



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: GH074839	Company Well Field County	WPX ENERGY DUGGAN RWF 514-29 RULISON GARFIELD	State COLORADO
API No: 06046216630000	Location SHL: 507' FSL X 602' FWL BHL: 244' FSL X 728' FWL SEC 29 TWP 6S RGE 94W		Other Services RPM
29 6S 94W RWF 14-29 PAD NABORS 673	Permanent Datum Log Measured From Drill Measured From		Elevations KB 6441 ft DF GL 6416 ft
OL KB KELLY BUSHING		Elevation 26 ft Above P. D.	

Date	10/JUL/13	
Run	ONE	
Service Order	624442	
Depth Driller	7895 ft	
Depth Logger	7833 ft	
Bottom Logged Interval	7833 ft	
Top Logged Interval	26 ft	
Time Started	1300	
Time Finished	1600	
Operator Rig Time	3 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	68 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	233 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	ORAN JACOBS	

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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	1102 ft
8.75 in	1102 ft	7895 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	32.2 lbm/ft		0 ft	1102 ft
4.6 in	11.6 lbm/ft	I-80	0 ft	7895 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 7 feet.
Logged with zero PSI at wellhead.
BHT = 233°F
SJ = 4618'-4642'

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

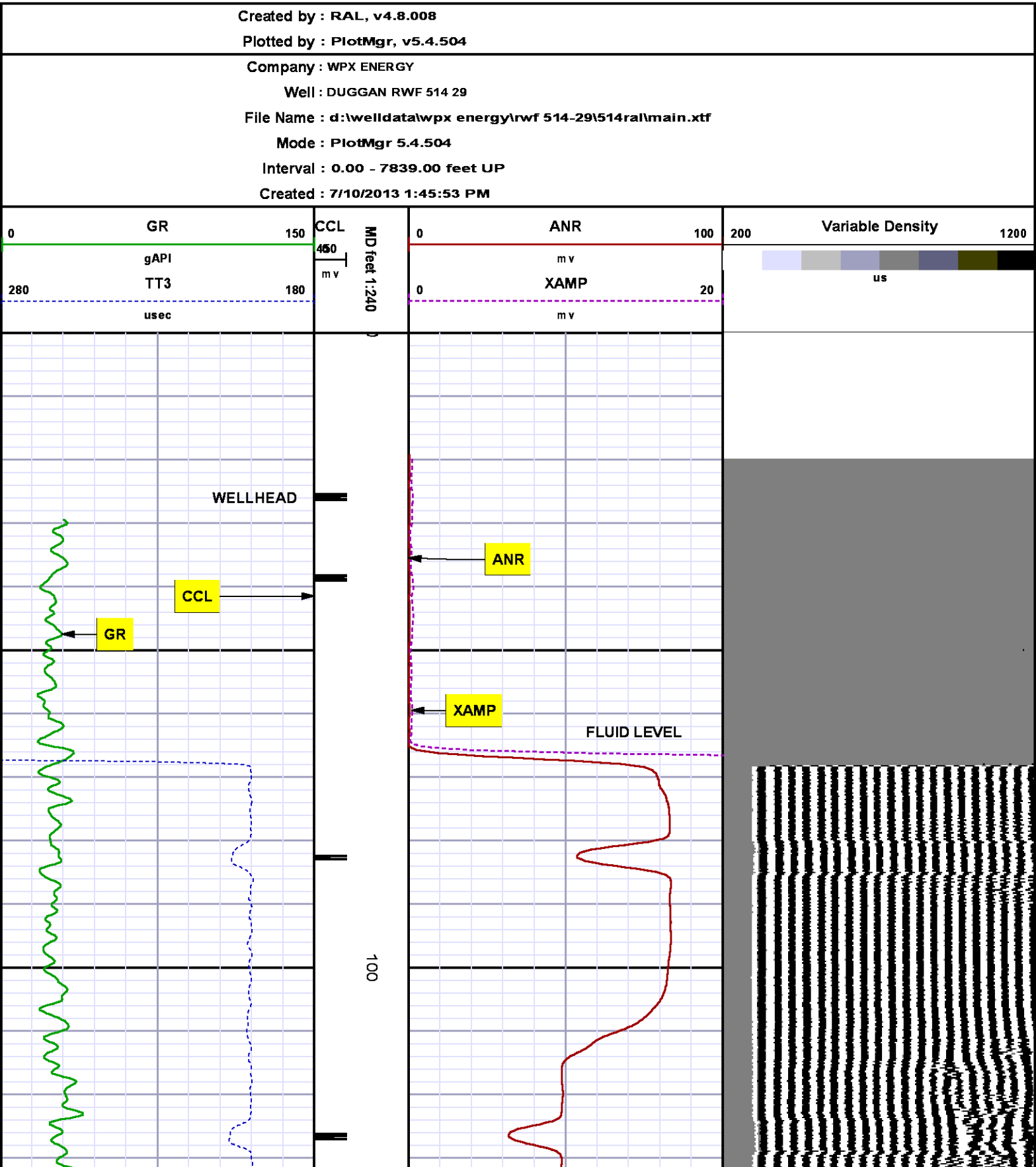
PRIMARY PRESENTATION

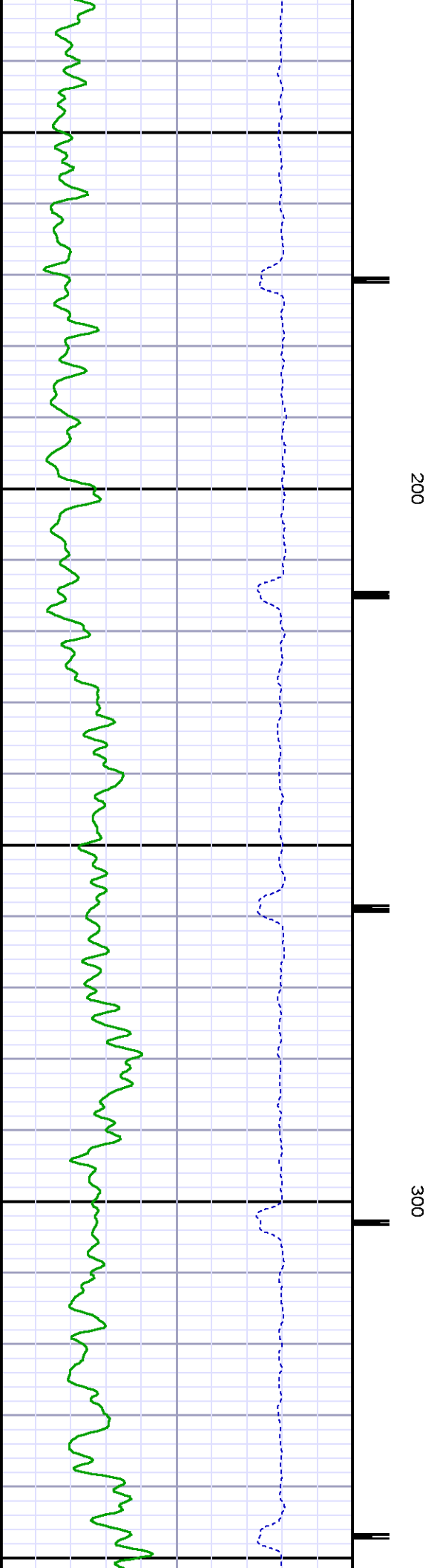
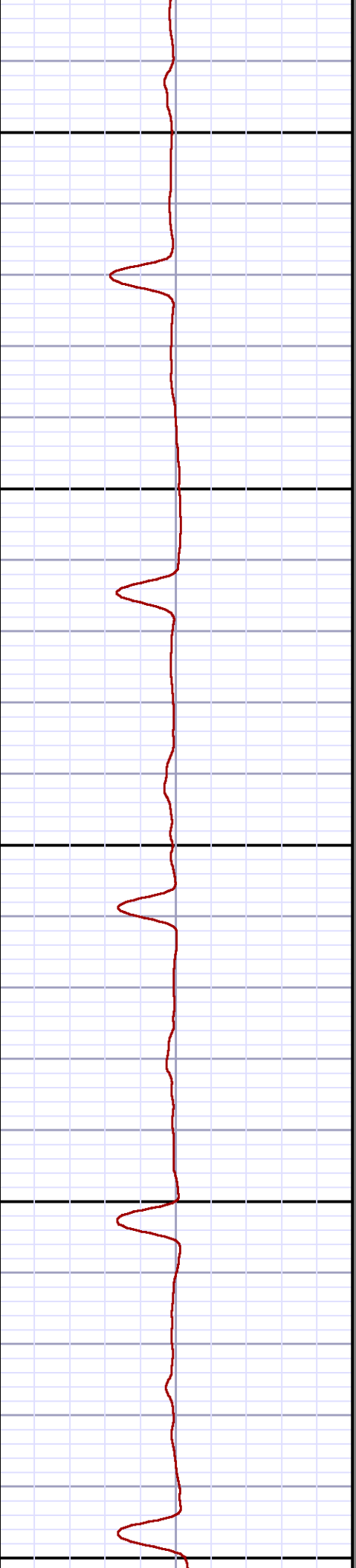
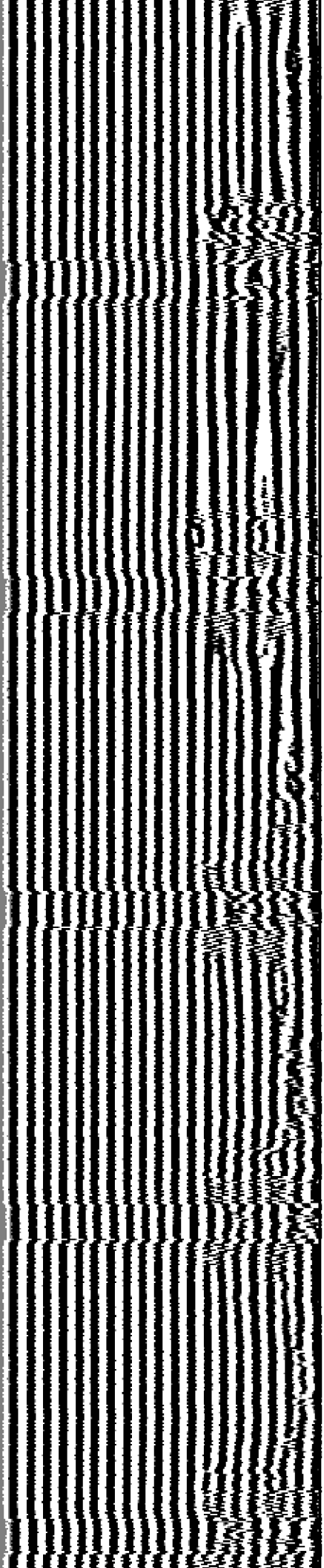
0 PSI

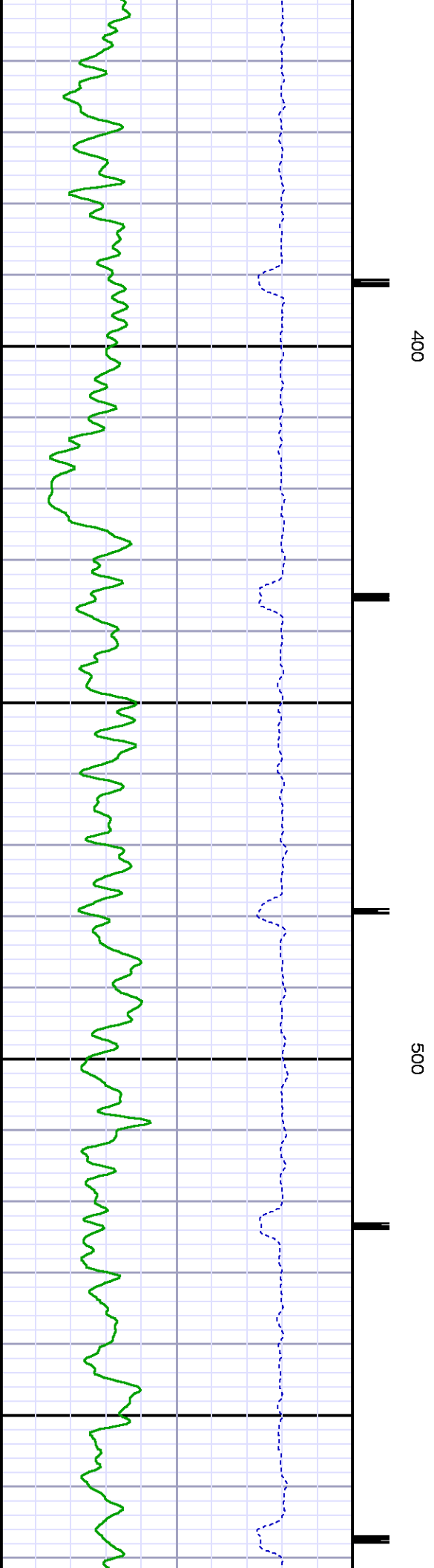
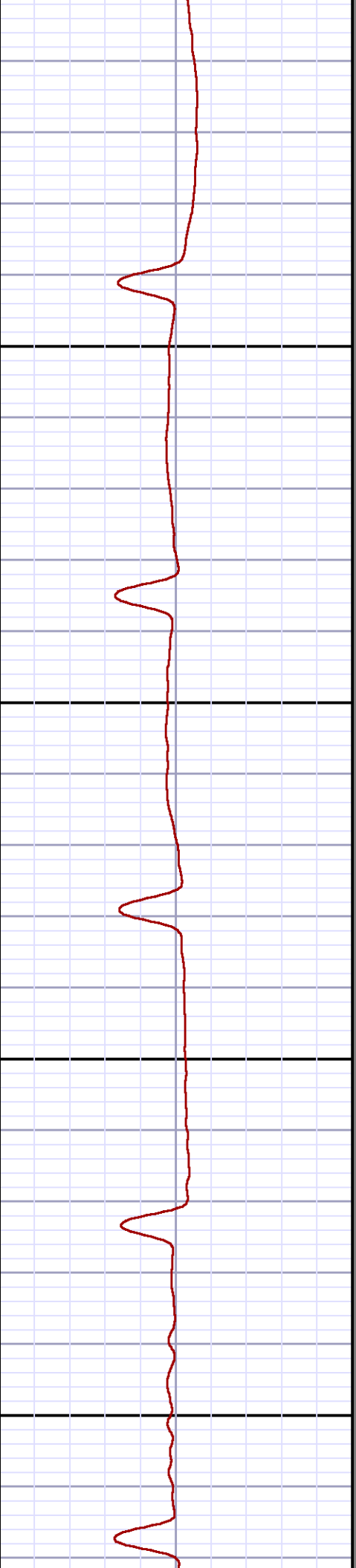
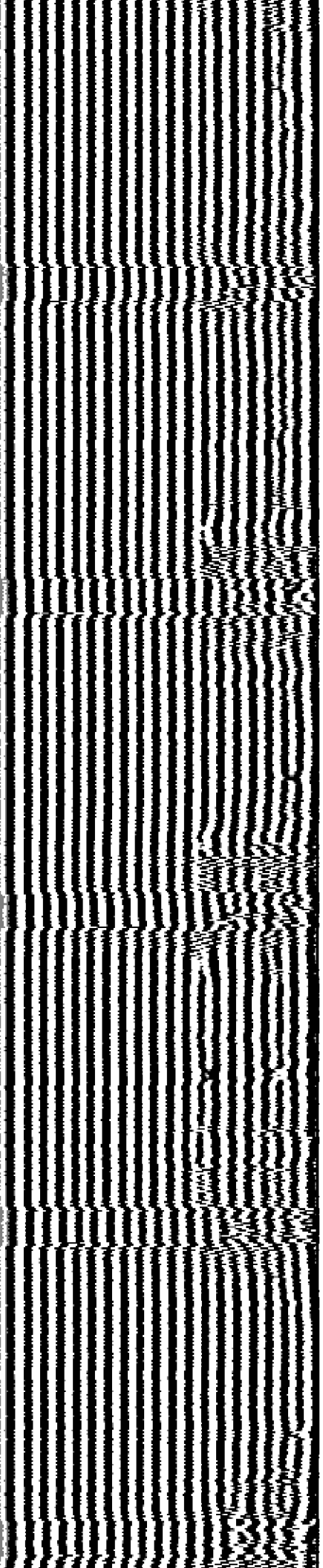
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	29.781	7862.000
RAL	Amp Gate Start Near	195.000	usec	29.781	7862.000
RAL	Amp Gate Start Radial	195.000	usec	29.781	7862.000
RAL	Amp Gate Width Far	25.000	usec	29.781	7862.000
RAL	Amp Gate Width Near	25.000	usec	29.781	7862.000
RAL	Amp Gate Width Radial	25.000	usec	29.781	7862.000
RAL	casing od	4.500	inches	29.781	7862.000
RAL	casing wt	11.600	lbm/ft	29.781	7862.000
RAL	FB Start Far	291.900	usec	29.781	7862.000
RAL	FB Start Near	180.000	usec	29.781	7862.000
RAL	FB Start Radial	180.000	usec	29.781	7862.000
RAL	FB Thresh Far	10.000	mv	29.781	7862.000
RAL	FB Thresh Near	4.000	mv	29.781	7862.000
RAL	FB Thresh Radial	4.000	mv	29.781	7862.000
RAL	Fluid Travel Time	200.000	usec/ft	29.781	7862.000

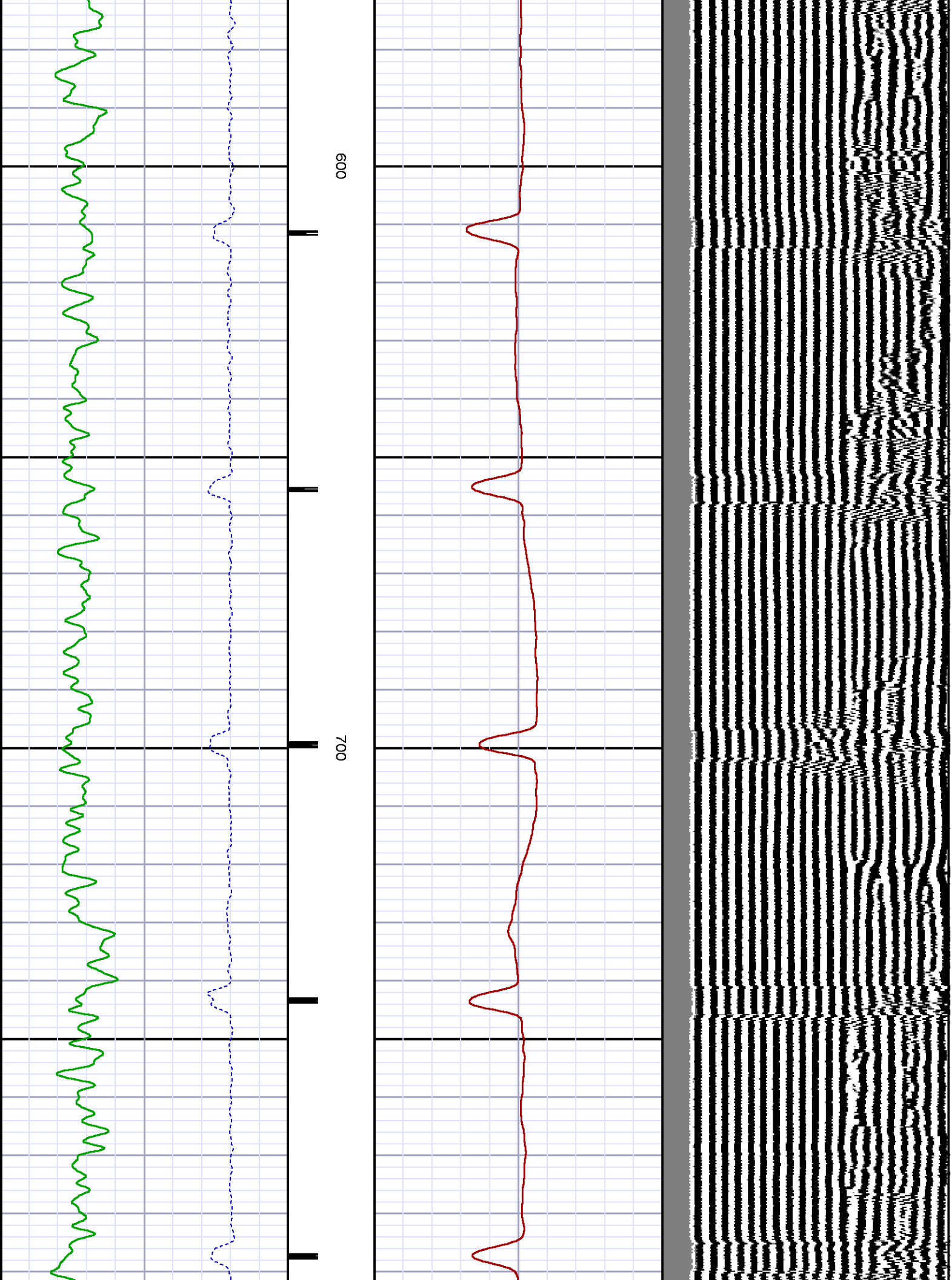
DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

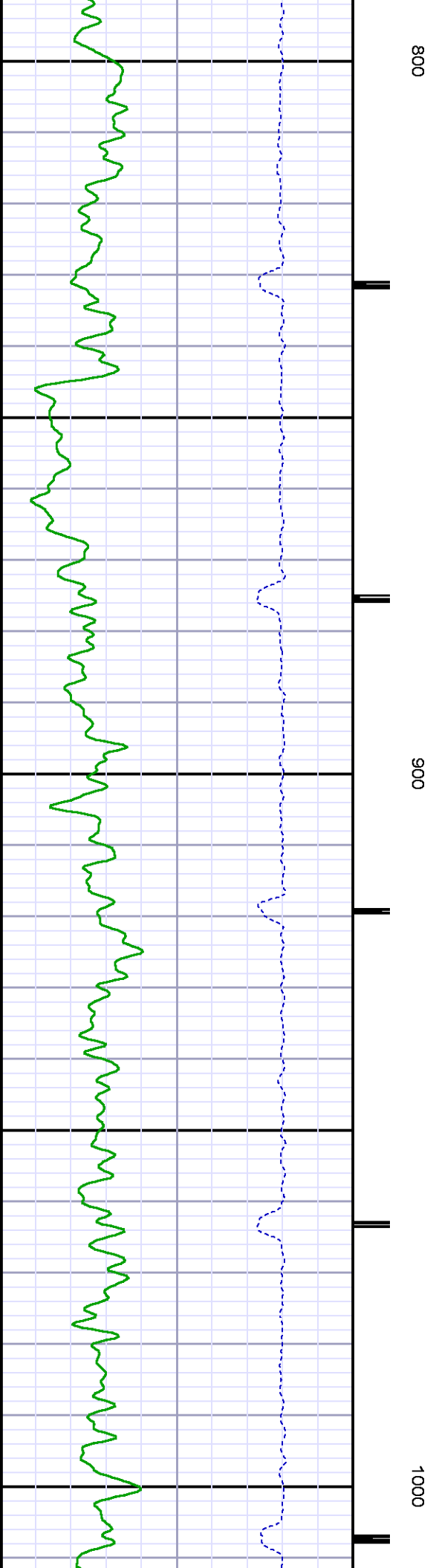
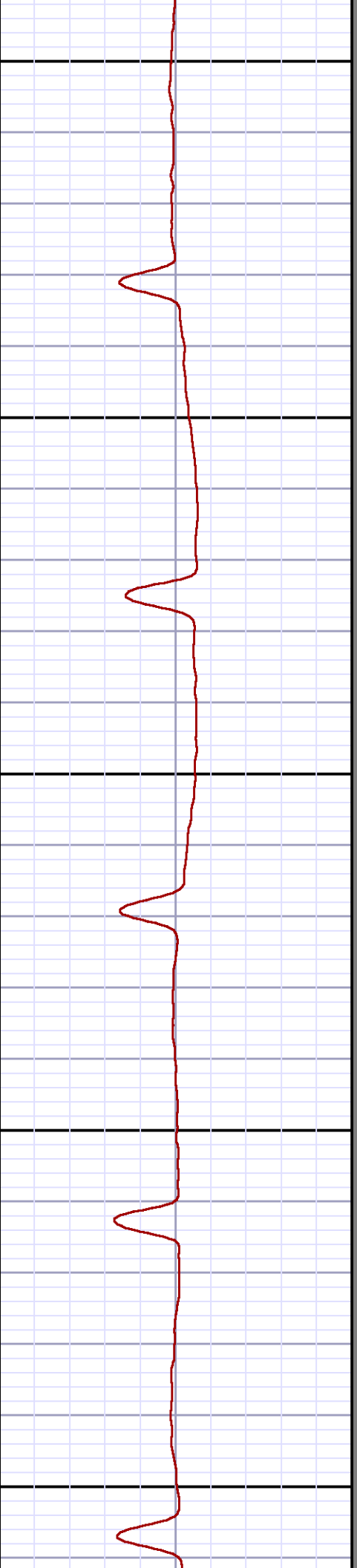
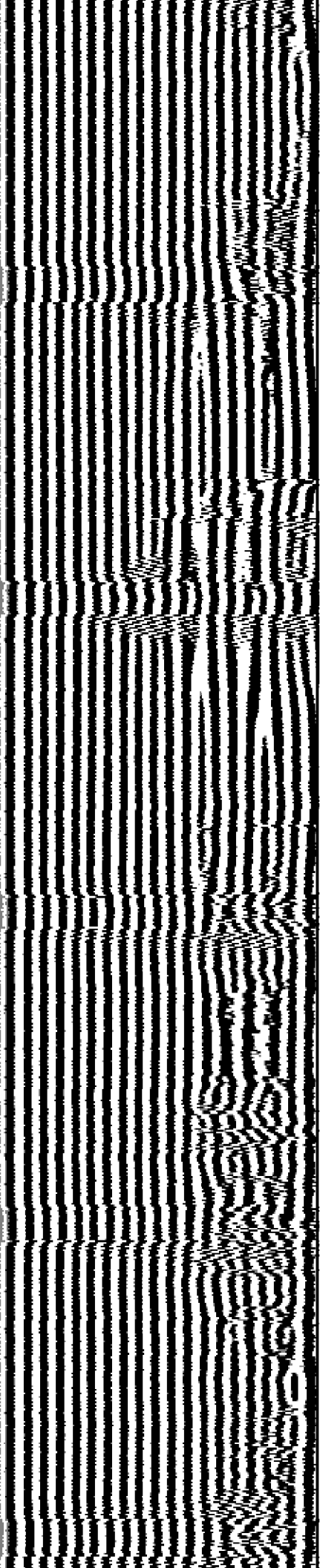
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

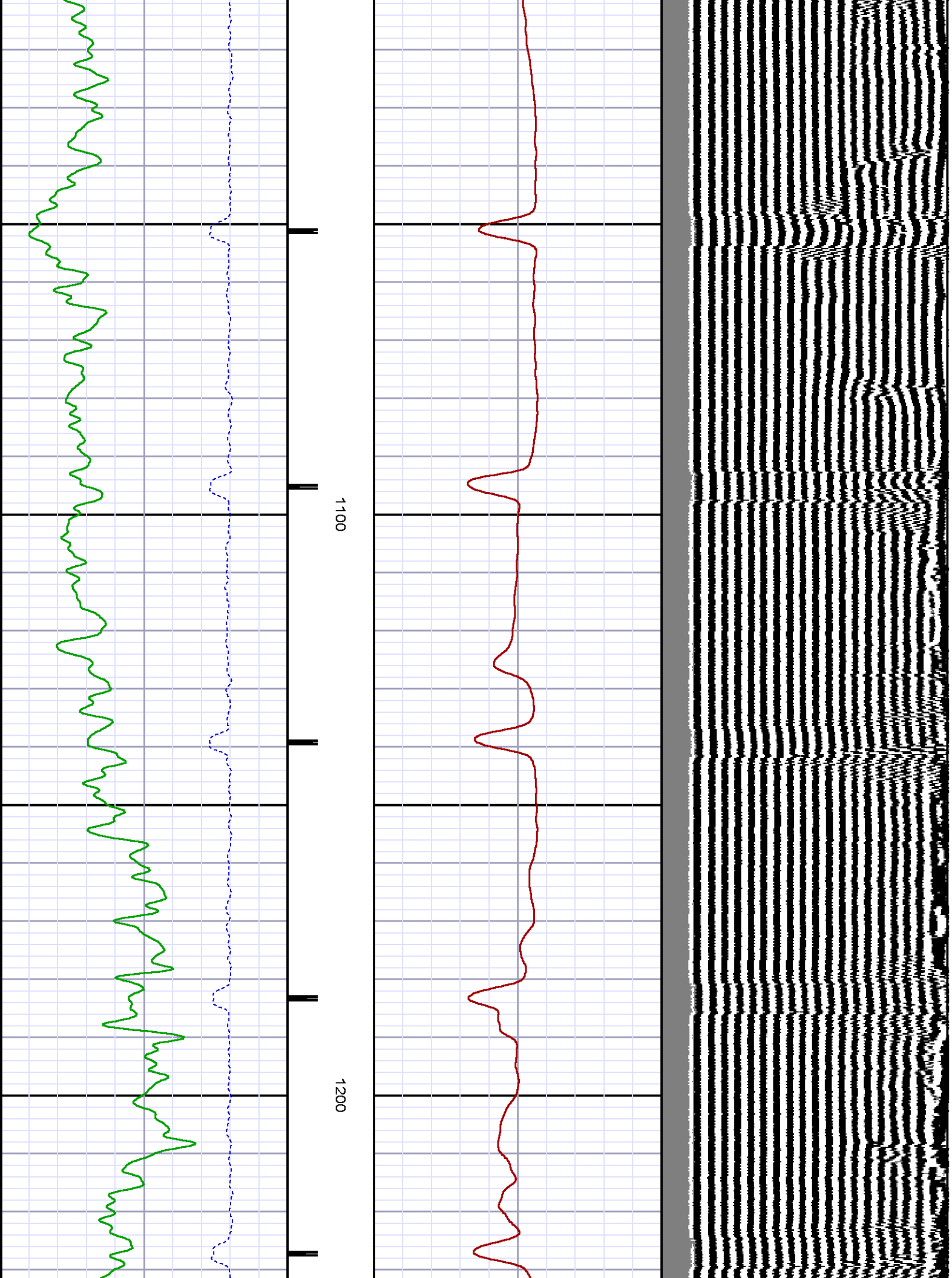


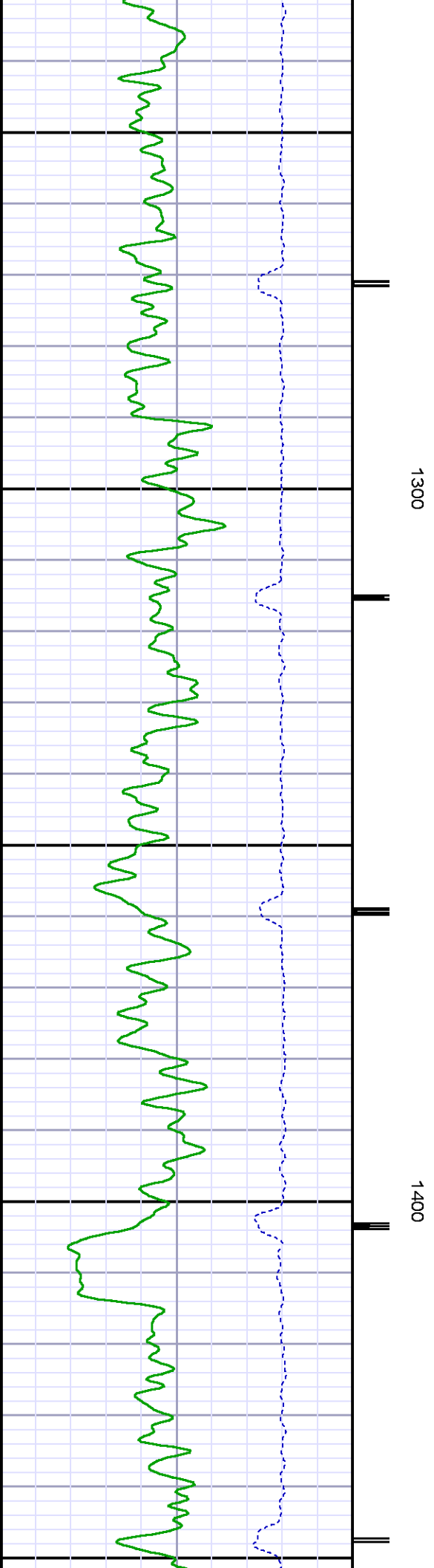
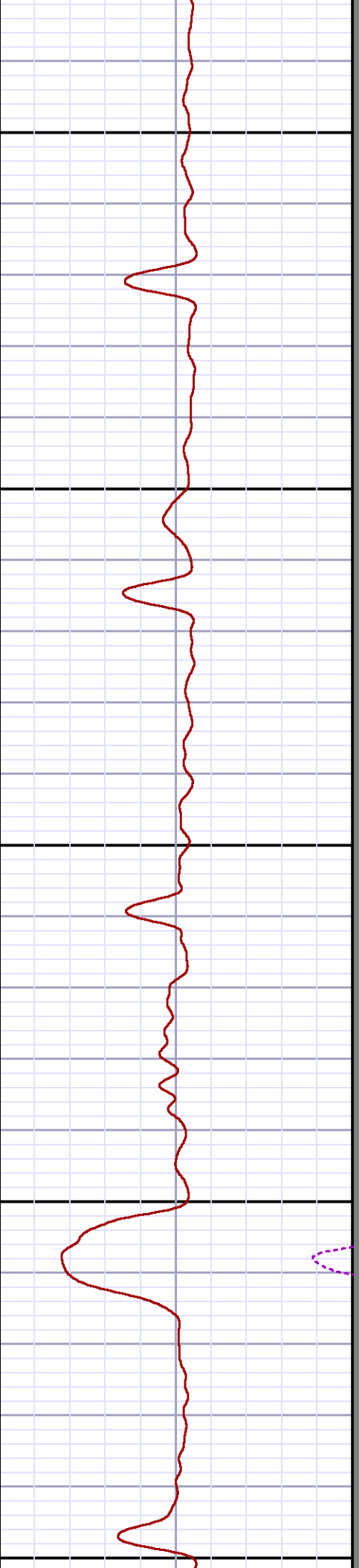
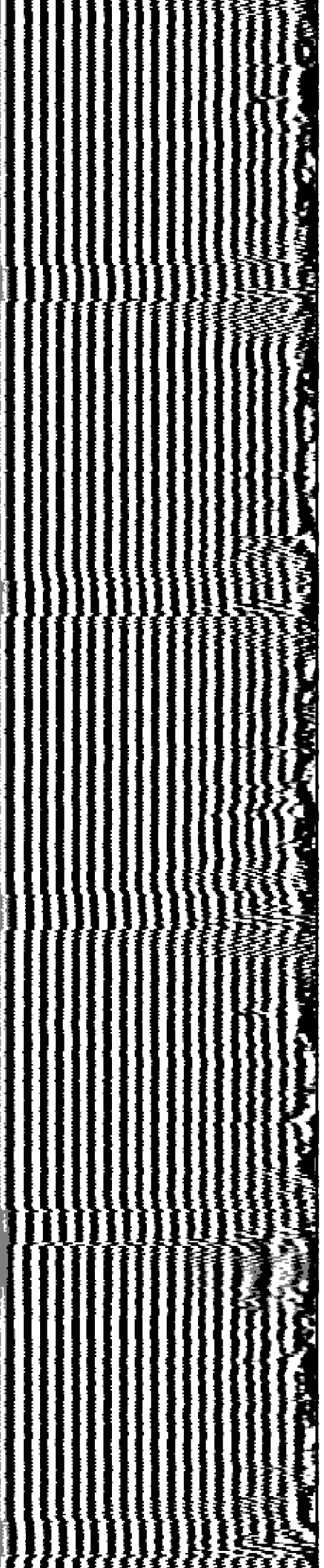


