



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH00980	Company Well Field County	WPX ENERGY WPX ENERGY RWF 421-4 RULISON GARFIELD	State CO
API No: 05045220670000	Location	Other Services	
4 7S 94W RMV 108-4 PAD MABORS 574	SHL: 440' FNL & 1701' FEL BHL: 1246' FNL & 2365' FWL SEC 4 TWP 7S RGE 94W	RPM	
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevation 26 ft Above P. D.	Elevations KB 5820 ft DF GL 5794 ft

Date	1/JAN/14
Run	ONE
Service Order	US625079
Depth Driller	8192 ft
Depth Logger	8166 ft
Bottom Logged Interval	8156 ft
Top Logged Interval	26 ft
Time Started	14:00
Time Finished	18:00
Operator Rig Time	4 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	64 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	65 fpm
Maximum Recorded Temperature	224 degF
Reference Log	NA
Reference Log Date	NA
Equipment No.	4271
Location	GRAND JCT.
Recorded By	NEWELL
Witnessed By	CHRIS TILLER

- 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
13.5 In	0 ft	1134 ft
8.75 In	1134 ft	8249 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1134 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	8249 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 10 feet.
Logged with 0 PSI at wellhead.
BHT = 224°F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	CENTRALIZED
1	1	GR/CCL	2459XA	10124121	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	34.629	8183.250
RAL	Amp Gate Start Near	195.000	usec	34.629	8183.250
RAL	Amp Gate Start Radial	195.000	usec	34.629	8183.250
RAL	Amp Gate Width Far	25.000	usec	34.629	8183.250
RAL	Amp Gate Width Near	25.000	usec	34.629	8183.250
RAL	Amp Gate Width Radial	25.000	usec	34.629	8183.250
RAL	casing od	4.500	inches	34.629	8183.250
RAL	casing wt	11.600	lbm/ft	34.629	8183.250
RAL	FB Start Far	291.900	usec	34.629	8183.250
RAL	FB Start Near	175.391	usec	34.629	8183.250
RAL	FB Start Radial	175.391	usec	34.629	8183.250
RAL	FB Thresh Far	10.000	mv	34.629	8183.250
RAL	FB Thresh Near	4.000	mv	34.629	8183.250
RAL	FB Thresh Radial	4.000	mv	34.629	8183.250
RAL	Fluid Travel Time	200.000	usec/ft	34.629	8184.223

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTD1	TTD2	TTD3

1426XA -15.750
2459XA -11.340
2459XA -9.490
2459XA -4.090

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 : WPX ENERGY

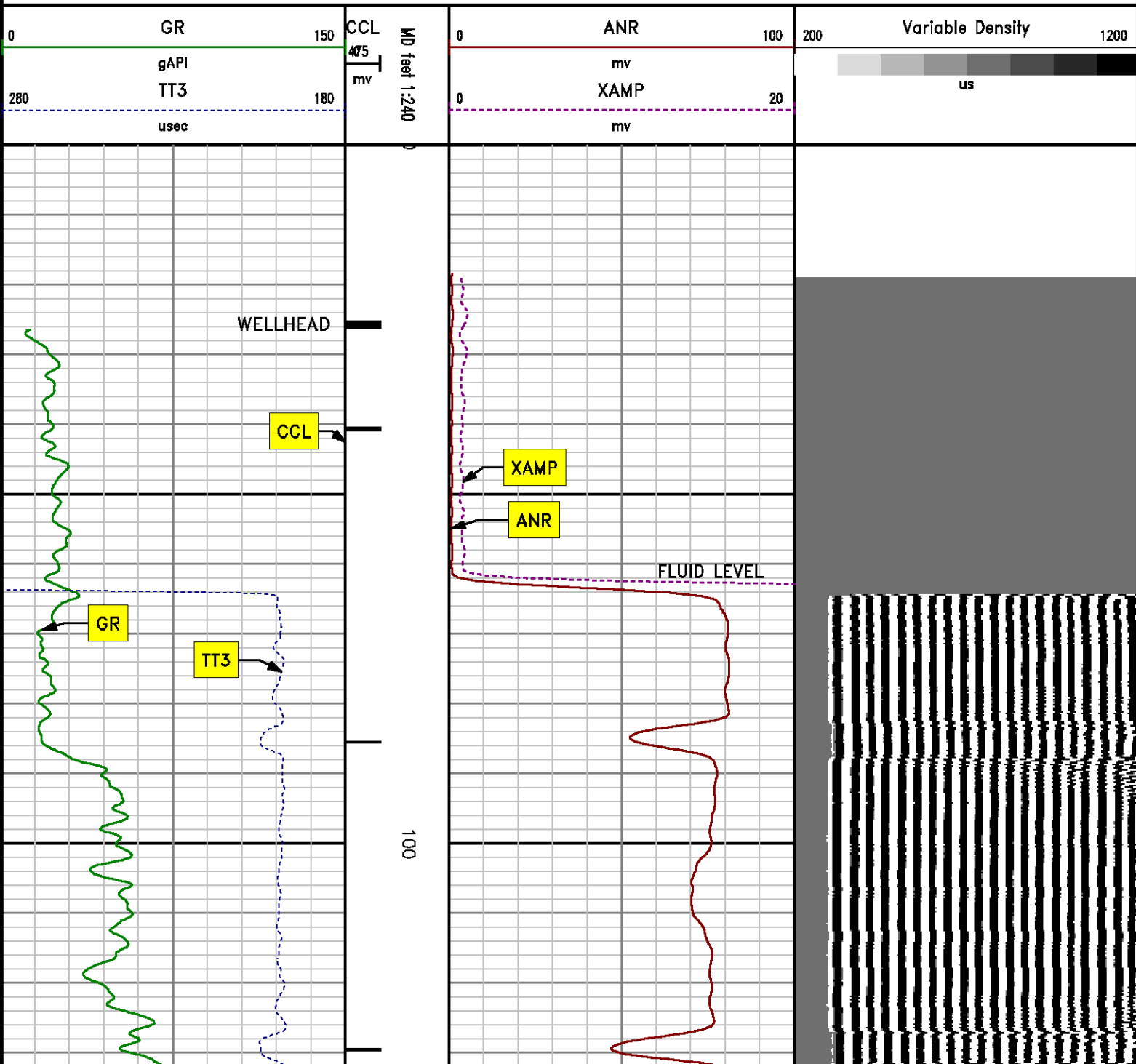
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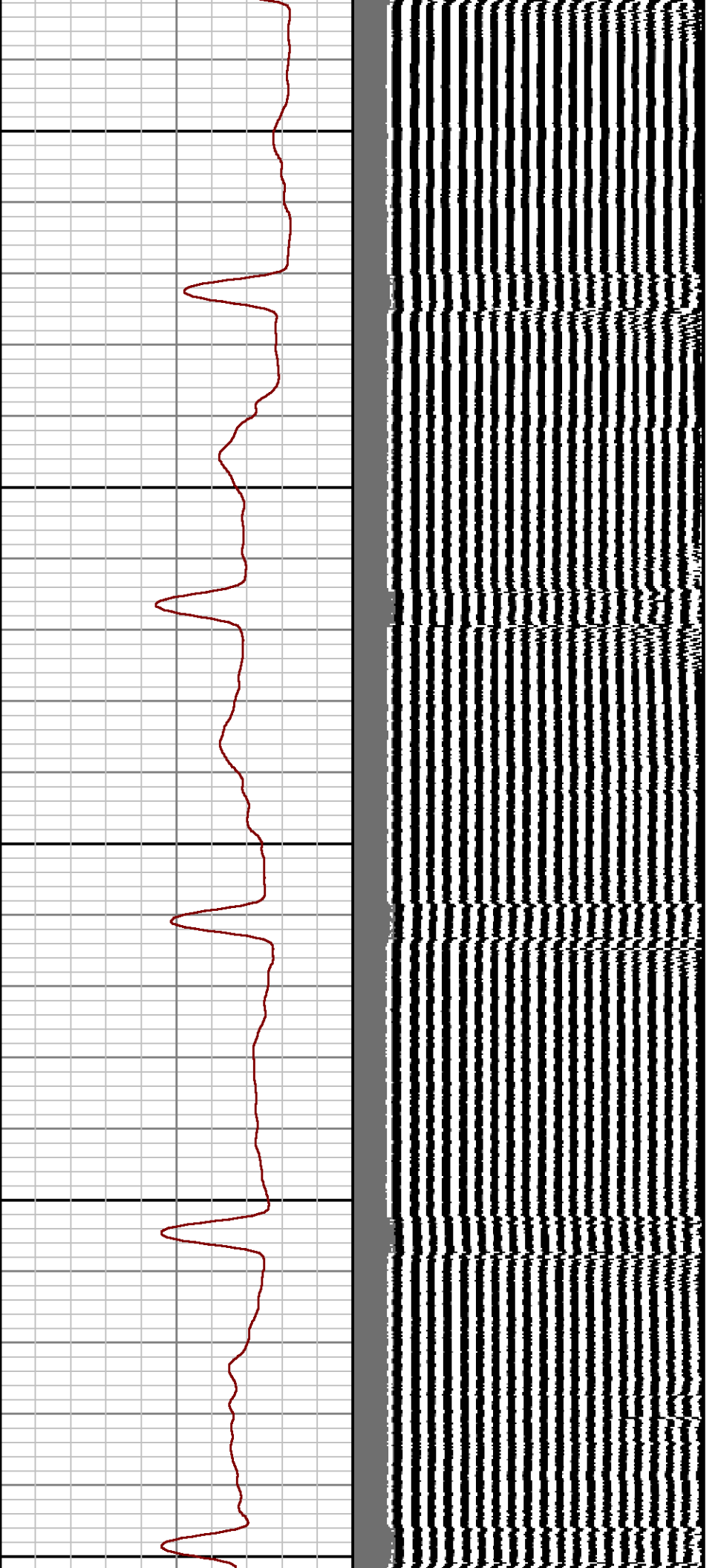
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Interval : 0.00 - 8170.00 feet UP

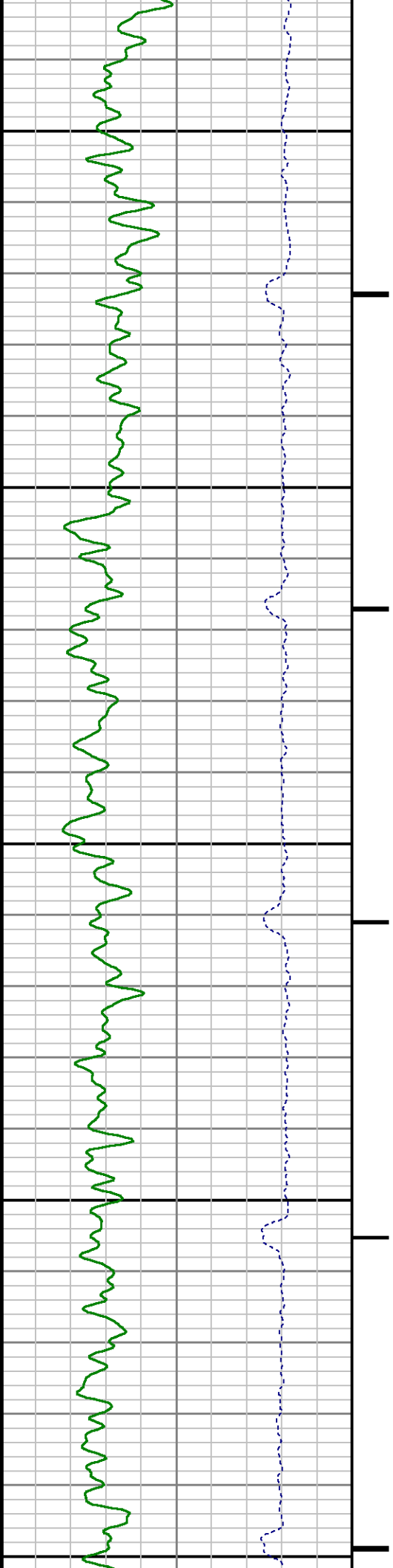
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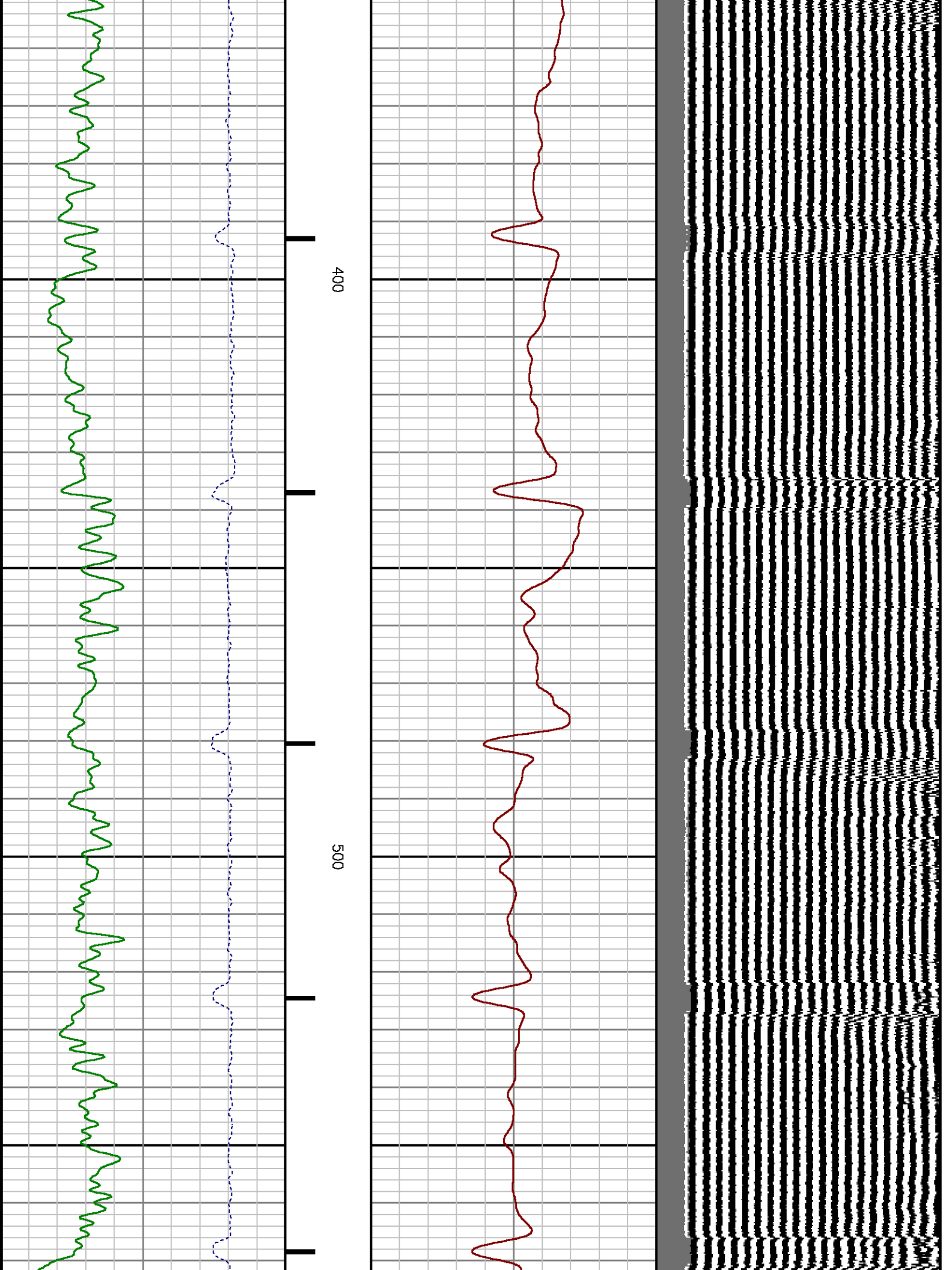


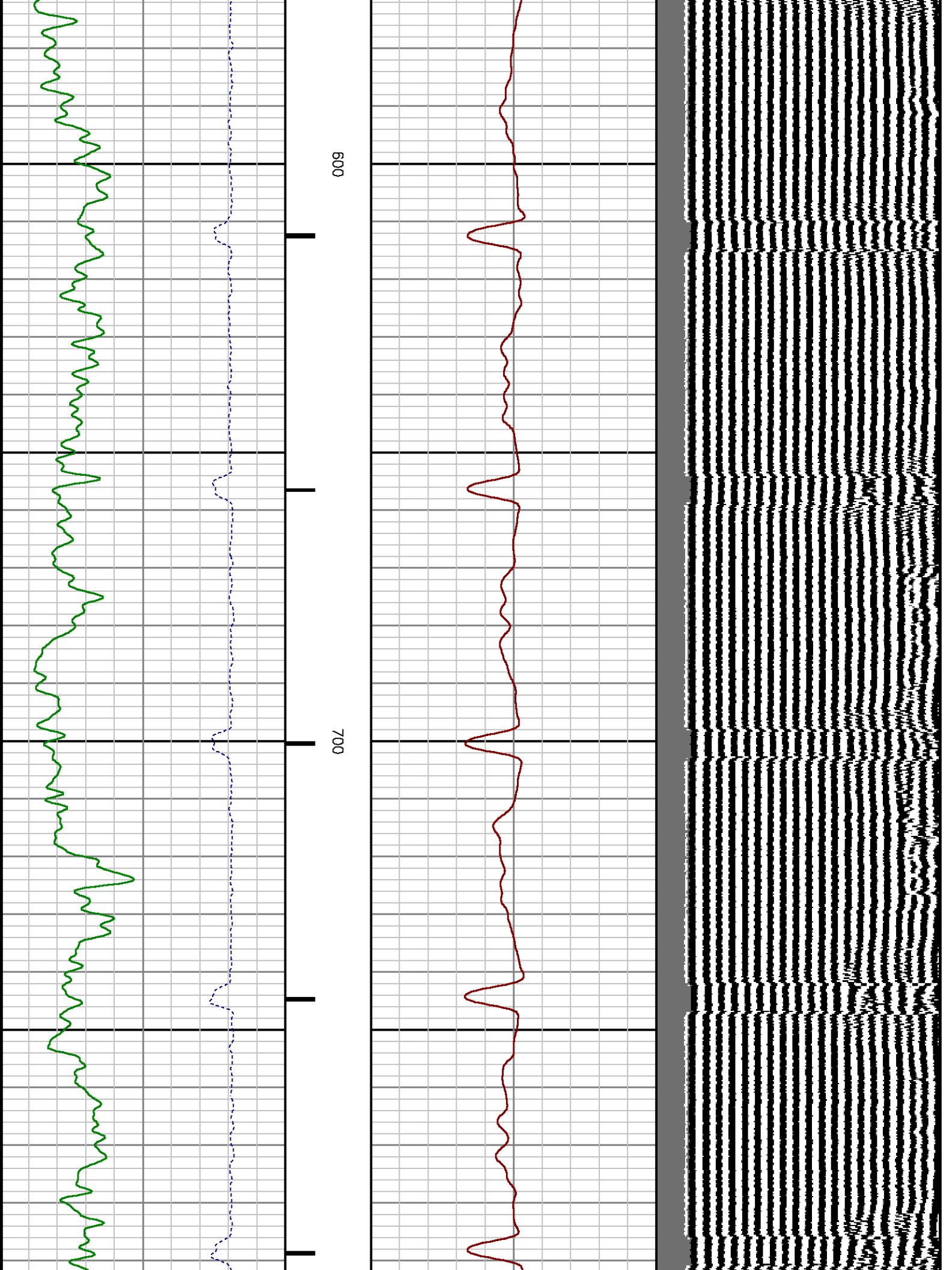


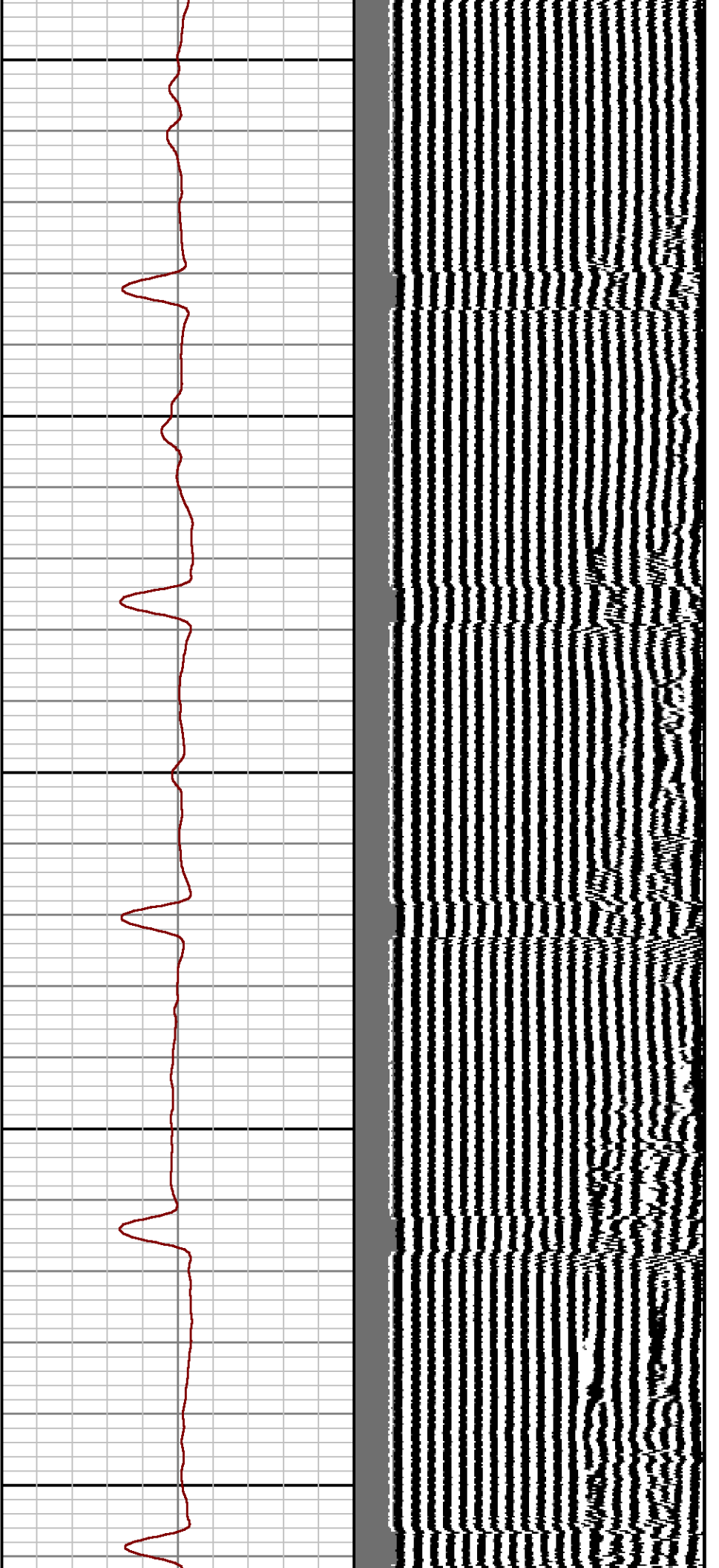
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300





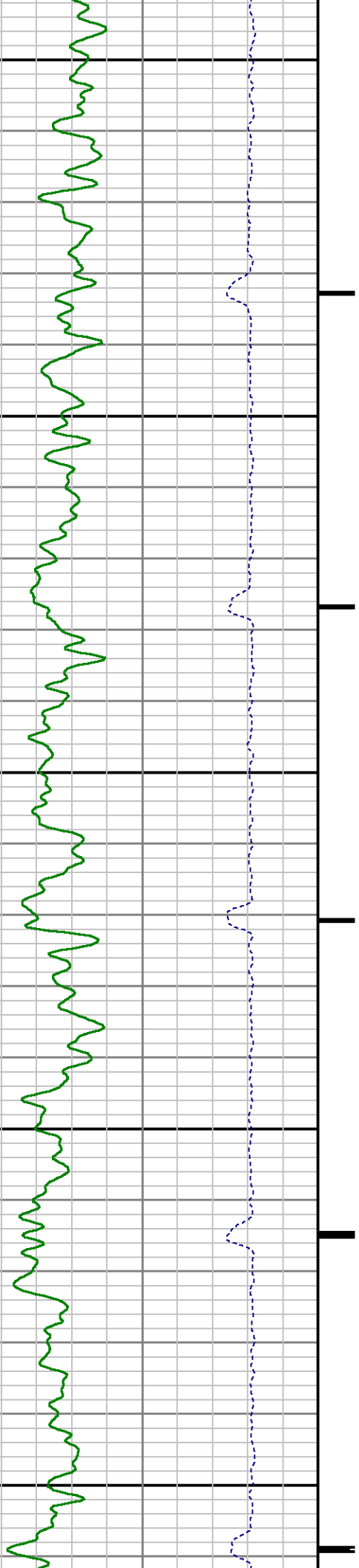


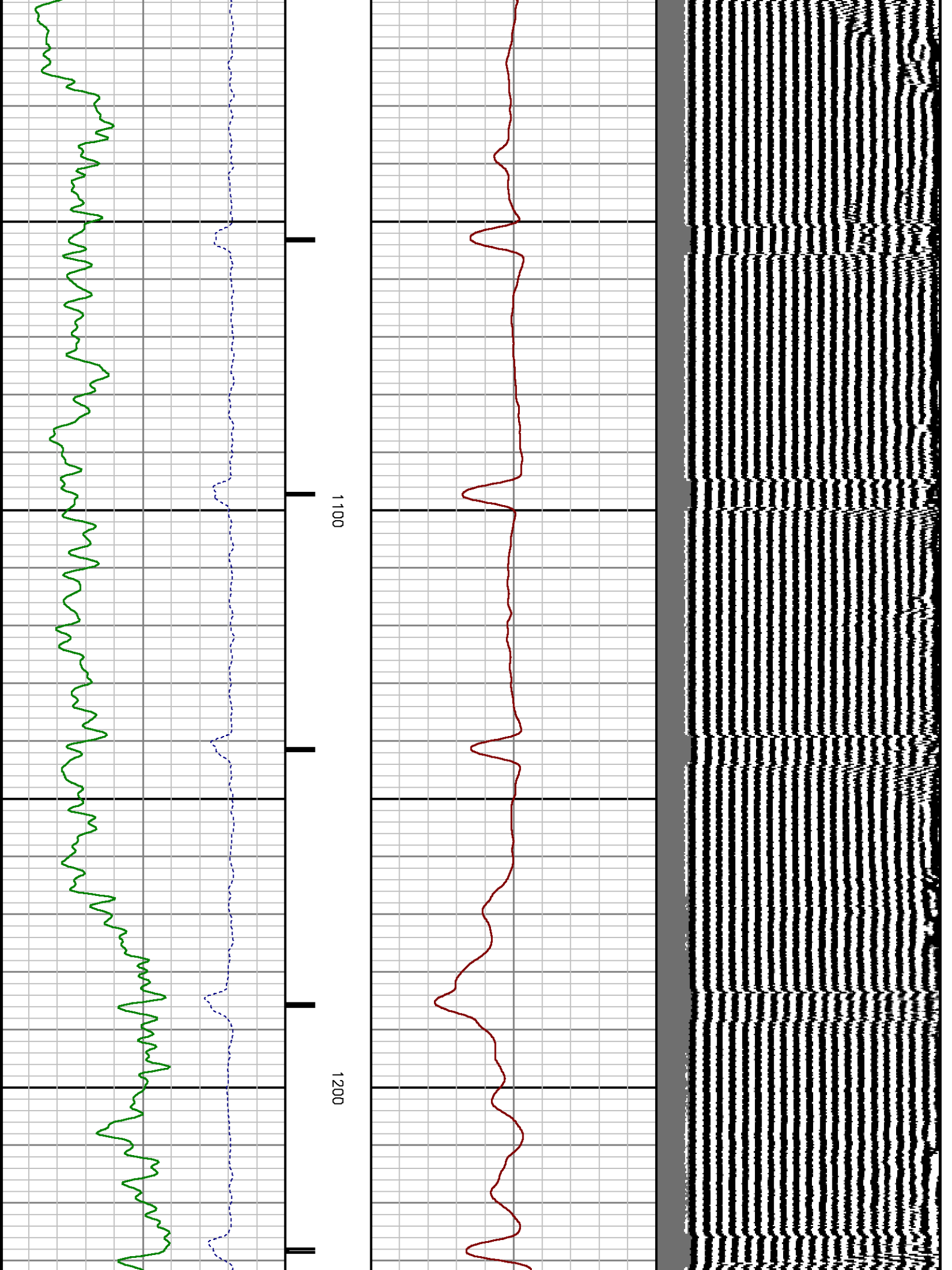


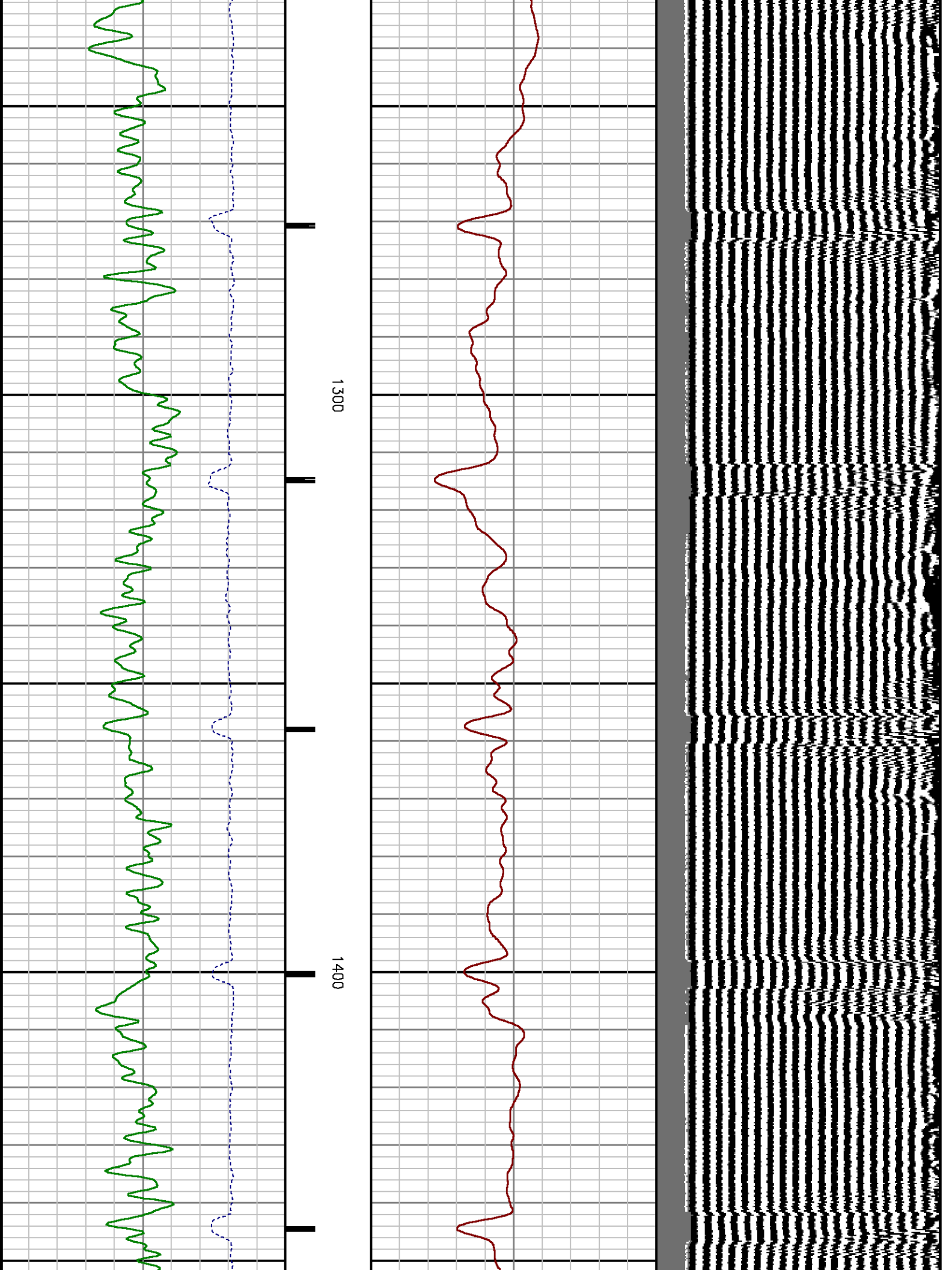
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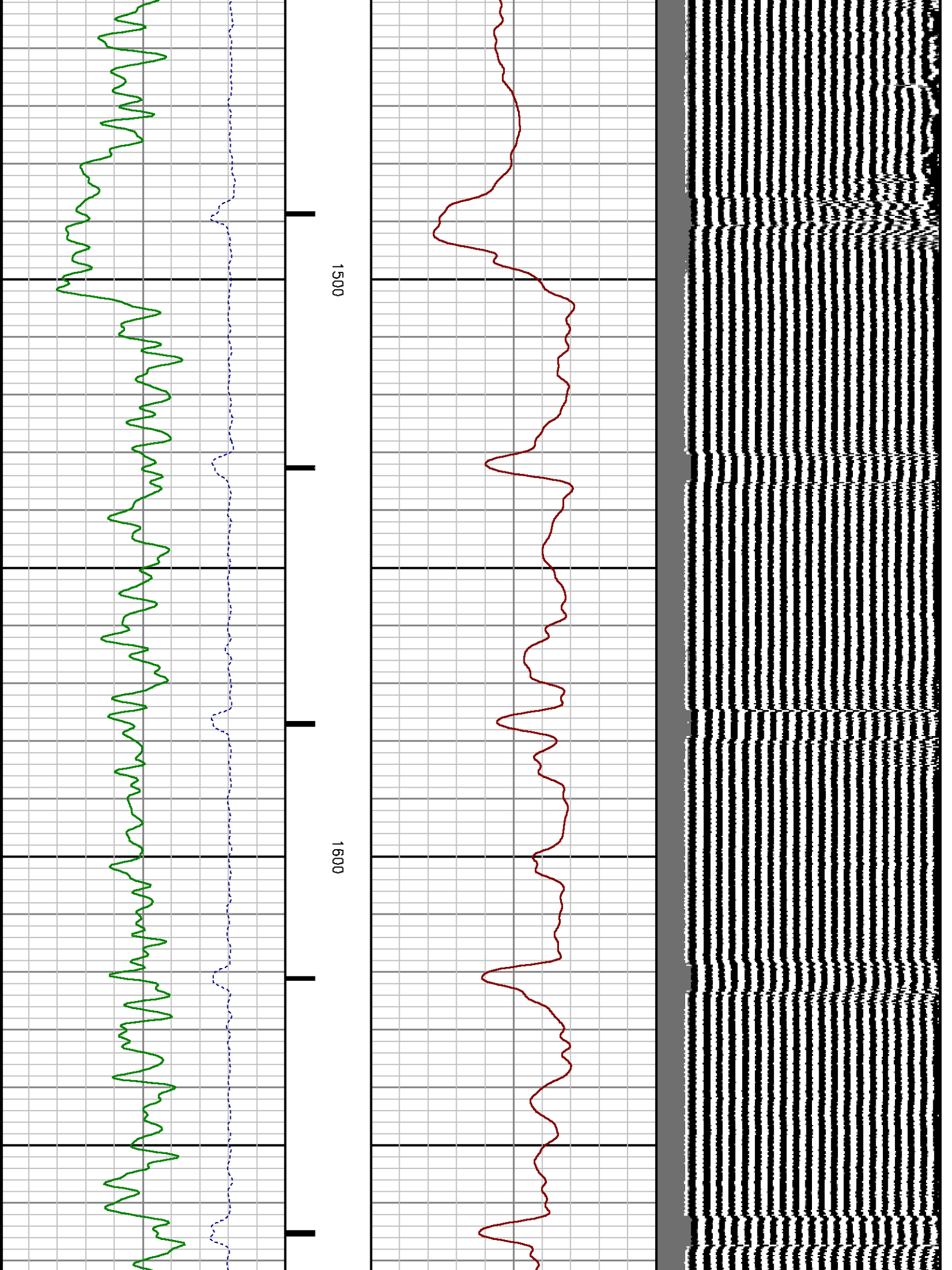
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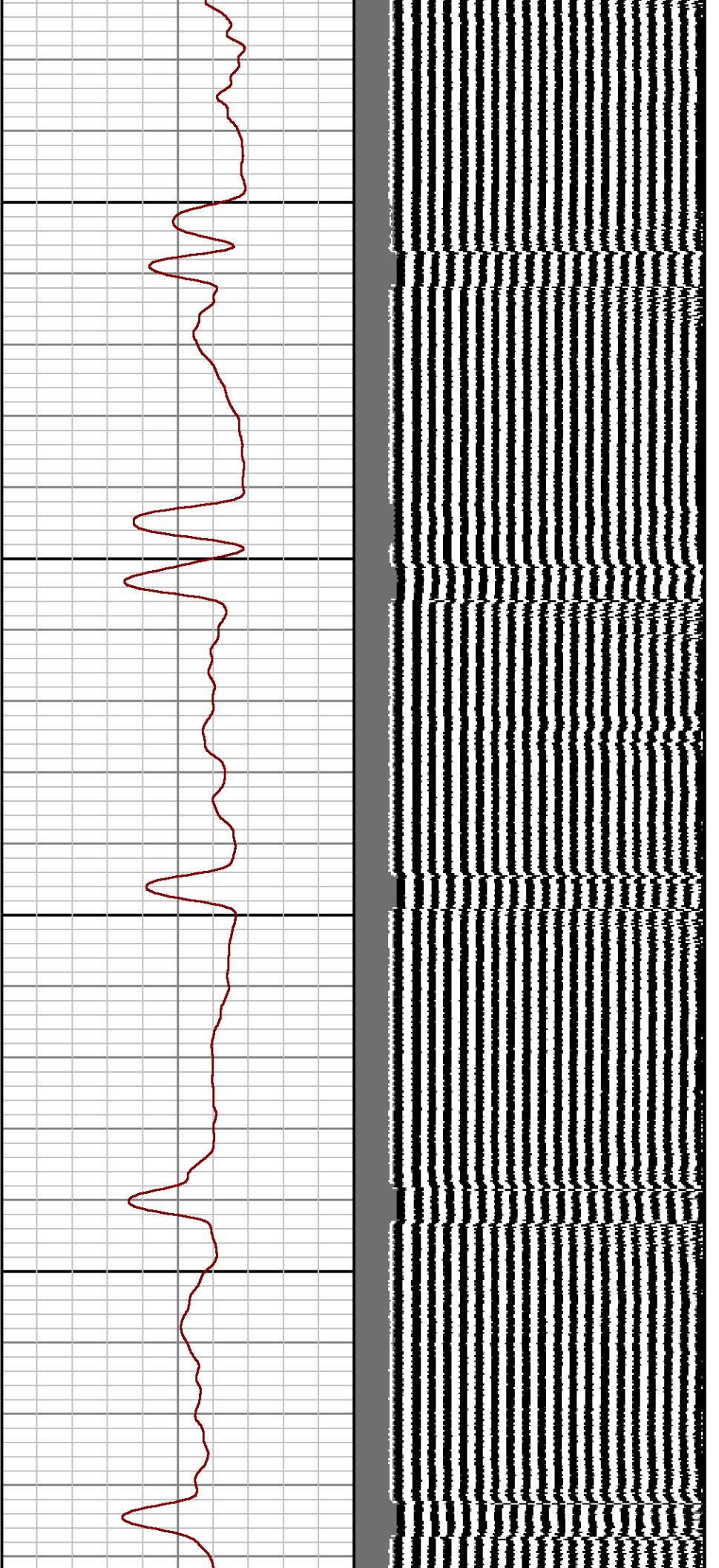
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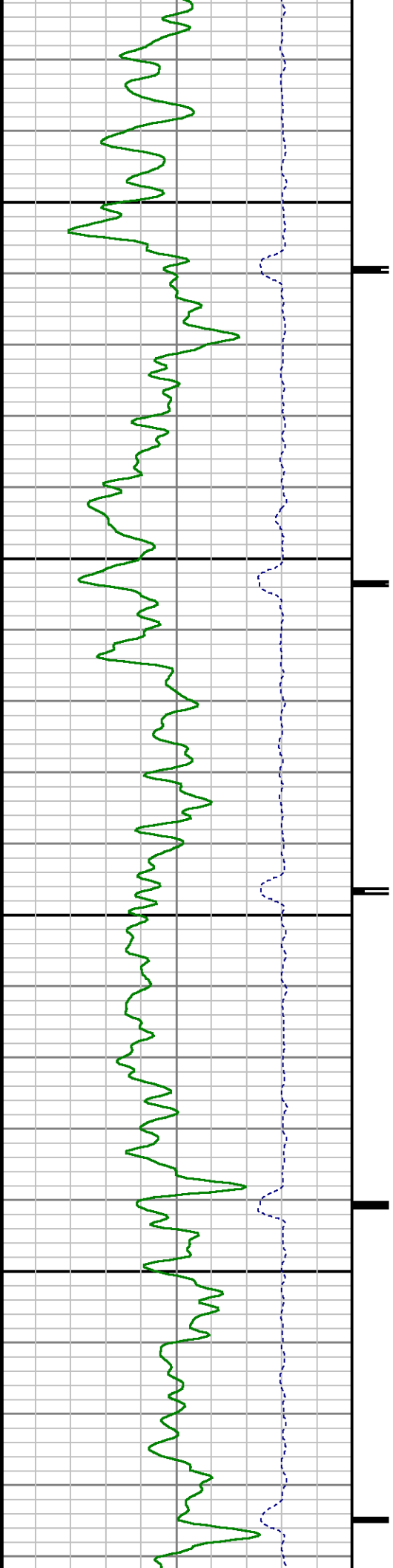


