



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: GH078889	Company Well Field County	WPX ENERGY WPX ENERGY RWF 341-4 RULISON GARFIELD	State COLORADO
API No: 06046220820000	Location SHL: 410' FNL X 1668' FEL BHL: 844' FNL X 1328' FEL (SENE) SEC 4 TWP 7S RGE 94W		Other Services RPM
4 7S 94W RMV 108-4 PAD NABORS 674	Permanent Datum Log Measured From Drill Measured From		Elevations KB 5820 ft DF GL 5794 ft
OL KB KELLY BUSHING		Elevation 26 ft Above P. D.	

Date	16/OCT/13	
Run	ONE	
Service Order	US624011	
Depth Driller	8019 ft	
Depth Logger	7993 ft	
Bottom Logged Interval	7983 ft	
Top Logged Interval	26 ft	
Time Started	0800	
Time Finished	1130	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	69 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	228 degF	
Reference Log	BAKER HUGHES HDIL	
Reference Log Date	02/OCT/13	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	CHRIS	

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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	1105 ft
8.75 in	1105 ft	8019 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1105 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8019 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 10/2/2013 at the clients request.
The amount of linear shift is 3 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.

BHT = 228°F

SJ = 4626'-4650'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218495	CENT
1	1	GR/CCL	1355XA	10580209	CENT

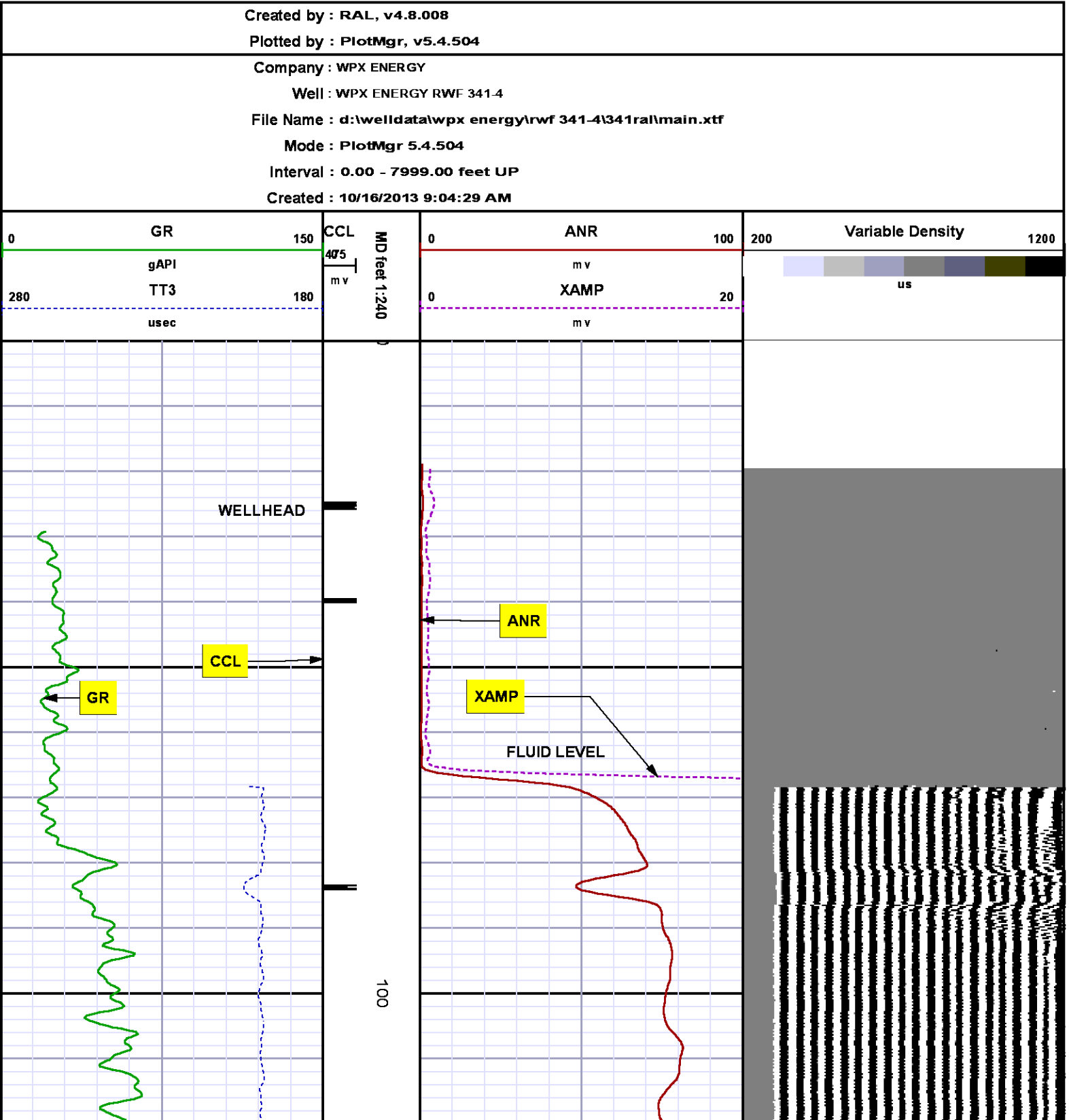
PRIMARY PRESENTATION
0 PSI

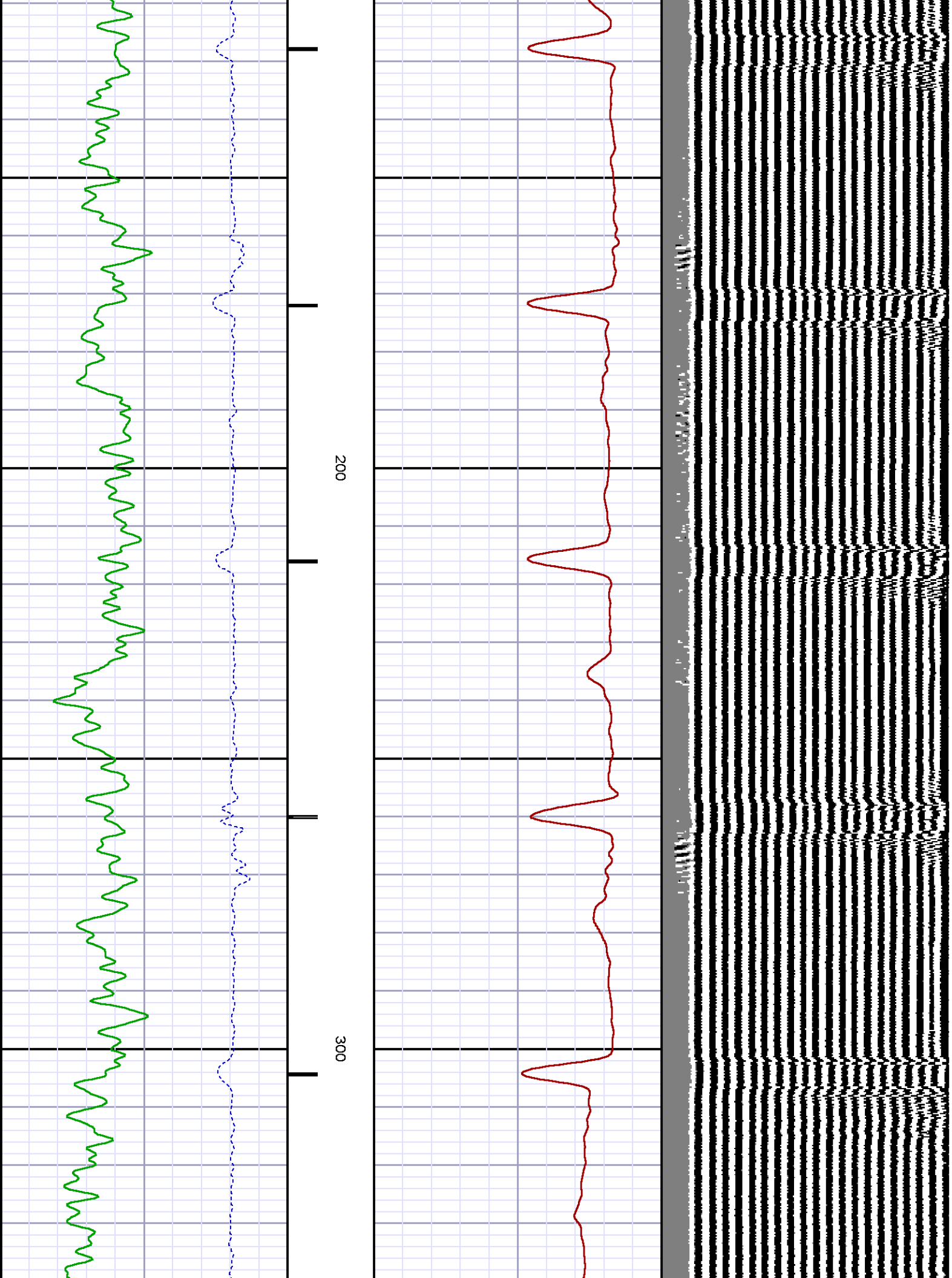
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	30.237	8010.000
RAL	Amp Gate Start Near	195.000	usec	30.237	8010.000
RAL	Amp Gate Start Radial	195.000	usec	30.237	8010.000
RAL	Amp Gate Width Far	25.000	usec	30.237	8010.000
RAL	Amp Gate Width Near	25.000	usec	30.237	8010.000
RAL	Amp Gate Width Radial	25.000	usec	30.237	8010.000
RAL	casing od	4.500	inches	30.237	8010.000
RAL	casing wt	11.600	lbm/ft	30.237	8010.000
RAL	FB Start Far	291.900	usec	30.237	8010.000
RAL	FB Start Near	180.000	usec	30.237	8010.000
RAL	FB Start Radial	180.000	usec	30.237	8010.000
RAL	FB Thresh Far	10.000	mv	30.237	8010.000
RAL	FB Thresh Near	4.000	mv	30.237	8010.000
RAL	FB Thresh Radial	4.000	mv	30.237	8010.000
RAL	Fluid Travel Time	200.000	usec/ft	30.237	8009.862

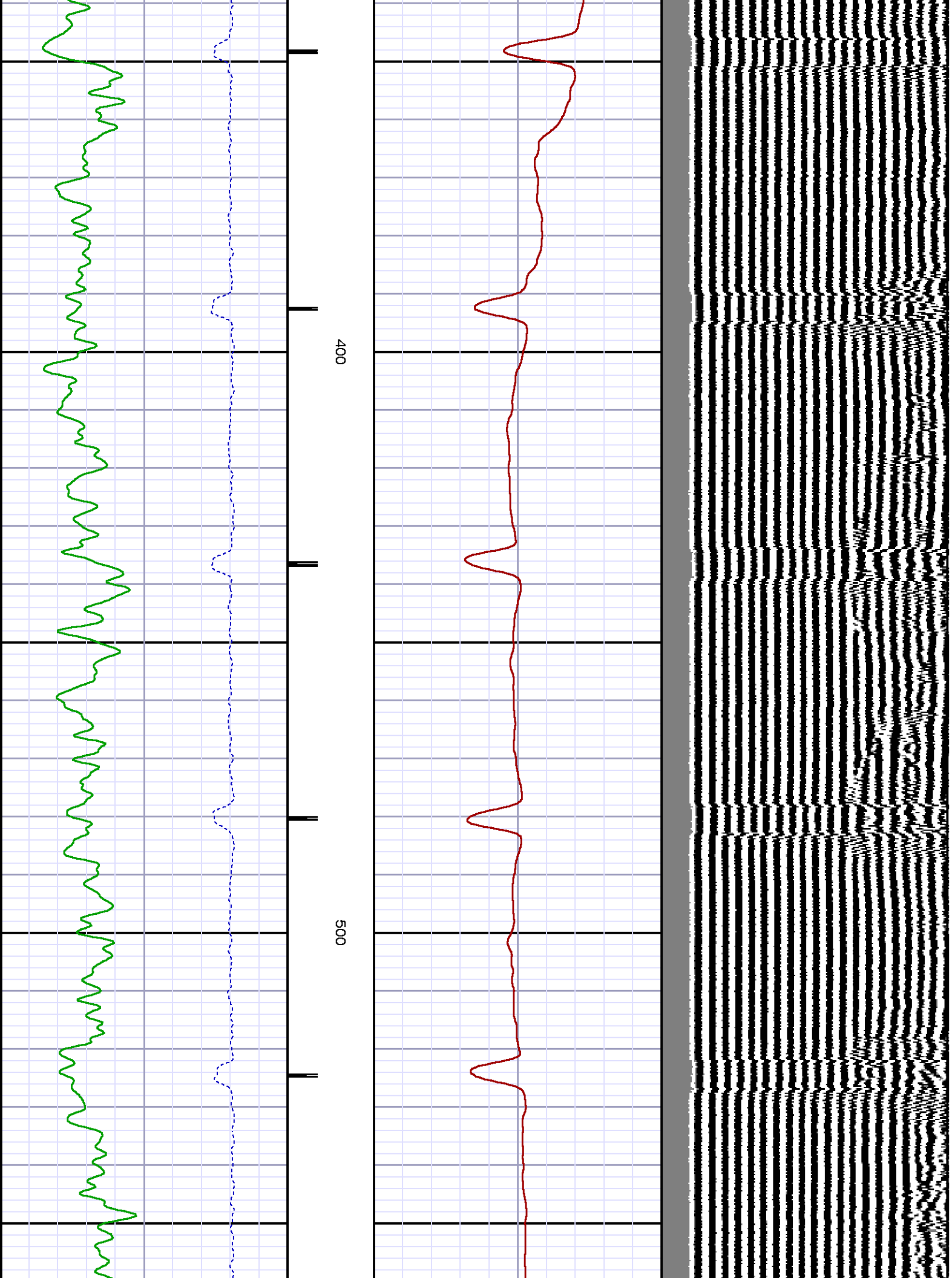
DEPTH OFFSETS
(for Acquired Curves)

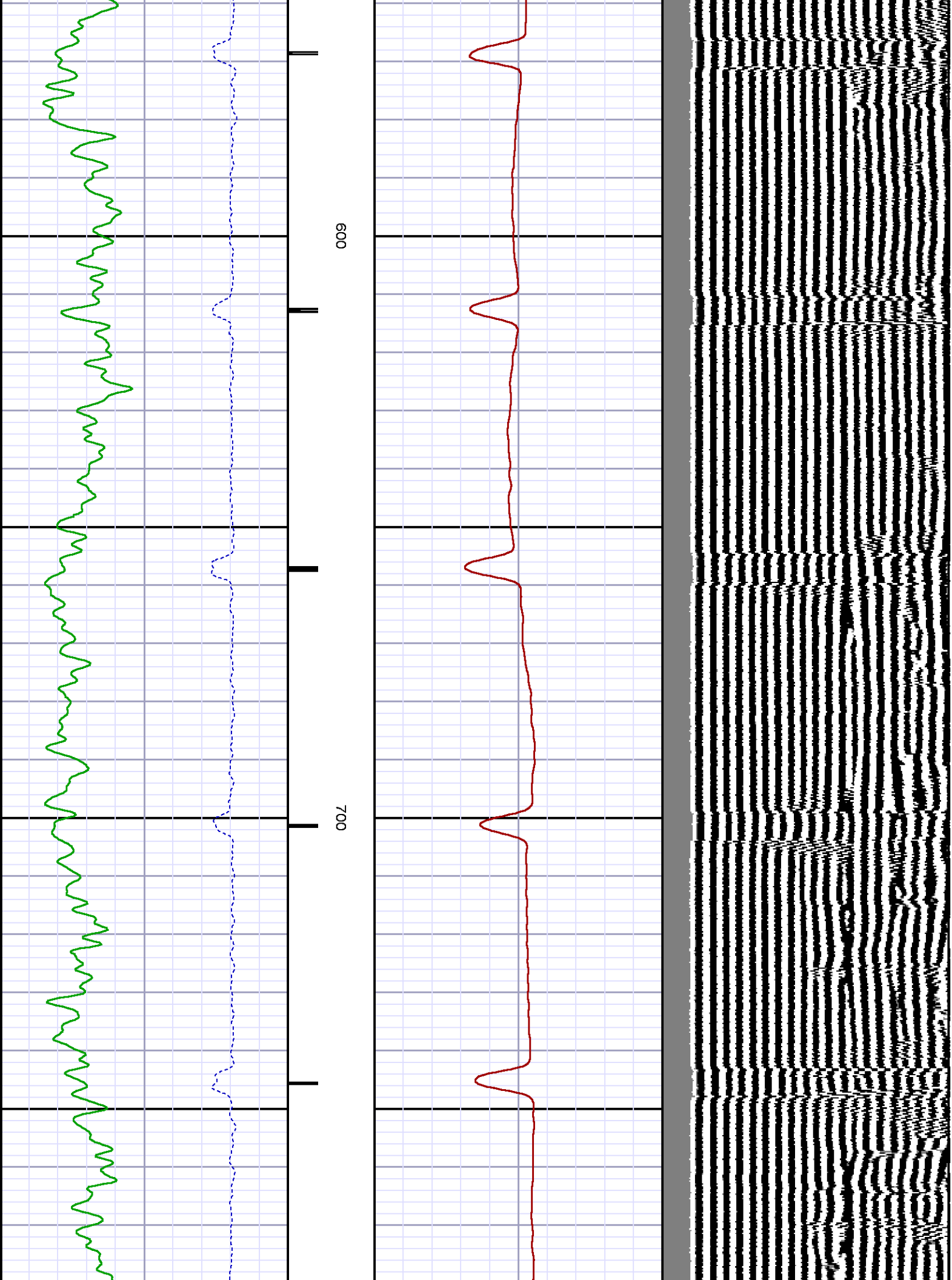
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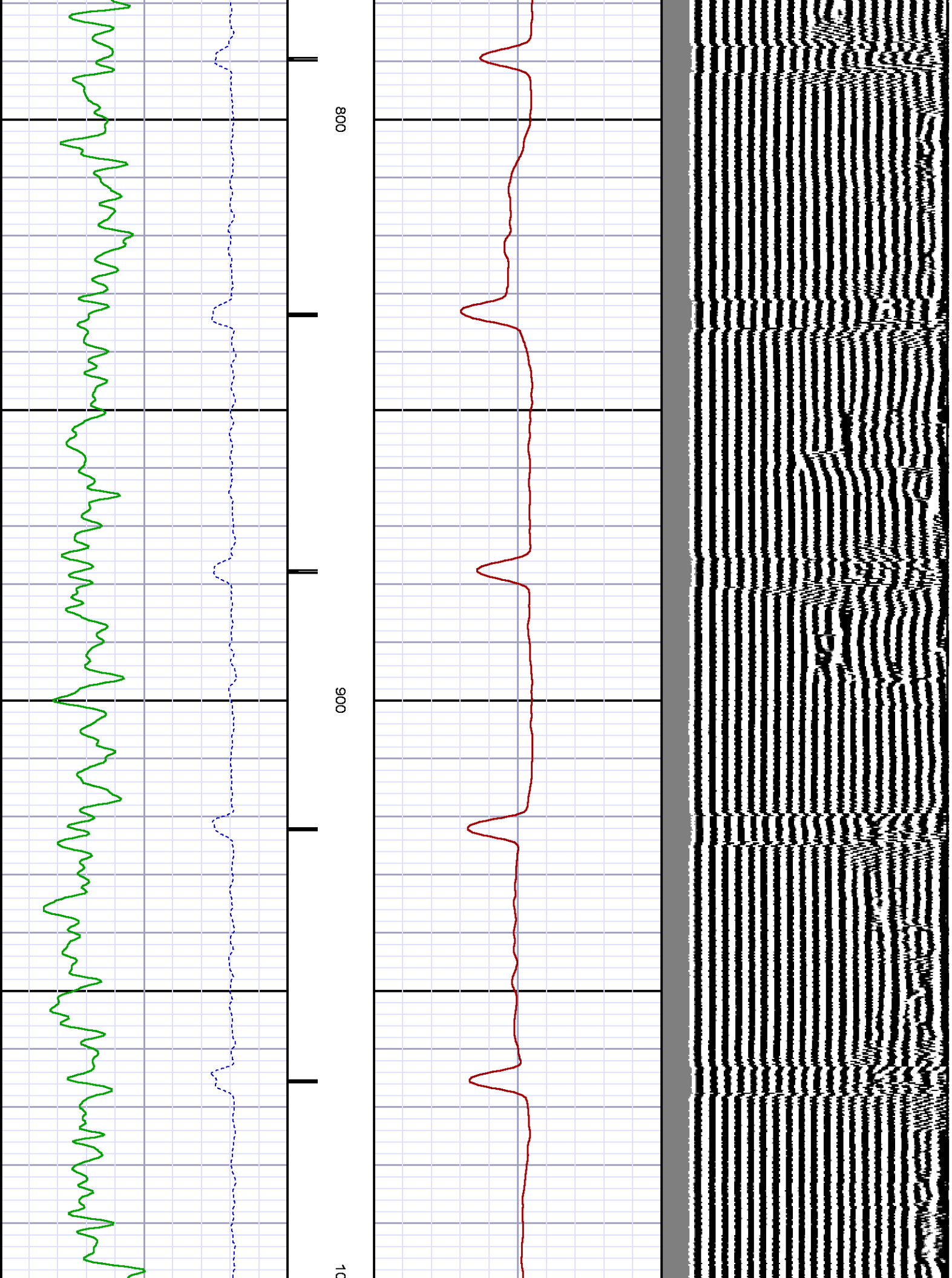
DEPTH OFFSET		ACQUIRED CURVES					
SERIES		ACAL	ANR	AR1	AR2	AR3	AR4
1426XA	-11.000	AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

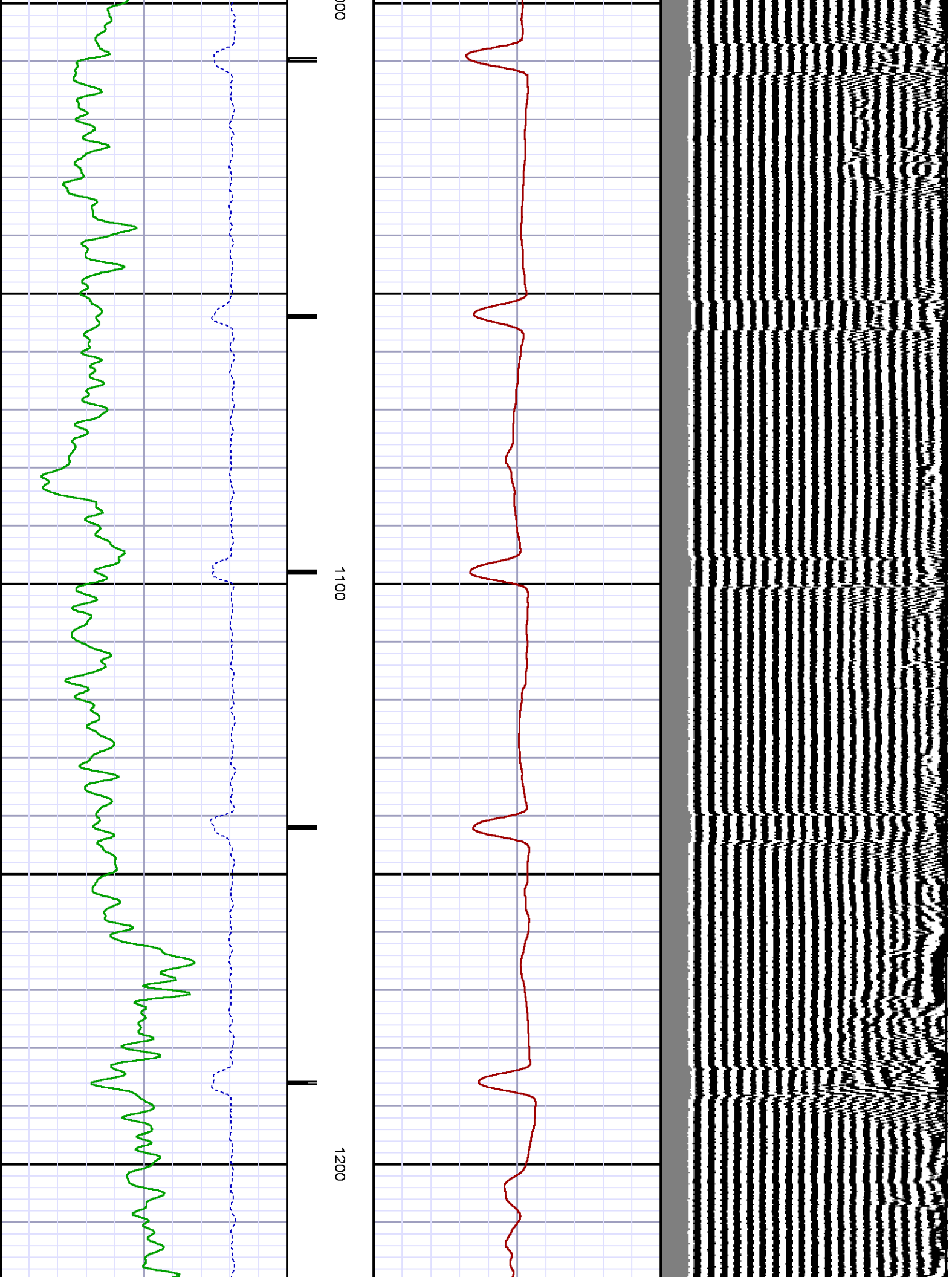


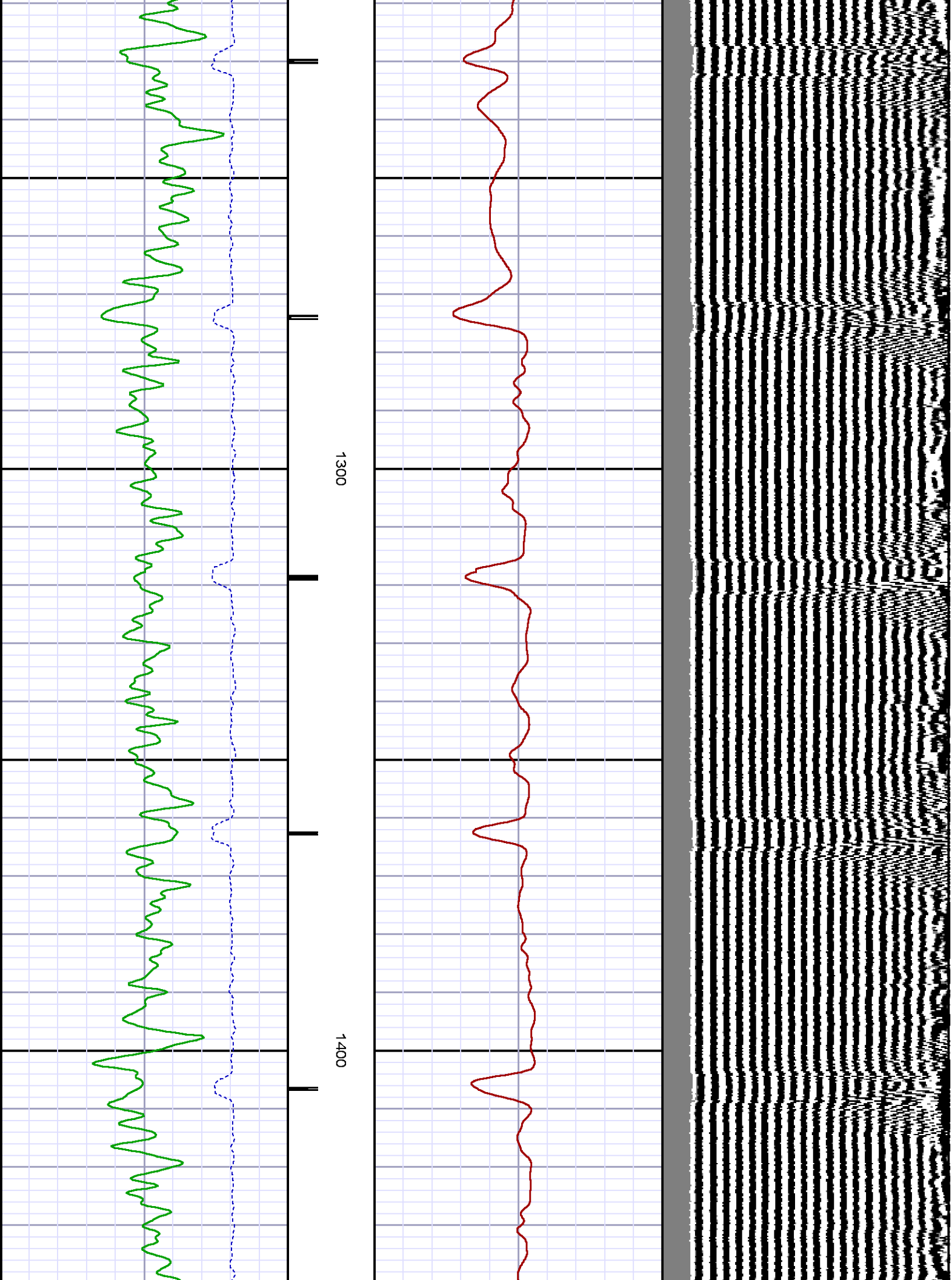


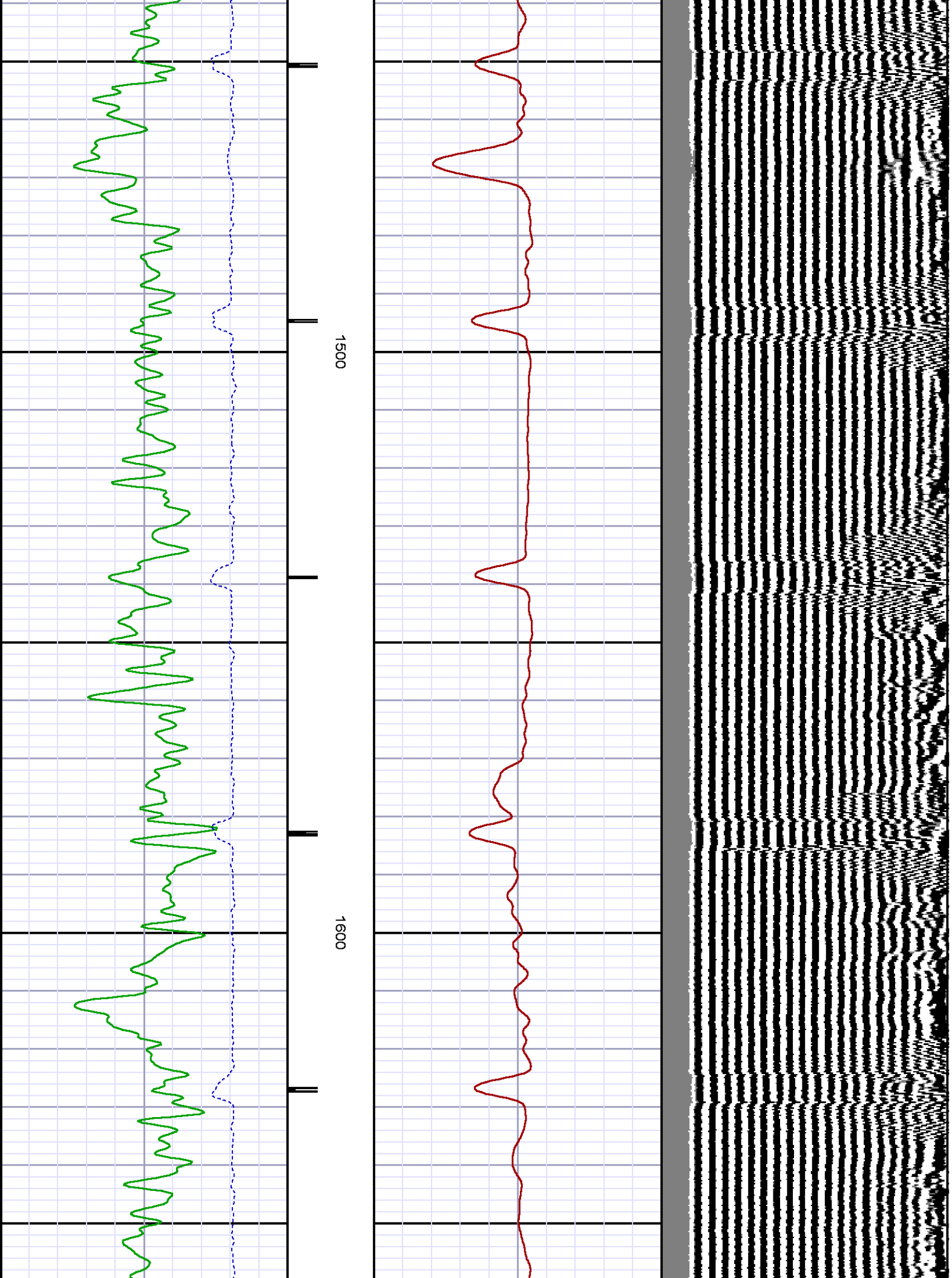


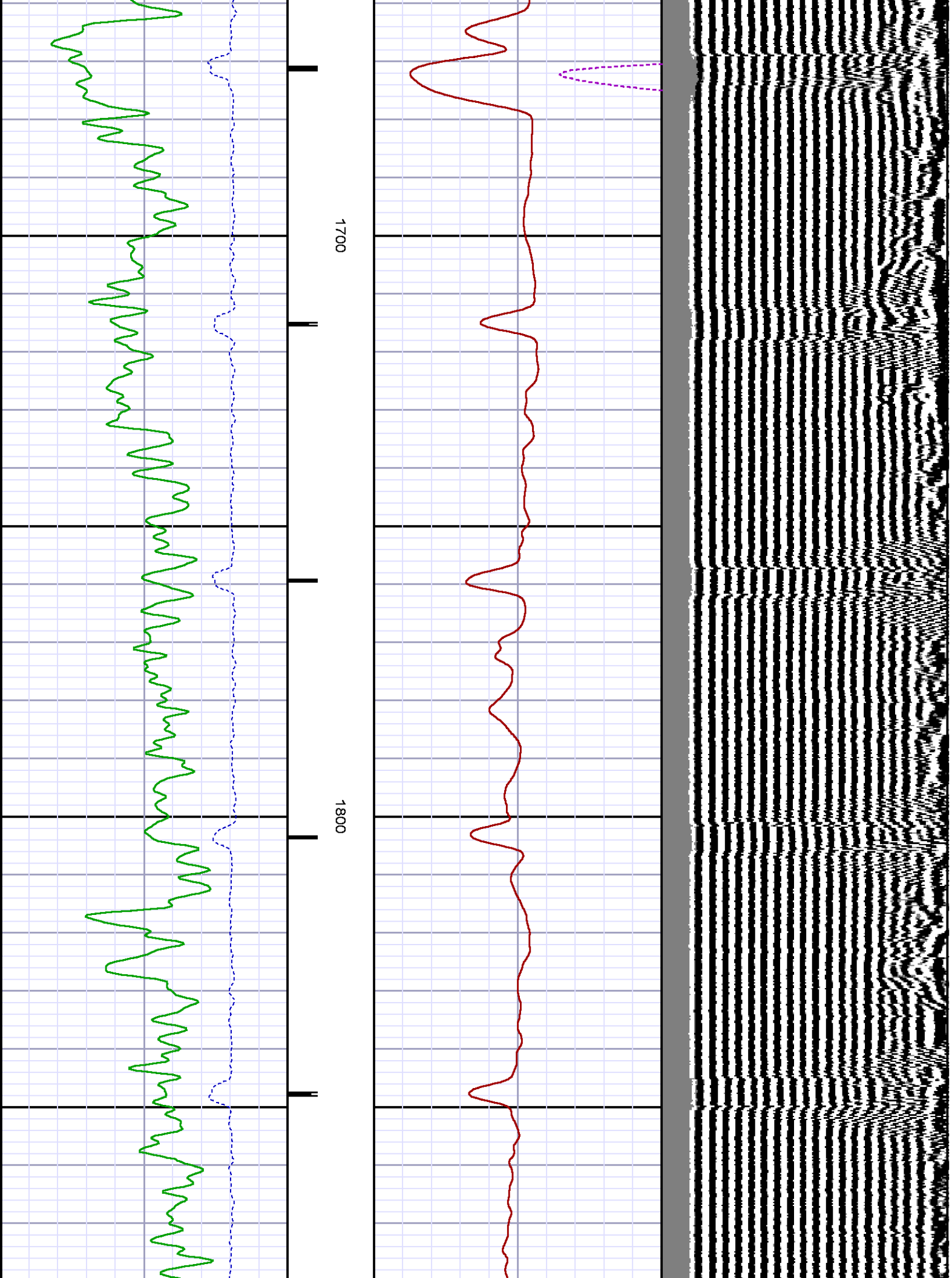


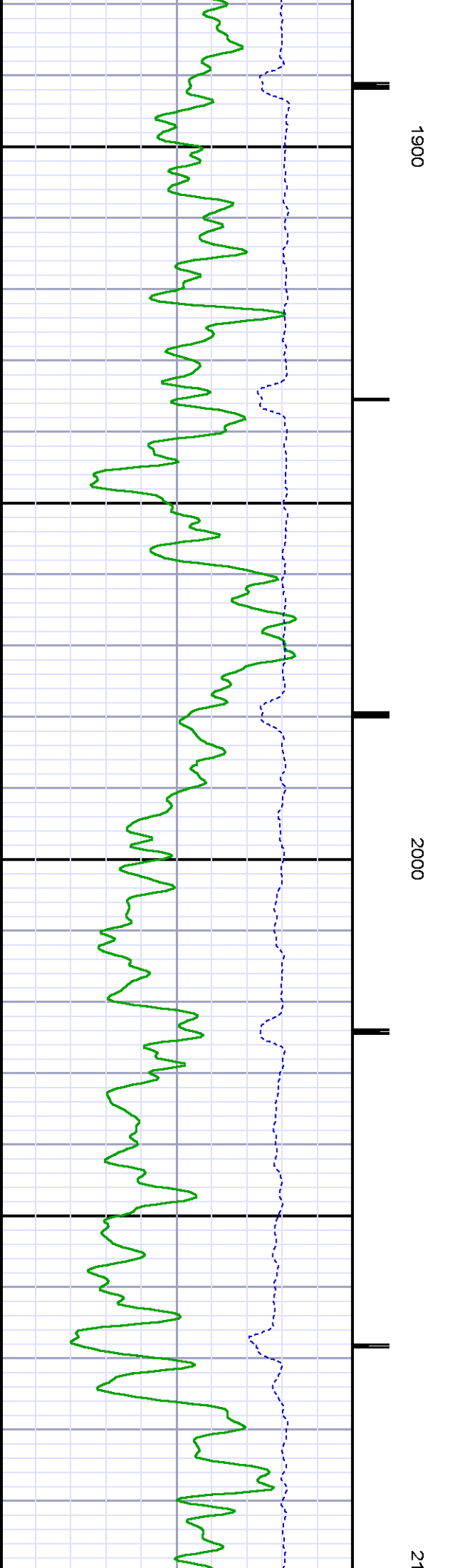
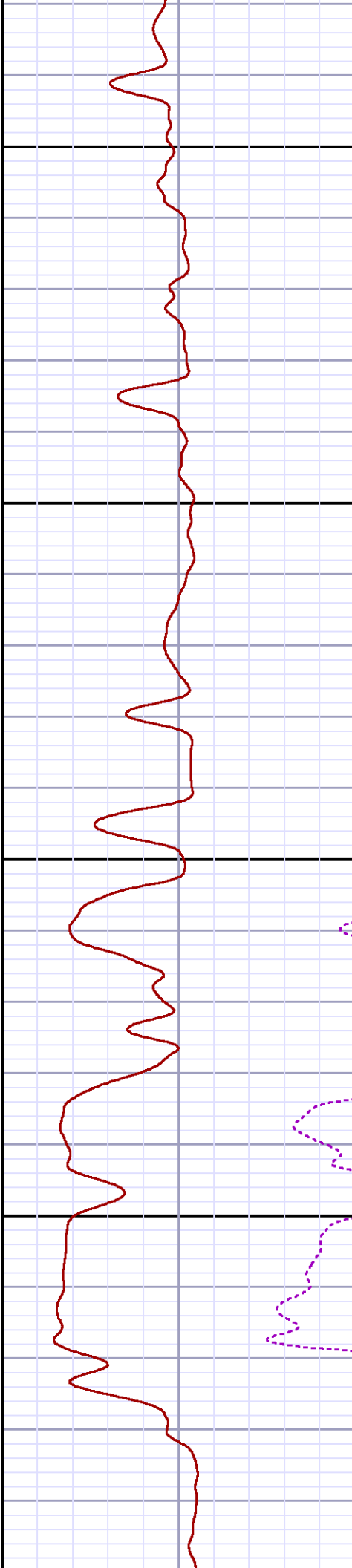
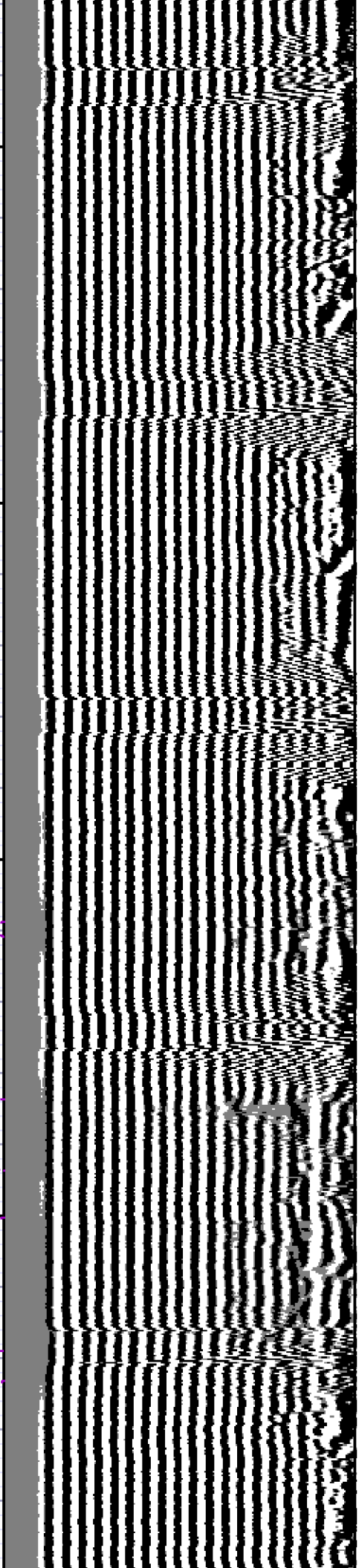


