



# RADIAL ANALYSIS BOND LOG

## Baker Atlas

File No: GH07264	Company Well Field County	WPX ENERGY YOUBERG RWF 434-23 RULISON GARFIELD	State COLORADO
API No: 06046182540000	Location SHL: 1349' FSL, 2306' FEL BHL: 219' FSL, 2097' FEL SEC 23 TWP 6S RGE 94W		Other Services RPM
23 6S 94W RWF 33-23 PAD NABORS 677			
Permanent Datum Log Measured From Drill Measured From	OL KB KELLY BUSHING	Elevation 5501.5 ft 26 ft Above P. D.	Elevations KB 5527.5 ft DF GL 5501.5 ft

Date	28/MAY/13			
Run	ONE			
Service Order	675090			
Depth Driller	8176 ft			
Depth Logger	8148 ft			
Bottom Logged Interval	8145 ft			
Top Logged Interval	26 ft			
Time Started	1400			
Time Finished	1730			
Operator Rig Time	3.5 HRS			
Type of Fluid in Hole	WATER			
Fluid Density	NA			
Salinity	NA			
Fluid Level	76 ft			
Logged Cement Top	NA			
Wellhead Pressure	0 psi			
Maximum Hole Deviation	NA			
Nominal Logging Speed	45 fpm			
Maximum Recorded Temperature	230 degF			
Reference Log	NONE			
Reference Log Date	NA			
Equipment No.	Location	GRAND JCT		
Recorded By	FLOYD RENEAU			
Witnessed By	JEFF DUCY			

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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	1115 ft
8.75 in	1115 ft	8176 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1115 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8176 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 12 feet.
Logged with zero PSI at wellhead.
BHT = 230°
SJ = 4816'-4840'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10404539	CENT
1	1	GRICCL	1355XA	10580209	CENT

PRIMARY PRESENTATION

0 PSI

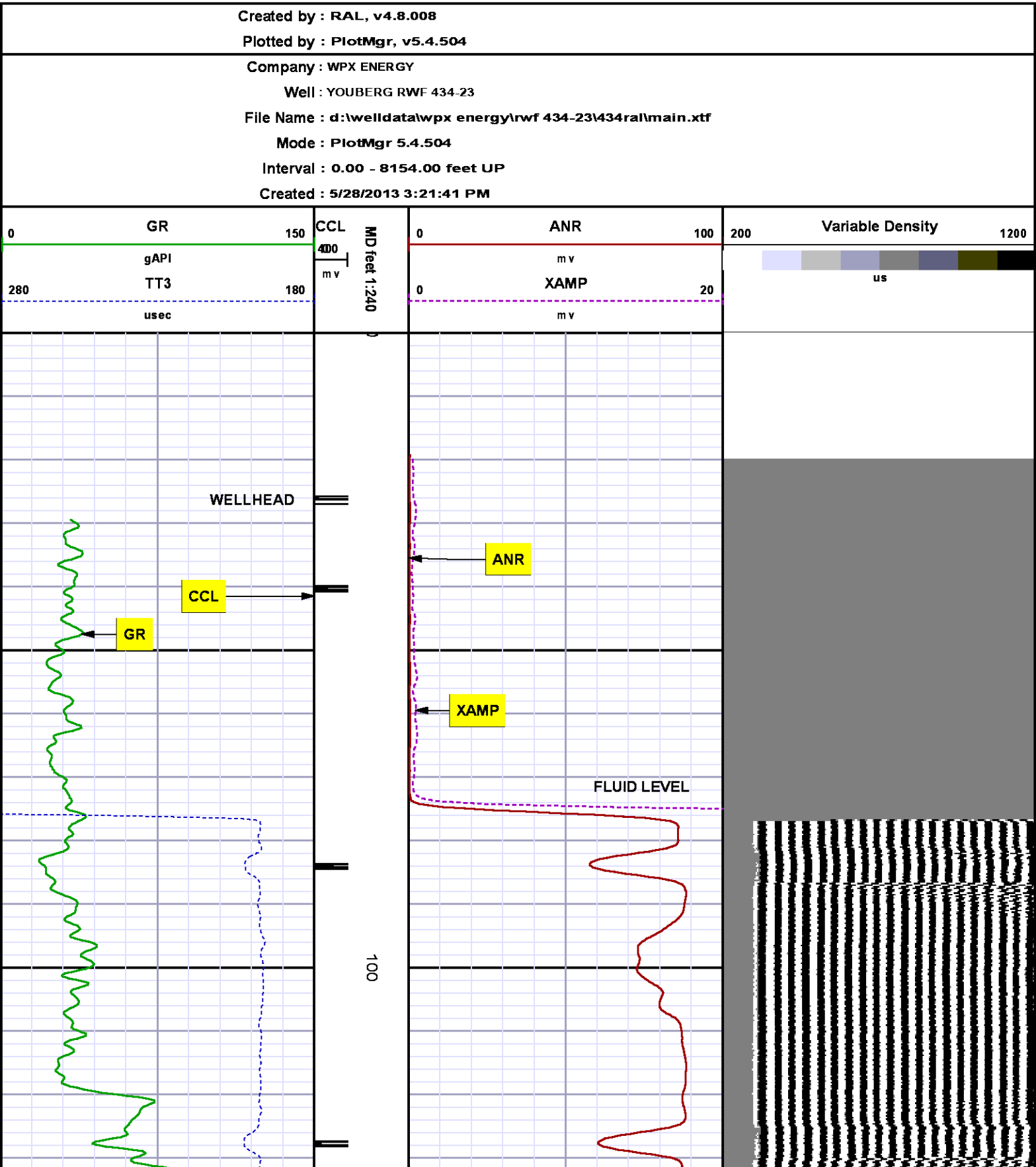
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	29.831	8167.500
RAL	Amp Gate Start Near	195.000	usec	29.831	8167.500
RAL	Amp Gate Start Radial	195.000	usec	29.831	8167.500
RAL	Amp Gate Width Far	25.000	usec	29.831	8167.500
RAL	Amp Gate Width Near	25.000	usec	29.831	8167.500
RAL	Amp Gate Width Radial	25.000	usec	29.831	8167.500
RAL	casing od	4.500	inches	29.831	8167.500
RAL	casing wt	11.600	lbm/ft	29.831	8167.500
RAL	FB Start Far	291.900	usec	29.831	8167.500
RAL	FB Start Near	180.000	usec	29.831	8167.500
RAL	FB Start Radial	180.000	usec	29.831	8167.500
RAL	FB Thresh Far	10.000	mv	29.831	8167.500
RAL	FB Thresh Near	4.000	mv	29.831	8167.500
RAL	FB Thresh Radial	4.000	mv	29.831	8167.500
RAL	Fluid Travel Time	200.000	usec/ft	29.831	8167.500

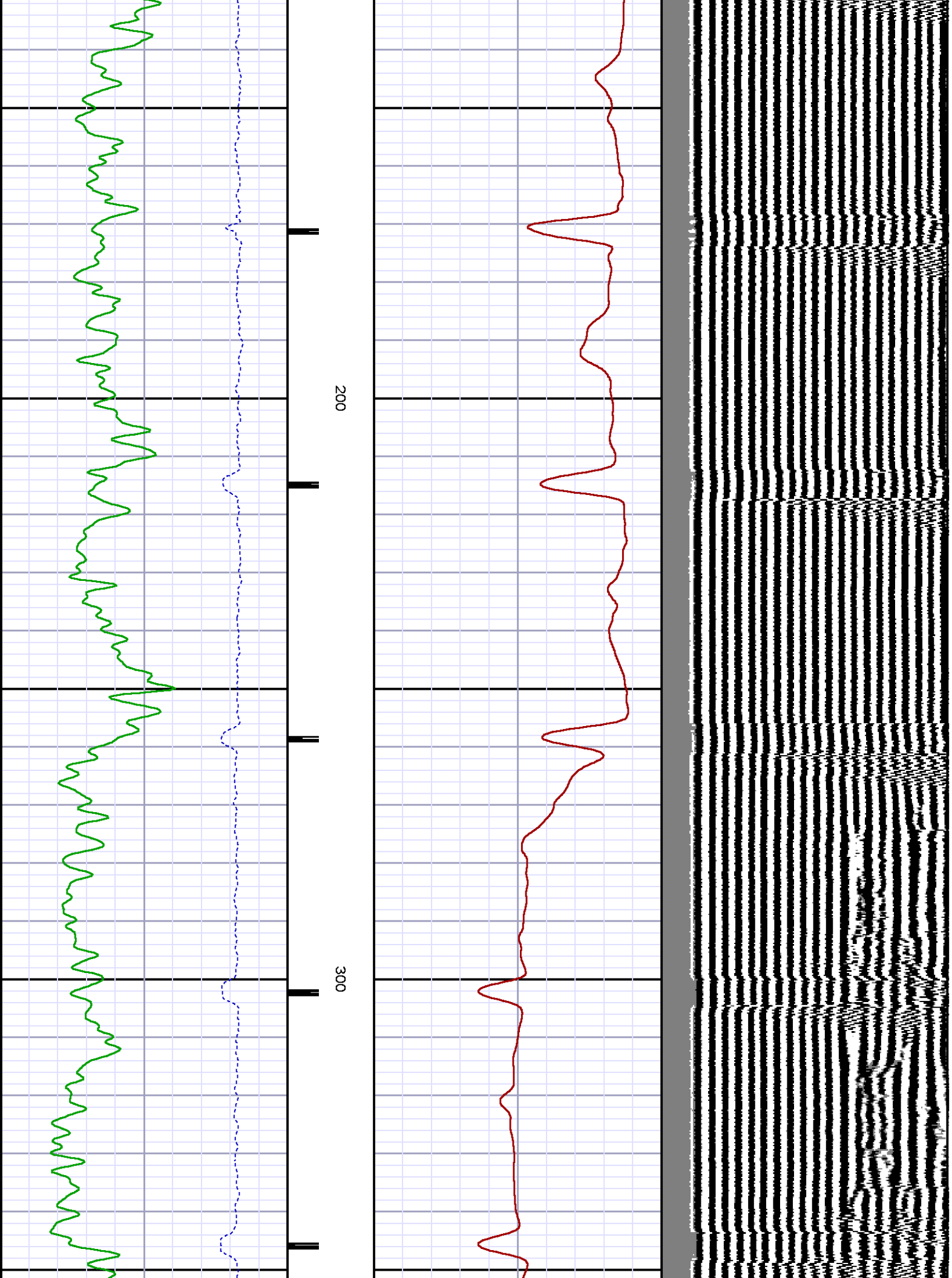
DEPTH OFFSETS

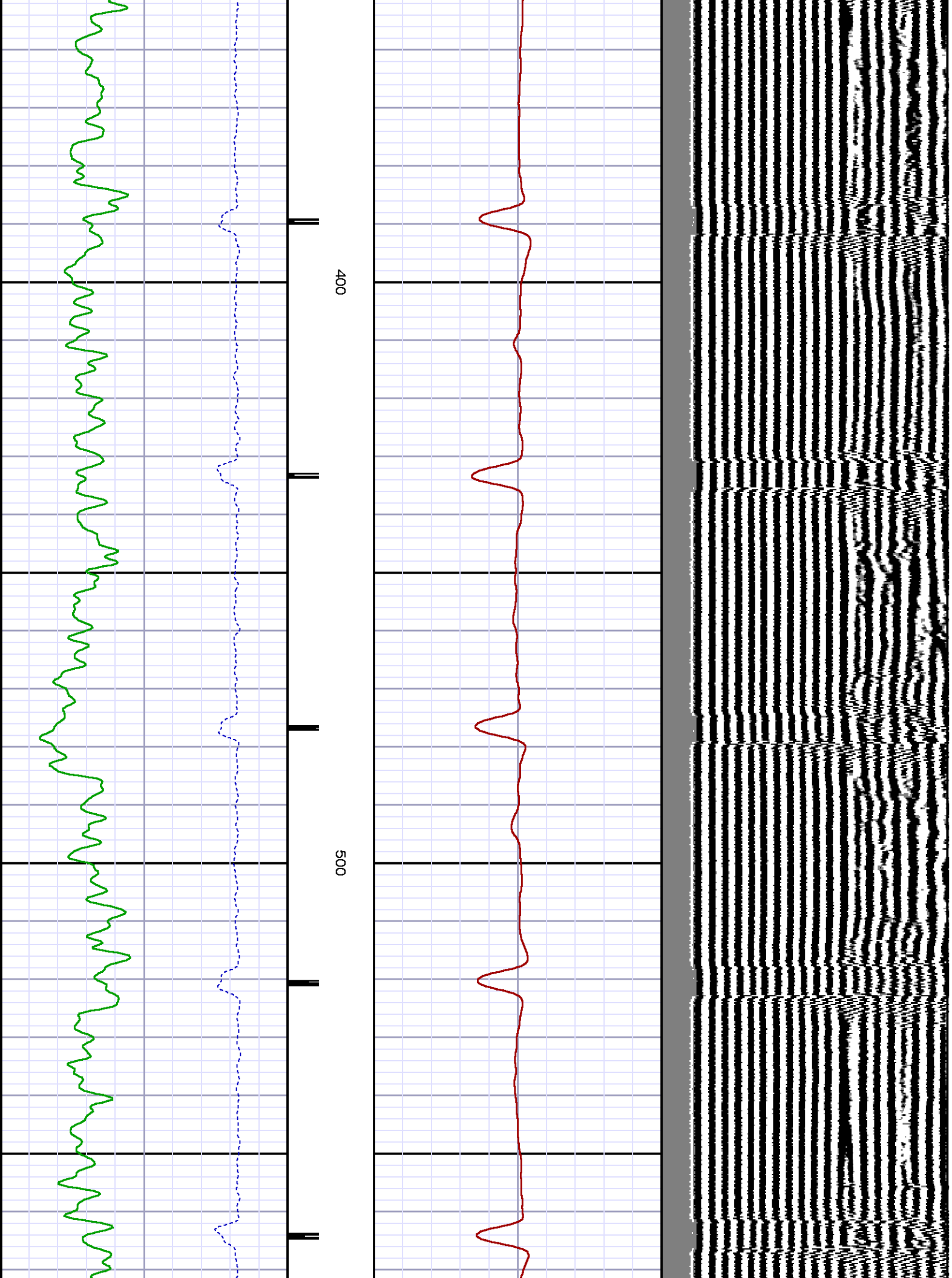
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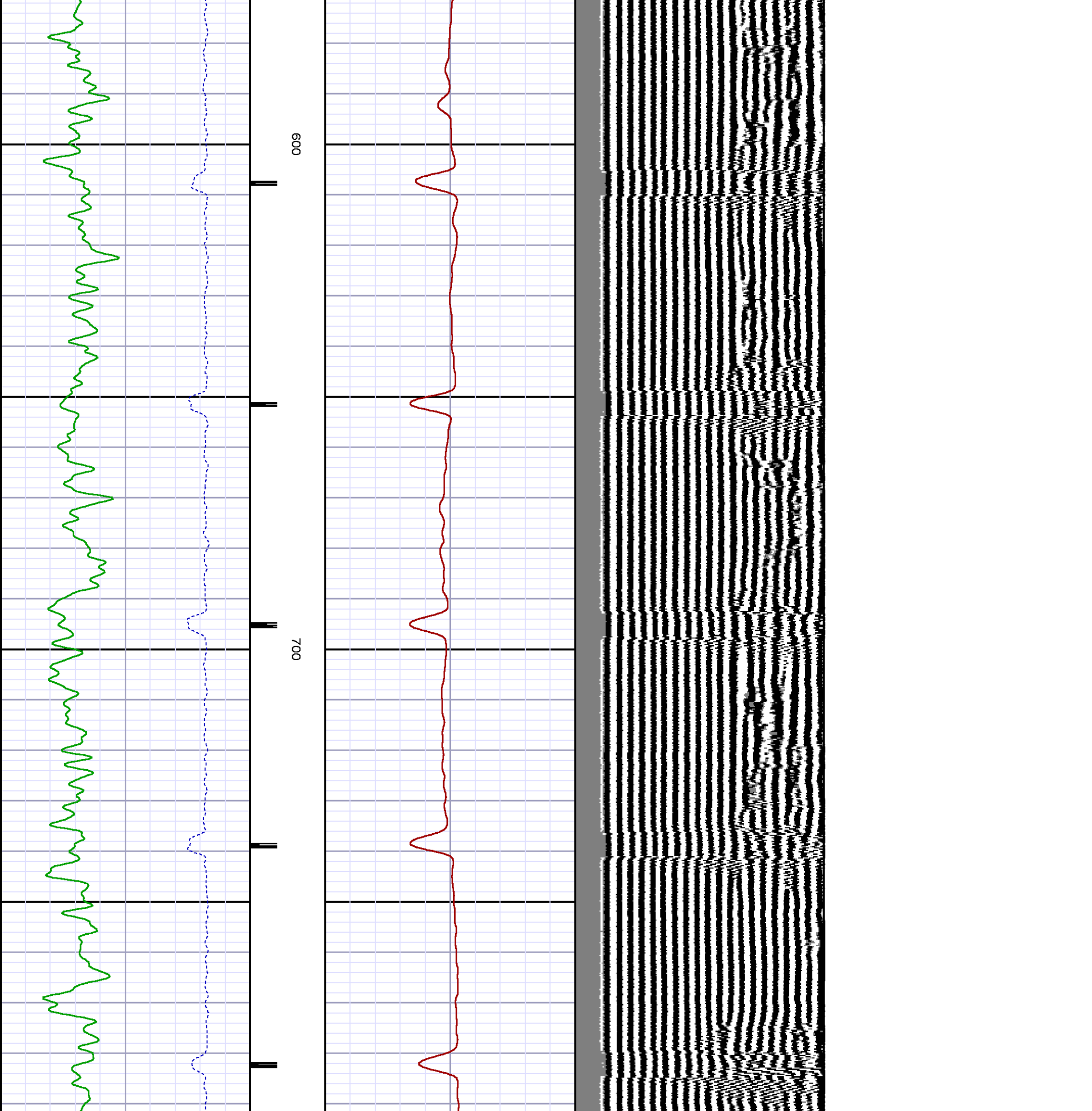
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

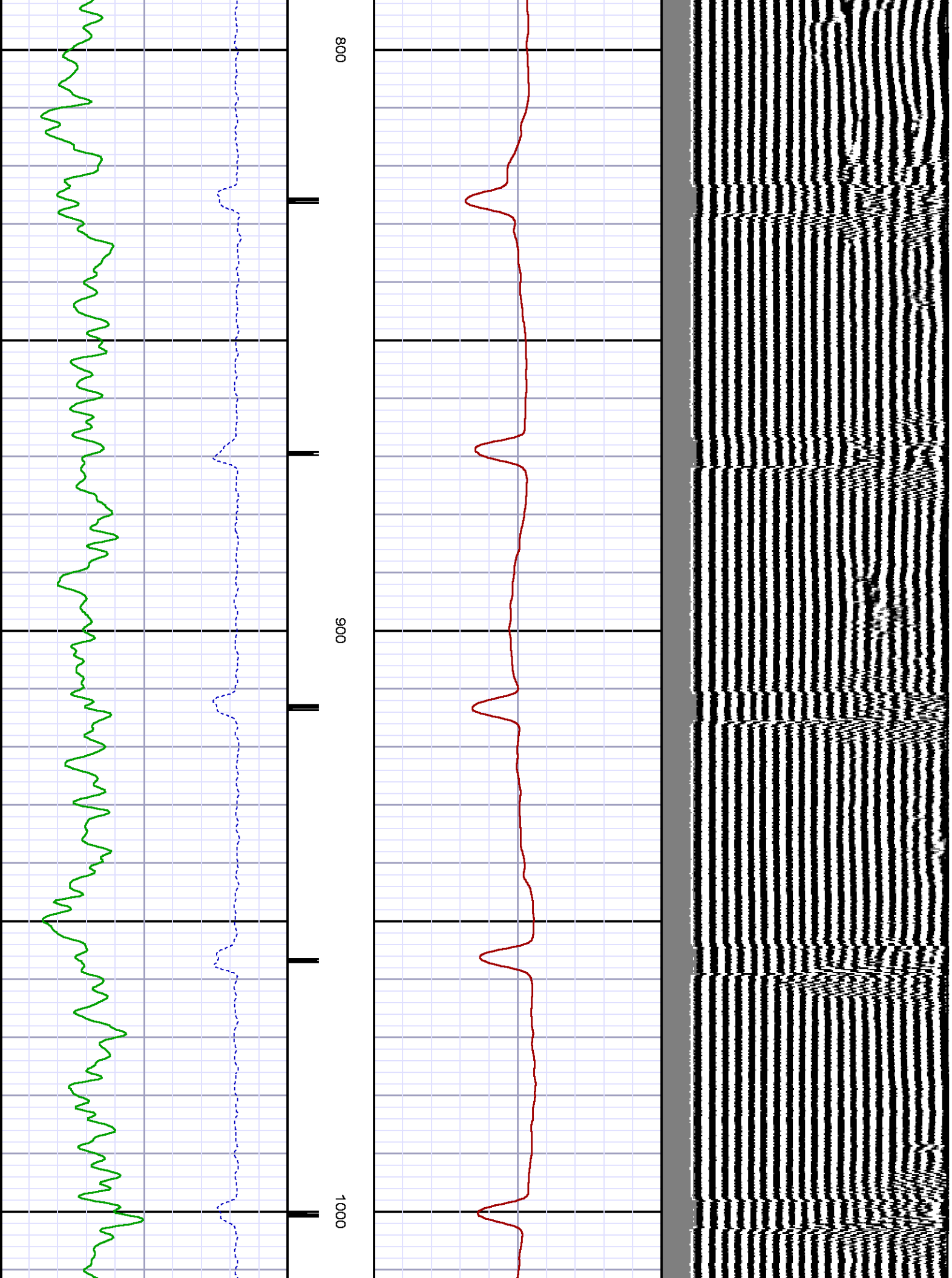
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					



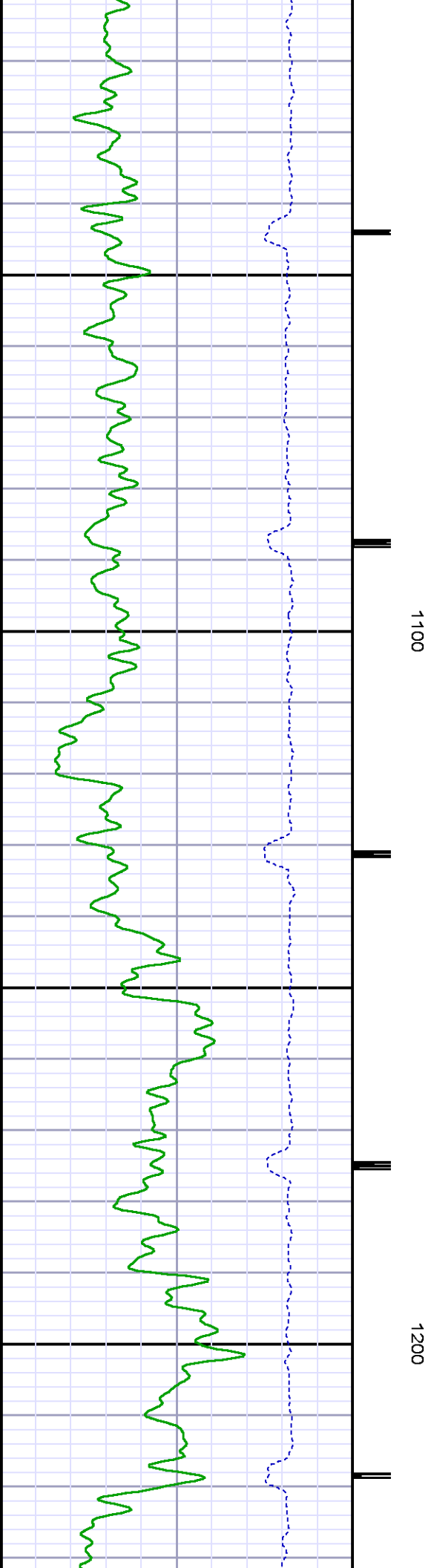
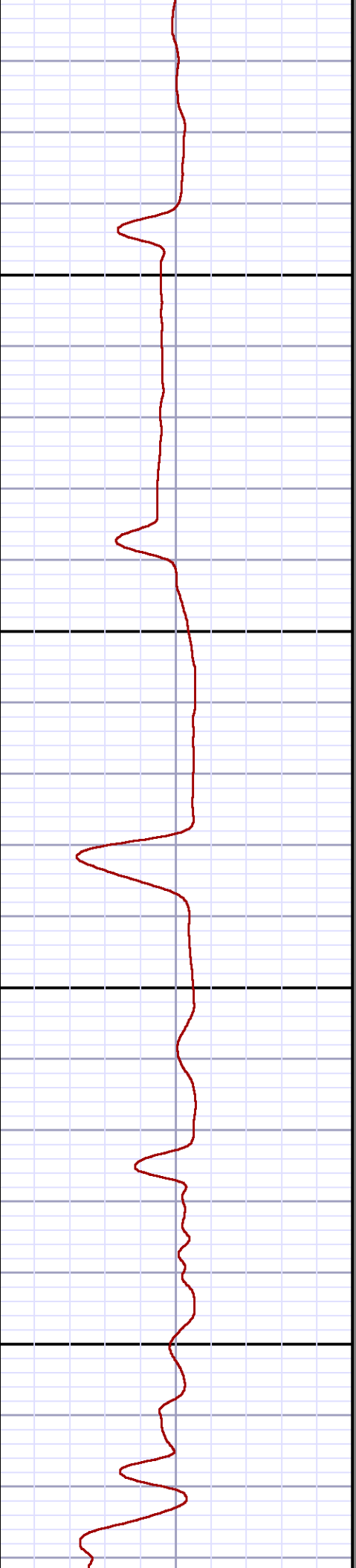
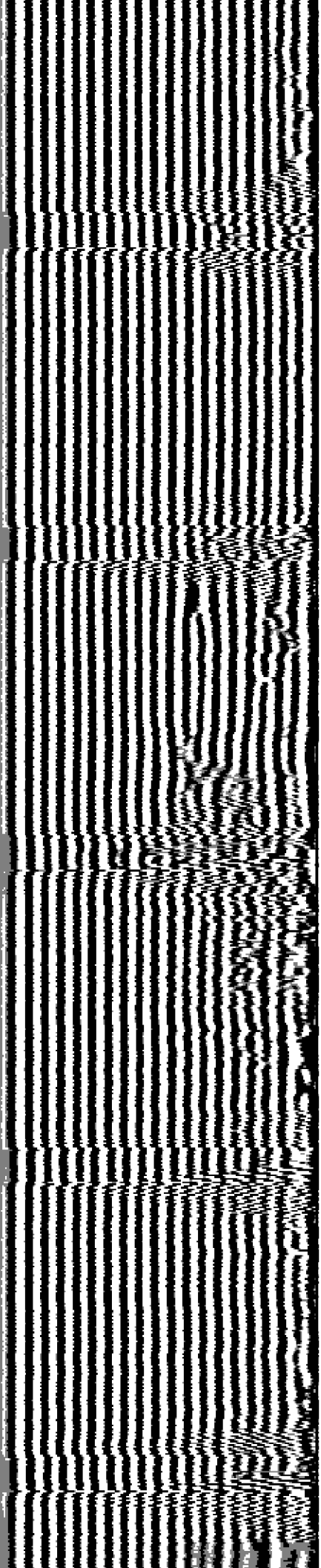




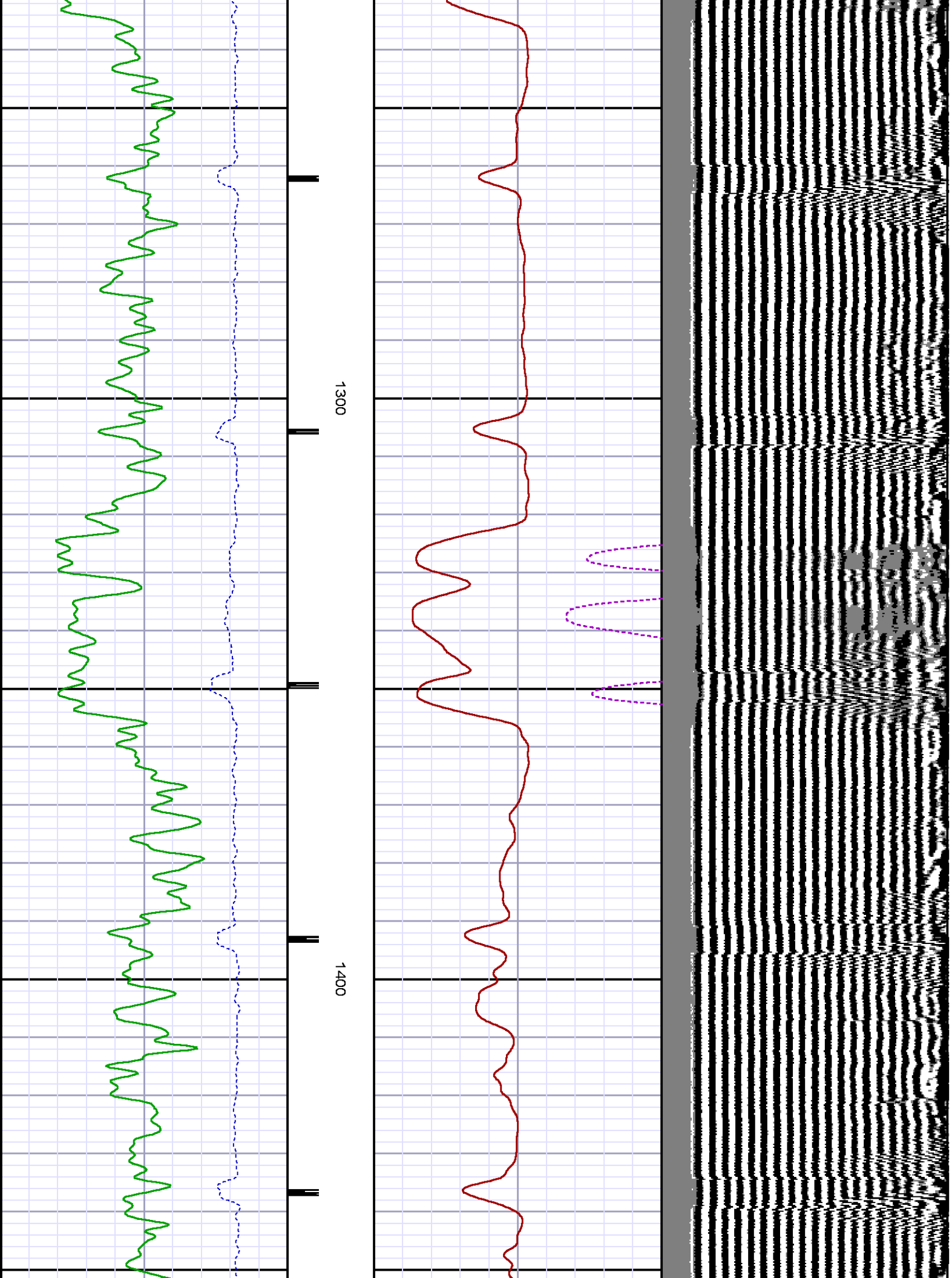


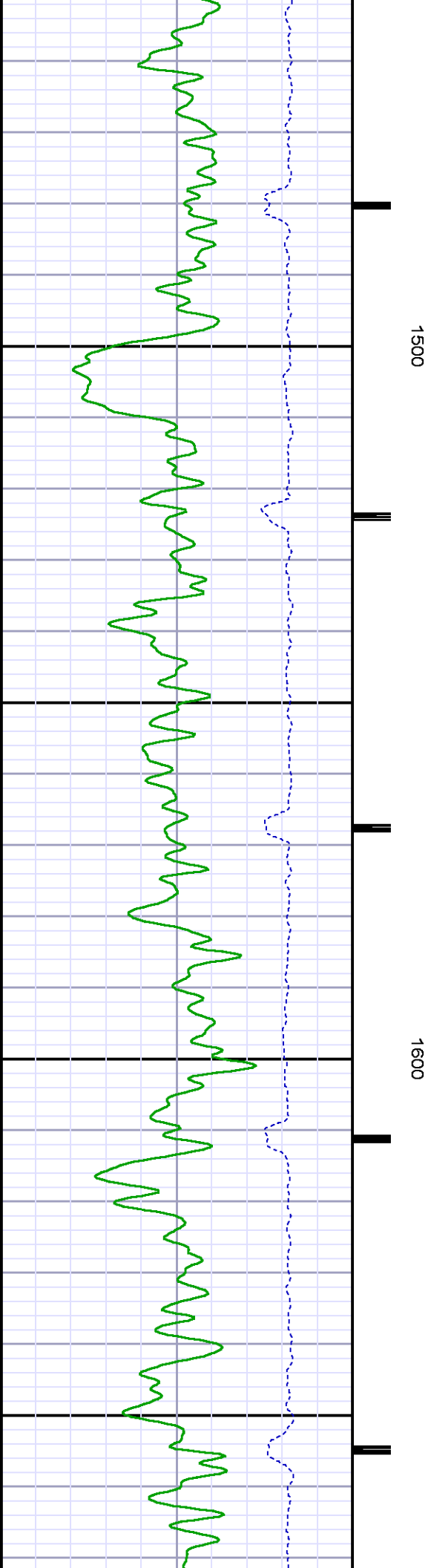
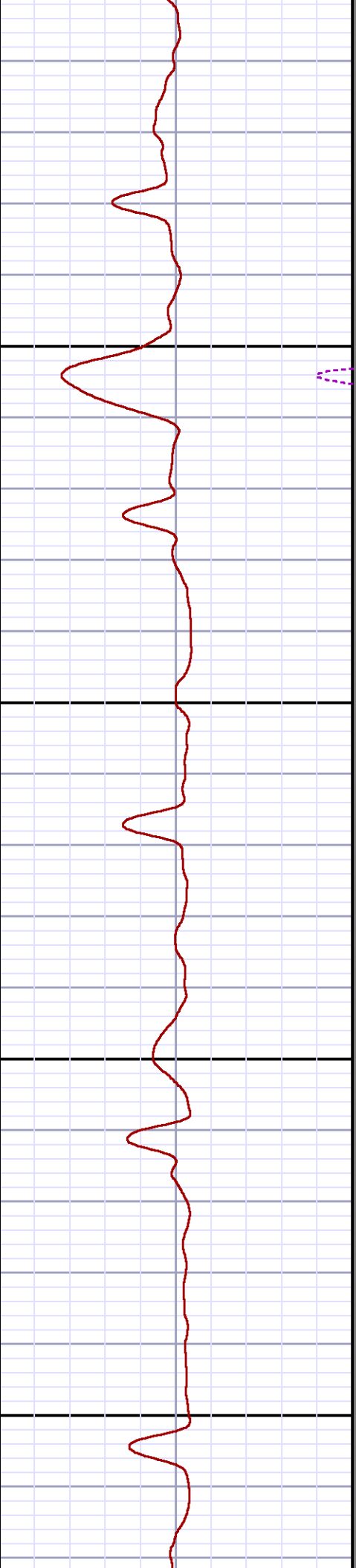
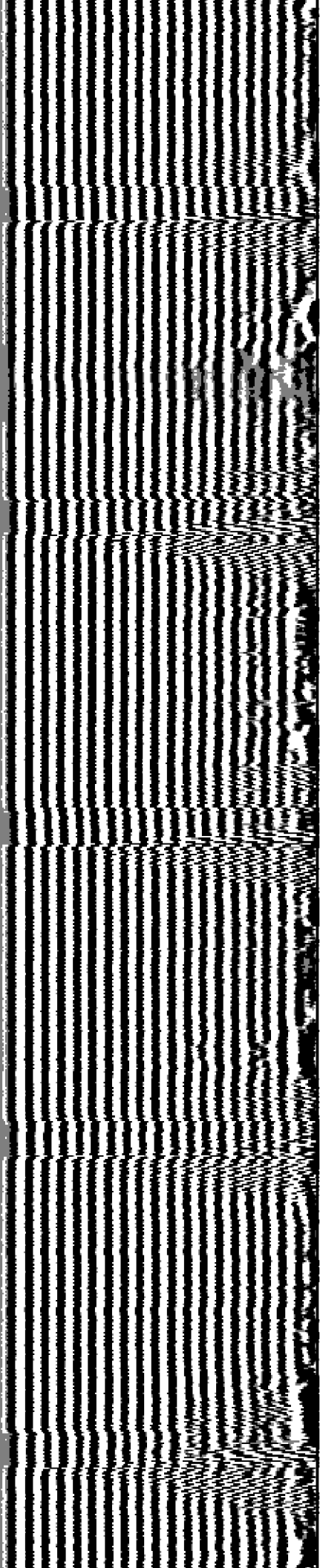