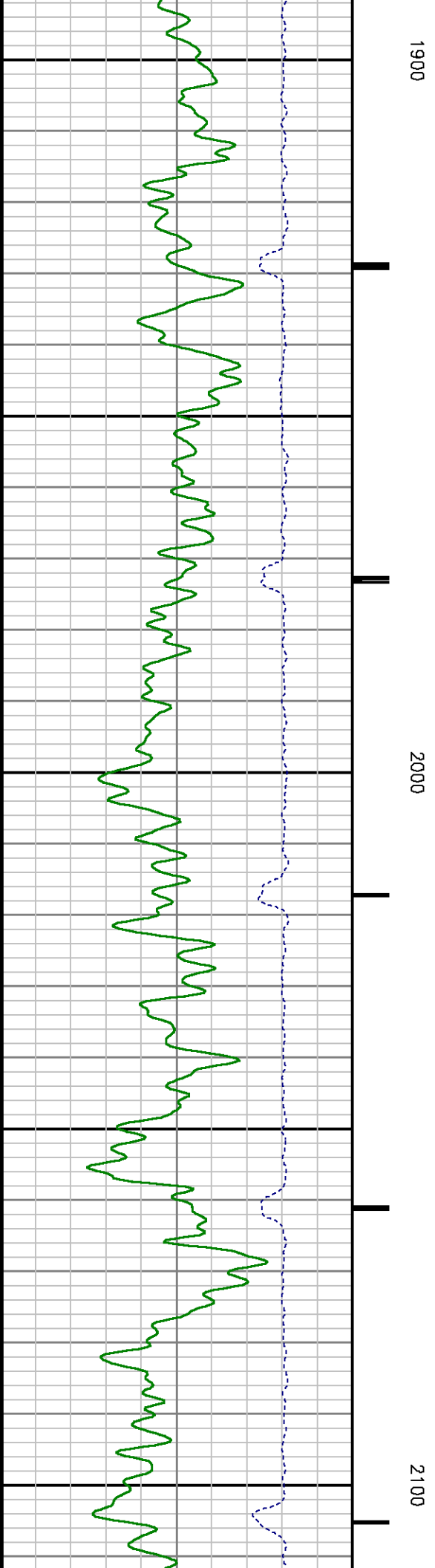
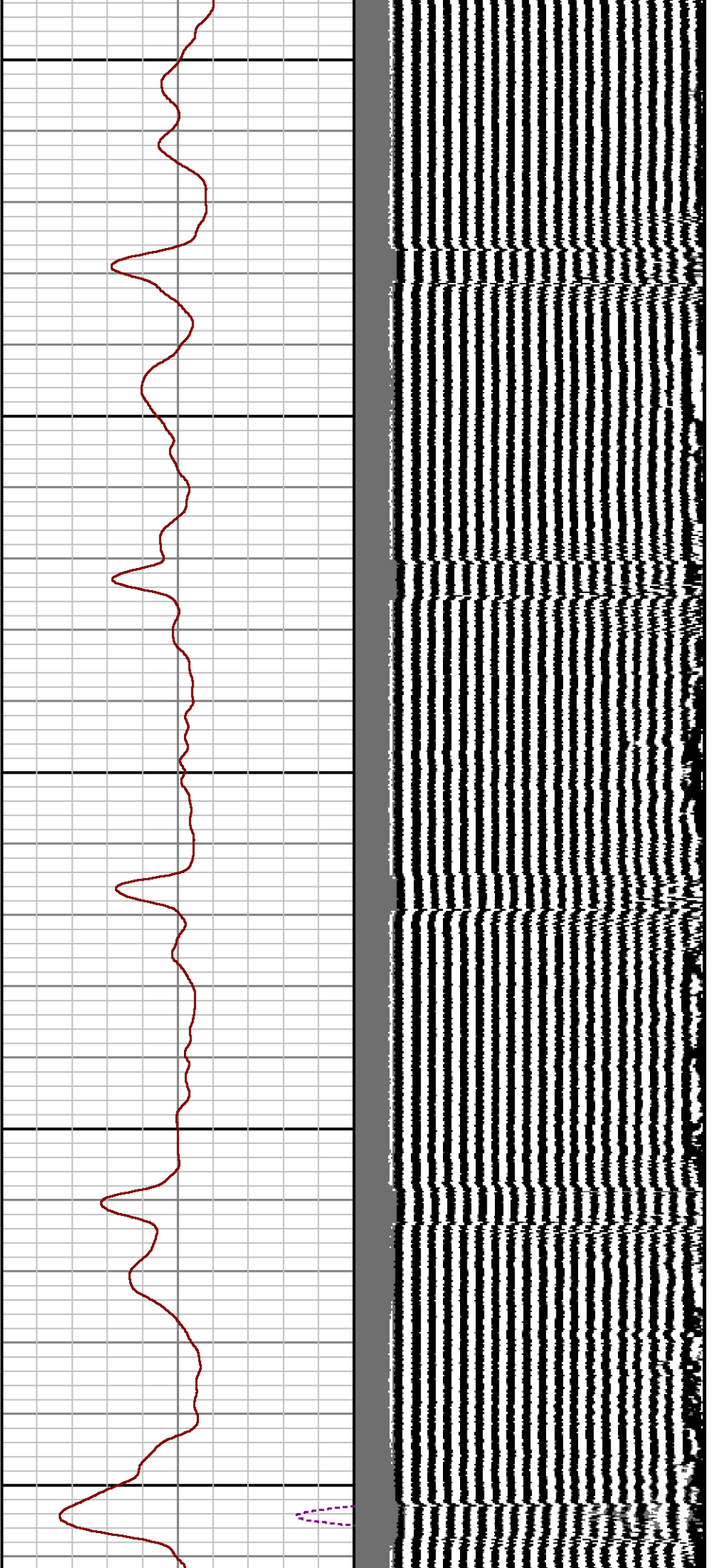


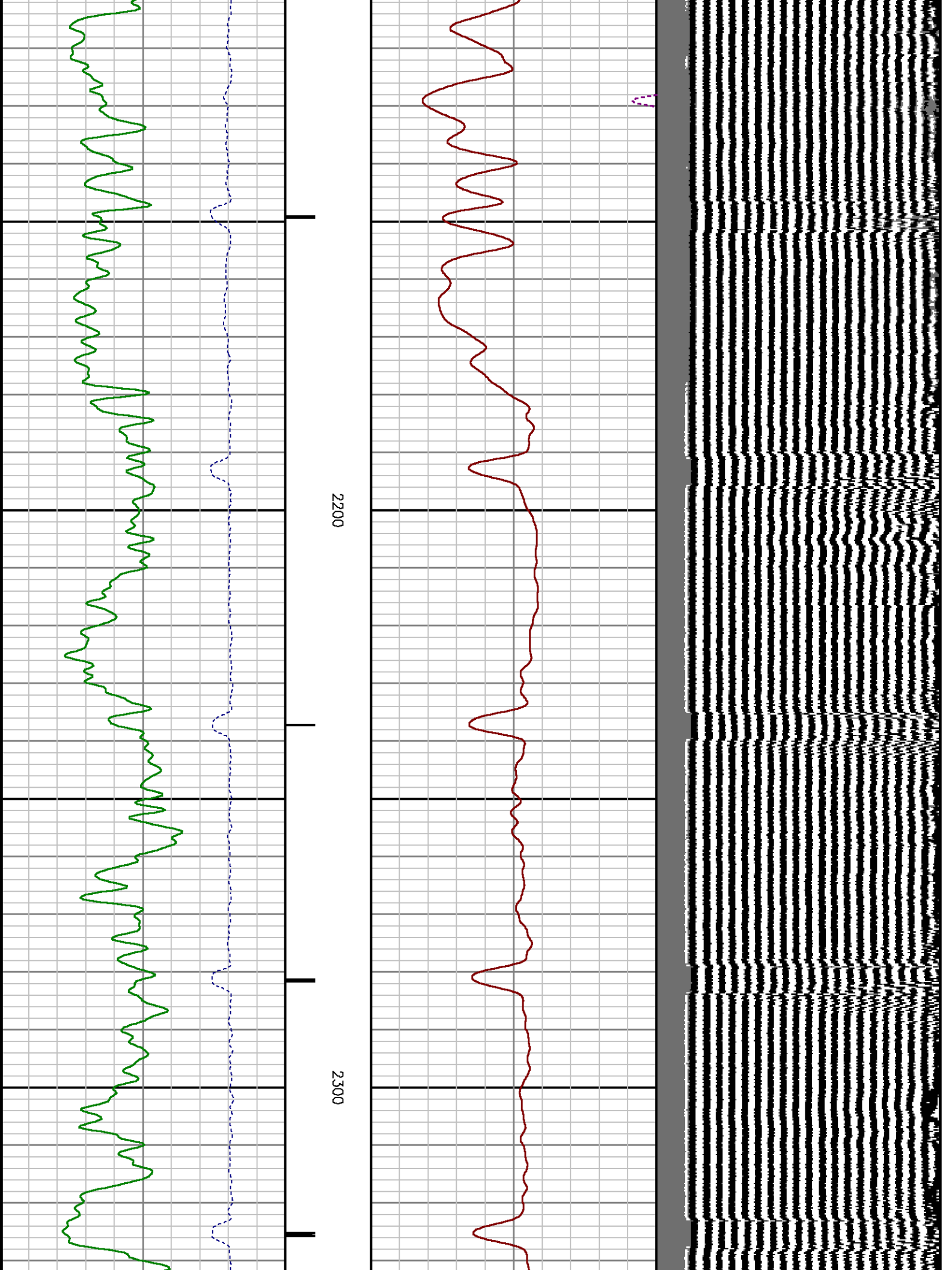


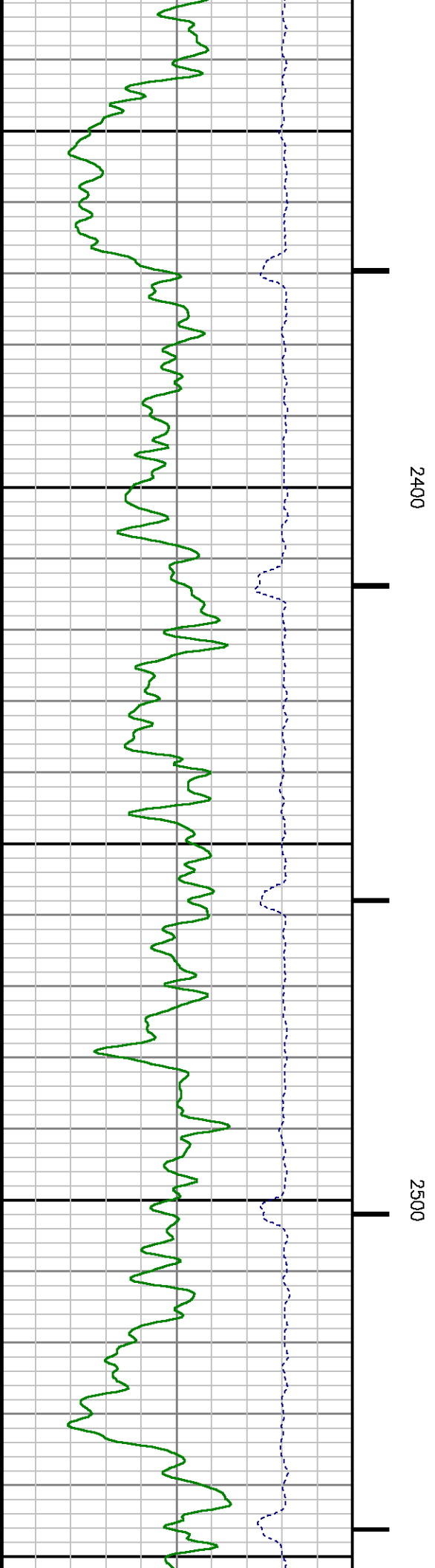
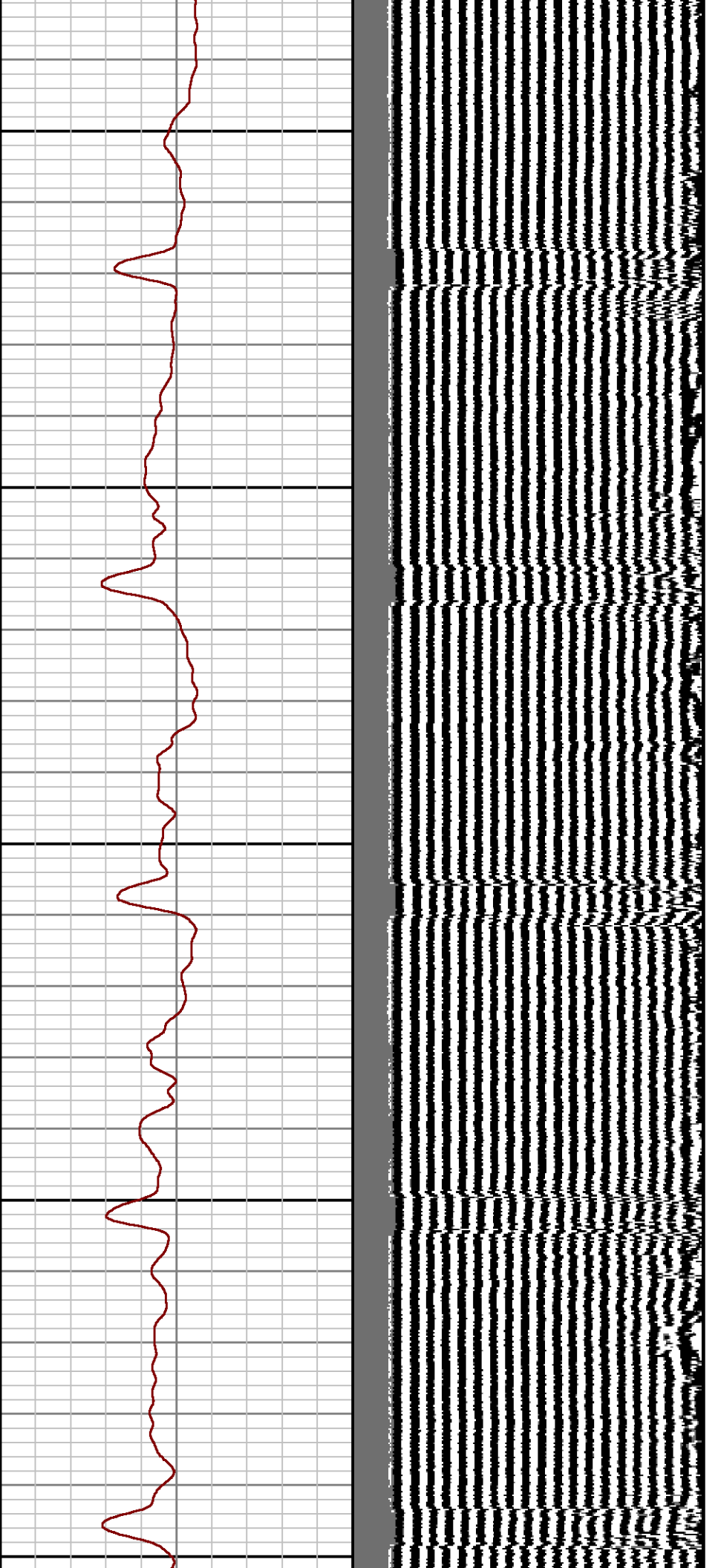
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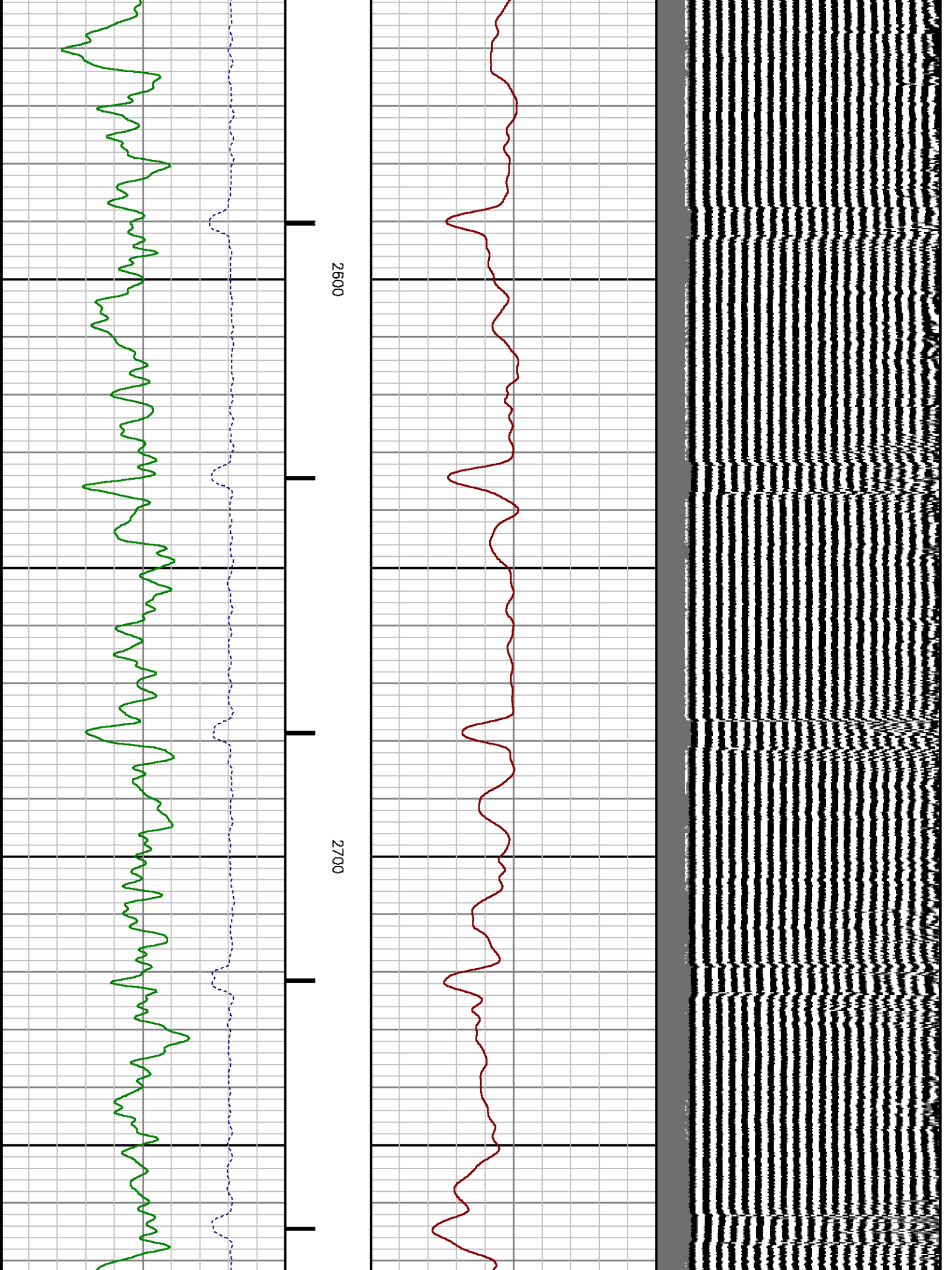
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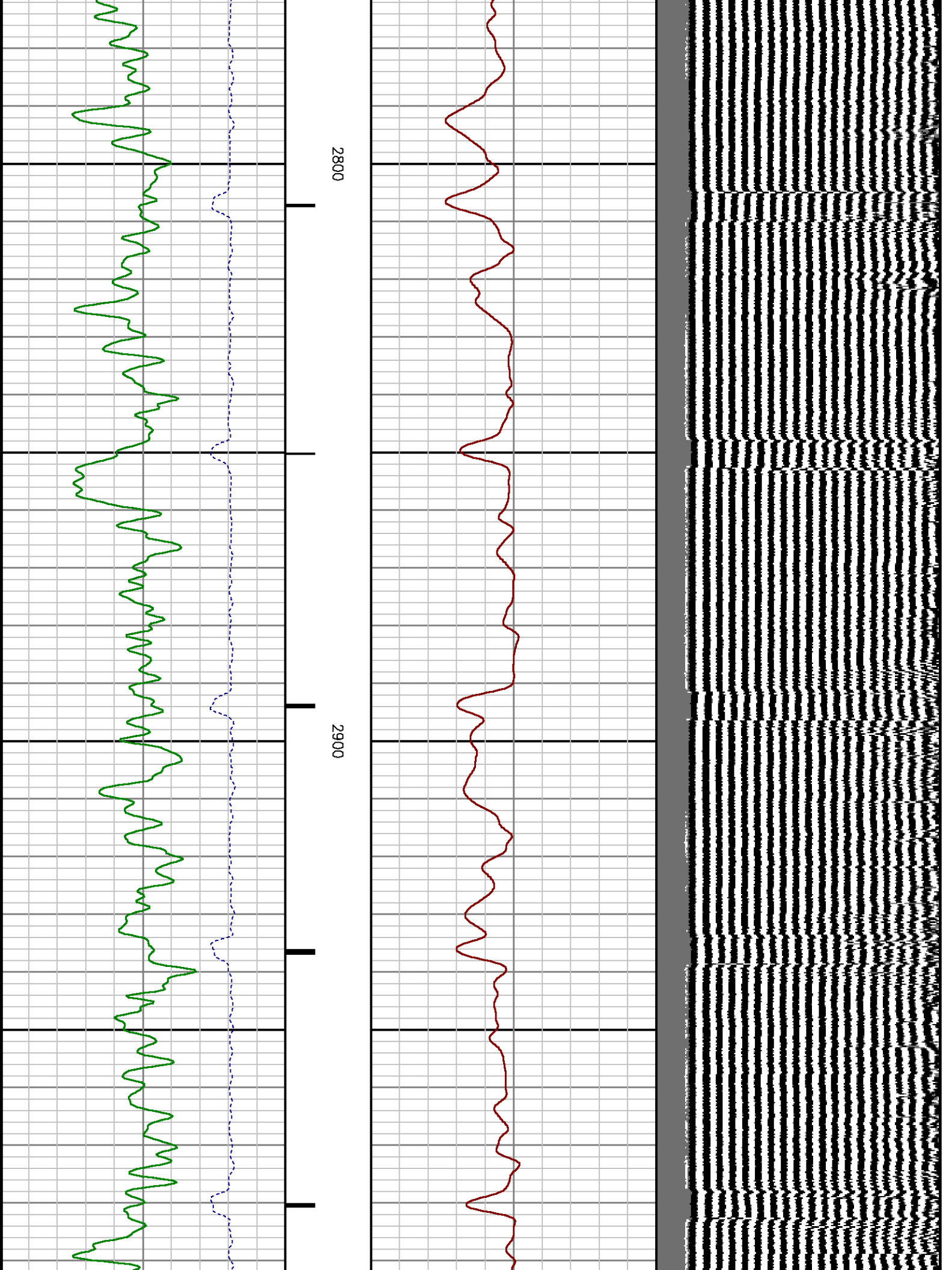


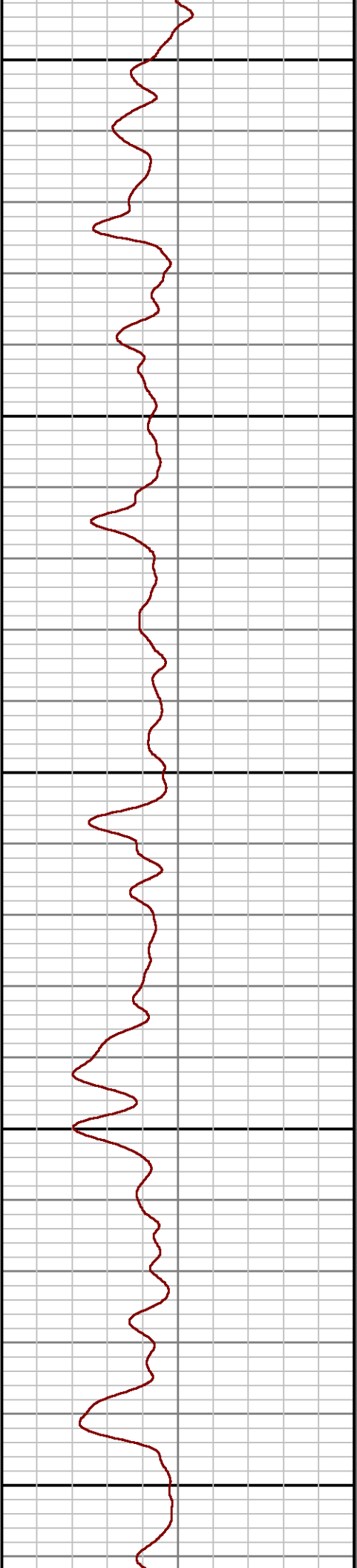
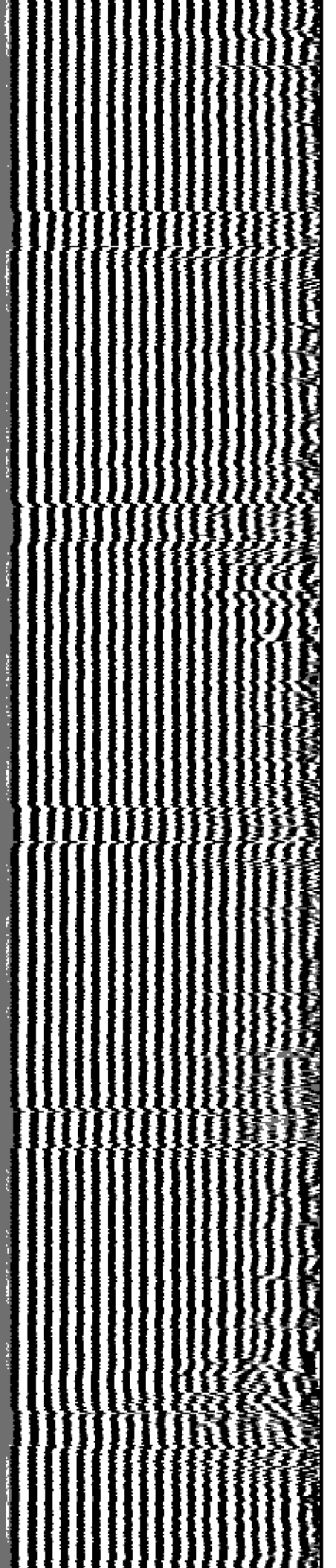








