



Baker Atlas

RADIAL ANALYSIS BOND LOG

File No:	Company	WPX ENERGY
CH084818	Well	FEDERAL NER 44-32
API No:	Field	RULISON
05045217900000	County	GARFIELD
	State	CO

32 6S 93W	Location	SHL: 182' FNL & 2602' FWL (9 7S 93W)	Other Services	RPM
RU 23-5 PAD		BHL: 759' FSL & 671' FEL (32 6S 93W)		
NABORS 576	SEC 32	TWP 6S	RGE 93W	

Permanent Datum	GL	Elevation	7603 ft
Log Measured From	KB	26 ft	Above P. D.
Drill Measured From	KB		

Date	25/APR/14
Run	ONE
Service Order	USE625392
Depth Driller	10389 ft
Depth Logger	10314 ft
Bottom Logged Interval	10304 ft
Top Logged Interval	26 ft
Time Started	8:00
Time Finished	13:00
Operator Rig Time	5 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	105 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	66 fpm
Maximum Recorded Temperature	246 degF
Reference Log	NA
Reference Log Date	NA
Equipment No.	4271
Location	GRAND JUNCTION
Recorded By	NEMELL
Witnessed By	JEFF DUCY

- 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	1138 ft
8.75 in	1138 ft	10427 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1138 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	10427 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 14 feet.

Logged with zero PSI at wellhead.

BHT = 246 °F

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	CENTRALIZED
1	1	GR/CCL	2459XA	10417456	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.155	10318.500
RAL	Amp Gate Start Near	195.000	usec	35.155	10318.500
RAL	Amp Gate Start Radial	195.000	usec	35.155	10318.500
RAL	Amp Gate Width Far	25.000	usec	35.155	10318.500
RAL	Amp Gate Width Near	25.000	usec	35.155	10318.500
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RAL	casing od	4.500	inches	35.155	10318.500
RAL	casing wt	11.600	lbm/ft	35.155	10318.500
RAL	FB Start Far	291.900	usec	35.155	10318.500
RAL	FB Start Near	175.391	usec	35.155	10318.500
RAL	FB Start Radial	175.391	usec	35.155	10318.500
RAL	FB Thresh Far	10.000	mv	35.155	10318.500
RAL	FB Thresh Near	4.000	mv	35.155	10318.500
RAL	FB Thresh Radial	4.000	mv	35.155	10318.500
RAL	Fluid Travel Time	200.000	usec/ft	35.155	10318.500

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

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

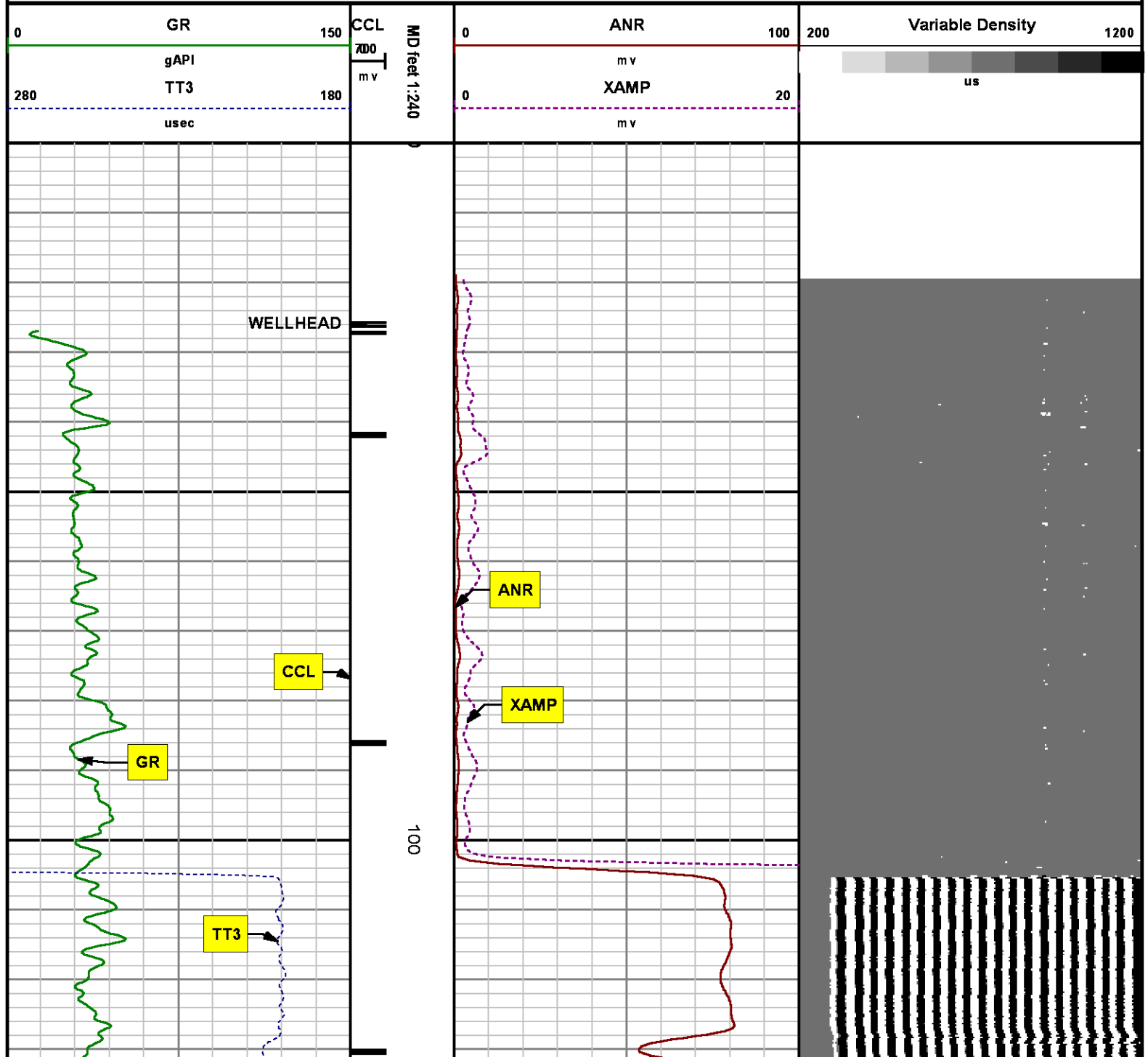
Well : FEDERAL NER 44-32

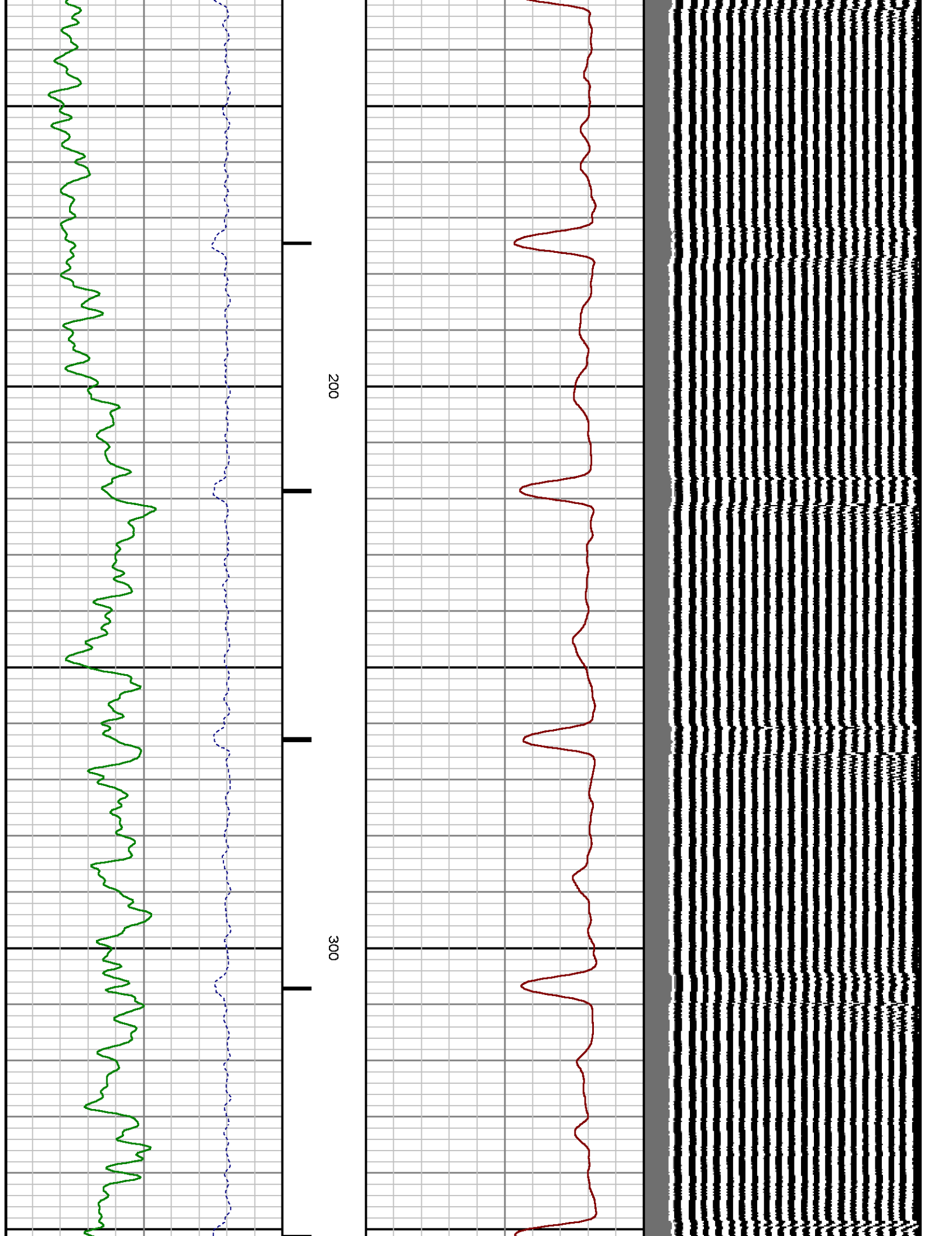
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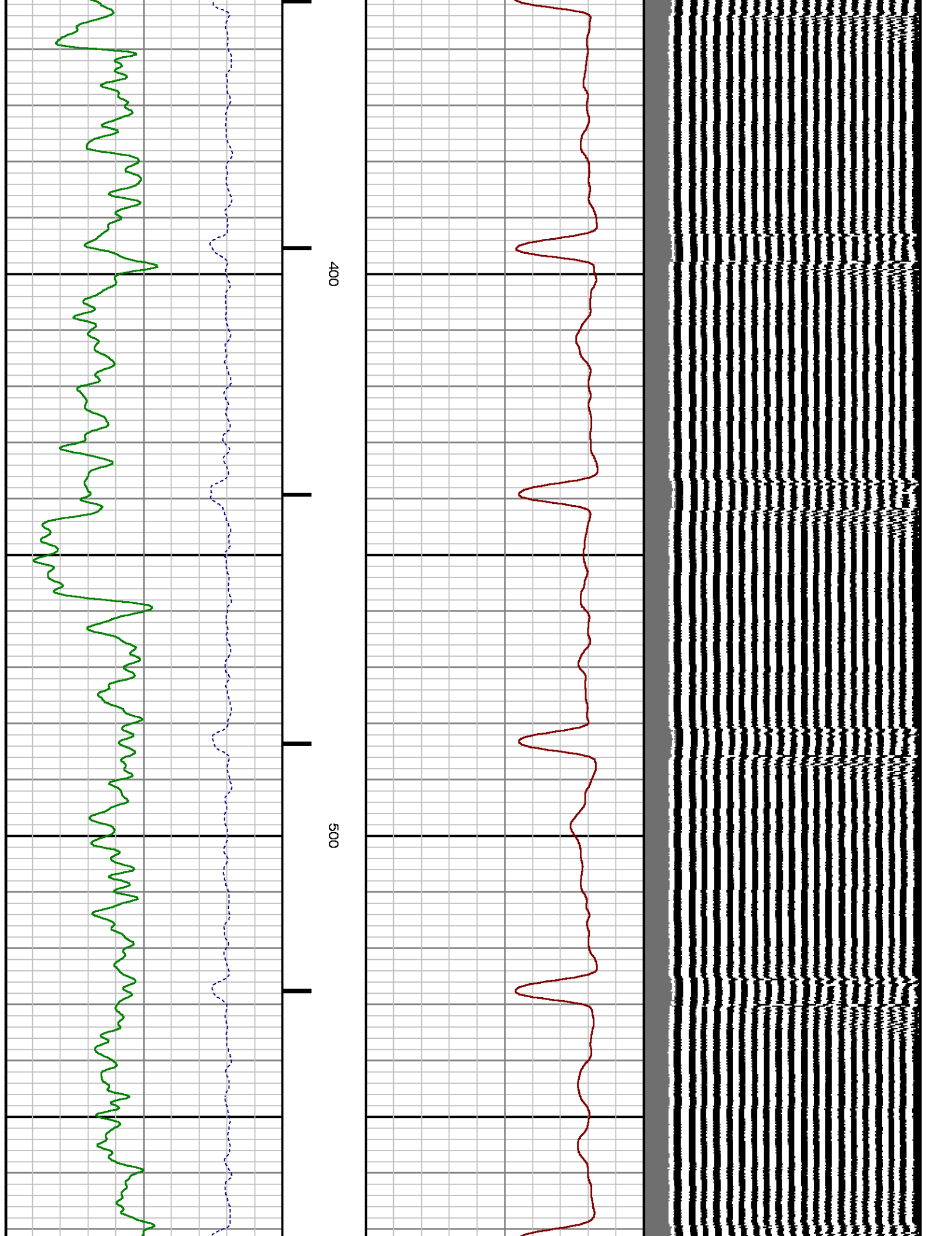
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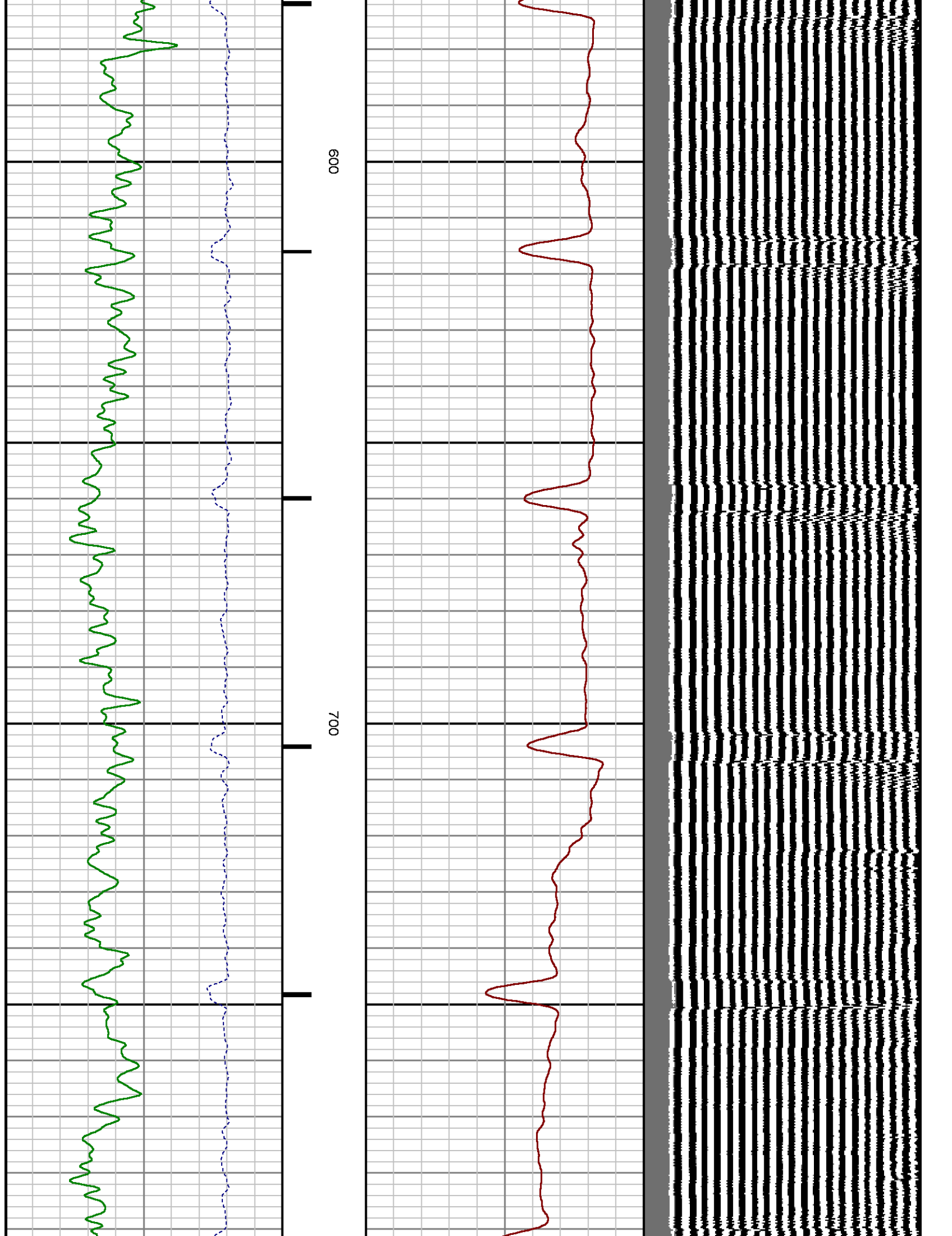
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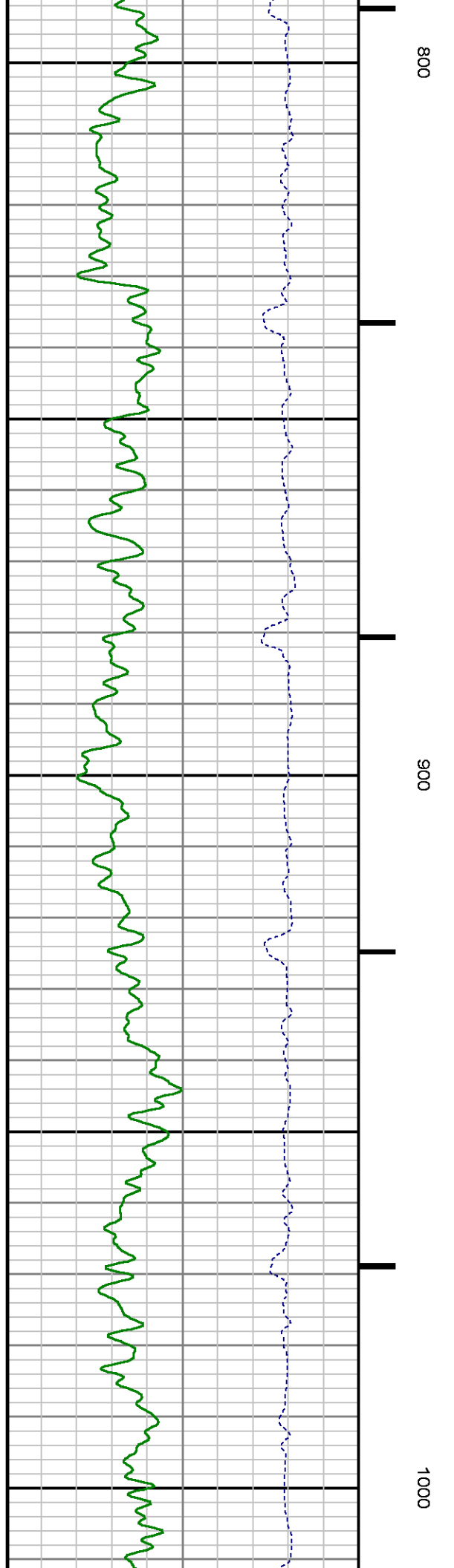
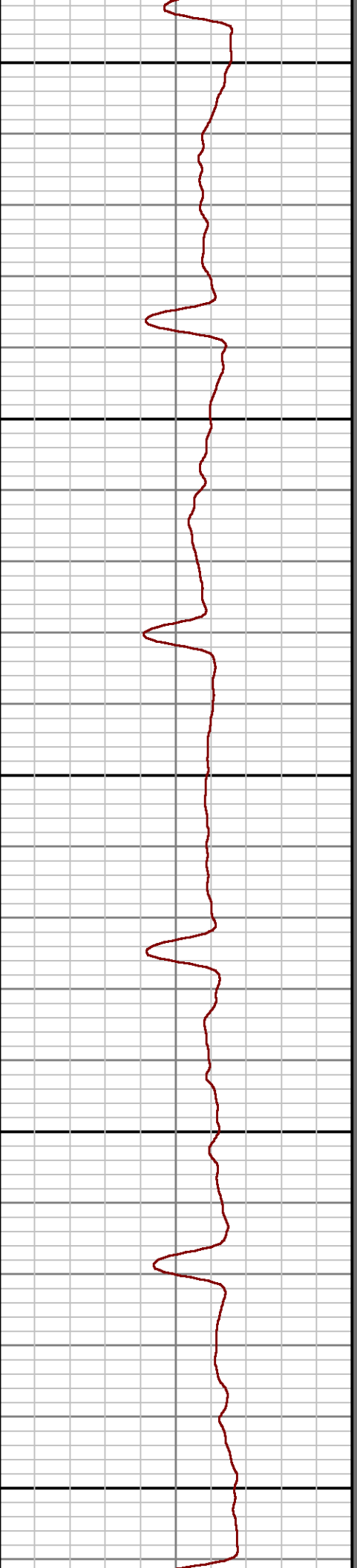
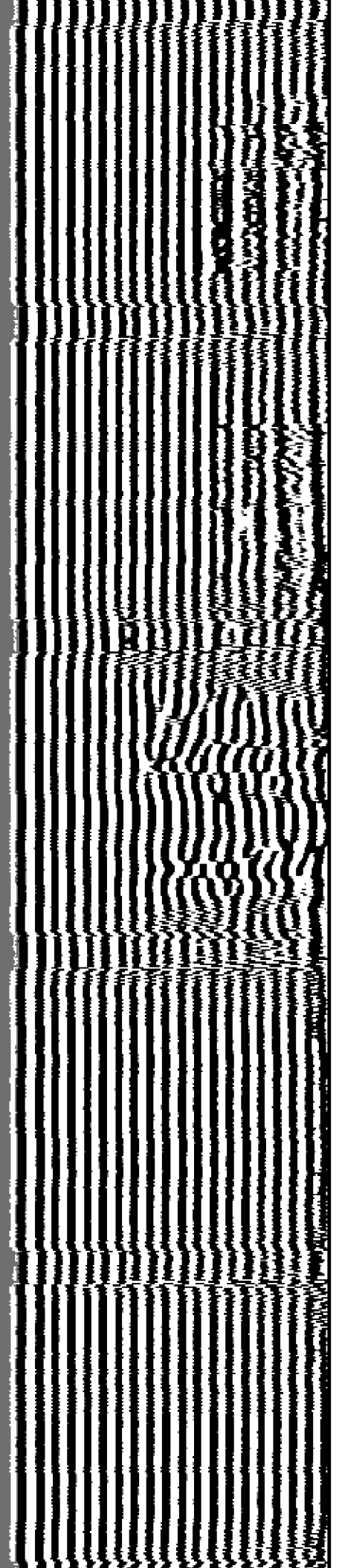
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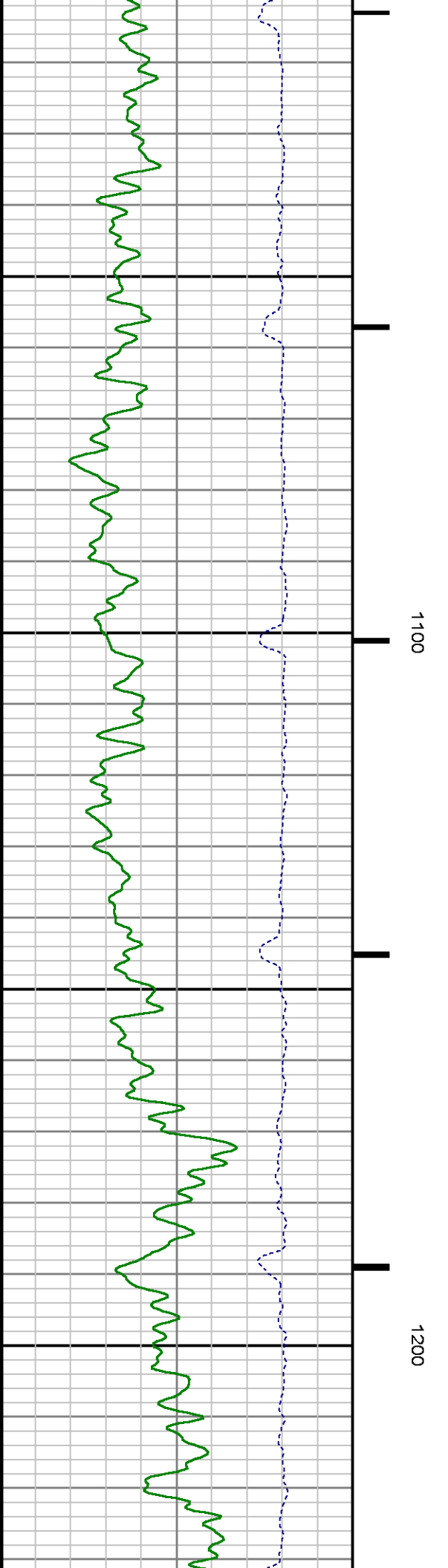
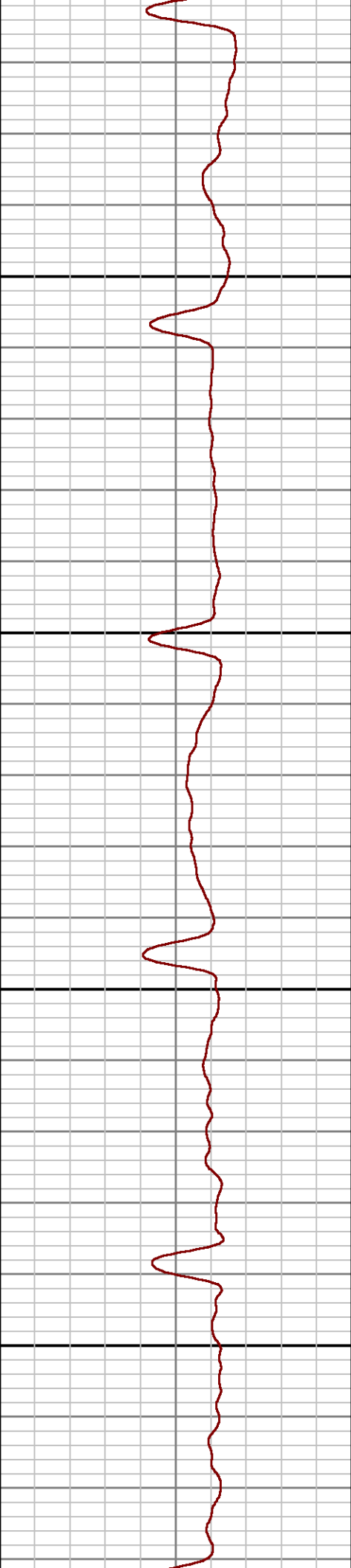
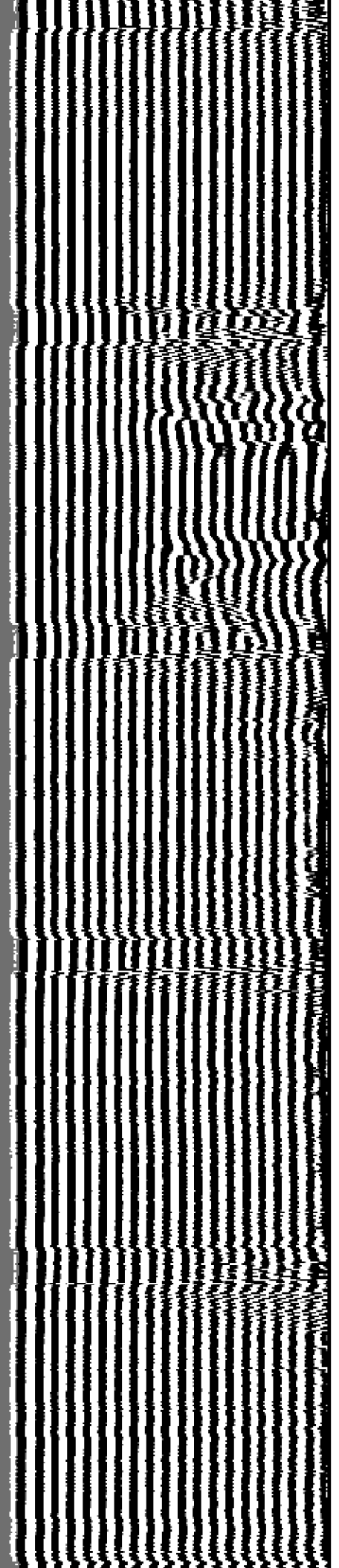