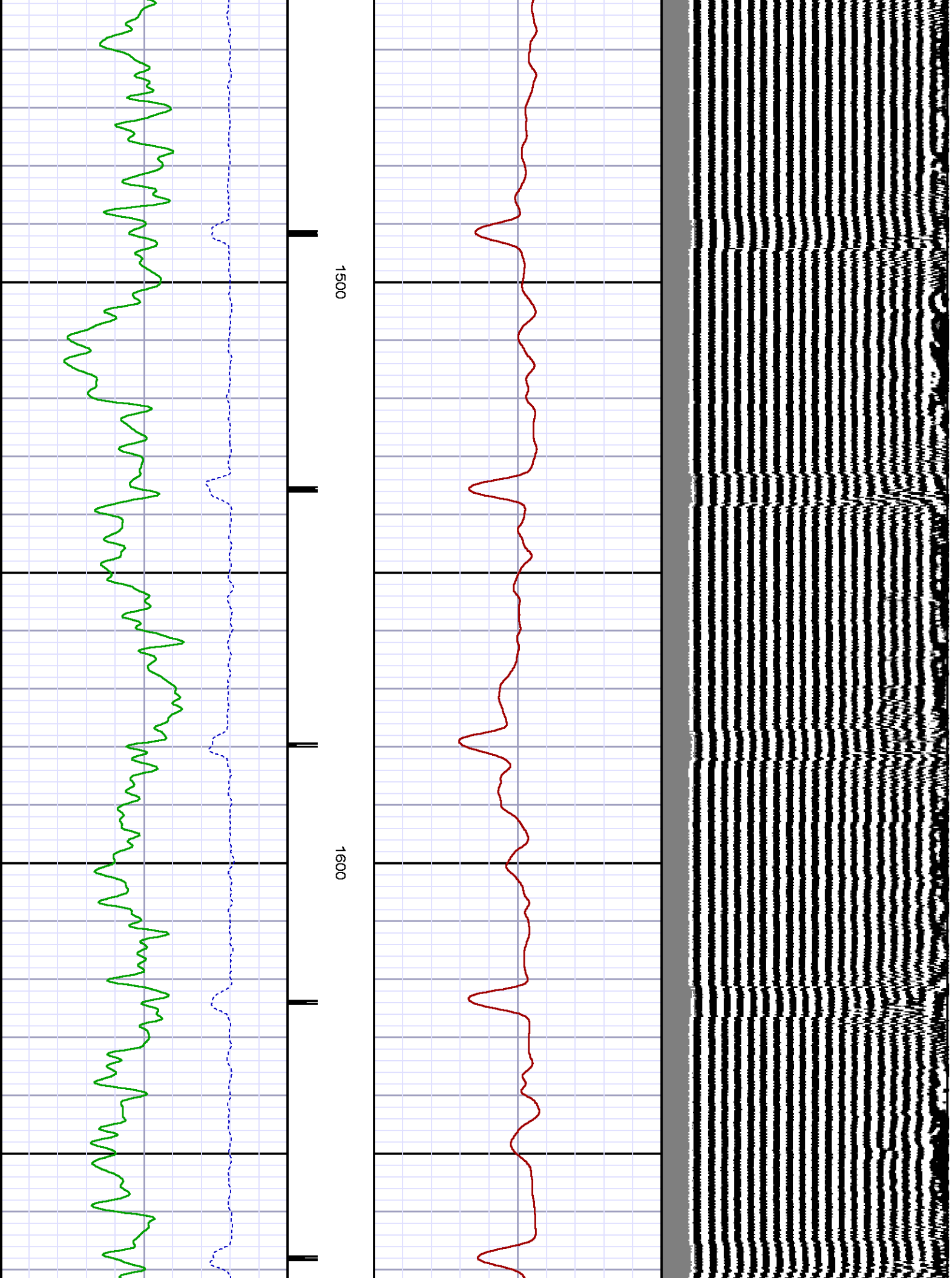


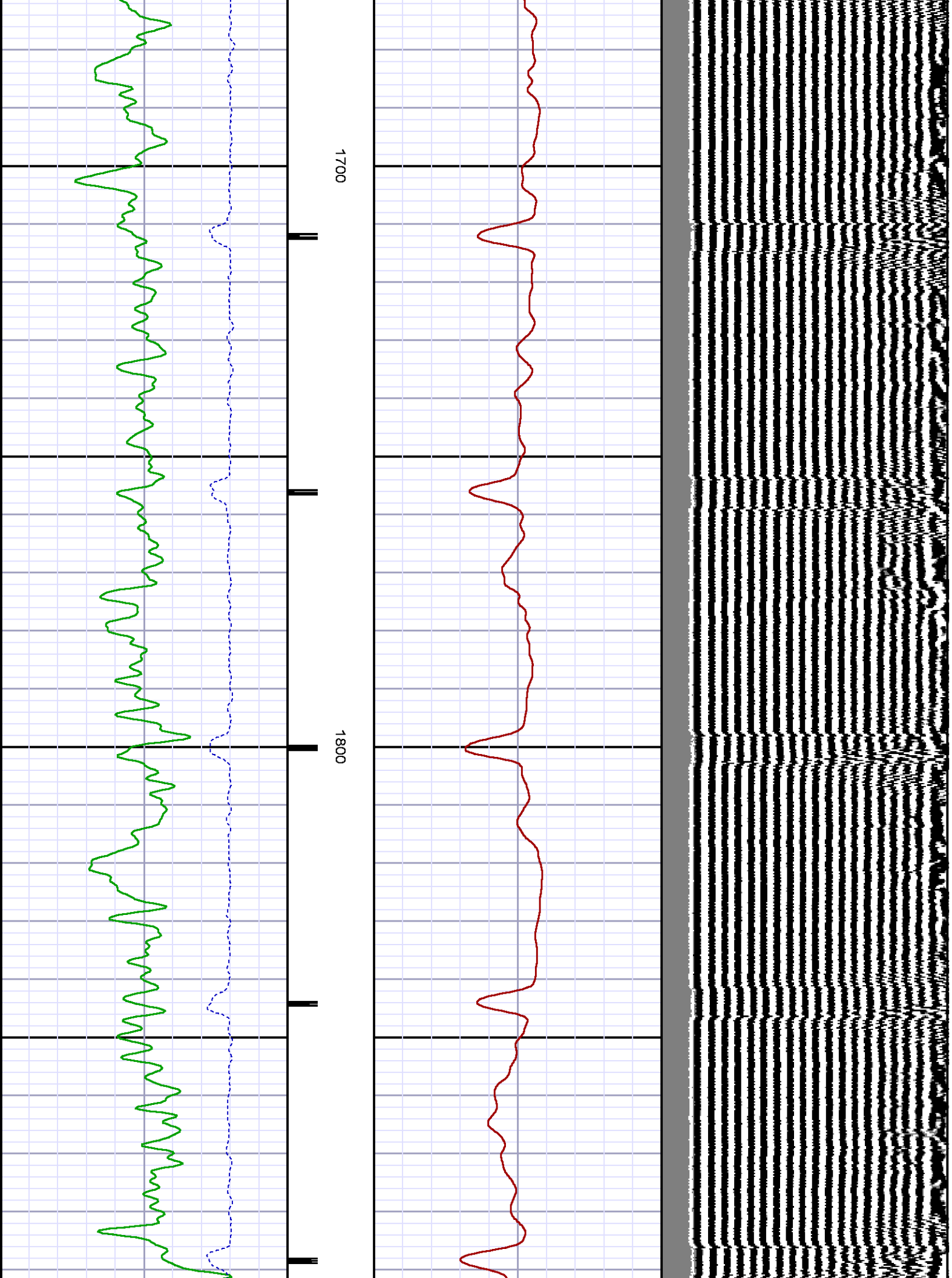


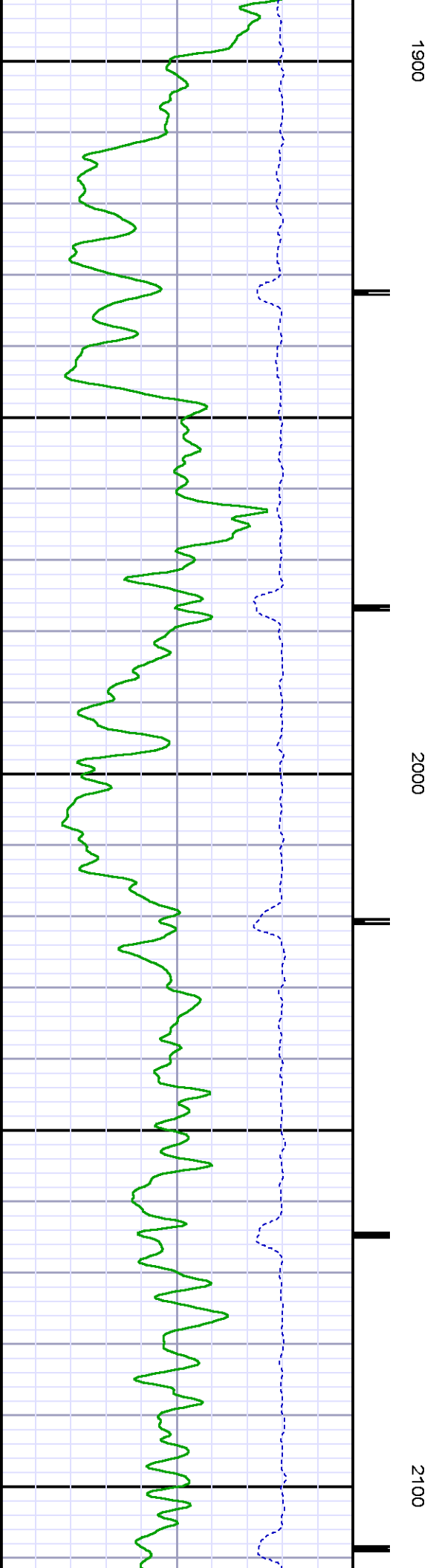
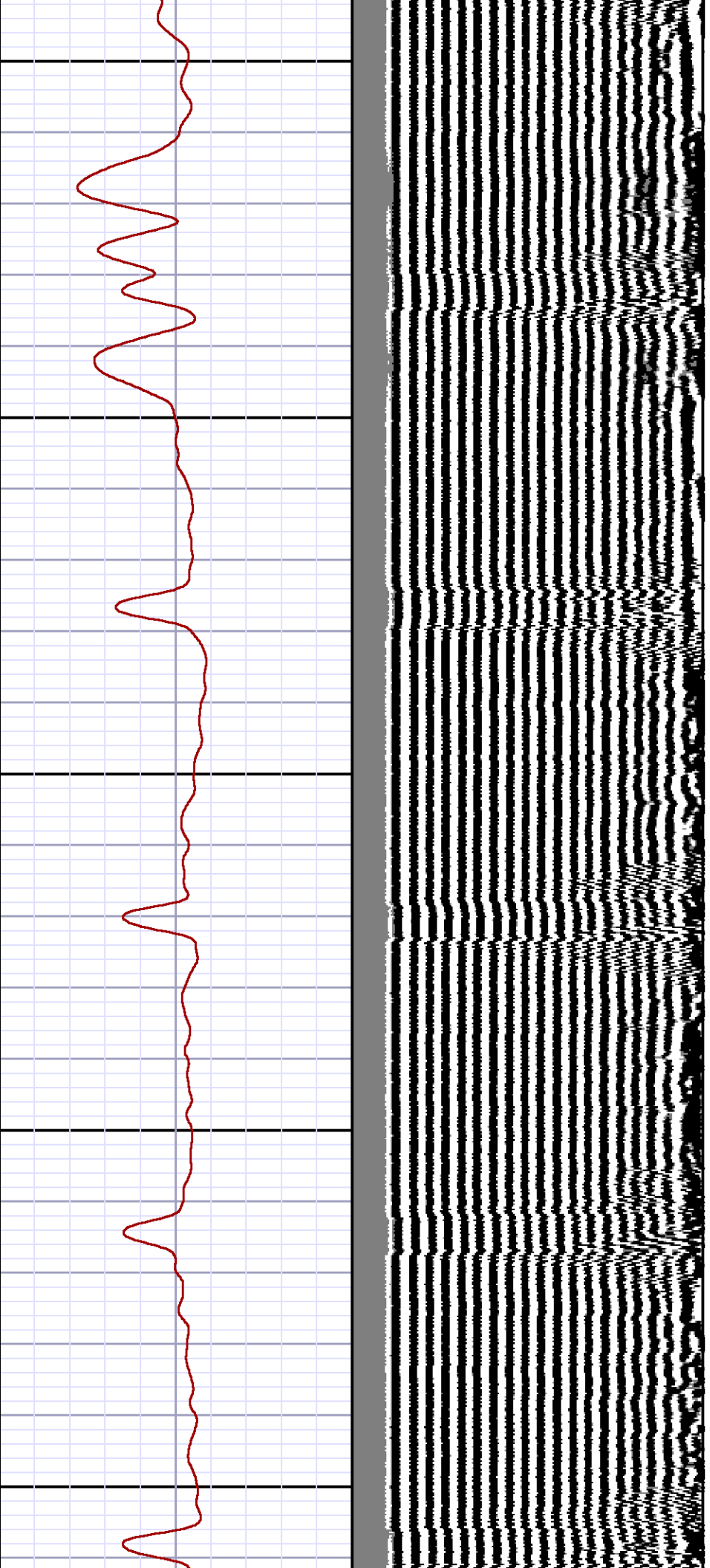