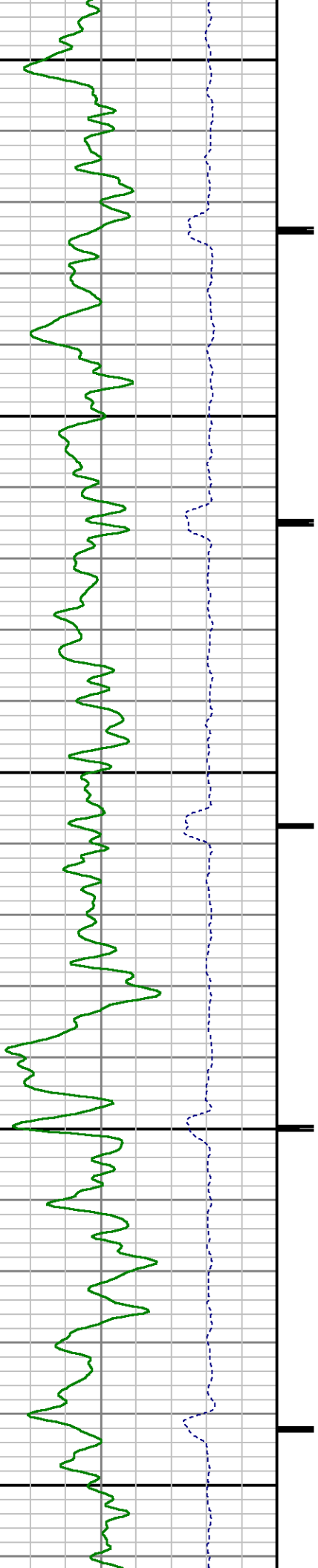


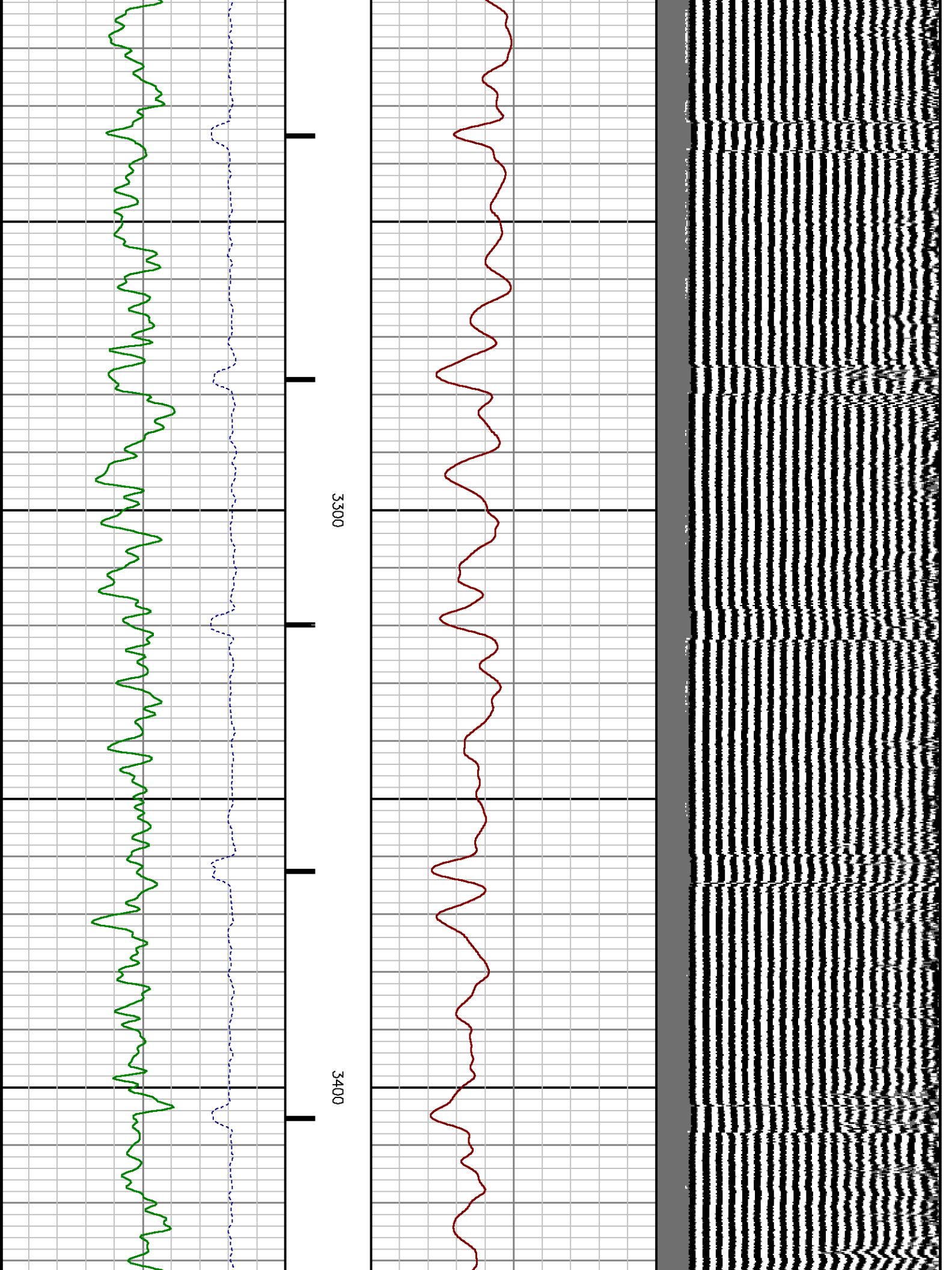


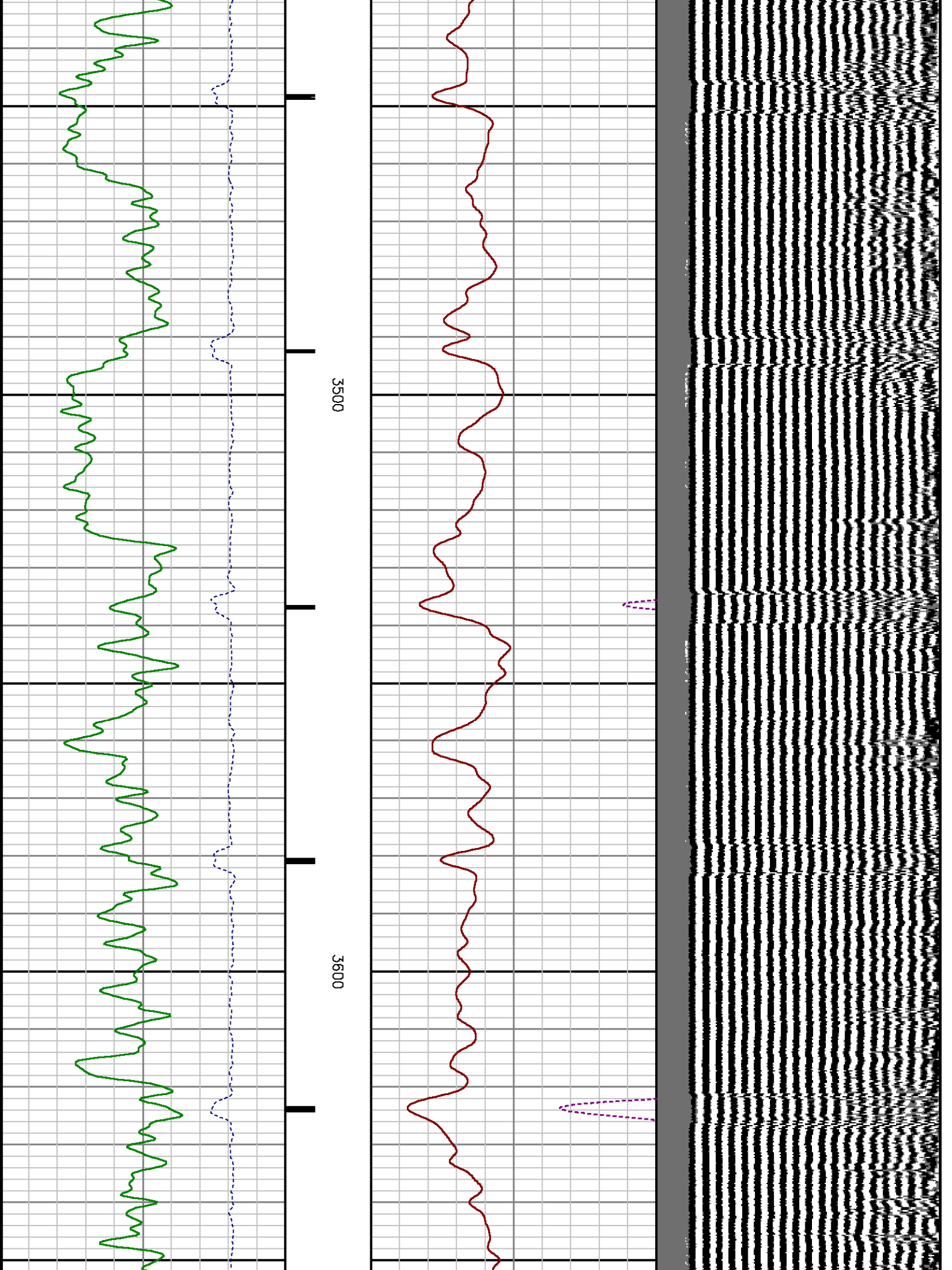
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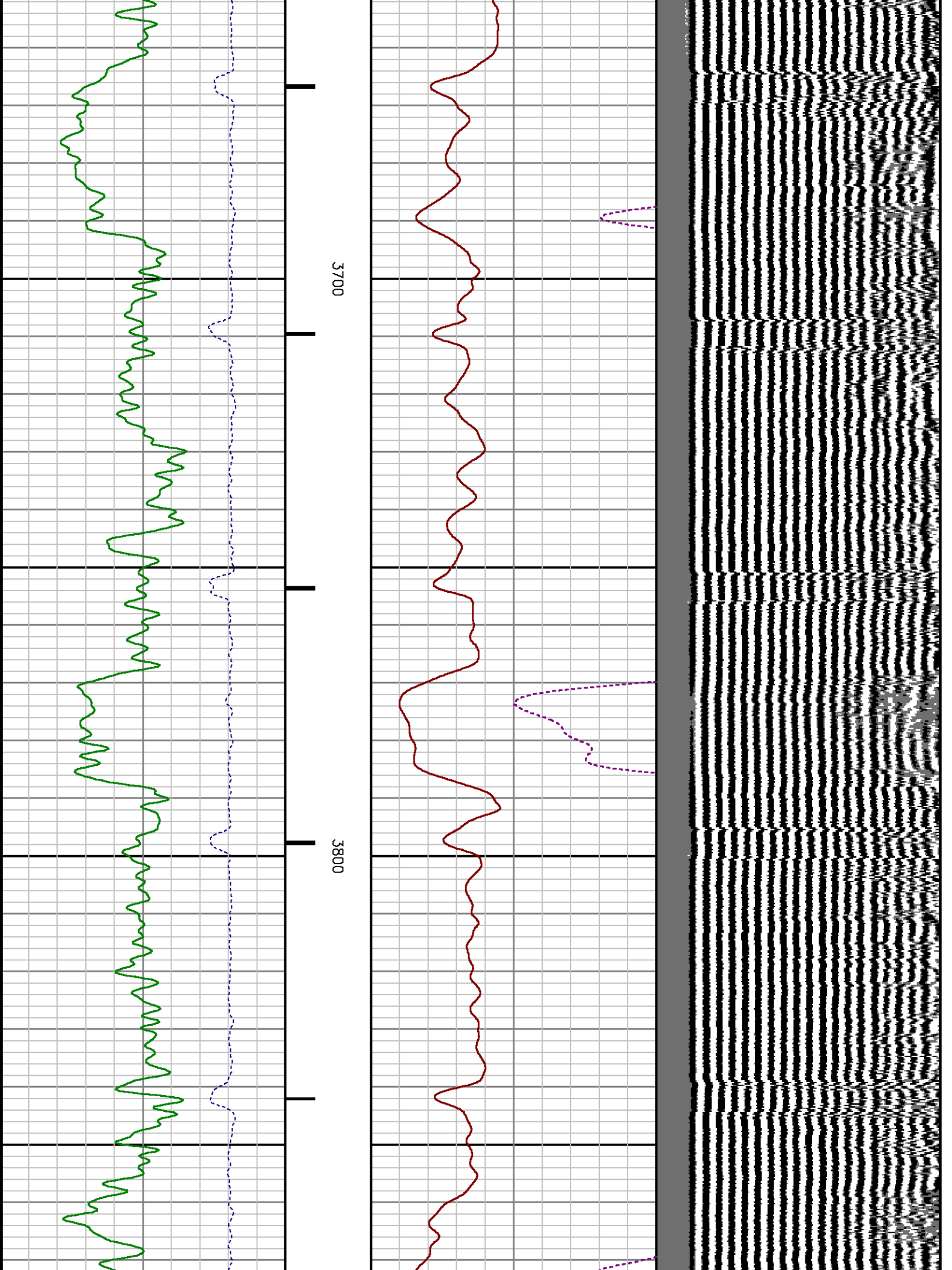
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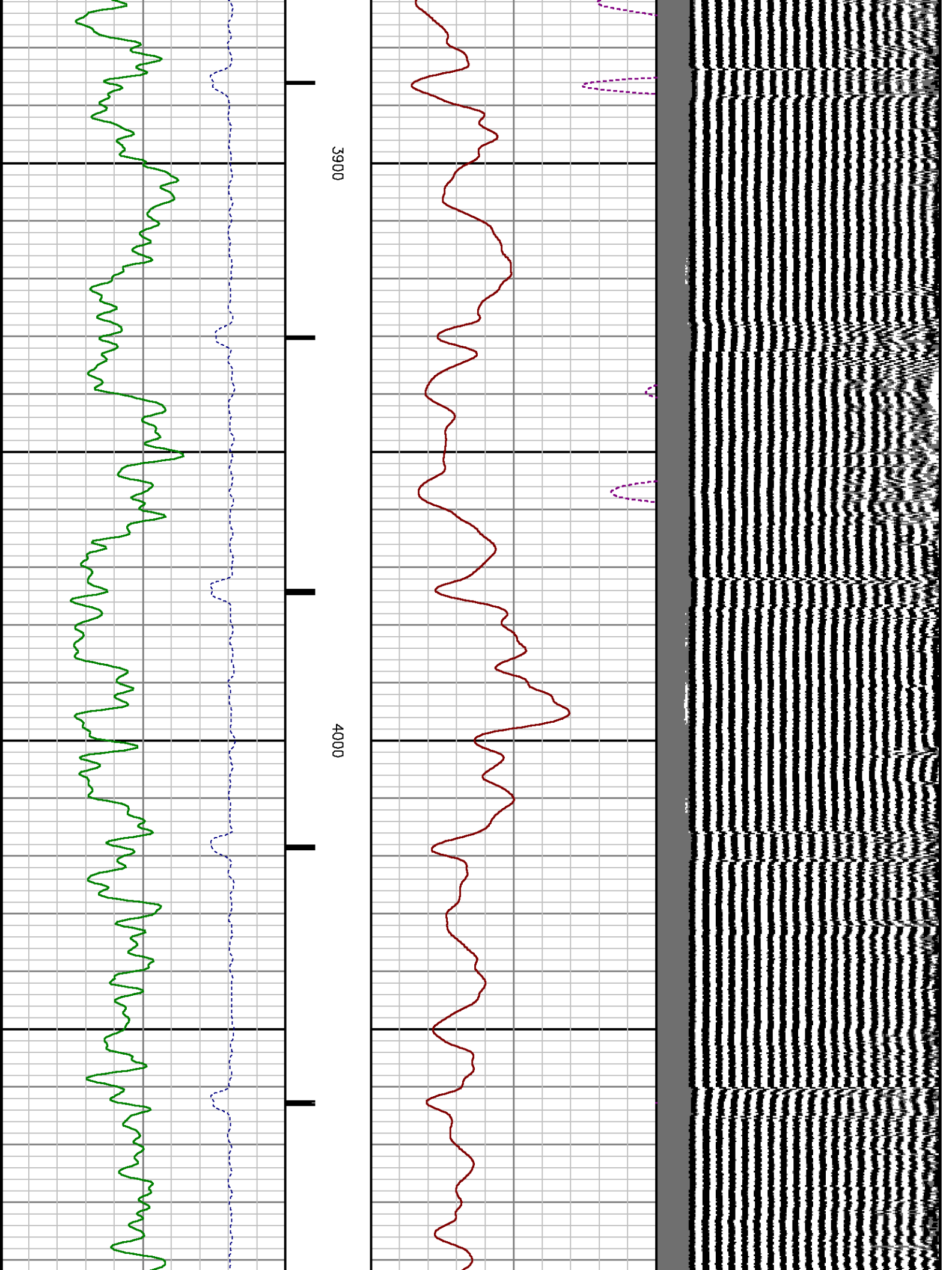
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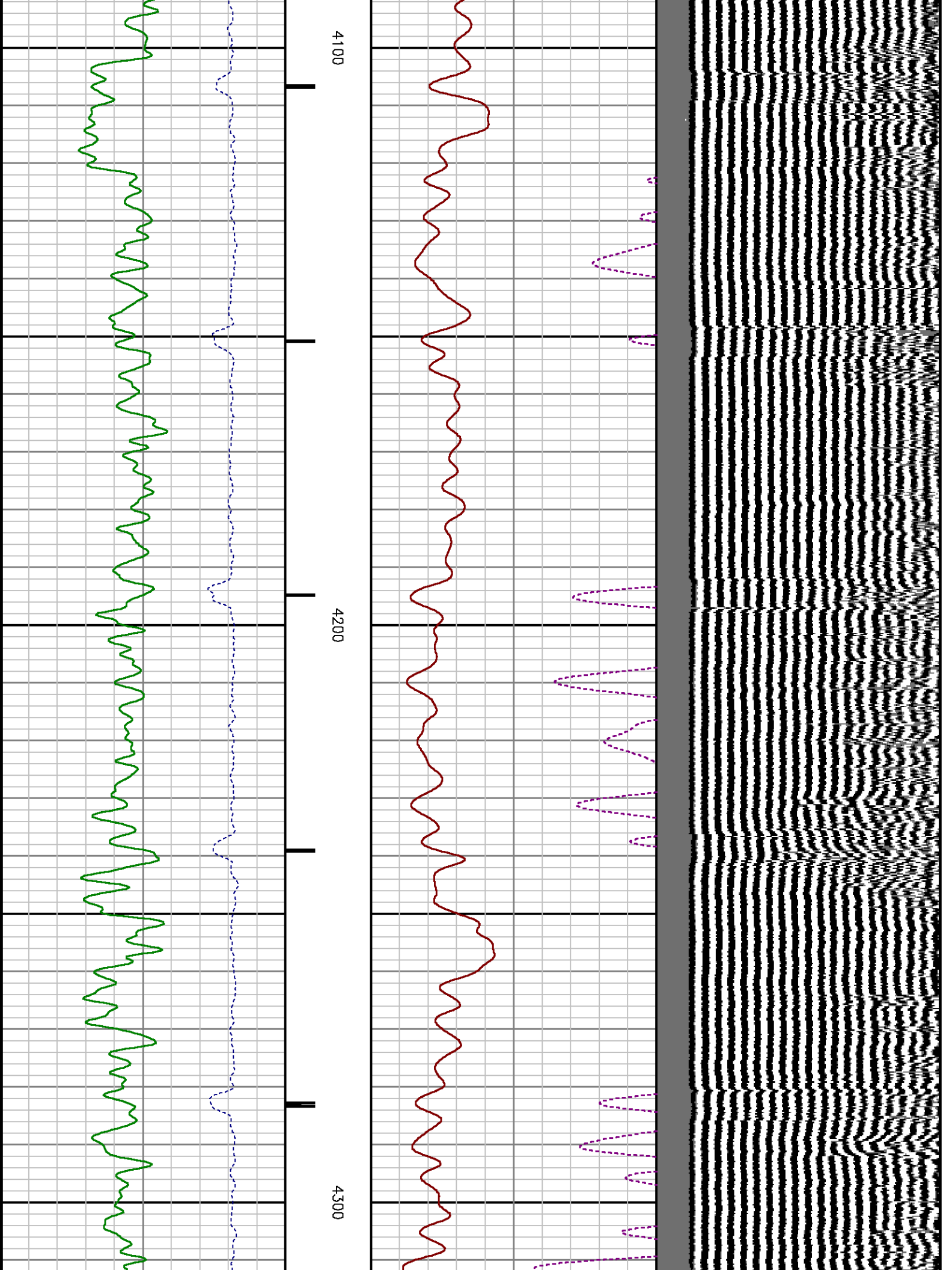