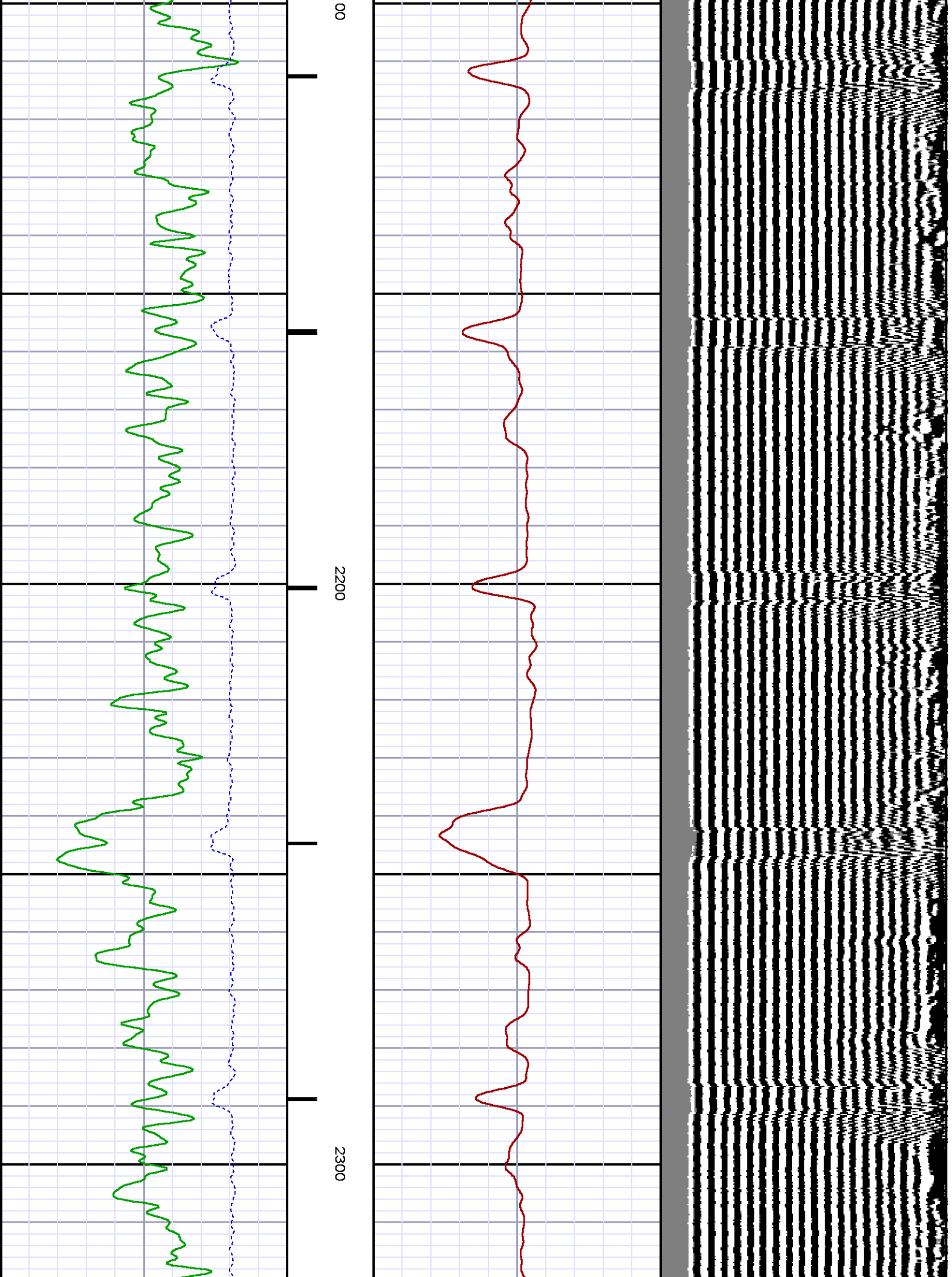


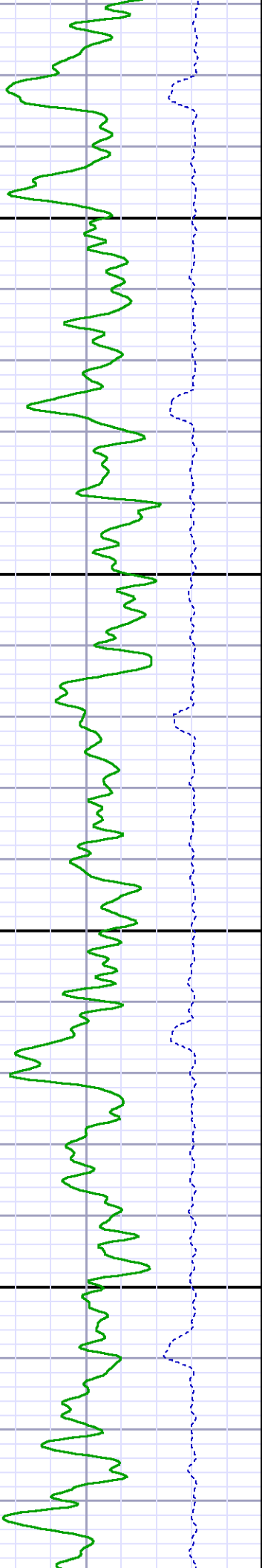
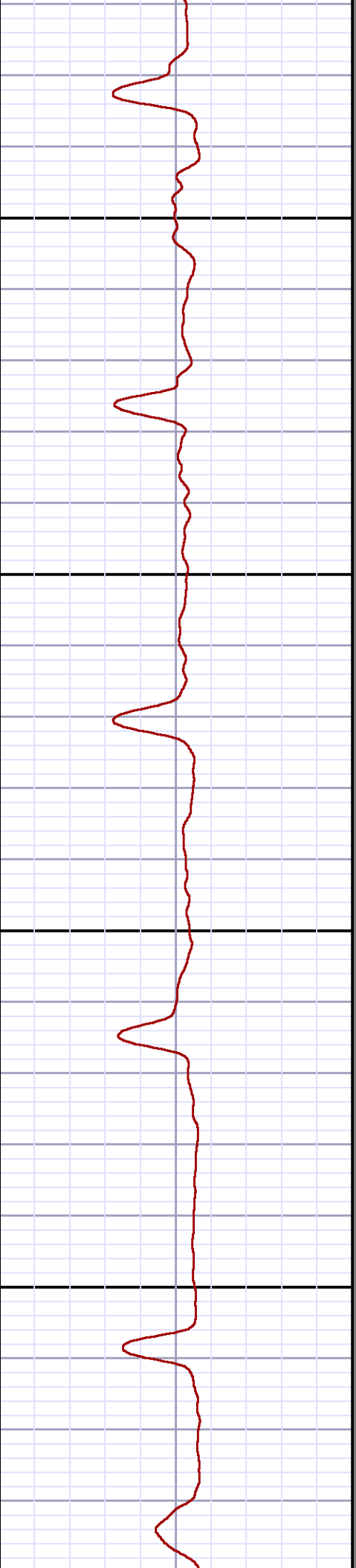
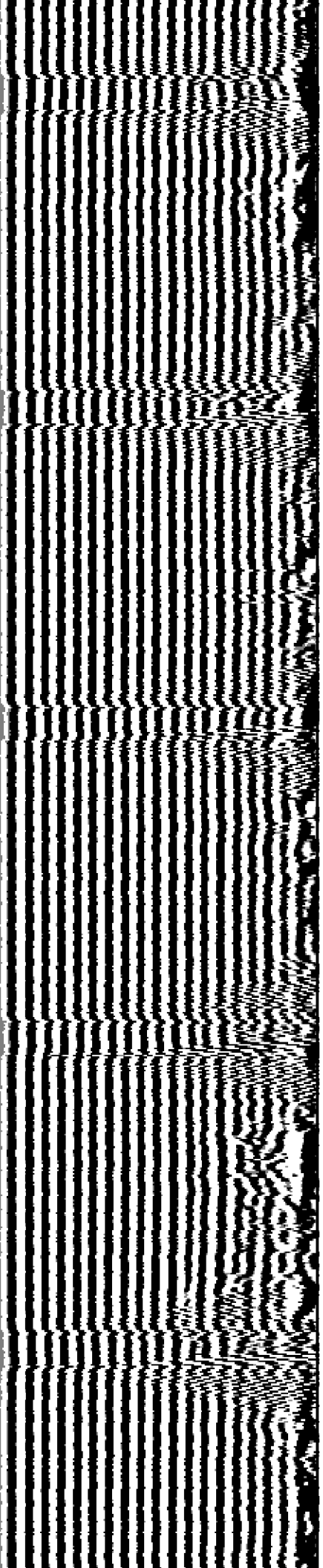


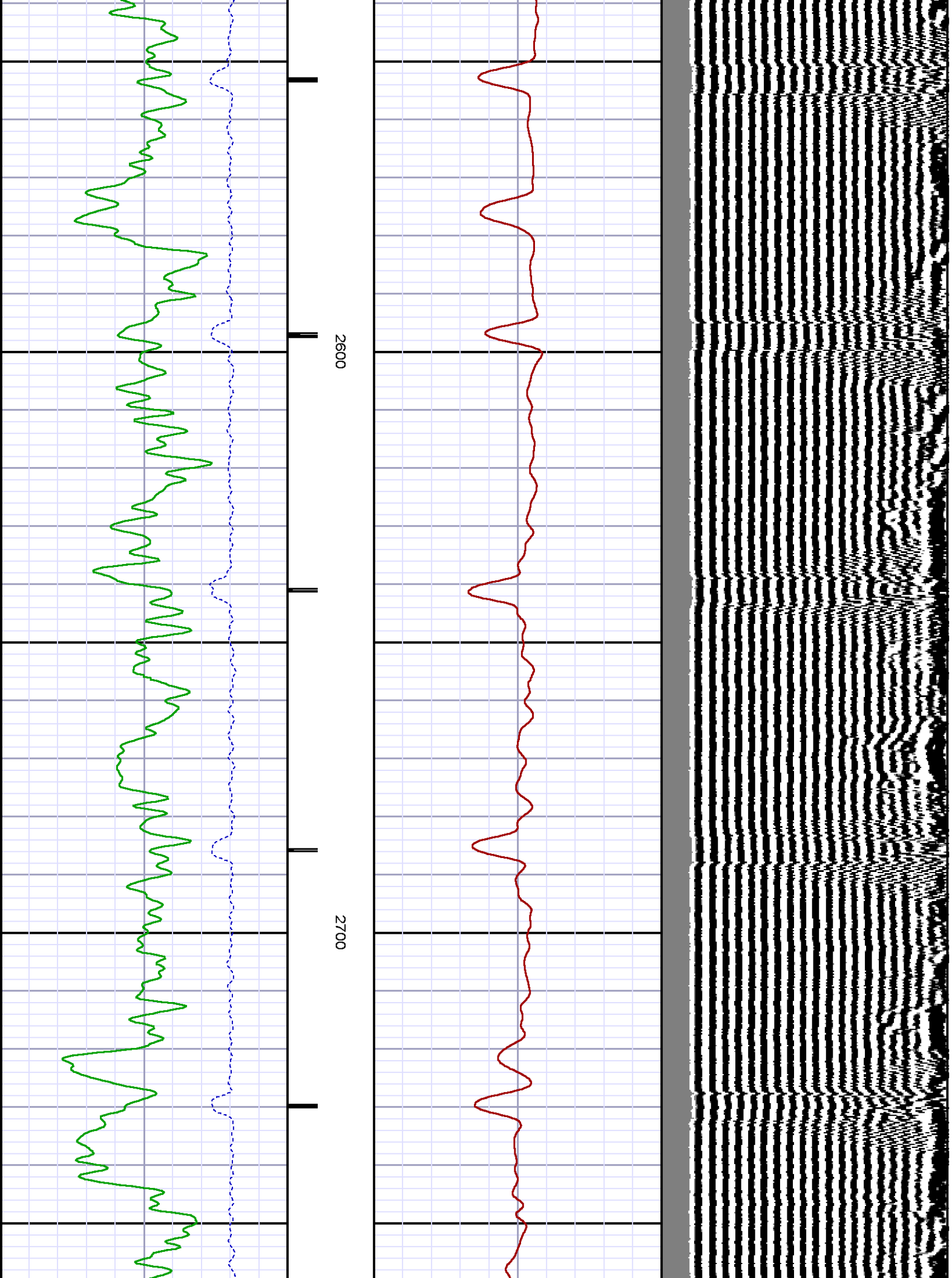


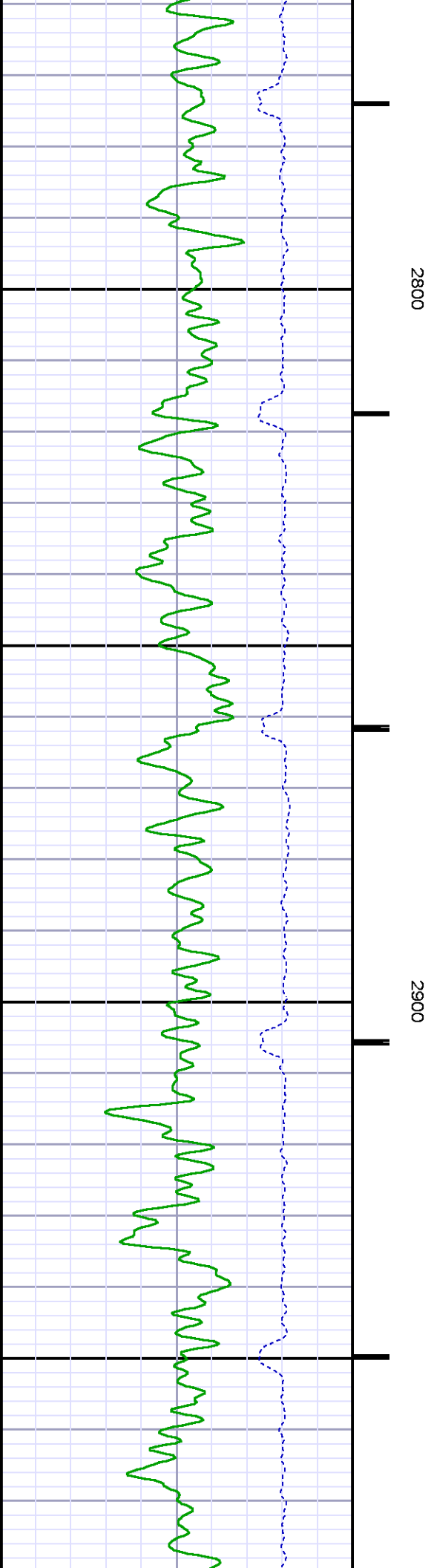
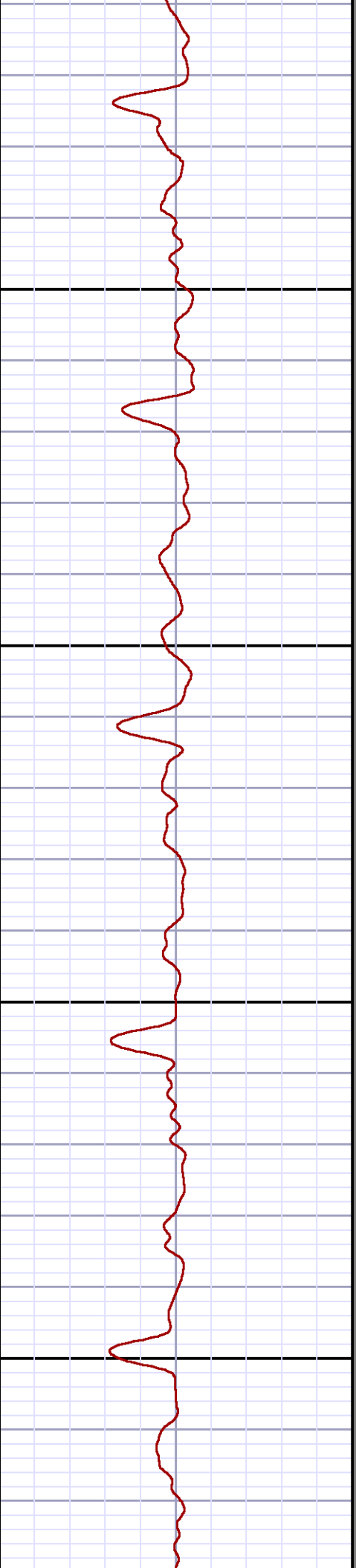
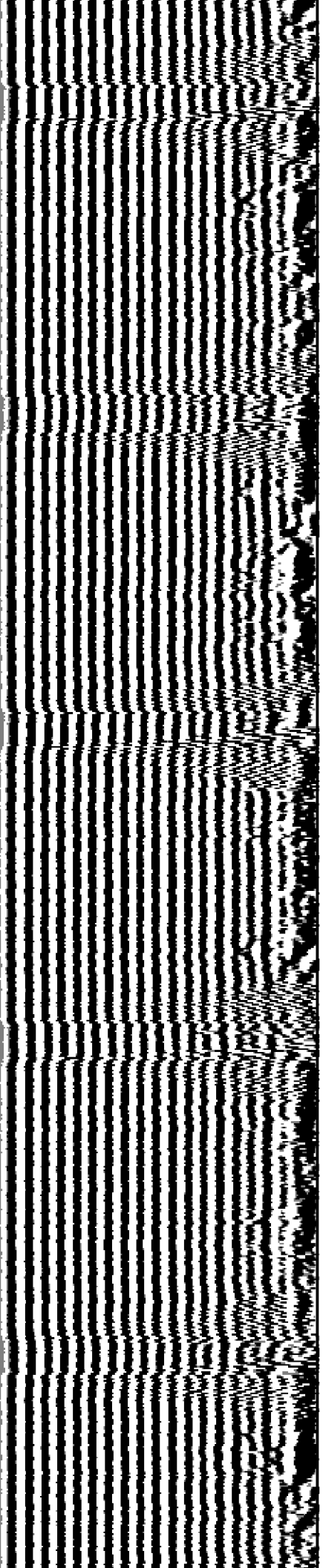


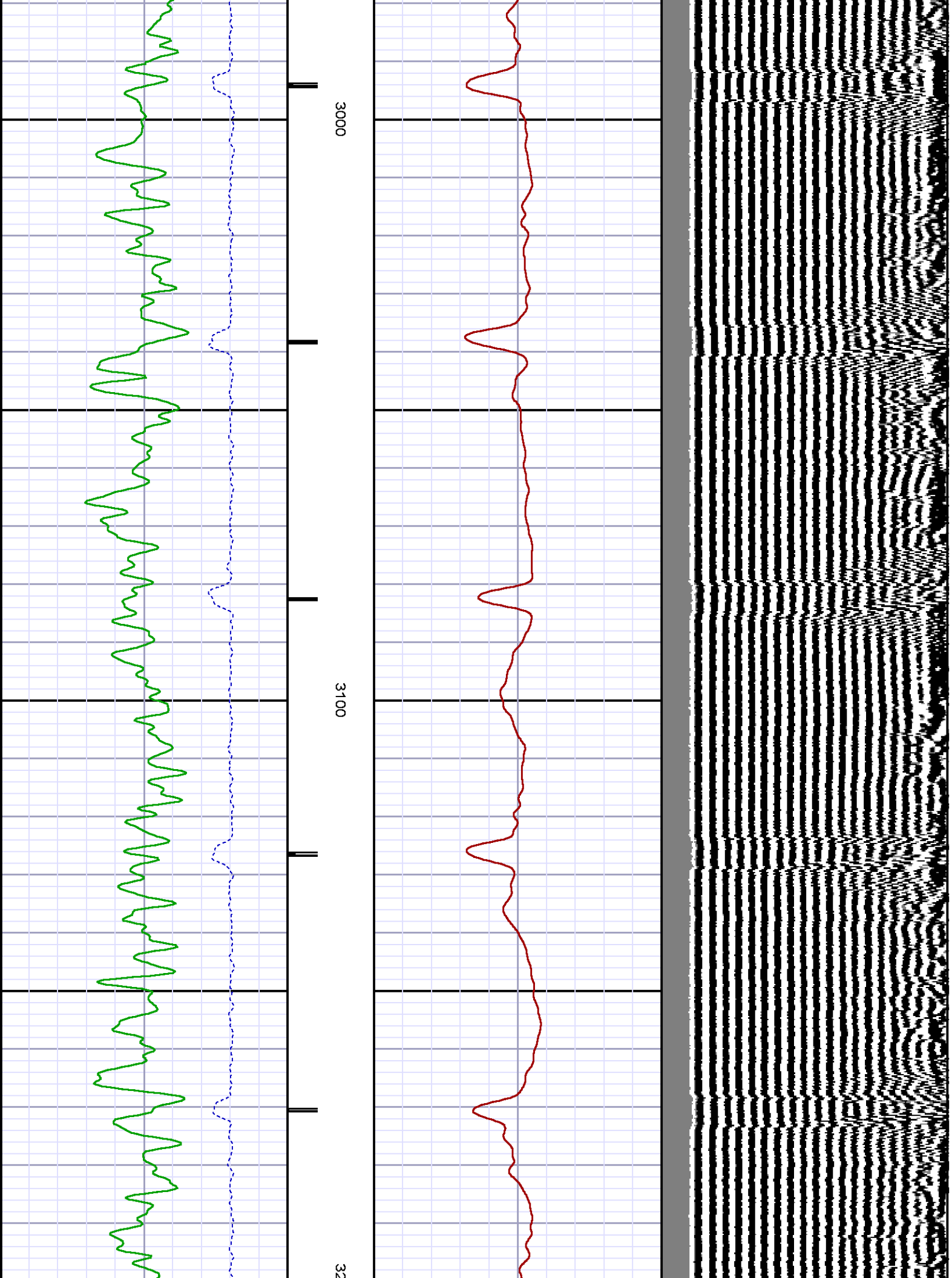


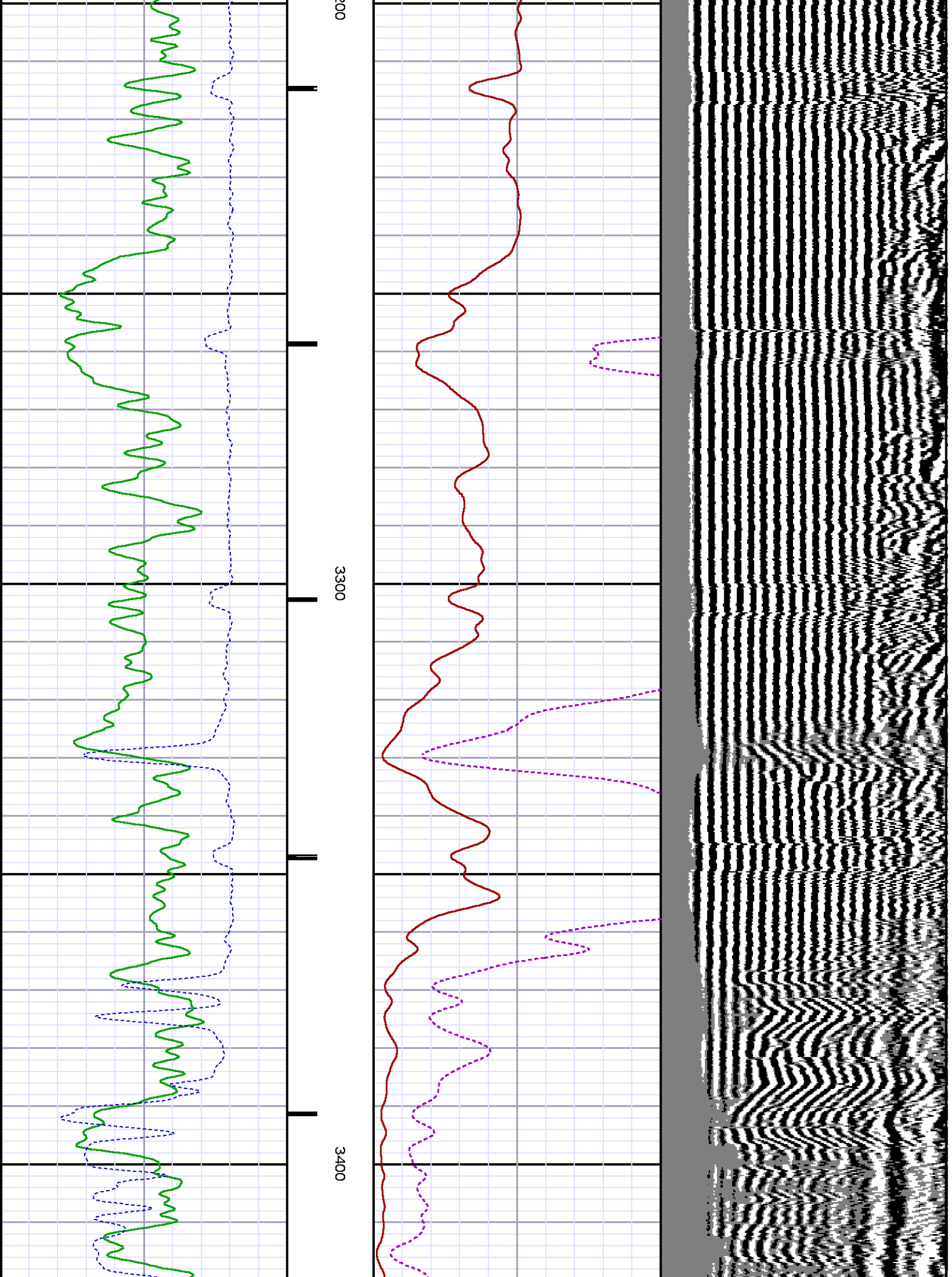


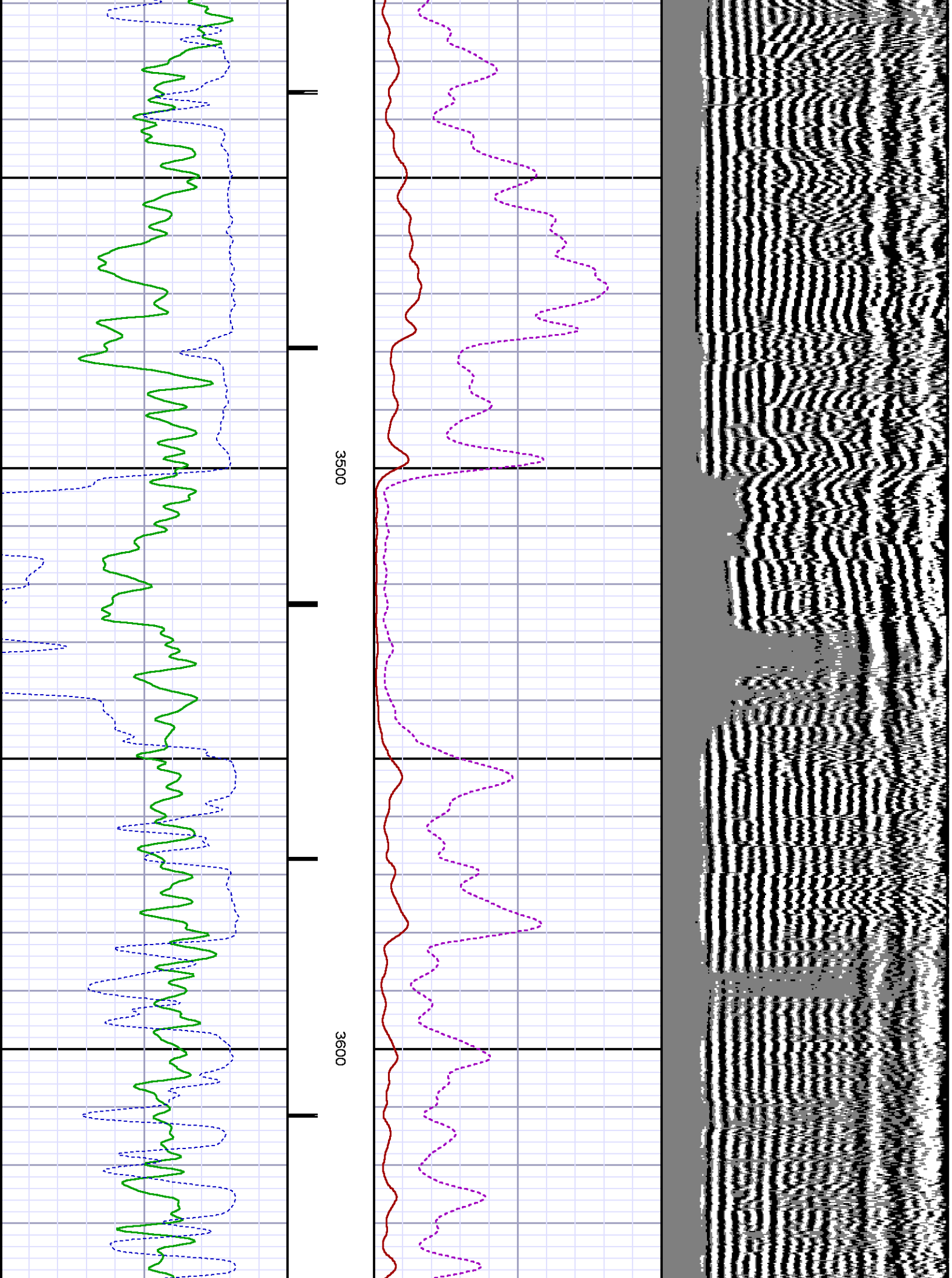


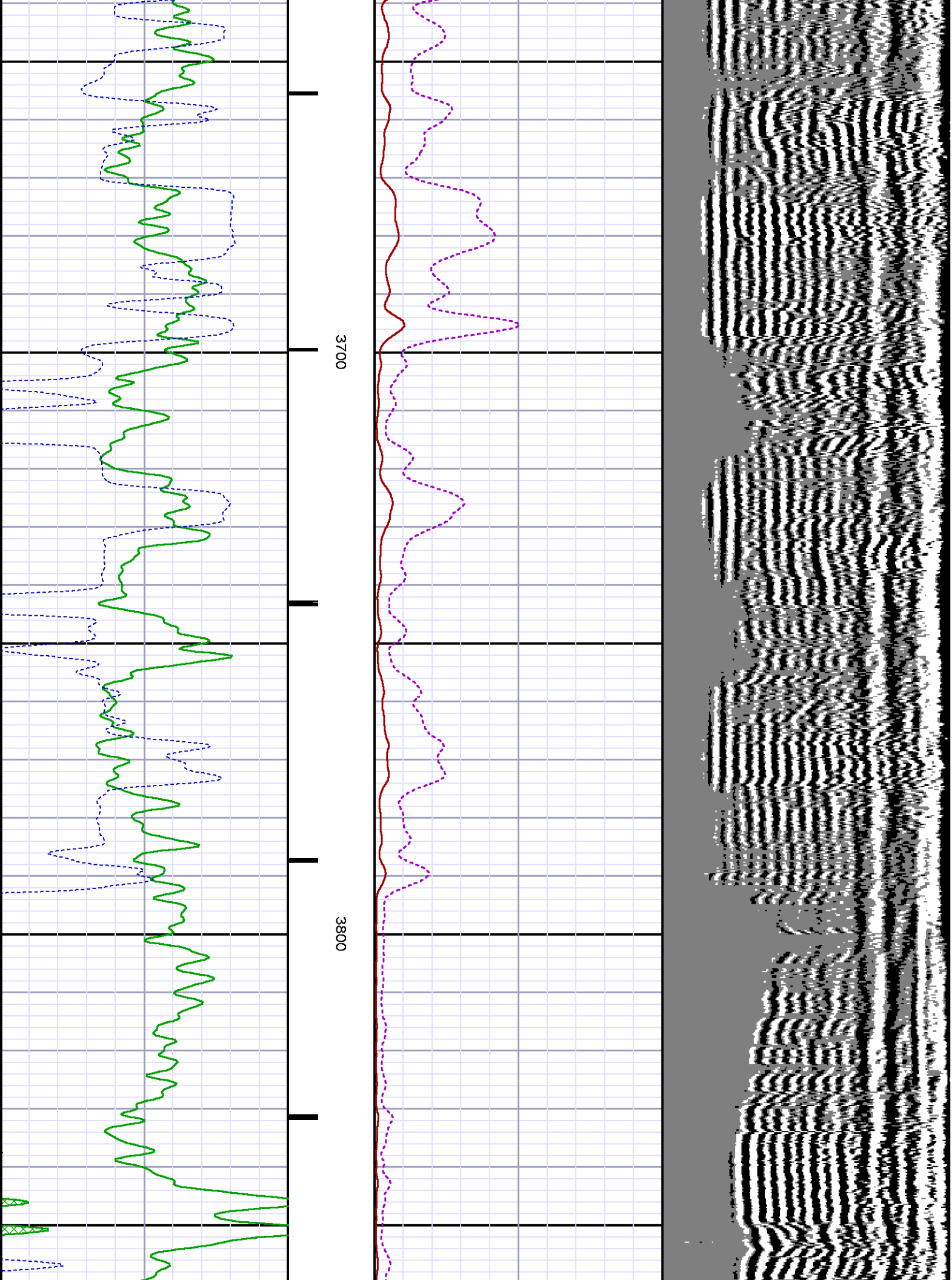


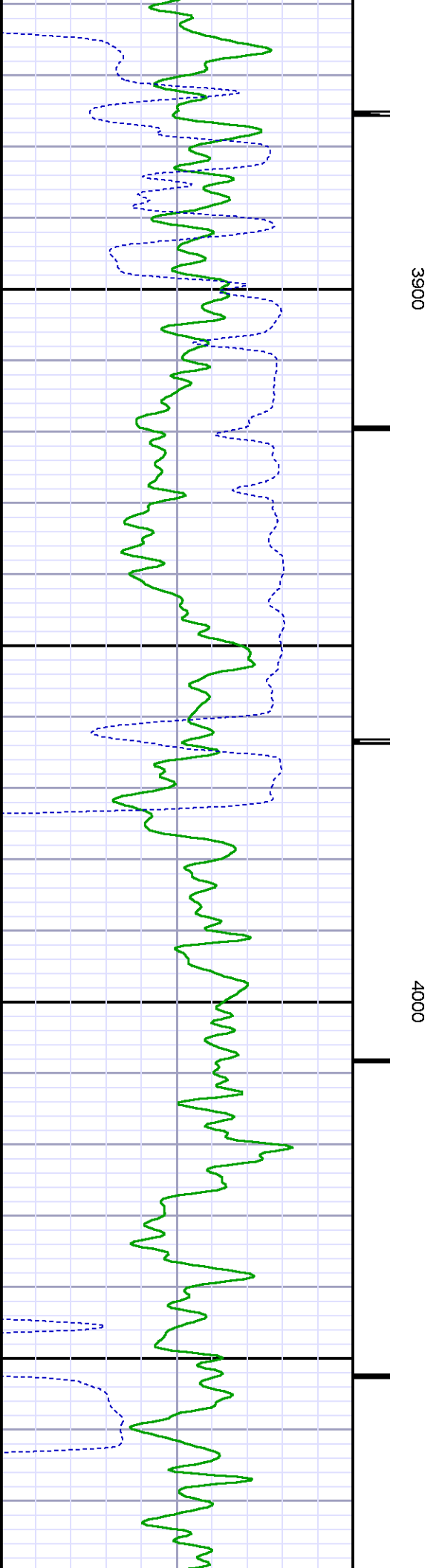
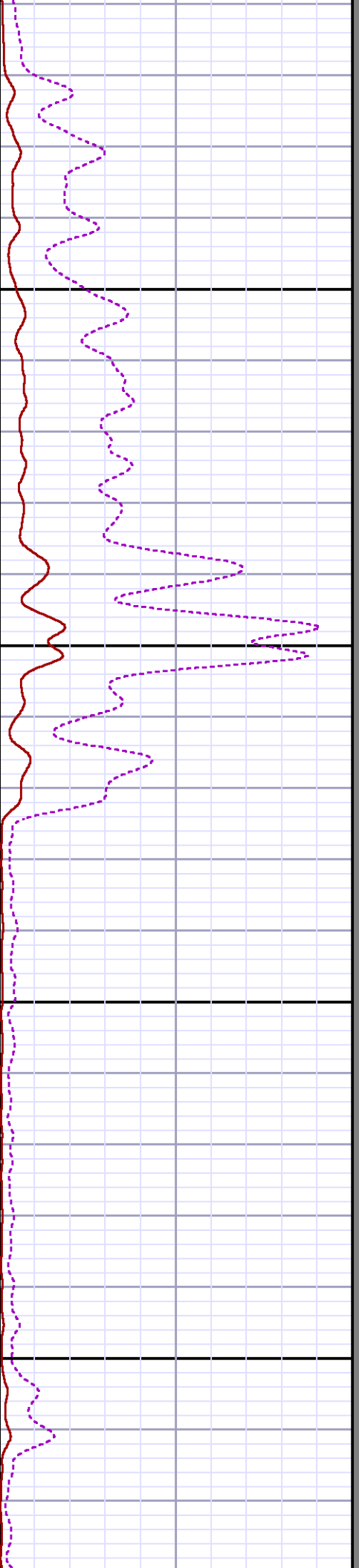
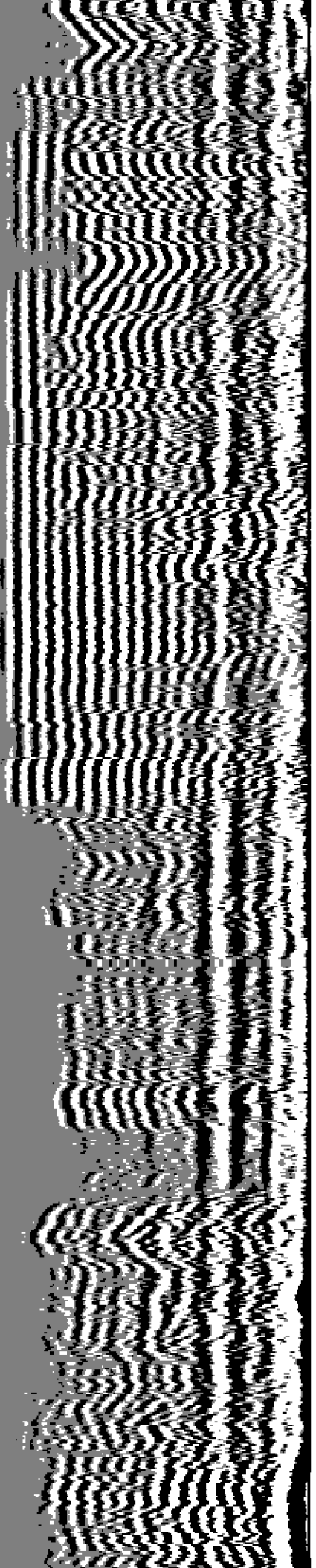


