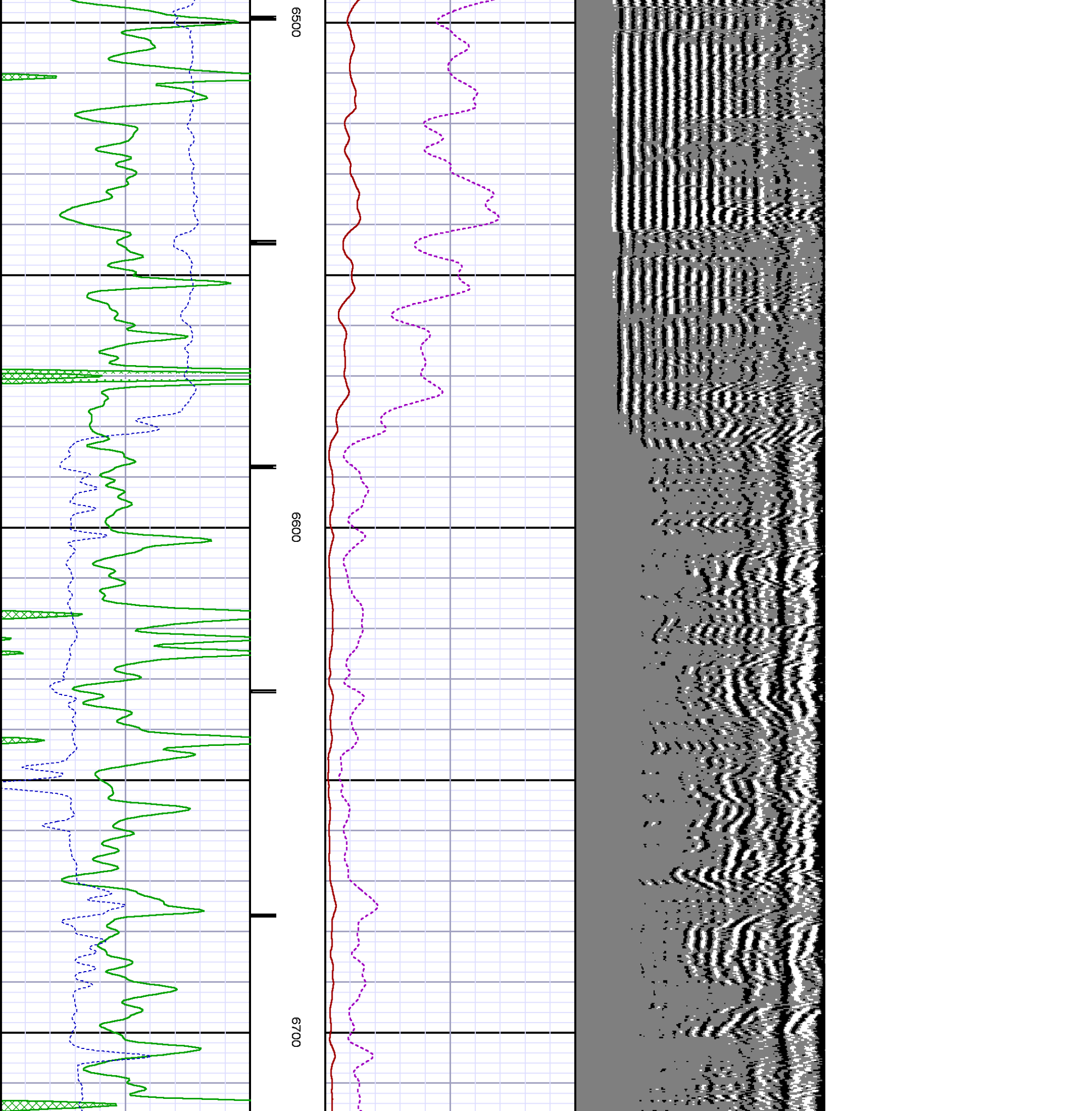




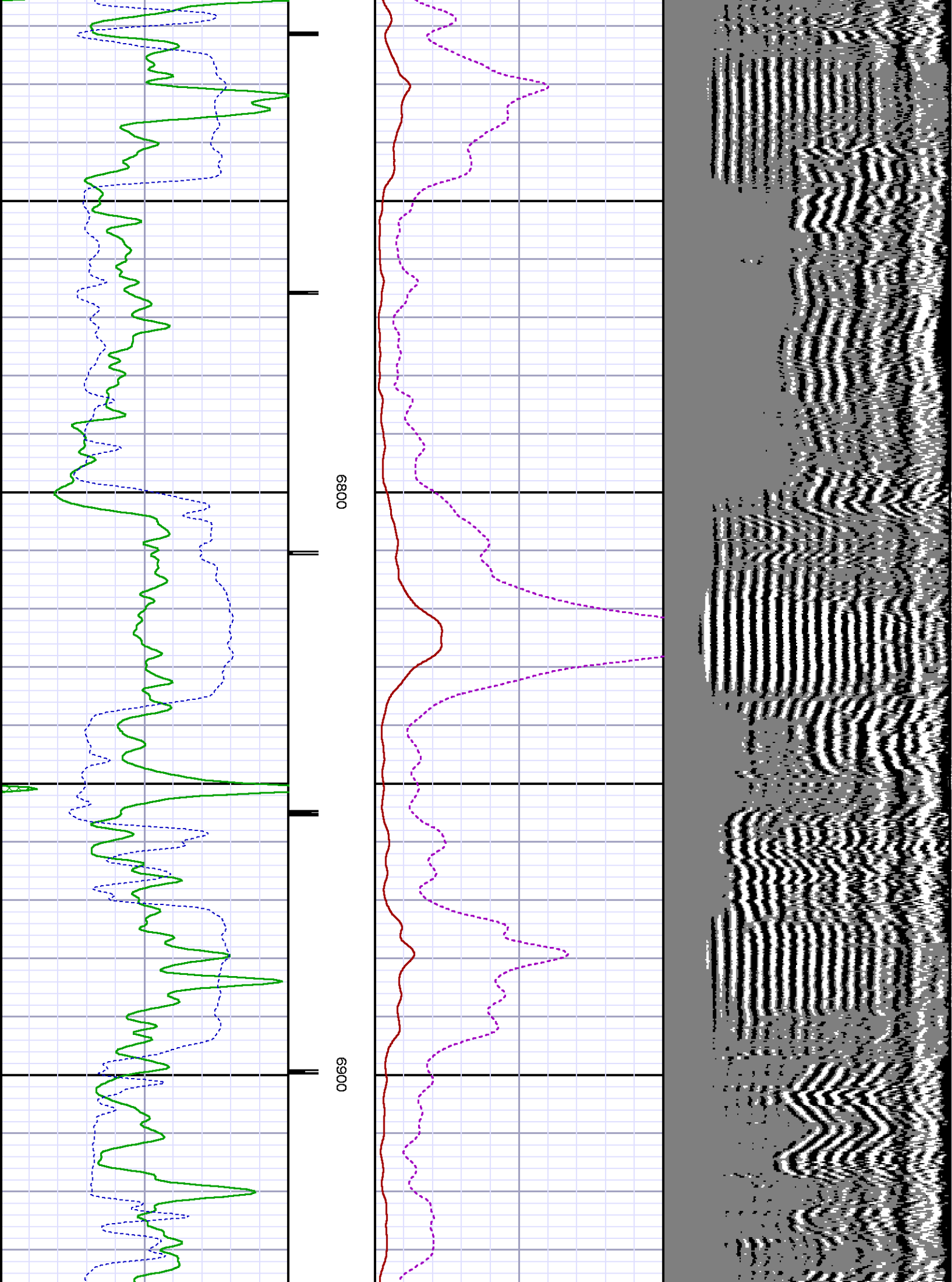


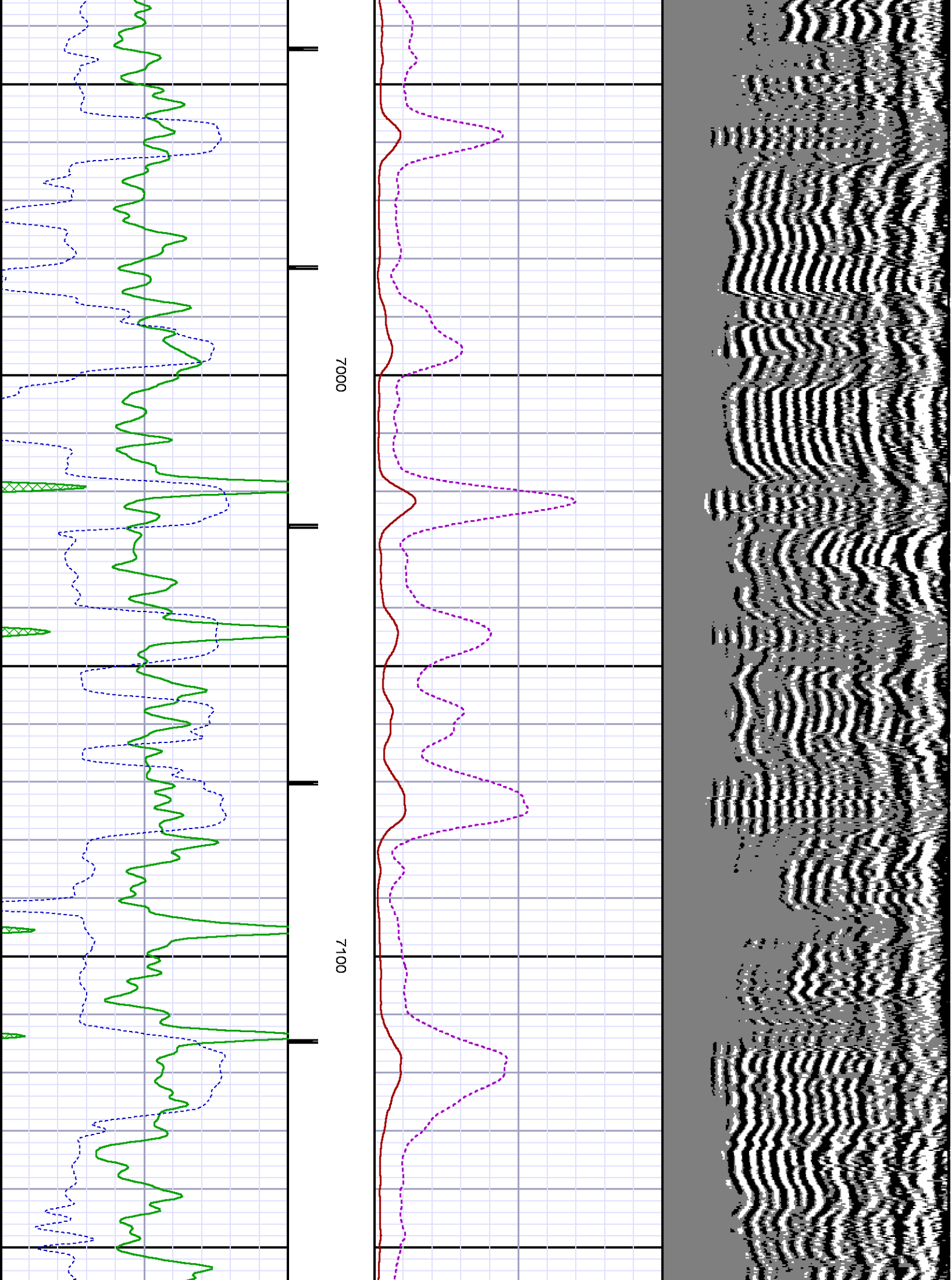


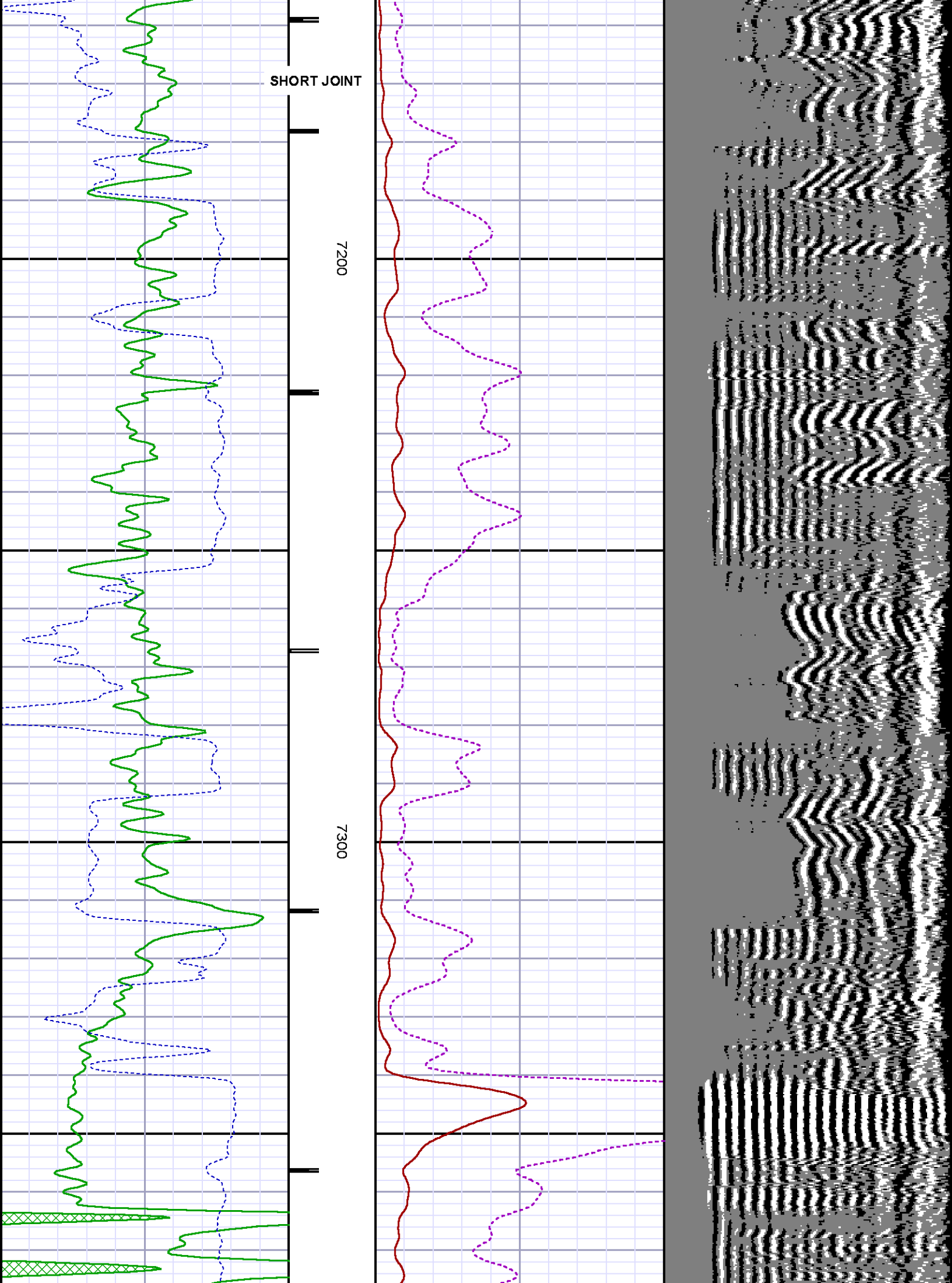




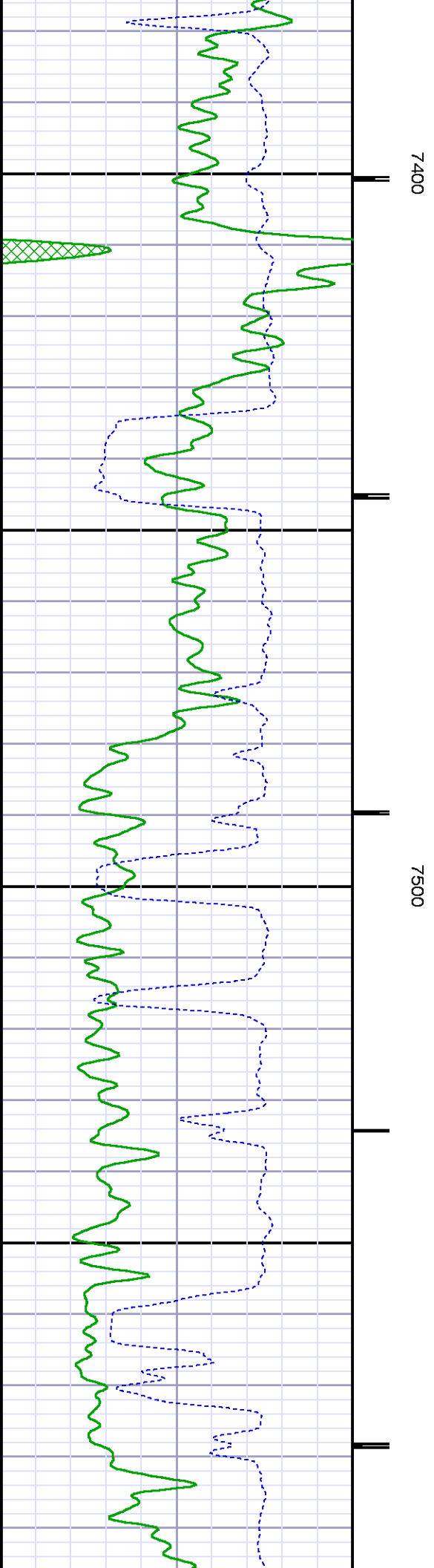
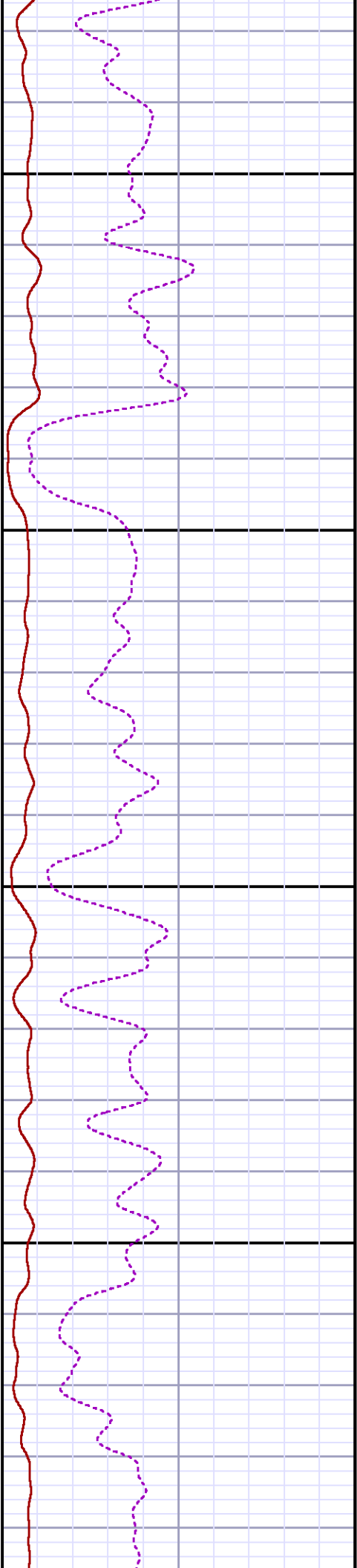
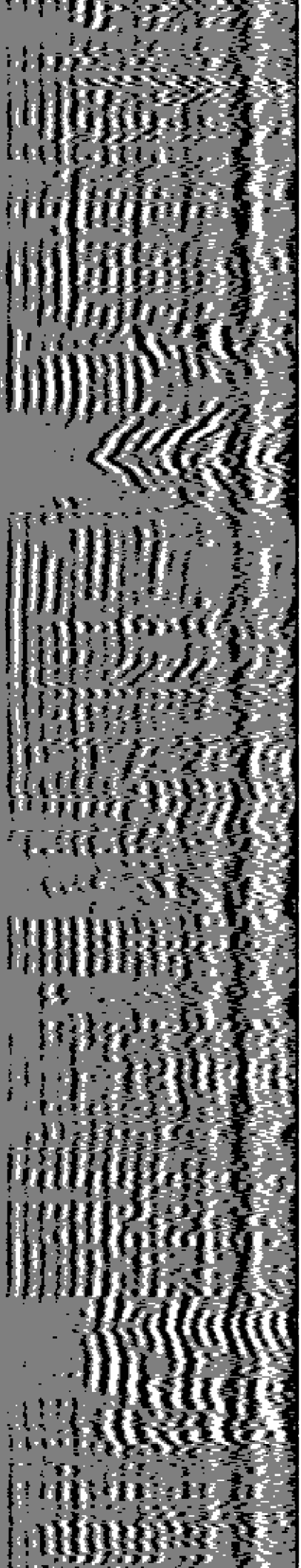


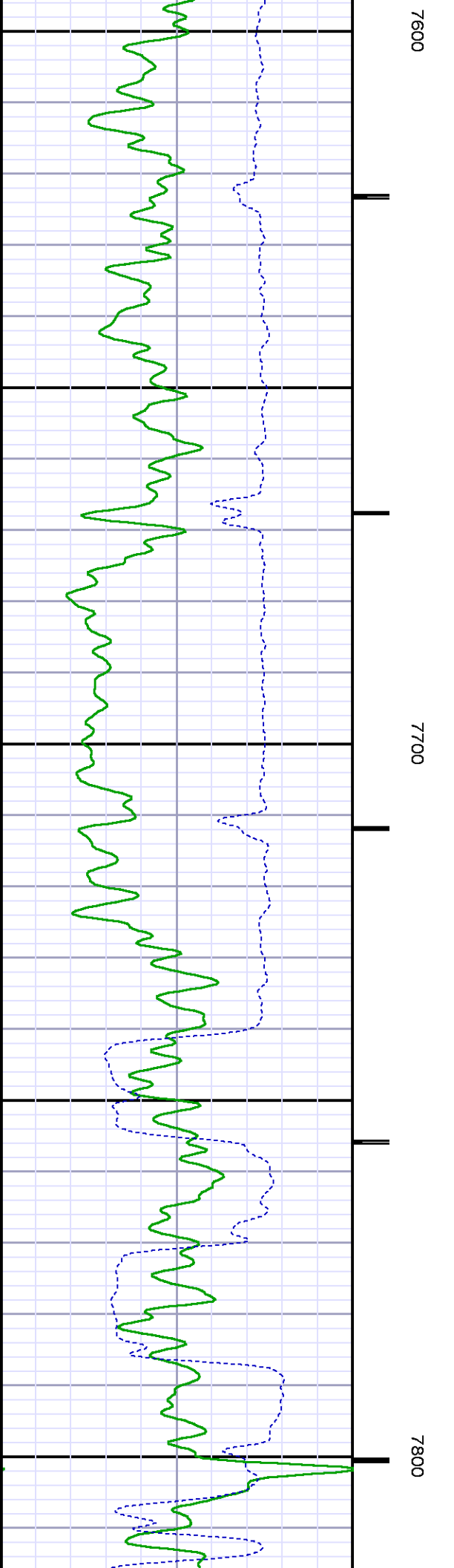
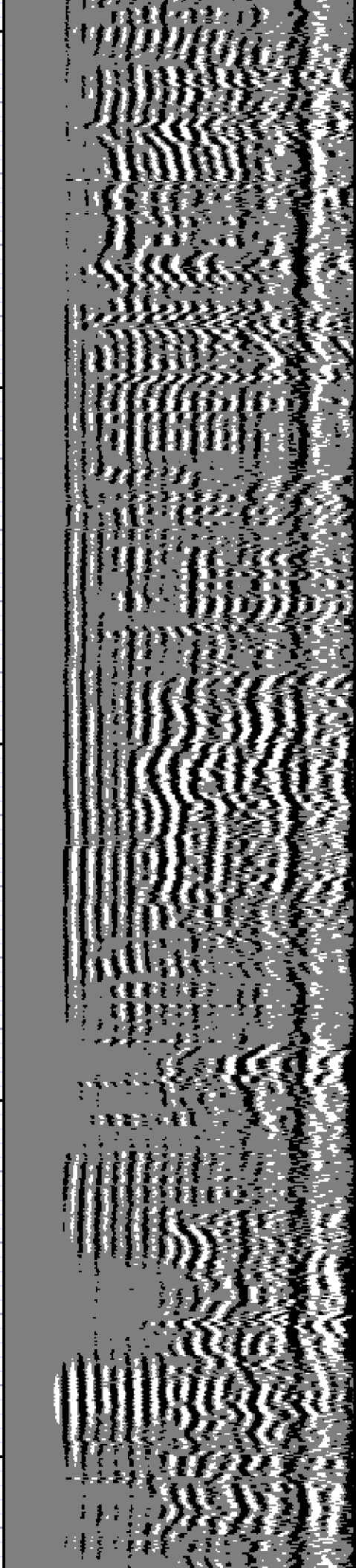


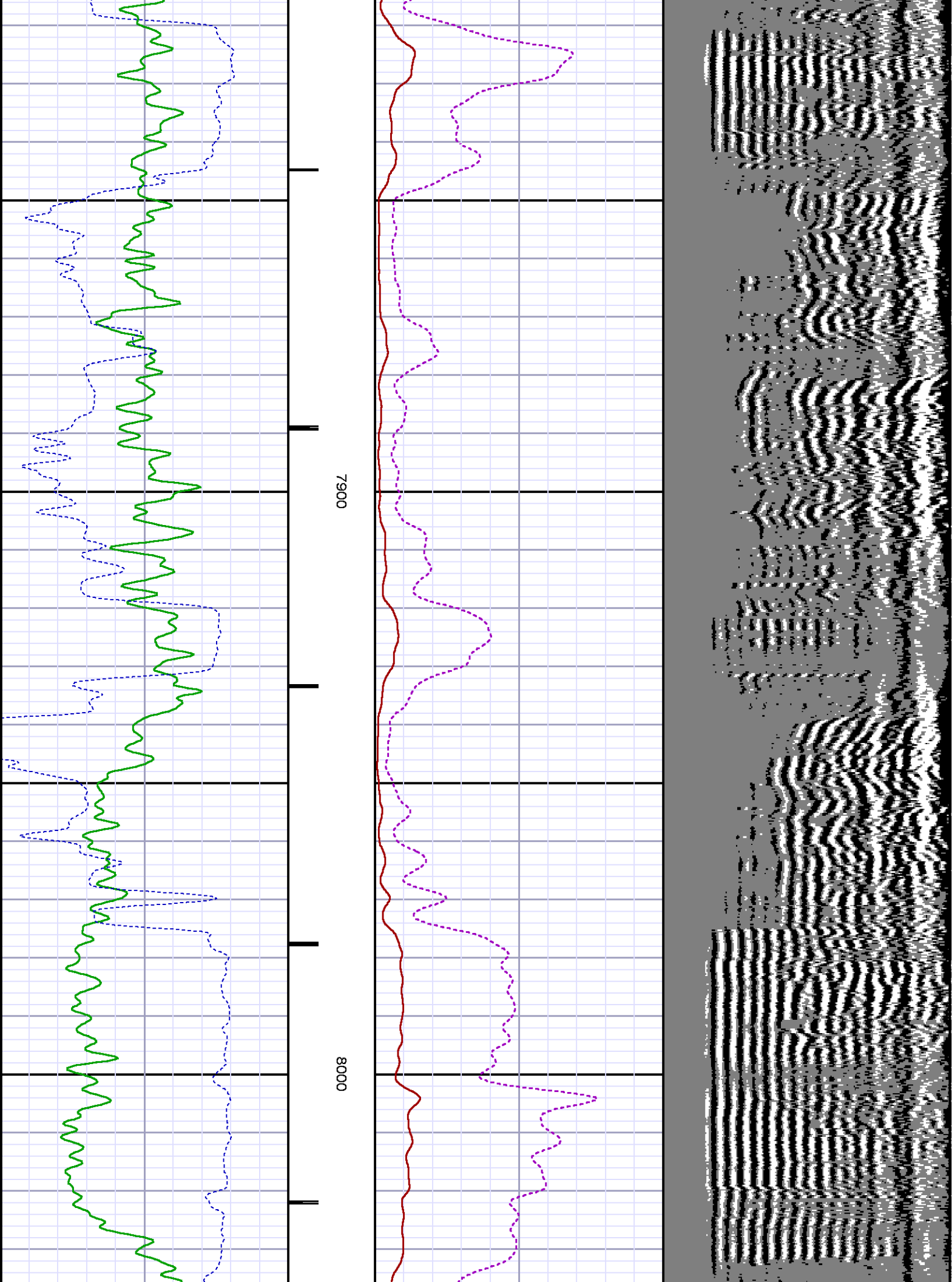


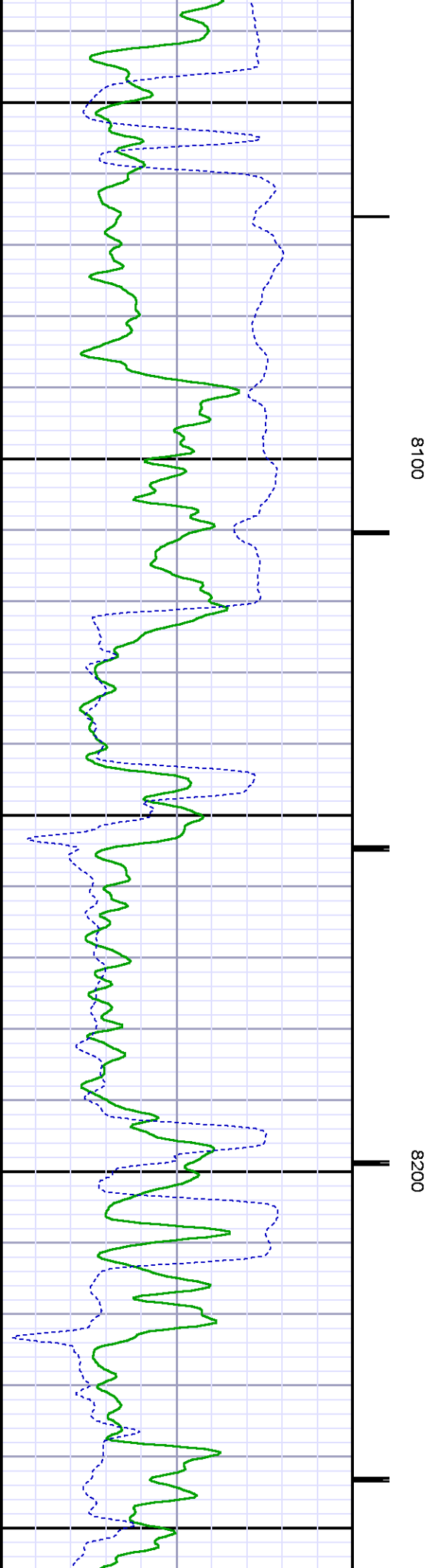
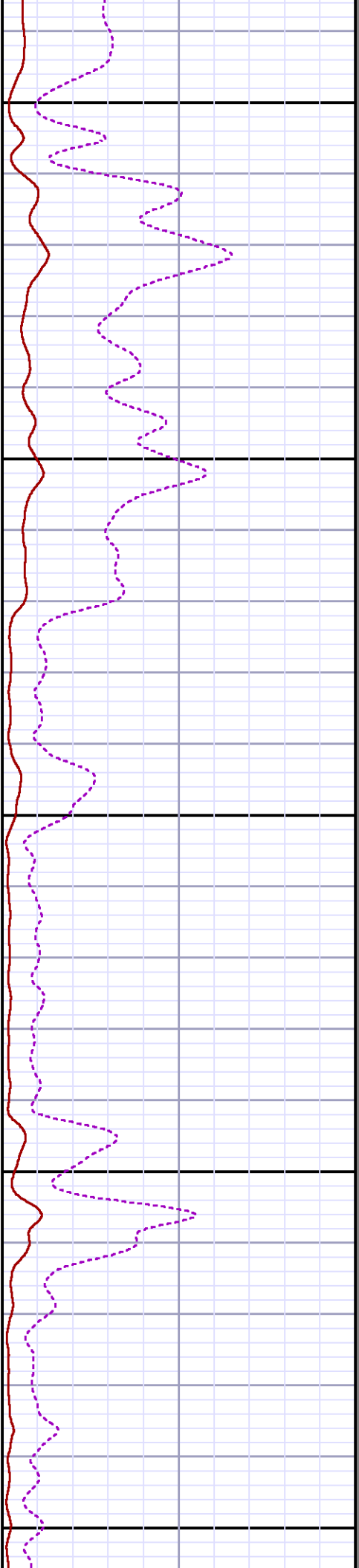
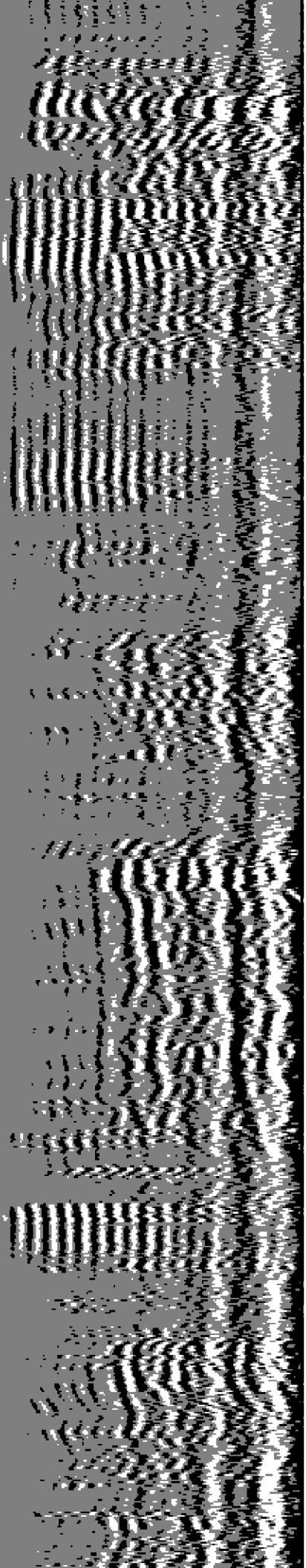


