



# RADIAL ANALYSIS BOND LOG

## Baker Atlas

File No: GH048864	Company Well Field County	WPX ENERGY CLOUGH NR 422-3 RULISON GARFIELD	State COLORADO
API No: 06045205250000	Location SHL: 1917' FSL, 1756' FWL (NESW) BHL: 2466' FSL, 2046' FWL (SENNW) H&P 280		Other Services NONE
Permanent Datum Log Measured From Drill Measured From	OL KB KELLY BUSHING	Elevation 24 ft Above P. D.	Elevations KB 6742.9 ft DF GL 6719.9 ft

Date	01/MAY/12	
Run	ONE	
Service Order	676913	
Depth Driller	10035 ft	
Depth Logger	10012 ft	
Bottom Logged Interval	10002 ft	
Top Logged Interval	24 ft	
Time Started	1800	
Time Finished	2200	
Operator Rig Time	4 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	100 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	252 degF	
Reference Log	SLUMBERGER OPEN HOLE	
Reference Log Date	21DEC/2011	
Equipment No.	Location	
Recorded By	4271	GRAND JCT
Witnessed By	FLOYD RENEAU	
	Alex Vater	

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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	2400 ft
7.875 in	0 ft	10035 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	2400 ft
4.5 in			0 ft	10035 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Slubmerger open hole log dated 12/2/2011 at the clients request.  The amount of linear shift is 19 feet.          The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

Logged with zero PSI at wellhead.

BHT = 252°F

SJ = 6792'-6814'

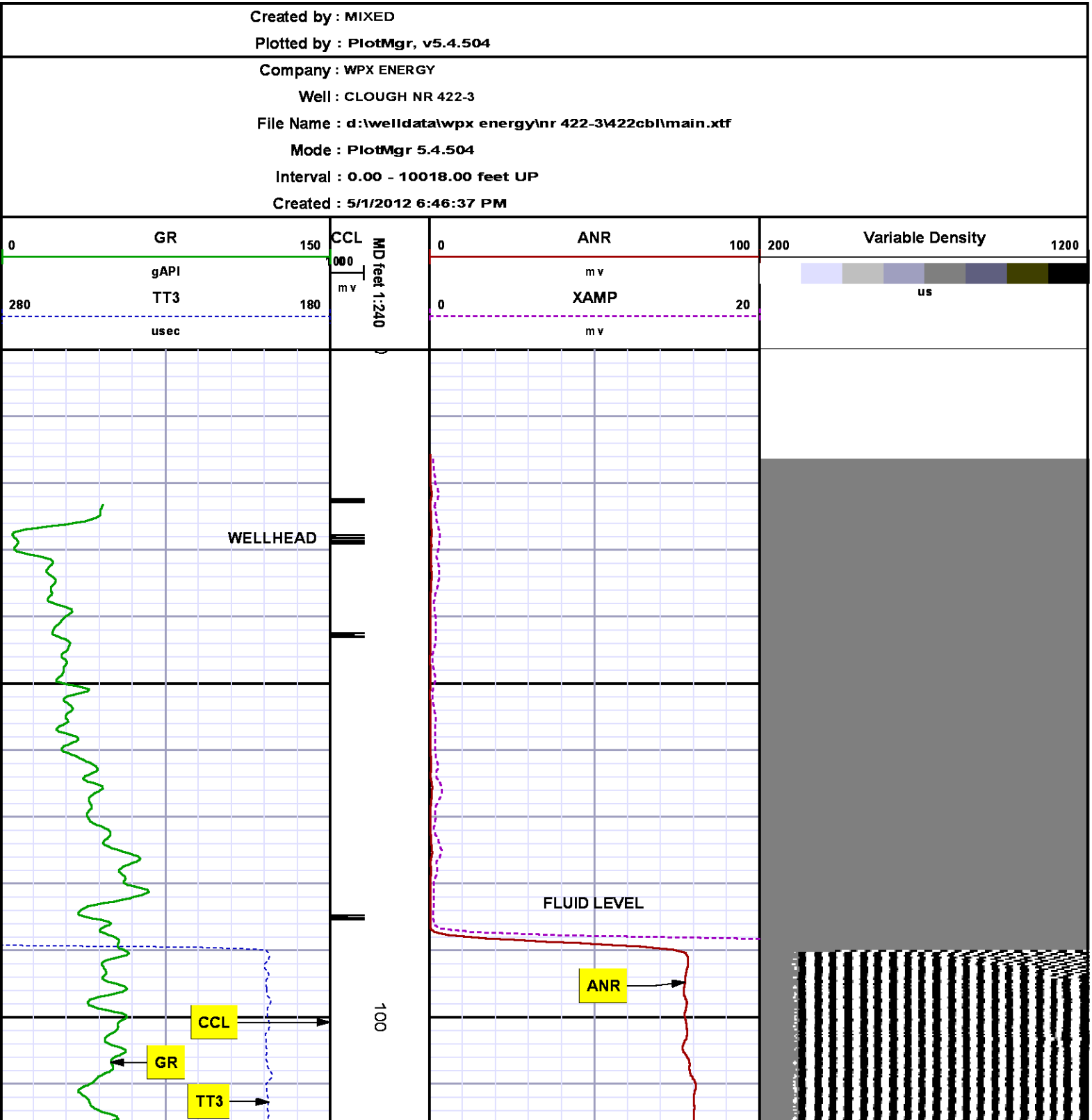
Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10156975	CENT
1	1	GRICCL	2459XA	10404544	CENT

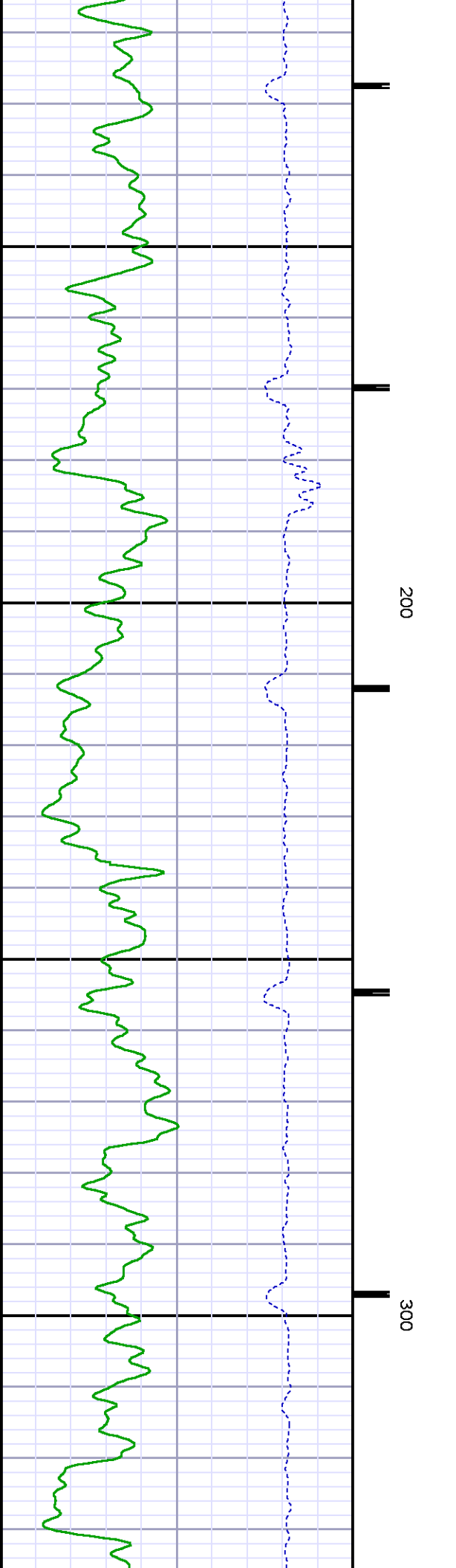
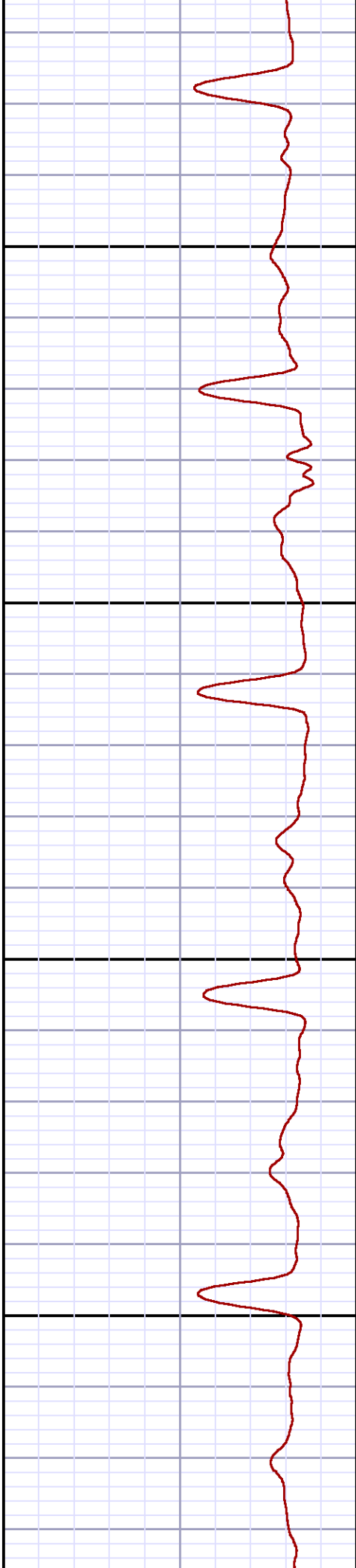
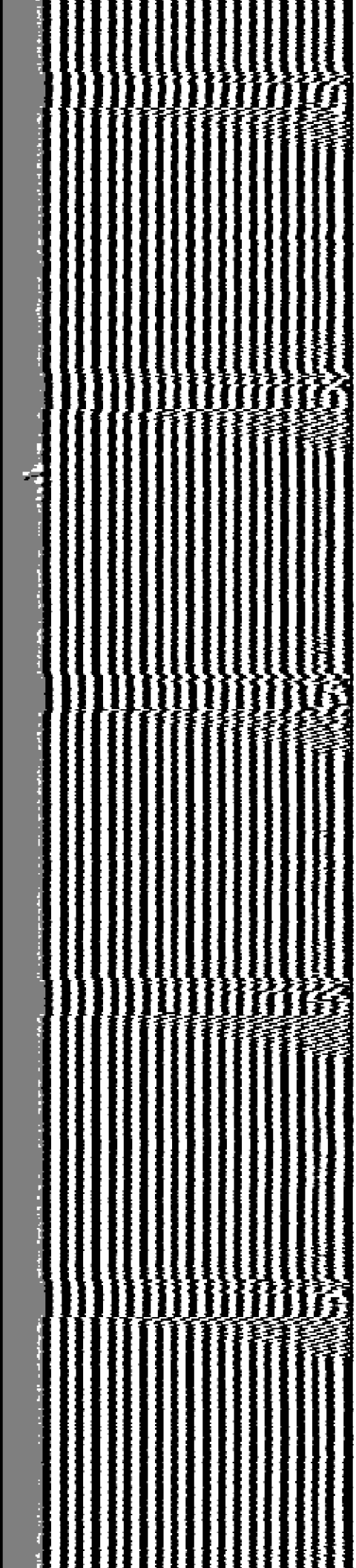
PRIMARY PRESENTATION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	21.875	10028.000
RAL	Amp Gate Start Near	195.000	usec	21.875	10028.000
RAL	Amp Gate Start Radial	195.000	usec	21.875	10028.000
RAL	Amp Gate Width Far	25.000	usec	21.875	10028.000
RAL	Amp Gate Width Near	25.000	usec	21.875	10028.000
RAL	Amp Gate Width Radial	25.000	usec	21.875	10028.000
RAL	casing od	4.500	inches	21.875	10028.000
RAL	casing wt	11.600	lbm/ft	21.875	10028.000
RAL	FB Start Far	291.900	usec	21.875	10028.000
RAL	FB Start Near	180.000	usec	21.875	10028.000
RAL	FB Start Radial	180.000	usec	21.875	10028.000
RAL	FB Thresh Far	10.000	mv	21.875	10028.000
RAL	FB Thresh Near	4.000	mv	21.875	10028.000
RAL	FB Thresh Radial	4.000	mv	21.875	10028.000
RAL	Fluid Travel Time	200.000	usec/ft	21.875	10027.625

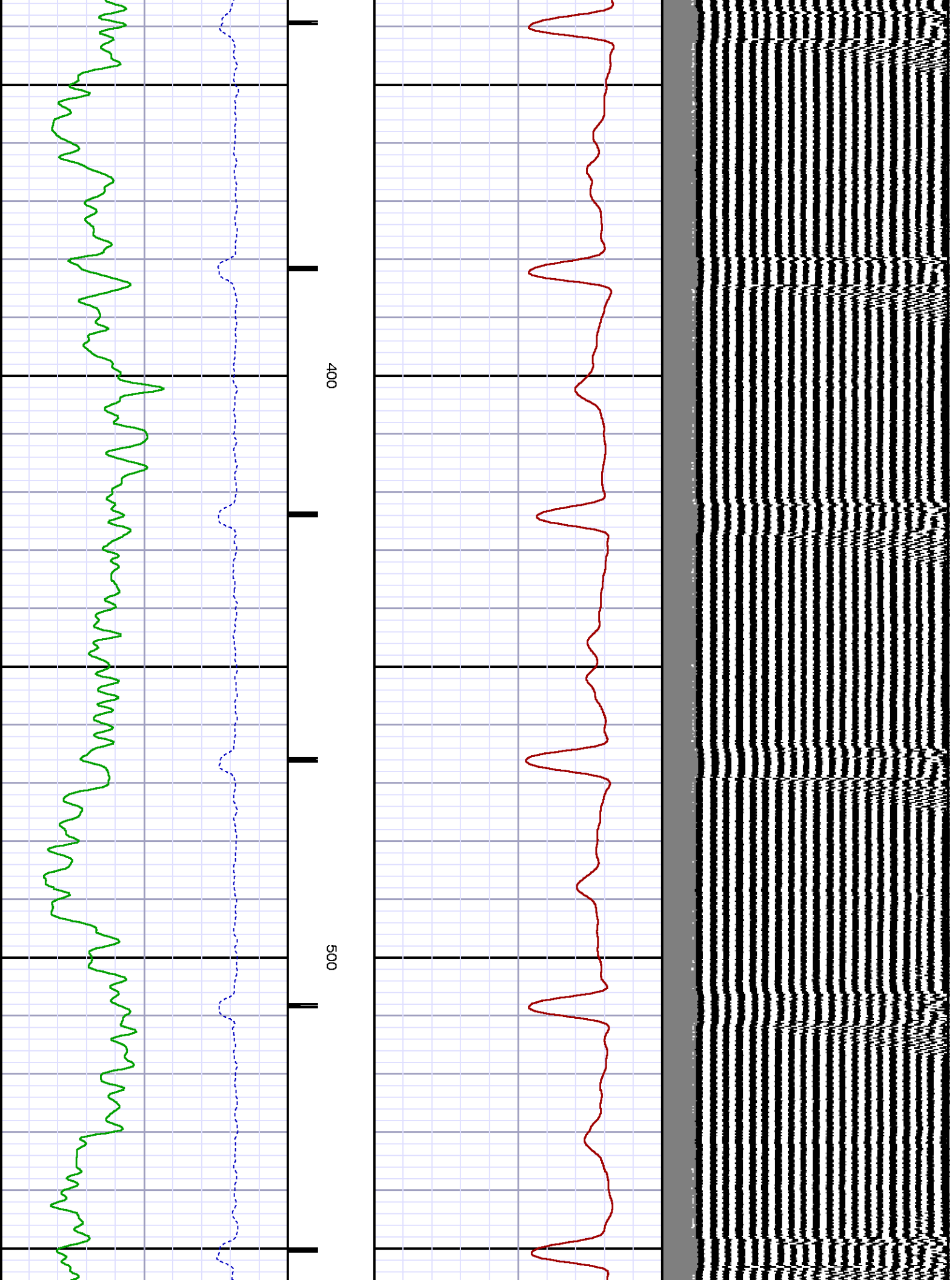
DEPTH OFFSETS  
(for Acquired Curves)

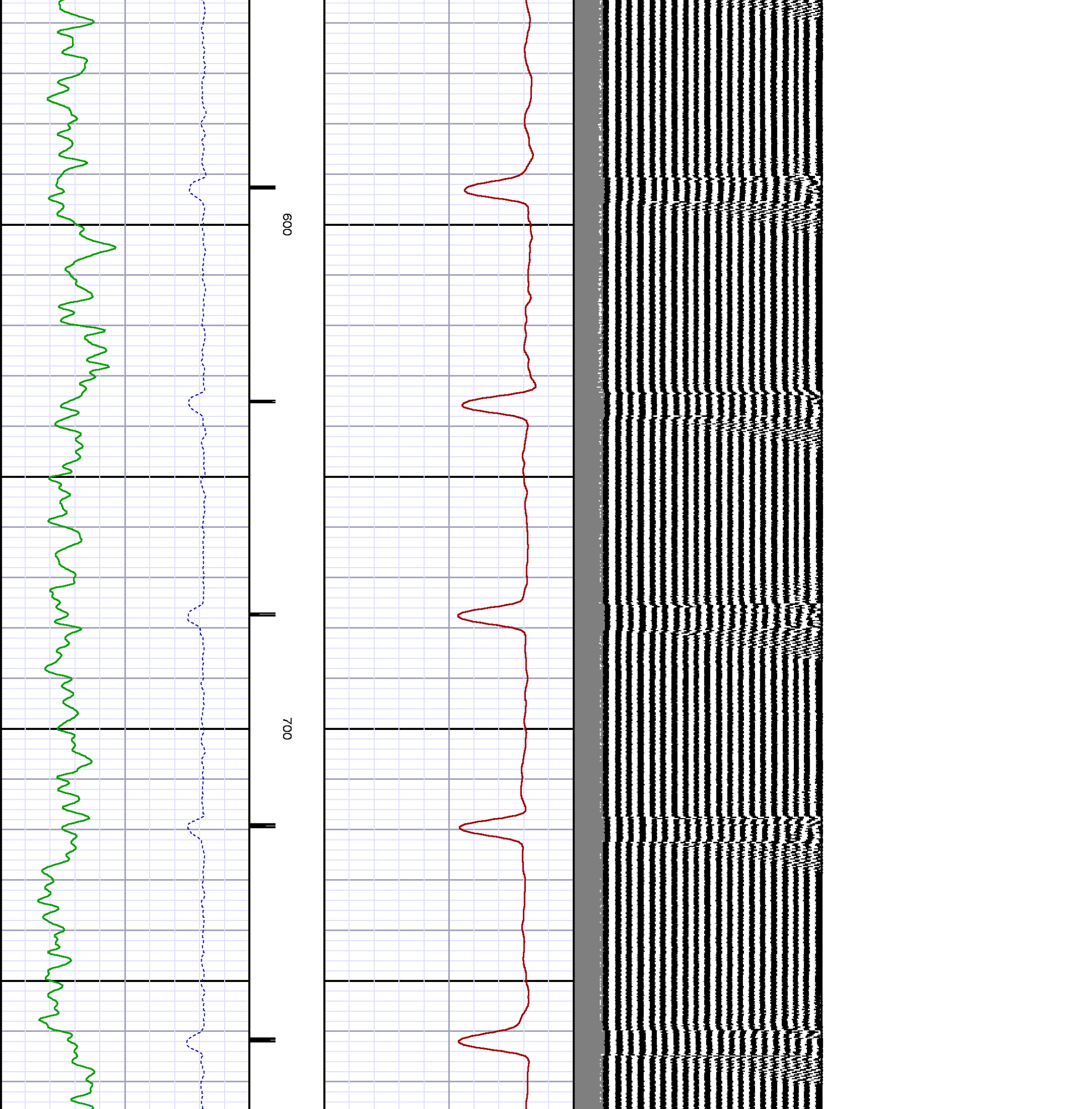
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

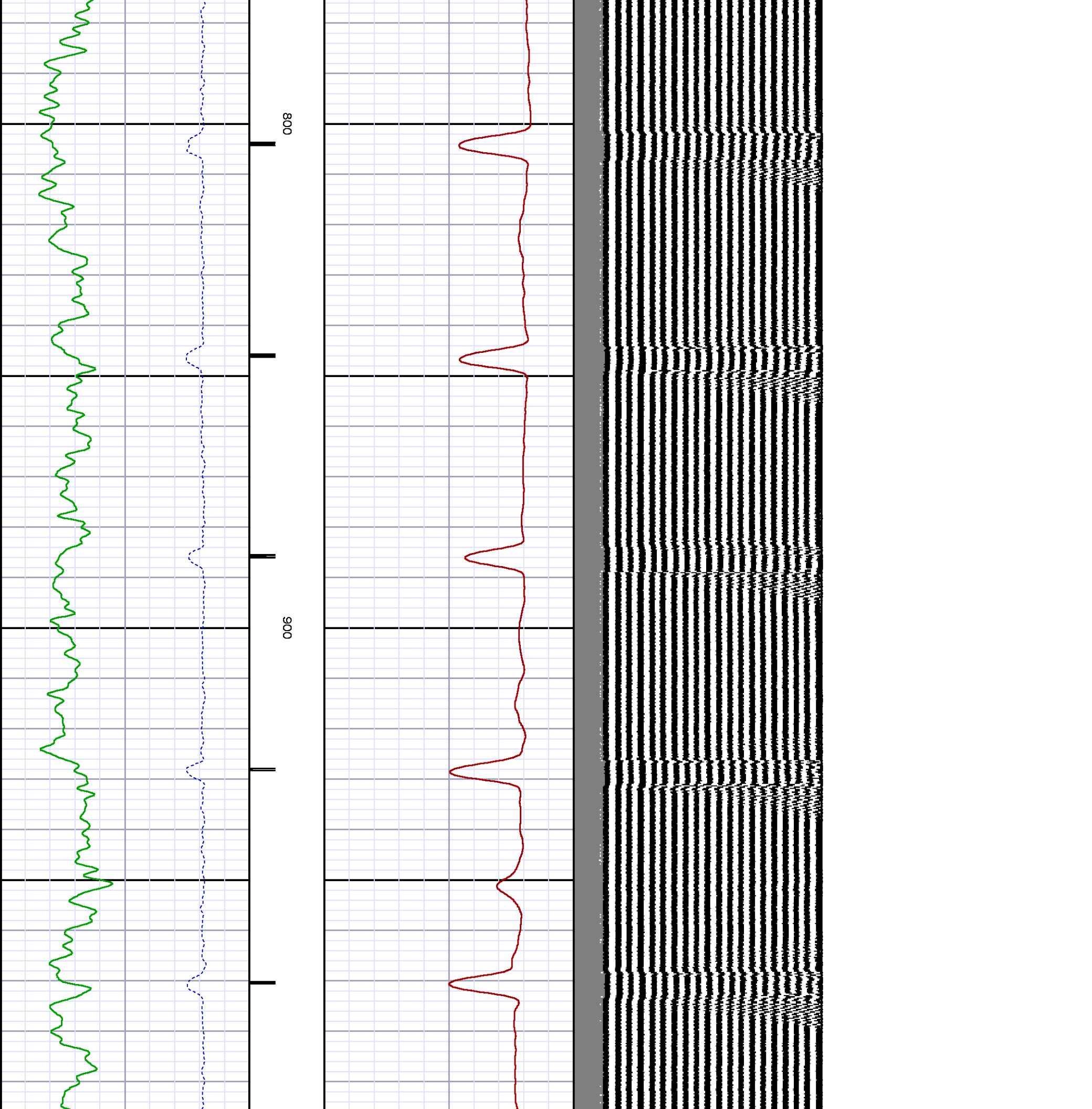


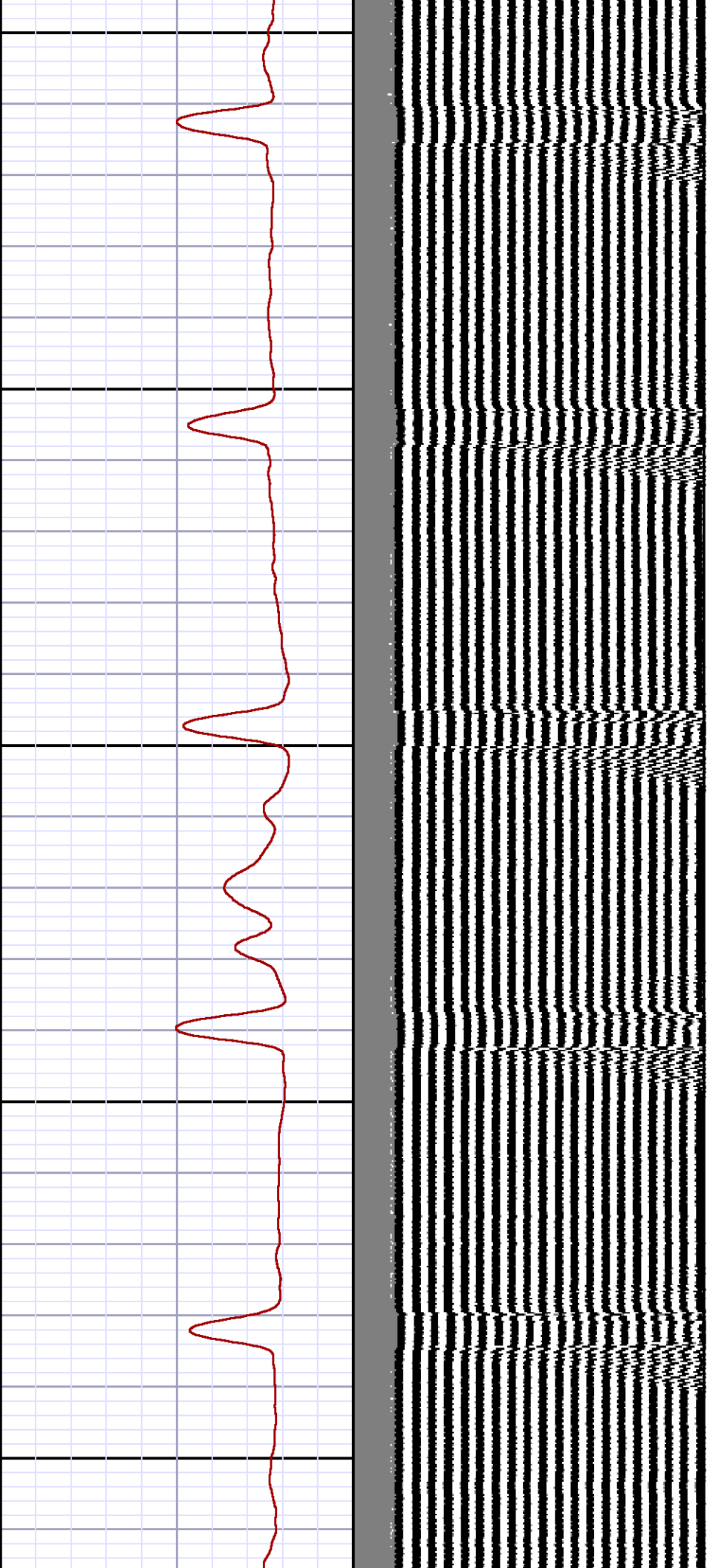








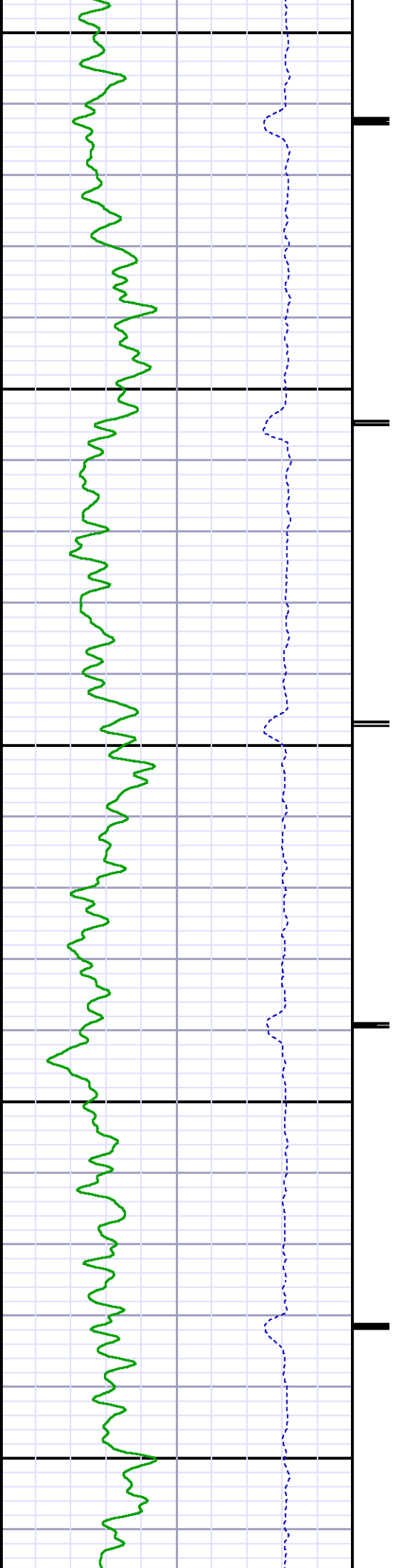


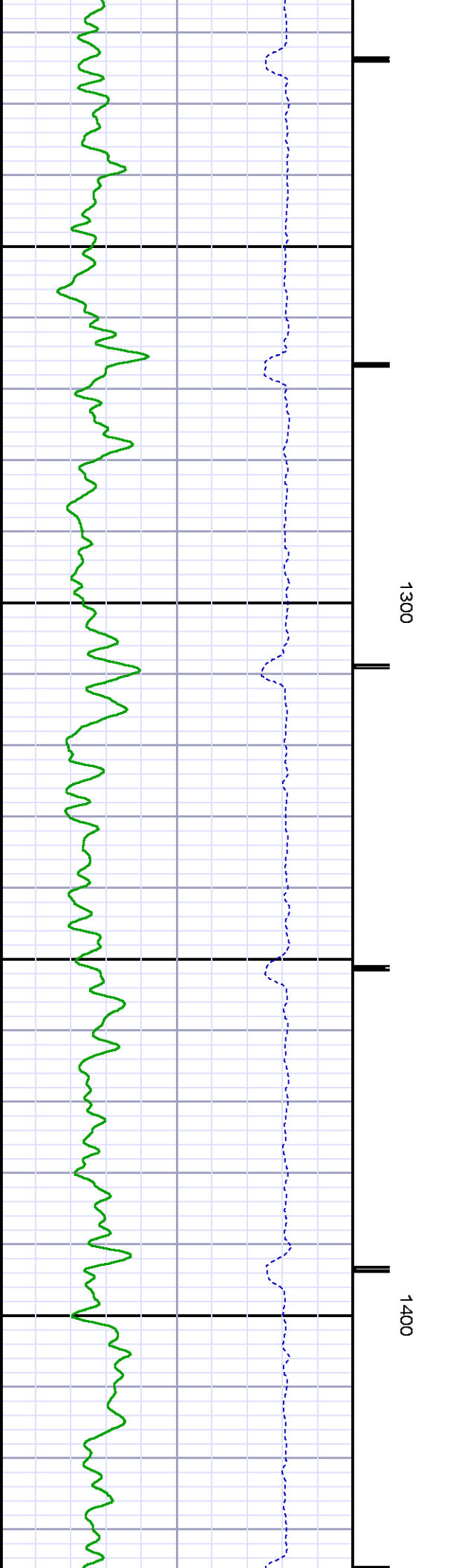
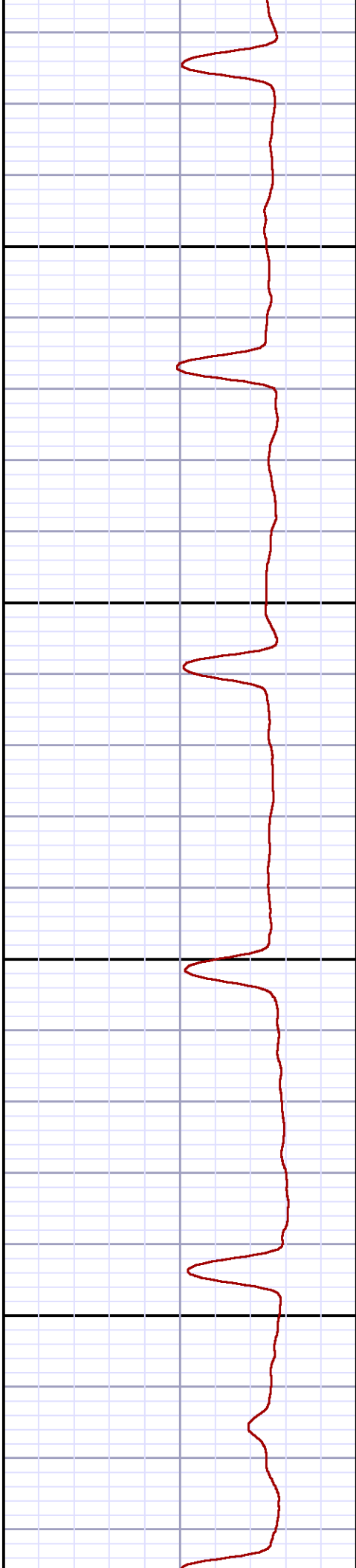
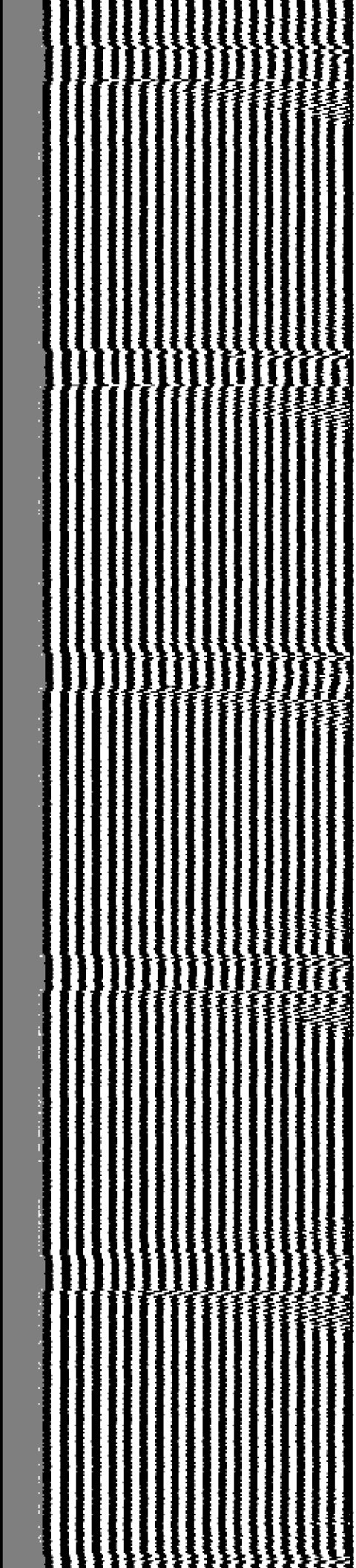


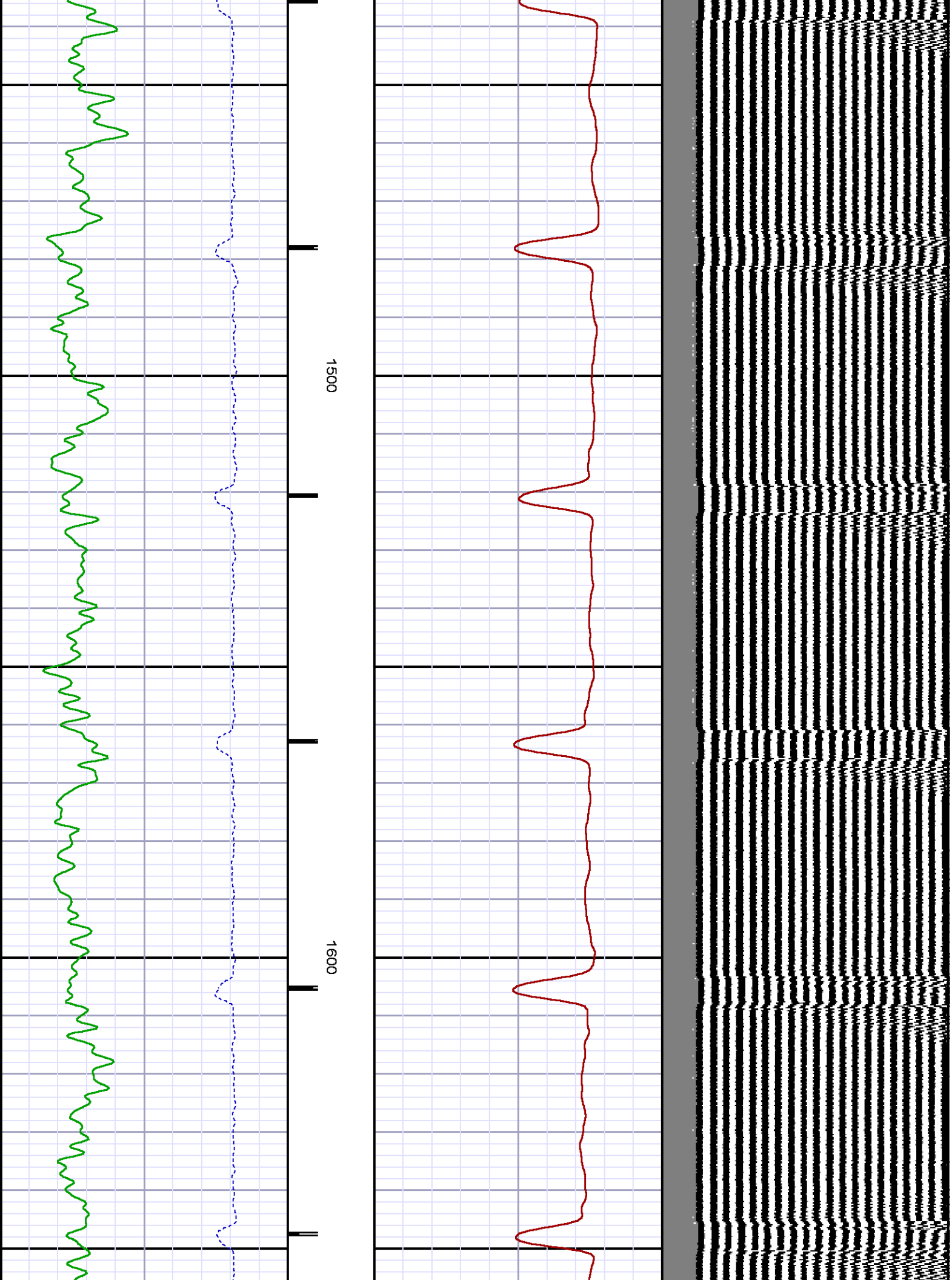
1000

1100

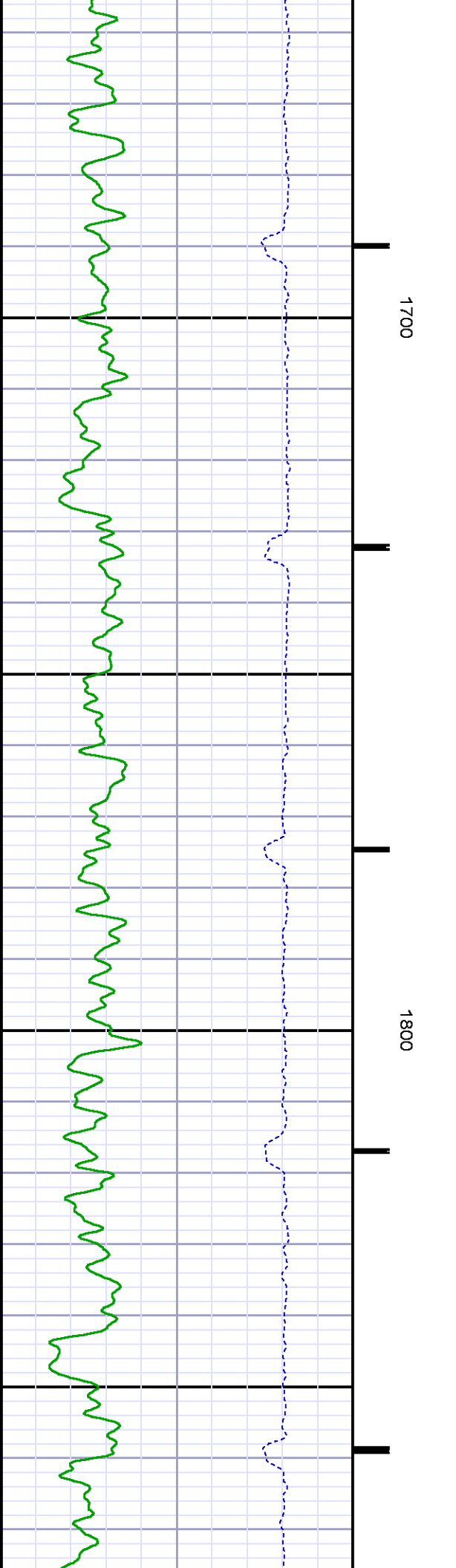
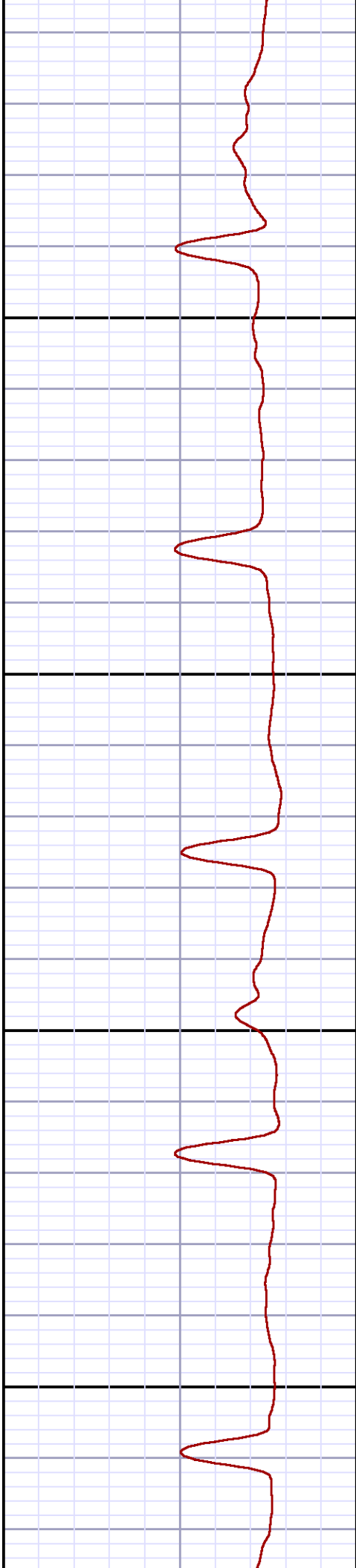
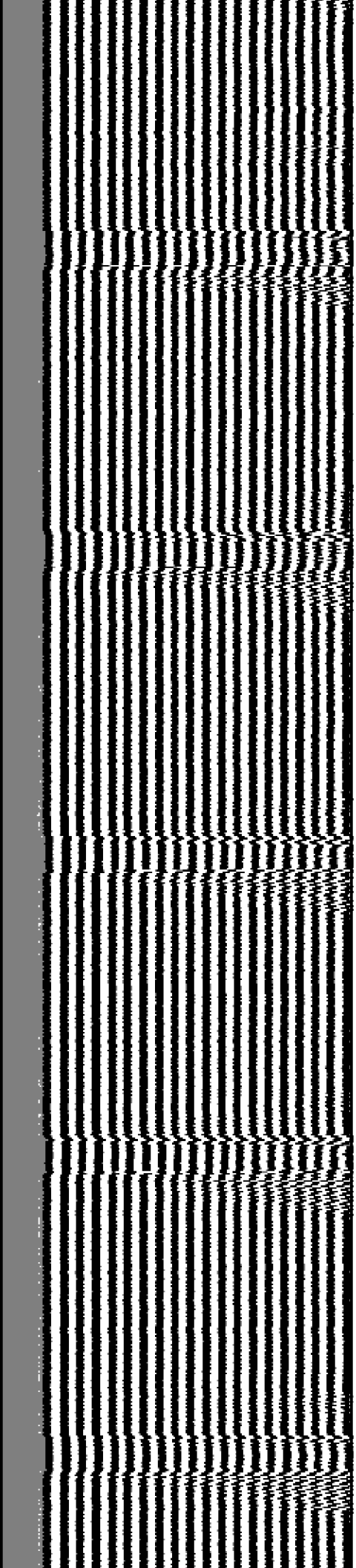
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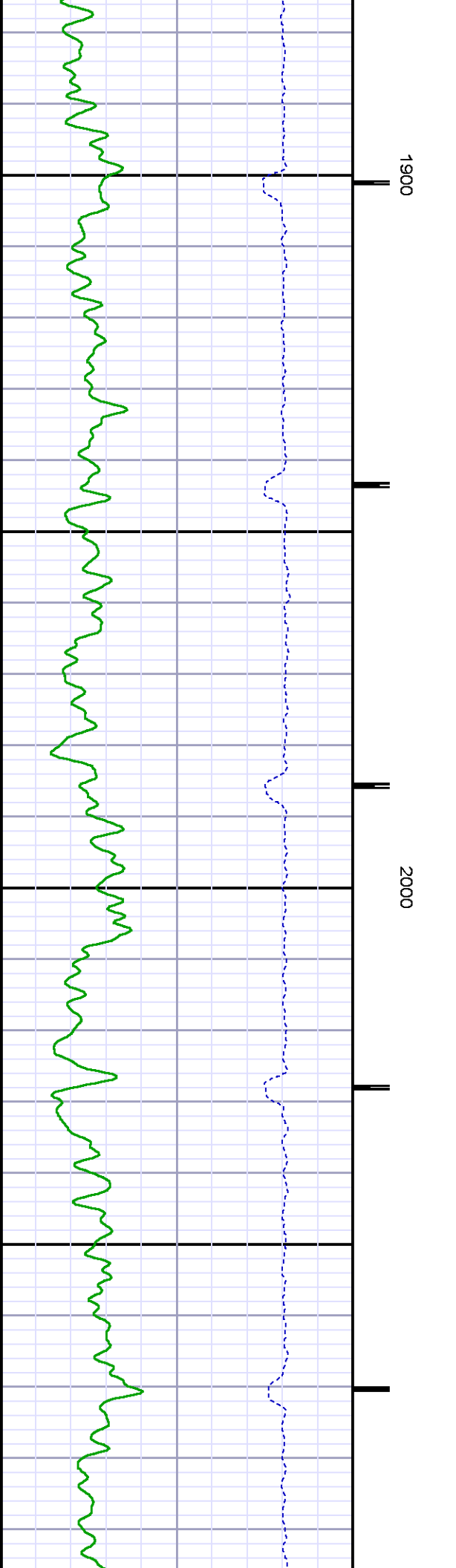
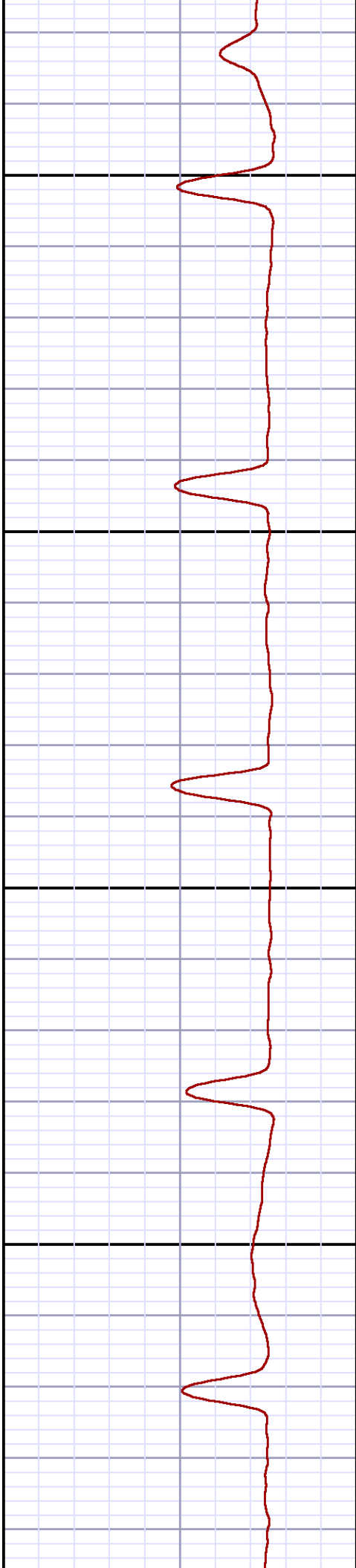
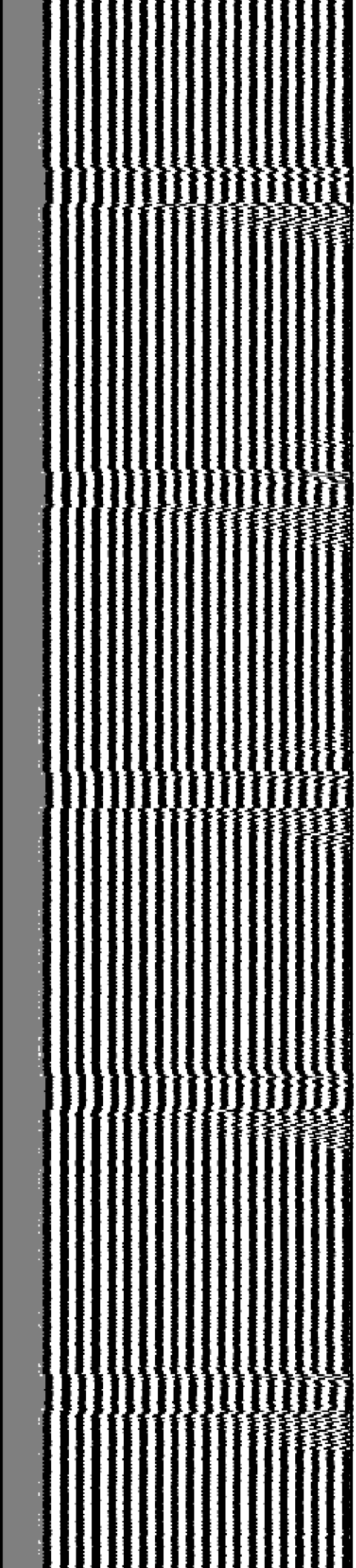




