



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: GH074106	Company Well Field County	WPX ENERGY FEDERAL RGU 23-23-198 SULPHUR CREEK RIO BLANCO	State COLORADO
API No: 06103117280000	Location SHL: 1828' FSL x 1906' FWL BHL: 2617' FSL x 1895' FWL		Other Services RPM
23 1S 98W RGU 23-23-198 PAD CYCLONE 29	SEC 23	TWP 1S	RGE 98W
Permanent Datum Log Measured From Drill Measured From	OL KB KELLY BUSHING	Elevation 21 ft Above P. D.	Elevations KB 6566 ft DF GL 6545 ft

Date	03/JUL/13		
Run	ONE		
Service Order	624436		
Depth Driller	12502 ft		
Depth Logger	12445 ft		
Bottom Logged Interval	12400 ft		
Top Logged Interval	21 ft		
Time Started	0900		
Time Finished	1400		
Operator Rig Time	5 HRS		
Type of Fluid in Hole	WATER		
Fluid Density	NA		
Salinity	NA		
Fluid Level	84 ft		
Logged Cement Top	NA		
Wellhead Pressure	0 psi		
Maximum Hole Deviation	10 deg		
Nominal Logging Speed	45 fpm		
Maximum Recorded Temperature	255 degF		
Reference Log	NONE		
Reference Log Date	NA		
Equipment No.	Location		
Recorded By	FLOYD RENEAU	GRANDUCT	
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	3863 ft
7.875 in	3863 ft	12502 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	32.2 lbm/ft		0 ft	3863 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	12502 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 11 feet.
Logged with zero PSI at wellhead.
BHT = 255°F
SJ = 7215'-7234'

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

PRIMARY PRESENTATION

0 PSI

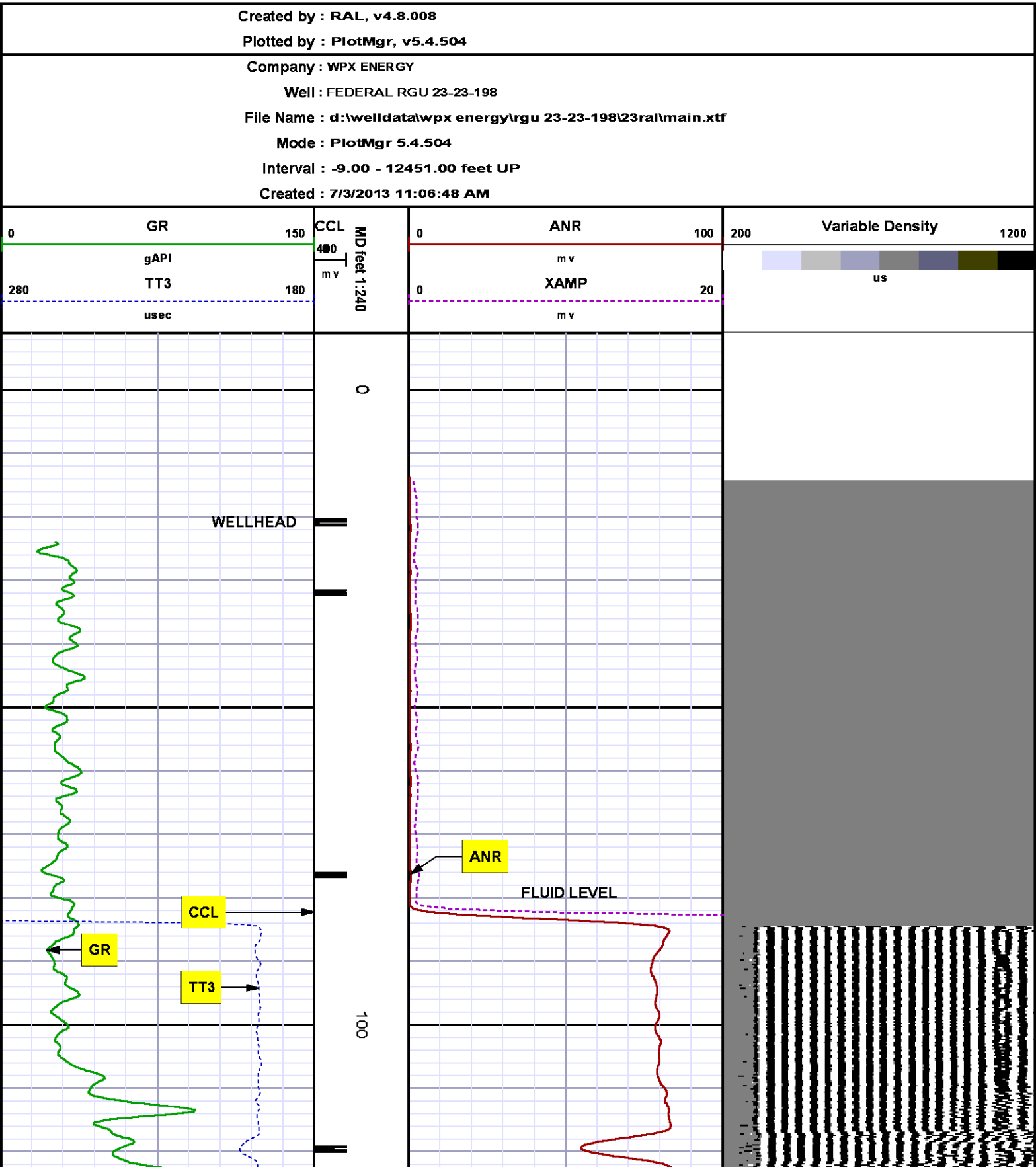
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	325.000	usec	24.155	12470.000
RAL	Amp Gate Start Near	195.000	usec	24.155	12470.000
RAL	Amp Gate Start Radial	195.000	usec	24.155	12470.000
RAL	Amp Gate Width Far	25.000	usec	24.155	12470.000
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RAL	casing od	4.500	inches	24.155	12470.000
RAL	casing wt	11.600	lbm/ft	24.155	12470.000
RAL	FB Start Far	315.000	usec	24.155	12470.000
RAL	FB Start Near	180.000	usec	24.155	12470.000
RAL	FB Start Radial	180.000	usec	24.155	12470.000
RAL	FB Thresh Far	10.000	mv	24.155	12470.000
RAL	FB Thresh Near	4.000	mv	24.155	12470.000
RAL	FB Thresh Radial	4.000	mv	24.155	12470.000
RAL	Fluid Travel Time	200.000	usec/ft	24.155	12469.905

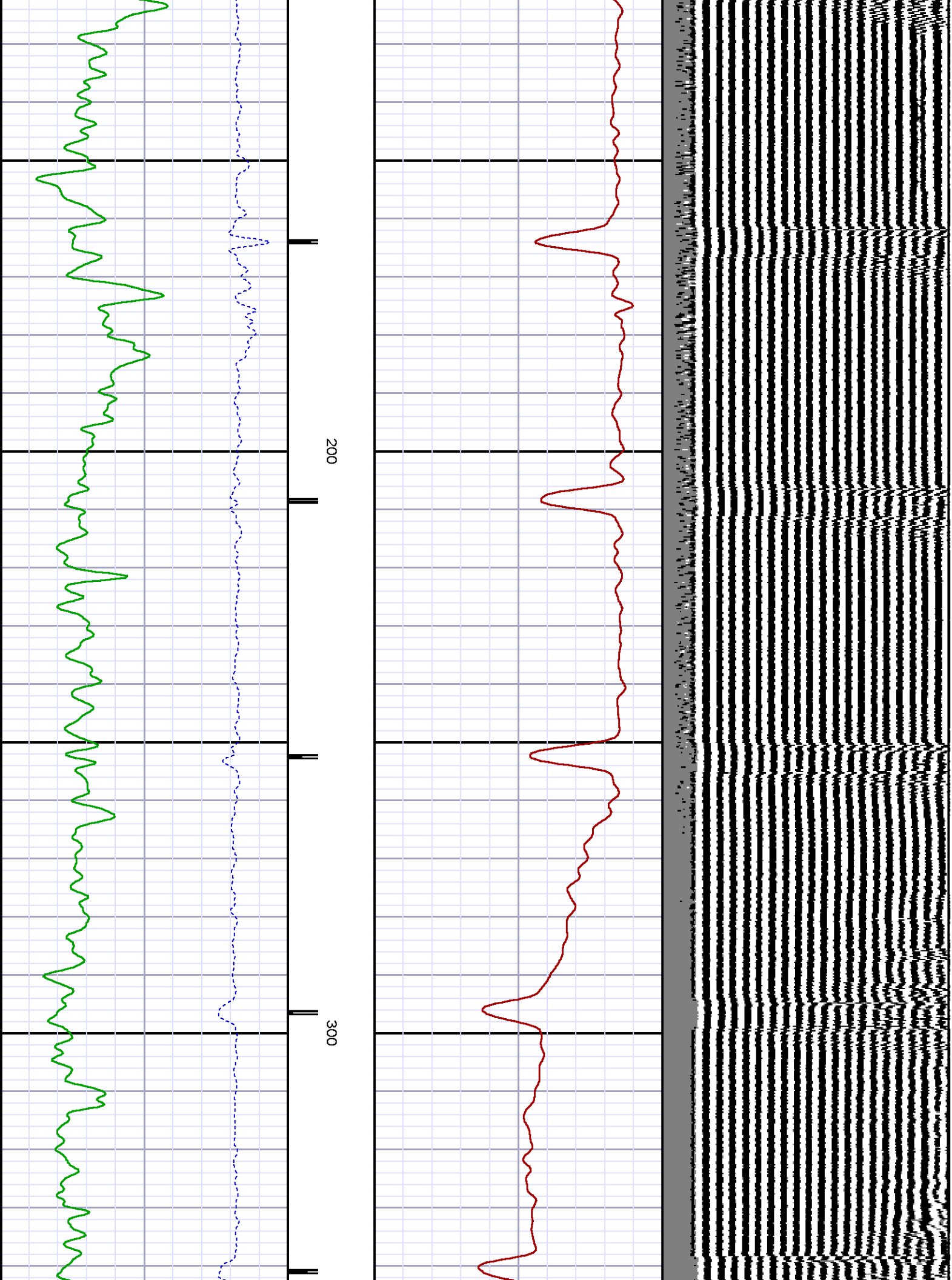
DEPTH OFFSETS

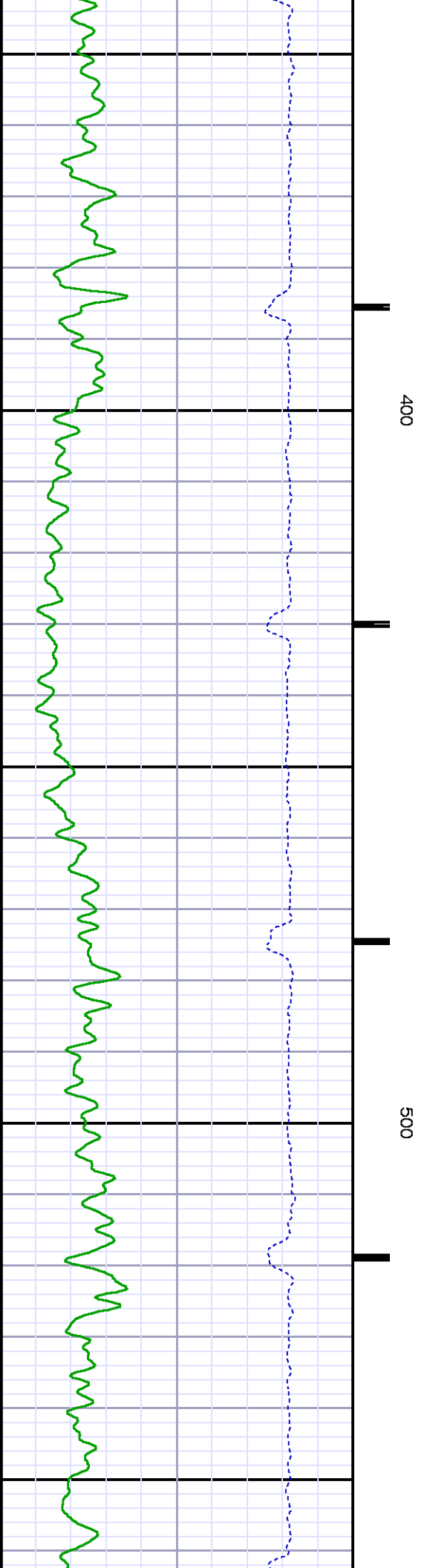
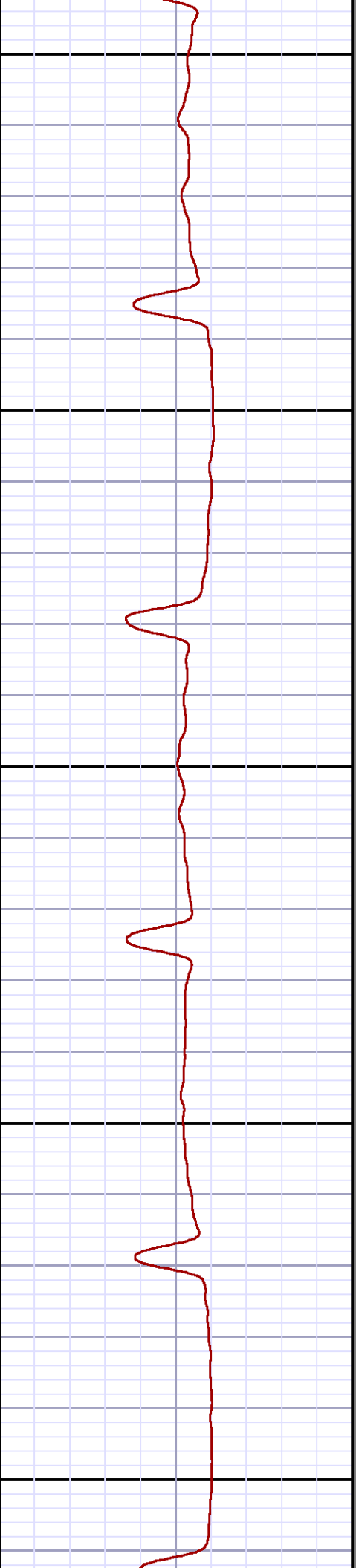
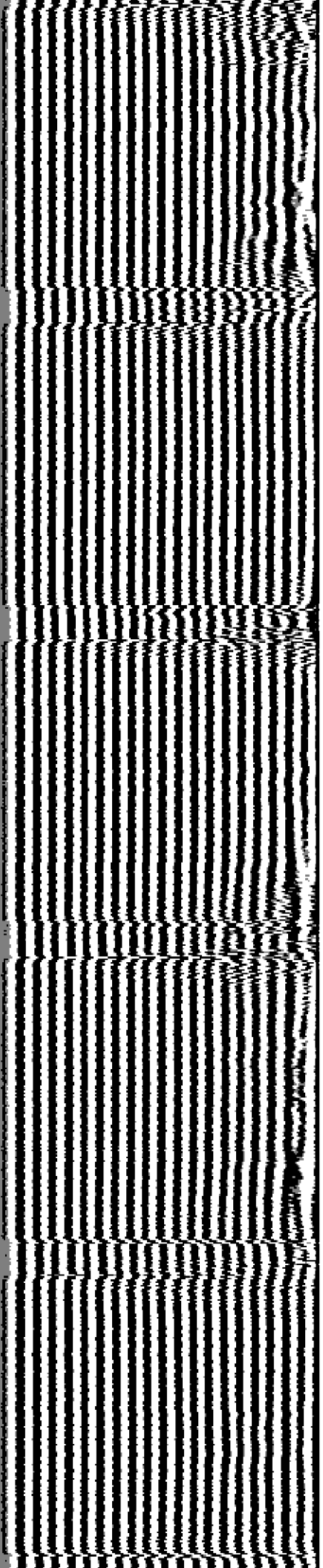
(for Acquired Curves)

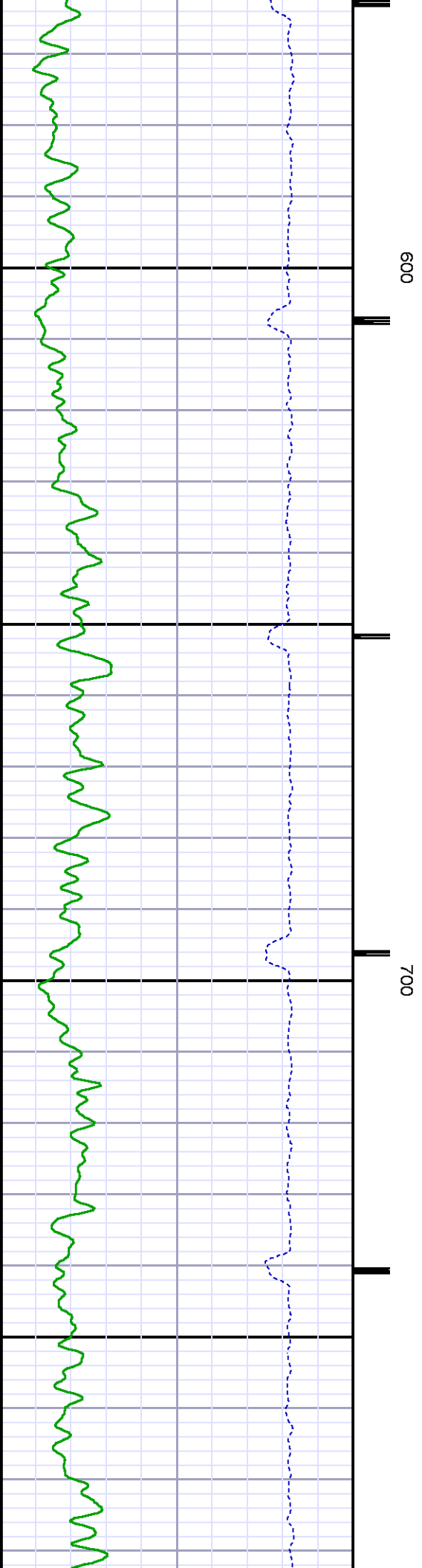
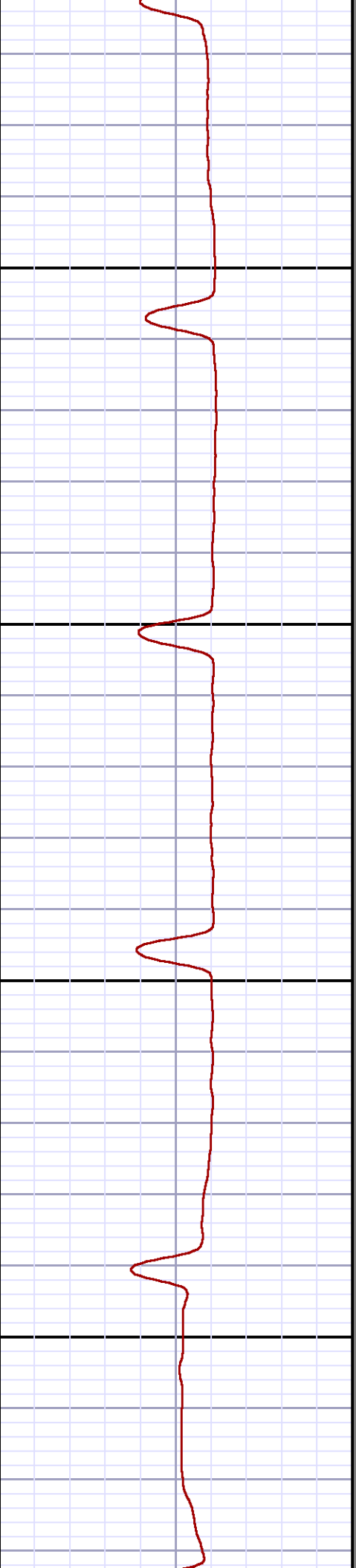
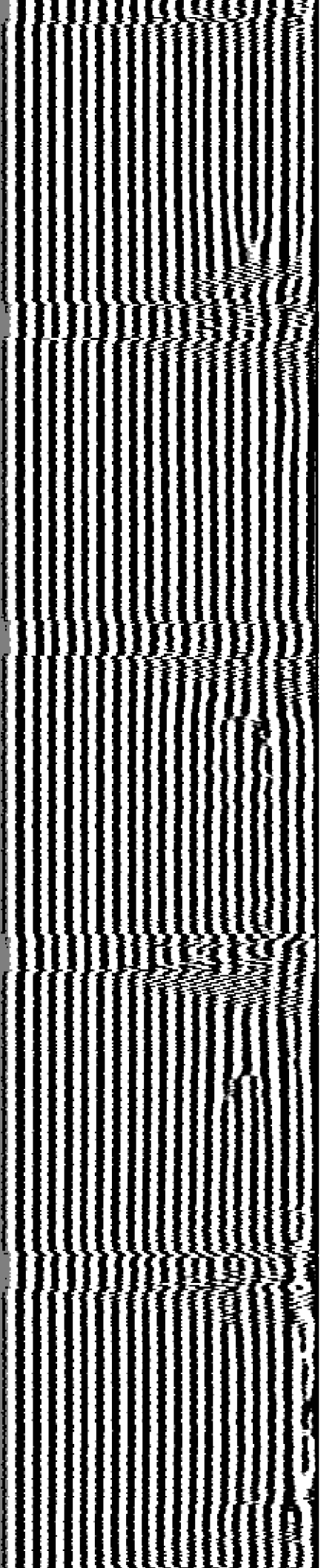
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

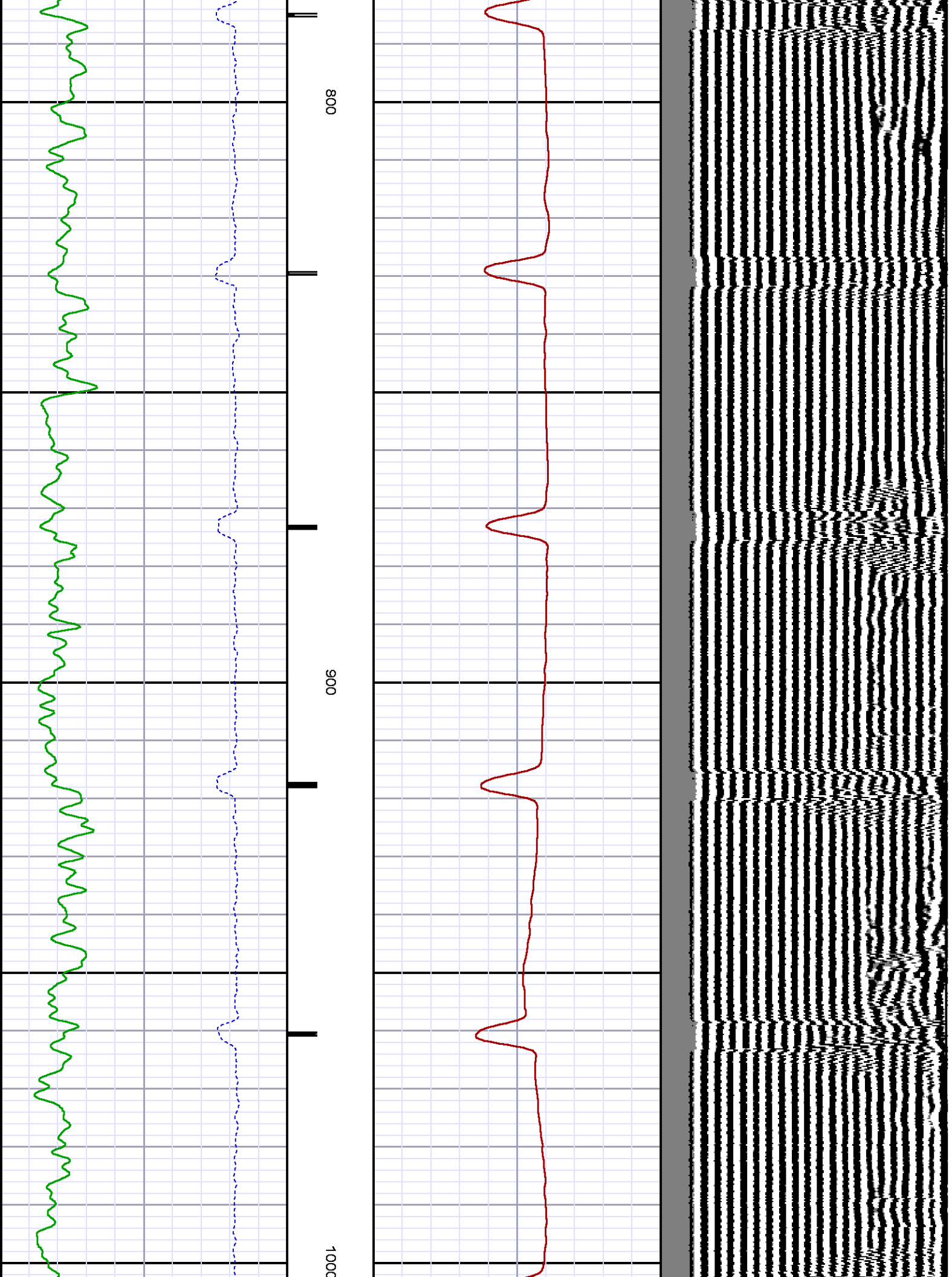
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

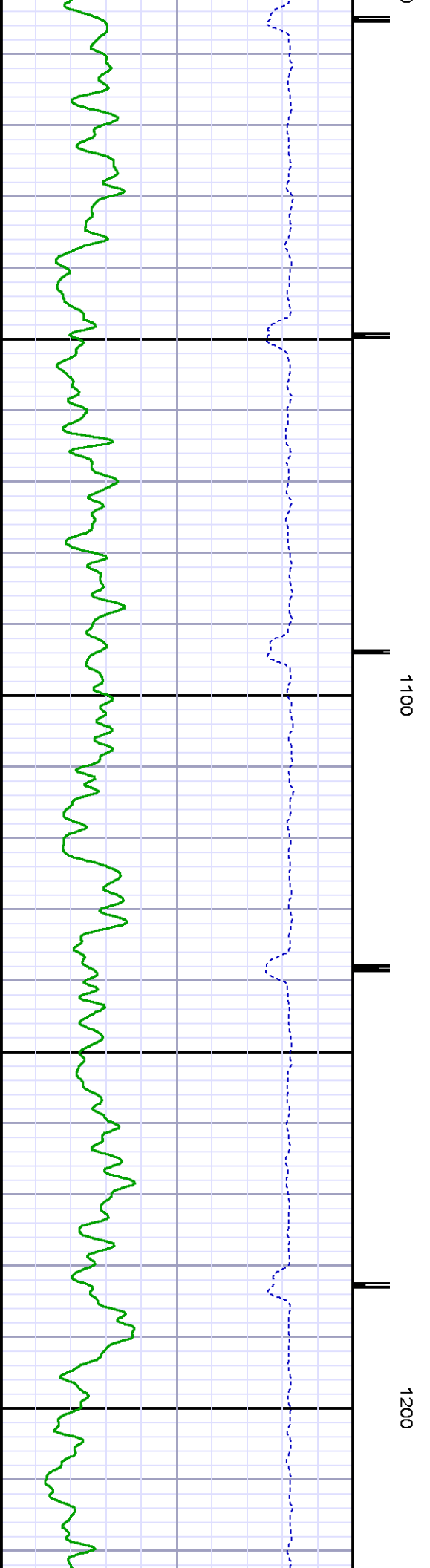
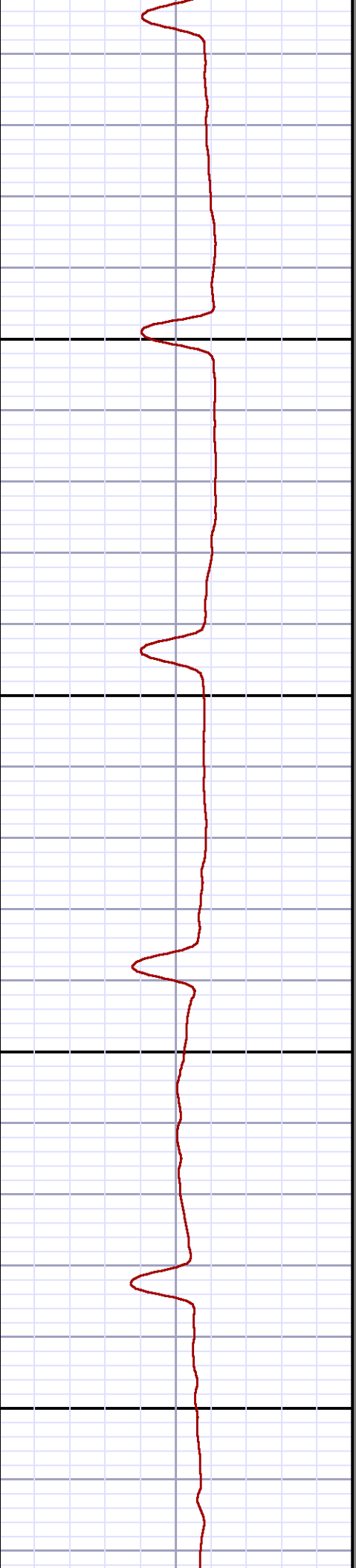
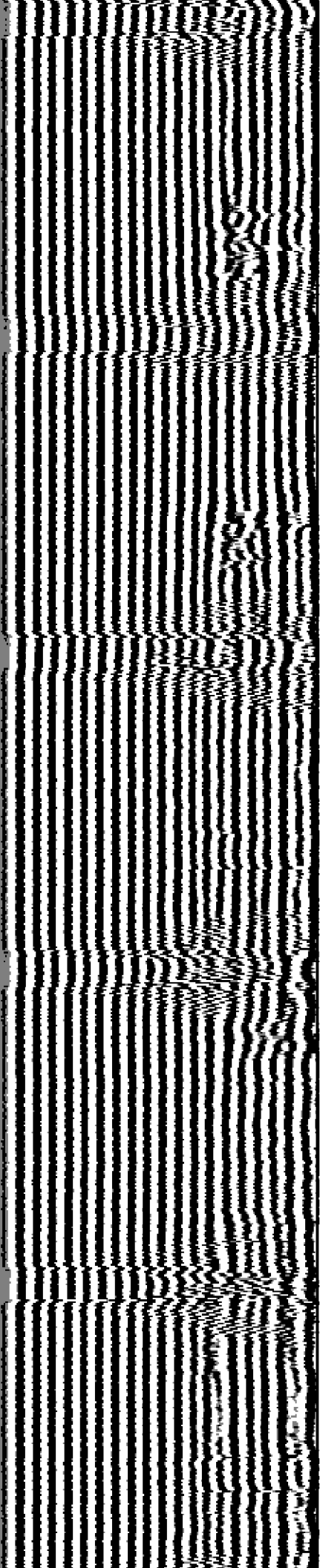


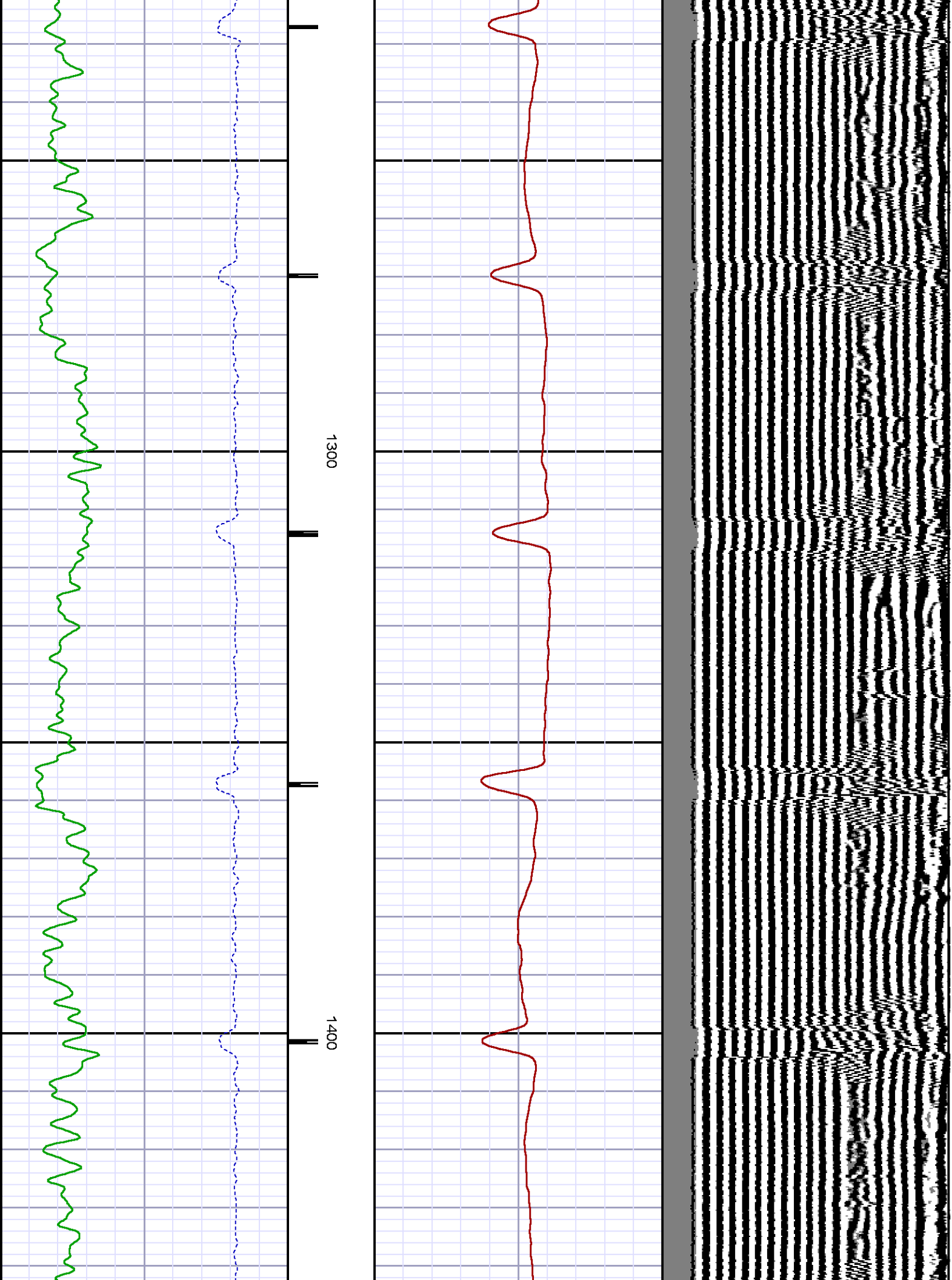


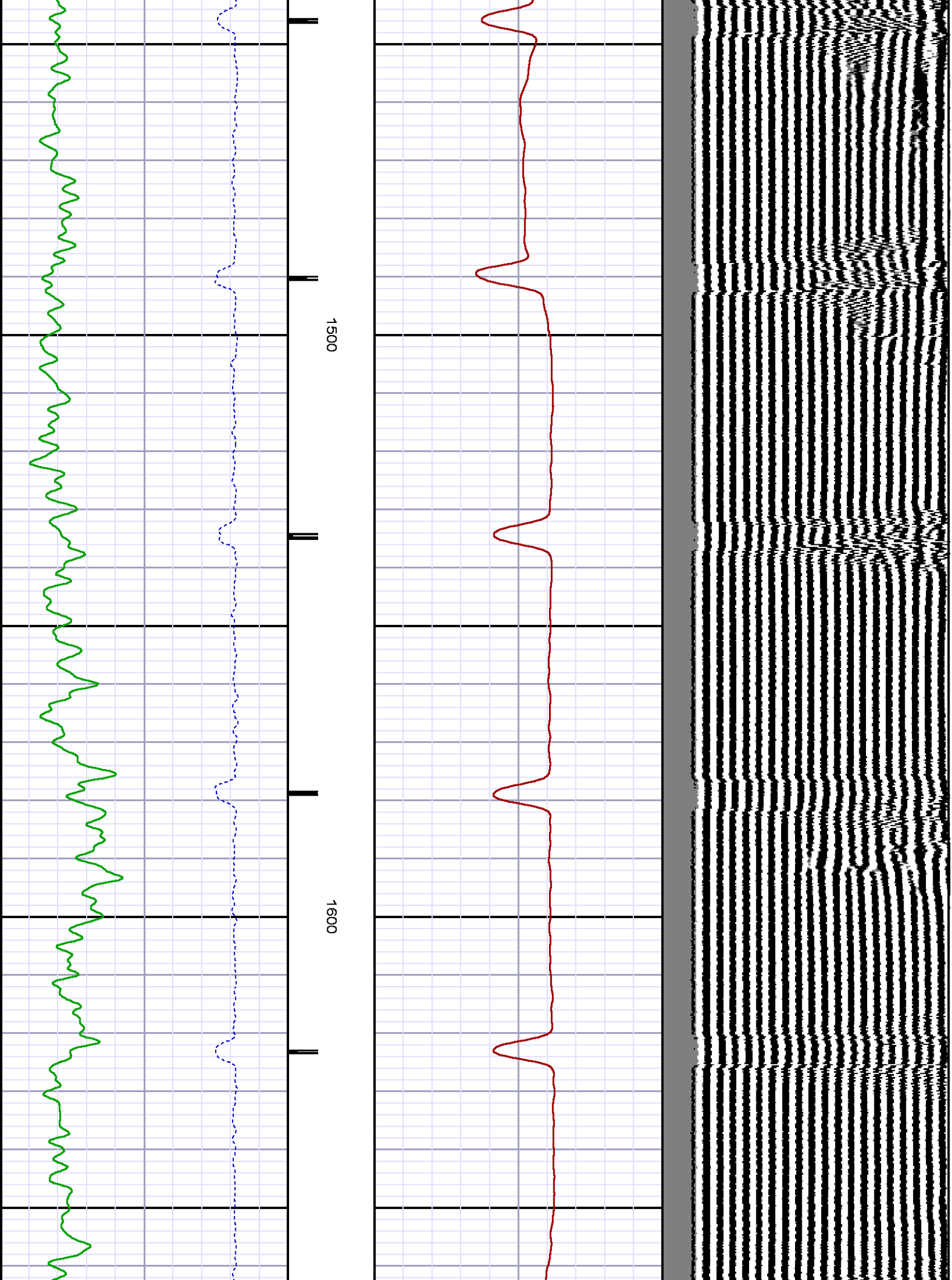


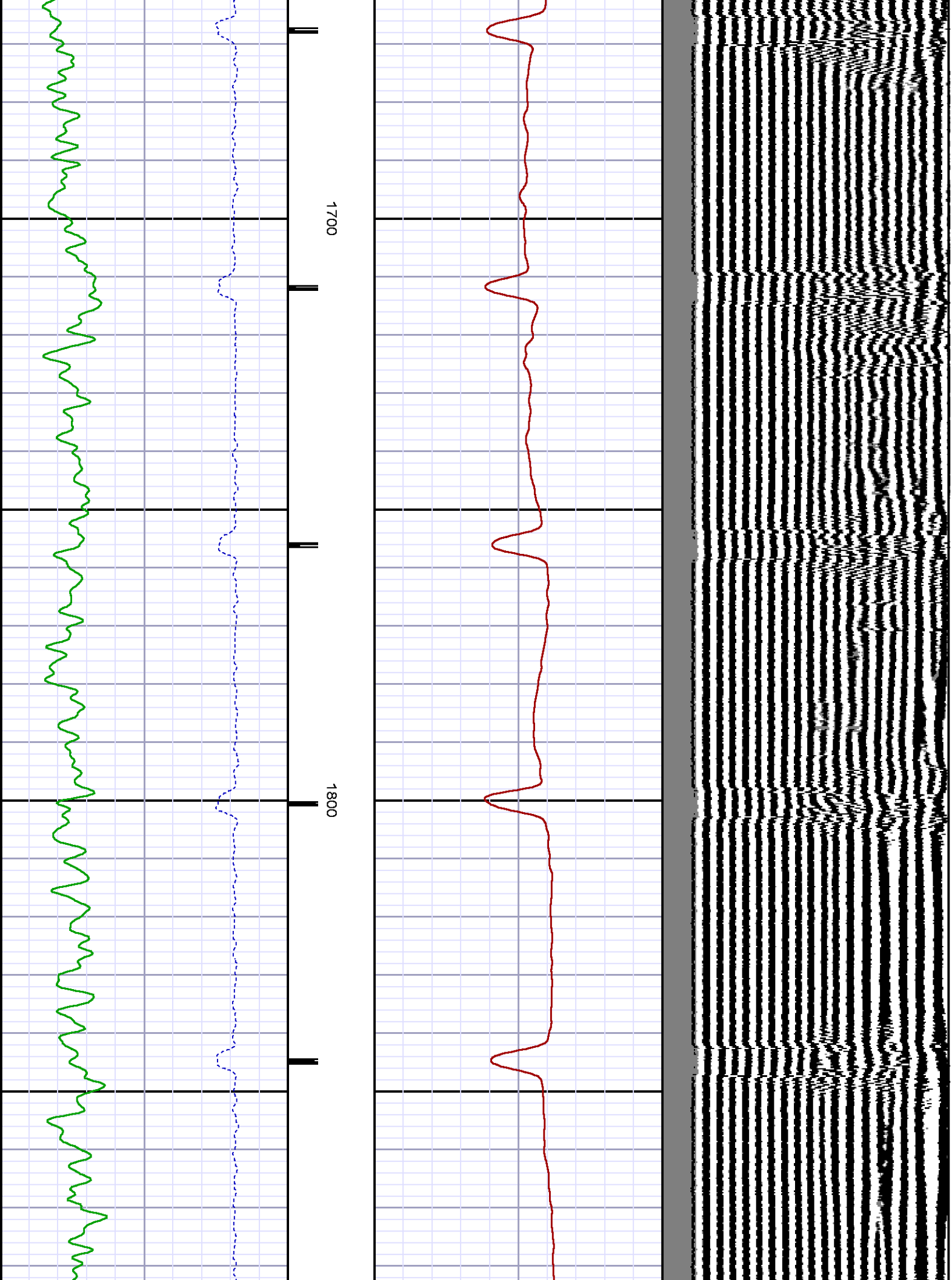


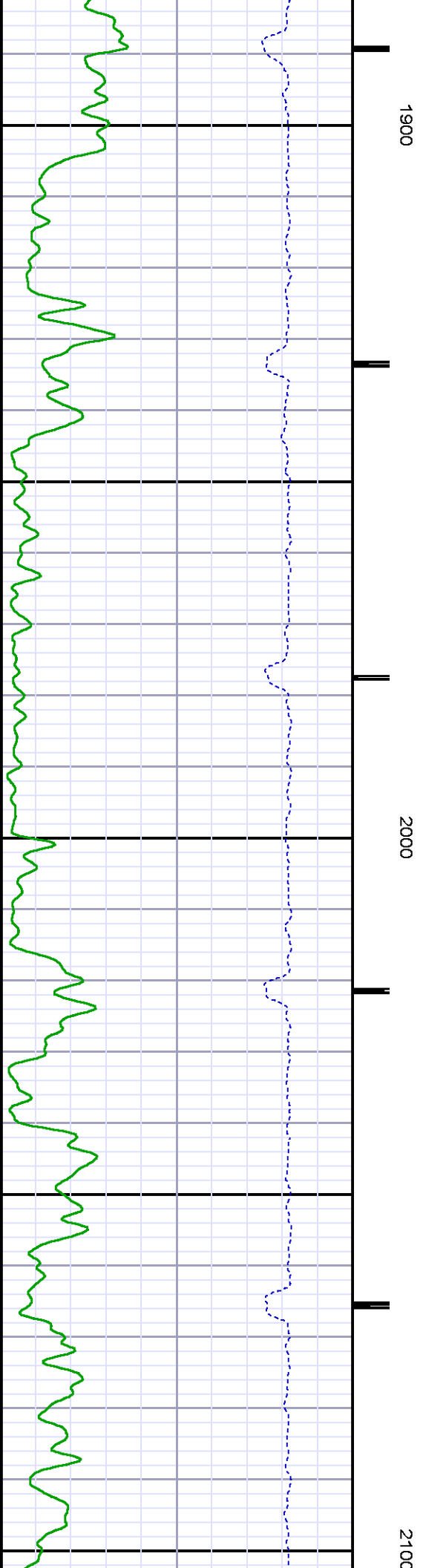
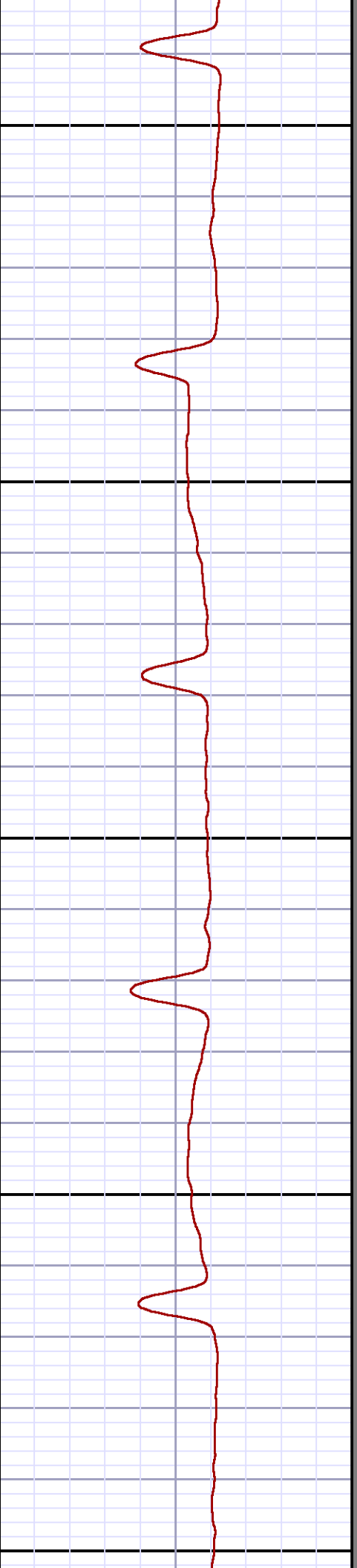
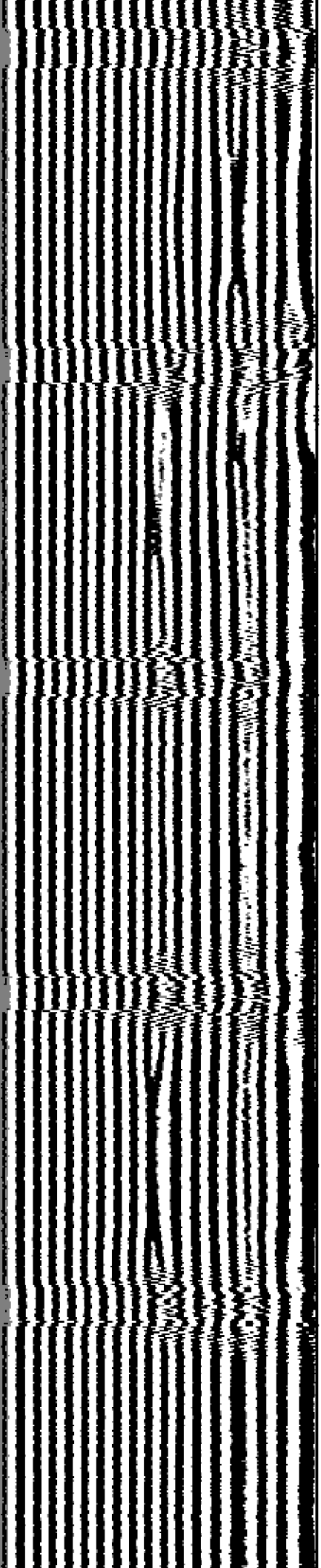