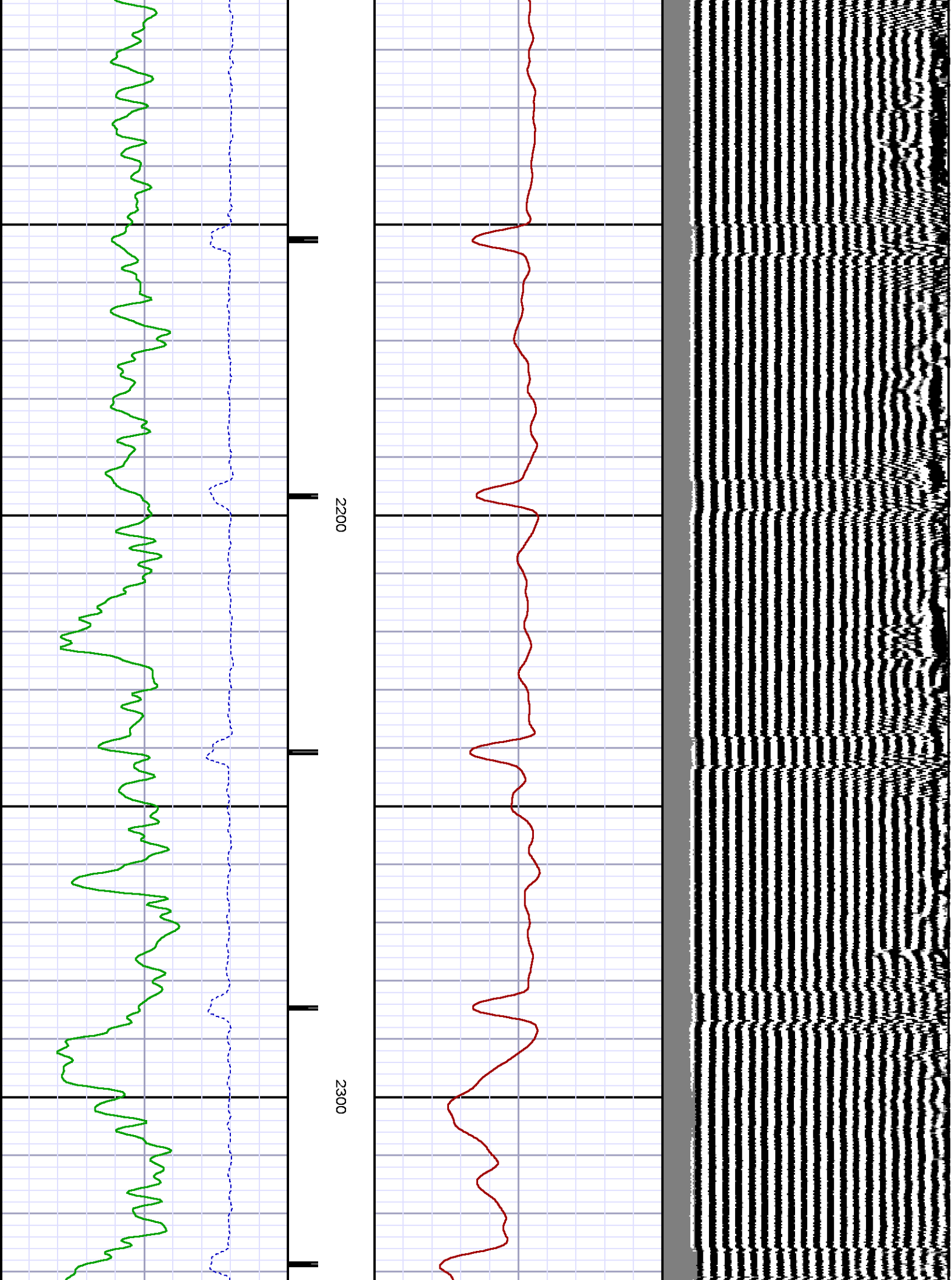


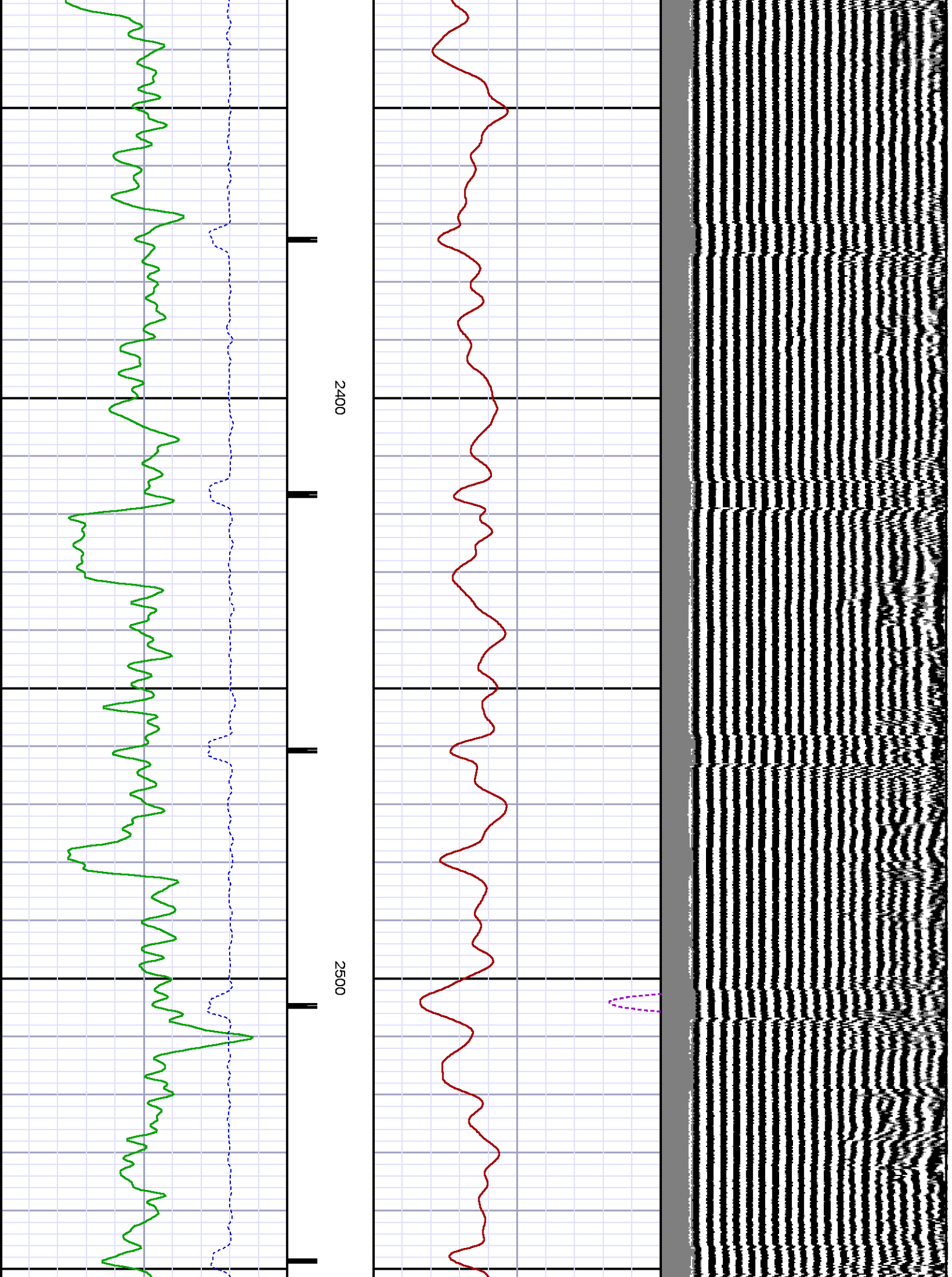


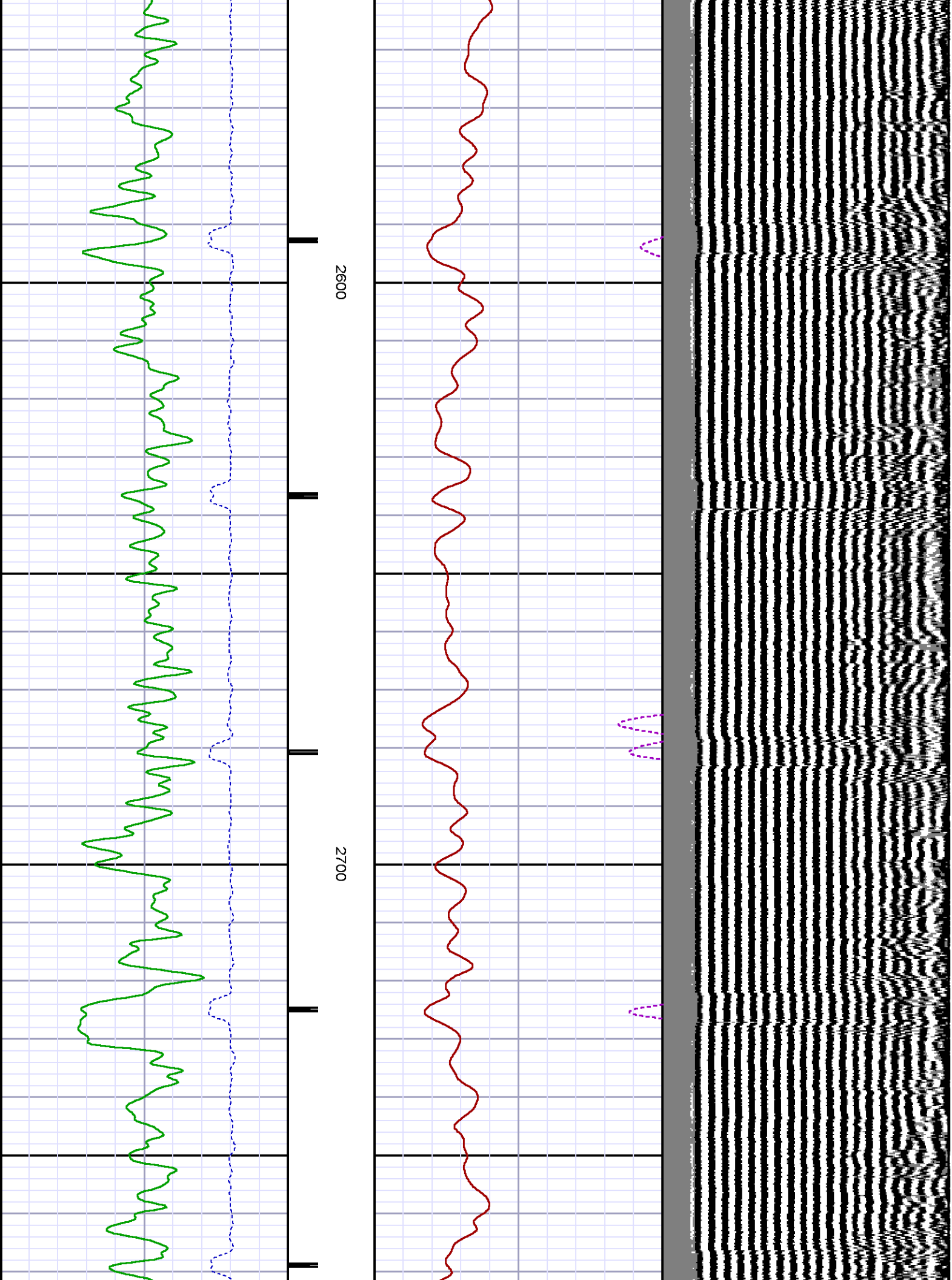


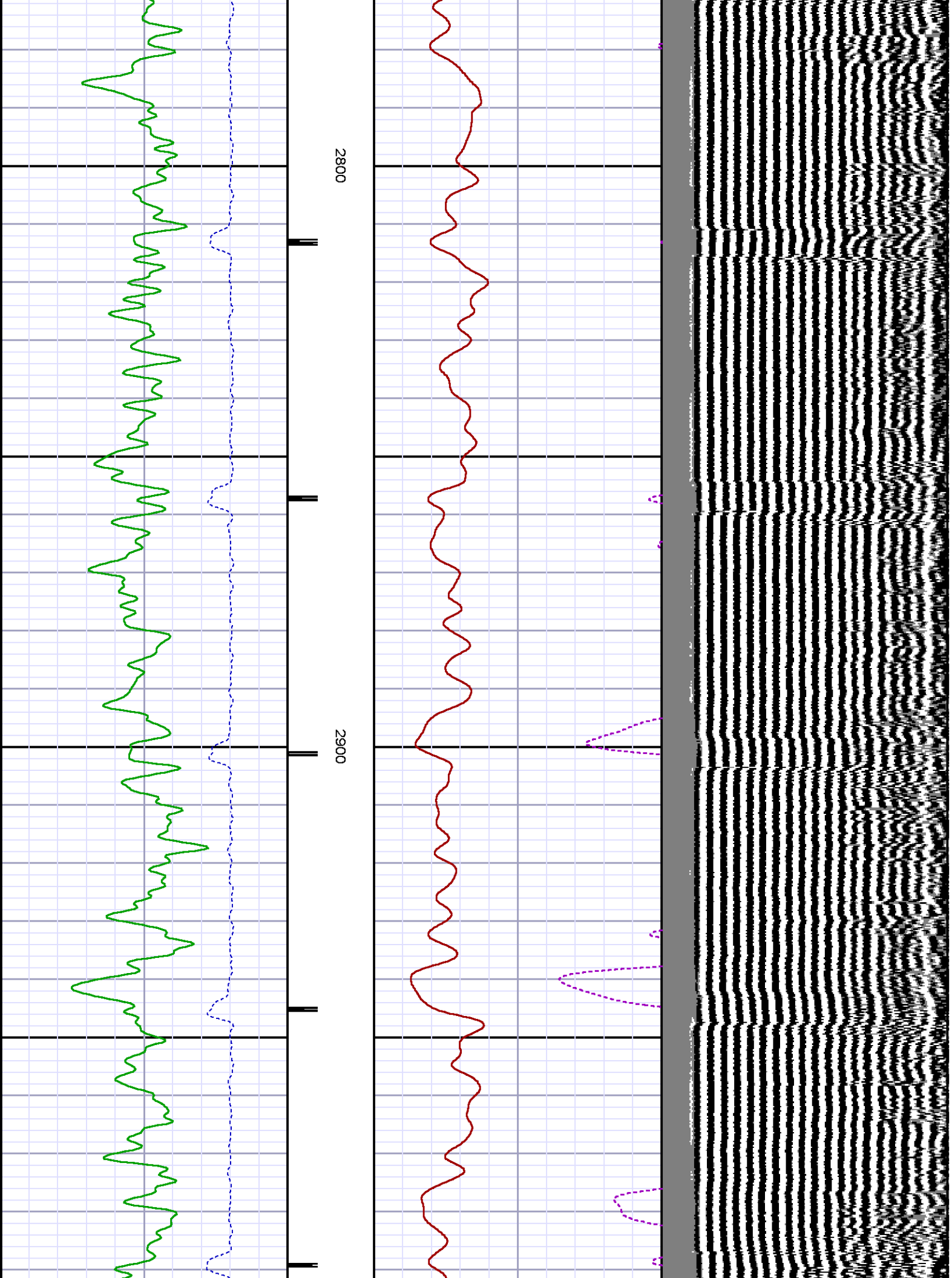


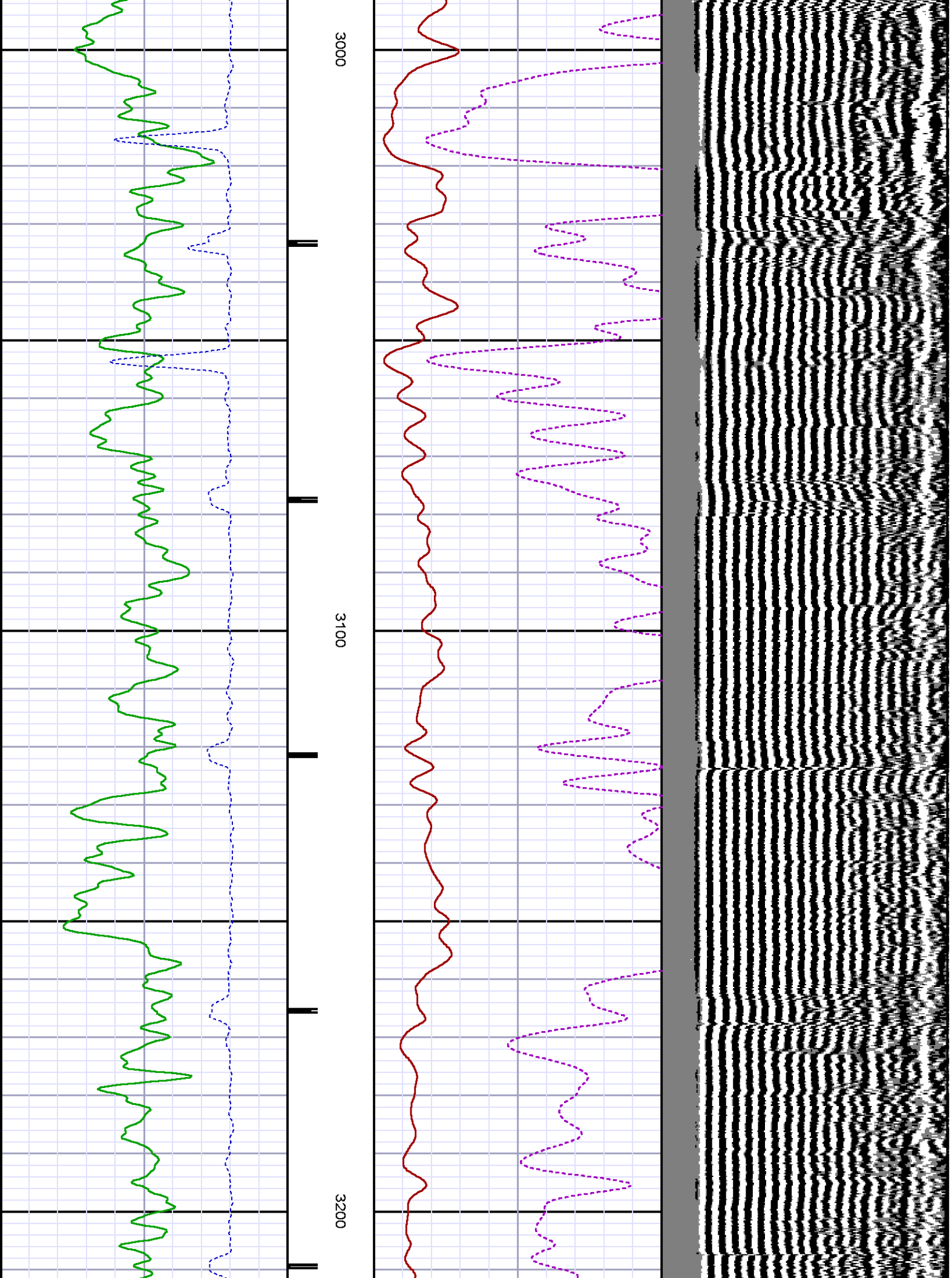


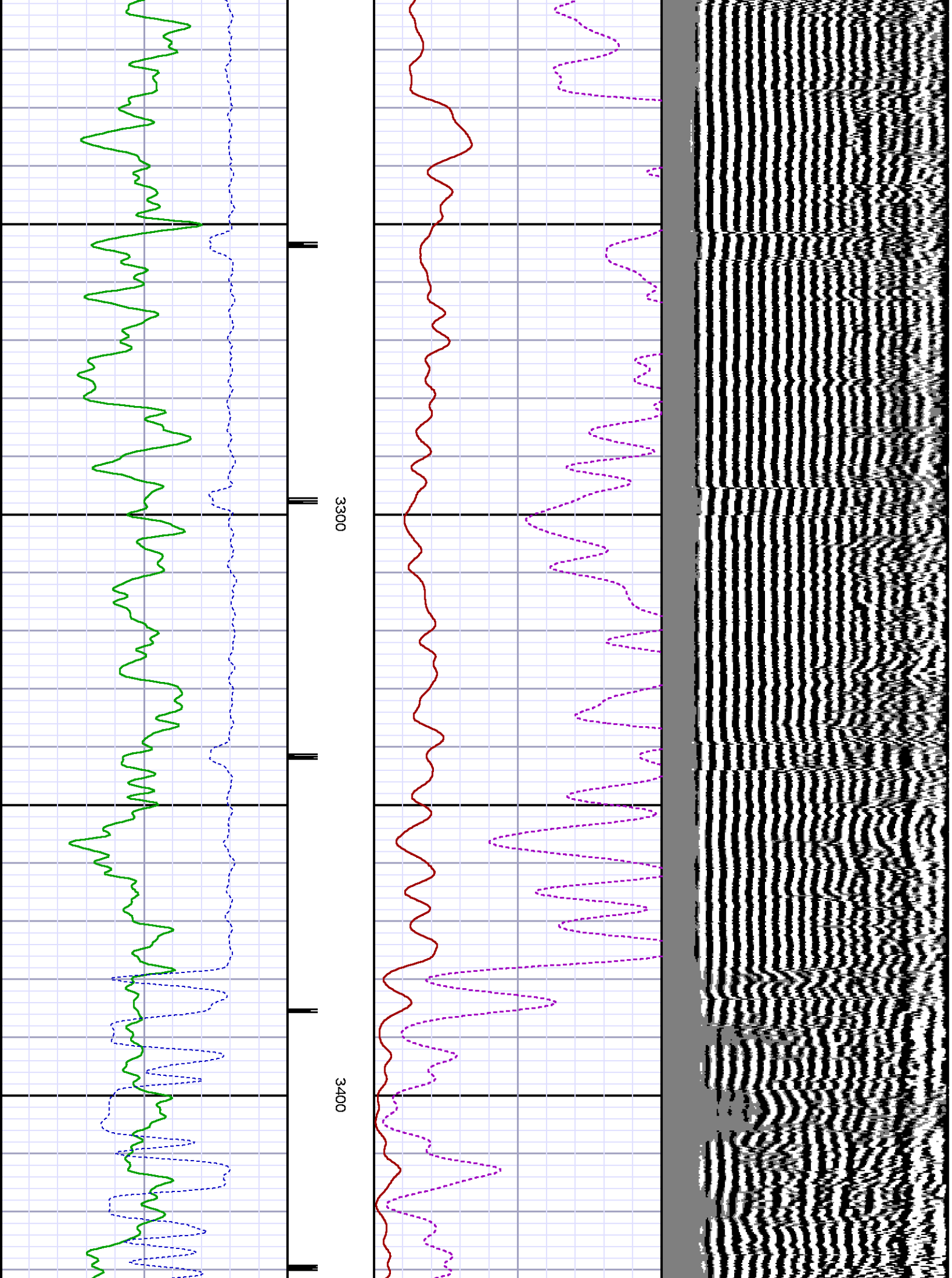


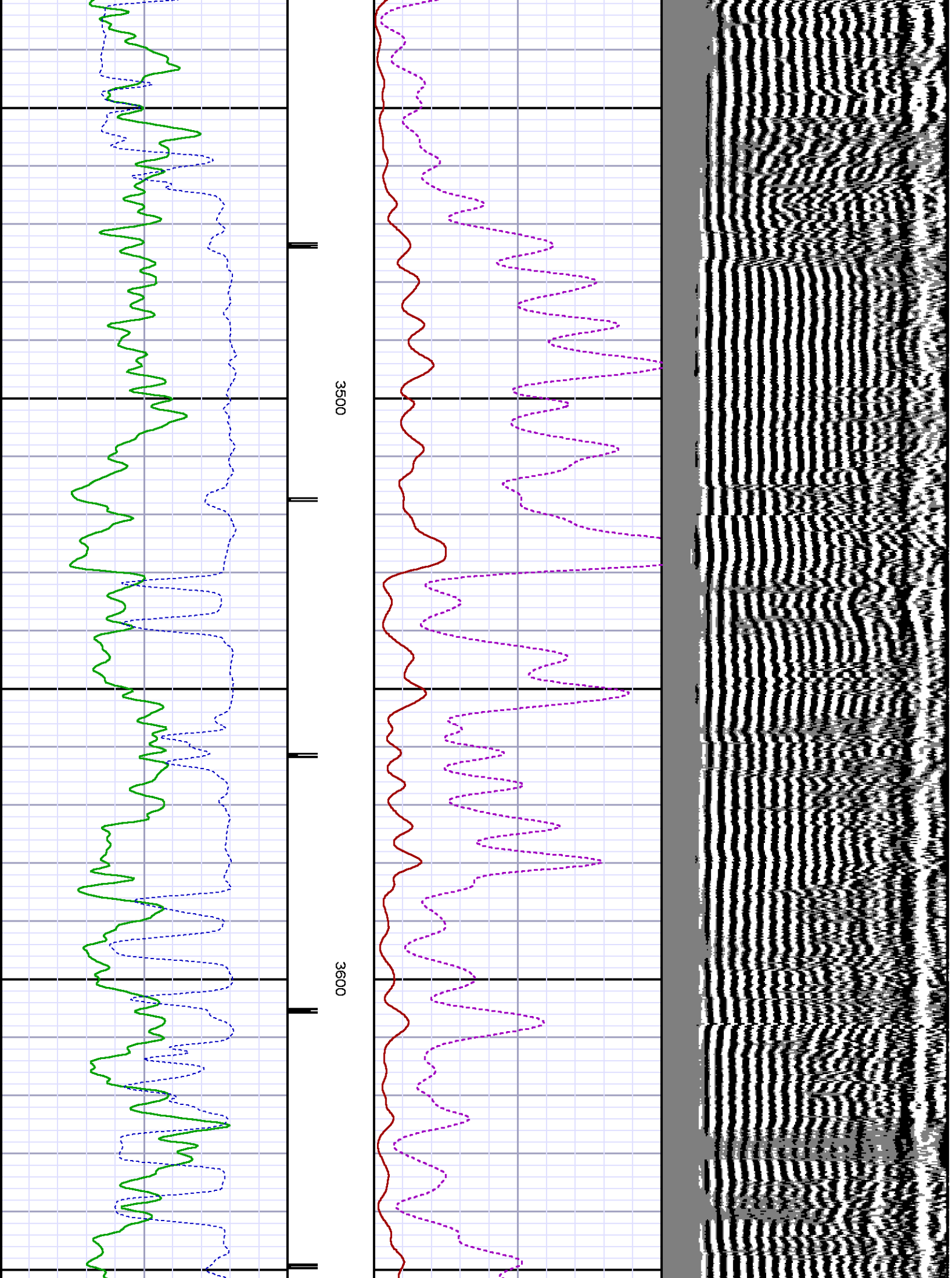


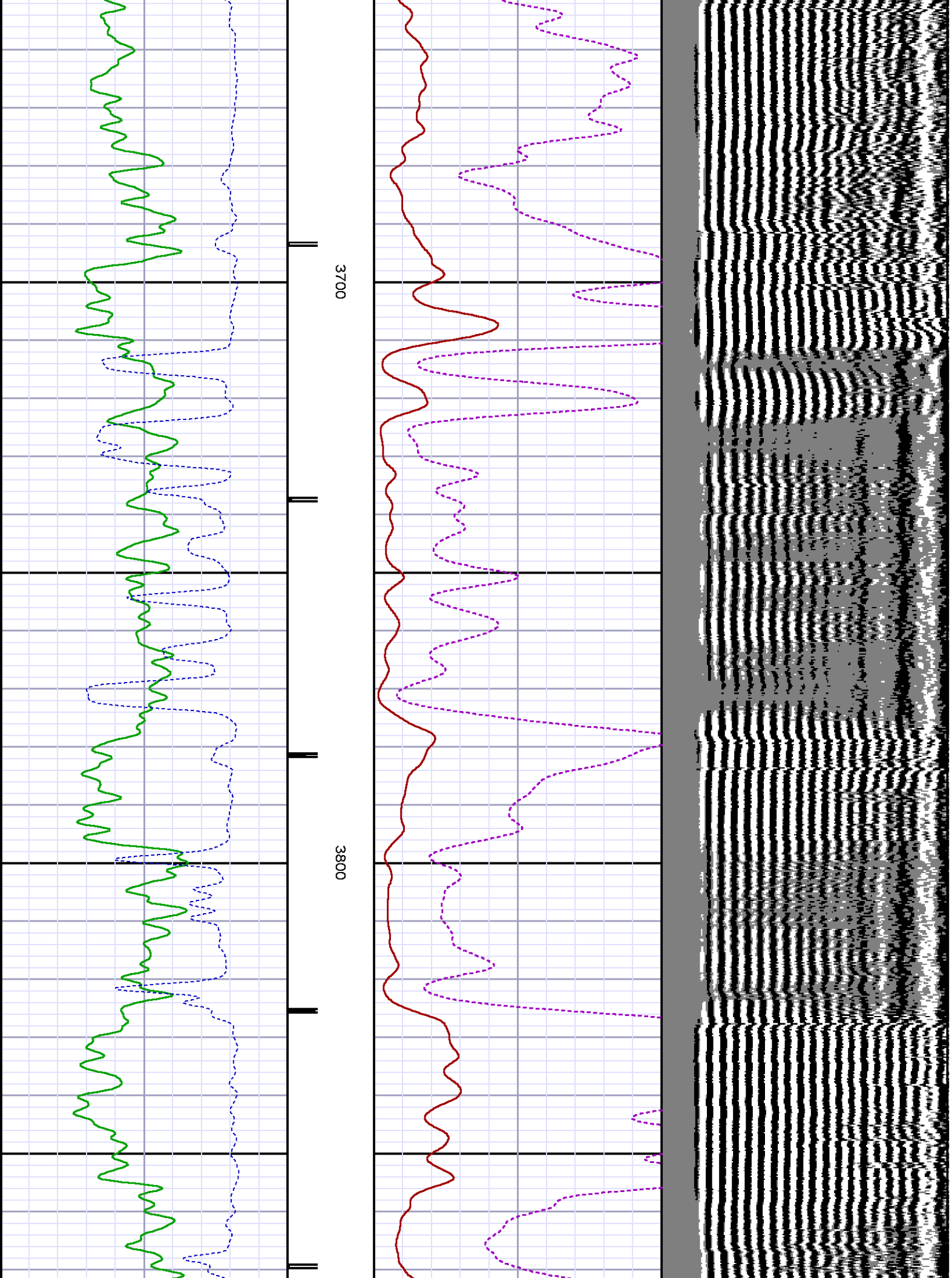


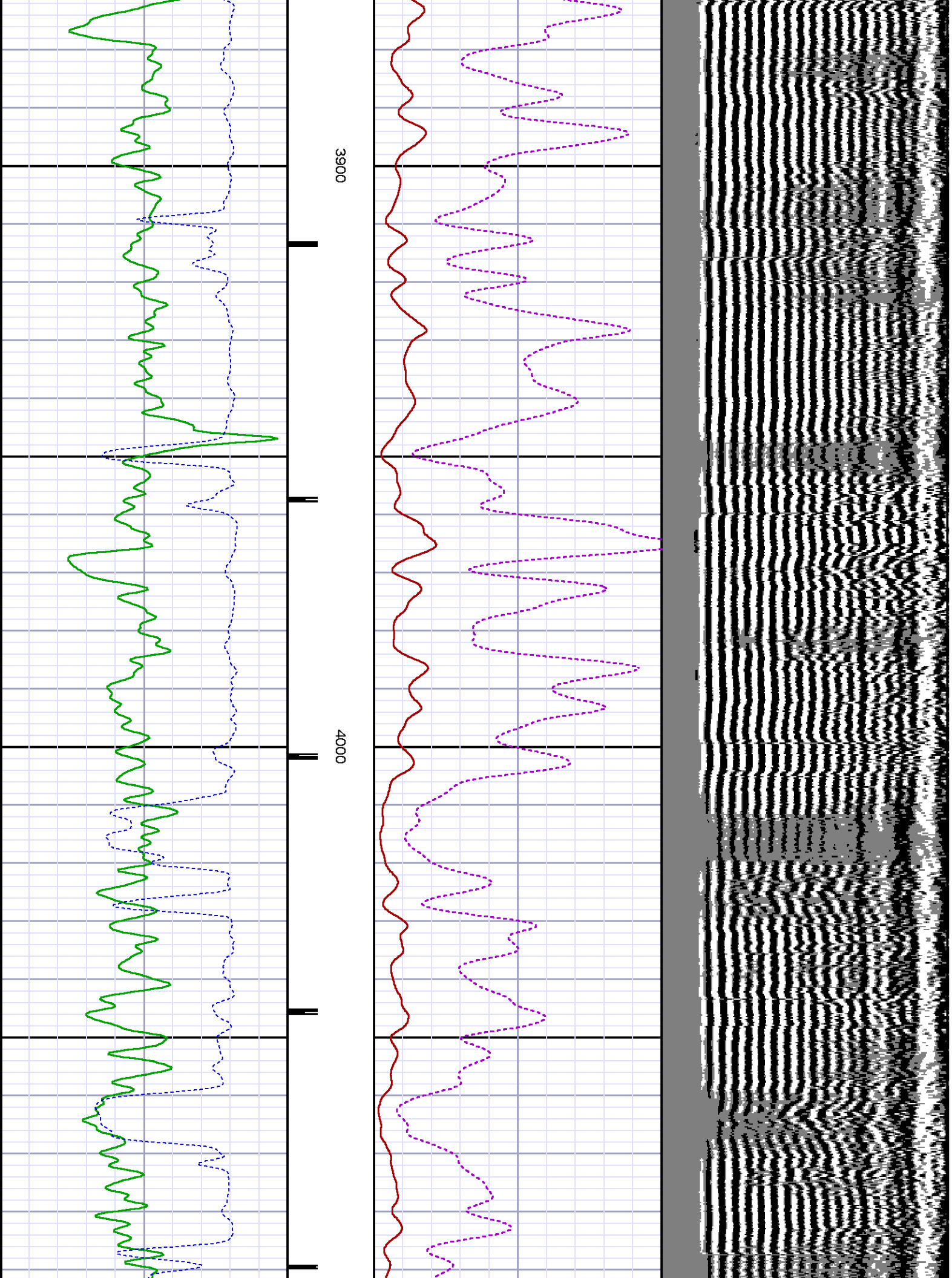


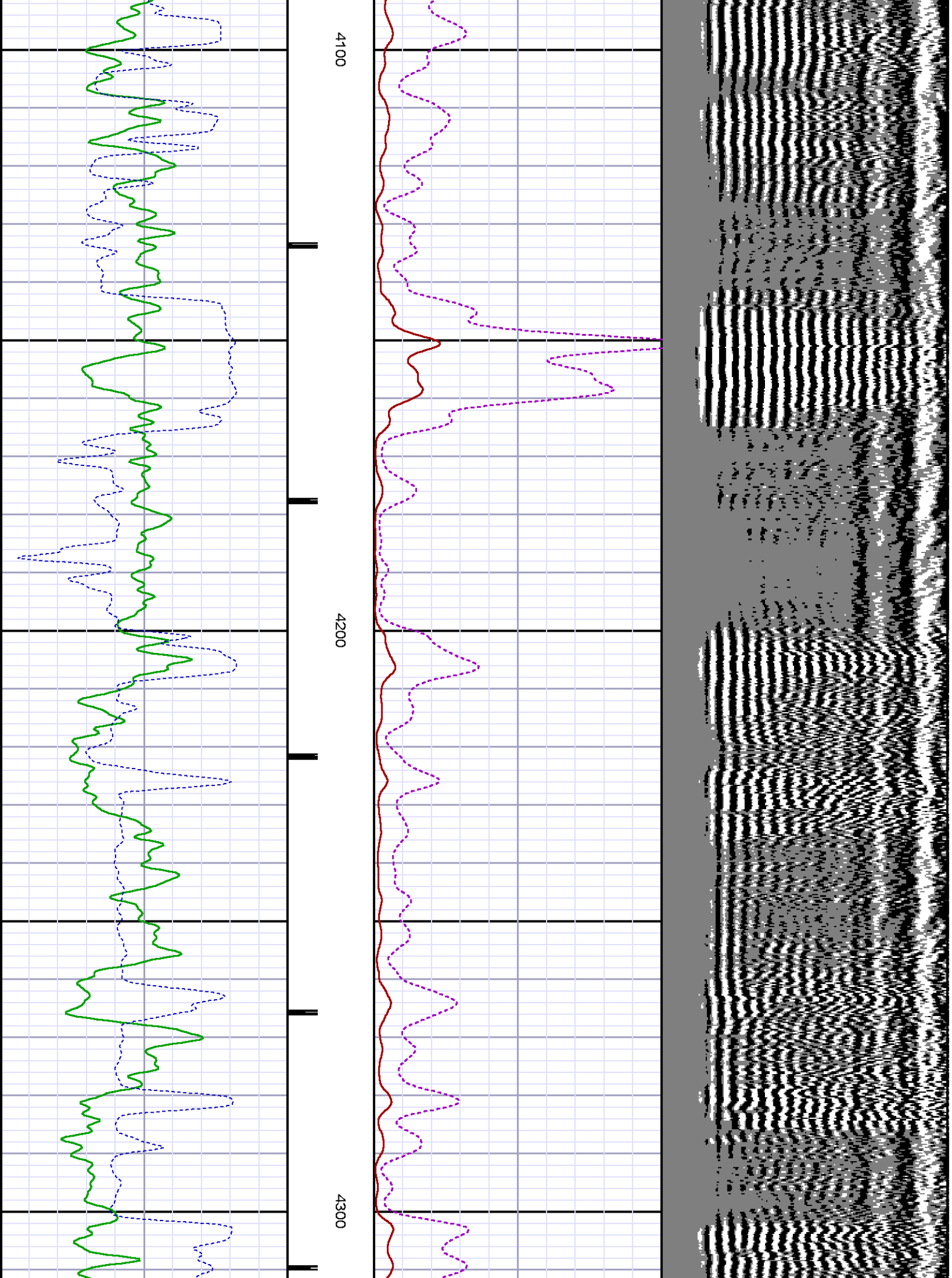


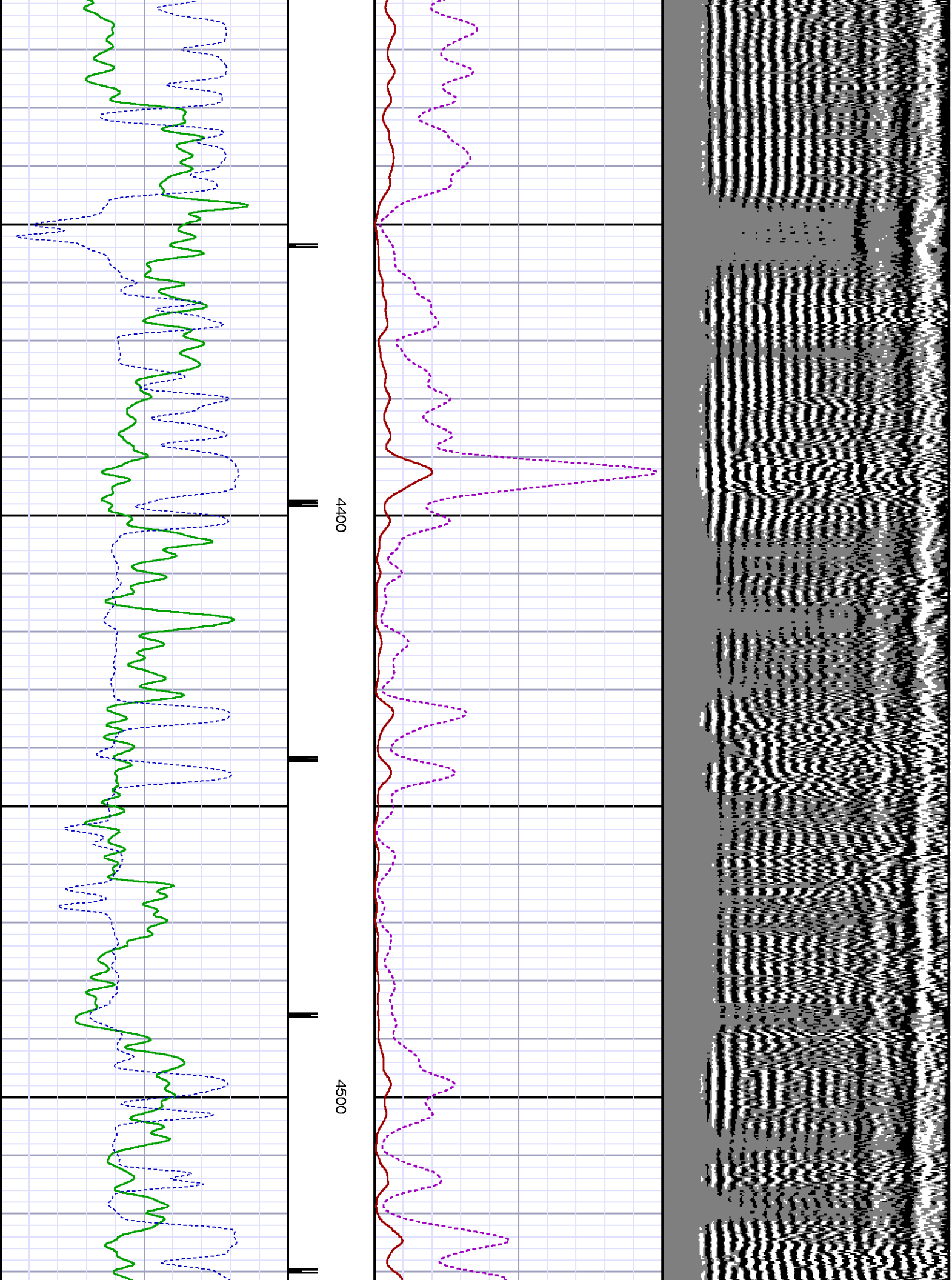


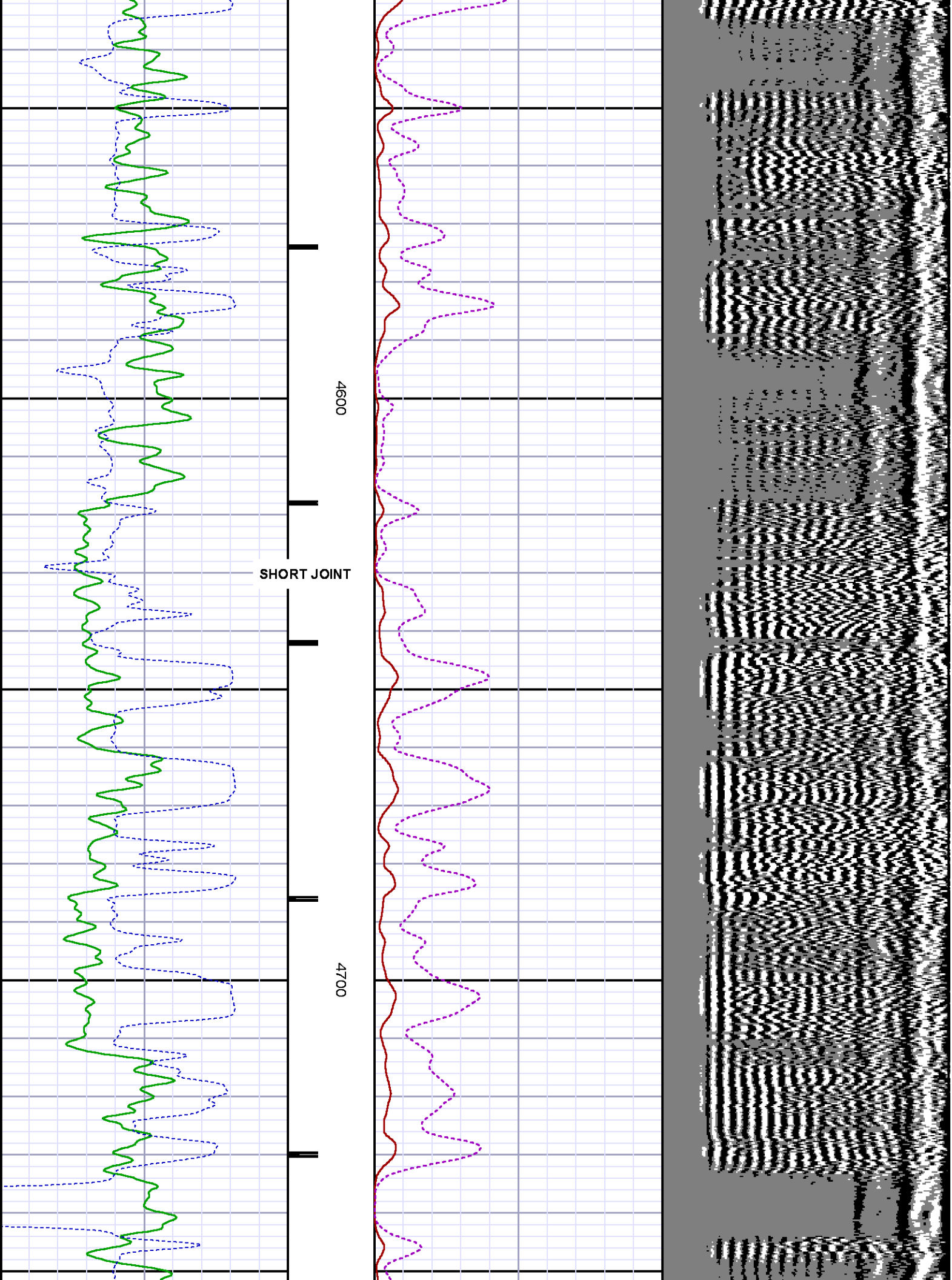


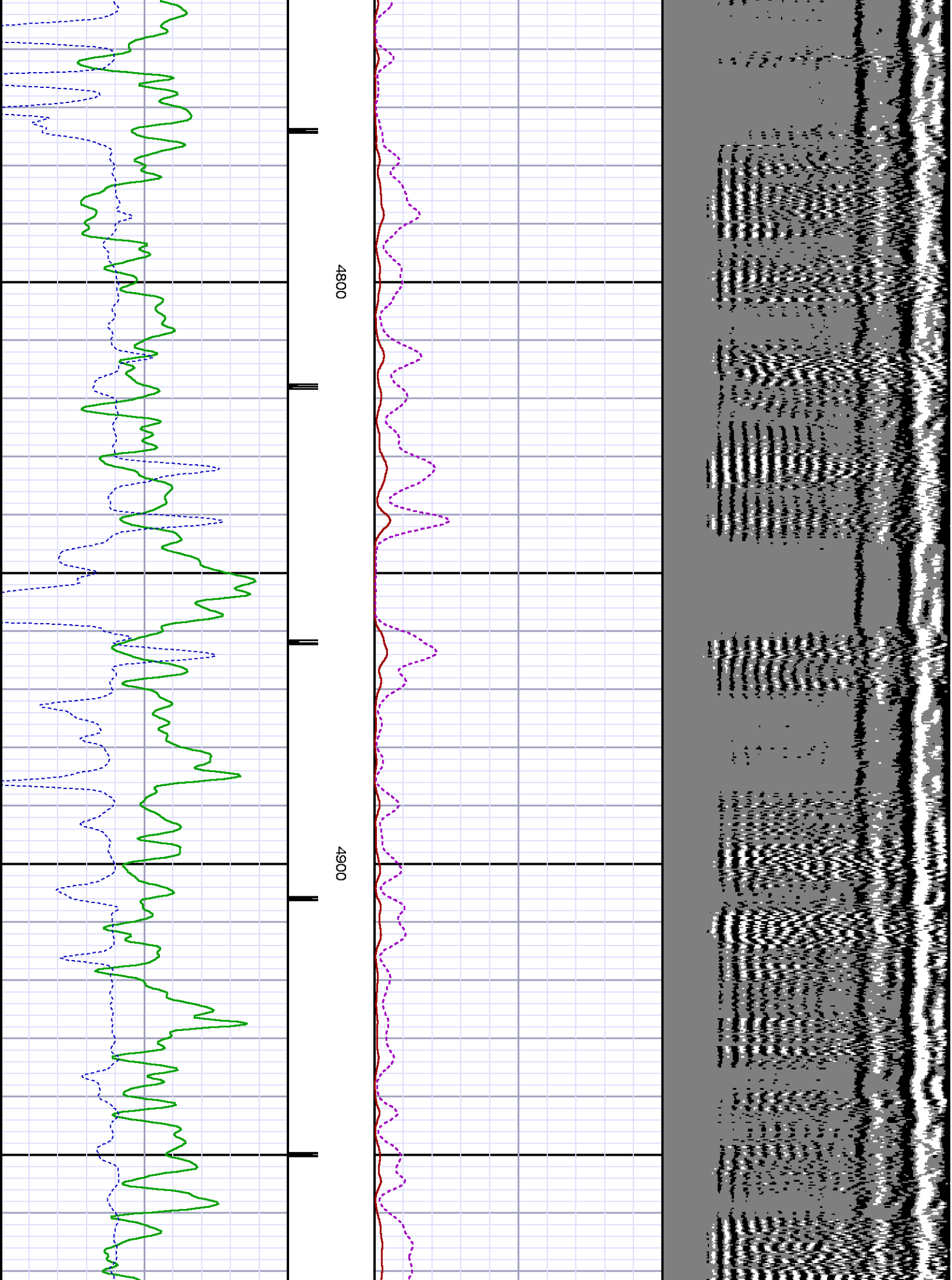


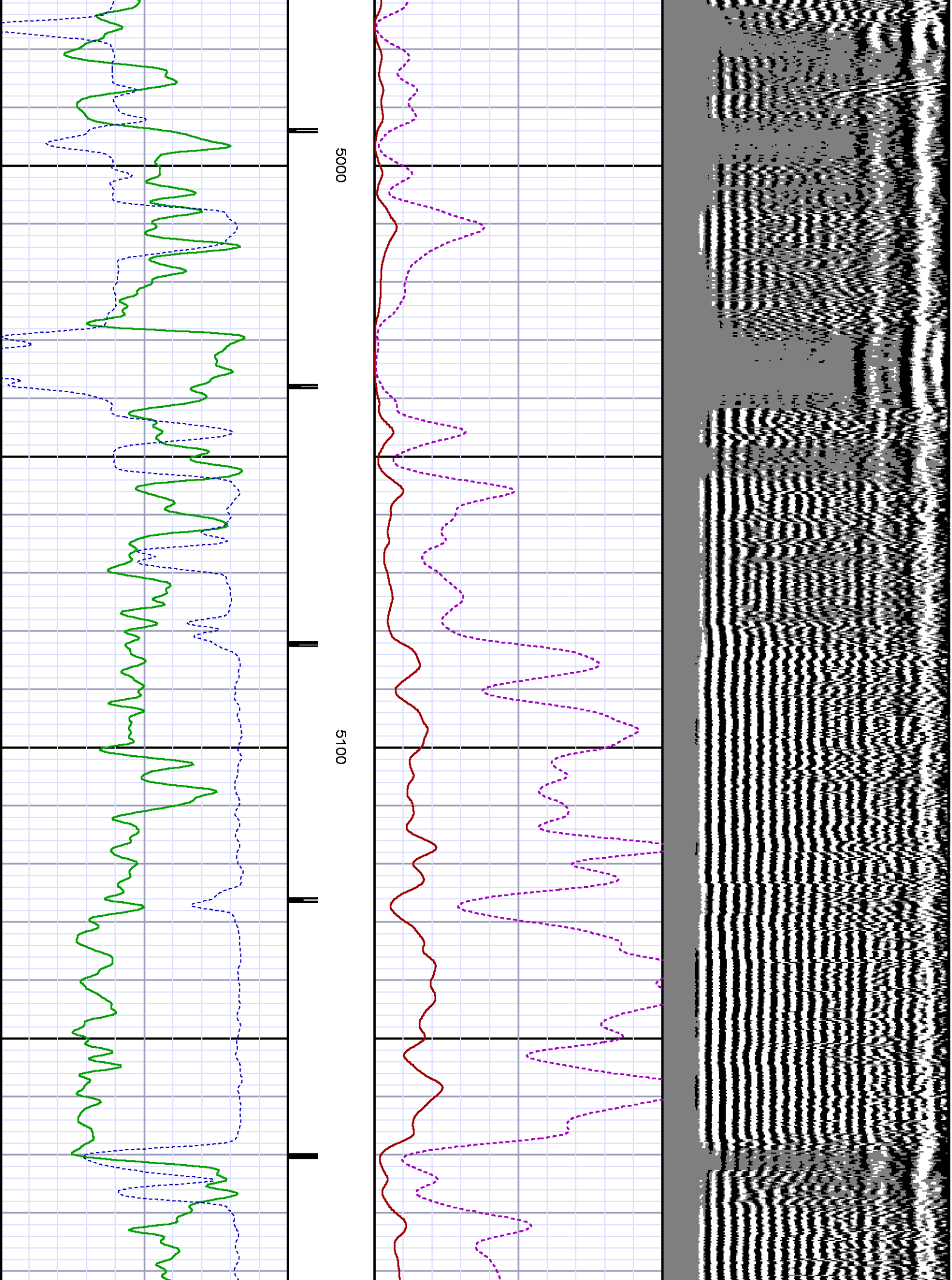


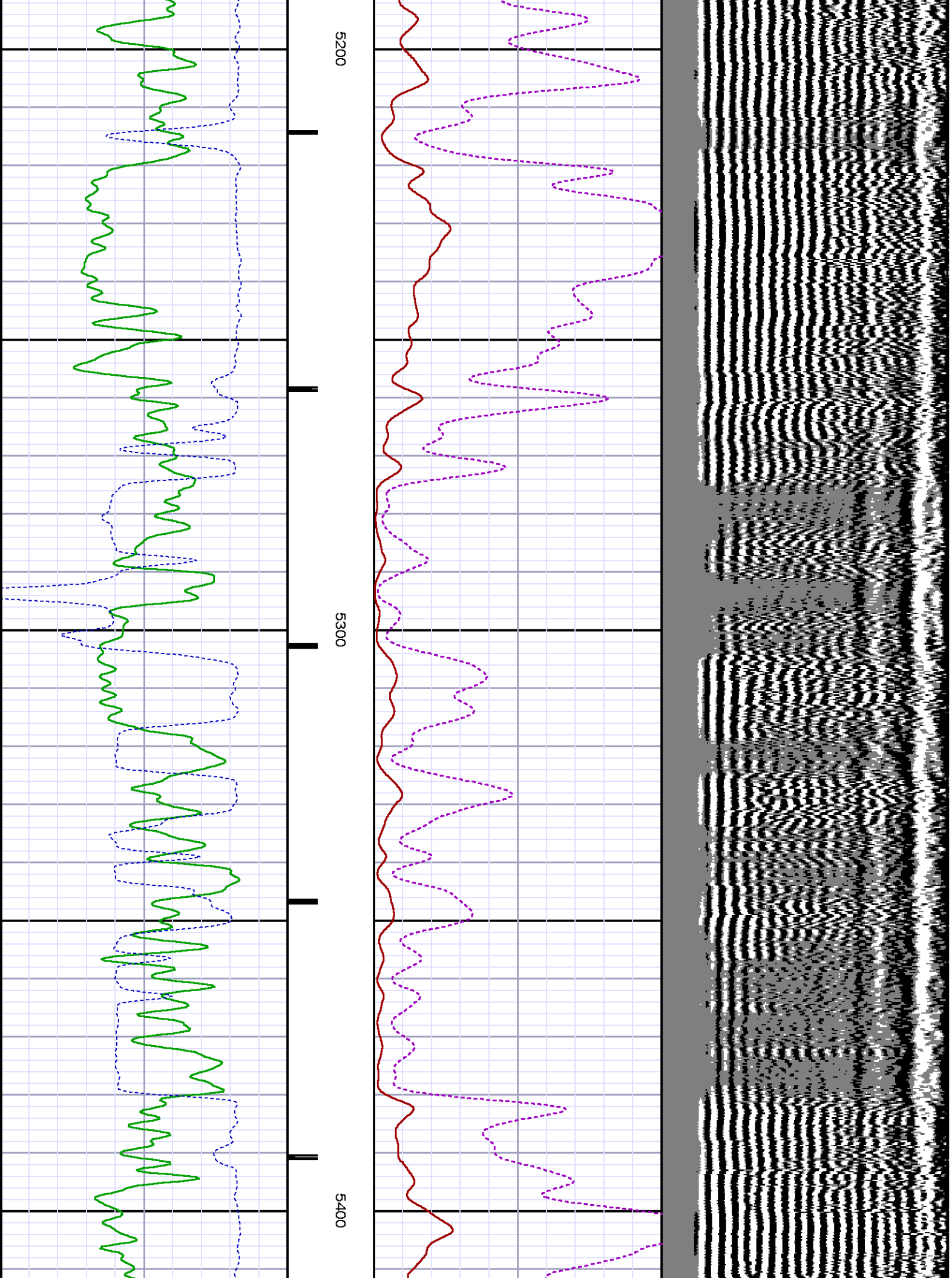


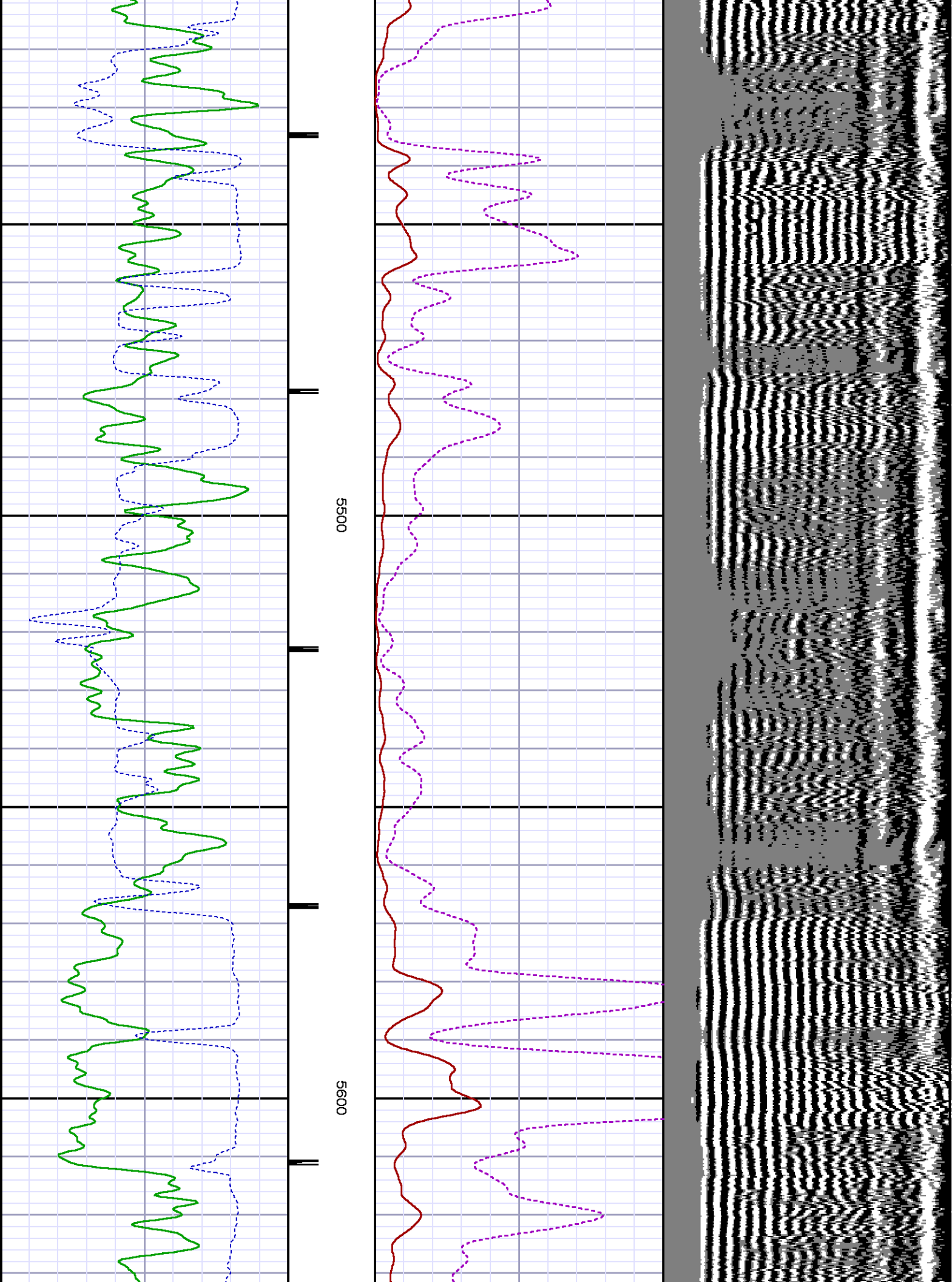


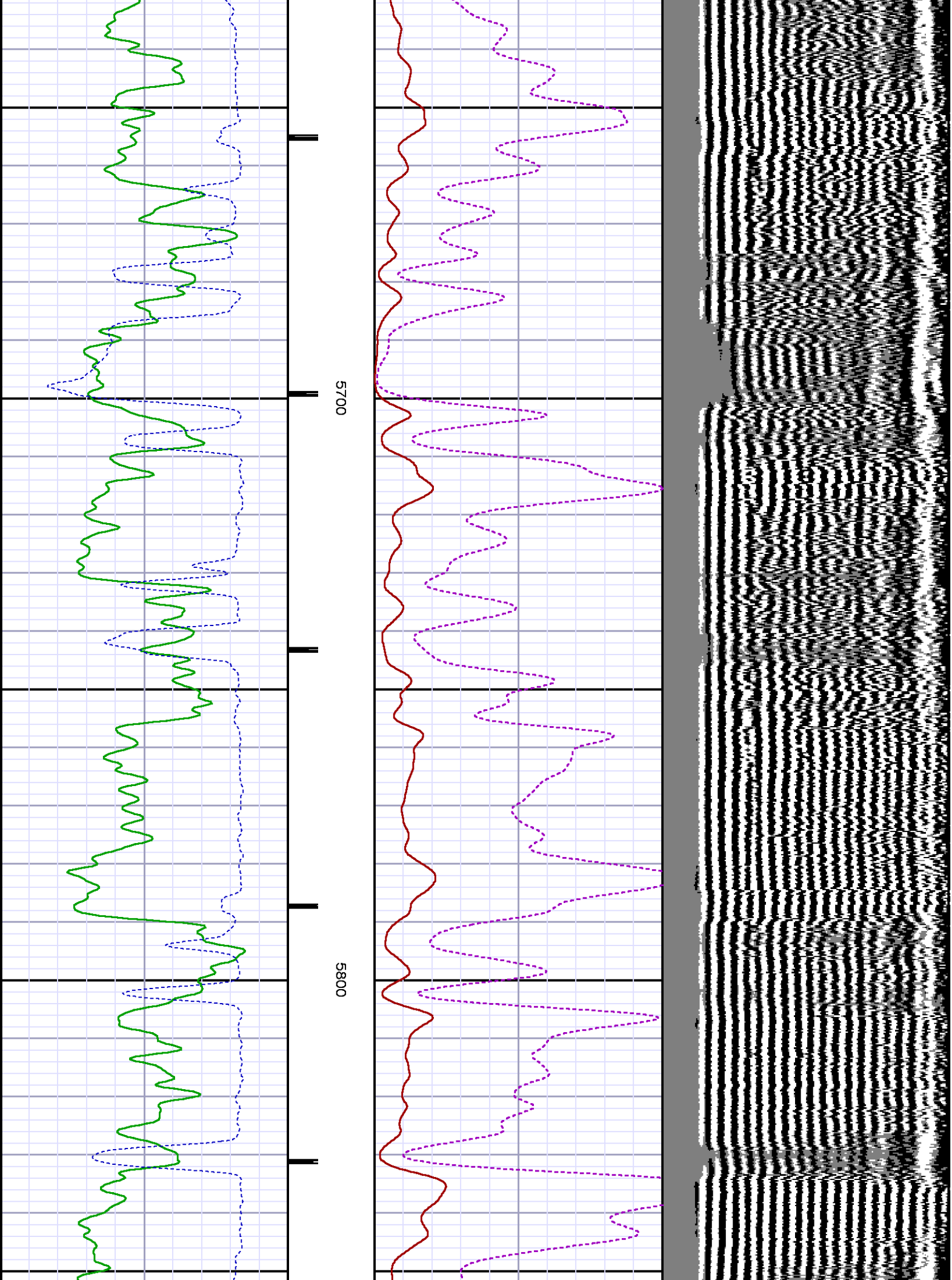


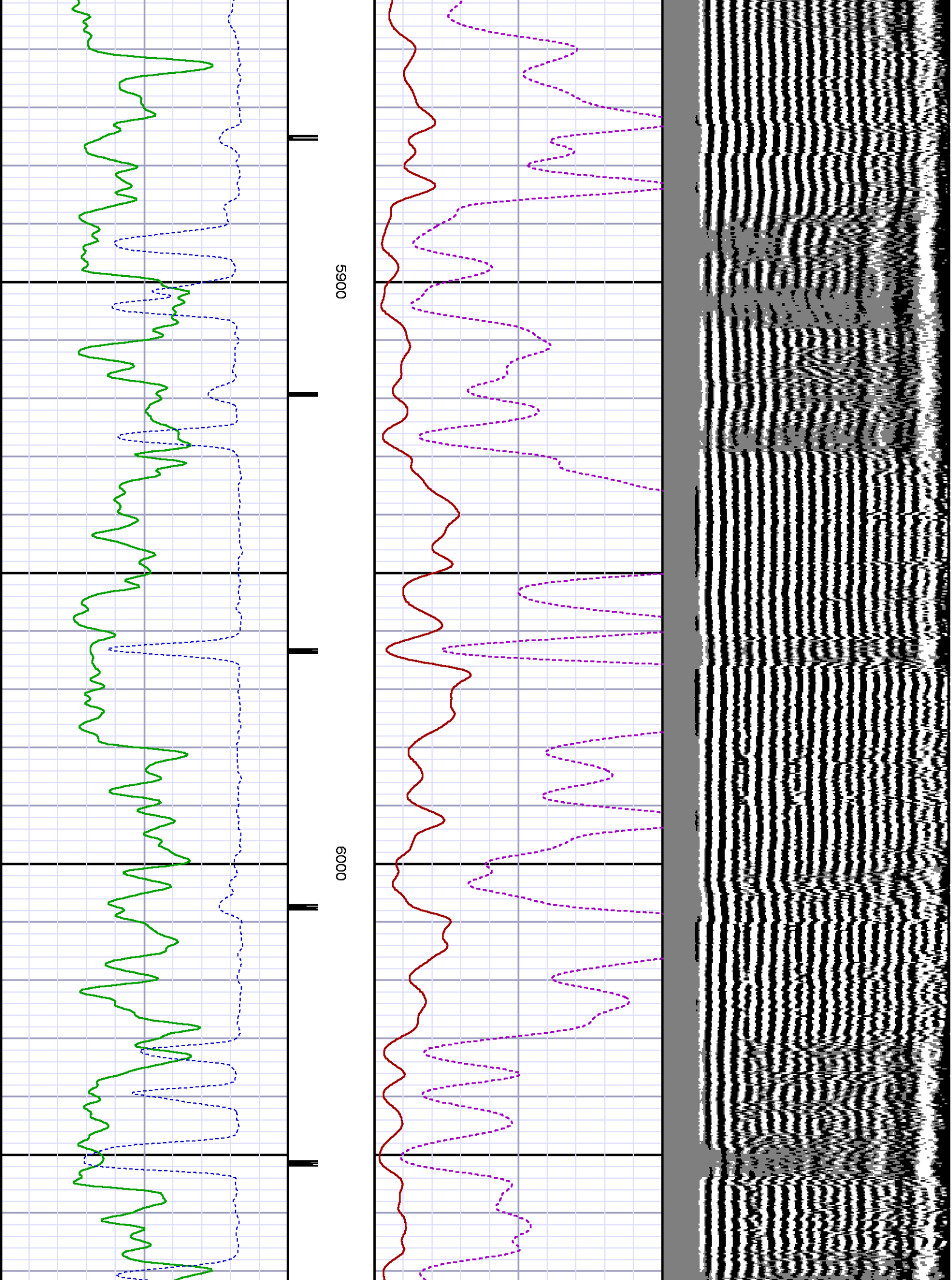


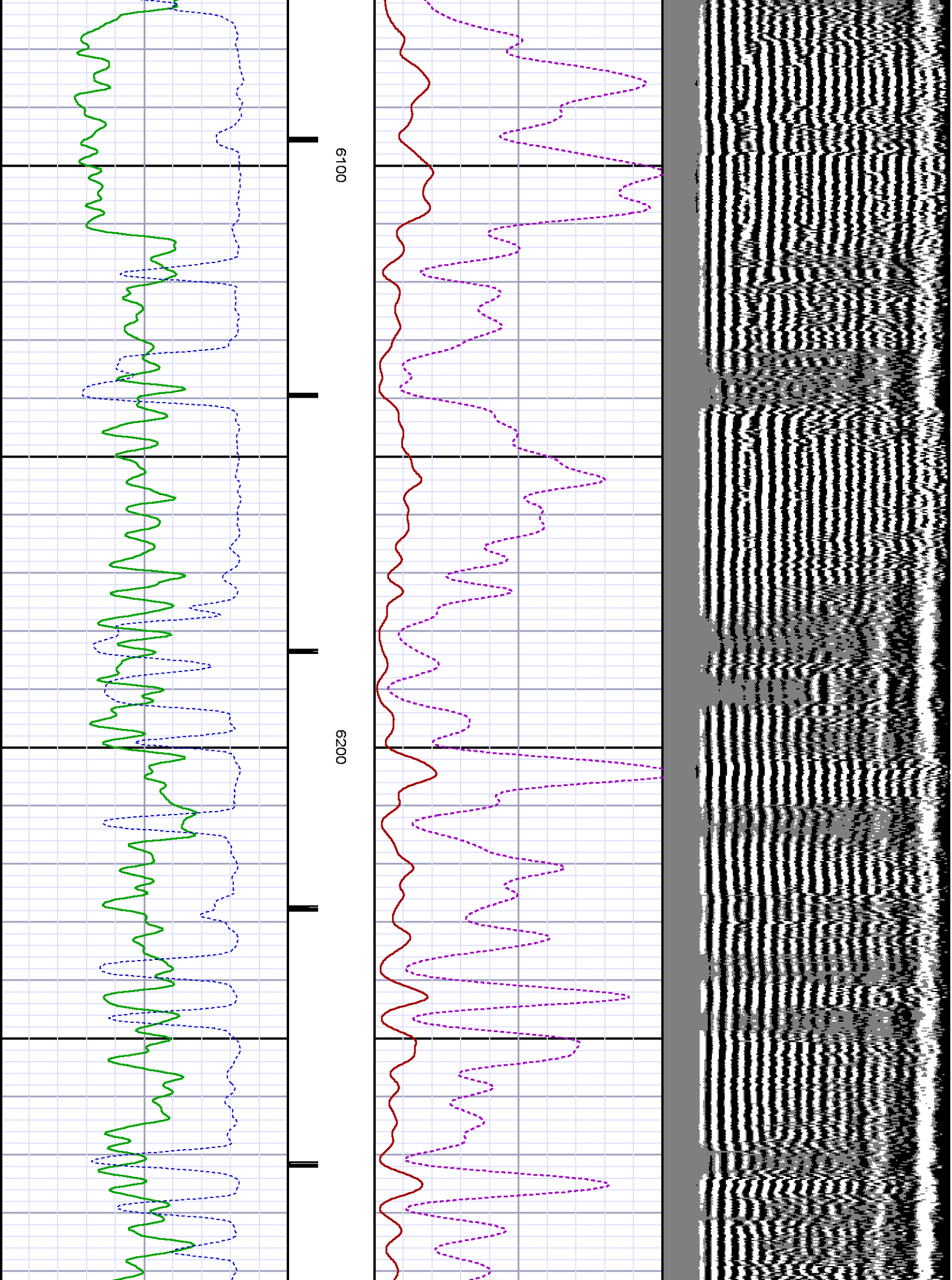


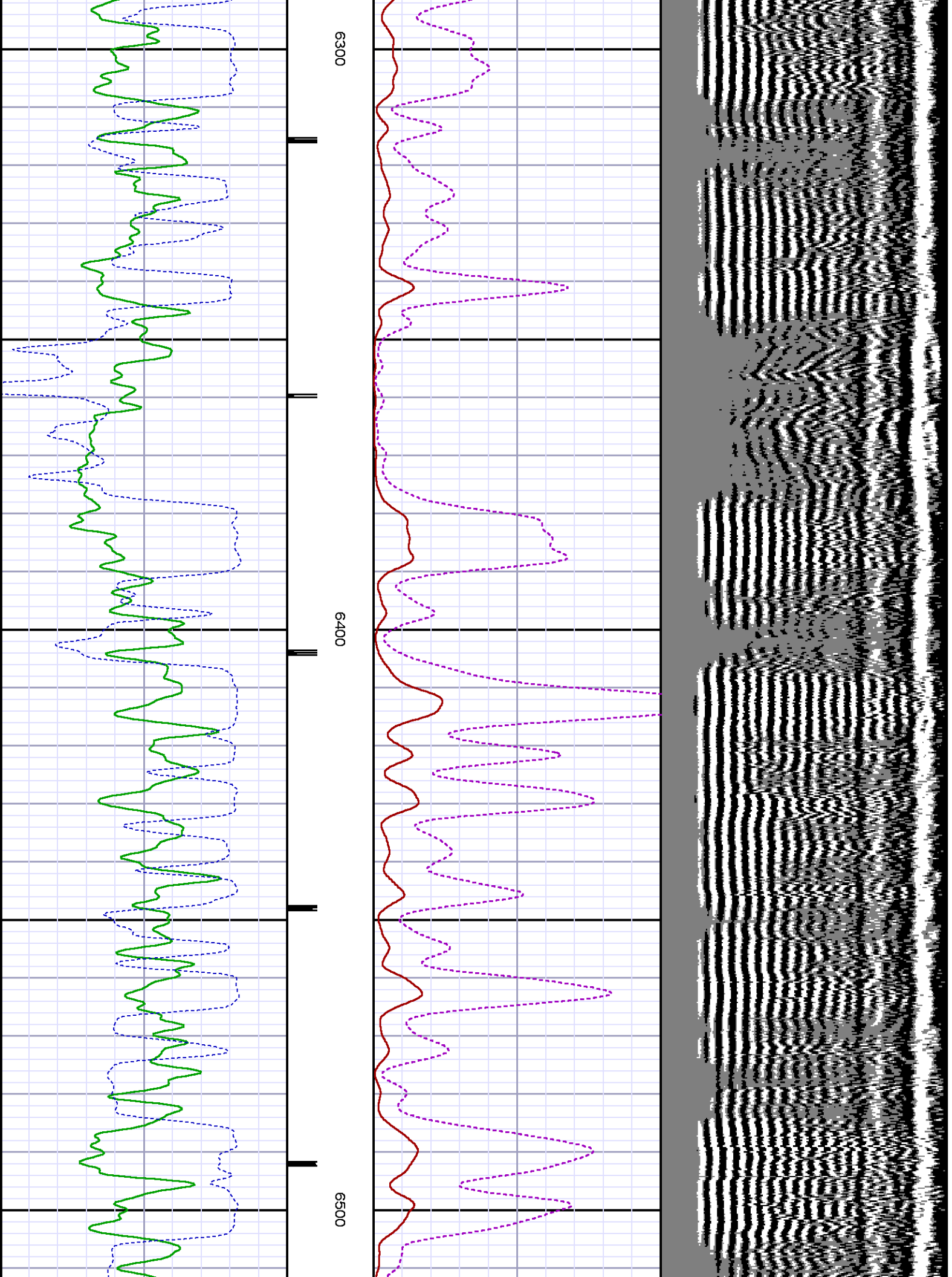


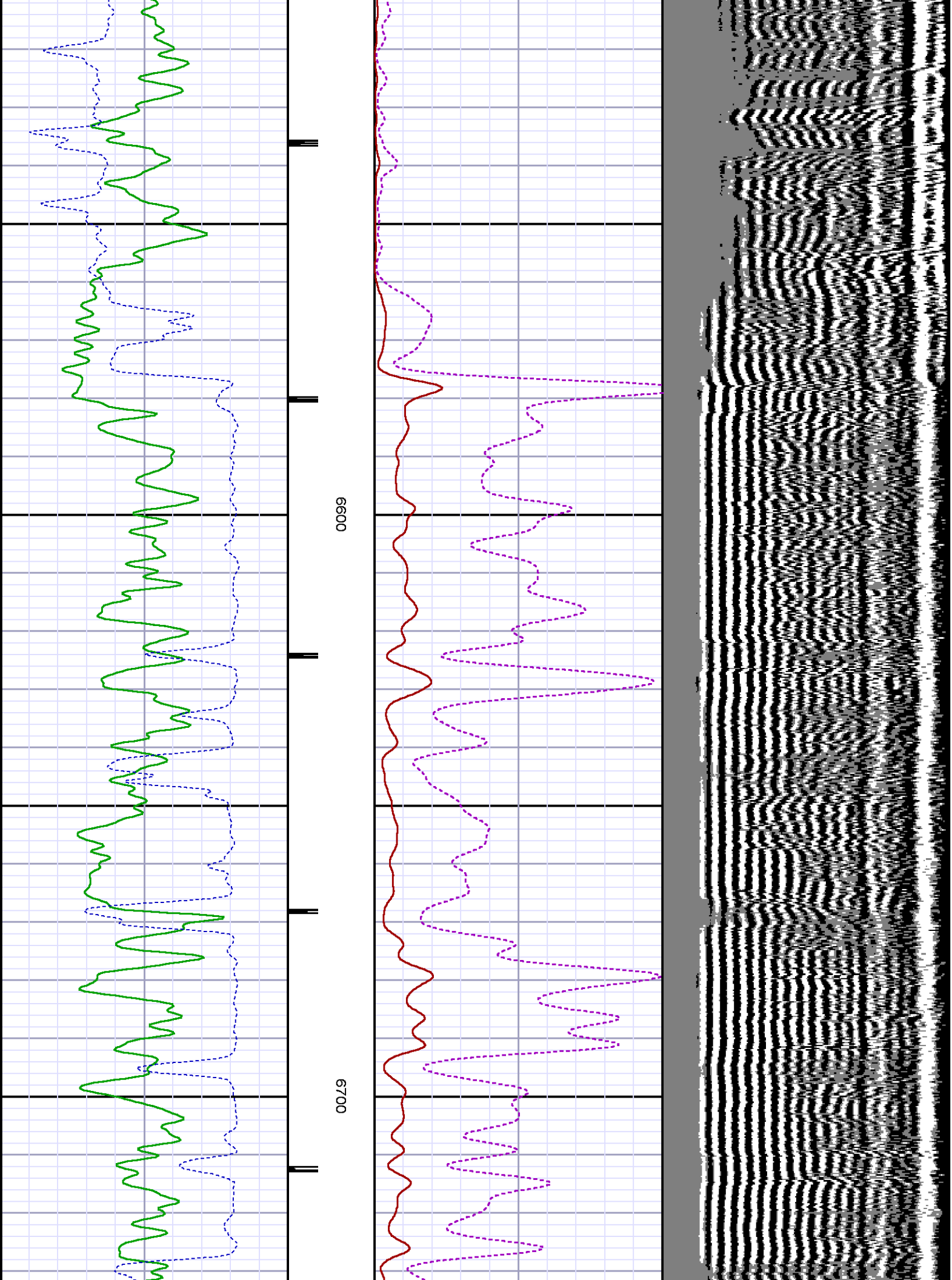