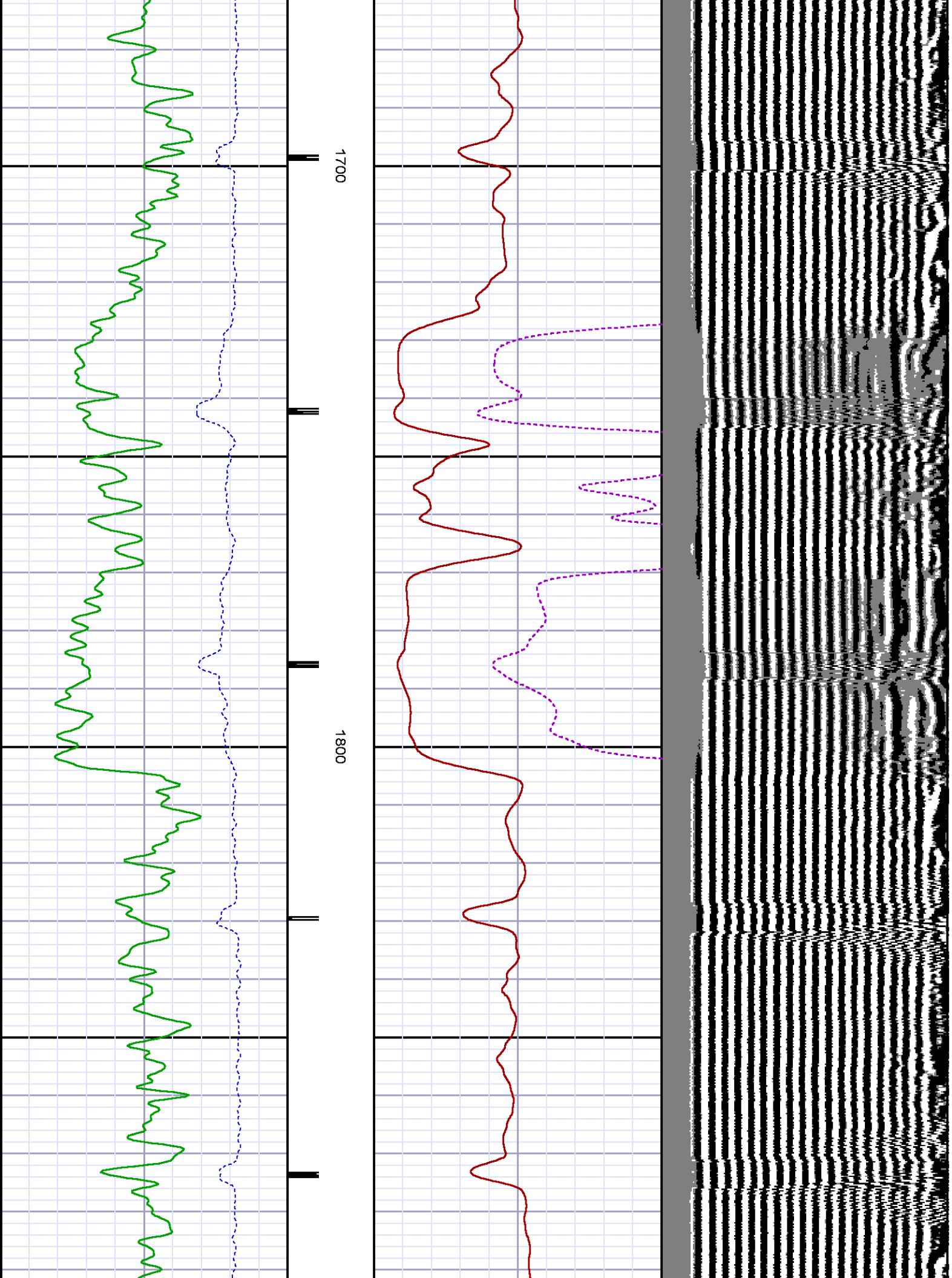


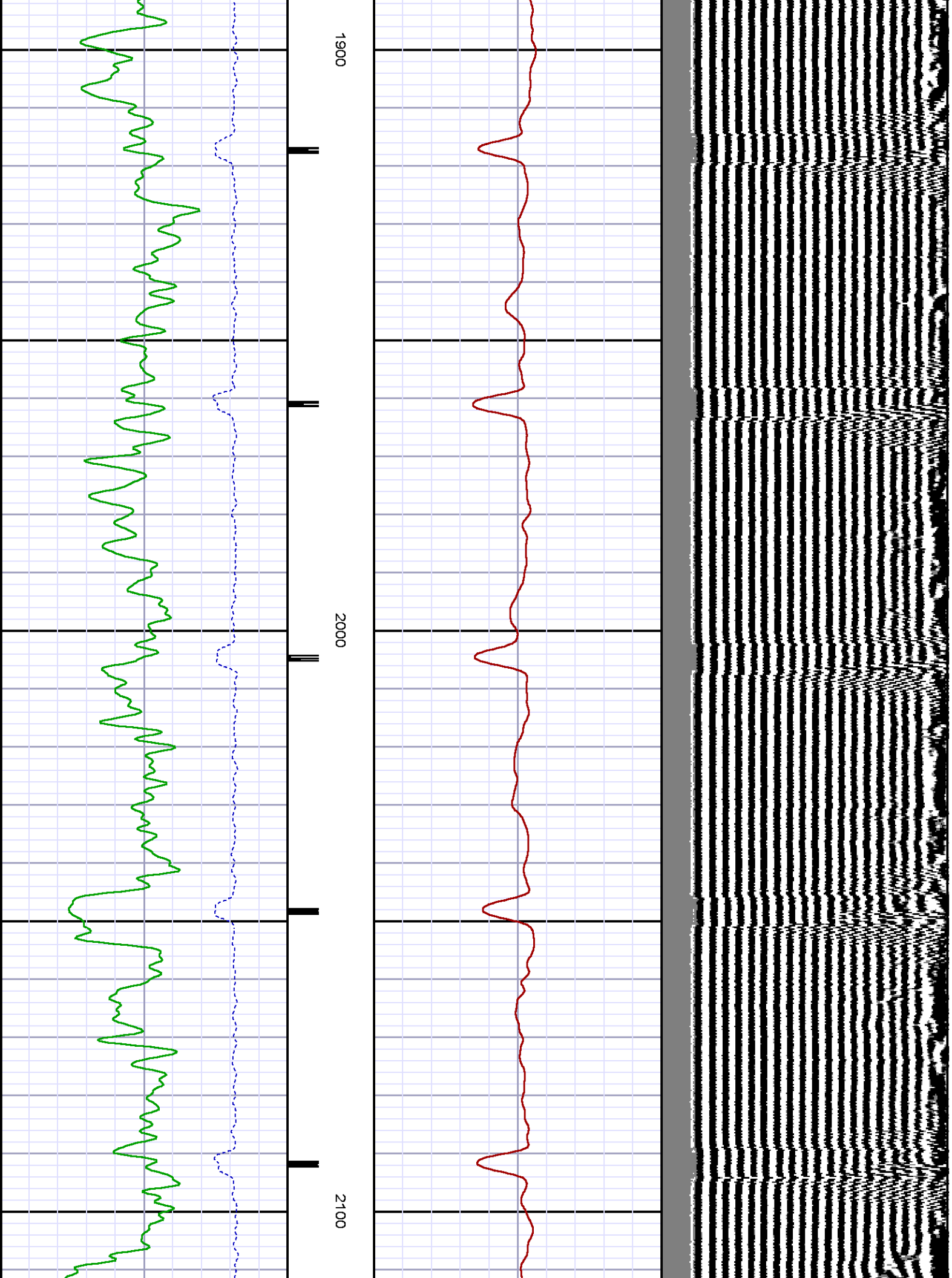


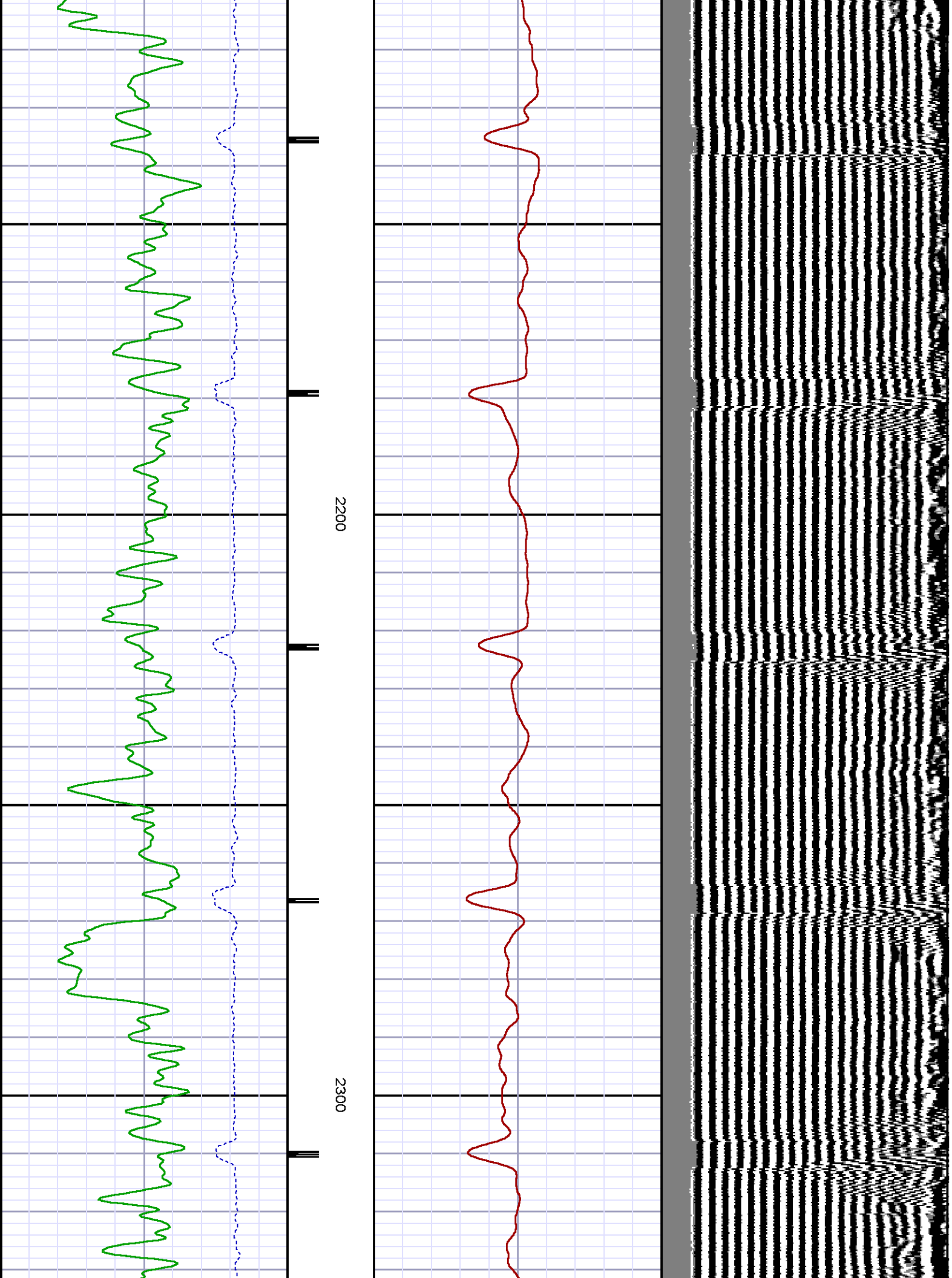




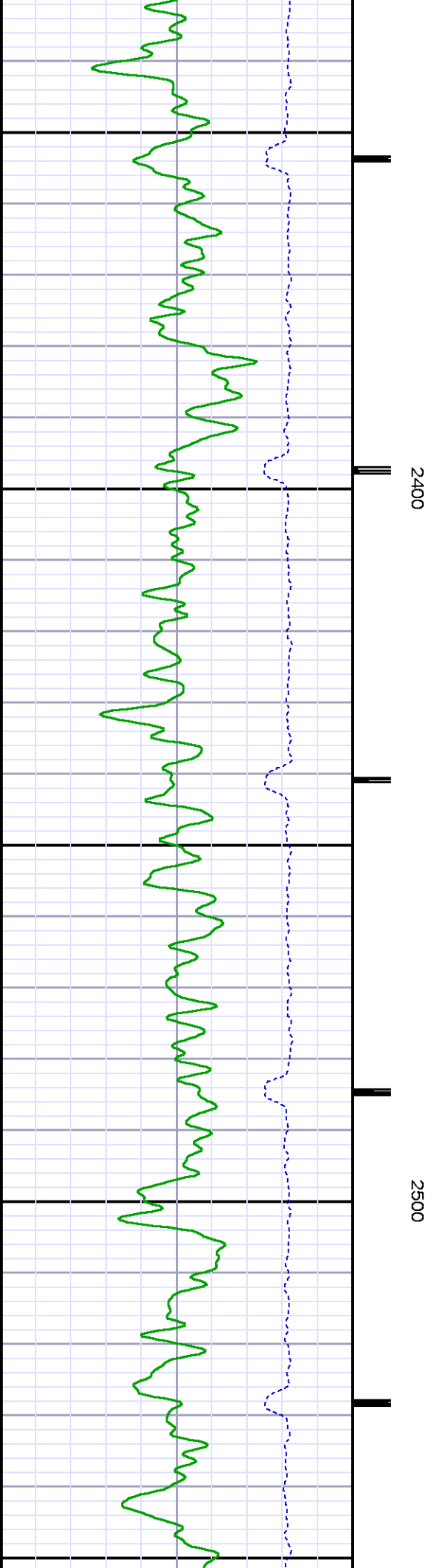
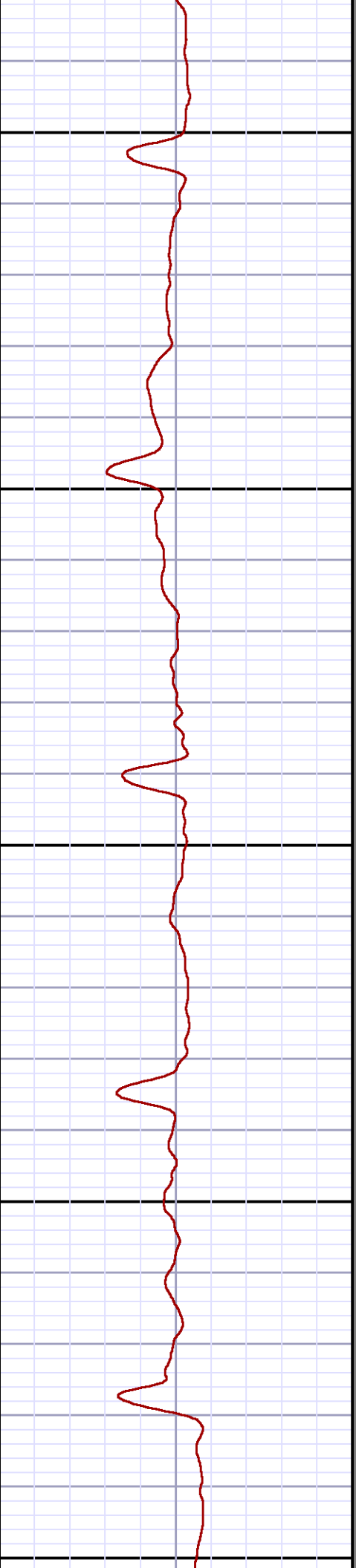
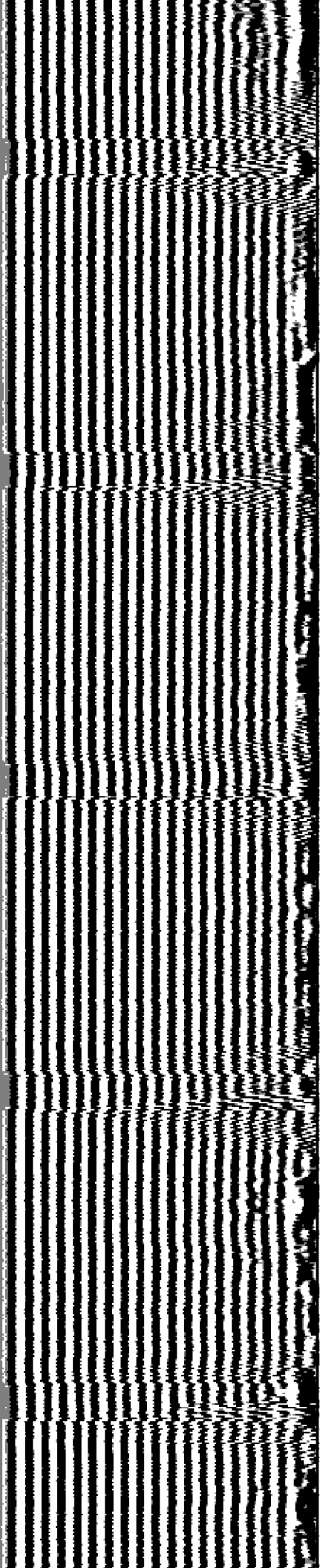


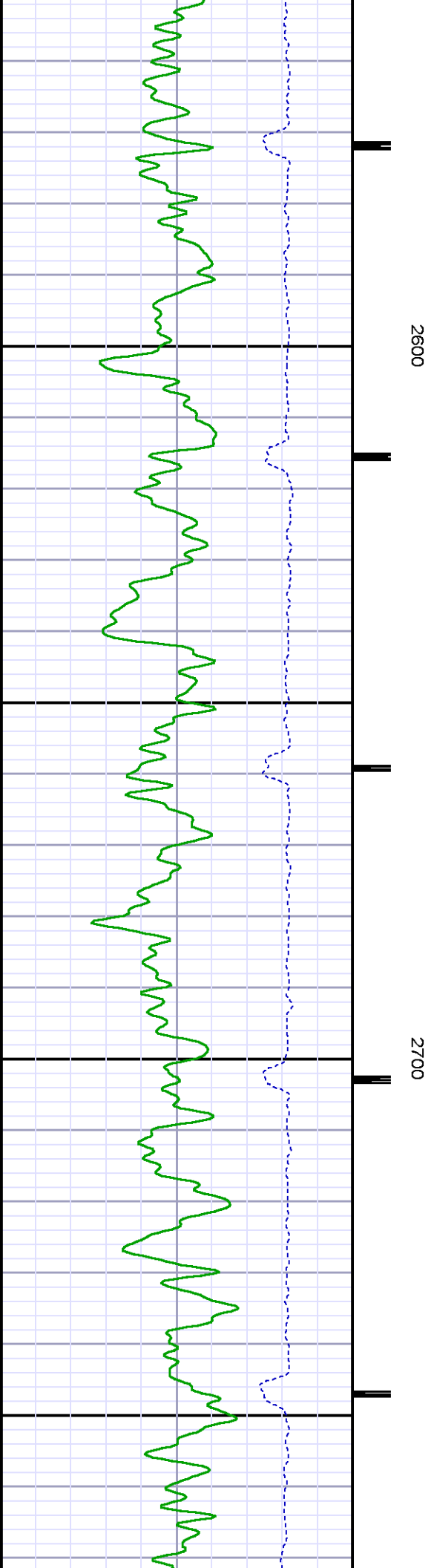
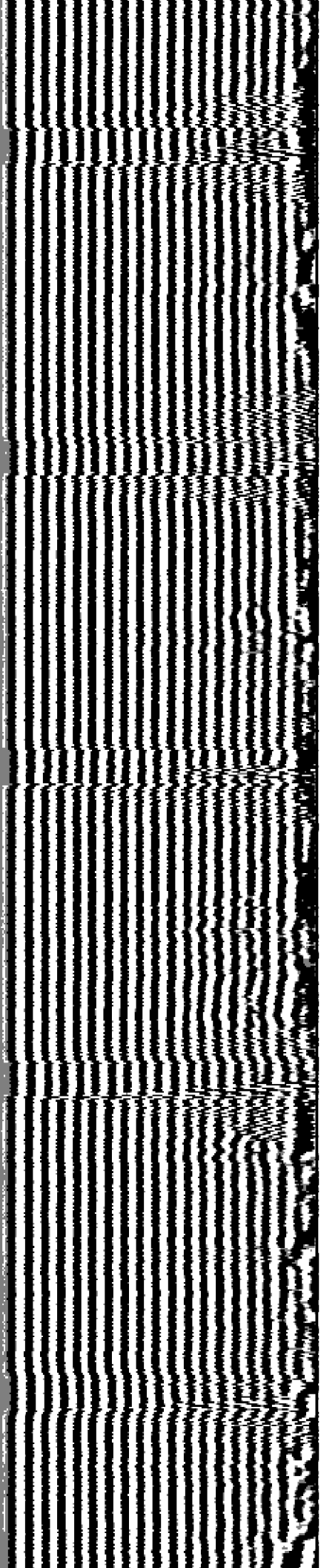




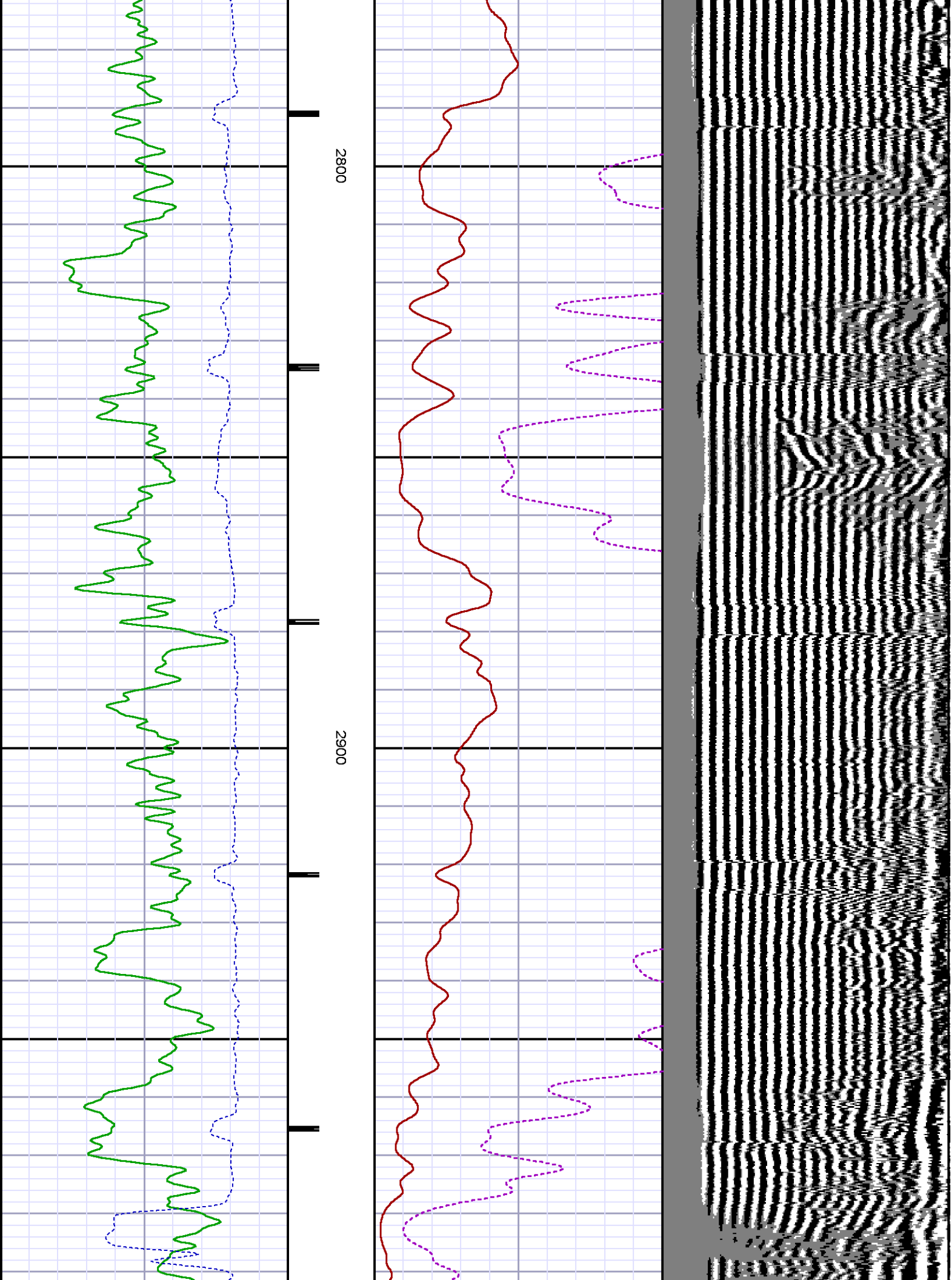


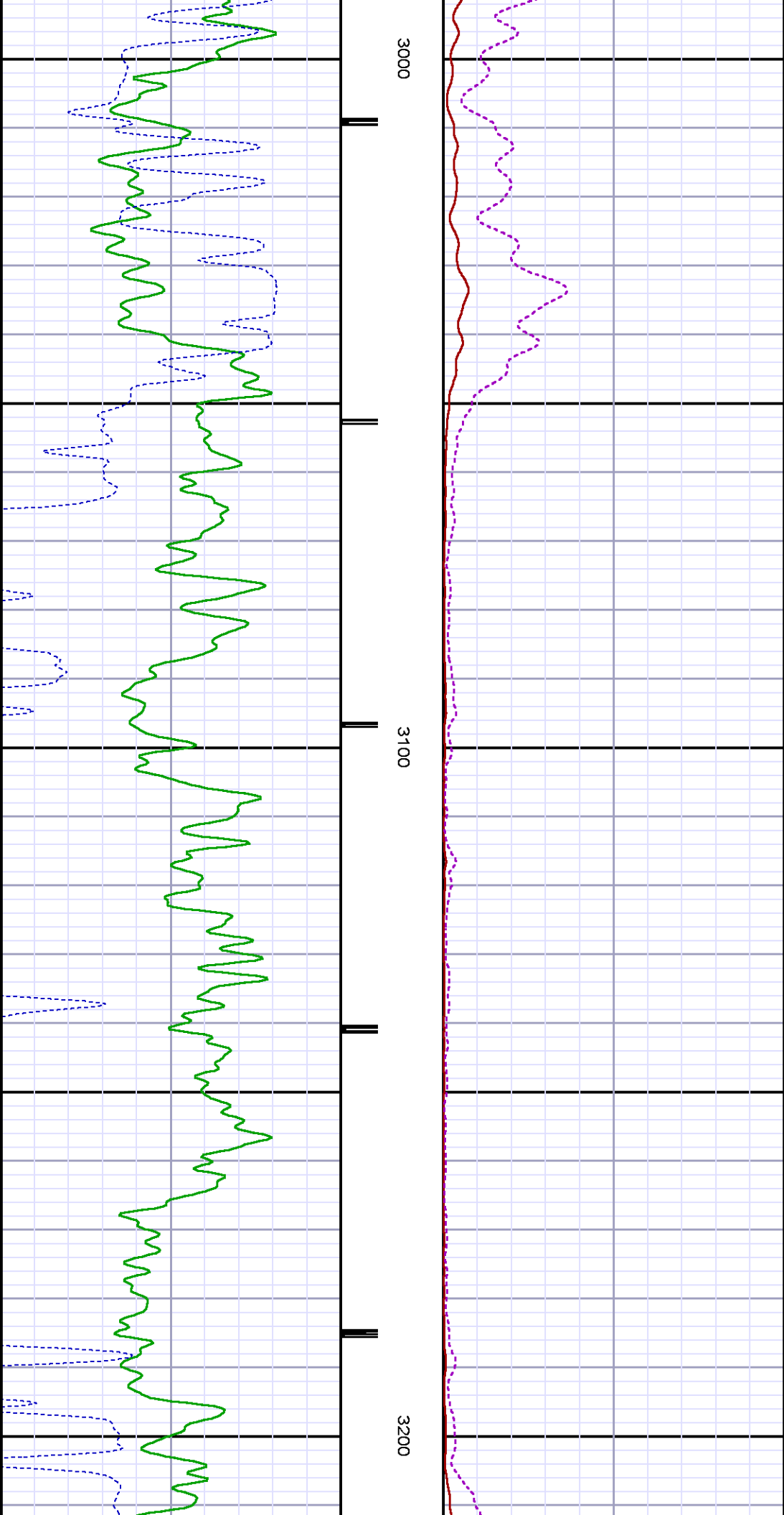
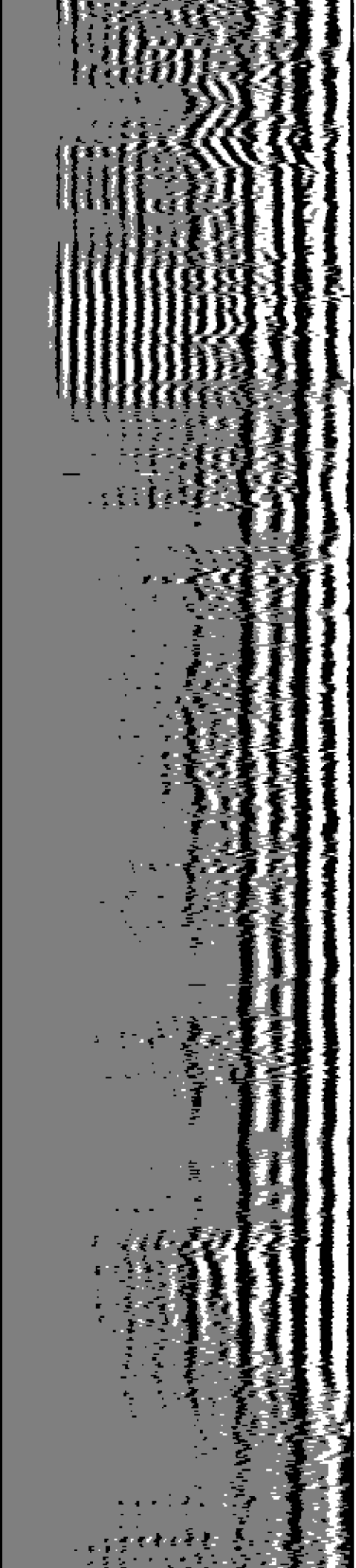


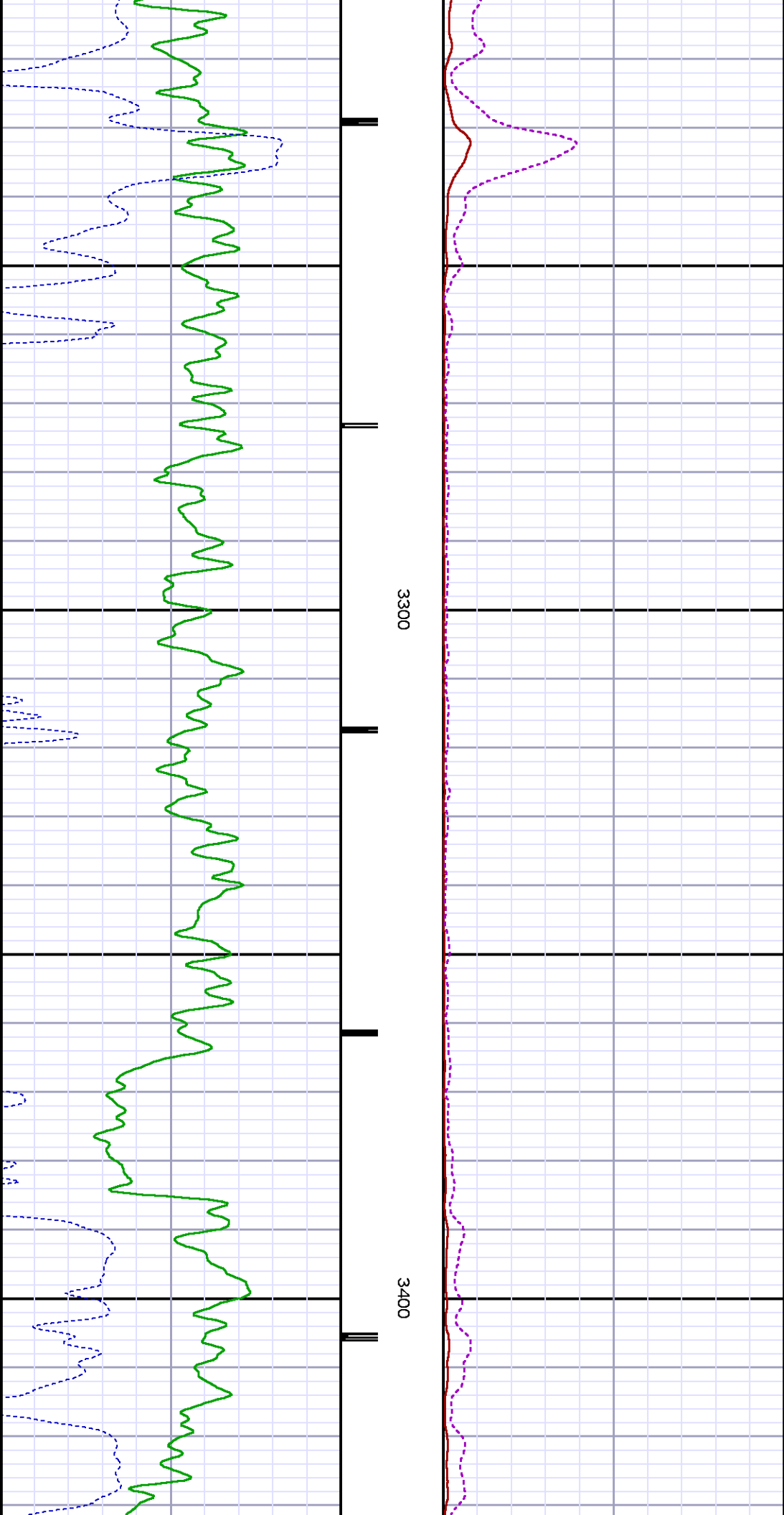
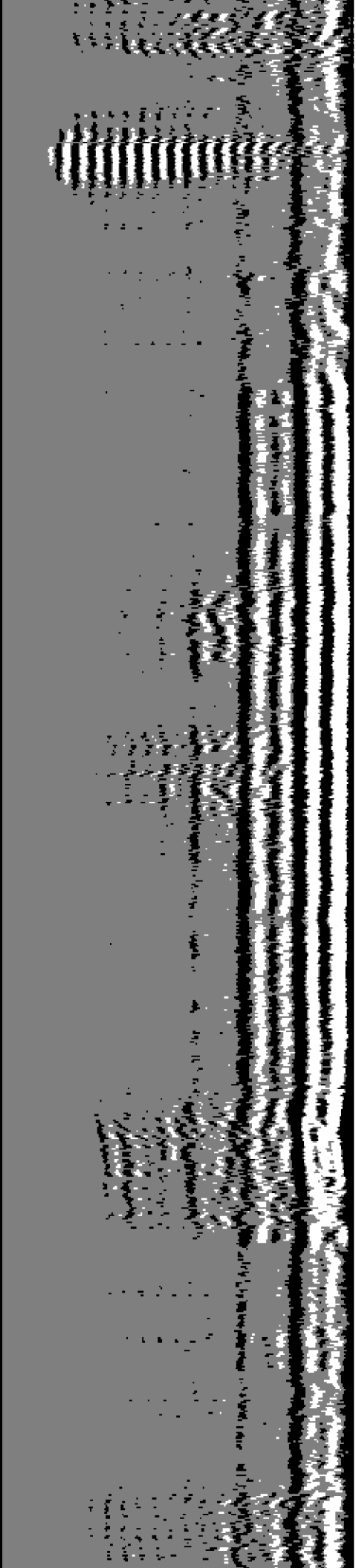