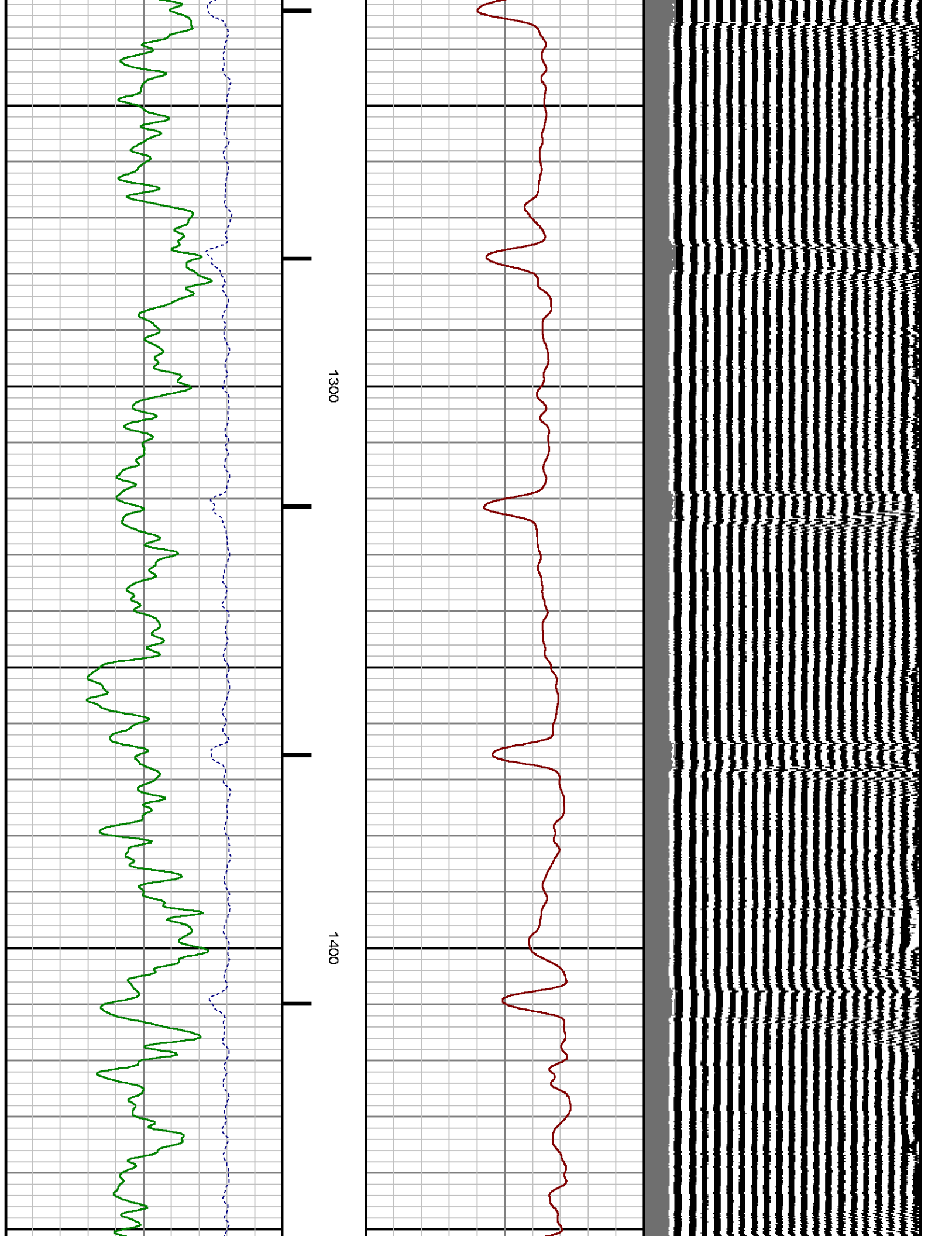


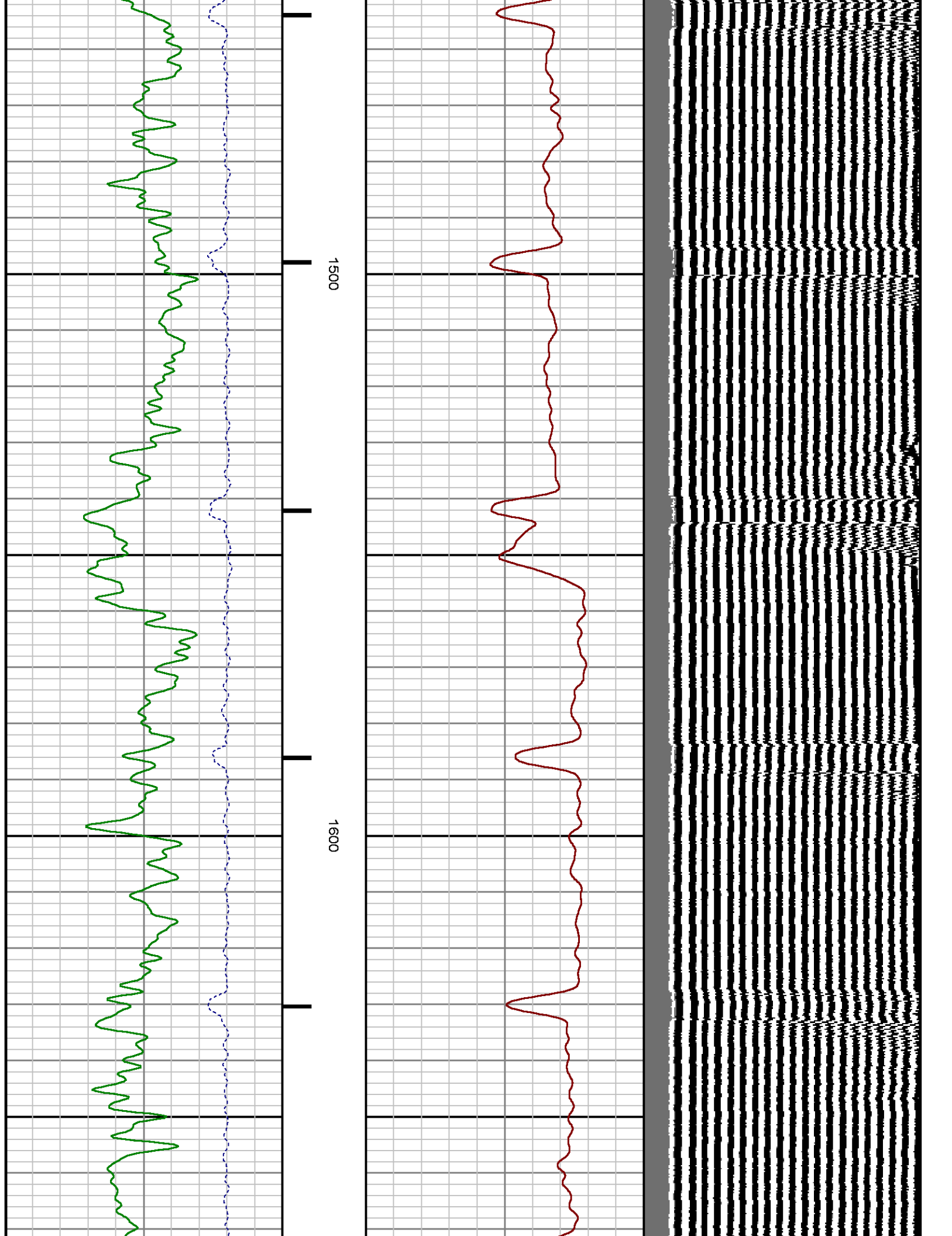


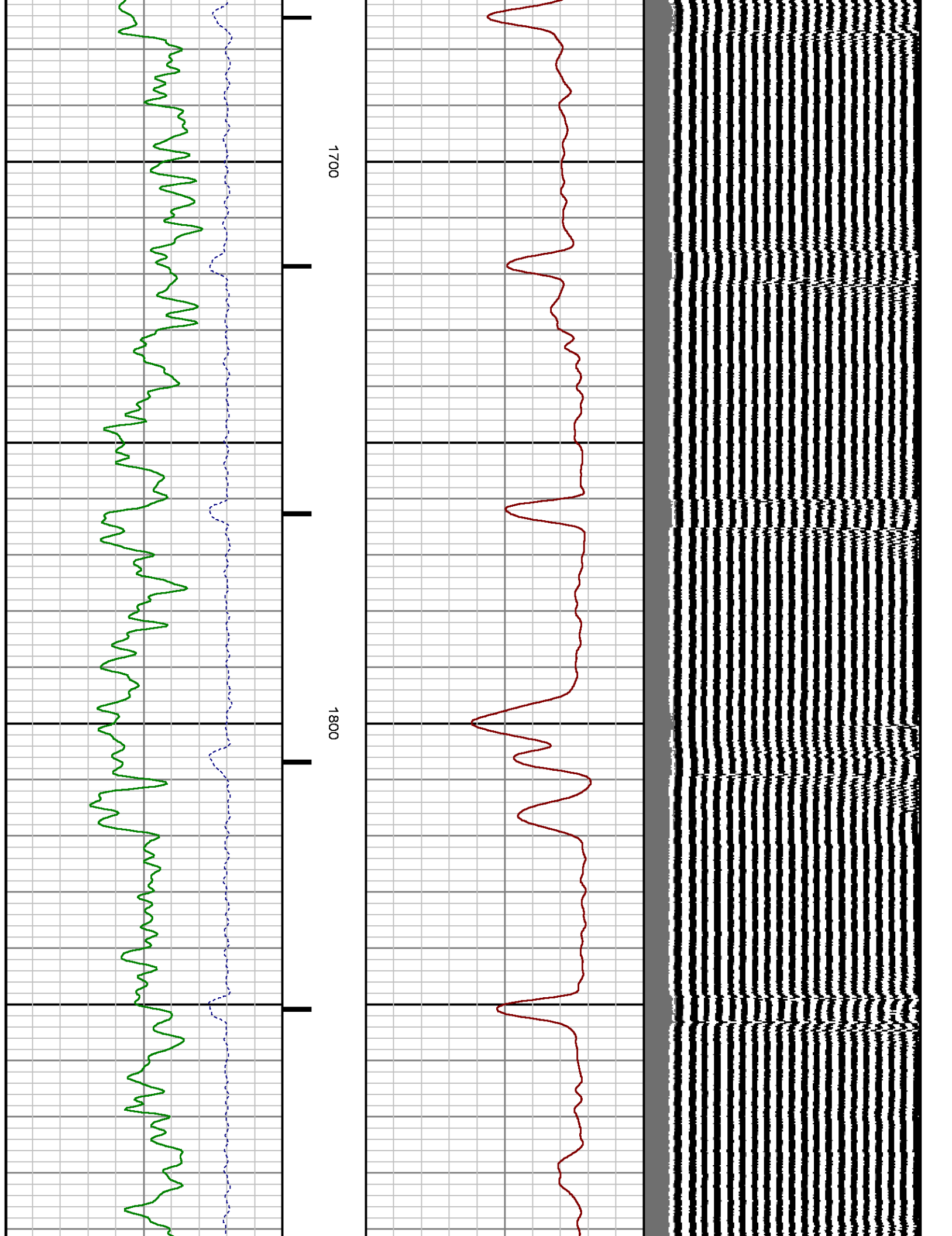


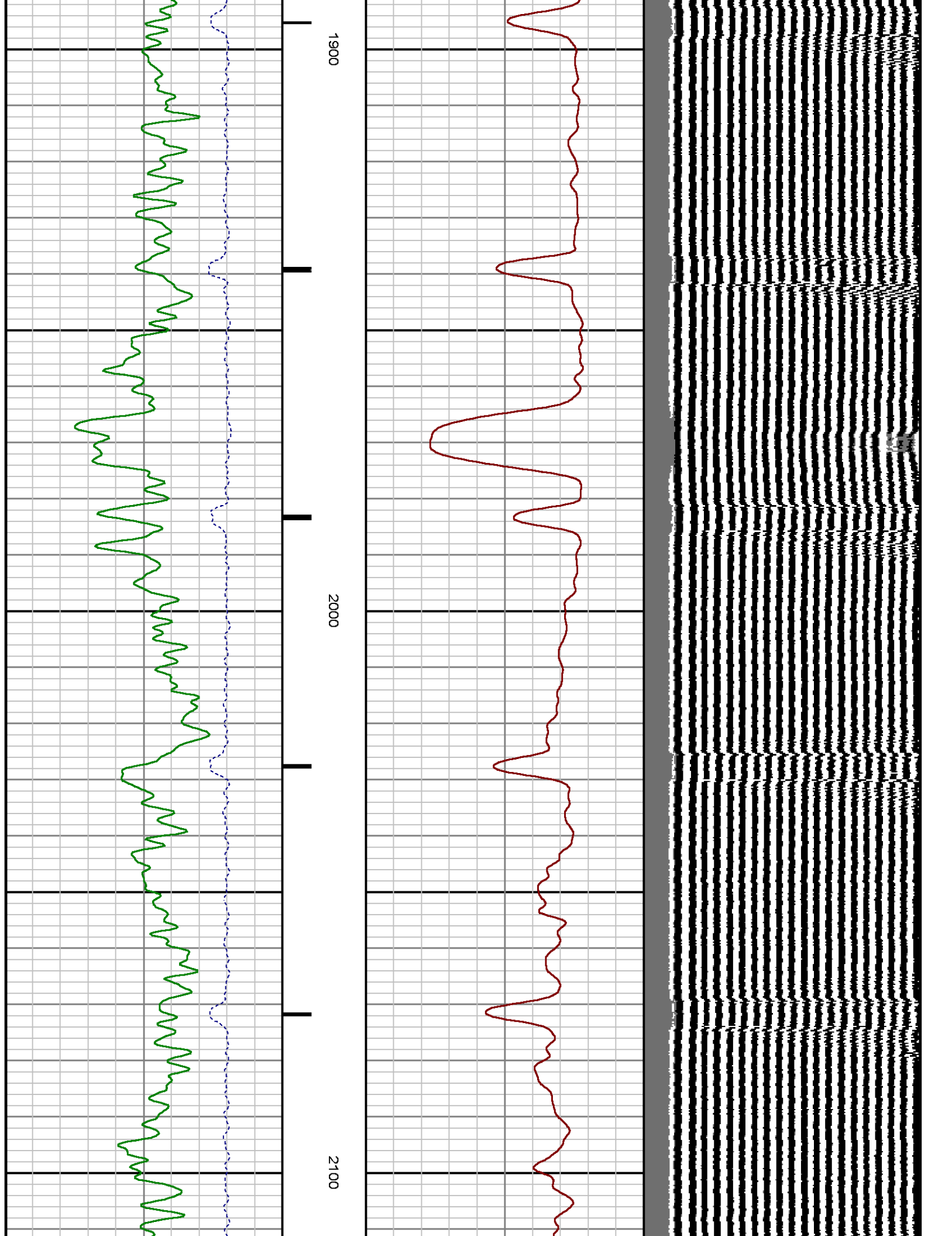


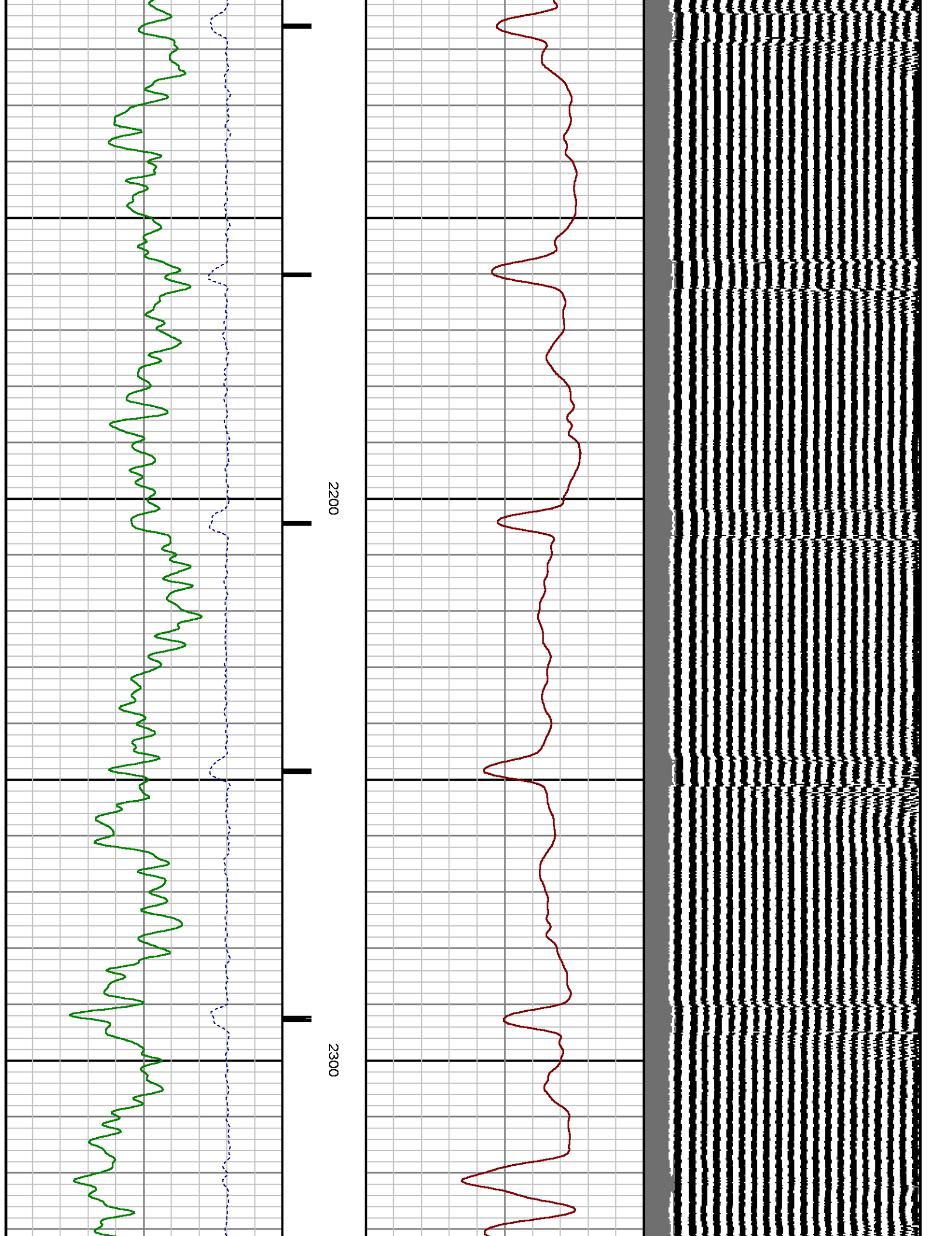


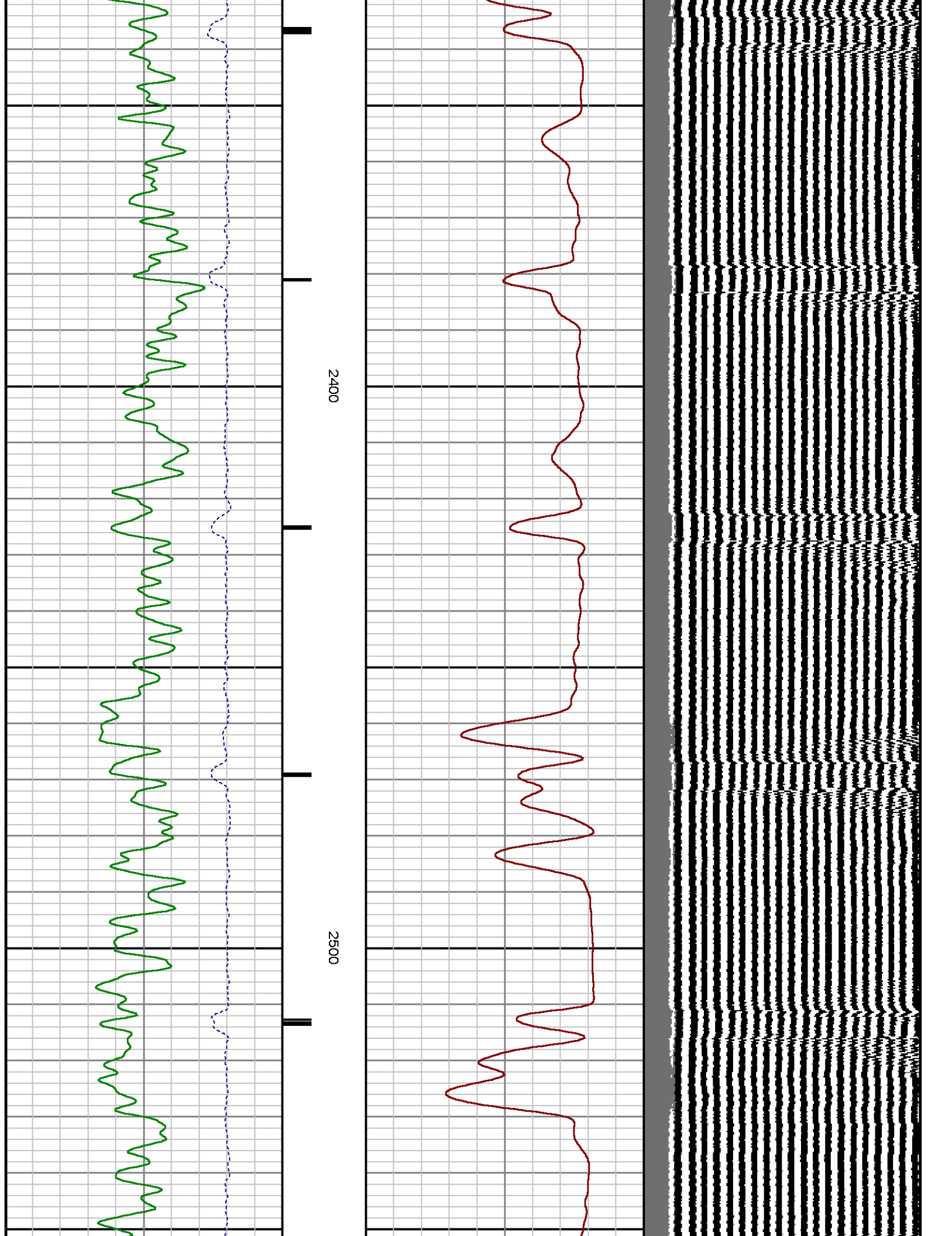


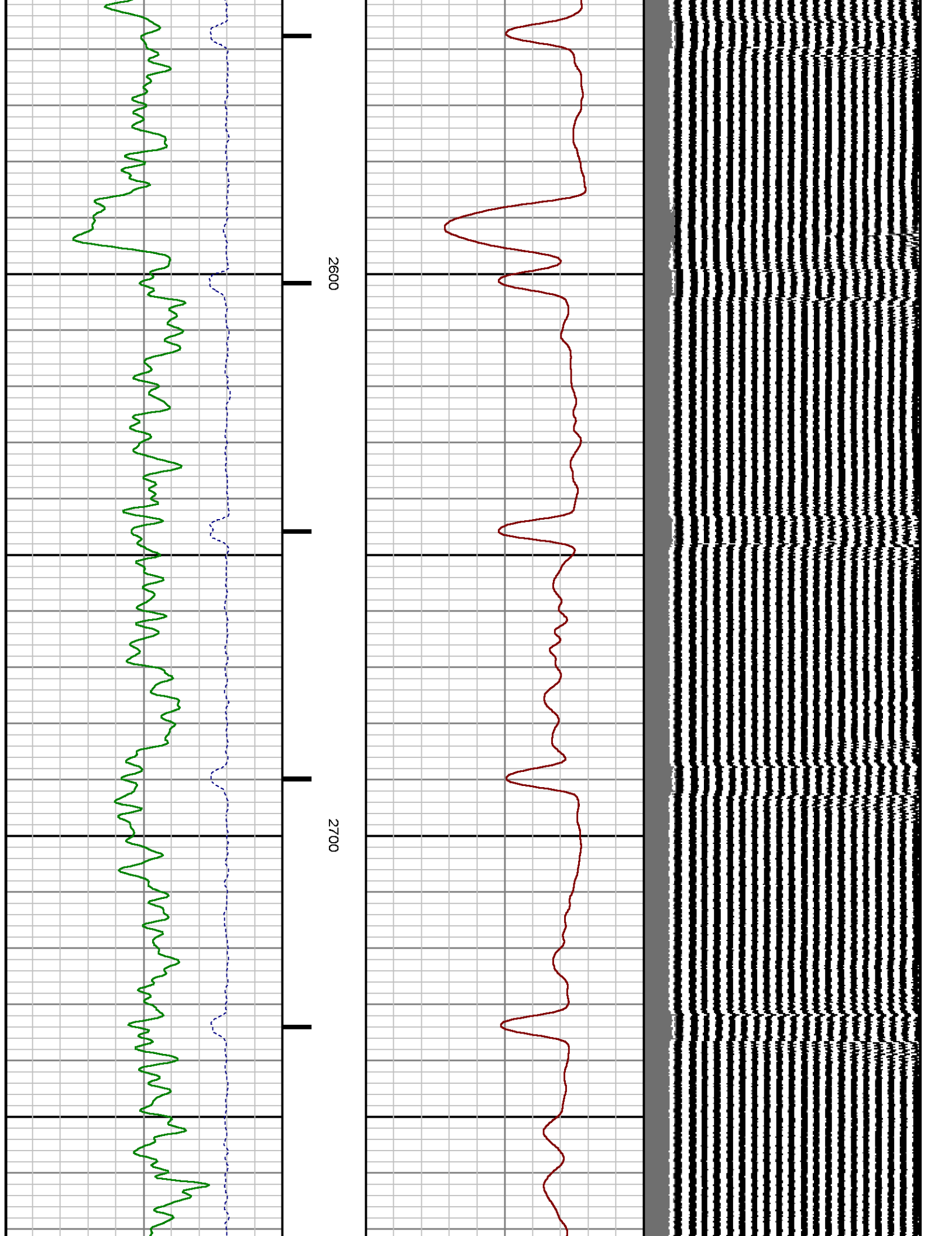


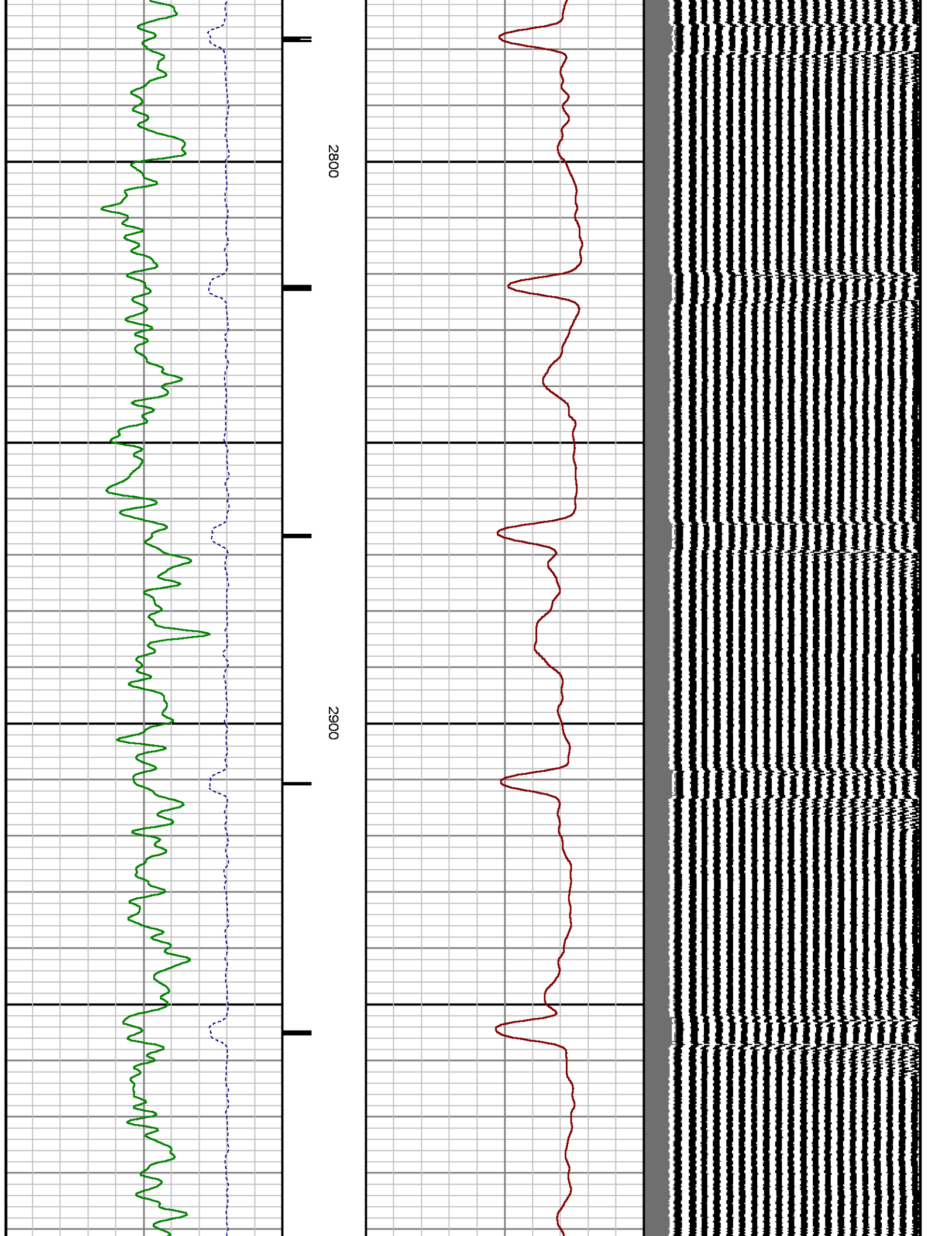


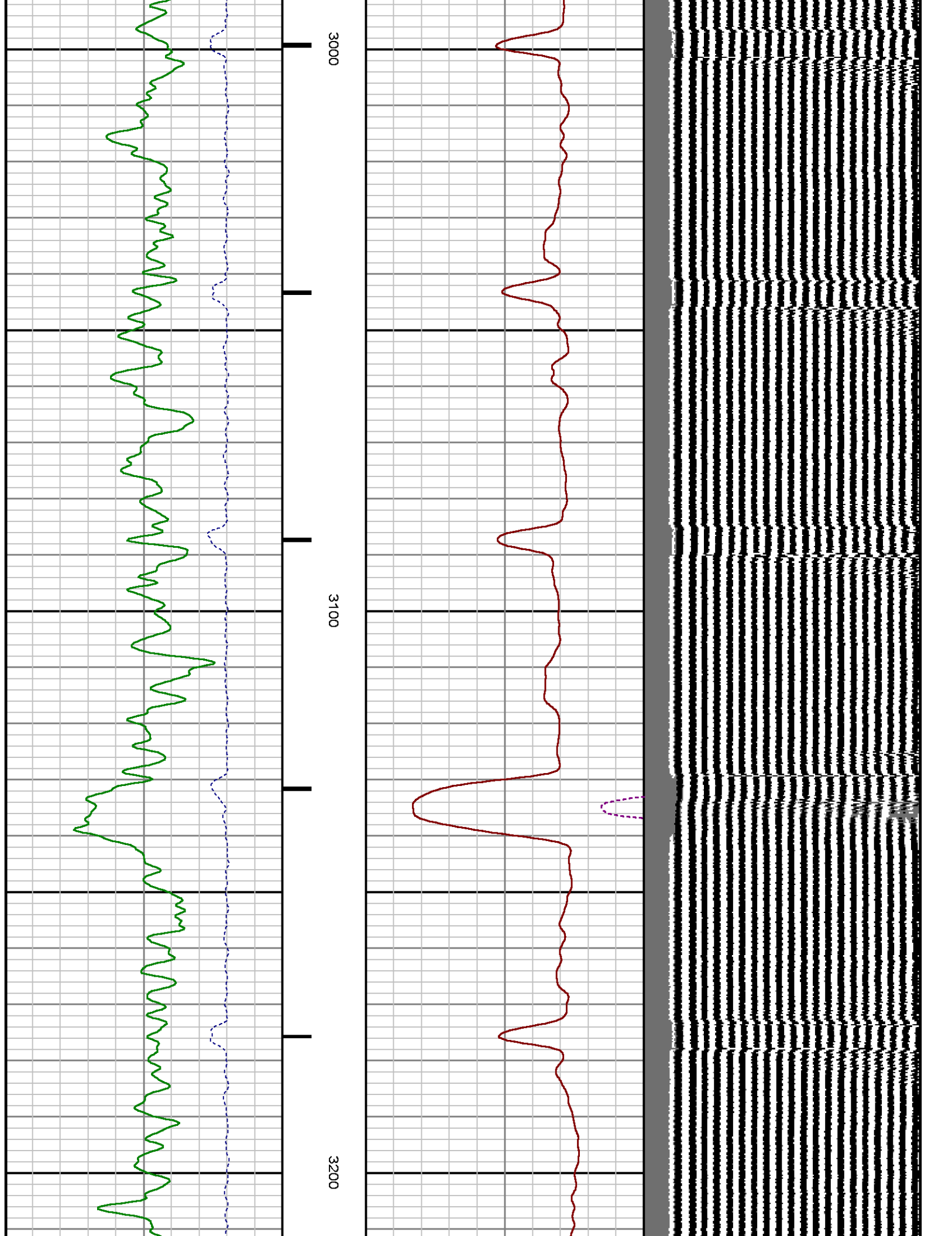


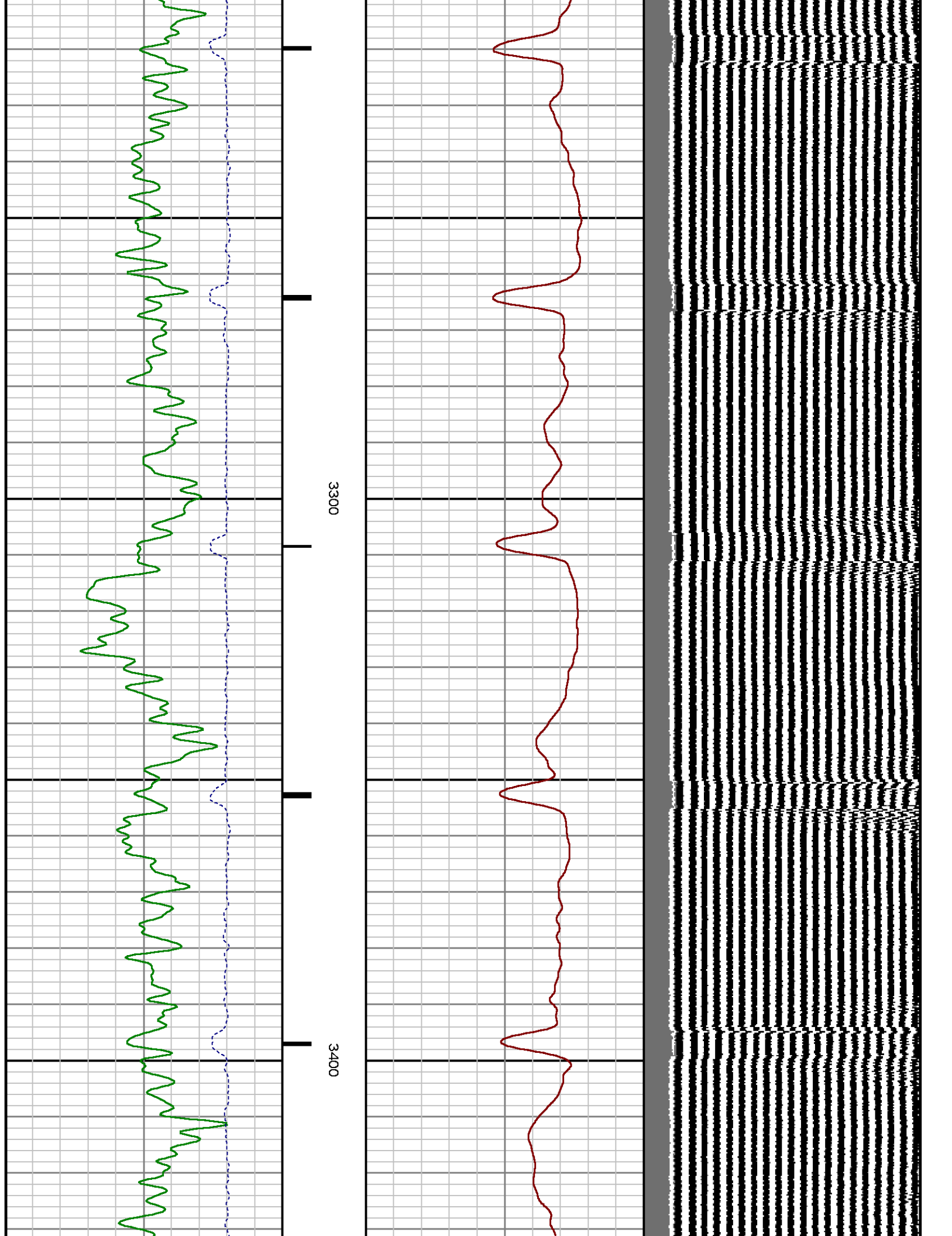


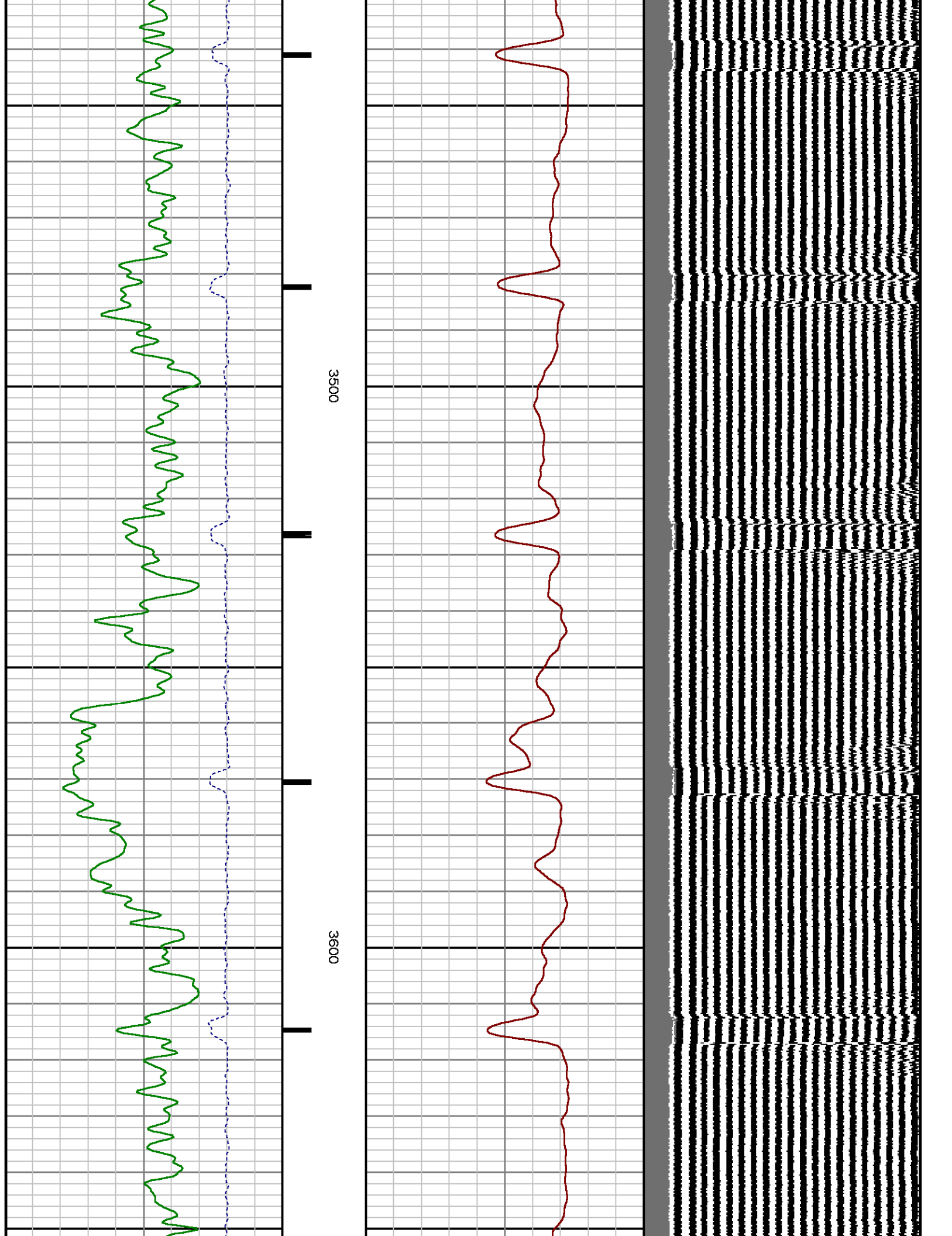


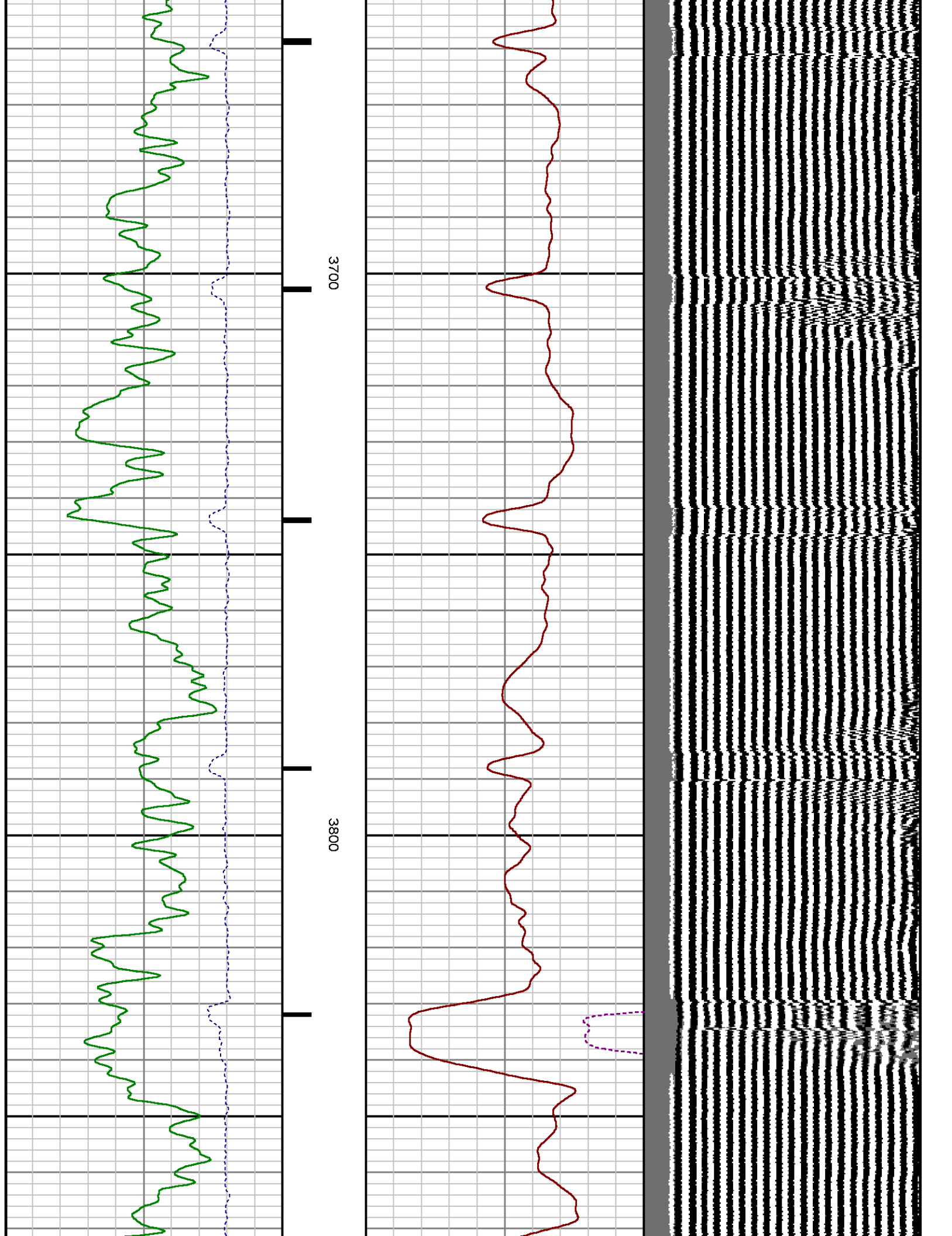