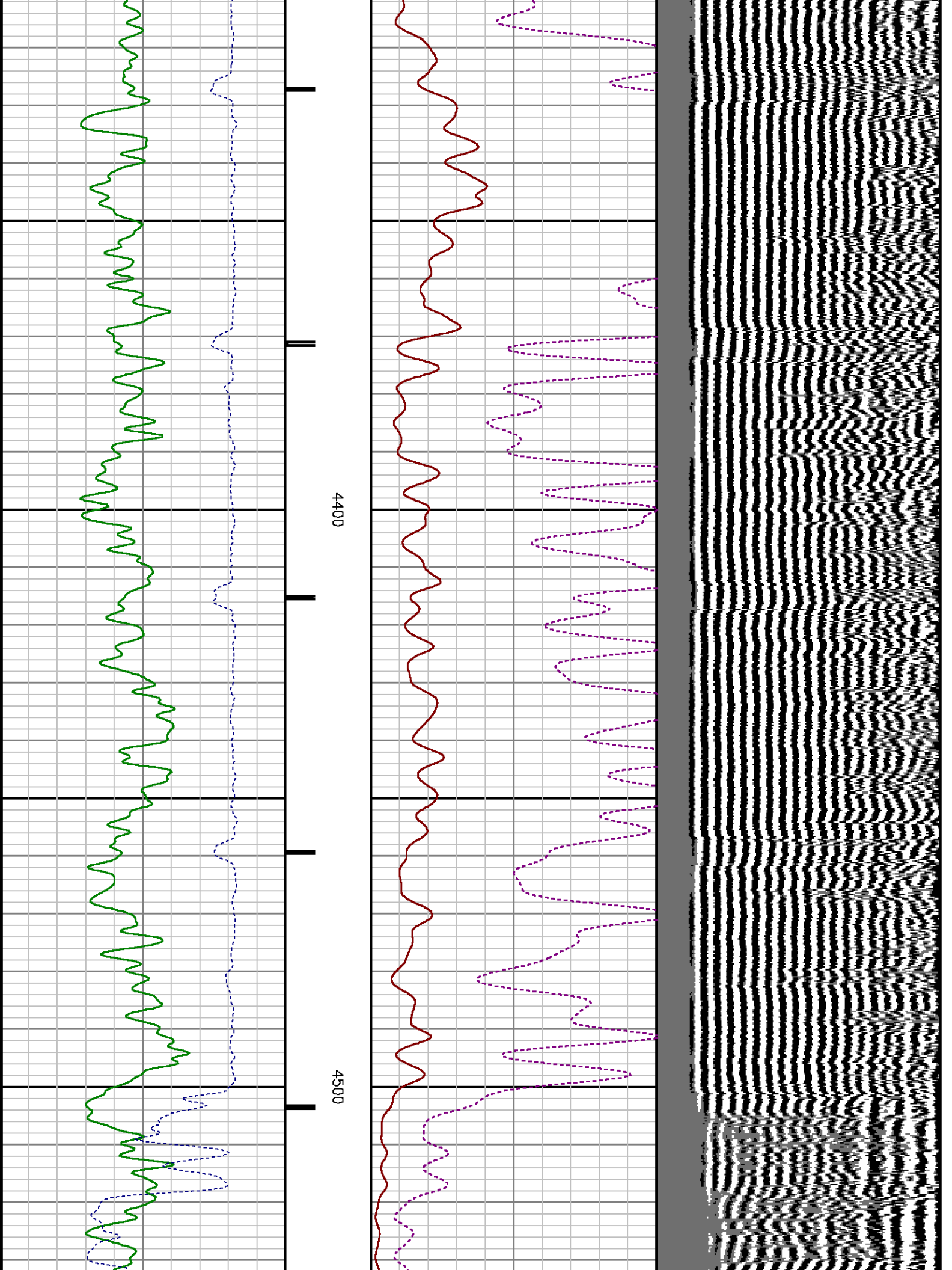


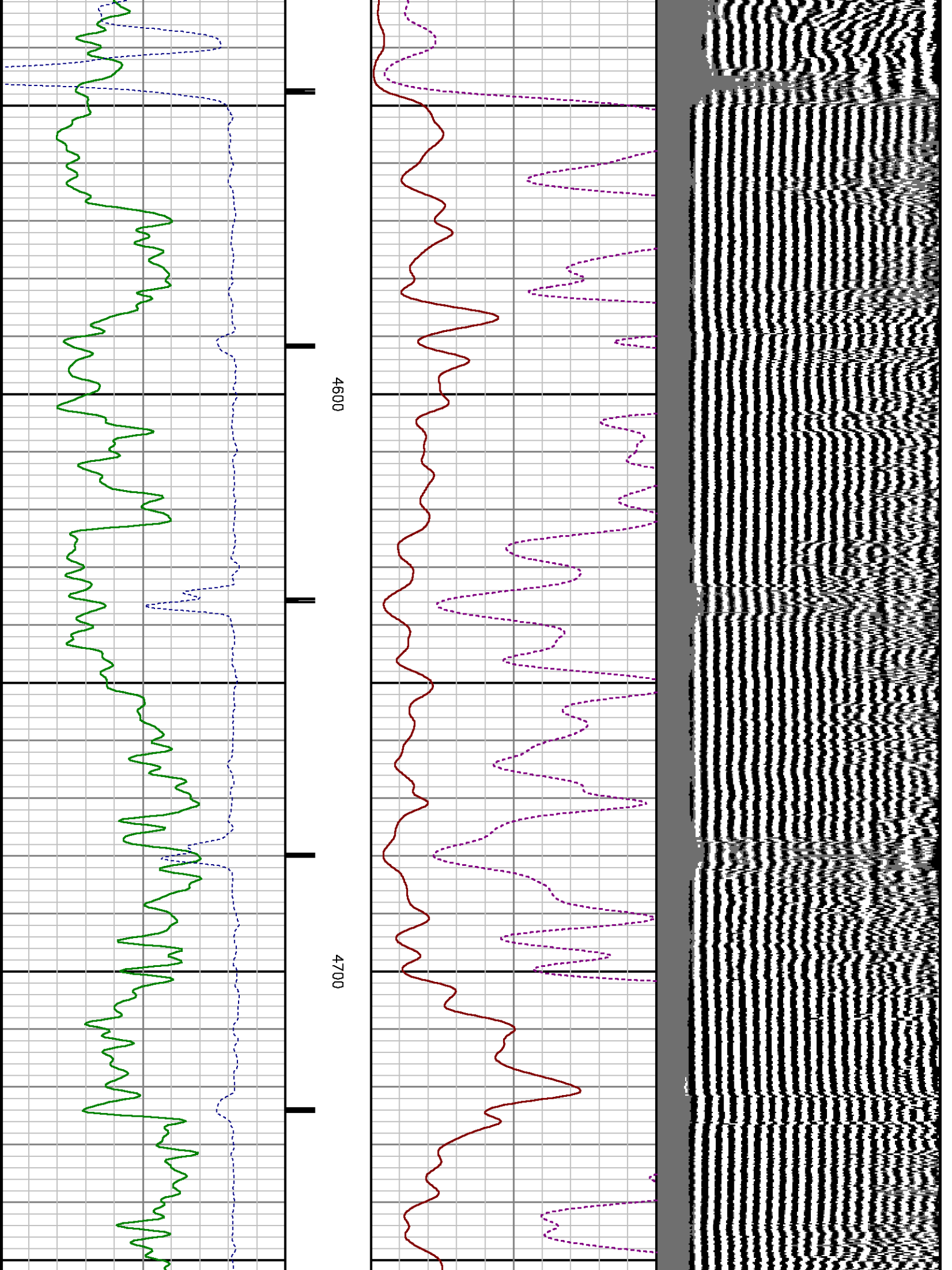


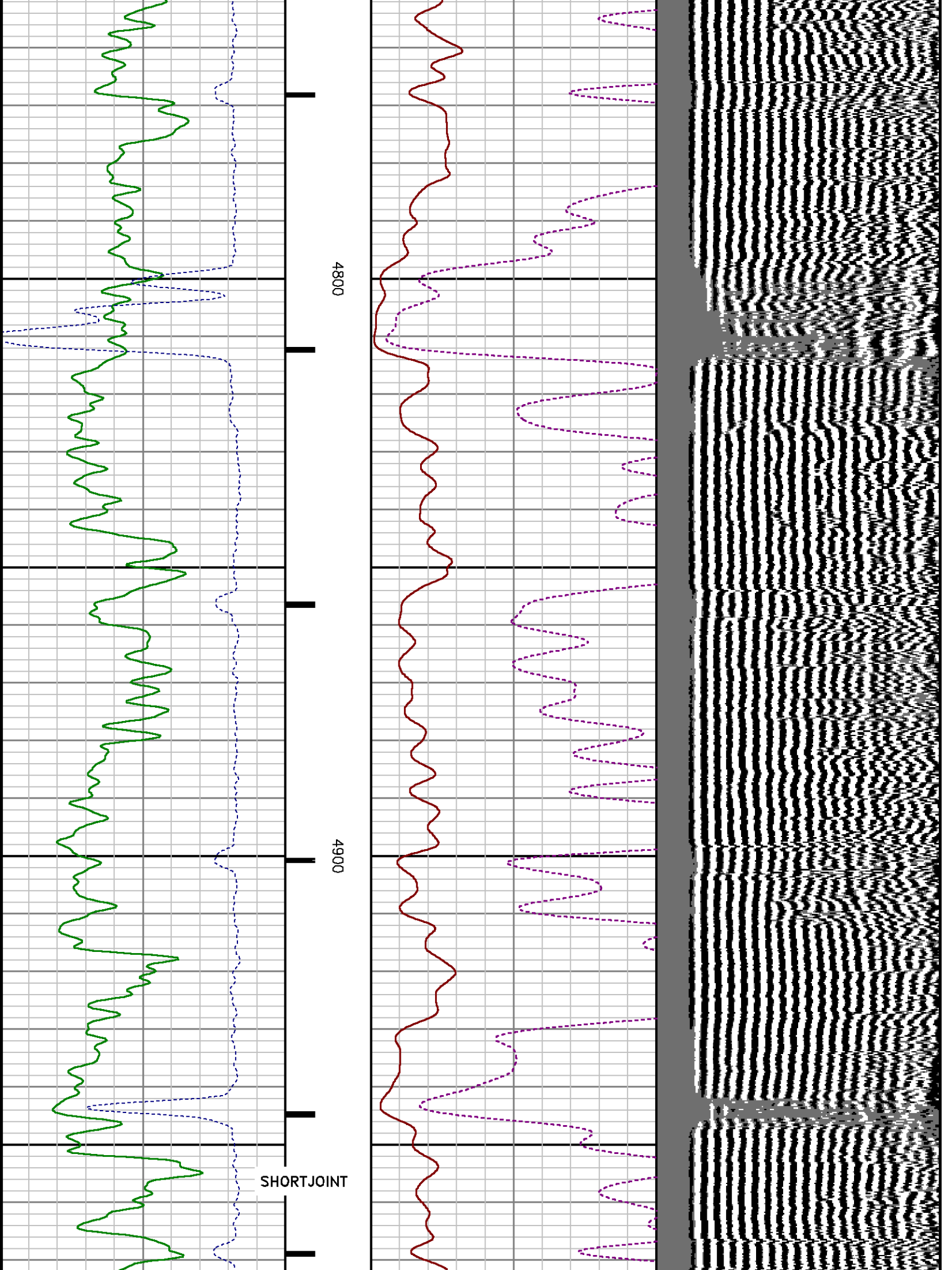


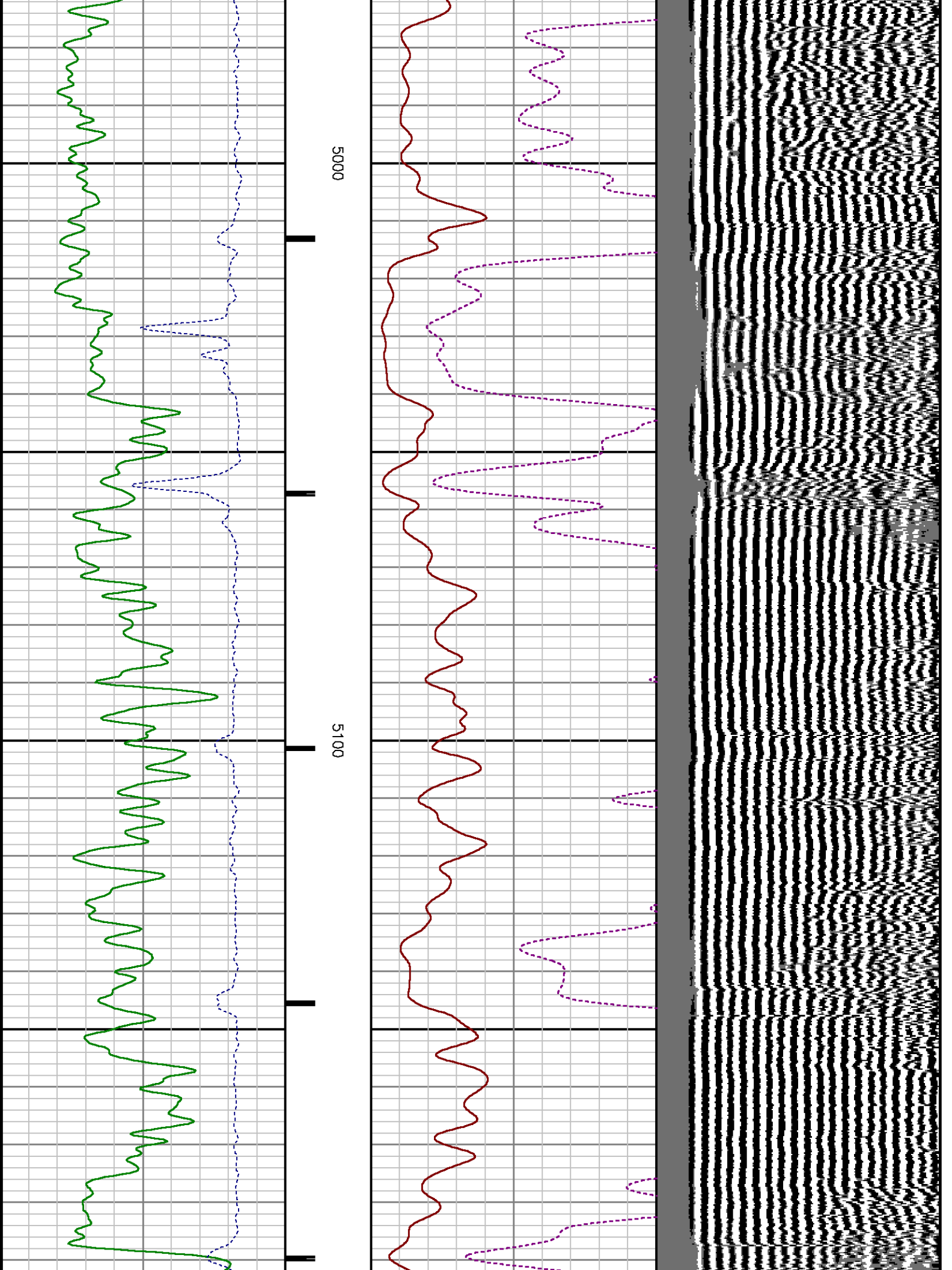


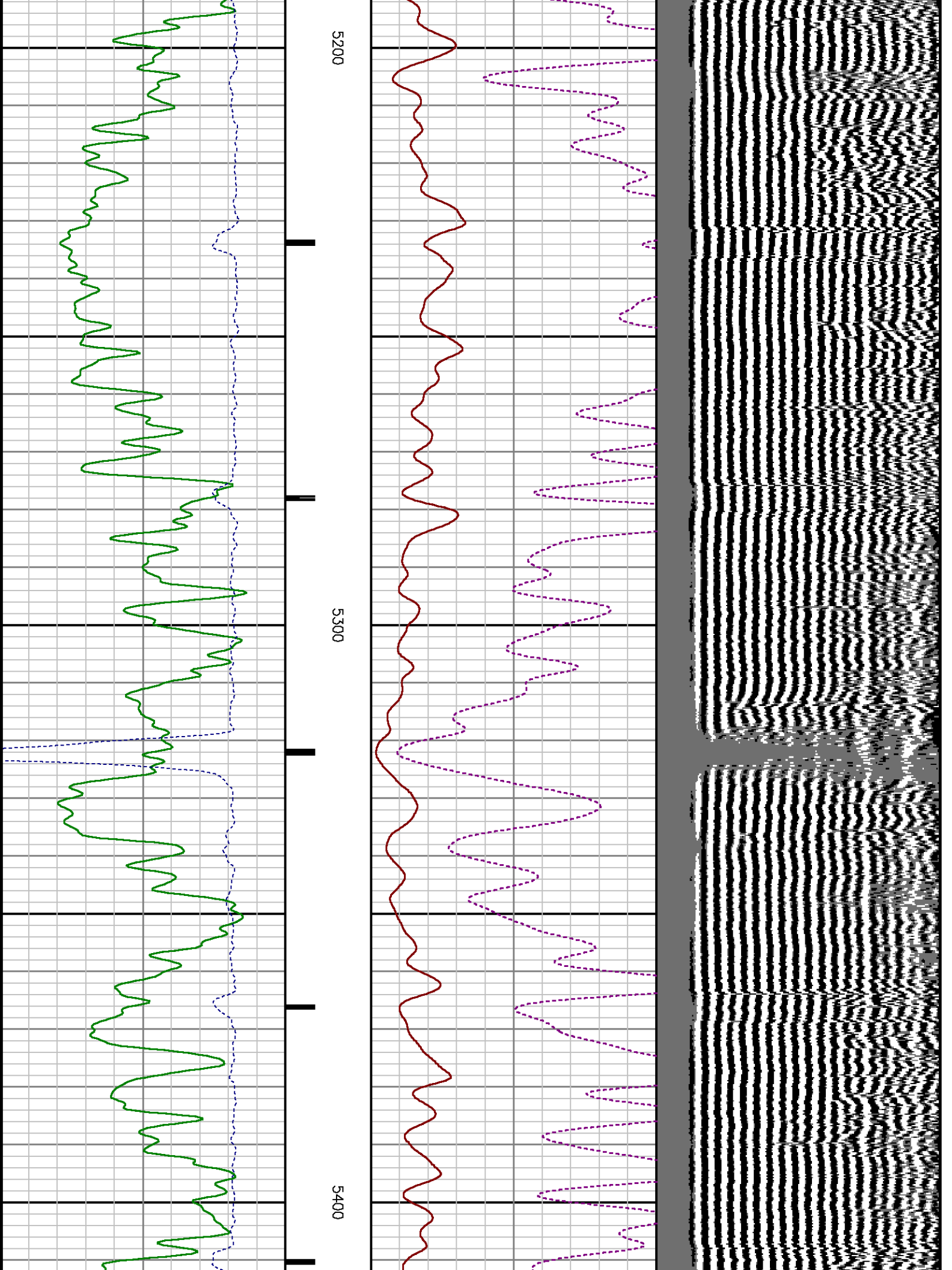


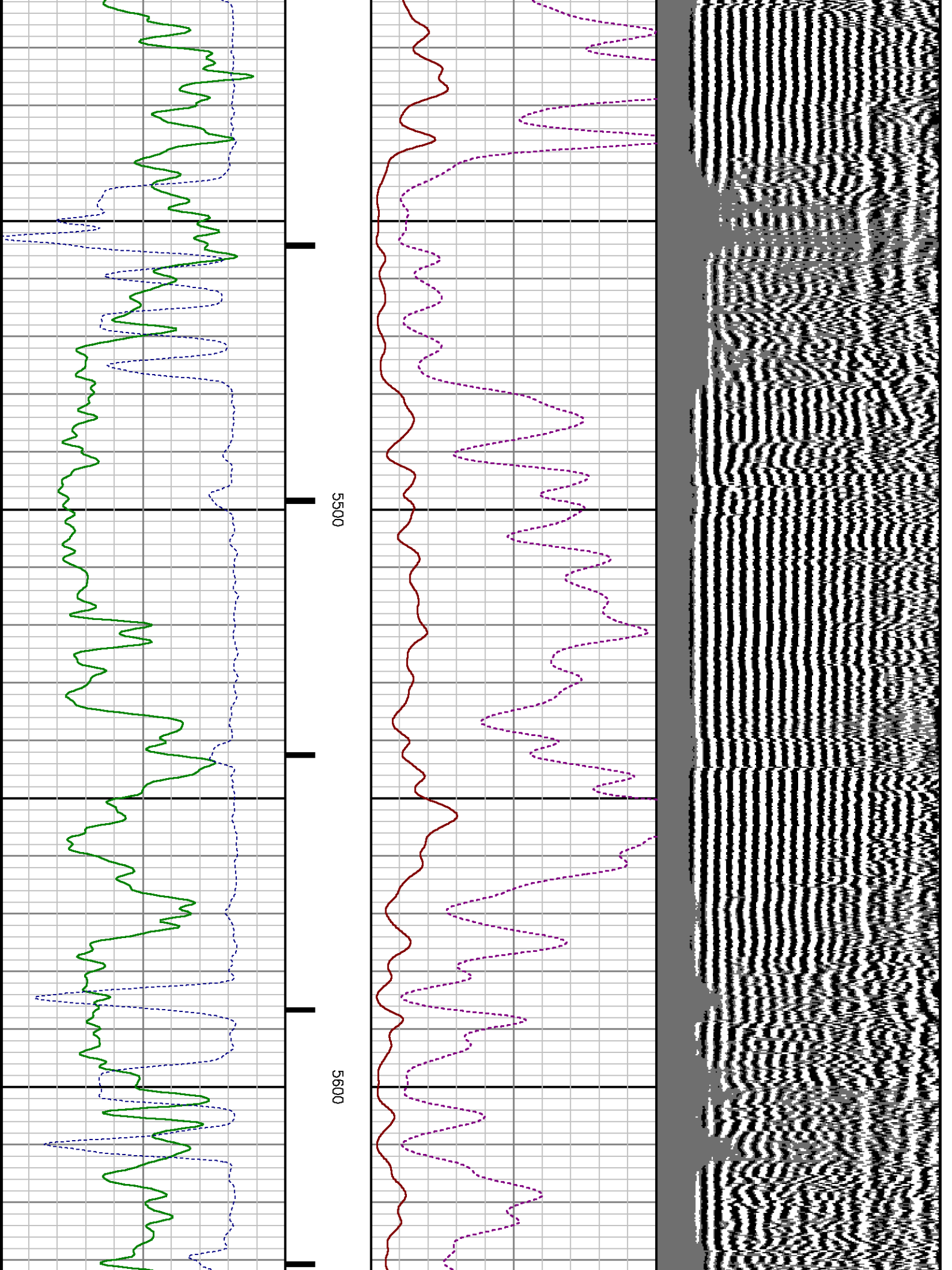


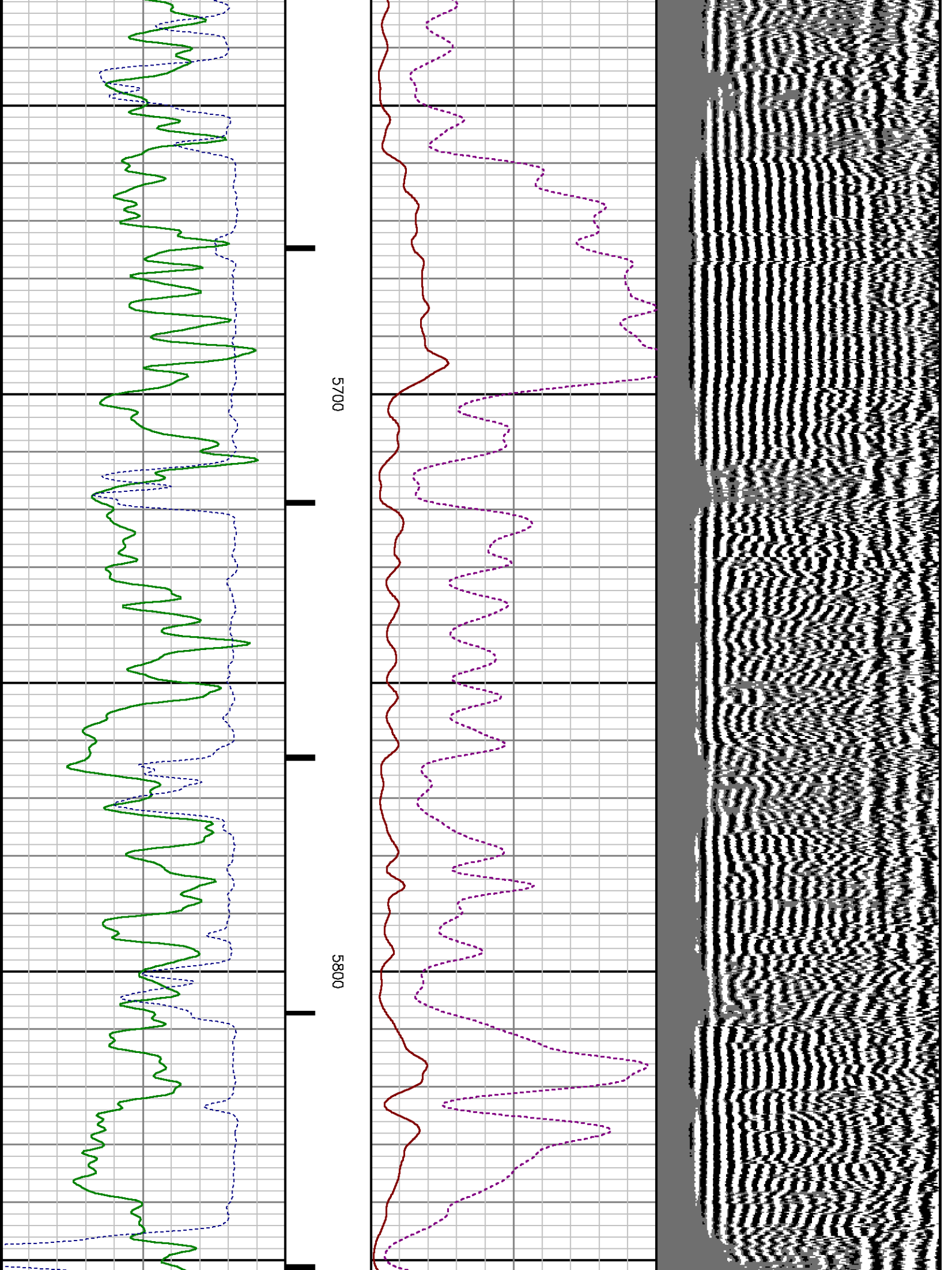


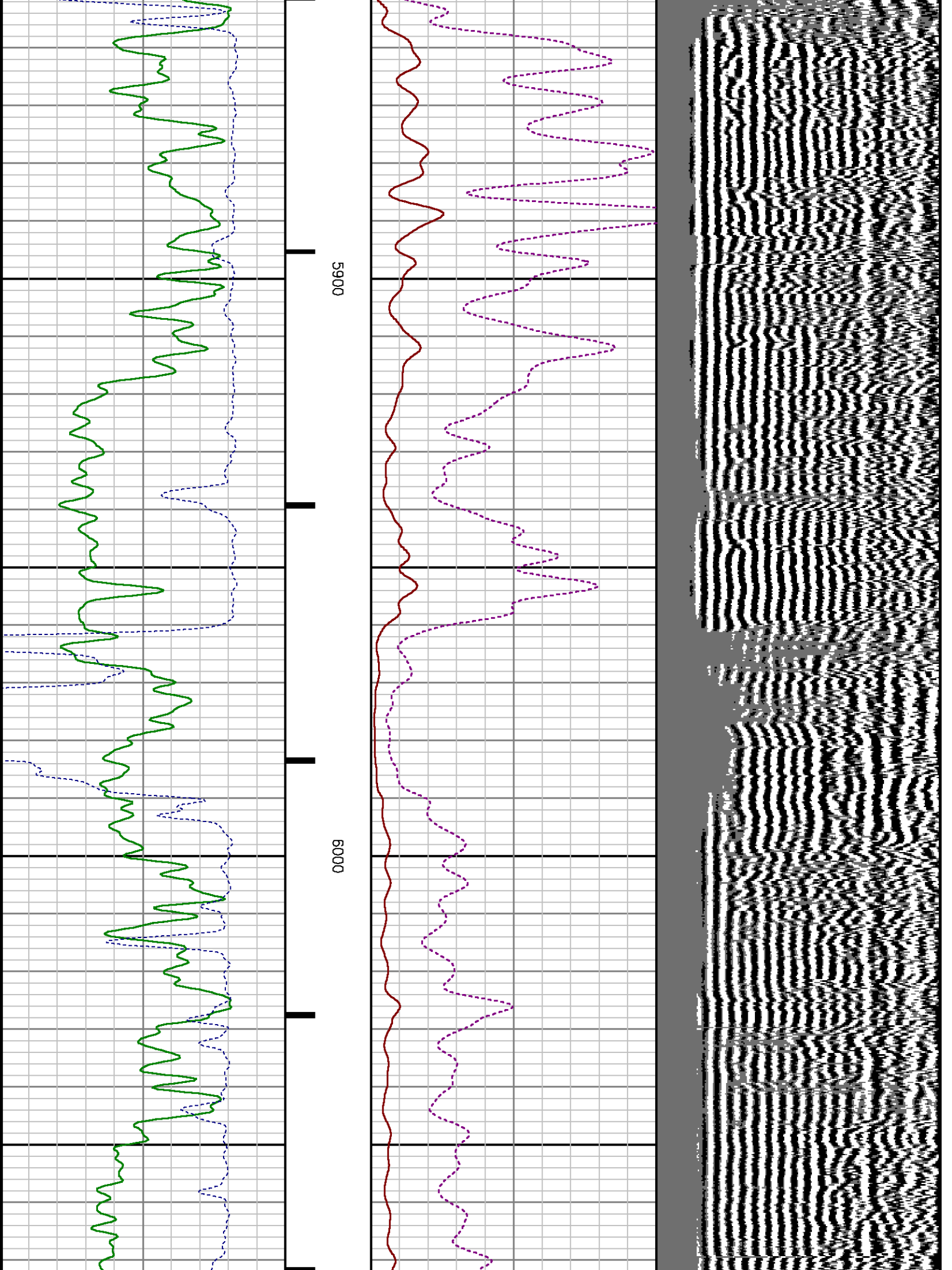


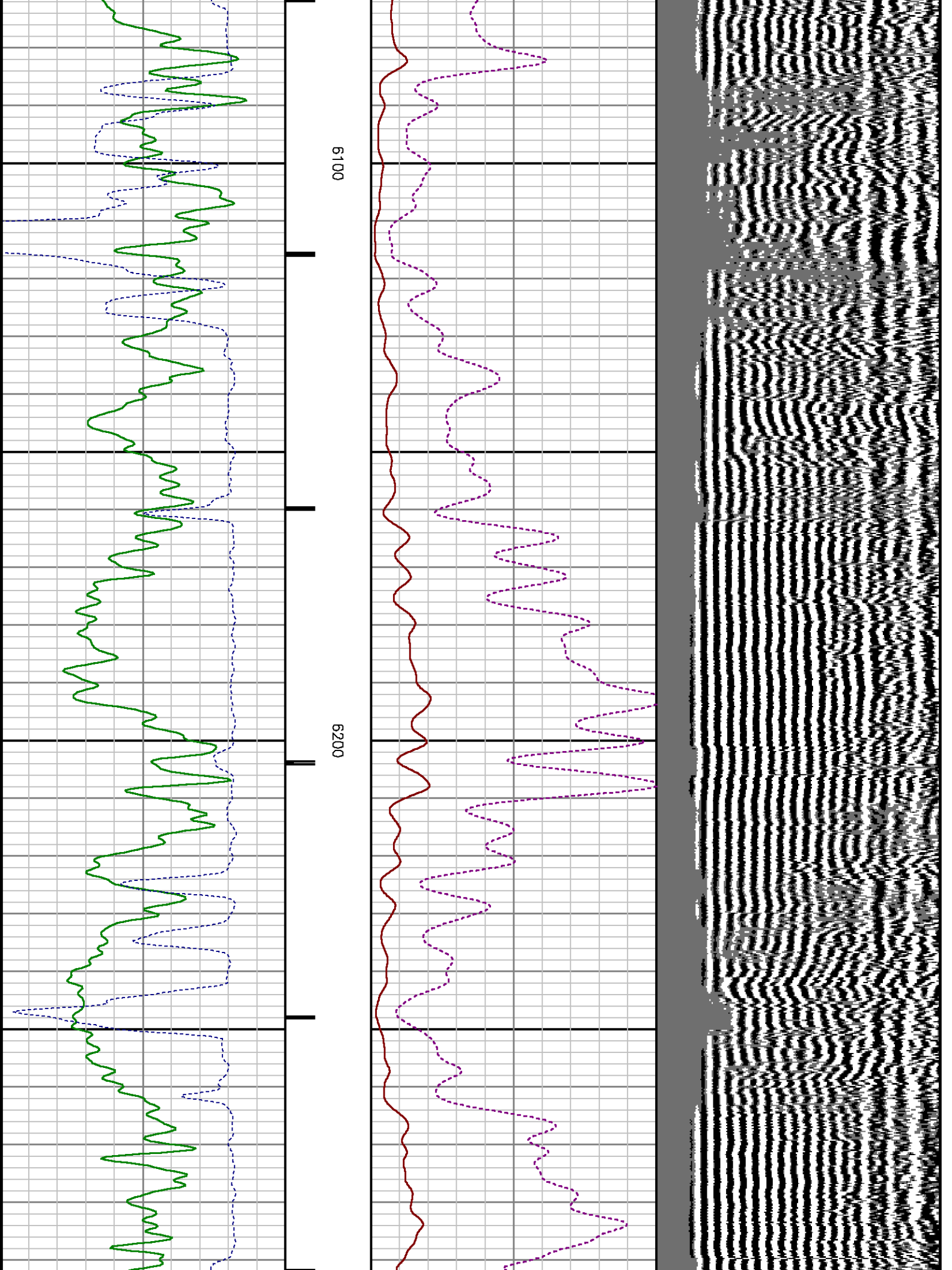


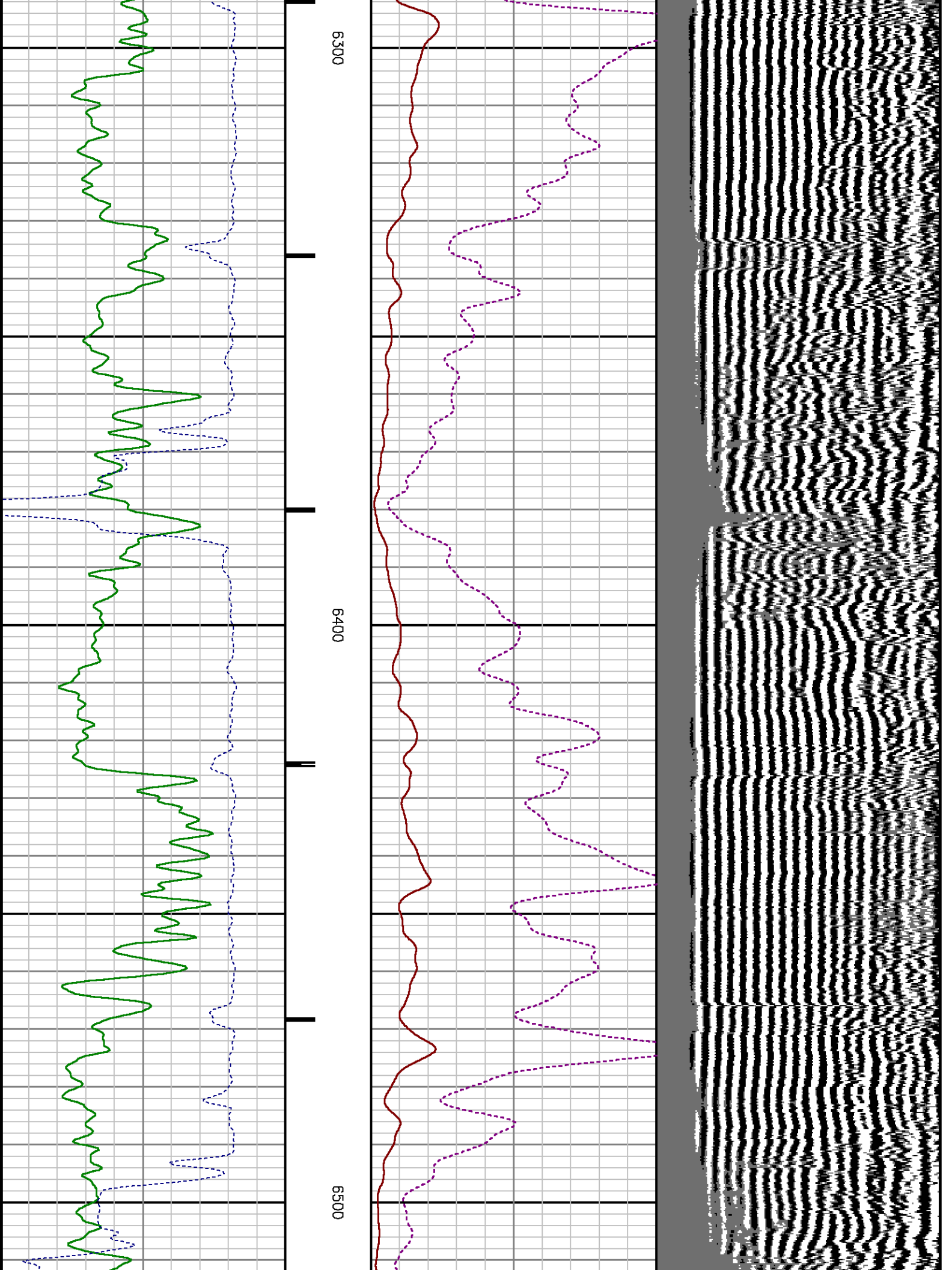


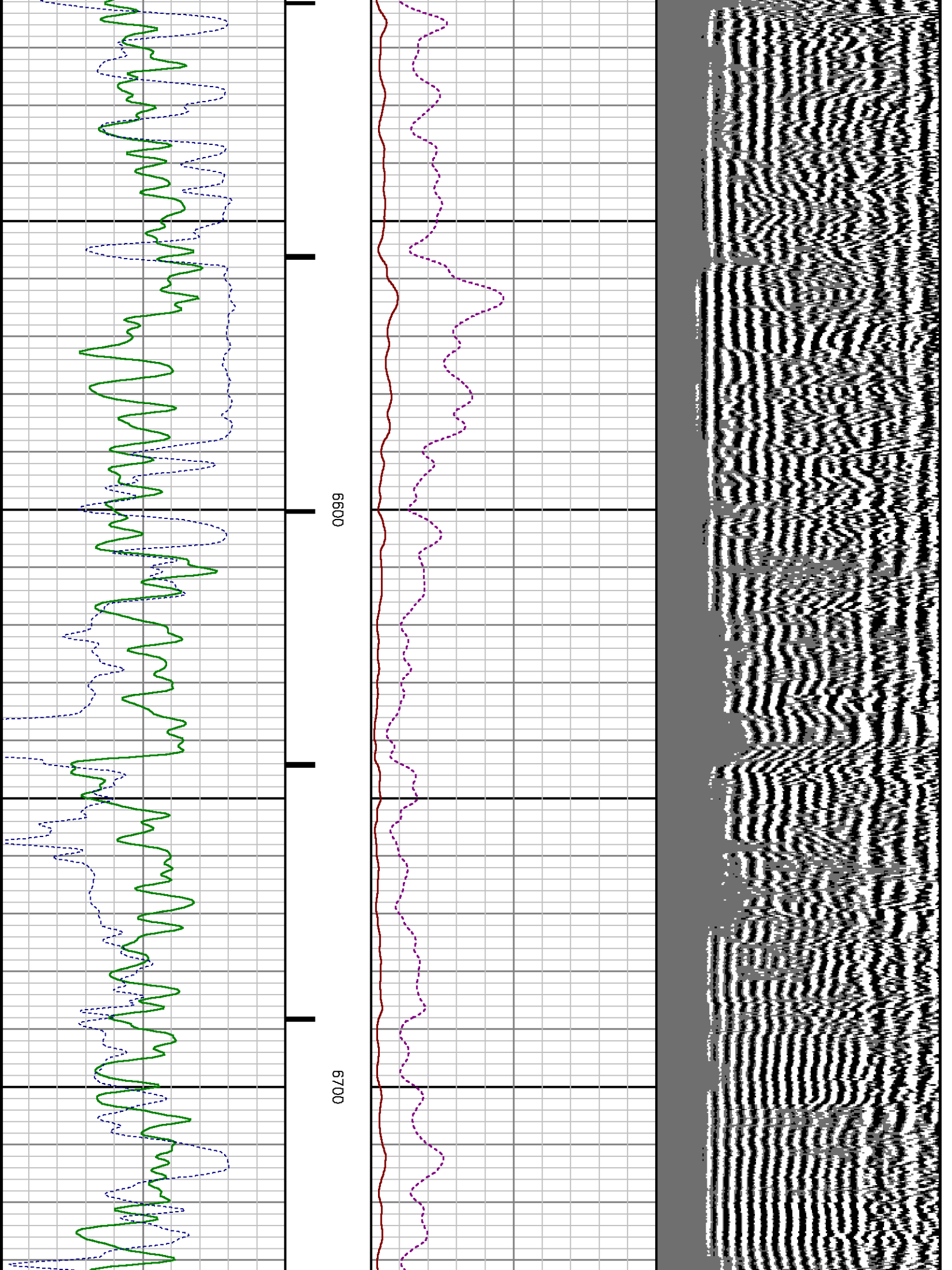


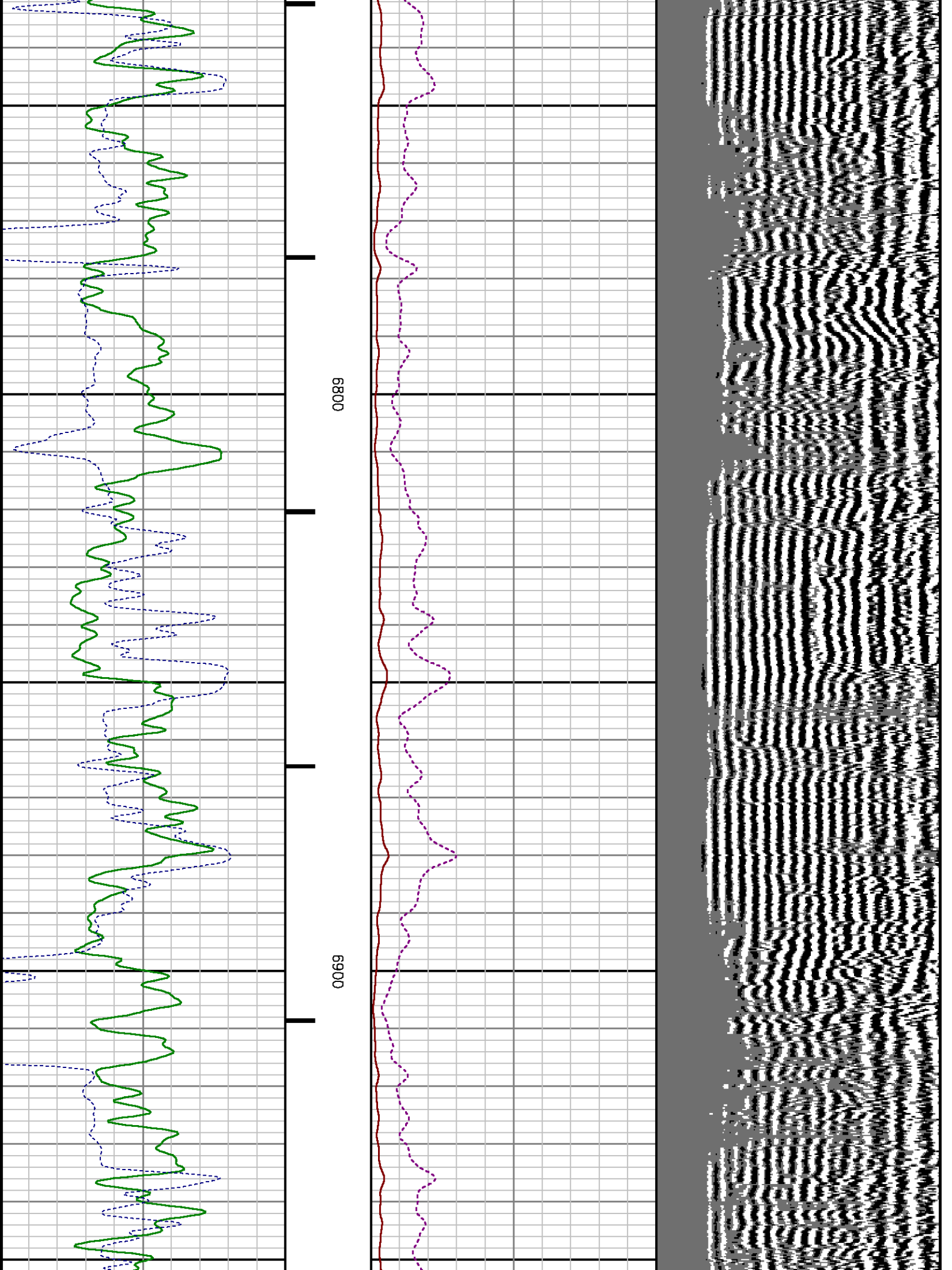


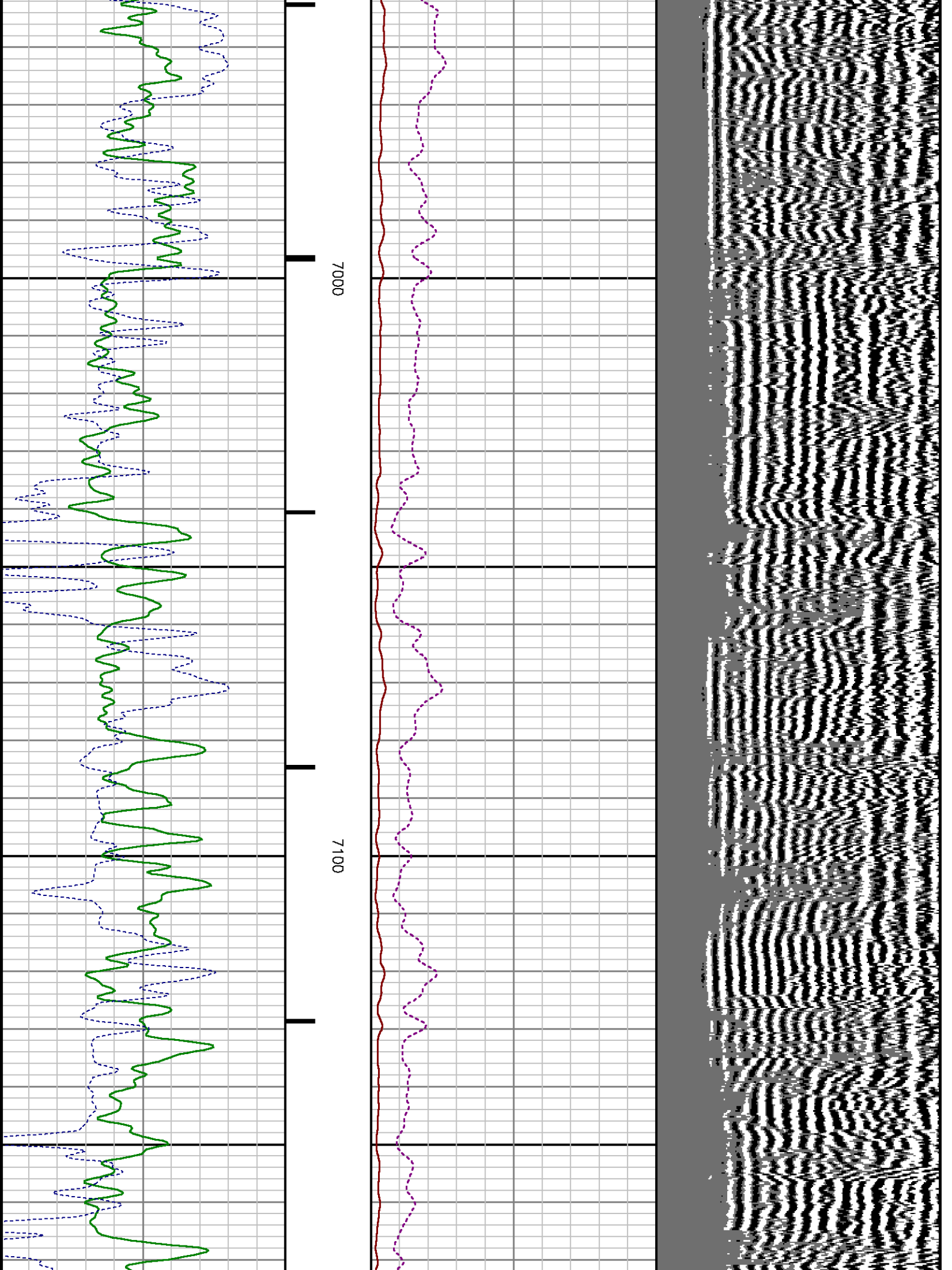


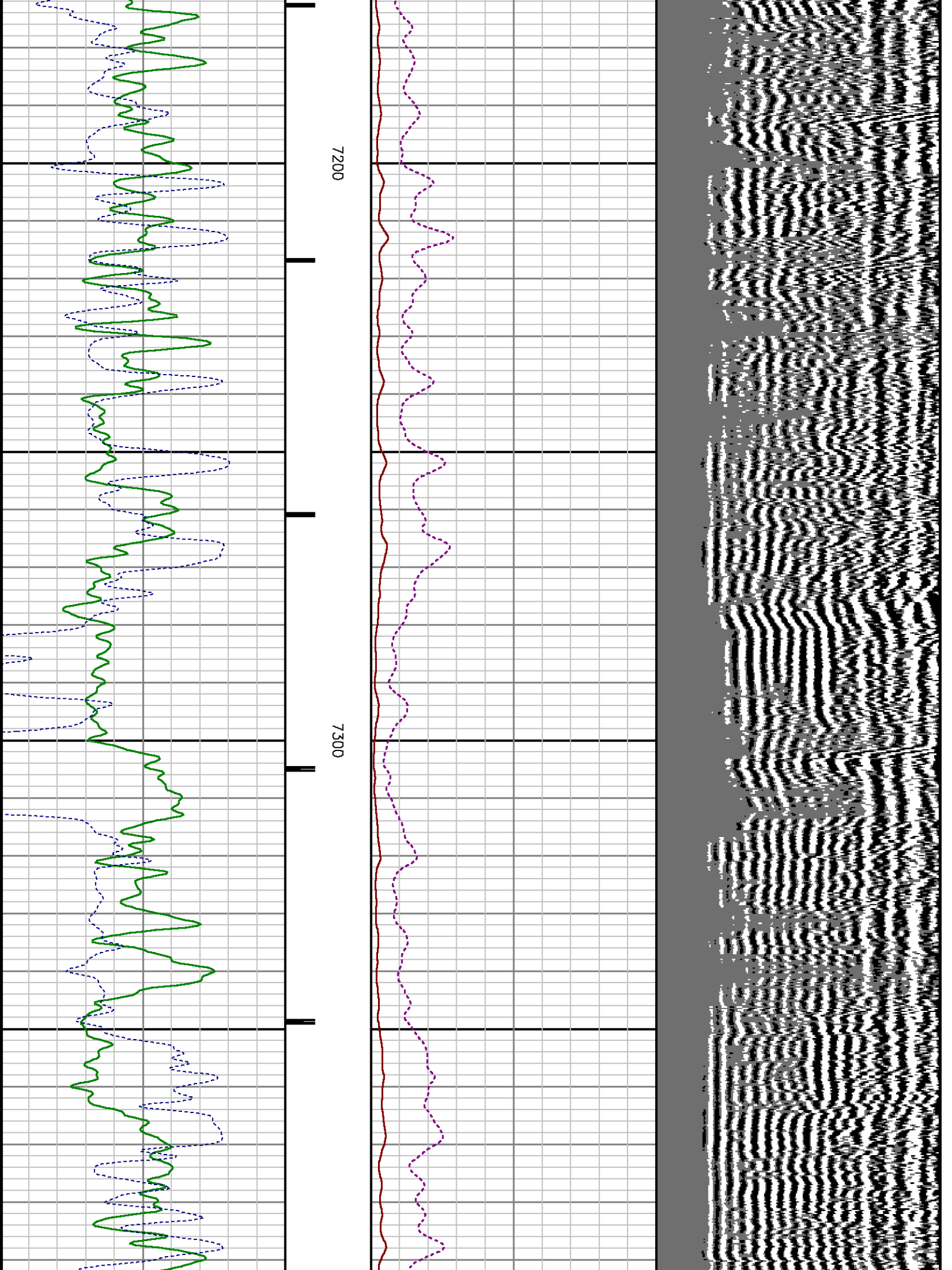


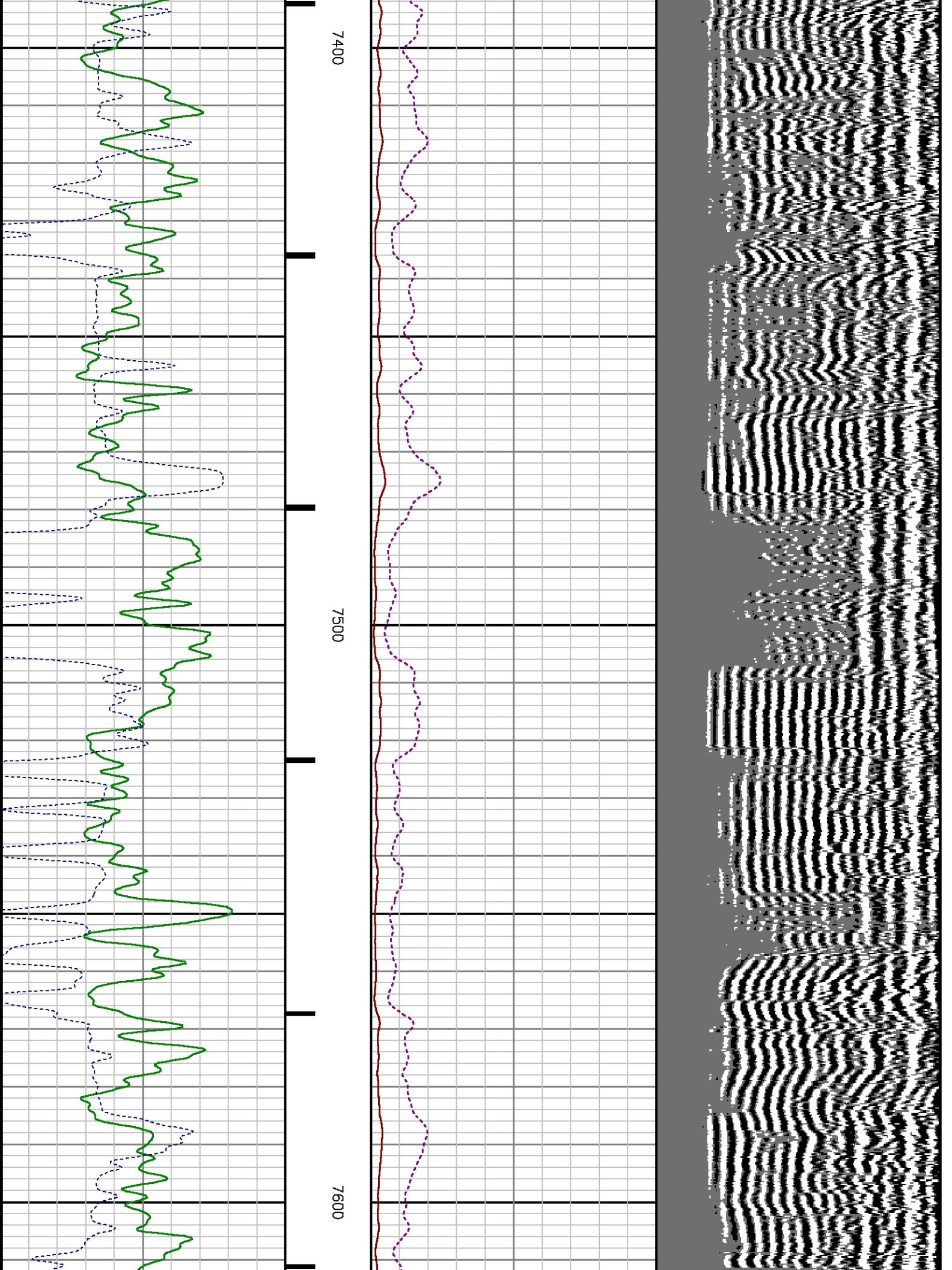


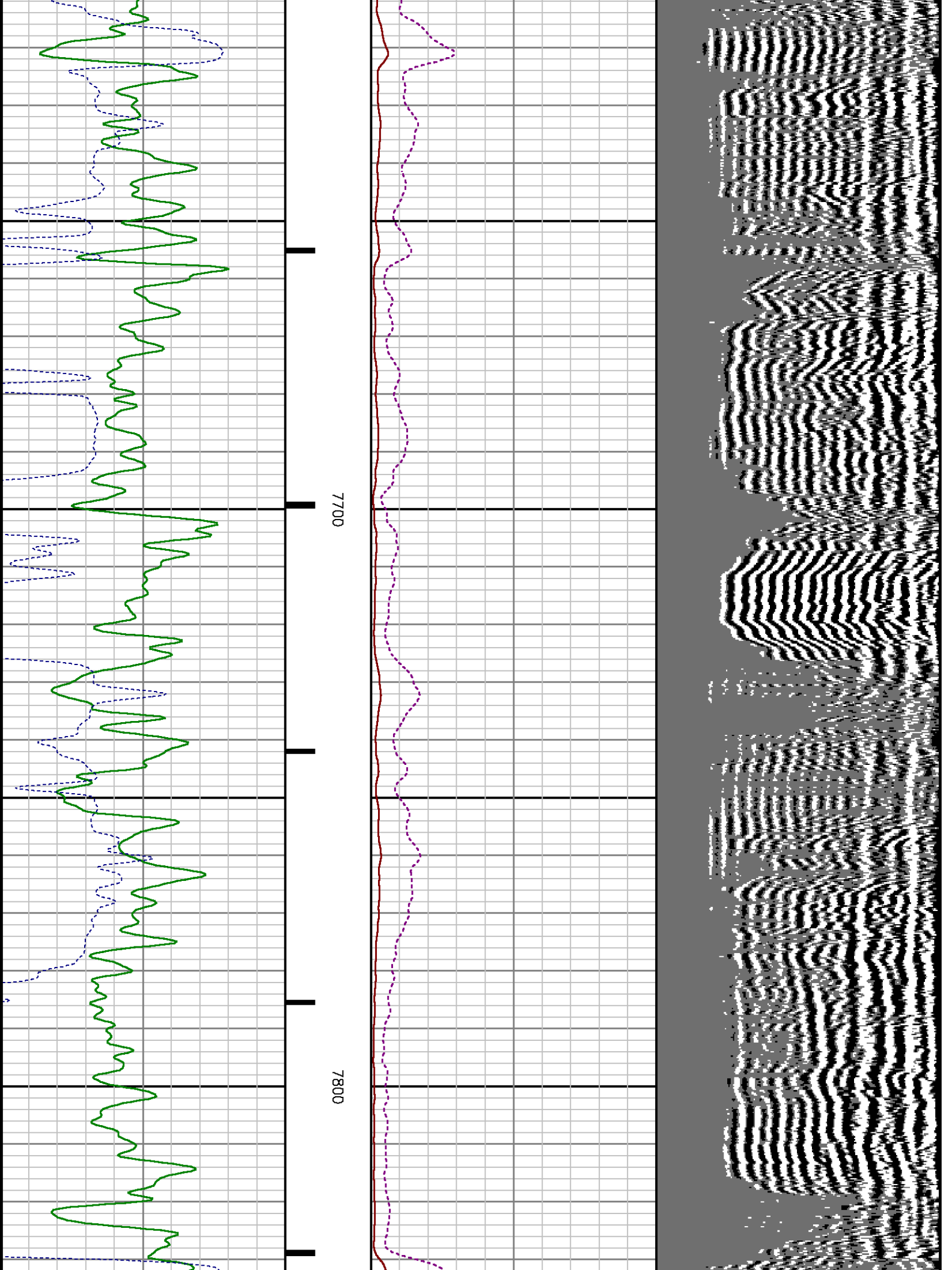


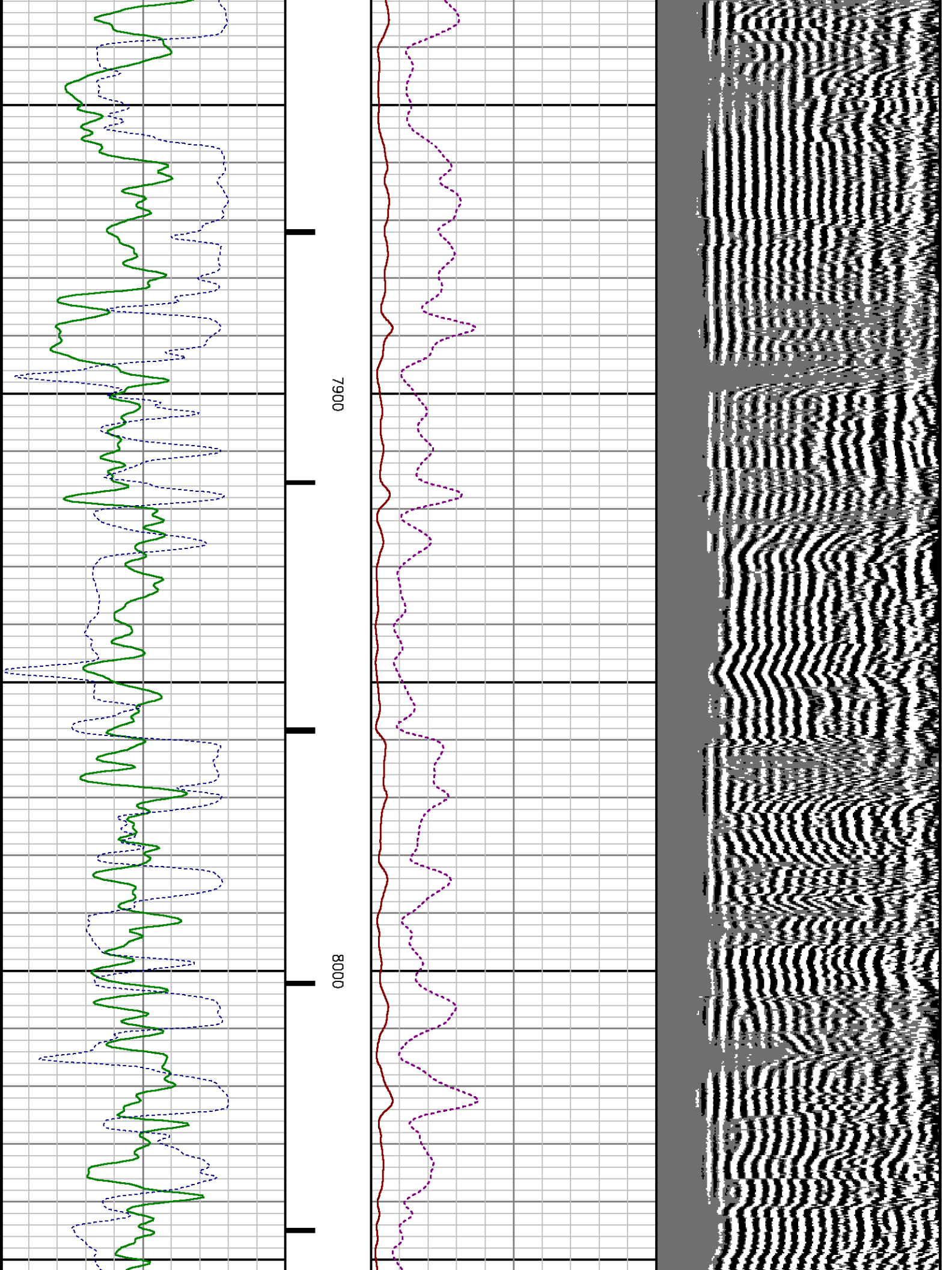


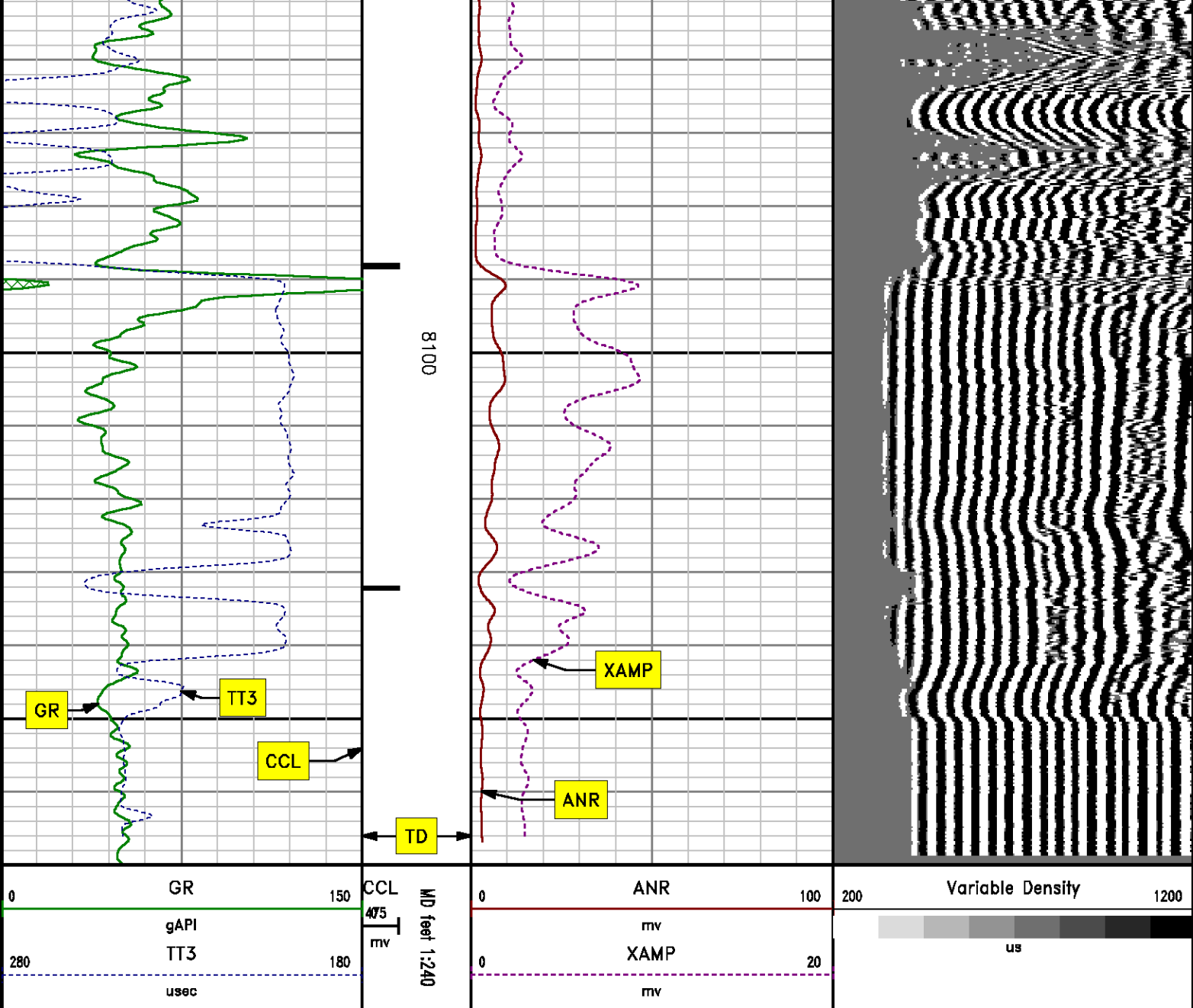












SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	34.629	8183.250
RA	Amp Gate Start N	105.000		34.629	8183.250