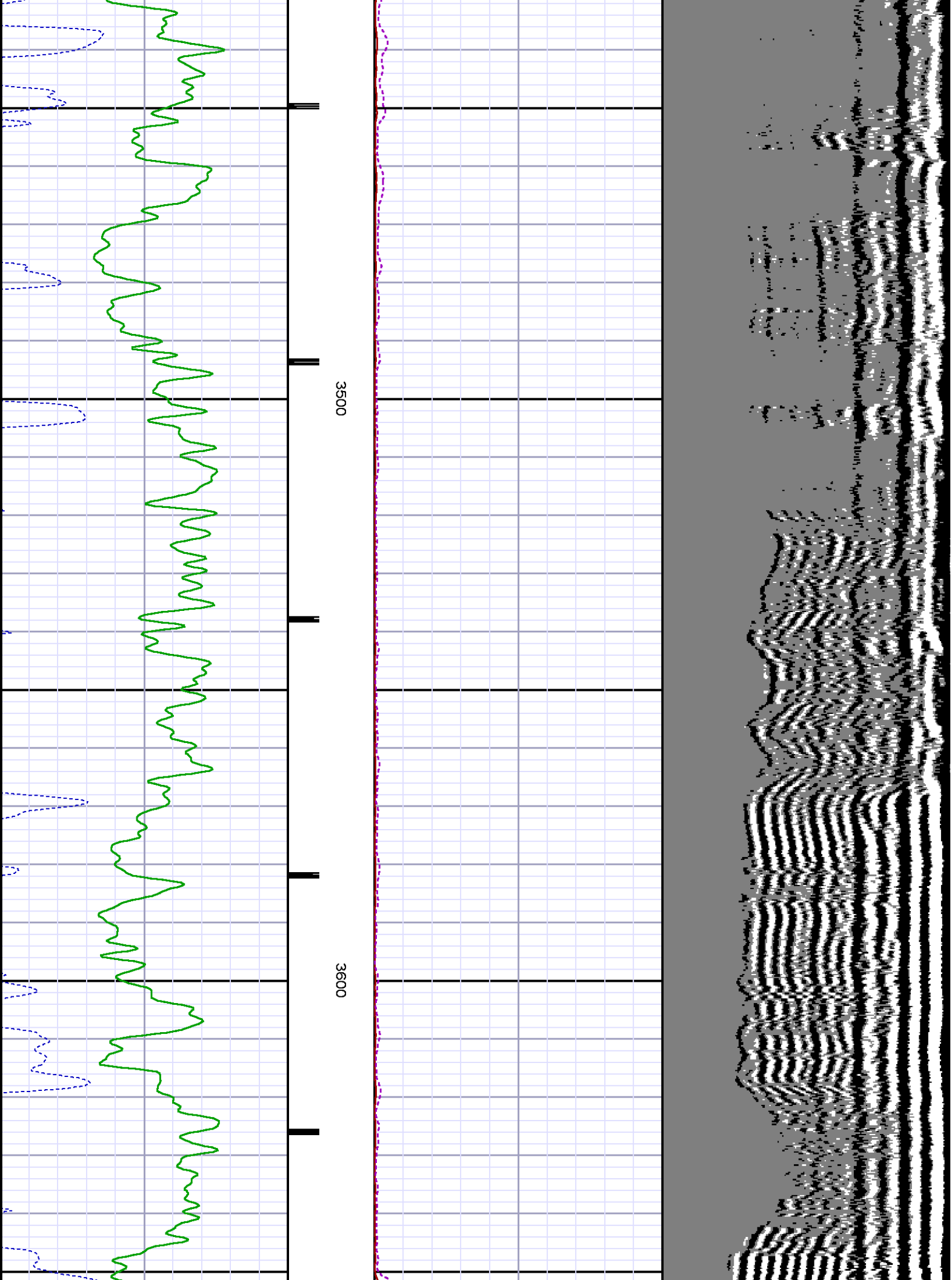


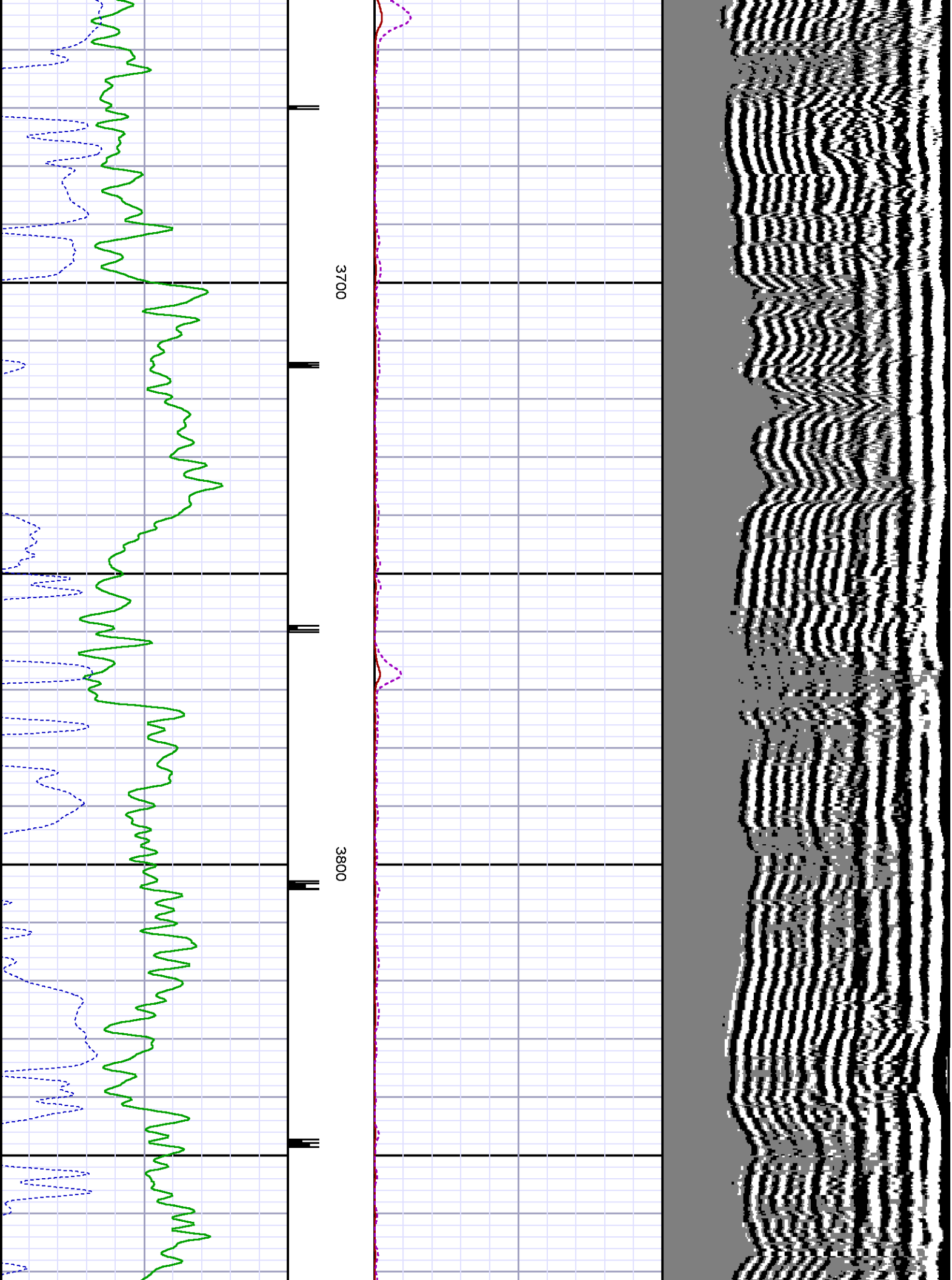


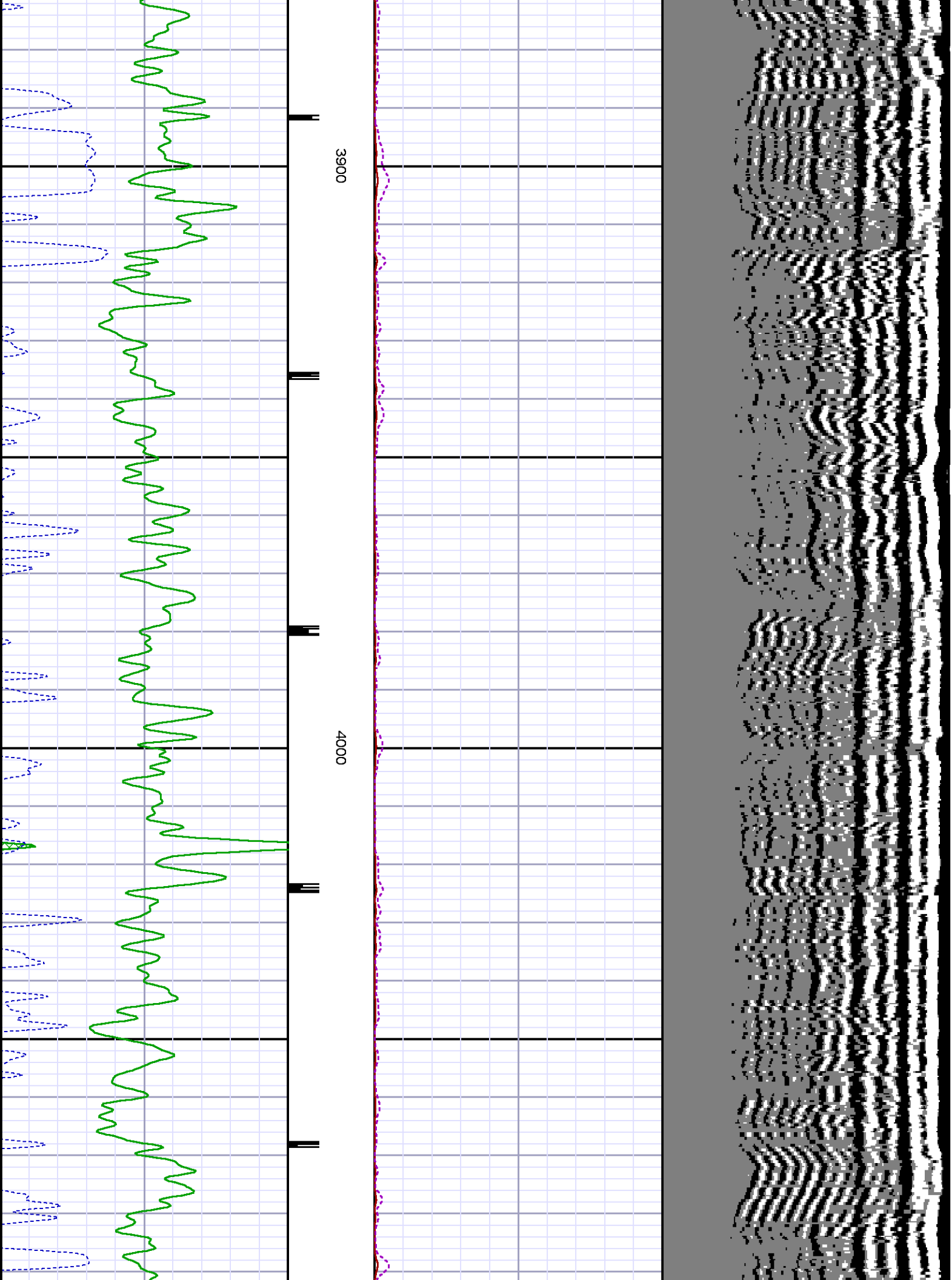


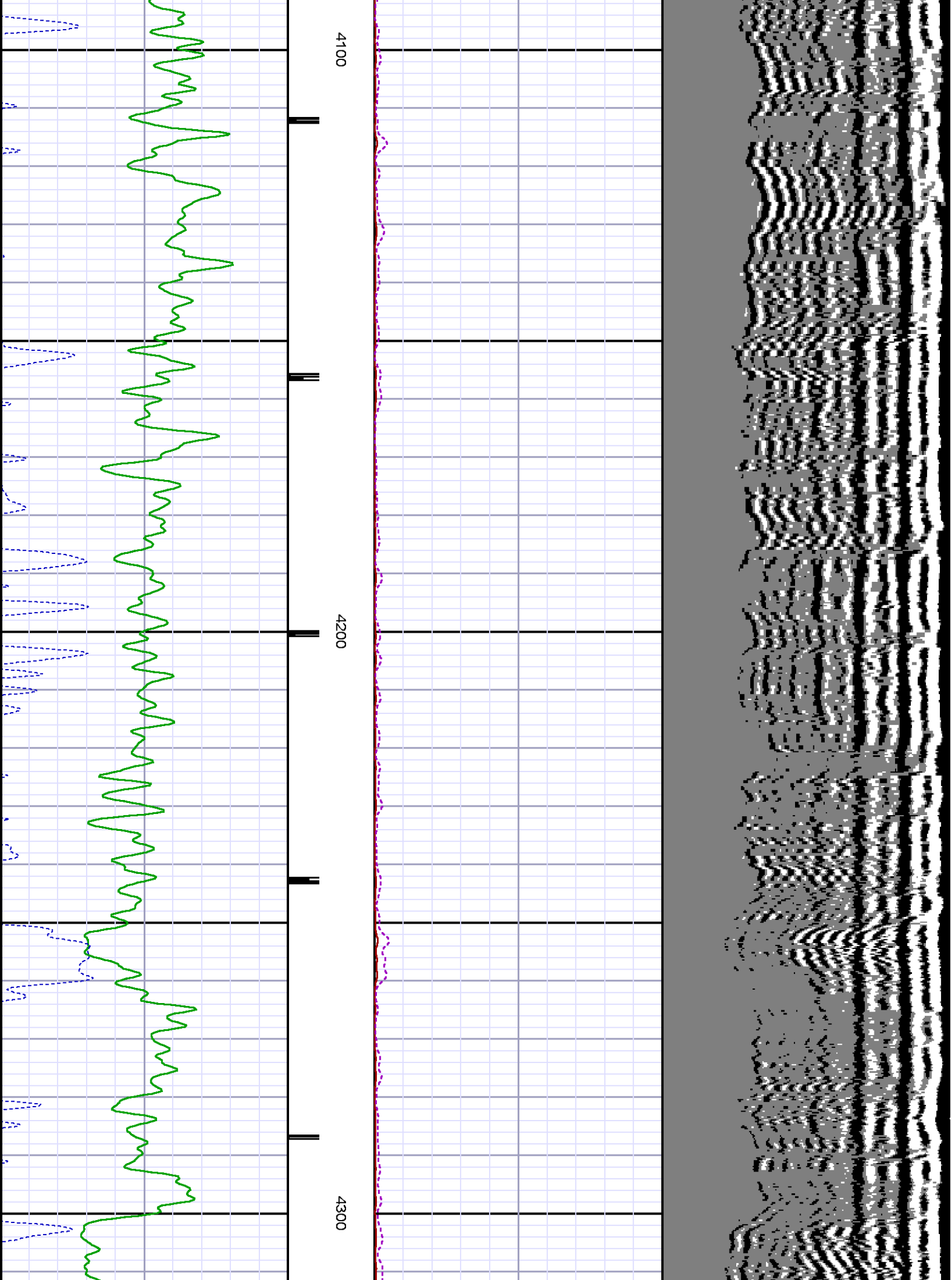




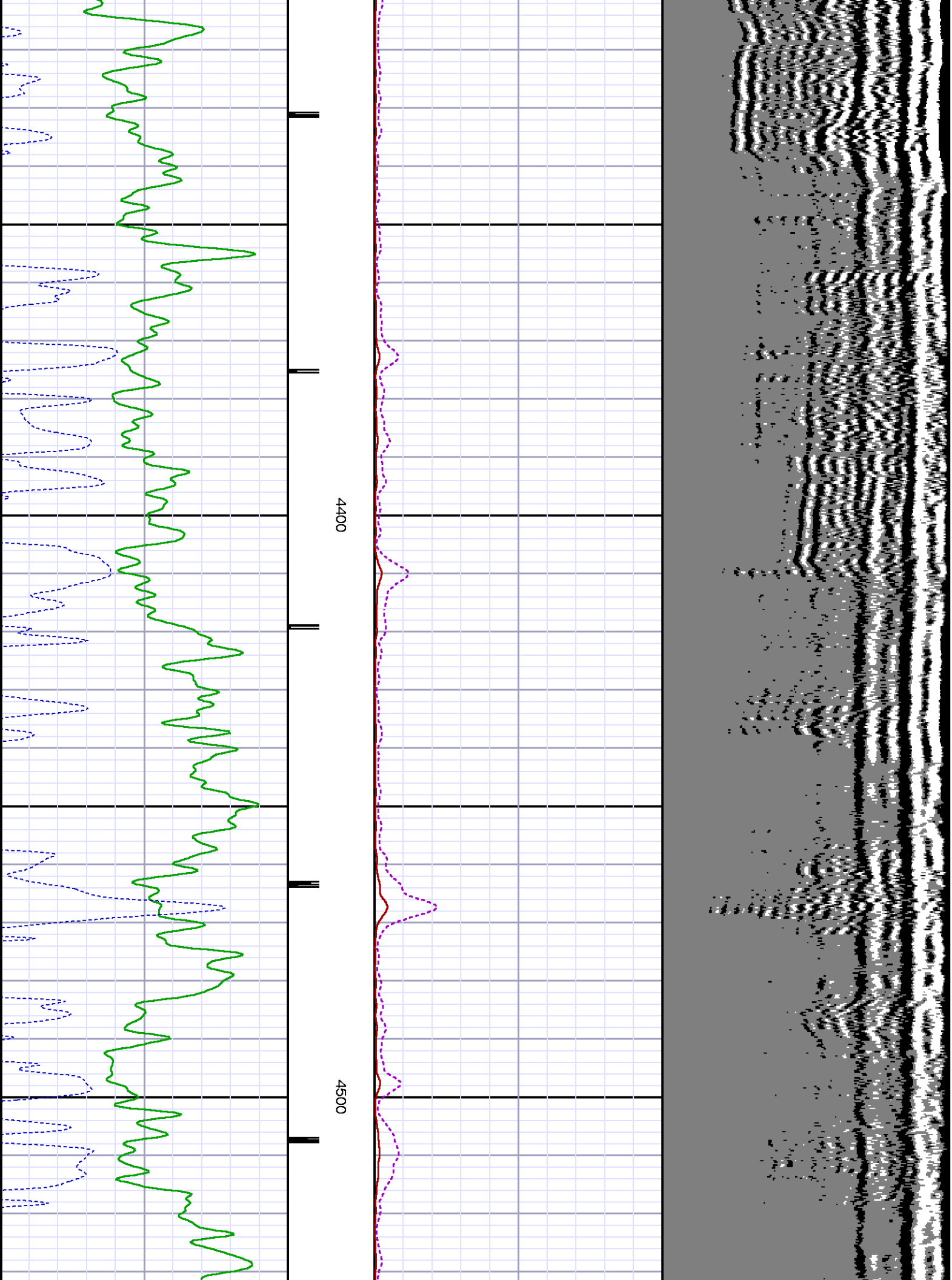


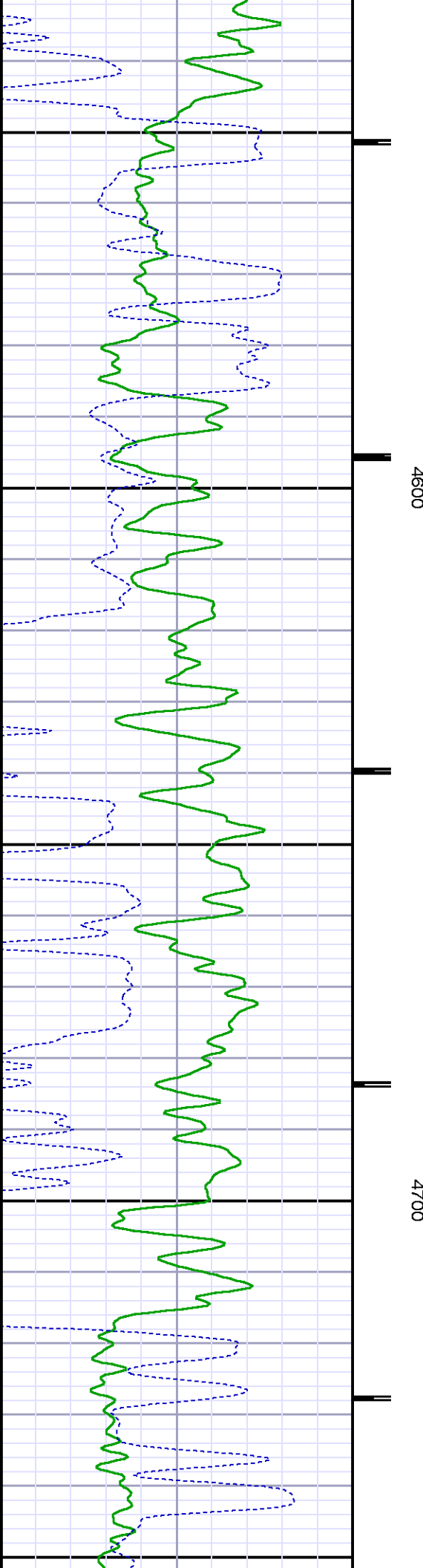
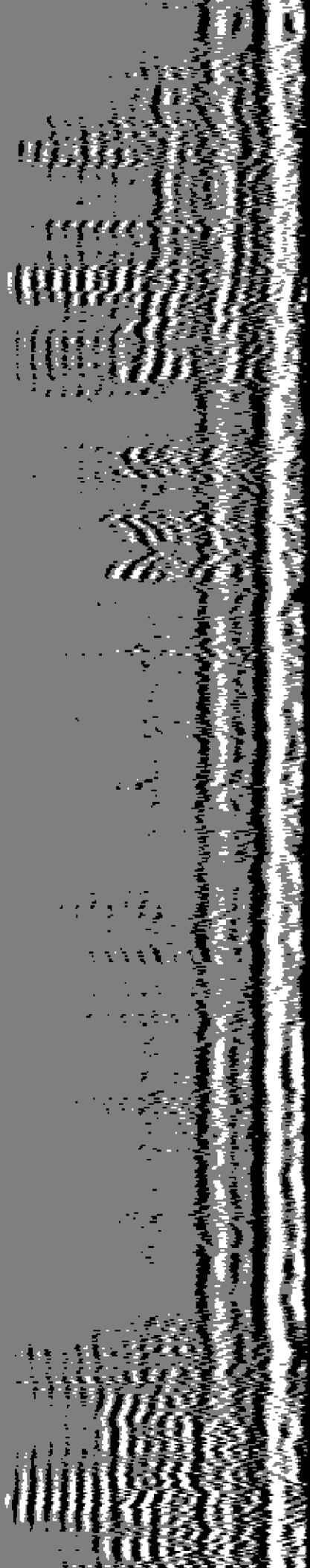