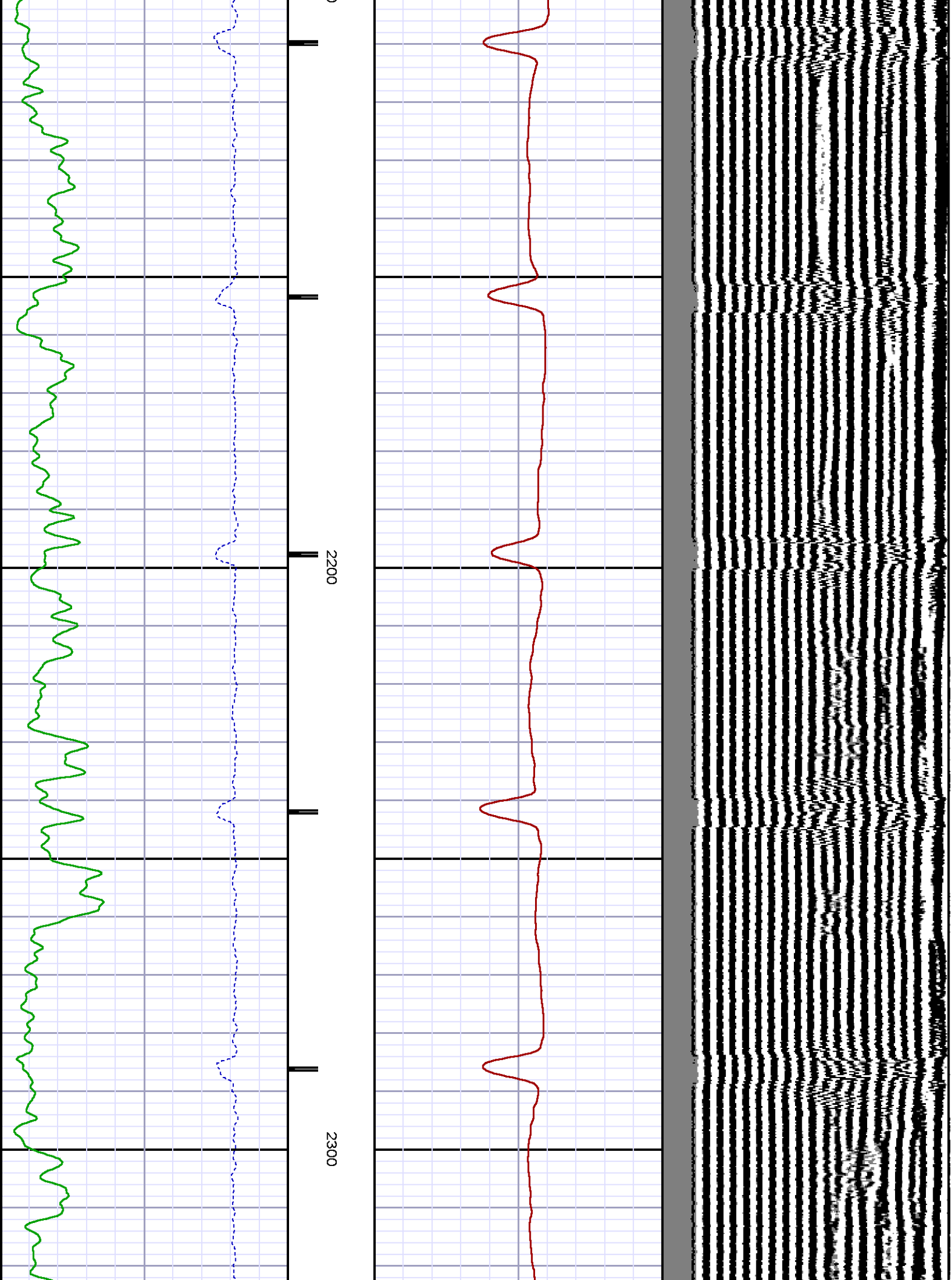


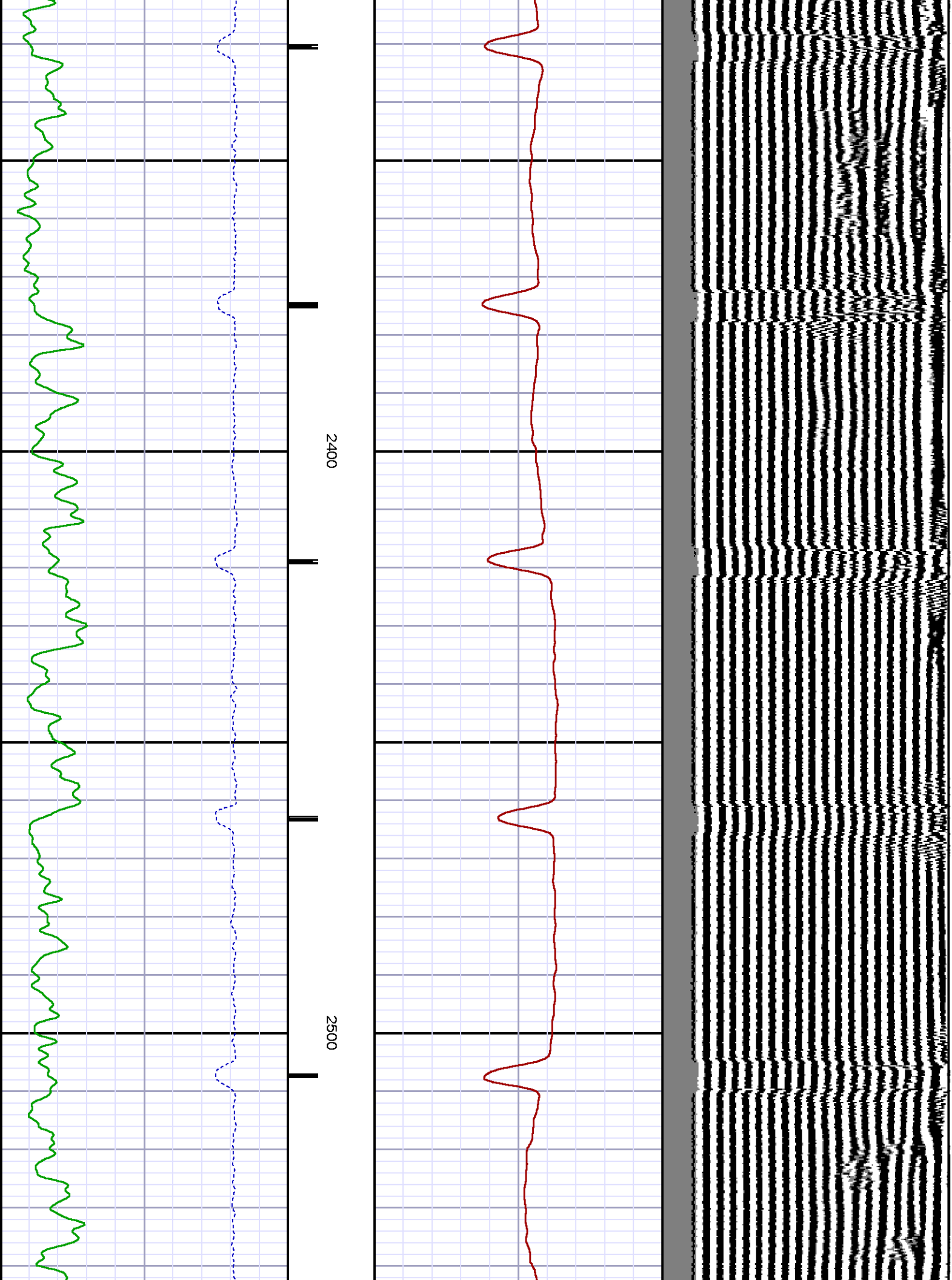


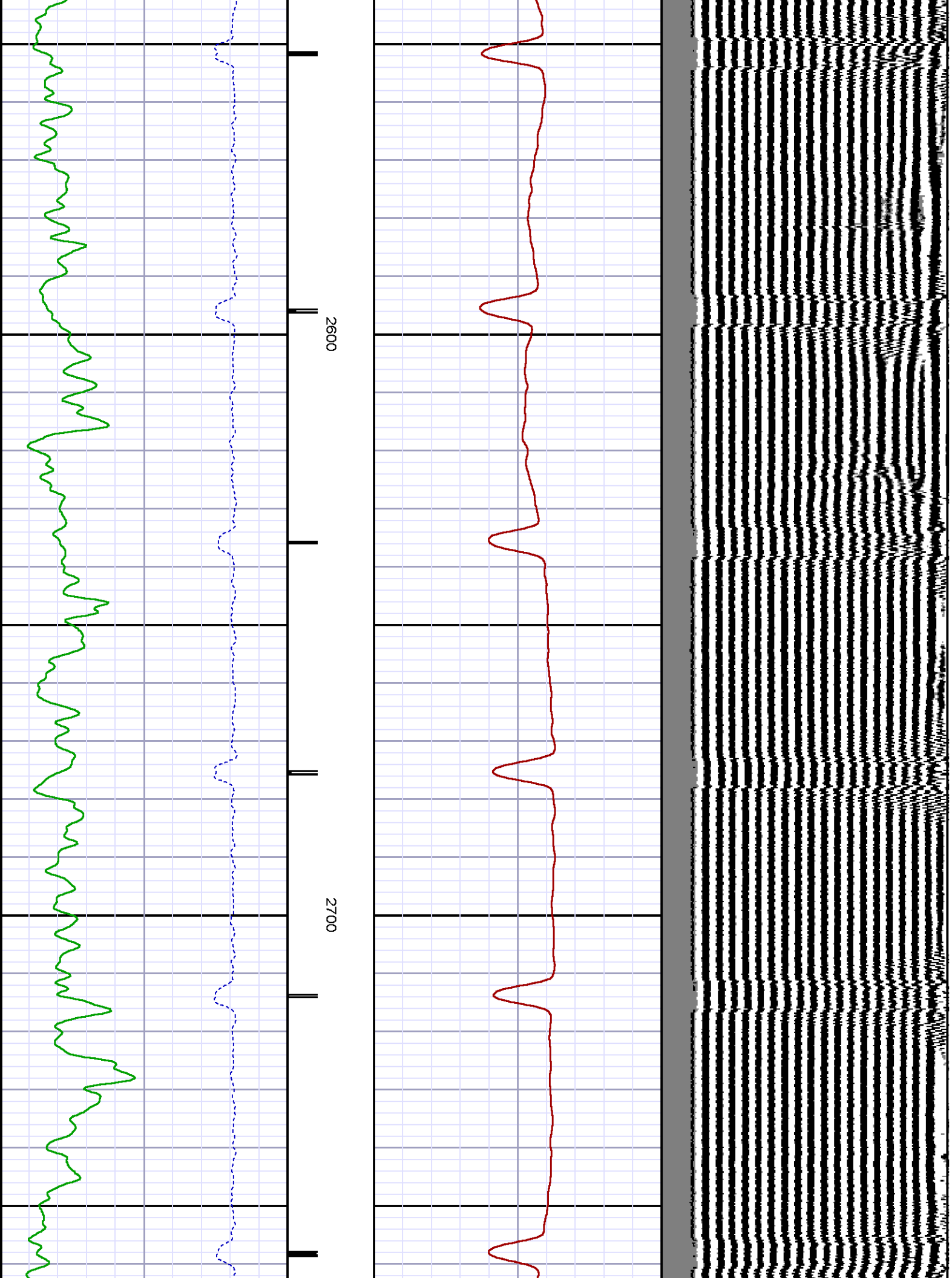


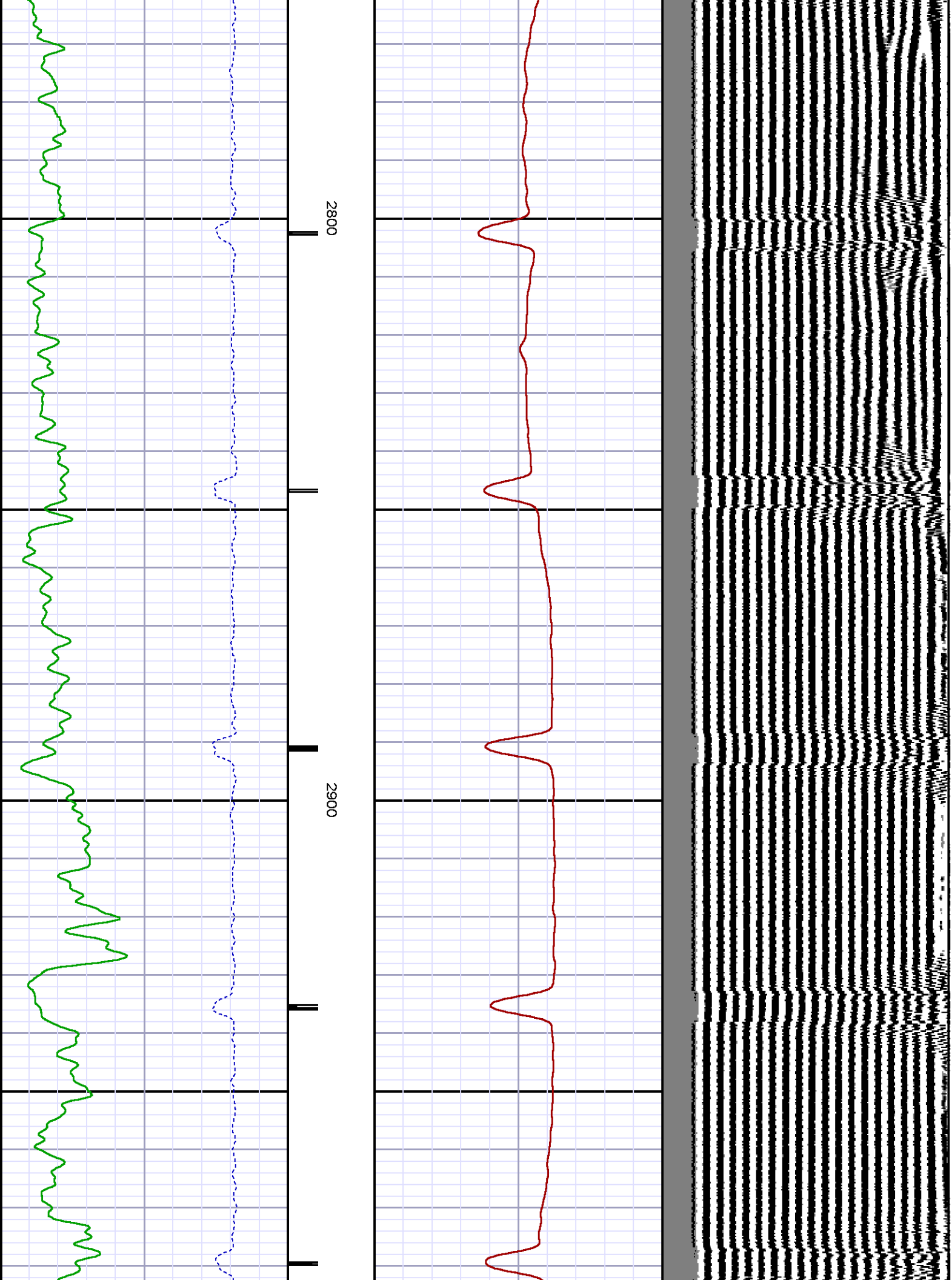


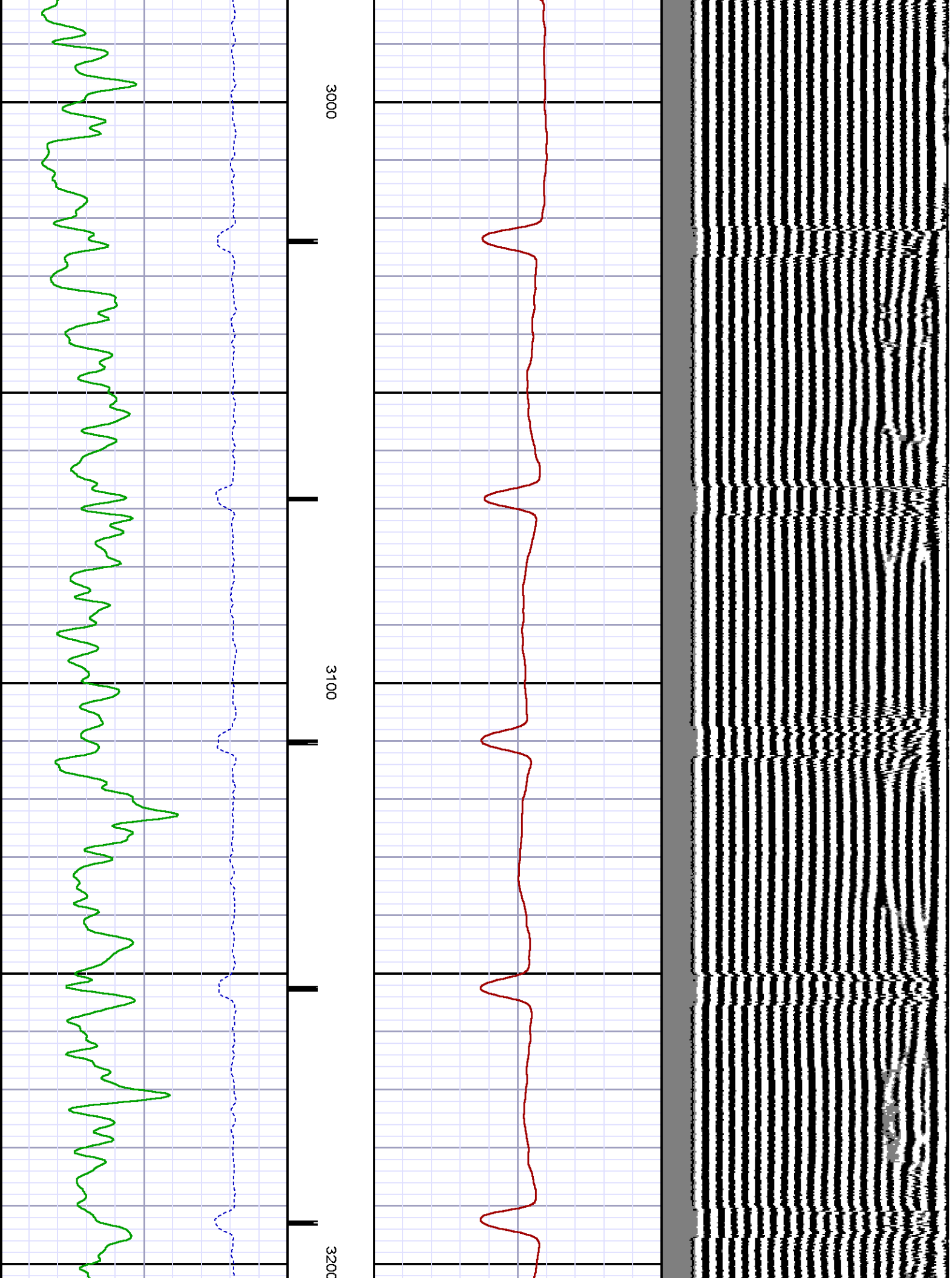


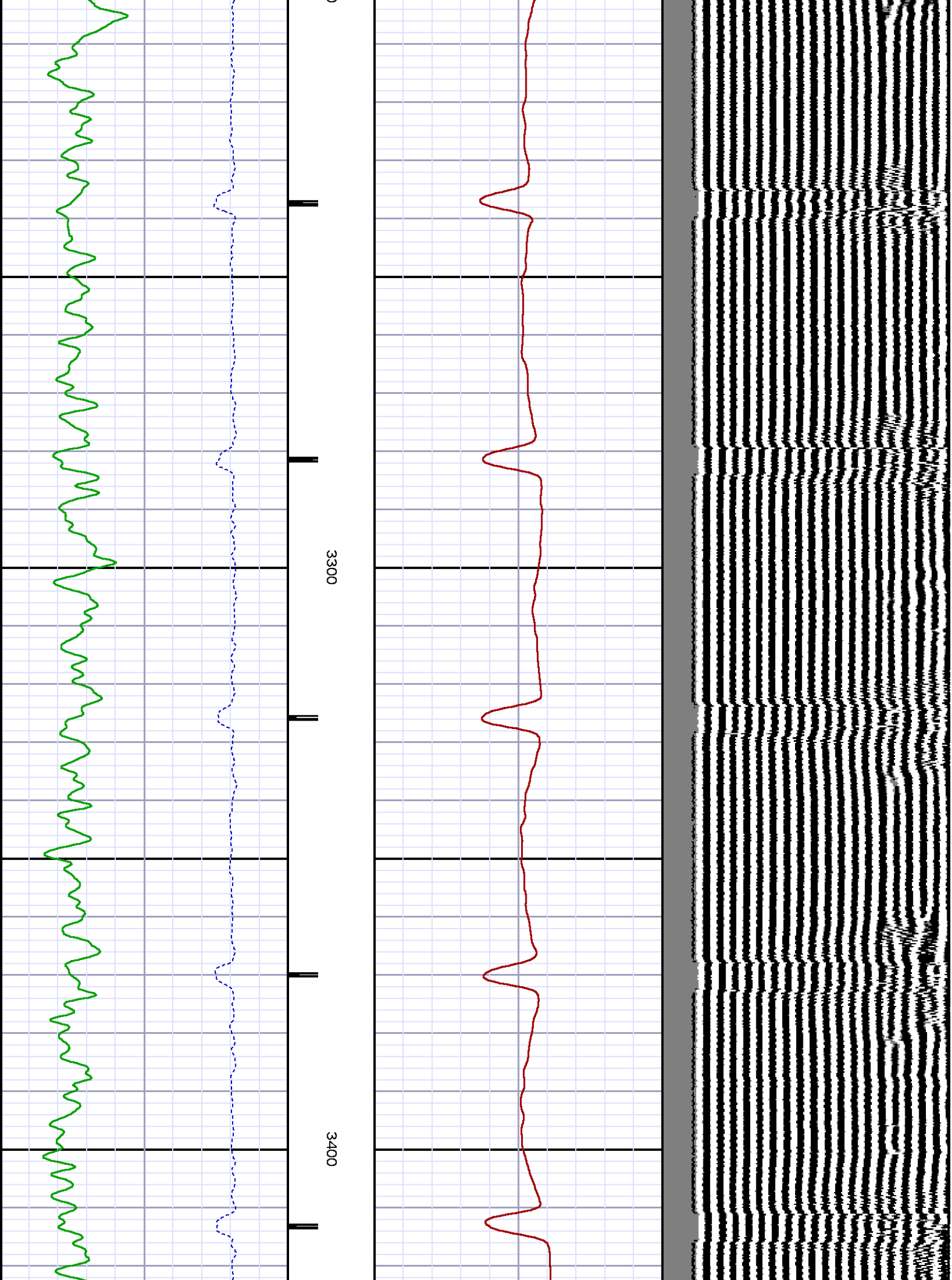


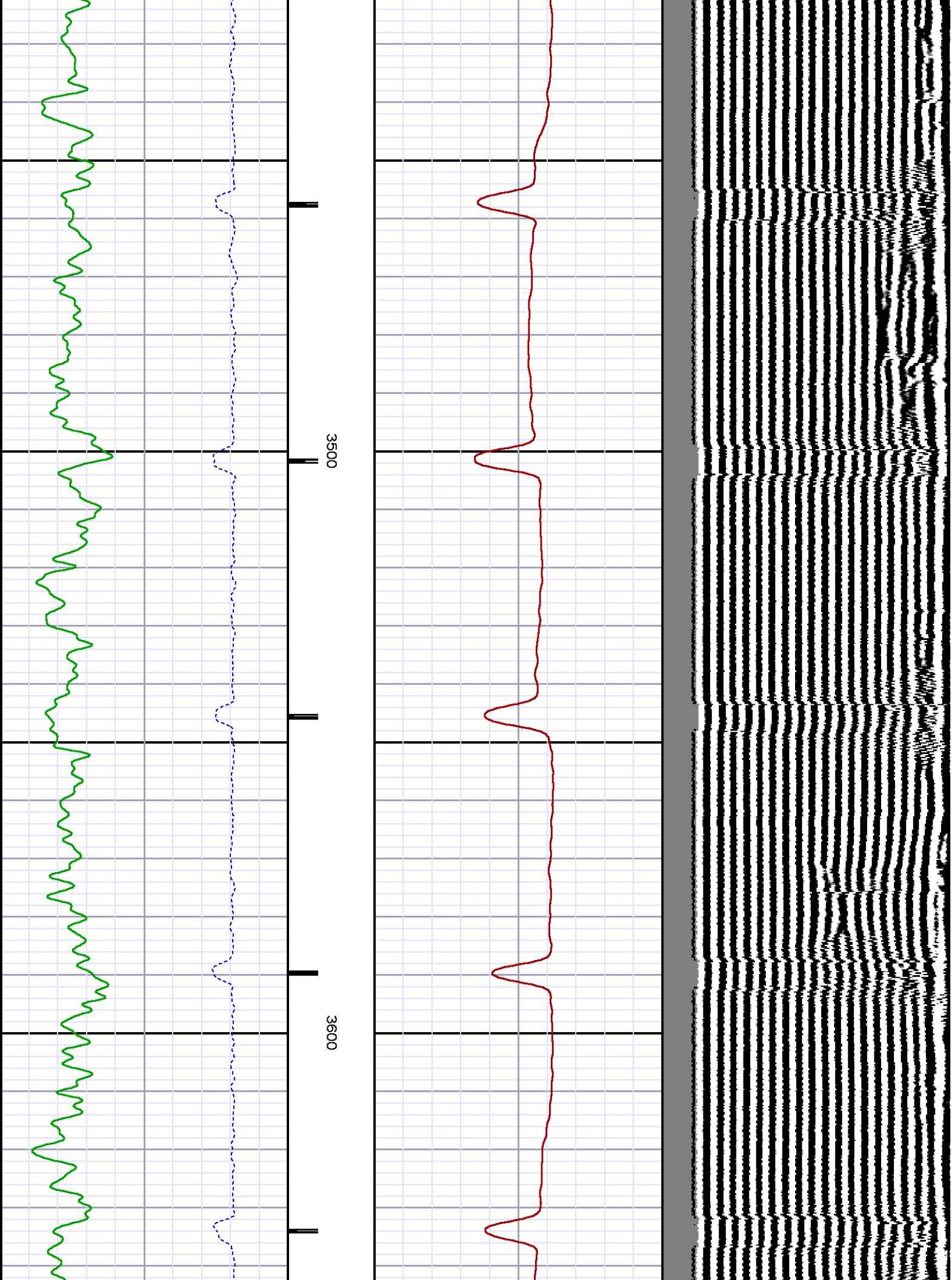


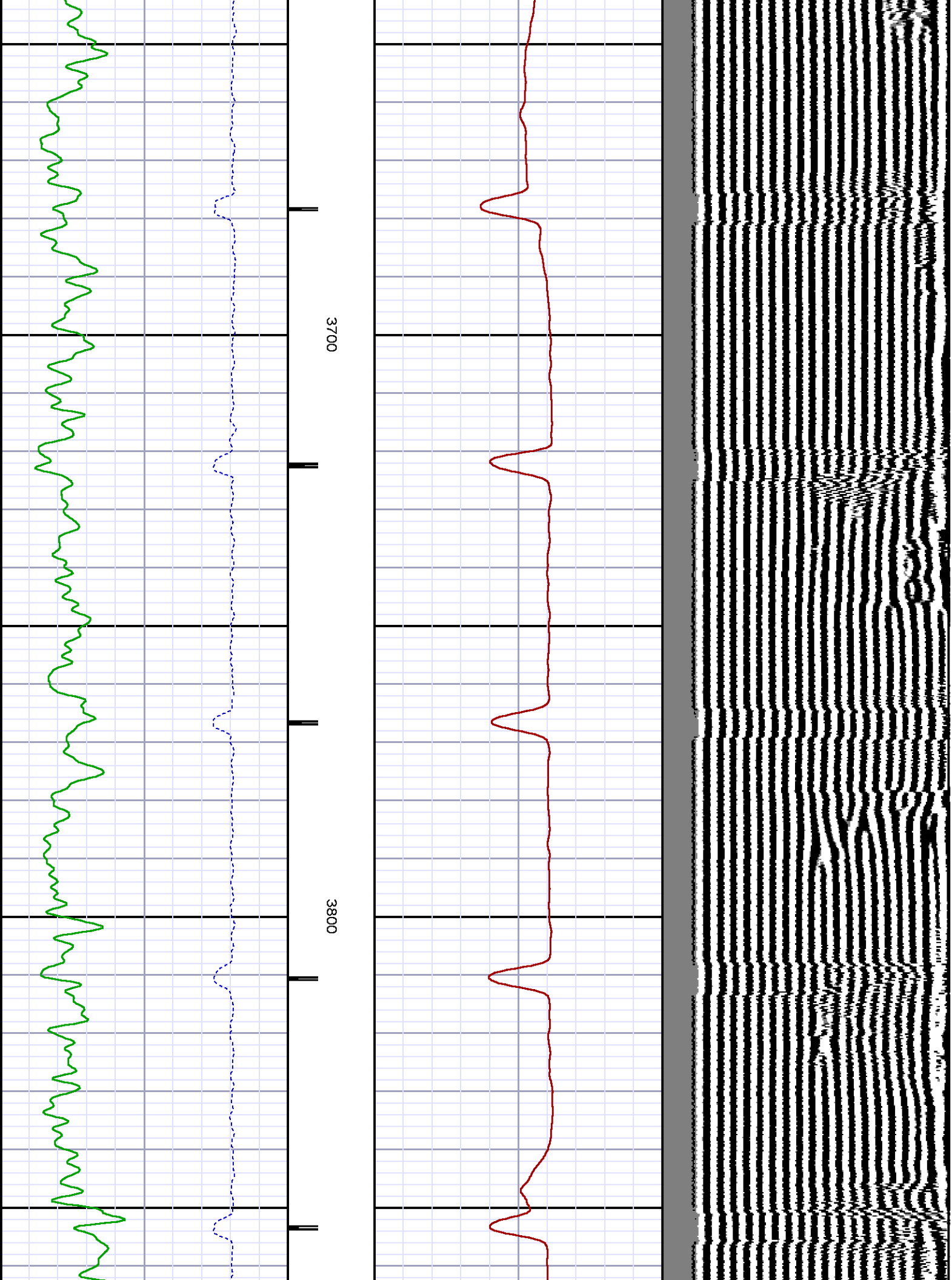


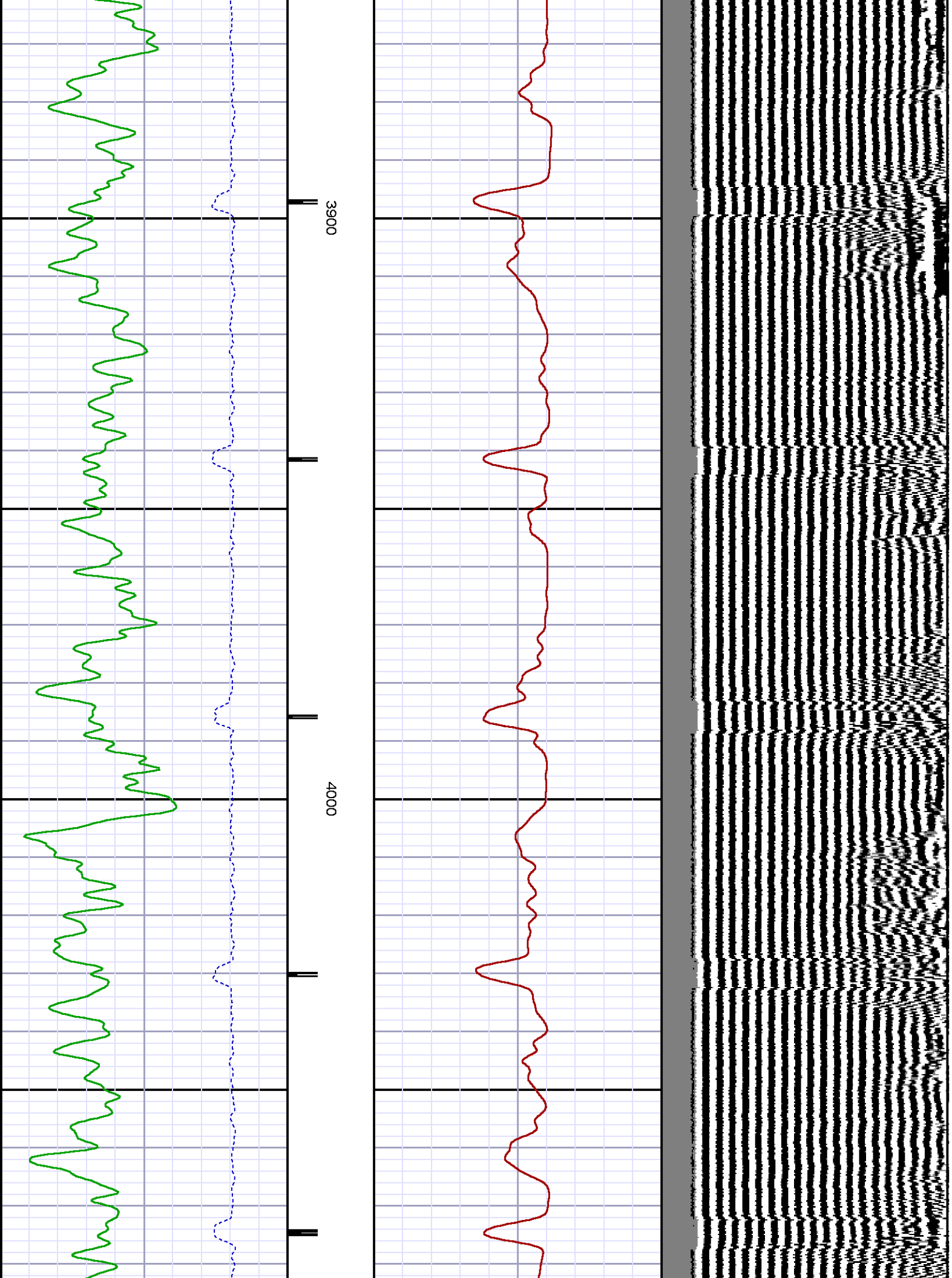


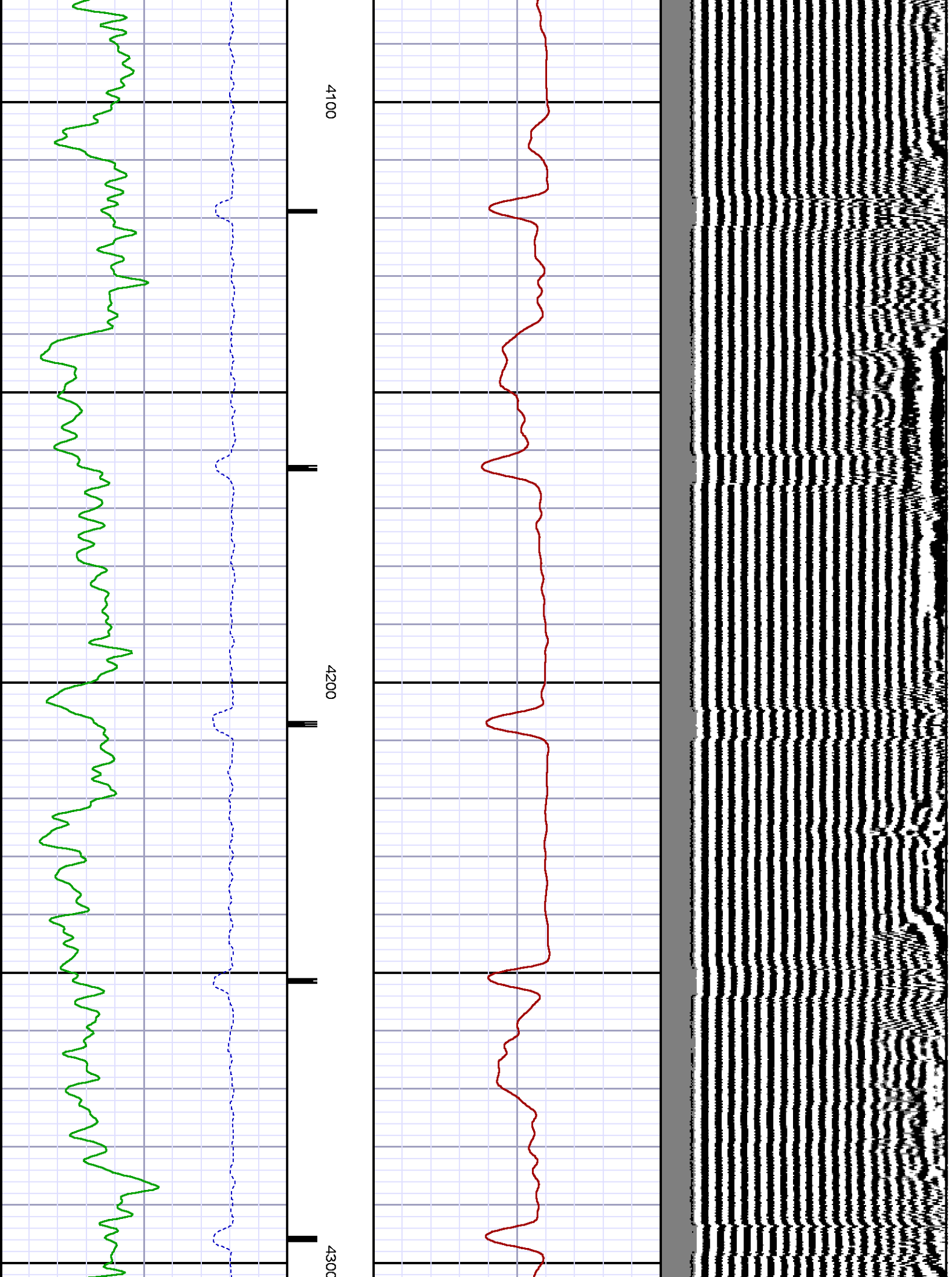


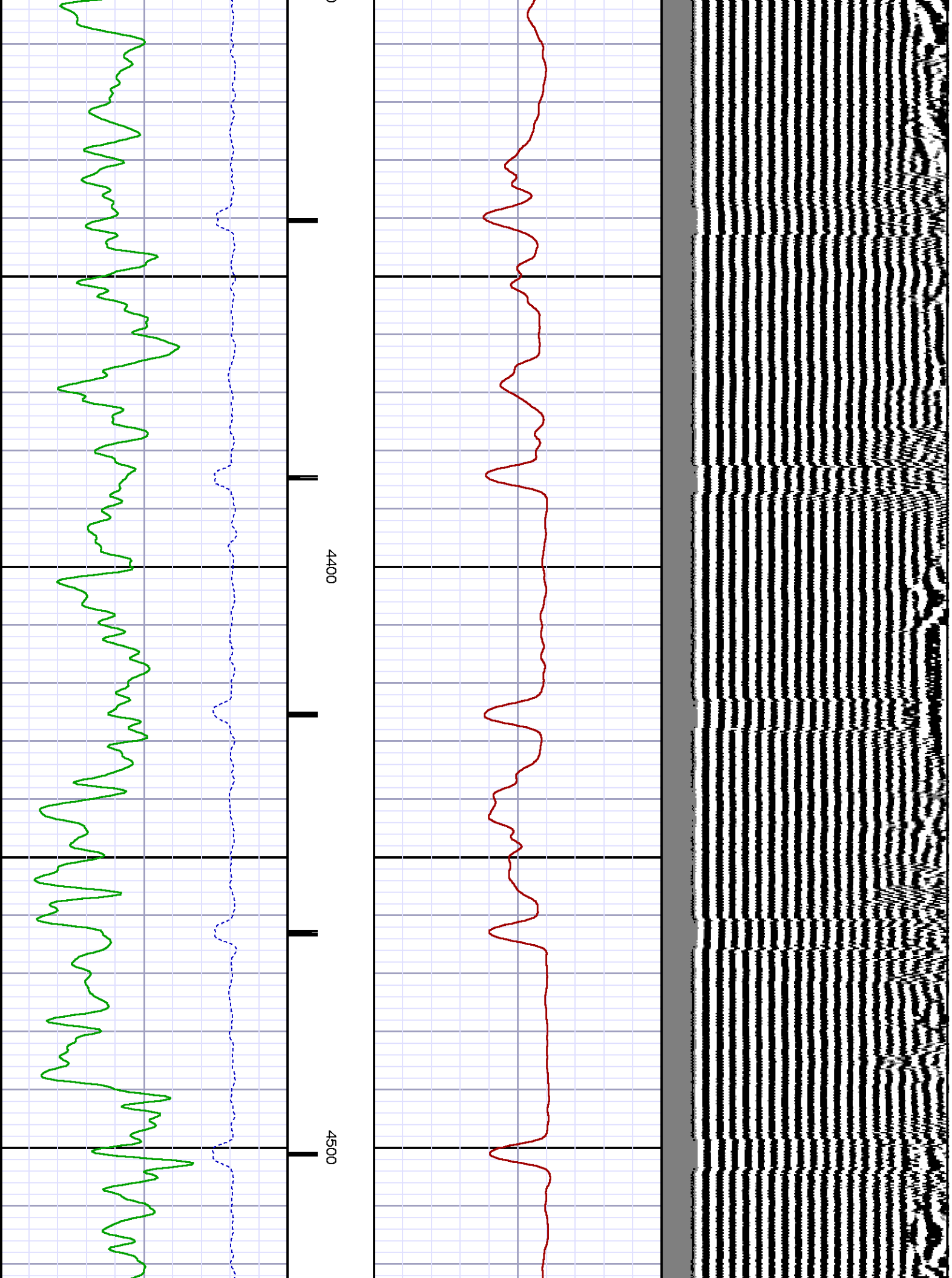


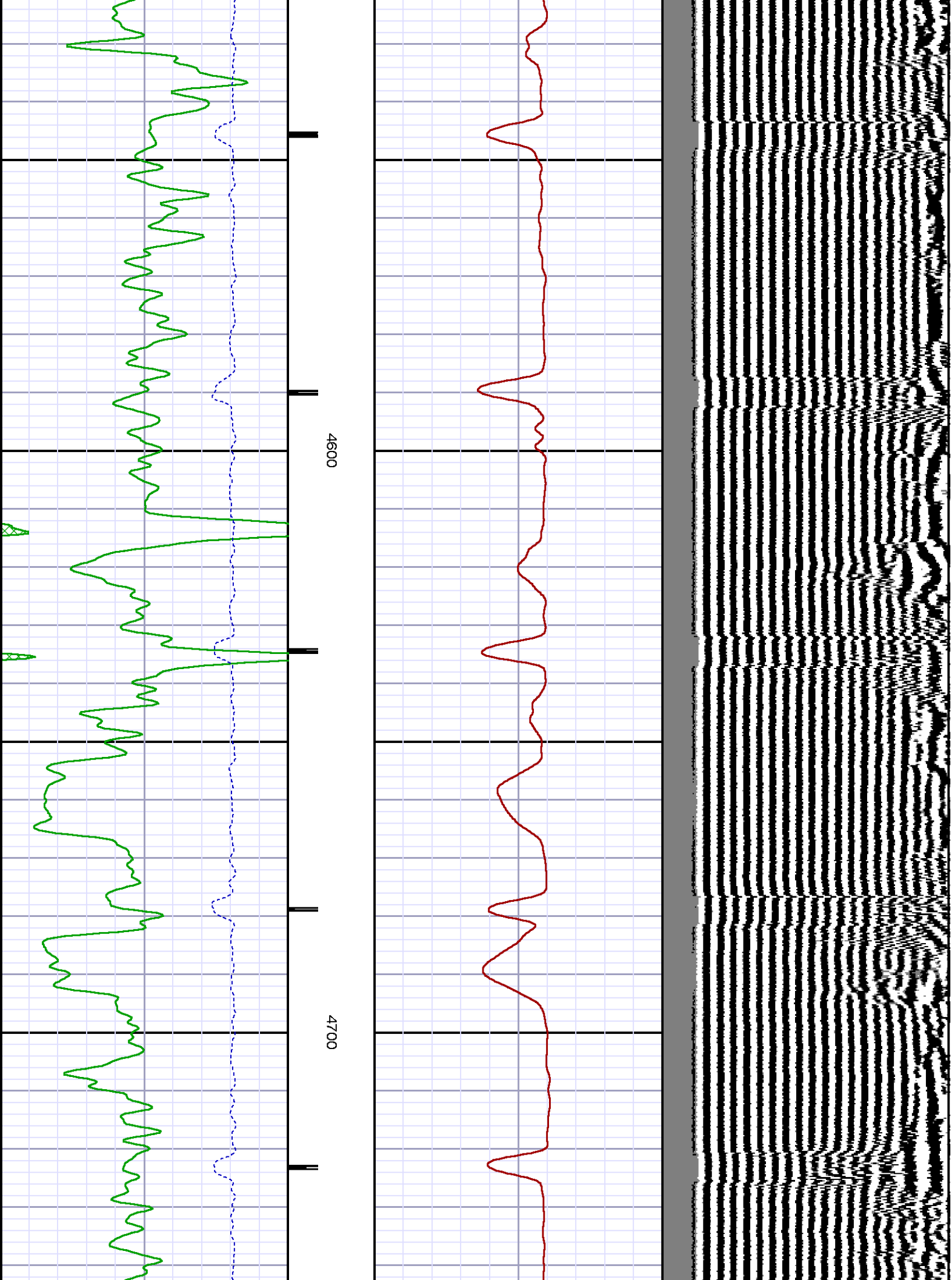


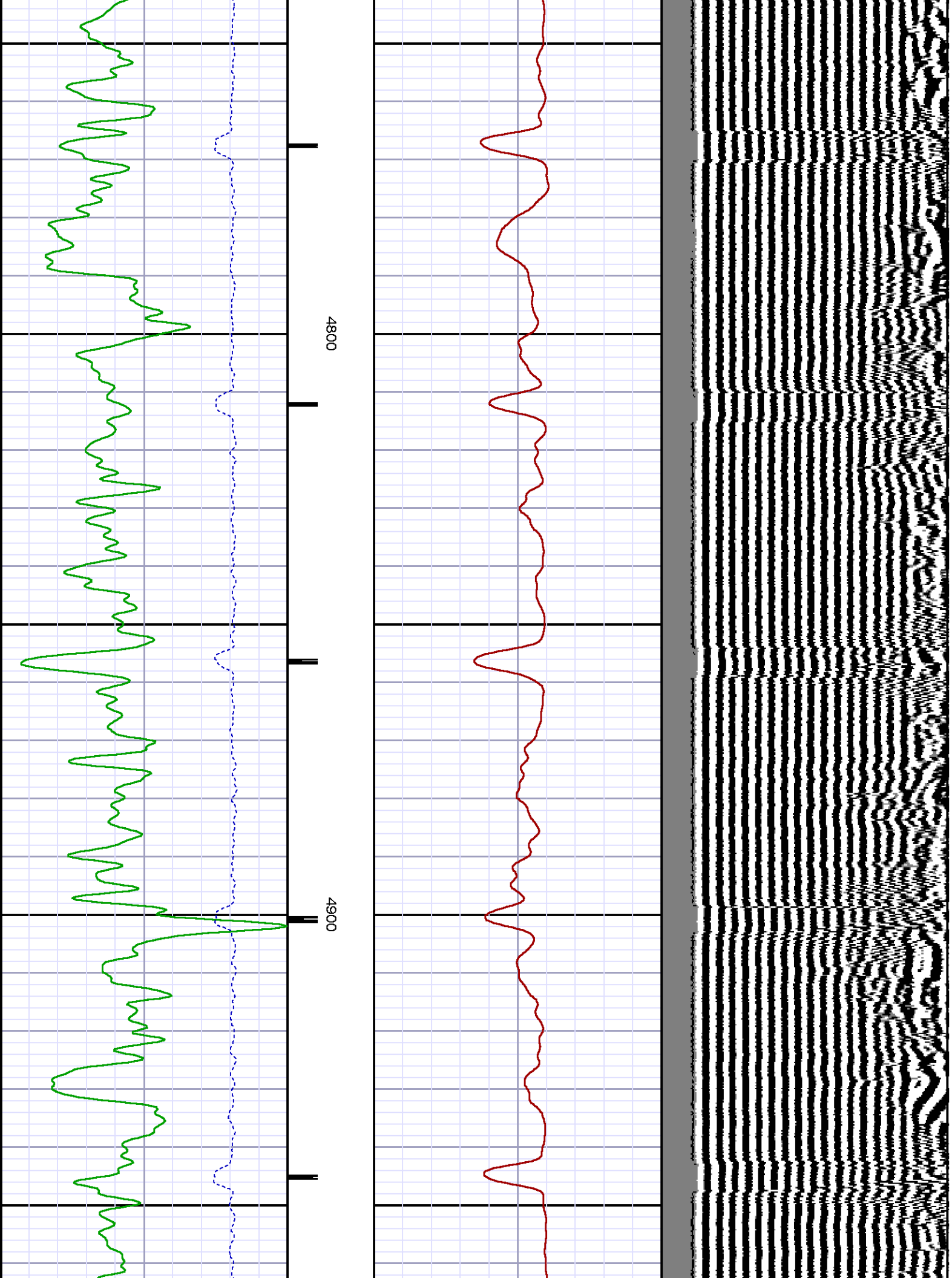


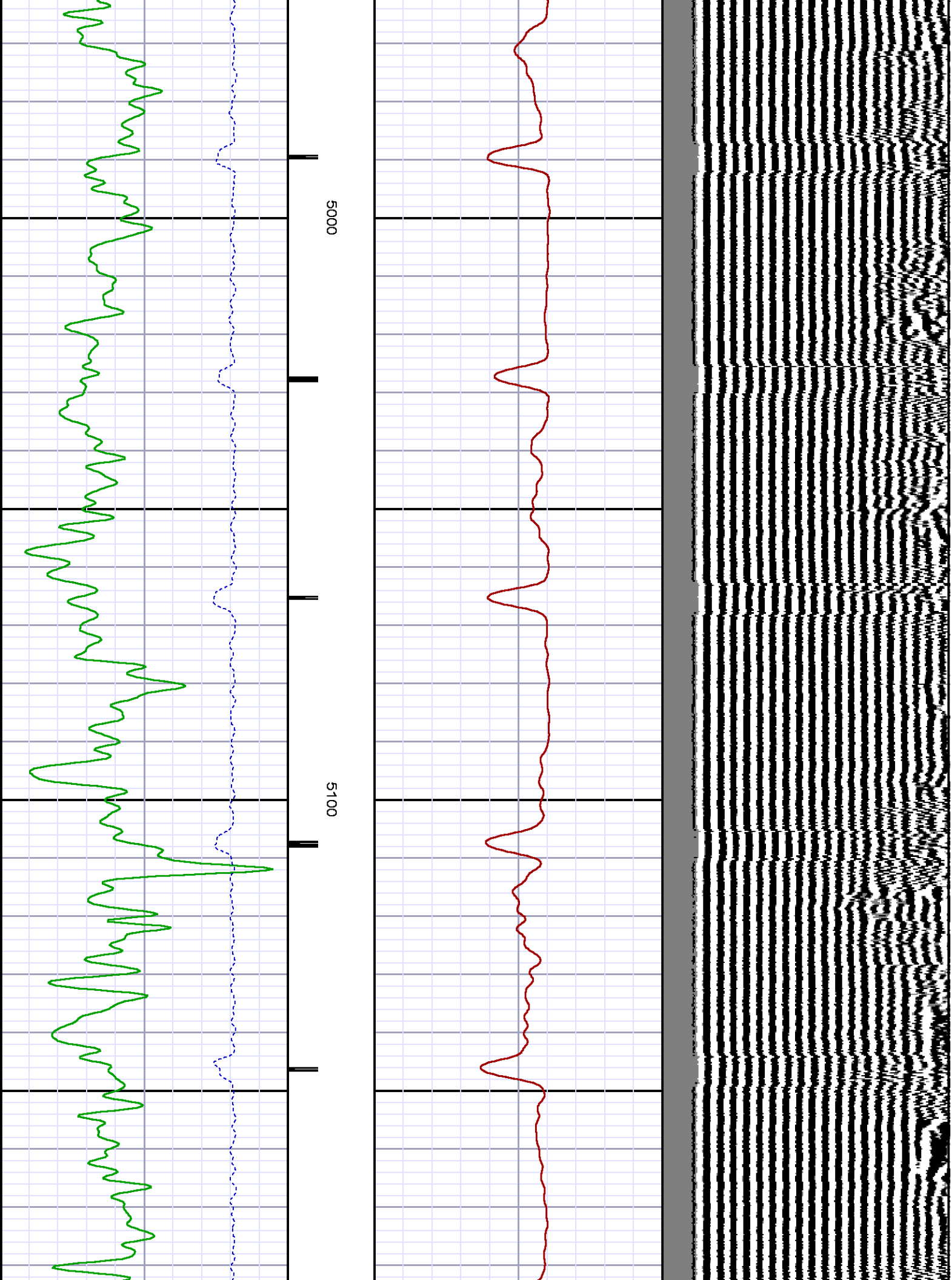


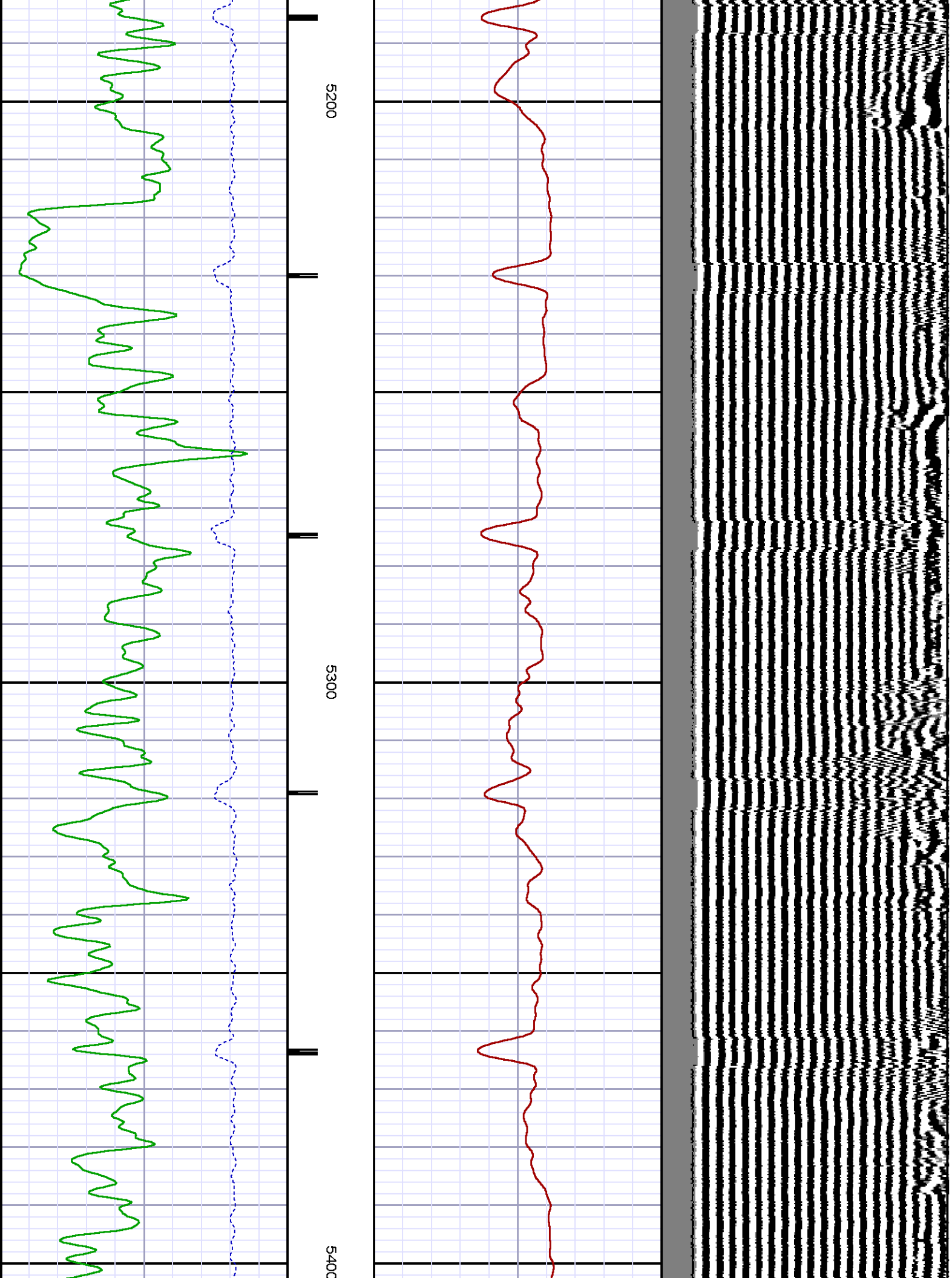


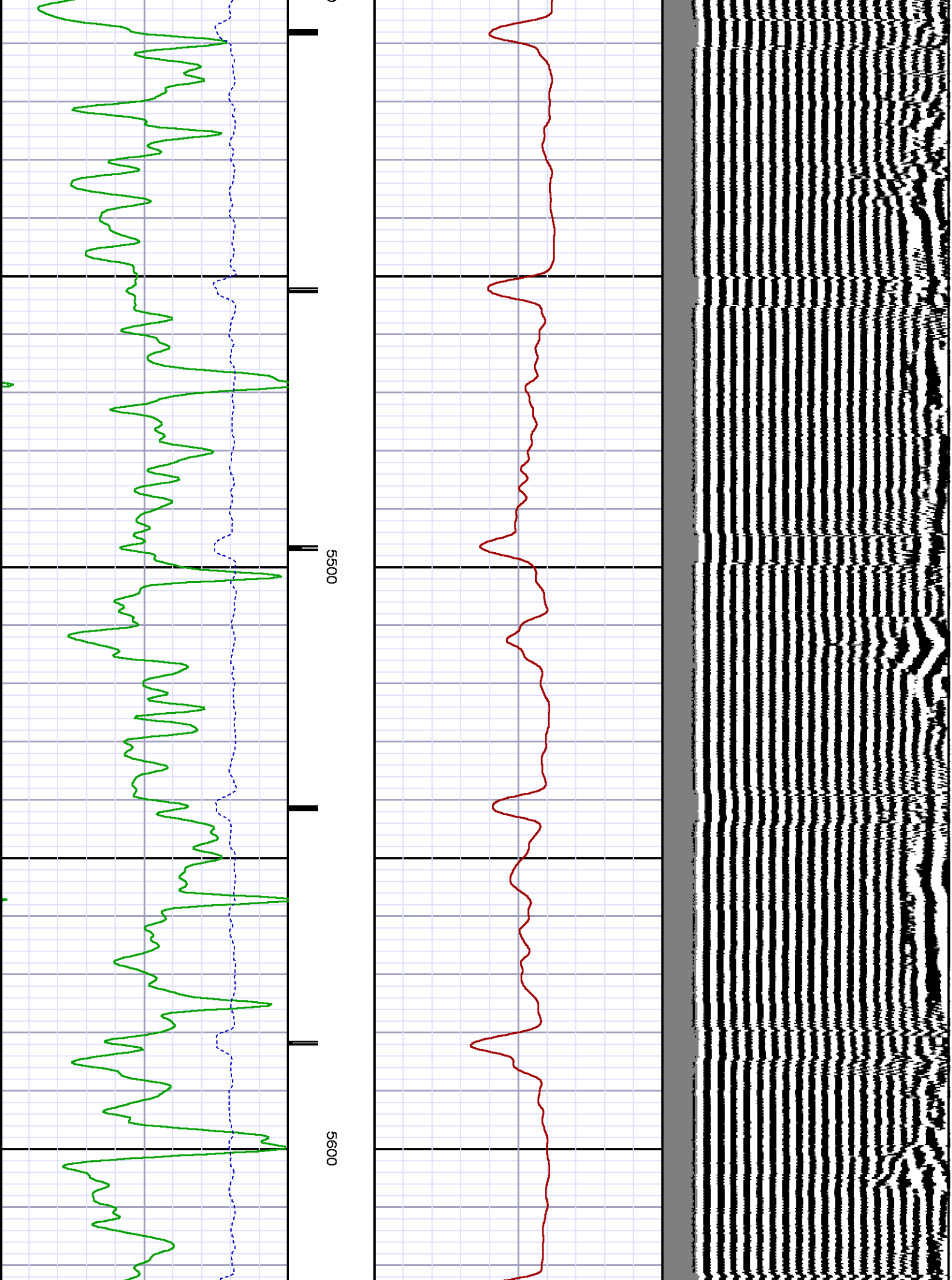


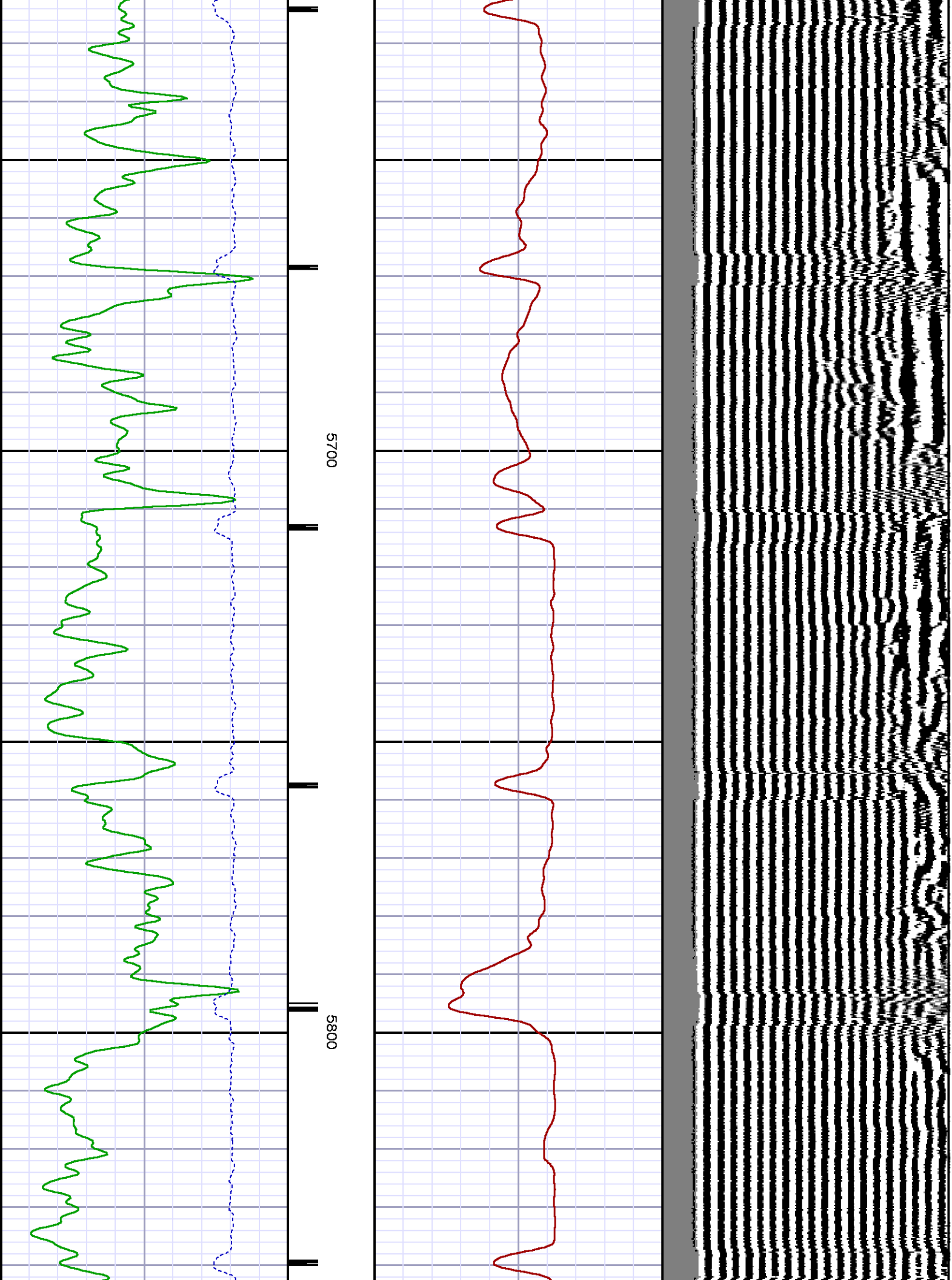


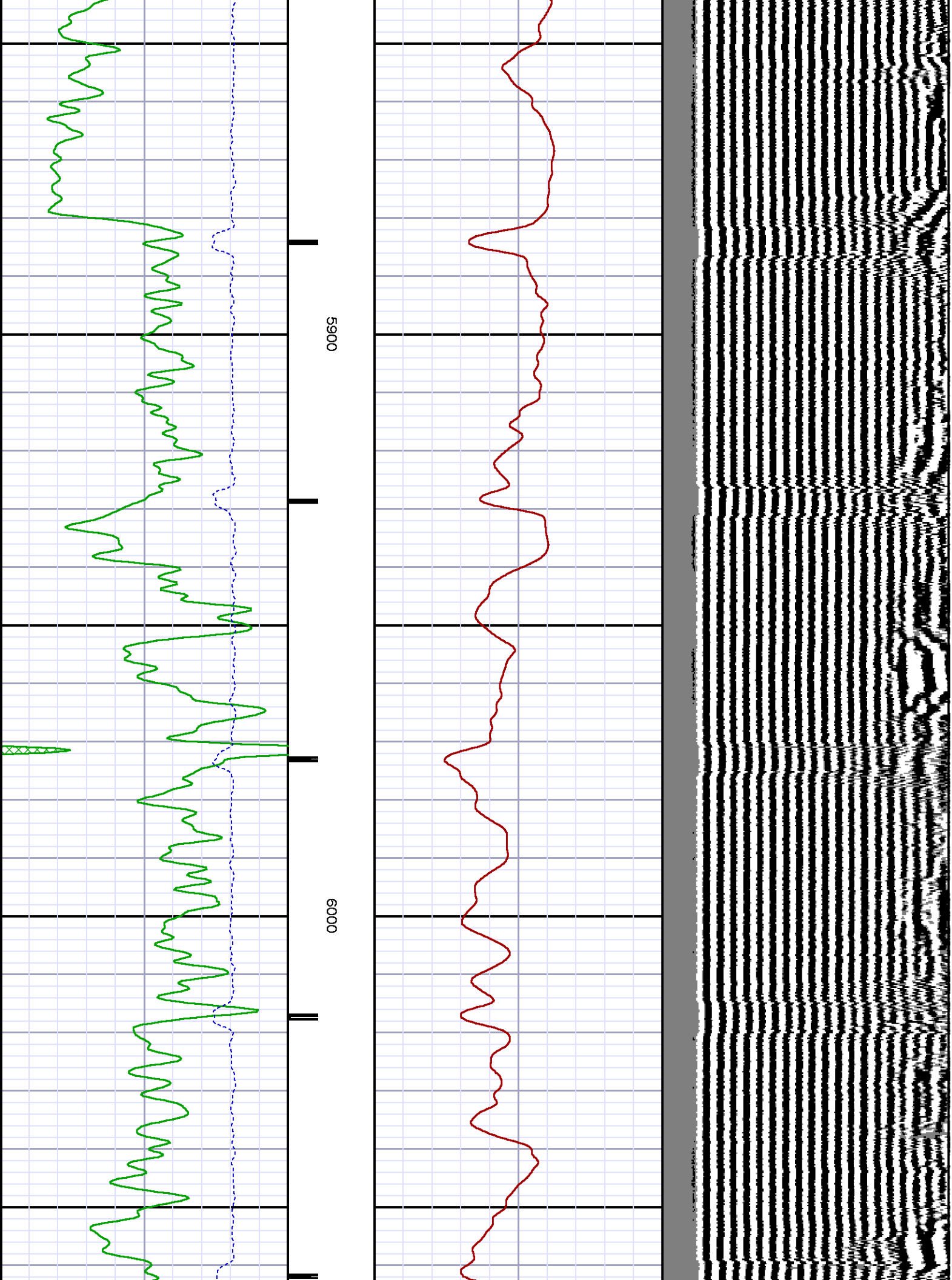


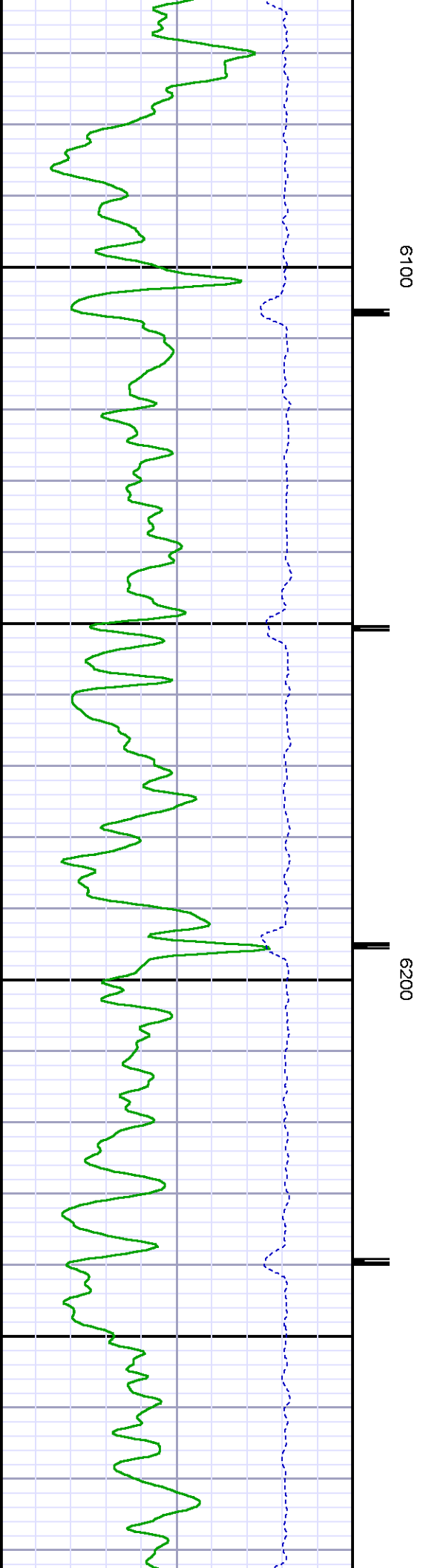
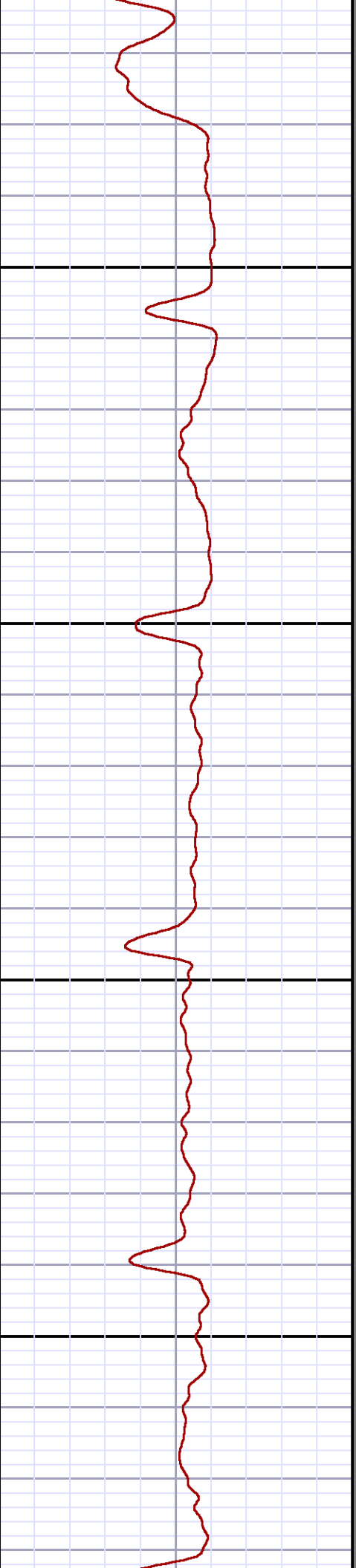
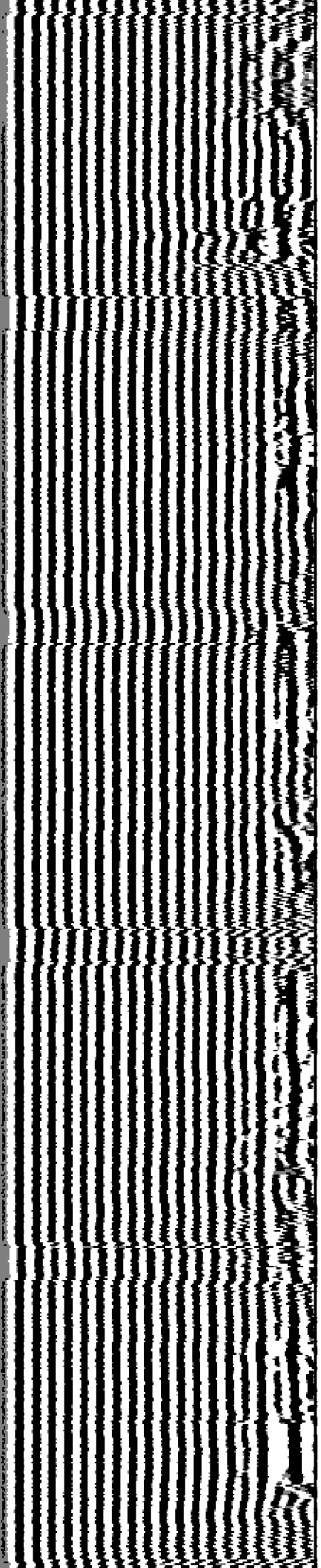