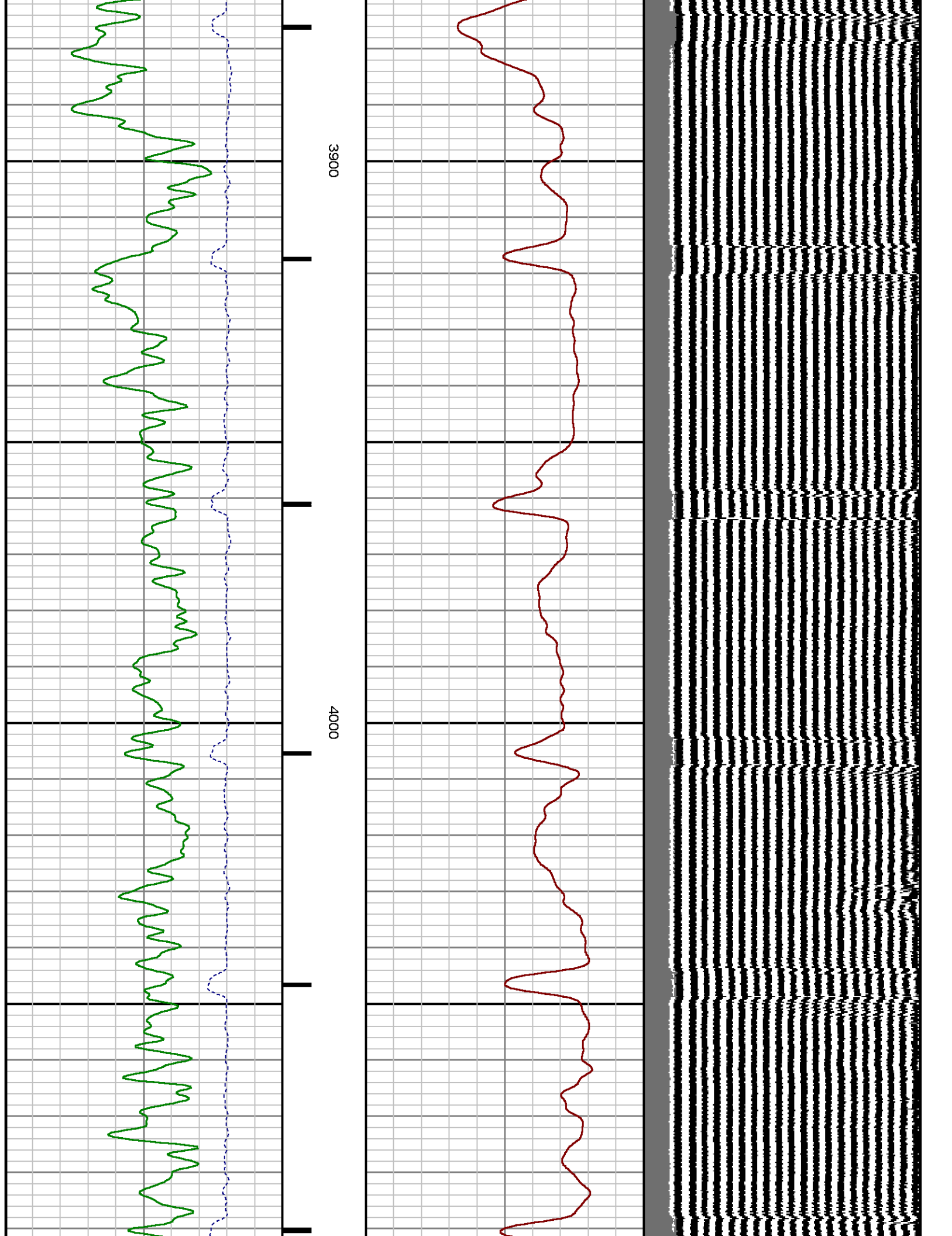


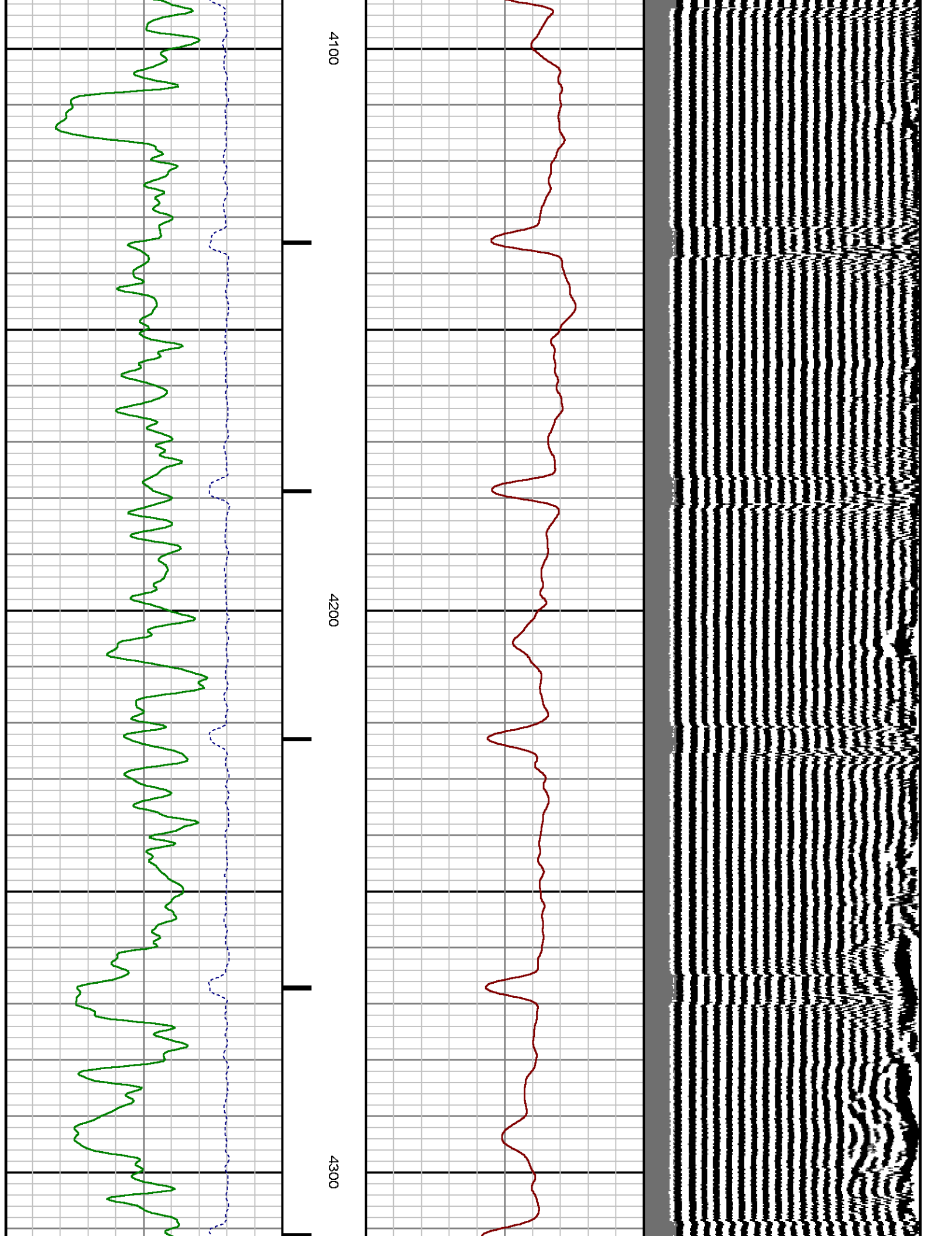


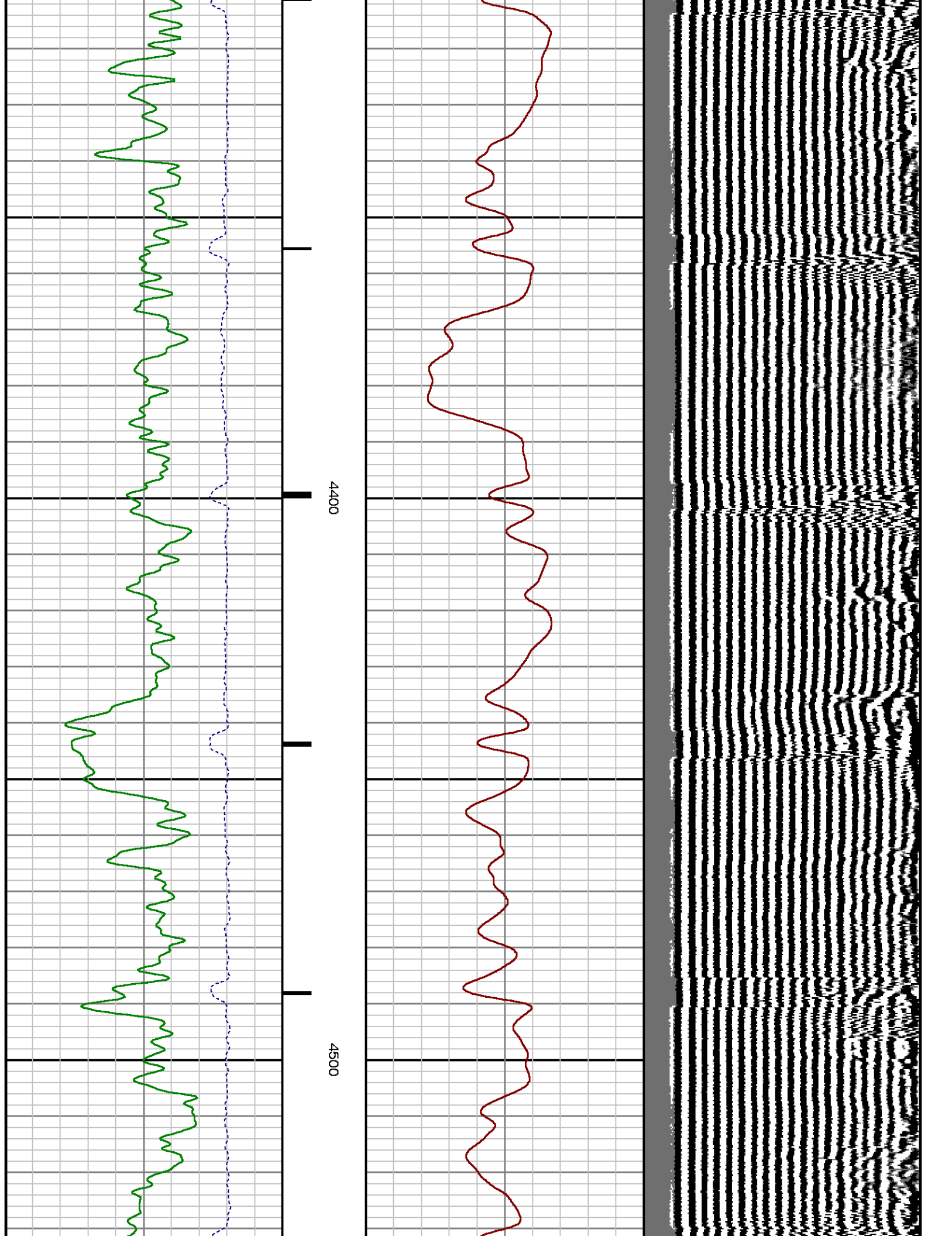


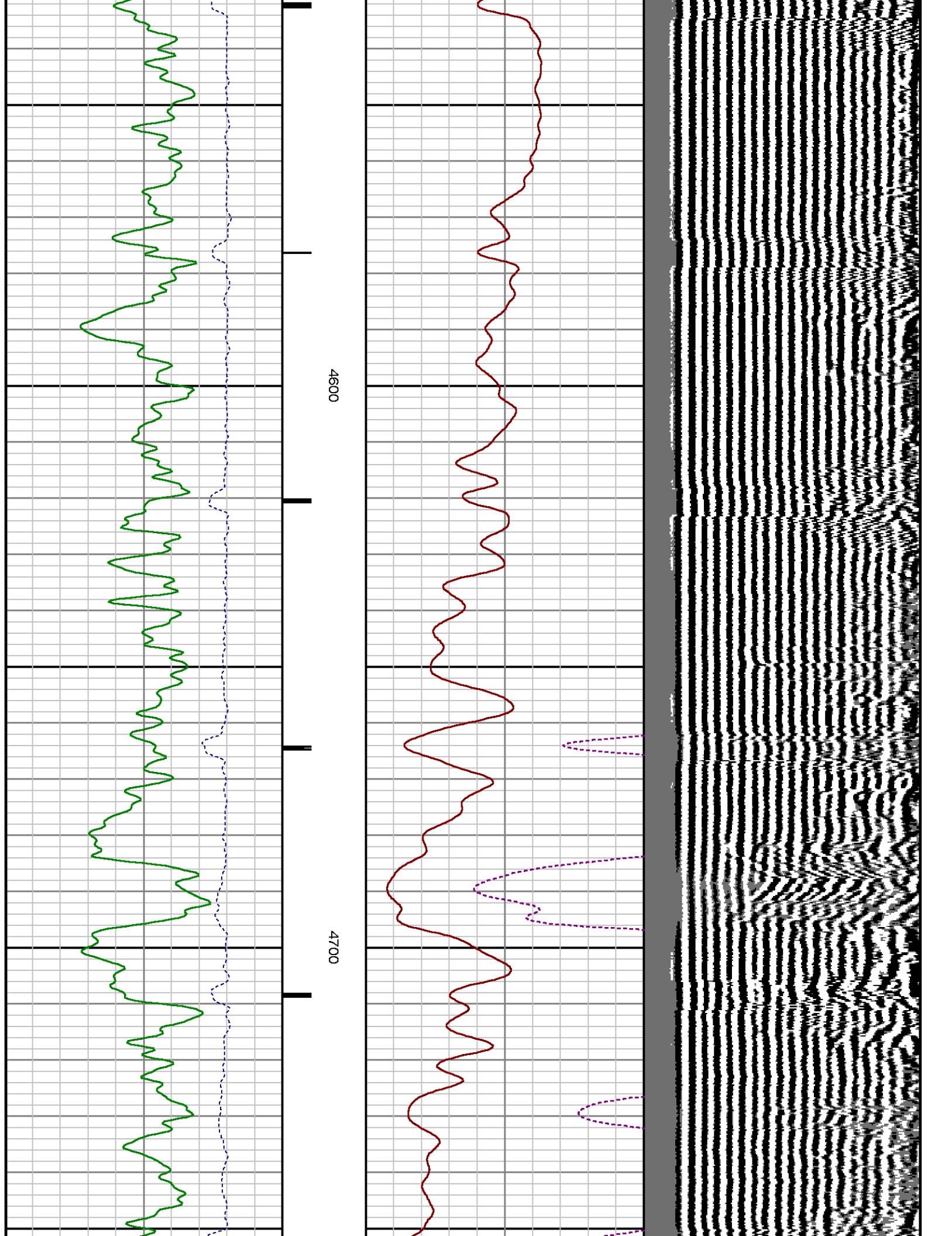


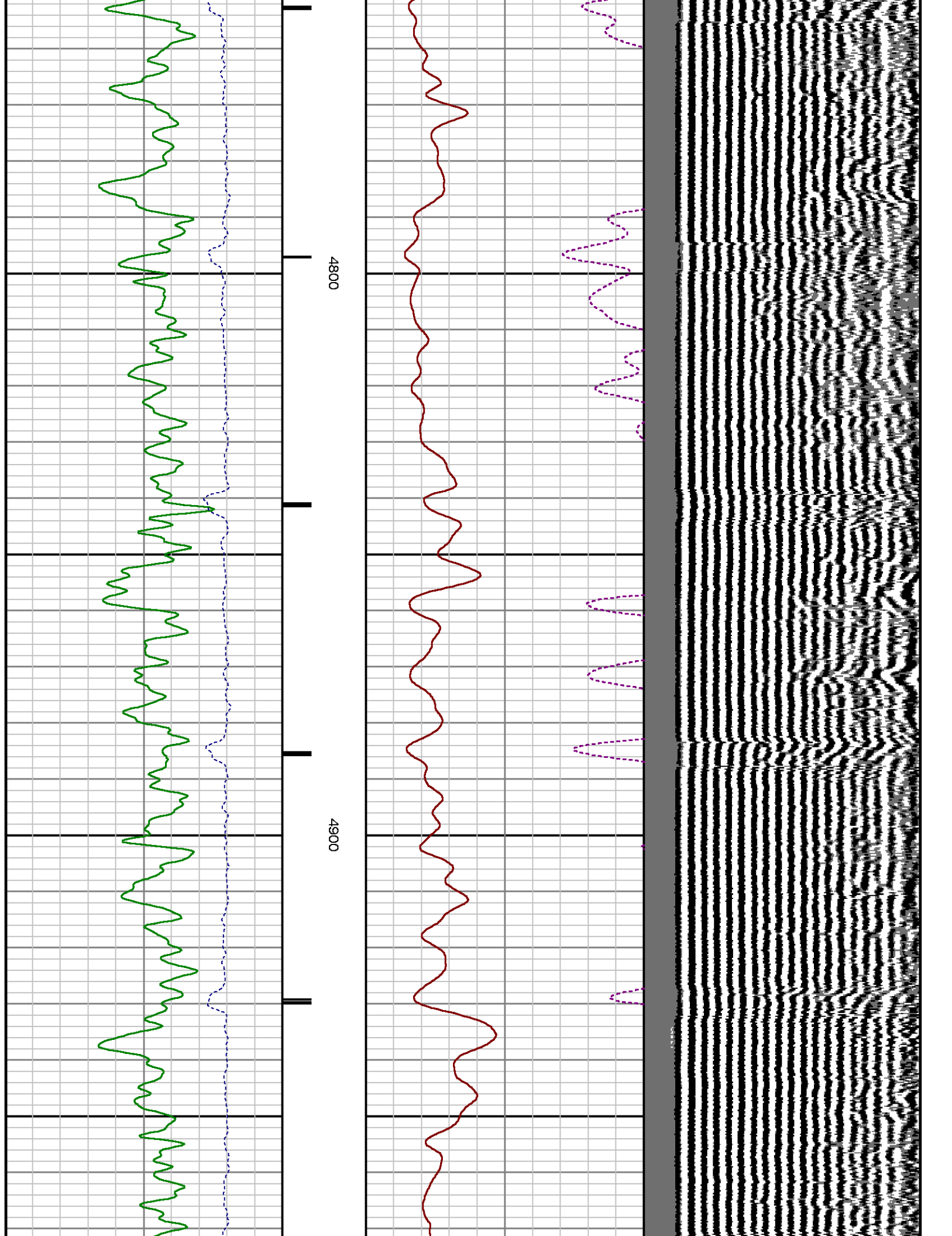


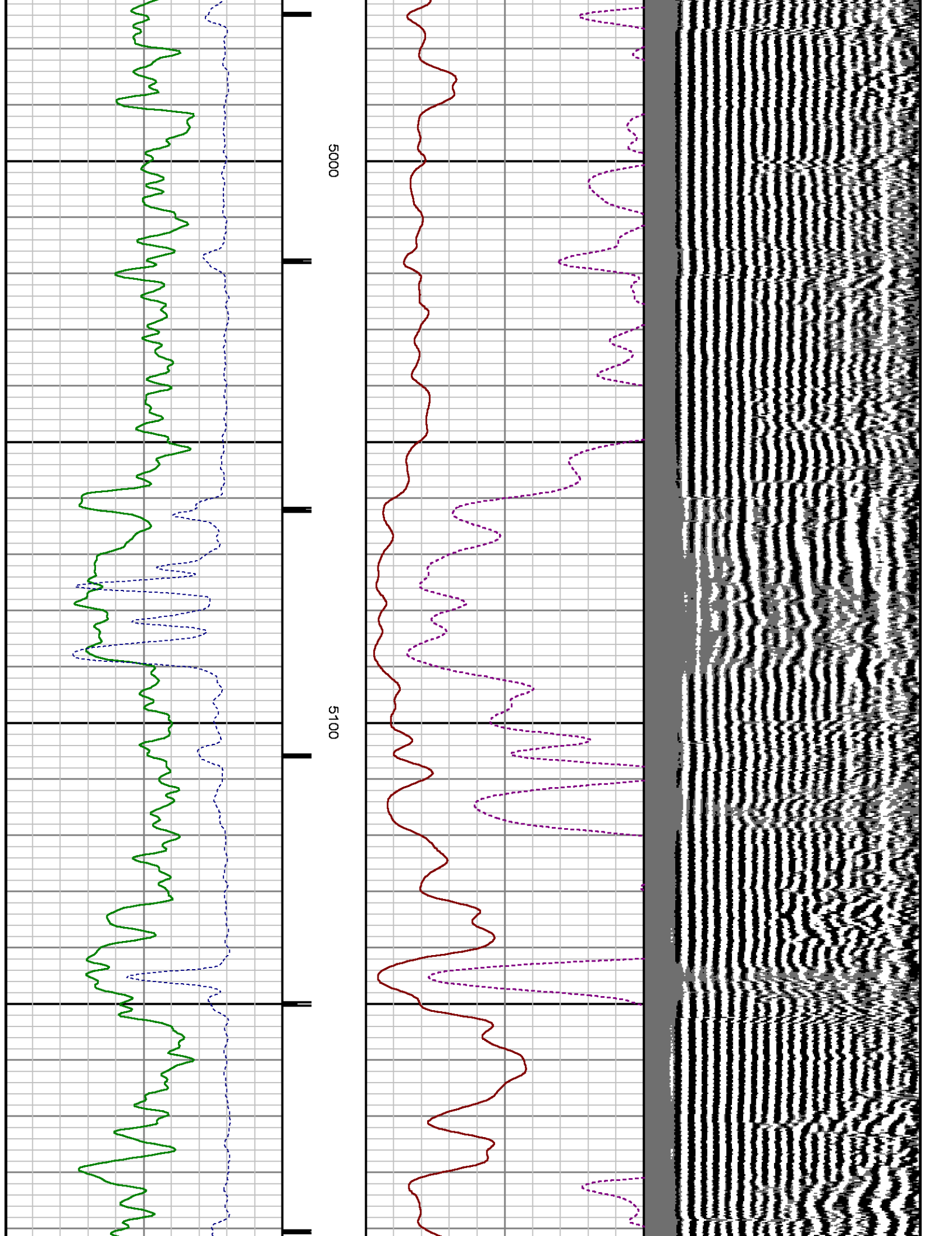


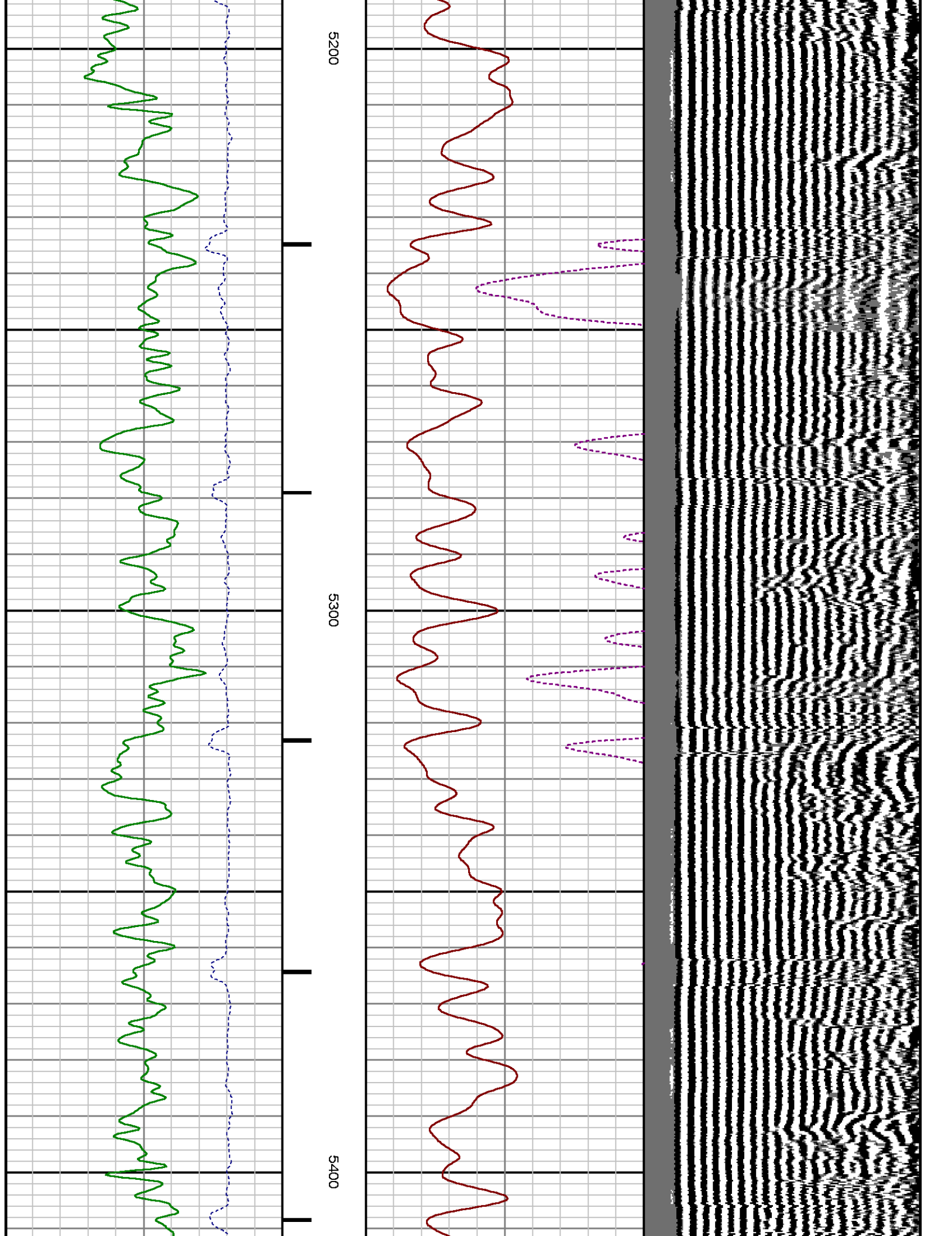


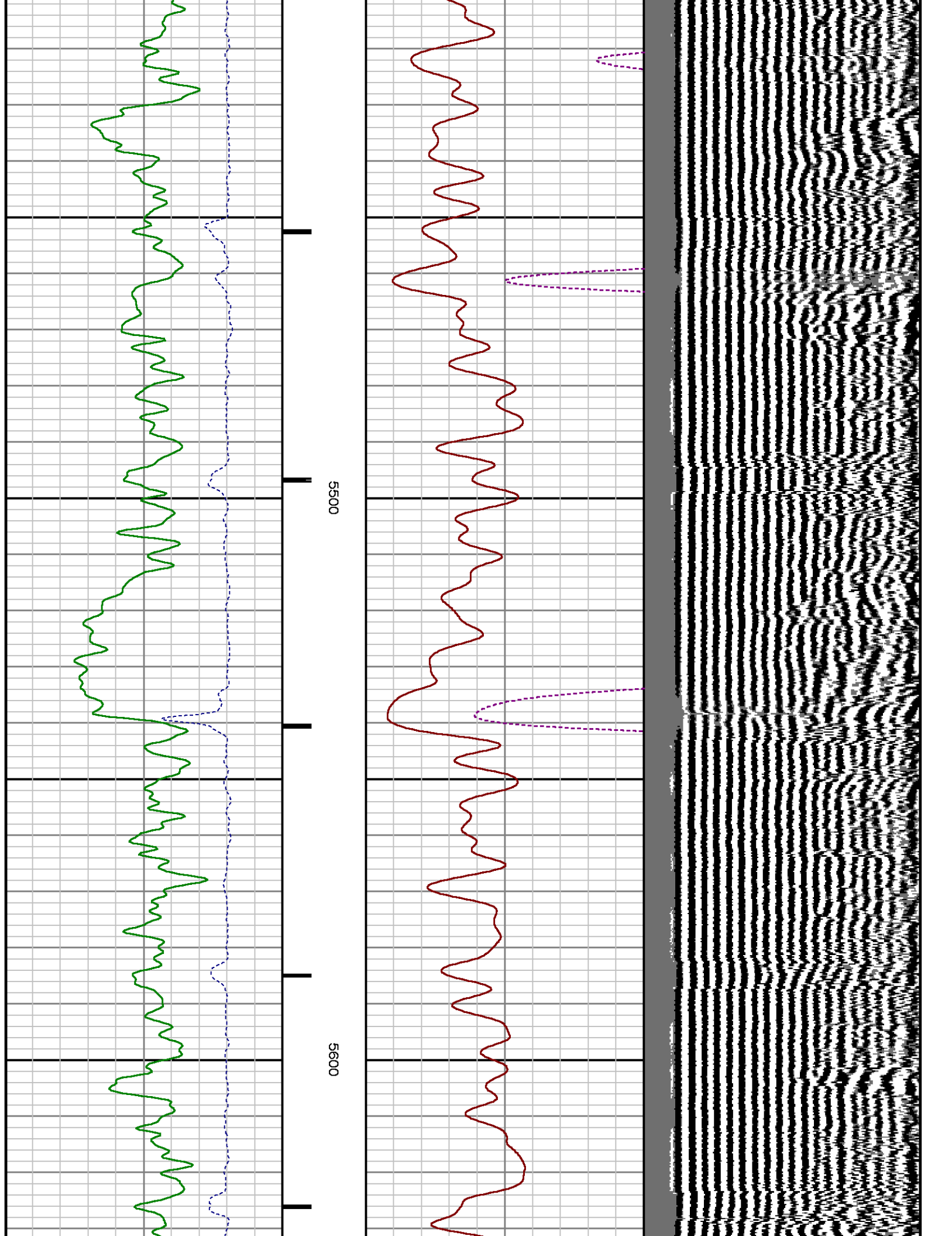


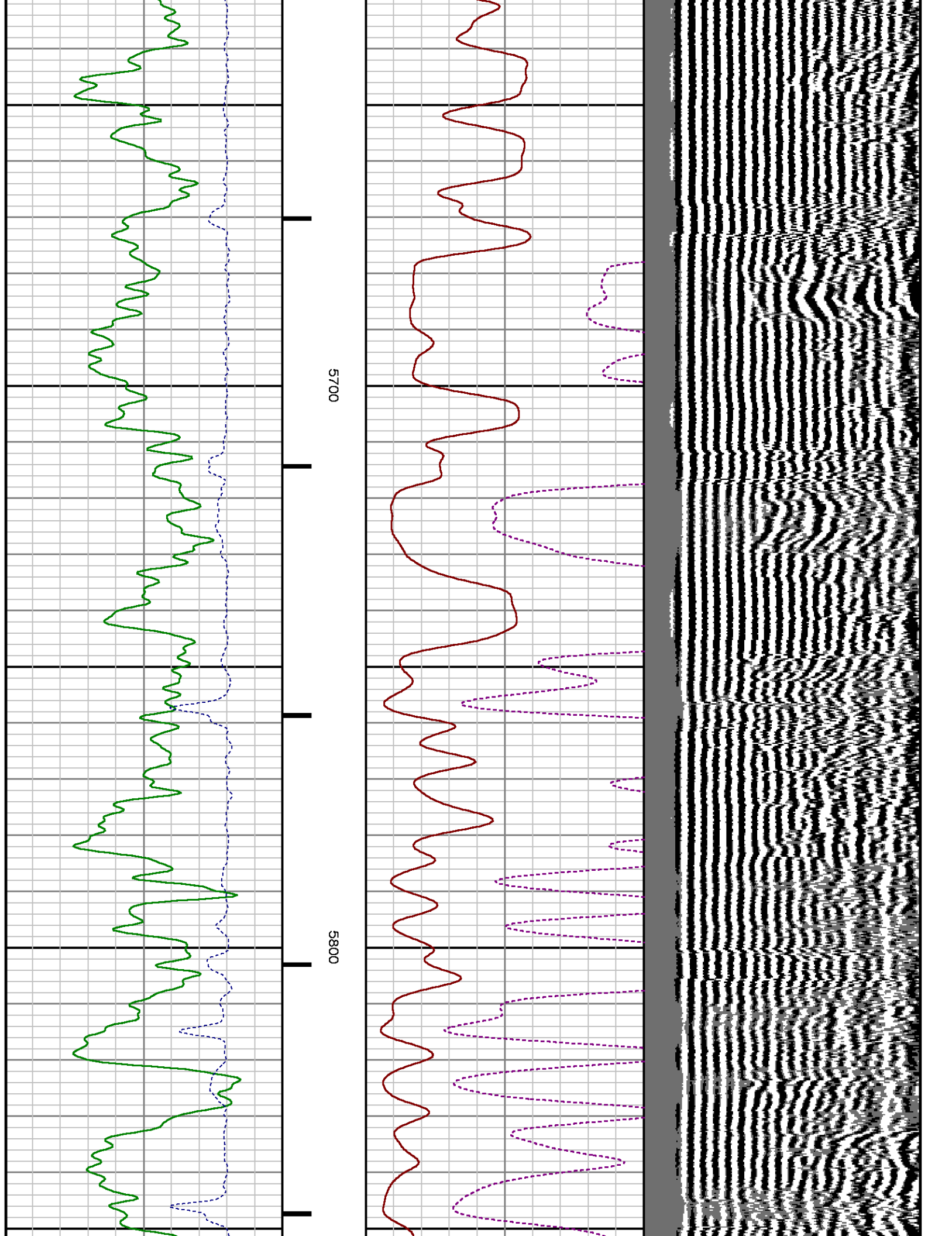


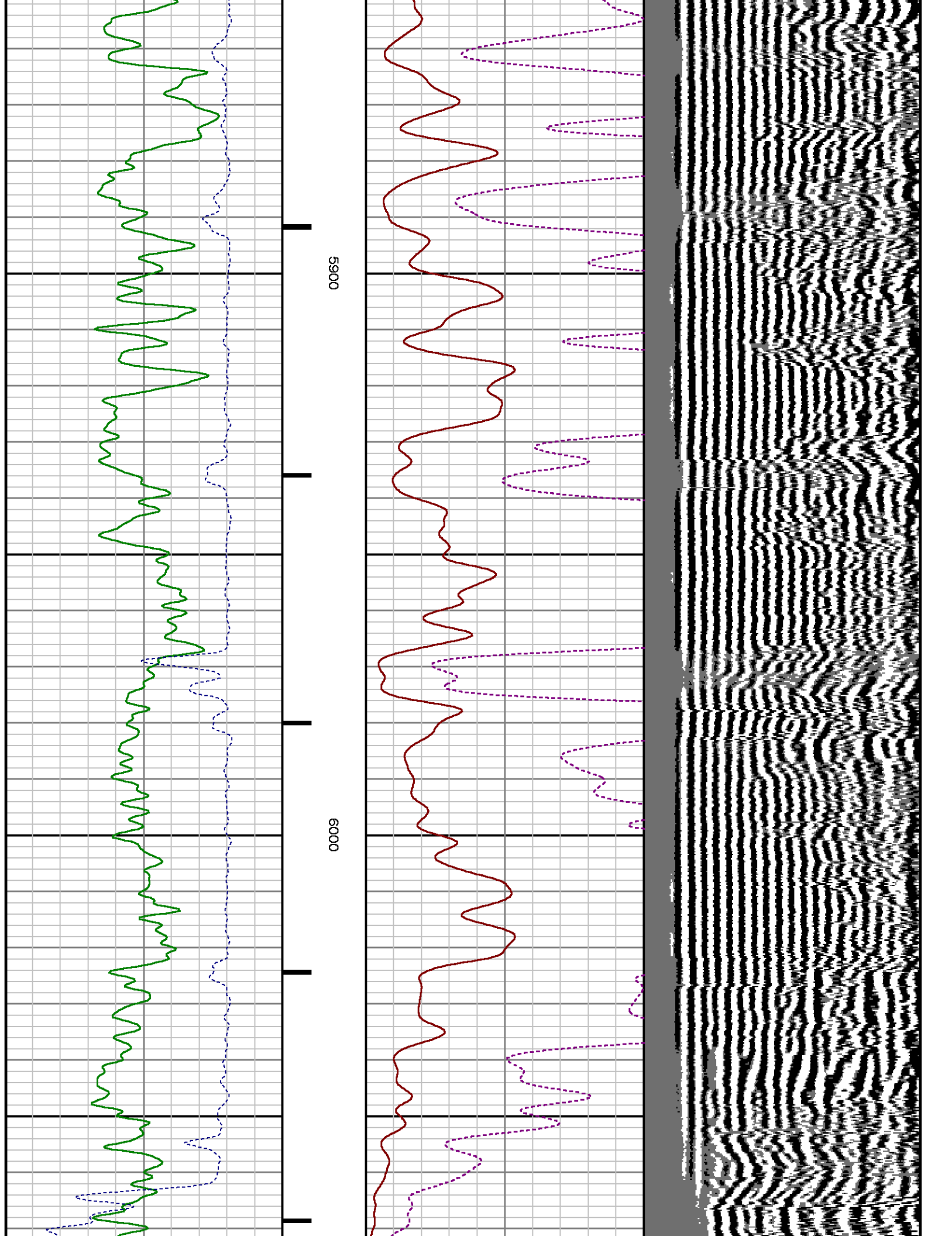


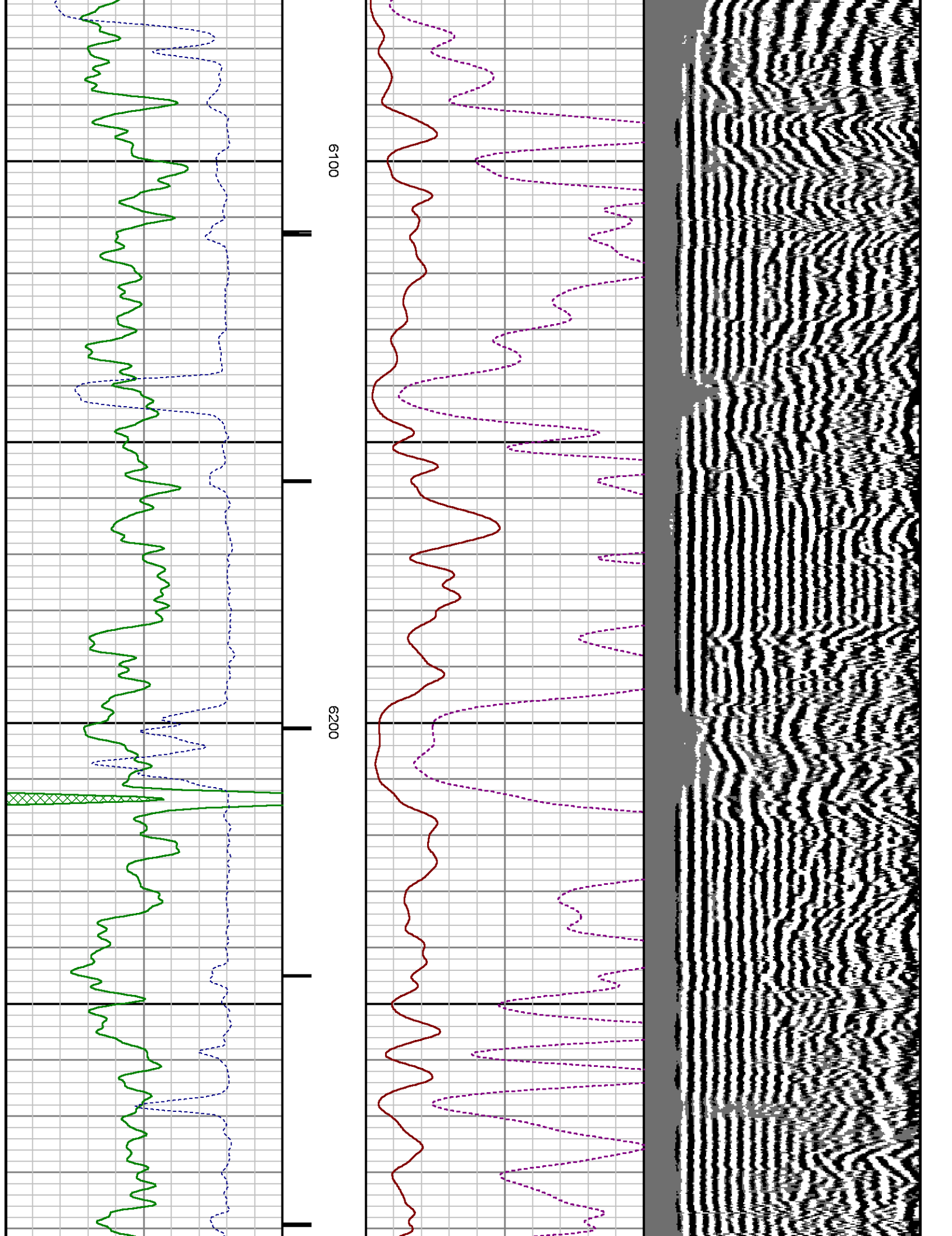


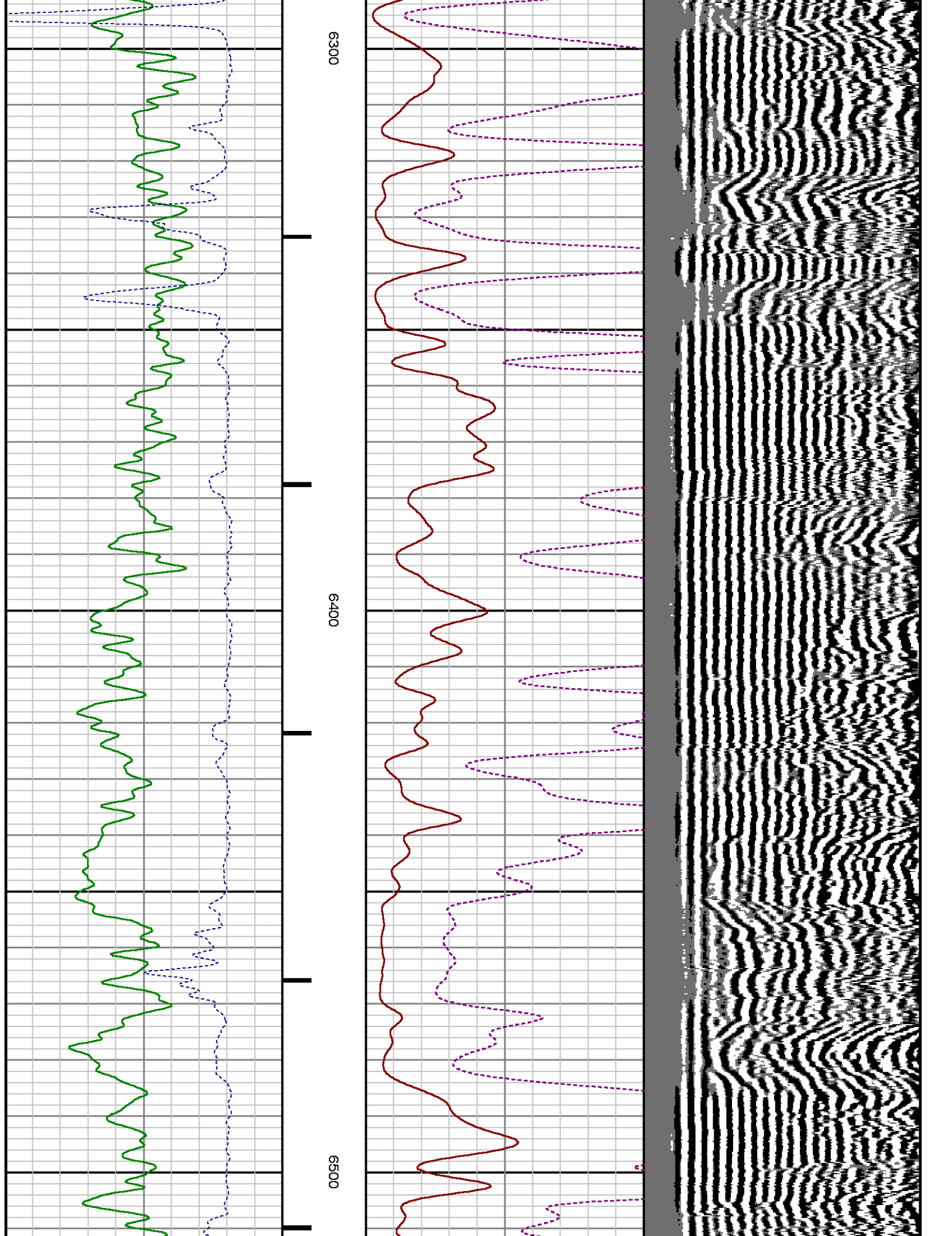


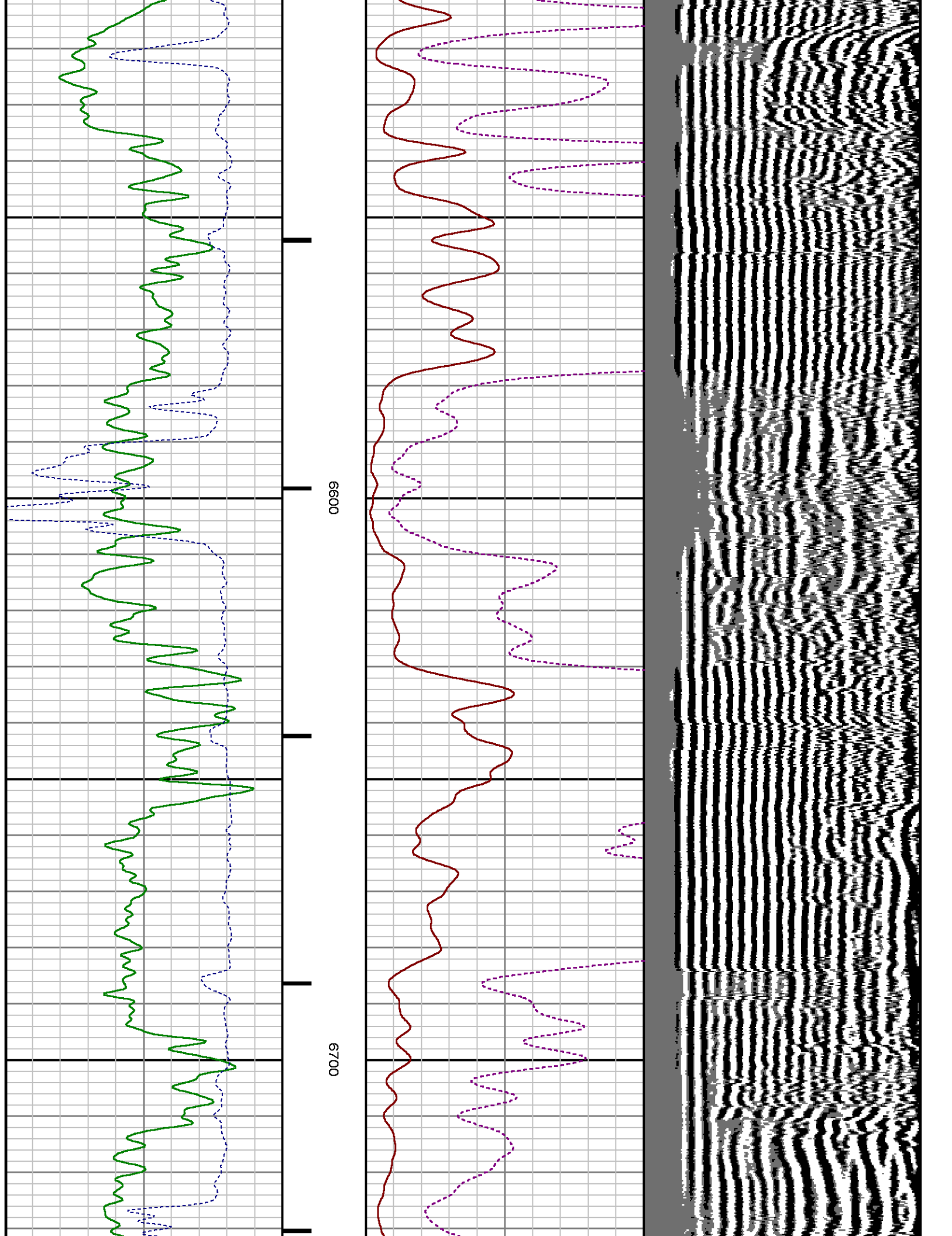


