



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH042352	Company Well	WILLIAMS PRODUCTION COMPANY FEDERAL RGU 523-35-198	
API No: 05103118010000	Field County	RYAN GULCH UNIT RIO BLANCO State COLORADO	
35 1S 98W RGU 23-35-198 CYCLONE 29	Location SHL: 2425' FSL & 1953' FWL (NESW) BHL: 1674' FSL & 1925' FWL (NESW)	Other Services RPM	
Permanent Datum Log Measured From Drill Measured From	GL KB KELLY BUSHING	Elevation 21 ft Above P. D.	Elevations KB 6799 ft DF 6798 ft GL 6778 ft
SEC 35	TWP 1S	RGE 98W	

Date	2 OCTOBER 2011	
Run	ONE	
Service Order	575399	
Depth Driller	12214 ft	
Depth Logger	12136 ft	
Bottom Logged Interval	12132 ft	
Top Logged Interval	21 ft	
Time Started	1530	
Time Finished	1930	
Operator Rig Time	4 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	NA	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	319 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	WAYNE MARCOTTE	

- FOLD HERE

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
30 in	0 ft	80 ft
13.5 in	0 ft	3827 ft
7.875 in	0 ft	12214 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			0 ft	80 ft
9.625 in			0 ft	3827 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	12214 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 = 319°F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10154957	CENT
1	1	GR/CCL	2459XA	10404544	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	25.687	12157.000
RAL	Amp Gate Start Near	195.000	usec	25.687	12157.000
RAL	Amp Gate Start Radial	195.000	usec	25.687	12157.000
RAL	Amp Gate Width Far	25.000	usec	25.687	12157.000
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RAL	casing od	4.500	inches	25.687	12157.000
RAL	casing wt	11.600	lbm/ft	25.687	12157.000
RAL	FB Start Far	291.900	usec	25.687	12157.000
RAL	FB Start Near	180.000	usec	25.687	12157.000
RAL	FB Start Radial	180.000	usec	25.687	12157.000
RAL	FB Thresh Far	10.000	mv	25.687	12157.000
RAL	FB Thresh Near	4.000	mv	25.687	12157.000
RAL	FB Thresh Radial	4.000	mv	25.687	12157.000
RAL	Fluid Travel Time	200.000	usec/ft	25.687	12157.000

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4

1426XA -11.360
1426XA -7.250
1426XA -5.390
1426XA 0.000

AR5	AR6	AR7	AR8	CHV	FPR2
FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

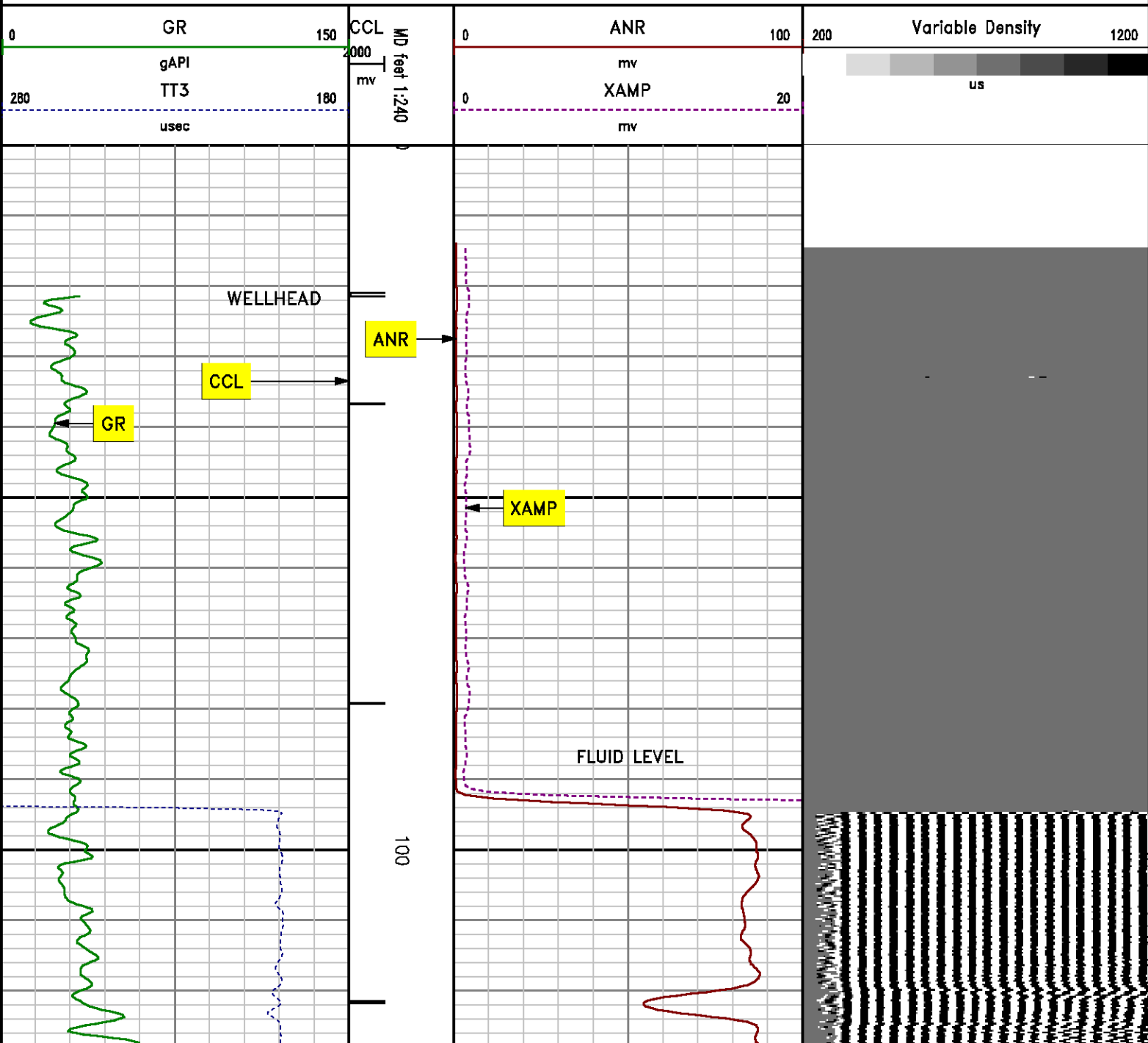
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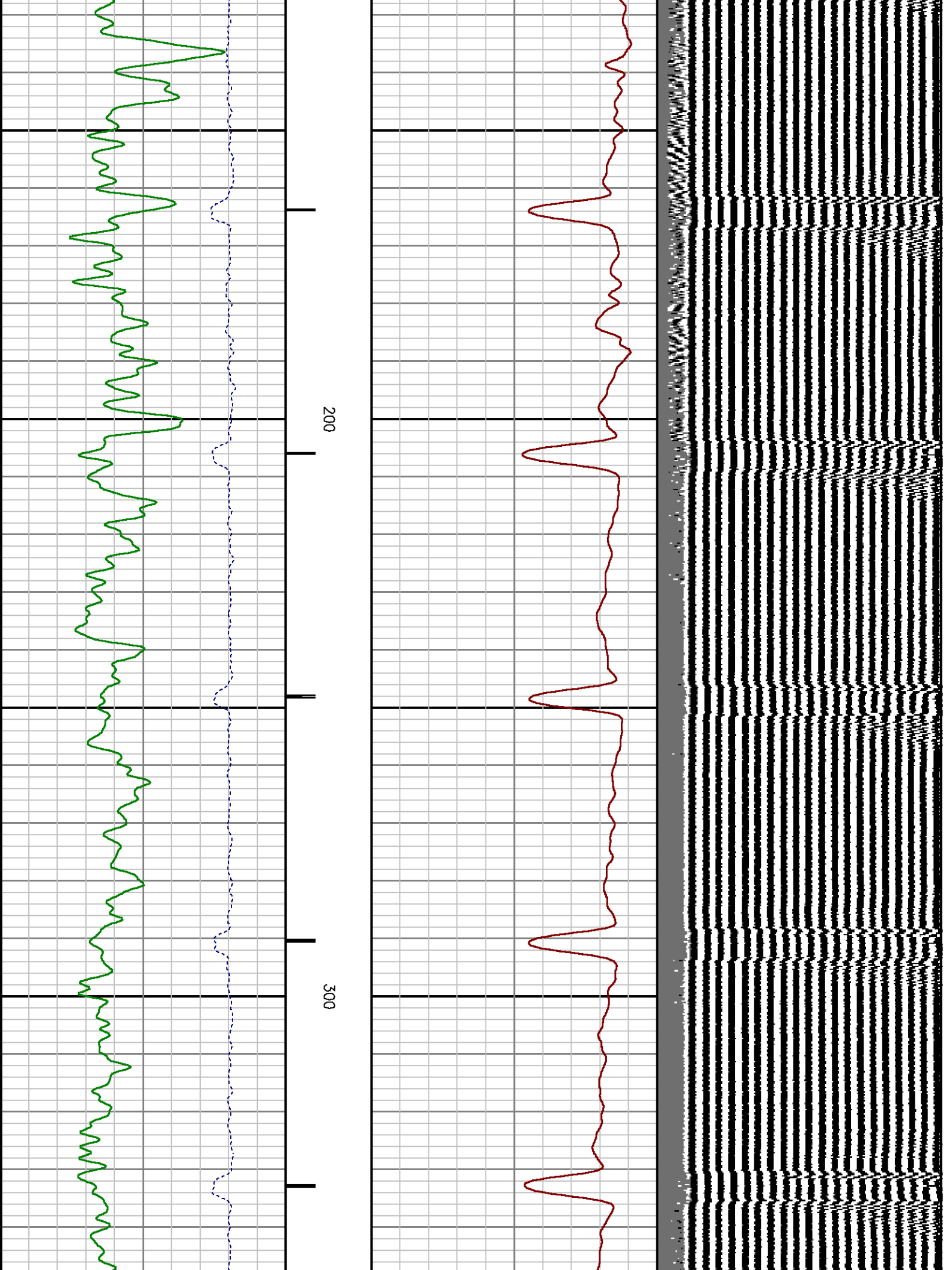
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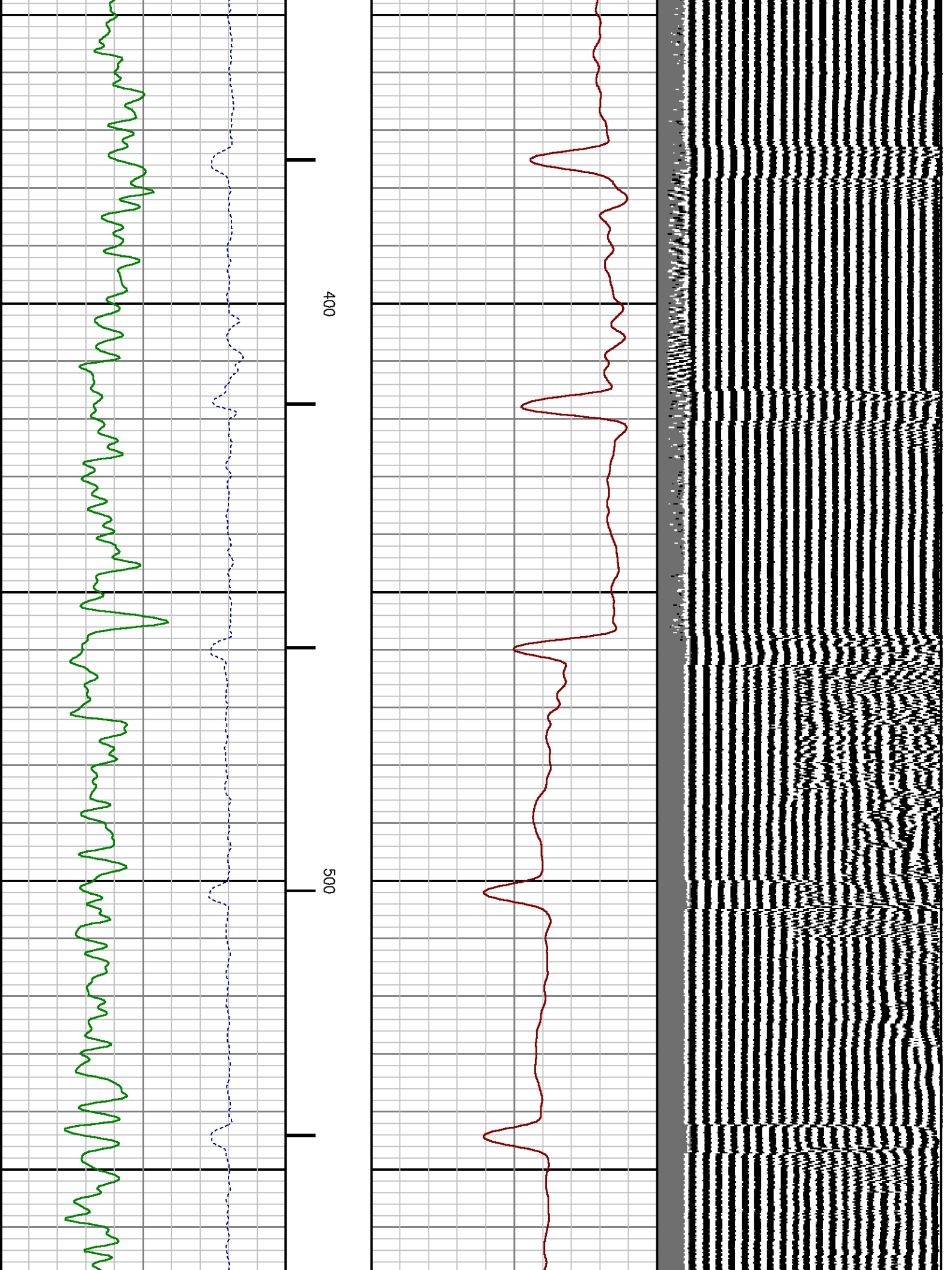
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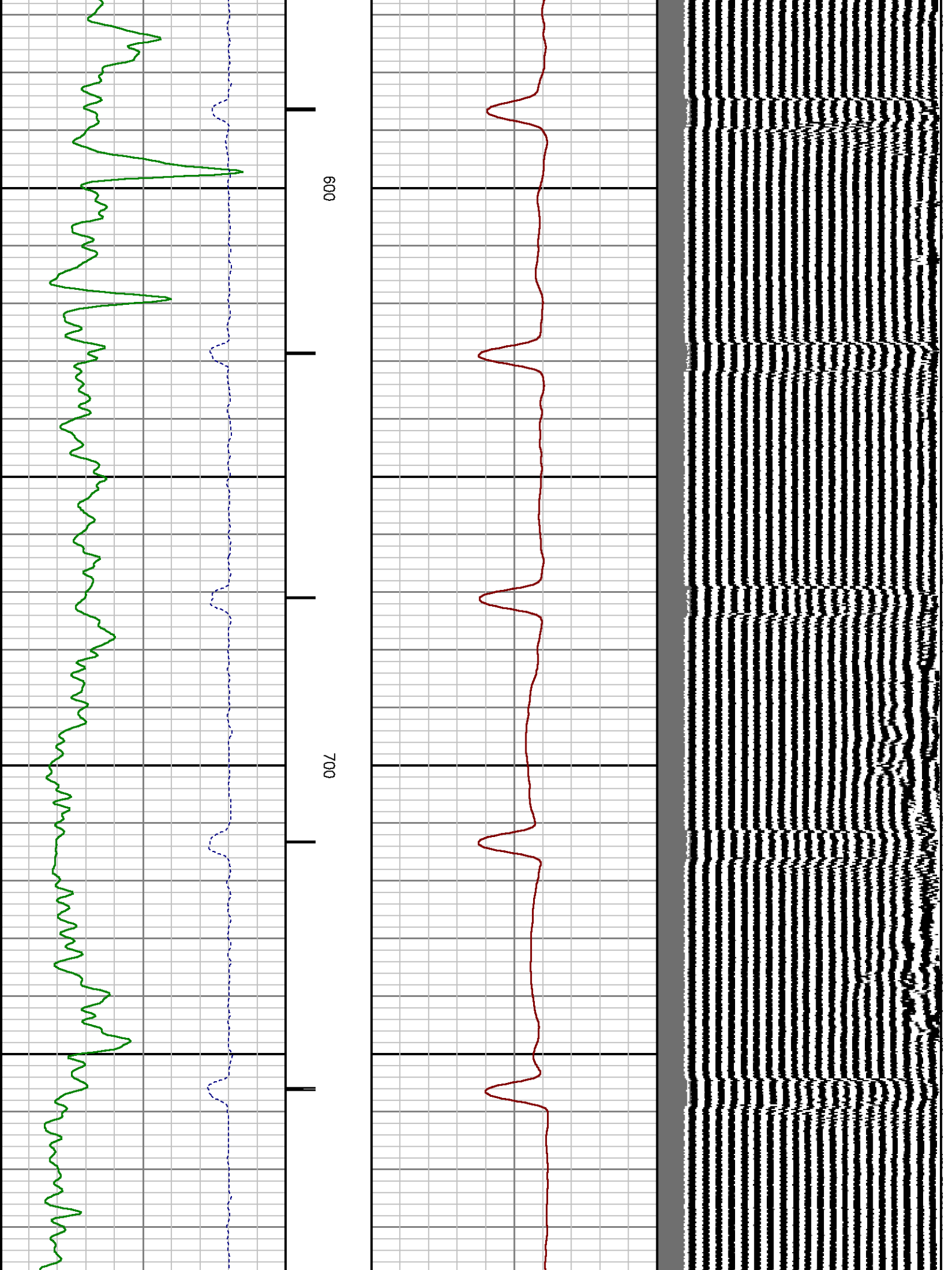
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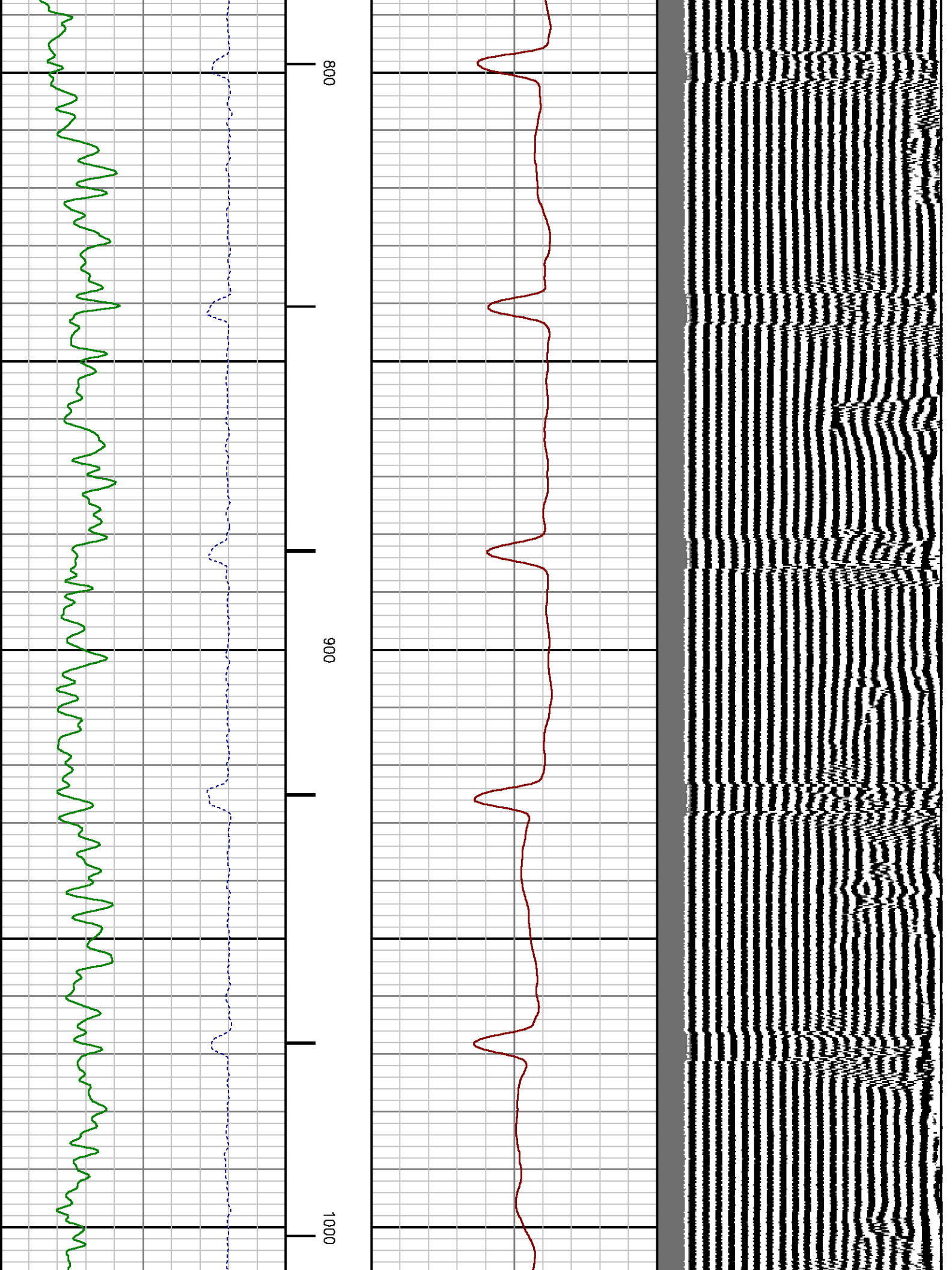
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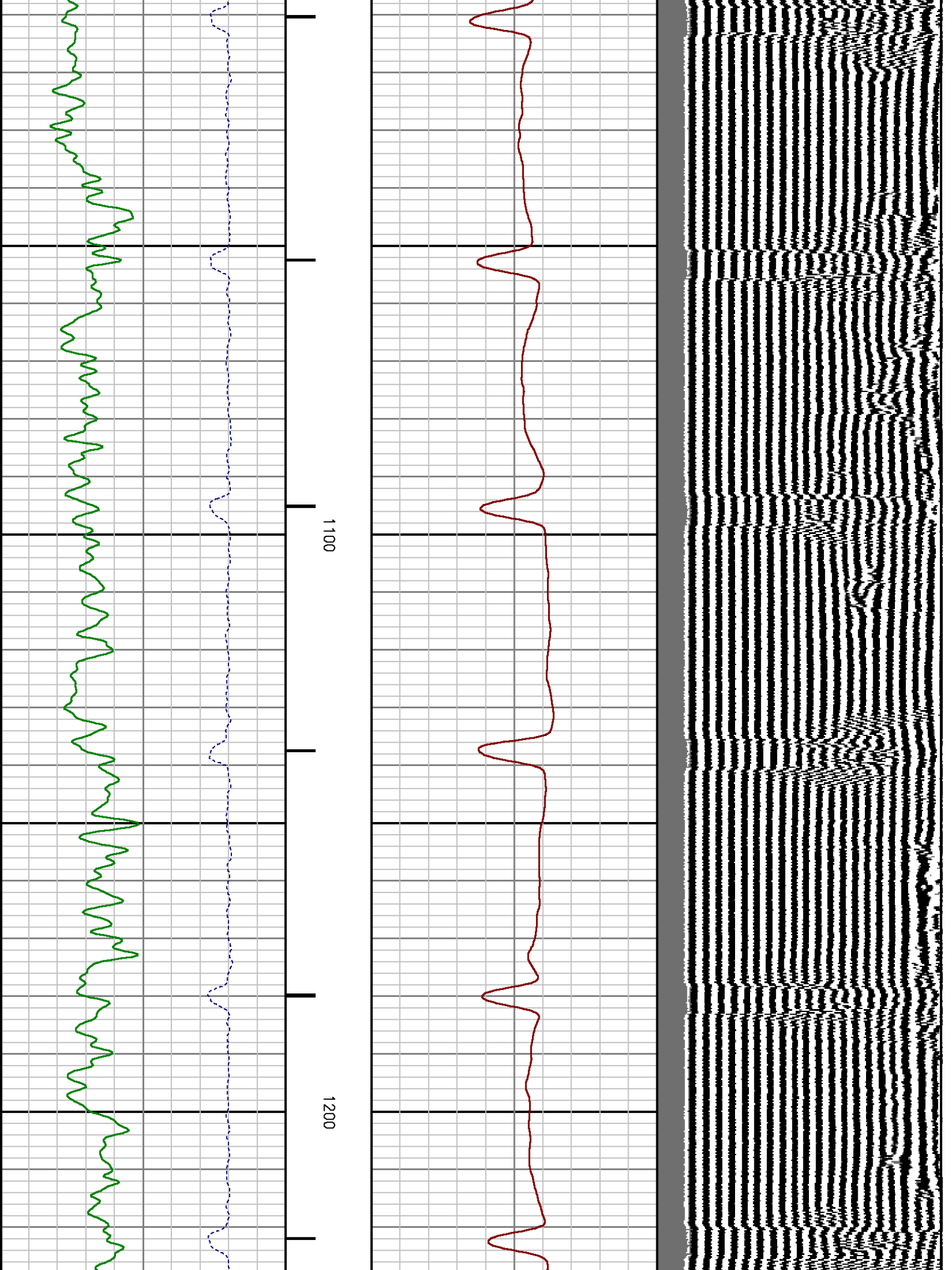