RAL	Amp Gate Start Near	195.000	usec	34.629	8183.250
RAL	Amp Gate Start Radial	195.000	usec	34.629	8183.250
RAL	Amp Gate Width Far	25.000	usec	34.629	8183.250
RAL	Amp Gate Width Near	25.000	usec	34.629	8183.250
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RAL	casing od	4.500	inches	34.629	8183.250
RAL	casing wt	11.600	lbm/ft	34.629	8183.250
RAL	FB Start Far	291.900	usec	34.629	8183.250
RAL	FB Start Near	175.391	usec	34.629	8183.250
RAL	FB Start Radial	175.391	usec	34.629	8183.250
RAL	FB Thresh Far	10.000	mv	34.629	8183.250
RAL	FB Thresh Near	4.000	mv	34.629	8183.250
RAL	FB Thresh Radial	4.000	mv	34.629	8183.250
RAL	Fluid Travel Time	200.000	usec/ft	34.629	8184.223

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	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	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

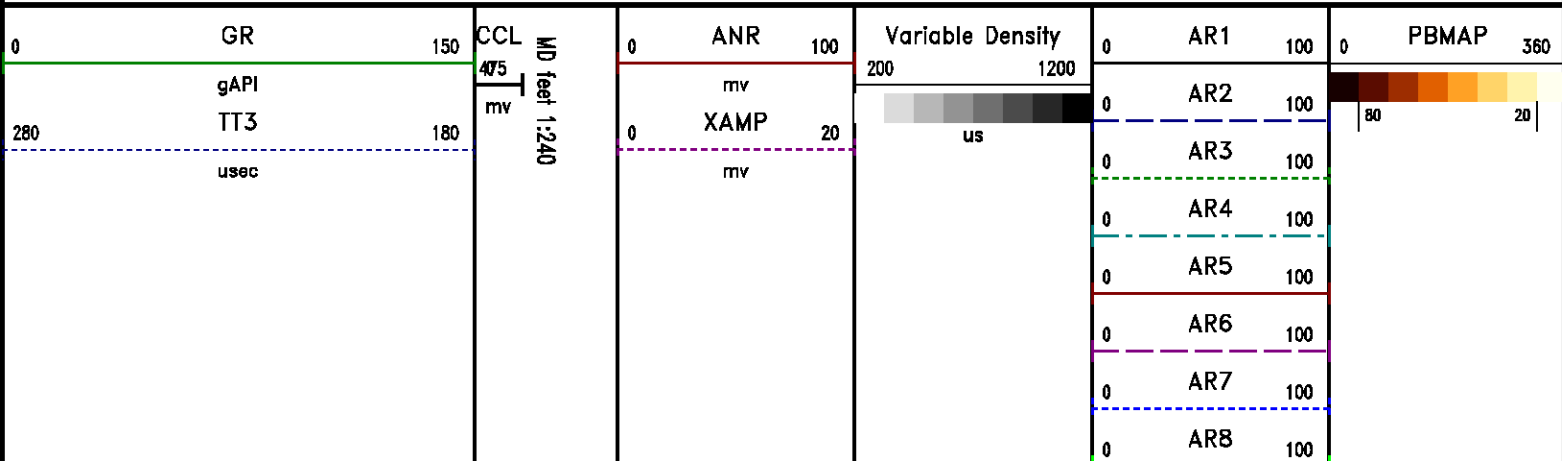
Well : WPX ENERGY RWF 421-4

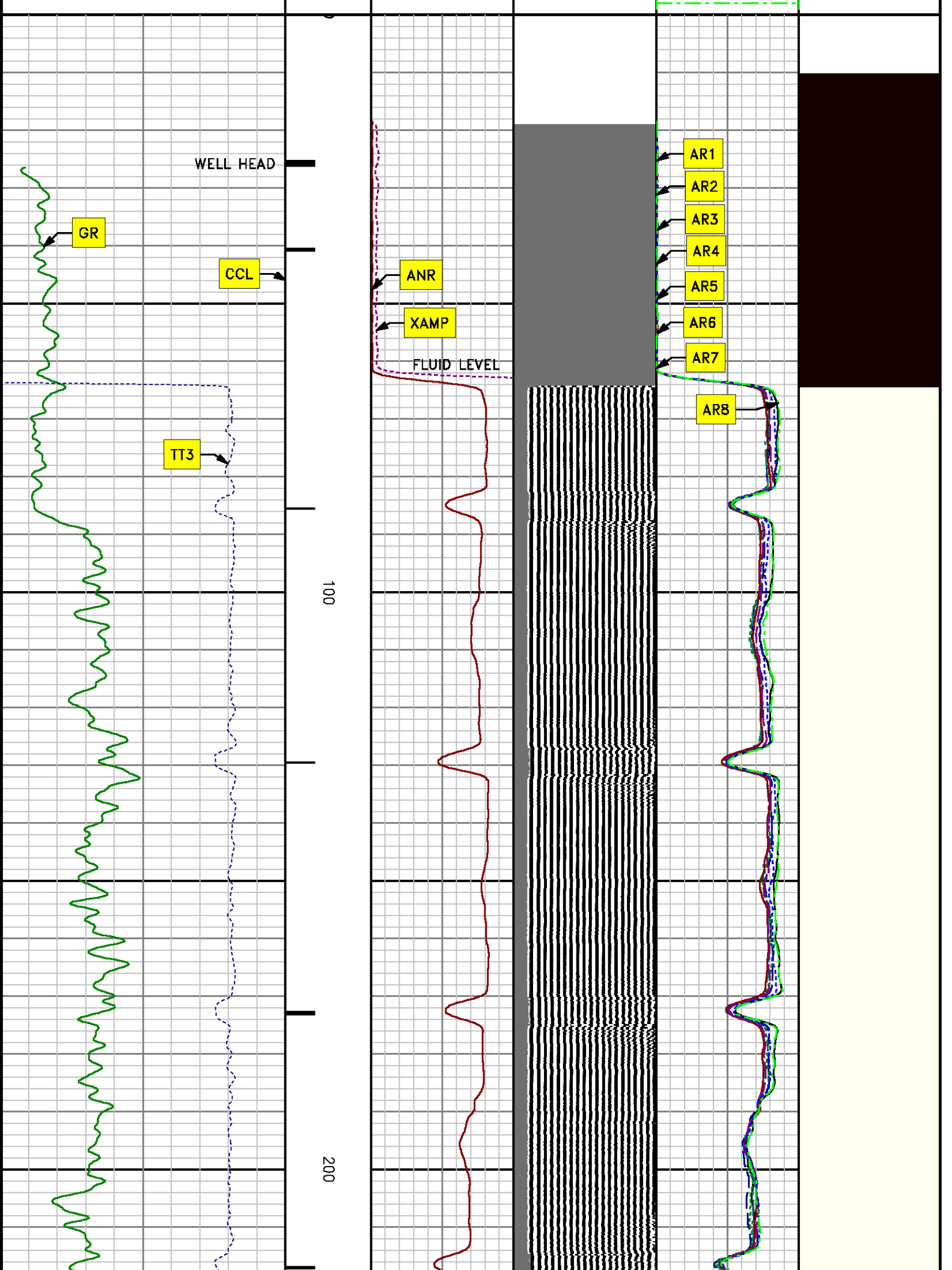
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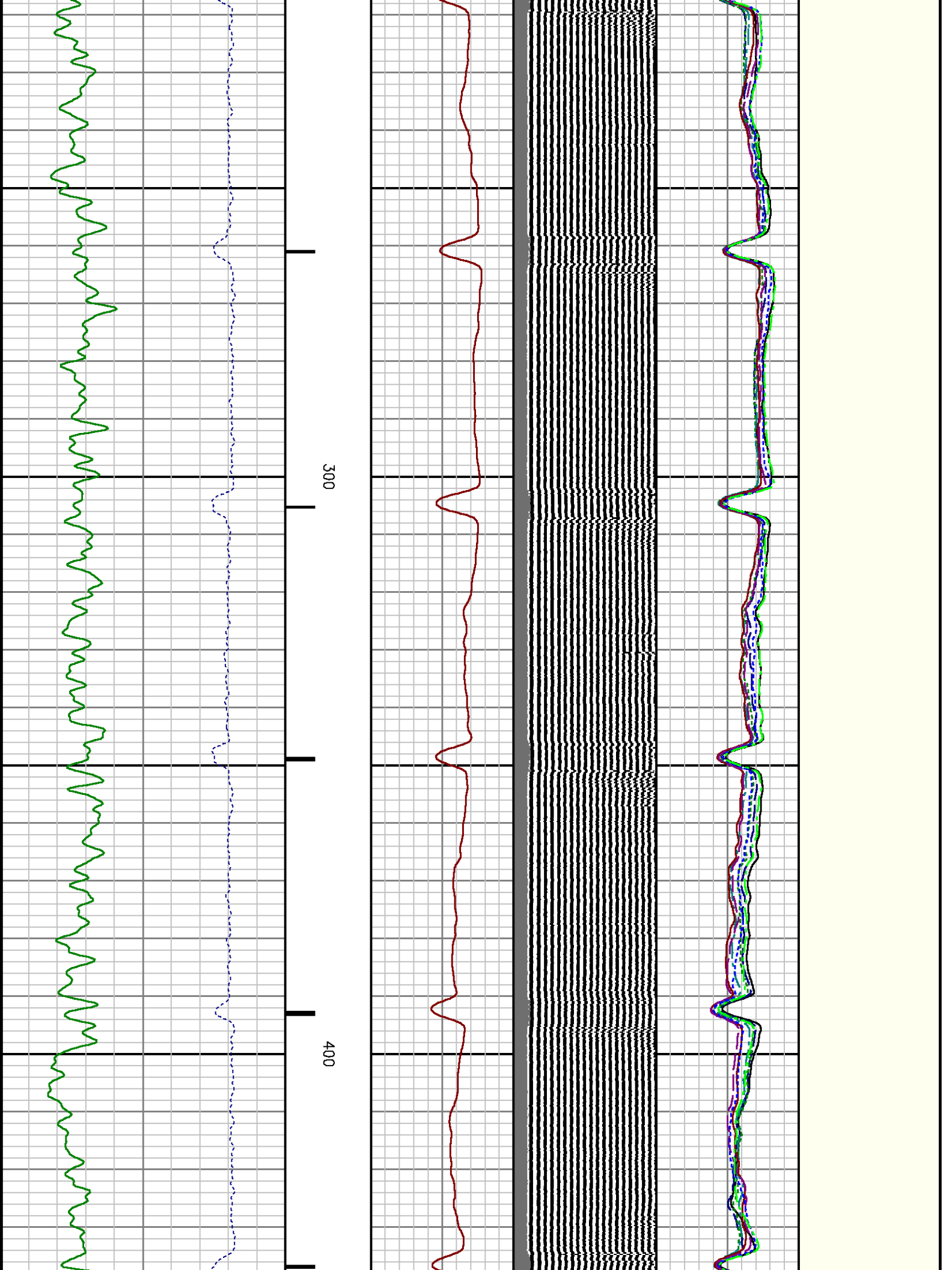
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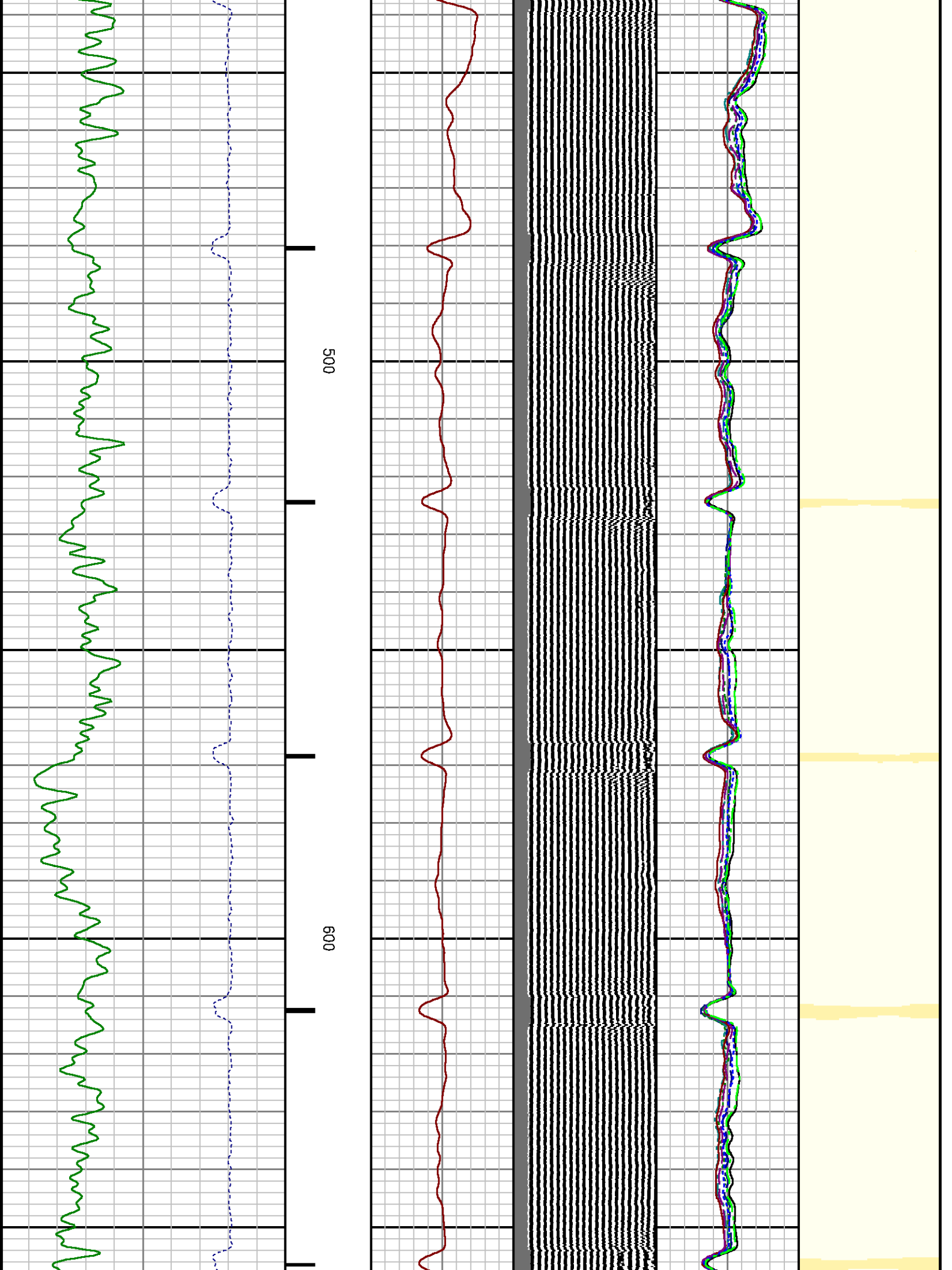
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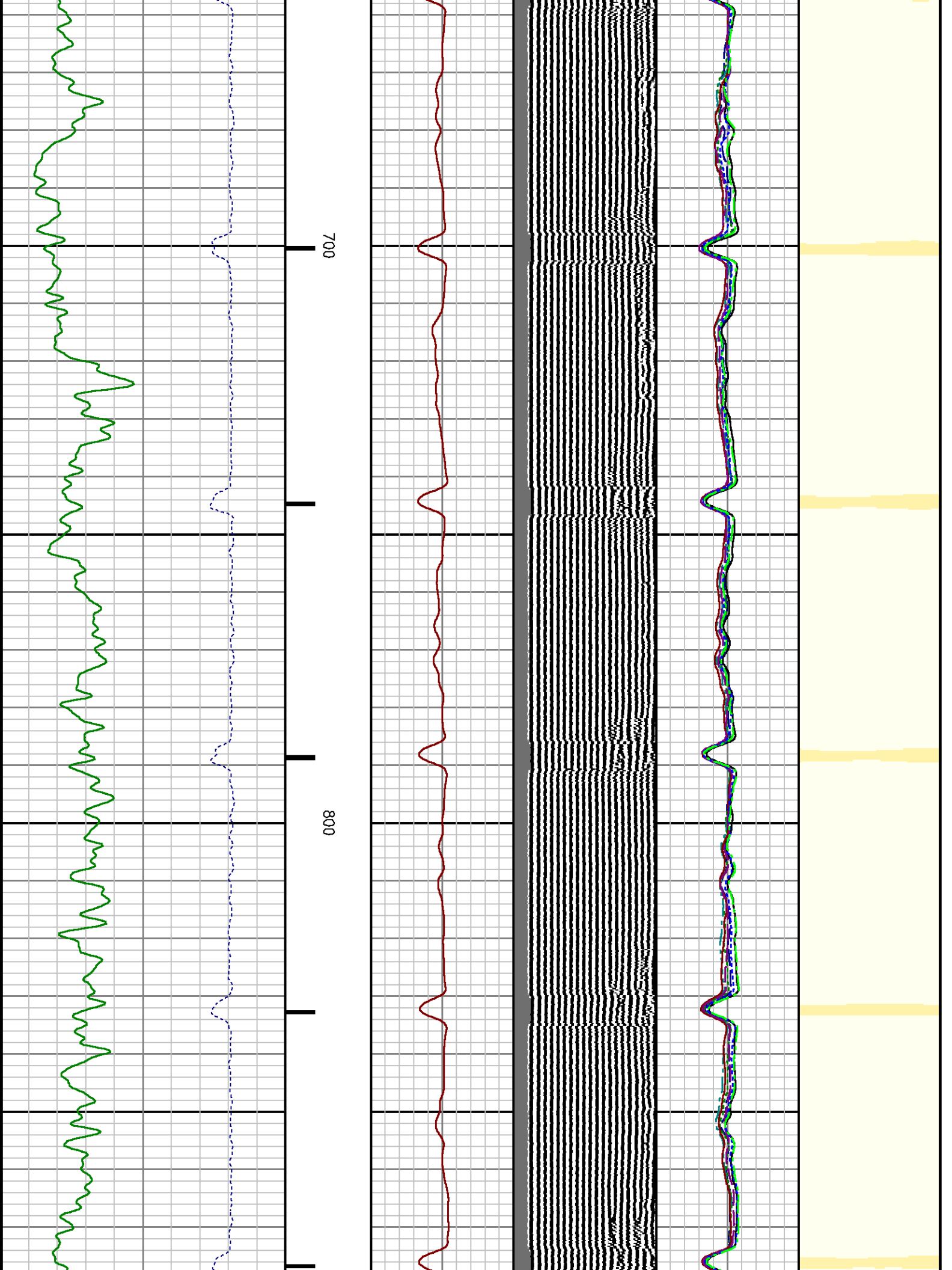
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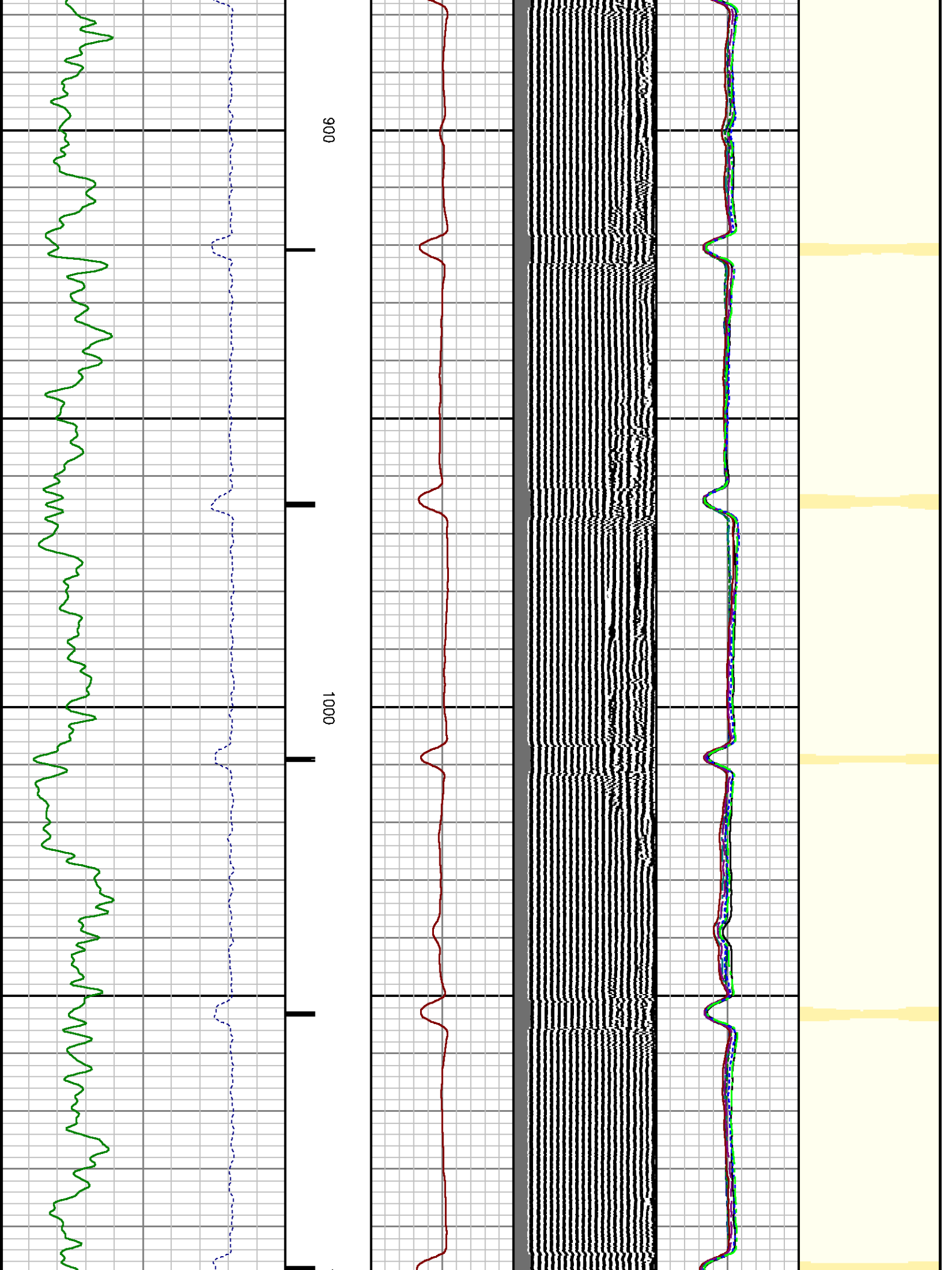