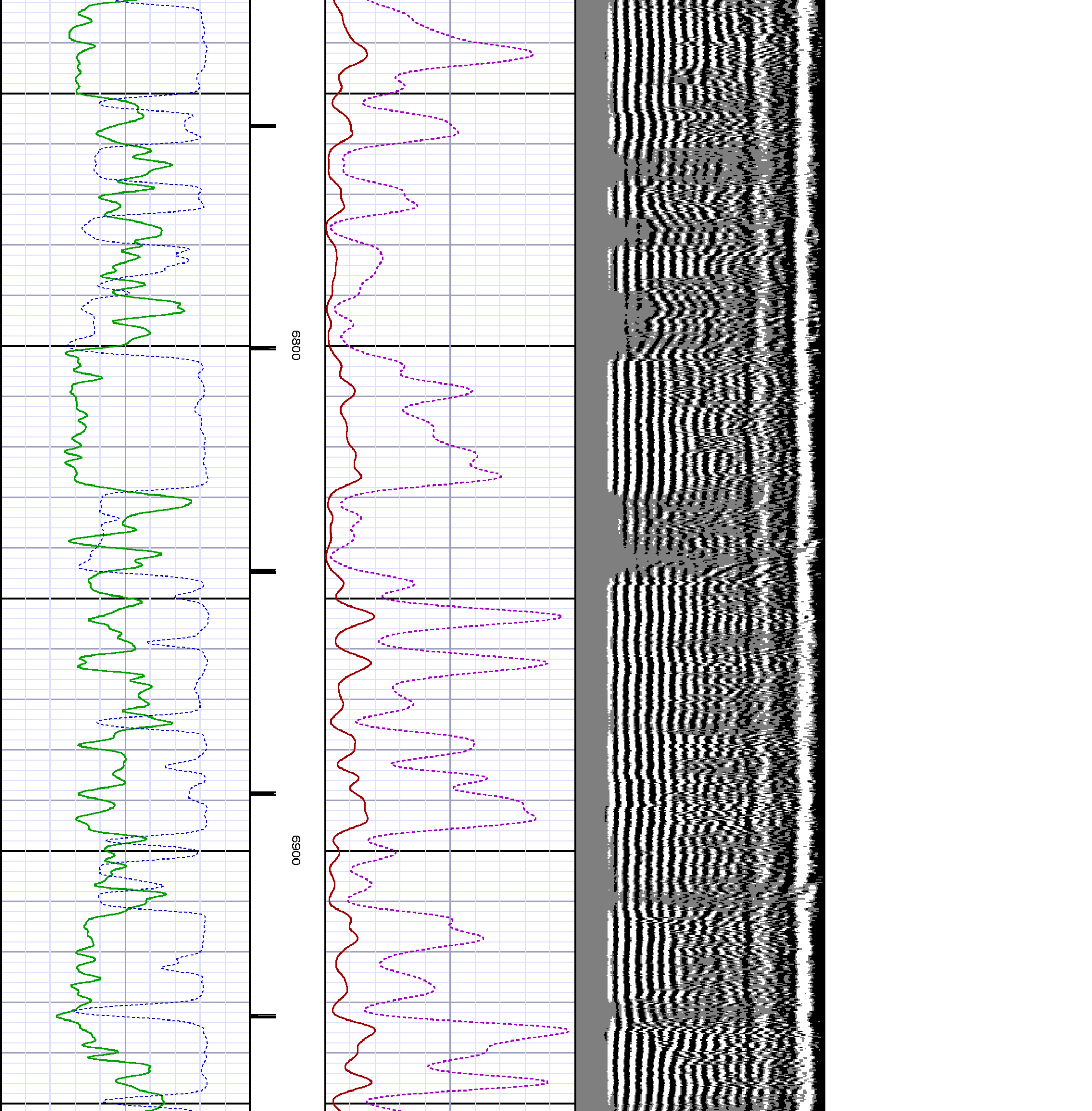


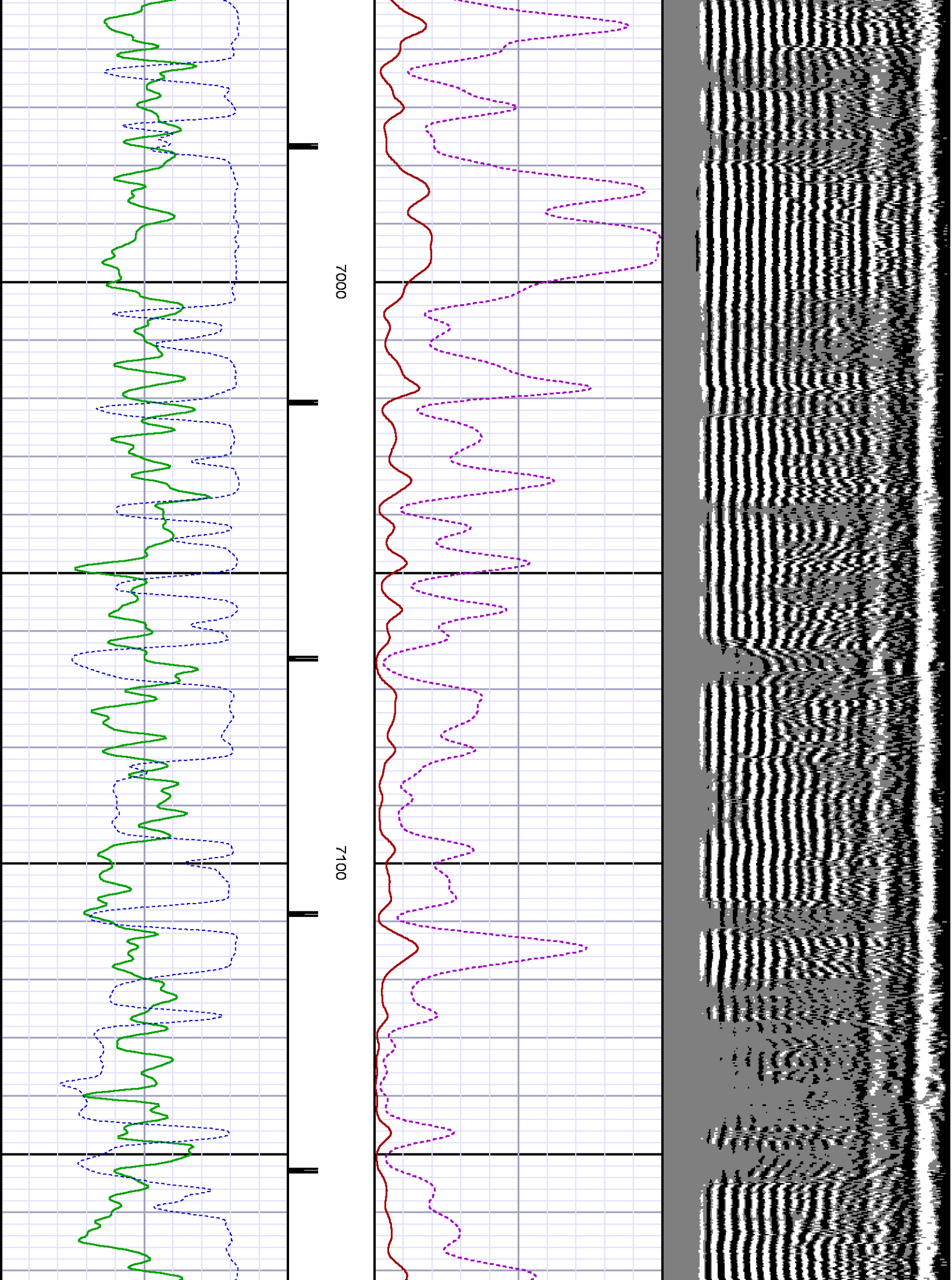


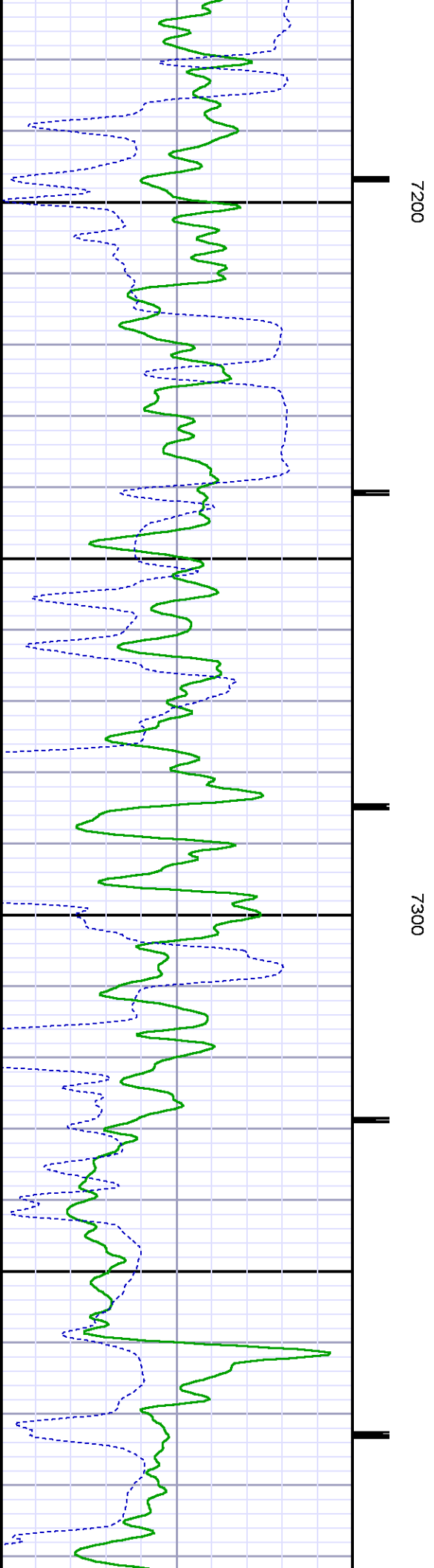
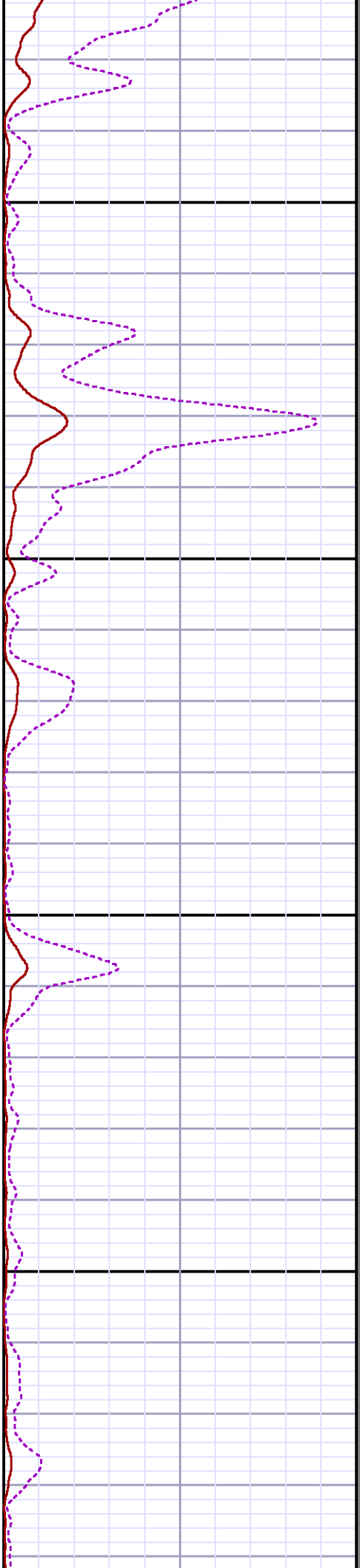
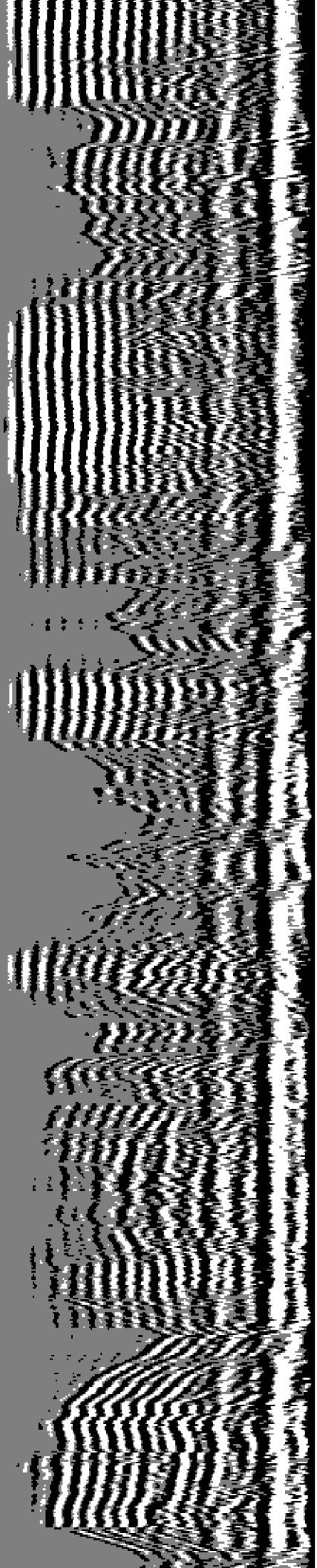


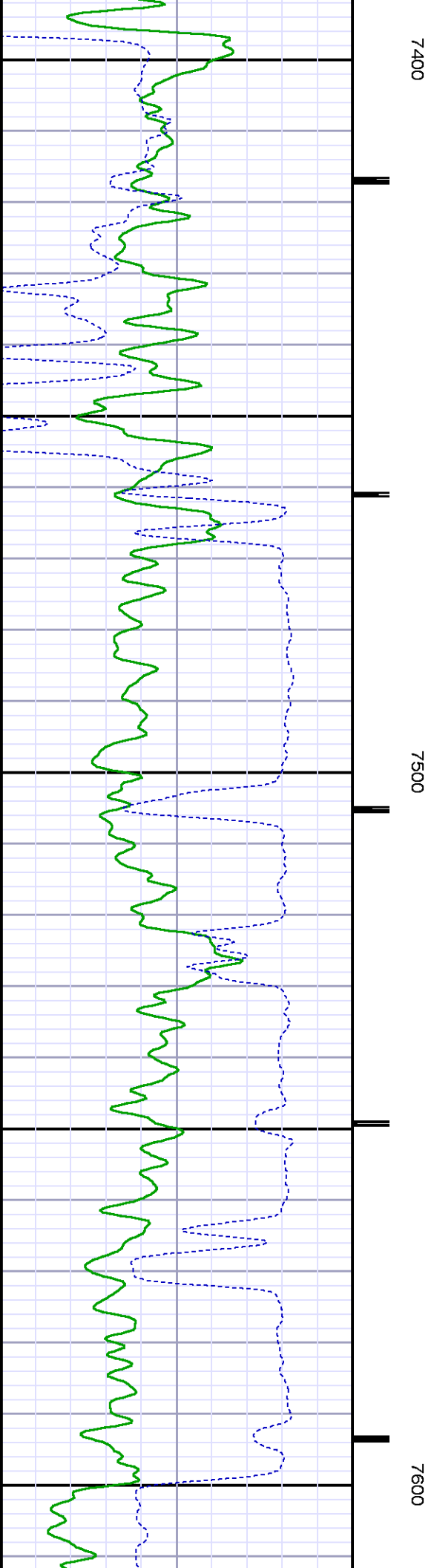
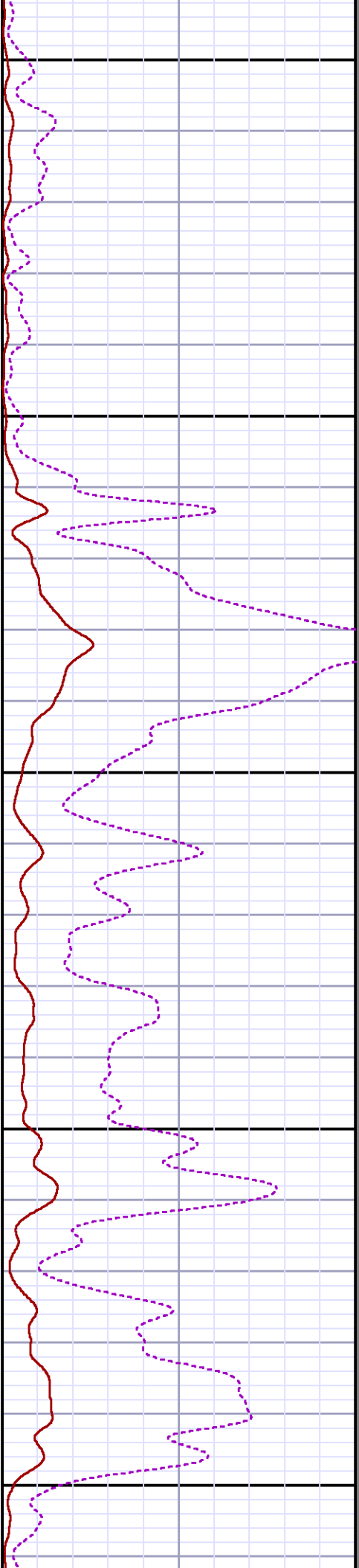
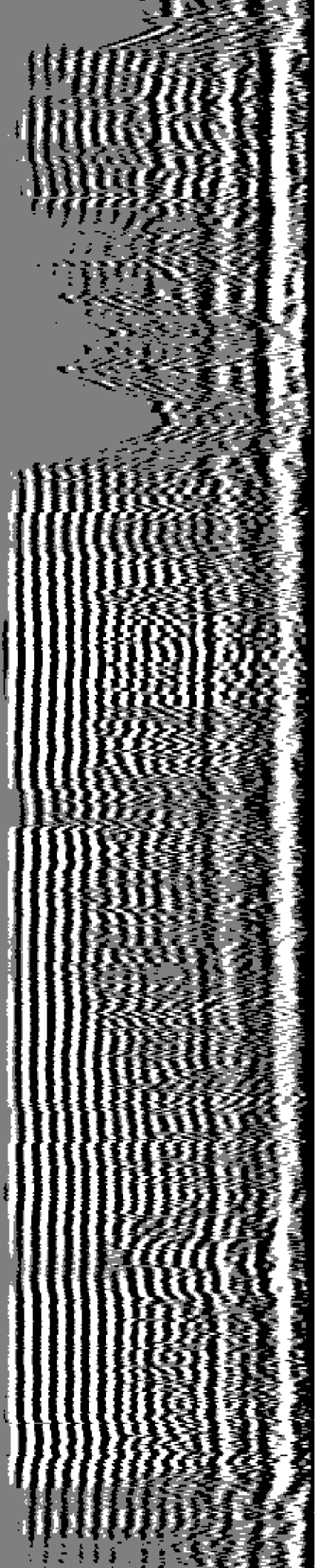


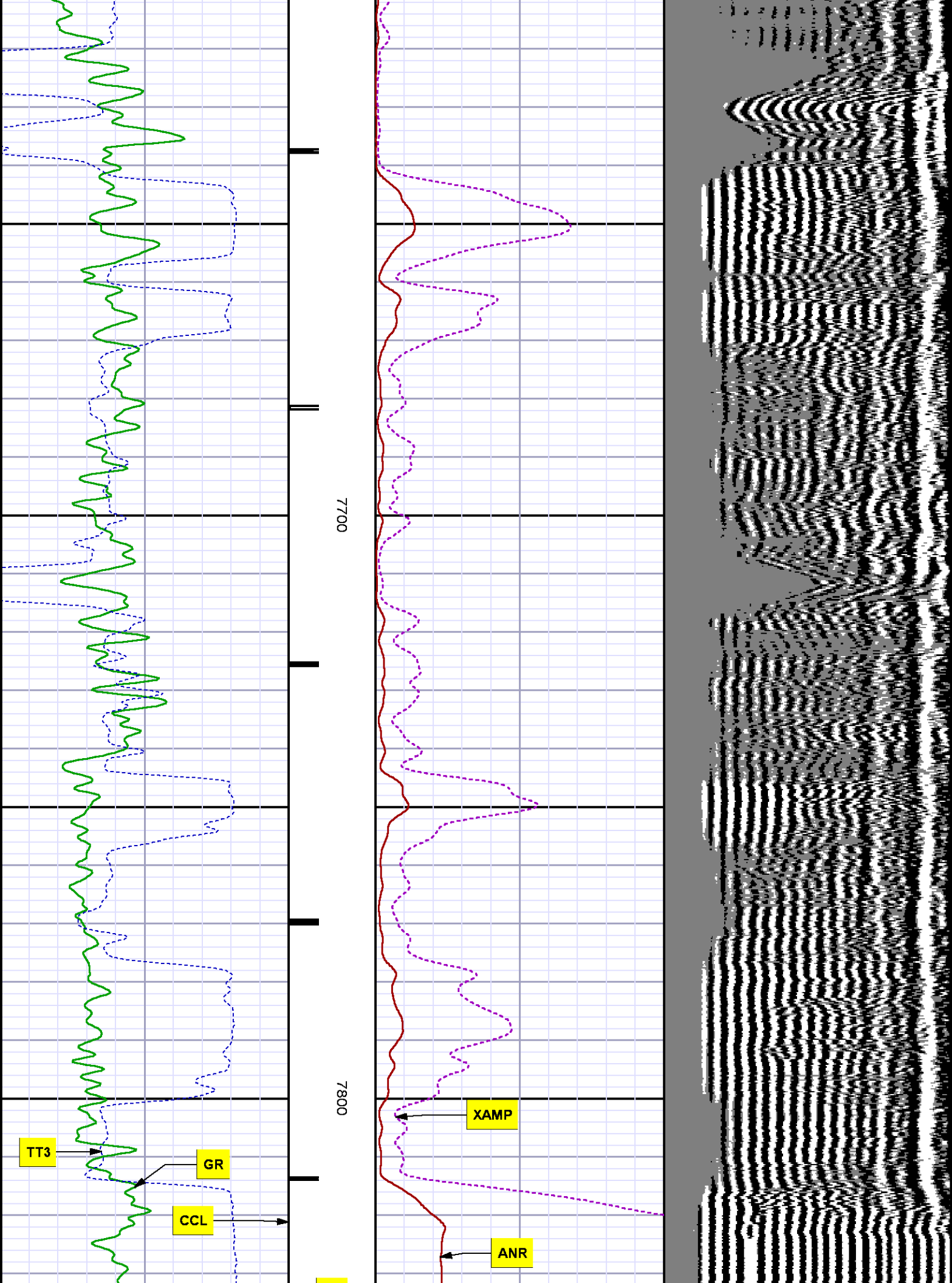


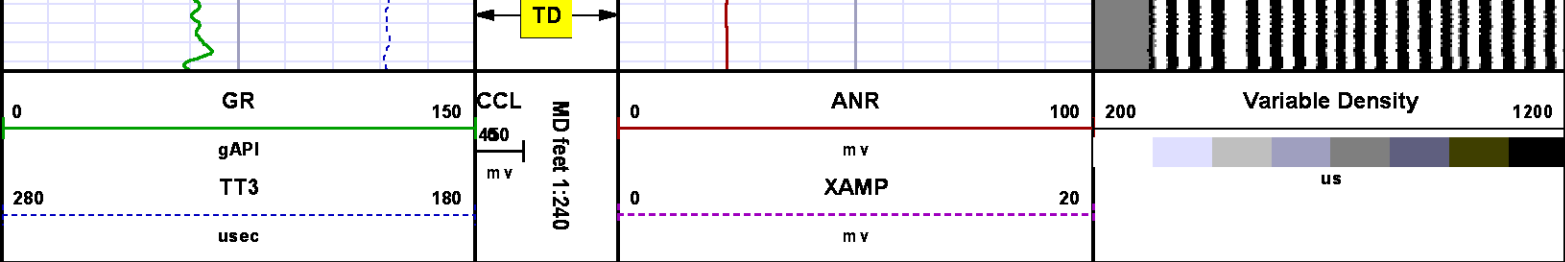












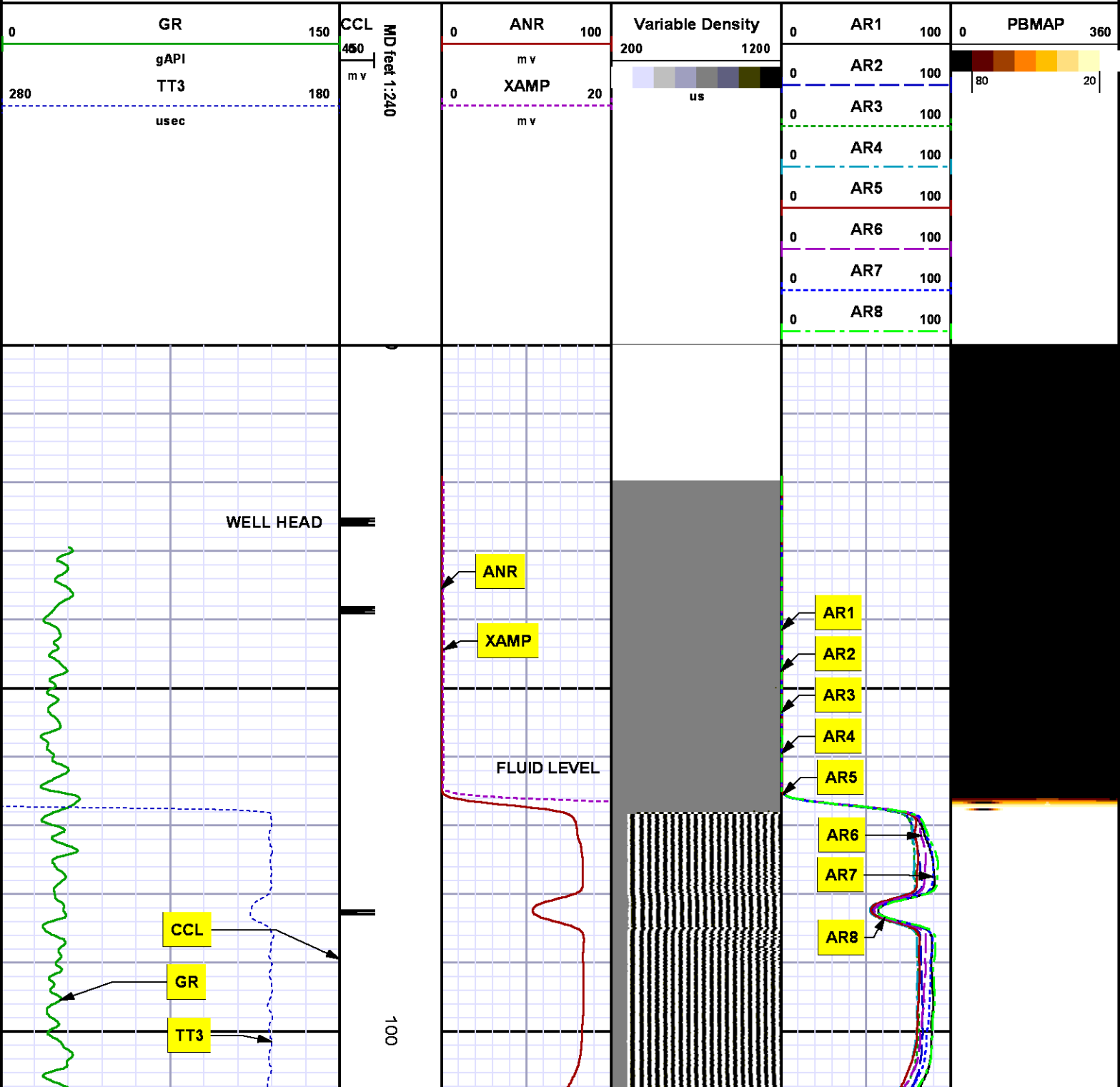
SECONDARY PRESENTATION
0 PSI

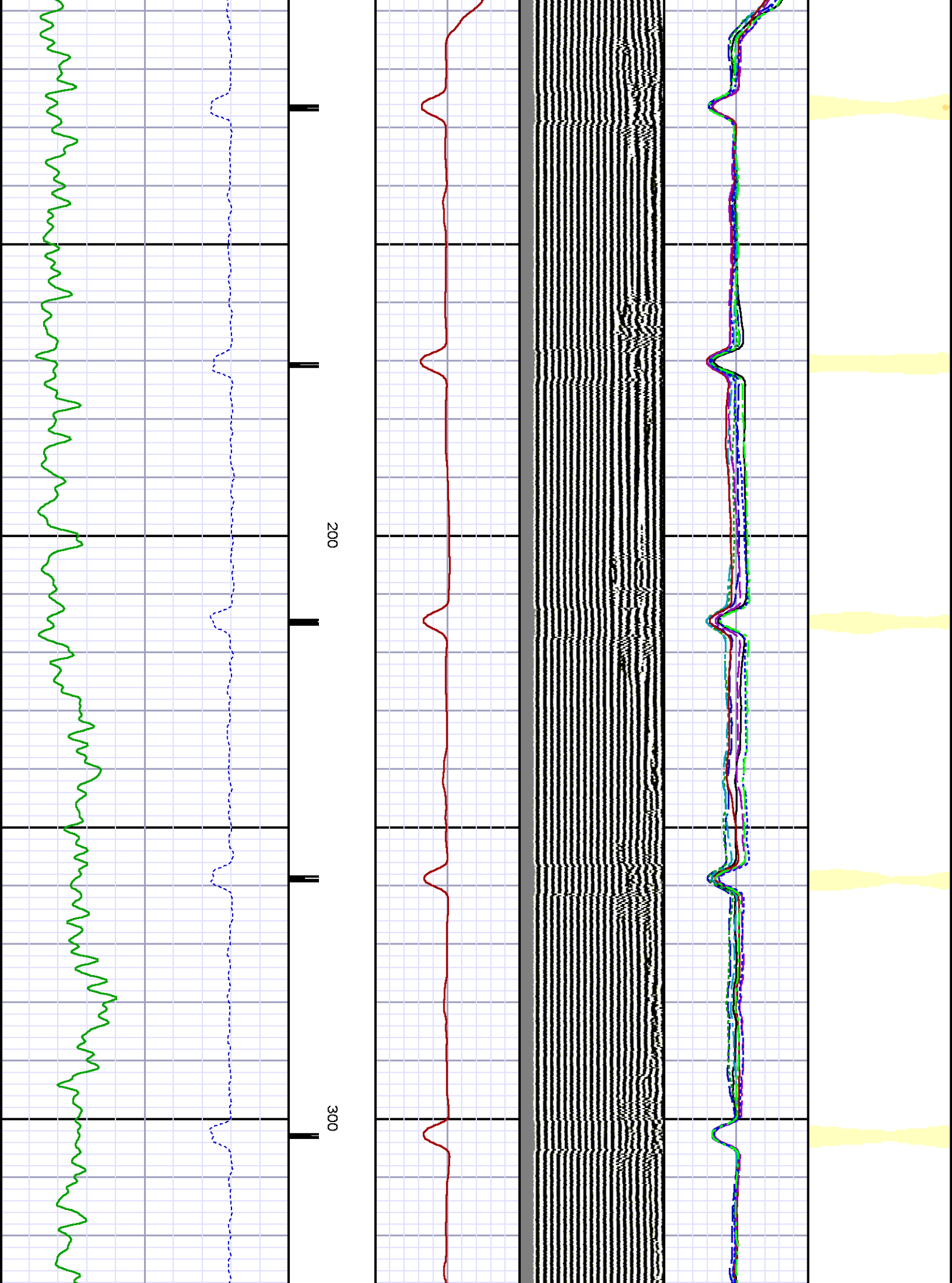
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	29.781	7862.000
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RAL	FB Start Radial	180.000	usec	29.781	7862.000
RAL	FB Thresh Far	10.000	mv	29.781	7862.000
RAL	FB Thresh Near	4.000	mv	29.781	7862.000
RAL	FB Thresh Radial	4.000	mv	29.781	7862.000
RAL	Fluid Travel Time	200.000	usec/ft	29.781	7862.000