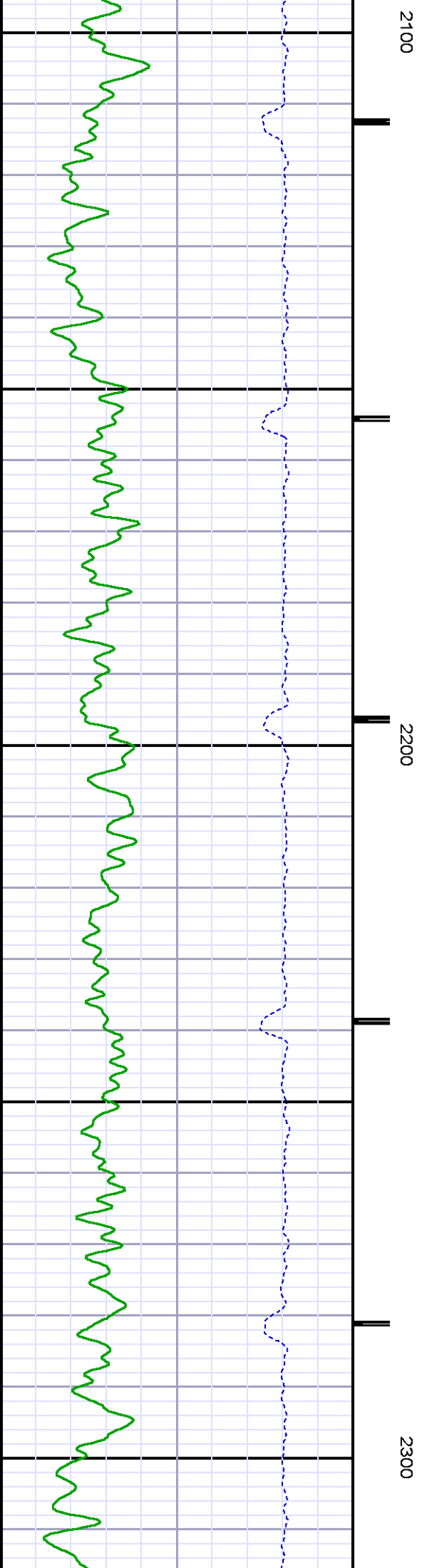
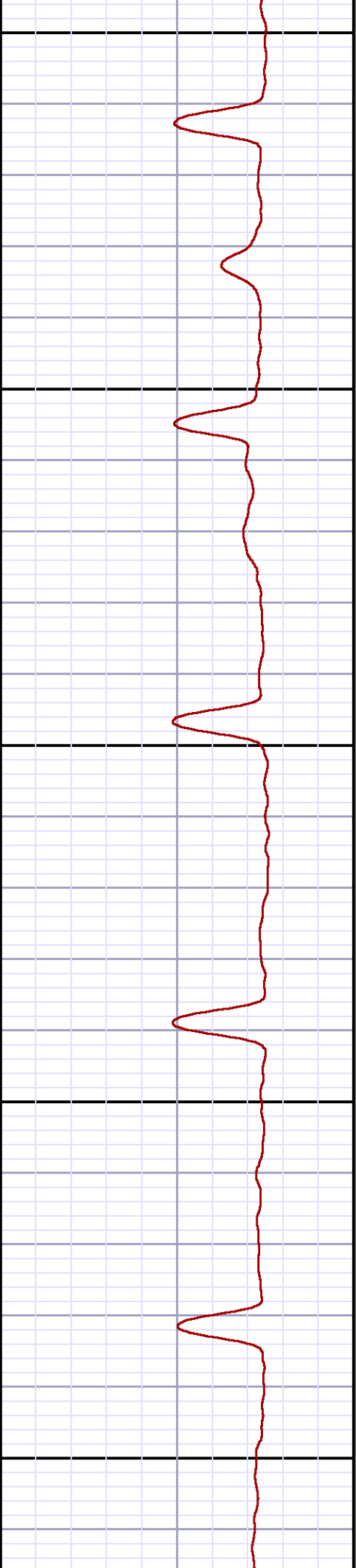
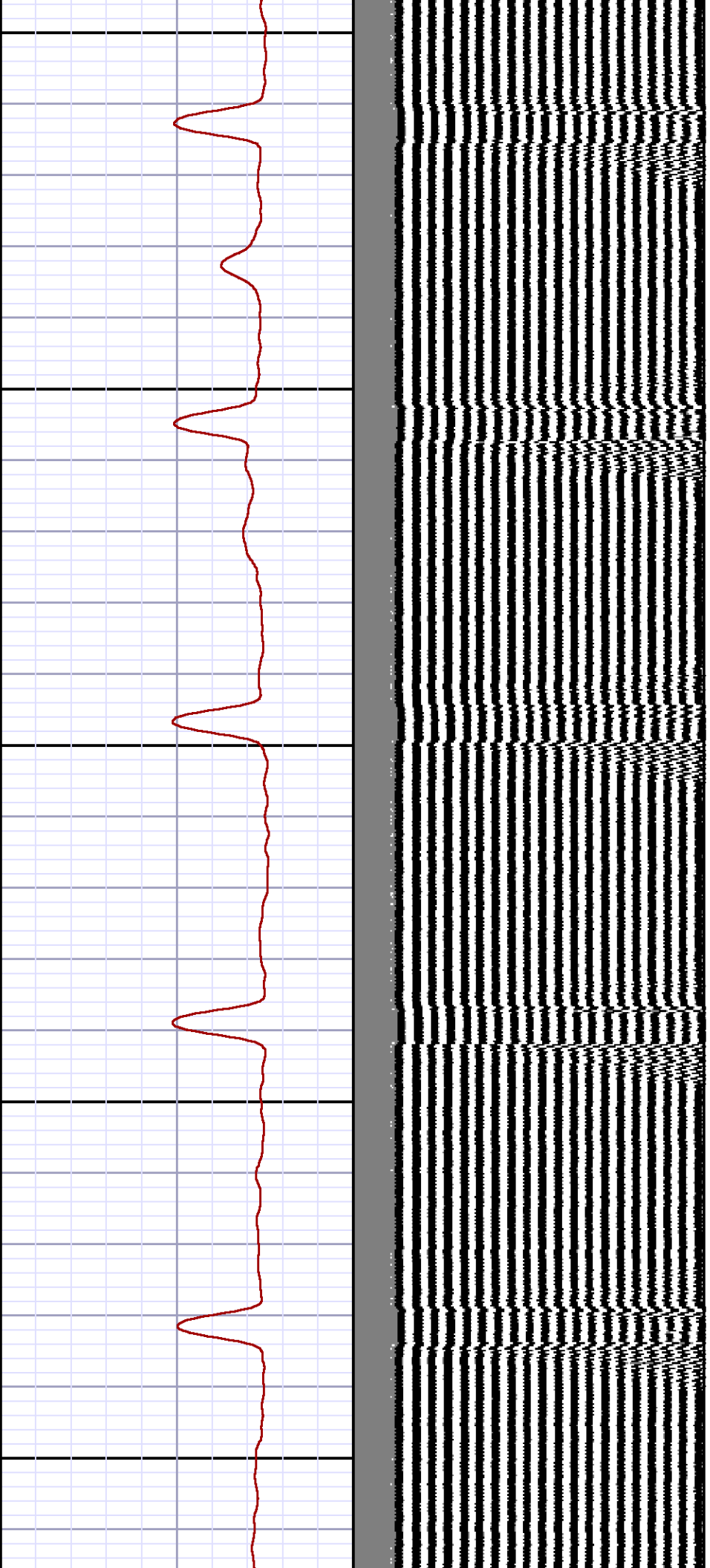


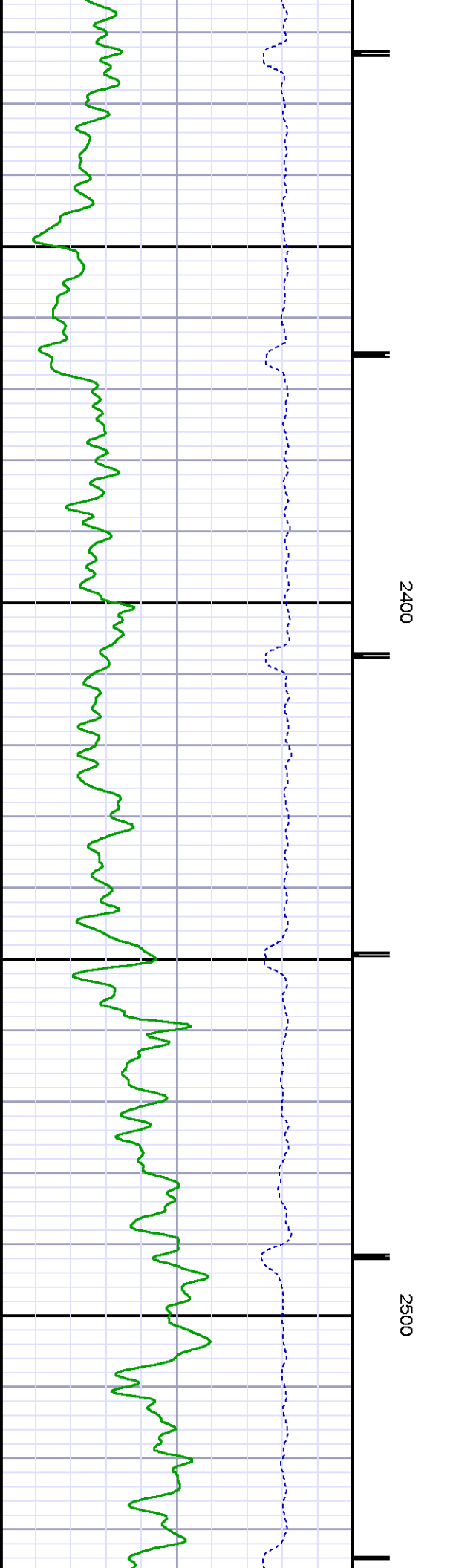
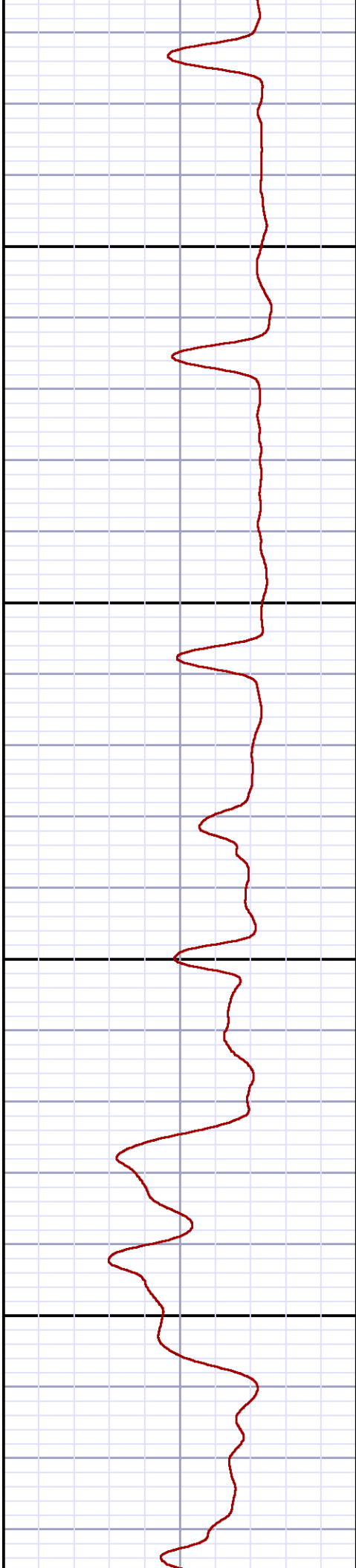
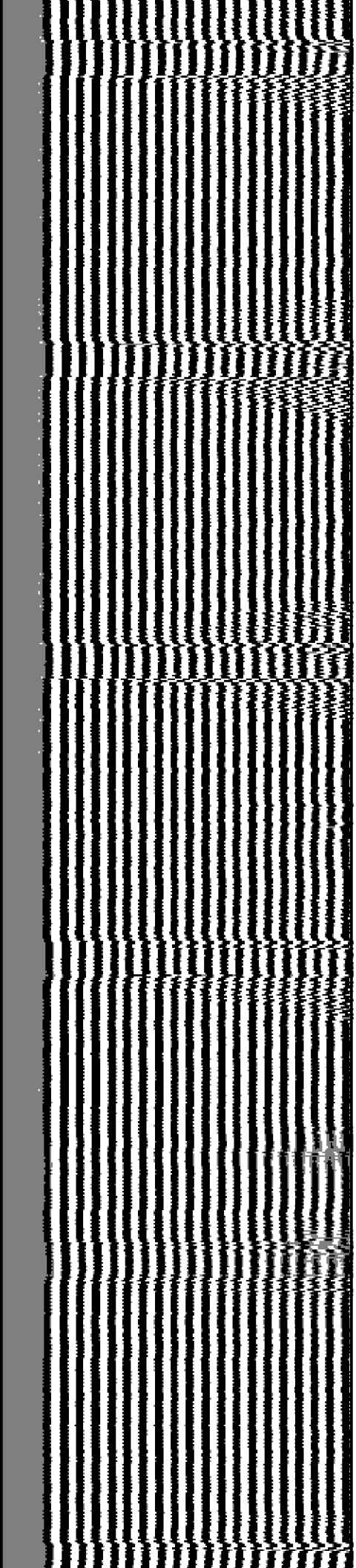


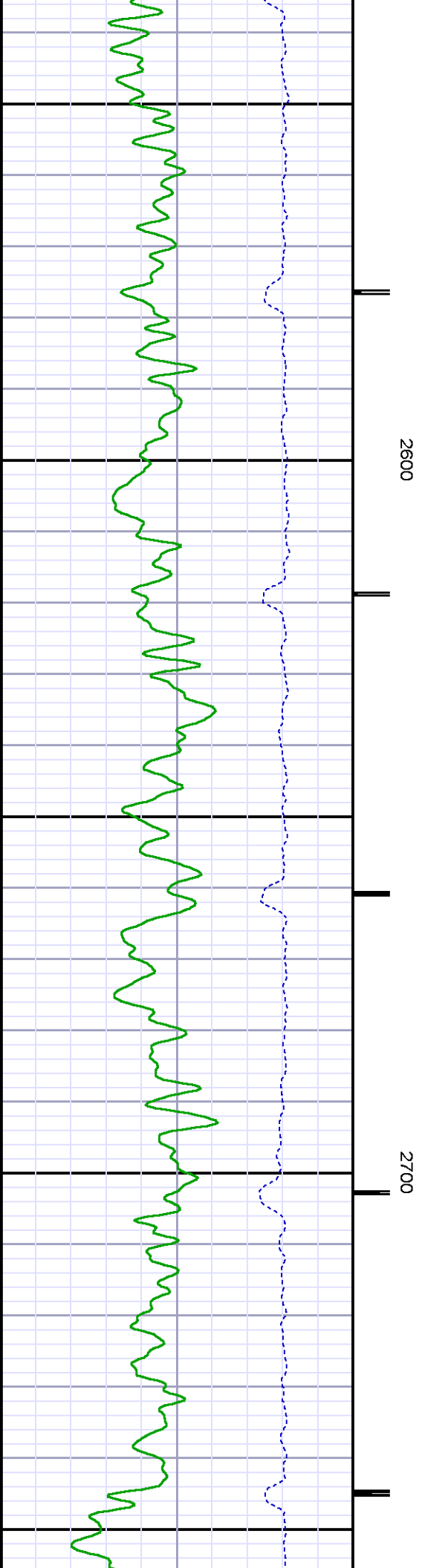
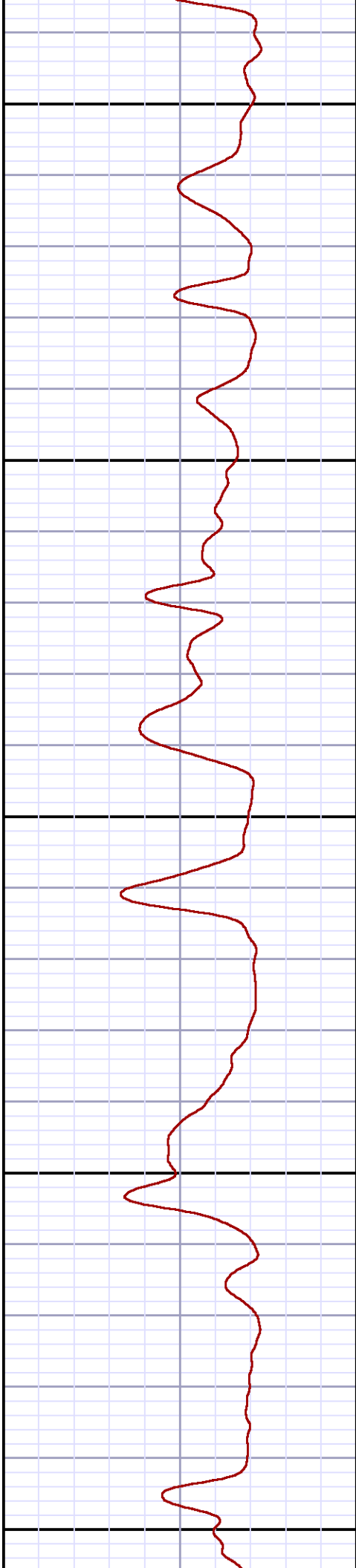
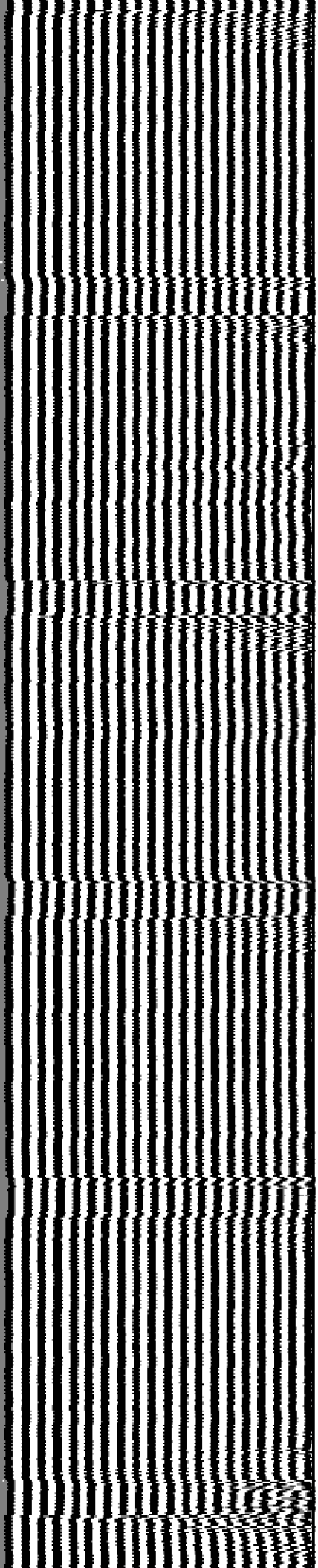


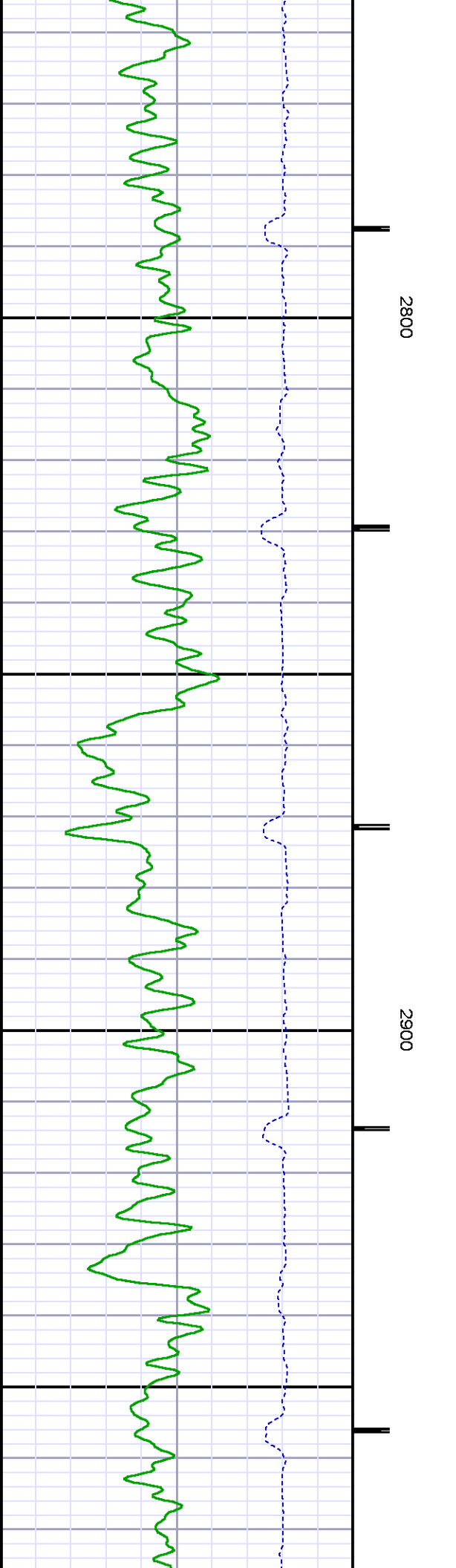
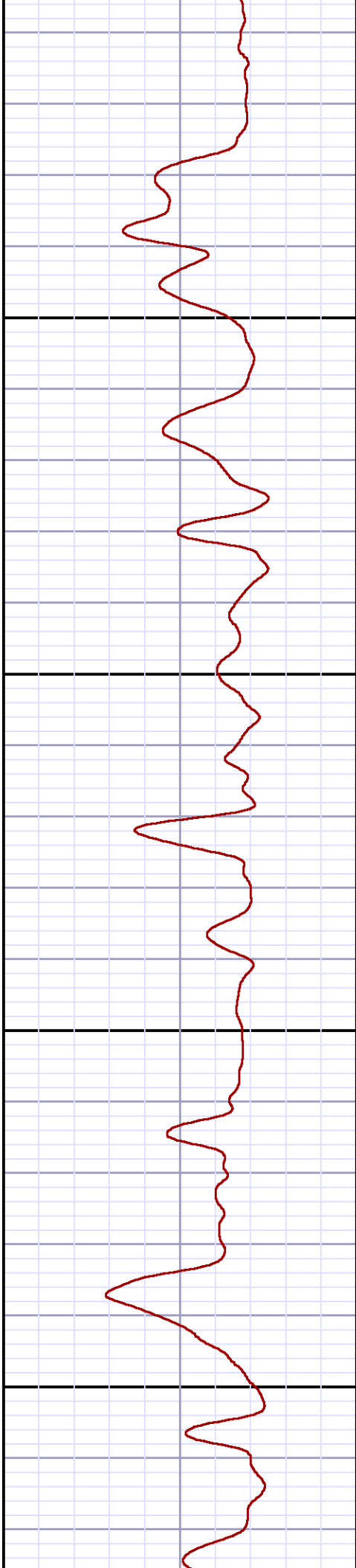
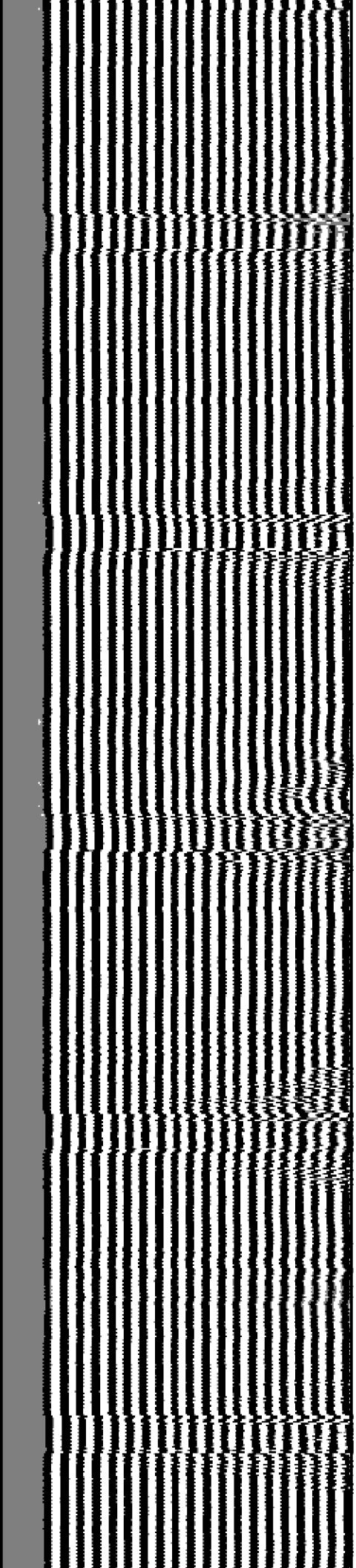


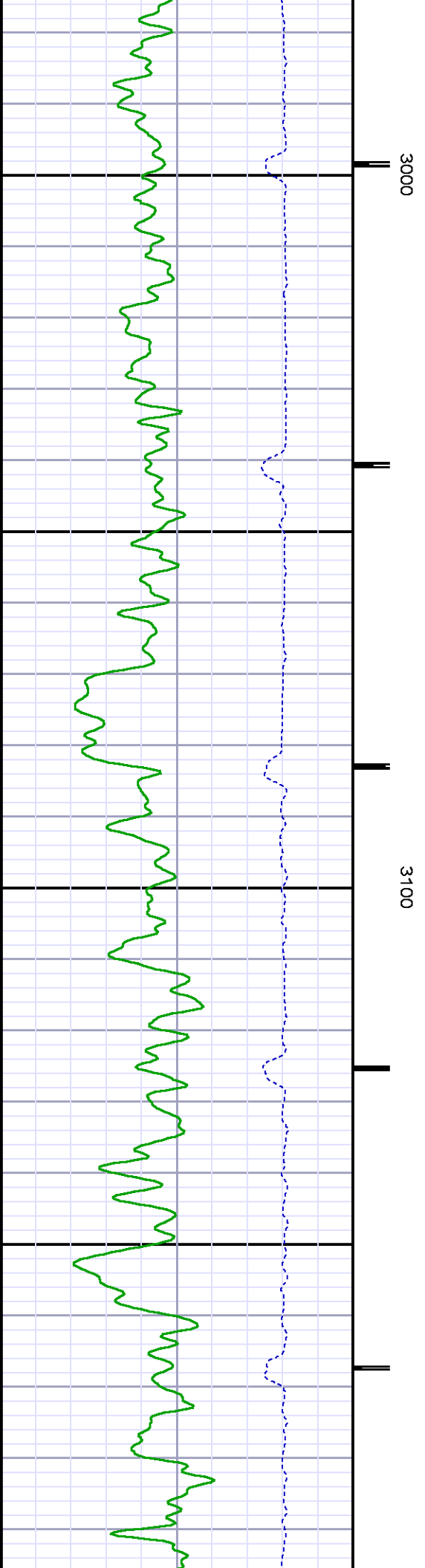
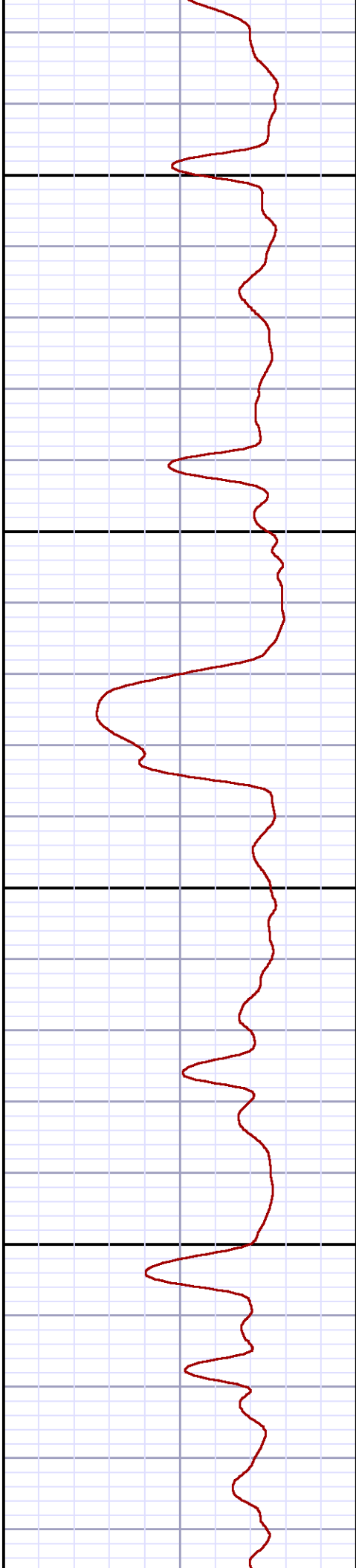
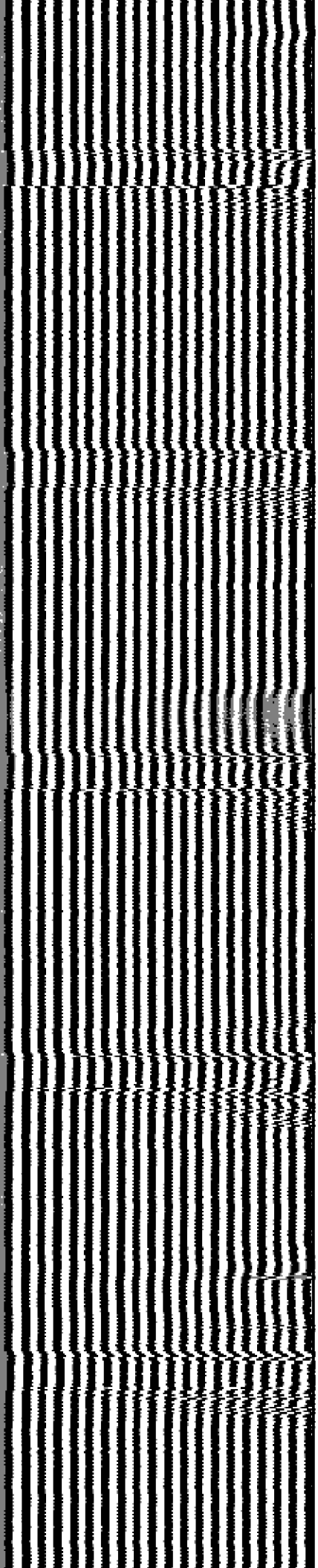




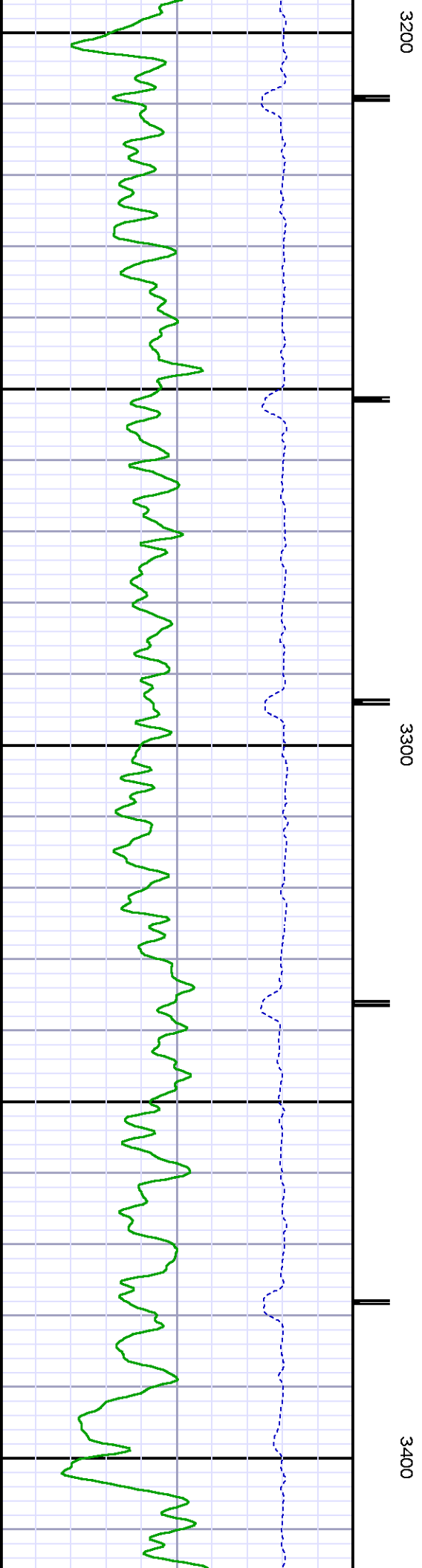
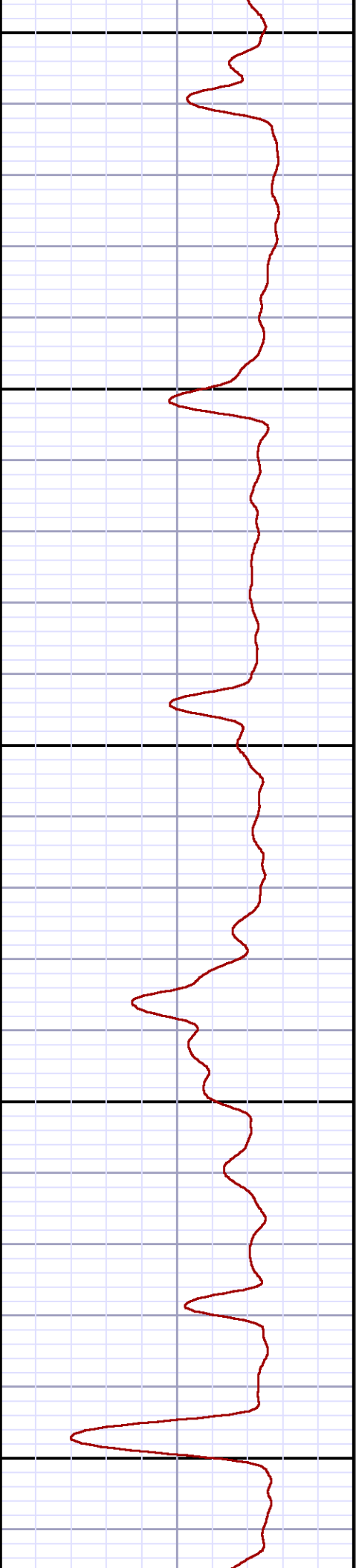
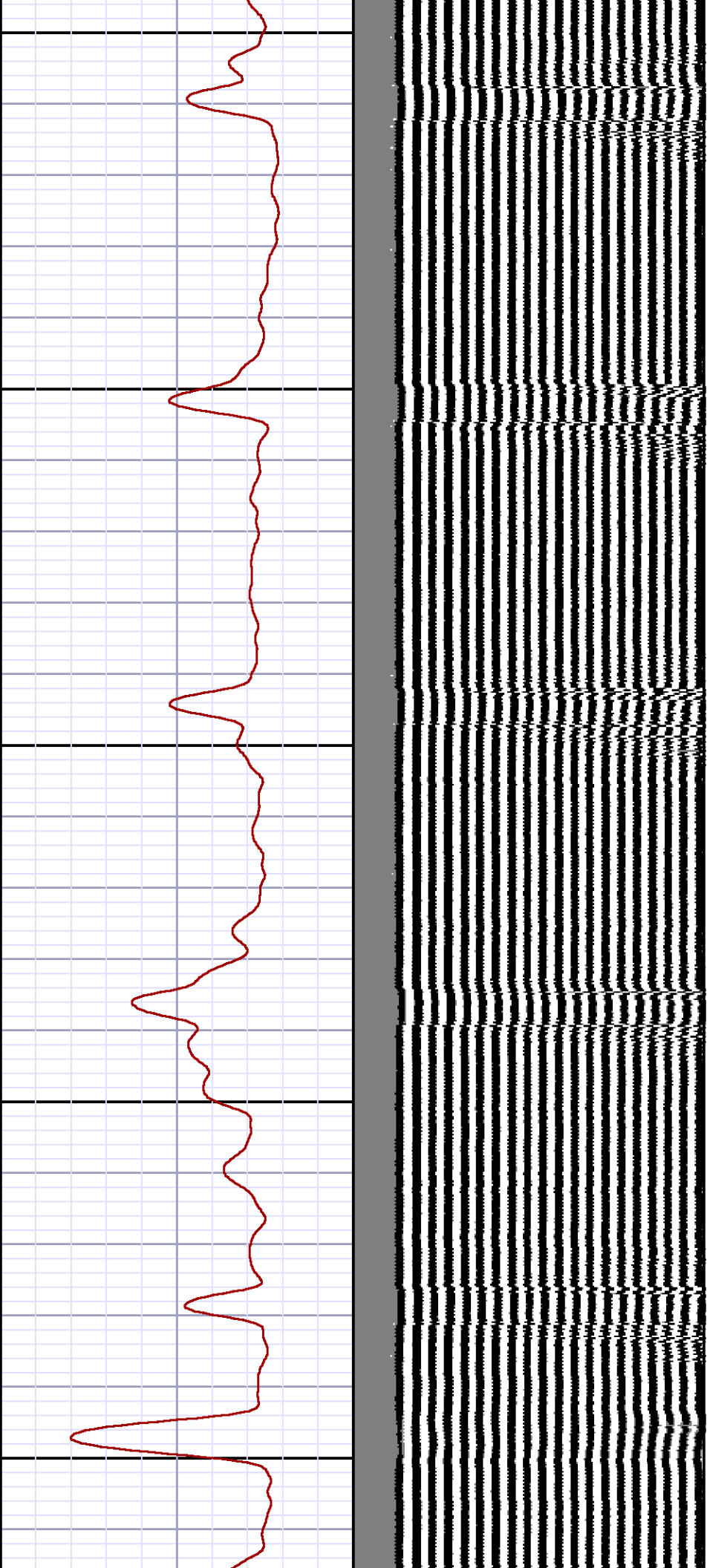


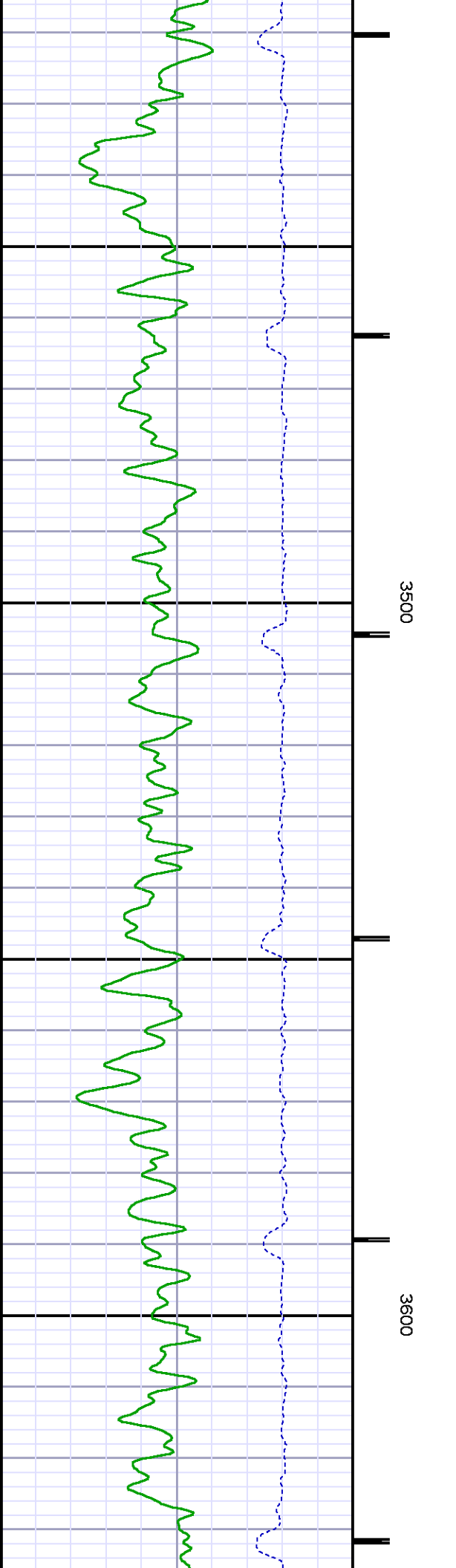
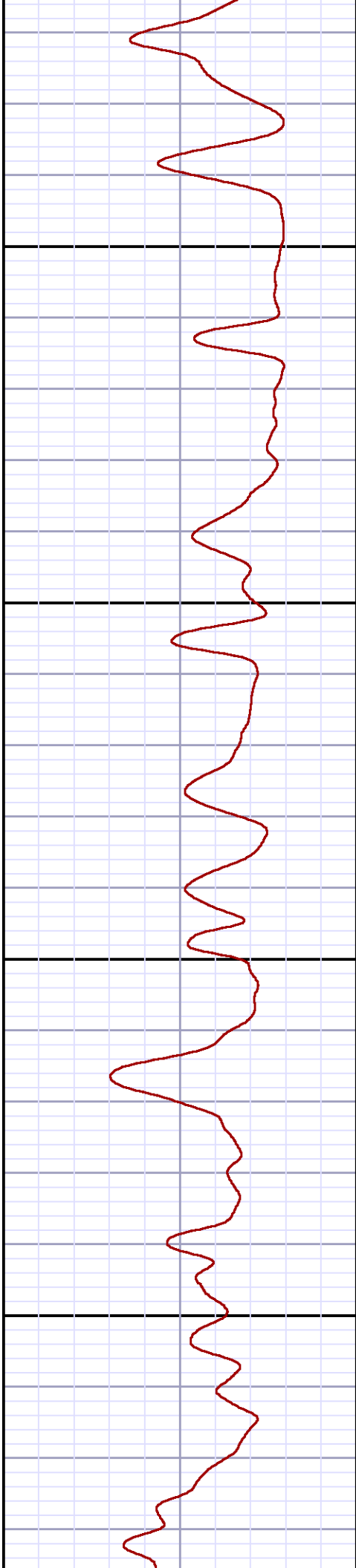
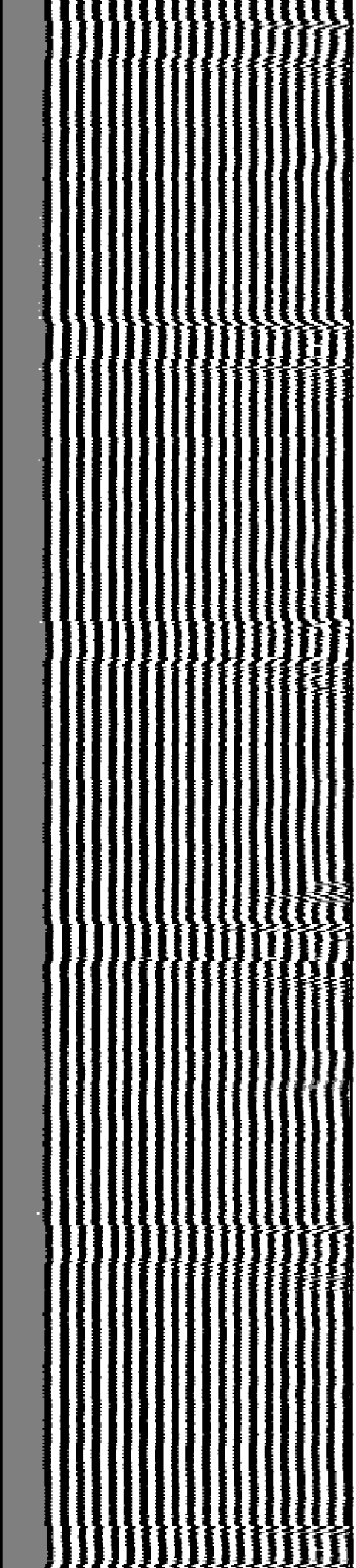


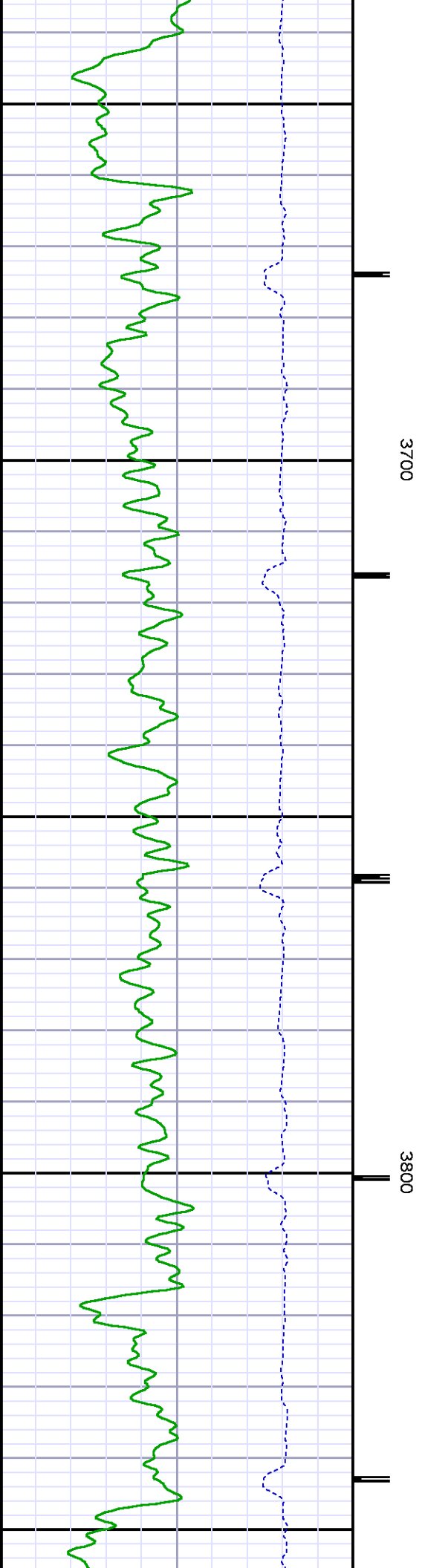
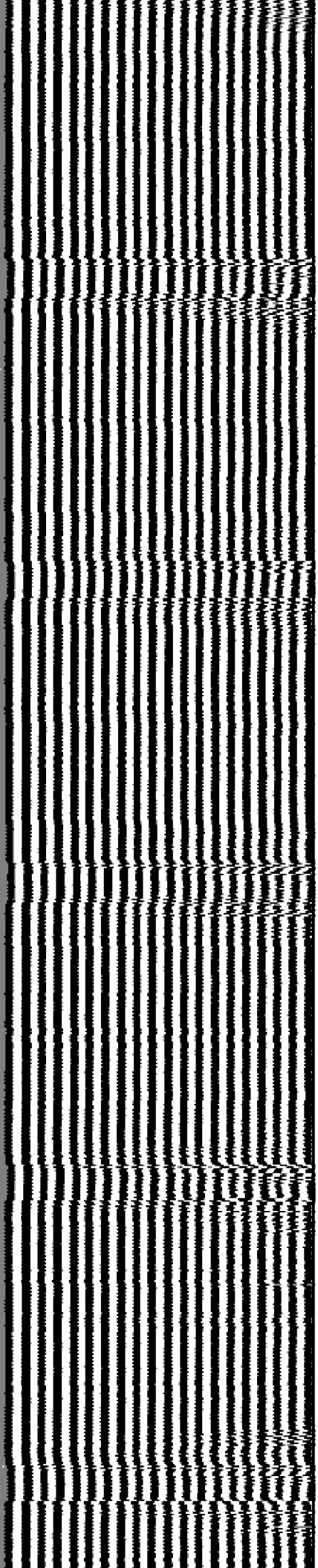




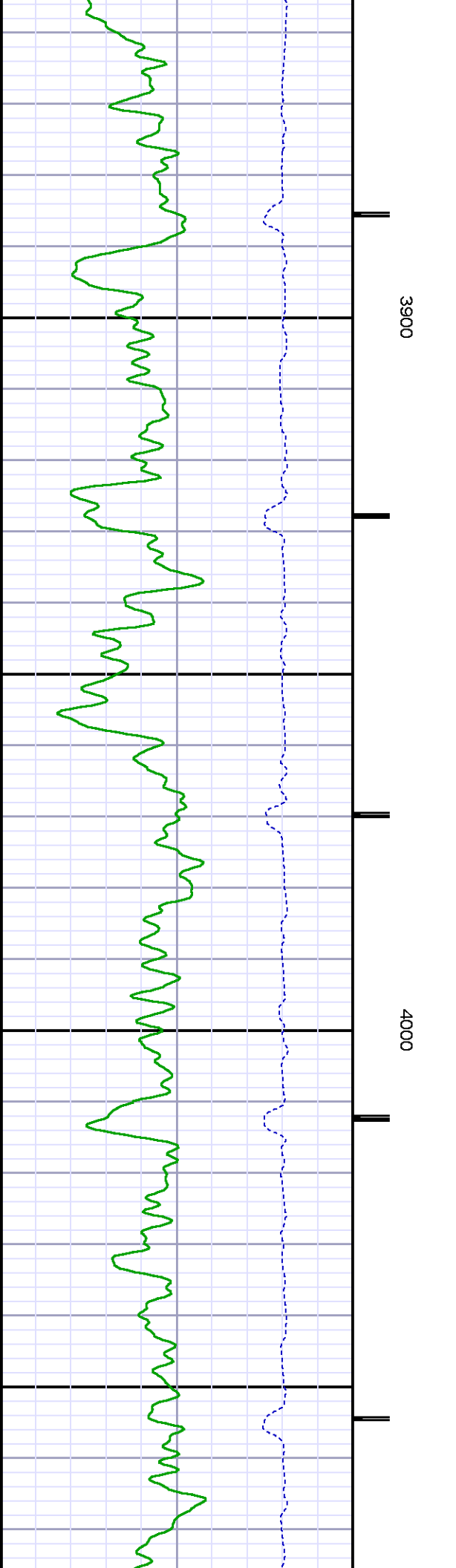
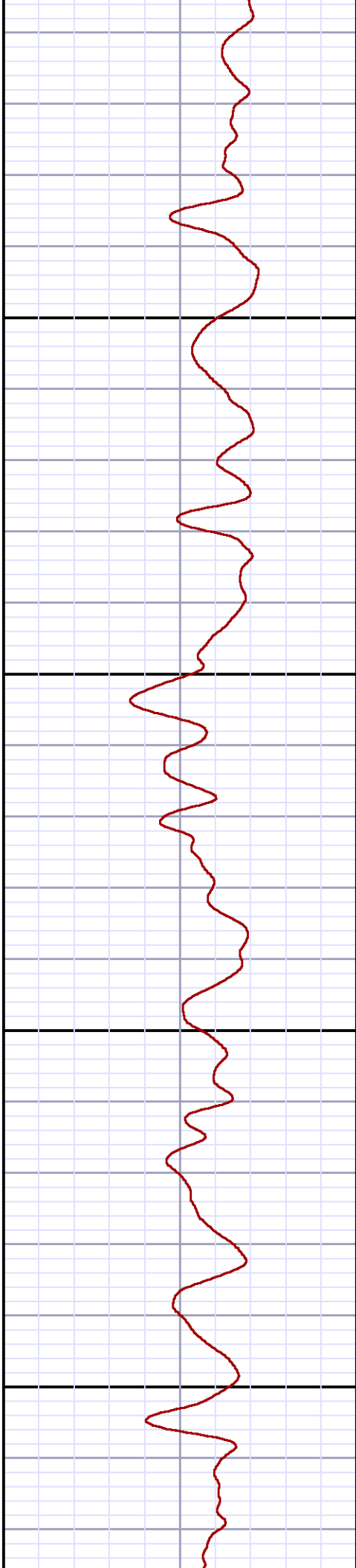
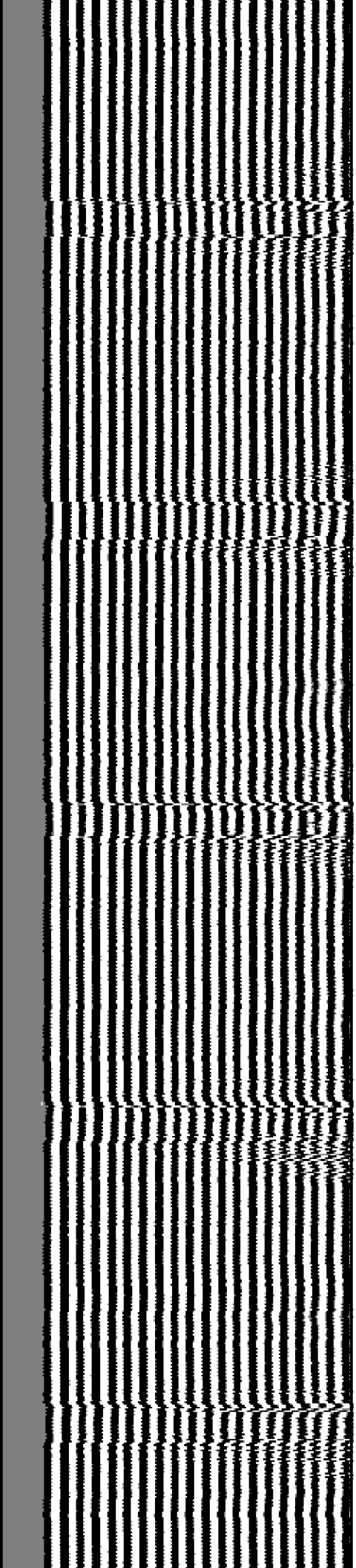


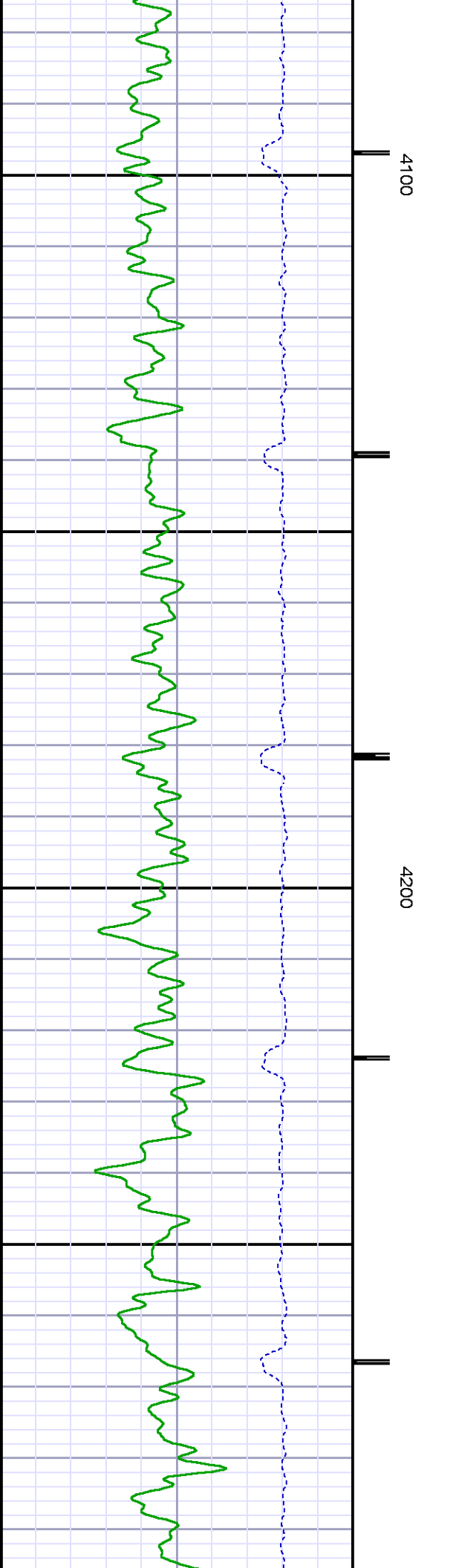
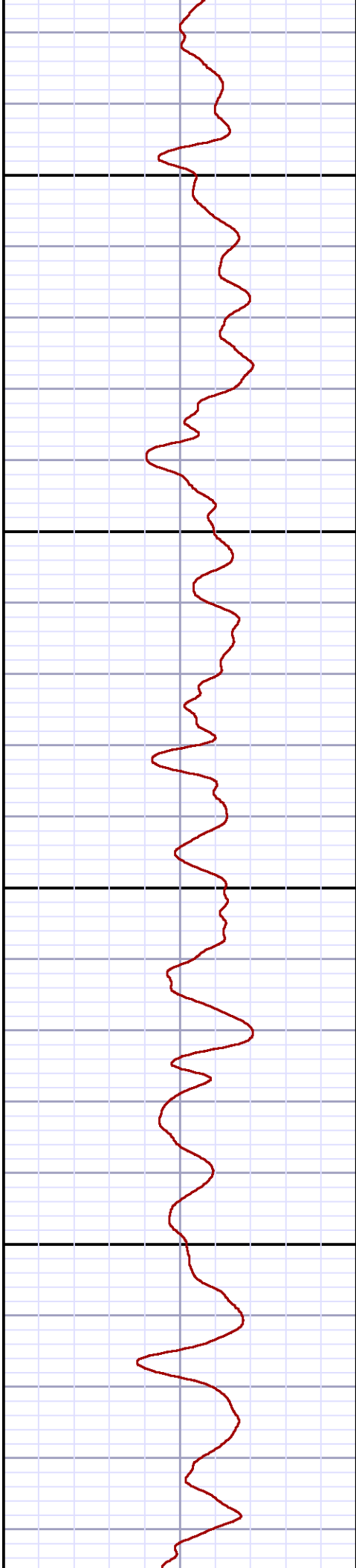
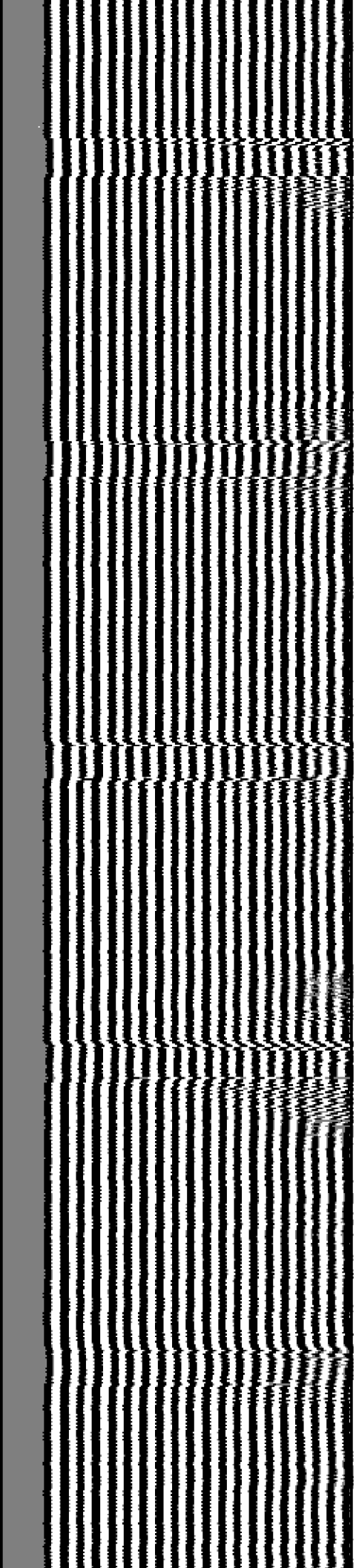