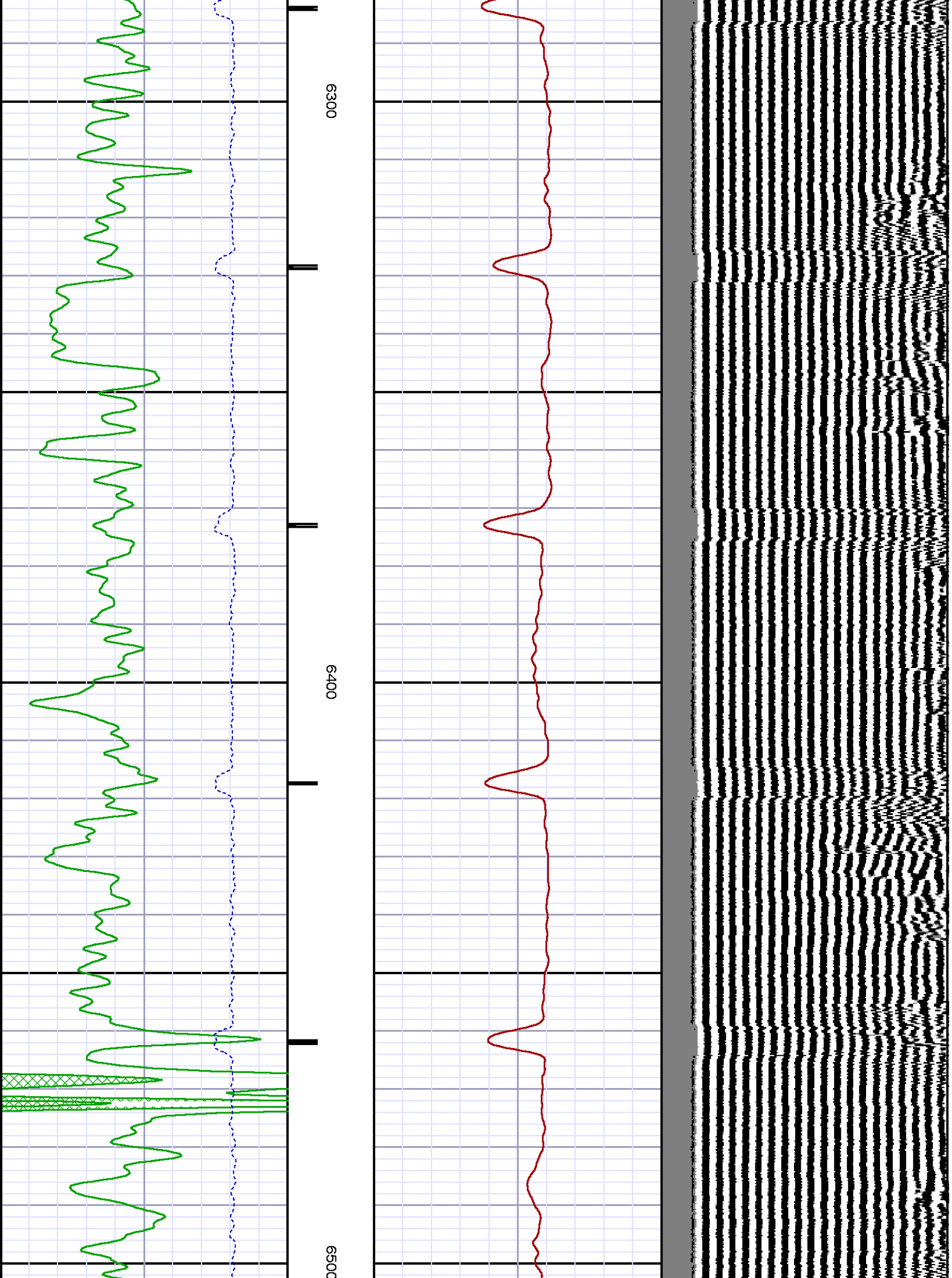


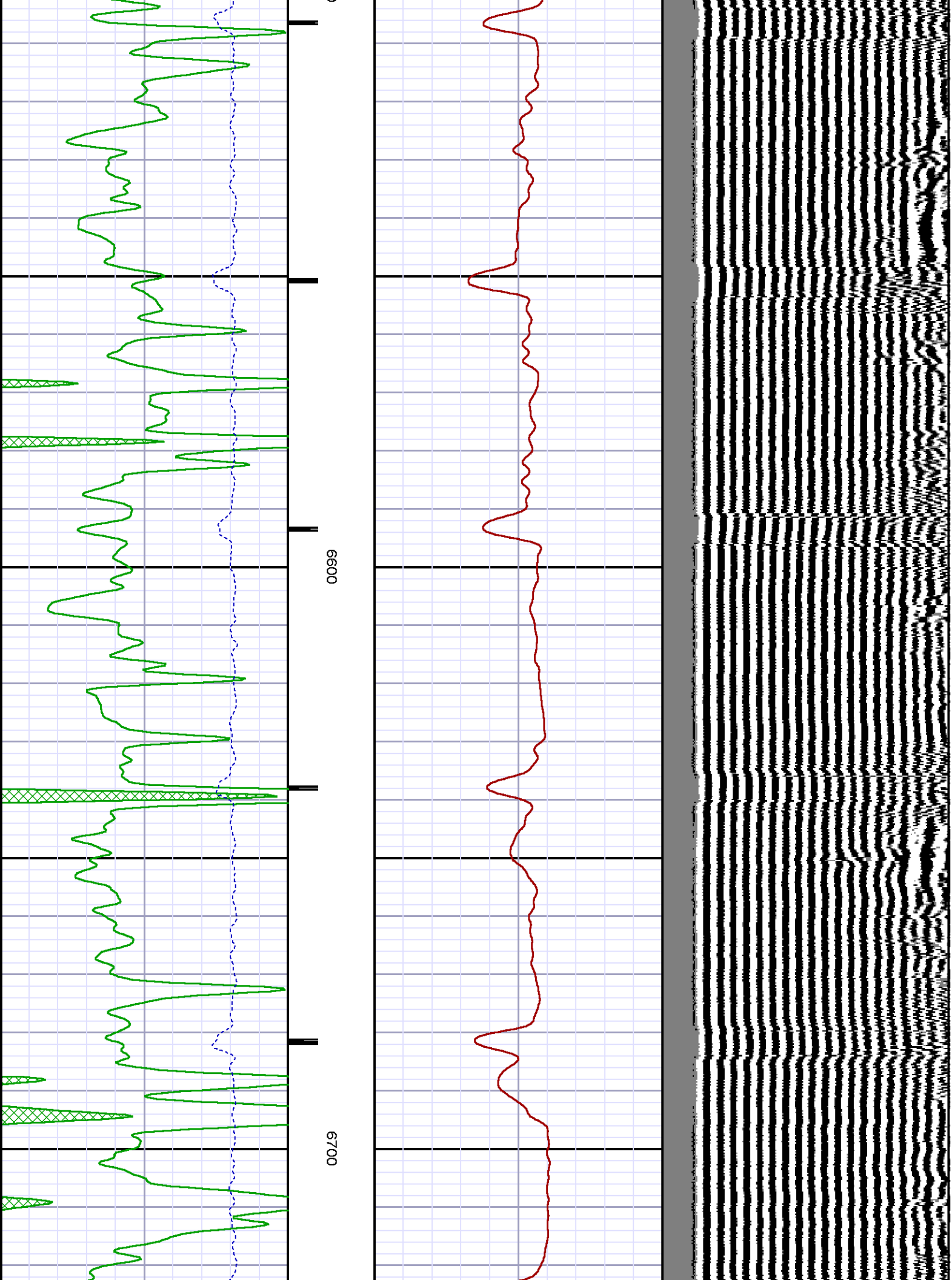


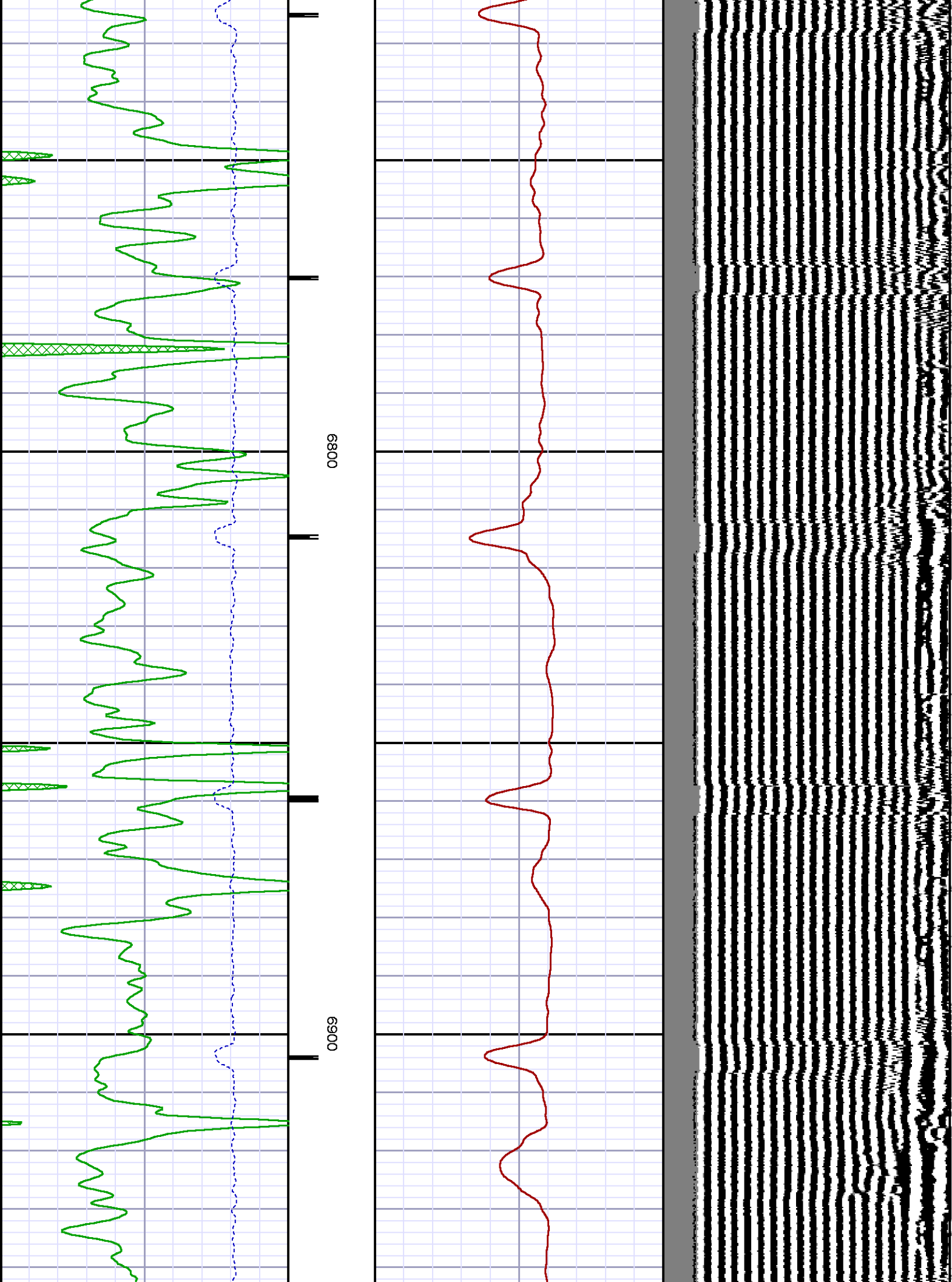


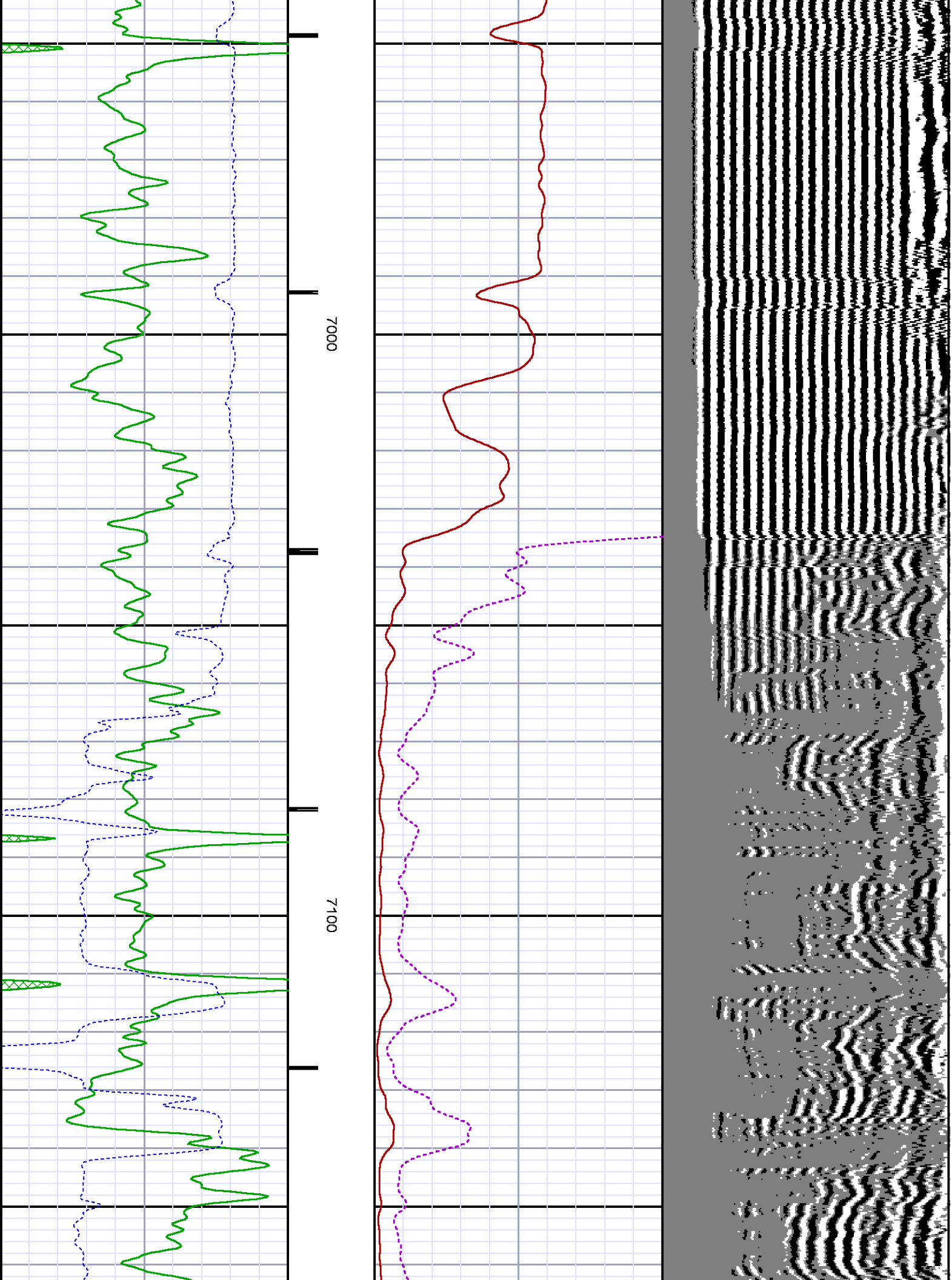


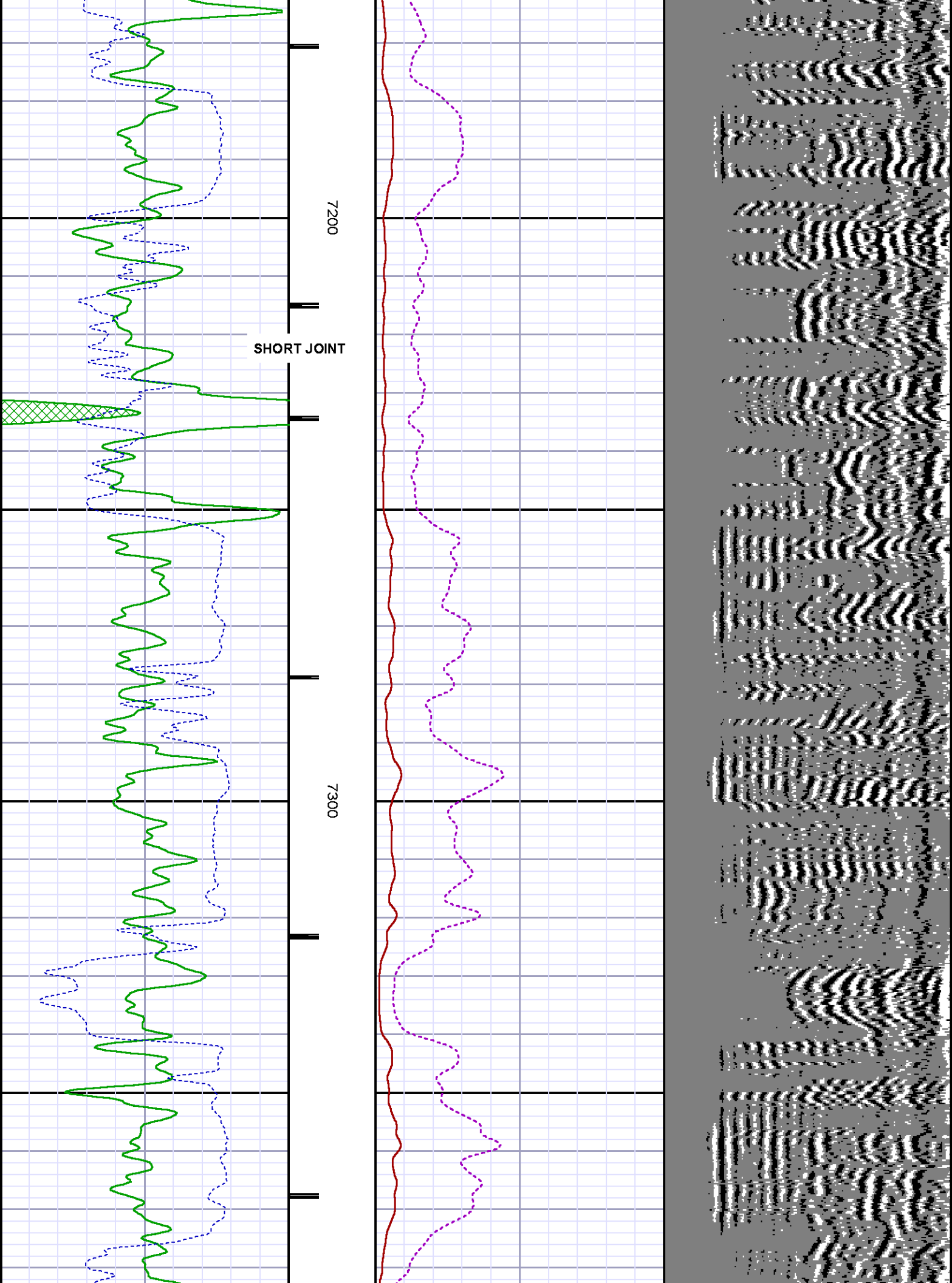


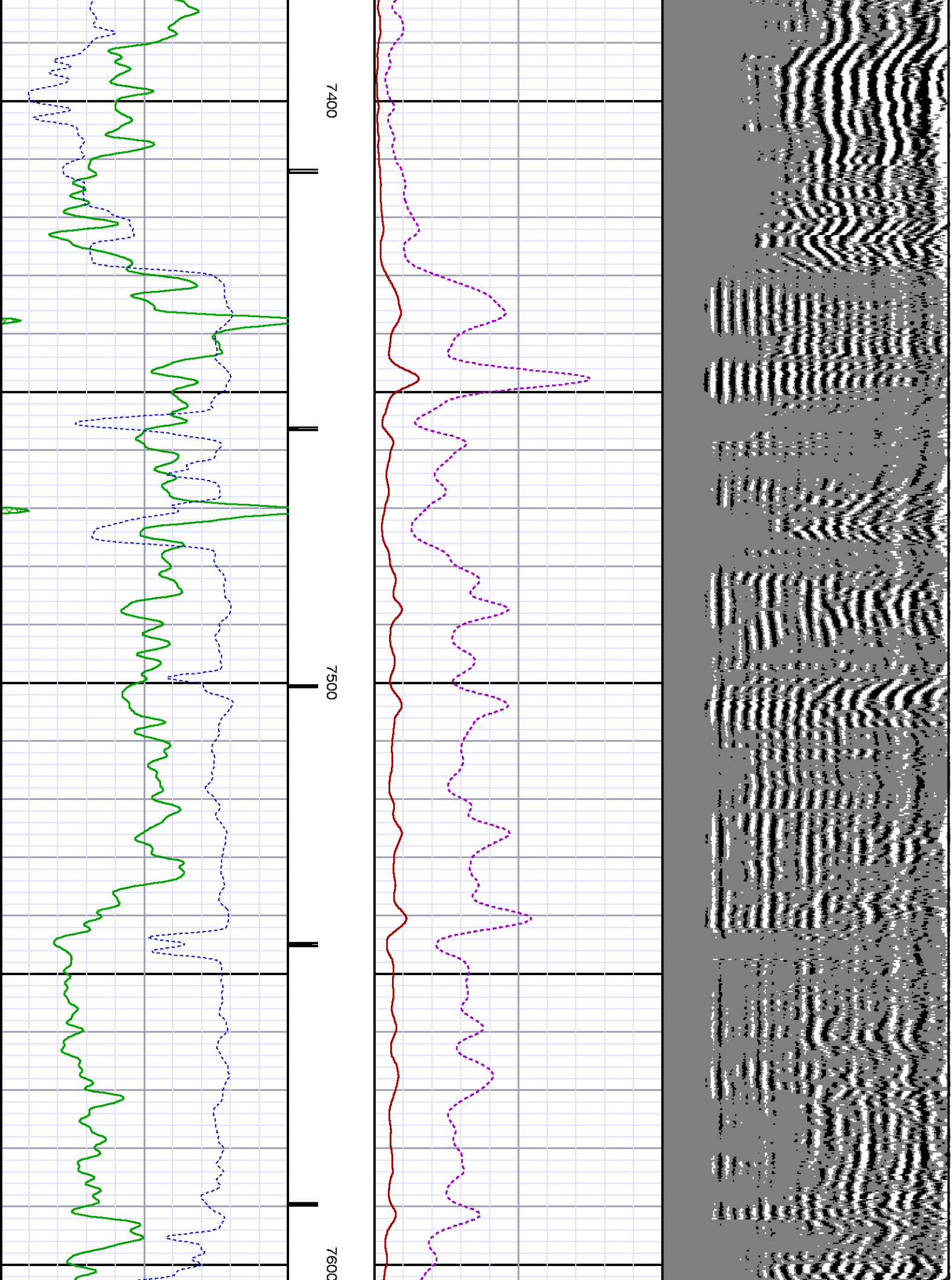


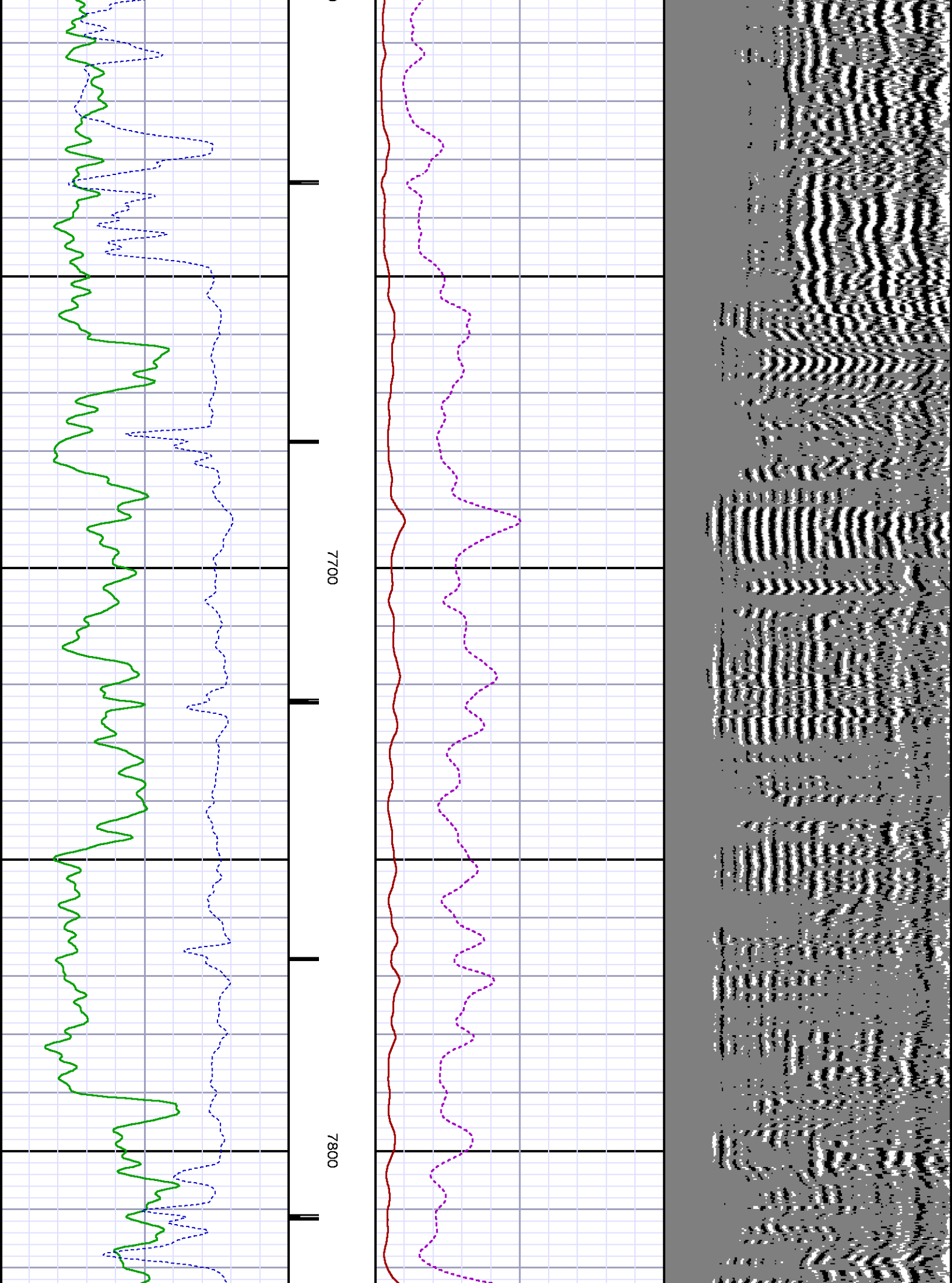


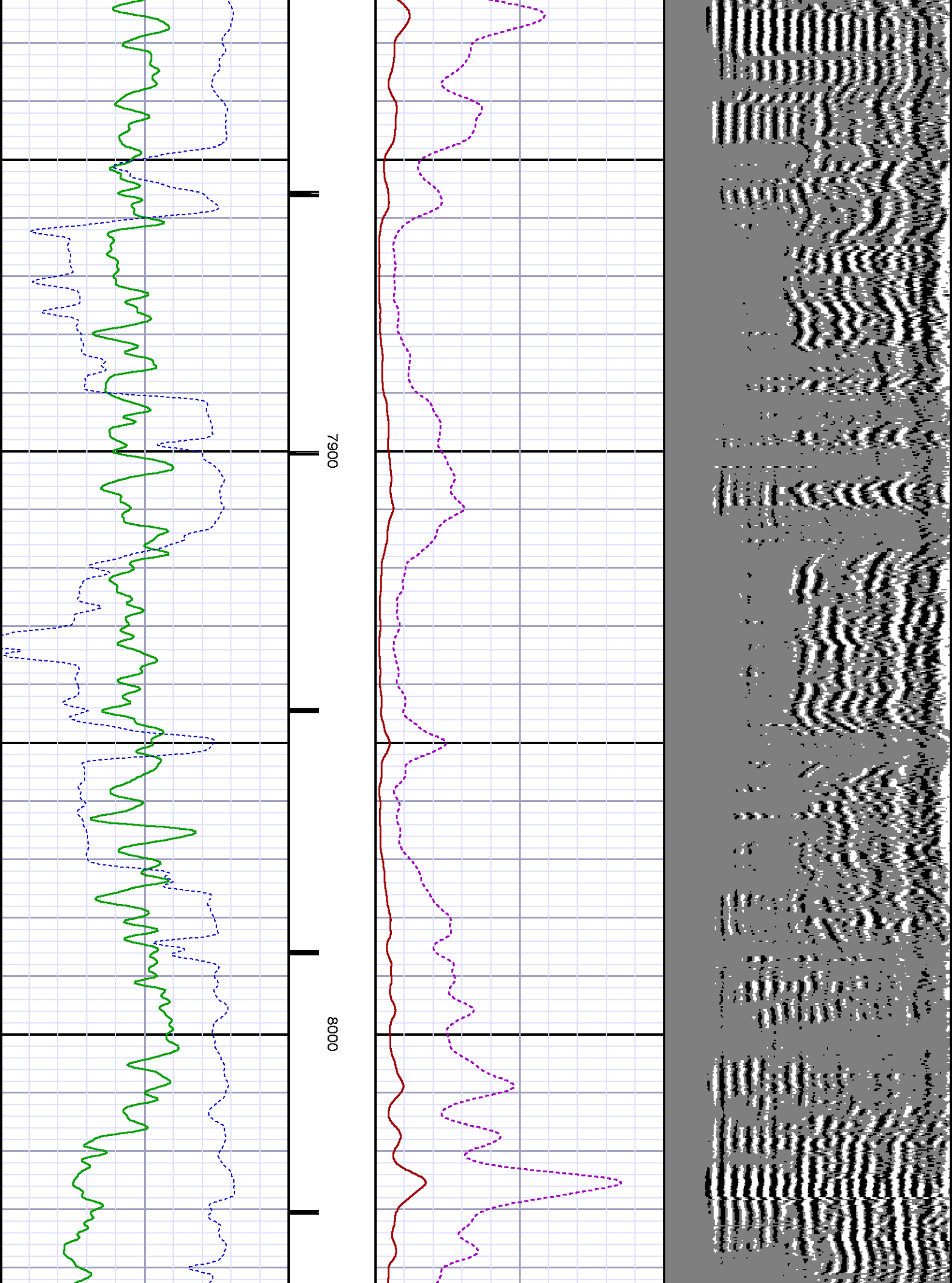


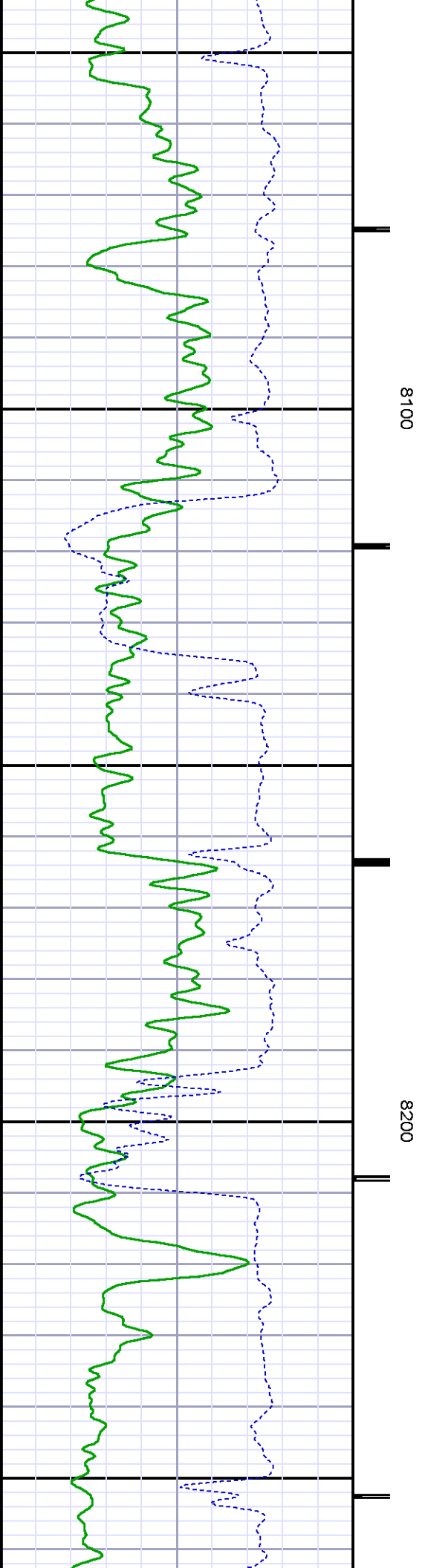
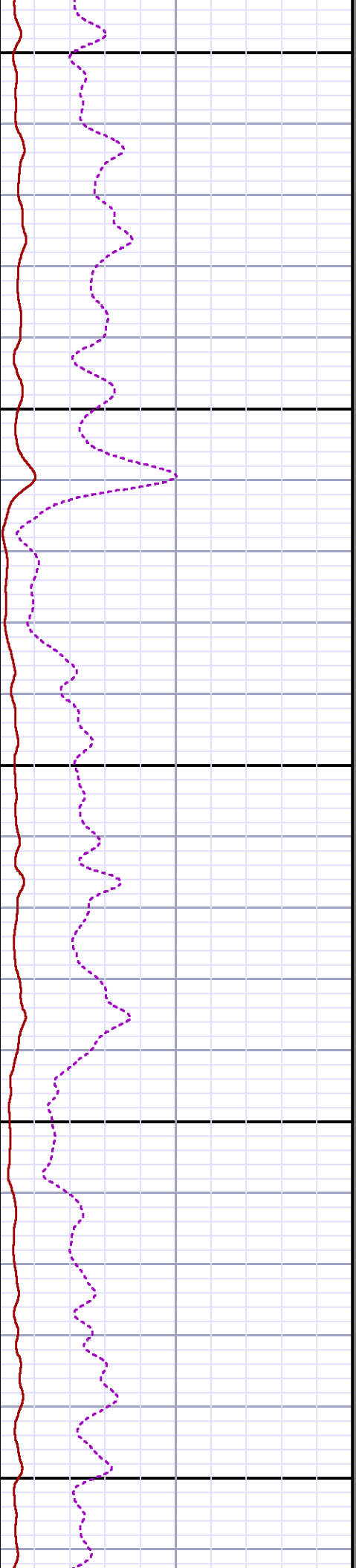
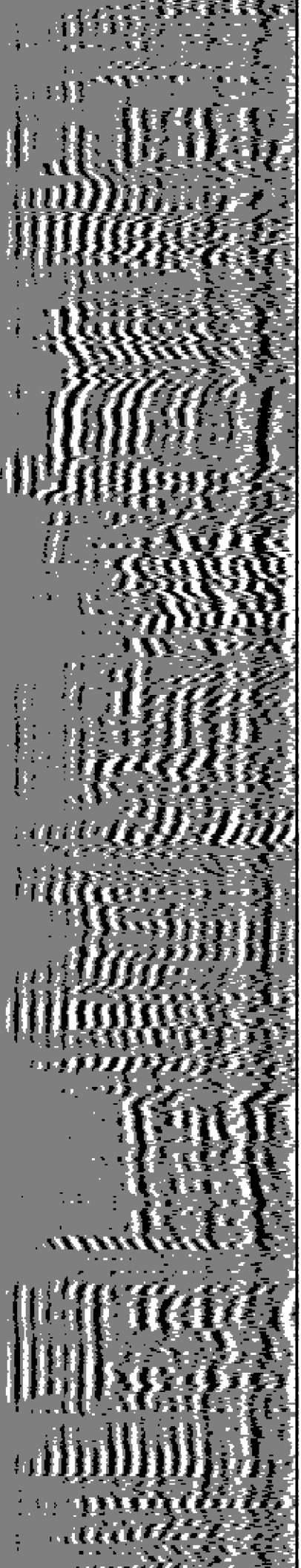


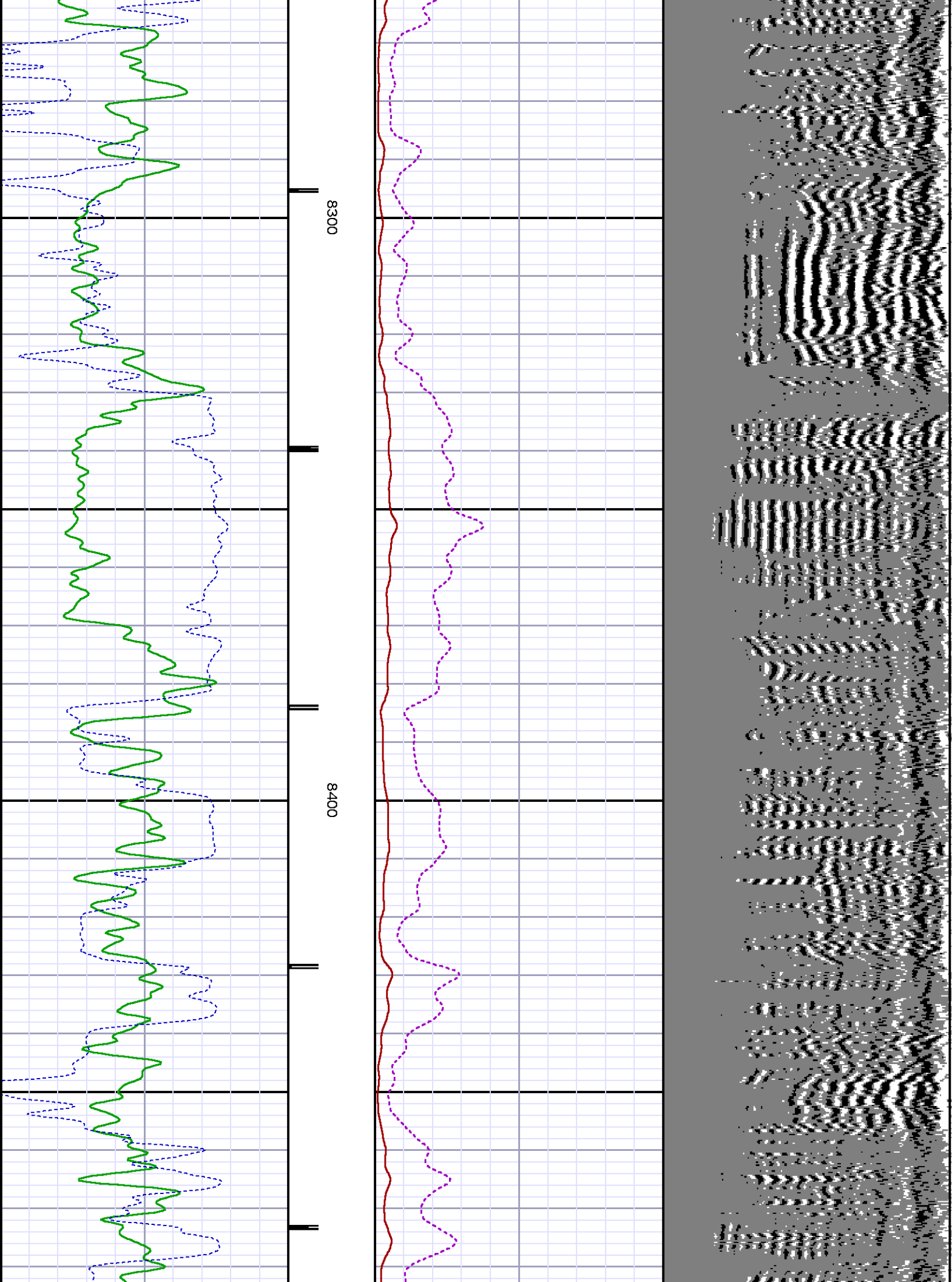


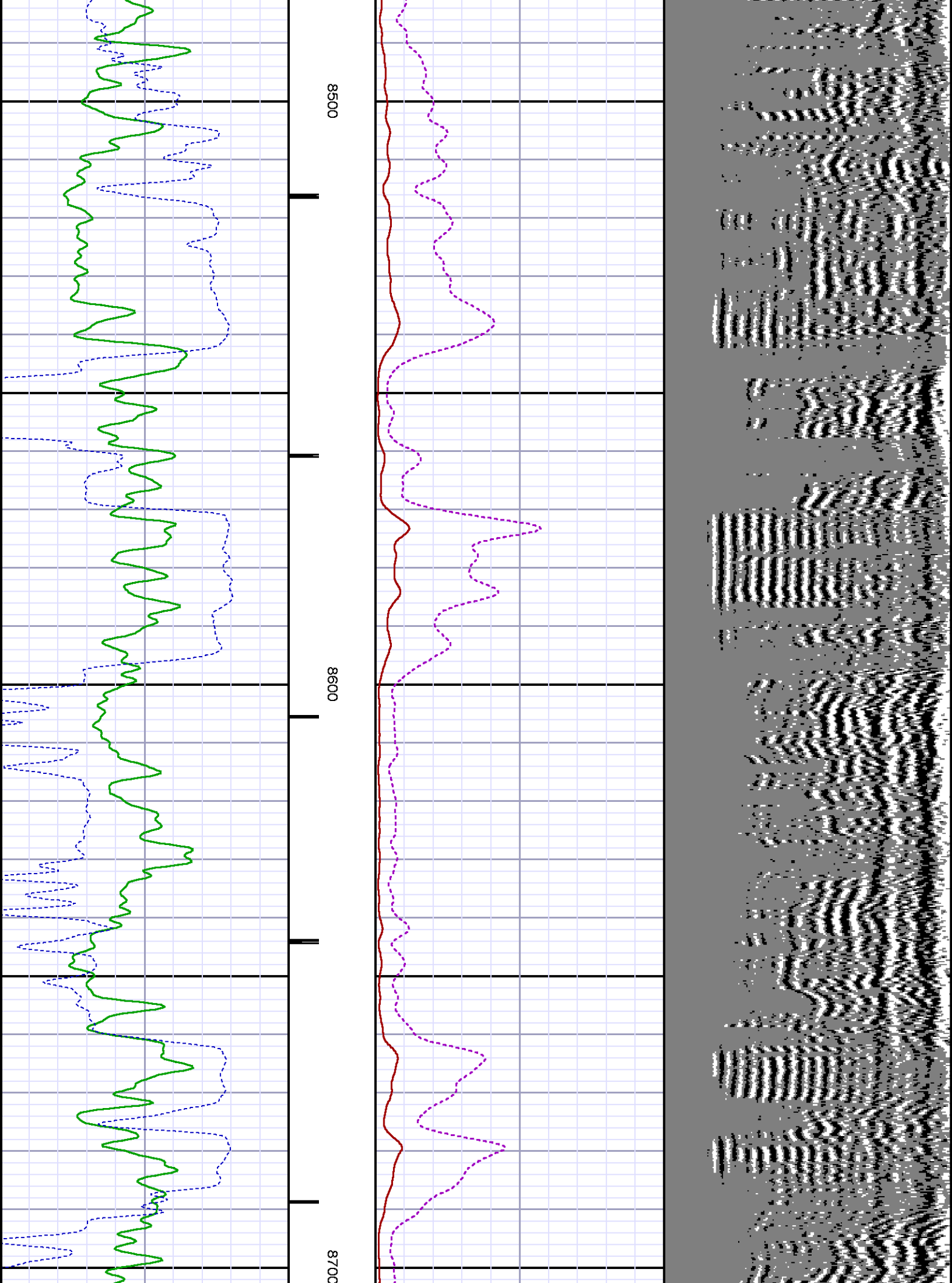


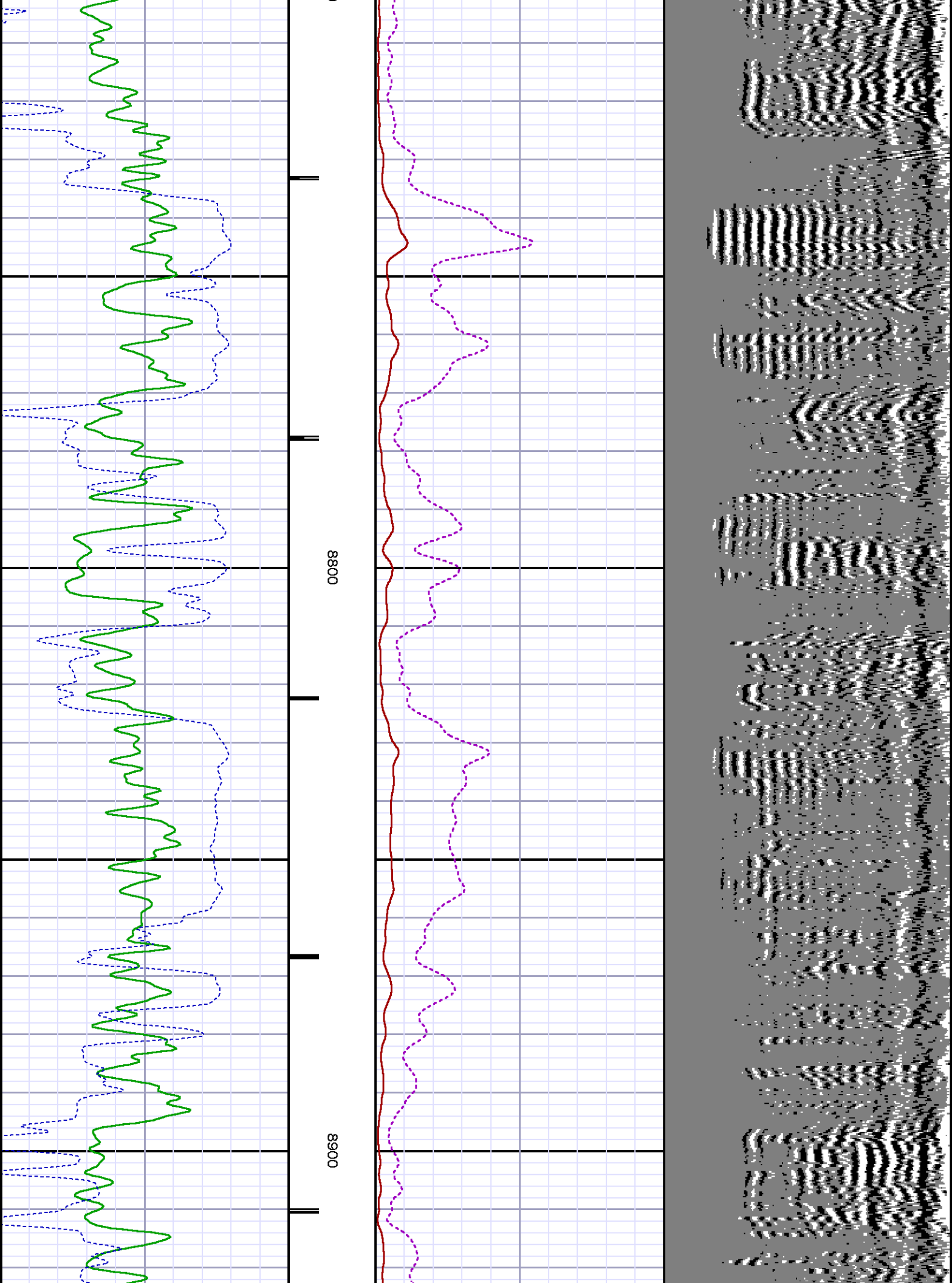


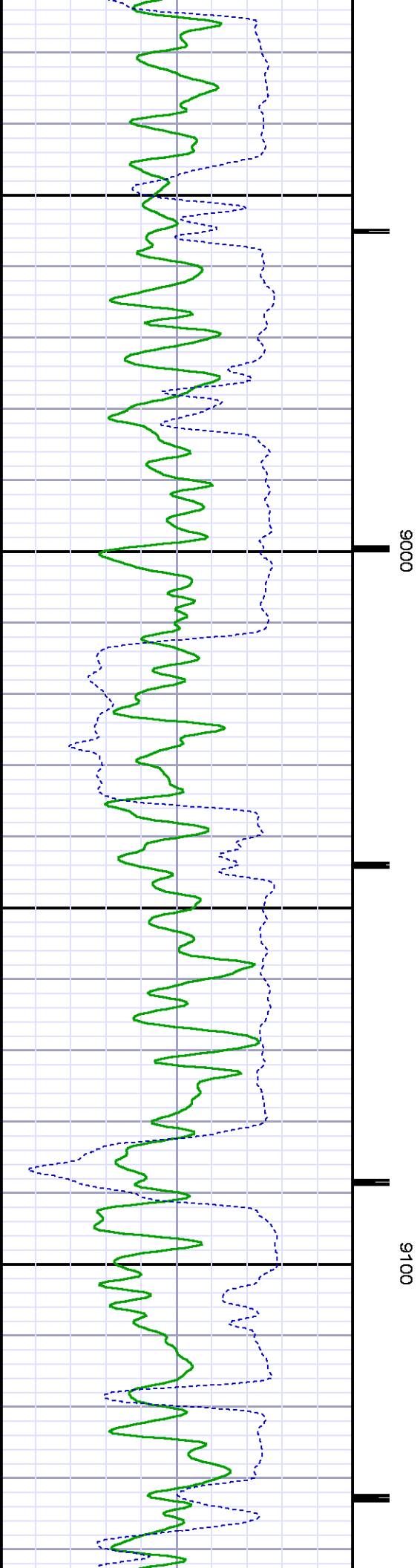
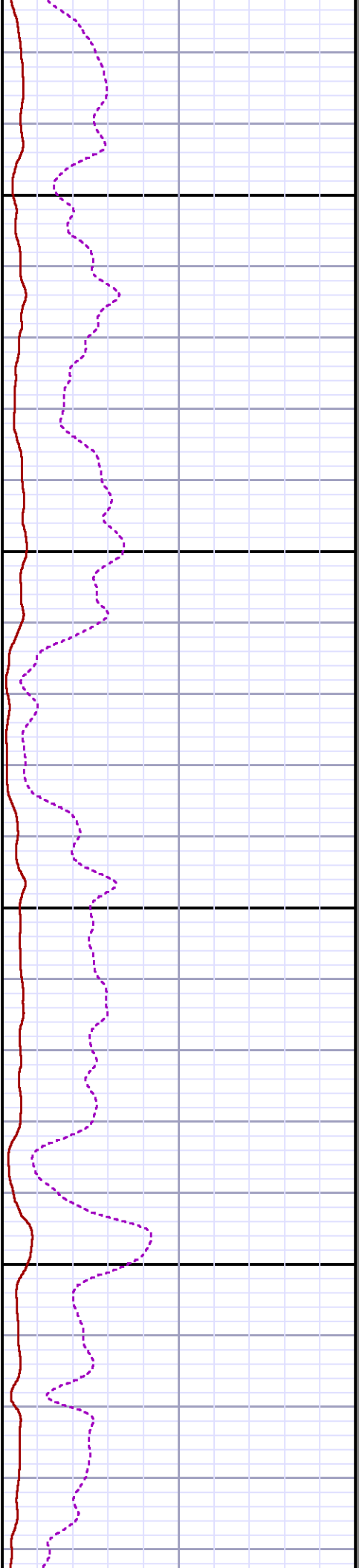
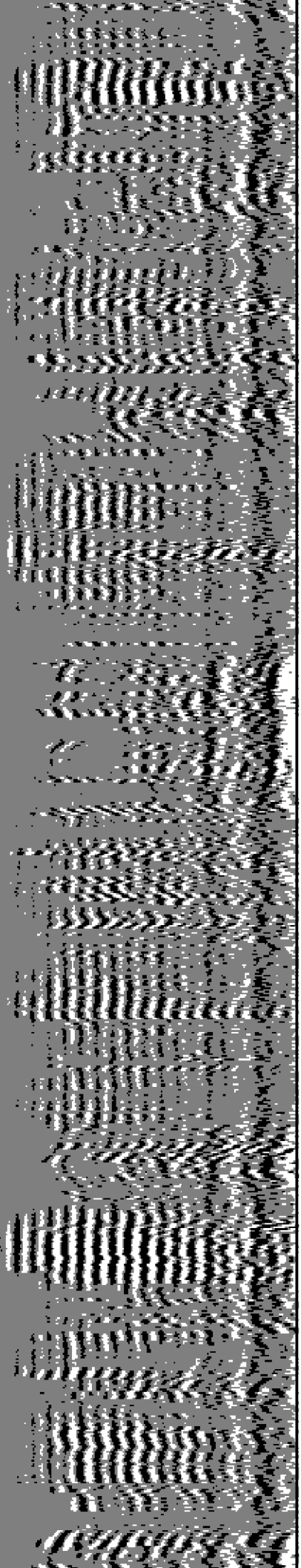