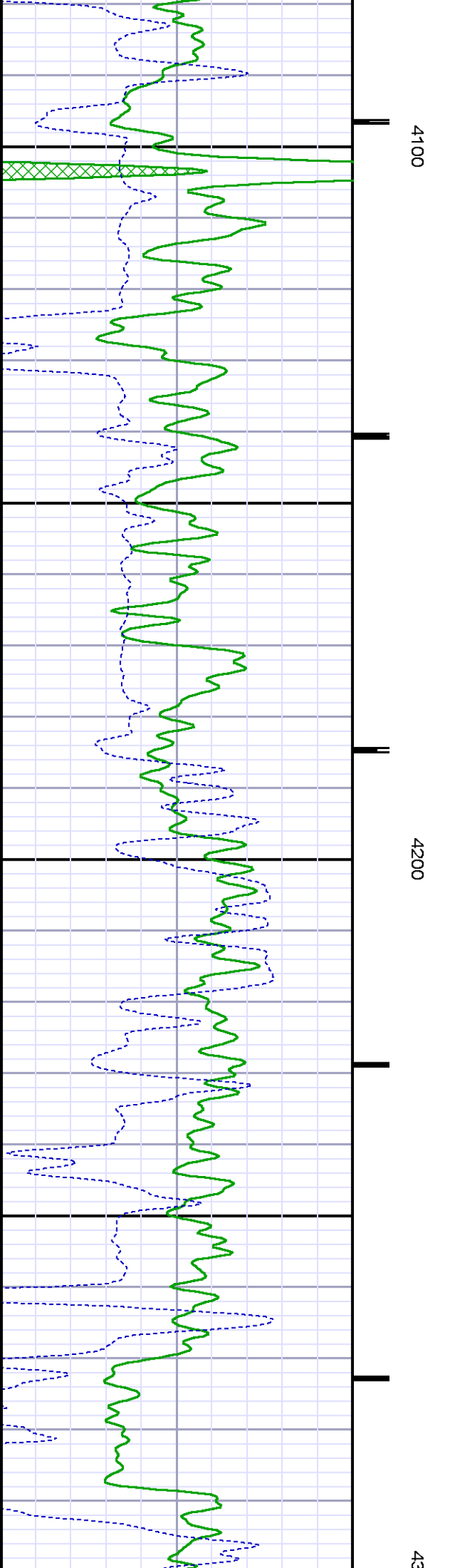
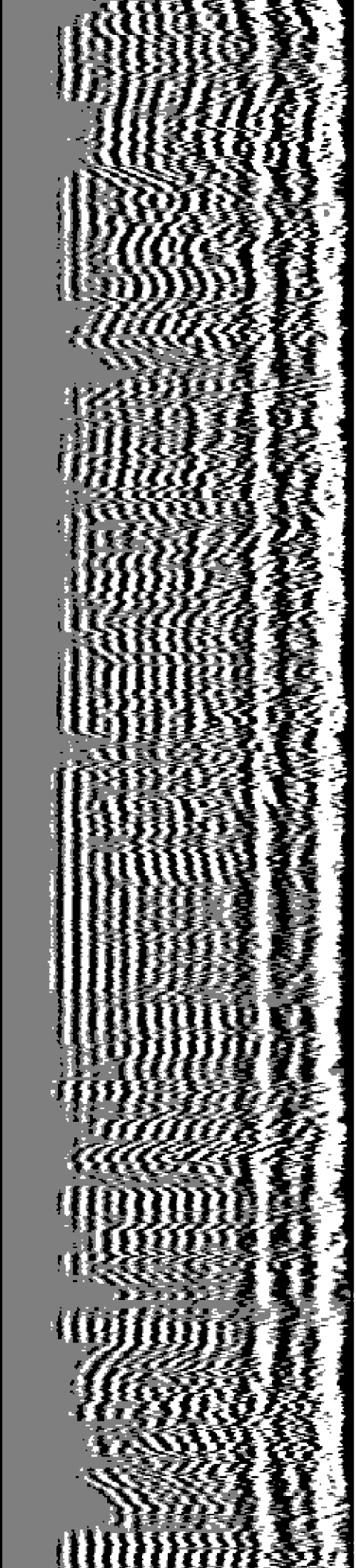


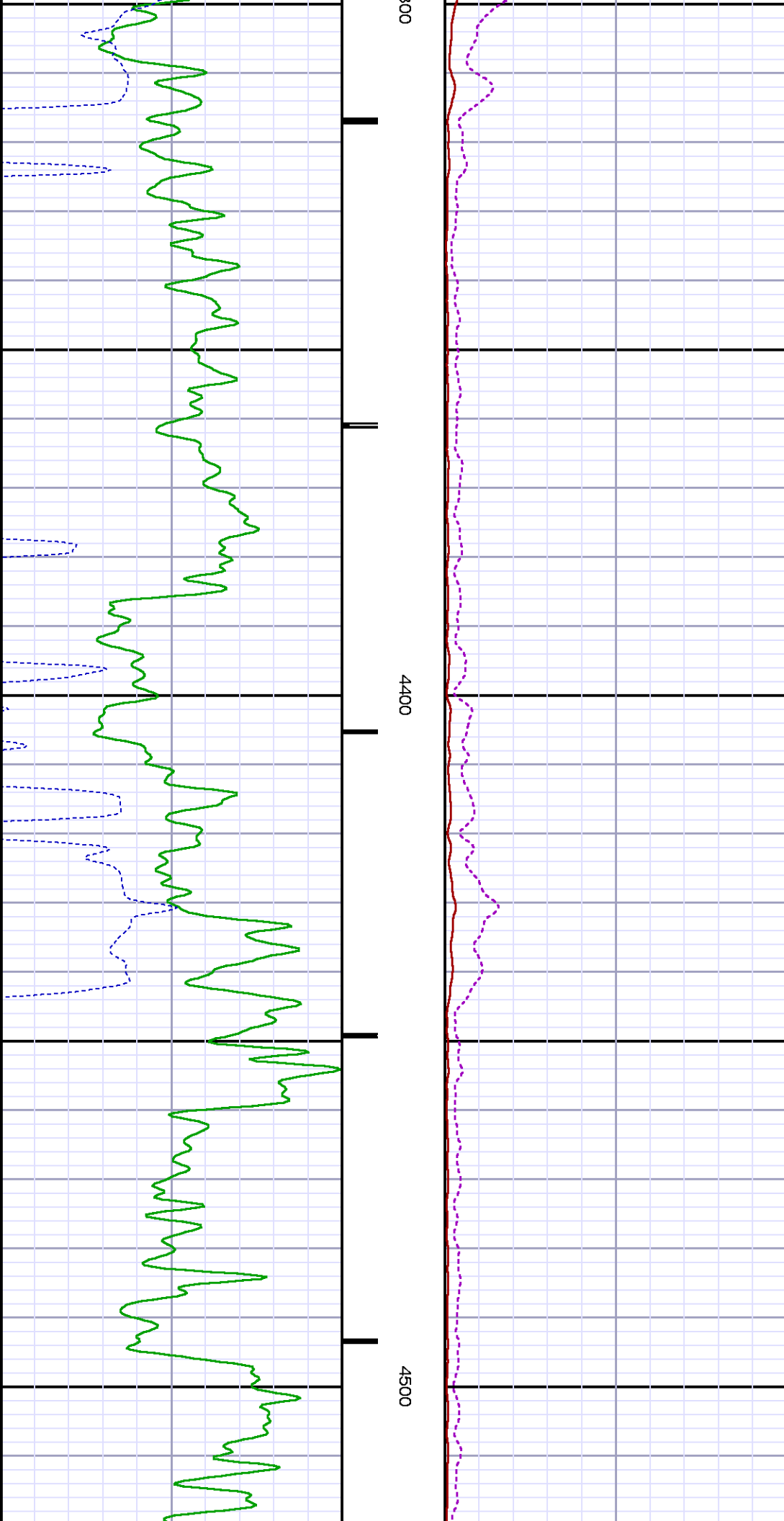
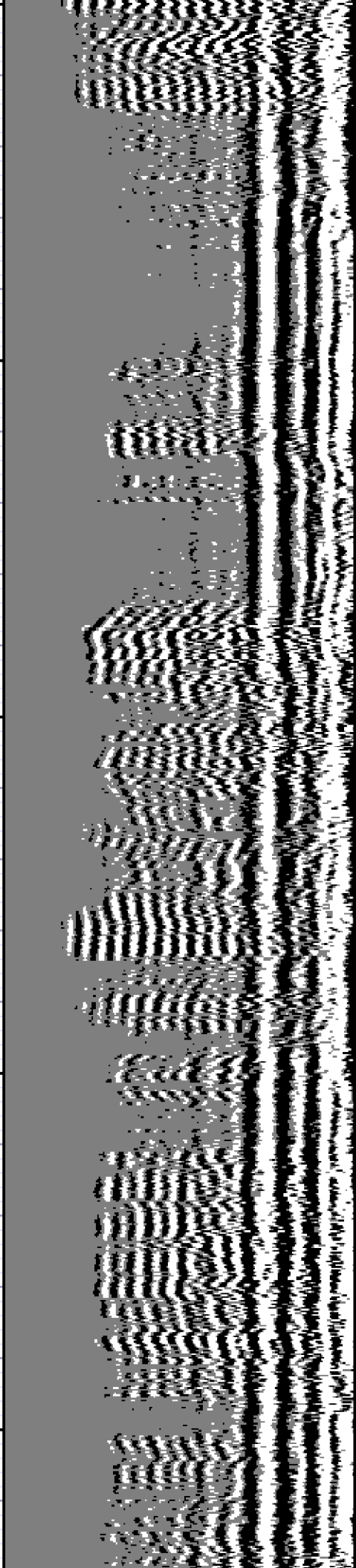


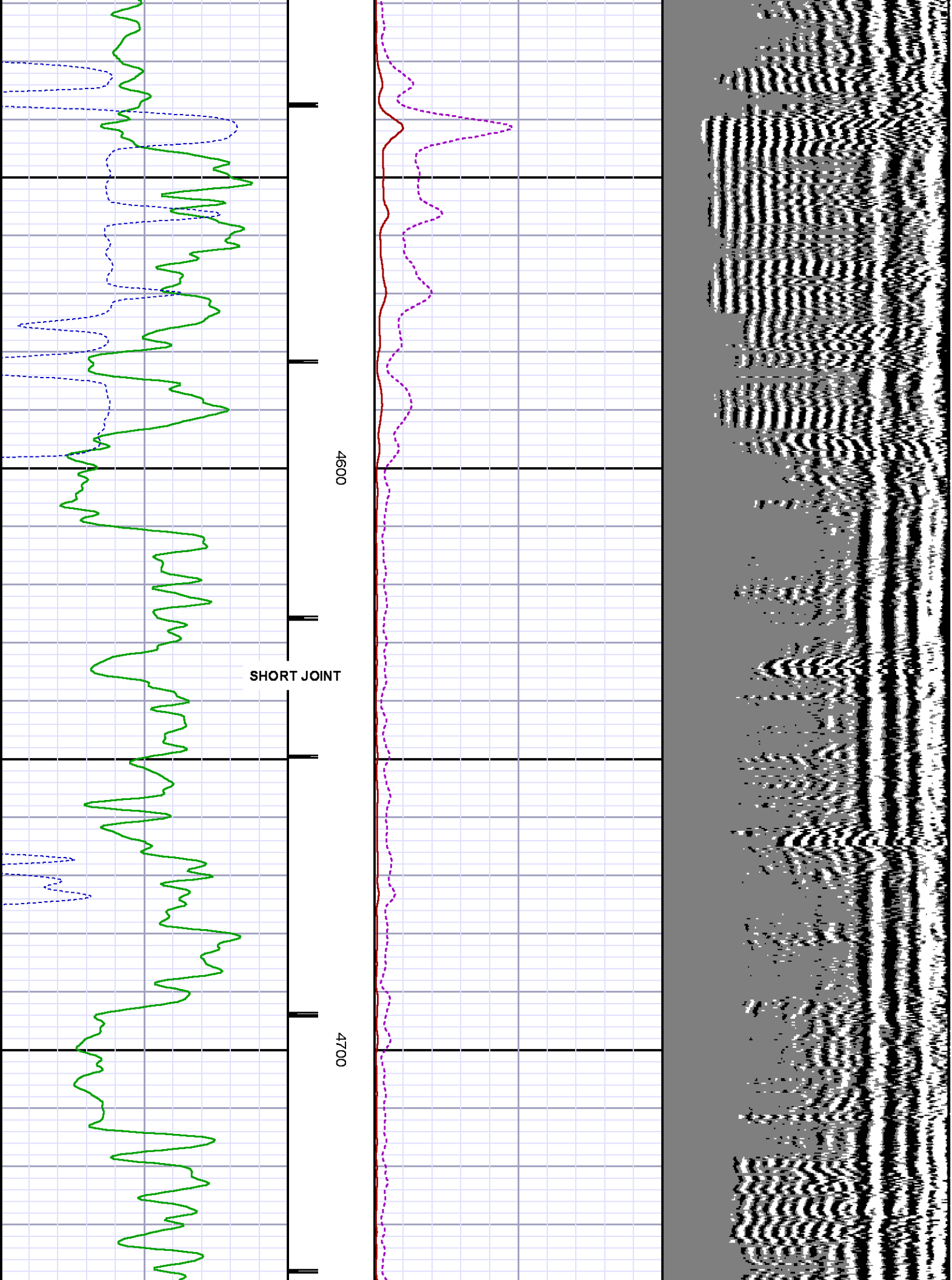


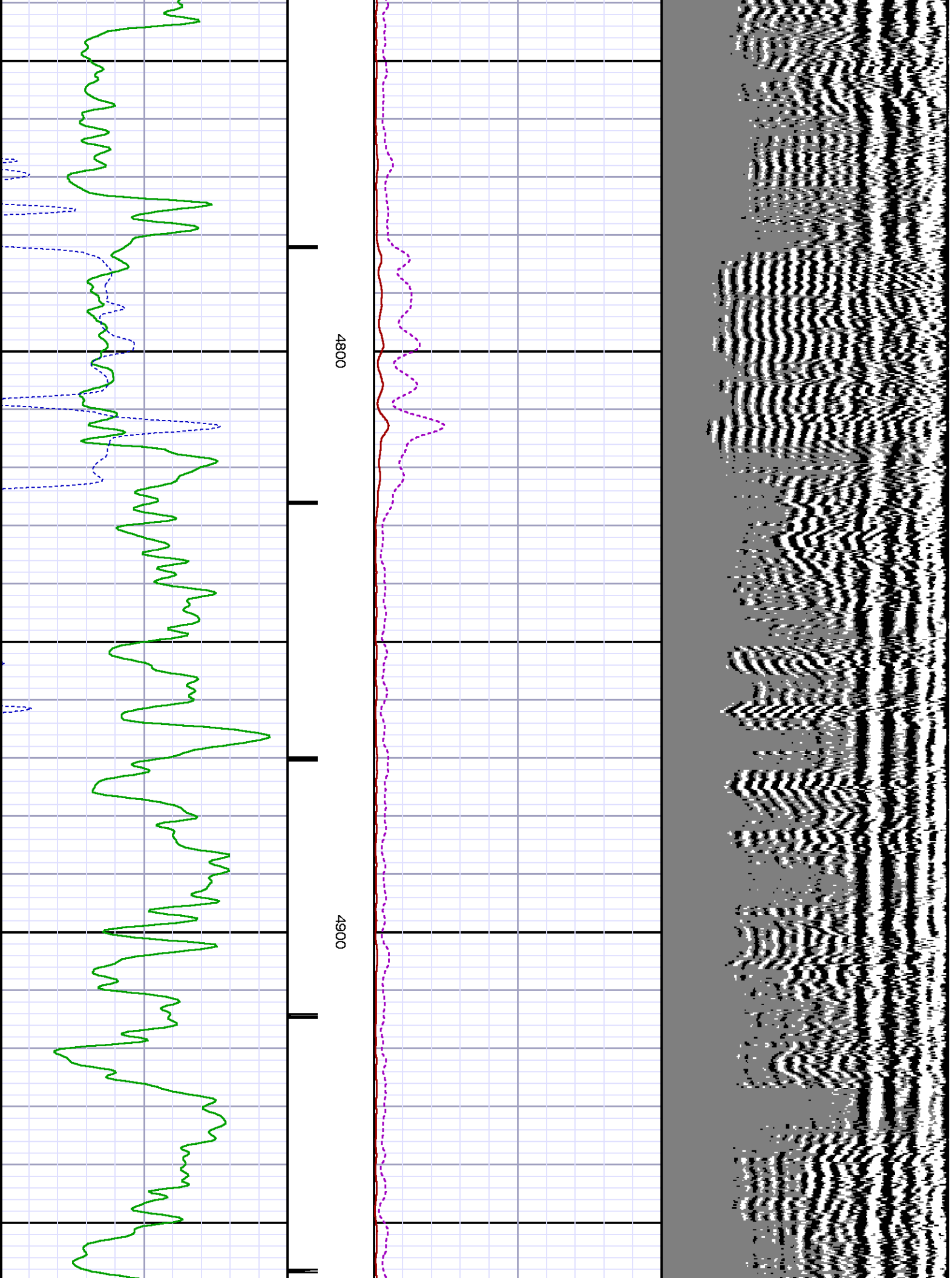


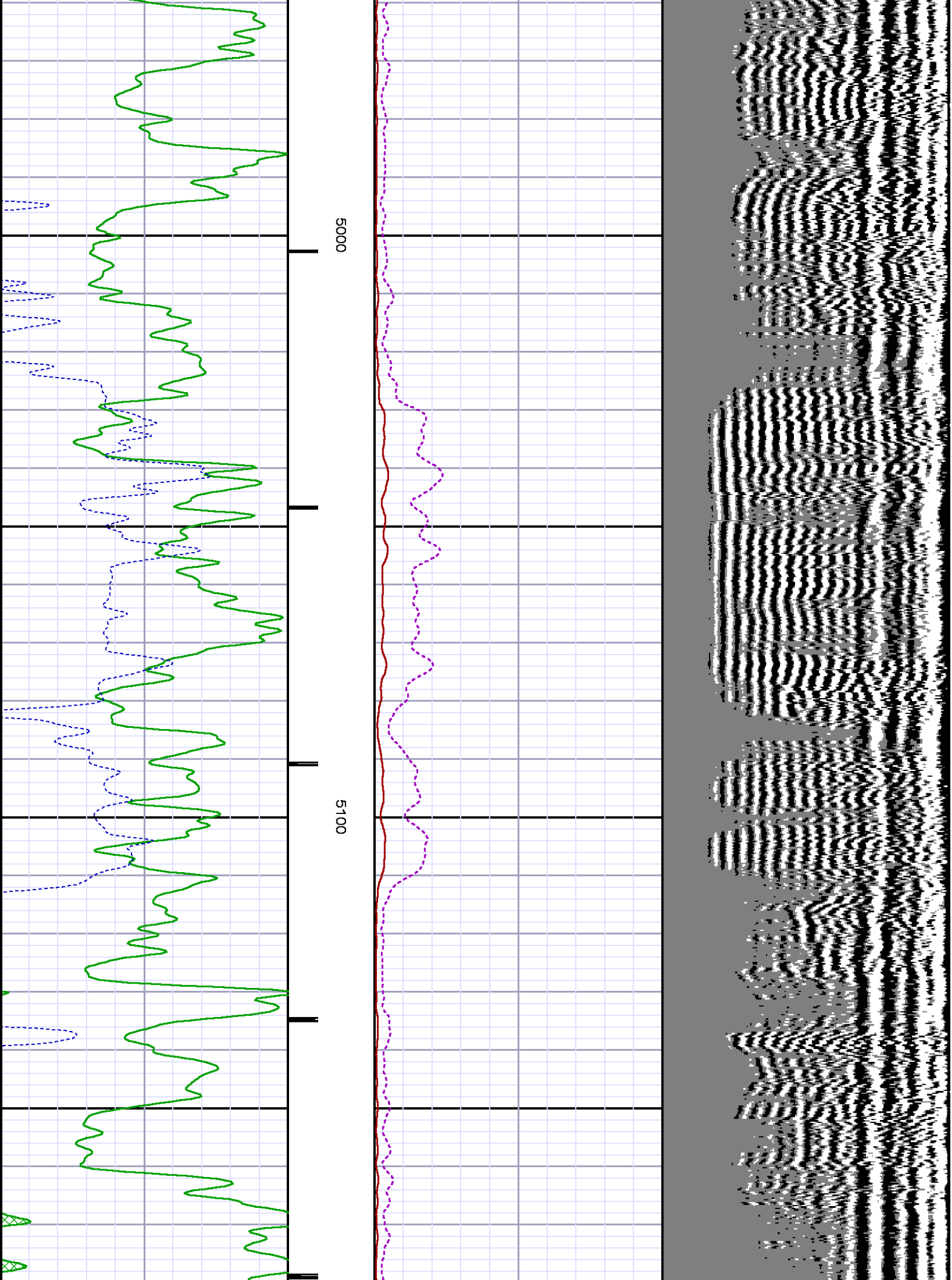


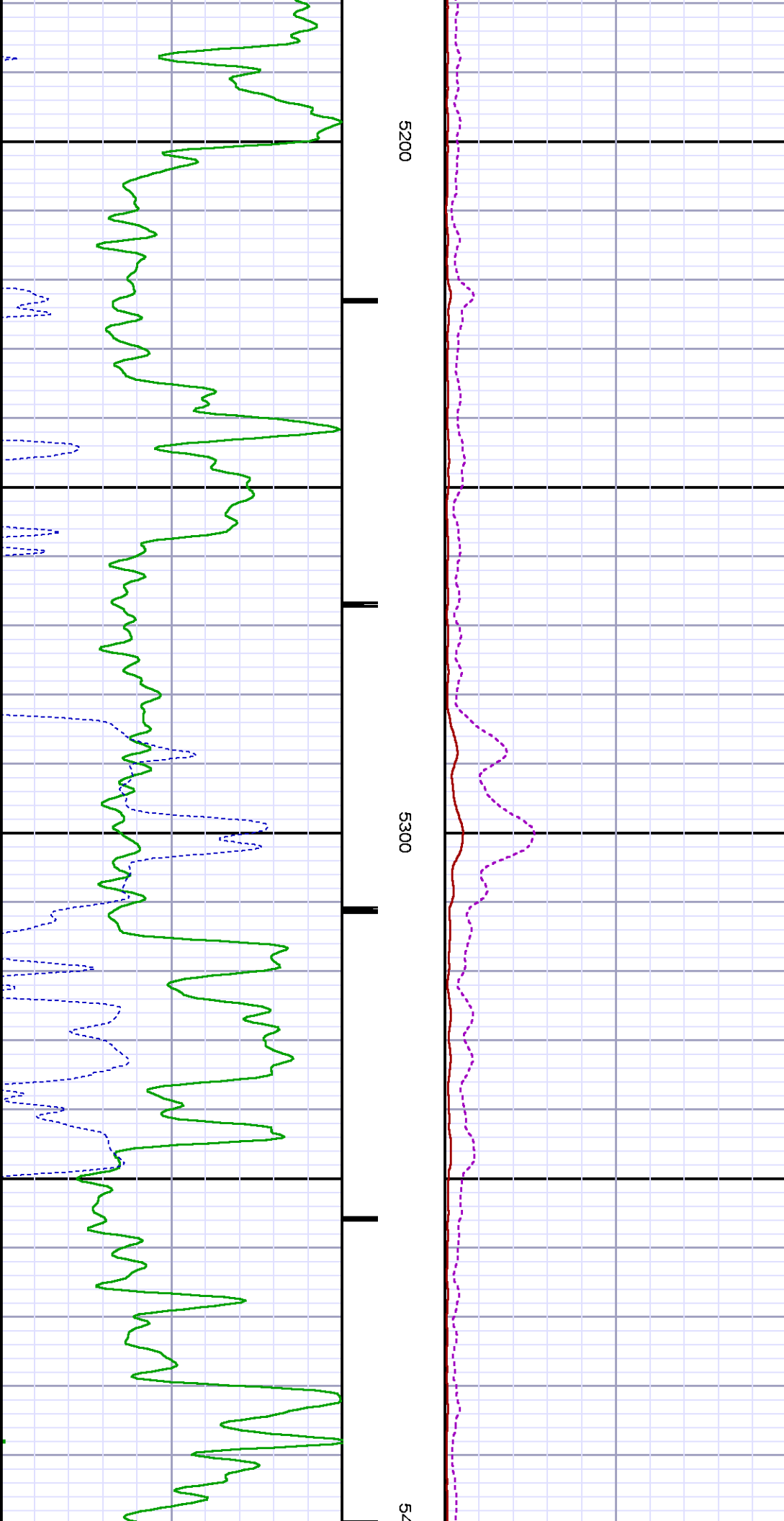
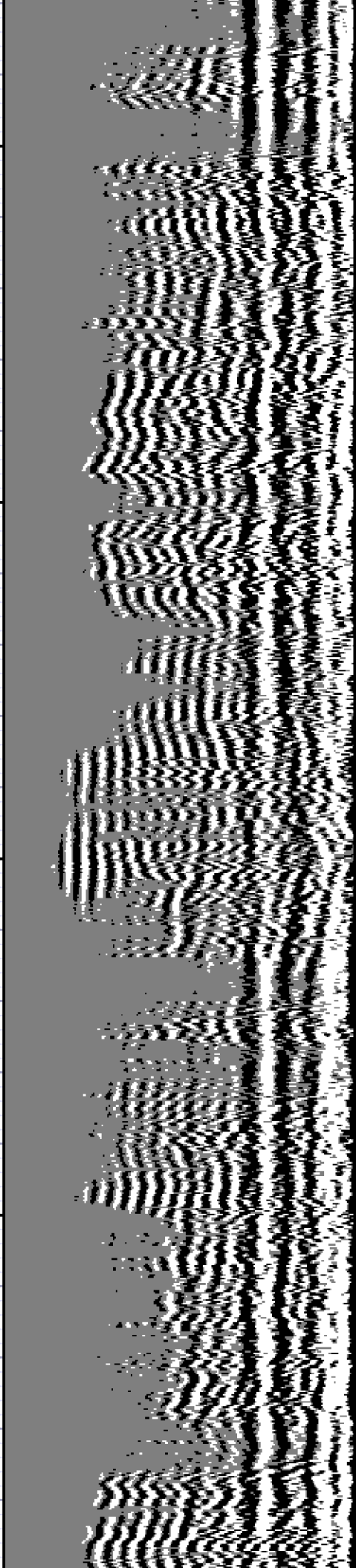