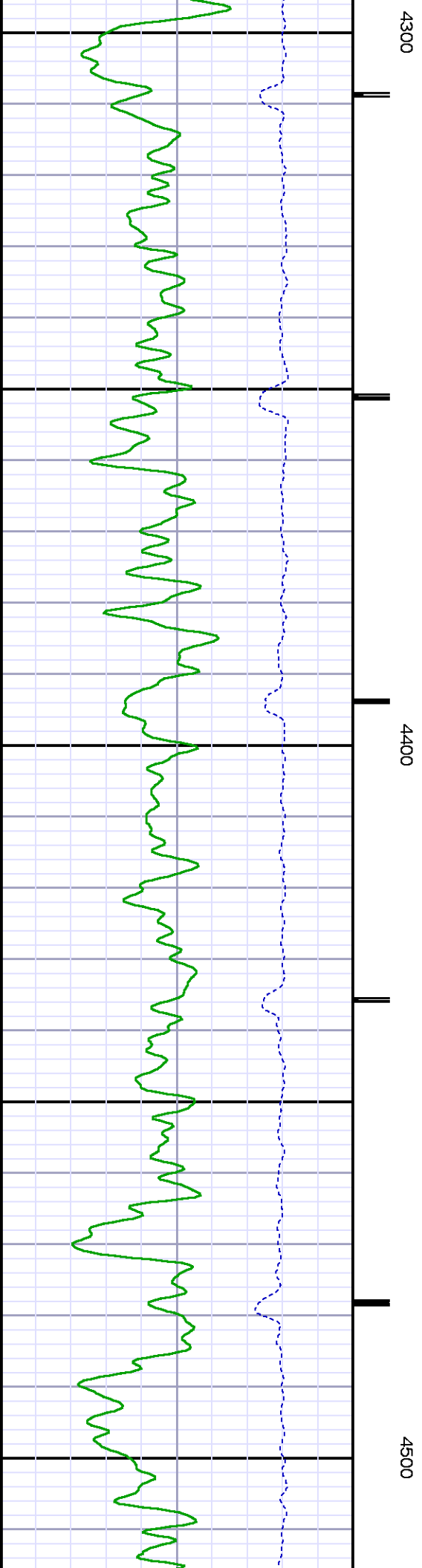
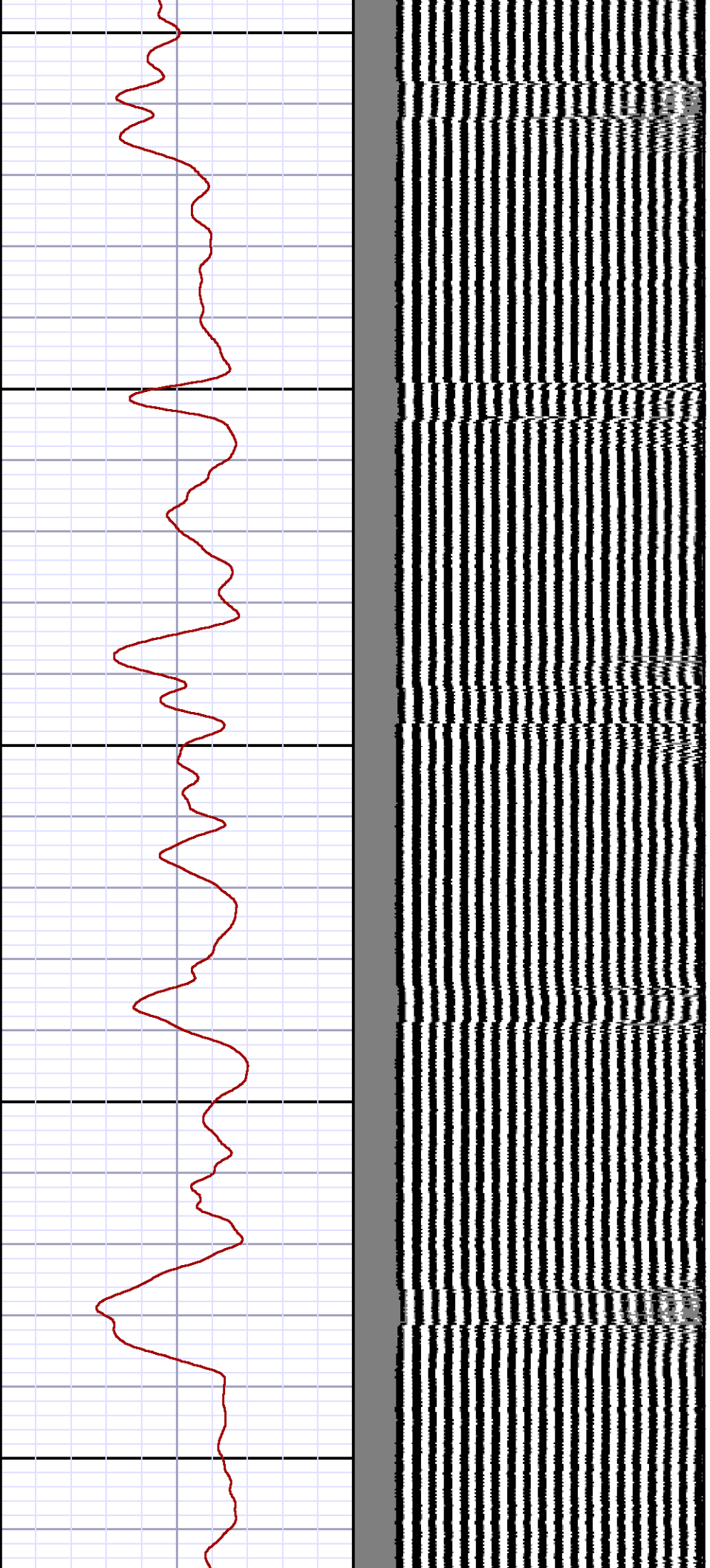


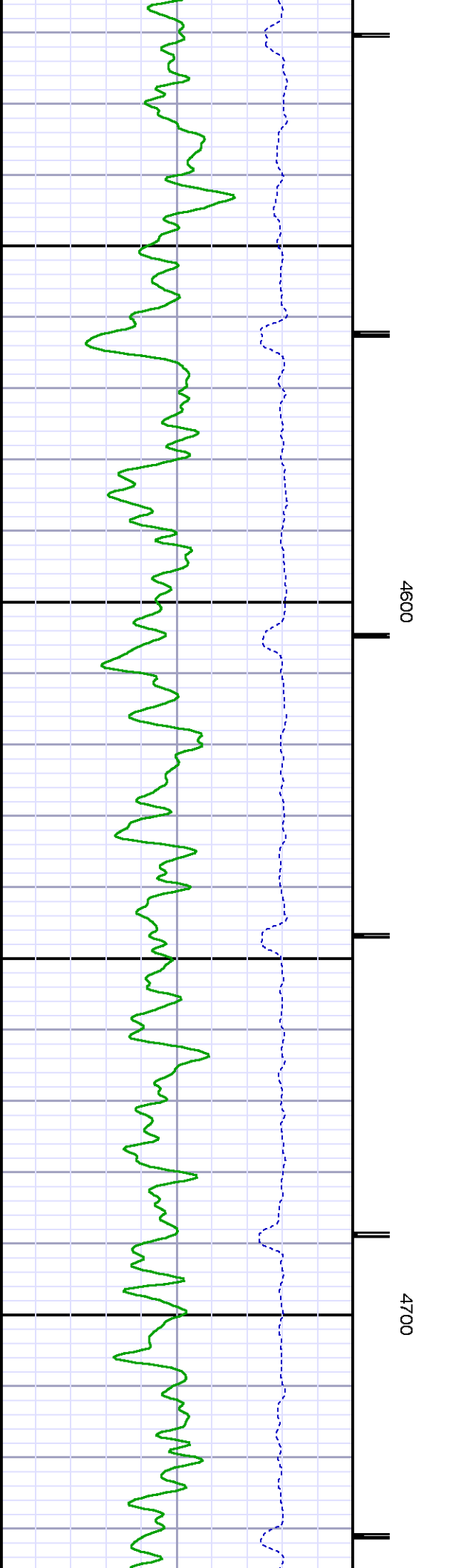
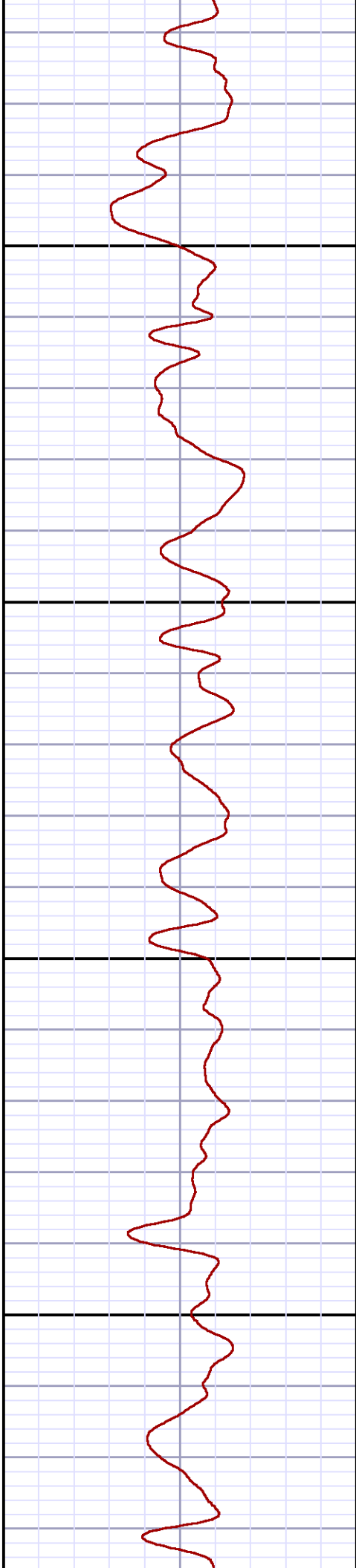
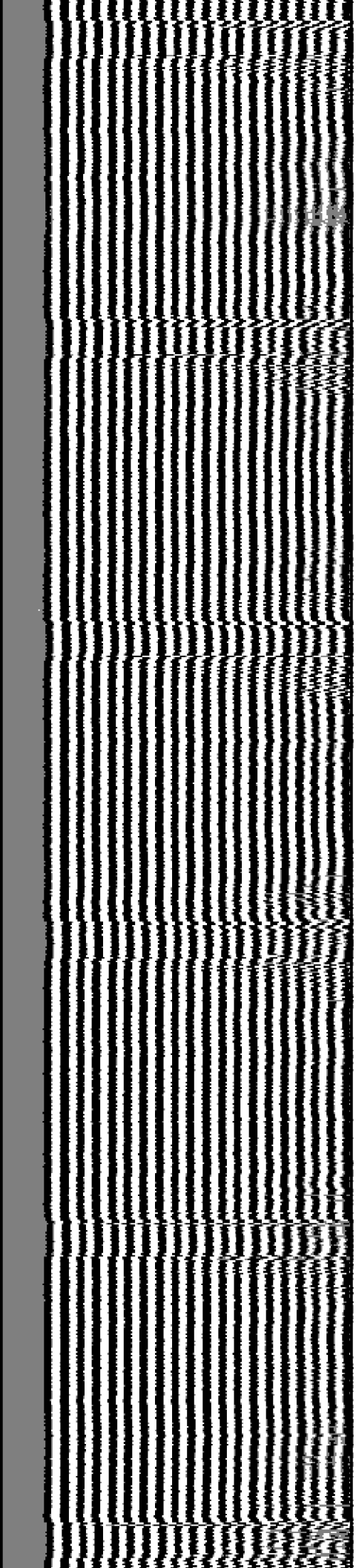


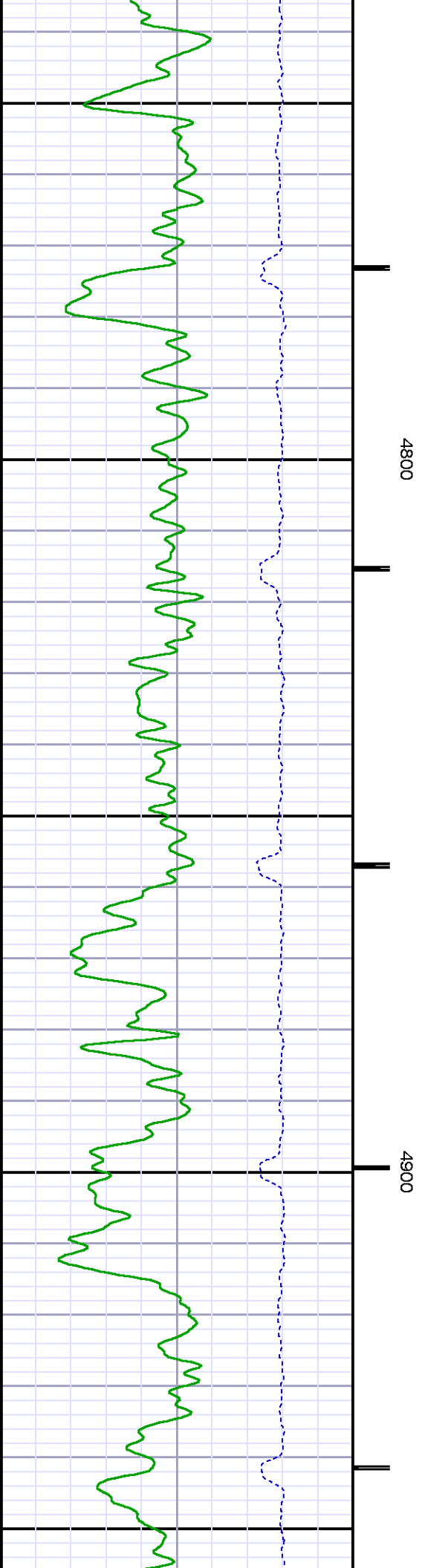
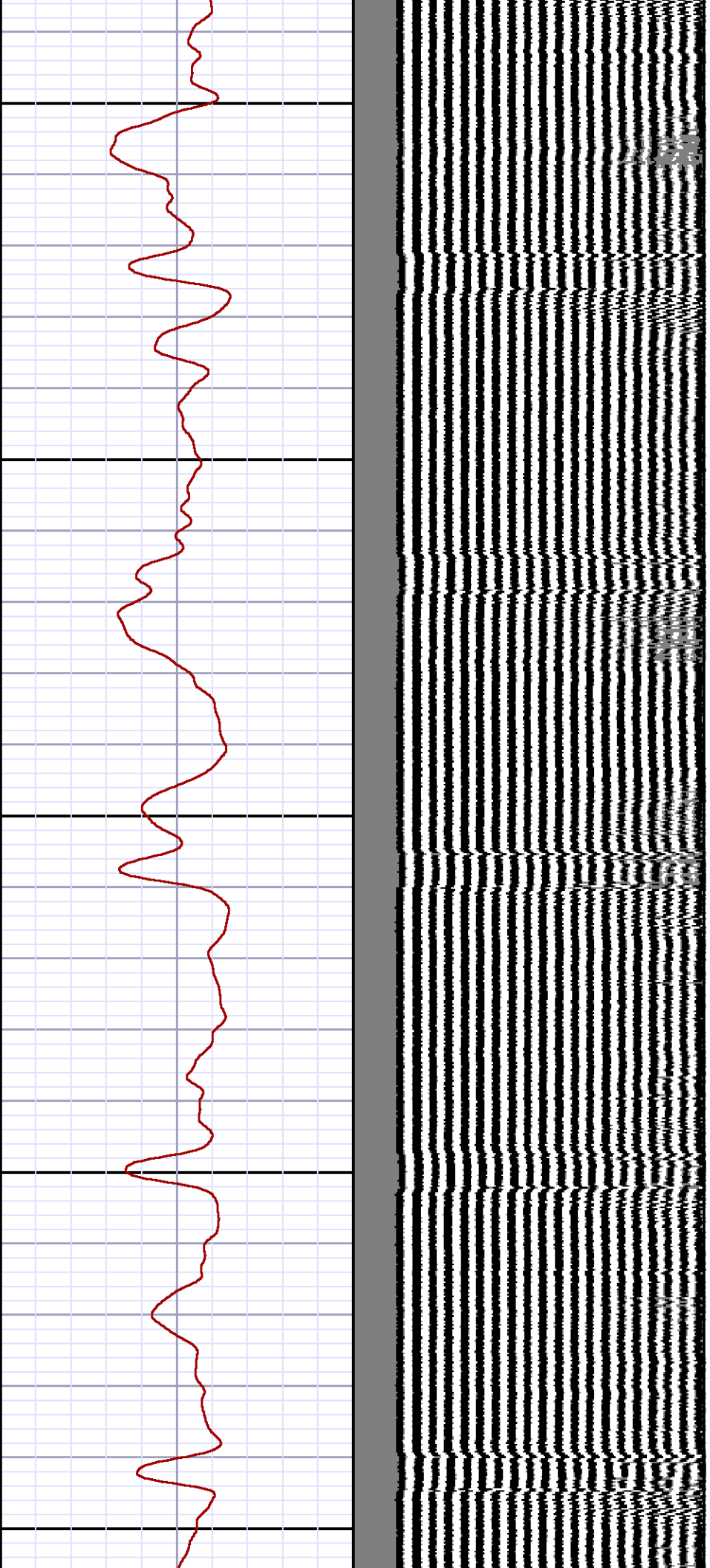




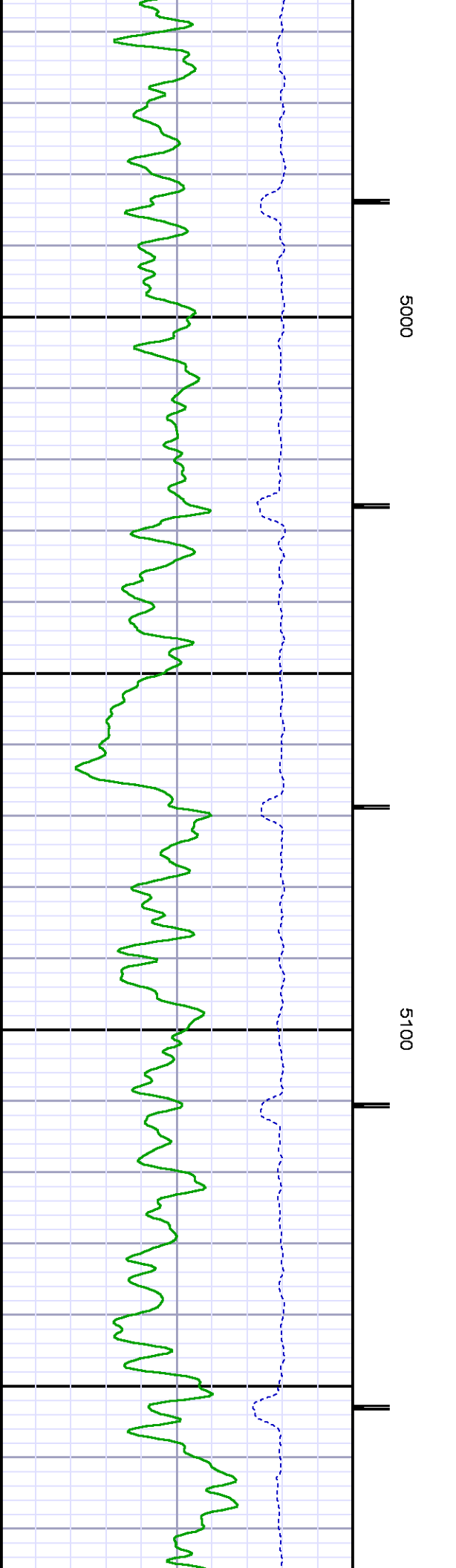
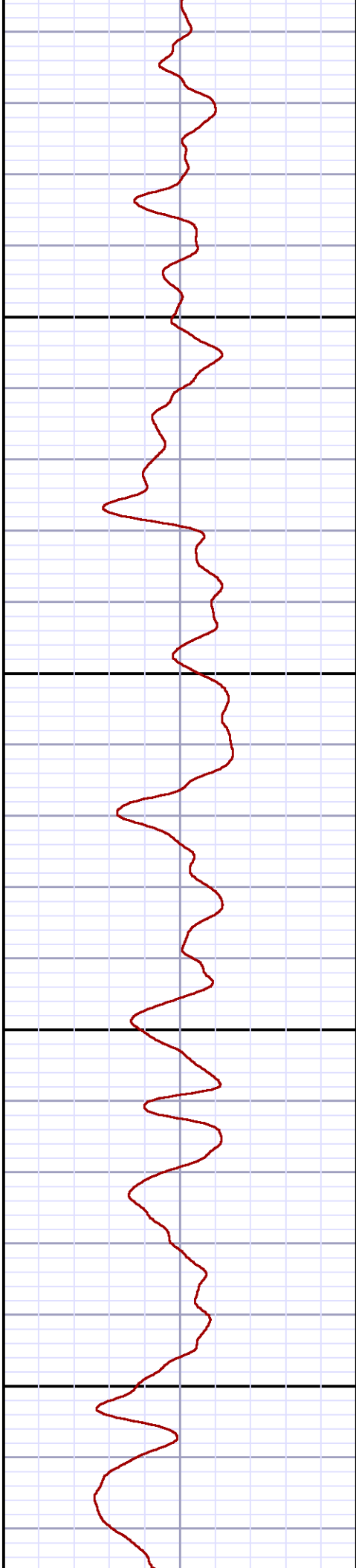
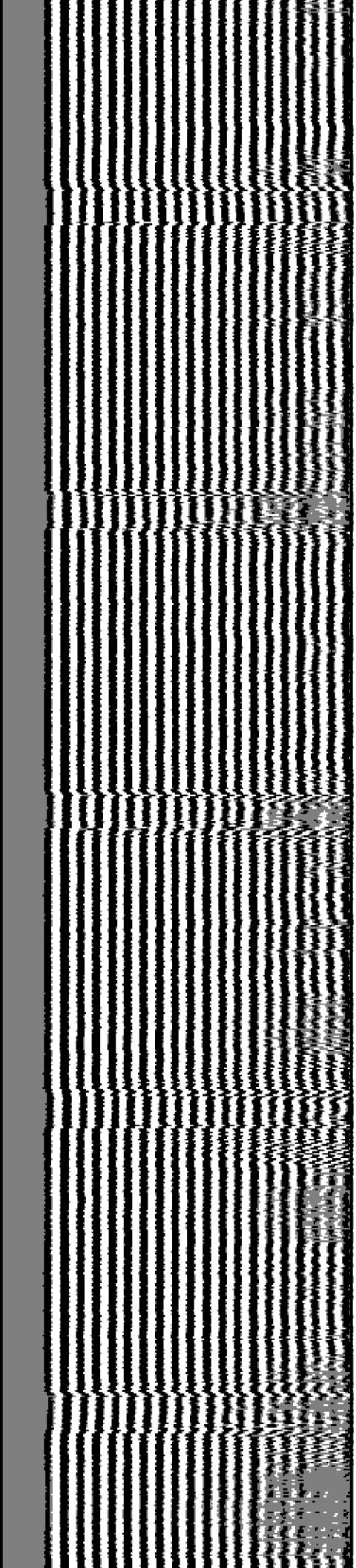


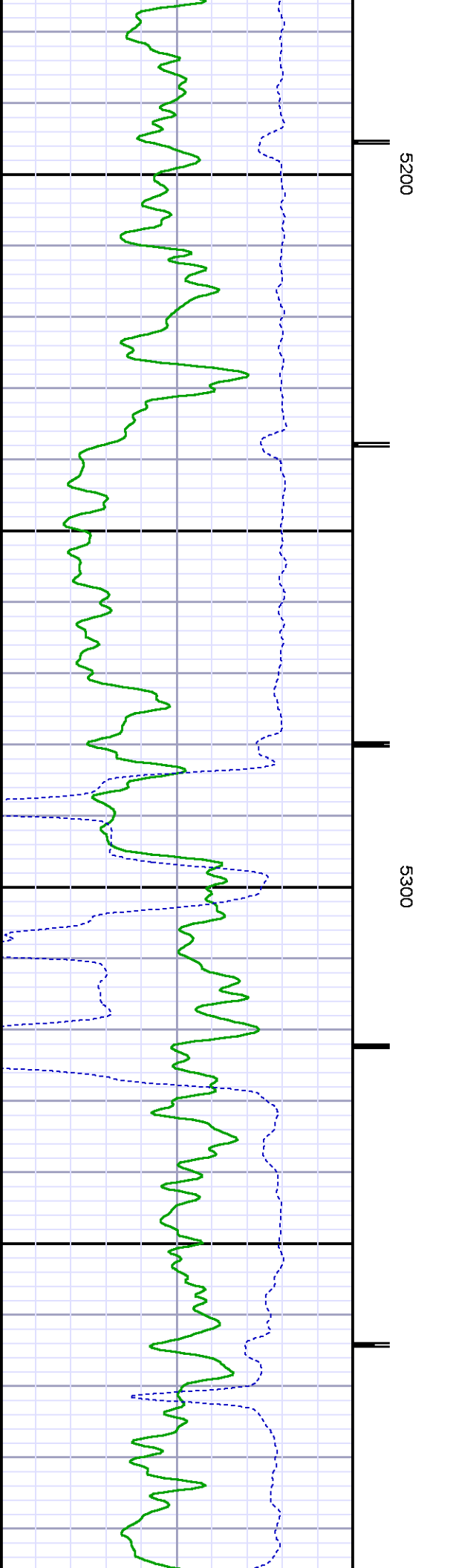
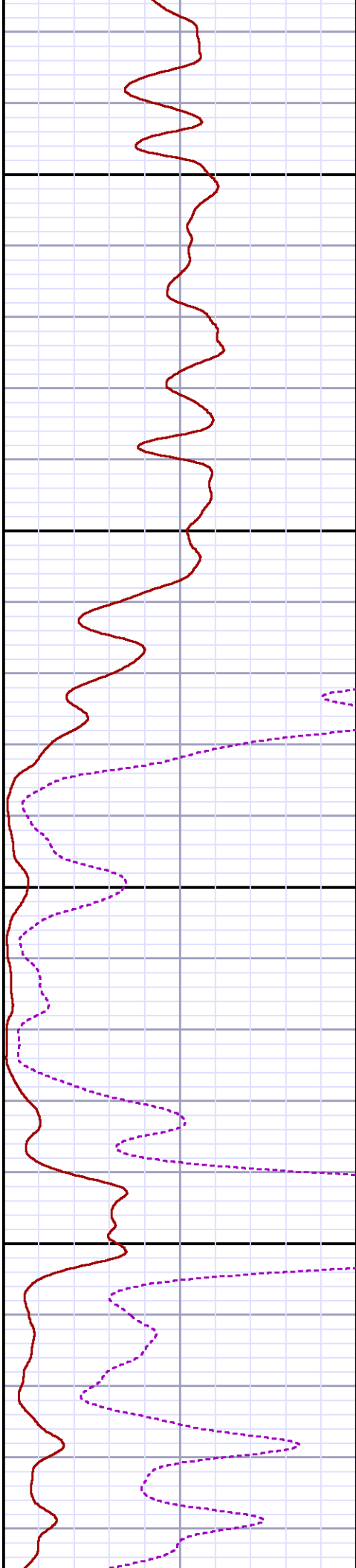
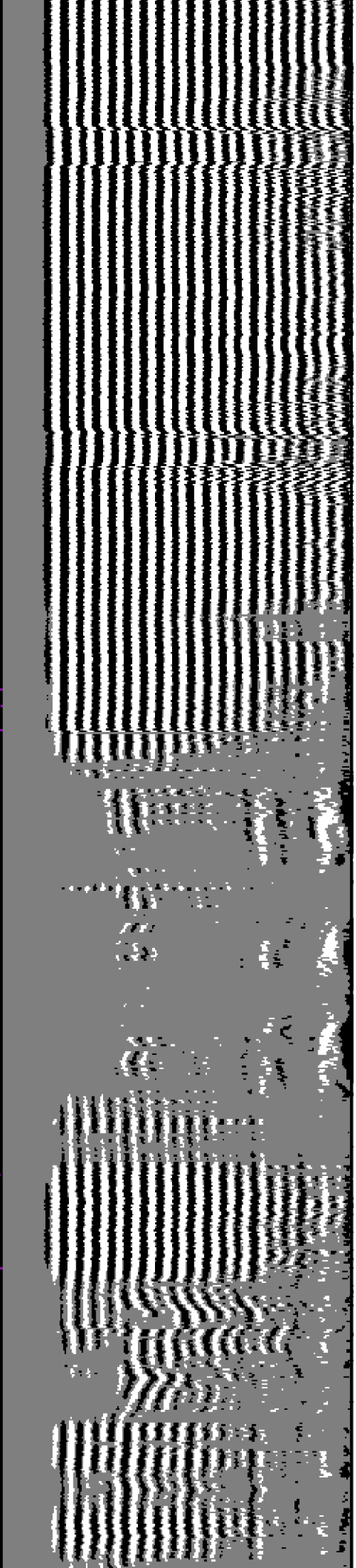


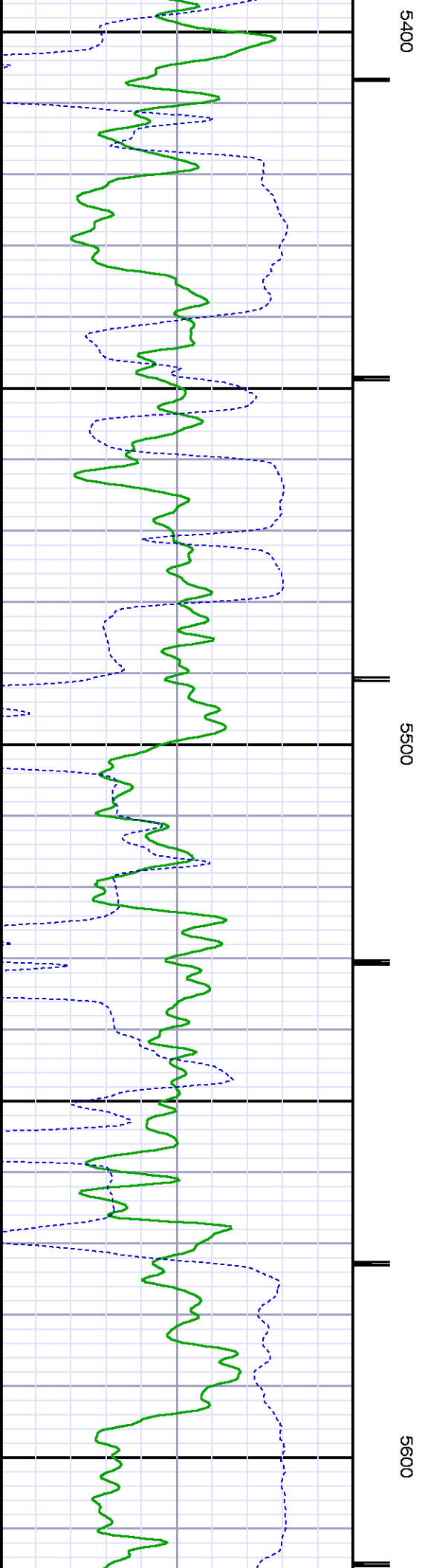
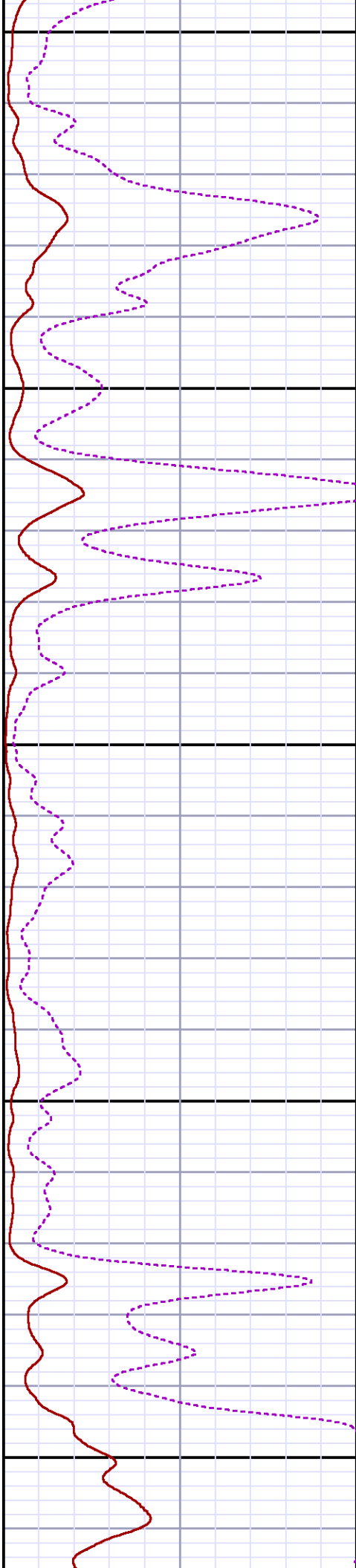
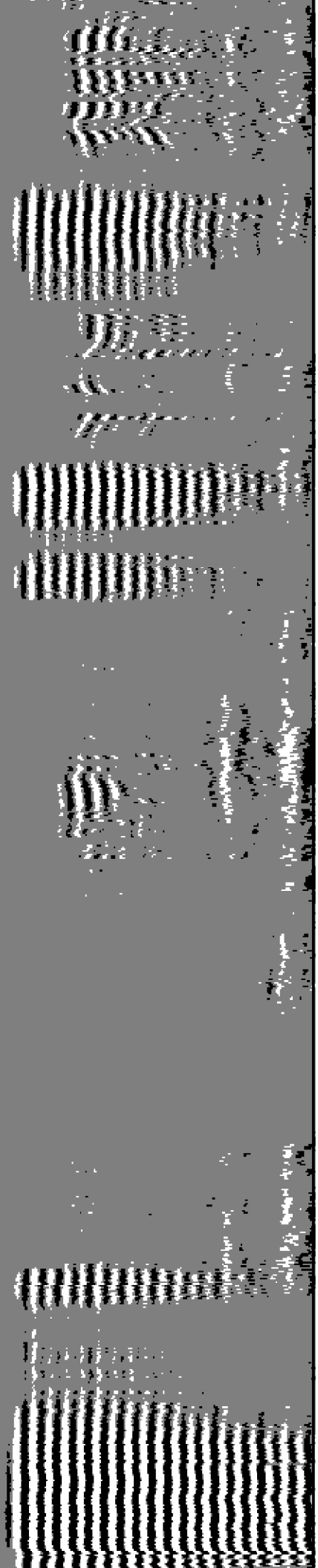