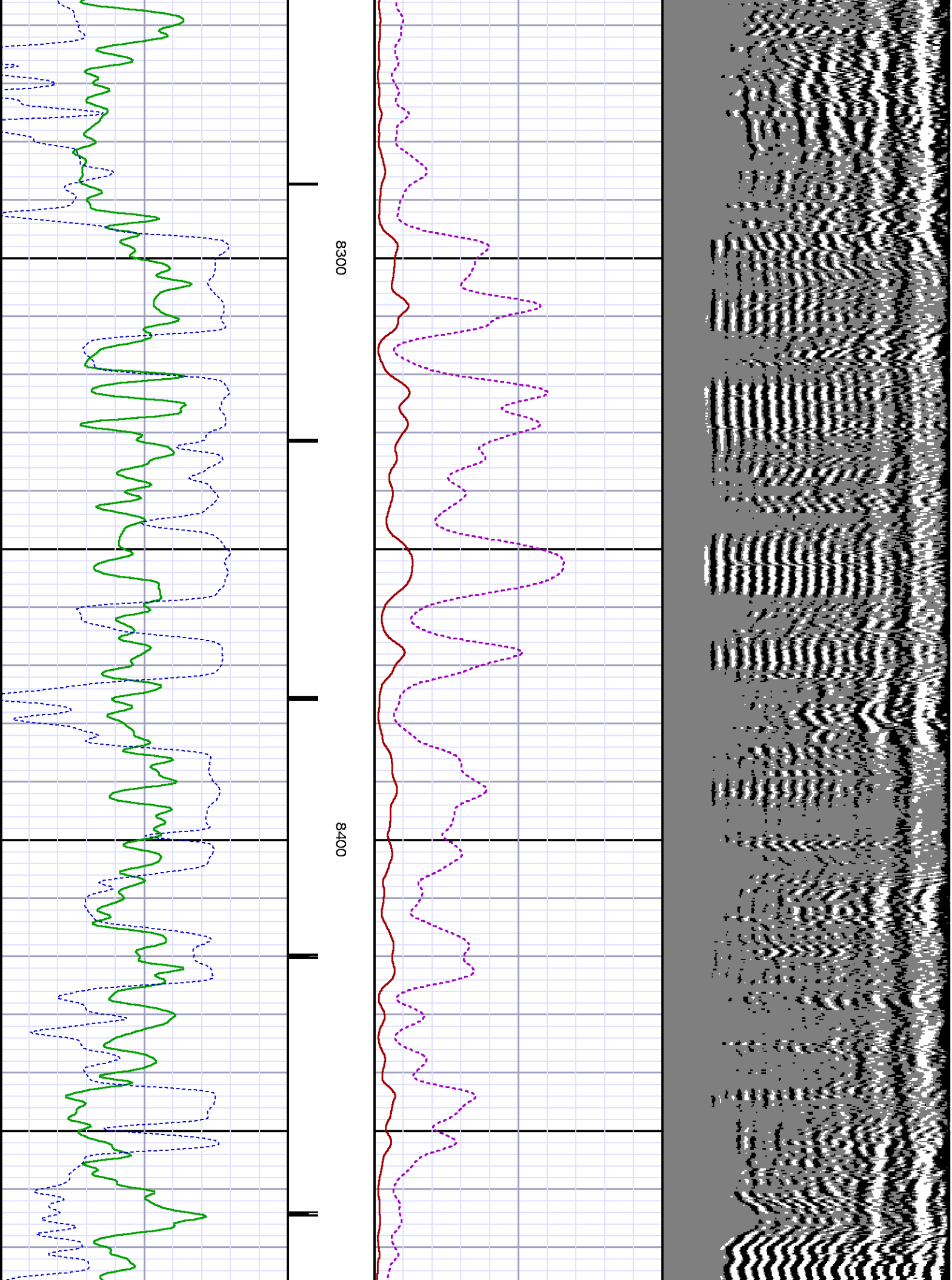




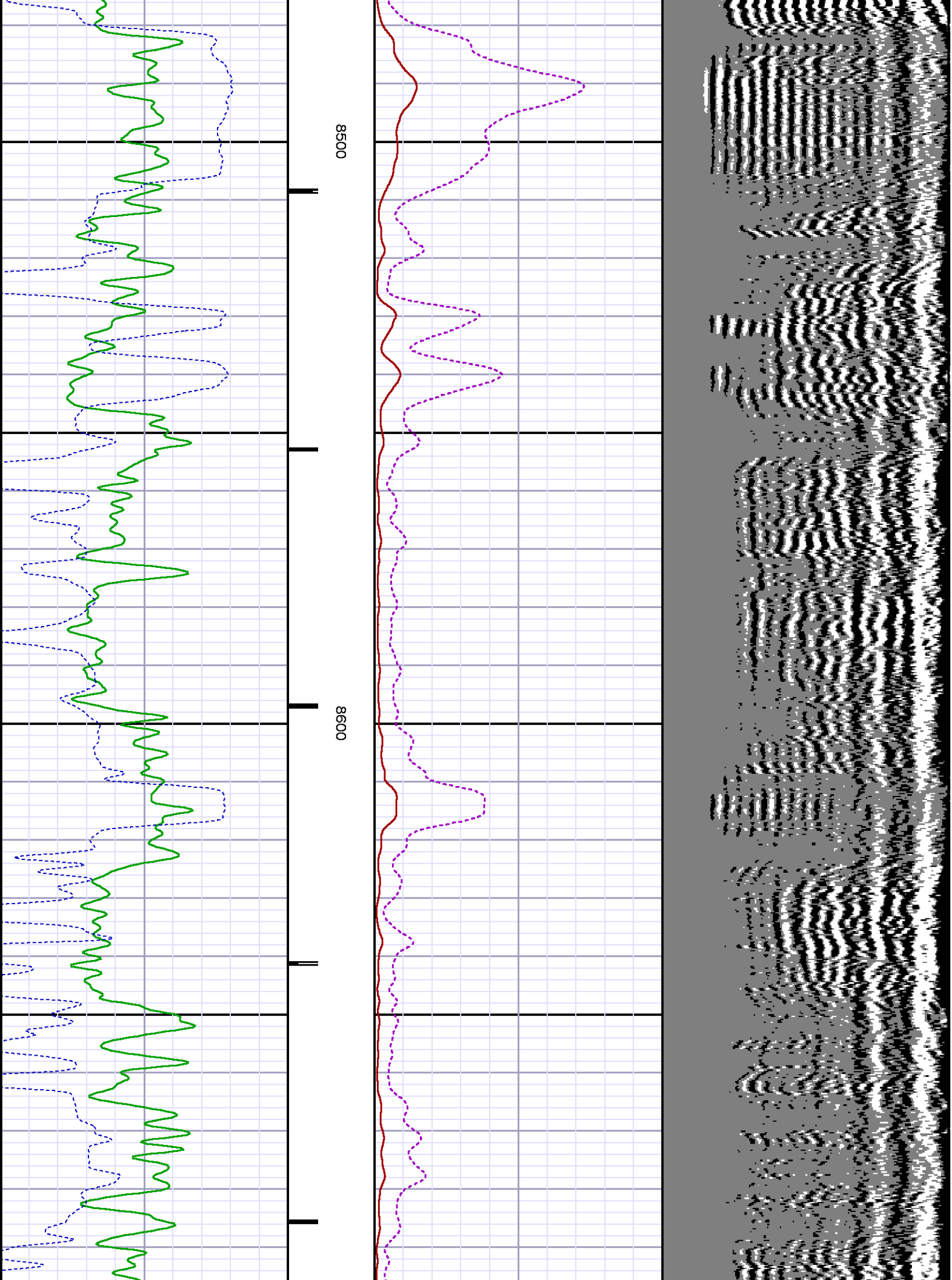




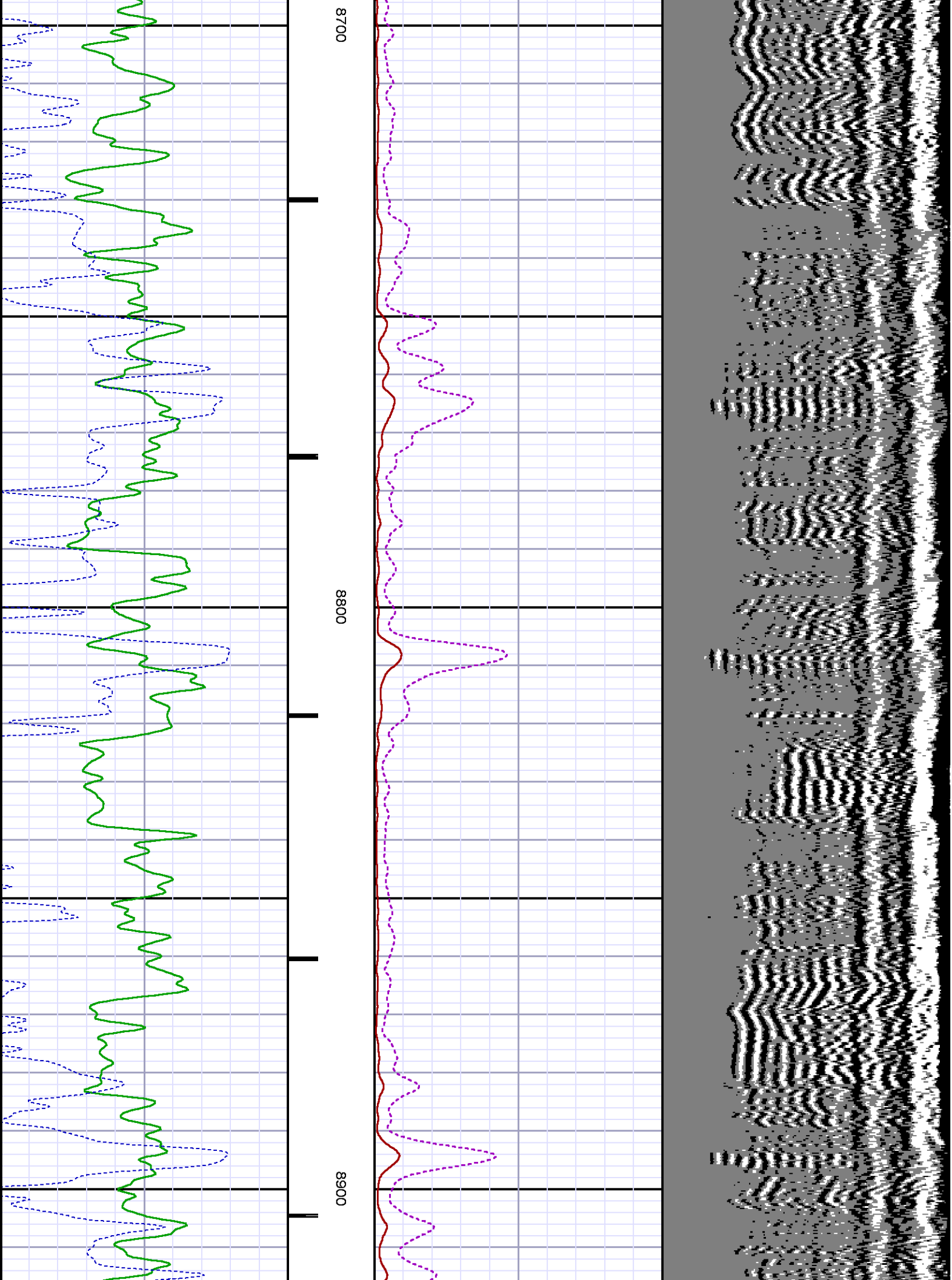


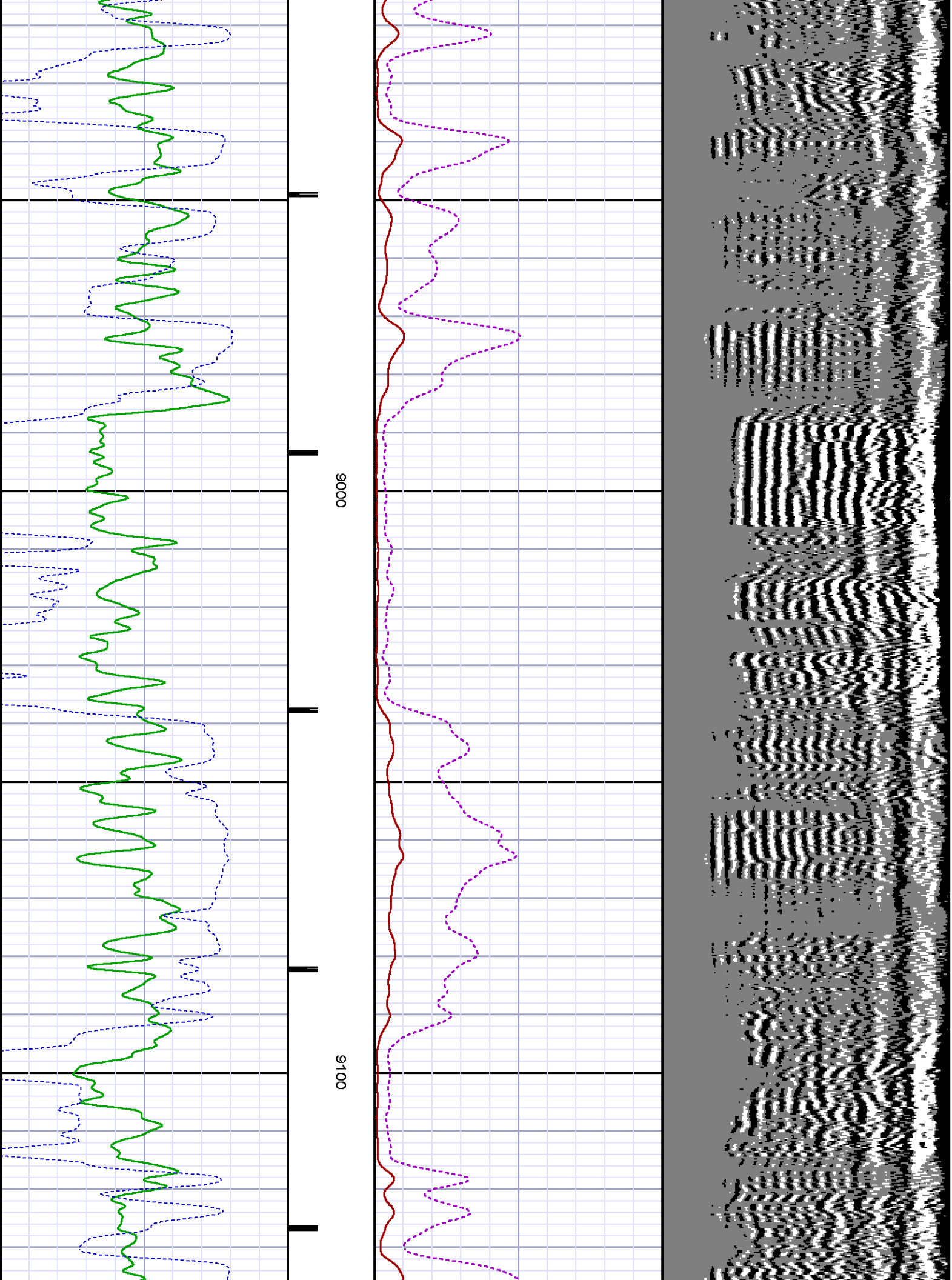


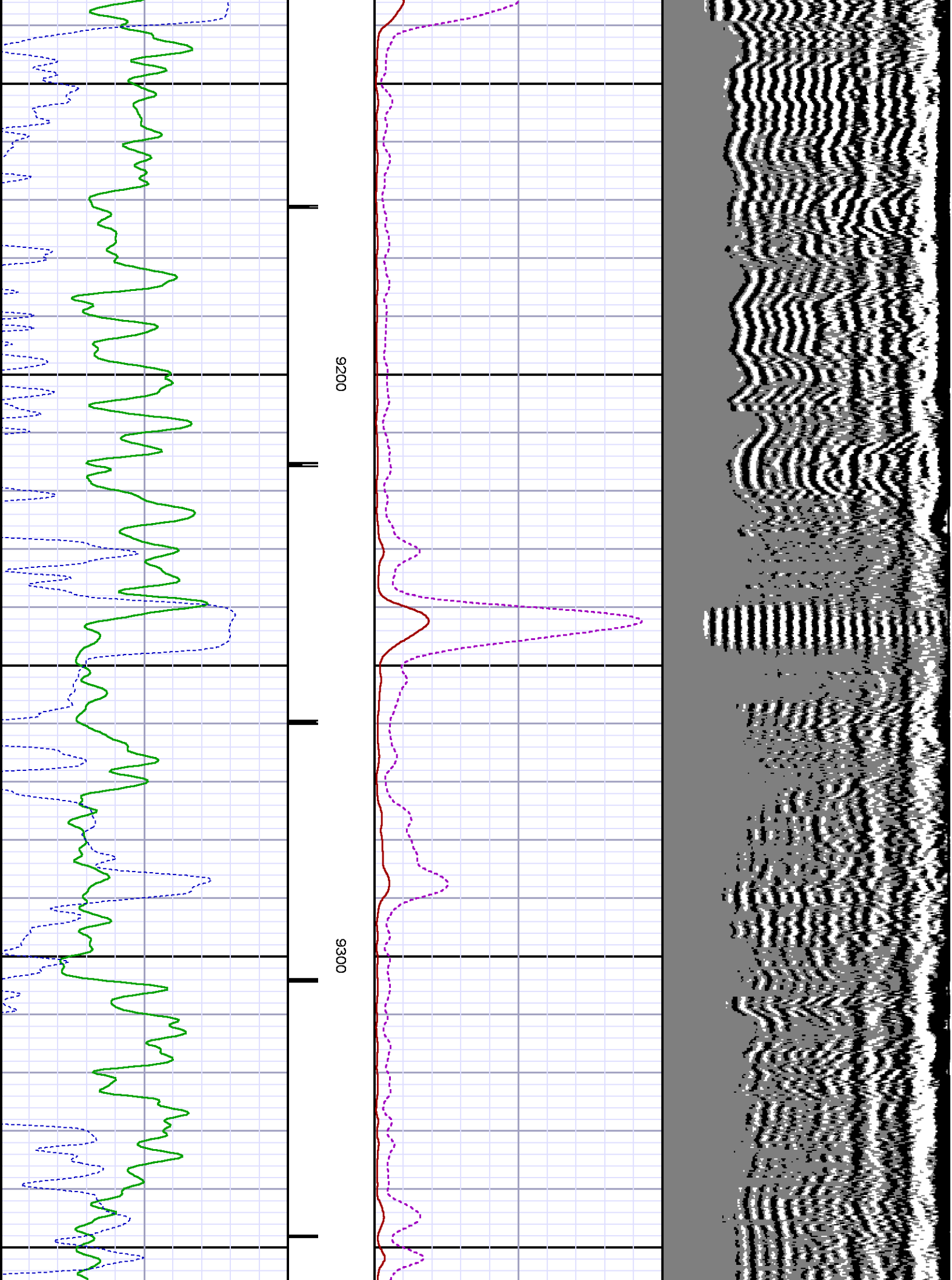


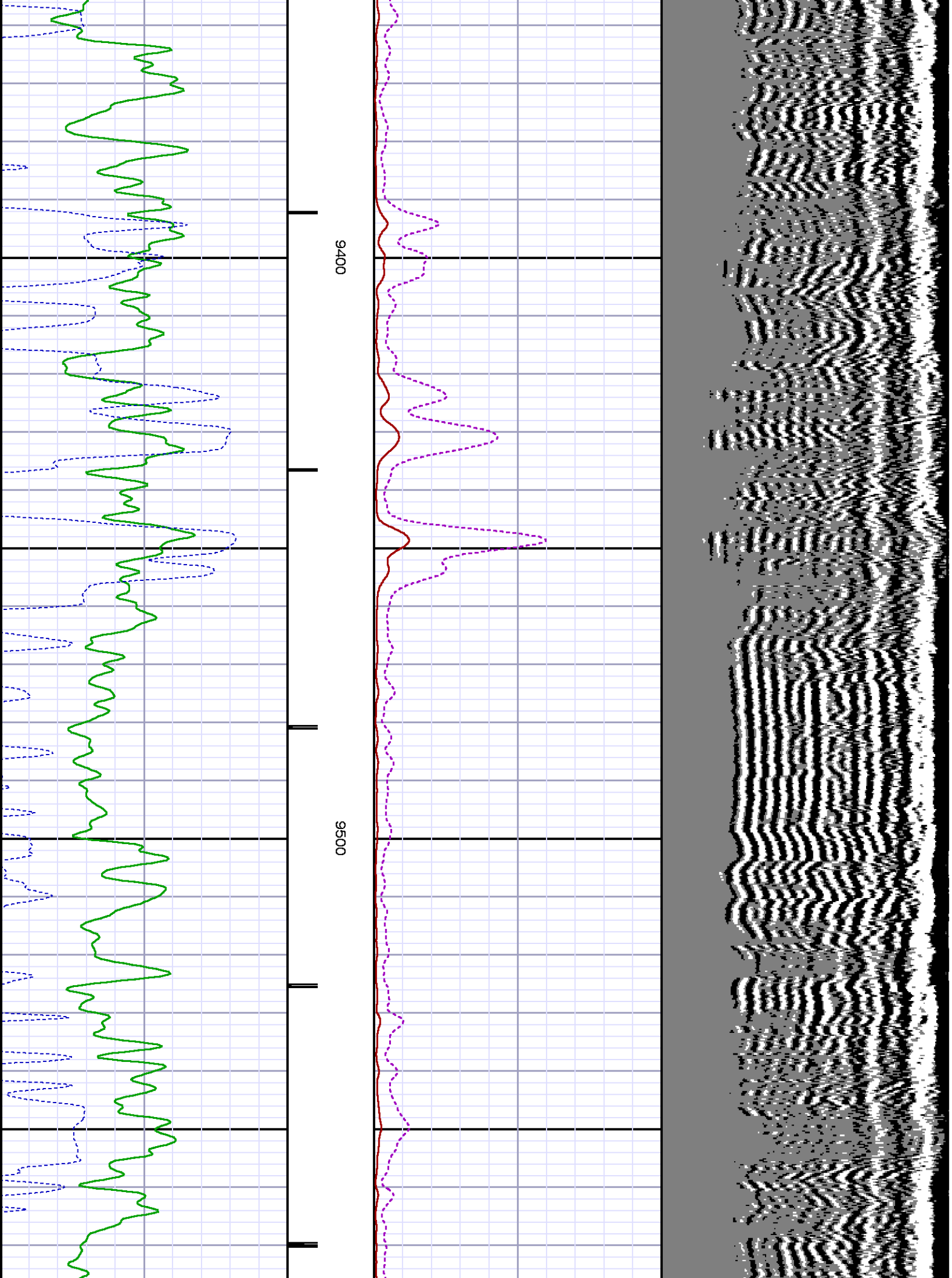


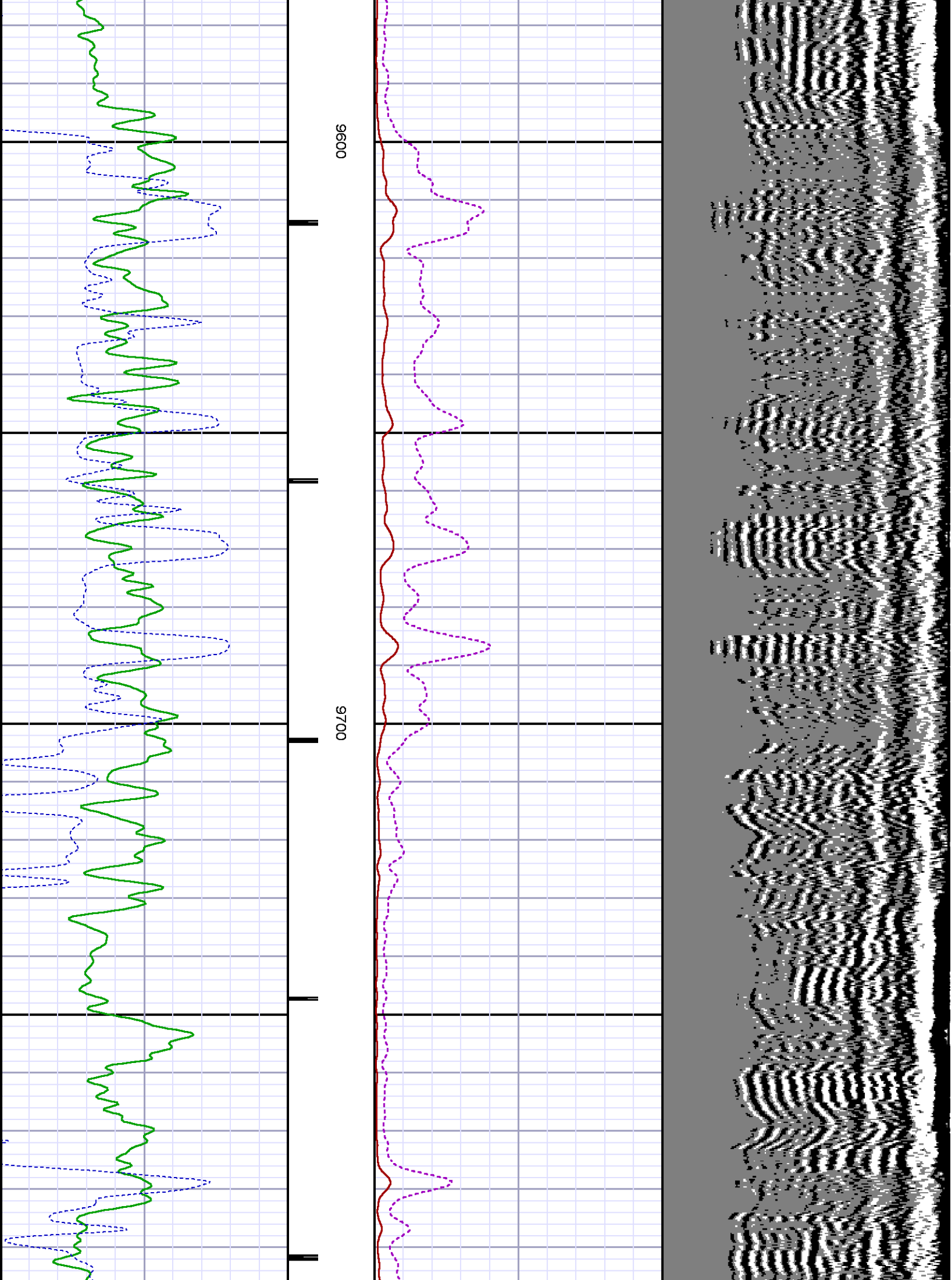




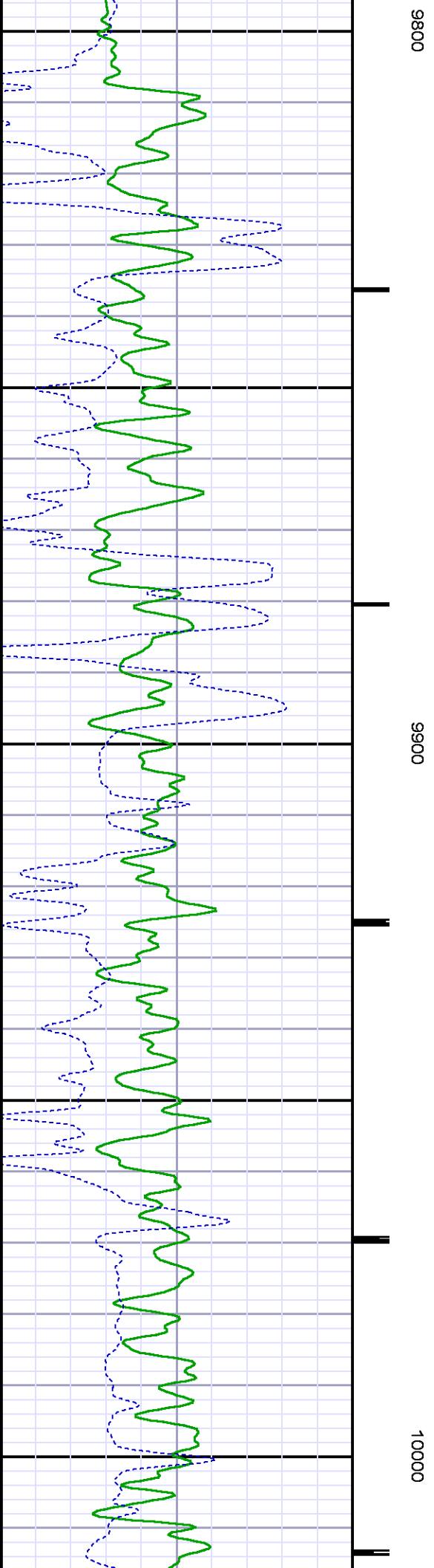
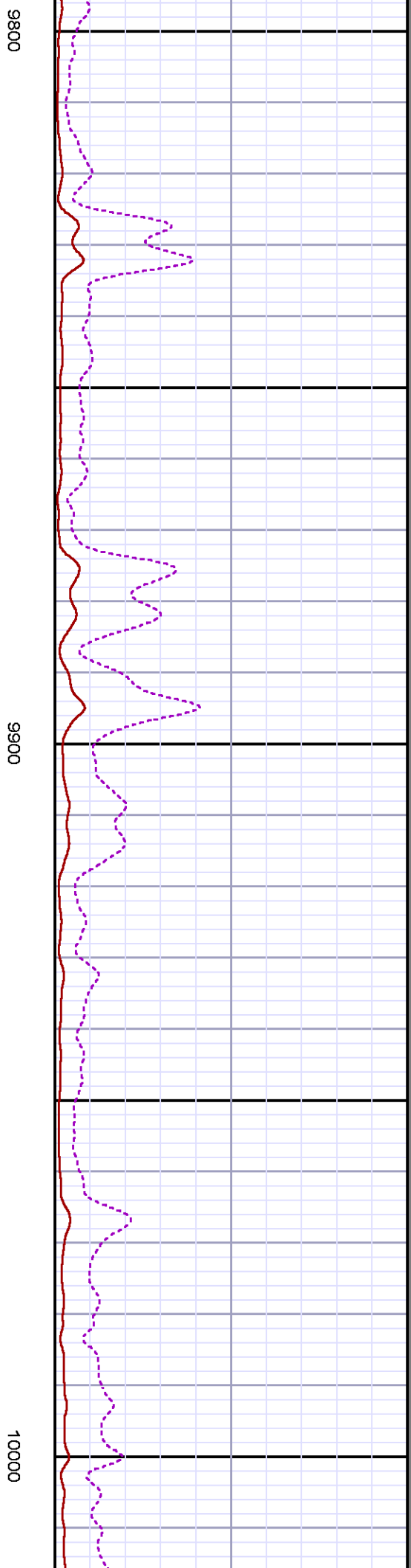
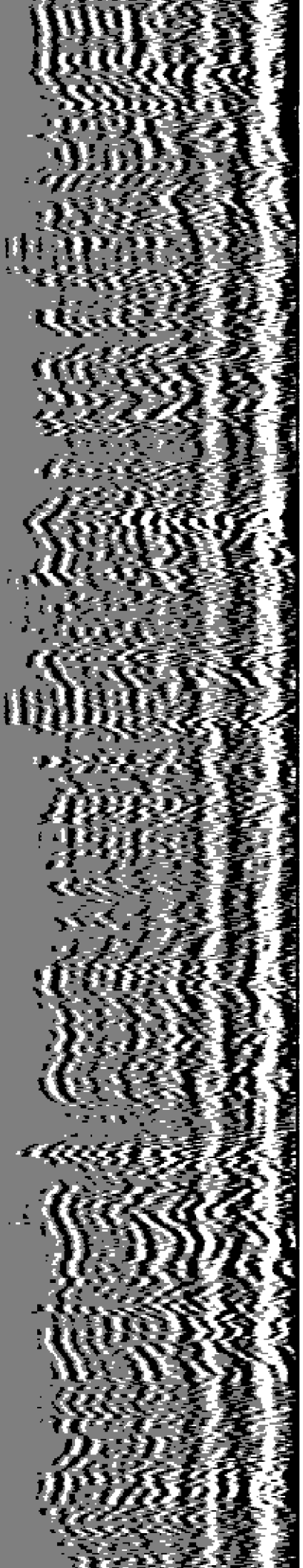




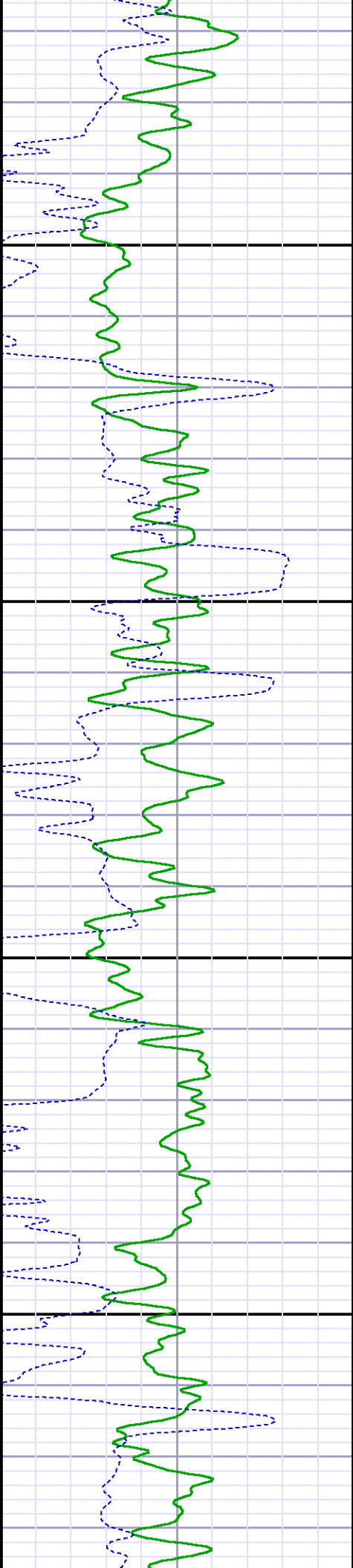
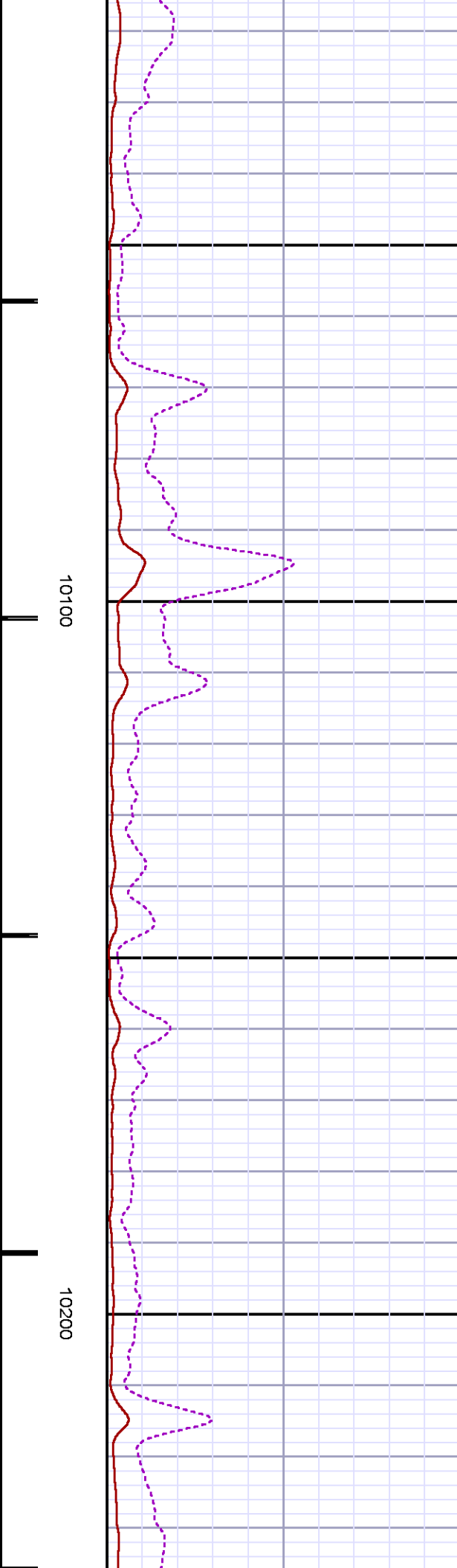
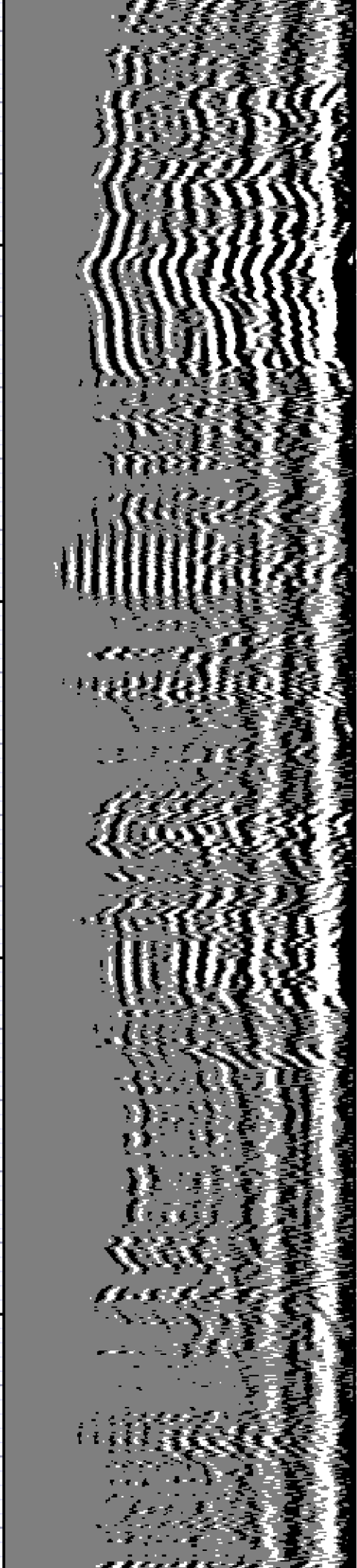


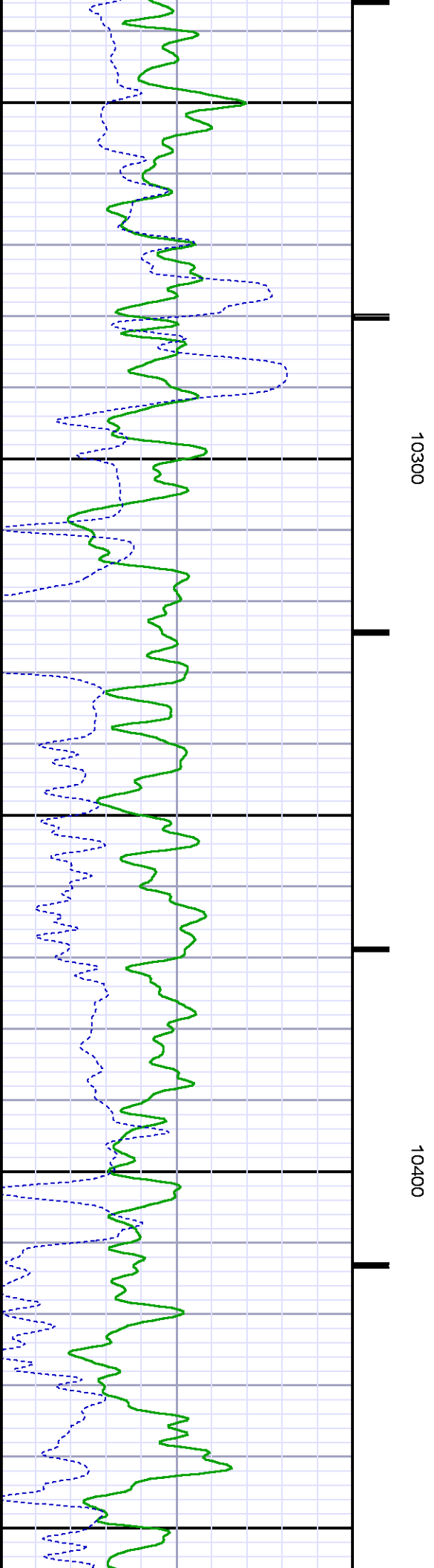
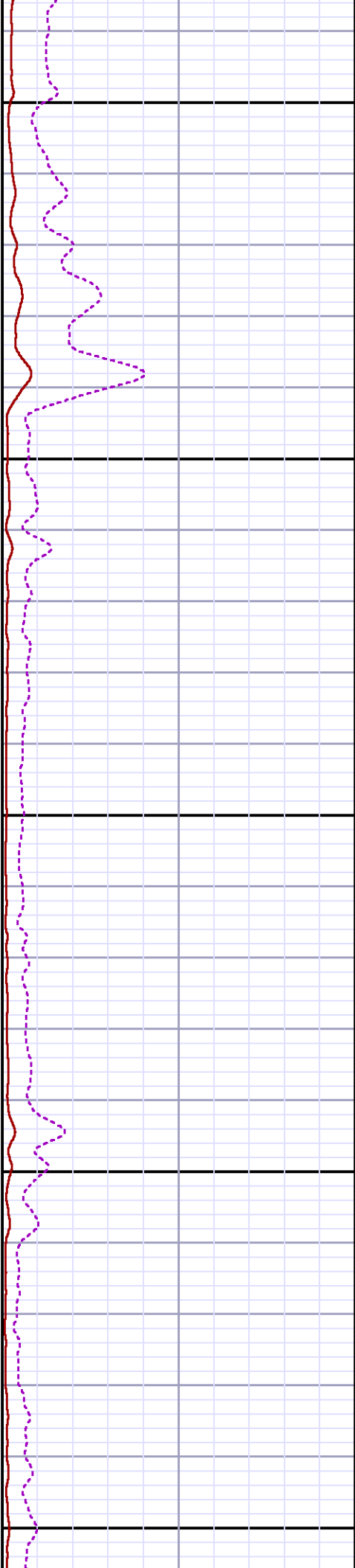
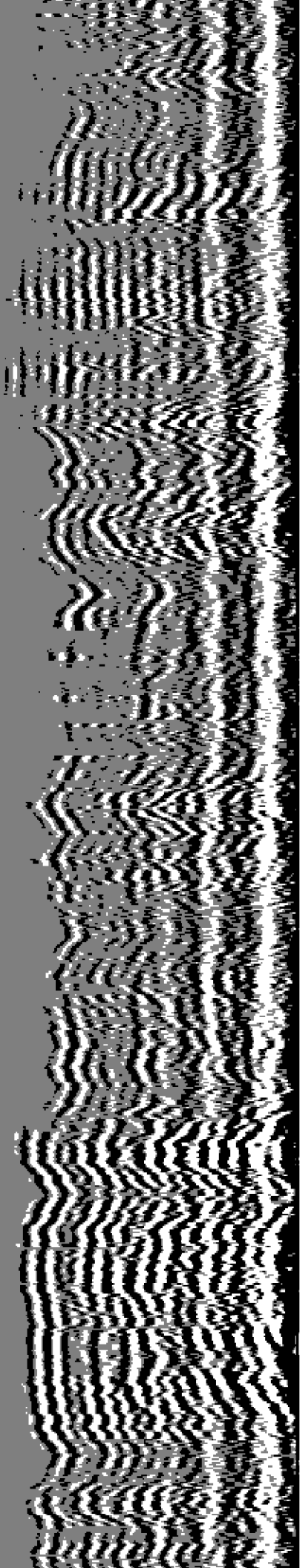


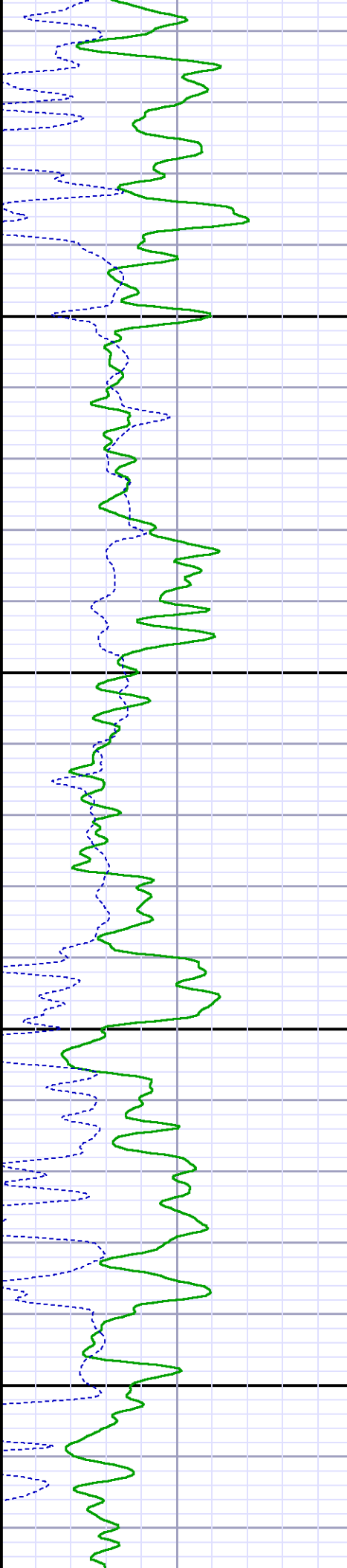
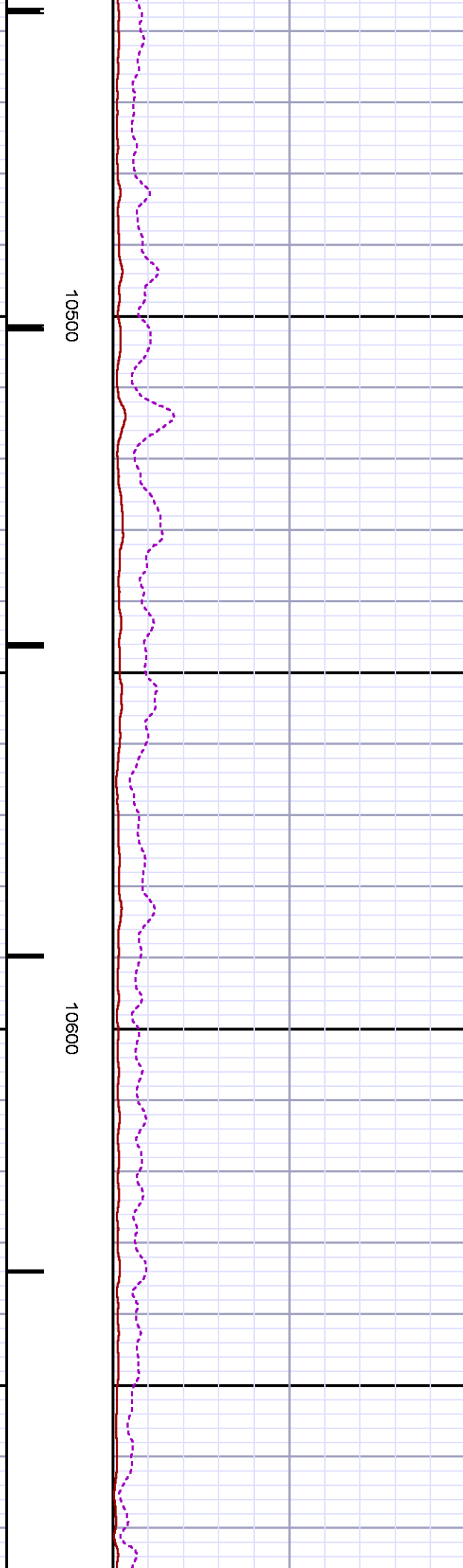
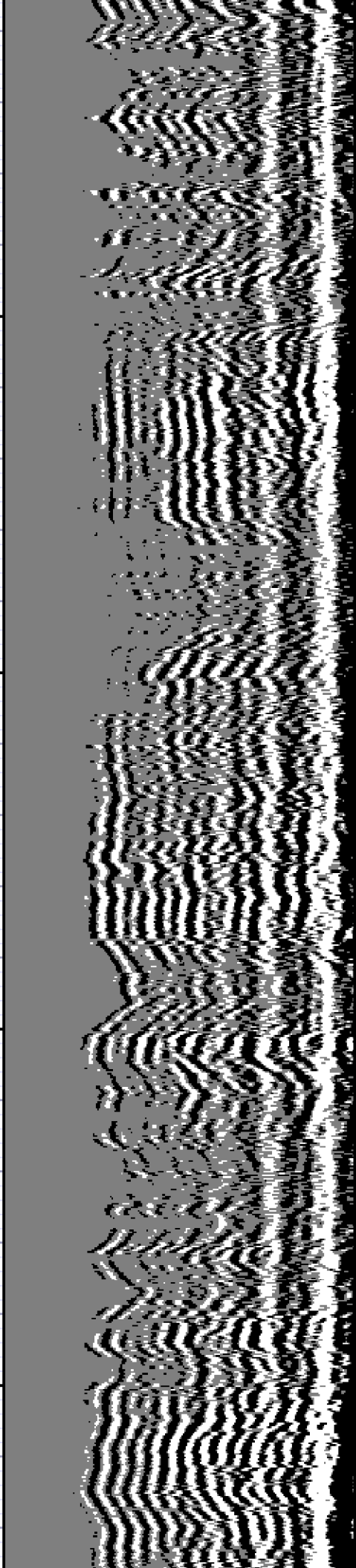


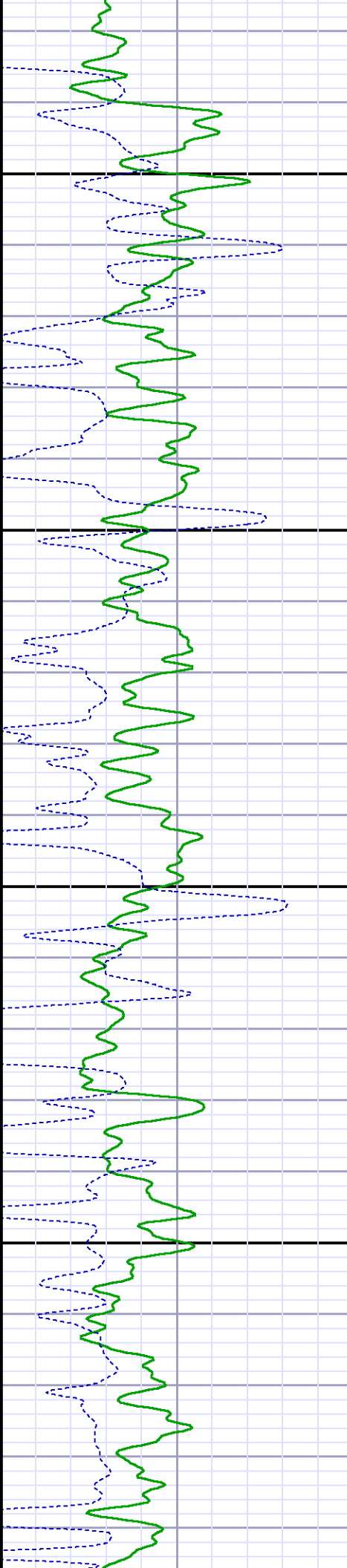
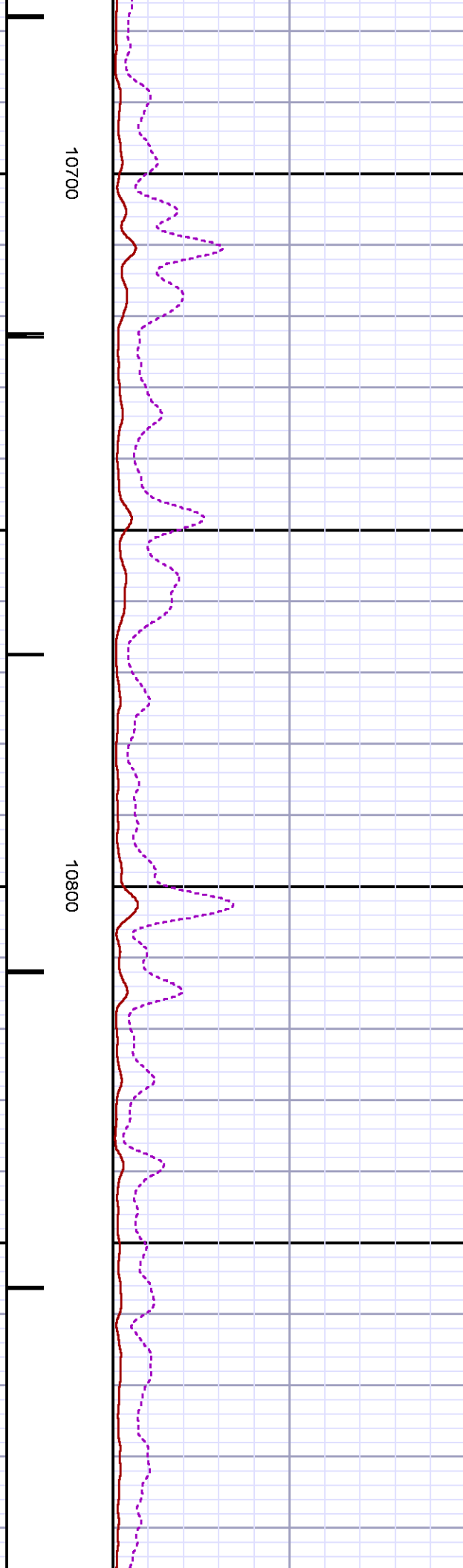
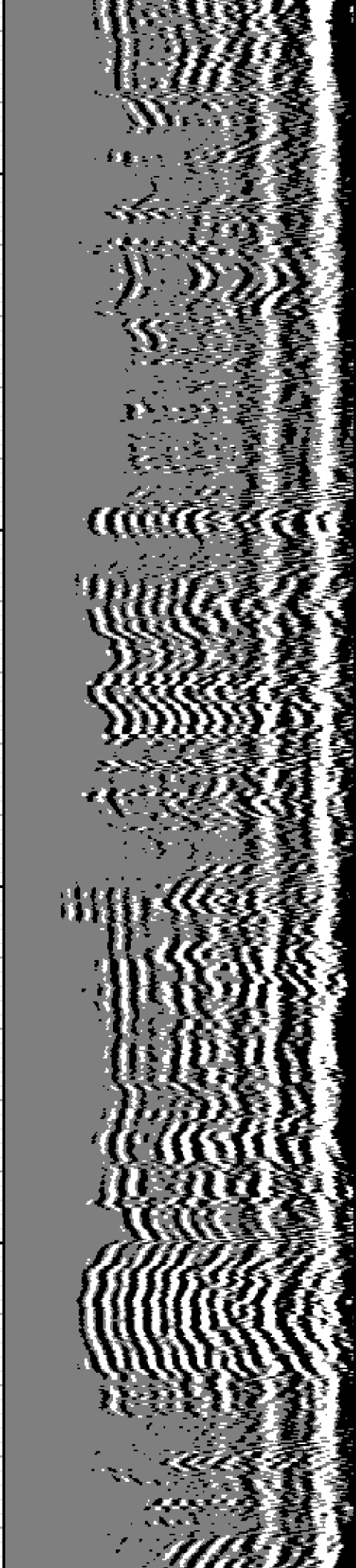