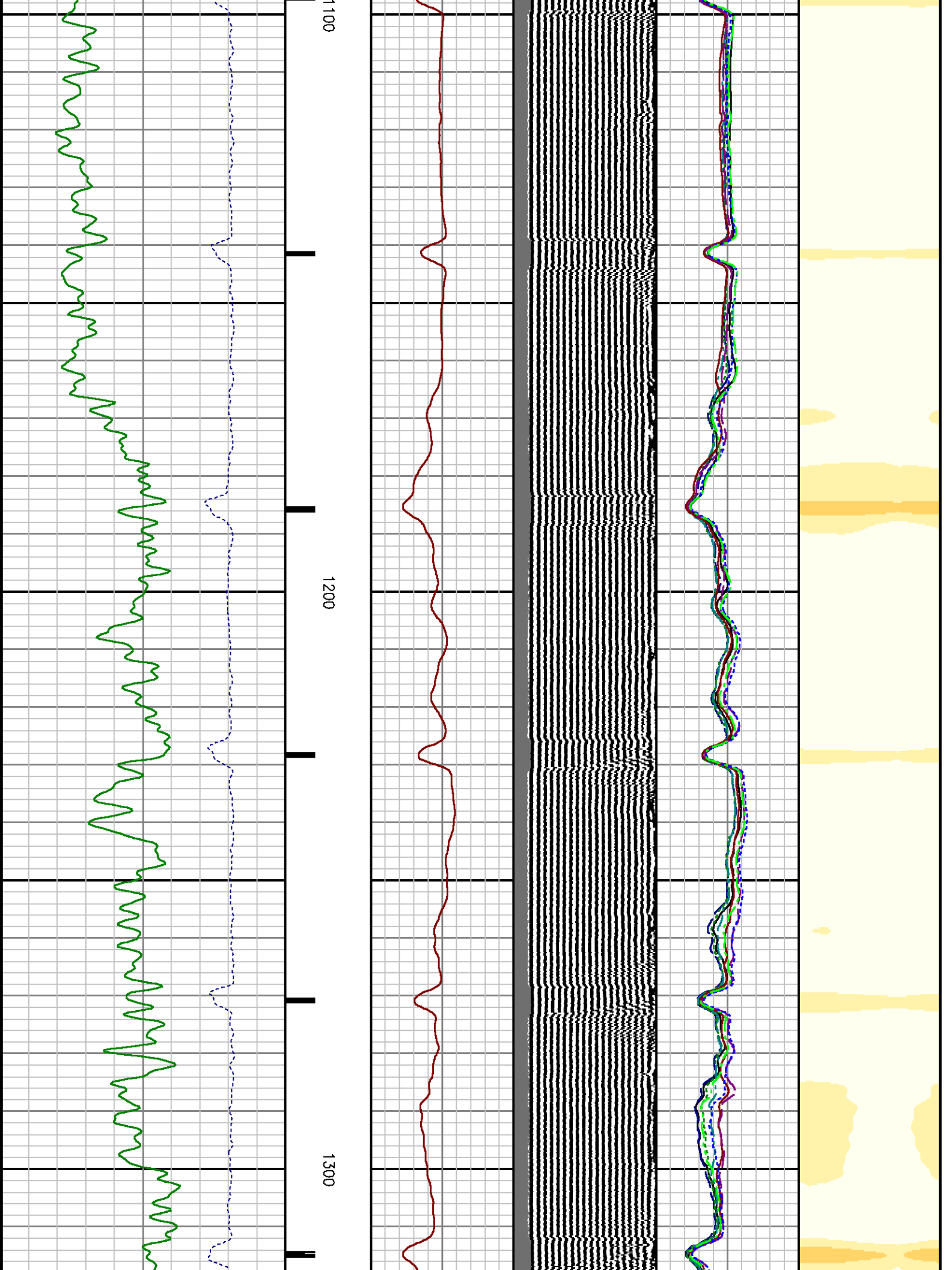


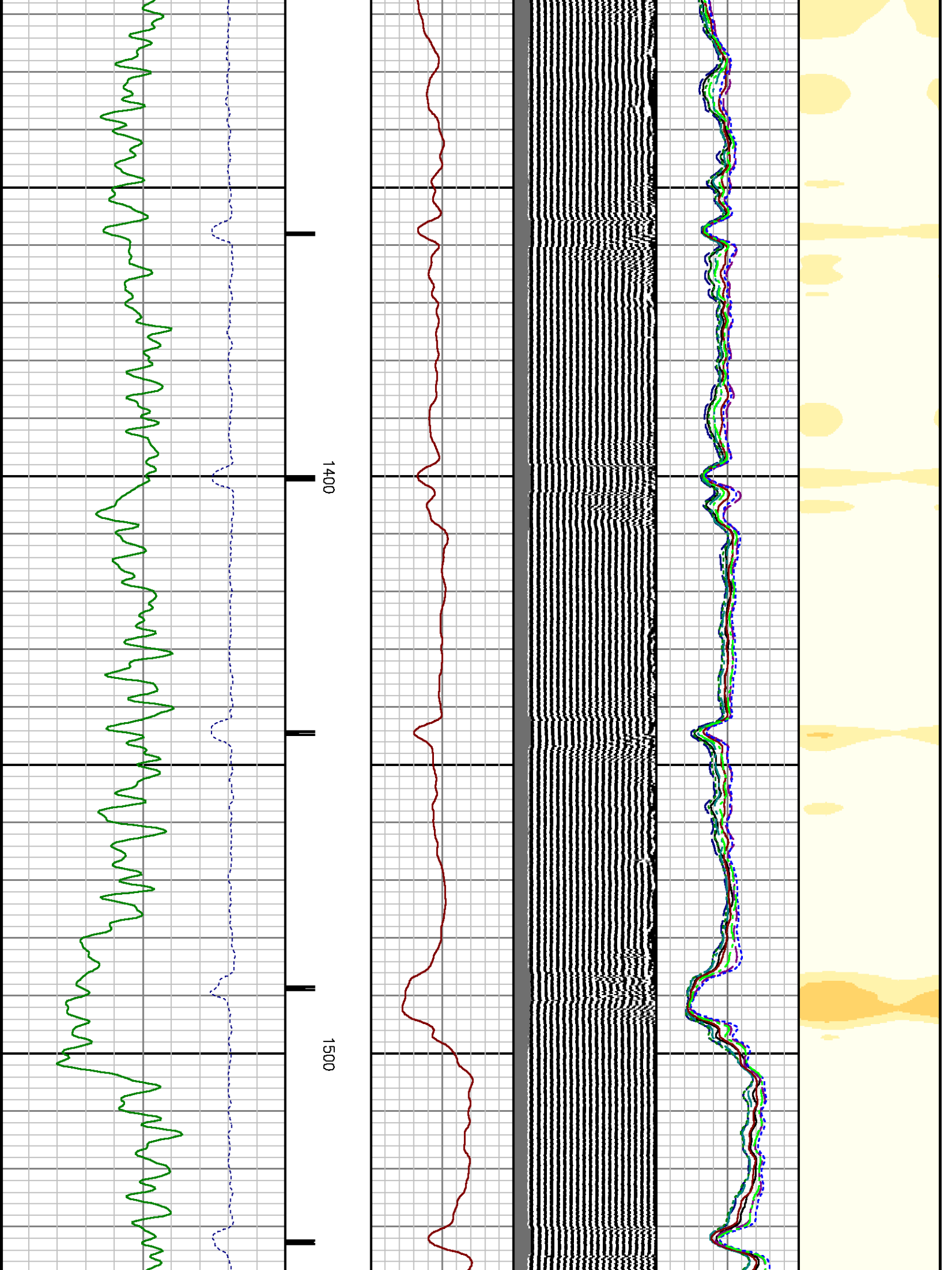


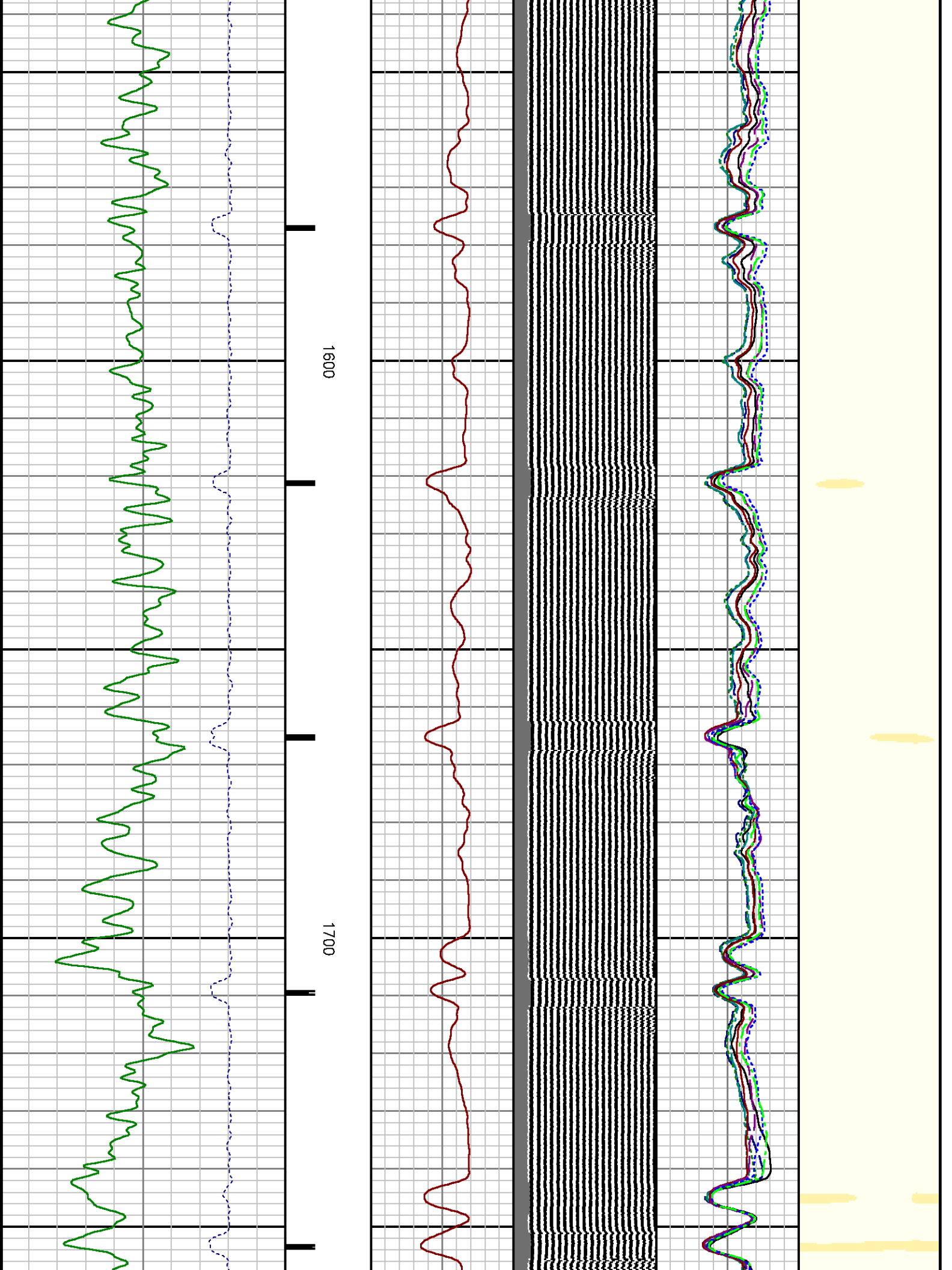


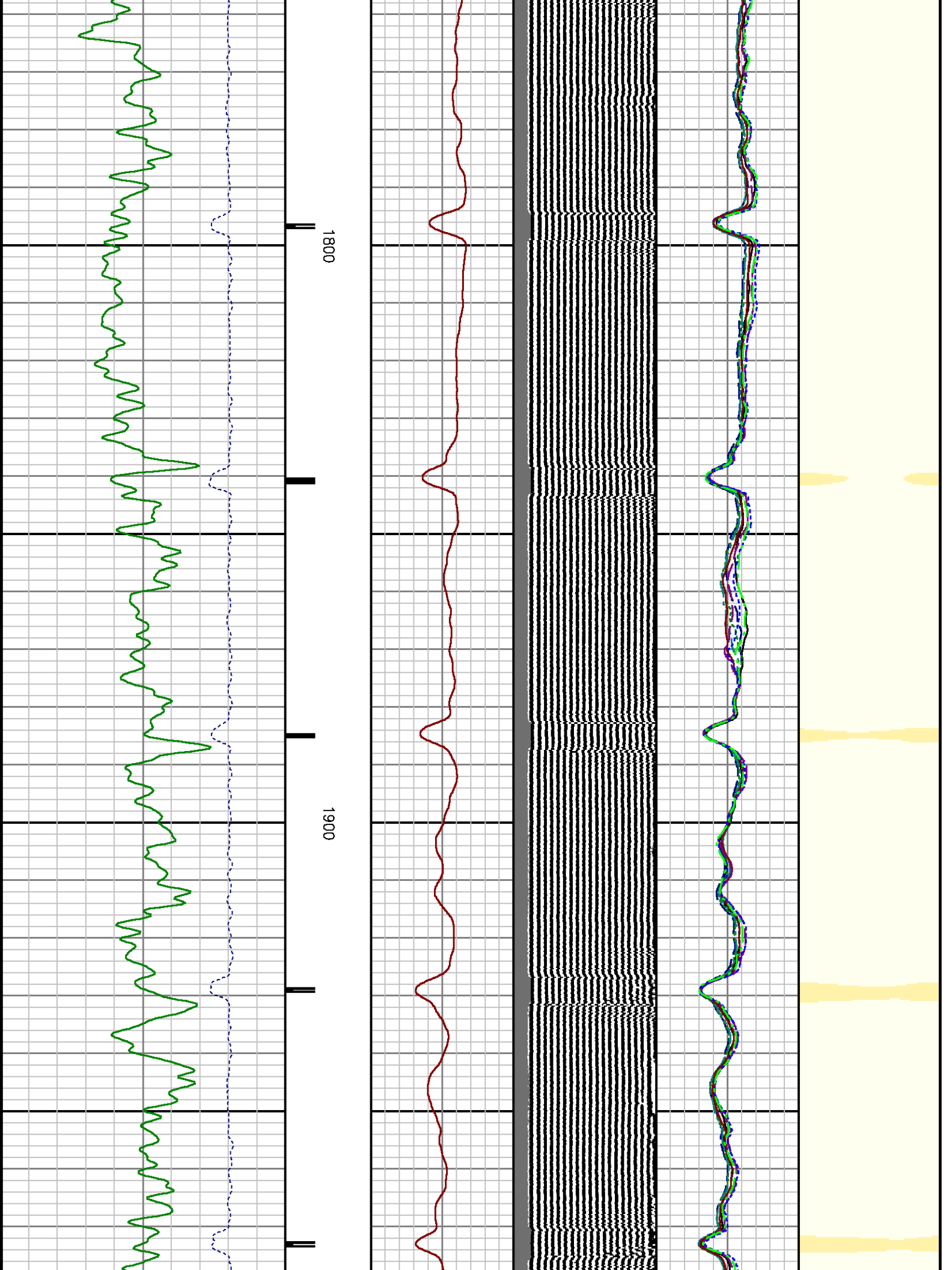


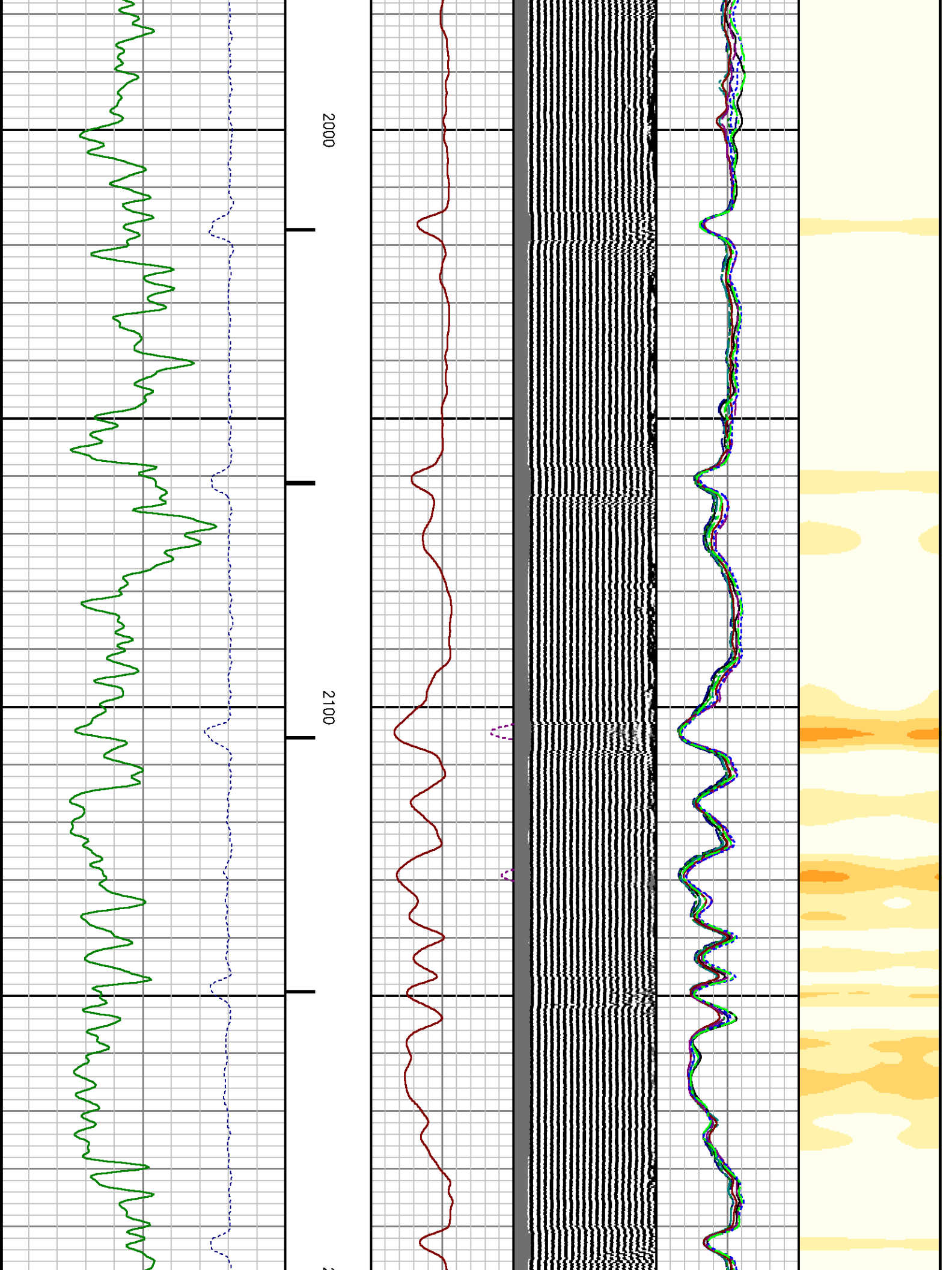


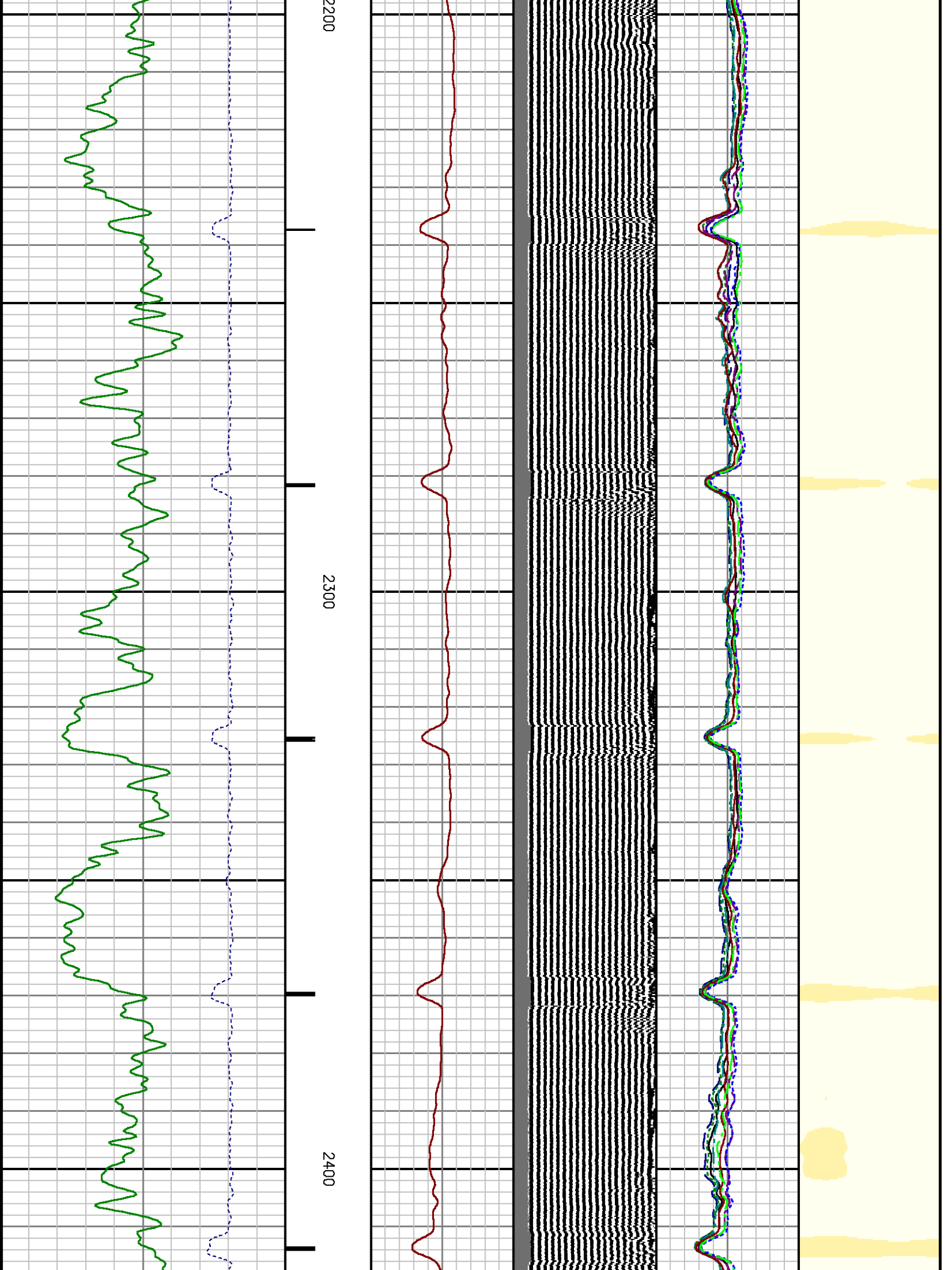


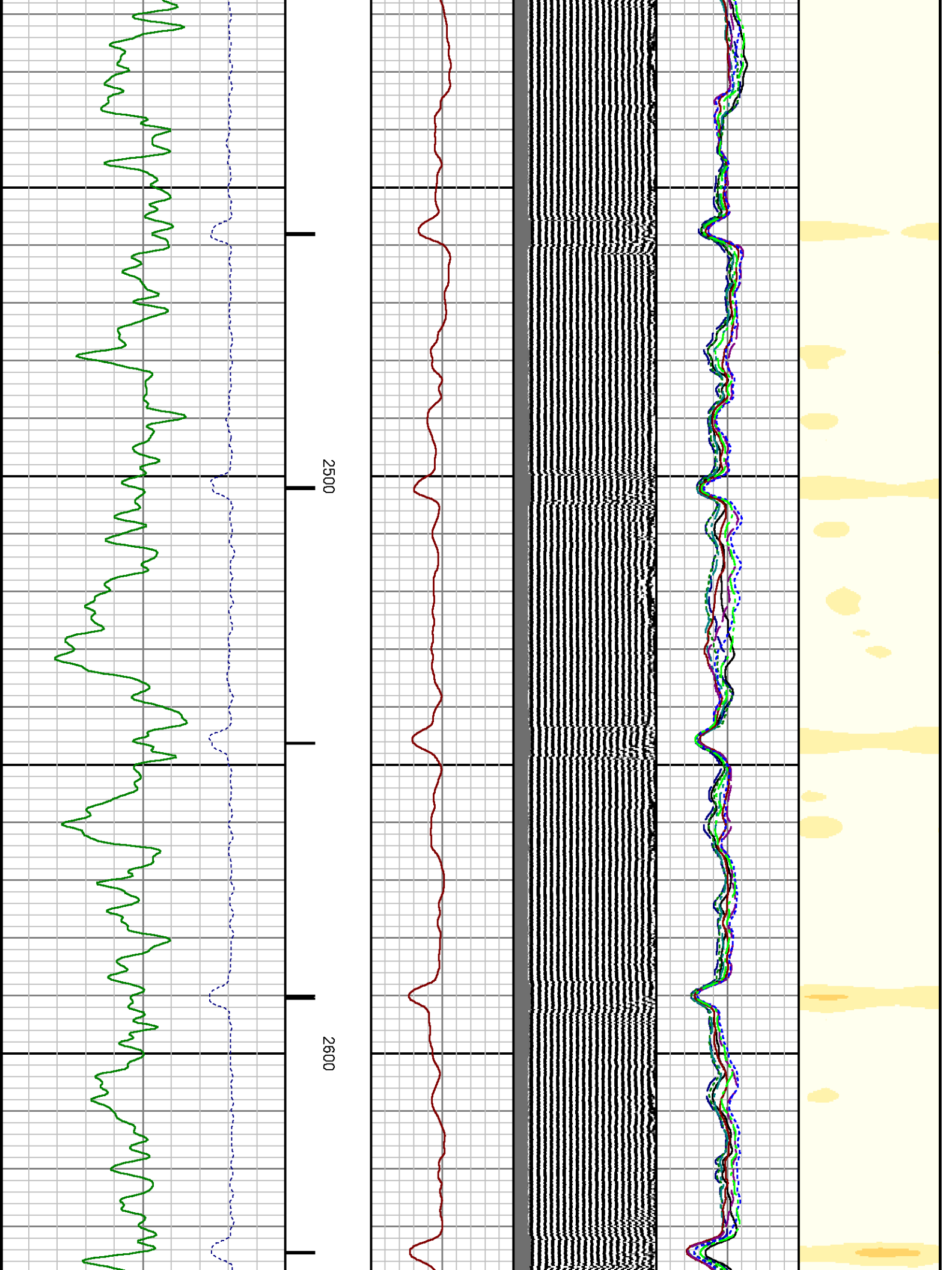


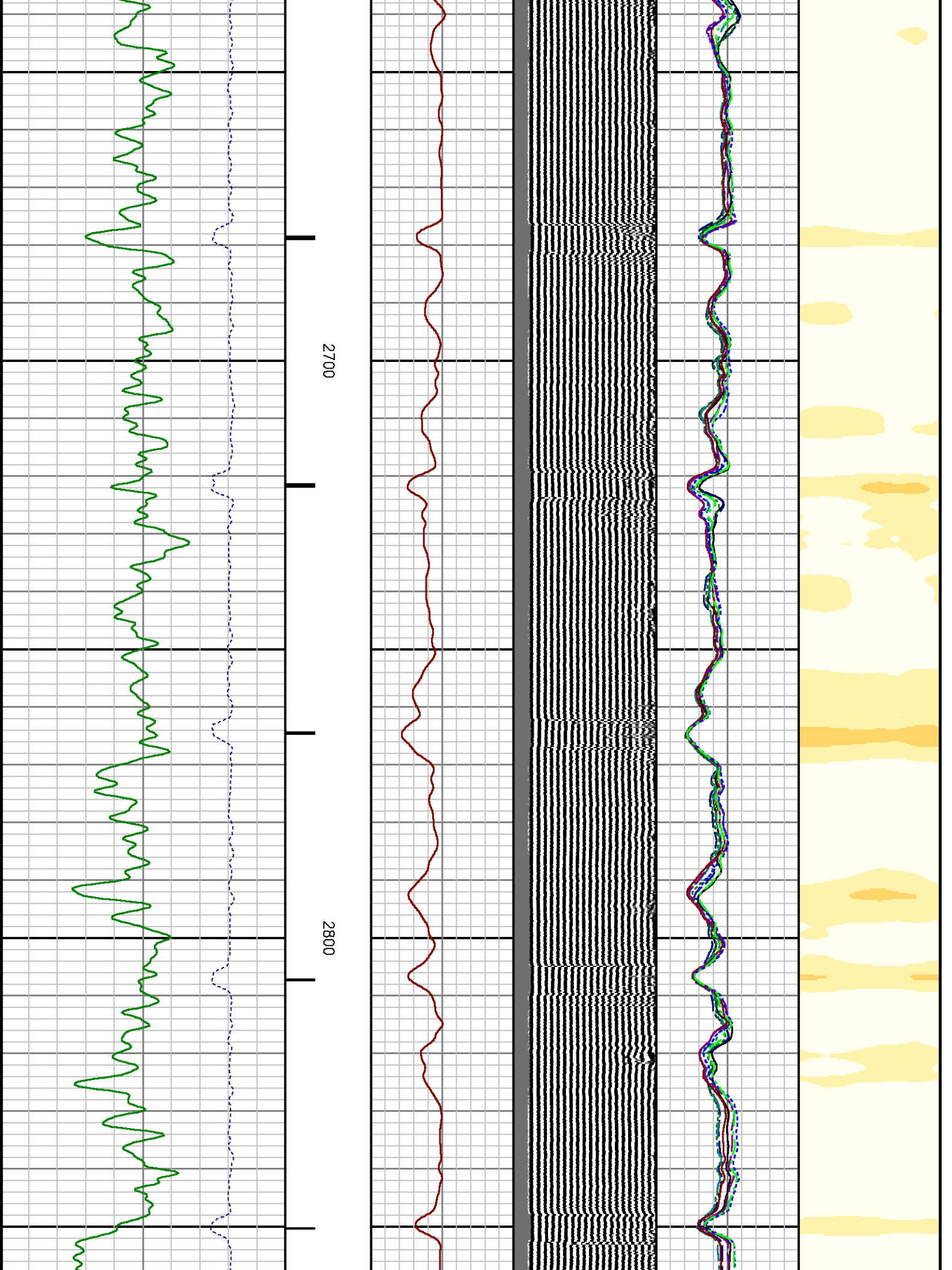


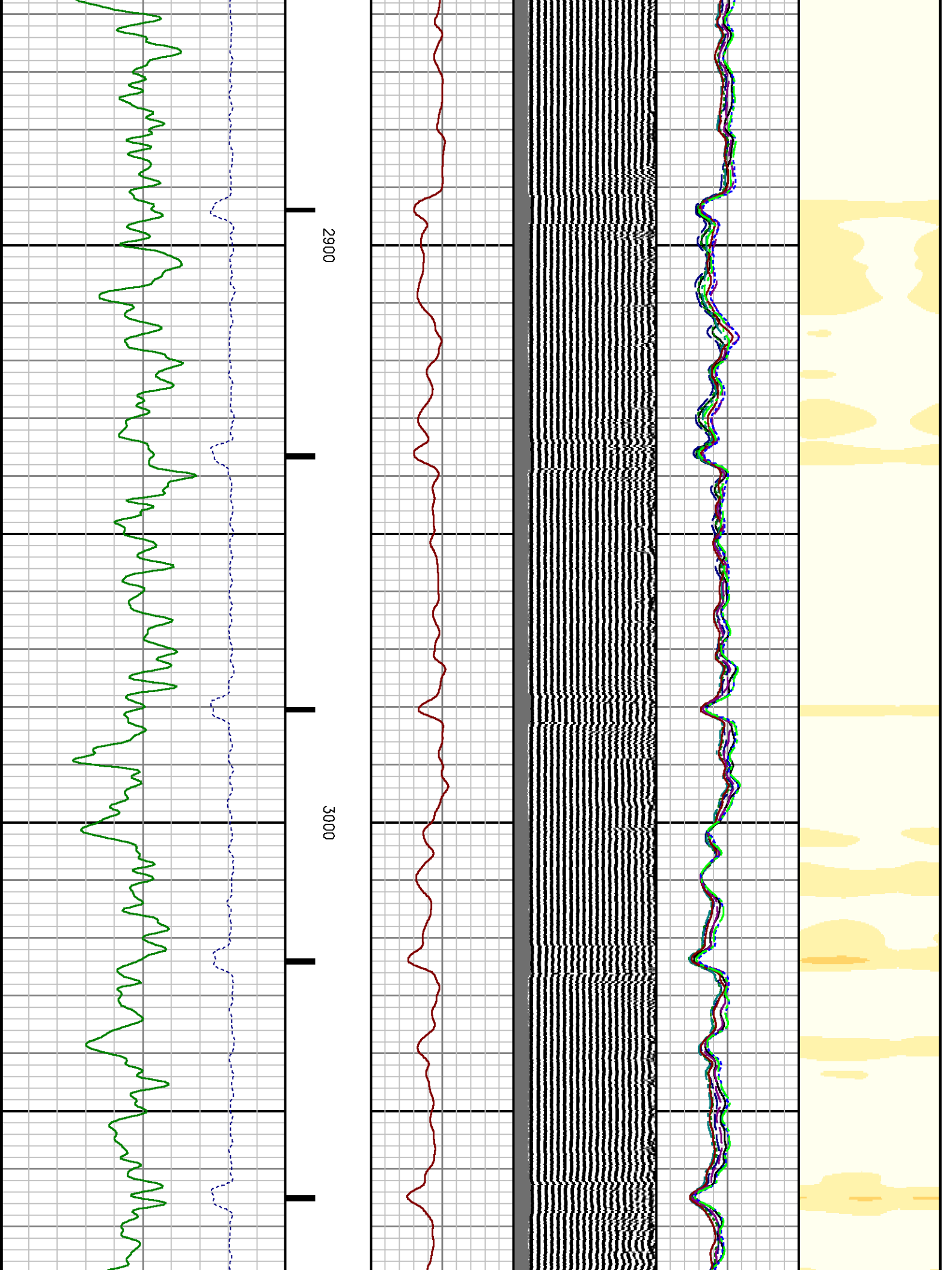


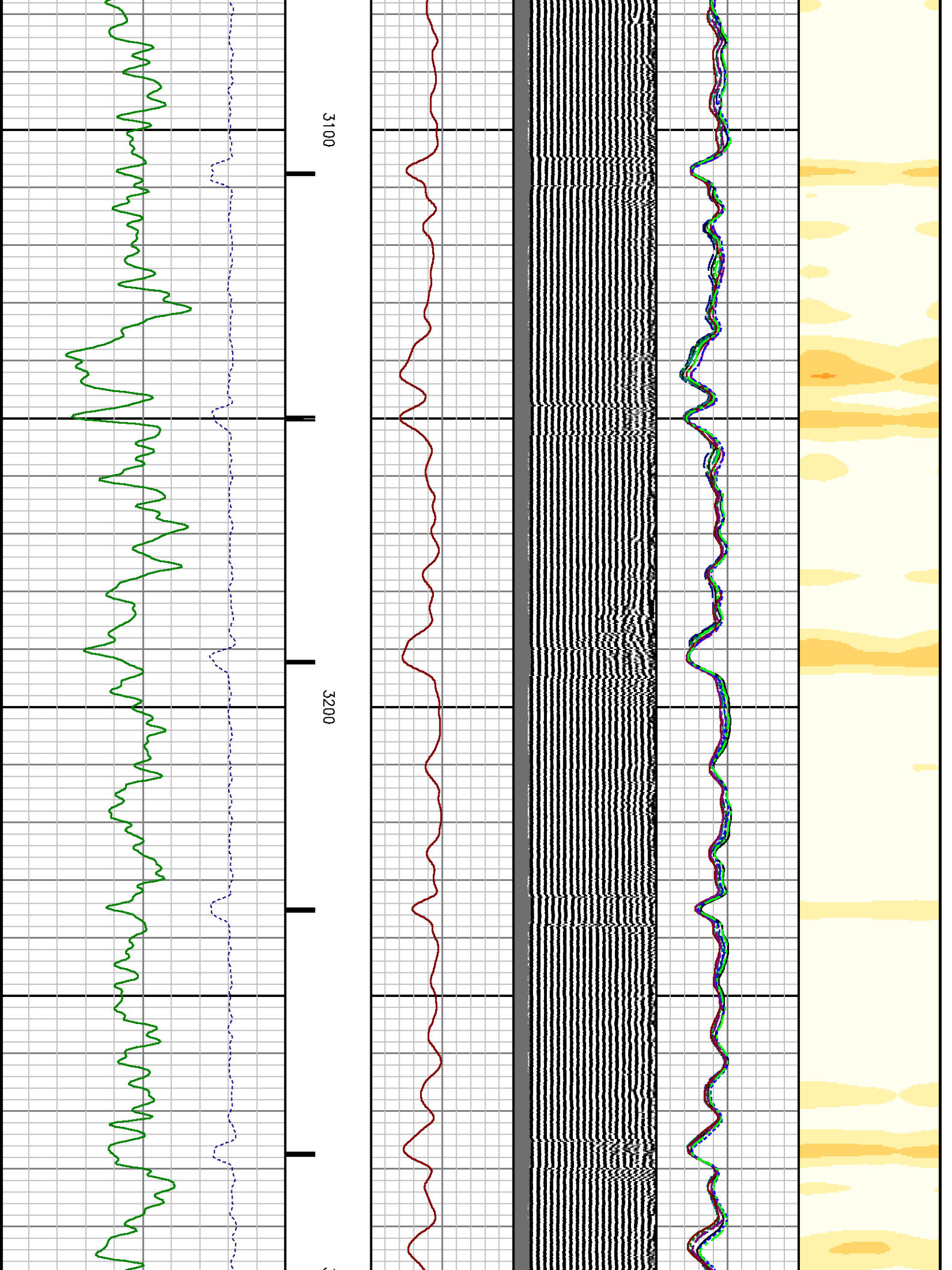


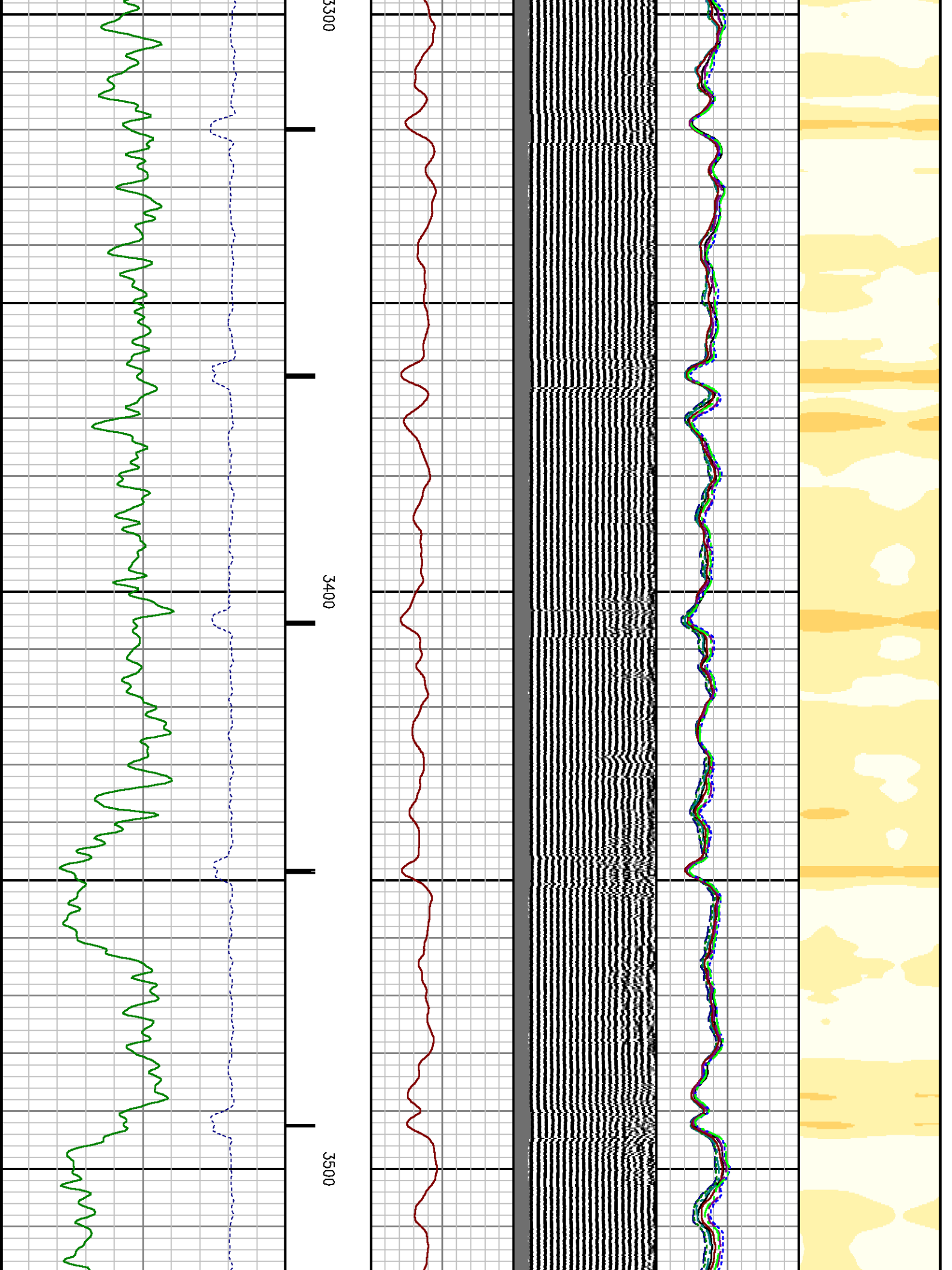


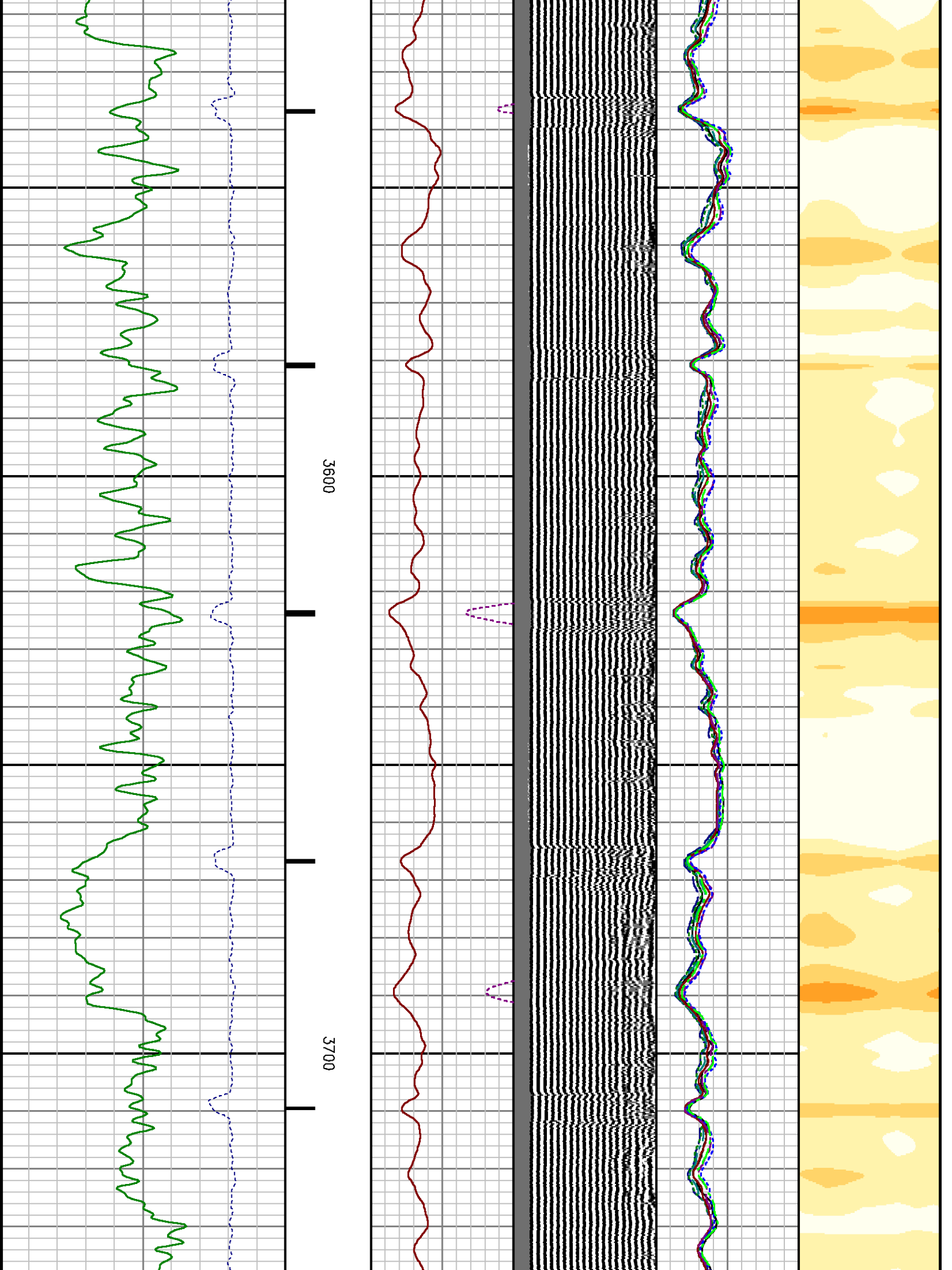