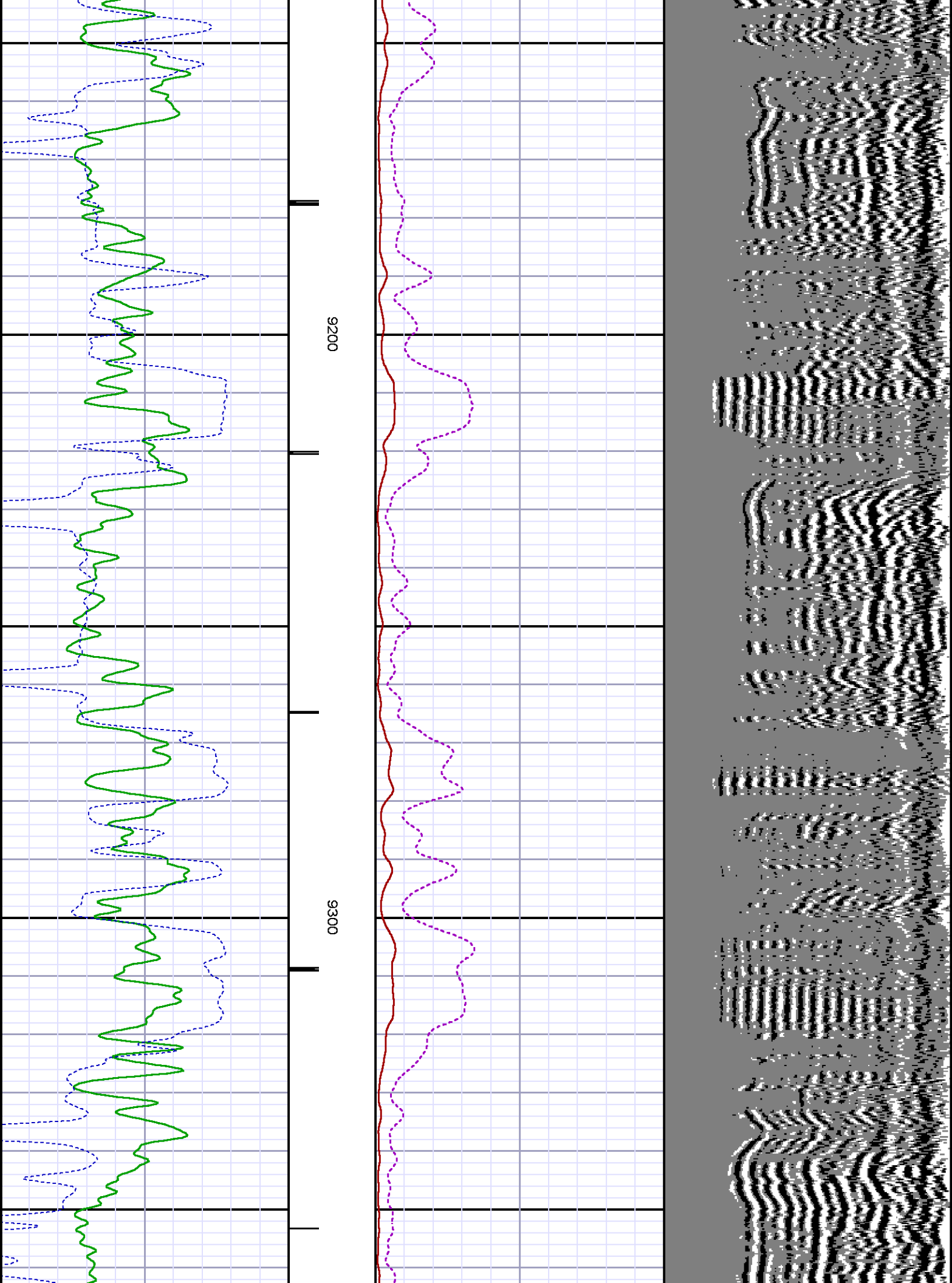


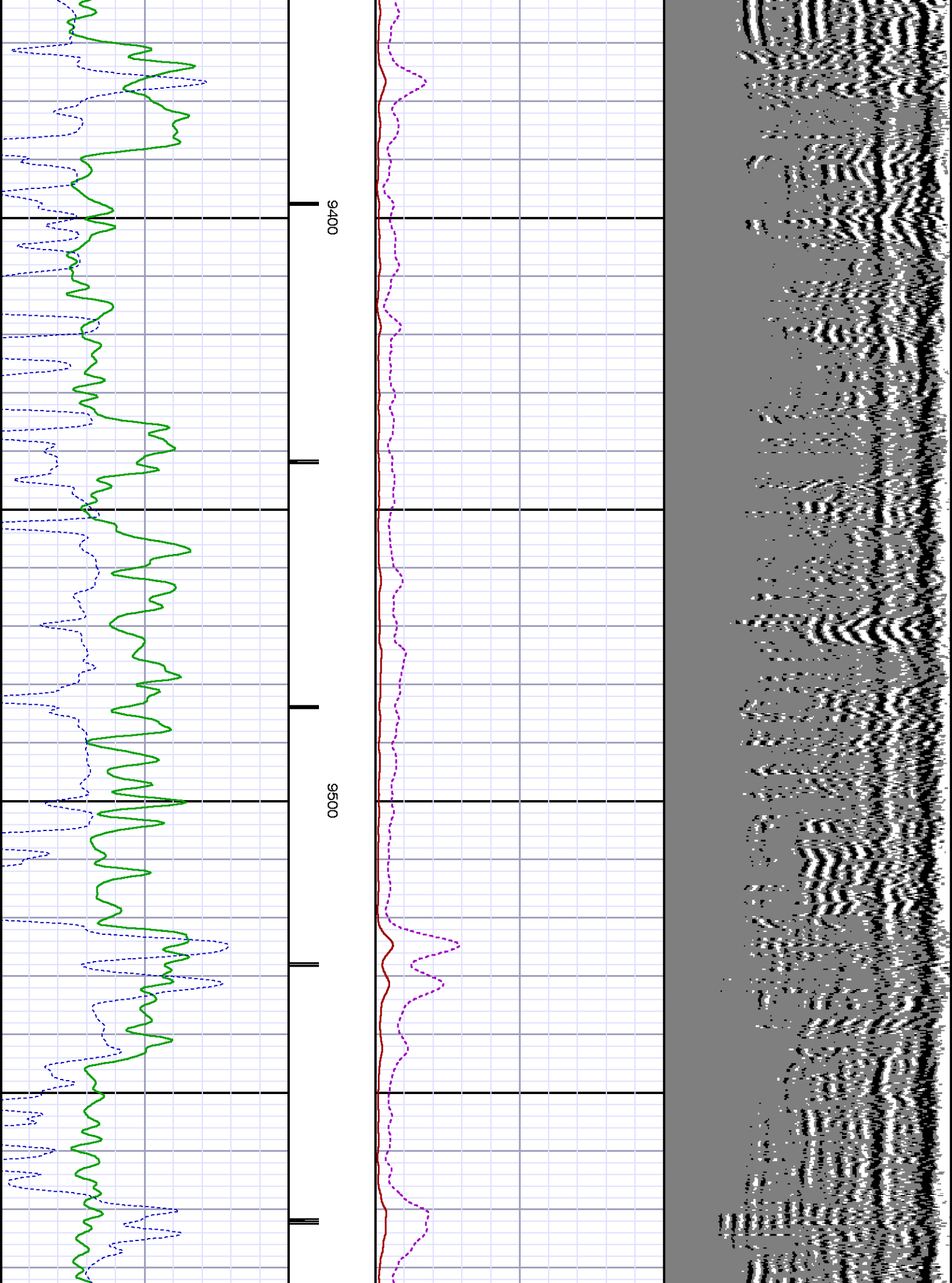


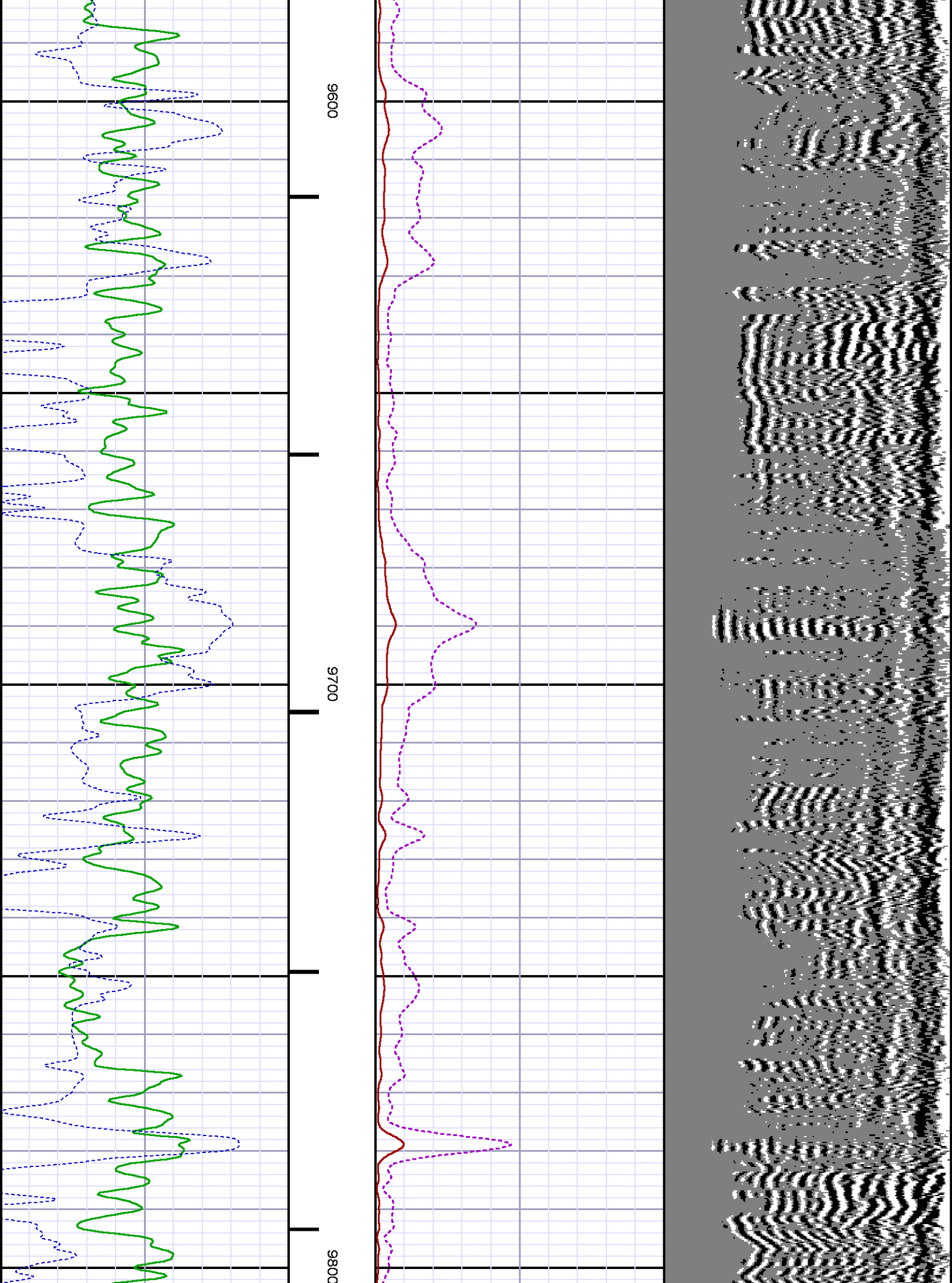


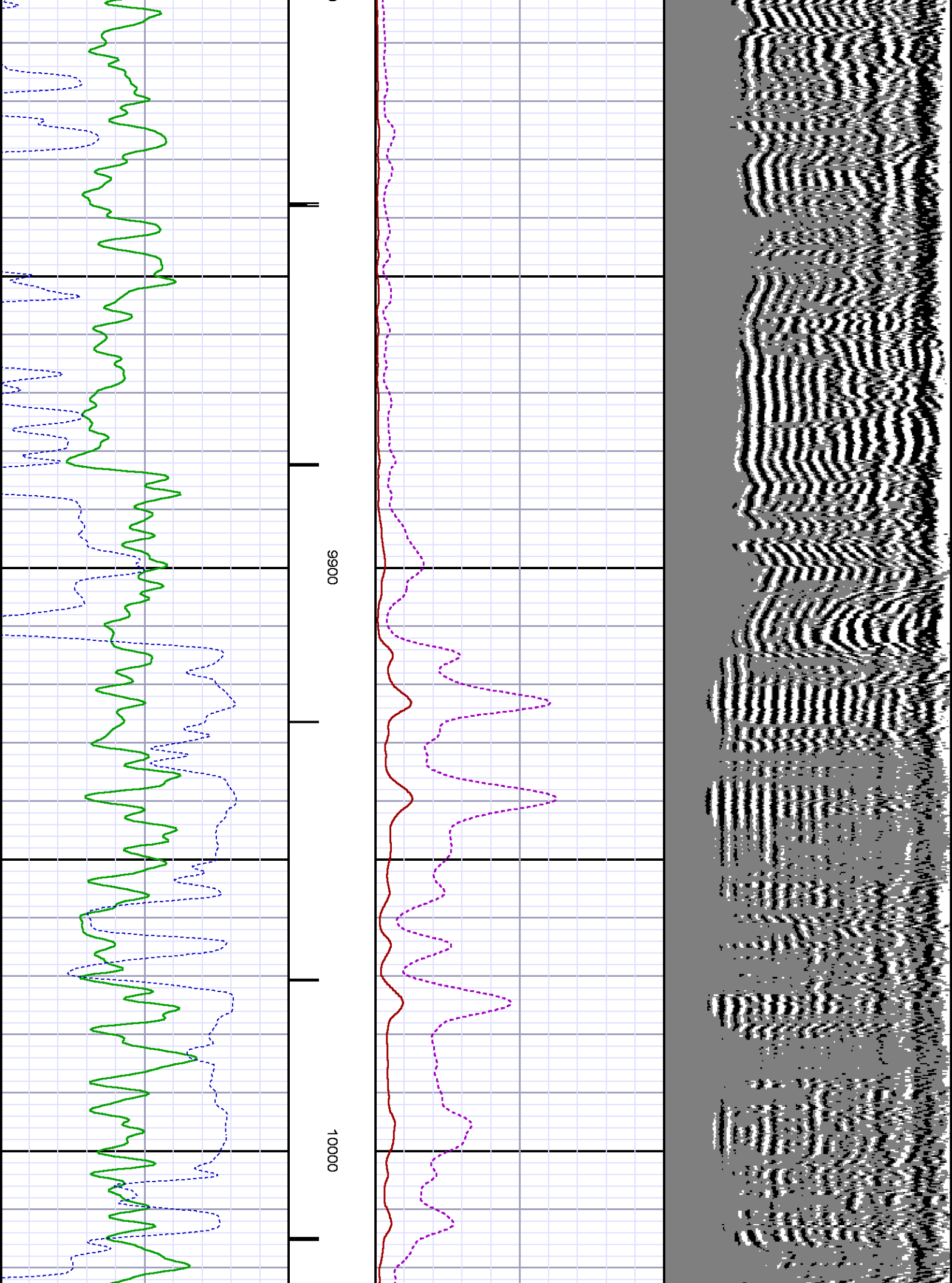


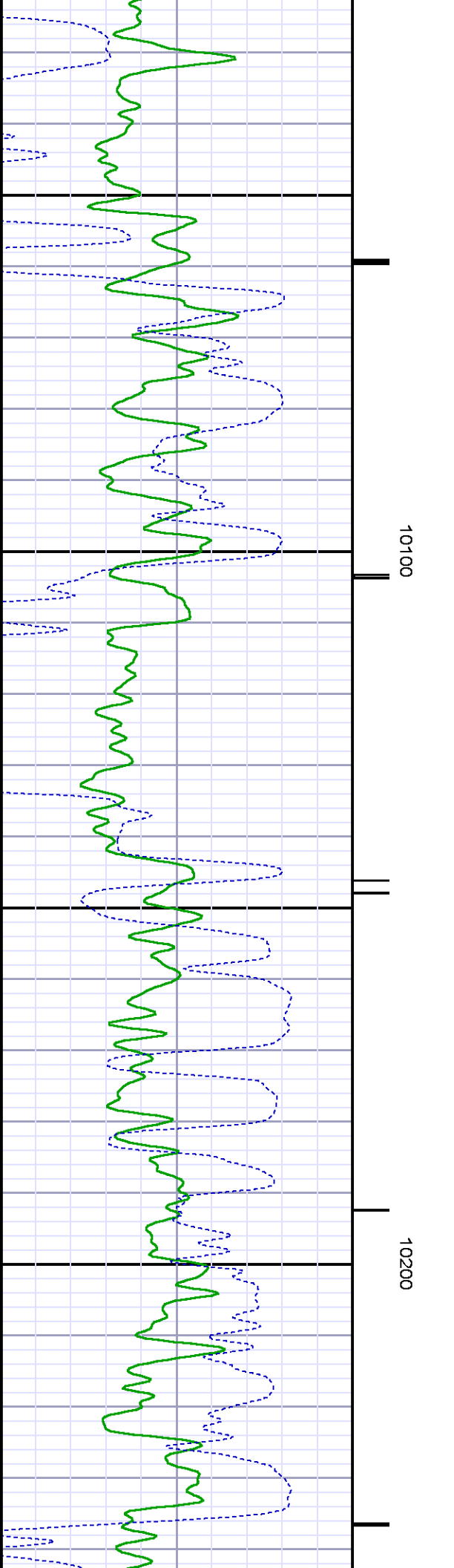
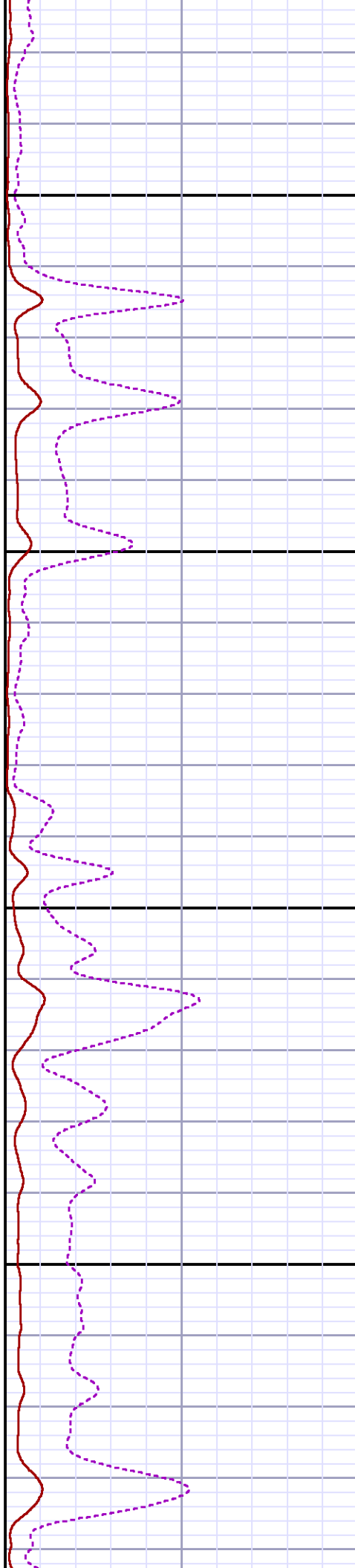
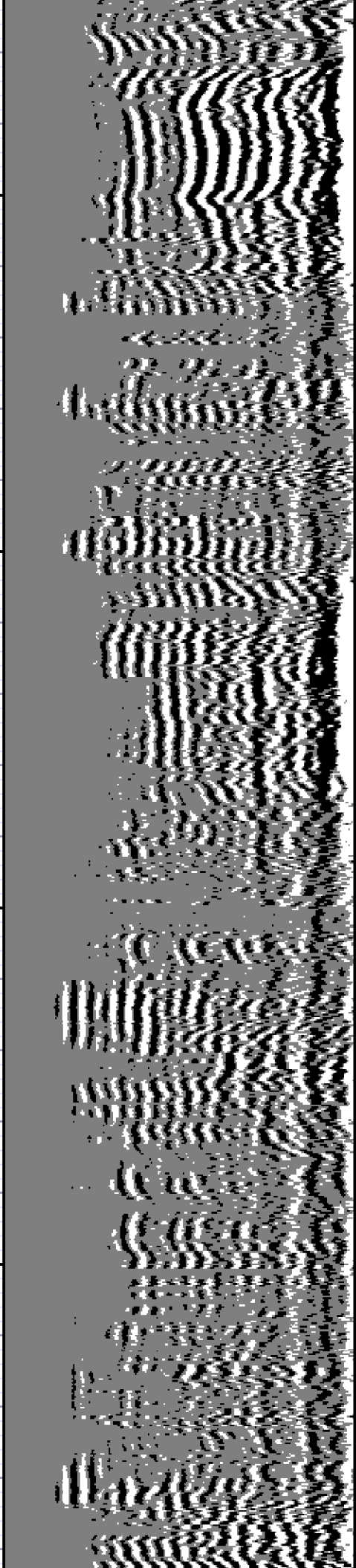


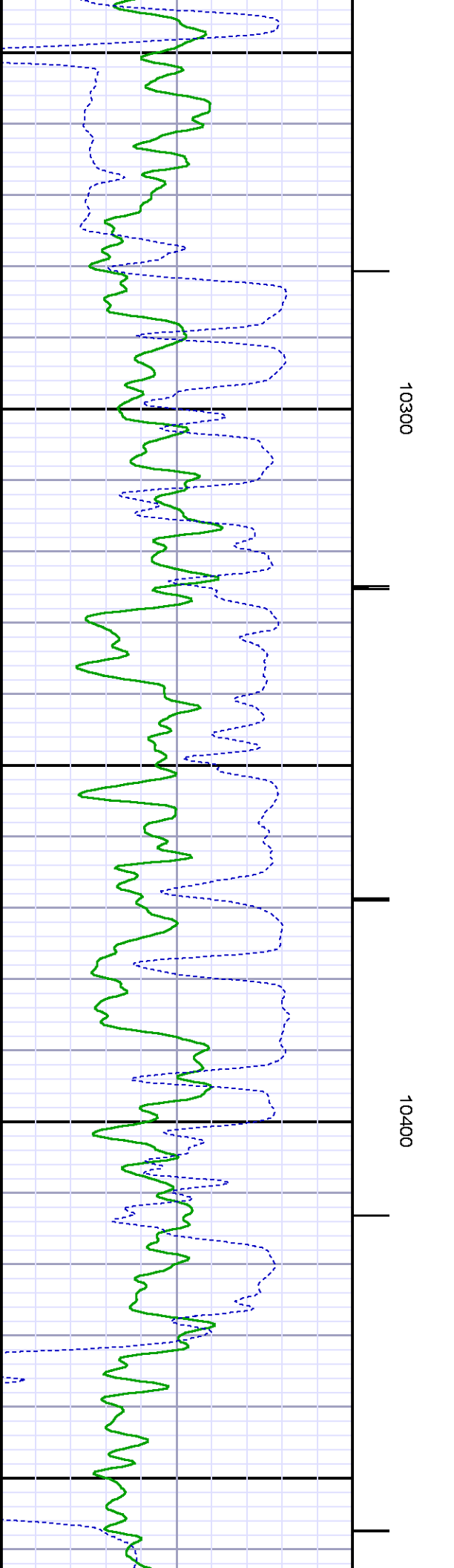
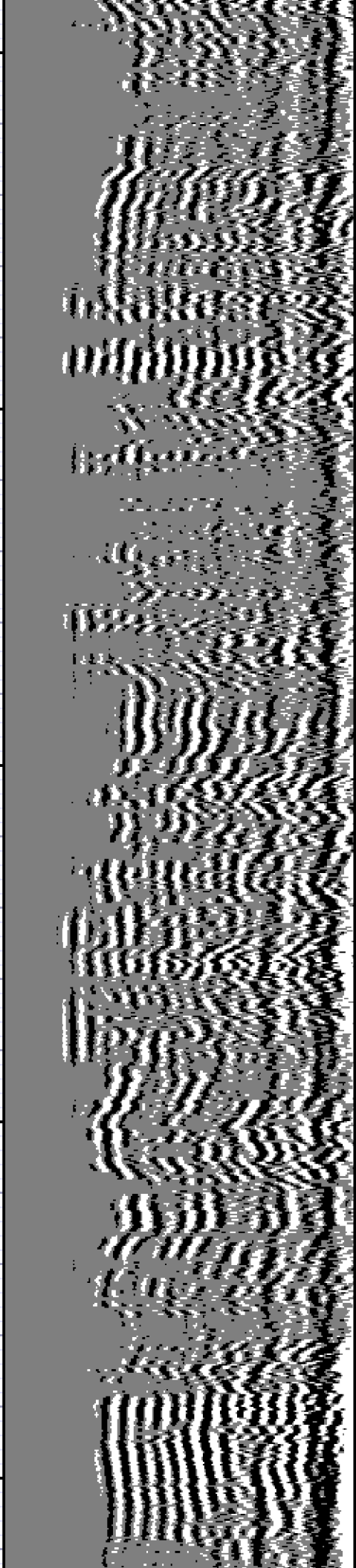


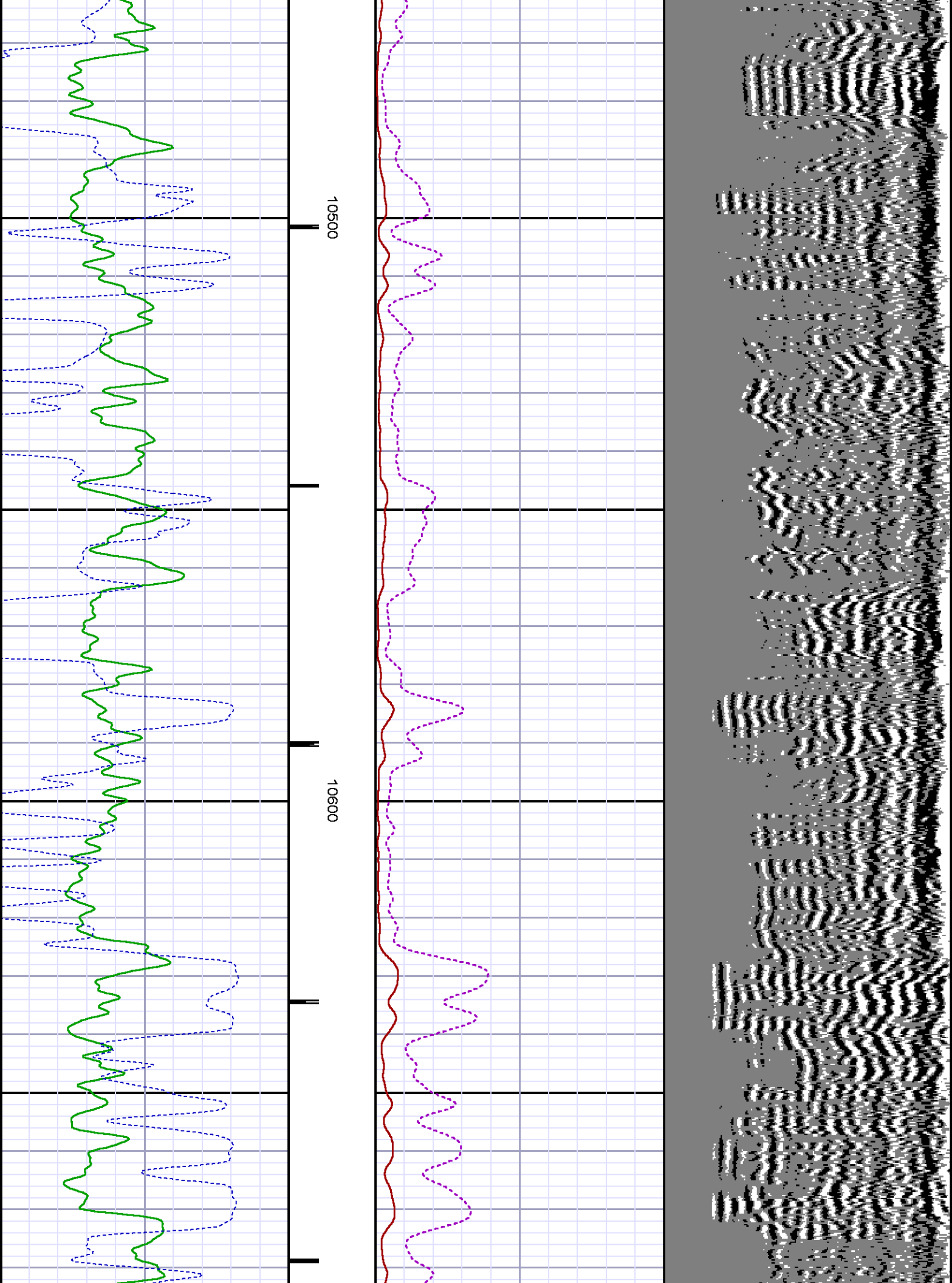


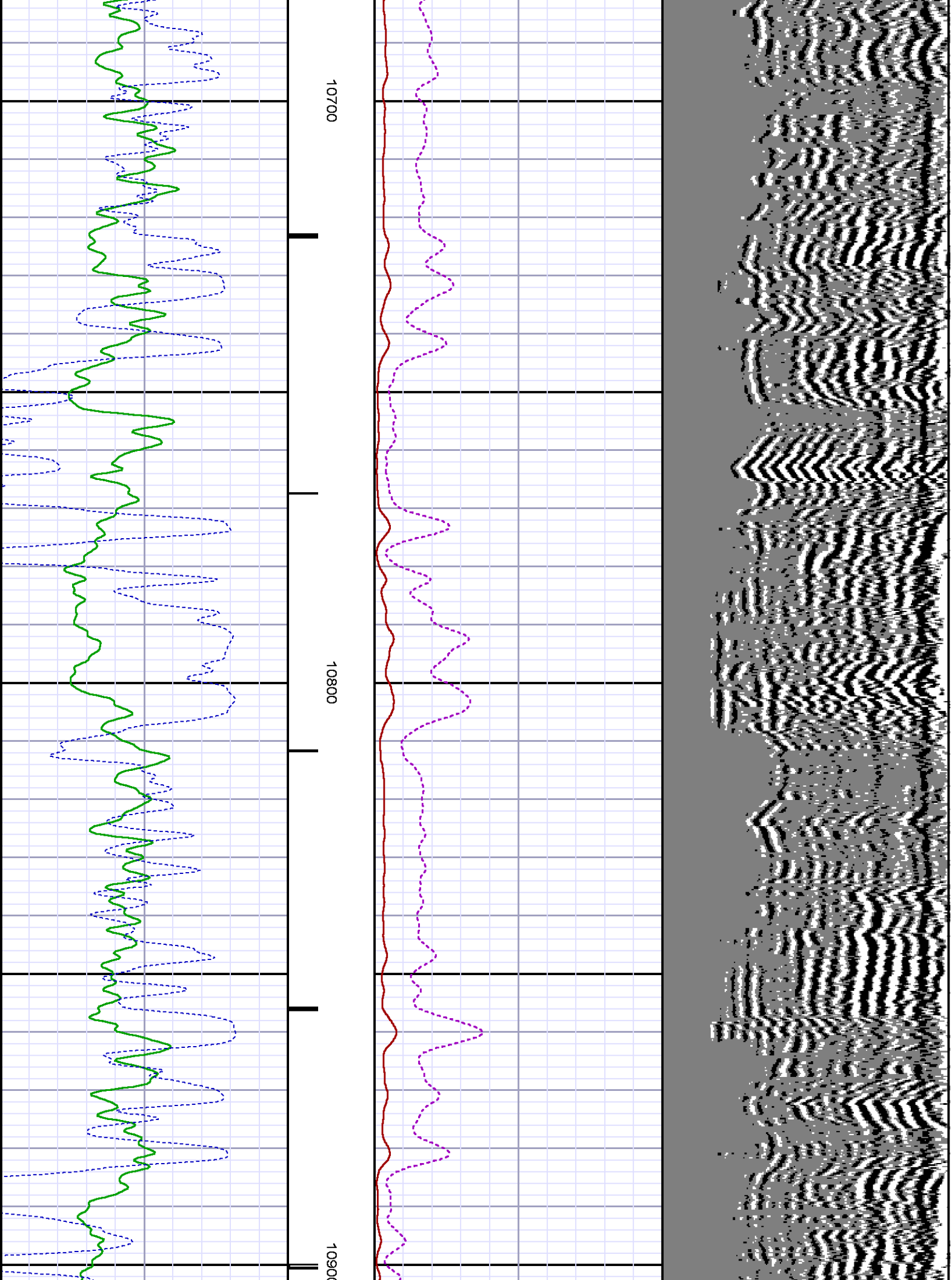


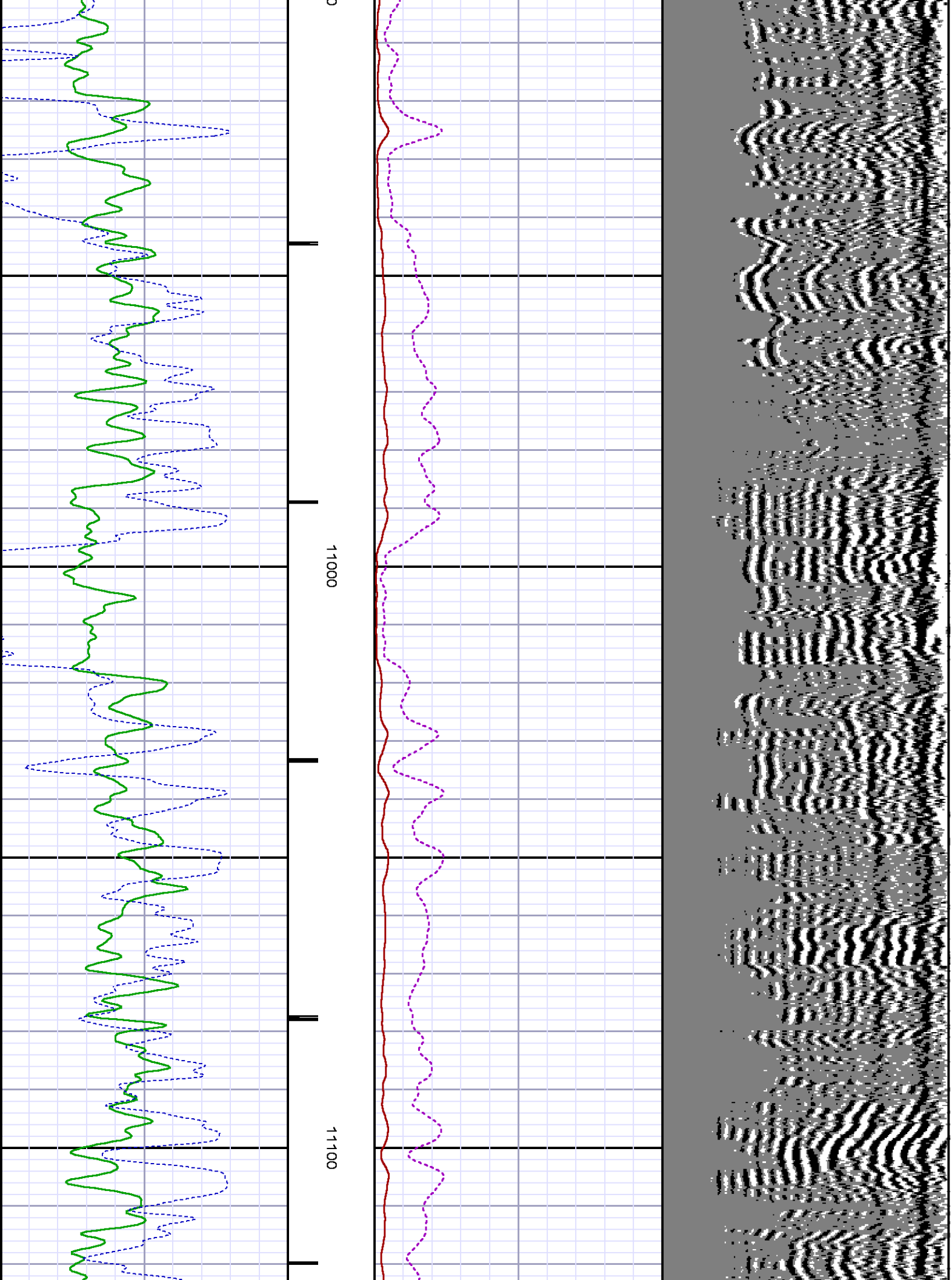


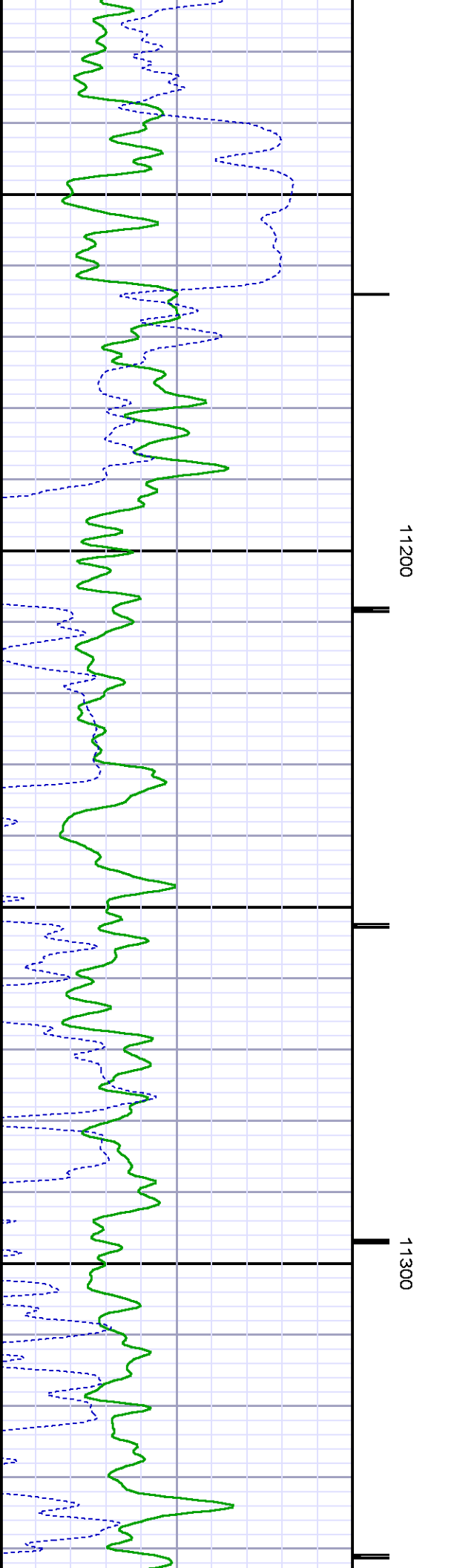
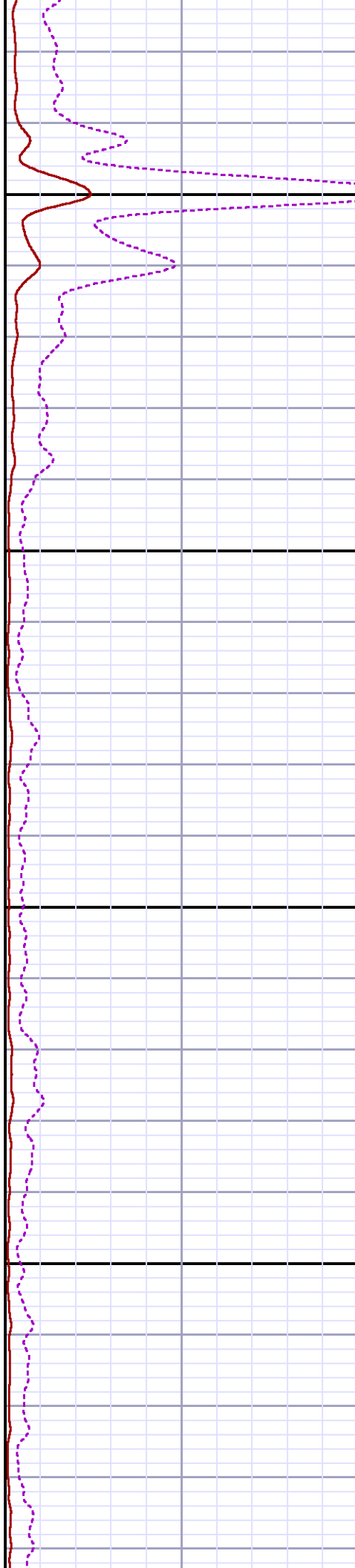
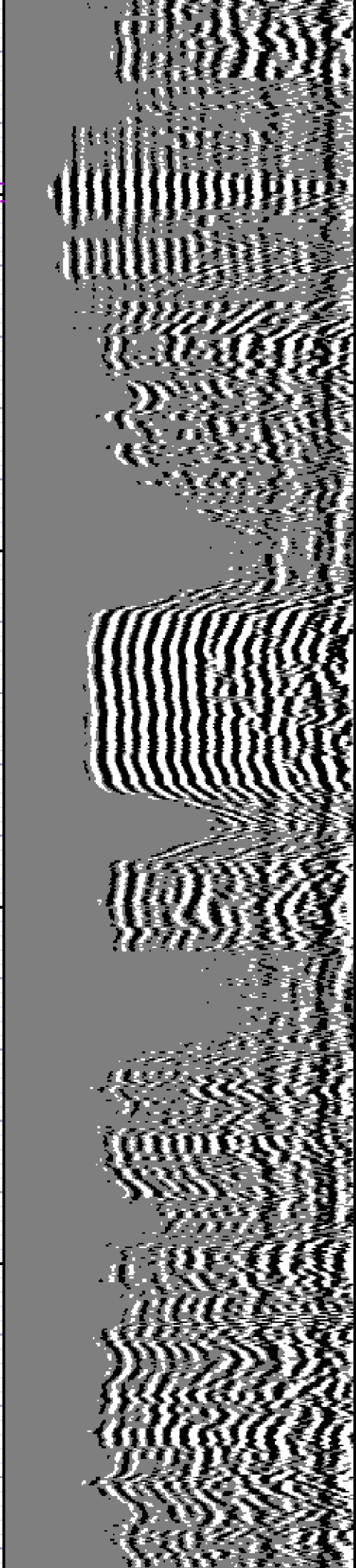


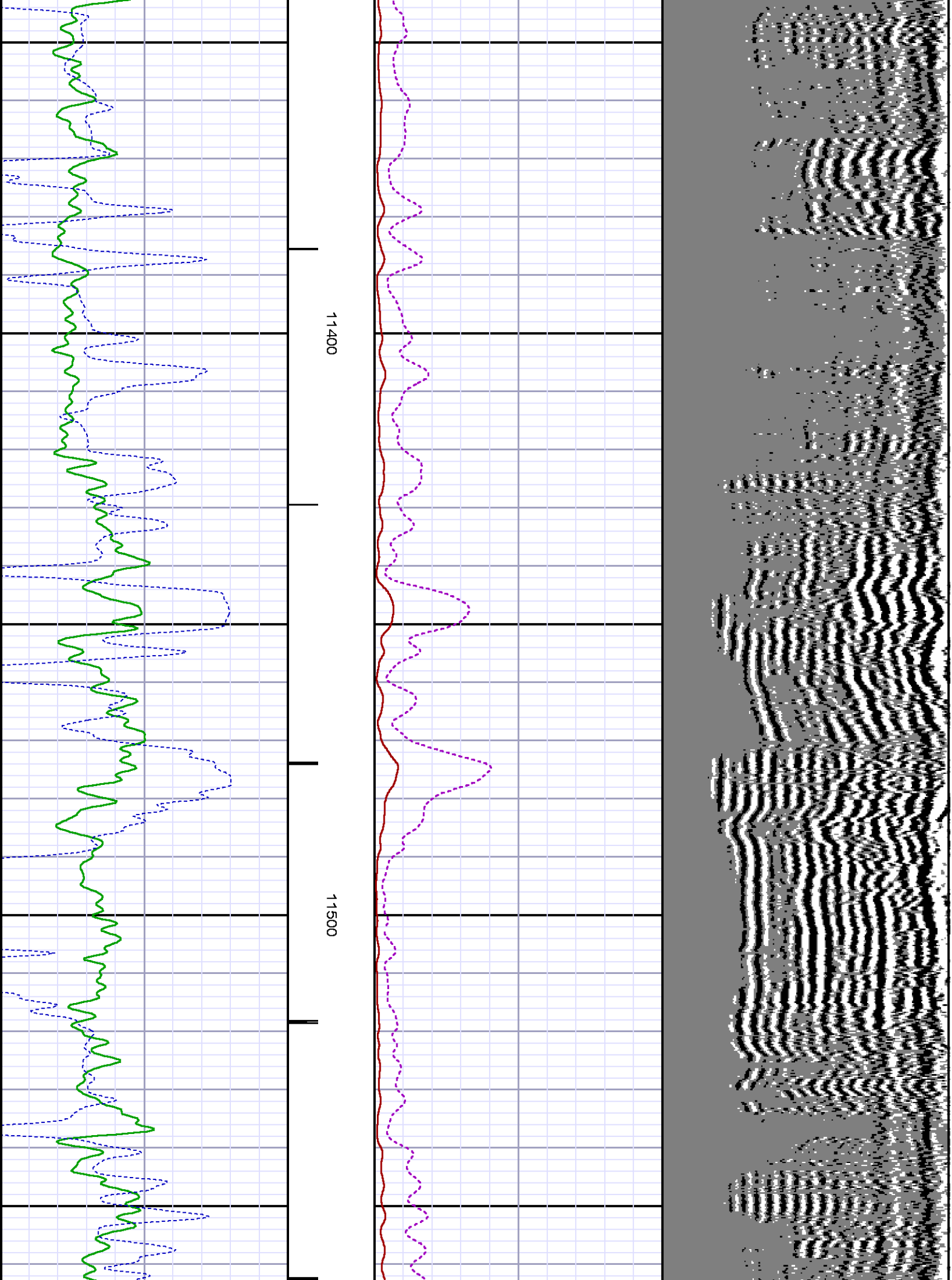


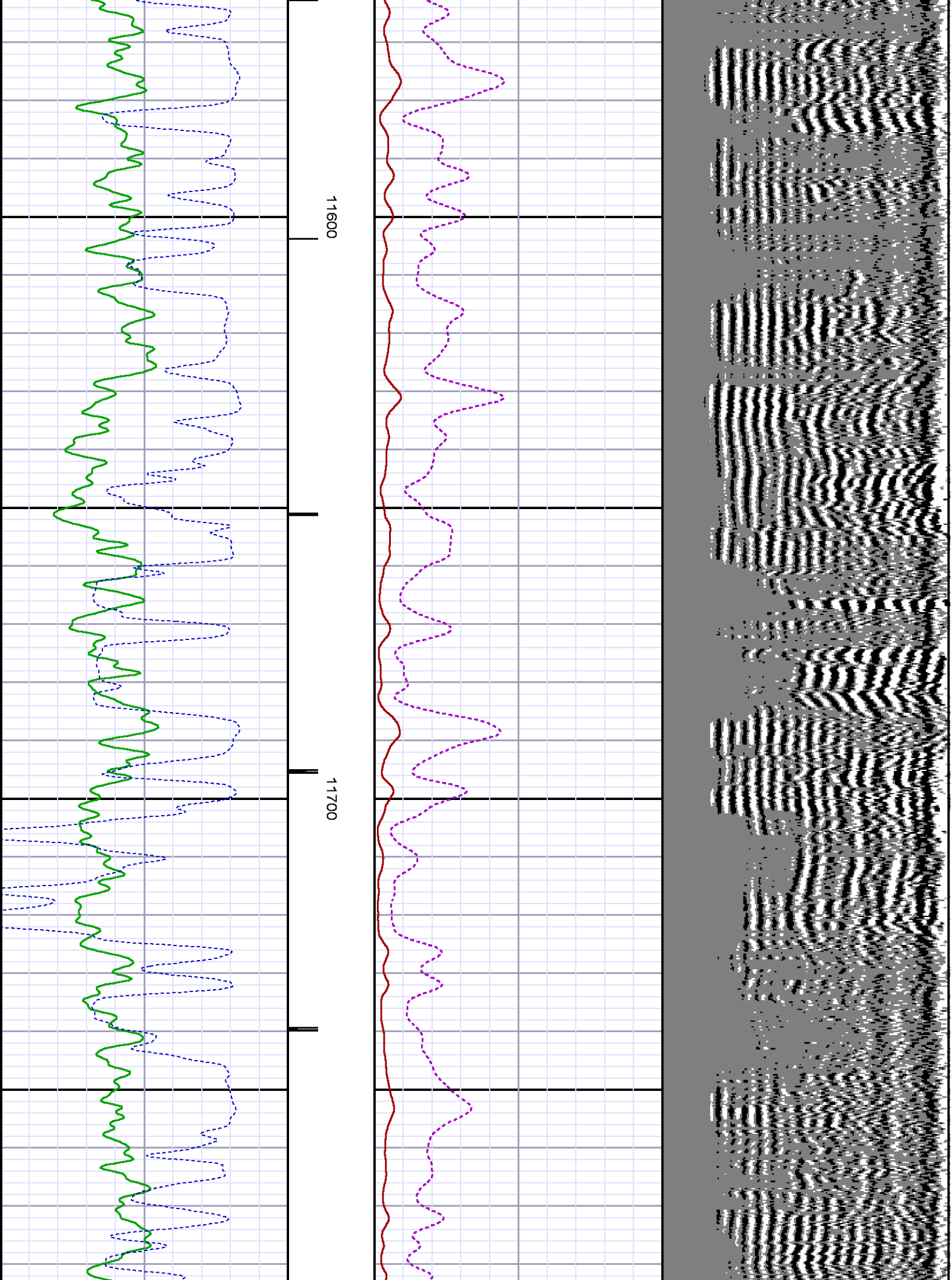


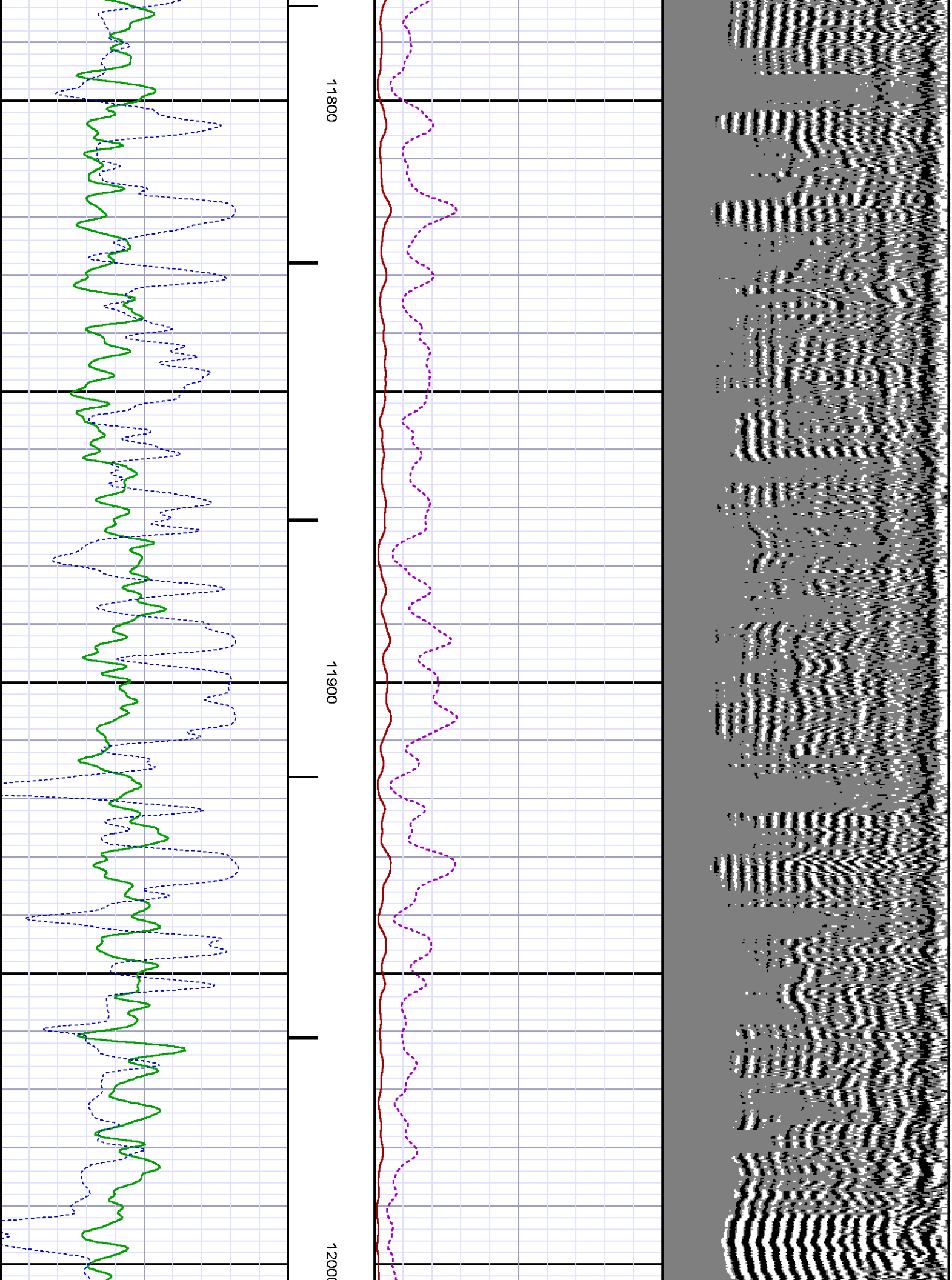


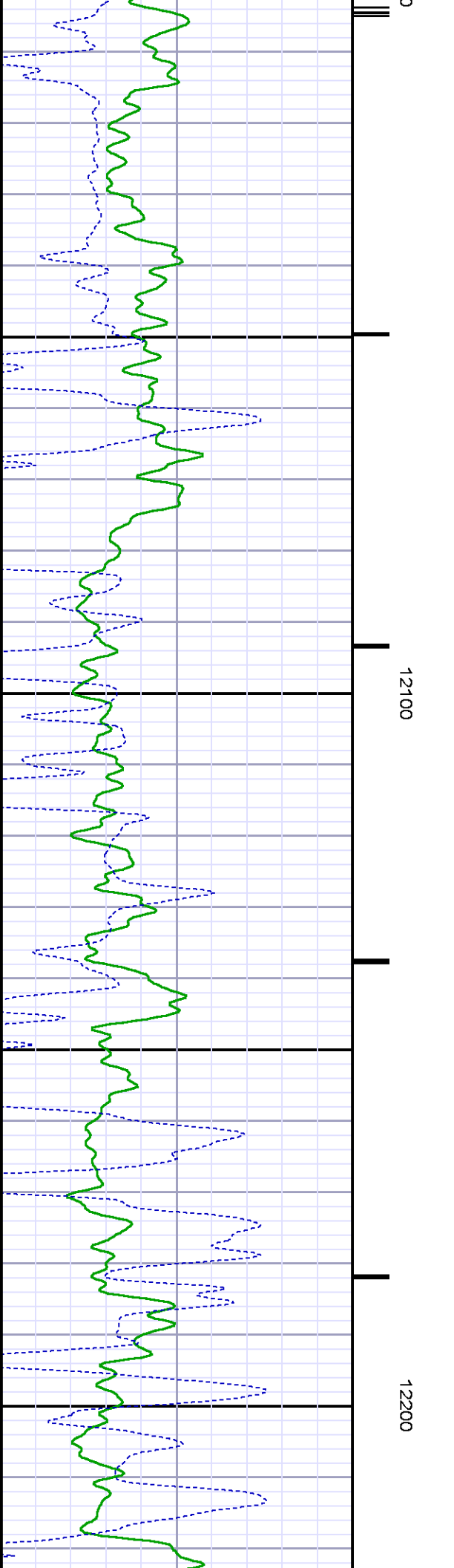
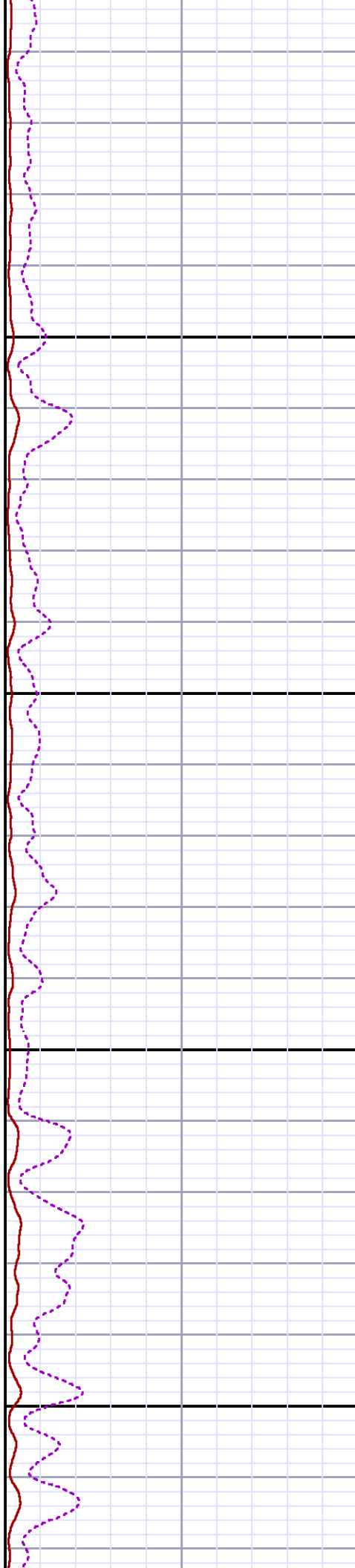
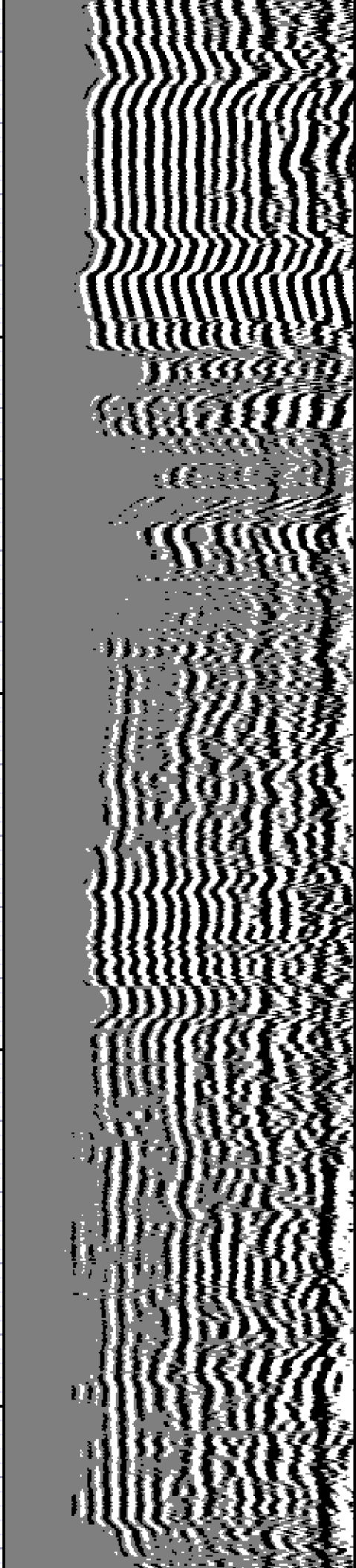


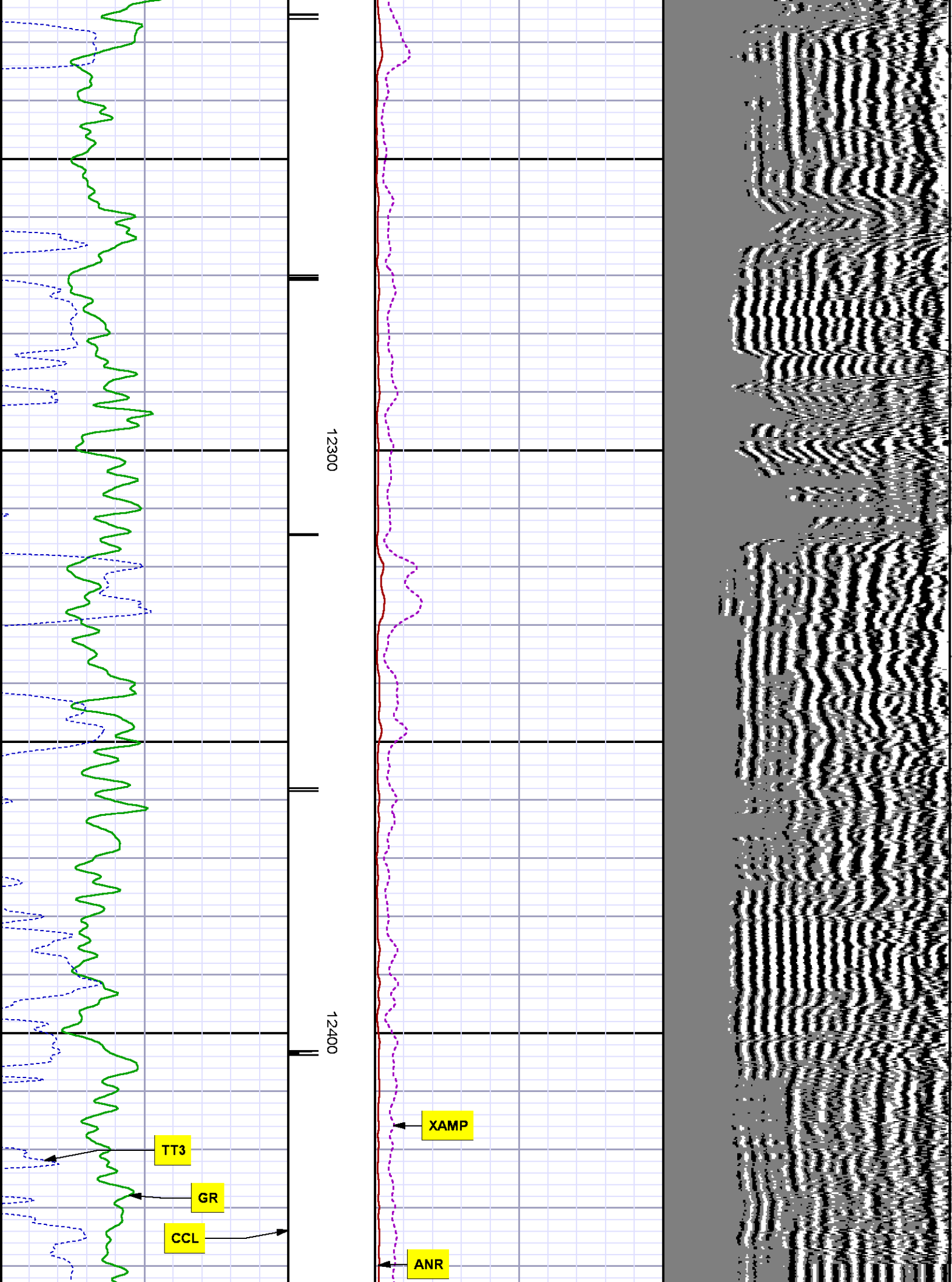


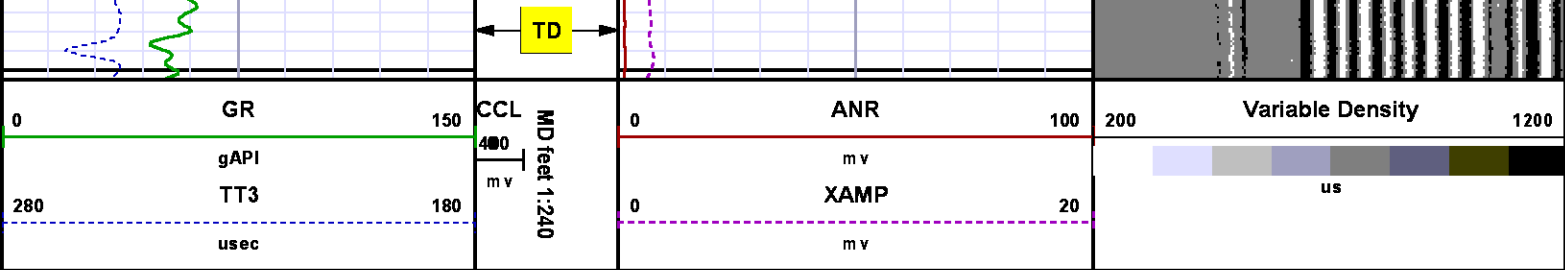












SECONDARY PRESENTATION
0 PSI

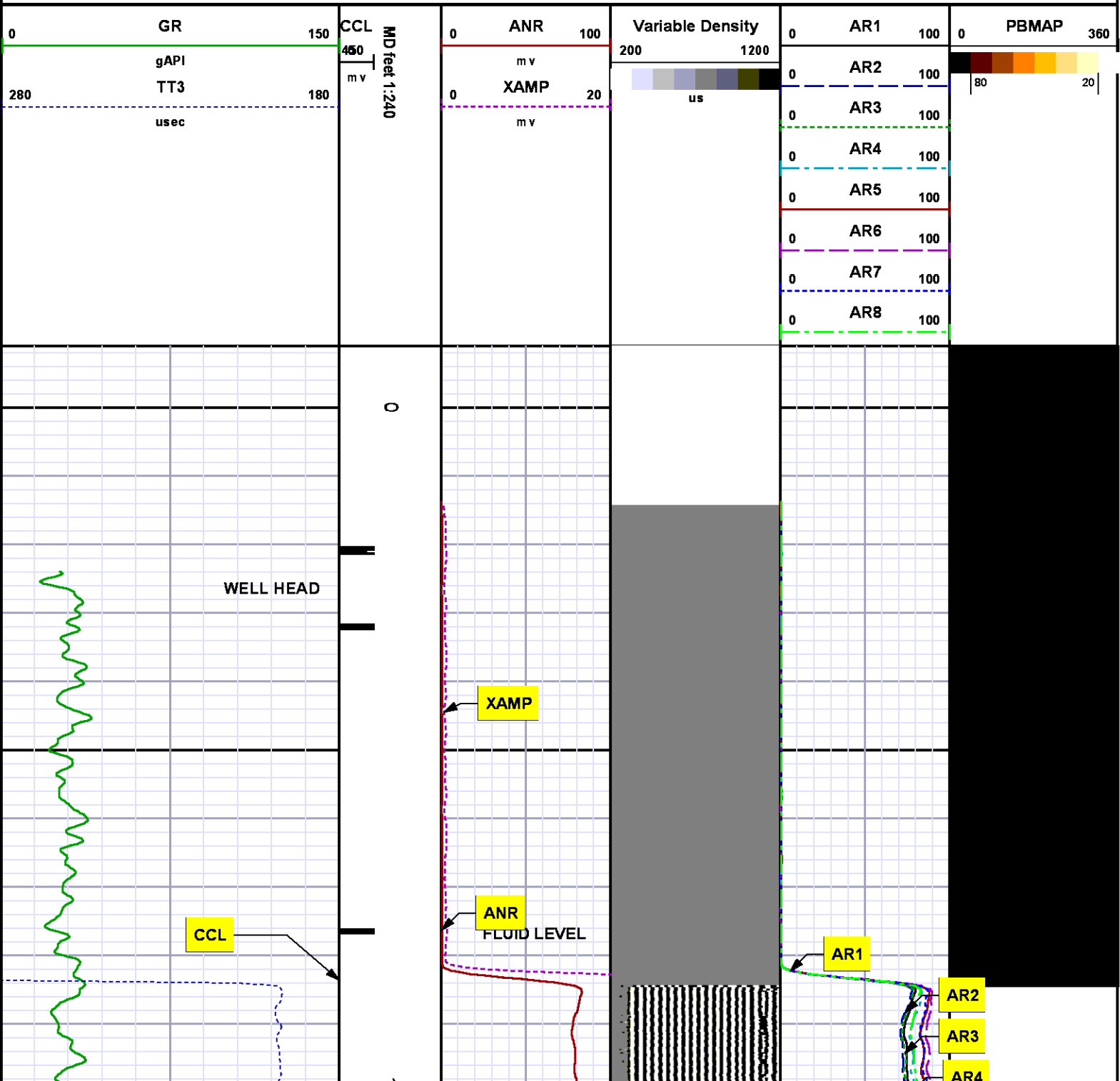
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	325.000	usec	24.155	12470.000
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RAL	Amp Gate Start Radial	195.000	usec	24.155	12470.000
RAL	Amp Gate Width Far	25.000	usec	24.155	12470.000
RAL	Amp Gate Width Near	25.000	usec	24.155	12470.000
RAL	Amp Gate Width Radial	25.000	usec	24.155	12470.000
RAL	casing od	4.500	inches	24.155	12470.000
RAL	casing wt	11.600	lbm/ft	24.155	12470.000
RAL	FB Start Far	315.000	usec	24.155	12470.000
RAL	FB Start Near	180.000	usec	24.155	12470.000
RAL	FB Start Radial	180.000	usec	24.155	12470.000
RAL	FB Thresh Far	10.000	mv	24.155	12470.000
RAL	FB Thresh Near	4.000	mv	24.155	12470.000
RAL	FB Thresh Radial	4.000	mv	24.155	12470.000
RAL	Fluid Travel Time	200.000	usec/ft	24.155	12469.905