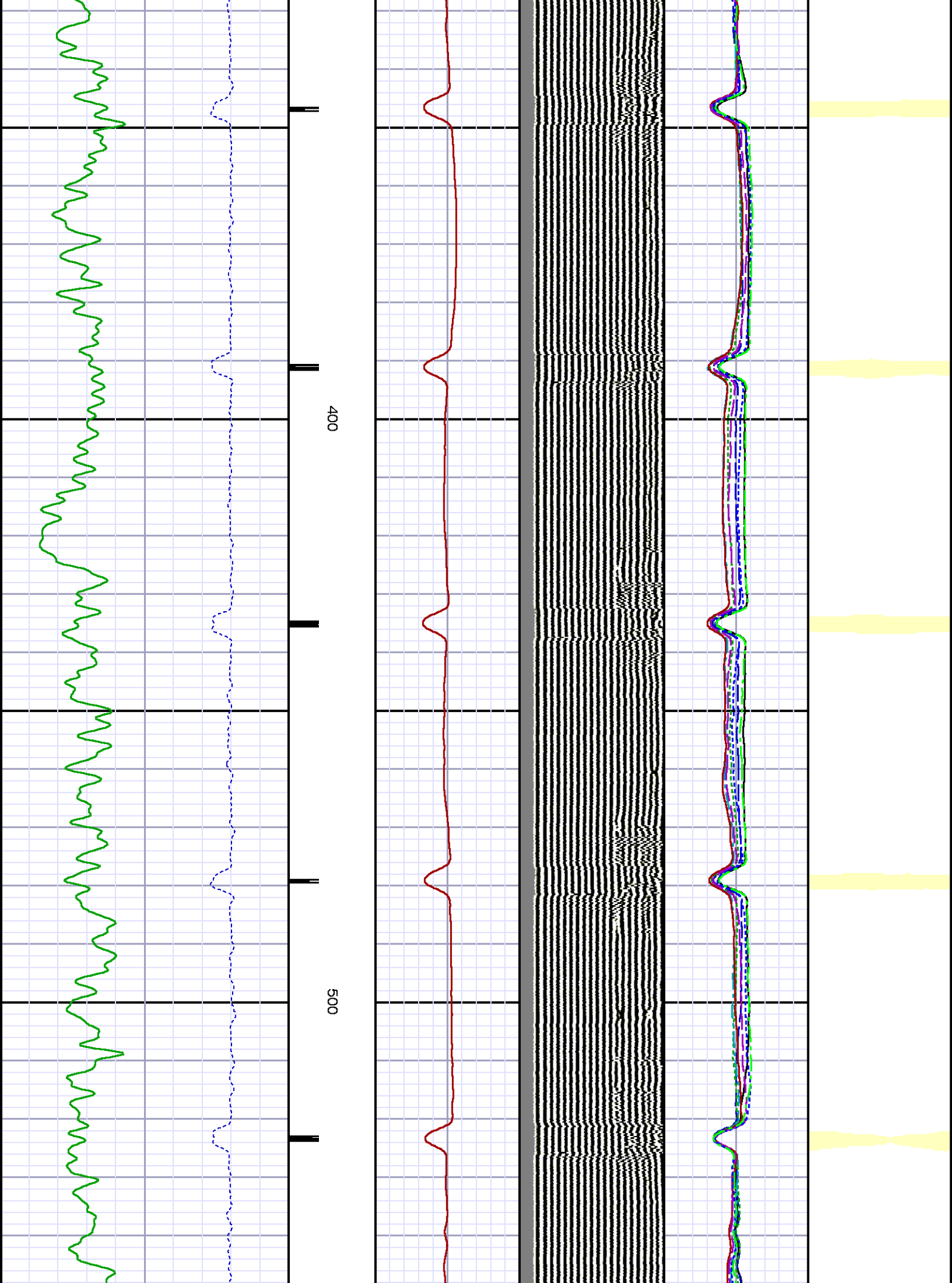
DEPTH OFFSETS						
(for Acquired Curves)						
SERIES	DEPTH OFFSET	ACQUIRED CURVES				
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3
		AR5	AR6	AR7	AR8	CHV
		FPR3	FPR5	TT3	TTR1	TTR2
		TTR4	TTR5	TTR6	TTR7	TTR8
						XAMP

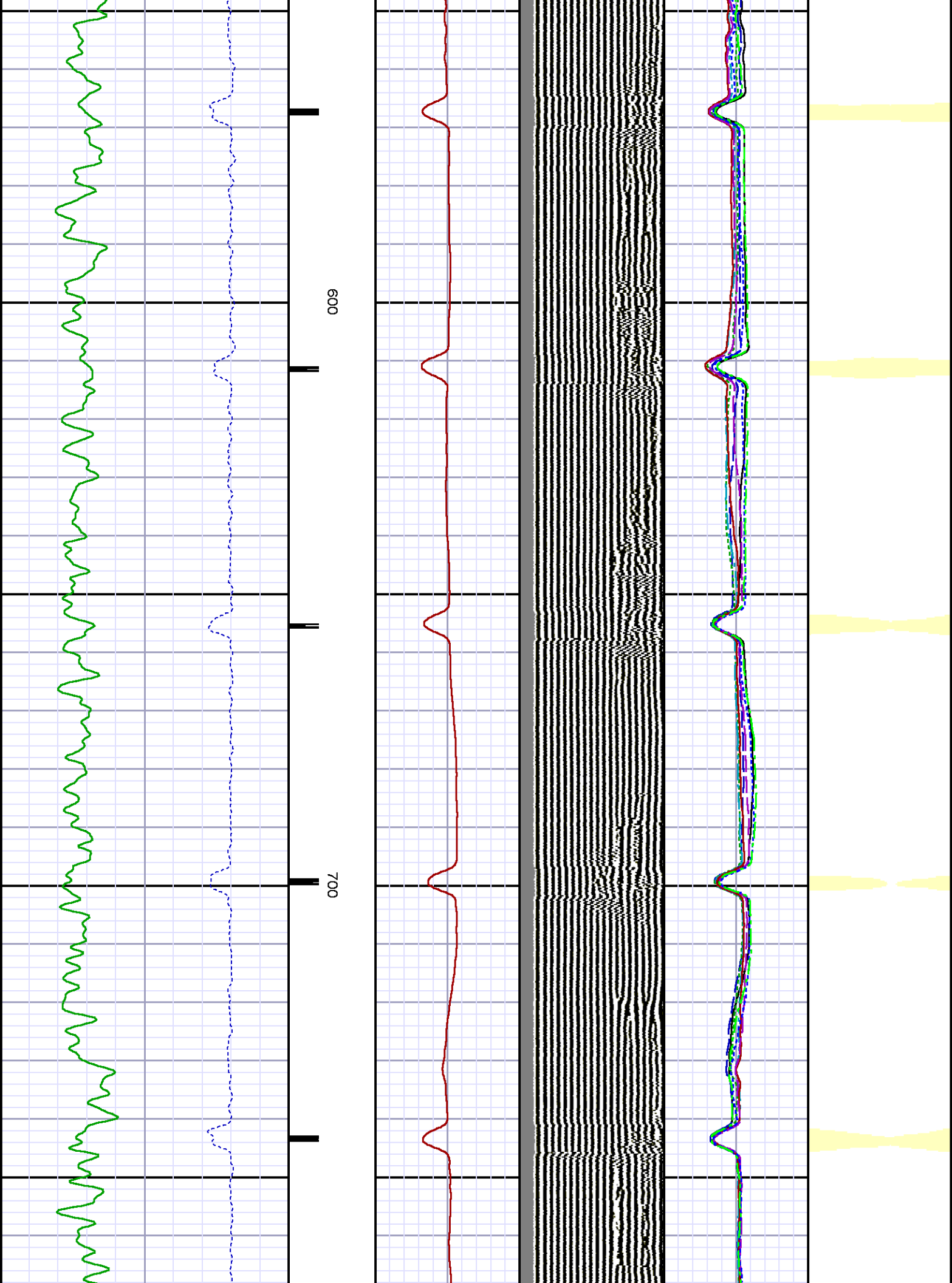
1426XA	-10.040	AFAR	SIG	TT5
1355XA	-5.620	CCL		
1355XA	-1.500	GR		
1355XA	0.000	TEMP		

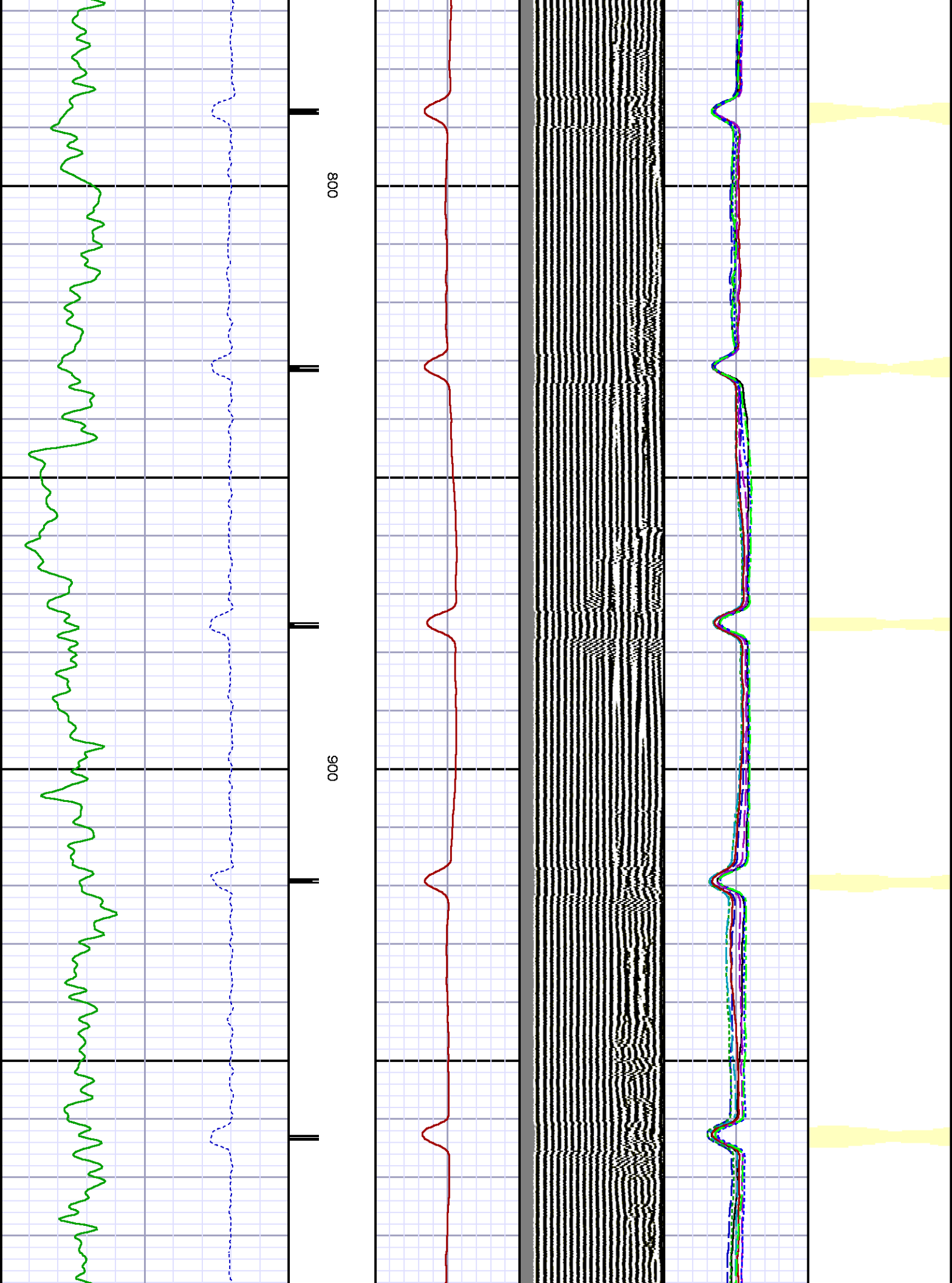
Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : DUGGAN RWF 514 29
File Name : d:\welldata\wpx energy\rwf 514-29\514ral\main.xtf
Mode : PlotMgr 5.4.504
Interval : 0.00 - 7839.00 feet UP
Created : 7/10/2013 1:45:53 PM