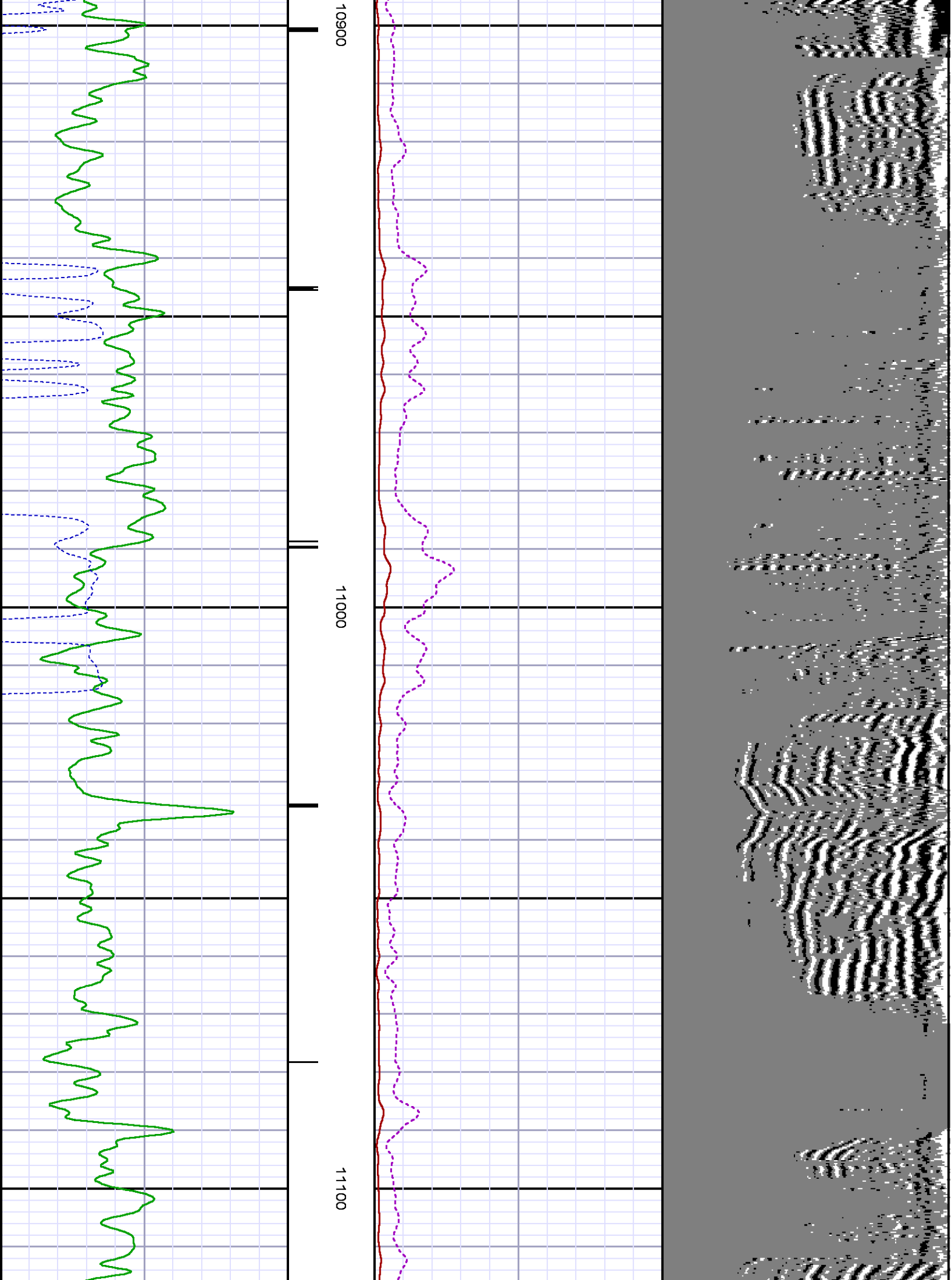


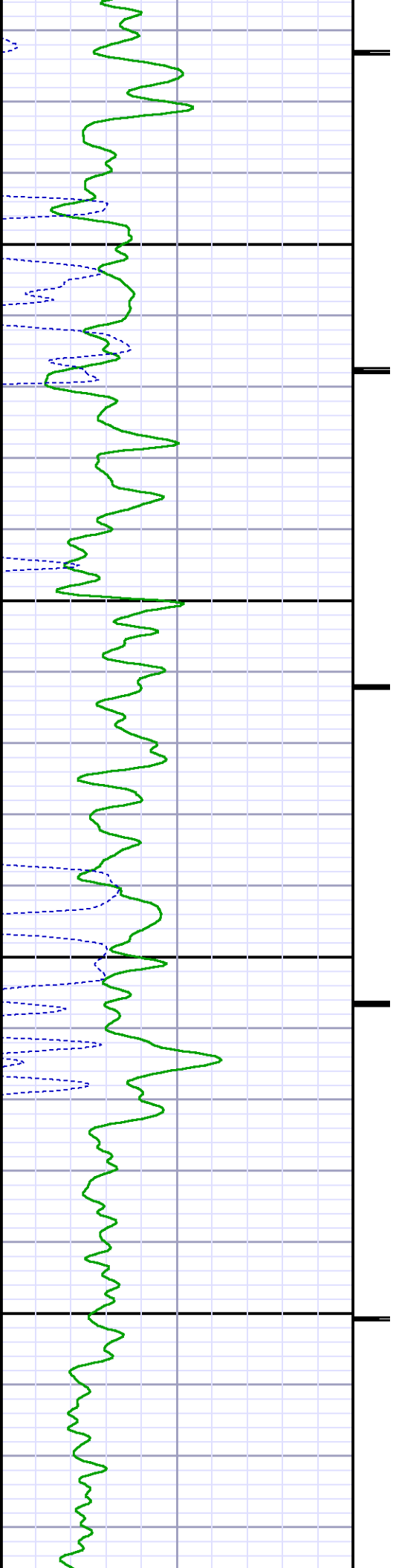
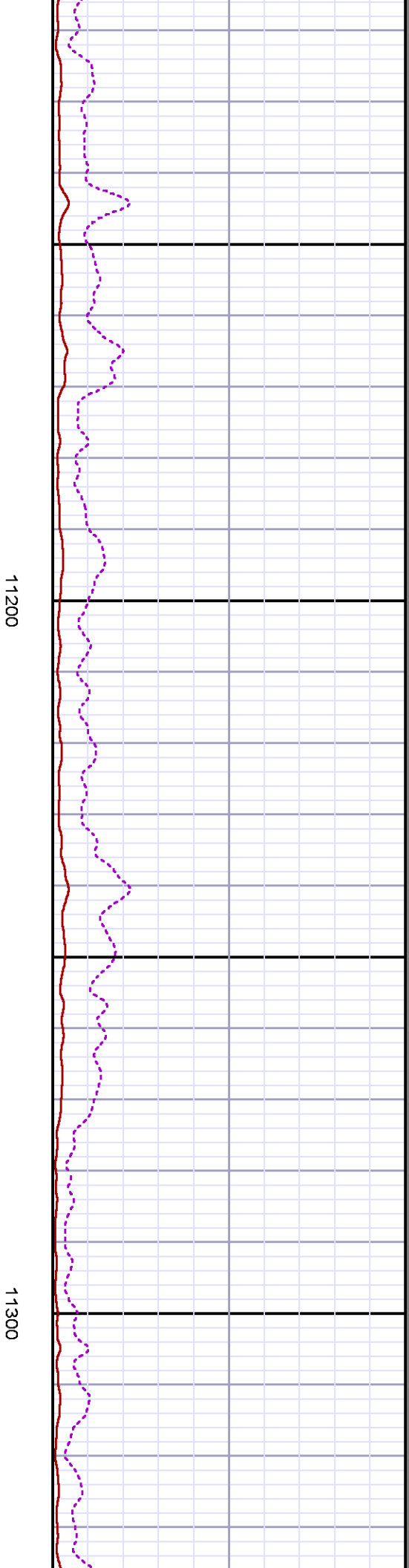
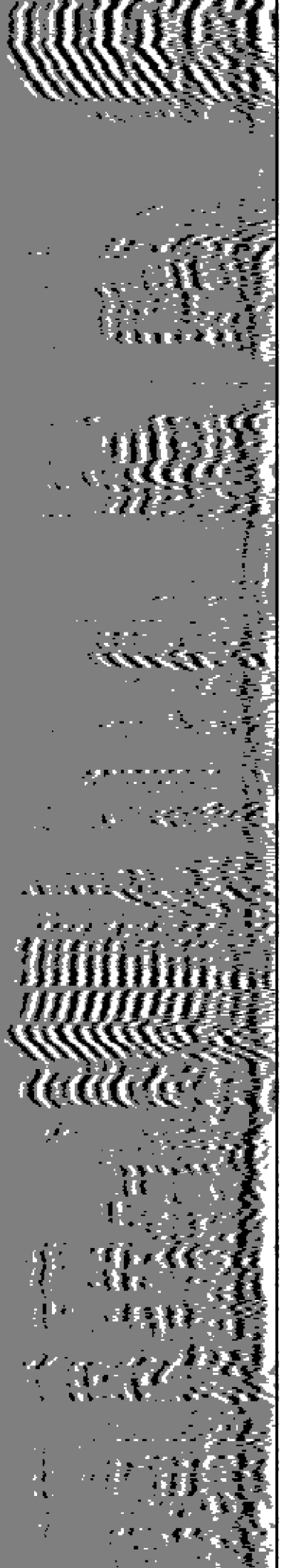




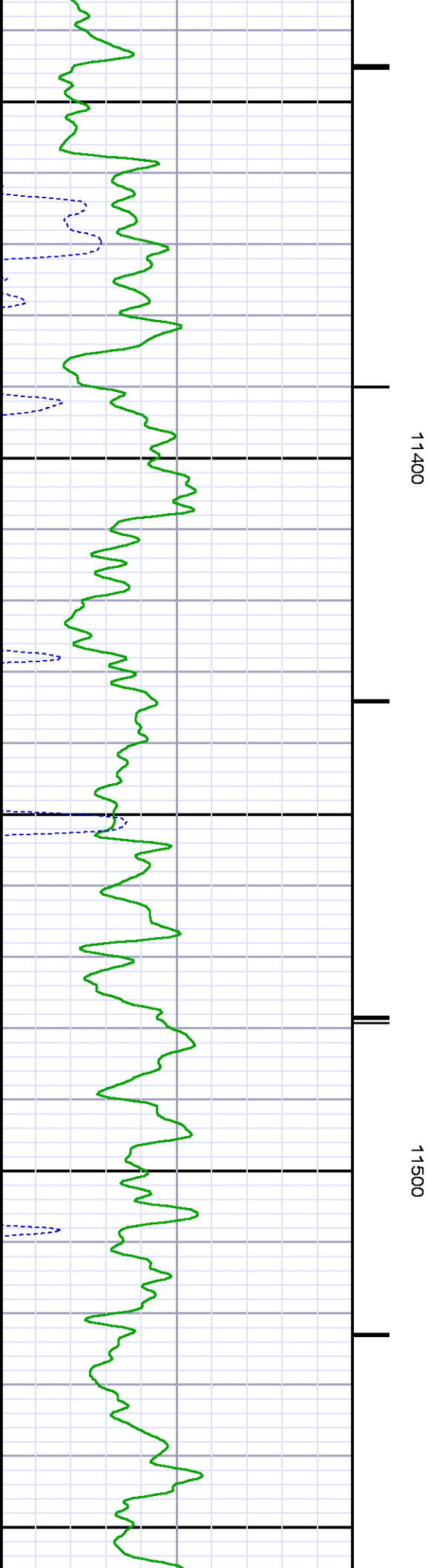
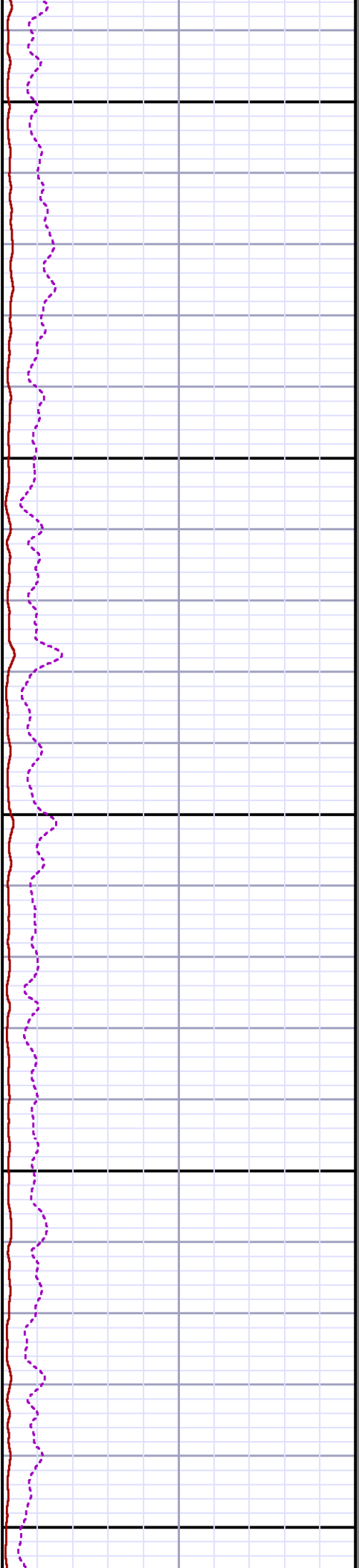
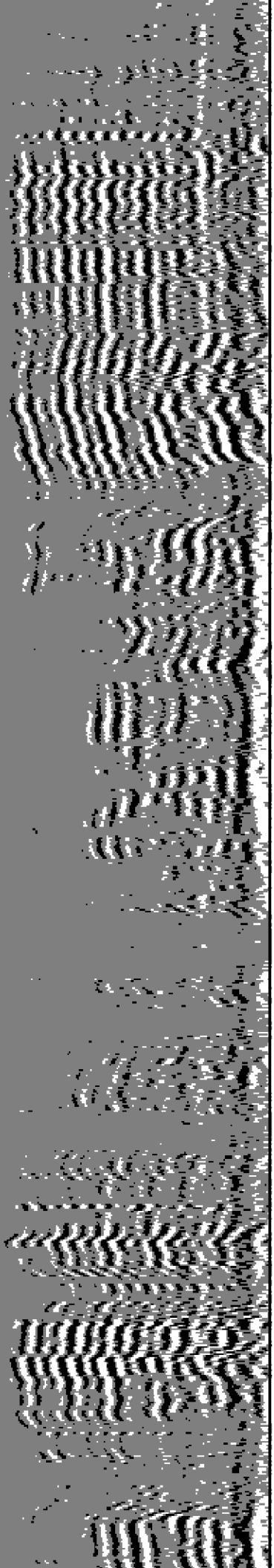


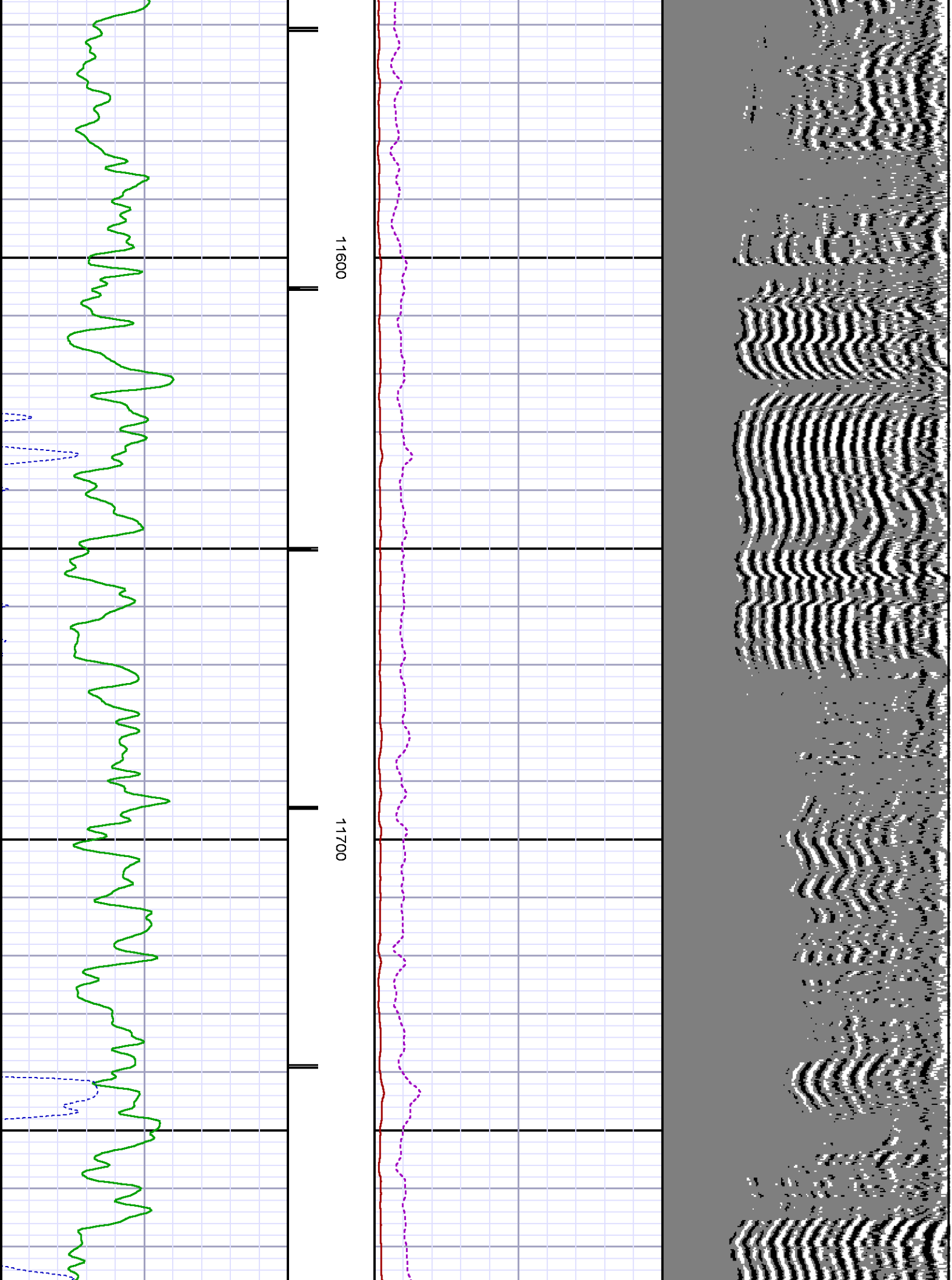


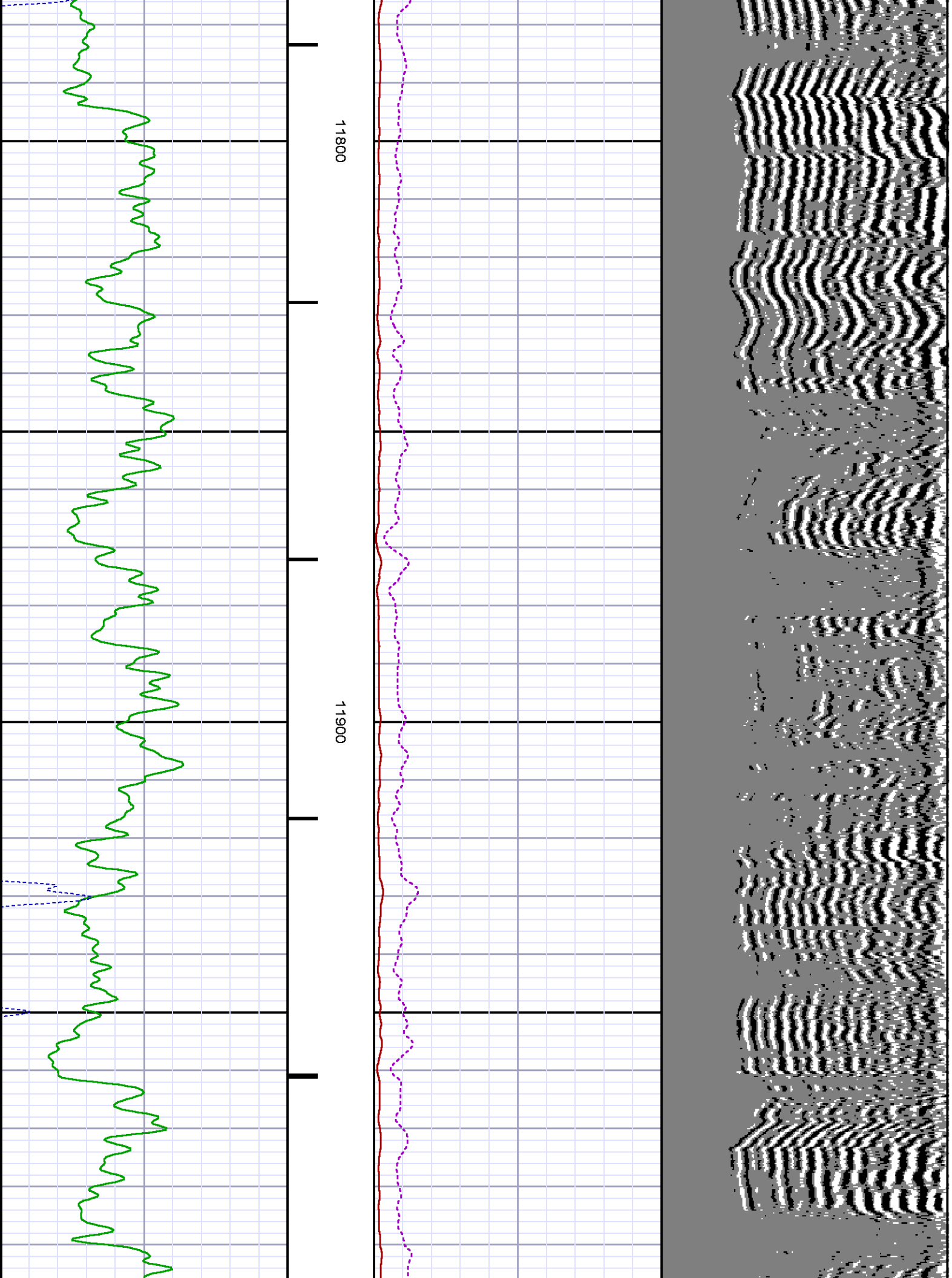


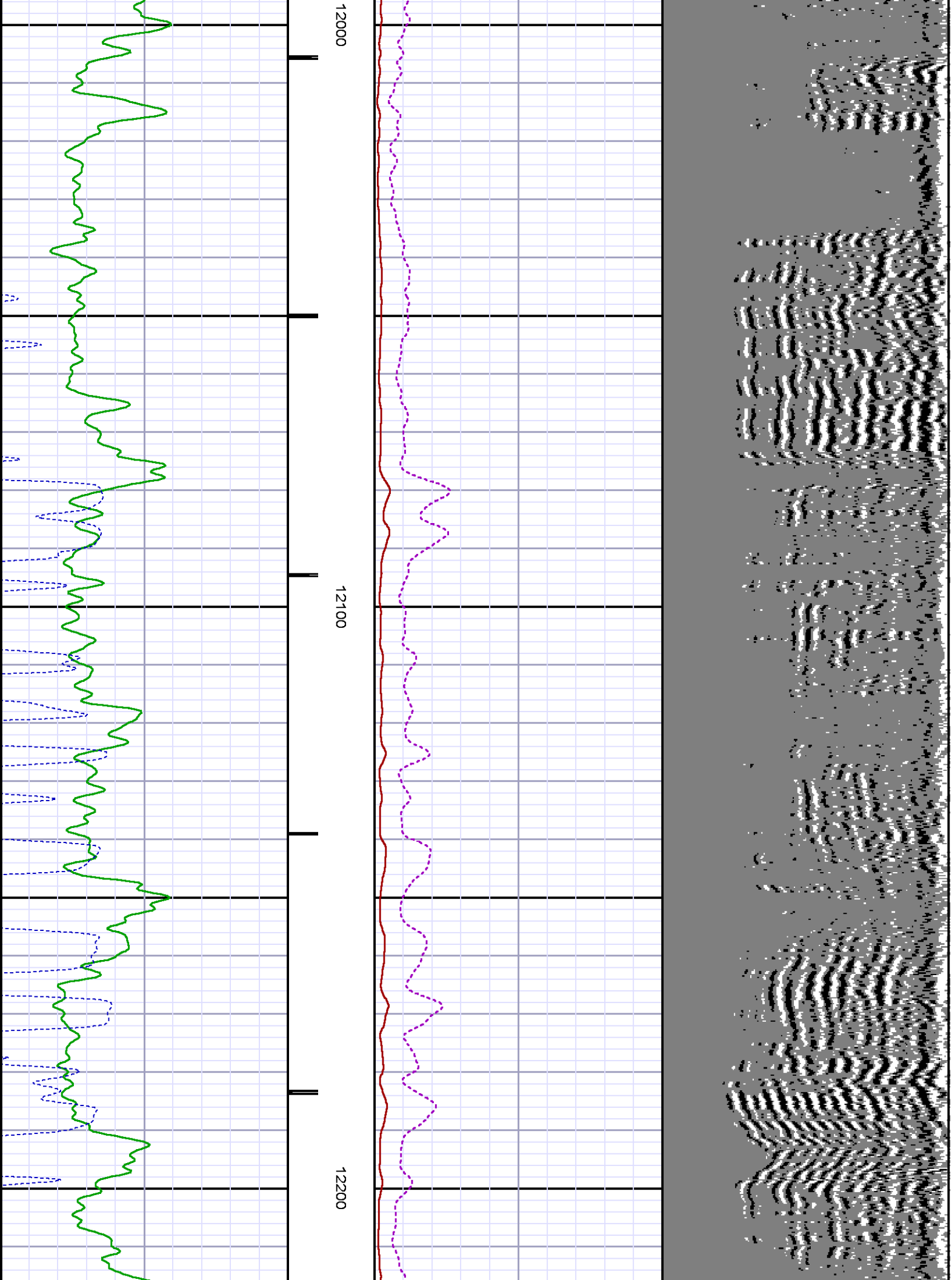


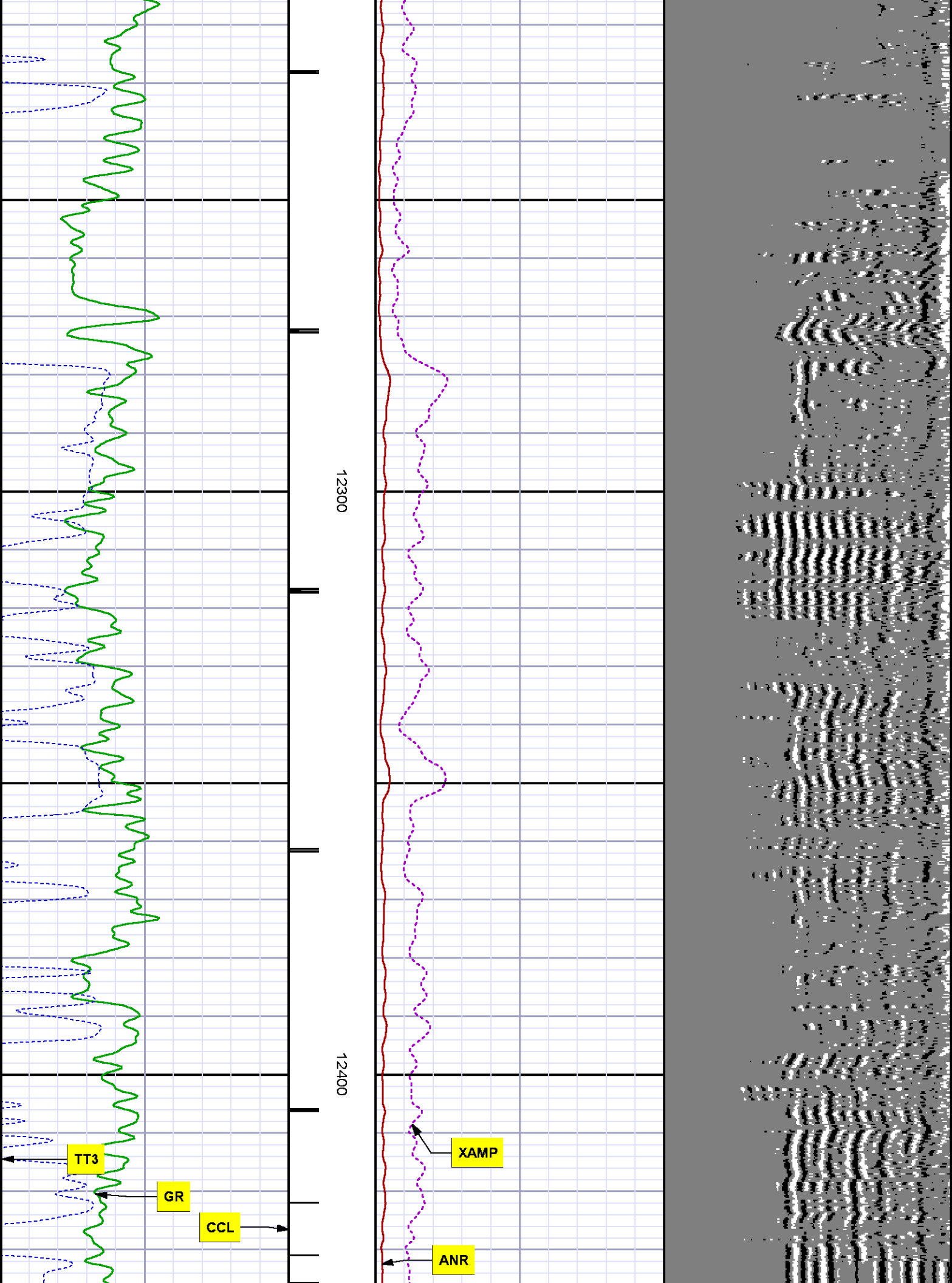


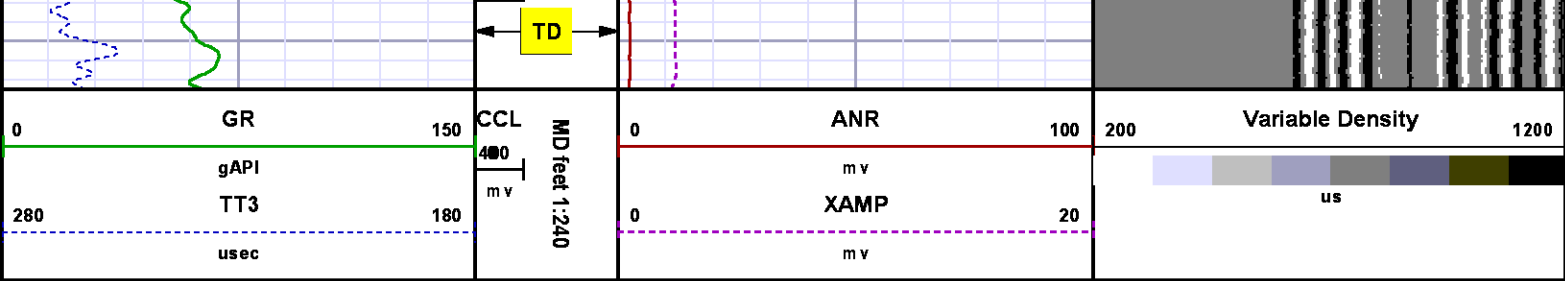












SECONDARY PRESENTATION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	26.160	10941.500
RAL	Amp Gate Start Near	195.000	usec	26.160	10941.500
RAL	Amp Gate Start Radial	195.000	usec	26.160	10941.500
RAL	Amp Gate Width Far	25.000	usec	26.160	10941.500
RAL	Amp Gate Width Near	25.000	usec	26.160	10941.500
RAL	Amp Gate Width Radial	25.000	usec	26.160	10941.500
RAL	casing od	4.500	inches	26.160	10941.500
RAL	casing wt	11.600	lbm/ft	26.160	10941.500
RAL	FB Start Far	291.900	usec	26.160	10941.500
RAL	FB Start Near	180.000	usec	26.160	10941.500
RAL	FB Start Radial	180.000	usec	26.160	10941.500
RAL	FB Thresh Far	10.000	mv	26.160	10941.500
RAL	FB Thresh Near	4.000	mv	26.160	10941.500
RAL	FB Thresh Radial	4.000	mv	26.160	10941.500
RAL	Fluid Travel Time	200.000	usec/ft	26.160	10941.004

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

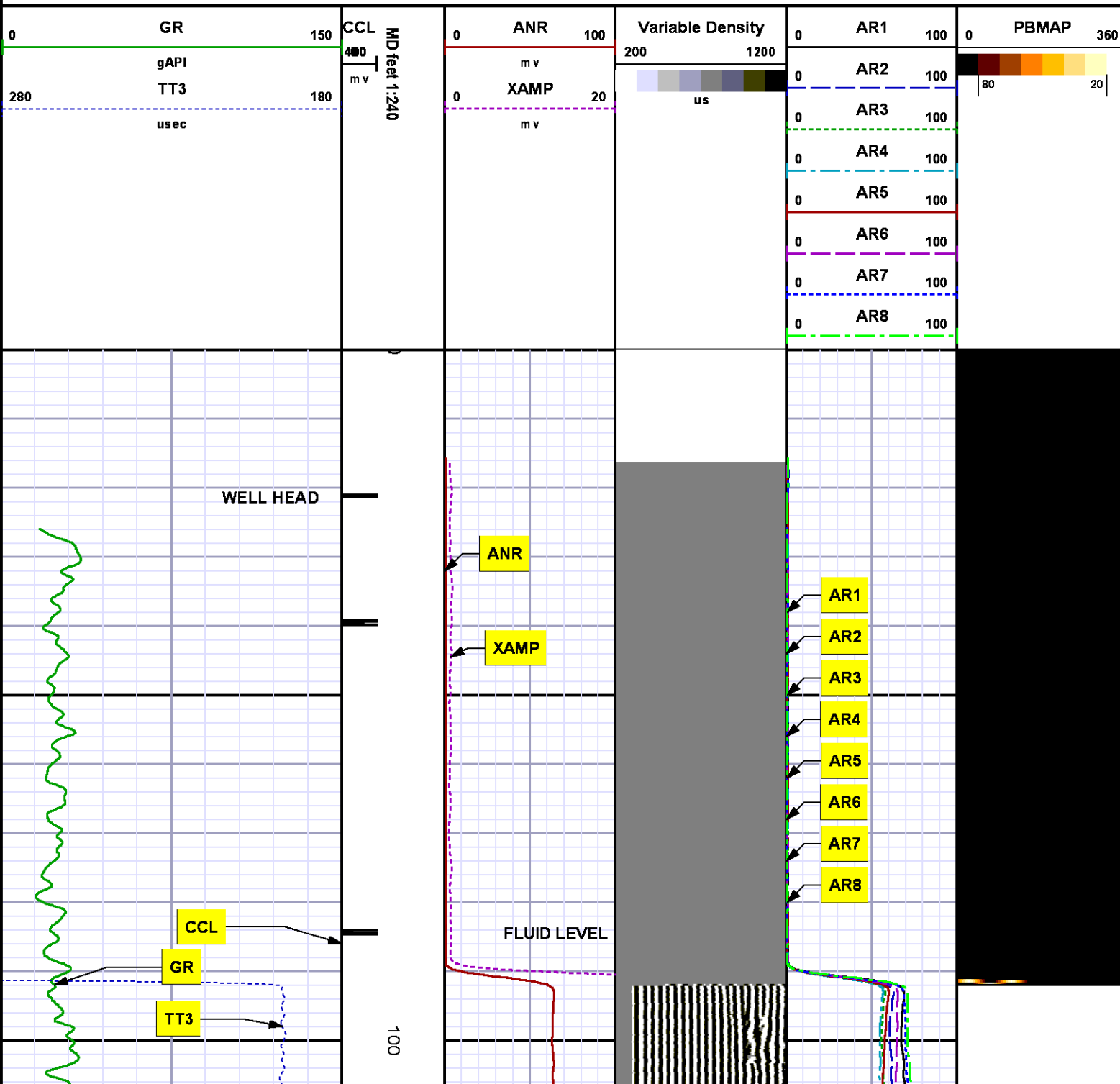
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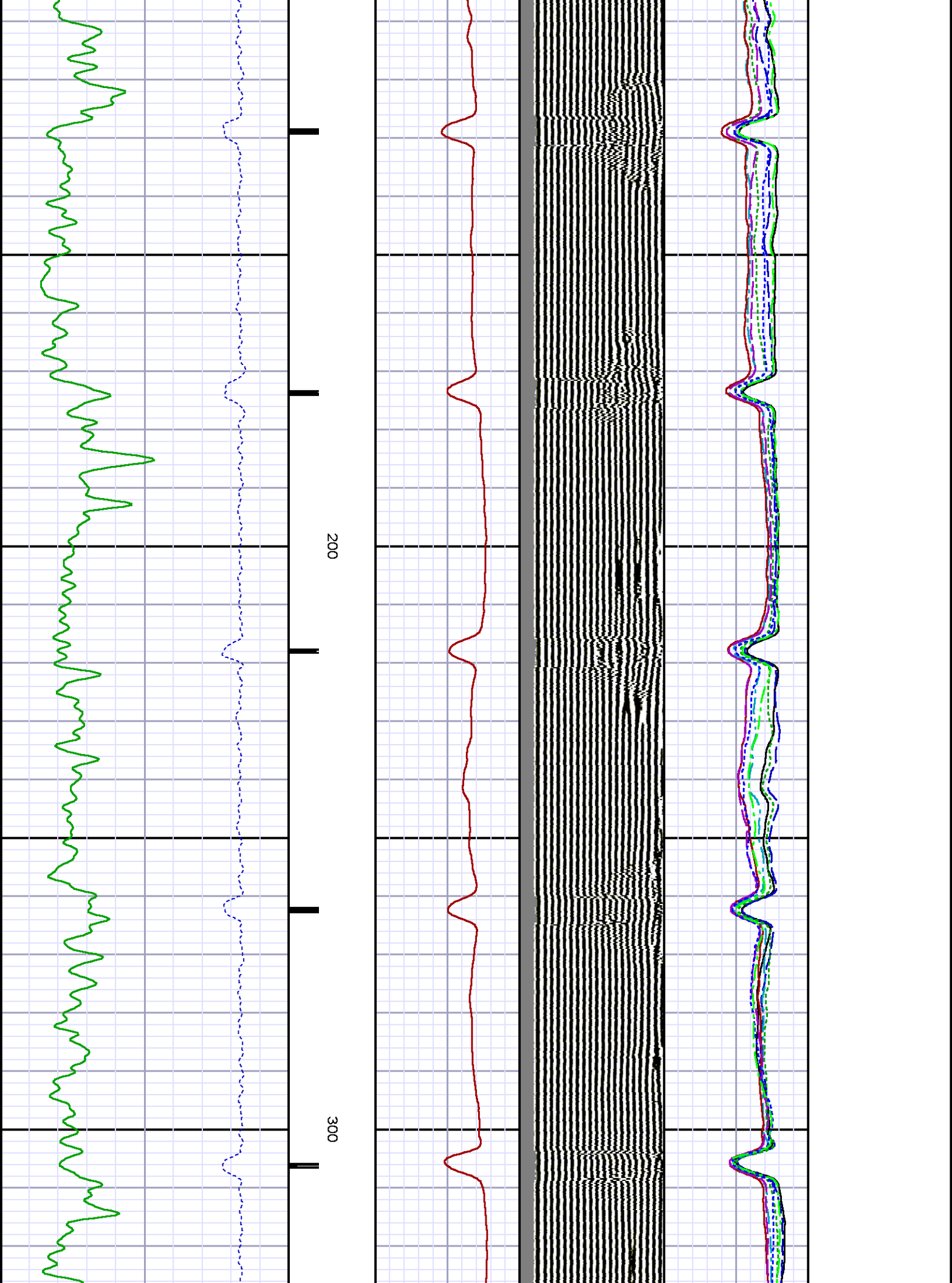
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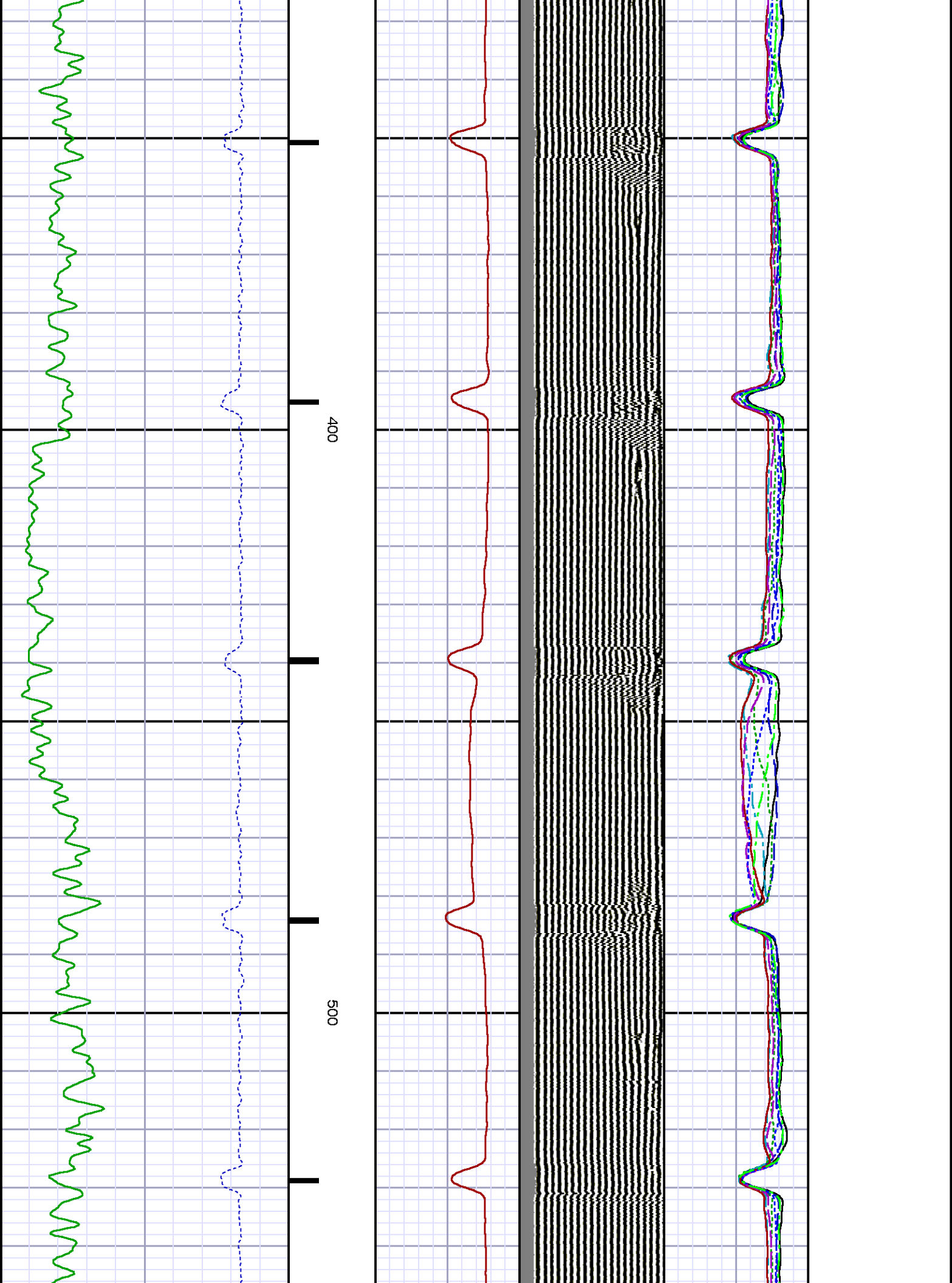
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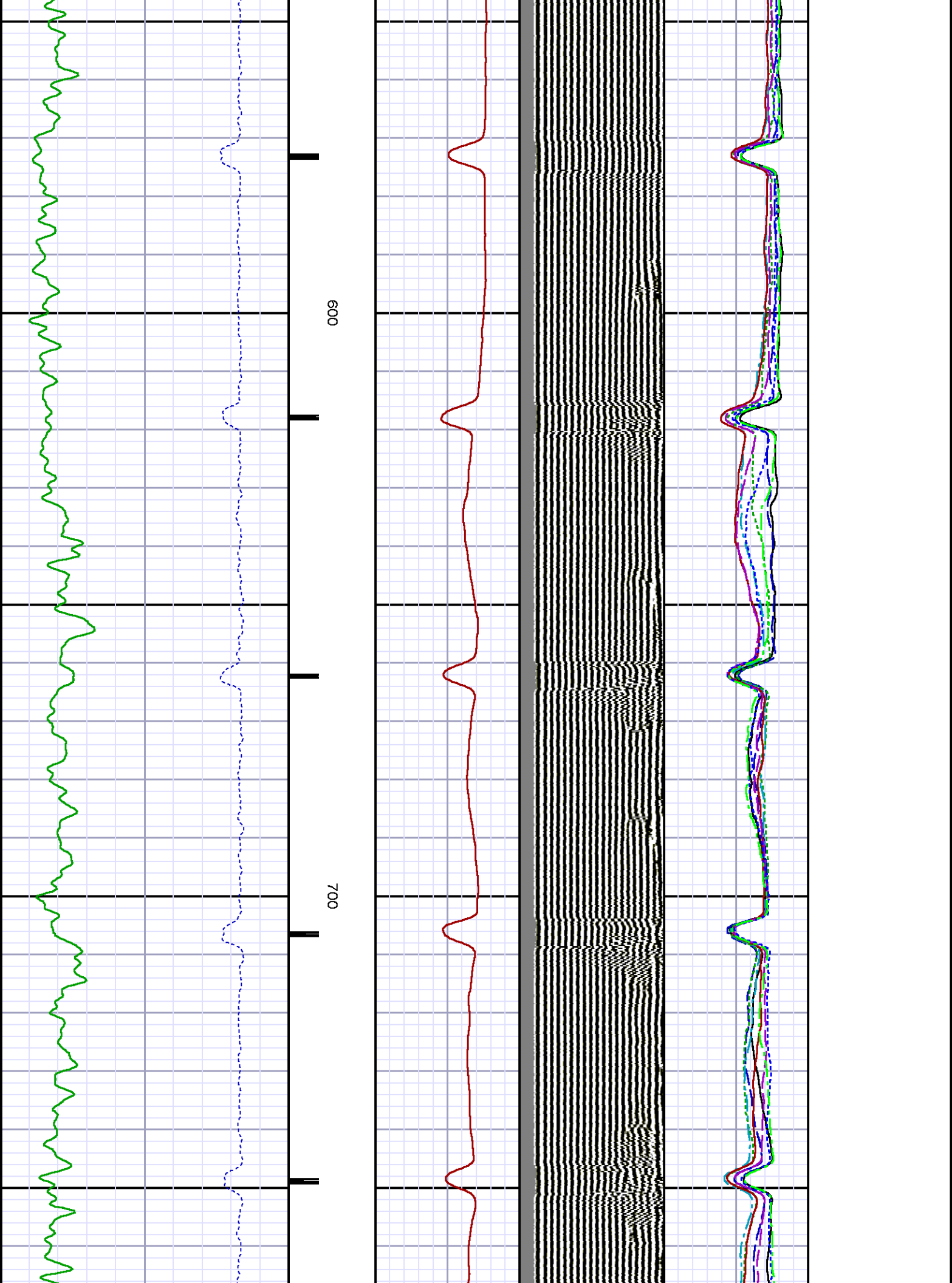
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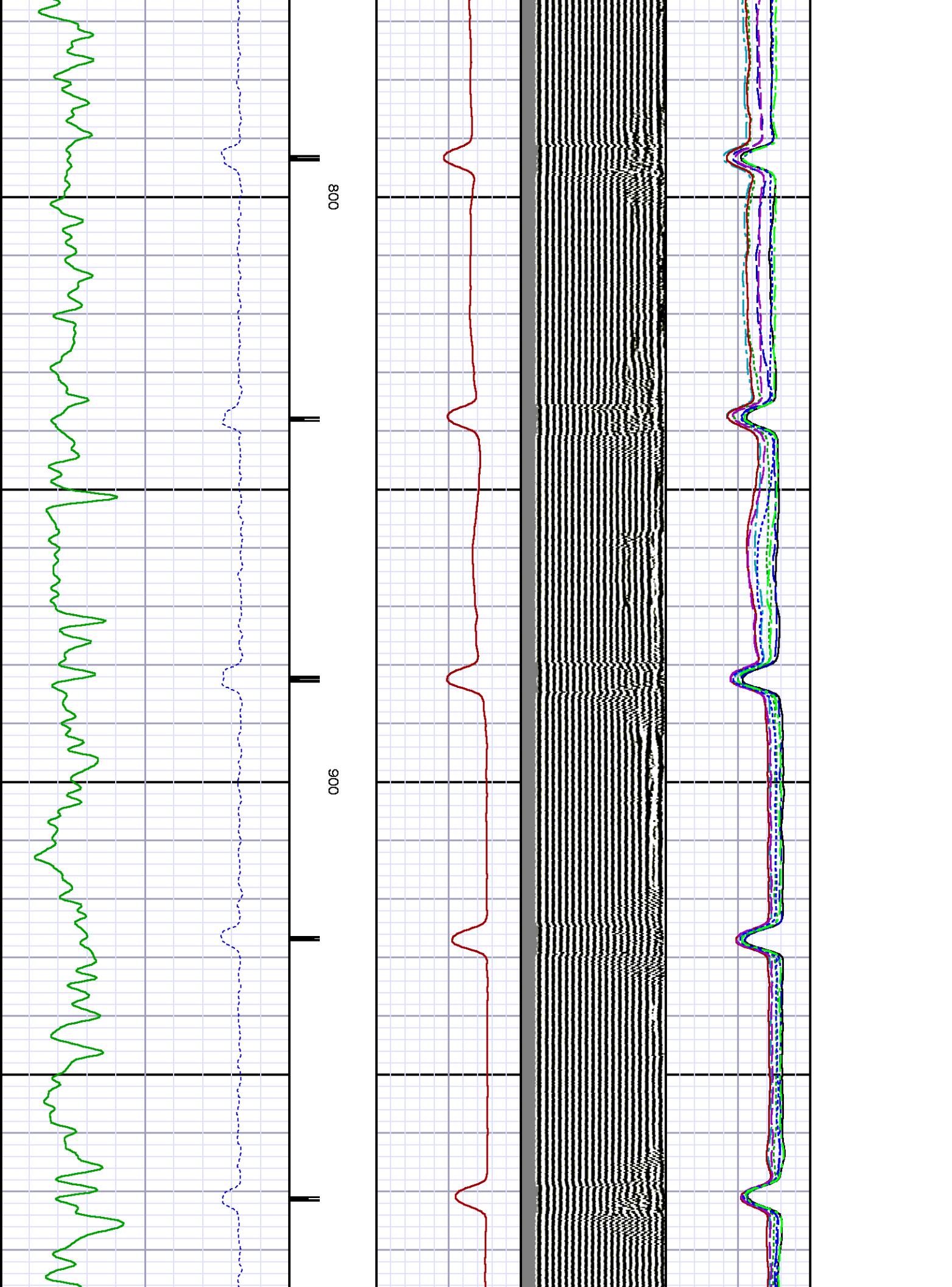
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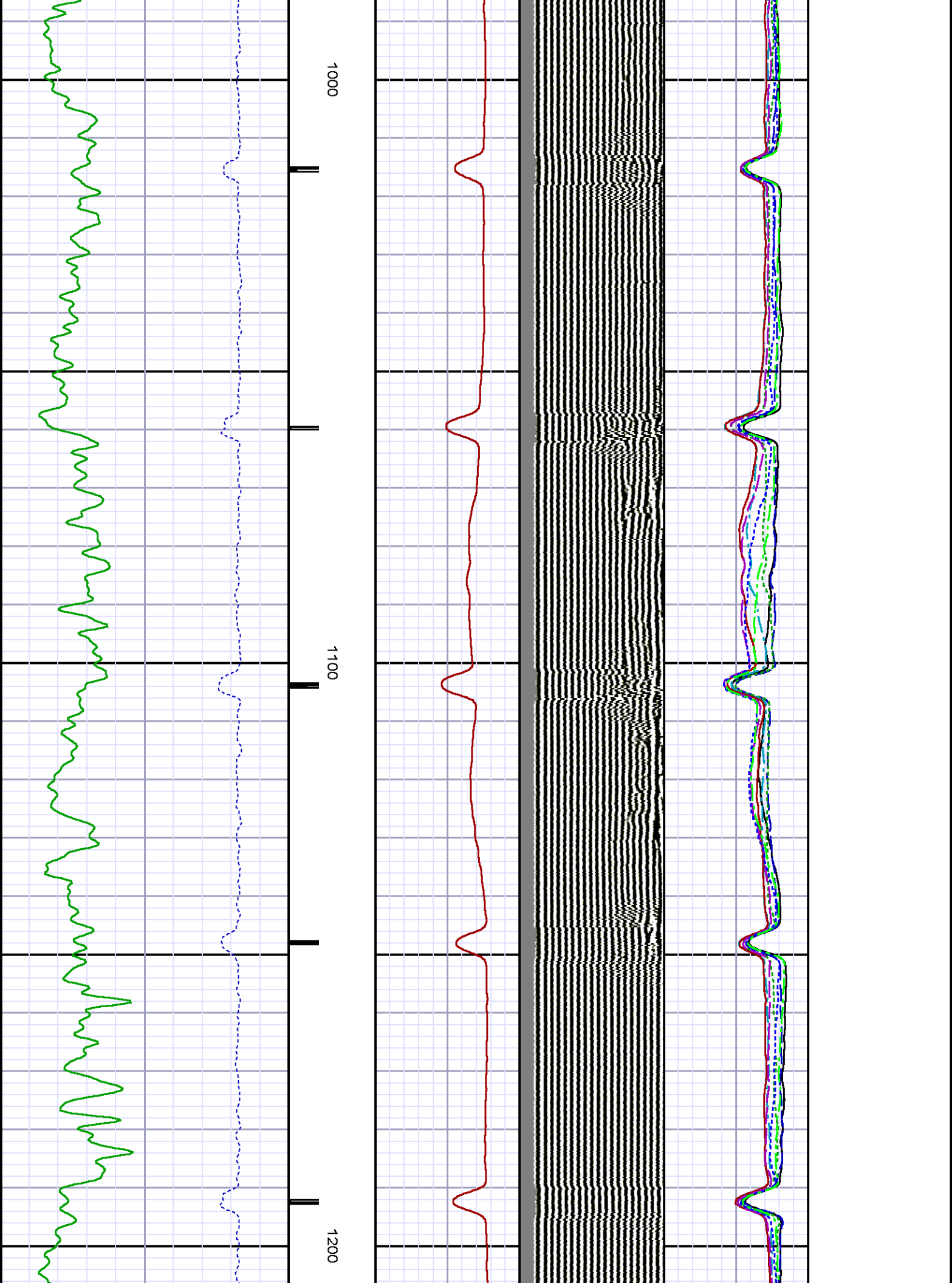




