



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No:	Company	WPX ENERGY	Other Services
CH81610	Well	WPX ENERGY RWF 332-4	
API No:	Field	RULISON	
05045220810000	County	GARFIELD	State CO
Location			
SHL: 445' FNL & 1706' FEL BHL: 1701' FNL & 2103' FEL			
4 7S 94W RMV 108-4 PAD NABORS 574	SEC 4	TWP 7S	RGE 94W
Permanent Datum	GL	Elevation	5794 ft
Log Measured From	KB	26 ft	Above P. D.
Drill Measured From	KB		Elevations KB 5820 ft DF GL 5794 ft

Date	04/JAN/14
Run	ONE
Service Order	US625082
Depth Driller	7201 ft
Depth Logger	7090 ft
Bottom Logged Interval	7080 ft
Top Logged Interval	26 ft
Time Started	8:30
Time Finished	13:30
Operator Rig Time	5 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	82 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	65 fpm
Maximum Recorded Temperature	191 degF
Reference Log	BAKER HUGHES OPEN HOLE
Reference Log Date	14/DEC/2013
Equipment No.	4271
Recorded By	NEWELL
Witnessed By	CHRIS TILLER

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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	1125 ft
8.75 In	1125 ft	8187 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1125 ft
4.5 In	11.6 lbm/ft		0 ft	8187 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 12/14/2013 the clients request.
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

The amount of linear shift is 3 feet.

BHT = 191 °F
SJ = 3822'–3846'

DID NOT TAG TD SINCE THE TOOLS WERE STUCK IN HOLE THE PREVIOUS
ATTEMPT. WENT TO 7090' AND STARTED LOGGING

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	25.812	7089.000
RAL	Amp Gate Start Near	195.000	usec	25.812	7089.000
RAL	Amp Gate Start Radial	195.000	usec	25.812	7089.000
RAL	Amp Gate Width Far	25.000	usec	25.812	7089.000
RAL	Amp Gate Width Near	25.000	usec	25.812	7089.000
RAL	Amp Gate Width Radial	25.000	usec	25.812	7089.000
RAL	casing od	4.500	inches	25.812	7089.000
RAL	casing wt	11.600	lbm/ft	25.812	7089.000
RAL	FB Start Far	291.900	usec	25.812	7089.000
RAL	FB Start Near	175.391	usec	25.812	7089.000
RAL	FB Start Radial	175.391	usec	25.812	7089.000
RAL	FB Thresh Far	10.000	mv	25.812	7089.000
RAL	FB Thresh Near	4.000	mv	25.812	7089.000
RAL	FB Thresh Radial	4.000	mv	25.812	7089.000
RAL	Fluid Travel Time	200.000	usec/ft	25.812	7089.843

DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

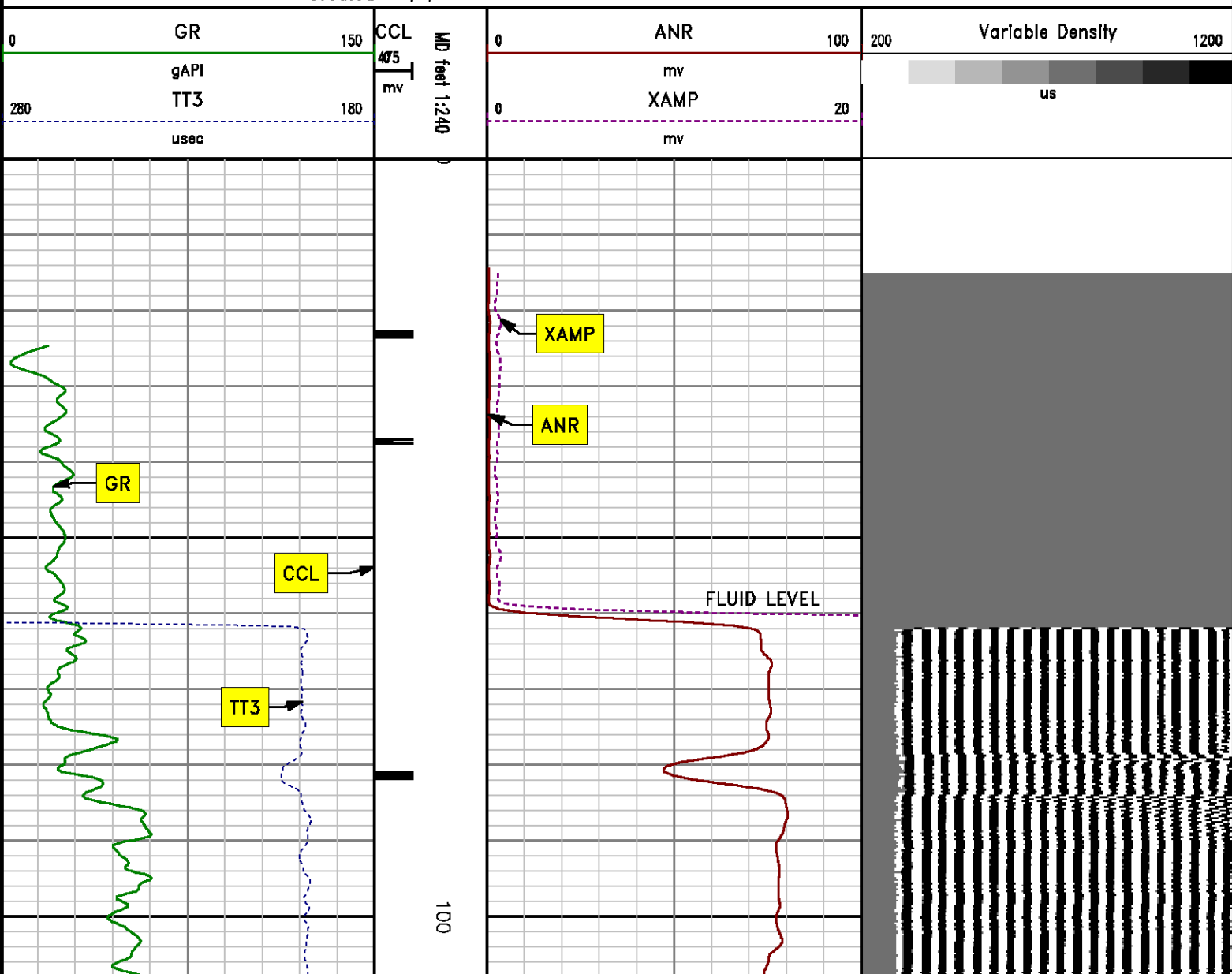
Well : RWF 332-4

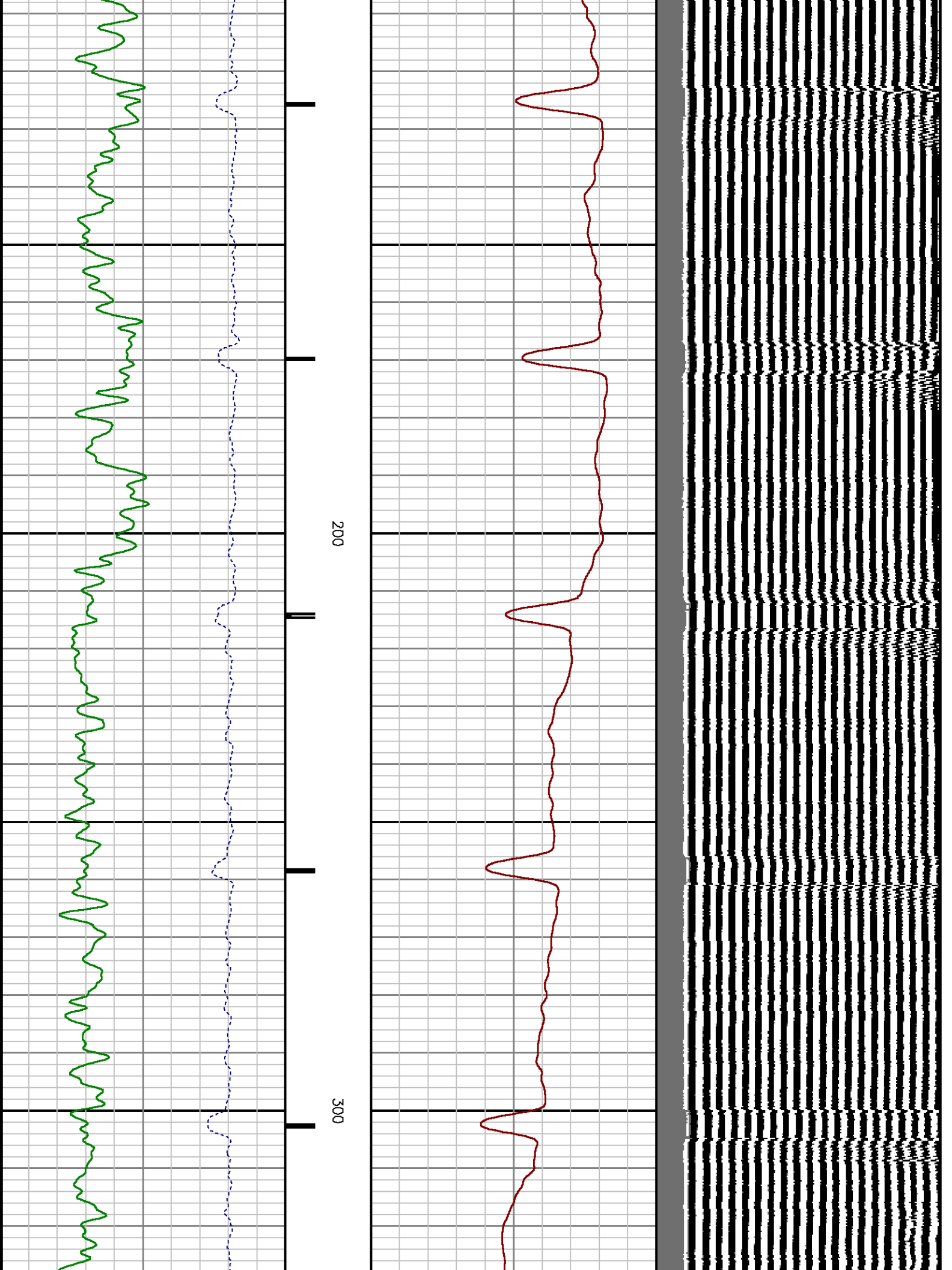
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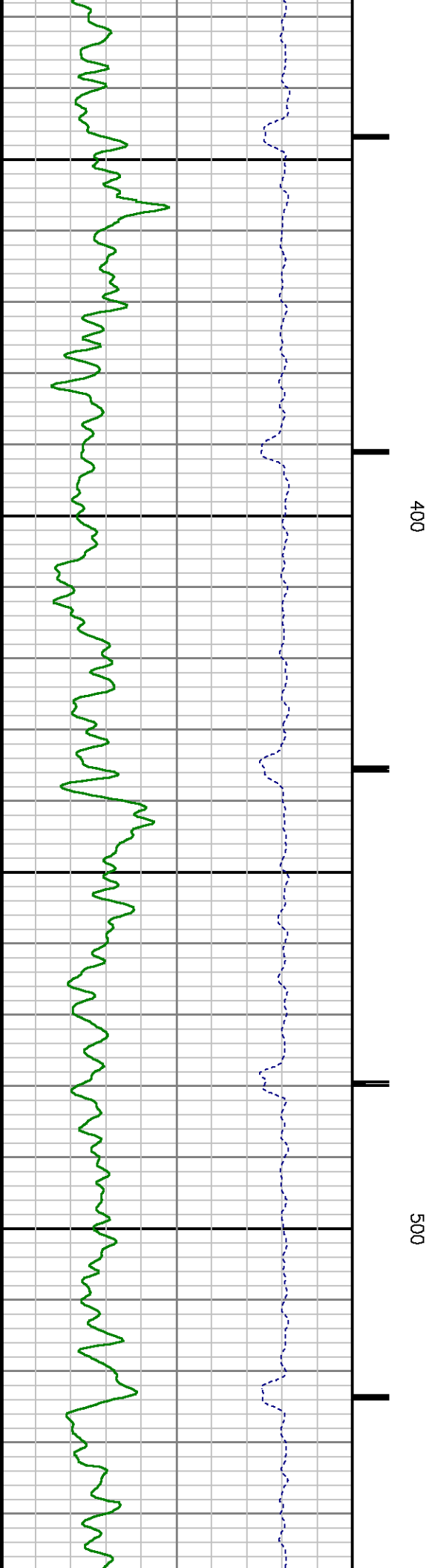
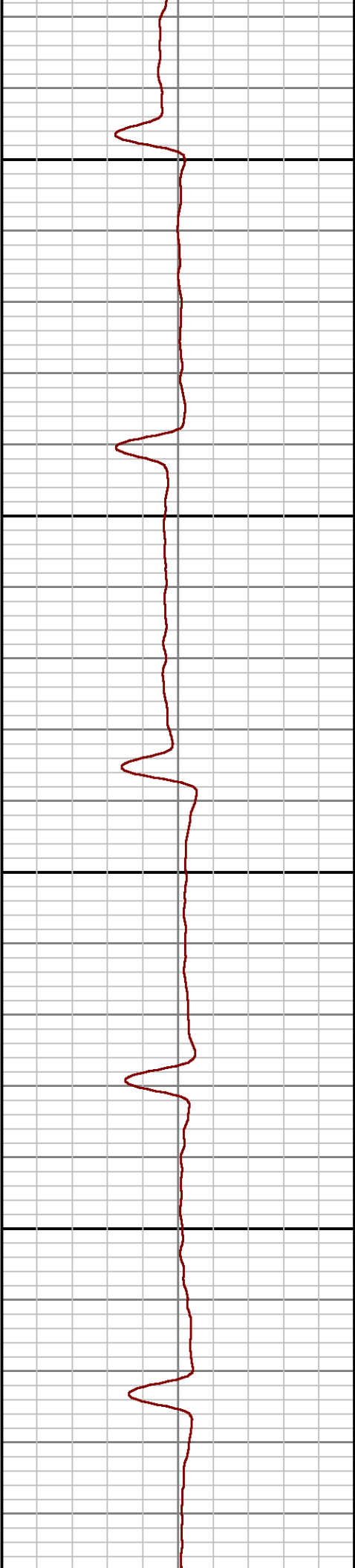
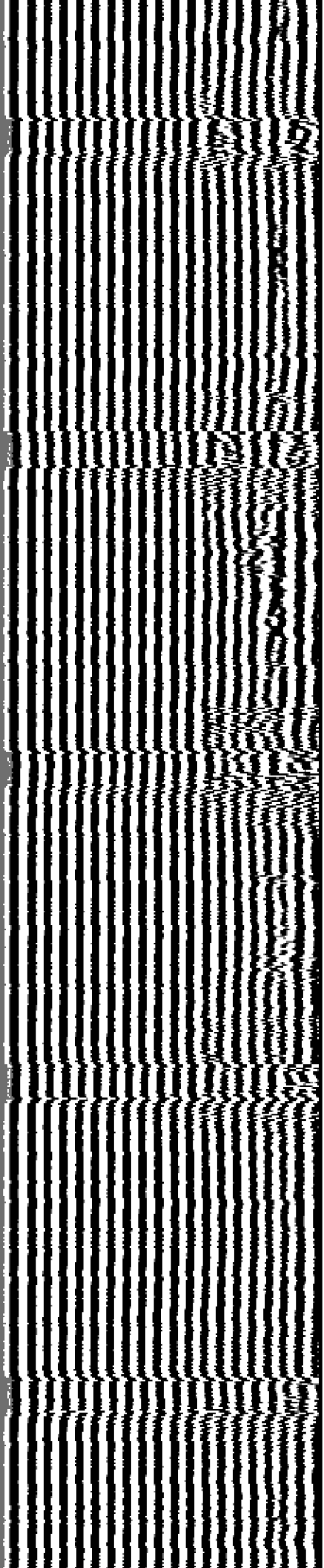
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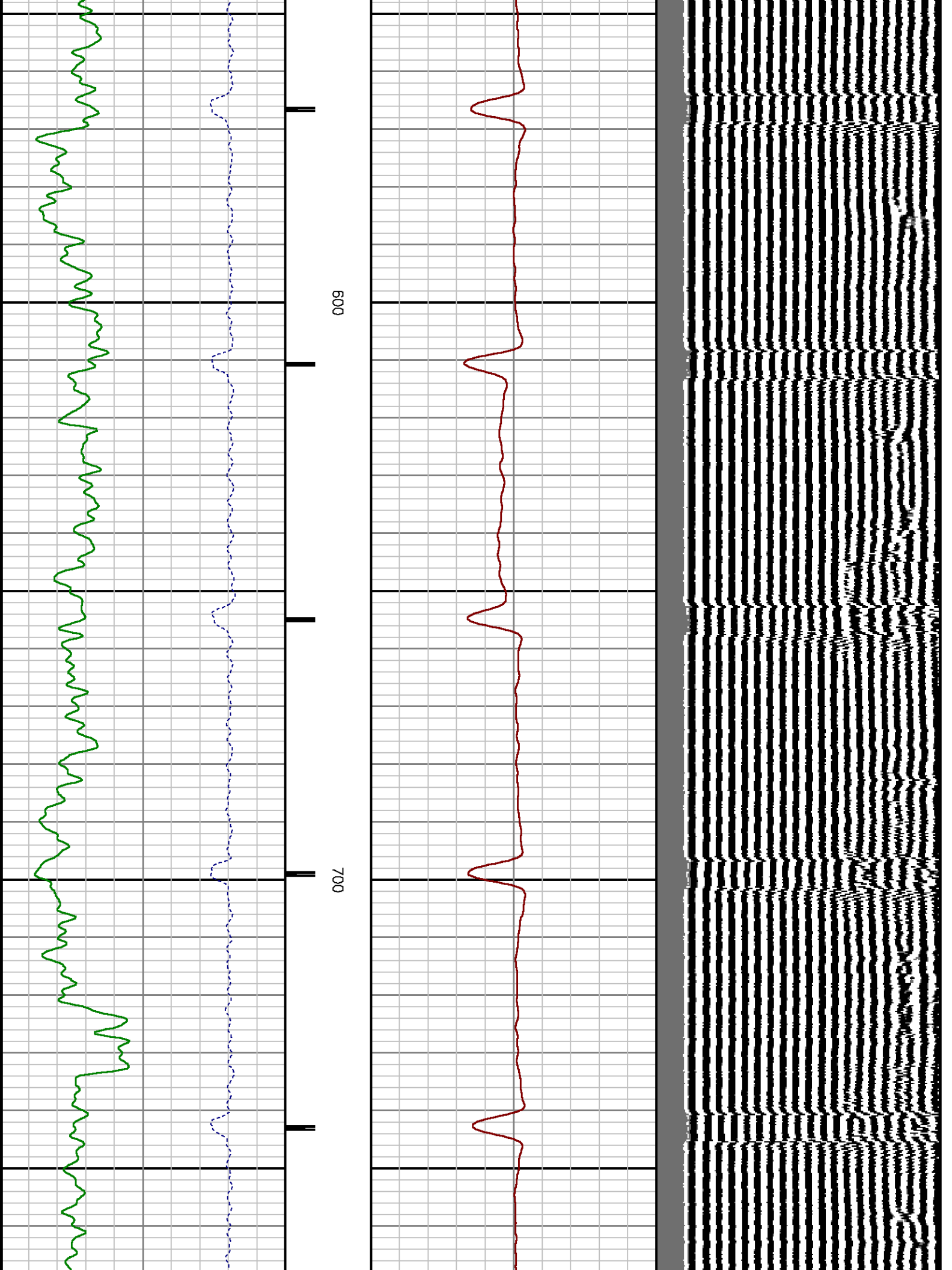
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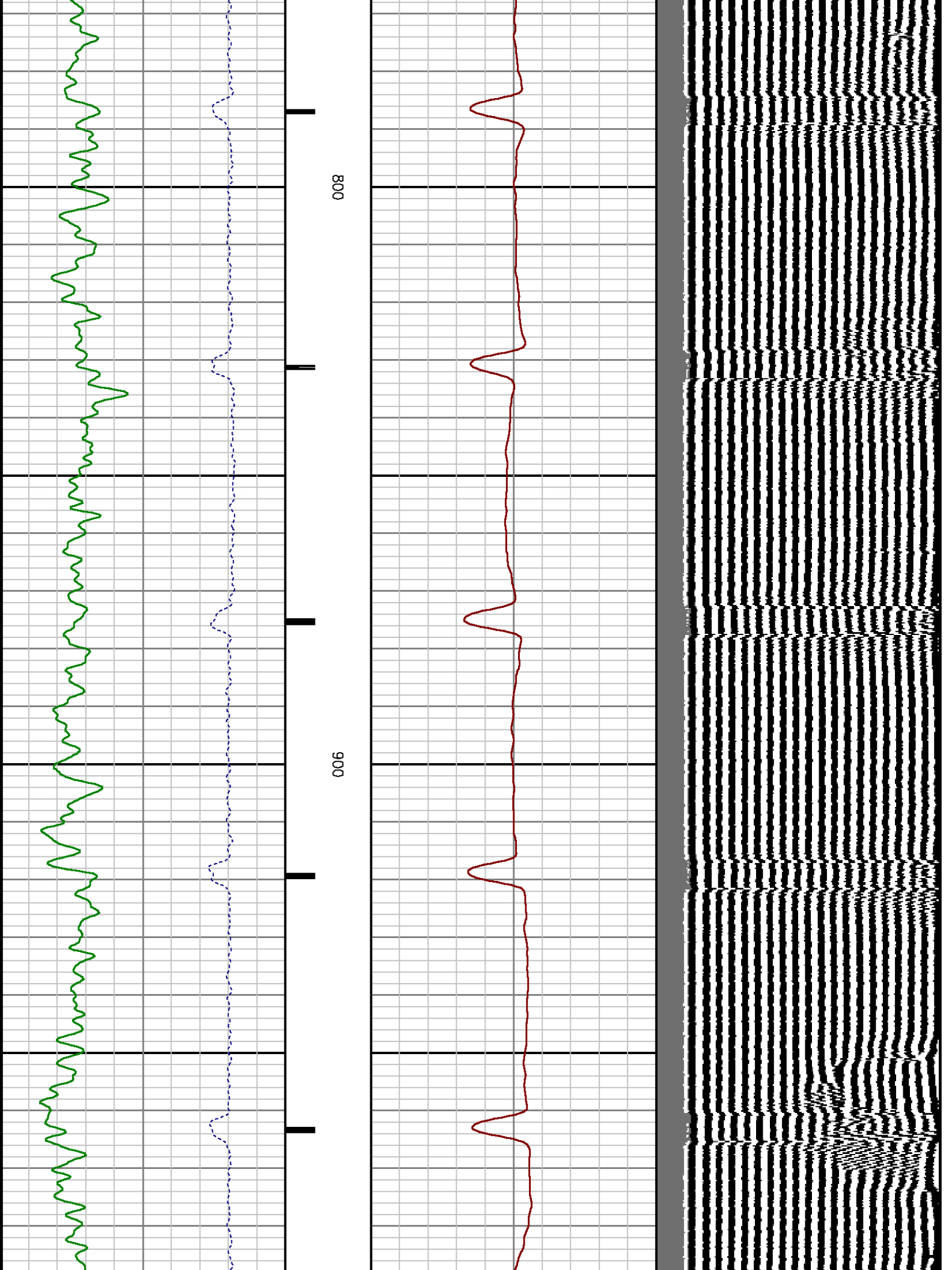
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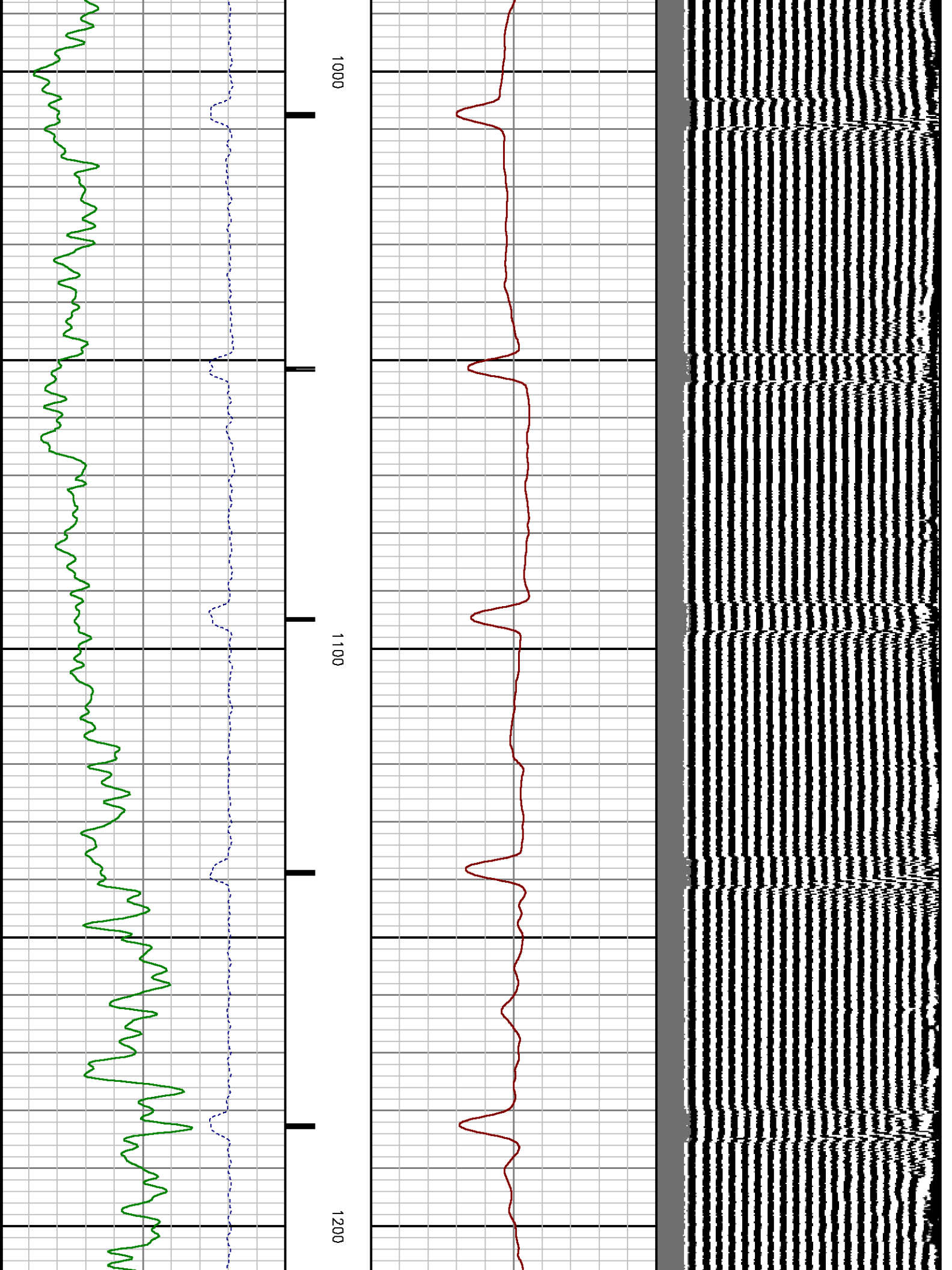