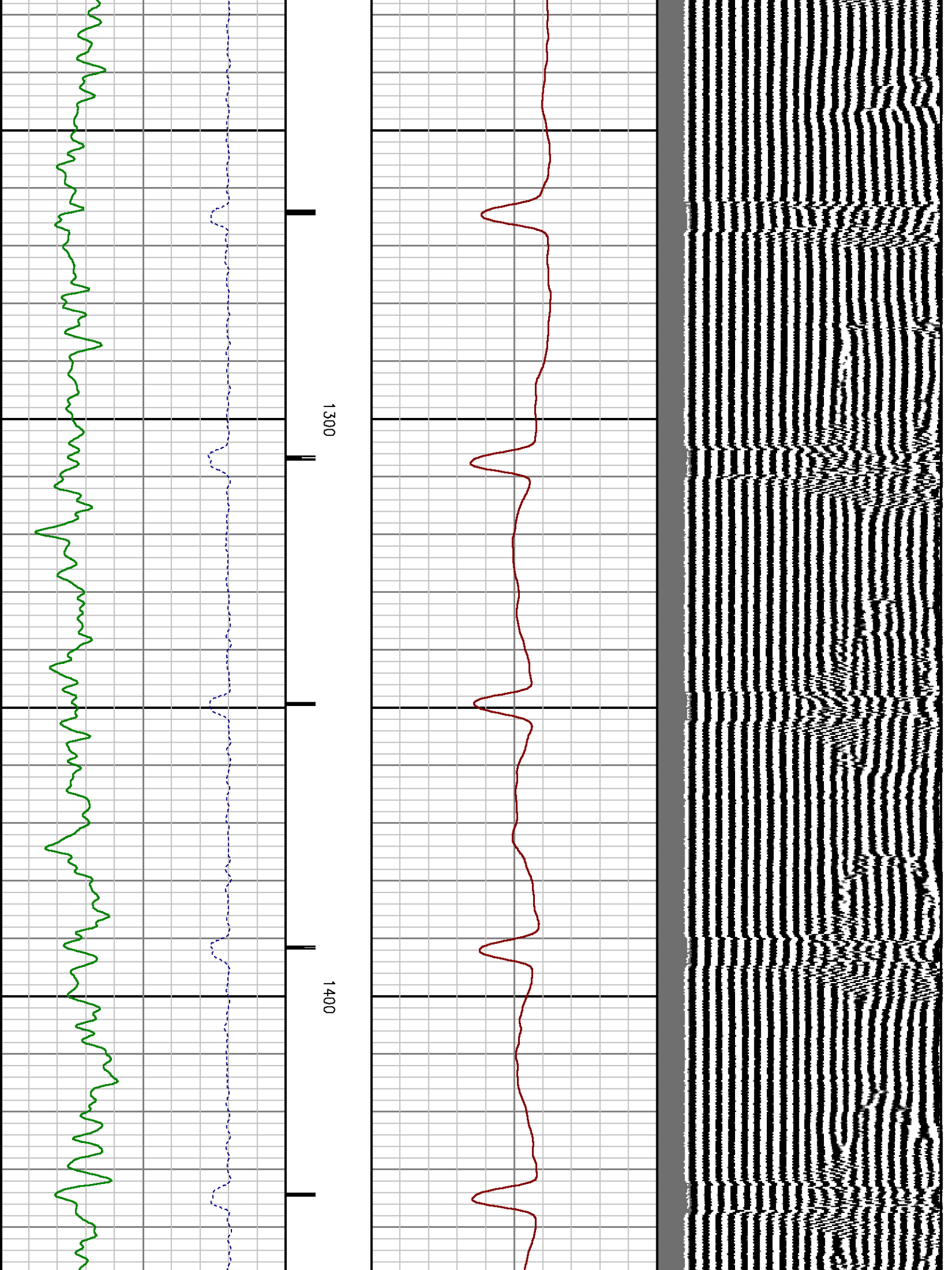


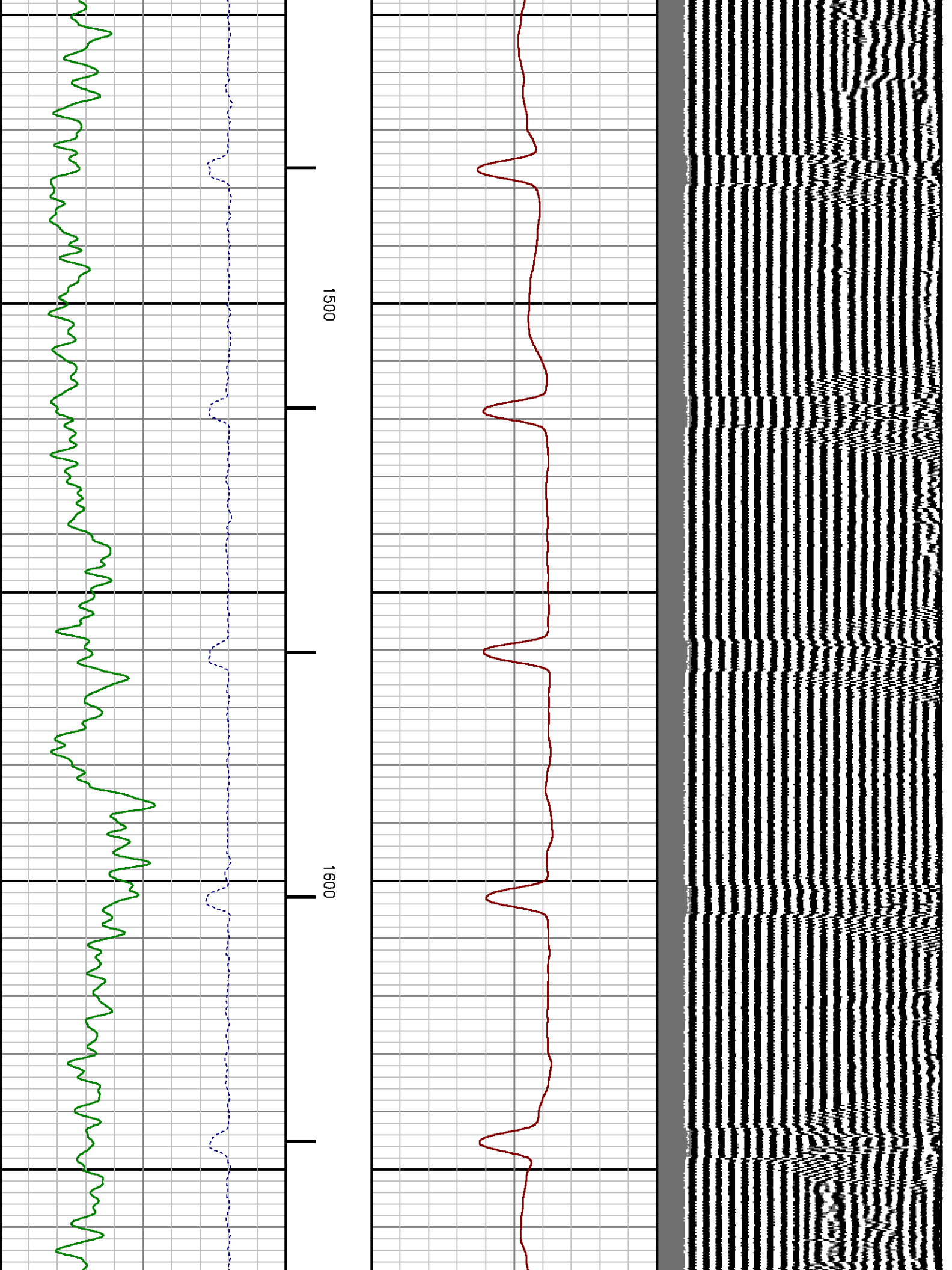


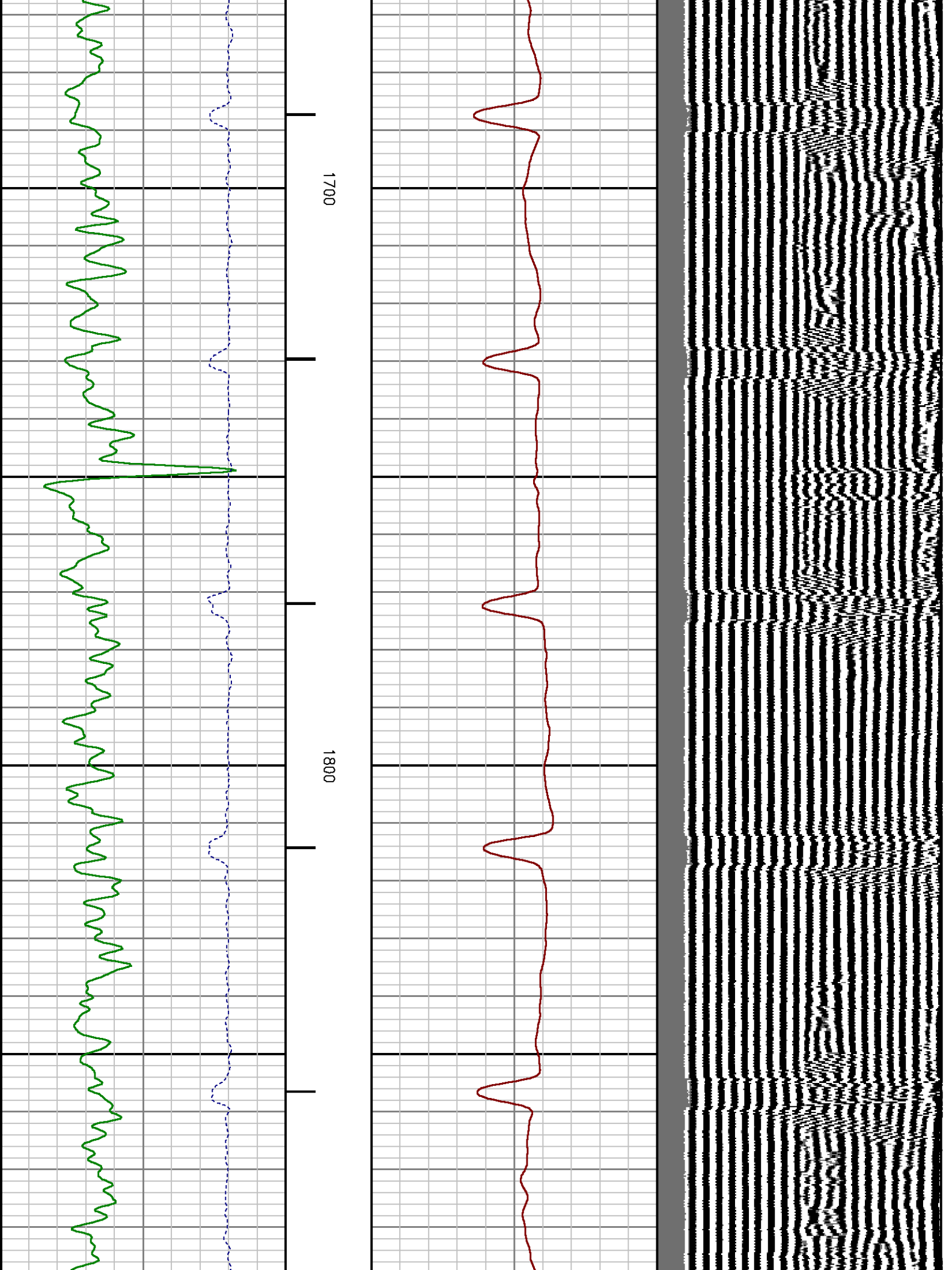


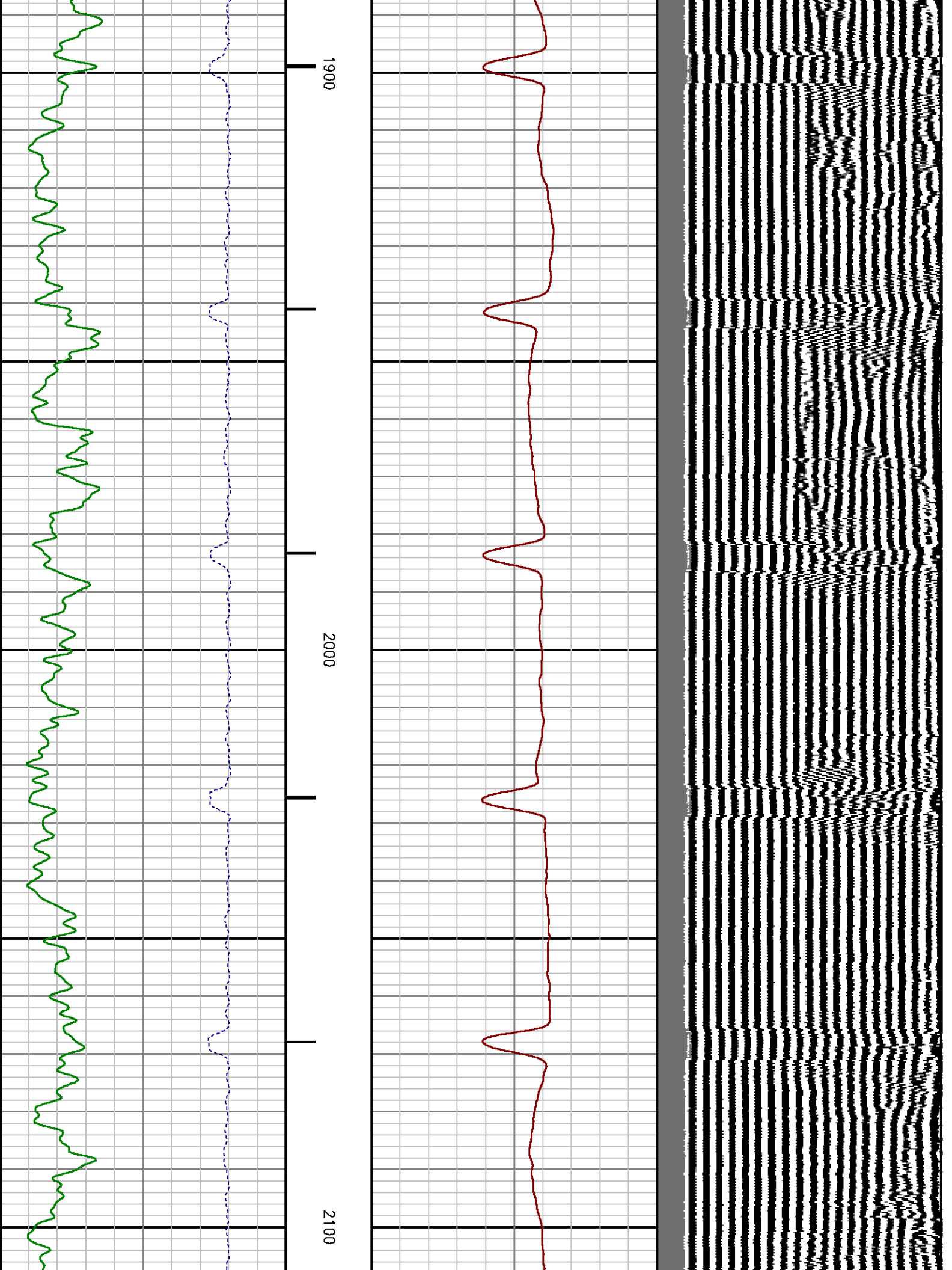


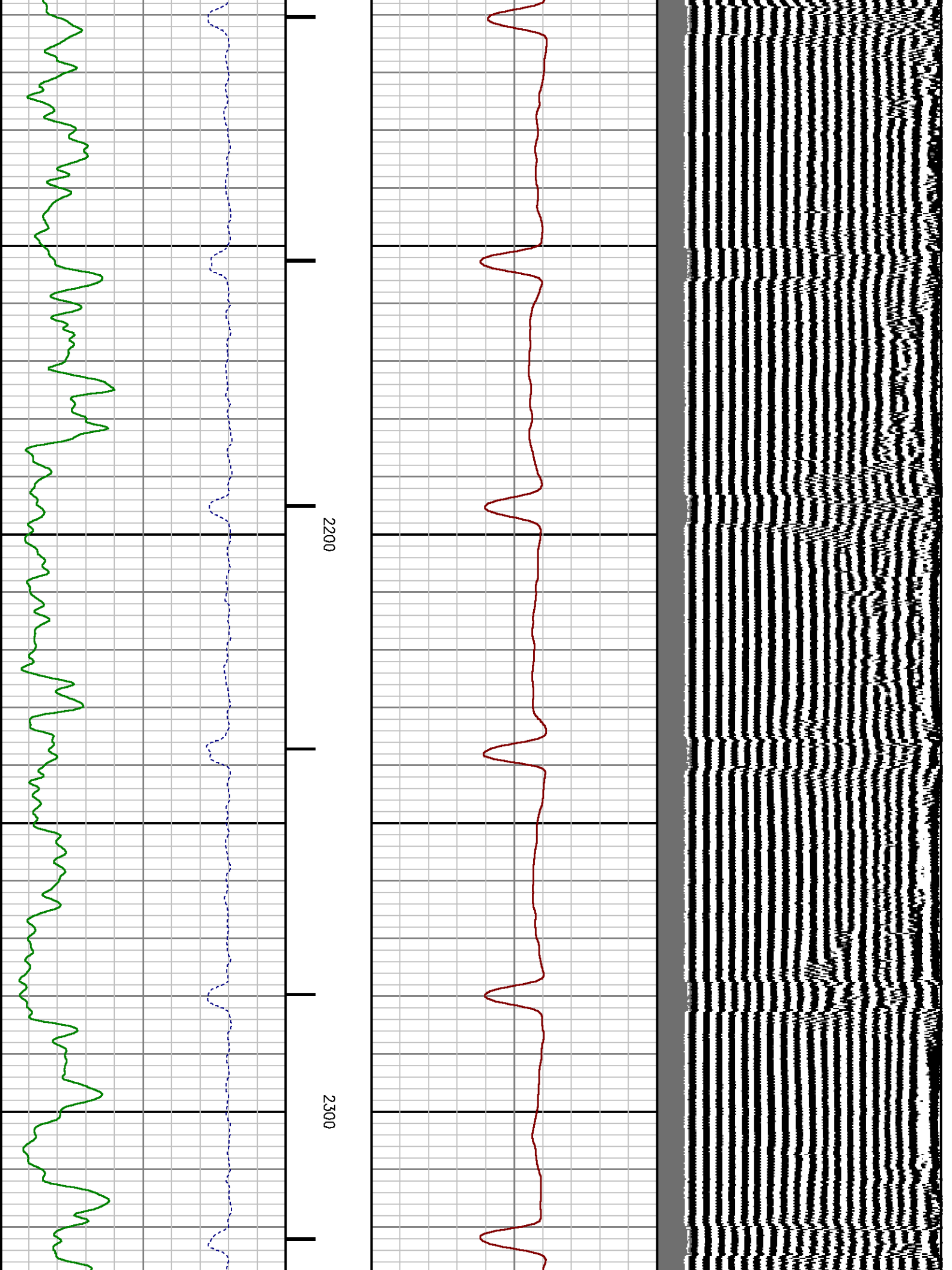


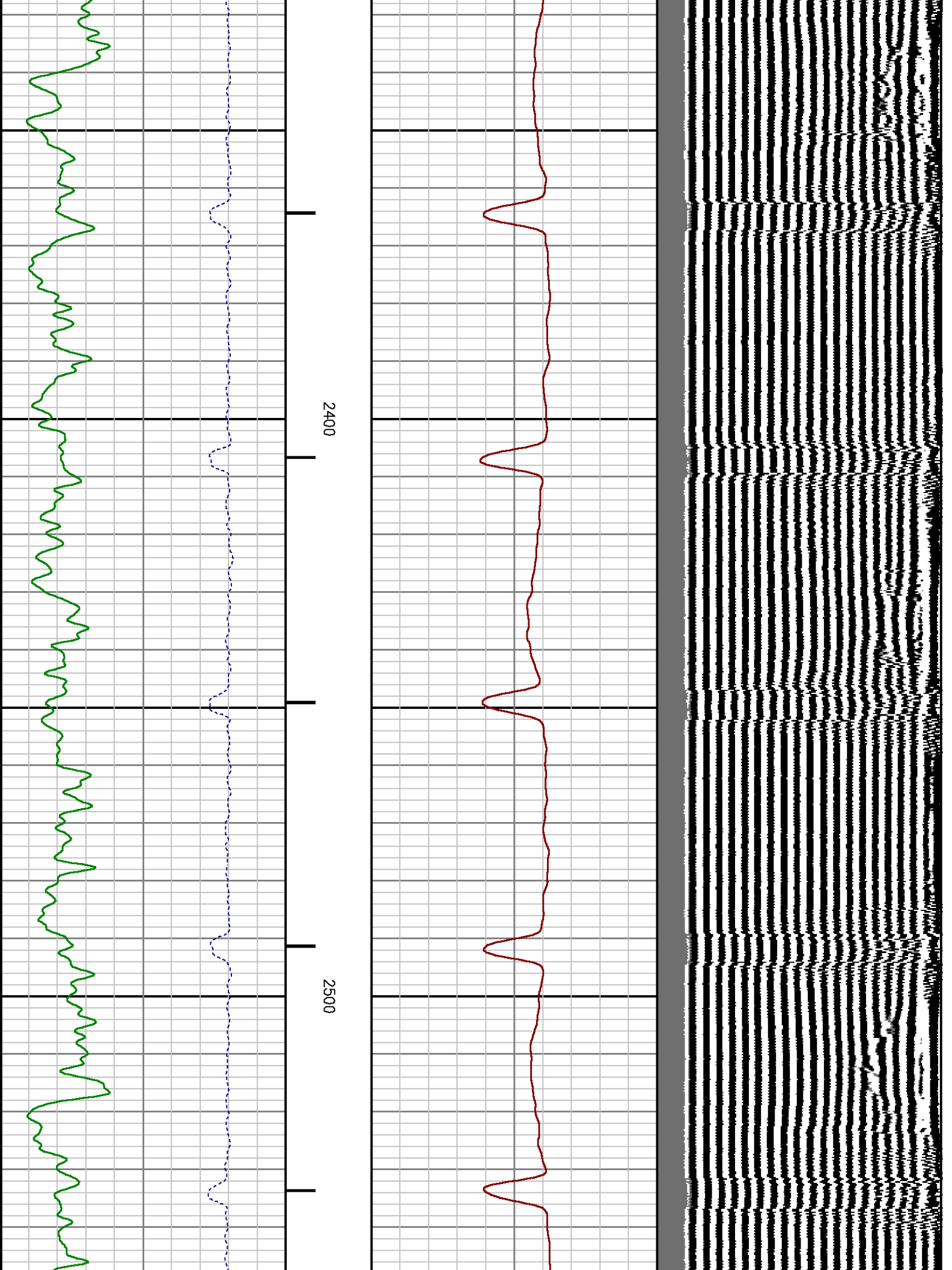


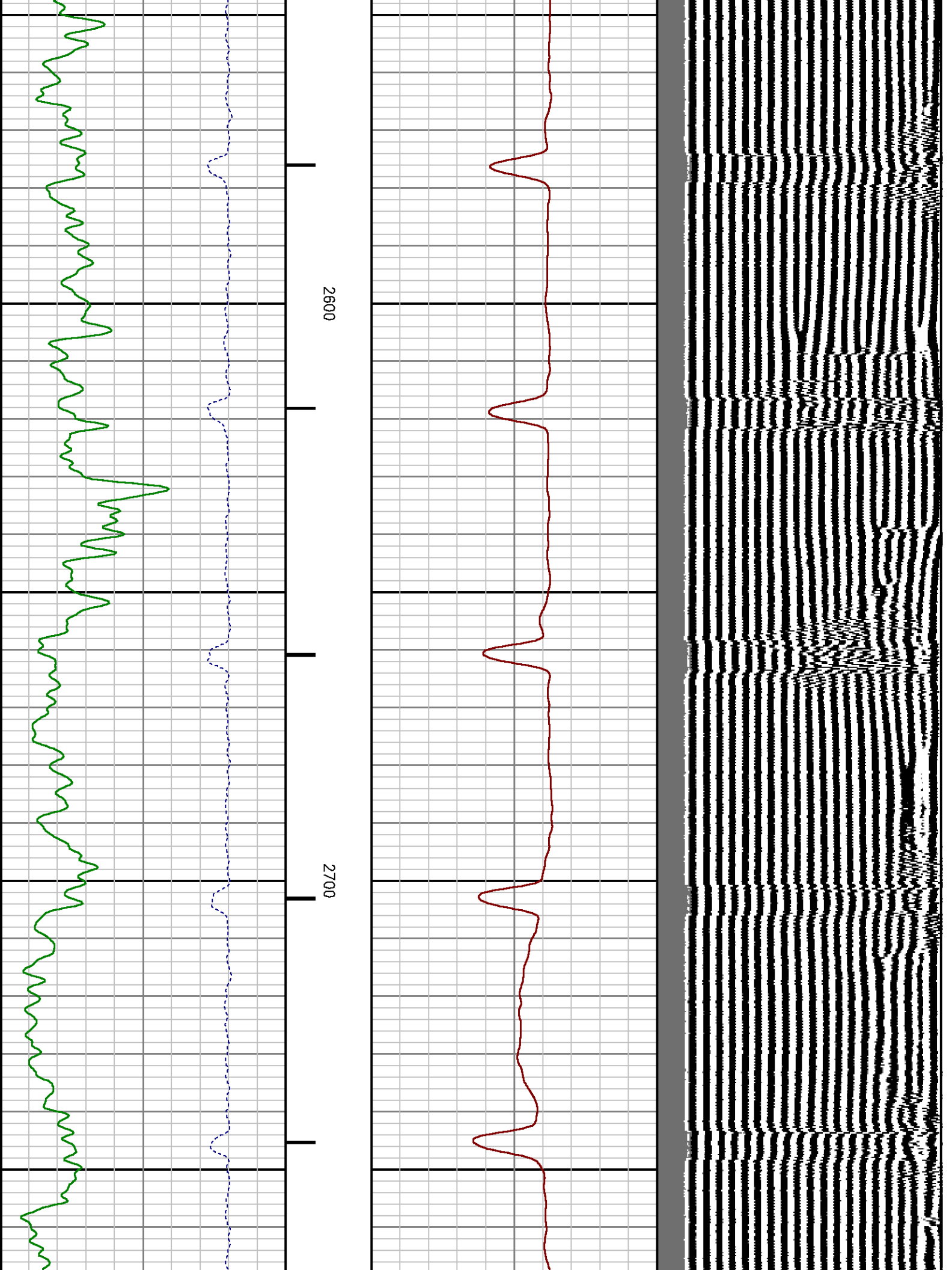


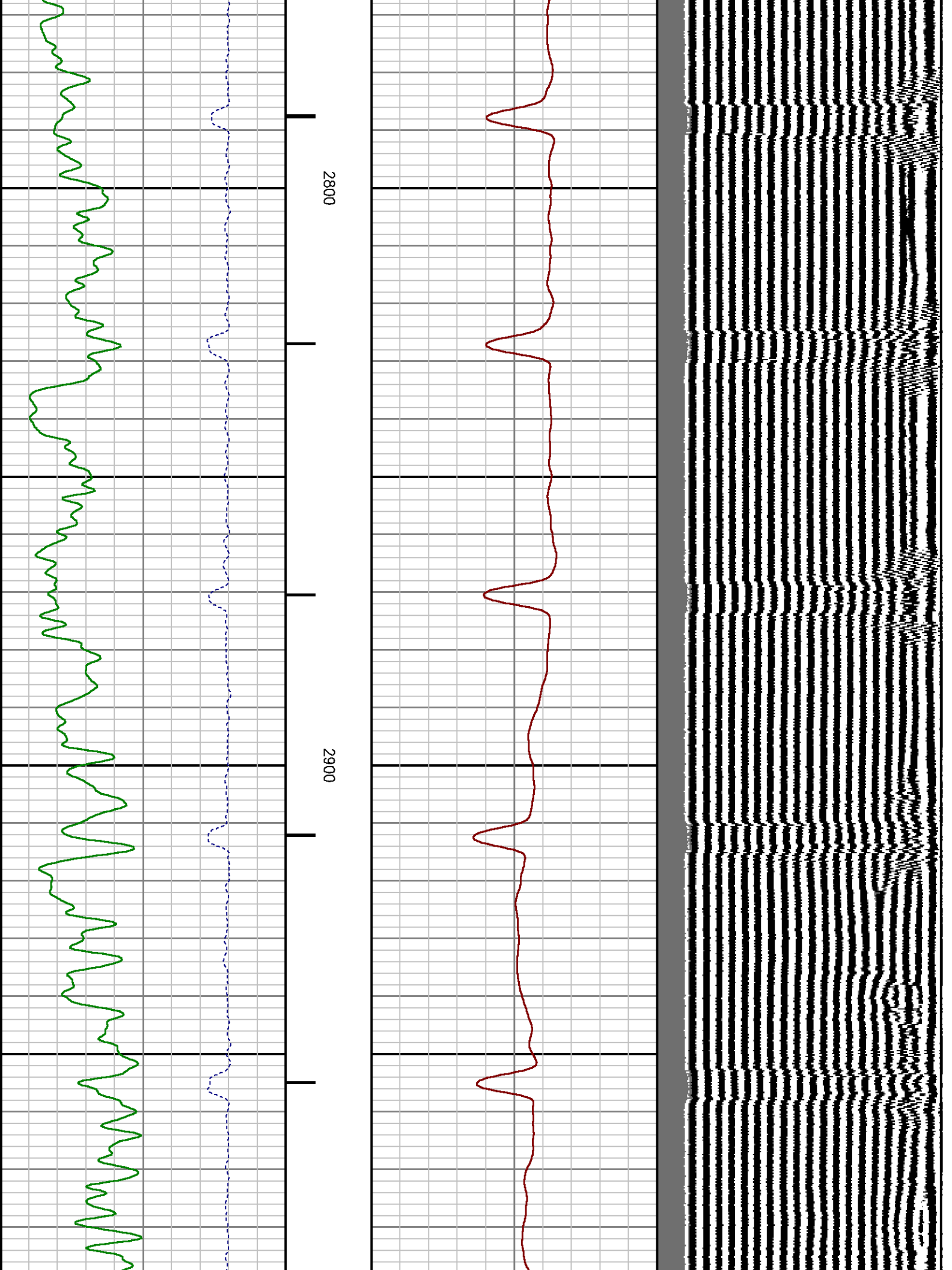


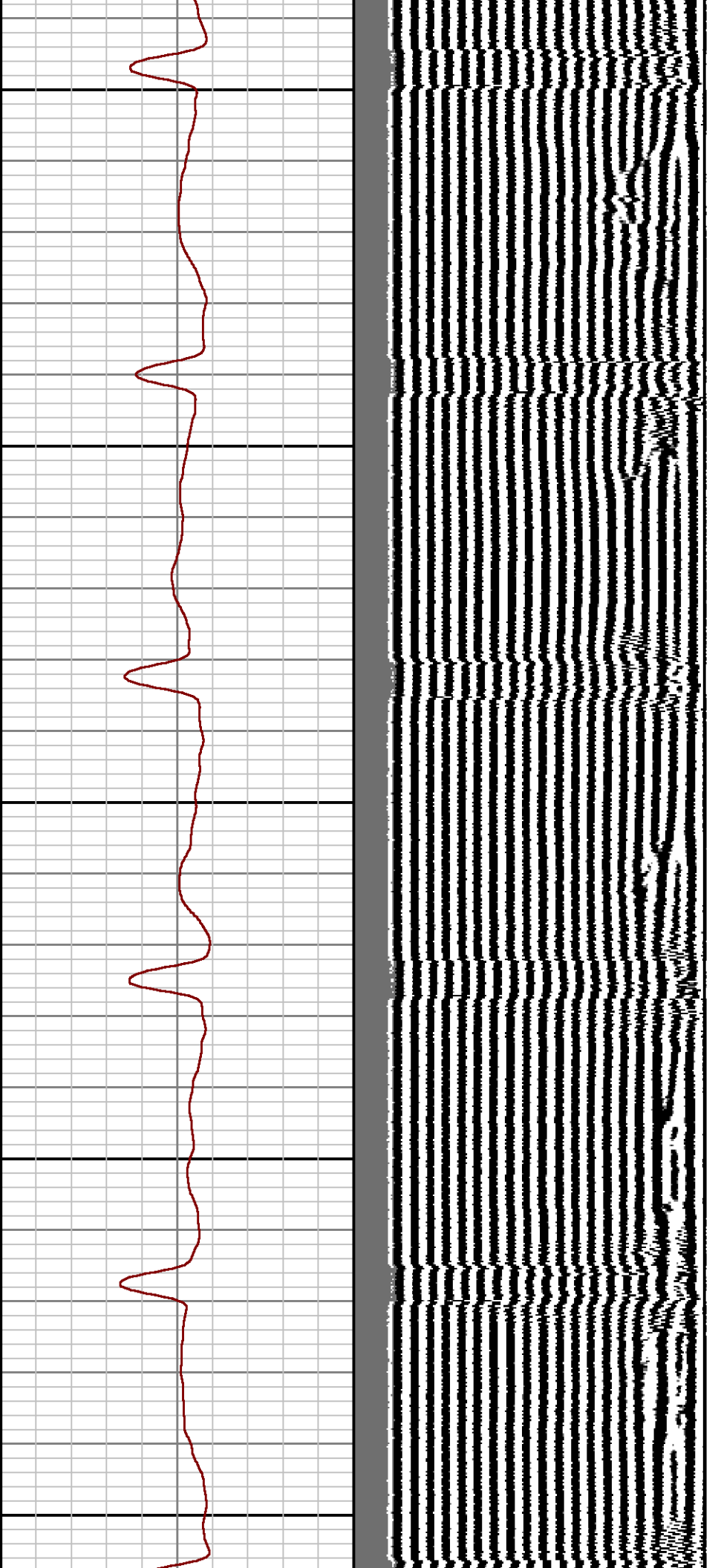








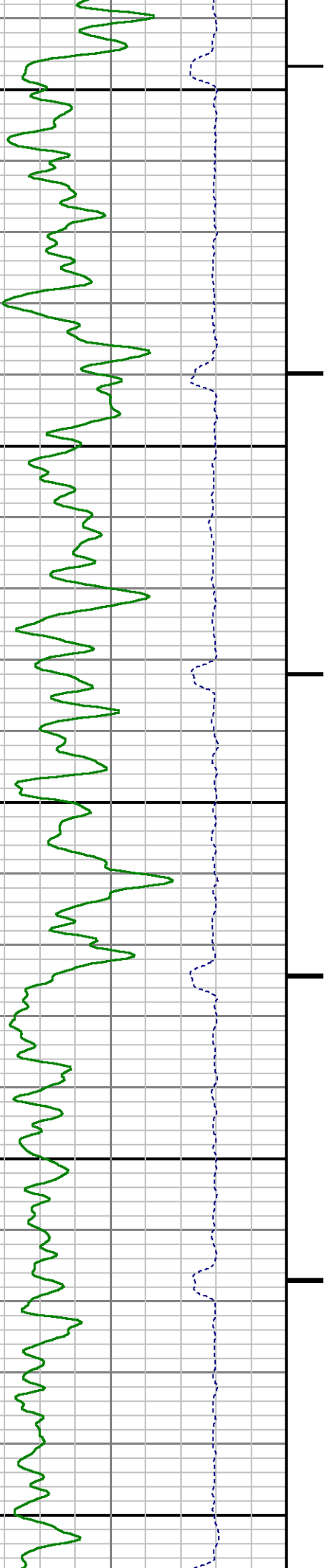


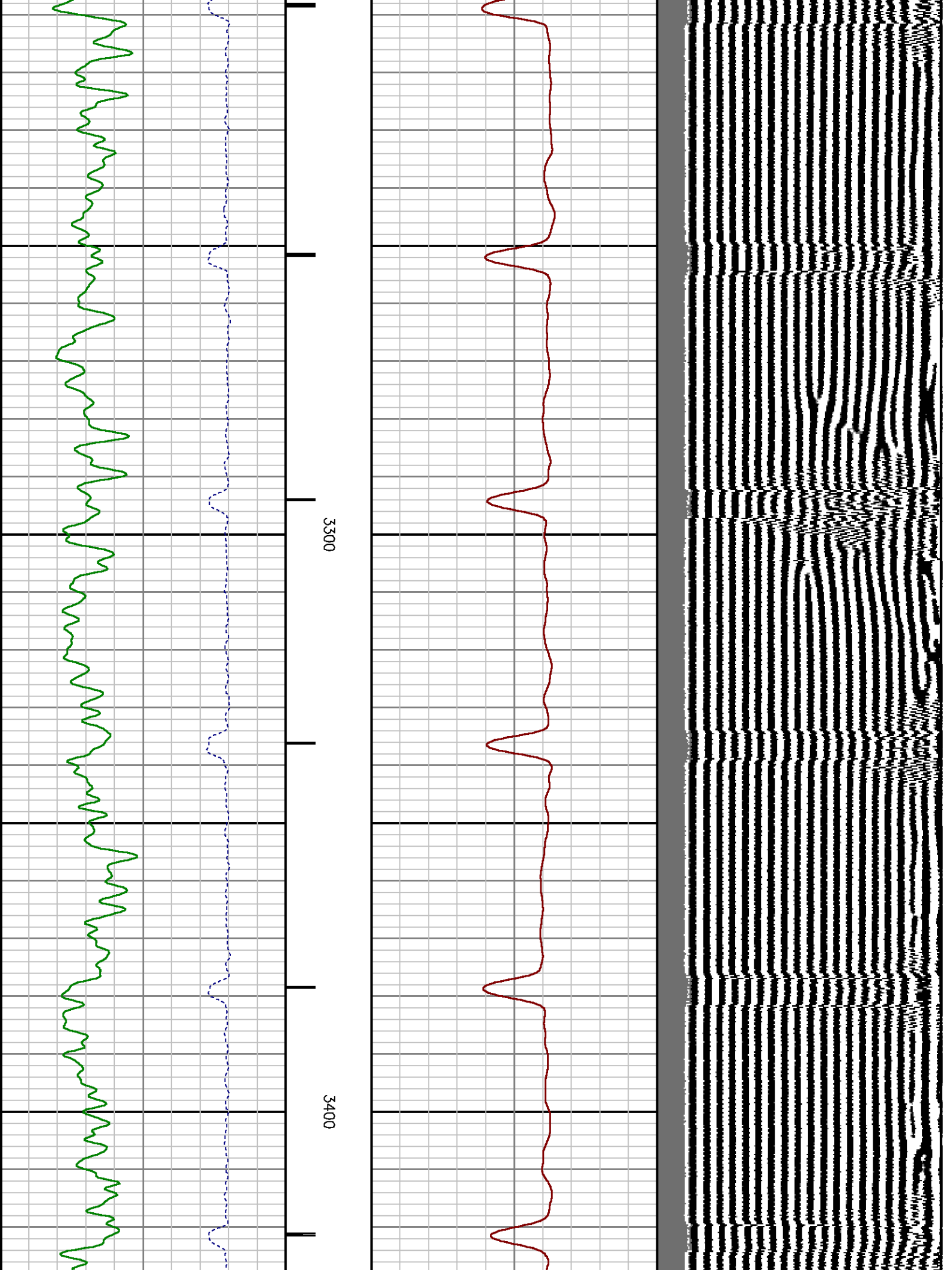


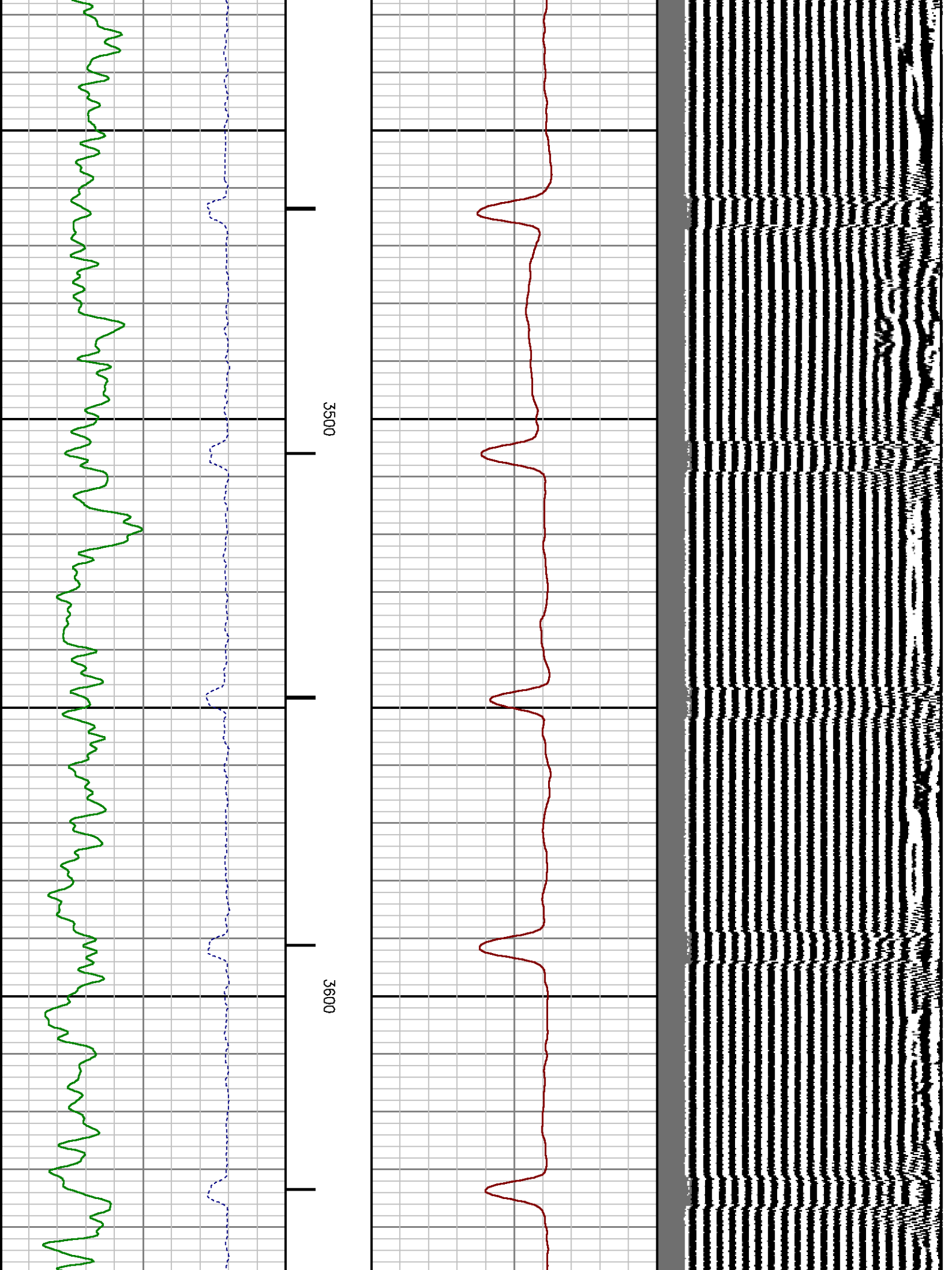
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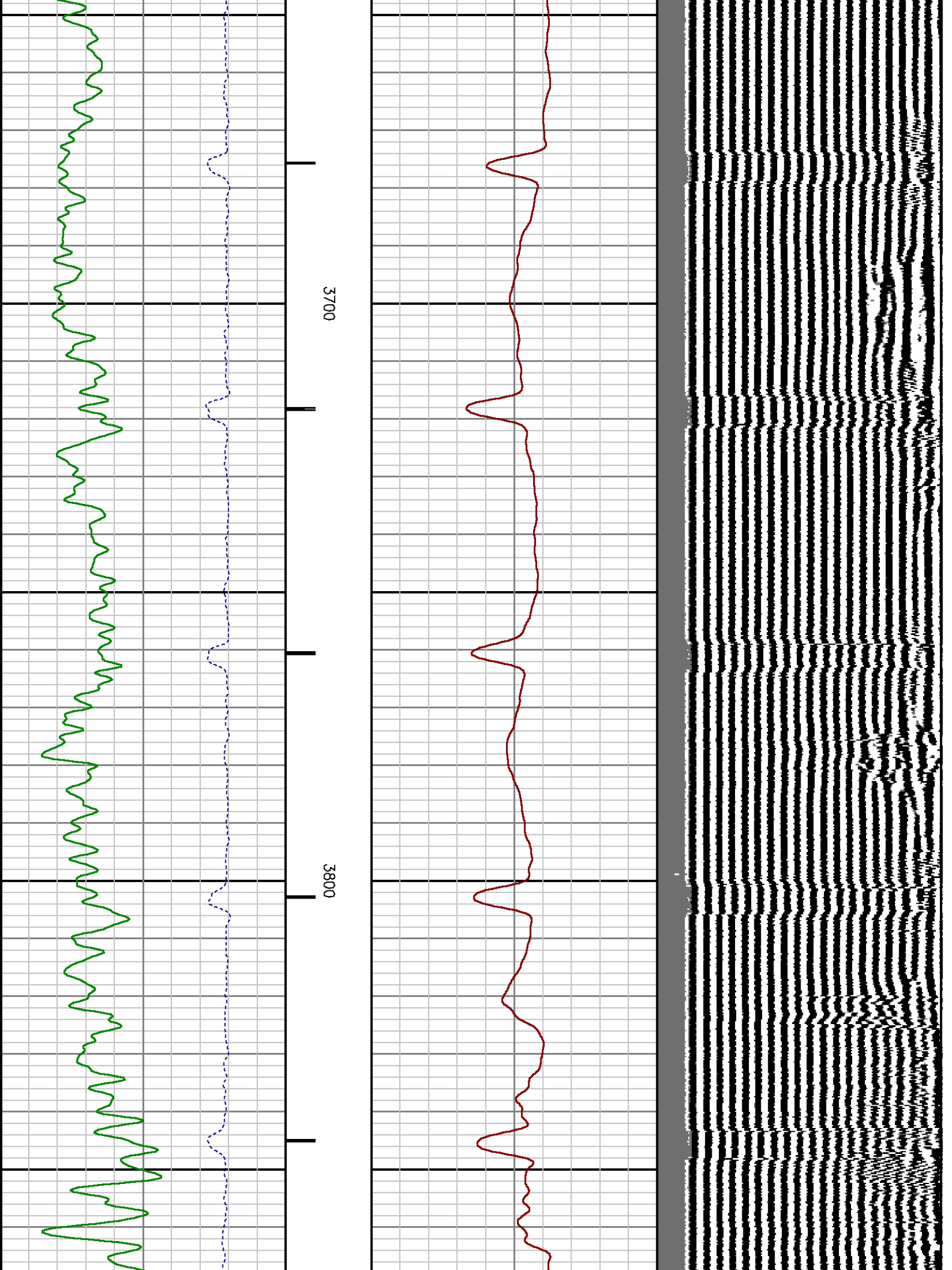
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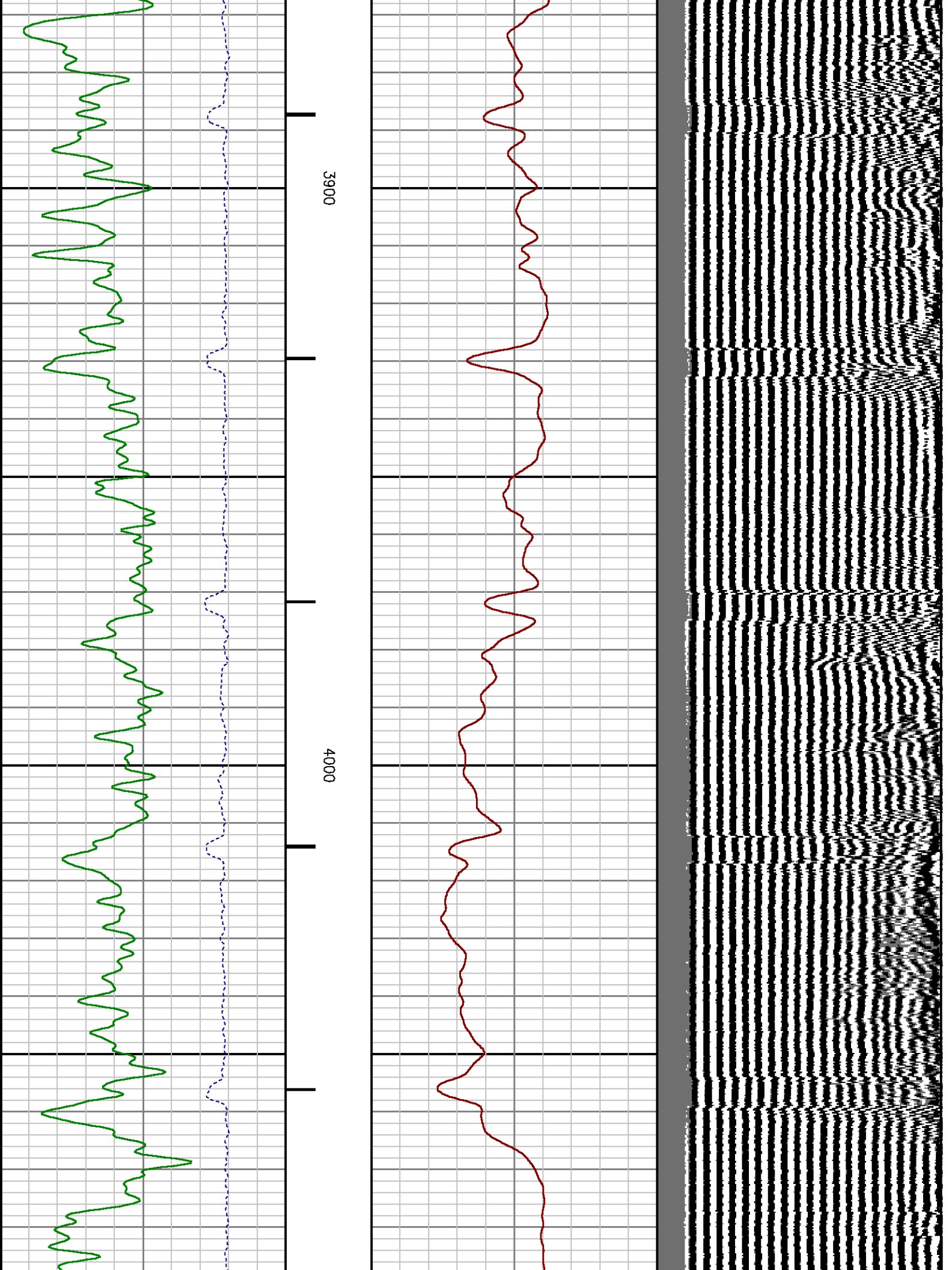
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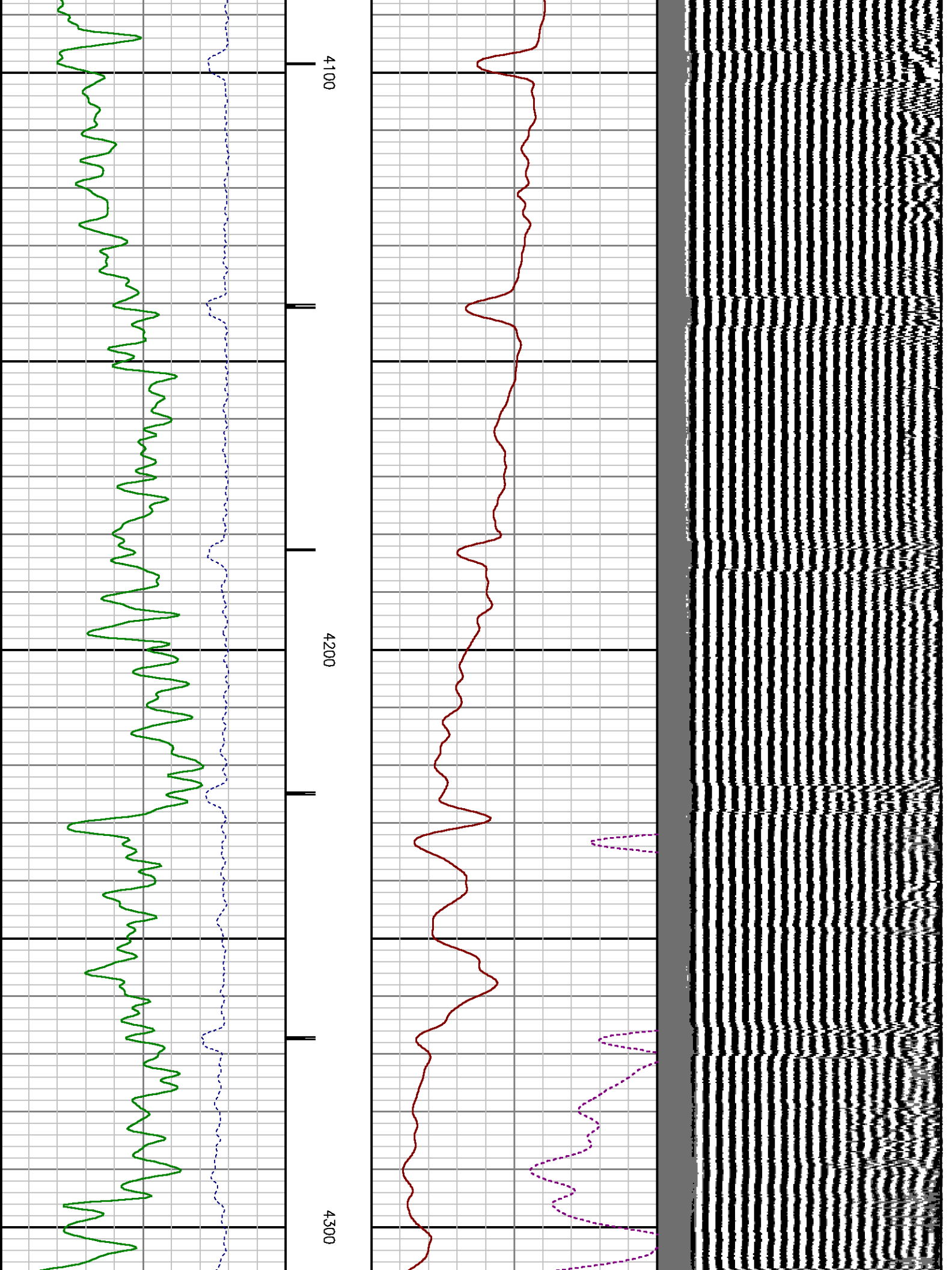