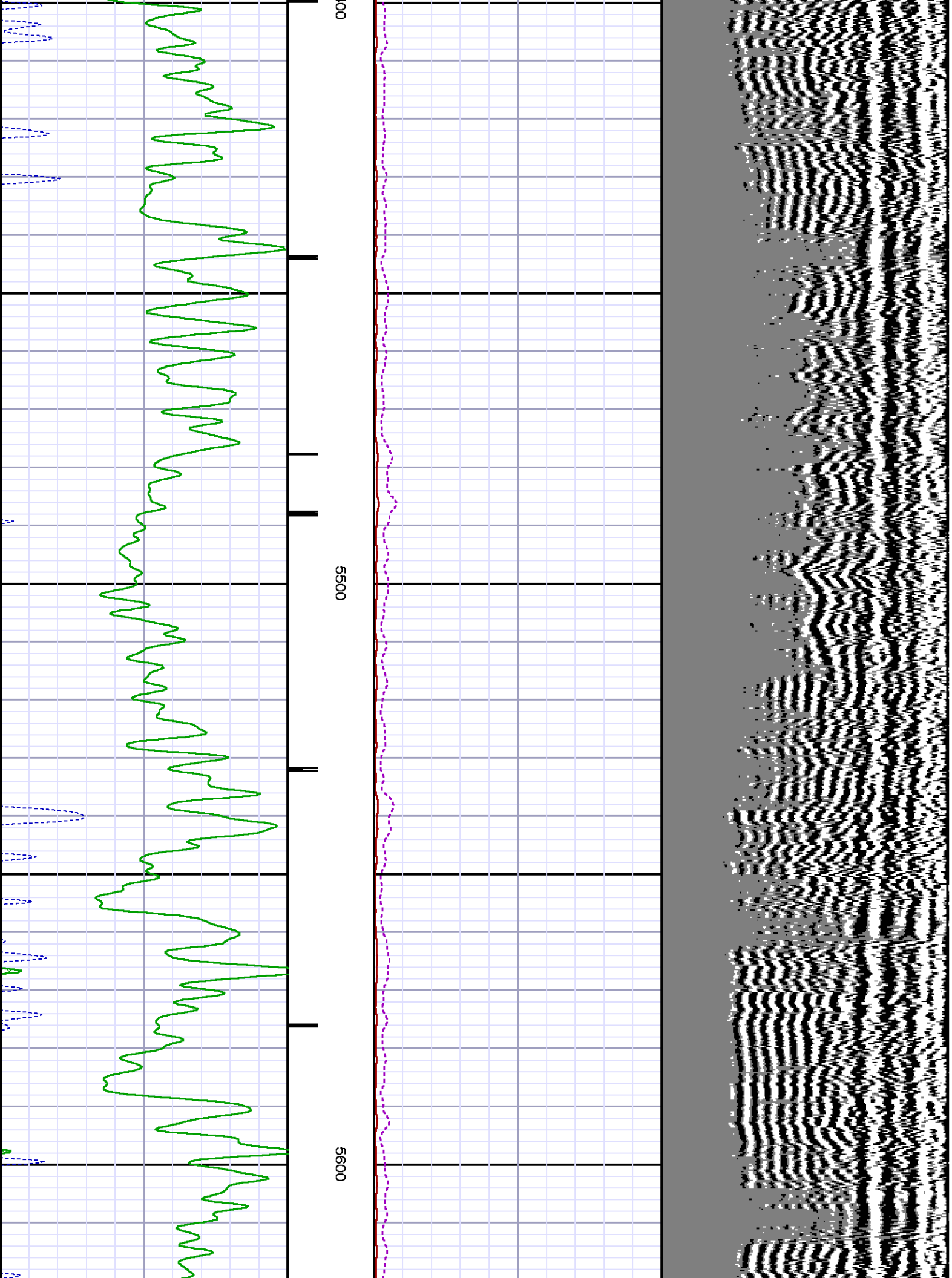


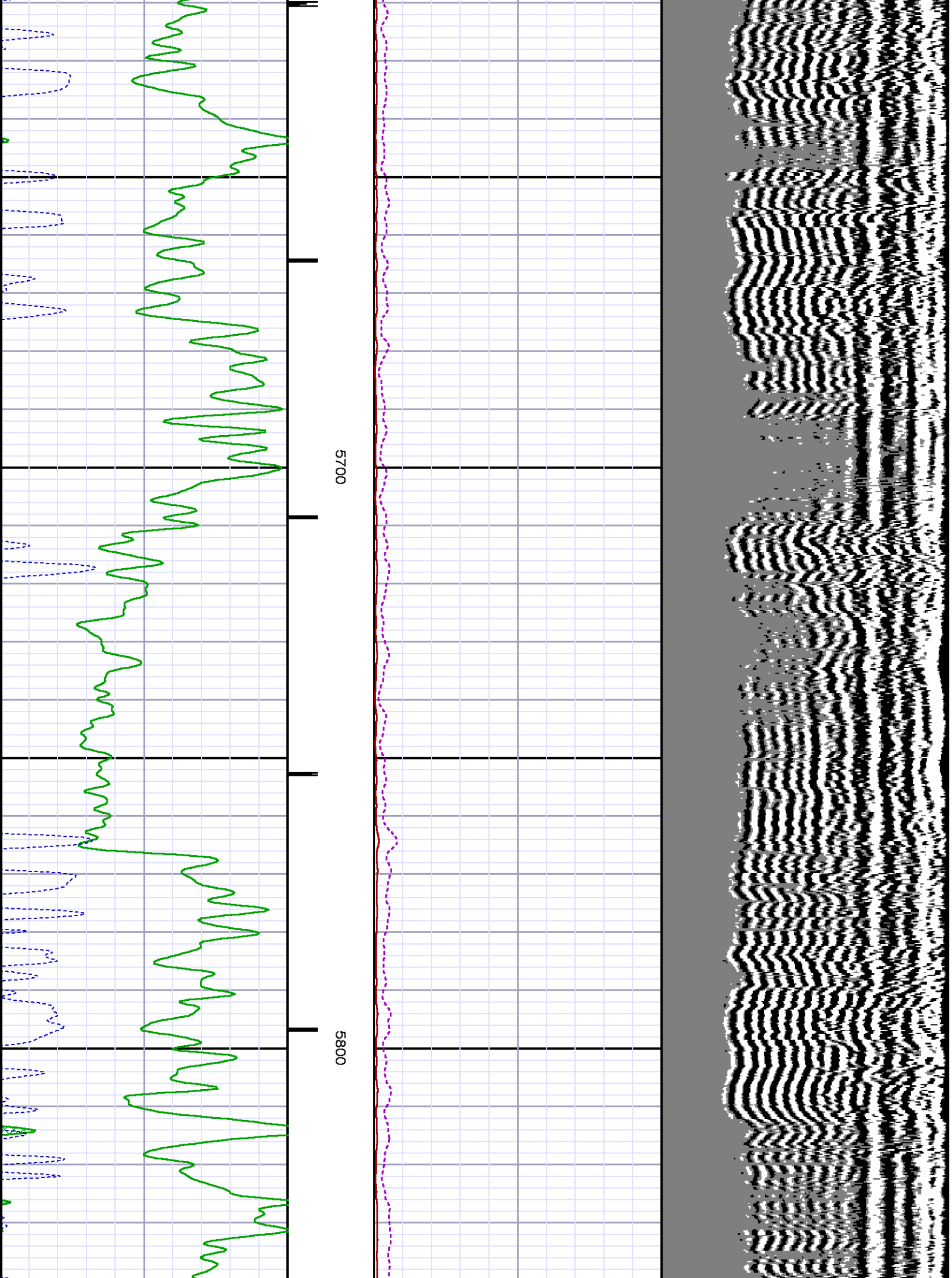


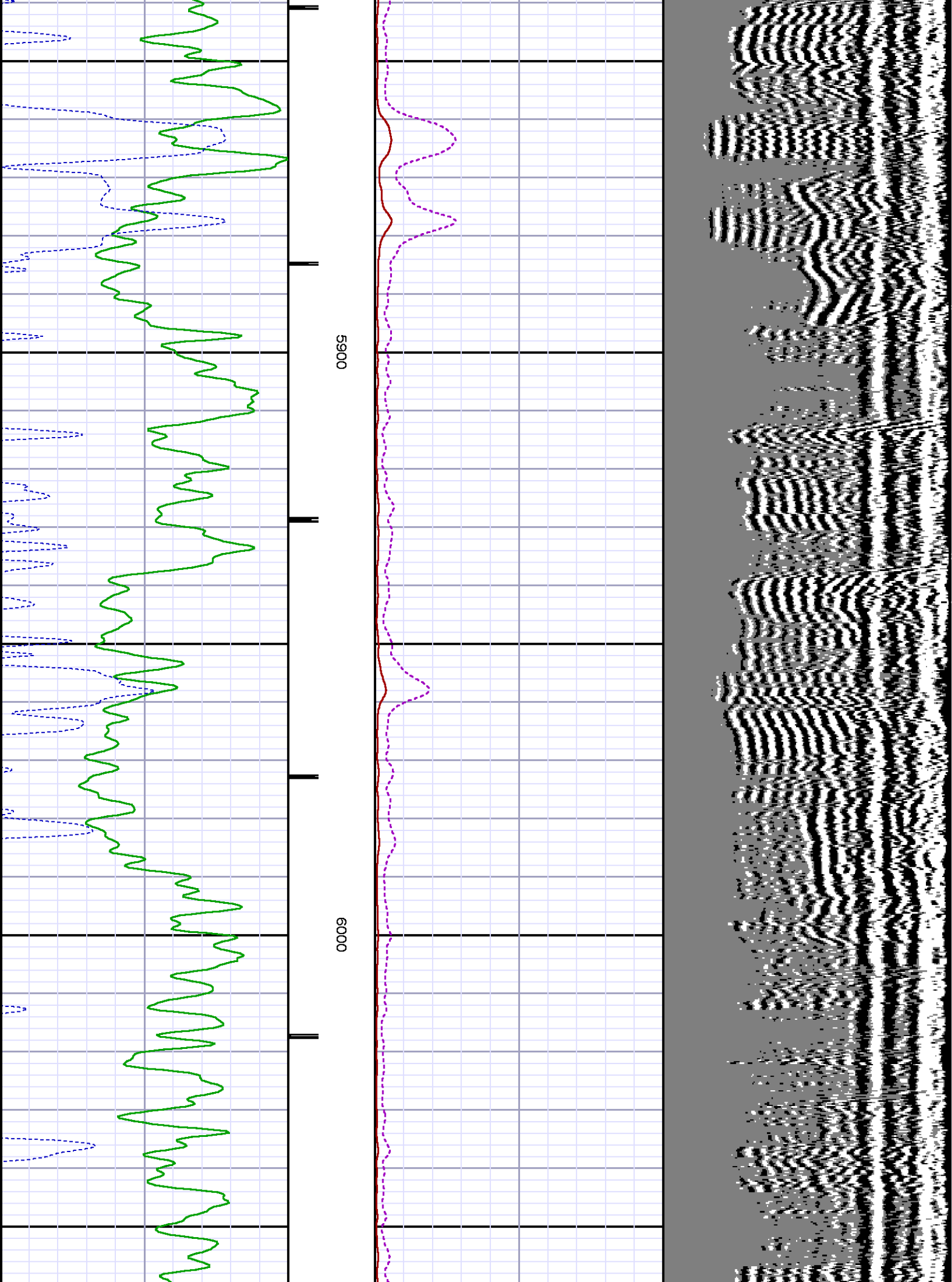


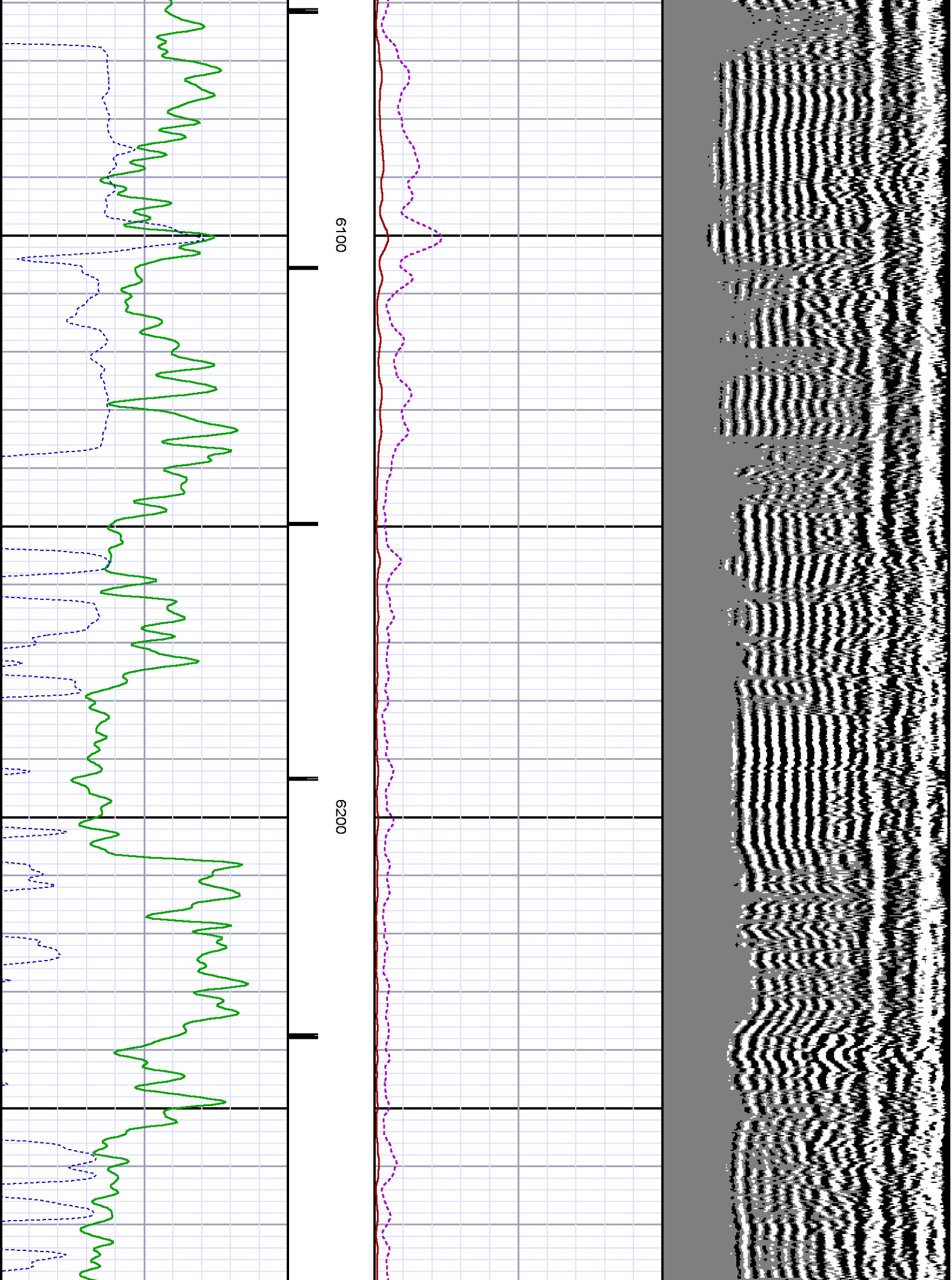


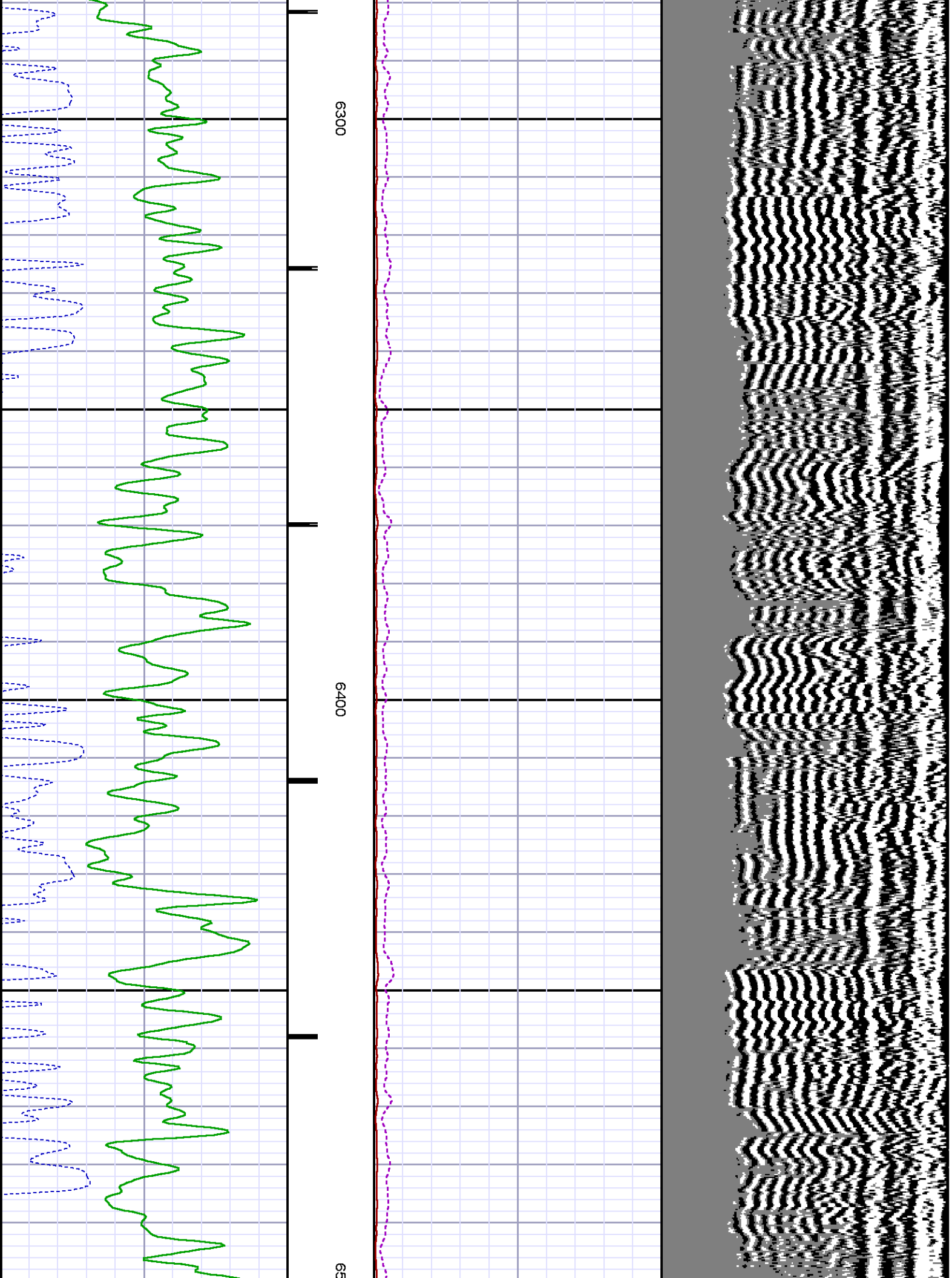


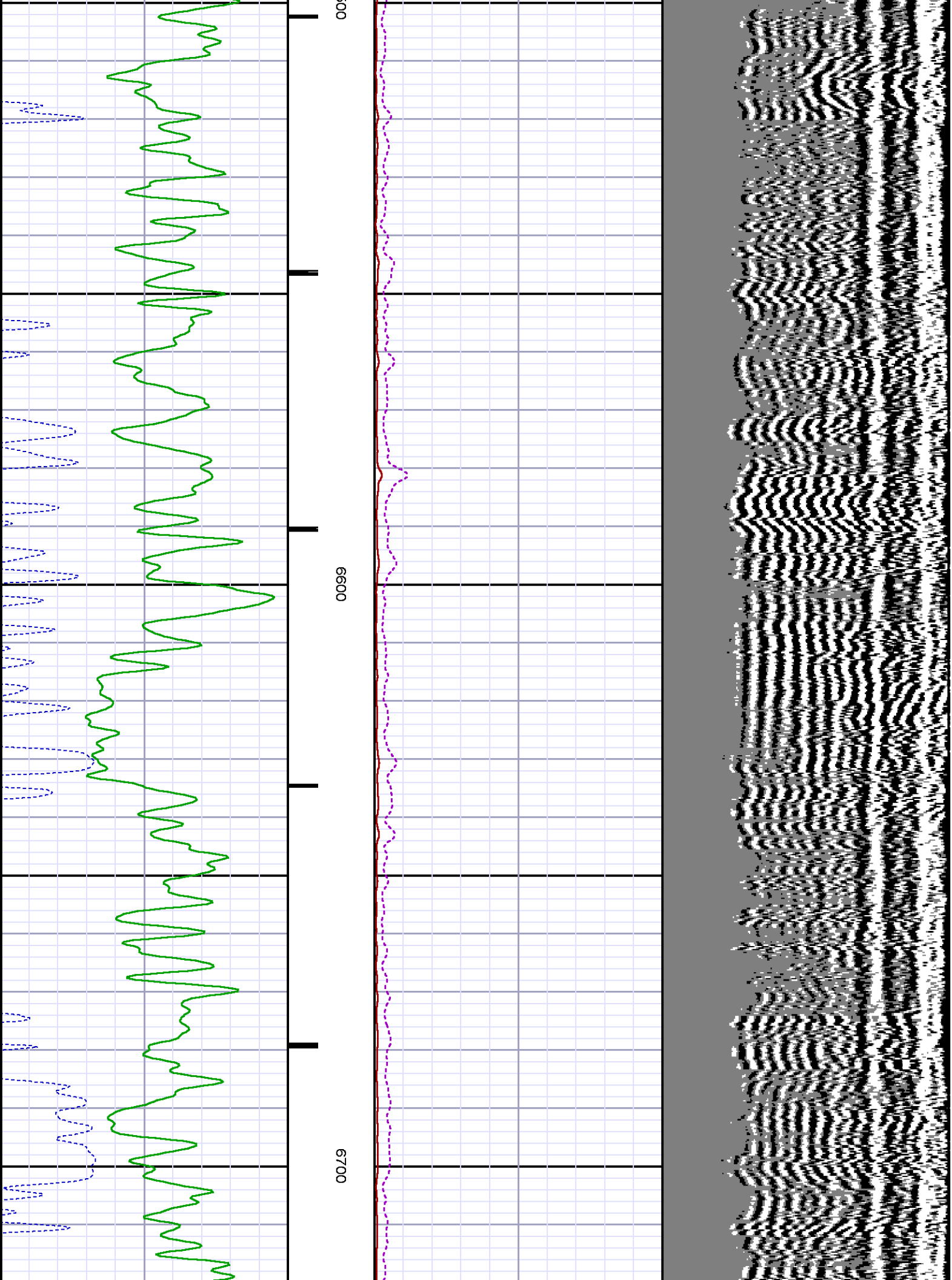


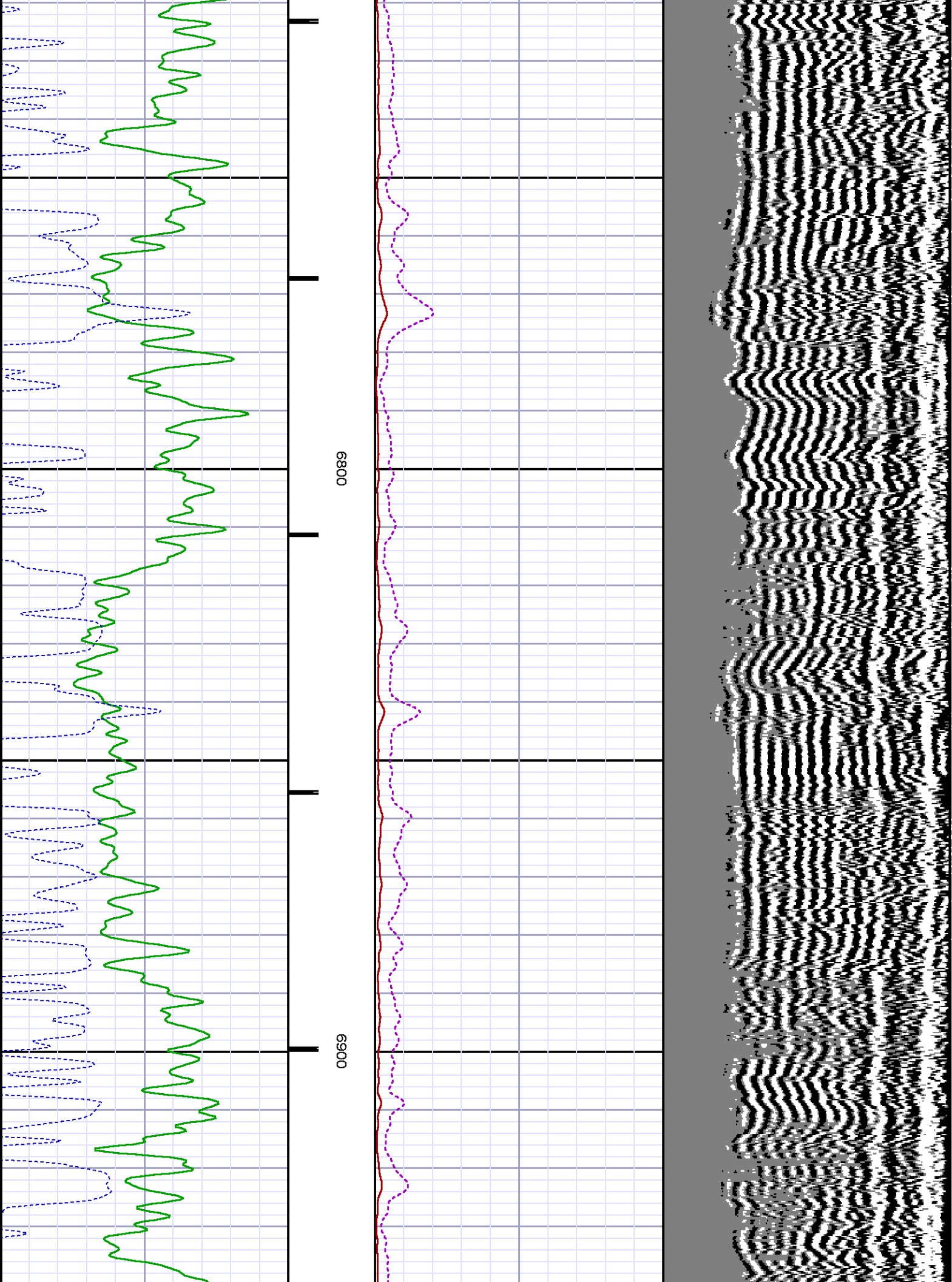


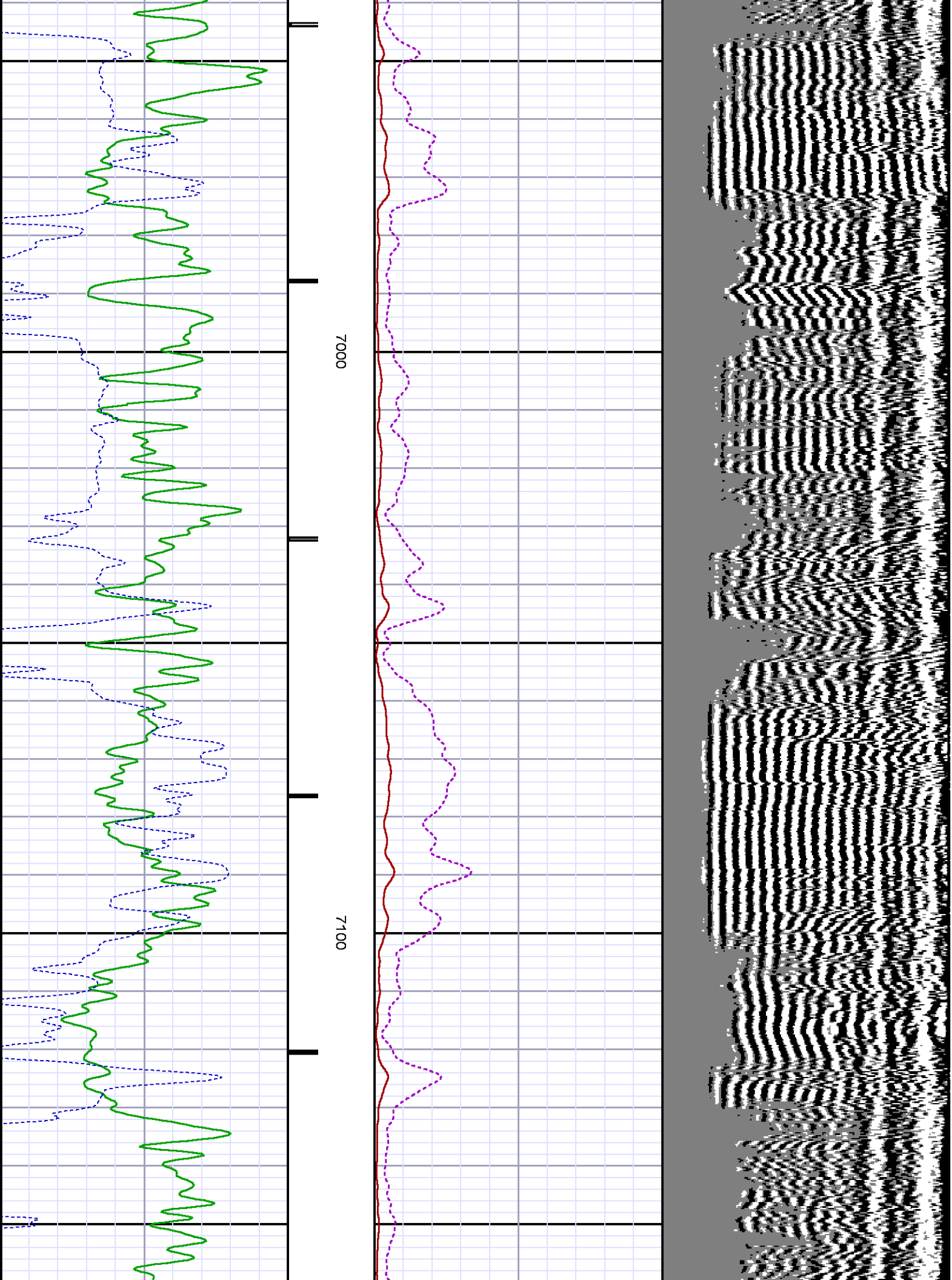


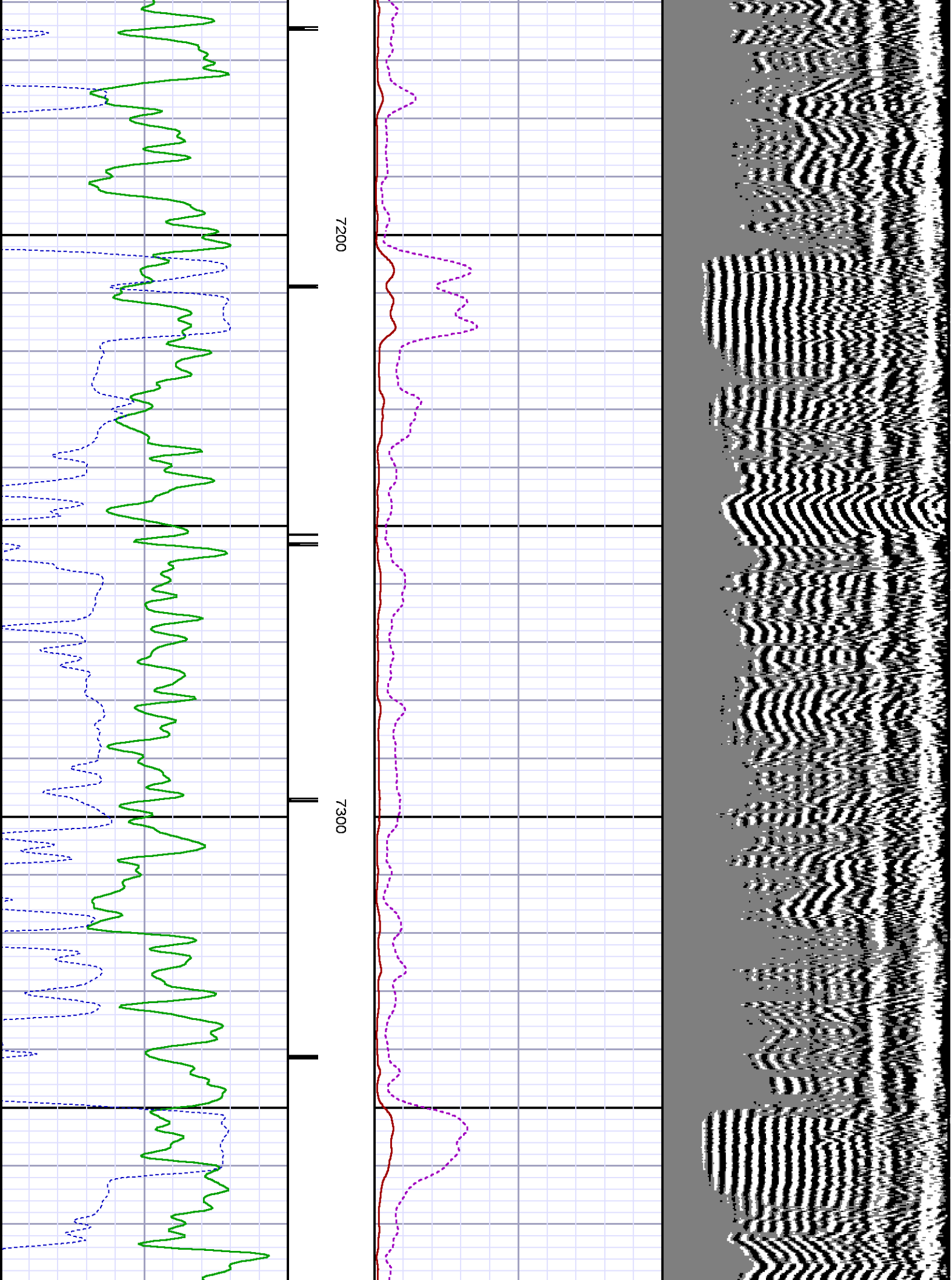


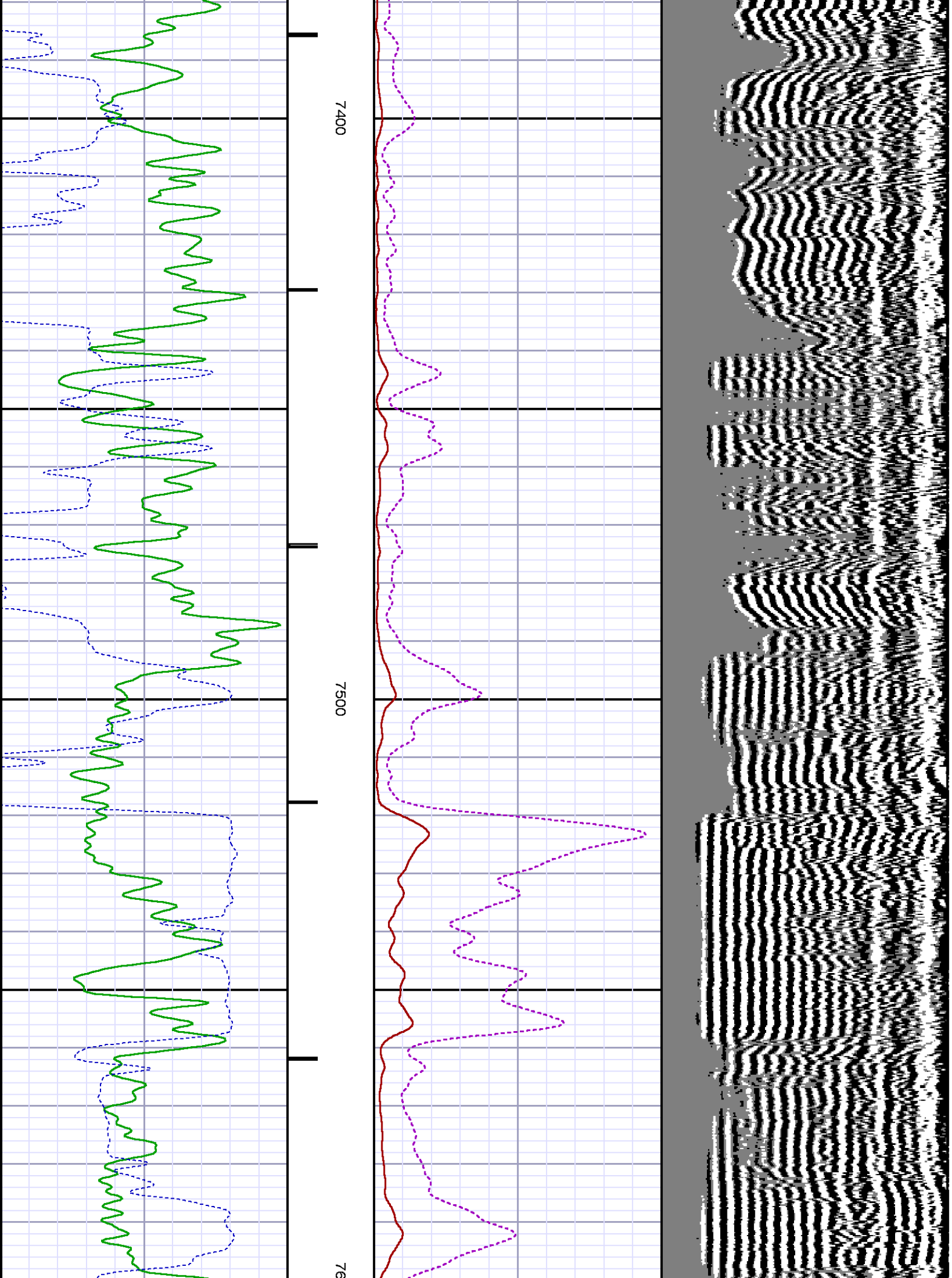


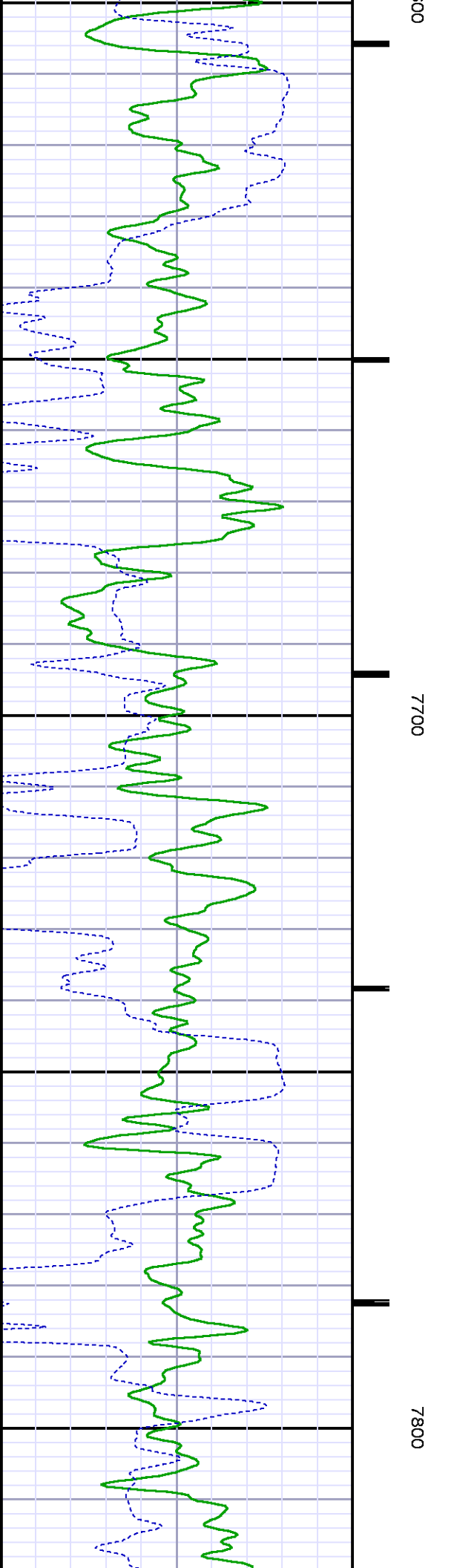
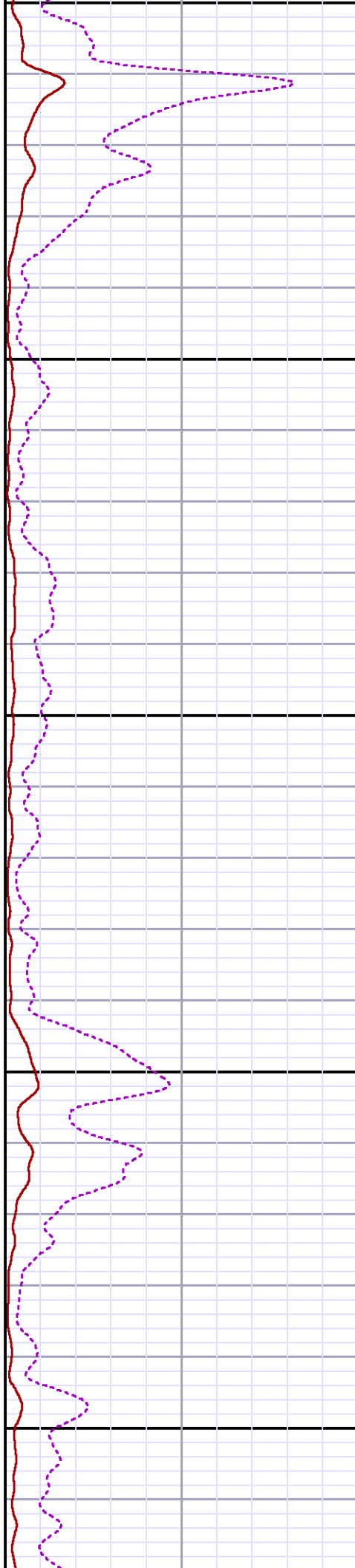
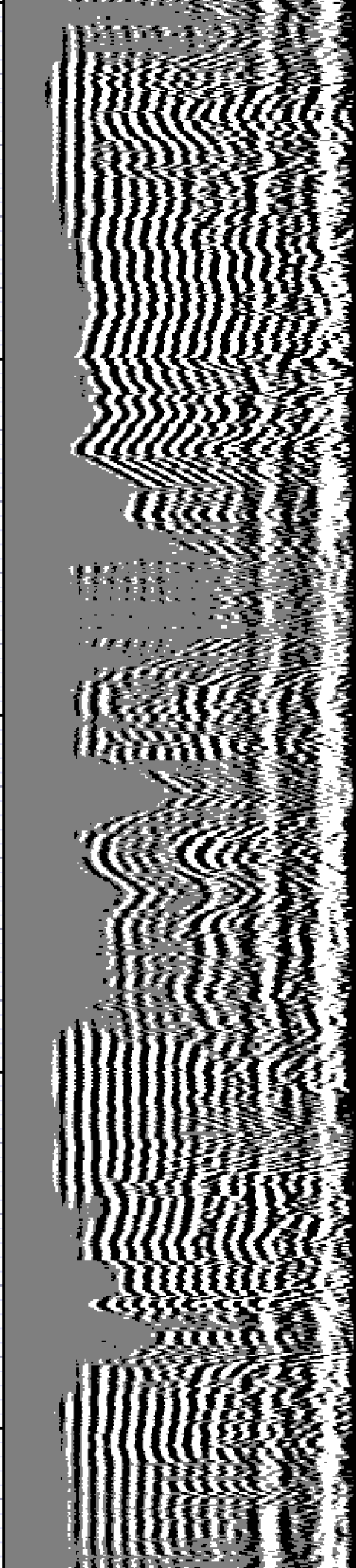


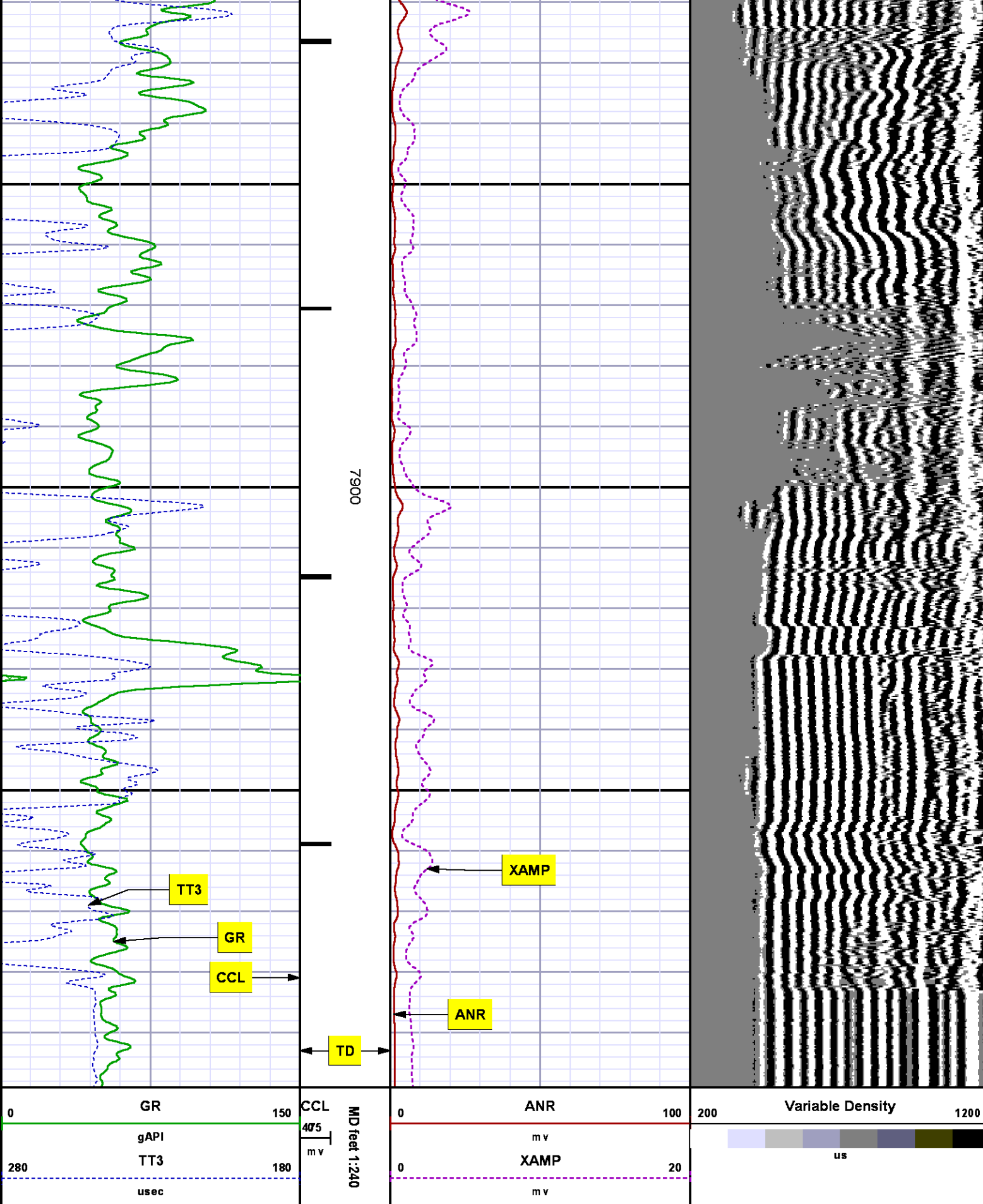












SECONDARY PRESENTATION

O PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	30.237	8010.000
RAL	Amp Gate Start Near	195.000	usec	30.237	8010.000
RAL	Amp Gate Start Radial	195.000	usec	30.237	8010.000
RAL	Amp Gate Width Far	25.000	usec	30.237	8010.000
RAL	Amp Gate Width Near	25.000	usec	30.237	8010.000
RAL	Amp Gate Width Radial	25.000	usec	30.237	8010.000
RAL	casing od	4.500	inches	30.237	8010.000
RAL	casing wt	11.600	lbm/ft	30.237	8010.000
RAL	FB Start Far	291.900	usec	30.237	8010.000
RAL	FB Start Near	180.000	usec	30.237	8010.000
RAL	FB Start Radial	180.000	usec	30.237	8010.000
RAL	FB Thresh Far	10.000	mv	30.237	8010.000
RAL	FB Thresh Near	4.000	mv	30.237	8010.000
RAL	FB Thresh Radial	4.000	mv	30.237	8010.000
RAL	Fluid Travel Time	200.000	usec/ft	30.237	8009.862