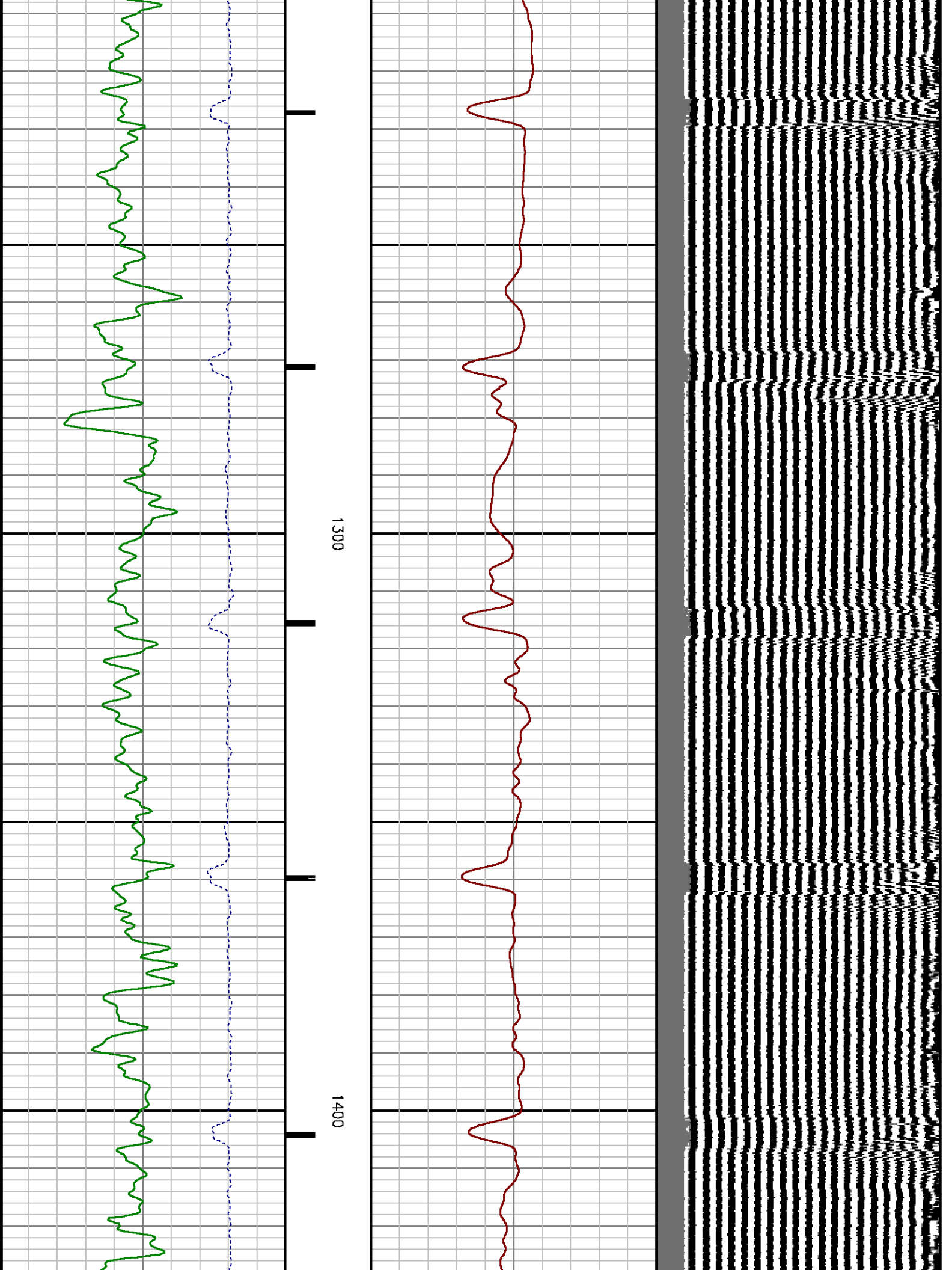


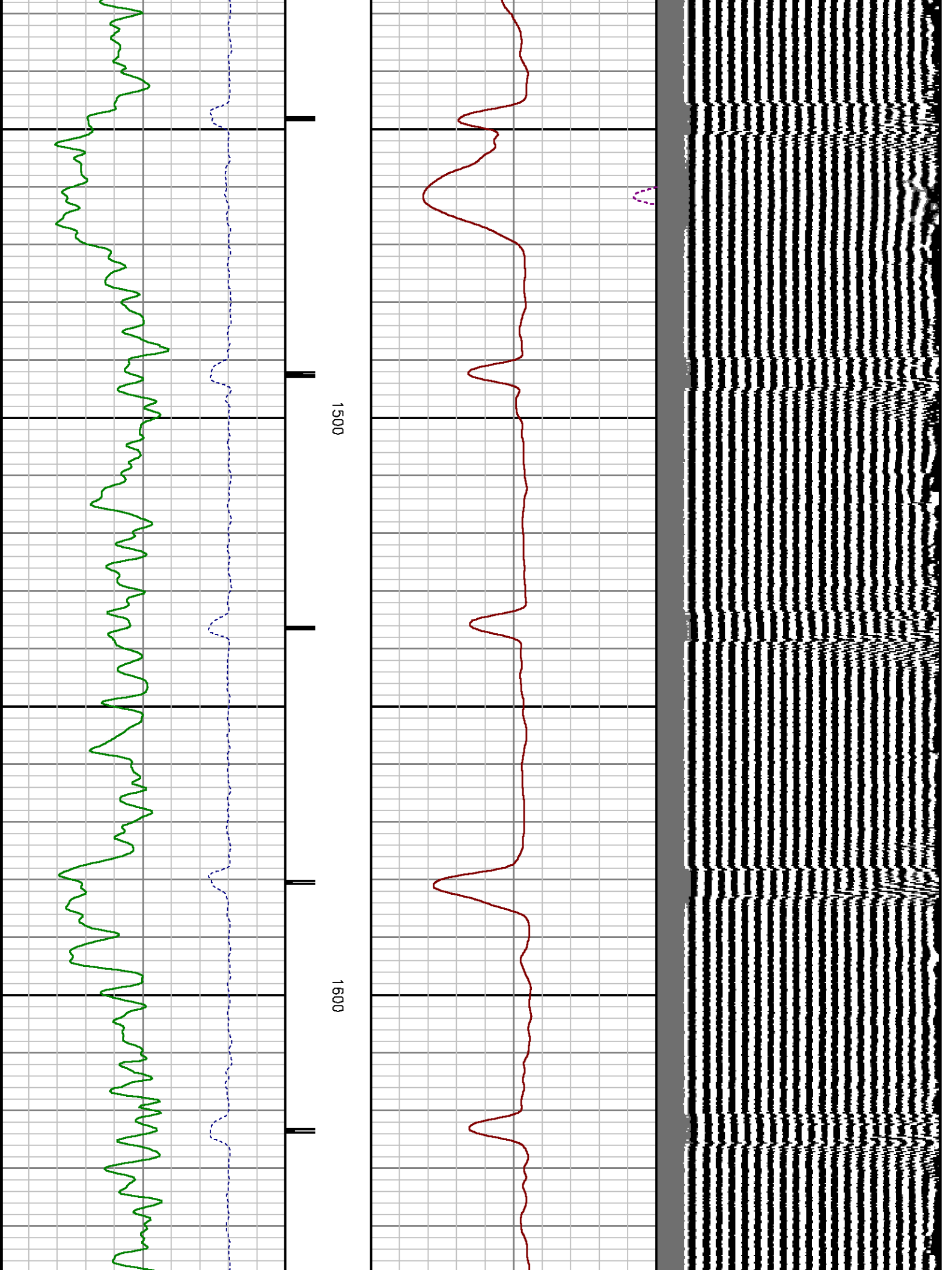


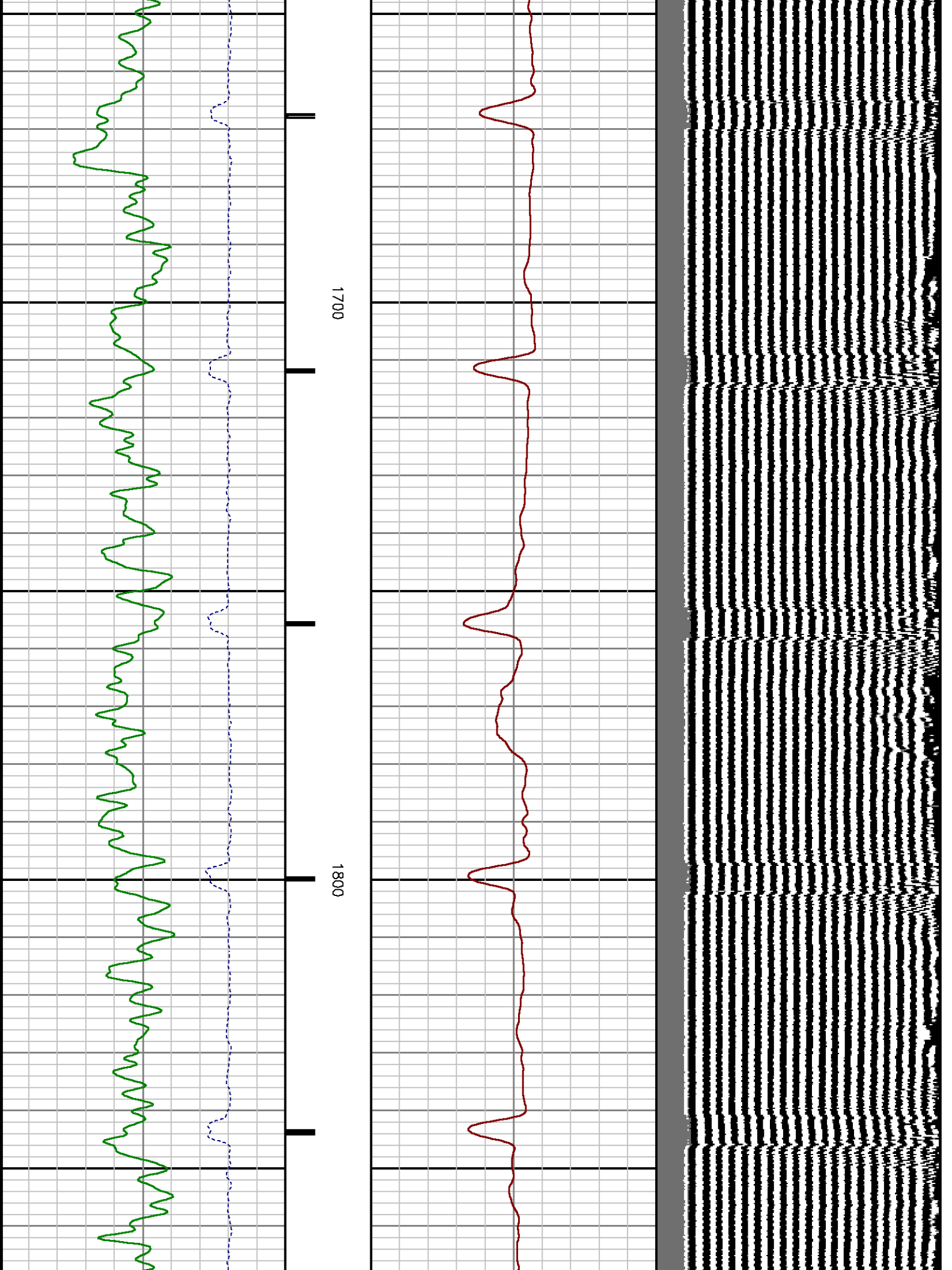


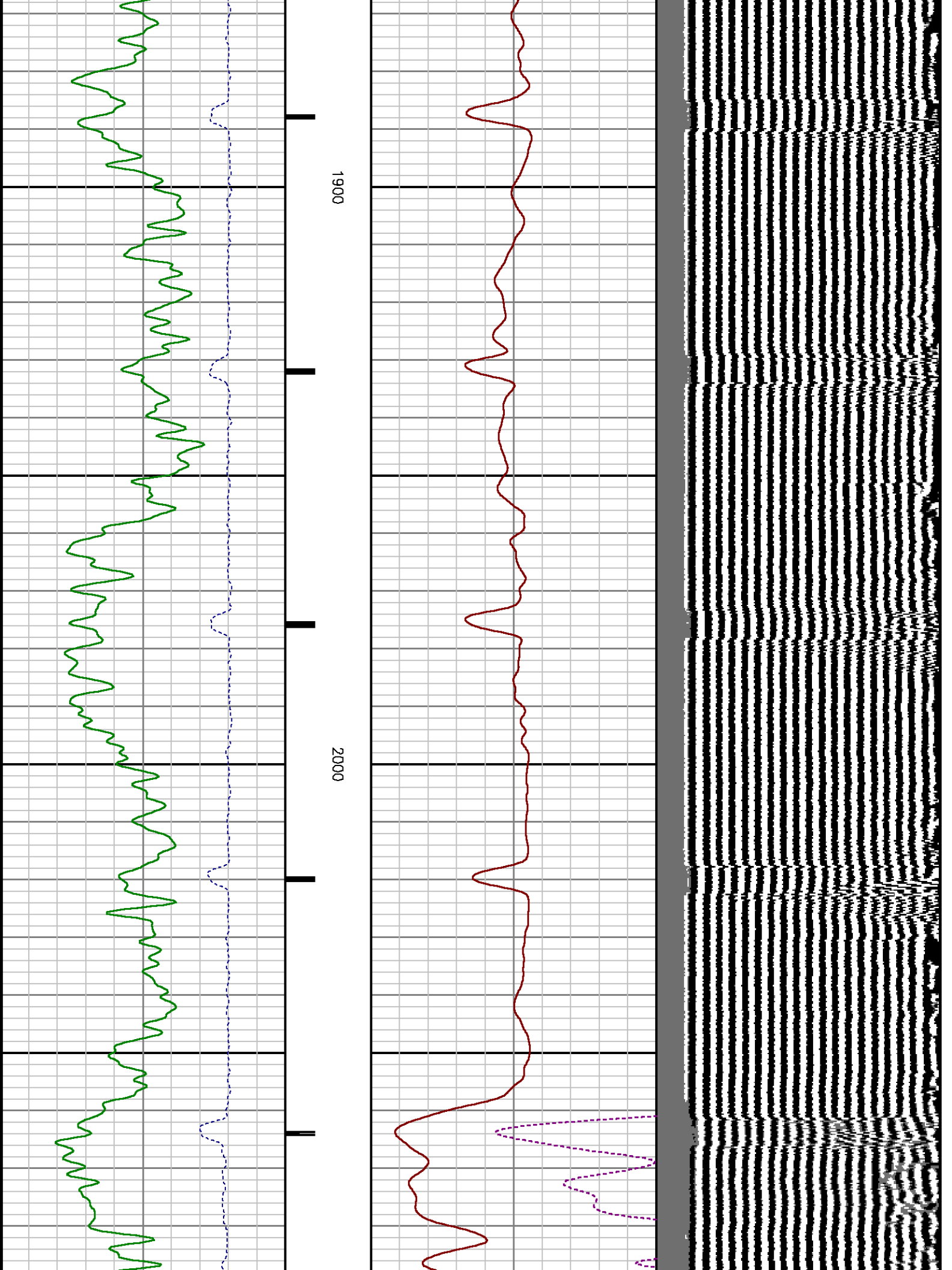


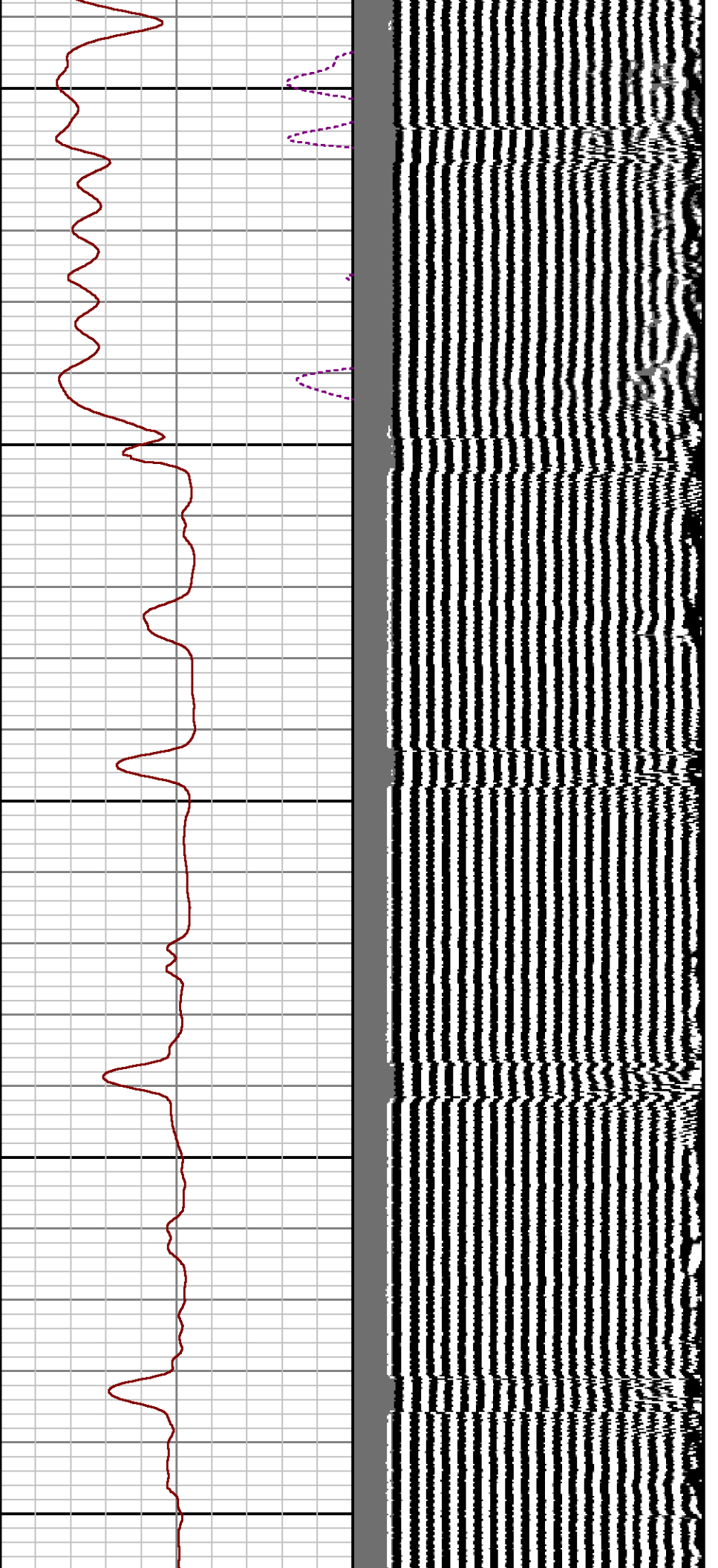








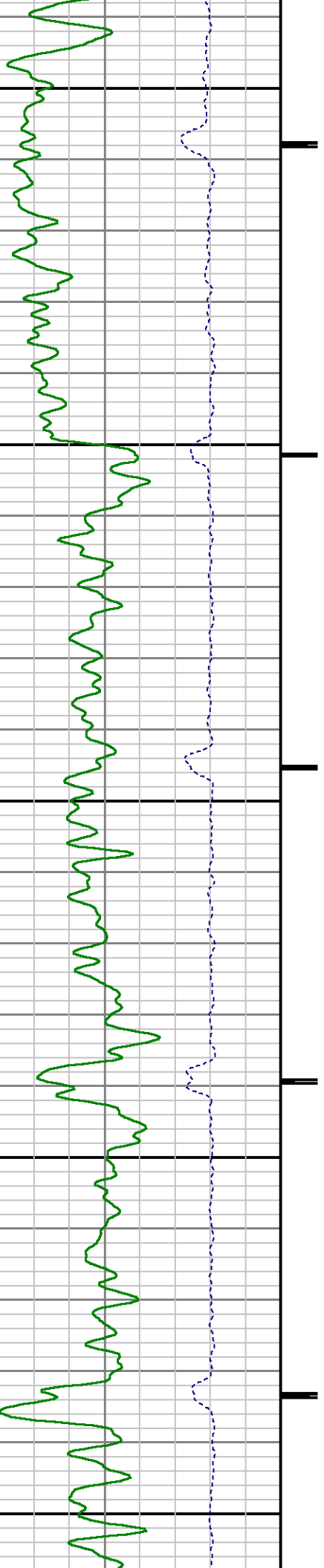


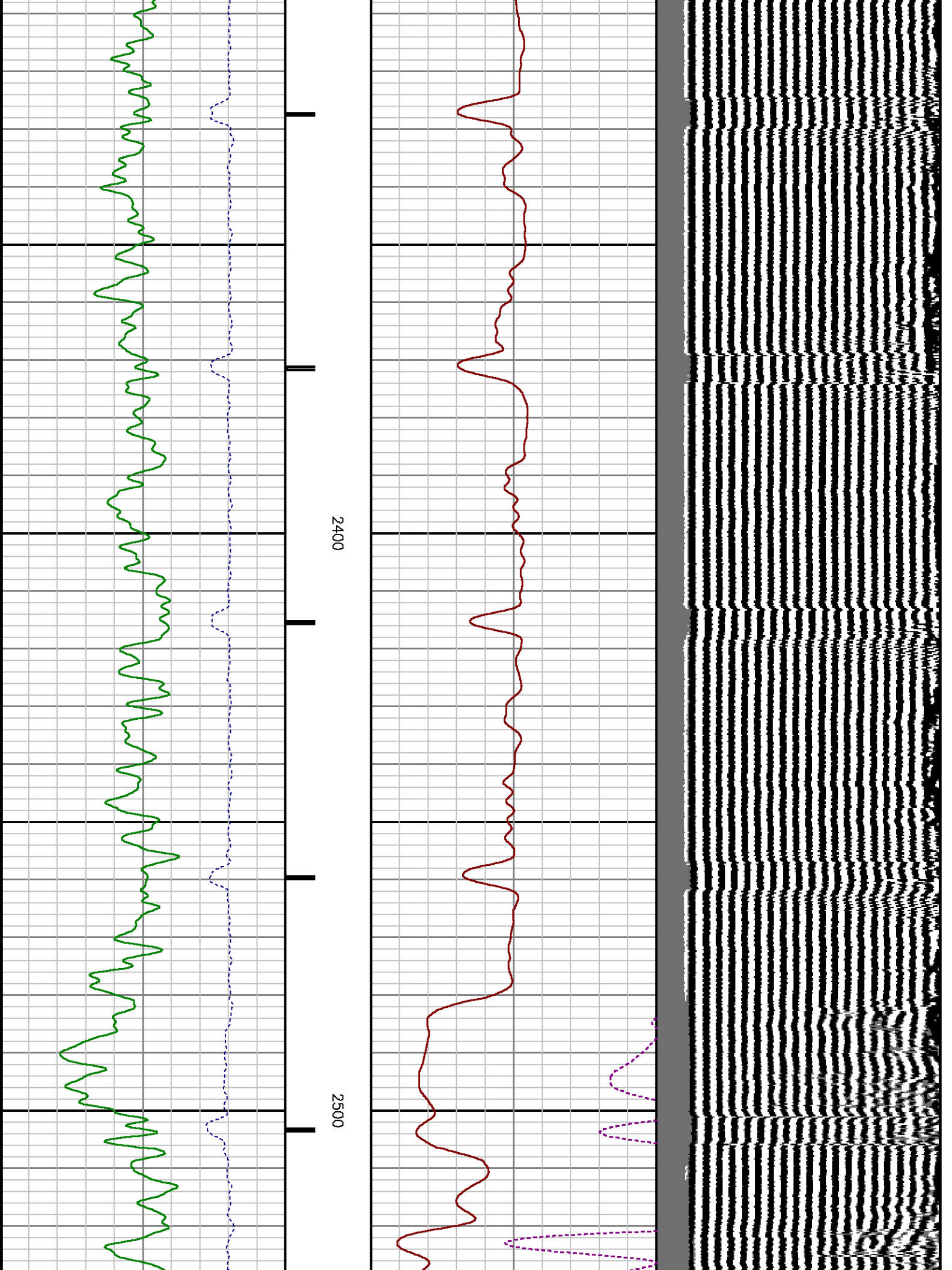


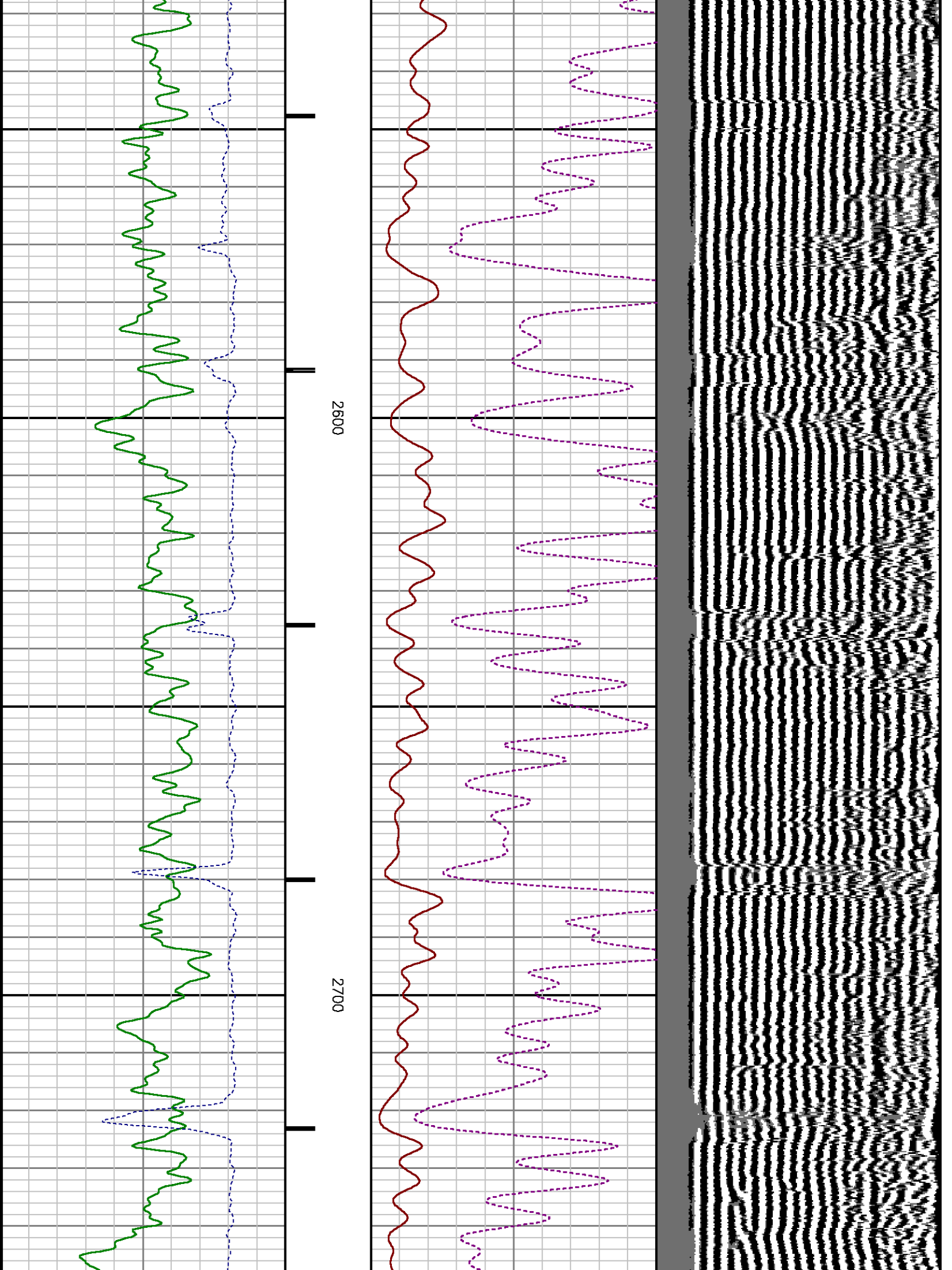
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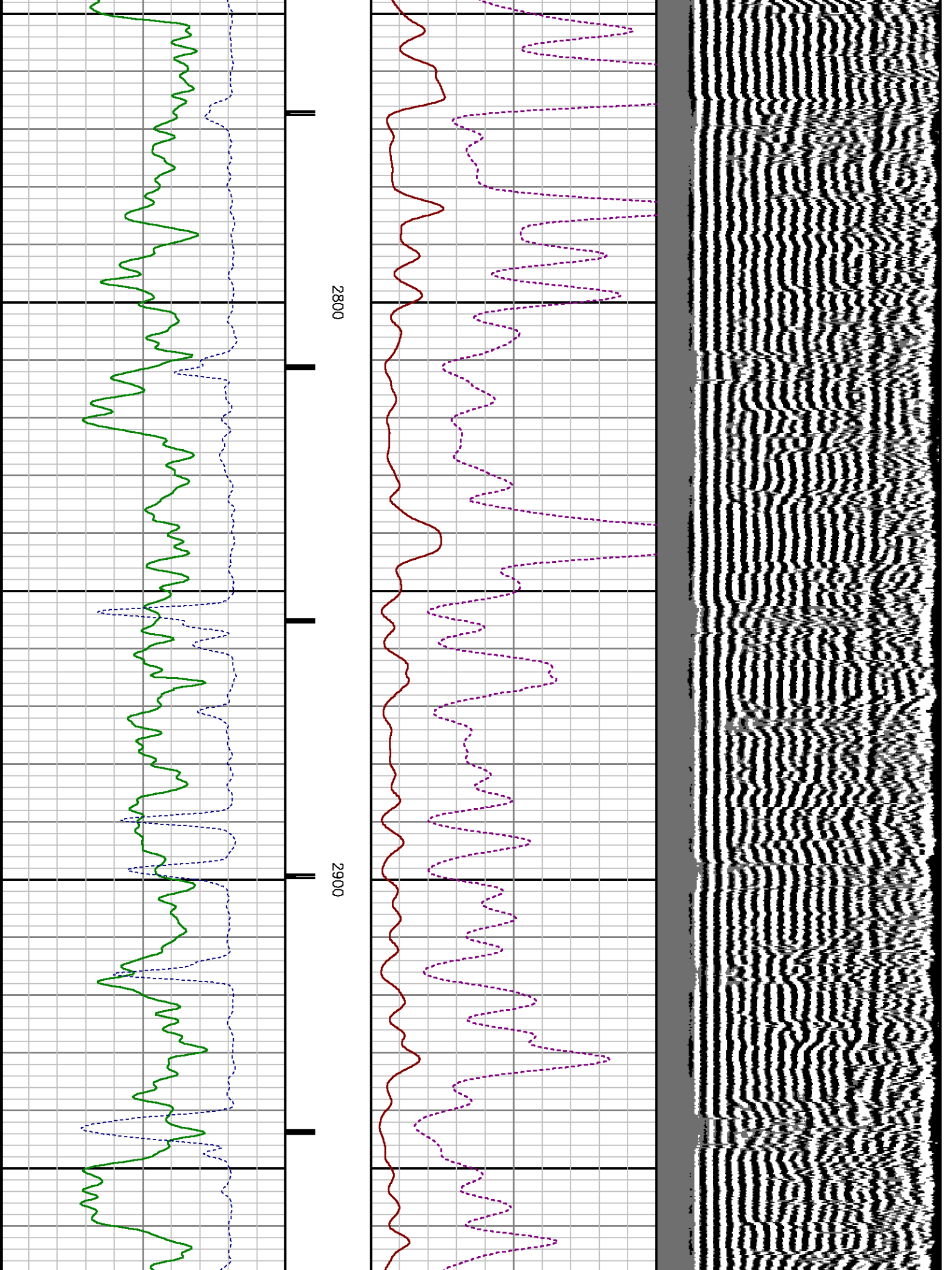
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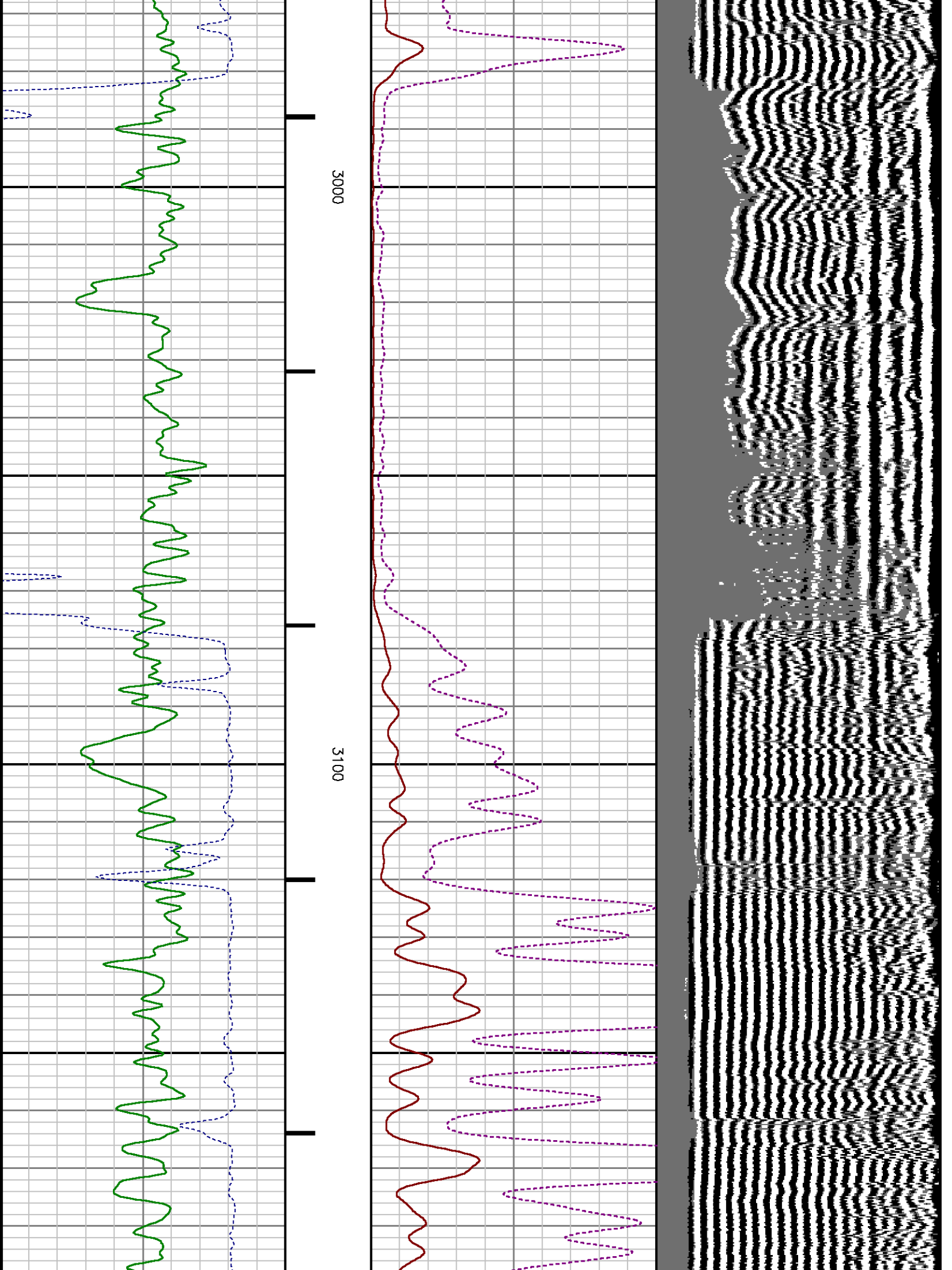
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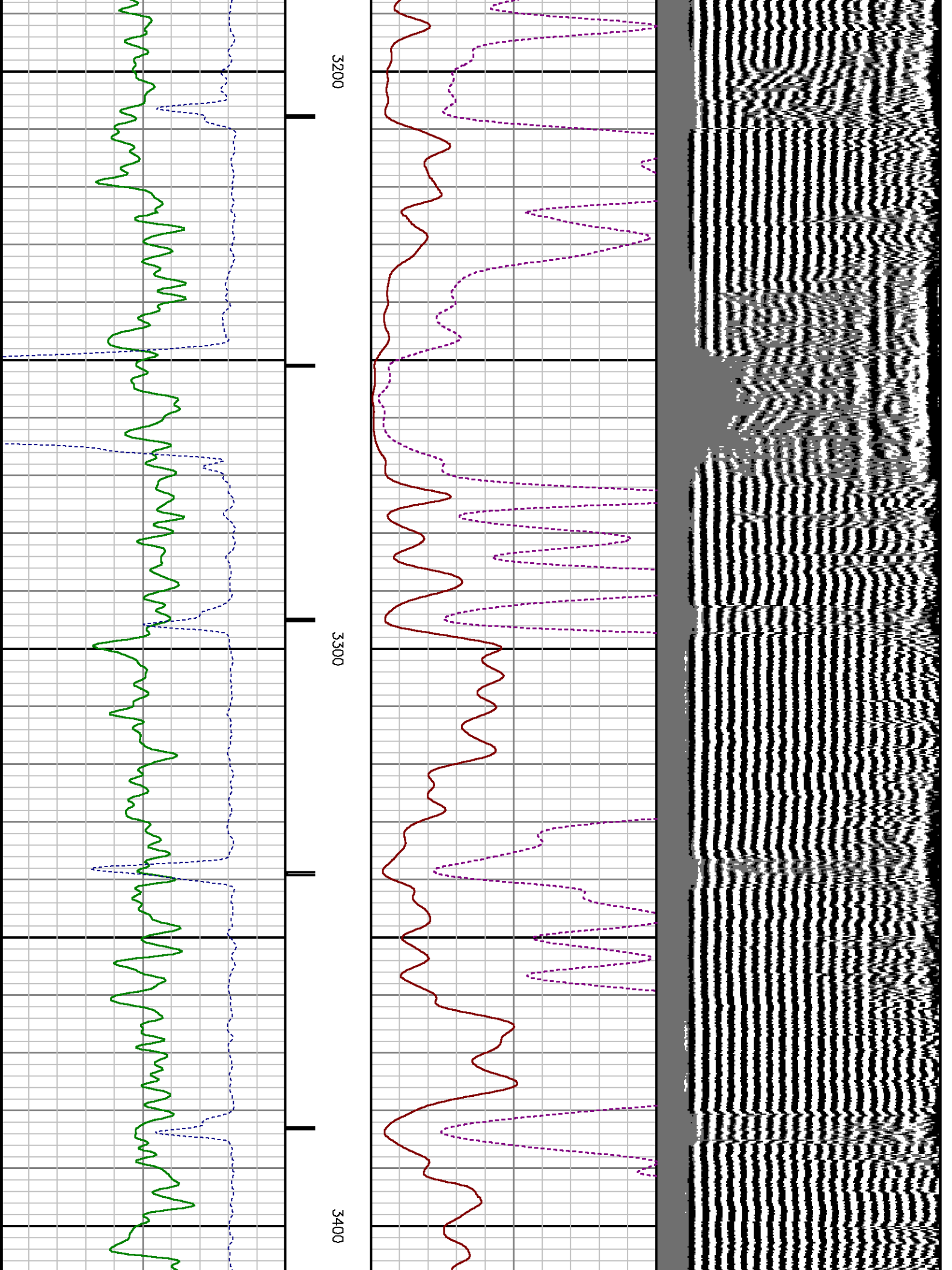