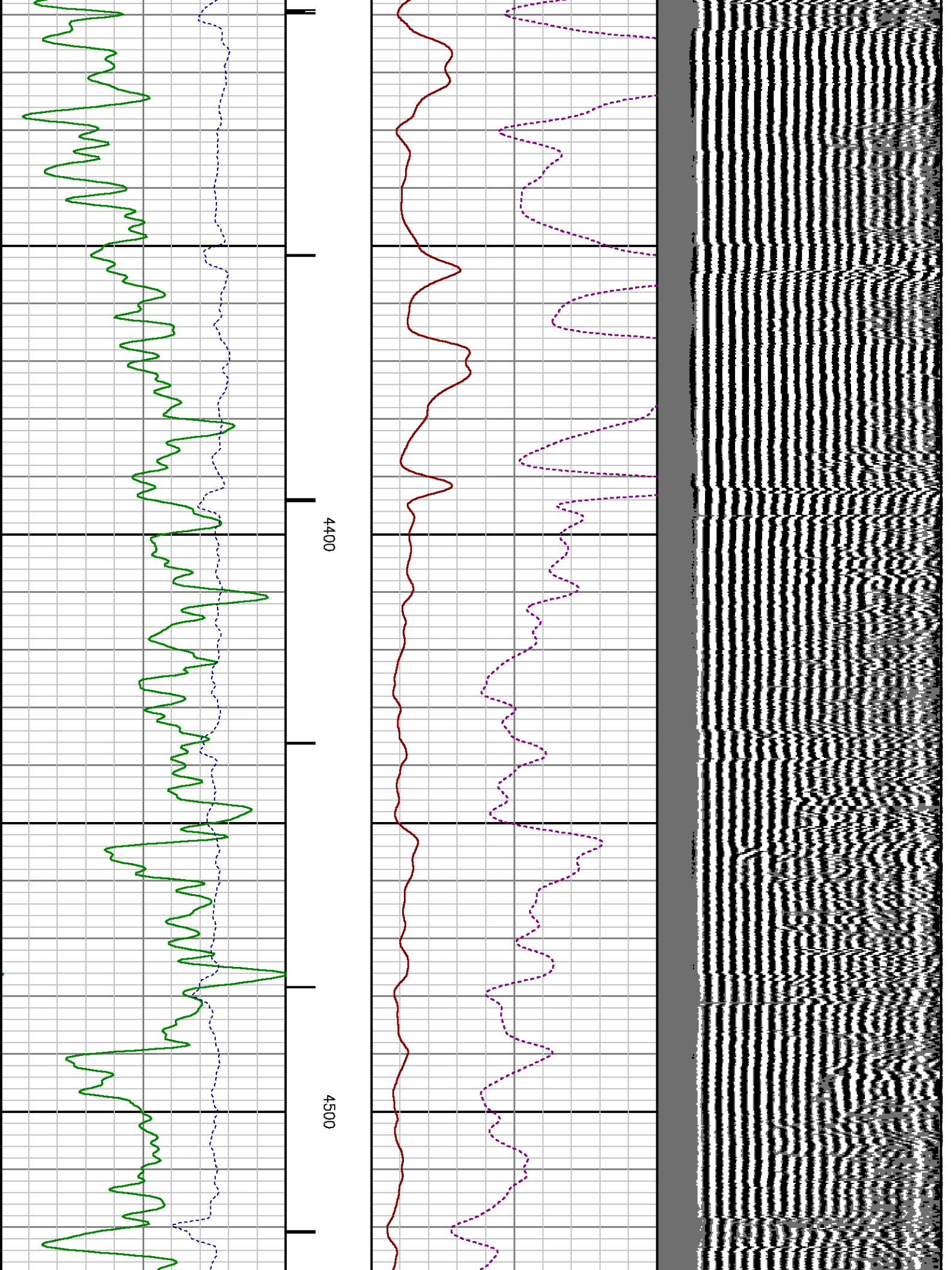


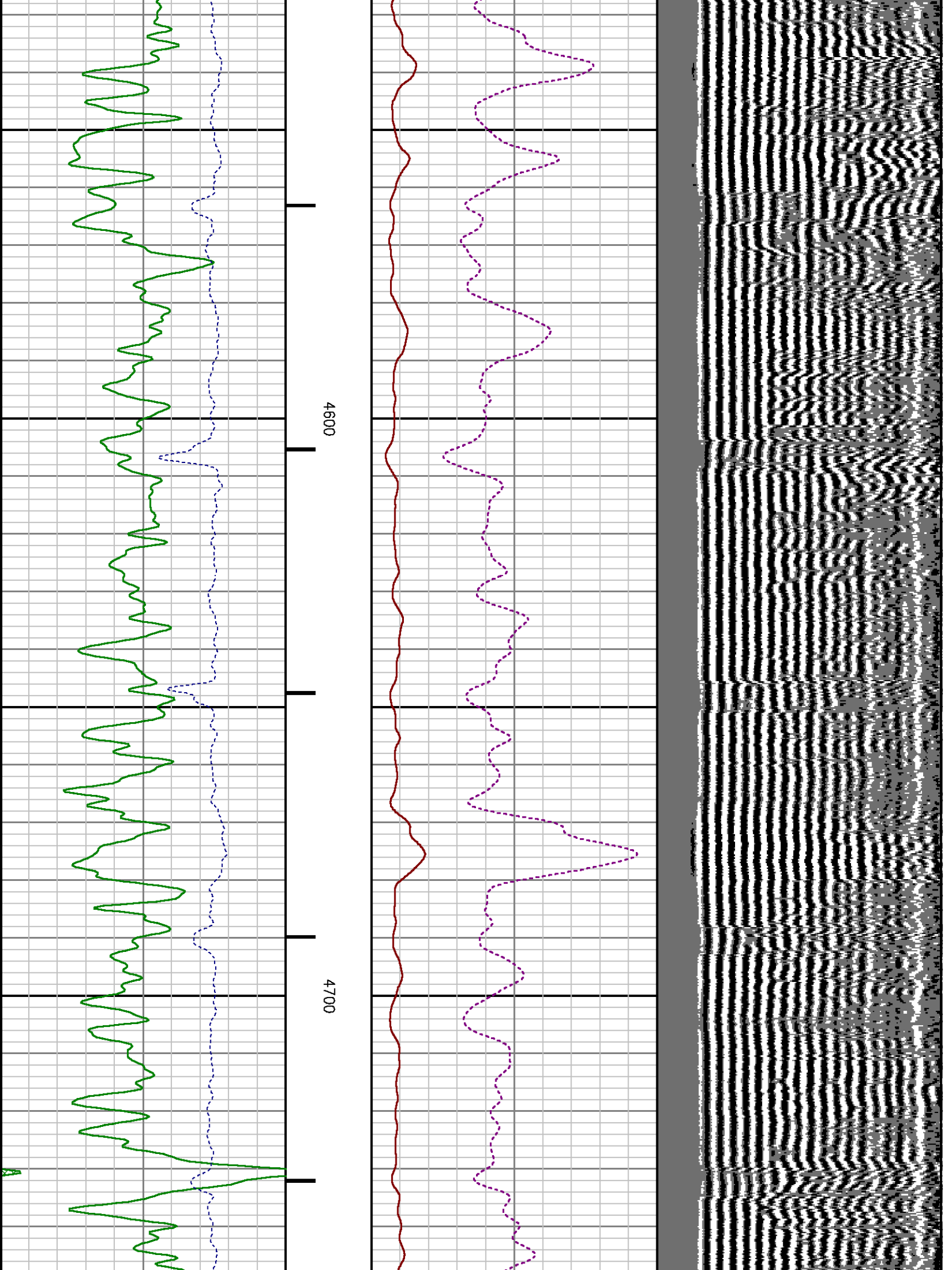


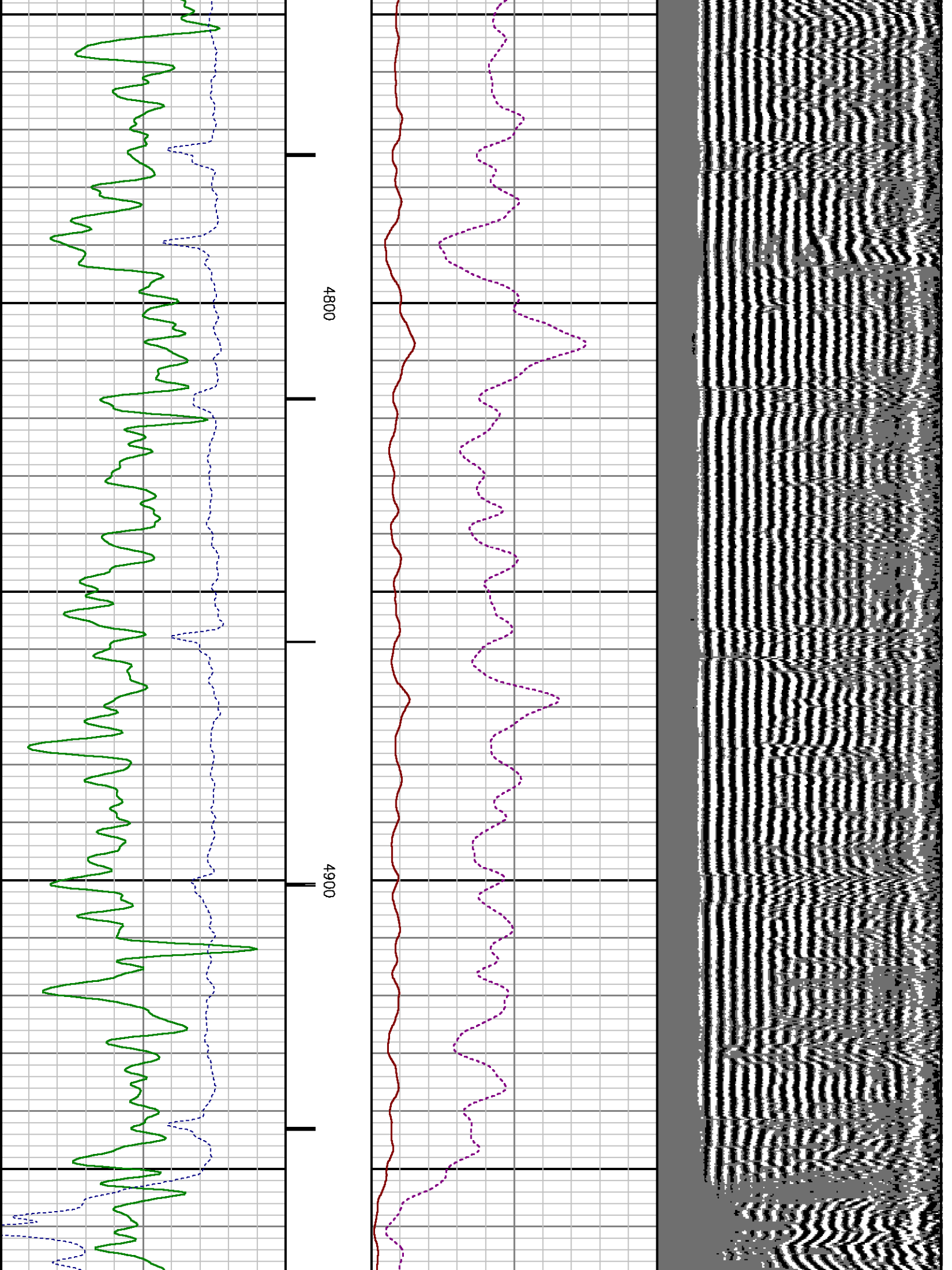


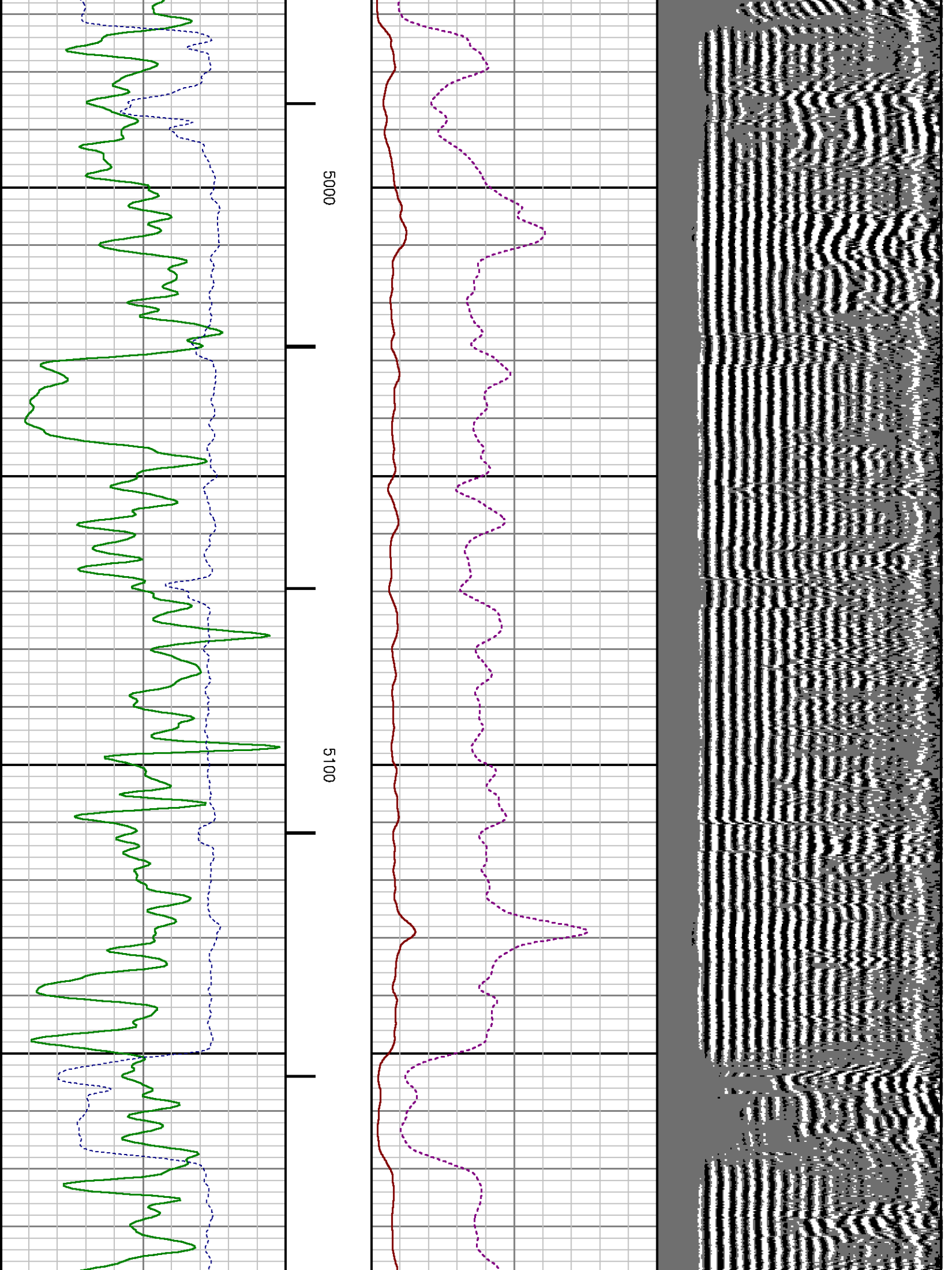


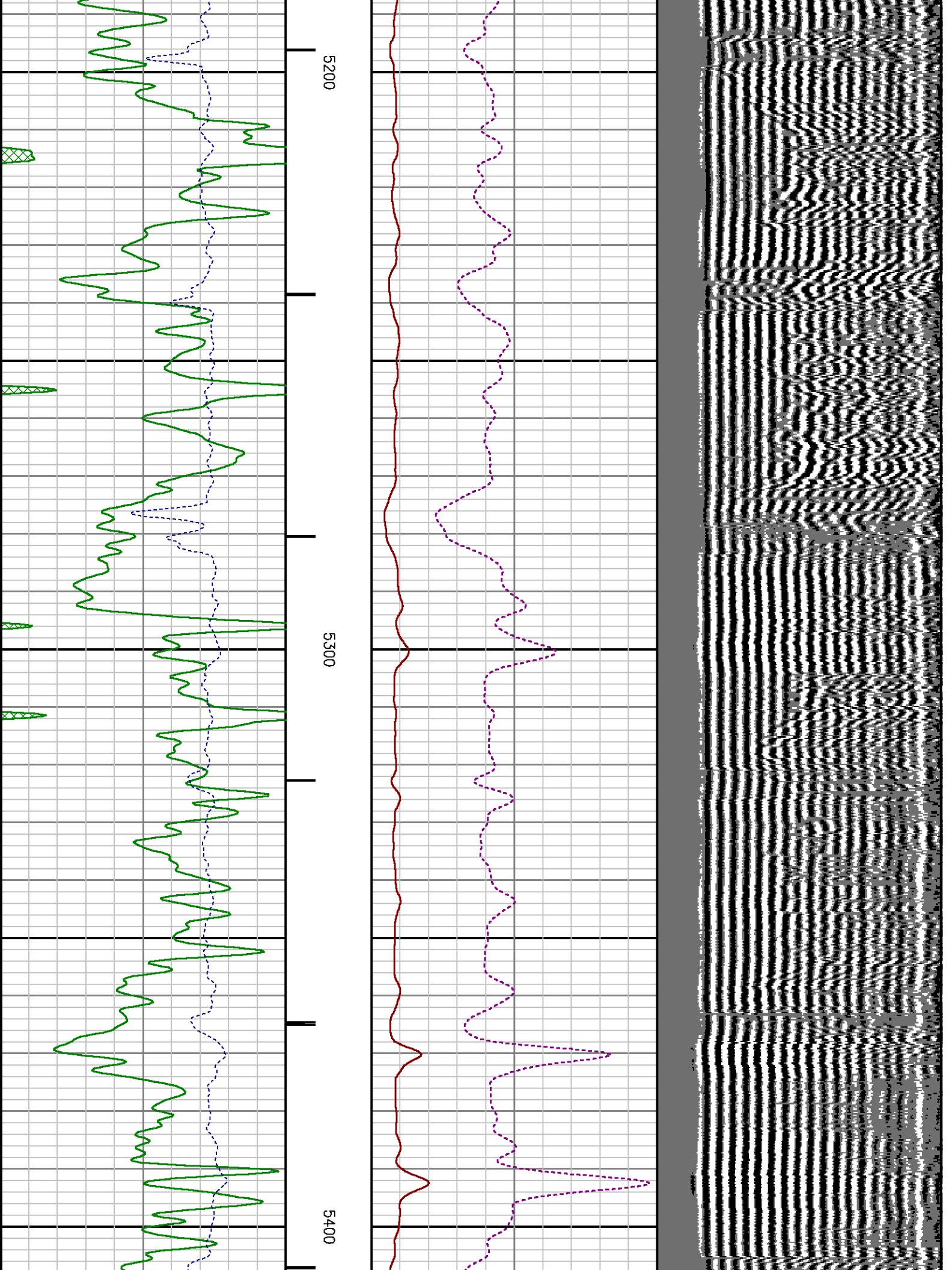


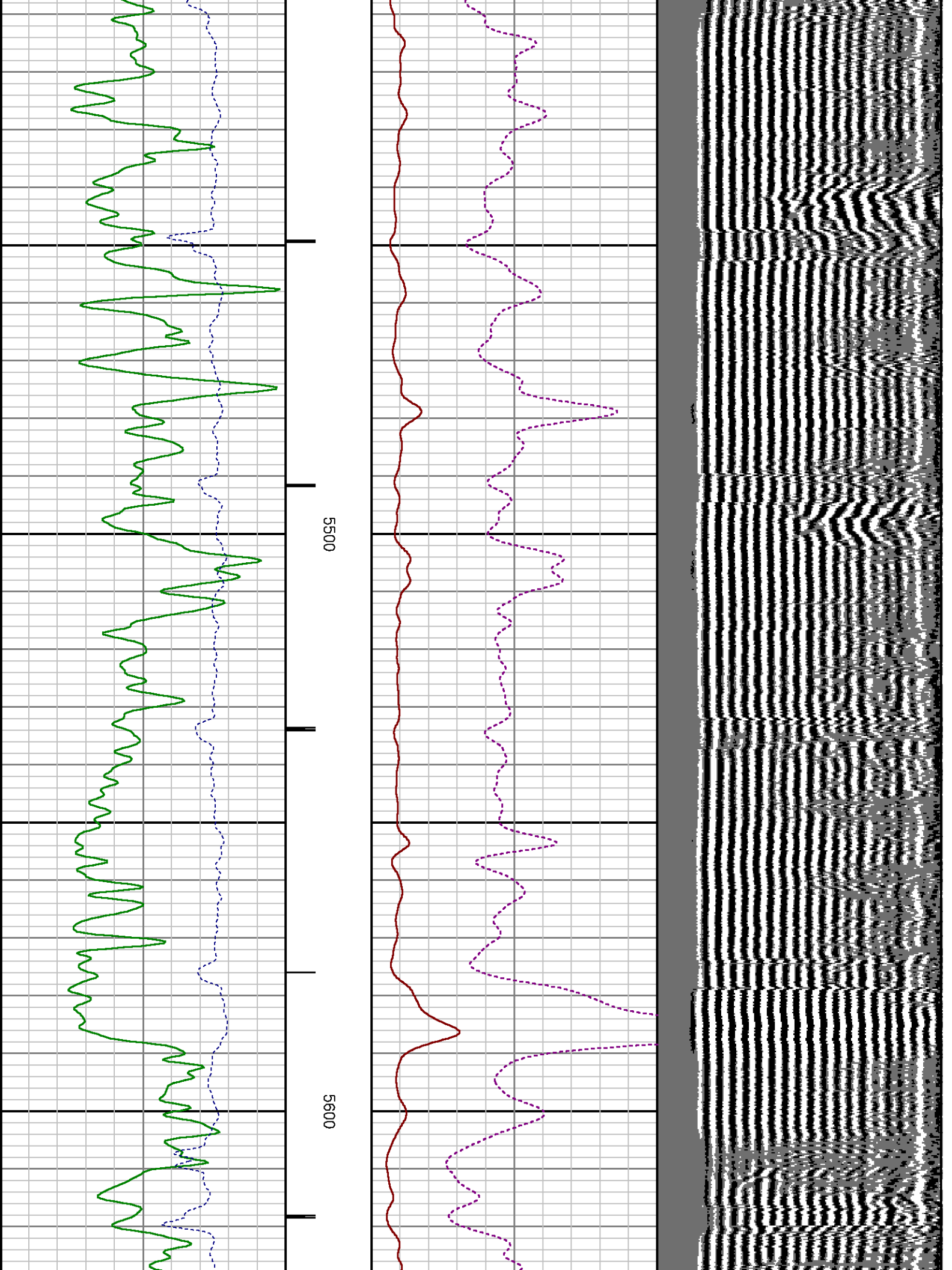


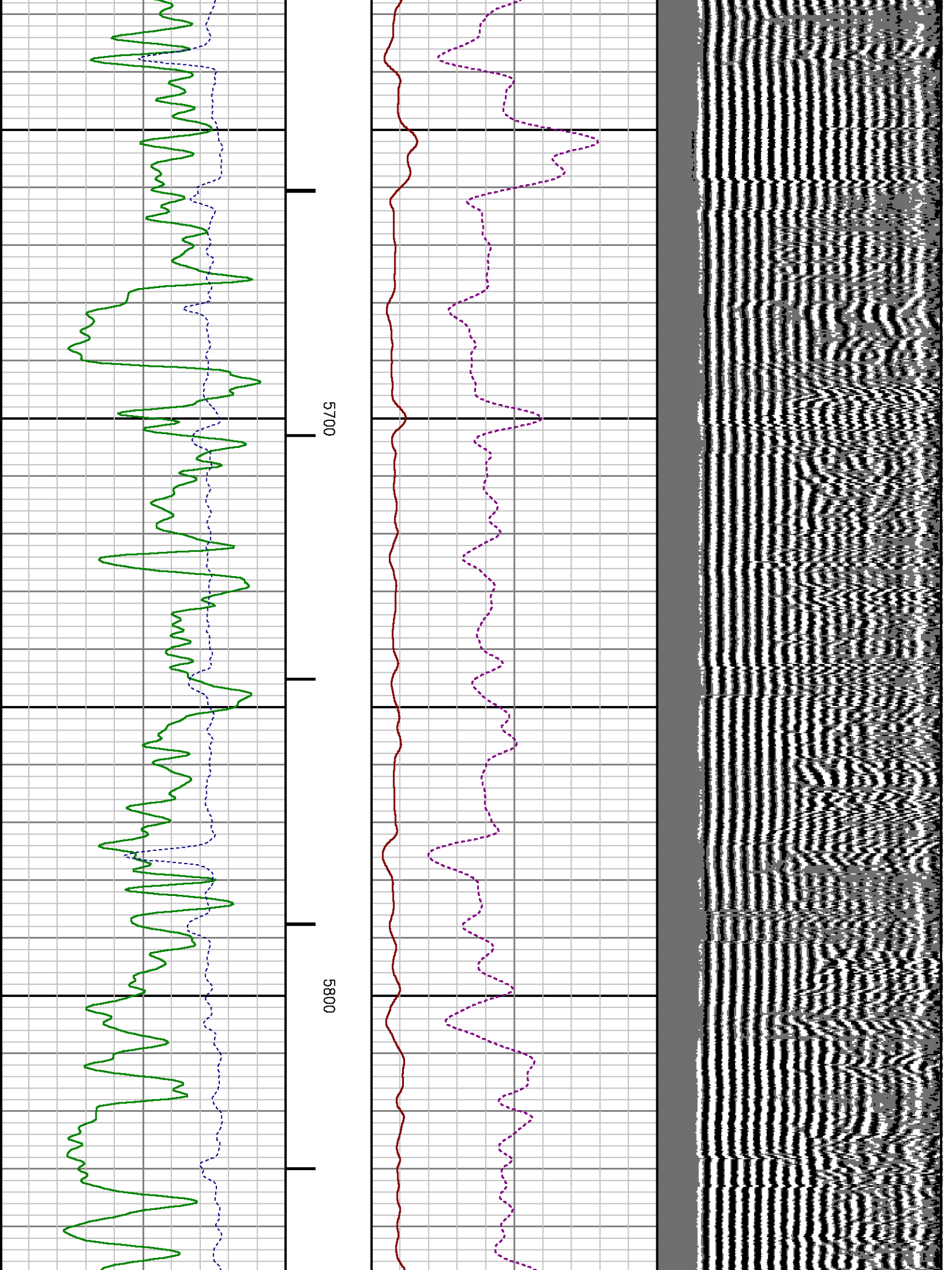


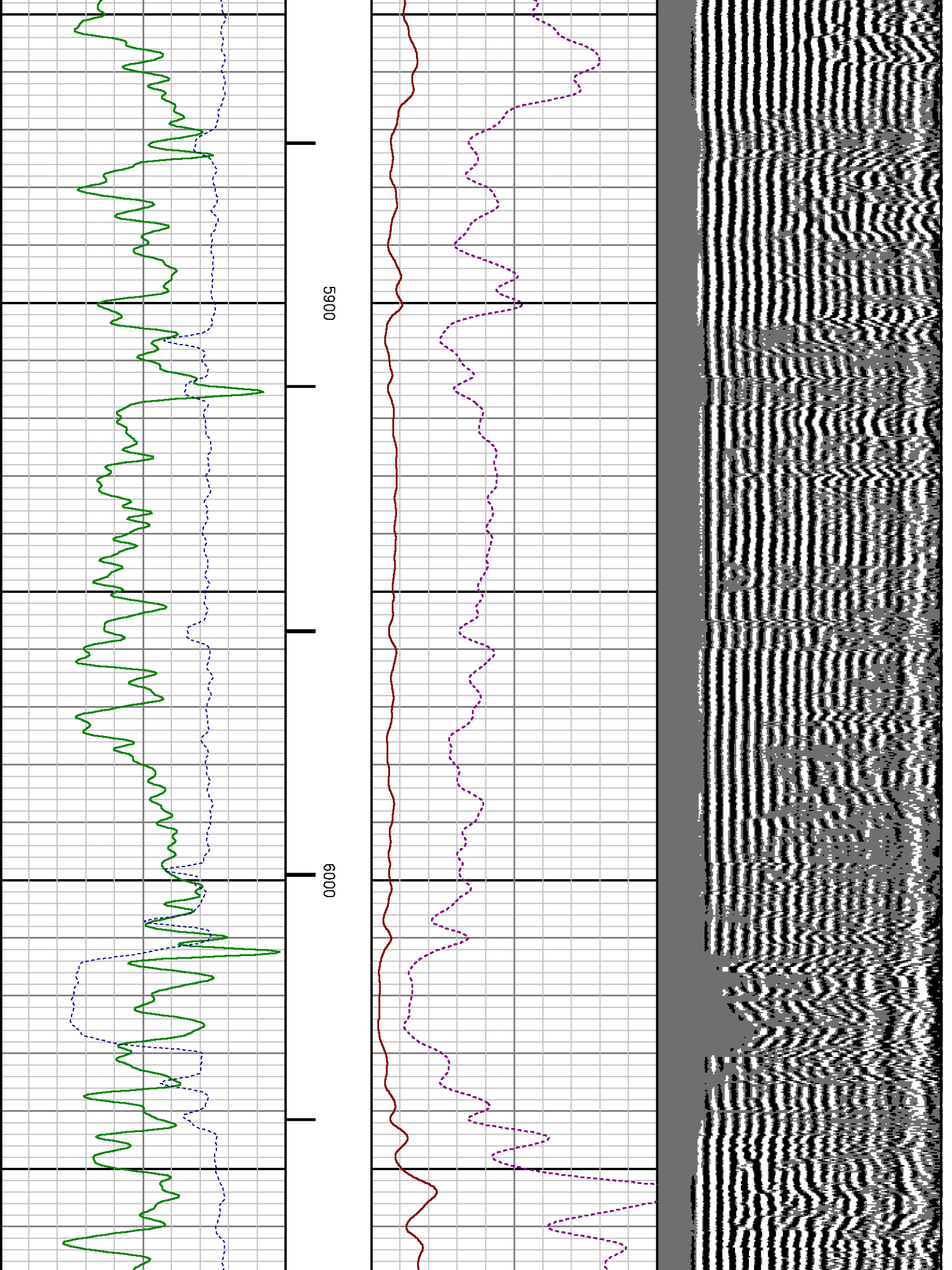


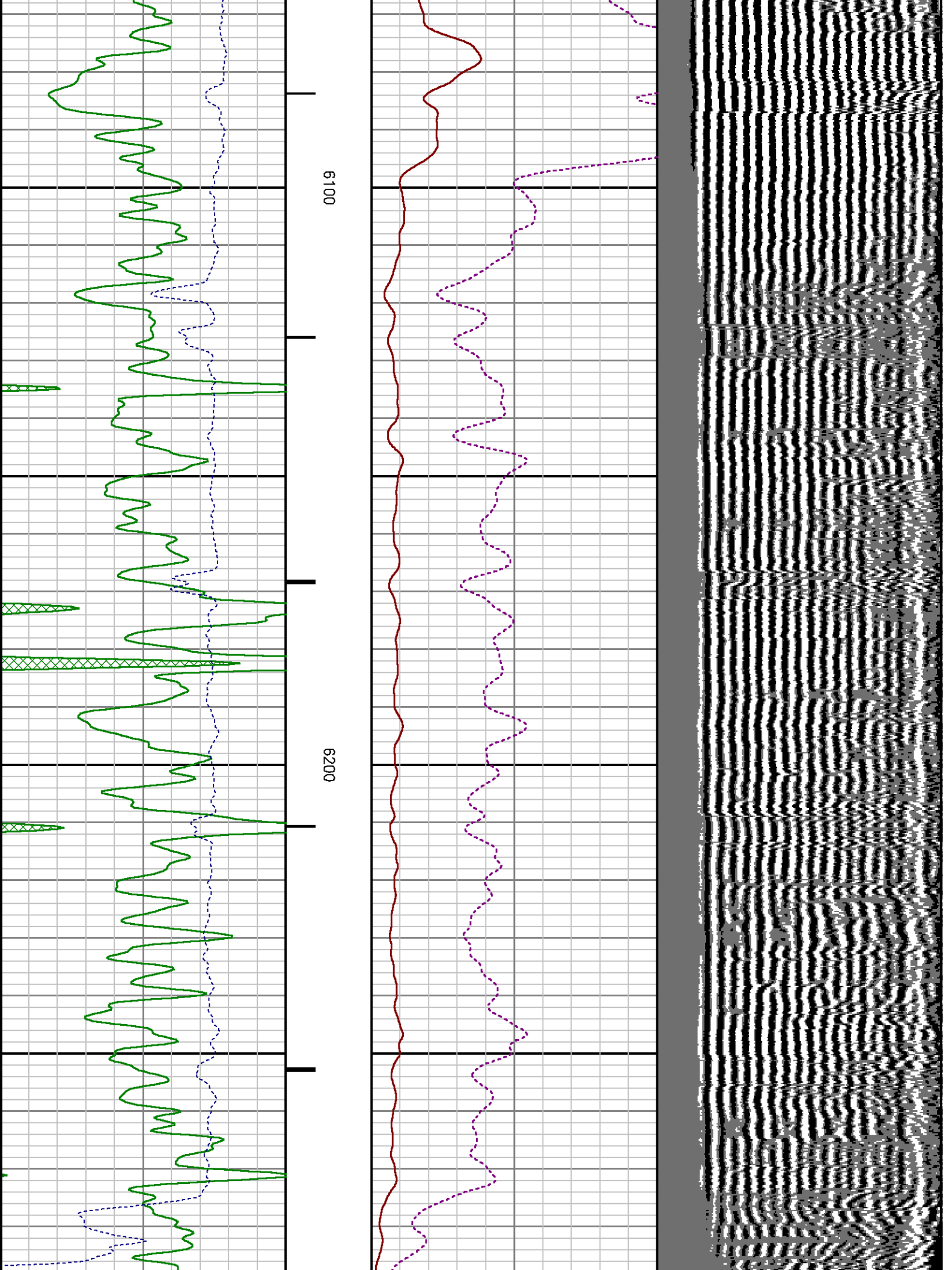


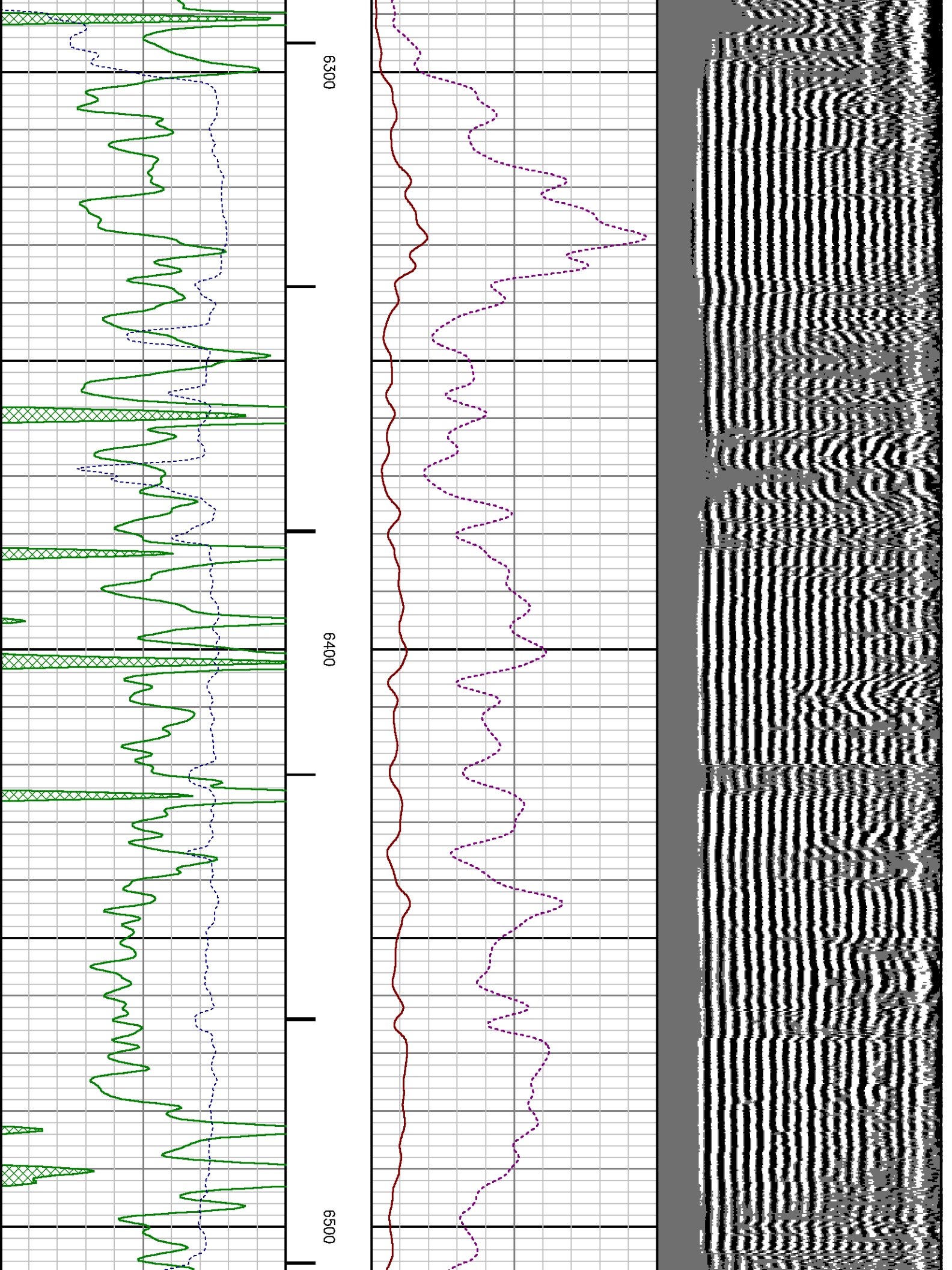


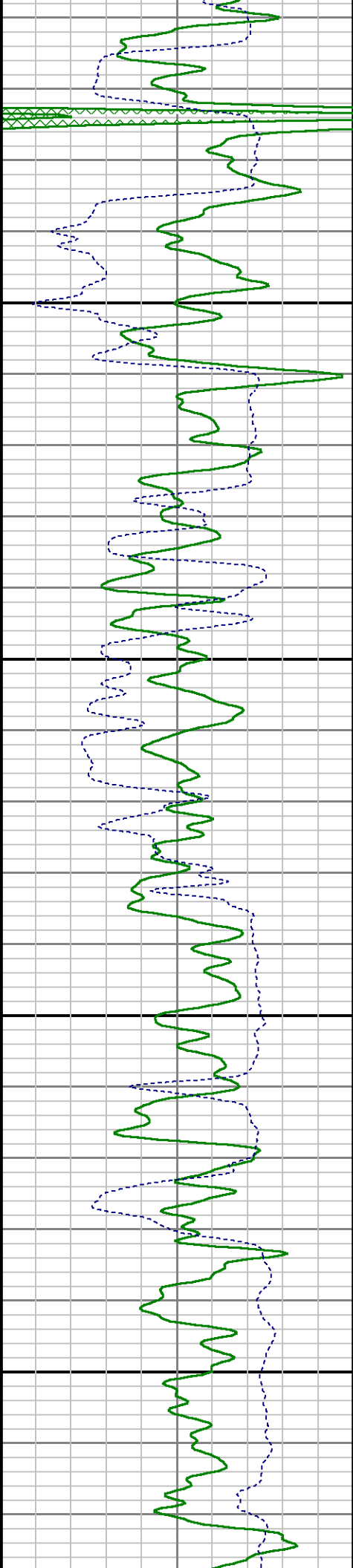






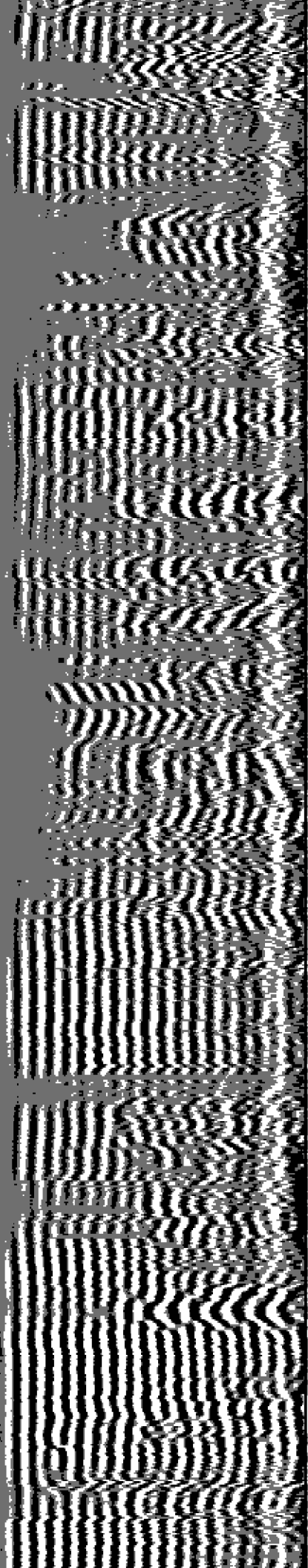
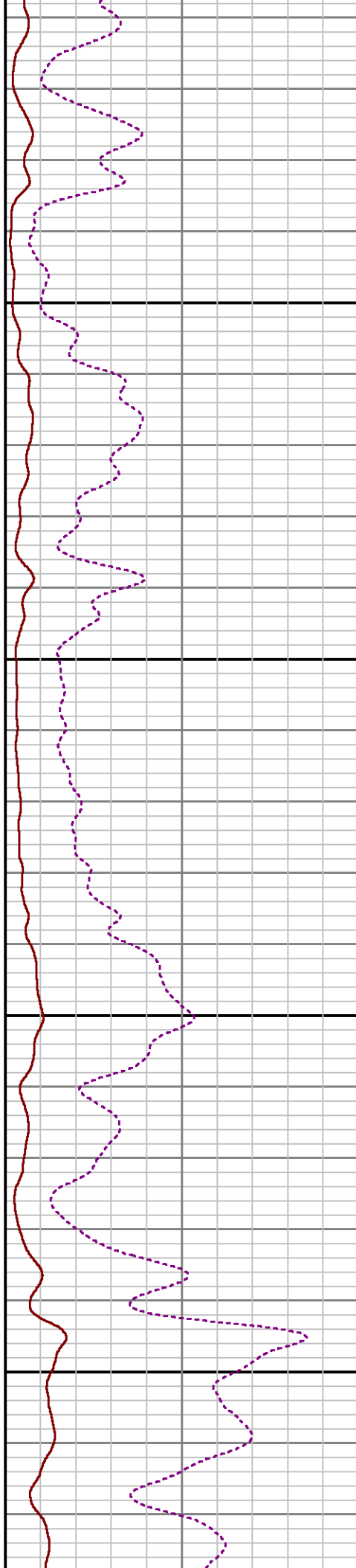


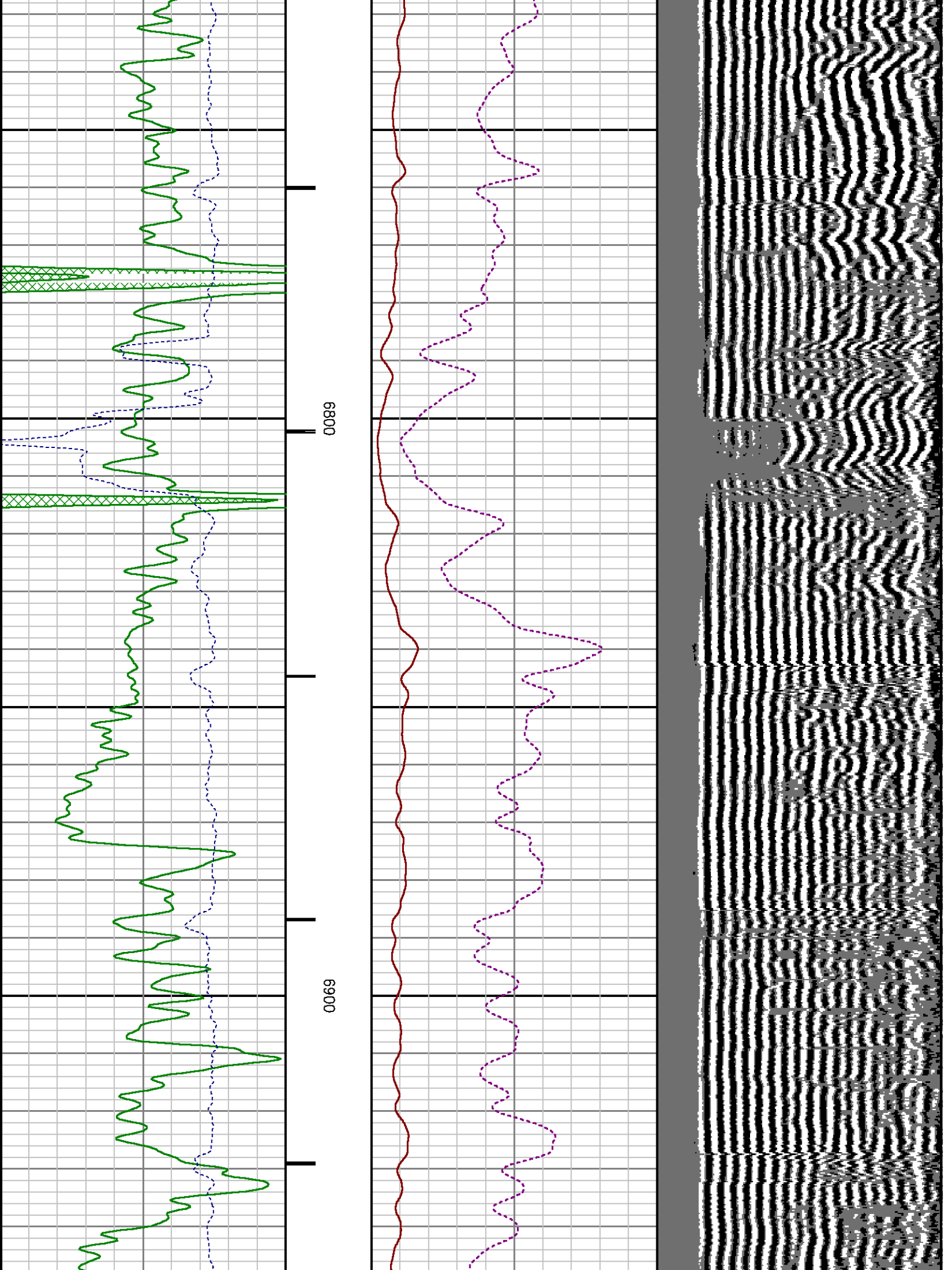


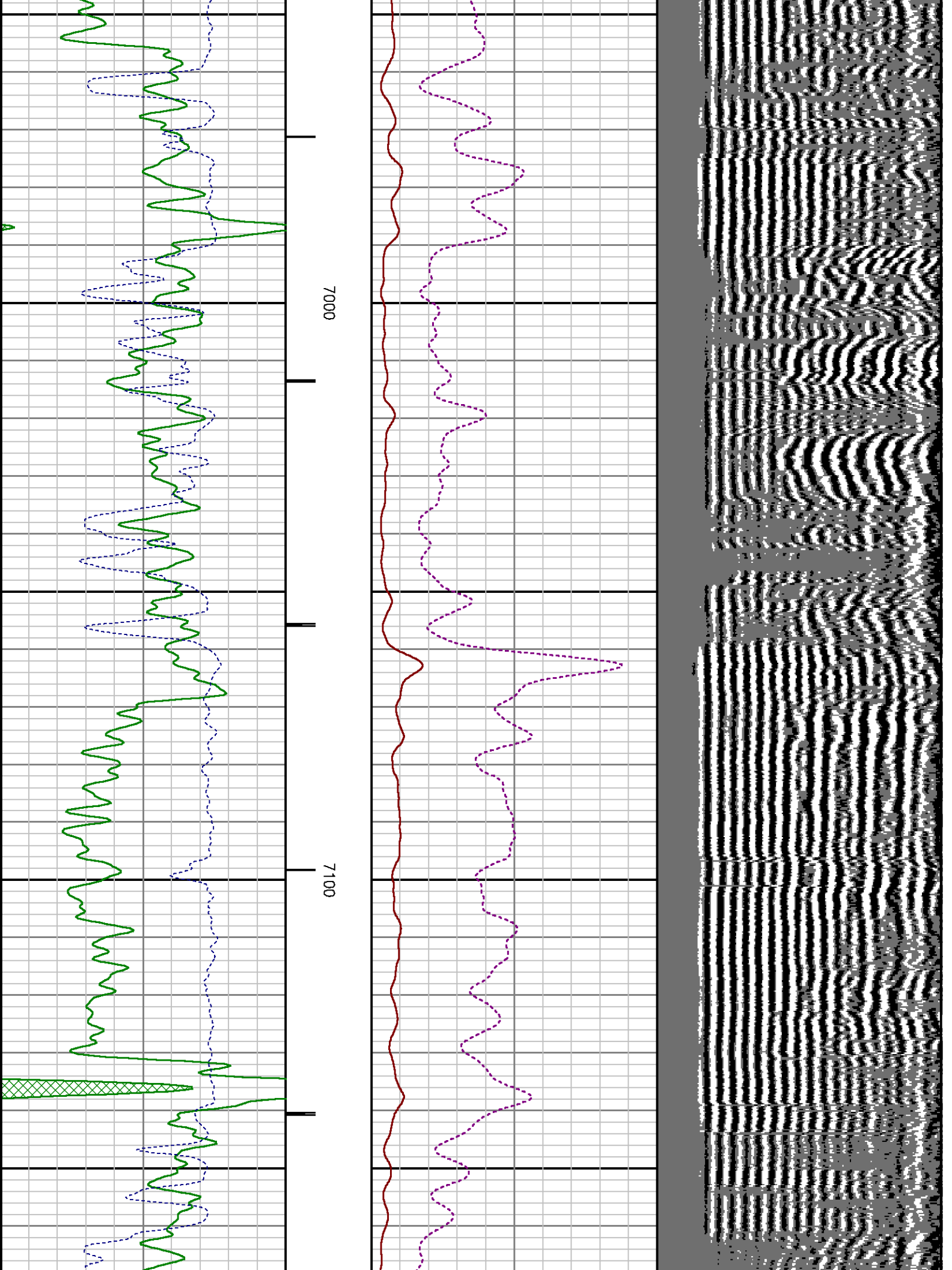


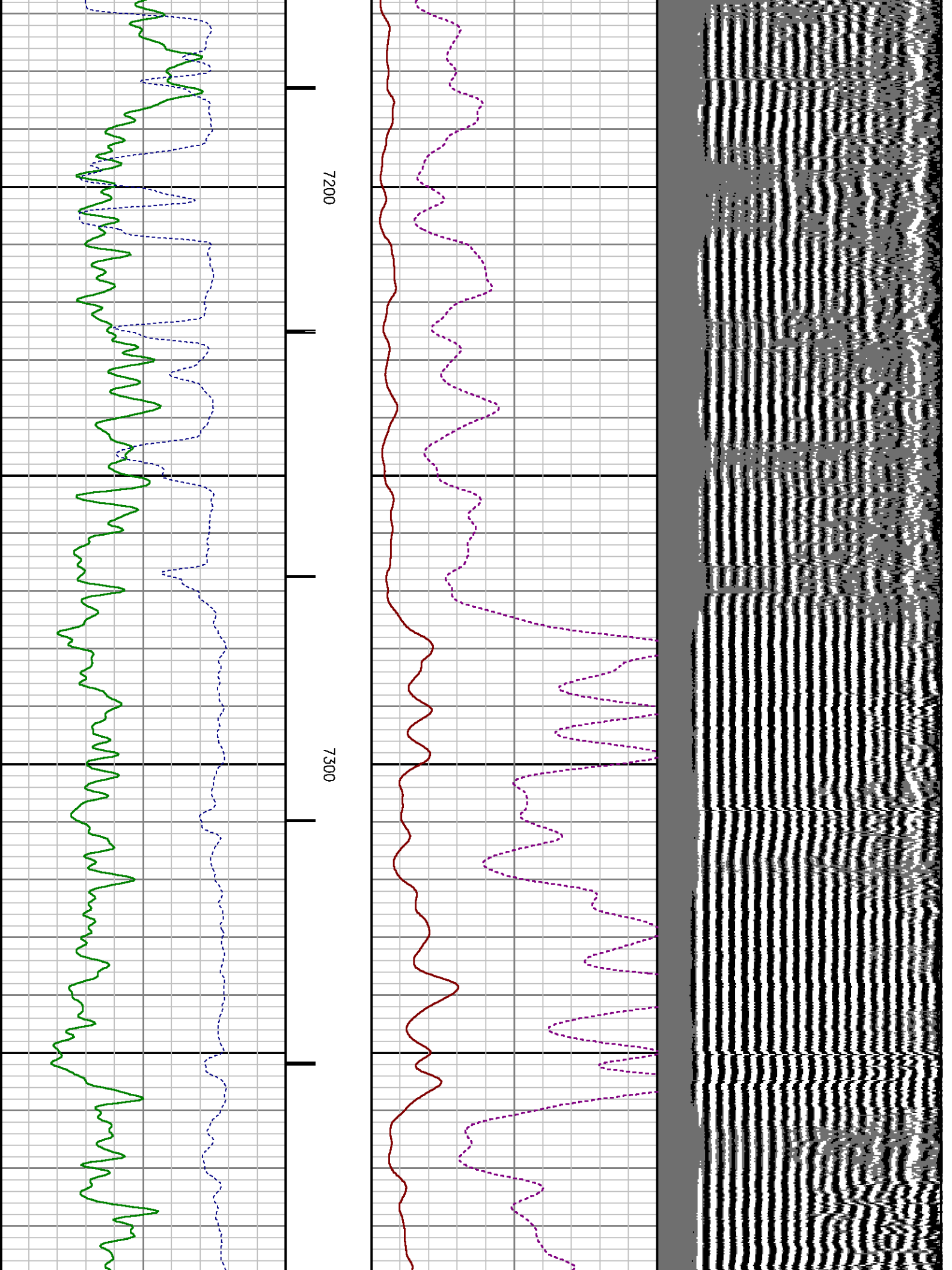
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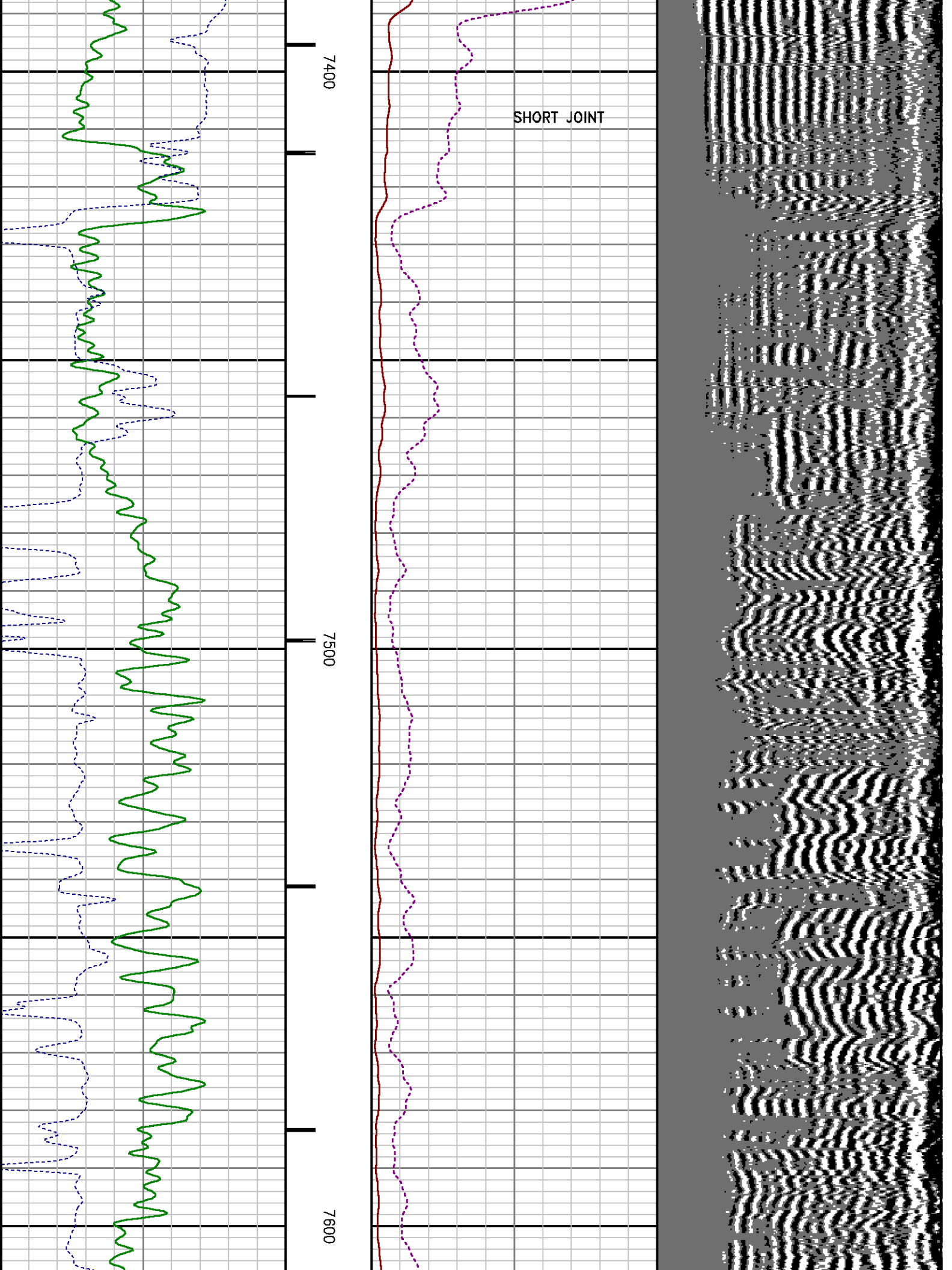
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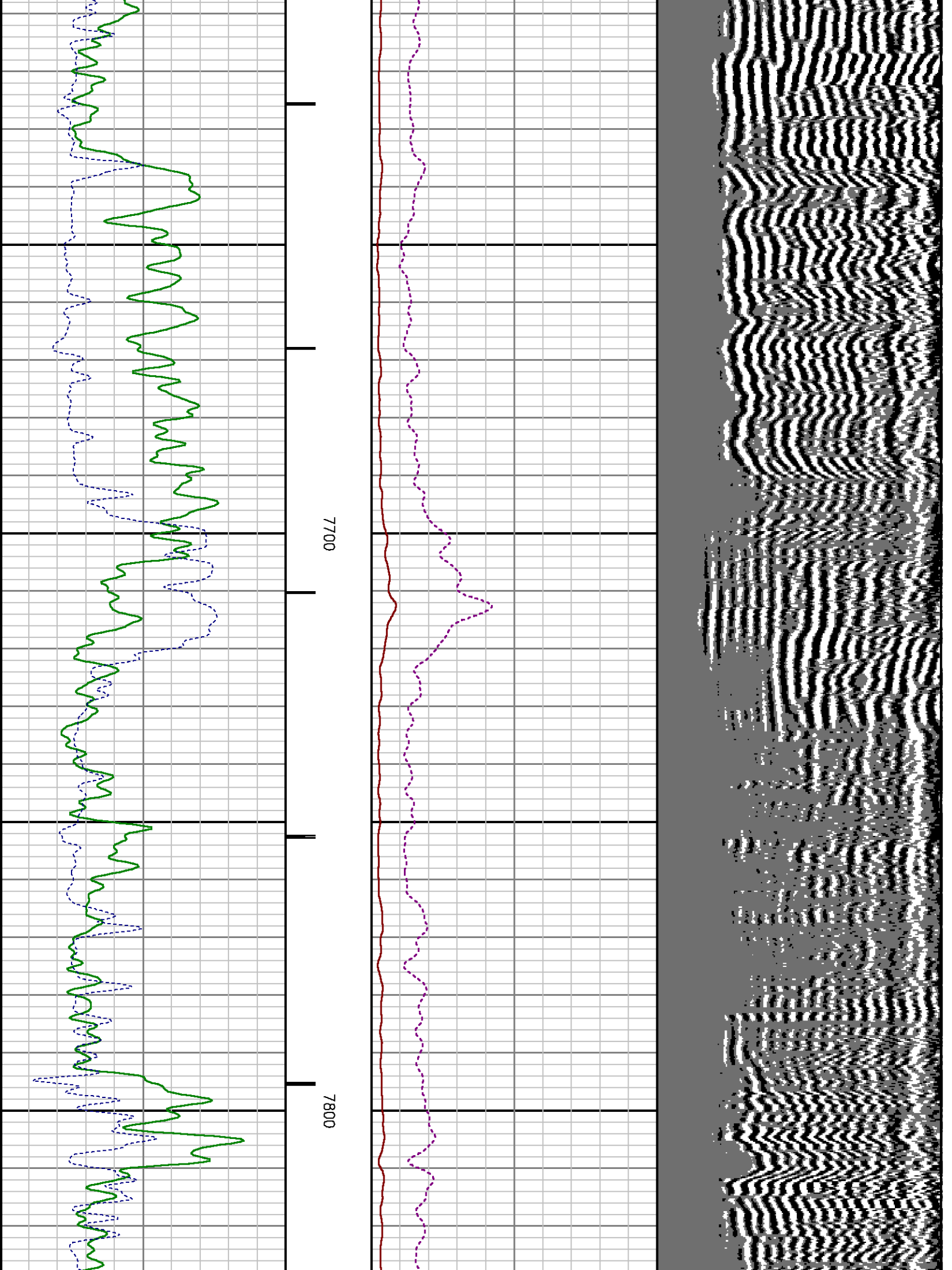


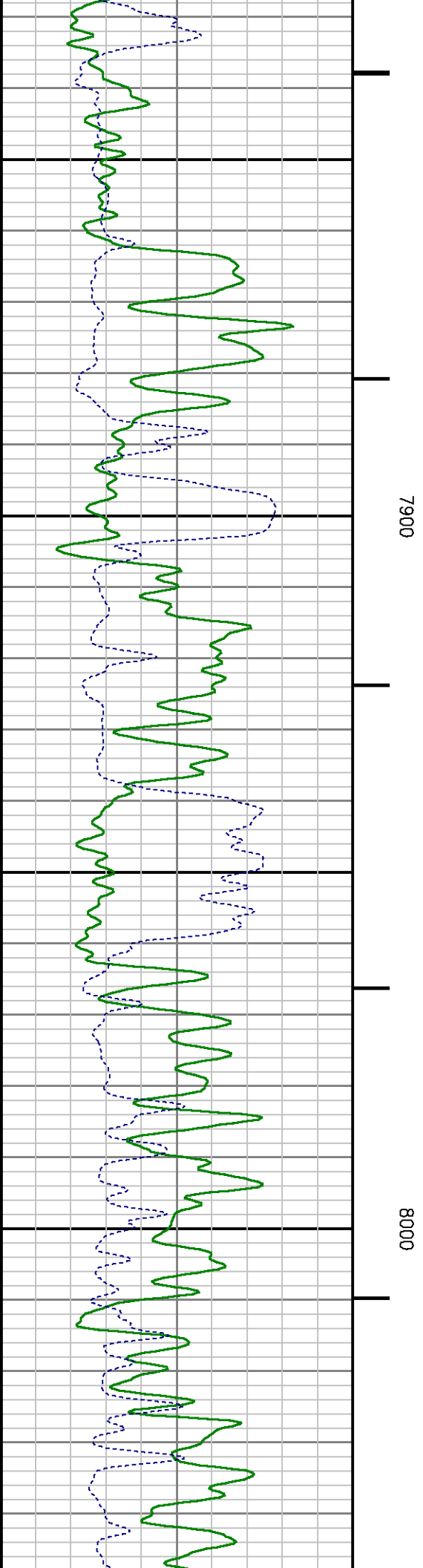
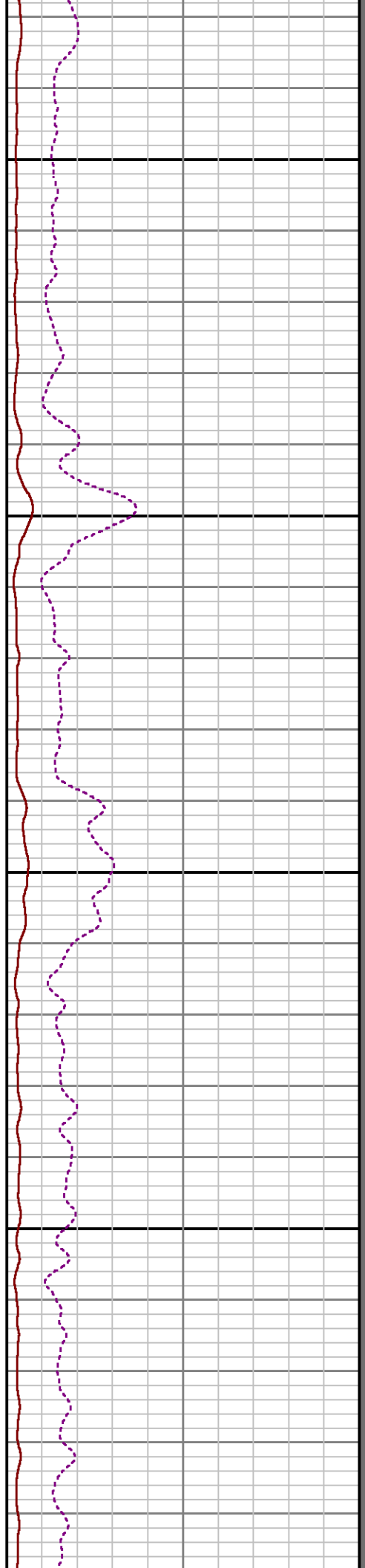
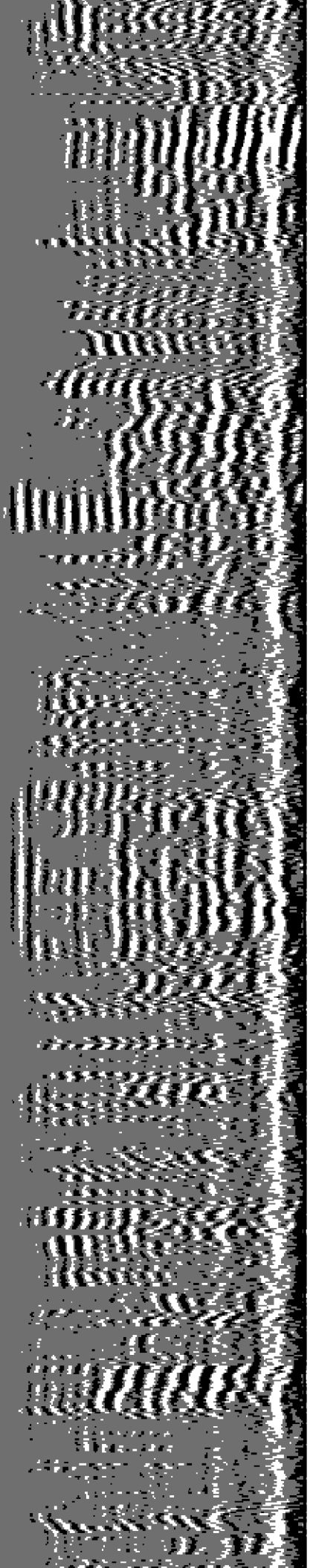


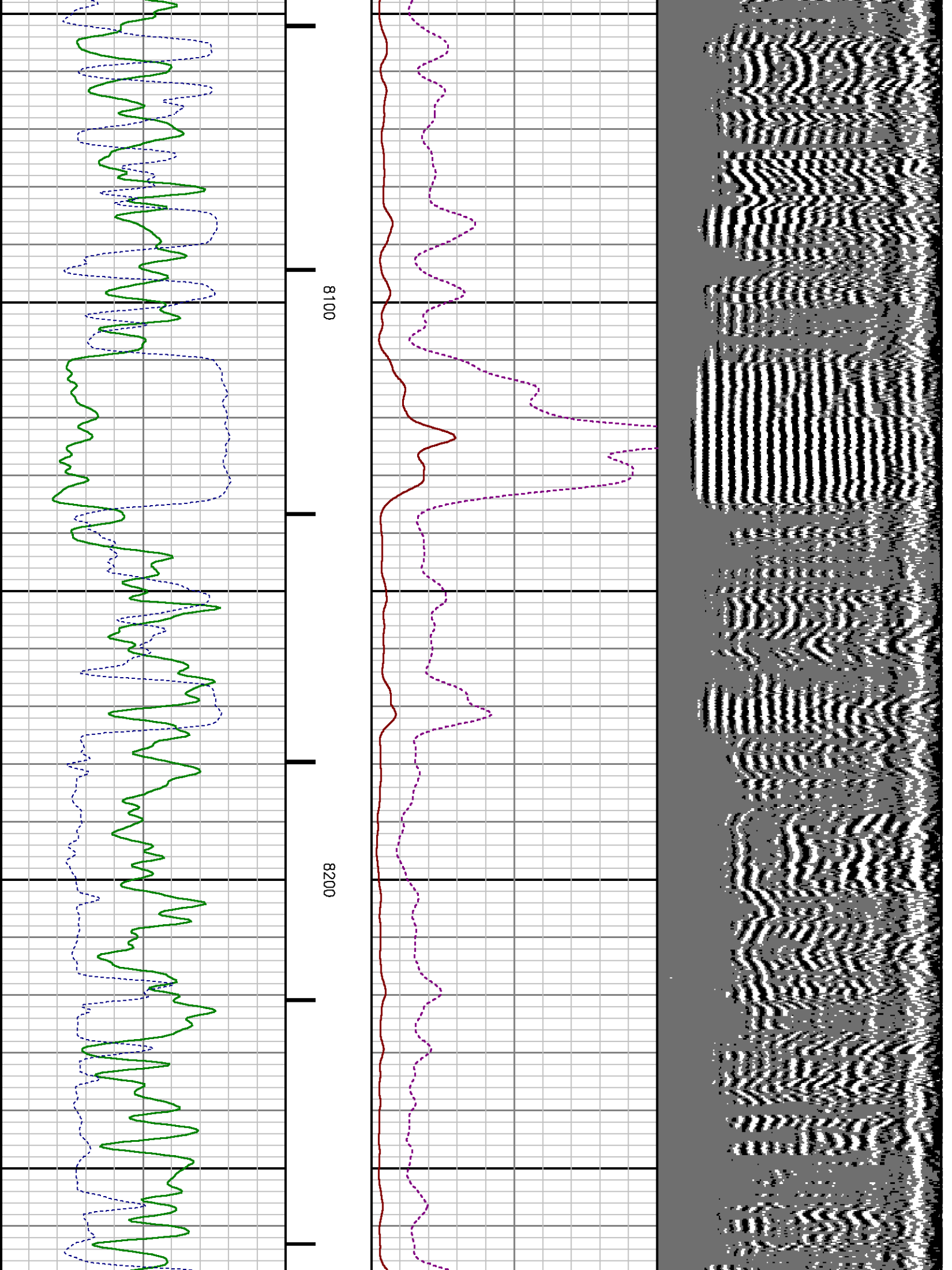


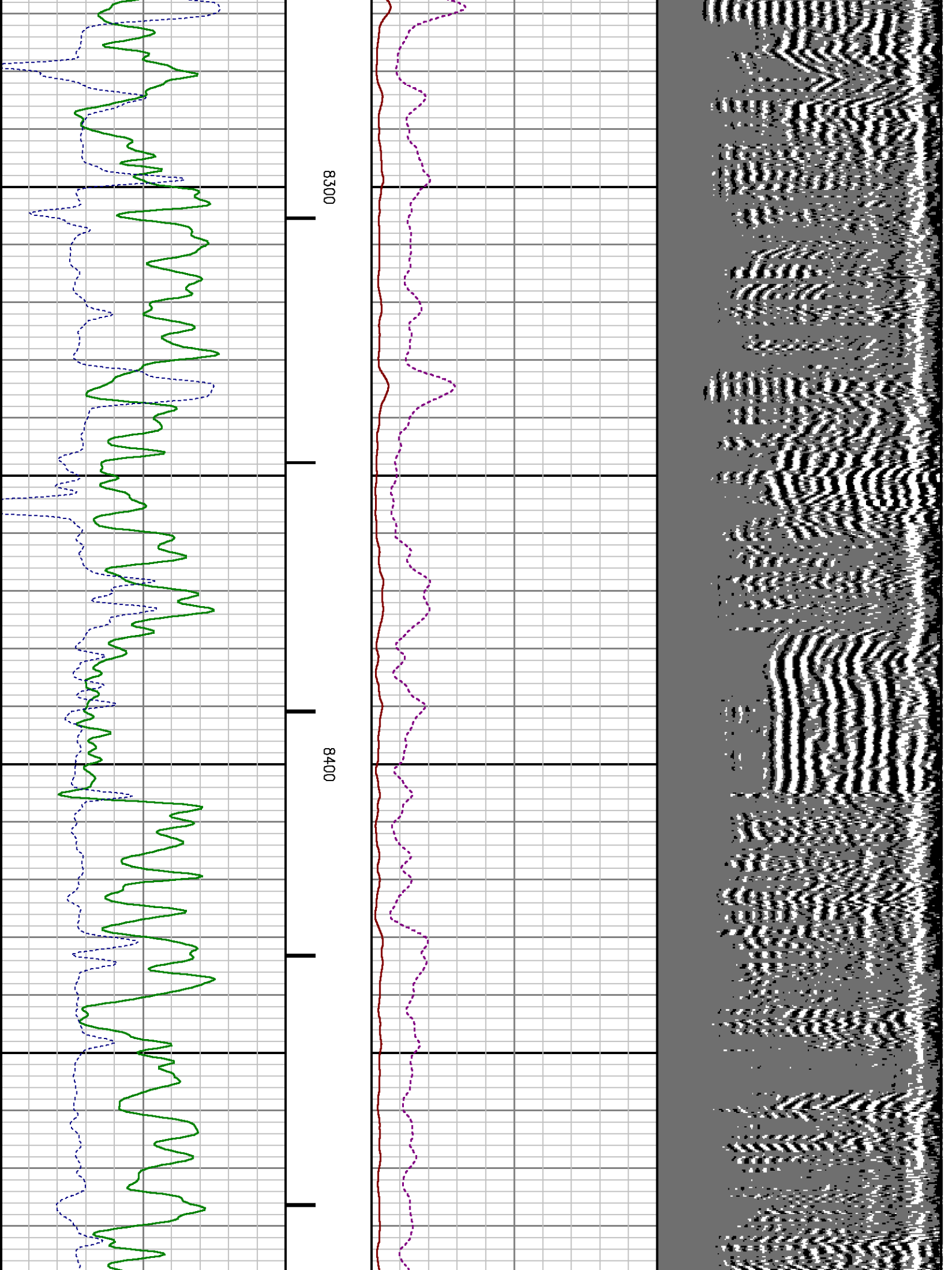


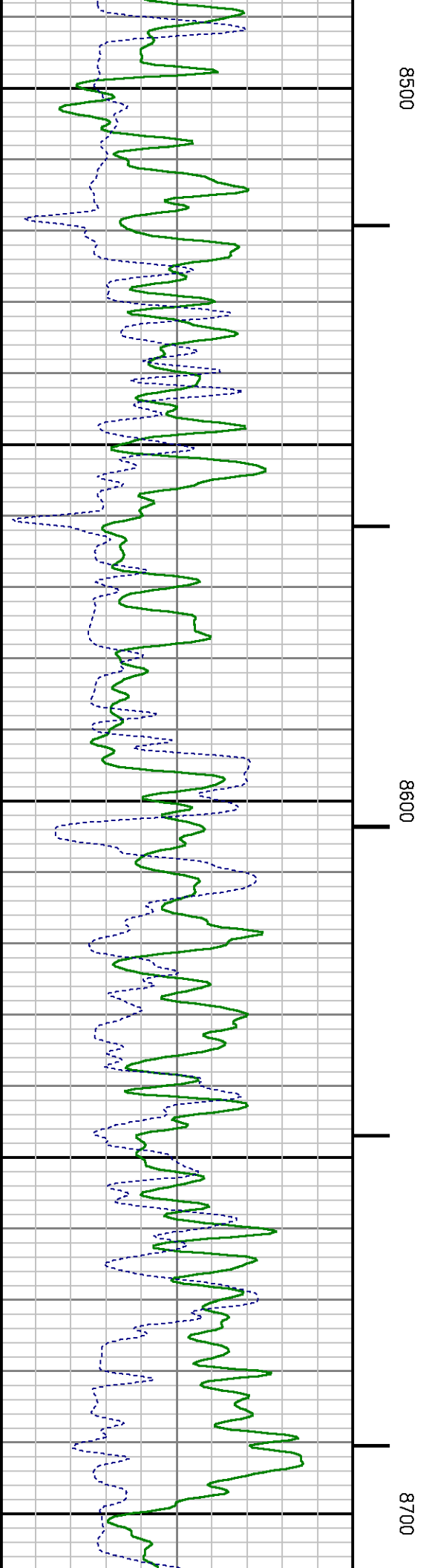
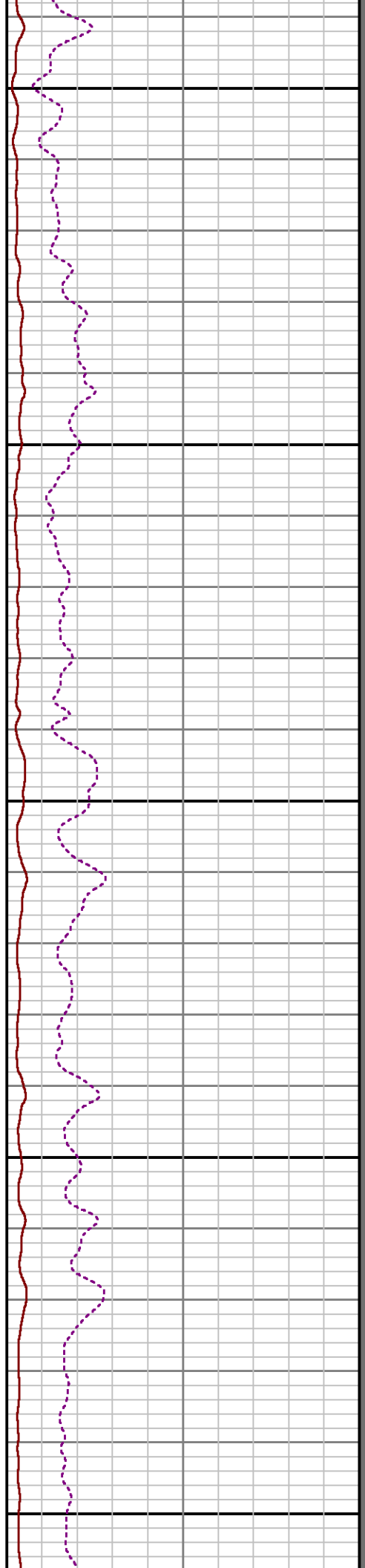
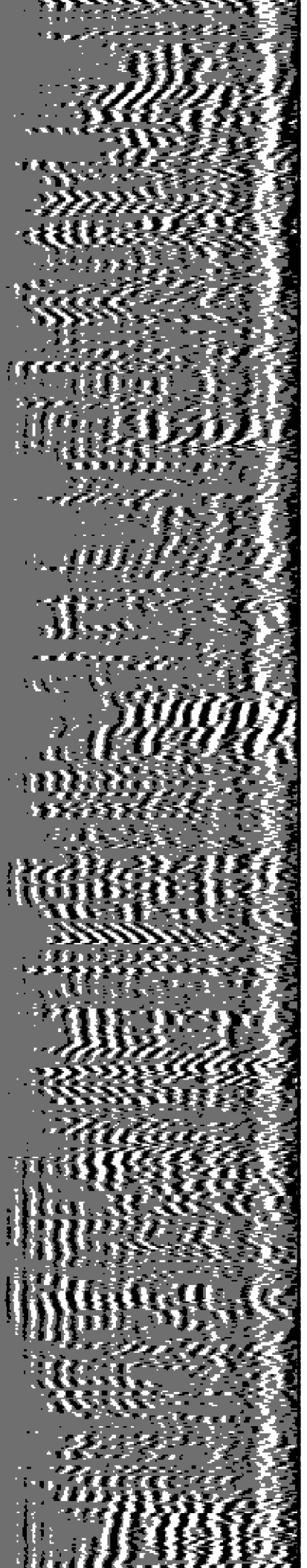