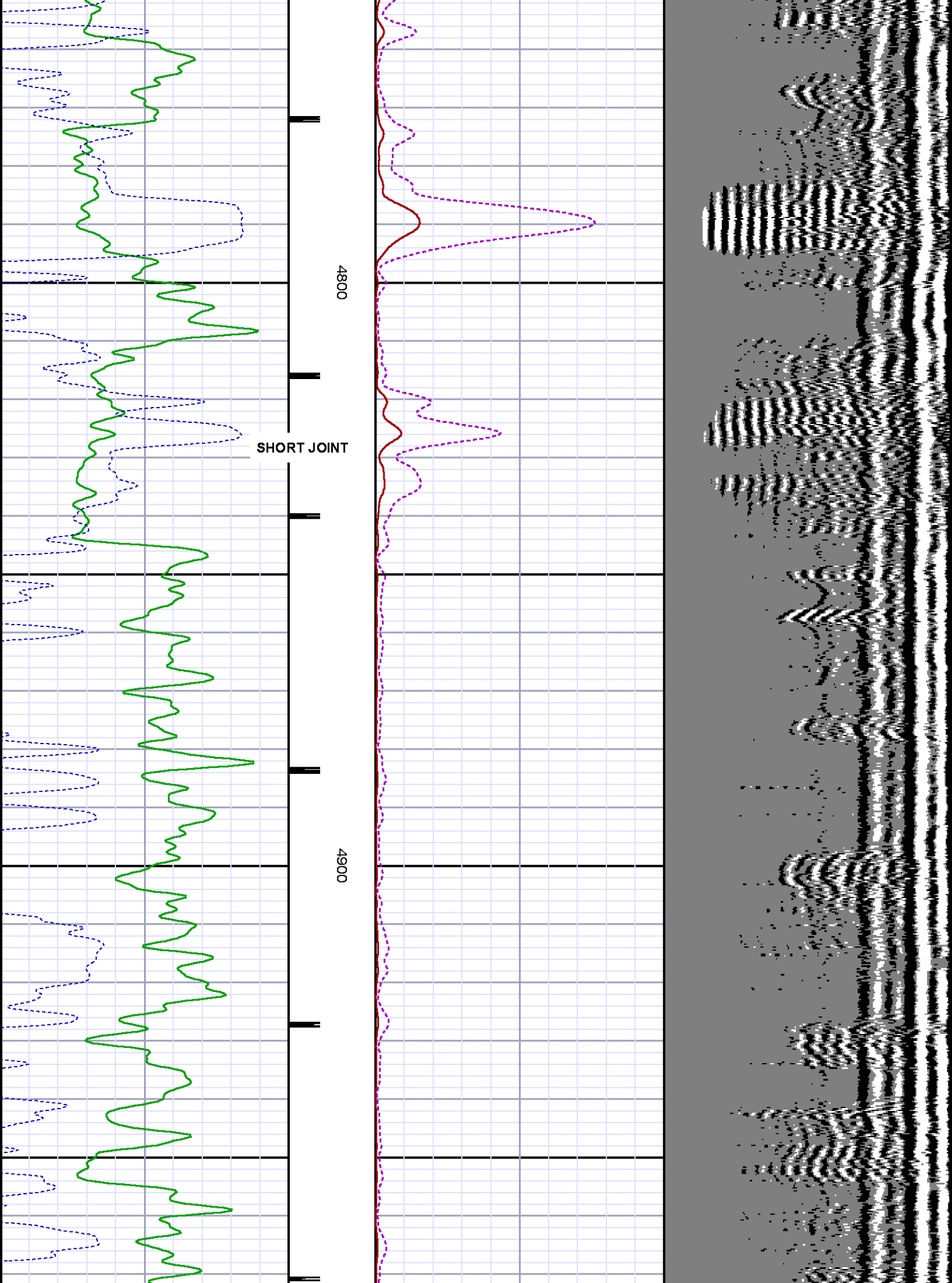


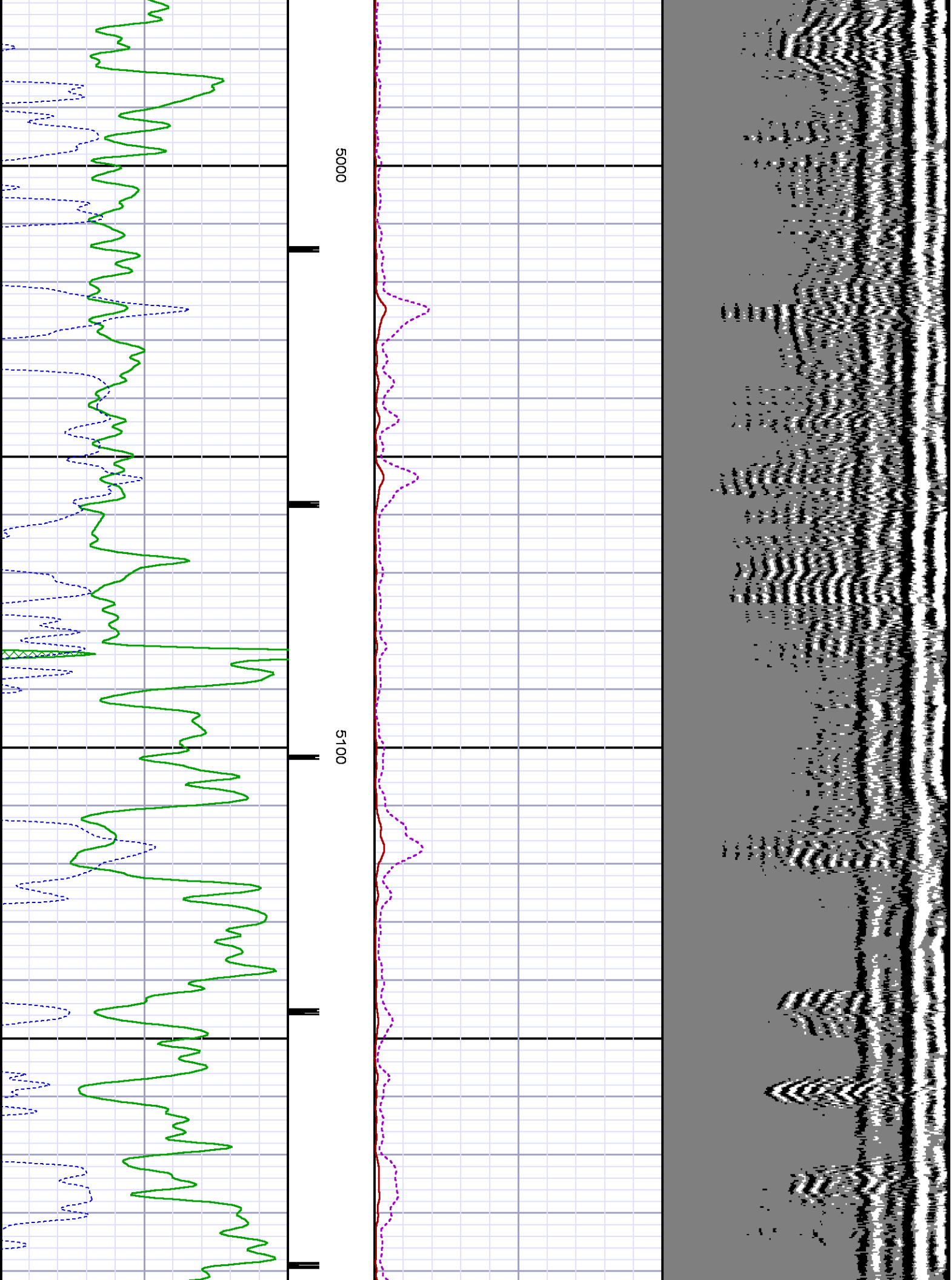


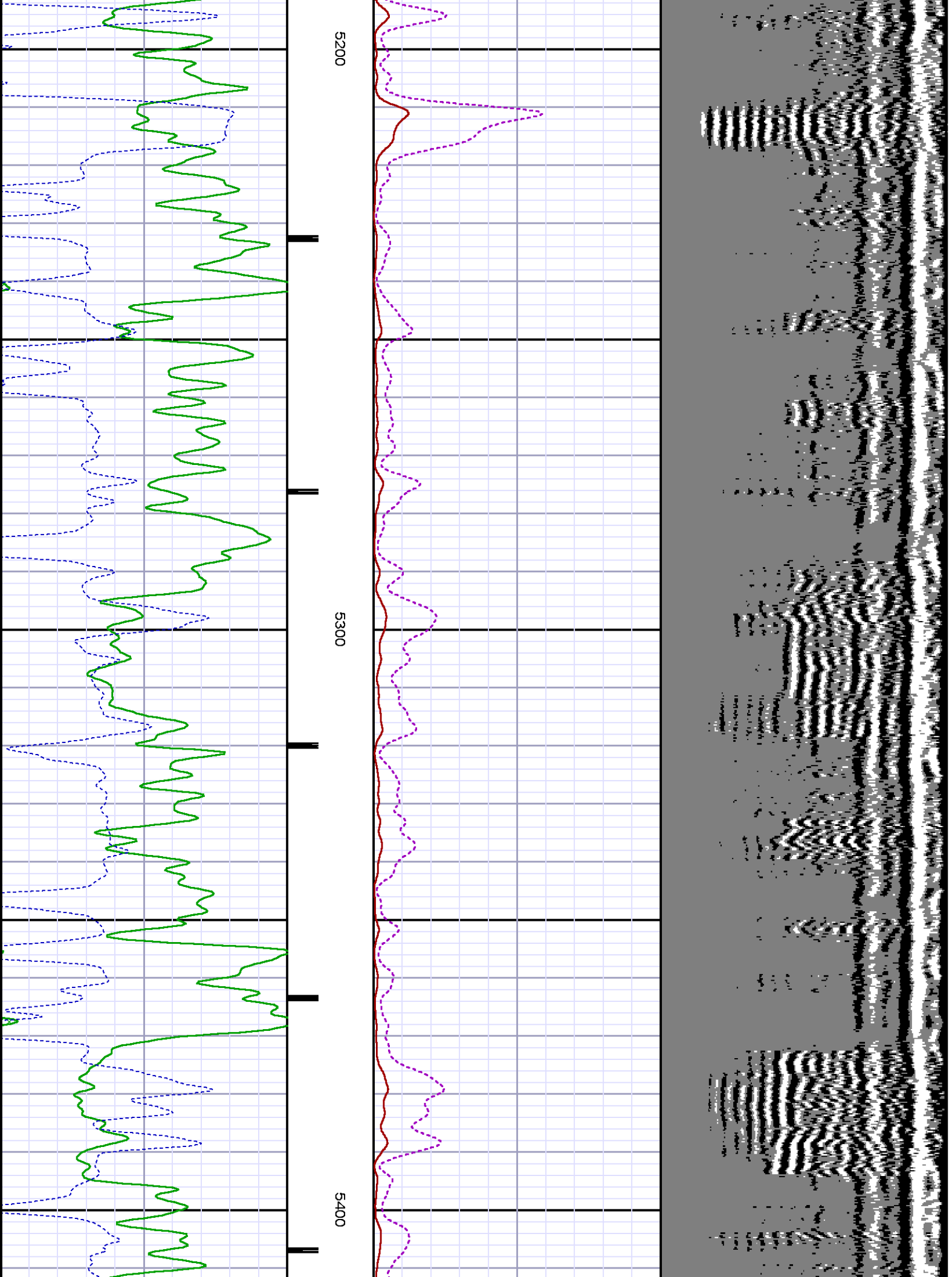


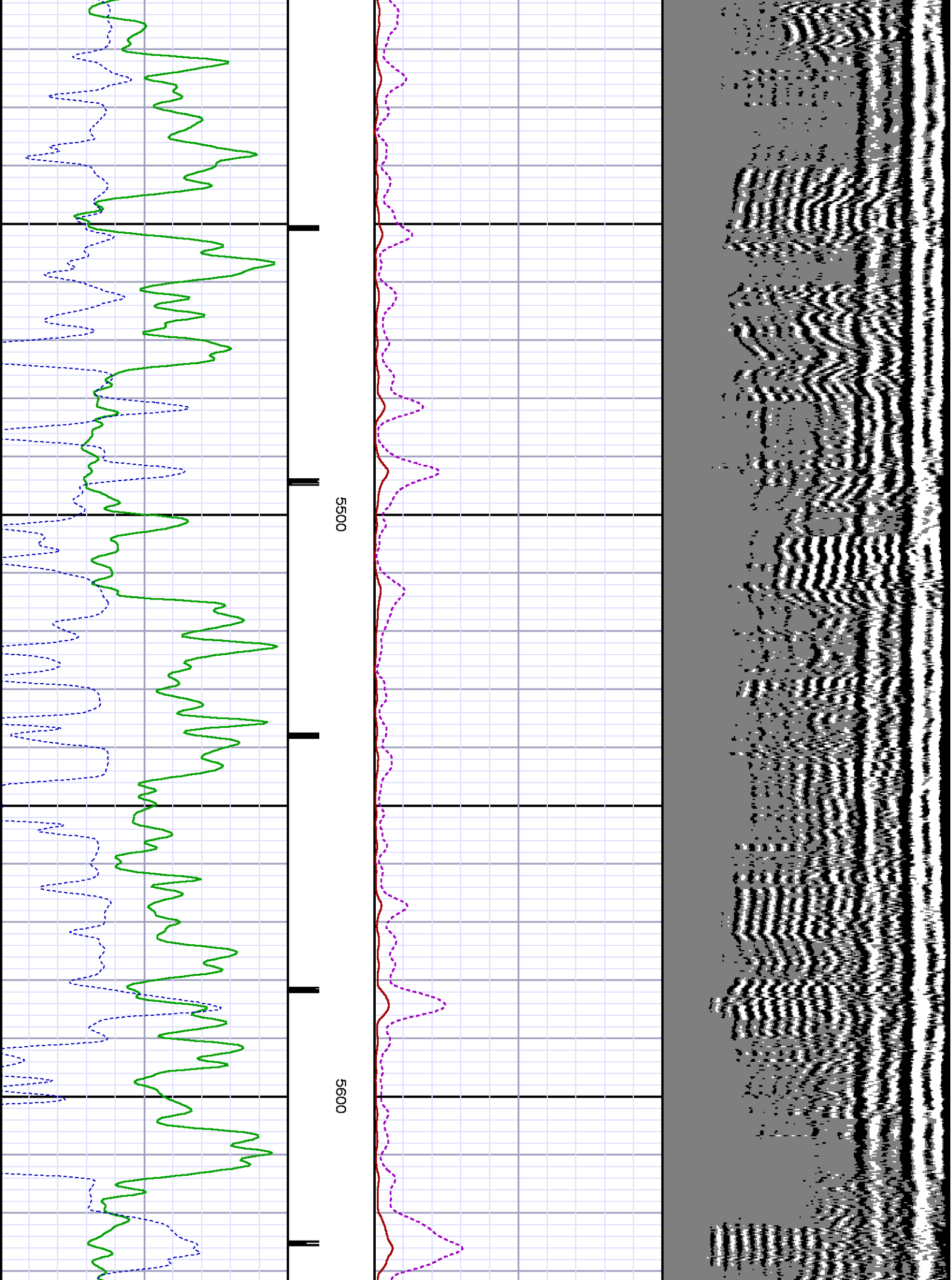




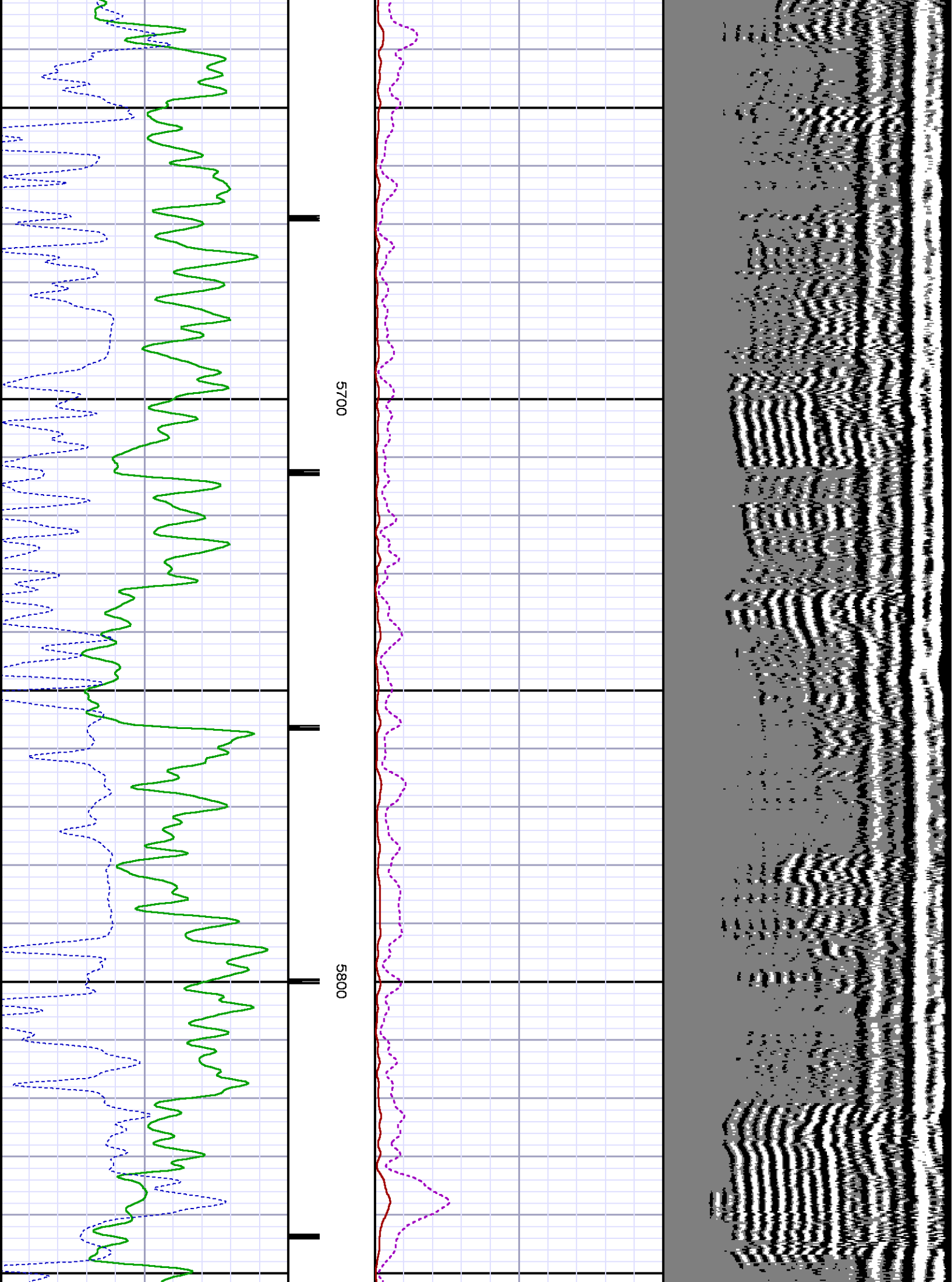




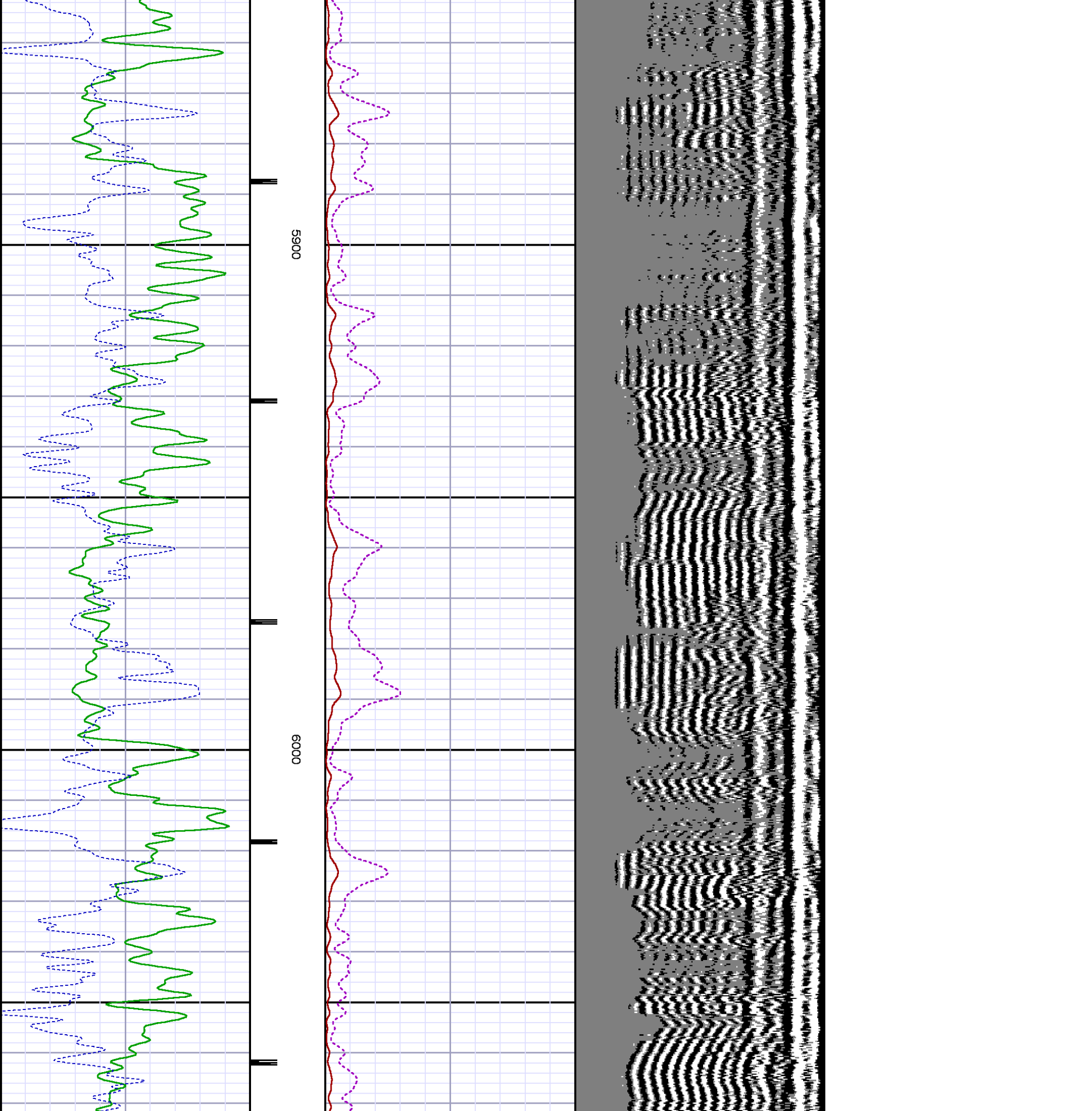


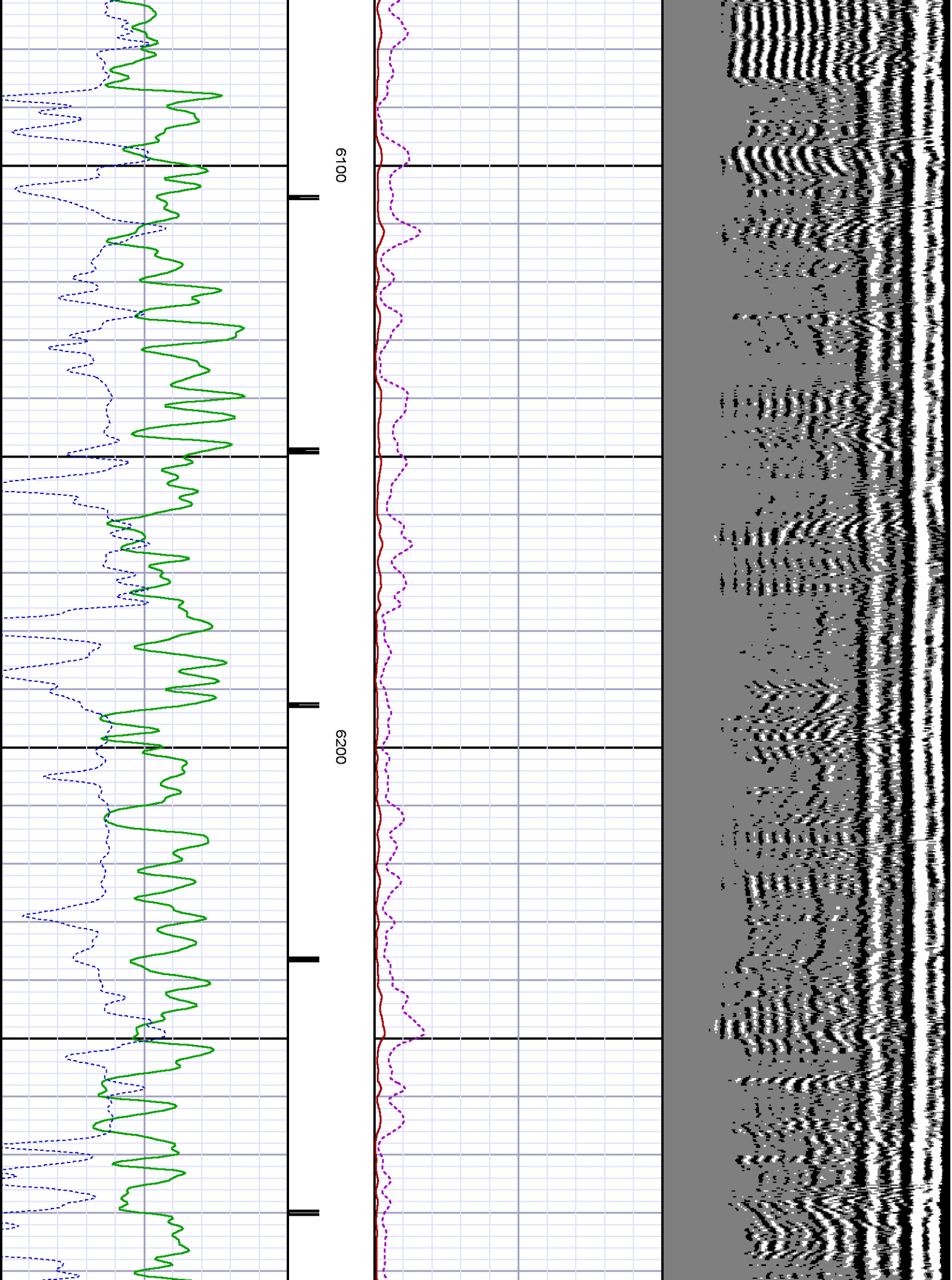


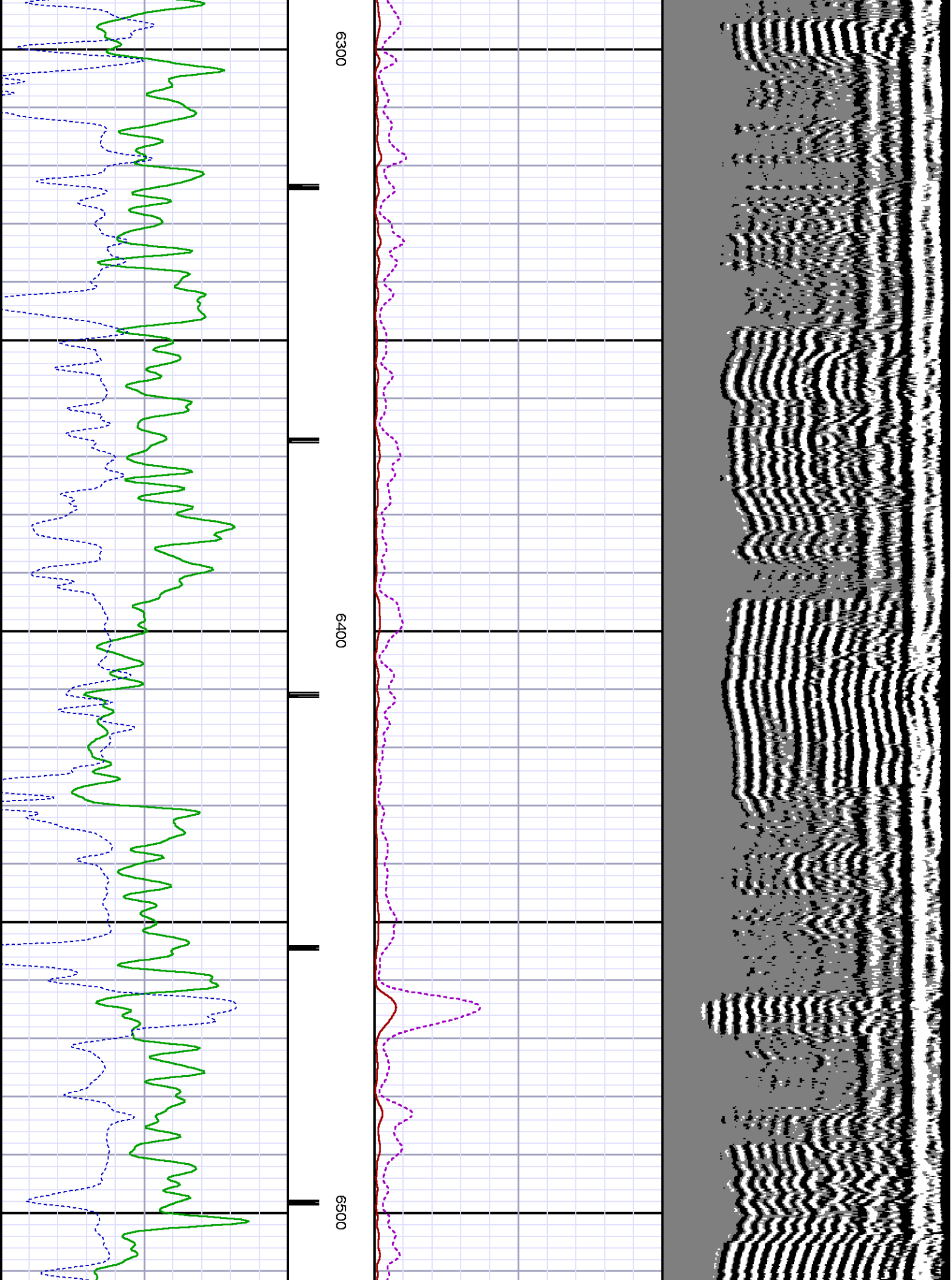


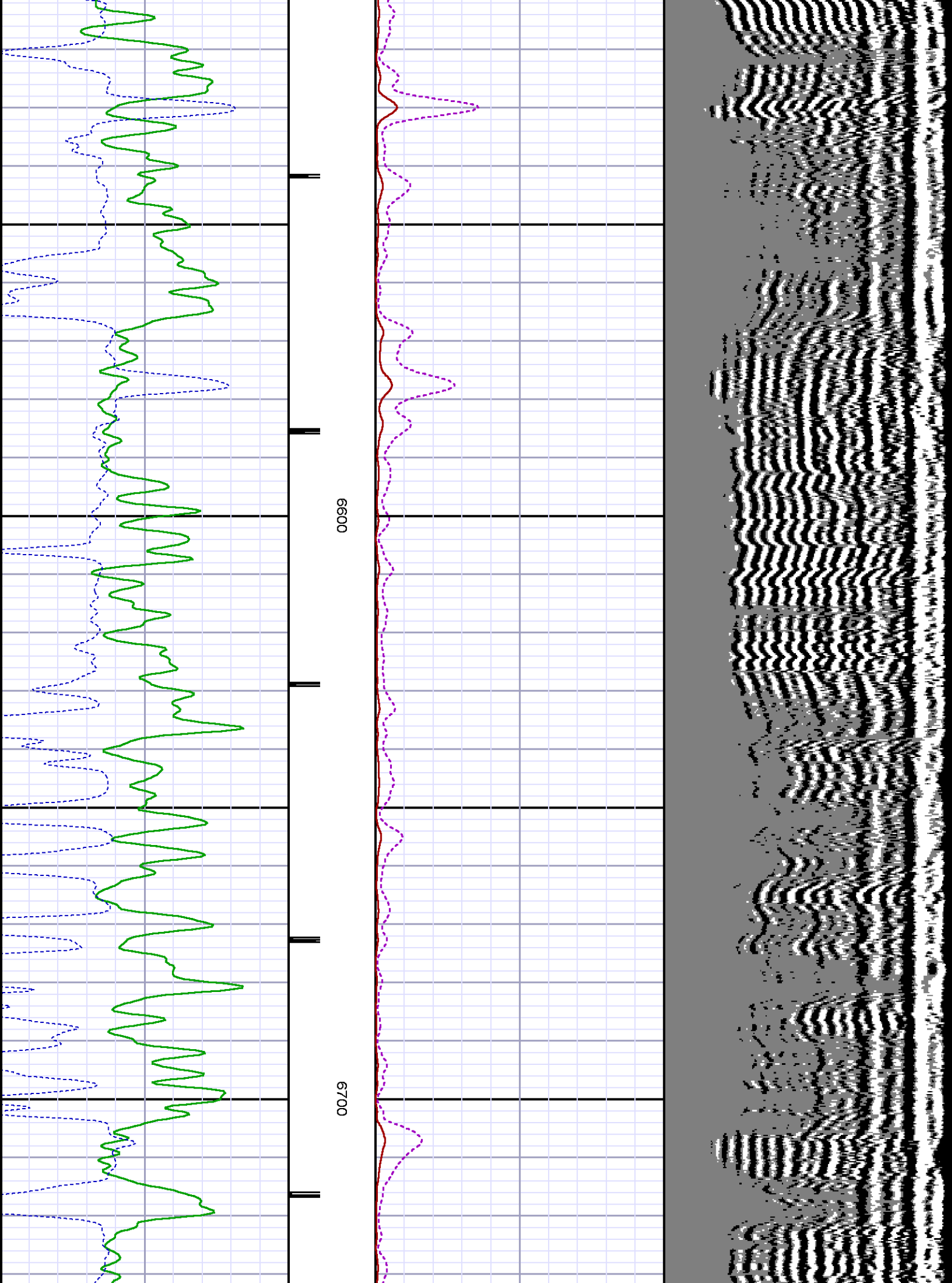


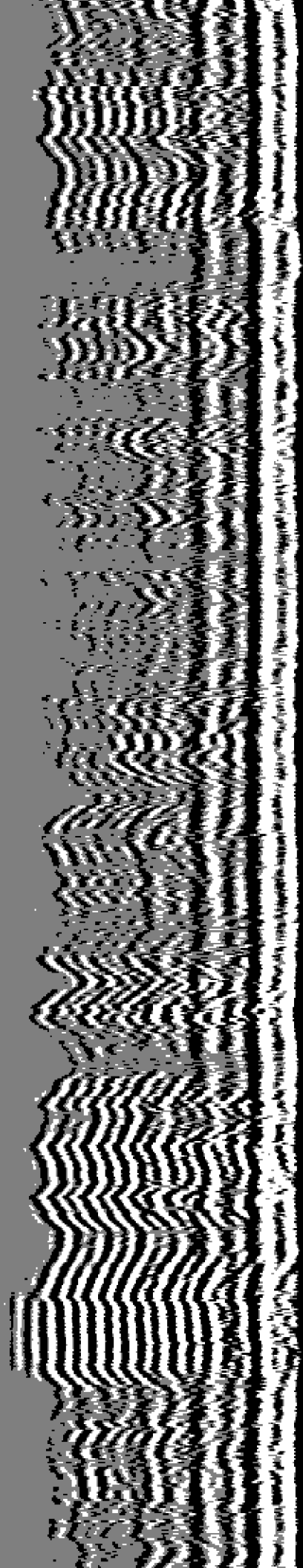
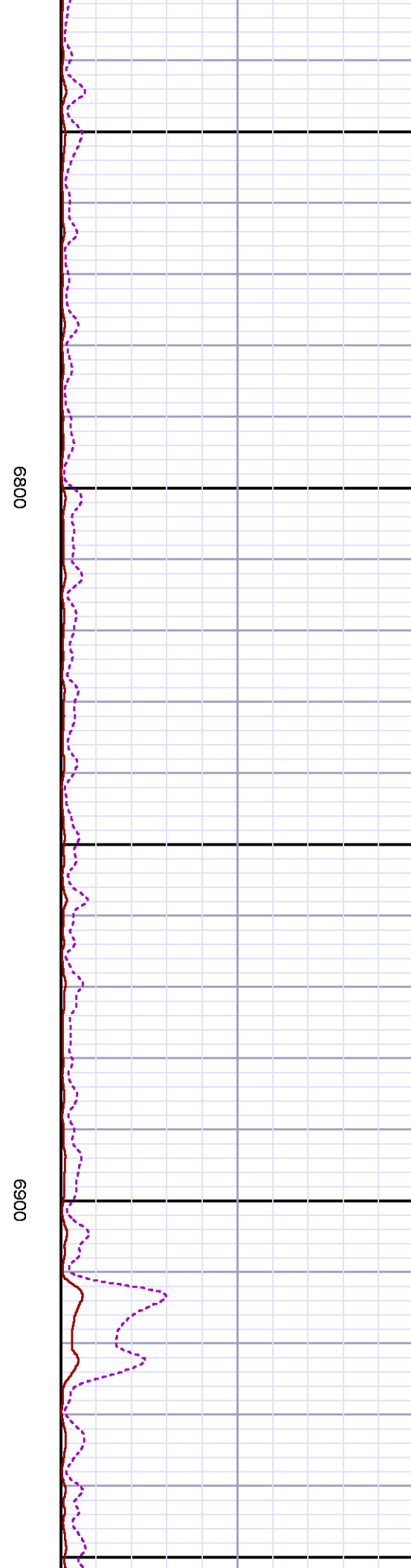
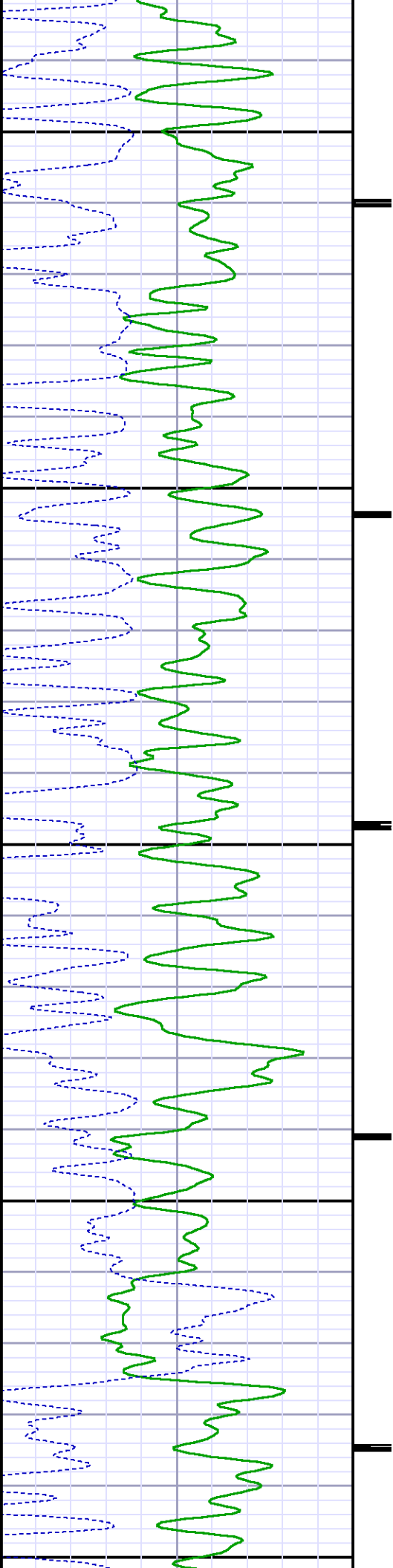




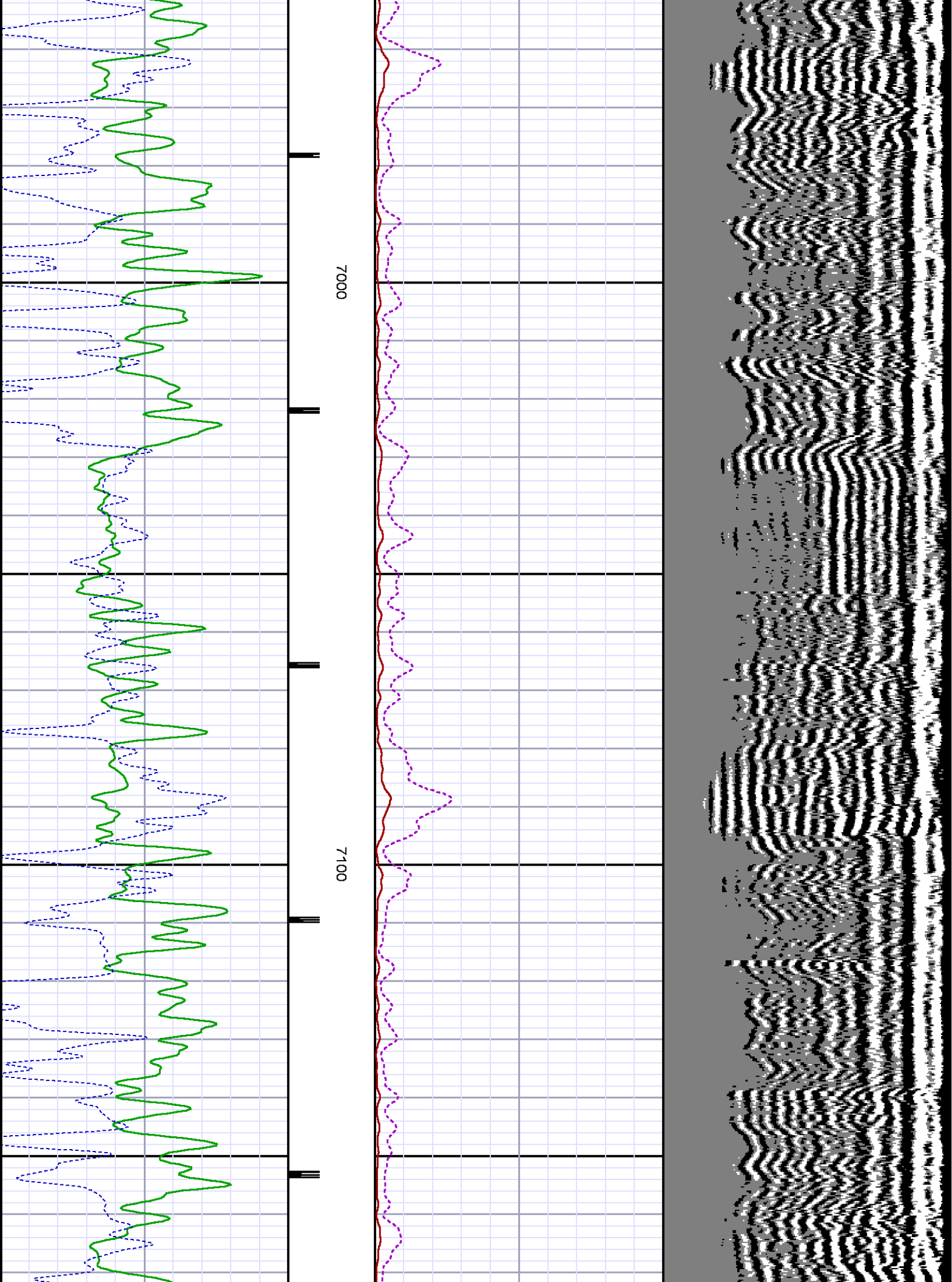


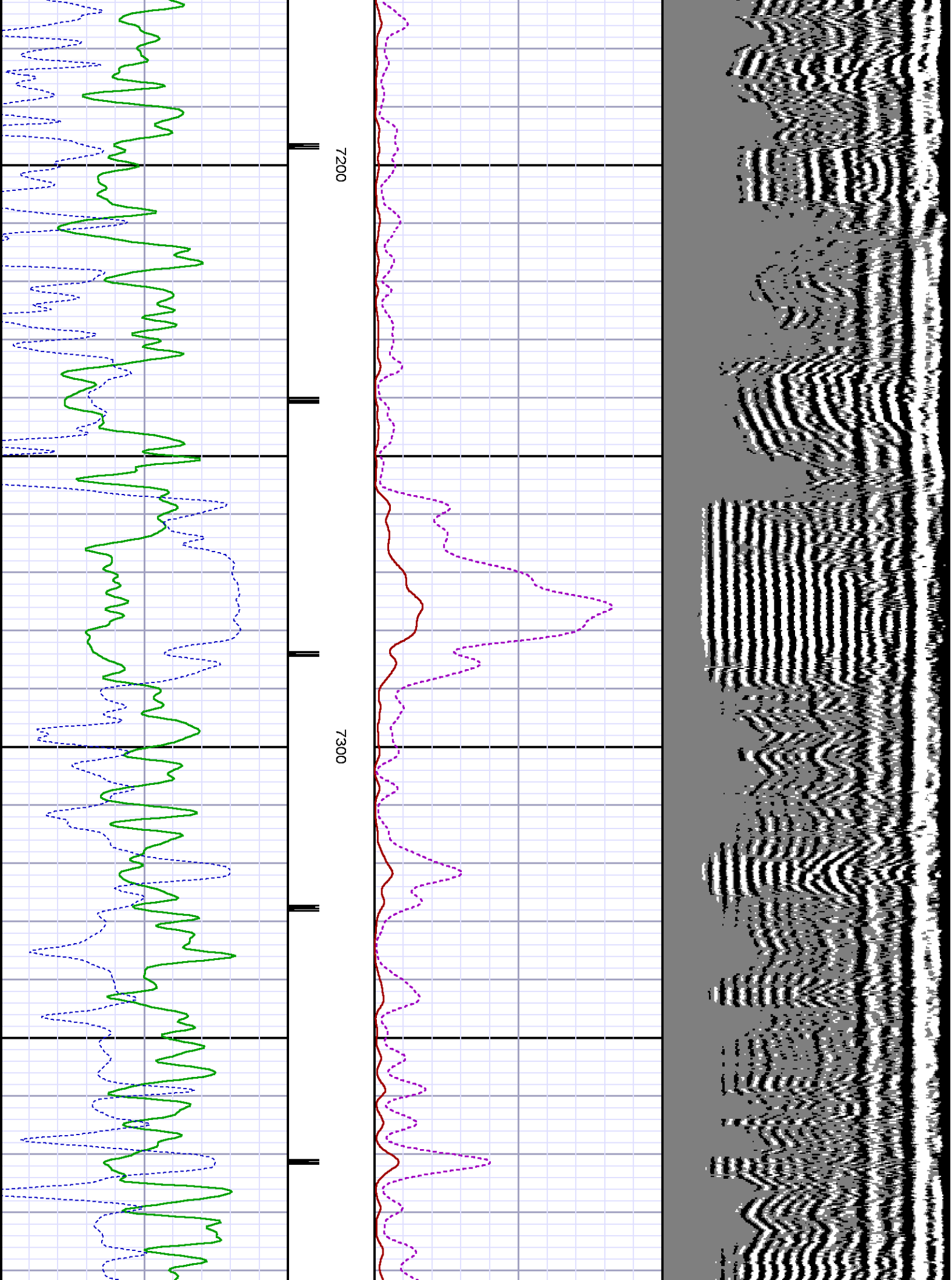




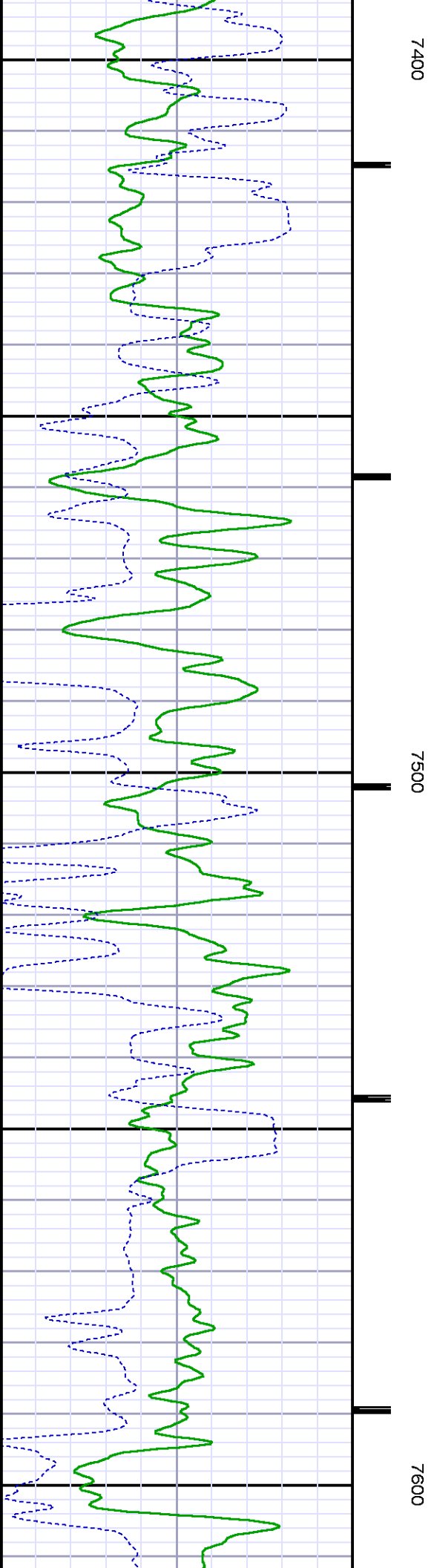
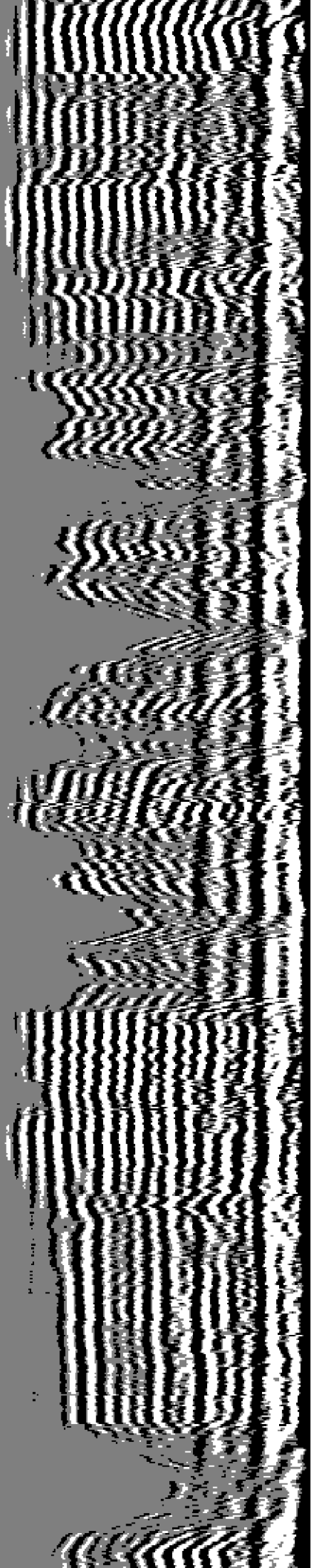