DEPTH OFFSETS

(for Acquired Curves)

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

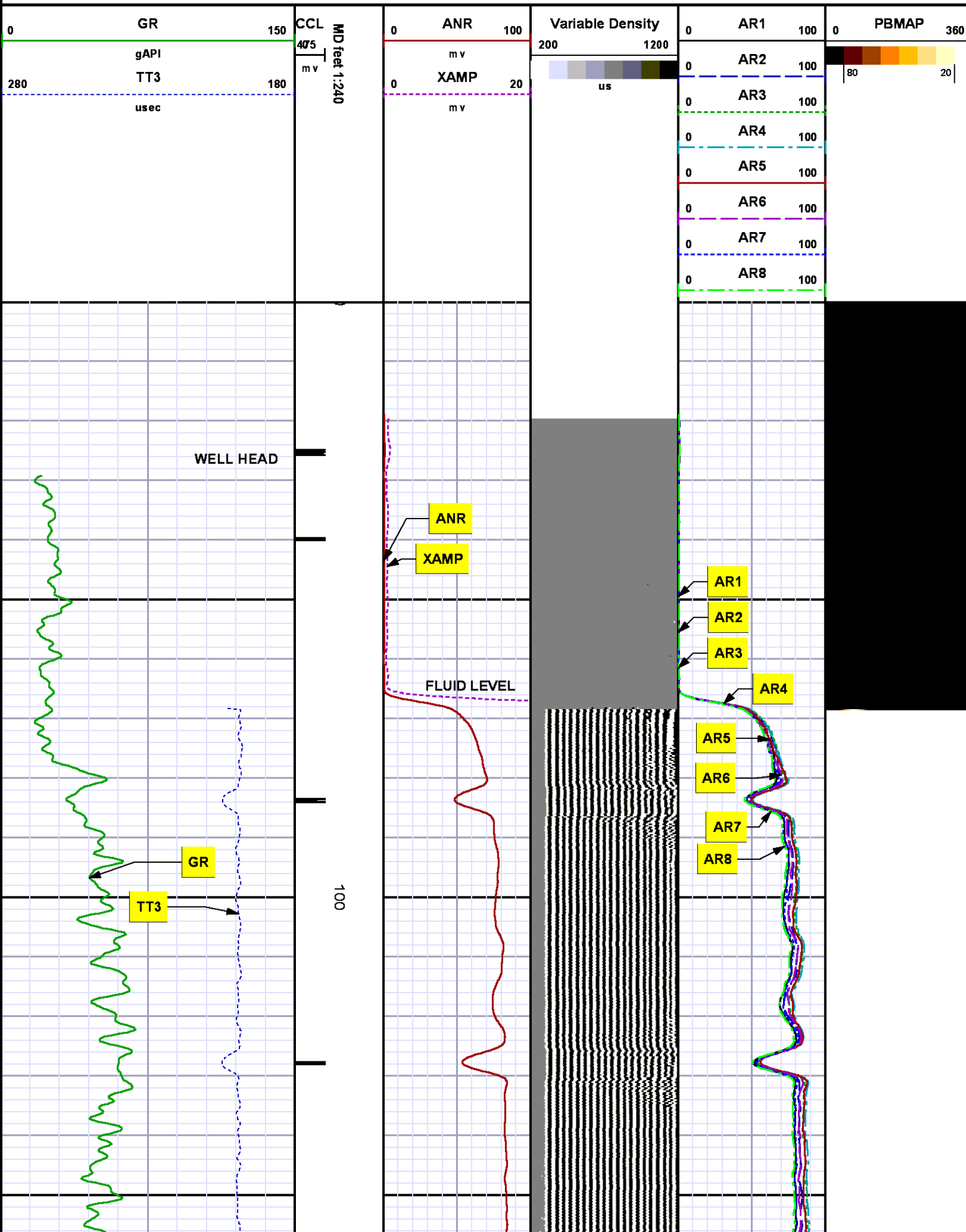
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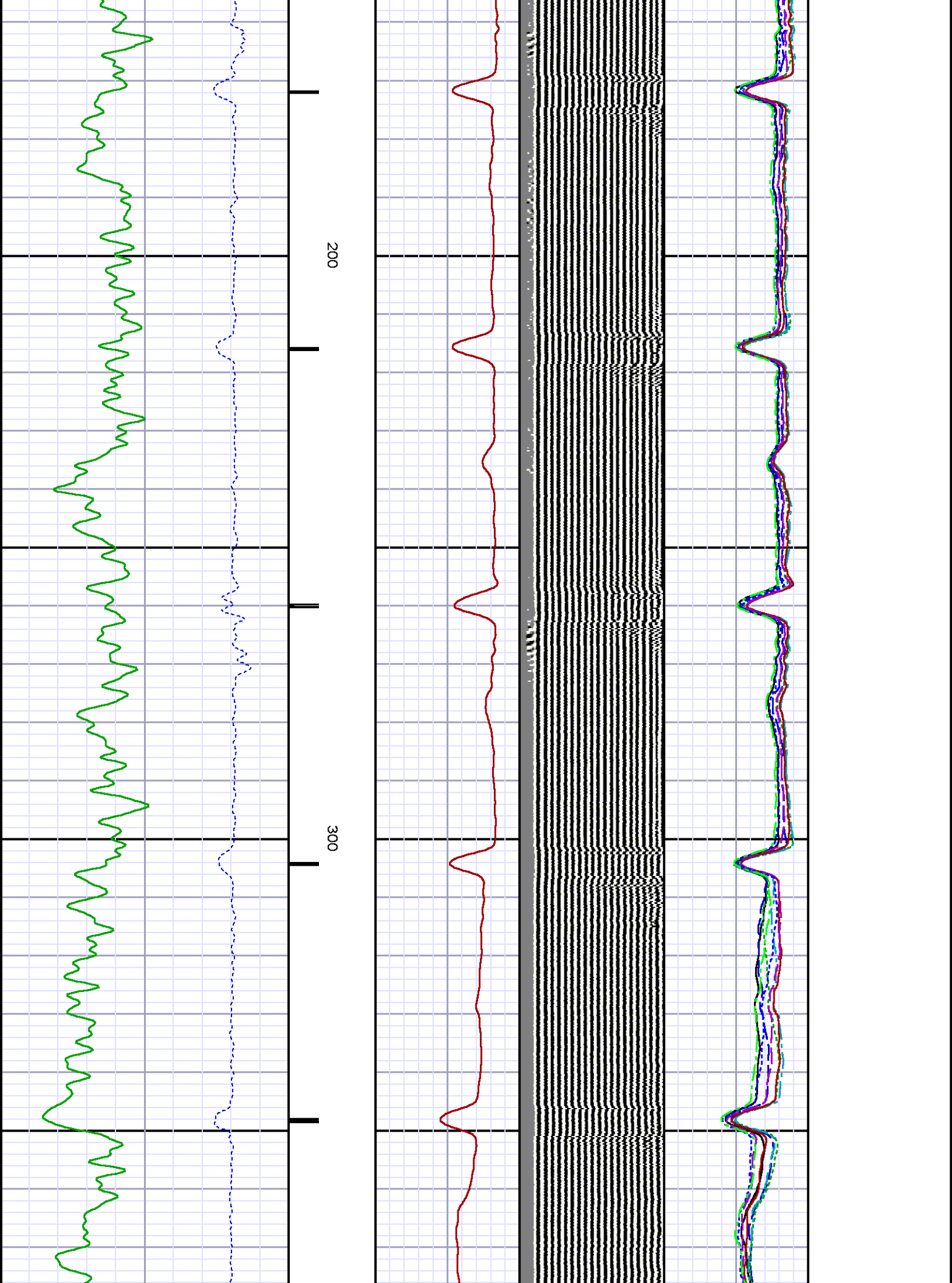
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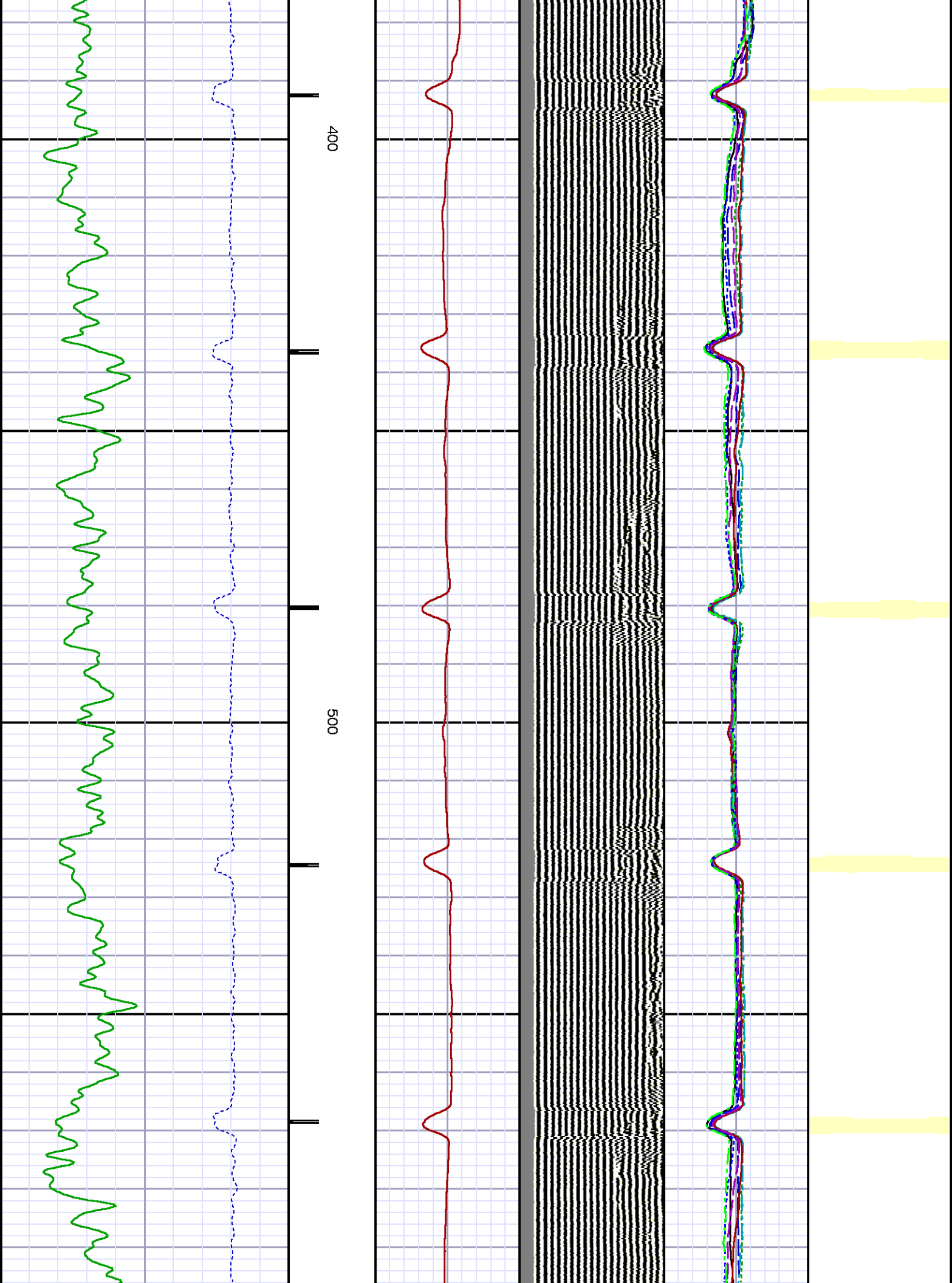
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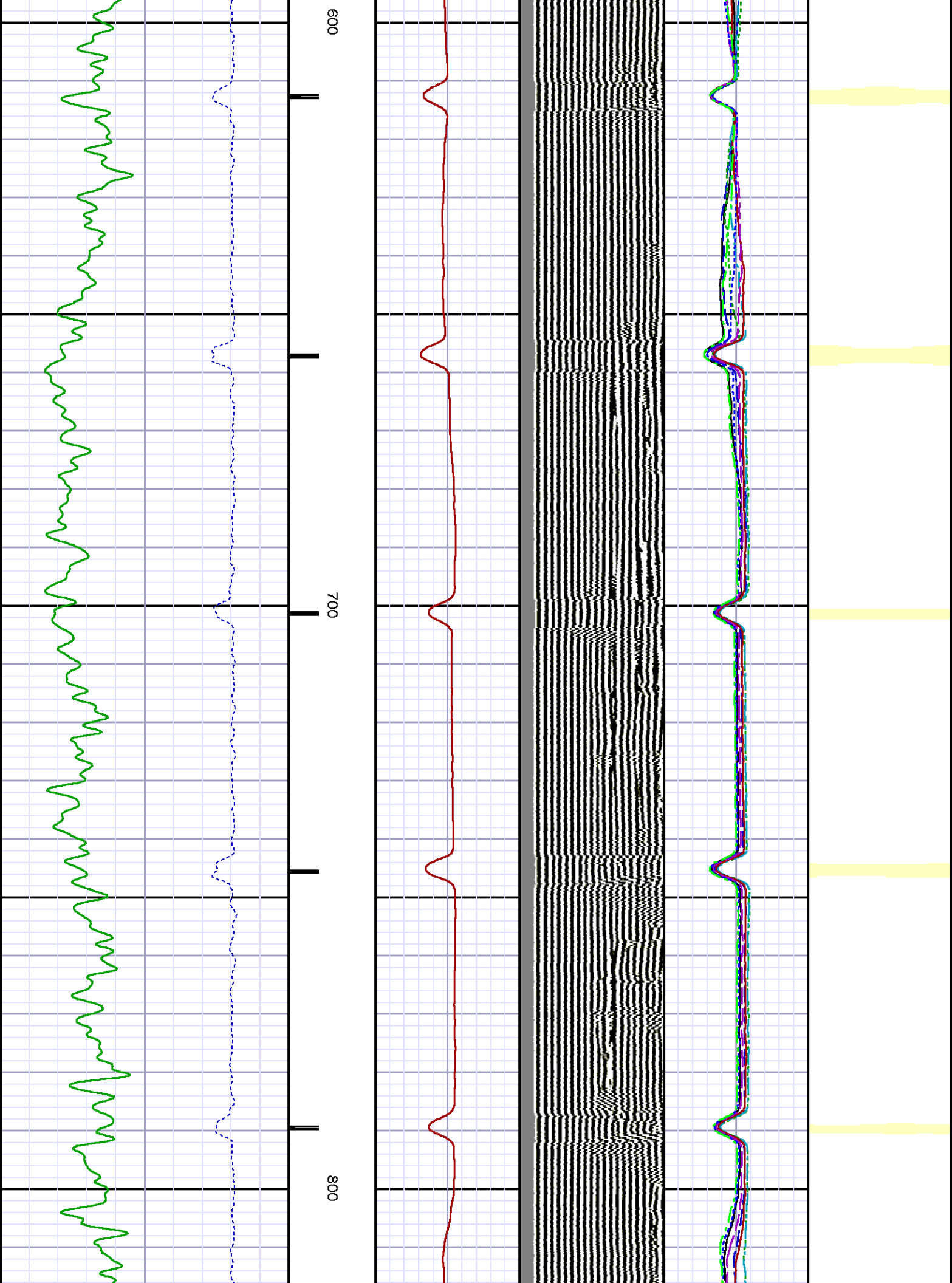
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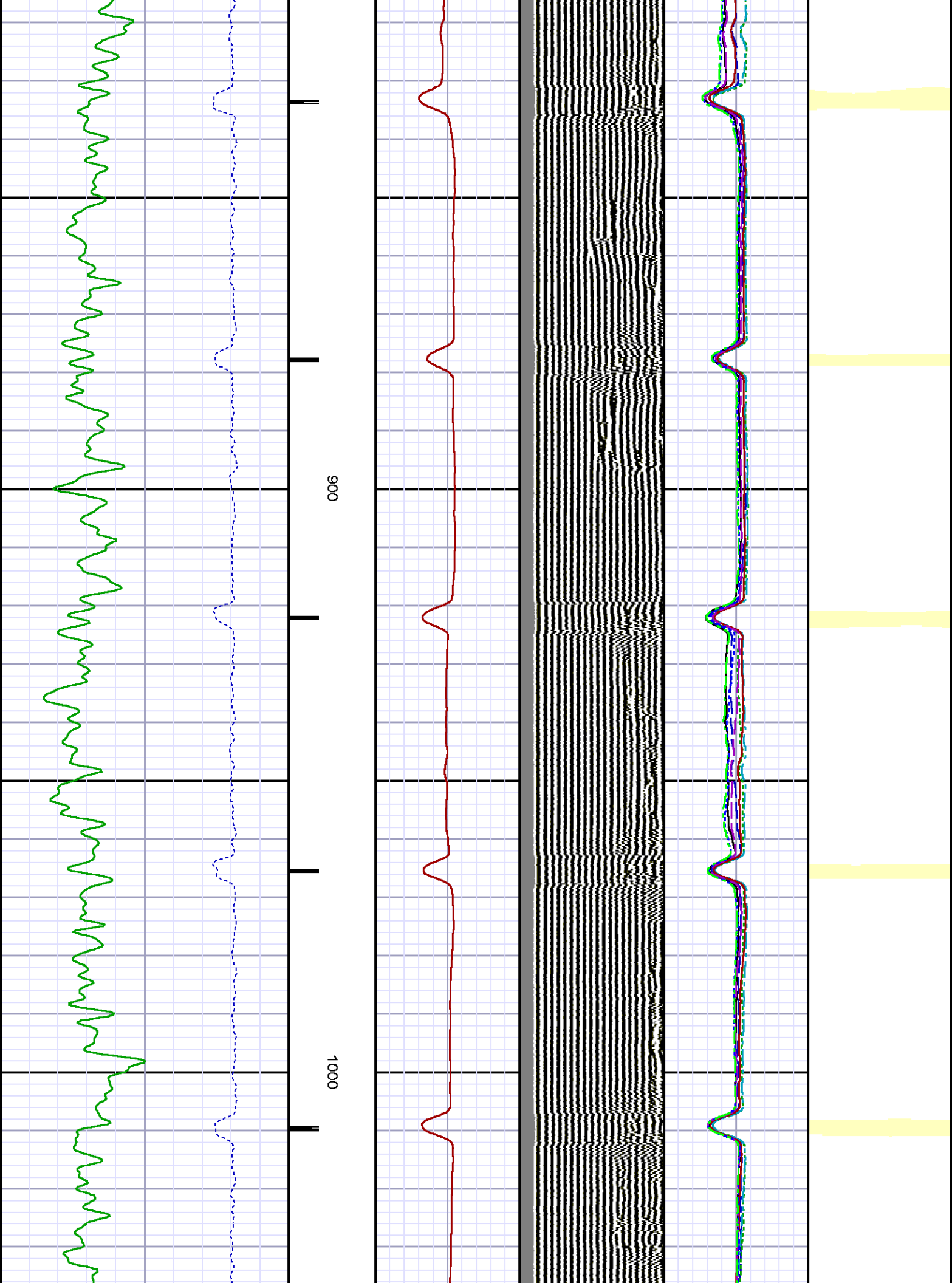
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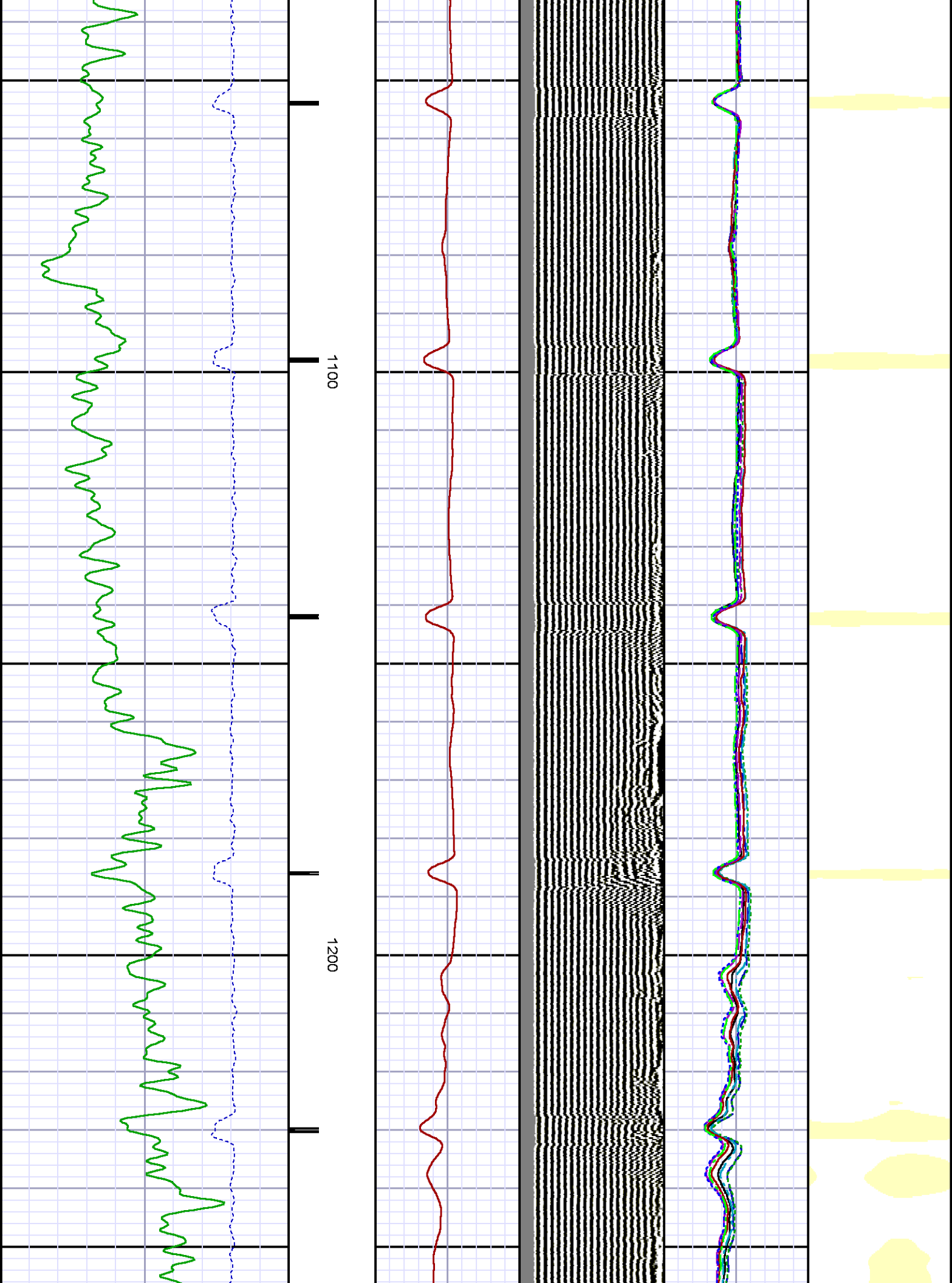