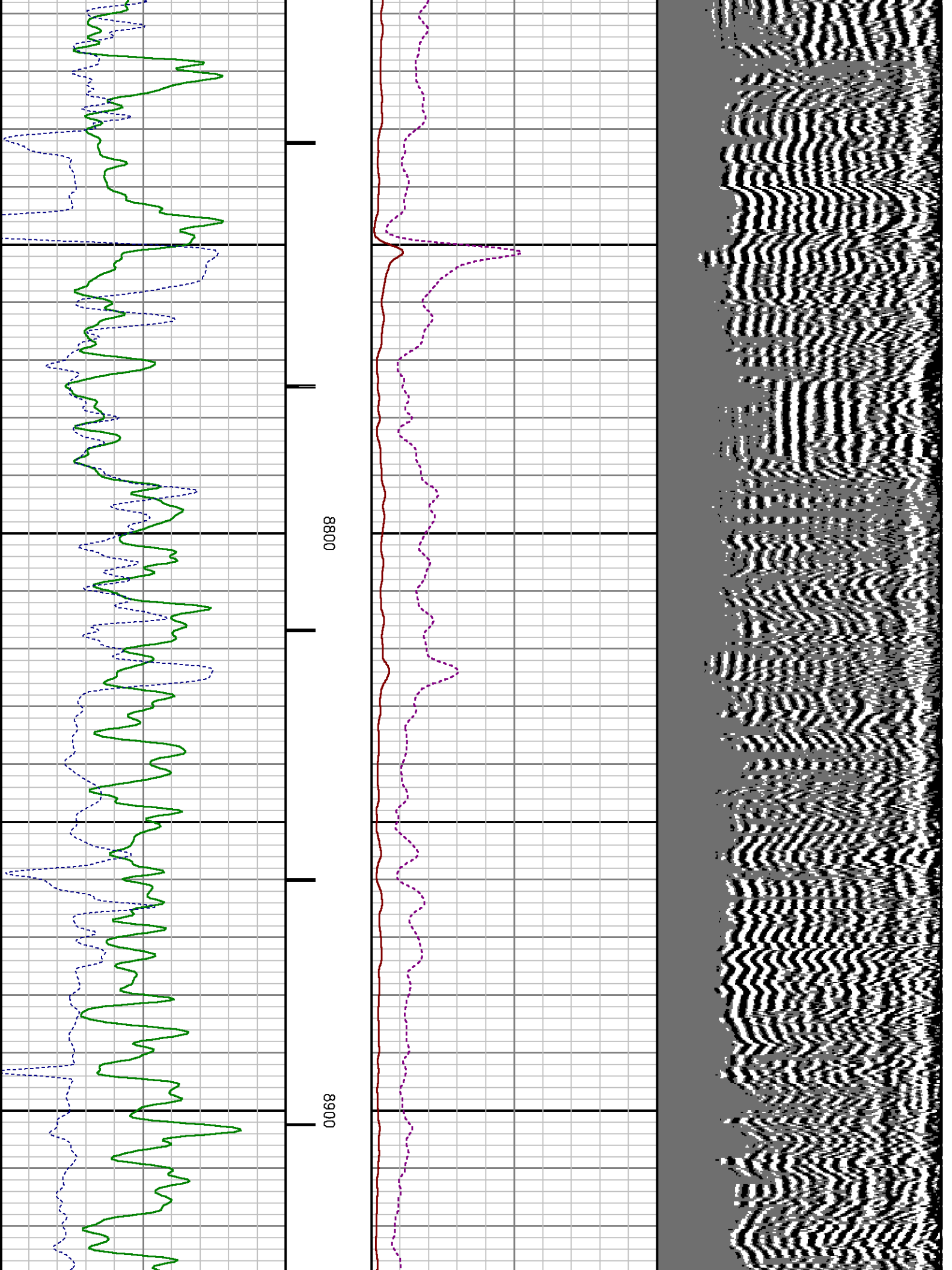


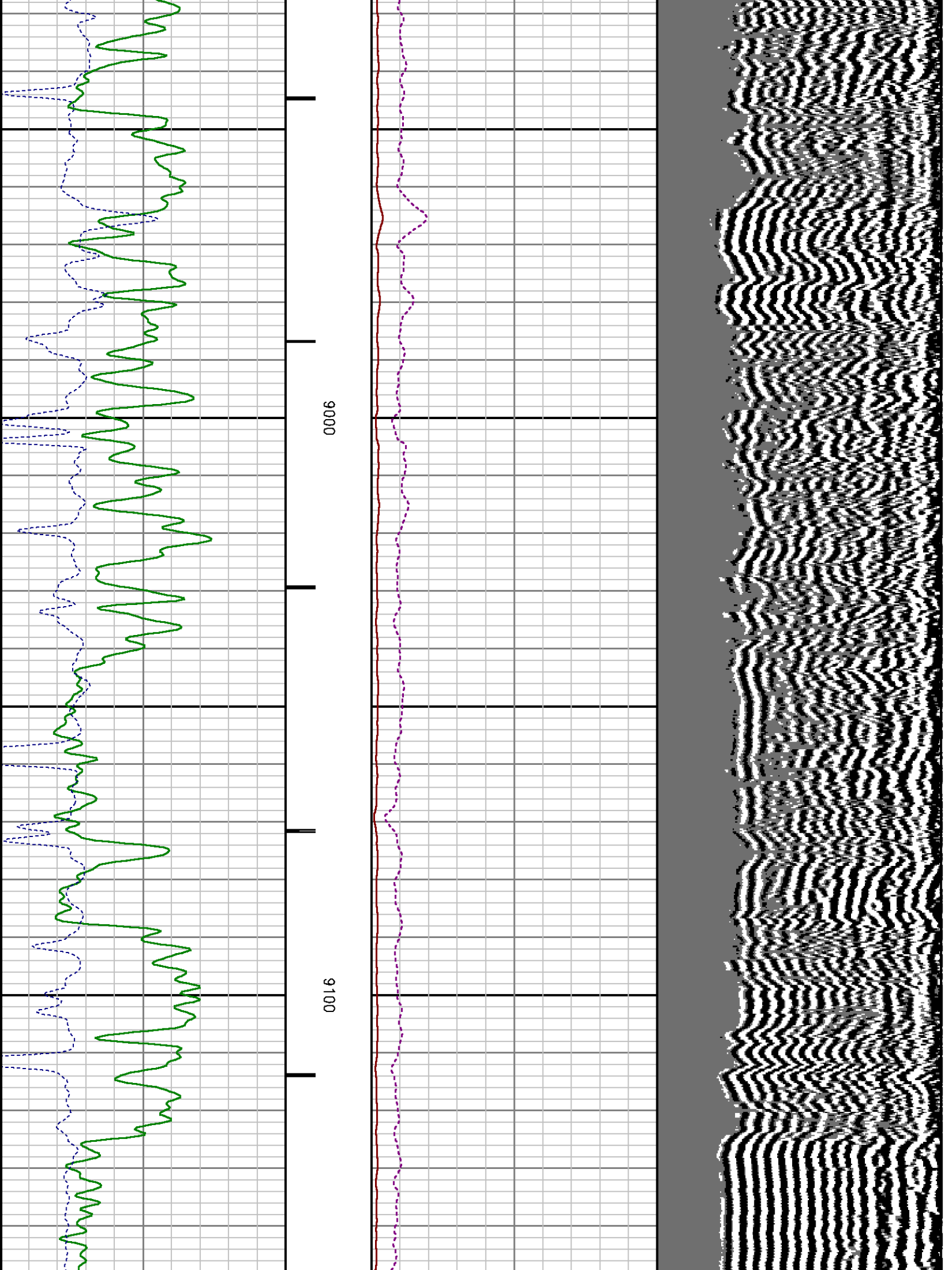


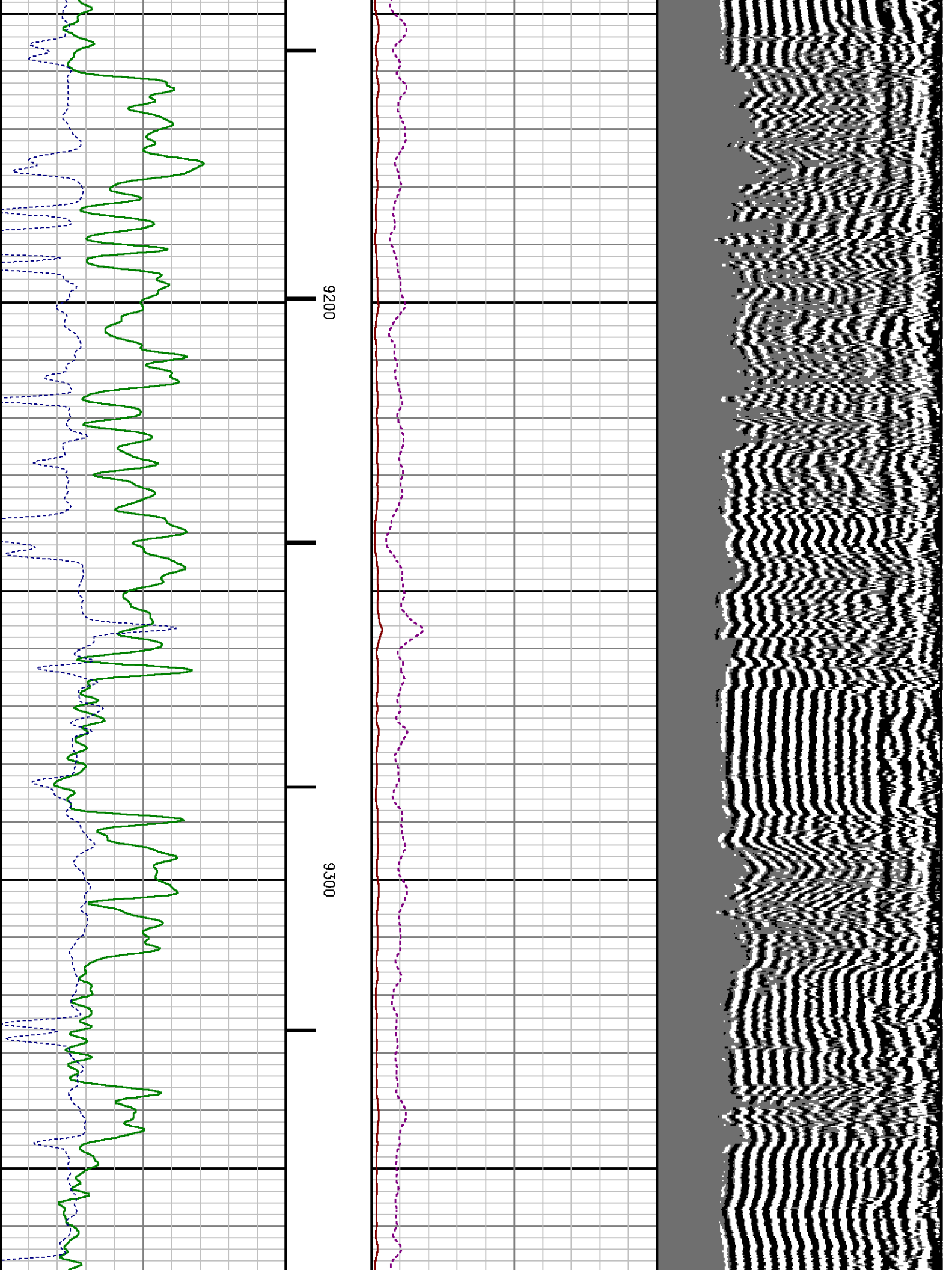


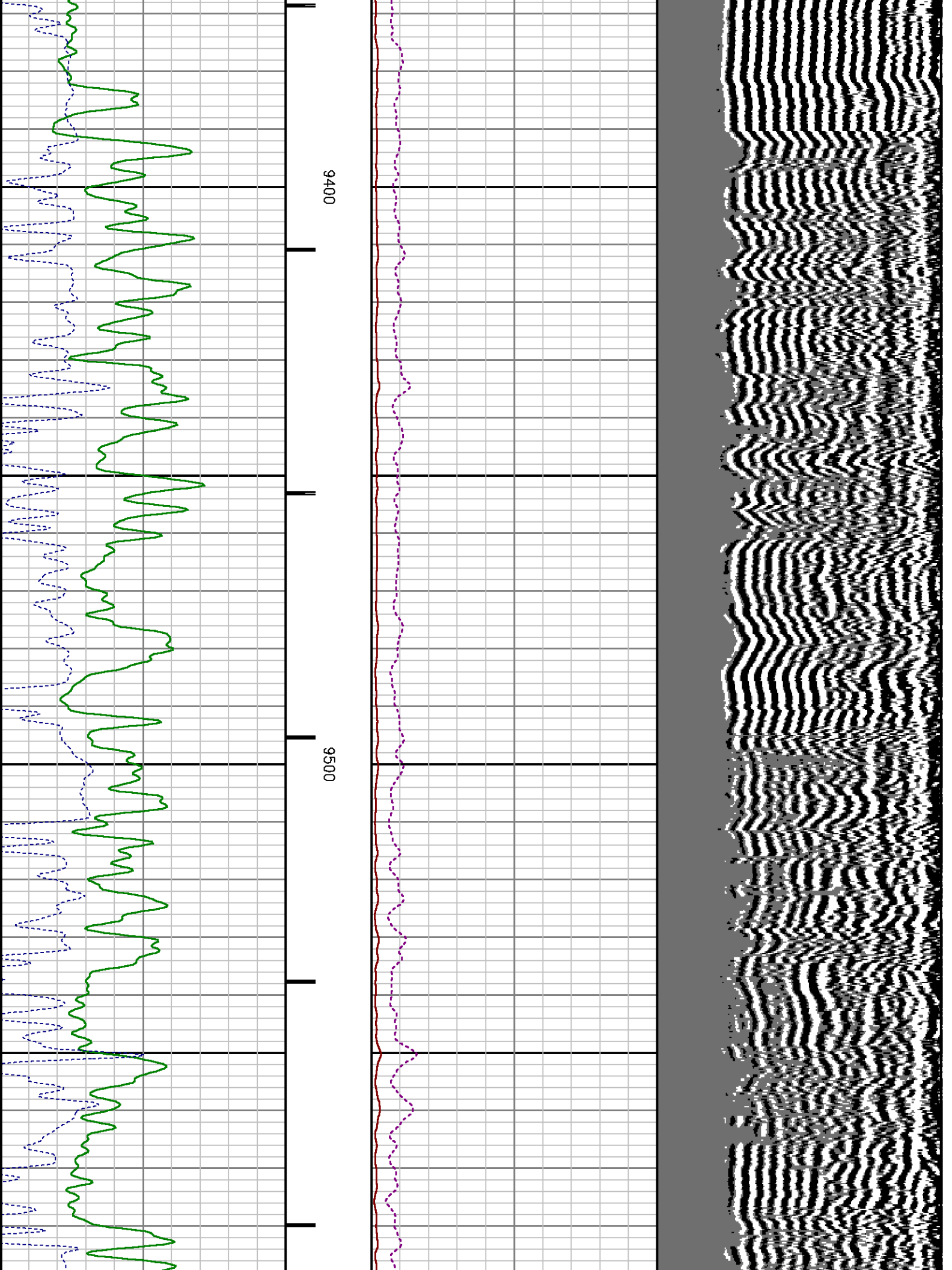


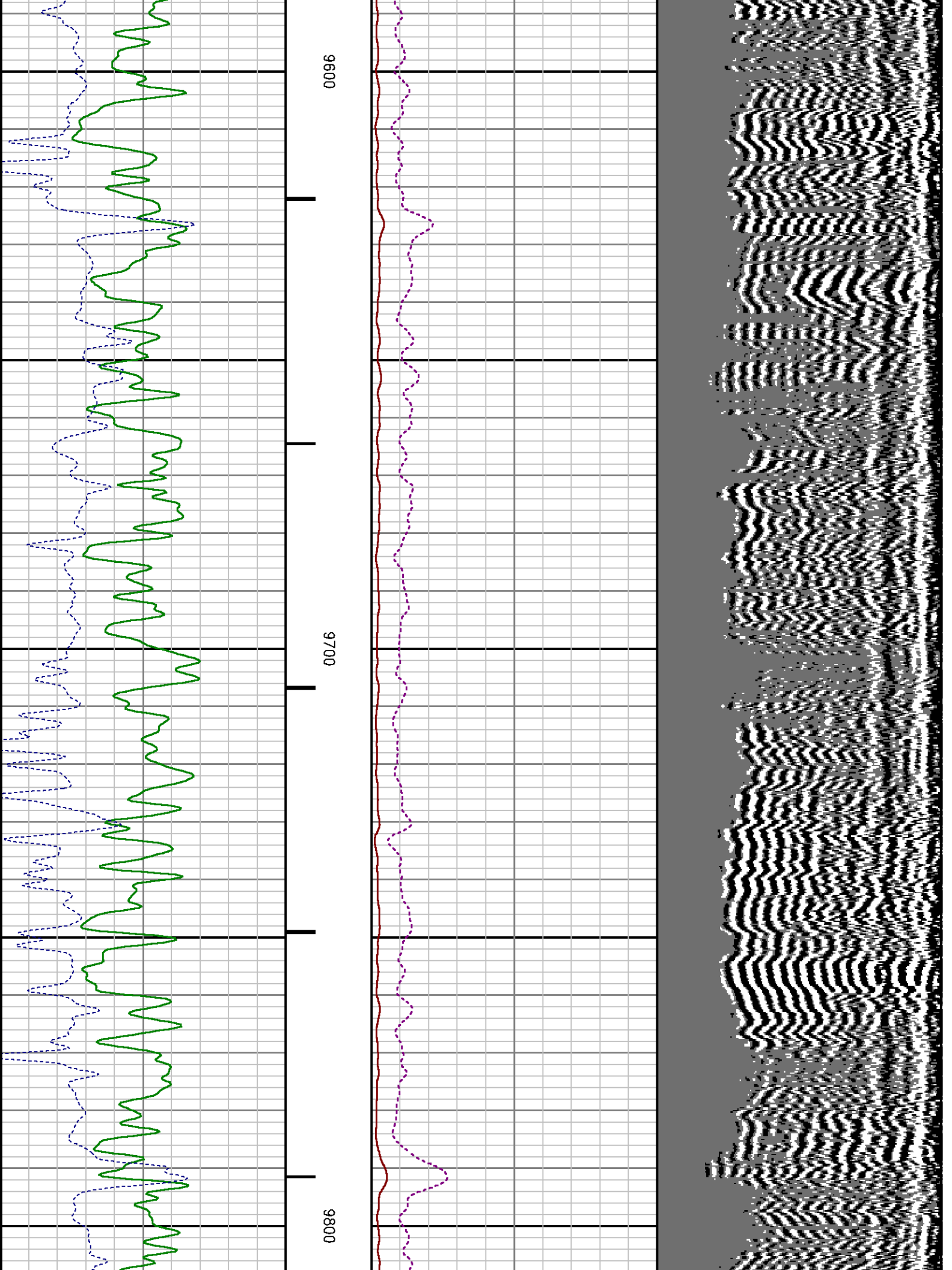


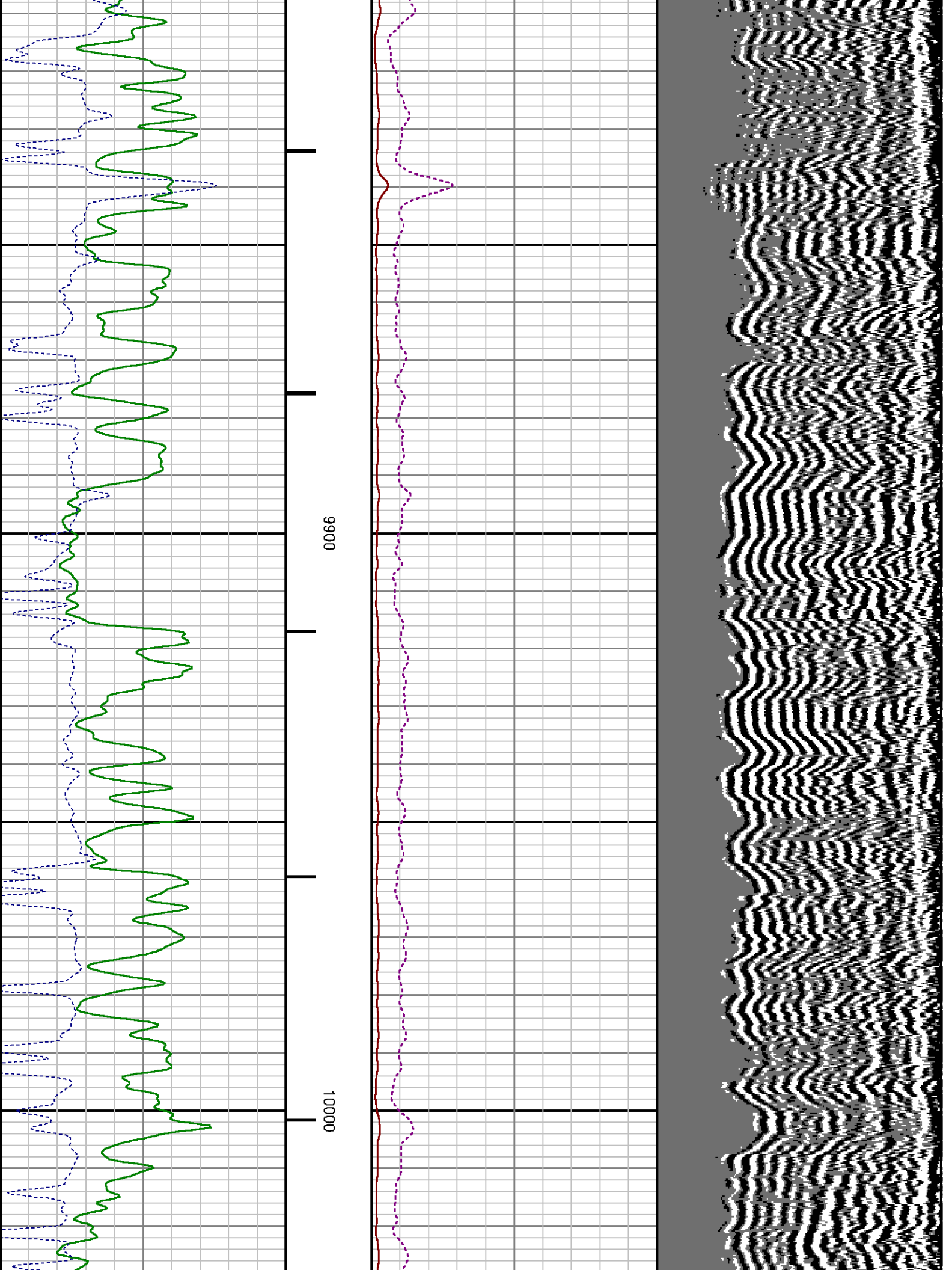


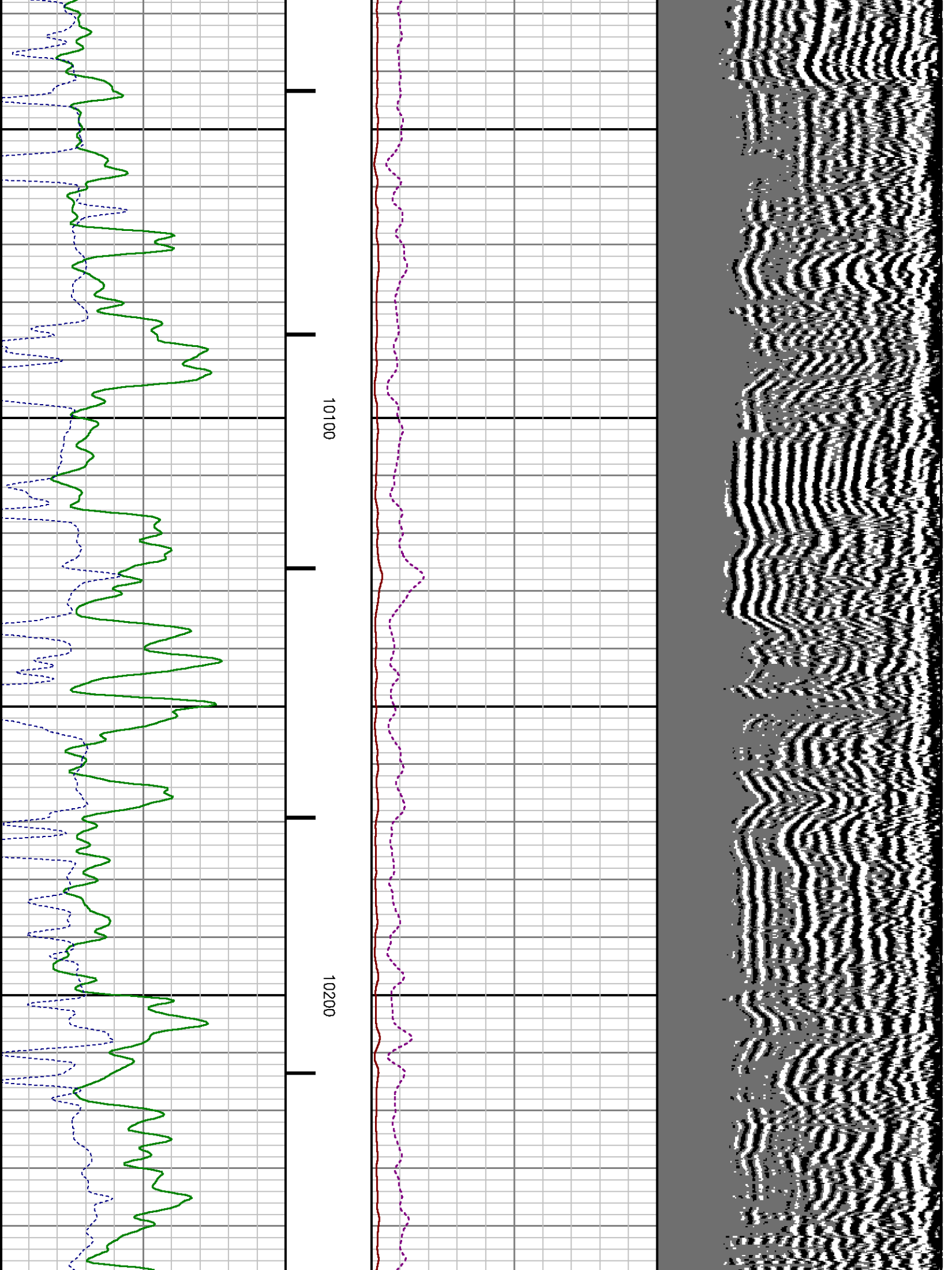


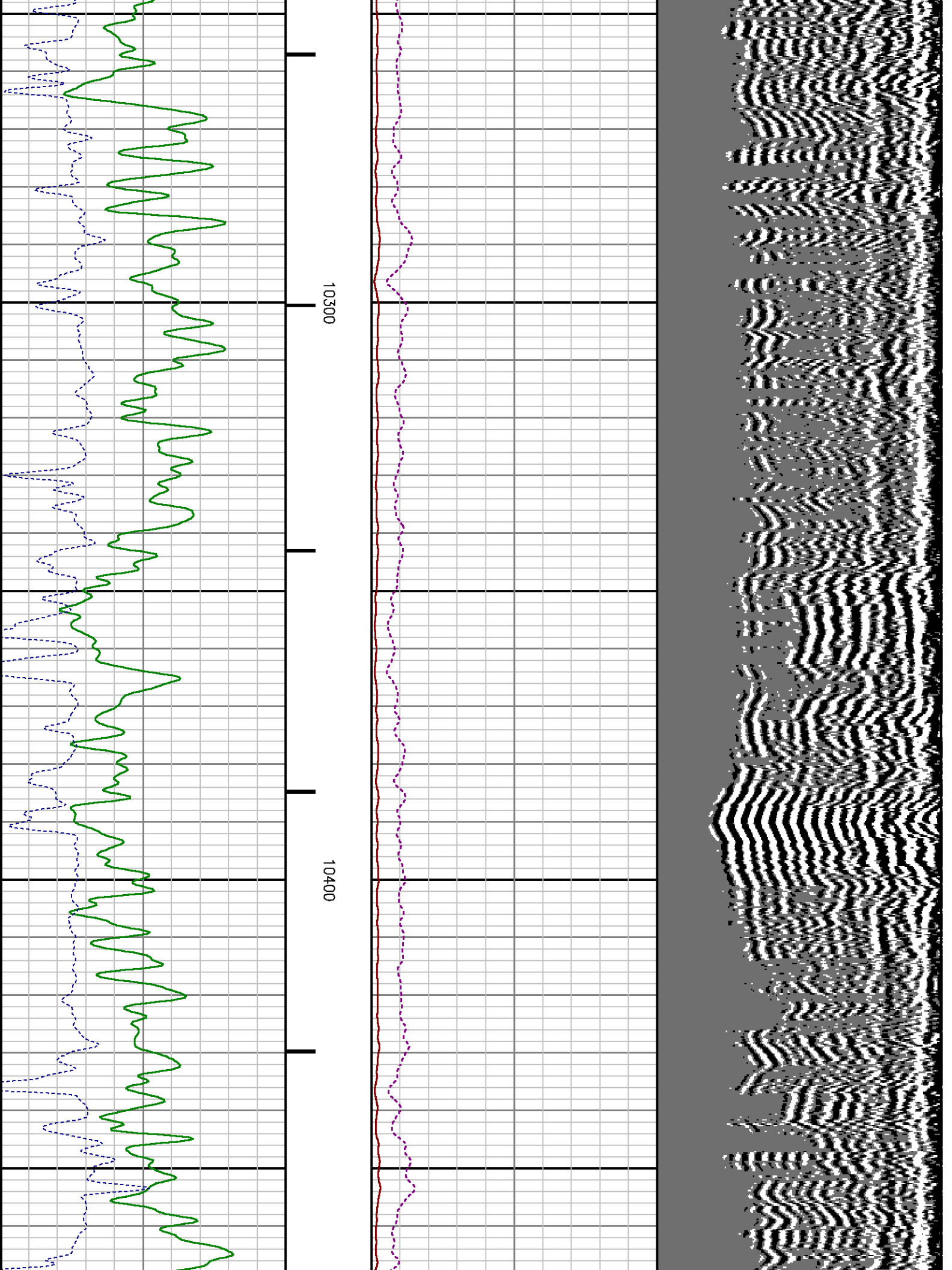


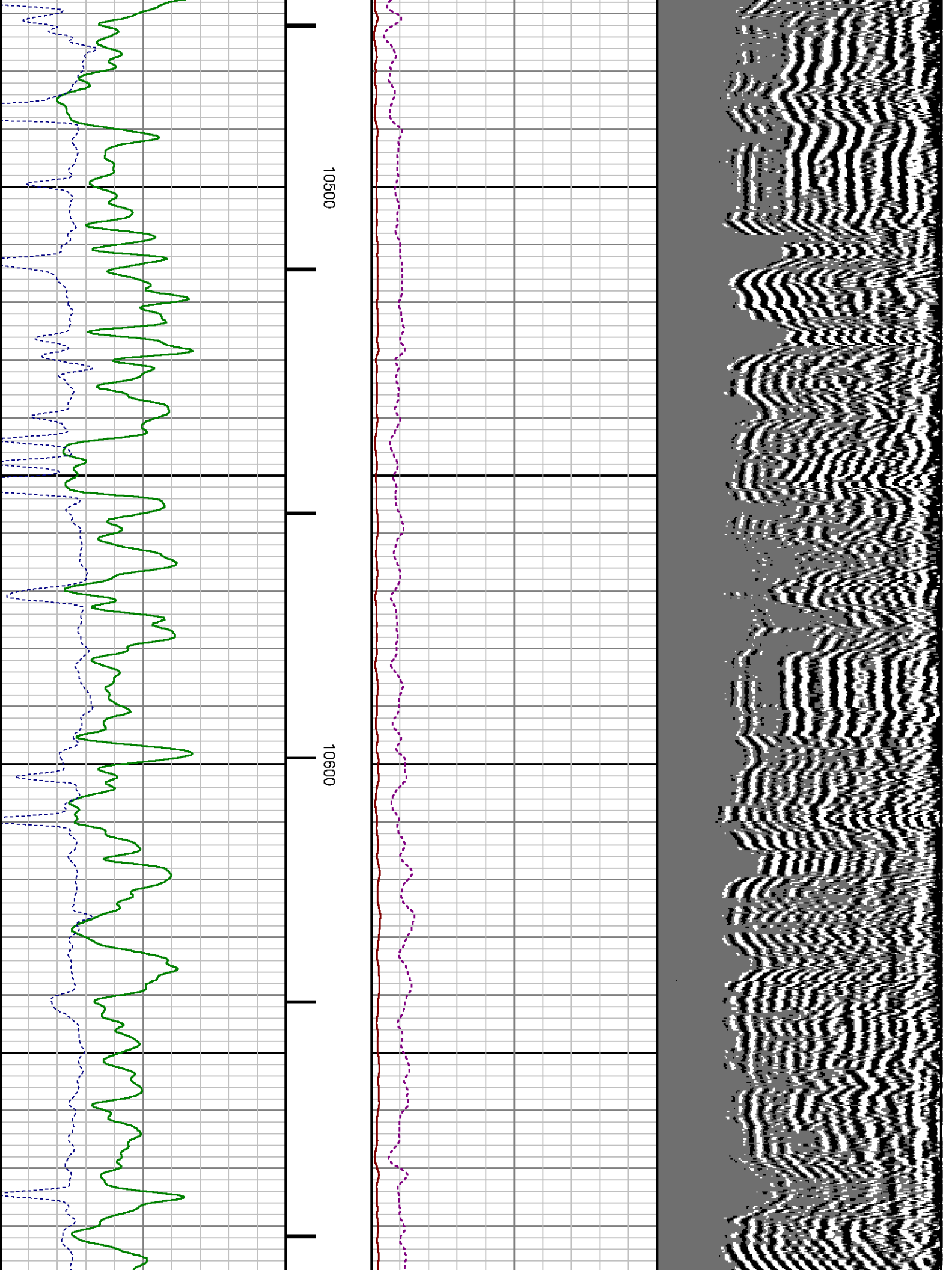


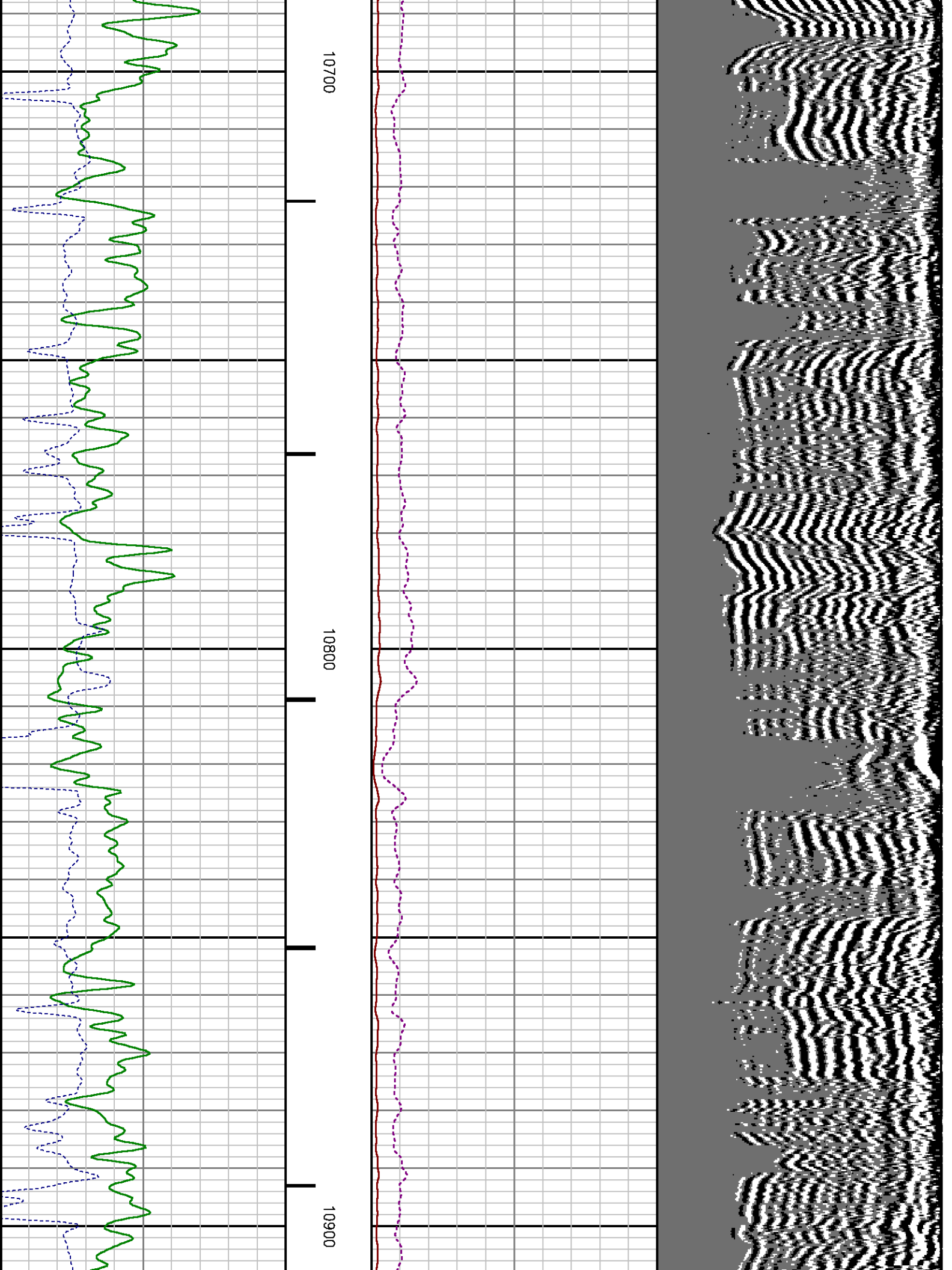


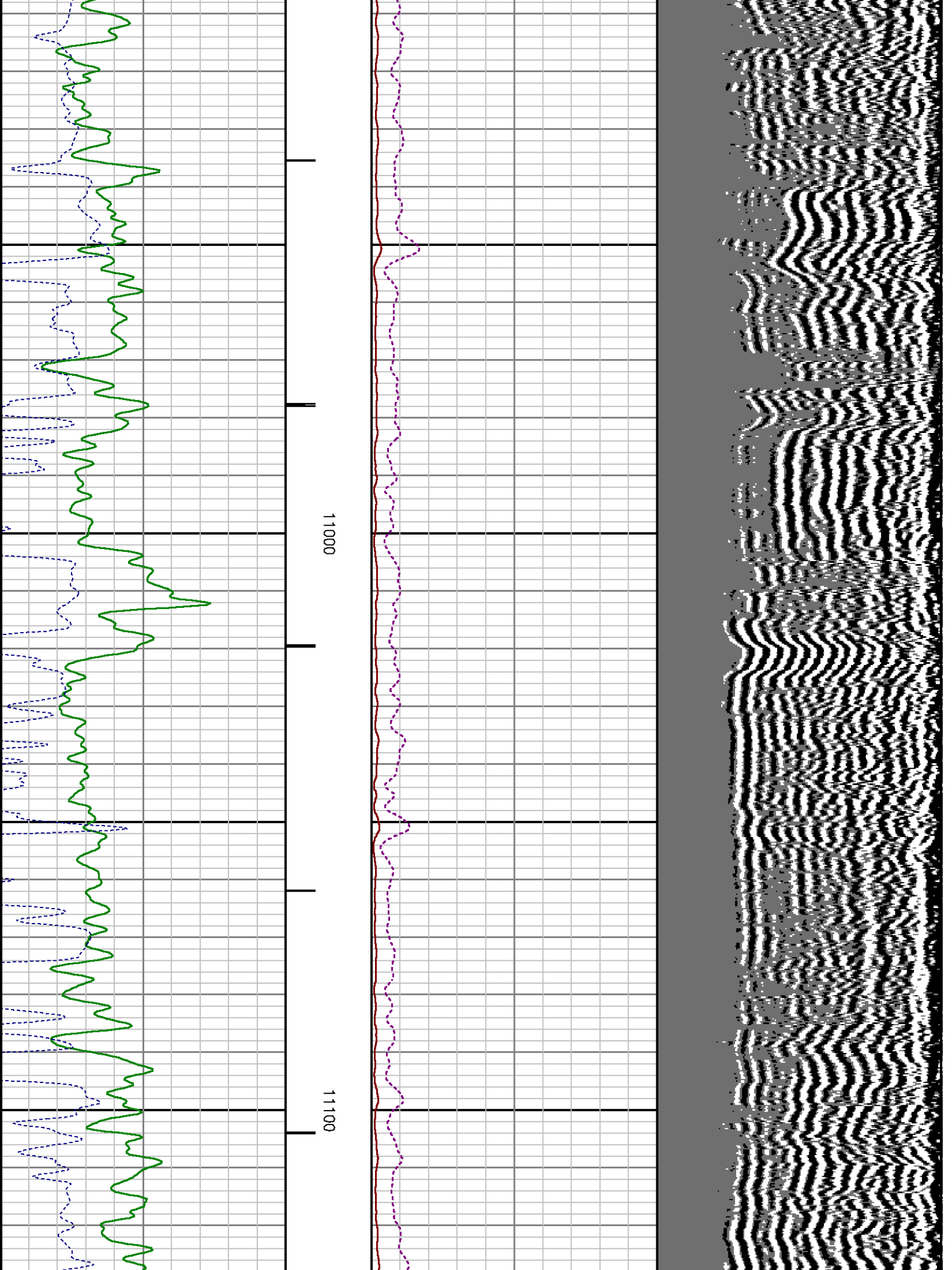


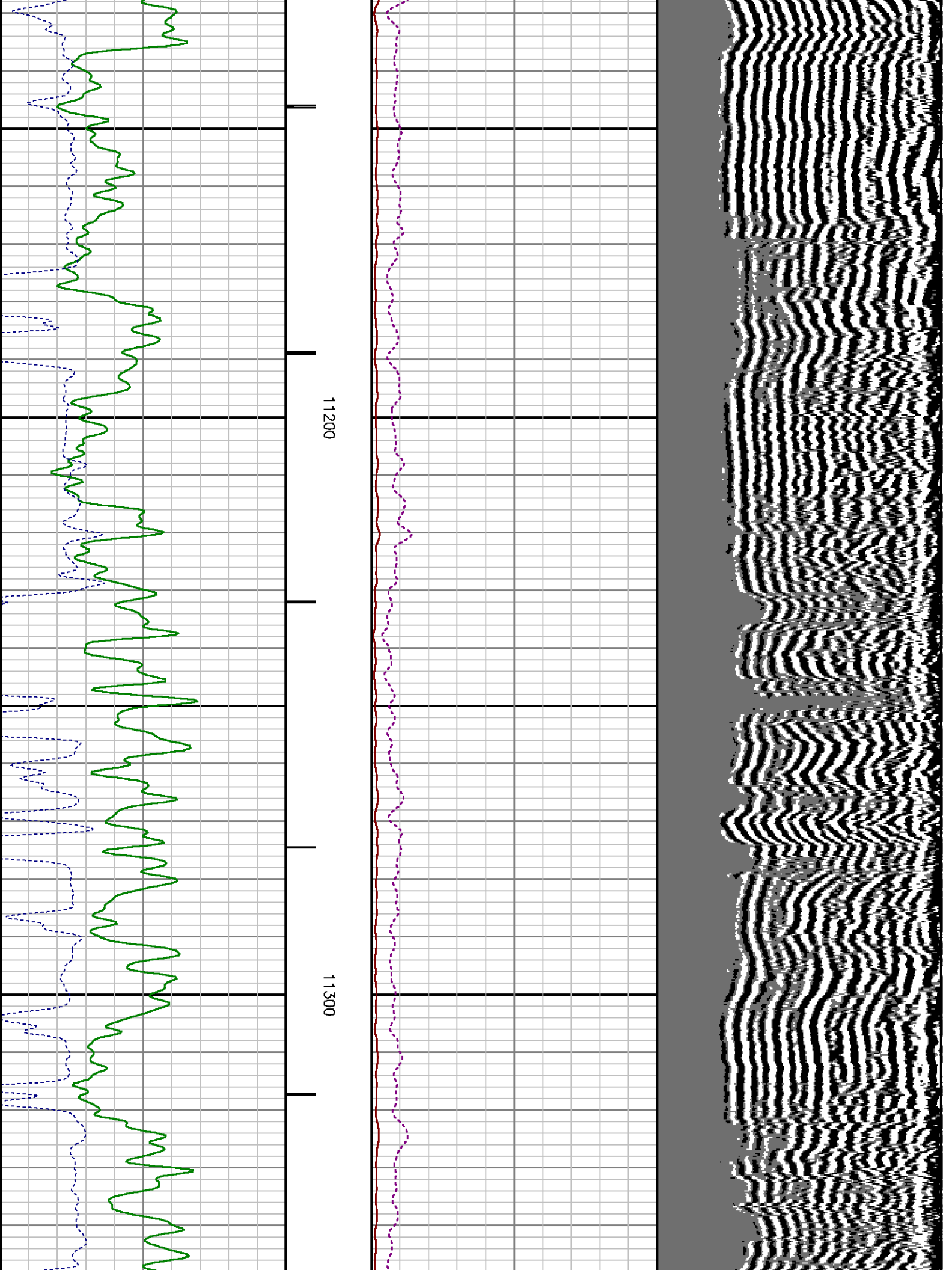


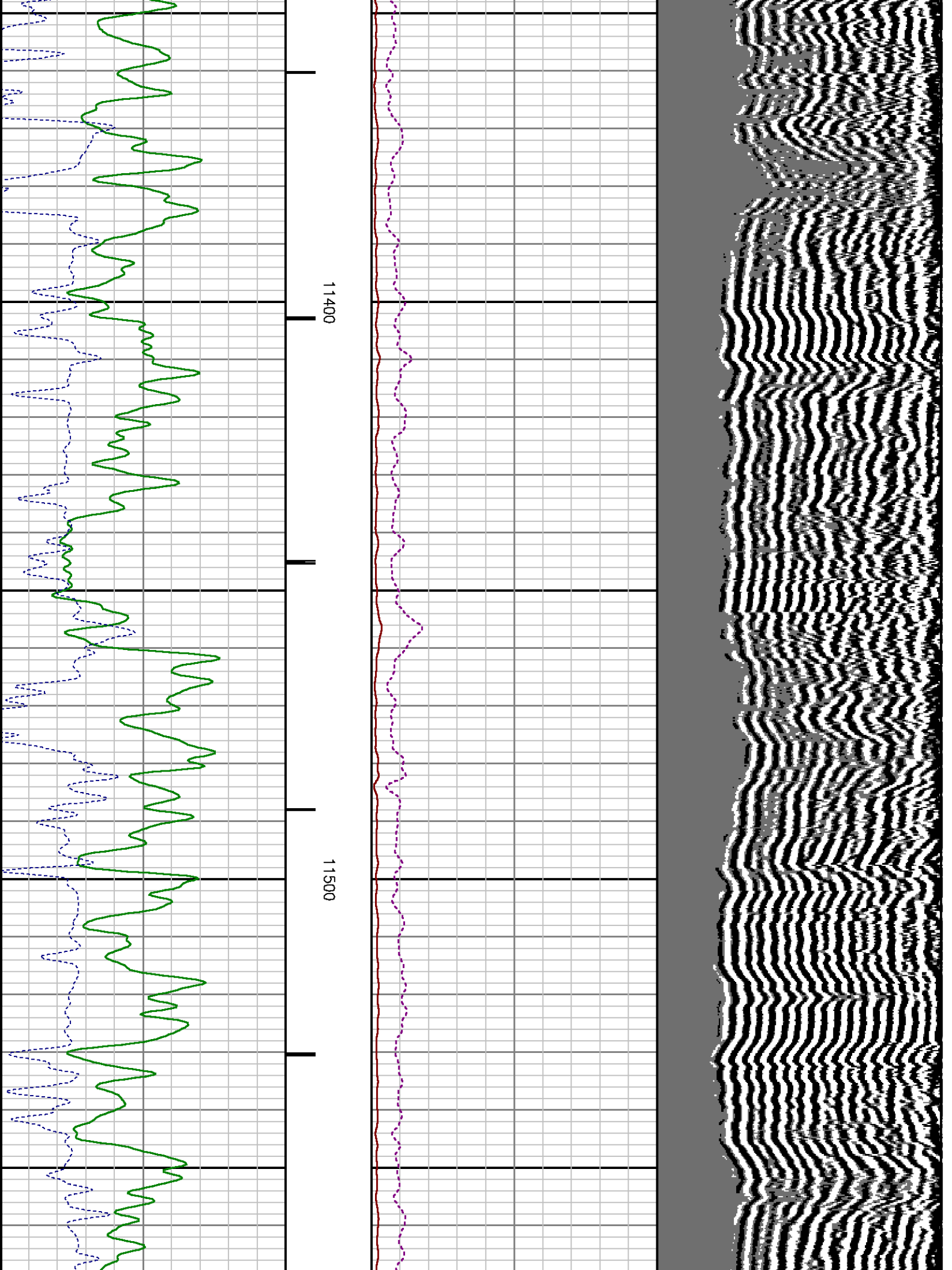


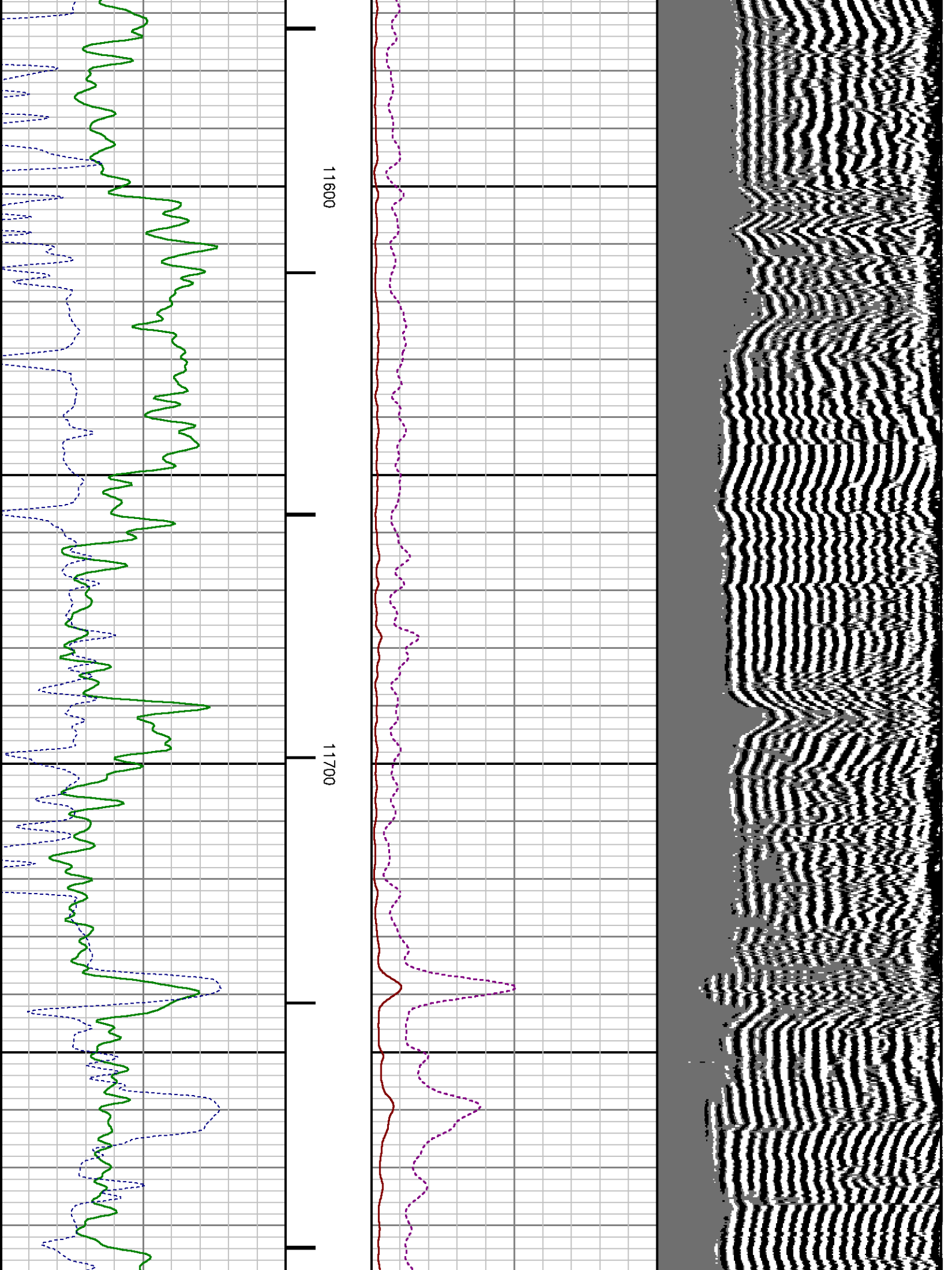


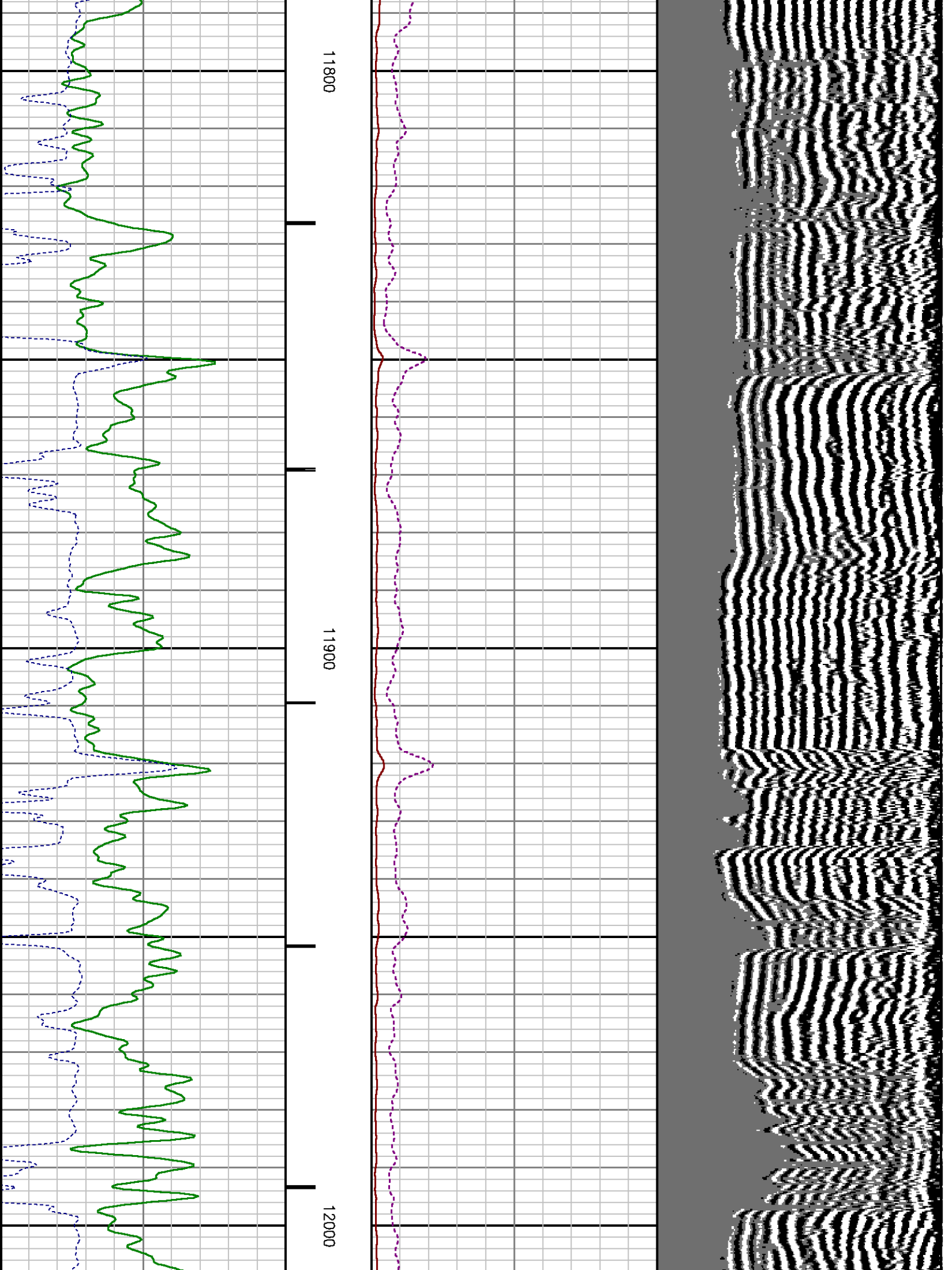












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RAL	FB Thresh Radial	4.000	mv	25.687	12157.000
RAL	Fluid Travel Time	200.000	usec/ft	25.687	12157.000

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					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