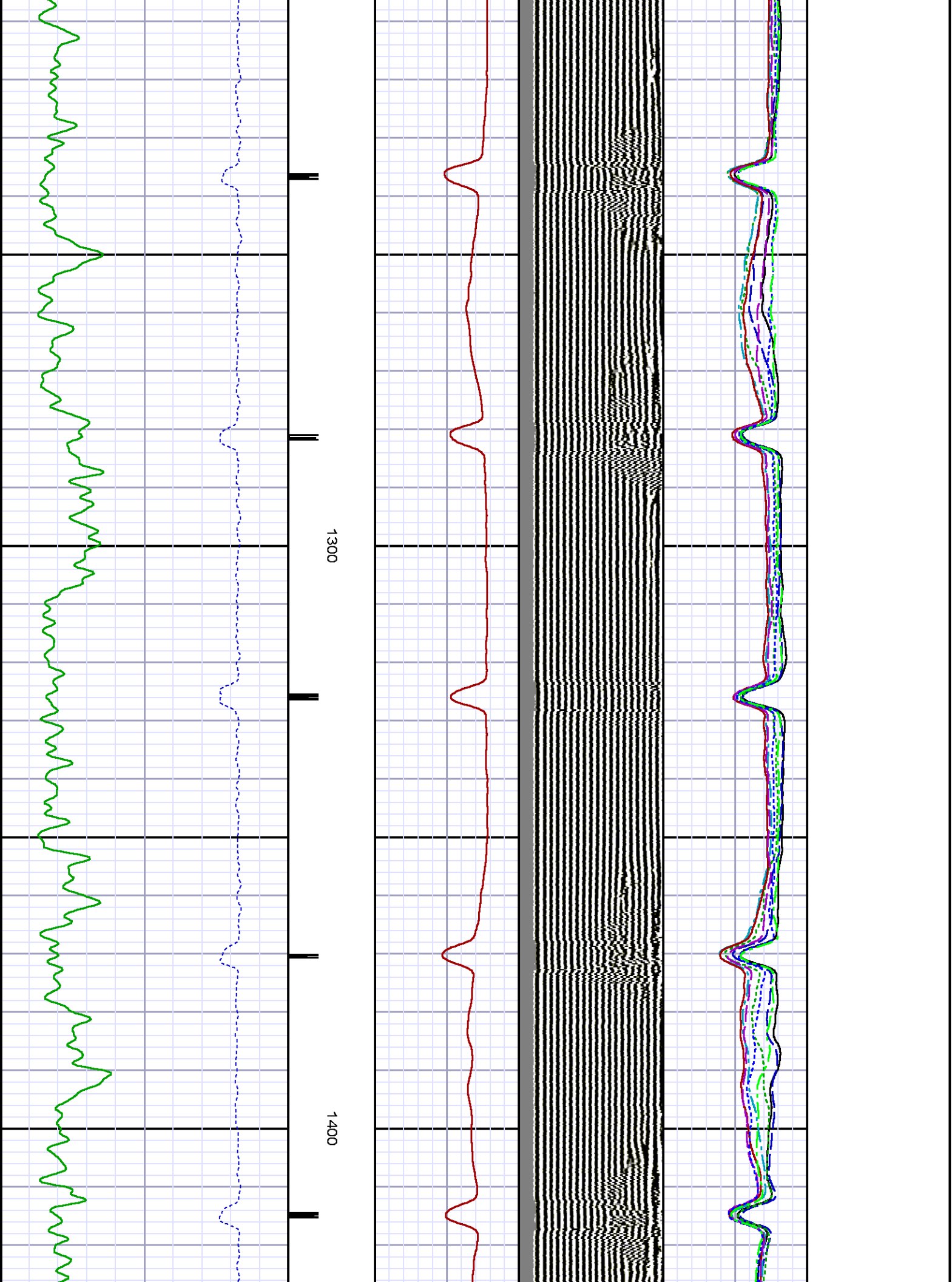


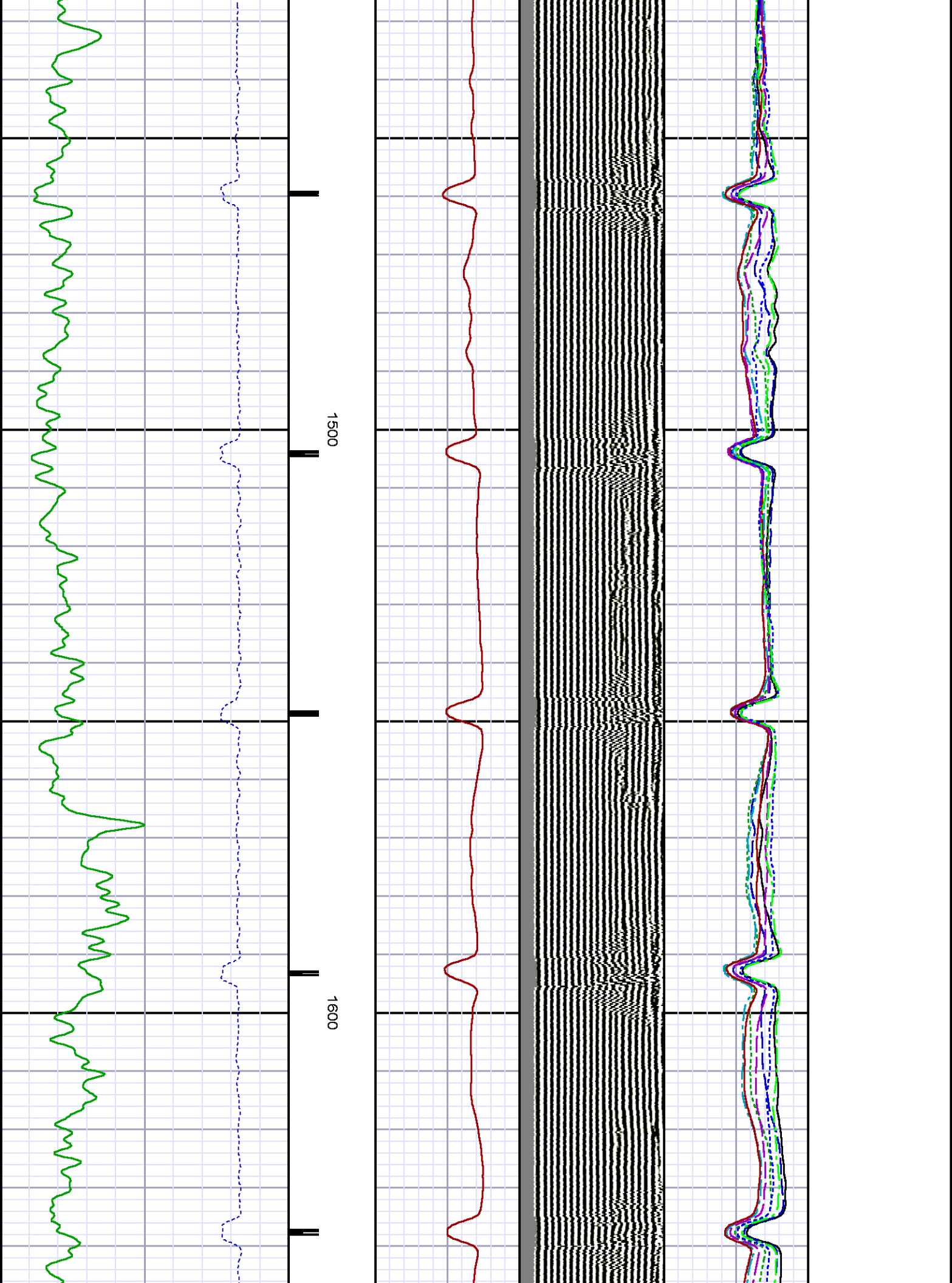


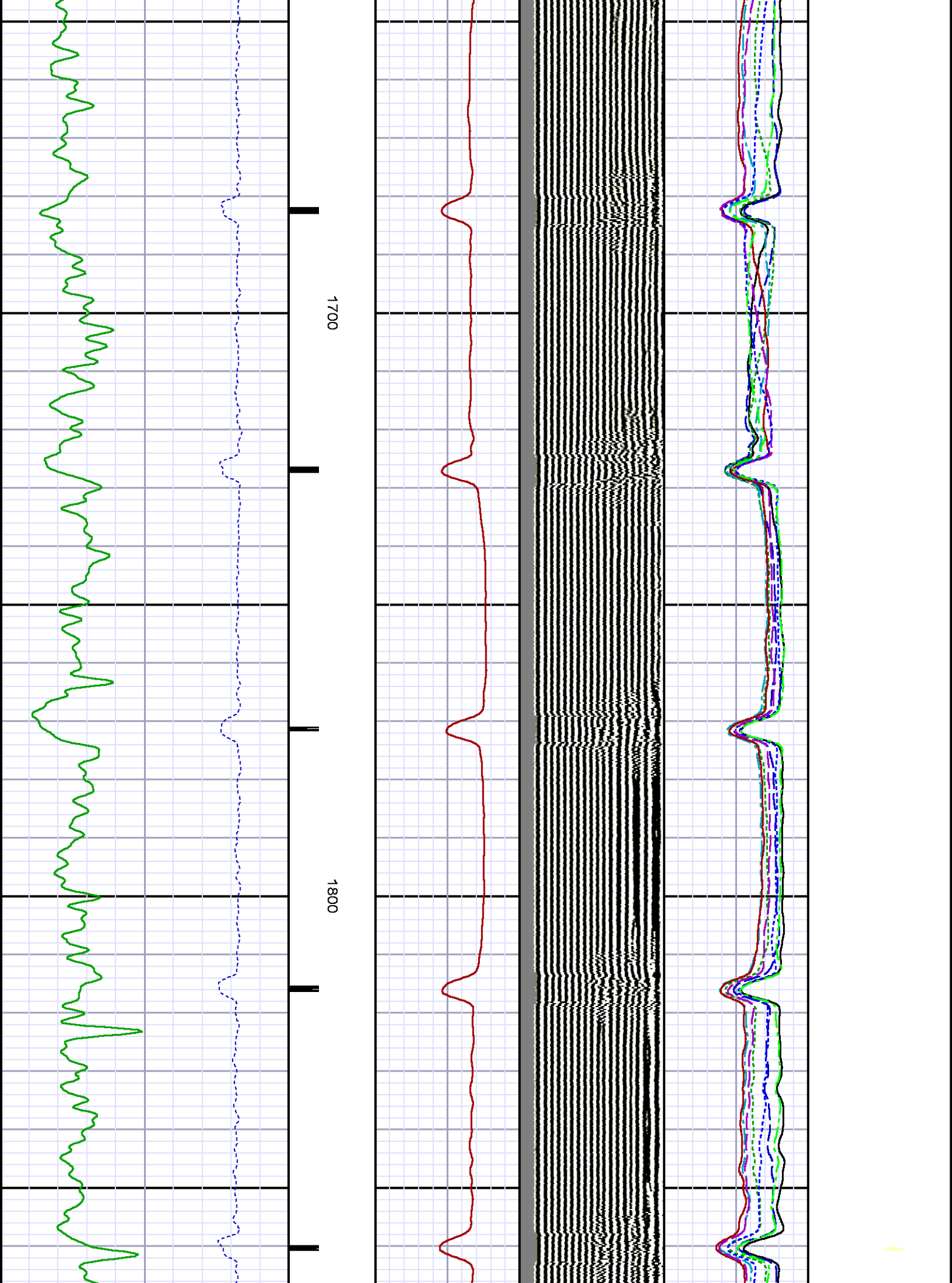


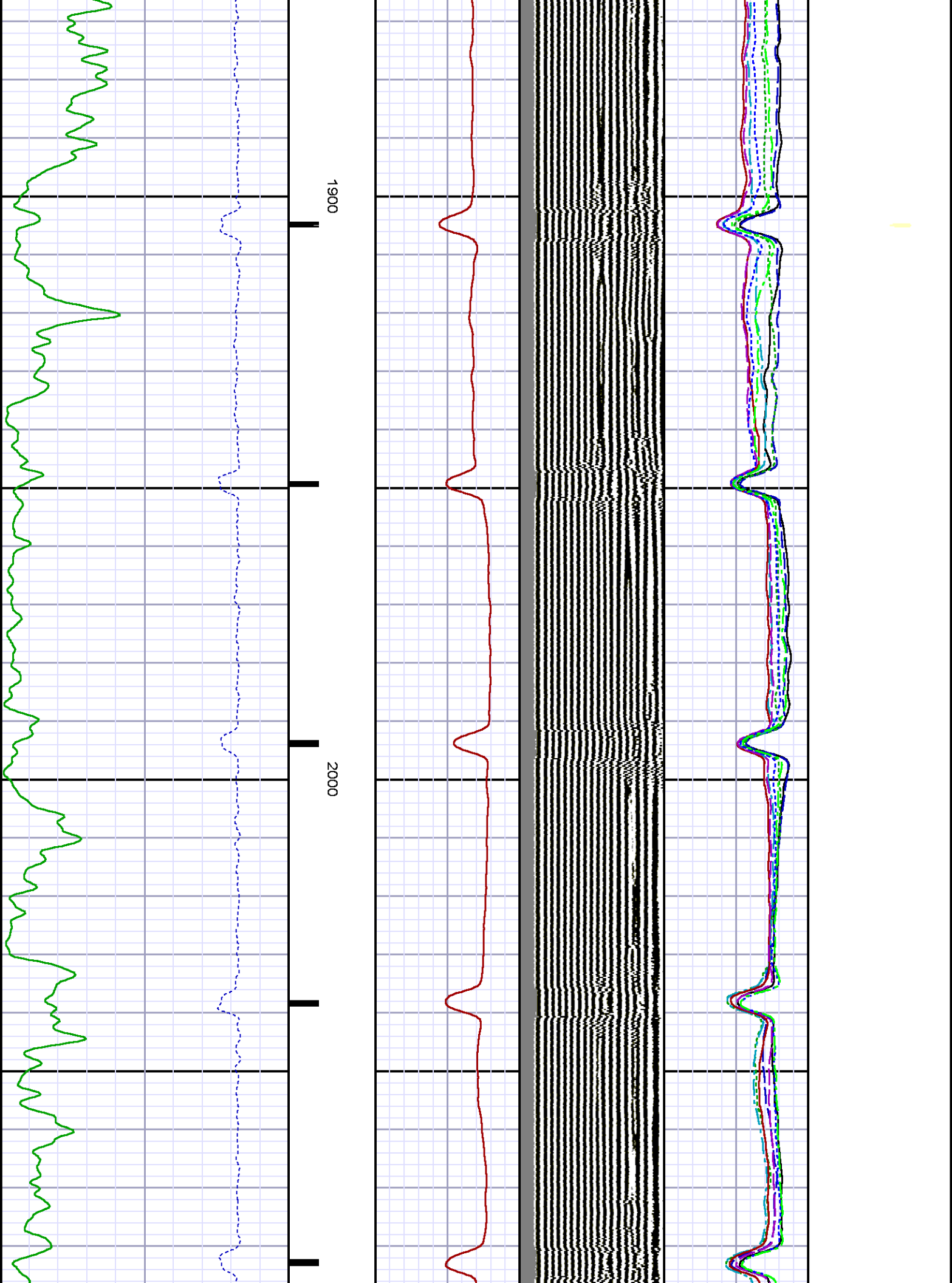


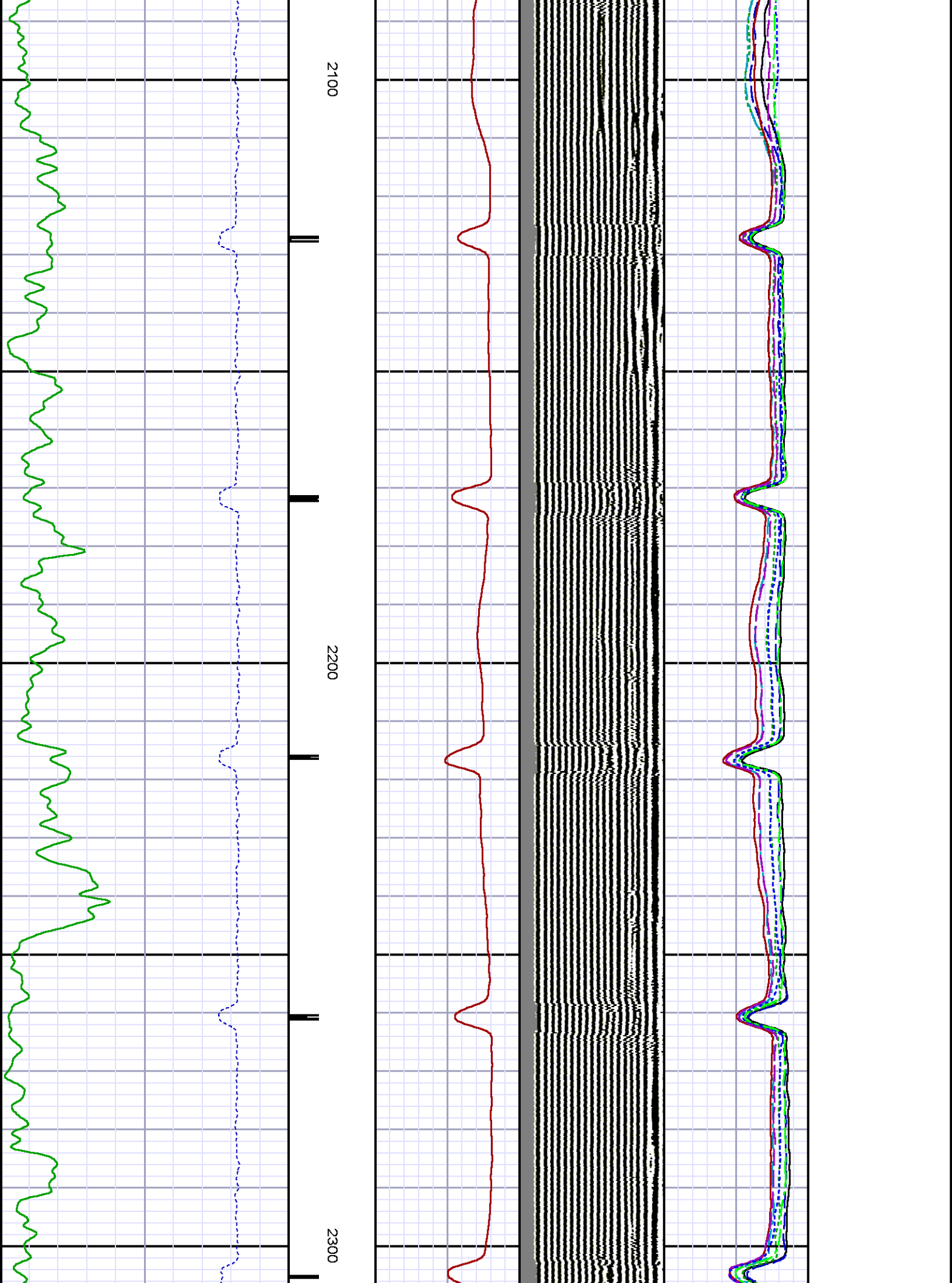




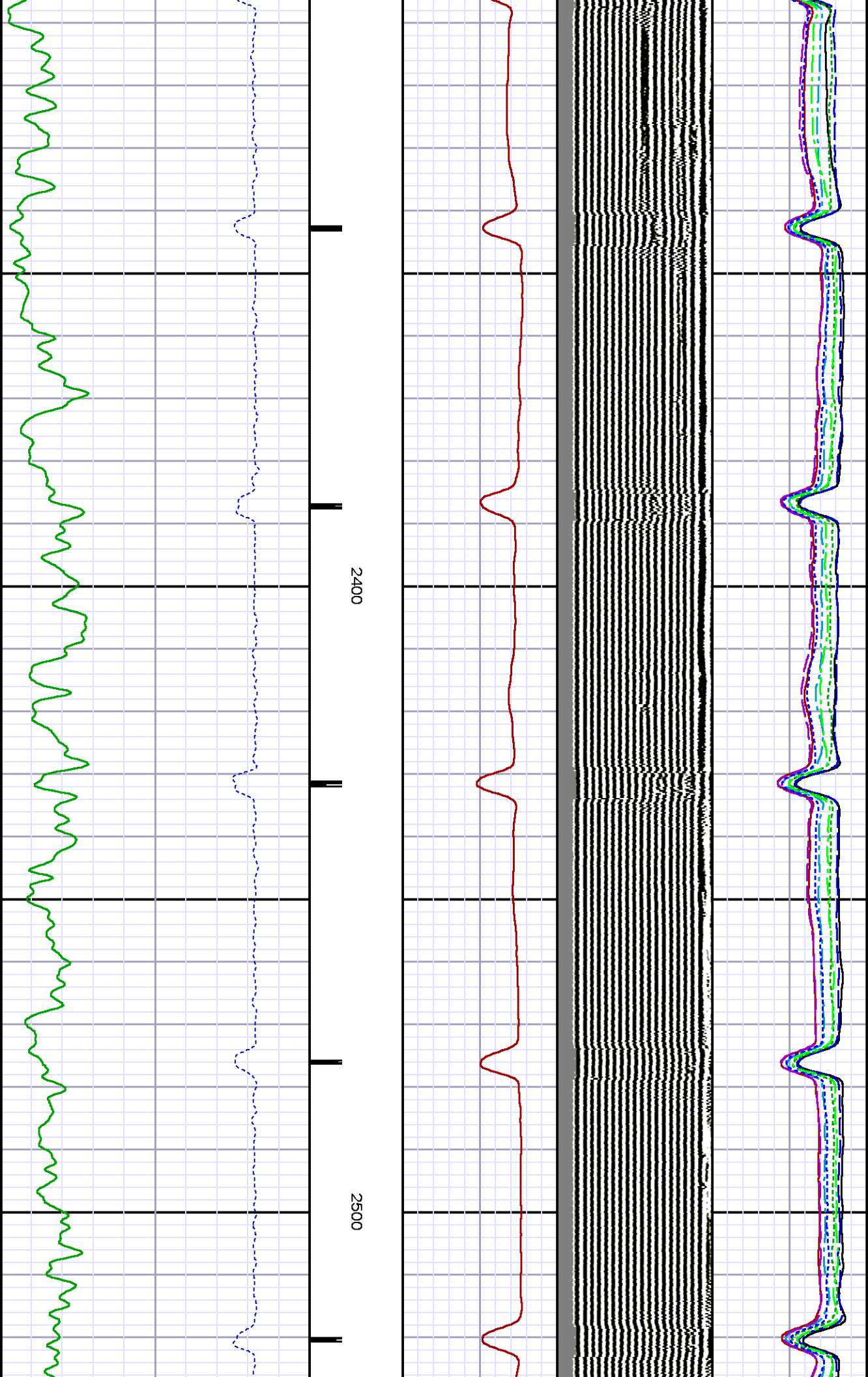




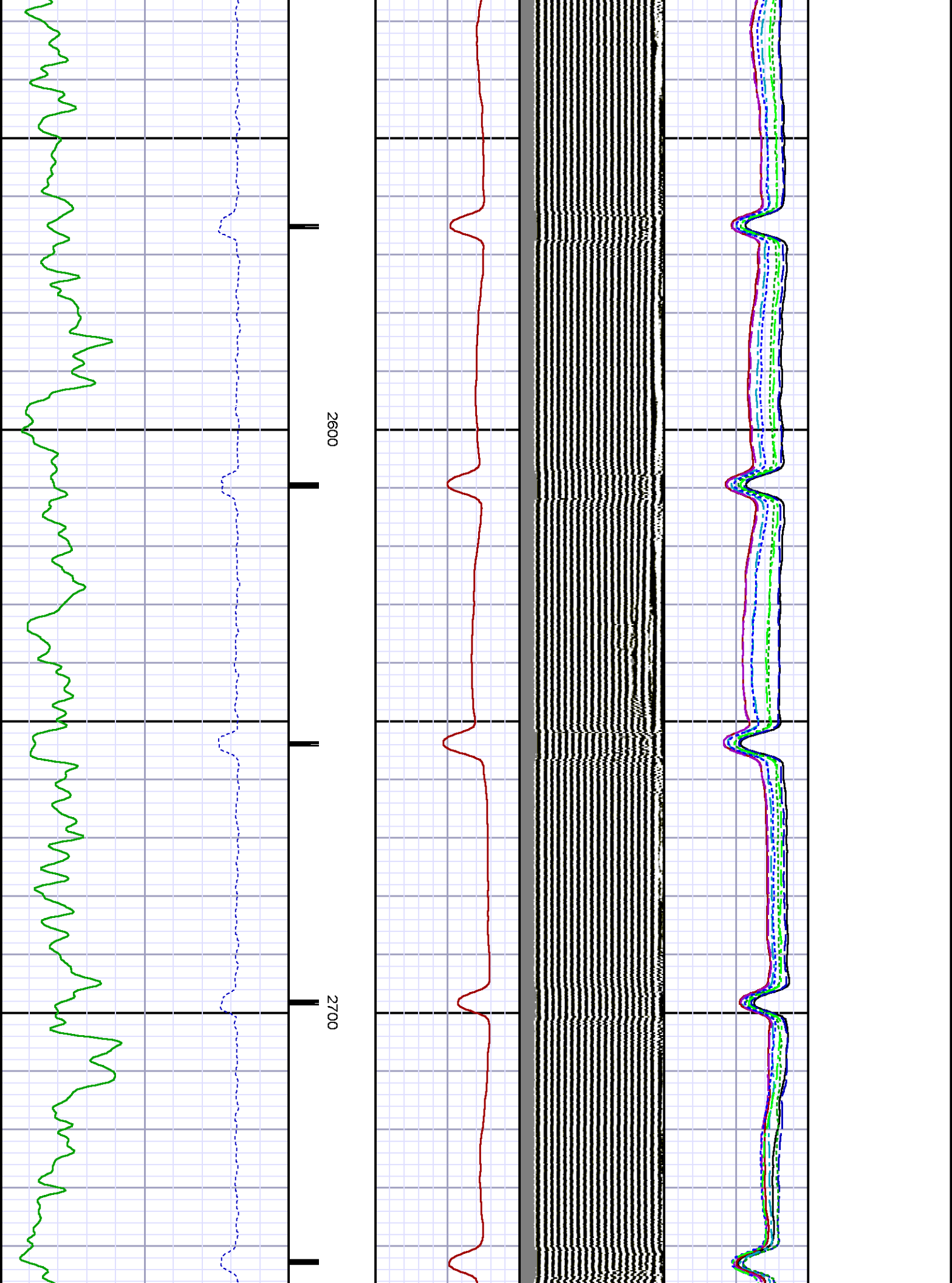


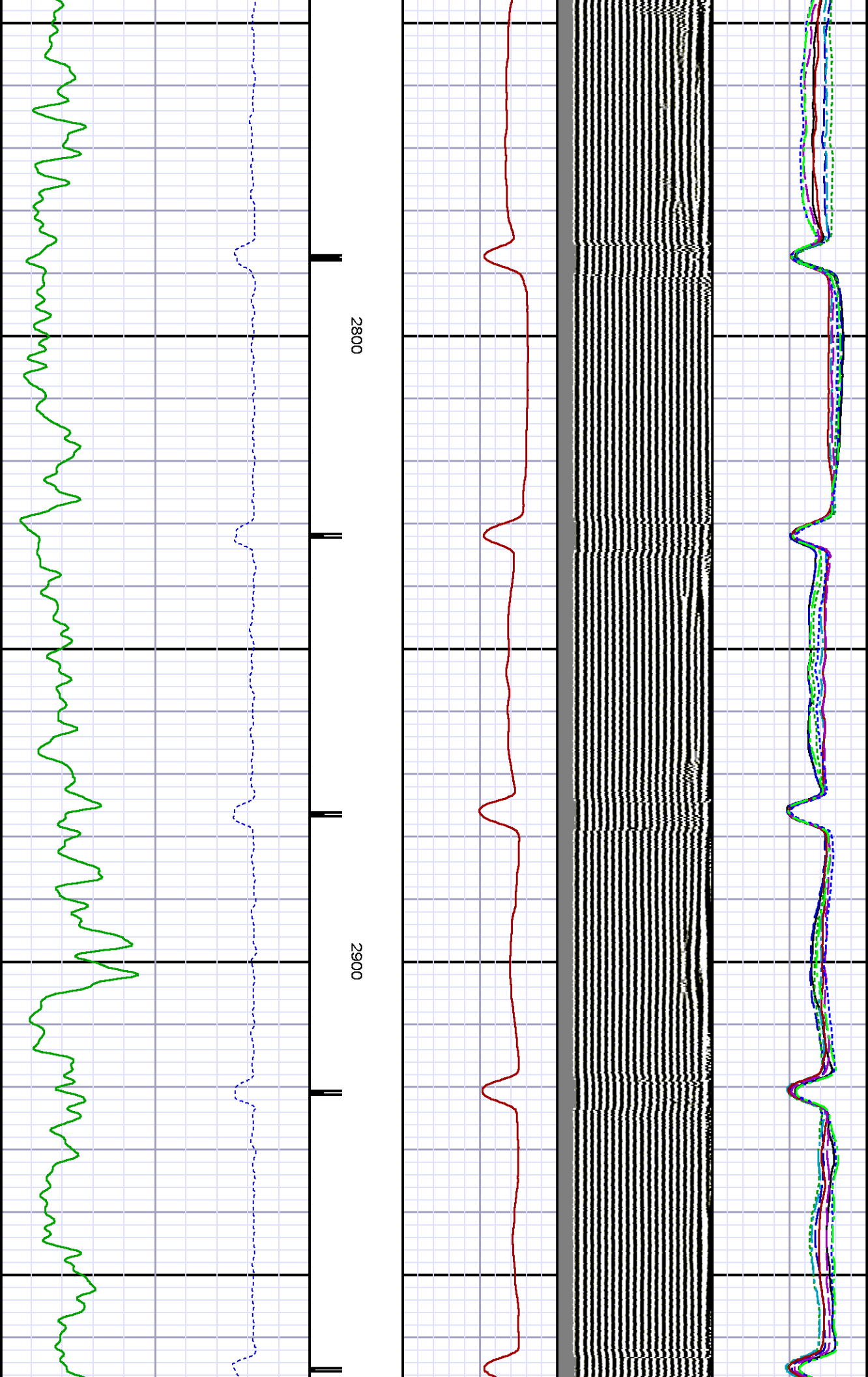


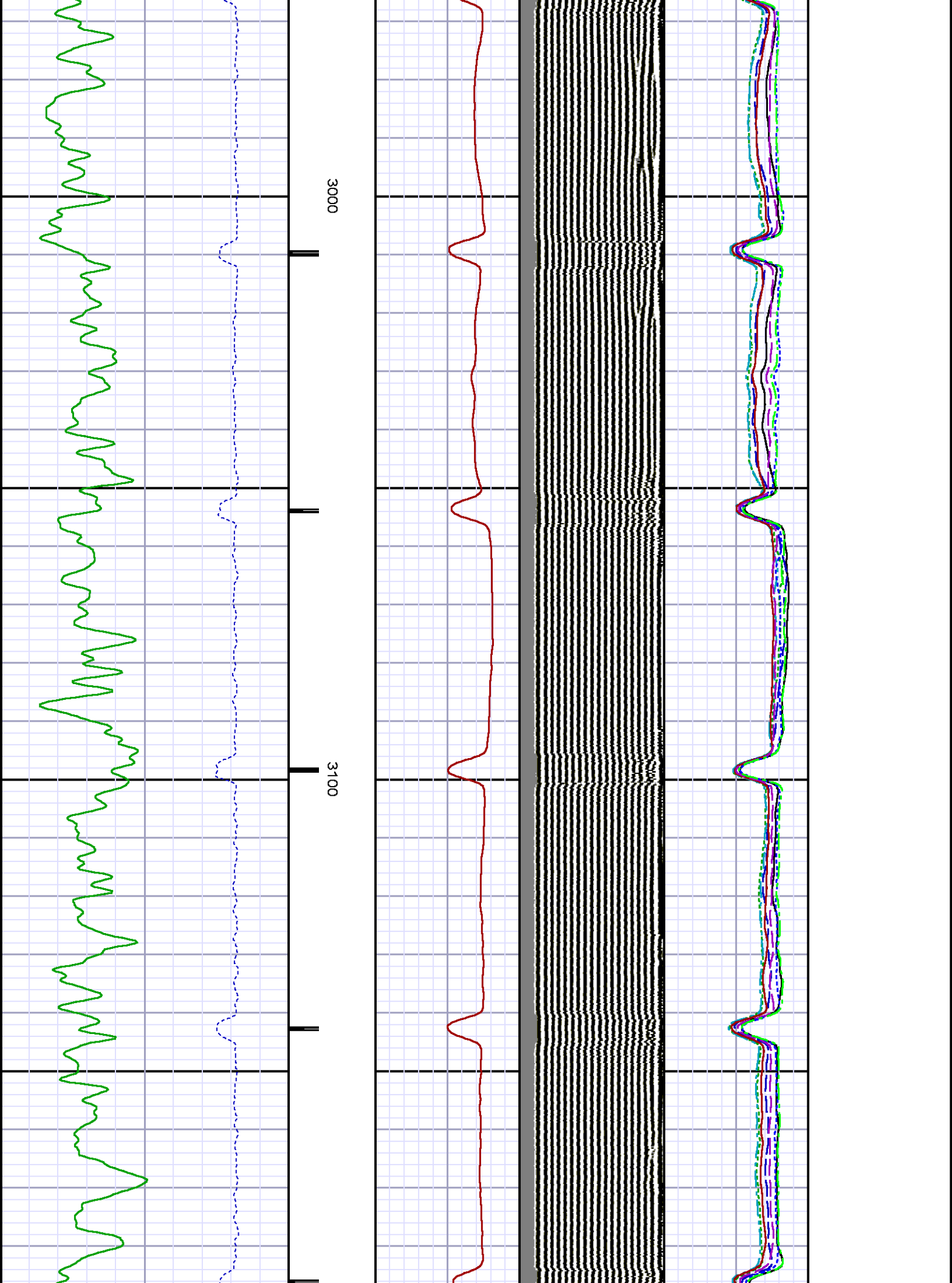


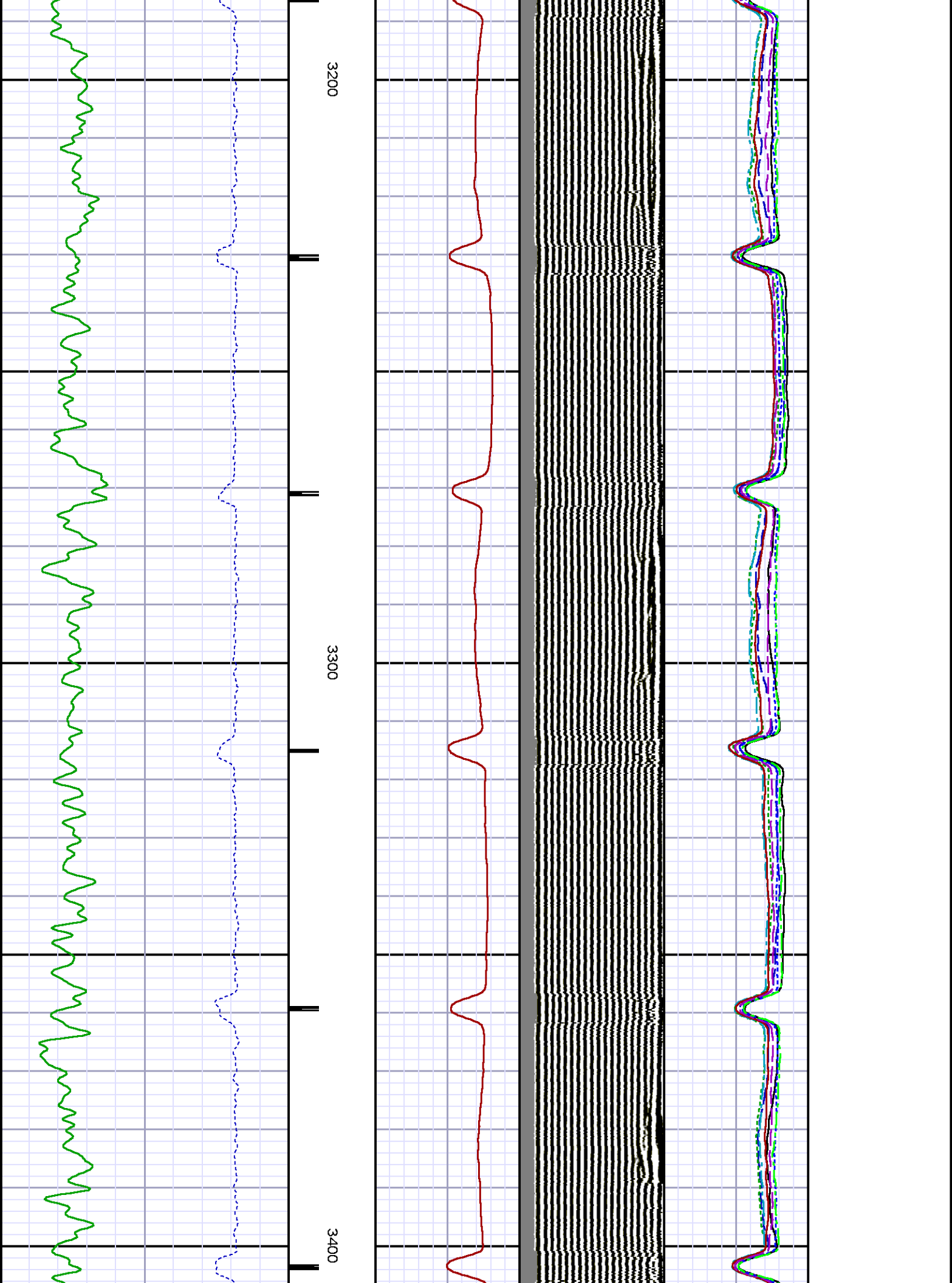


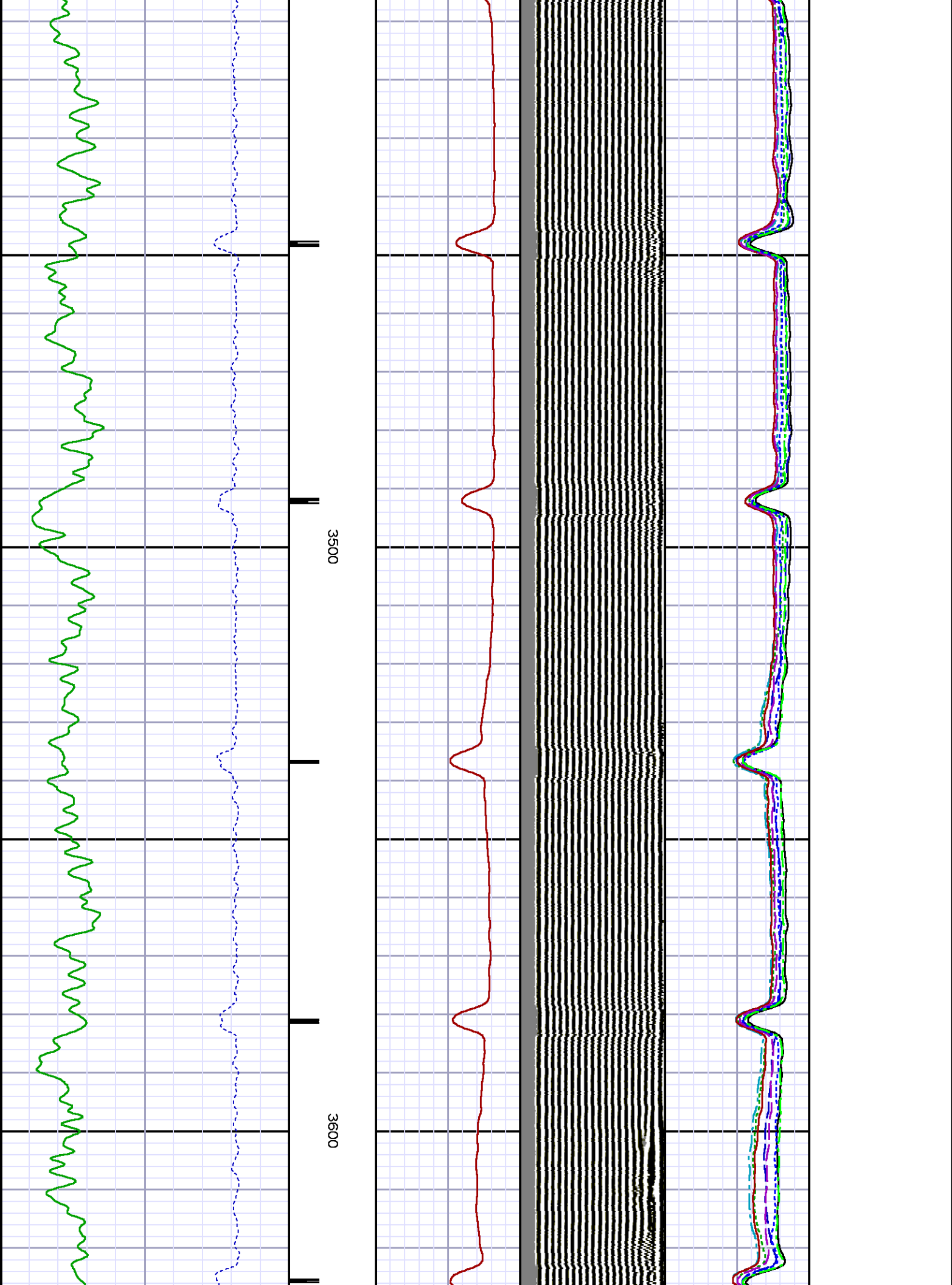


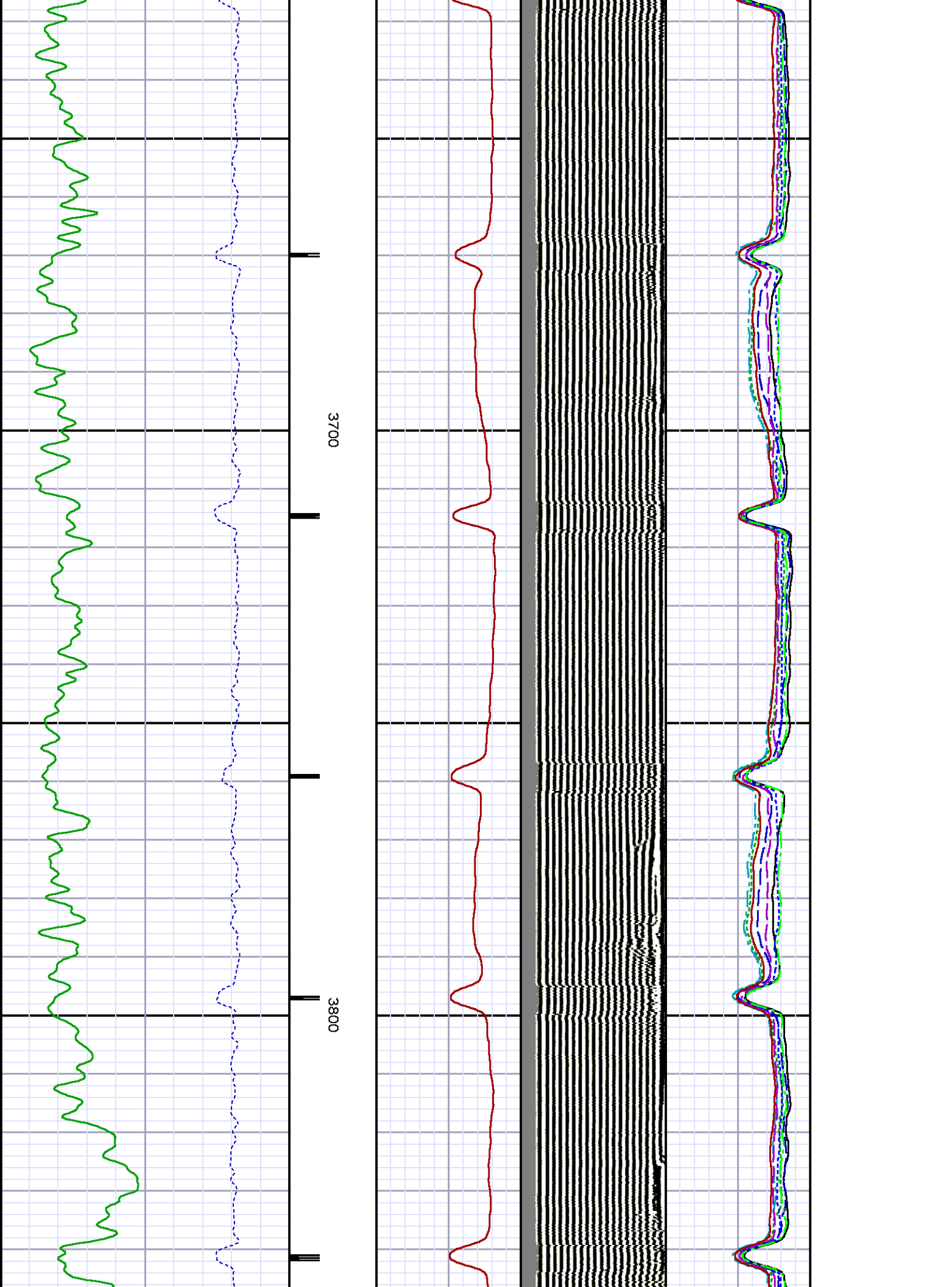




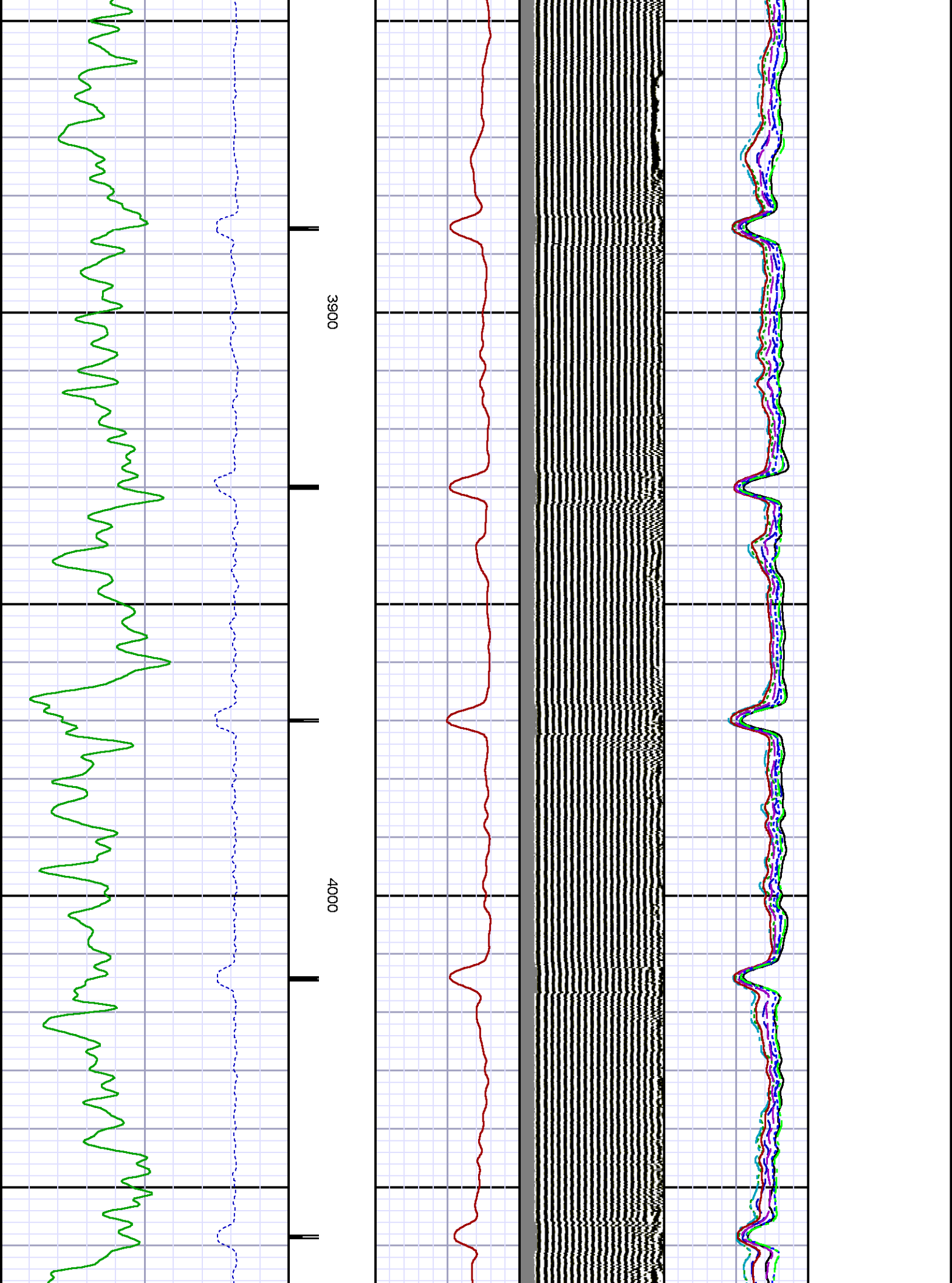


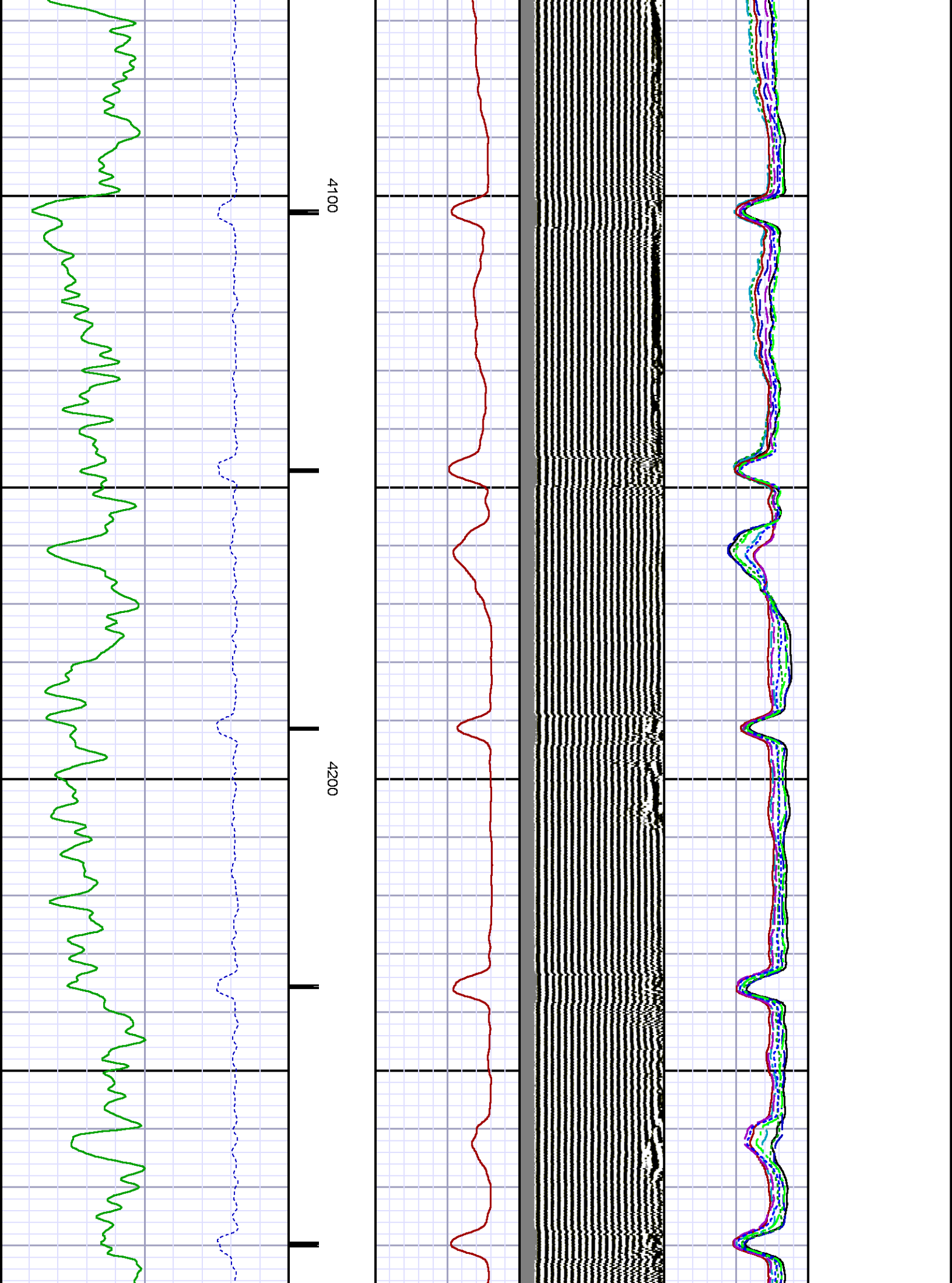


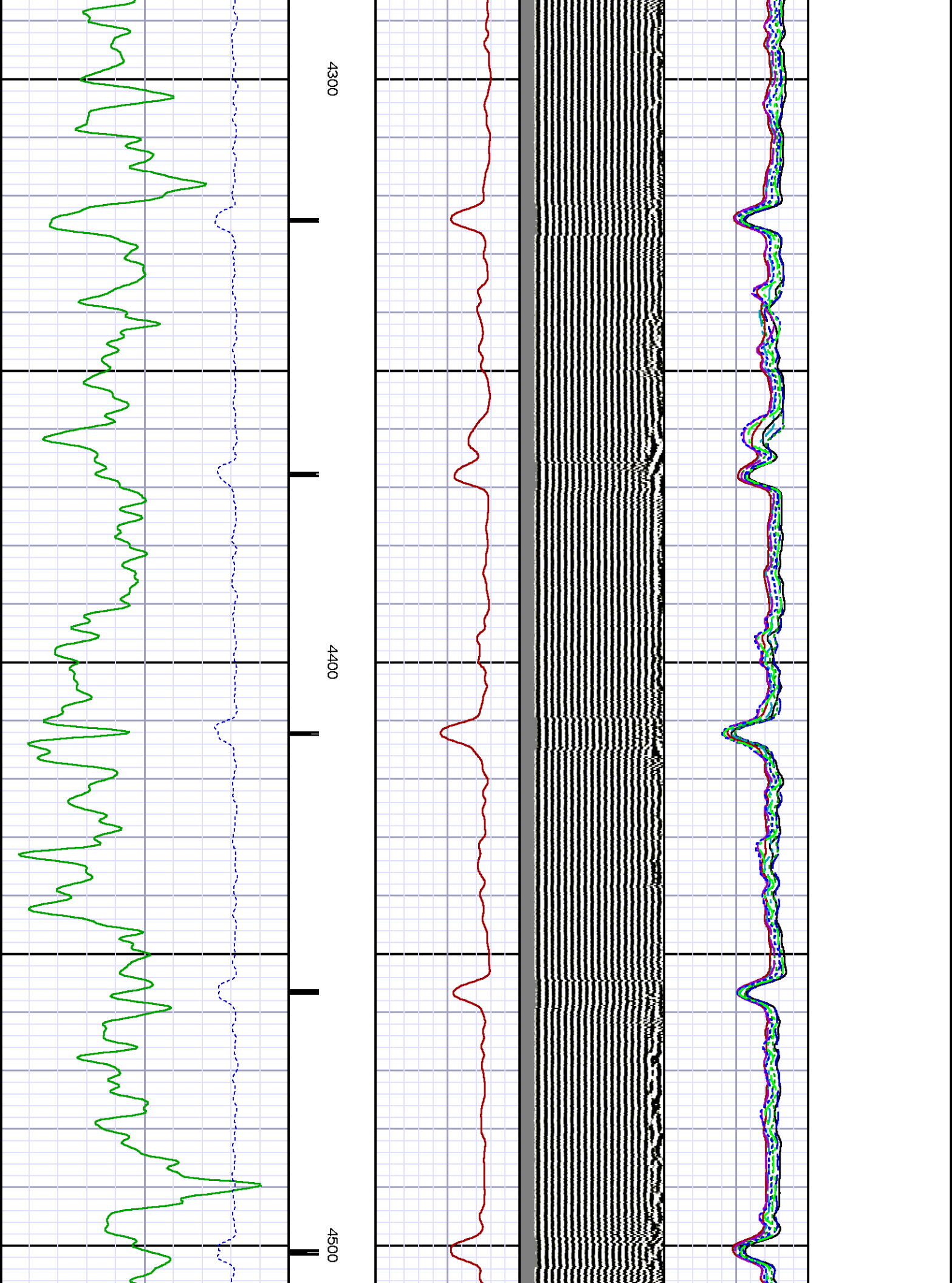


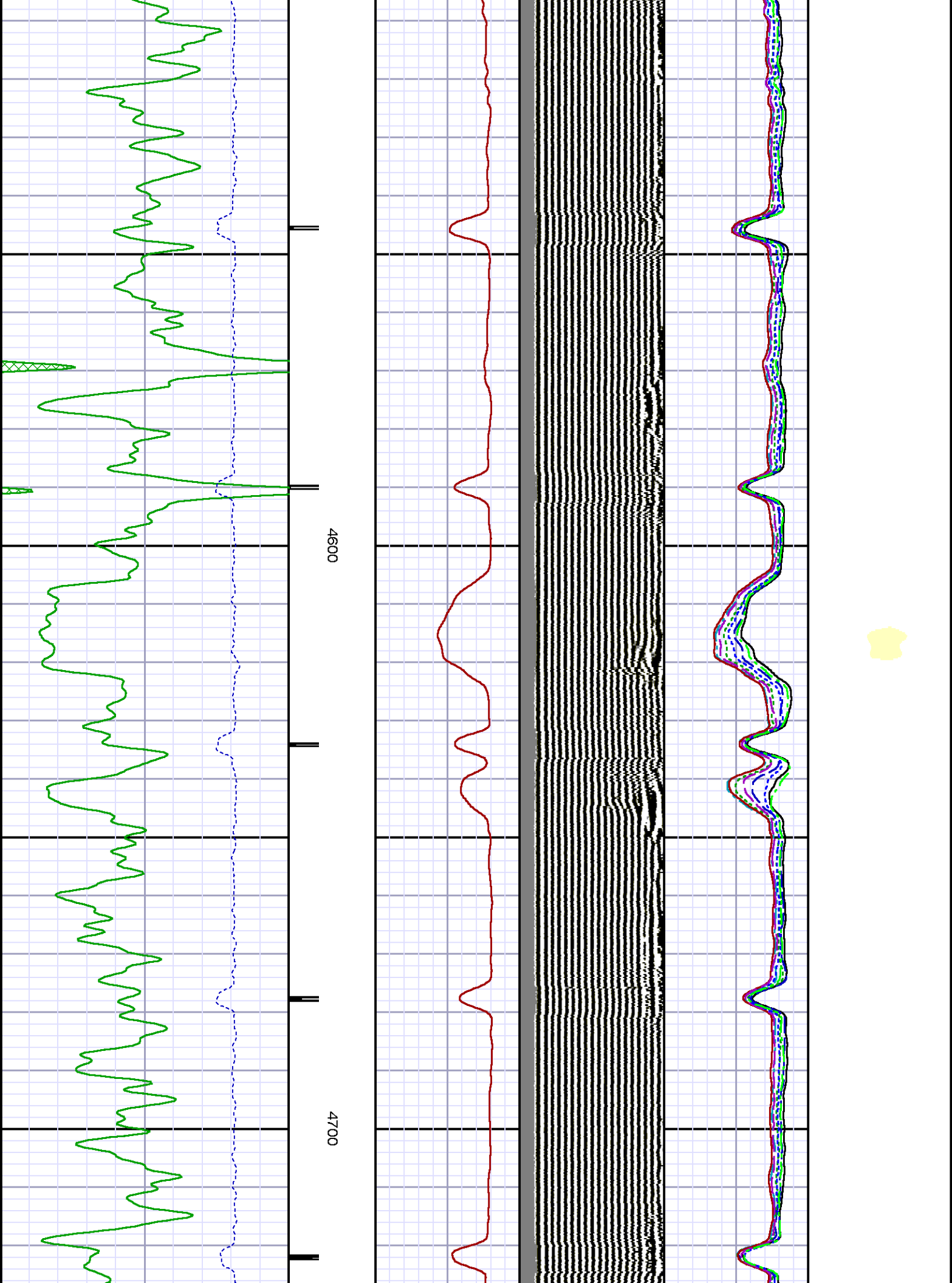


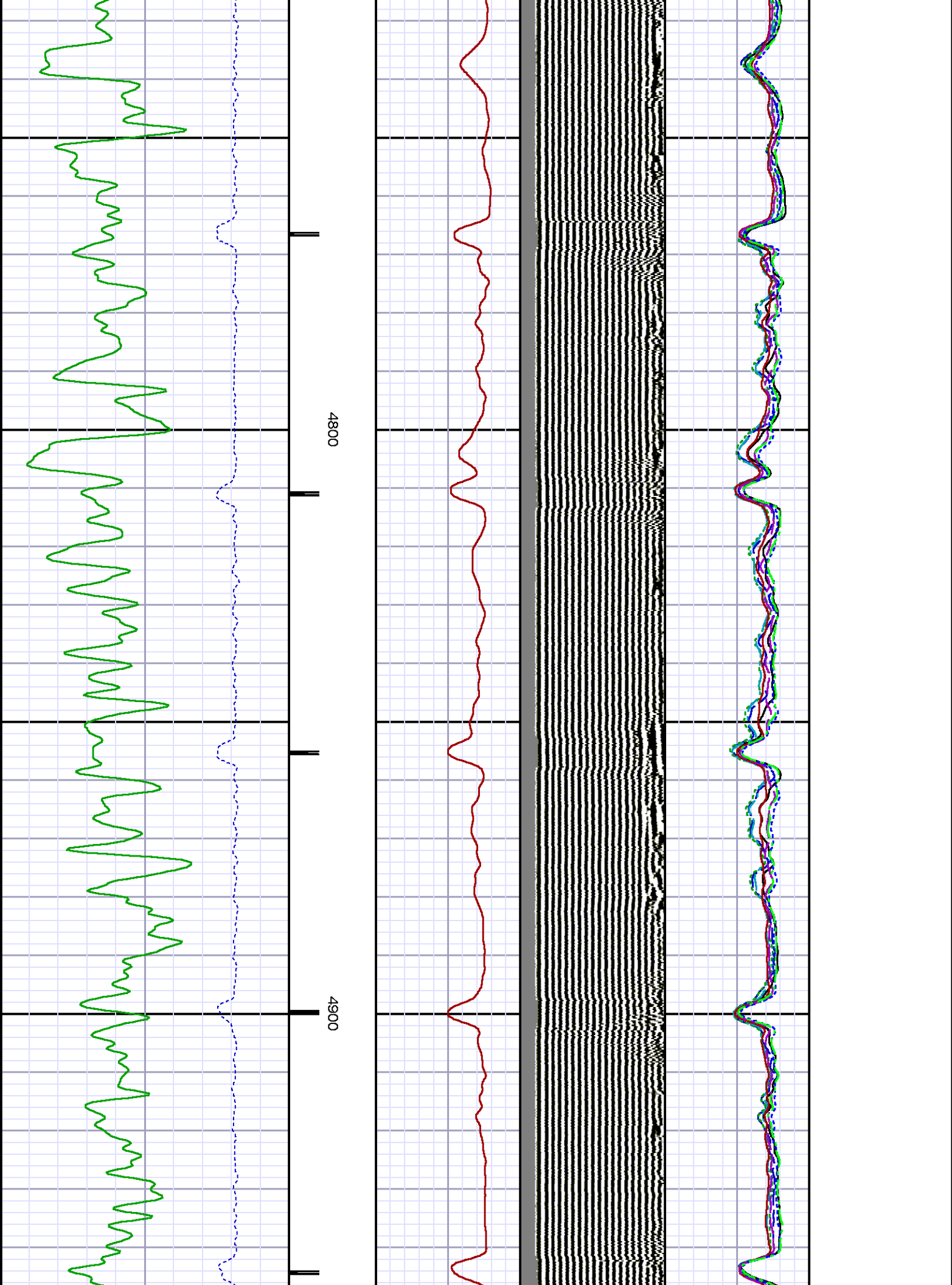




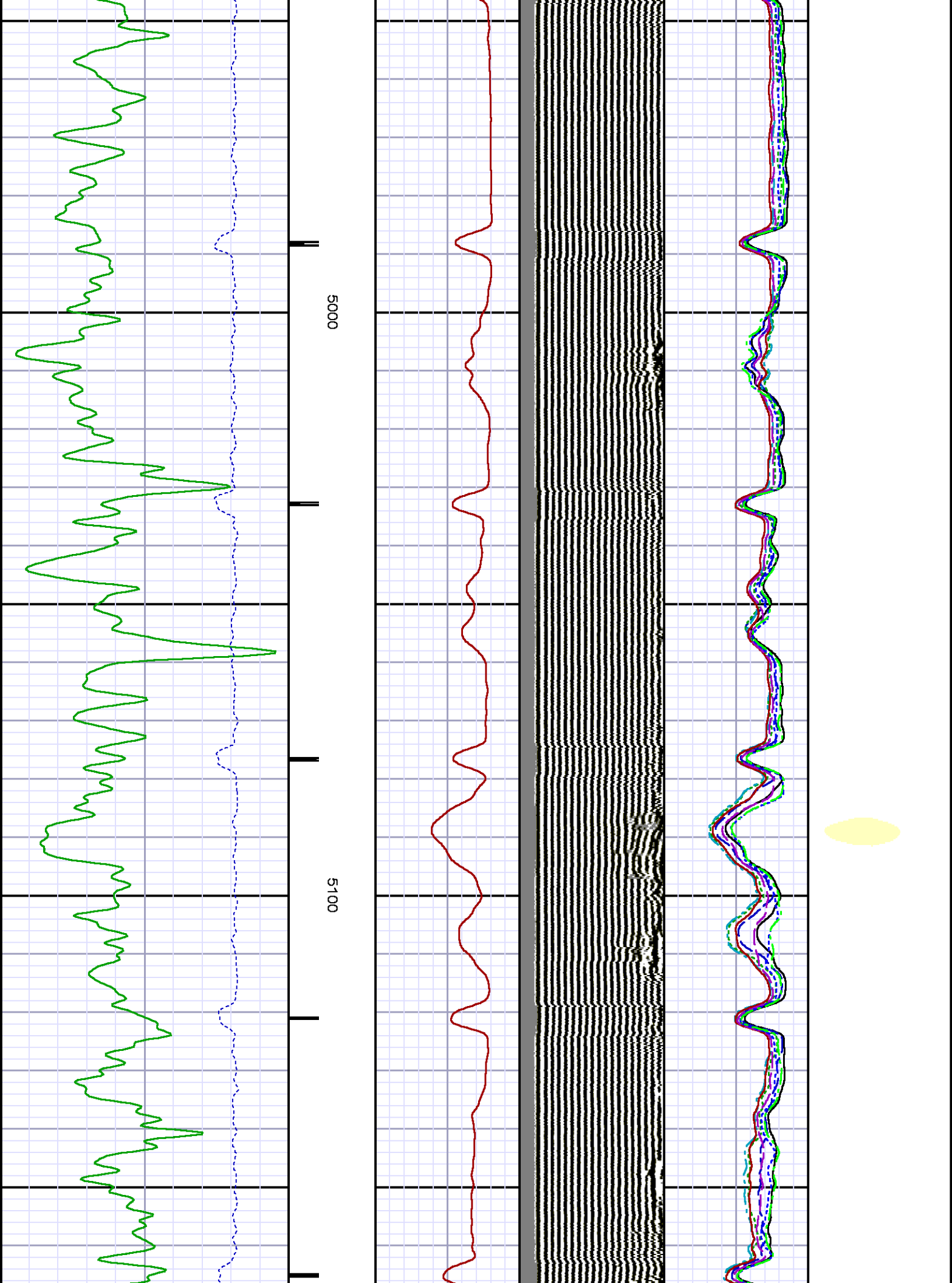




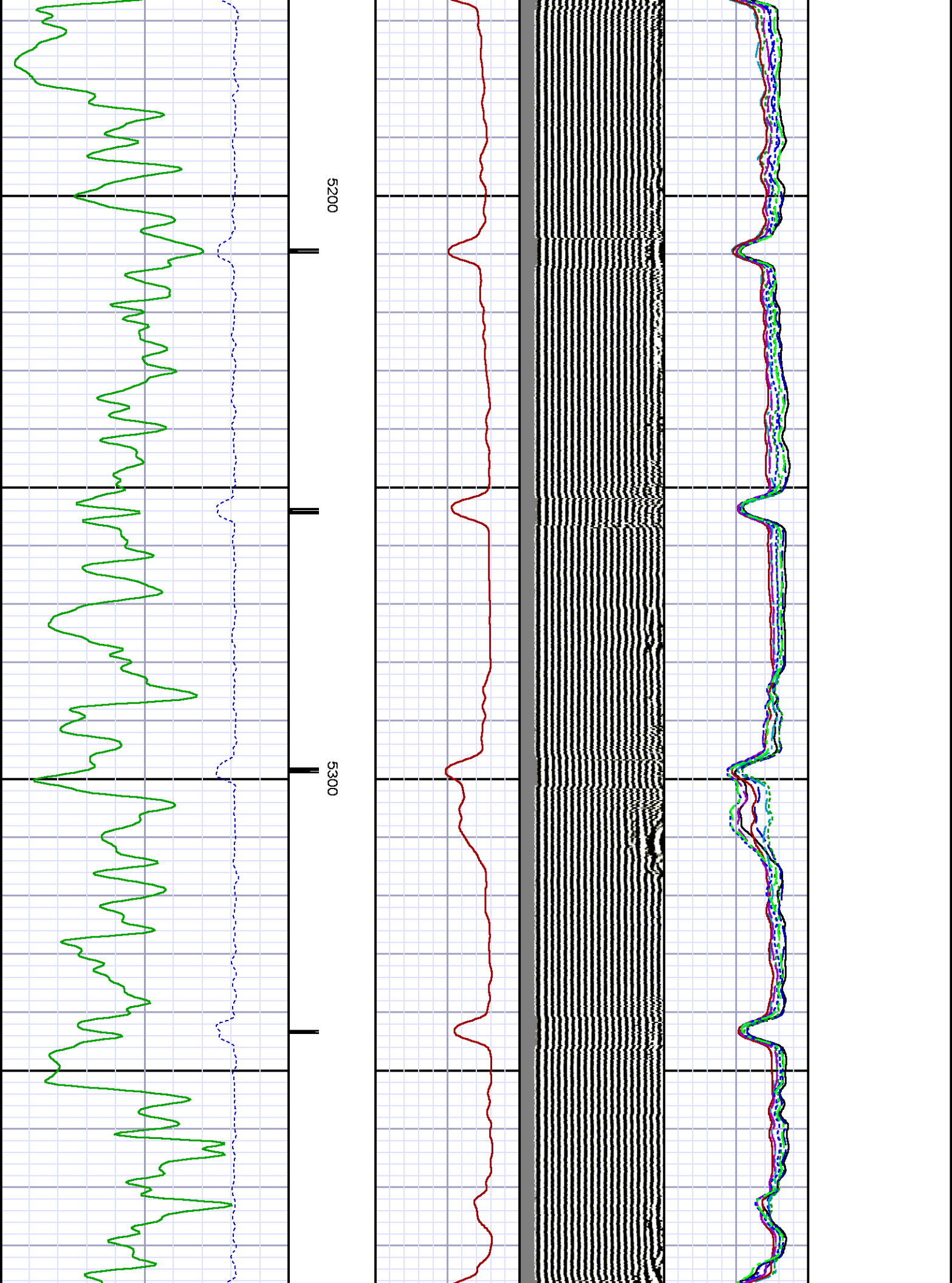


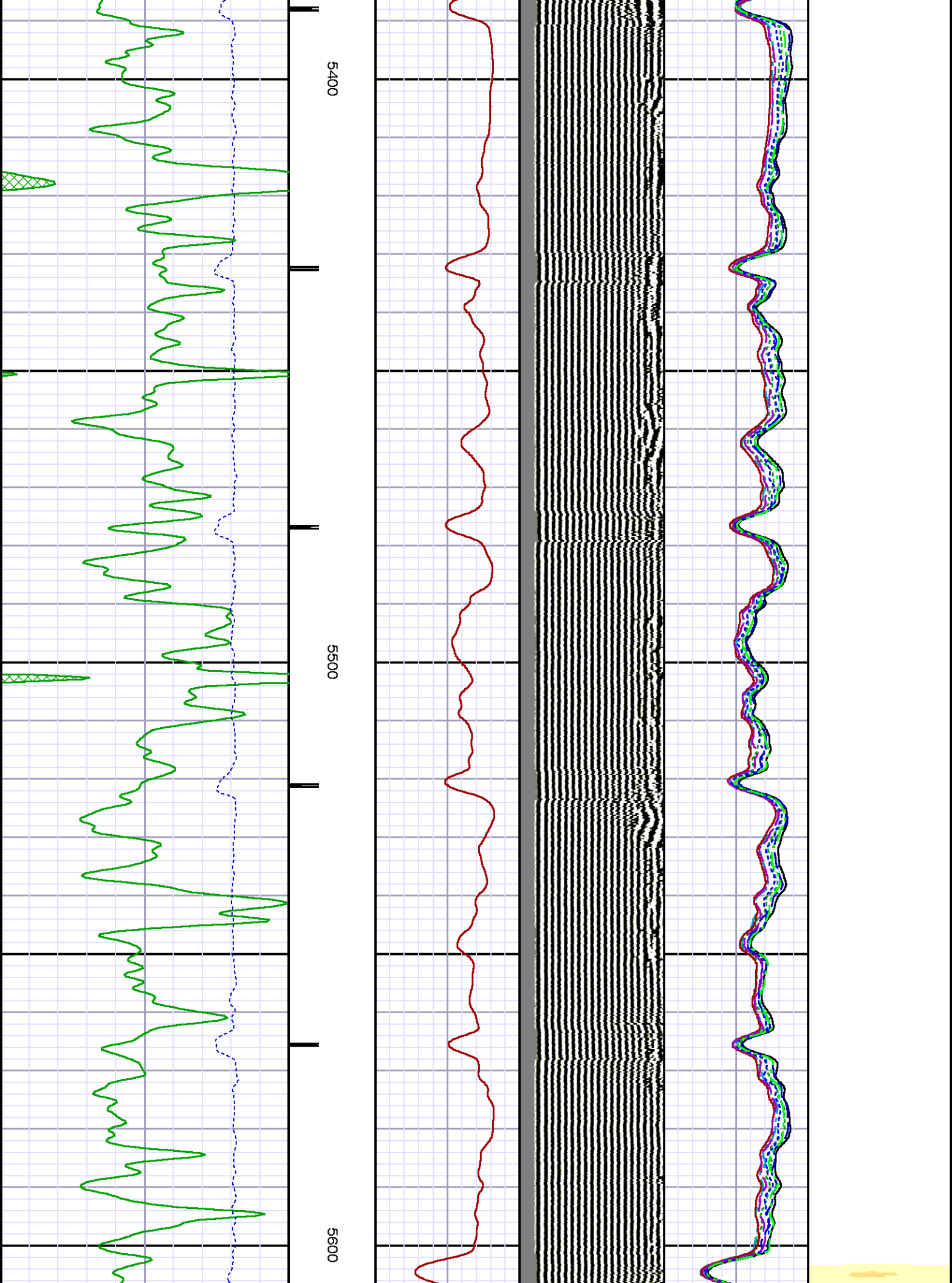


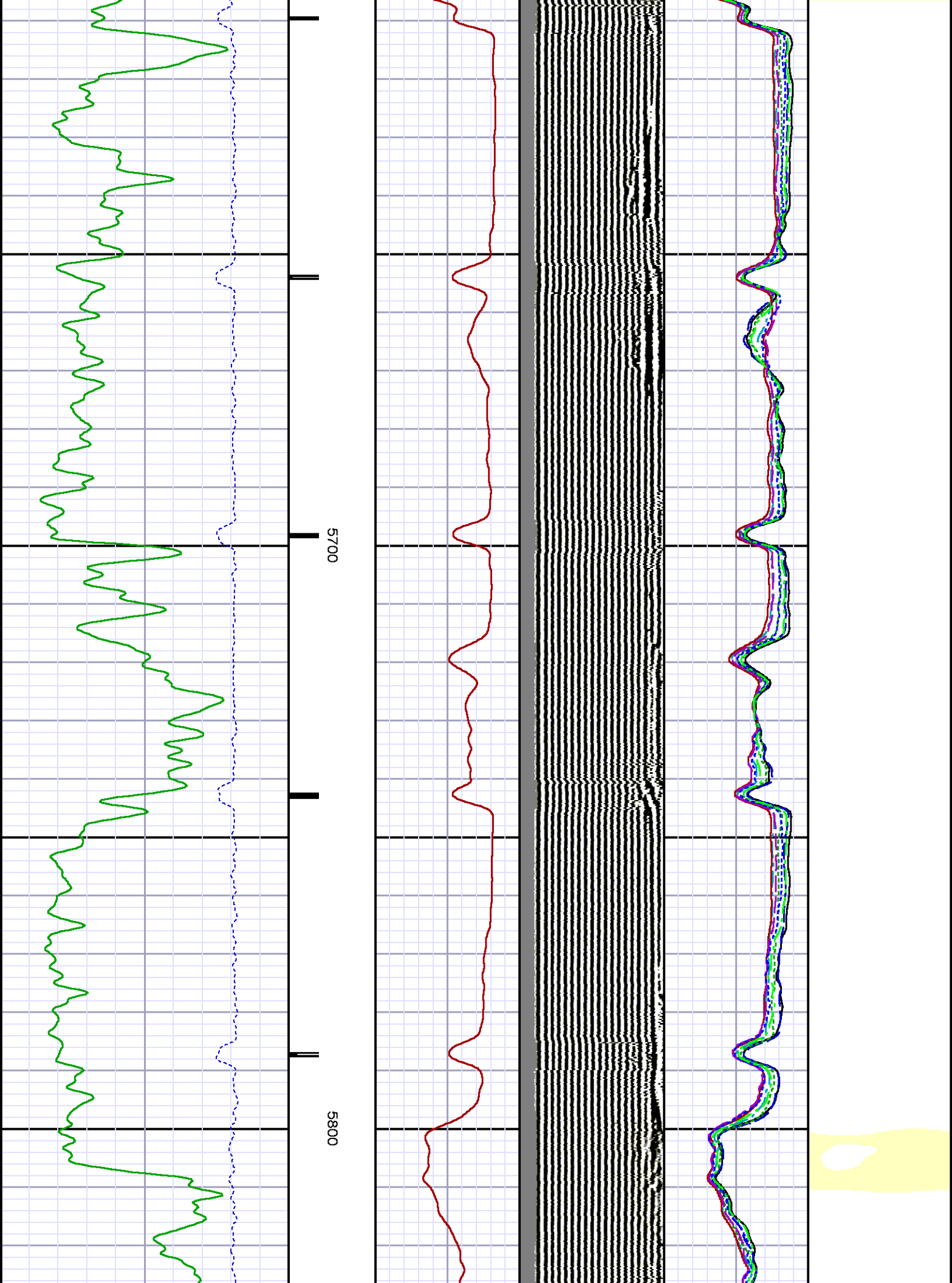


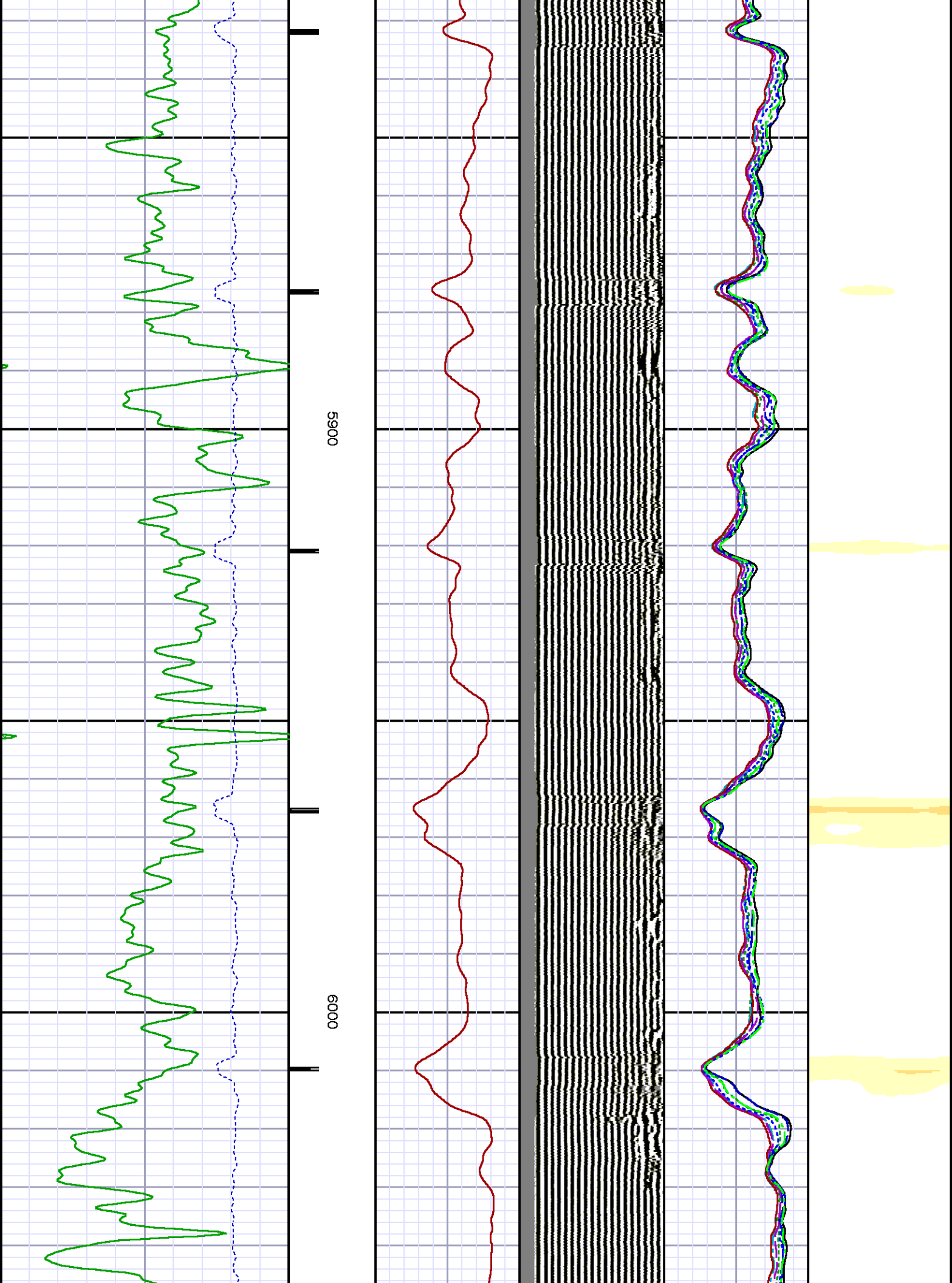


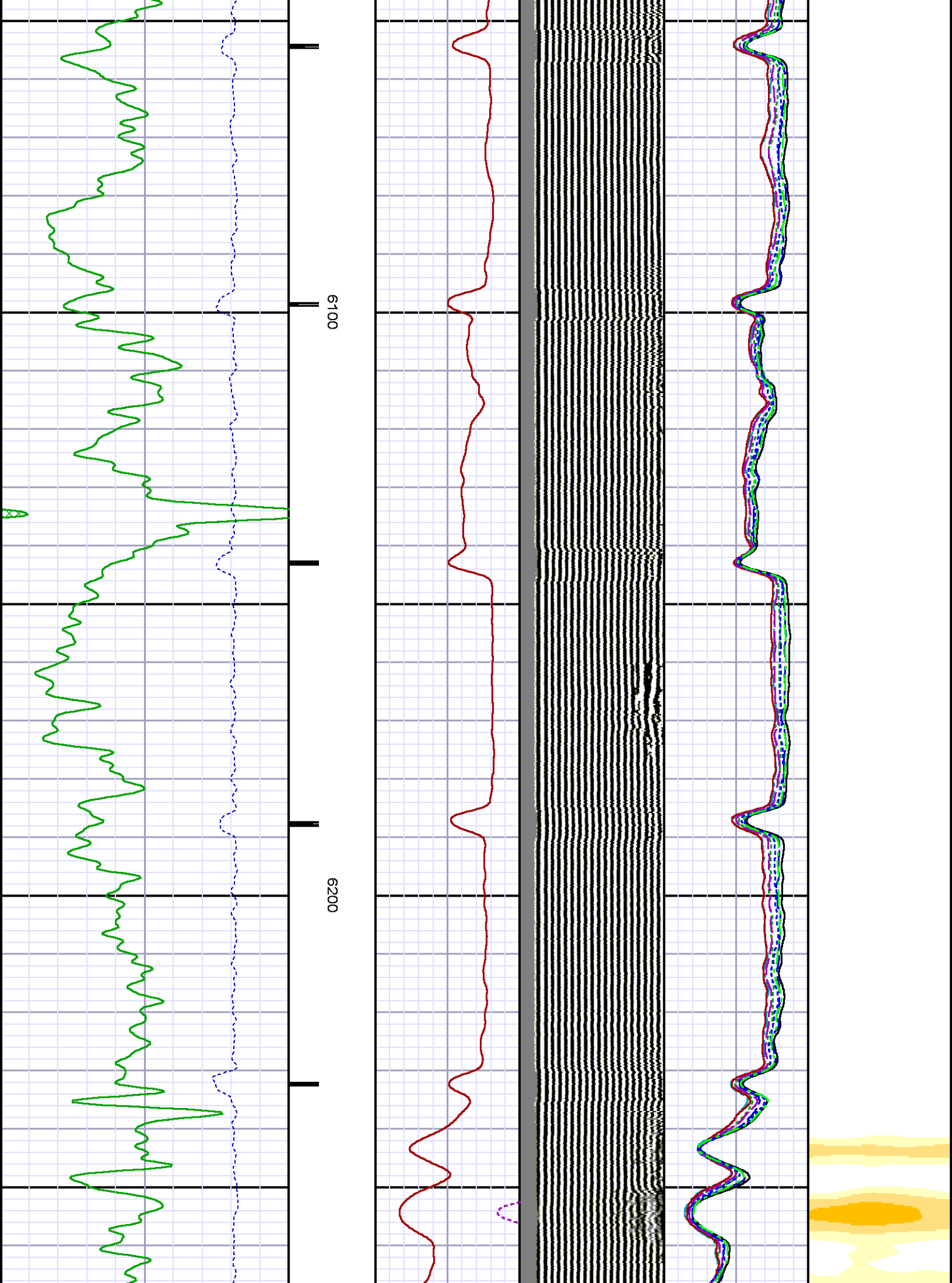




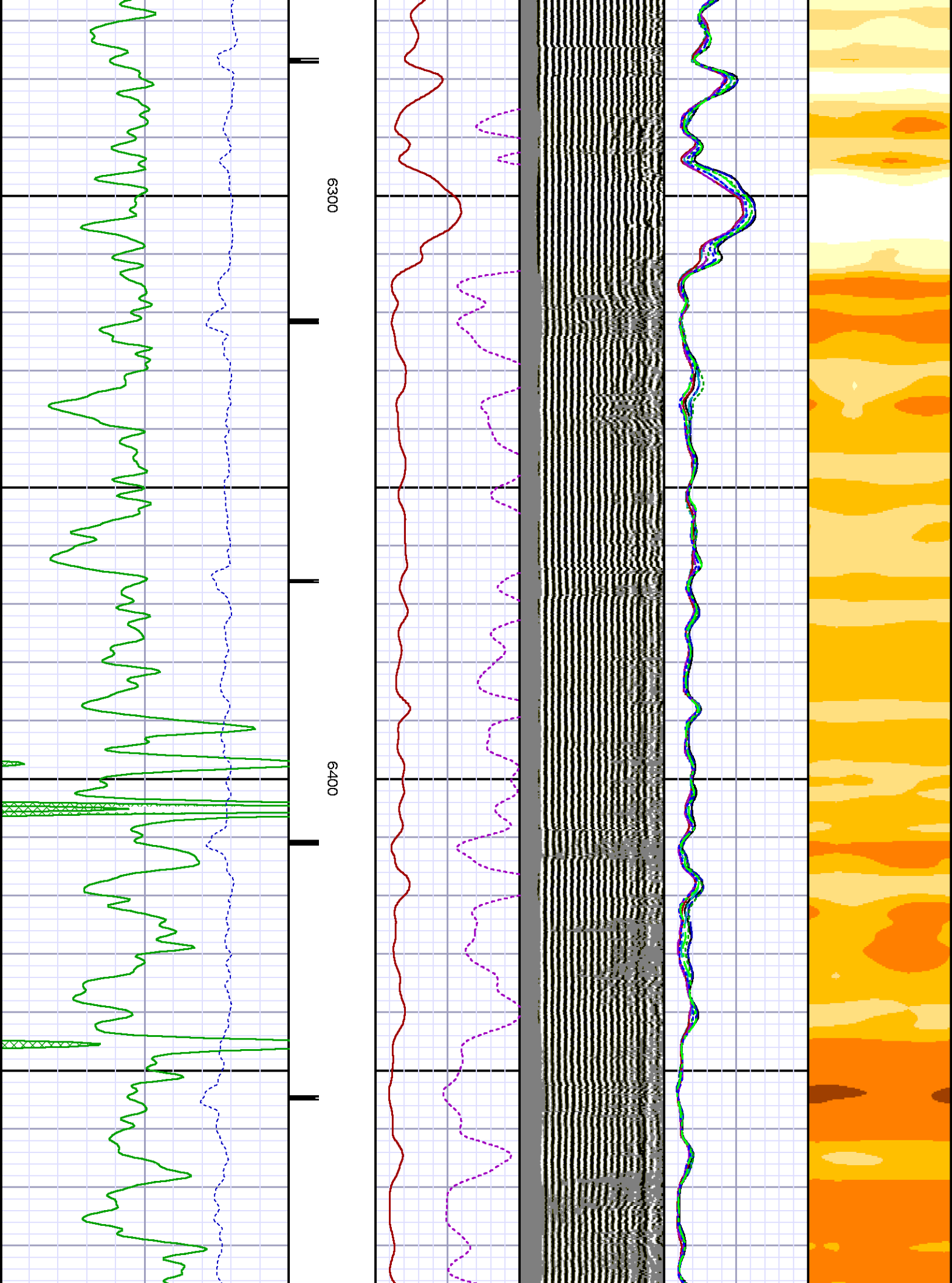




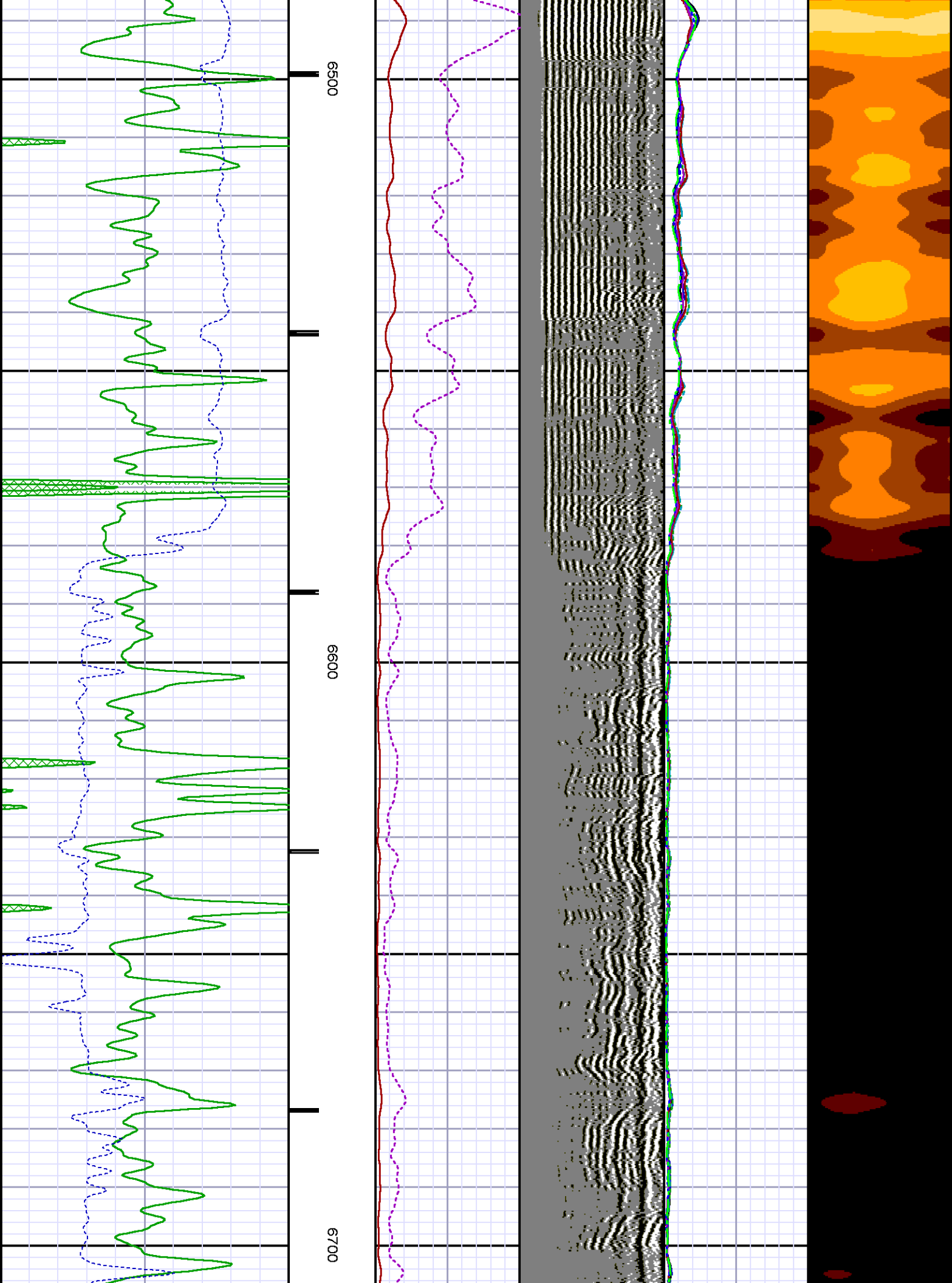


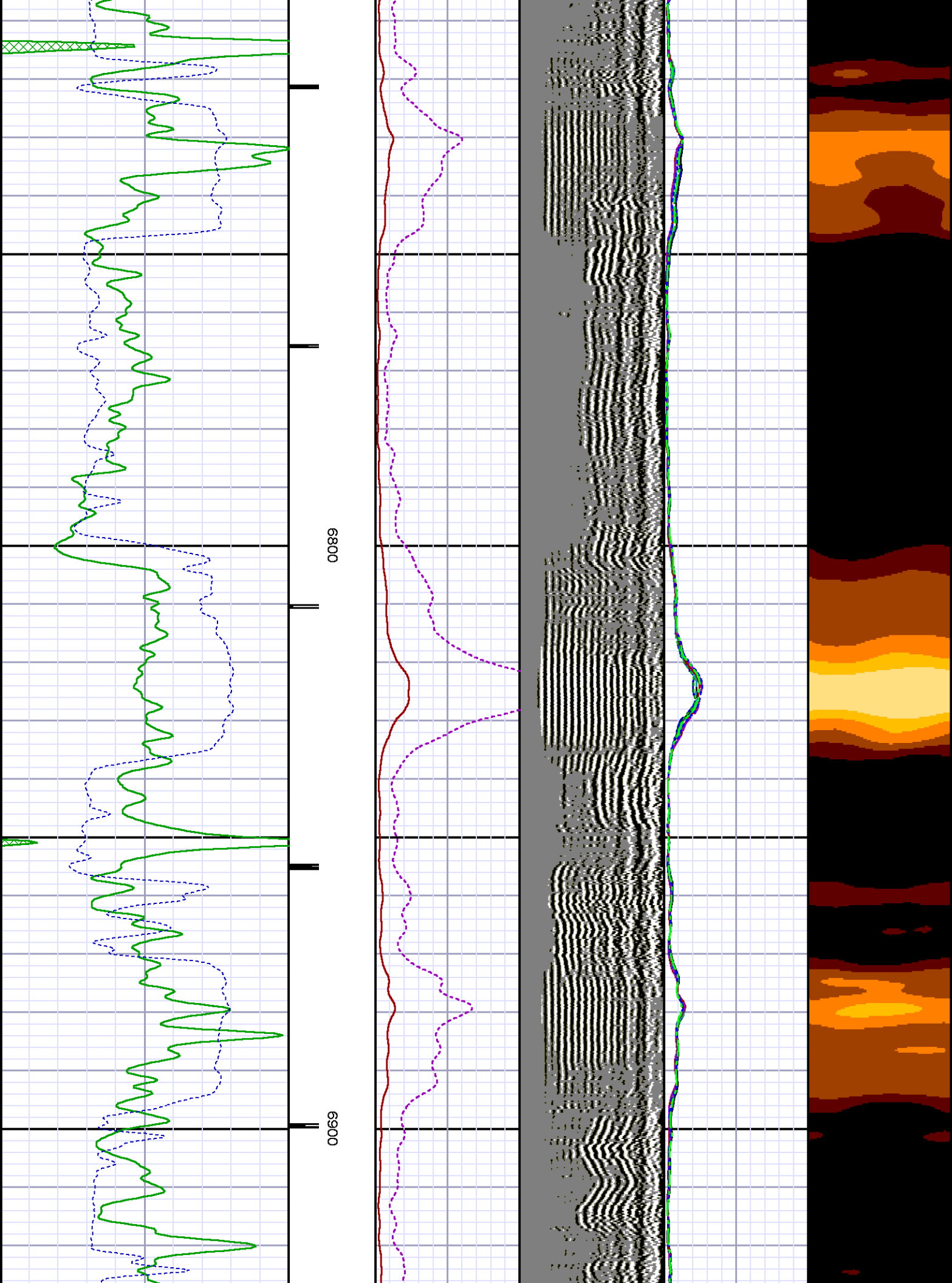


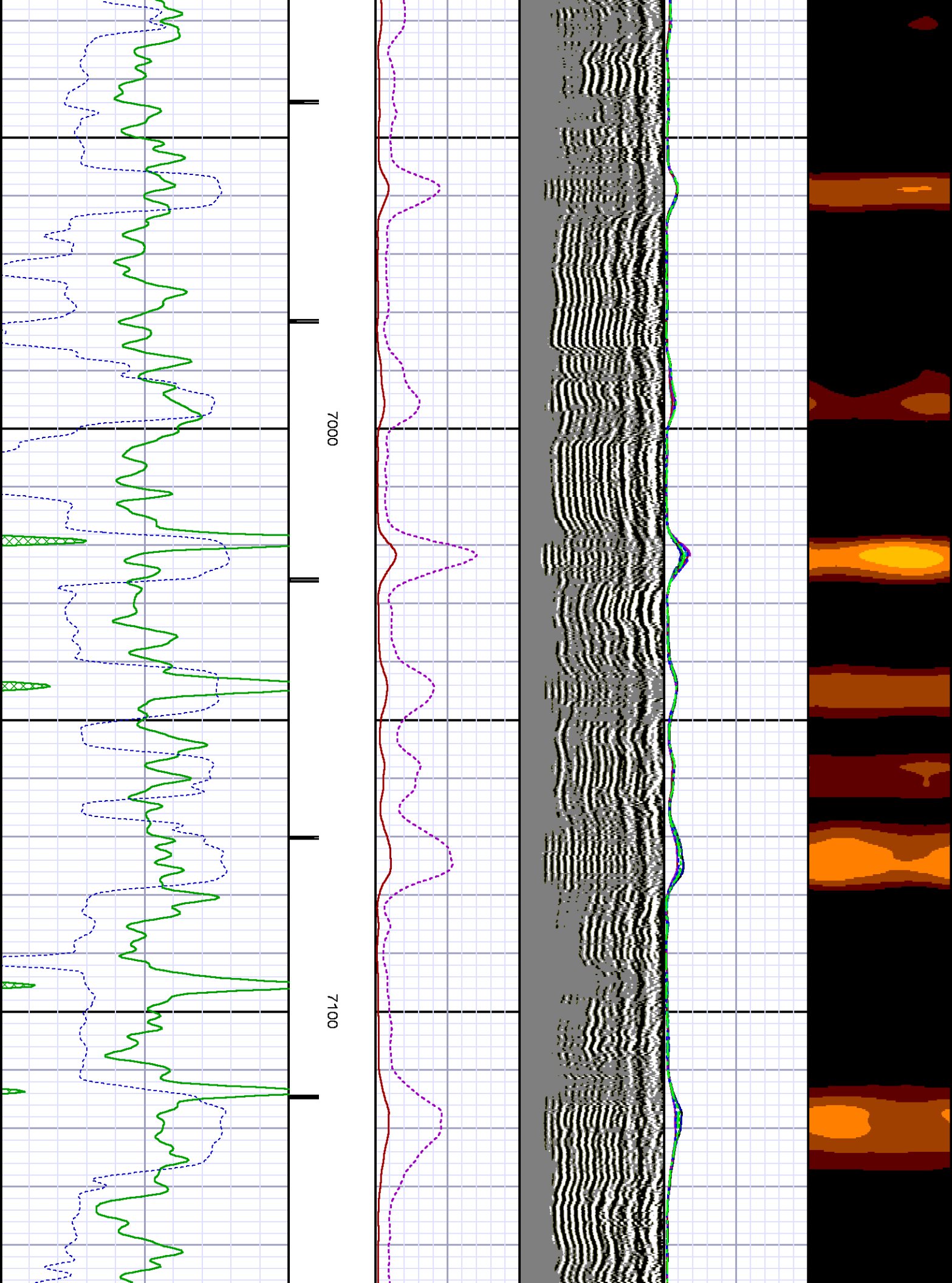


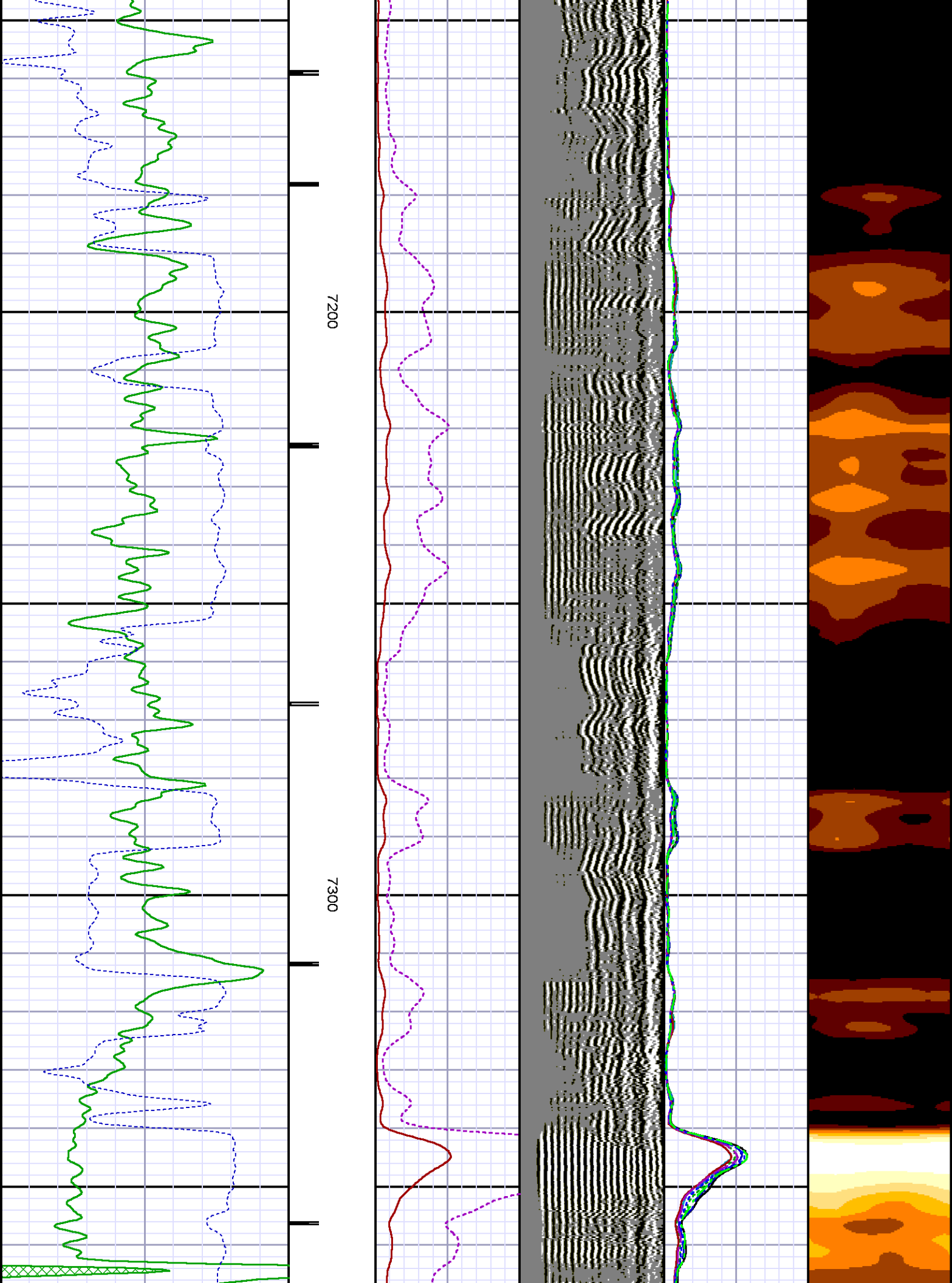


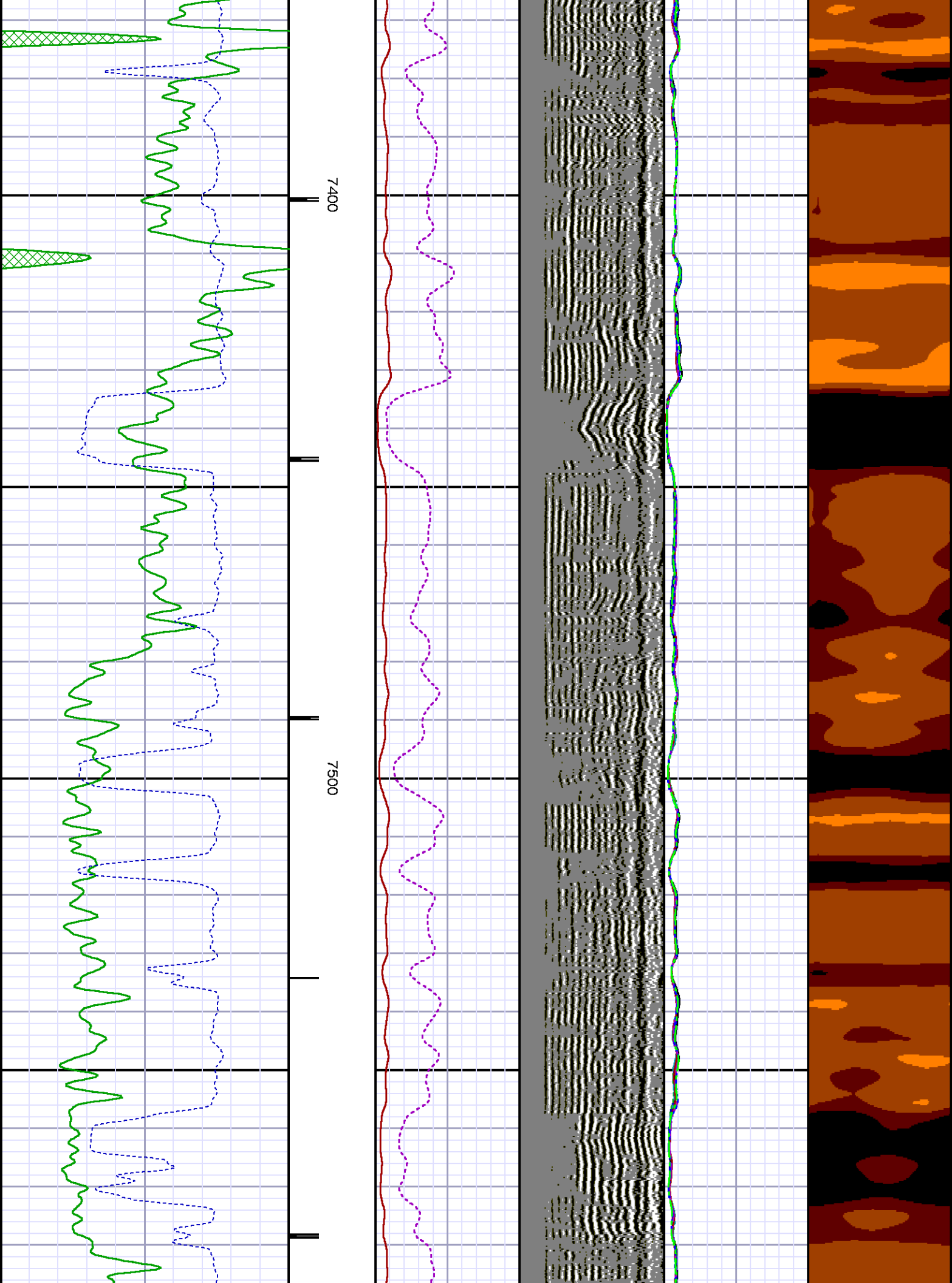




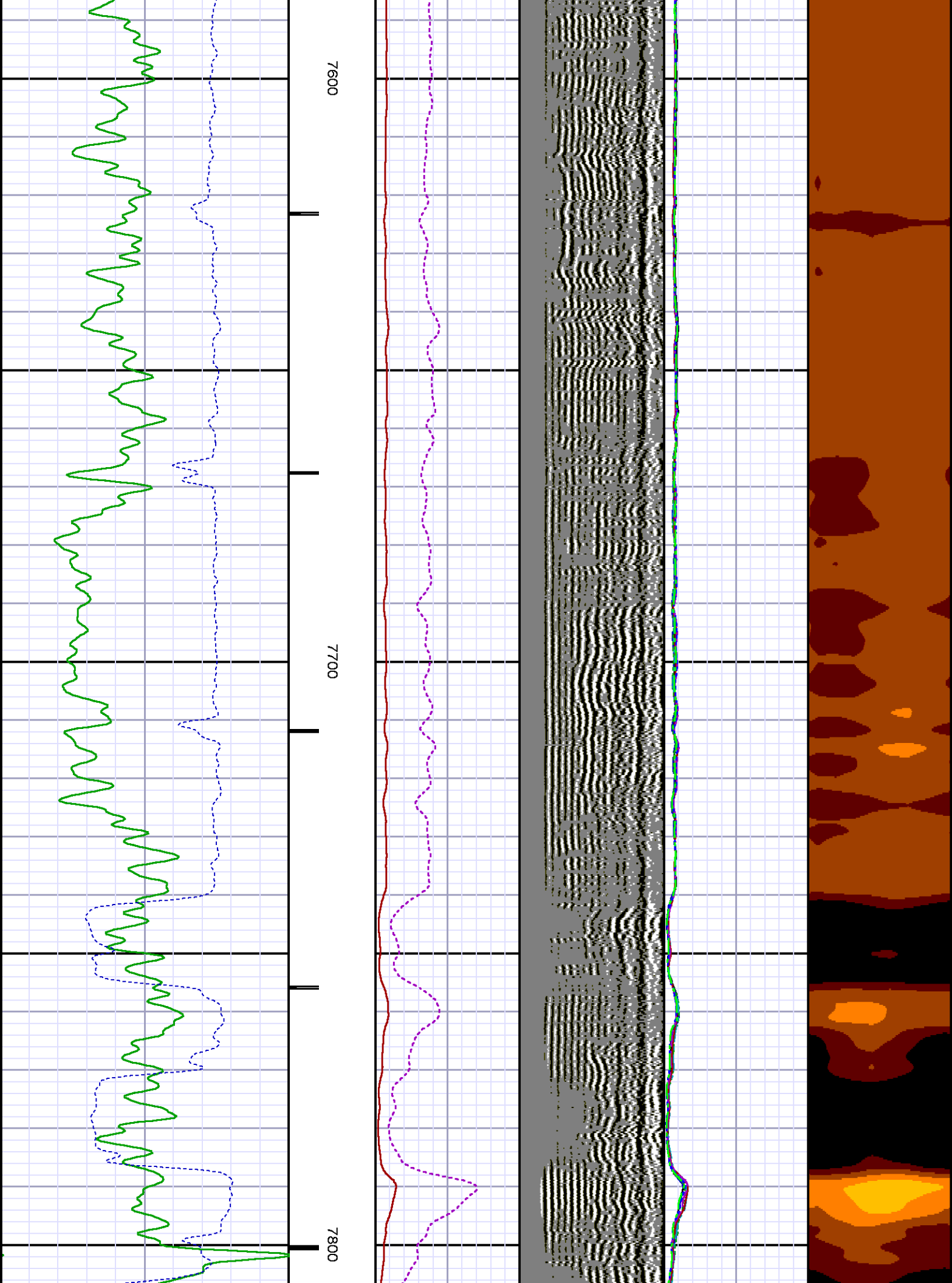




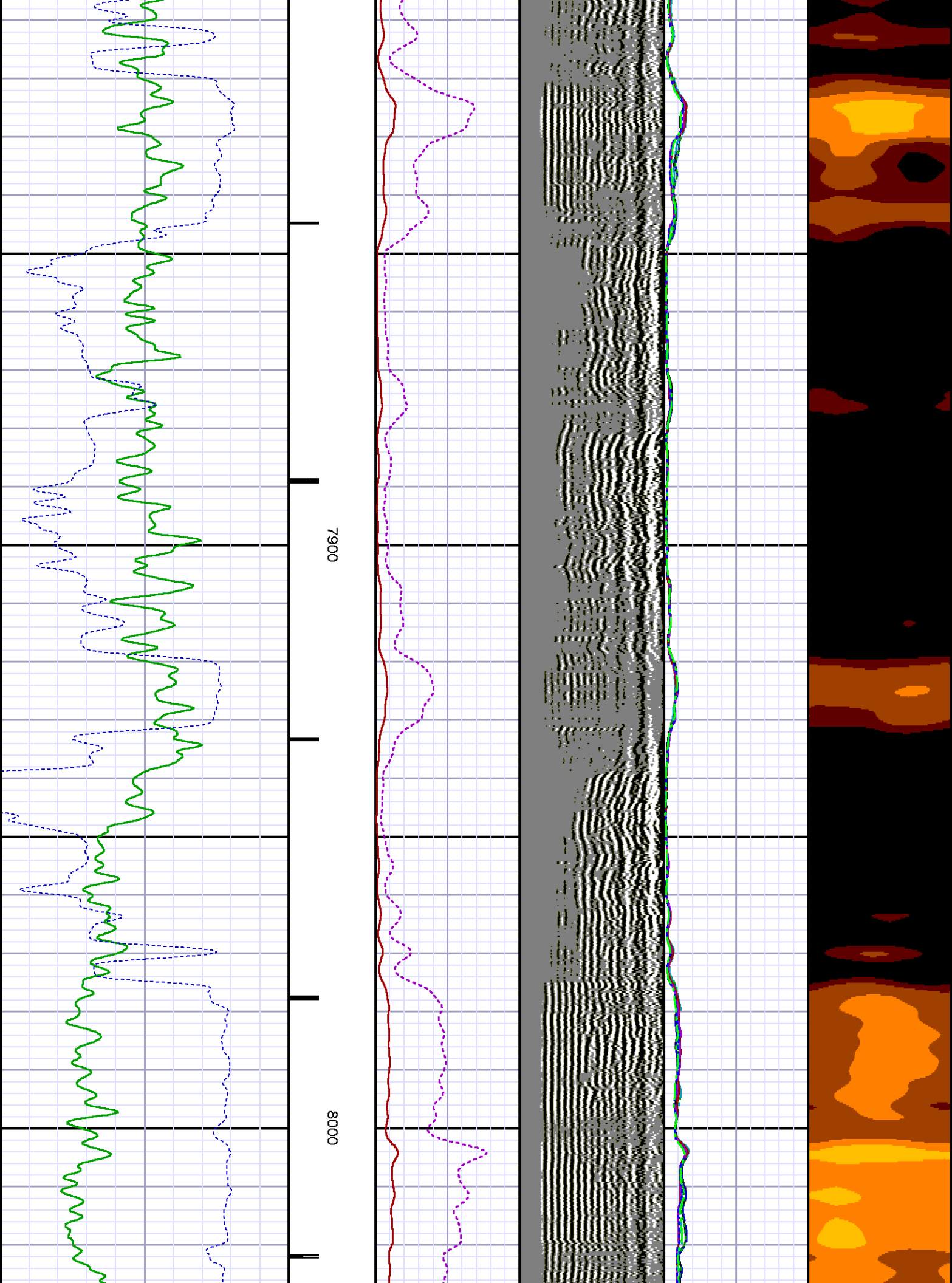


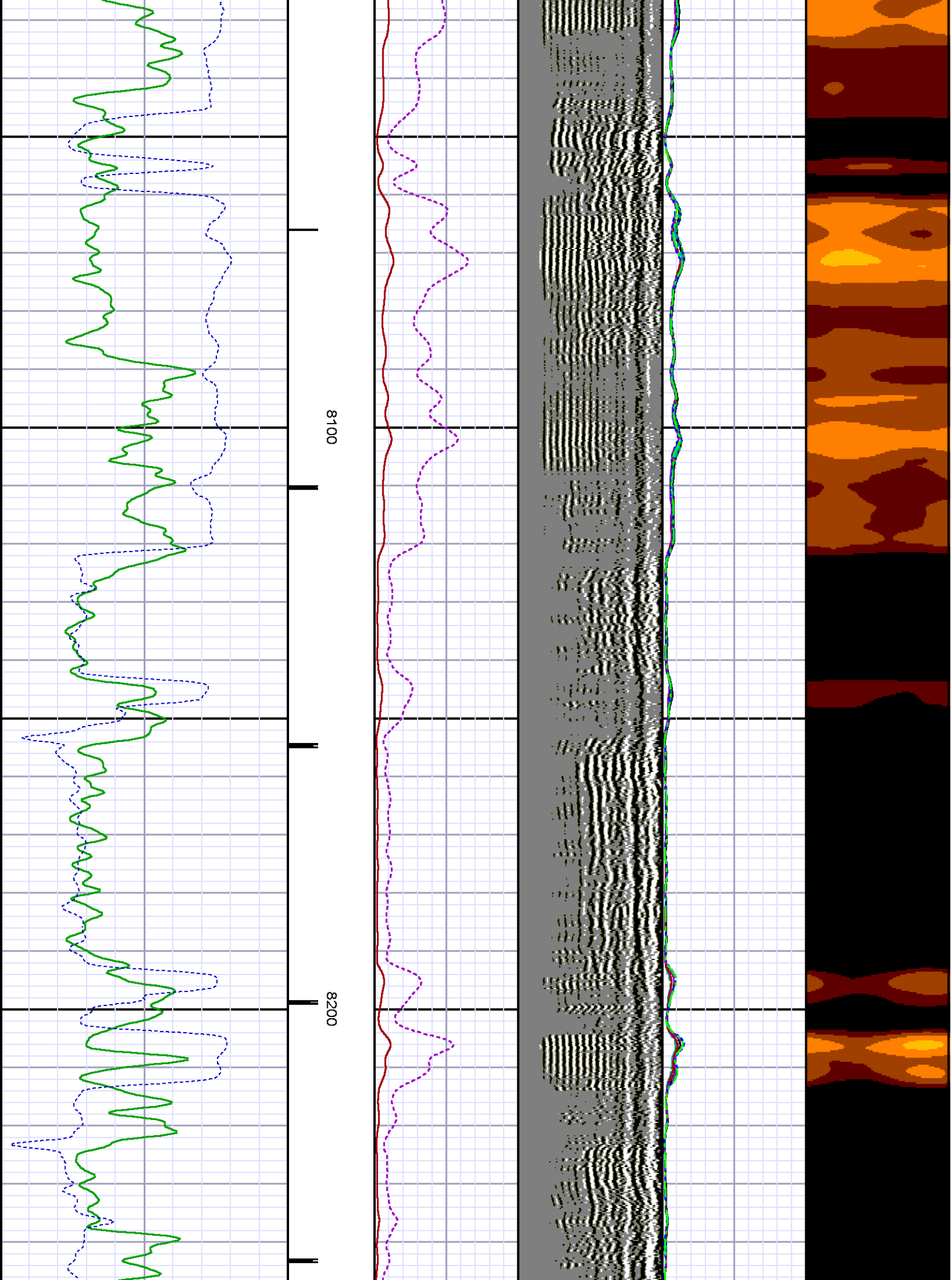


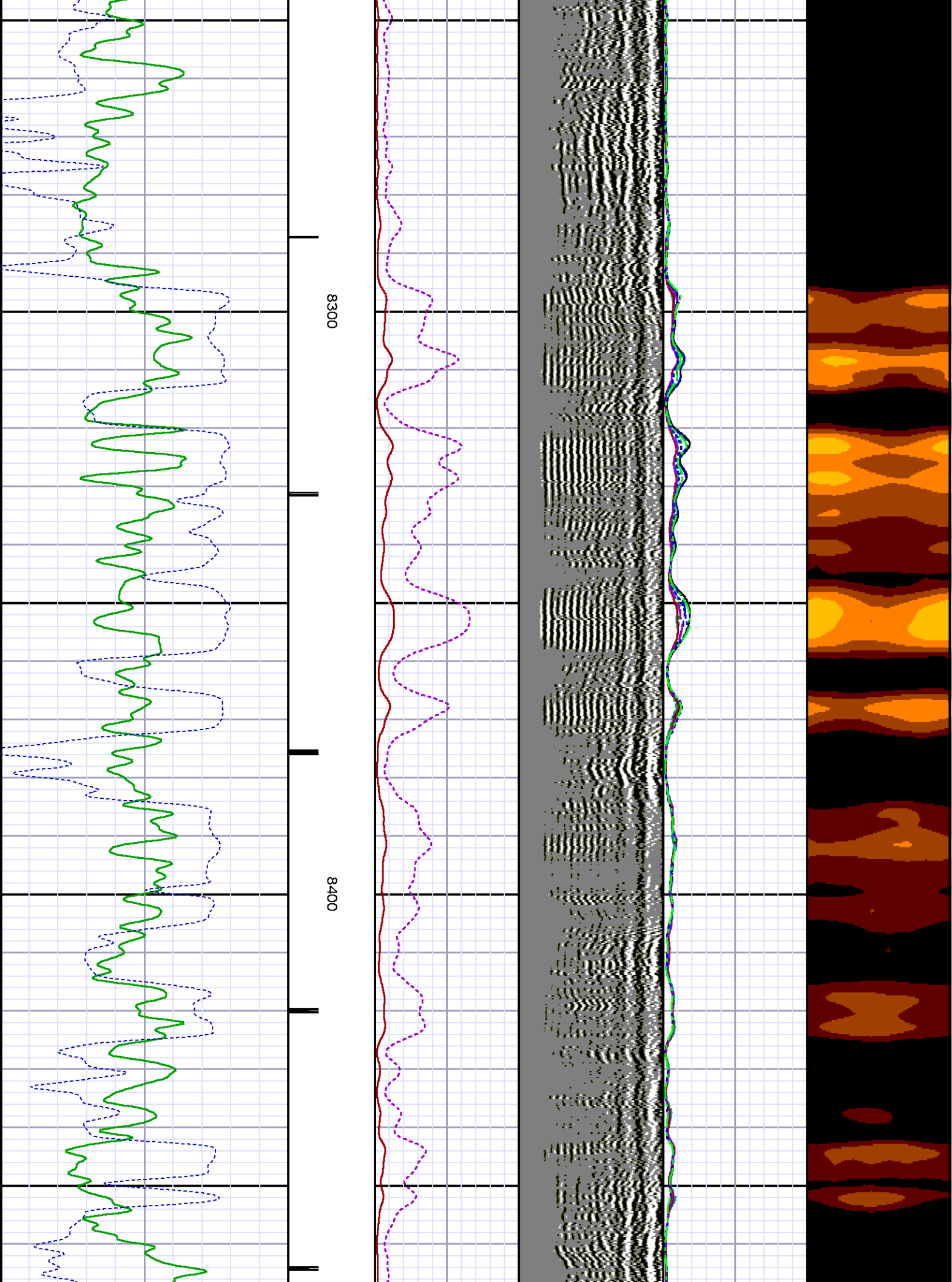