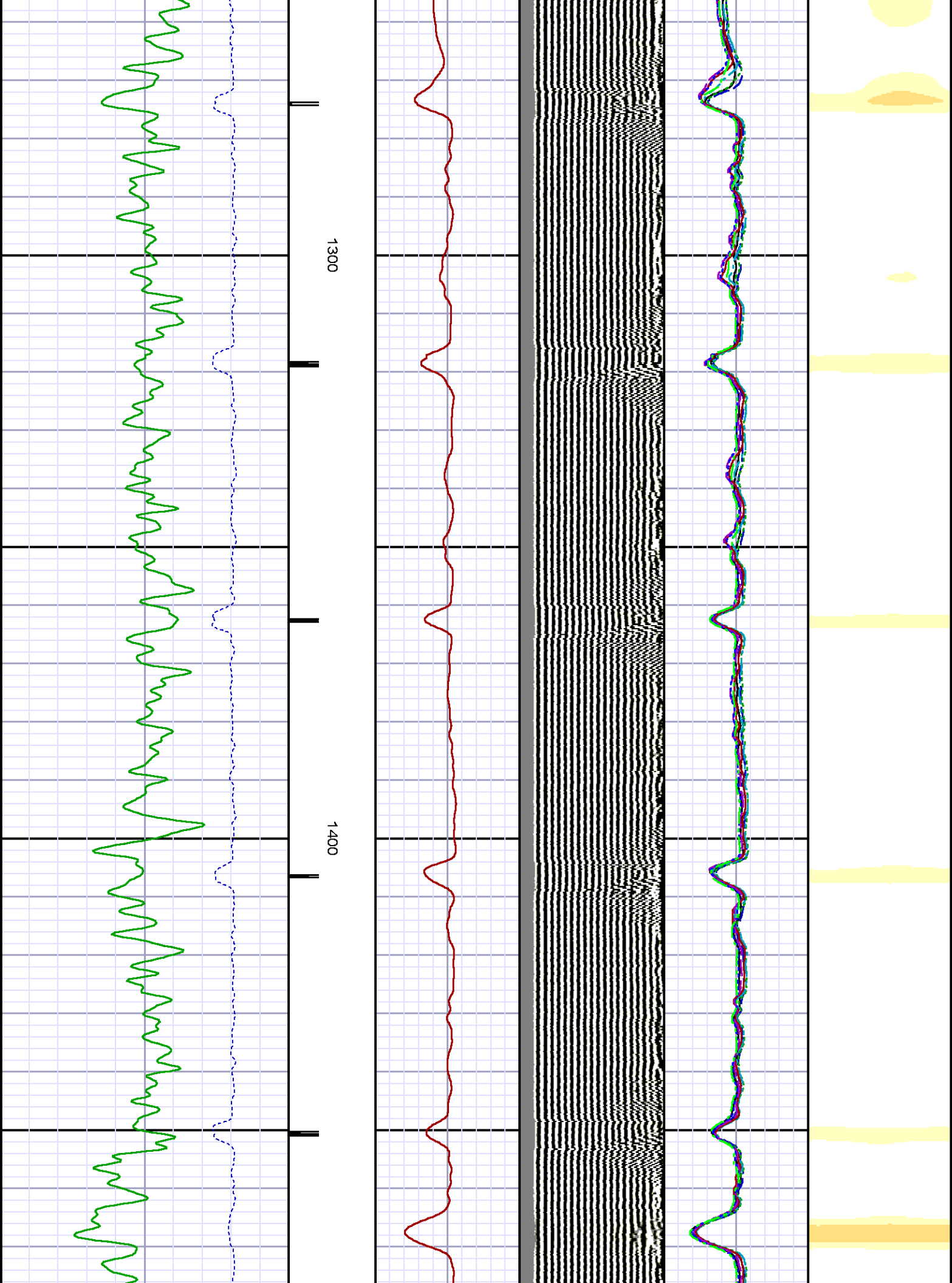


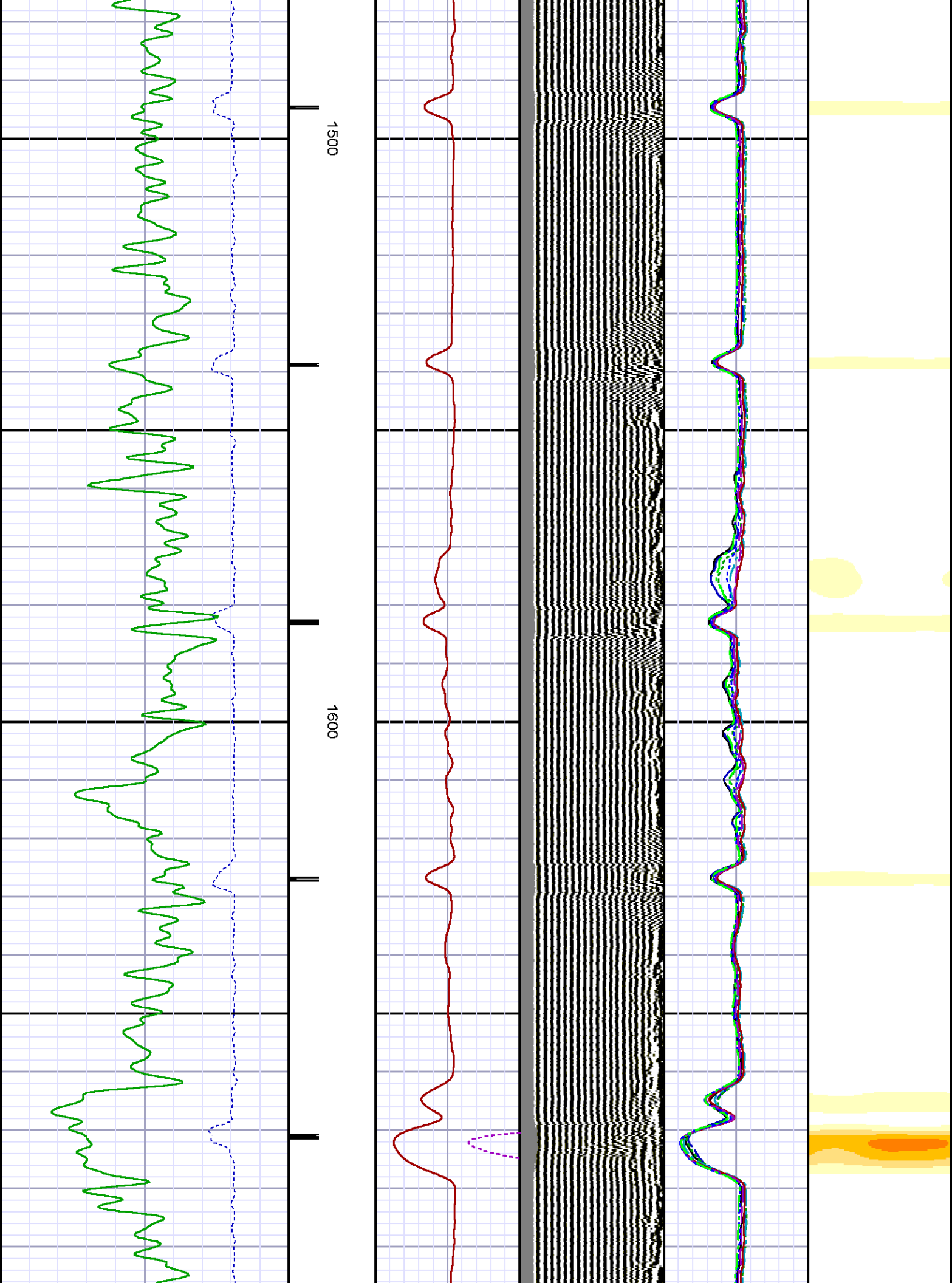


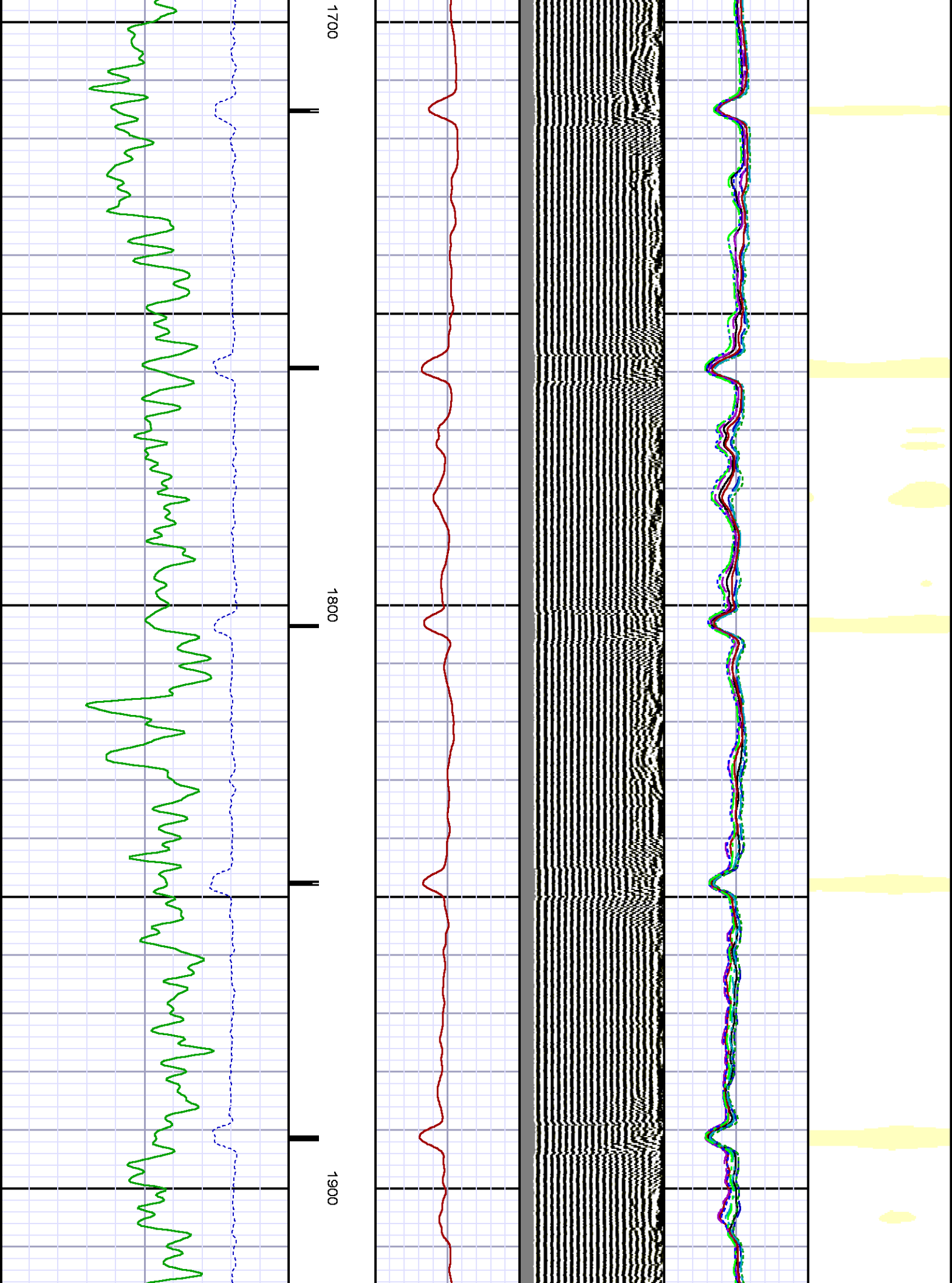


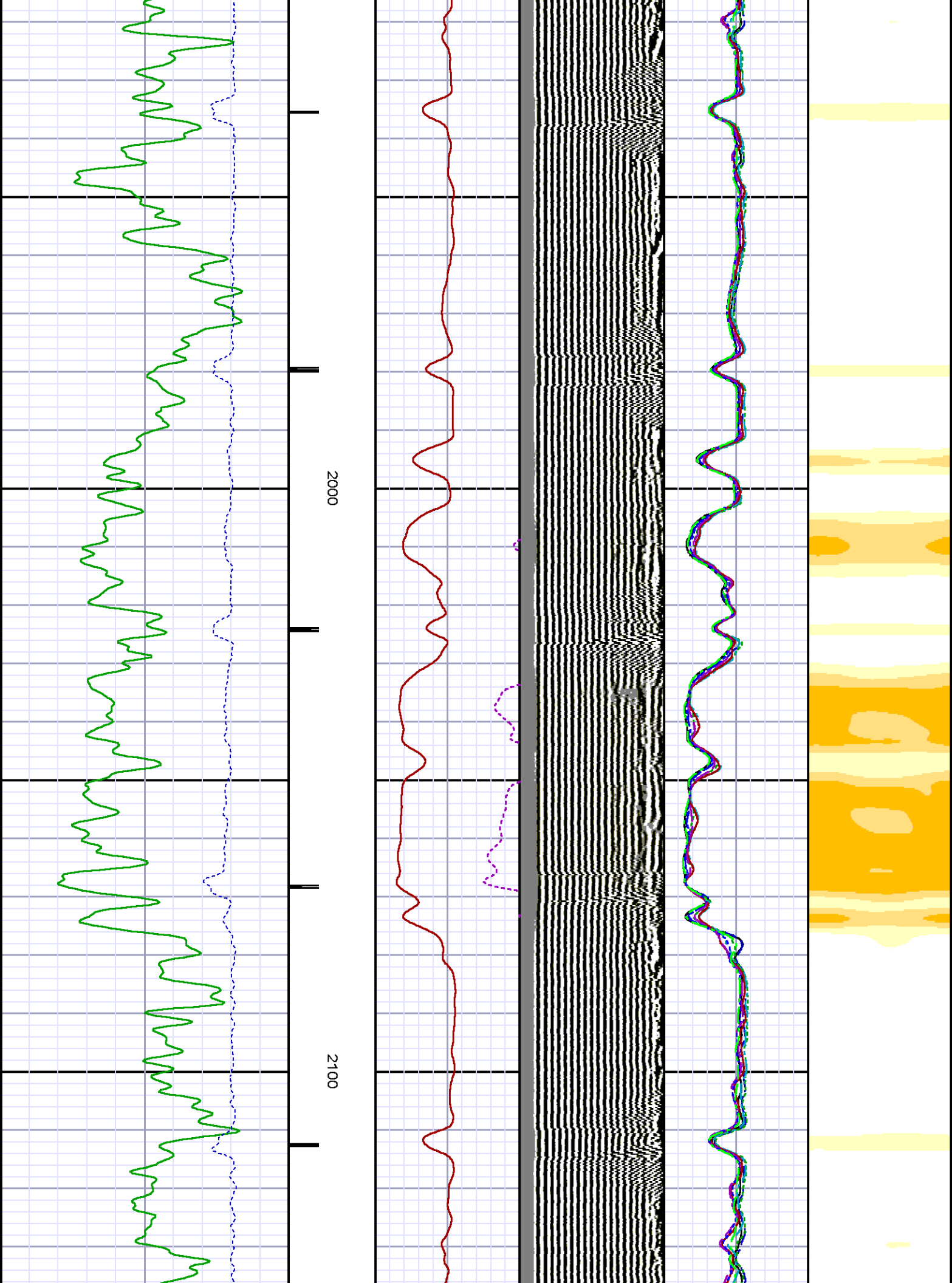


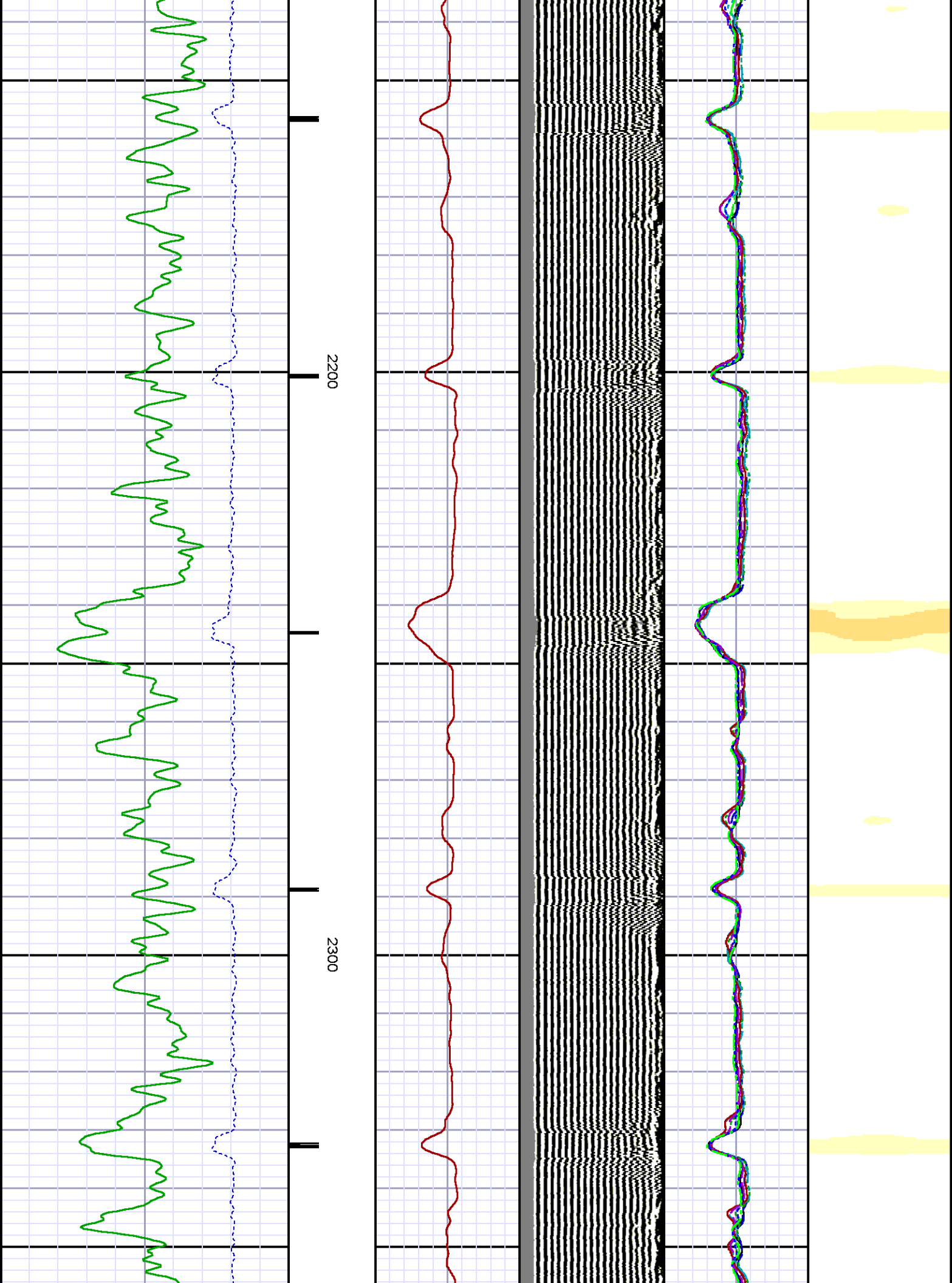


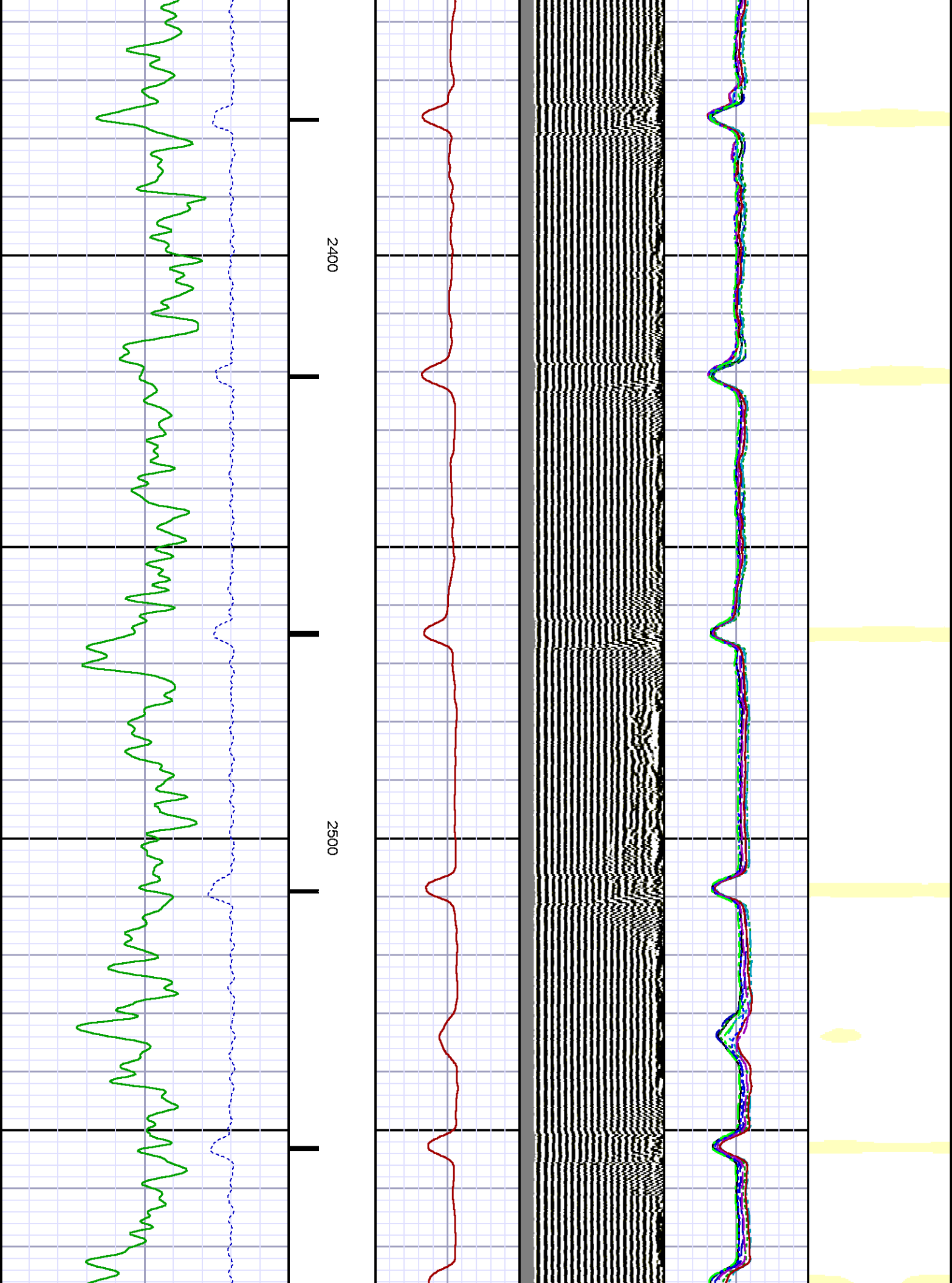


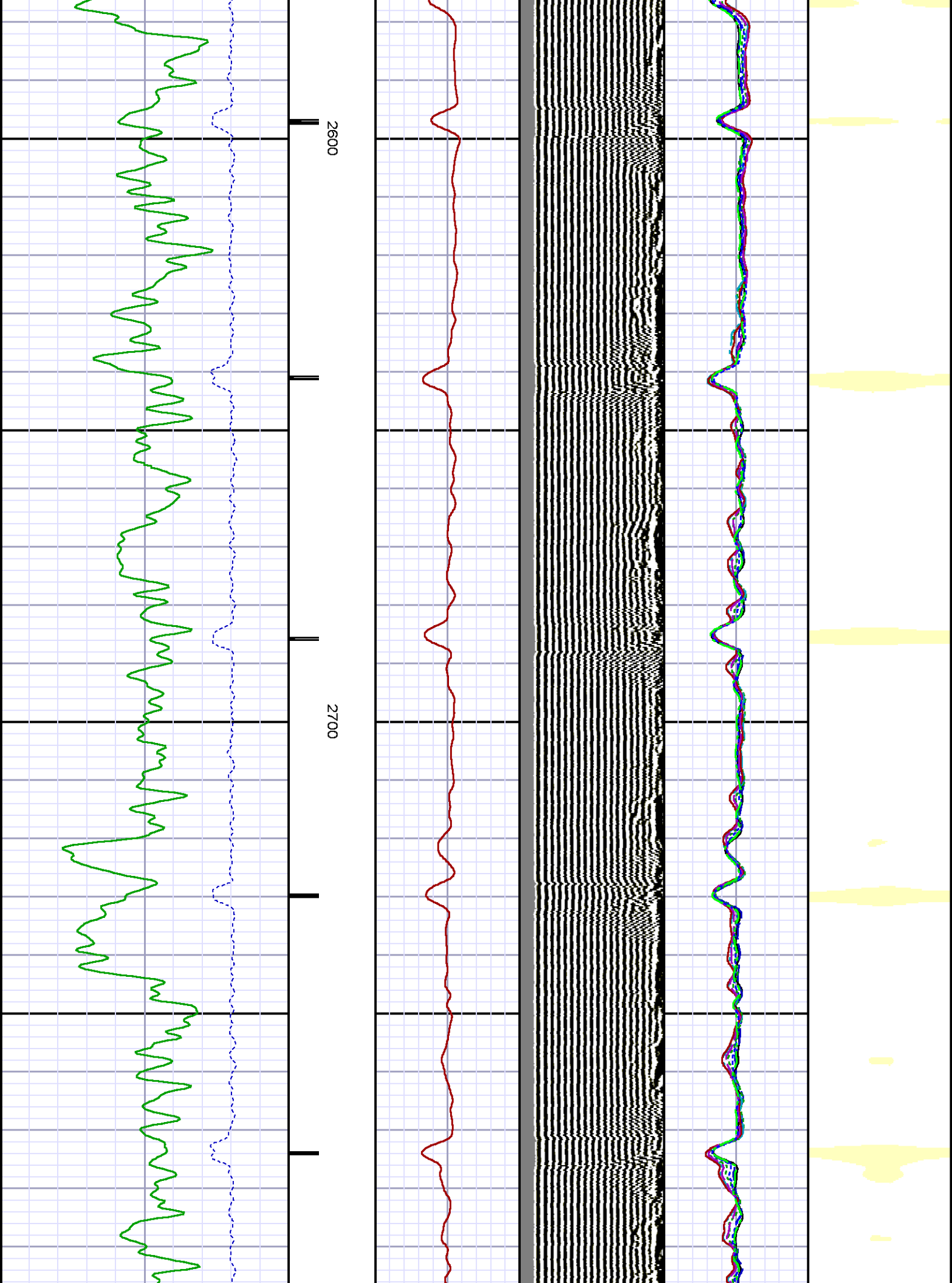


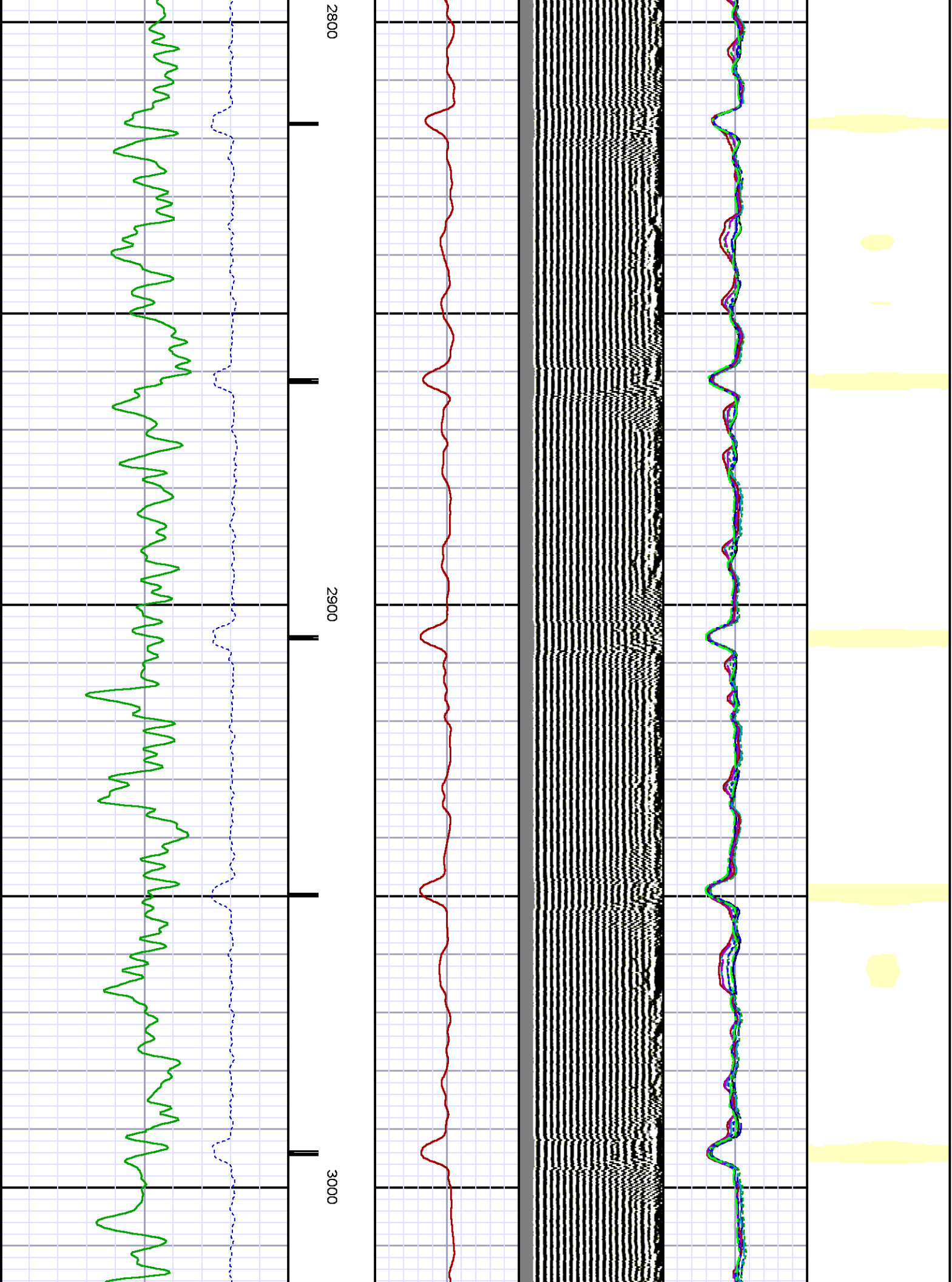


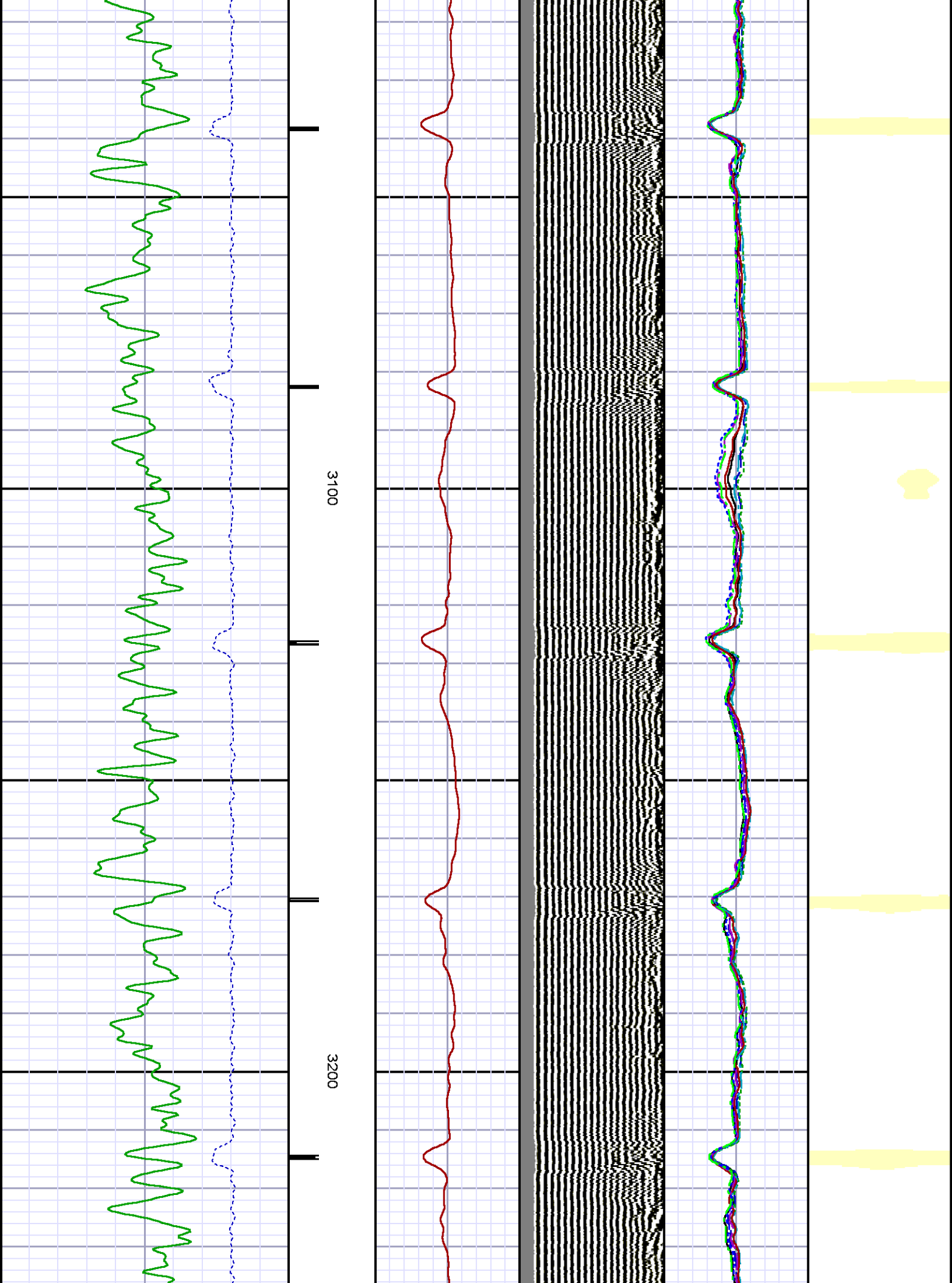


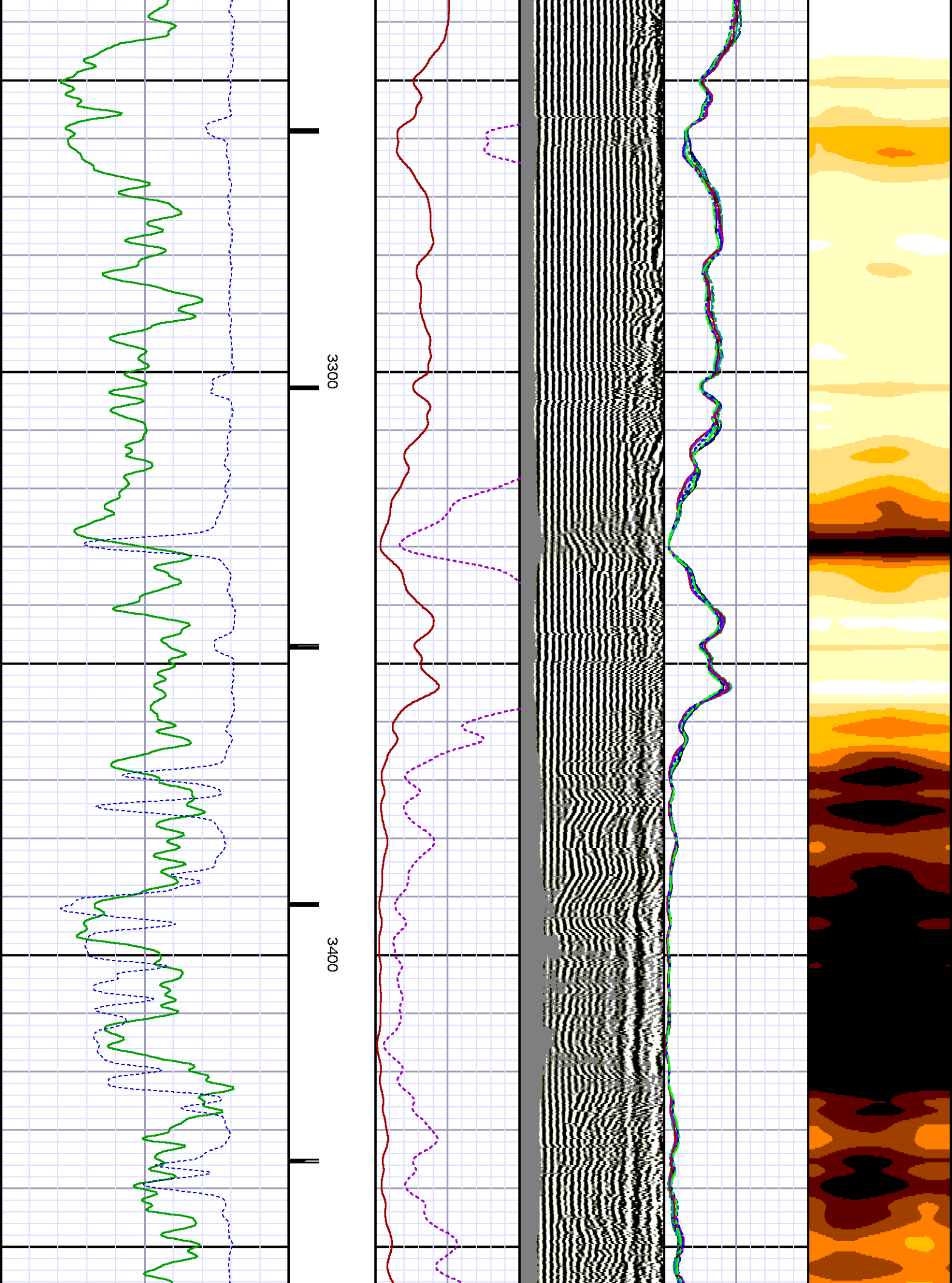


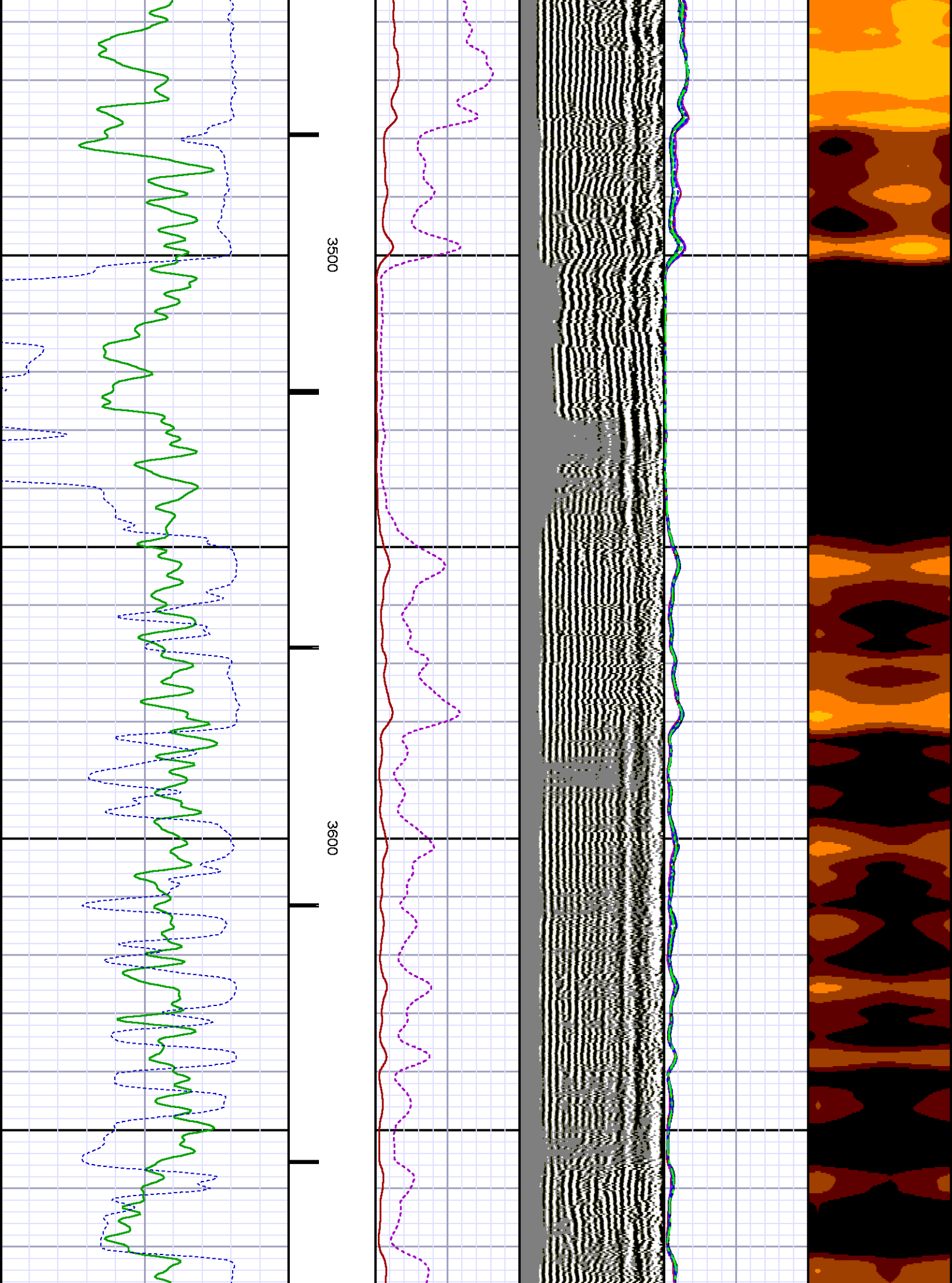


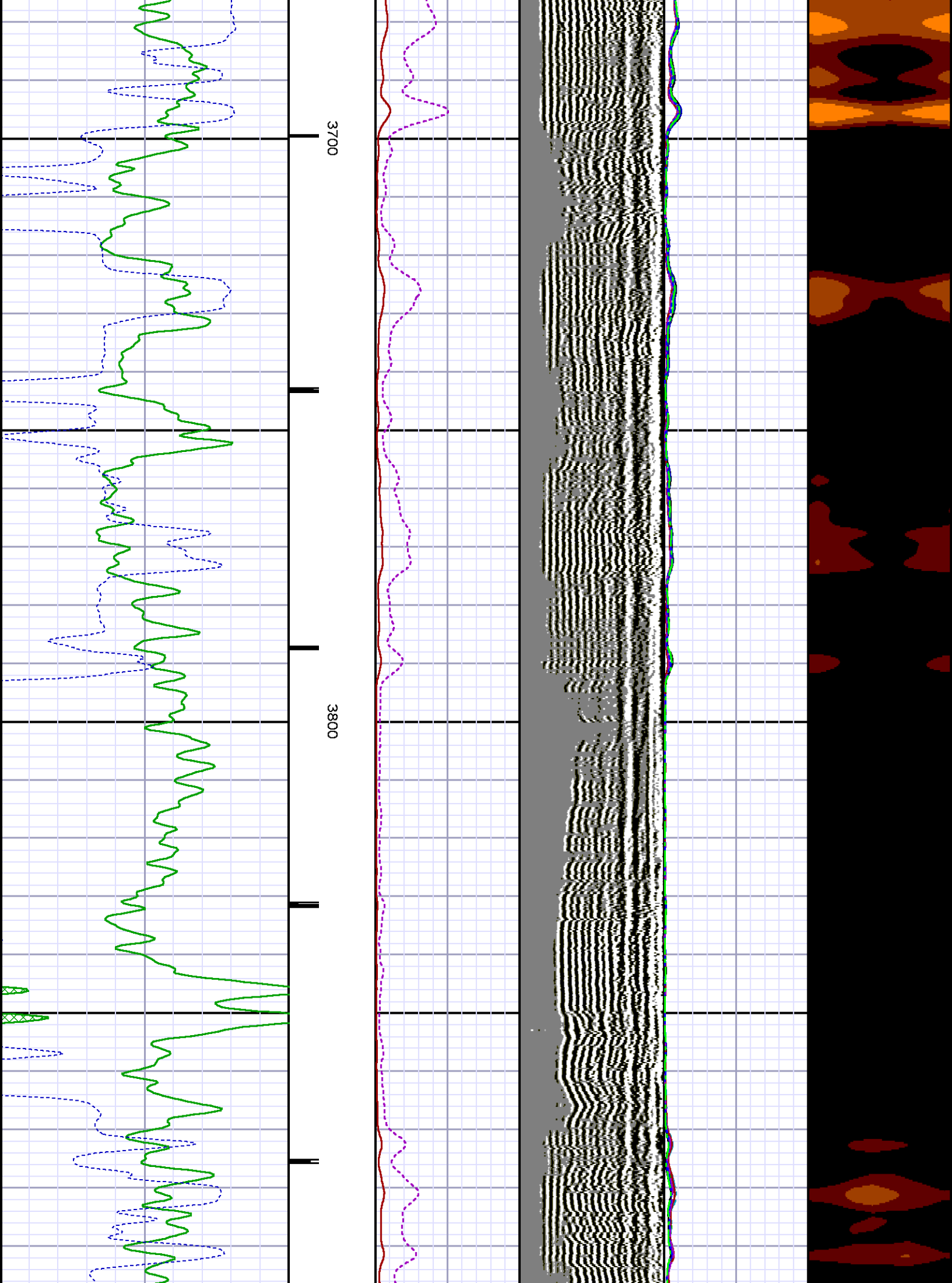


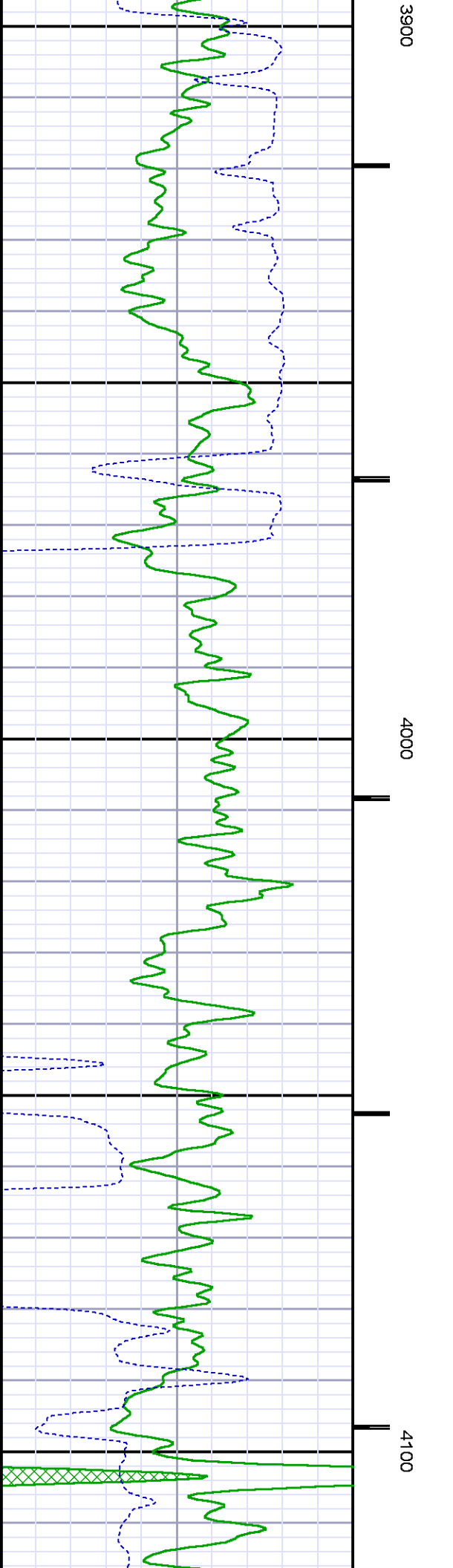
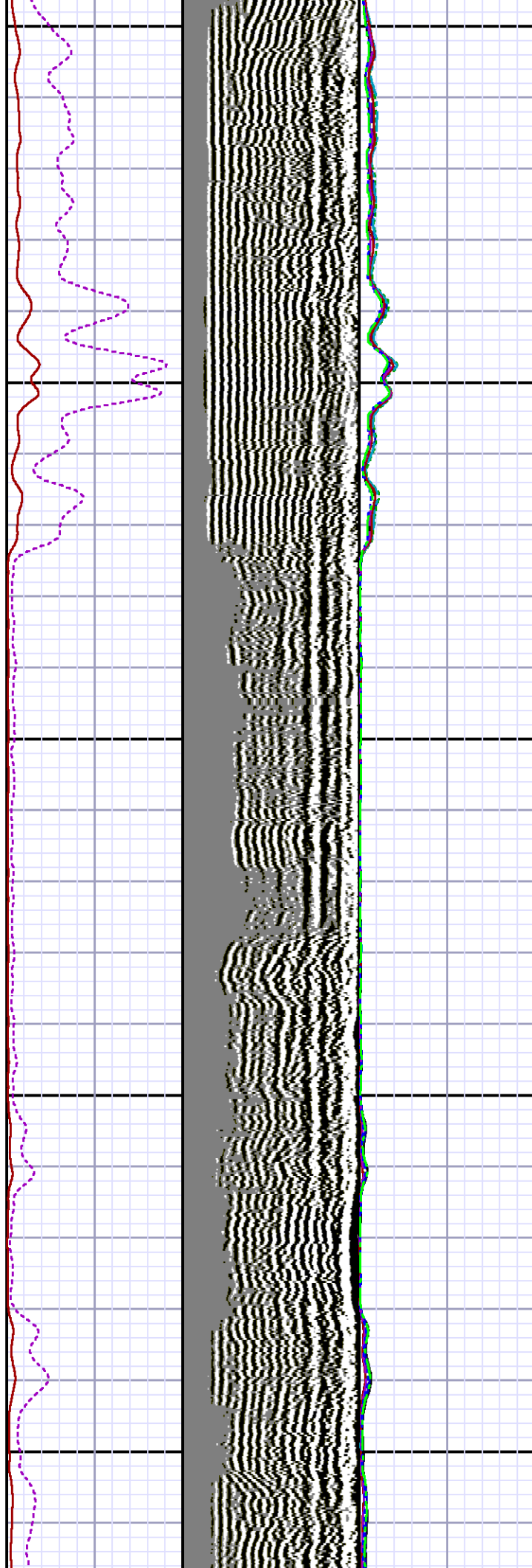