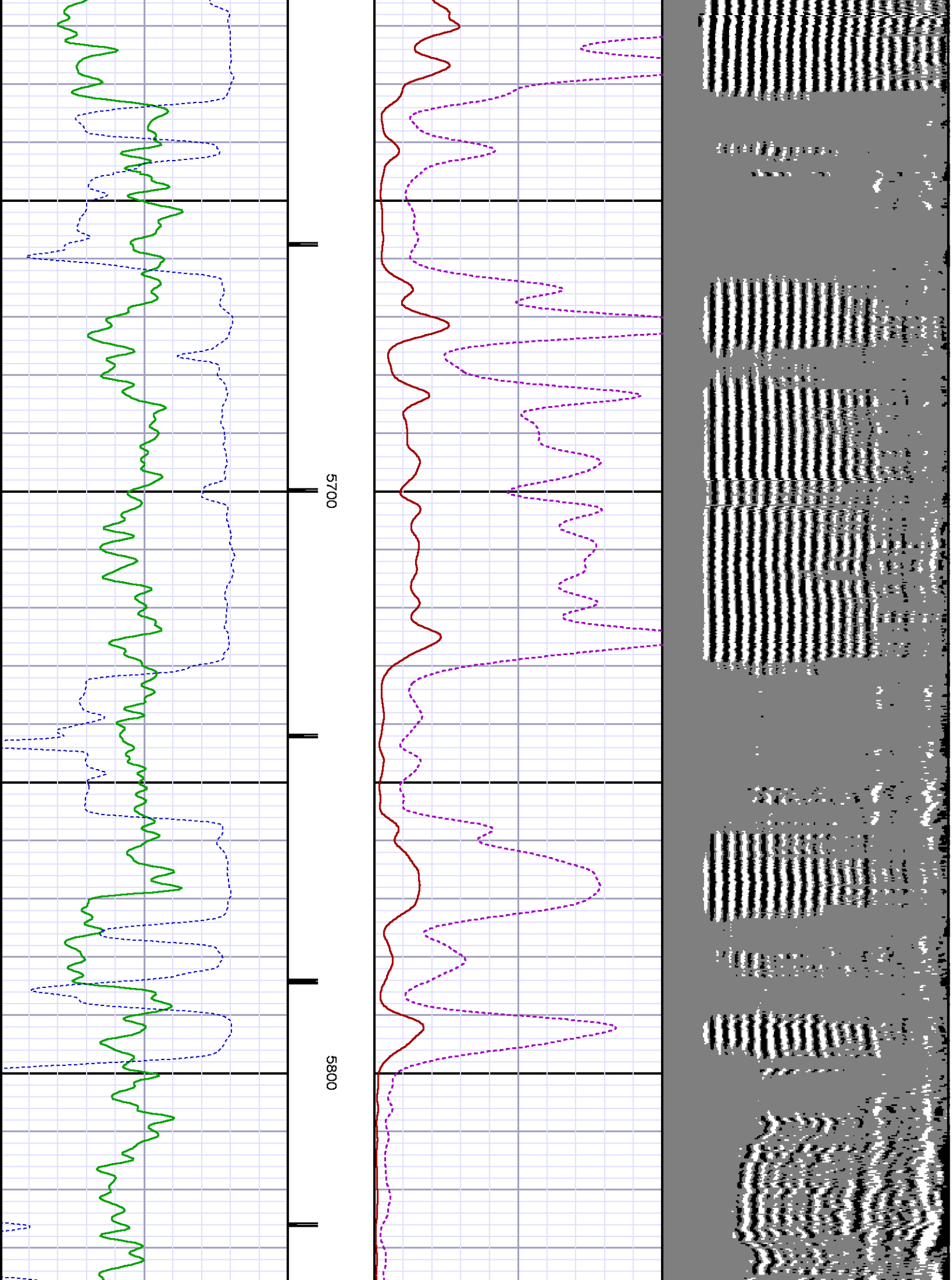


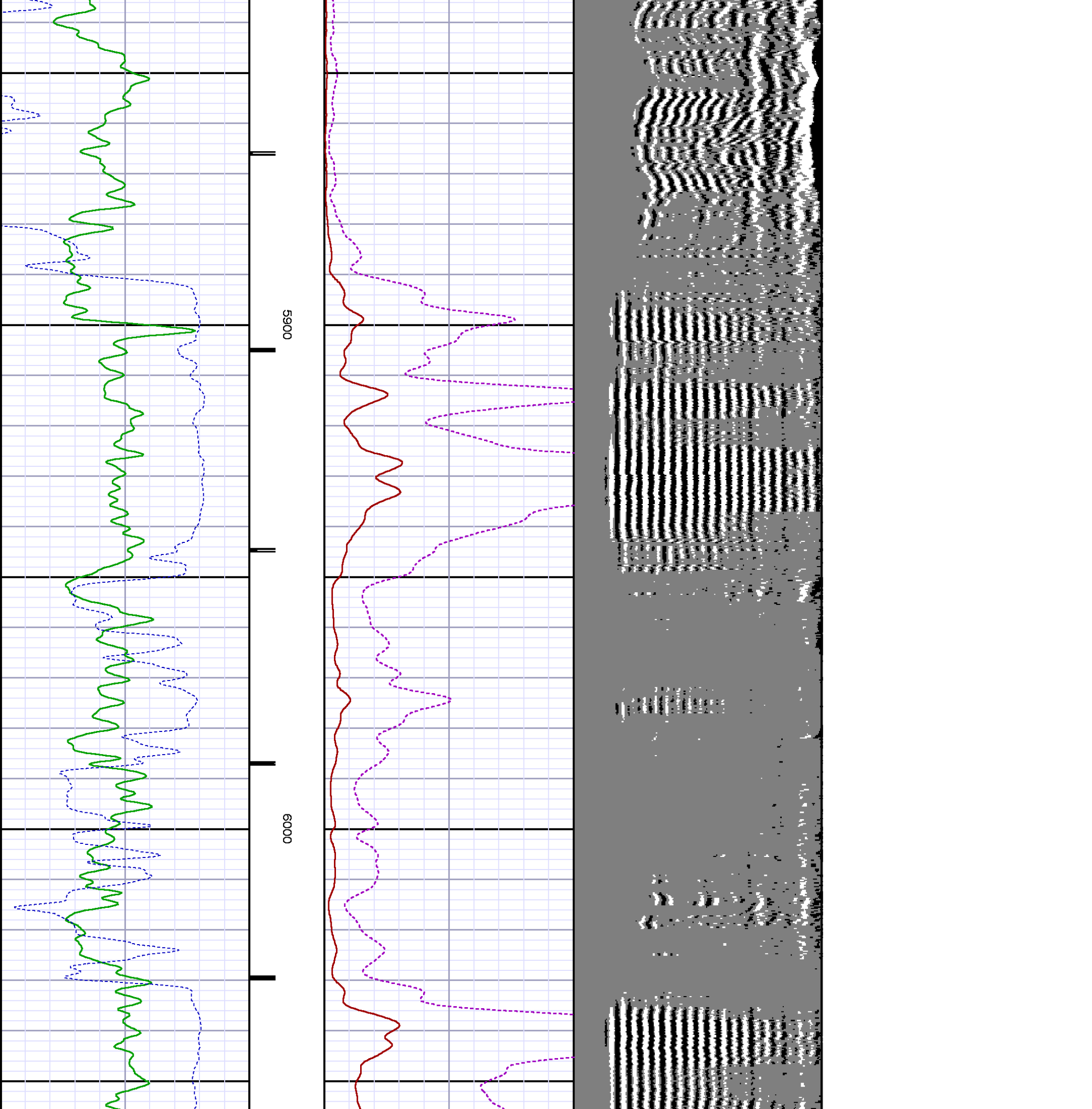


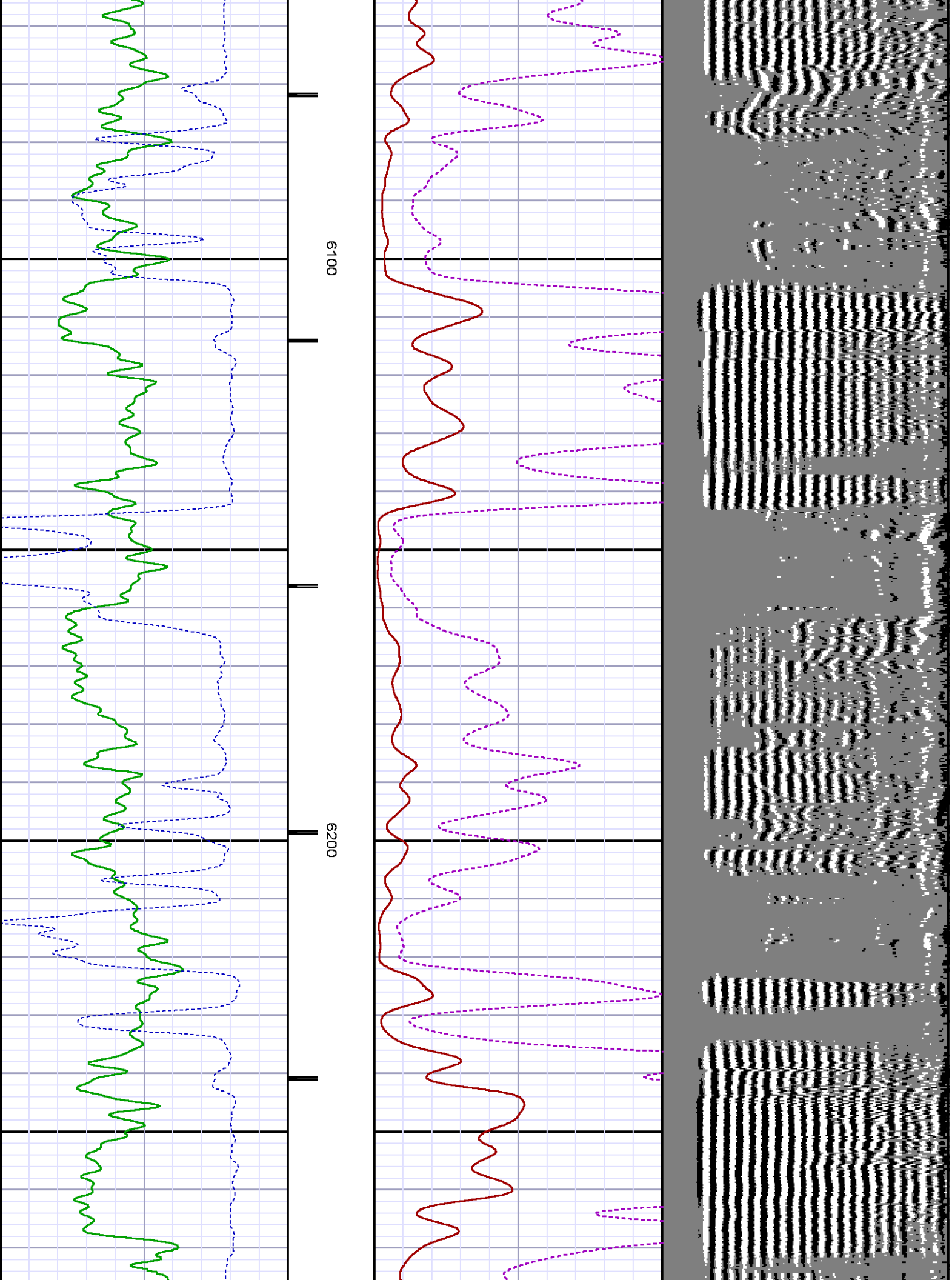


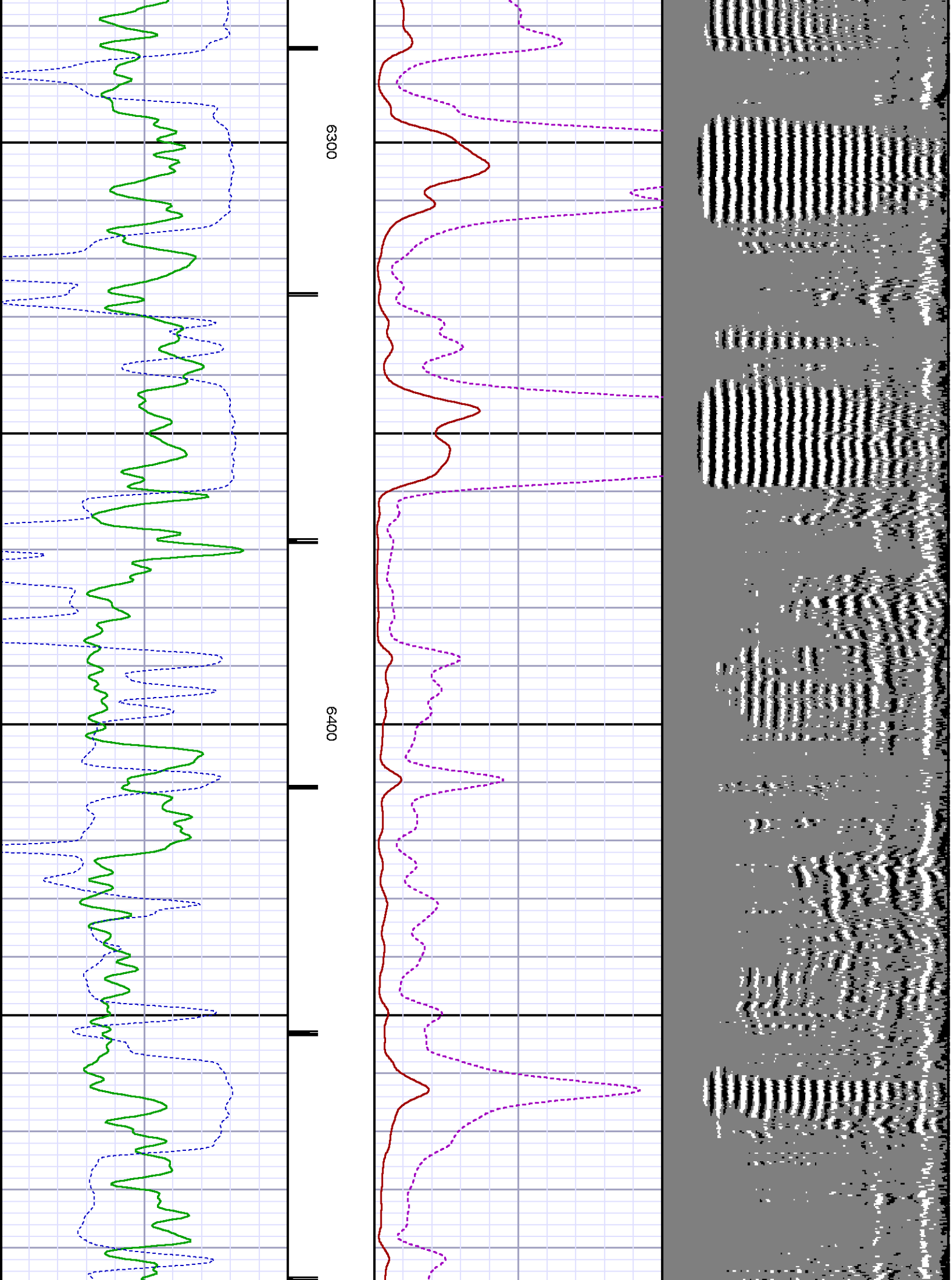


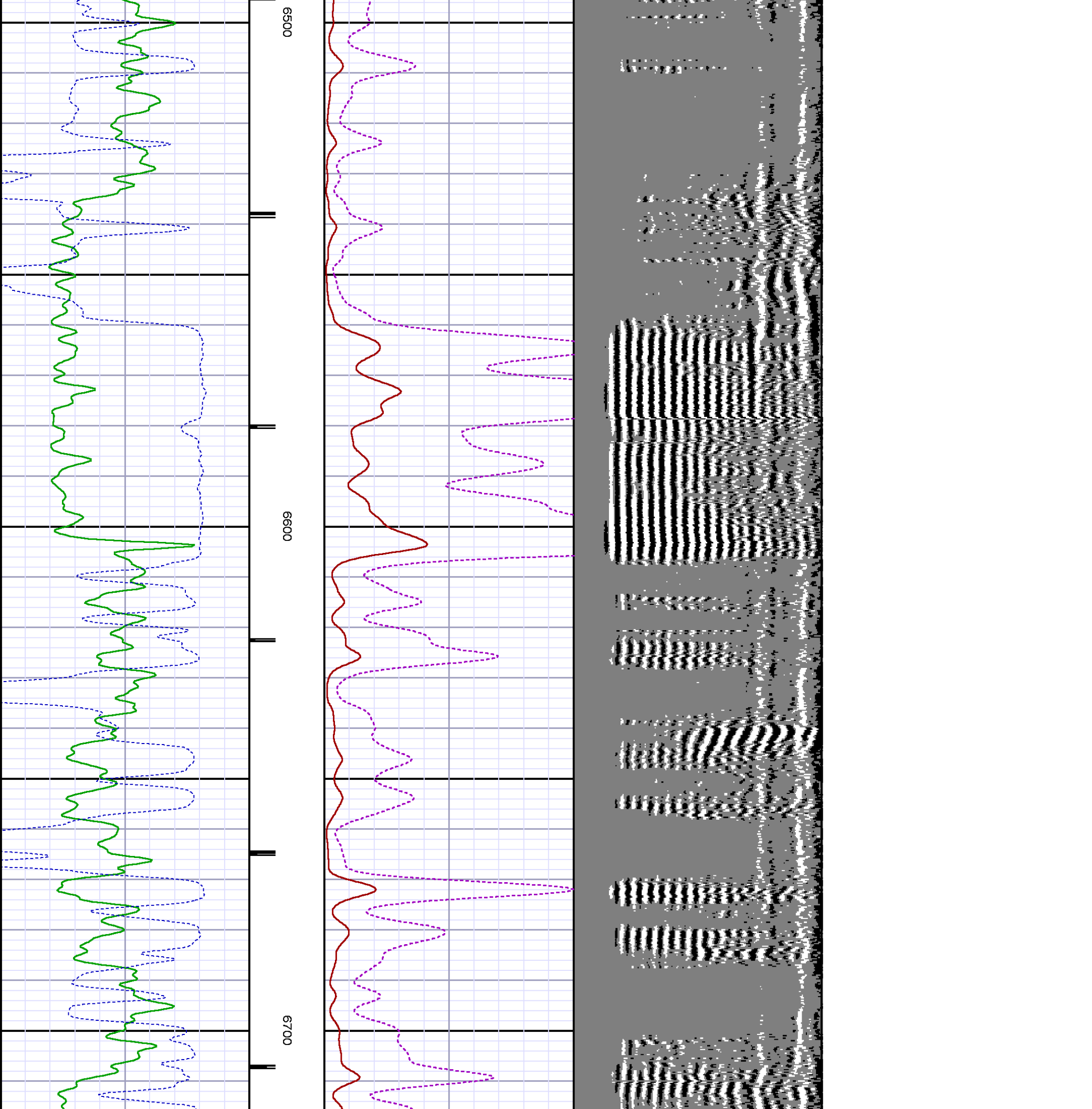


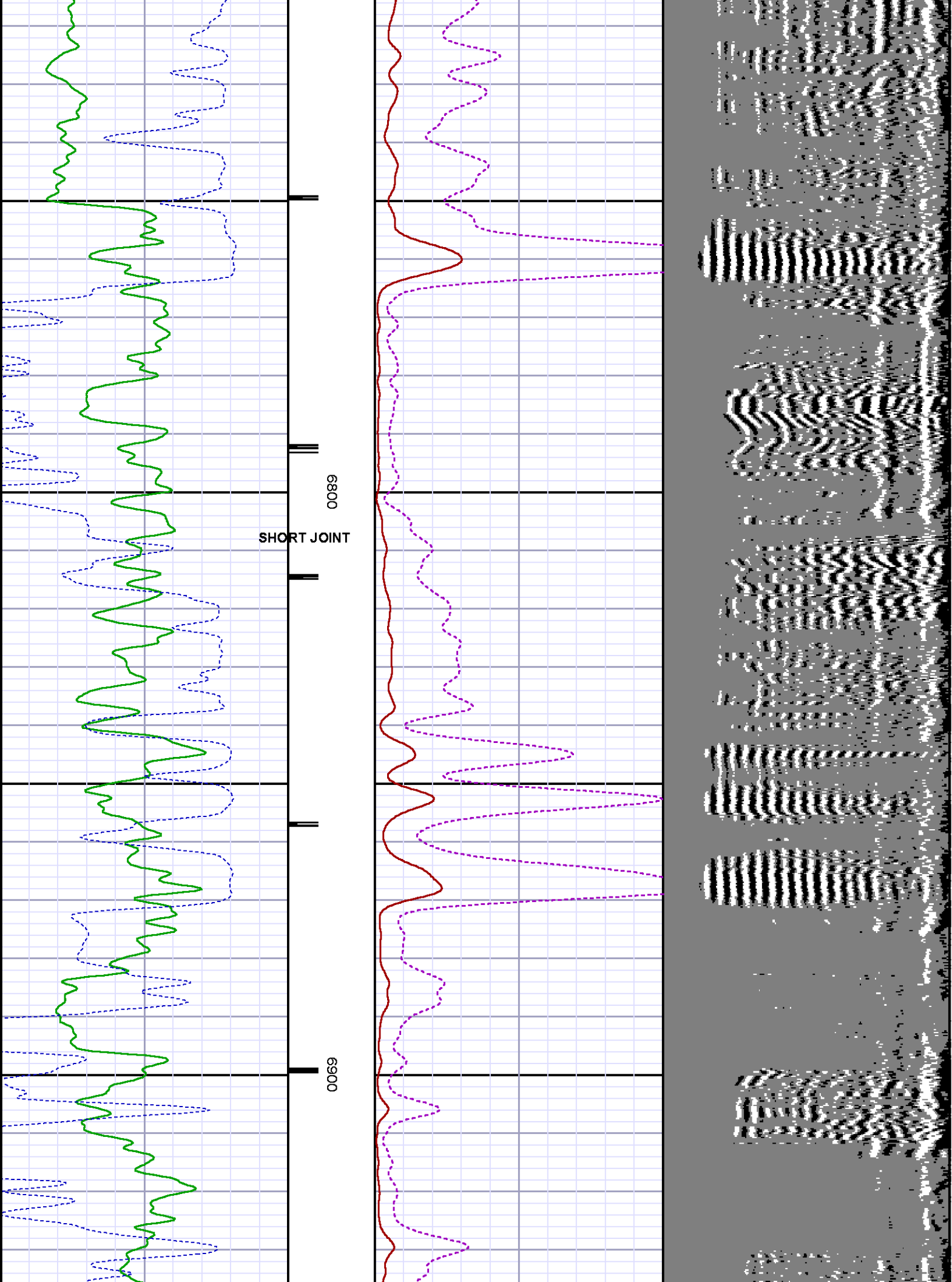


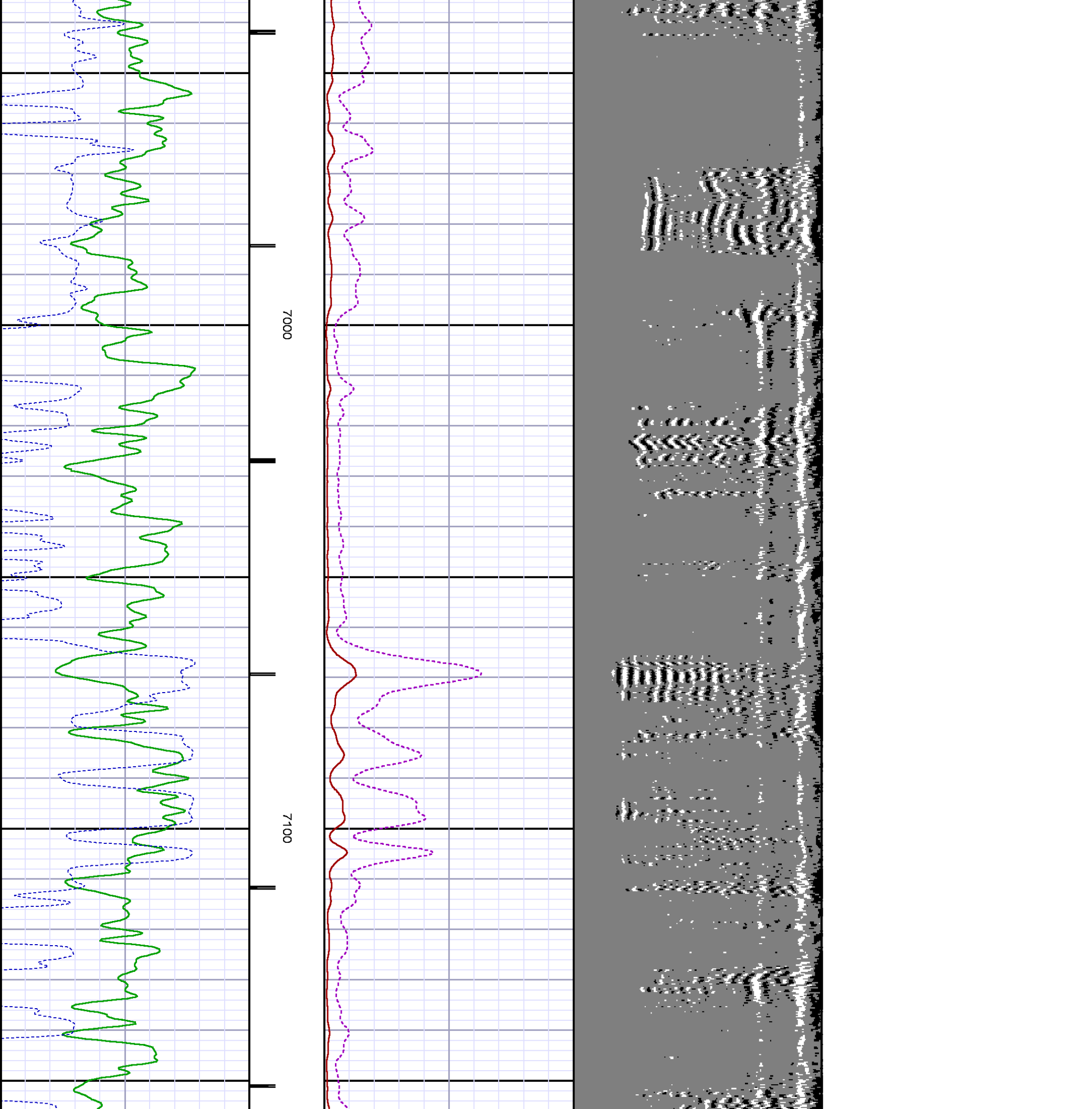




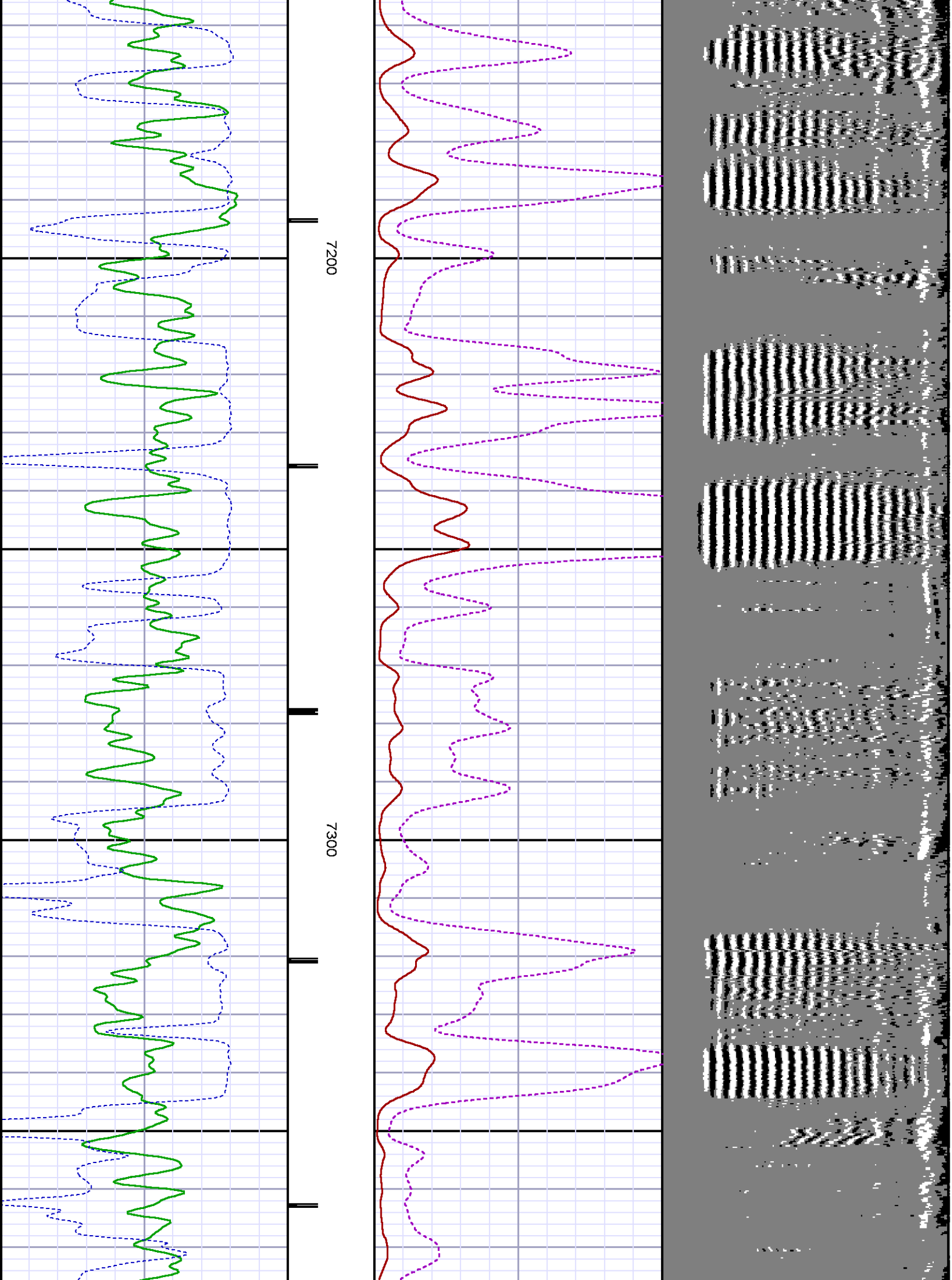




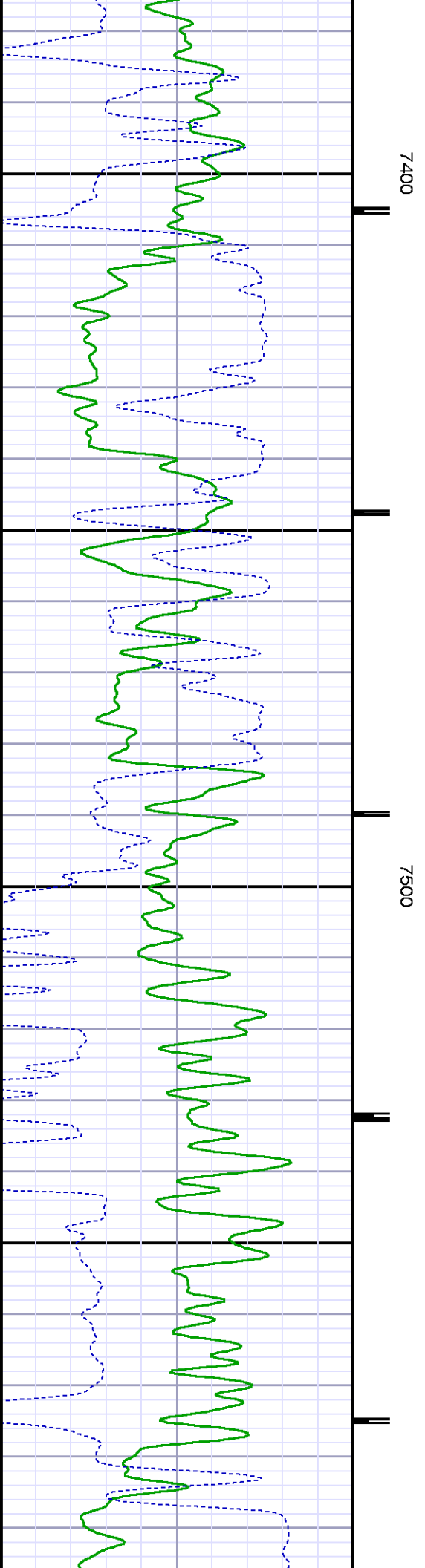
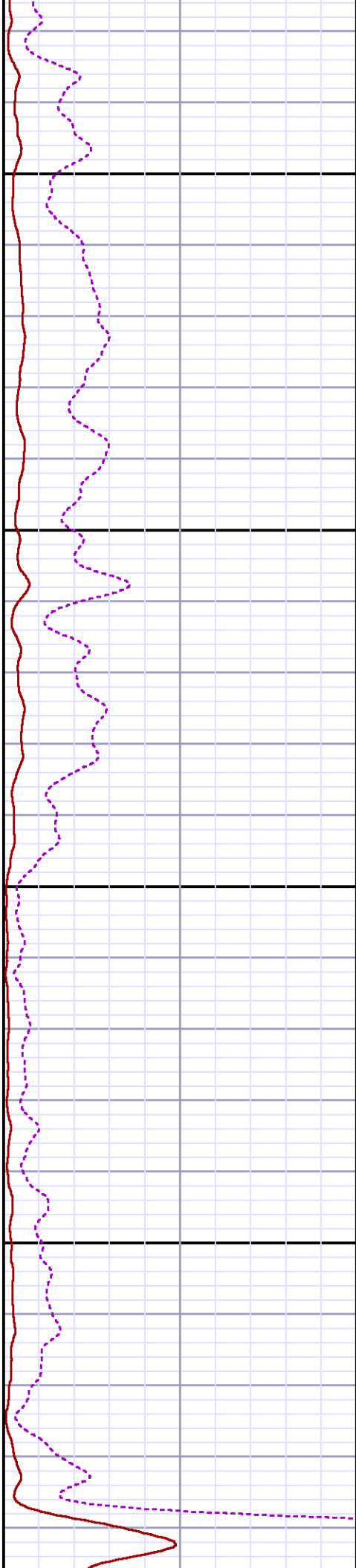
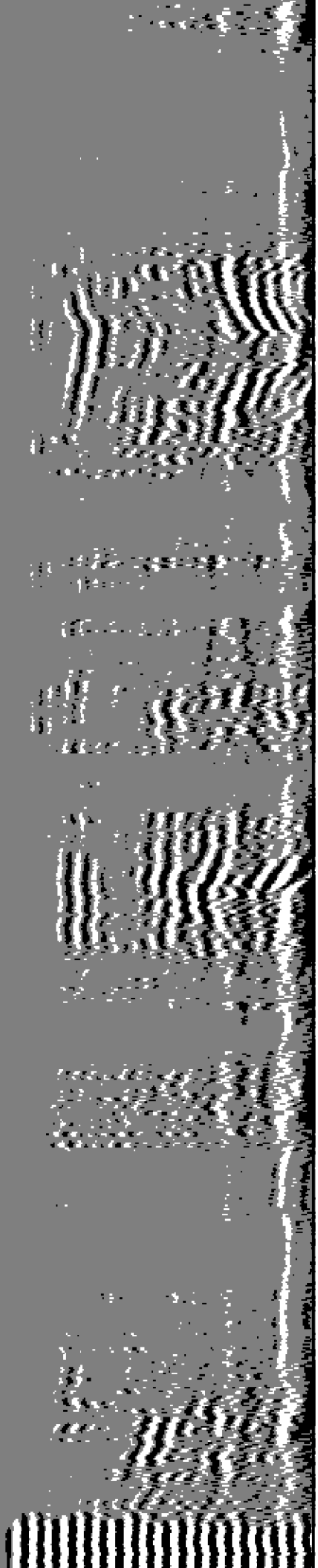


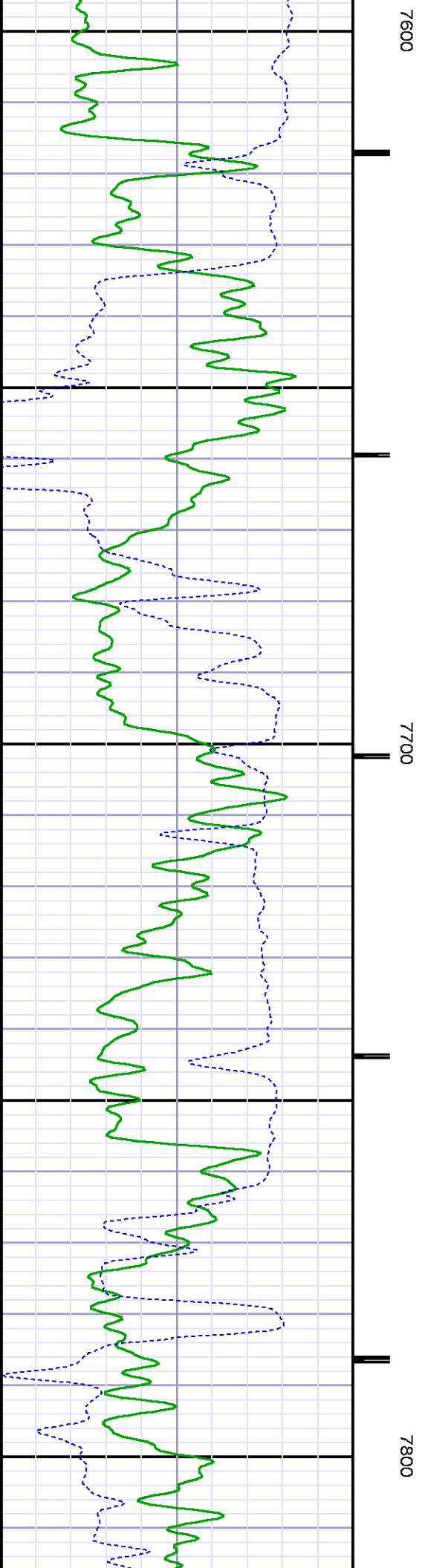
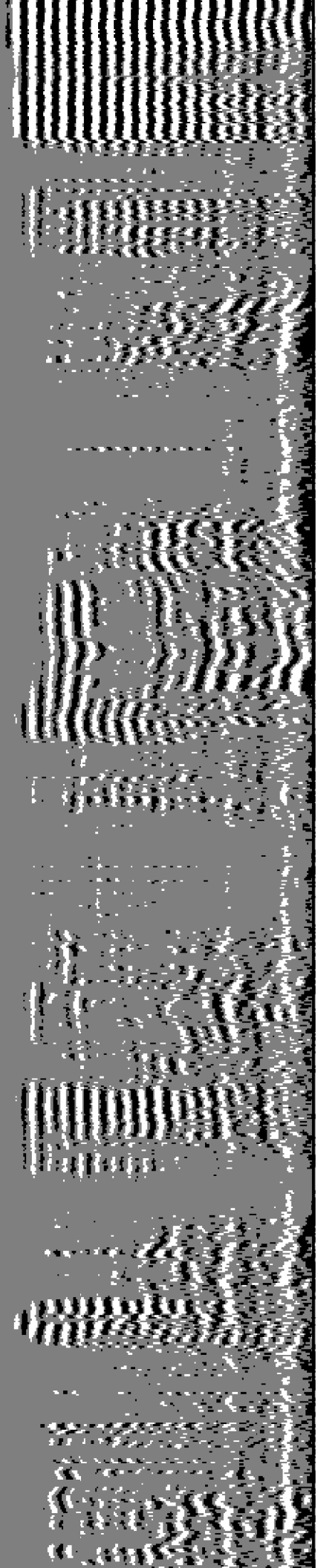


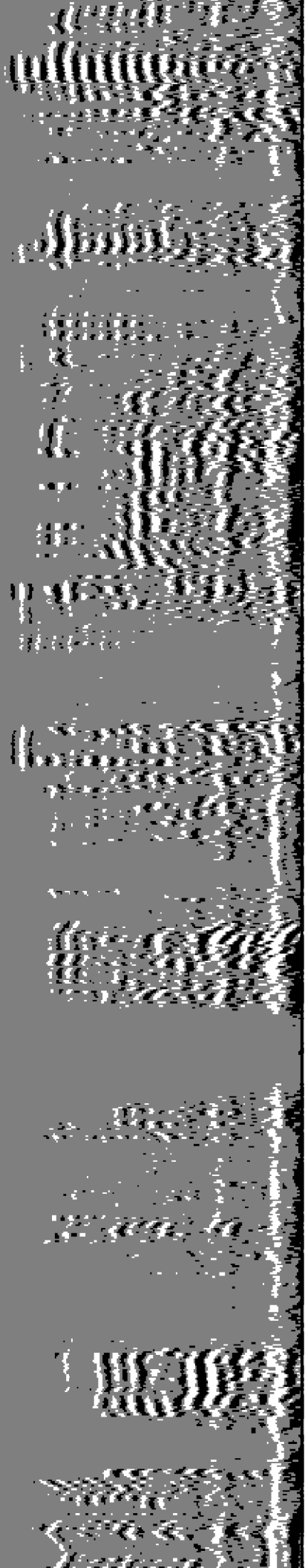
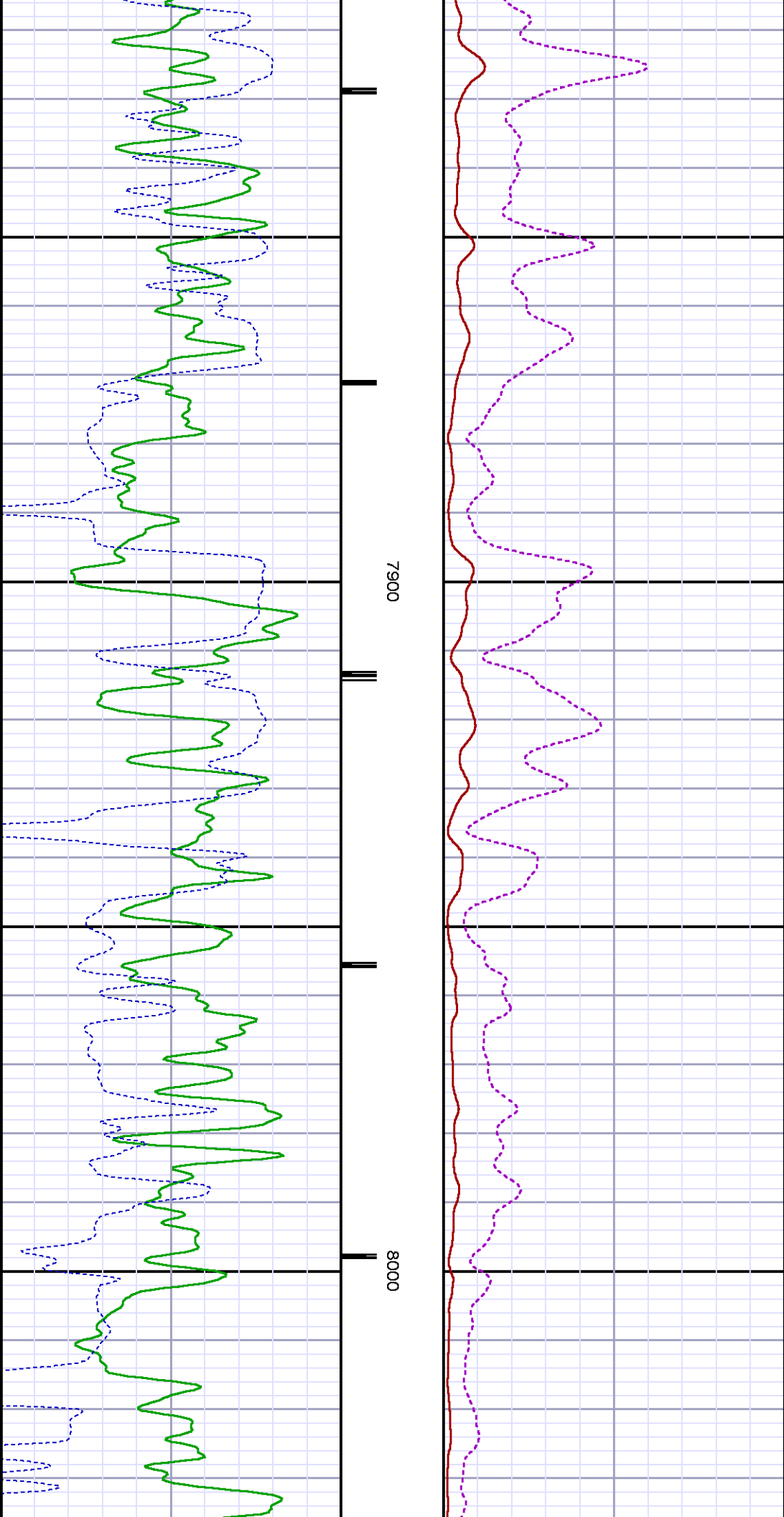


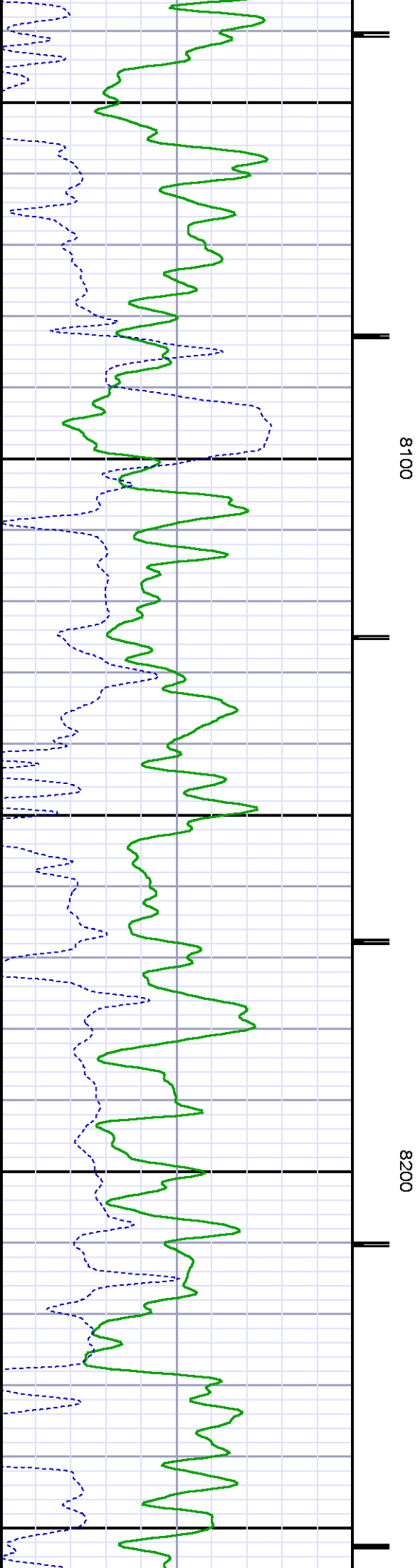
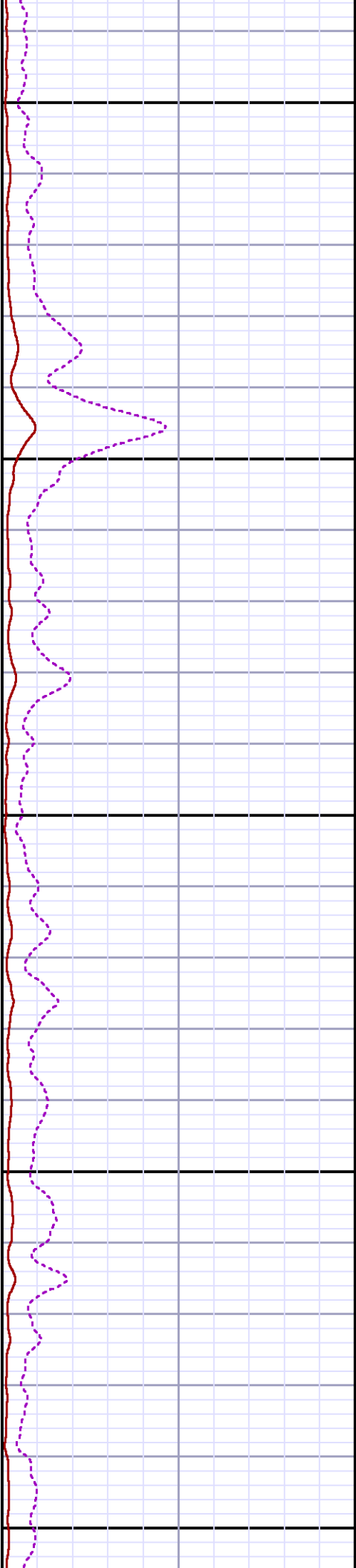
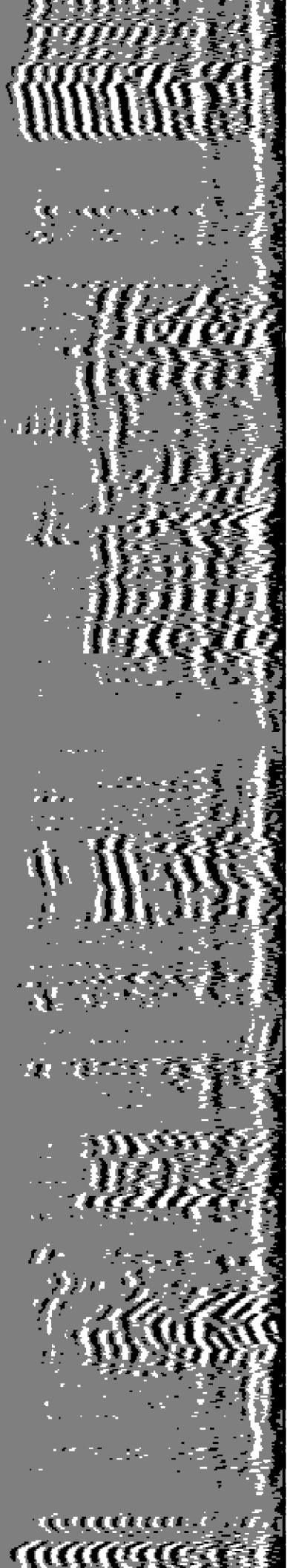


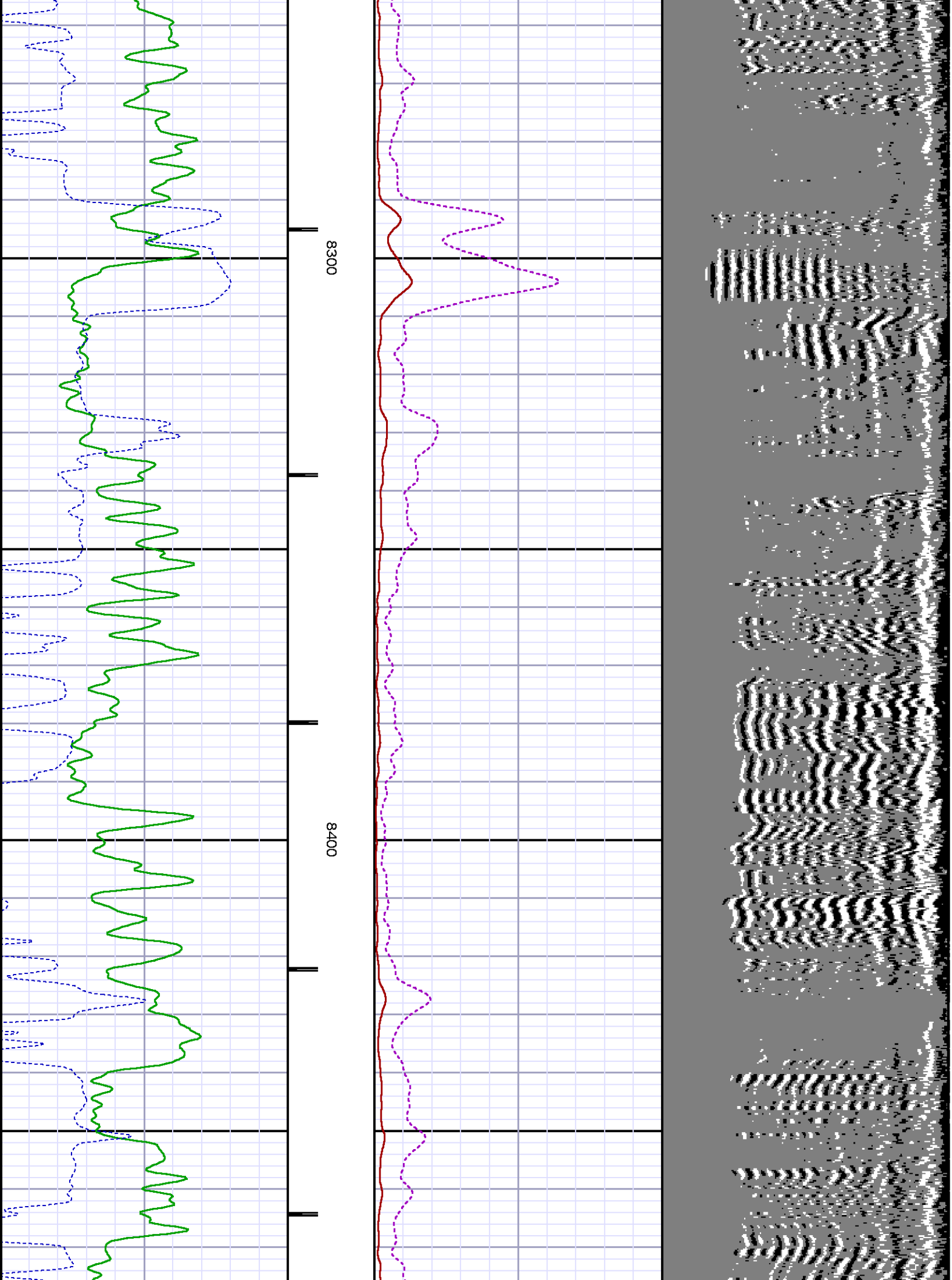


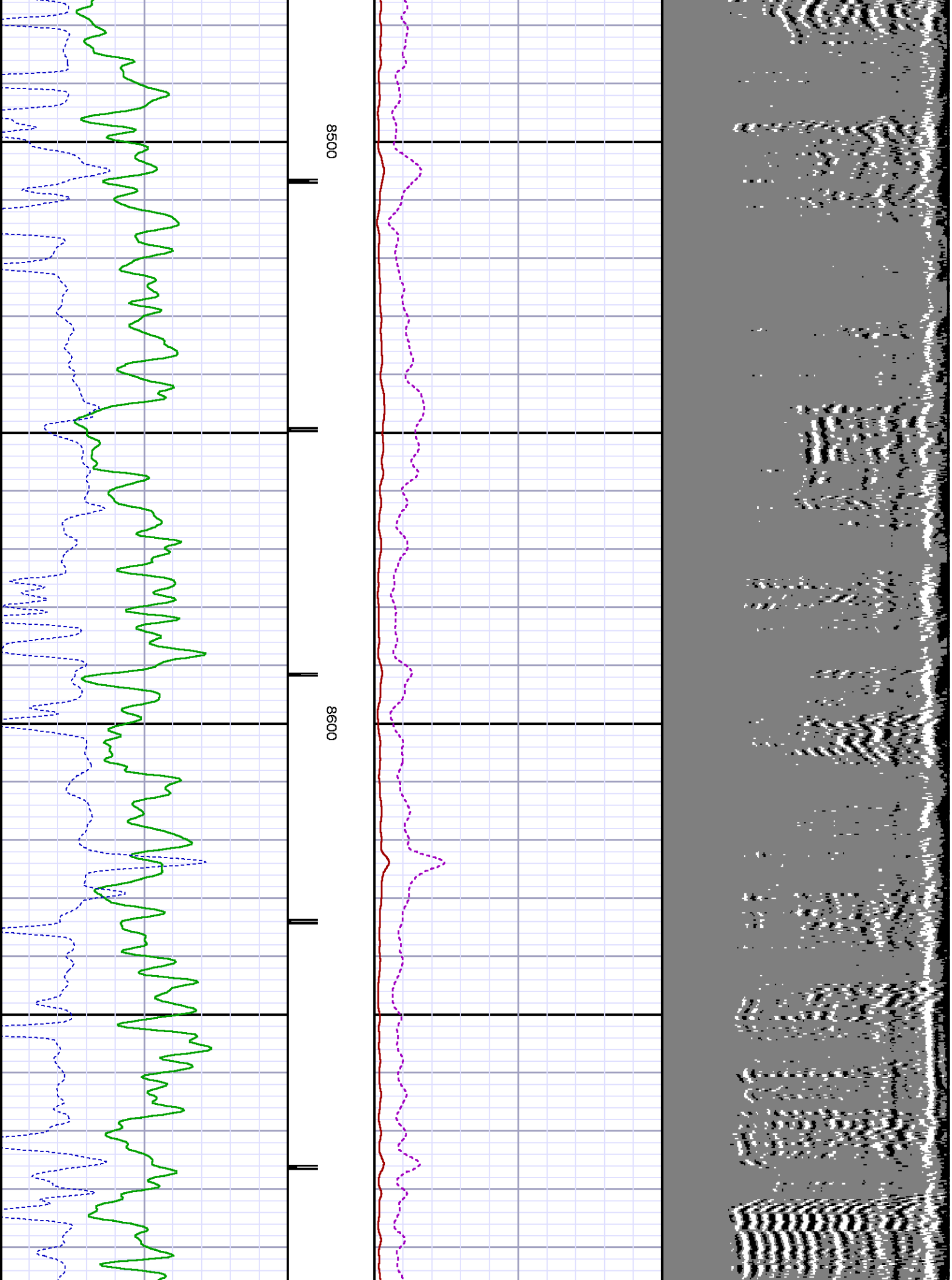




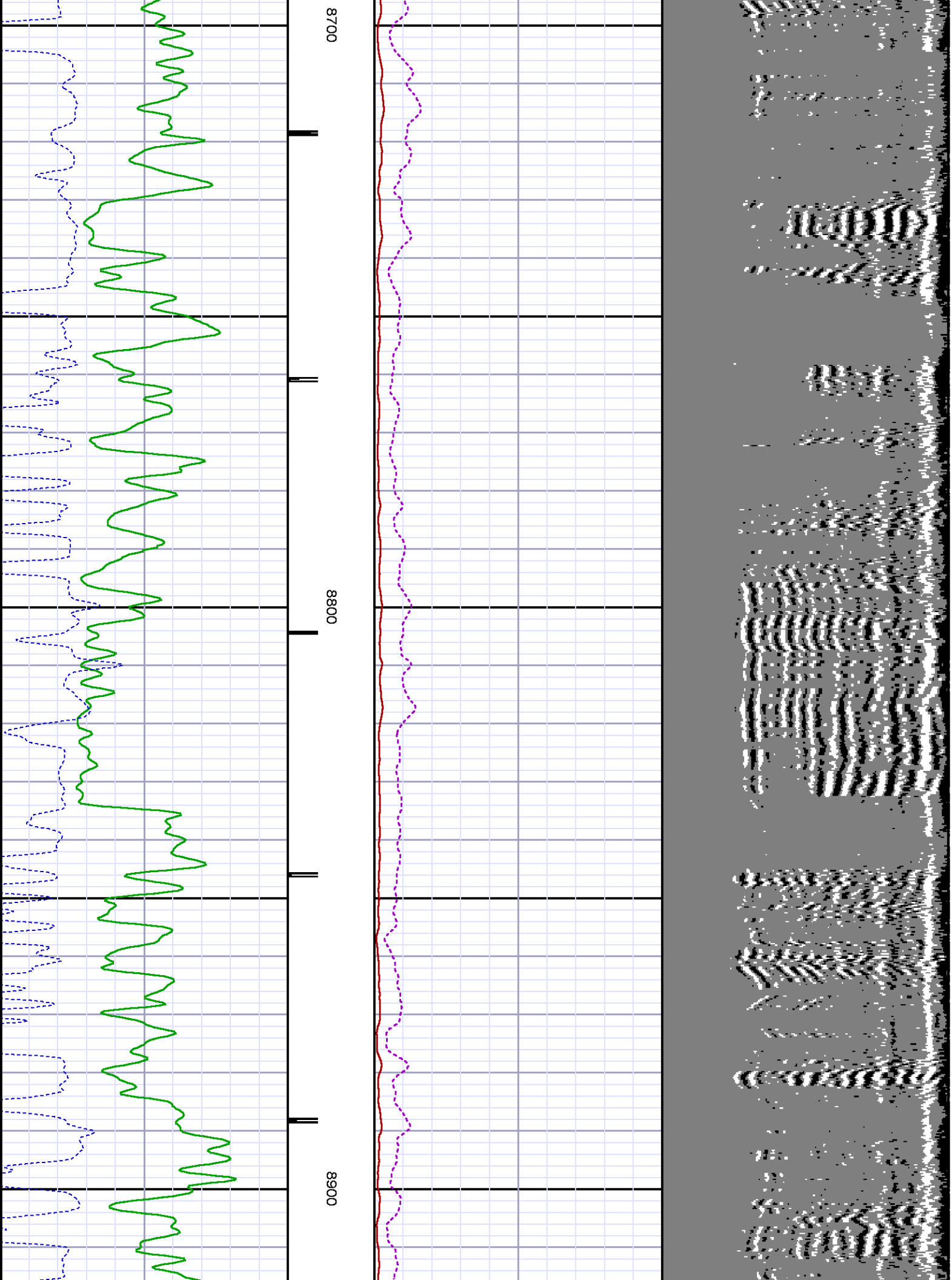


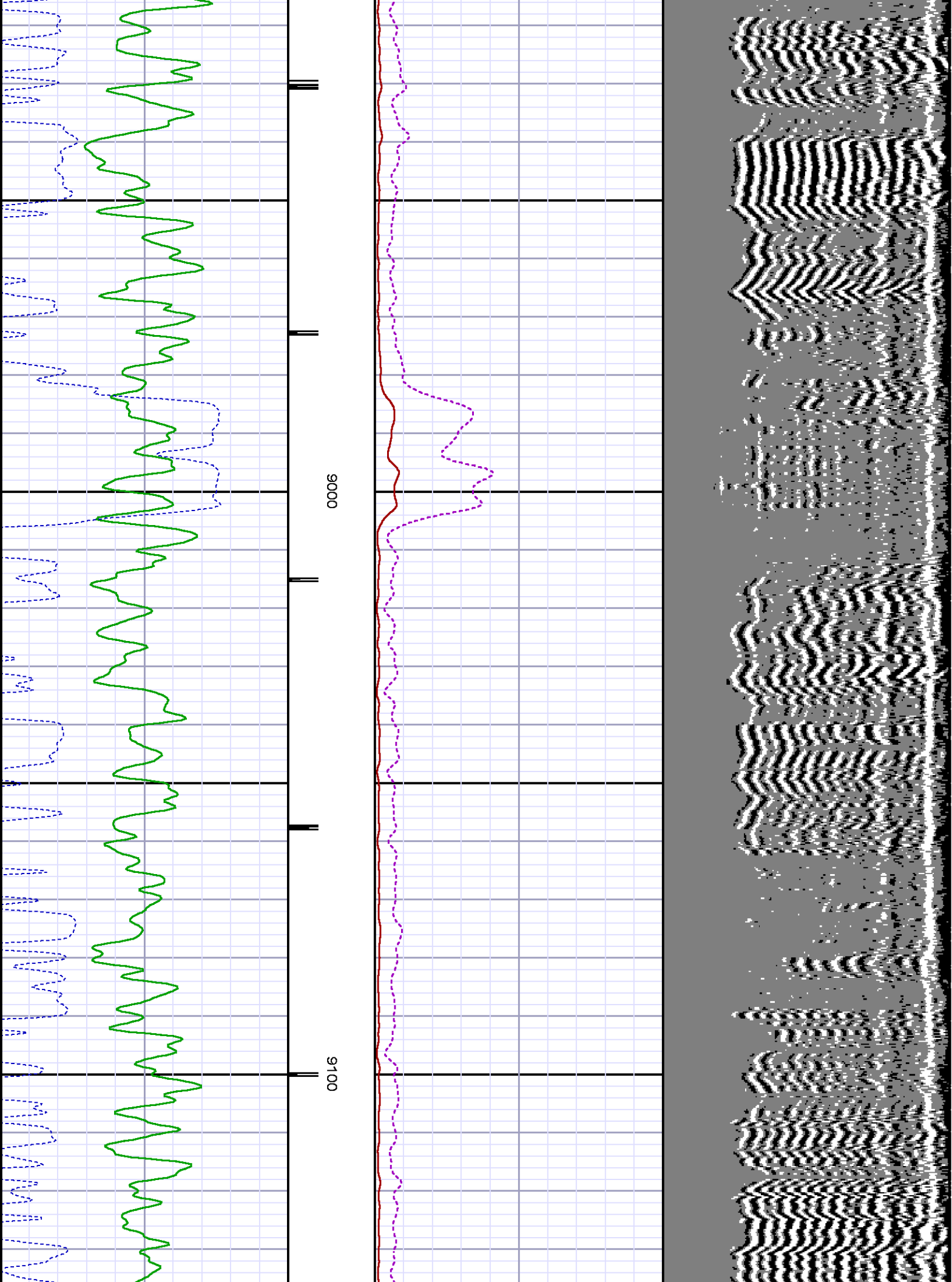


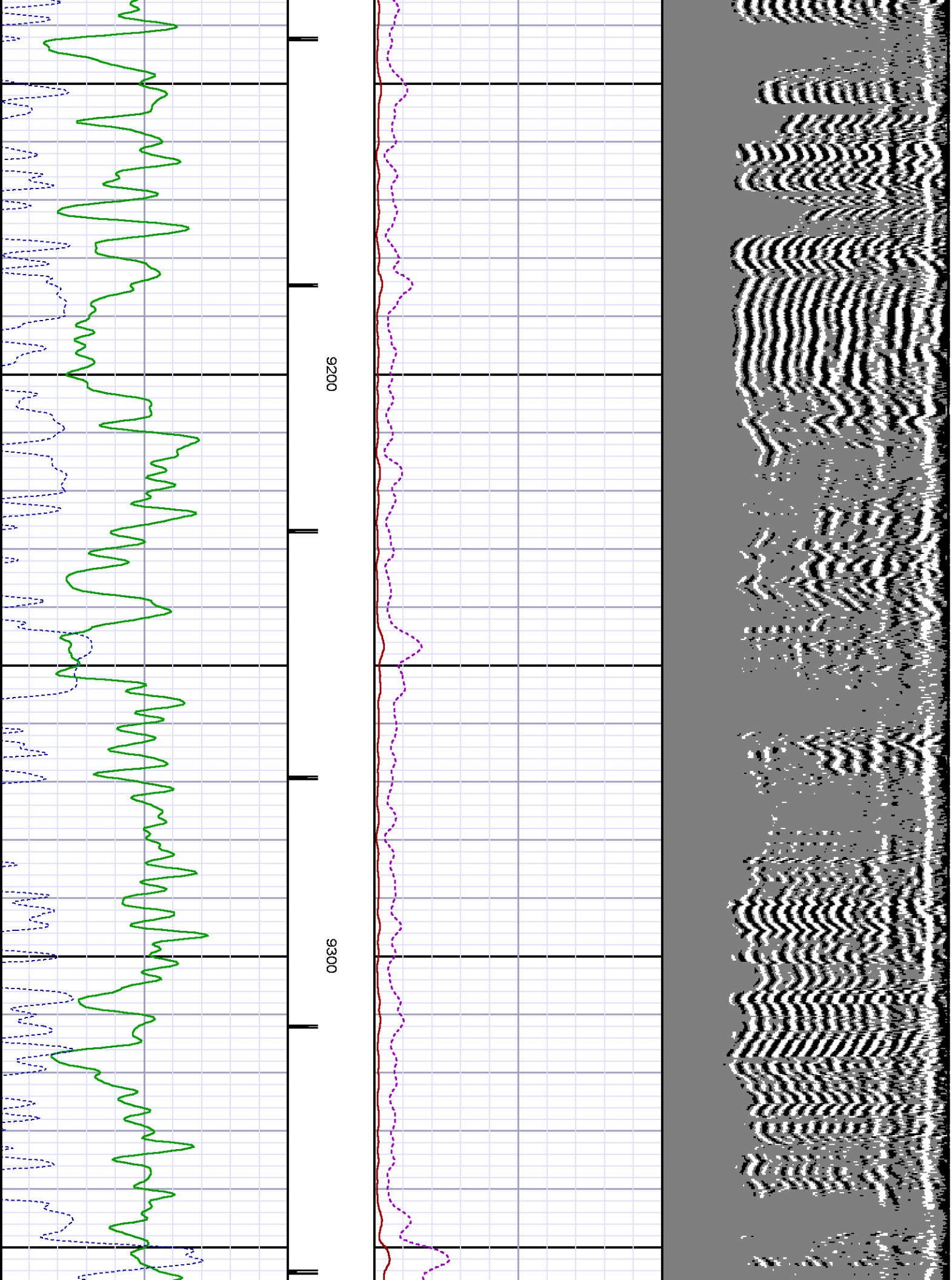


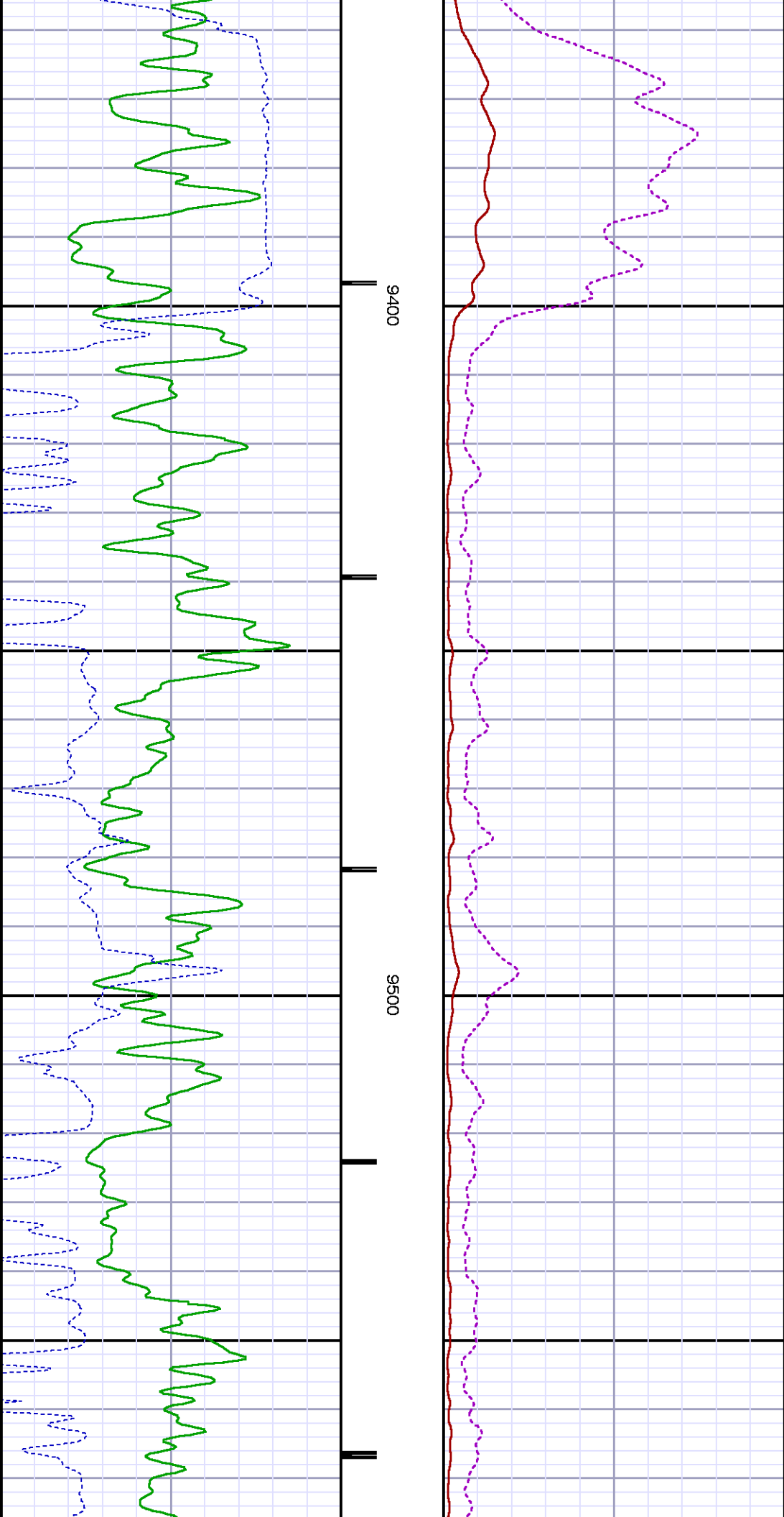
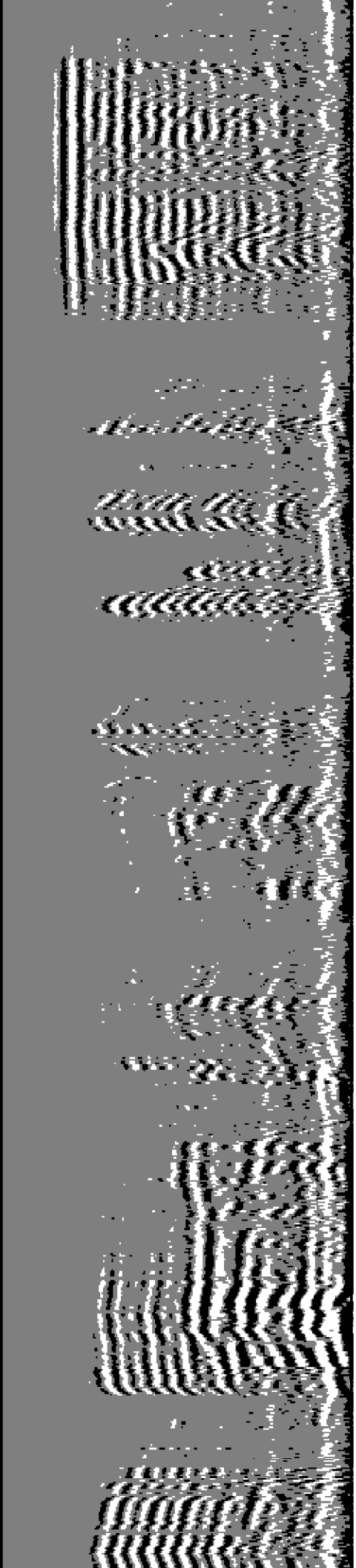