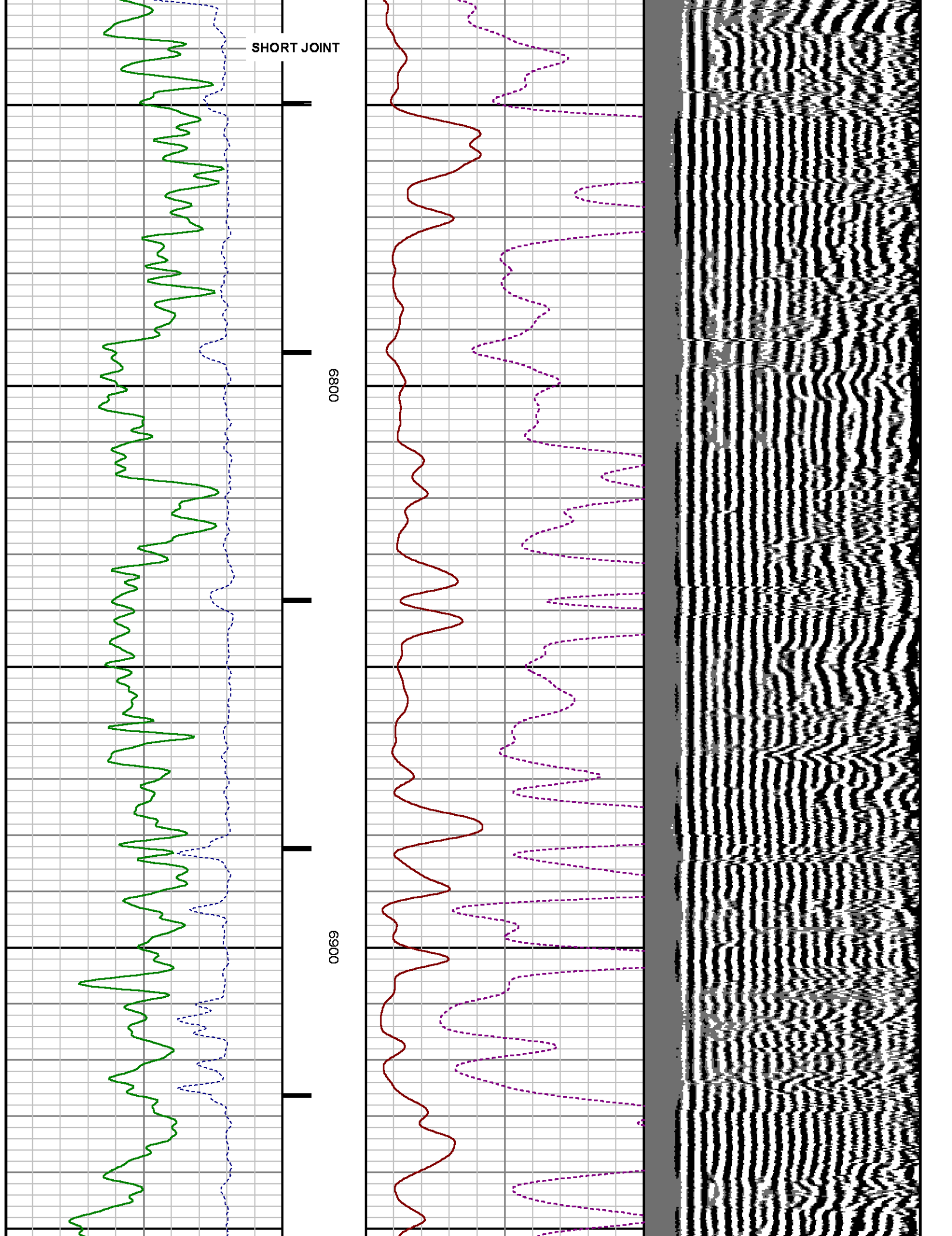


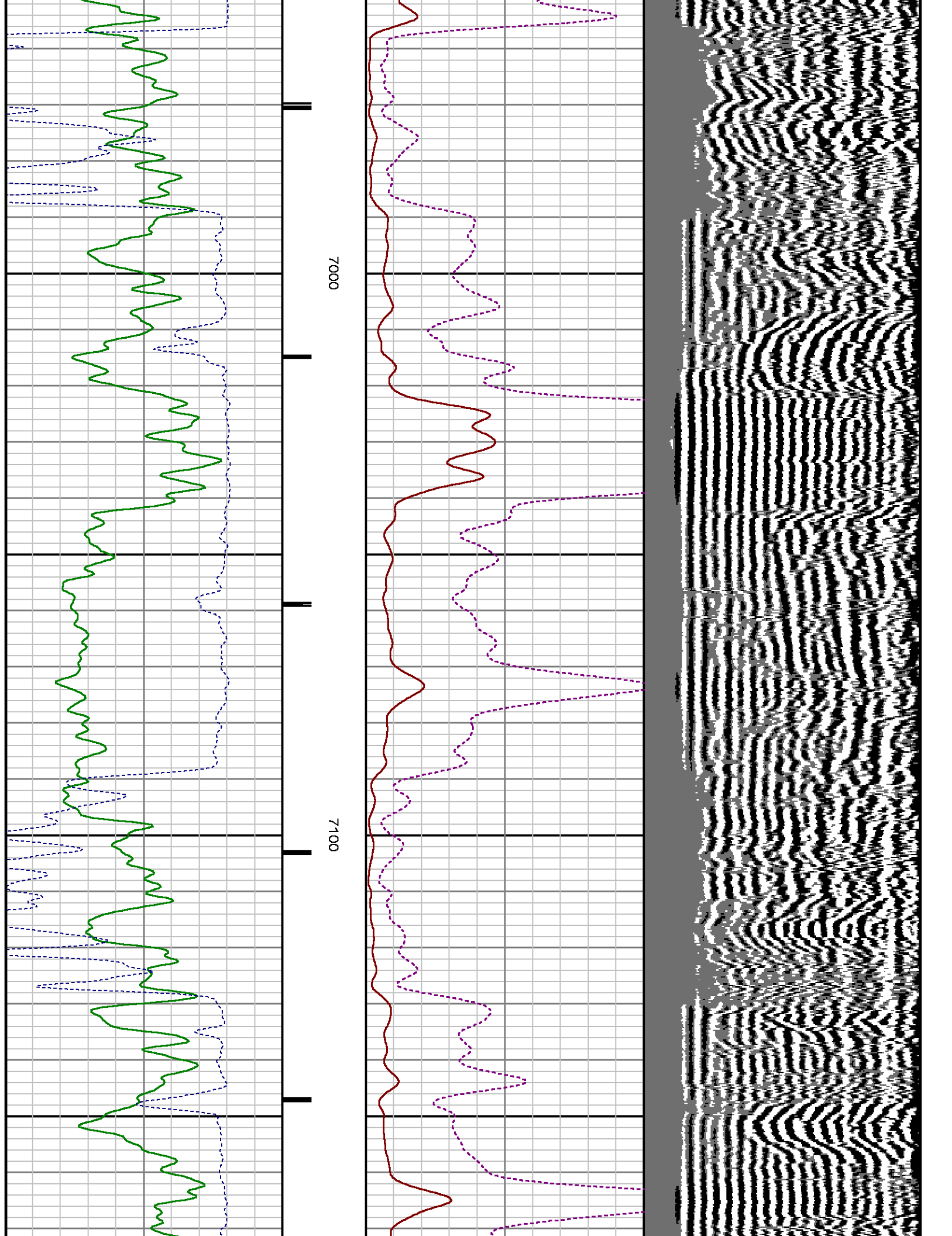


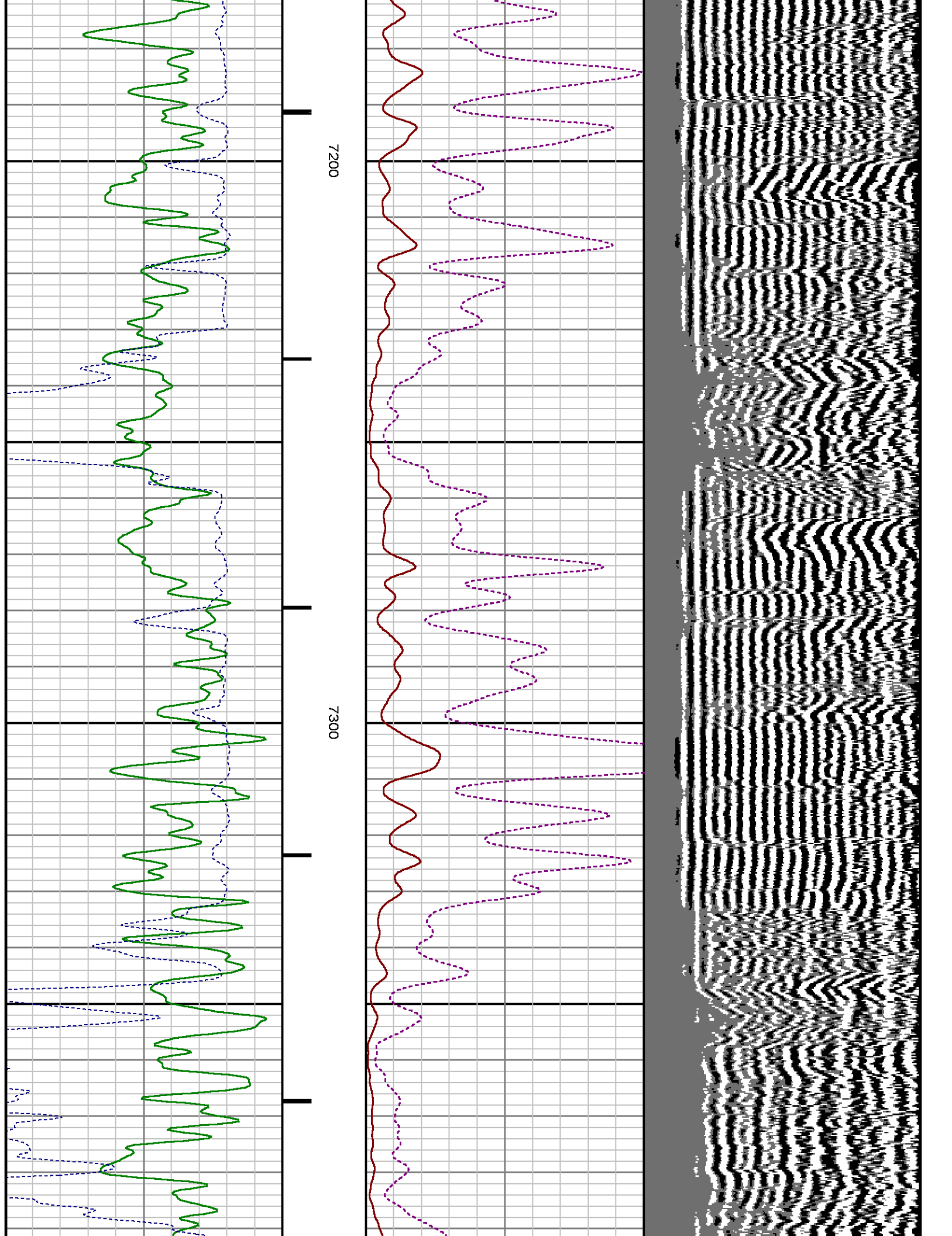


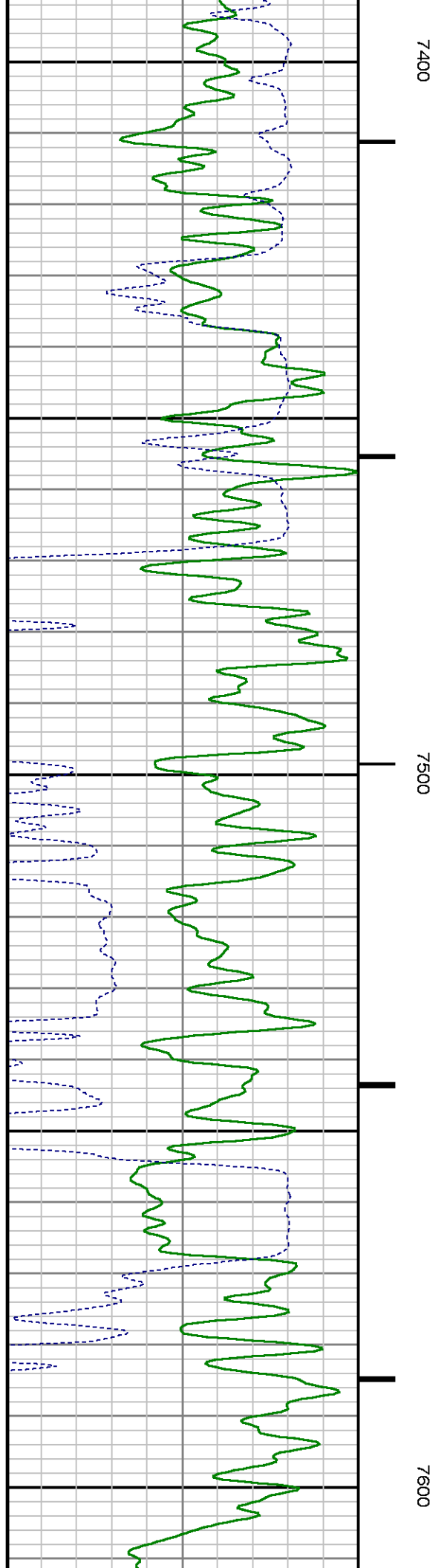
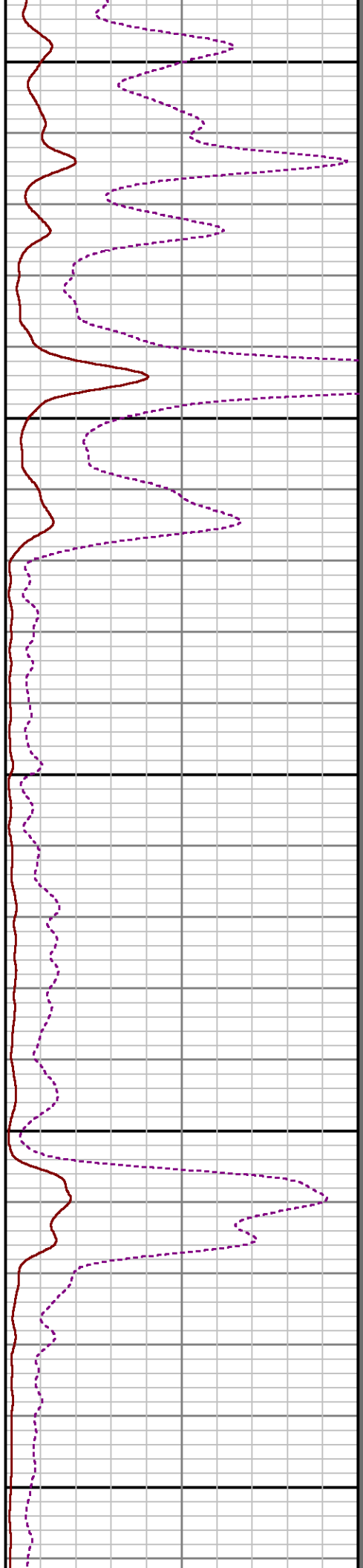
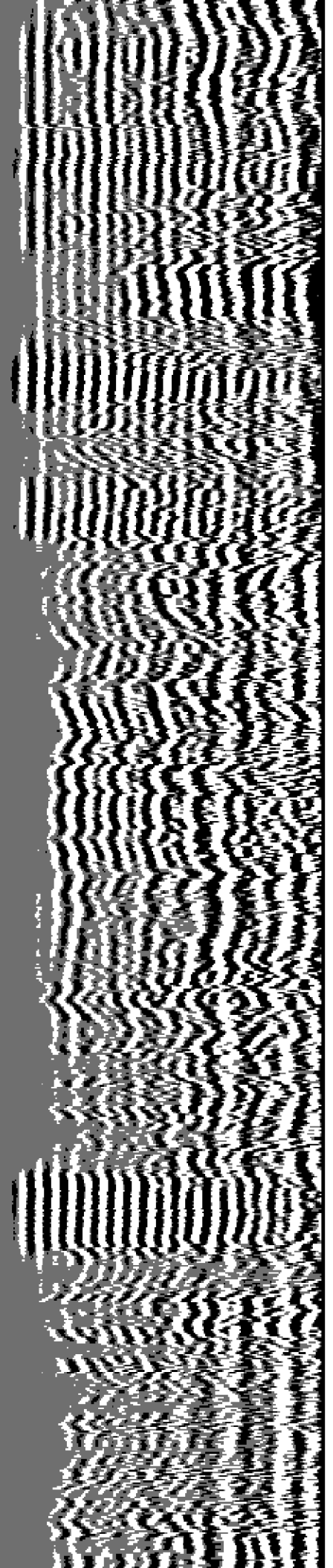


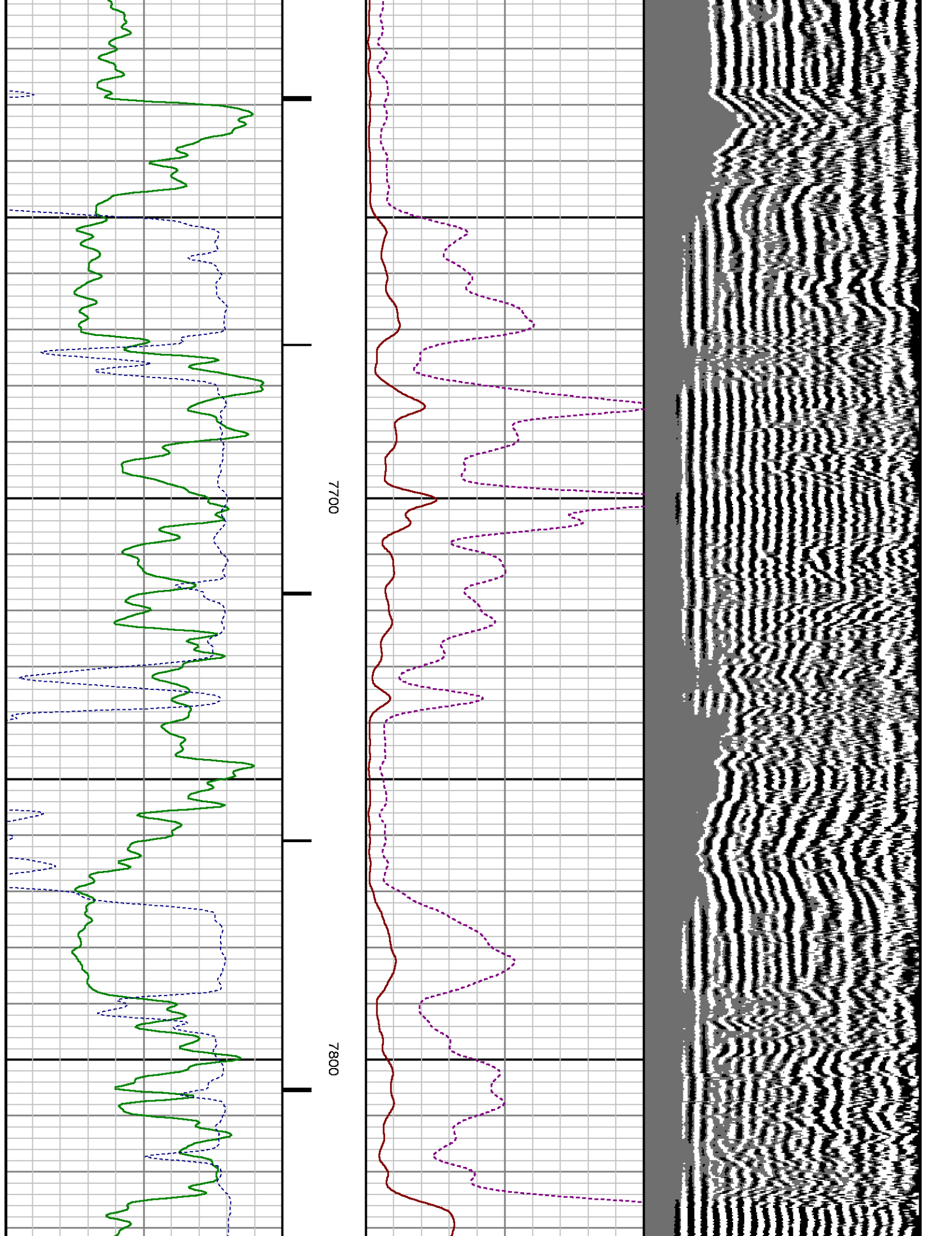


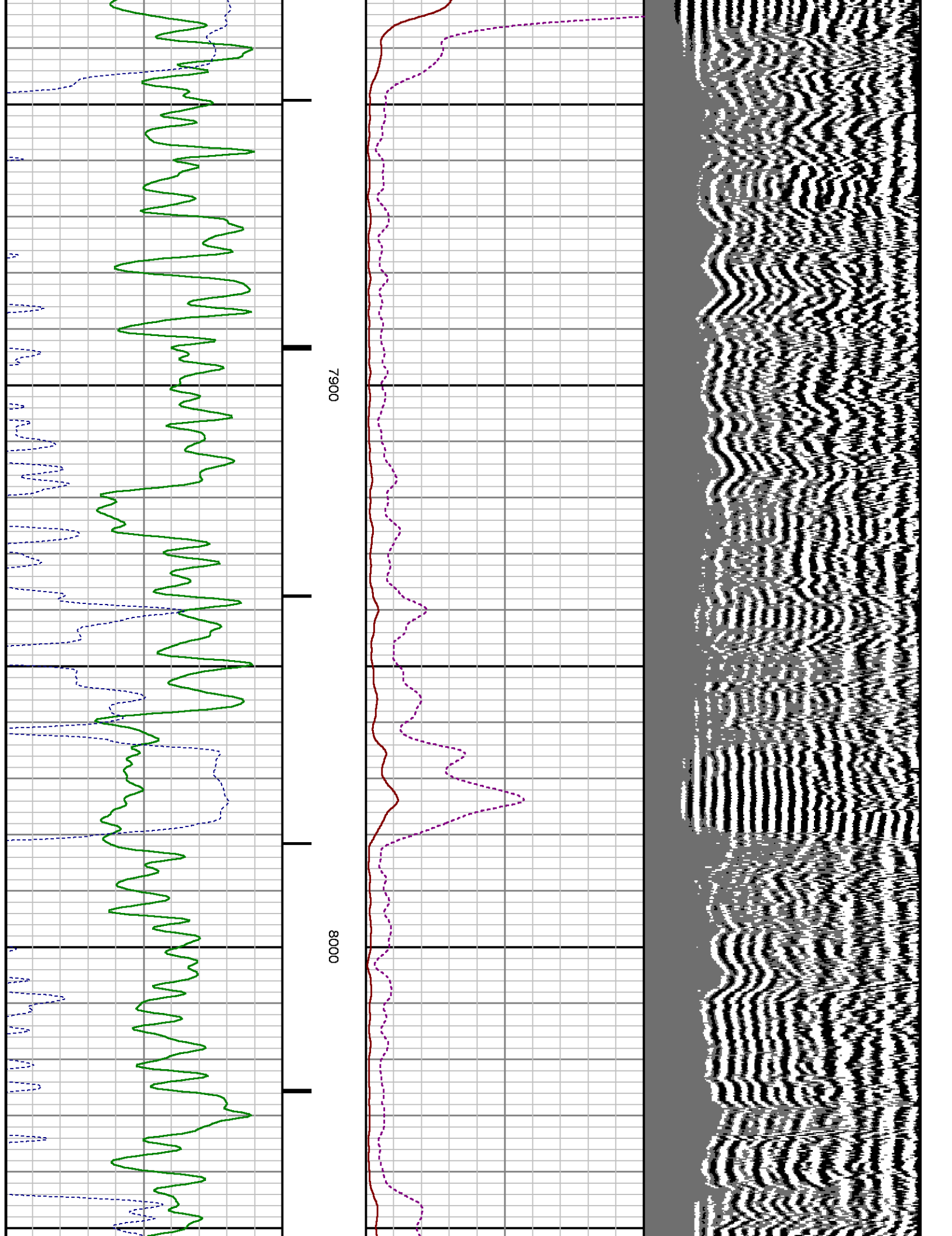


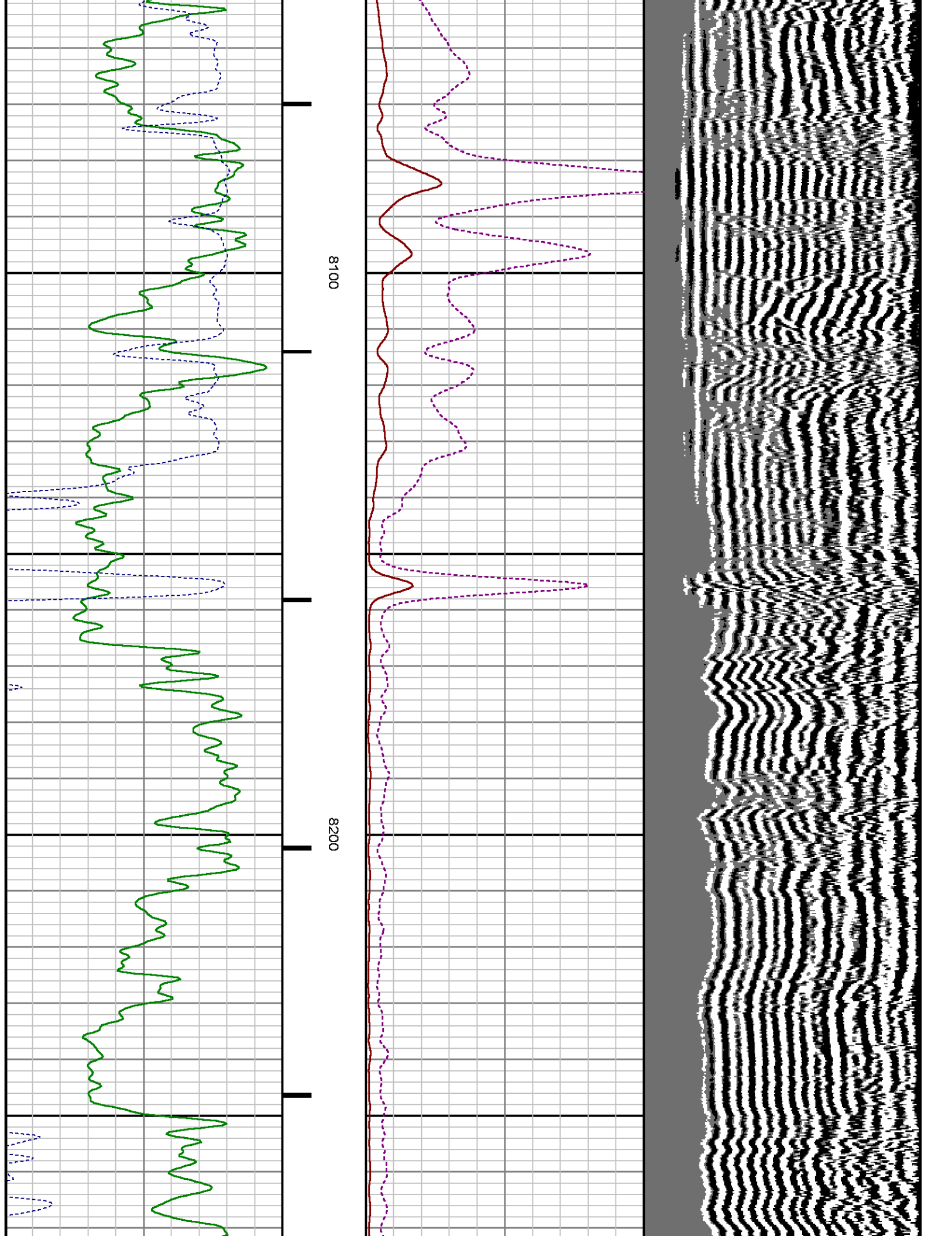


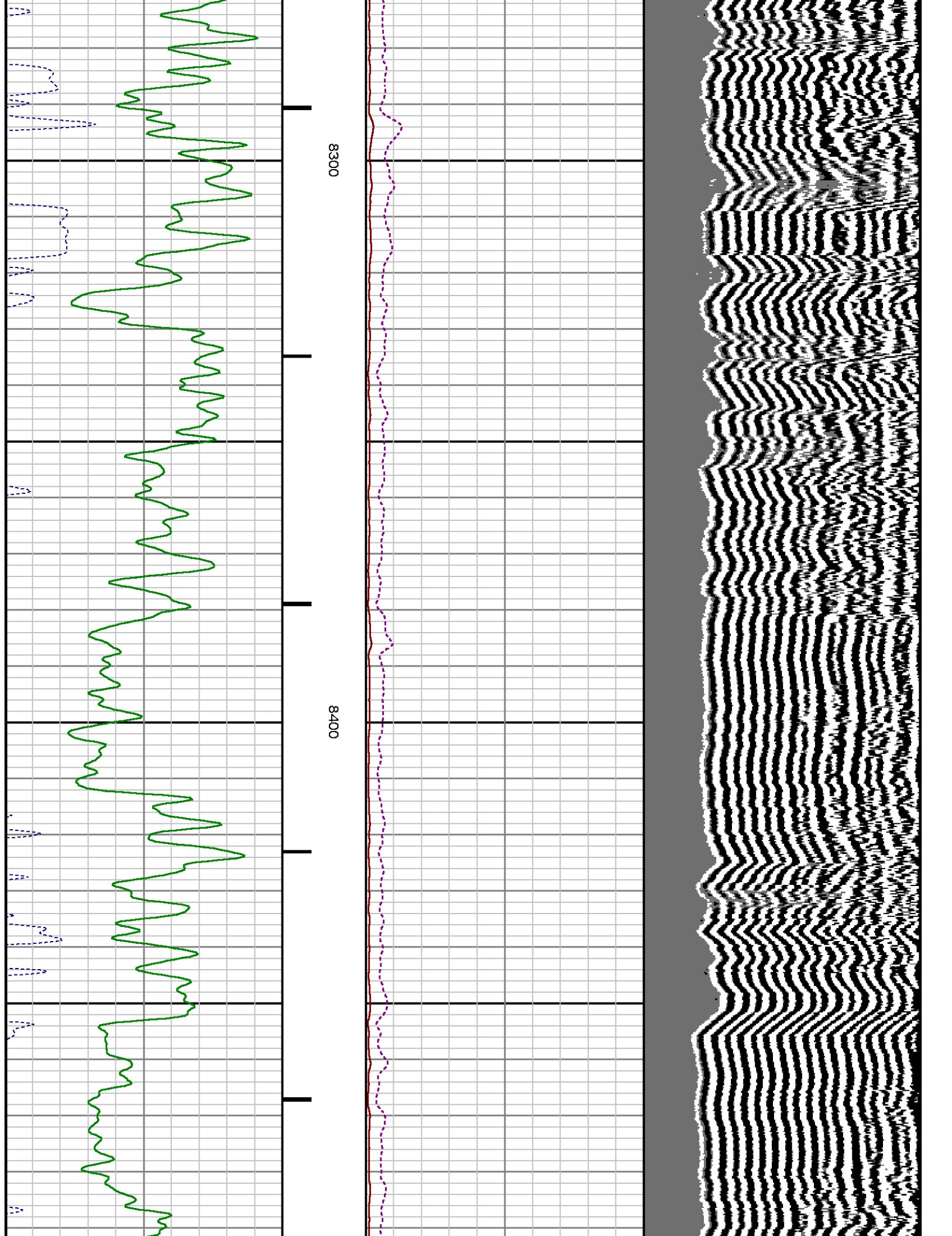


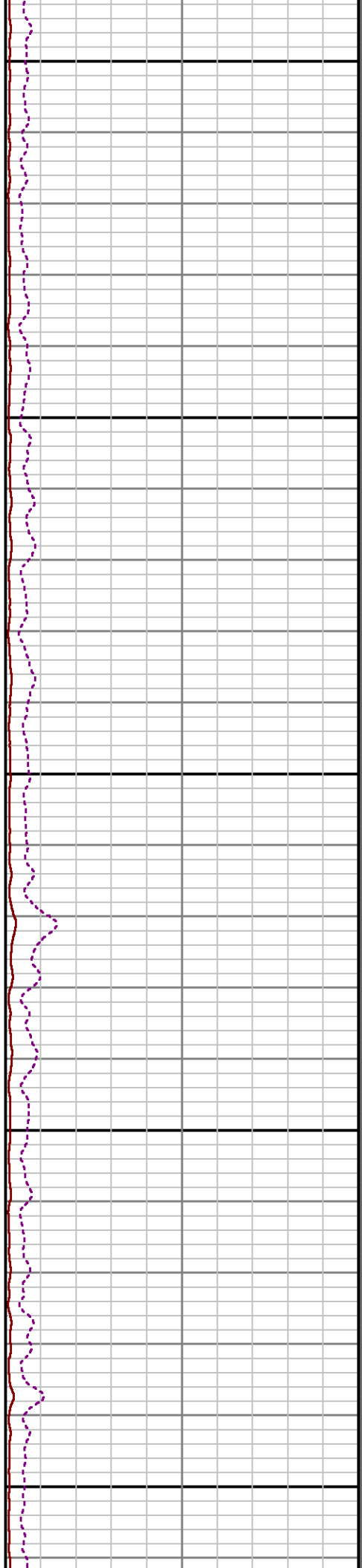
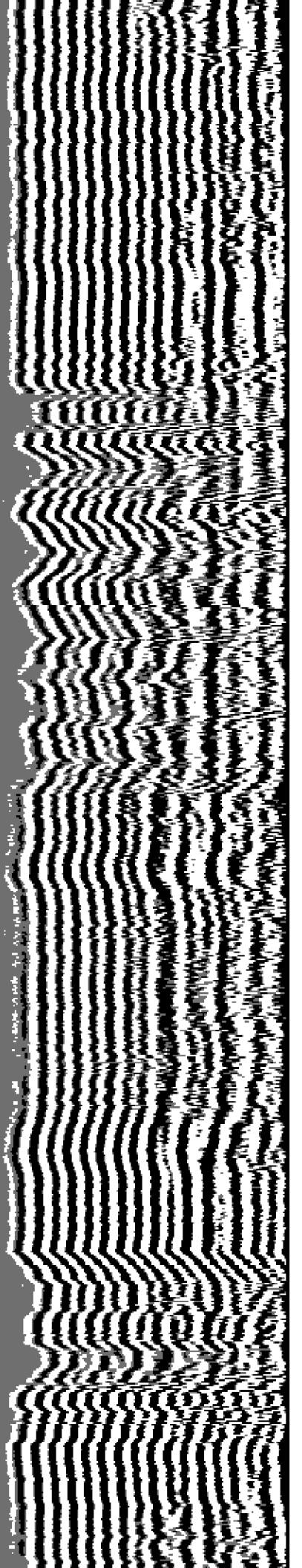