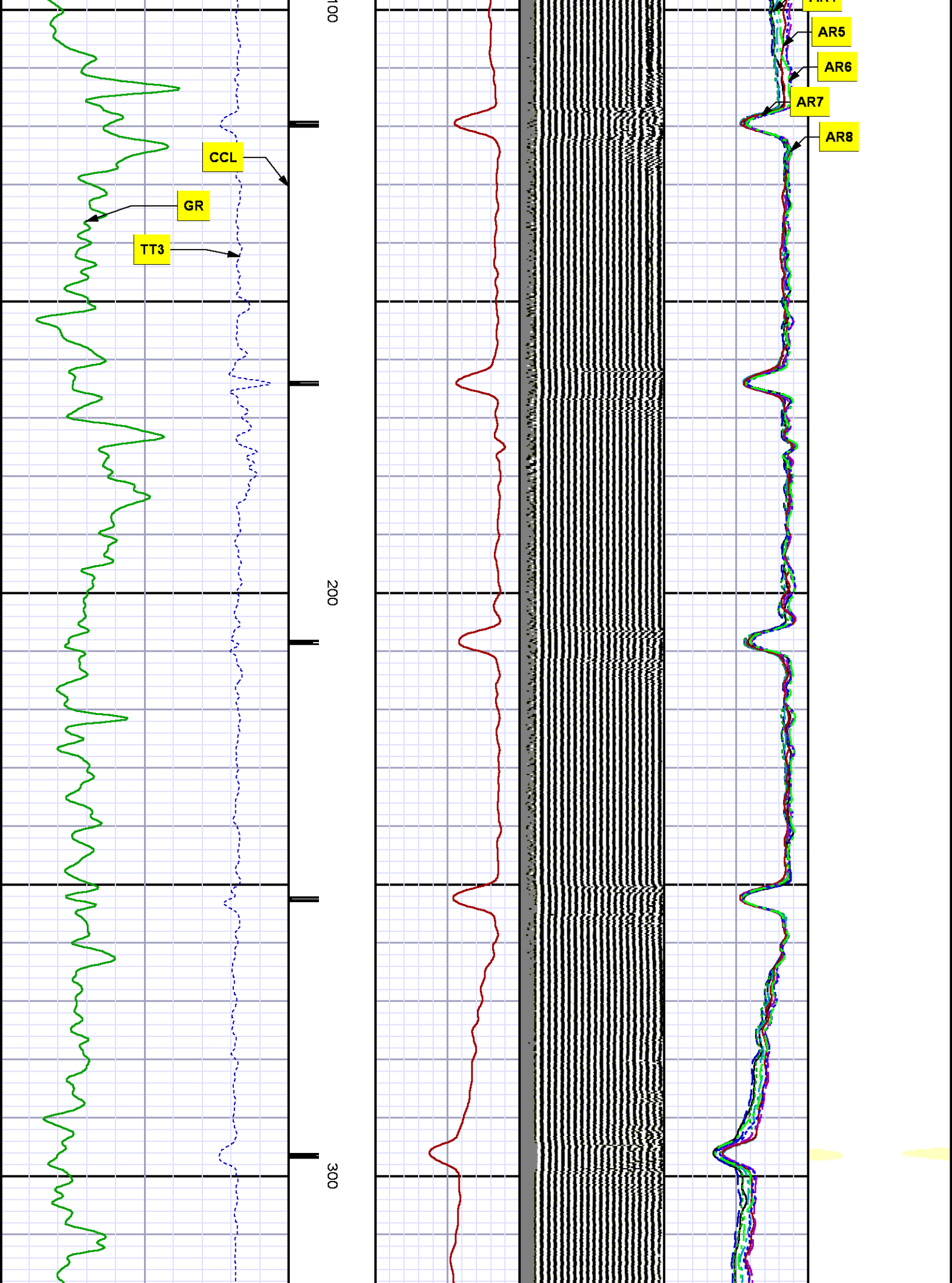
DEPTH OFFSETS
(for Acquired Curves)

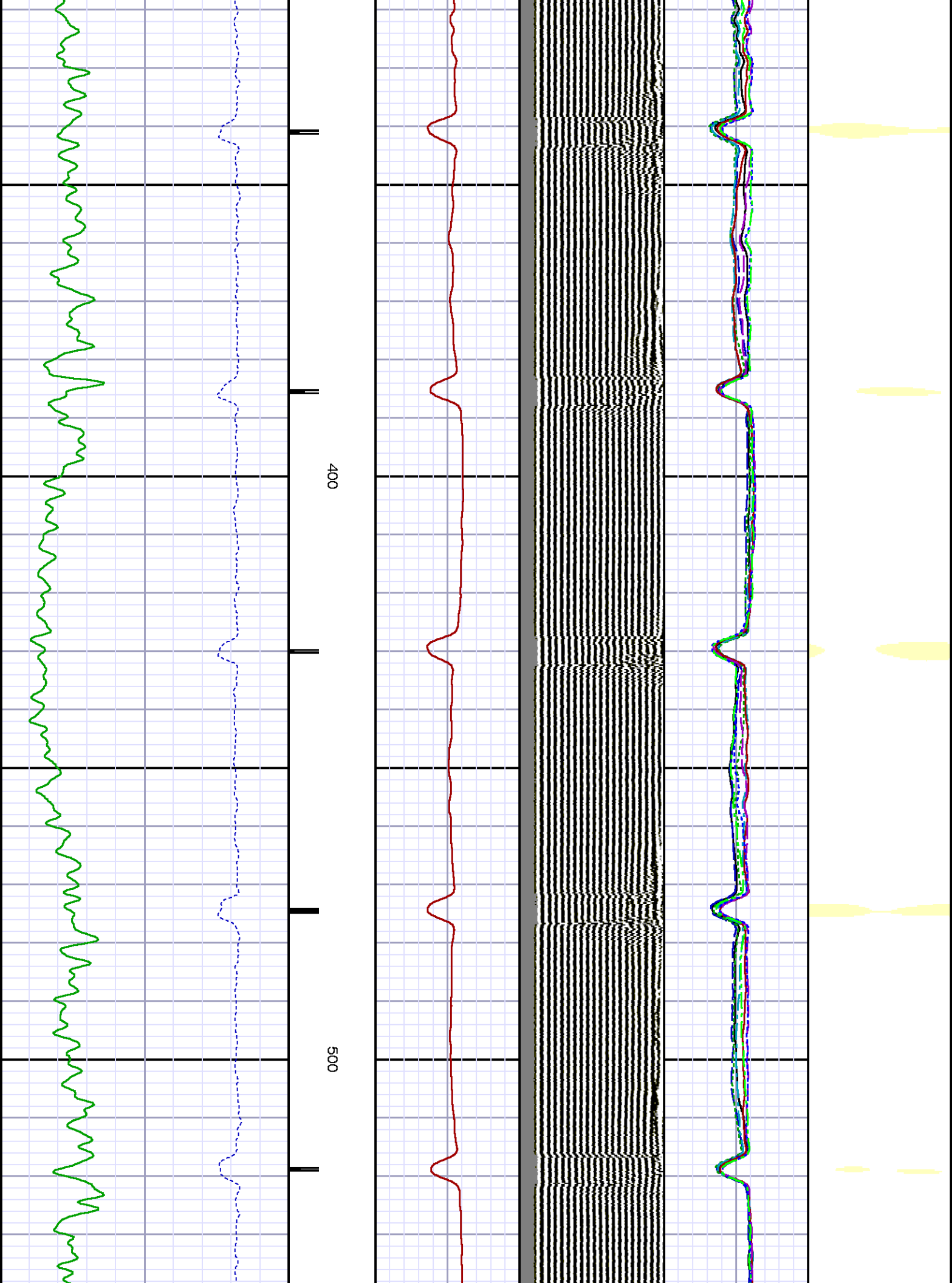
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP

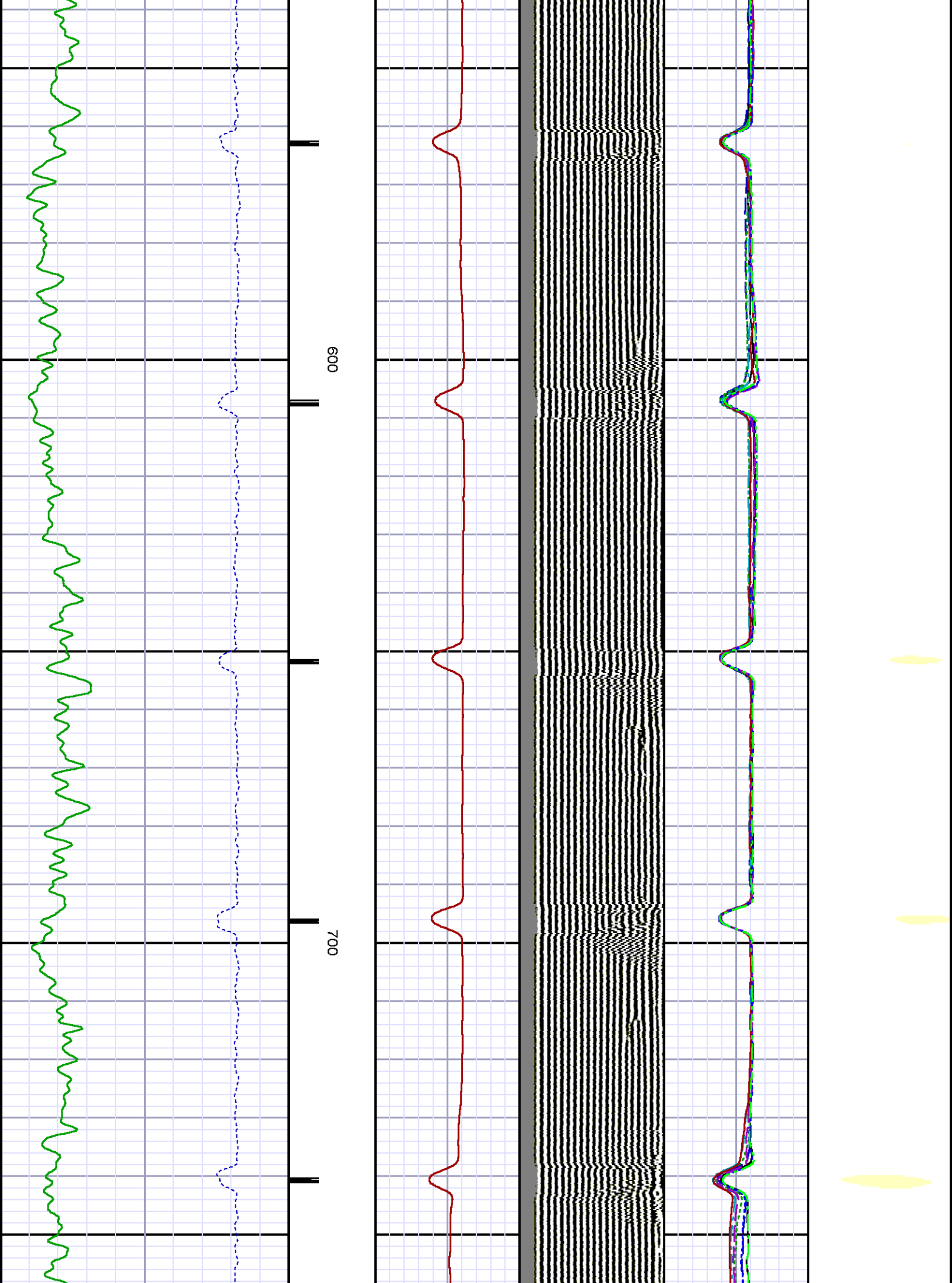
1426XA	-10.040	AFAR	SIG	TT5
1355XA	-5.620	CCL		
1355XA	-1.500	GR		
1355XA	0.000	TEMP		

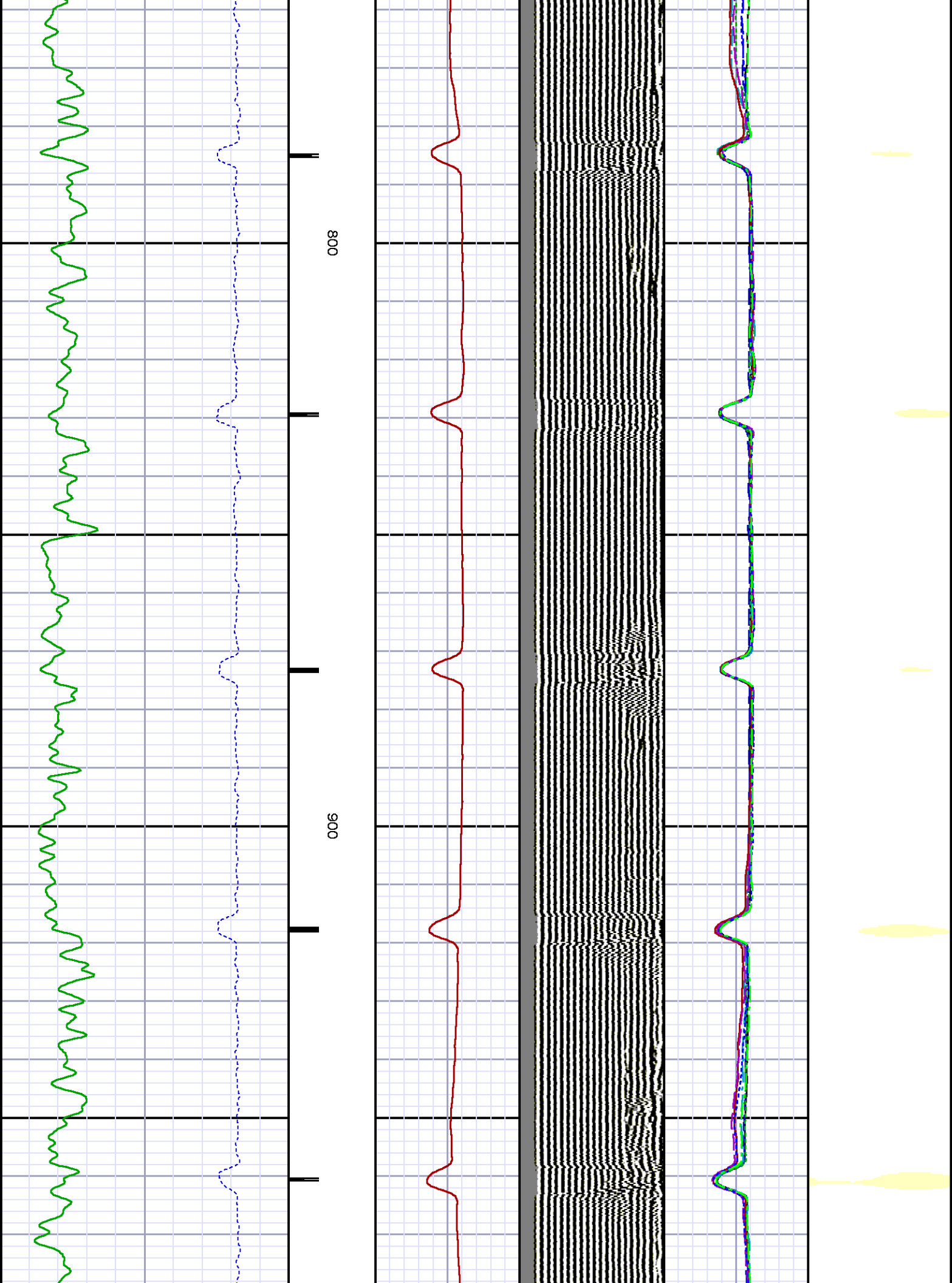
Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : FEDERAL RGU 23-23-198
File Name : d:\welldata\wpx energy\rgu 23-23-198\23ral\main.xtf
Mode : PlotMgr 5.4.504
Interval : -9.00 - 12470.00 feet UP
Created : 7/3/2013 11:06:48 AM

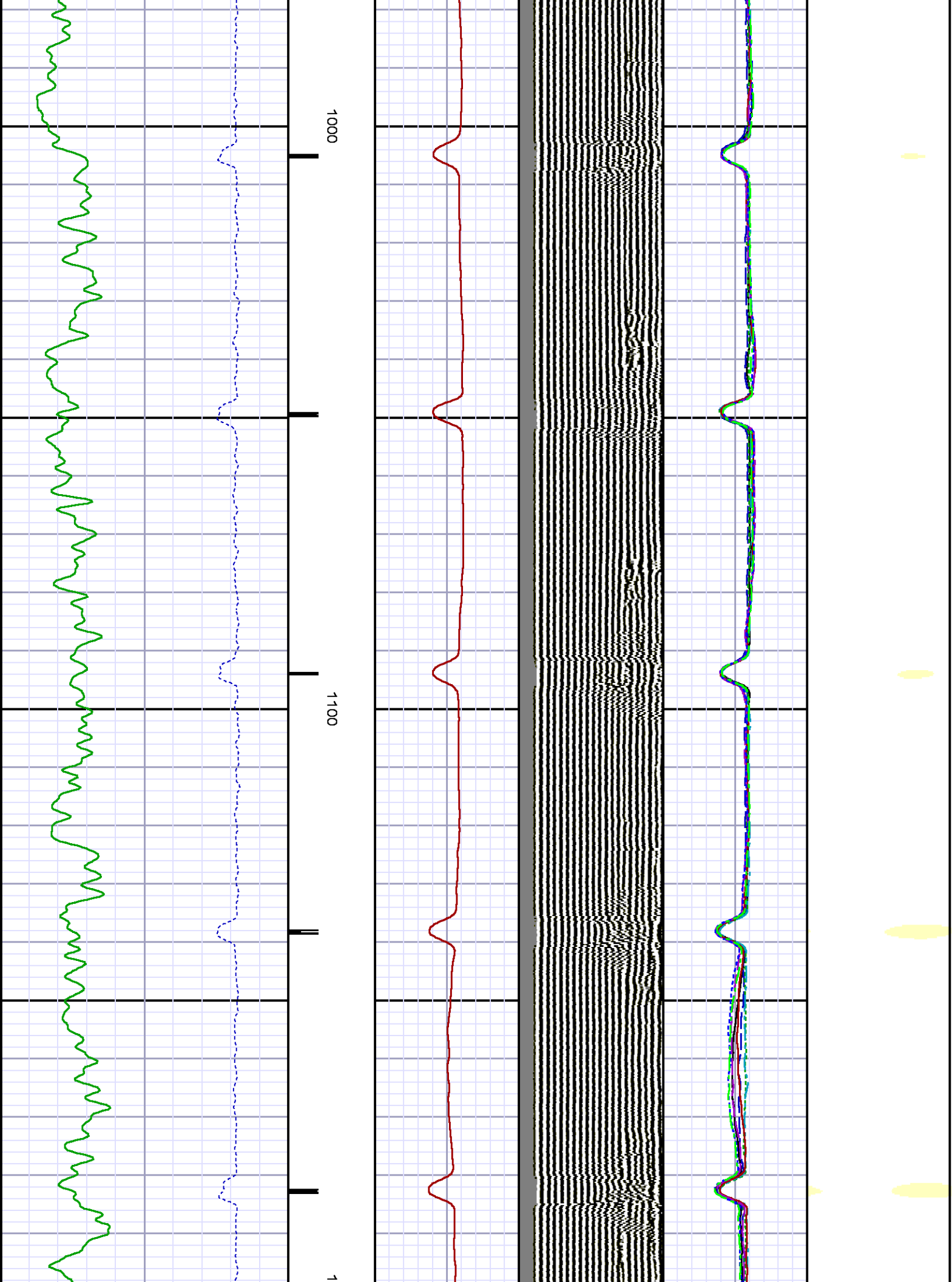


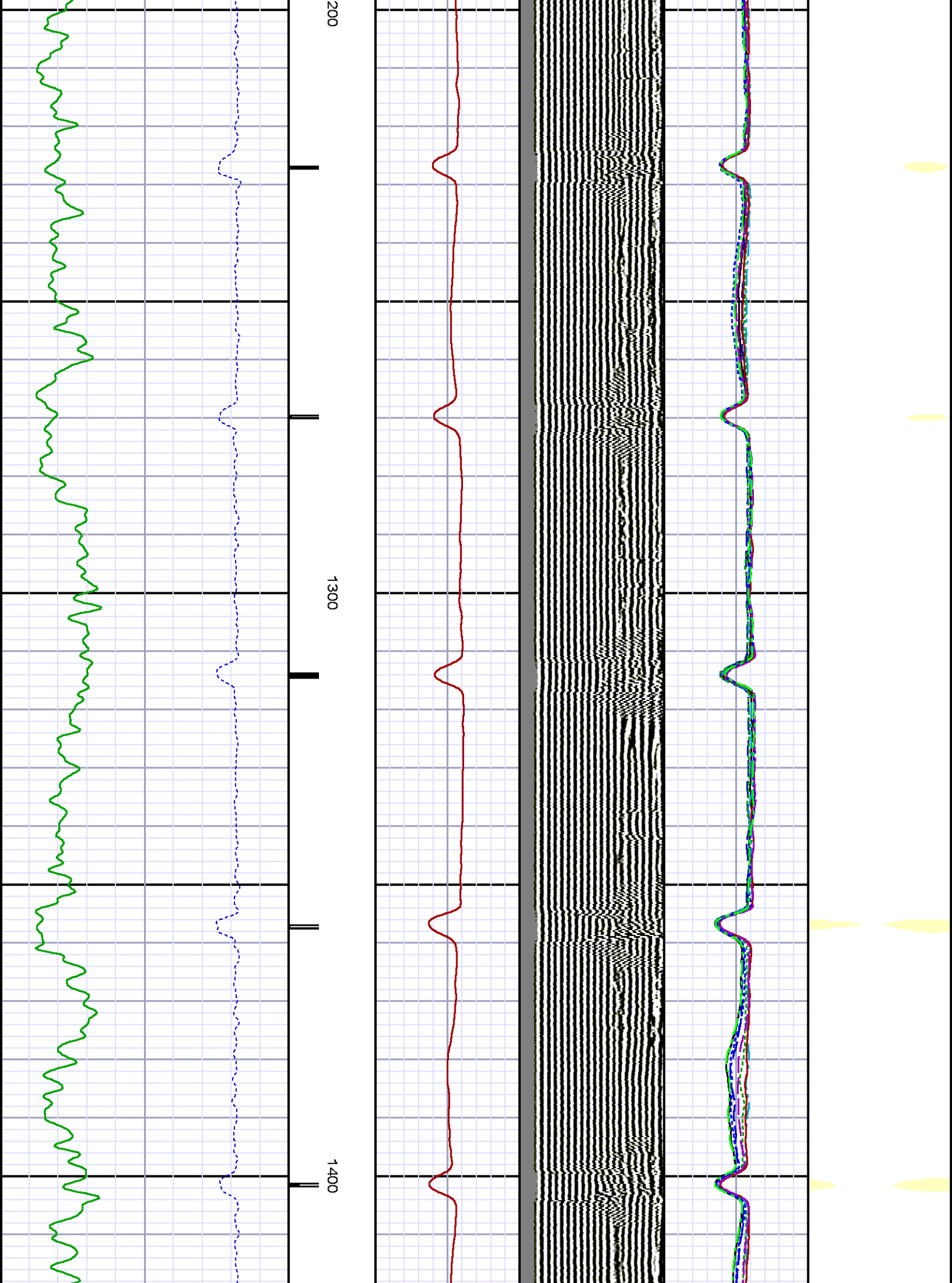


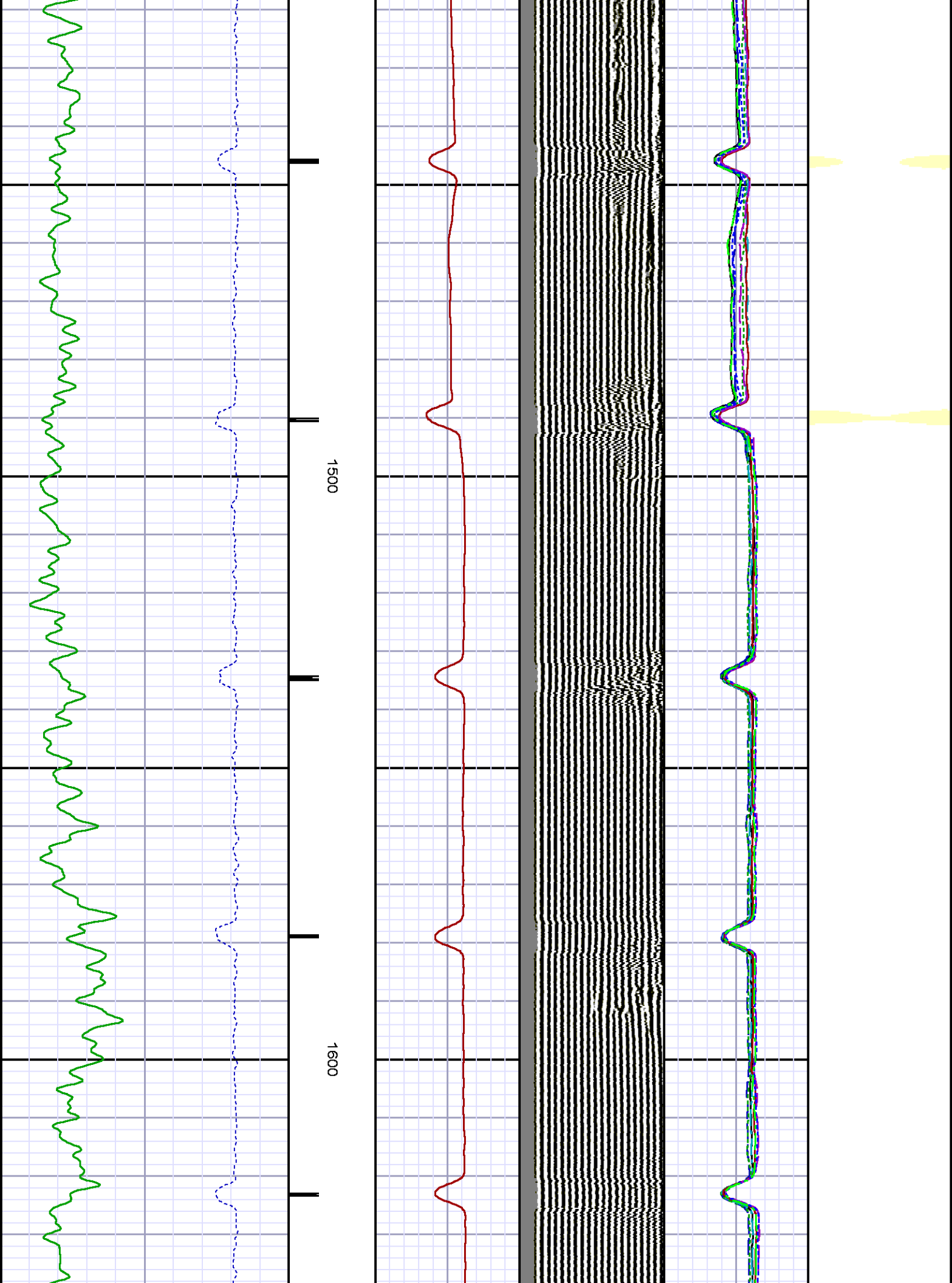


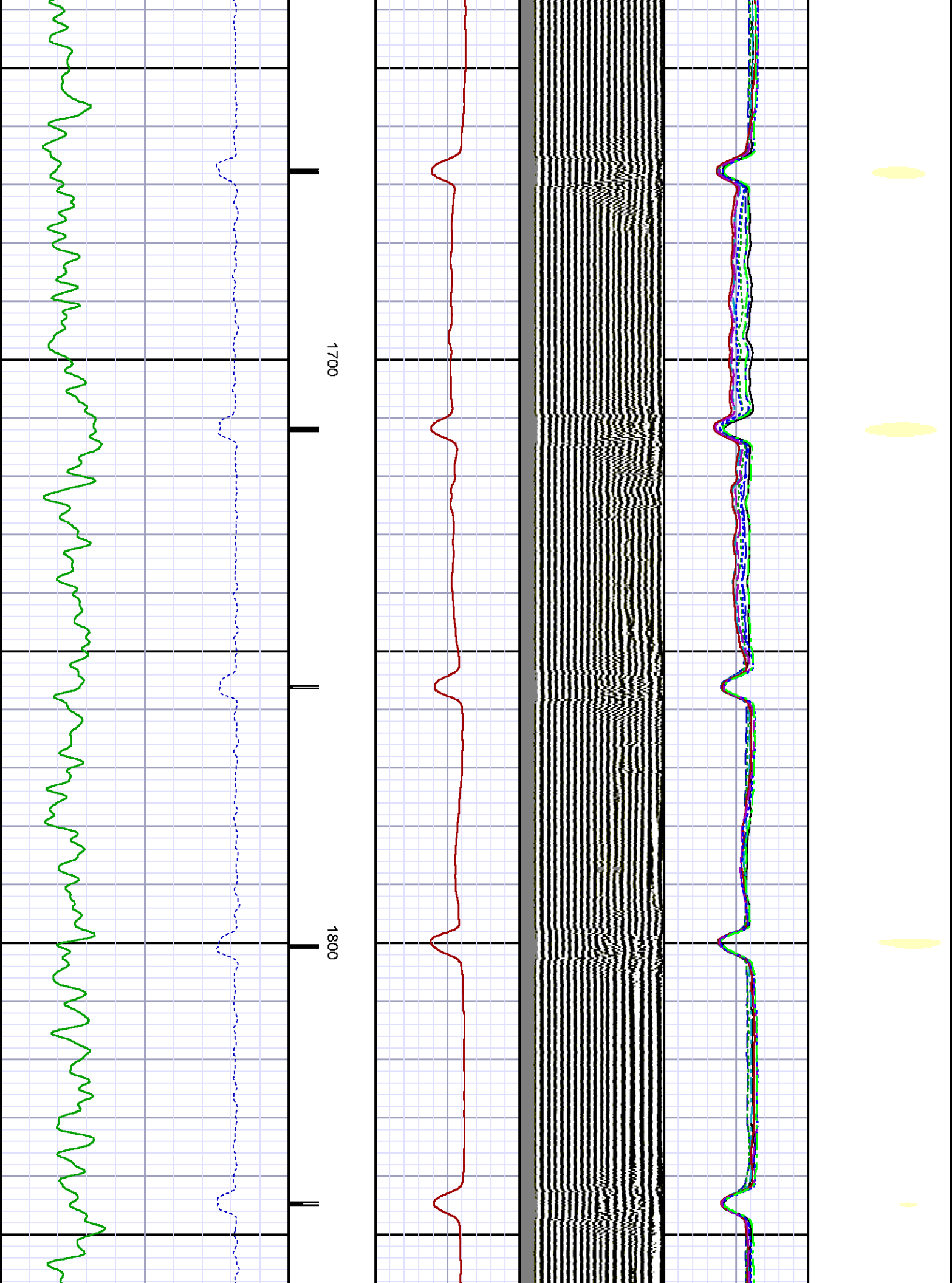


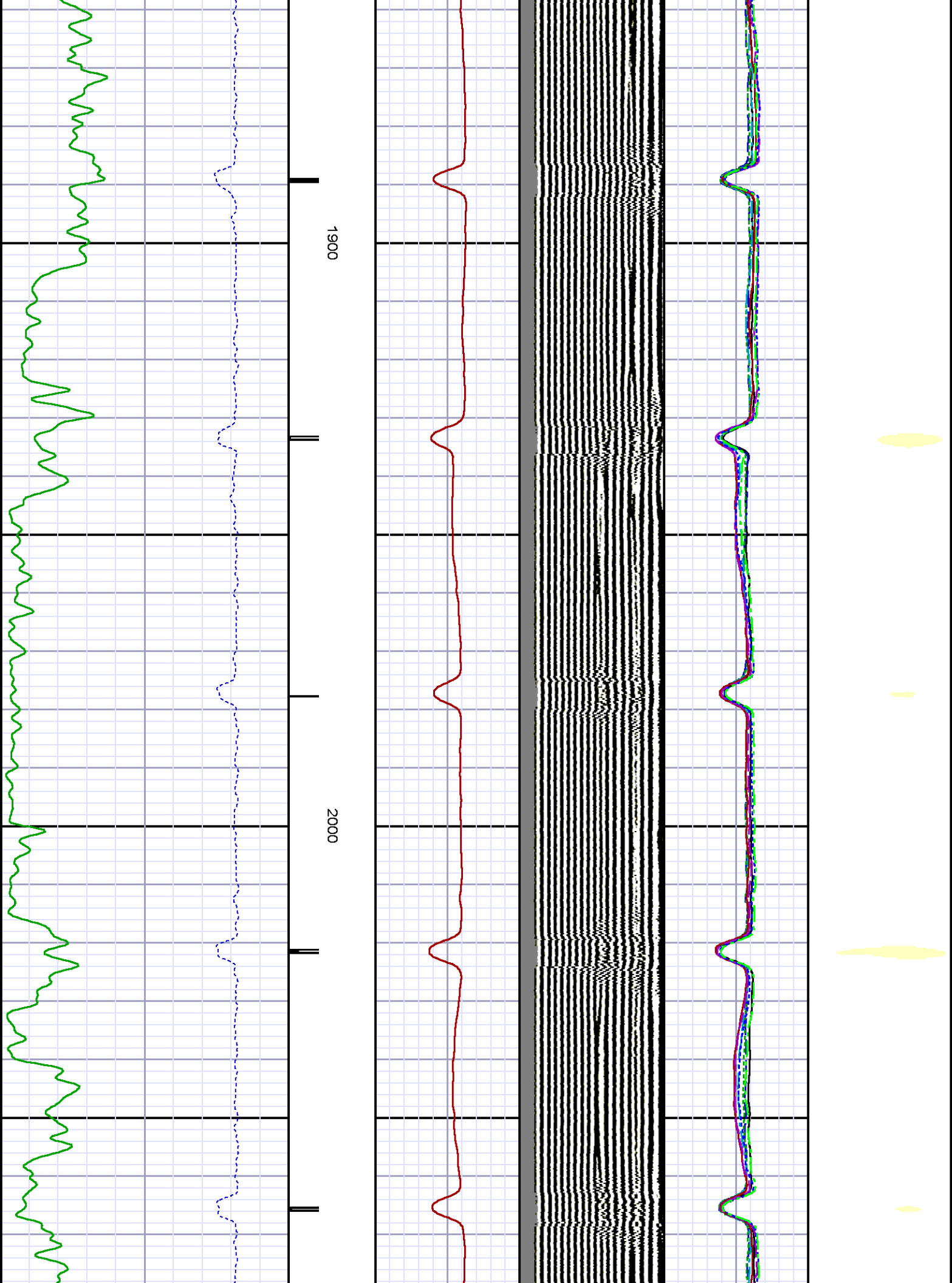


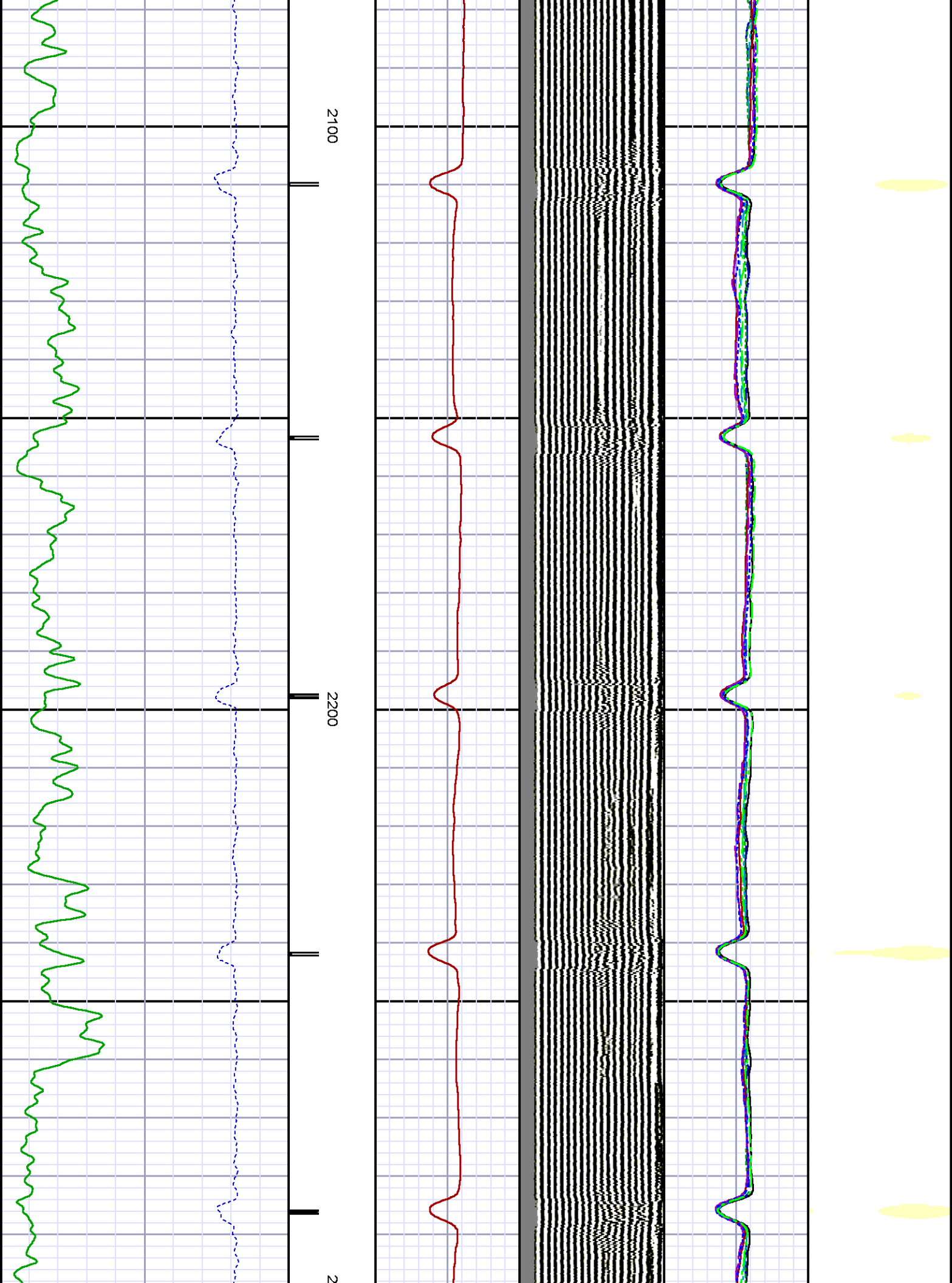


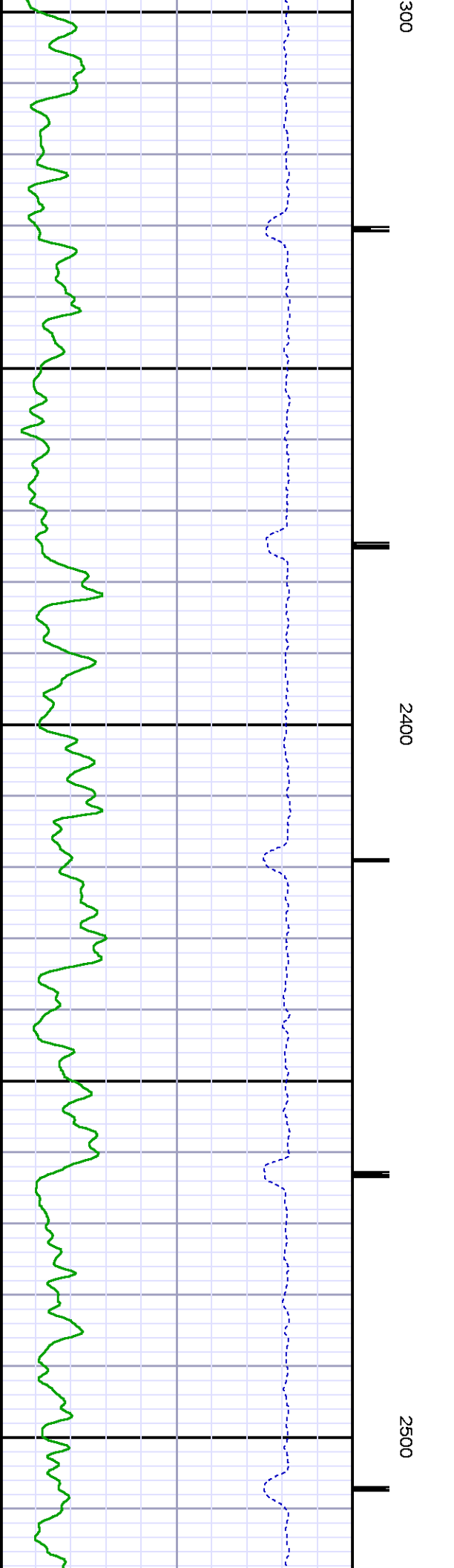
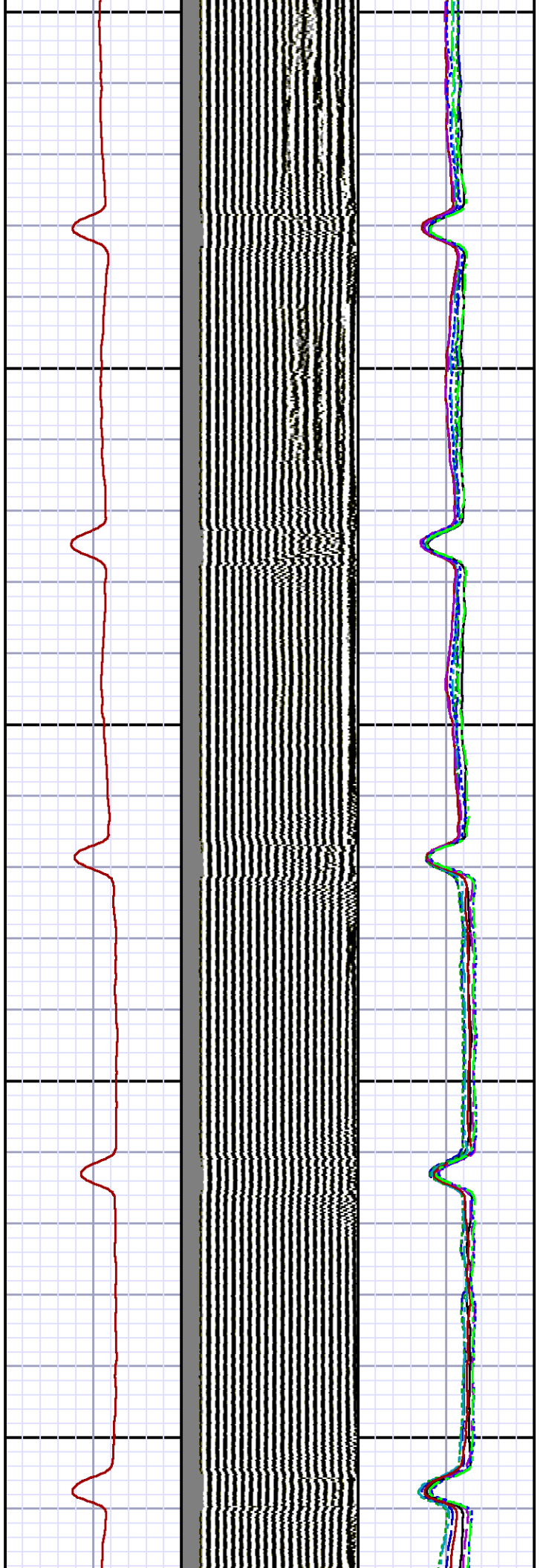