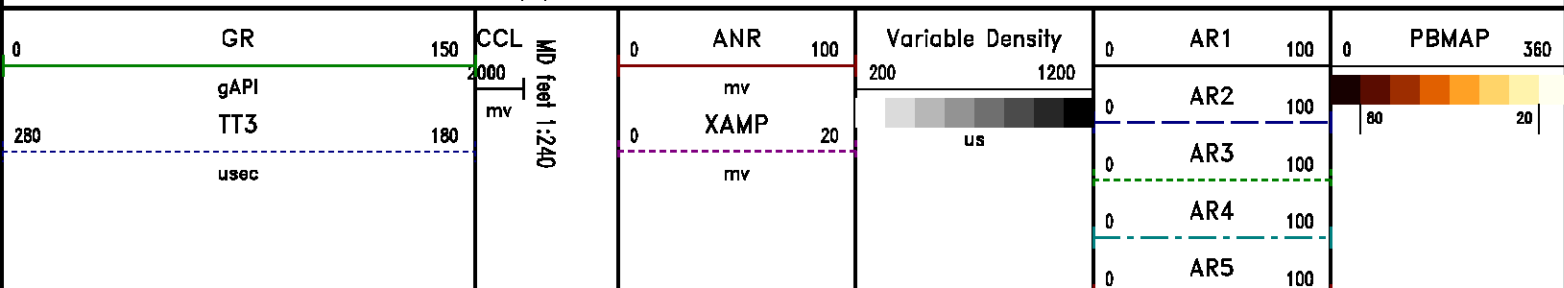
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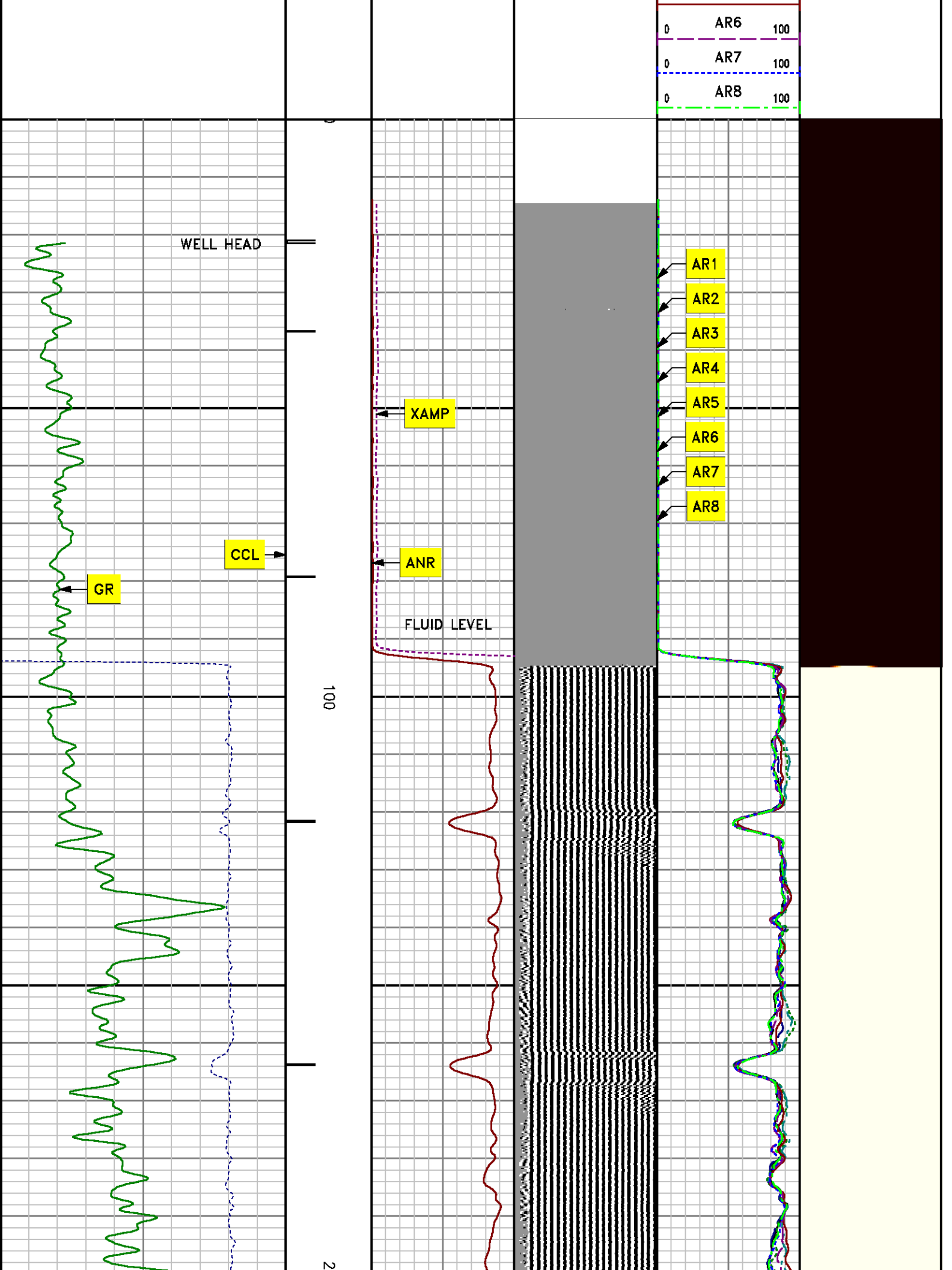
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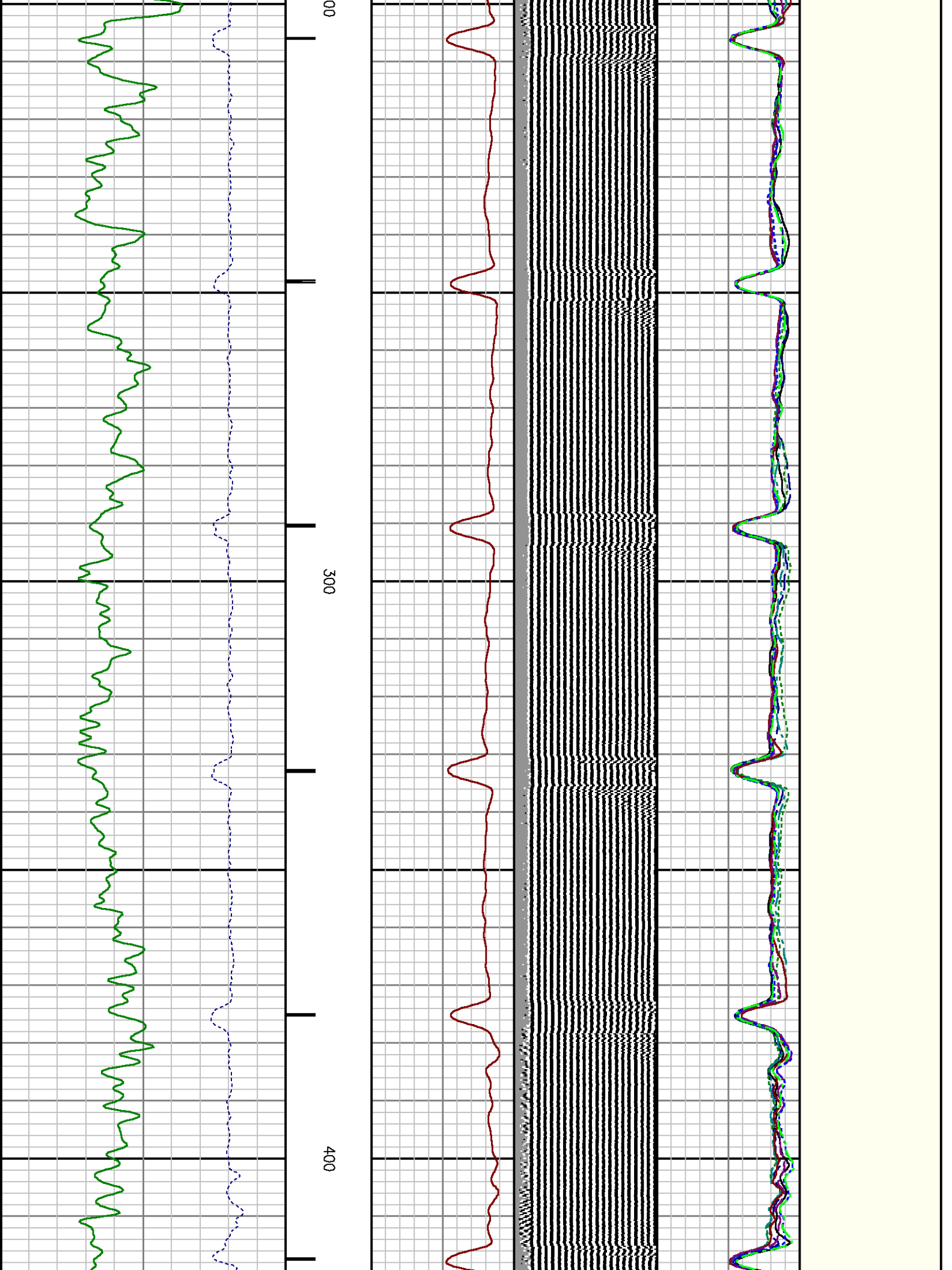
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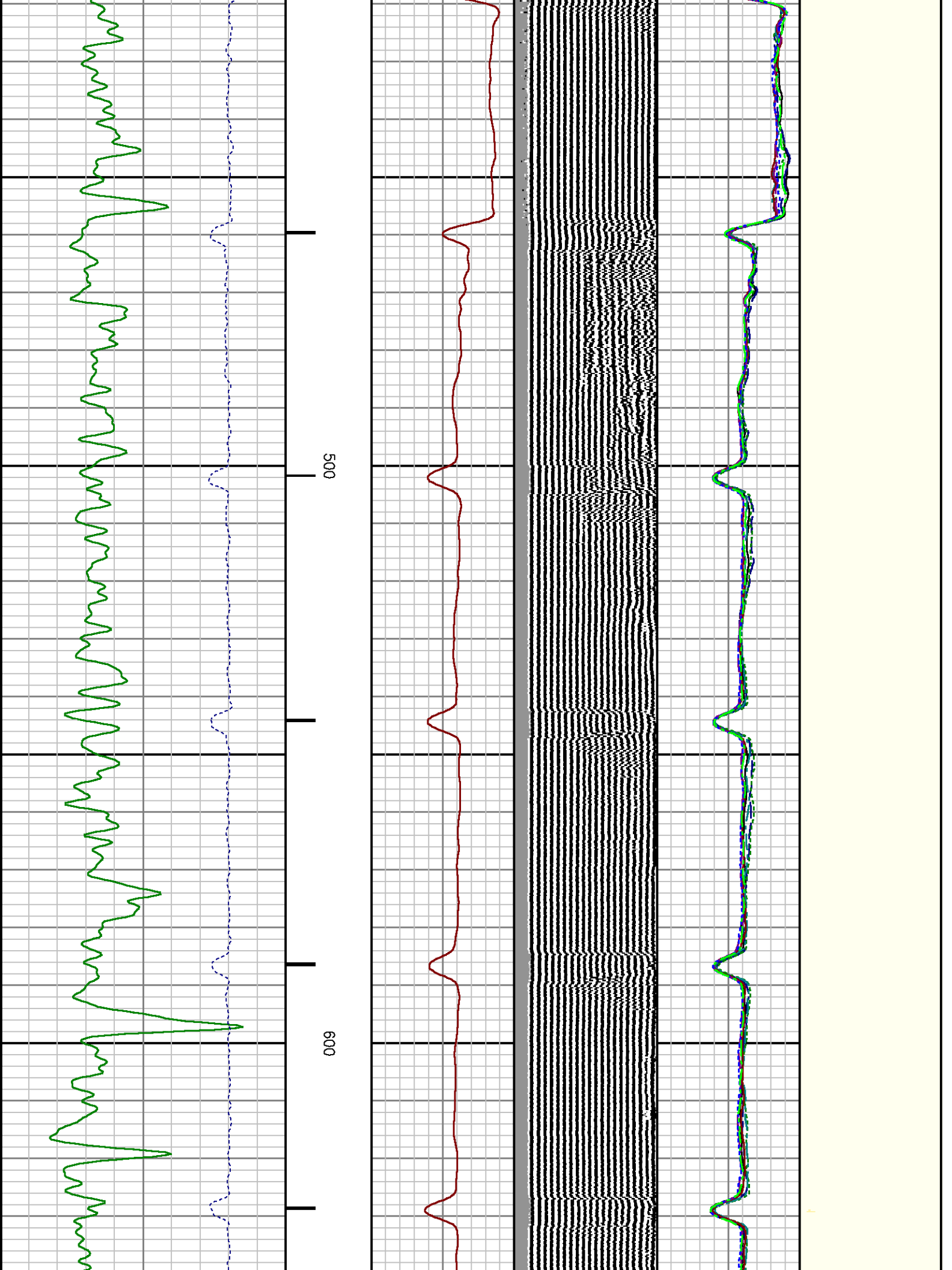
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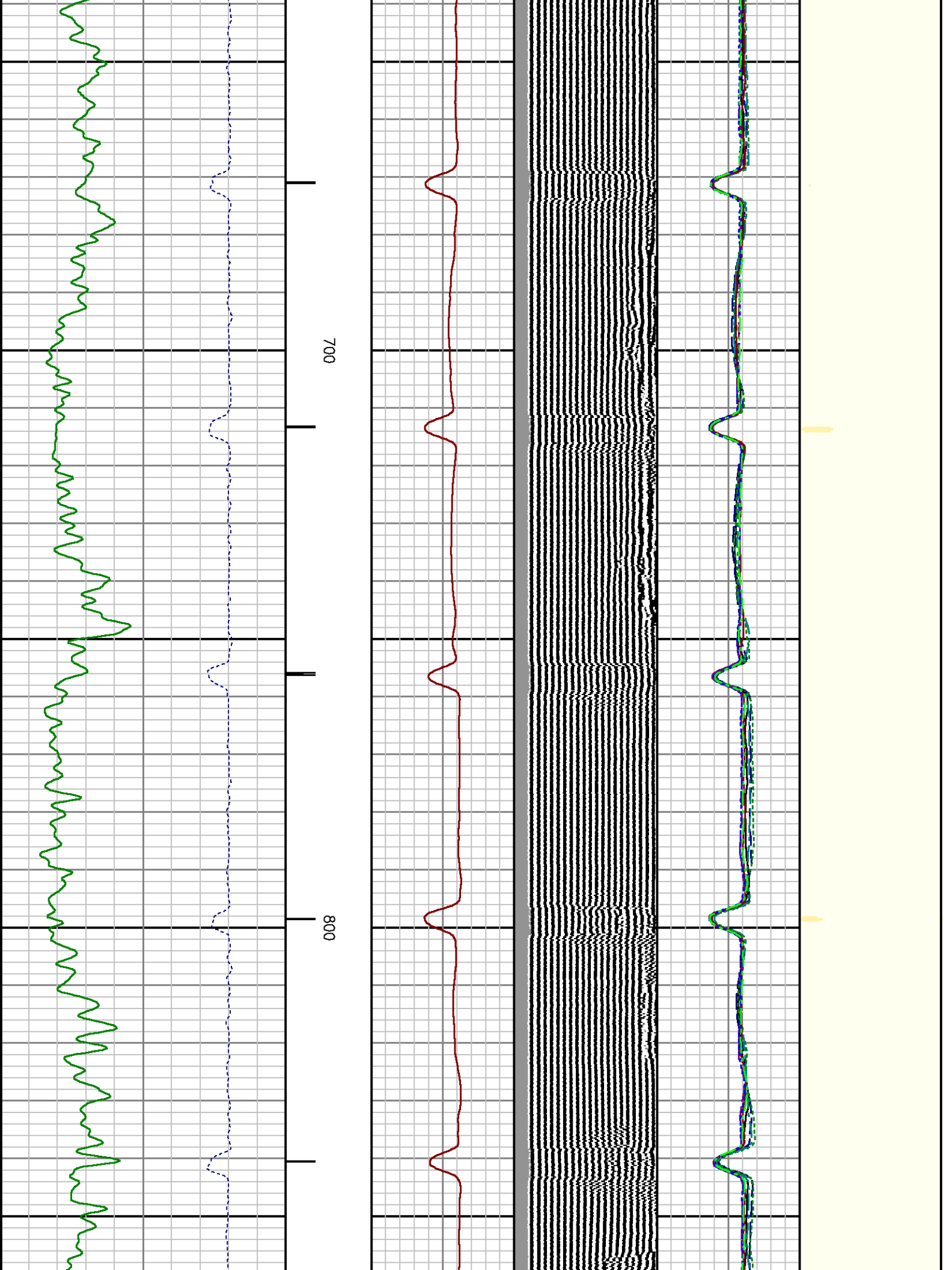


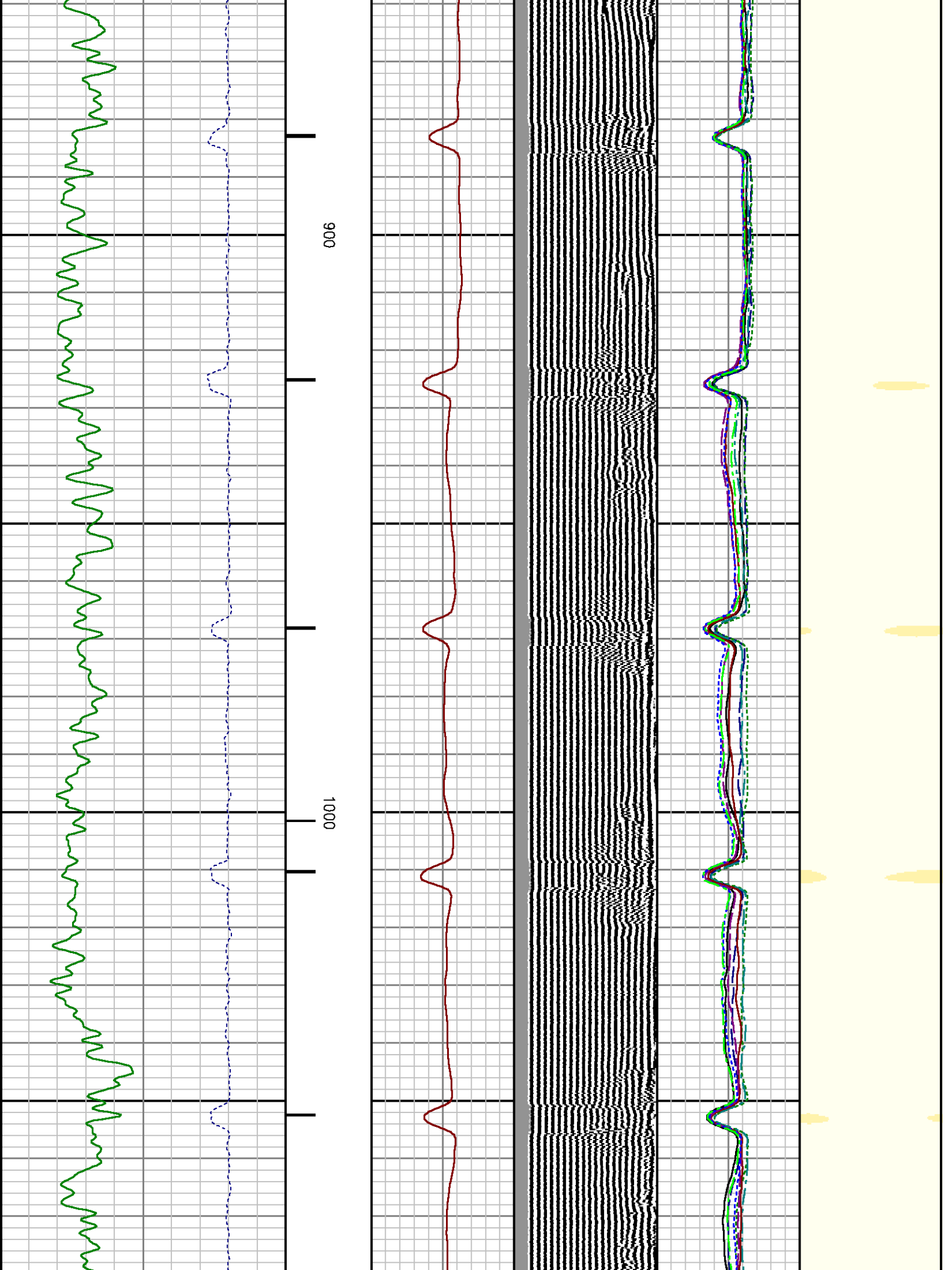
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0	AR7	100
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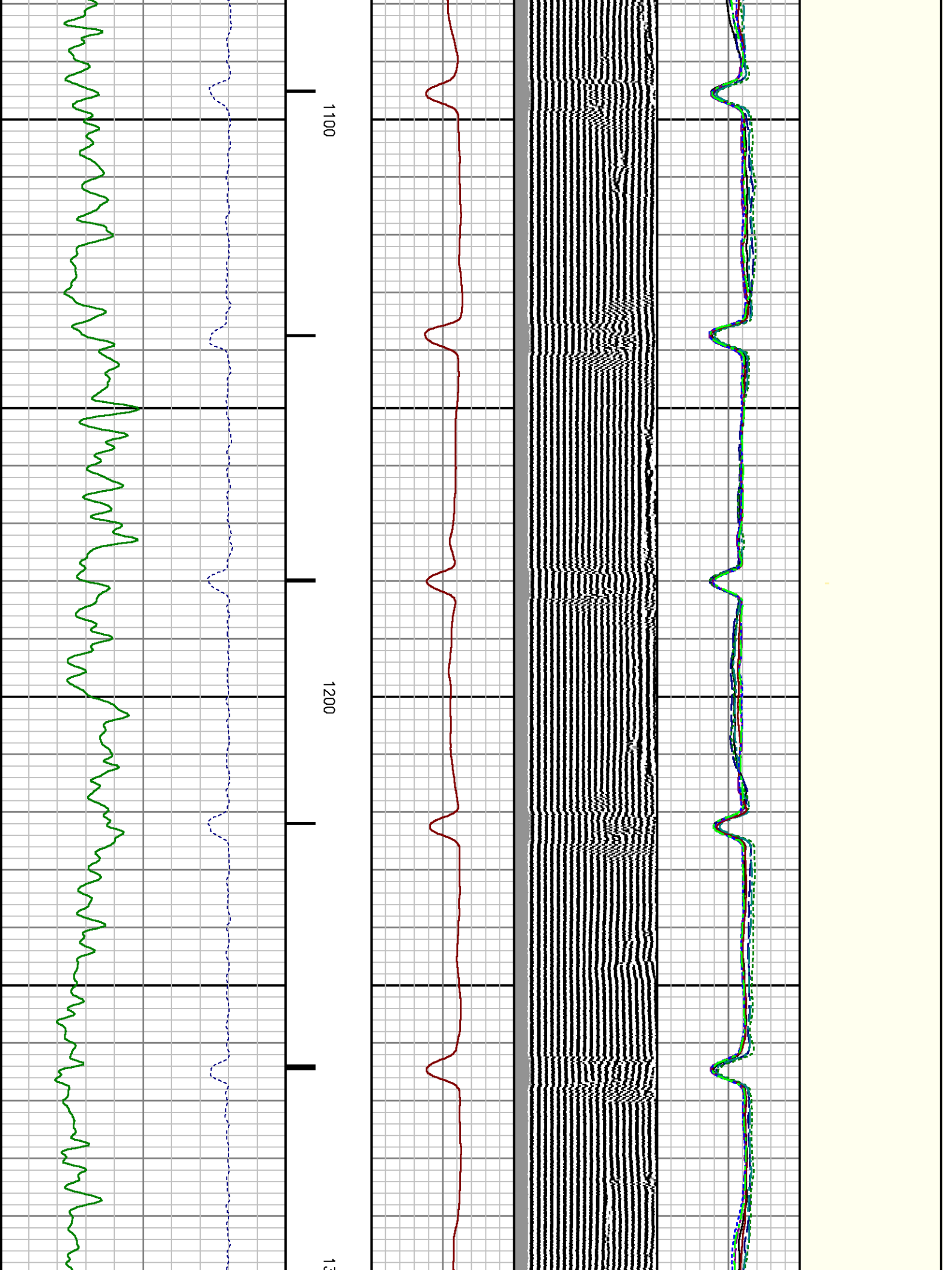