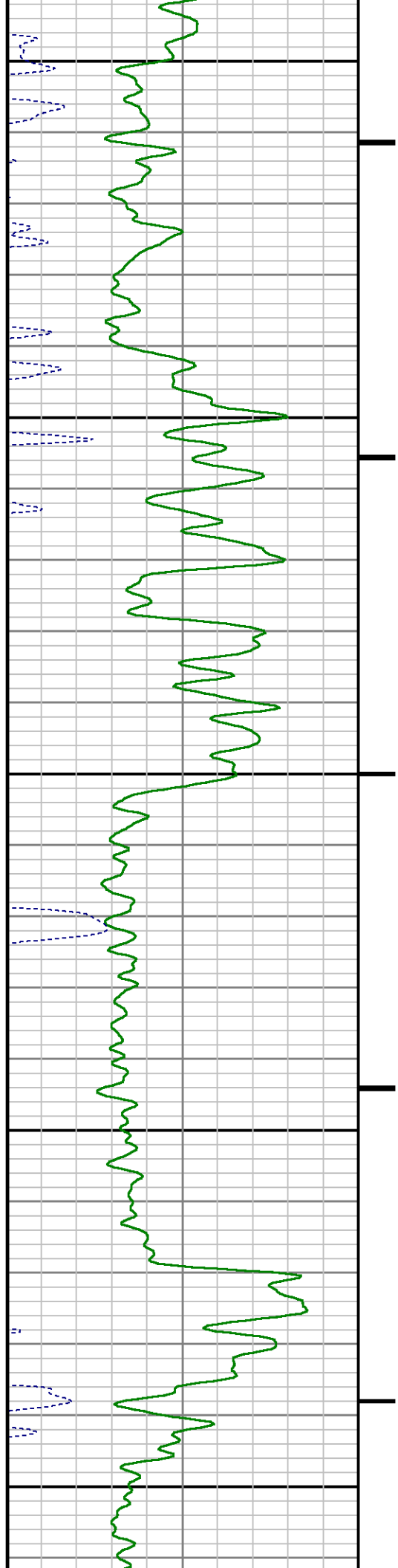


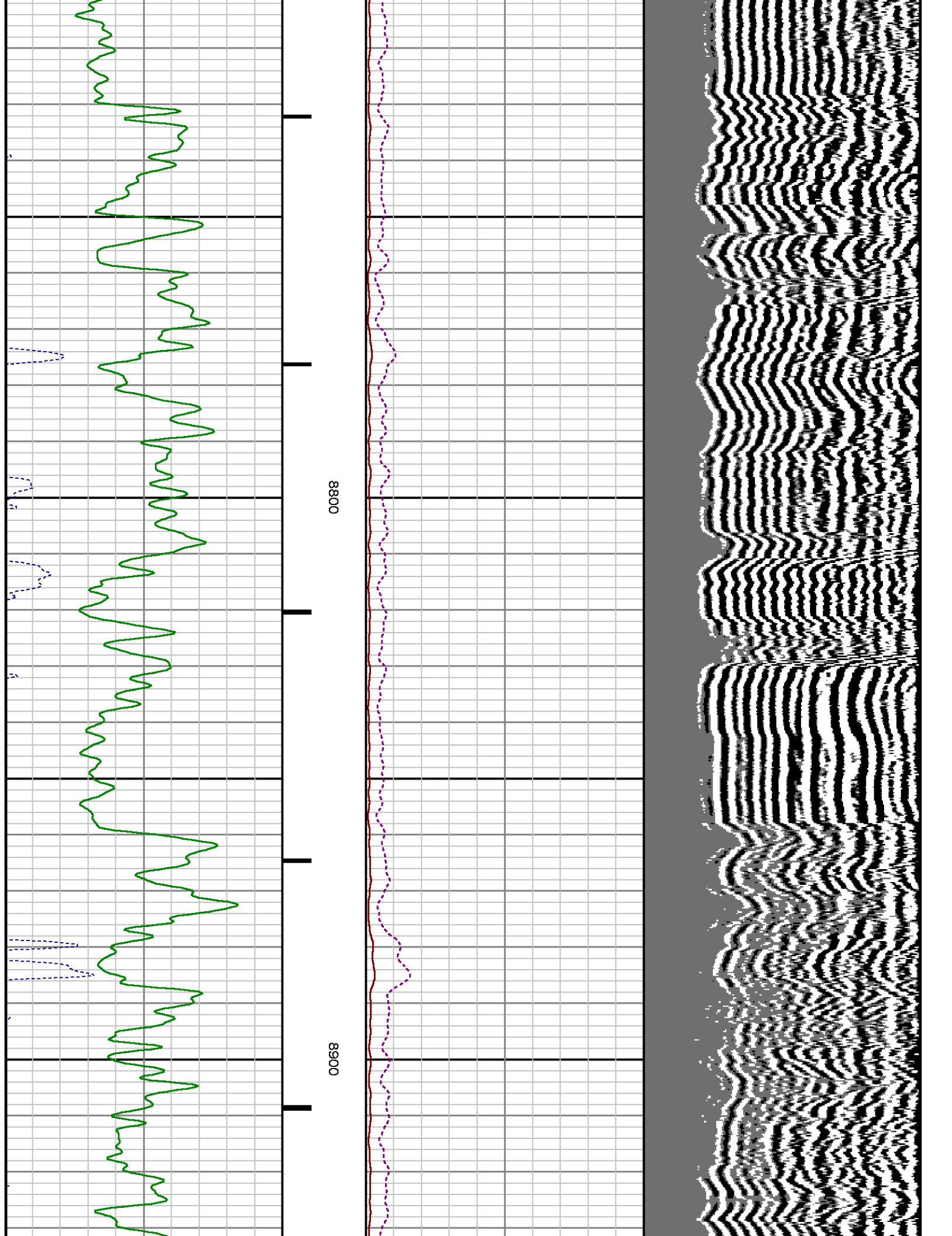


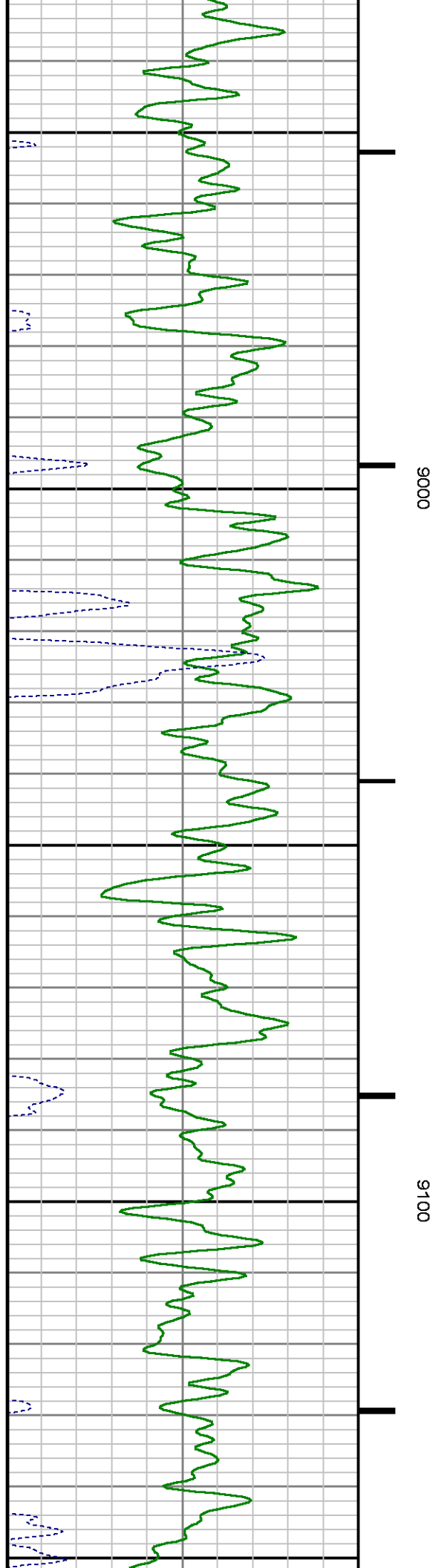
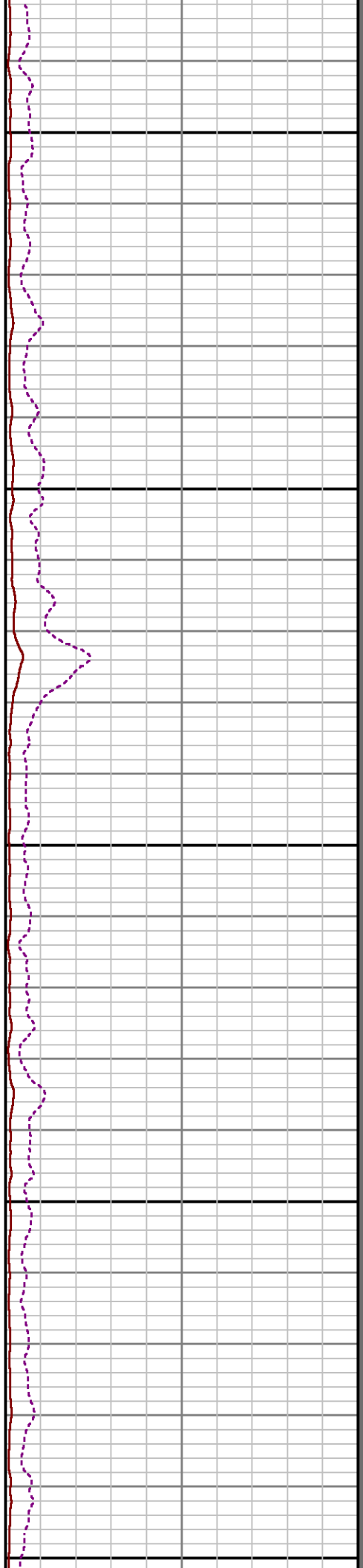
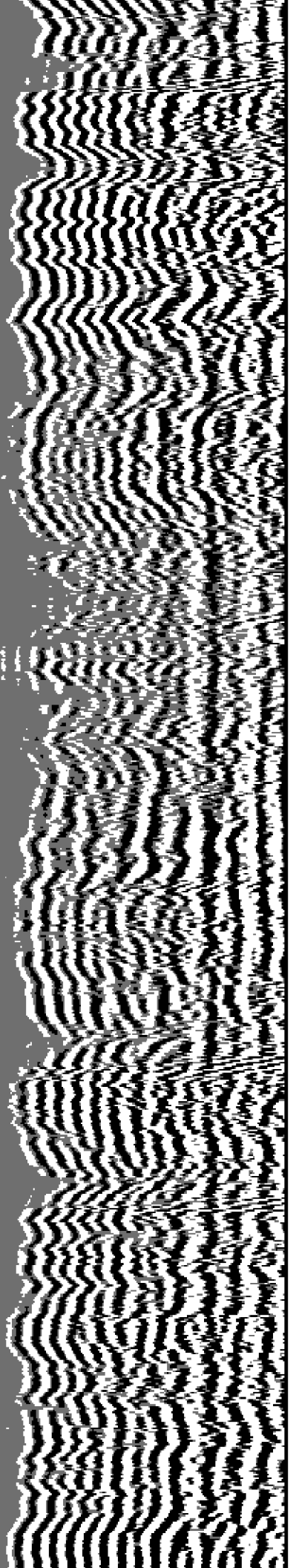
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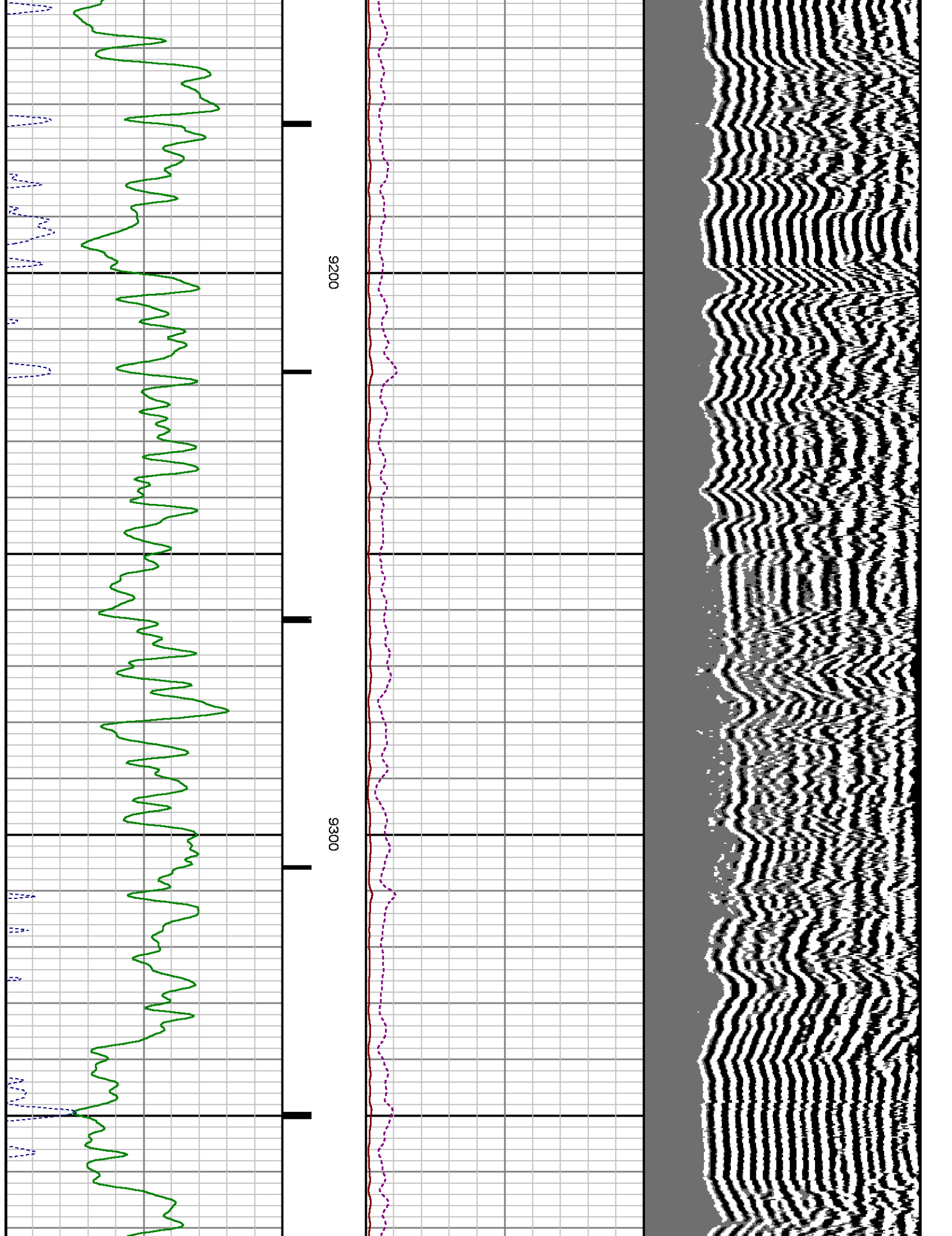
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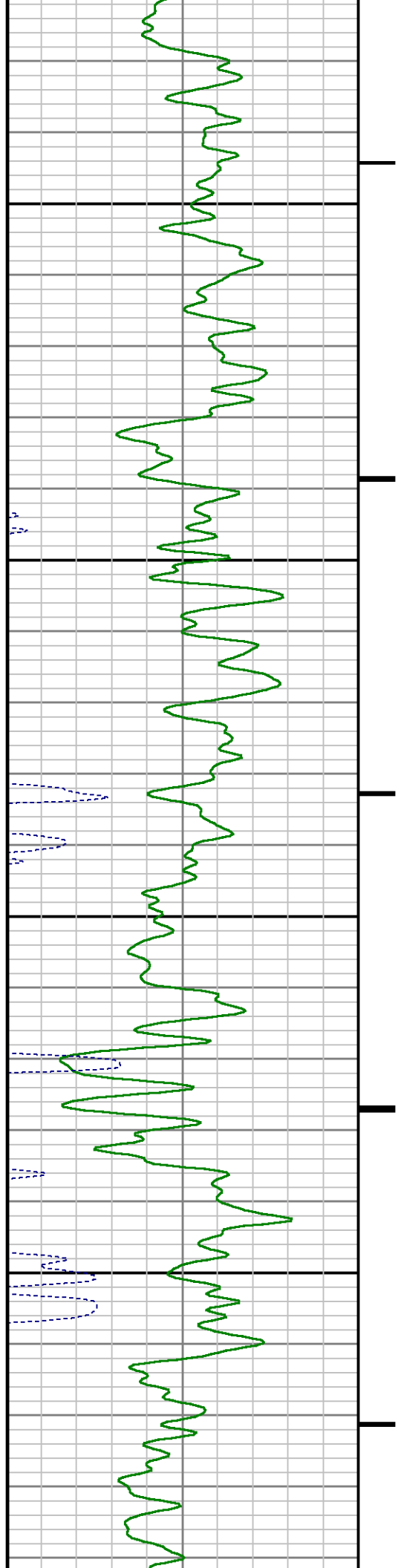
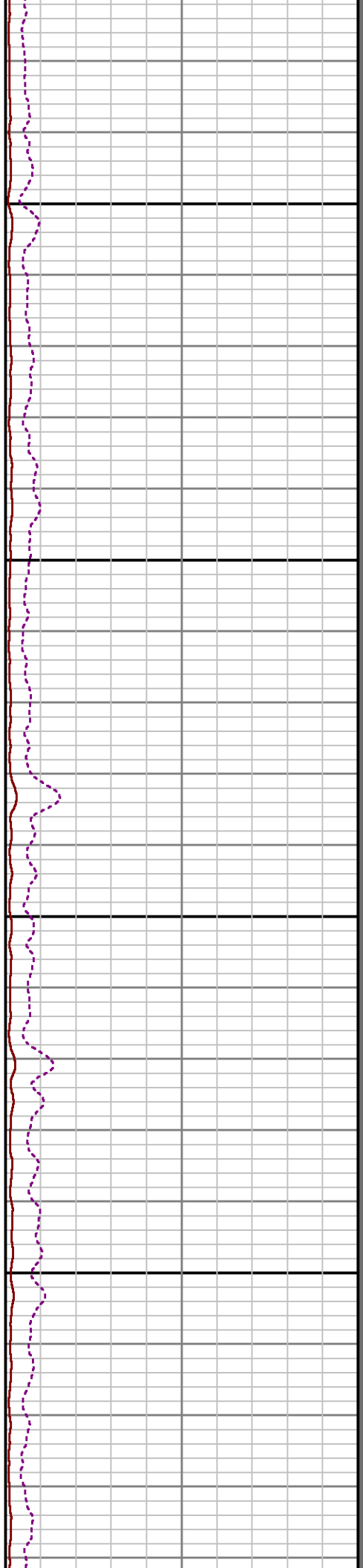
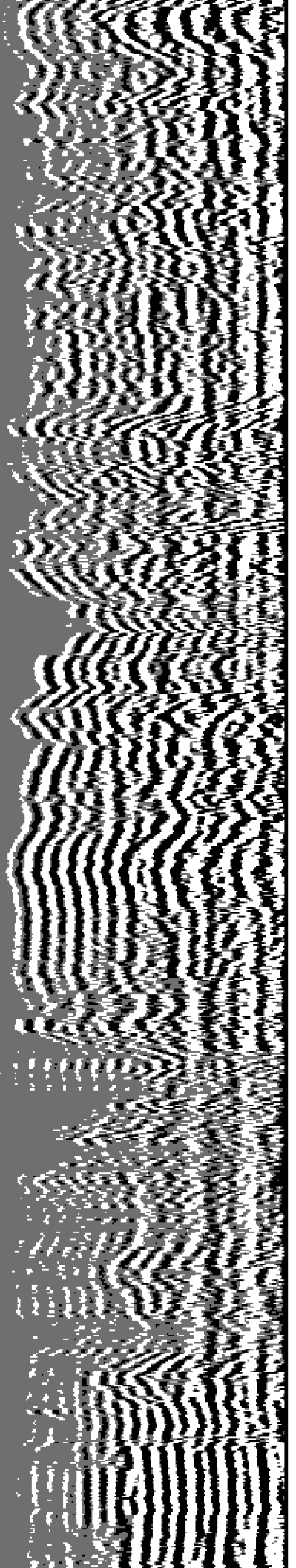
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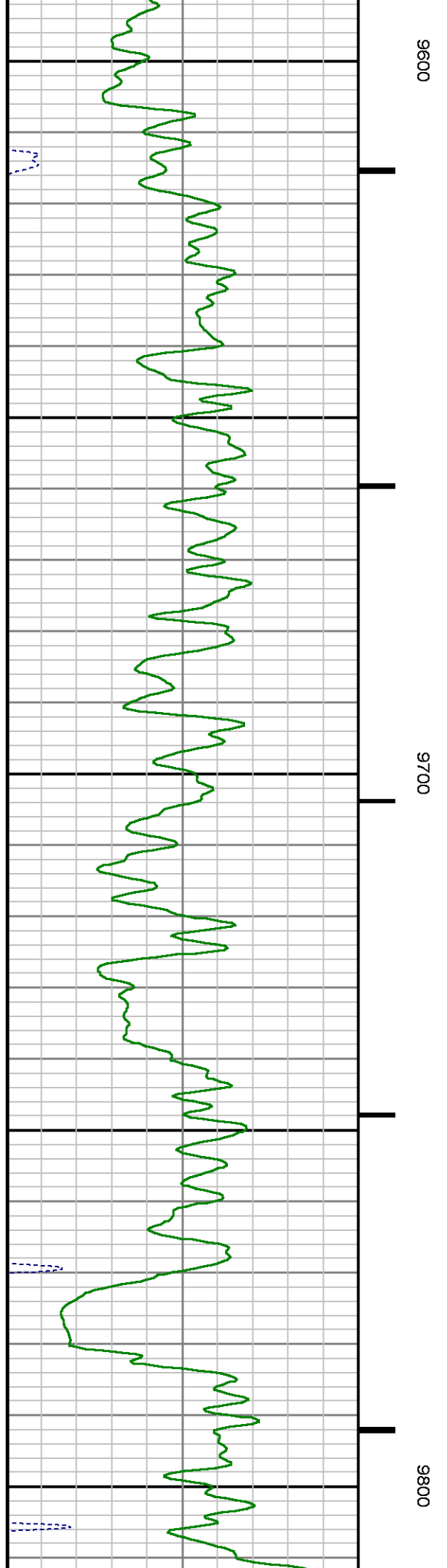
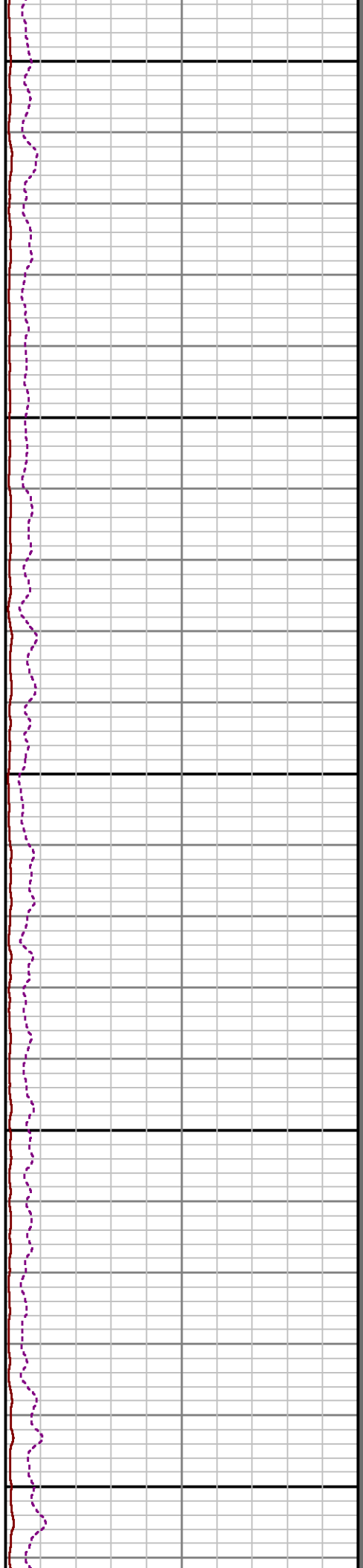
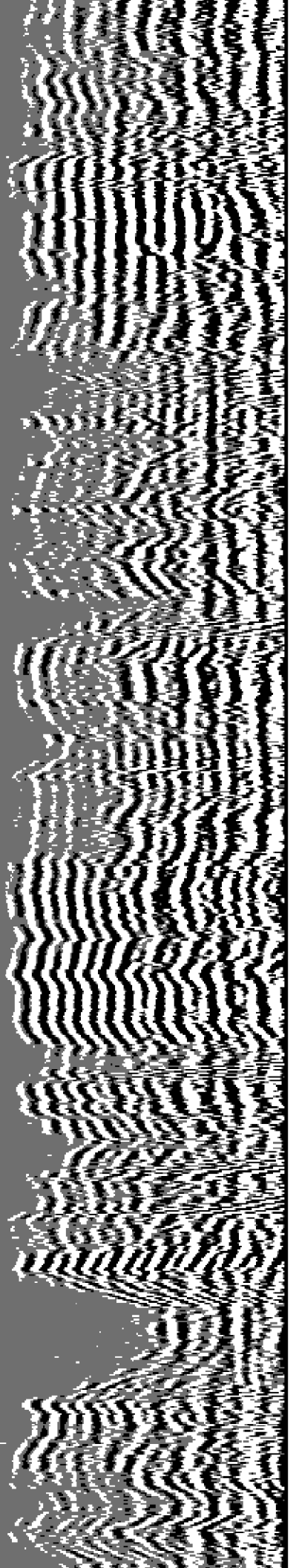


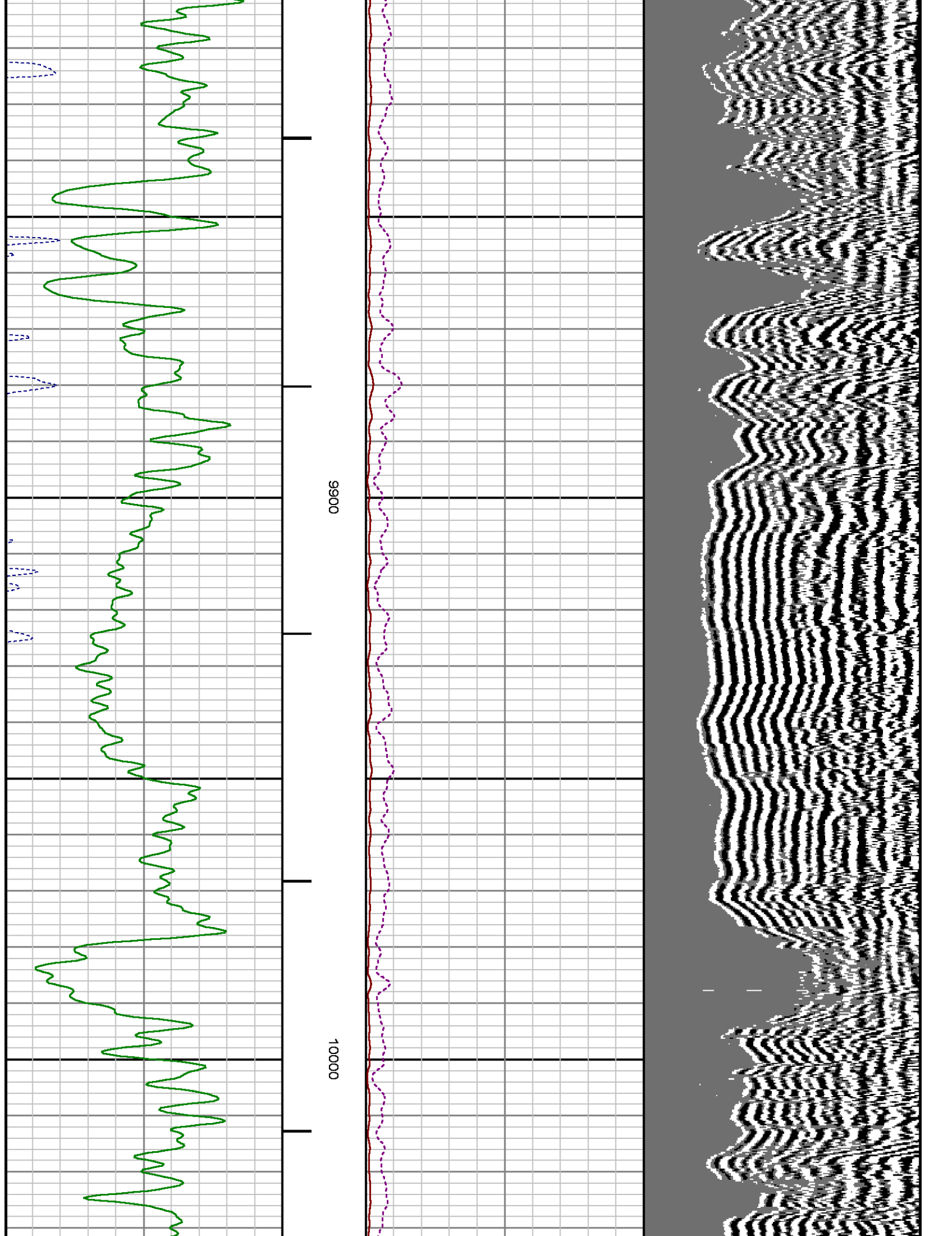


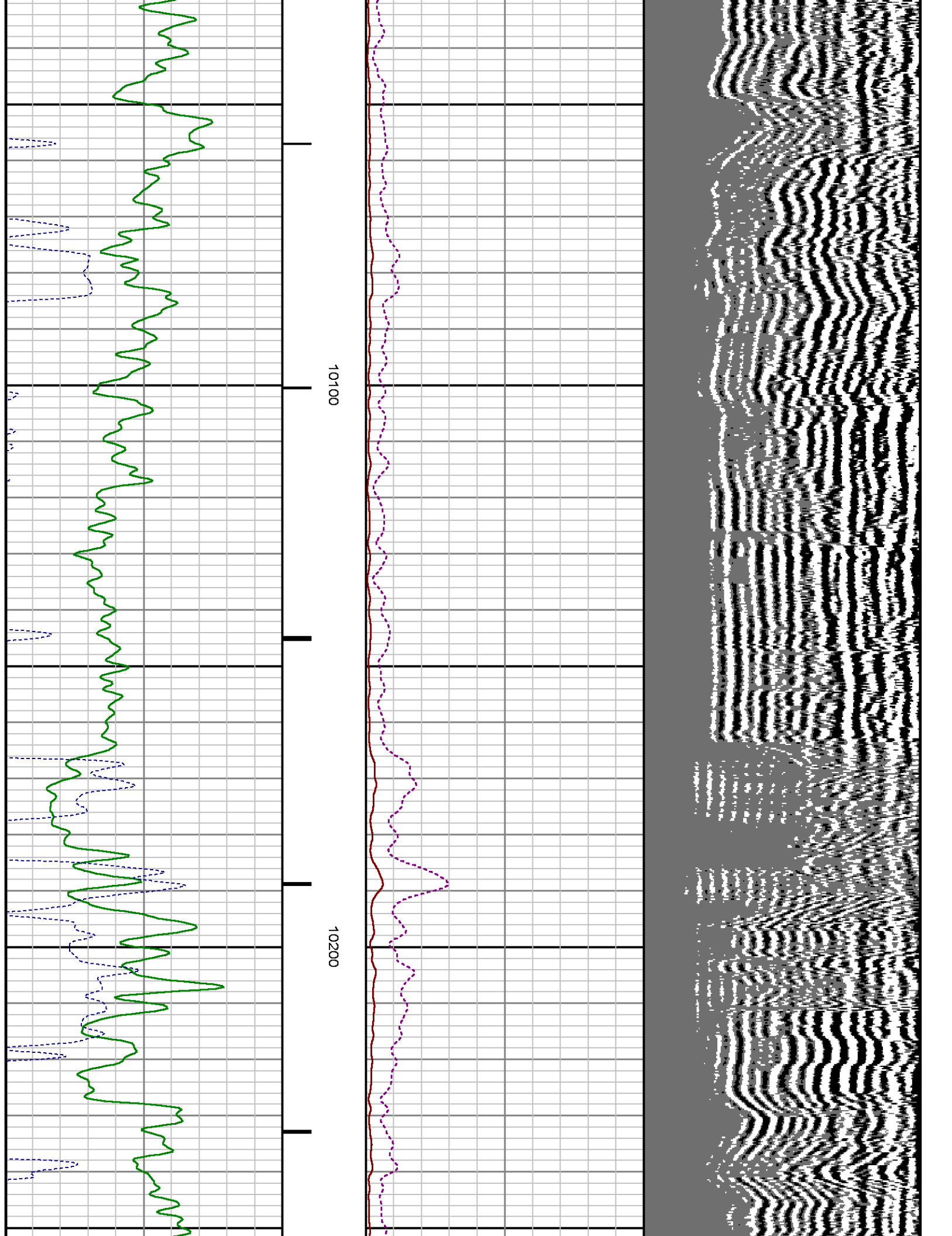


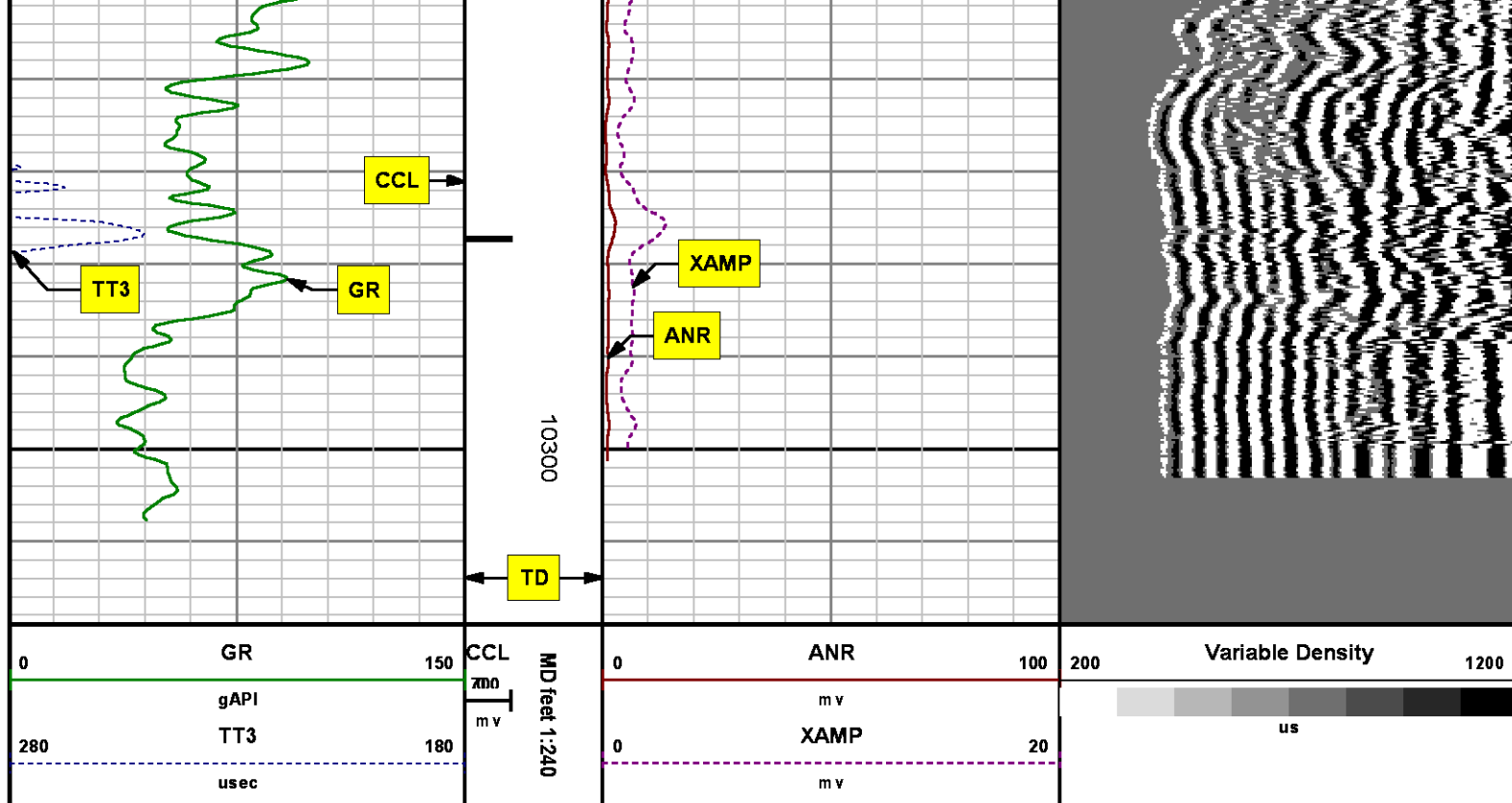












SECONDARY PRESENTATION 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.155	10318.500
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RAL	Amp Gate Width Near	25.000	usec	35.155	10318.500
RAL	Amp Gate Width Radial	25.000	usec	35.155	10318.500
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RAL	FB Start Far	291.900	usec	35.155	10318.500
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RAL	FB Thresh Far	10.000	m v	35.155	10318.500
RAL	FB Thresh Near	4.000	m v	35.155	10318.500
RAL	FB Thresh Radial	4.000	m v	35.155	10318.500