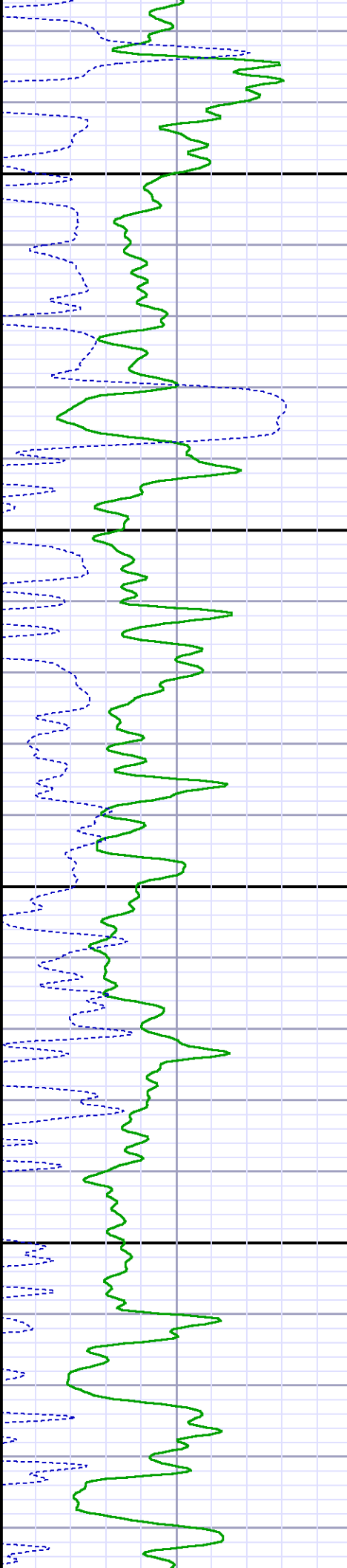
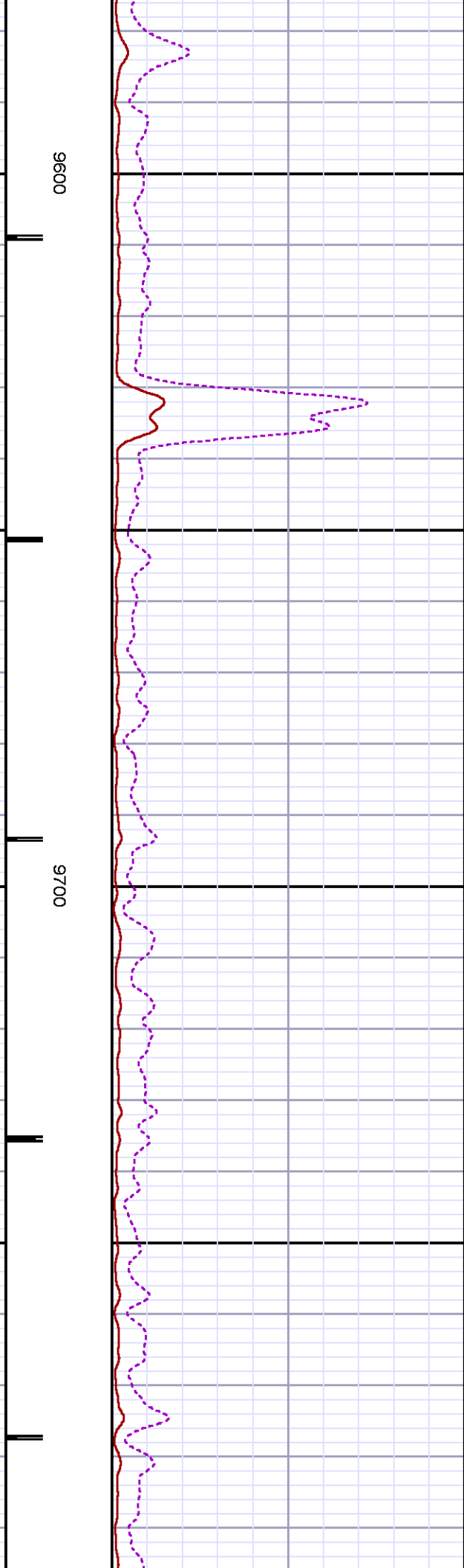
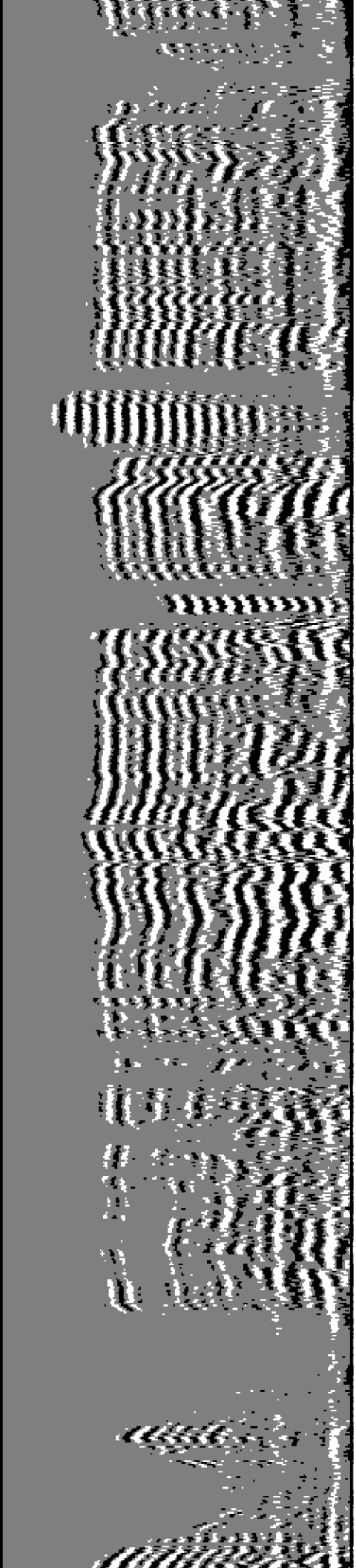


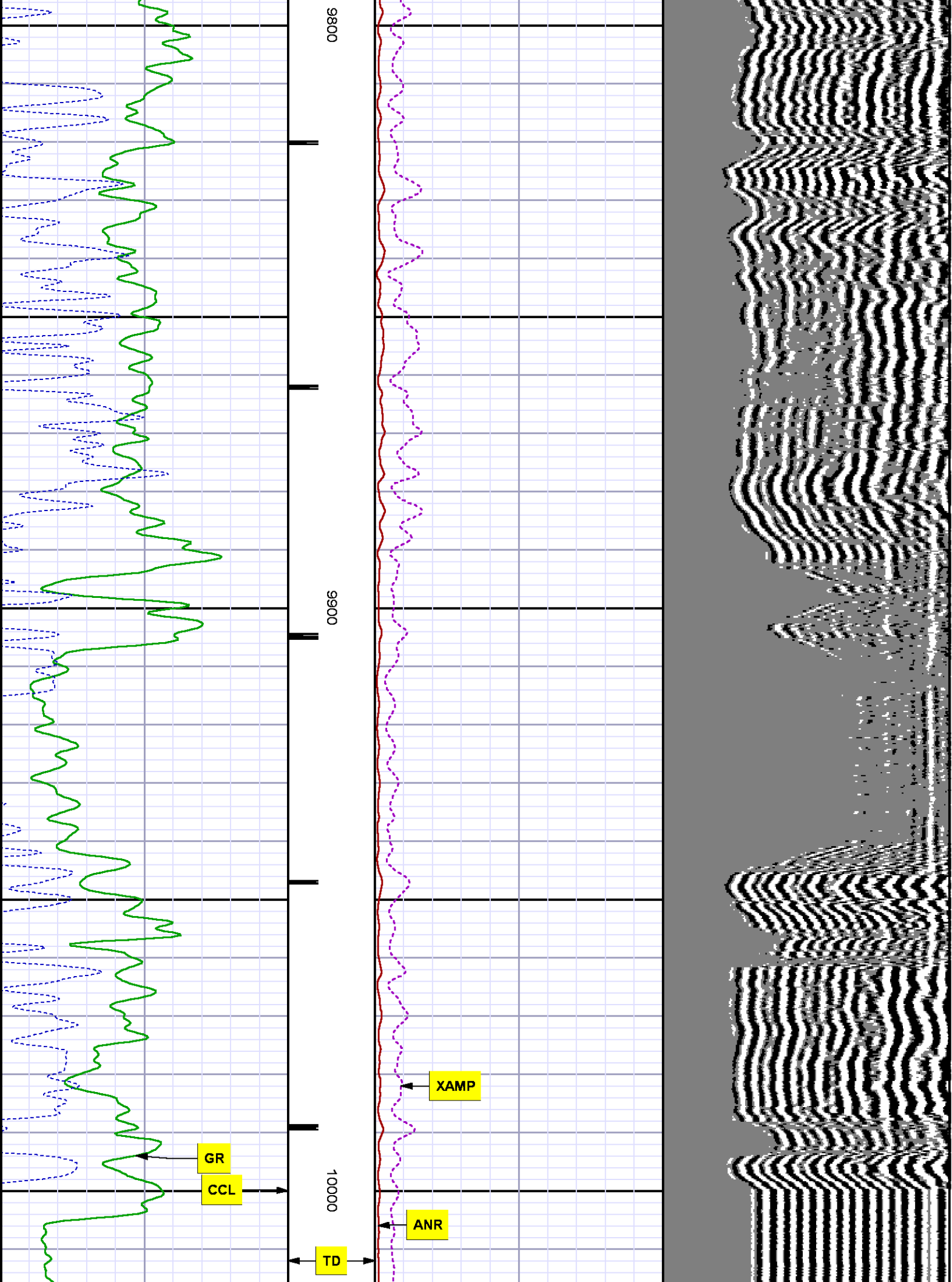




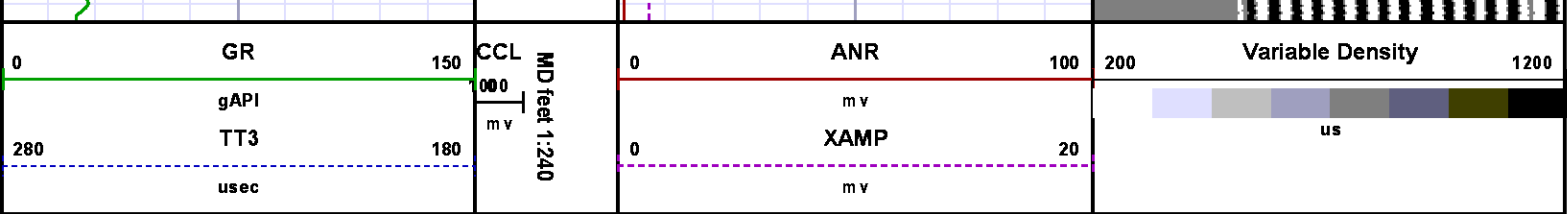












SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	u sec	21.875	10028.000
RAL	Amp Gate Start Near	195.000	u sec	21.875	10028.000
RAL	Amp Gate Start Radial	195.000	u sec	21.875	10028.000
RAL	Amp Gate Width Far	25.000	u sec	21.875	10028.000
RAL	Amp Gate Width Near	25.000	u sec	21.875	10028.000
RAL	Amp Gate Width Radial	25.000	u sec	21.875	10028.000
RAL	casing od	4.500	inches	21.875	10028.000
RAL	casing wt	11.600	lbm/ft	21.875	10028.000
RAL	FB Start Far	291.900	u sec	21.875	10028.000
RAL	FB Start Near	180.000	u sec	21.875	10028.000
RAL	FB Start Radial	180.000	u sec	21.875	10028.000
RAL	FB Thresh Far	10.000	mv	21.875	10028.000
RAL	FB Thresh Near	4.000	mv	21.875	10028.000
RAL	FB Thresh Radial	4.000	mv	21.875	10028.000
RAL	Fluid Travel Time	200.000	u sec/ft	21.875	10027.625

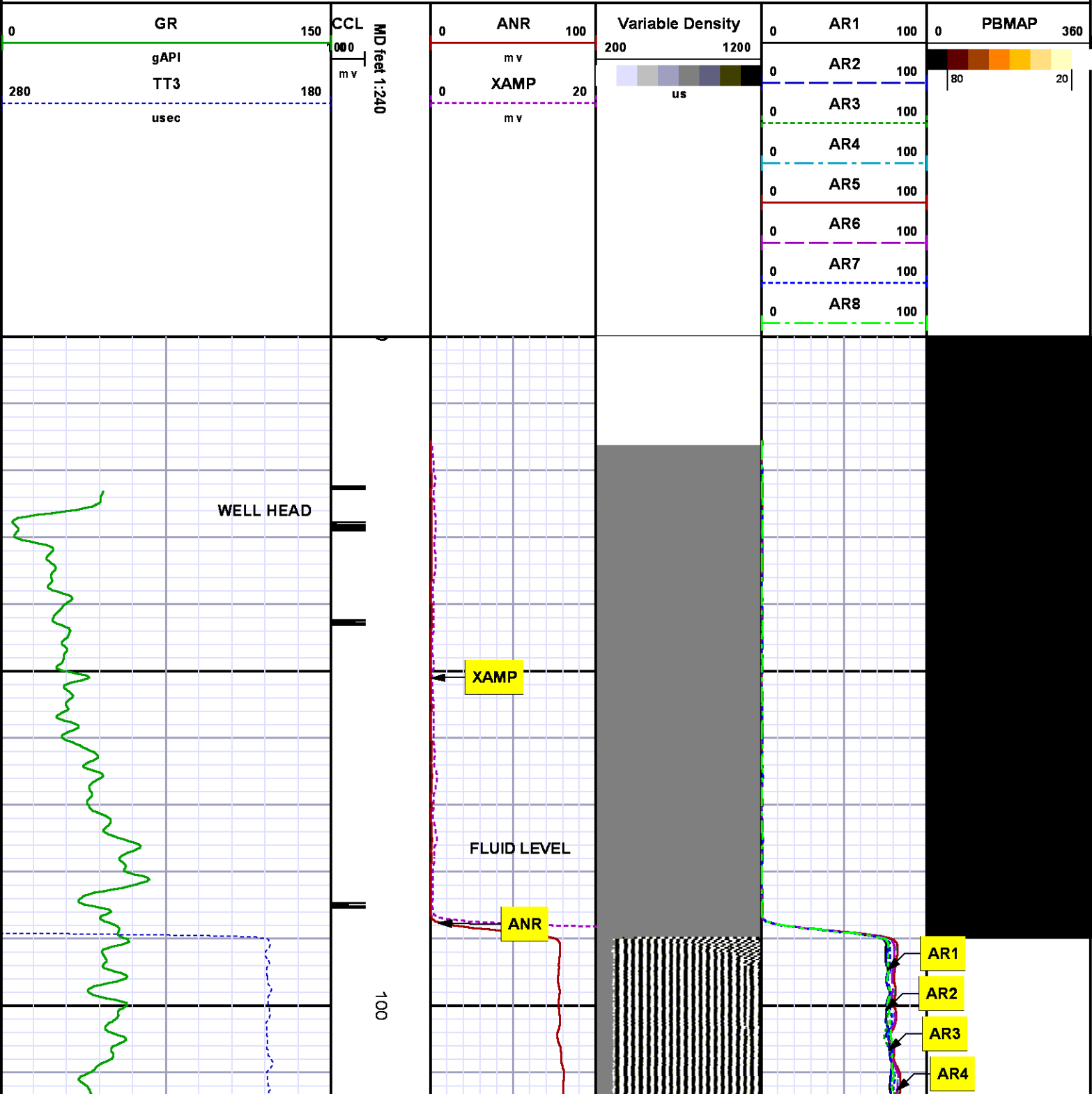
DEPTH OFFSETS

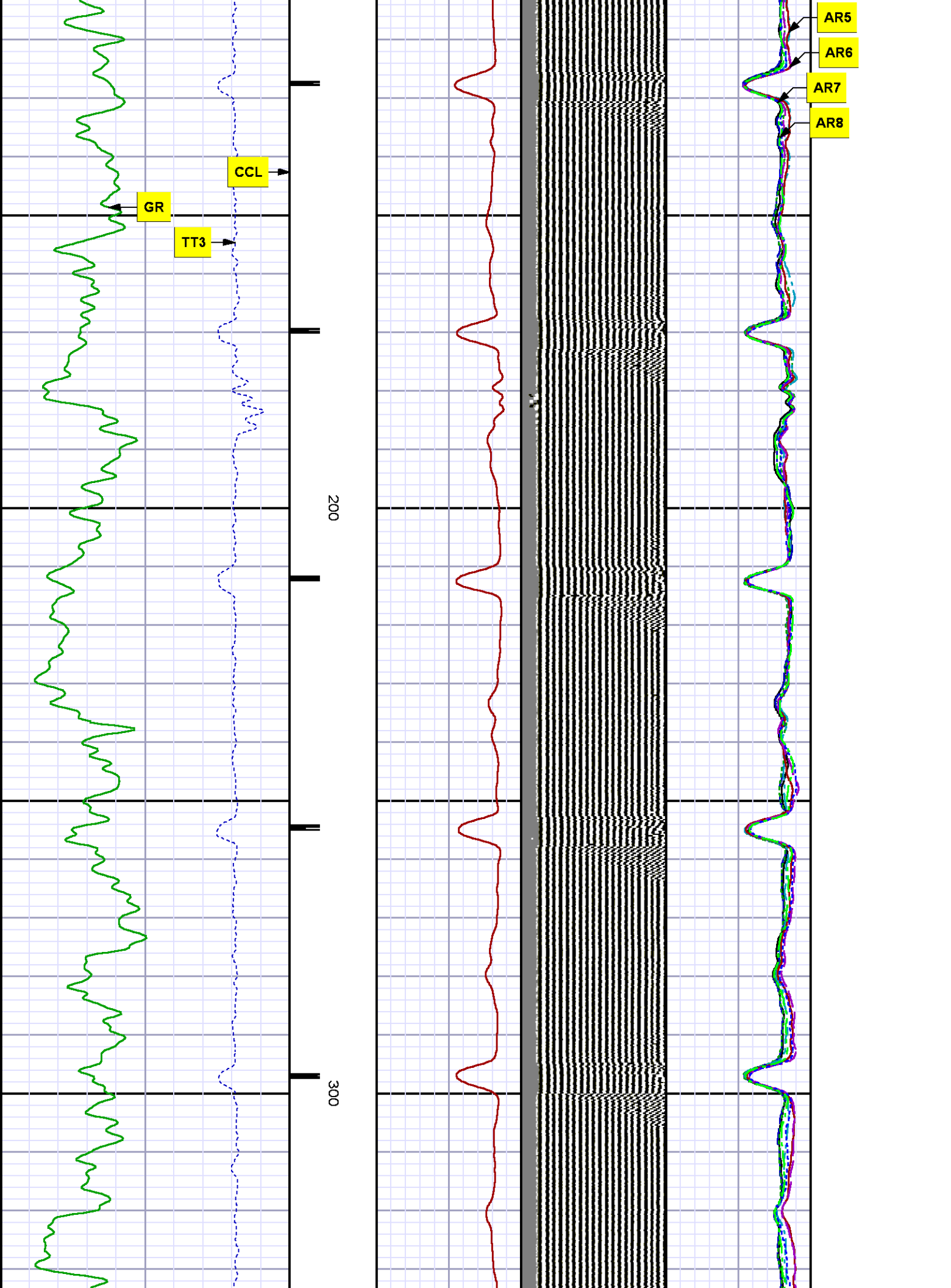
(for Acquired Curves)

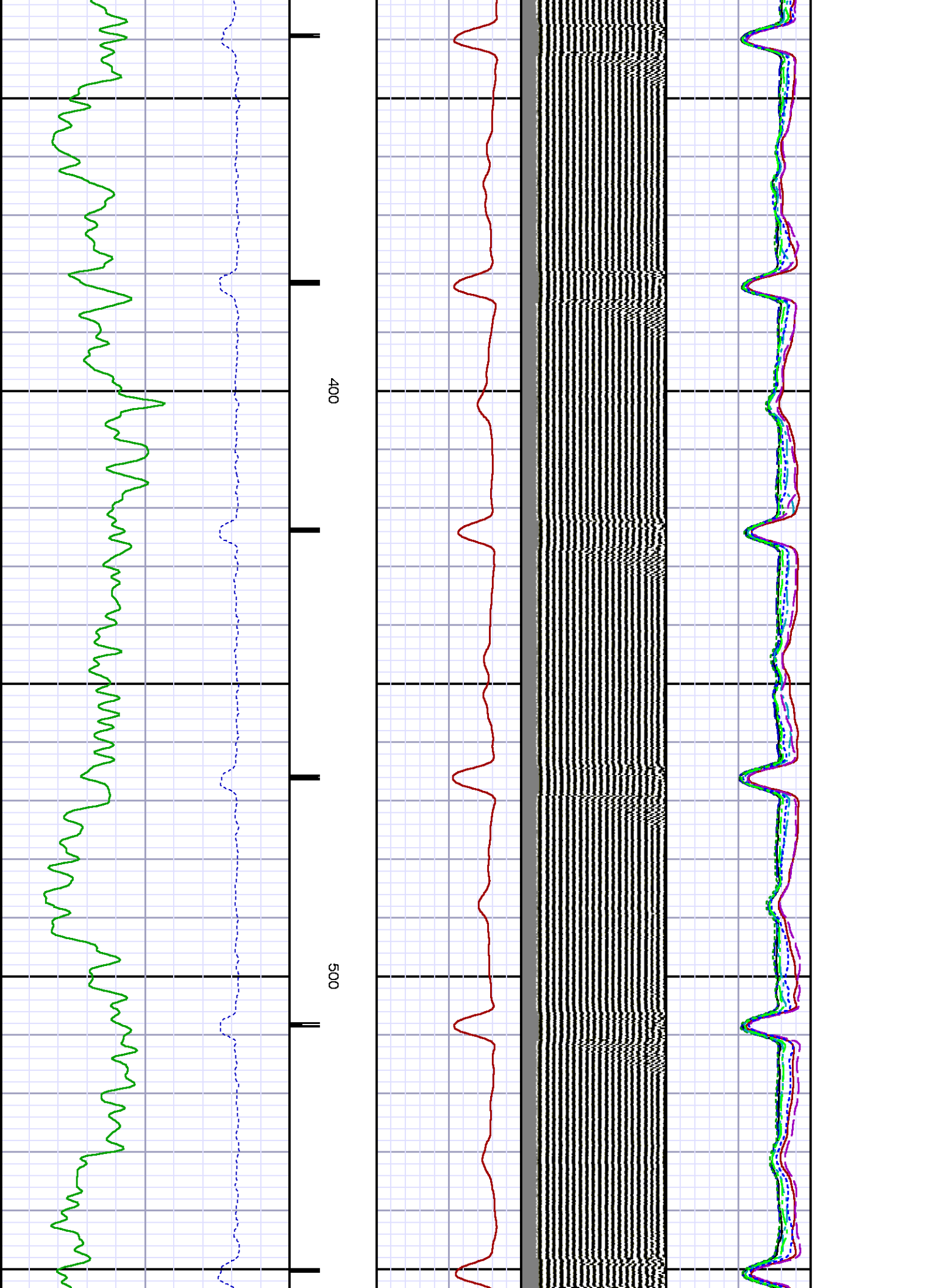
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
		AFAR	SIG	TT5			
1426XA	-11.360						

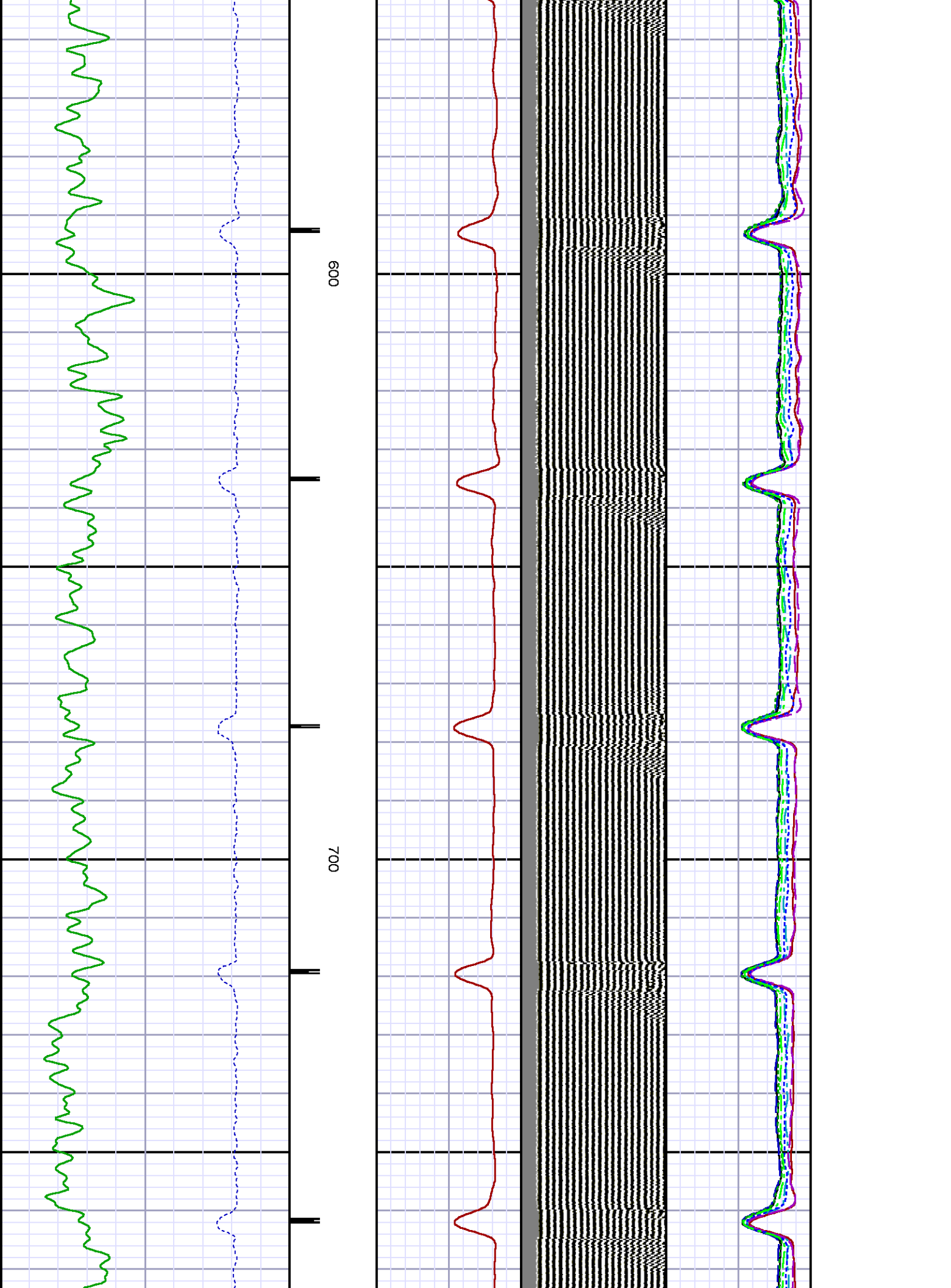
1426XA	-7.250	CCL
1426XA	-5.390	GR
1426XA	0.000	NEU

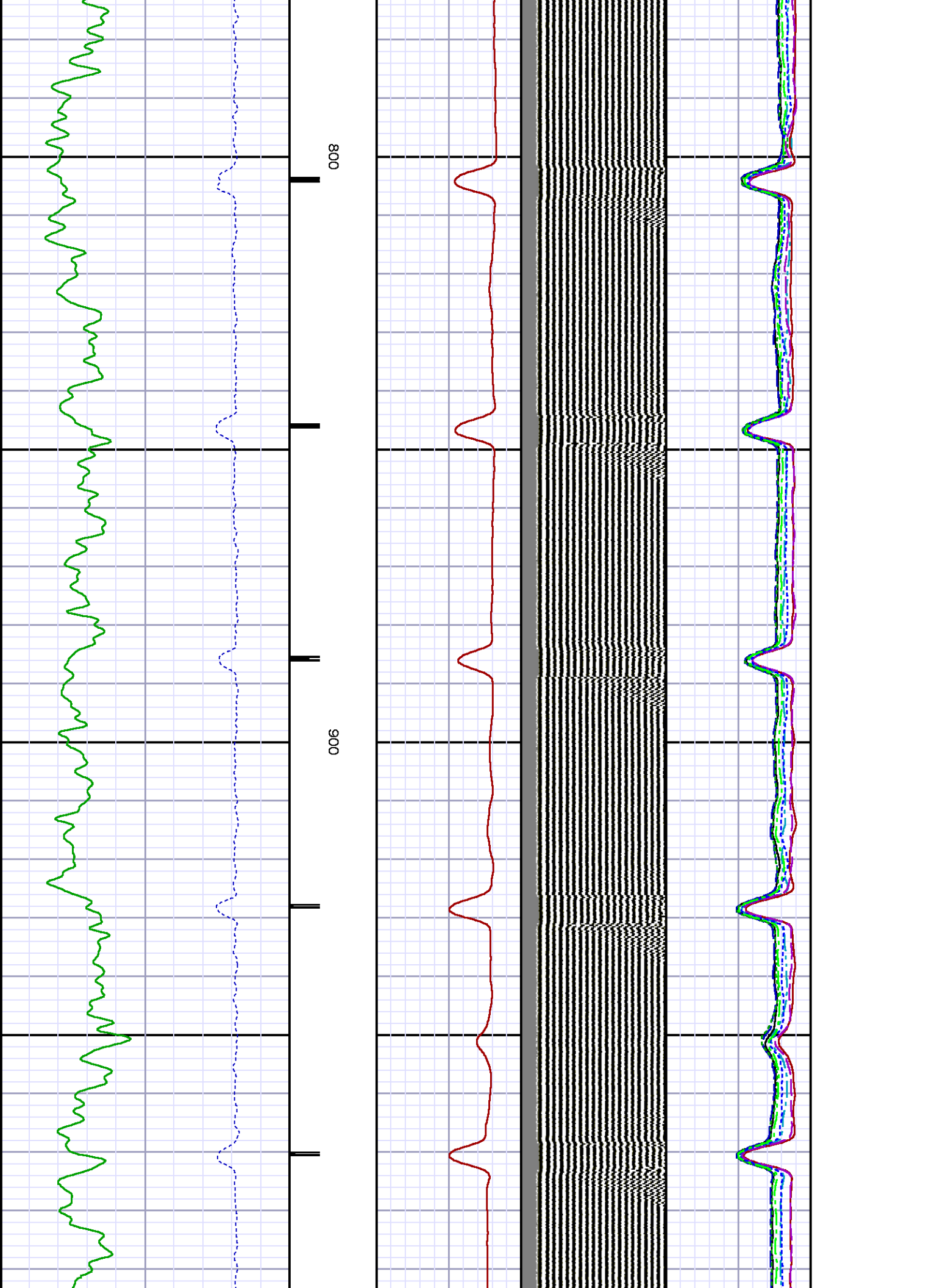
Created by : MIXED  
Plotted by : PlotMgr, v5.4.504  
Company : WPX ENERGY  
Well : CLOUGH NR 422-3  
File Name : d:\welldata\wpx energy\nr 422-3\422cbl\main.xtf  
Mode : PlotMgr 5.4.504  
Interval : 0.00 - 10018.00 feet UP  
Created : 5/1/2012 6:46:37 PM