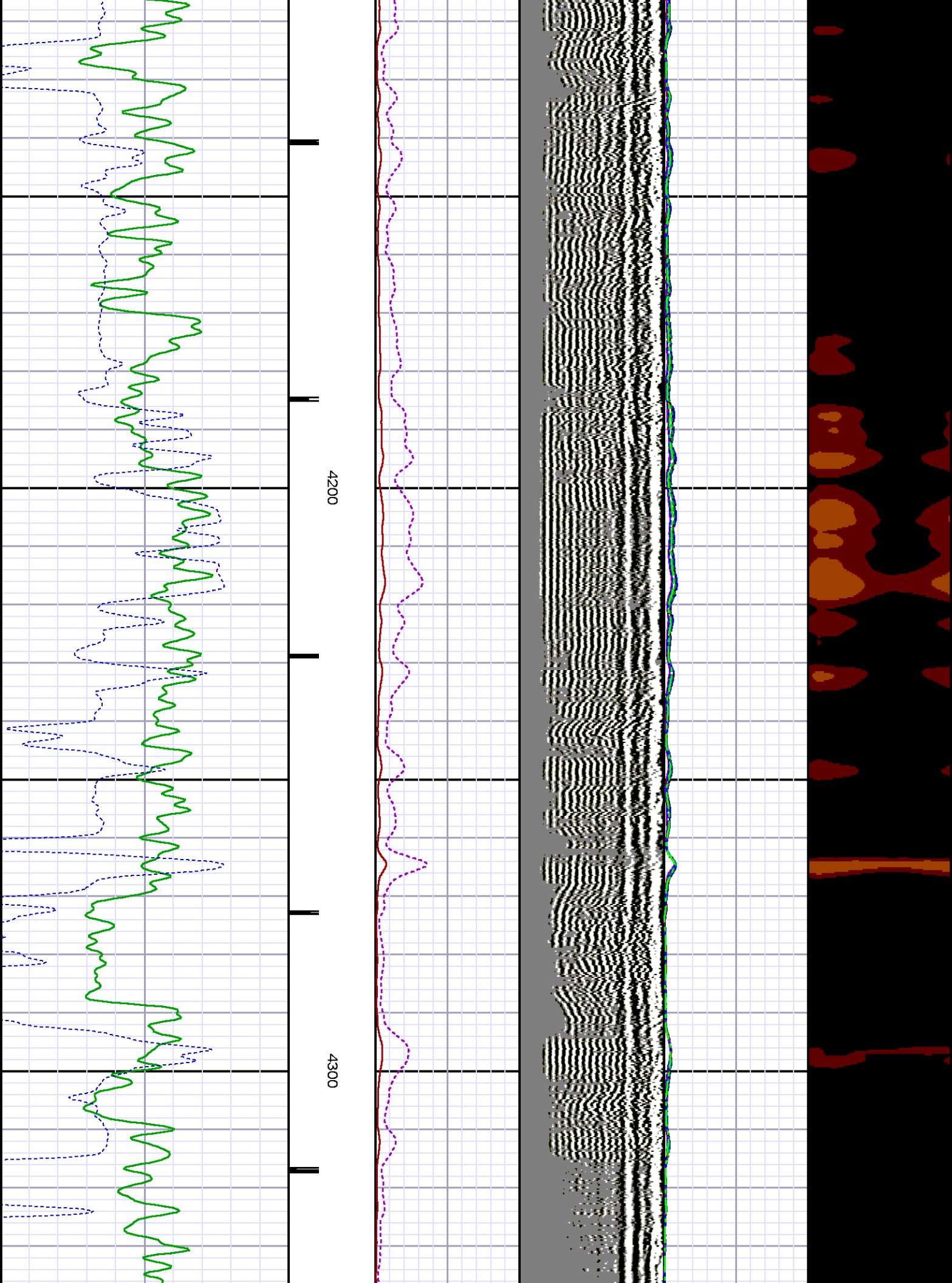


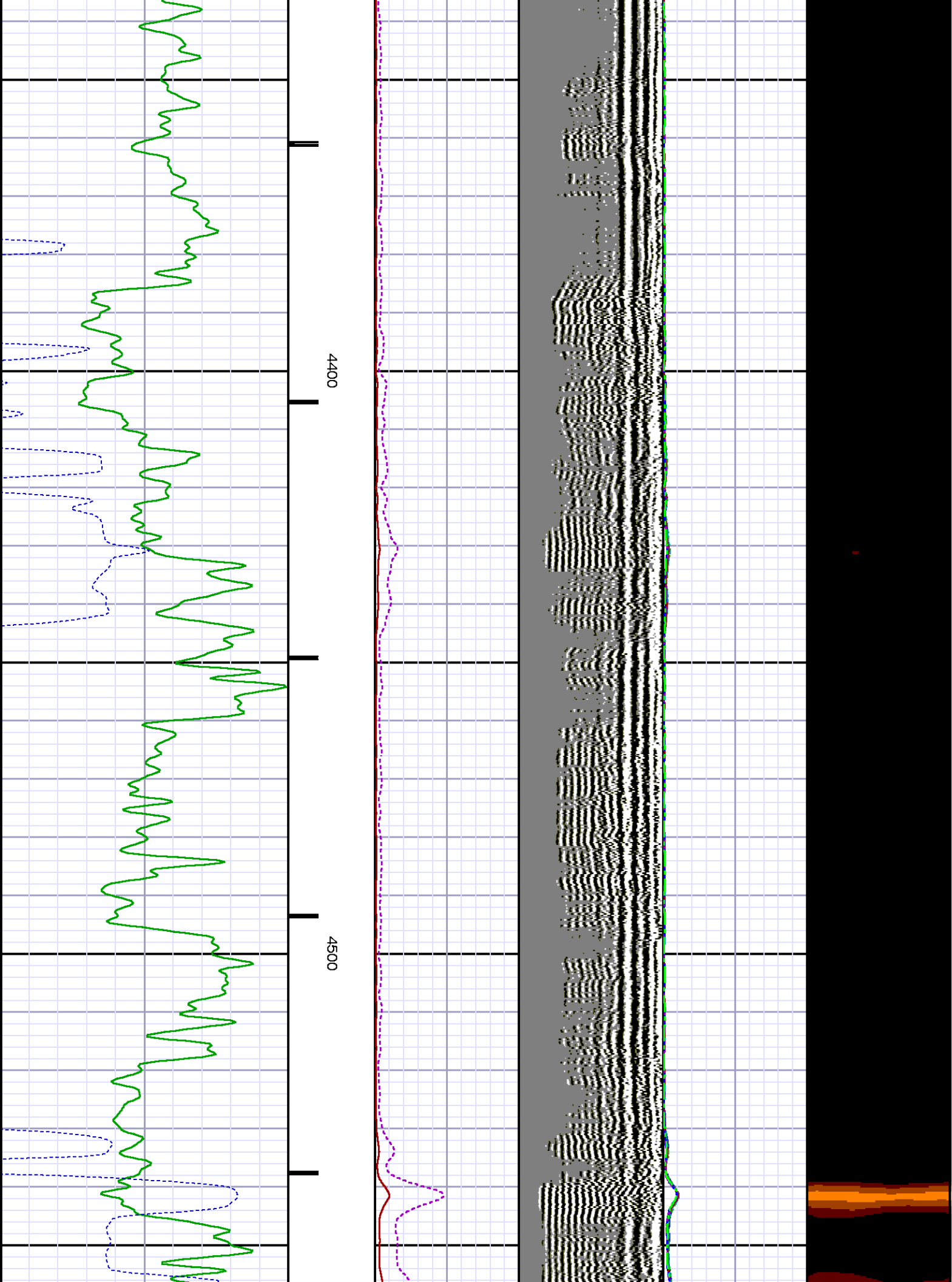


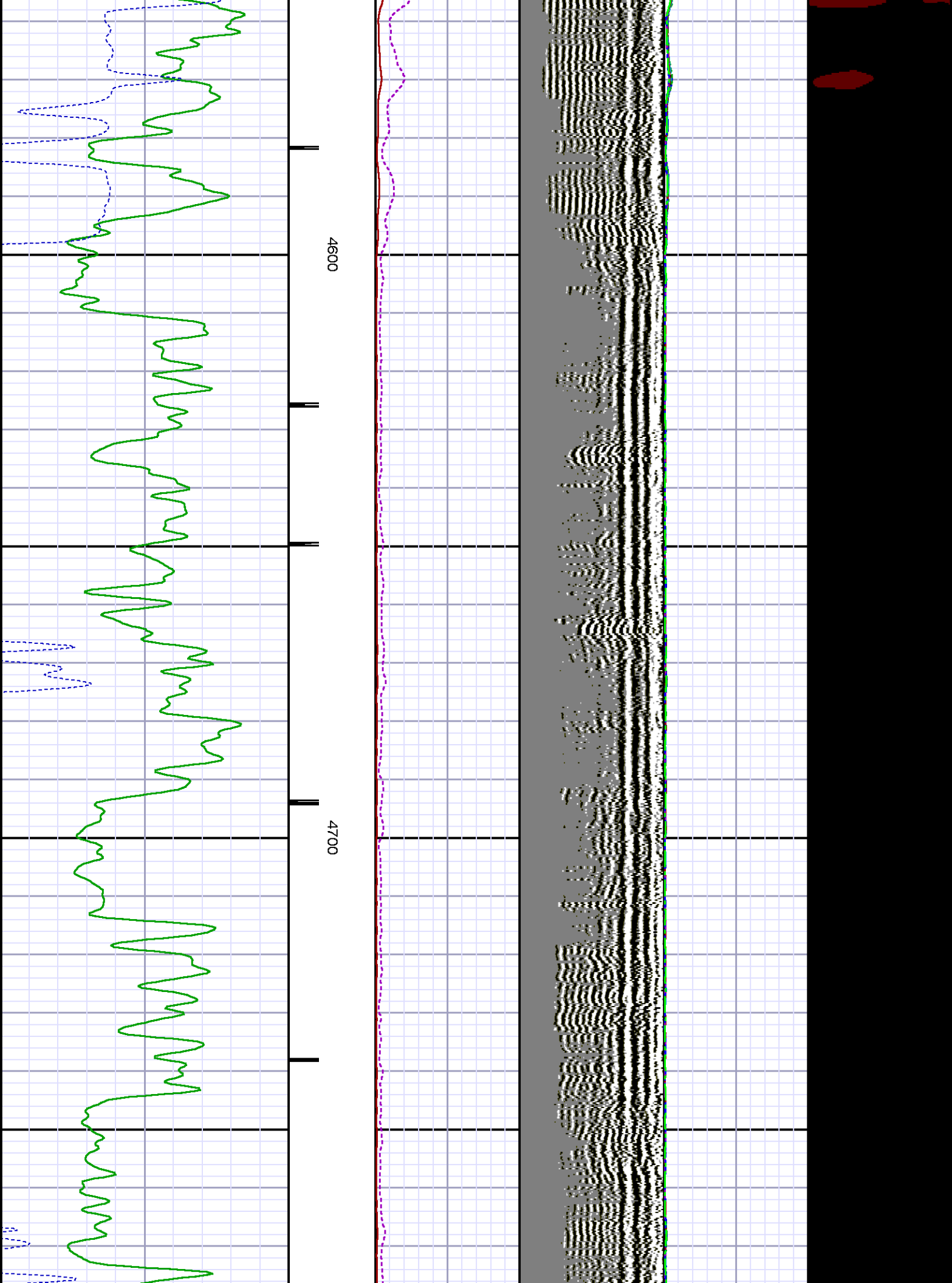


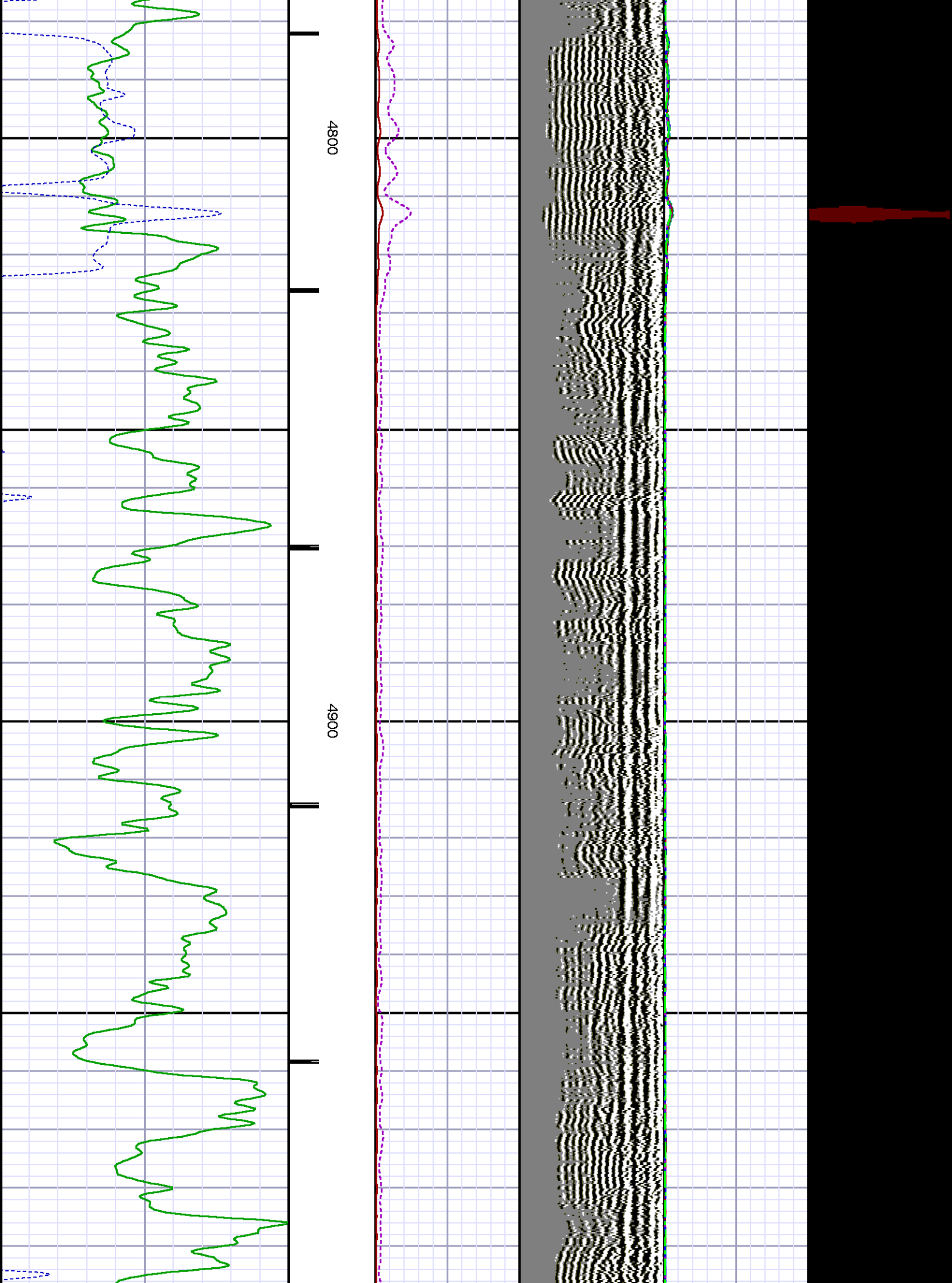


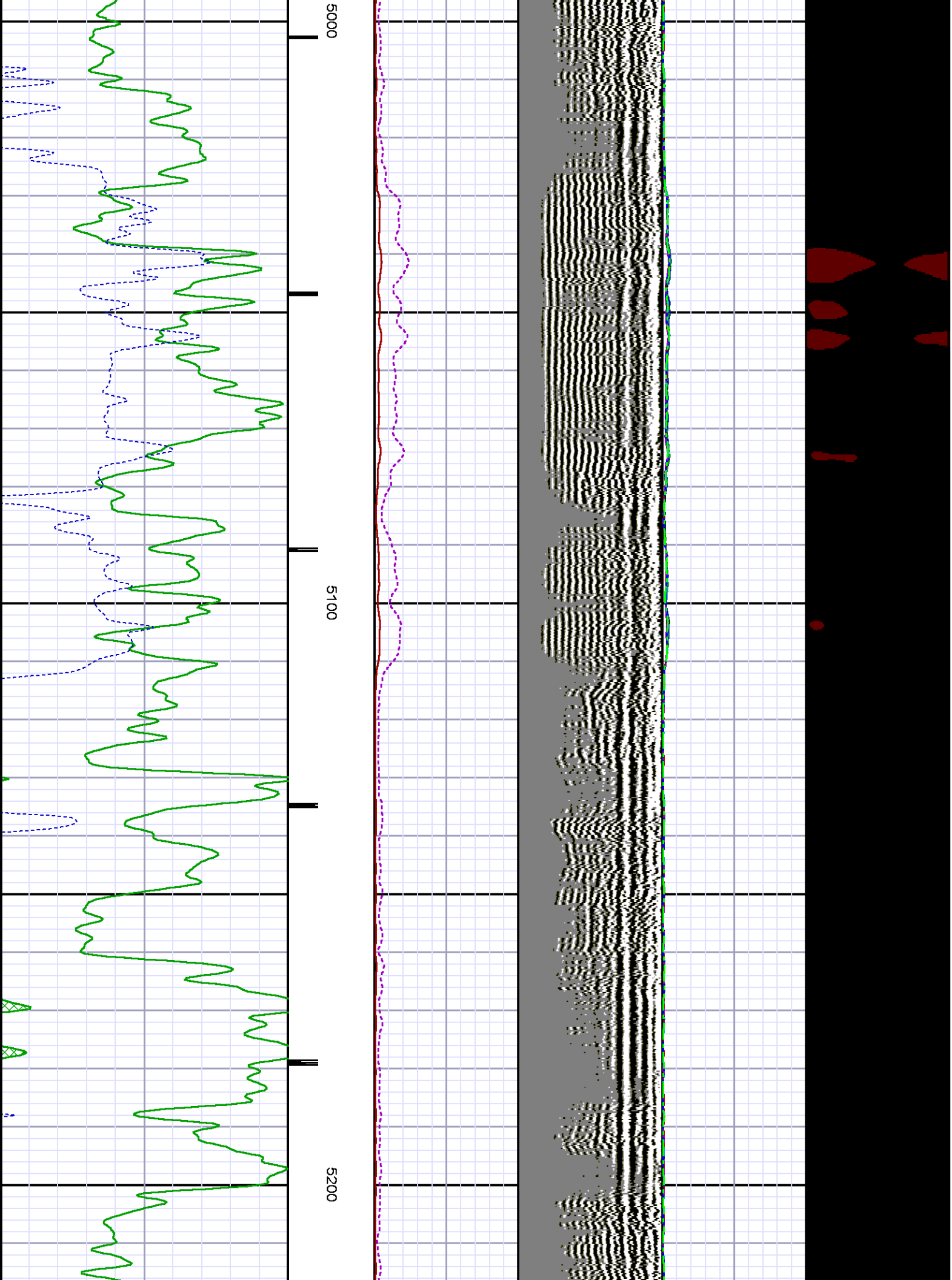


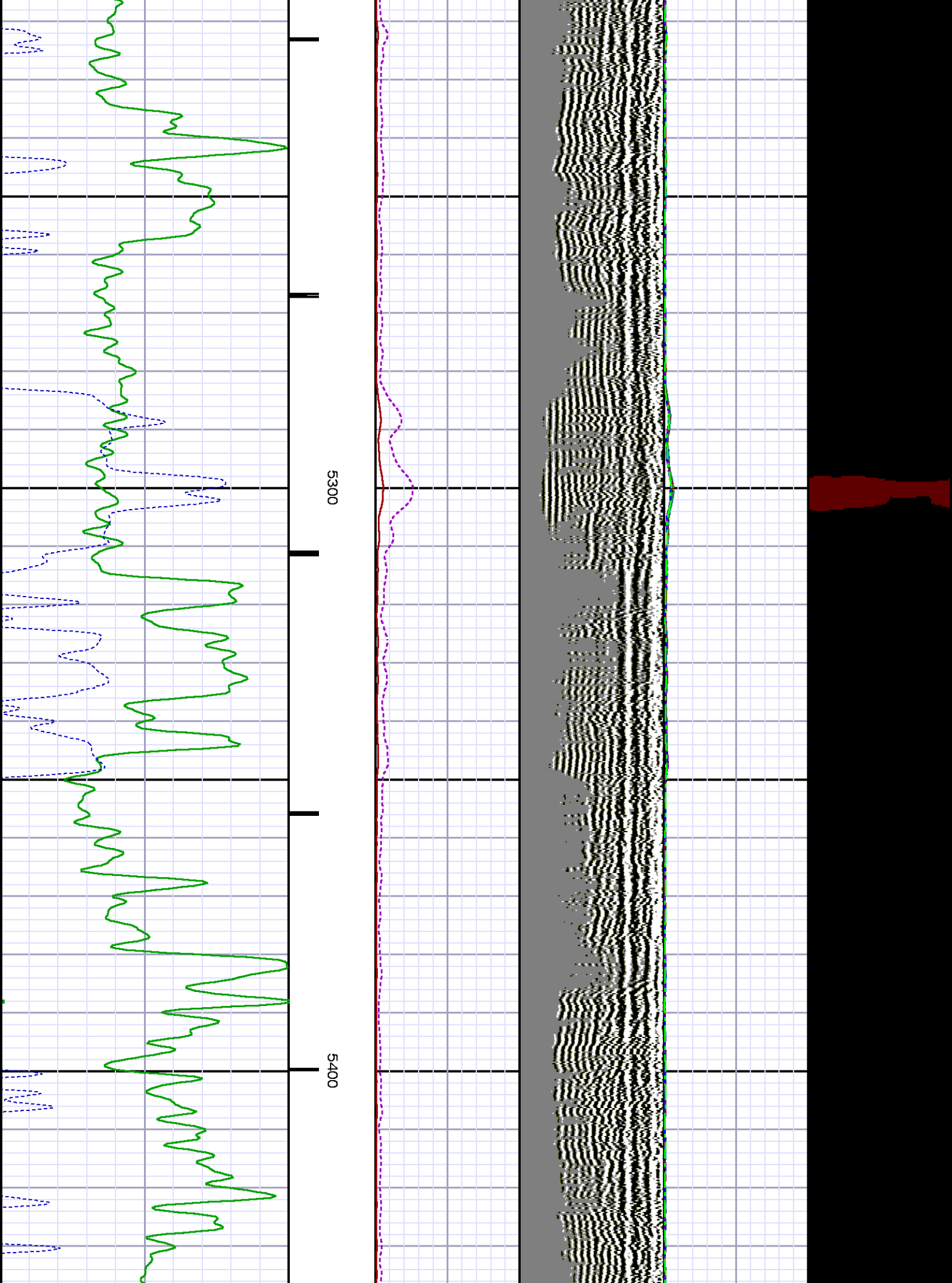


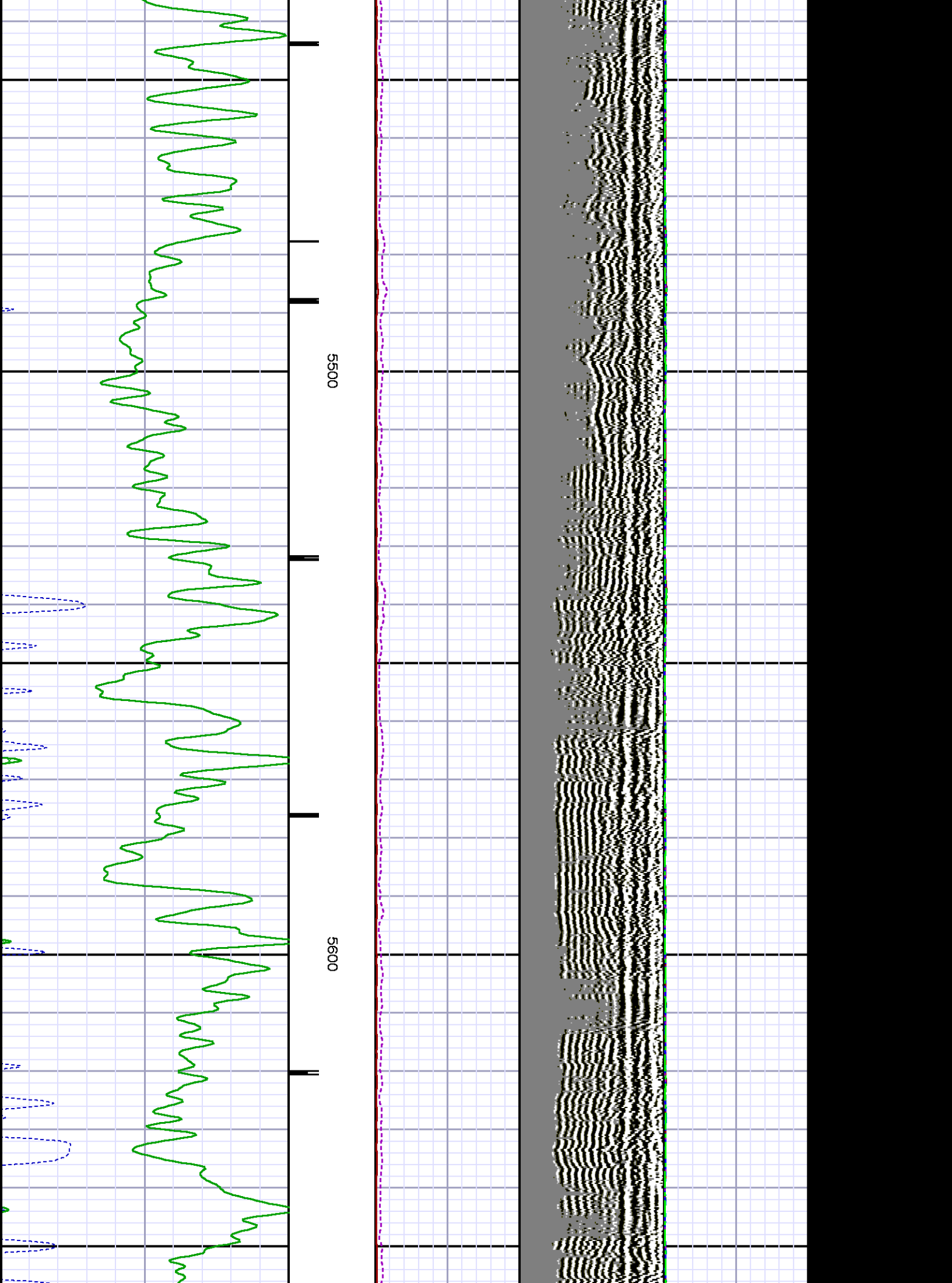


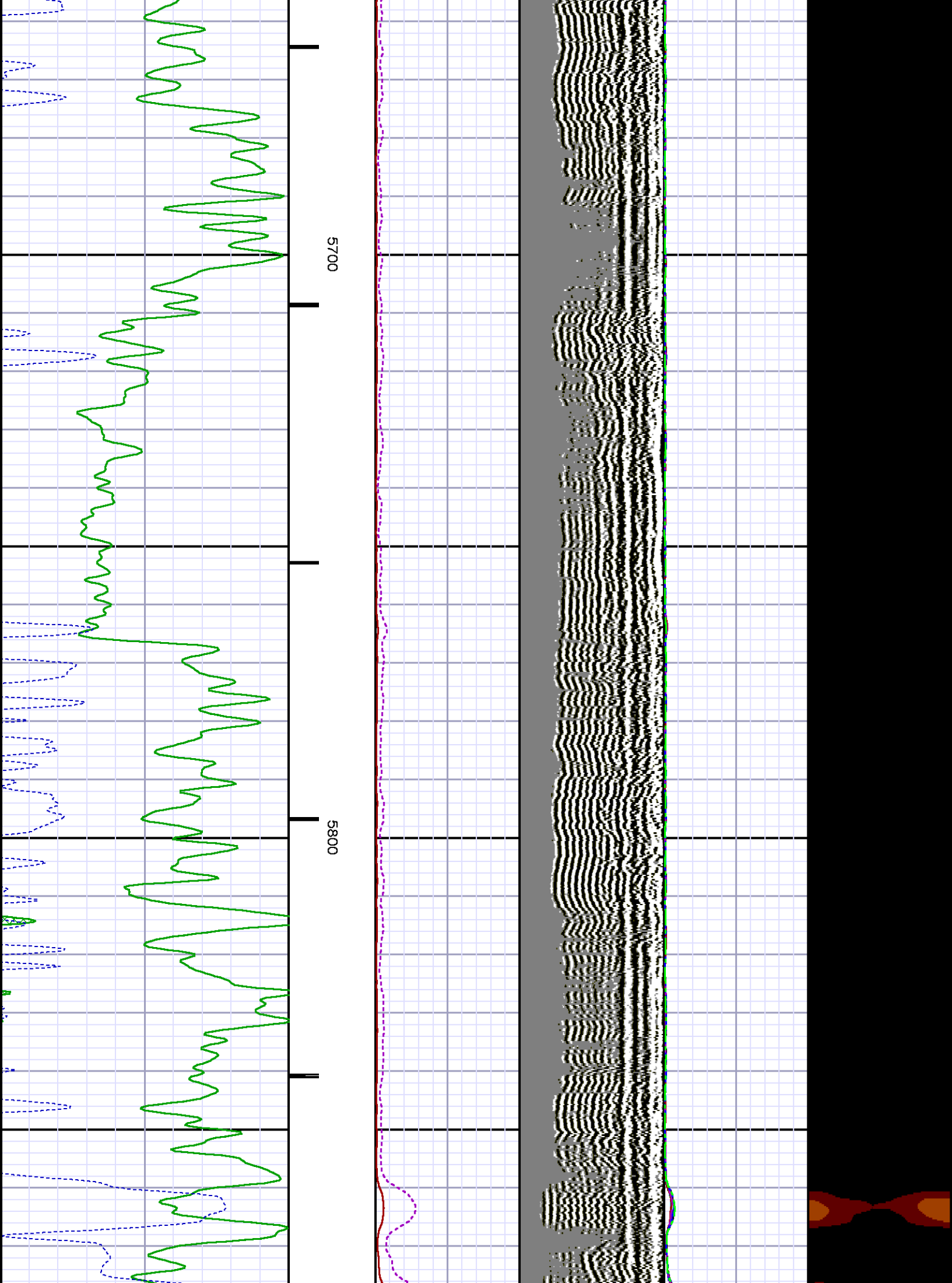


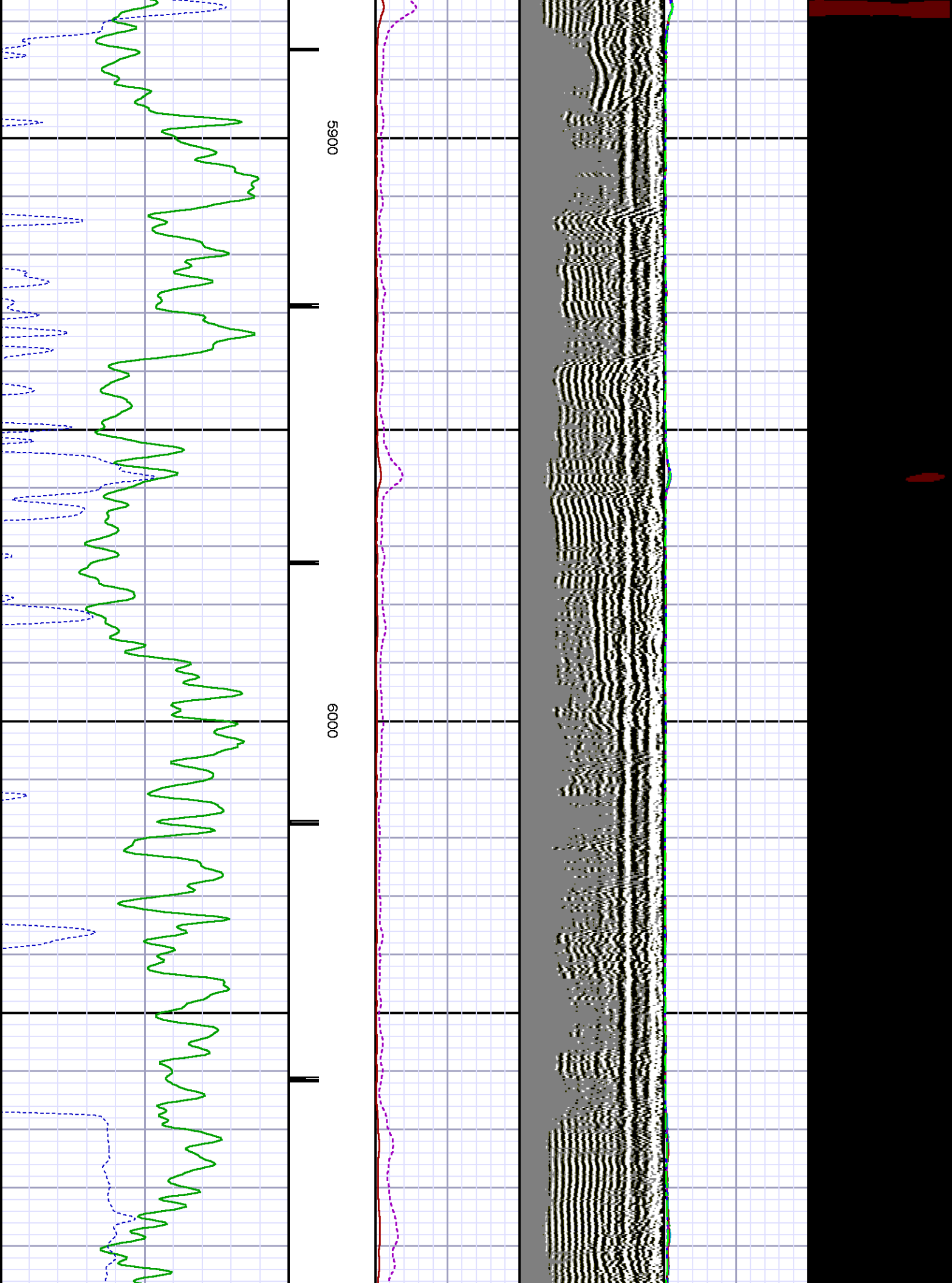


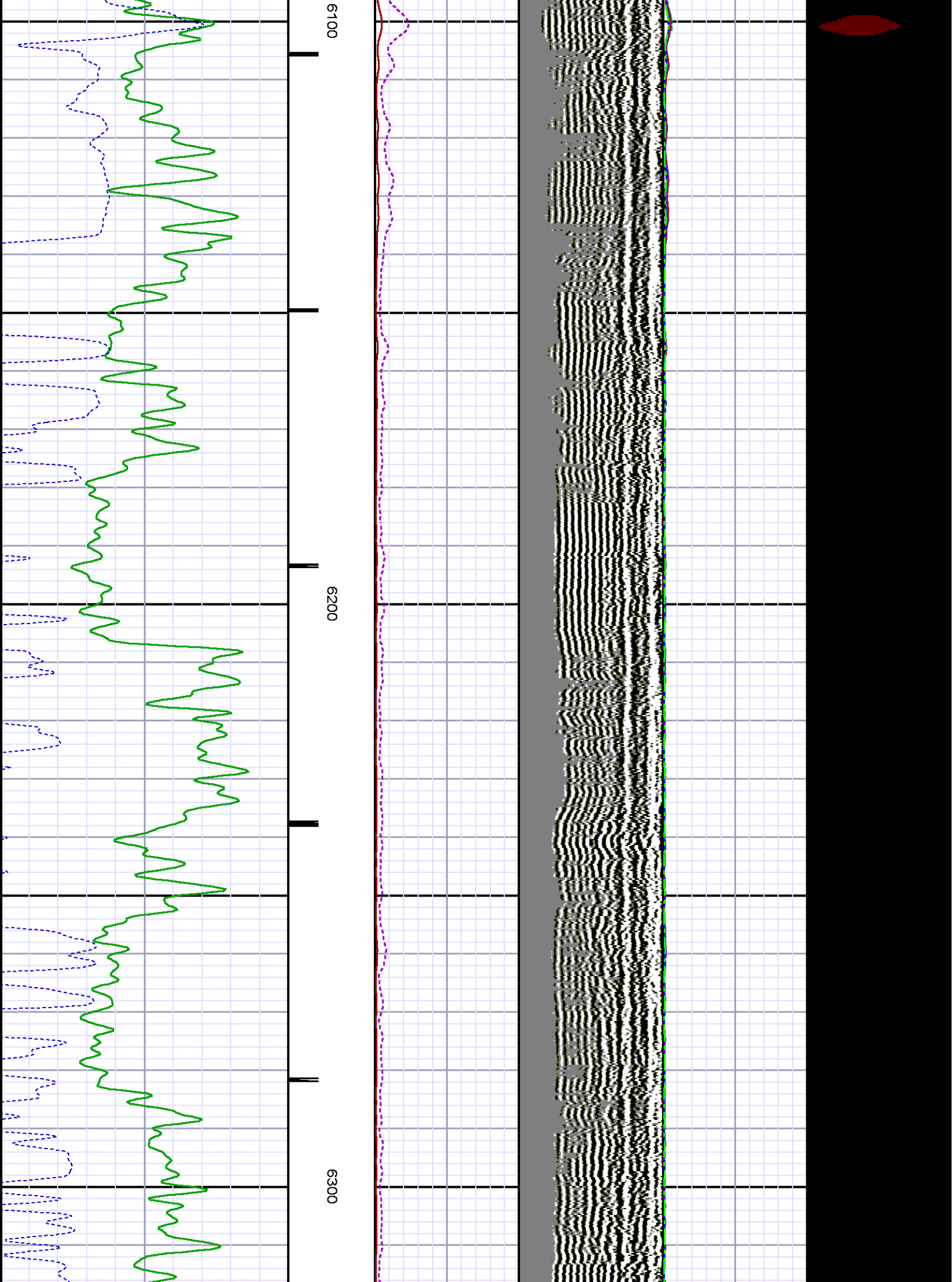


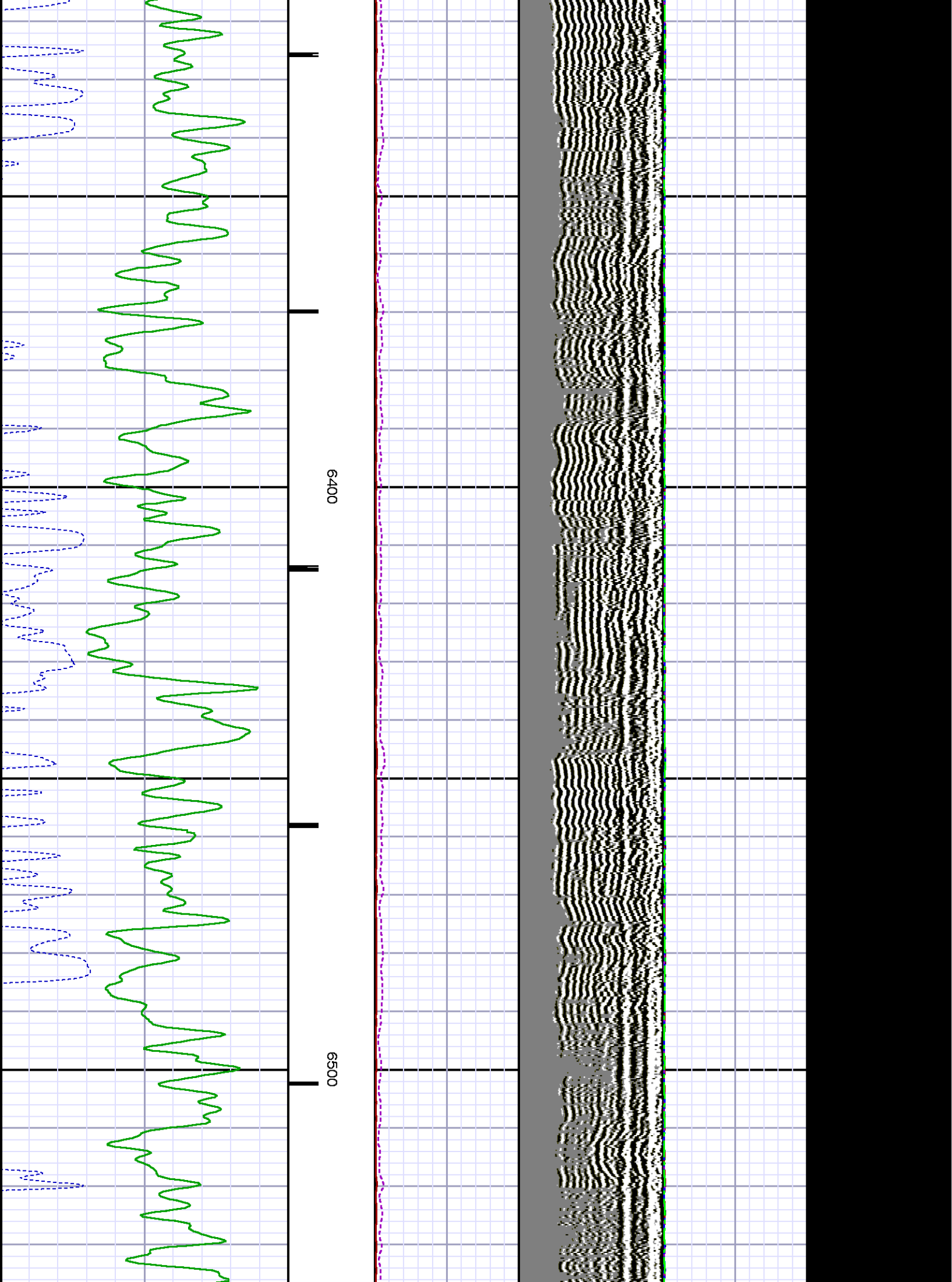


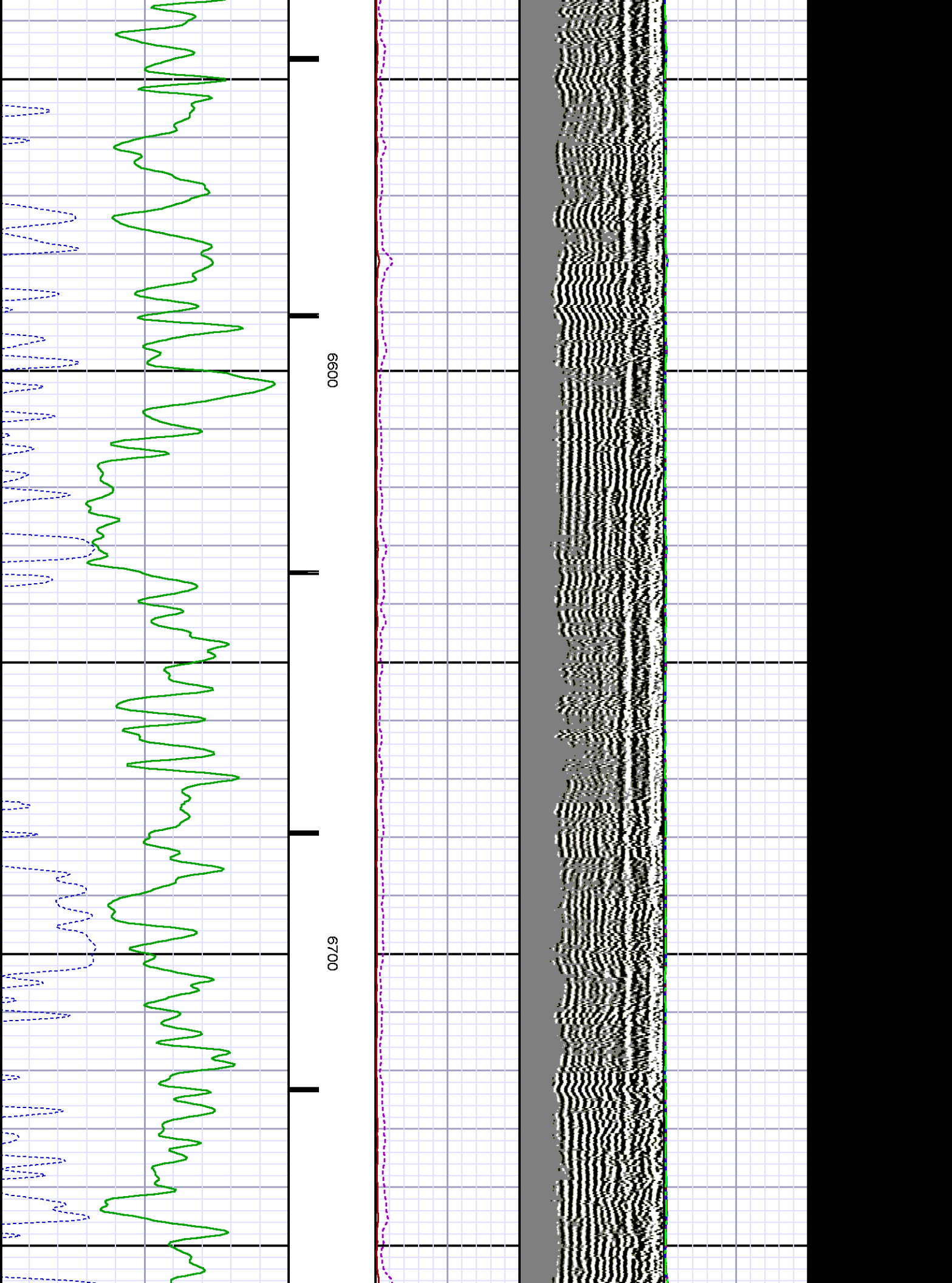


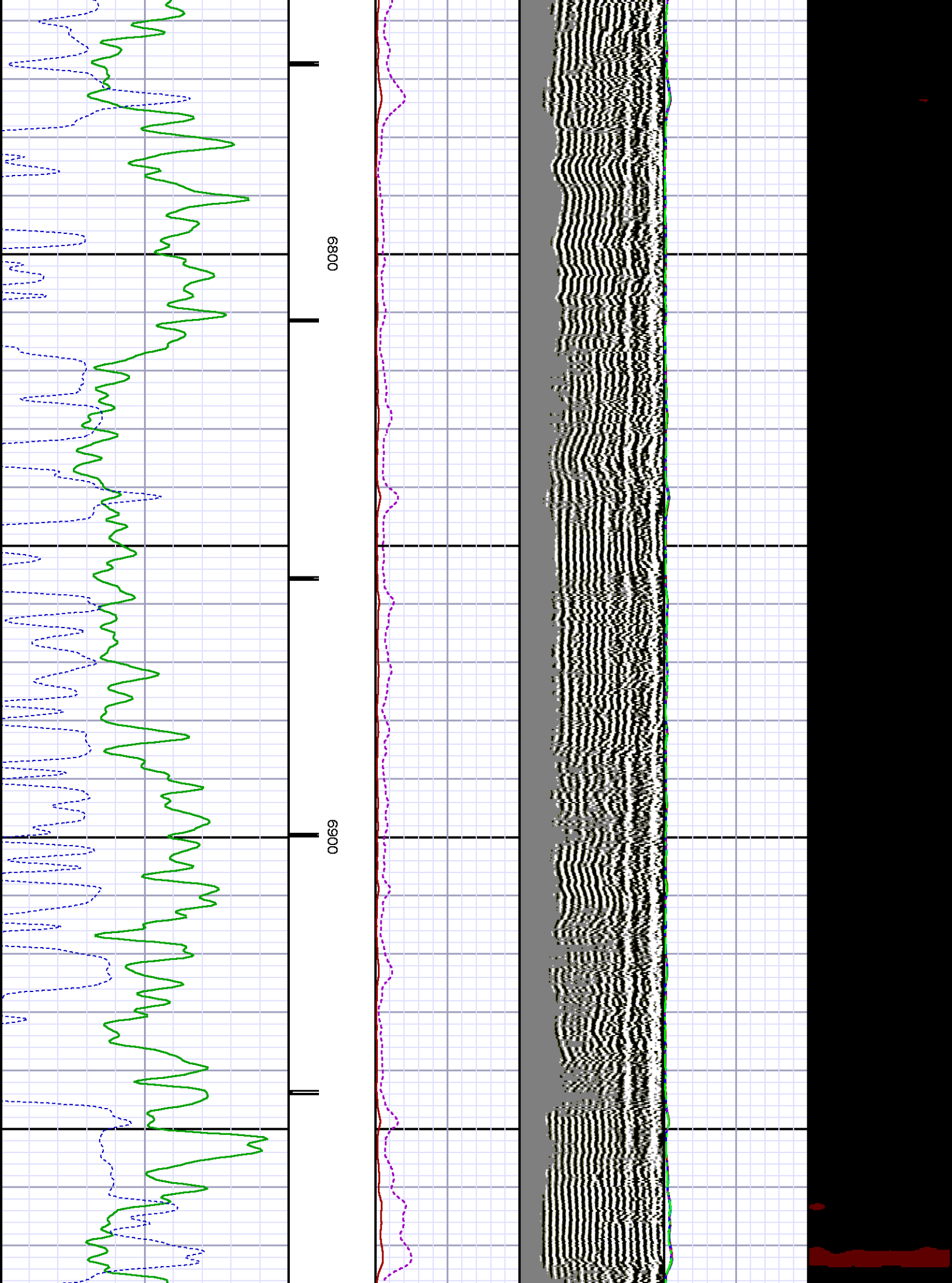


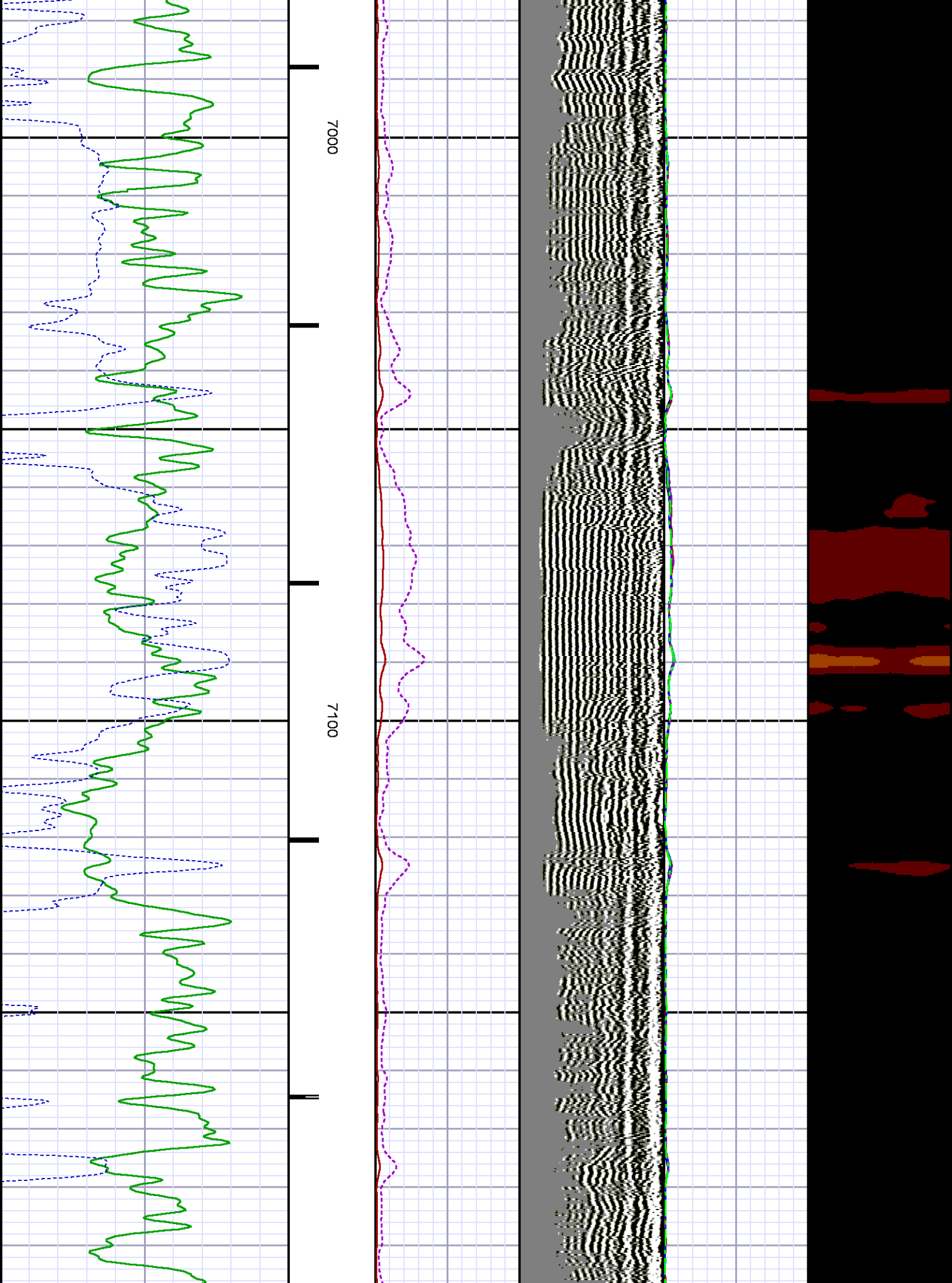


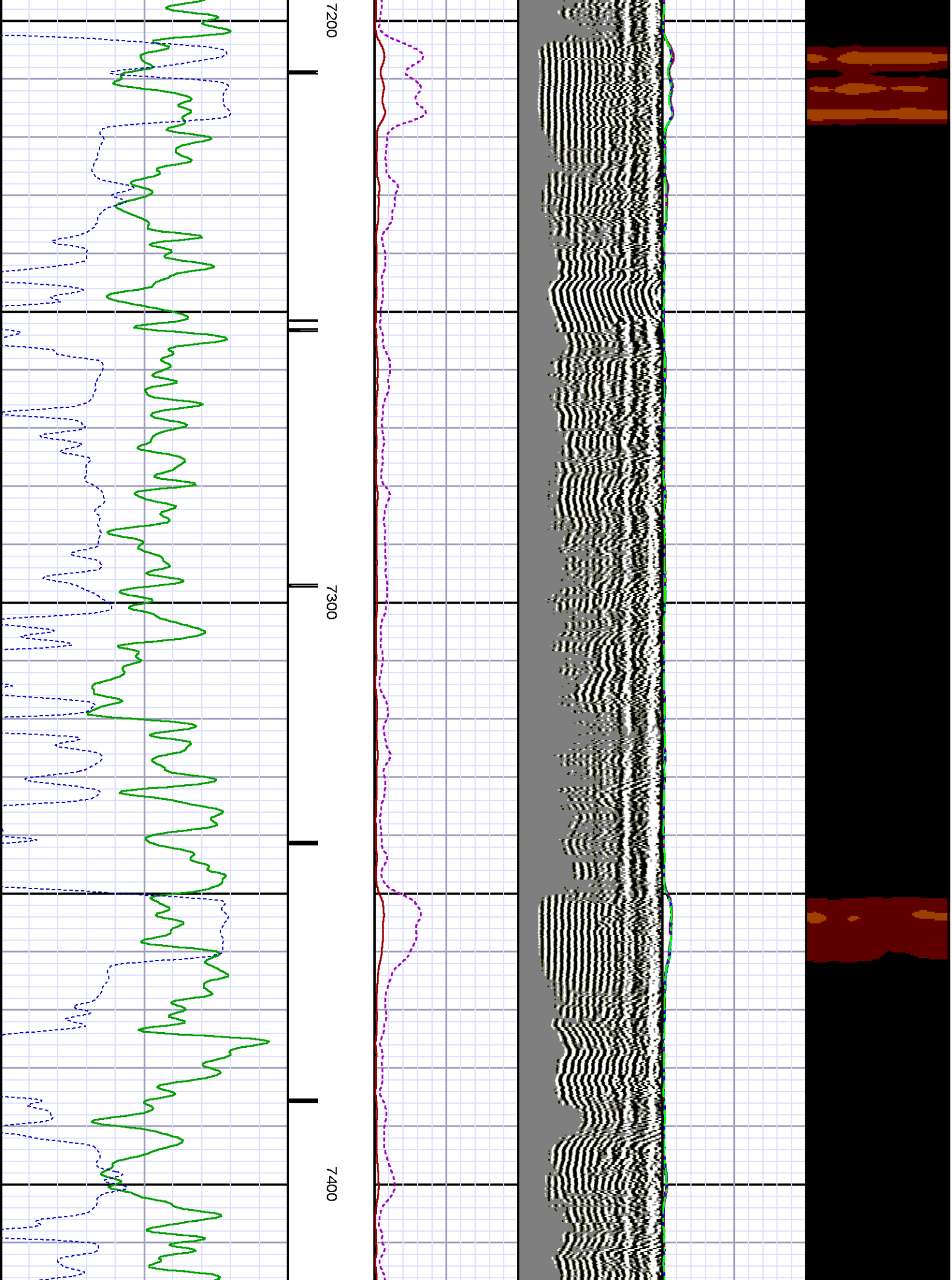


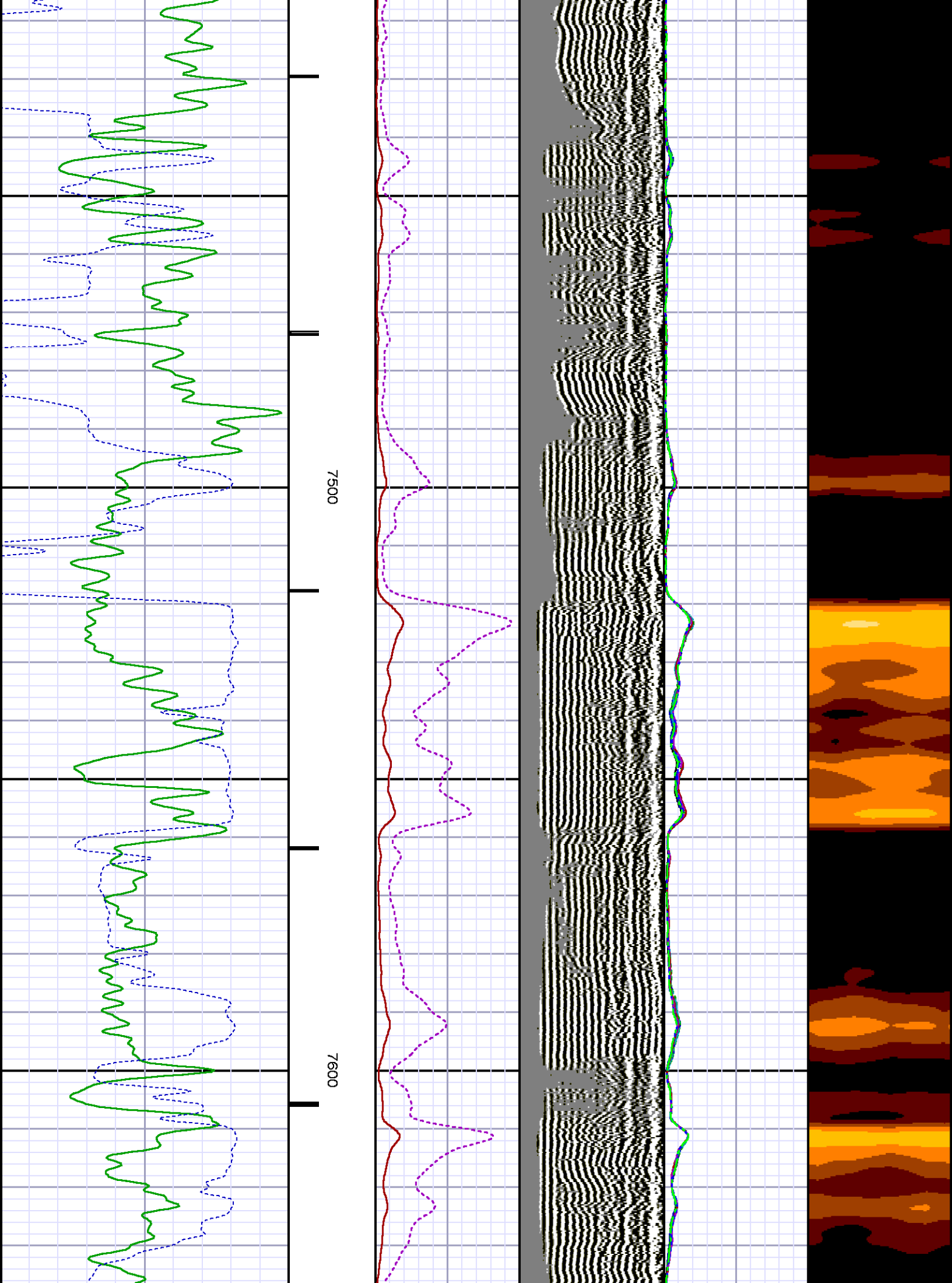


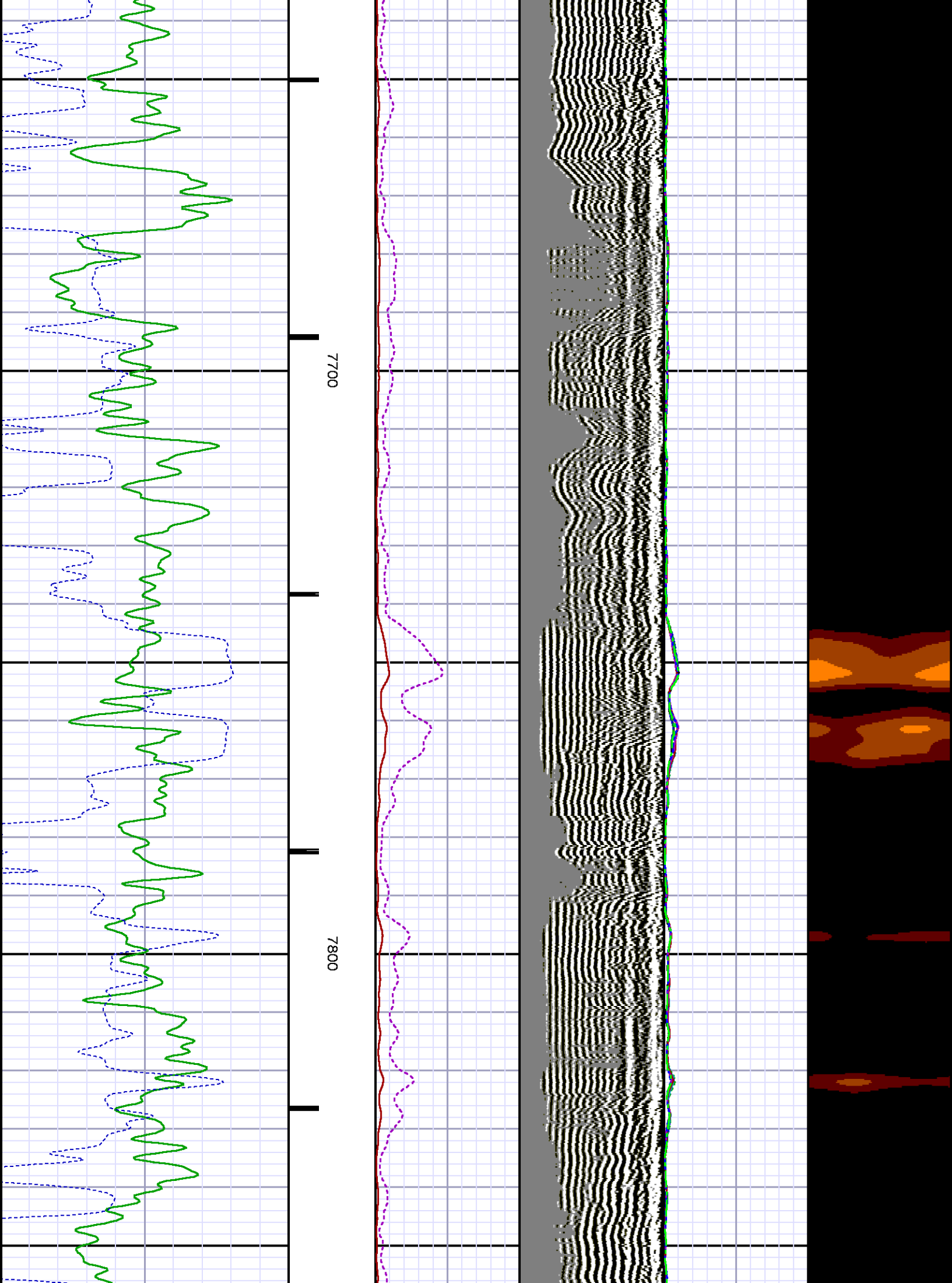


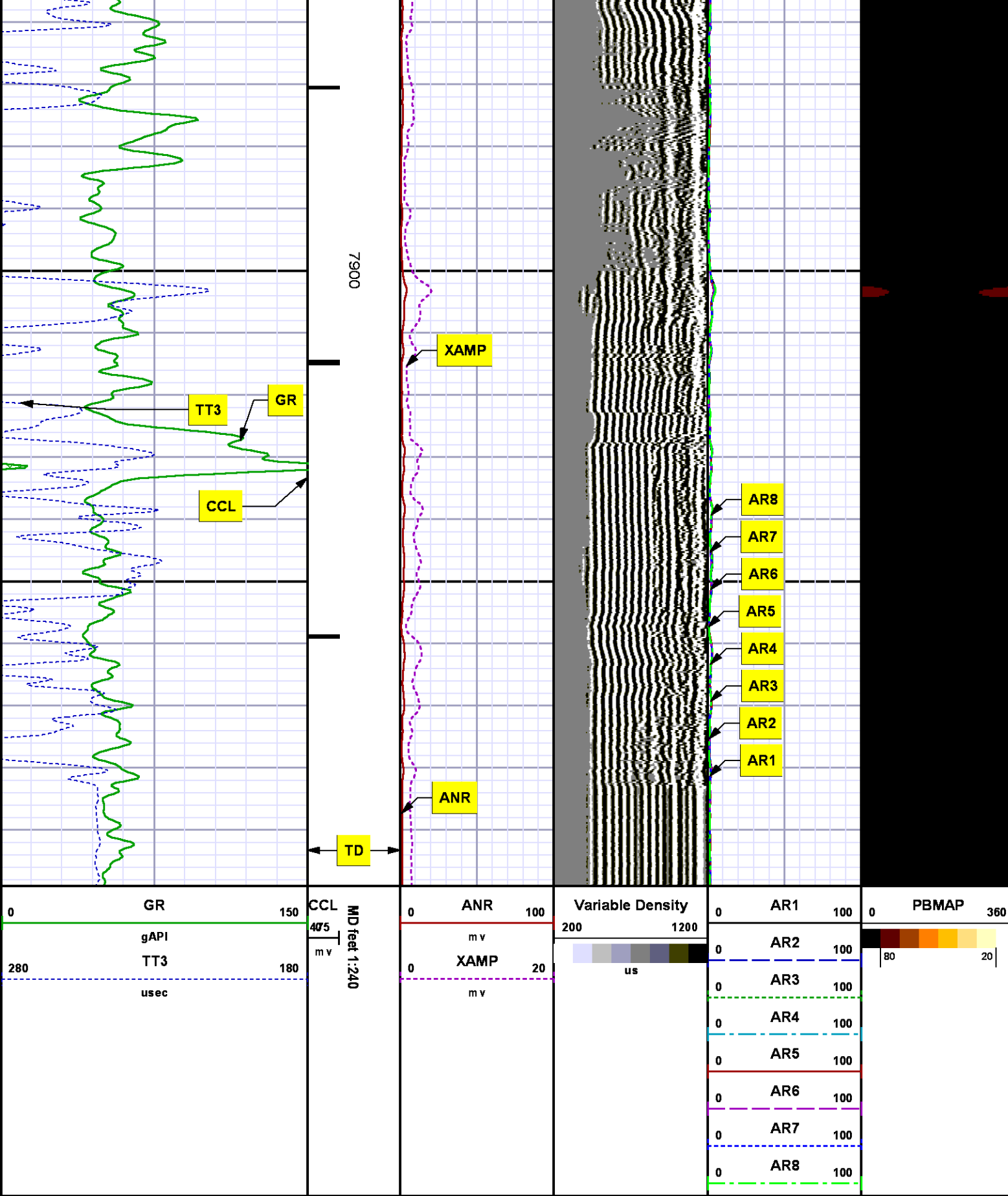












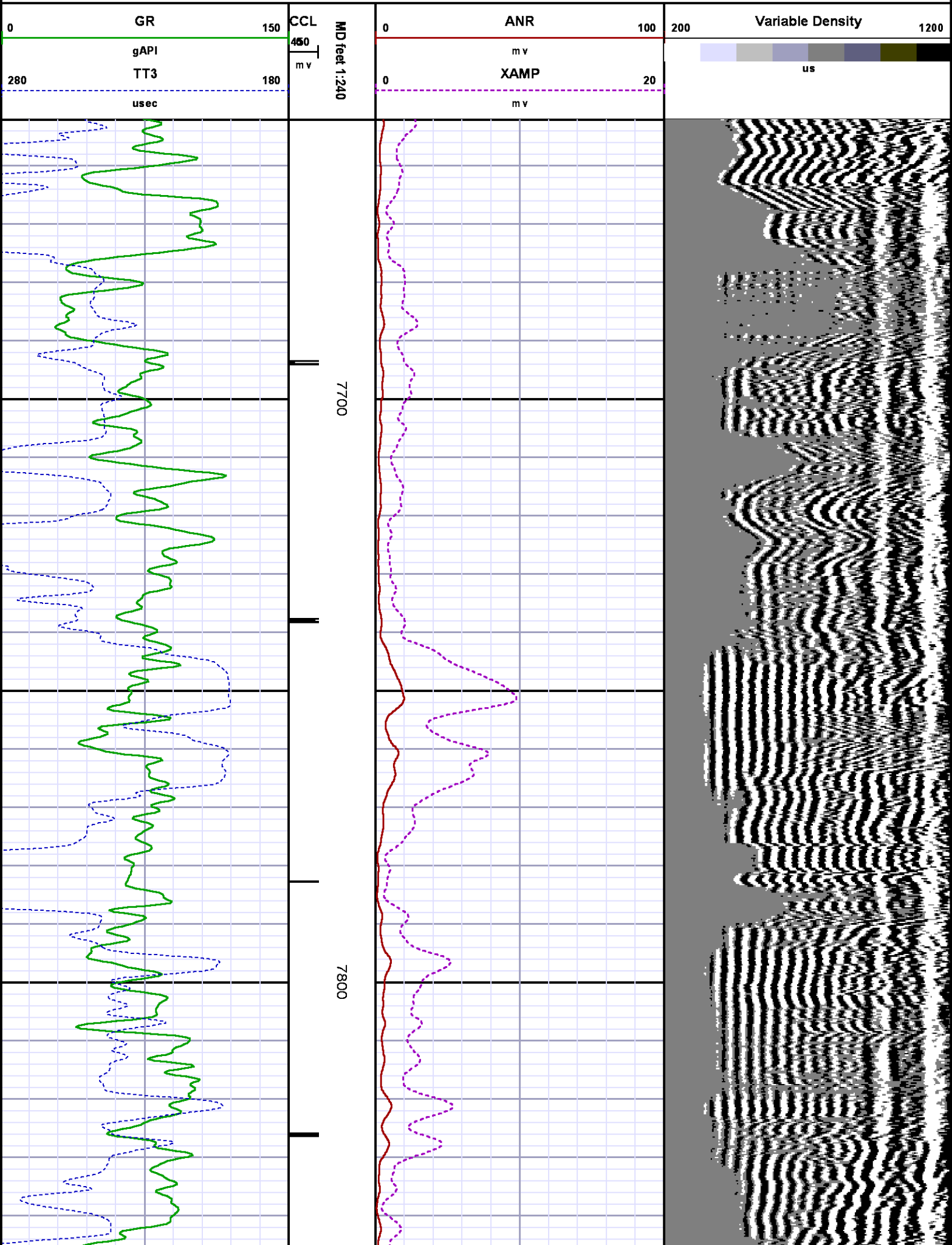
REPEAT SECTION

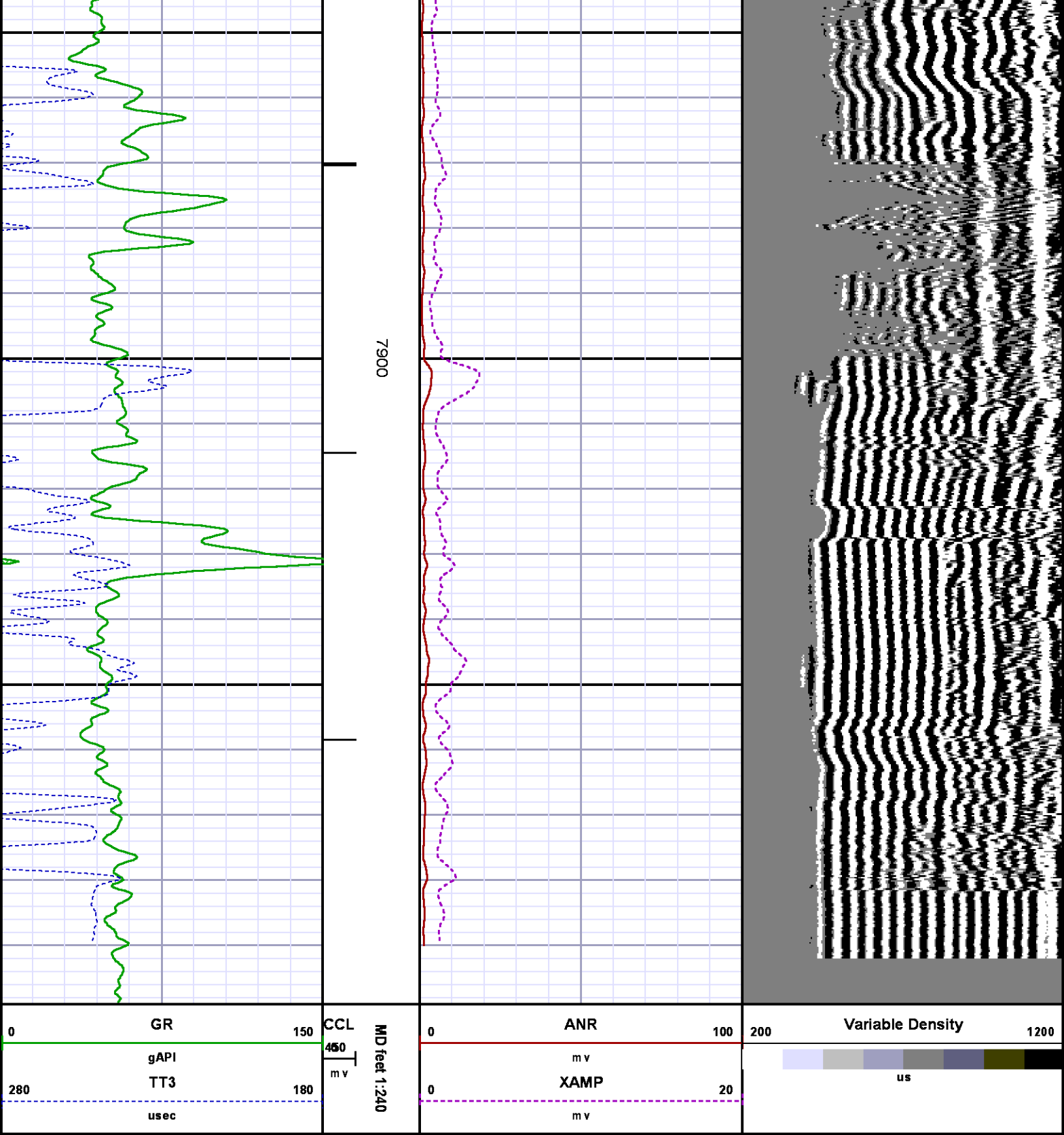
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	7500.004	8002.080
RAL	Amp Gate Start Near	195.000	usec	7500.004	8002.080
RAL	Amp Gate Start Radial	195.000	usec	7500.004	8002.080
RAL	Amp Gate Width Far	25.000	usec	7500.004	8002.080
RAL	Amp Gate Width Near	25.000	usec	7500.004	8002.080
RAL	Amp Gate Width Radial	25.000	usec	7500.004	8002.080
RAL	casing od	4.500	inches	7500.004	8002.080
RAL	casing wt	11.600	lbm/ft	7500.004	8002.080
RAL	FB Start Far	291.900	usec	7500.004	8002.080
RAL	FB Start Near	180.000	usec	7500.004	8002.080
RAL	FB Start Radial	180.000	usec	7500.004	8002.080
RAL	FB Thresh Far	10.000	mv	7500.004	8002.080
RAL	FB Thresh Near	4.000	mv	7500.004	8002.080
RAL	FB Thresh Radial	4.000	mv	7500.004	8002.080
RAL	Fluid Travel Time	200.000	usec/ft	7500.004	8002.036

DEPTH OFFSETS
(for Acquired Curves)

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





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\495O15_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Oct 15 11:39:31 2013 TOOL SERIES: 1426XA ASSET: 495 SEQ: 015

Tool Delay [usec] -57.00 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	-0.096	100.00	0.14
3 Ft. Receiver	218	216	30	166	25	-1.985	100.00	0.14