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

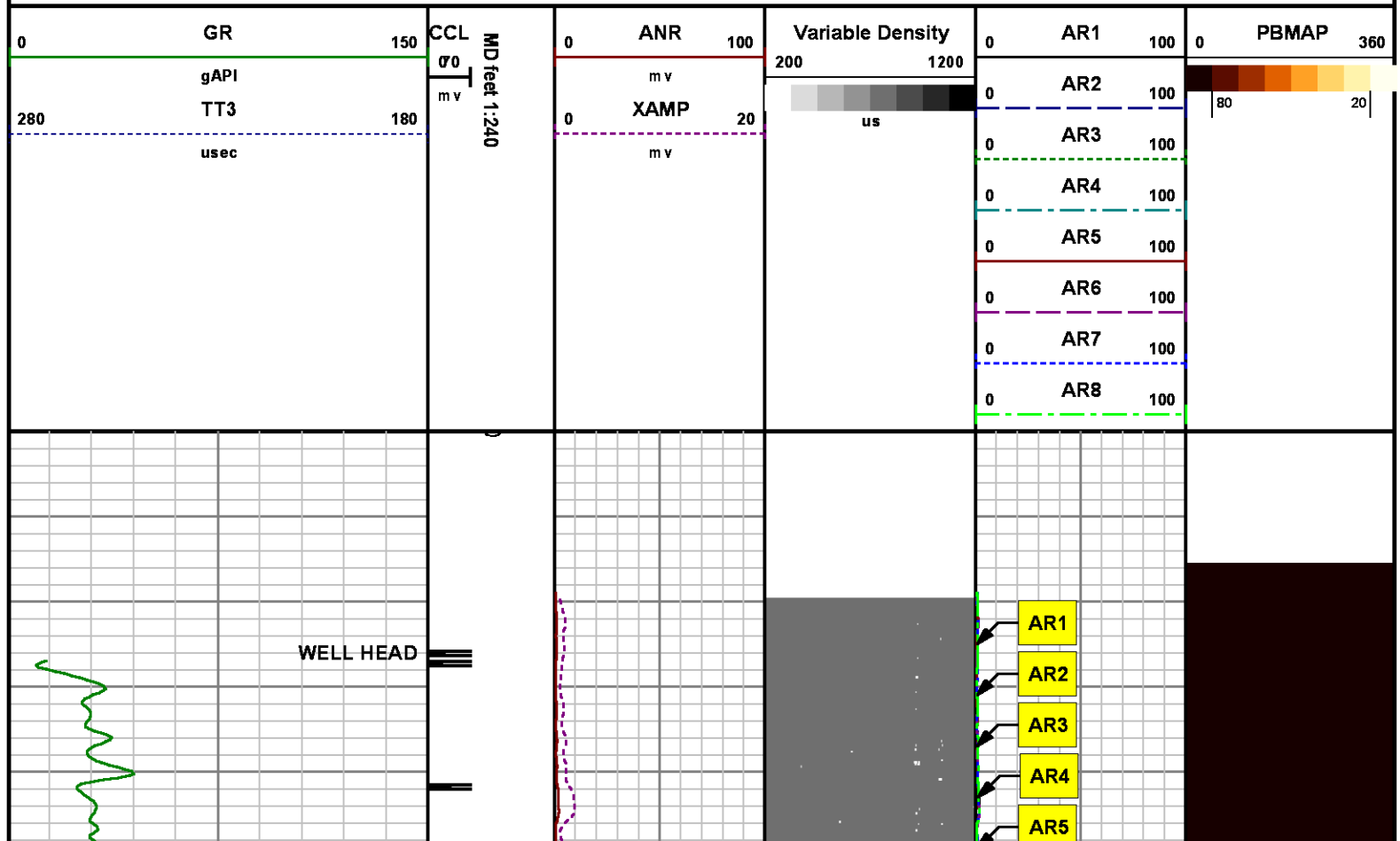
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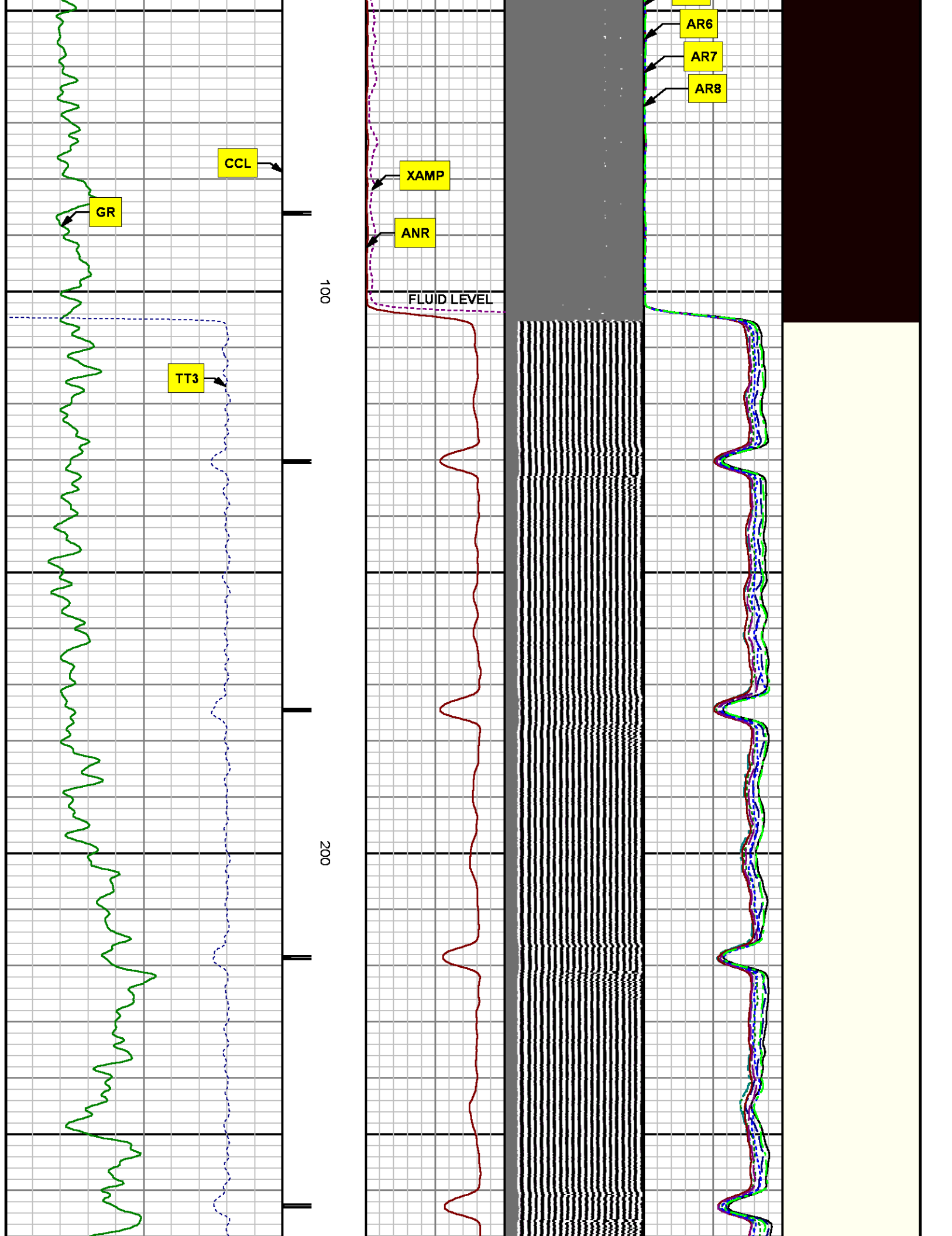
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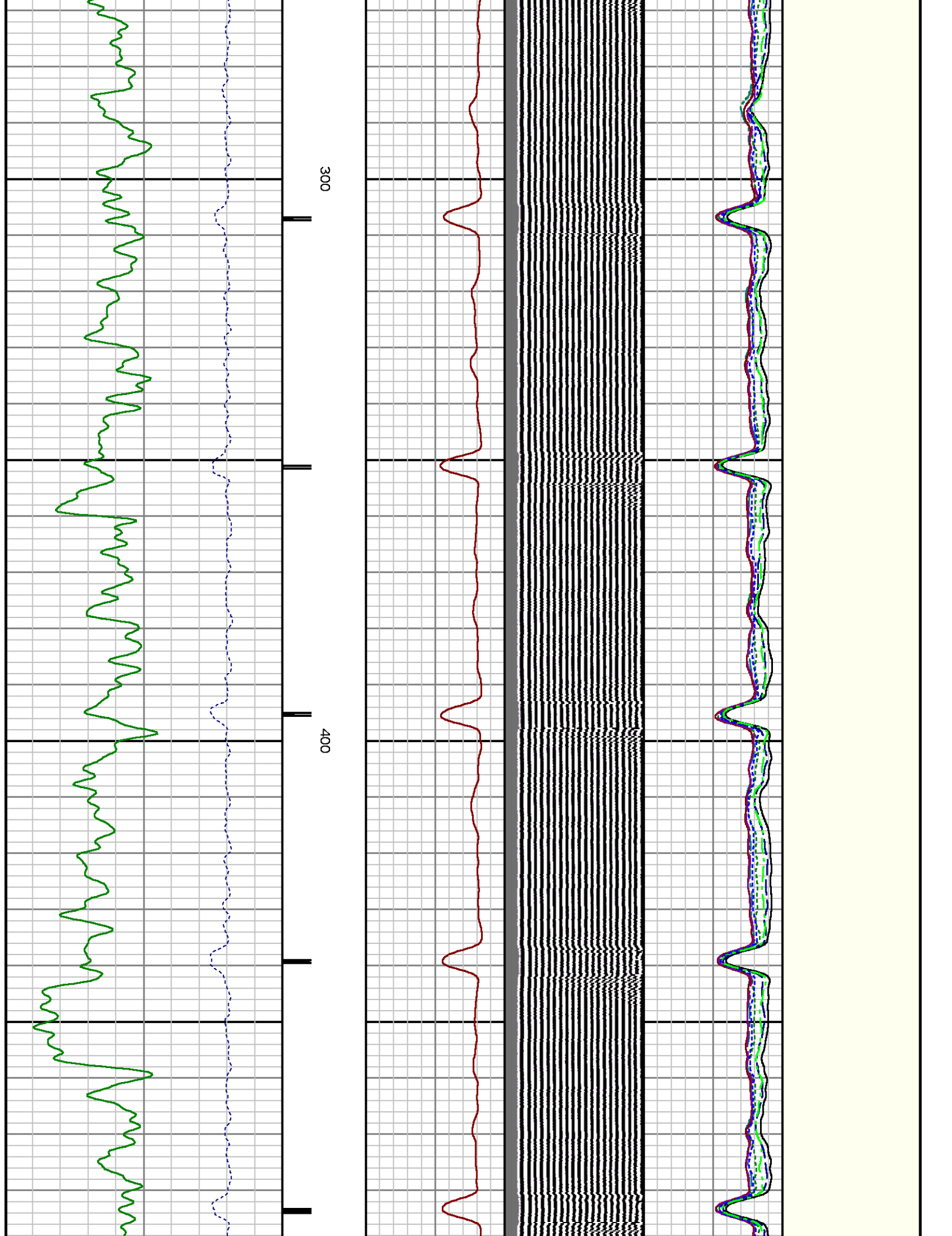
Mode : PlotMgr 5.4.504

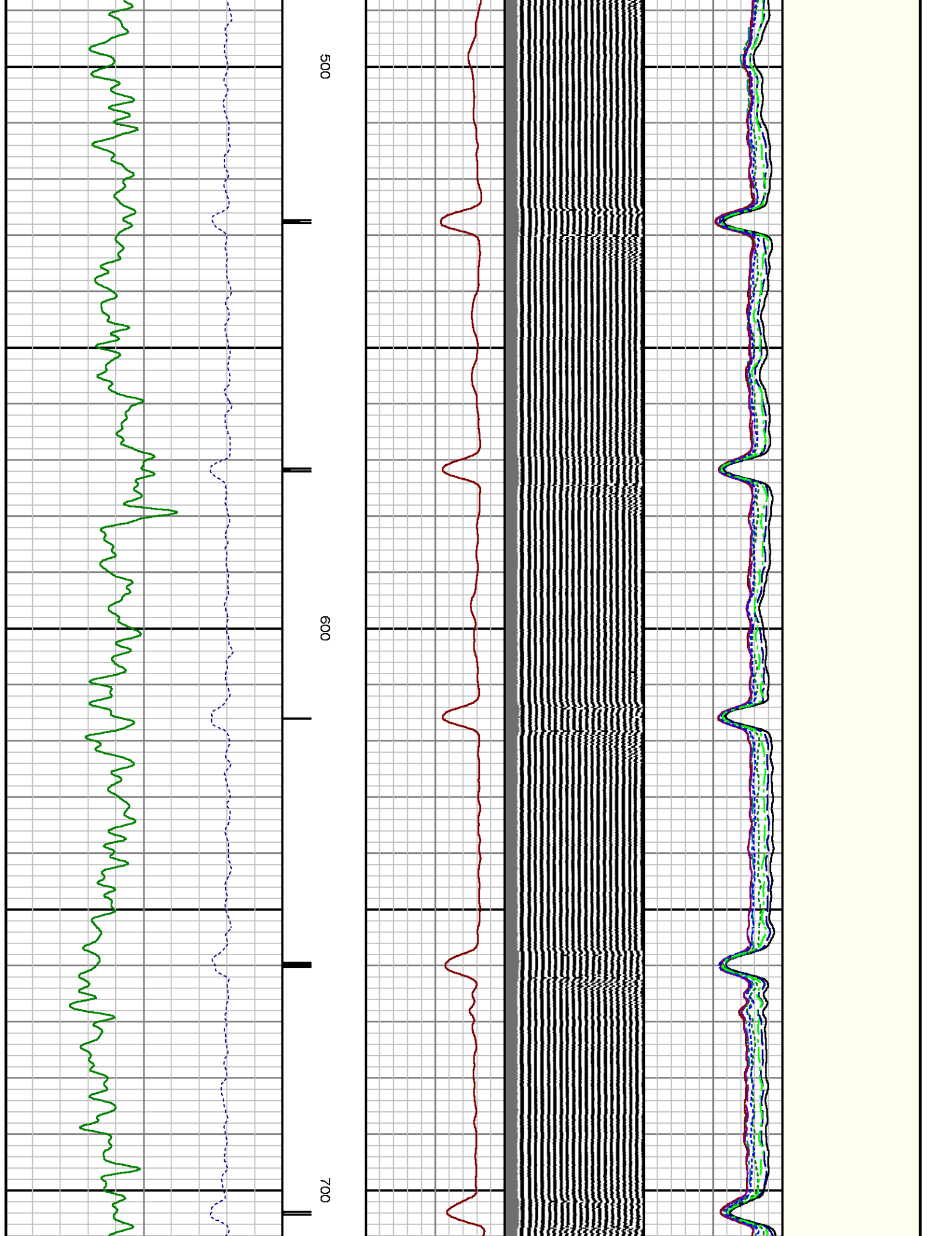
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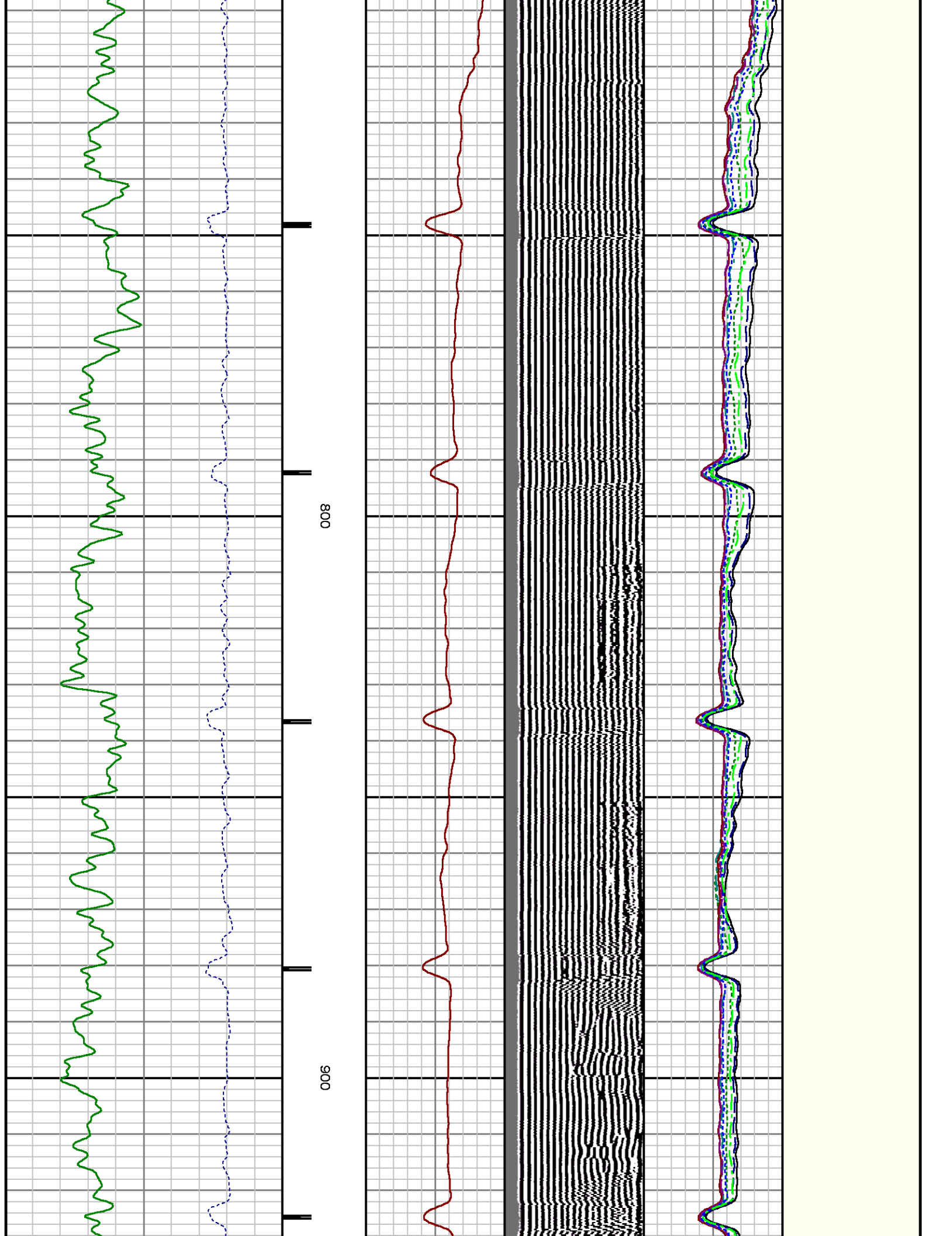
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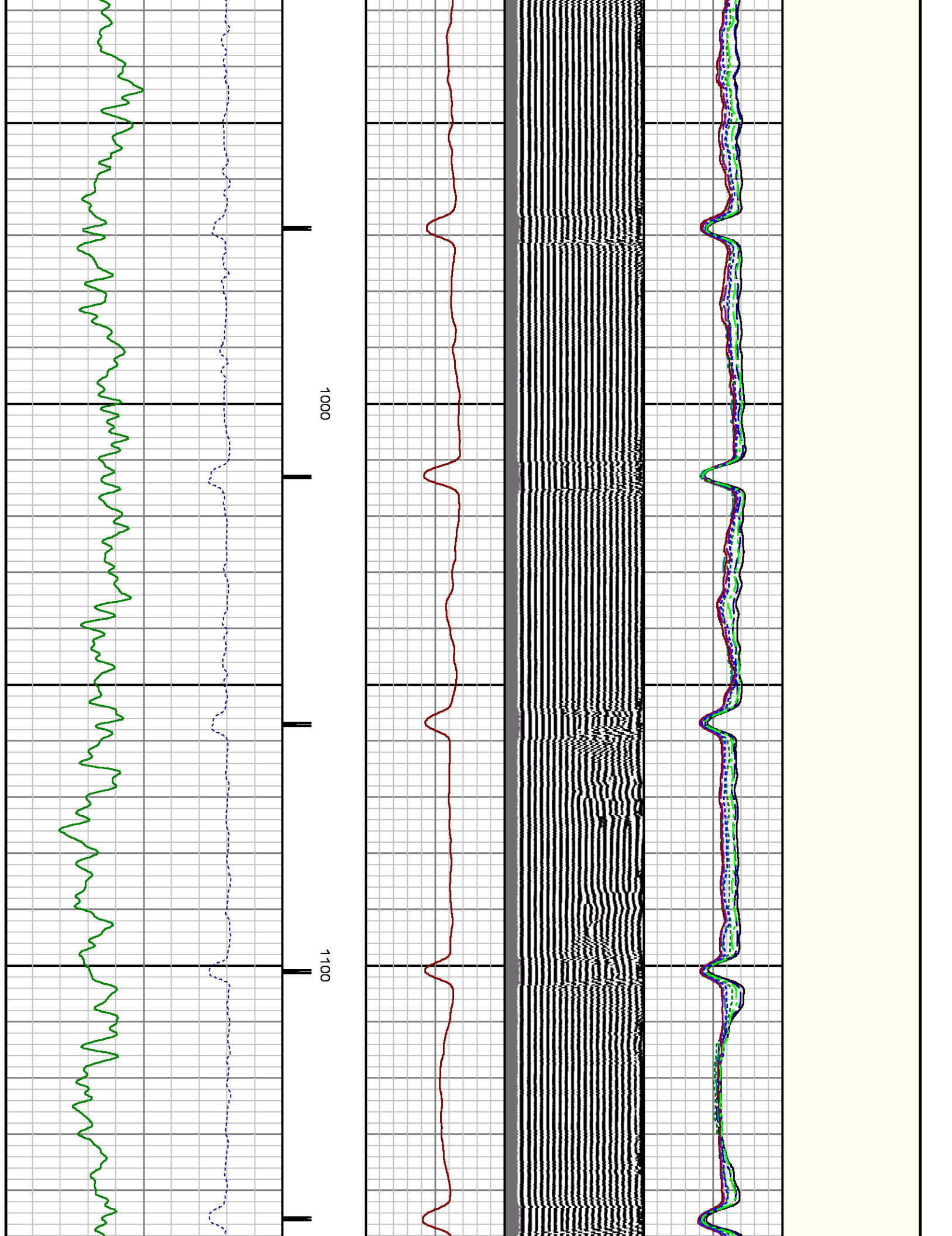