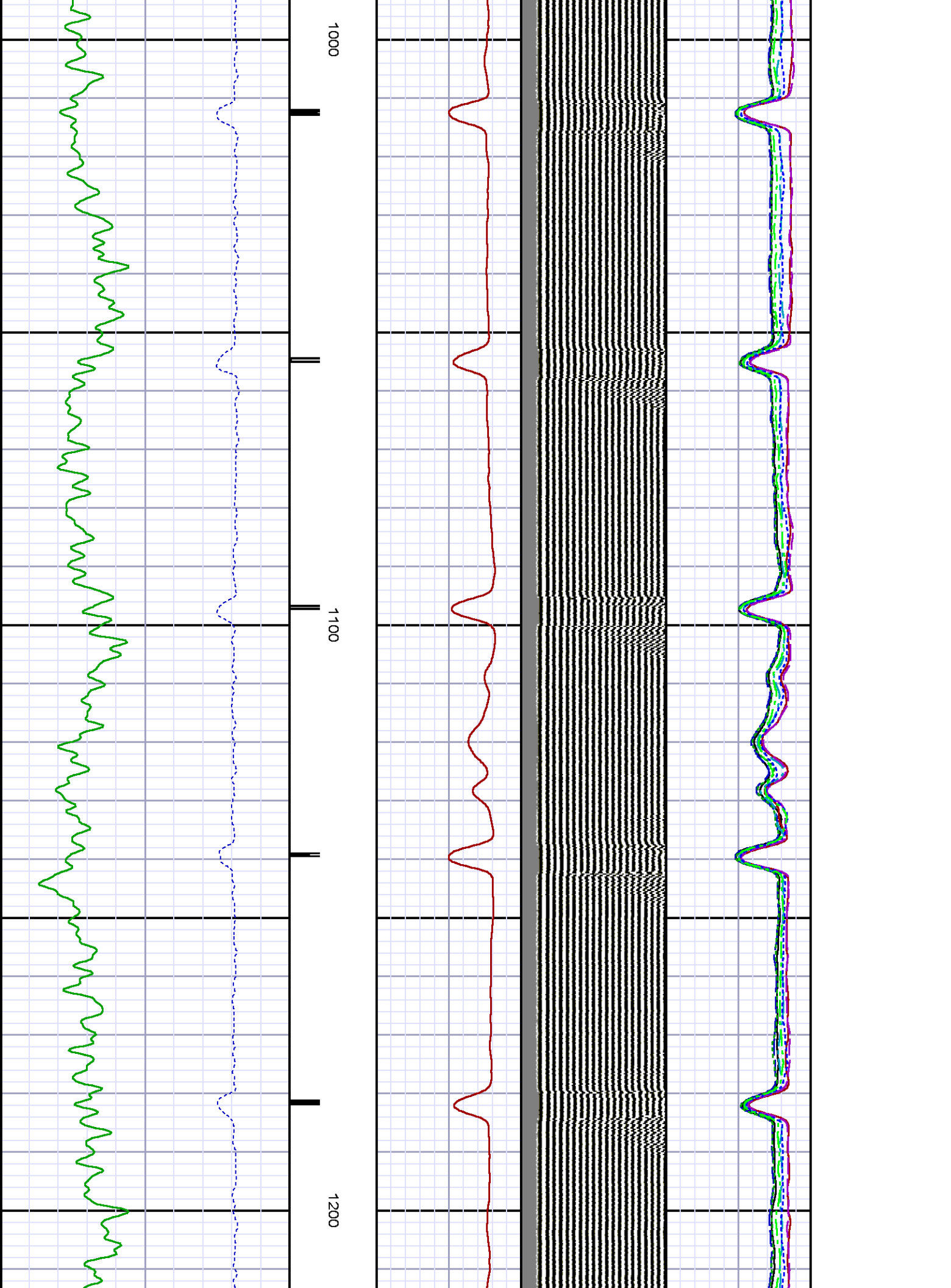


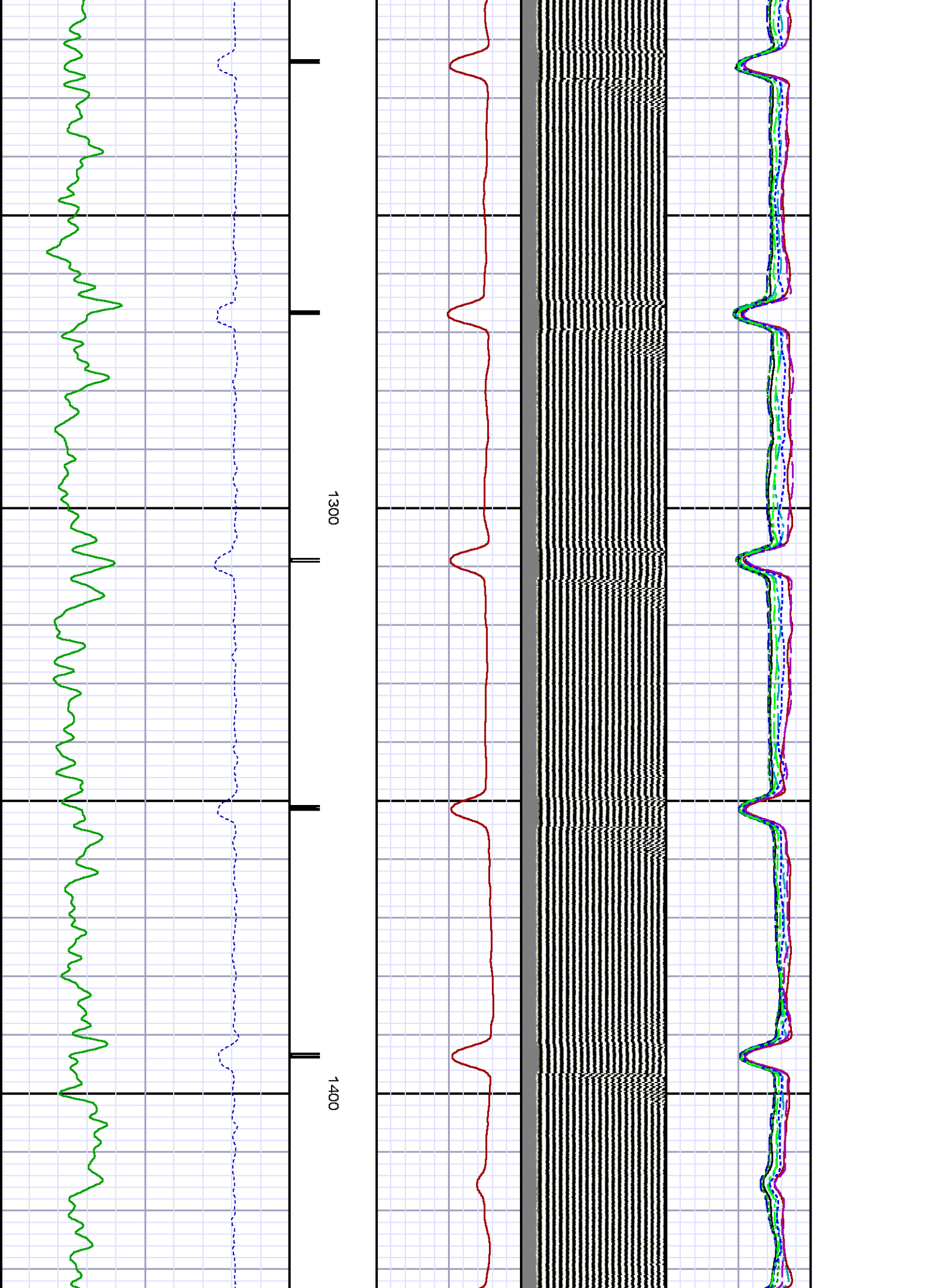


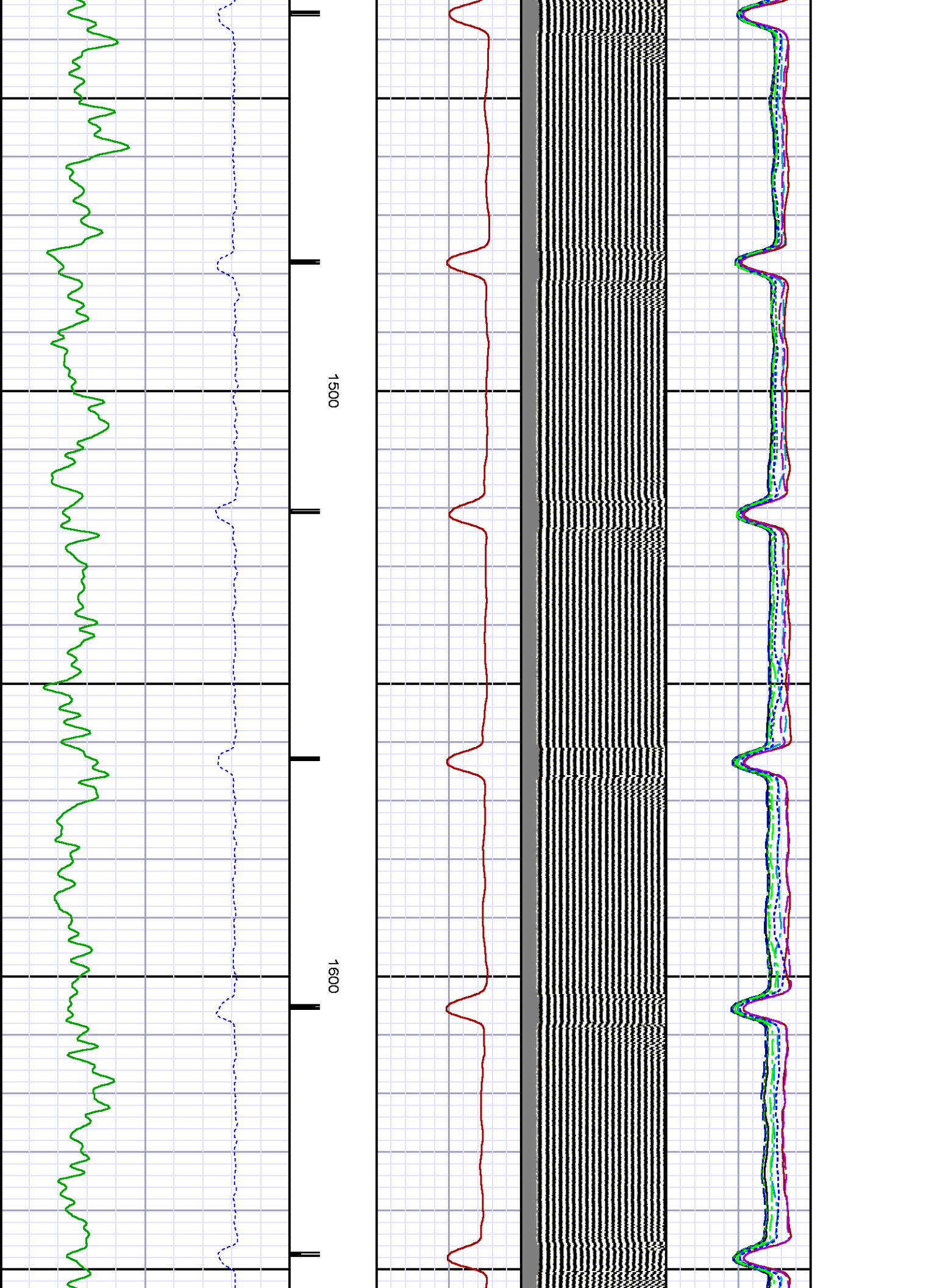


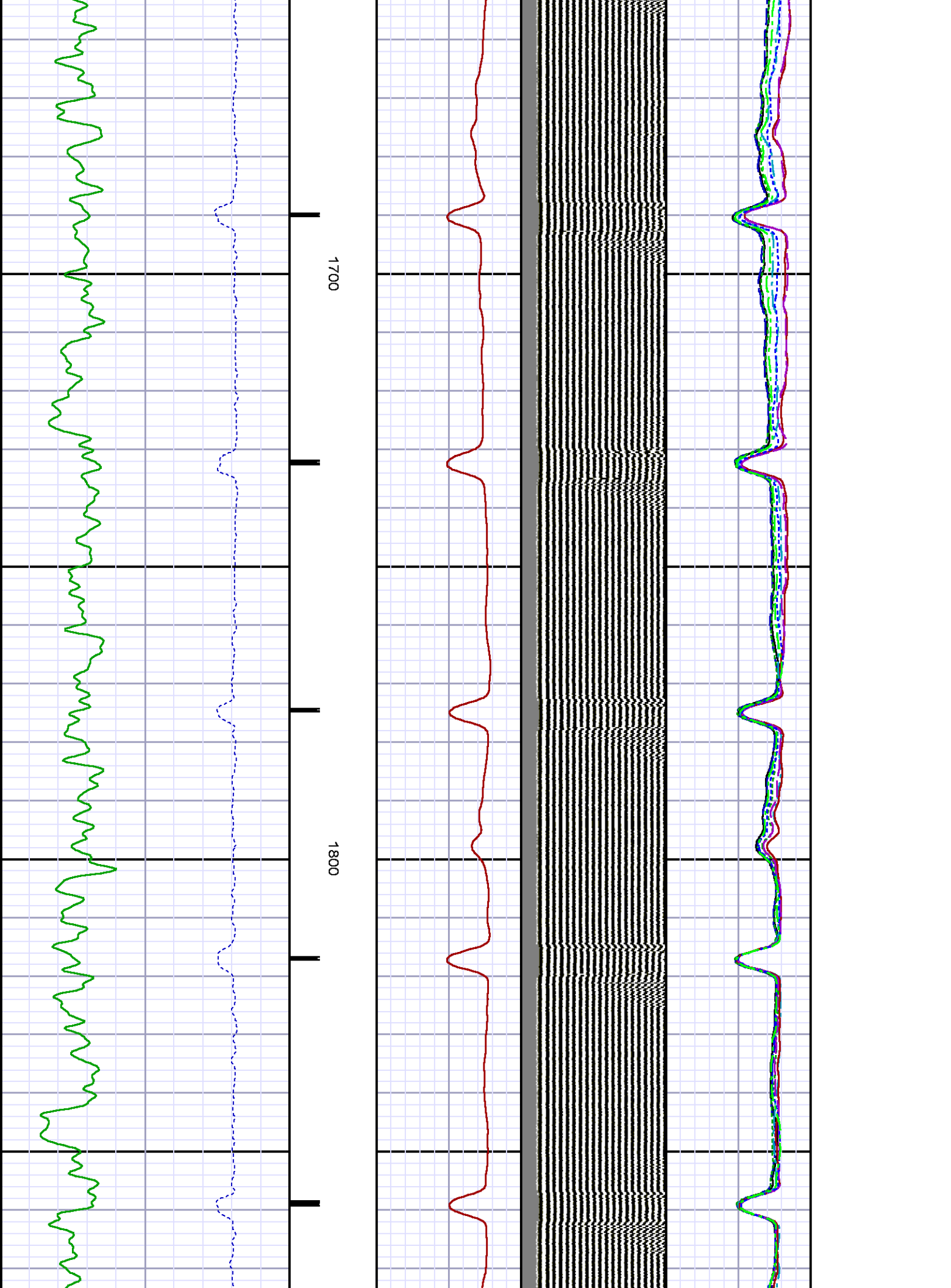


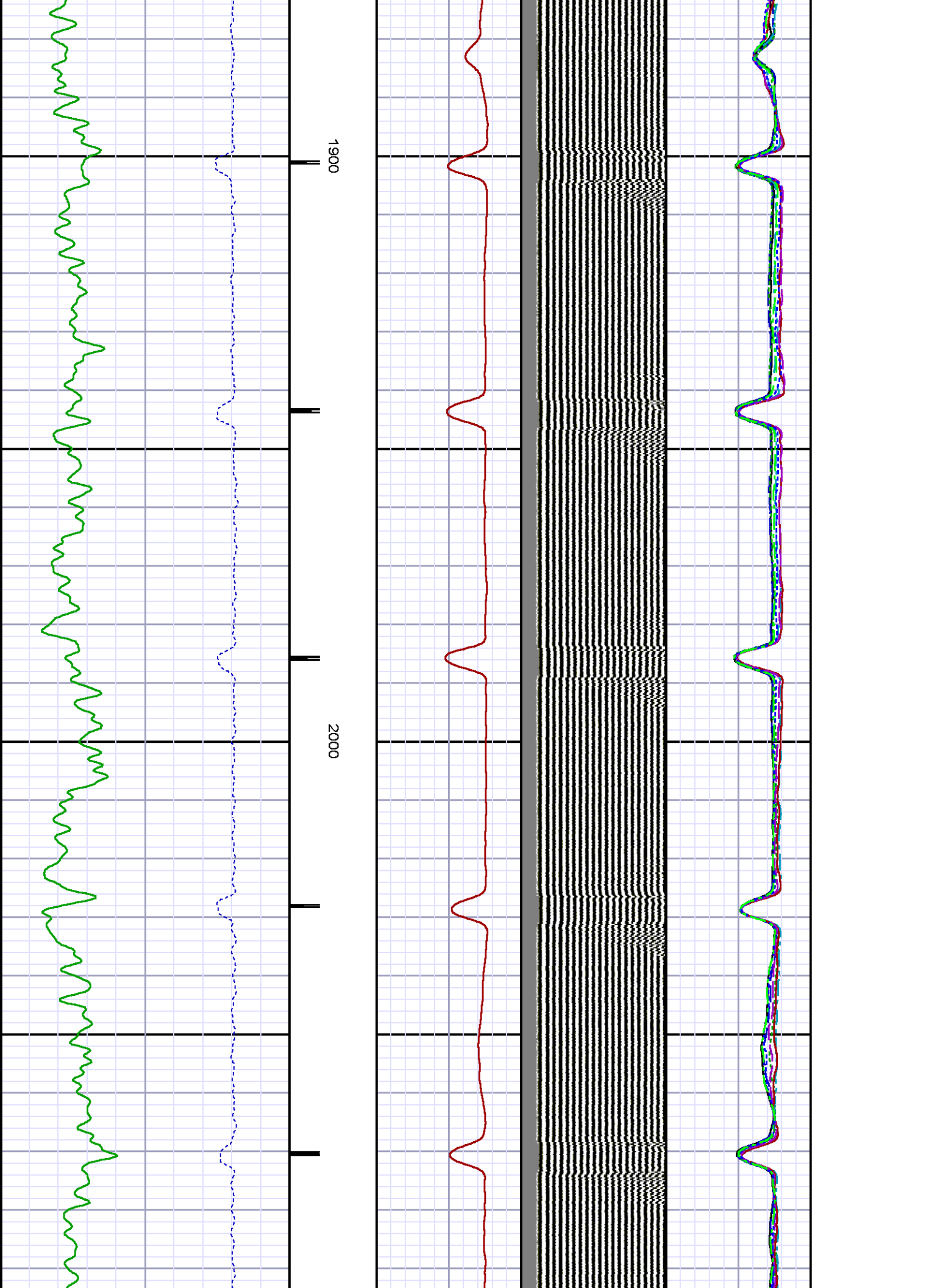




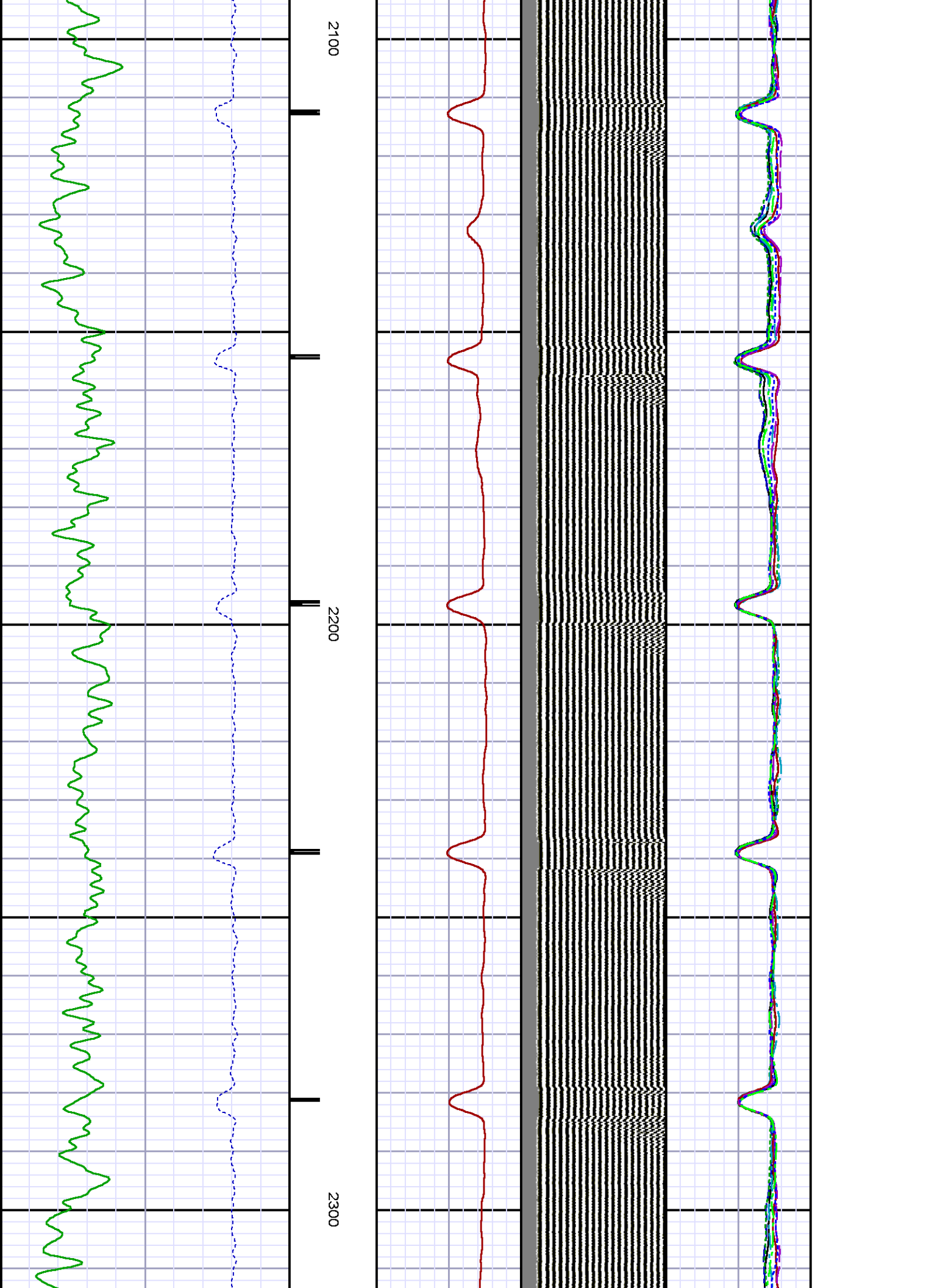




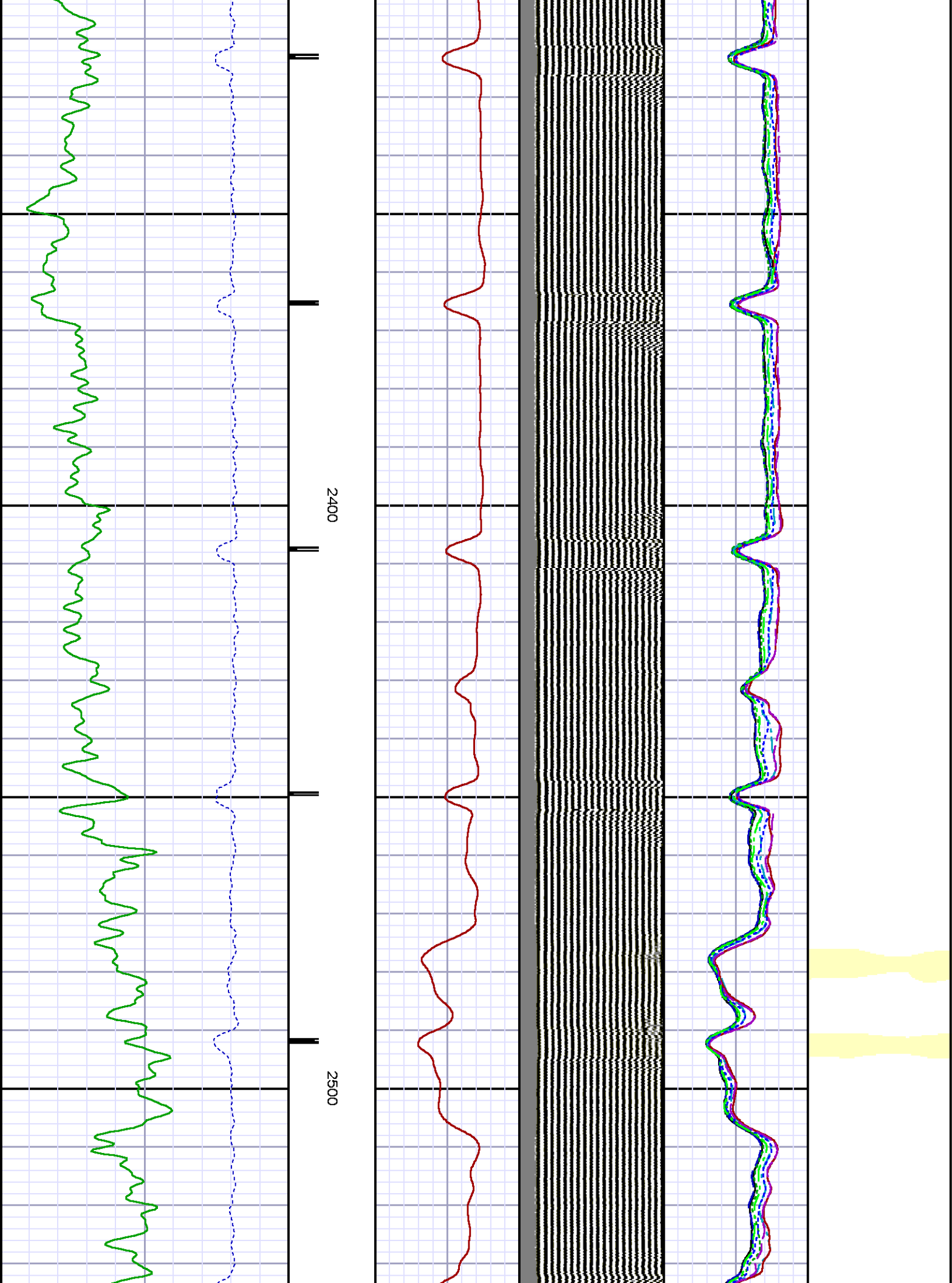


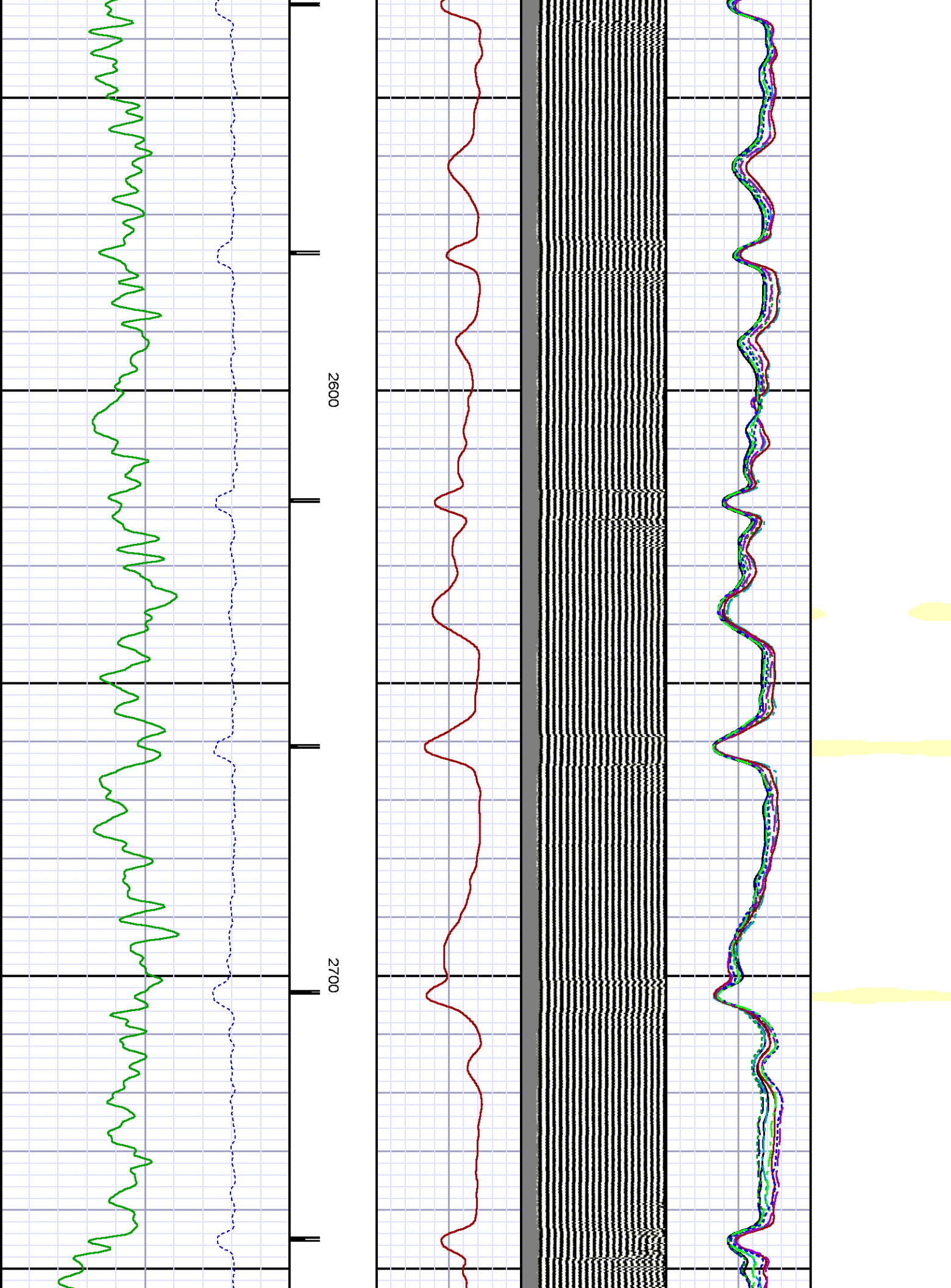


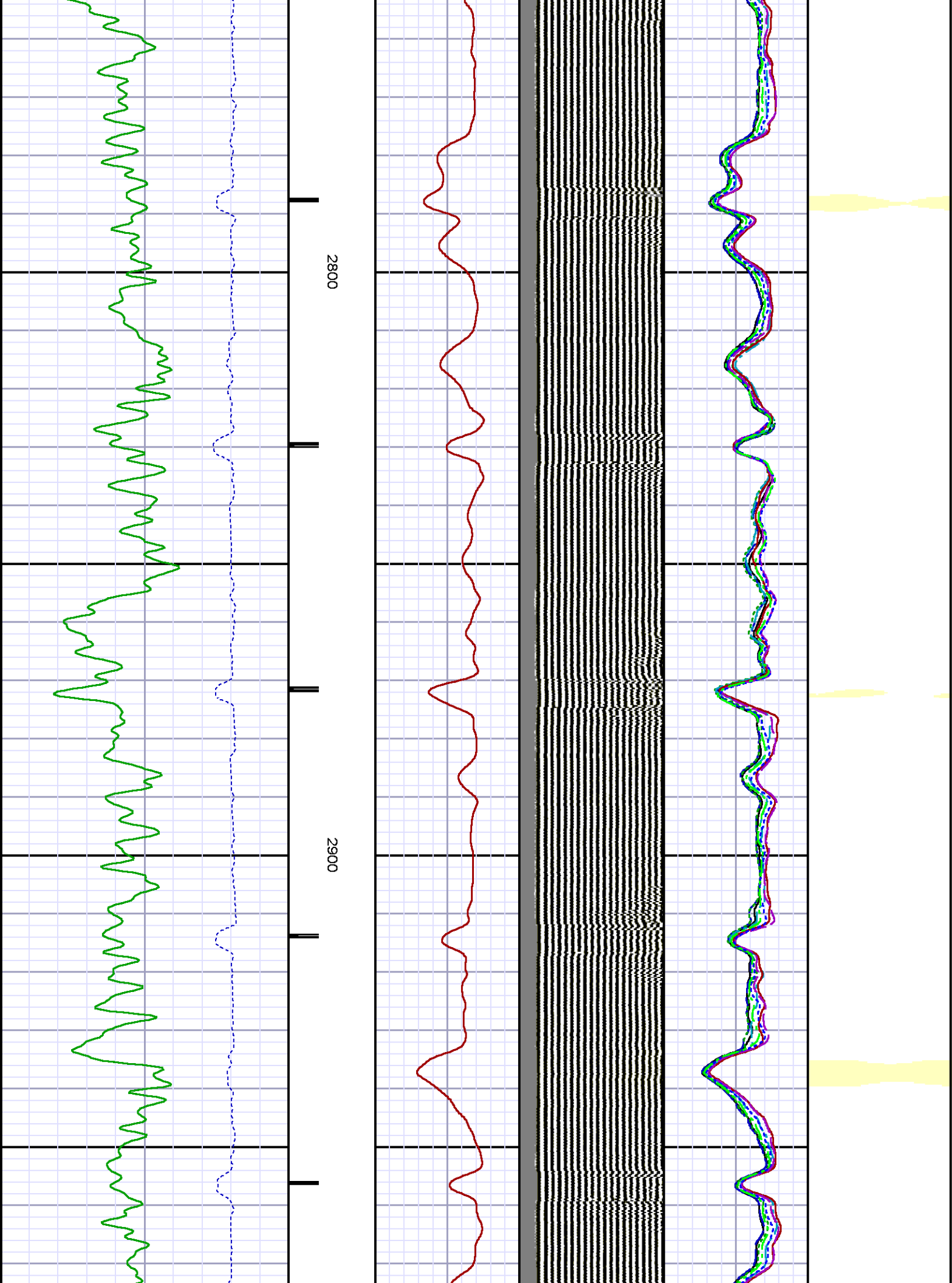


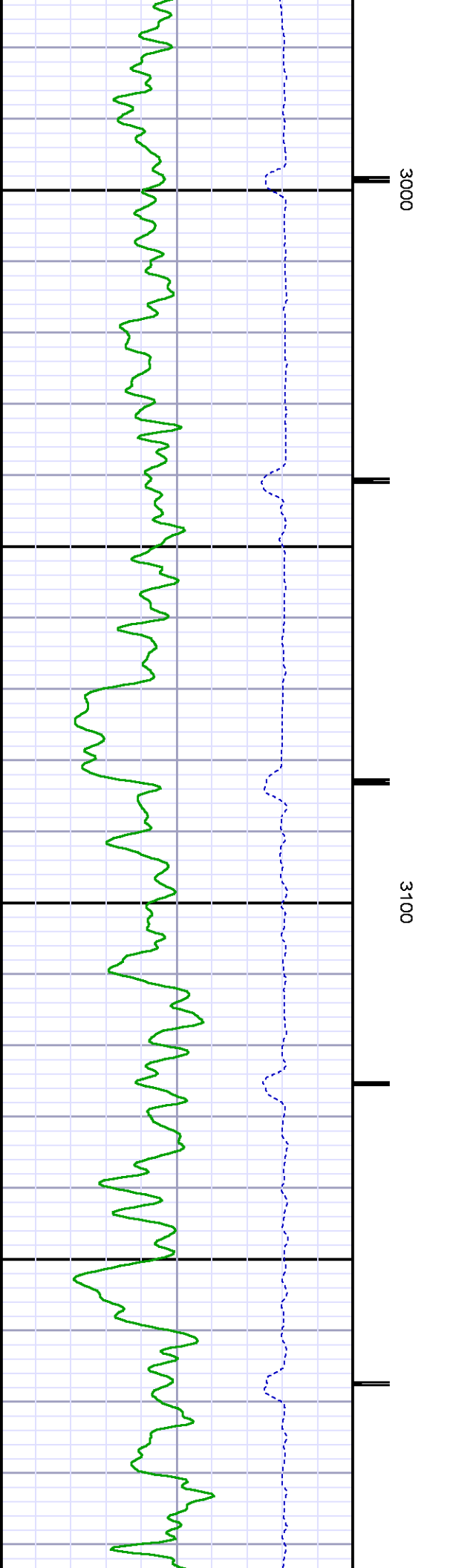
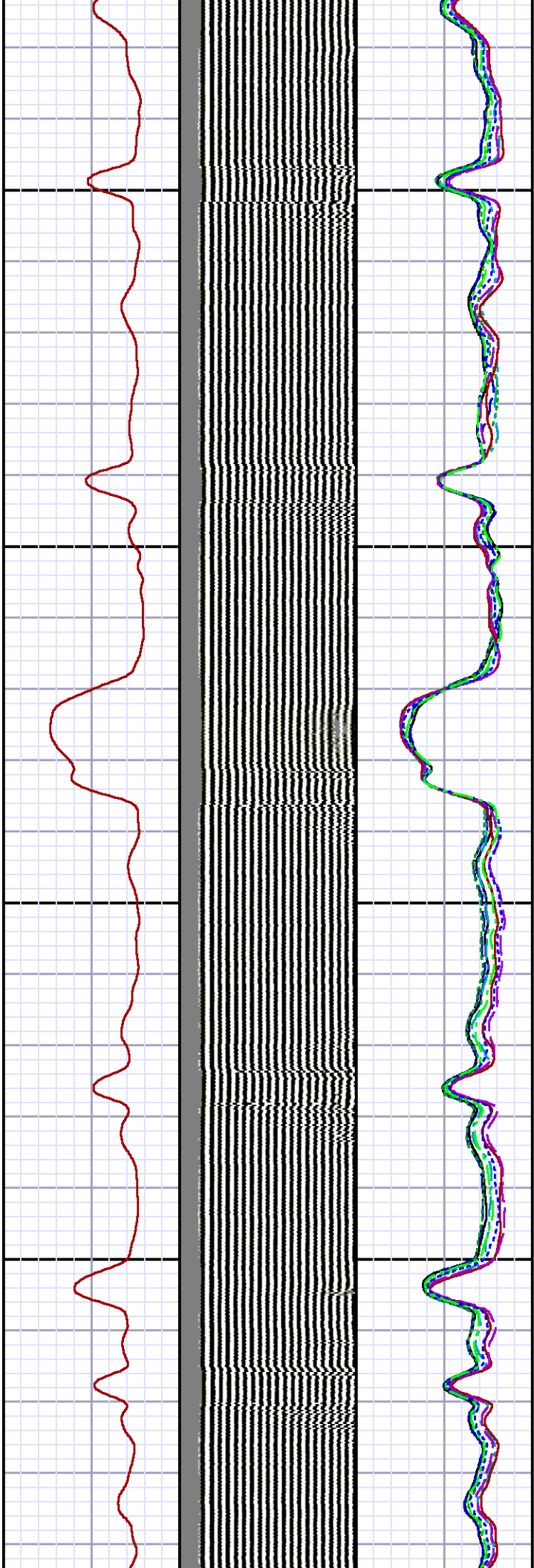
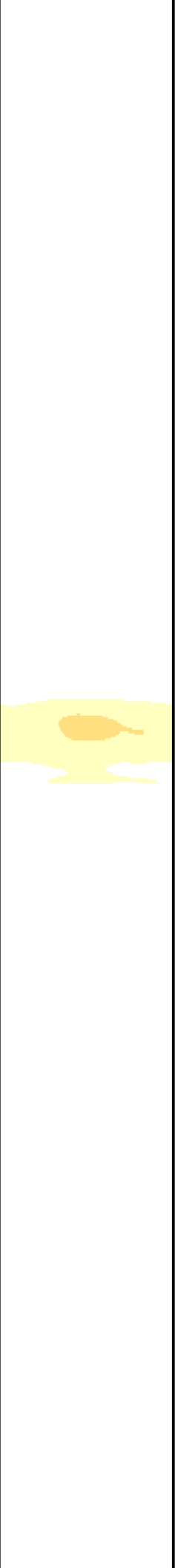