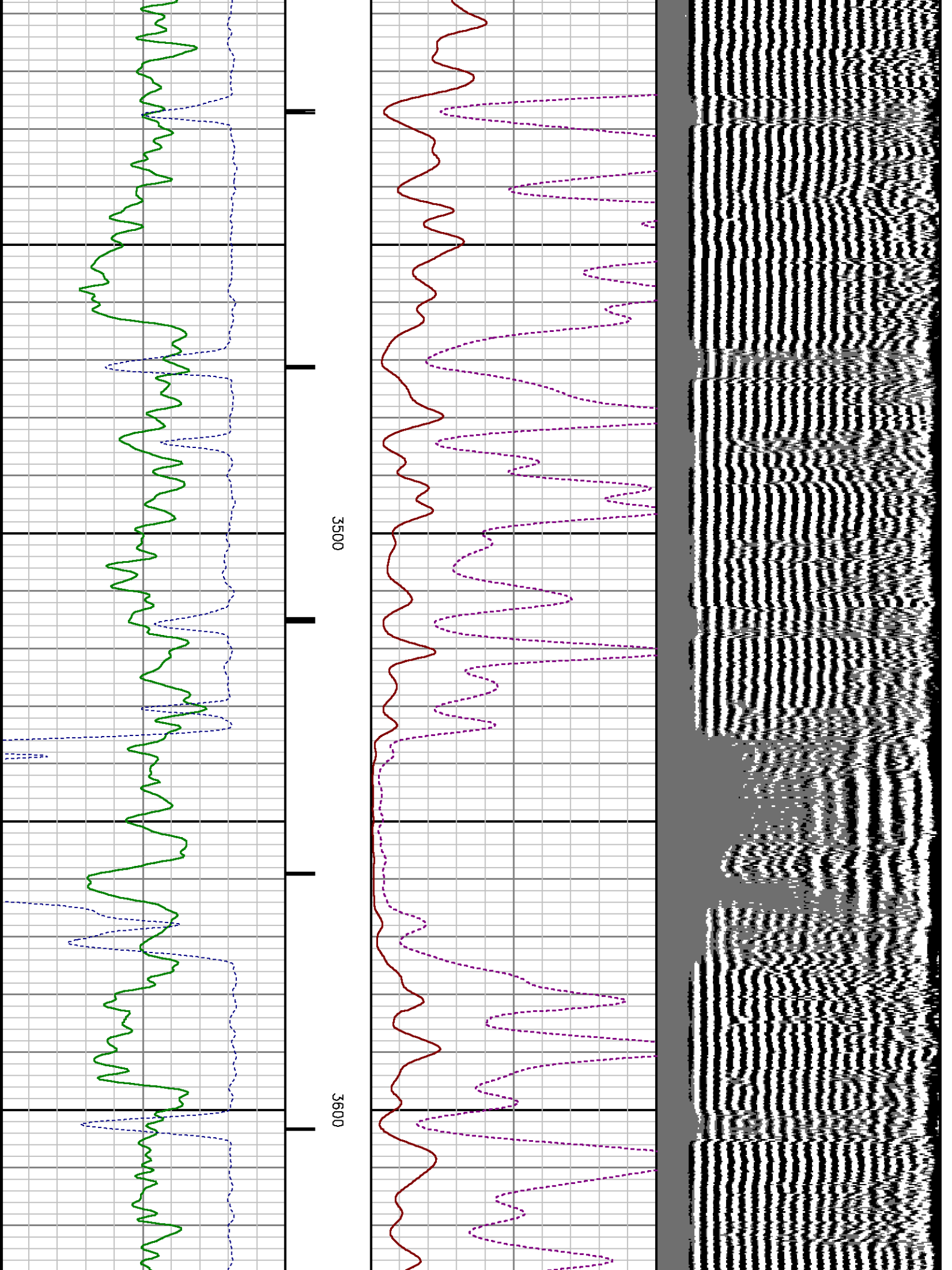


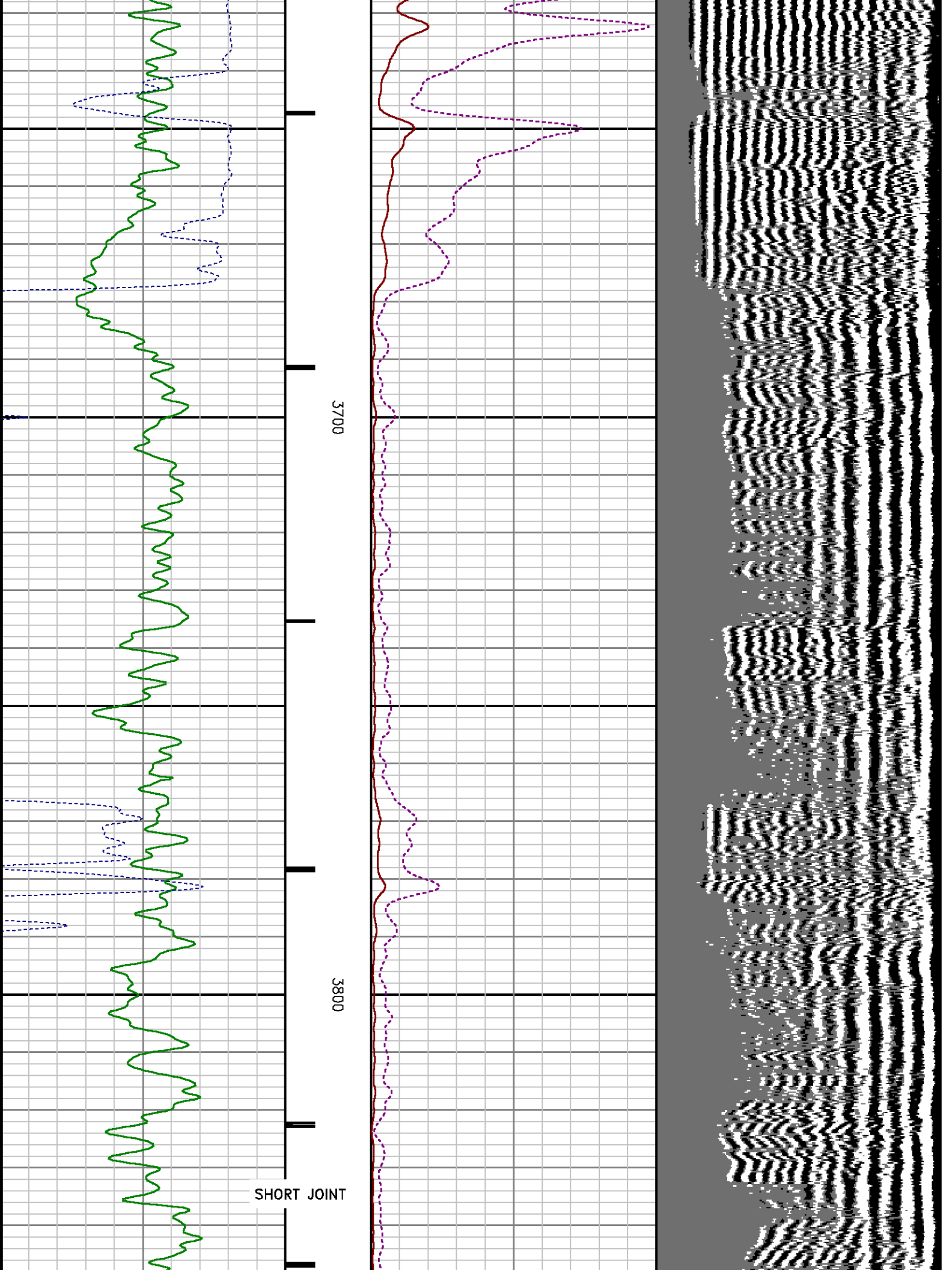


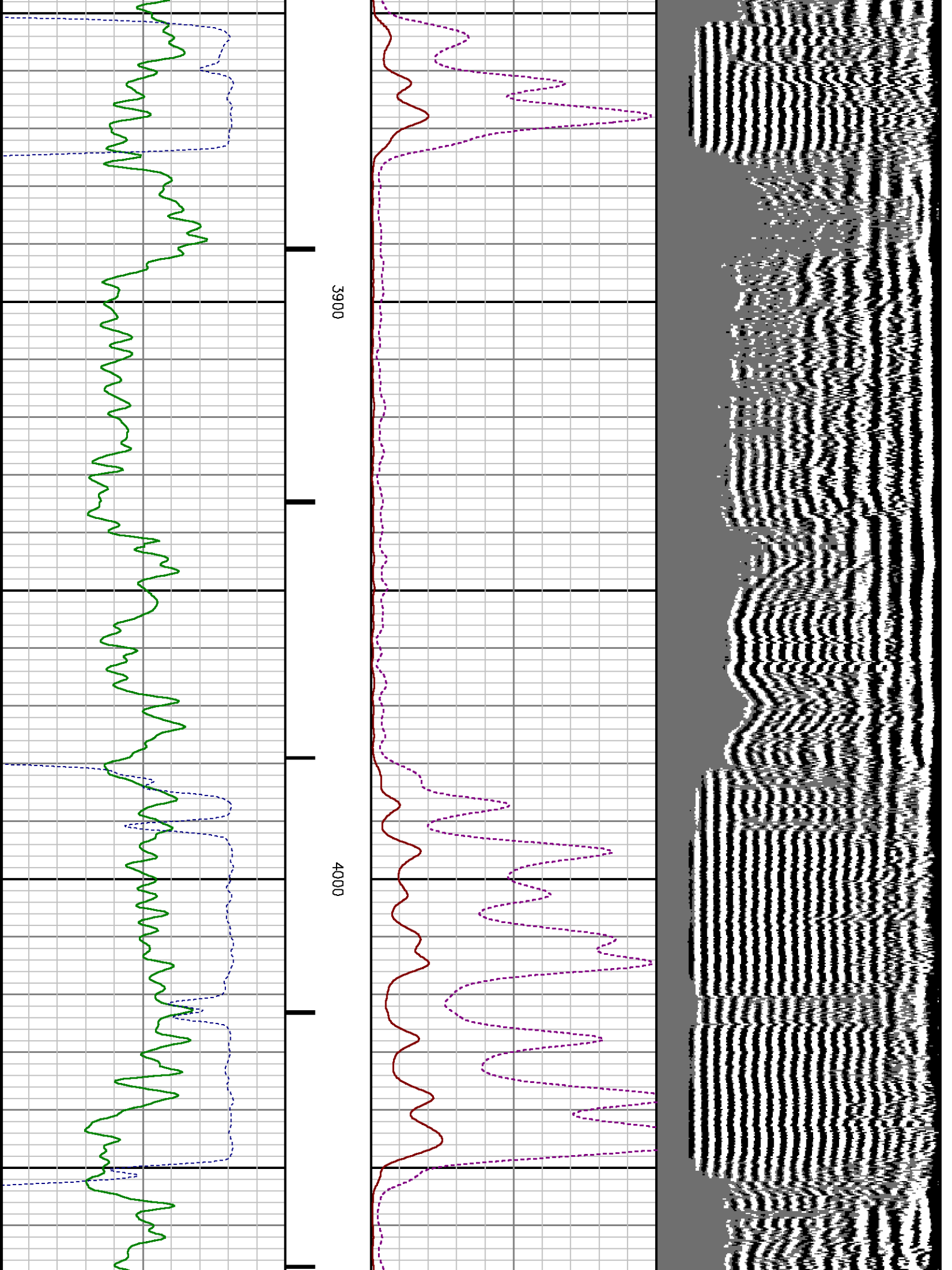


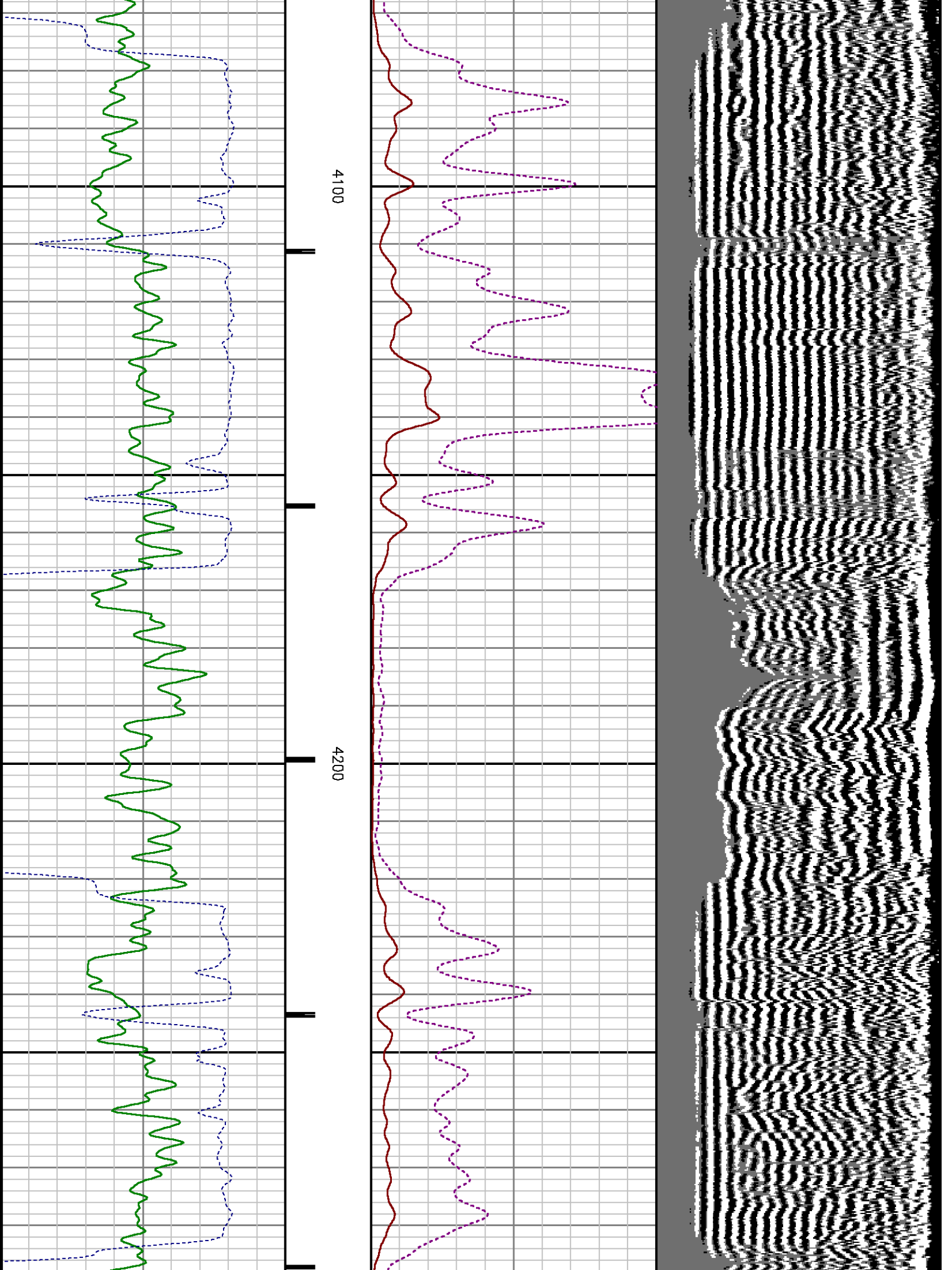


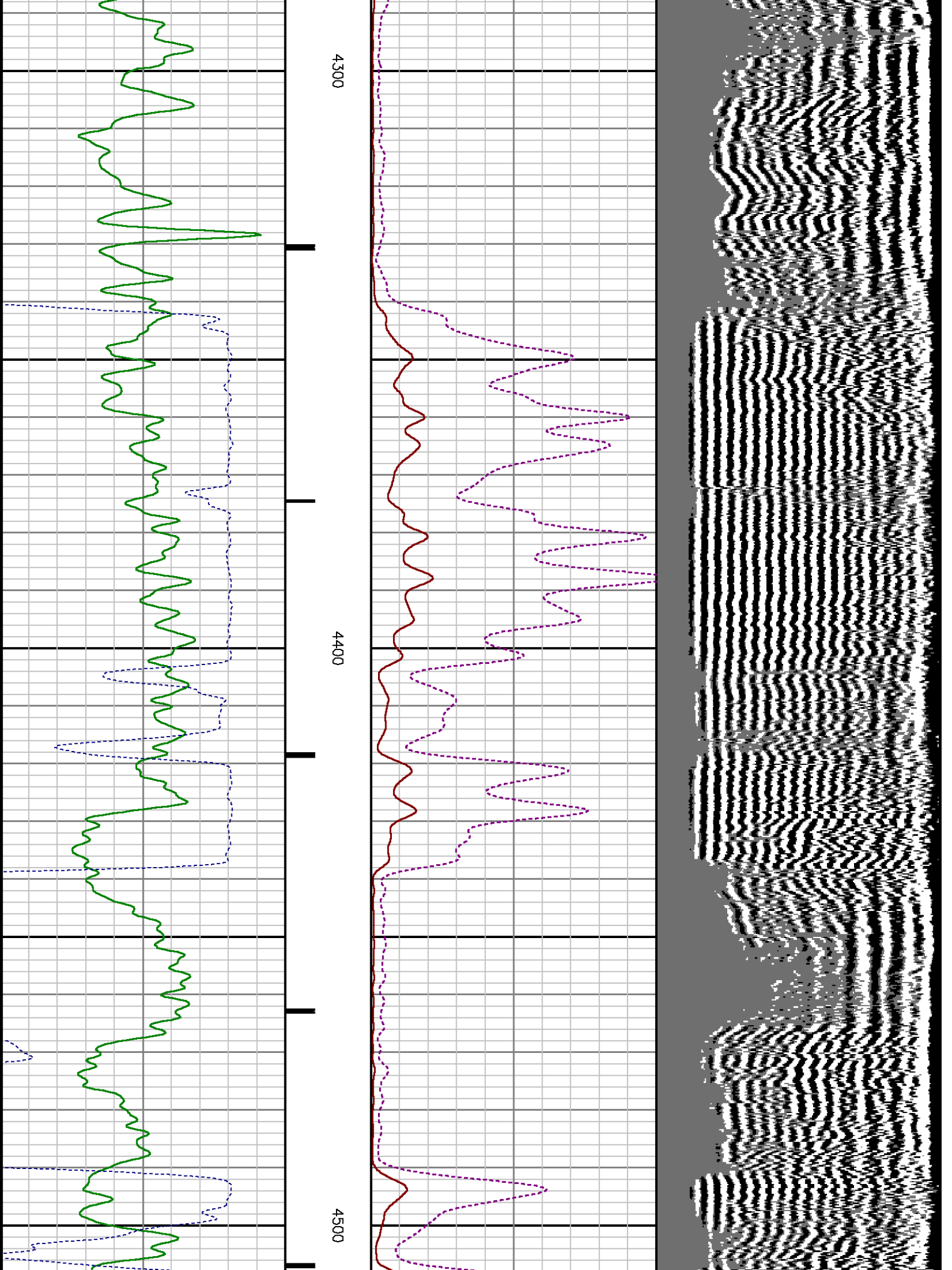


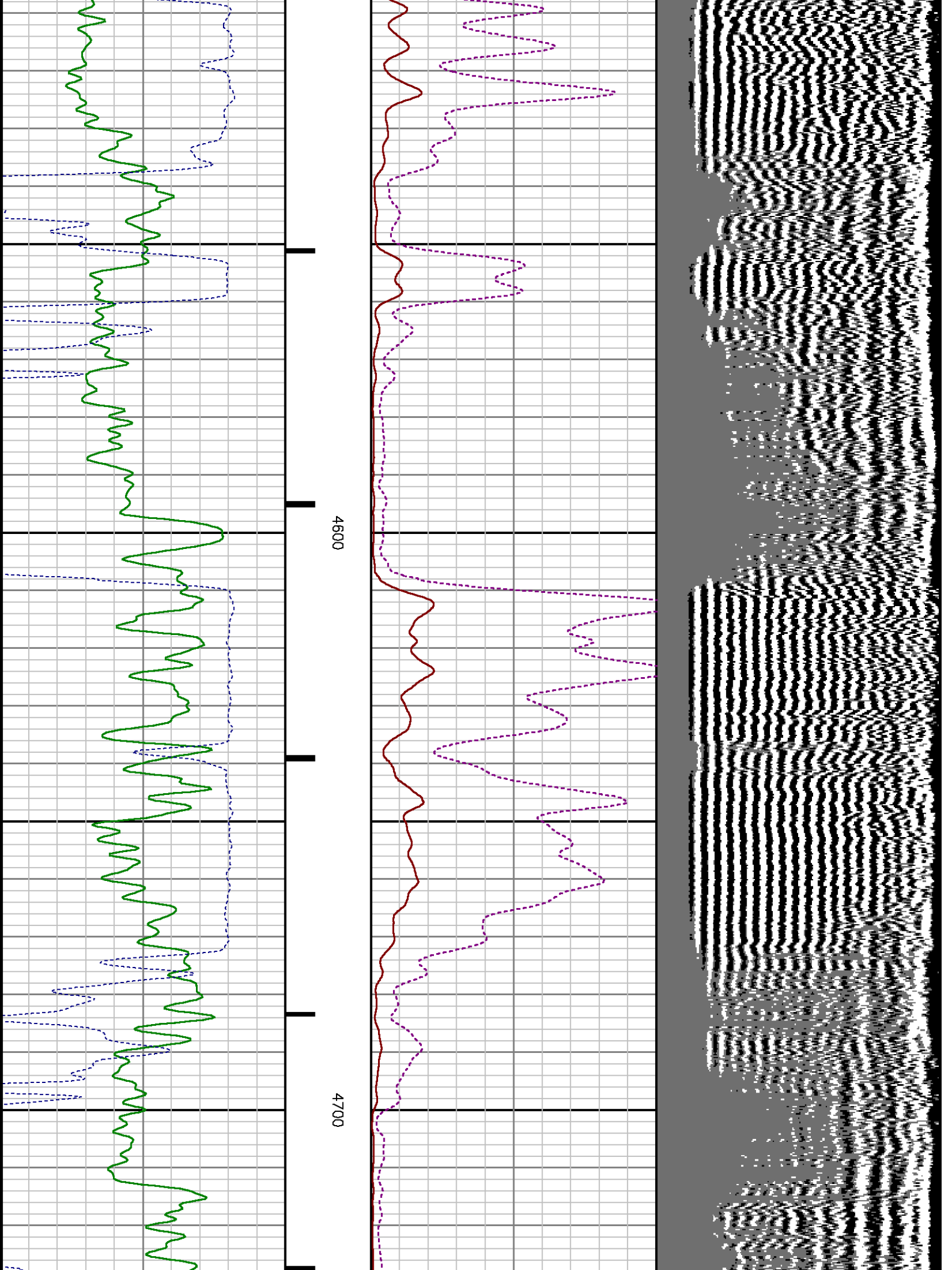


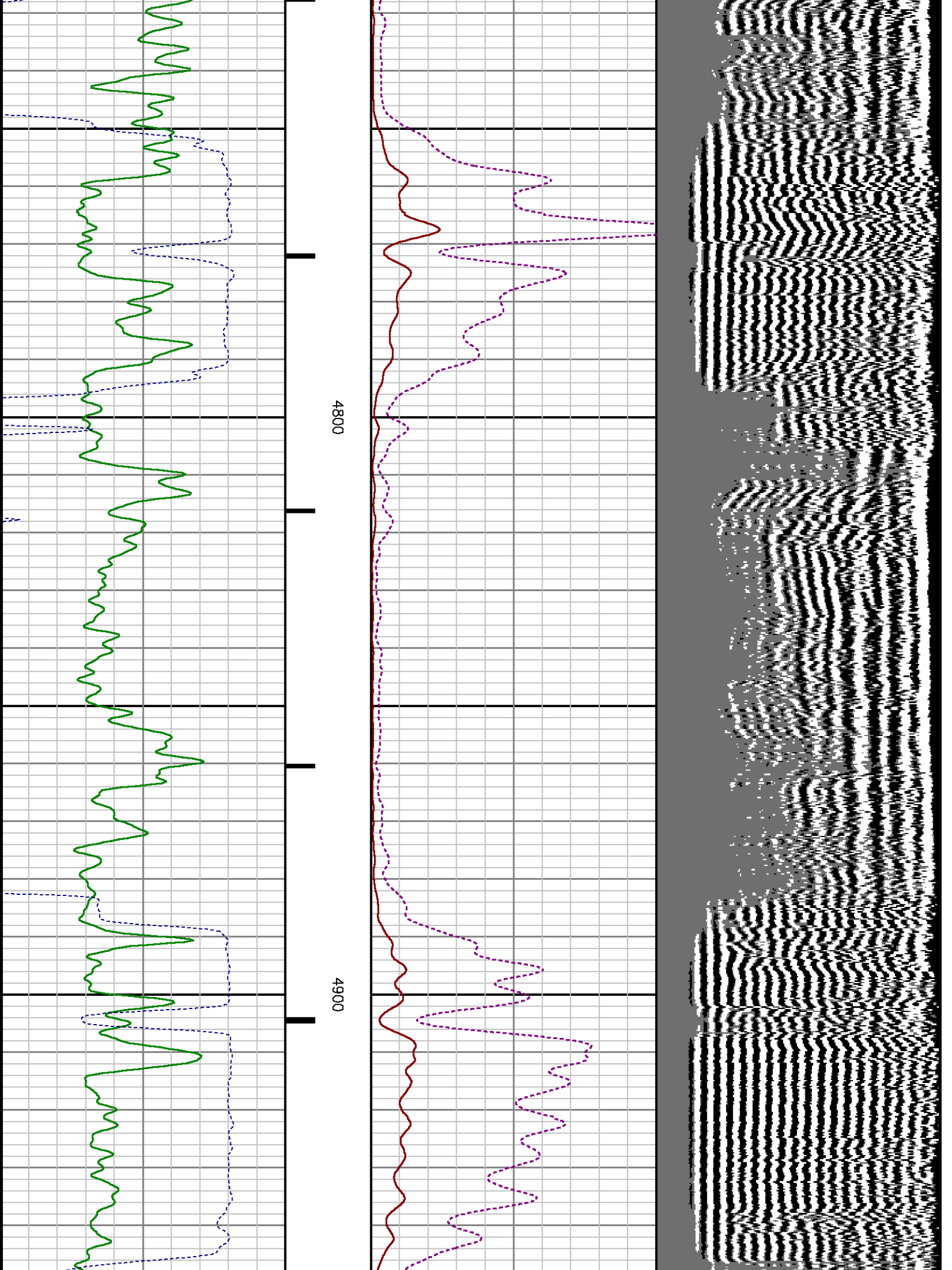


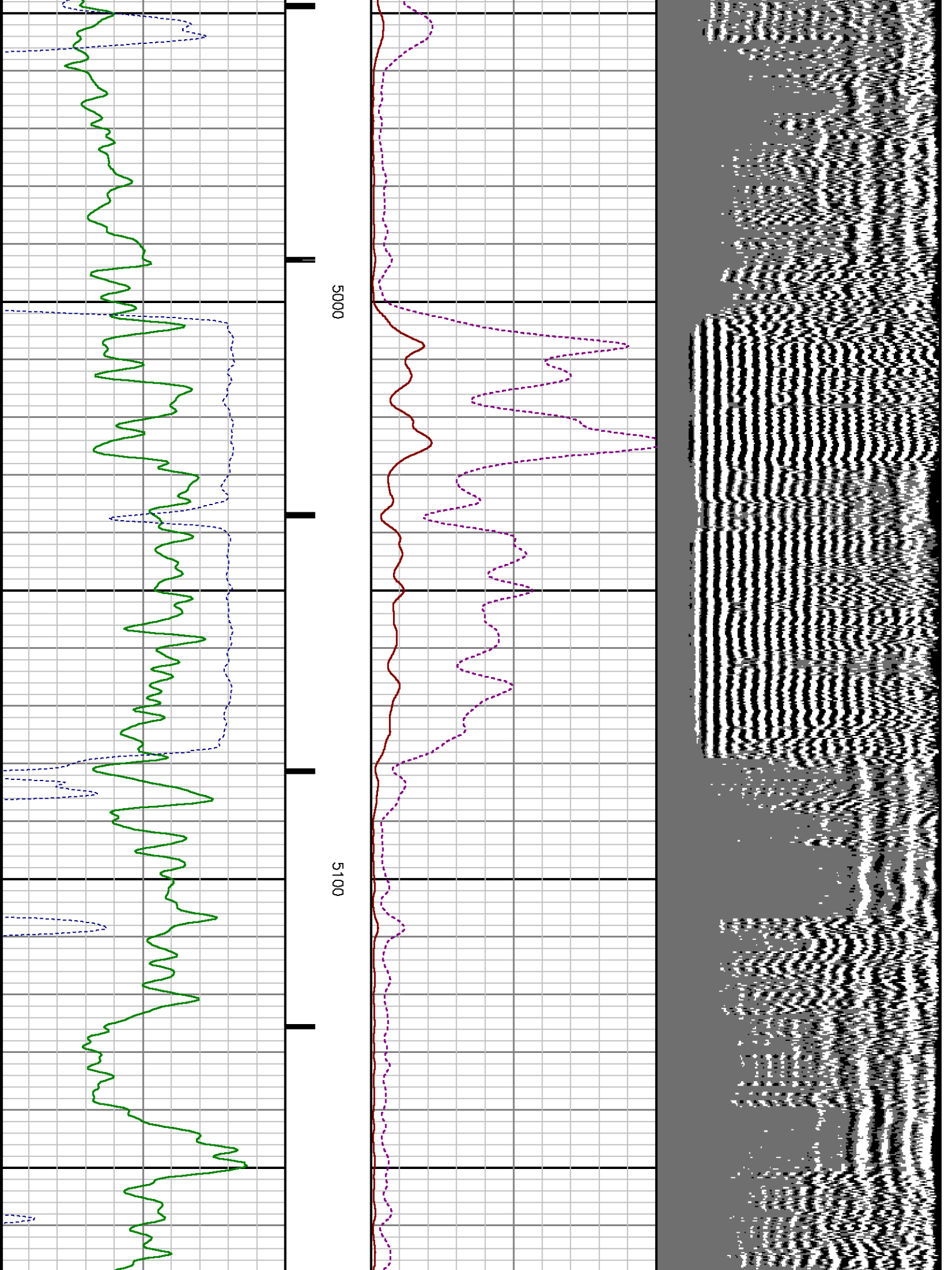


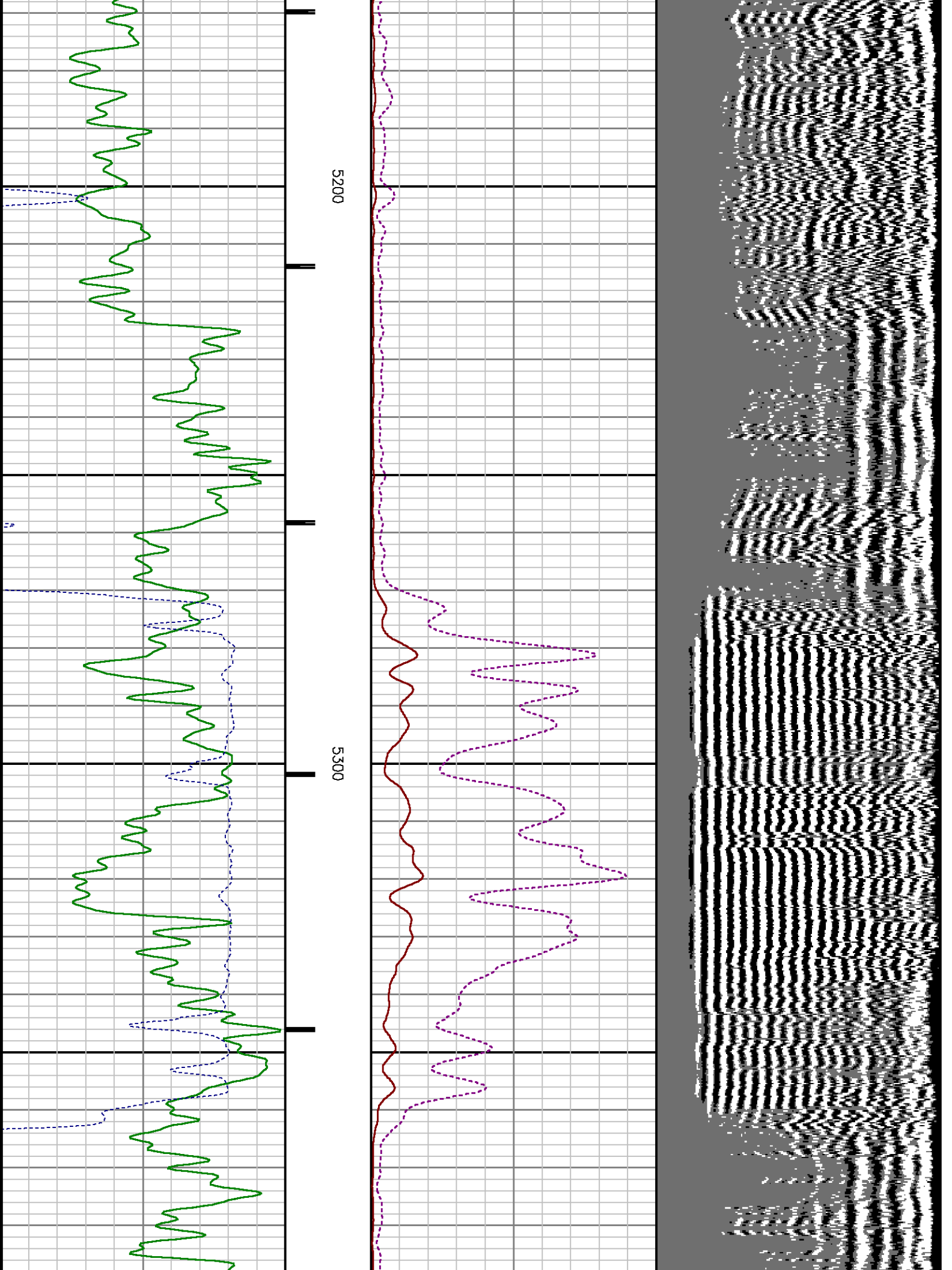


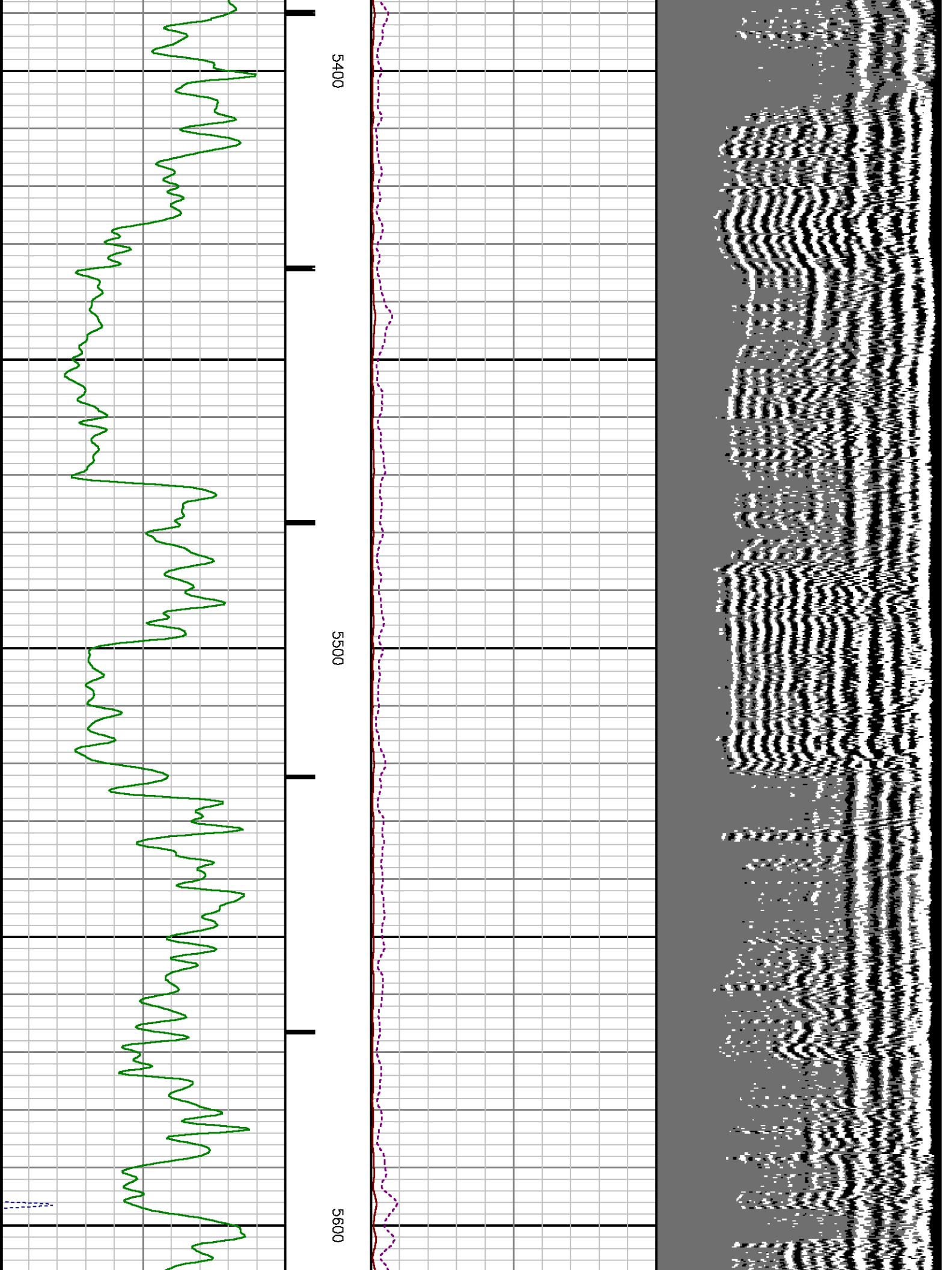


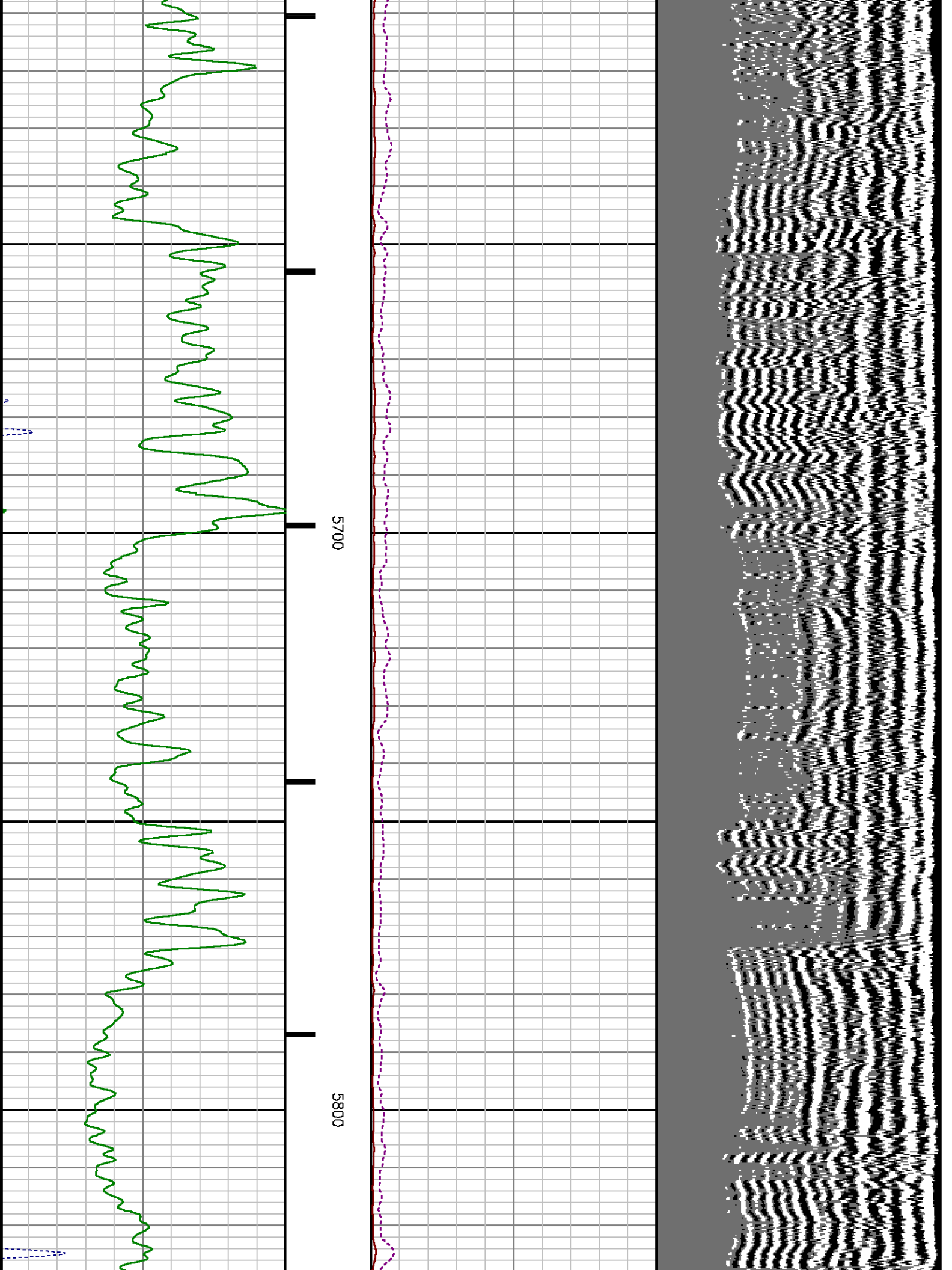


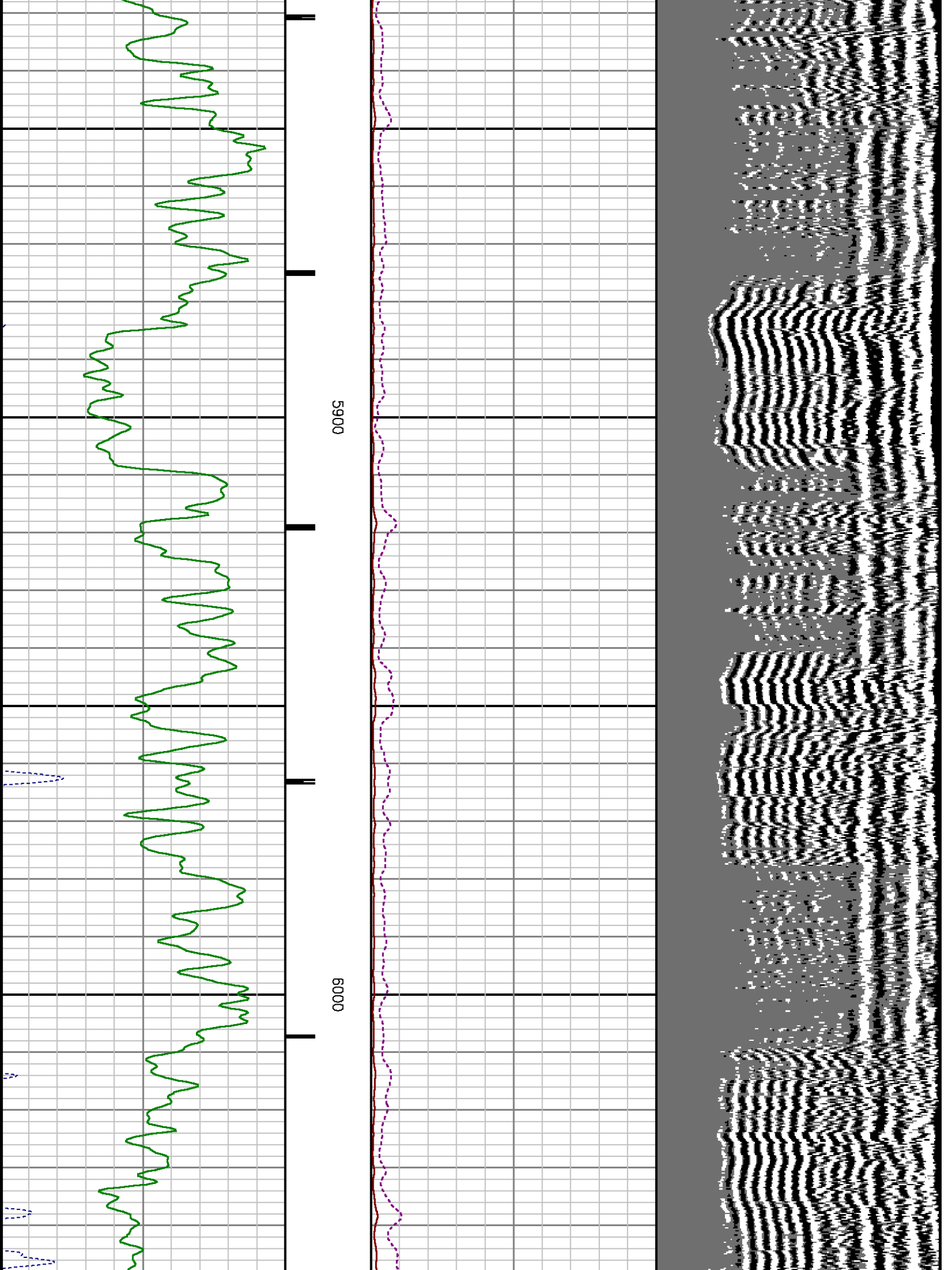


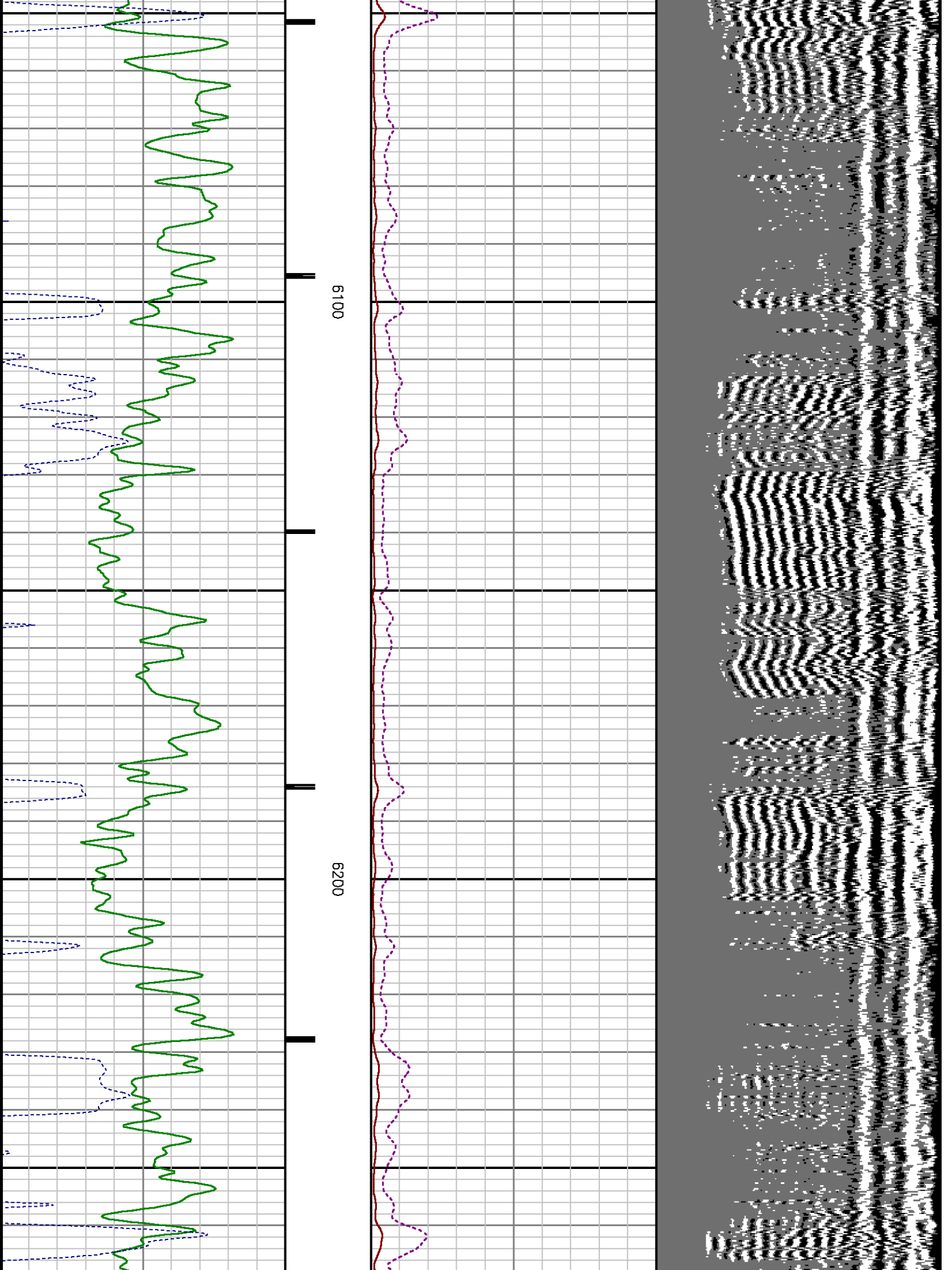


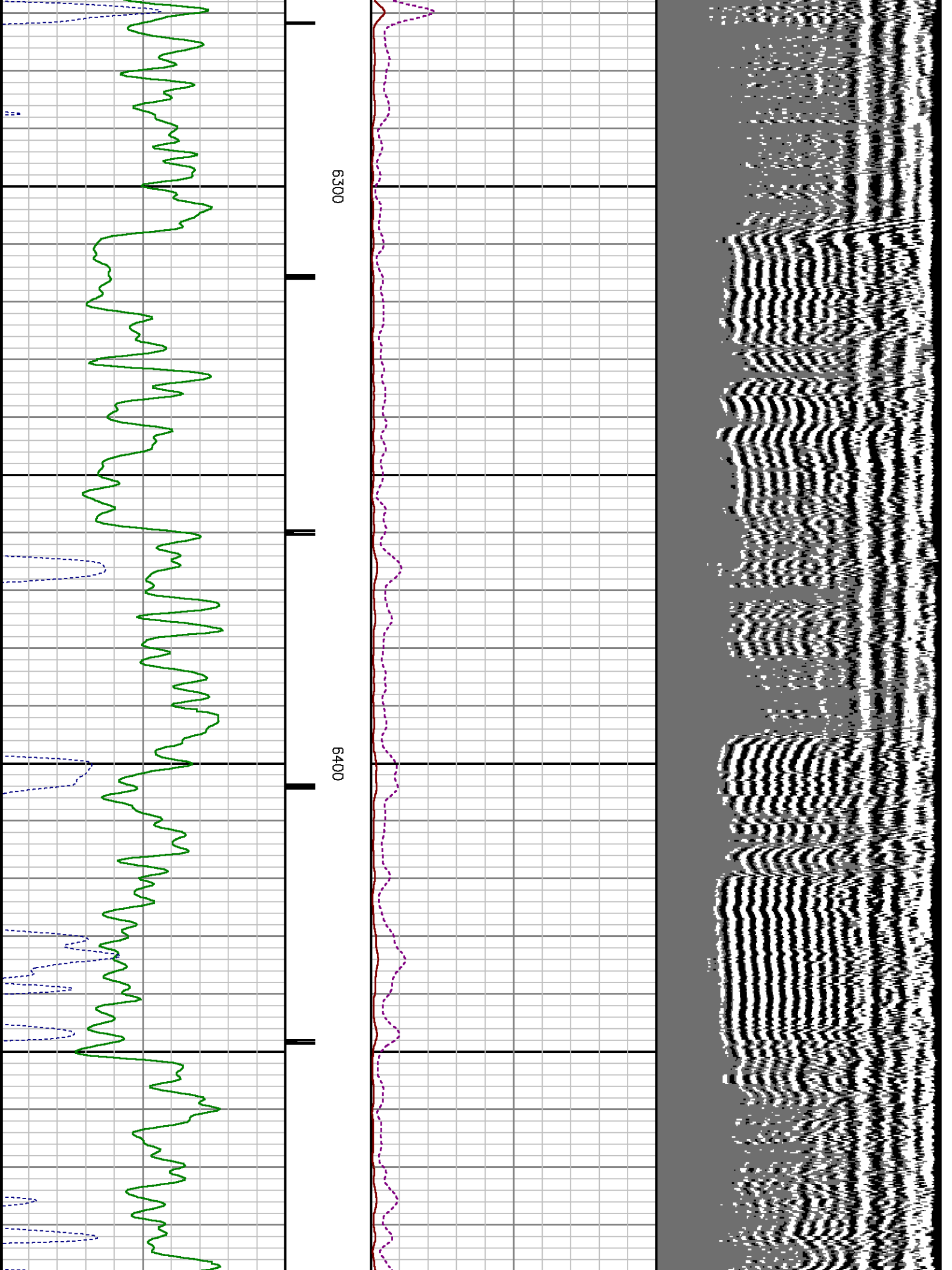


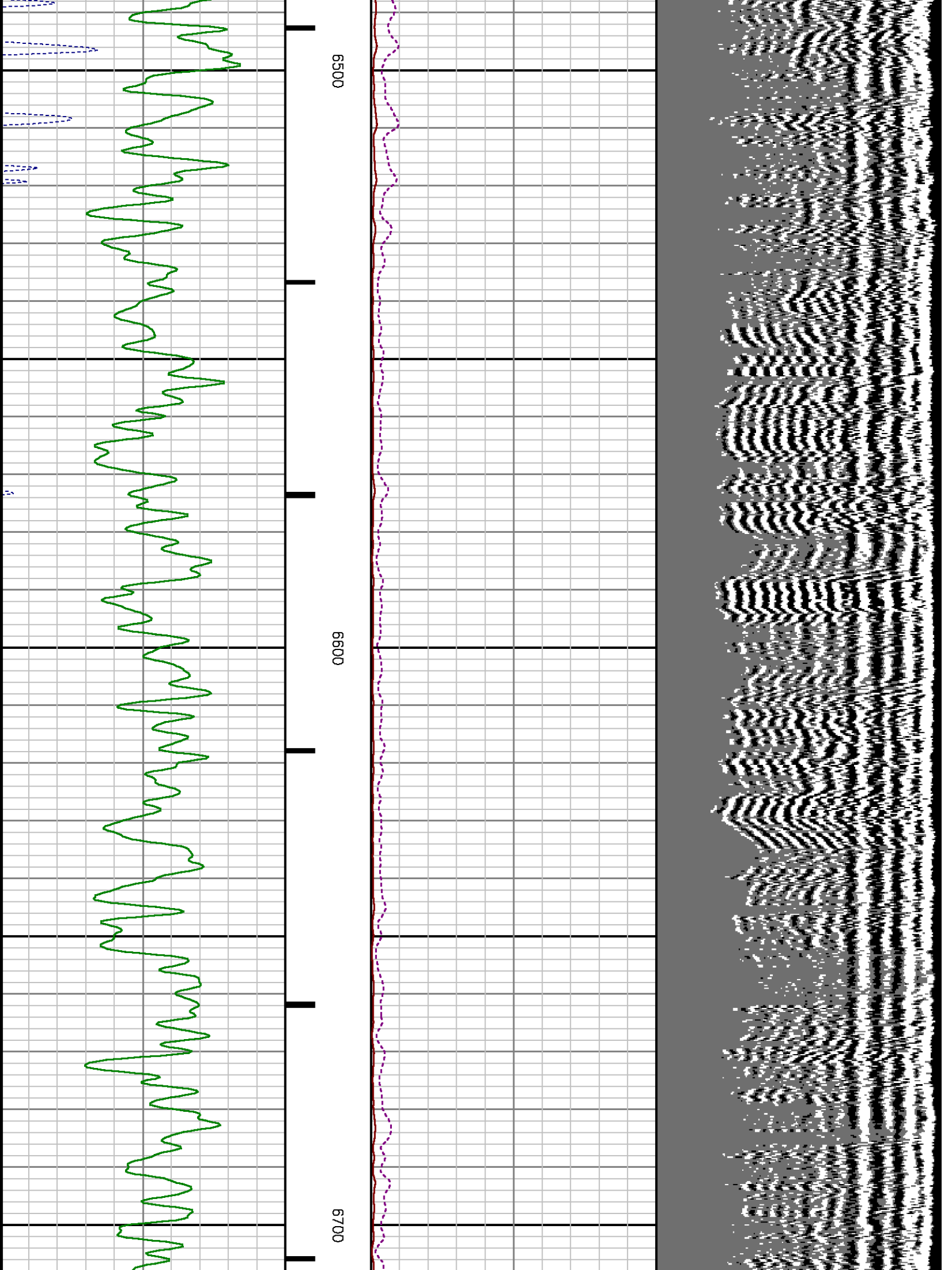


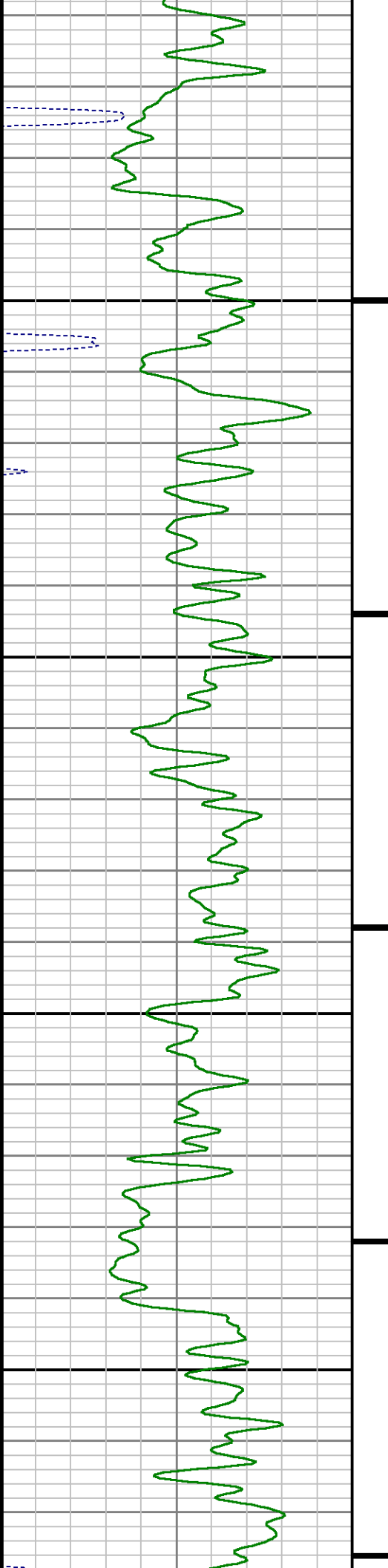






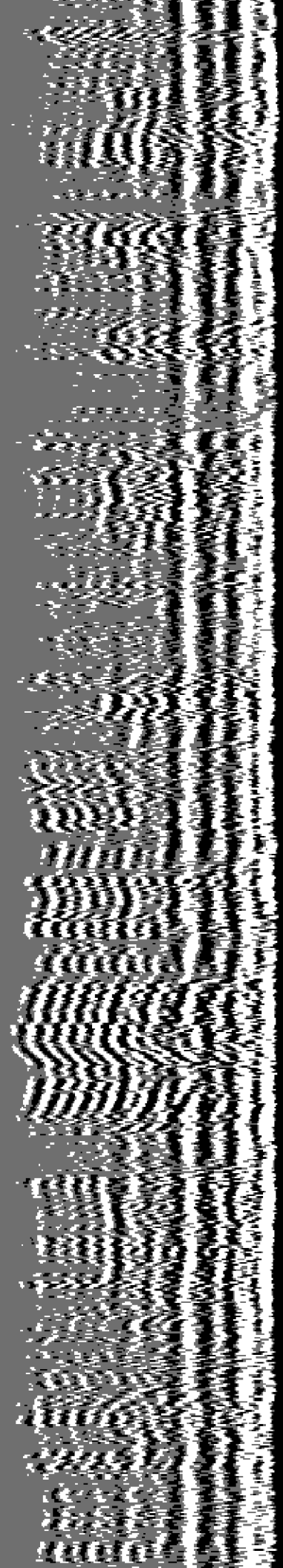
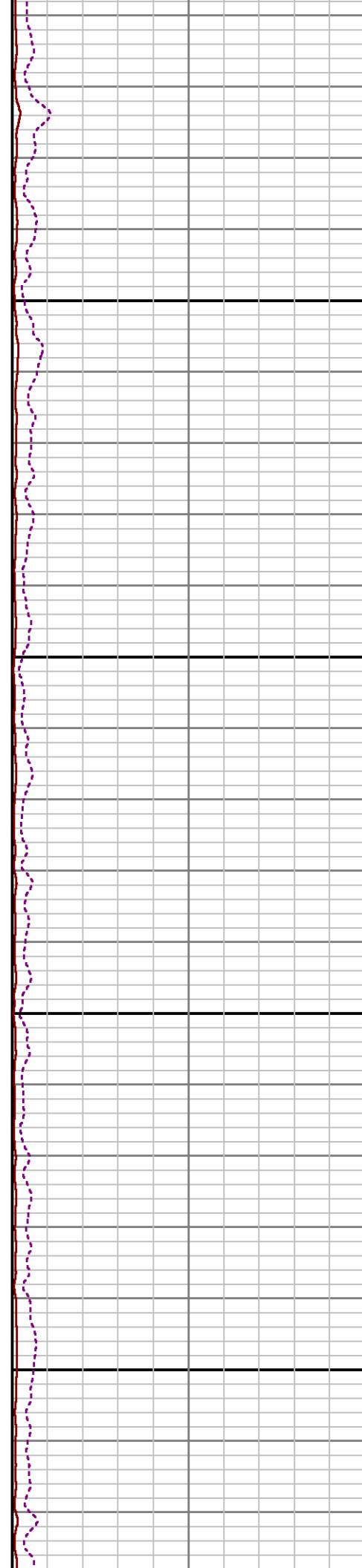






0089

0069



MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	25.812	7089.000
RAL	Amp Gate Start Near	195.000	usec	25.812	7089.000
RAL	Amp Gate Start Radial	195.000	usec	25.812	7089.000
RAL	Amp Gate Width Far	25.000	usec	25.812	7089.000
RAL	Amp Gate Width Near	25.000	usec	25.812	7089.000
RAL	Amp Gate Width Radial	25.000	usec	25.812	7089.000
RAL	casing od	4.500	inches	25.812	7089.000
RAL	casing wt	11.600	lbm/ft	25.812	7089.000
RAL	FB Start Far	291.900	usec	25.812	7089.000
RAL	FB Start Near	175.391	usec	25.812	7089.000
RAL	FB Start Radial	175.391	usec	25.812	7089.000
RAL	FB Thresh Far	10.000	mv	25.812	7089.000
RAL	FB Thresh Near	4.000	mv	25.812	7089.000
RAL	FB Thresh Radial	4.000	mv	25.812	7089.000
RAL	Fluid Travel Time	200.000	usec/ft	25.812	7089.843

DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : RWF 332-4

File Name : d:\welldata\wpx\rwf 332-4\332cbl\main.txt

Mode : PlotMgr 5.4.504

Interval : 0.00 - 7090.00 feet UP

Created : 1/4/2014 4:45:01 PM

GR

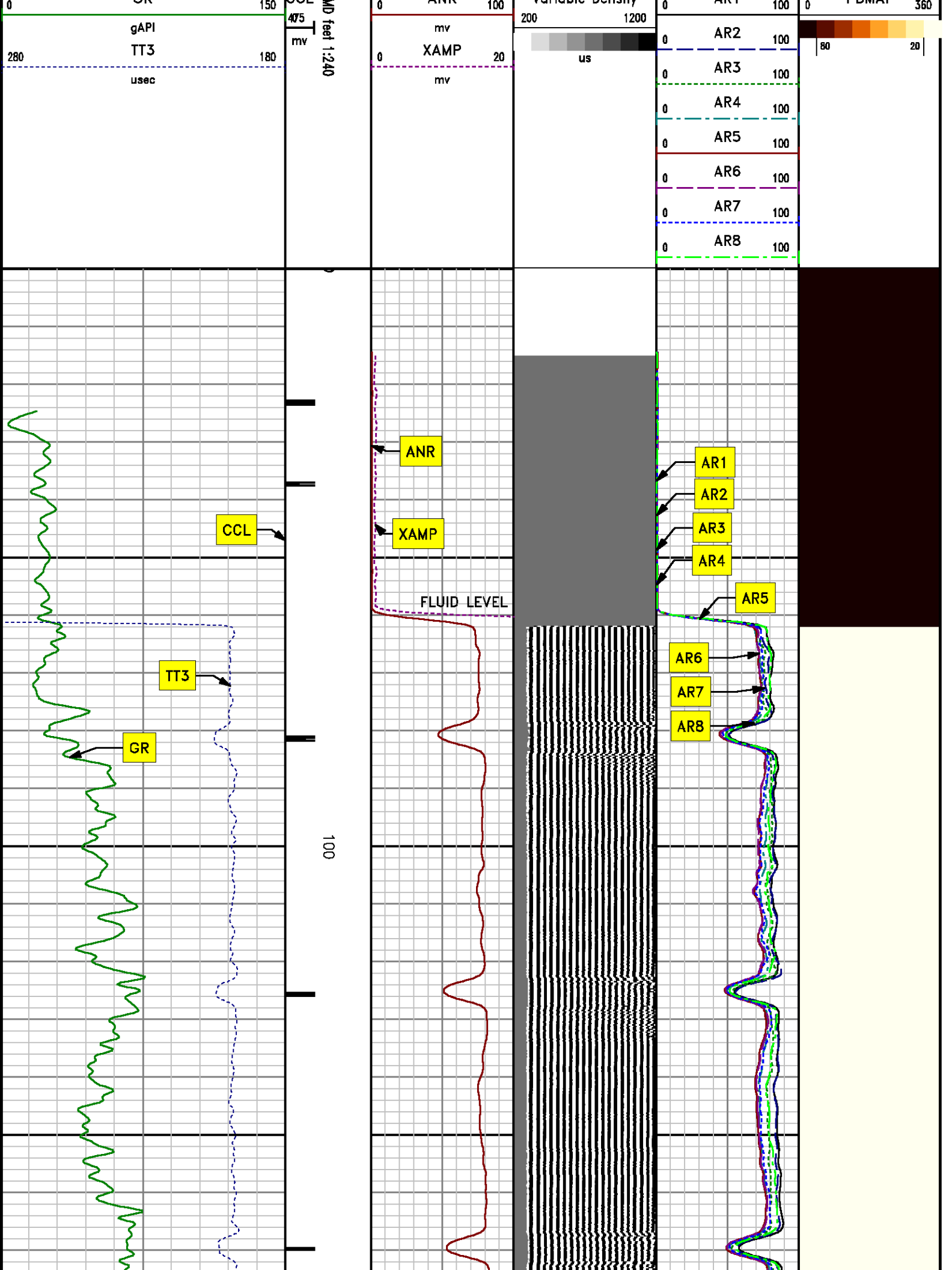
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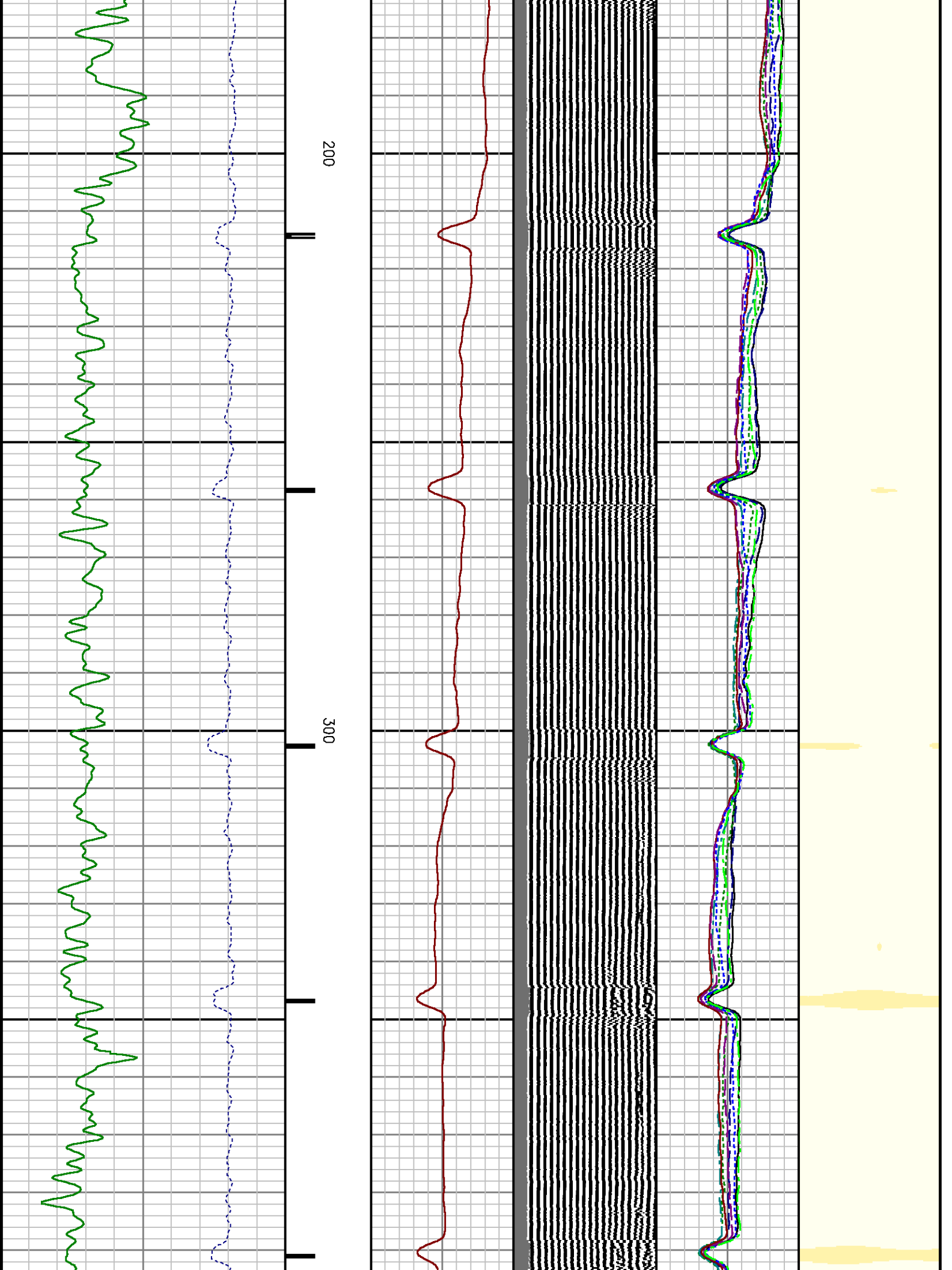
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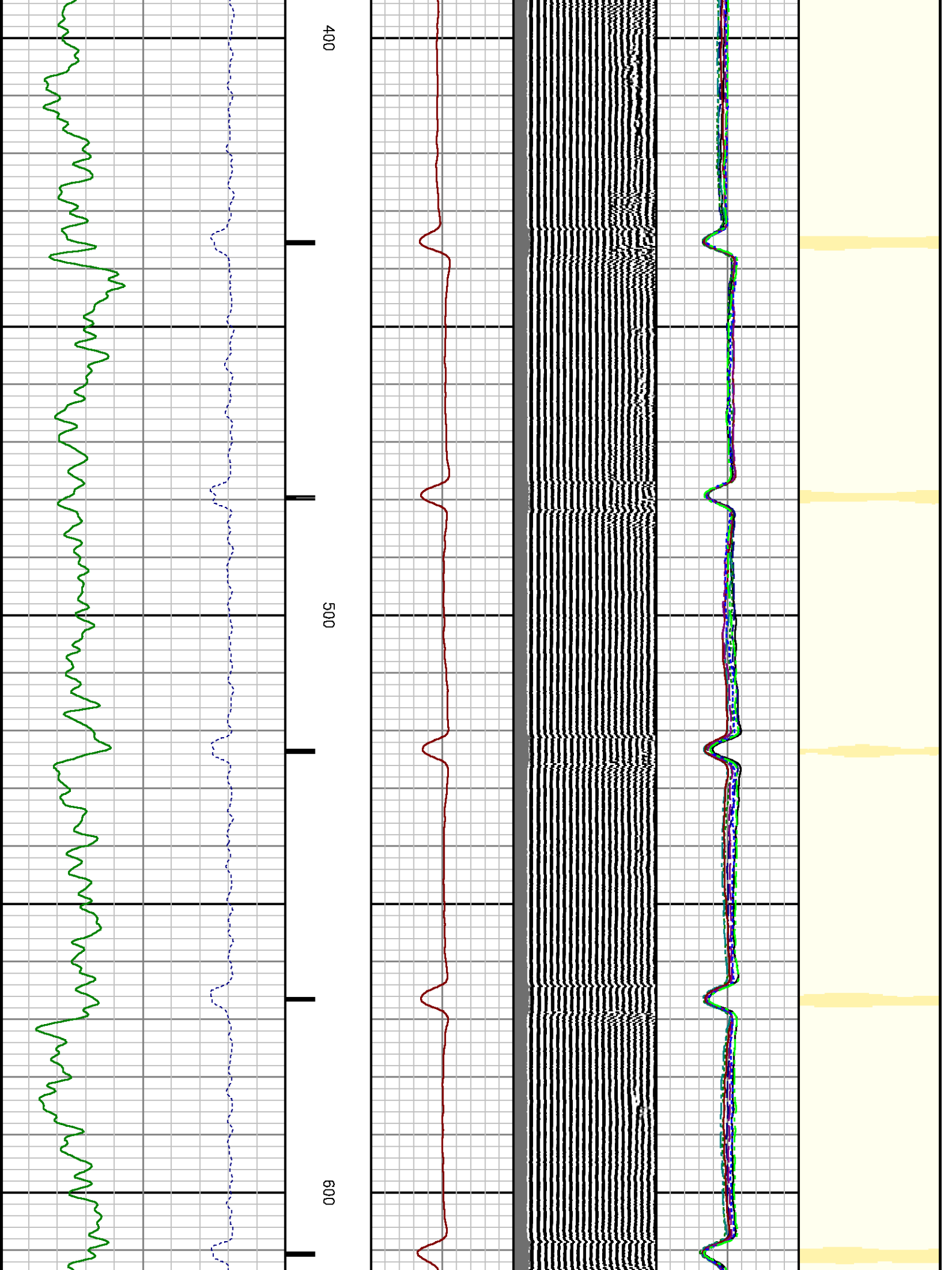
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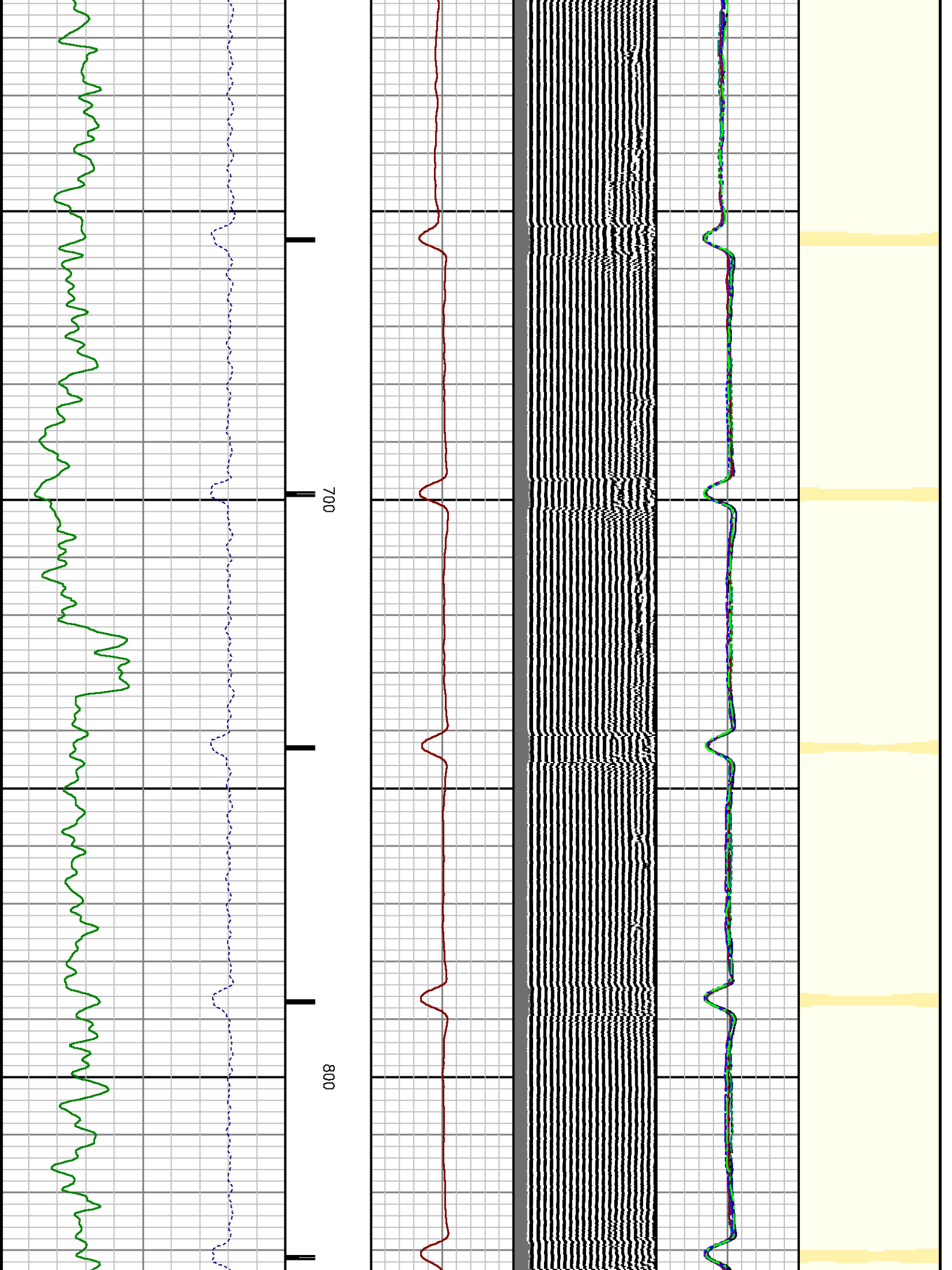
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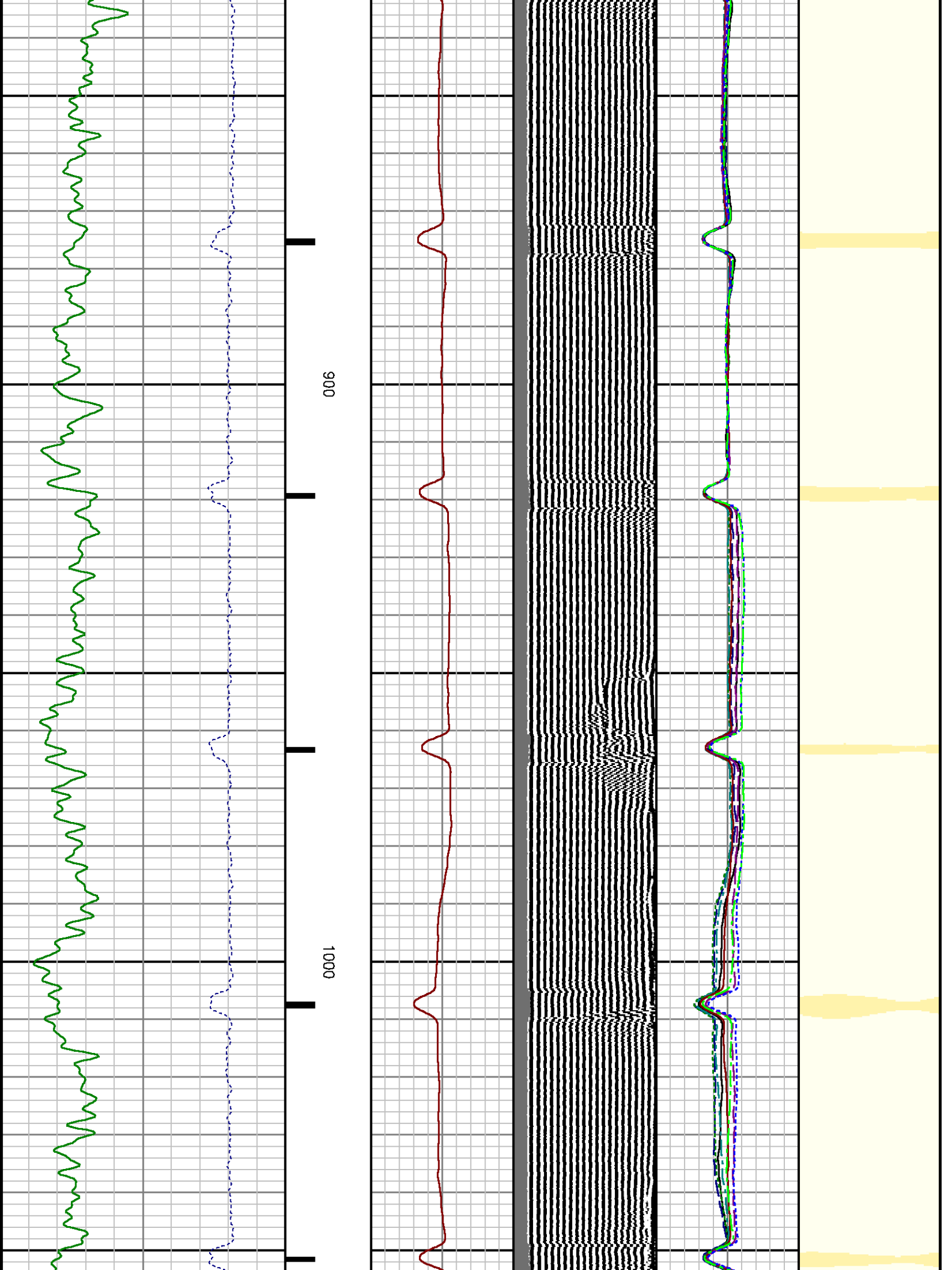
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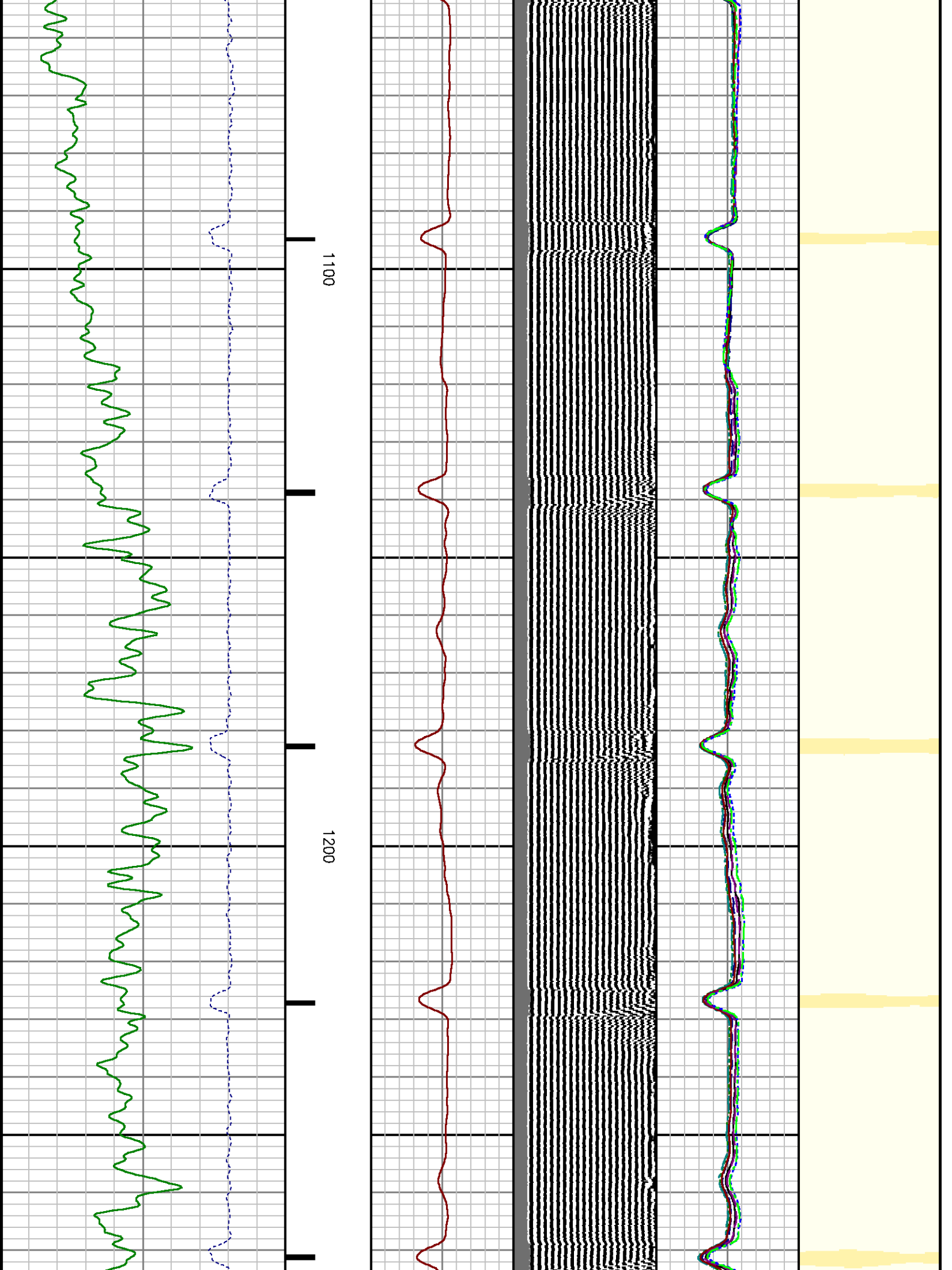