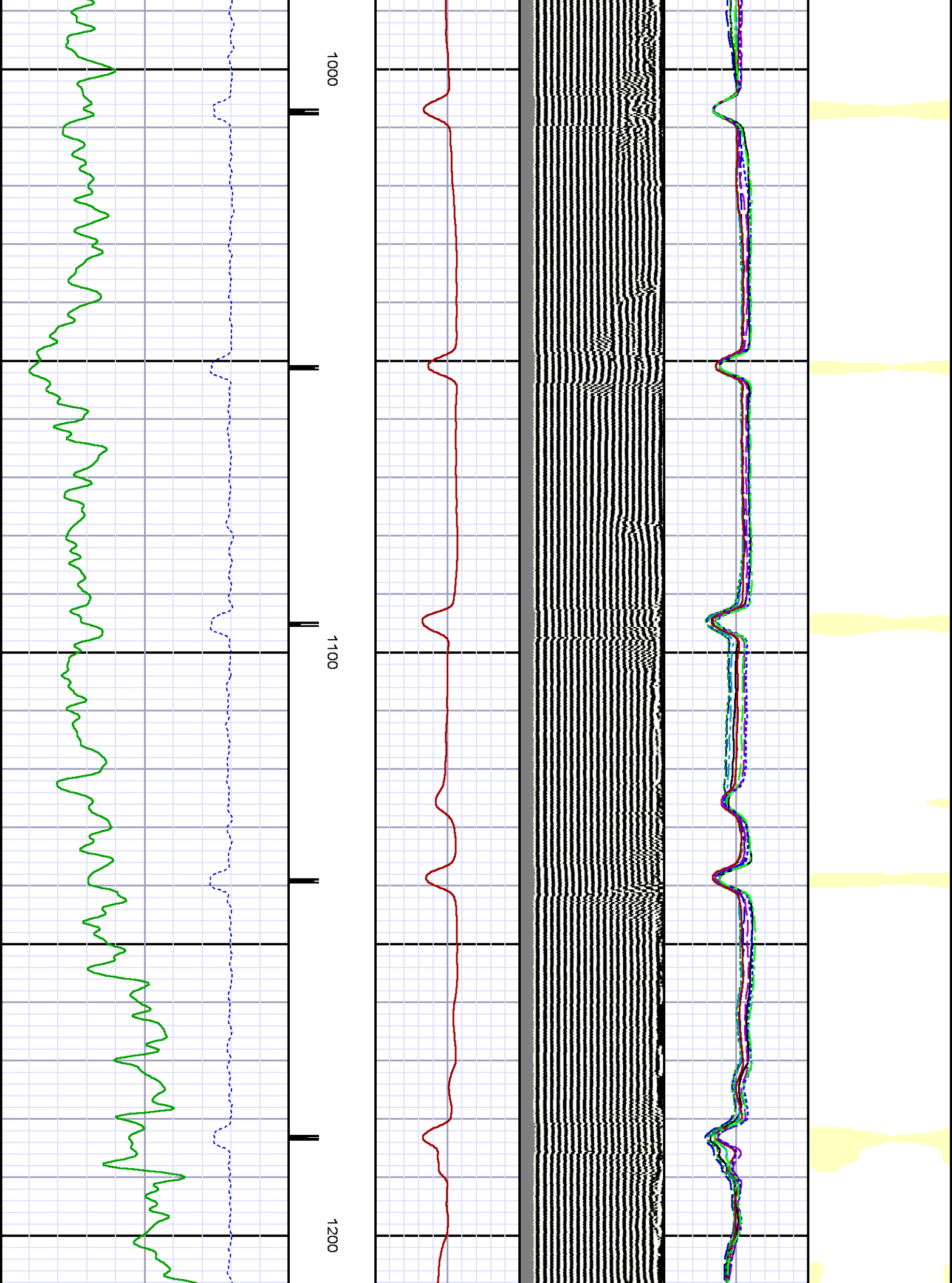


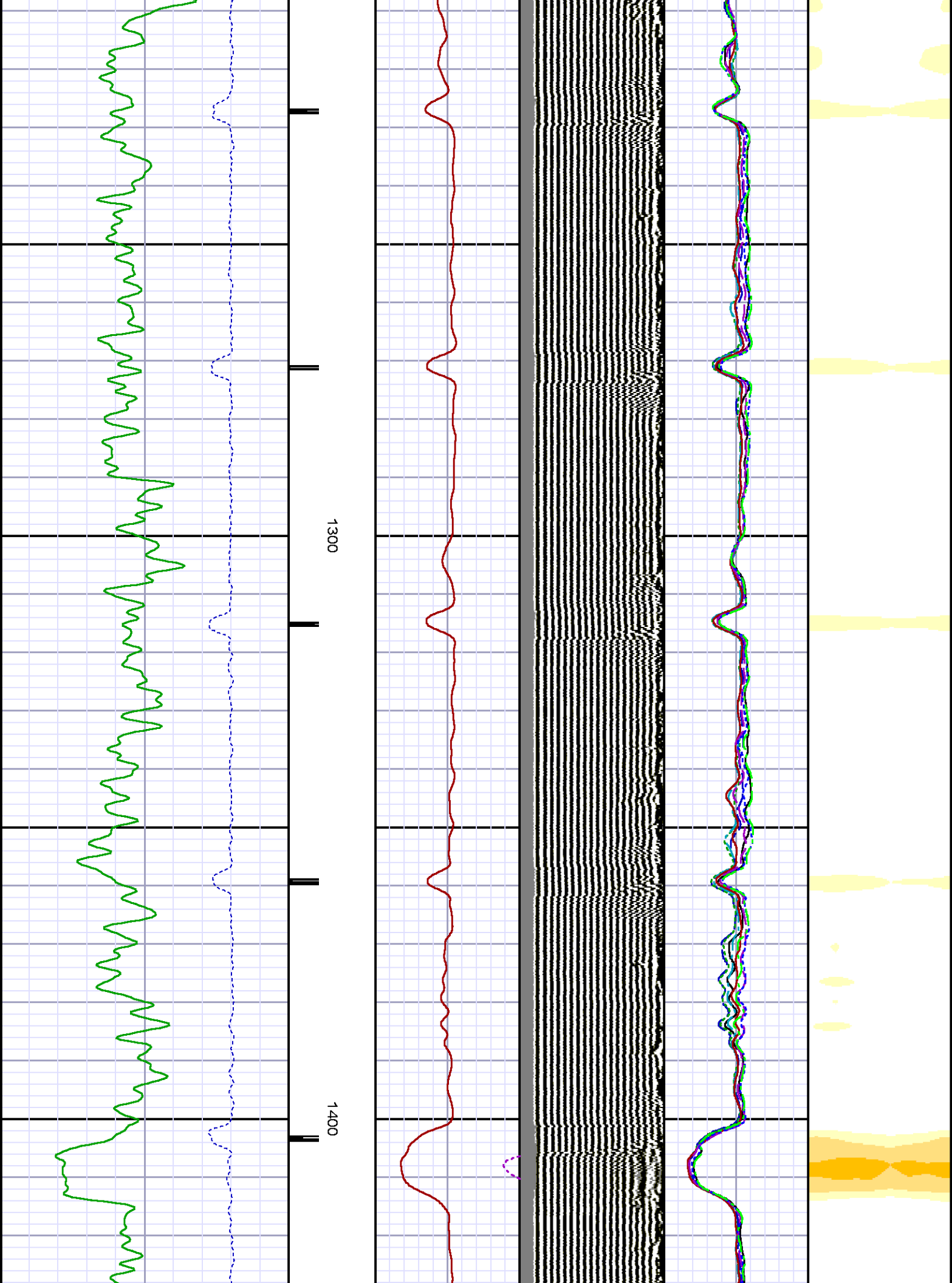


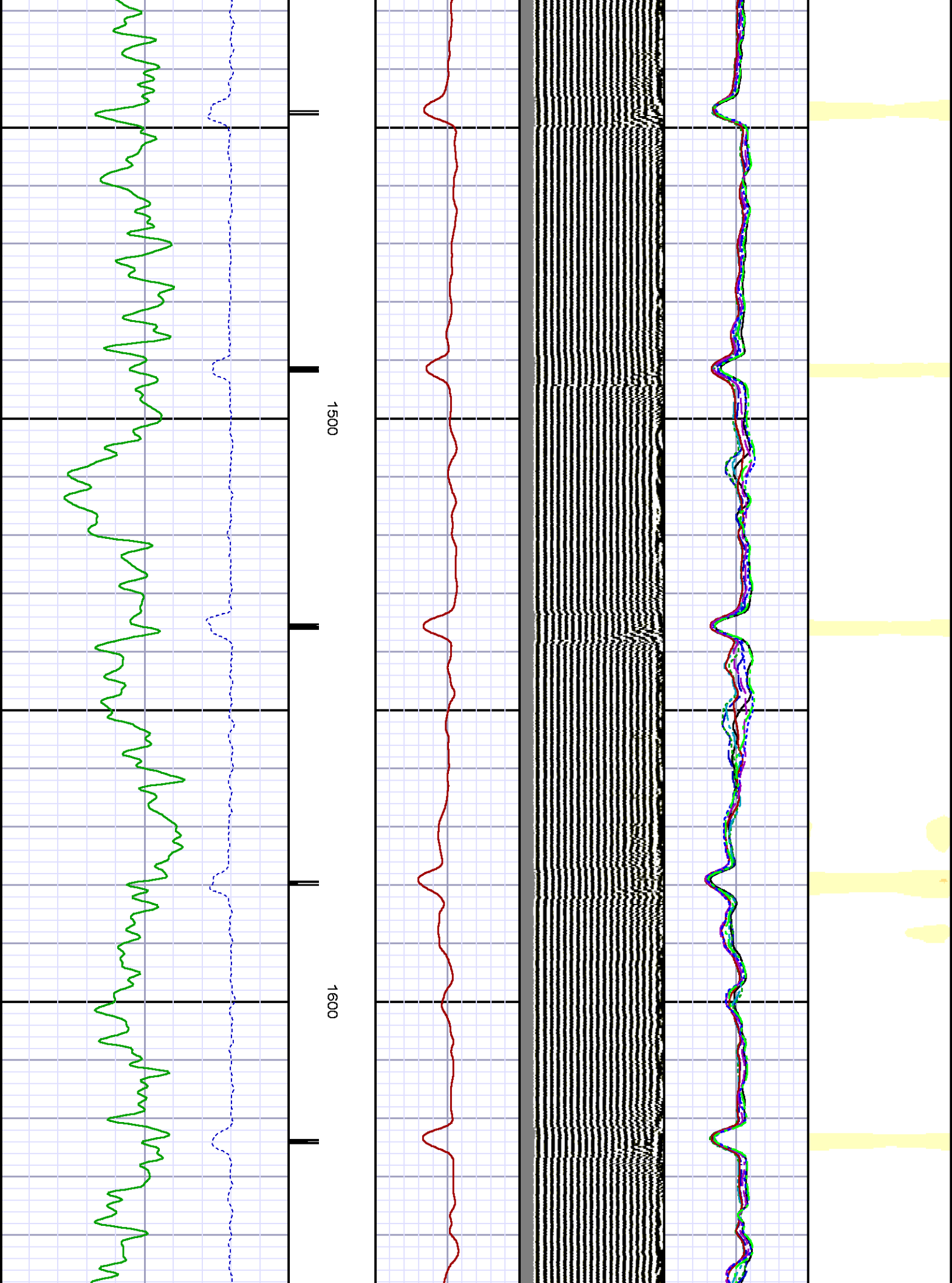


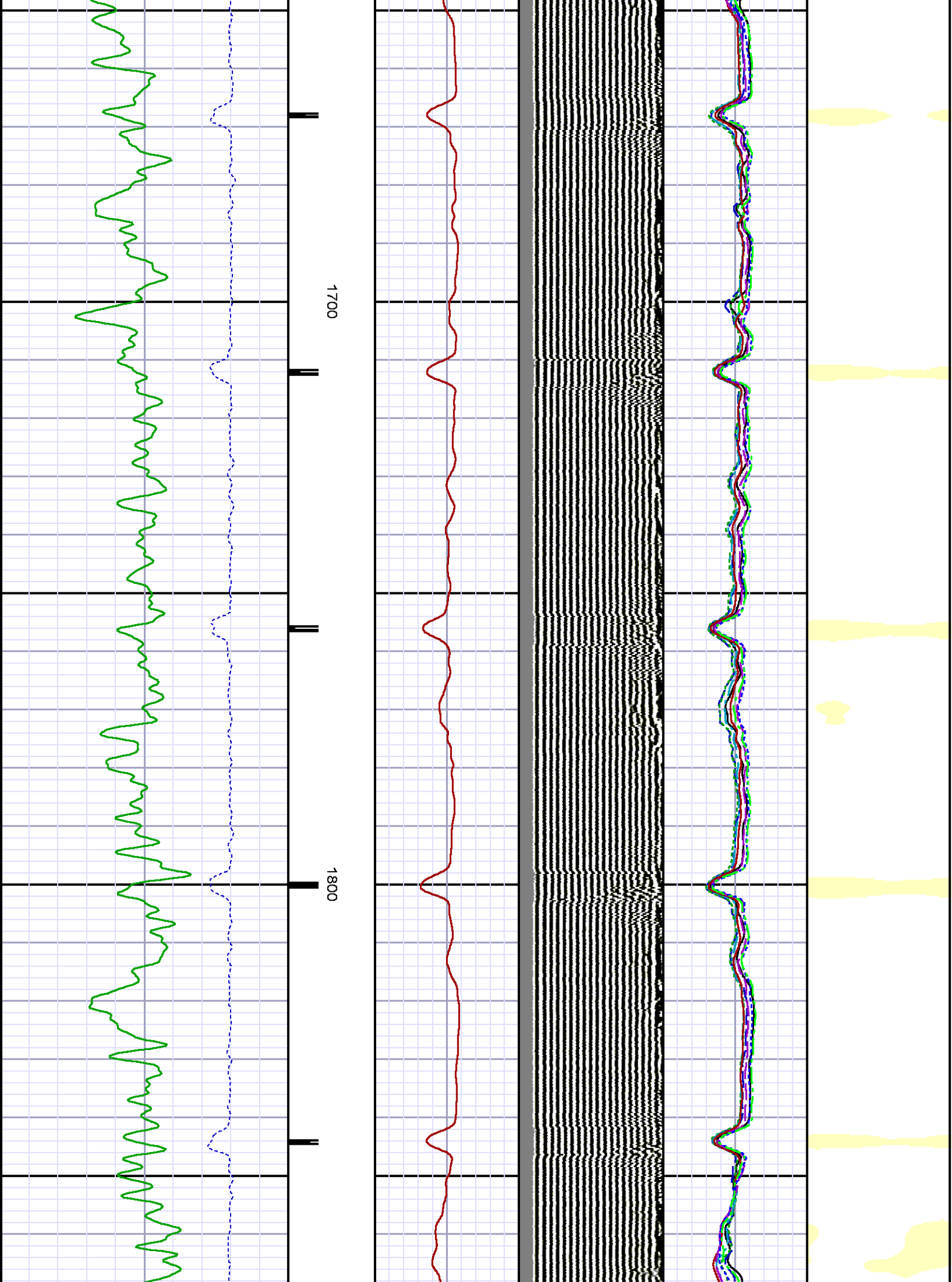


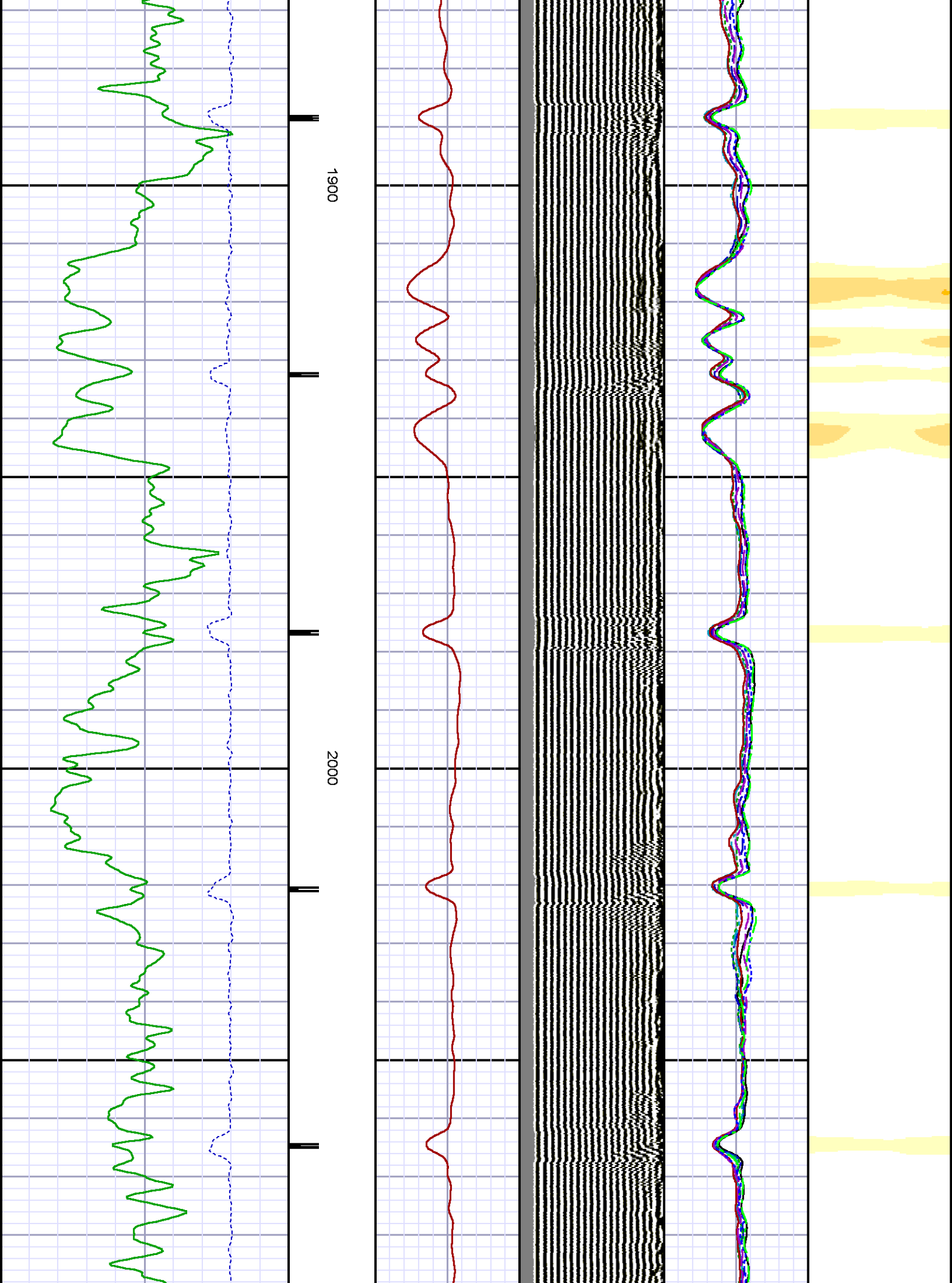


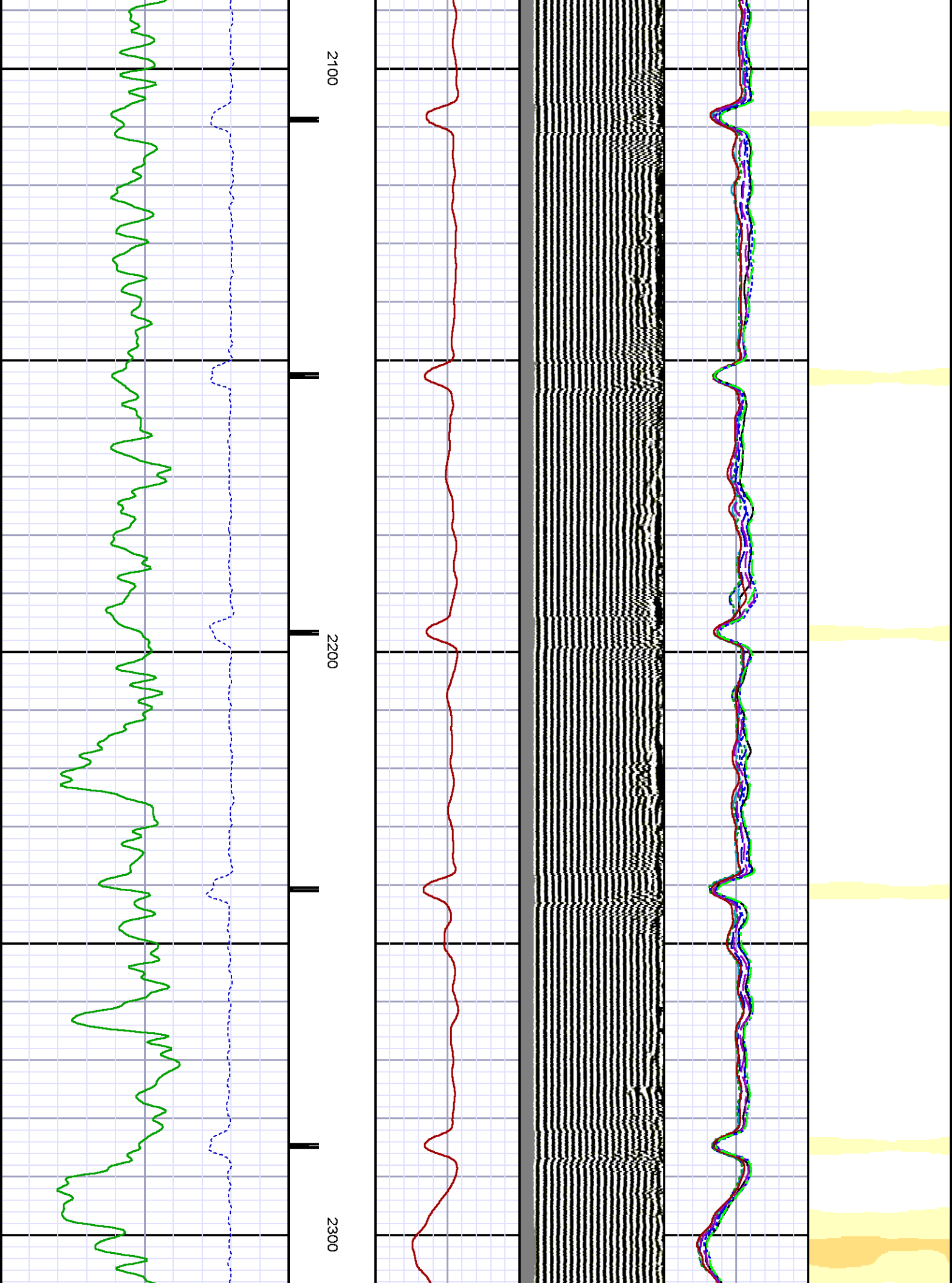


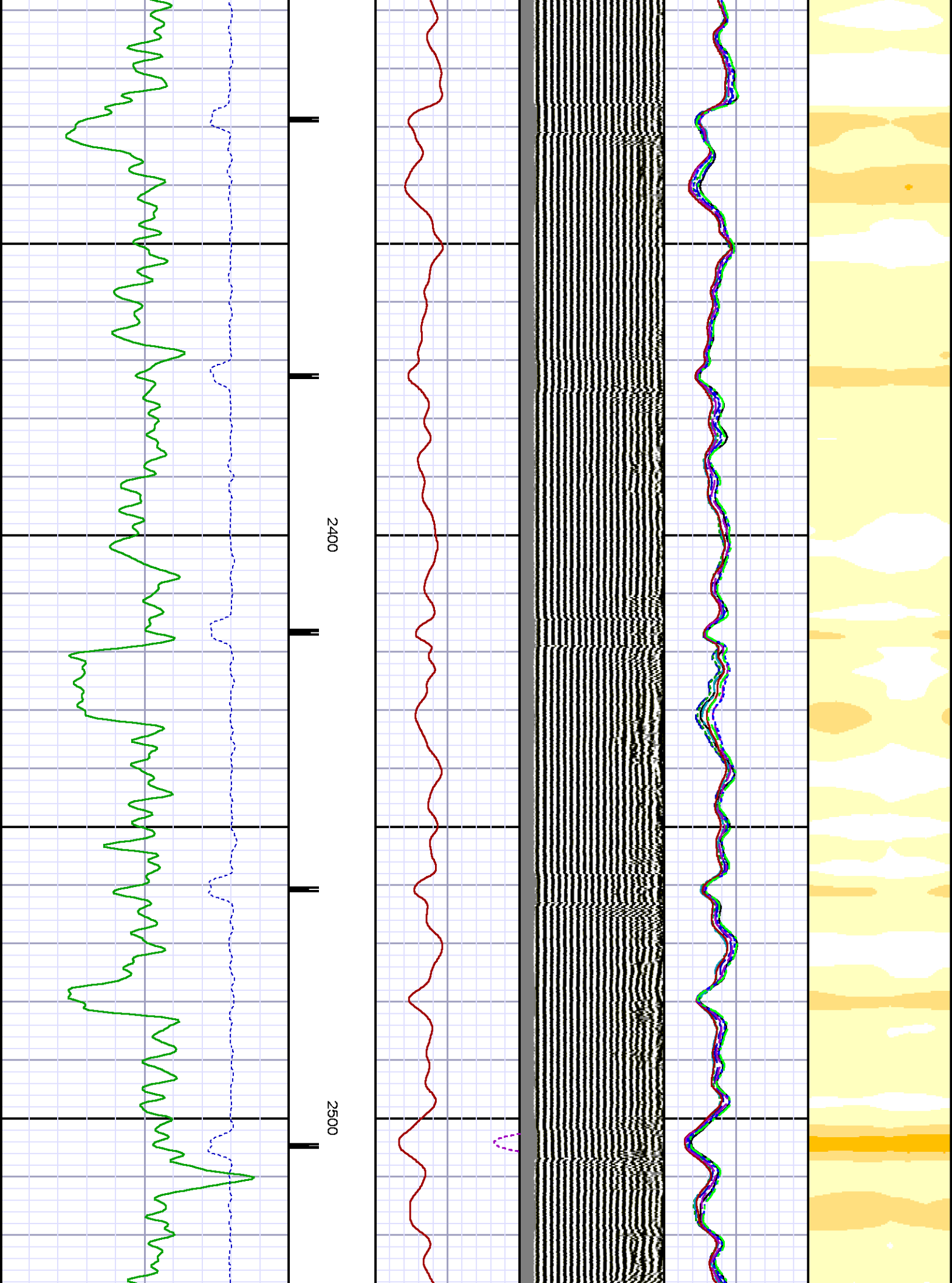


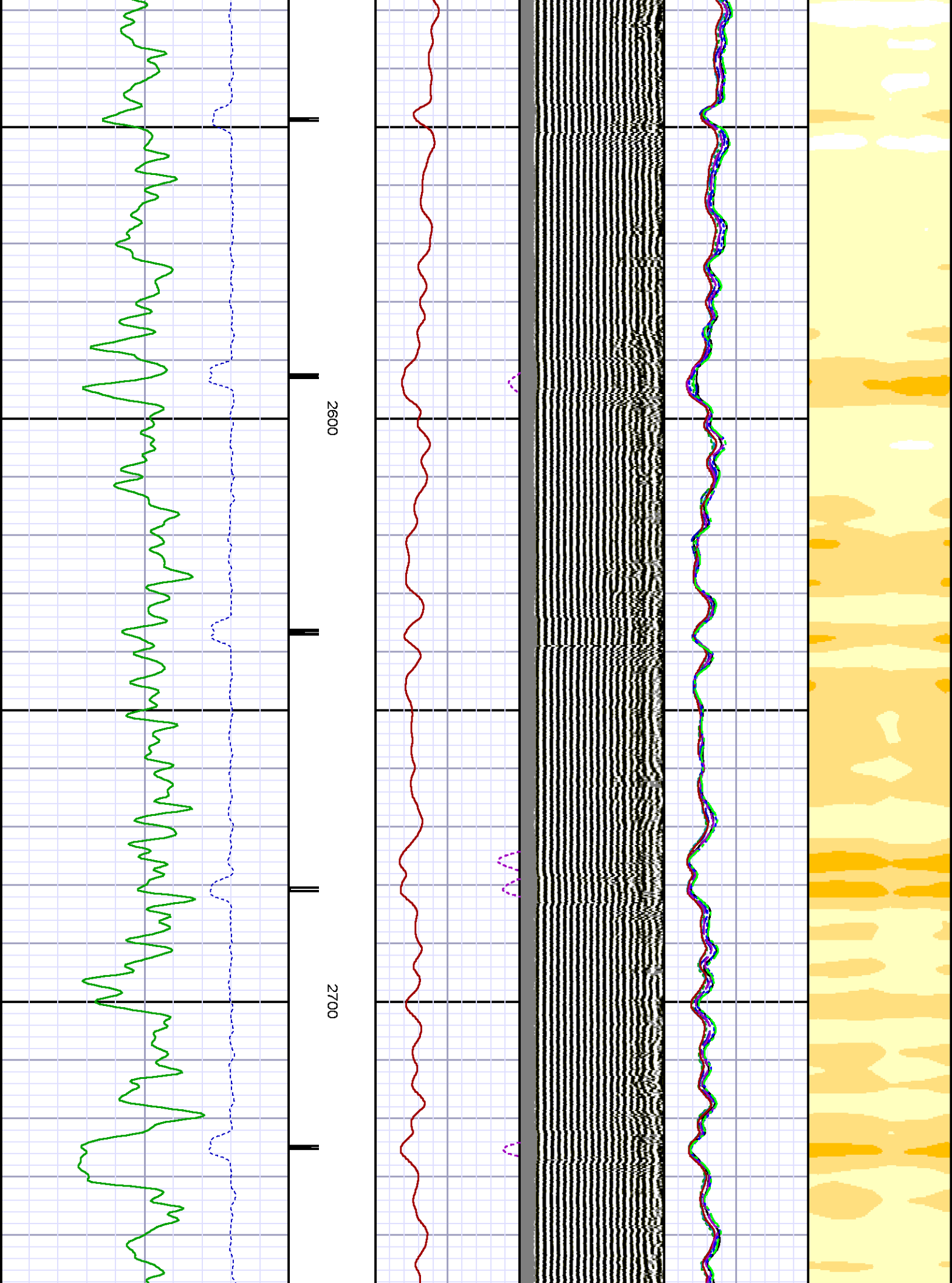


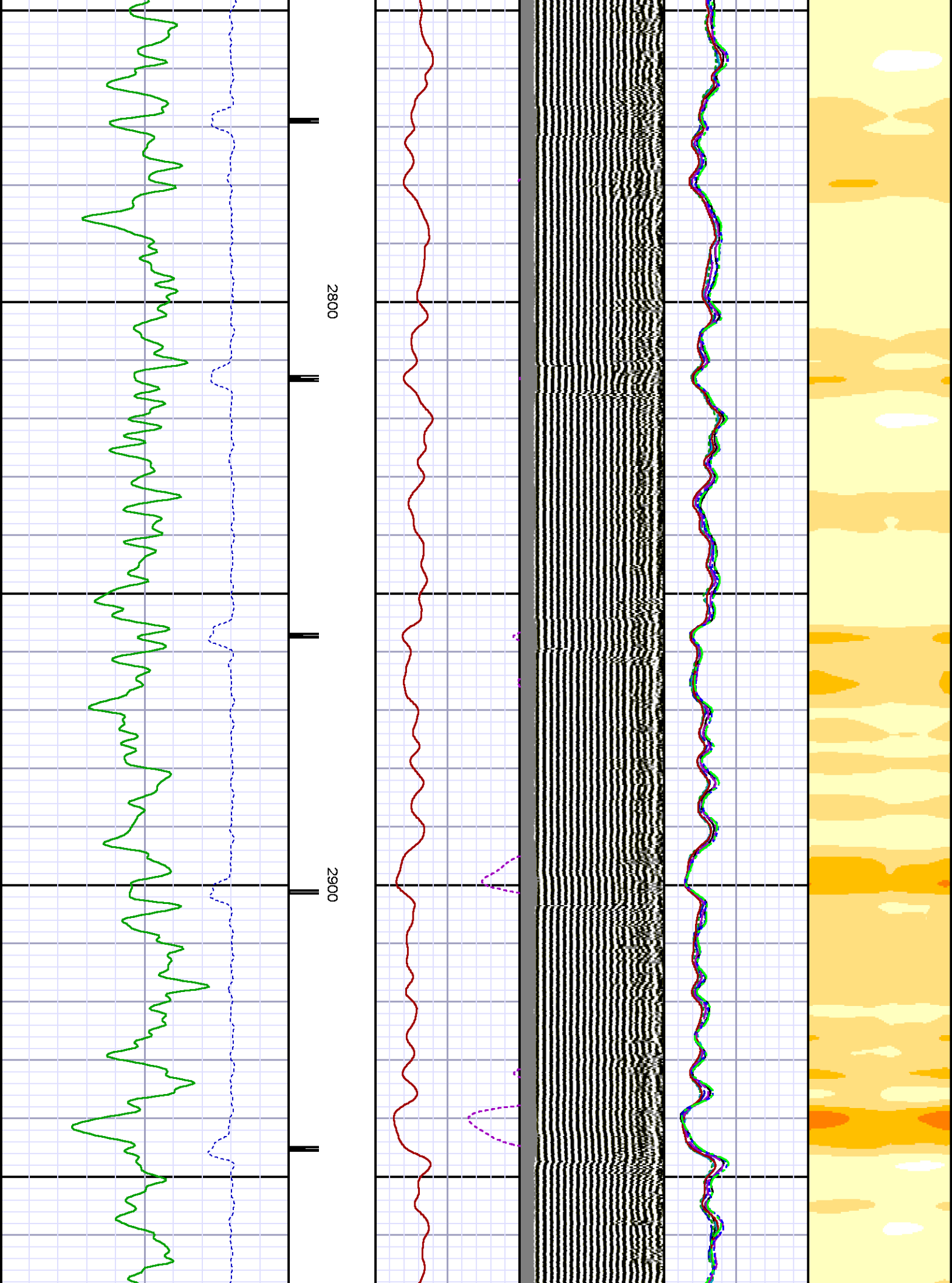


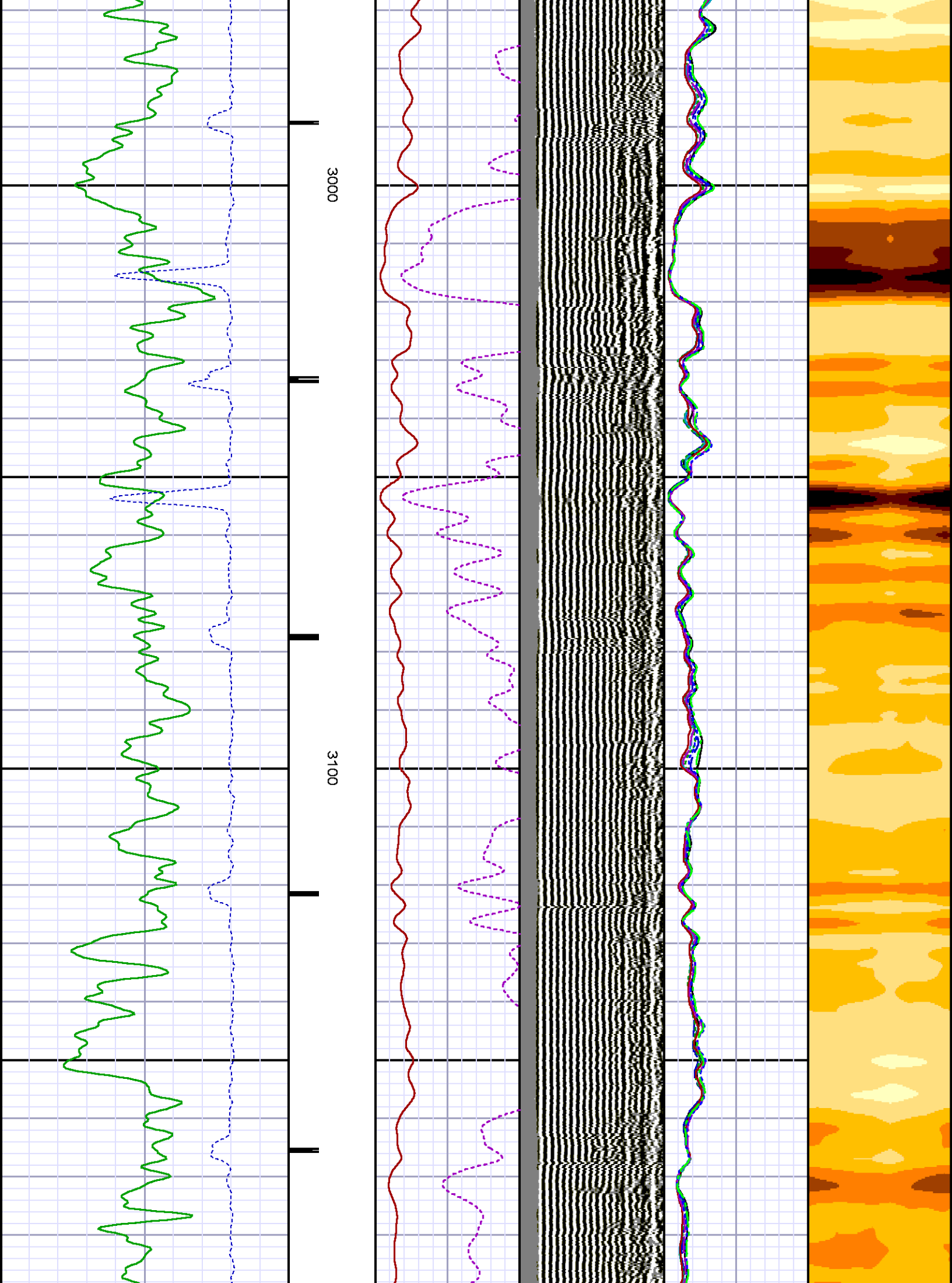


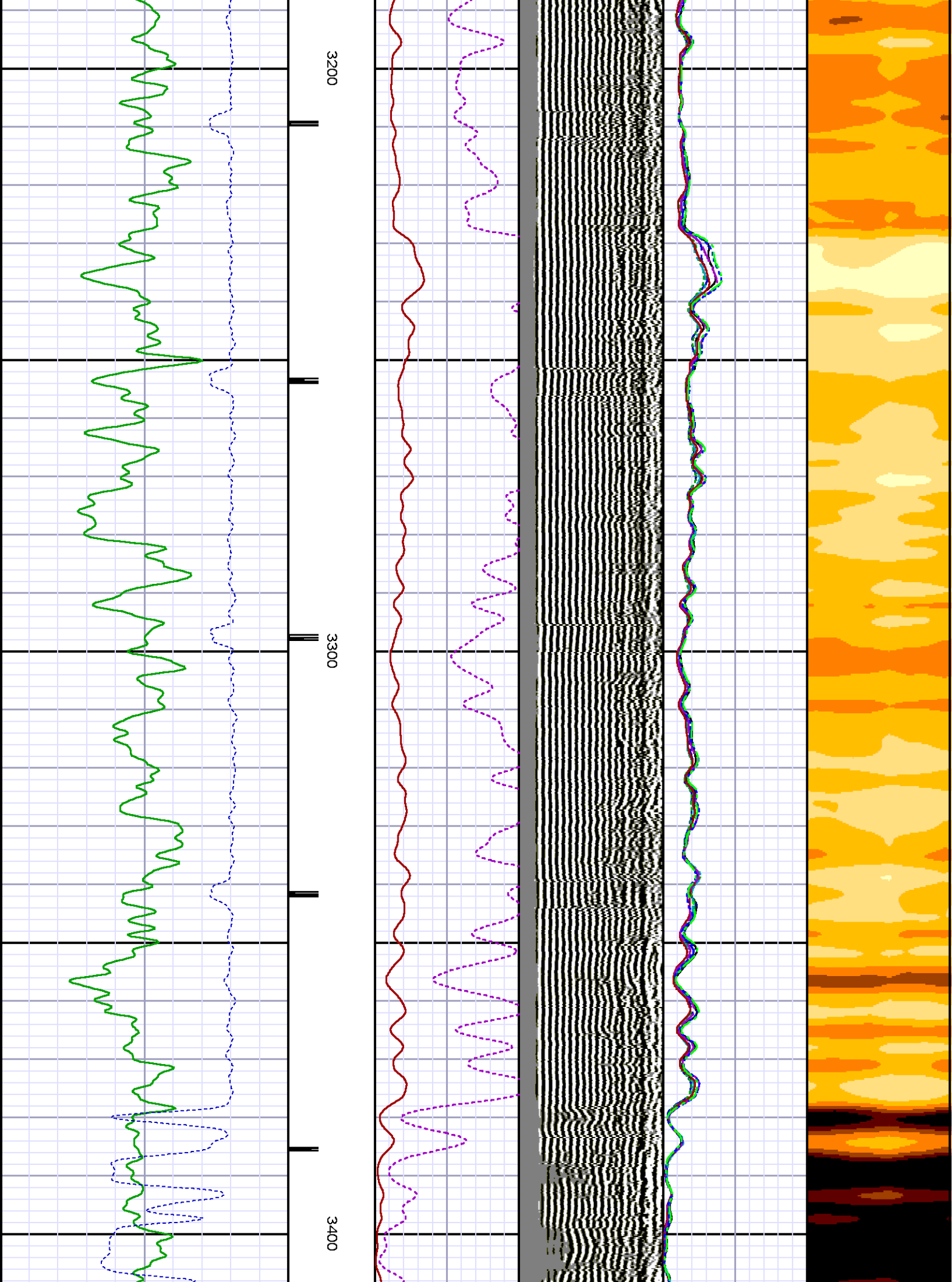


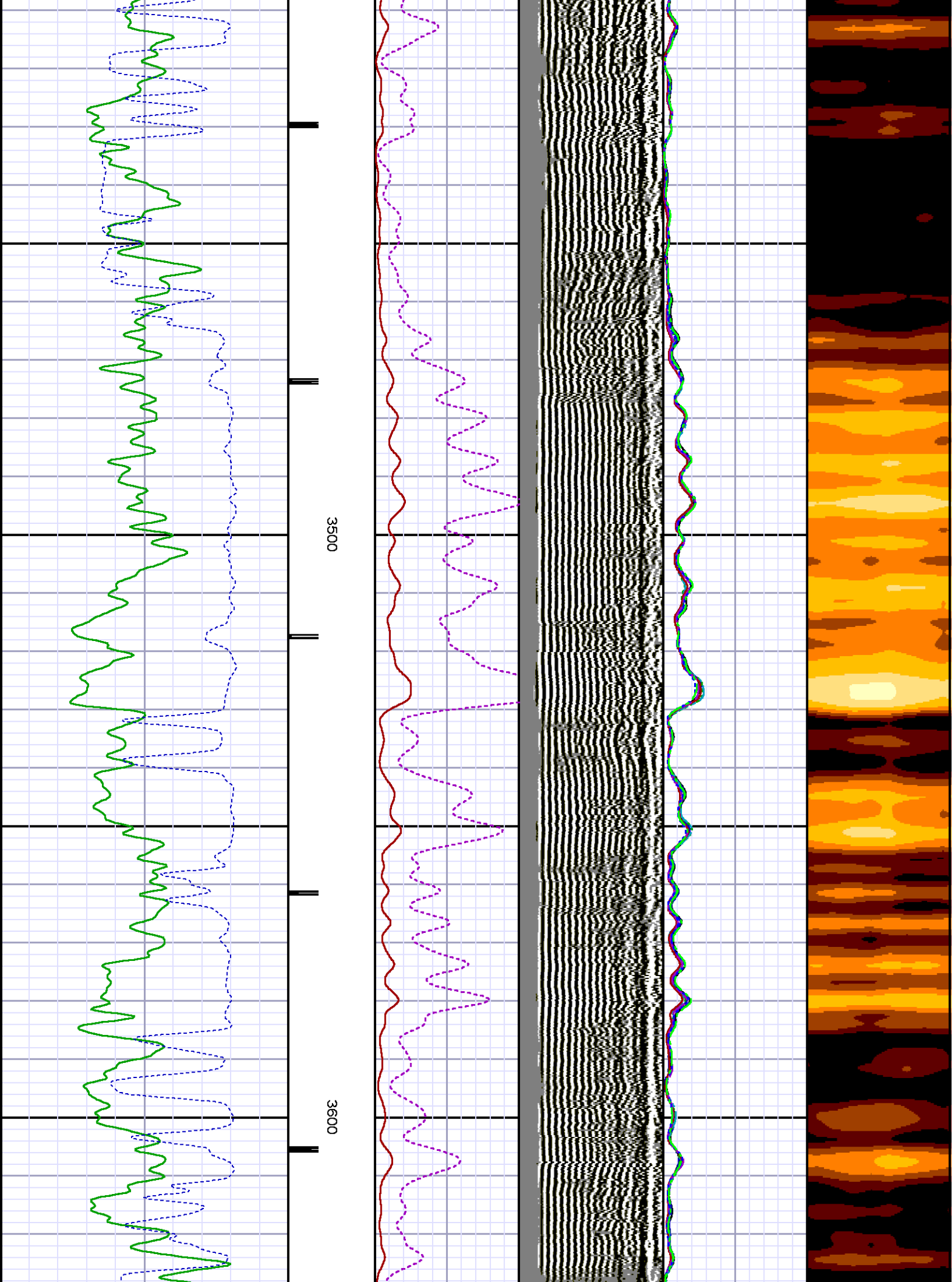


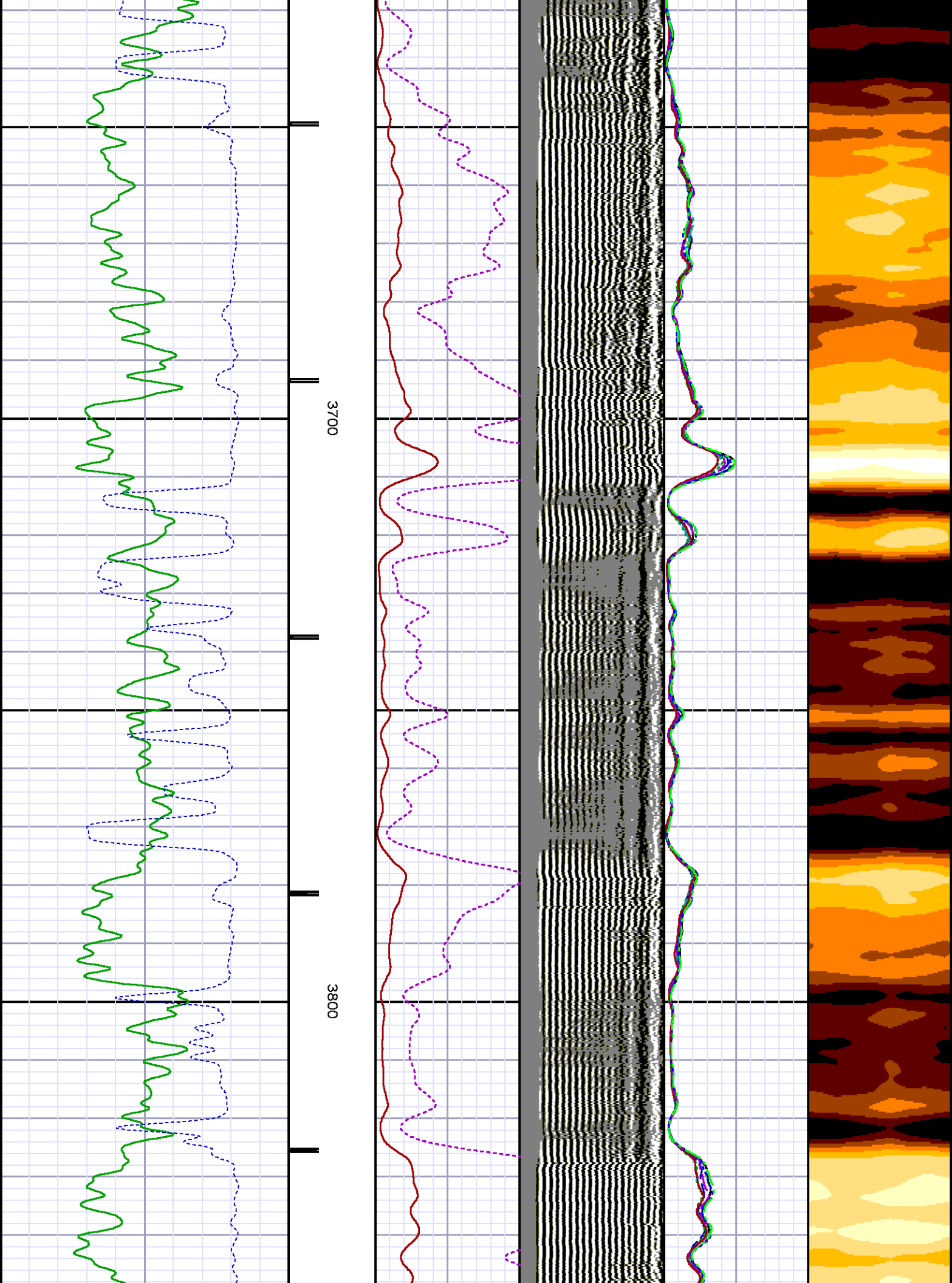


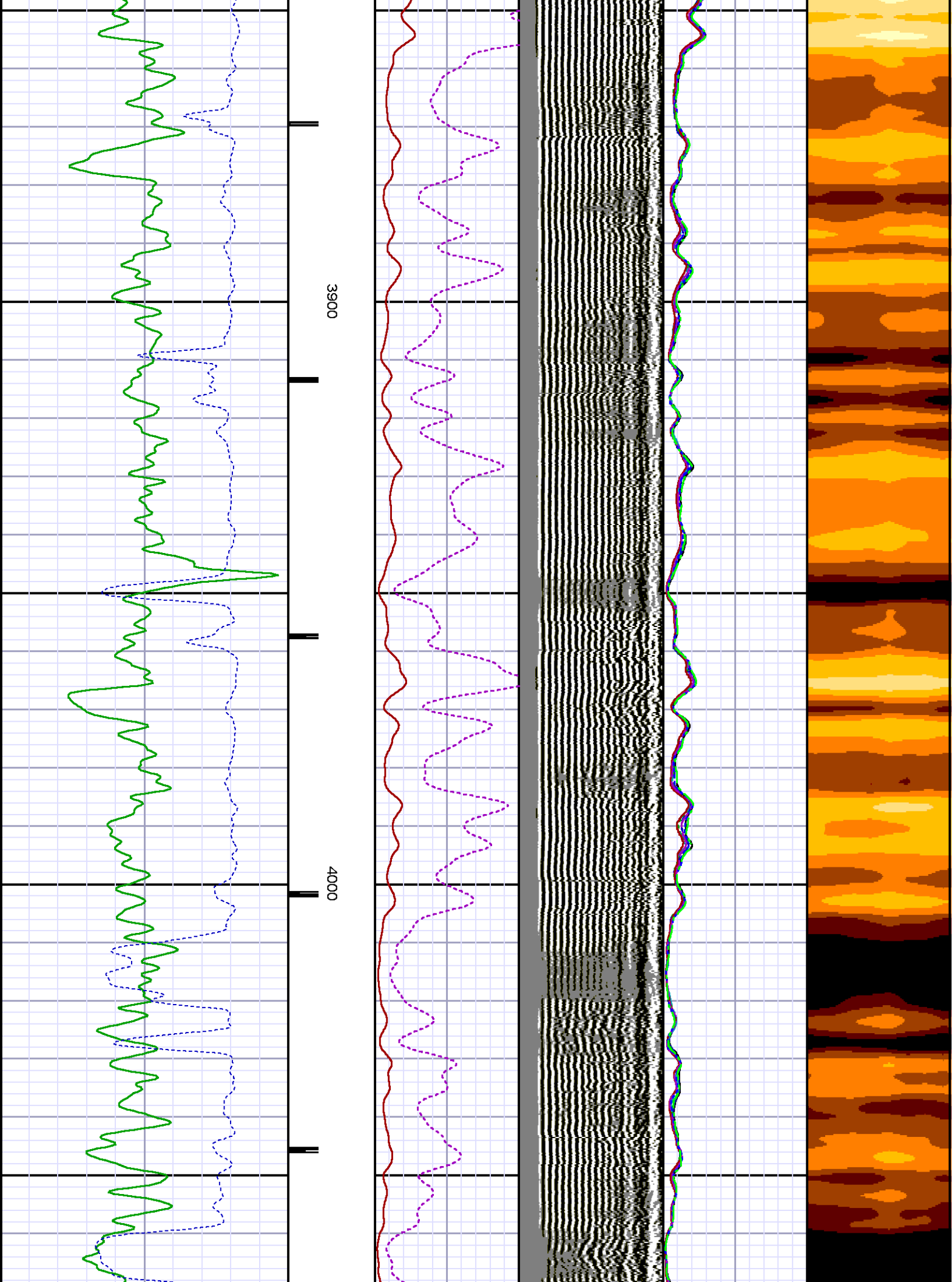


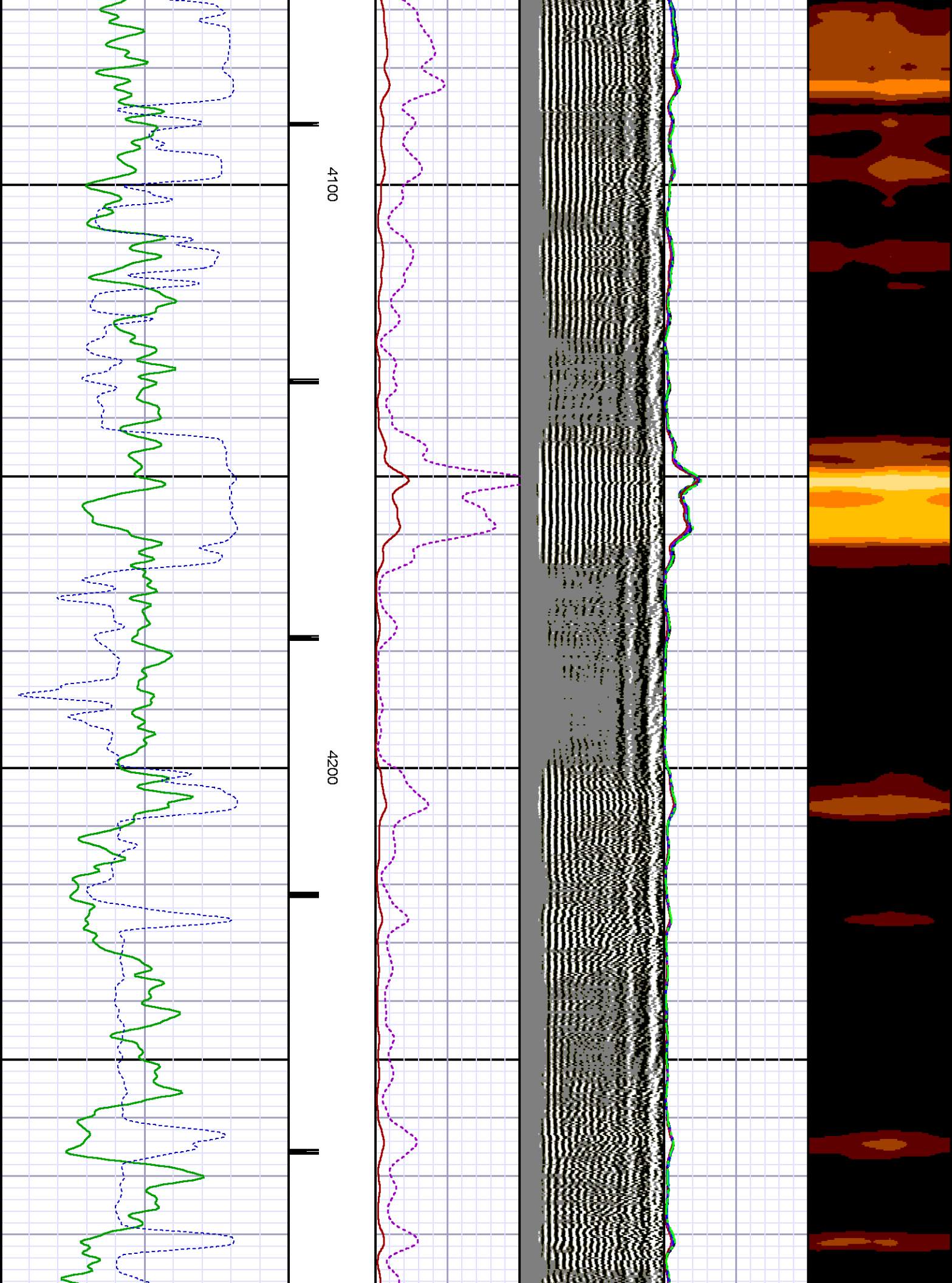


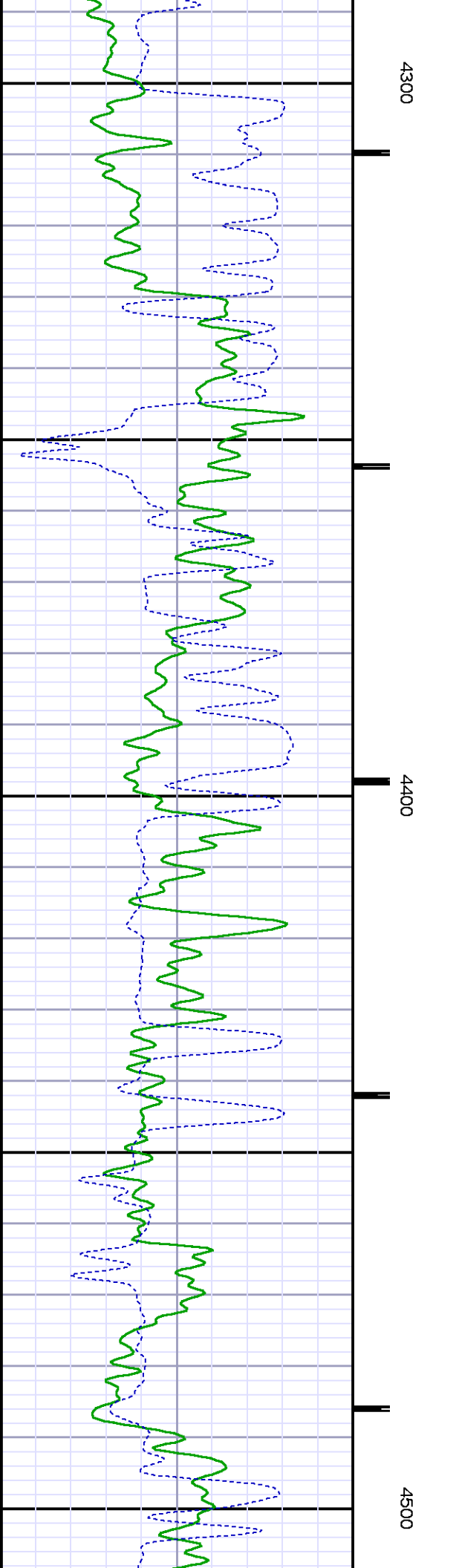
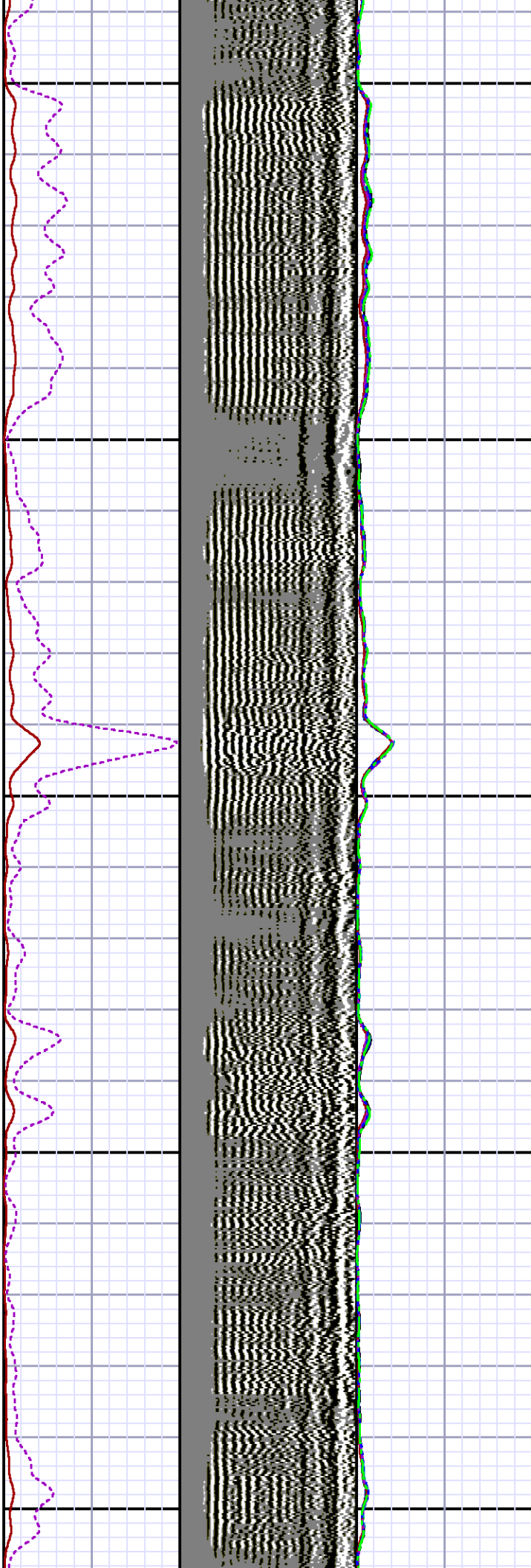
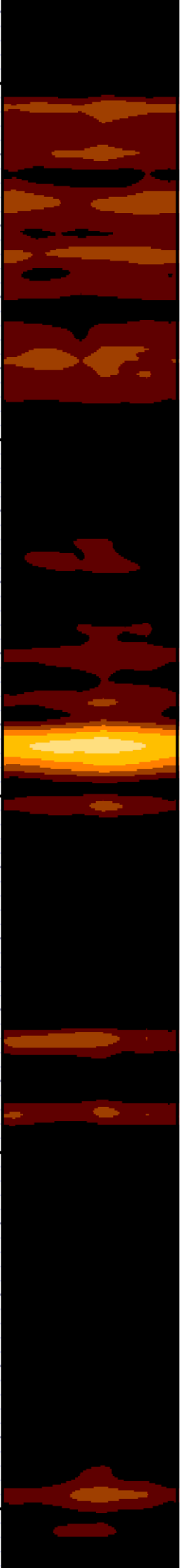