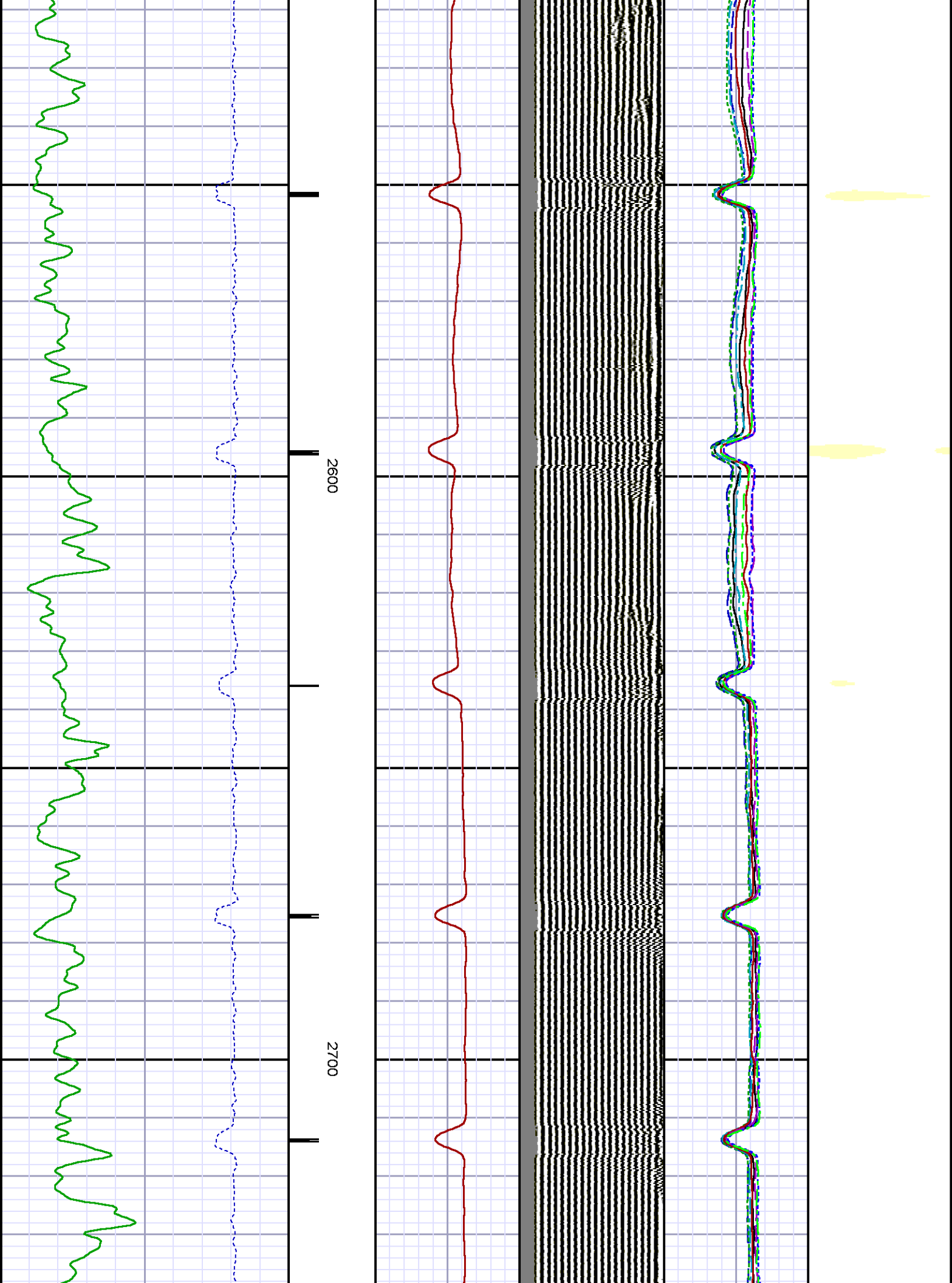


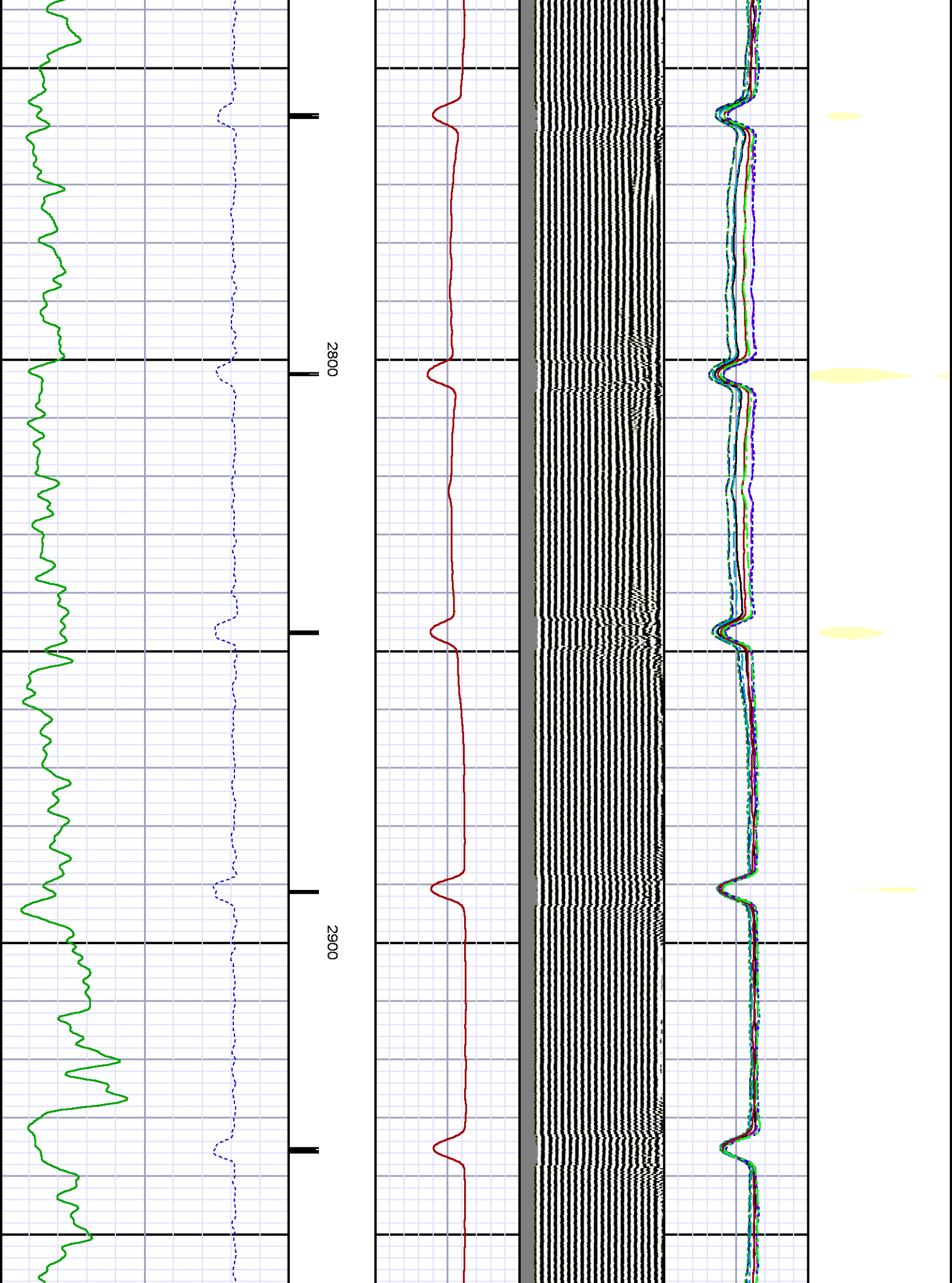


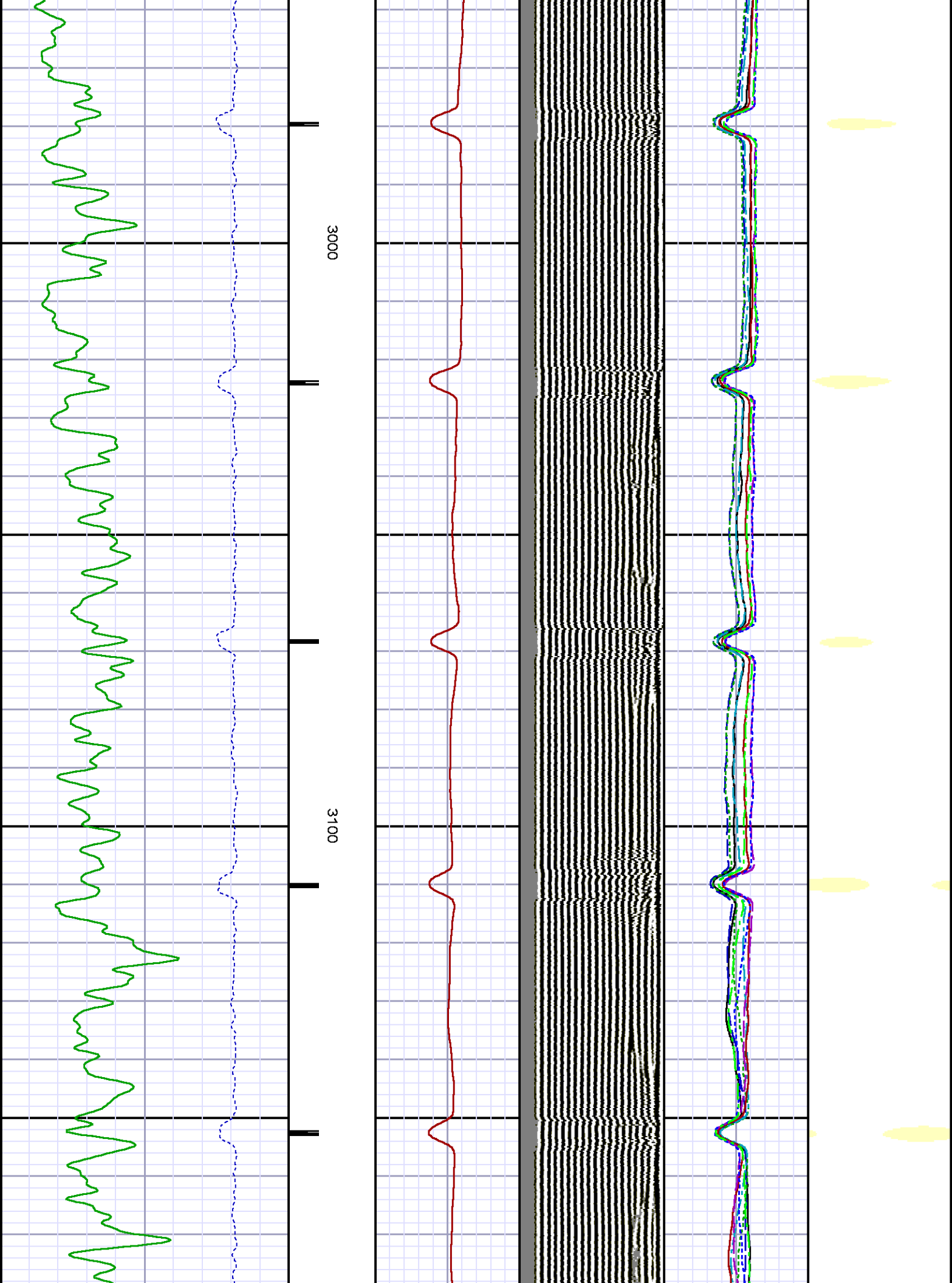


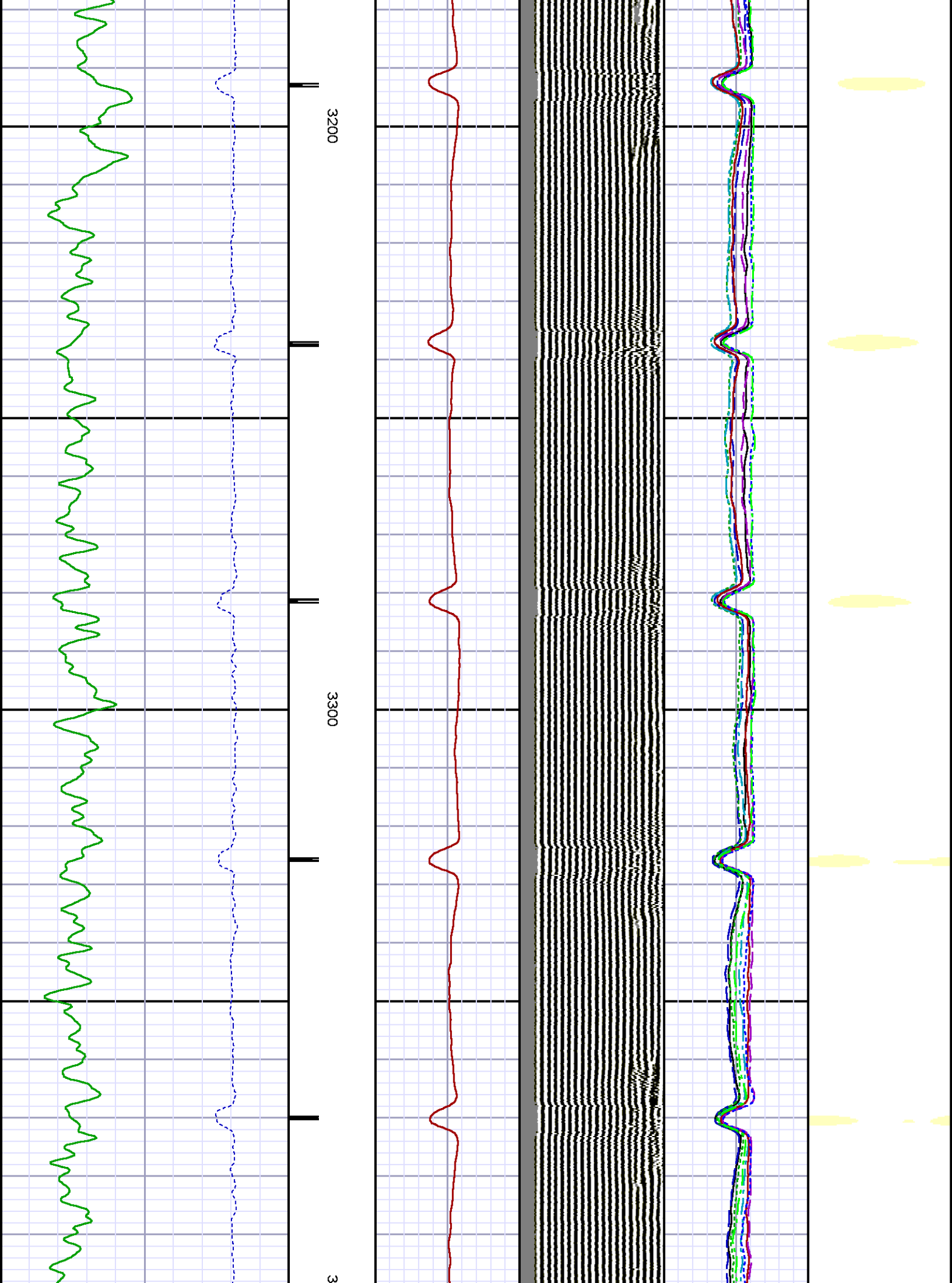


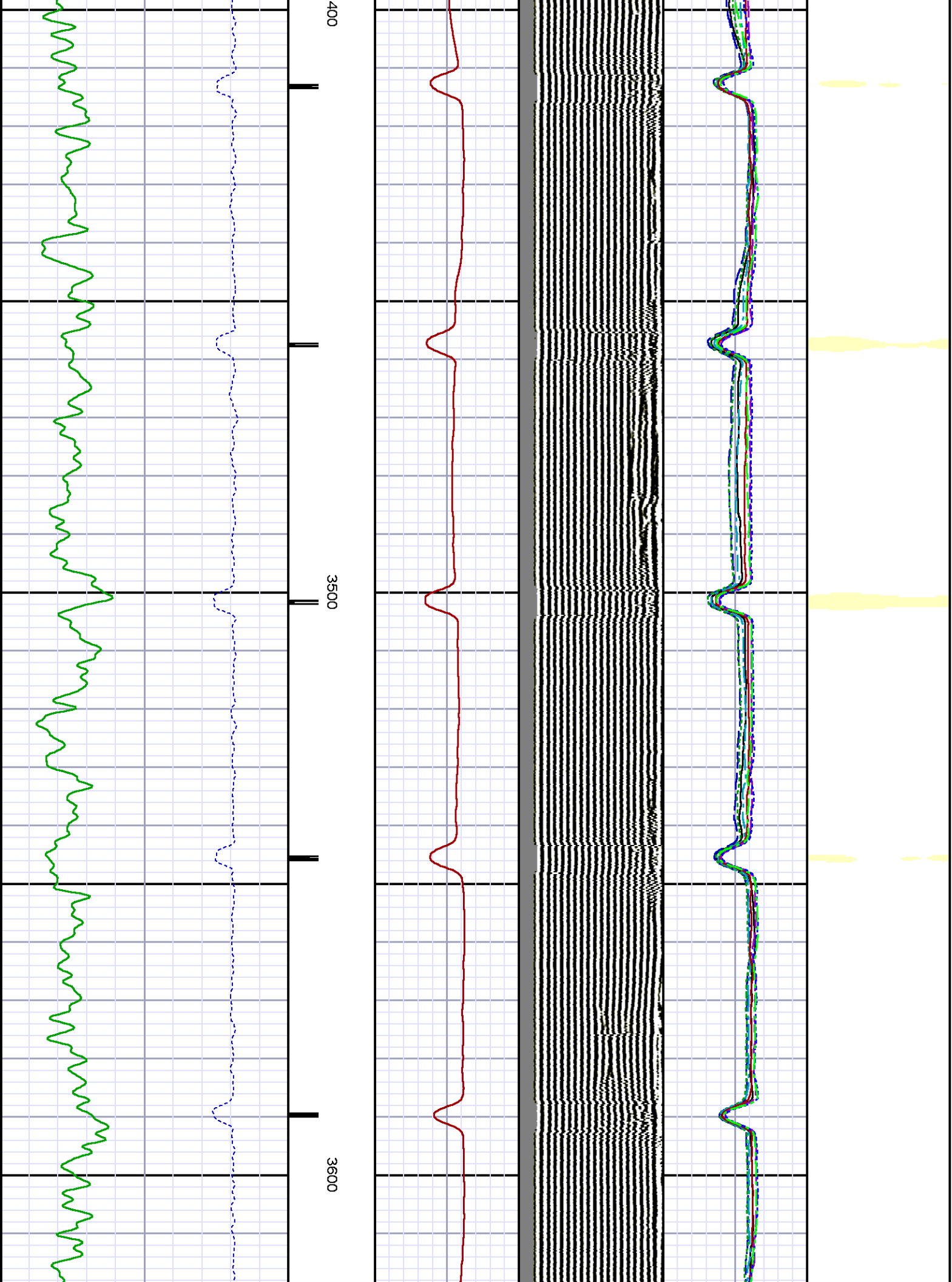


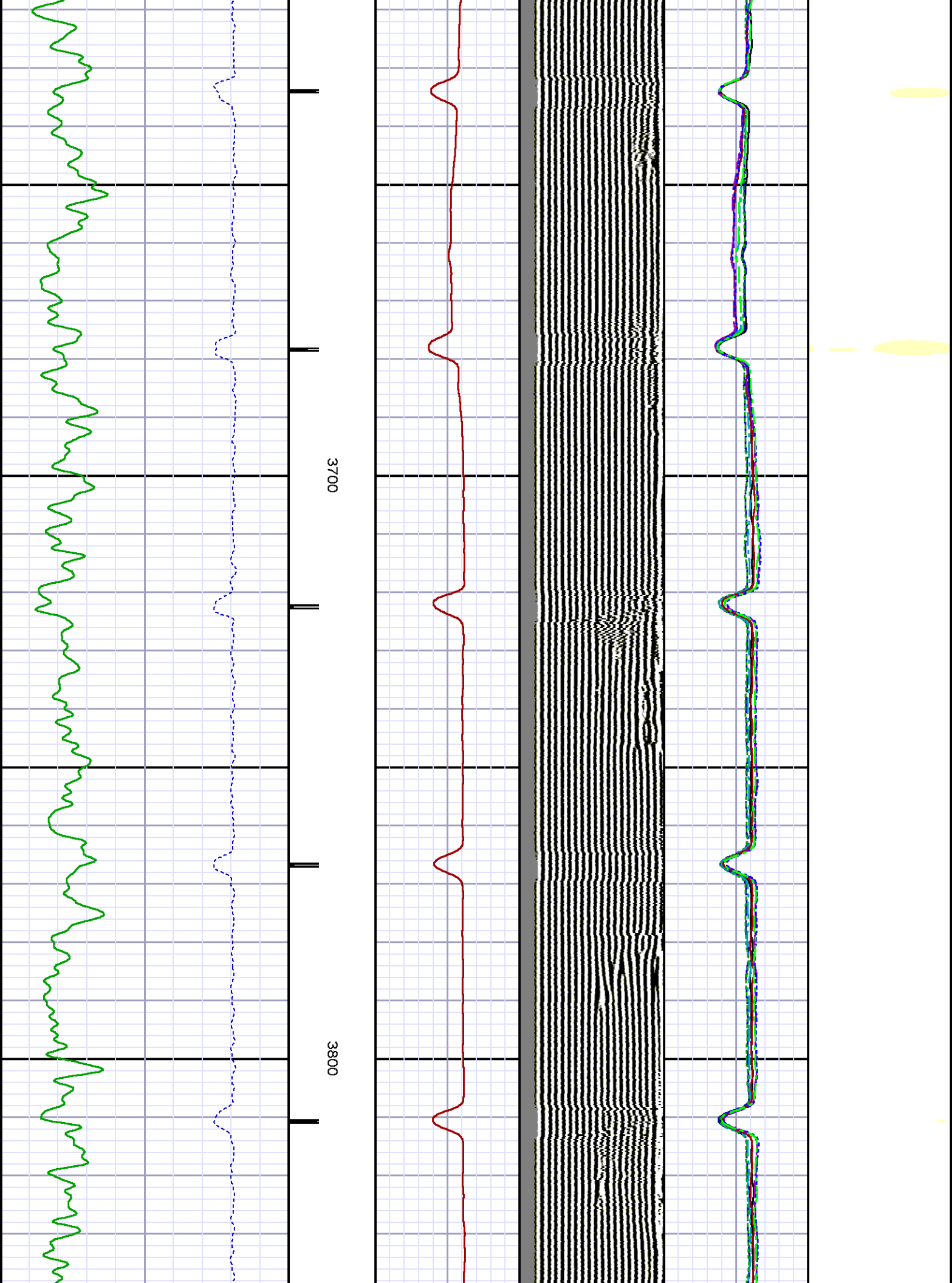


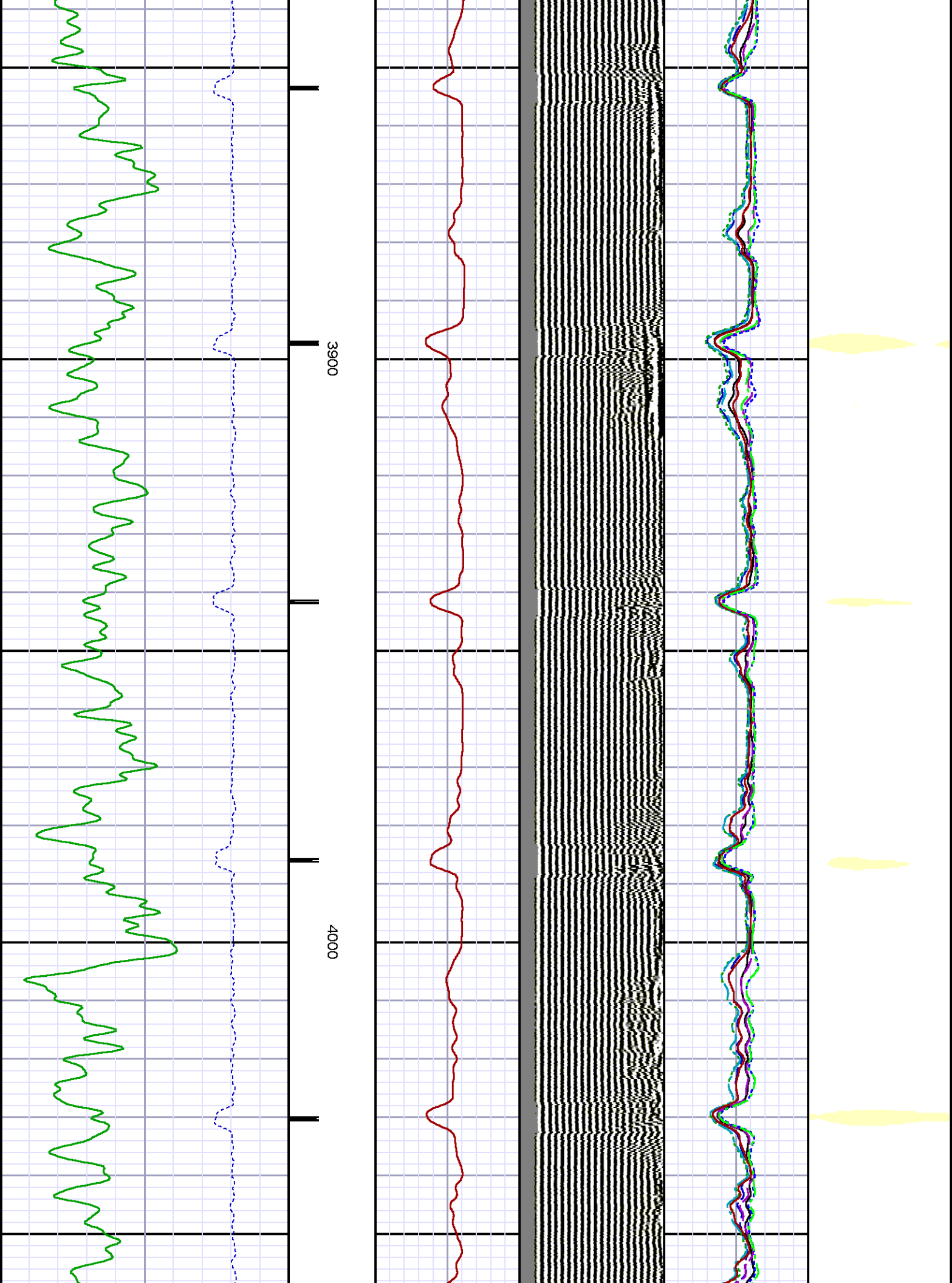


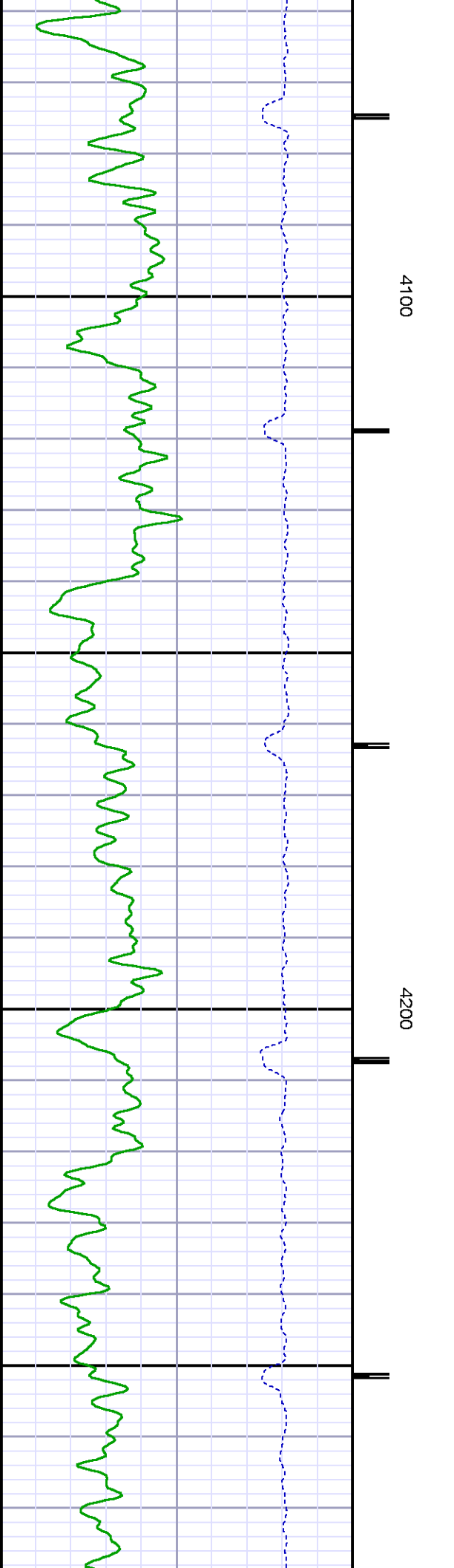
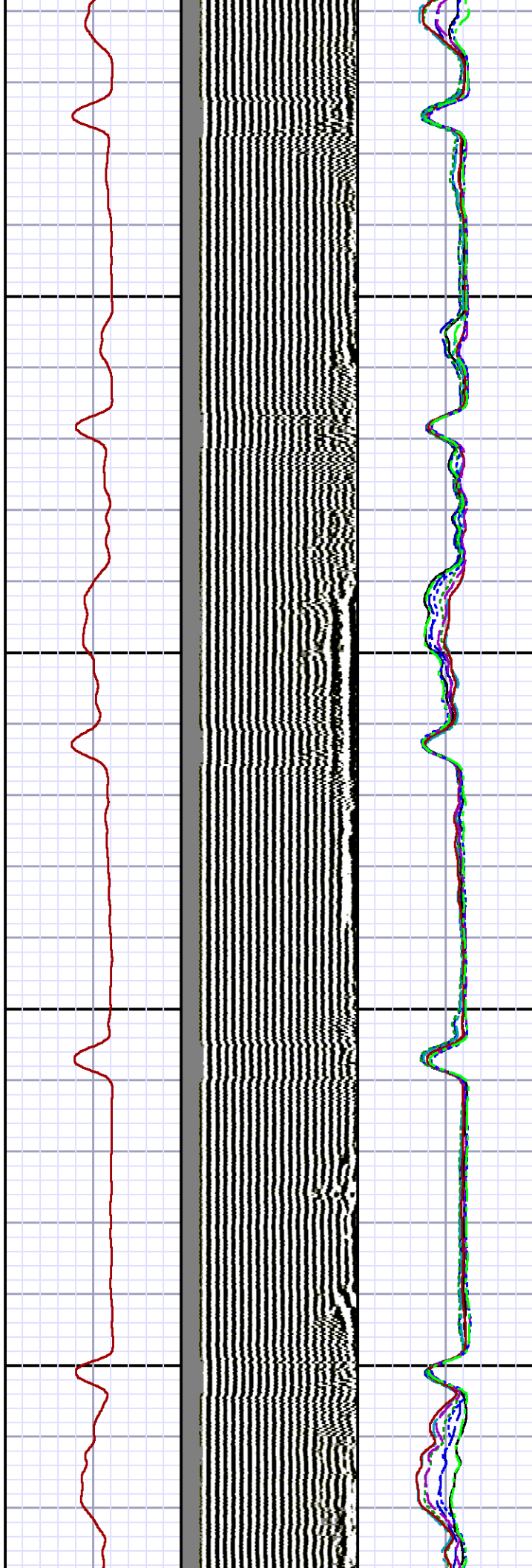
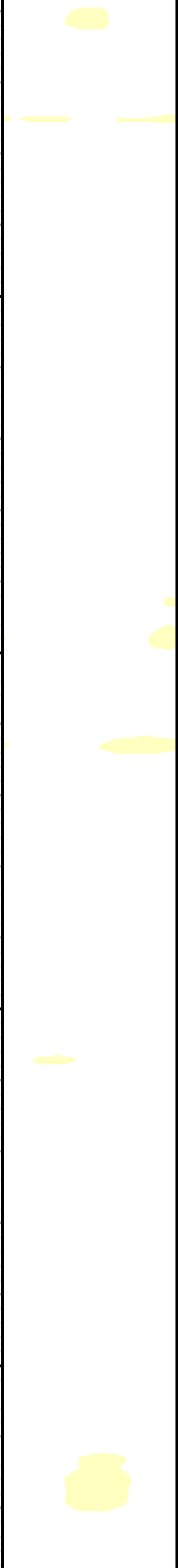