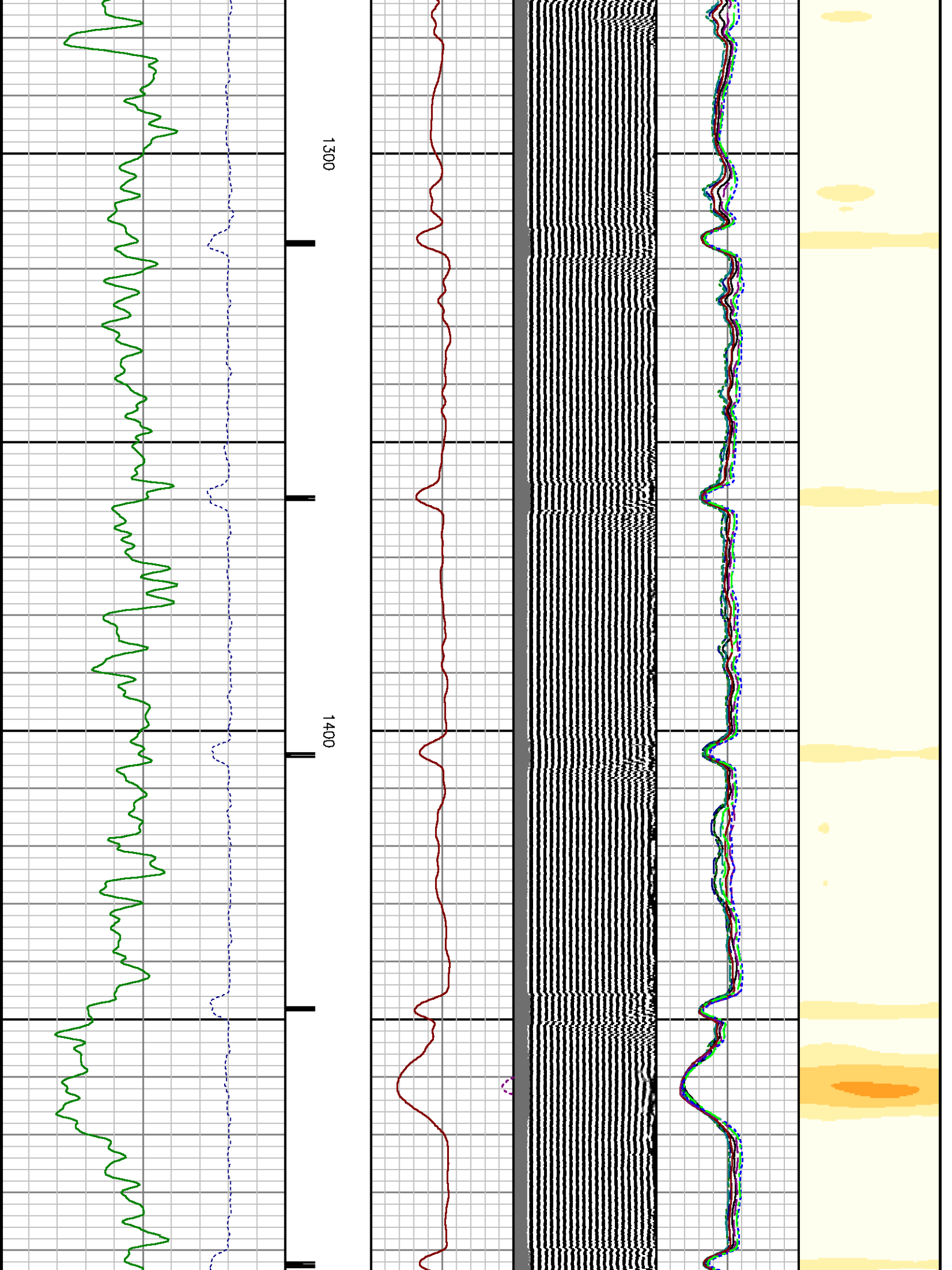




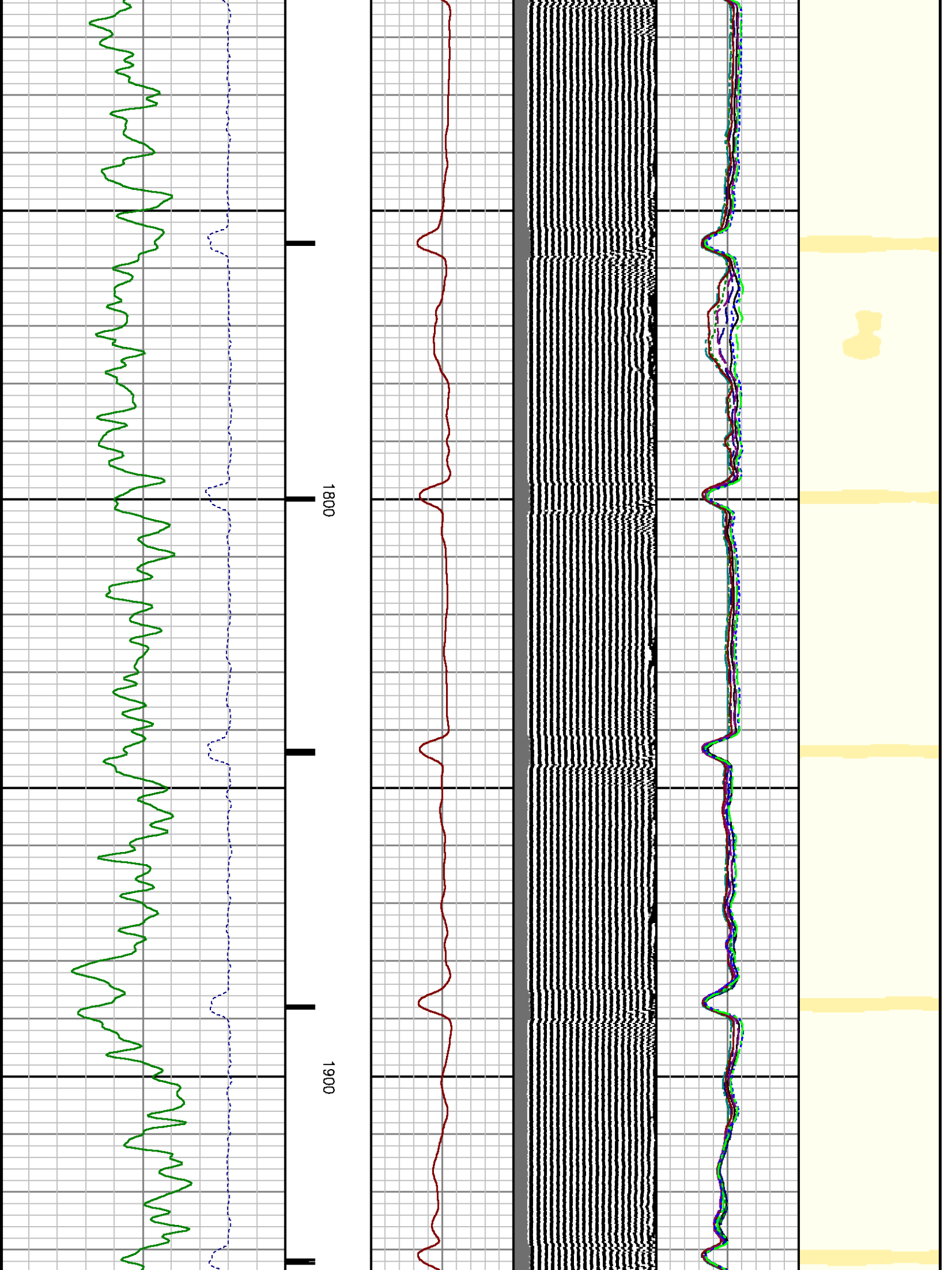


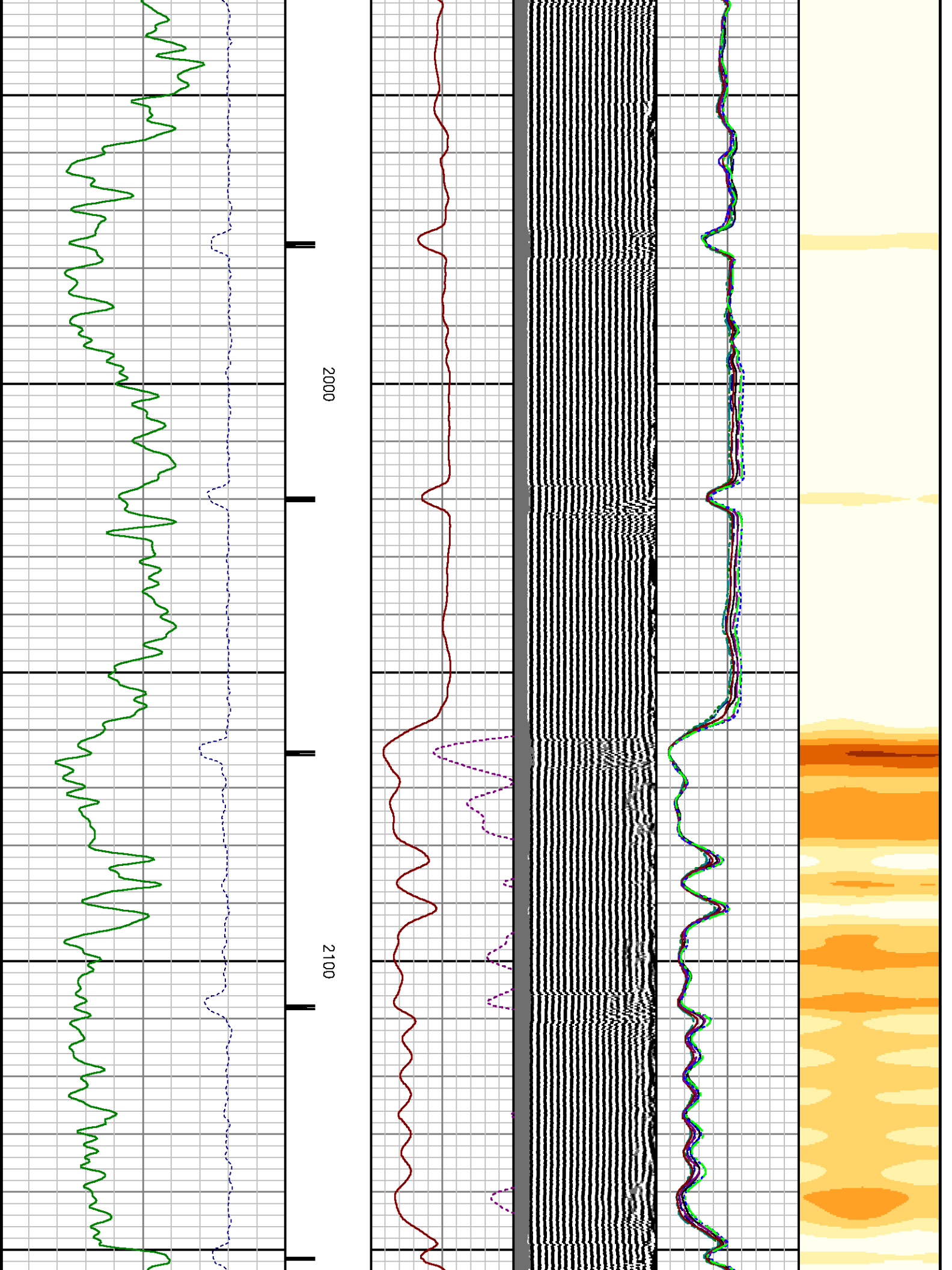


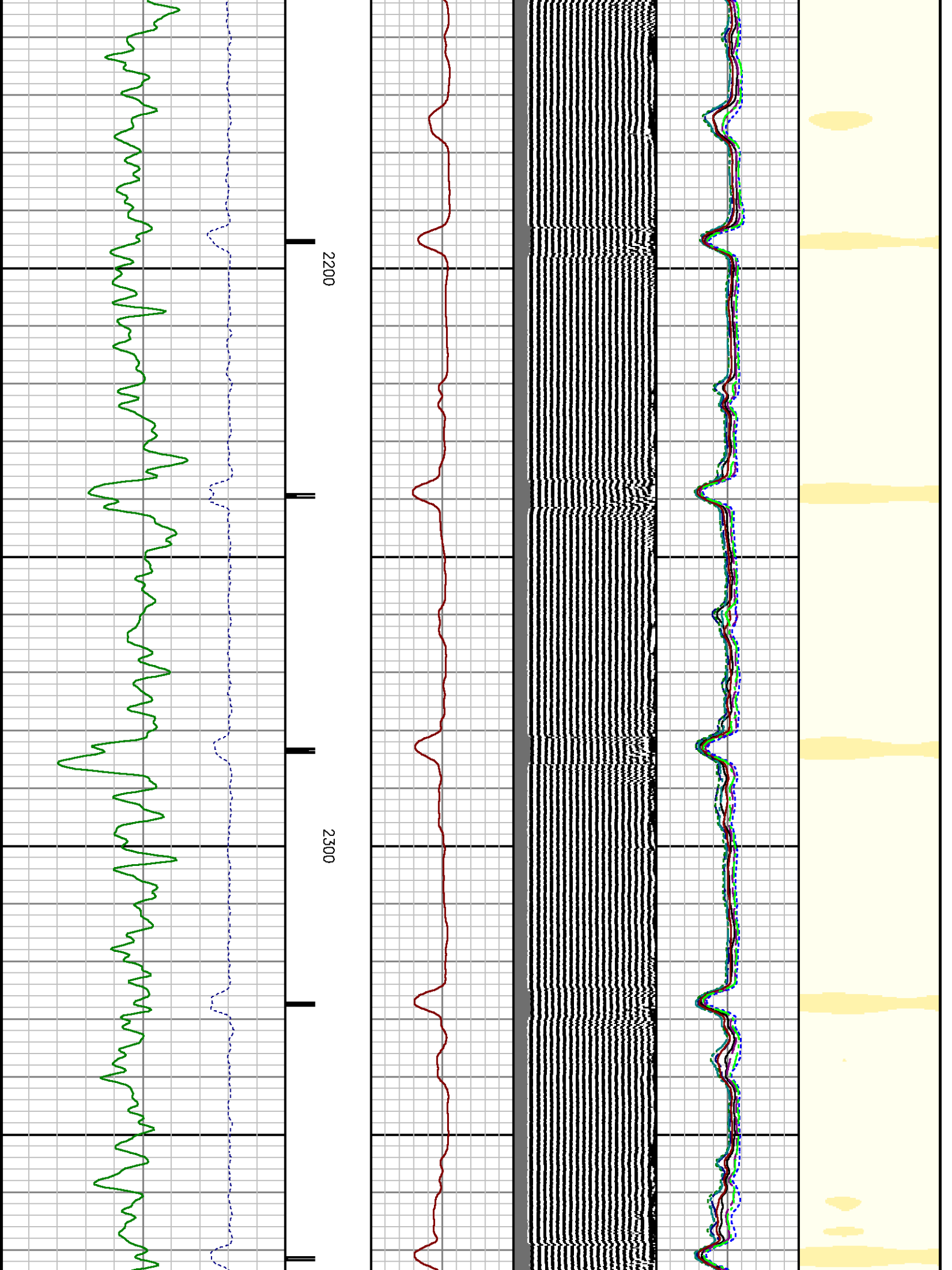


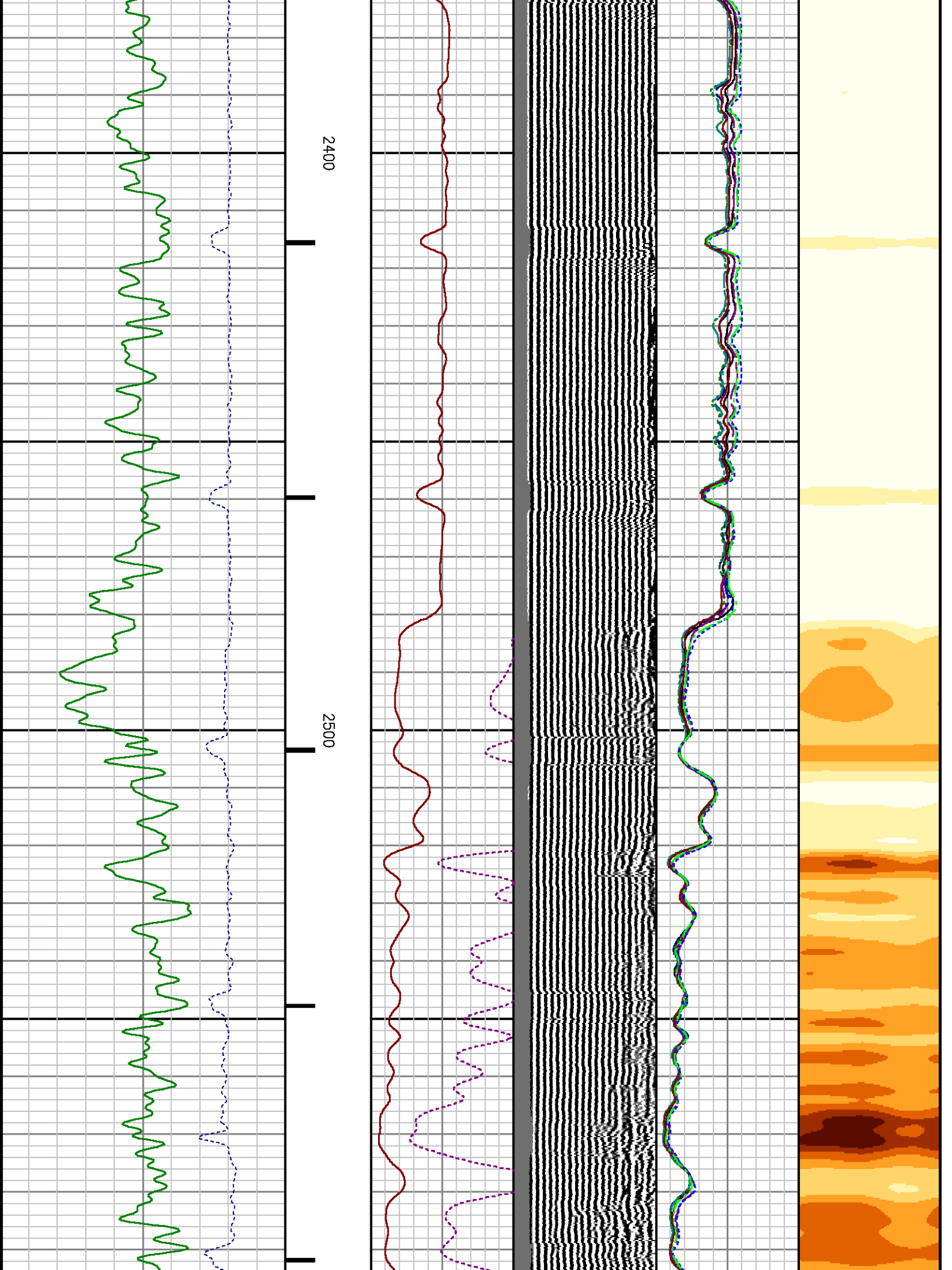


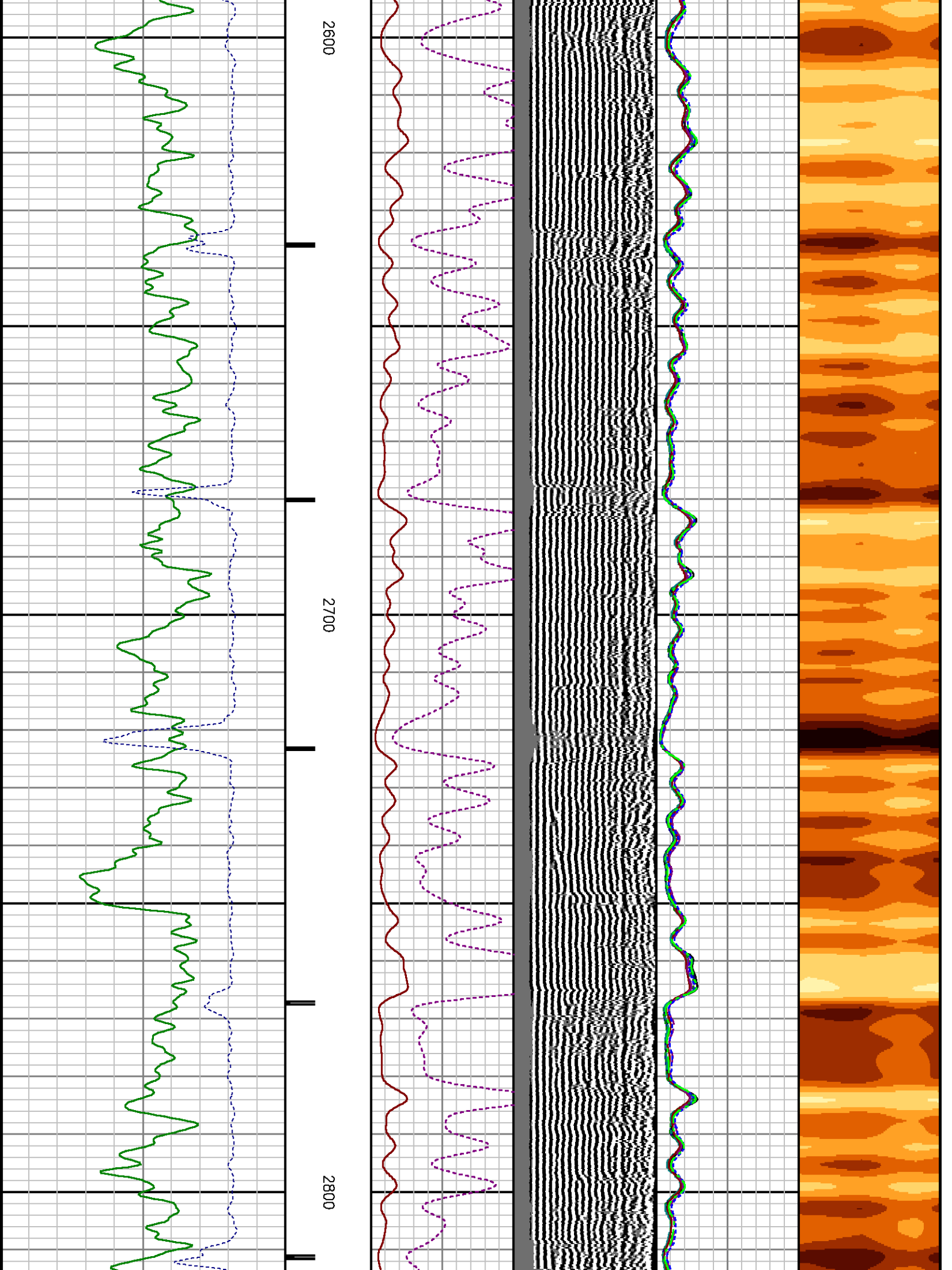


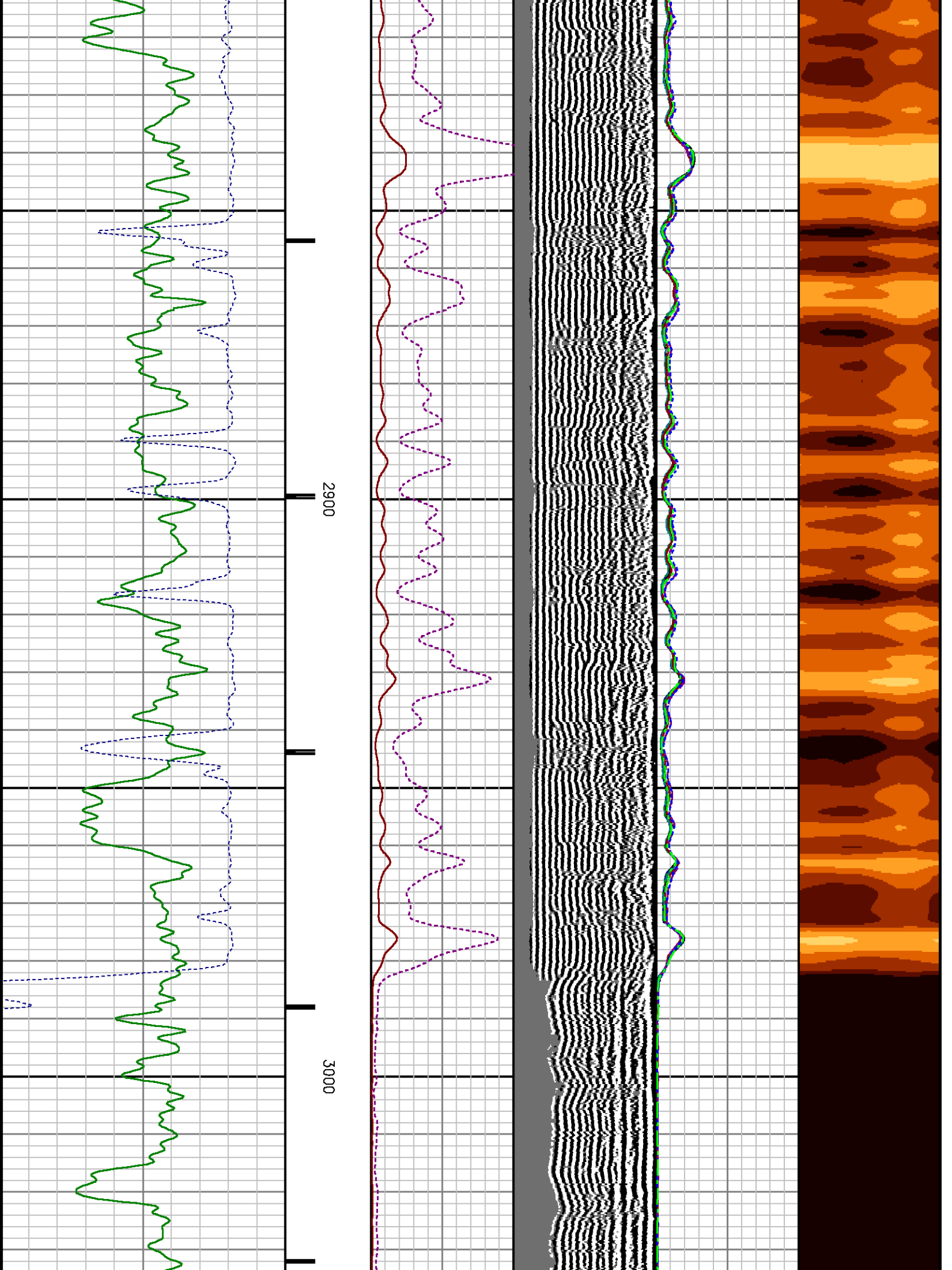


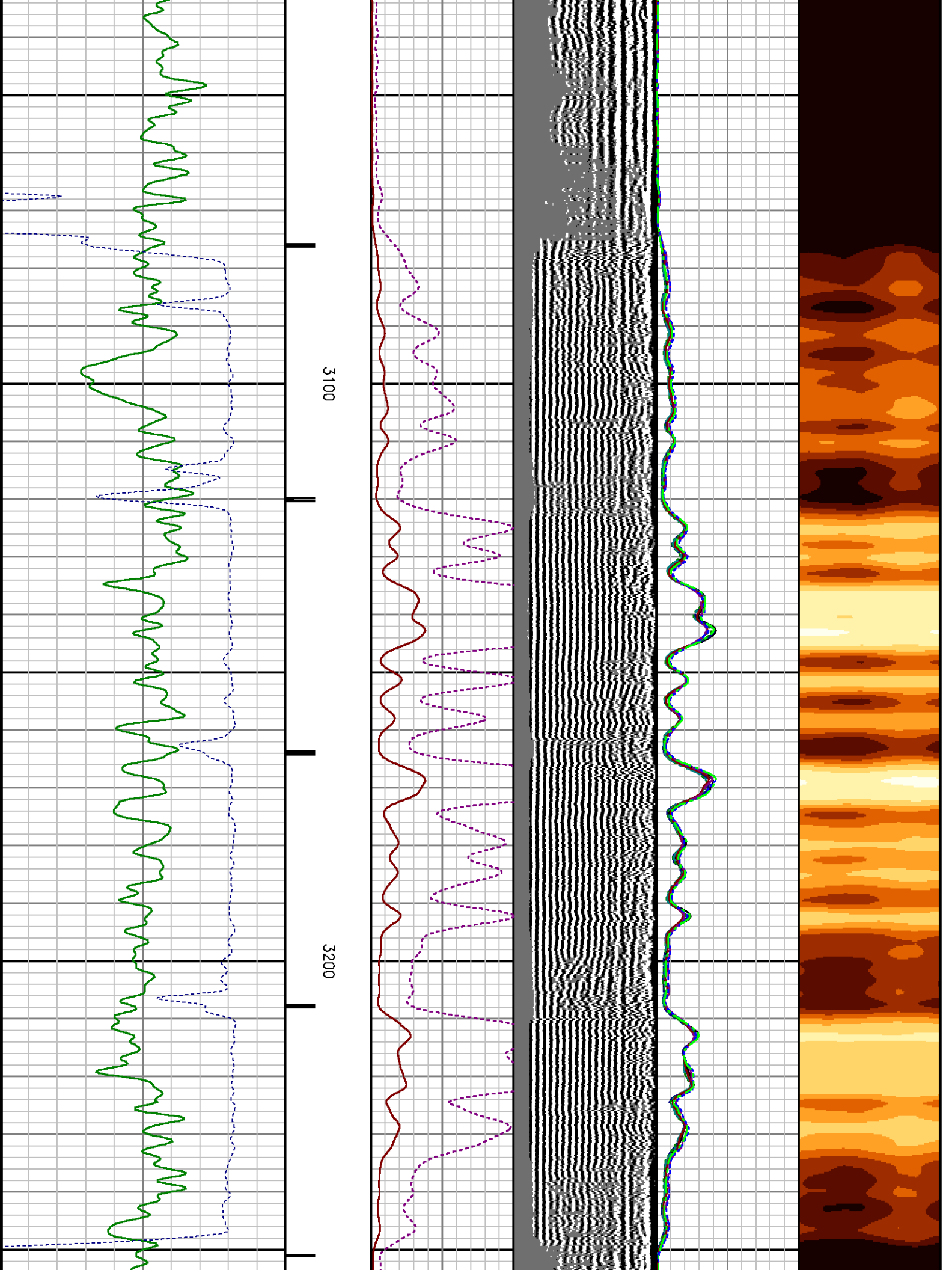


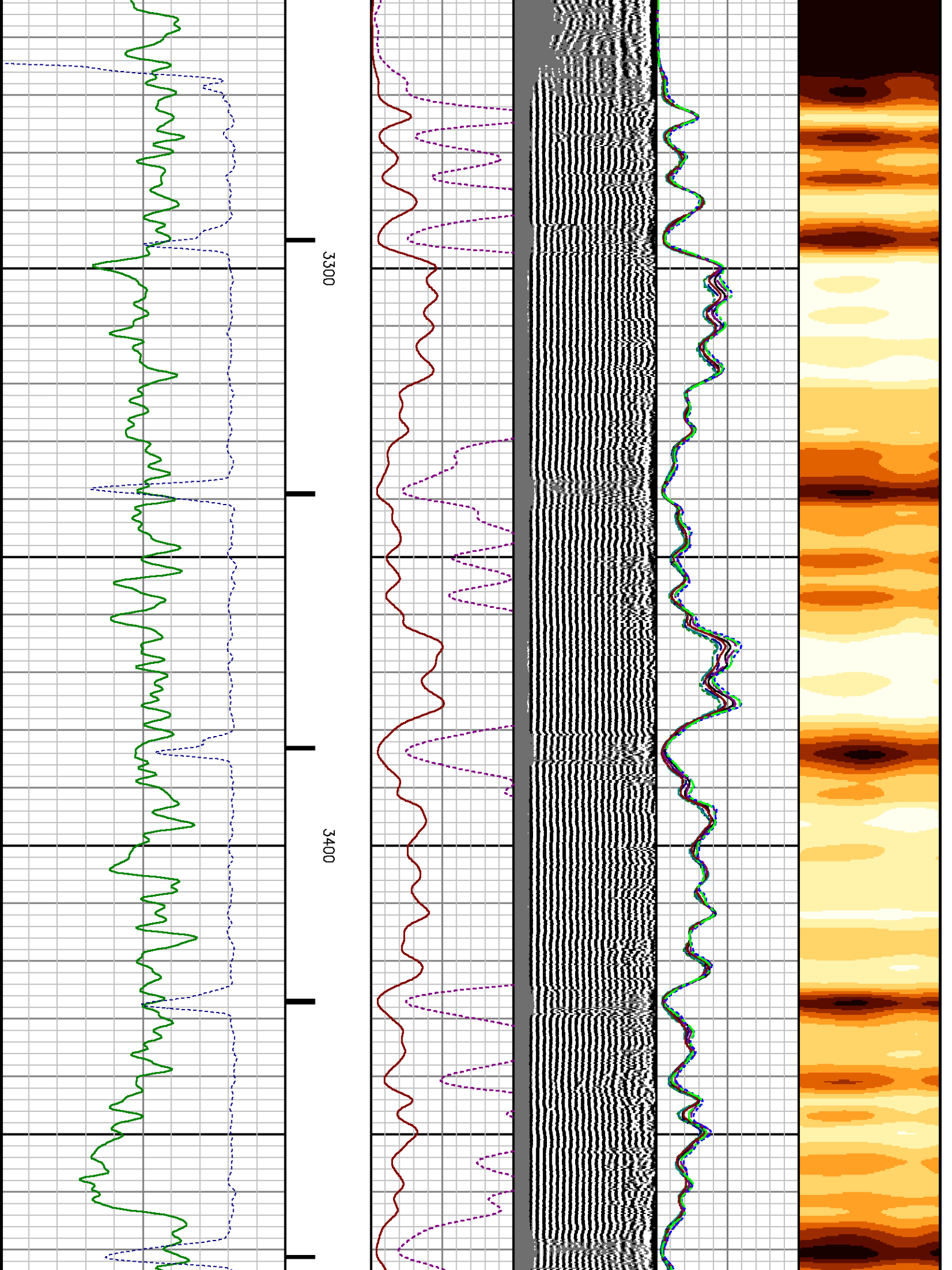


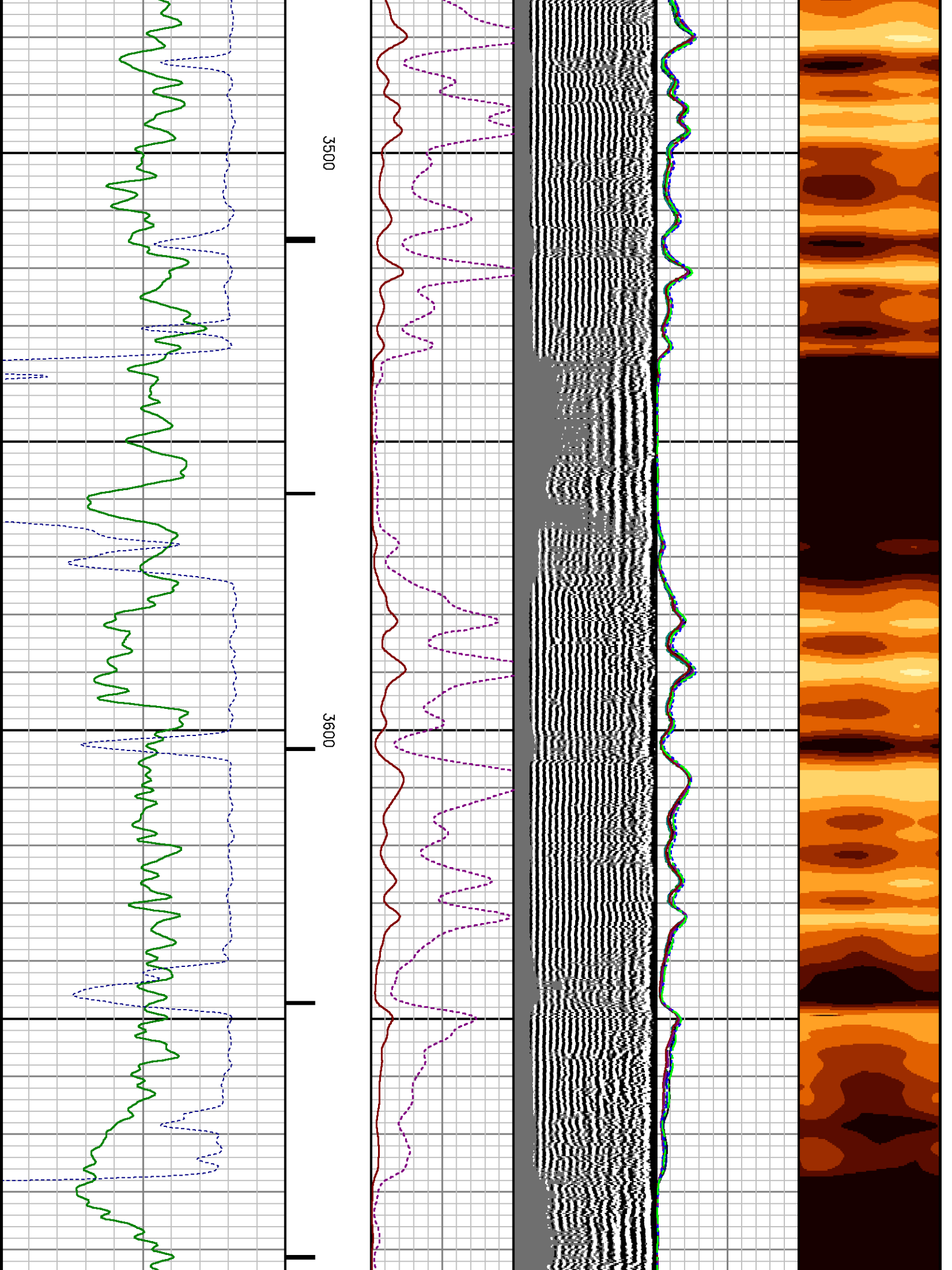


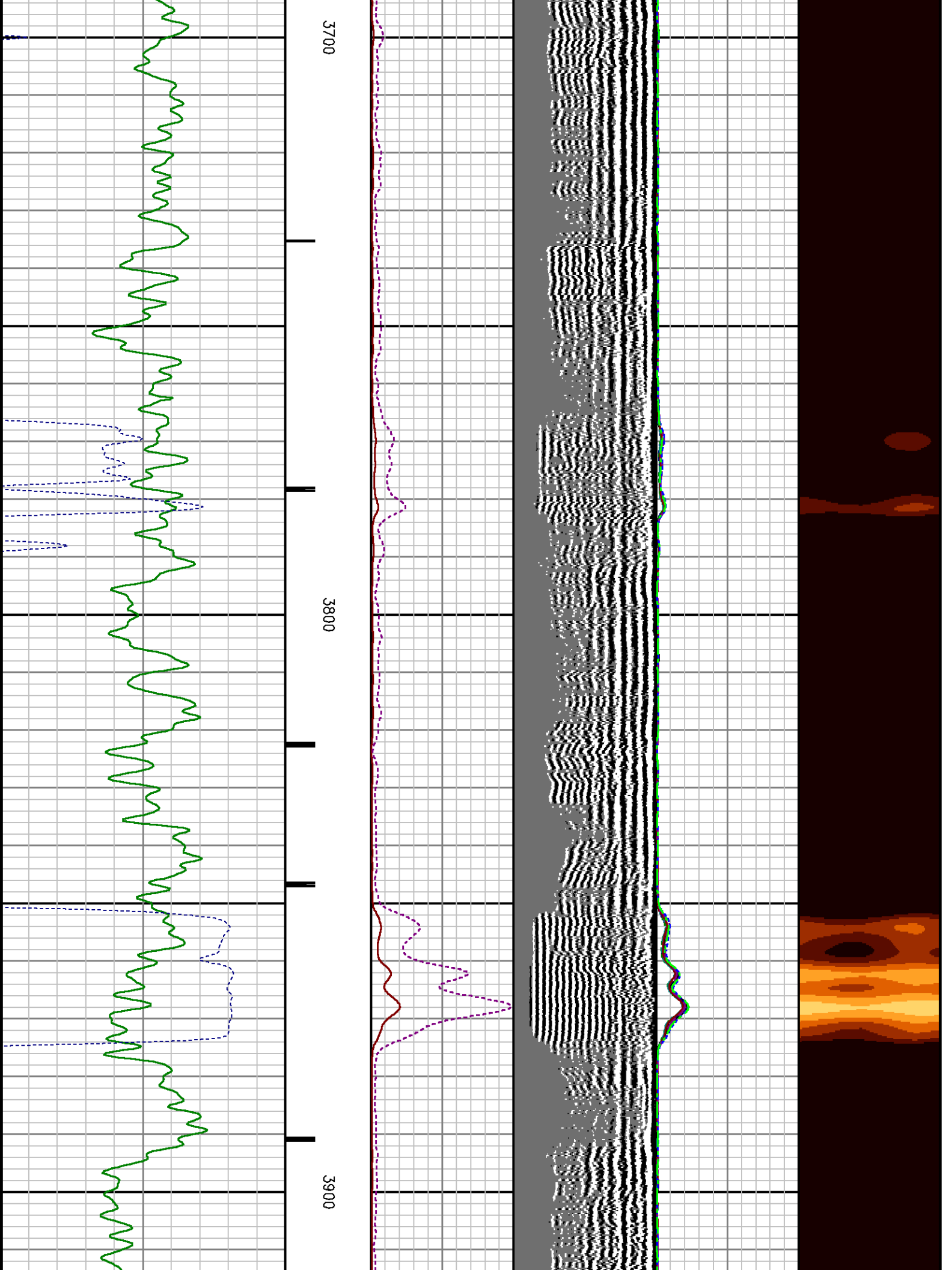


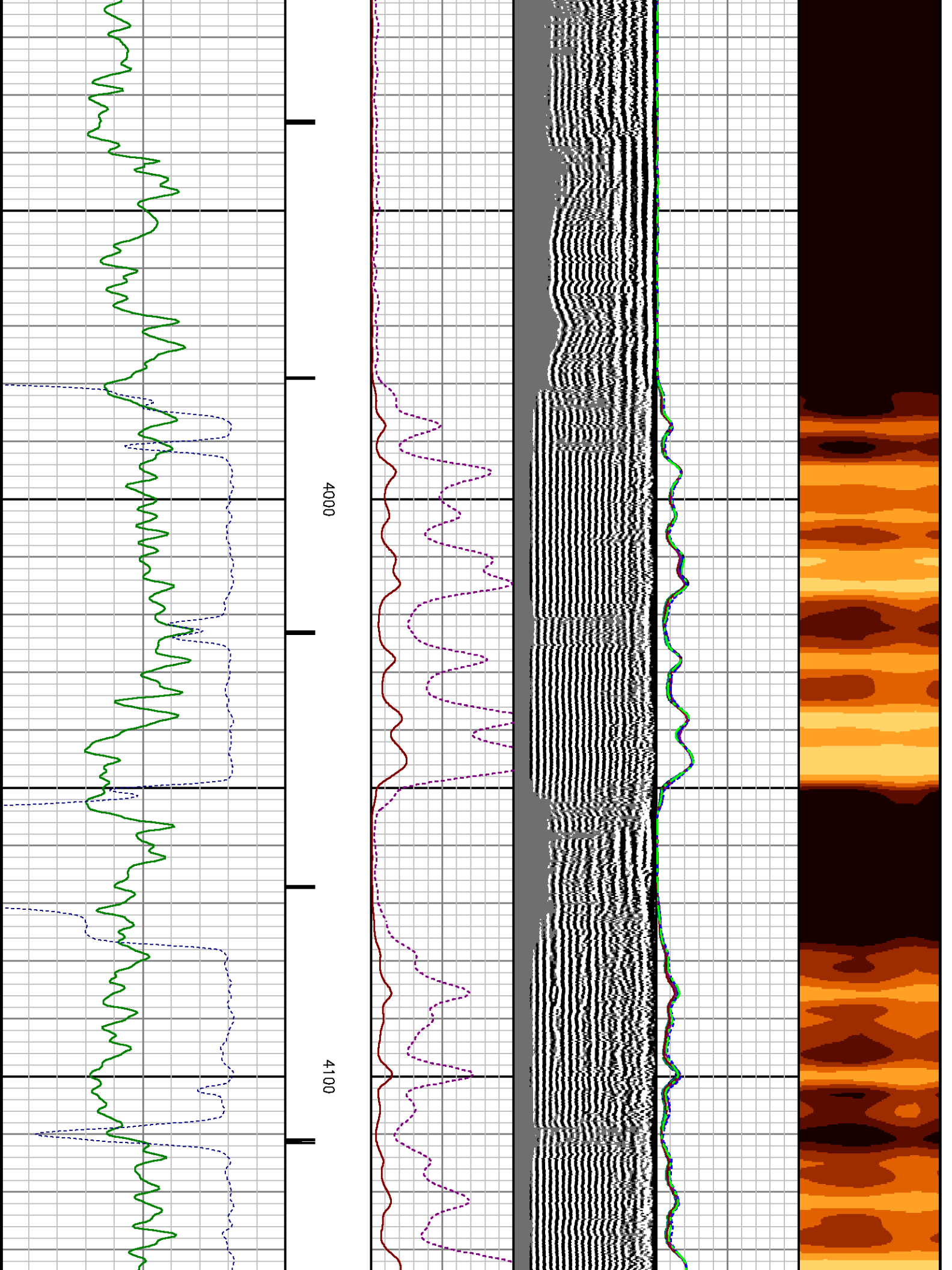


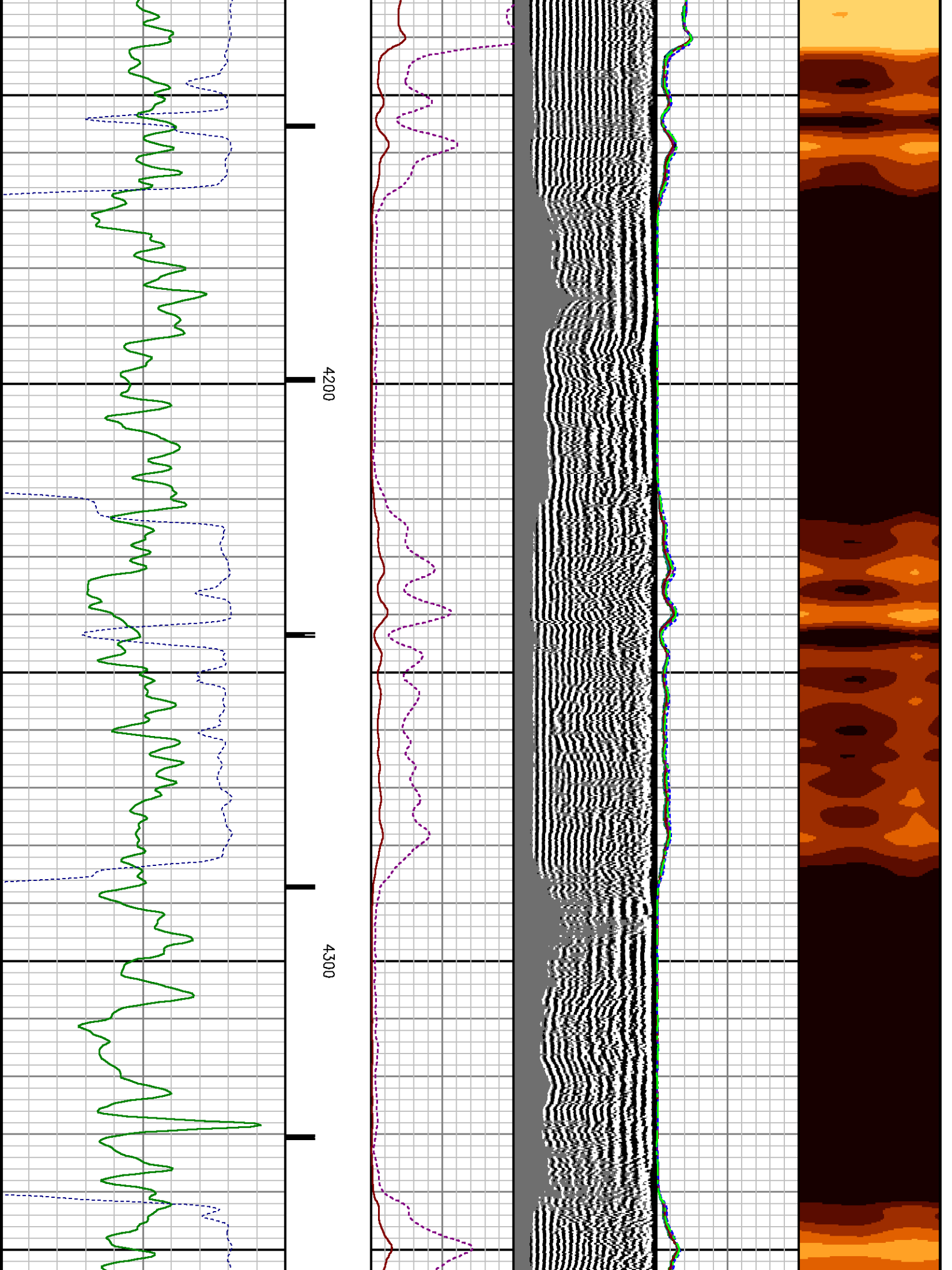


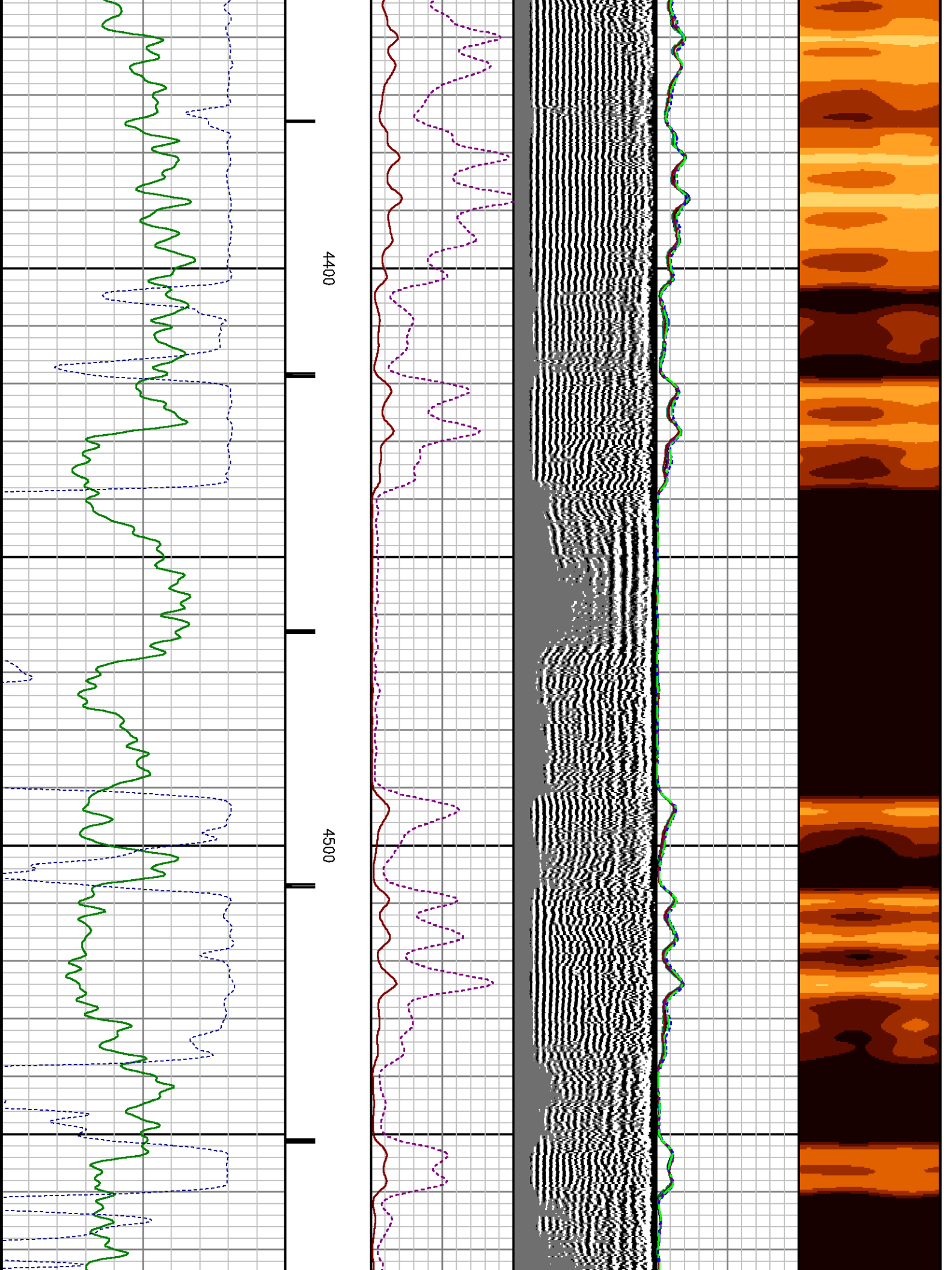


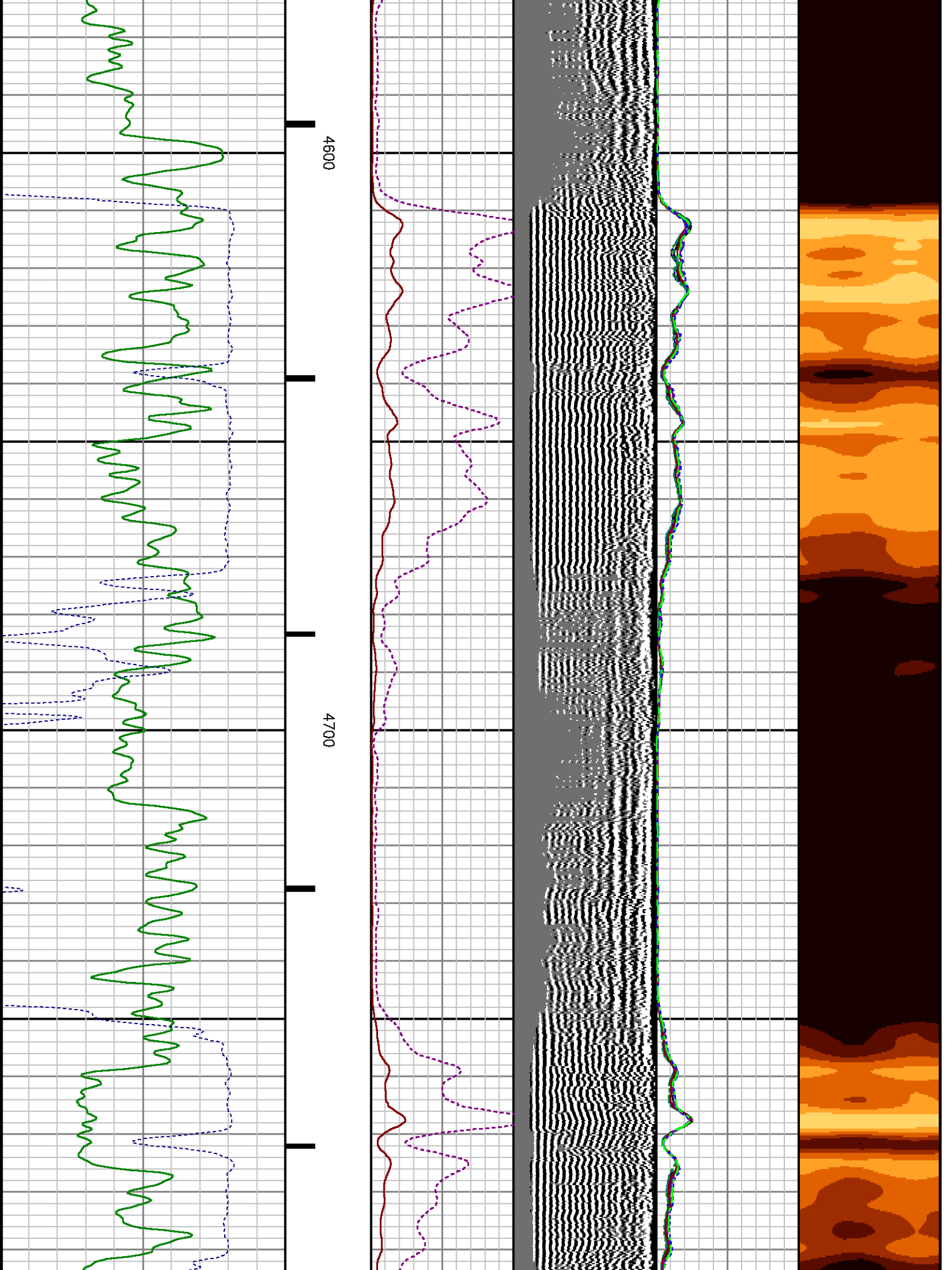


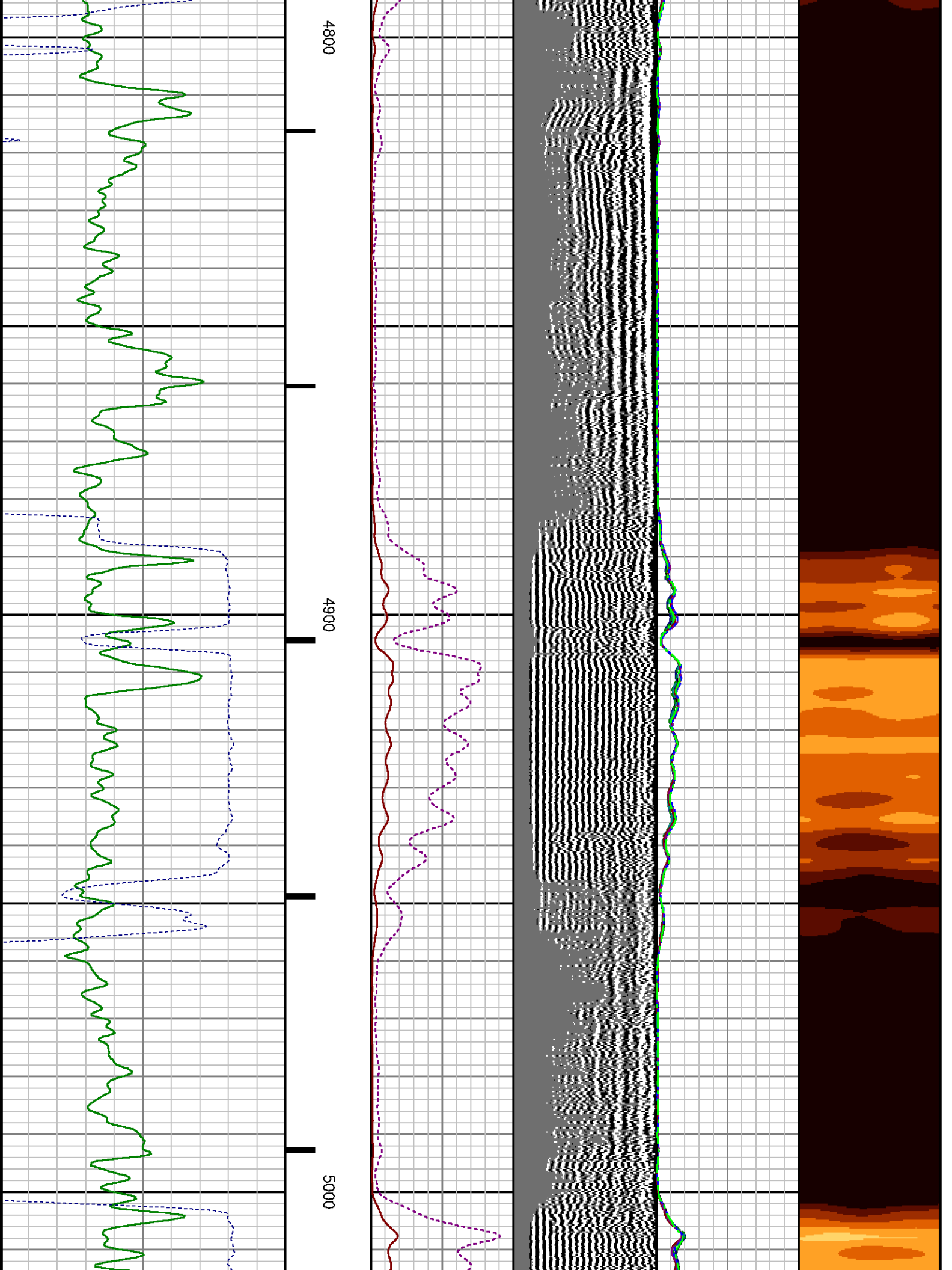


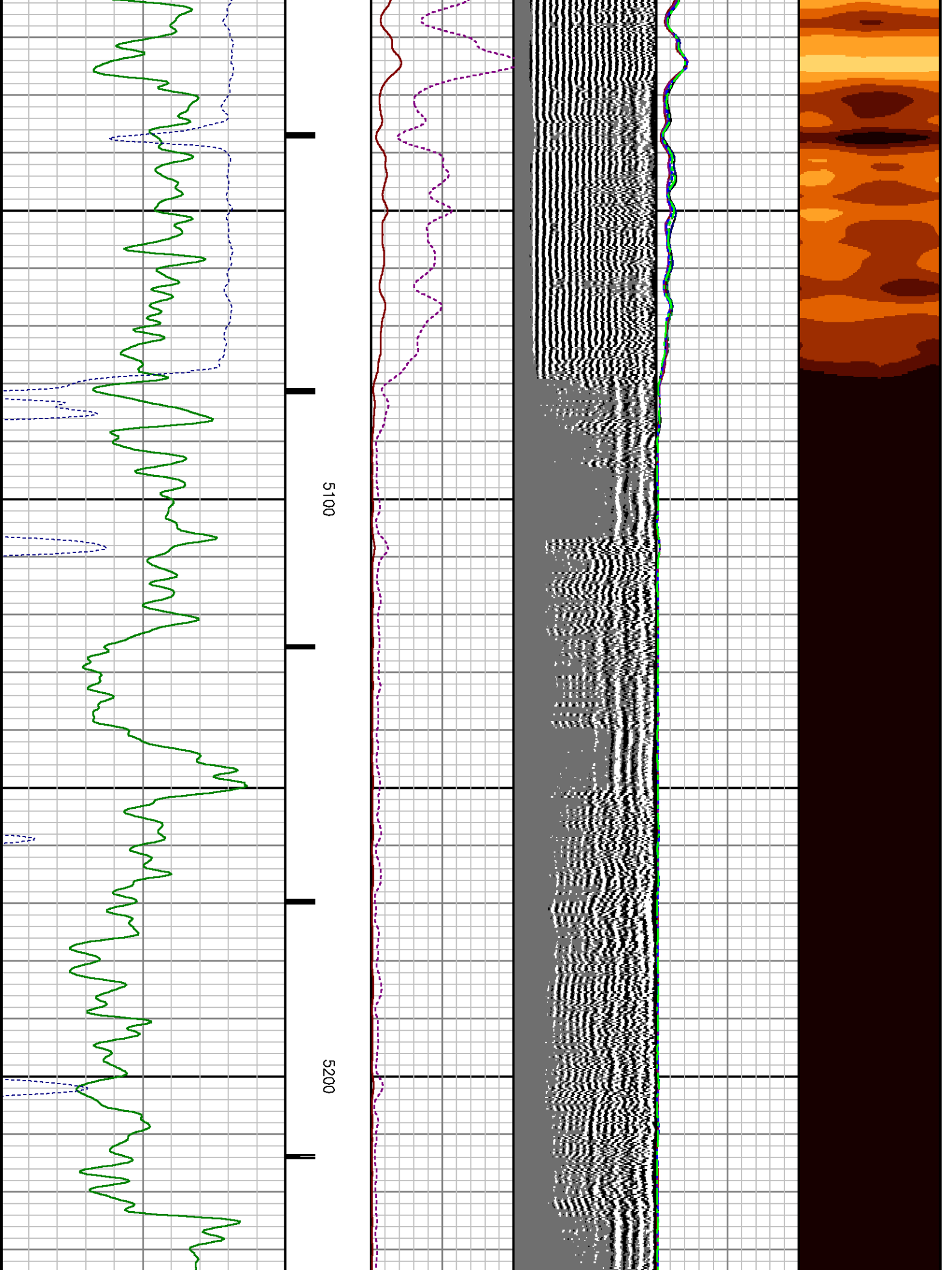


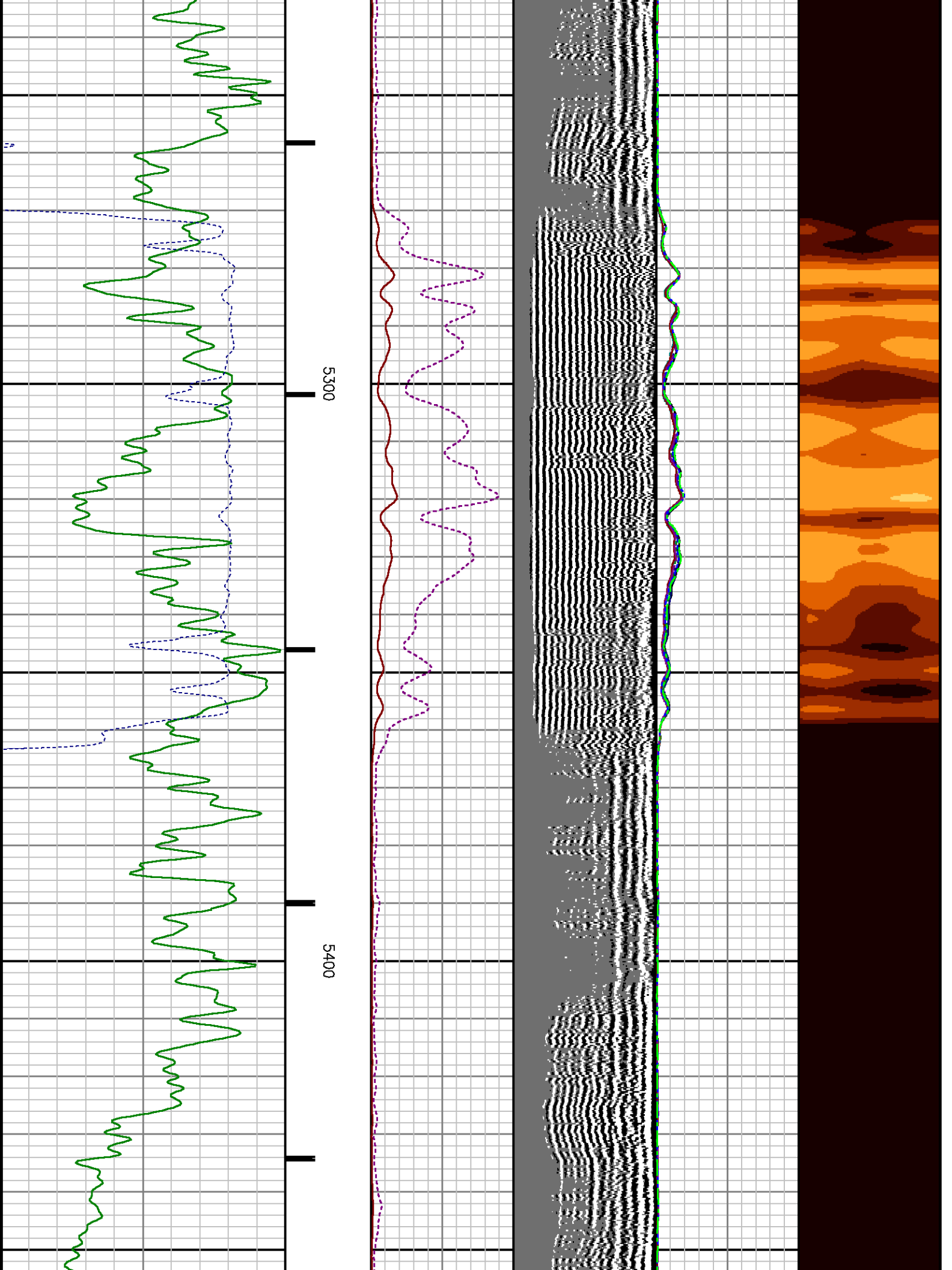


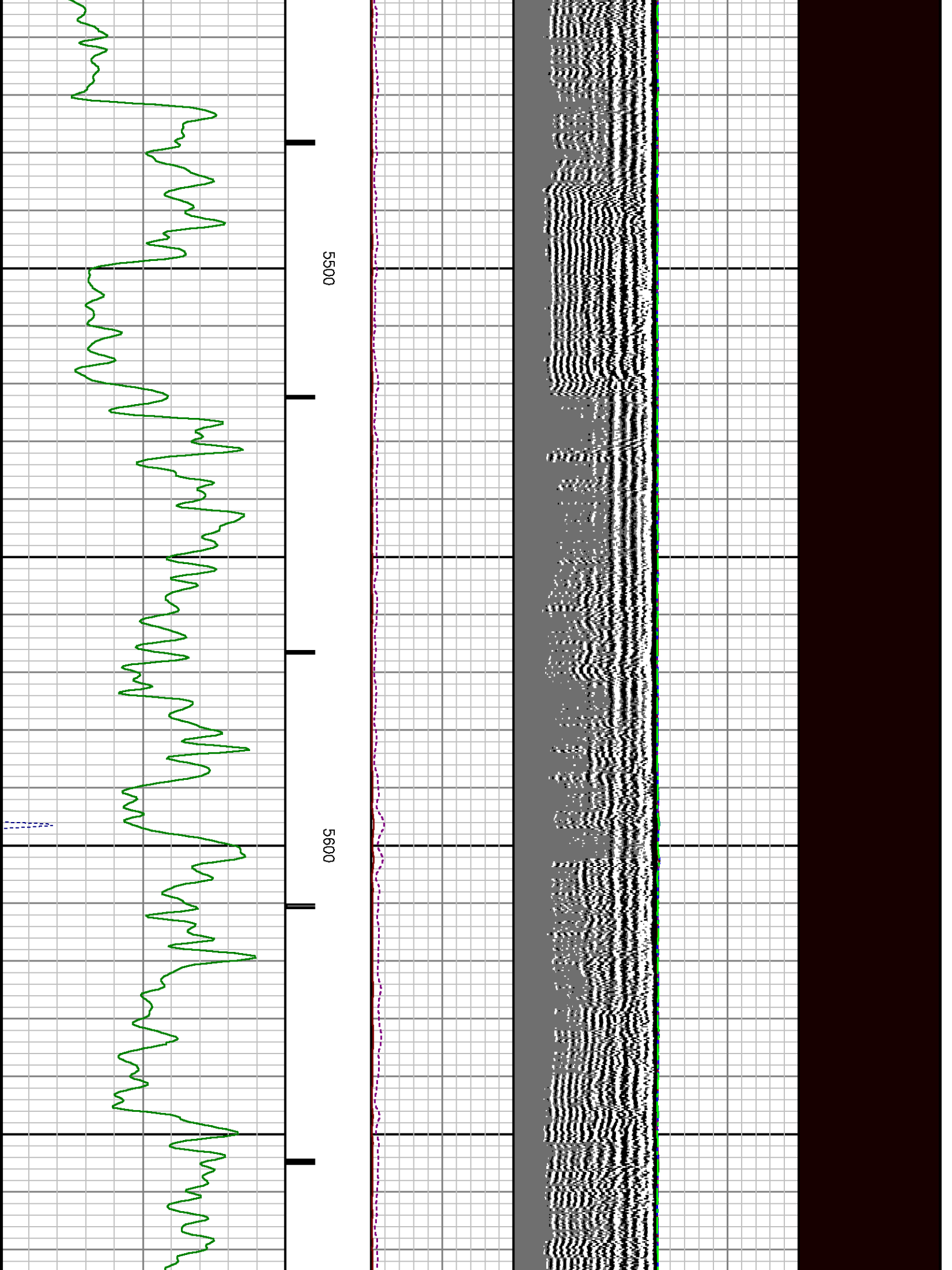


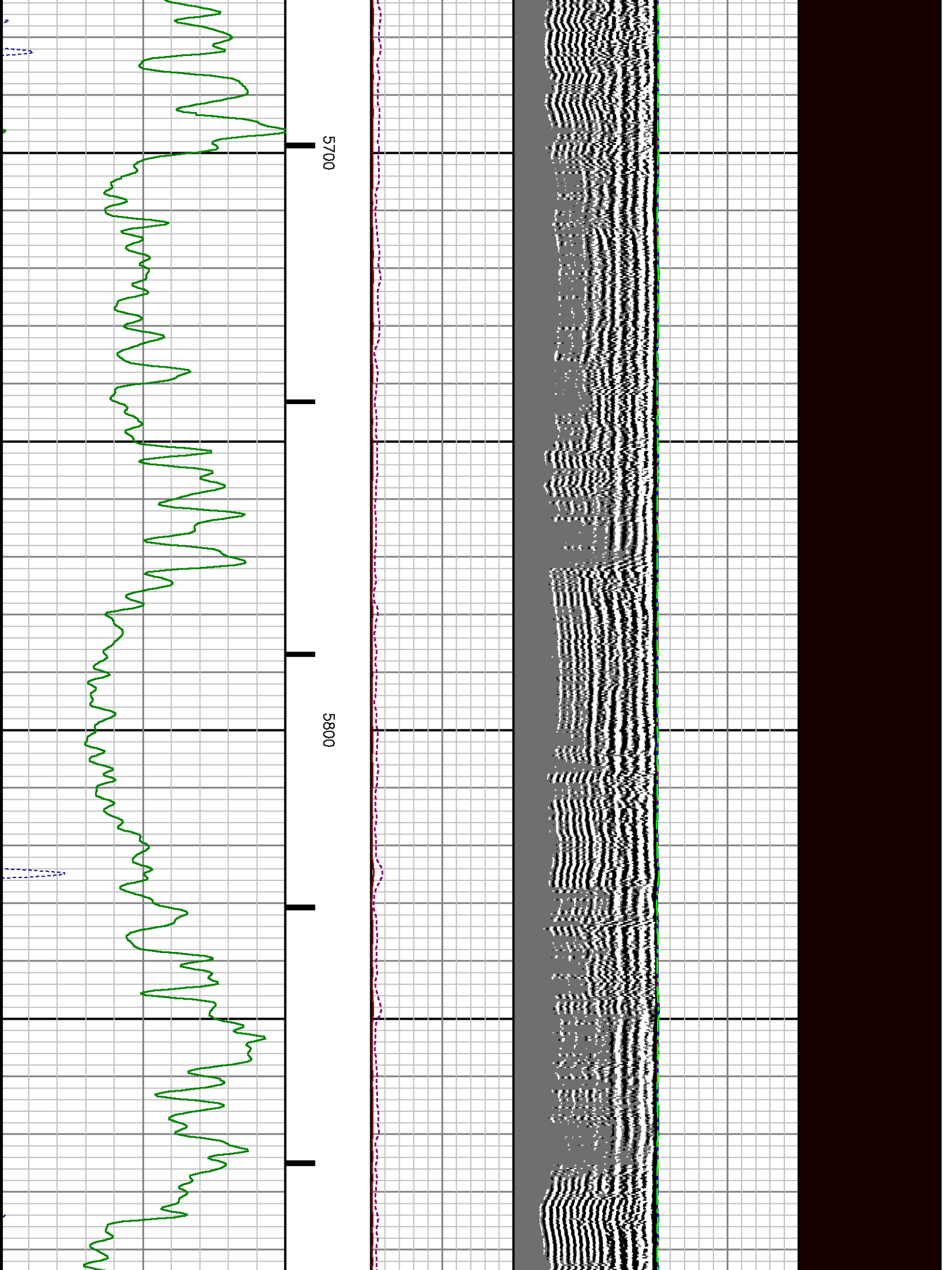


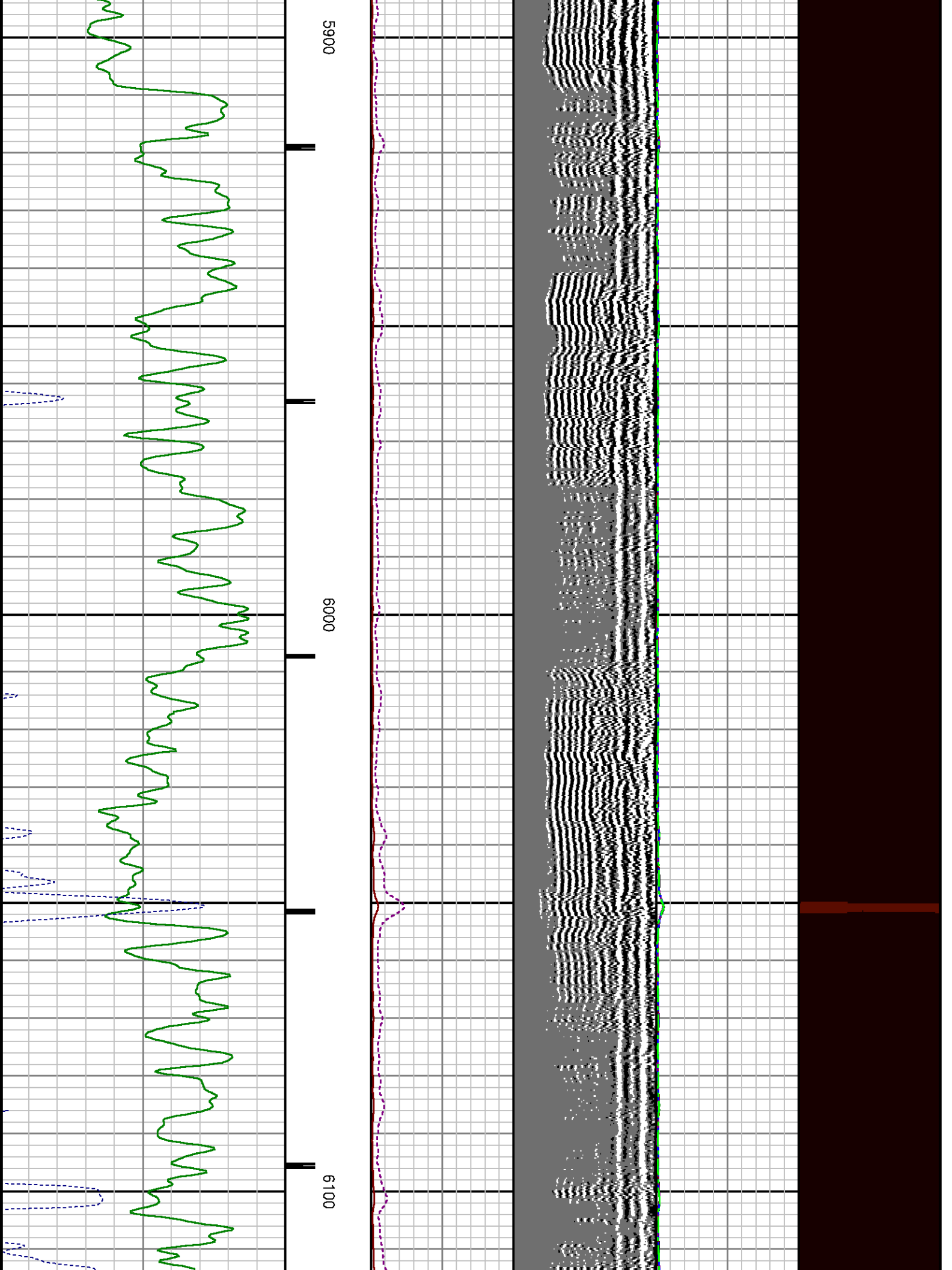


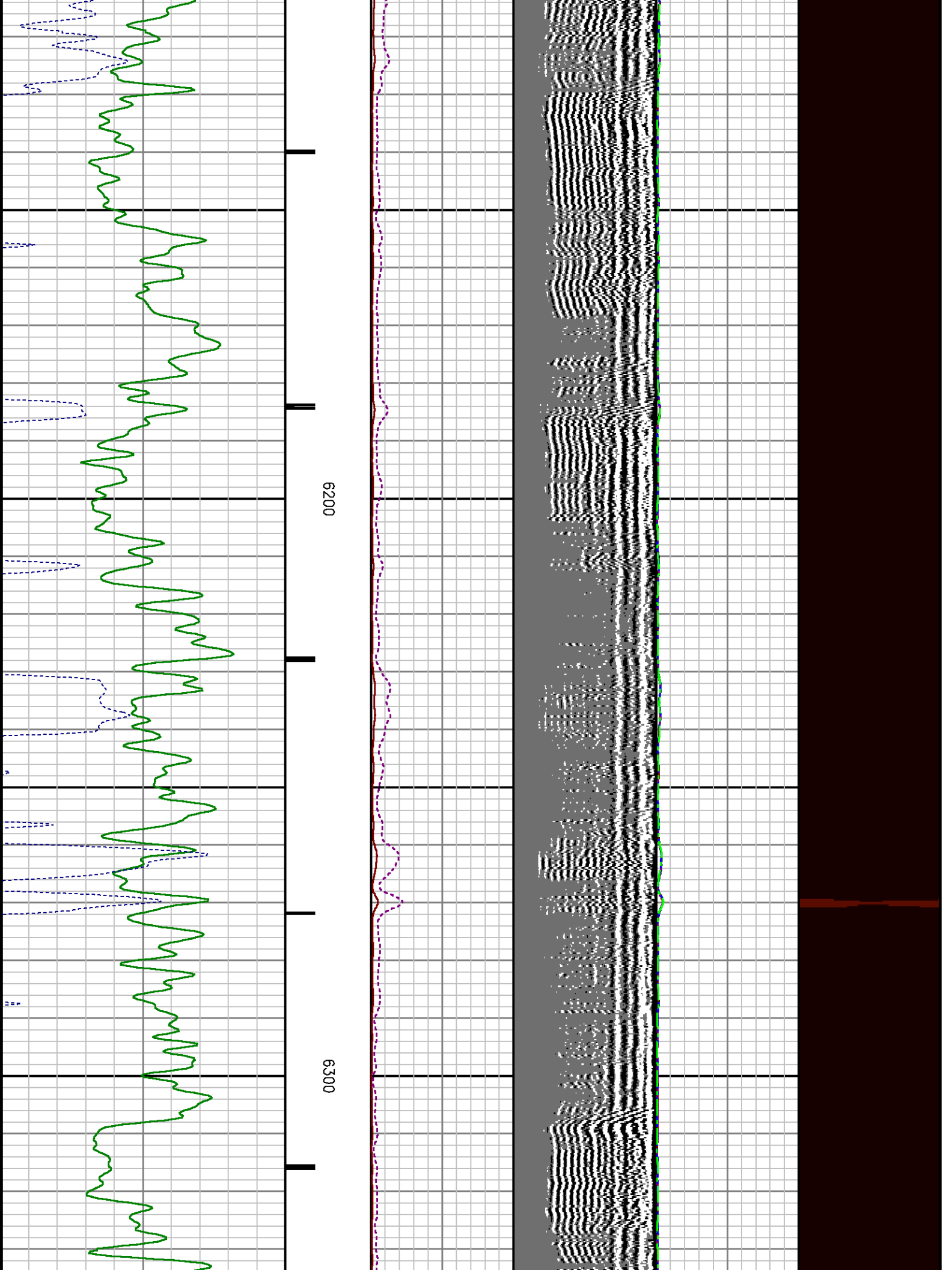


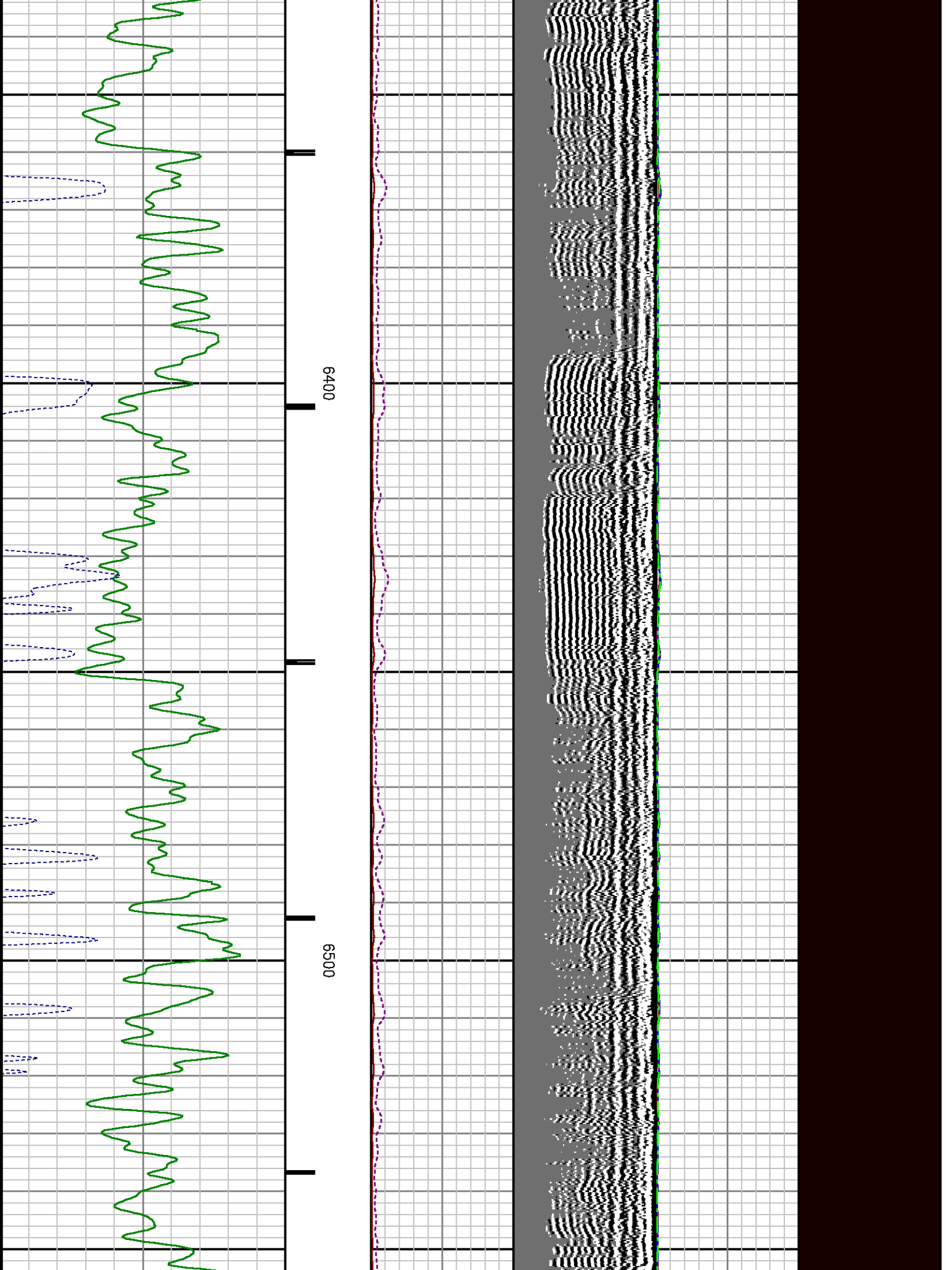


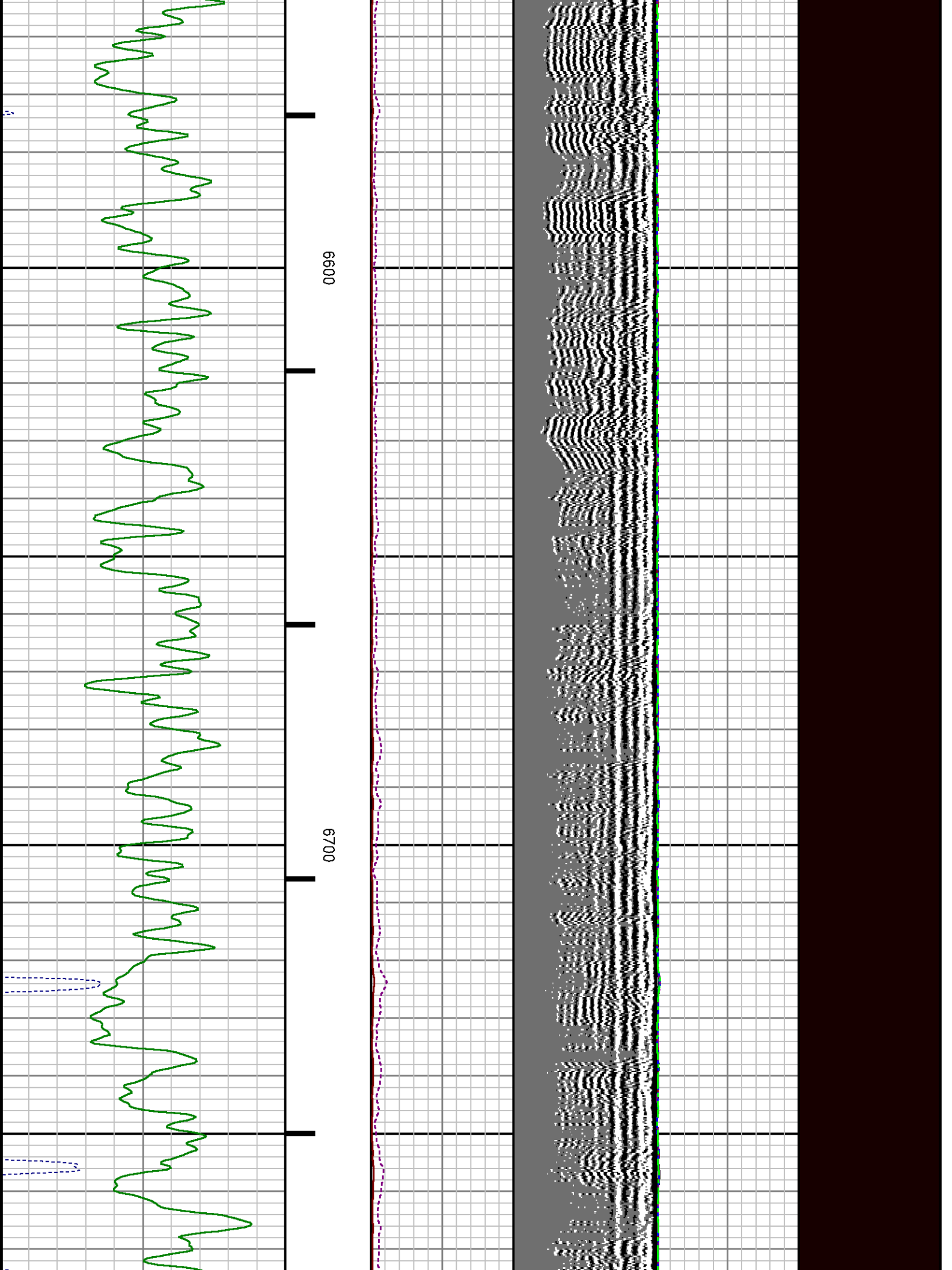


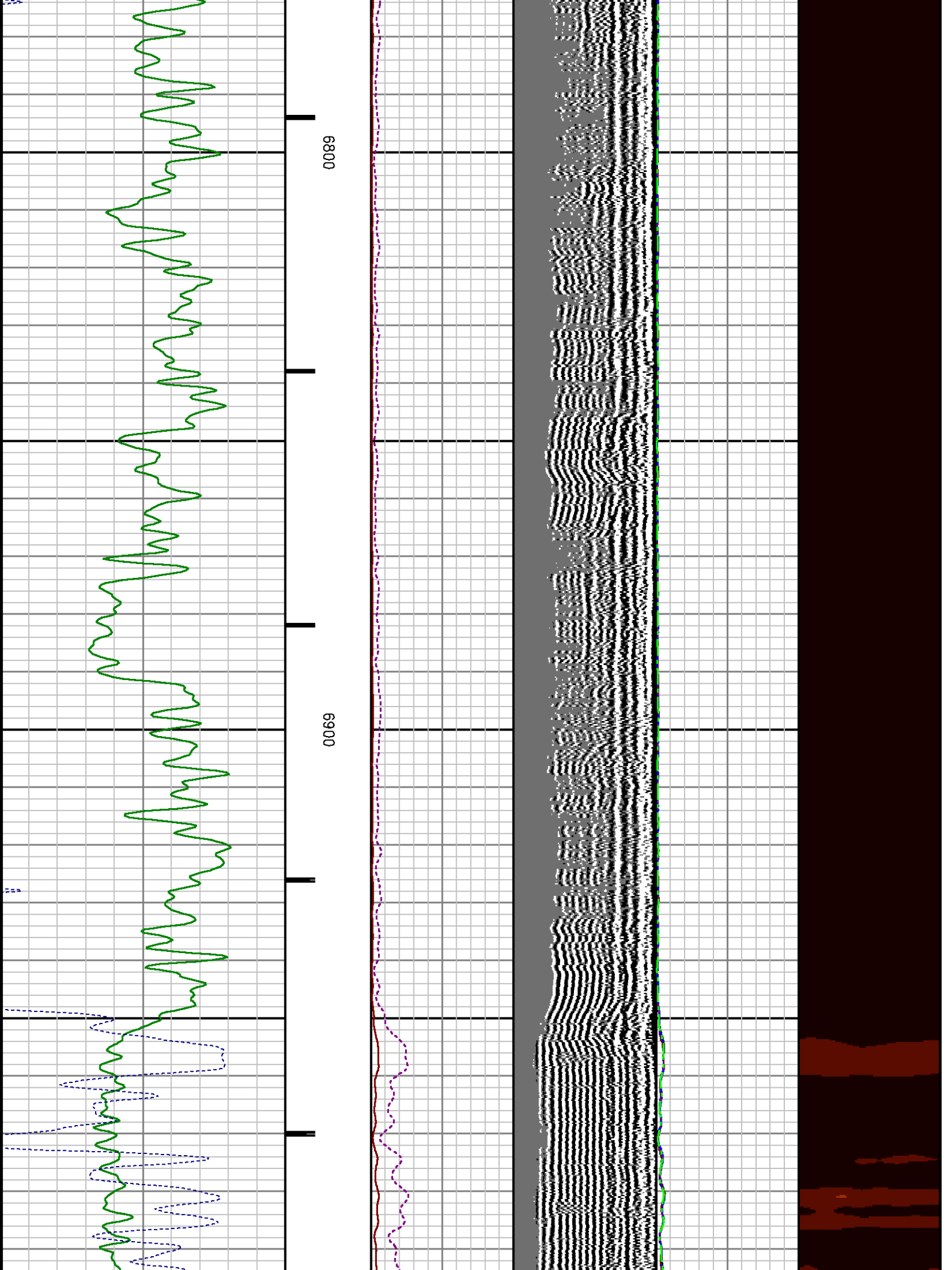


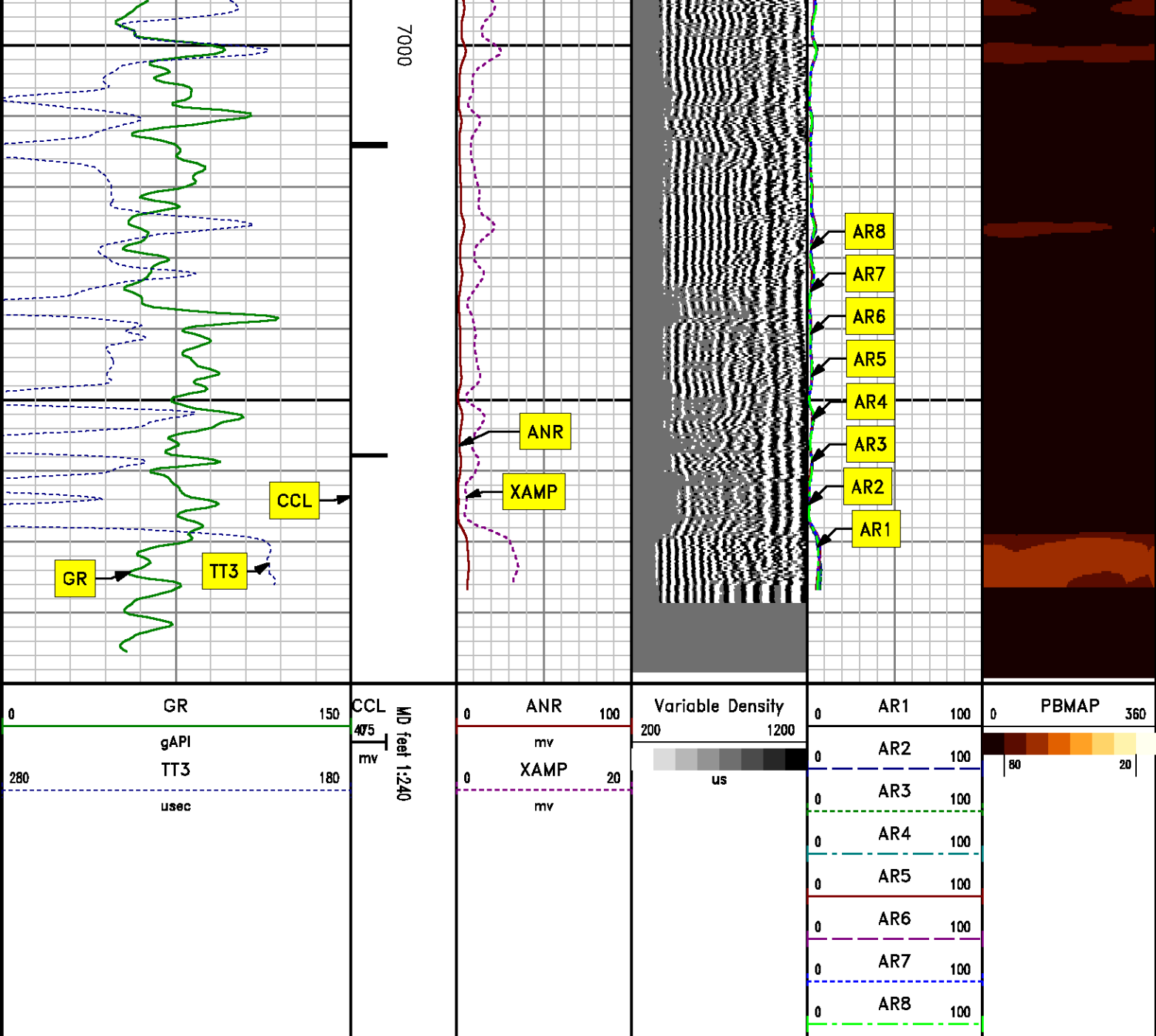












REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
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MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	6768.210	7088.210
RAL	Amp Gate Start Near	195.000	usec	6768.210	7088.210
RAL	Amp Gate Start Radial	195.000	usec	6768.210	7088.210
RAL	Amp Gate Width Far	25.000	usec	6768.210	7088.210