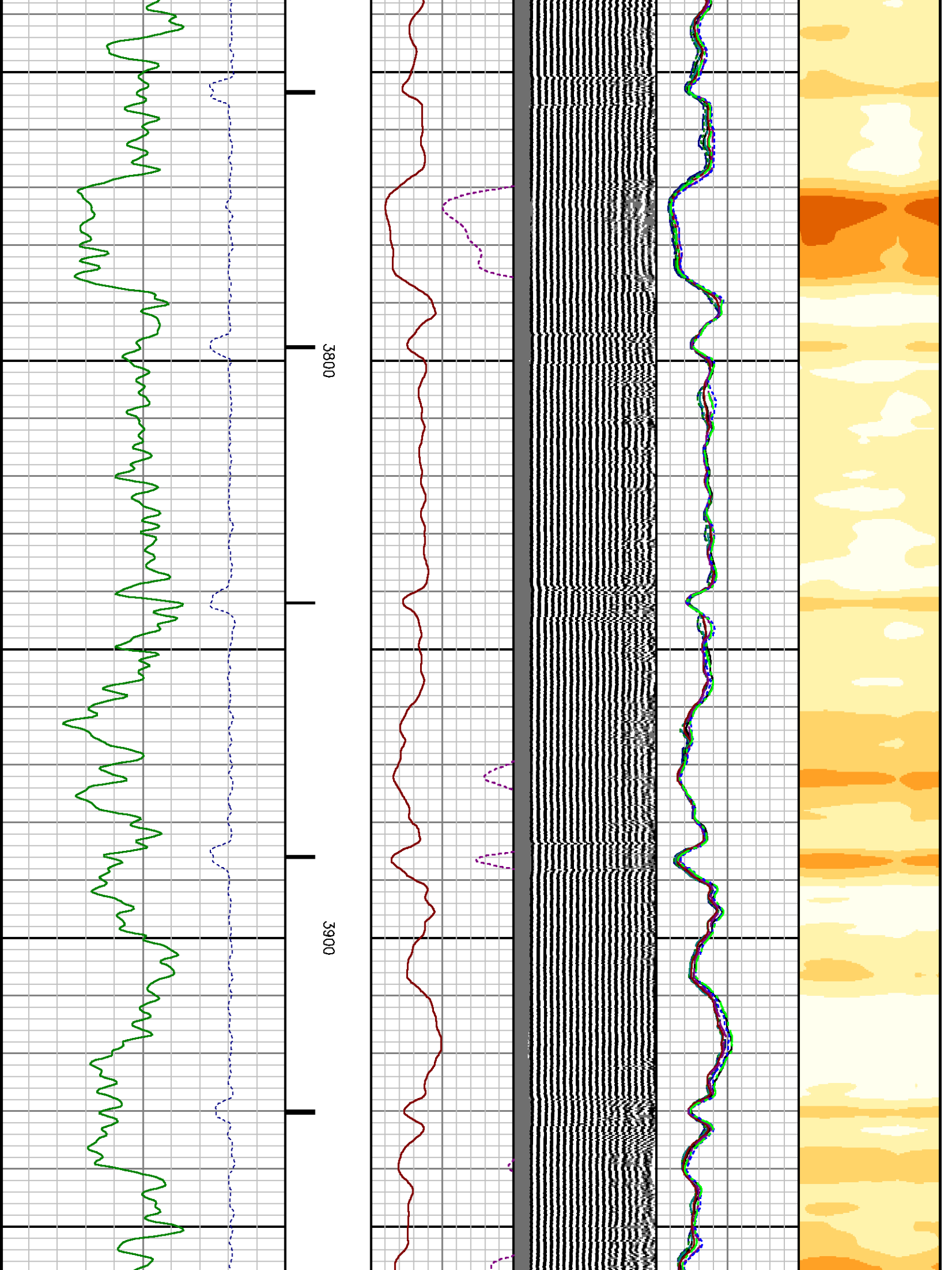


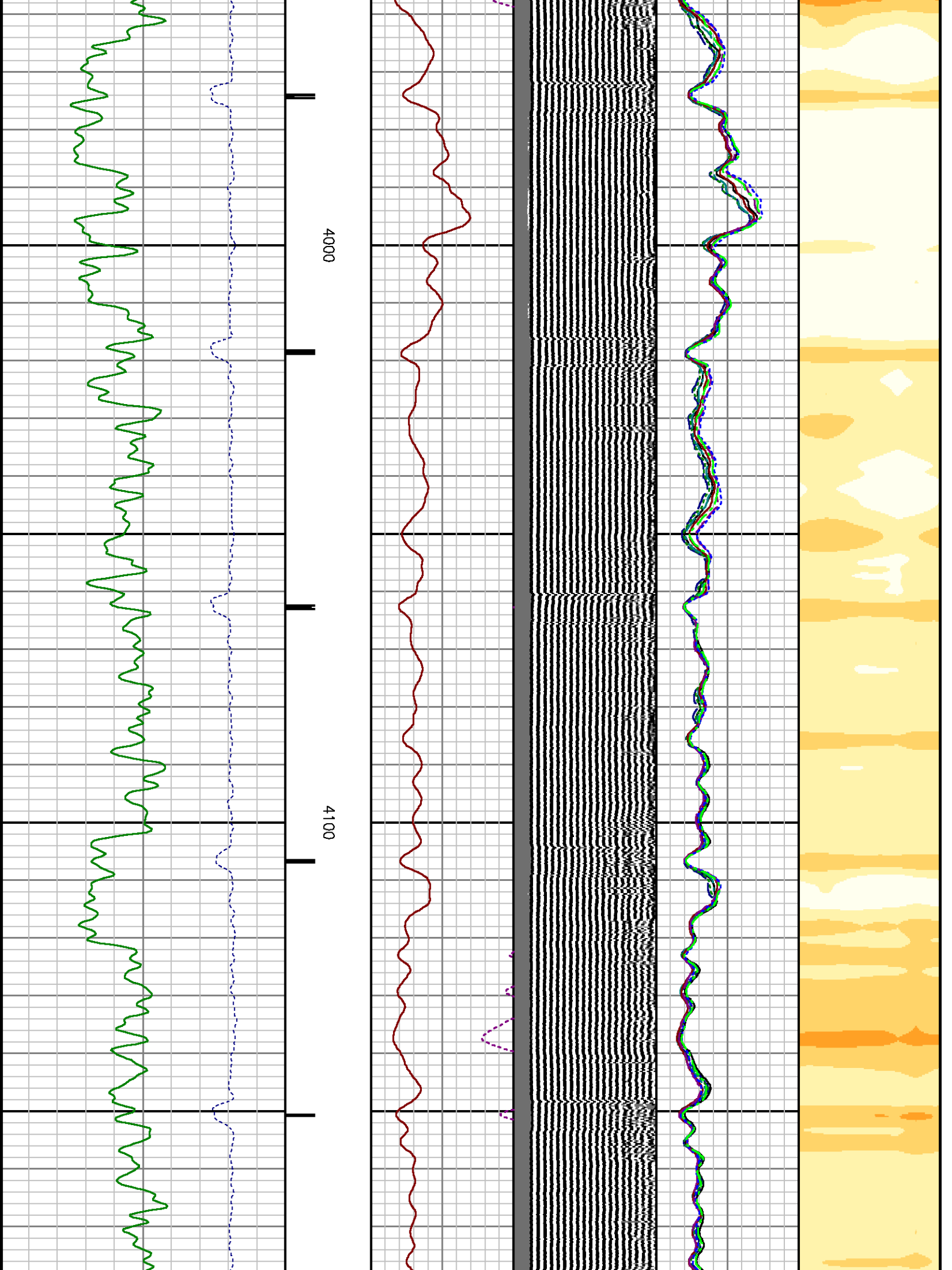


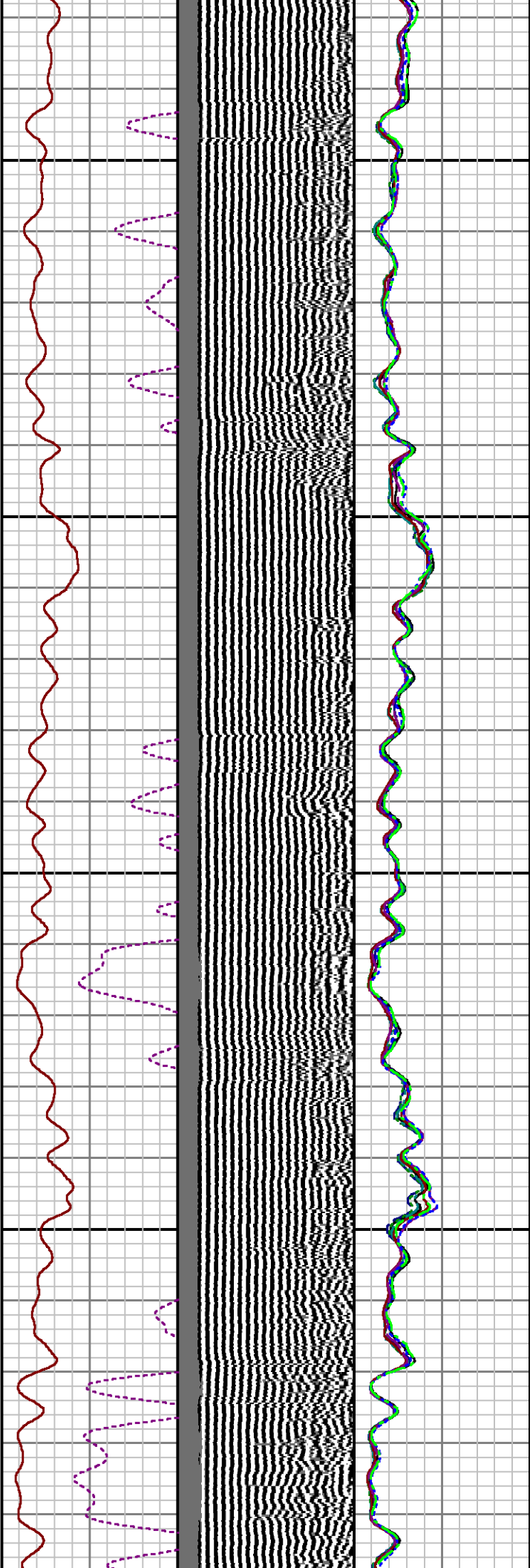






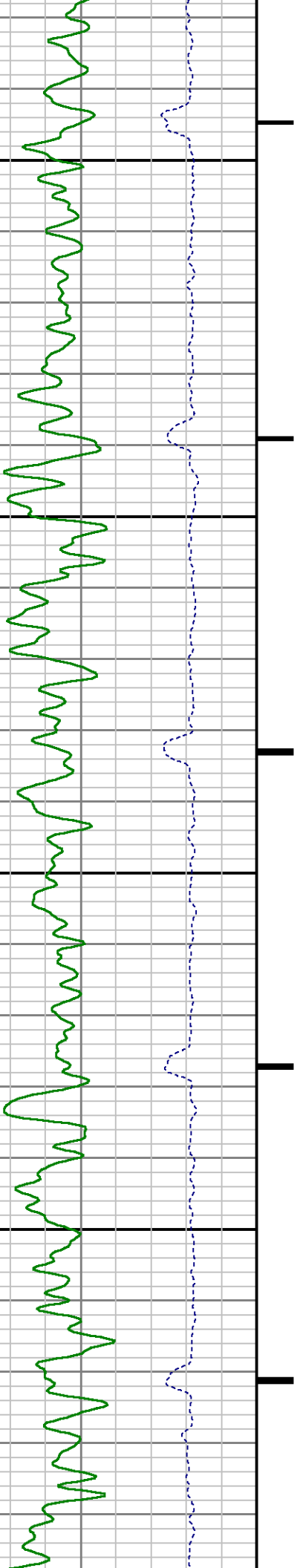


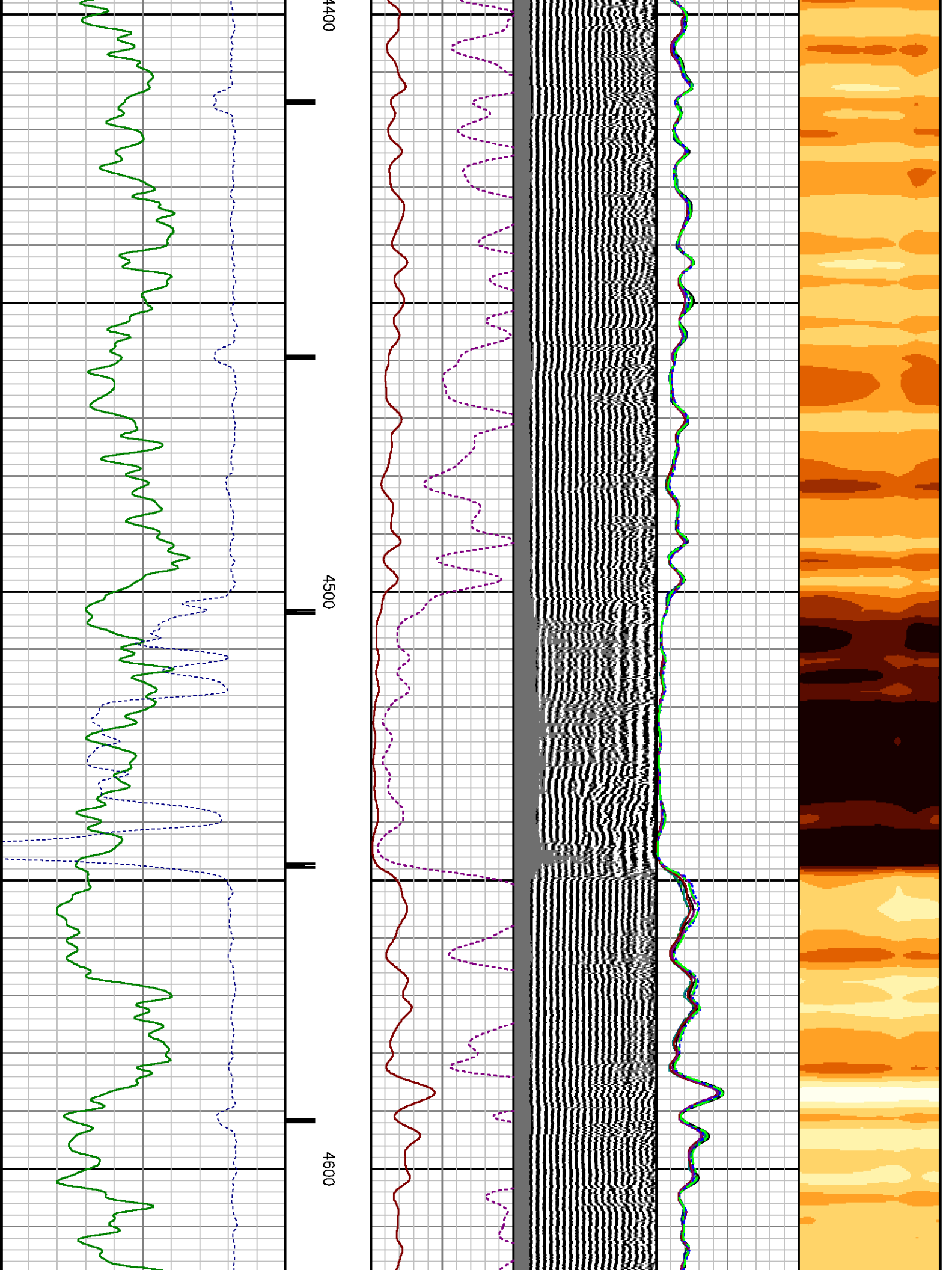


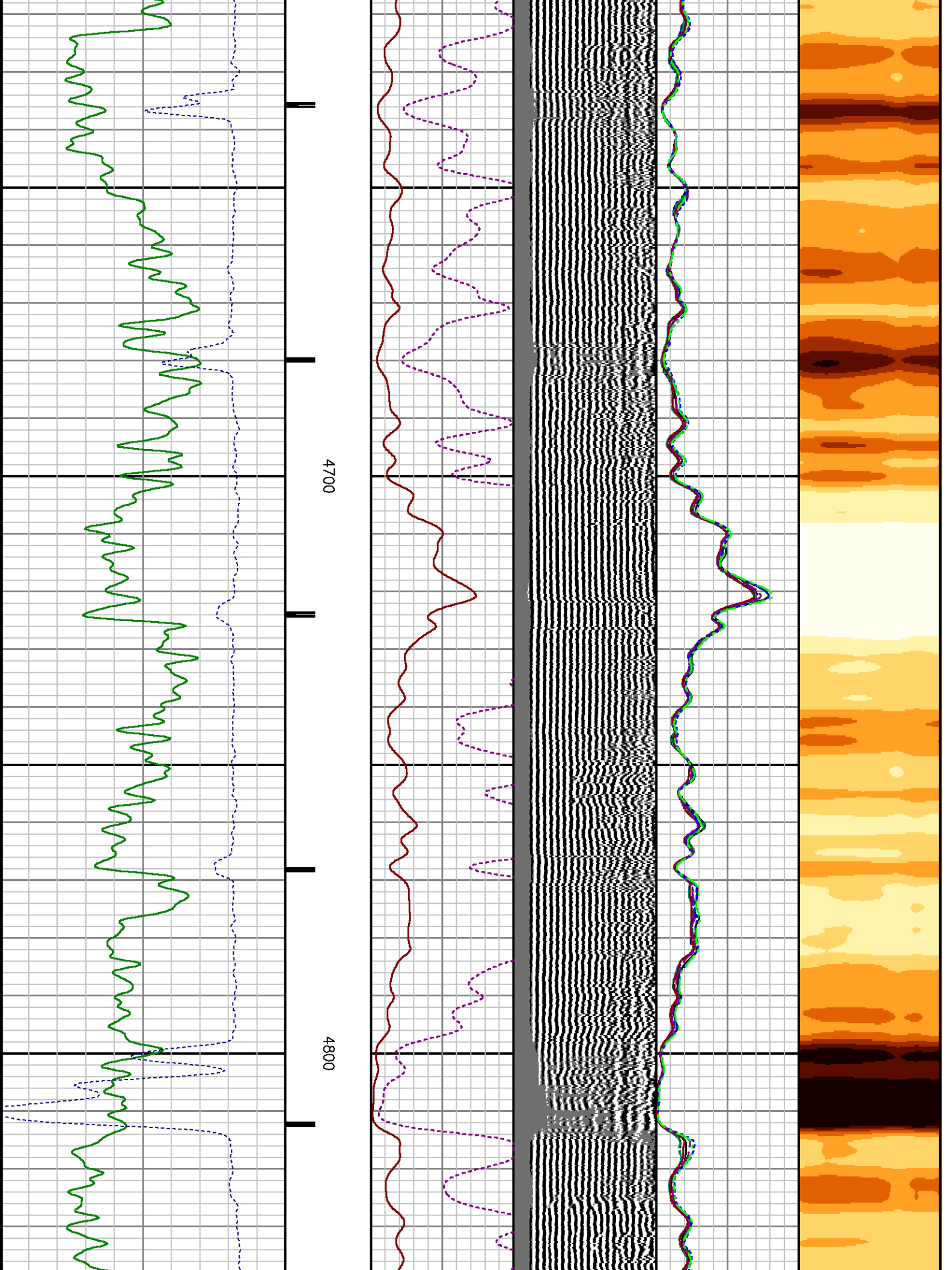


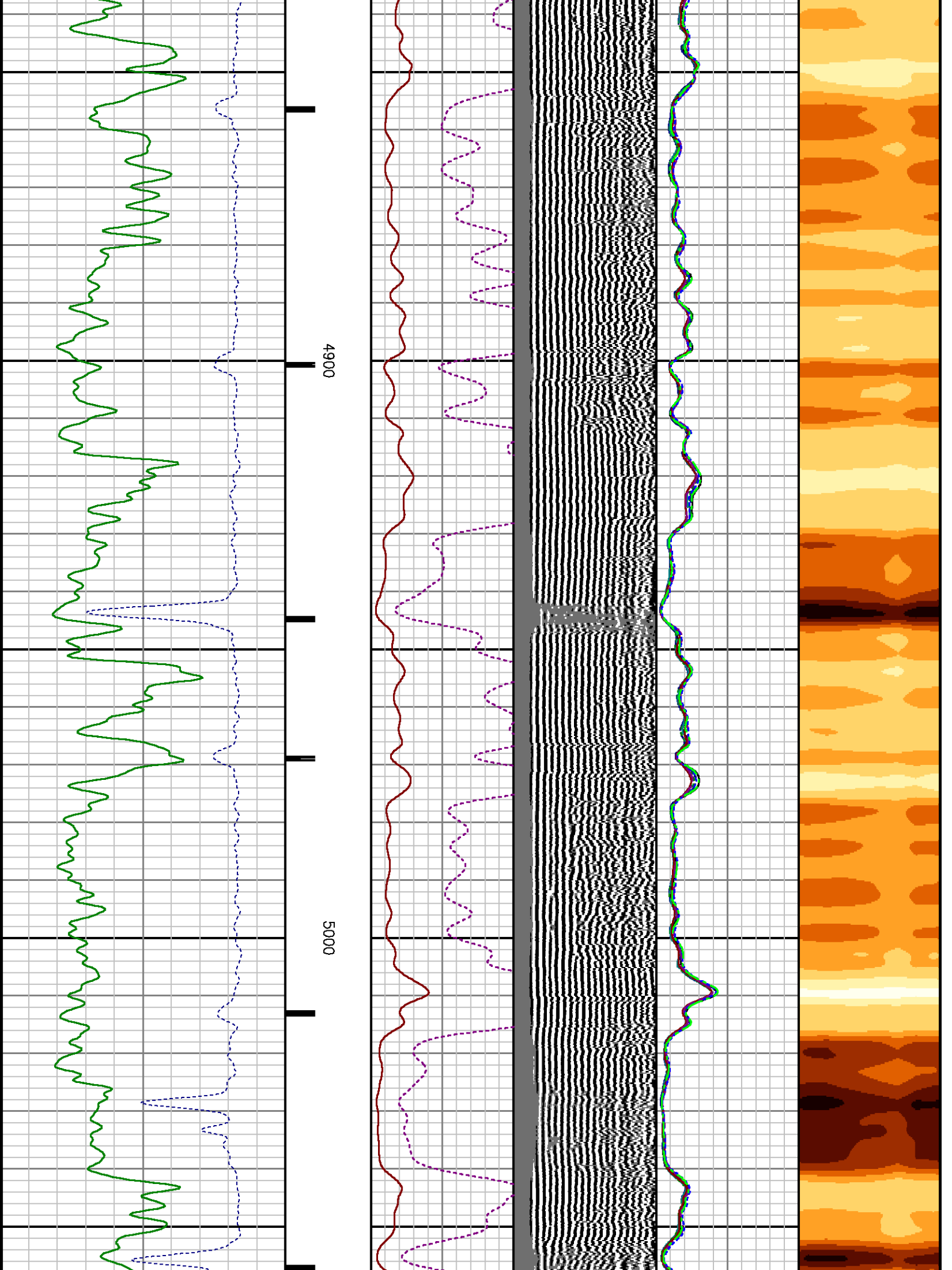
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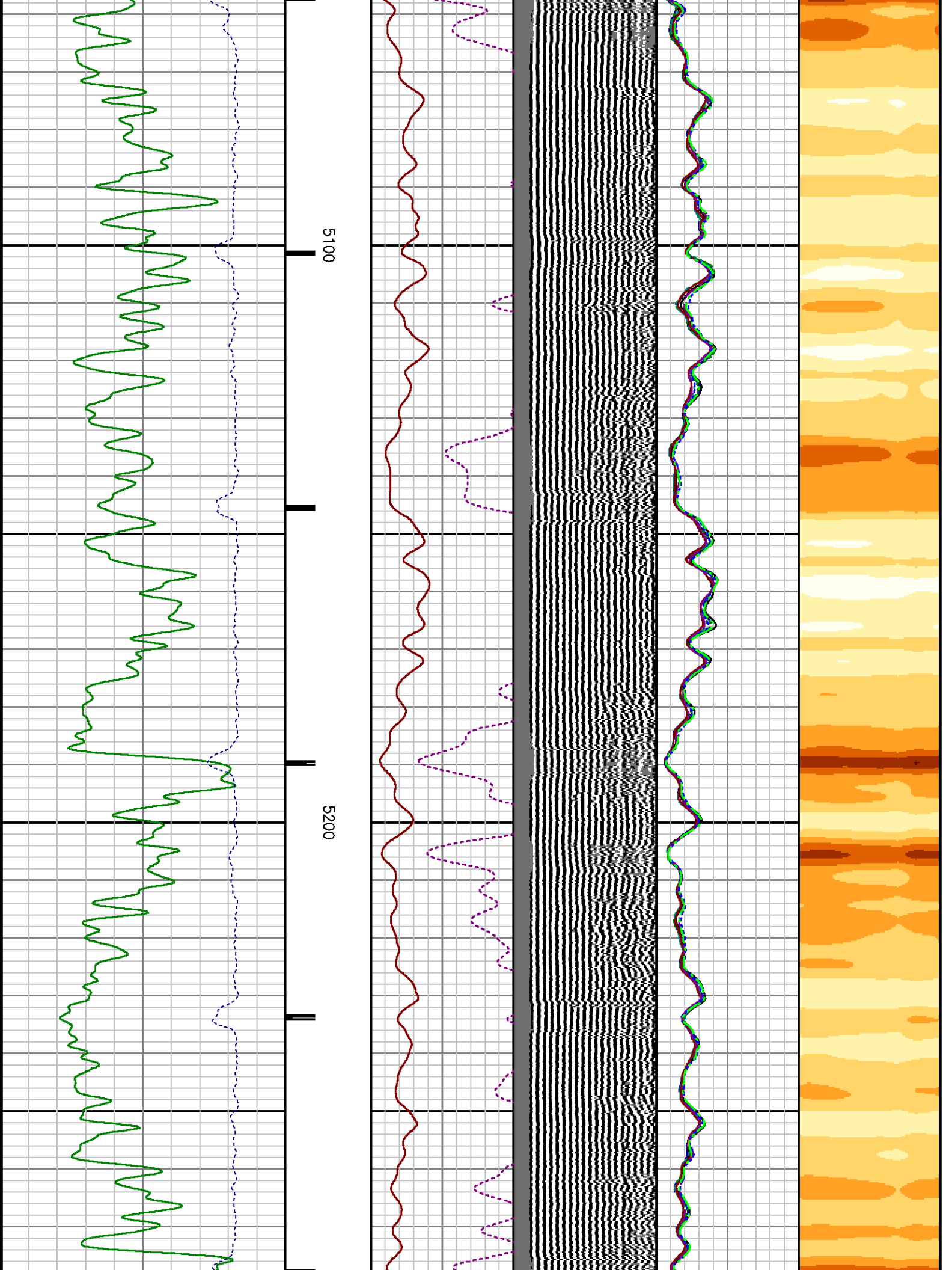
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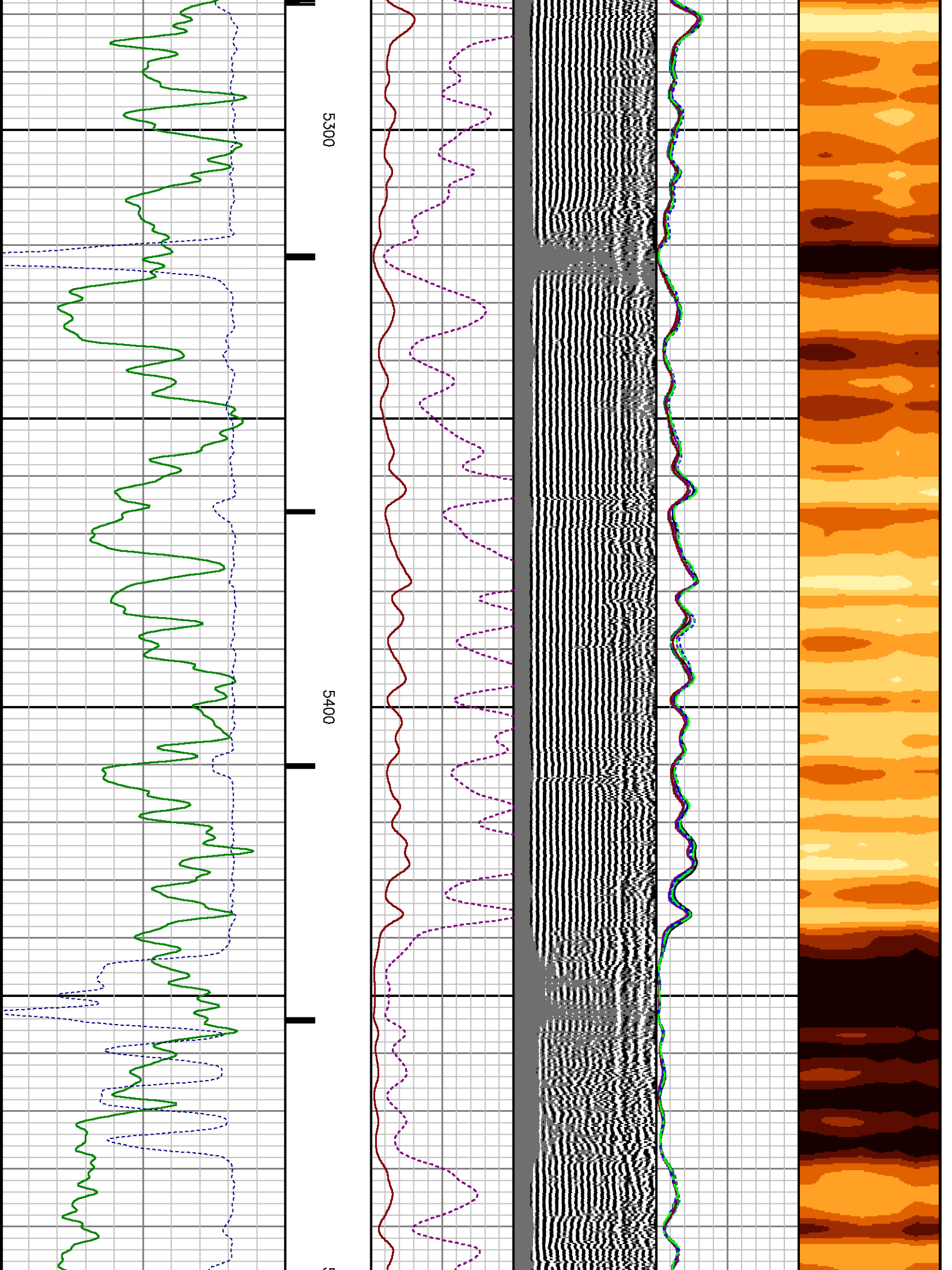