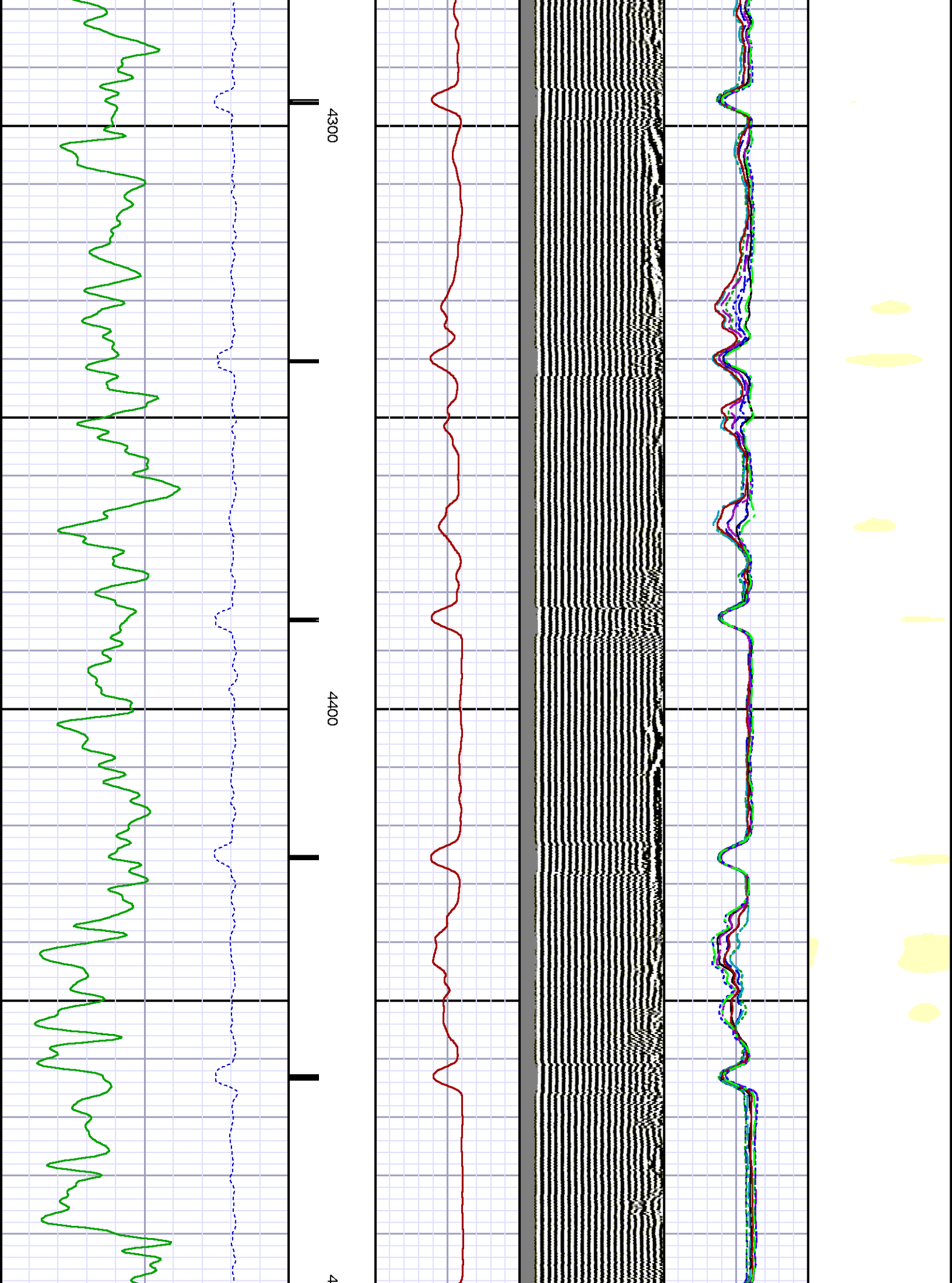


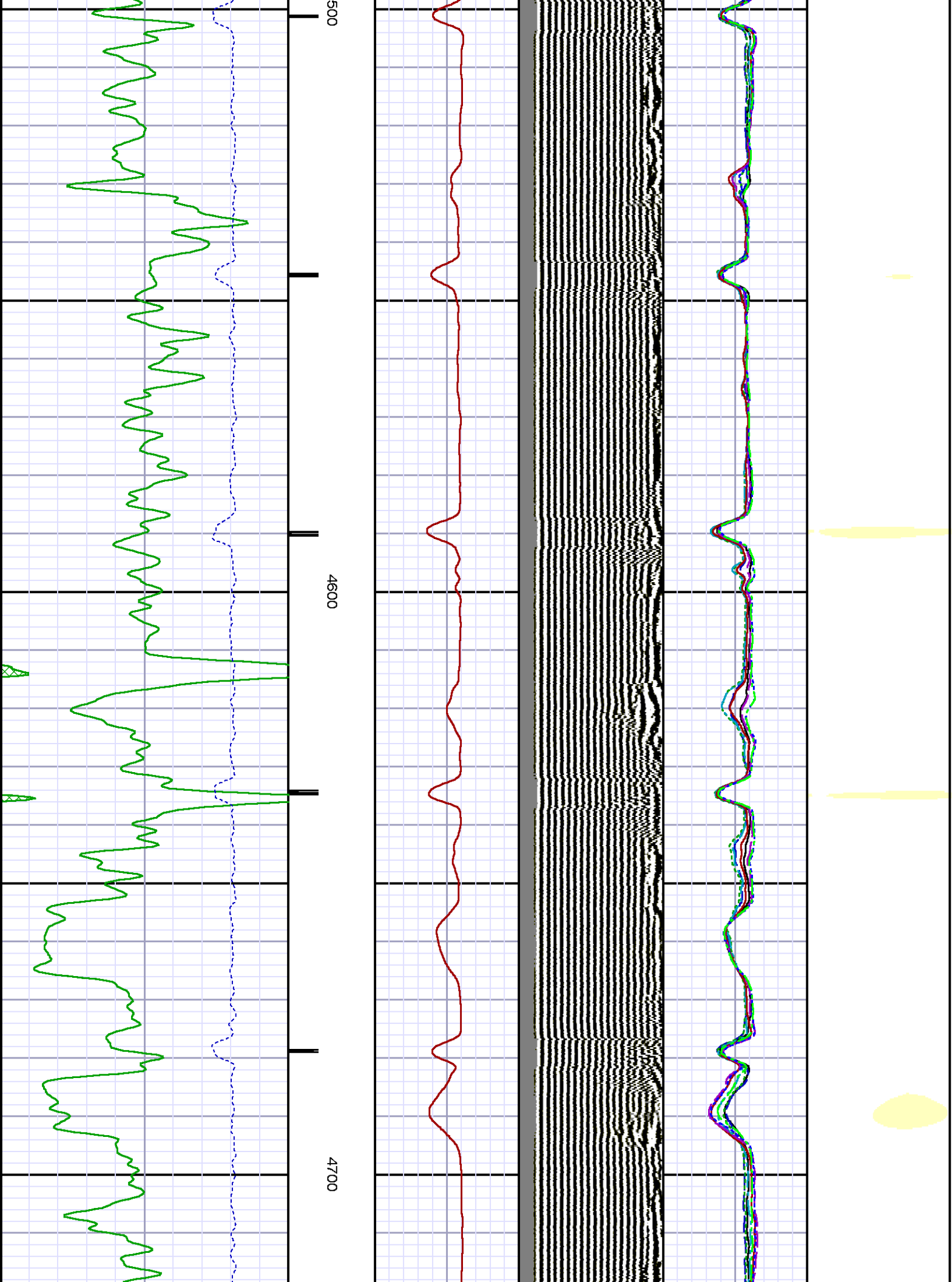


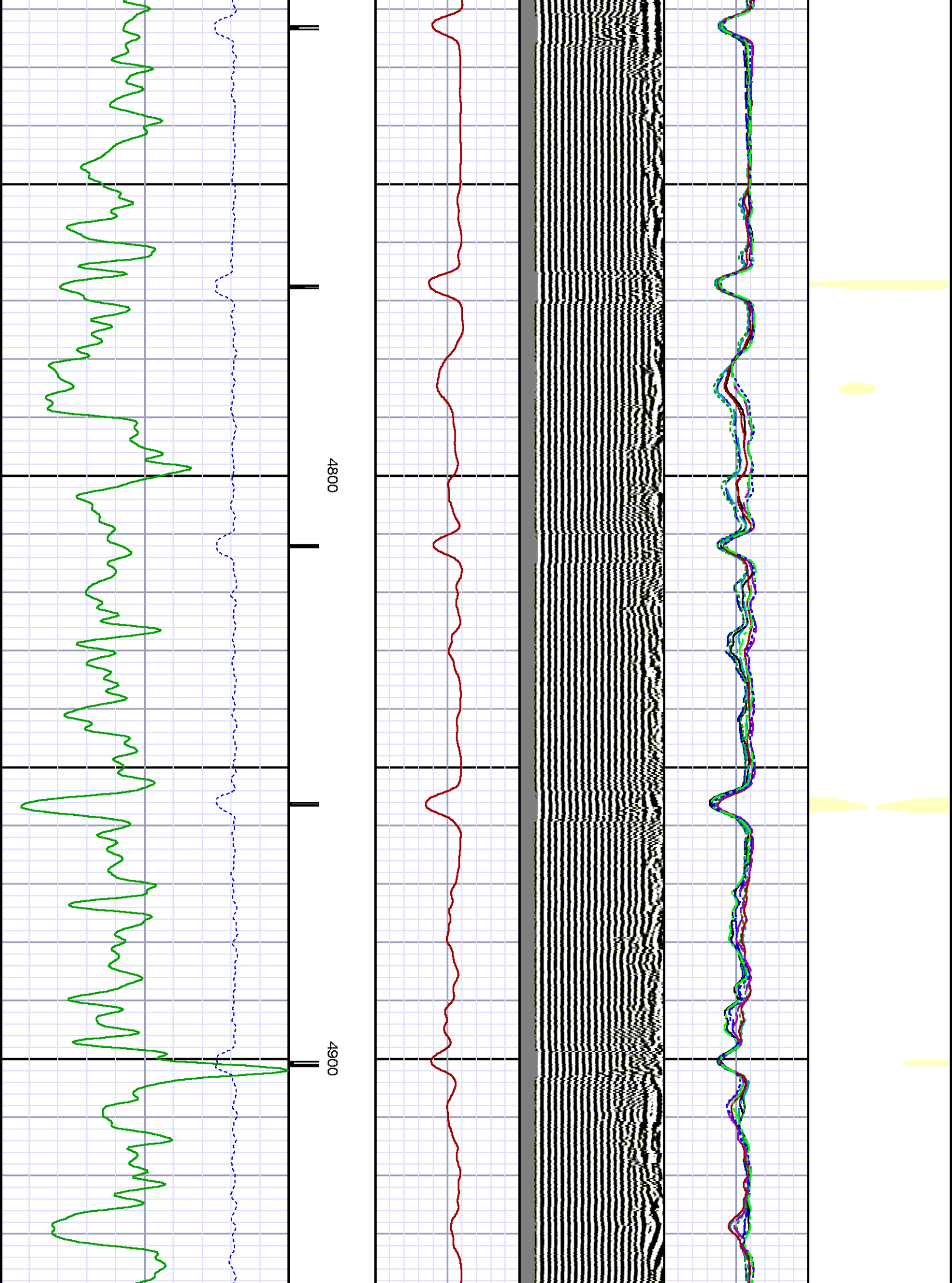


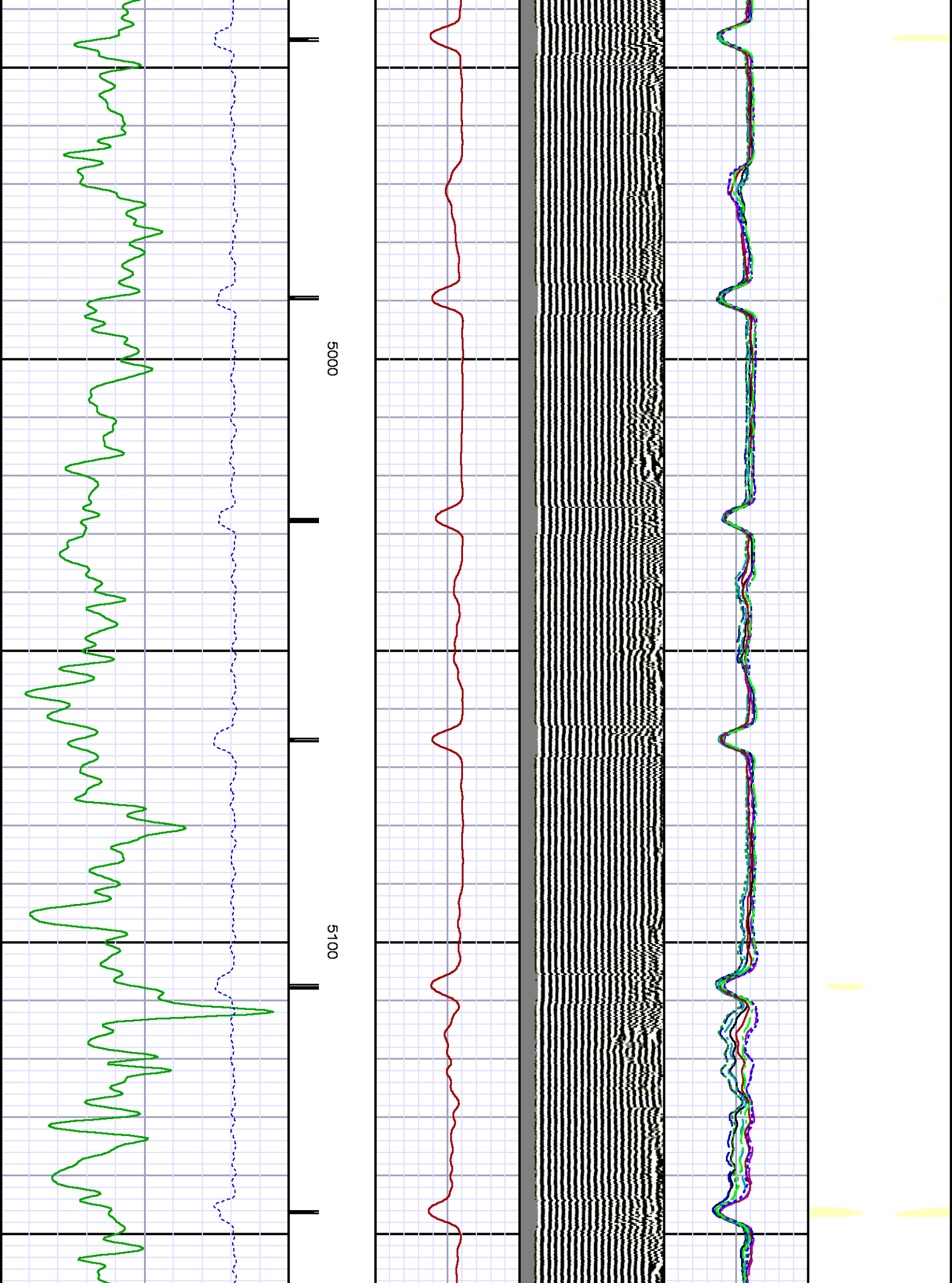


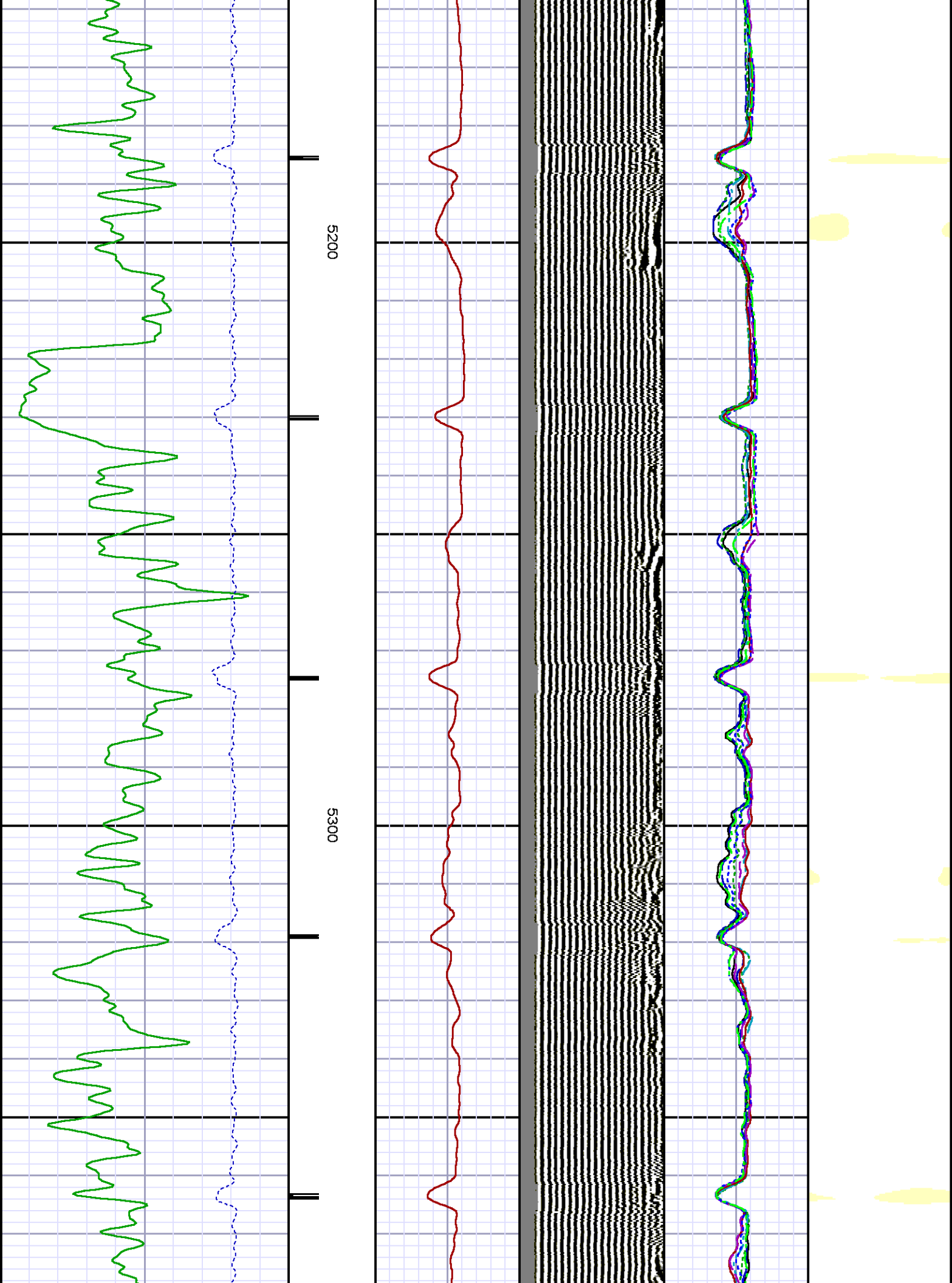


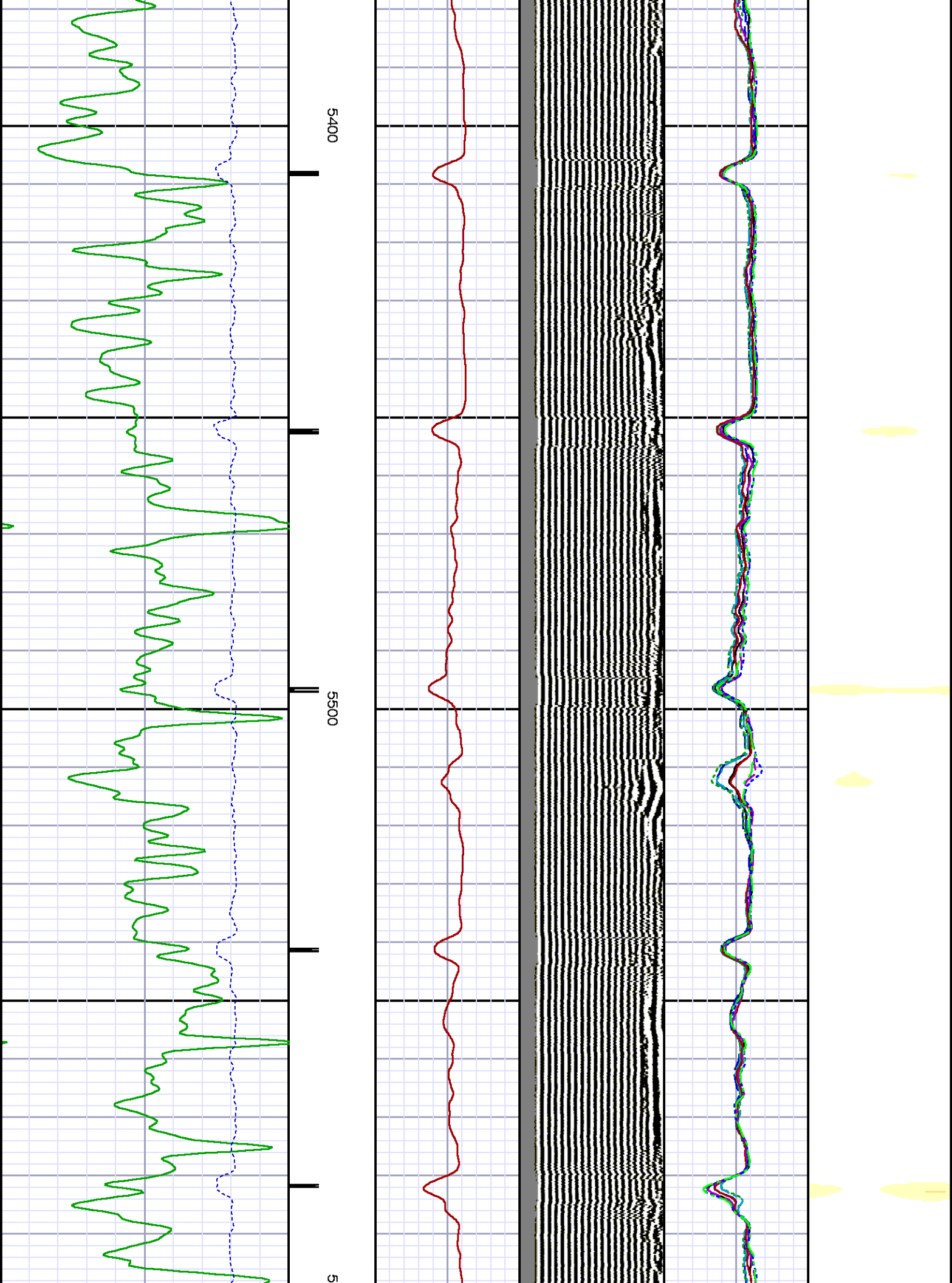


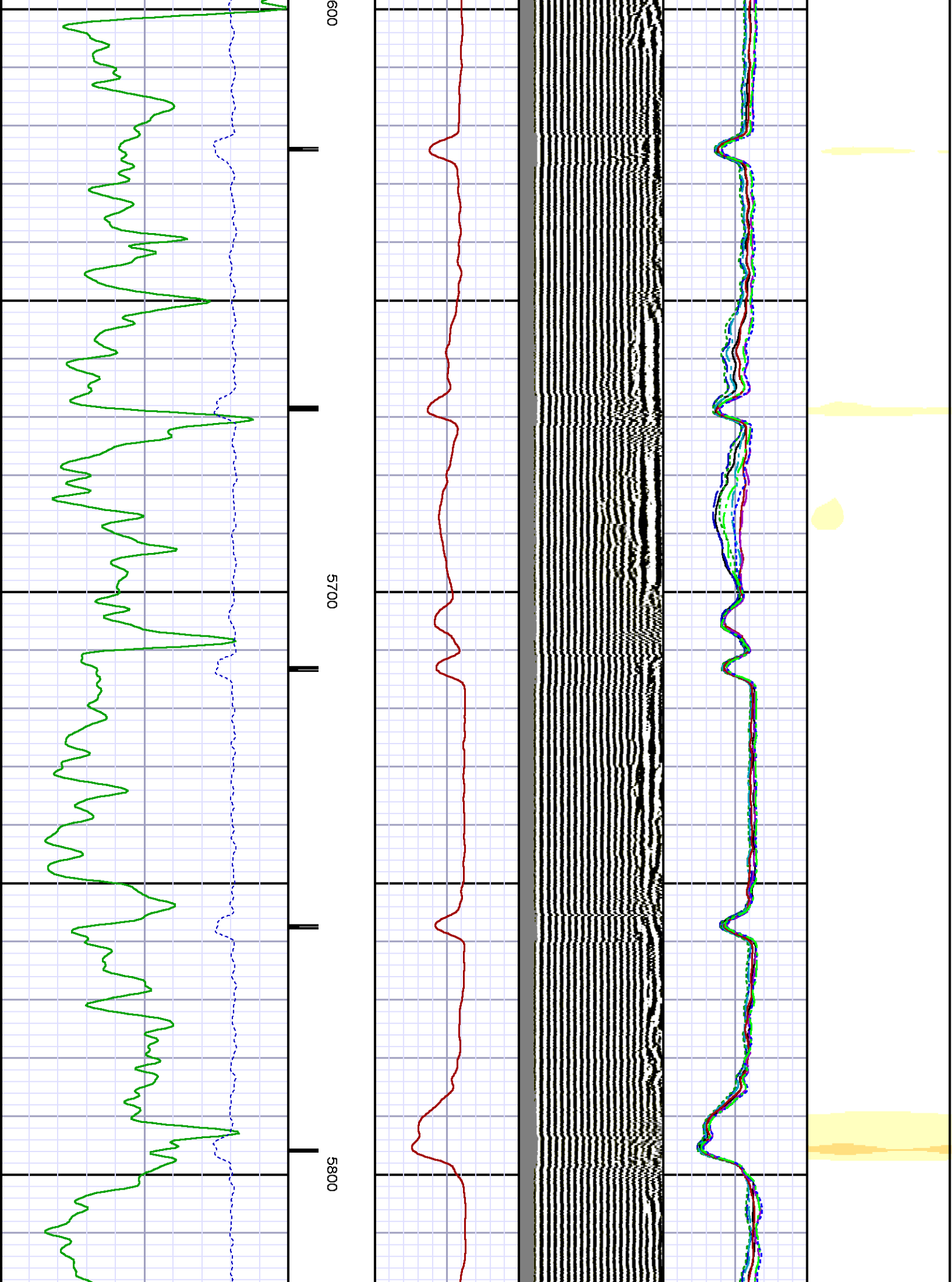


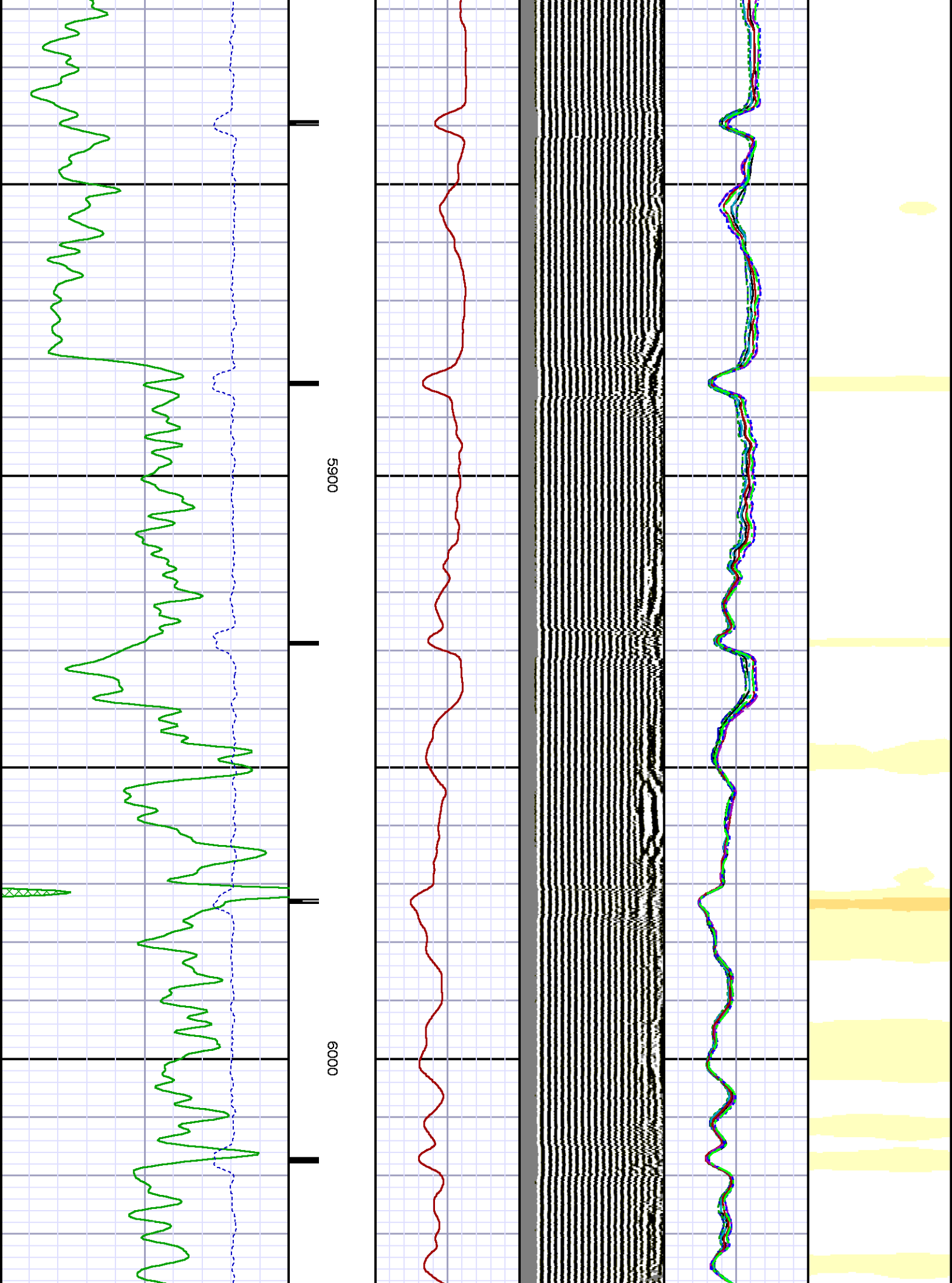


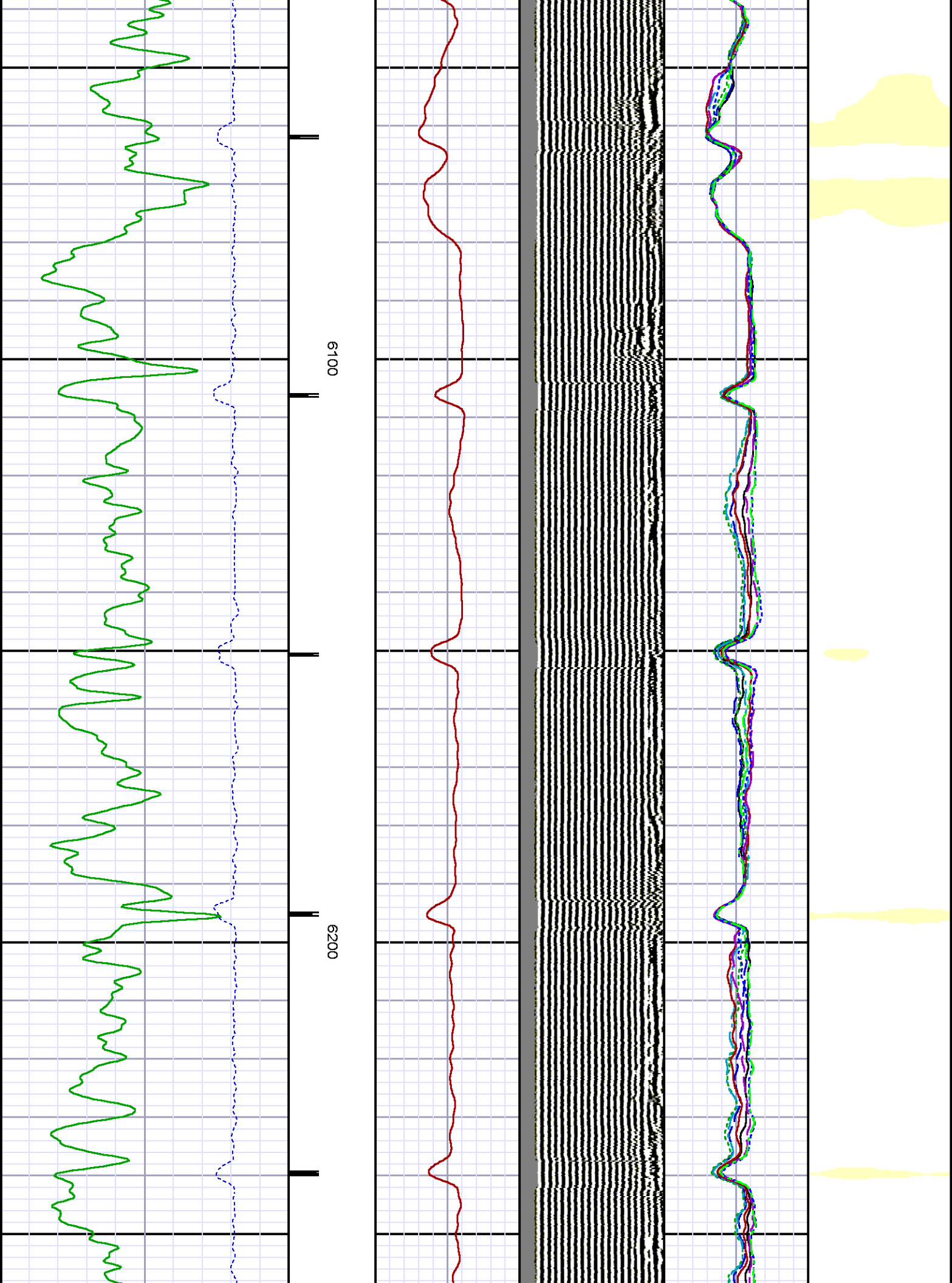


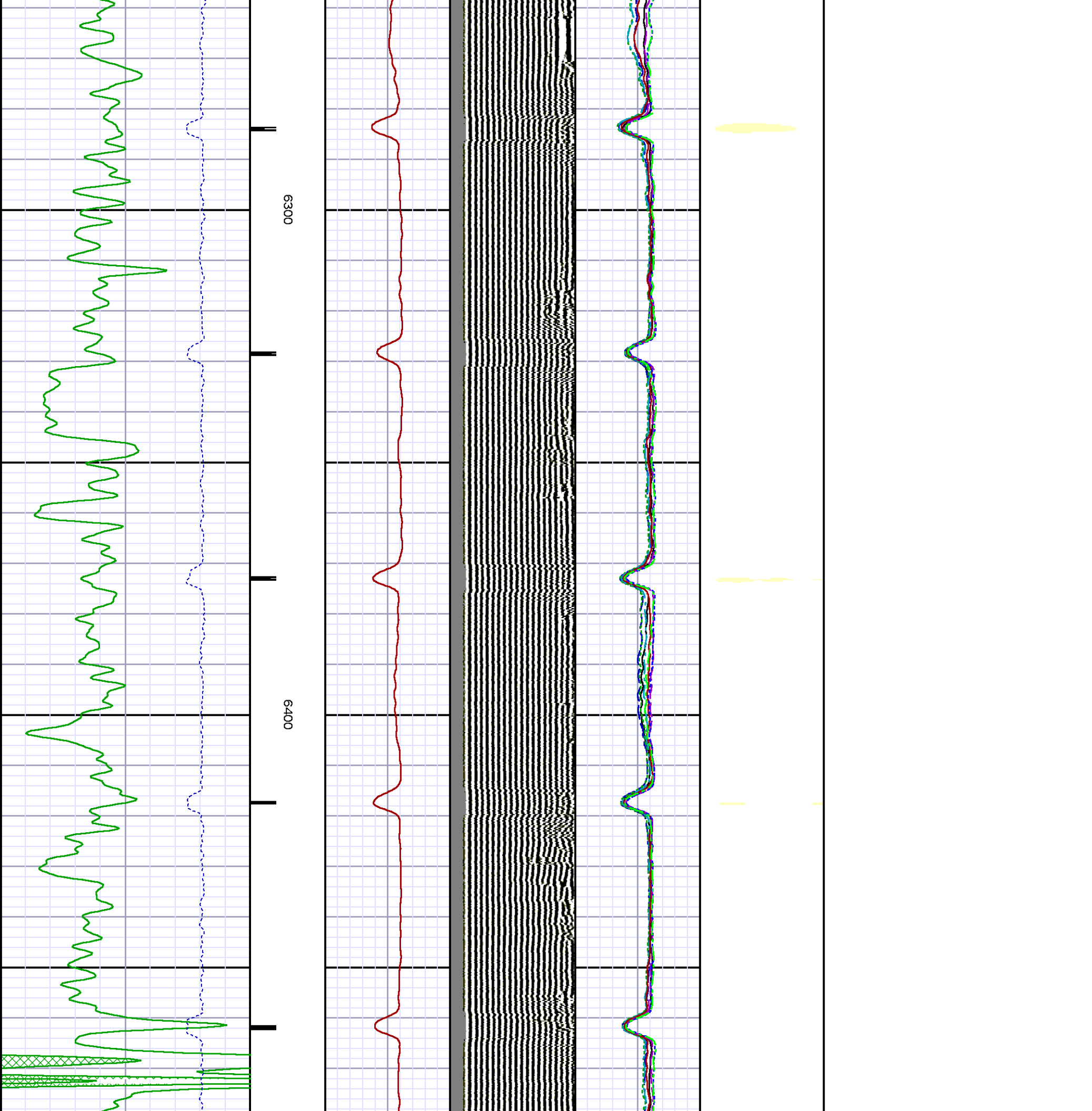


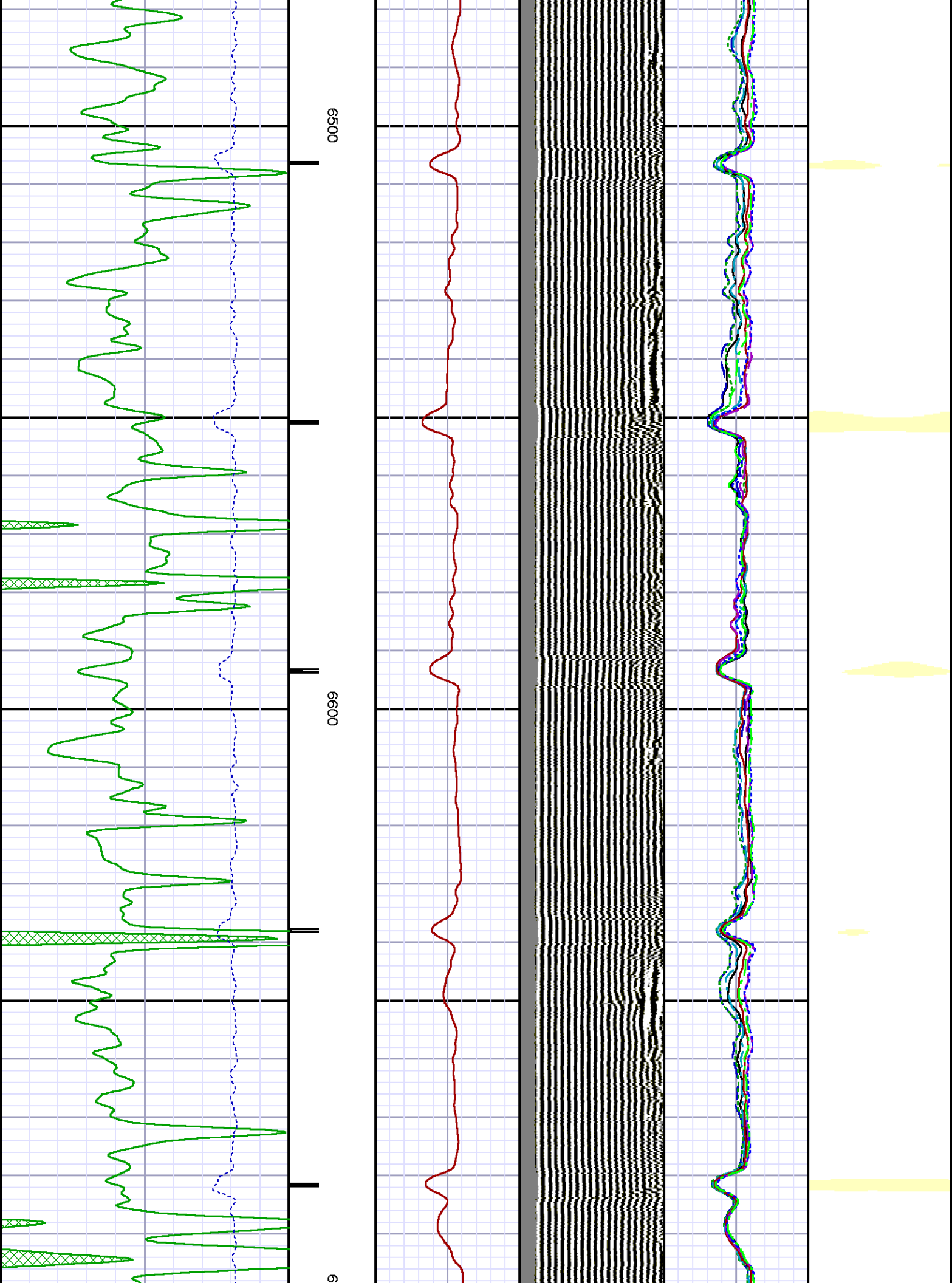


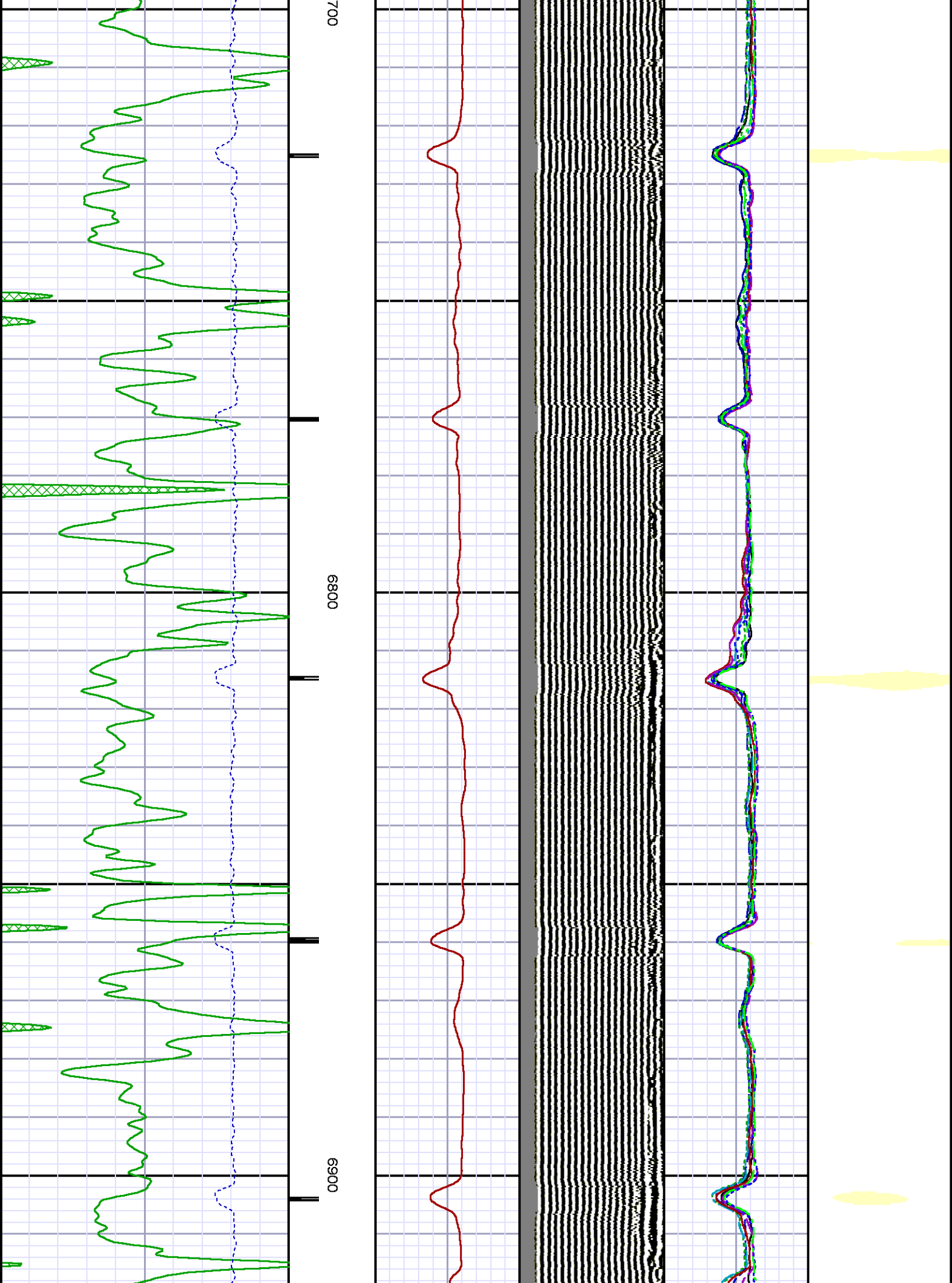


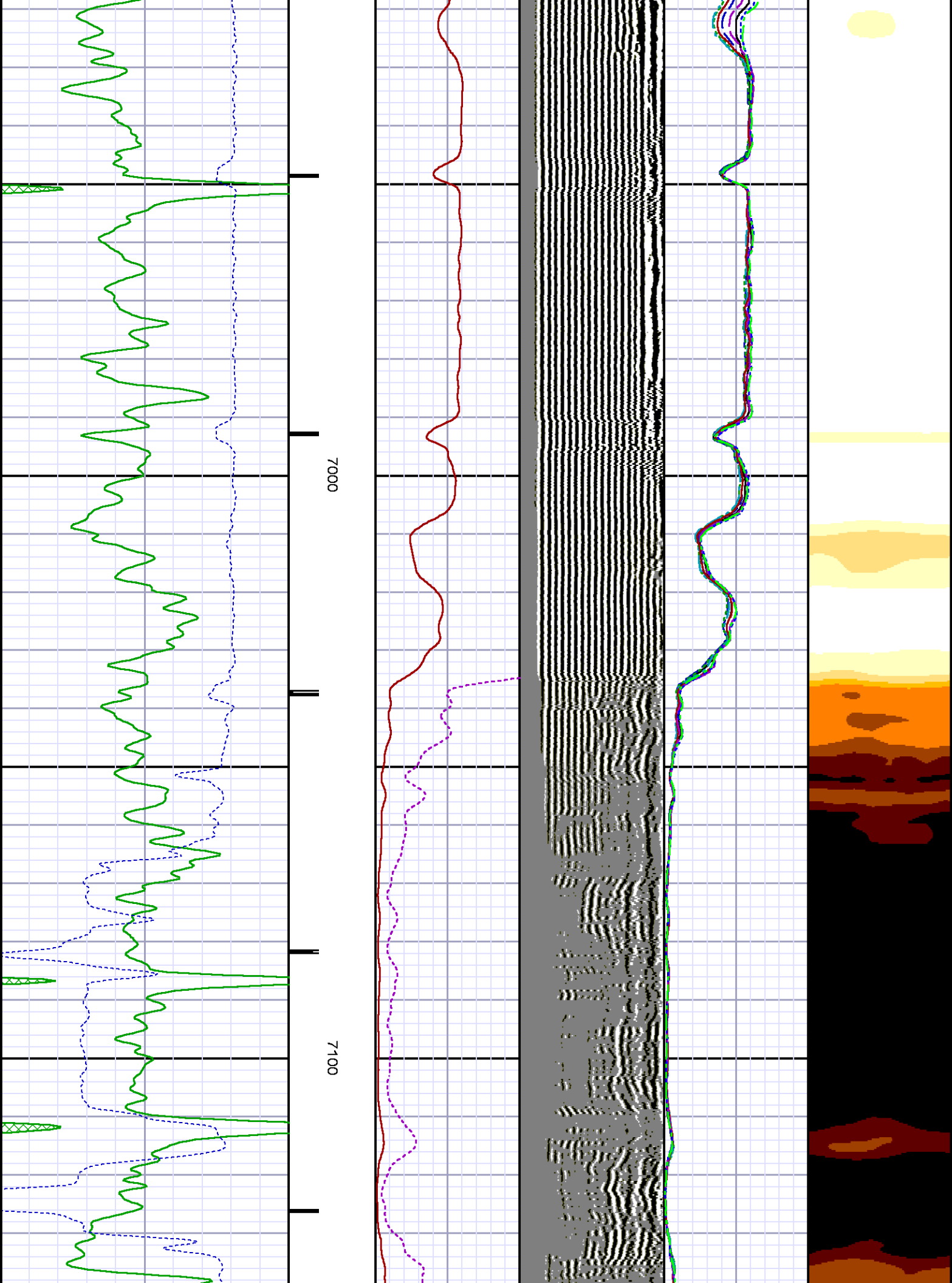


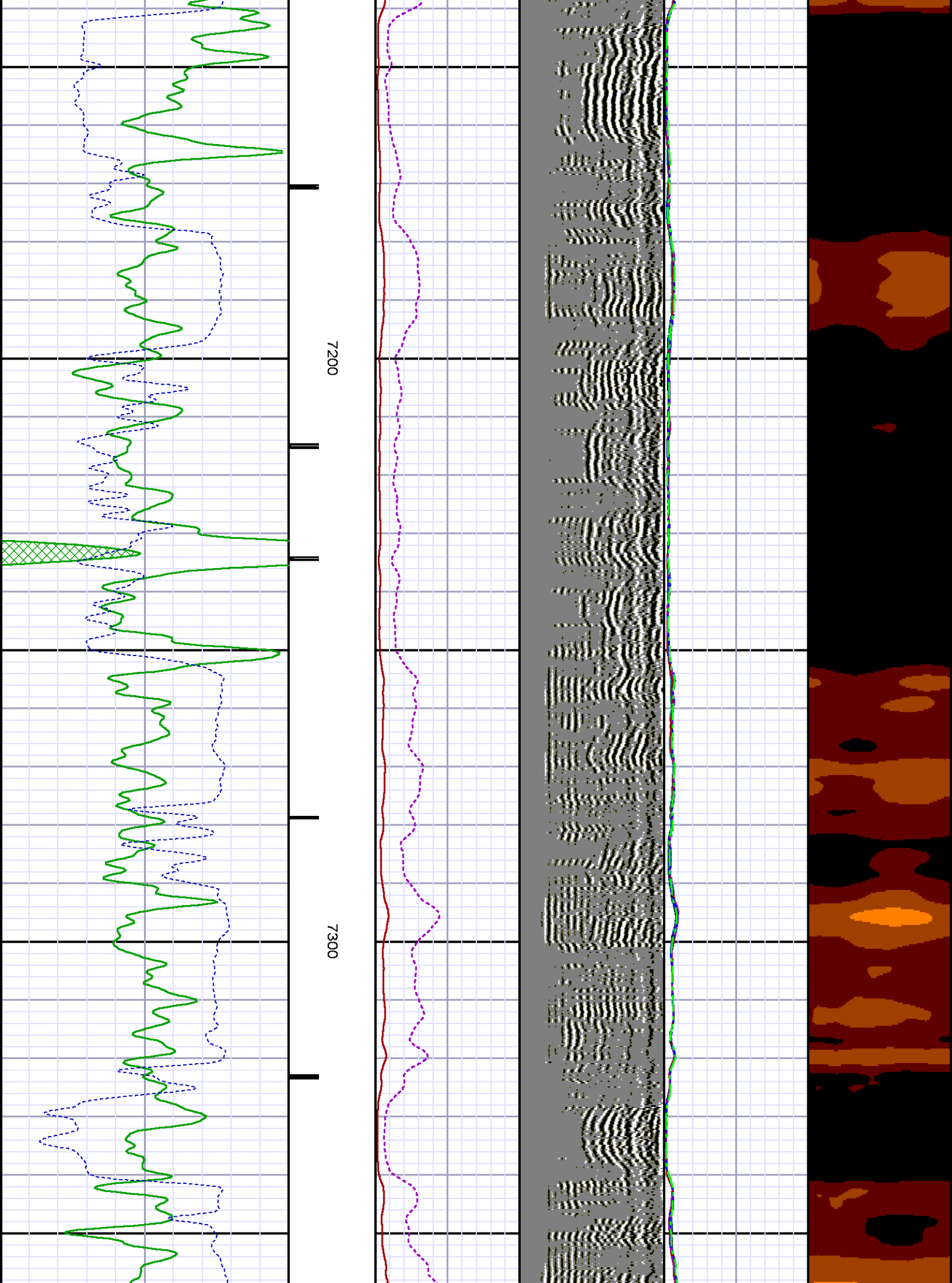


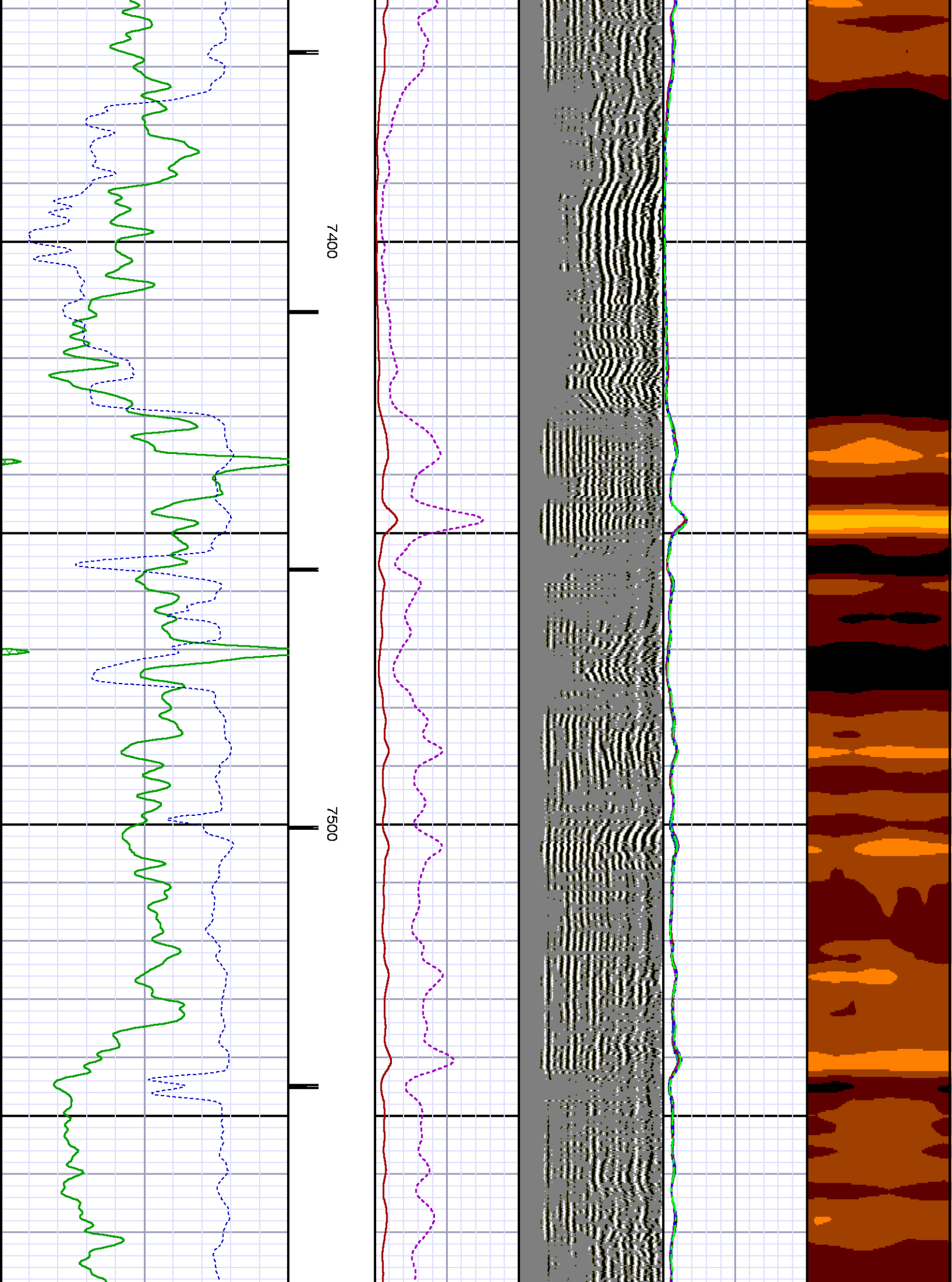


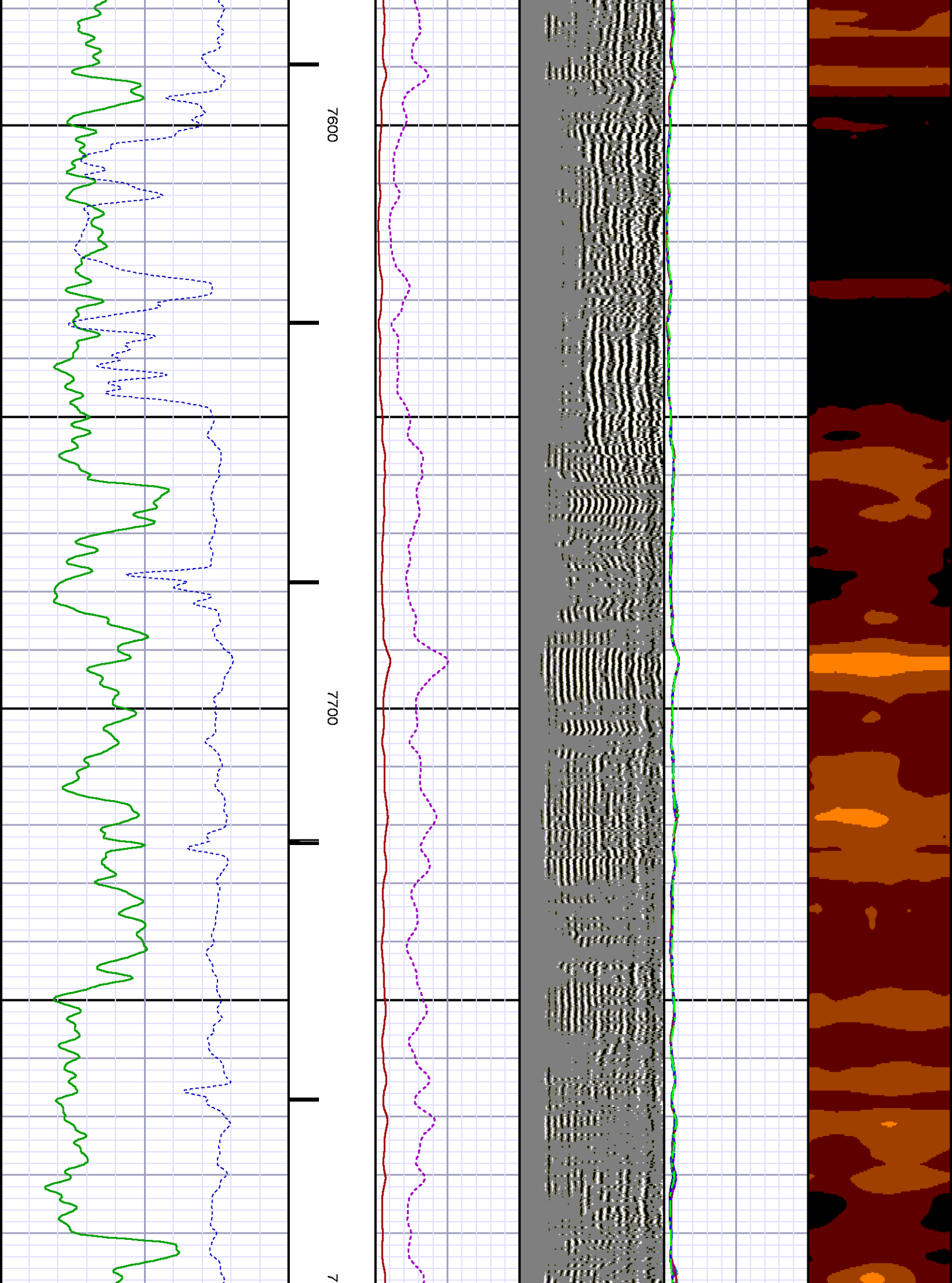


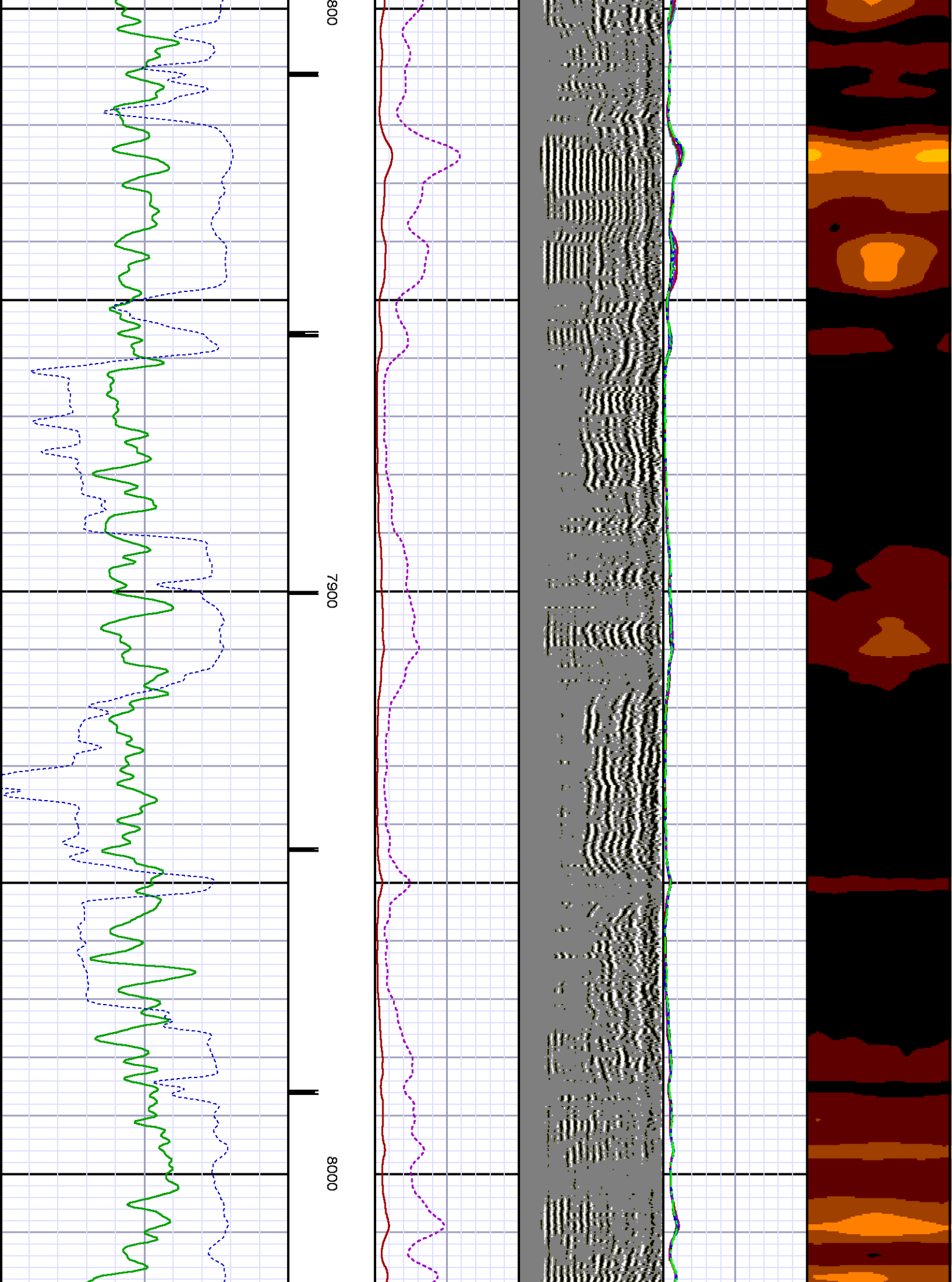


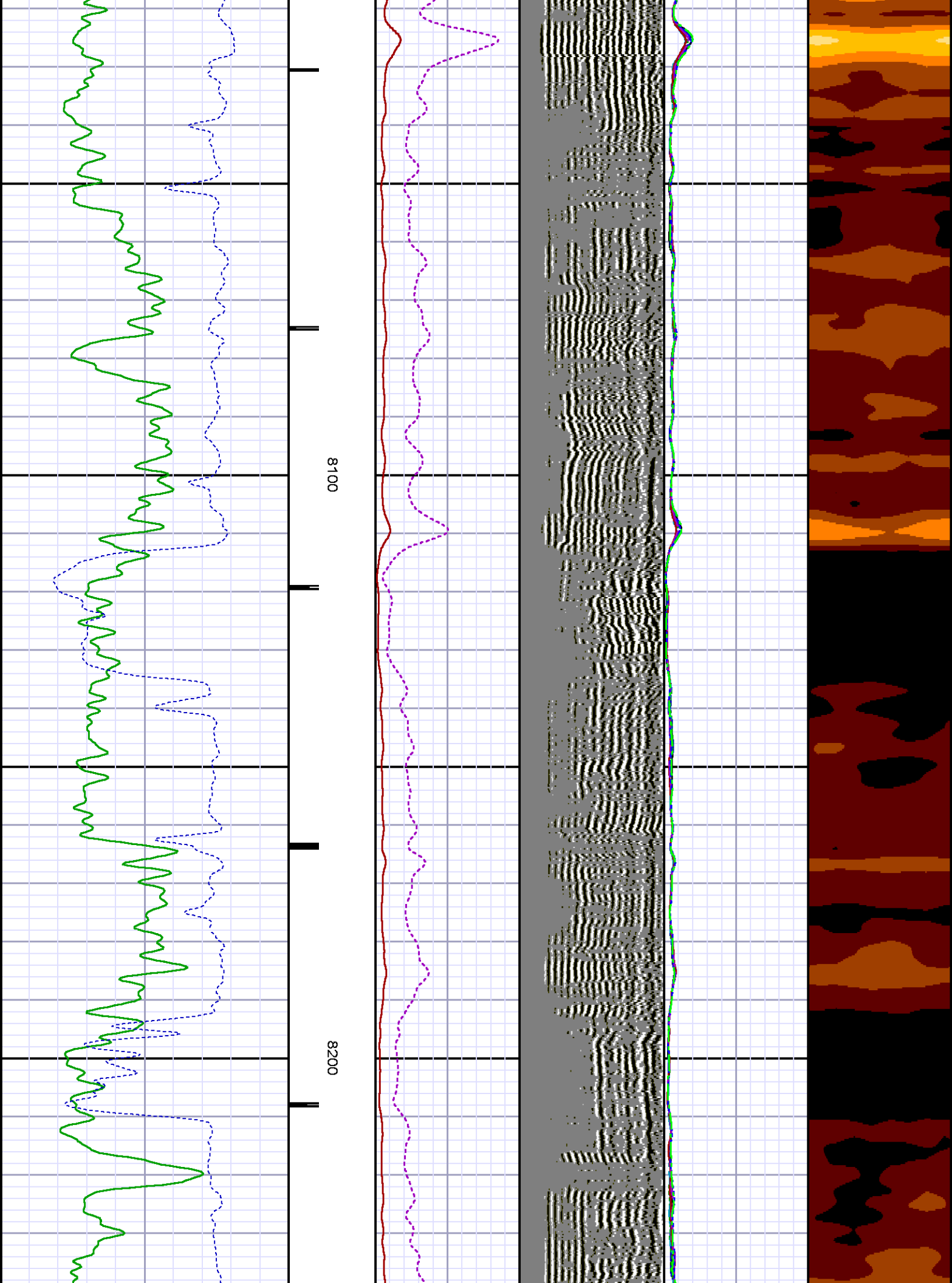


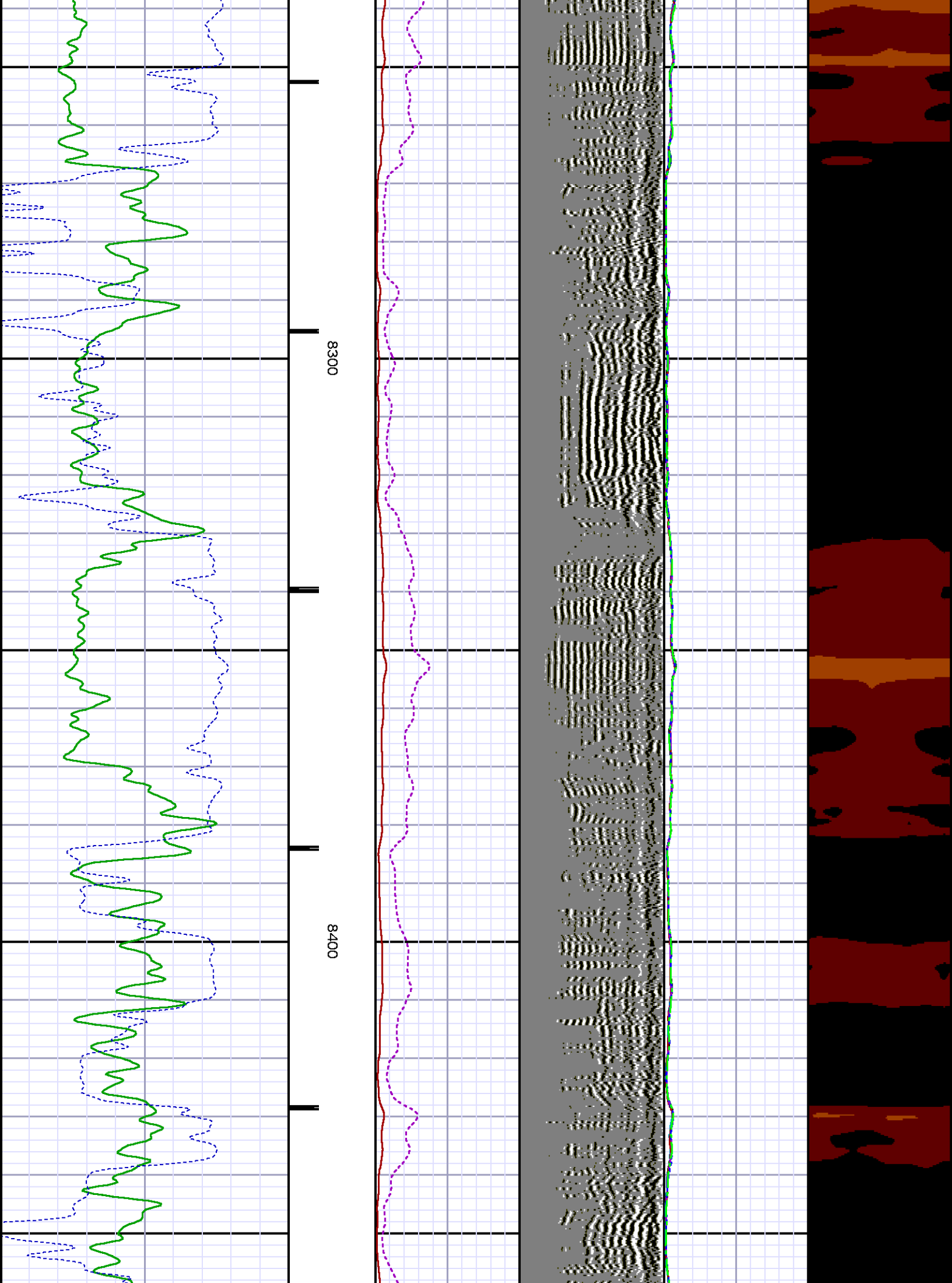


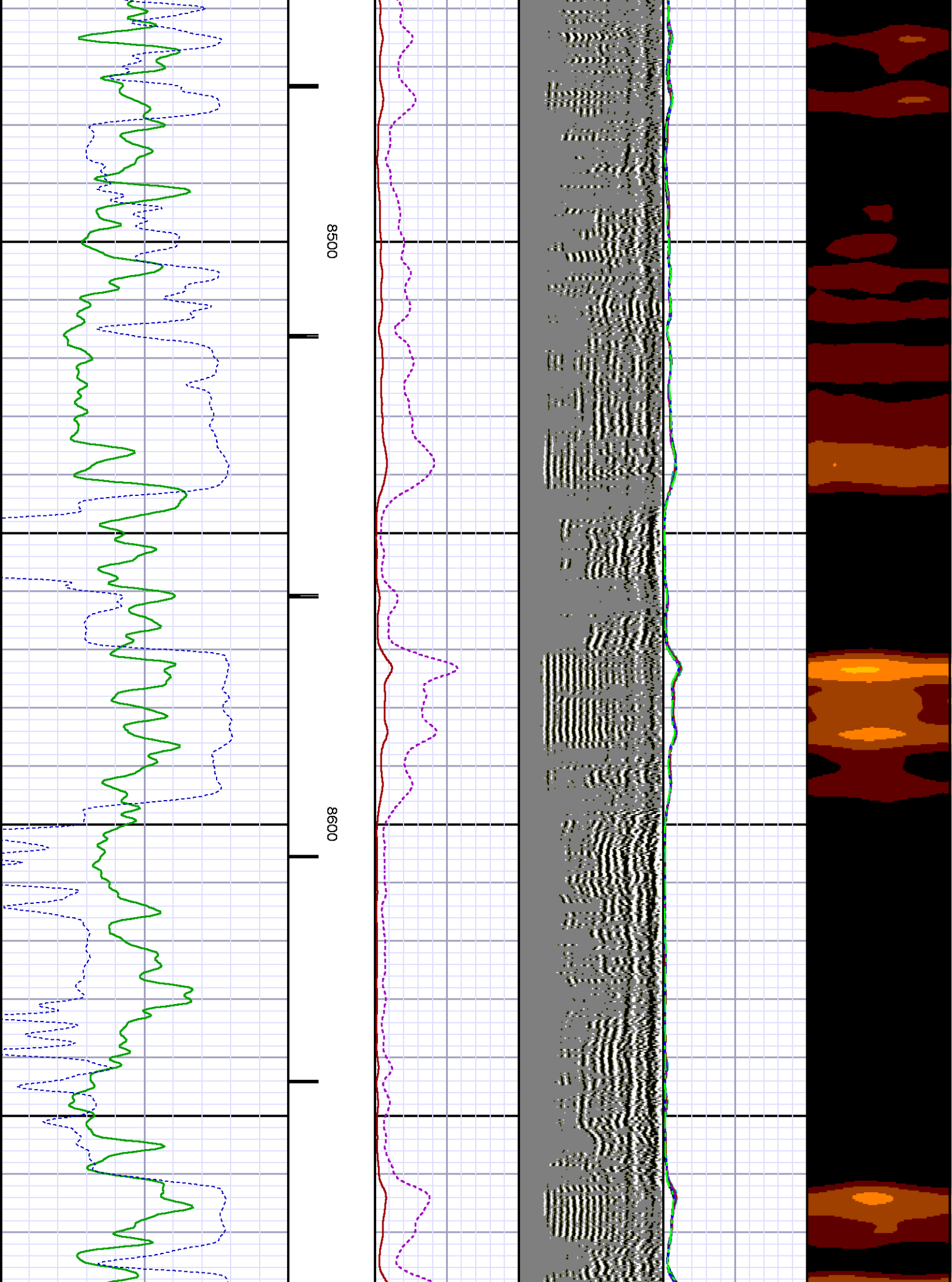


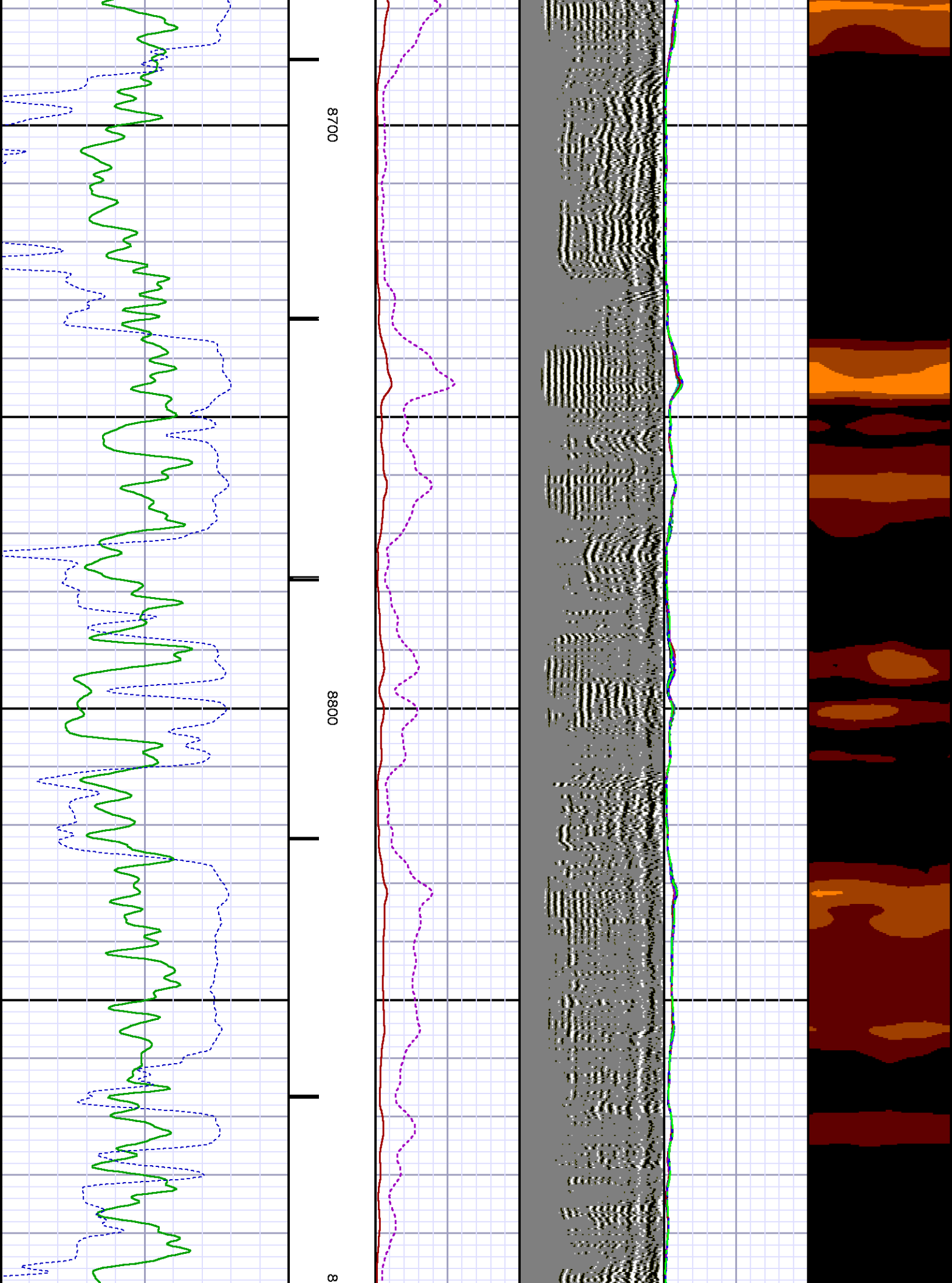


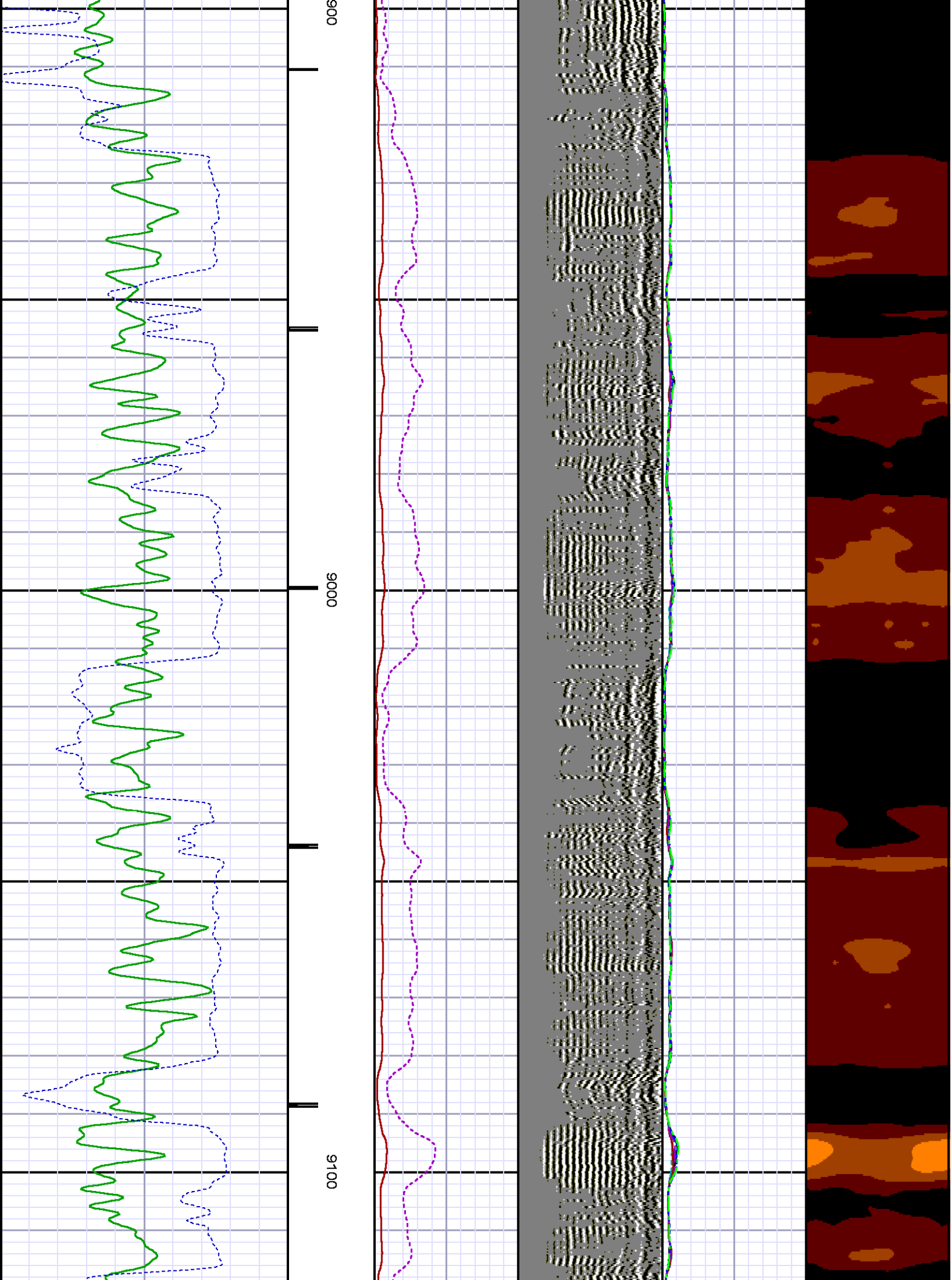


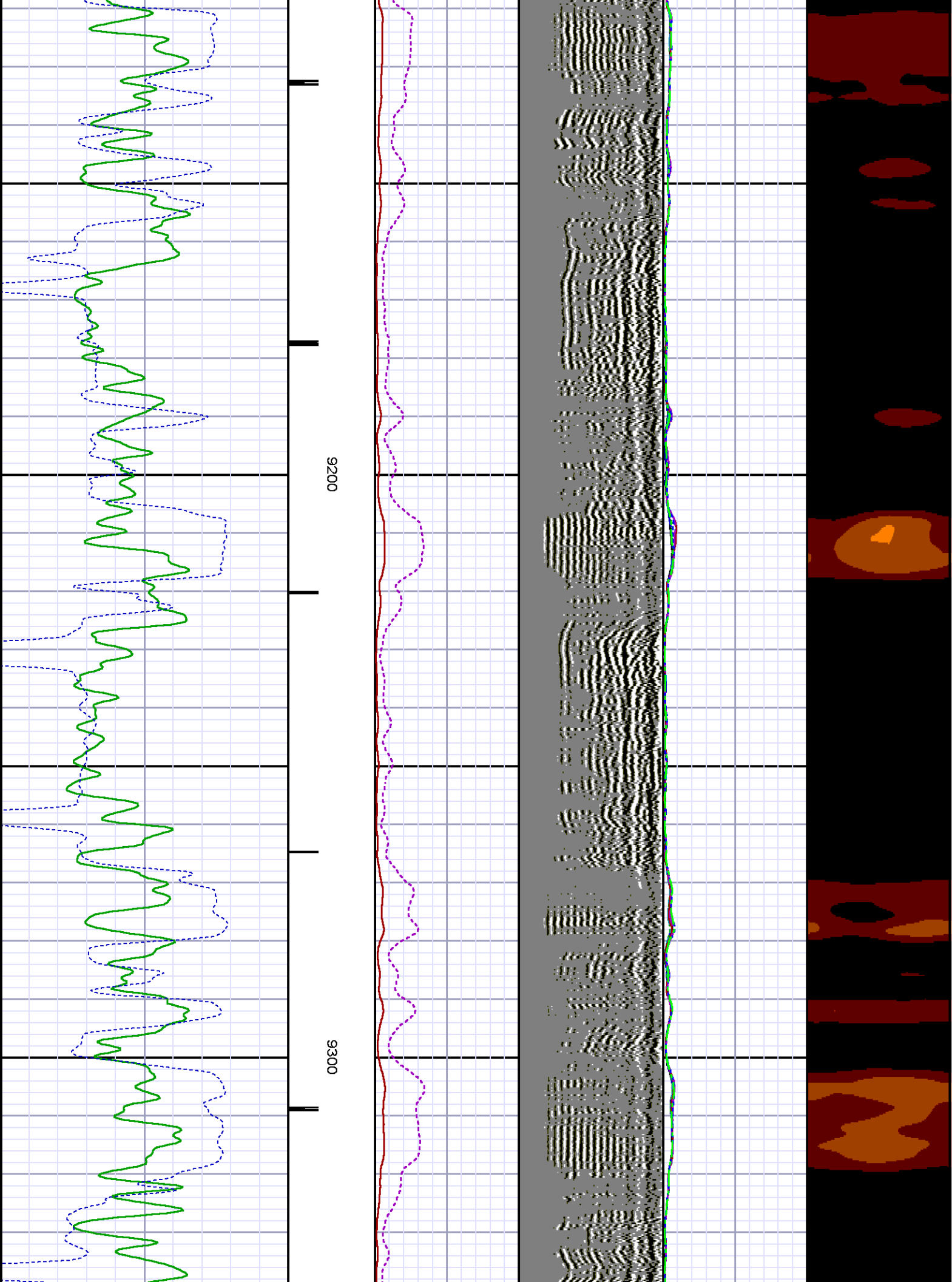


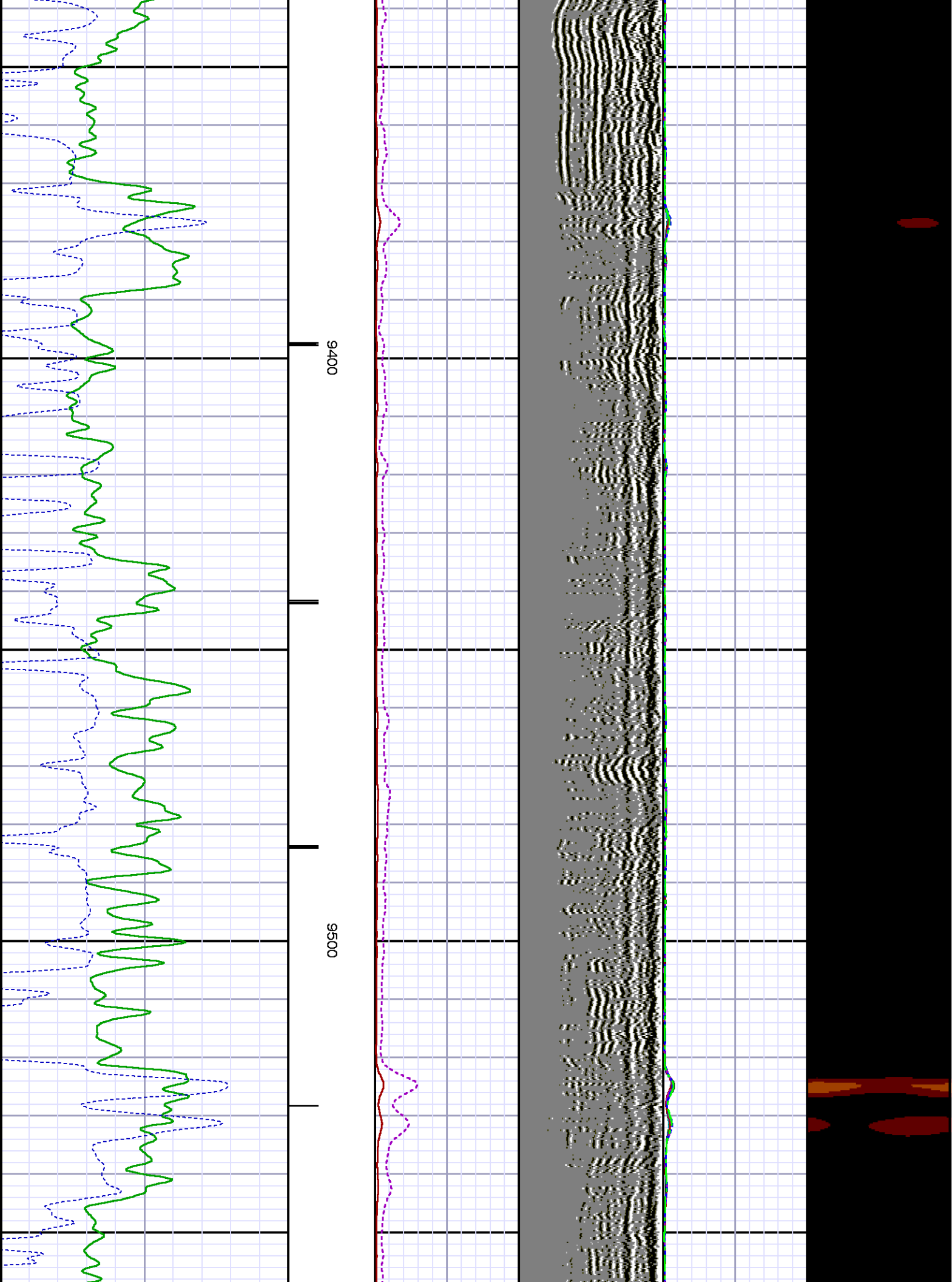


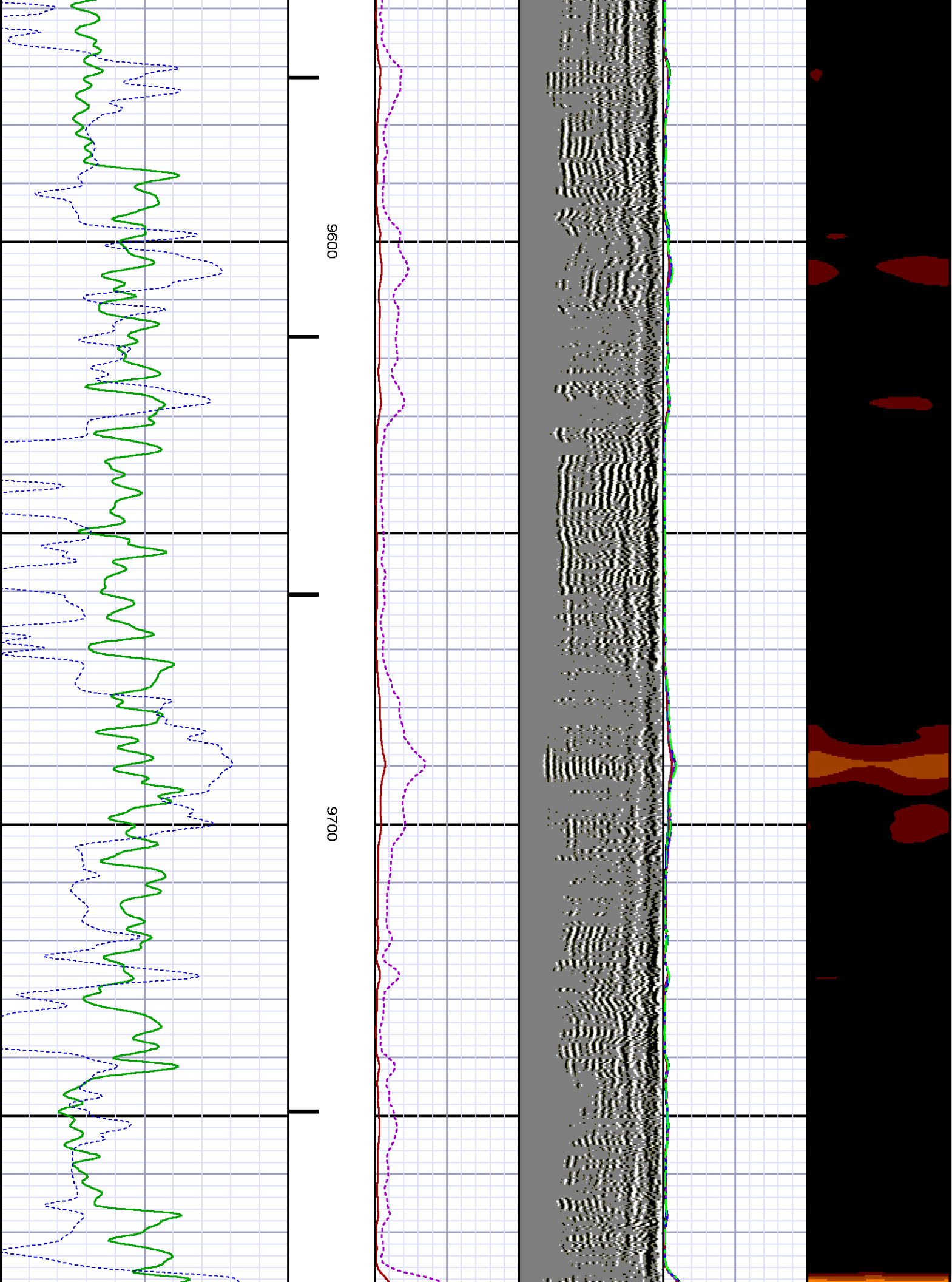


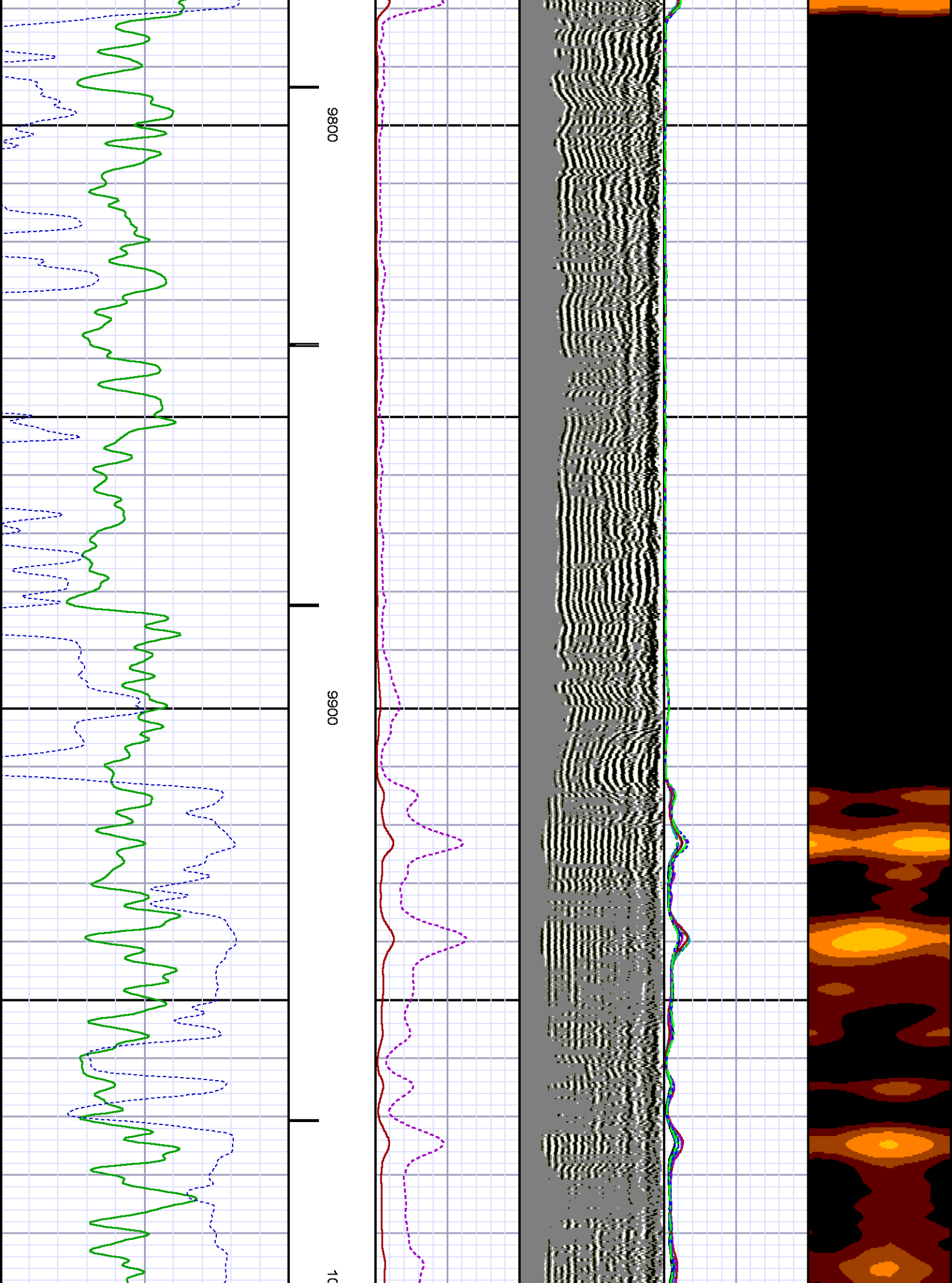


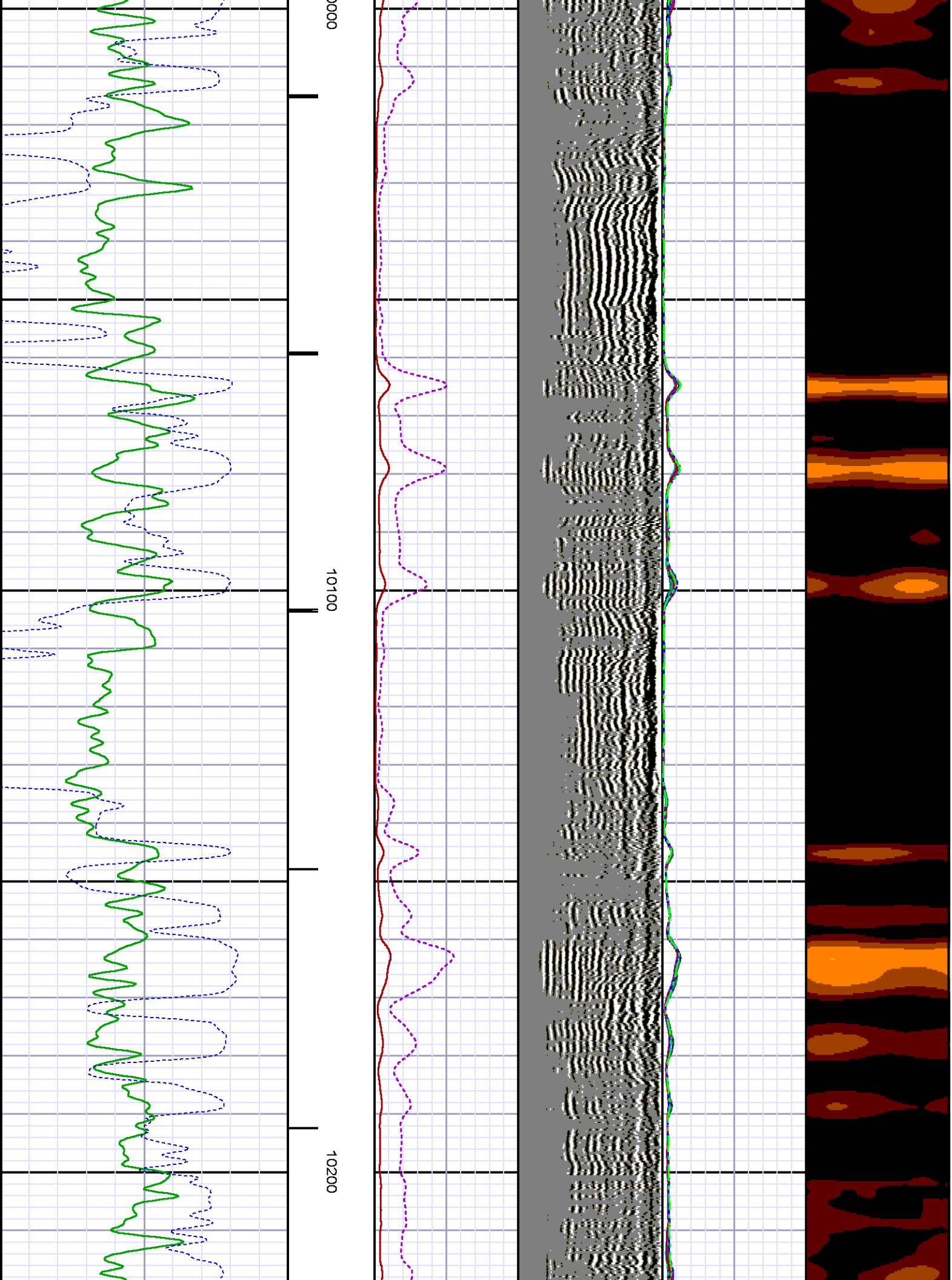


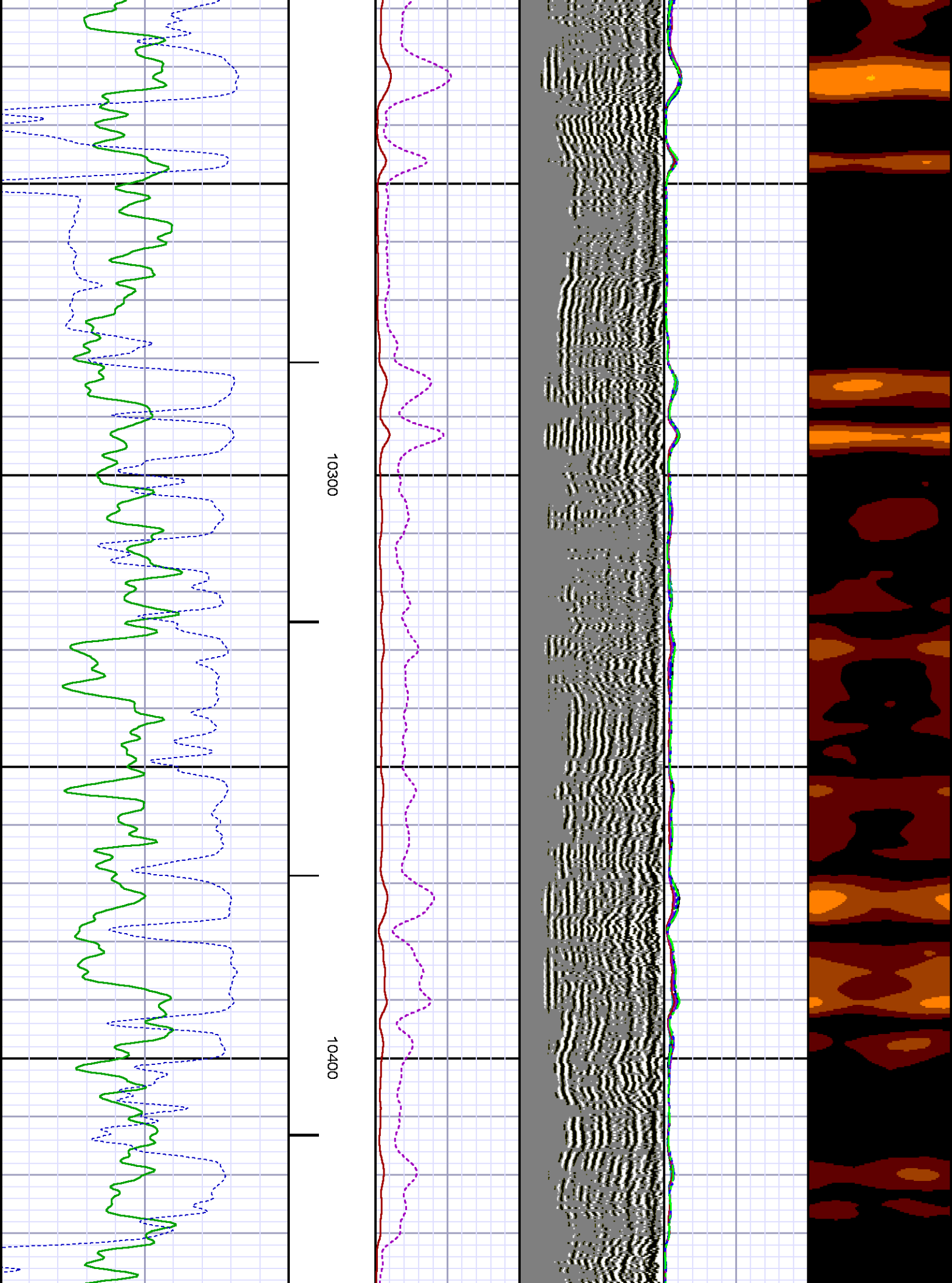


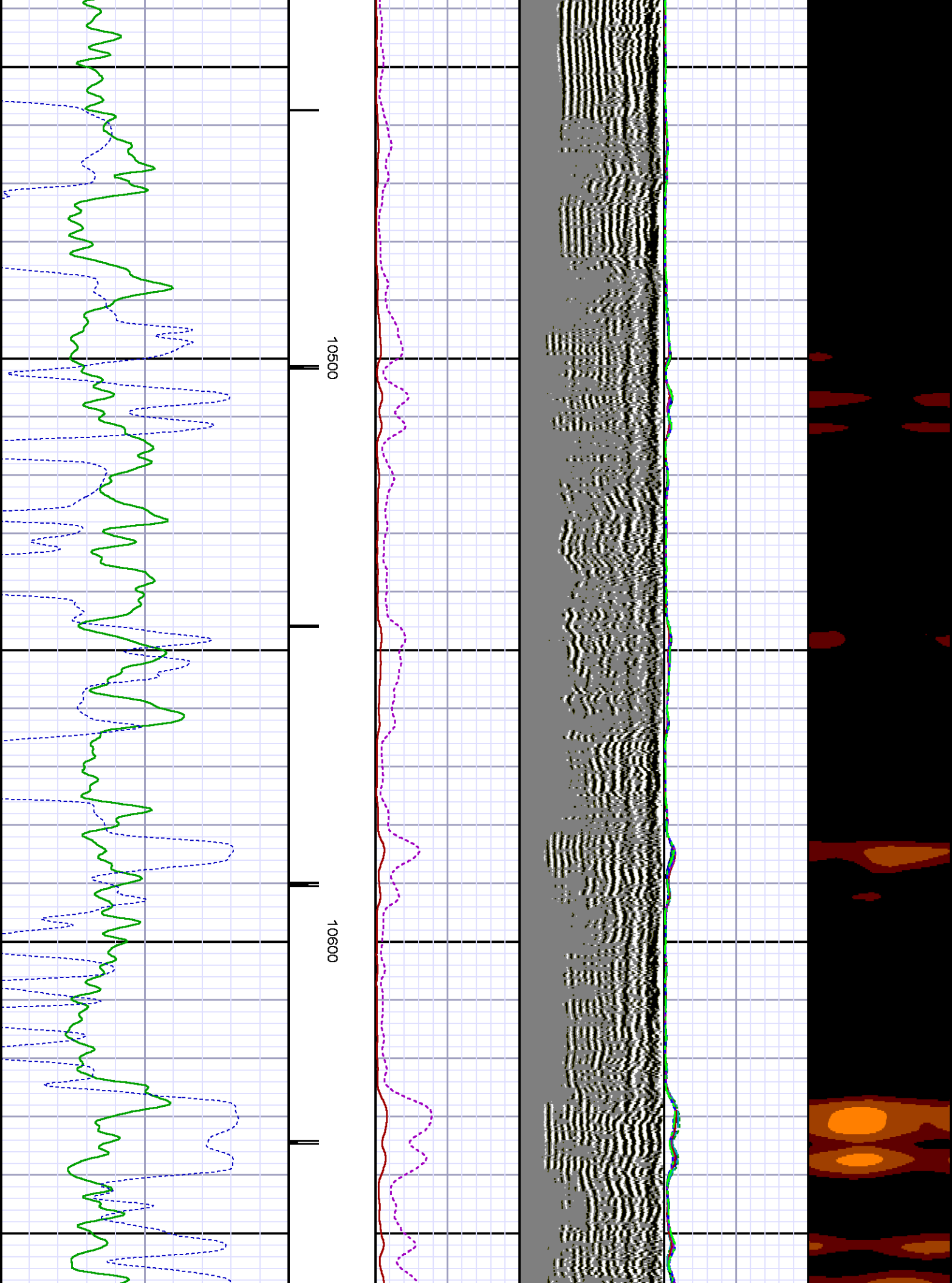


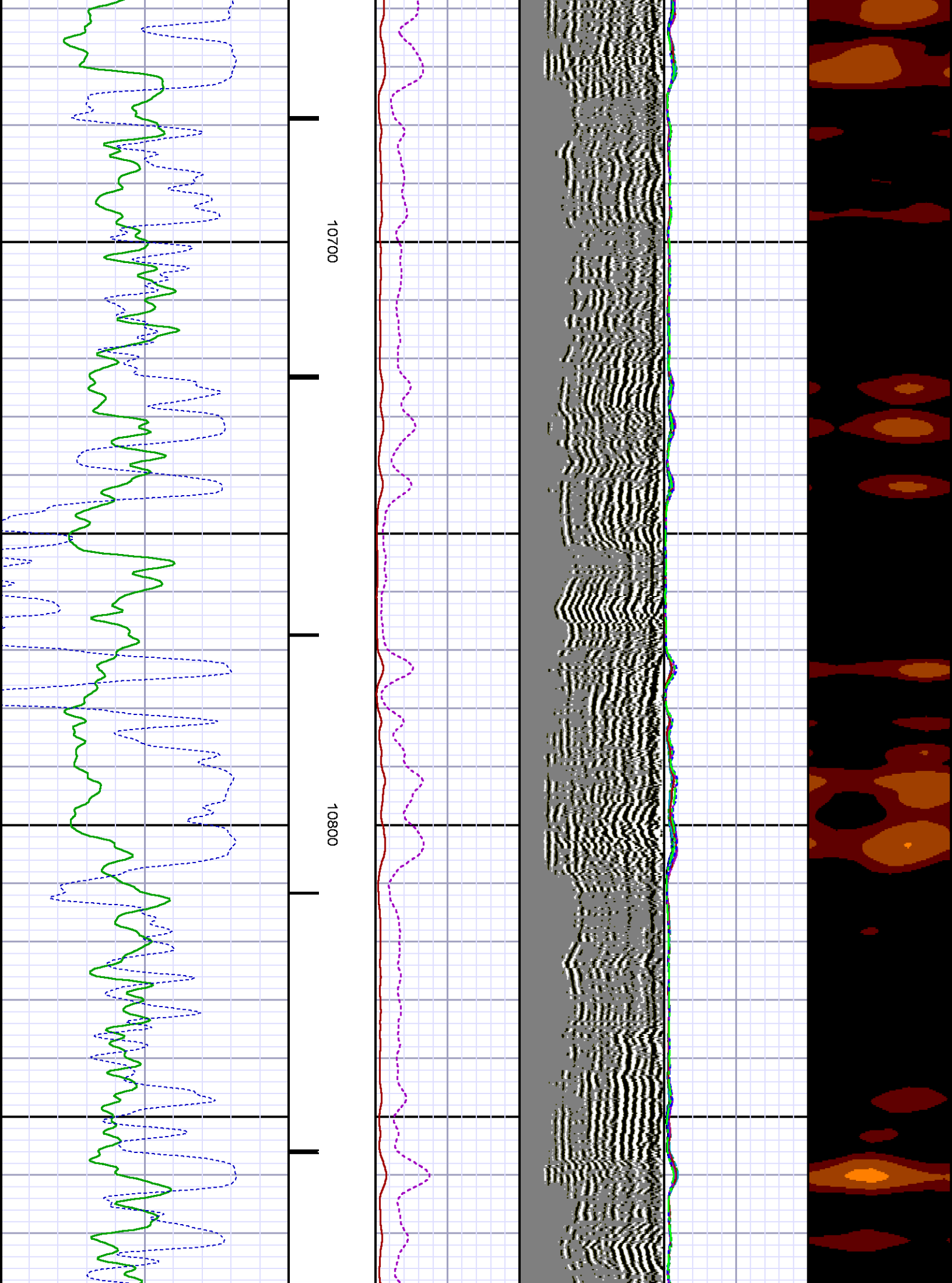


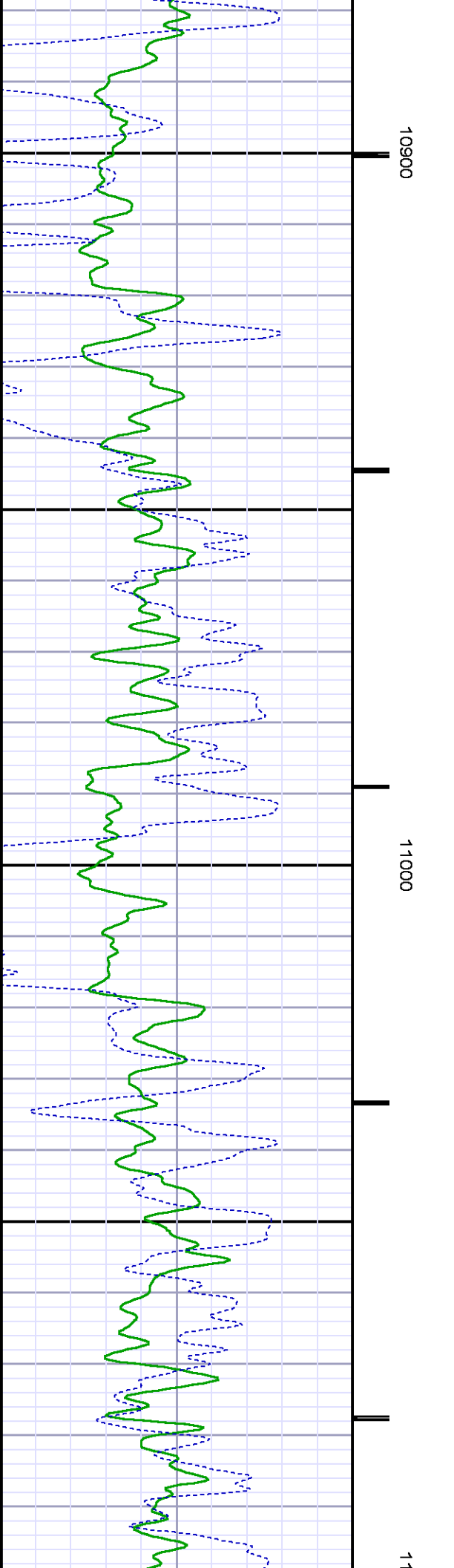
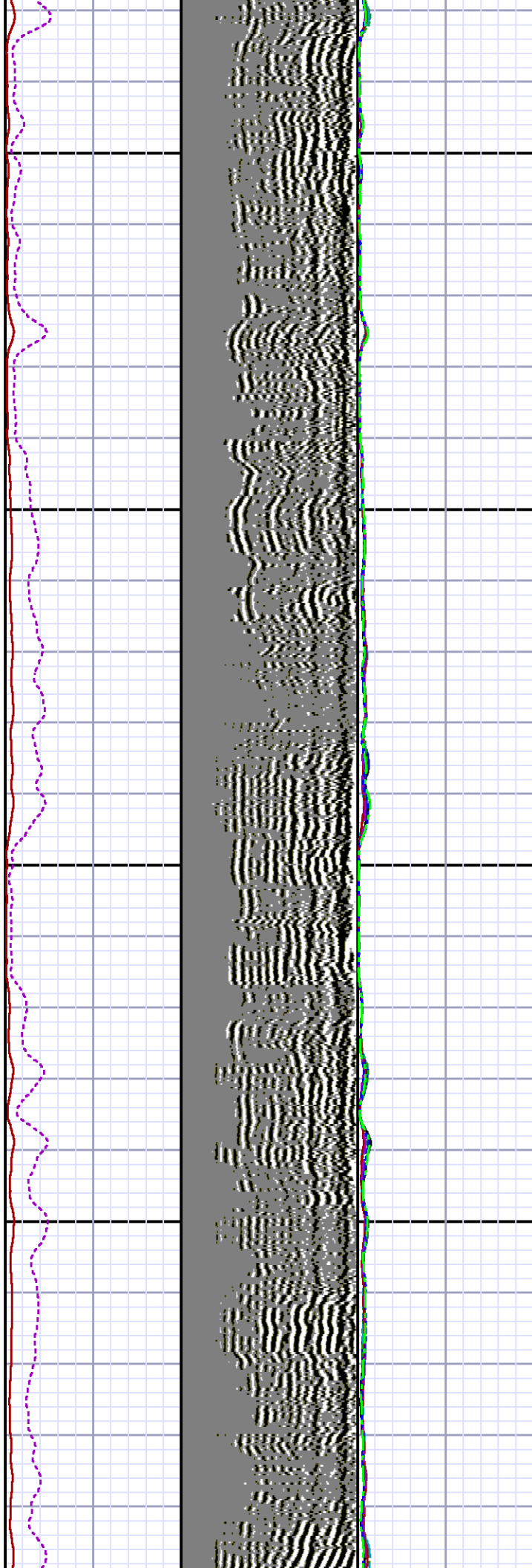
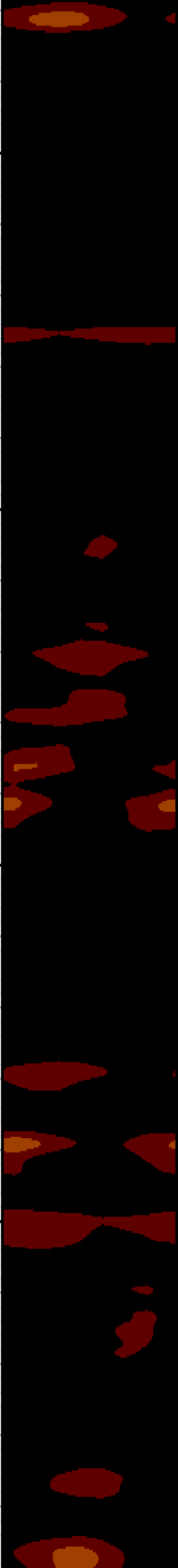


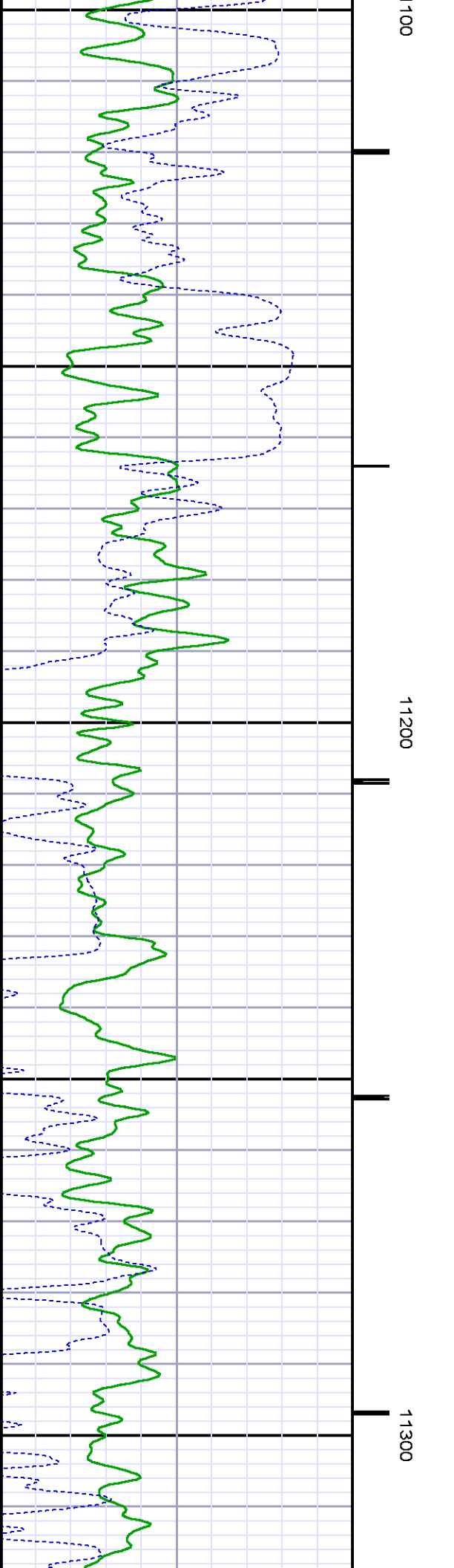
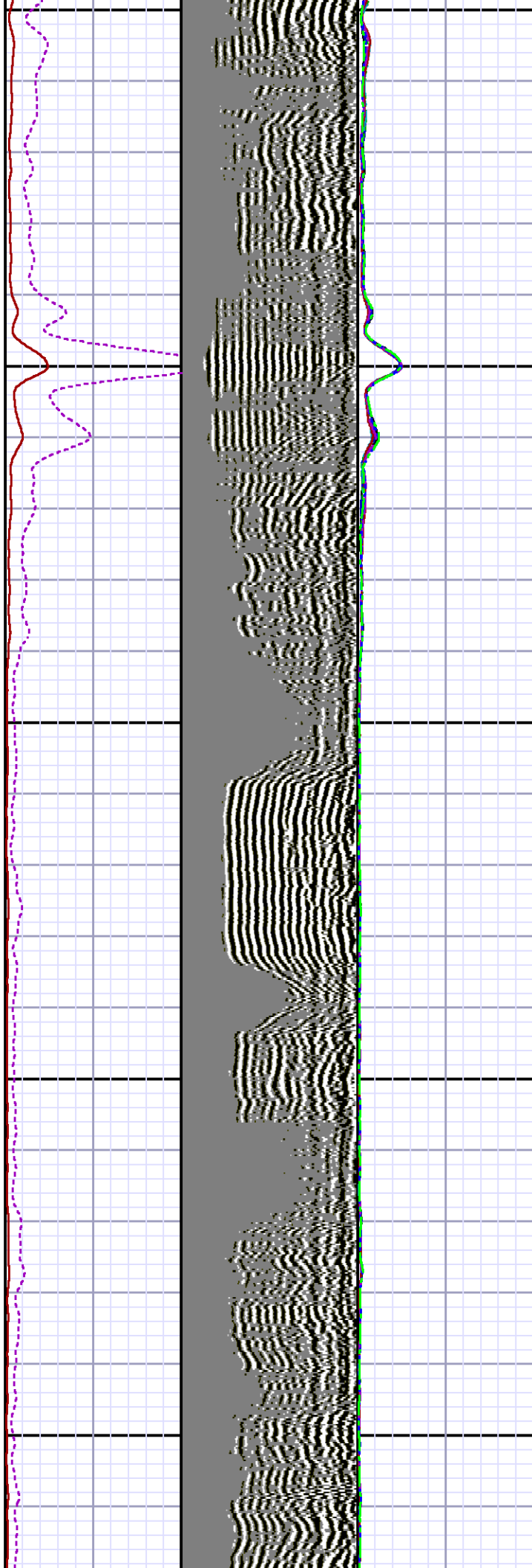


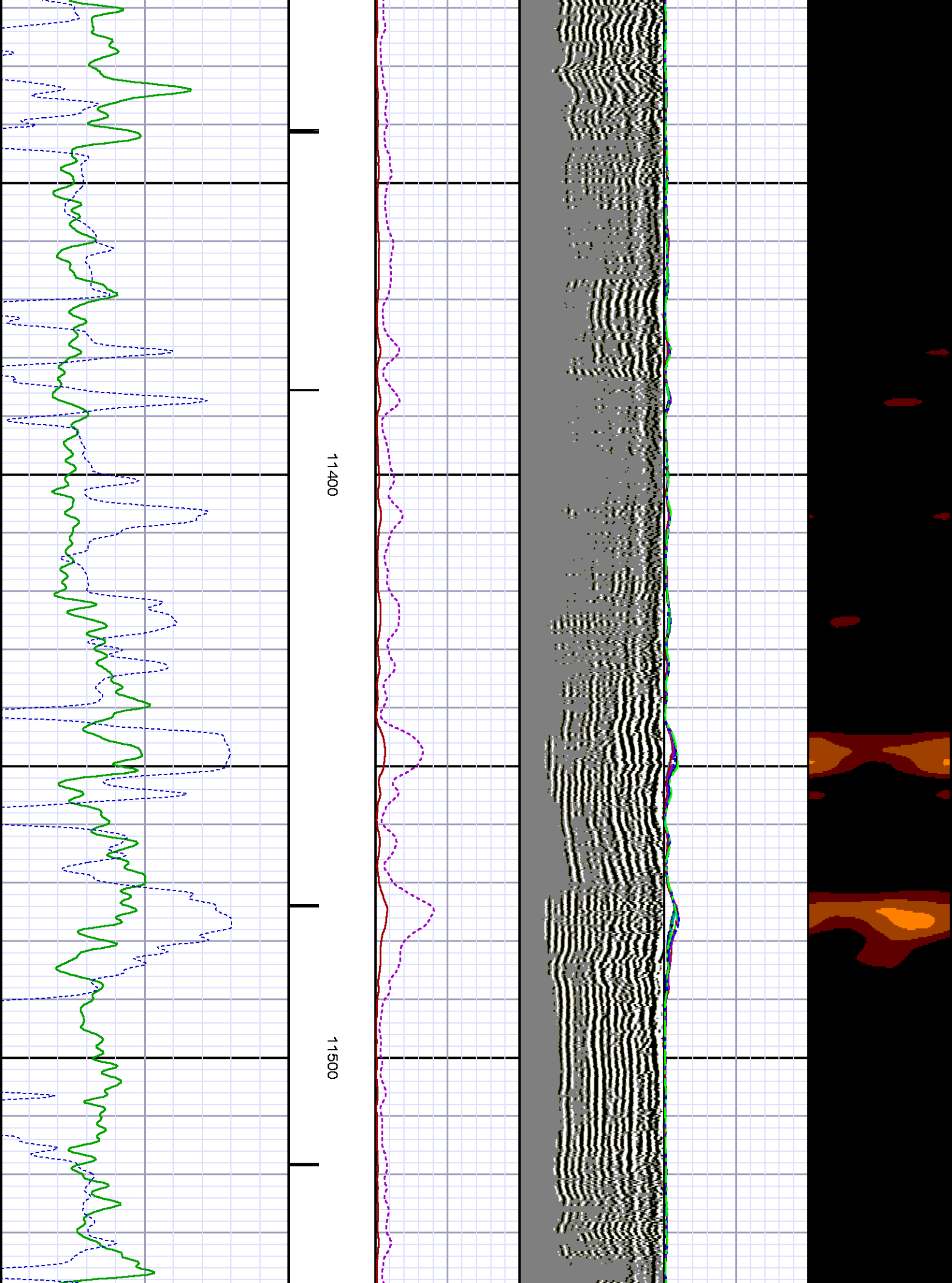


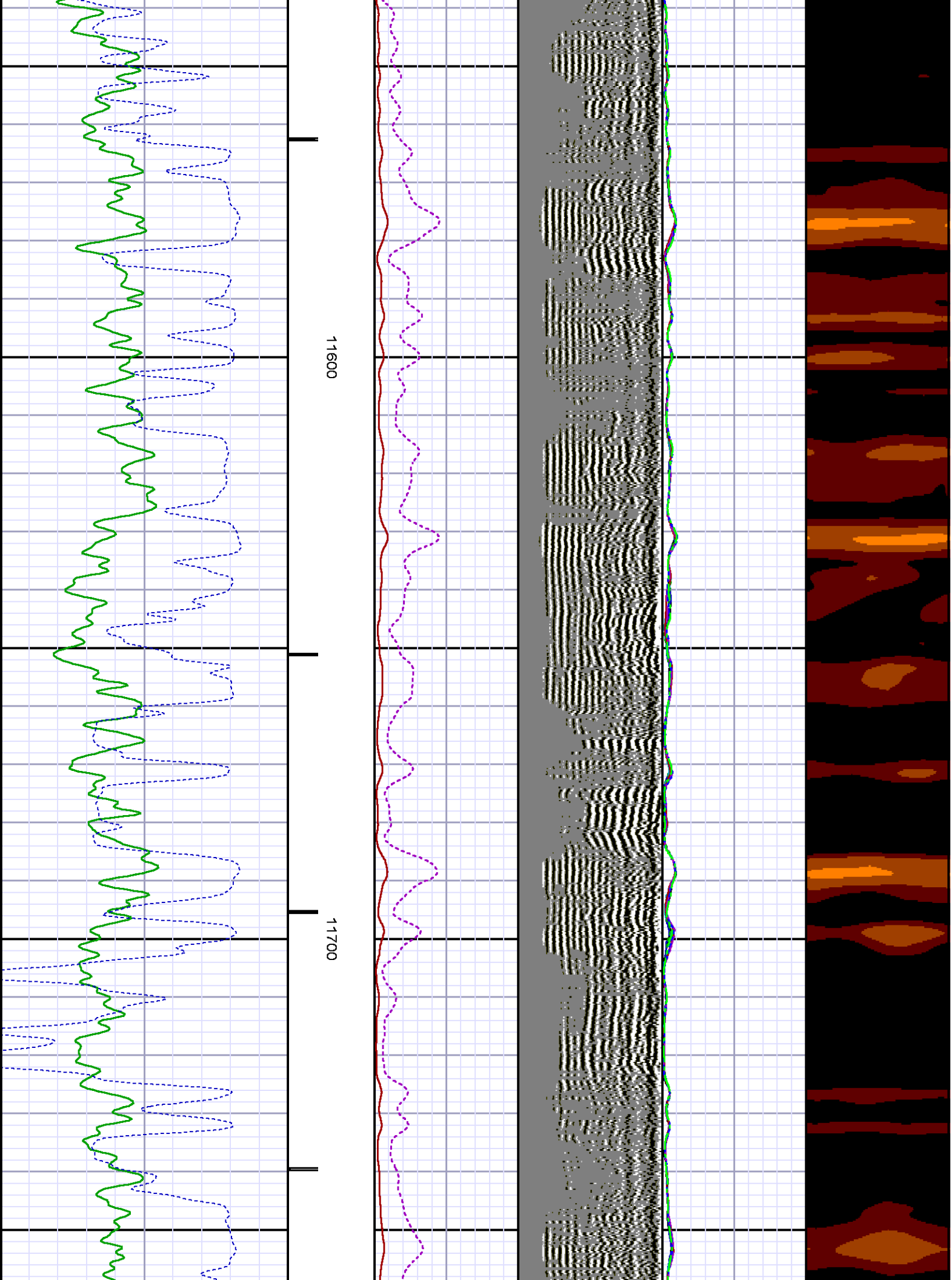


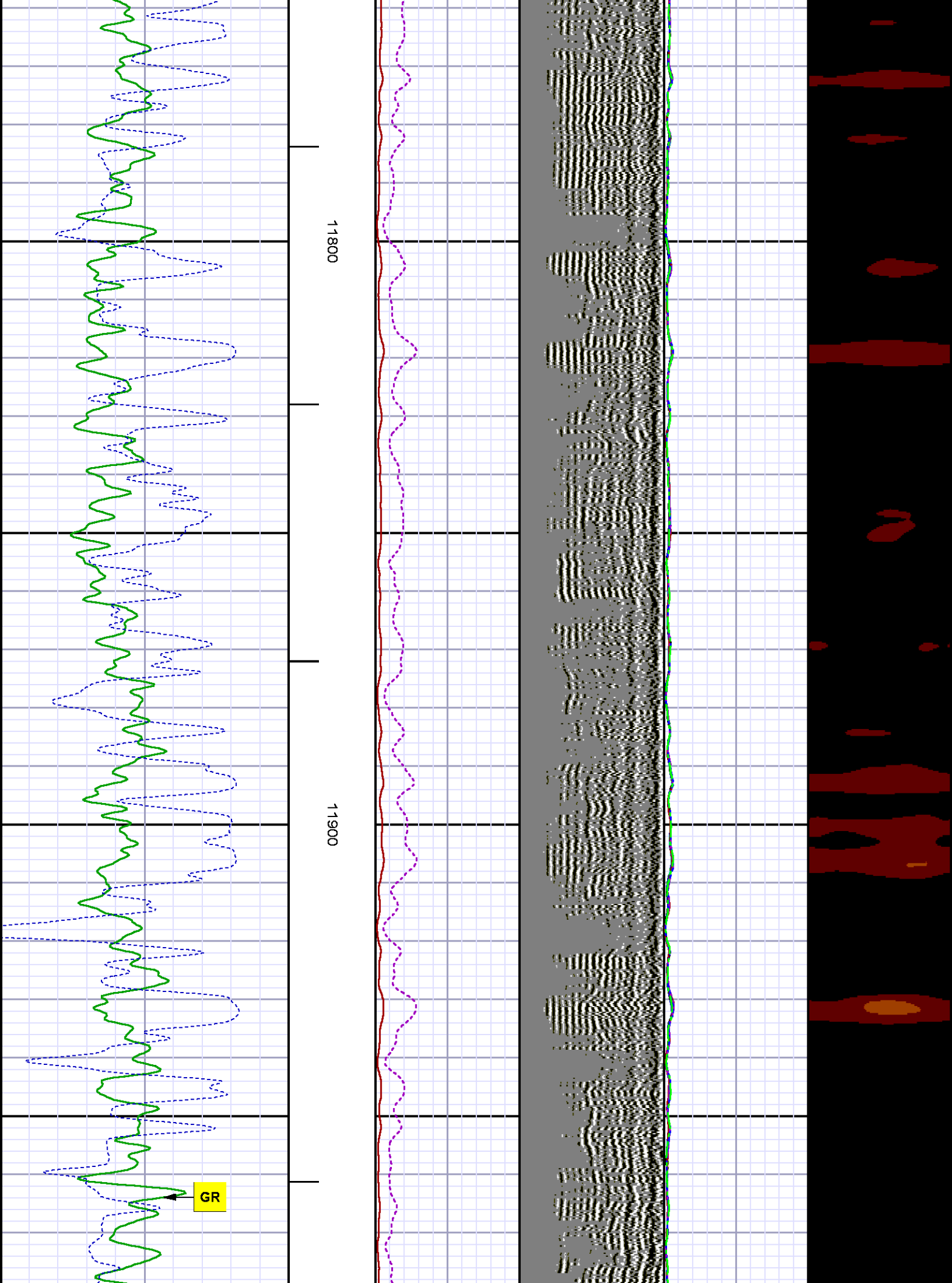


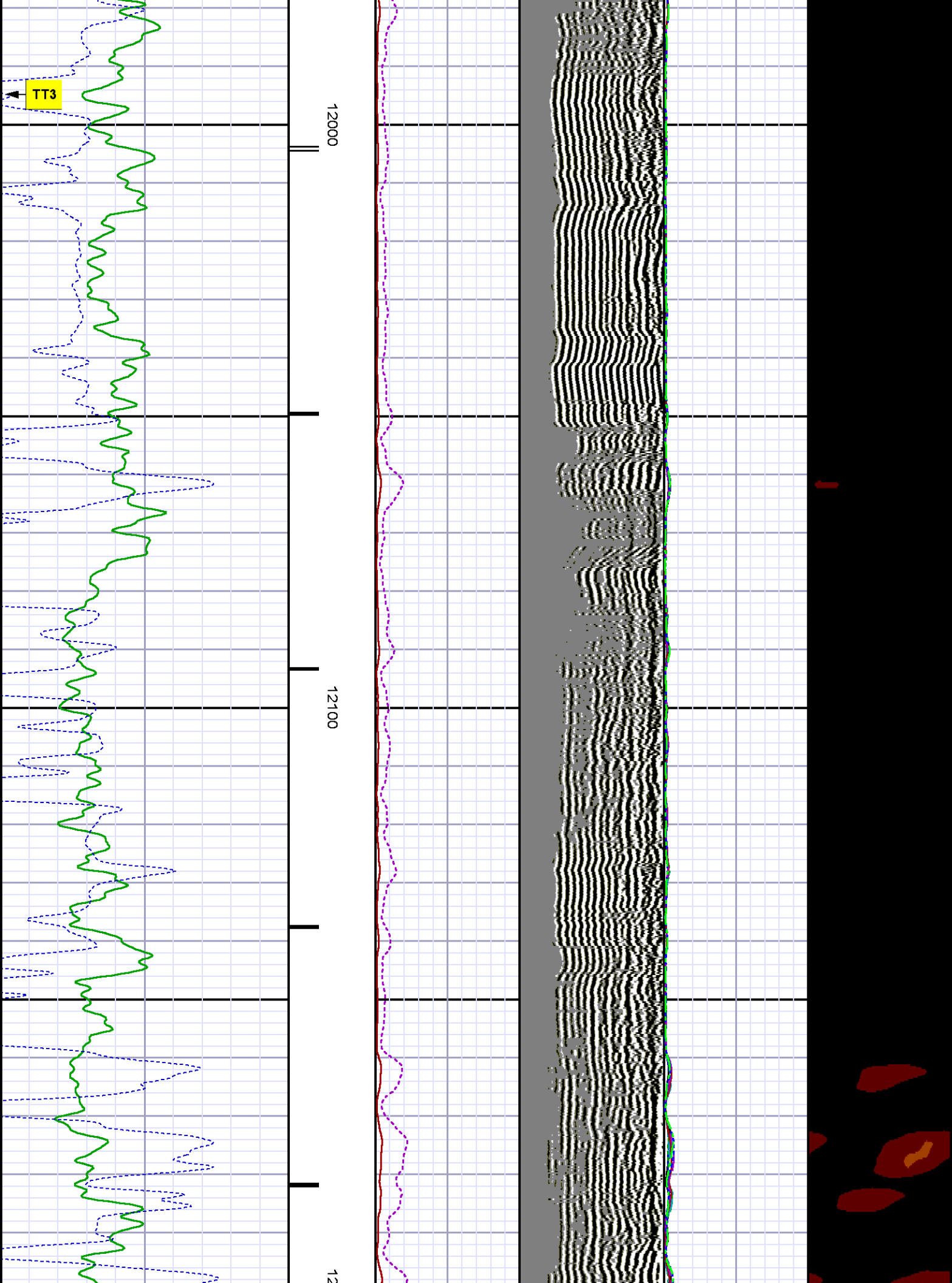


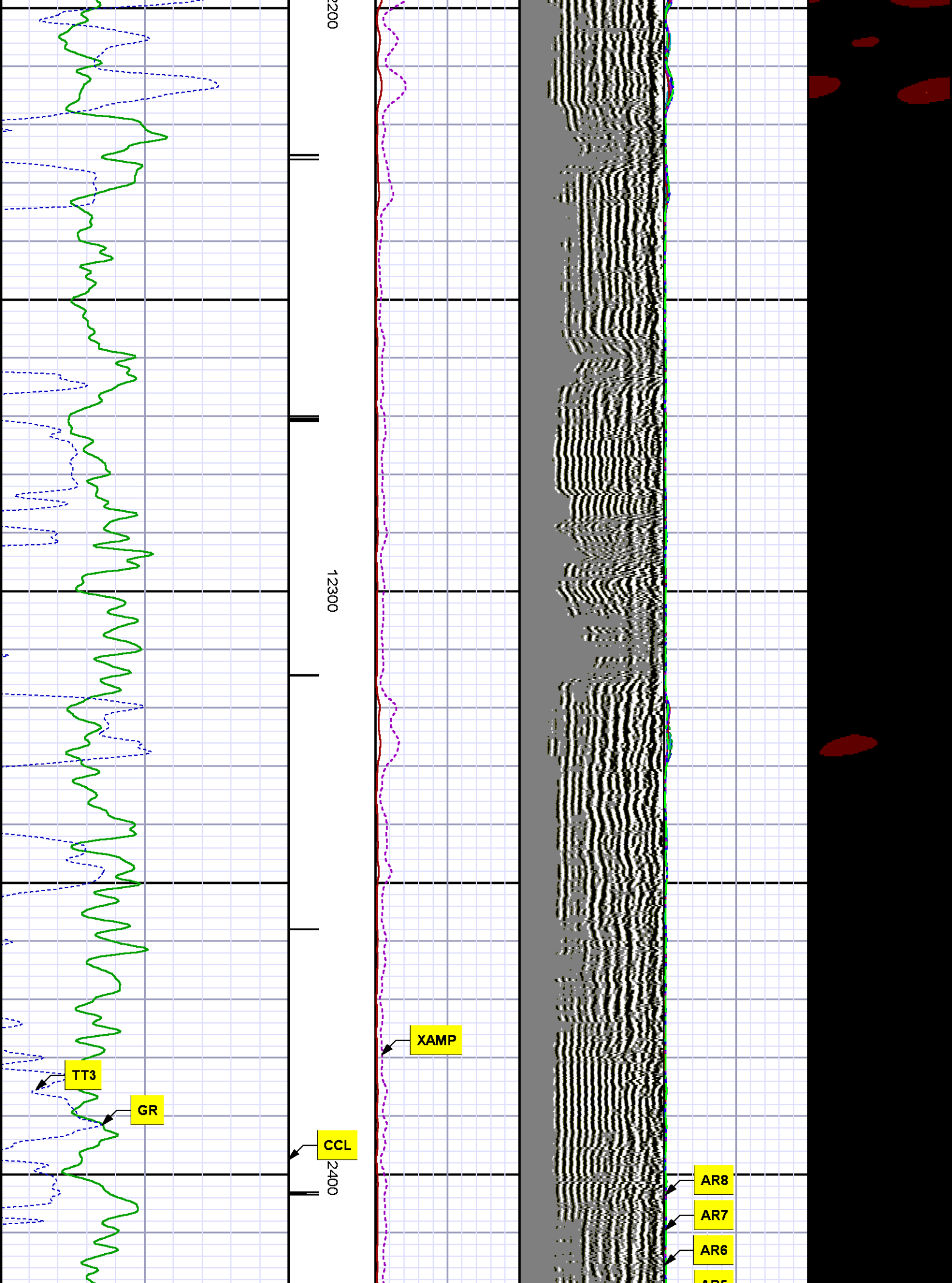


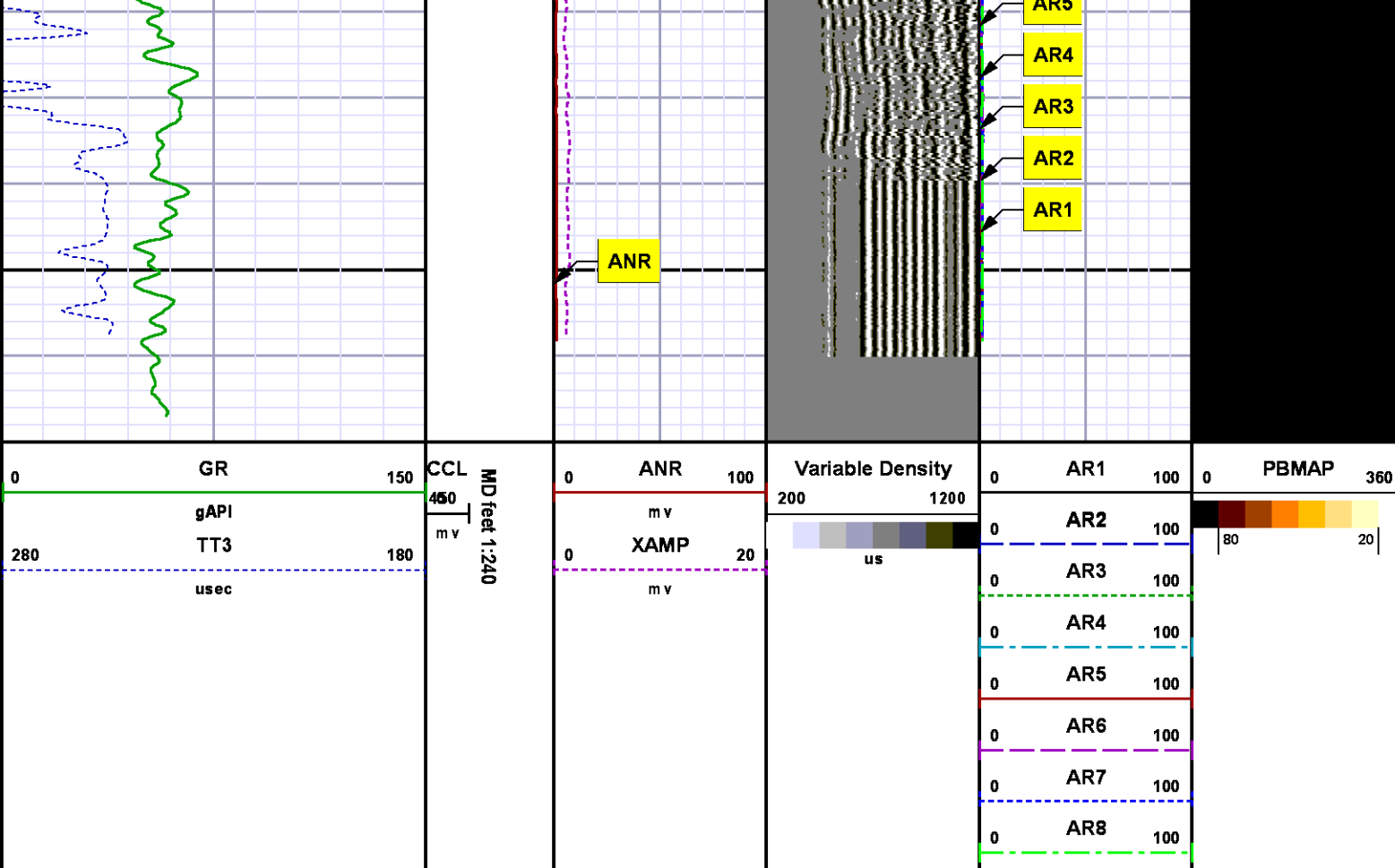












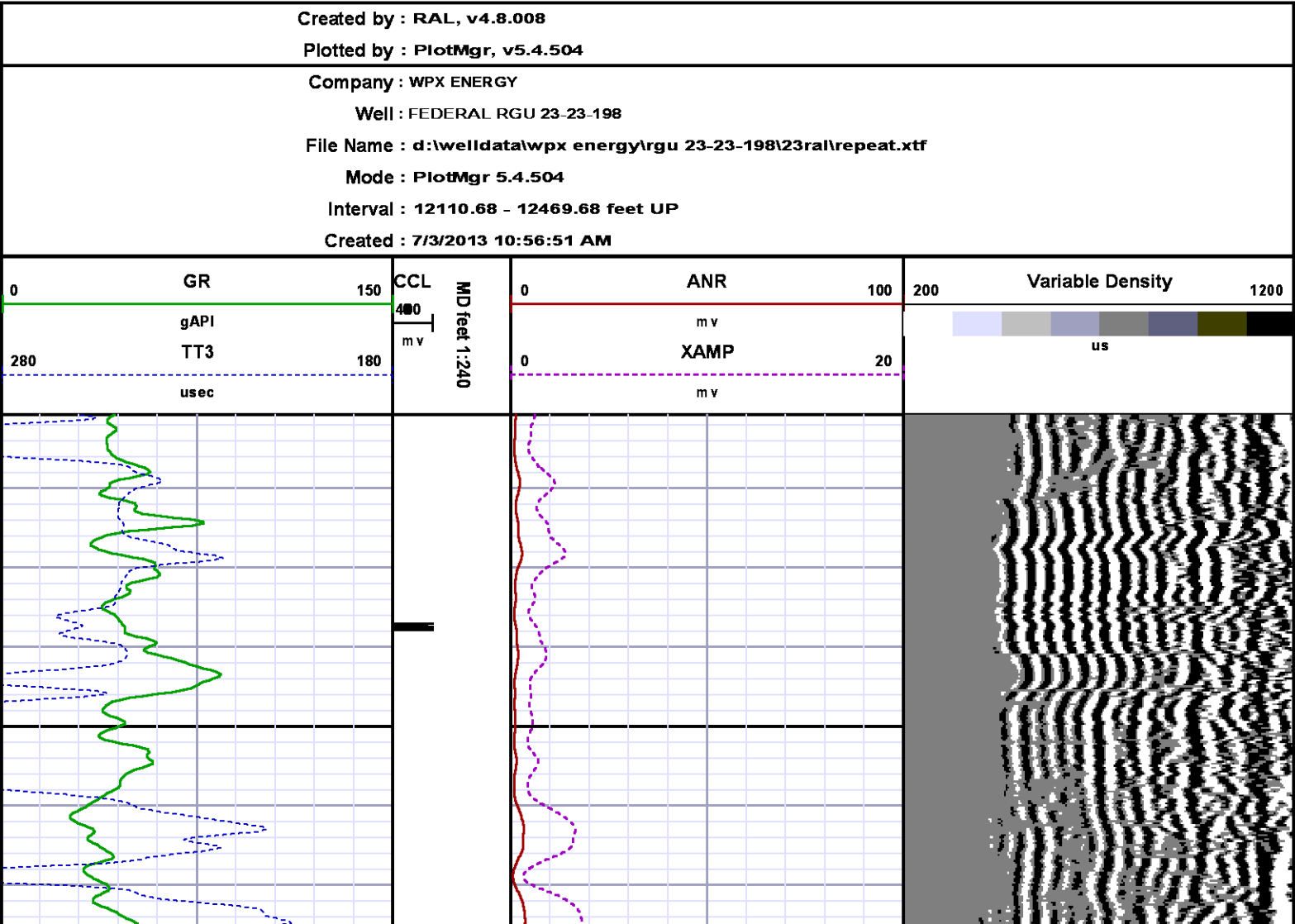
*REPEAT SECTION
0 PSI*

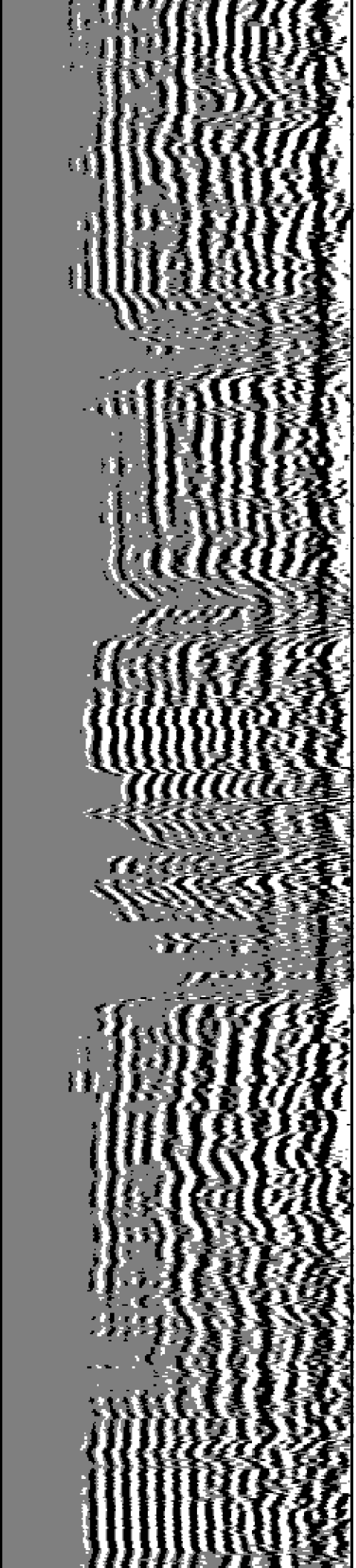
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	325.000	usec	12110.616	12469.680