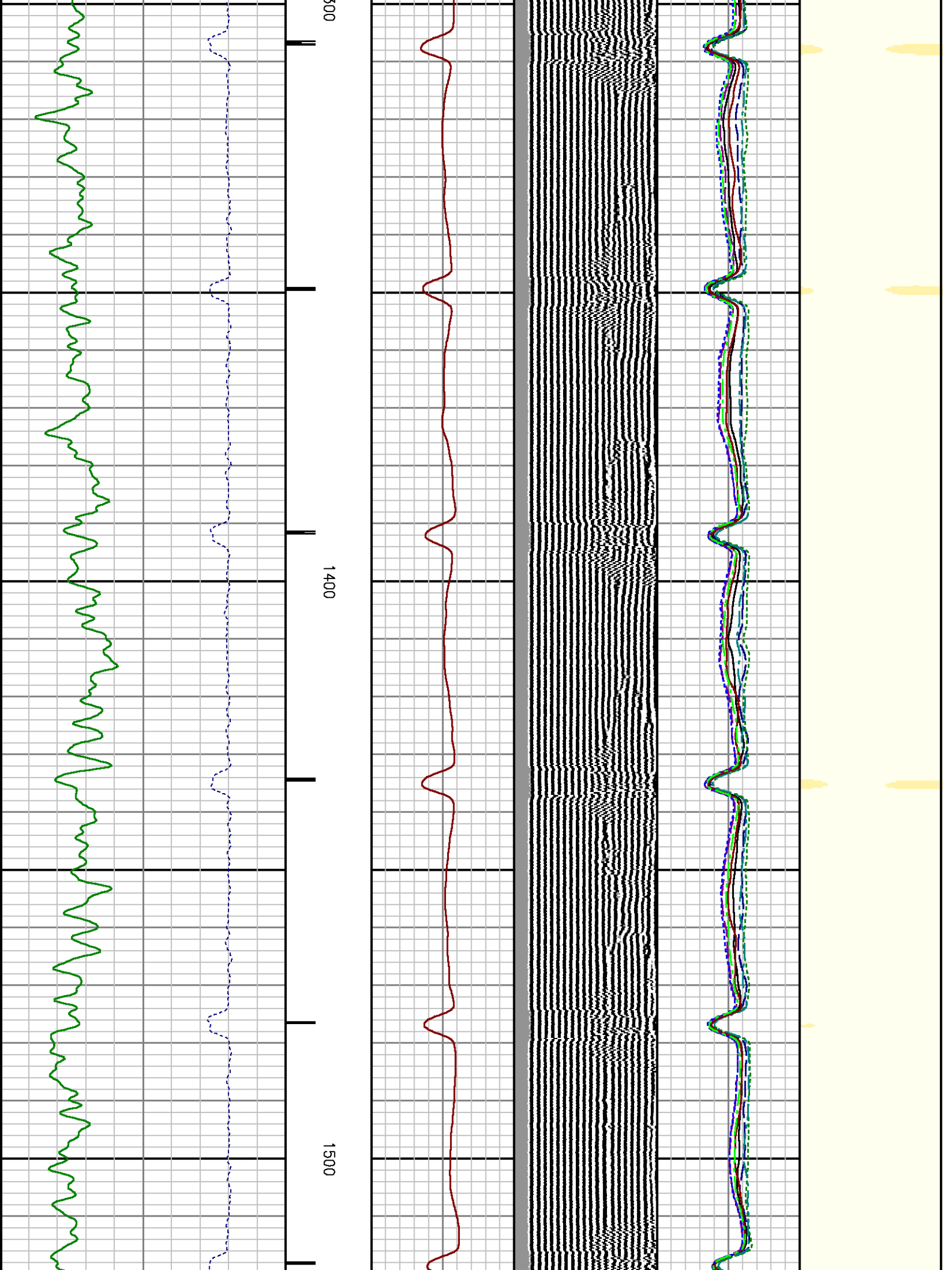


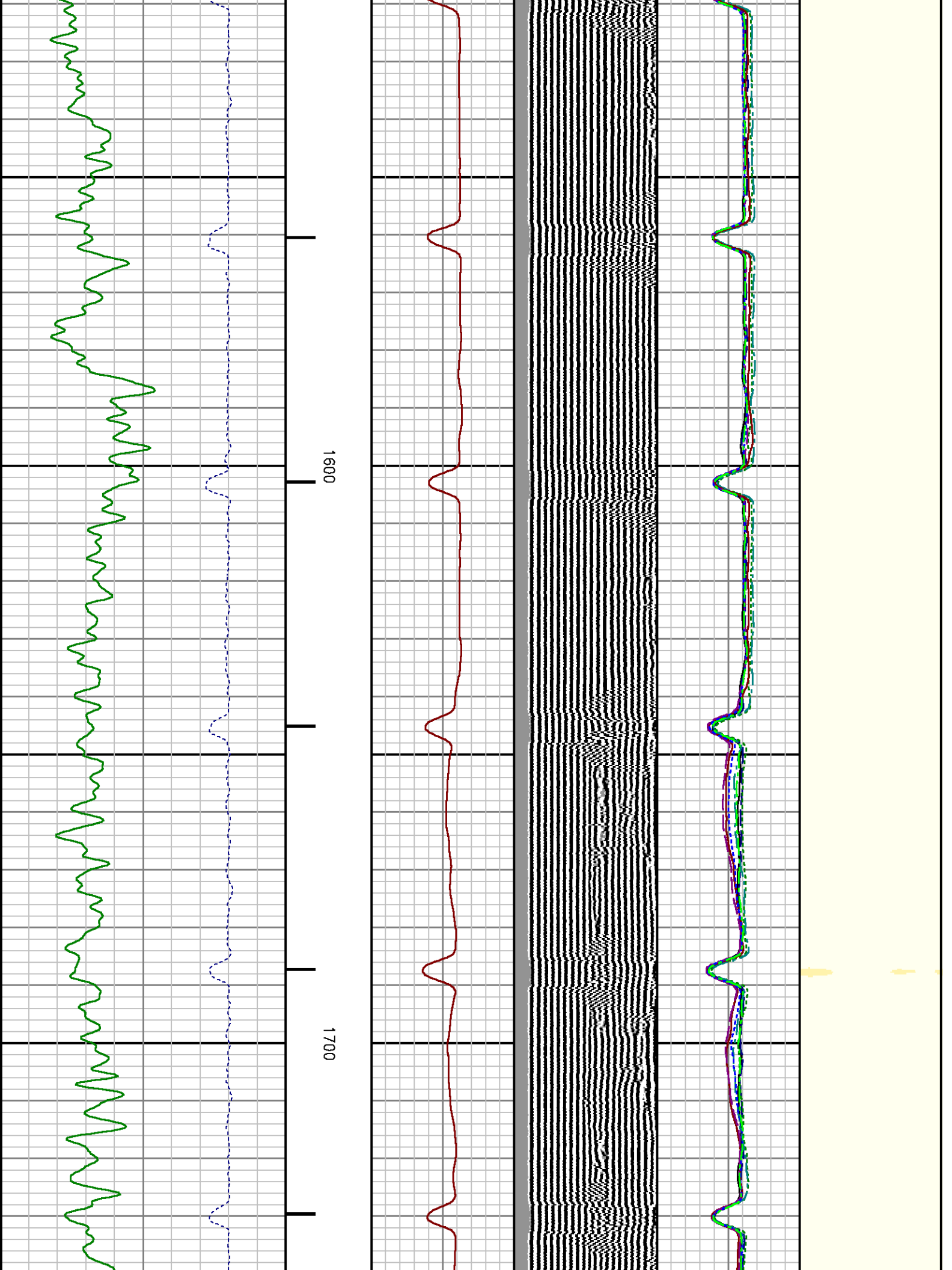


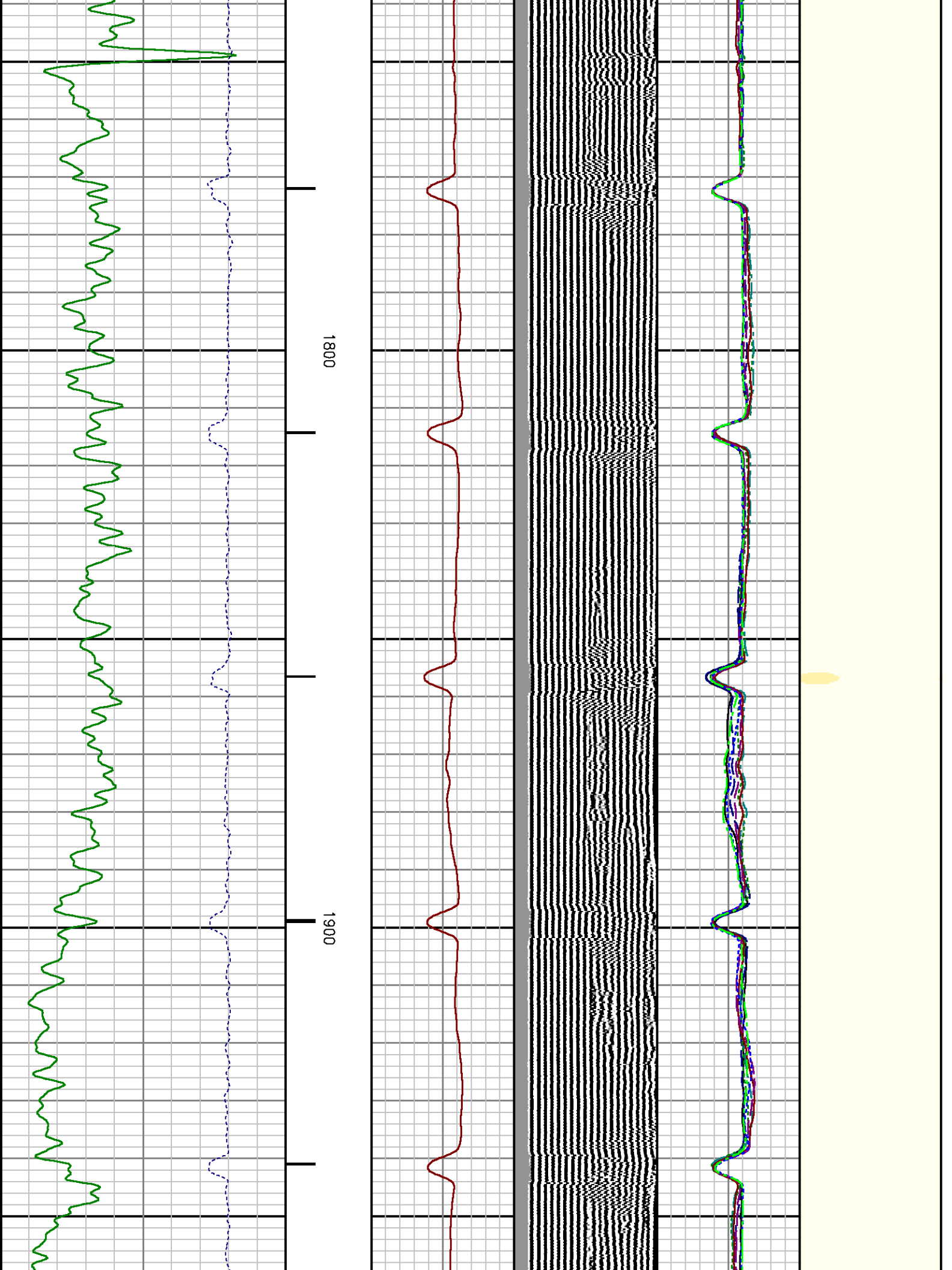


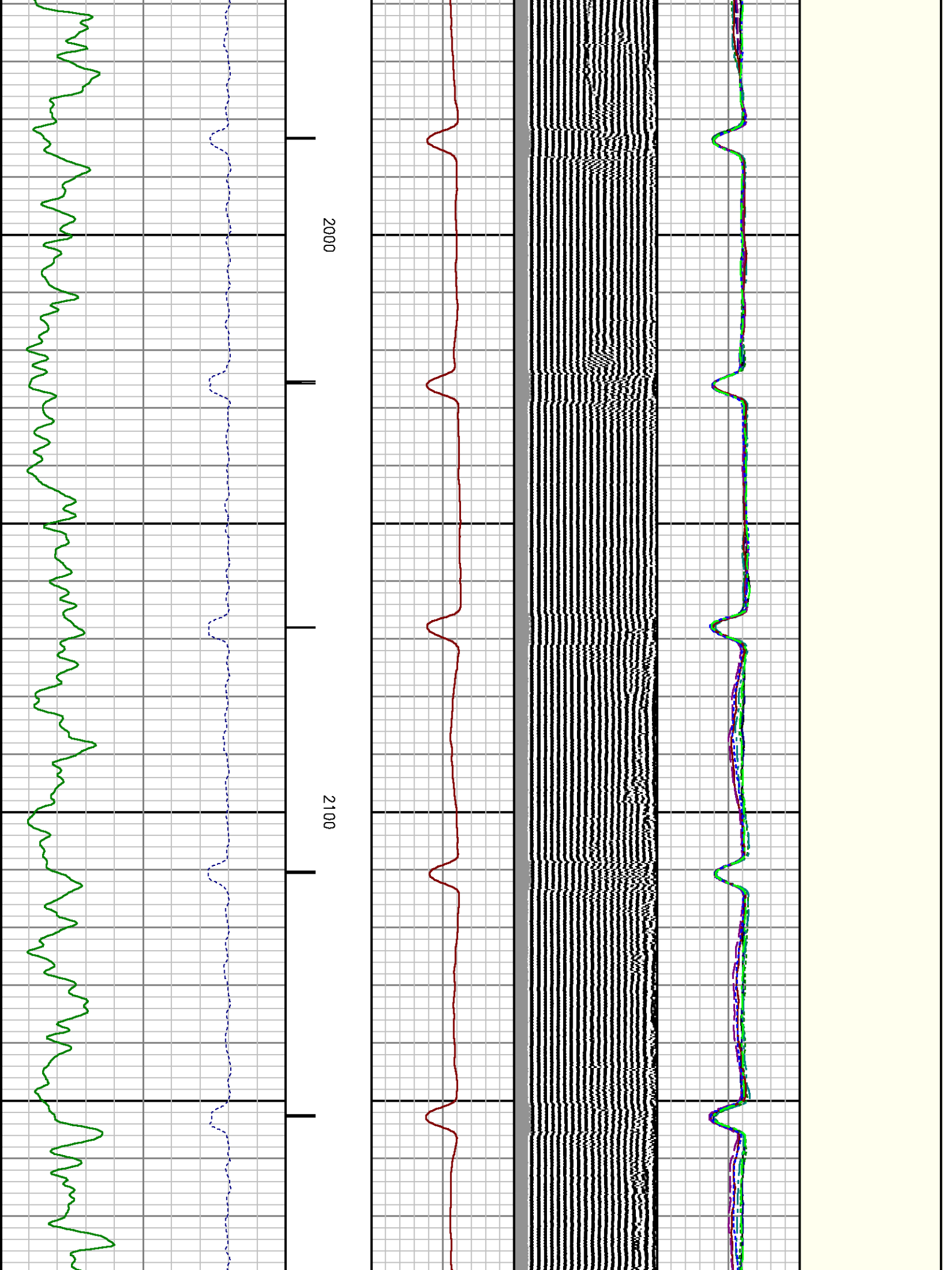


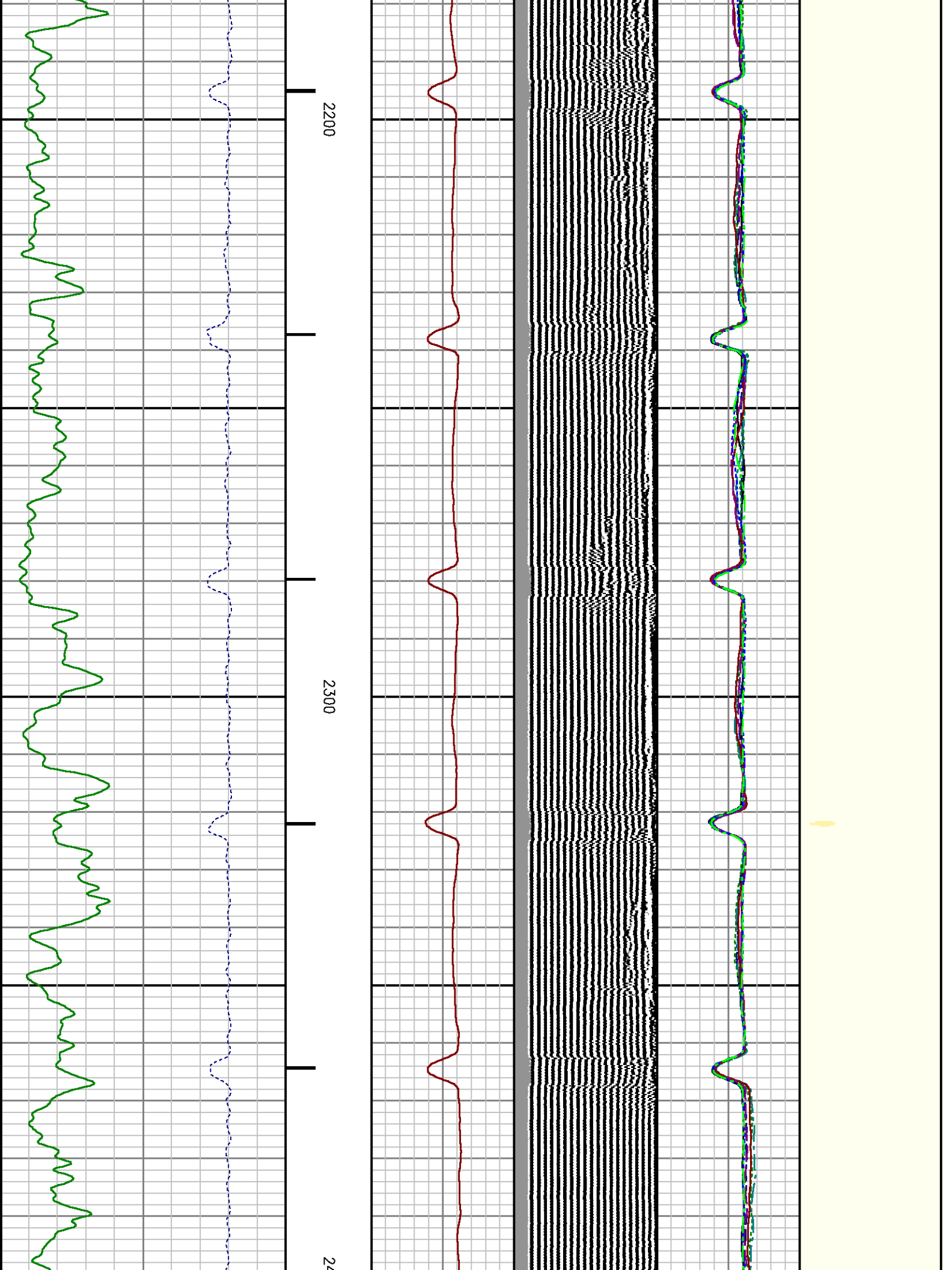


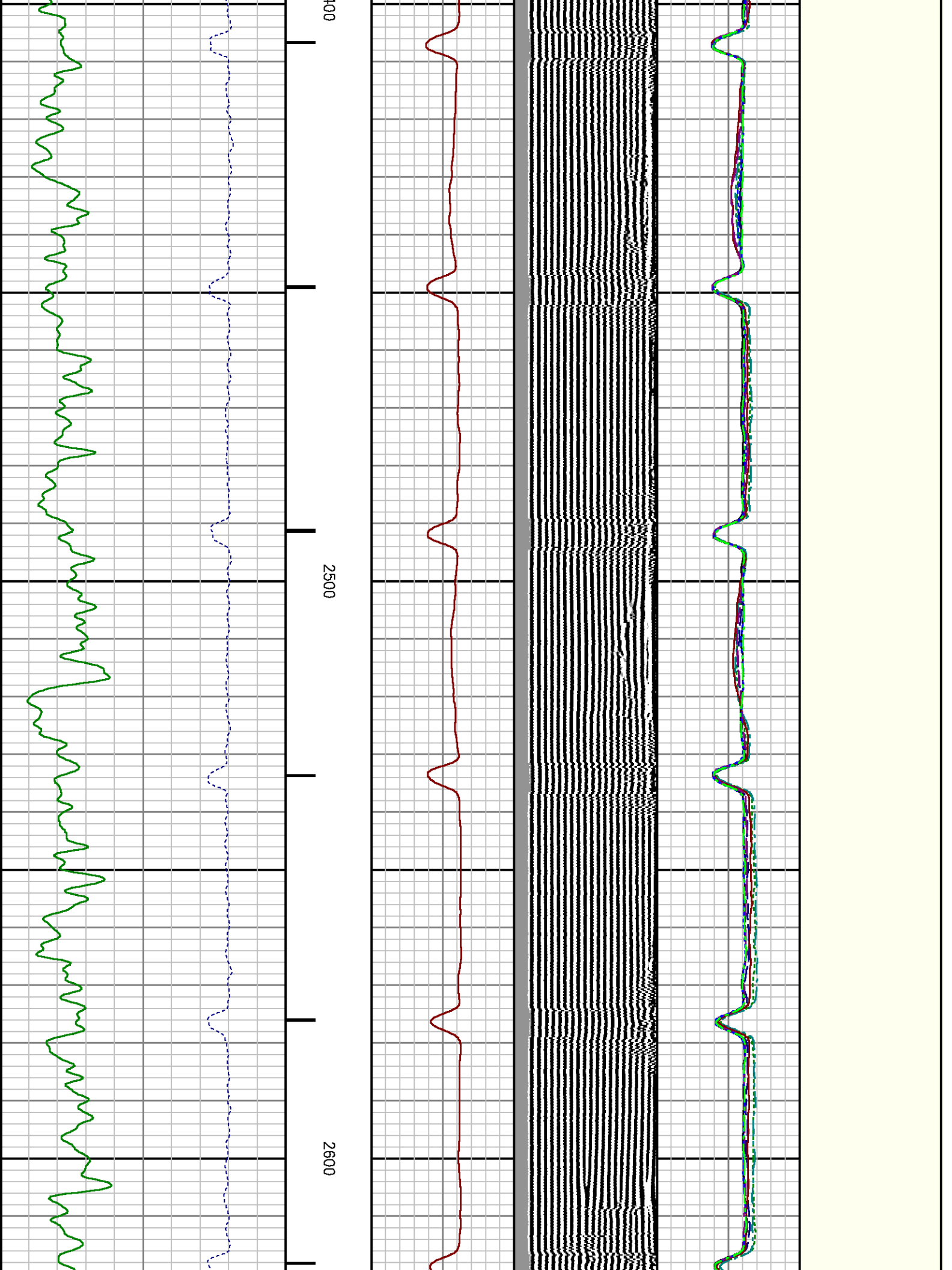


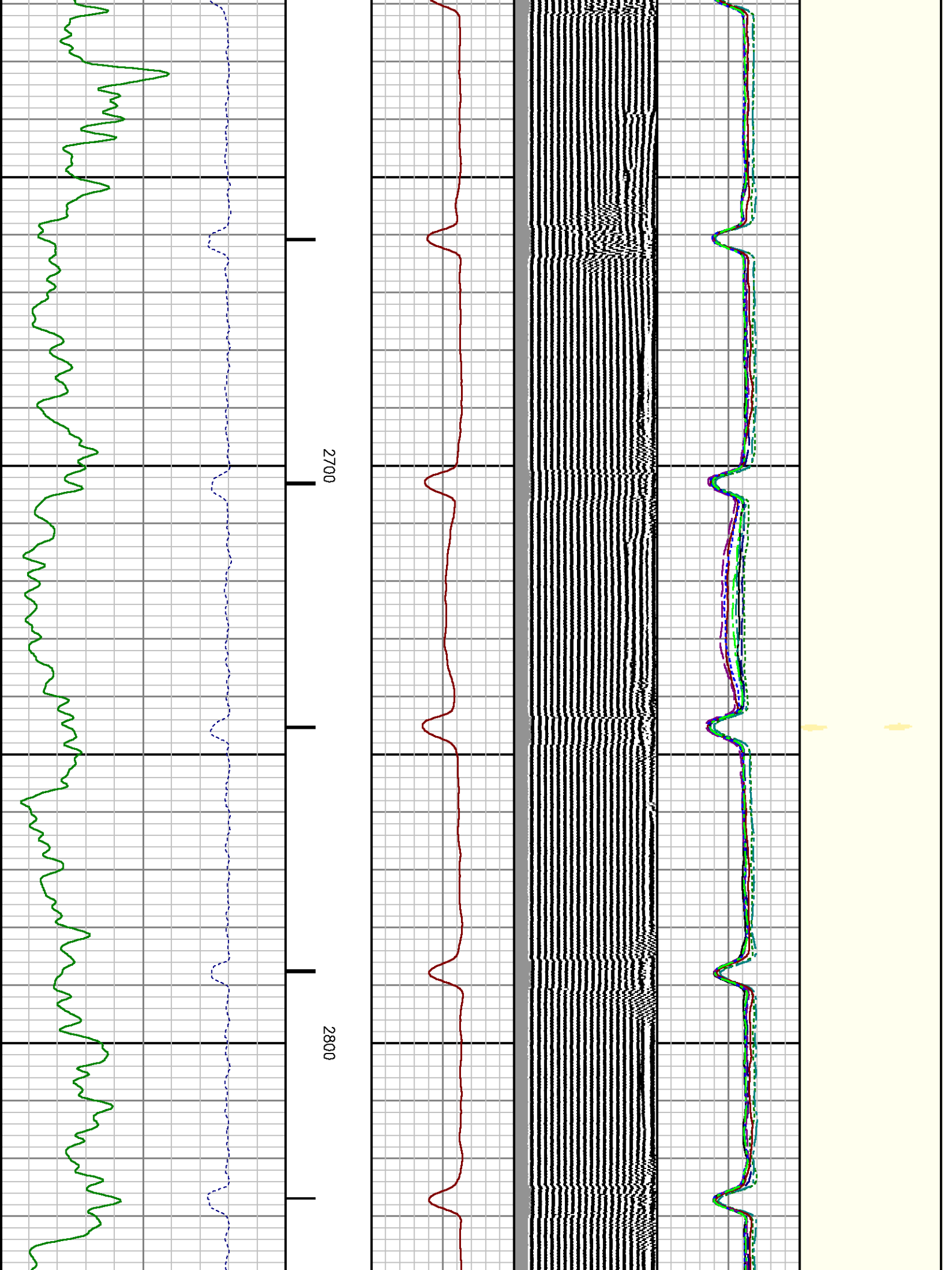


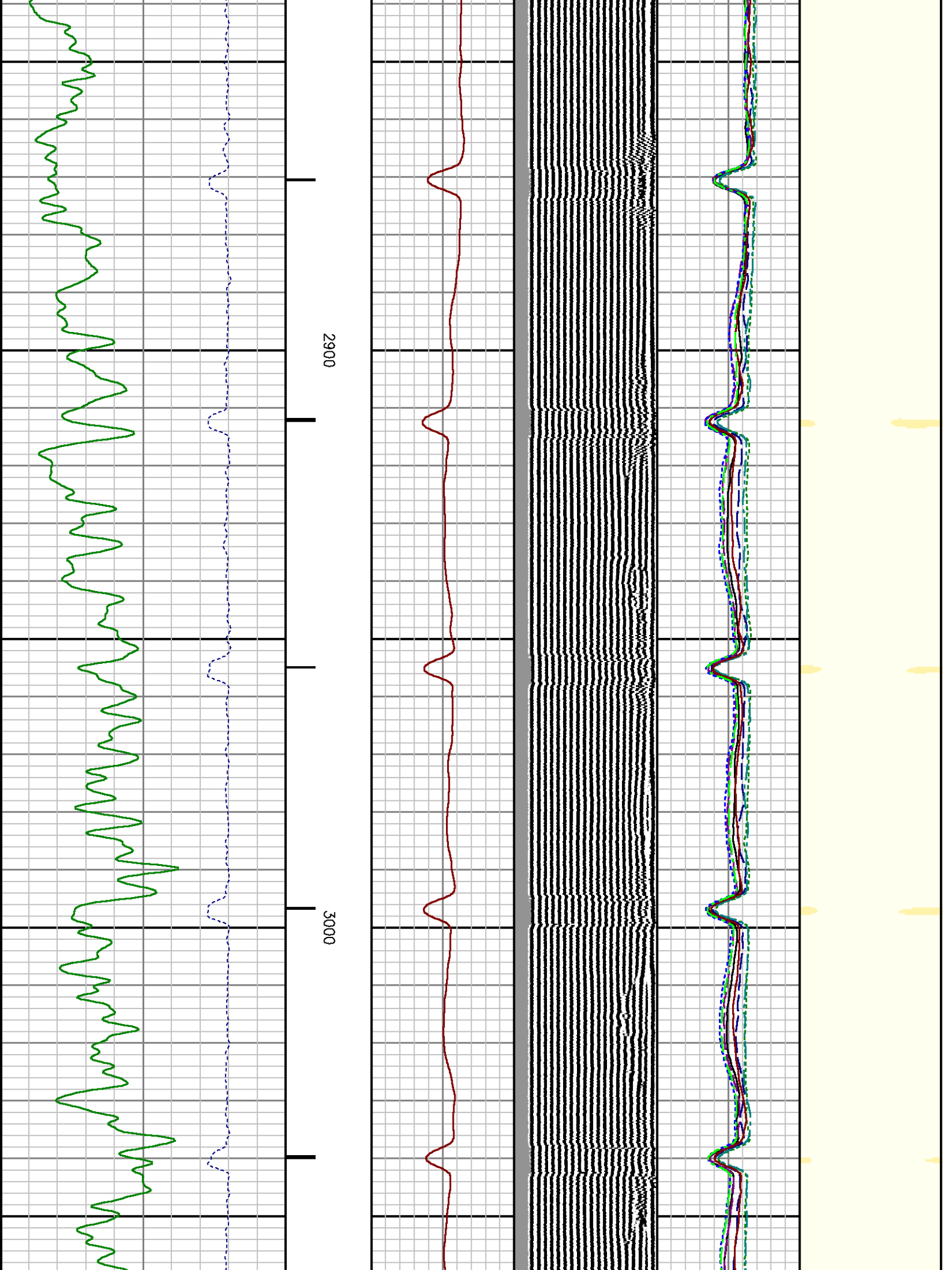


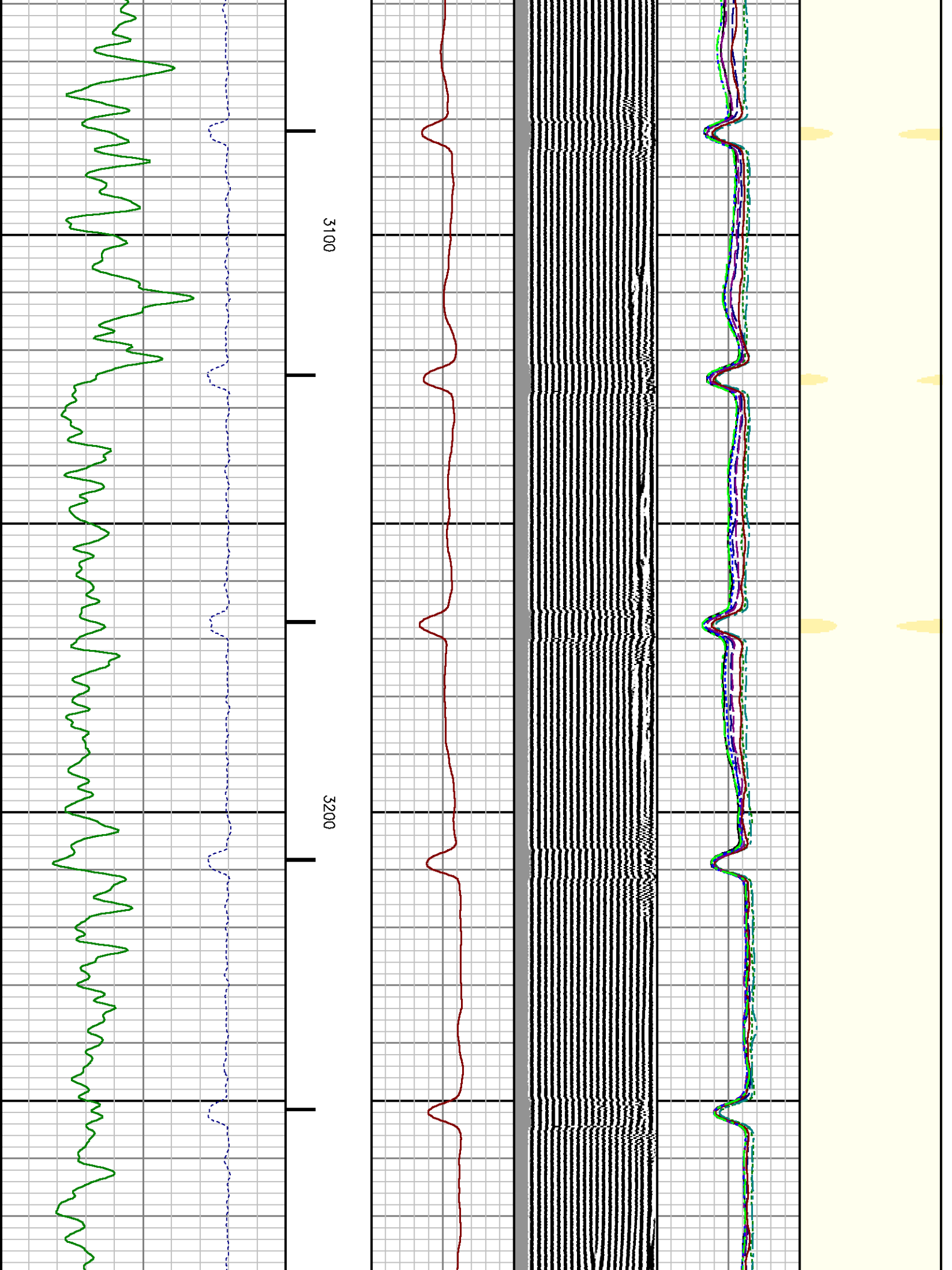


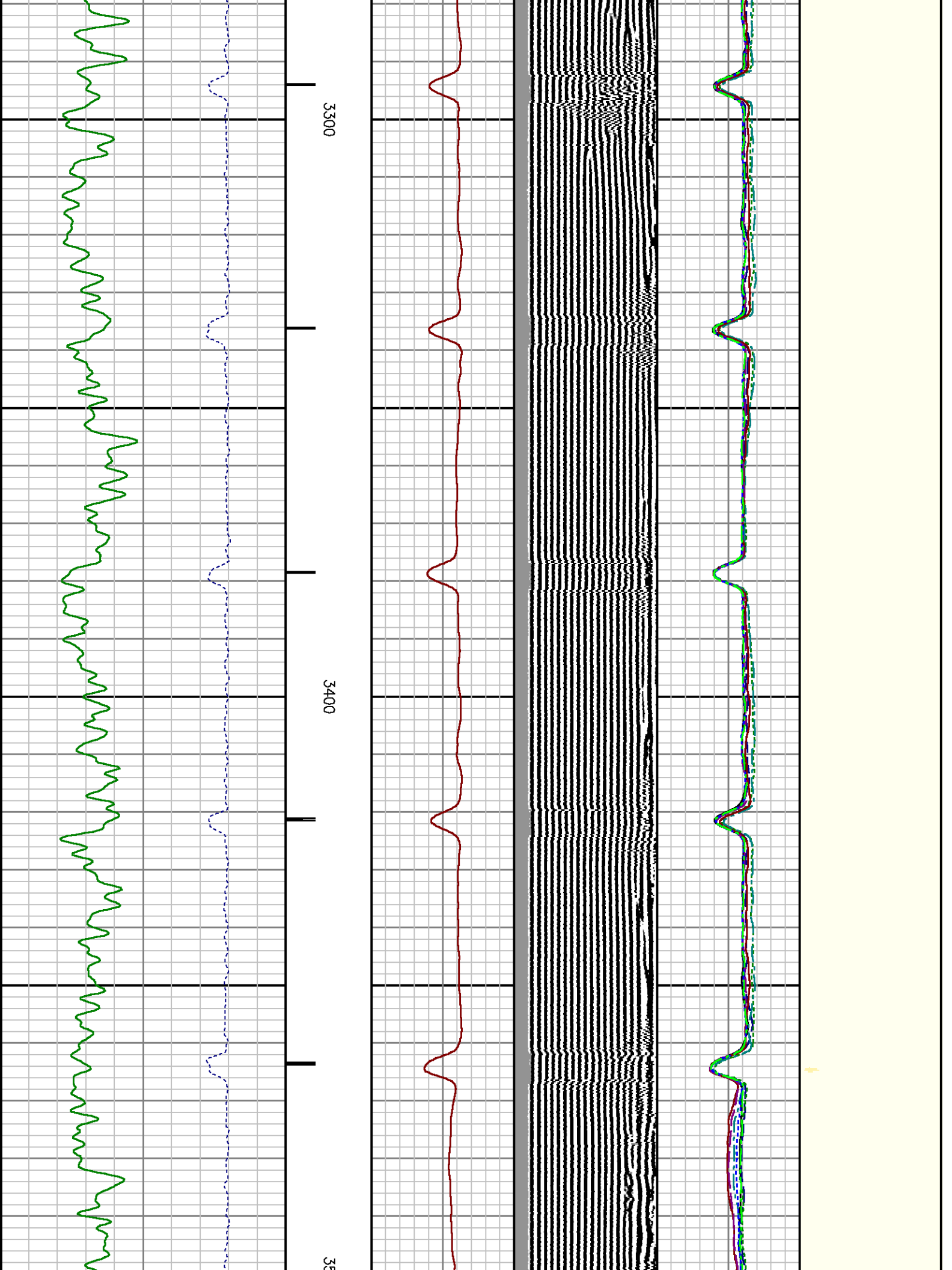


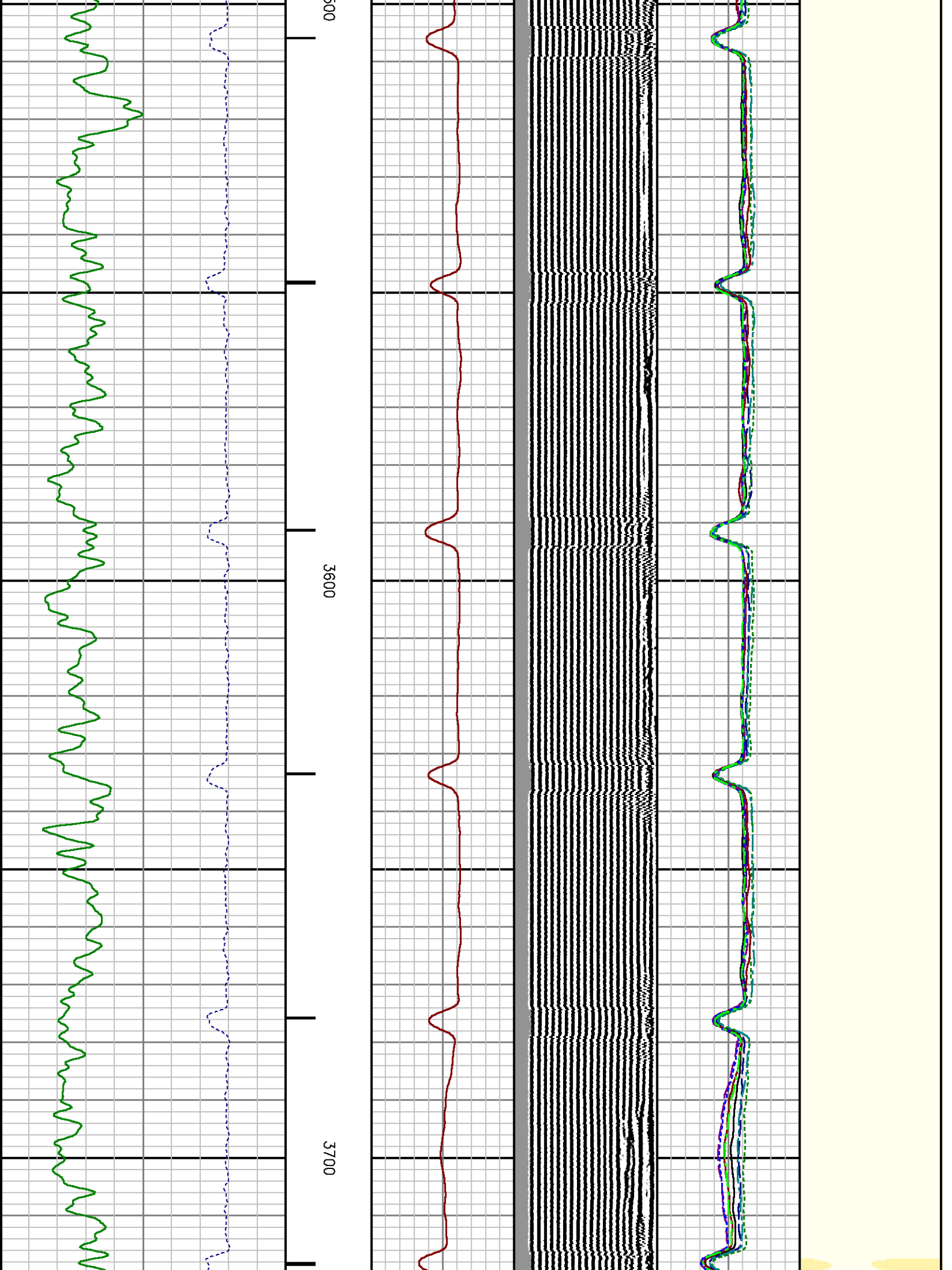


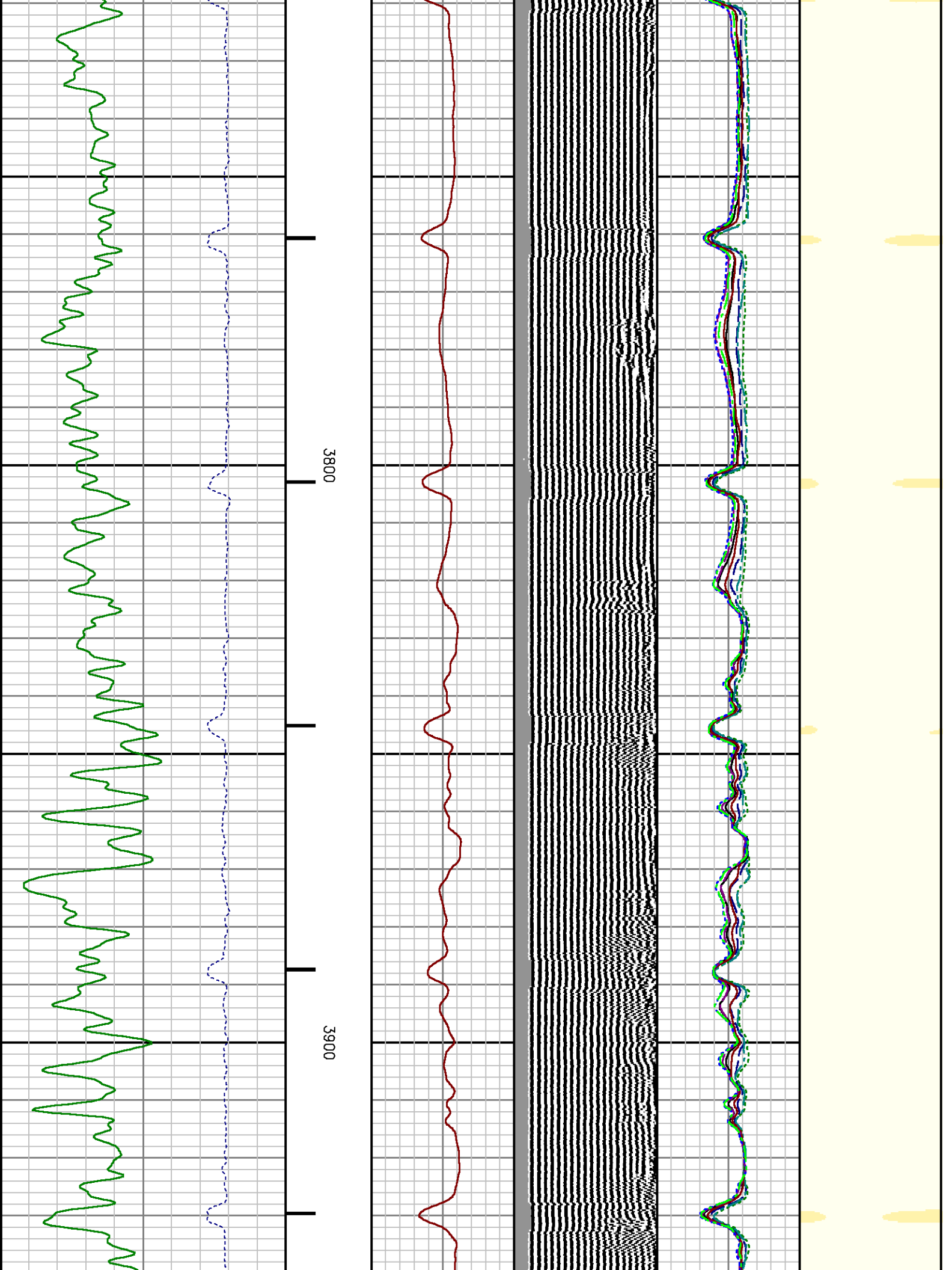


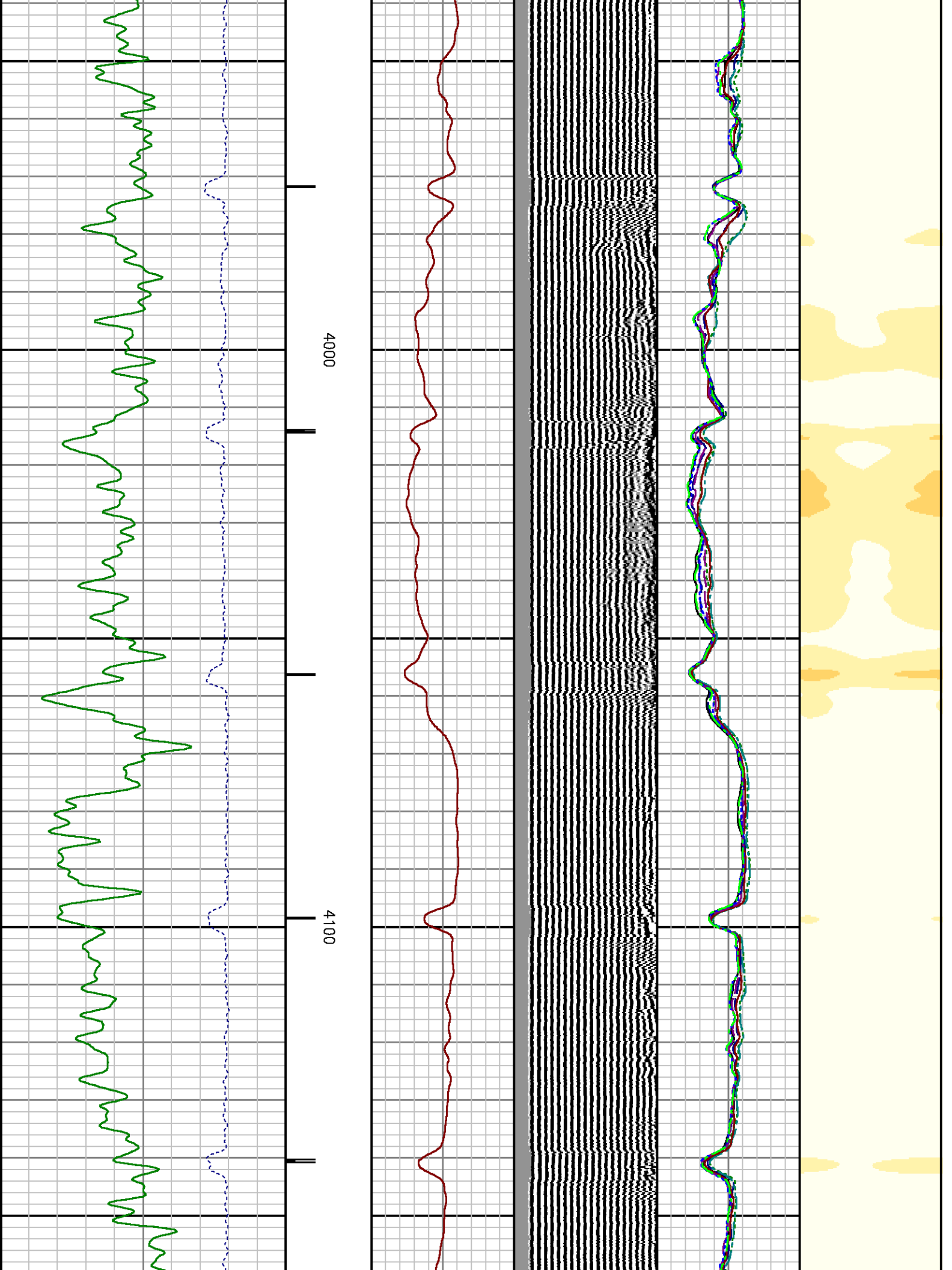


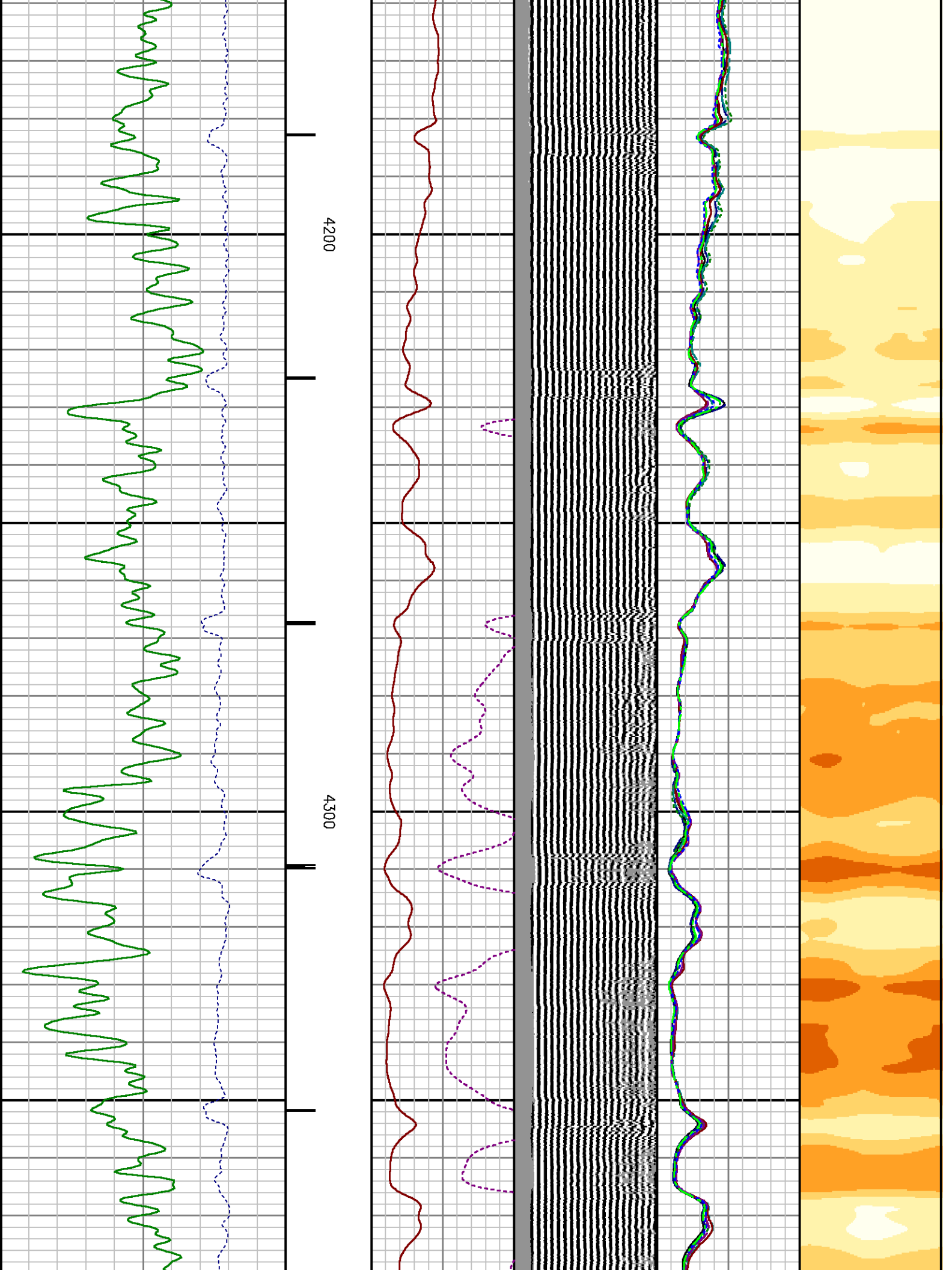


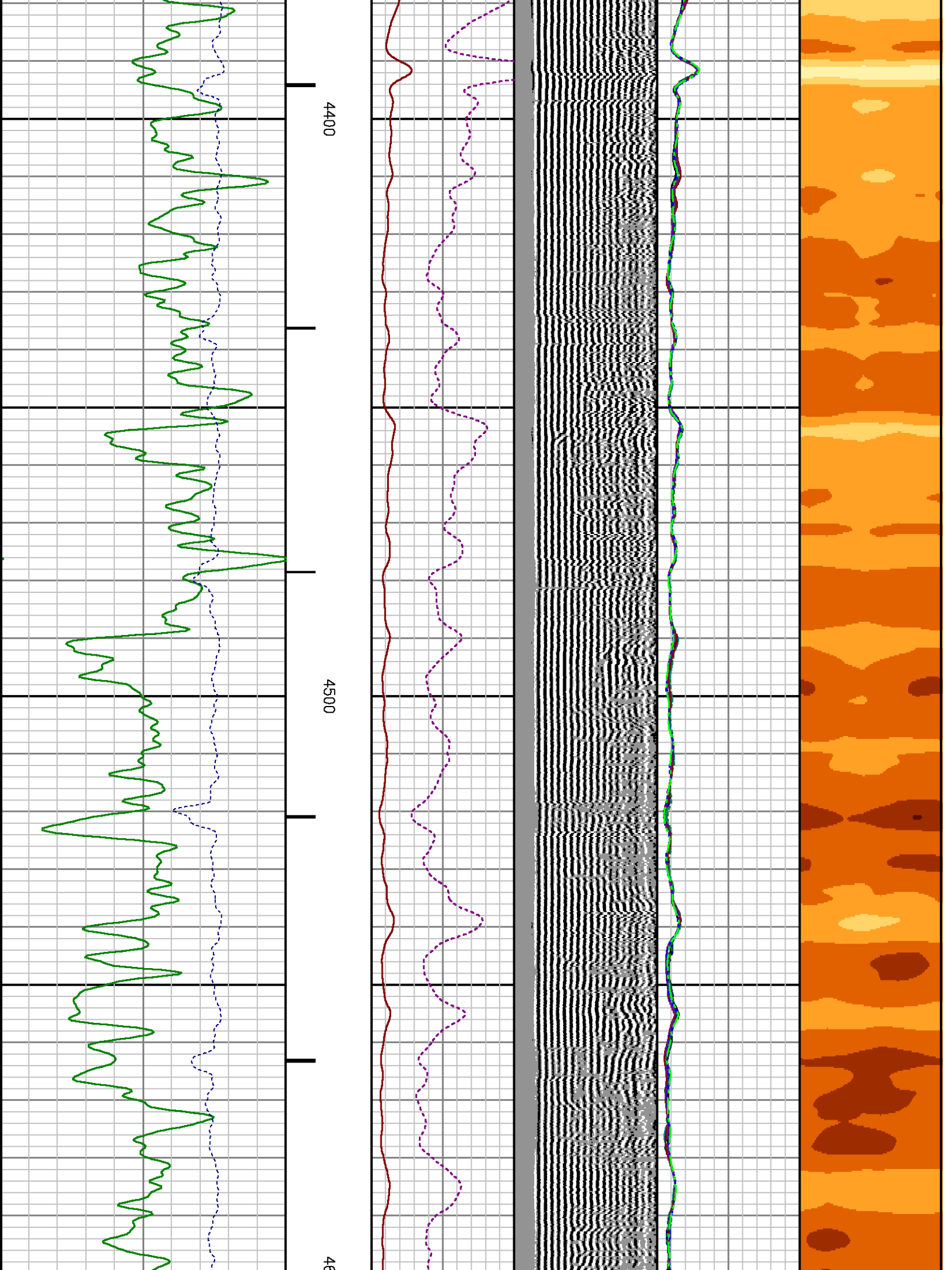


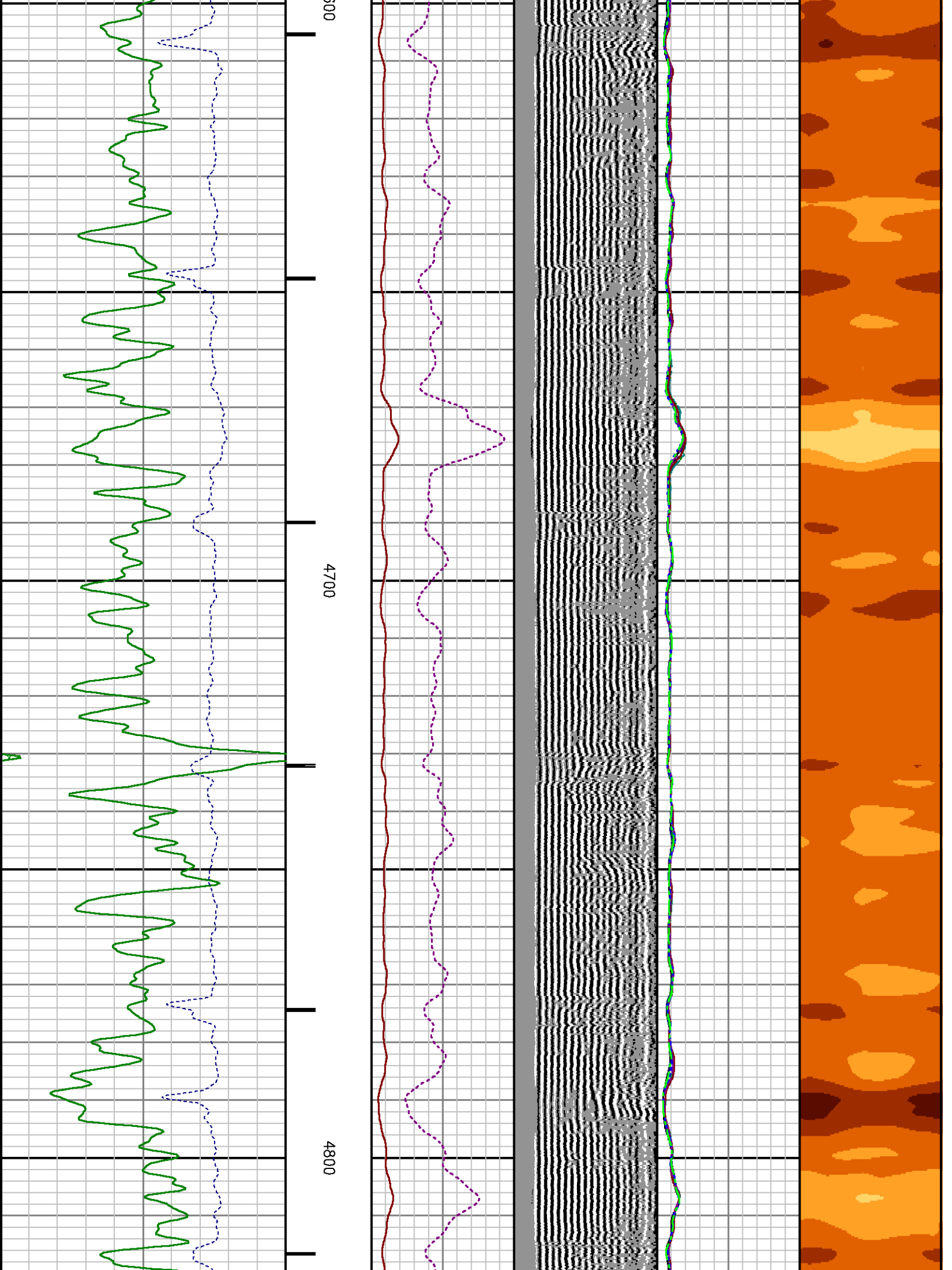


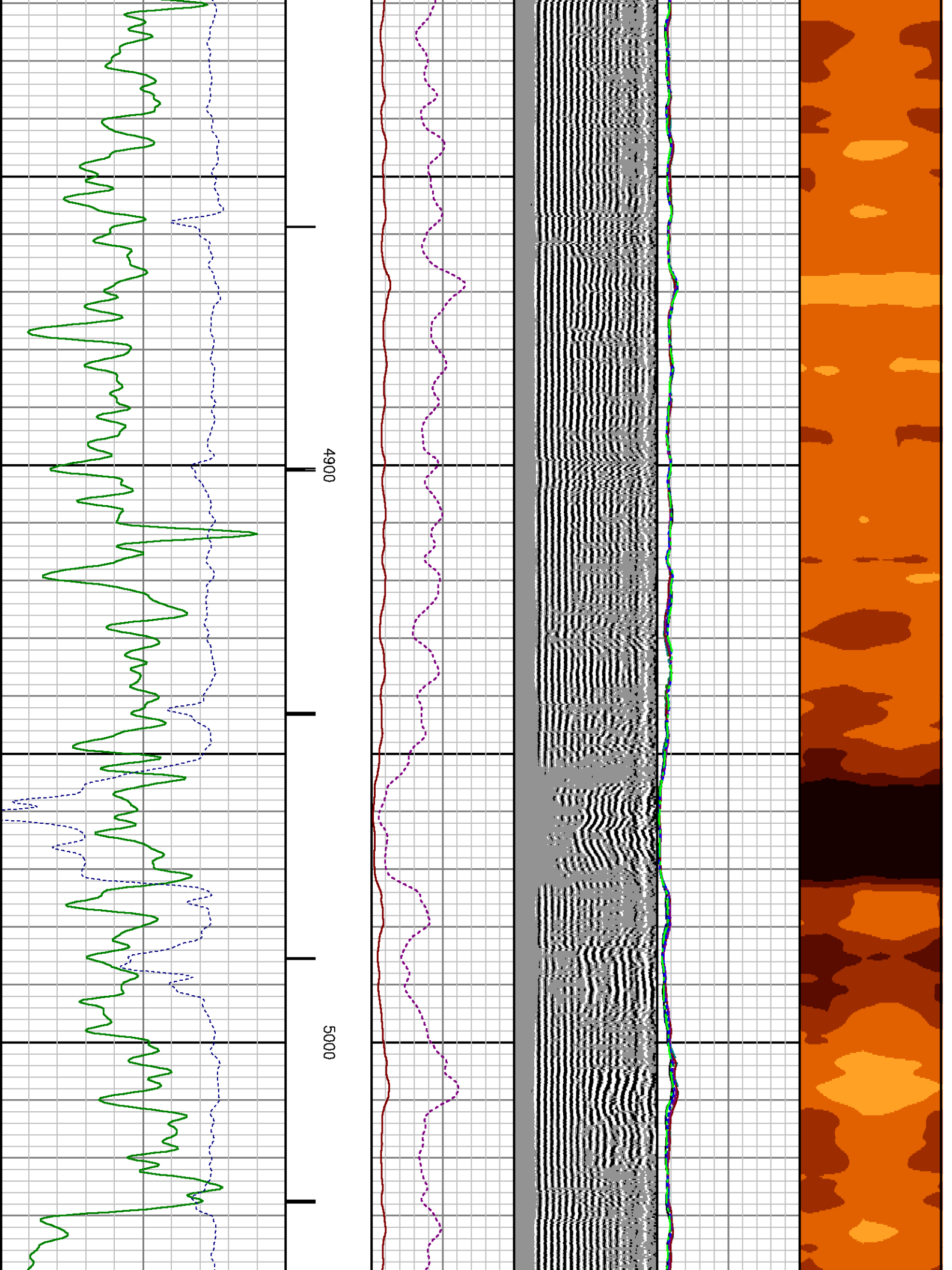


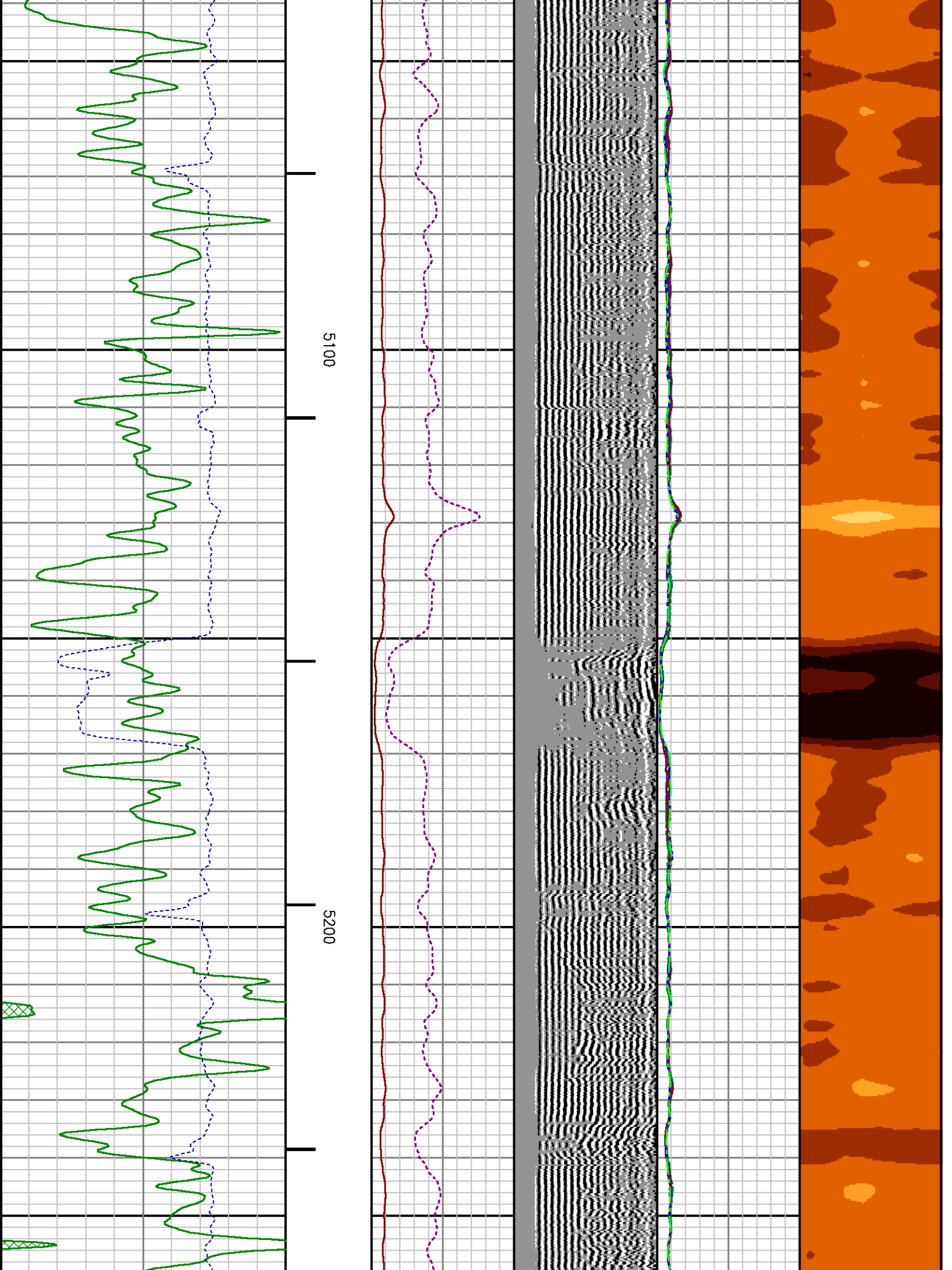


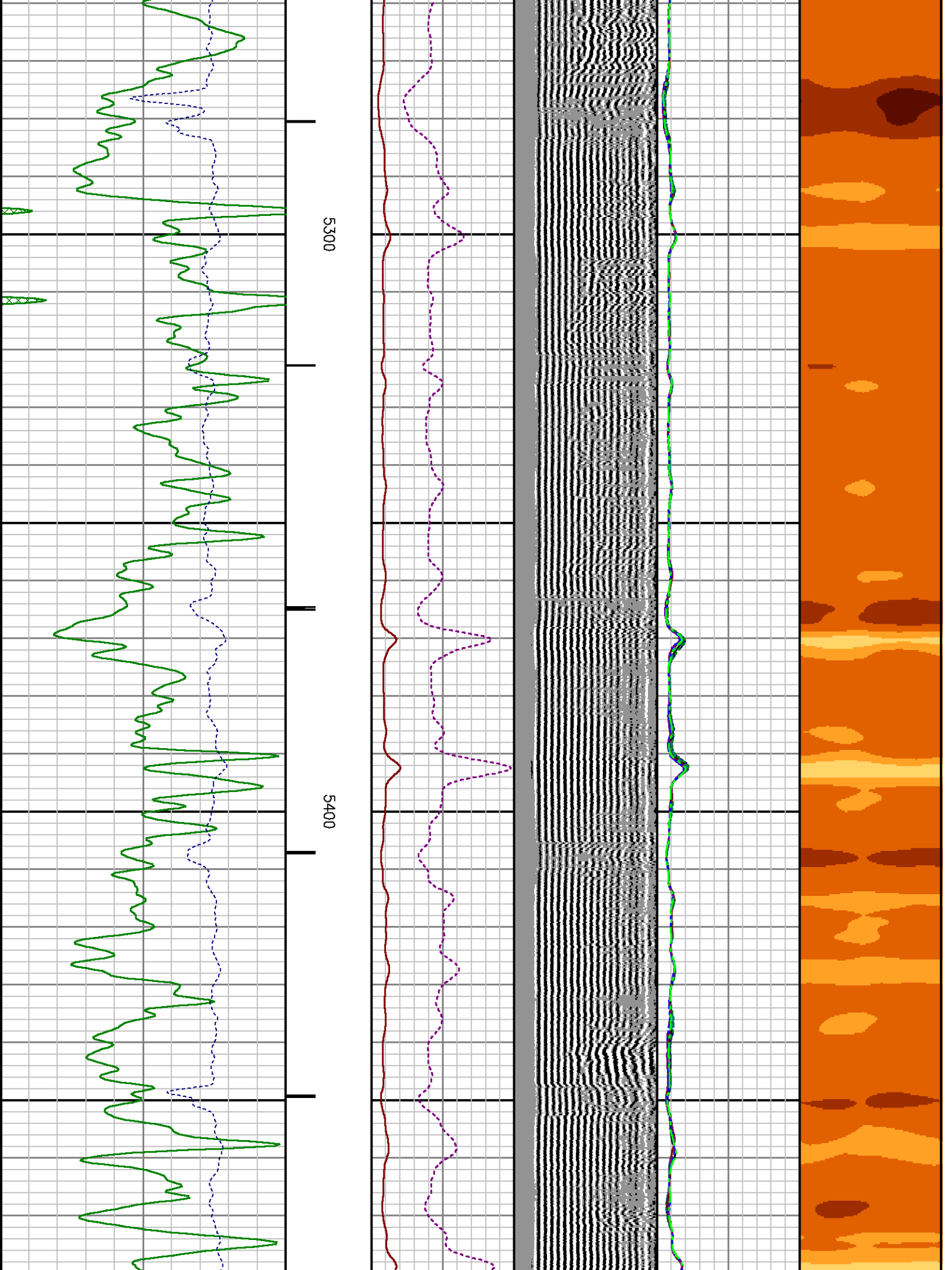


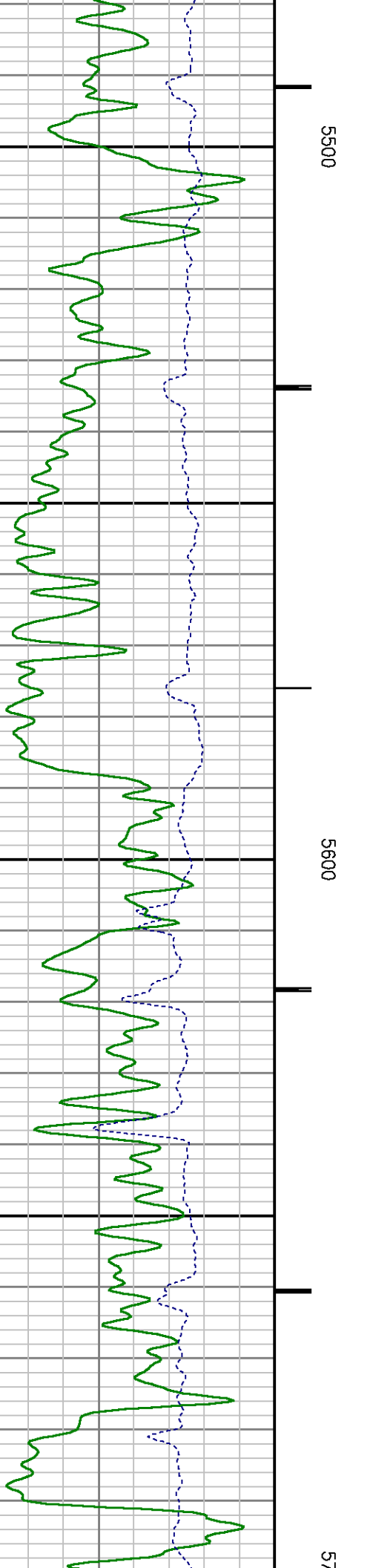
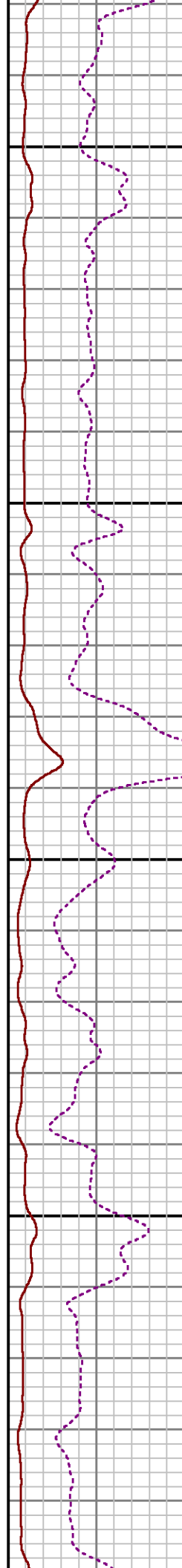
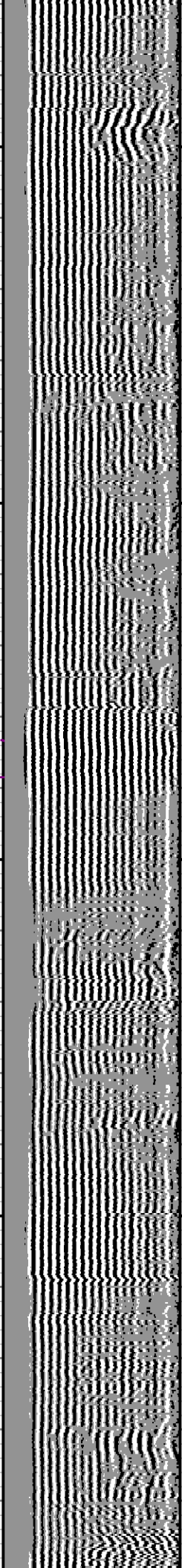


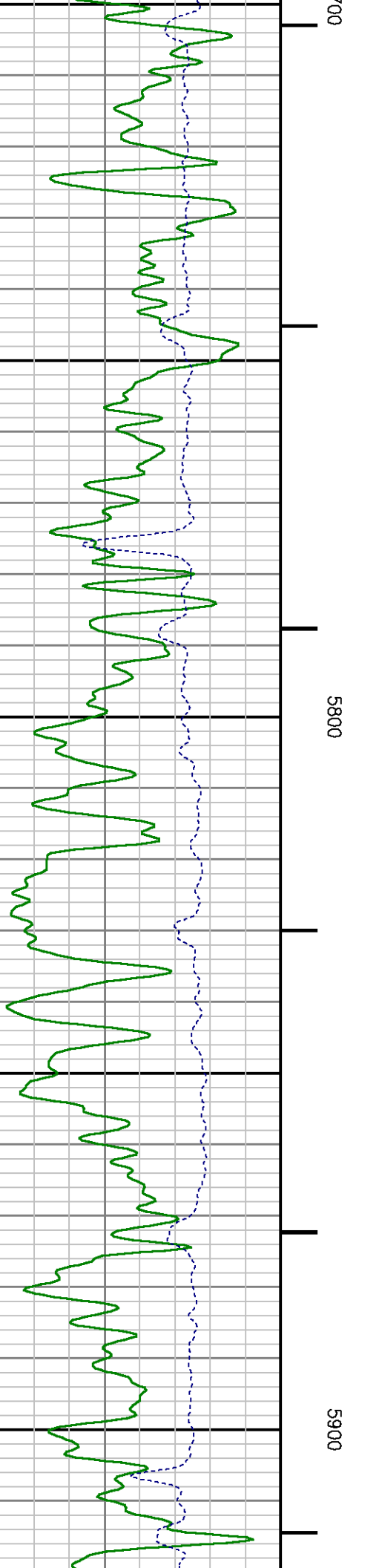
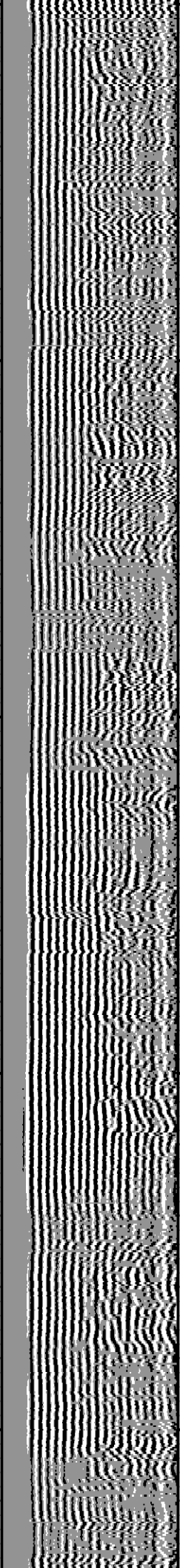
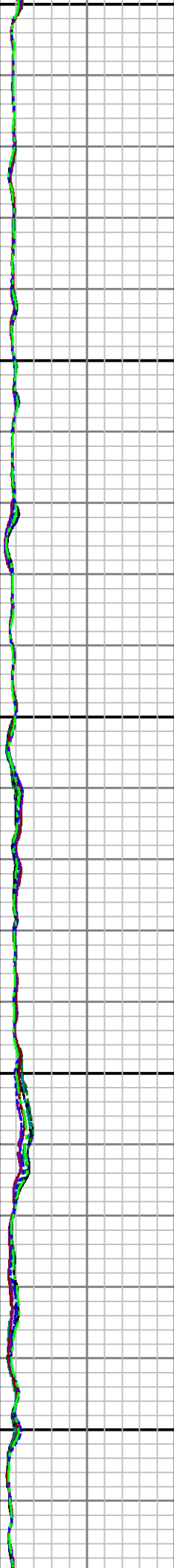
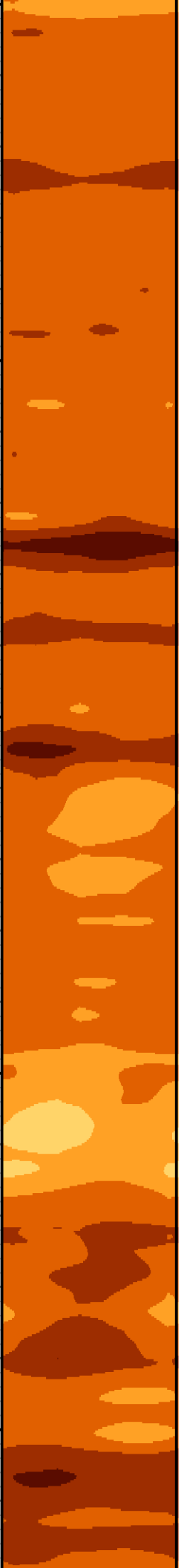