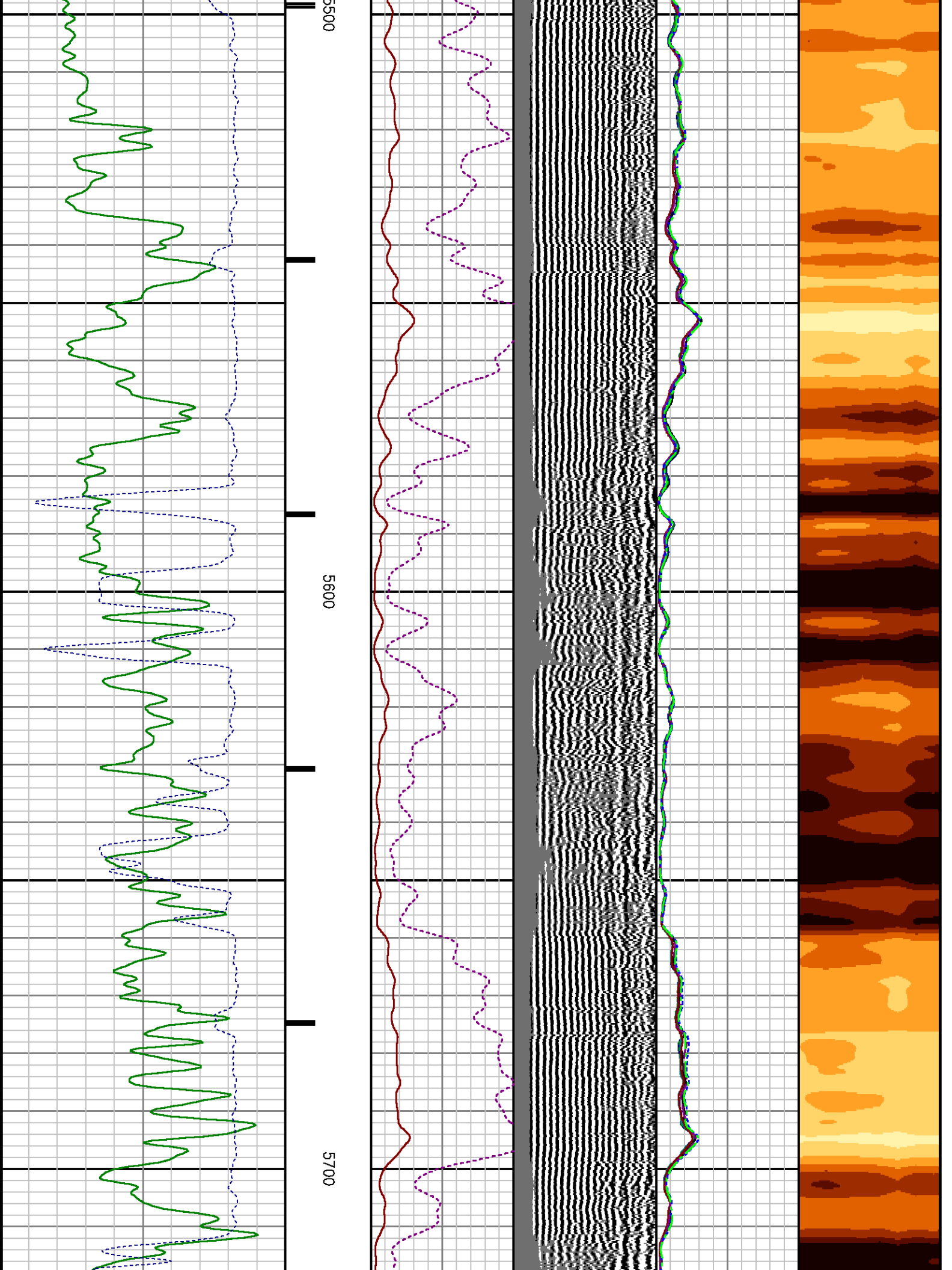


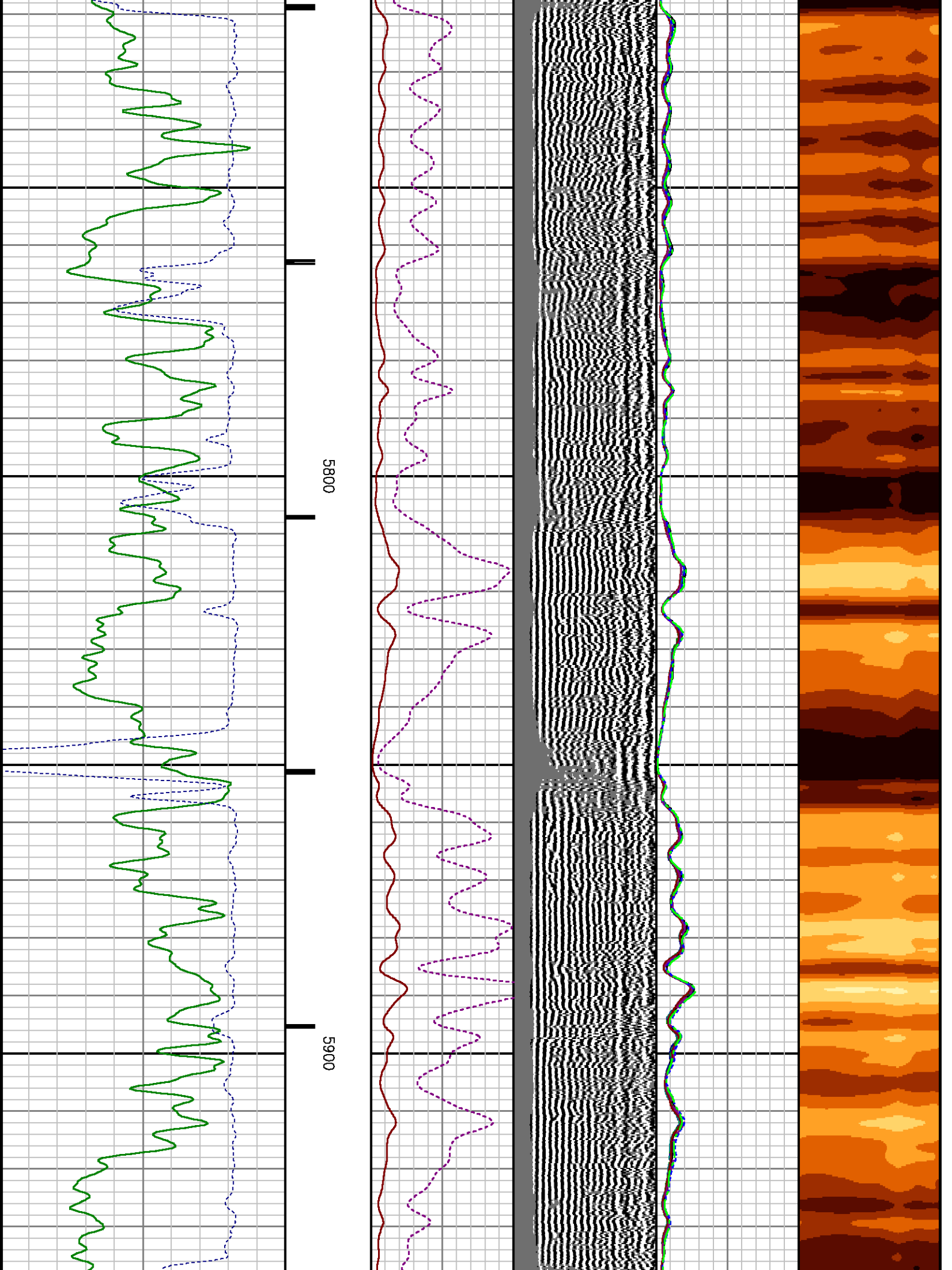


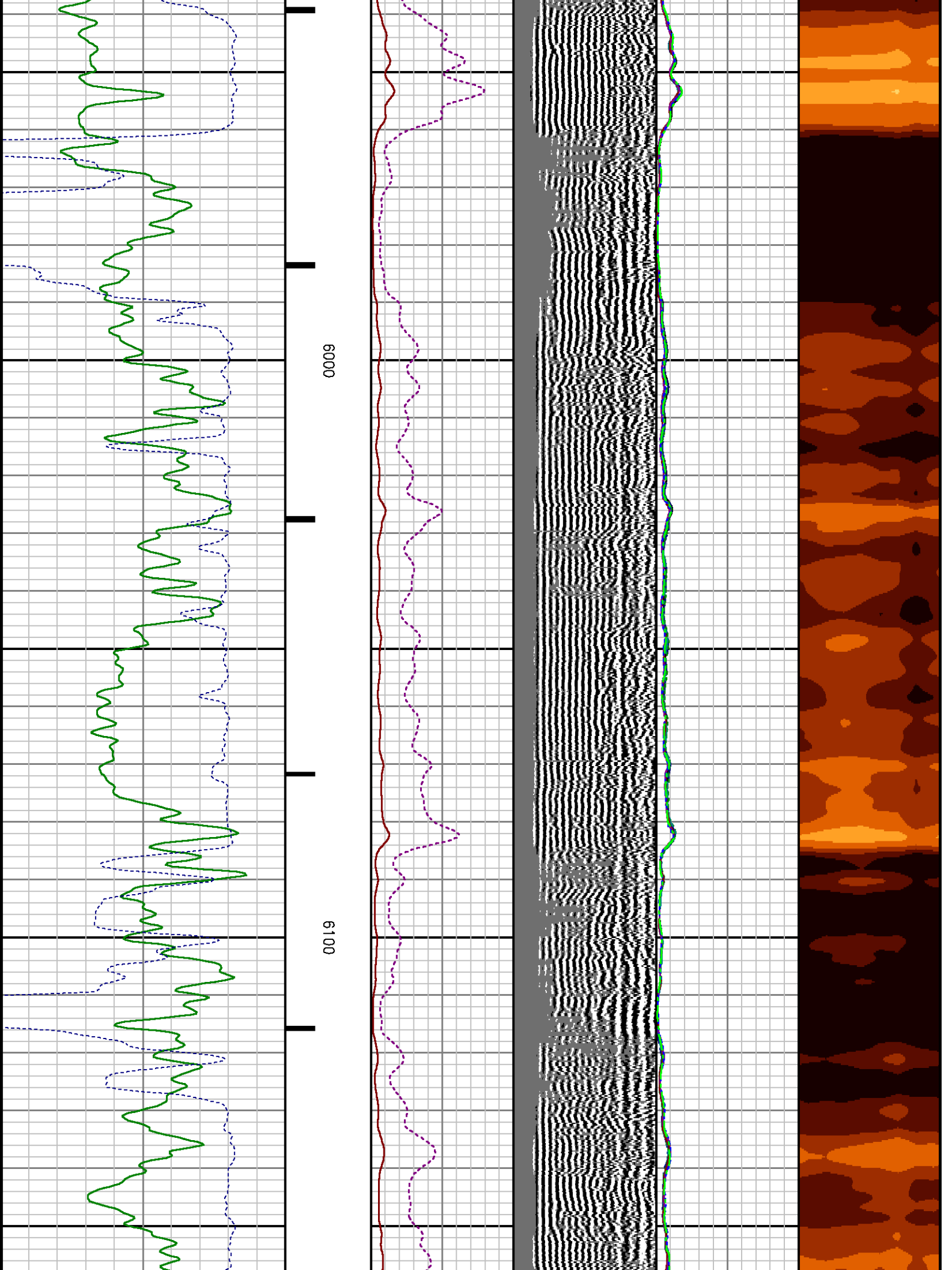


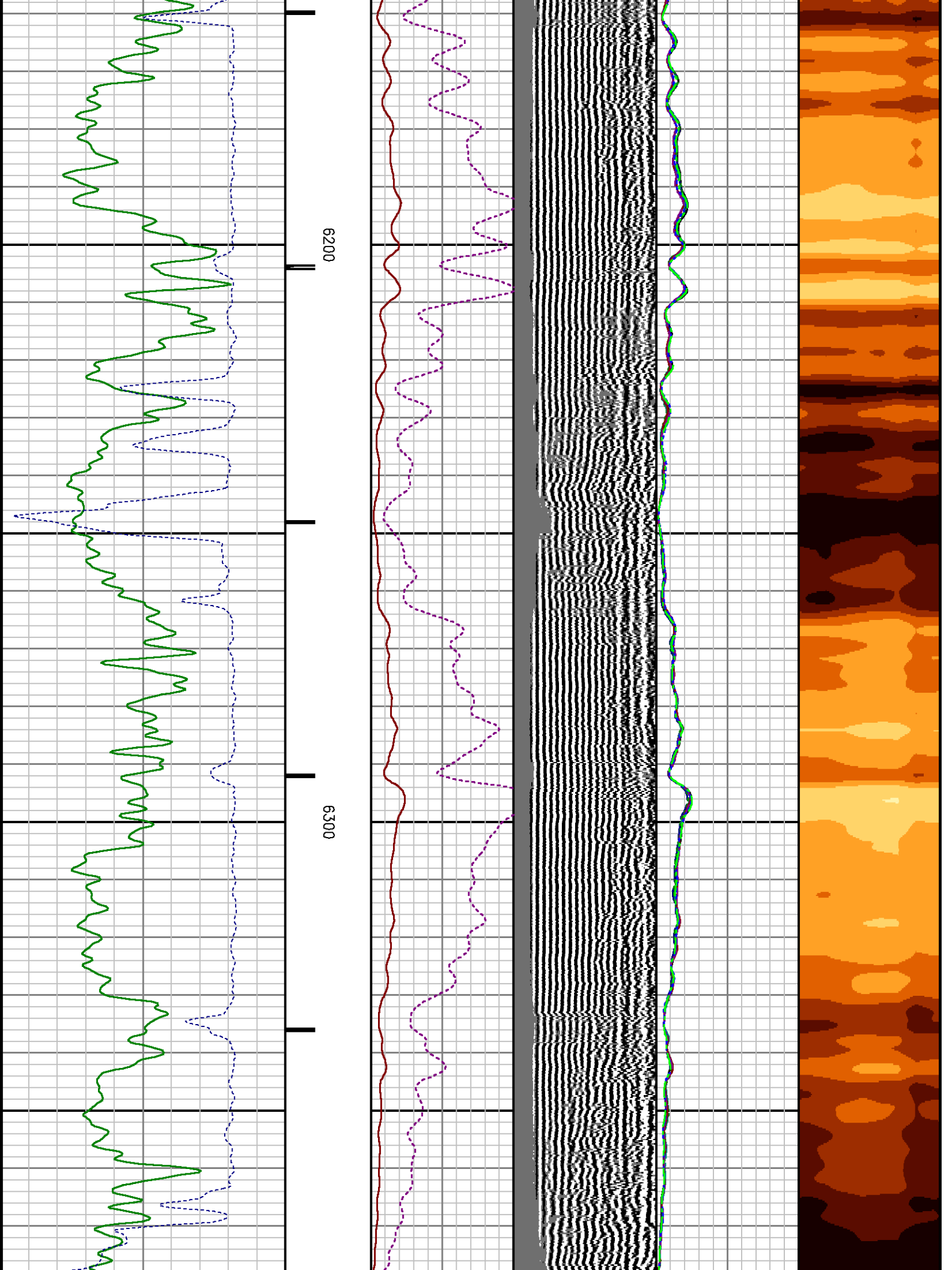


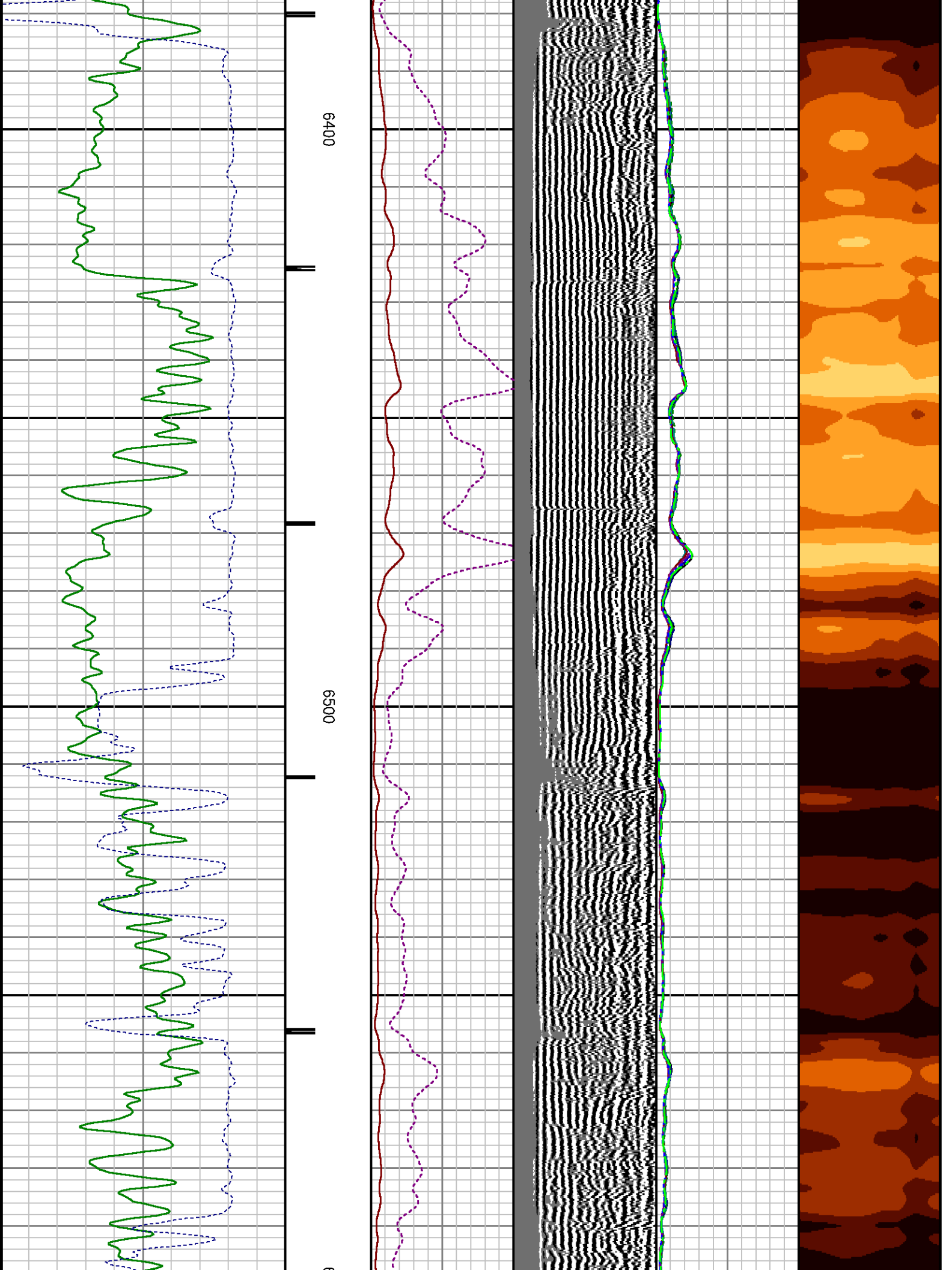


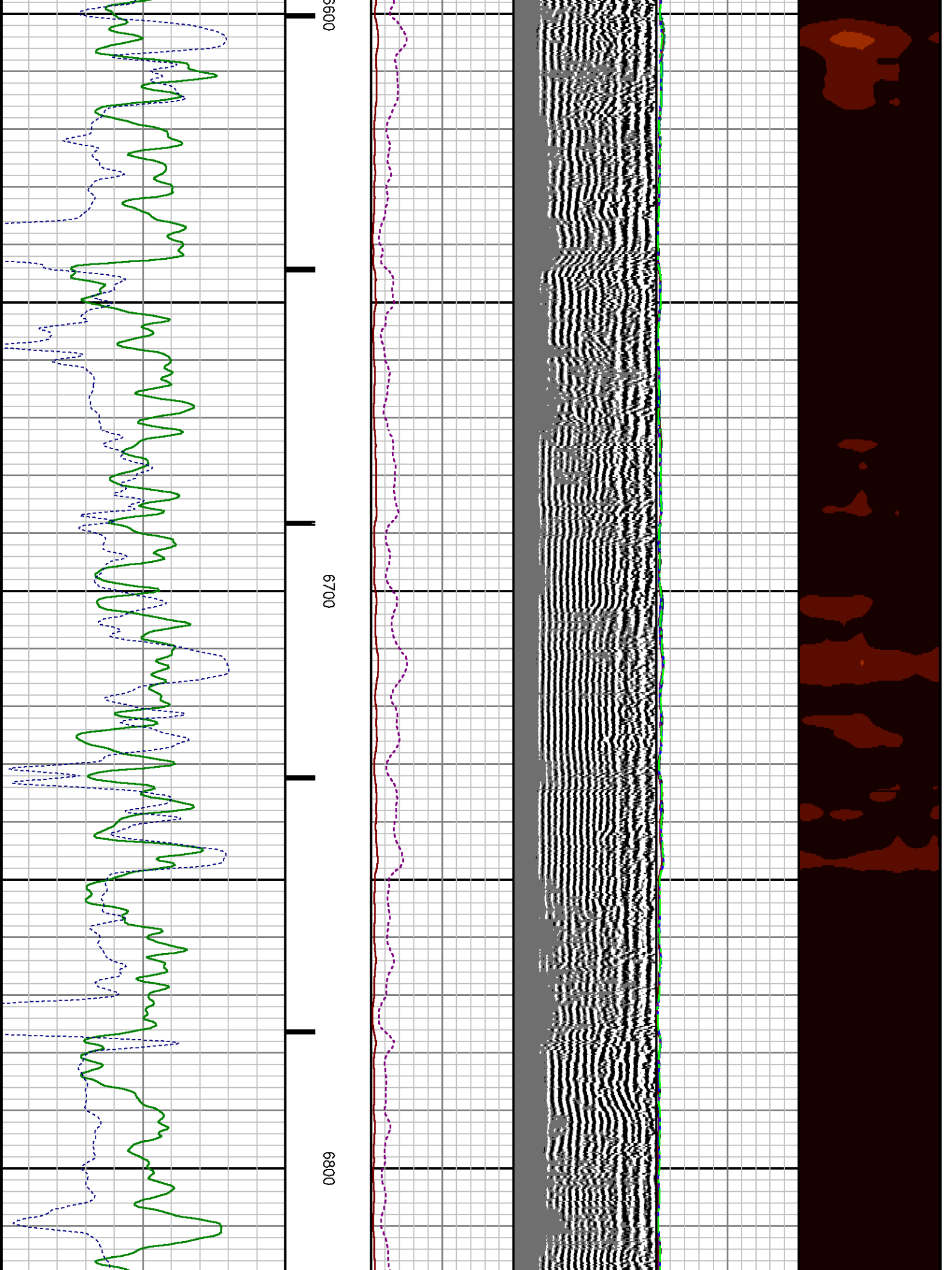


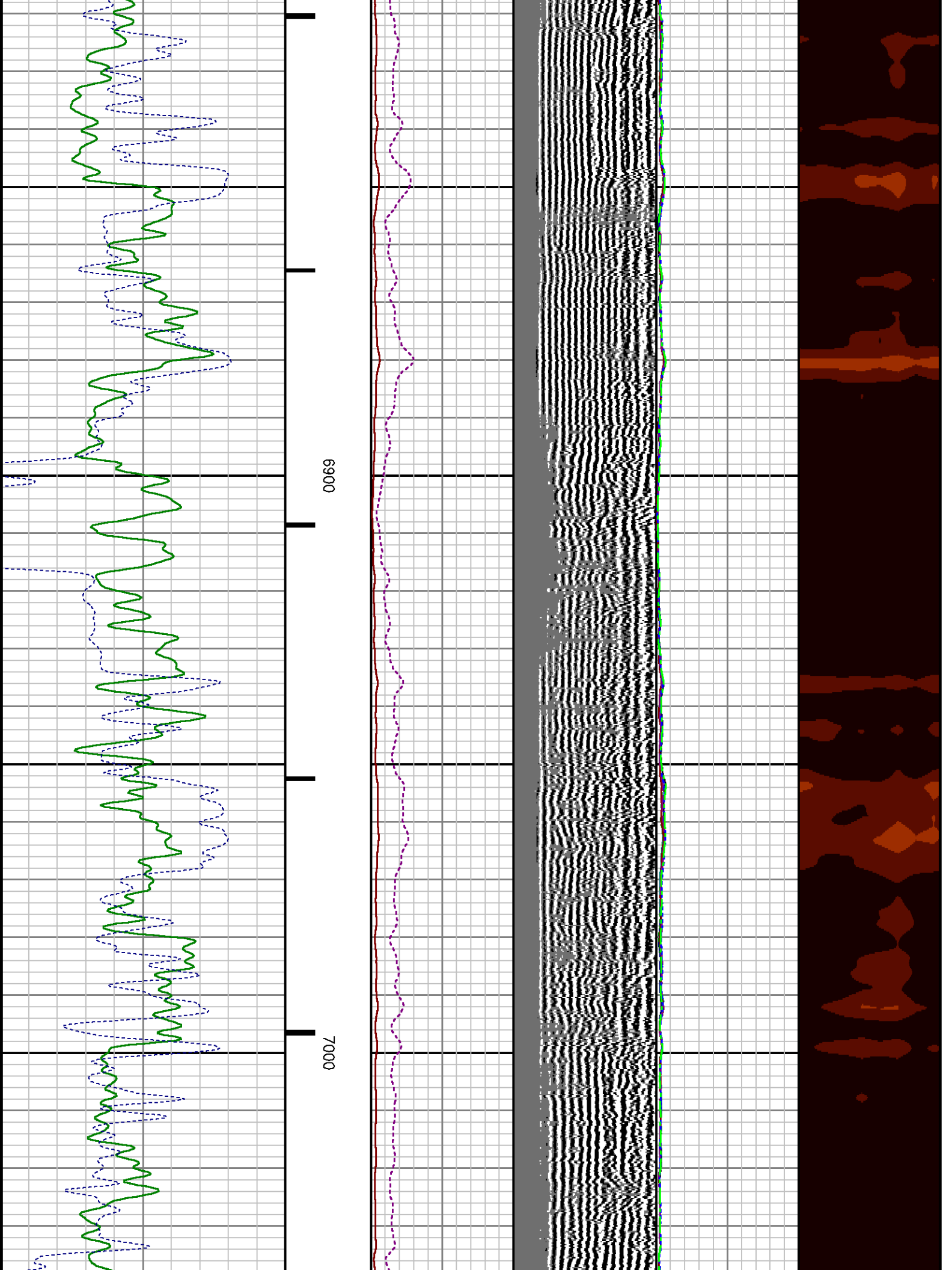


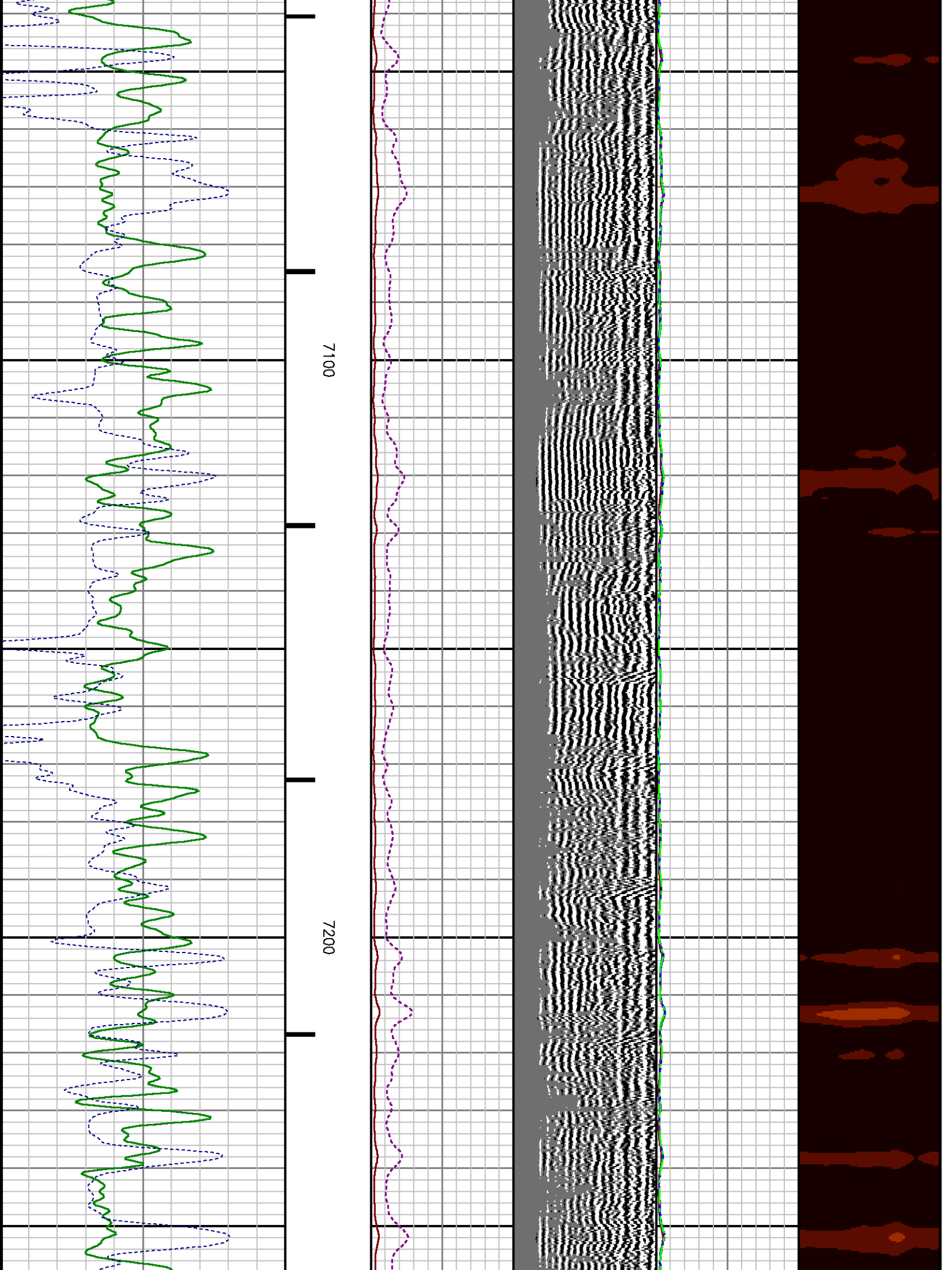


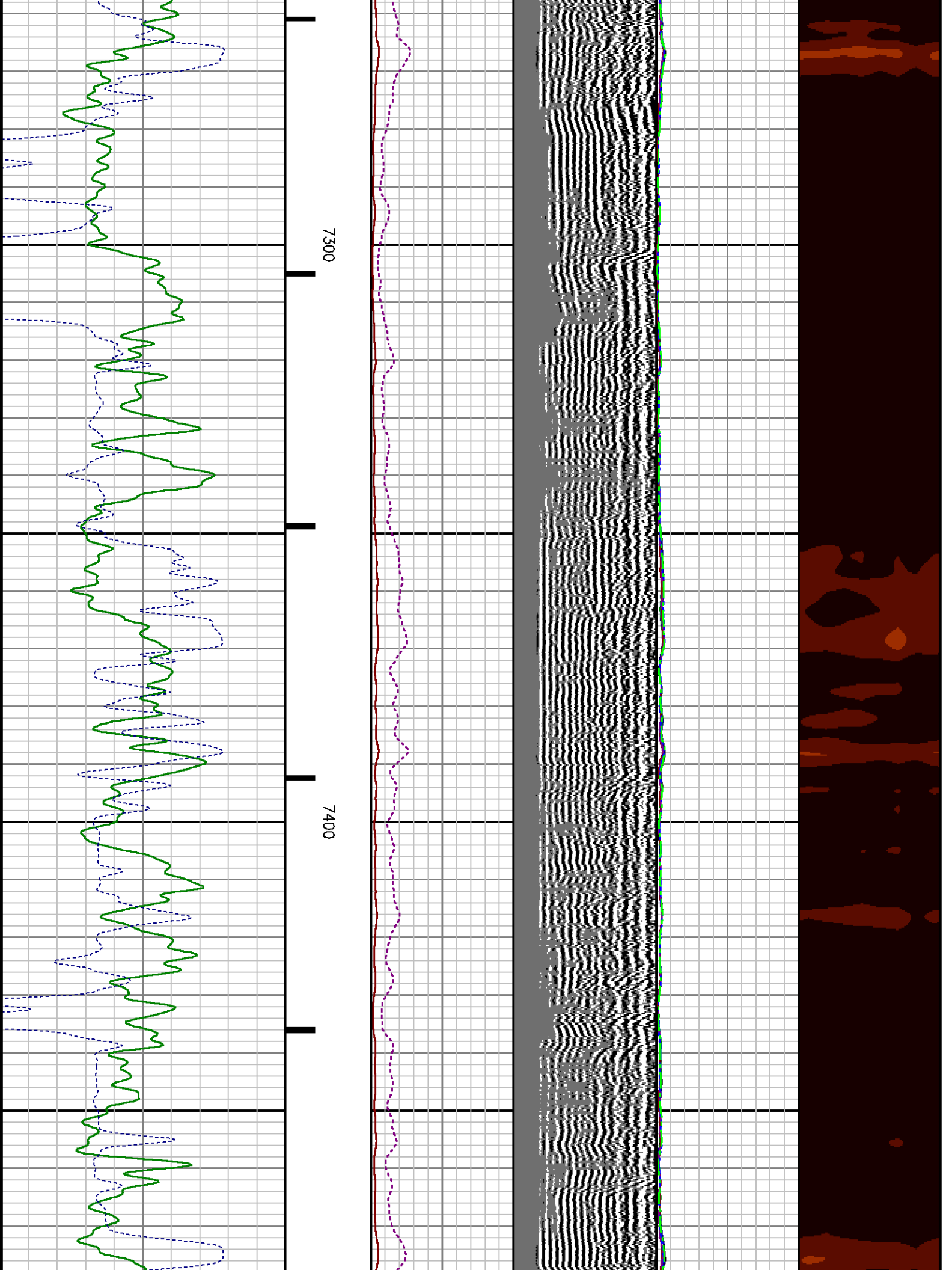


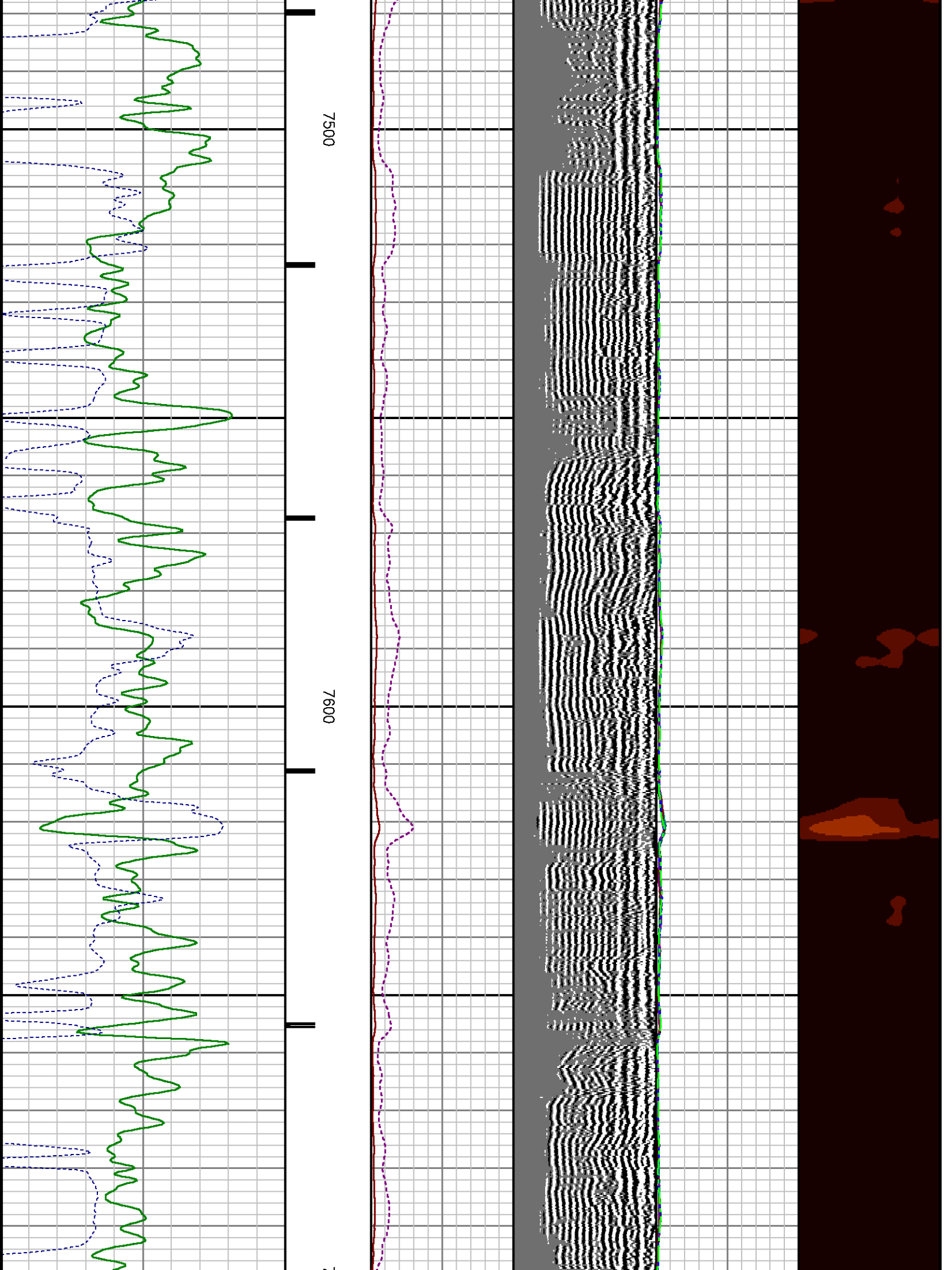


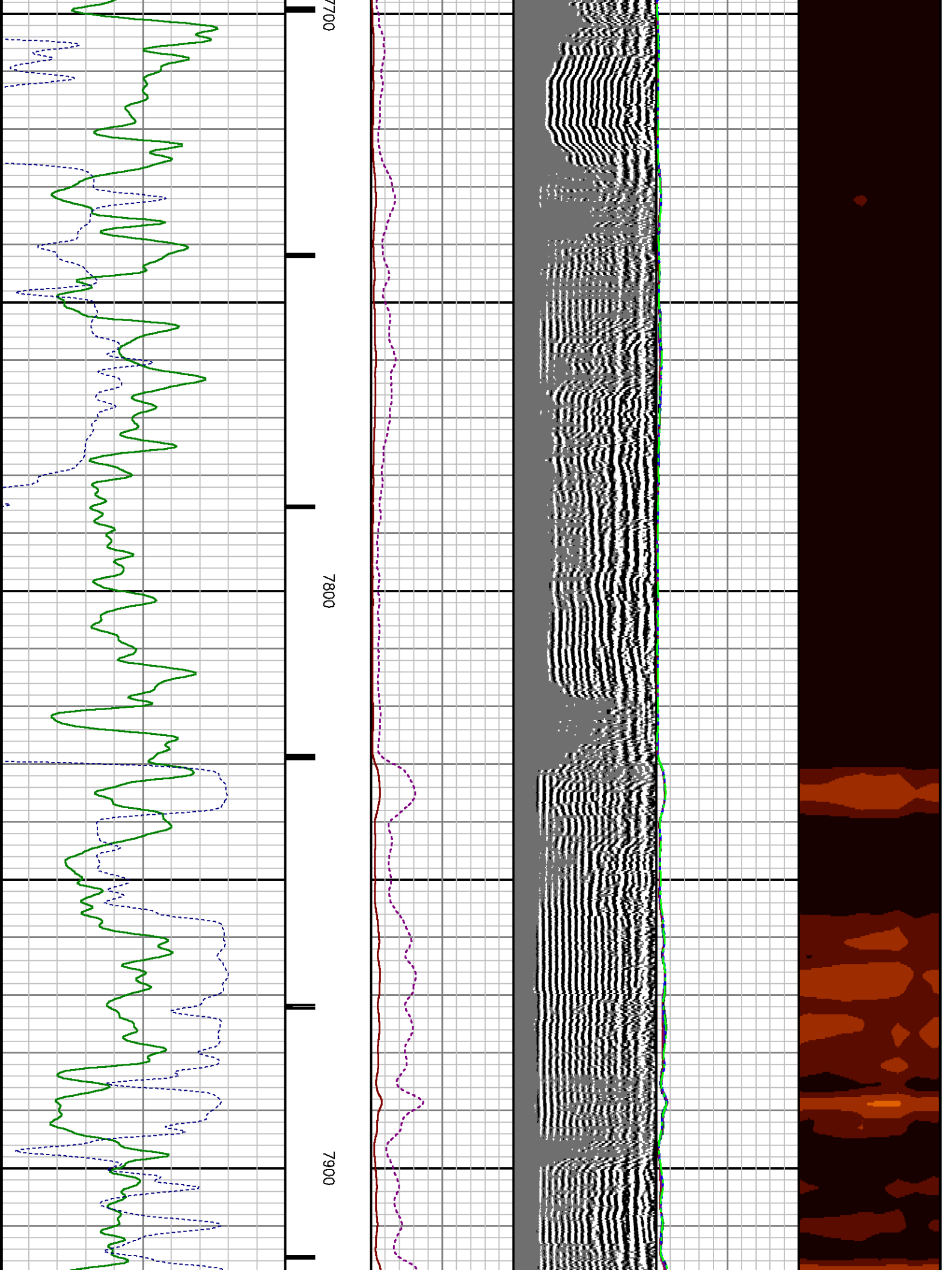


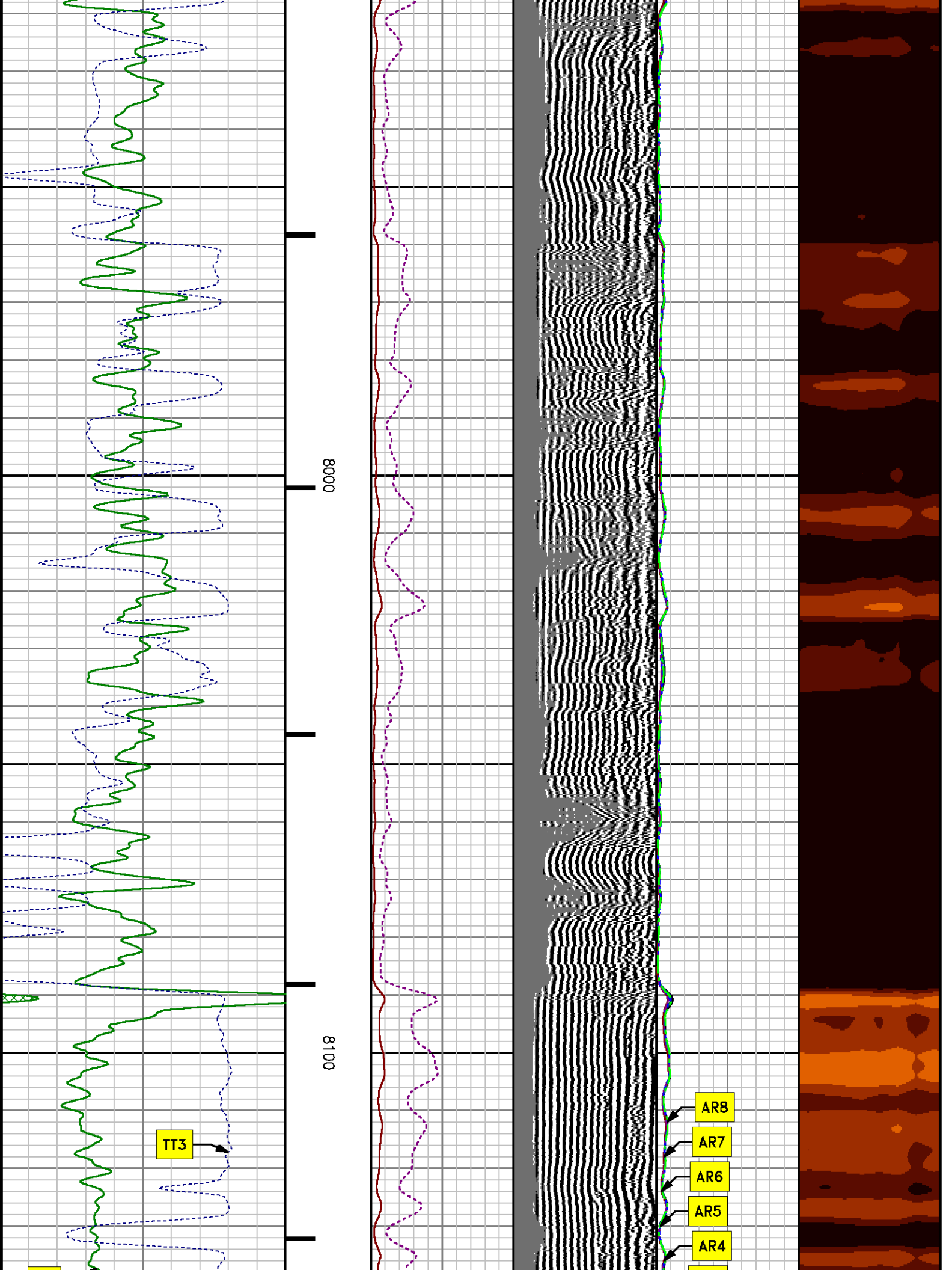








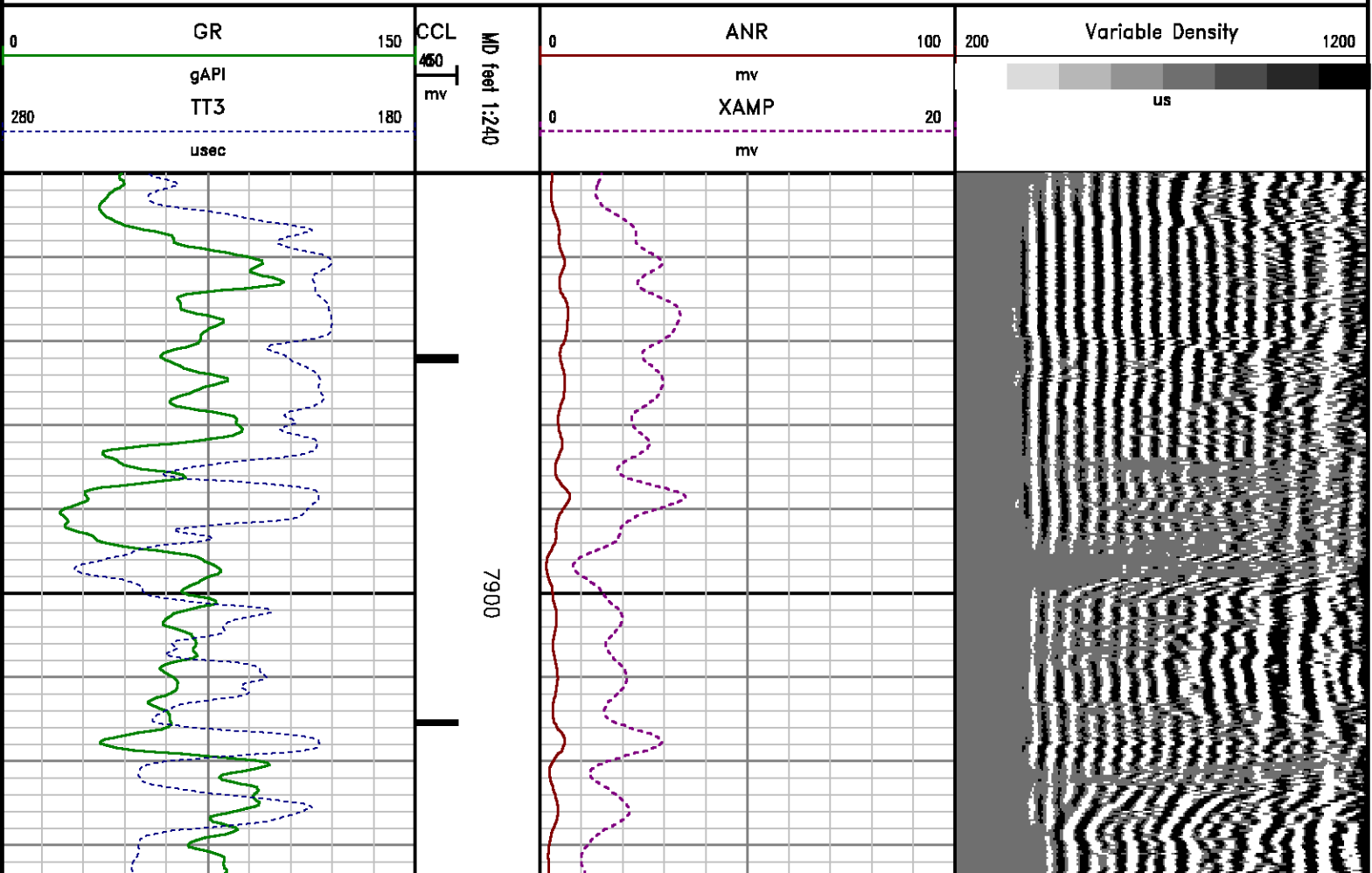


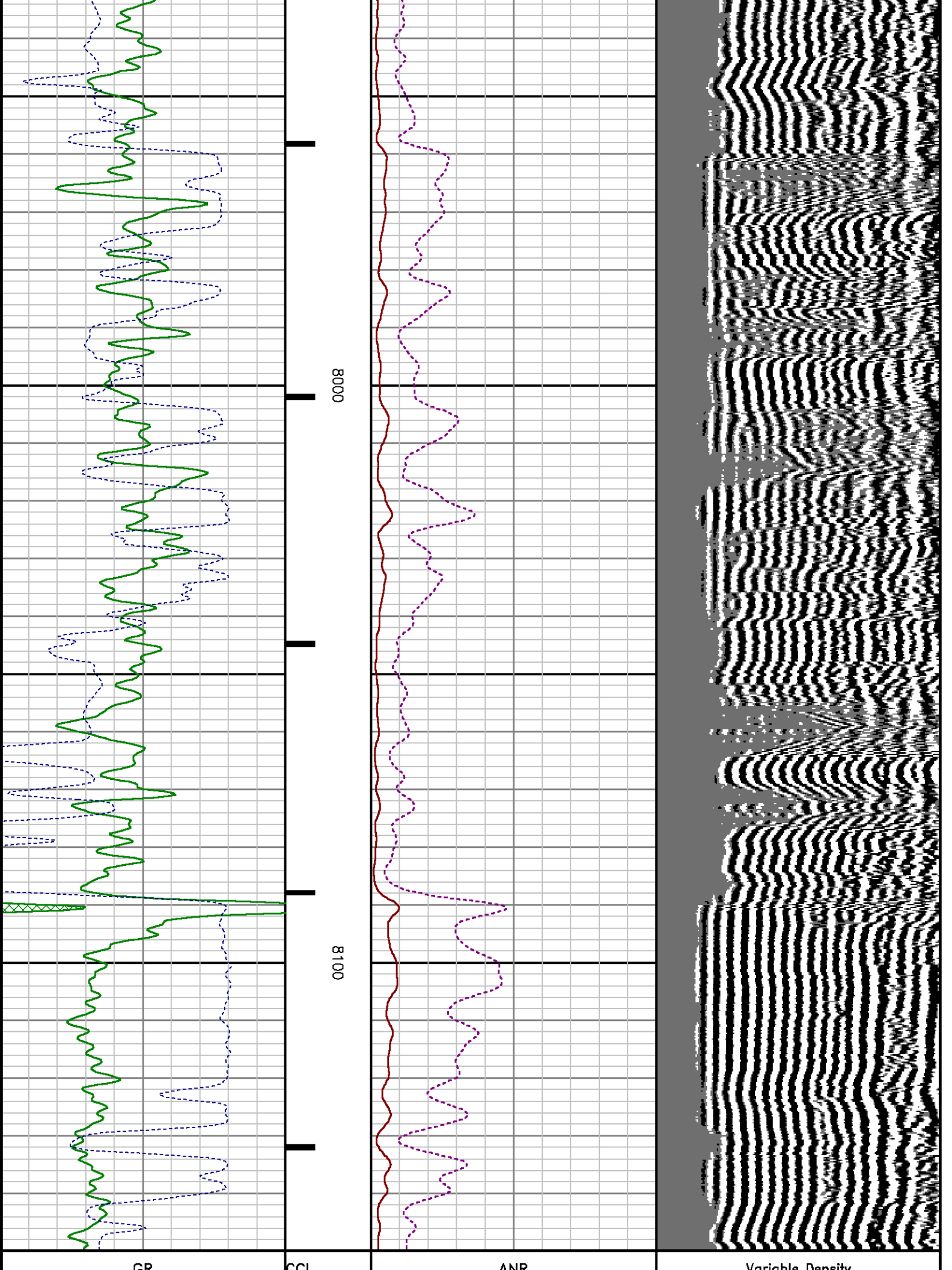


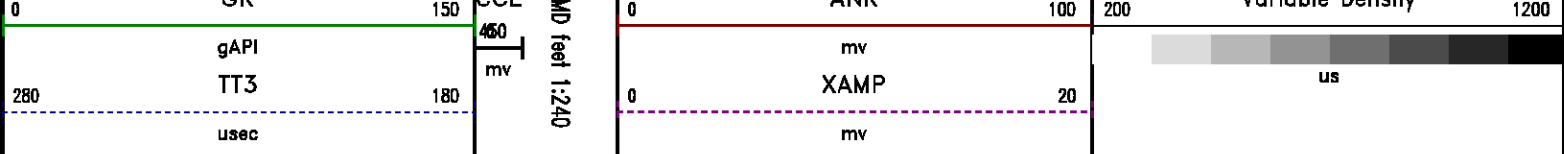
DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
1426XA	-16.750	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	-15.750	AFAR	SIG	TT5					
2459XA	-11.340	CCL							
2459XA	-9.490	GR							
2459XA	-4.090	NEU							

Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : WPX ENERGY RWF 421-4
File Name : d:\welldata\wp\rwf 421-4\421cbl\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 7850.00 - 8150.00 feet UP
Created : 12/31/2013 8:17:30 PM







CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\121D7.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Dec 19 13:07:05 2013 TOOL SERIES: 2459XA ASSET: 121 SEQ: D7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	72.18	324.27	0.734	52.97	237.97	185.00

Verification File: C:\case\calver\GR\121D7.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Dec 19 13:08:40 2013 TOOL SERIES: 2459XA ASSET: 121 SEQ: D7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	78.40	322.22	0.734	57.54	236.47	178.93

RALSHP

Shop Calibration: C:\case\calver\RALSHP\49631_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Dec 31 14:39:56 2013 TOOL SERIES: 1426XA ASSET: 496 SEQ: 31

Tool Delay [usec]	-56.00	Tank OD in	5.50	Tank Wt lbm/ft	15.50	Tank ID in	4.95
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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	217	216	30	166	25	-0.322	100.00	0.16
3 Ft. Receiver	217	216	30	176	9	2.373	100.00	0.16
5 Ft. Receiver	326	326	30	272	25	4.656	150.00	0.18
Radial #1	217	216	30	174	13	1.935	100.00	0.16
Radial #2	217	216	30	174	13	1.146	100.00	0.16

Radial #3	217	216	30	174	13	1.371	100.00	0.16
Radial #4	217	216	30	174	13	1.983	100.00	0.16
Radial #5	217	216	30	174	13	3.104	100.00	0.16
Radial #6	216	216	30	174	13	1.419	100.00	0.16
Radial #7	216	216	30	174	13	2.011	100.00	0.16
Radial #8	217	216	30	174	13	1.467	100.00	0.16

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\49631 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Dec 31 17:28:25 2013 TOOL SERIES: 1426XA ASSET: 496 SEQ: 31

Tool Delay [usec] Casing OD In Casing Wt lbm/ft Casing ID In

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="0.058"/>	<input type="text" value="0.000"/>	<input type="text" value="1.00"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.474"/>			
5 Ft. Receiver	<input type="text" value="317"/>	<input type="text" value="30"/>	<input type="text" value="1.231"/>			
Radial #1	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.208"/>			
Radial #2	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.195"/>			
Radial #3	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.370"/>			
Radial #4	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.375"/>			
Radial #5	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.631"/>			
Radial #6	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.603"/>			
Radial #7	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.300"/>			
Radial #8	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.317"/>			

TOOL DIAGRAM

OTA SHORT CABLE HEAD

24.23'

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

XMIT	18.05'
NEAR RCVR	14.97'
FAR RCVR	13.05'
CCL	11.34'
GR	9.49'
NEU	4.09'
	0.00'

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	WPX ENERGY		
Well	WPX ENERGY RWF 421-4		
Field	RULISON		
County	GARFIELD	State	CO

File No:	CH80980
API No:	05045220870000

Location

SHL: 440' FNL & 1701' FEL
BHL: 1246' FNL & 2365' FWL

Elevations

KB	5820 ft
DF	
GL	5794 ft

4 7S 94W
RMV 108-4 PAD
NABORS 574

SEC	4	TWP	7S	RGE	94W
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CASE

Baker Atlas