RAL	Amp Gate Width Near	25.000	usec	6768.210	7088.210
RAL	Amp Gate Width Radial	25.000	usec	6768.210	7088.210
RAL	casing od	4.500	inches	6768.210	7088.210
RAL	casing wt	11.600	lbm/ft	6768.210	7088.210
RAL	FB Start Far	291.900	usec	6768.210	7088.210
RAL	FB Start Near	175.391	usec	6768.210	7088.210
RAL	FB Start Radial	175.391	usec	6768.210	7088.210
RAL	FB Thresh Far	10.000	mv	6768.210	7088.210
RAL	FB Thresh Near	4.000	mv	6768.210	7088.210
RAL	FB Thresh Radial	4.000	mv	6768.210	7088.210
RAL	Fluid Travel Time	200.000	usec/ft	6768.210	7088.991

DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

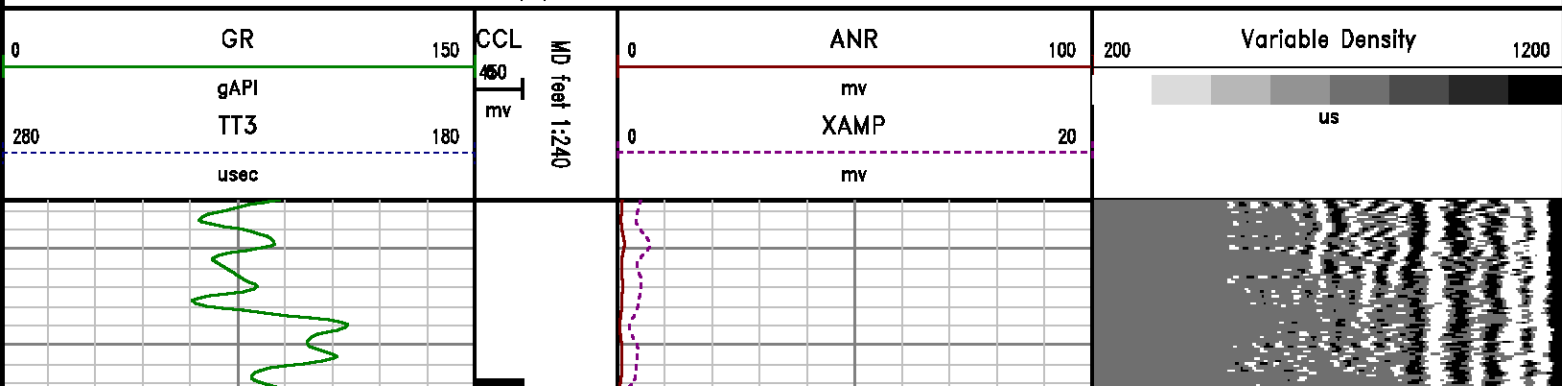
Well : RWF 332-4

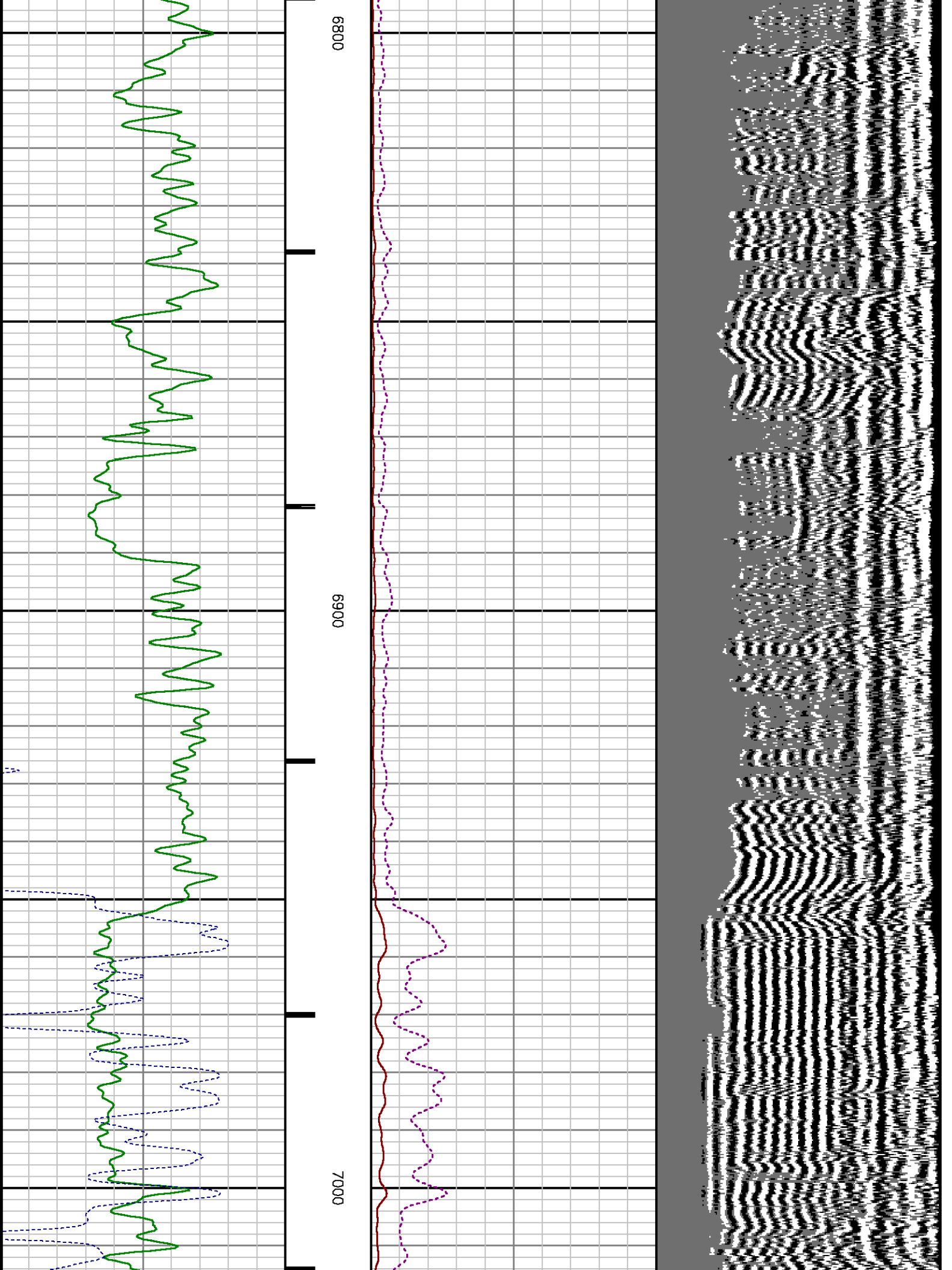
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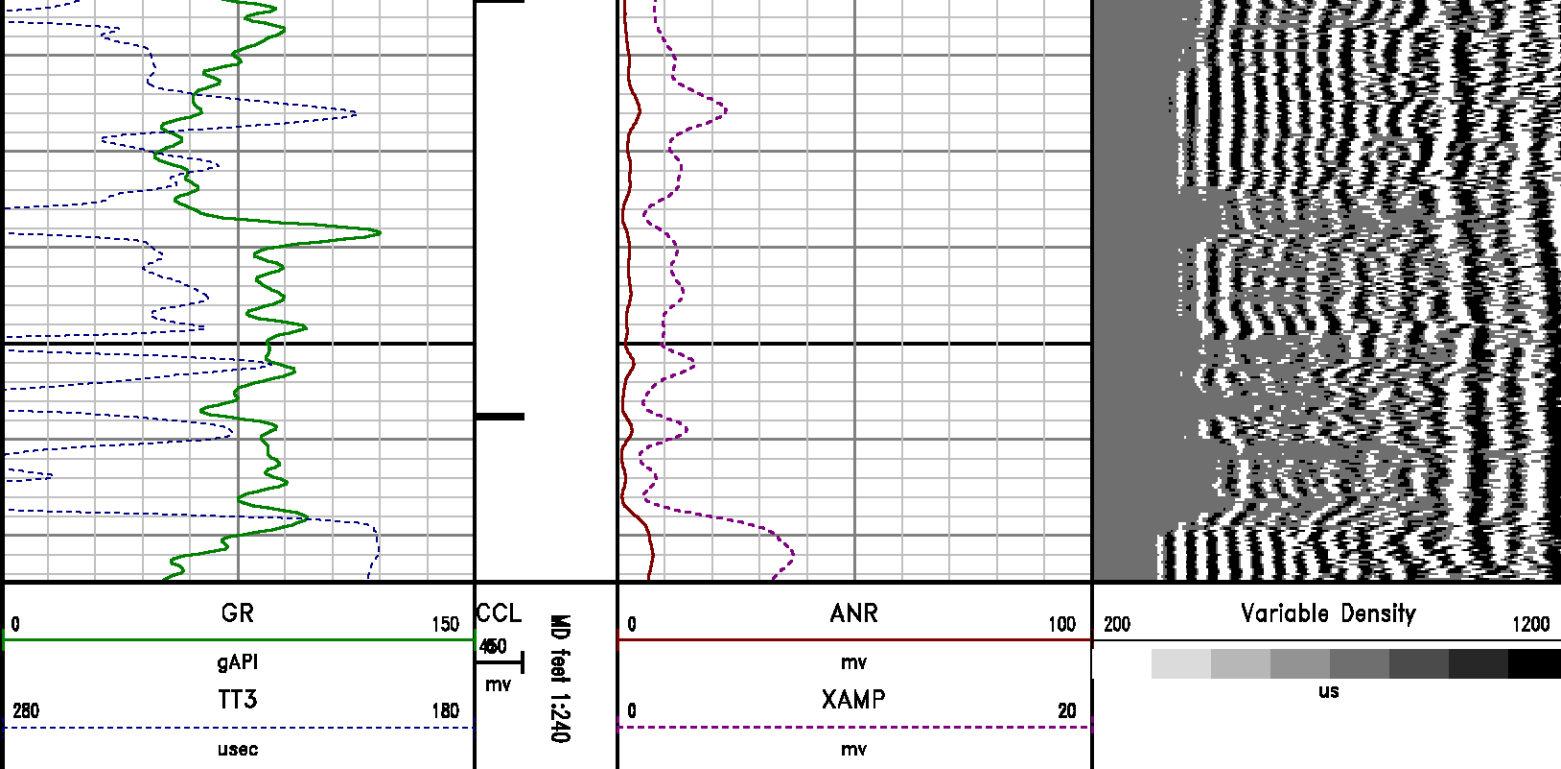
Mode : PlotMgr 5.4.504

Interval : 6775.00 - 7075.00 feet UP

Created : 1/4/2014 4:44:26 PM







CALIBRATION SUMMARY

RALSHP #2

Shop Calibration: C:\case\calver\RALSHP\49604 shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jan 04 12:47:43 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: 04

Tool Delay [usec] -55.00 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	-0.083	100.00	0.17
3 Ft. Receiver	218	216	30	166	13	-0.663	100.00	0.16
5 Ft. Receiver	327	325	30	243	25	0.436	150.00	0.18
Radial #1	218	216	30	166	5	0.133	100.00	0.16
Radial #2	218	216	30	166	5	-0.187	100.00	0.16
Radial #3	218	216	30	166	5	0.133	100.00	0.16
Radial #4	218	216	30	166	5	-0.042	100.00	0.16