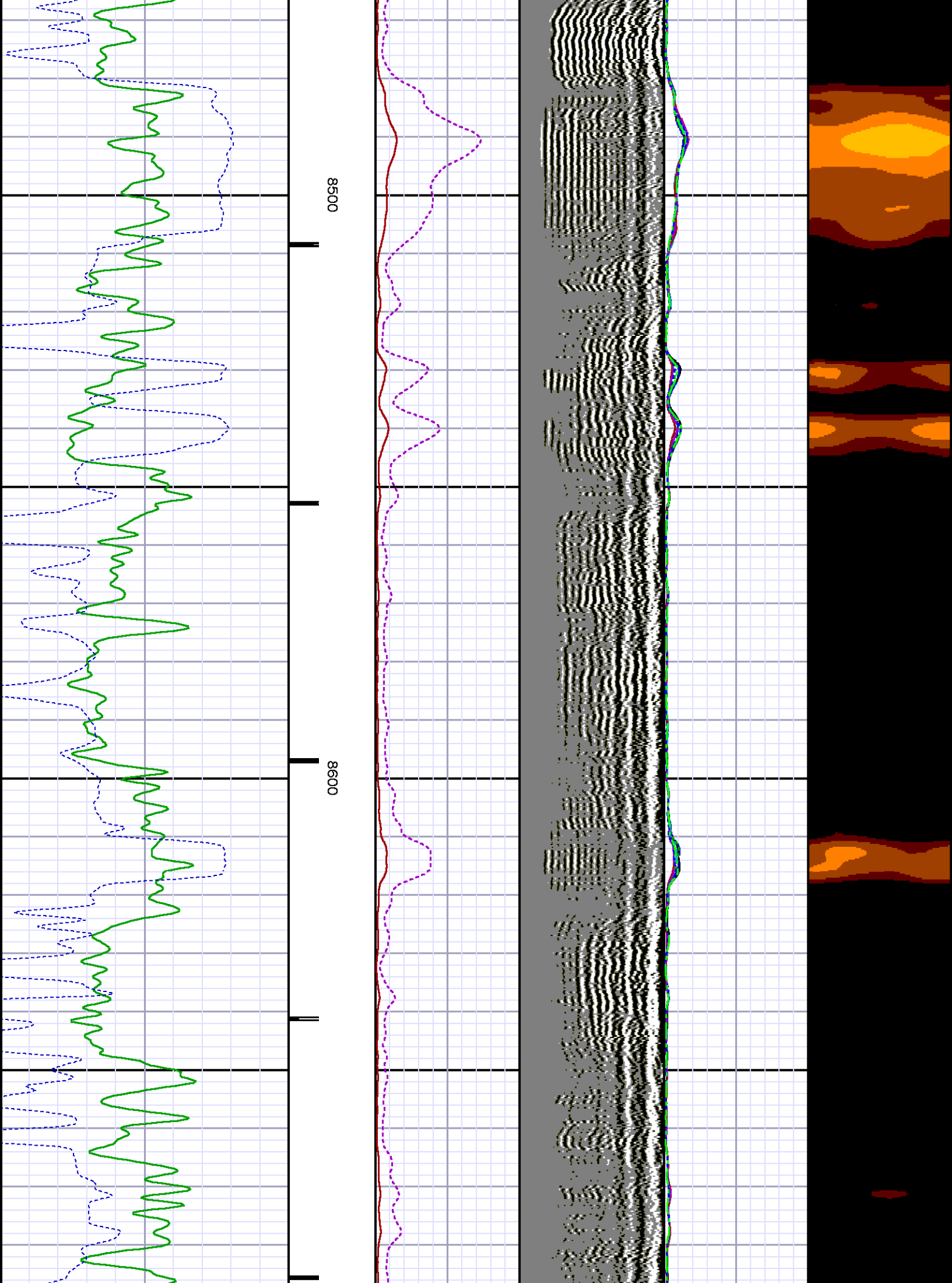


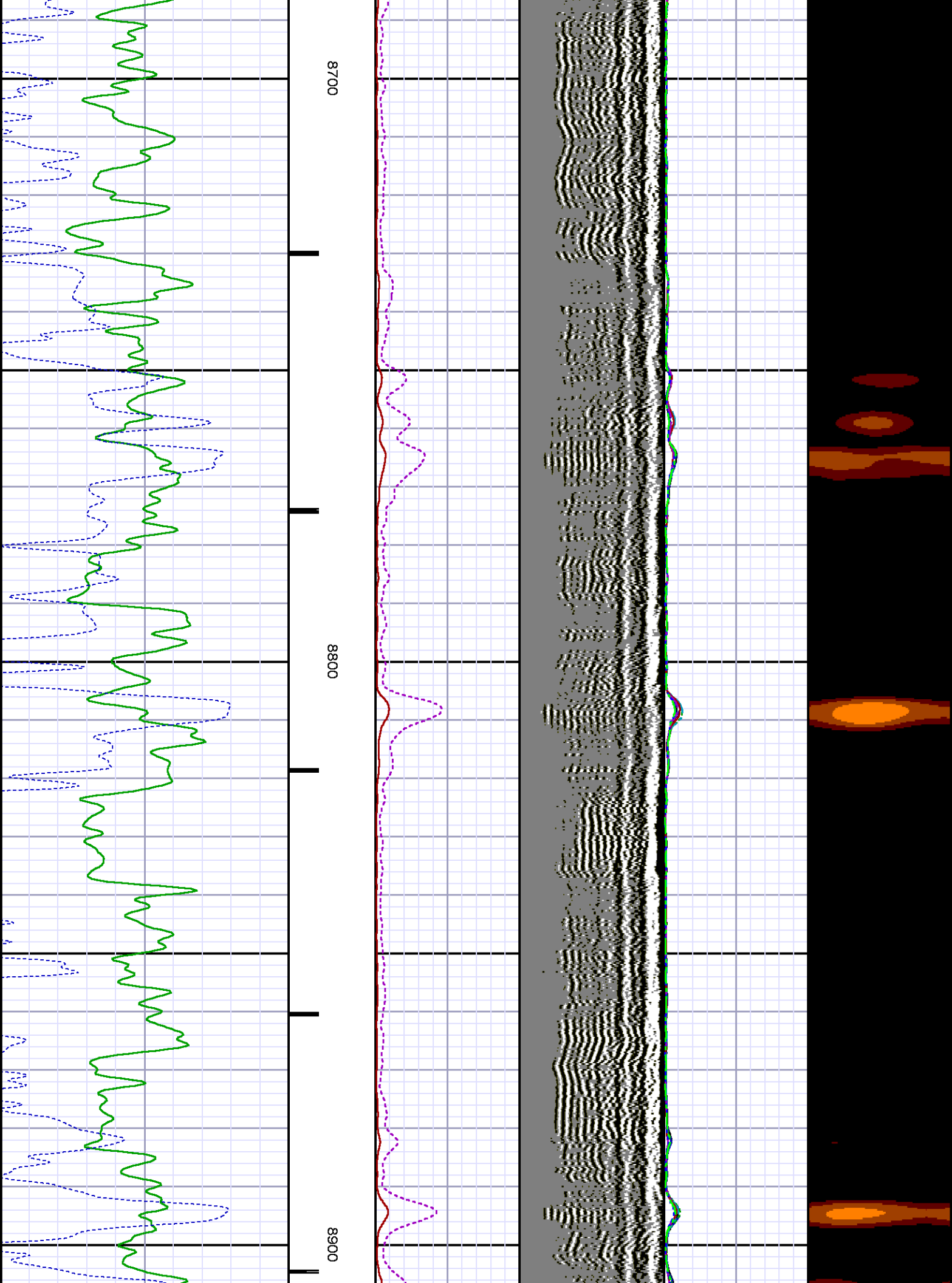




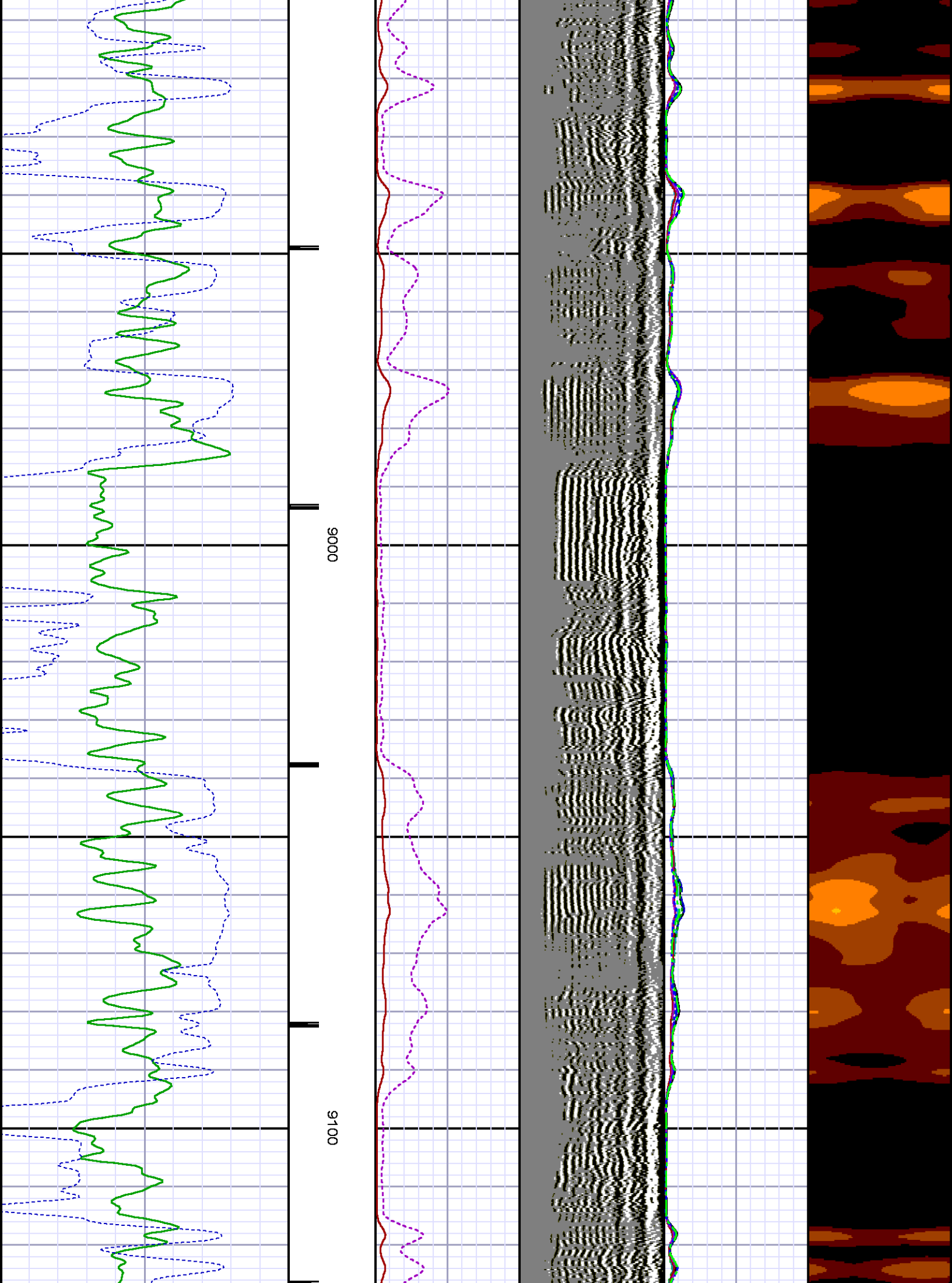




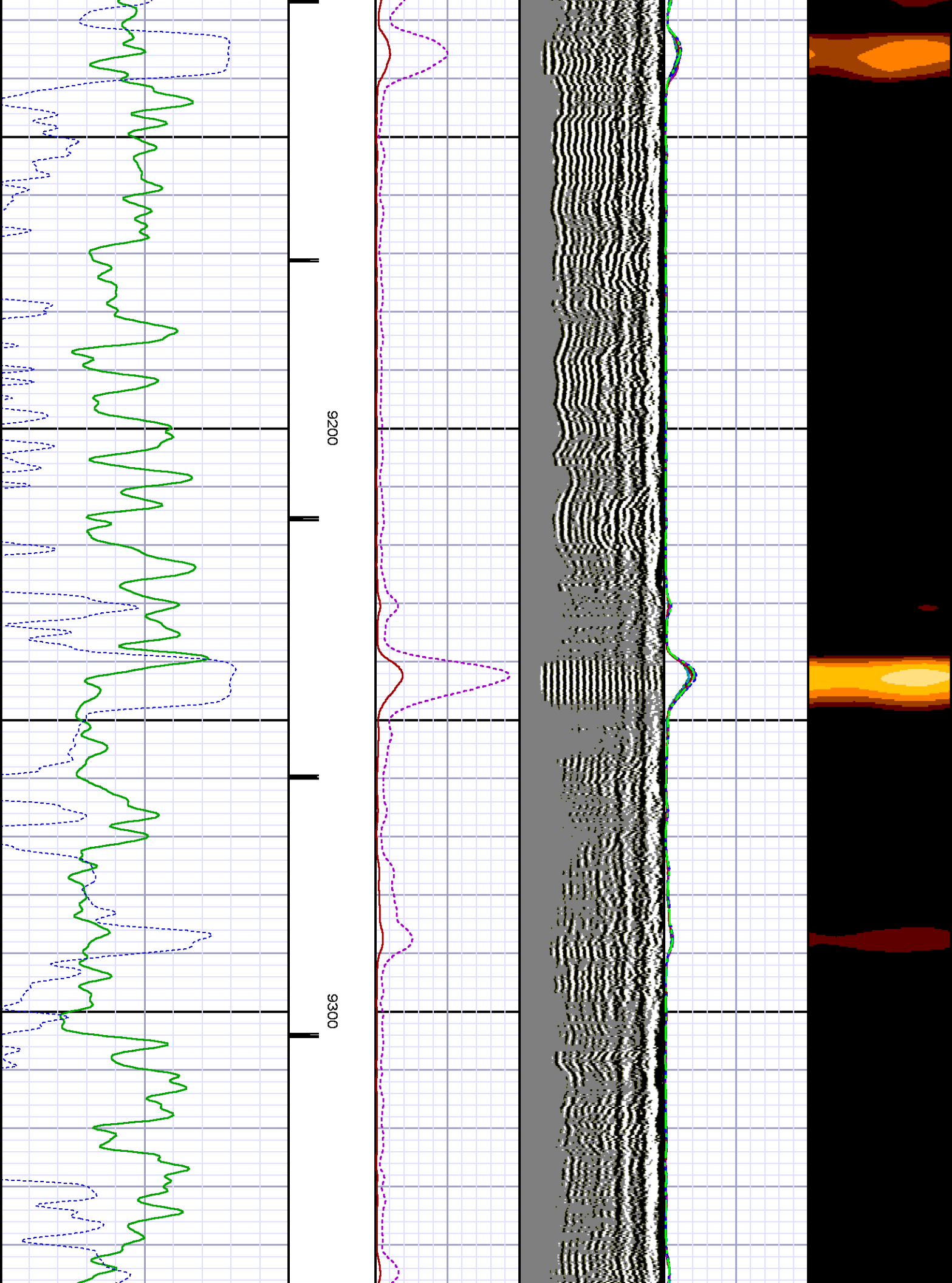


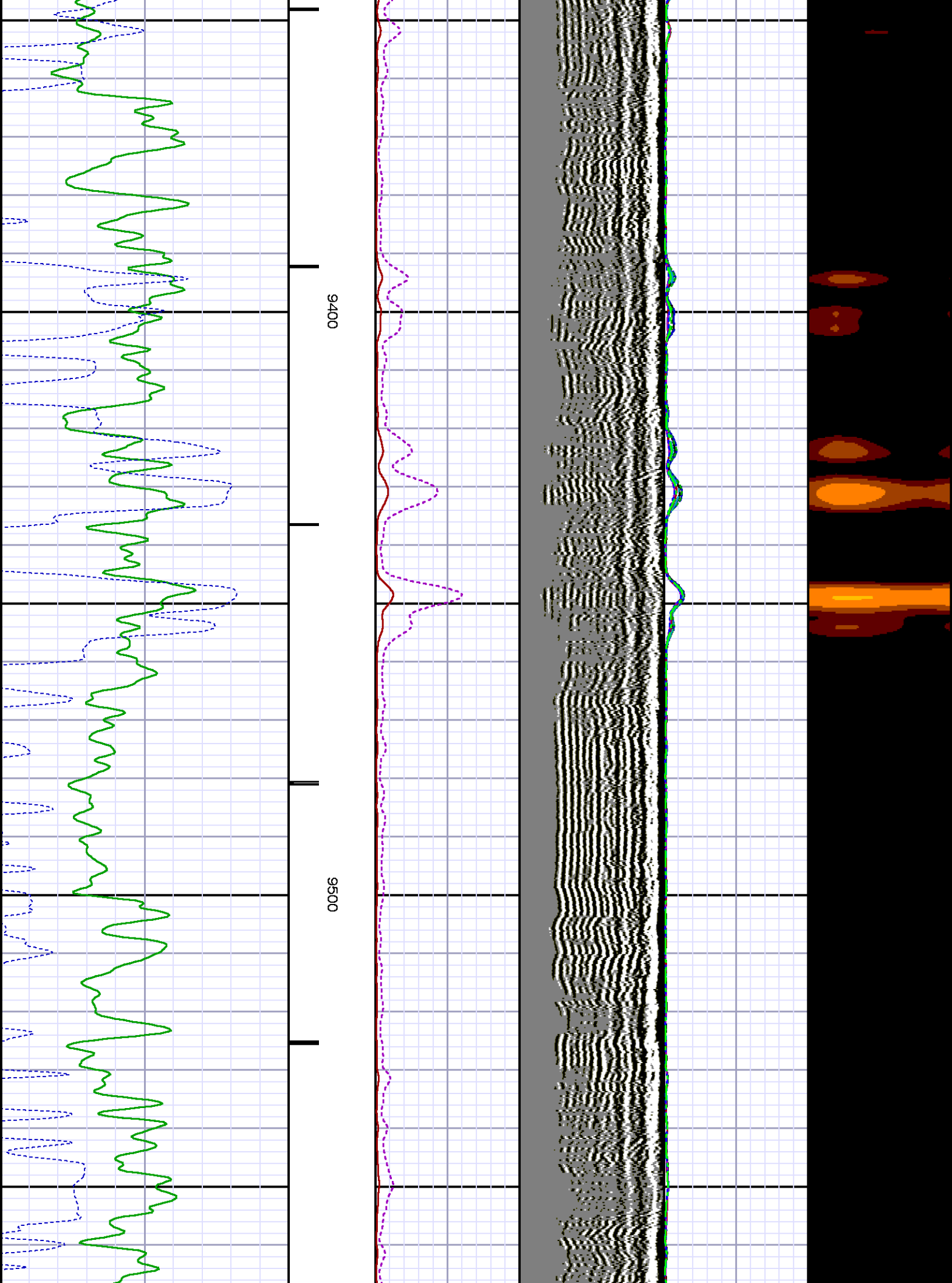


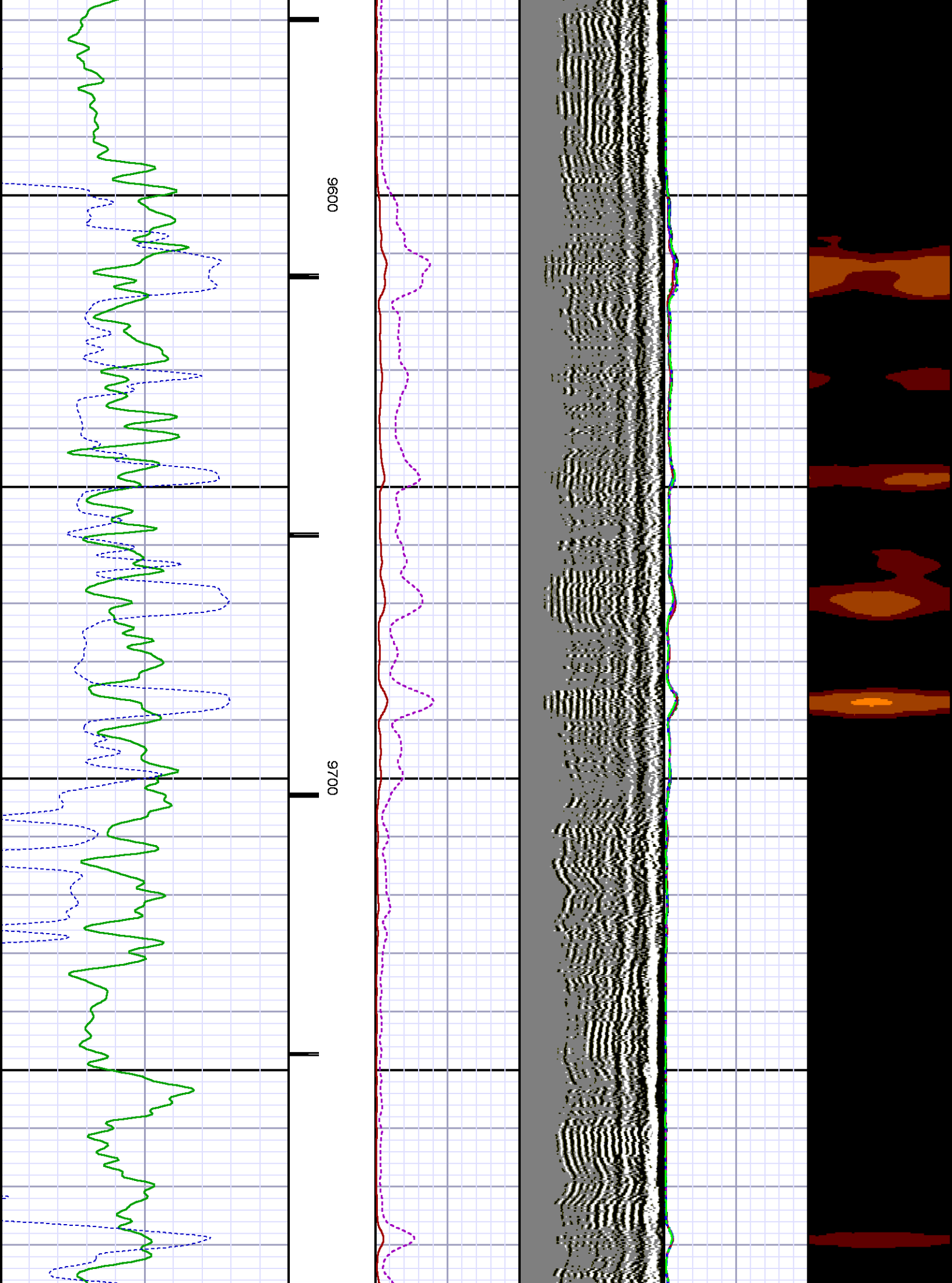


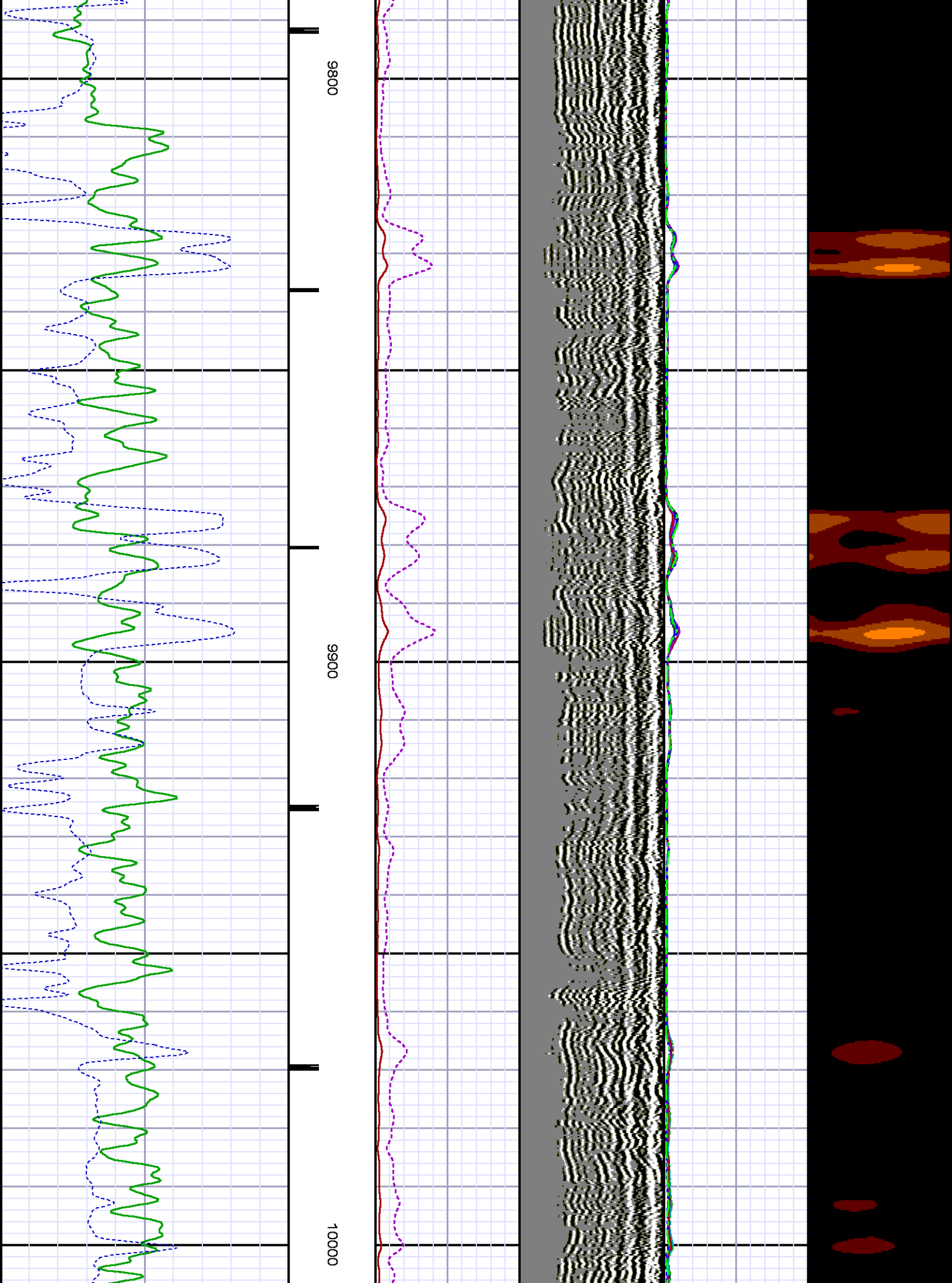


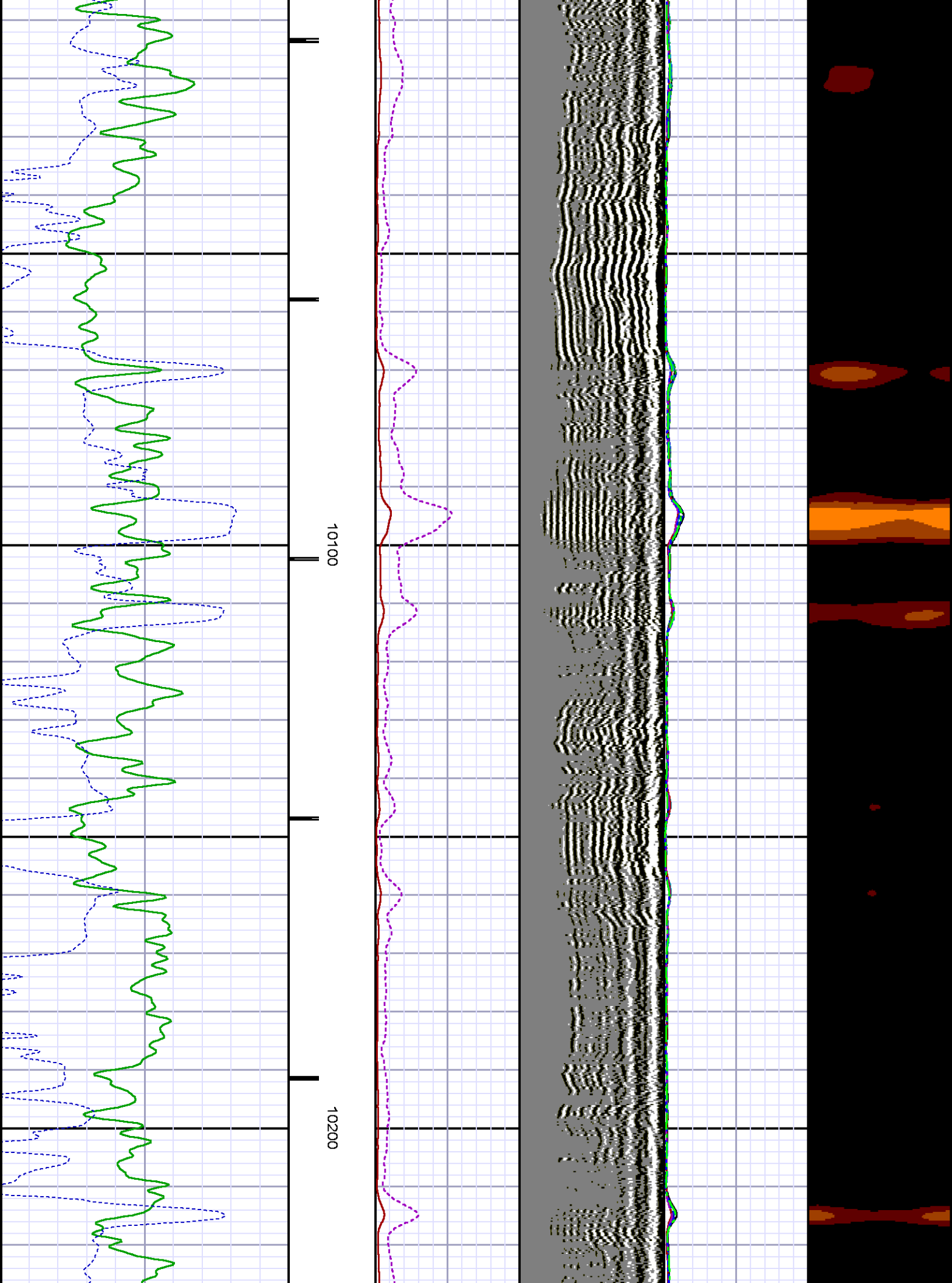




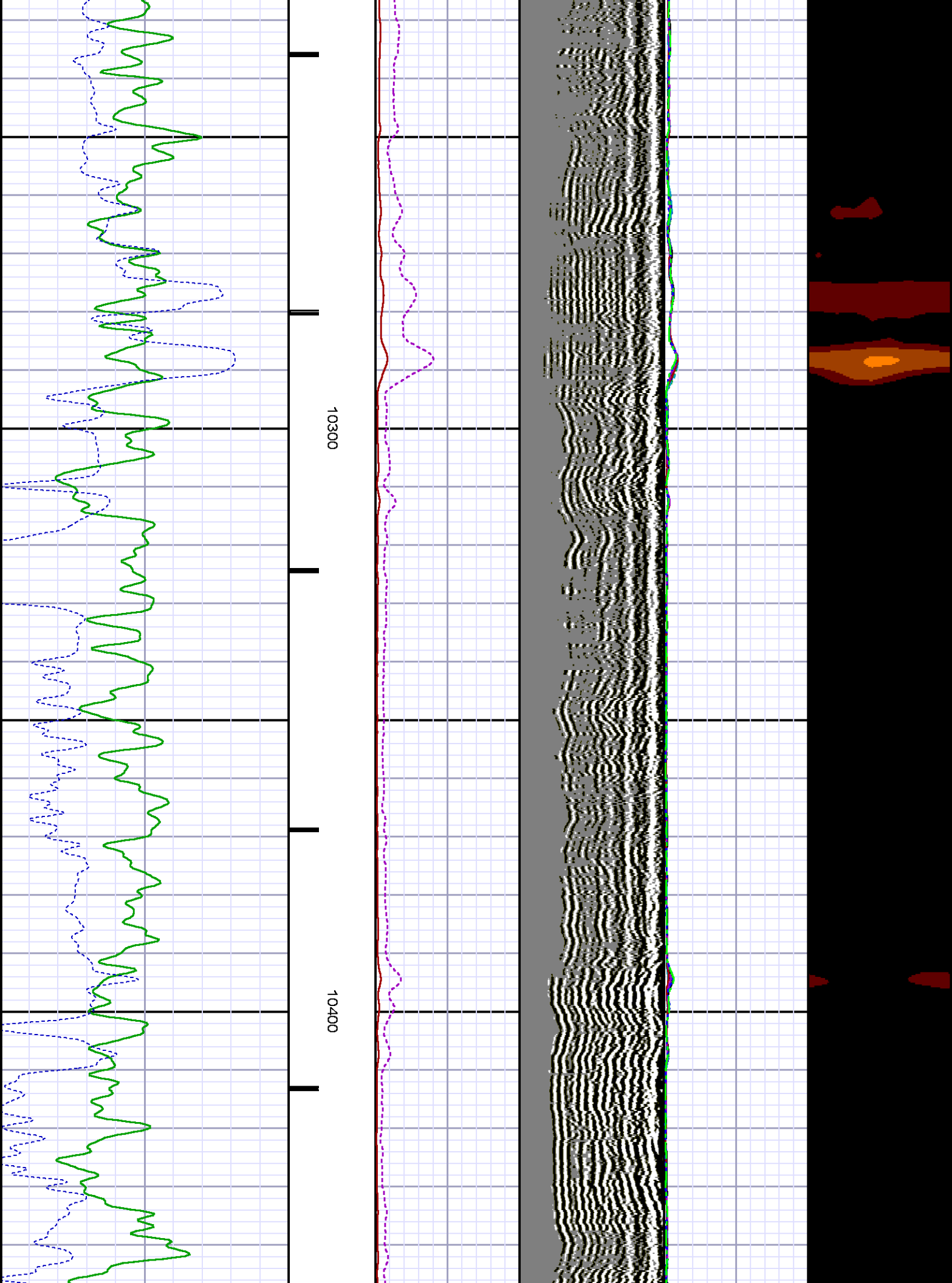




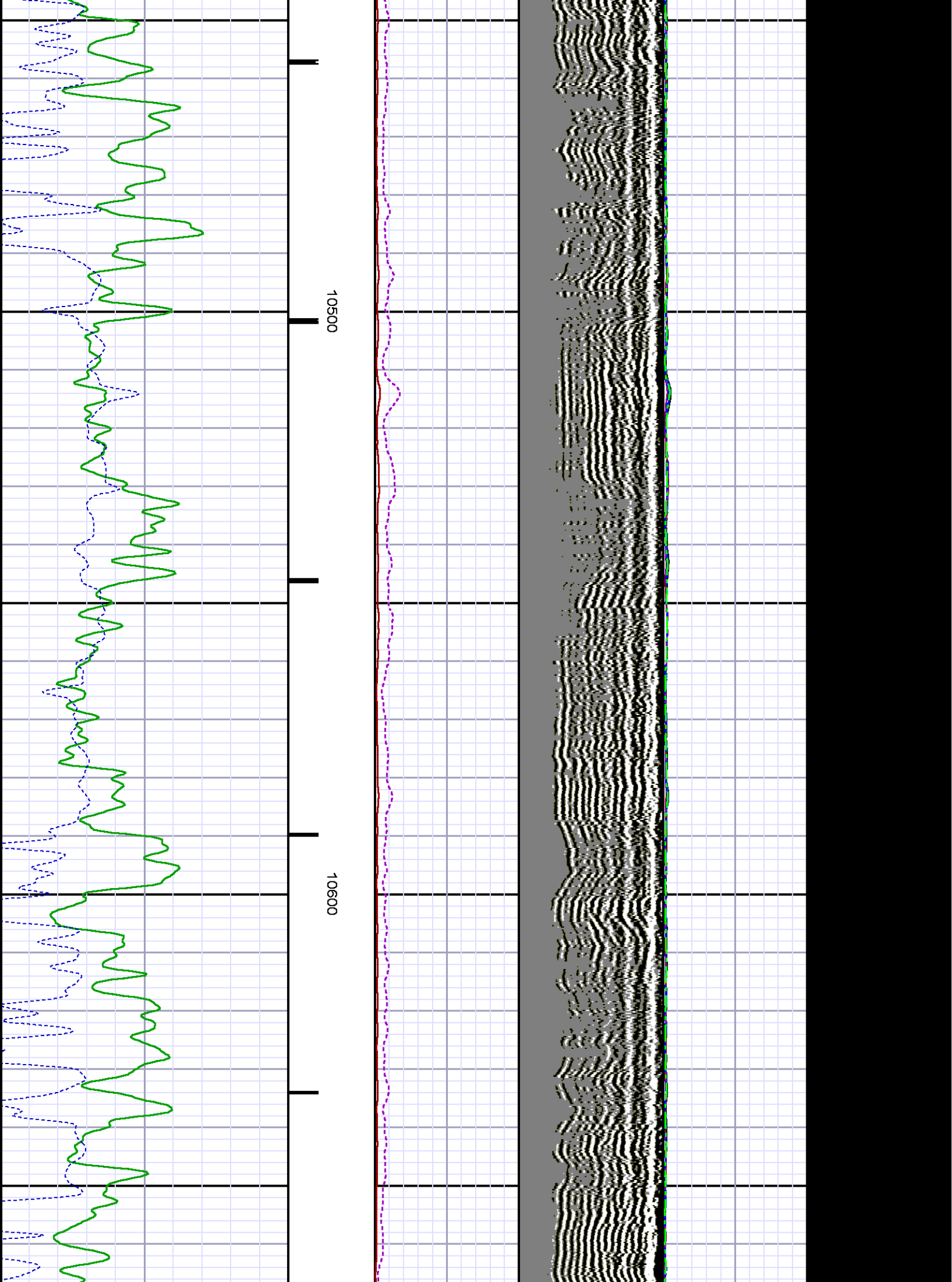


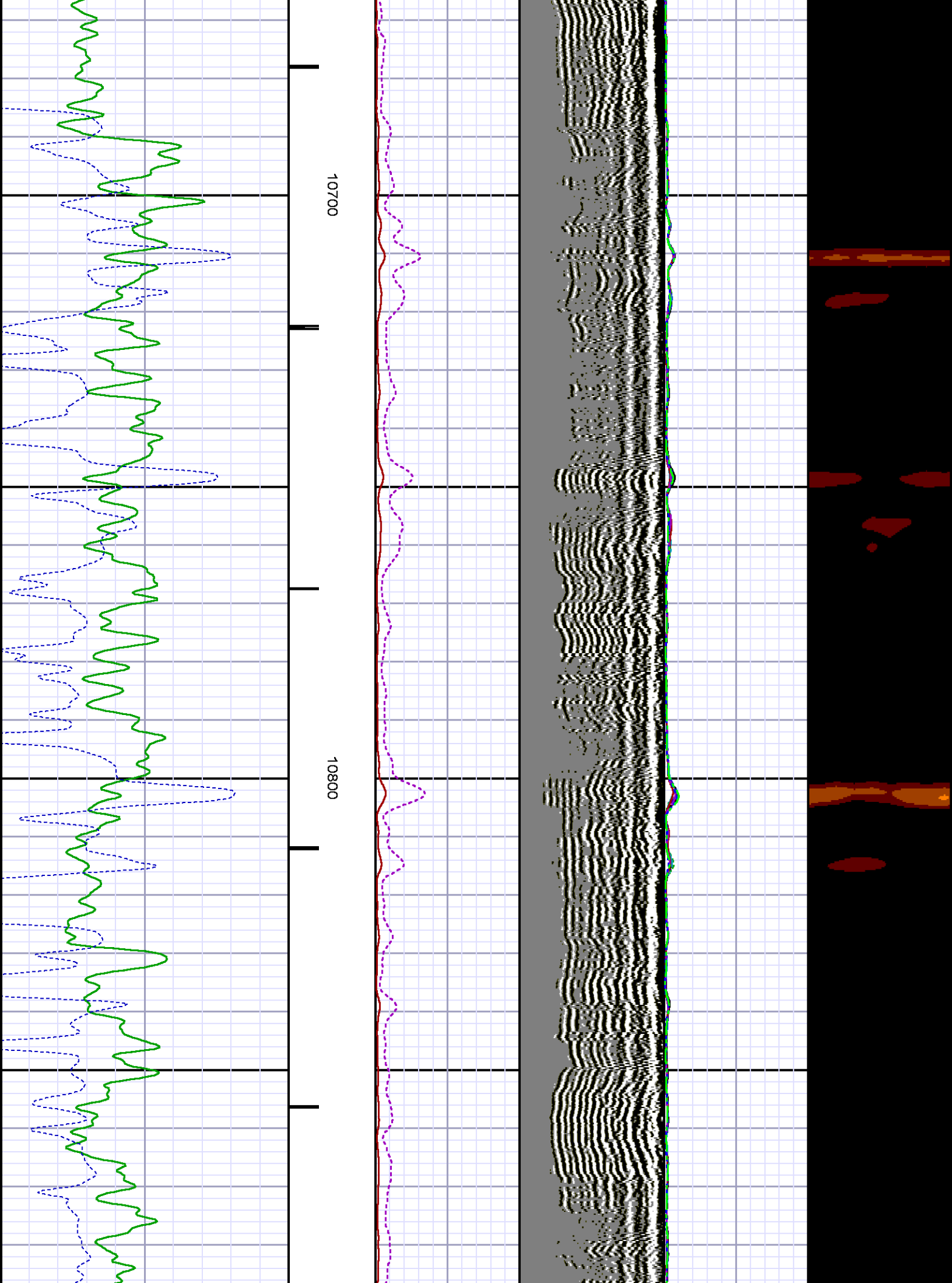


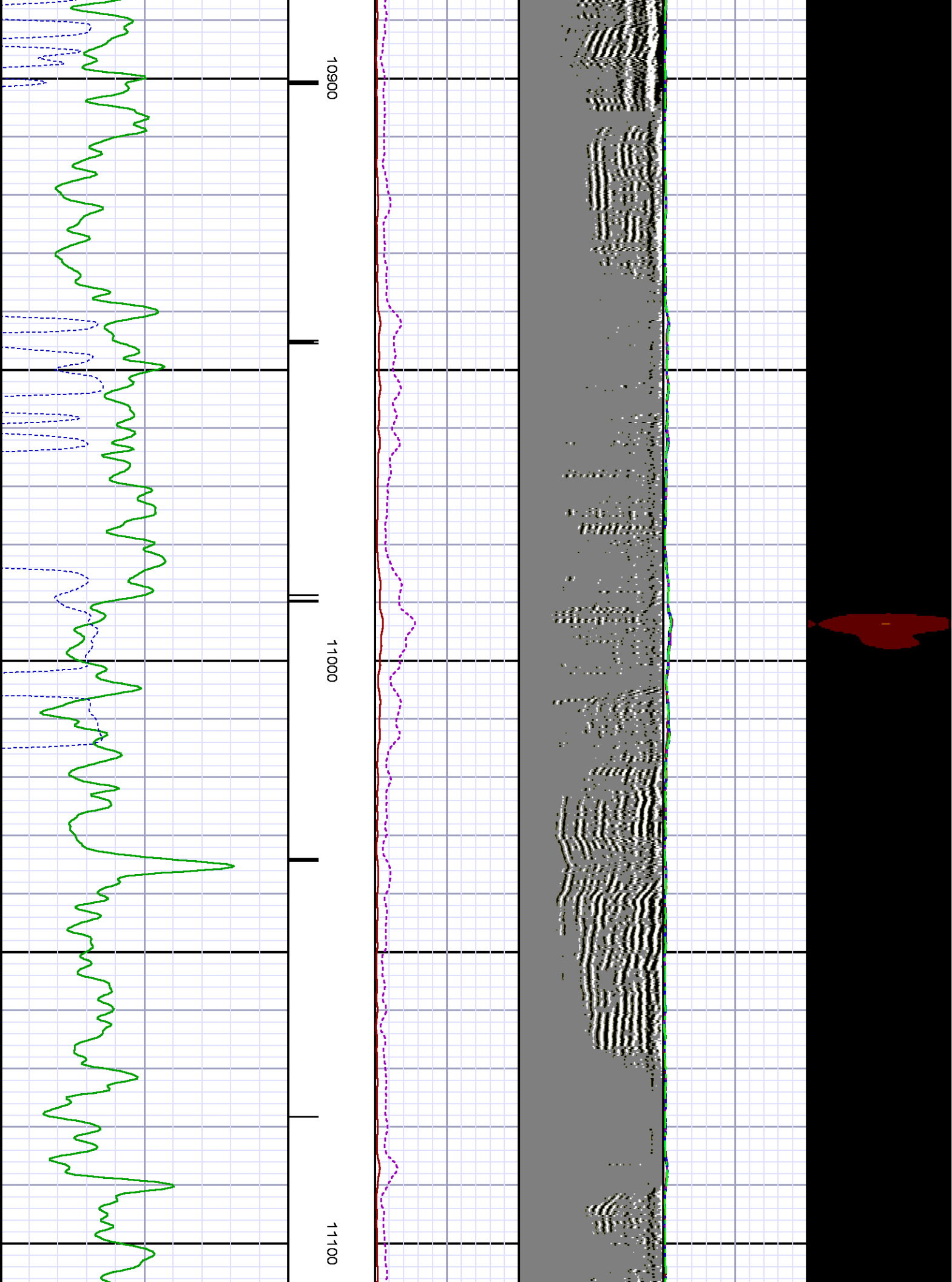


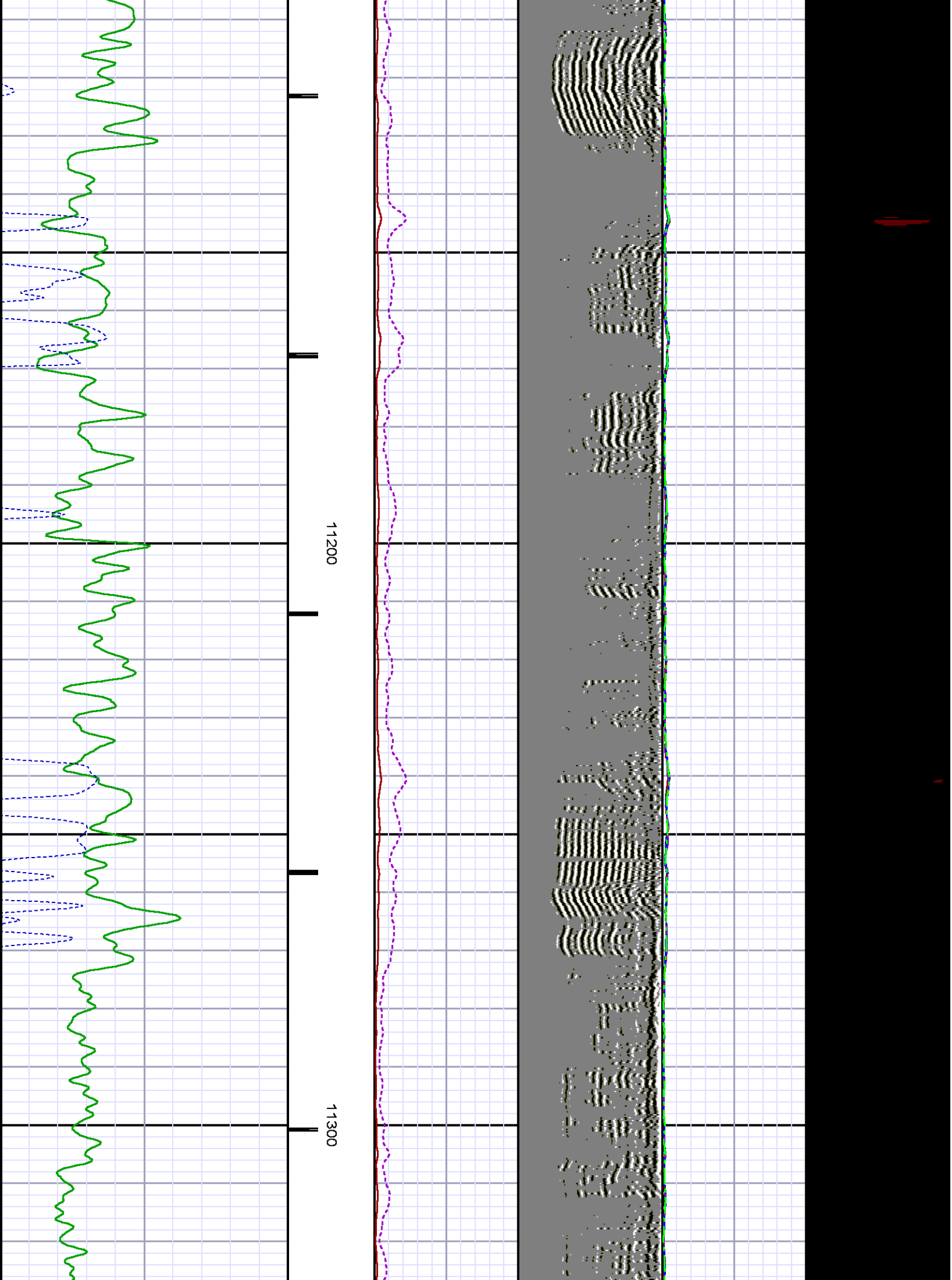


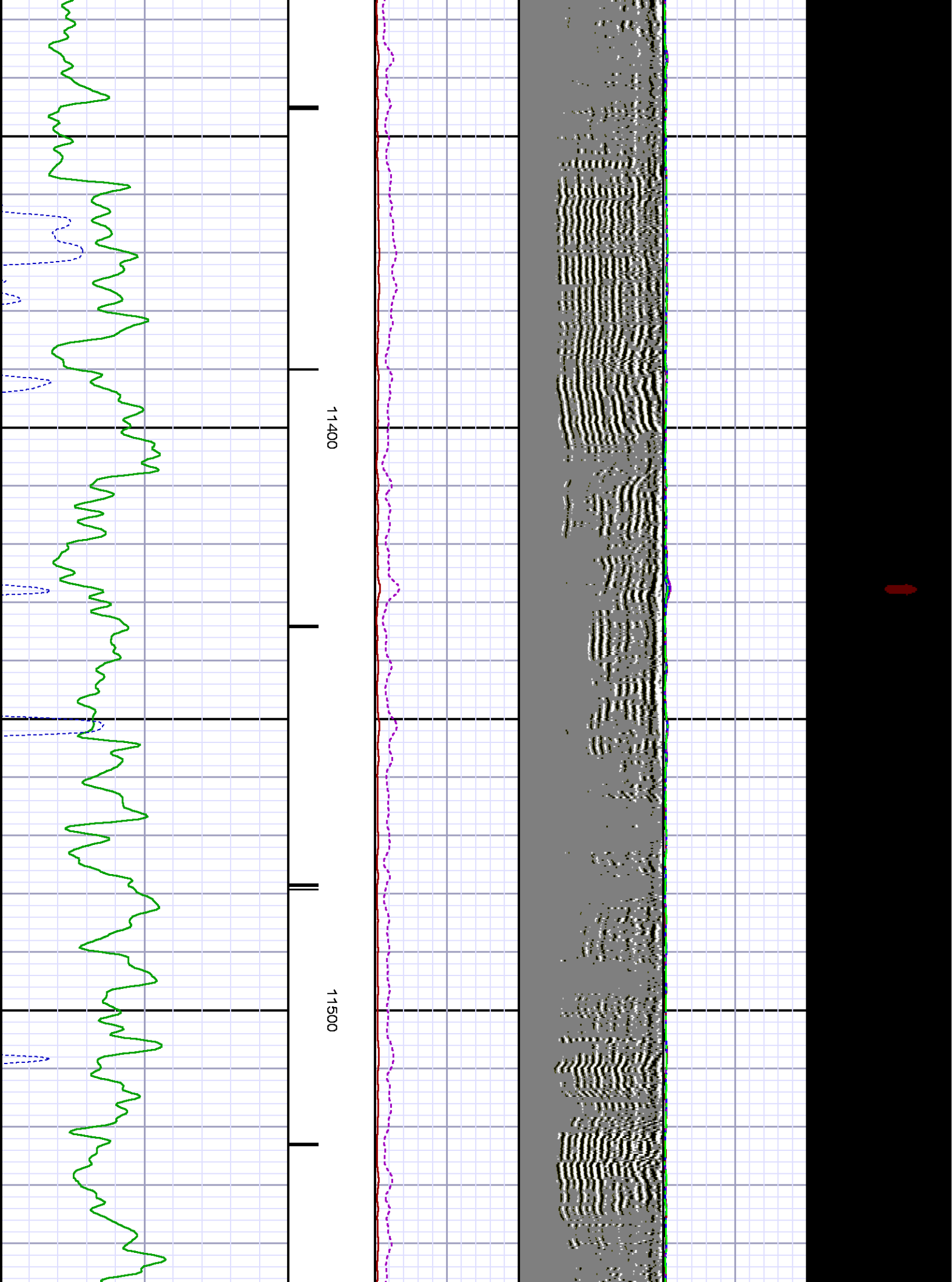


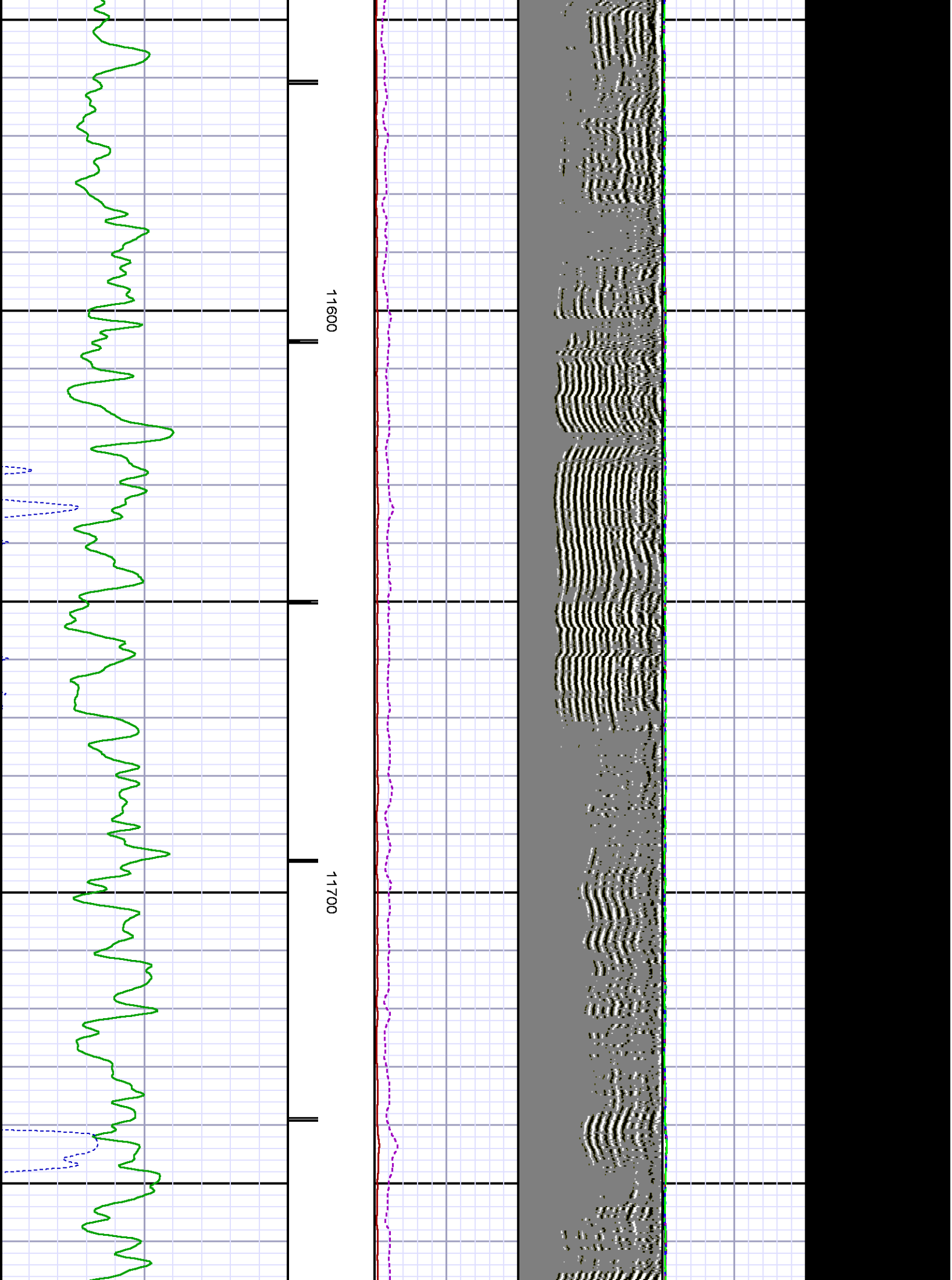




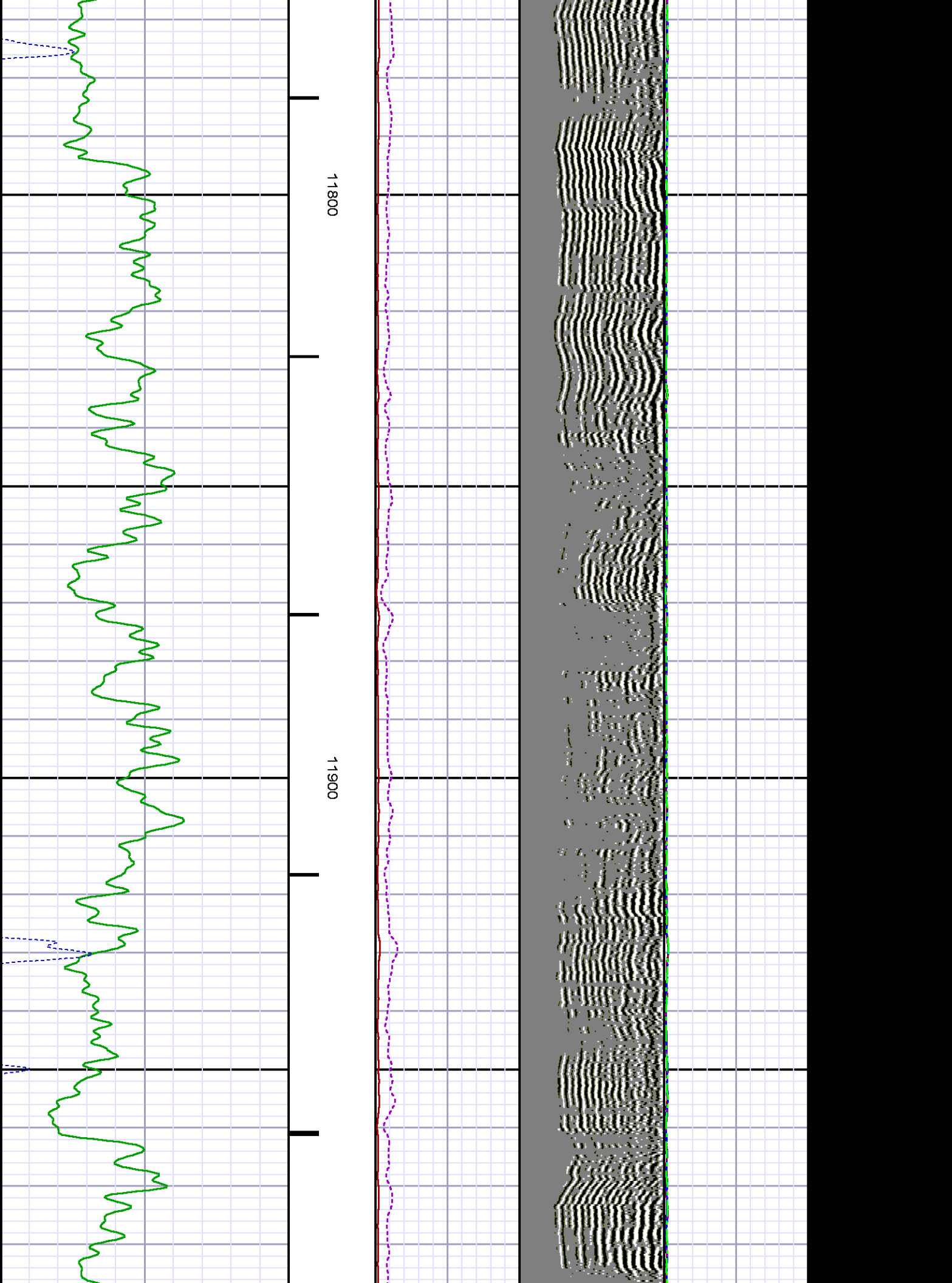


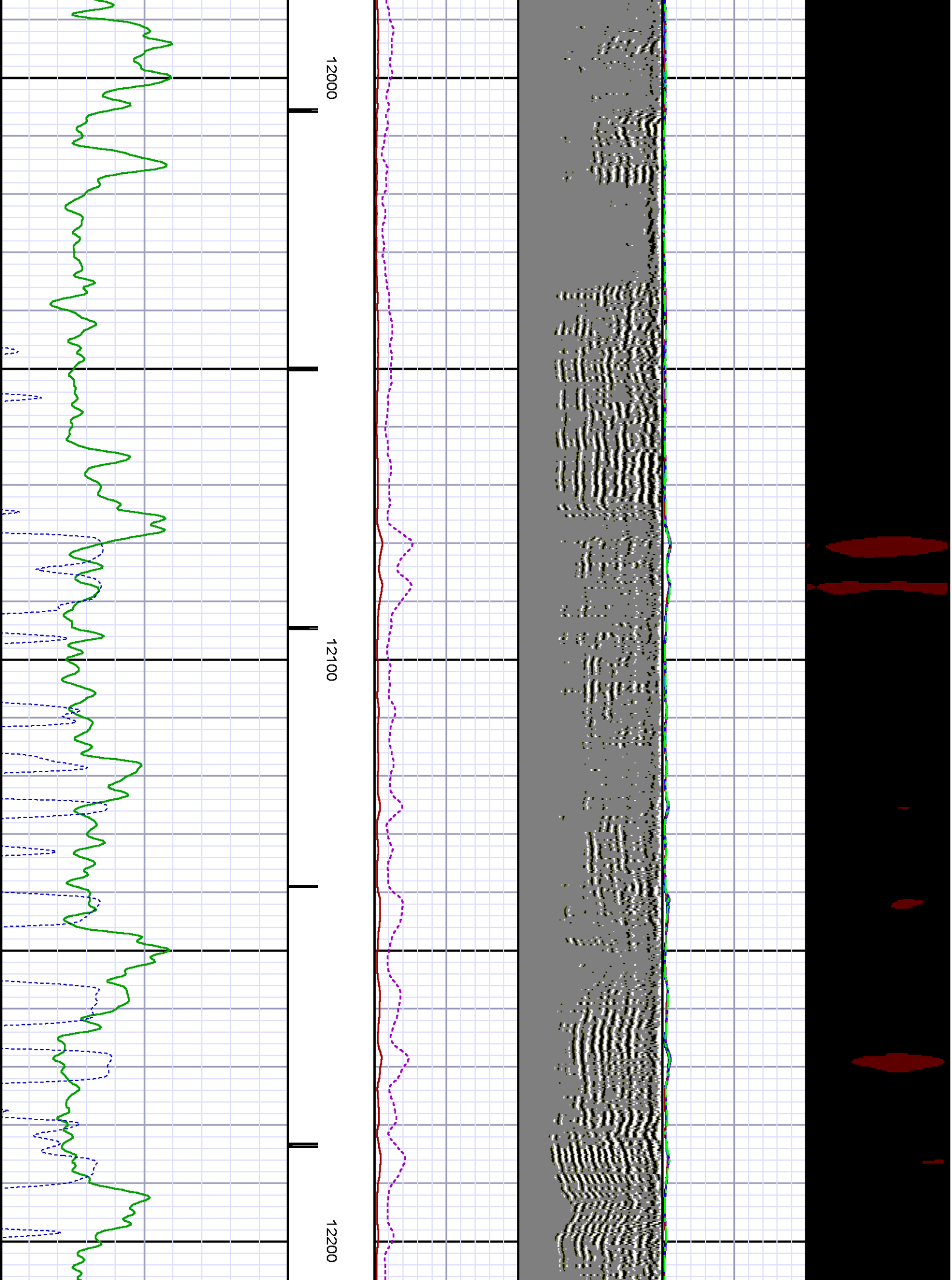


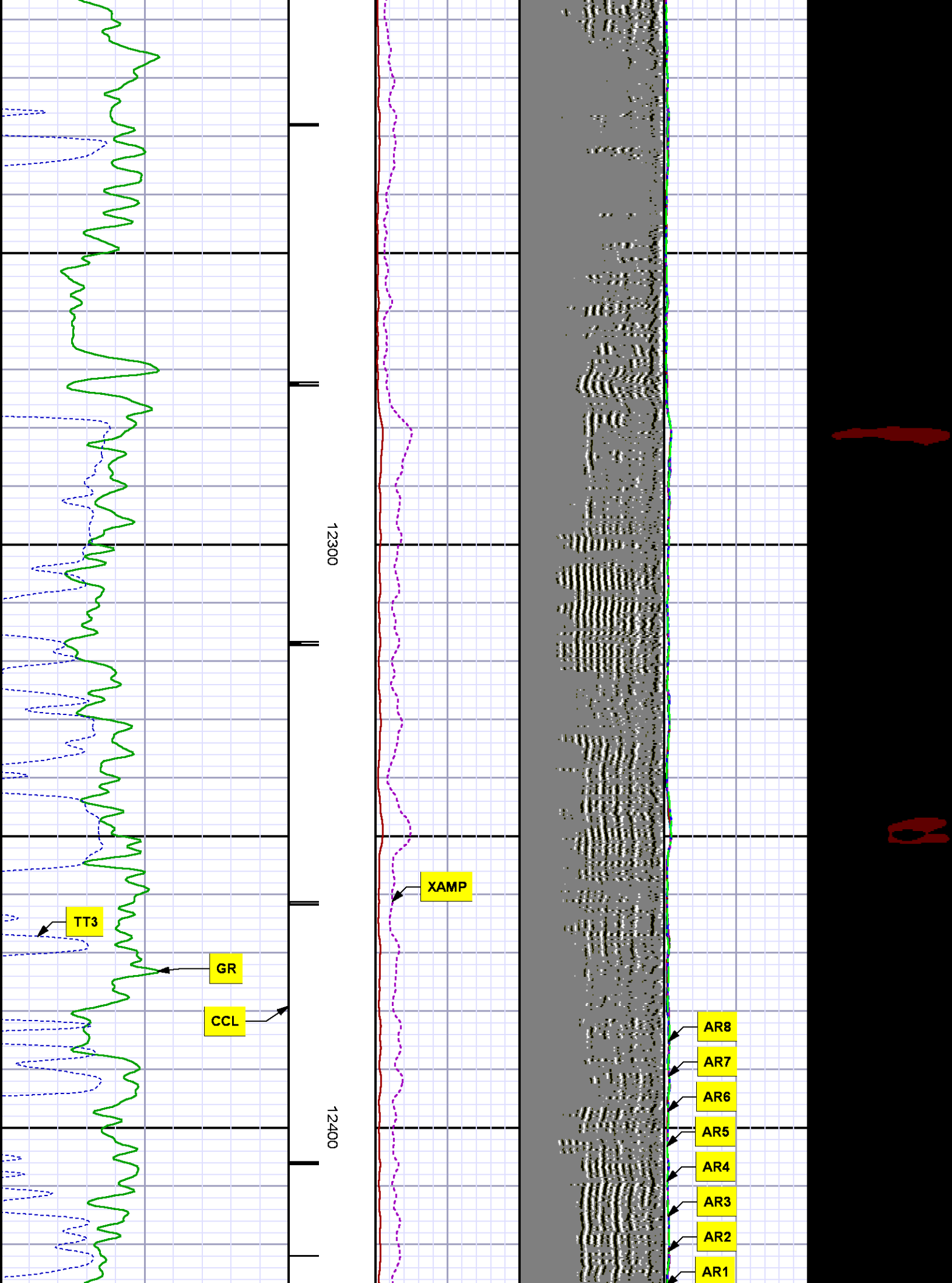


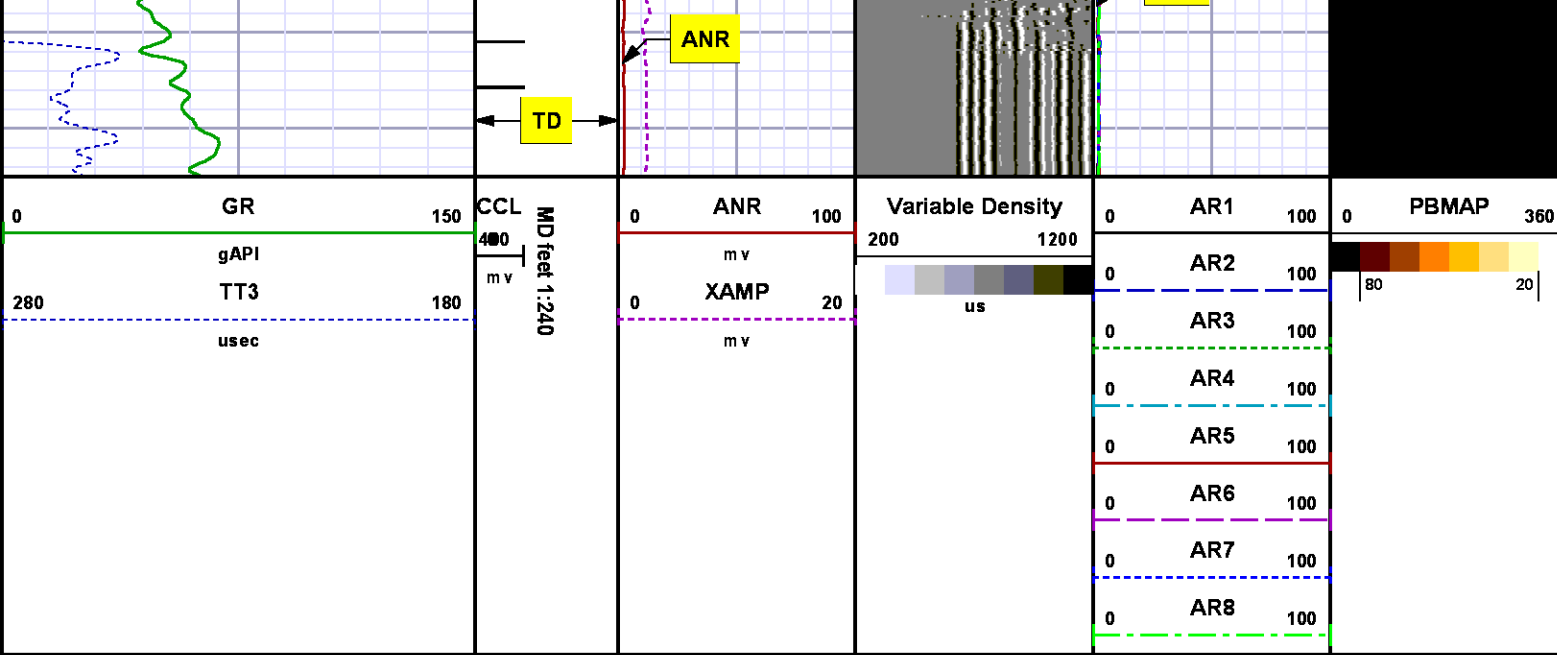












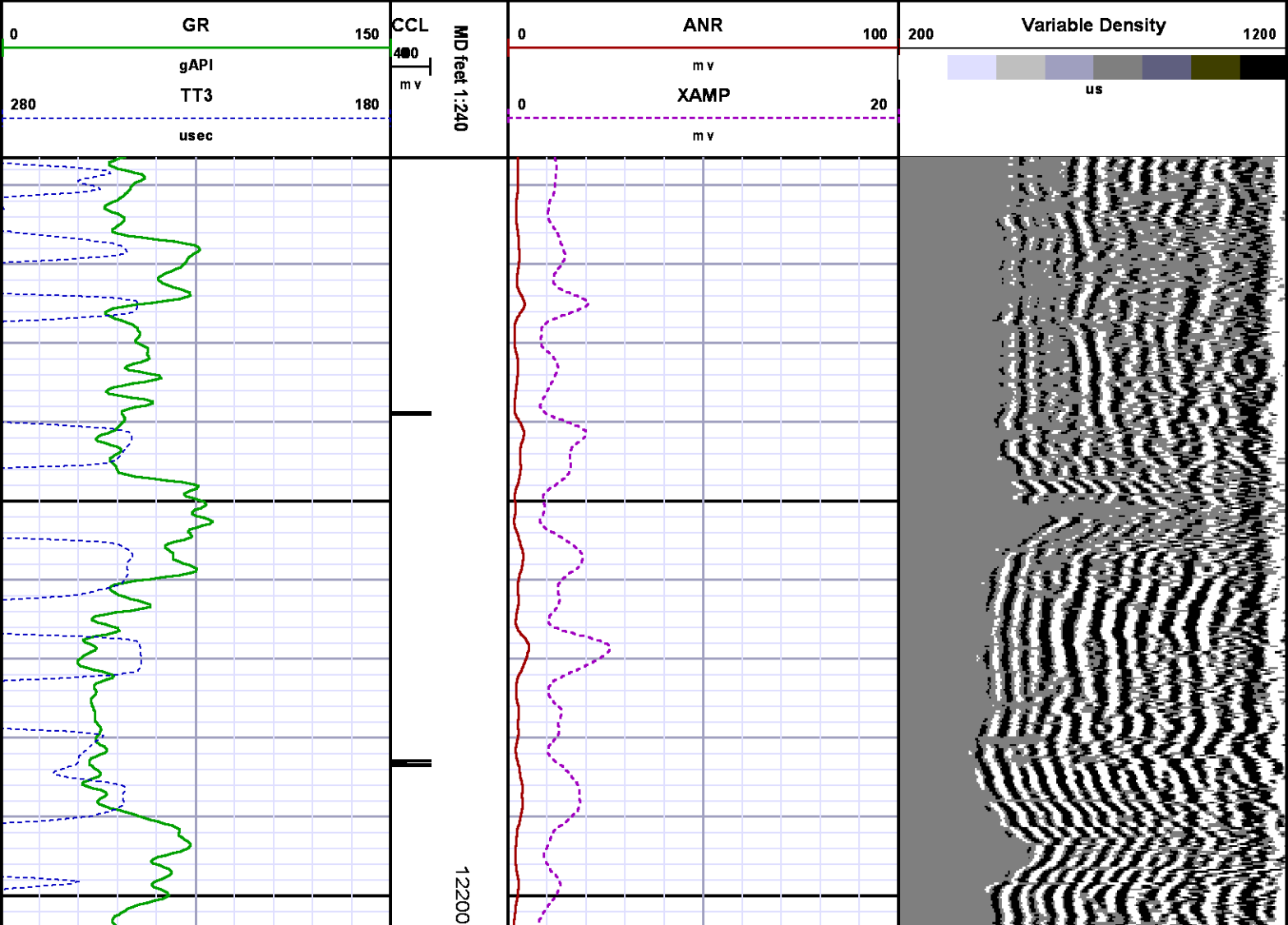
REPEAT SECTION  
0 PSI

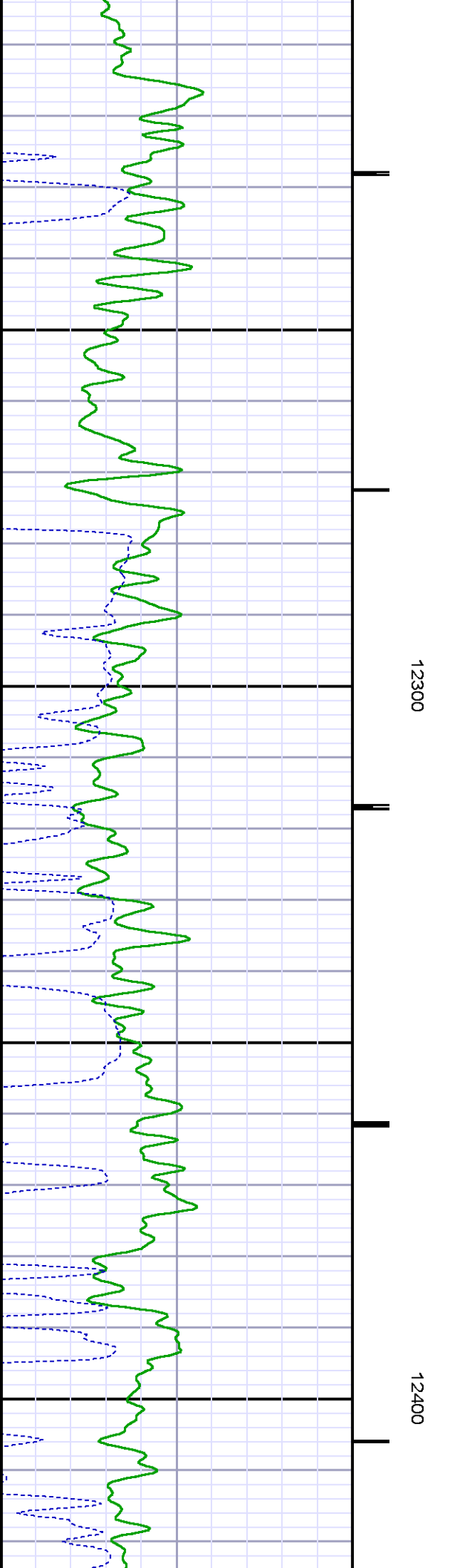
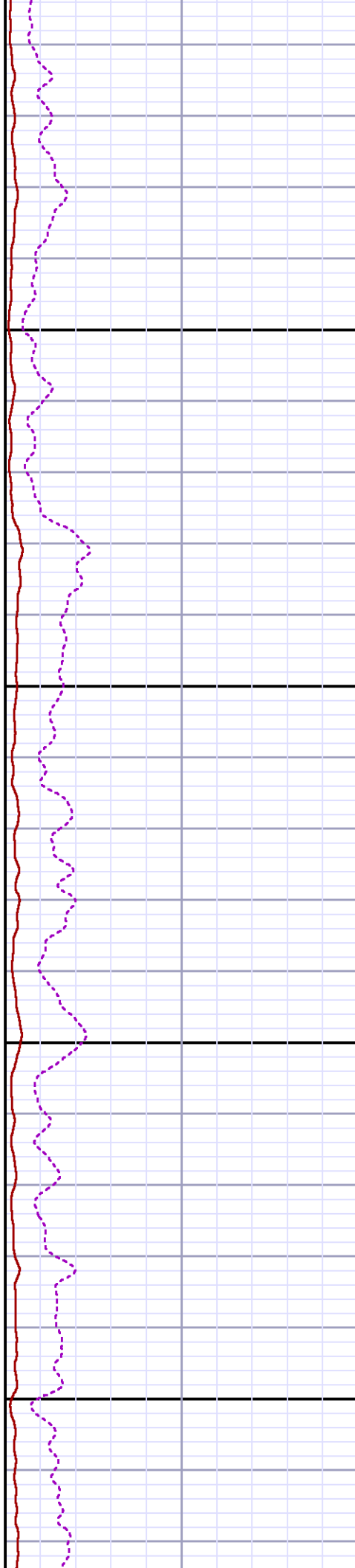
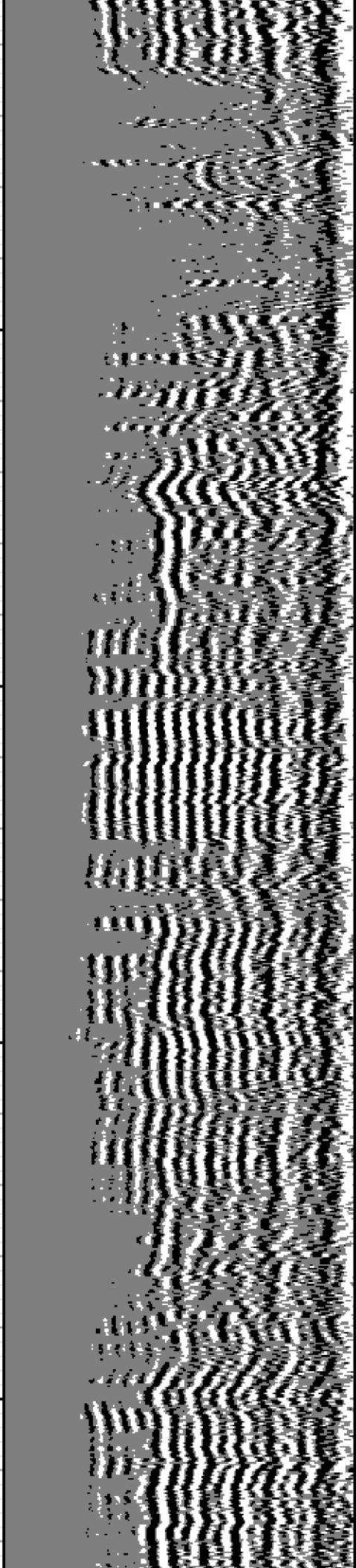
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	12106.311	12467.530
RAL	Amp Gate Start Near	195.000	usec	12106.311	12467.530
RAL	Amp Gate Start Radial	195.000	usec	12106.311	12467.530
RAL	Amp Gate Width Far	25.000	usec	12106.311	12467.530
RAL	Amp Gate Width Near	25.000	usec	12106.311	12467.530
RAL	Amp Gate Width Radial	25.000	usec	12106.311	12467.530
RAL	casing od	4.500	inches	12106.311	12467.530