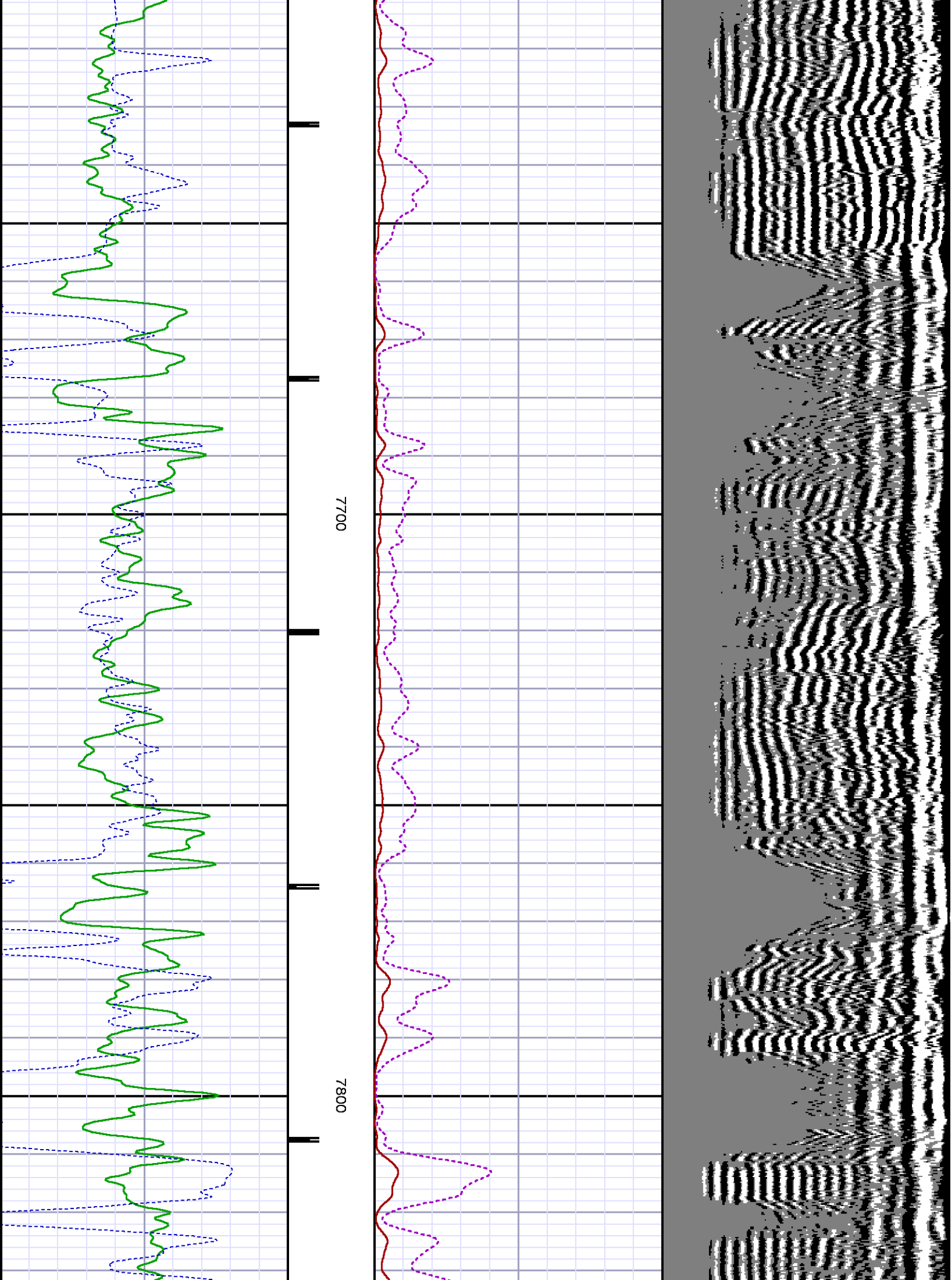


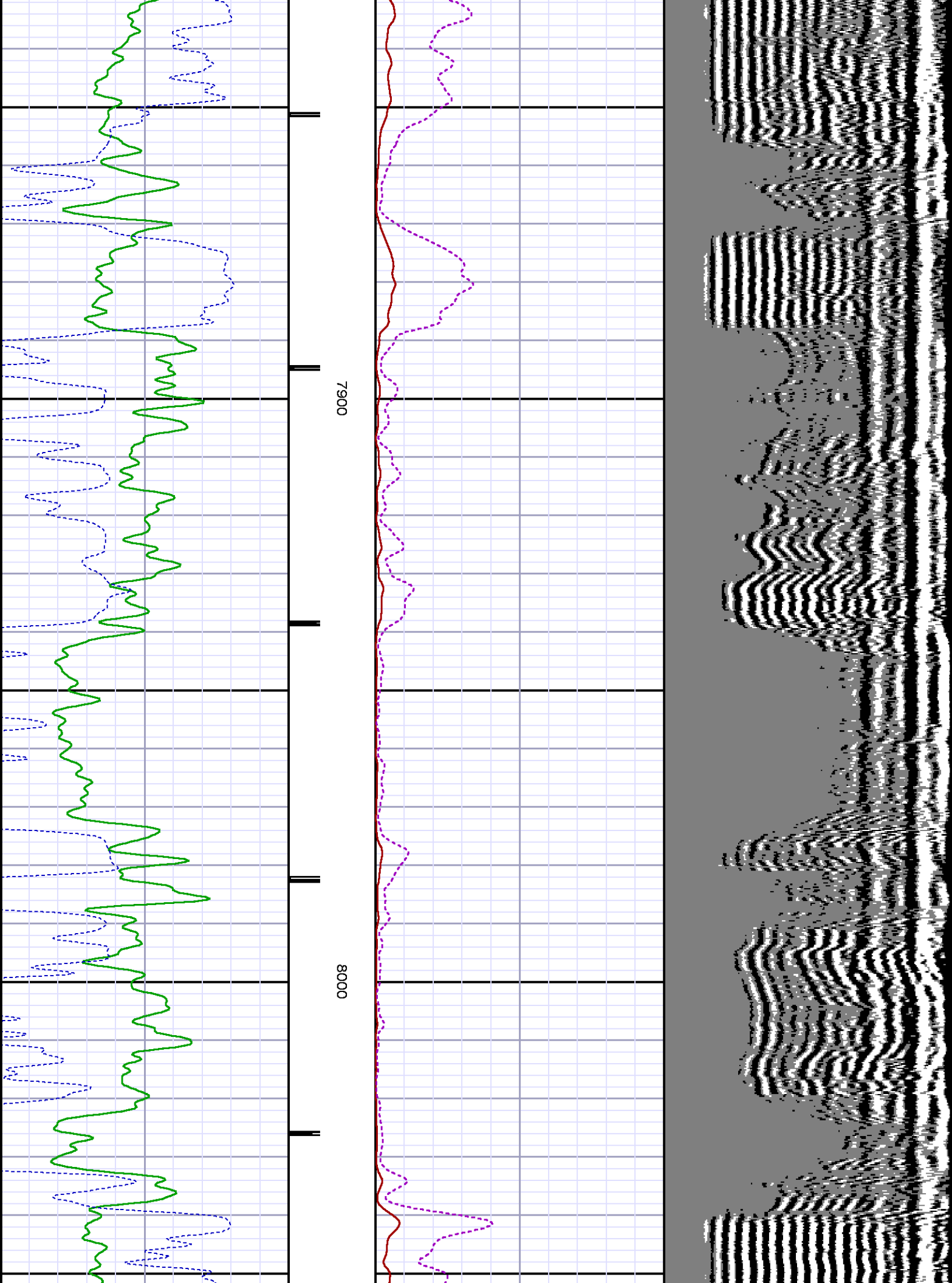


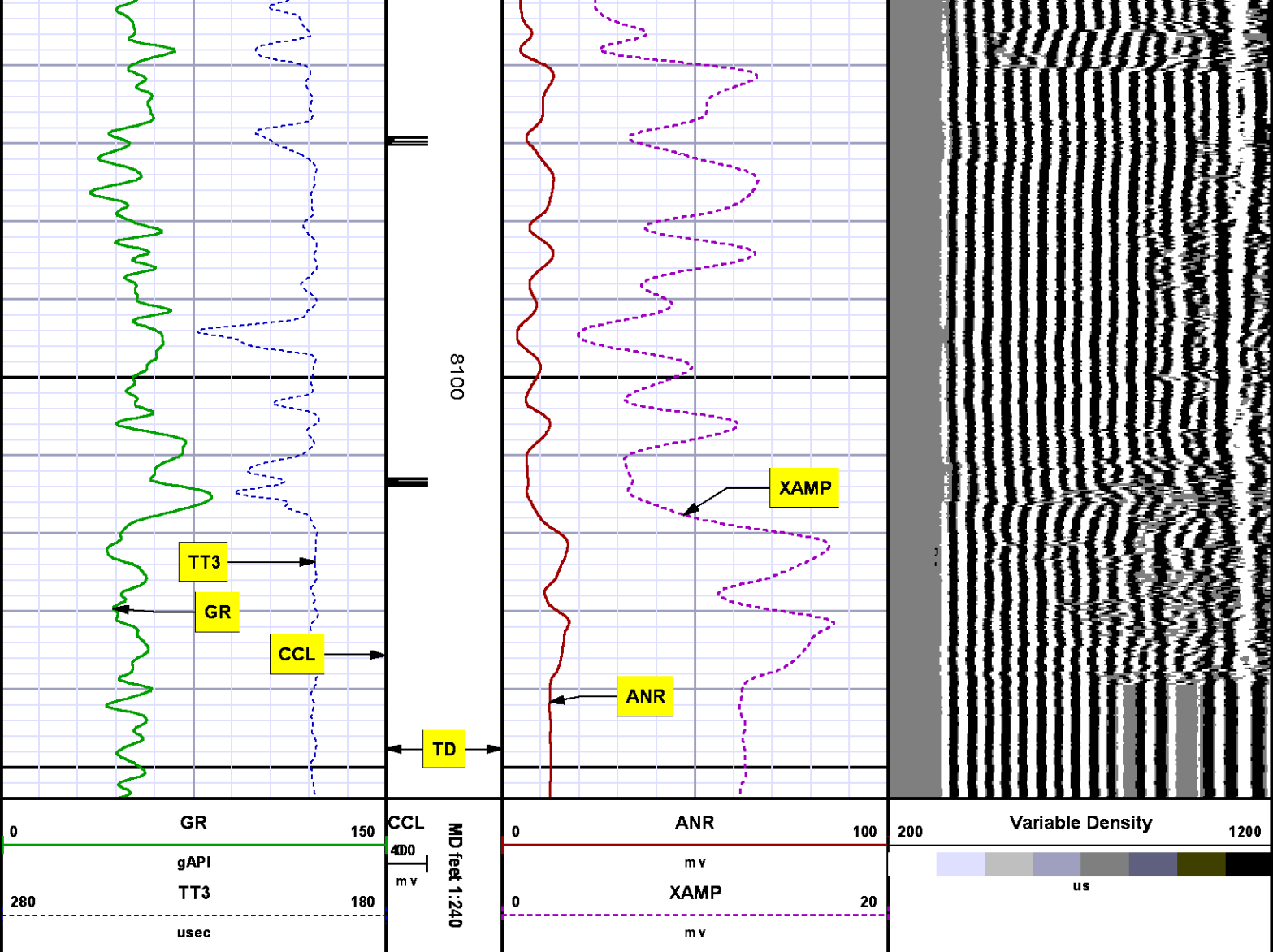












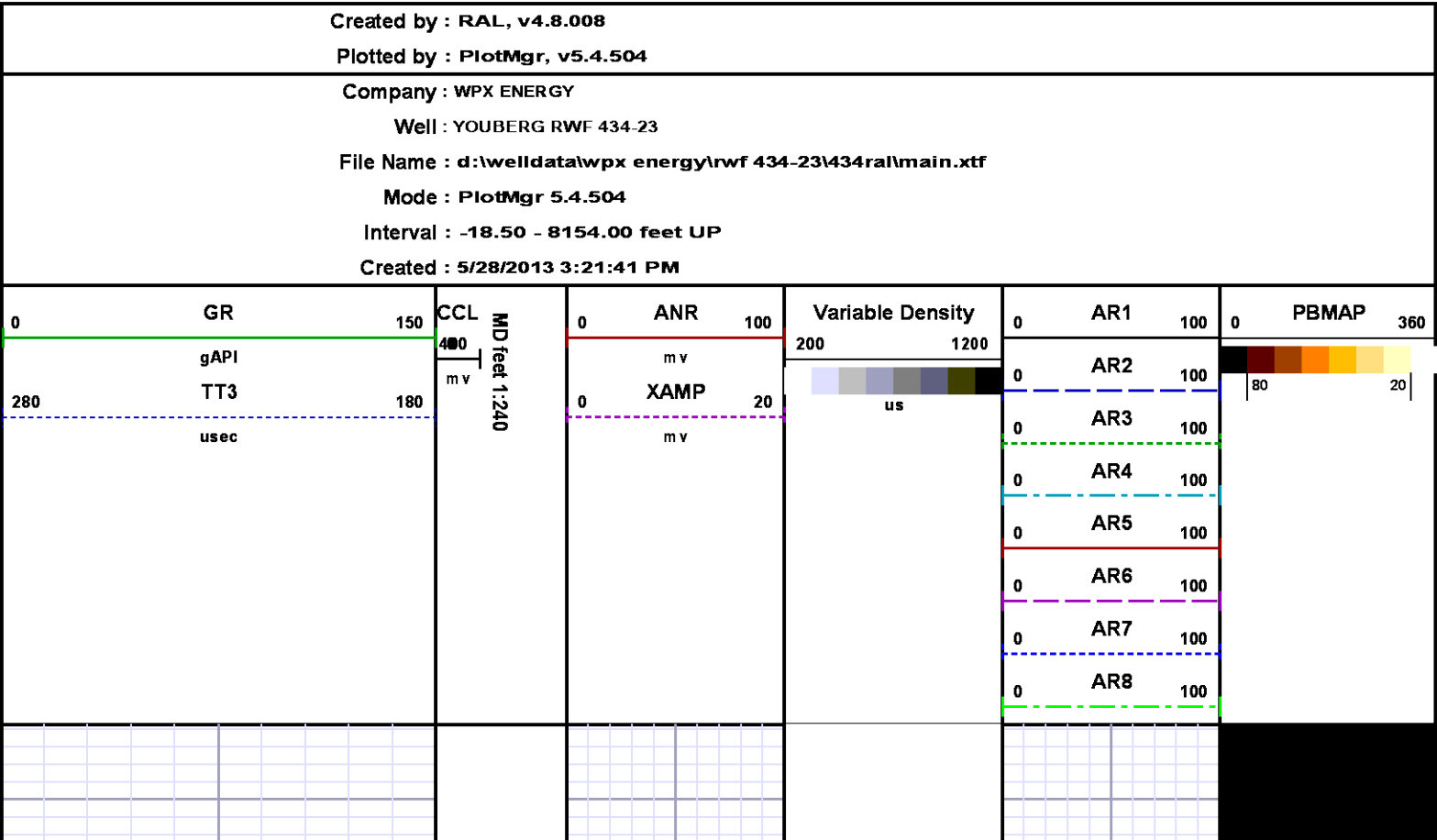
SECONDARY PRESENTATION  
0 PSI

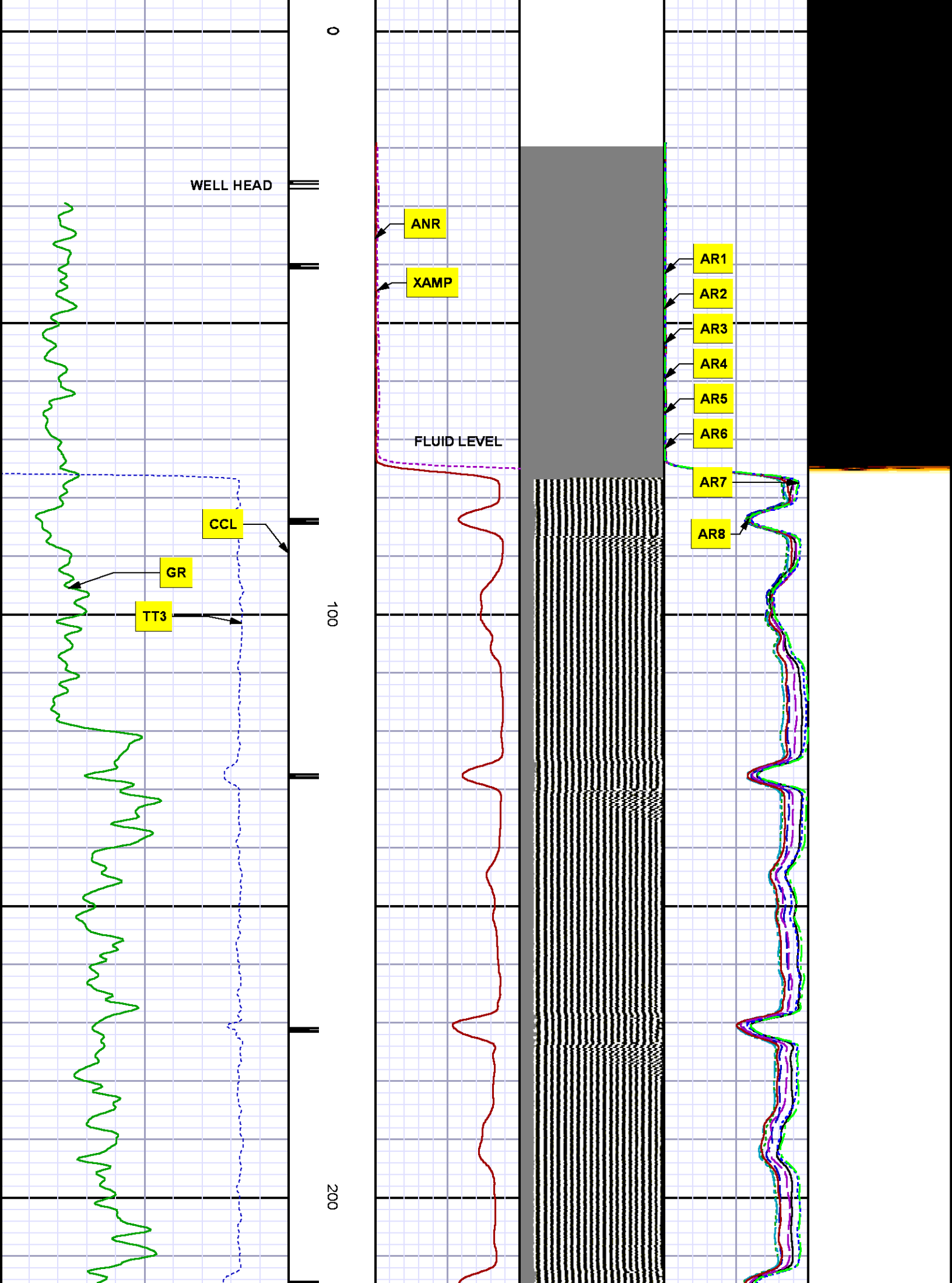
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	29.831	8167.500
RAL	Amp Gate Start Near	195.000	u sec	29.831	8167.500
RAL	Amp Gate Start Radial	195.000	u sec	29.831	8167.500
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RAL	Amp Gate Width Near	25.000	u sec	29.831	8167.500

RAL	Amp Gate Width Radial	25.000	usec	29.831	8167.500
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RAL	casing wt	11.600	lbm/ft	29.831	8167.500
RAL	FB Start Far	291.900	usec	29.831	8167.500
RAL	FB Start Near	180.000	usec	29.831	8167.500
RAL	FB Start Radial	180.000	usec	29.831	8167.500
RAL	FB Thresh Far	10.000	mv	29.831	8167.500
RAL	FB Thresh Near	4.000	mv	29.831	8167.500
RAL	FB Thresh Radial	4.000	mv	29.831	8167.500
RAL	Fluid Travel Time	200.000	usec/ft	29.831	8167.500

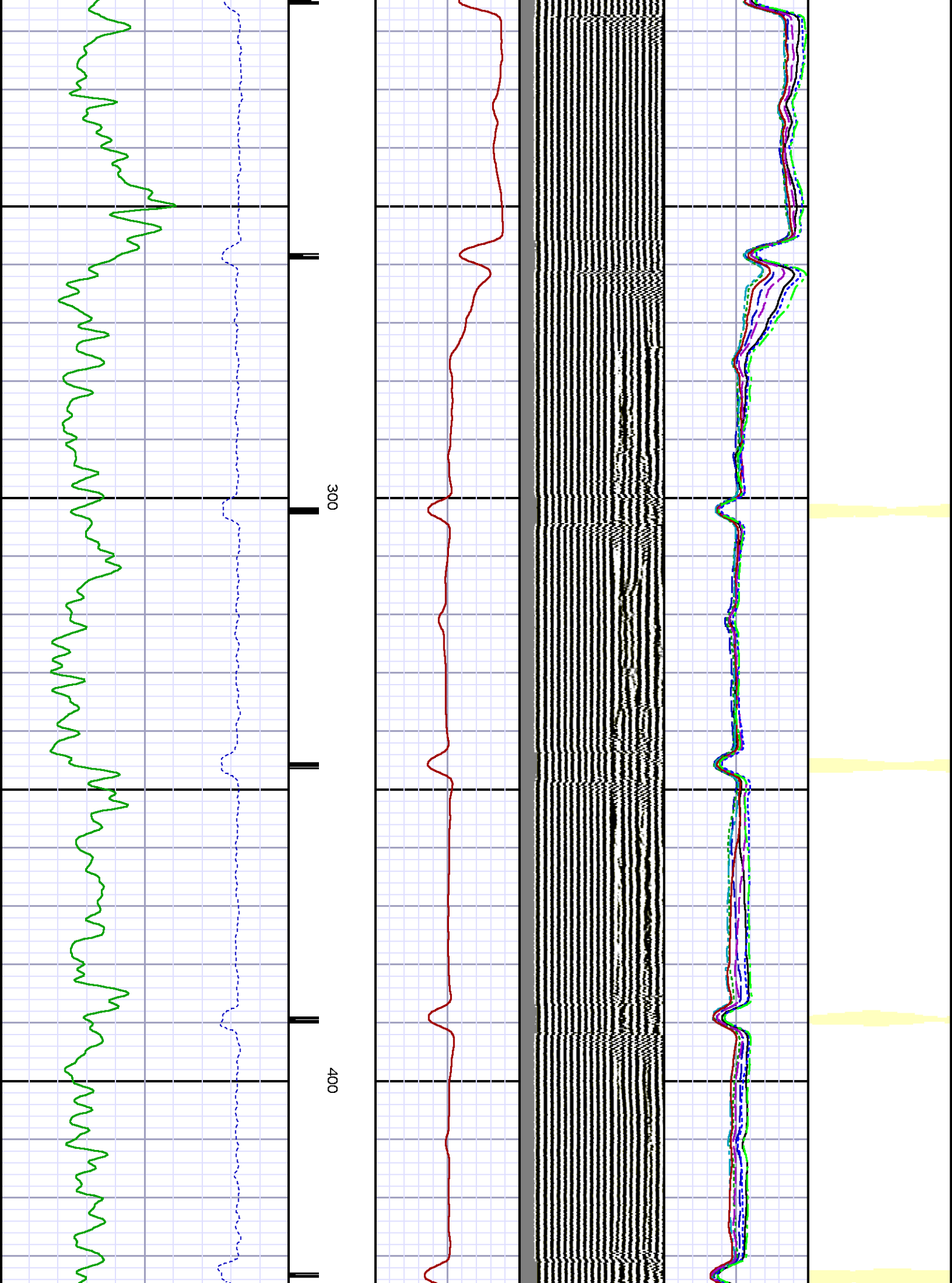
DEPTH OFFSETS  
(for Acquired Curves)

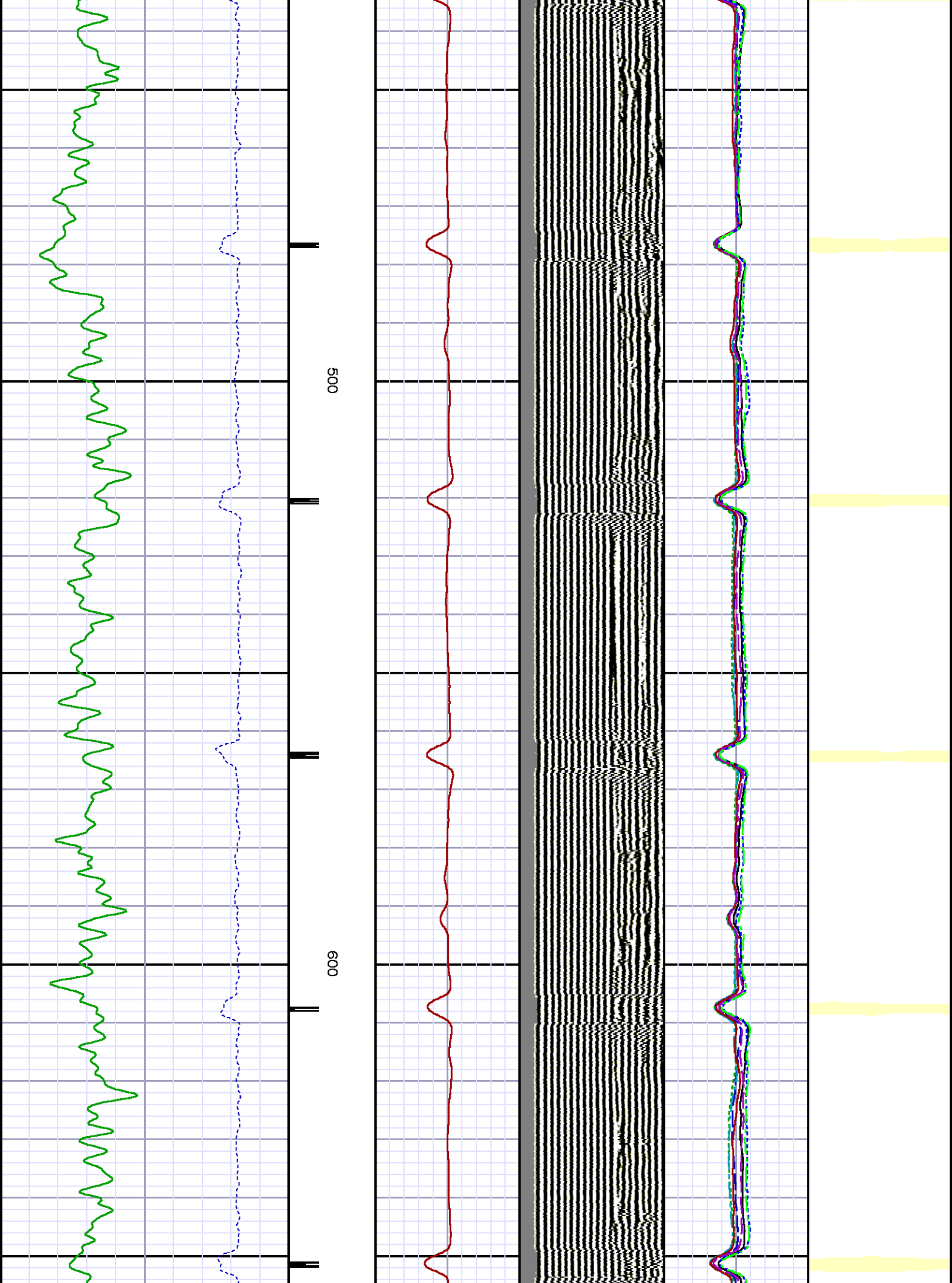
SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	-11.000	ACAL    ANR    AR1    AR2    AR3    AR4 AR5    AR6    AR7    AR8    CHV    FPR2 FPR3    FPR5    TT3    TTR1    TTR2    TTR3 TTR4    TTR5    TTR6    TTR7    TTR8    XAMP
1426XA	-10.040	AFAR    SIG    TT5
1355XA	-5.620	CCL
1355XA	-1.500	GR
1355XA	0.000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