5 Ft. Receiver	327	325	30	181	25	0.735	150.00	0.25
Radial #1	219	216	30	166	25	1.368	100.00	0.14
Radial #2	218	216	30	166	25	1.246	100.00	0.14
Radial #3	217	216	30	166	25	-0.494	100.00	0.14
Radial #4	216	216	30	166	25	-1.023	100.00	0.14
Radial #5	216	216	30	166	25	-1.221	100.00	0.14
Radial #6	216	216	30	166	25	-1.619	100.00	0.14
Radial #7	217	216	30	166	25	-0.880	100.00	0.14
Radial #8	219	216	30	166	25	-0.978	100.00	0.14

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\495O15_fid.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Oct 15 11:40:58 2013 TOOL SERIES: 1426XA ASSET: 495 SEQ: 015

Tool Delay [usec] -57.00 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	0.002	0.000	1.00	100.000
3 Ft. Receiver	200	30	-0.281			
5 Ft. Receiver	317	30	-0.442			
Radial #1	200	30	-0.216			
Radial #2	200	30	-0.266			
Radial #3	200	30	-0.234			
Radial #4	200	30	-0.319			
Radial #5	200	30	-0.275			
Radial #6	200	30	-0.256			
Radial #7	200	30	-0.229			
Radial #8	200	30	-0.264			

GAMMA RAY

Calibration File: C:\case\calver\GR1209S2.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Sep 21 07:59:31 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: S2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	92.80	466.13	0.496	45.99	230.99	185.00

Verification File: C:\case\calver\GR1209S2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Sep 21 08:00:45 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: S2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	93.69	477.64	0.496	46.43	236.69	190.26

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



18.89'

XMIT 12.71'

NEAR RCVR 9.63'

FAR RCVR 7.71'



CCL 5.79'

GR 1.67'

TEMP 0.17'

0.00'

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

 BAKER HUGHES	Company	WPX ENERGY				File No:
	Well	WPX ENERGY RWF 341-4				CH078589
Baker Atlas	Field	RULISON				API No:
	County	GARFIELD	State	COLORADO		05045220820000
	Location	SHL: 410' FNL x 1668' FEL				Elevations
	BHL: 844' FNL x 1328' FEL (SENE)	KB 5820 ft				4 7S 94W
	SEC 4	TWP 7S	RGE 94W	DF		RMV 108-4 PAD
				GL 5794 ft		NABORS 574