RAL	casing wt	11.600	lbm/ft	12106.311	12467.530
RAL	FB Start Far	291.900	usec	12106.311	12467.530
RAL	FB Start Near	180.000	usec	12106.311	12467.530
RAL	FB Start Radial	180.000	usec	12106.311	12467.530
RAL	FB Thresh Far	15.000	mv	12106.311	12467.530
RAL	FB Thresh Near	10.000	mv	12106.311	12467.530
RAL	FB Thresh Radial	10.000	mv	12106.311	12467.530
RAL	Fluid Travel Time	200.000	usec/ft	12106.311	12467.529

DEPTH OFFSETS  
(for Acquired Curves)

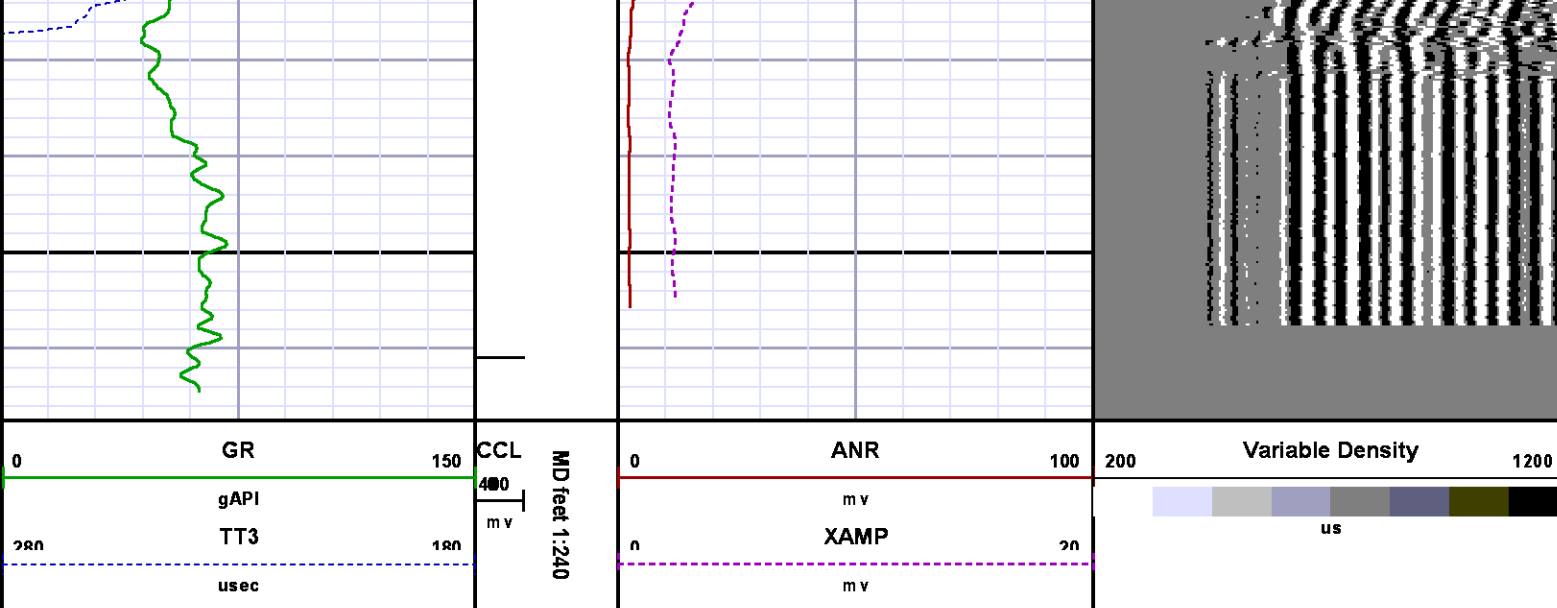
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

Created by : RAL, v4.8.008  
Plotted by : PlotMgr, v5.4.504  
Company : WPX ENERGY  
Well : FEDERAL RGU 423-23-198  
File Name : d:\welldata\wpx energy\rgu 423-23-198\423ral\repeat.xtf  
Mode : PlotMgr 5.4.504  
Interval : 12106.53 - 12467.53 feet UP  
Created : 7/5/2013 12:00:17 PM









## CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calven\RALSHP\028JU2\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jul 03 10:00:05 2013 TOOL SERIES: 1426XA ASSET: 028 SEQ: JU2

Tool Delay [u sec] -61.00 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	218	216	30	166	25	0.612	100.00	0.20
3 Ft. Receiver	217	216	30	168	18	1.469	100.00	0.20
5 Ft. Receiver	351	350	30	211	25	0.146	150.00	0.16
Radial #1	217	216	30	181	12	2.274	100.00	0.20
Radial #2	217	216	30	181	12	1.304	100.00	0.20
Radial #3	217	216	30	181	12	1.104	100.00	0.20
Radial #4	217	216	30	181	12	0.184	100.00	0.20