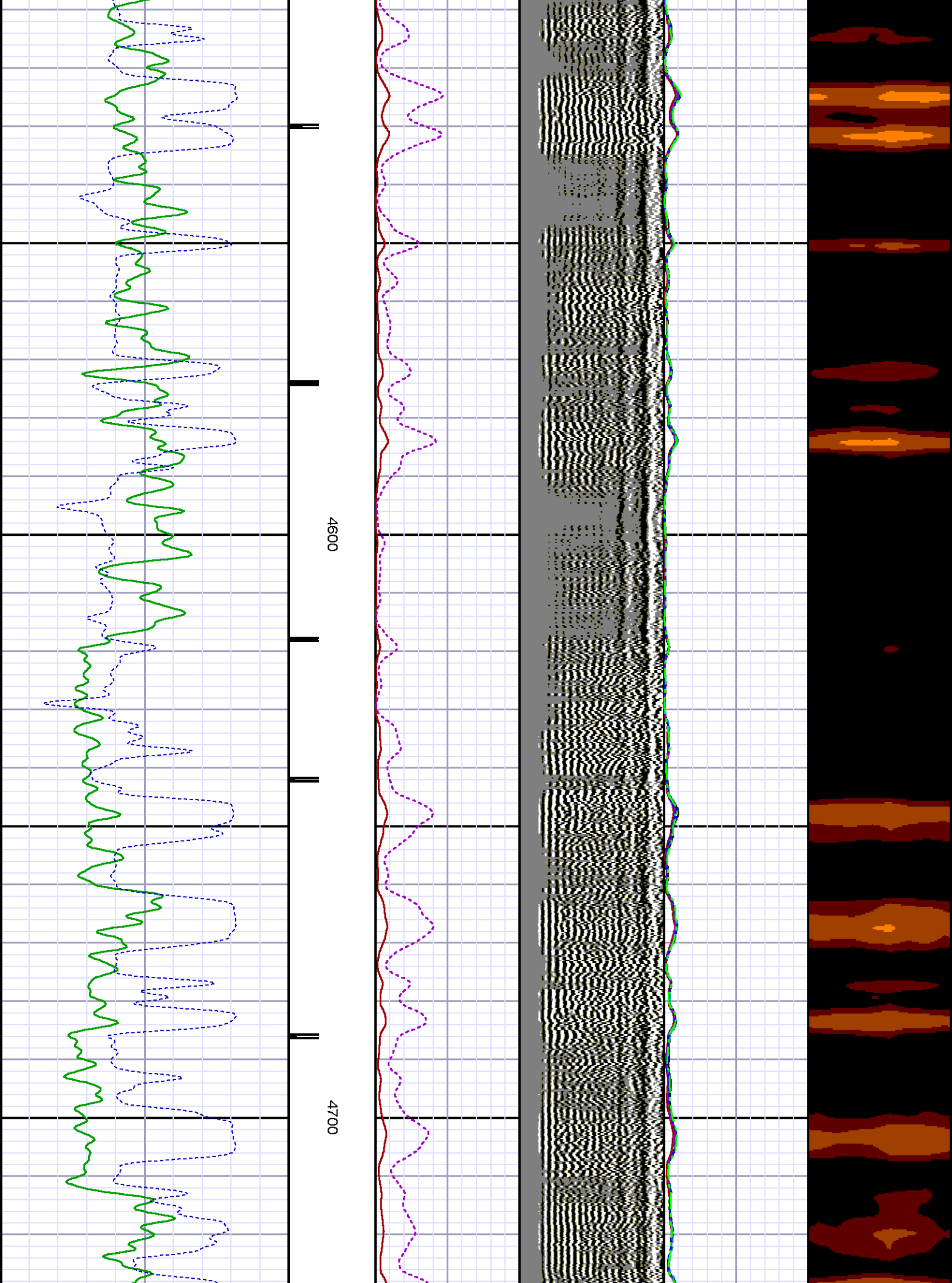


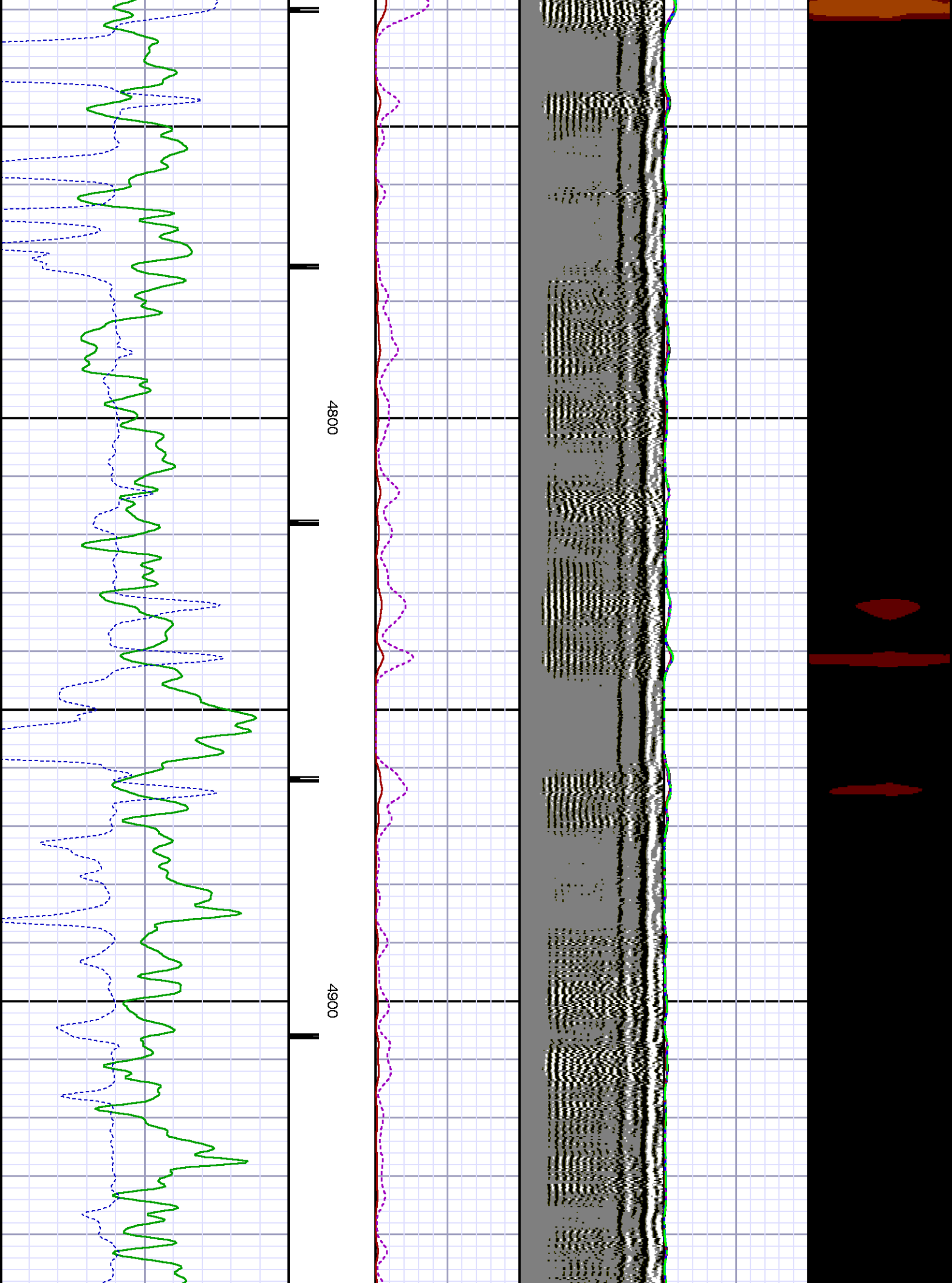


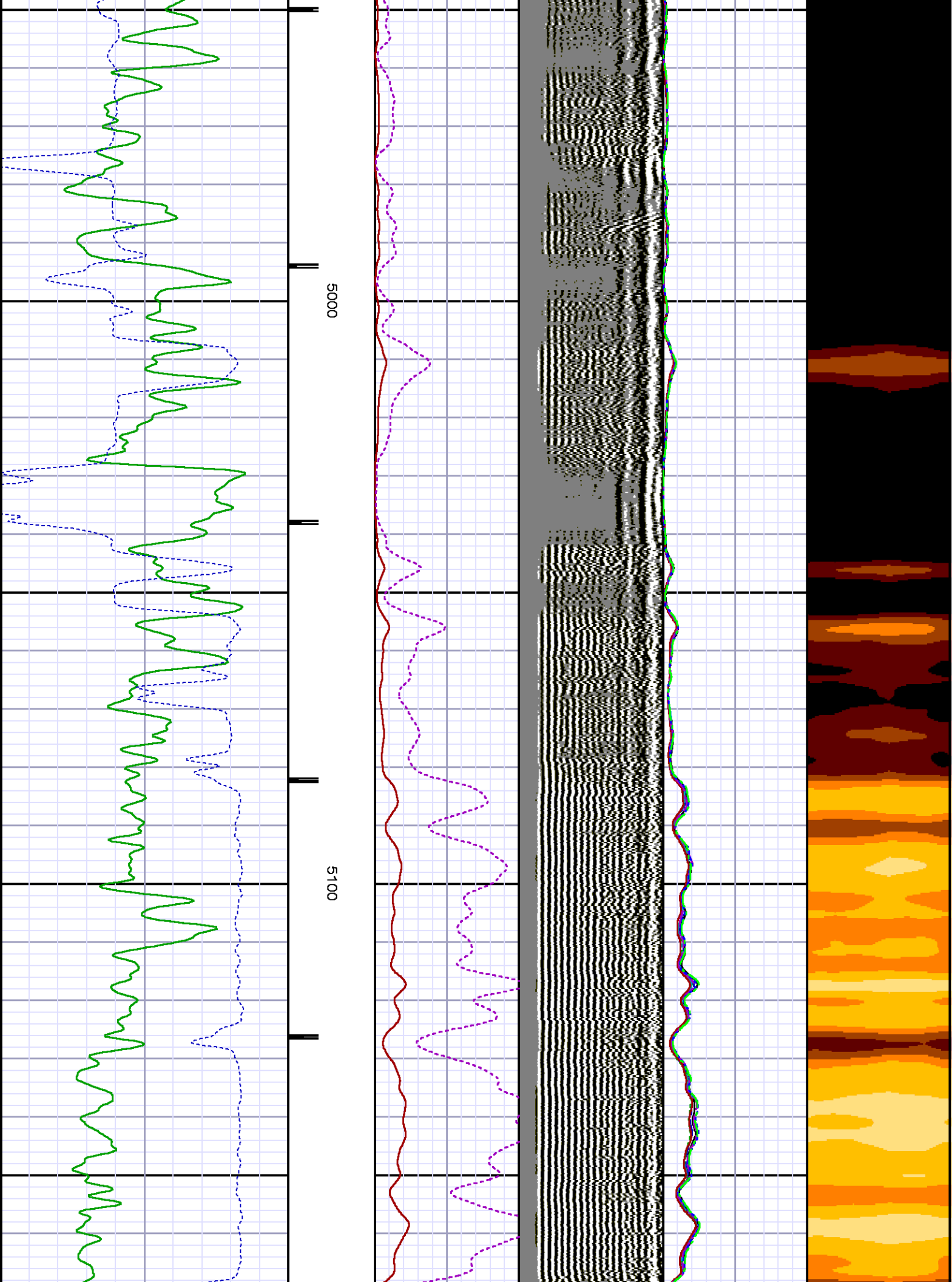


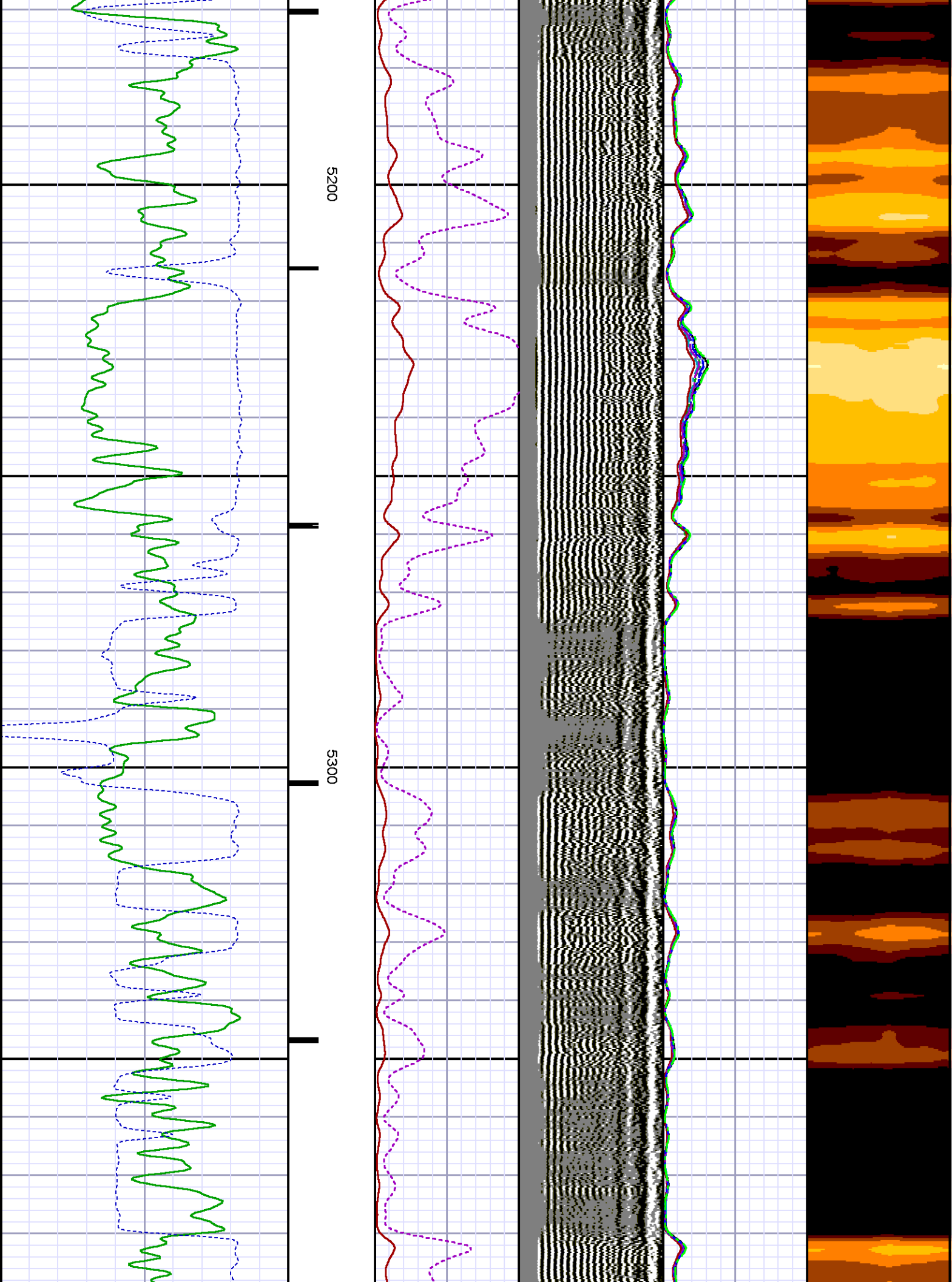


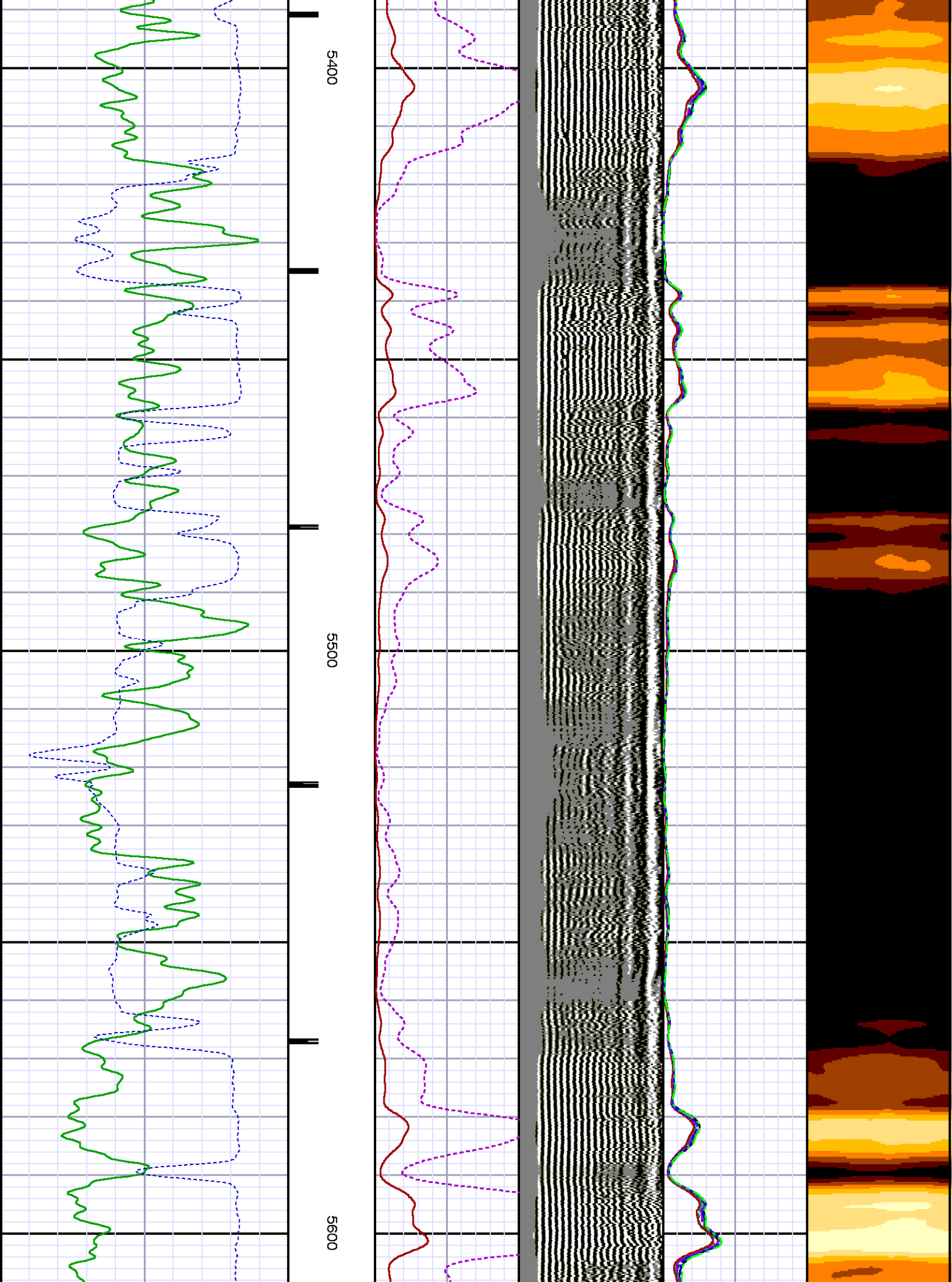


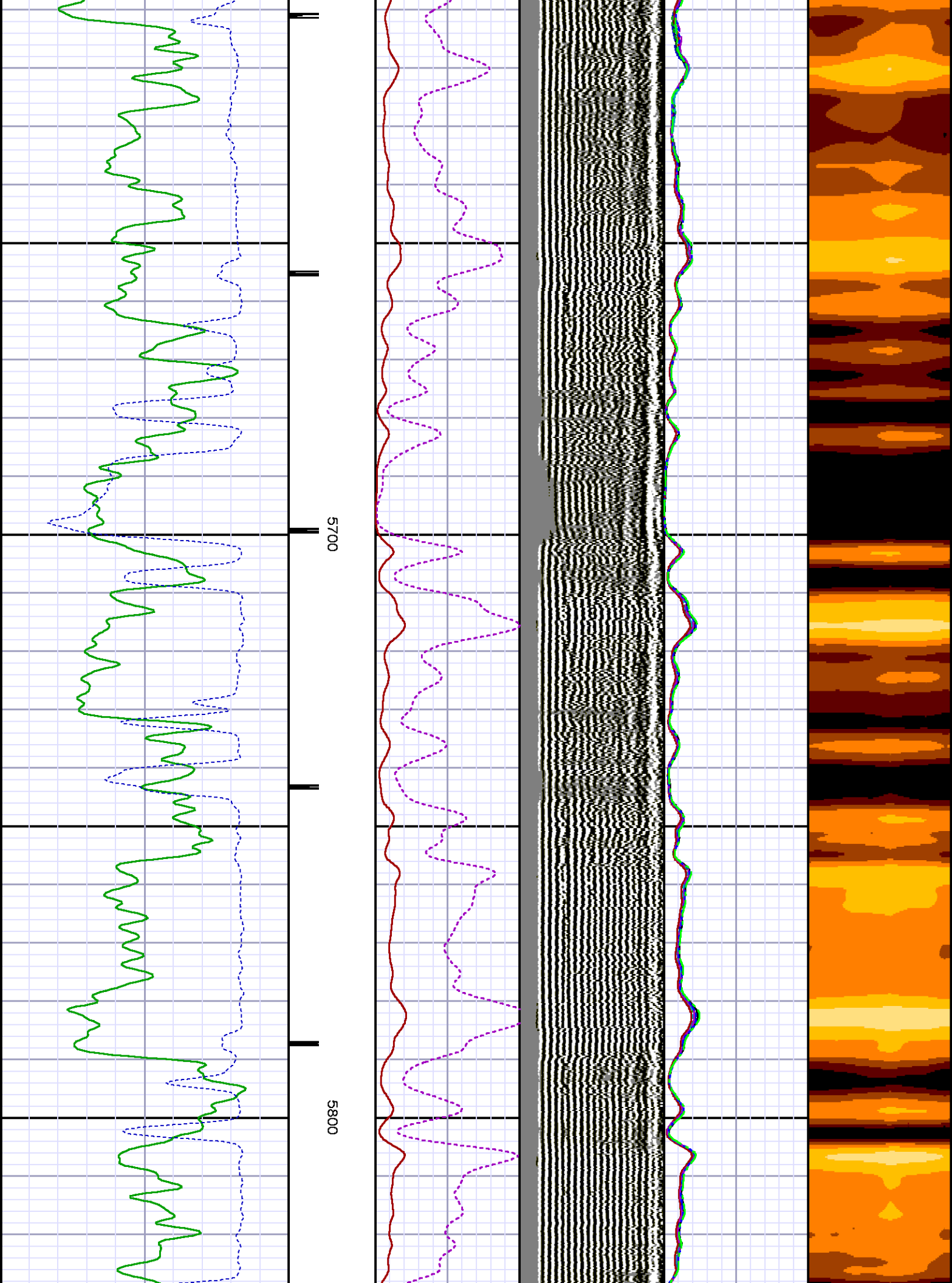


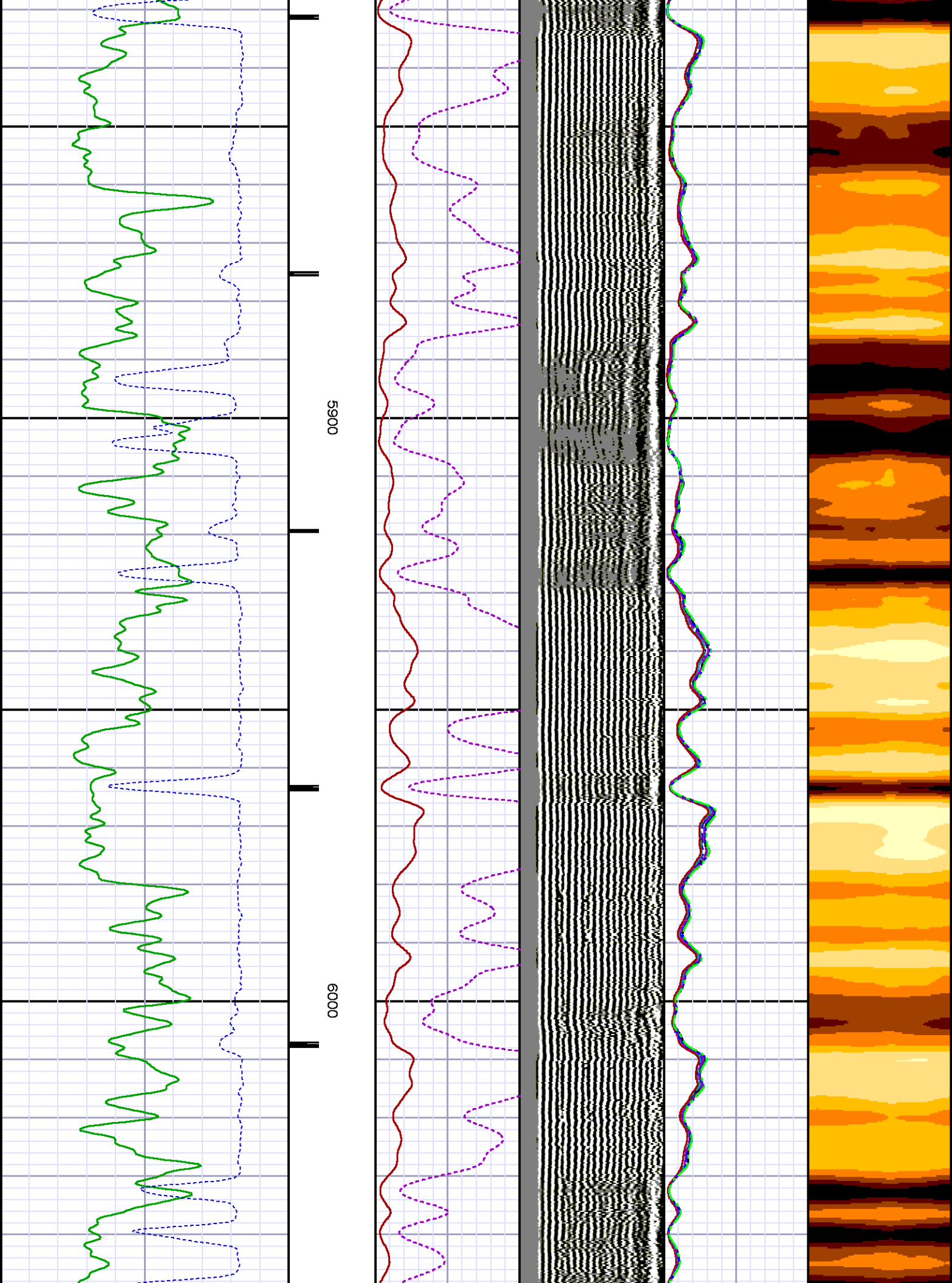


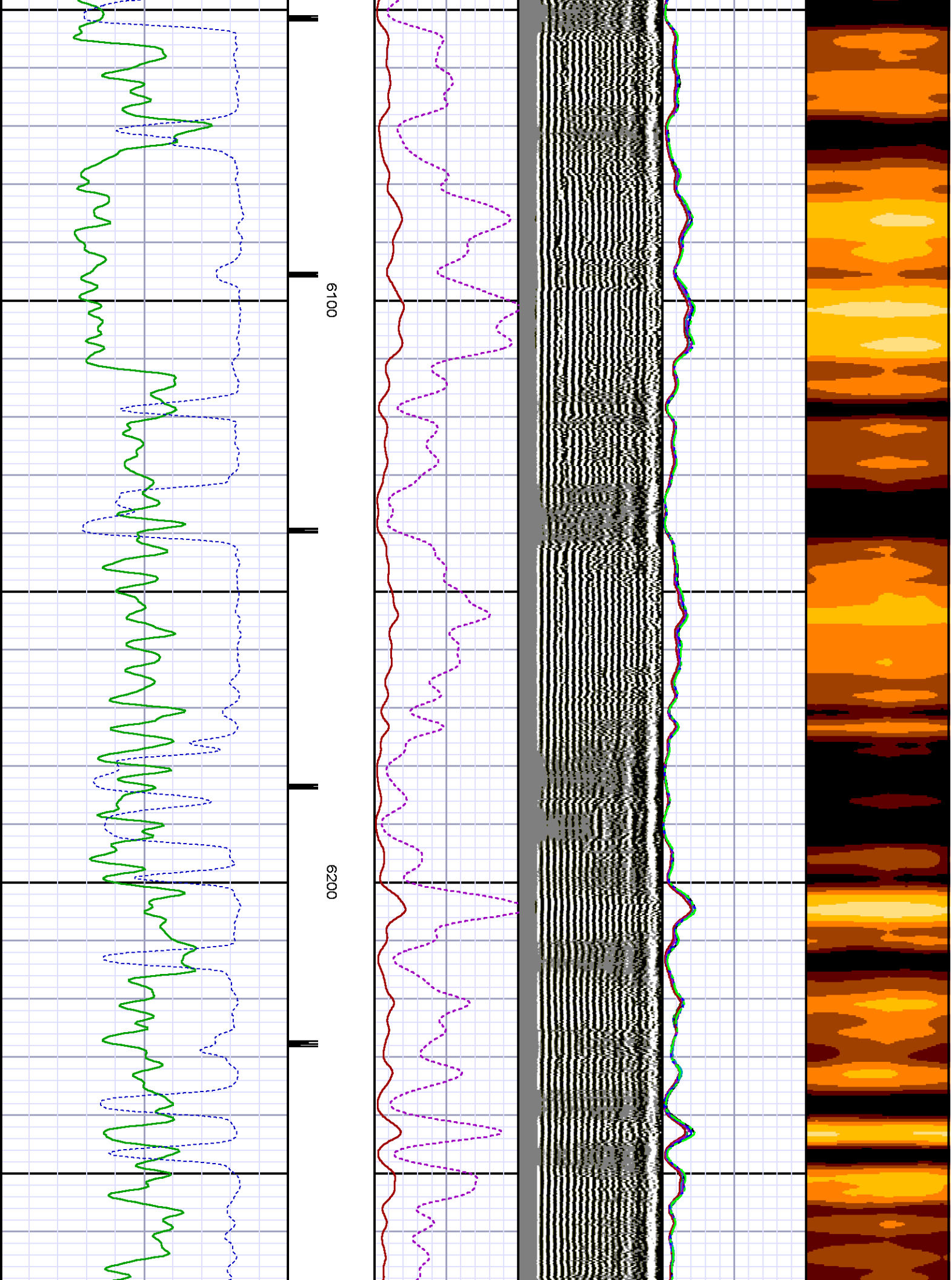


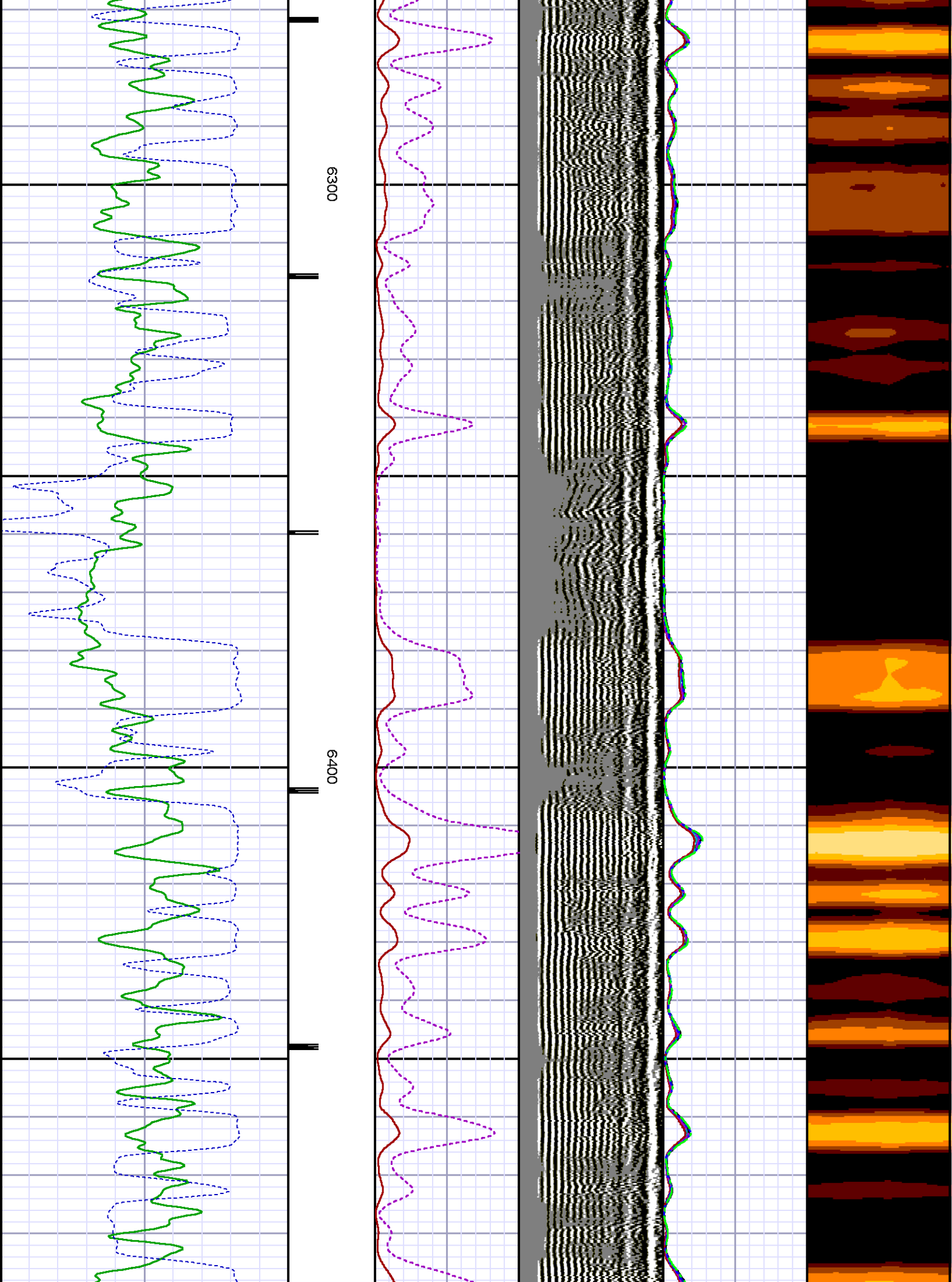


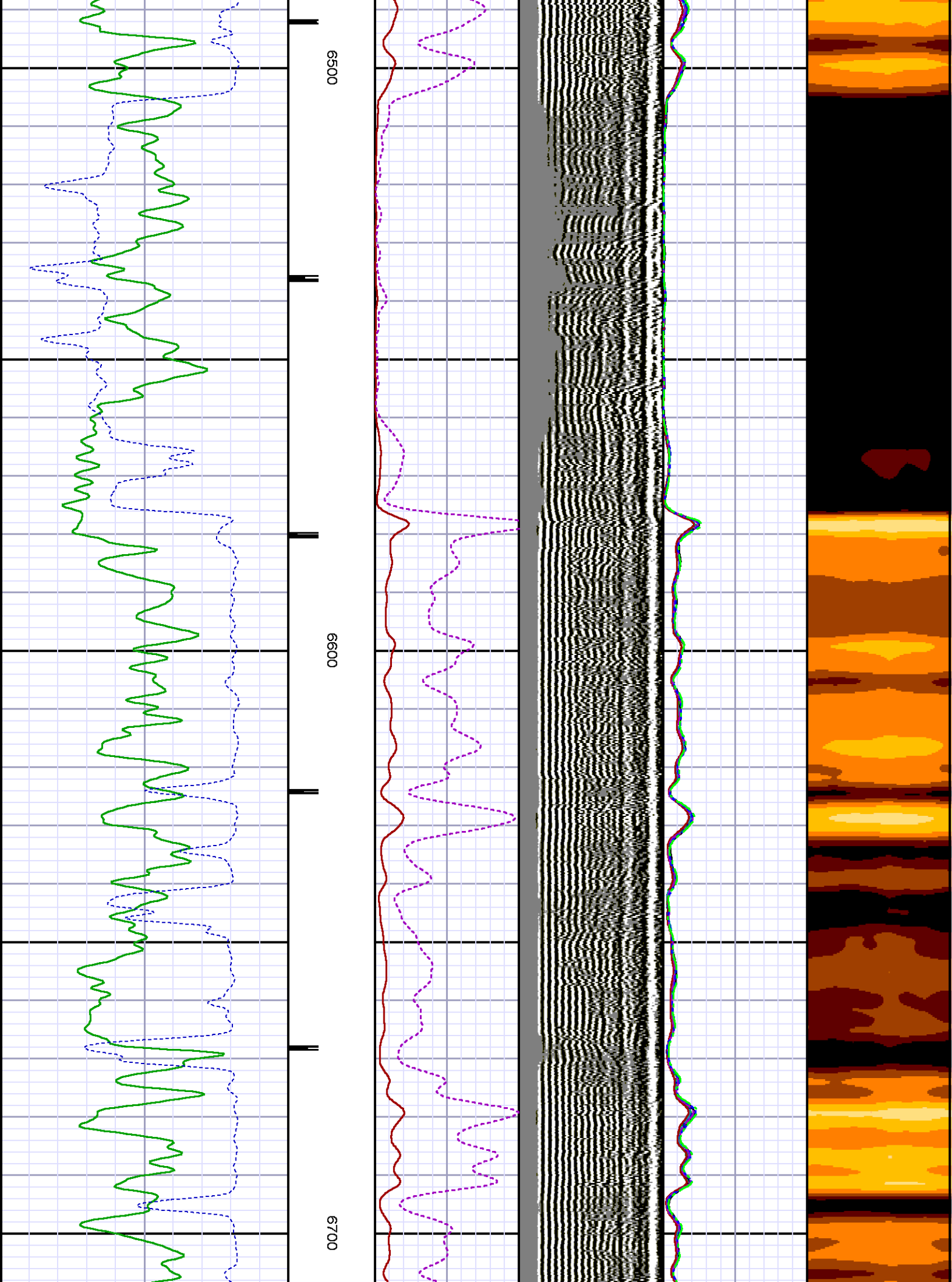


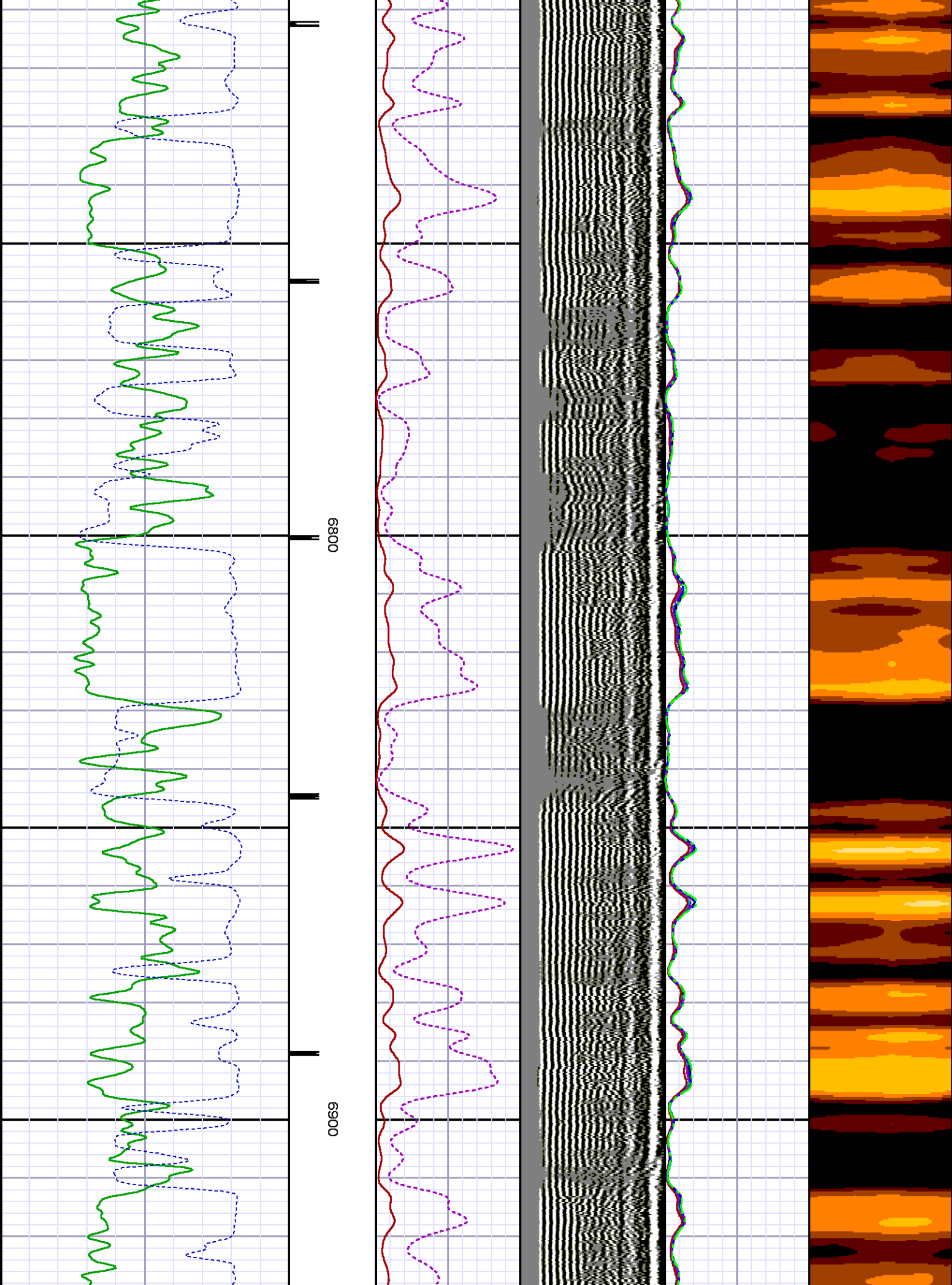


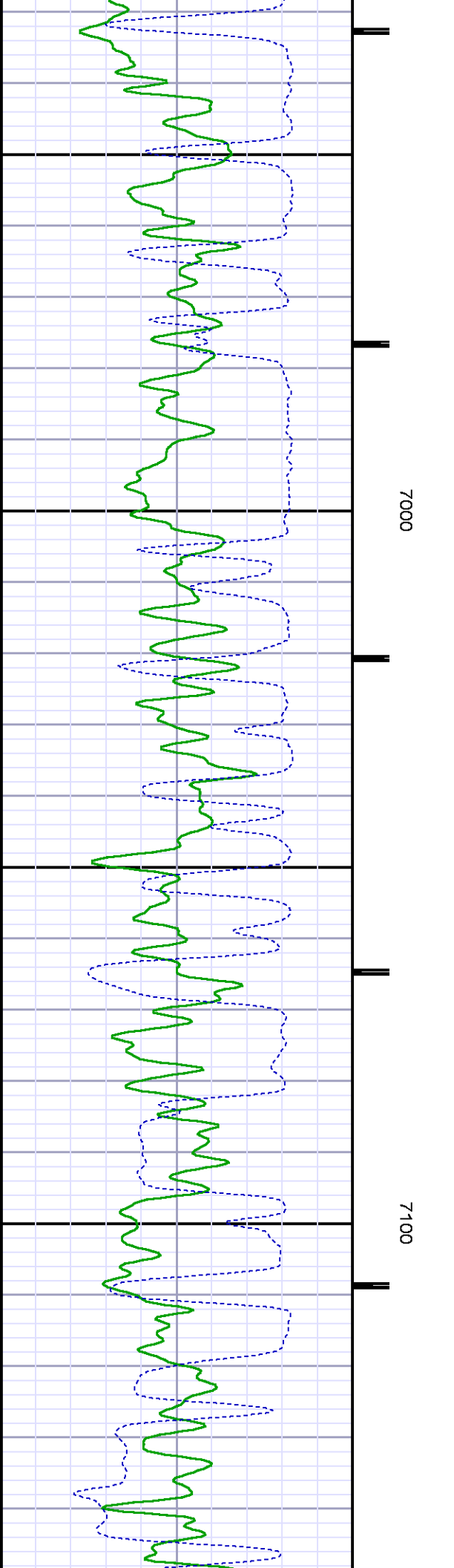
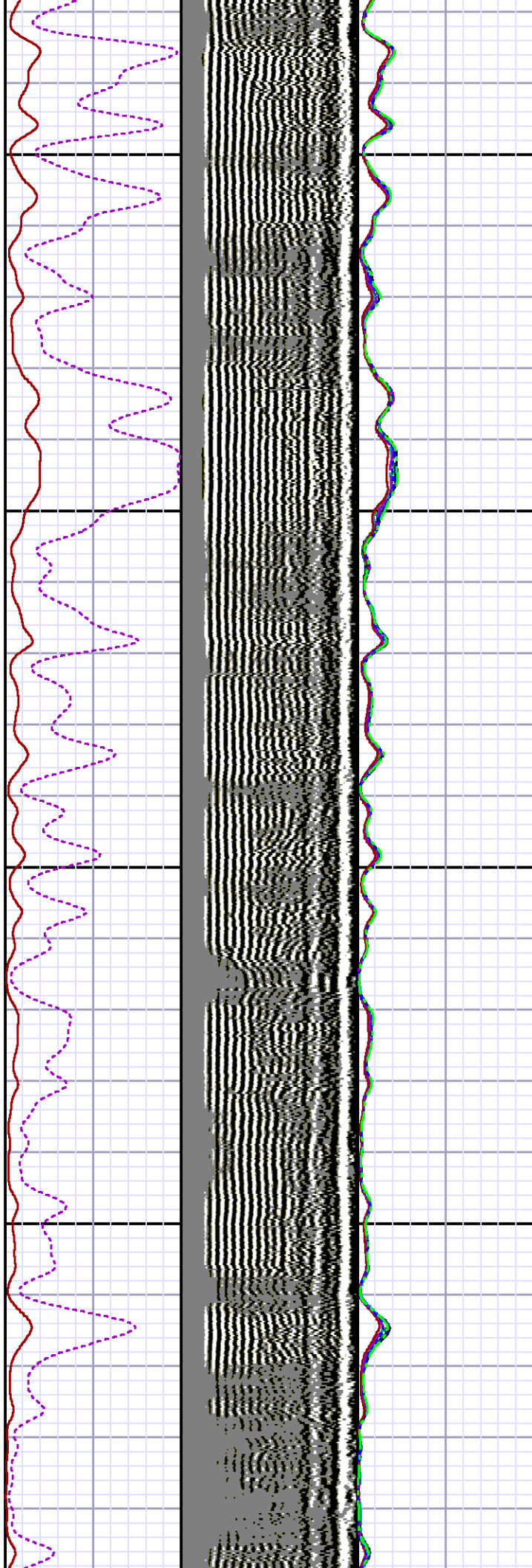
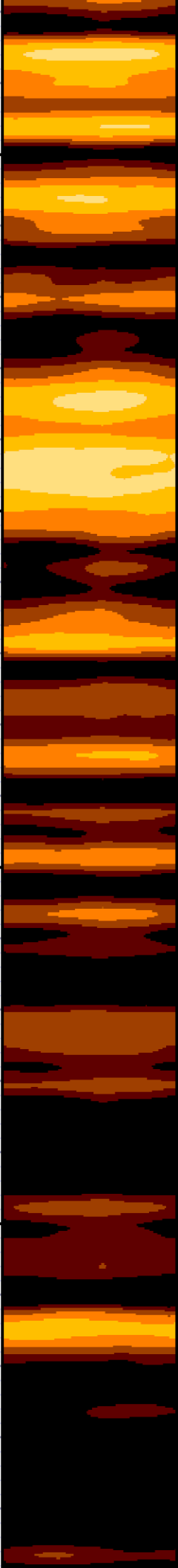


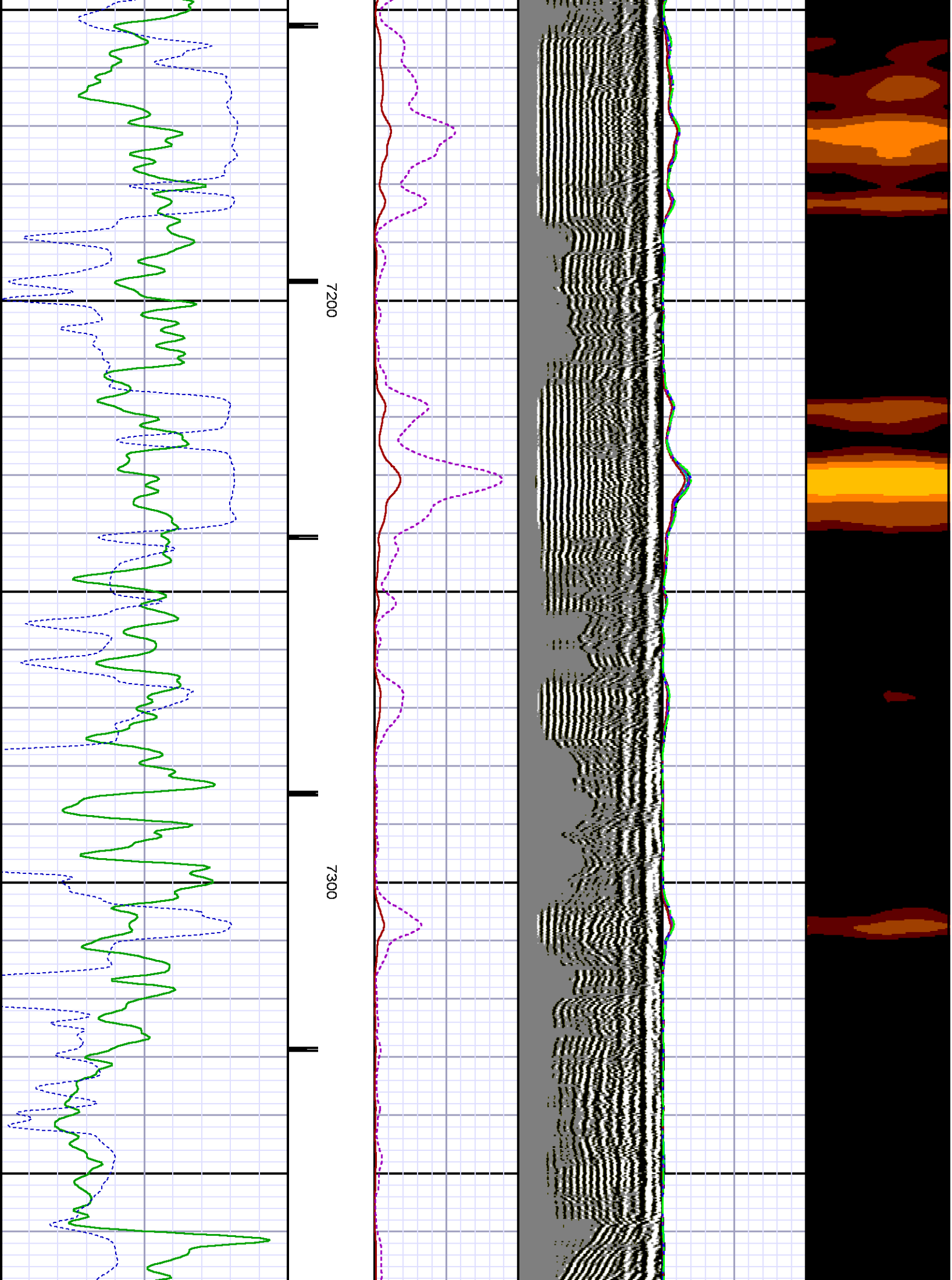


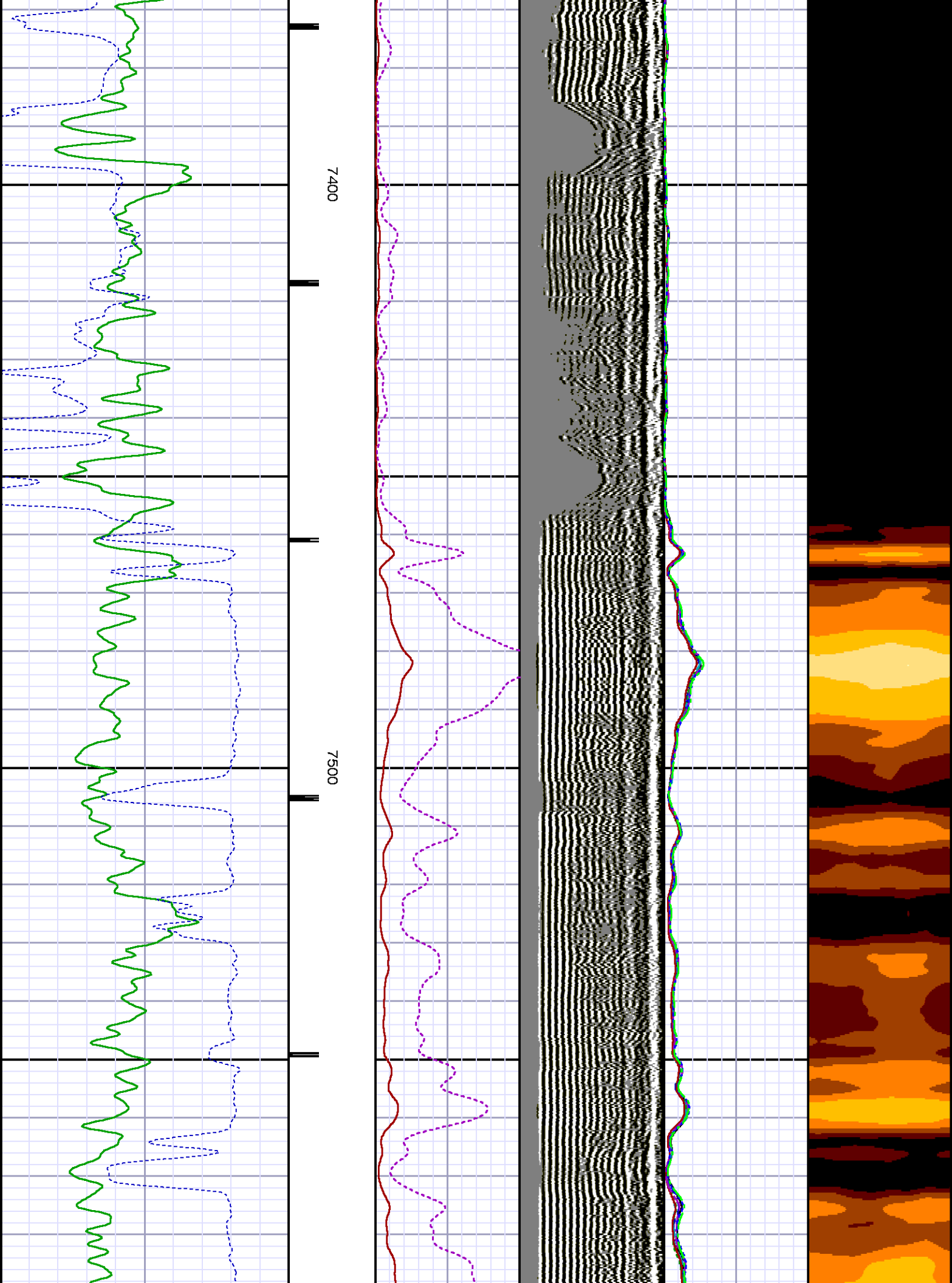


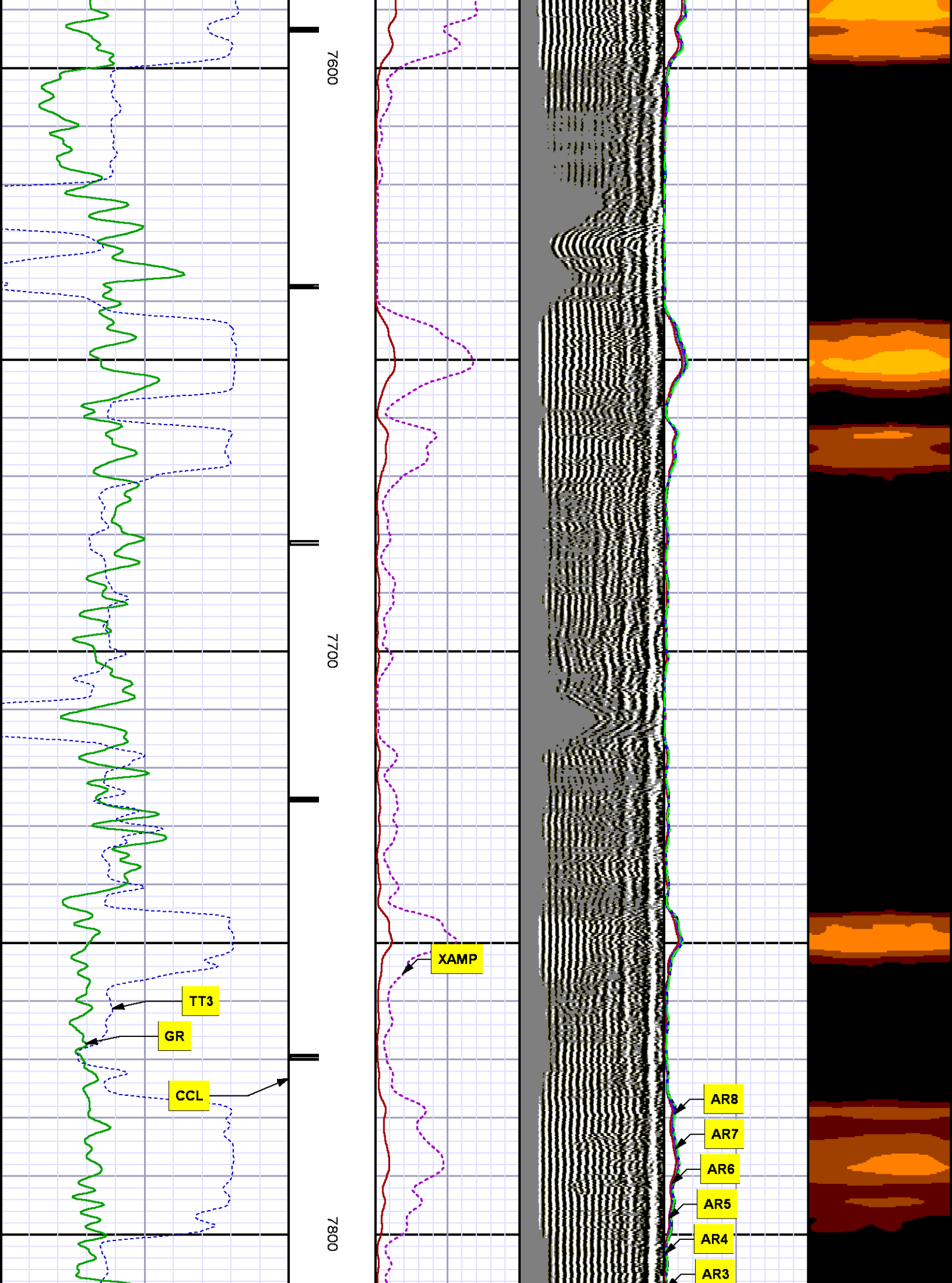


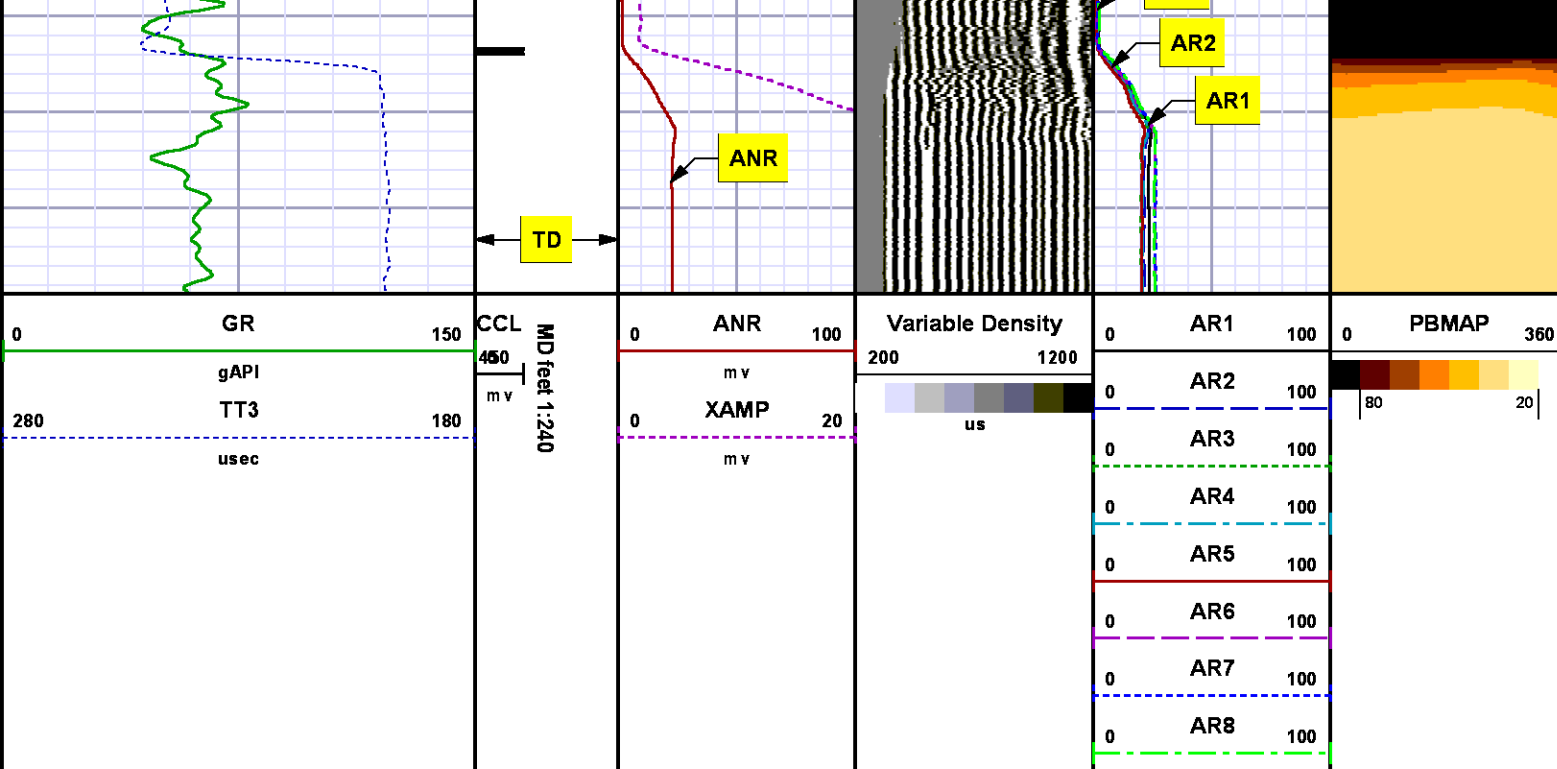












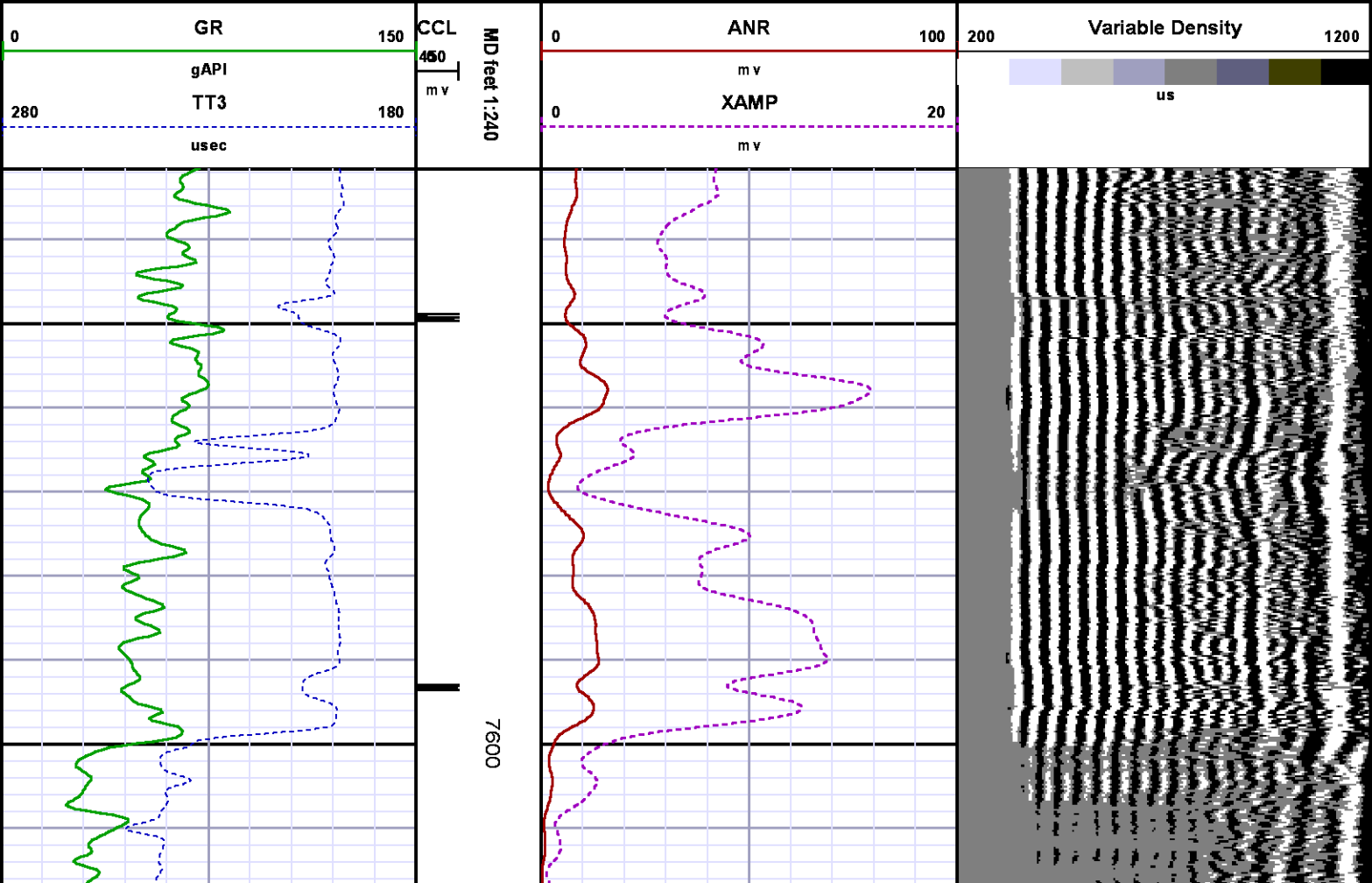
REPEAT SECTION
0 PSI

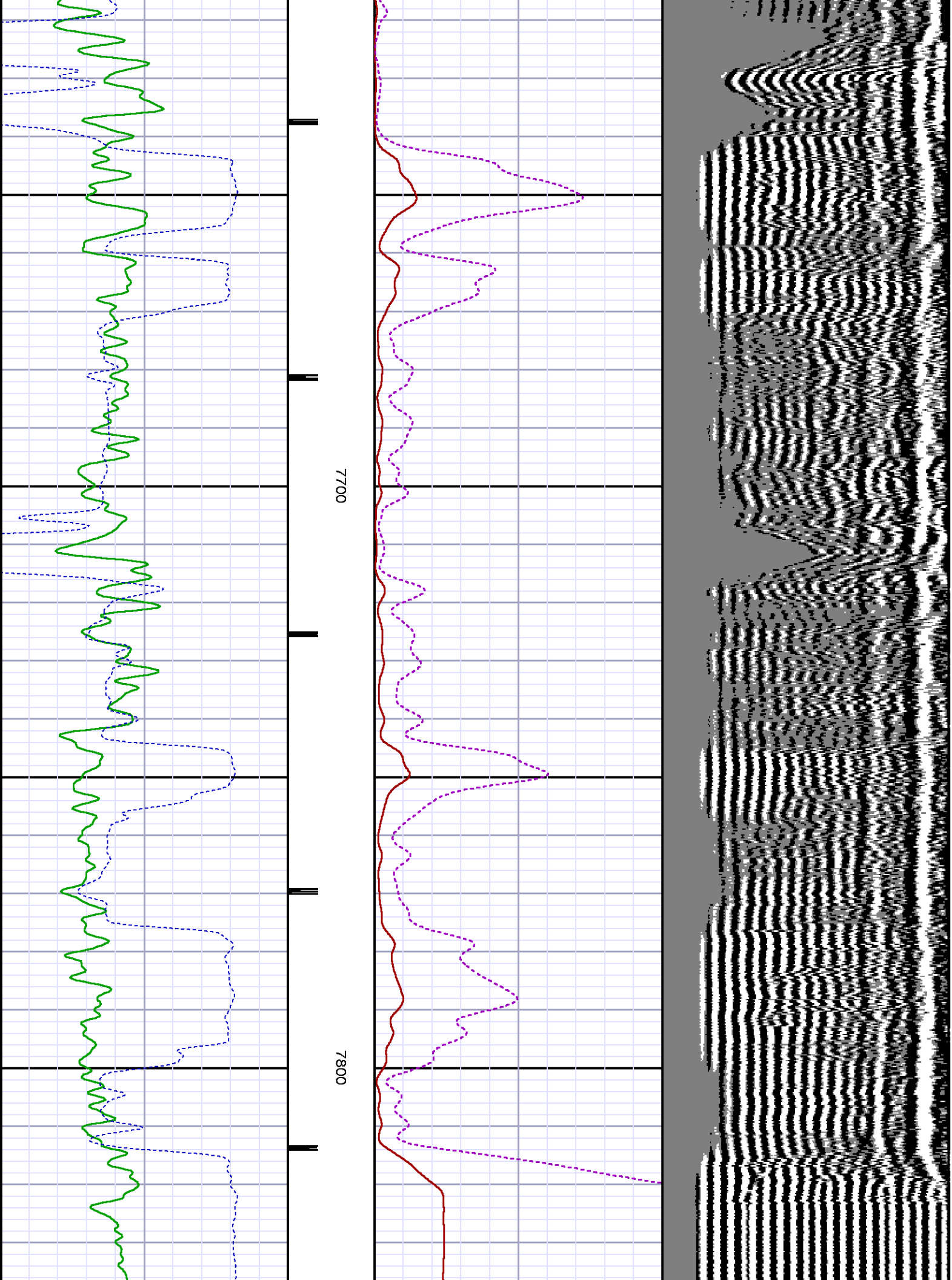
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	7531.280	7855.530
RAL	Amp Gate Start Near	195.000	u sec	7531.280	7855.530
RAL	Amp Gate Start Radial	195.000	u sec	7531.280	7855.530
RAL	Amp Gate Width Far	25.000	u sec	7531.280	7855.530
RAL	Amp Gate Width Near	25.000	u sec	7531.280	7855.530
RAL	Amp Gate Width Radial	25.000	u sec	7531.280	7855.530
RAL	casing od	4.500	inches	7531.280	7855.530
RAL	casing wt	11.600	lbm/ft	7531.280	7855.530
RAL	FB Start Far	291.900	u sec	7531.280	7855.530
RAL	FB Start Near	180.000	u sec	7531.280	7855.530
RAL	FB Start Radial	180.000	u sec	7531.280	7855.530
RAL	FB Thresh Far	10.000	mv	7531.280	7855.530
RAL	FB Thresh Near	4.000	mv	7531.280	7855.530
RAL	FB Thresh Radial	4.000	mv	7531.280	7855.530
RAL	Fluid Travel Time	200.000	u sec/ft	7531.280	7855.217

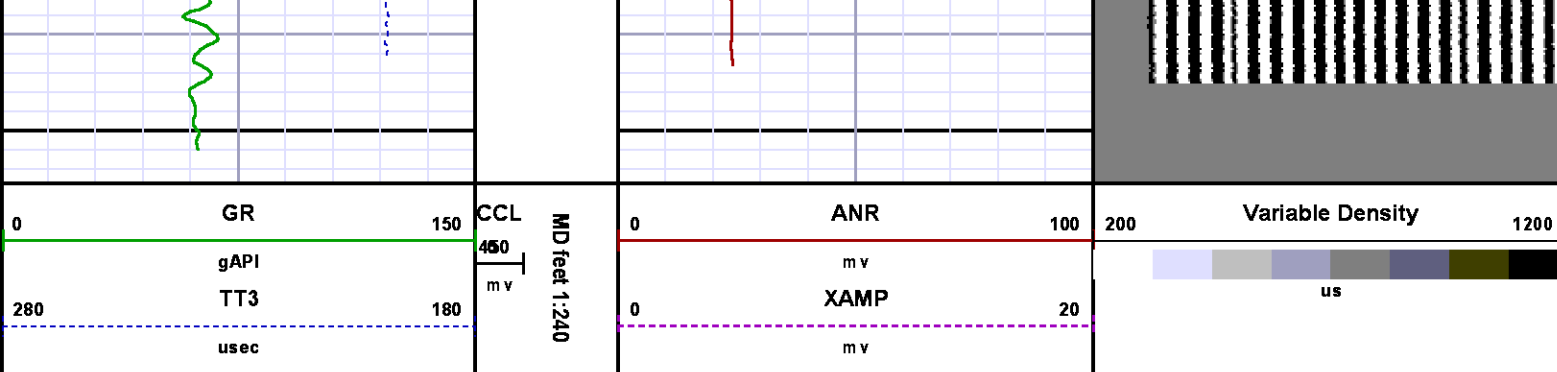
DEPTH OFFSETS
(for Acquired Curves)

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 : DUGGAN RWF 514 29
File Name : d:\welldata\wpx energy\lrwf 514-29\514ral\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 7531.53 - 7855.53 feet UP