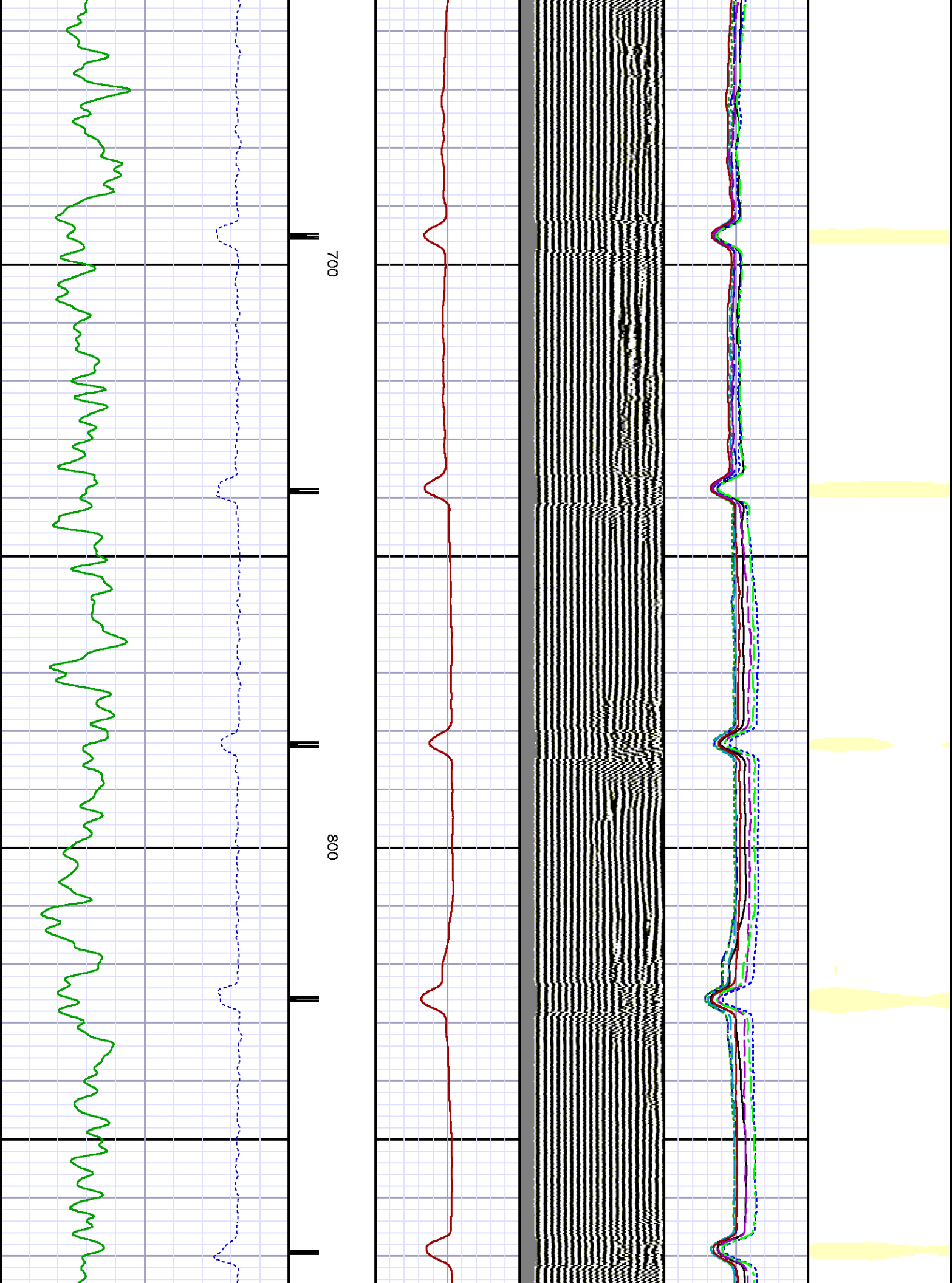


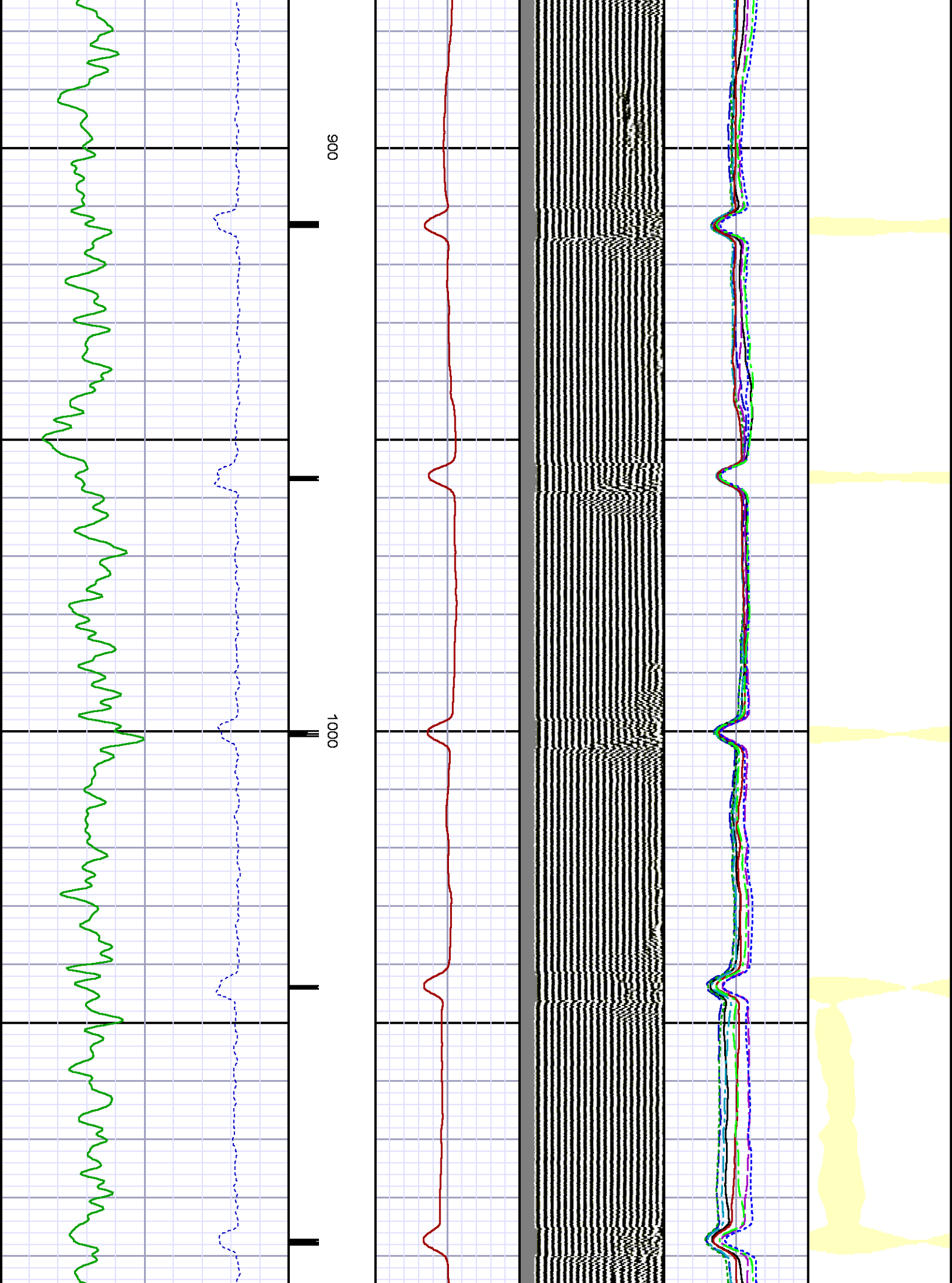


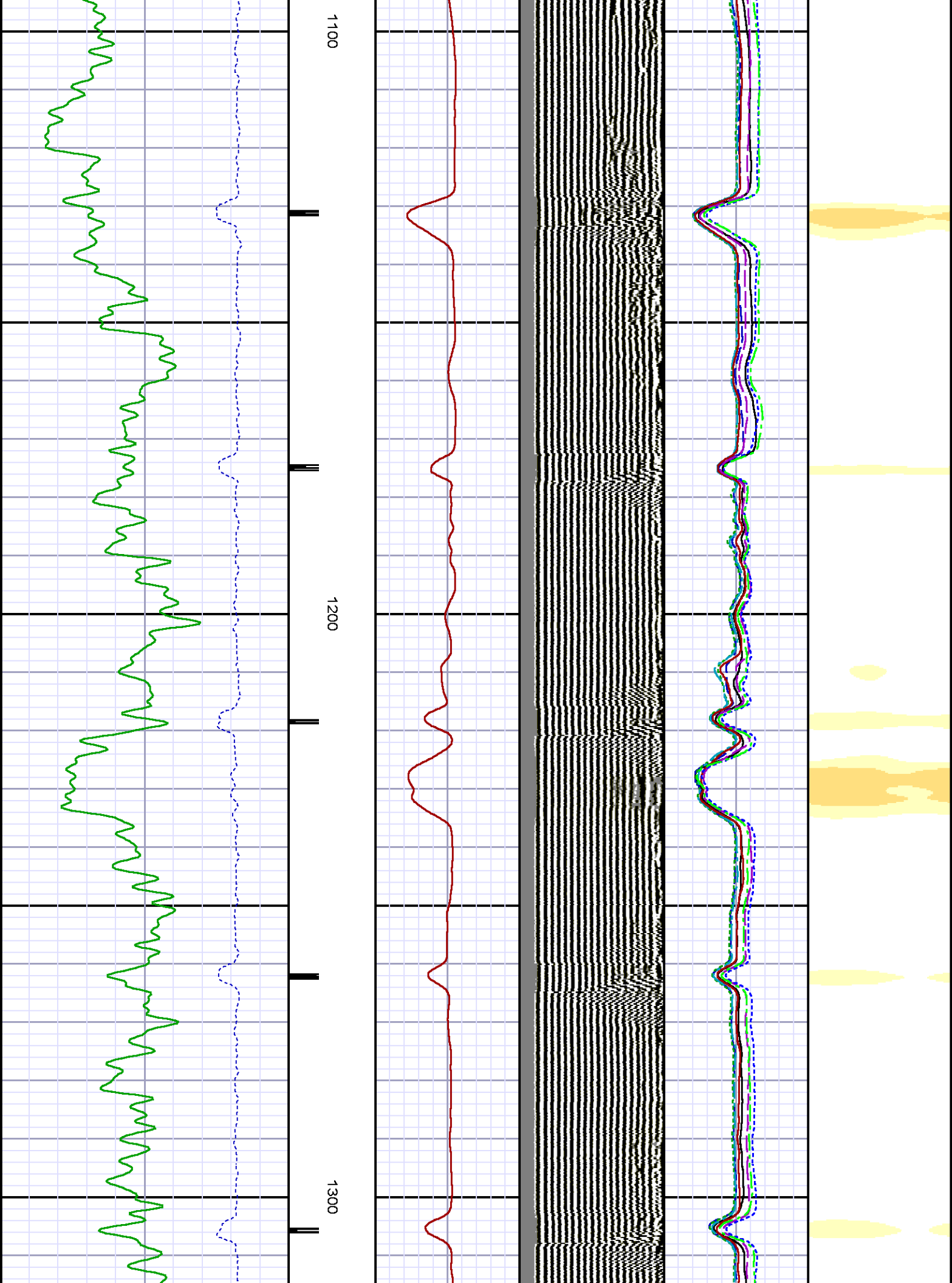




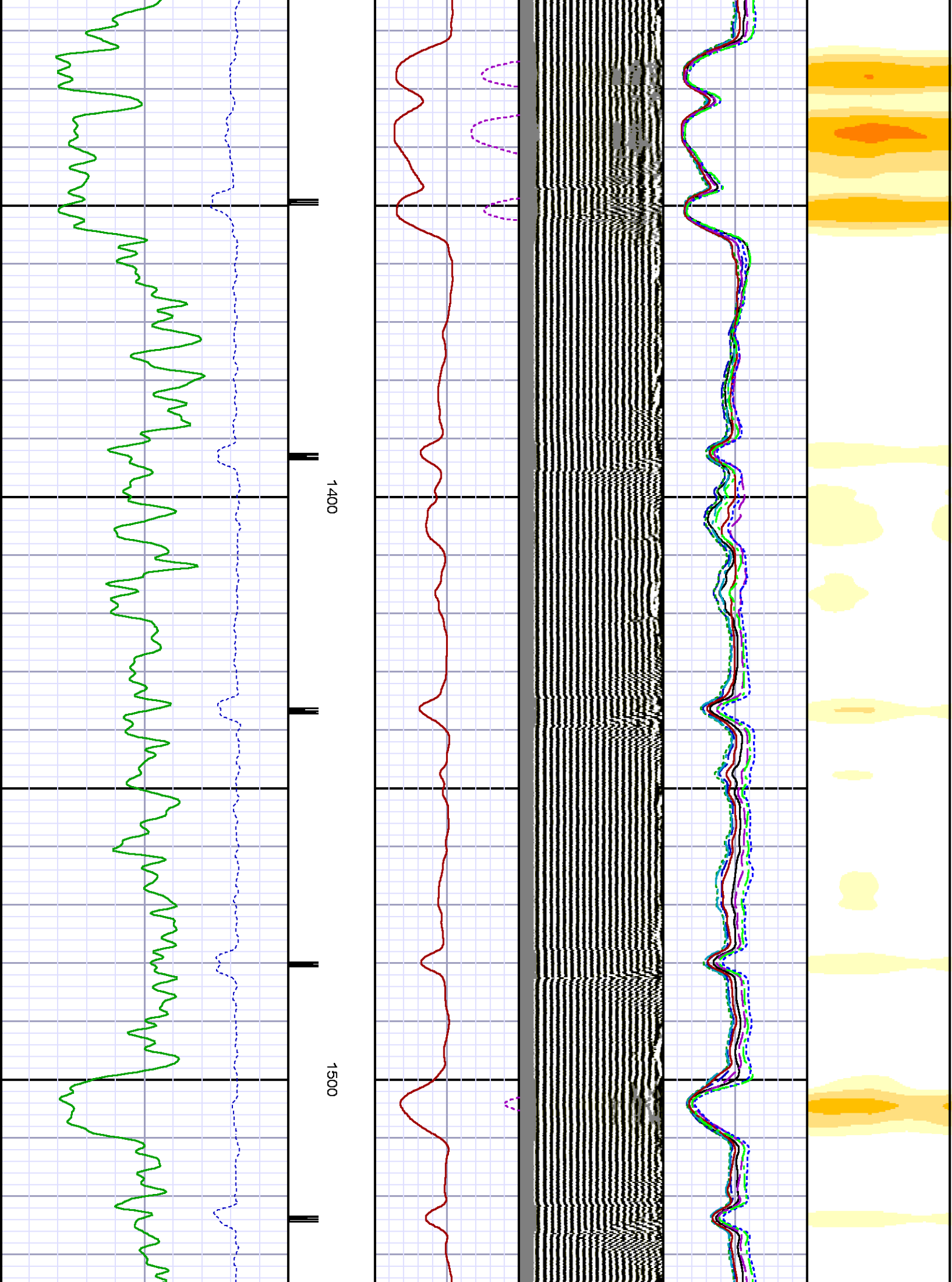




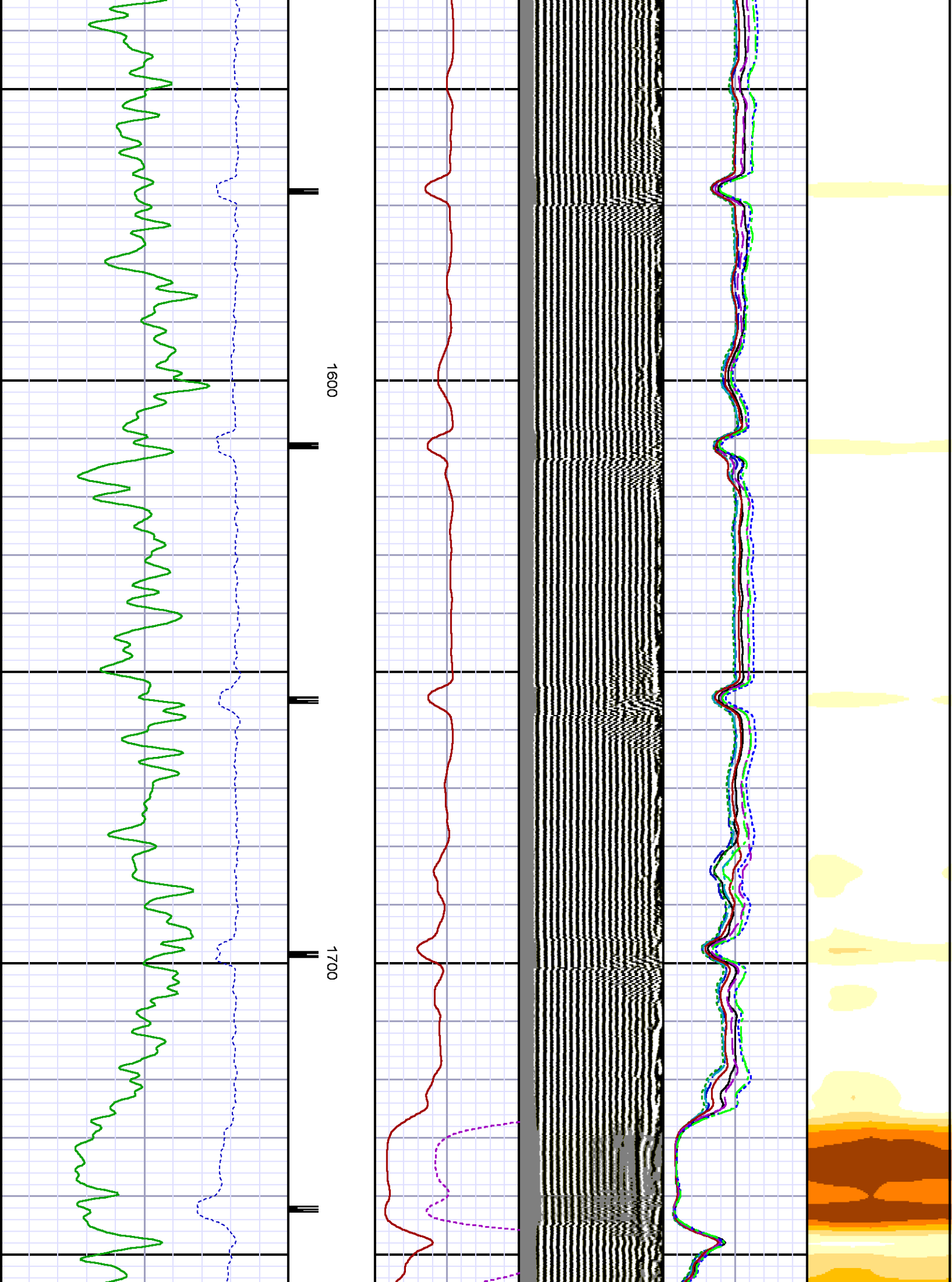


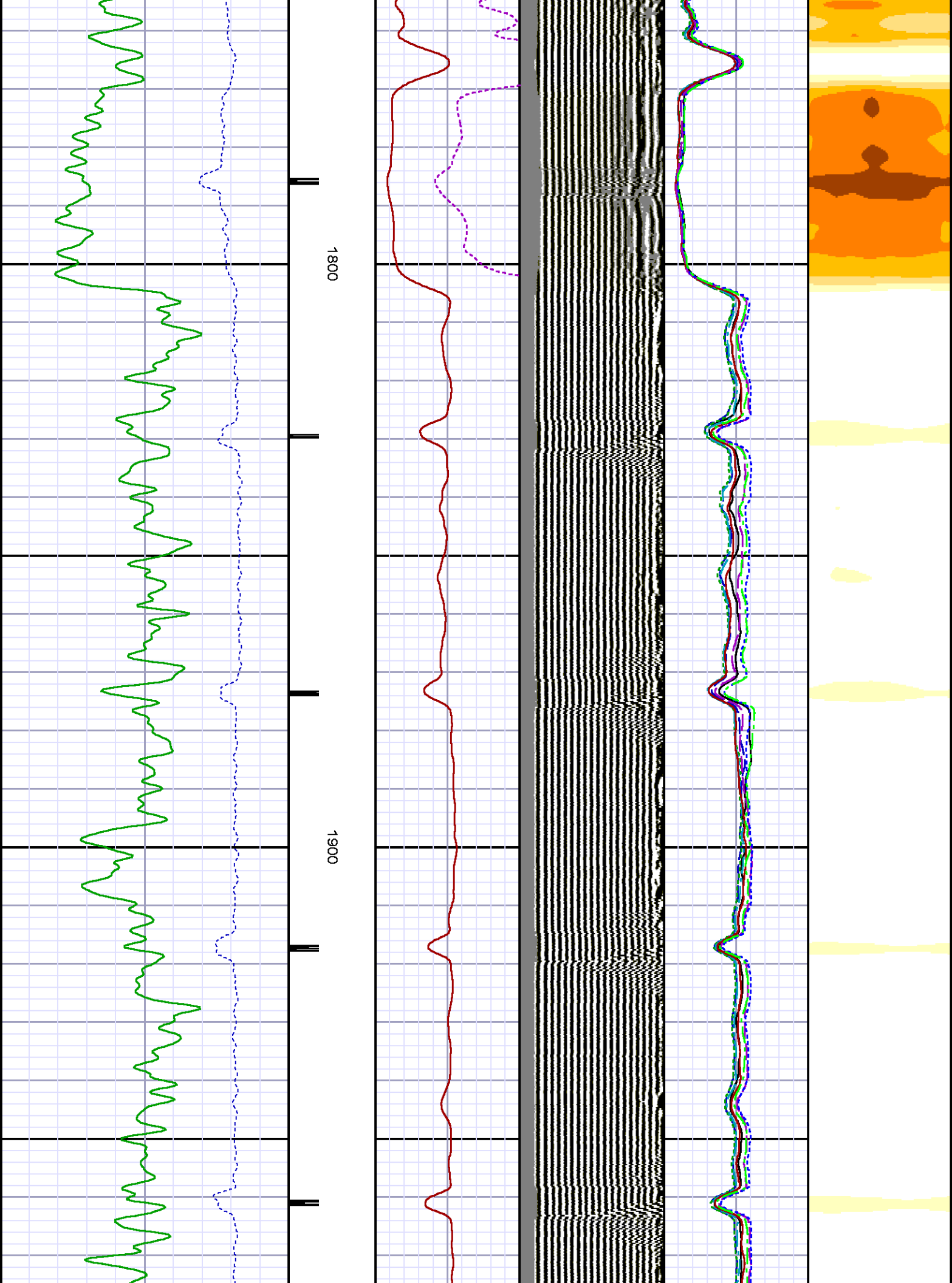


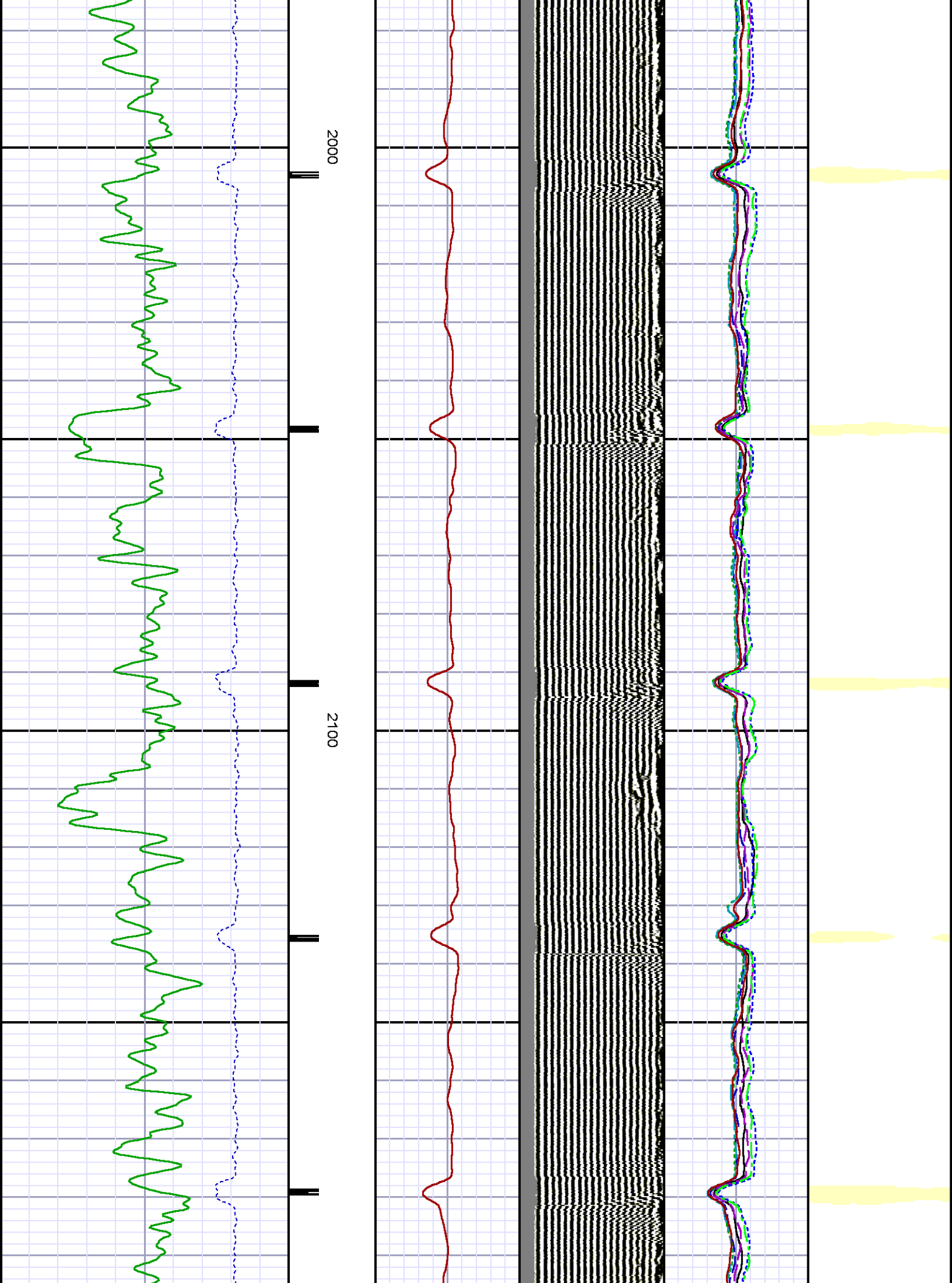


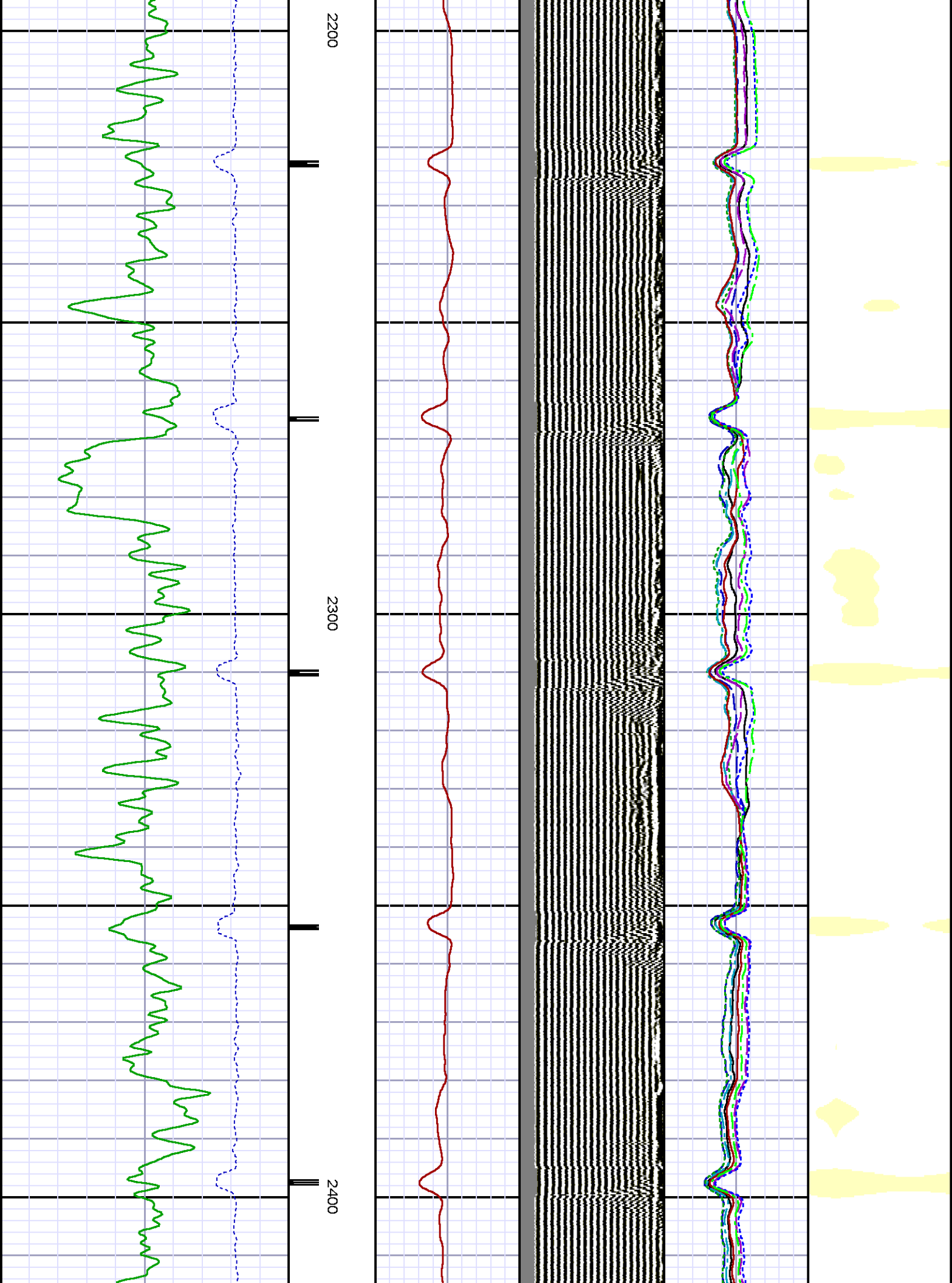


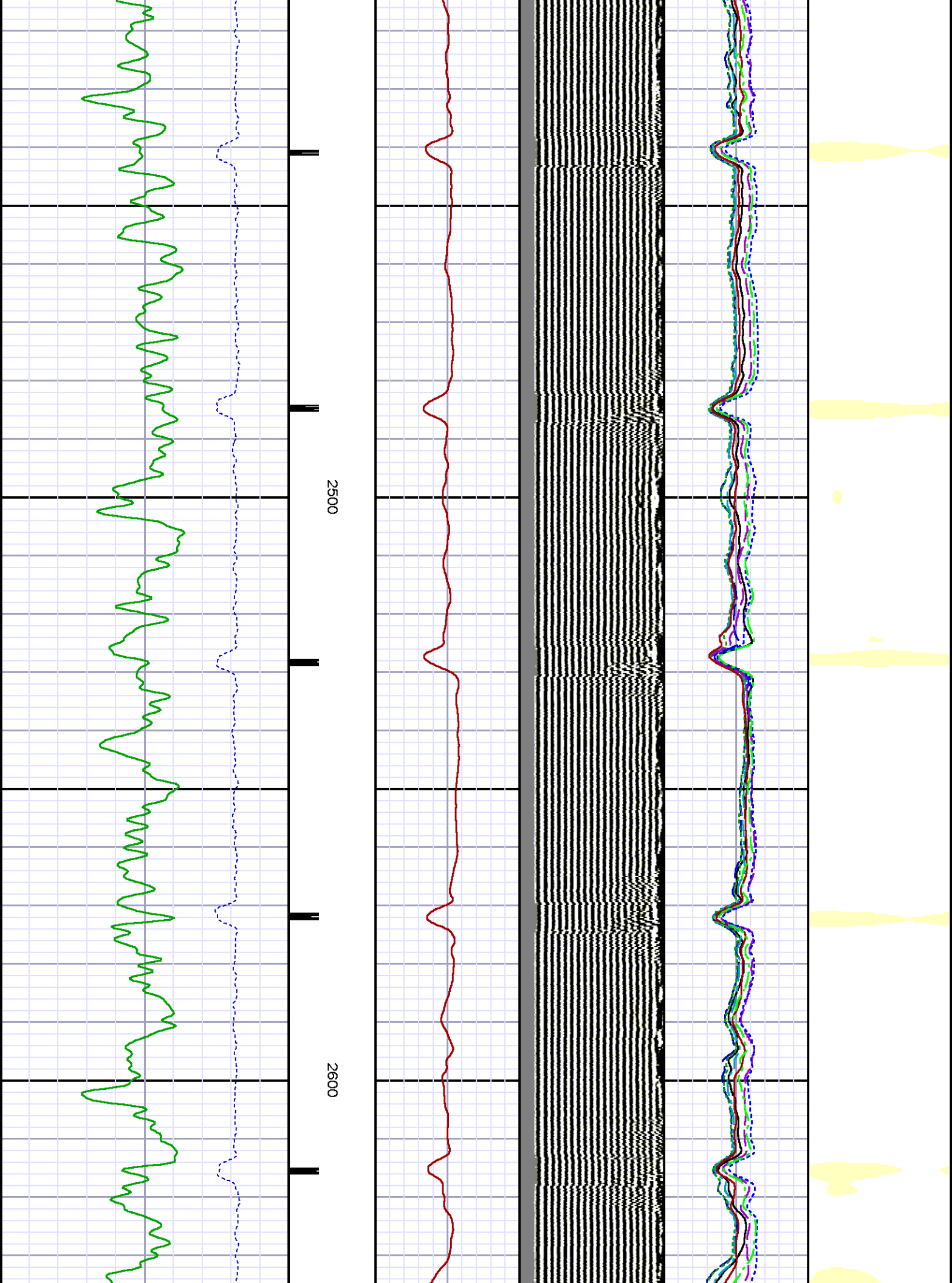




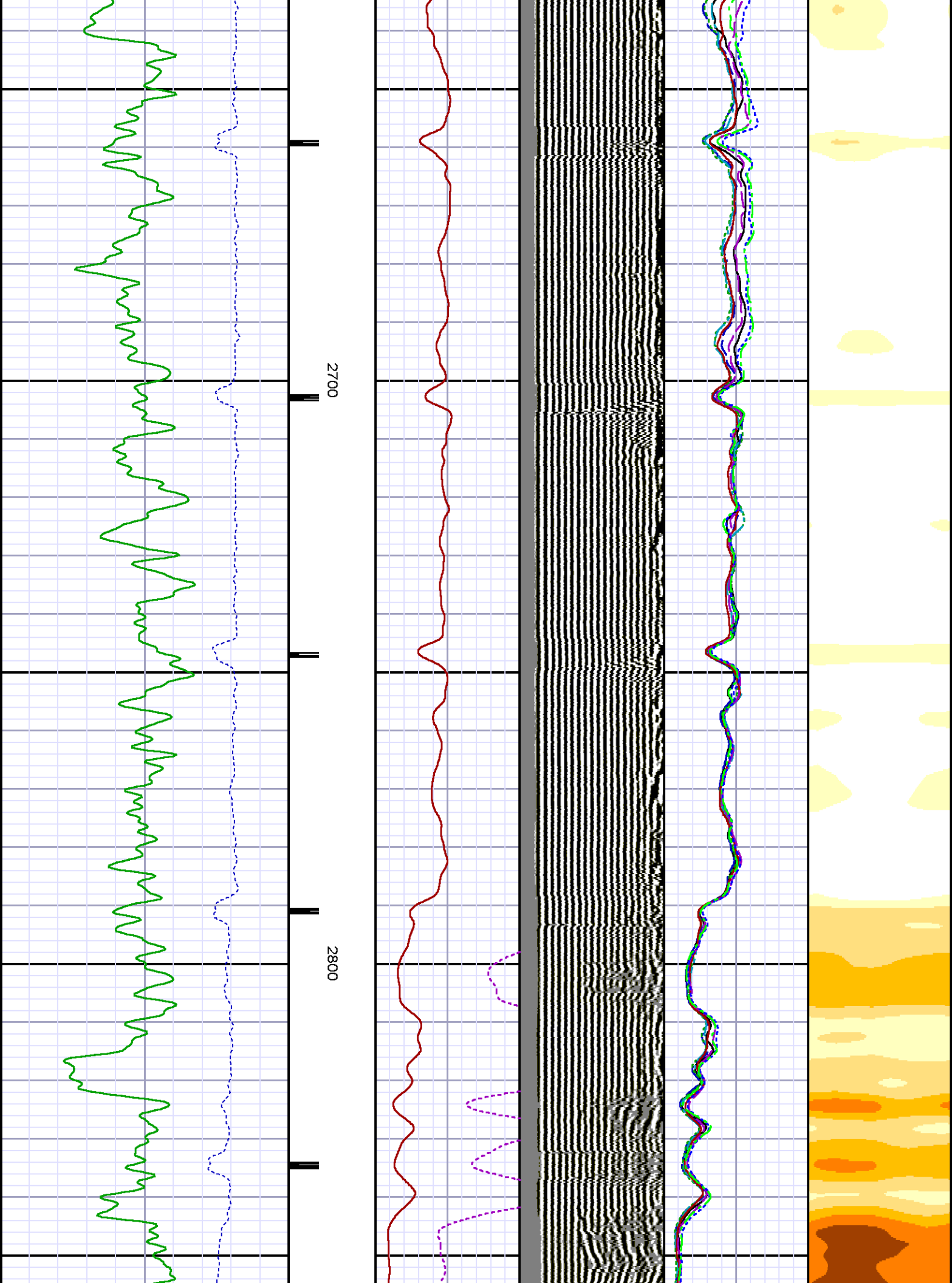




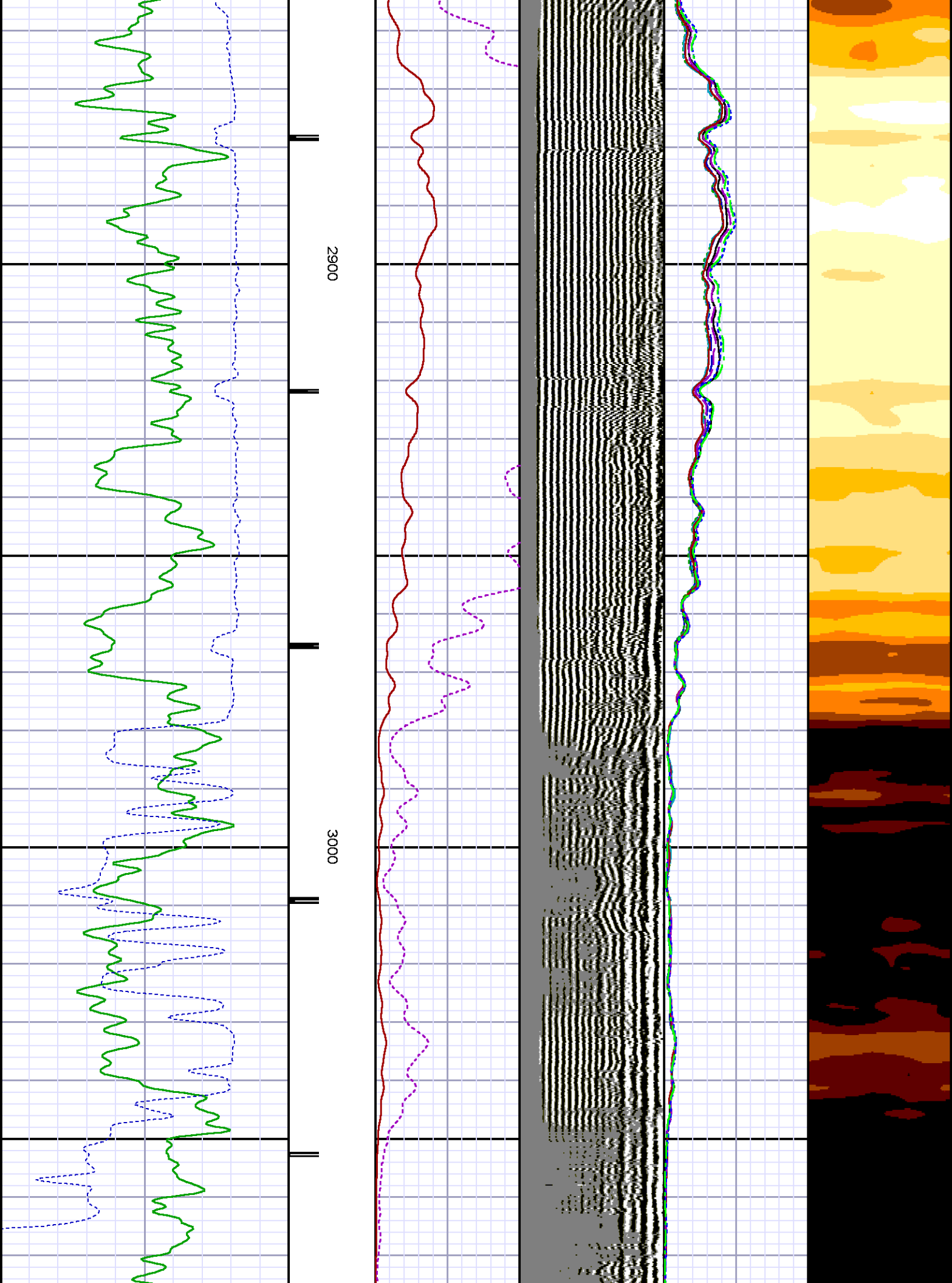


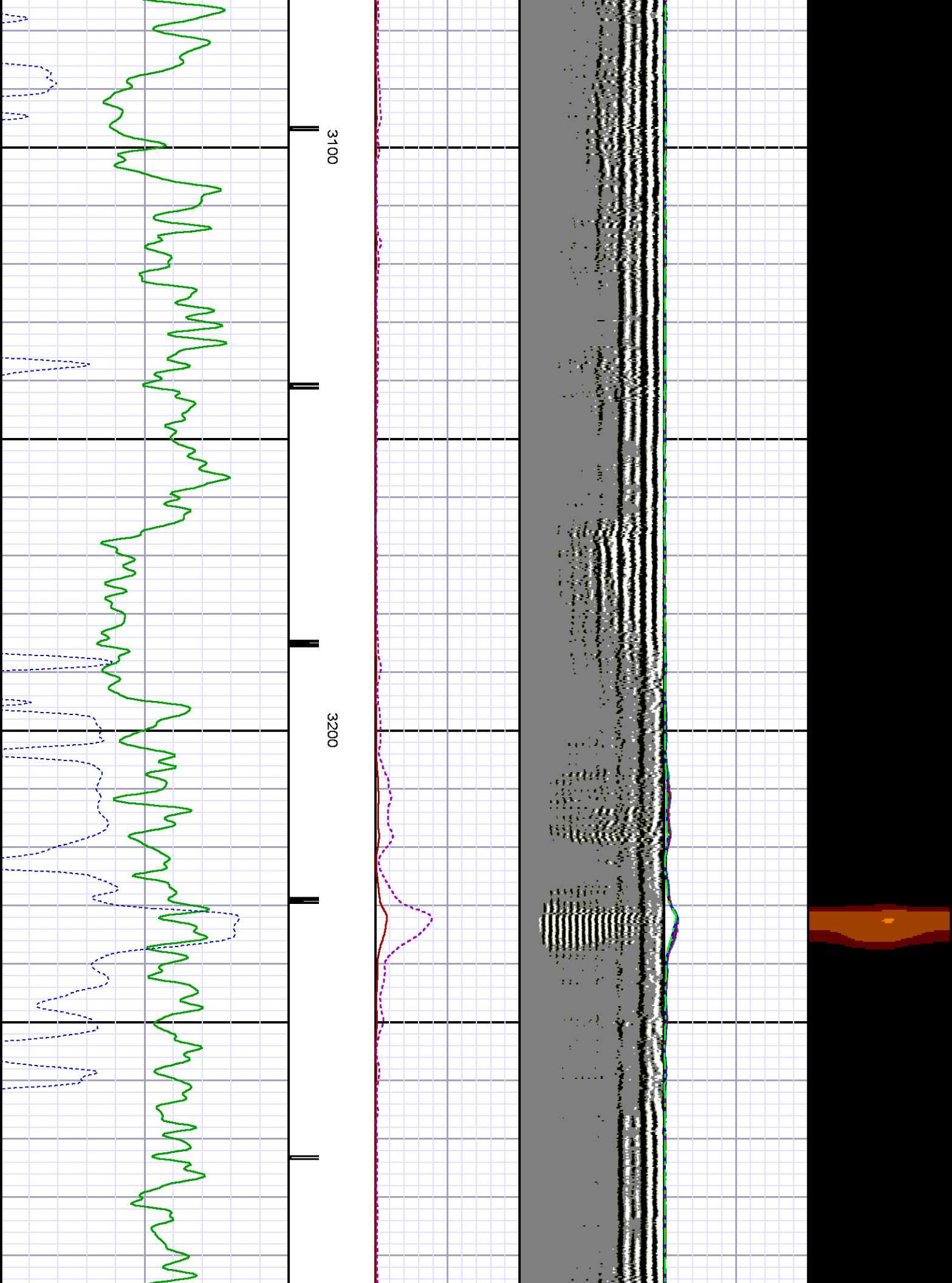


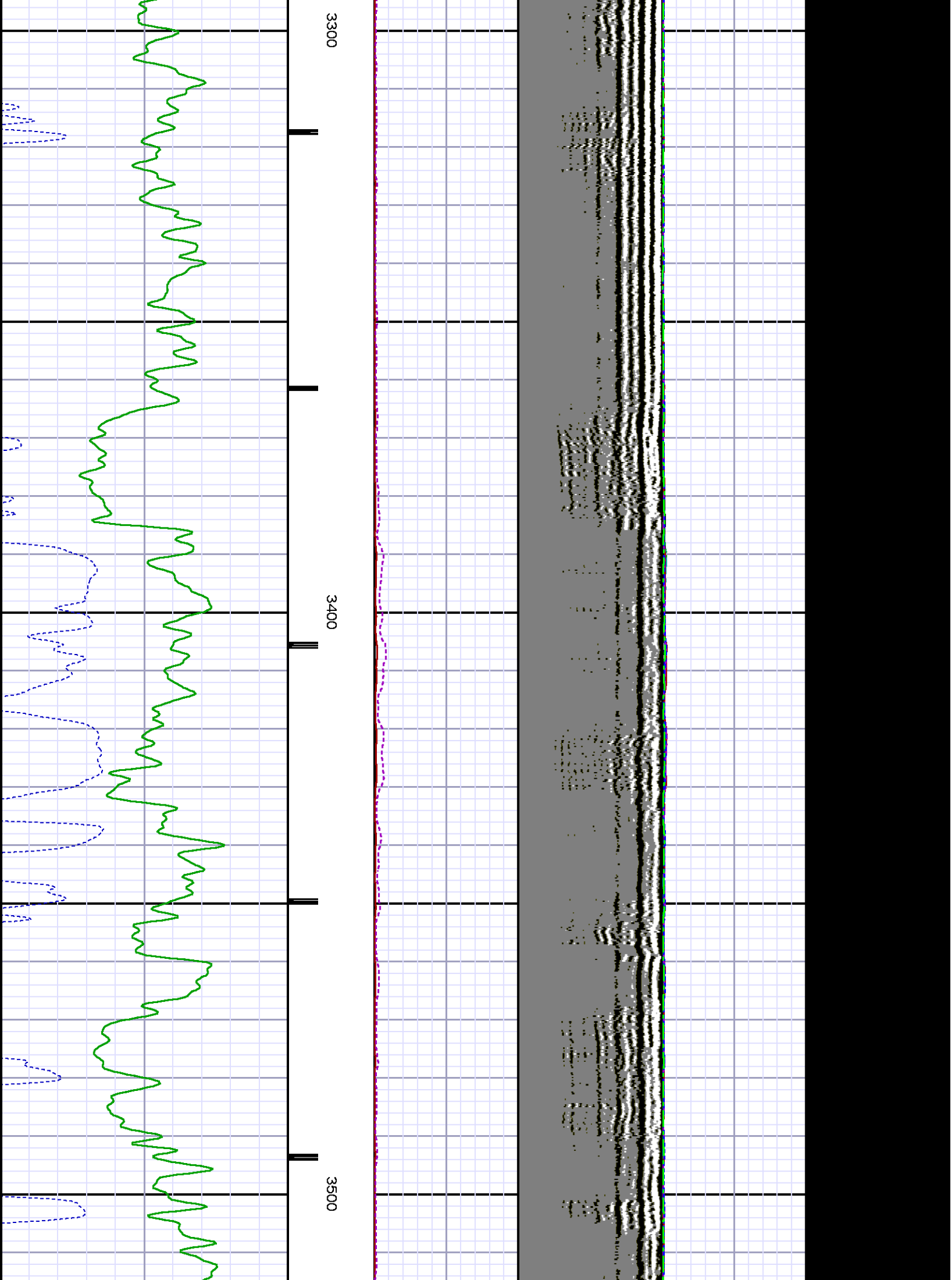


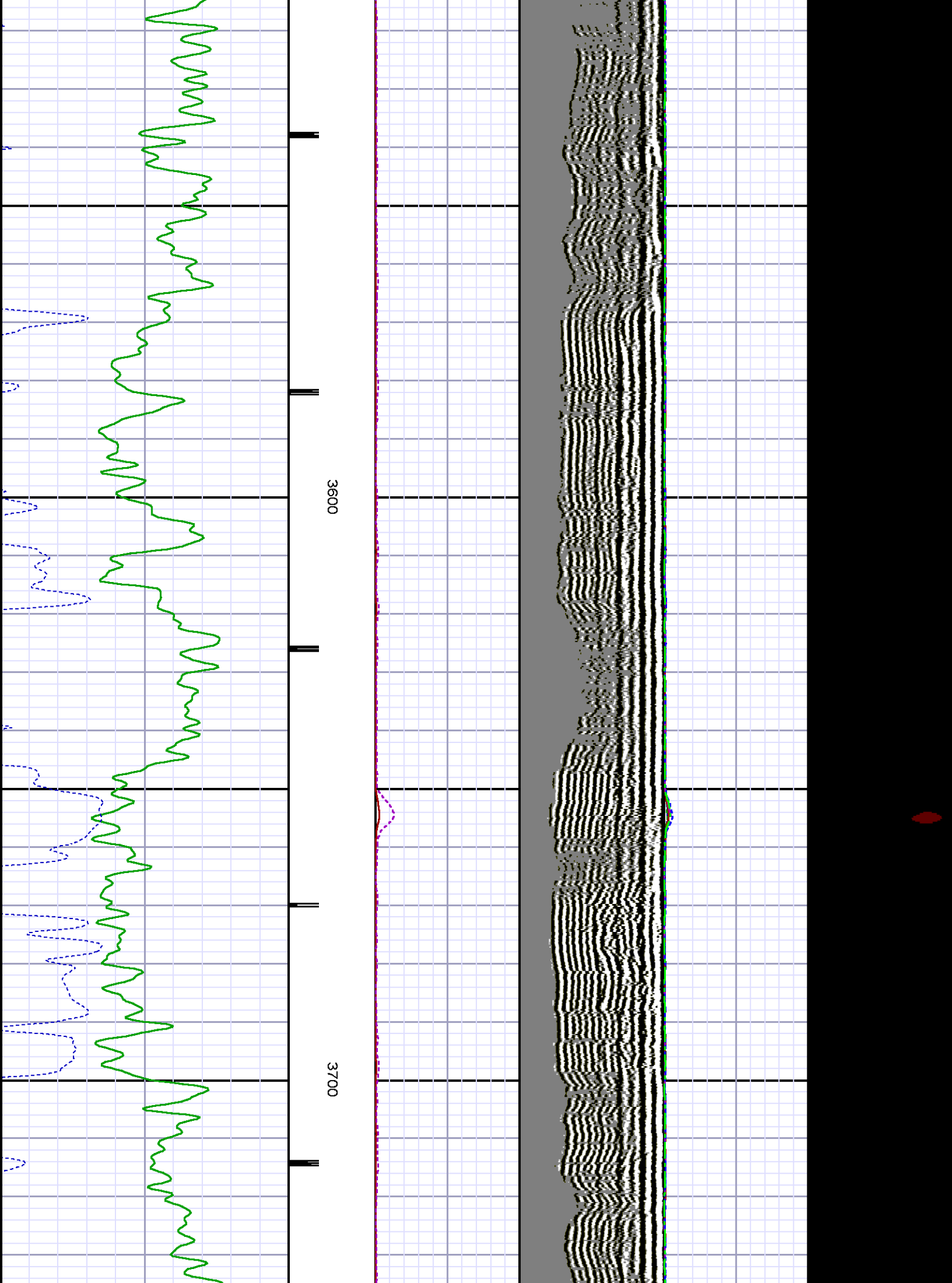


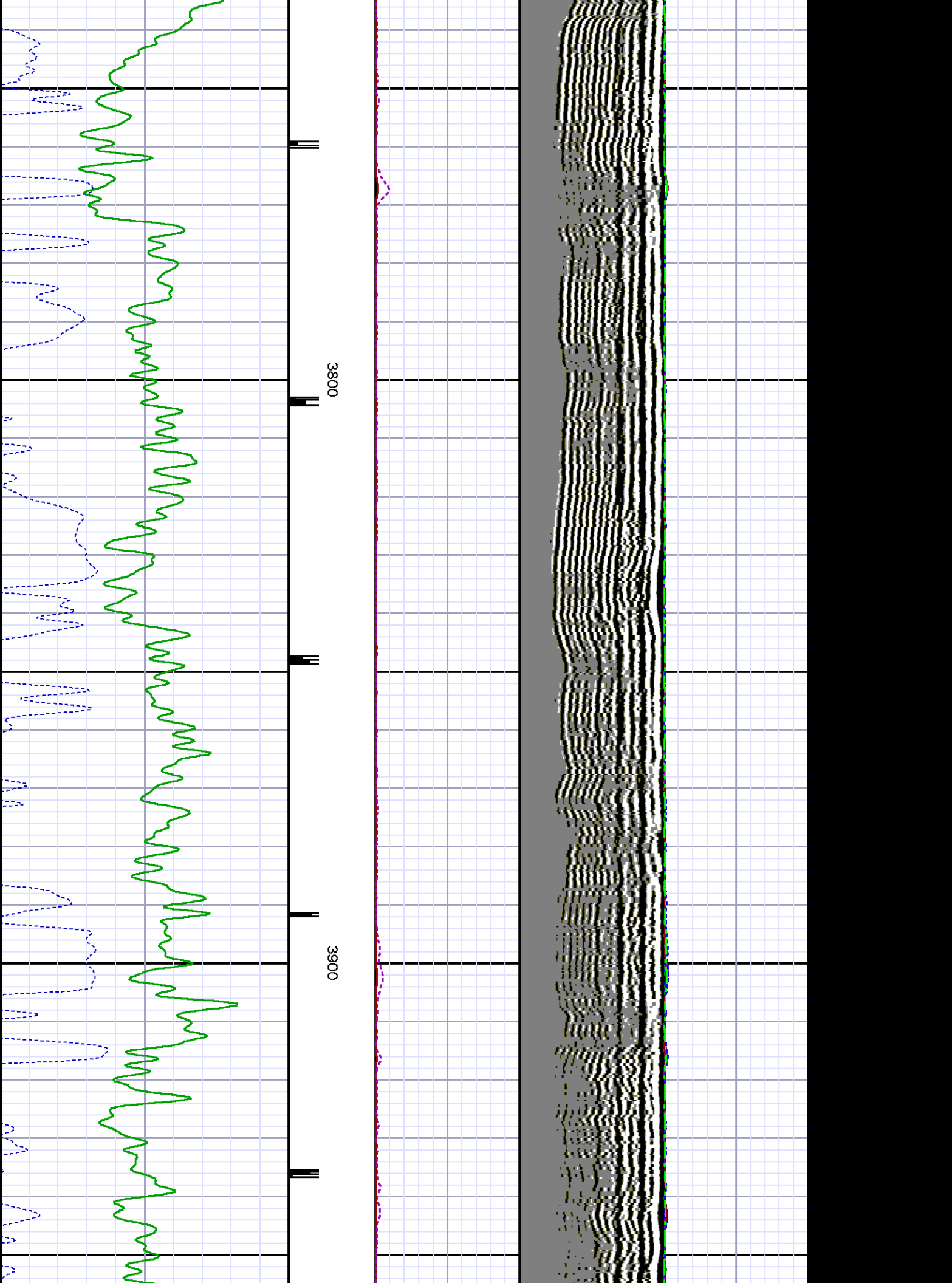


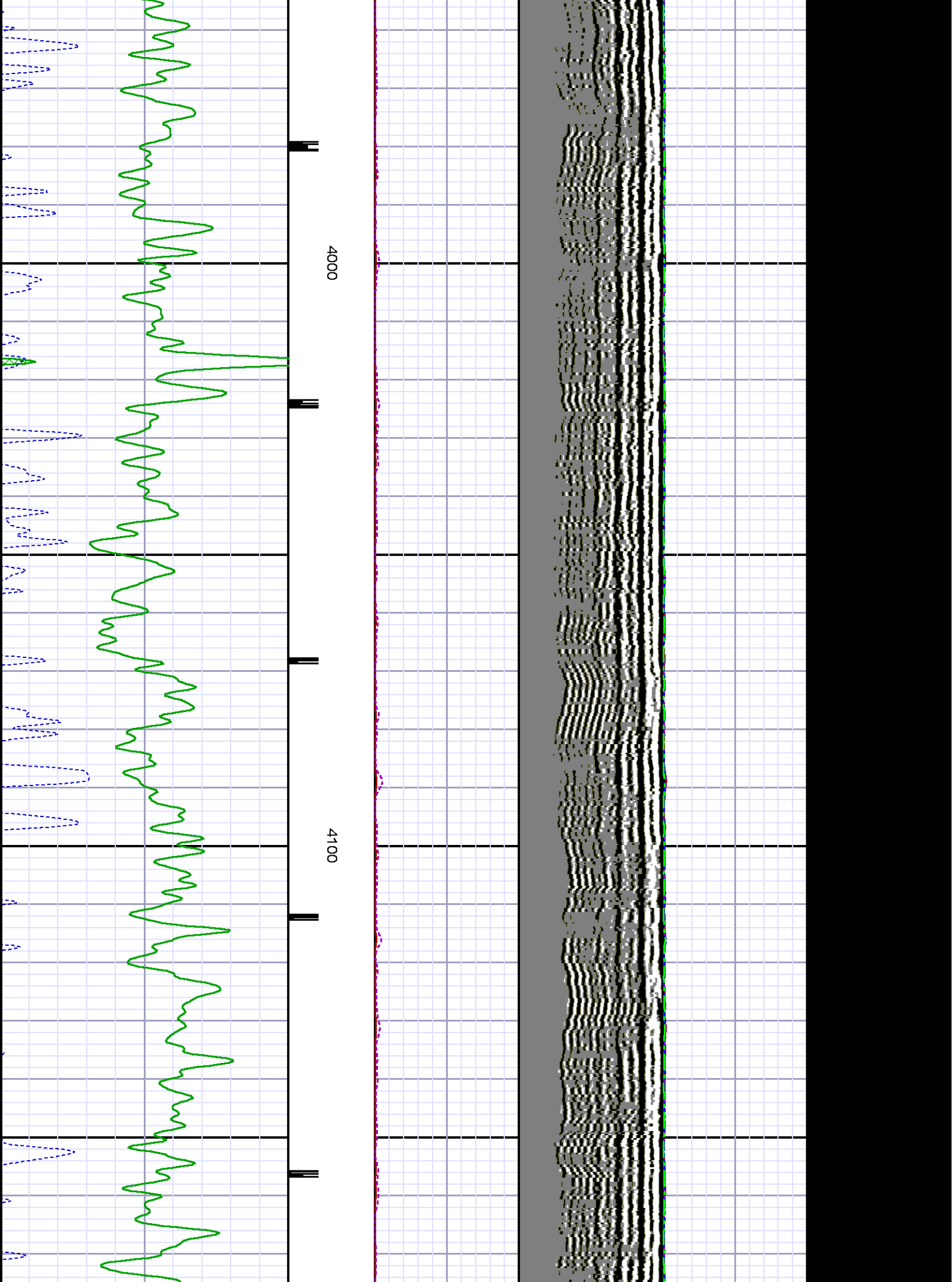




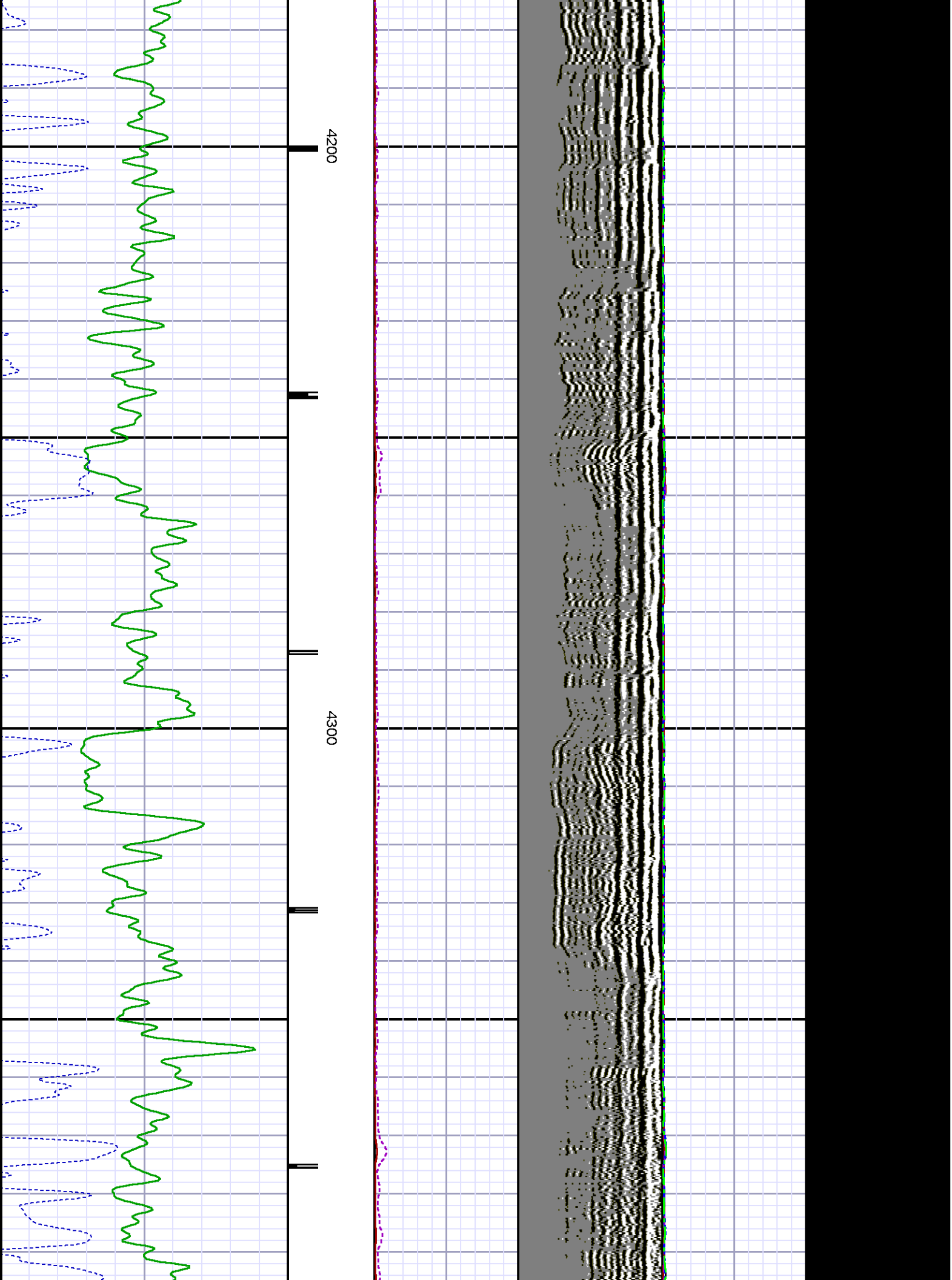


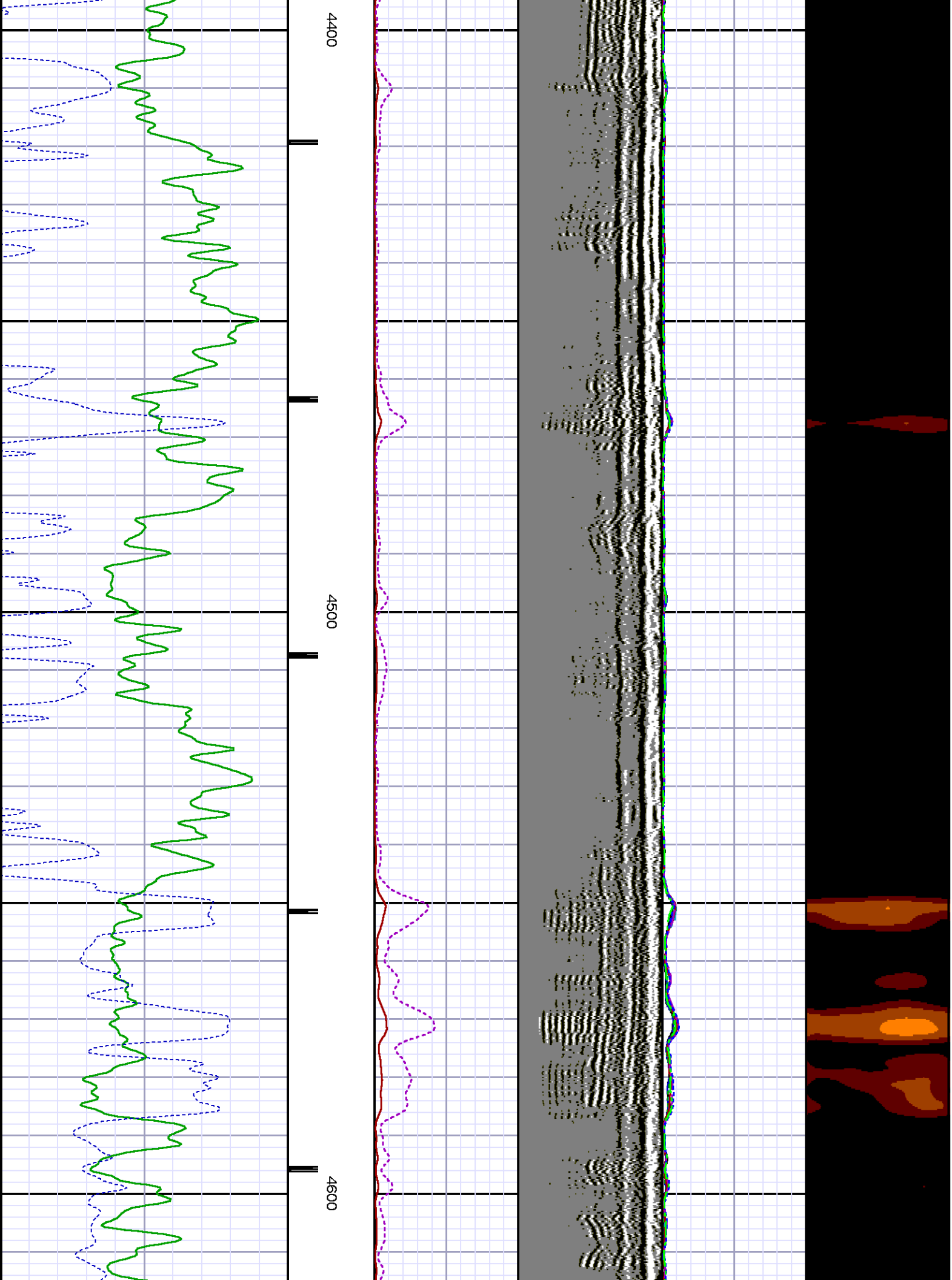


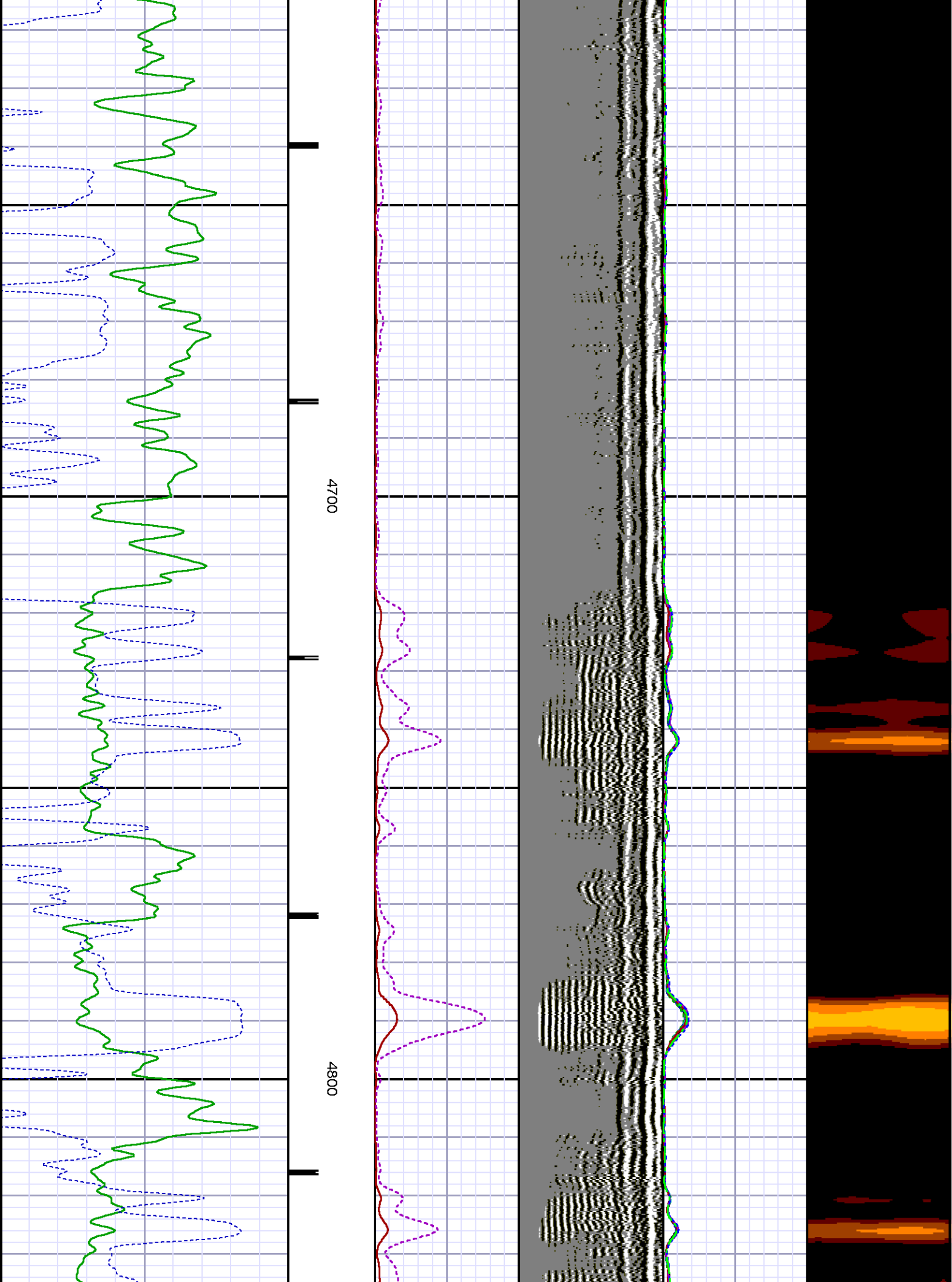


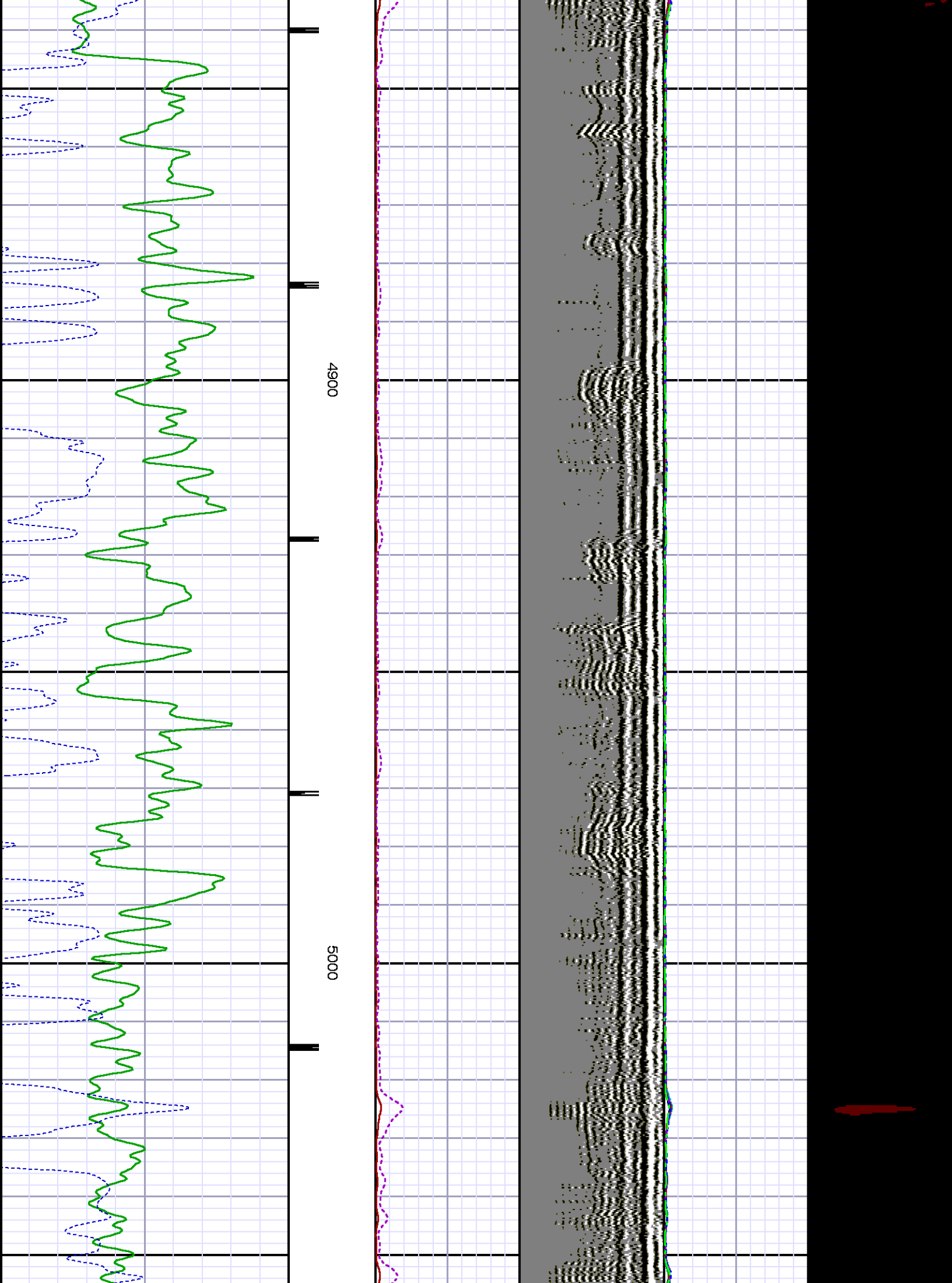


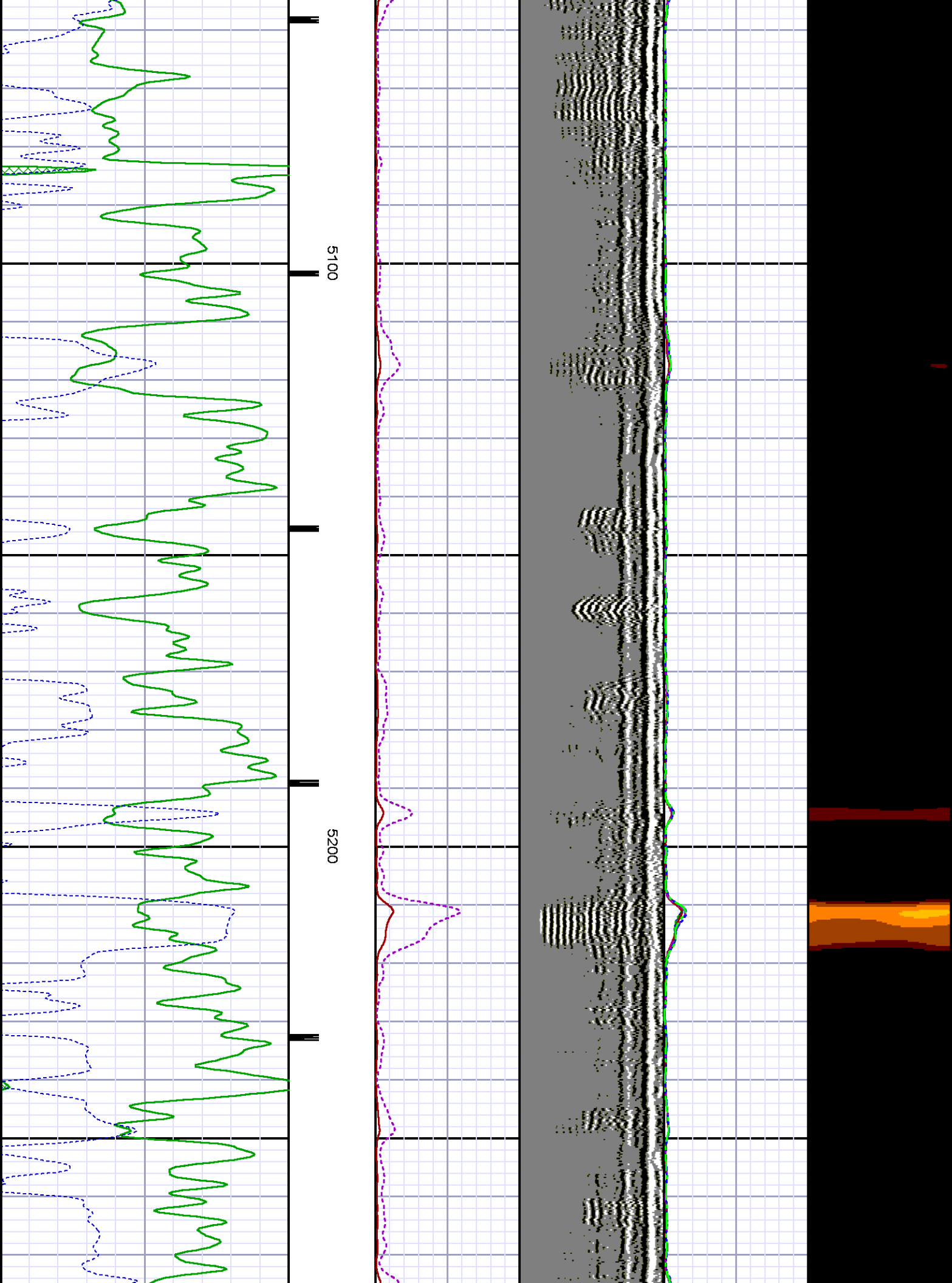


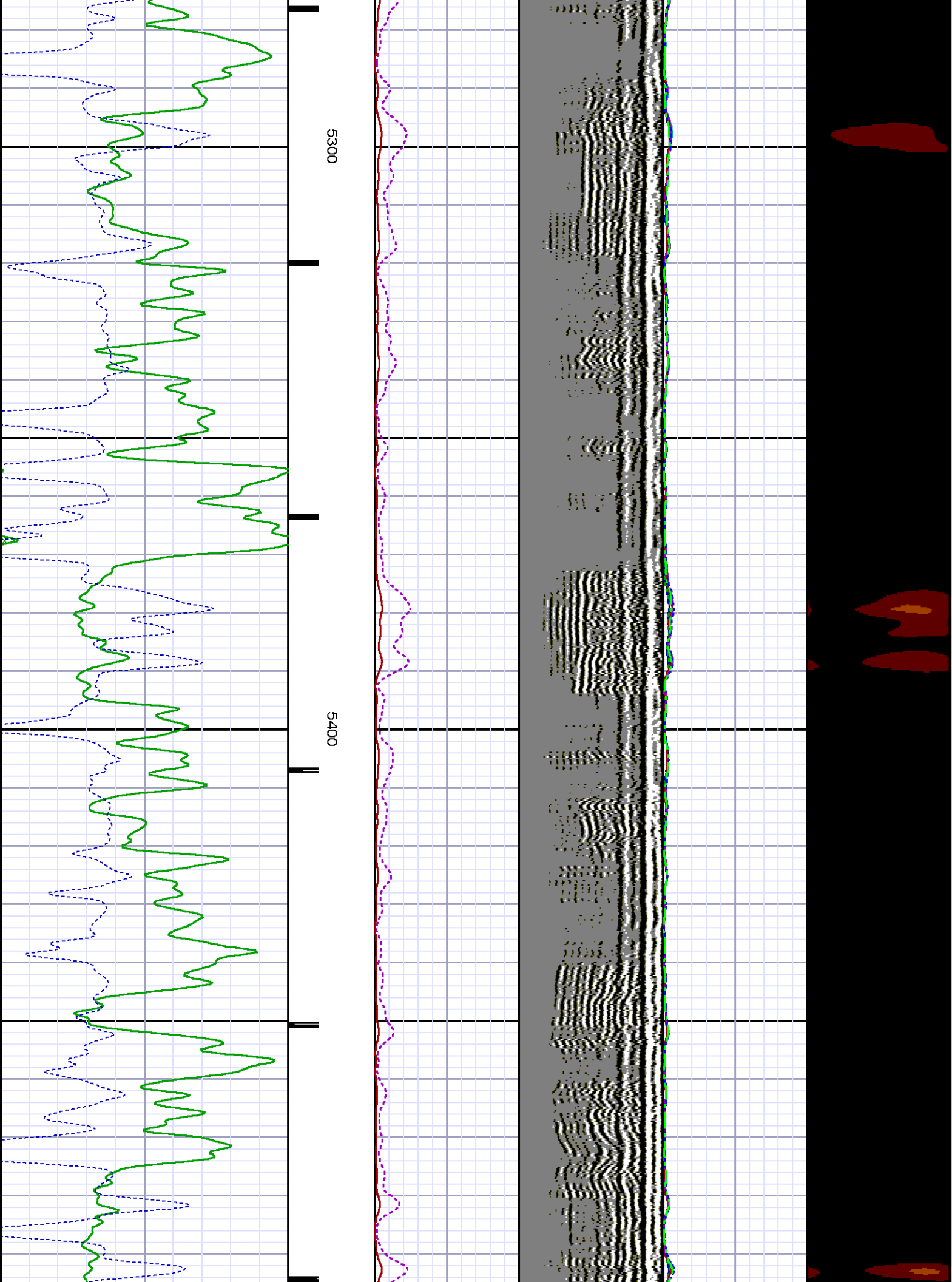




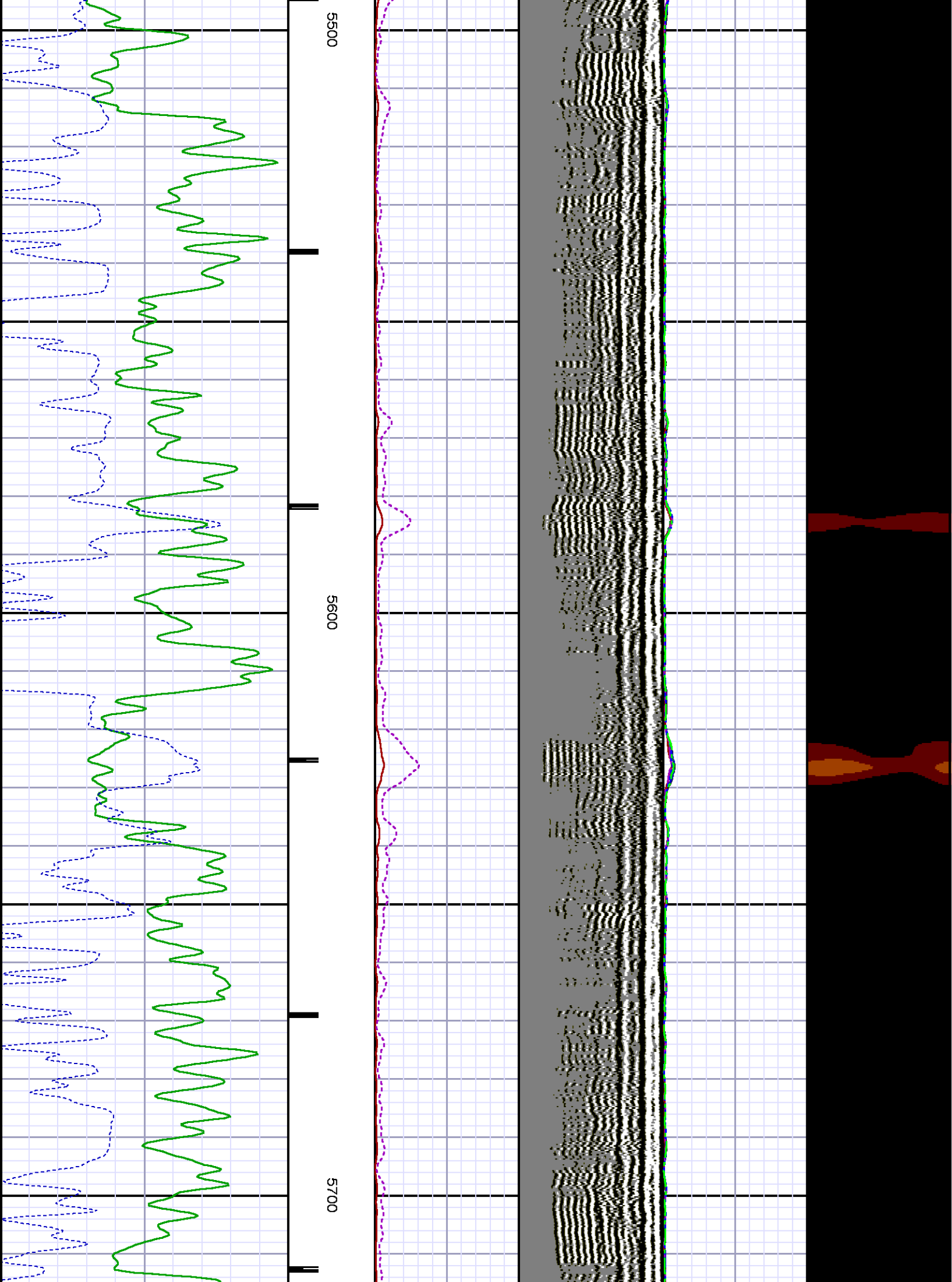


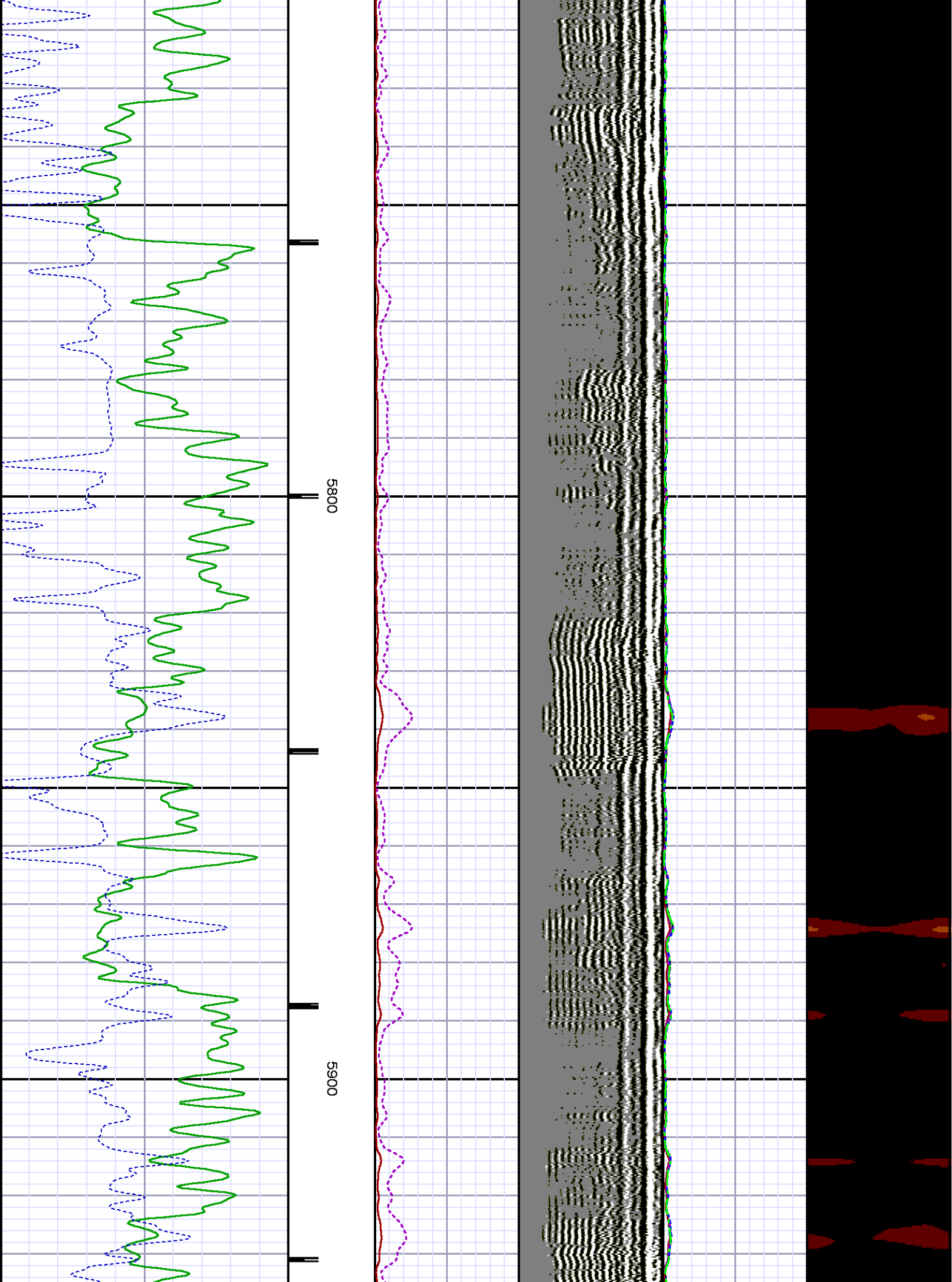


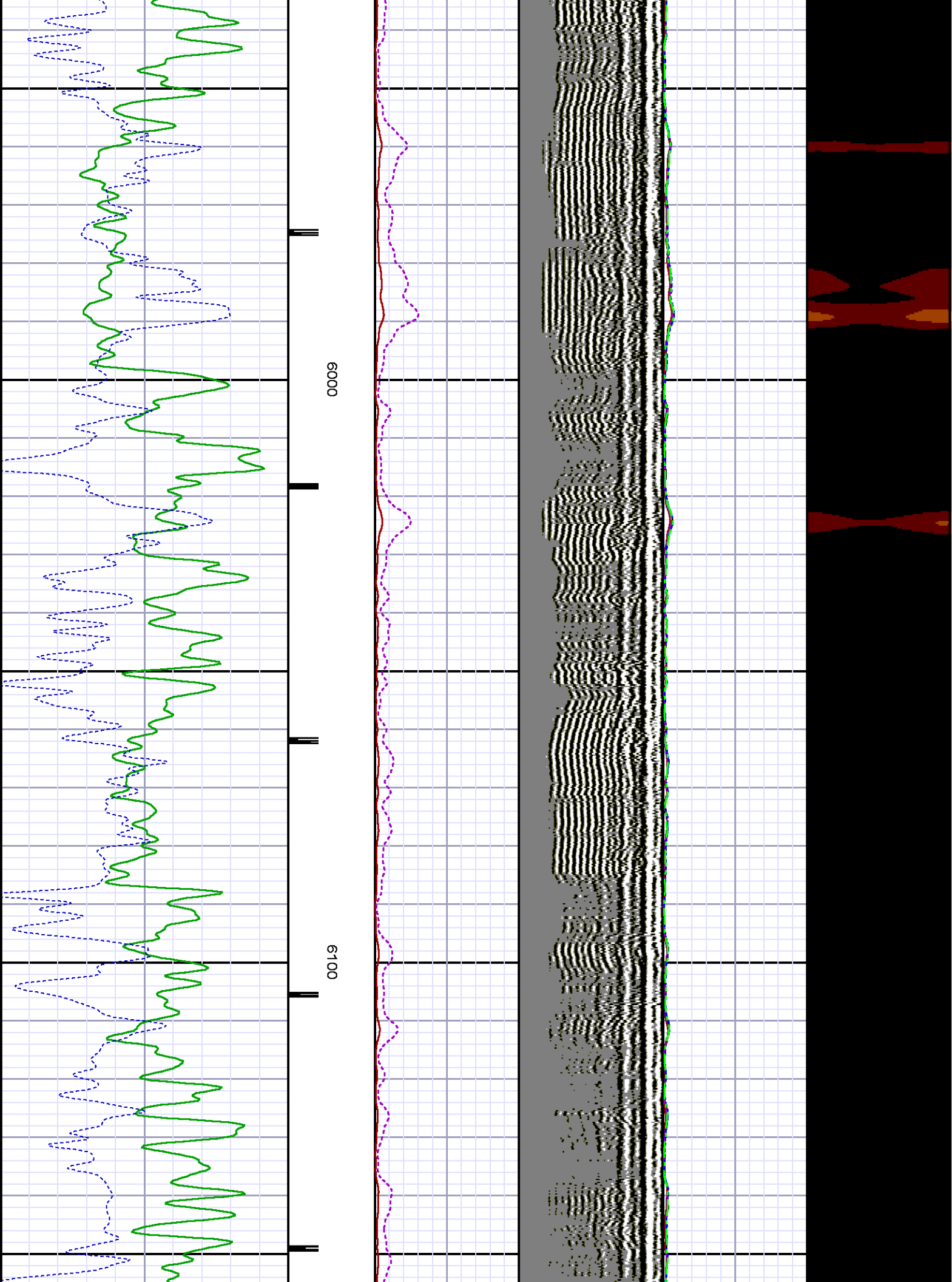


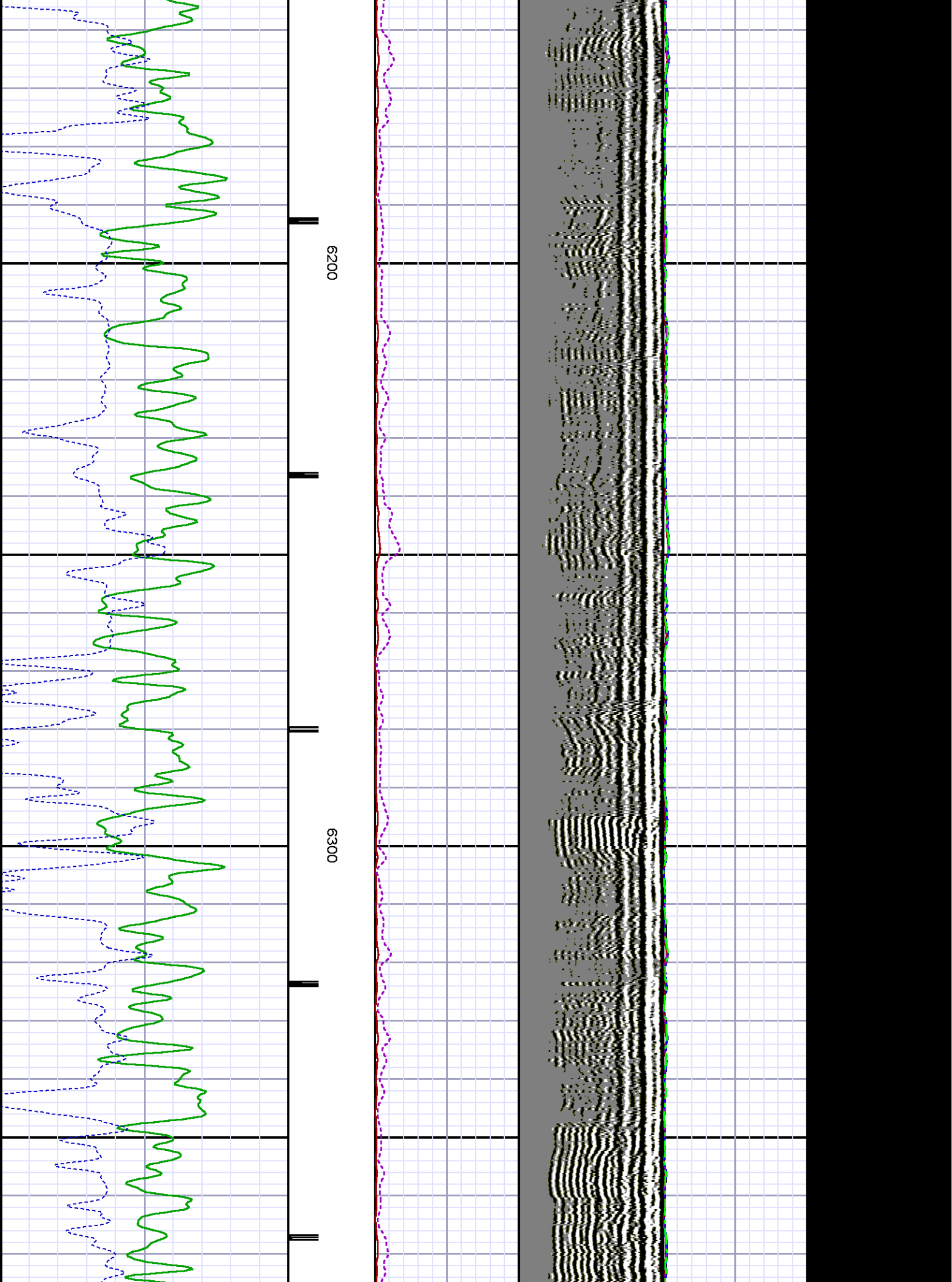


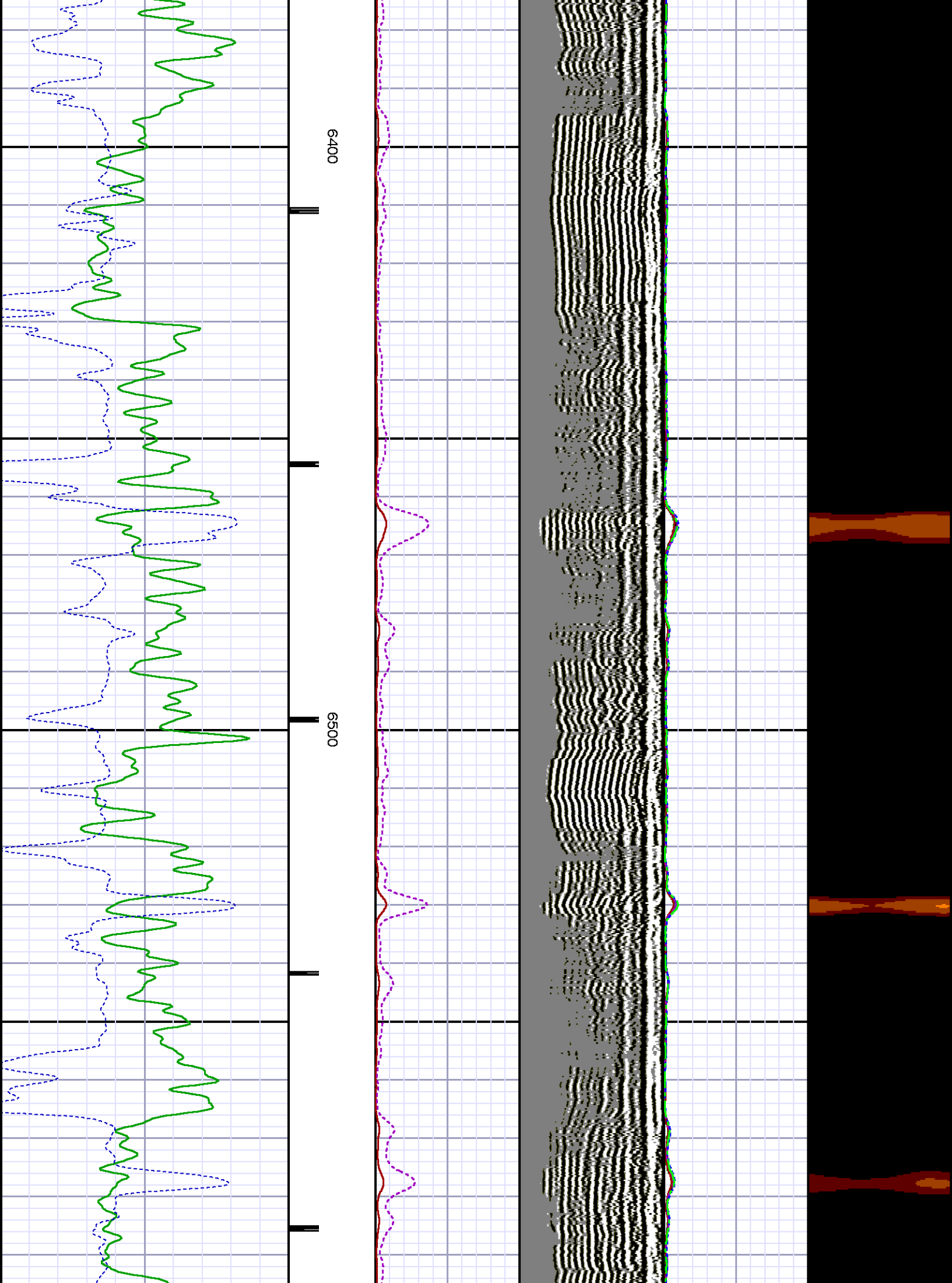




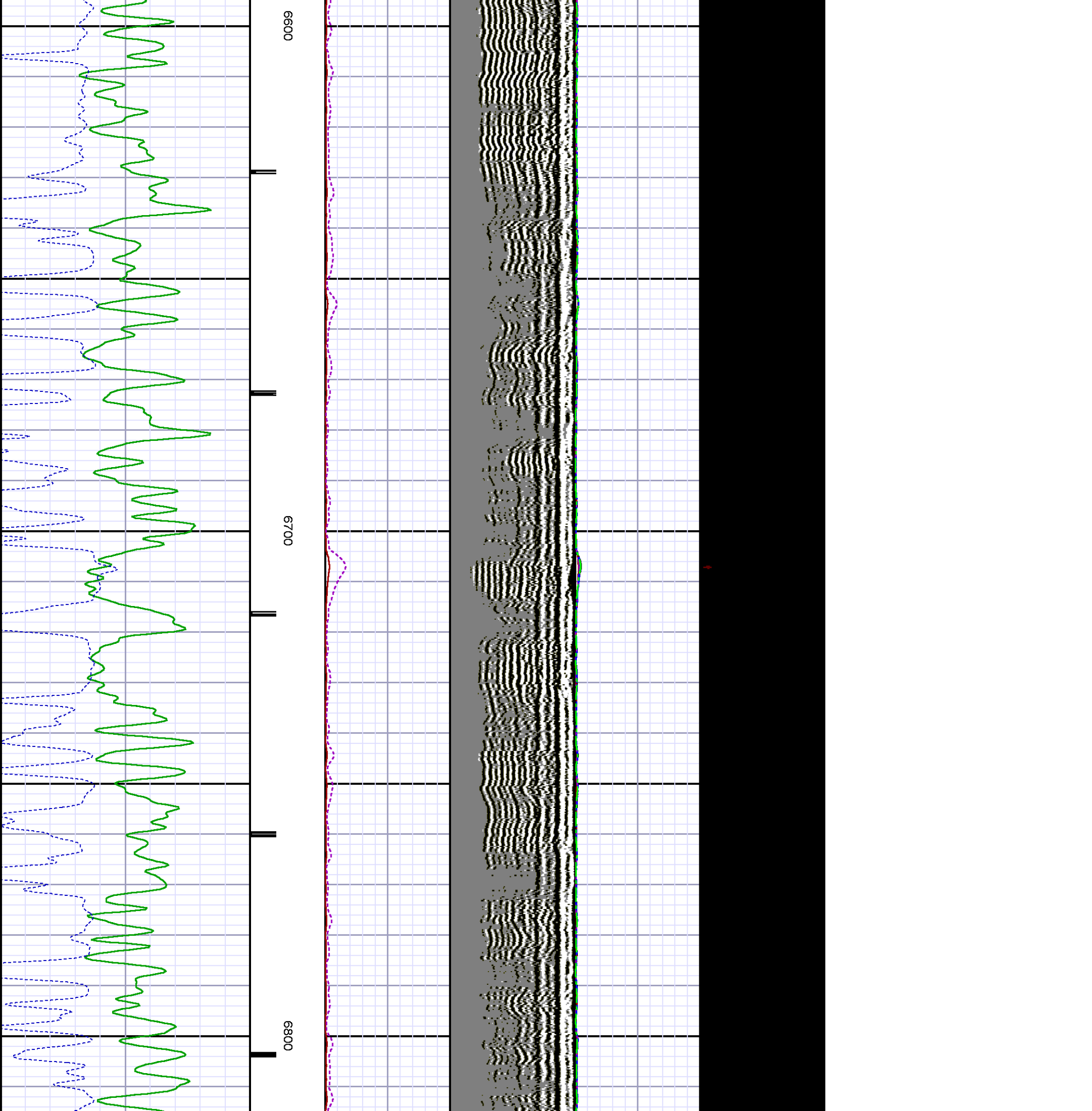




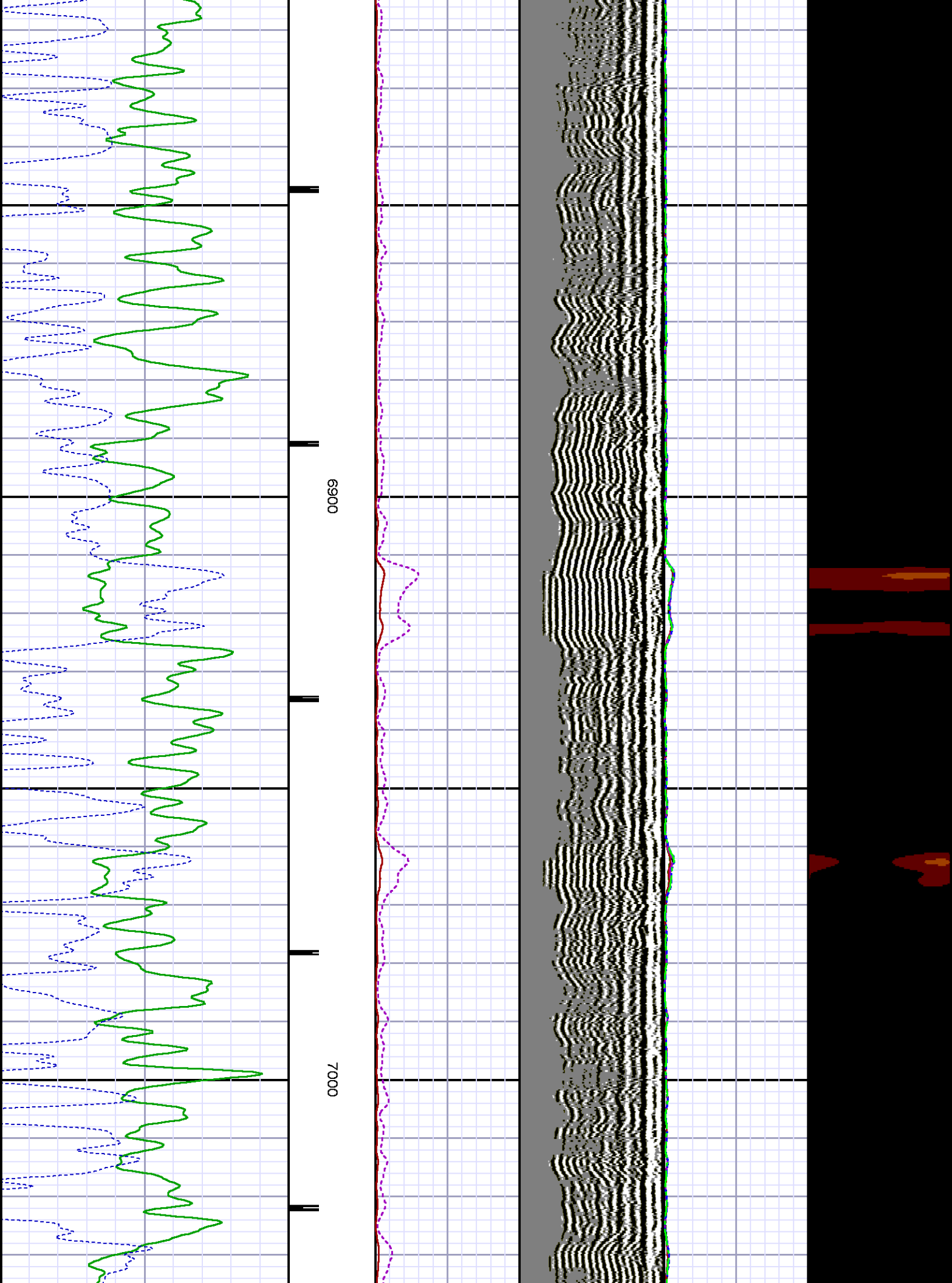


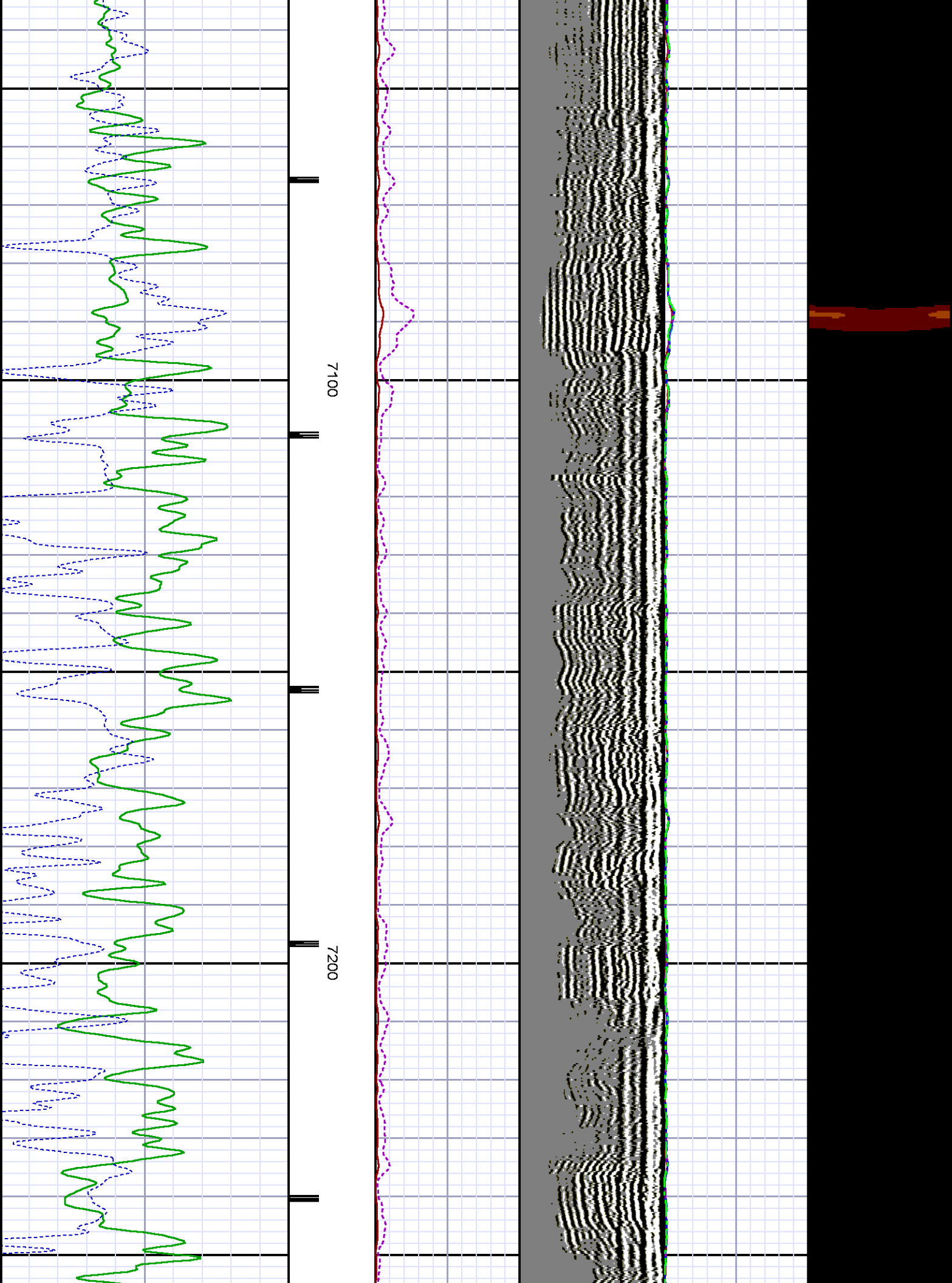


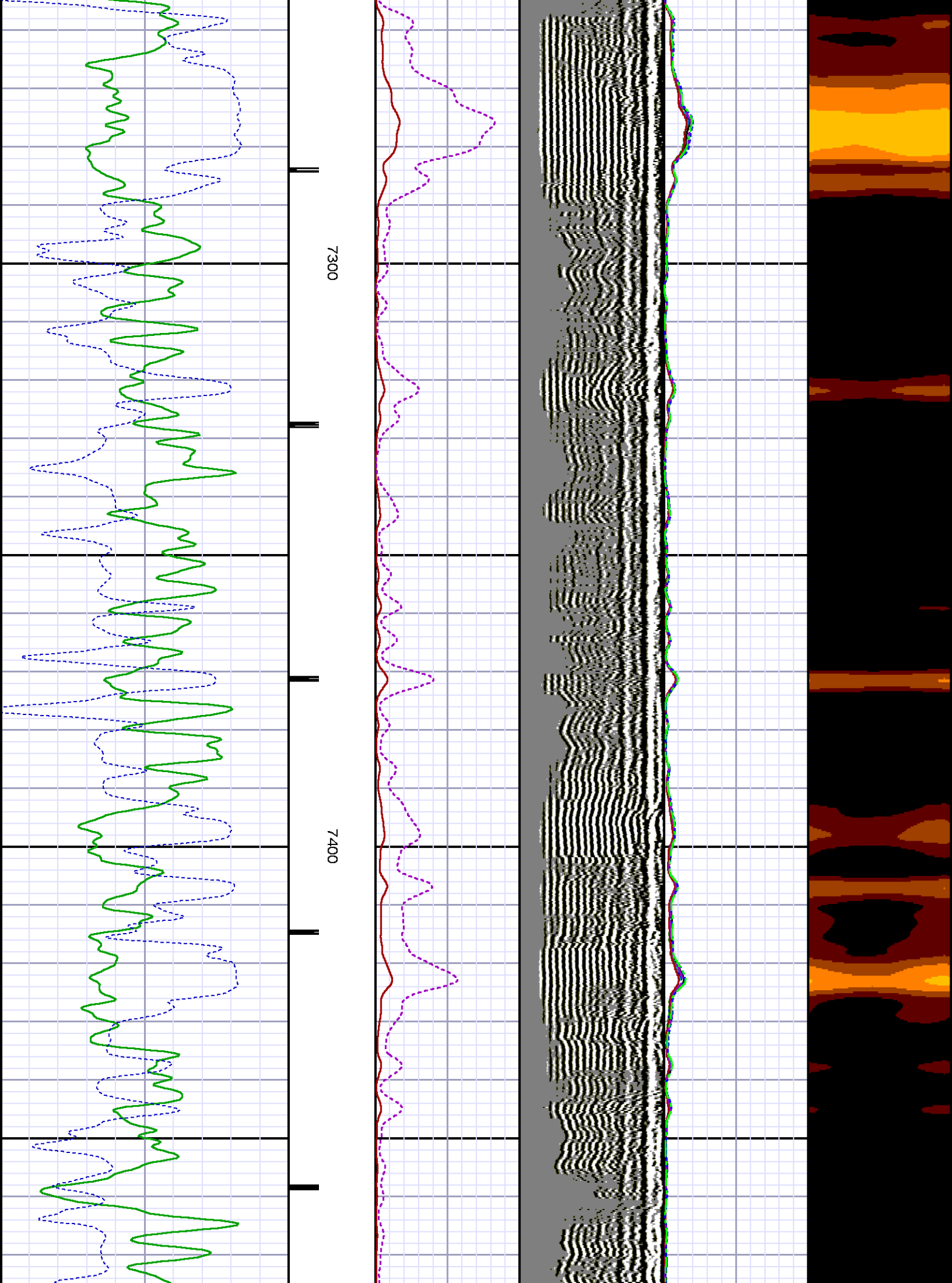


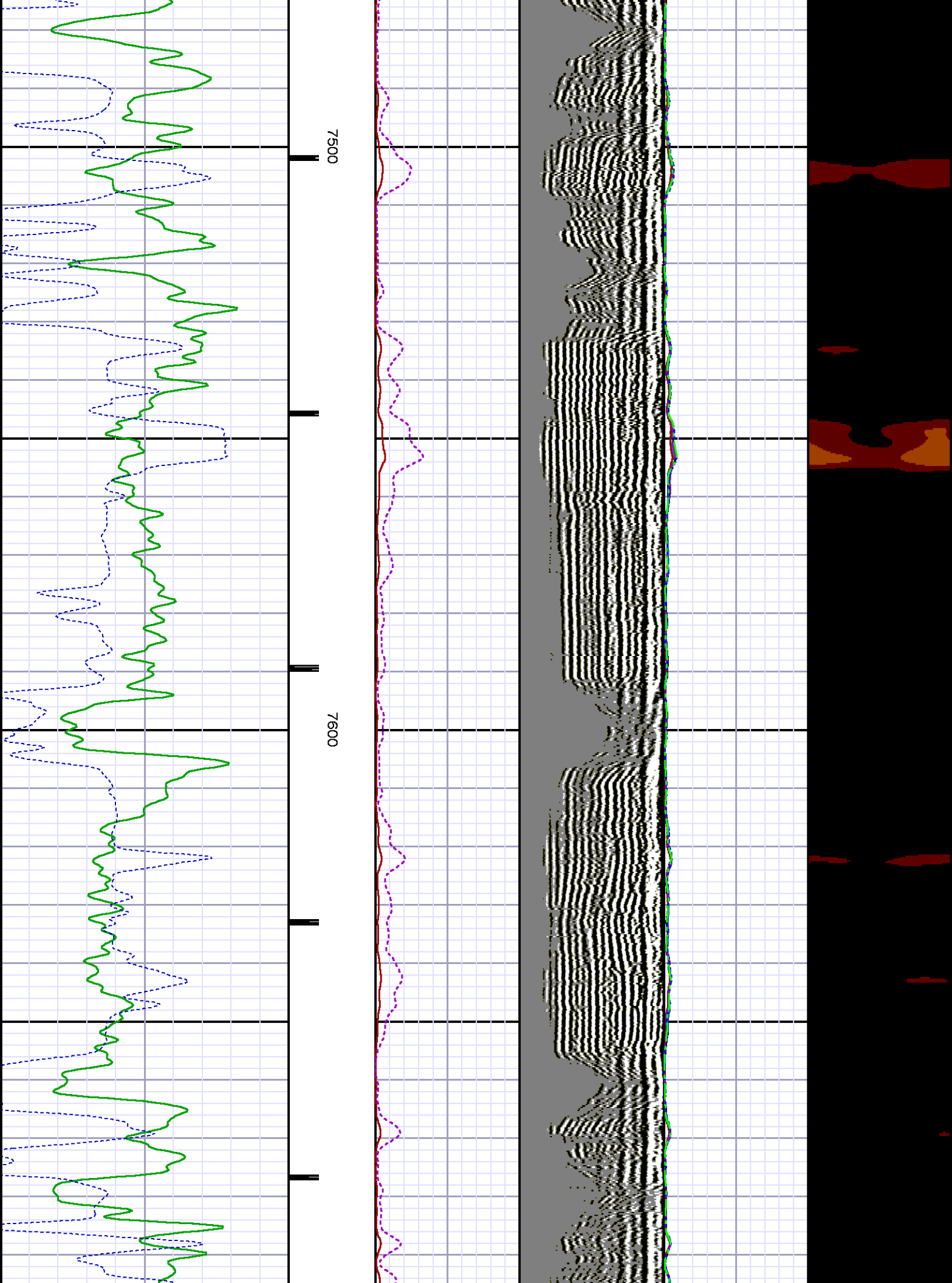


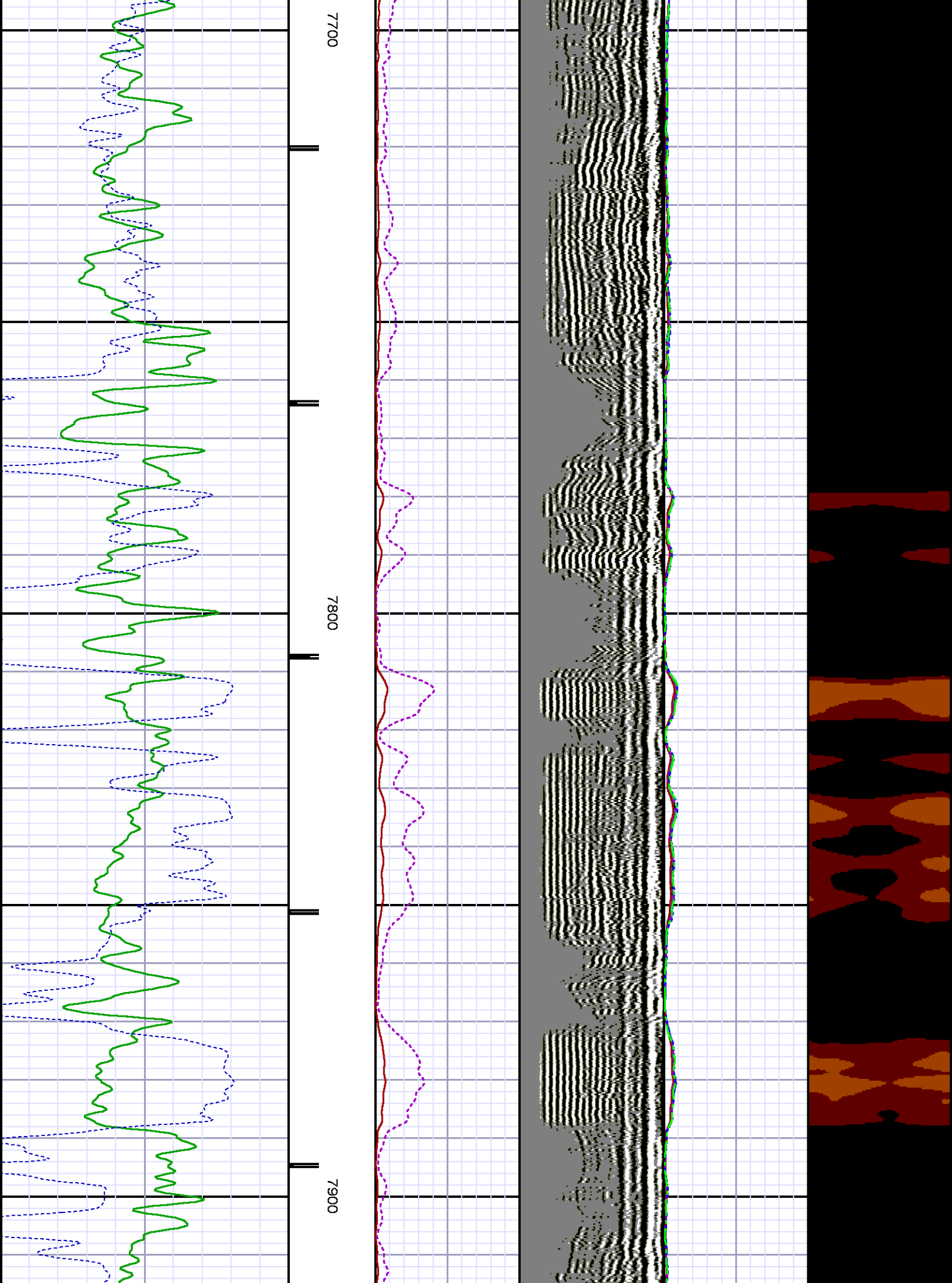




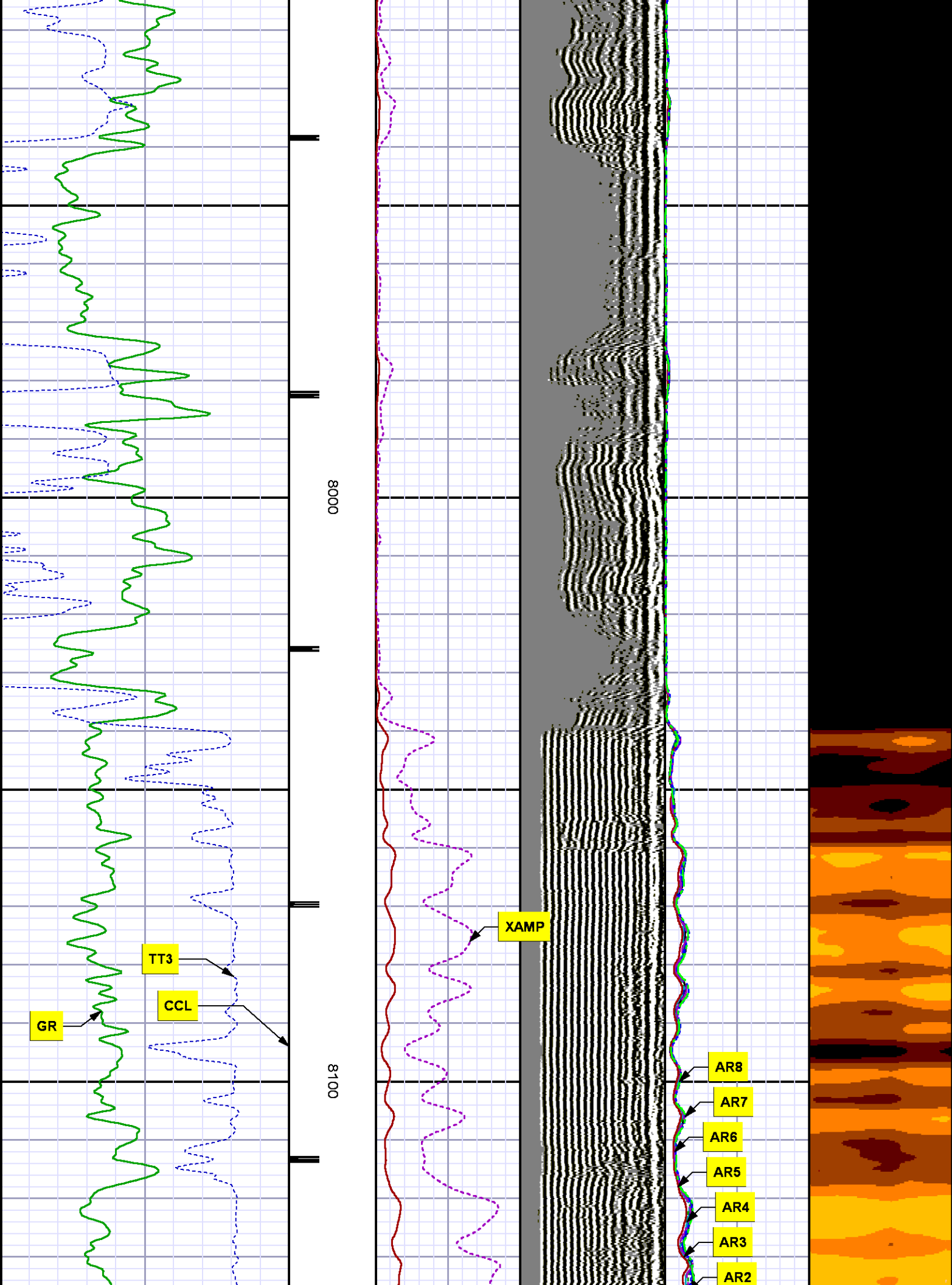




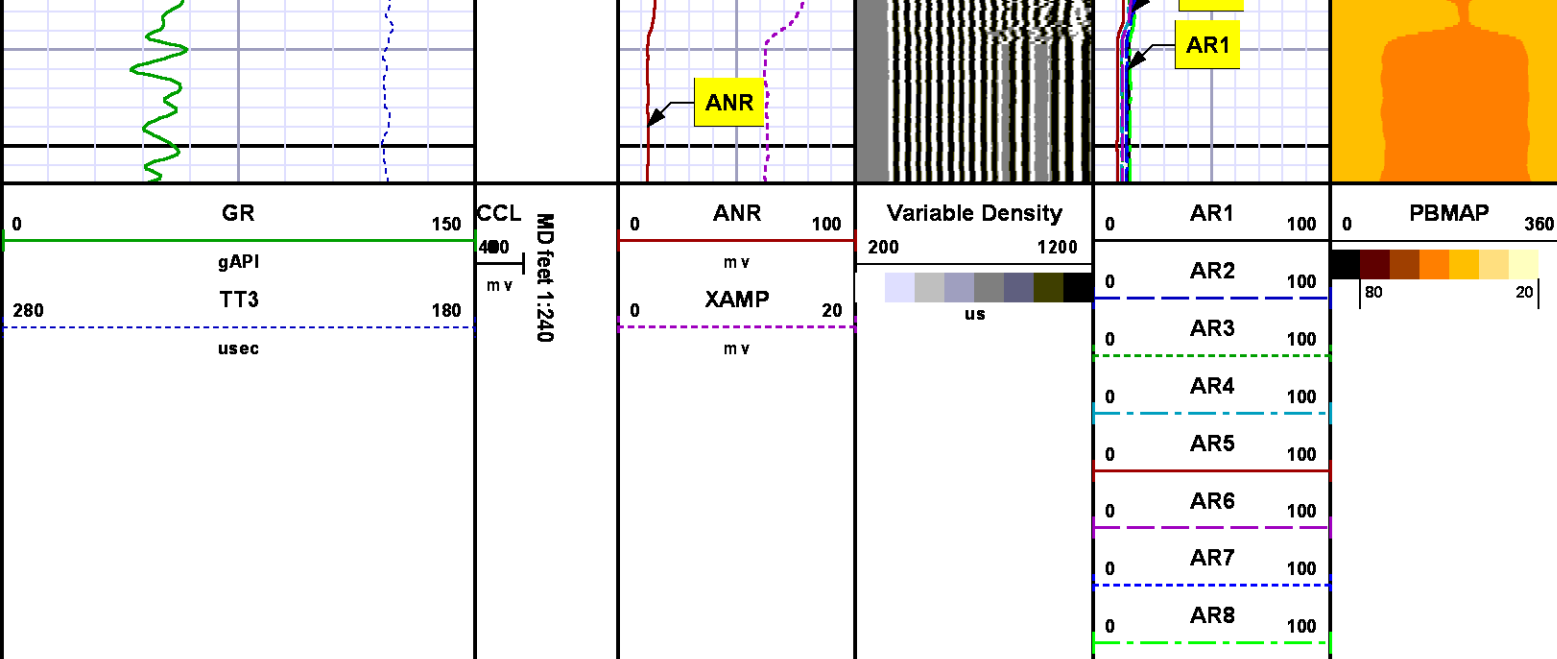












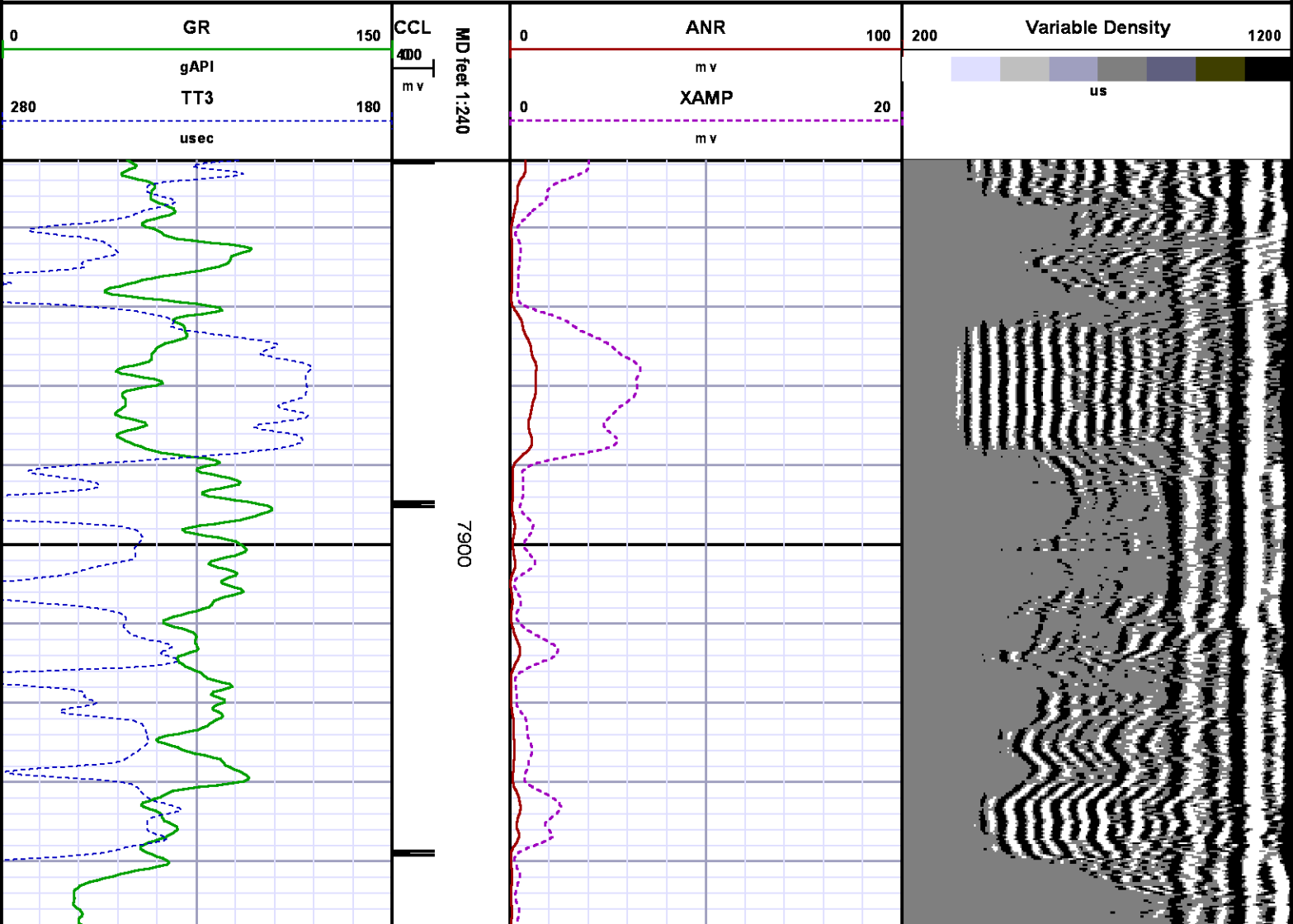
*REPEAT SECTION*  
*0 PSI*

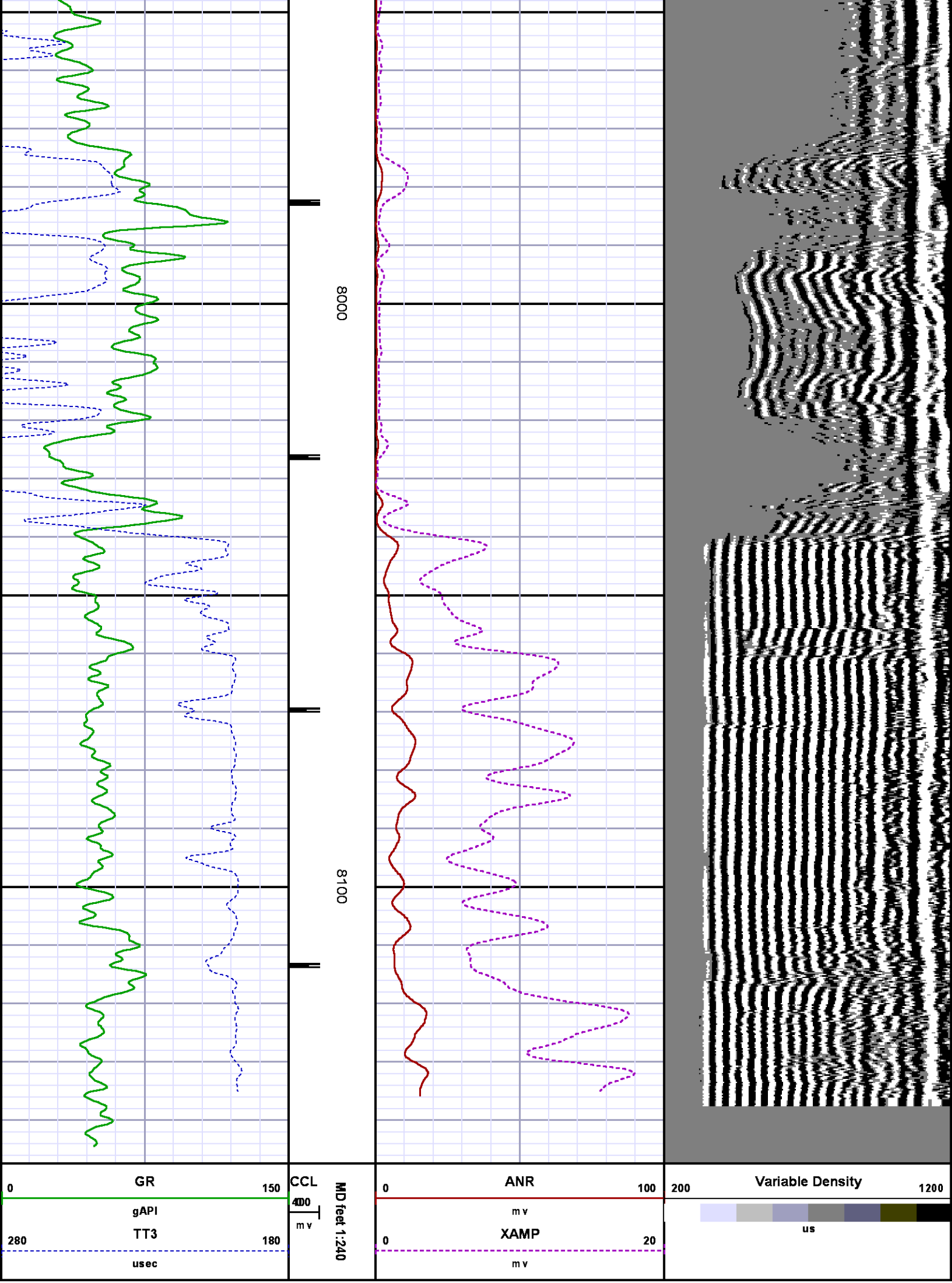
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	7851.240	8147.490
RAL	Amp Gate Start Near	195.000	usec	7851.240	8147.490