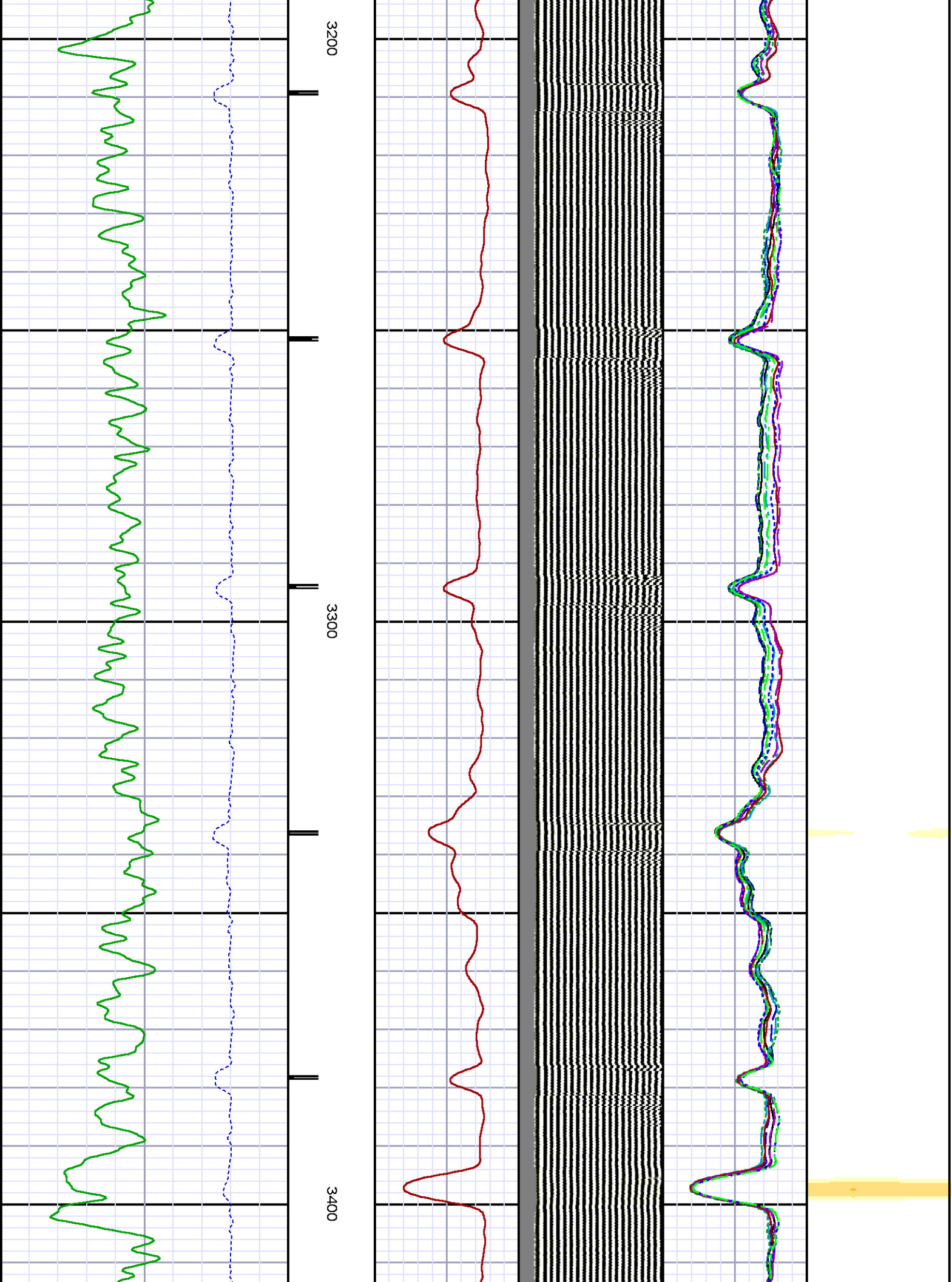




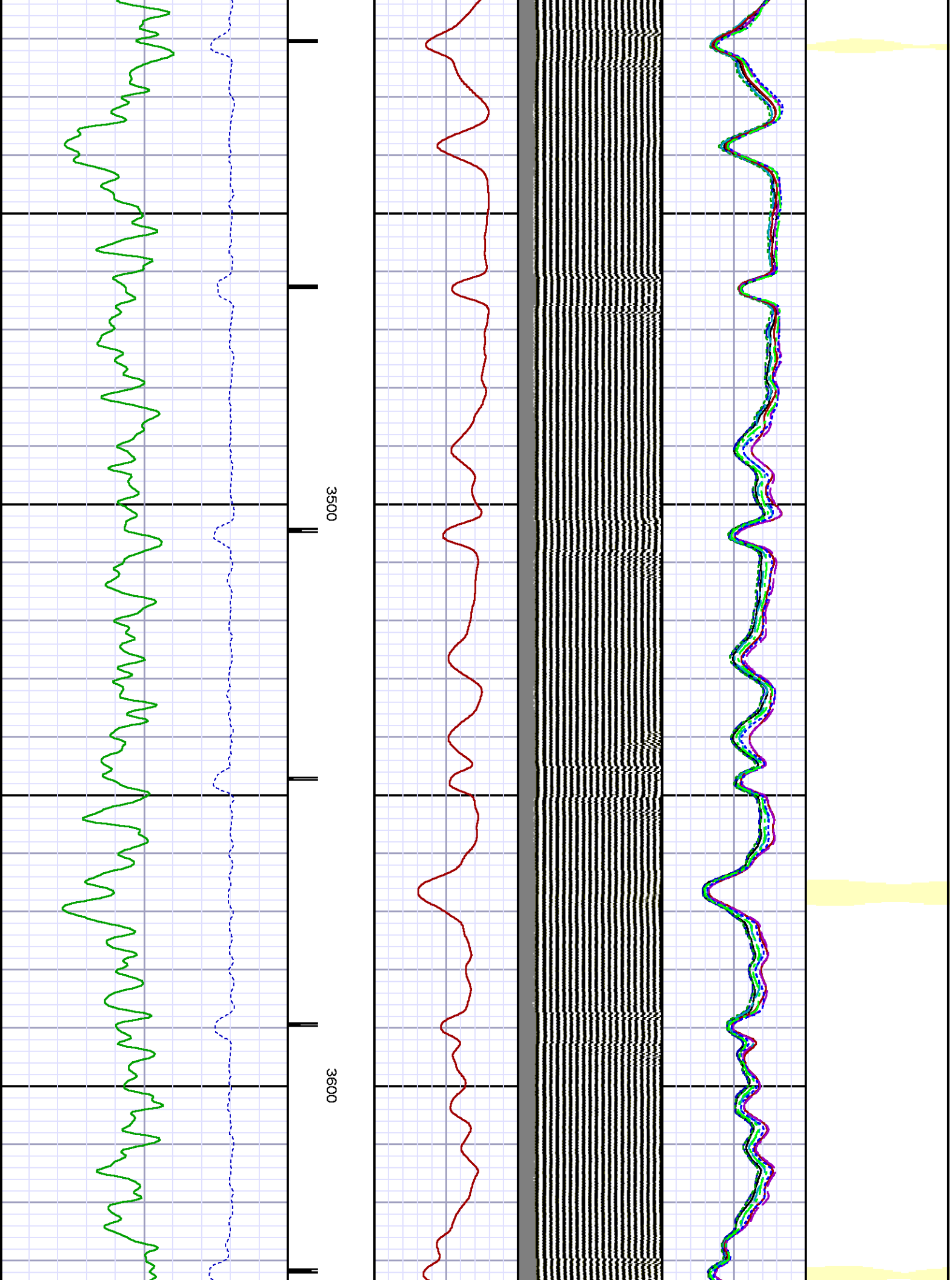




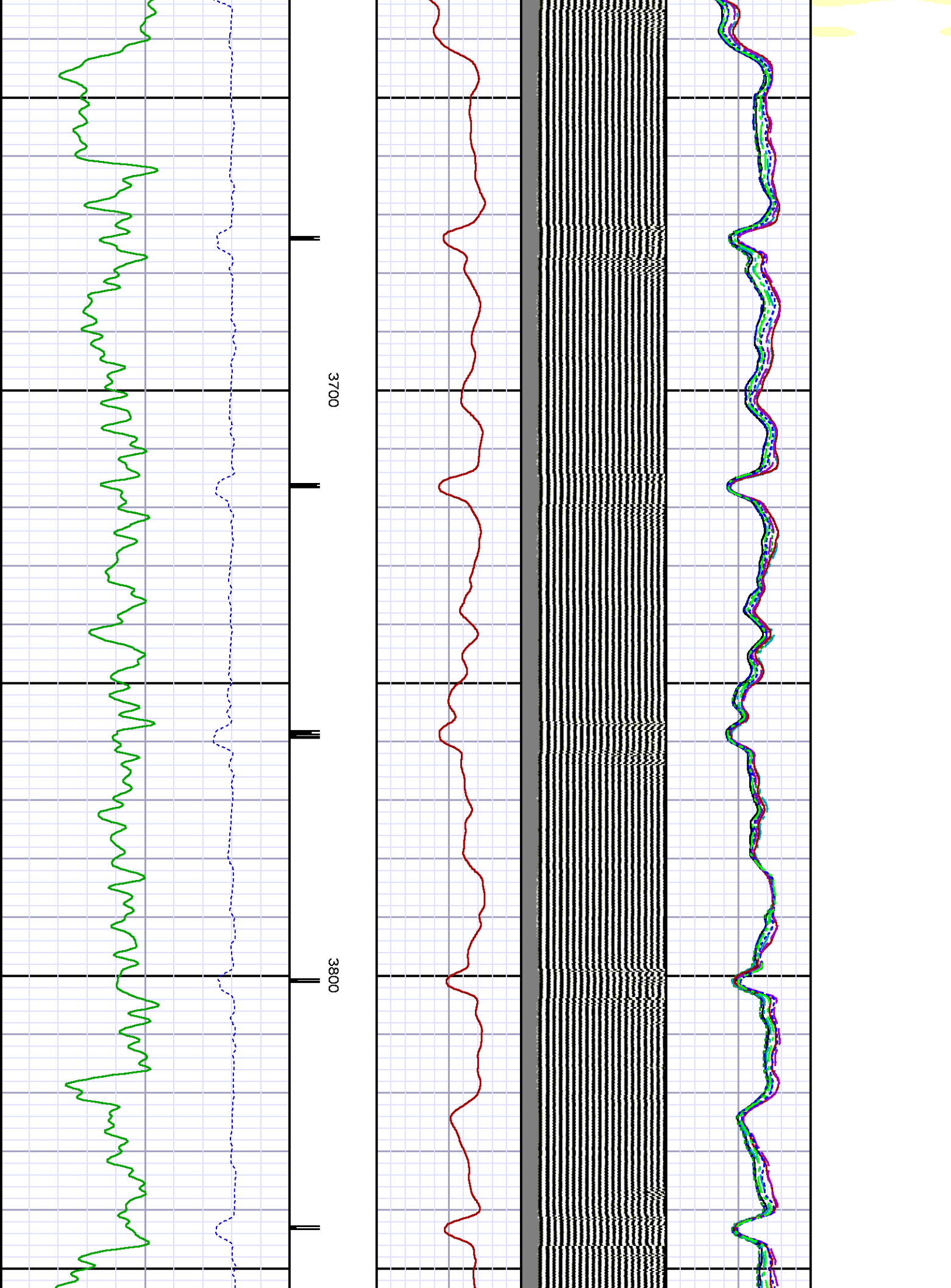


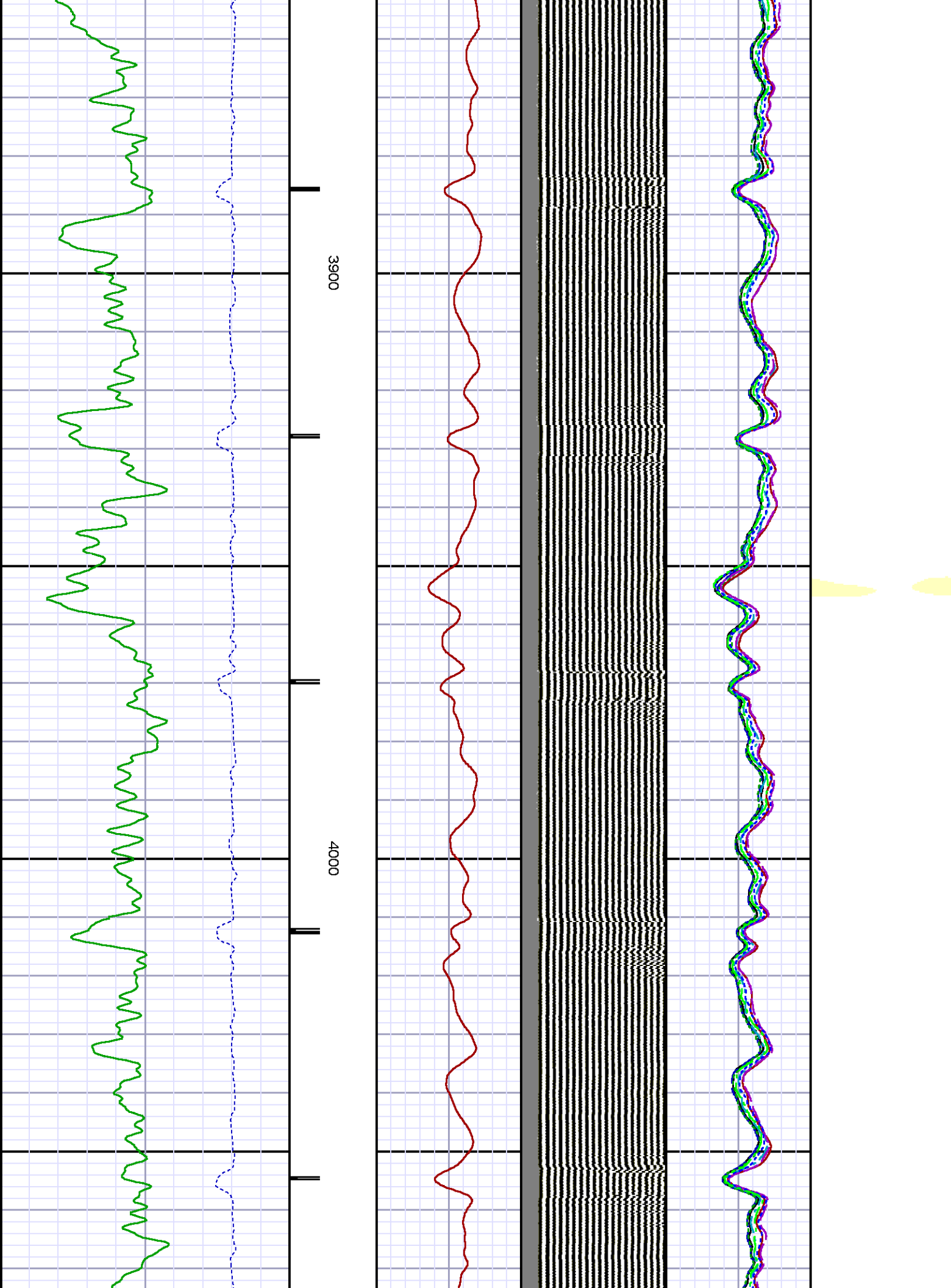


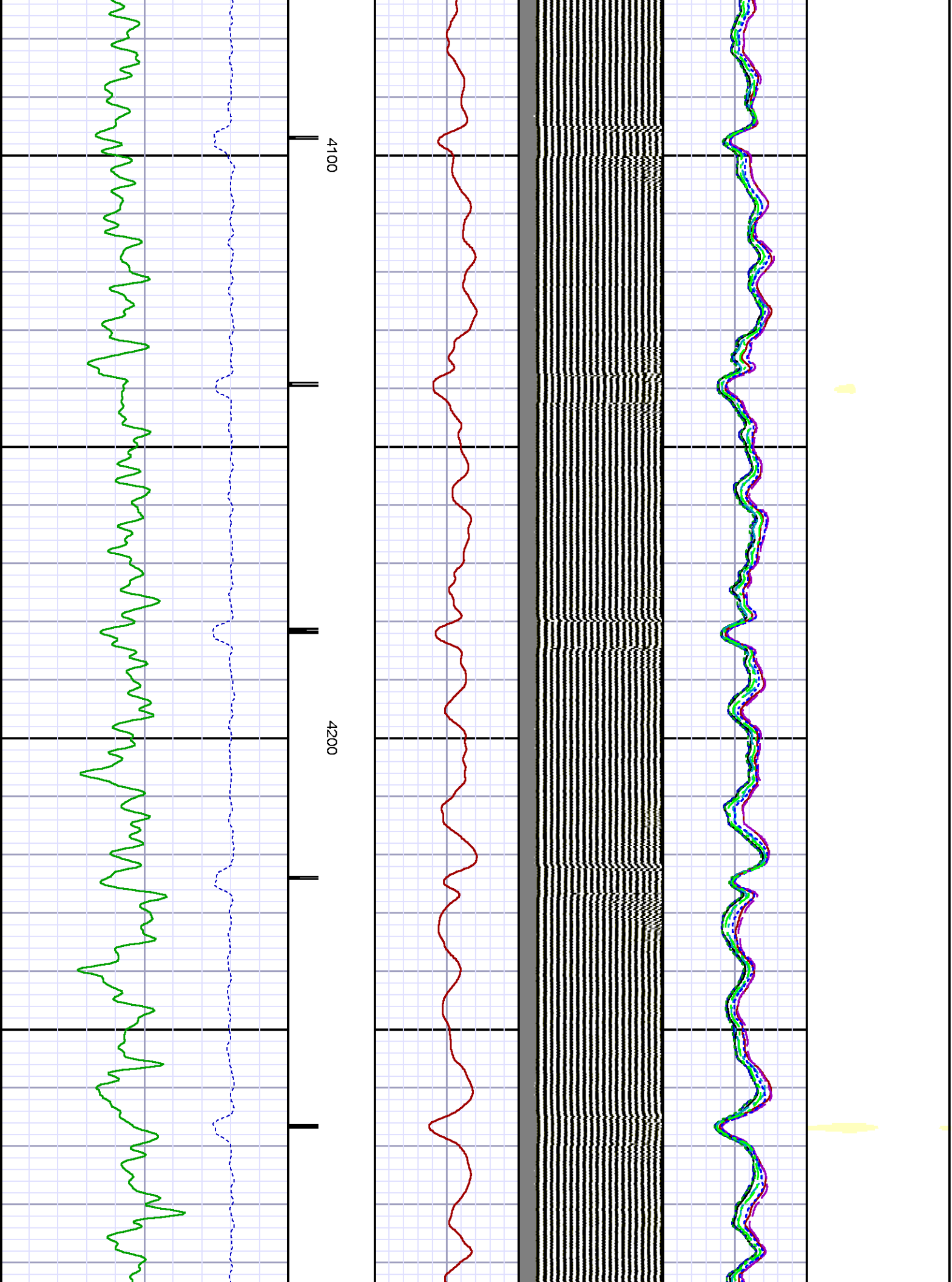


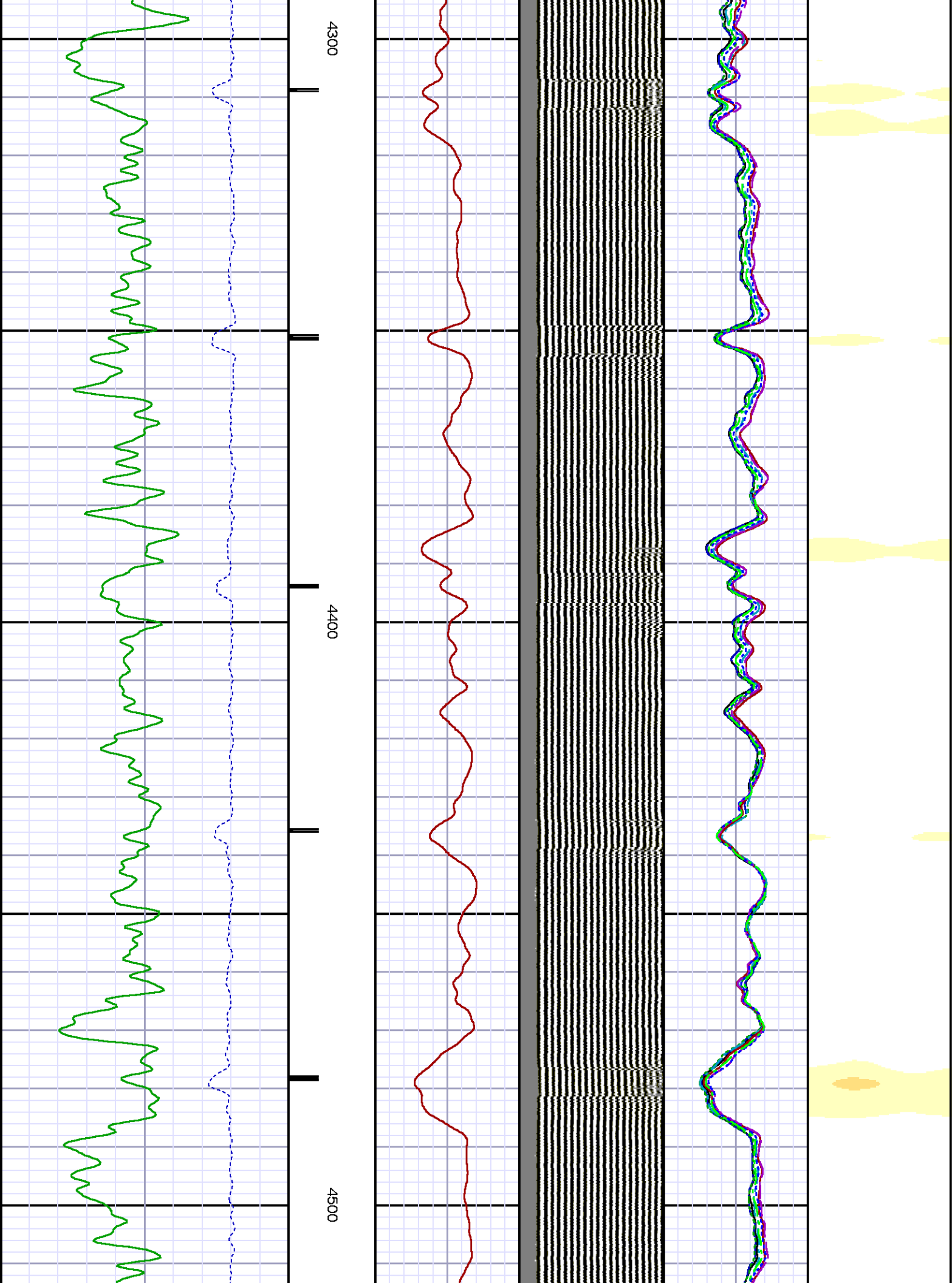


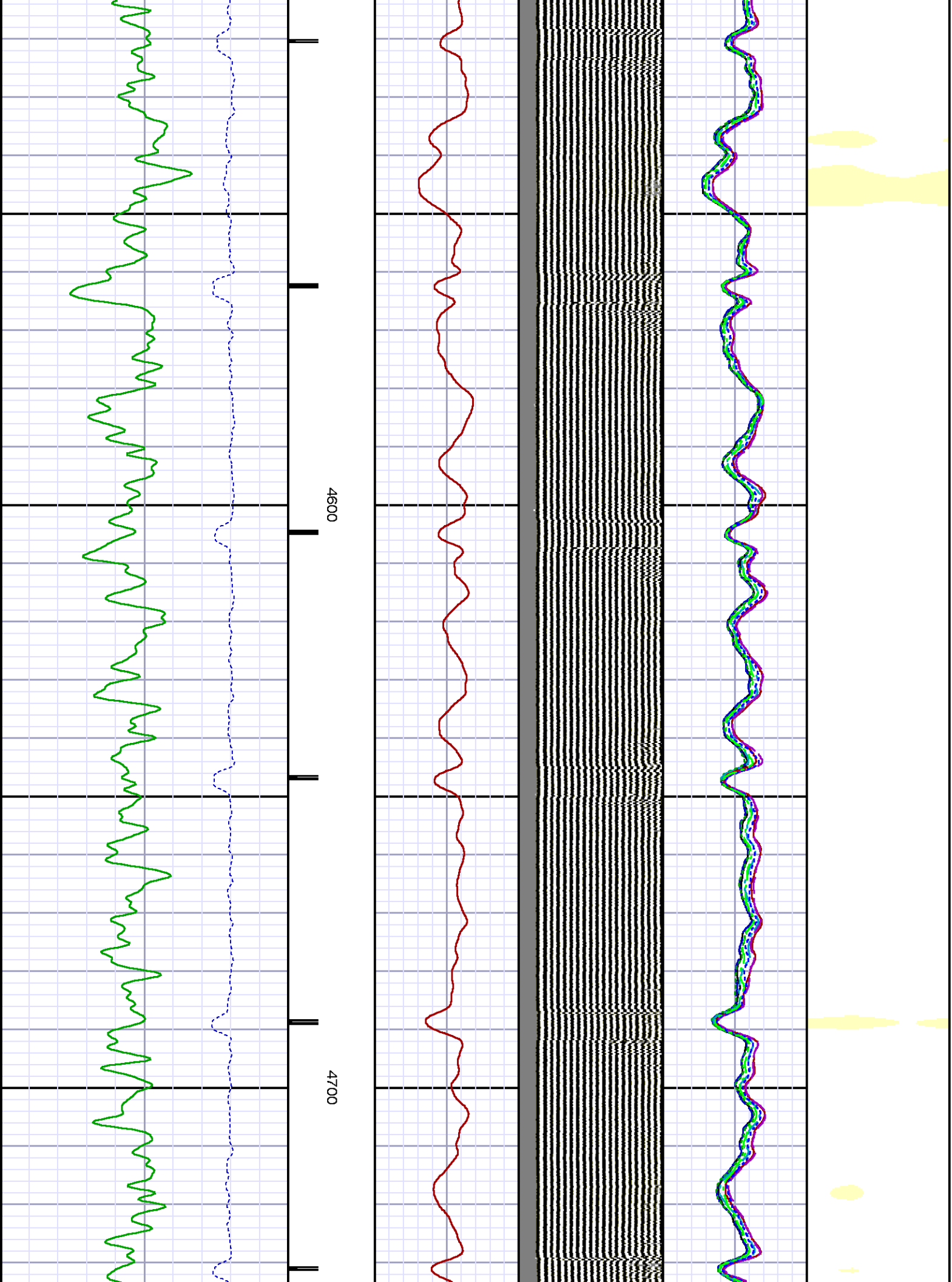




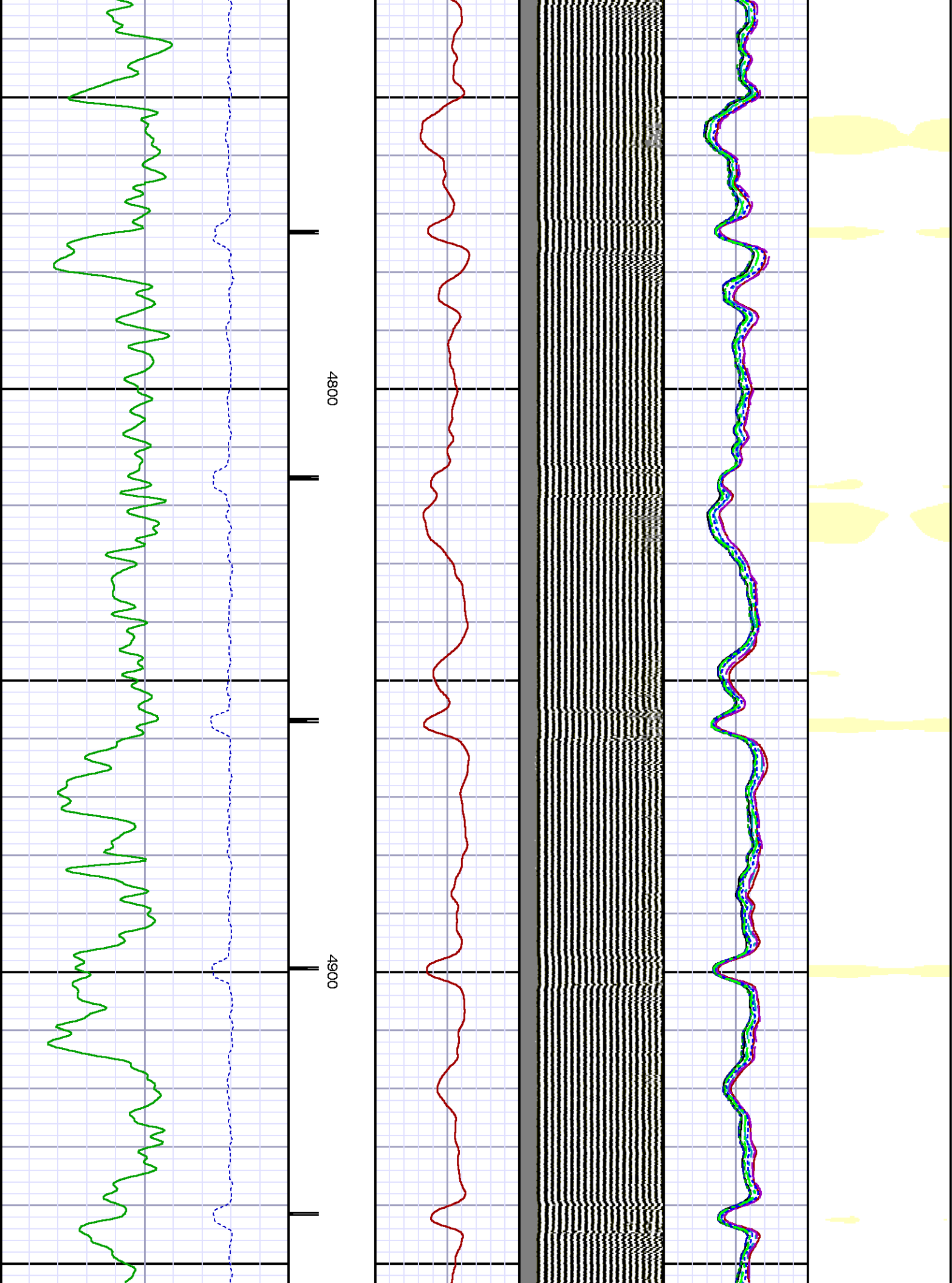




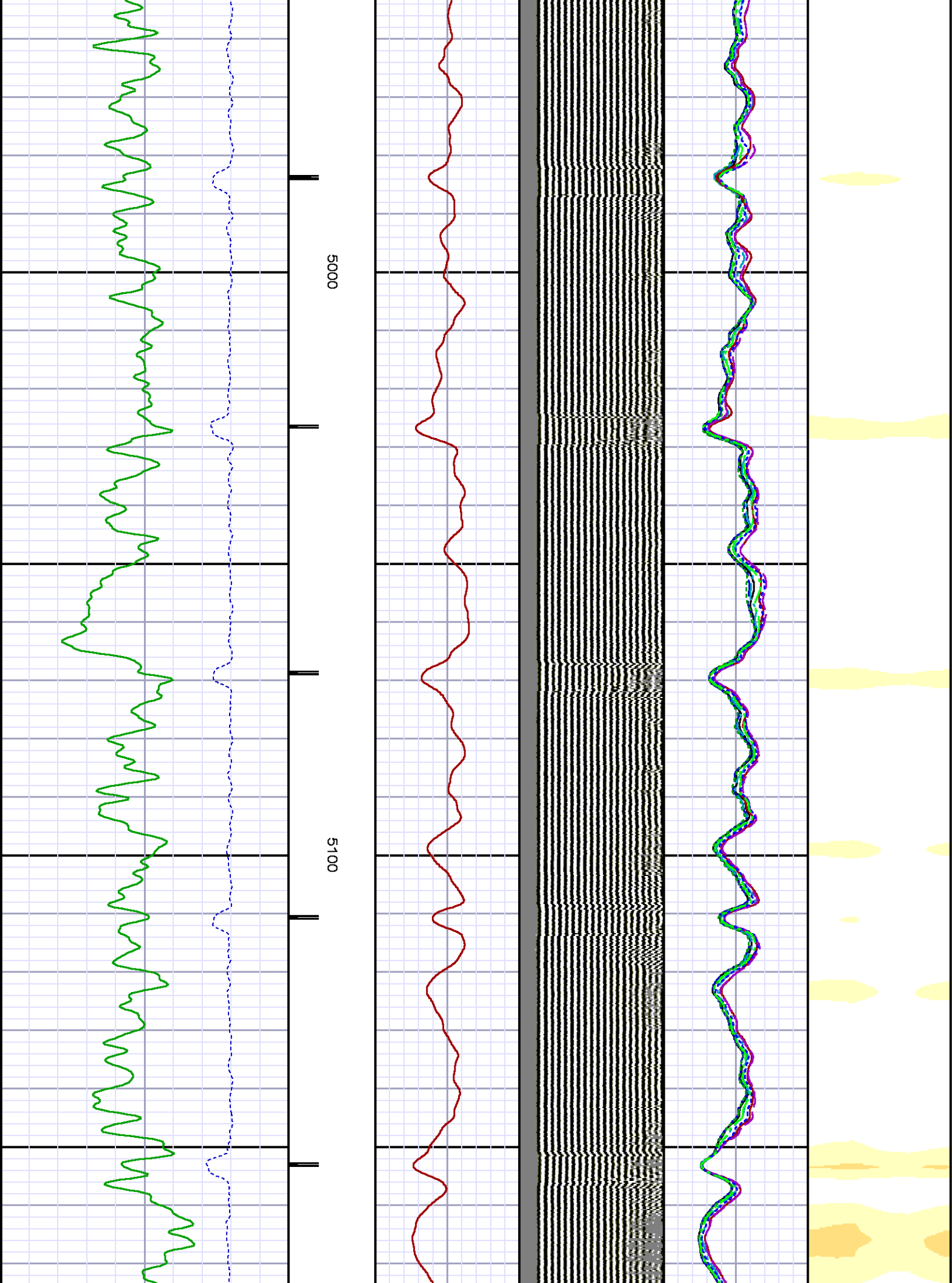


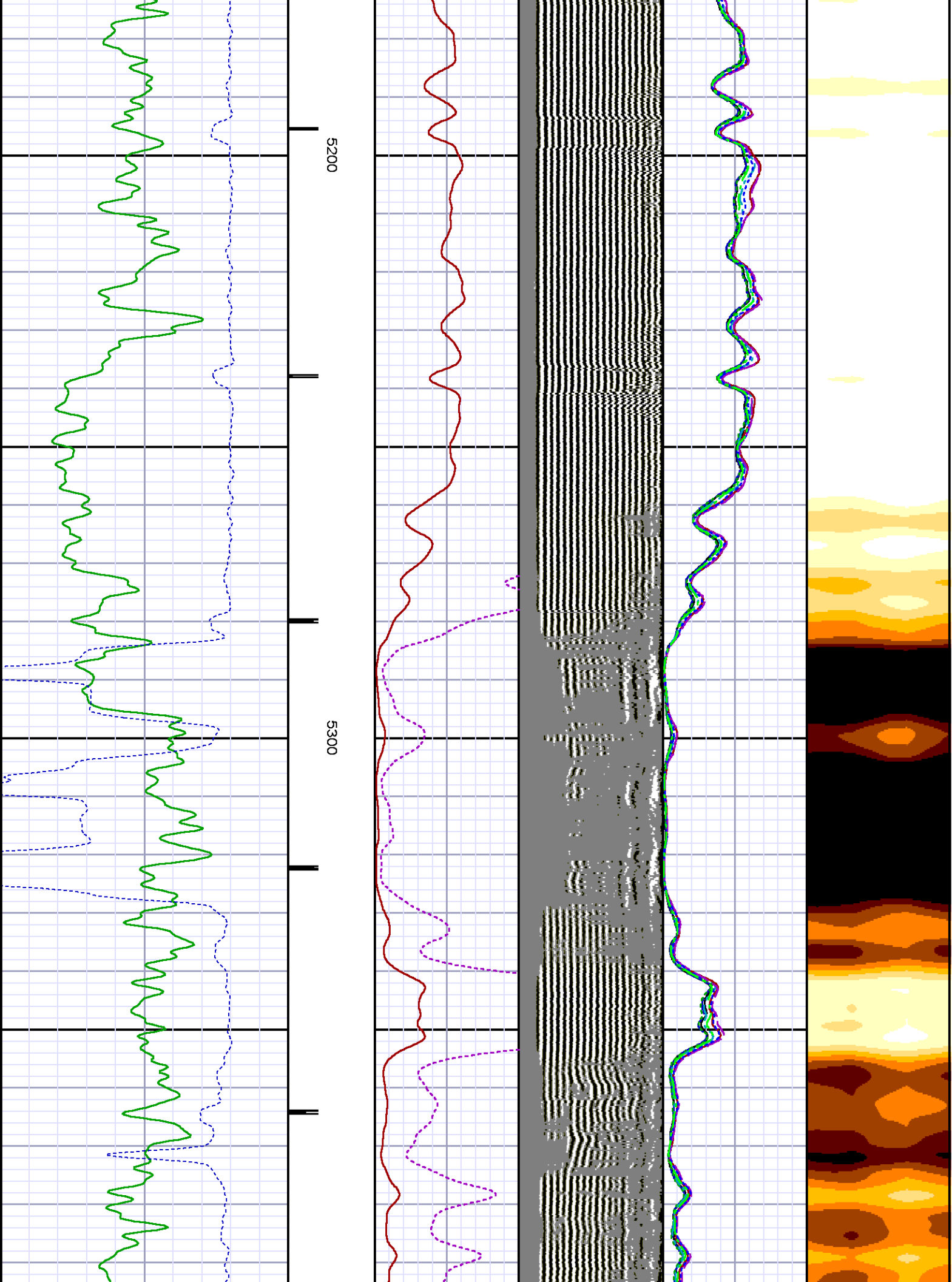


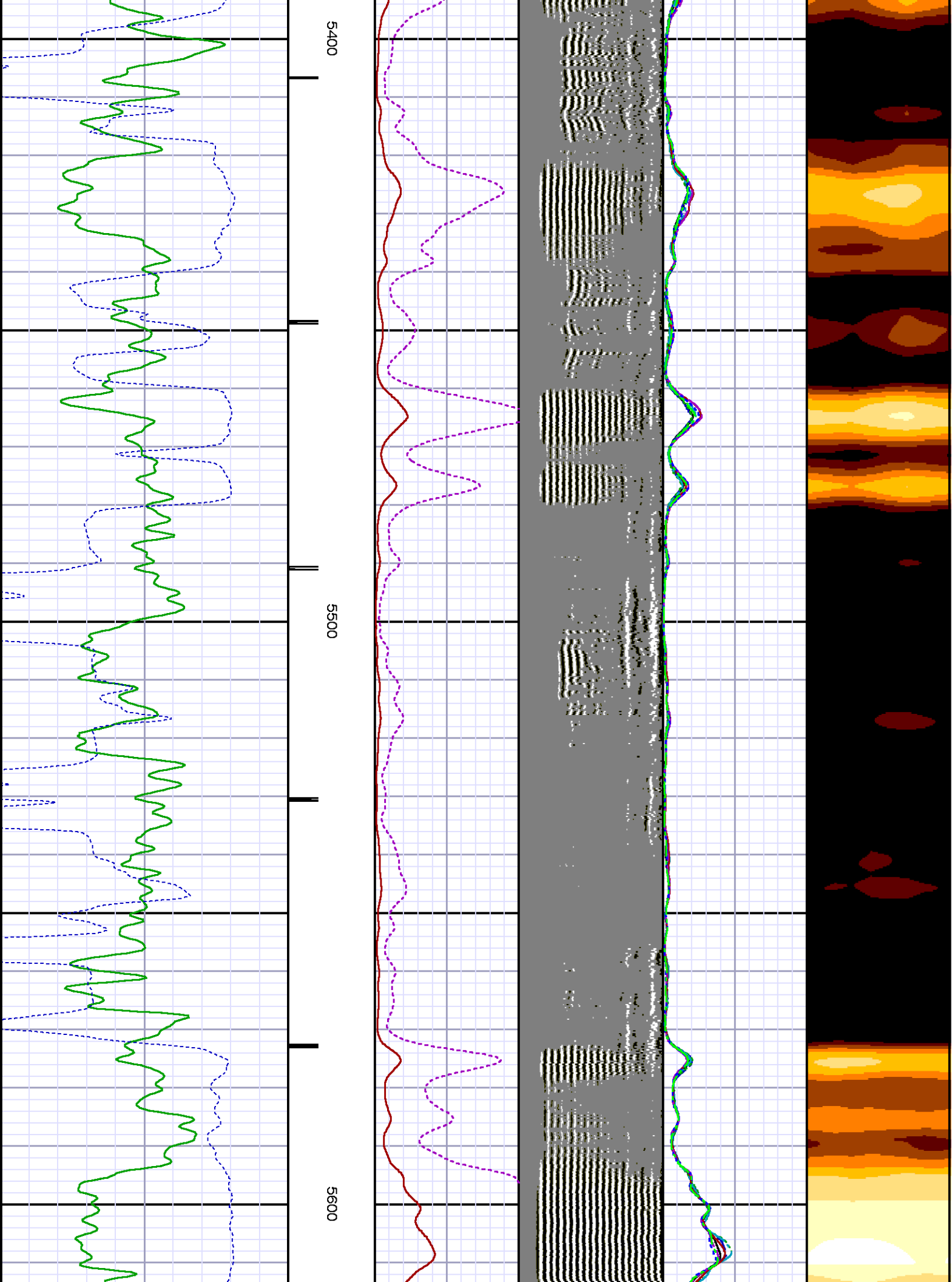


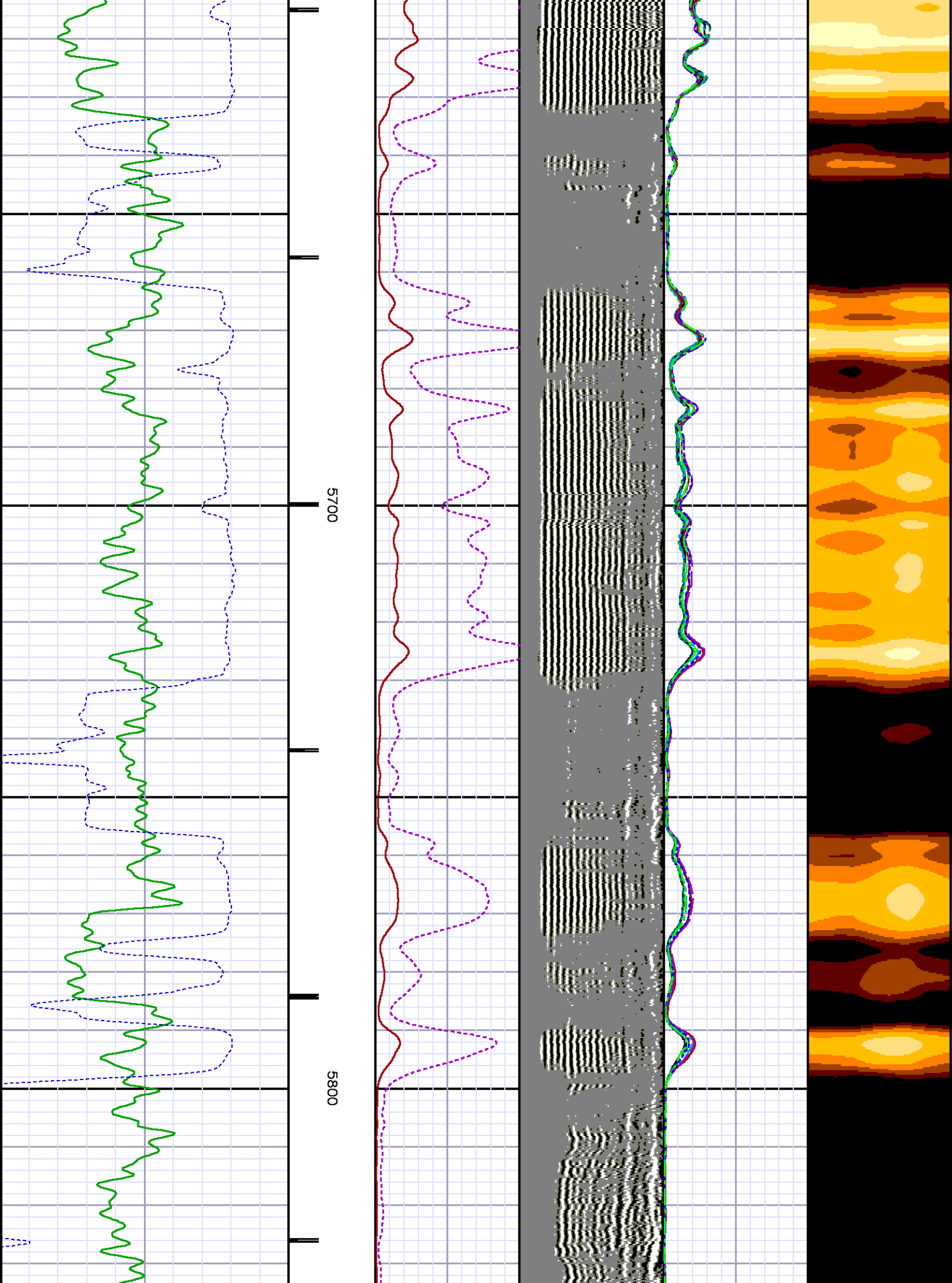


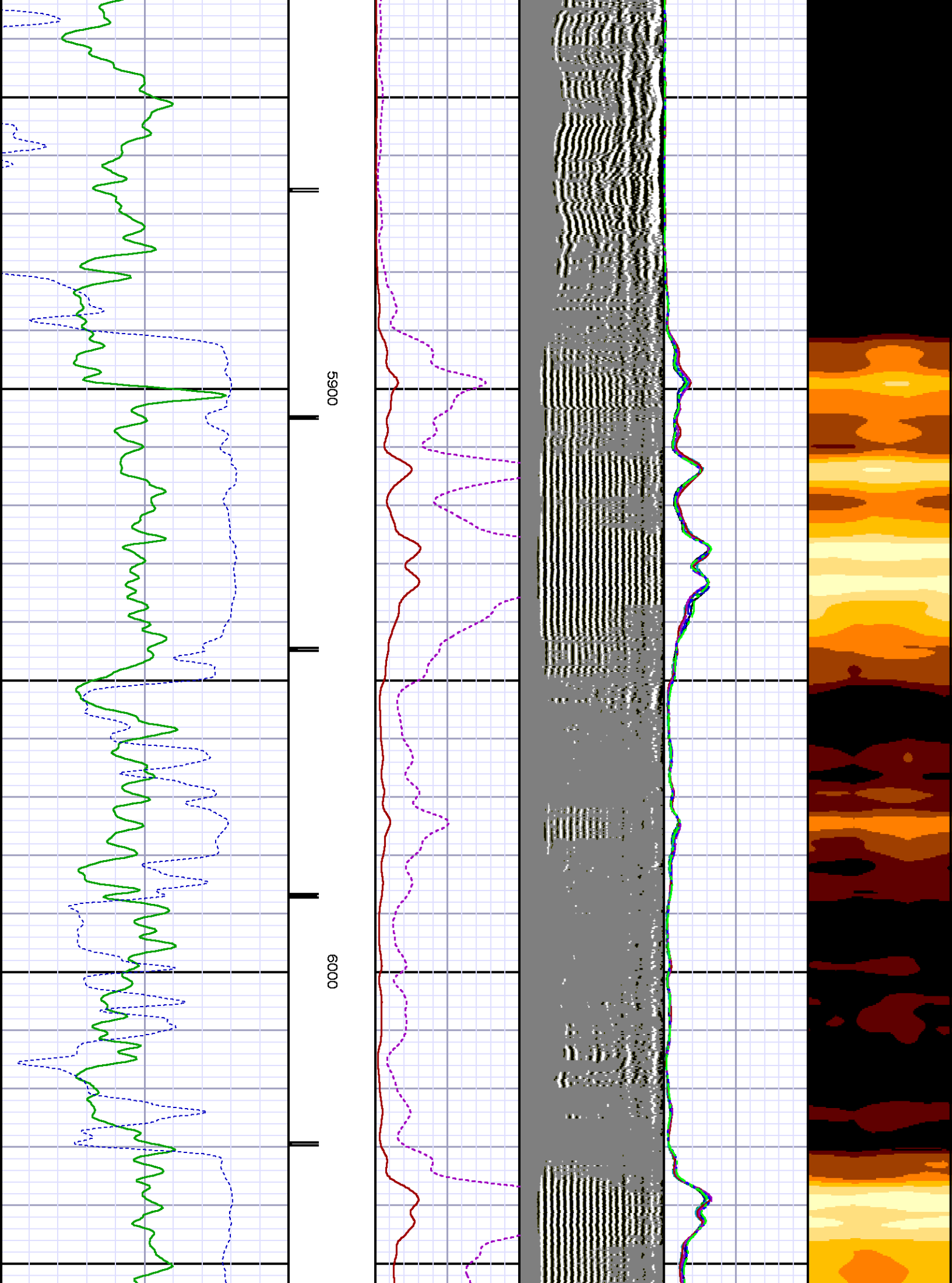




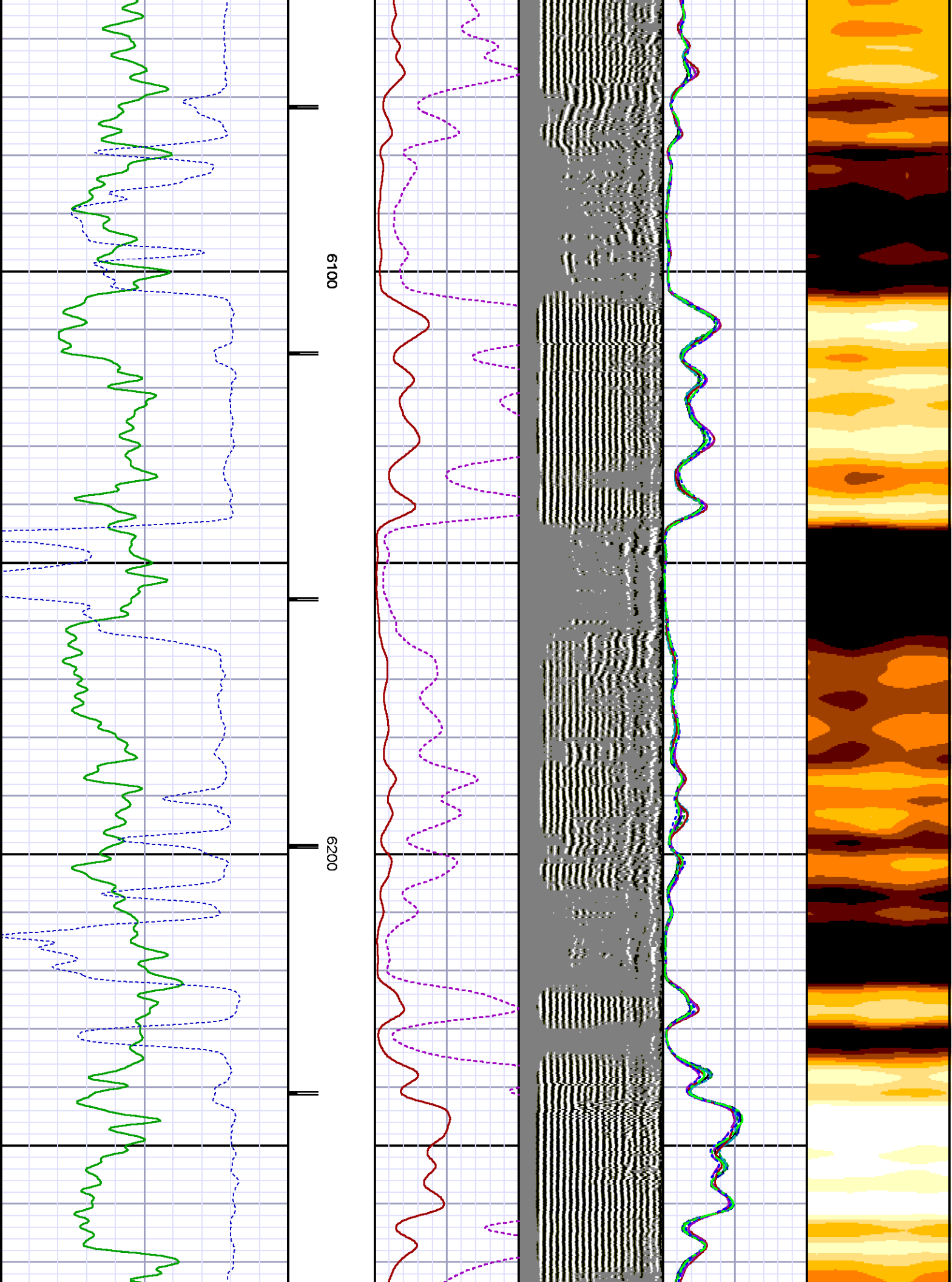




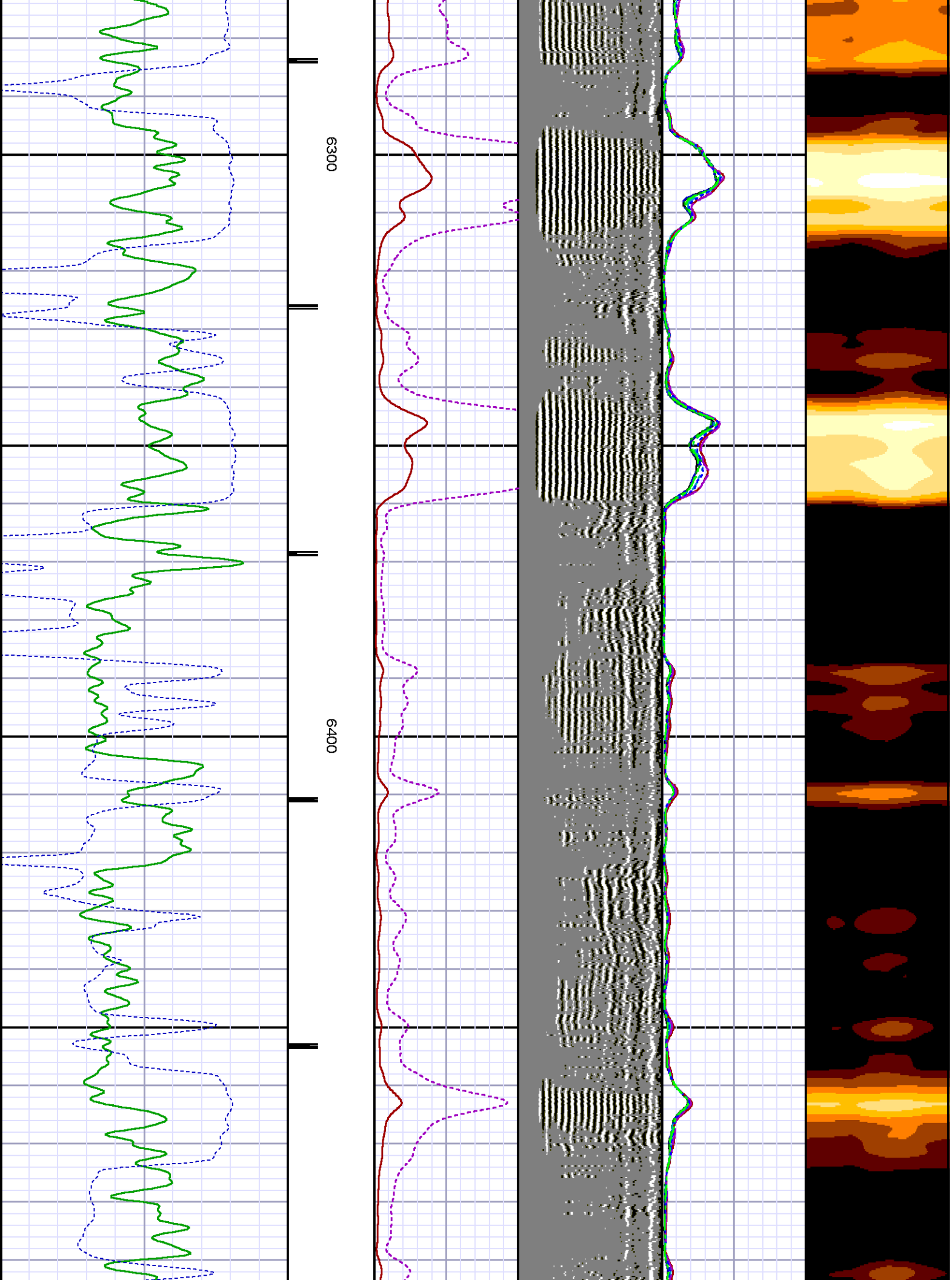


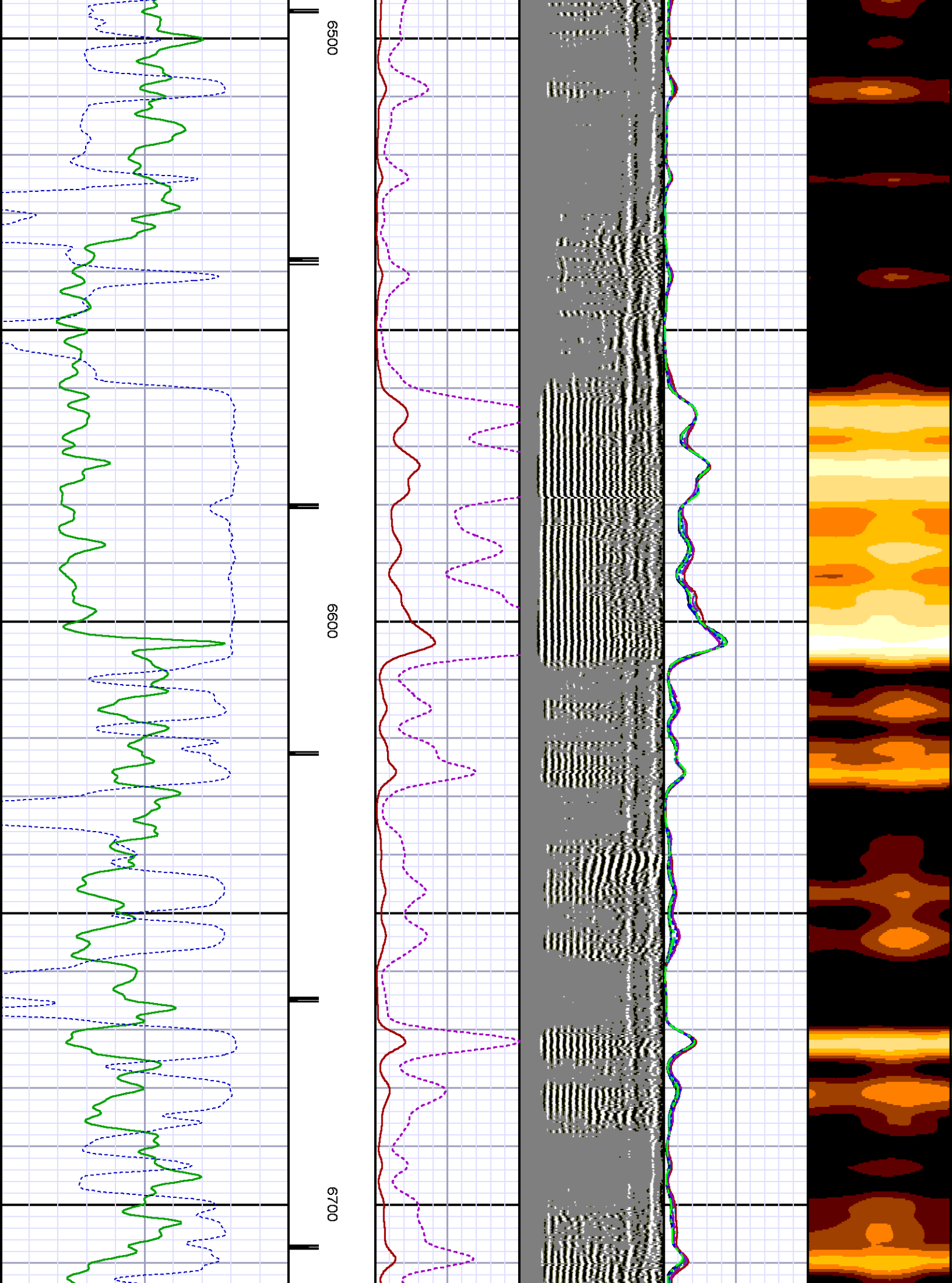


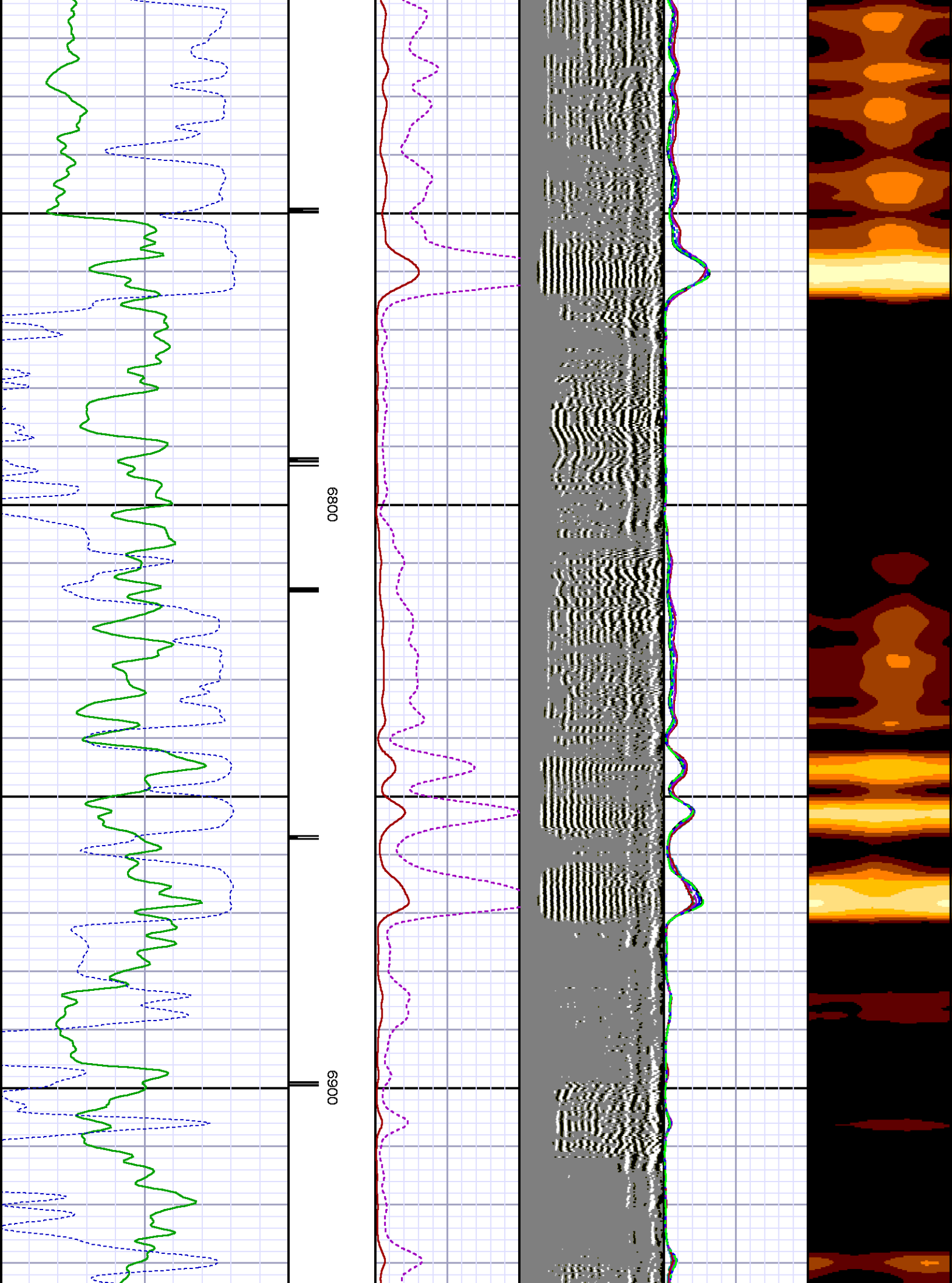


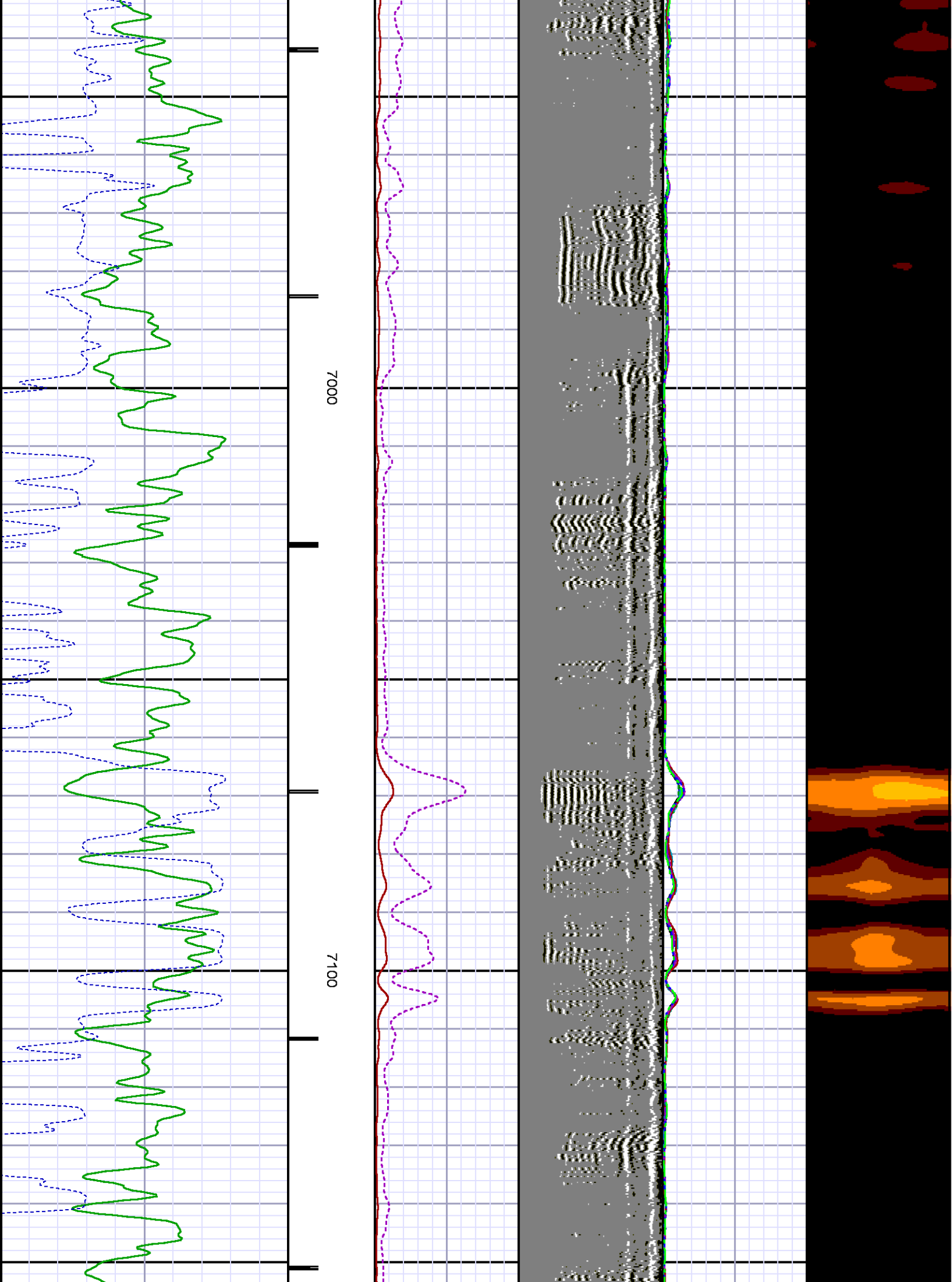


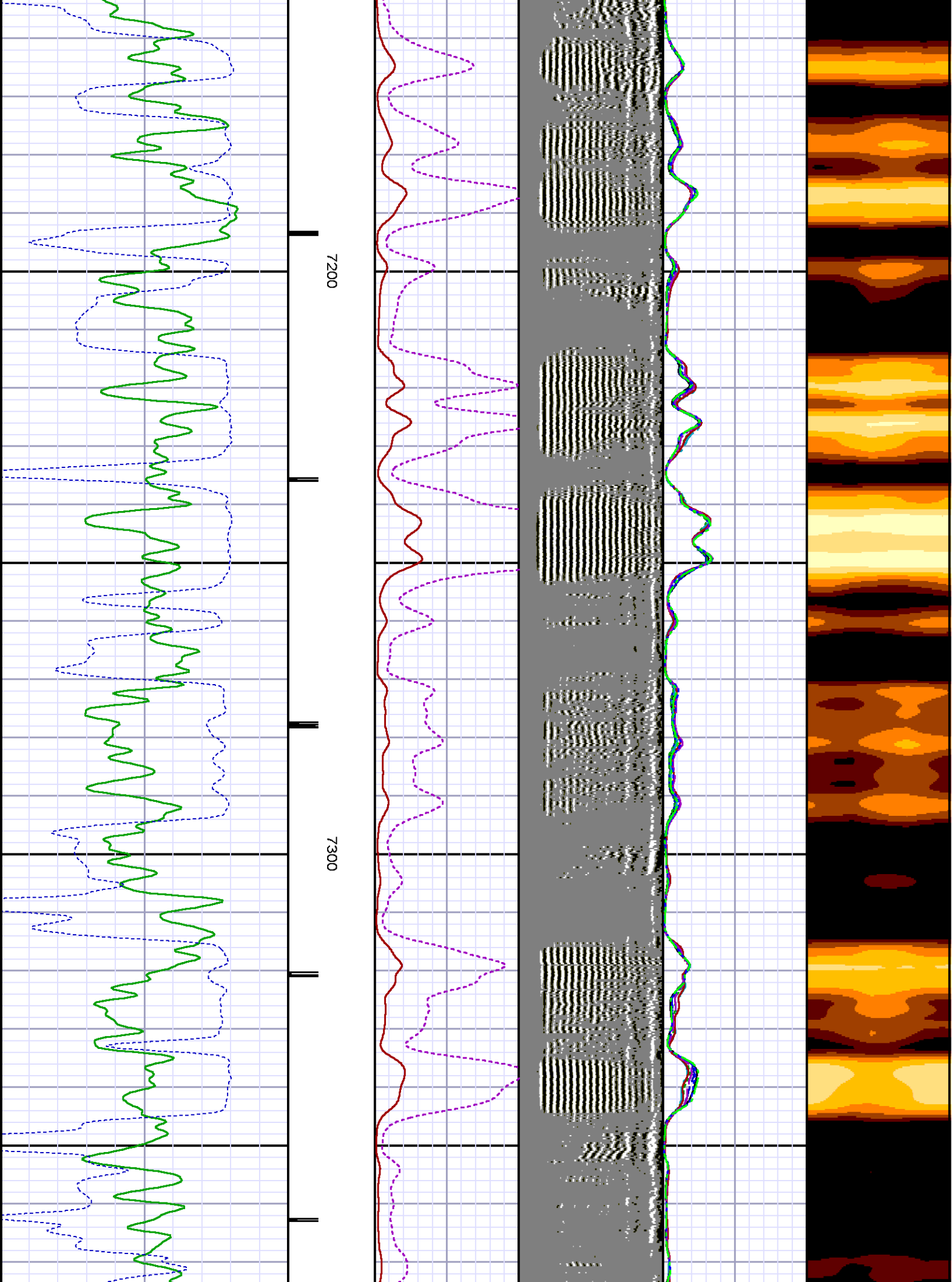


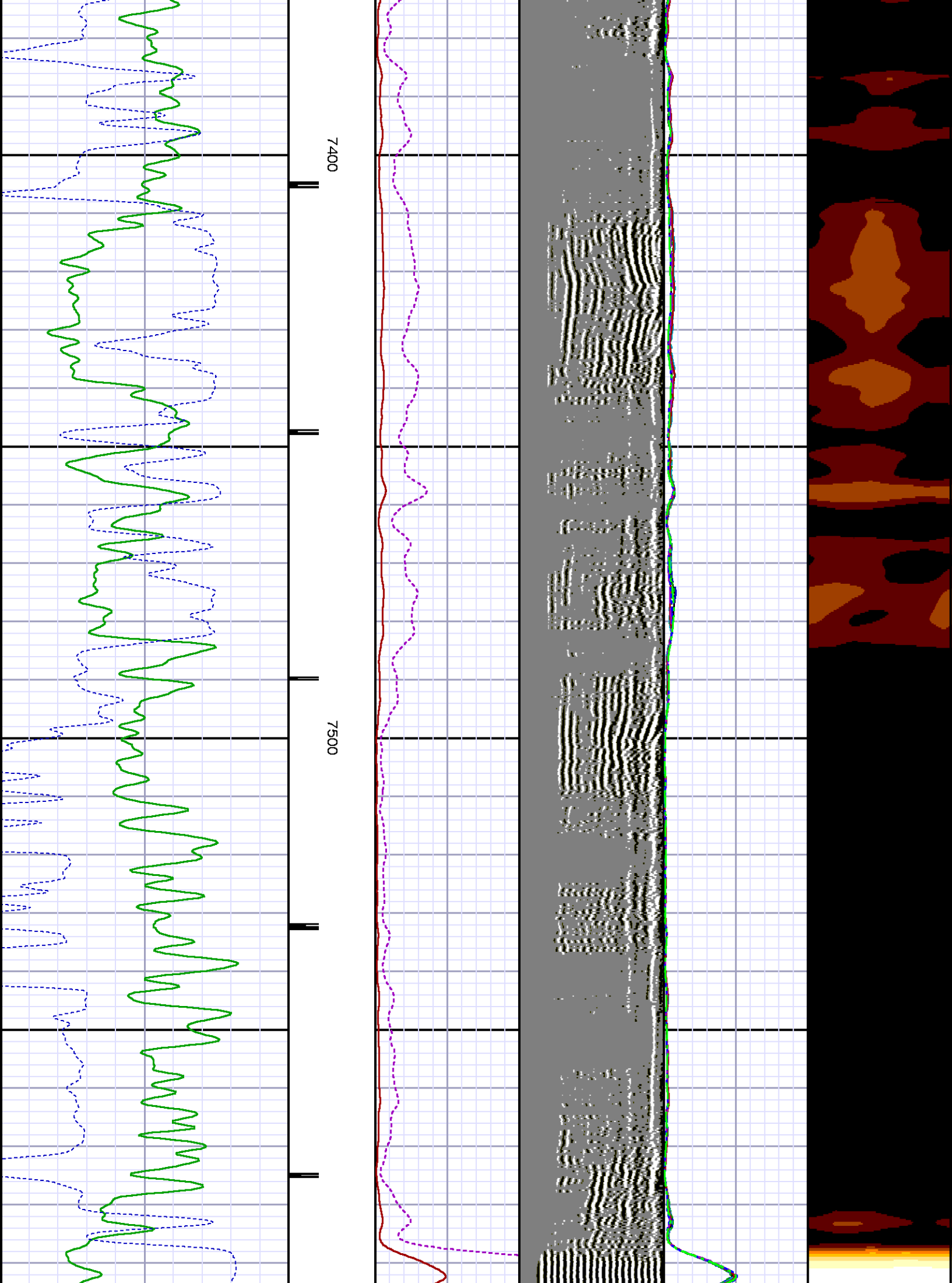




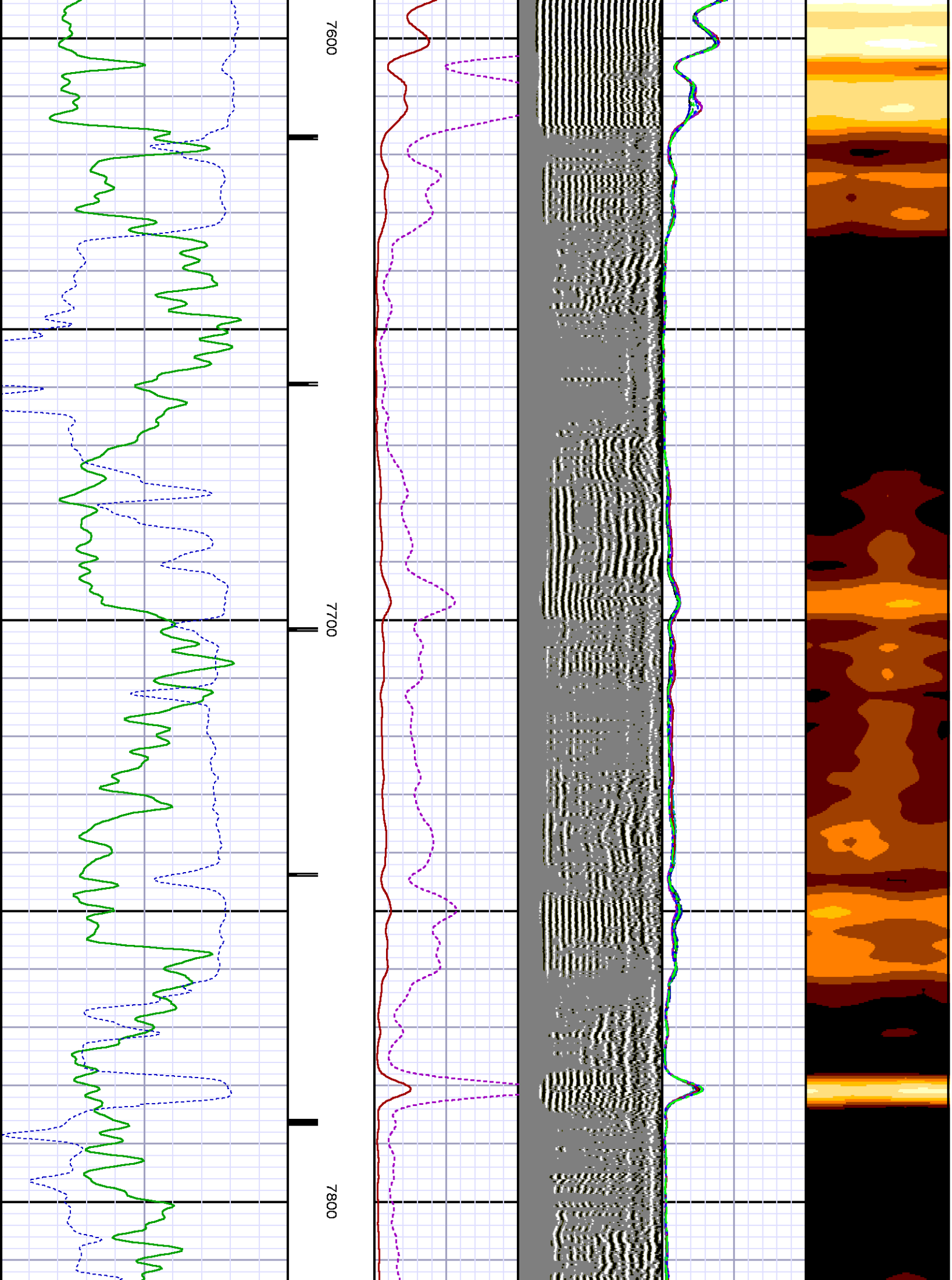


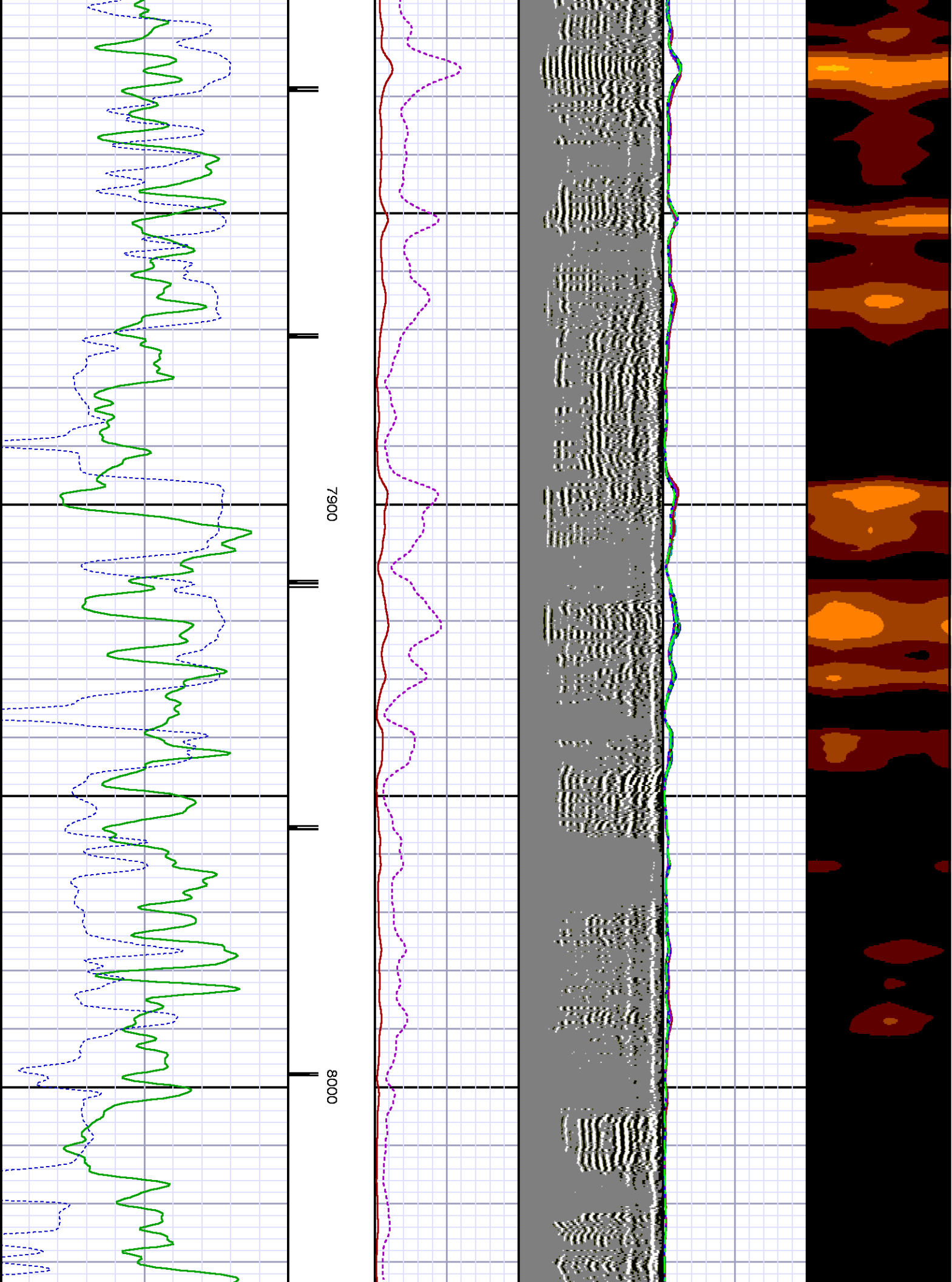


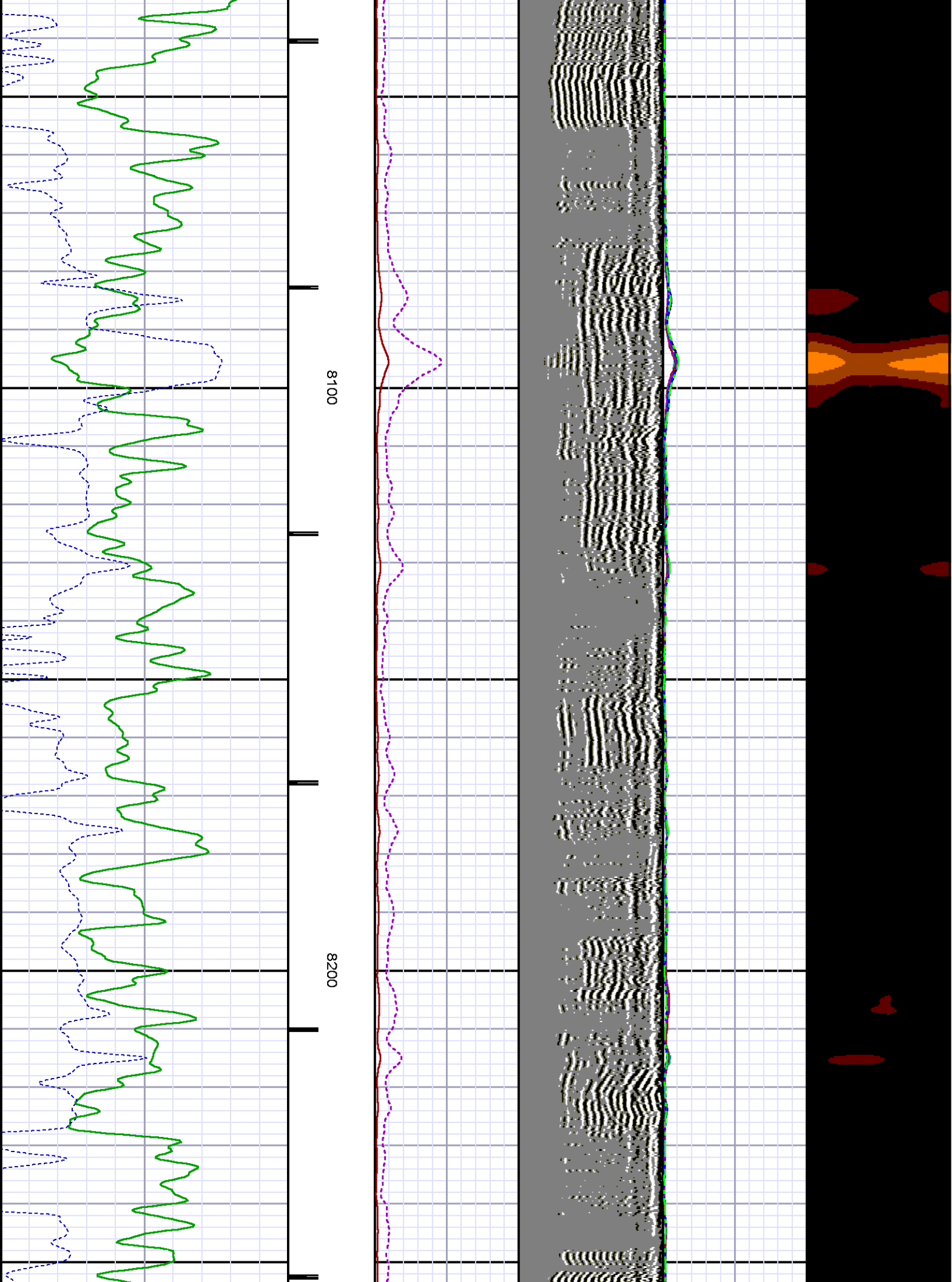


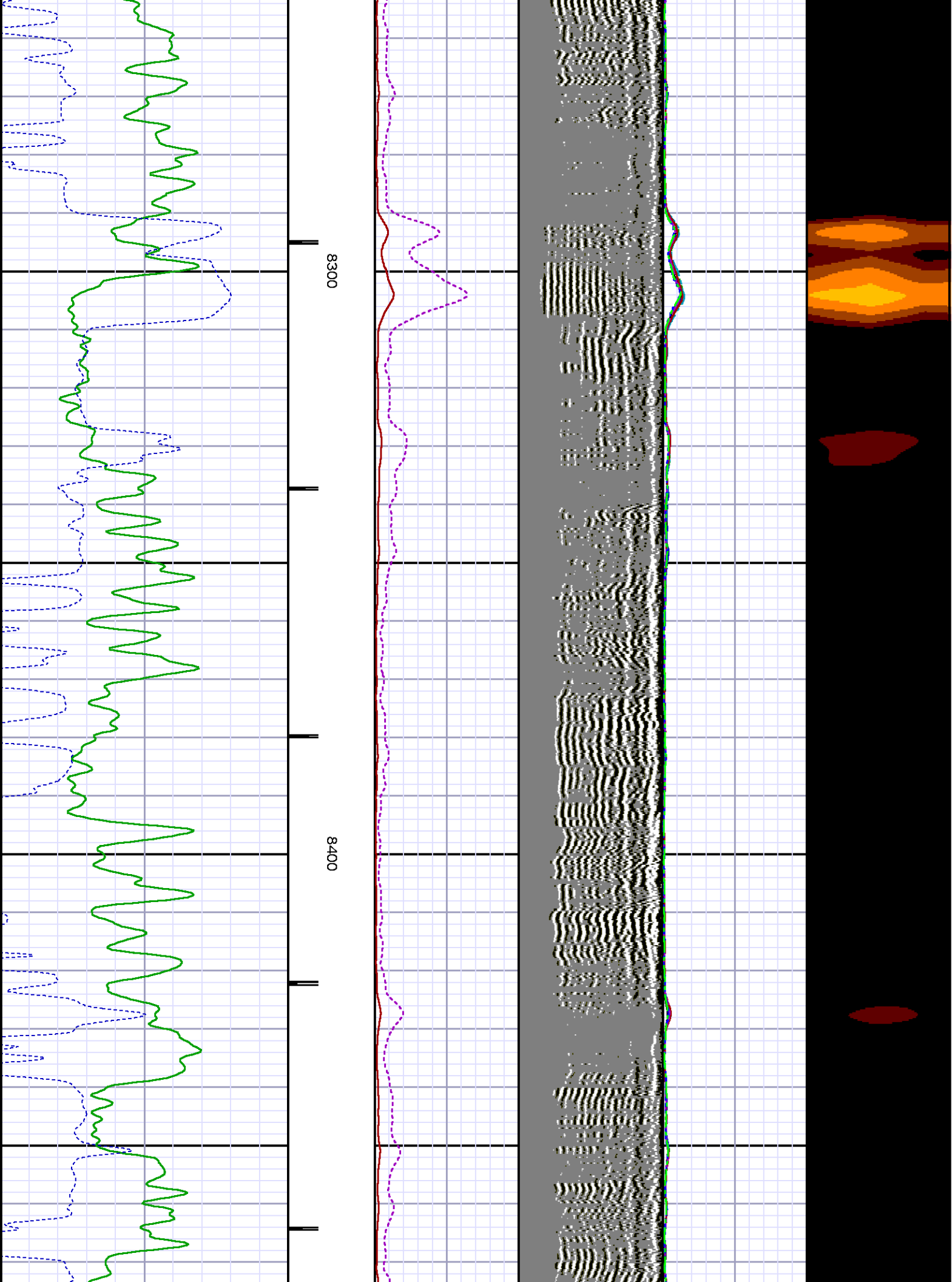


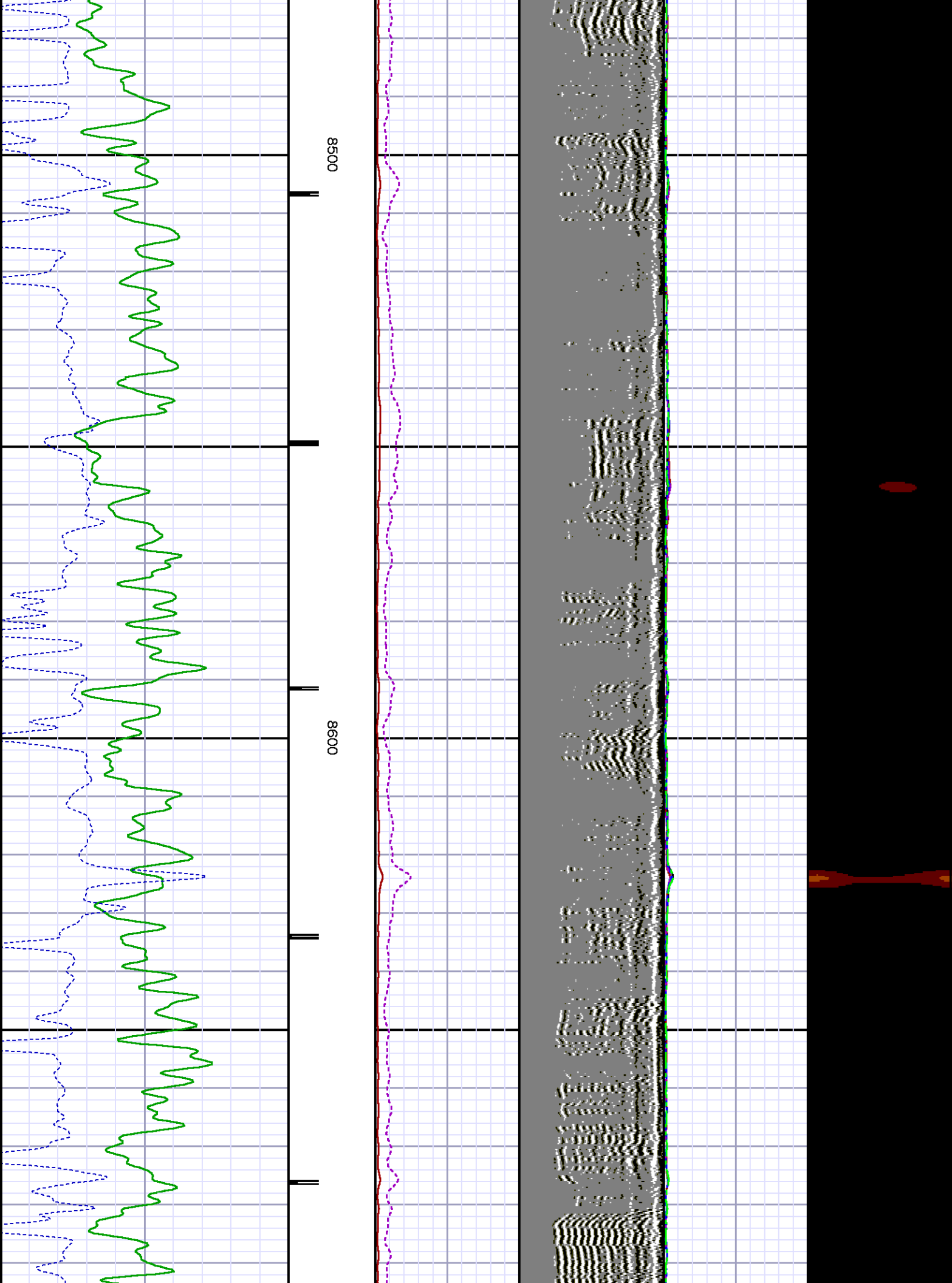


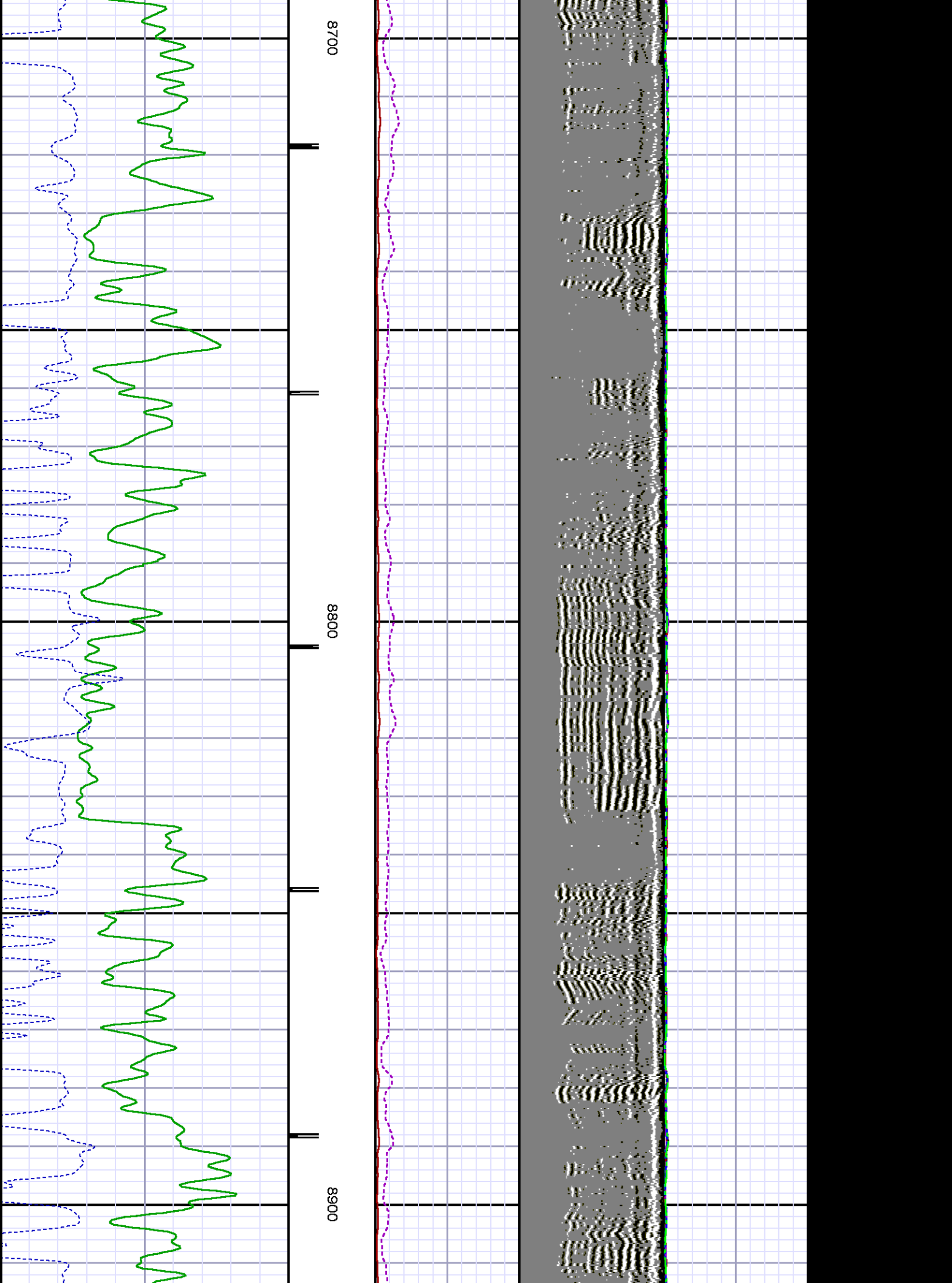




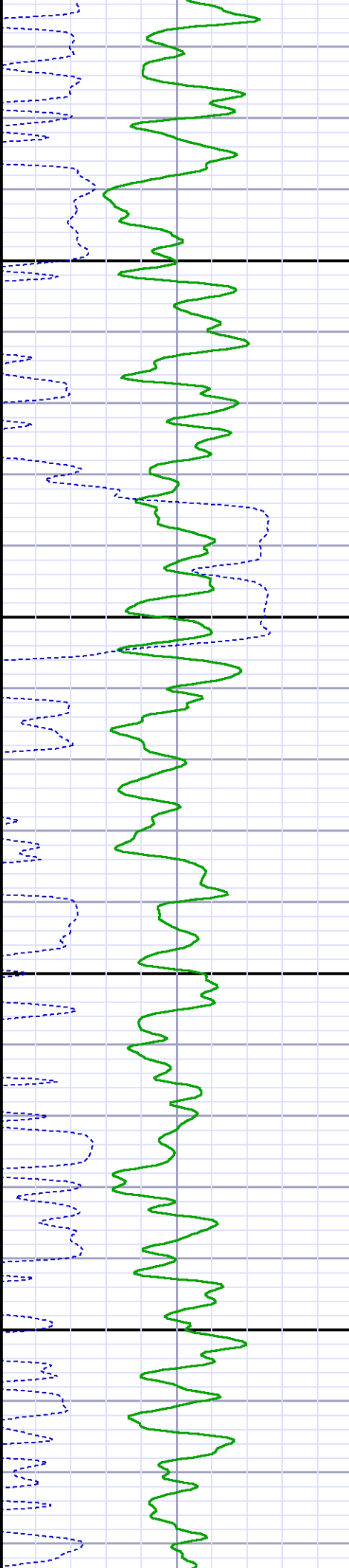
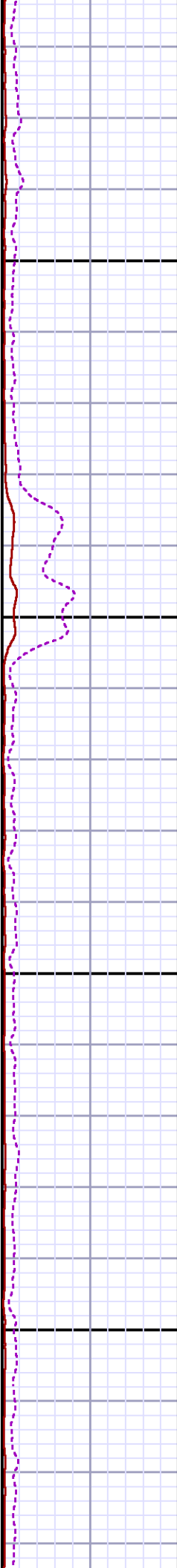
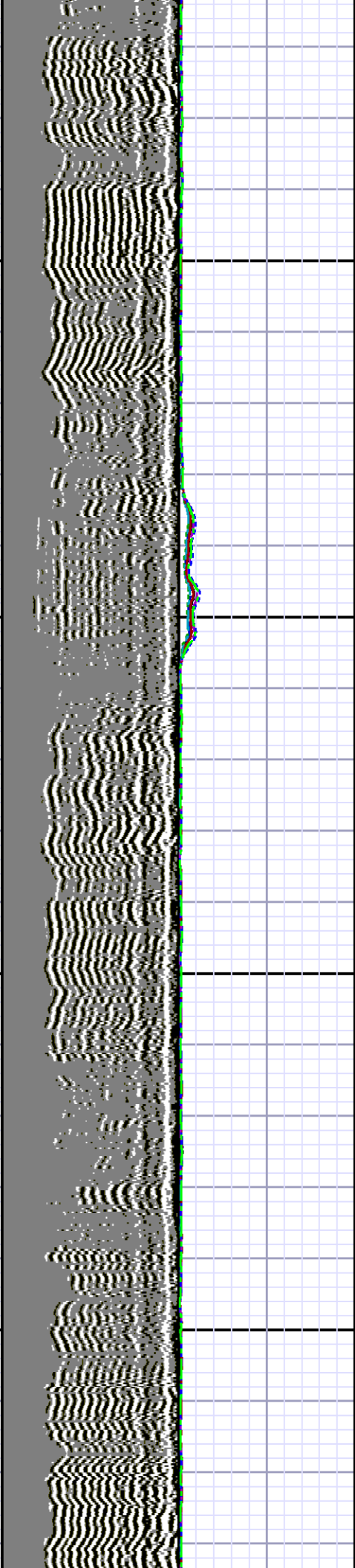
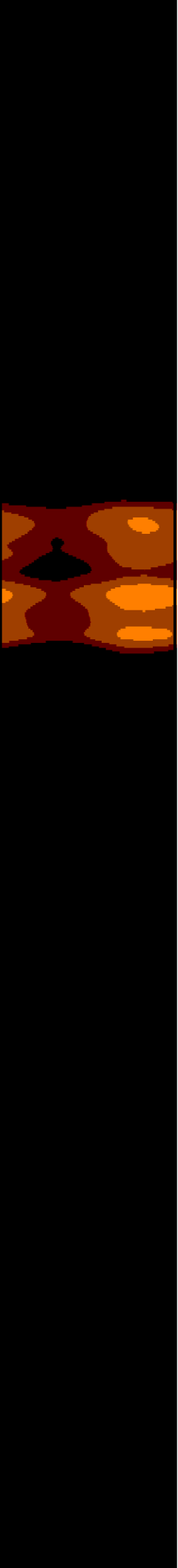


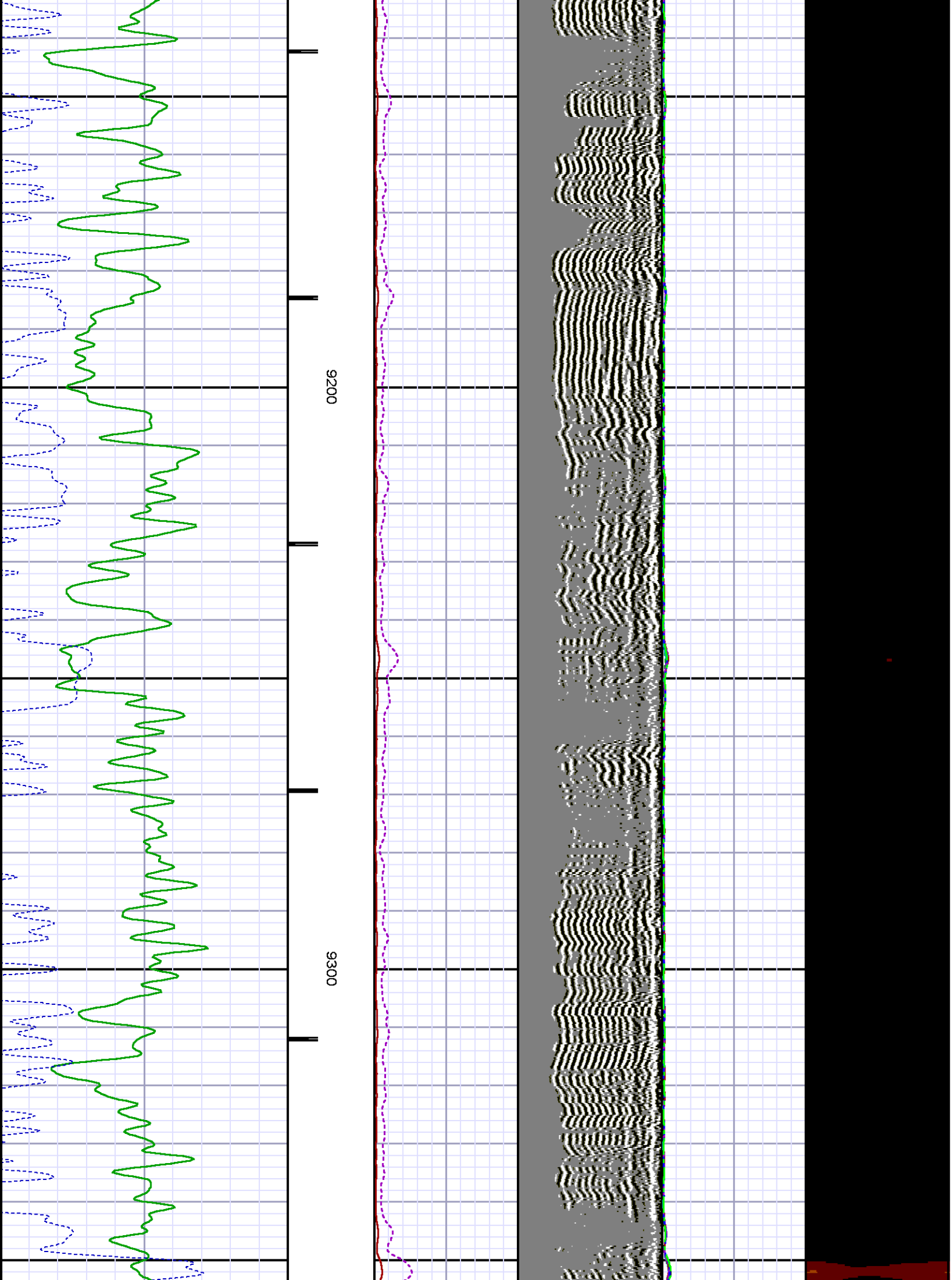


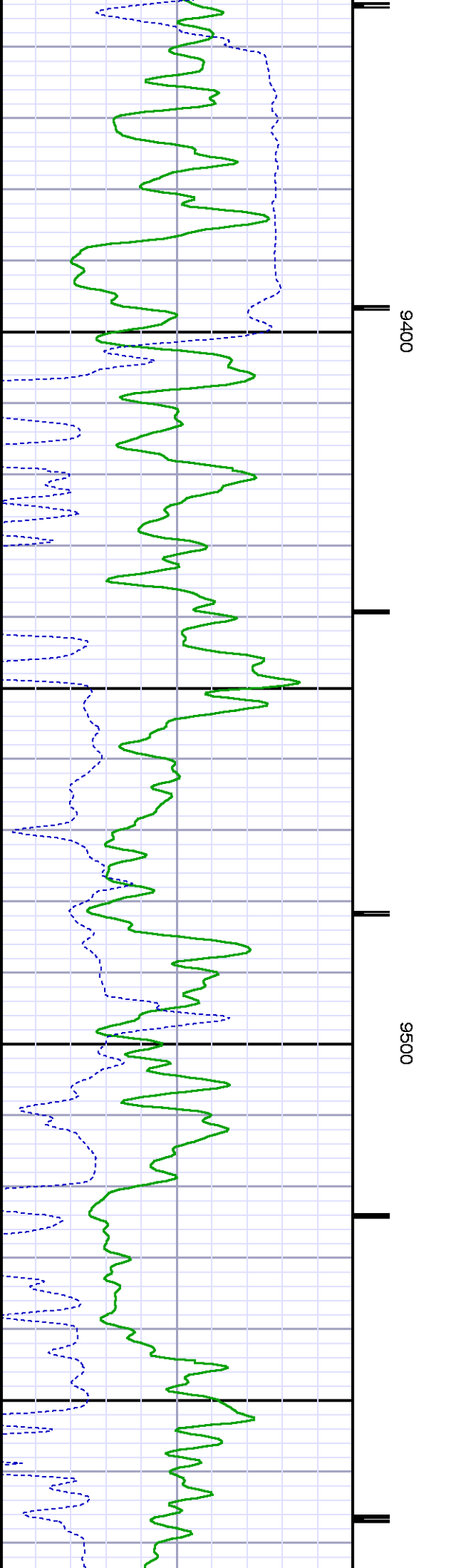
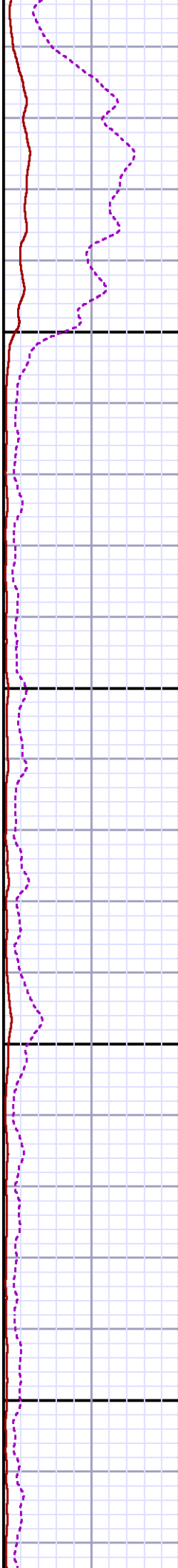
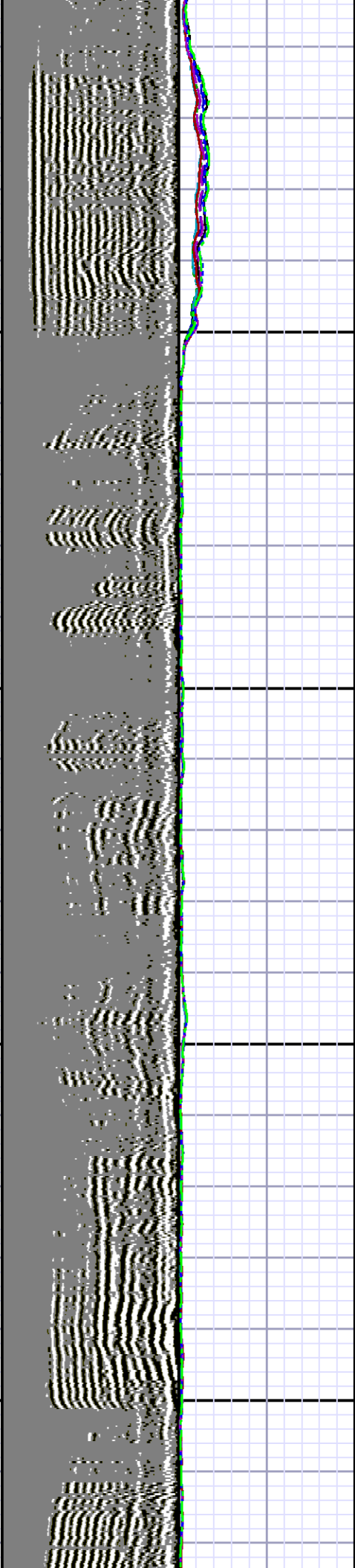
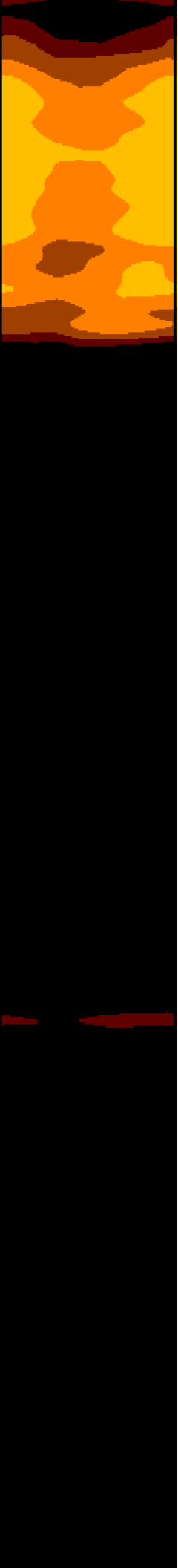


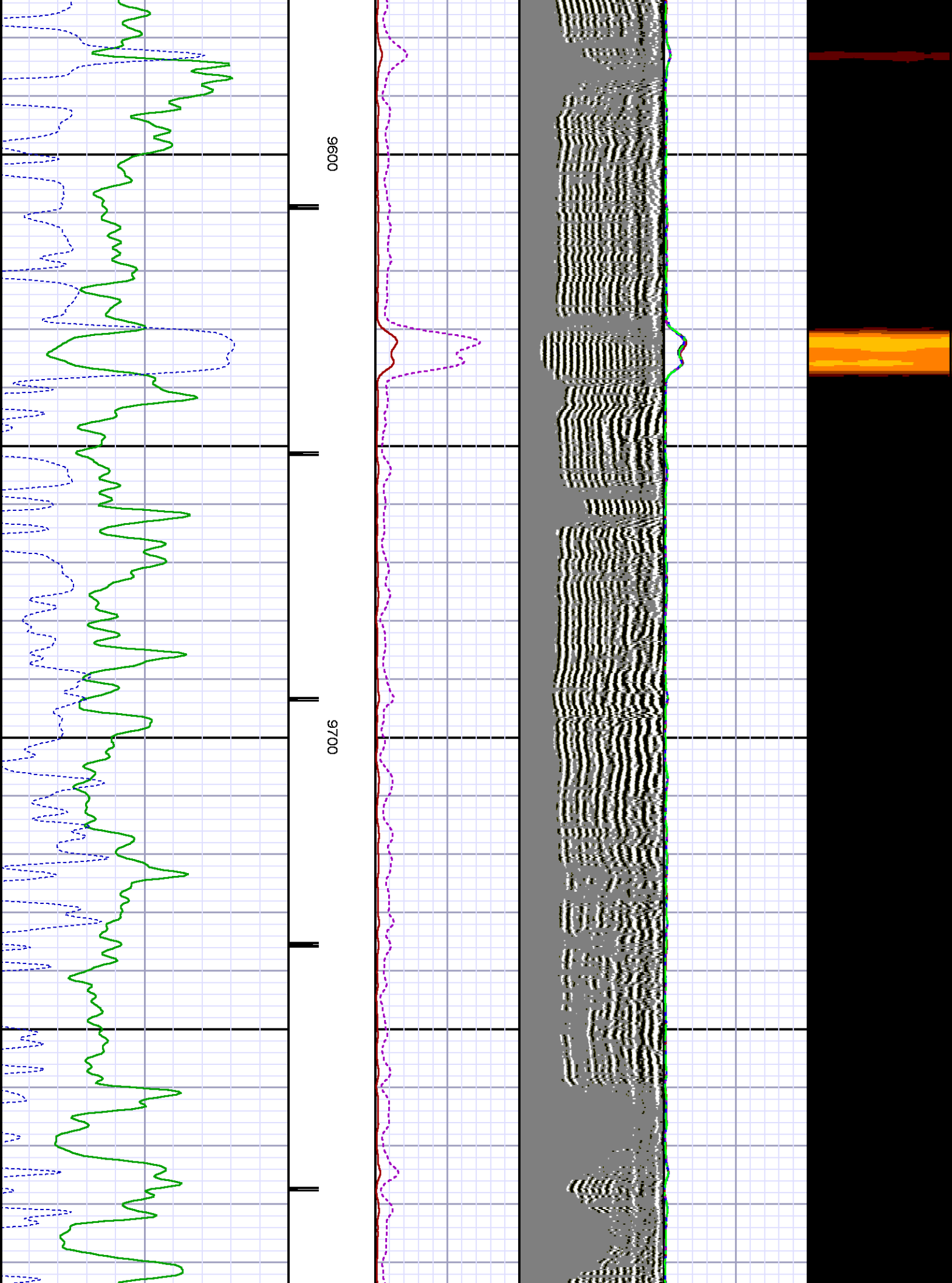


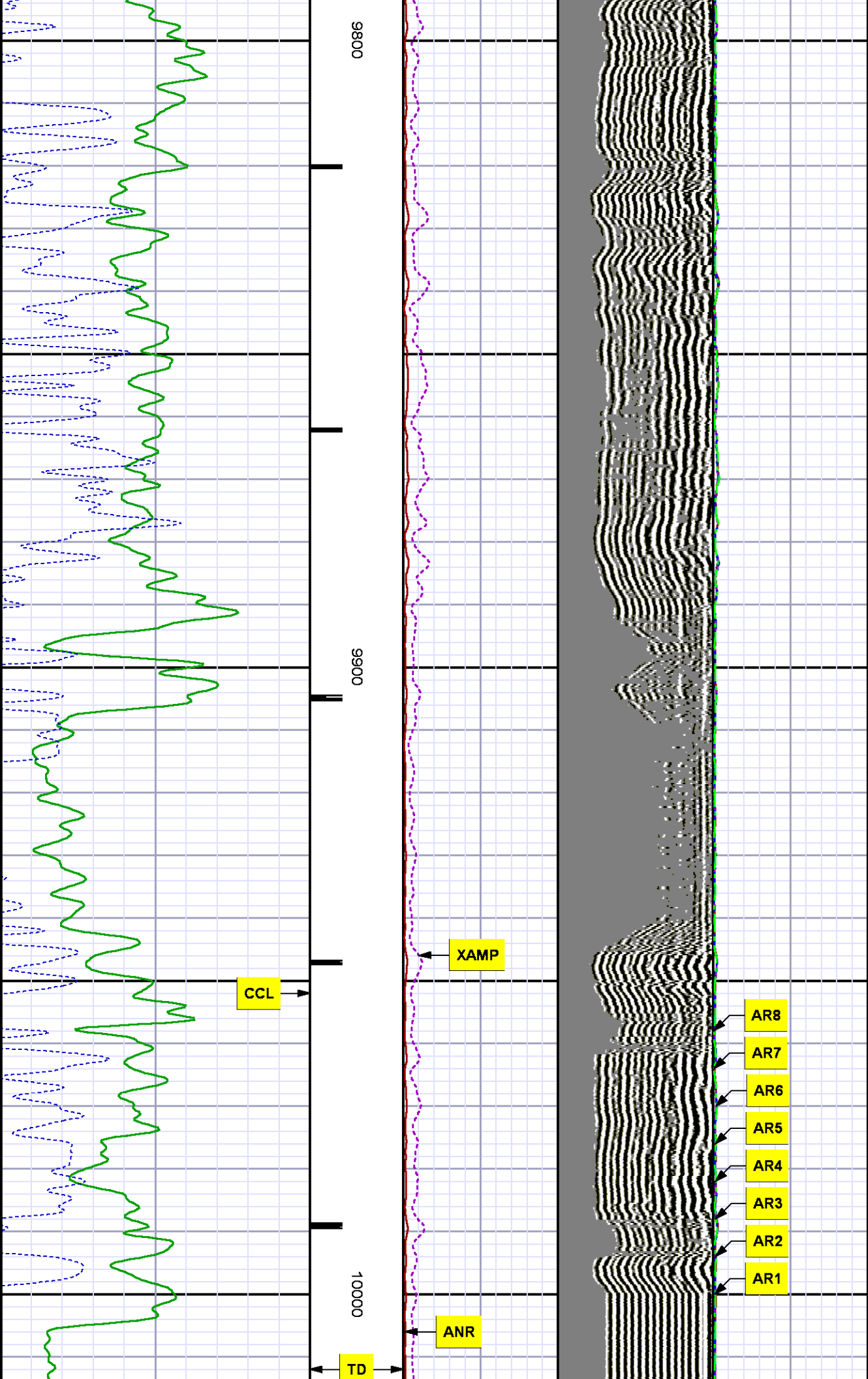


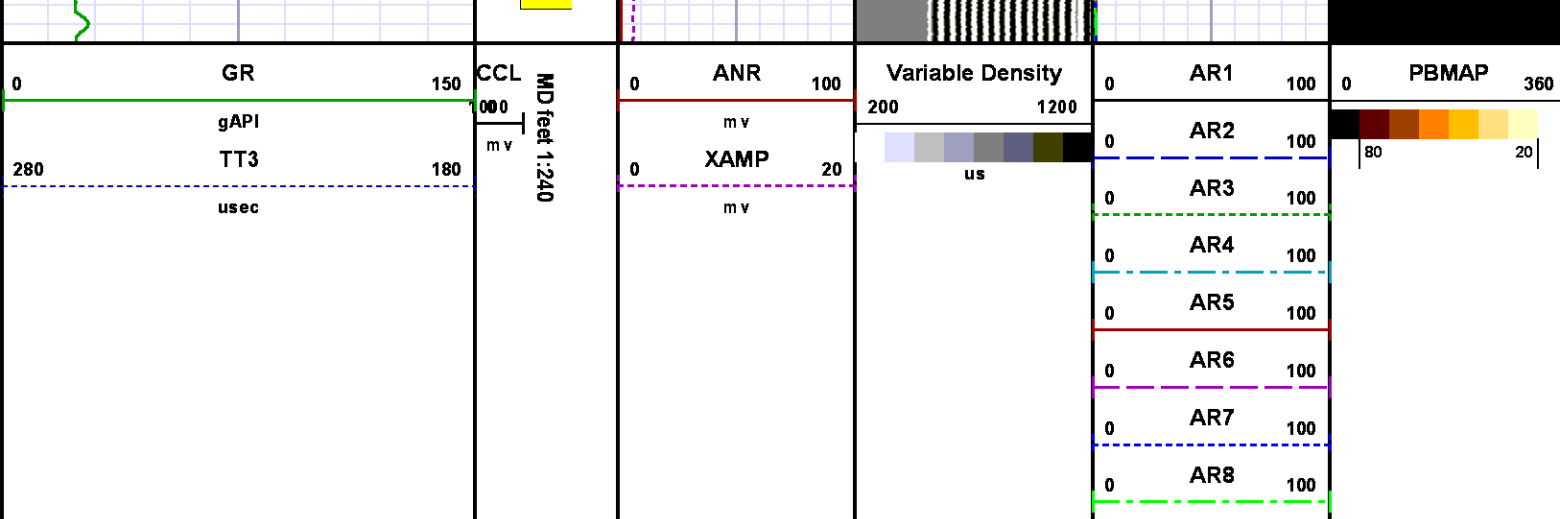












REPEAT SECTION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	9718.310	10074.560
RAL	Amp Gate Start Near	195.000	usec	9718.310	10074.560
RAL	Amp Gate Start Radial	195.000	usec	9718.310	10074.560
RAL	Amp Gate Width Far	25.000	usec	9718.310	10074.560
RAL	Amp Gate Width Near	25.000	usec	9718.310	10074.560
RAL	Amp Gate Width Radial	25.000	usec	9718.310	10074.560
RAL	casing od	4.500	inches	9718.310	10074.560
RAL	casing wt	11.600	lbm/ft	9718.310	10074.560
RAL	FB Start Far	291.900	usec	9718.310	10074.560
RAL	FB Start Near	180.000	usec	9718.310	10074.560
RAL	FB Start Radial	180.000	usec	9718.310	10074.560
RAL	FB Thresh Far	10.000	mv	9718.310	10074.560
RAL	FB Thresh Near	4.000	mv	9718.310	10074.560
RAL	FB Thresh Radial	4.000	mv	9718.310	10074.560
RAL	Fluid Travel Time	200.000	usec/ft	9718.310	10074.341

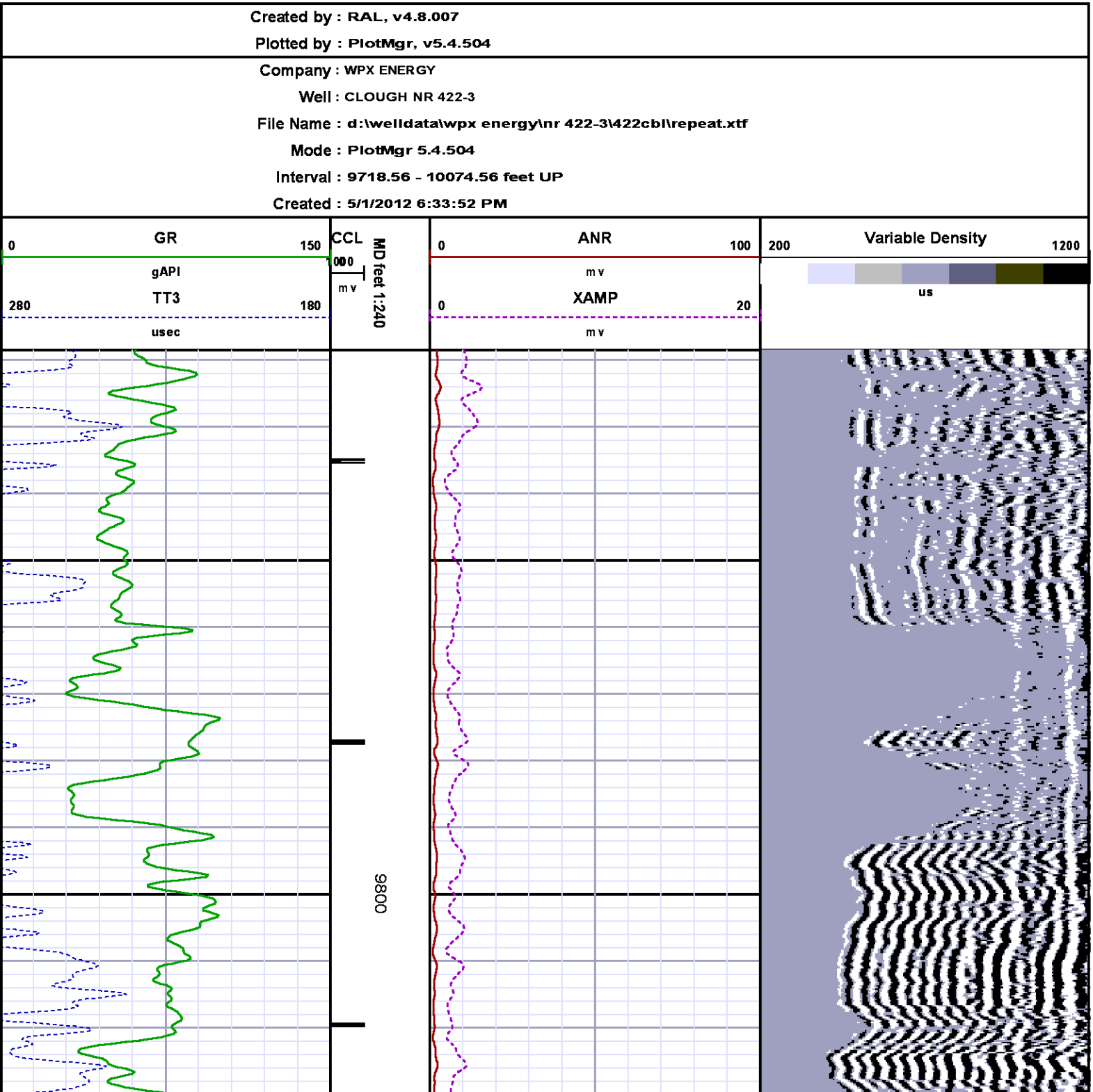
DEPTH OFFSETS

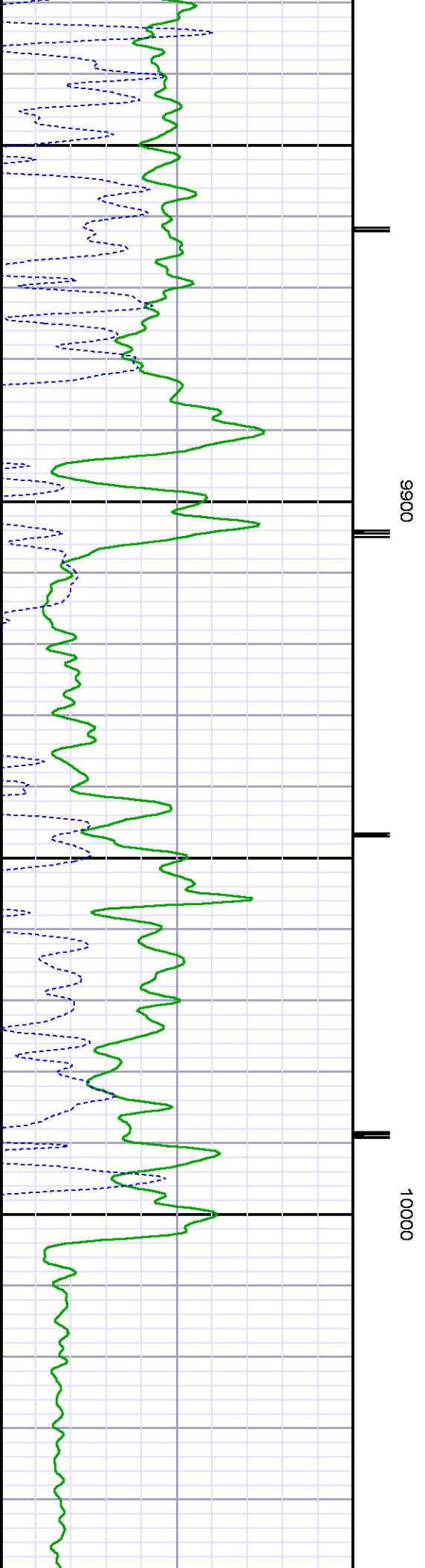
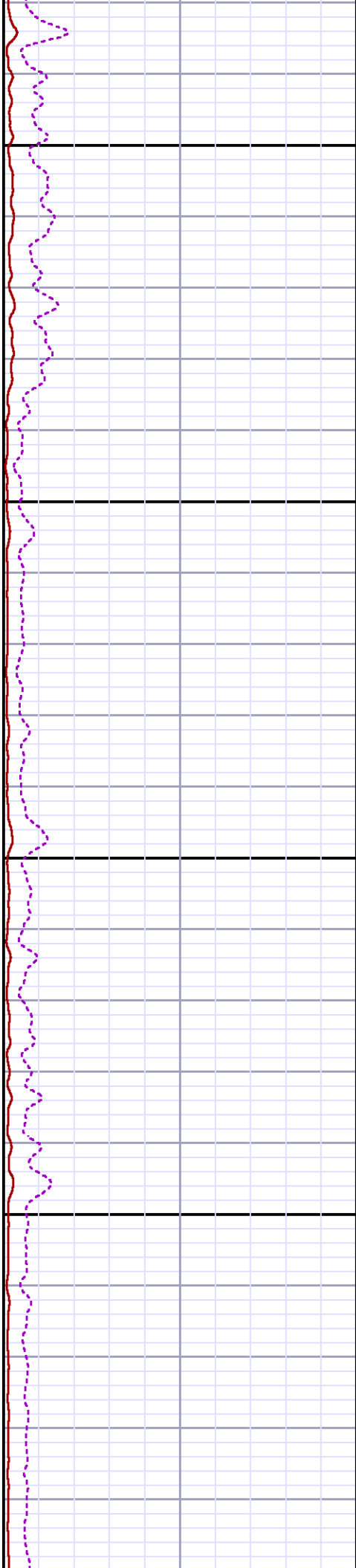