Created : 7/10/2013 1:37:21 PM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\539JUL9_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Jul 09 08:18:49 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: JUL9

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	30	166	25	-0.355	100.00	0.17
3 Ft. Receiver	218	216	30	160	25	-2.106	100.00	0.17
5 Ft. Receiver	326	323	30	244	25	0.545	150.00	0.19
Radial #1	219	216	30	147	25	0.536	100.00	0.17
Radial #2	219	216	30	147	25	0.302	100.00	0.17
Radial #3	219	216	30	147	25	-0.102	100.00	0.17
Radial #4	218	216	30	147	25	-0.277	100.00	0.17
Radial #5	218	216	30	147	25	-0.133	100.00	0.17
Radial #6	217	216	30	147	25	-0.306	100.00	0.17
Radial #7	216	216	30	147	25	-0.215	100.00	0.17
Radial #8	219	216	30	147	25	-0.374	100.00	0.17

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\539JUL9 fld.cal

WELLSITE CALIBRATION SUMMARY

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	-0.060	0.000	1.00	100.000
3 Ft. Receiver	200	30	-2.491			
5 Ft. Receiver	317	30	-3.283			
Radial #1	200	30	-4.083			
Radial #2	200	30	-3.268			
Radial #3	200	30	-3.495			
Radial #4	200	30	-3.553			
Radial #5	200	30	-5.091			
Radial #6	200	30	-3.649			
Radial #7	200	30	-3.686			
Radial #8	200	30	-3.697			

GAMMA RAY

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

CALIBRATION SUMMARY

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

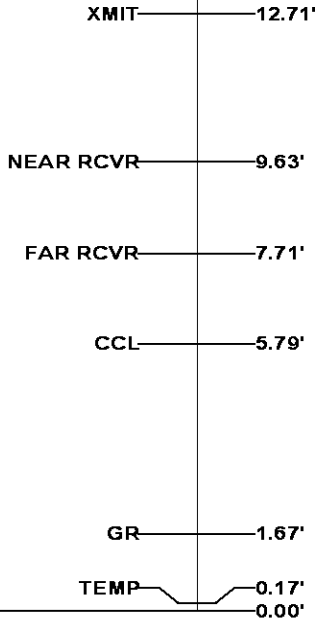
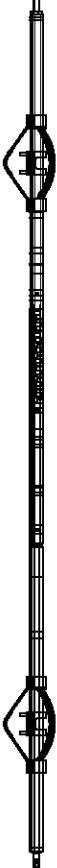
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	140.71	580.31	0.410	57.71	237.98	180.28


TOOL DIAGRAM

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>  <div> <div>BAKER</div> <div>HUGHES</div> </div> </div> <div> <div>Baker Atlas</div> <div>CASE</div> </div>	Company	WPX ENERGY		File No:	CH074539
	Well	DUGGAN RWF 514-29		API No:	05045216630000
	Field	RULISON			
	County	GARFIELD	State	COLORADO	
Location		Elevations			
SHL: 507' FSL X 602' FWL		KB 5441 ft		29 6S 94W	
BHL: 244' FSL X 728' FWL		DF		RWF 14-29 PAD	
SEC 29 TWP 6S RGE 94W		GL 5415 ft		NABORS 573	