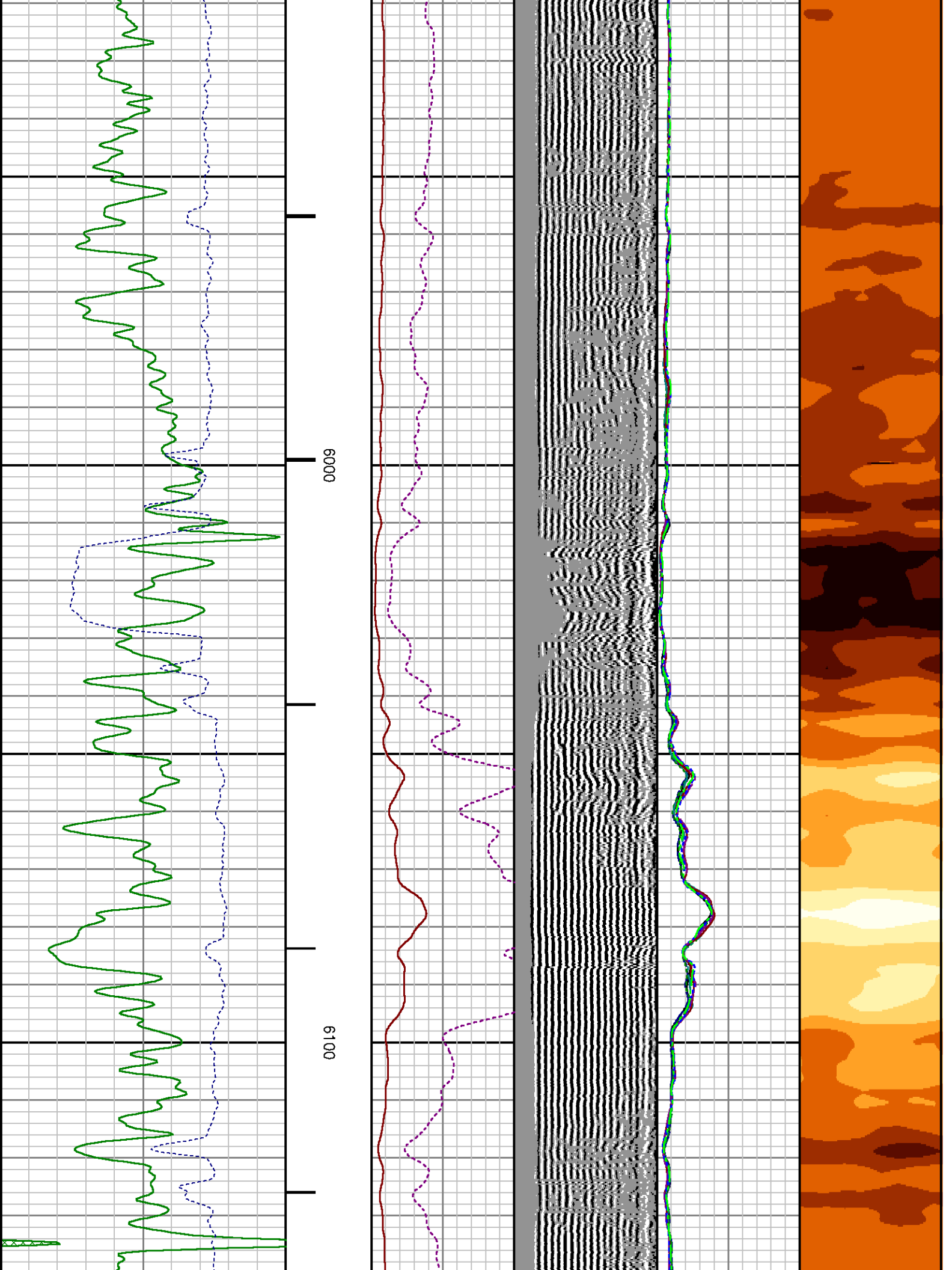


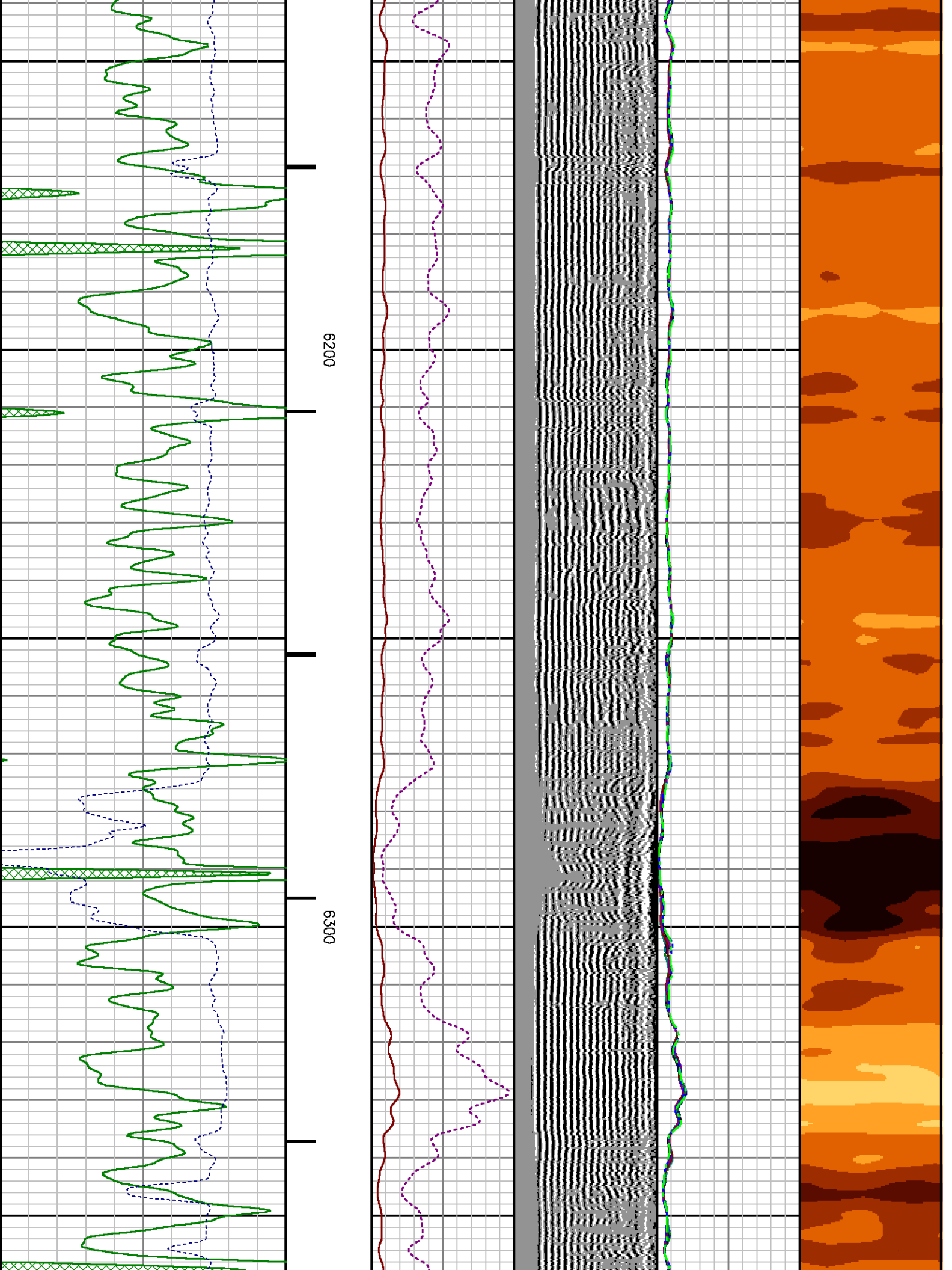


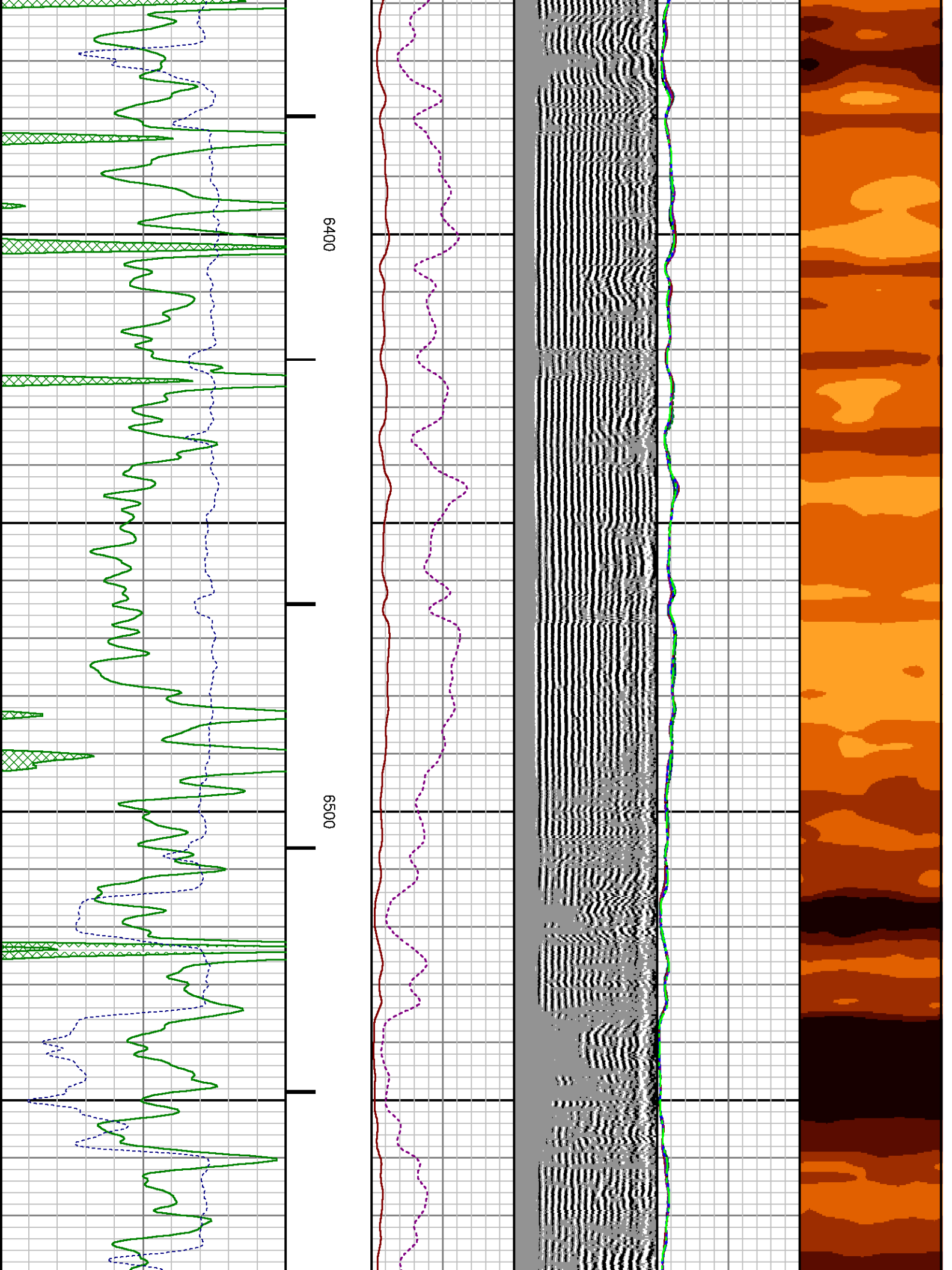


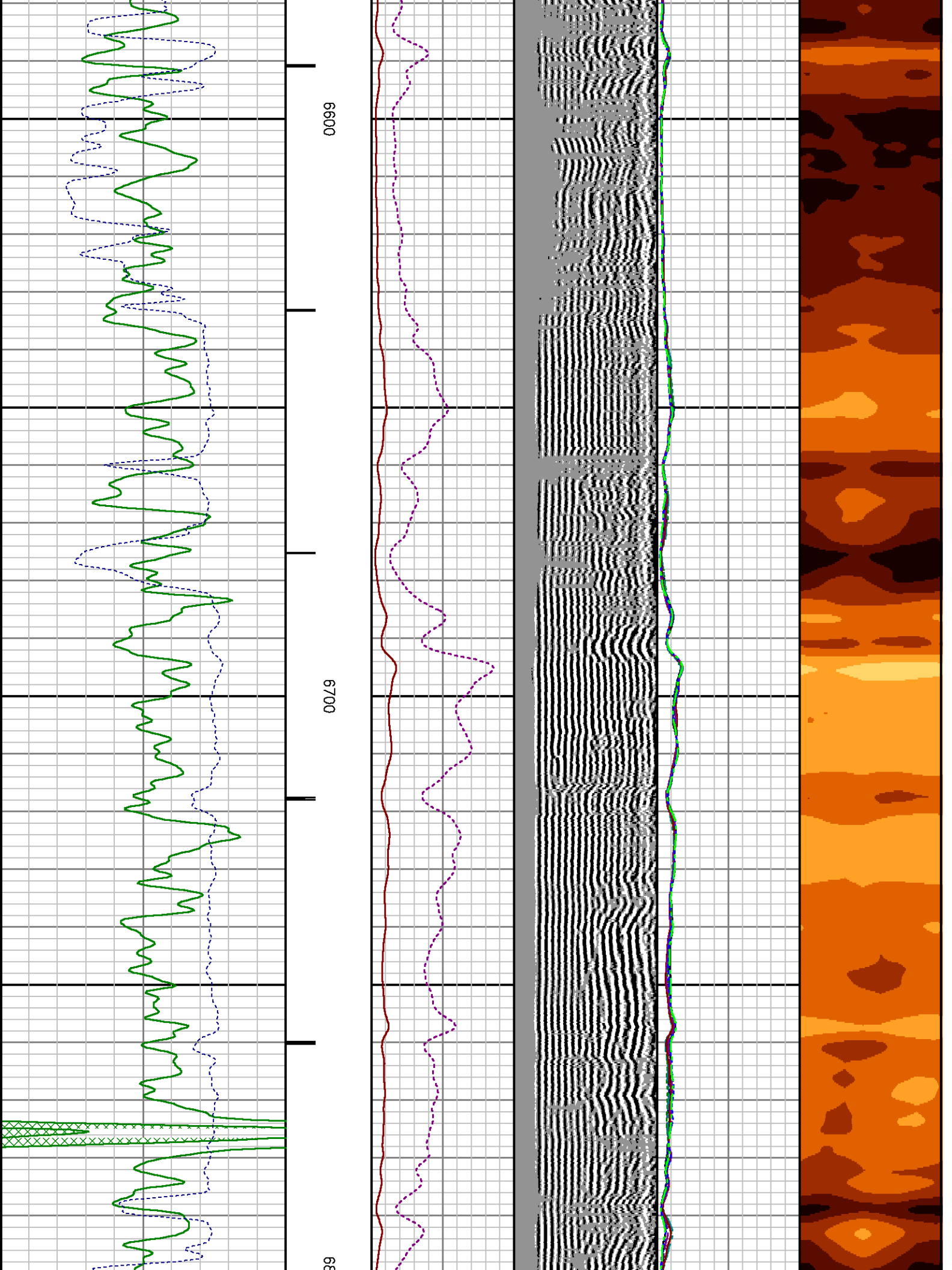


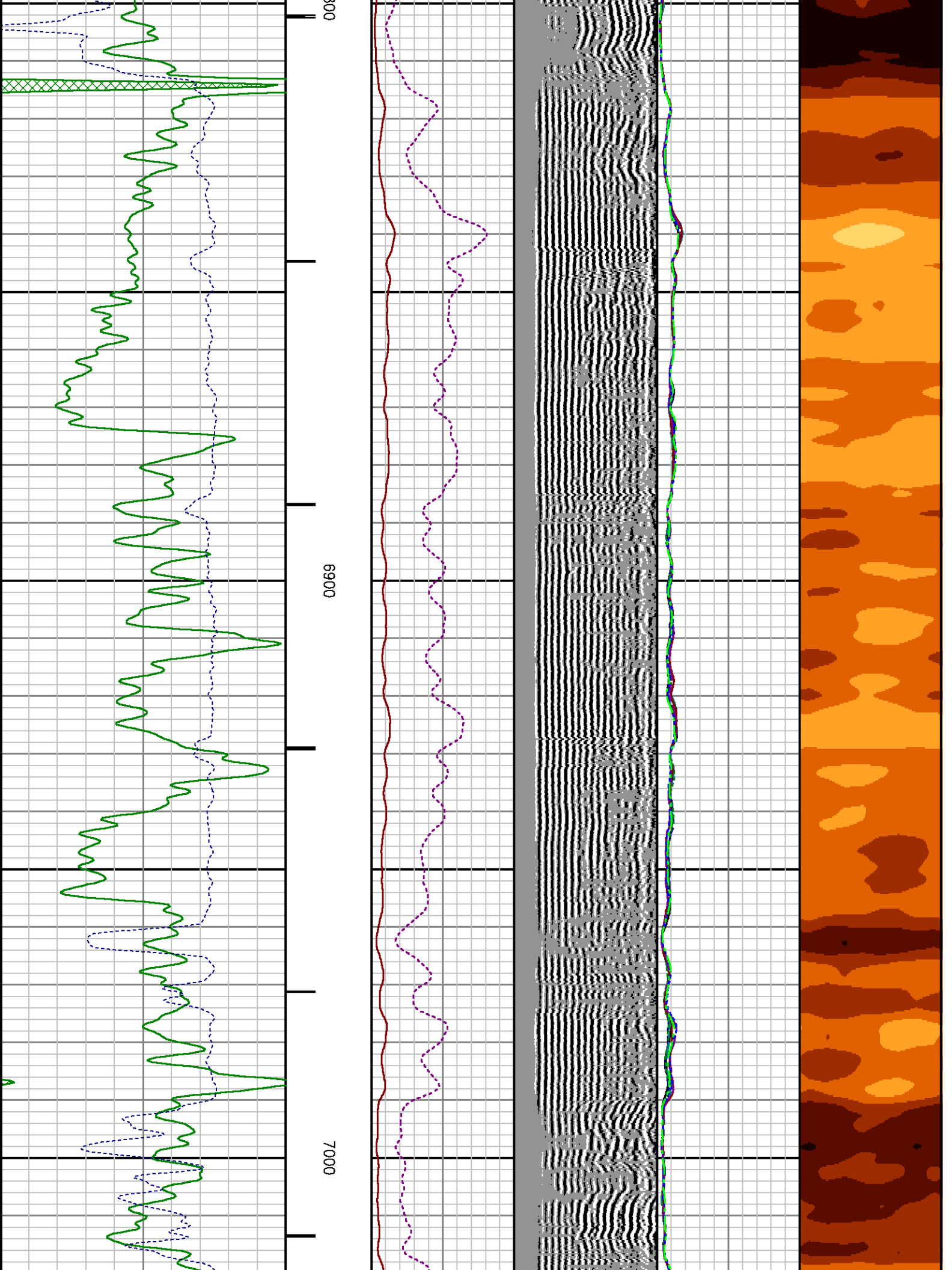


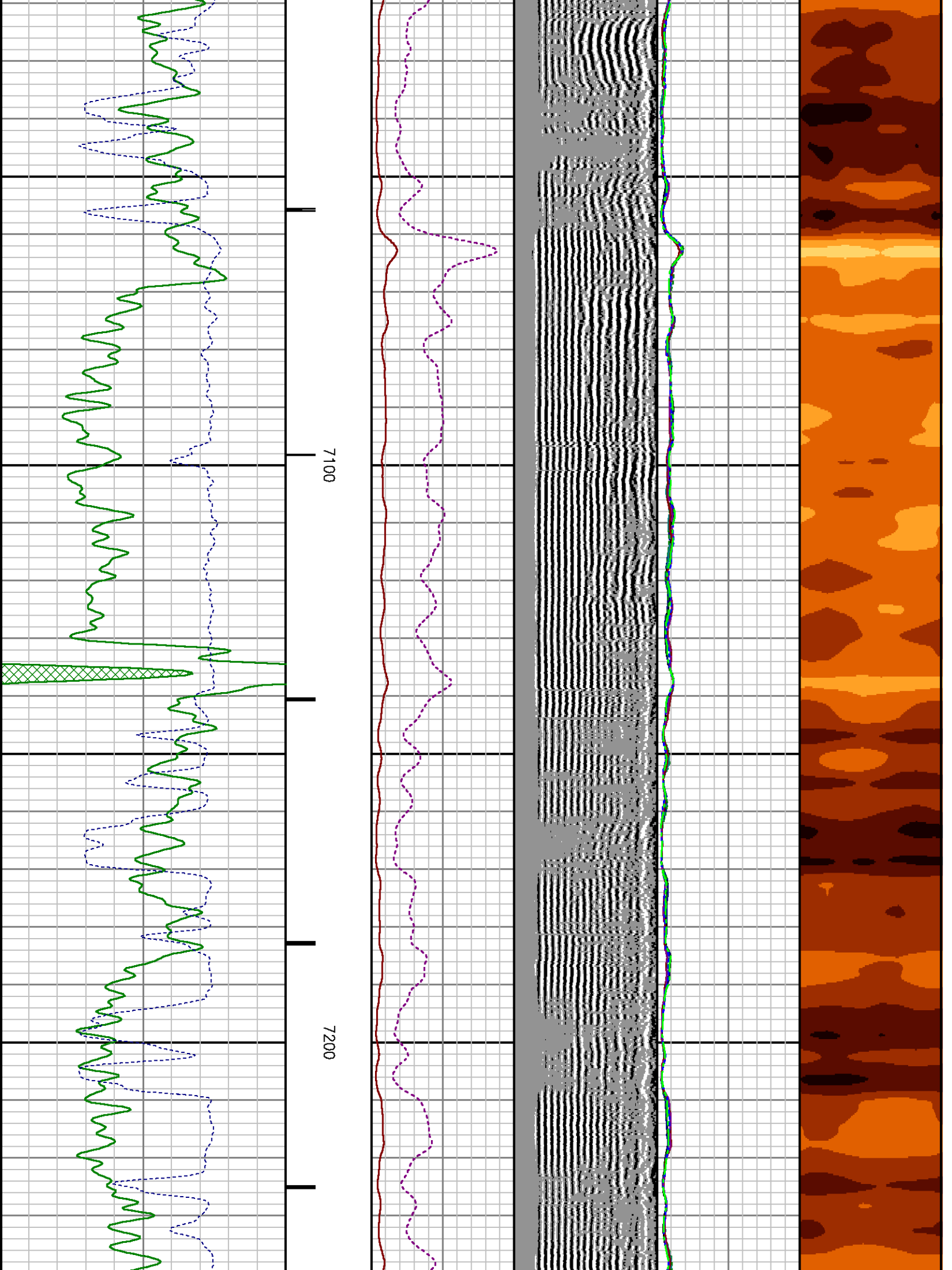


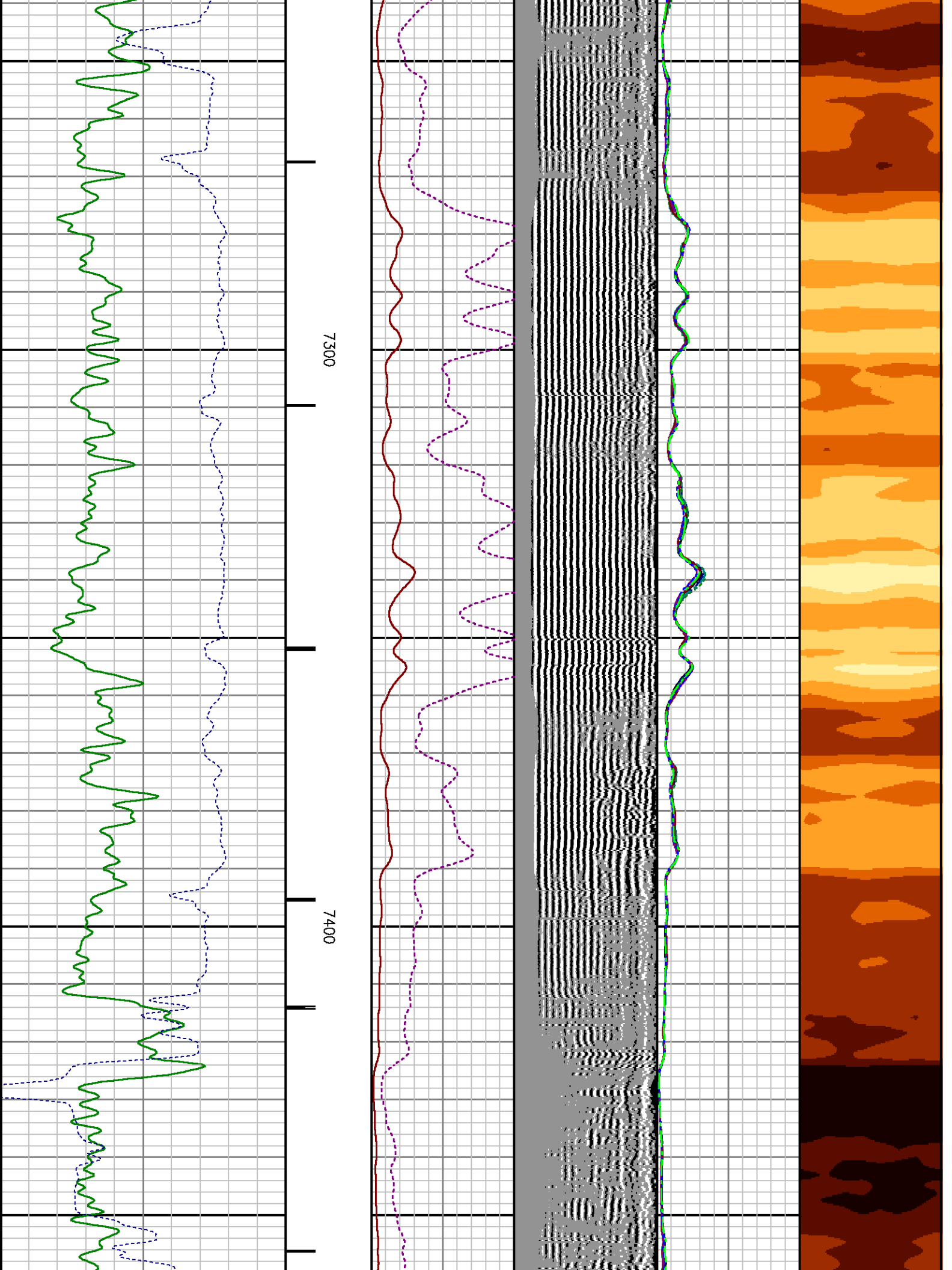


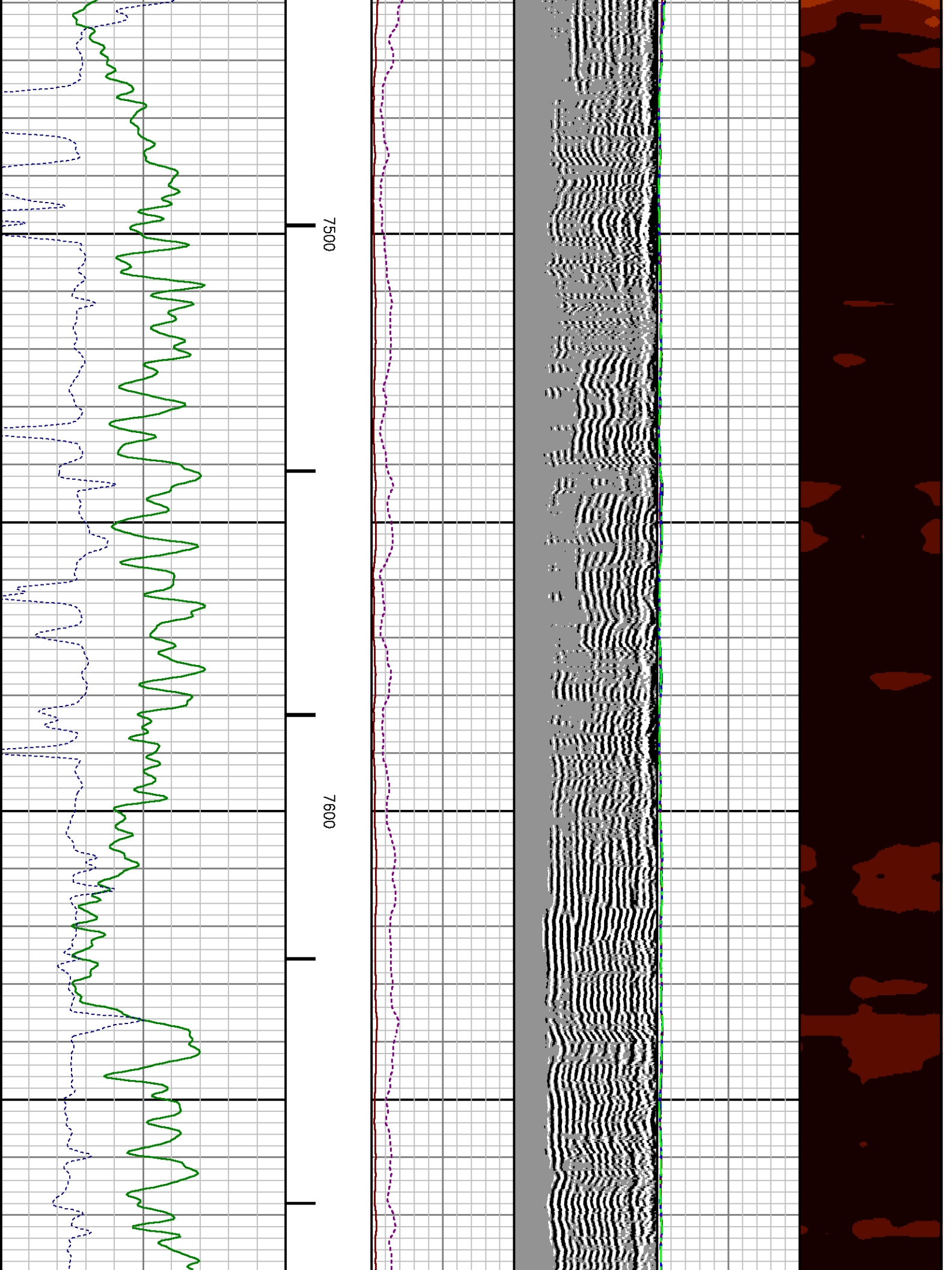


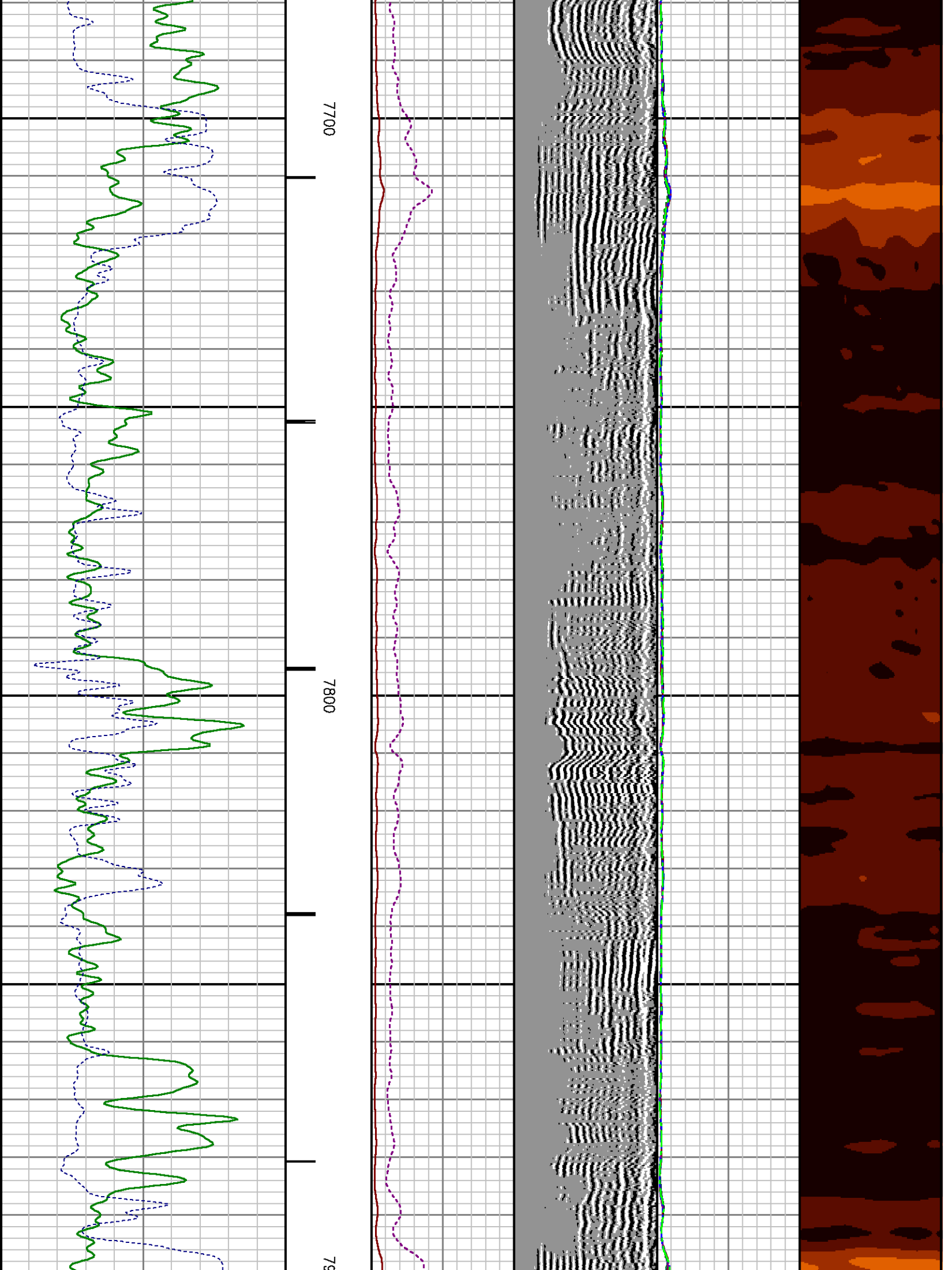


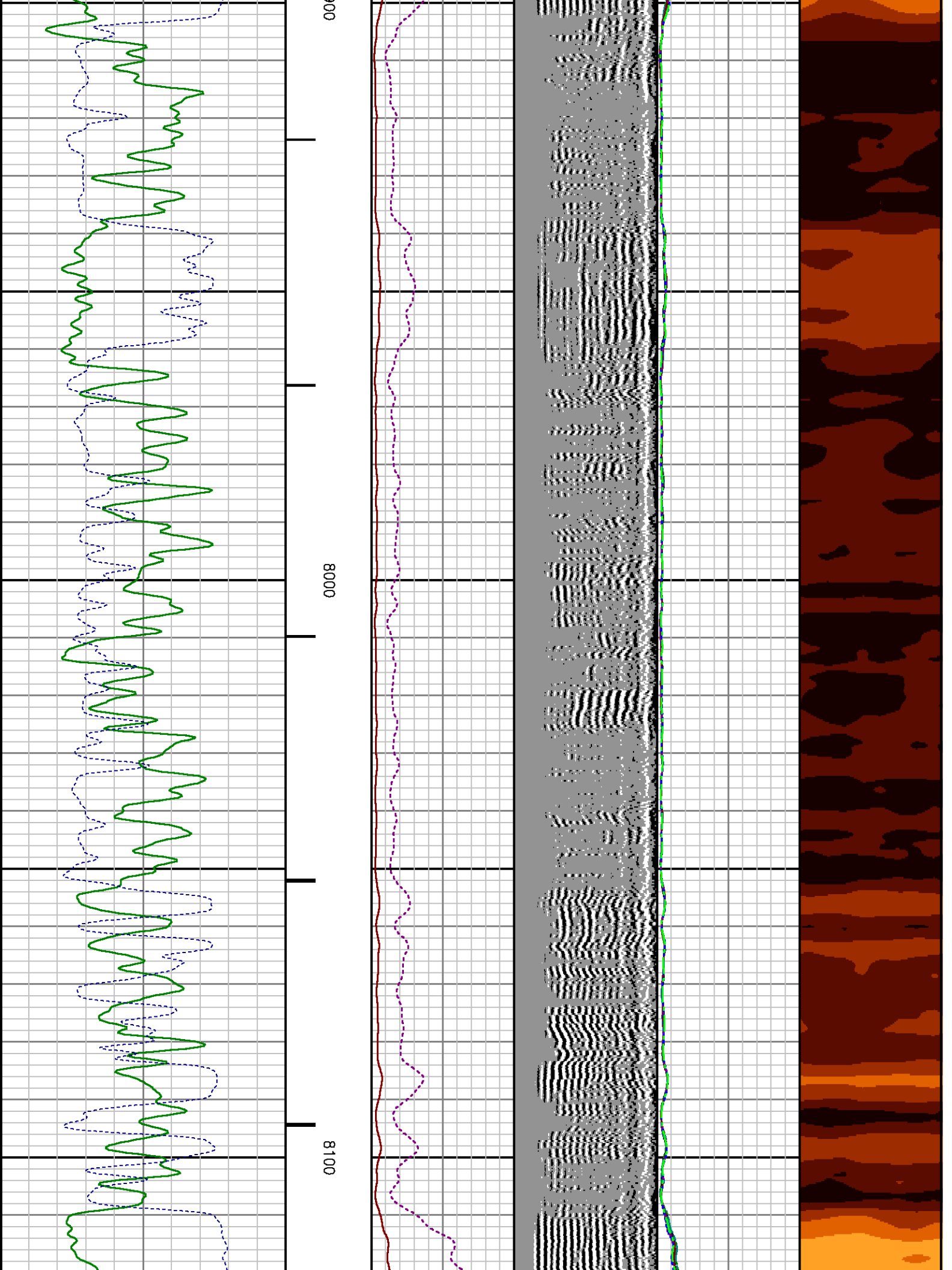


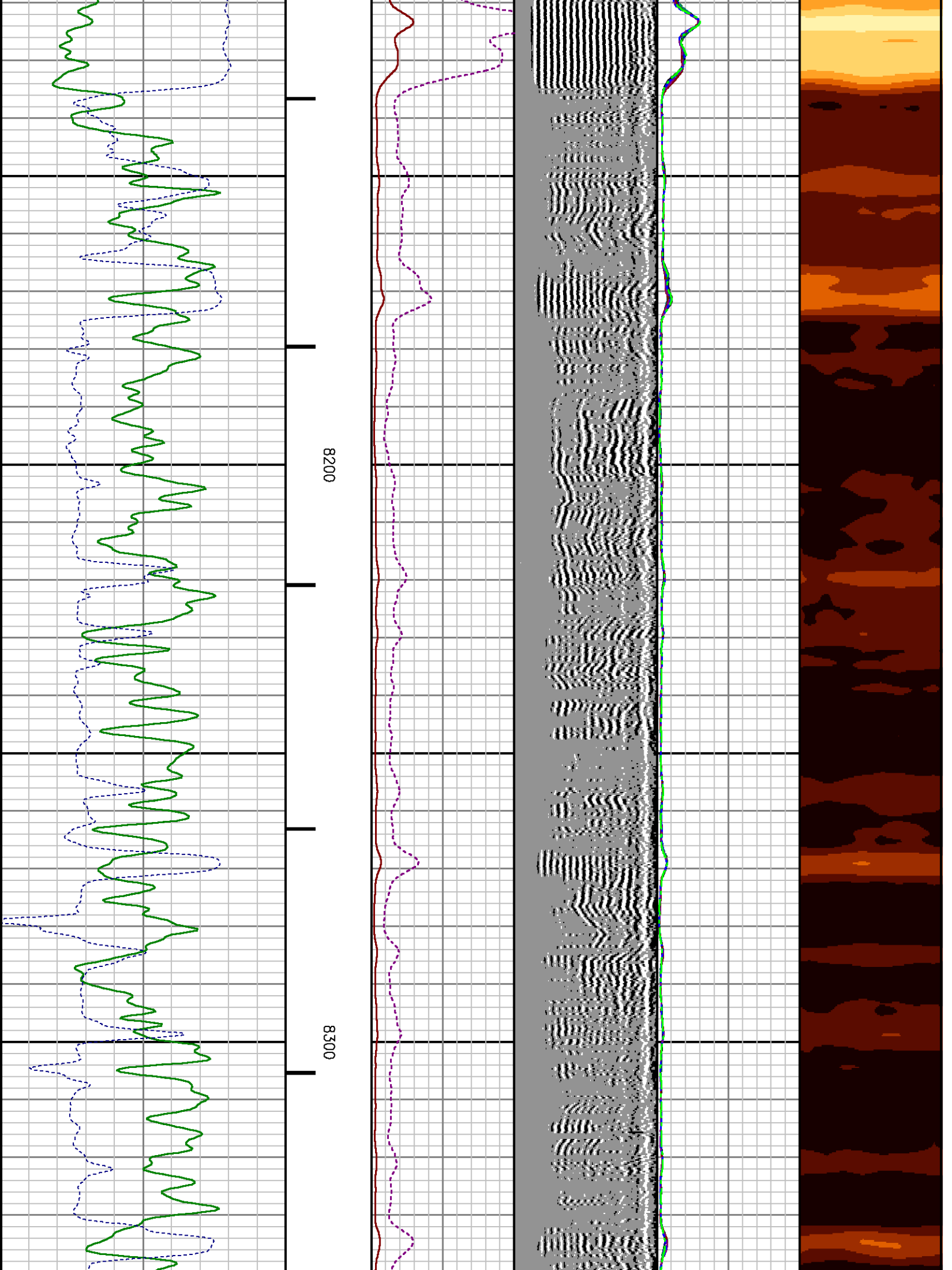


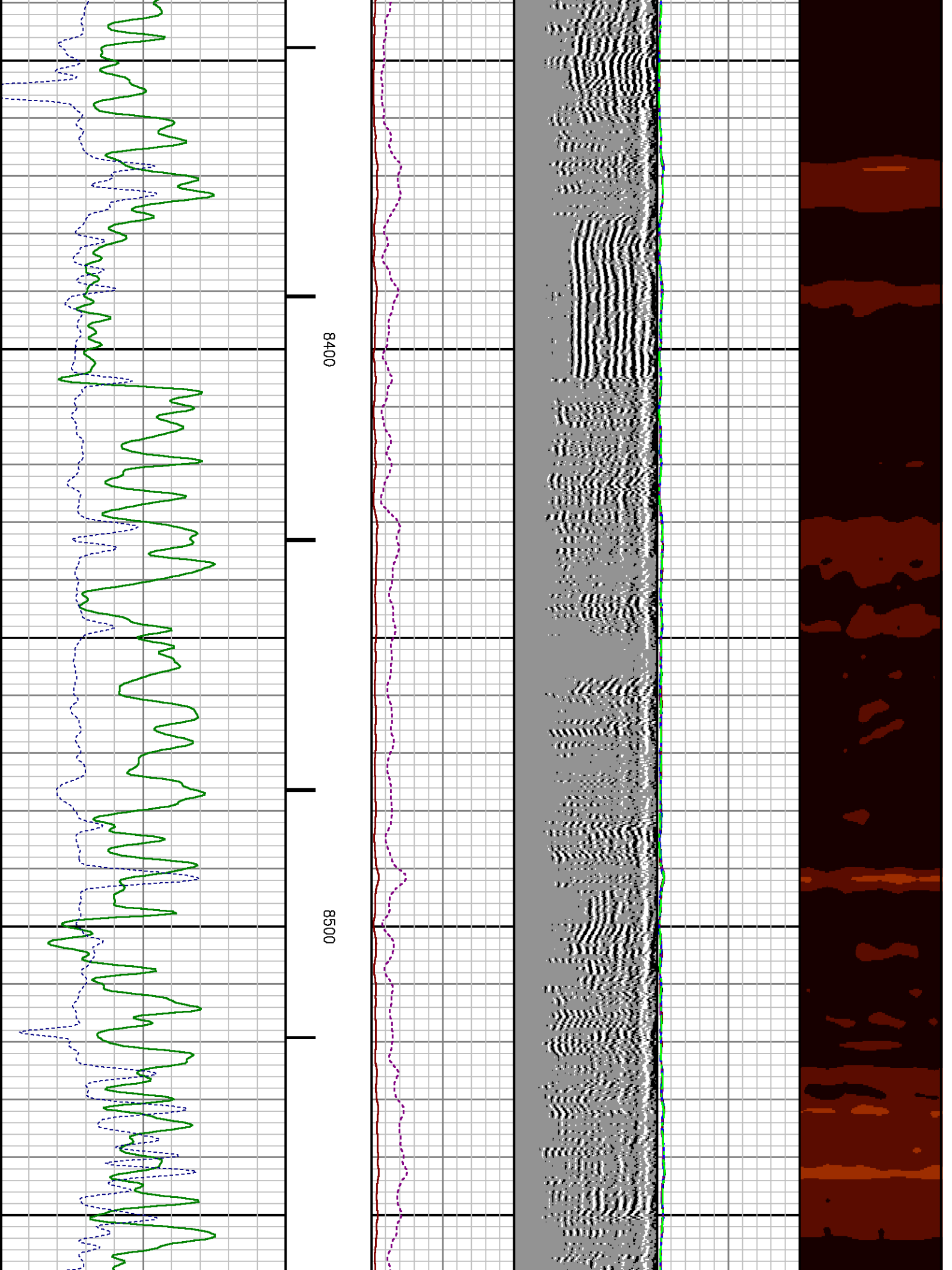


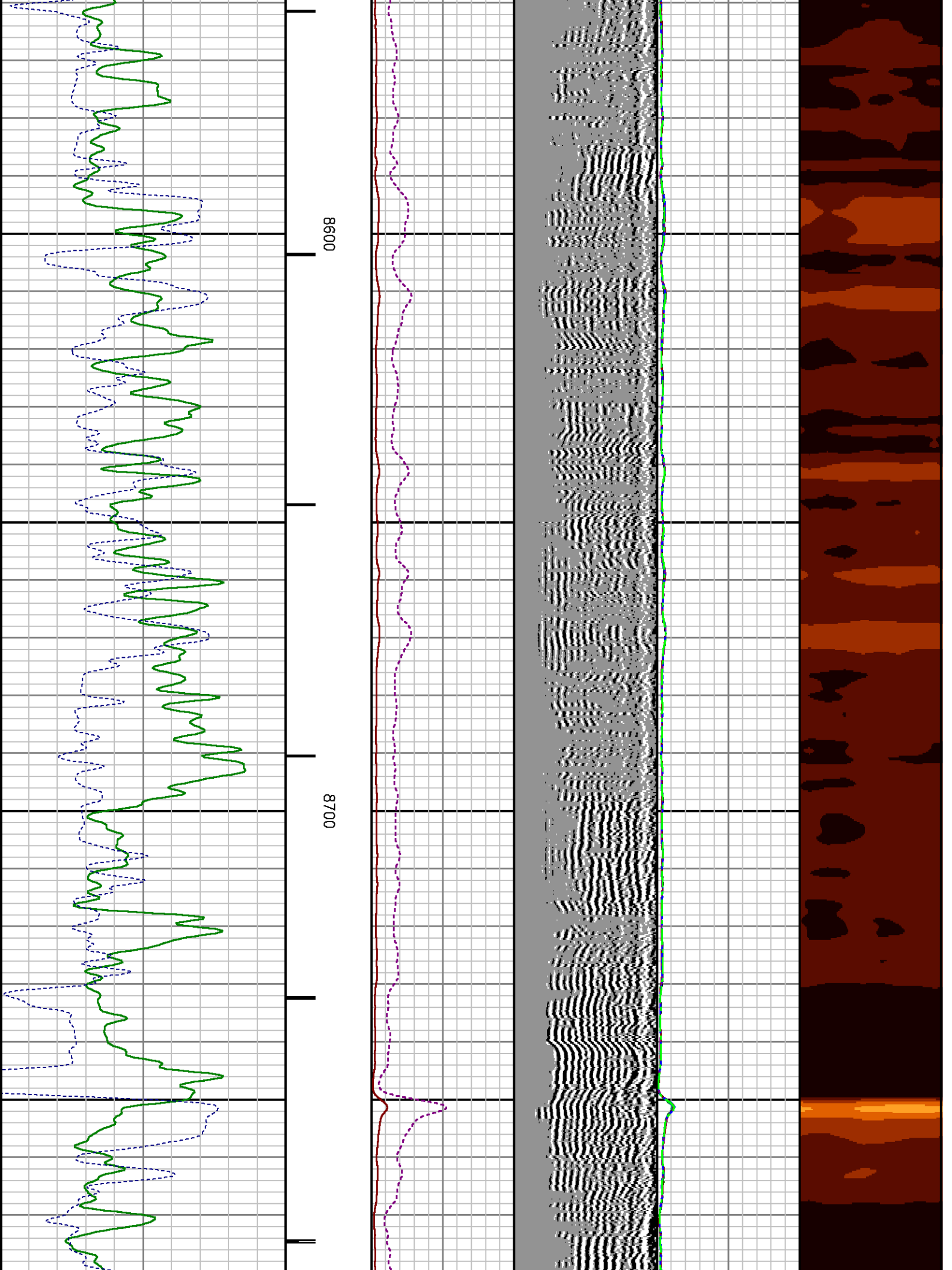


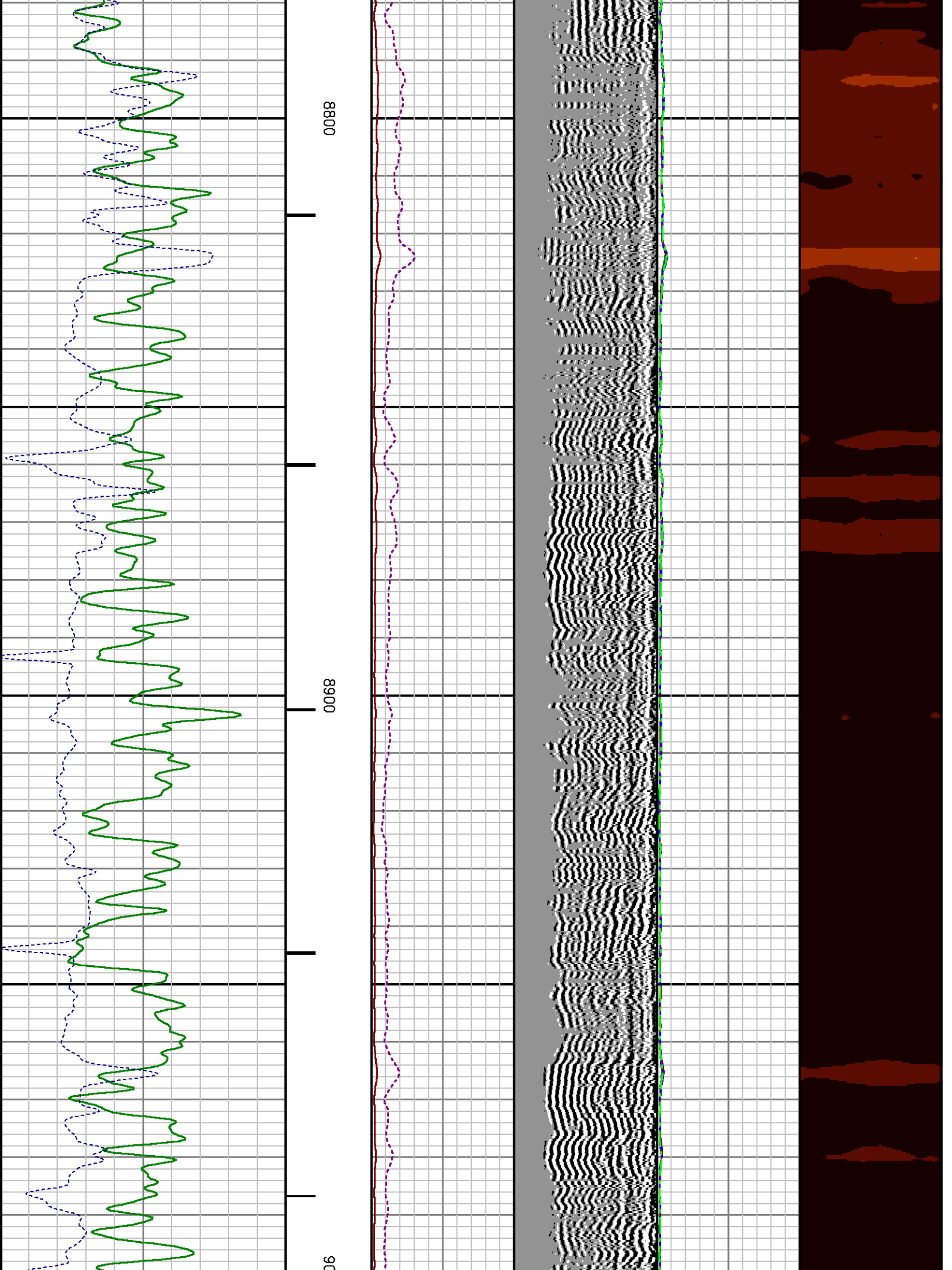


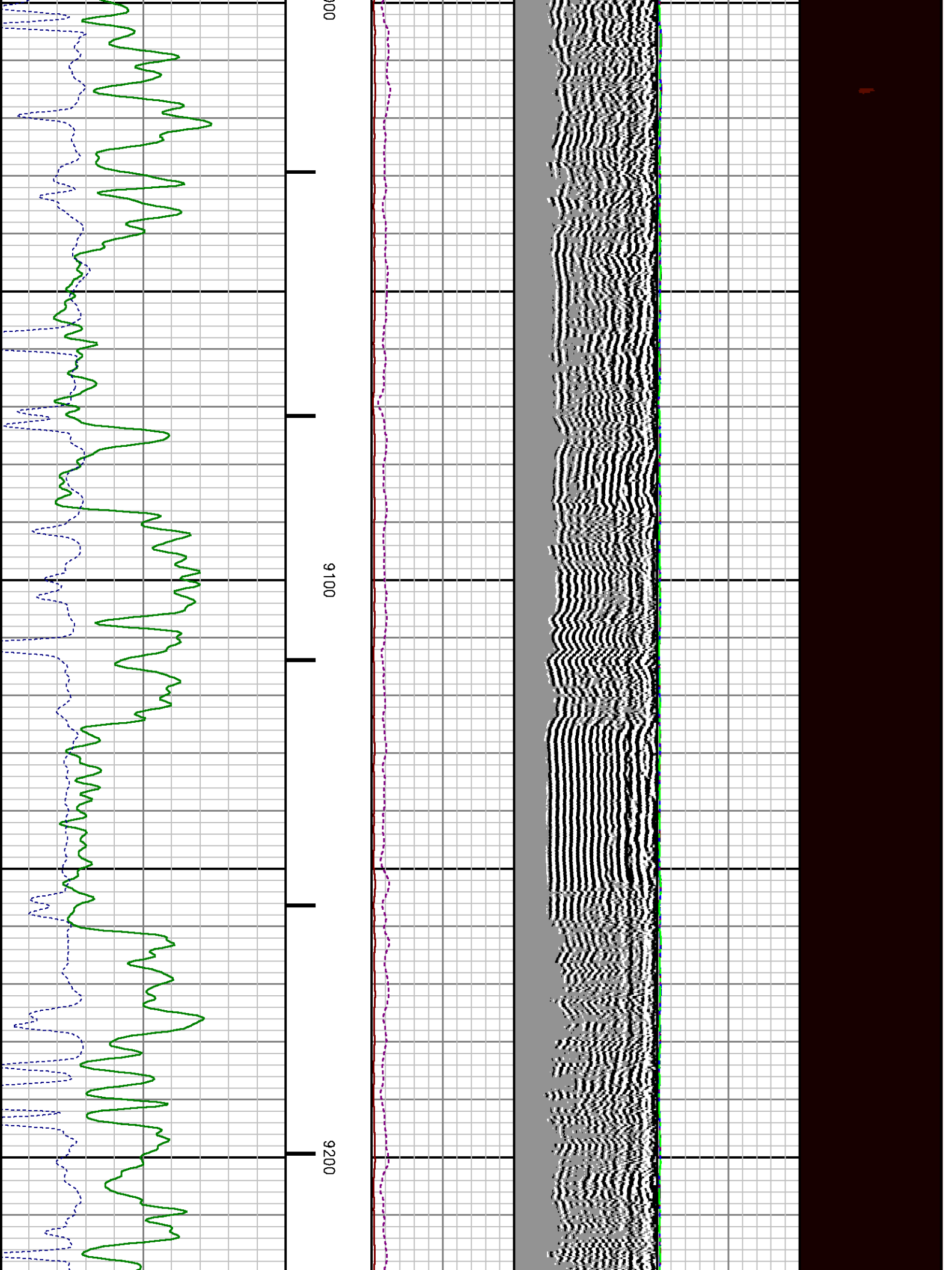


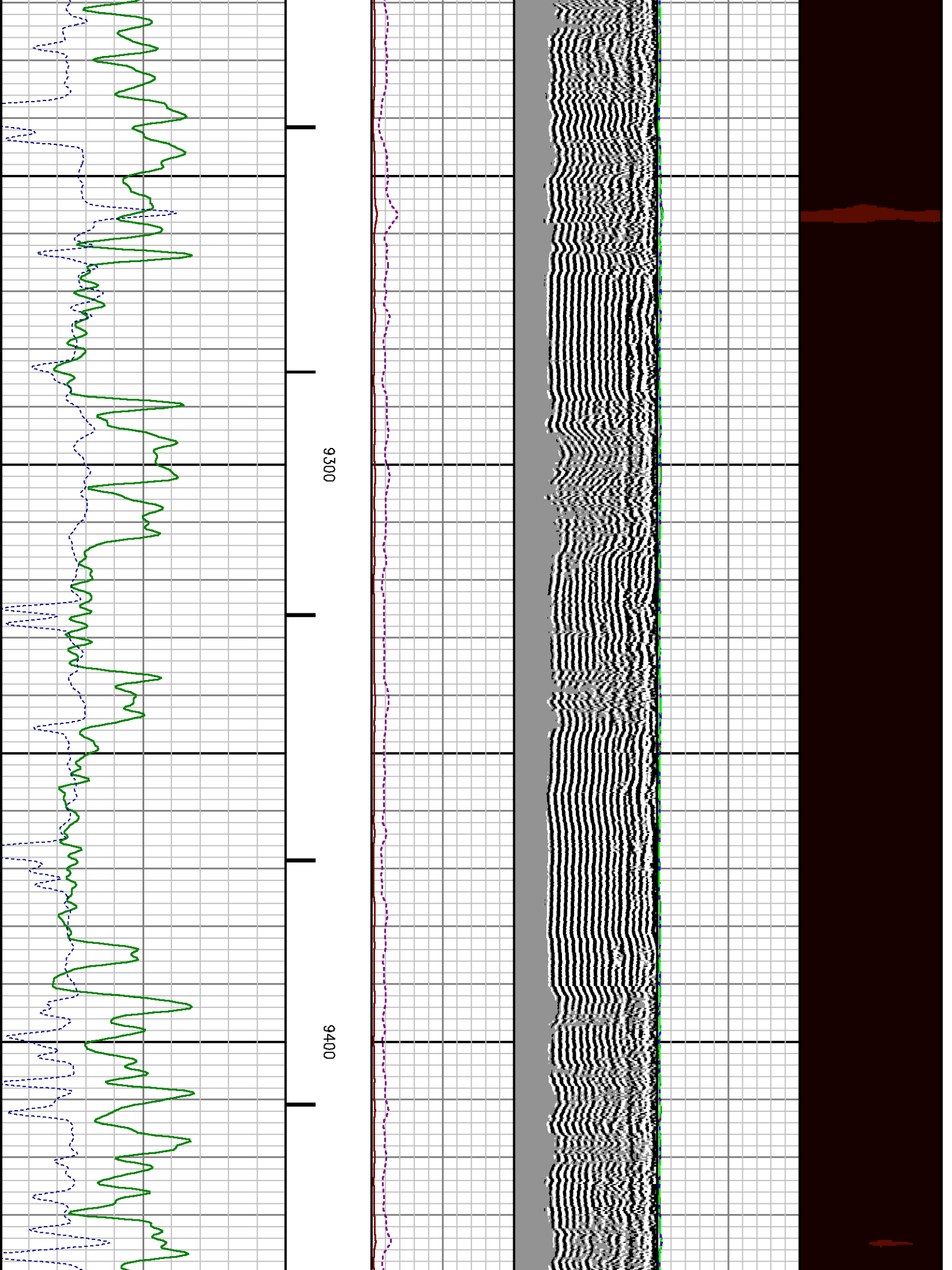


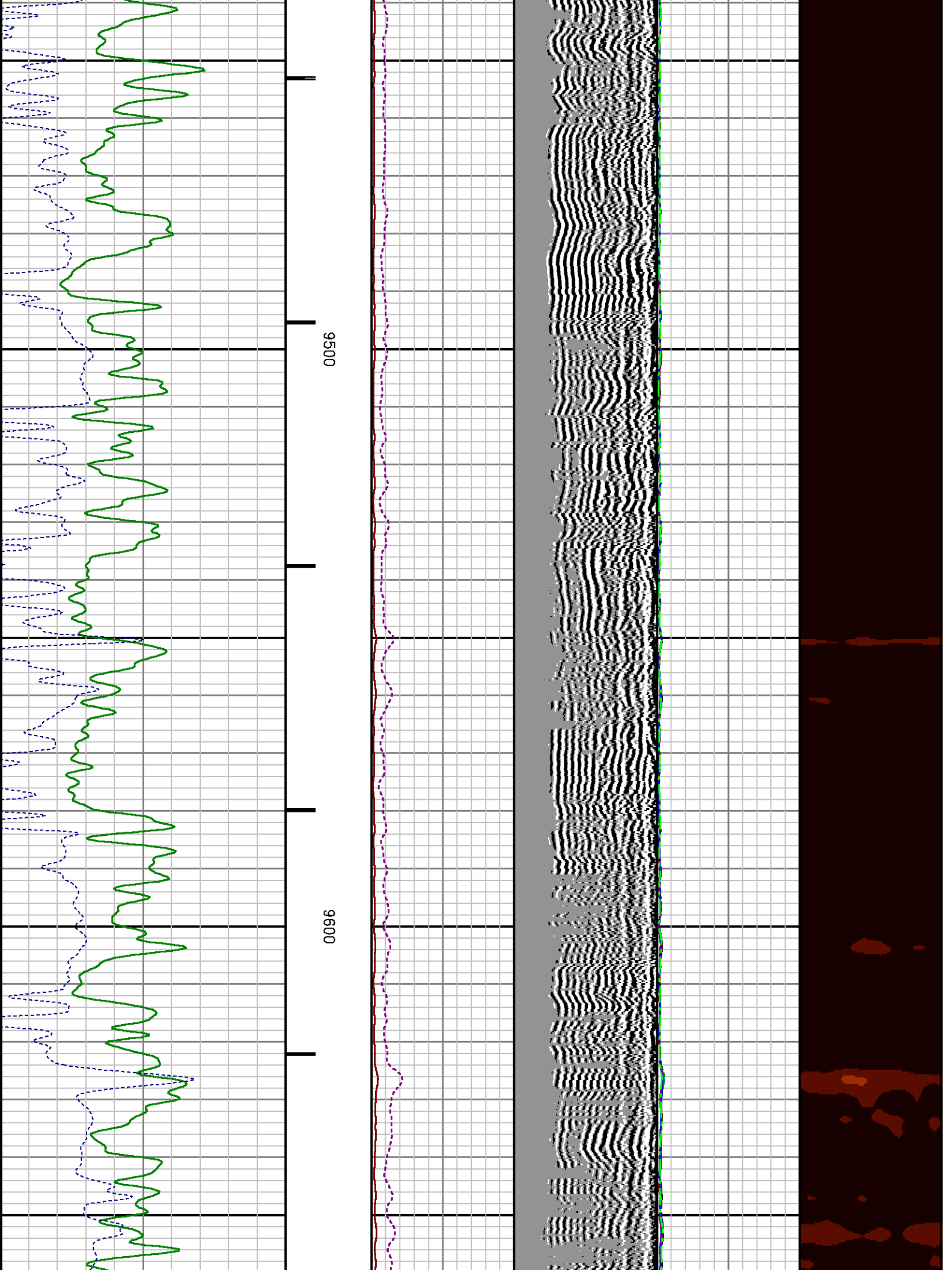


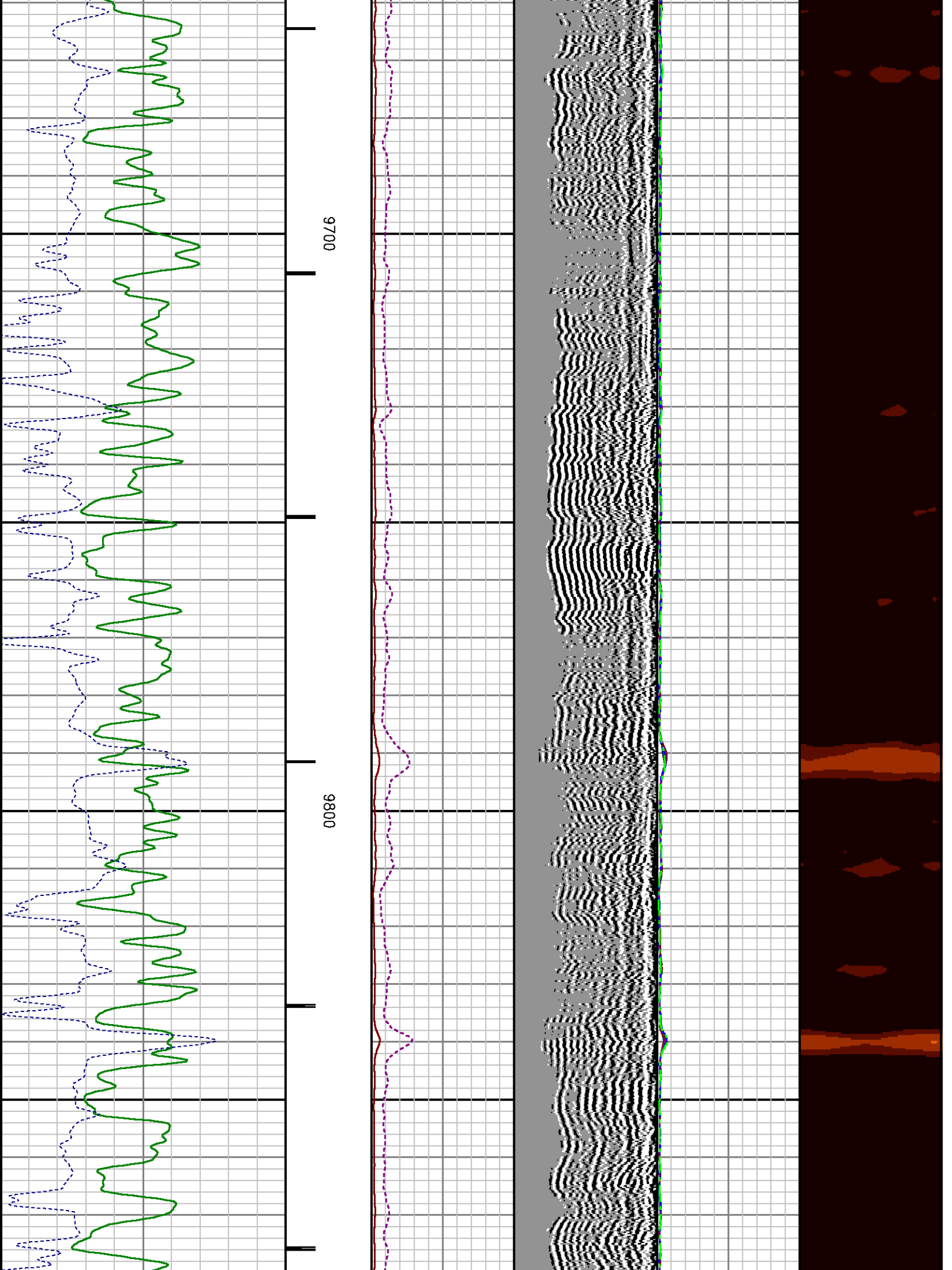


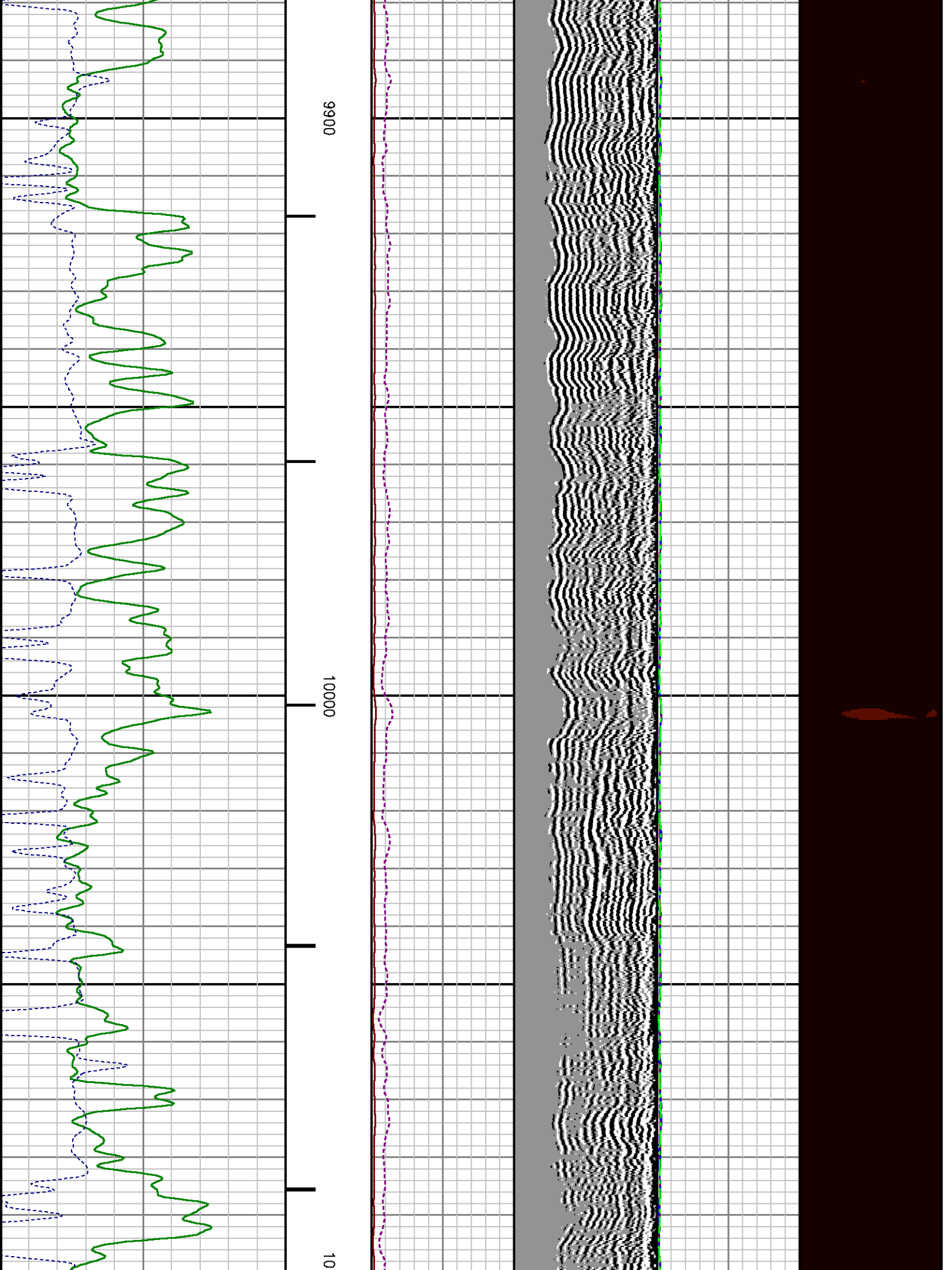


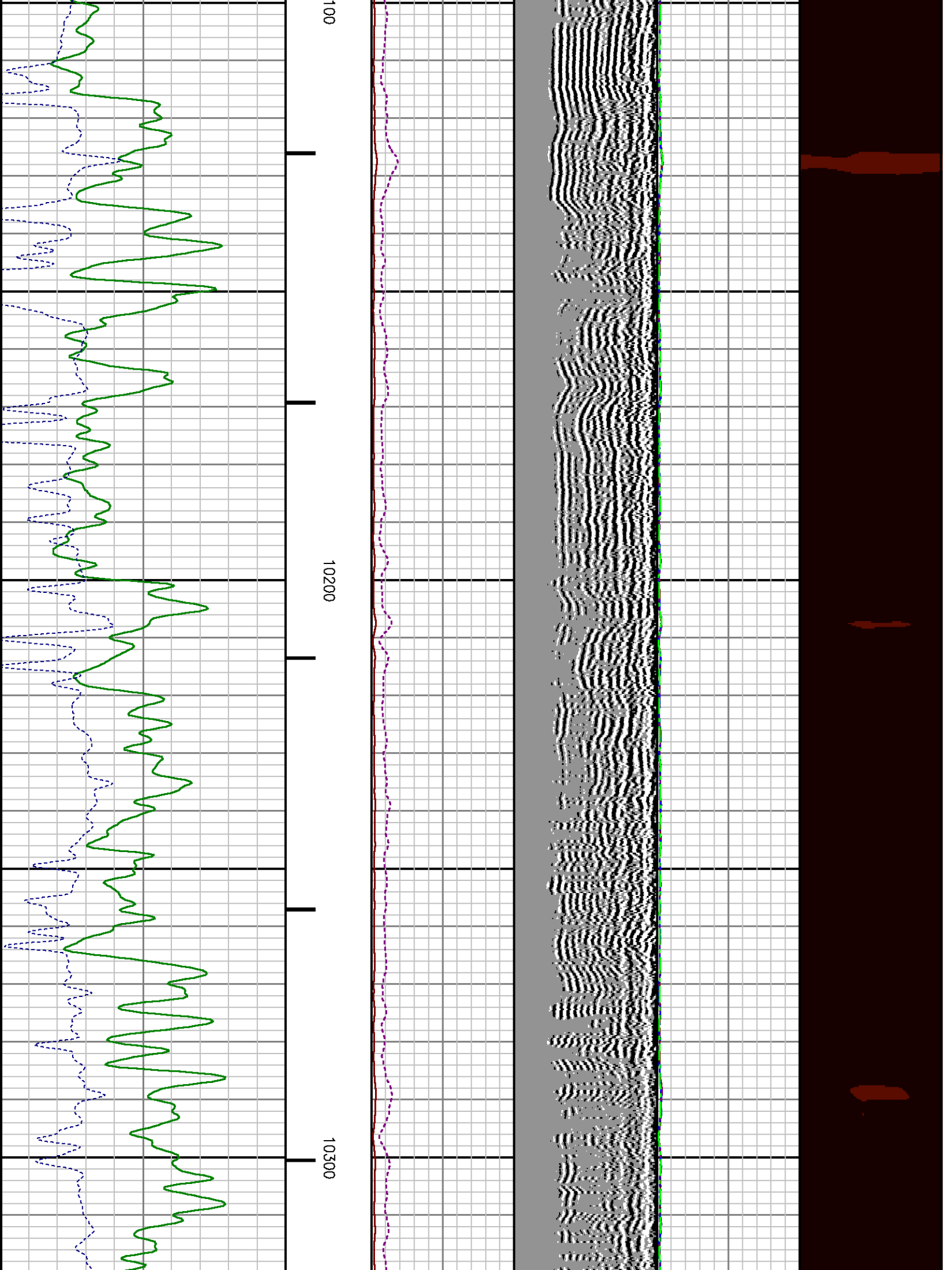


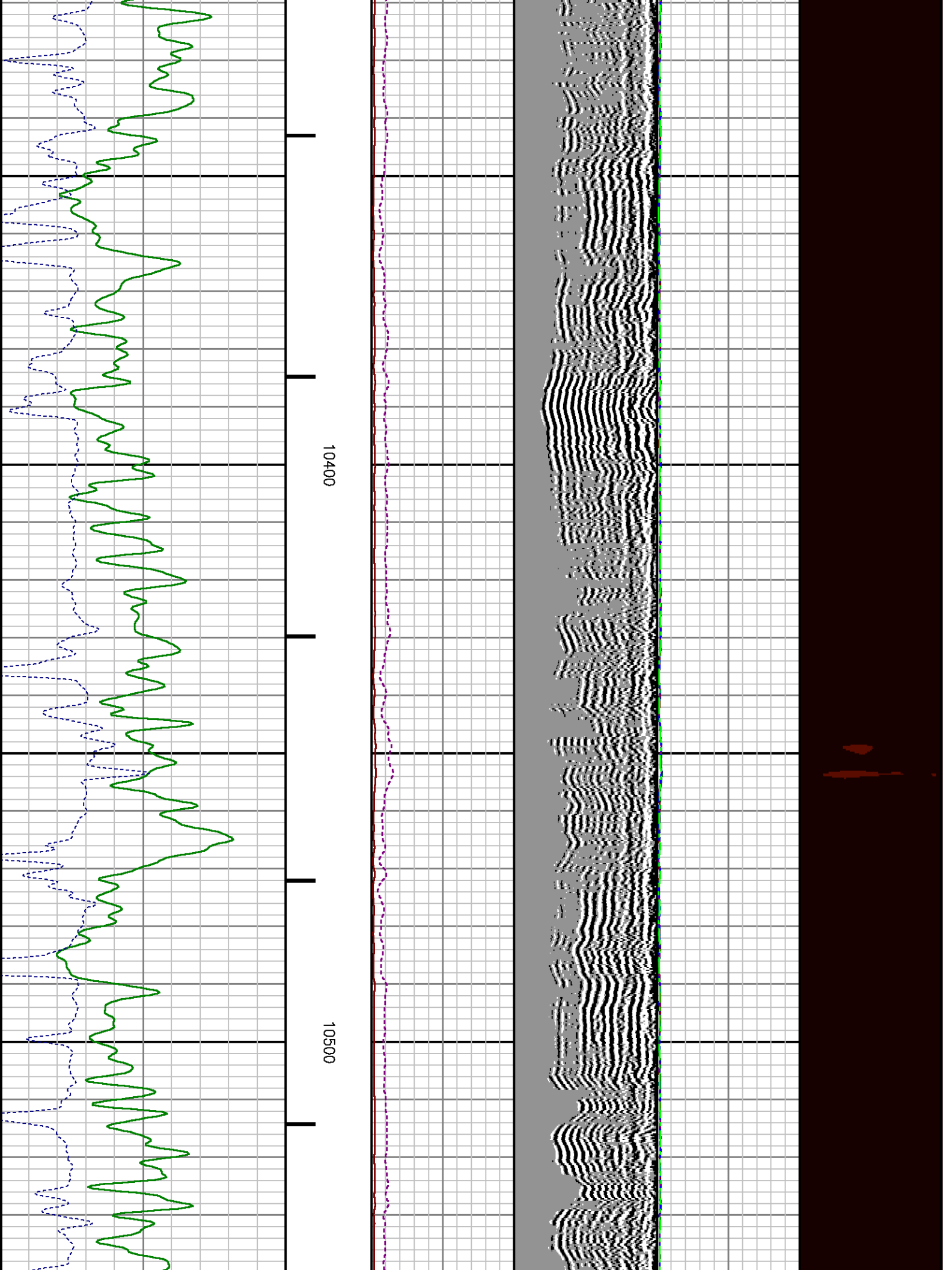


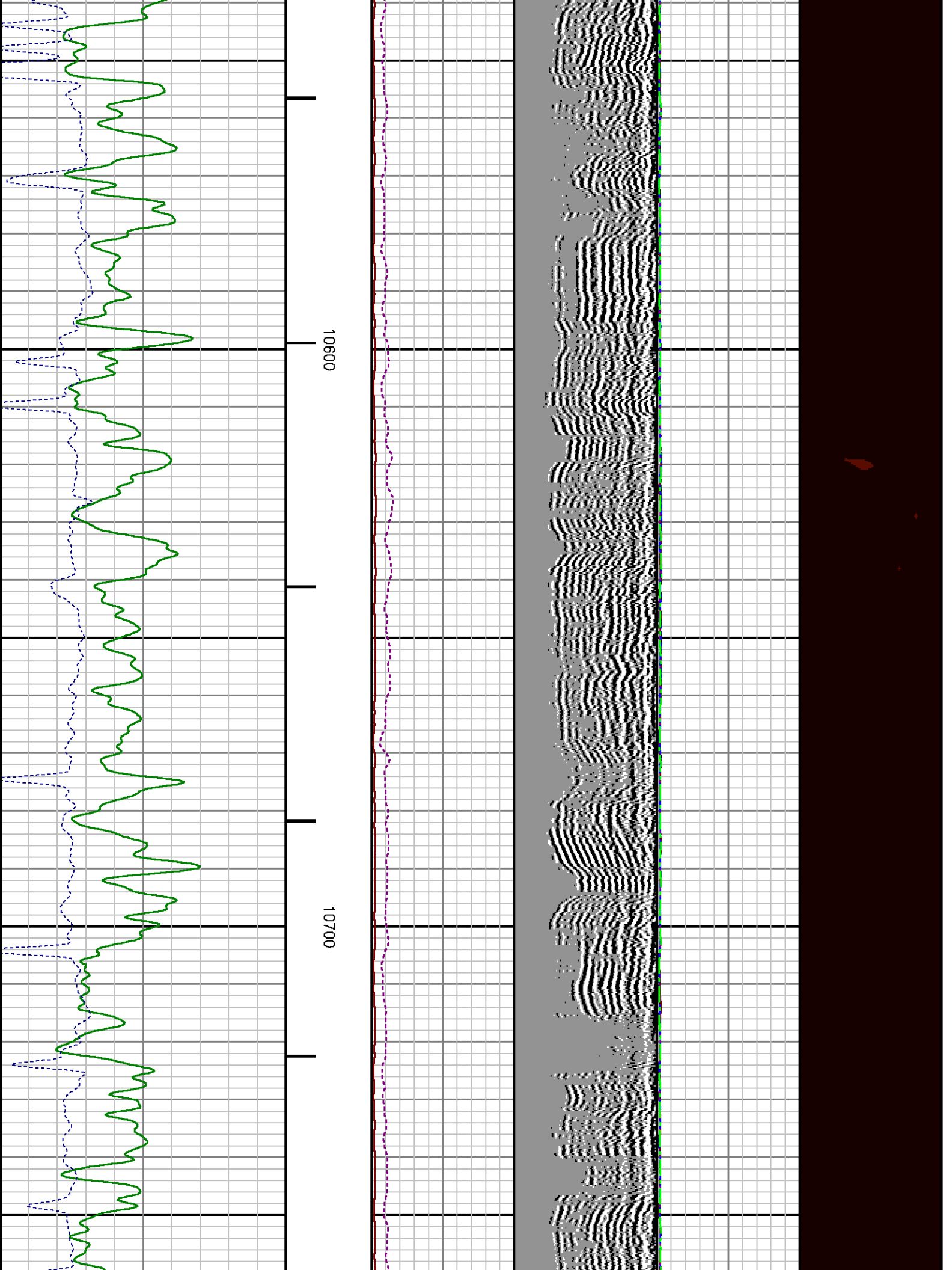


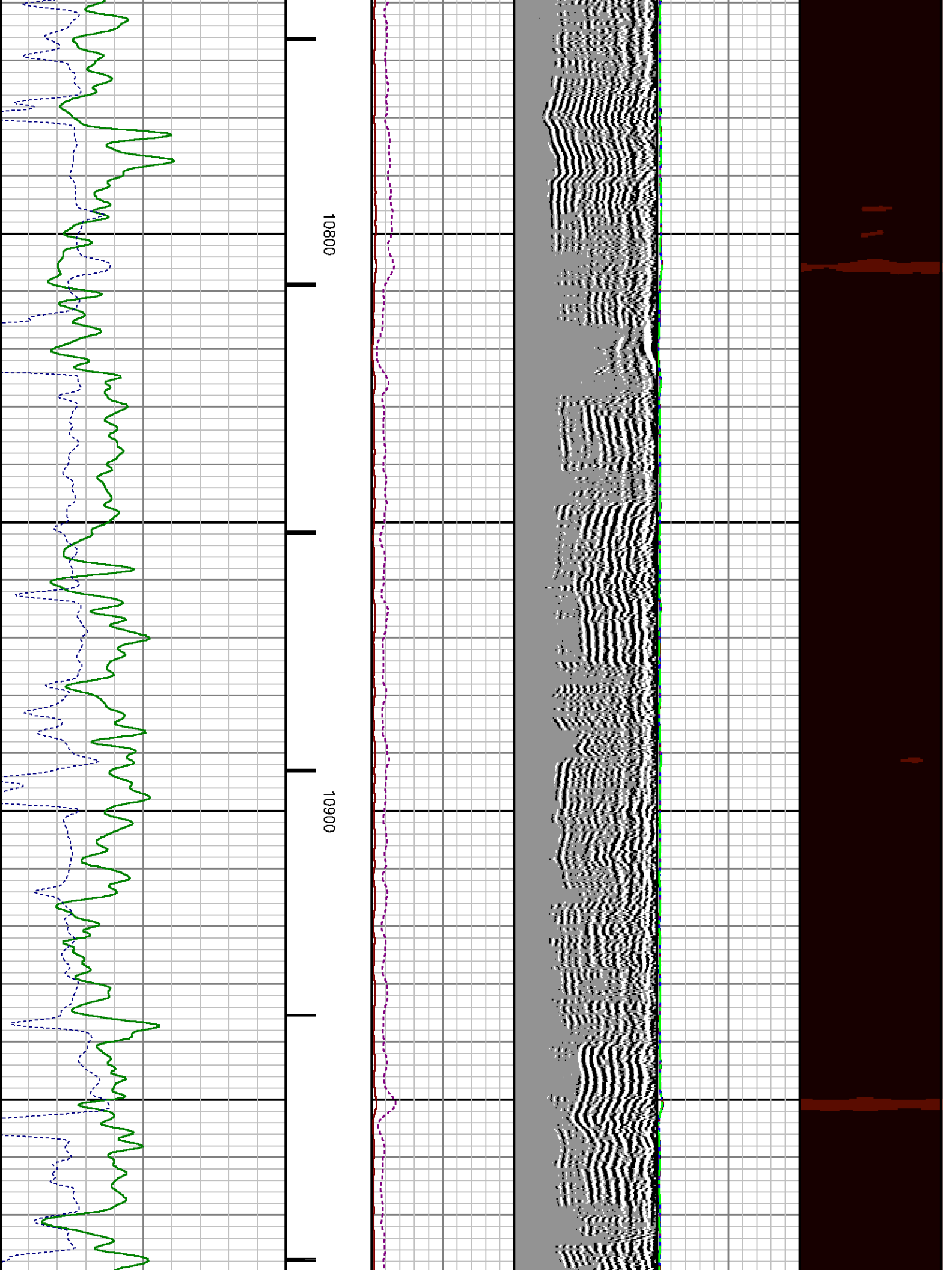


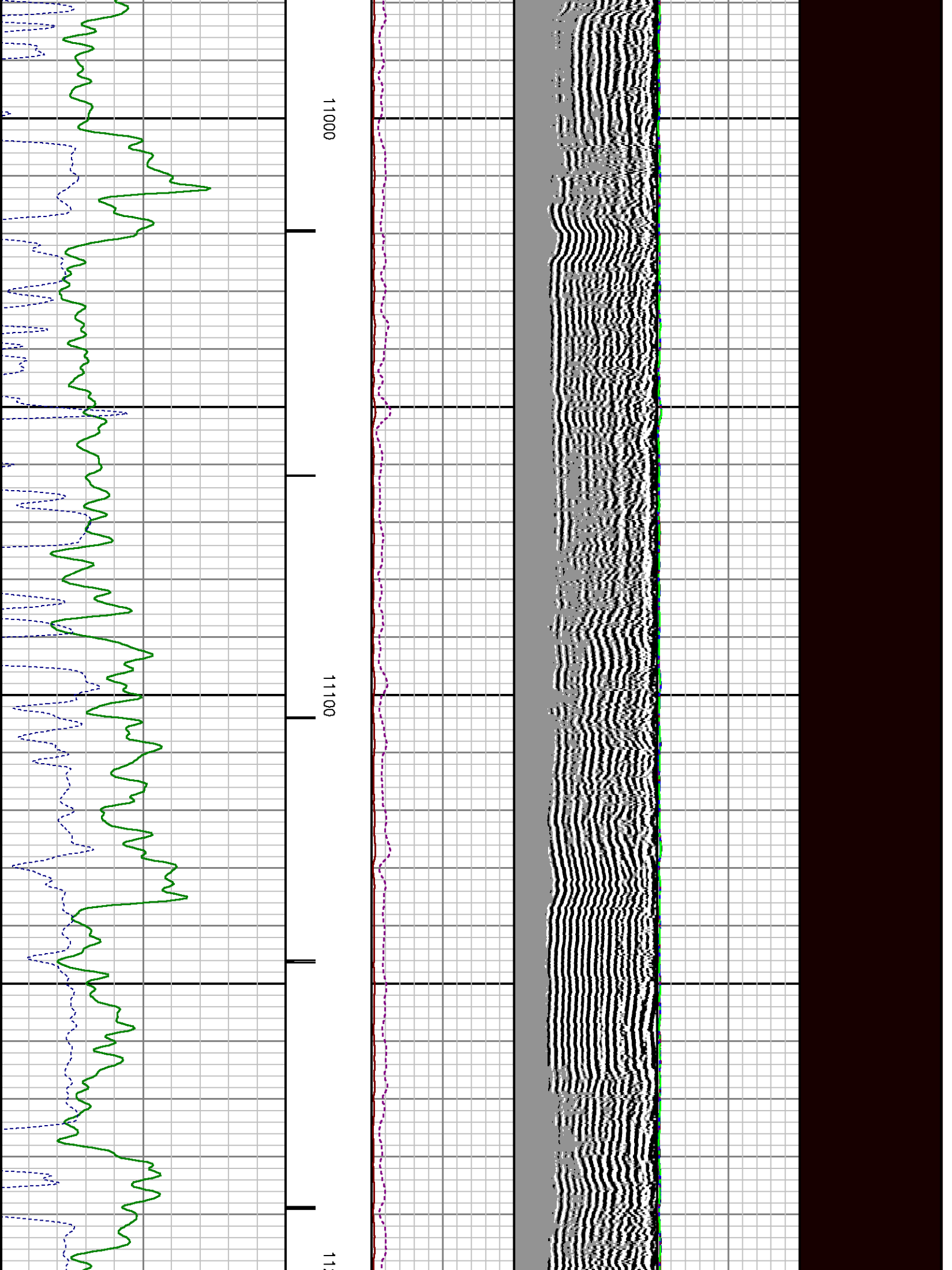


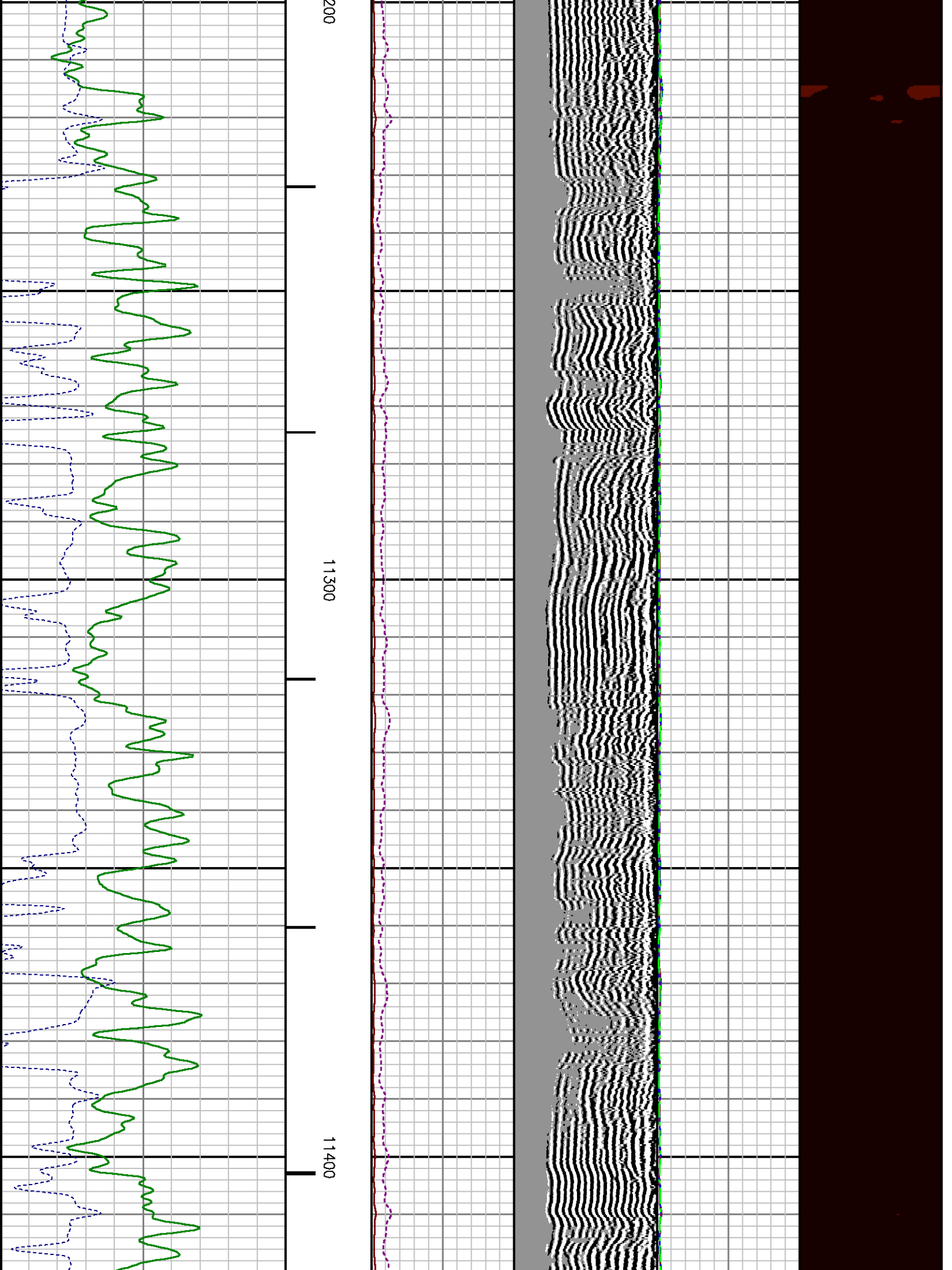


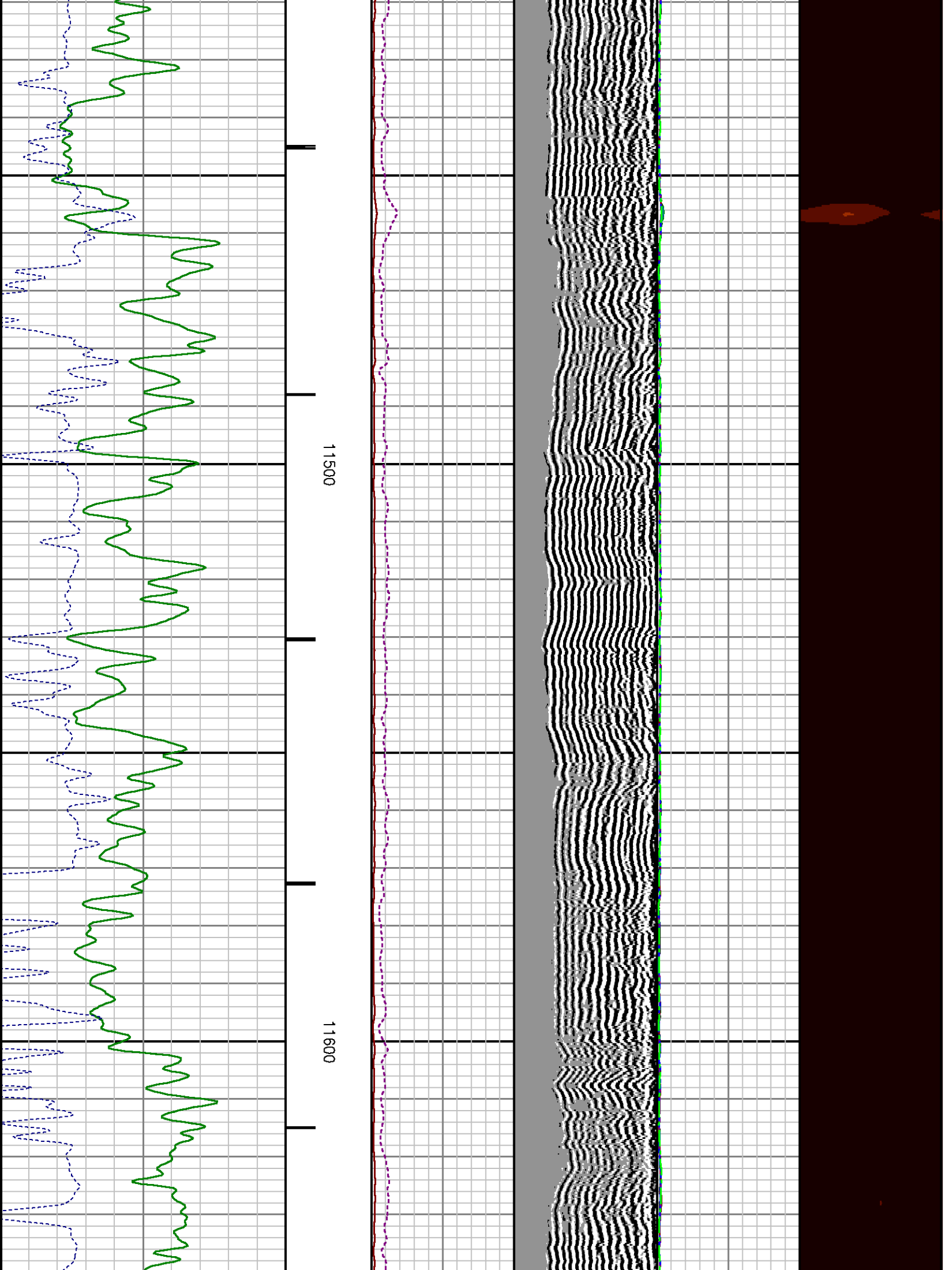


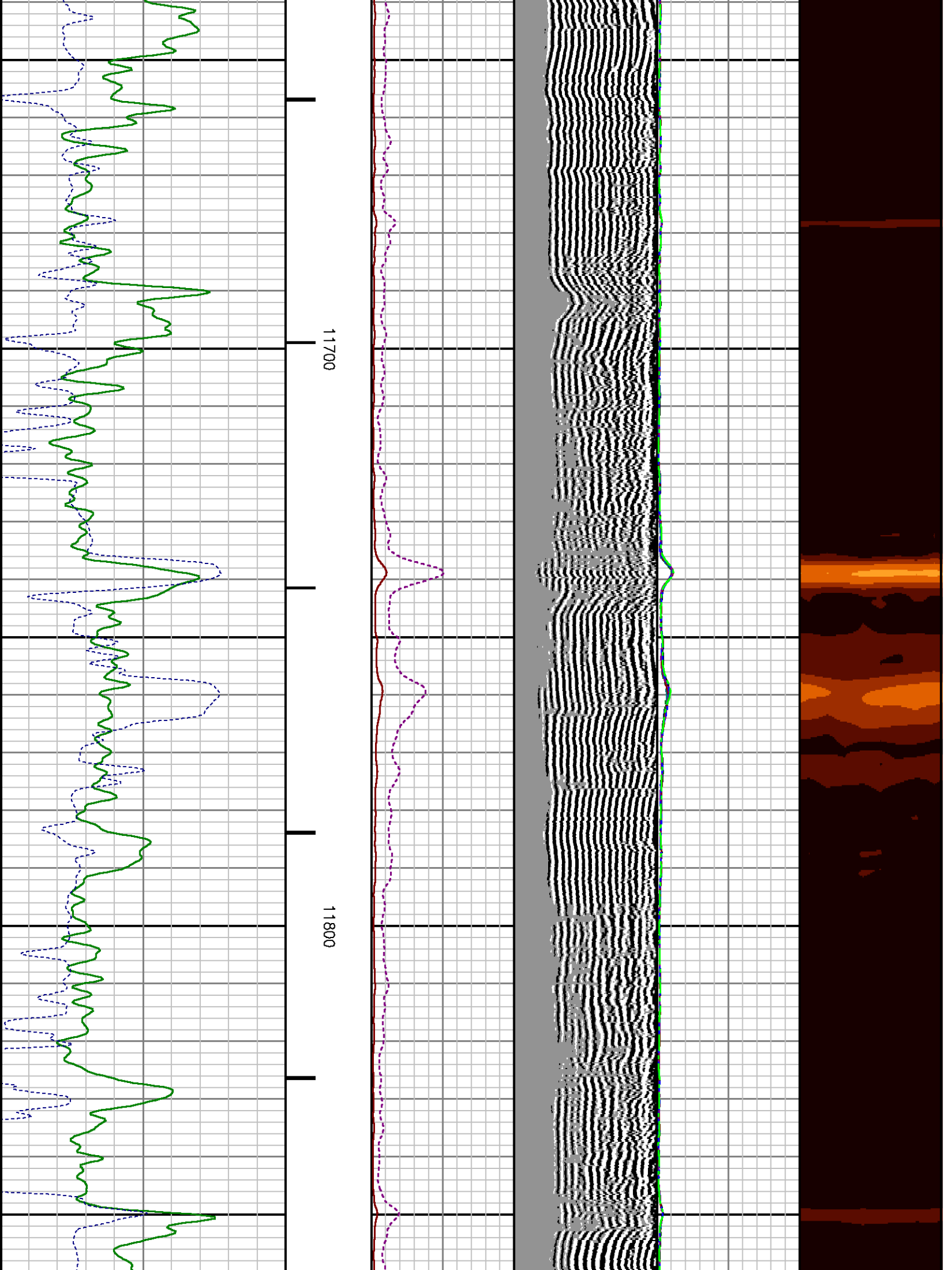


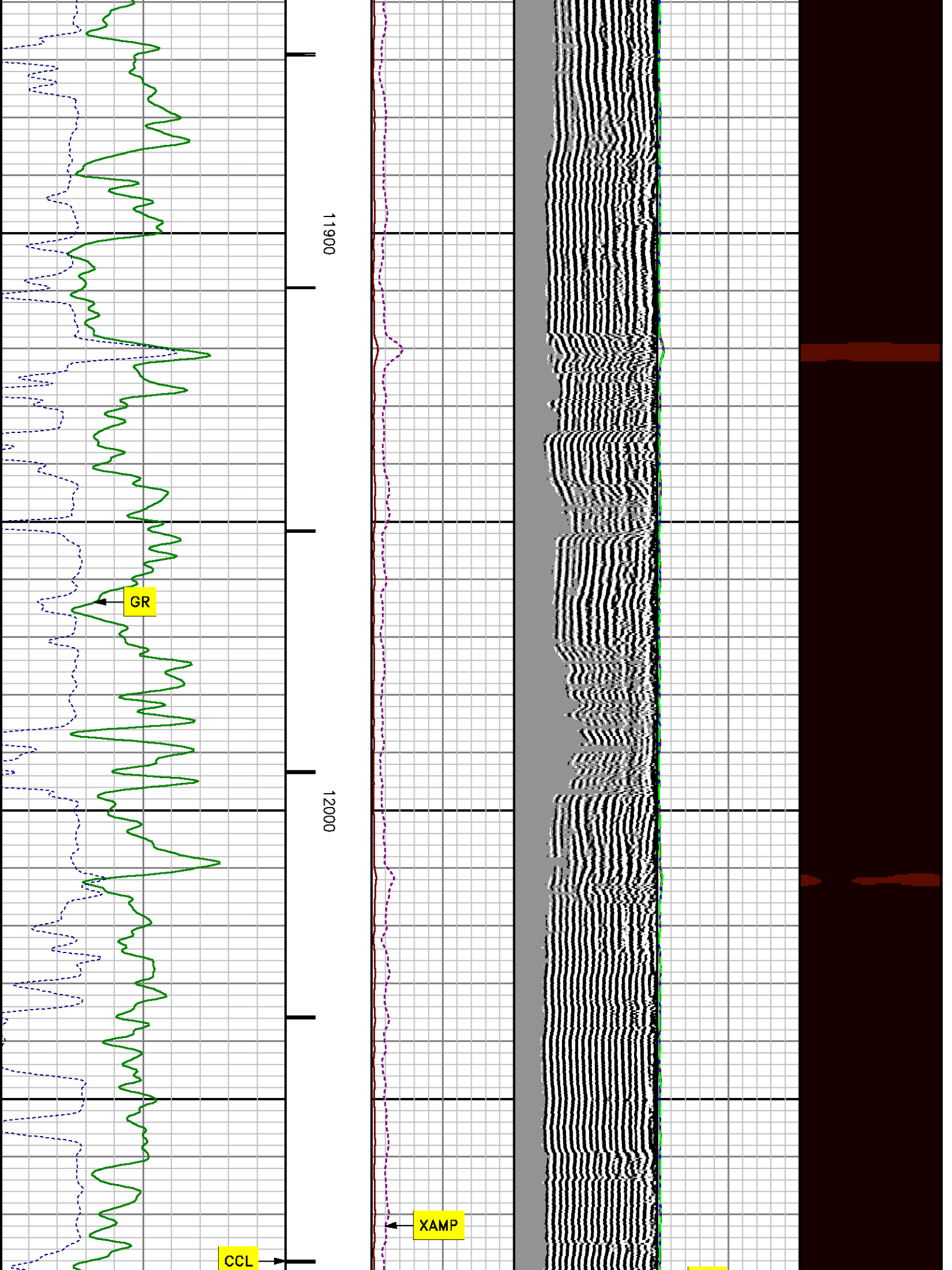


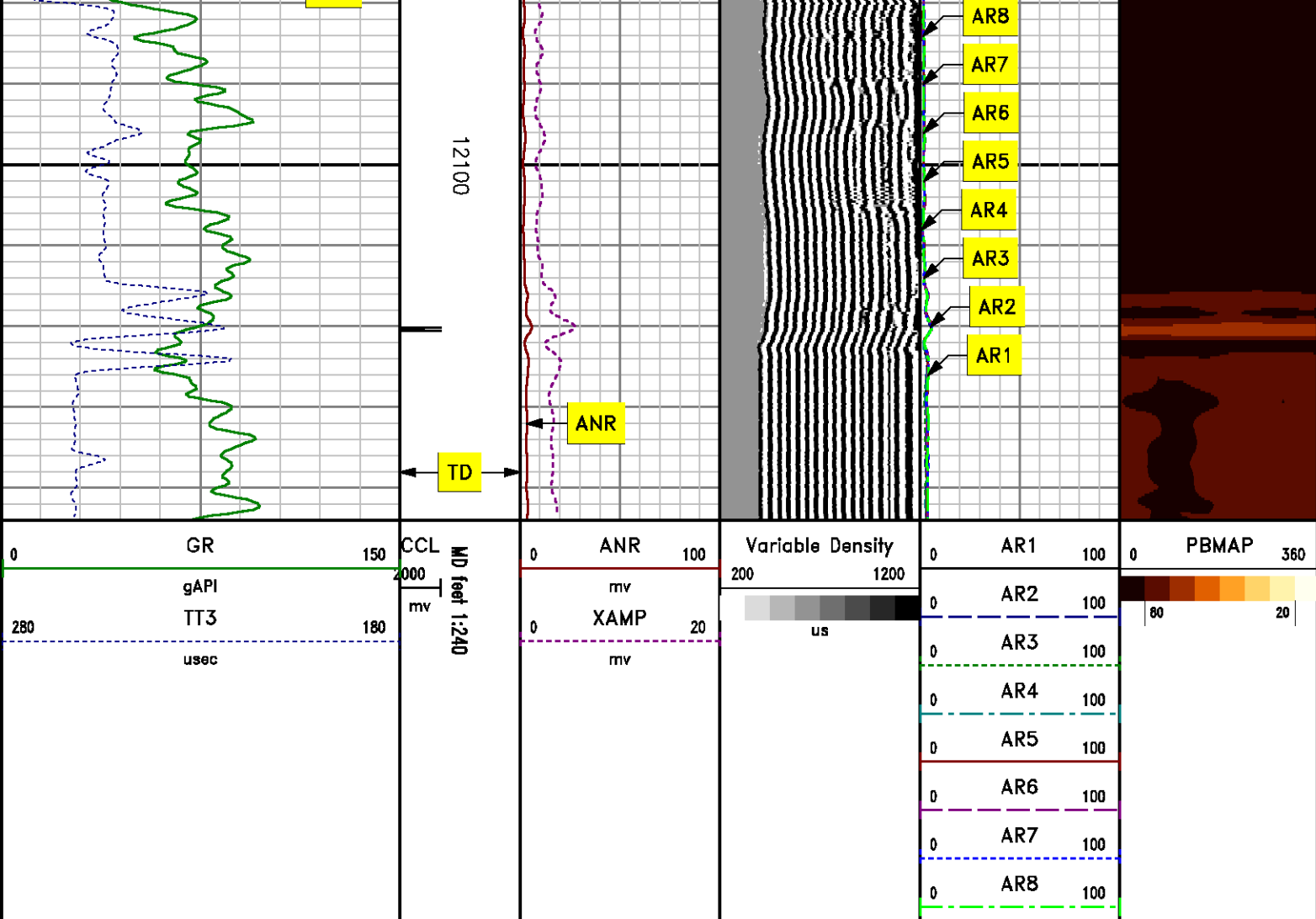












REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	310.000	usec	11795.381	12160.631
RAL	Amp Gate Start Near	195.000	usec	11795.381	12160.631
RAL	Amp Gate Start Radial	195.000	usec	11795.381	12160.631
RAL	Amp Gate Width Far	25.000	usec	11795.381	12160.631
RAL	Amp Gate Width Near	25.000	usec	11795.381	12160.631
RAL	Amp Gate Width Radial	25.000	usec	11795.381	12160.631
RAL	casing od	4.500	inches	11795.381	12160.631

RAL	casing wt	11.600	lbm/ft	11795.381	12160.631
RAL	FB Start Far	291.900	usec	11795.381	12160.631
RAL	FB Start Near	180.000	usec	11795.381	12160.631
RAL	FB Start Radial	180.000	usec	11795.381	12160.631
RAL	FB Thresh Far	10.000	mv	11795.381	12160.631
RAL	FB Thresh Near	4.000	mv	11795.381	12160.631
RAL	FB Thresh Radial	4.000	mv	11795.381	12160.631
RAL	Fluid Travel Time	200.000	usec/ft	11795.381	12160.631

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							

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

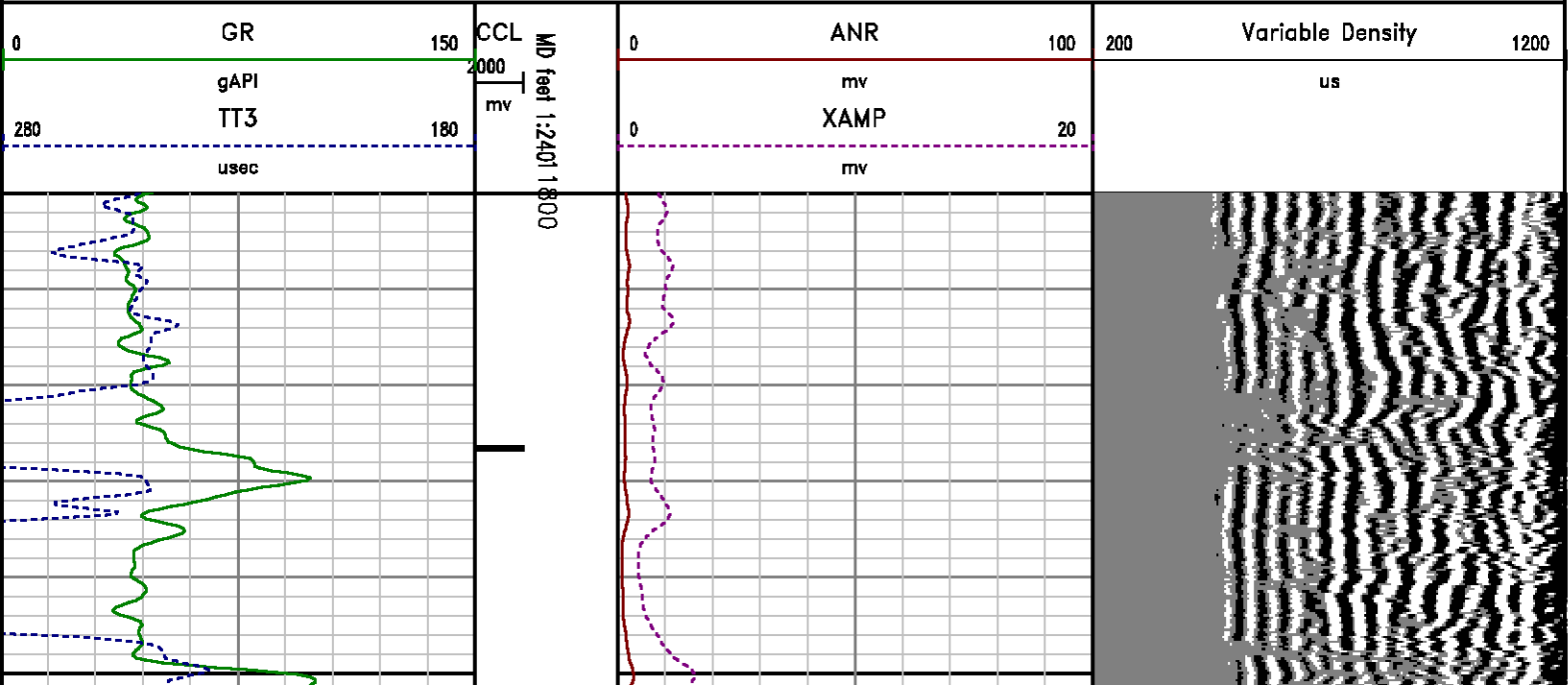
Well : FEDERAL RGU 523-35-198

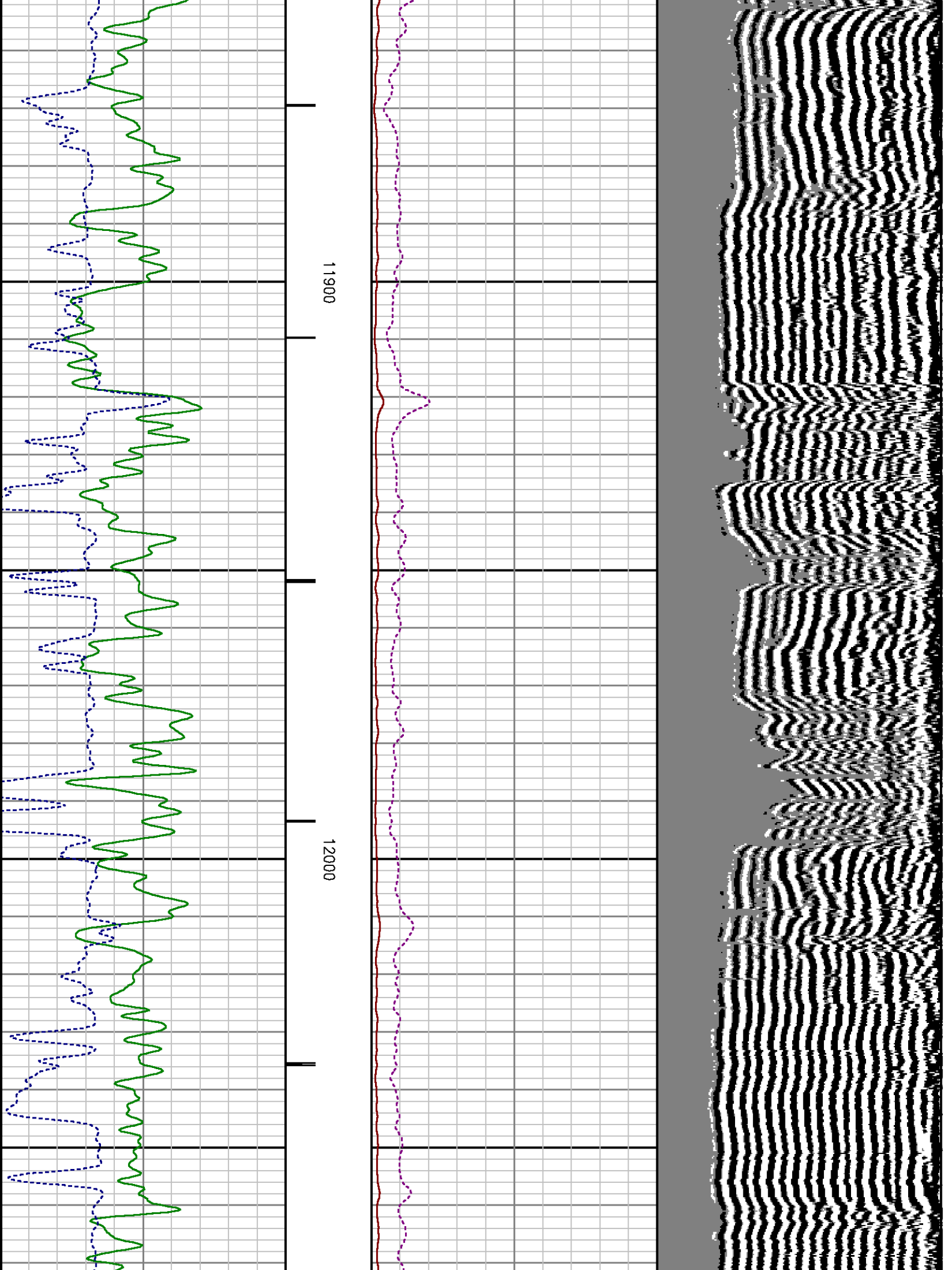
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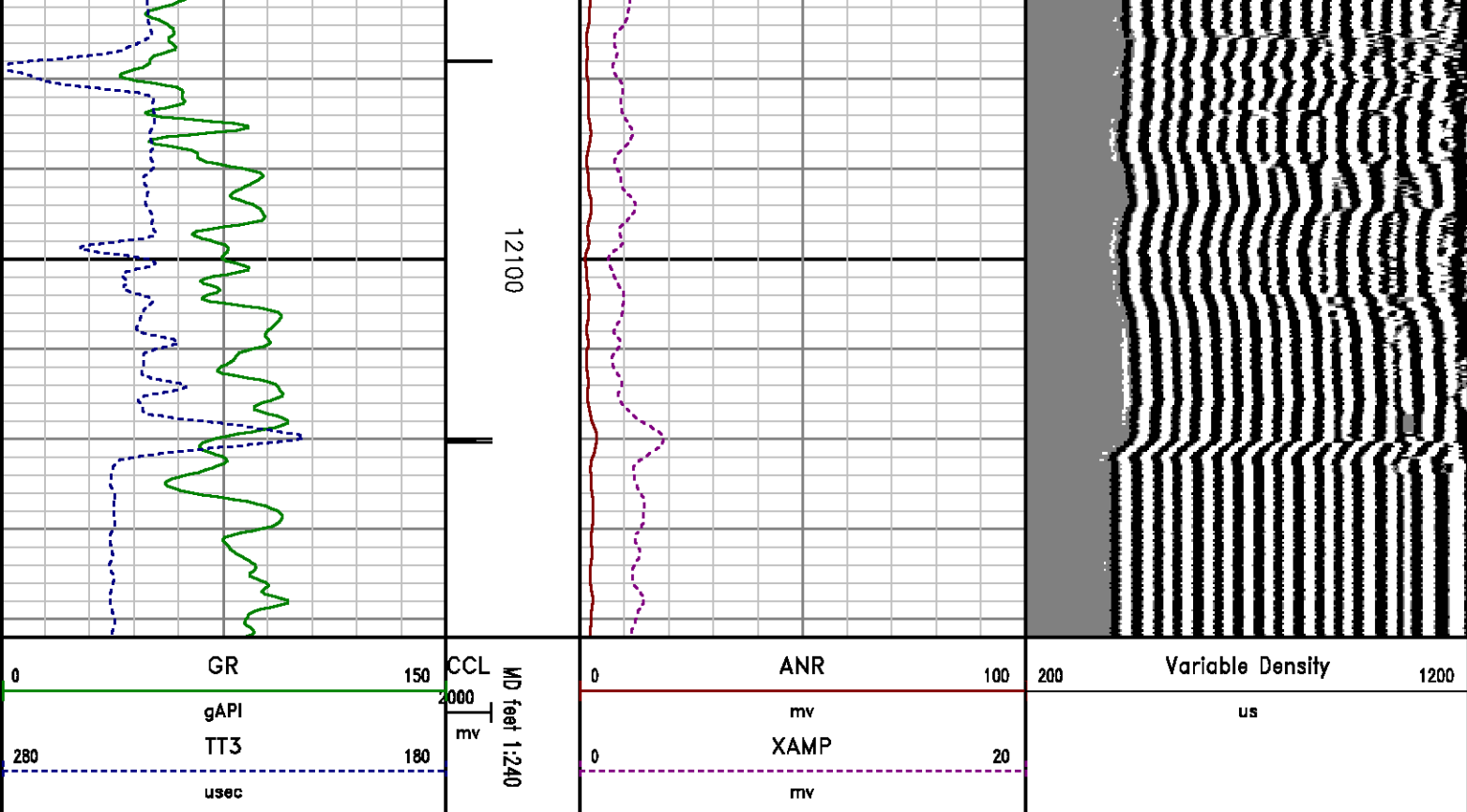
Mode : PlotMgr 5.4.504

Interval : 11800.00 - 12142.00 feet UP

Created : 9/1/2011 4:34:08 PM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\957S27_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Sep 27 13:15:50 2011 TOOL SERIES: 1426XA ASSET: 957 SEQ: S27