Radial #5	218	216	30	166	5	0.221	100.00	0.16
Radial #6	216	216	30	166	5	0.417	100.00	0.16
Radial #7	216	216	30	166	5	0.379	100.00	0.16
Radial #8	218	216	30	166	5	0.467	100.00	0.16

RALFLD #2

Wellsite Calibration: C:\case\calver\RALFLD\49604 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jan 04 12:49:35 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: 04

Tool Delay [usec] -55.00 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	0.102	0.000	1.00	100.000
3 Ft. Receiver	200	30	1.732			
5 Ft. Receiver	317	30	1.238			
Radial #1	200	30	1.034			
Radial #2	200	30	1.223			
Radial #3	200	30	1.345			
Radial #4	200	30	1.383			
Radial #5	200	30	1.392			
Radial #6	200	30	1.436			
Radial #7	200	30	1.287			
Radial #8	200	30	1.336			

GAMMA RAY #2

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

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

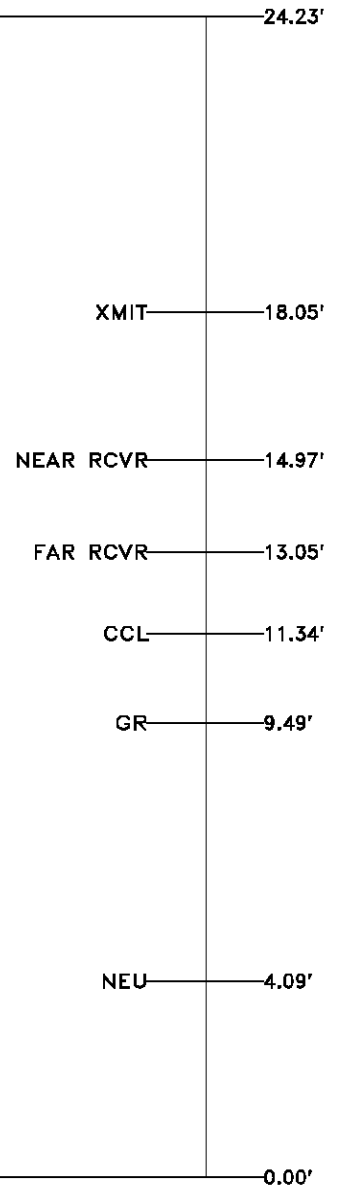
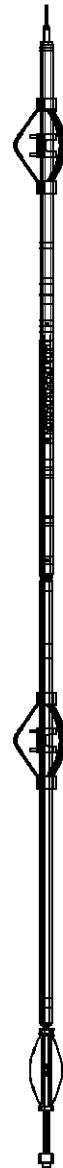
Series 1426XA
 Mnemonic PROB
 Diameter 2.75"
 Length 11.17'
 Measure Point 0.75' FAR RCVR
 Measure Point 2.67' NEAR RCVR
 Measure Point 5.75' XMIT
 Temp Rating 350.00 °F
 Press Rating 18000.00 PSI

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

WPX ENERGY

WPX ENERGY RWF 332-4

RULISON

GARFIELD

State

CO

Location

SHL: 445' FNL & 1706' FEL

Elevations

KB 5820 ft

File No:

CH81810

API No:

05045220810000

4 75 94W

Baker Atlas



CASE

BHL: 1701' FNL & 2103' FEL

DF

RMV 108-4 PAD

GL 5794 ft

NABORS 574

SEC 4 TWP 7S RGE 94W