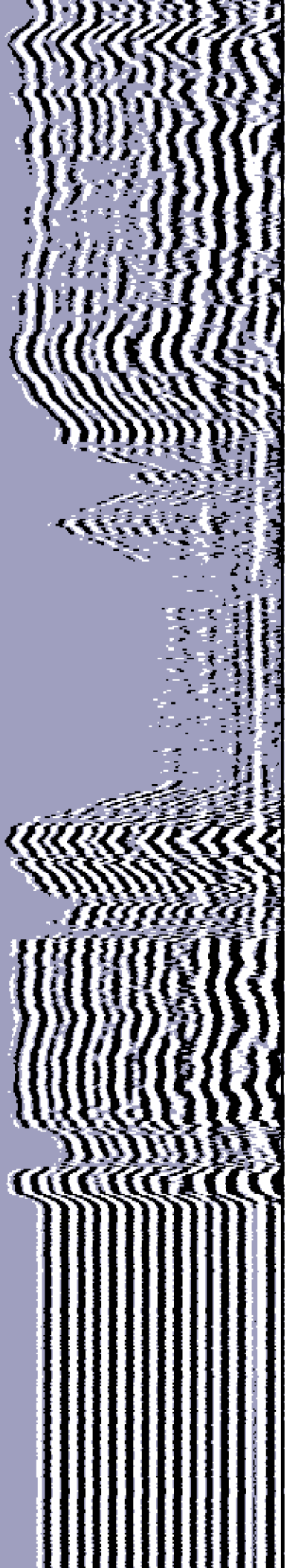
(for Acquired Curves)

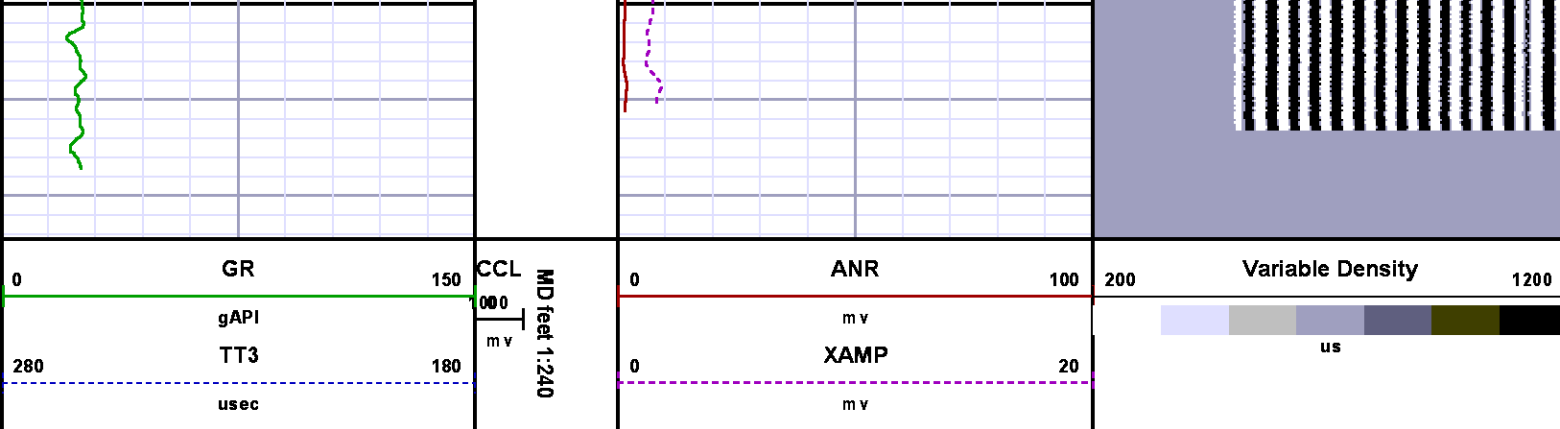


(Optional Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	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	-11.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					







## CALIBRATION SUMMARY

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\957A\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 26 10:30:20 2012 TOOL SERIES: 1426XA ASSET: 957 SEQ: A

Tool Delay [usec] -62.00 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	219	216	25	166	25	0.941	100.00	0.13
3 Ft. Receiver	219	216	25	152	25	-6.523	100.00	0.12
5 Ft. Receiver	329	323	25	172	25	3.932	100.00	0.10
Radial #1	219	216	25	146	25	-5.000	100.00	0.12
Radial #2	219	216	25	146	25	-3.835	100.00	0.12
Radial #3	219	216	25	146	25	-5.260	100.00	0.12
Radial #4	219	216	25	146	25	-5.317	100.00	0.12
Radial #5	218	216	25	146	25	-5.274	100.00	0.12
Radial #6	217	216	25	146	25	-6.251	100.00	0.12
Radial #7	217	216	25	146	25	-8.118	100.00	0.12
Radial #8	219	216	25	146	25	-7.164	100.00	0.12

*RALFLD*

Wellsite Calibration: C:\case\calver\RALFLD\957A fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 26 10:31:29 2012 TOOL SERIES: 1426XA ASSET: 957 SEQ: A

Tool Delay [usec] -62.00 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	0.041	0.000	1.00	100.000
3 Ft. Receiver	200	25	0.140			
5 Ft. Receiver	317	25	-0.199			
Radial #1	200	25	0.321			
Radial #2	200	25	0.161			
Radial #3	200	25	0.397			
Radial #4	200	25	0.293			
Radial #5	200	25	0.105			
Radial #6	200	25	0.293			
Radial #7	200	25	0.335			
Radial #8	200	25	0.222			

## GAMMA RAY

Calibration File: C:\case\calver\GR\544A7.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Apr 07 11:28:55 2012 TOOL SERIES: 2459XA ASSET: 544 SEQ: A7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	64.36	314.09	0.741	47.67	232.67	185.00

Verification File: C:\case\calver\GR\544A7.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Apr 07 11:30:48 2012 TOOL SERIES: 2459XA ASSET: 544 SEQ: A7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	63.73	307.56	0.741	47.21	227.83	180.62

## TOOL DIAGRAM

<div><div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>BAKER</div><div>HUGHES</div></div></div><div>Baker Atlas</div><div>CASE</div></div>	Company		WPX ENERGY		File No:	
	Well		CLOUGH NR 422-3		CH046864	
	Field		RULISON		API No:	
	County		GARFIELD	State	COLORADO	05045205250000
Location		Elevations				
SHL: 1917' FSL, 1756' FWL (NESW)		KB 6742.9 ft		3 6S 94W		
BHL: 2466' FSL, 2046' FWL (SENW)		DF		NR 23-3 PAD		
		GL 6719.9 ft		H&P 280		
SEC 3		TWP 6S	RGE 94W			