Radial #5	216	216	30	181	12	-1.008	100.00	0.20
Radial #6	215	216	30	181	12	0.145	100.00	0.20
Radial #7	215	216	30	181	12	-0.383	100.00	0.19
Radial #8	218	216	30	181	12	2.208	100.00	0.20

# RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\028JU2\_fid.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jul 03 10:03:10 2013 TOOL SERIES: 1426XA ASSET: 028 SEQ: JU2

Tool Delay [usec] -61.00 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	0.100	0.000	1.00	100.000
3 Ft. Receiver	195	25	-0.182			
5 Ft. Receiver	325	25	-0.389			
Radial #1	195	25	-0.168			
Radial #2	195	25	-0.266			
Radial #3	195	25	-0.298			
Radial #4	195	25	-0.162			
Radial #5	195	25	-0.255			
Radial #6	195	25	-0.295			
Radial #7	195	25	-0.210			
Radial #8	195	25	-0.232			

# RALSHP #2

Shop Calibration: C:\case\calver\RALSHP\106JUL5\_shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 05 14:01:28 2013 TOOL SERIES: 1426XA ASSET: 106 SEQ: JUL5

Tool Delay [usec] -61.00 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	216	216	30	166	25	-0.657	100.00	0.18
3 Ft. Receiver	217	216	30	166	25	-0.900	100.00	0.17
5 Ft. Receiver	325	324	30	250	25	0.459	150.00	0.19
Radial #1	216	216	30	166	25	-1.915	100.00	0.17
Radial #2	216	216	30	166	25	-0.445	100.00	0.17
Radial #3	217	216	30	166	25	-0.565	100.00	0.17
Radial #4	217	216	30	166	25	-0.710	100.00	0.18
Radial #5	217	216	30	166	25	-0.069	100.00	0.18
Radial #6	216	216	30	166	25	-0.748	100.00	0.18