RAL	Amp Gate Start Radial	195.000	usec	7851.240	8147.490
RAL	Amp Gate Width Far	25.000	usec	7851.240	8147.490
RAL	Amp Gate Width Near	25.000	usec	7851.240	8147.490
RAL	Amp Gate Width Radial	25.000	usec	7851.240	8147.490
RAL	casing od	4.500	inches	7851.240	8147.490
RAL	casing wt	11.600	lbm/ft	7851.240	8147.490
RAL	FB Start Far	291.900	usec	7851.240	8147.490
RAL	FB Start Near	180.000	usec	7851.240	8147.490
RAL	FB Start Radial	180.000	usec	7851.240	8147.490
RAL	FB Thresh Far	10.000	mv	7851.240	8147.490
RAL	FB Thresh Near	4.000	mv	7851.240	8147.490
RAL	FB Thresh Radial	4.000	mv	7851.240	8147.490
RAL	Fluid Travel Time	200.000	usec/ft	7851.240	8147.415

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 : YOUBERG RWF 434-23  
File Name : d:\well\data\wpx energy\rwf 434-23\434ra\repeat.xtf  
Mode : PlotMgr 5.4.504  
Interval : 7851.49 - 8147.49 feet UP  
Created : 5/28/2013 3:14:22 PM





# CALIBRATION SUMMARY

## RALSHP

Shop Calibration: C:\case\calver\RALSHP\539M25\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat May 25 07:10:23 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M25

Tool Delay [usec] -58.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.498	100.00	0.19
3 Ft. Receiver	218	216	30	152	25	-0.699	100.00	0.18
5 Ft. Receiver	324	322	30	239	25	0.500	150.00	0.20
Radial #1	218	216	30	144	25	0.962	100.00	0.18
Radial #2	218	216	30	144	25	0.578	100.00	0.18
Radial #3	218	216	30	144	25	0.109	100.00	0.19
Radial #4	216	216	30	144	25	-0.196	100.00	0.18
Radial #5	217	216	30	144	25	0.183	100.00	0.18
Radial #6	216	216	30	144	25	-0.100	100.00	0.18
Radial #7	215	216	30	144	25	-0.266	100.00	0.18
Radial #8	218	216	30	144	25	-0.010	100.00	0.18