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	218	216	30	166	25	0.009	100.00	0.14
3 Ft. Receiver	218	216	30	159	25	-1.569	100.00	0.14
5 Ft. Receiver	327	323	30	263	25	-7.619	150.00	0.15
Radial #1	218	216	30	158	25	1.721	100.00	0.14
Radial #2	219	216	30	158	25	3.119	100.00	0.14
Radial #3	218	216	30	158	25	1.340	100.00	0.14
Radial #4	218	216	30	158	25	-0.164	100.00	0.14
Radial #5	217	216	30	158	25	-0.478	100.00	0.14
Radial #6	216	216	30	158	25	0.500	100.00	0.14

Radial #6	216	216	30	158	25	-0.933	100.00	0.14
Radial #7	216	216	30	158	25	-0.933	100.00	0.14
Radial #8	218	216	30	158	25	-1.622	100.00	0.14

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\957S27 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Sep 27 13:18:45 2011 TOOL SERIES: 1426XA ASSET: 957 SEQ: S27

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	-0.010	0.000	1.00	100.000
3 Ft. Receiver	195	25	0.082			
5 Ft. Receiver	310	25	-0.029			
Radial #1	195	25	0.005			
Radial #2	195	25	0.066			
Radial #3	195	25	0.090			
Radial #4	195	25	0.067			
Radial #5	195	25	0.015			
Radial #6	195	25	0.097			
Radial #7	195	25	0.066			
Radial #8	195	25	0.057			

GAMMA RAY

Calibration File: C:\case\calver\GR\544A3.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Aug 30 11:21:03 2011 TOOL SERIES: 2459XA ASSET: 544 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	50.00	298.44	0.745	37.23	222.23	185.00

Verification File: C:\case\calver\GR\544A3.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Tue Aug 30 11:22:15 2011 TOOL SERIES: 2459XA ASSET: 544 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	49.82	298.84	0.745	37.10	222.53	185.43

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

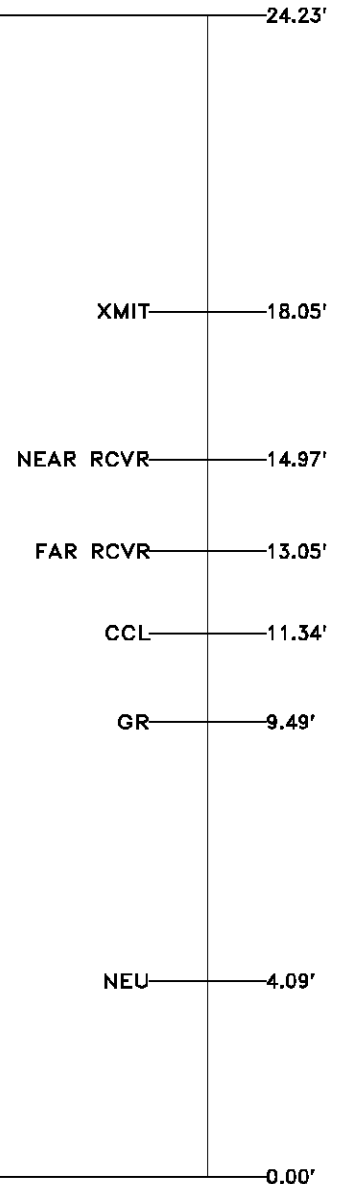
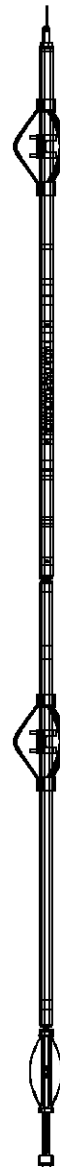
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

Probe GR/CCL/NEU

Series	2459XA
Mnemonic	PROB
Diameter	2.75"
Length	9.42'
Measure Point	1.21' NEU
Measure Point	6.60' GR
Measure Point	8.46' CCL

CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



Total Length: 24.23'
Total Weight: Not Available
Max Diameter: 0' 3.12"

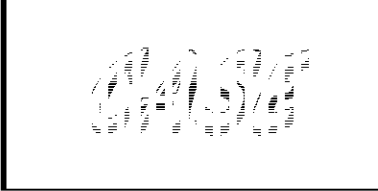


Company
Well
Field
County

WILLIAMS PRODUCTION COMPANY
FEDERAL RGU 523-35-198
RYAN GULCH UNIT
RIO BLANCO

State COLORADO

File No:
CH042352
API No:
05103118010000

	Location			Elevations		
	SHL: 2425' FSL & 1953' FWL (NESW)			KB	6799 ft	35 1S 98W
	BHL: 1674' FSL & 1925' FWL (NESW)			DF	6798 ft	RGU 23-35-198
				GL	6778 ft	CYCLONE 29
SEC 35			TWP 1S	RGE	98W	