Radial #7	216	216	30	166	25	-0.806	100.00	0.18
Radial #8	217	216	30	166	25	-0.524	100.00	0.17

# RALFLD #2

Wellsite Calibration: C:\case\calver\RALFLD\106JUL5 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 05 14:04:11 2013 TOOL SERIES: 1426XA ASSET: 106 SEQ: JUL5

Tool Delay [usec] -61.00 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	-0.064	0.000	1.00	100.000
3 Ft. Receiver	195	25	-1.653			
5 Ft. Receiver	305	25	-2.213			
Radial #1	195	25	-2.950			
Radial #2	195	25	-2.574			
Radial #3	195	25	-2.286			
Radial #4	195	25	-2.315			
Radial #5	195	25	-2.077			
Radial #6	195	25	-2.066			
Radial #7	195	25	-1.463			
Radial #8	195	25	-1.945			

# GAMMA RAY

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

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jun 27 10:51:00 2013 TOOL SERIES: 2459XA 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: 2459XA 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

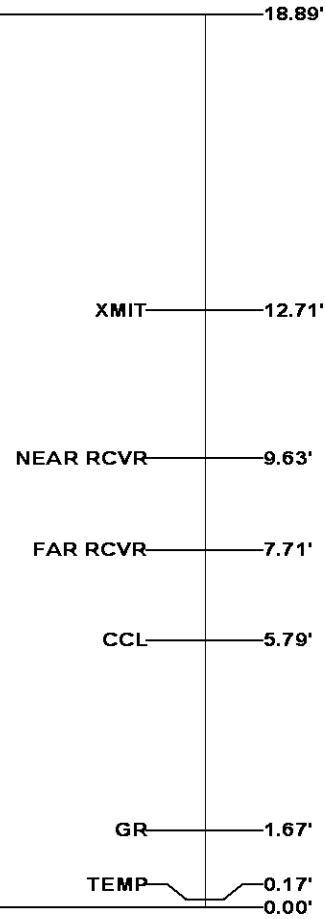
OTA SHORT CABLE HEAD

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



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



Baker Atlas

CASE

Company Well Field County	WPX ENERGY				File No:
	FEDERAL RGU 423-23-198				CH073685
	SULPHUR CREEK				API No:
	RIO BLANCO	State	COLORADO		05103117830000
Location			Elevations		
SHL: 1799' FSL x 1916' FWL			KB	6564 ft	23 1S 98W
BHL: 1954' FSL x 1898' FWL			DF		RGU 23-23-198 PAD
			GL	6543 ft	CYCLONE 29
SEC	23	TWP	1S	RGE	98W