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\539M25\_fid.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat May 25 07:12:53 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M25

Tool Delay [usec] -58.00 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	-0.189	0.000	1.00	100.000
3 Ft. Receiver	195	25	-2.060			
5 Ft. Receiver	305	25	-2.920			
Radial #1	195	25	-3.539			

Radial #1	195	25	-3.032
Radial #2	195	25	-3.002
Radial #3	195	25	-3.148
Radial #4	195	25	-4.486
Radial #5	195	25	-3.346
Radial #6	195	25	-3.588
Radial #7	195	25	-3.307
Radial #8	195	25	

## GAMMA RAY

Calibration File: C:\case\calver\GR\209M2.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun May 12 13:40:15 2013      TOOL SERIES: 1355XA      ASSET: 209      SEQ: M2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K    WA612	129.07	523.51	0.469	60.53	245.53	185.00

Verification File: C:\case\calver\GR\209M2.VP

### PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sun May 12 13:41:35 2013      TOOL SERIES: 1355XA      ASSET: 209      SEQ: M2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K    WA612	131.47	531.85	0.469	61.66	249.45	187.79

## TOOL DIAGRAM

OTA SHORT CABLE HEAD

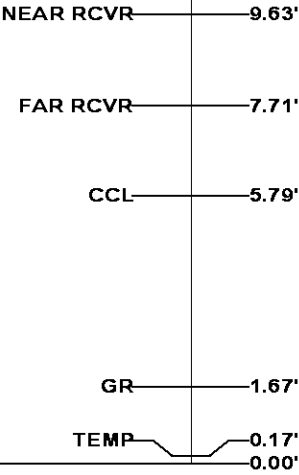
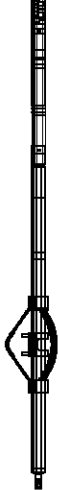
### PROBE 2 3/4 DUAL RECEIVER RADII

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





18.89'  
XMIT 12.71'

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"

<div> <b>BAKER HUGHES</b></div> <div>Baker Atlas</div> <div></div>	Company	WPX ENERGY		File No:	CH07264
	Well	YOUBERG RWF 434-23		API No:	05045182540000
	Field	RULISON			
	County	GARFIELD	State	COLORADO	
Location		Elevations		23 6S 94W	
SHL: 1349' FSL, 2306' FEL		KB 5527.5 ft		RWF 33-23 PAD	
BHL: 219' FSL, 2097' FEL		DF		NABORS 577	
SEC 23 TWP 6S RGE 94W		GL 5501.5 ft			