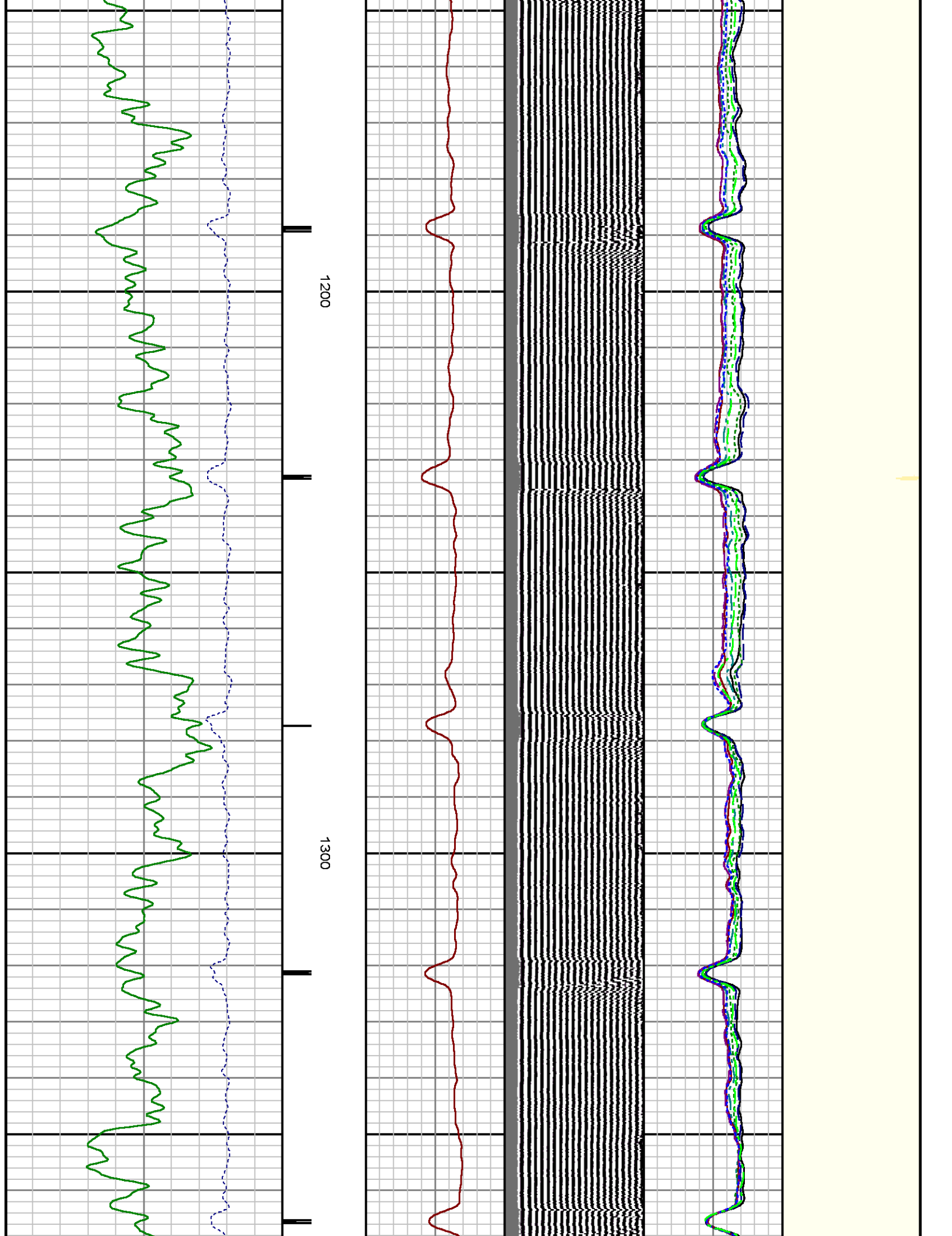


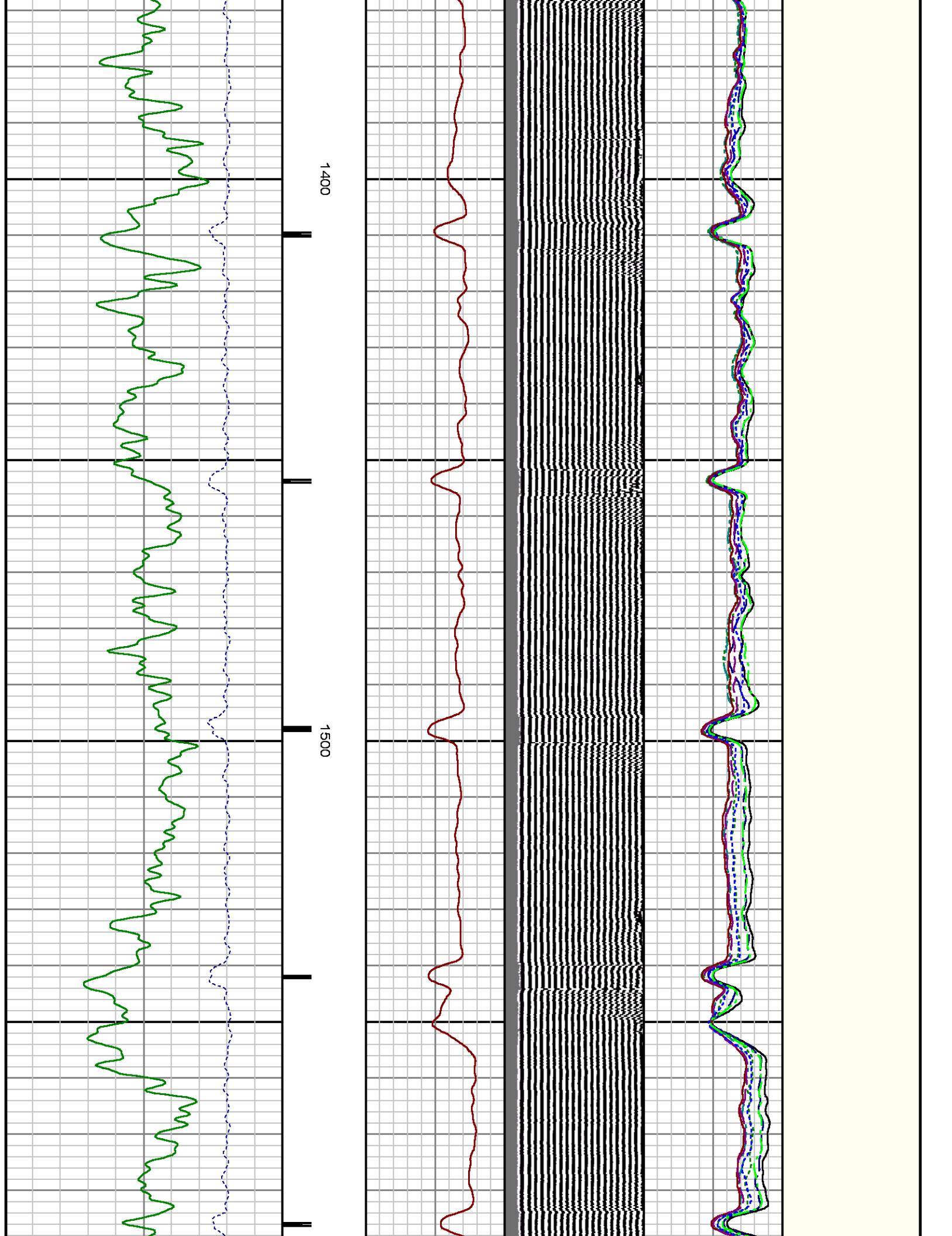


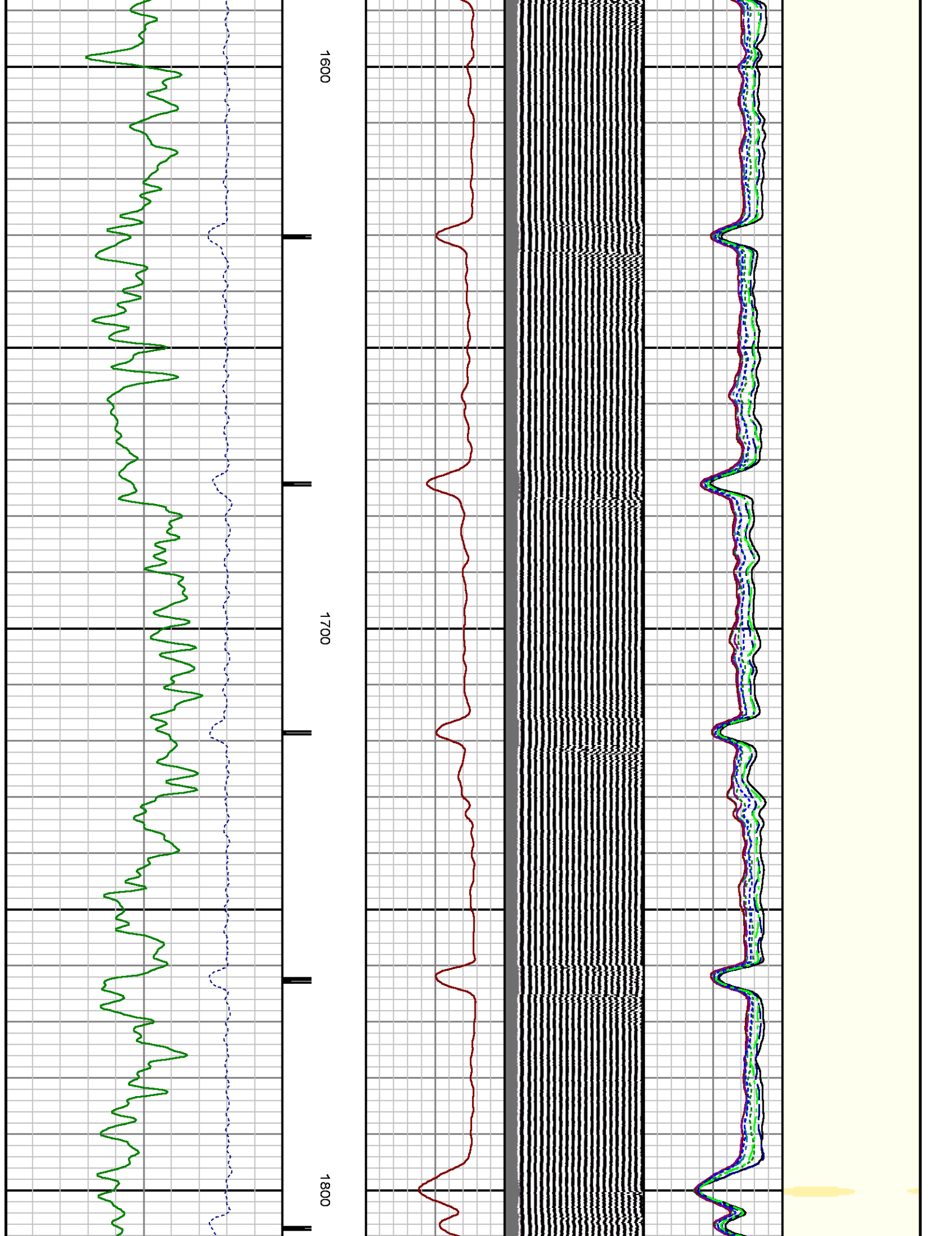




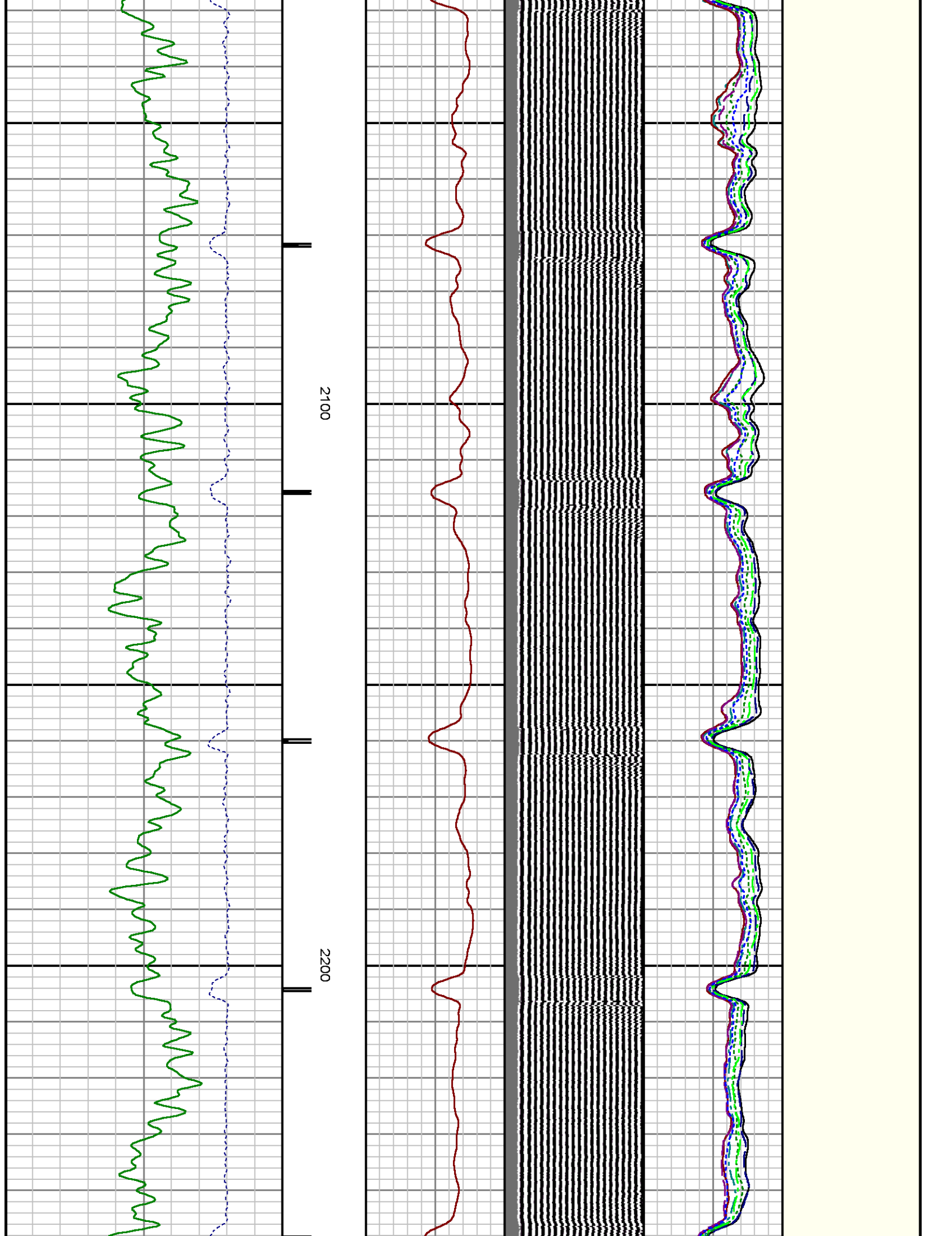


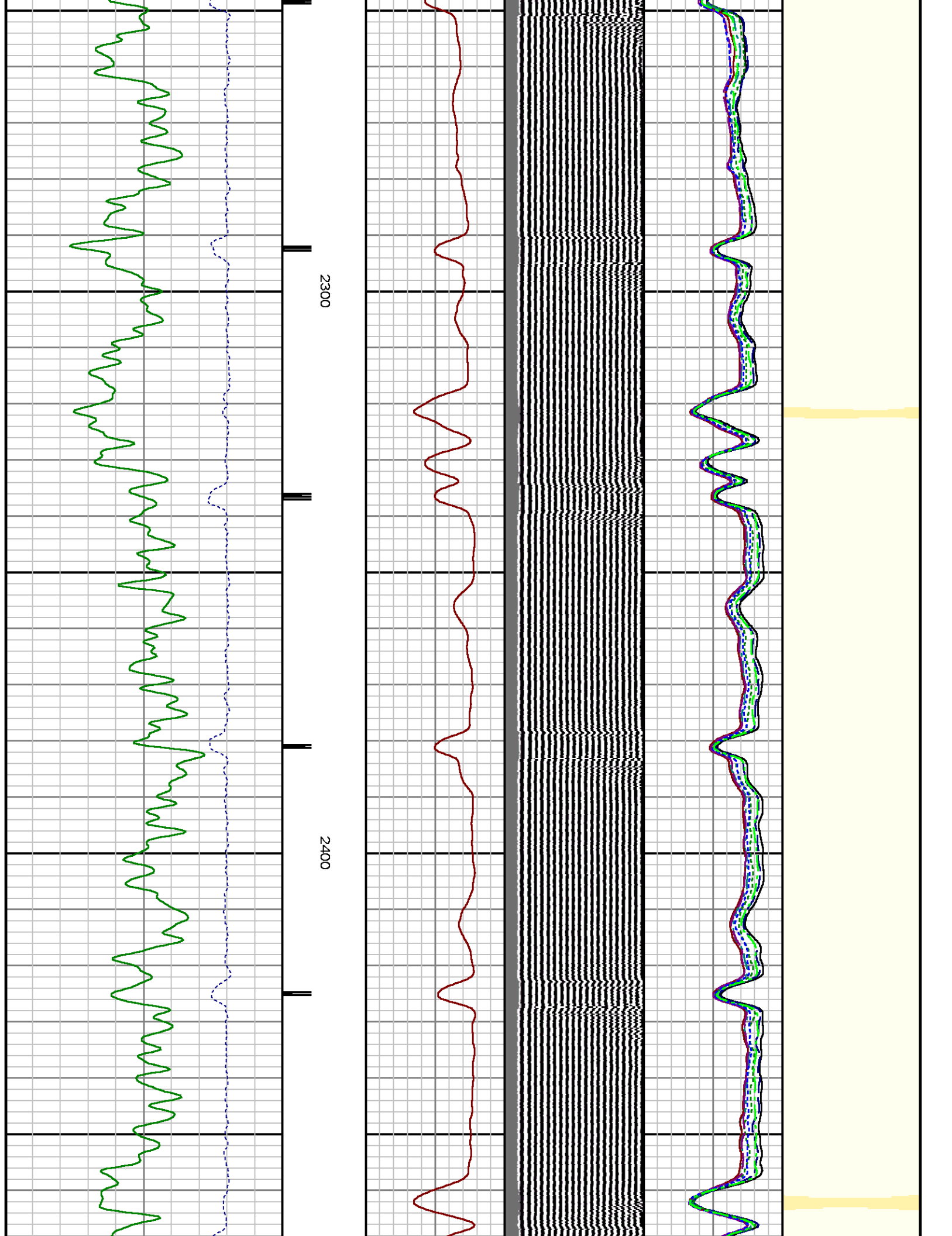


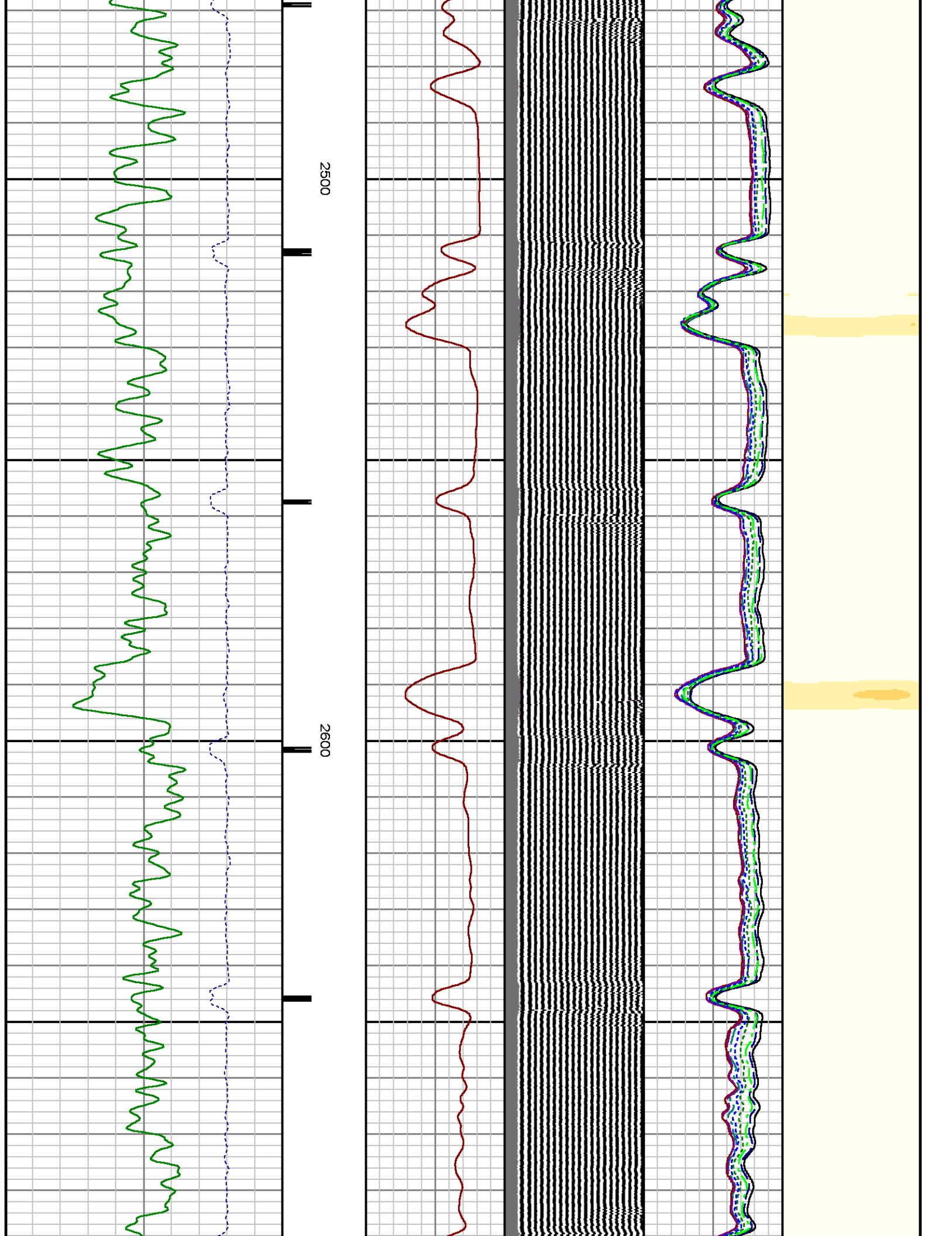


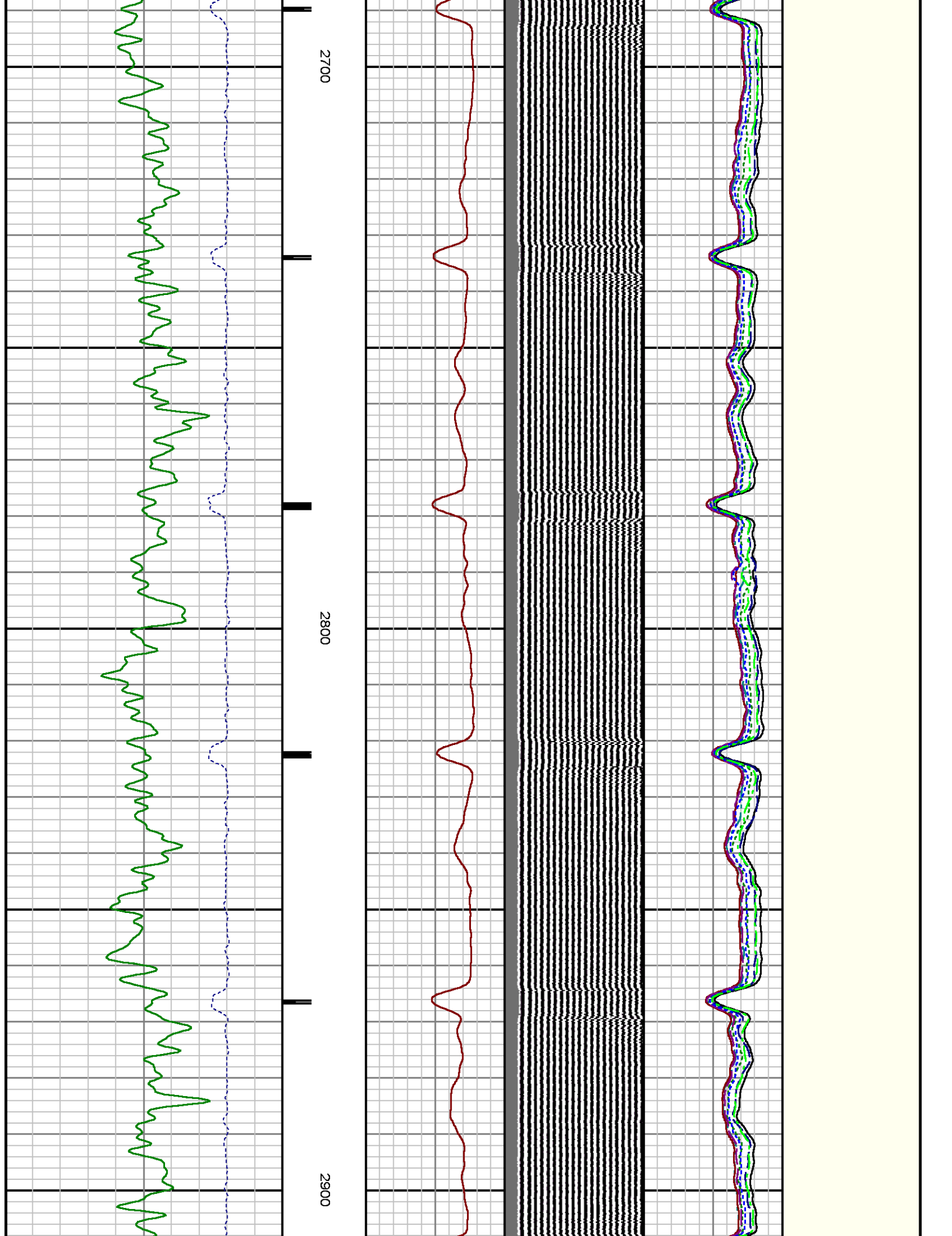


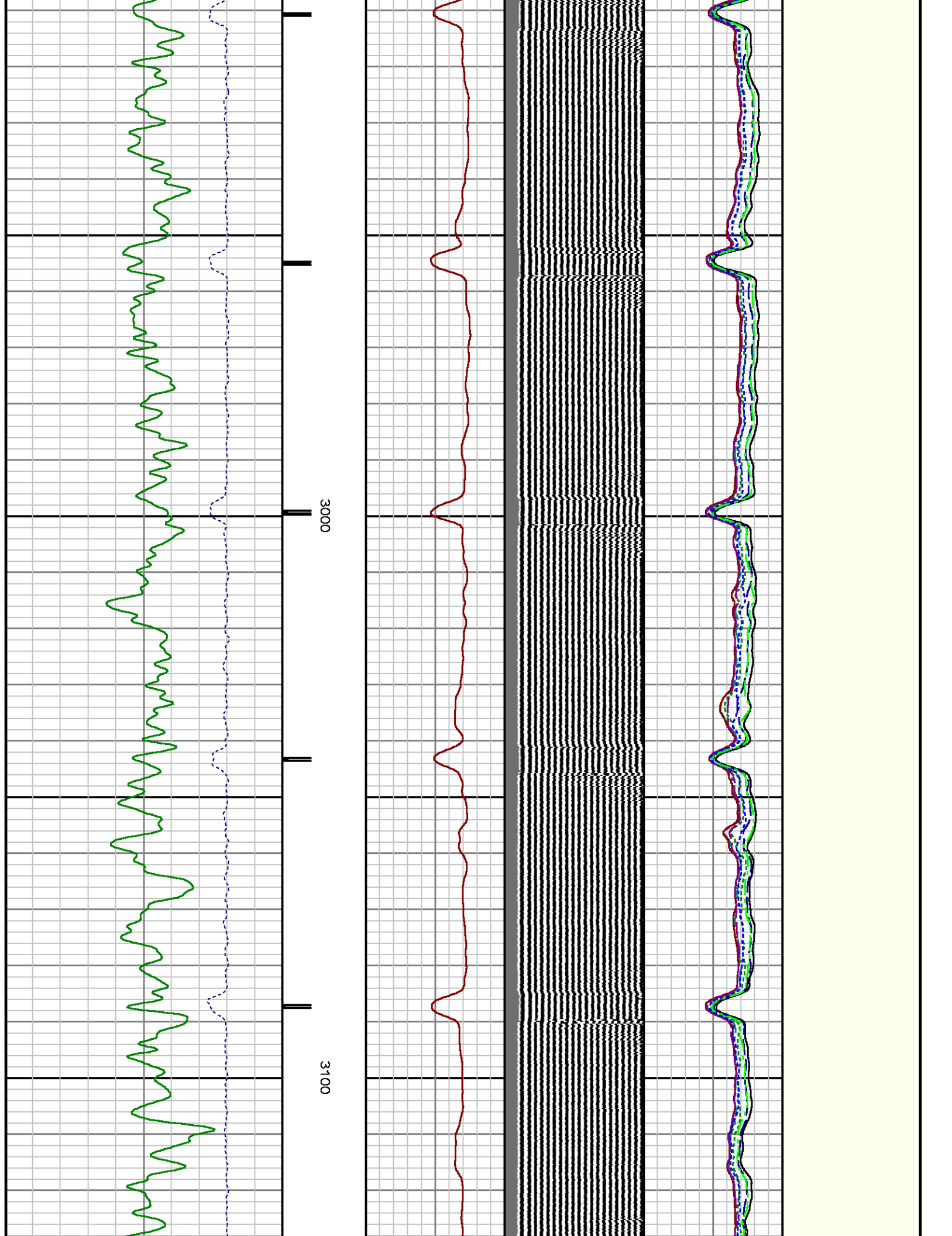


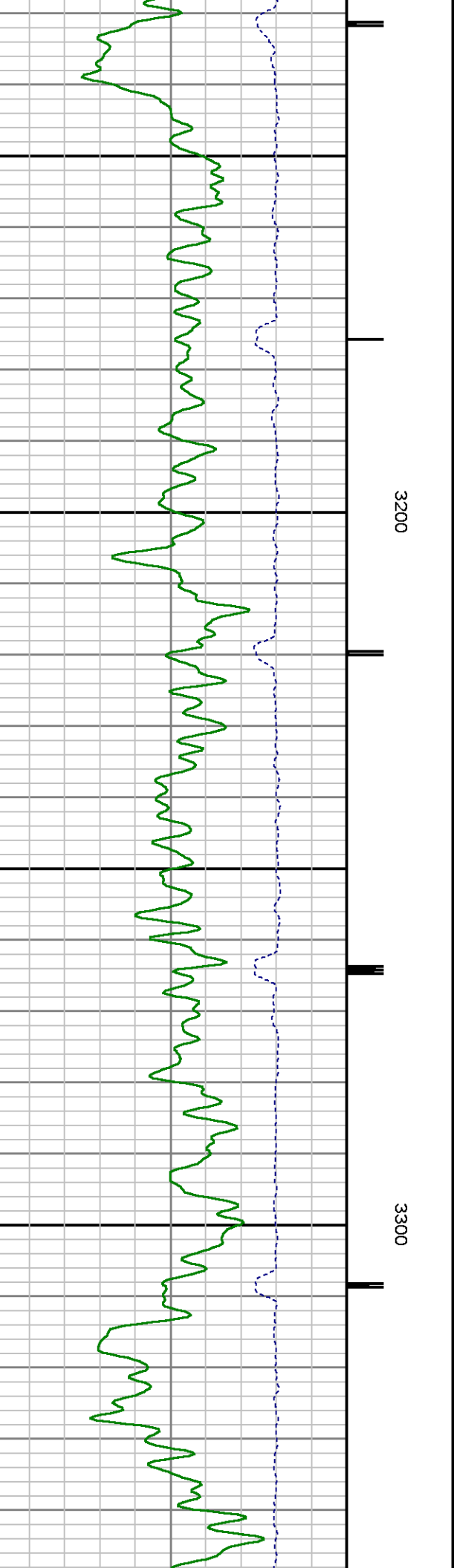
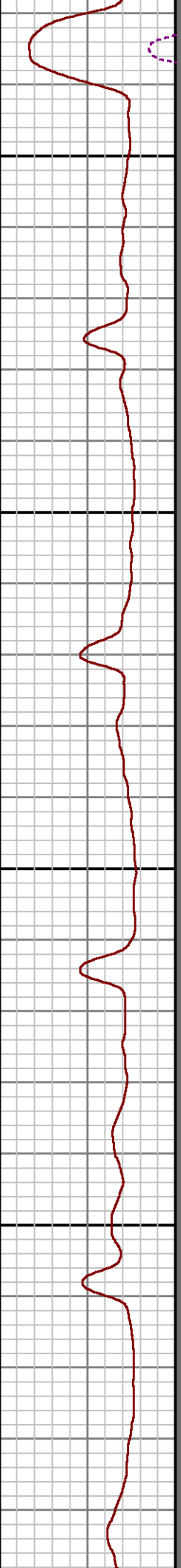
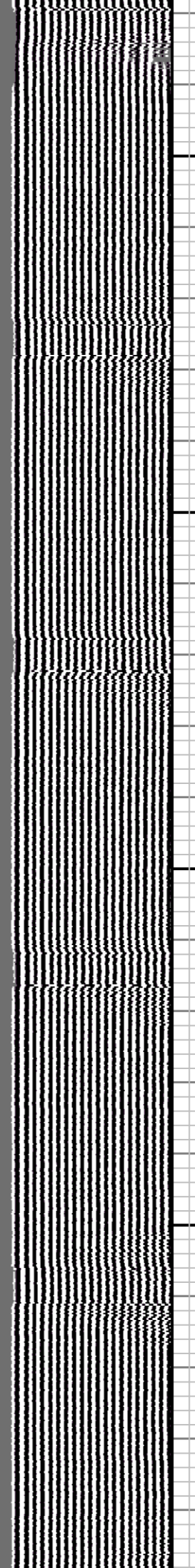
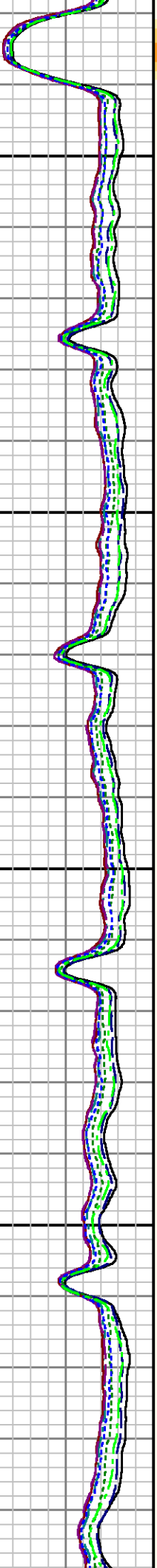
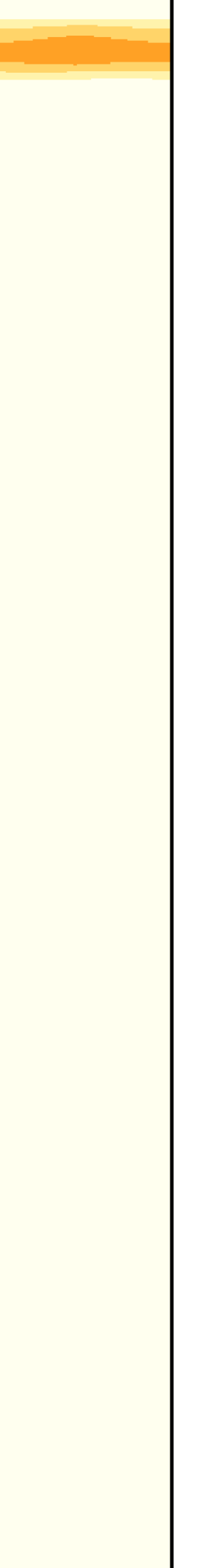