RAL	Amp Gate Start Near	195.000	usec	12110.616	12469.680
RAL	Amp Gate Start Radial	195.000	usec	12110.616	12469.680
RAL	Amp Gate Width Far	25.000	usec	12110.616	12469.680
RAL	Amp Gate Width Near	25.000	usec	12110.616	12469.680
RAL	Amp Gate Width Radial	25.000	usec	12110.616	12469.680
RAL	casing od	4.500	inches	12110.616	12469.680
RAL	casing wt	11.600	lbm/ft	12110.616	12469.680
RAL	FB Start Far	315.000	usec	12110.616	12469.680
RAL	FB Start Near	180.000	usec	12110.616	12469.680
RAL	FB Start Radial	180.000	usec	12110.616	12469.680

RAL	FB Thresh Far	10.000	mv	12110.616	12469.680
RAL	FB Thresh Near	4.000	mv	12110.616	12469.680
RAL	FB Thresh Radial	4.000	mv	12110.616	12469.680
RAL	Fluid Travel Time	200.000	usec/ft	12110.616	12469.680

DEPTH OFFSETS
(for Acquired Curves)

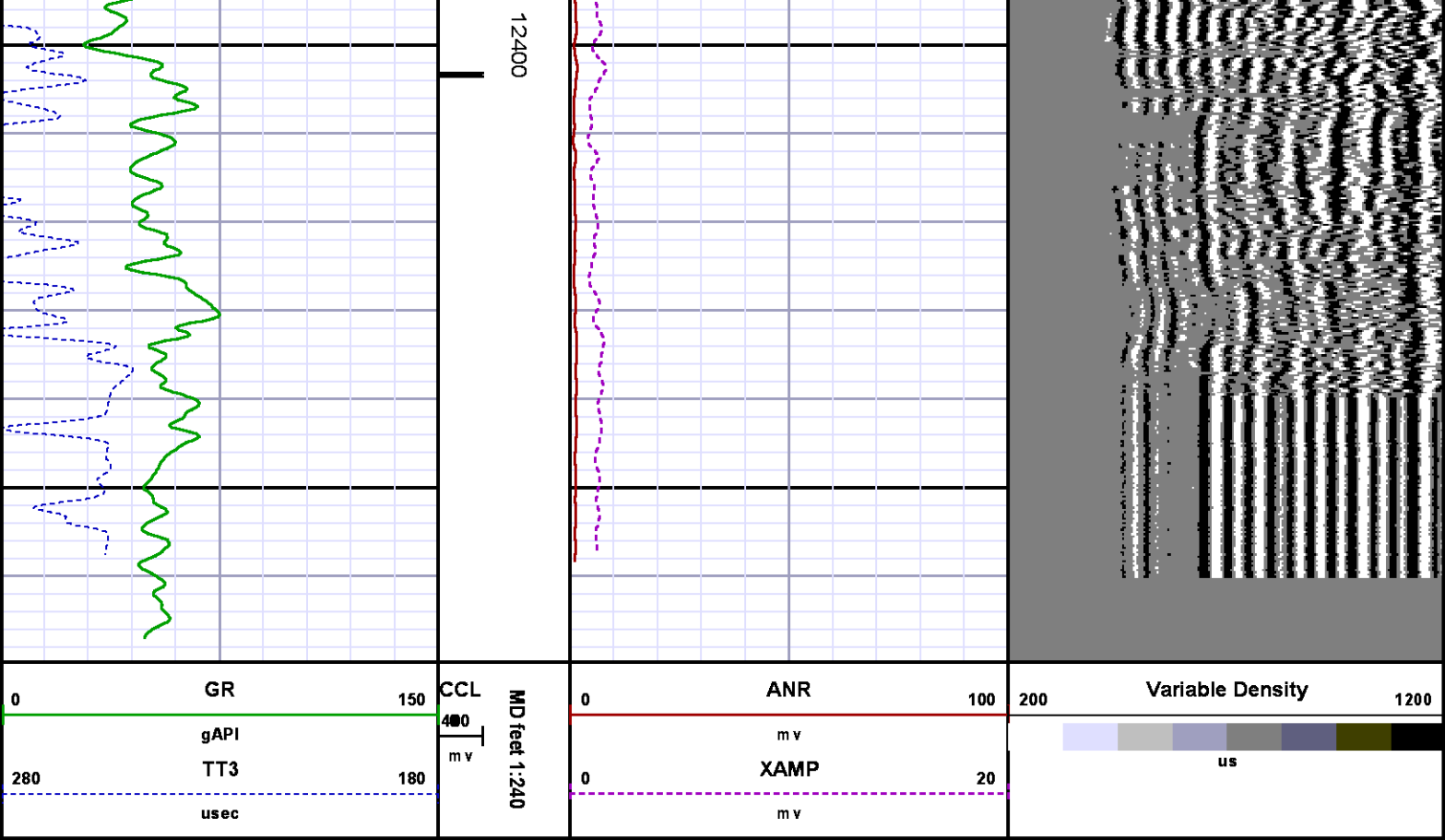
SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	-11.000	ACAL ANR AR1 AR2 AR3 AR4 AR5 AR6 AR7 AR8 CHV FPR2 FPR3 FPR5 TT3 TTR1 TTR2 TTR3 TTR4 TTR5 TTR6 TTR7 TTR8 XAMP
1426XA	-10.040	AFAR SIG TT5
1355XA	-5.620	CCL
1355XA	-1.500	GR
1355XA	0.000	TEMP





12200

12300



CALIBRATION SUMMARY

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

RALSHP

Shop Calibration: C:\case\calver\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 [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	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			

TOOL DIAGRAM

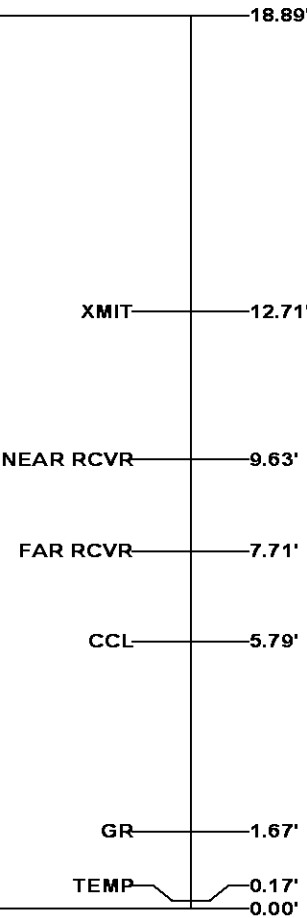
OTA SHORT CABLE HEAD

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"

<div> BAKER HUGHES</div> <div>Baker Atlas</div> <div></div>	Company WPX ENERGY		File No: CH074105	
	Well FEDERAL RGU 23-23-198		API No: 05103117880000	
	Field SULPHUR CREEK			
County RIO BLANCO		State COLORADO		
Location		Elevations		
SHL: 1828' FSL x 1906' FWL		KB 6566 ft		23 1S 98W
BHL: 2617' FSL x 1895' FWL		DF		RGU 23-23-198 PAD
		GL 6545 ft		CYCLONE 29
SEC 23	TWP 1S	RGE 98W		