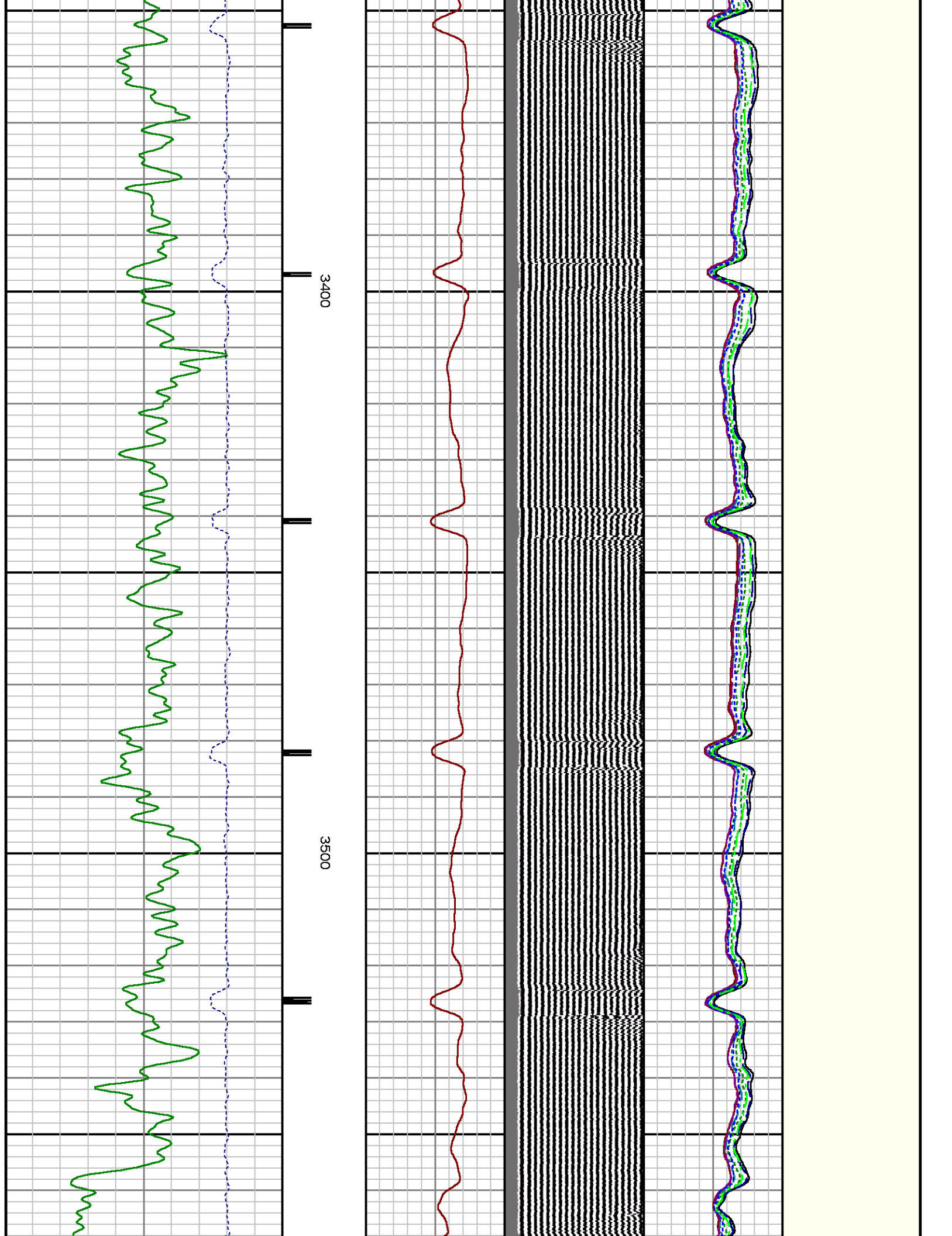


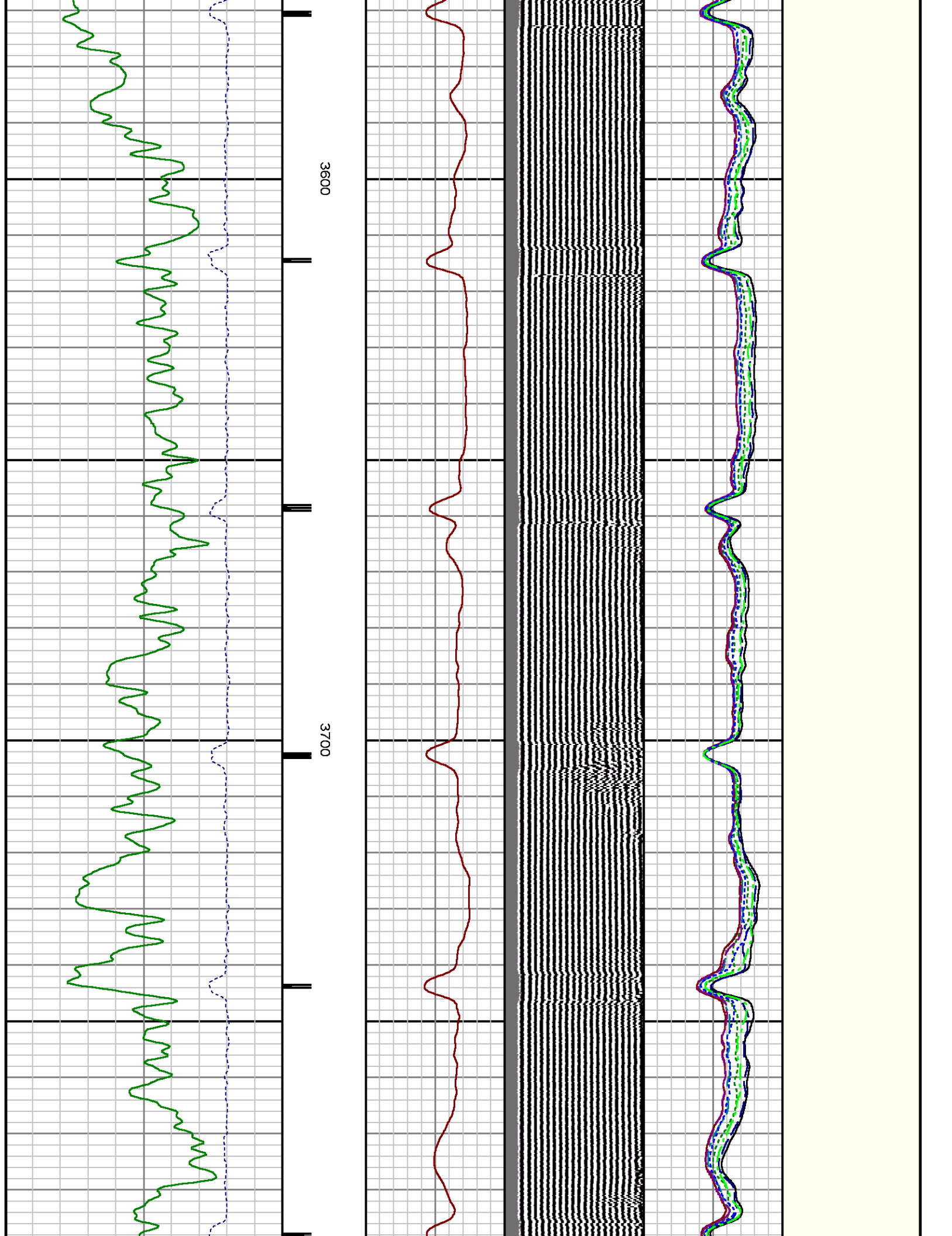


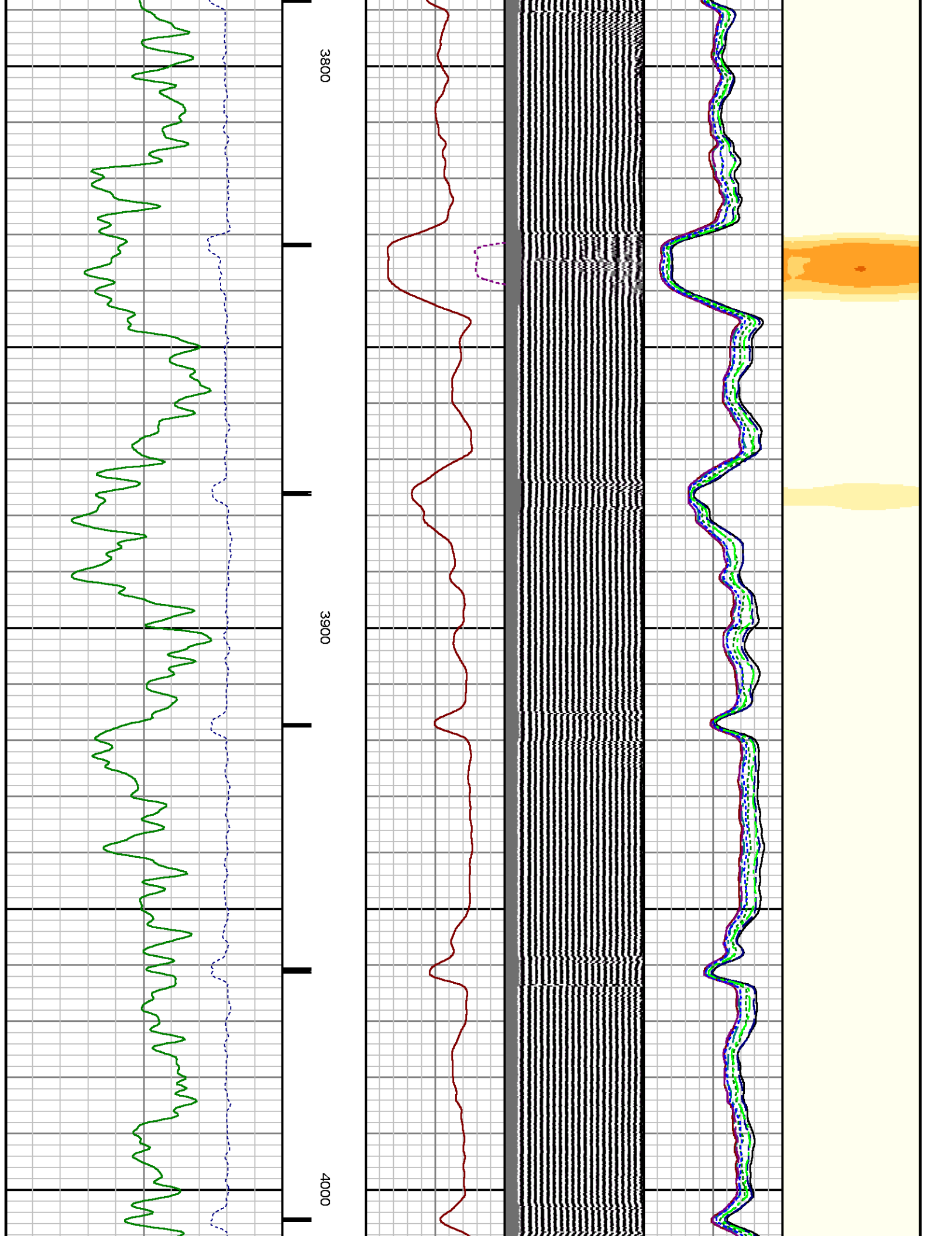


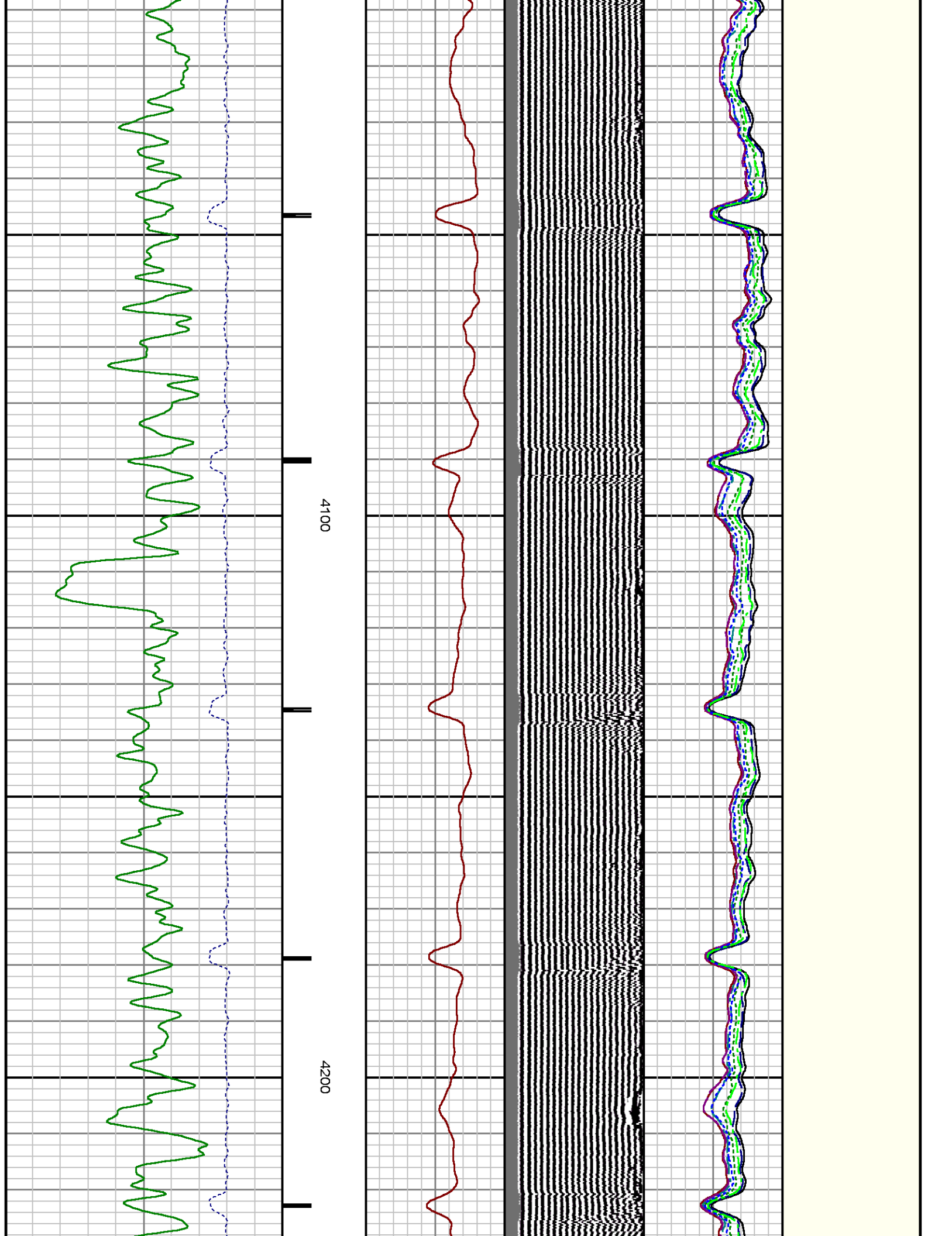


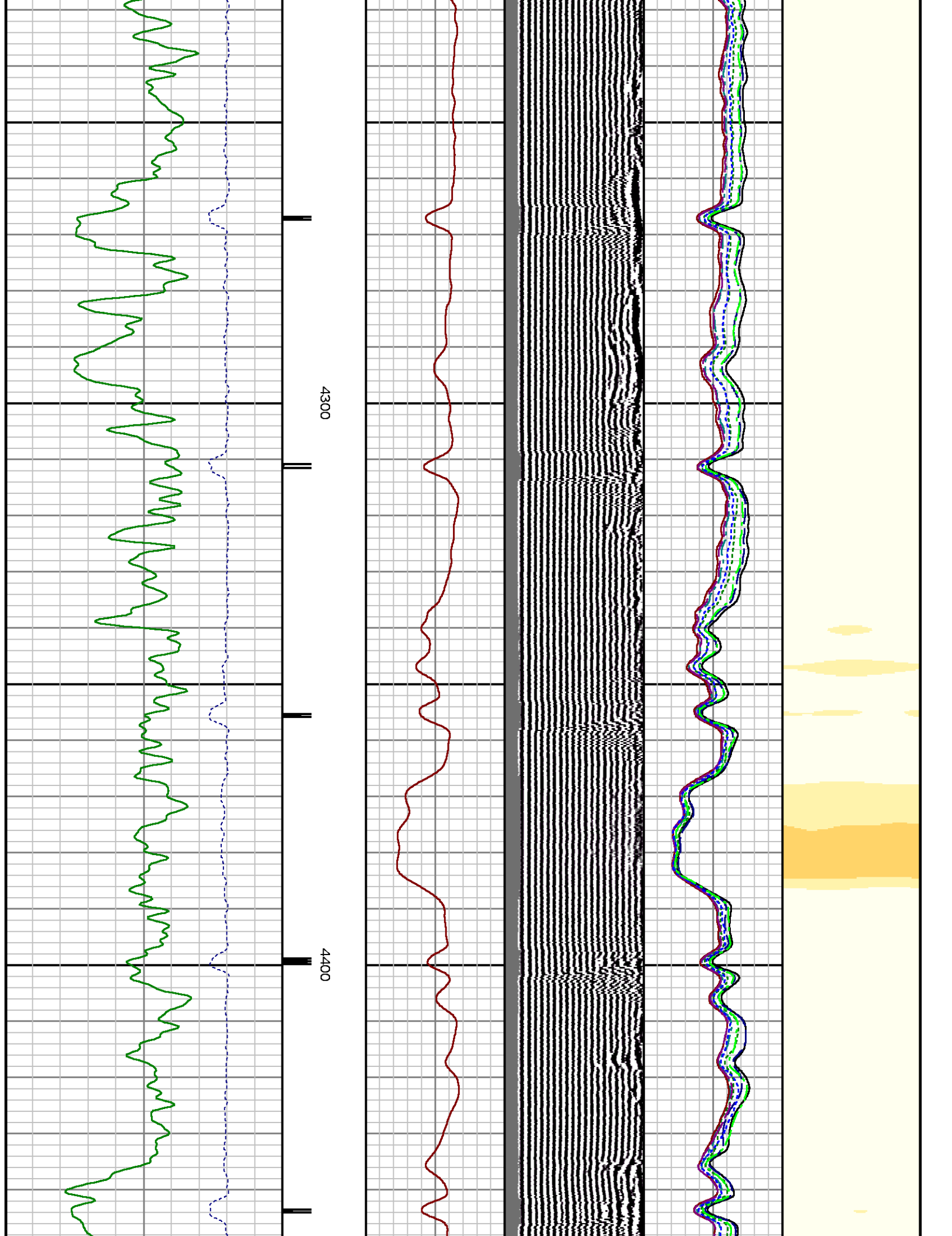


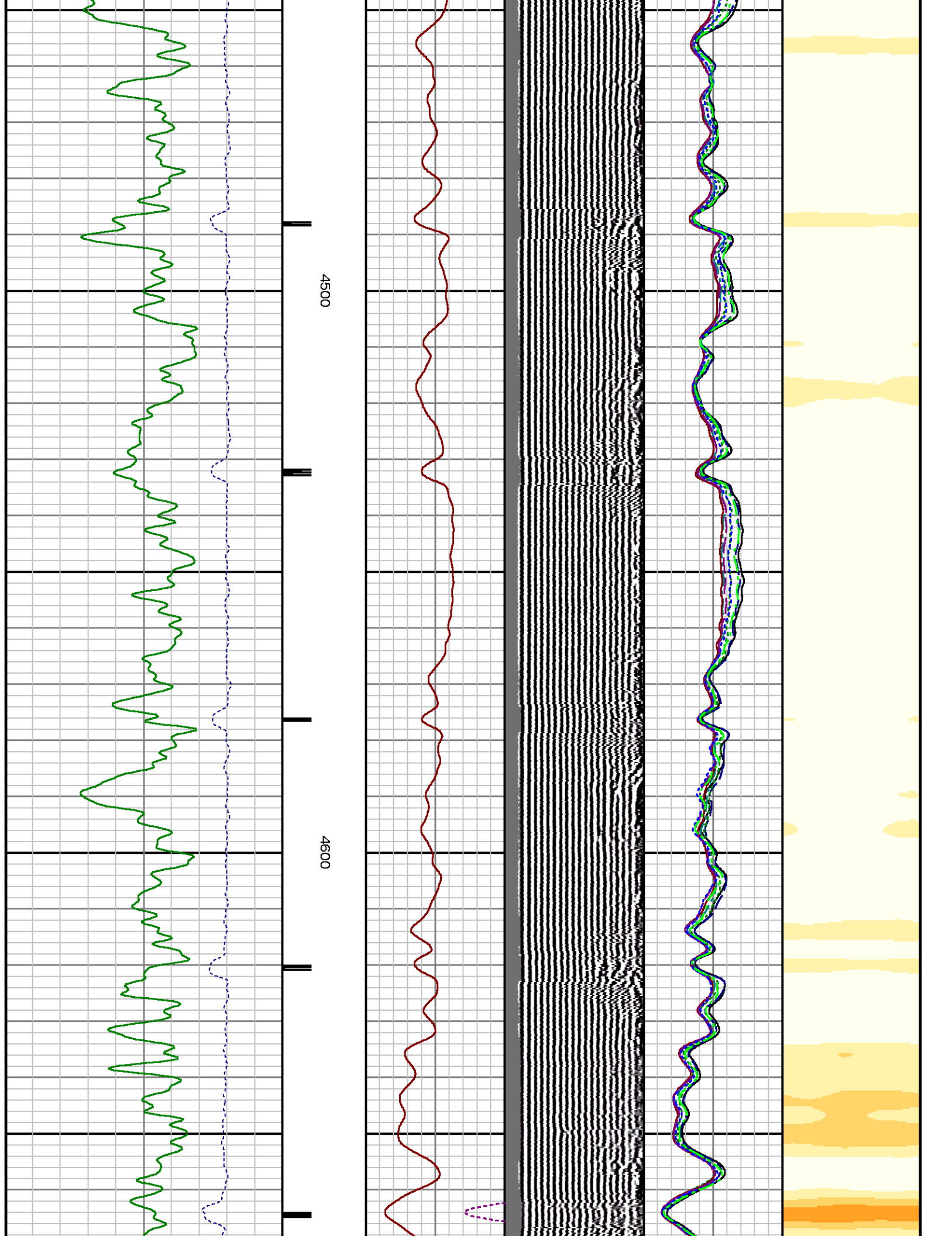


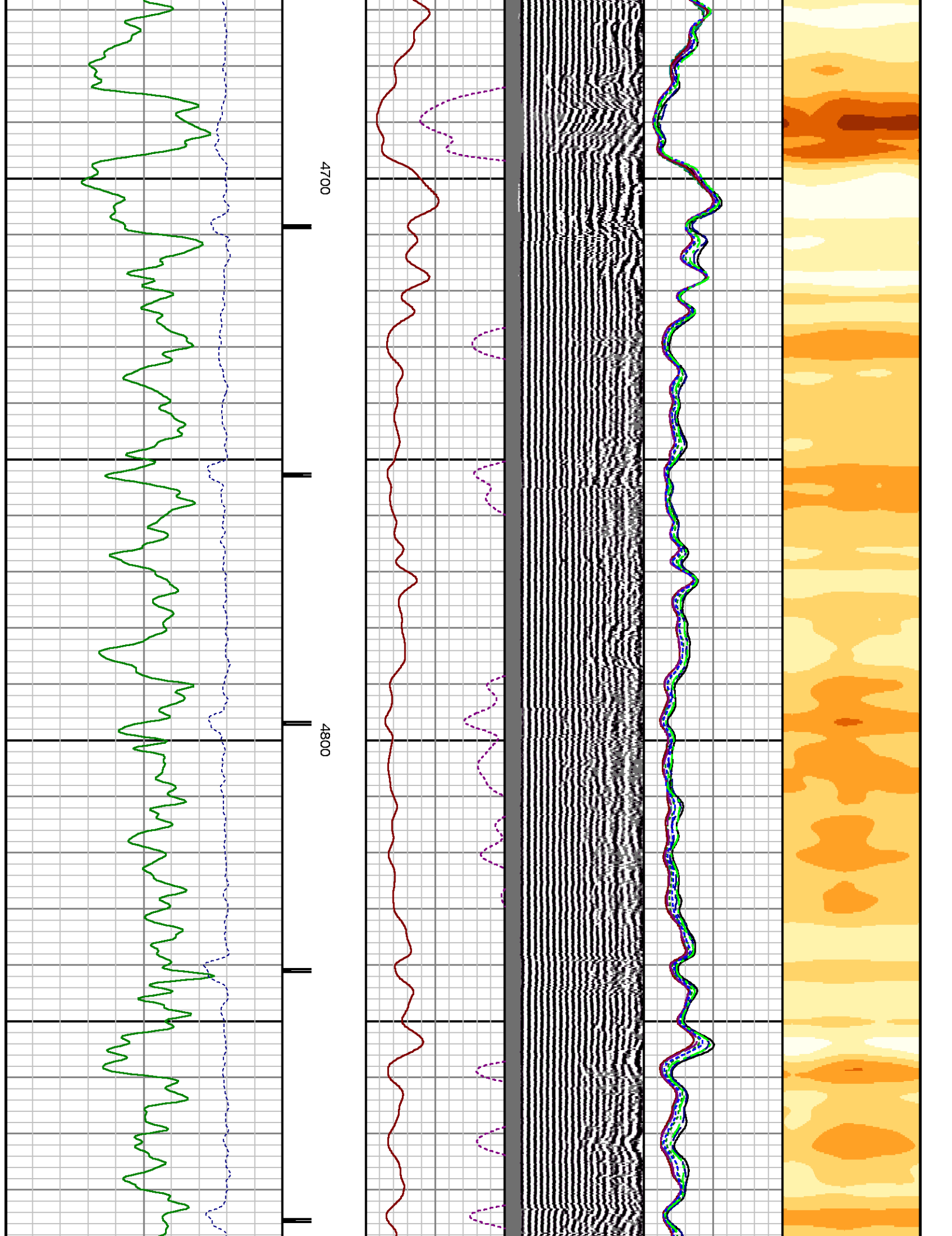


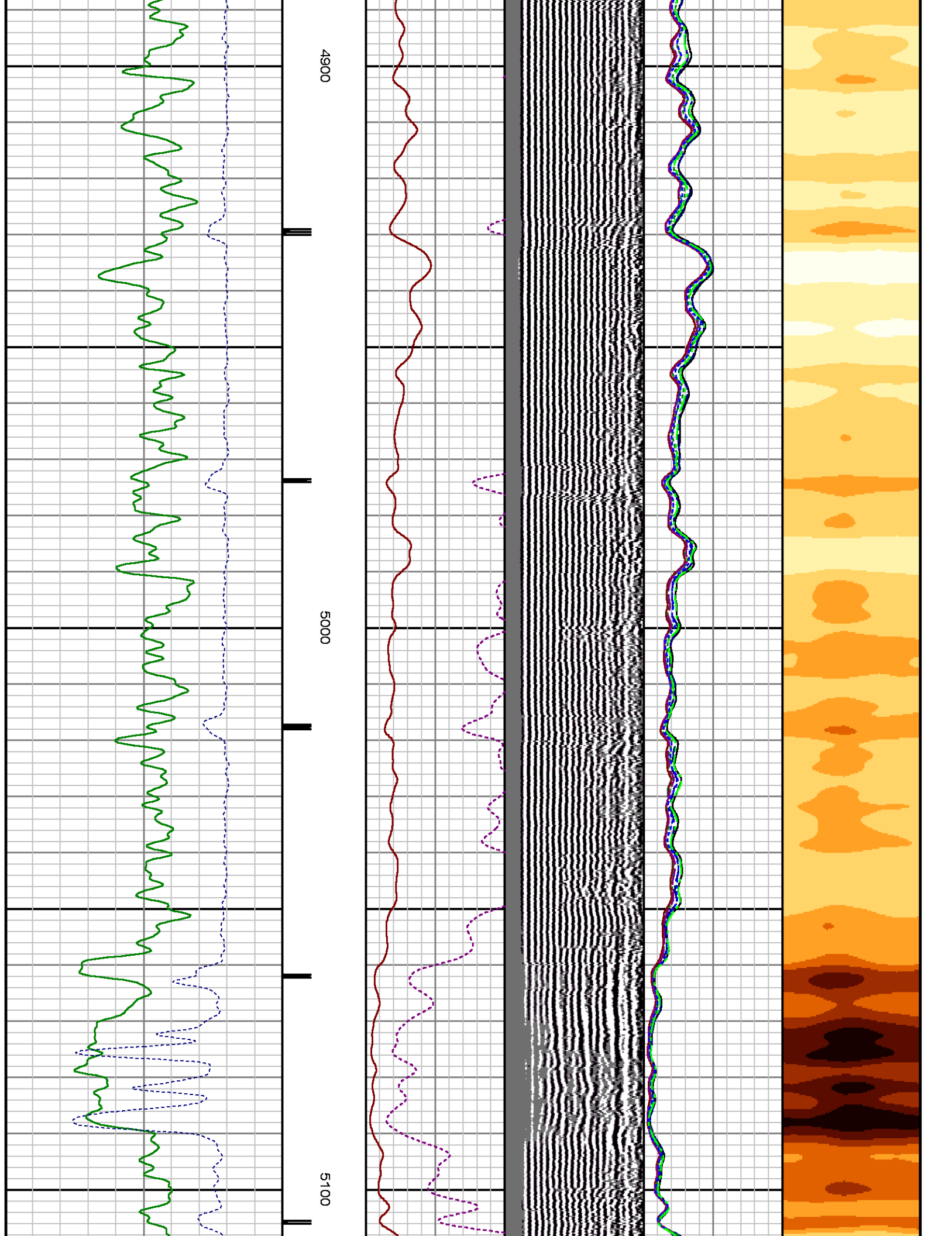


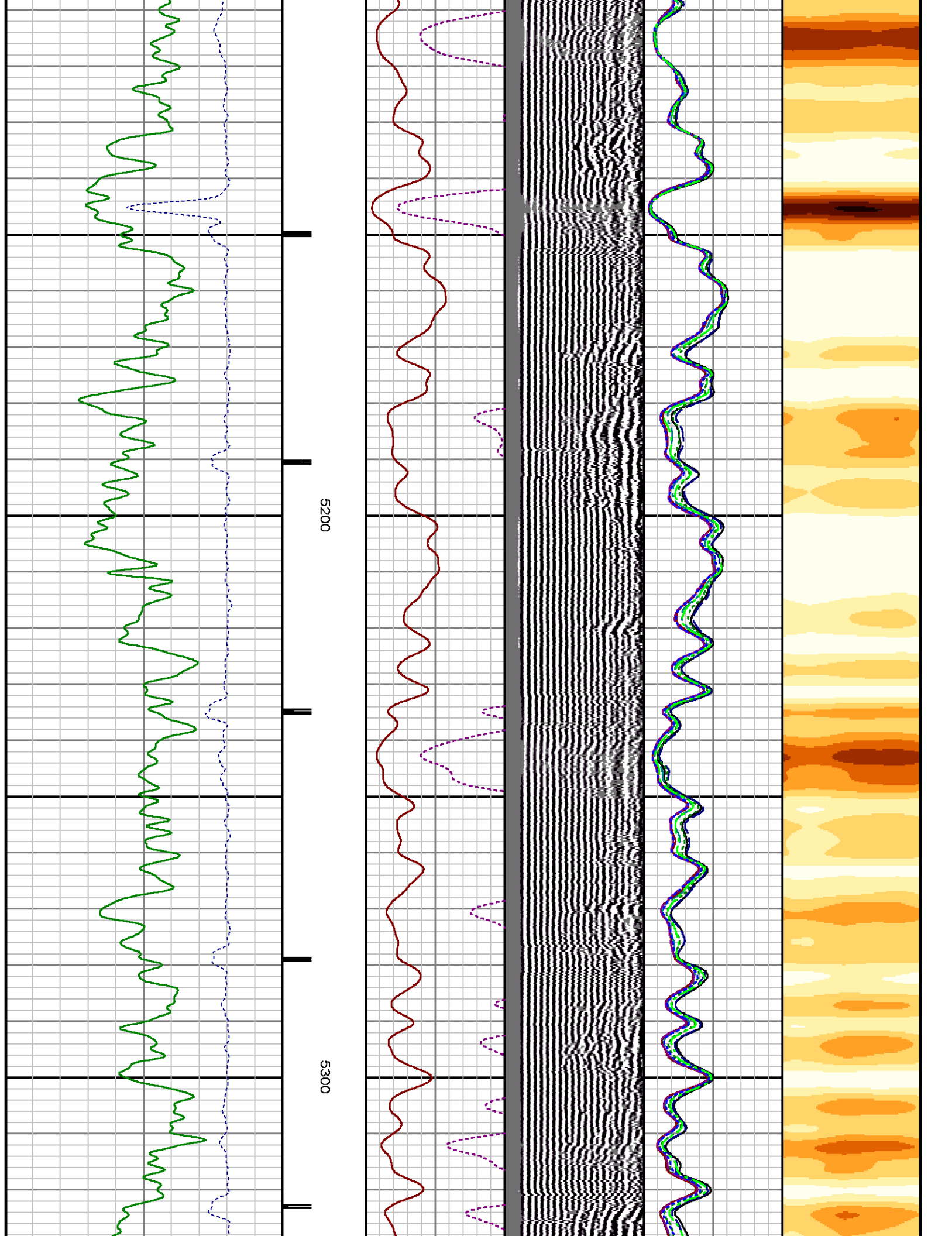


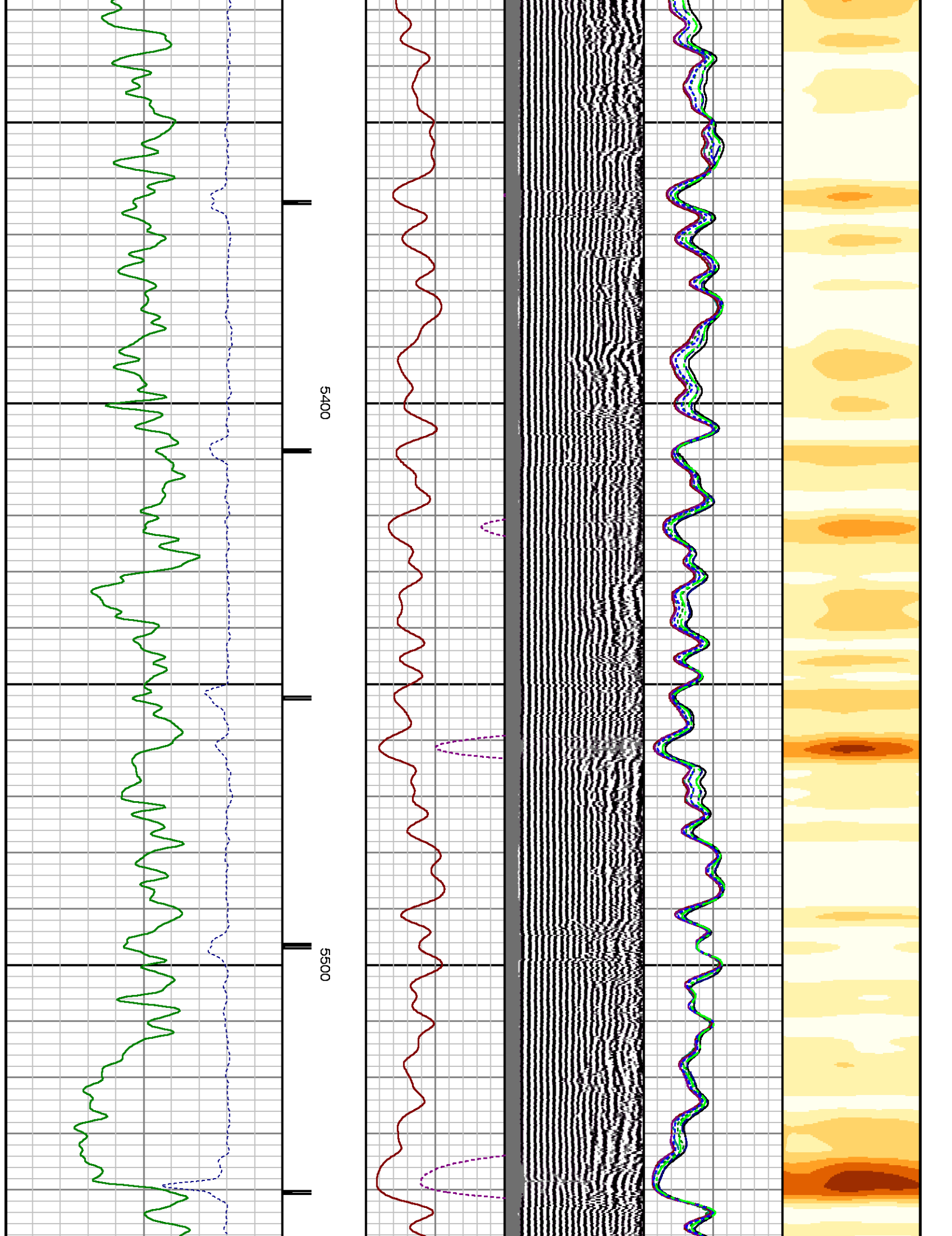


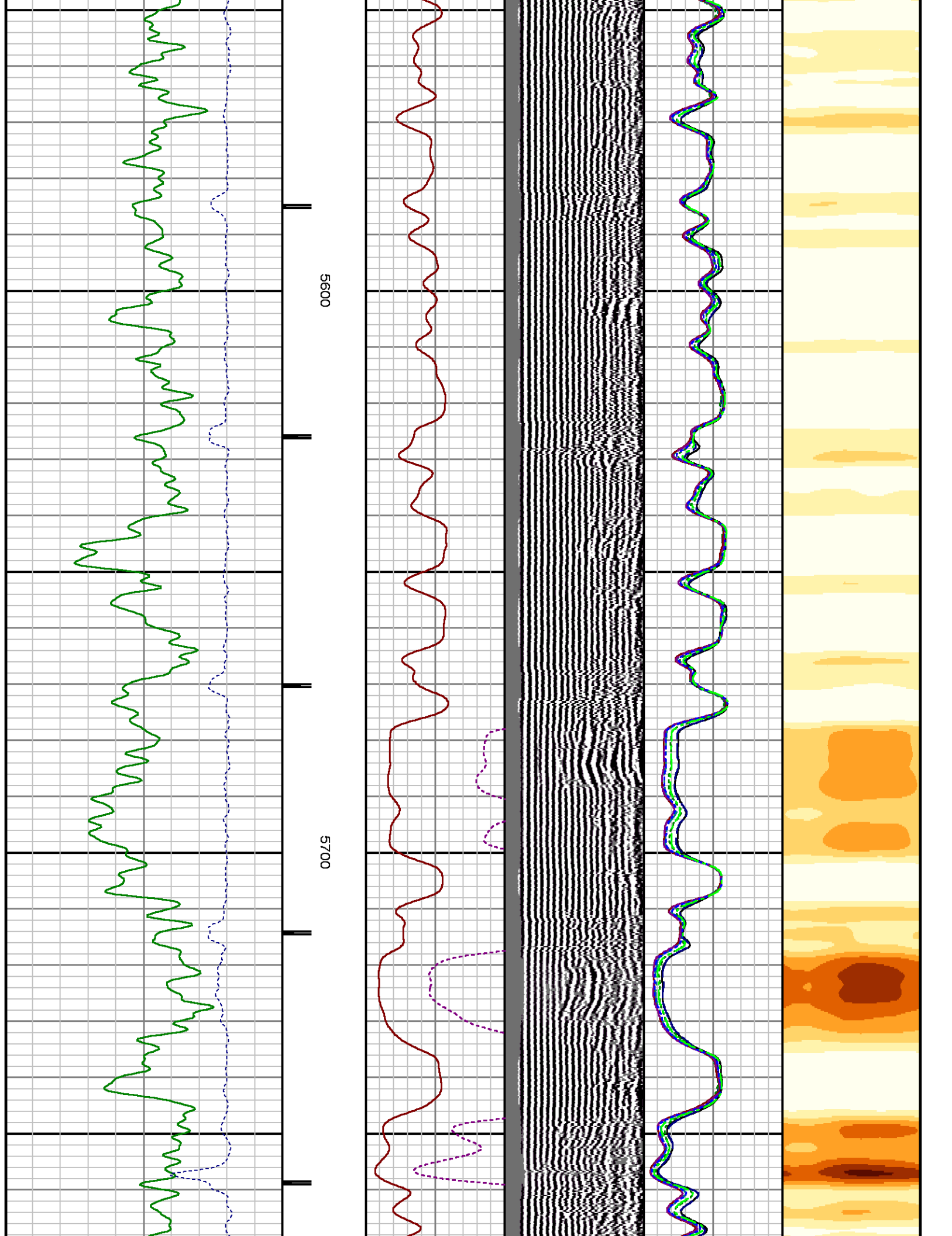


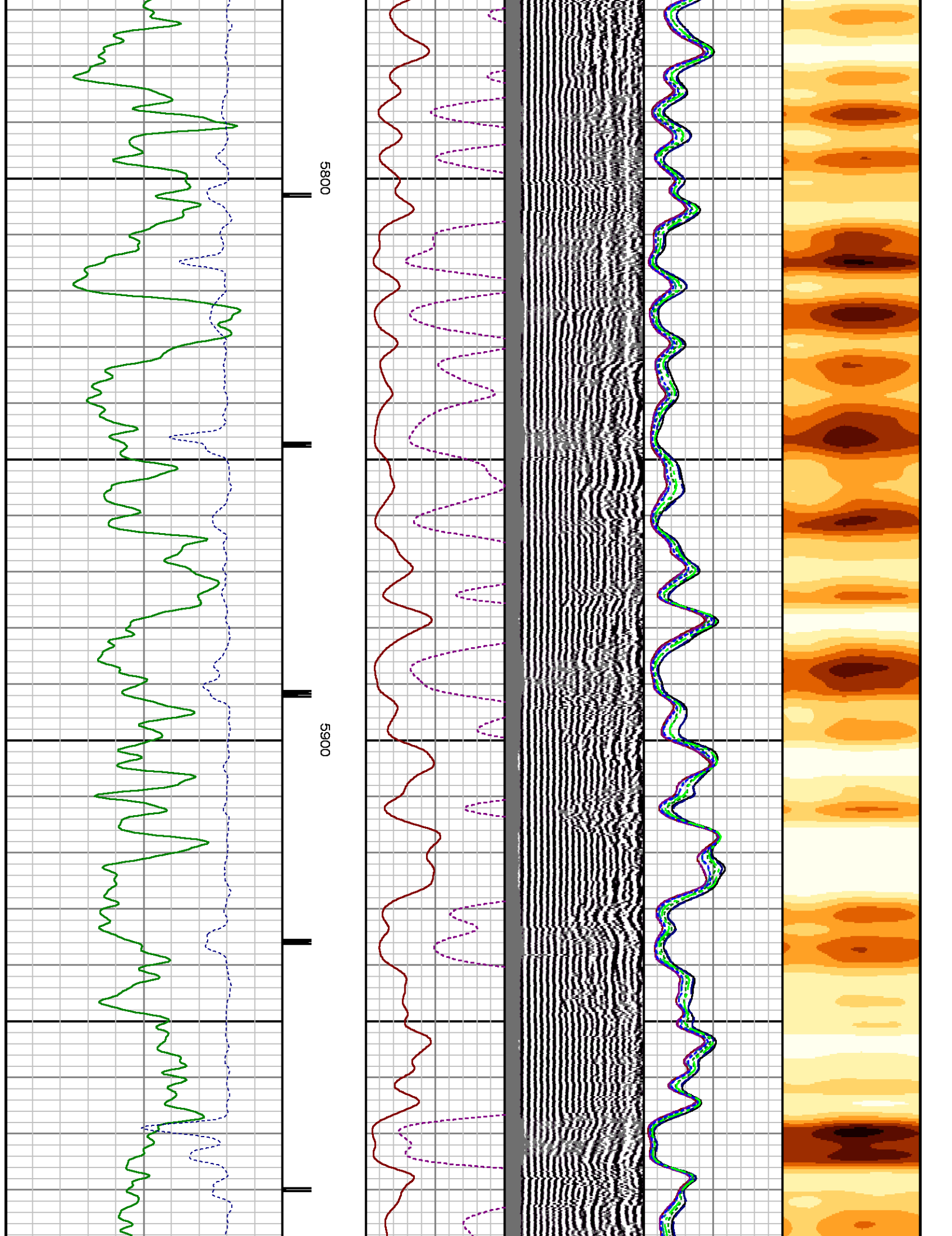


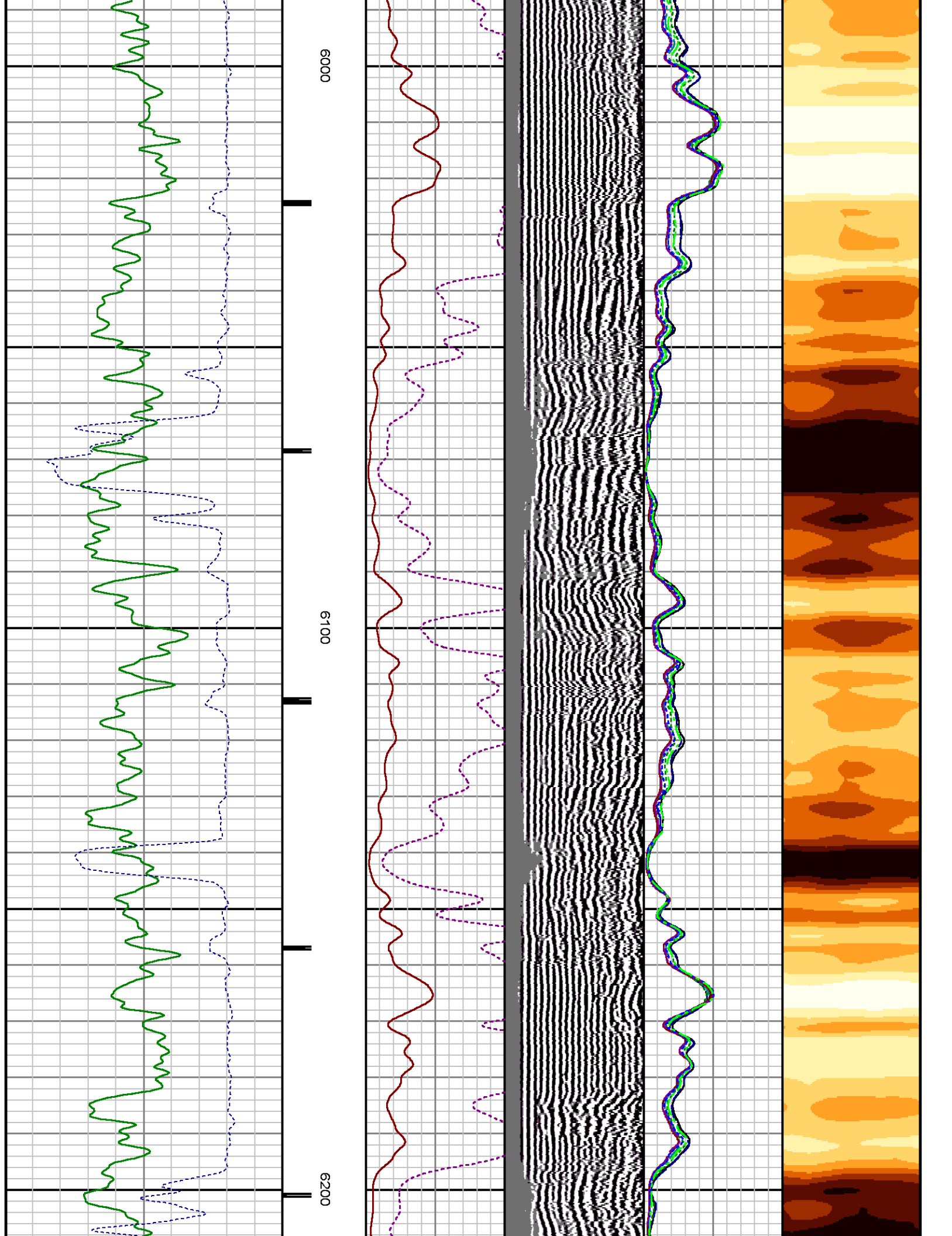


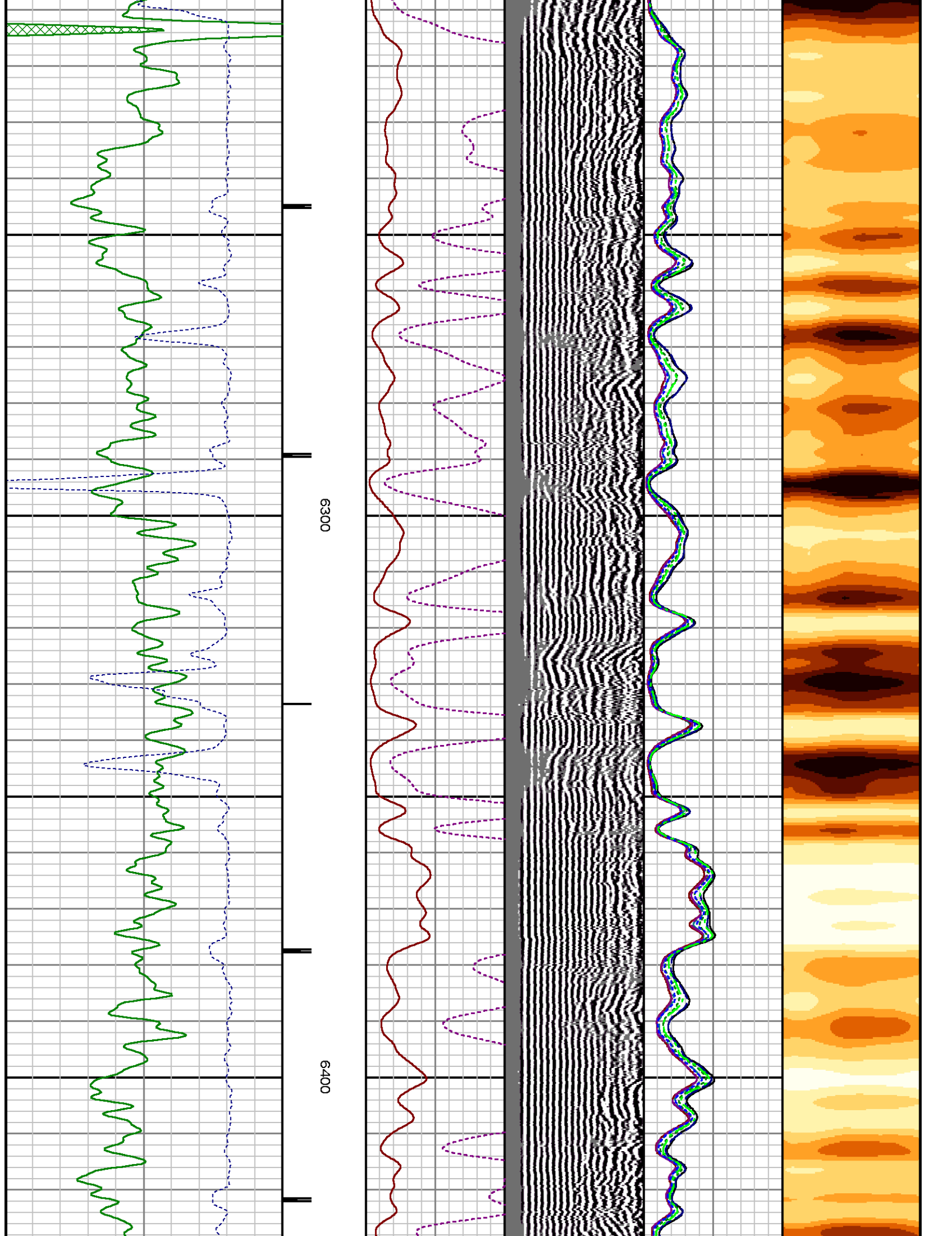


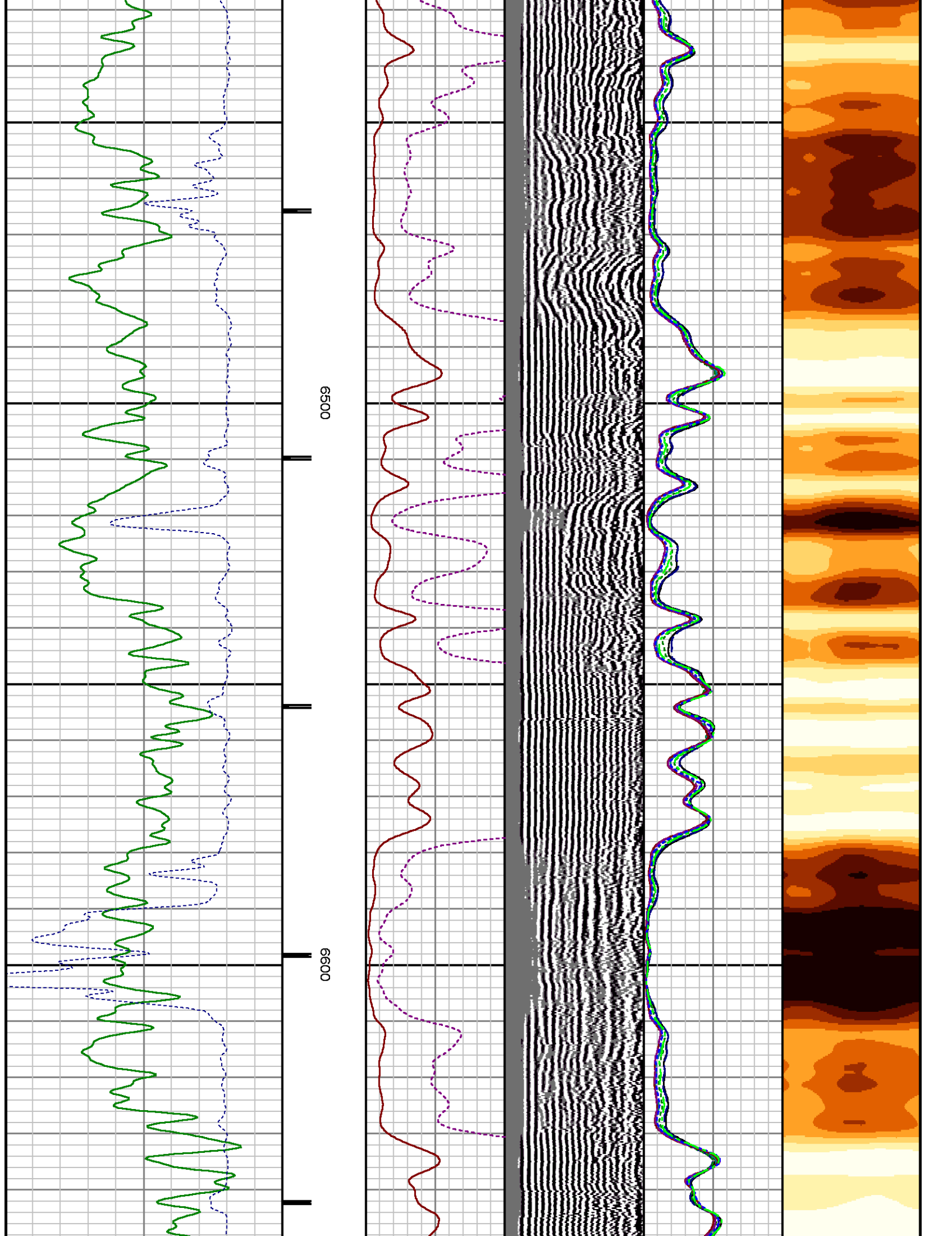


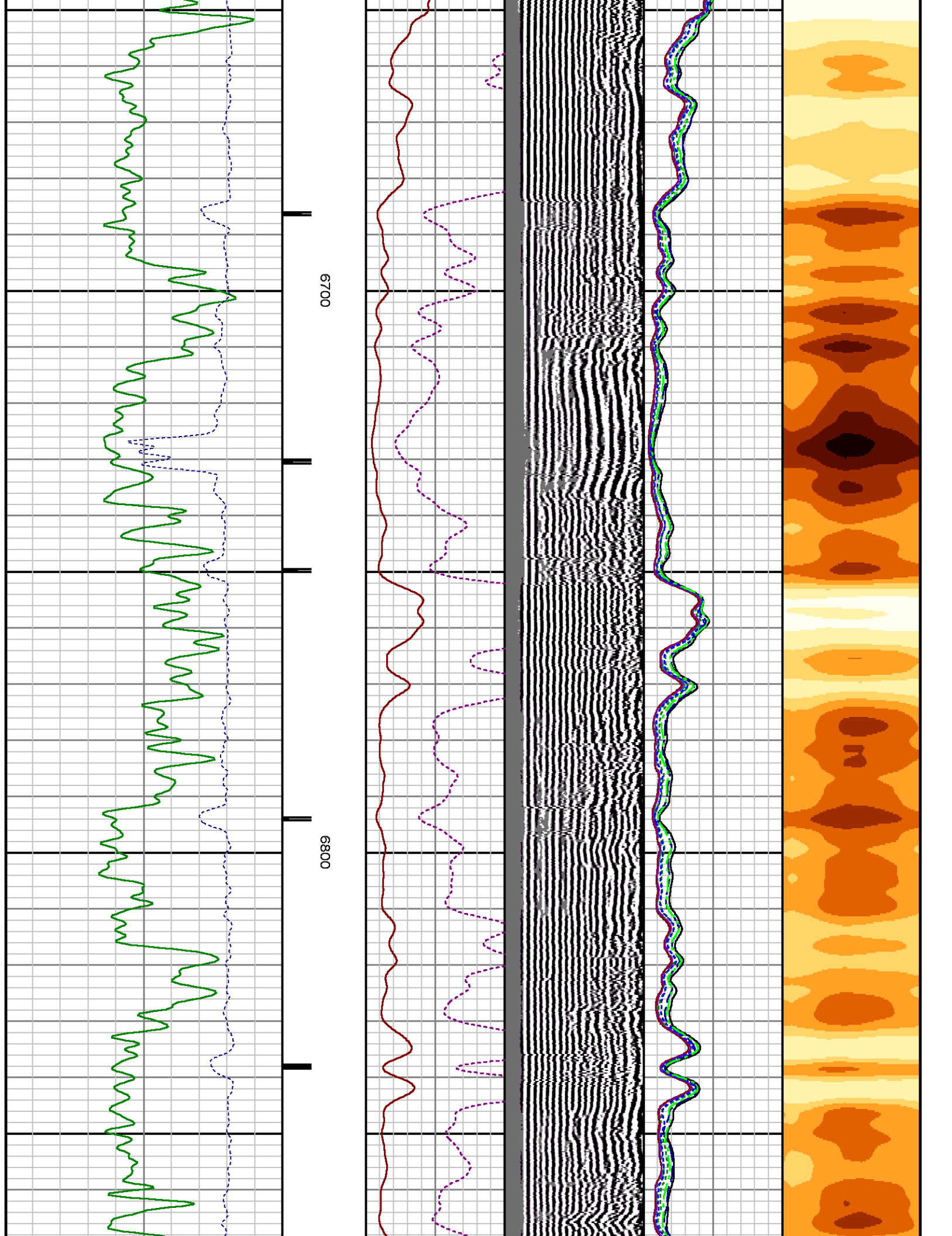


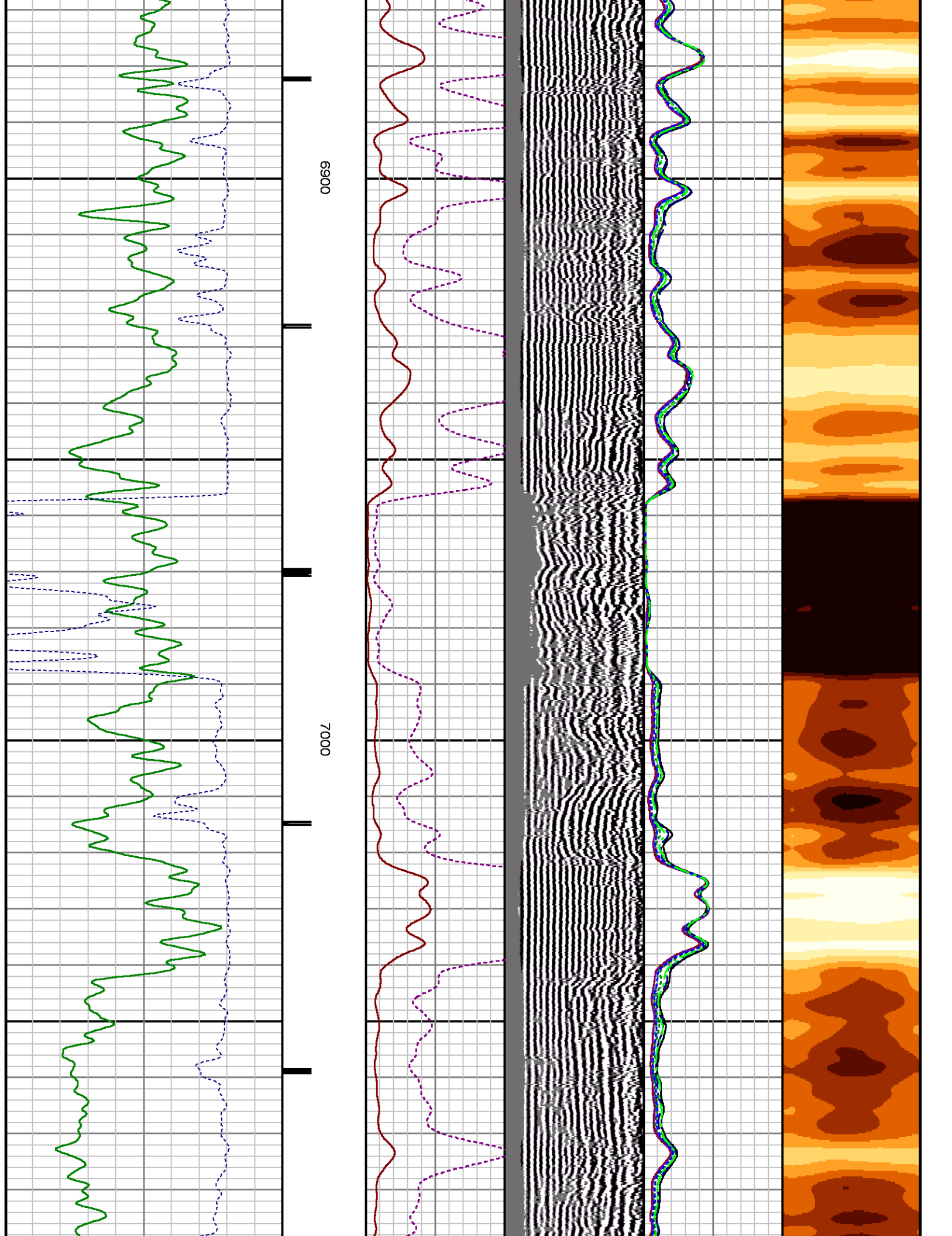


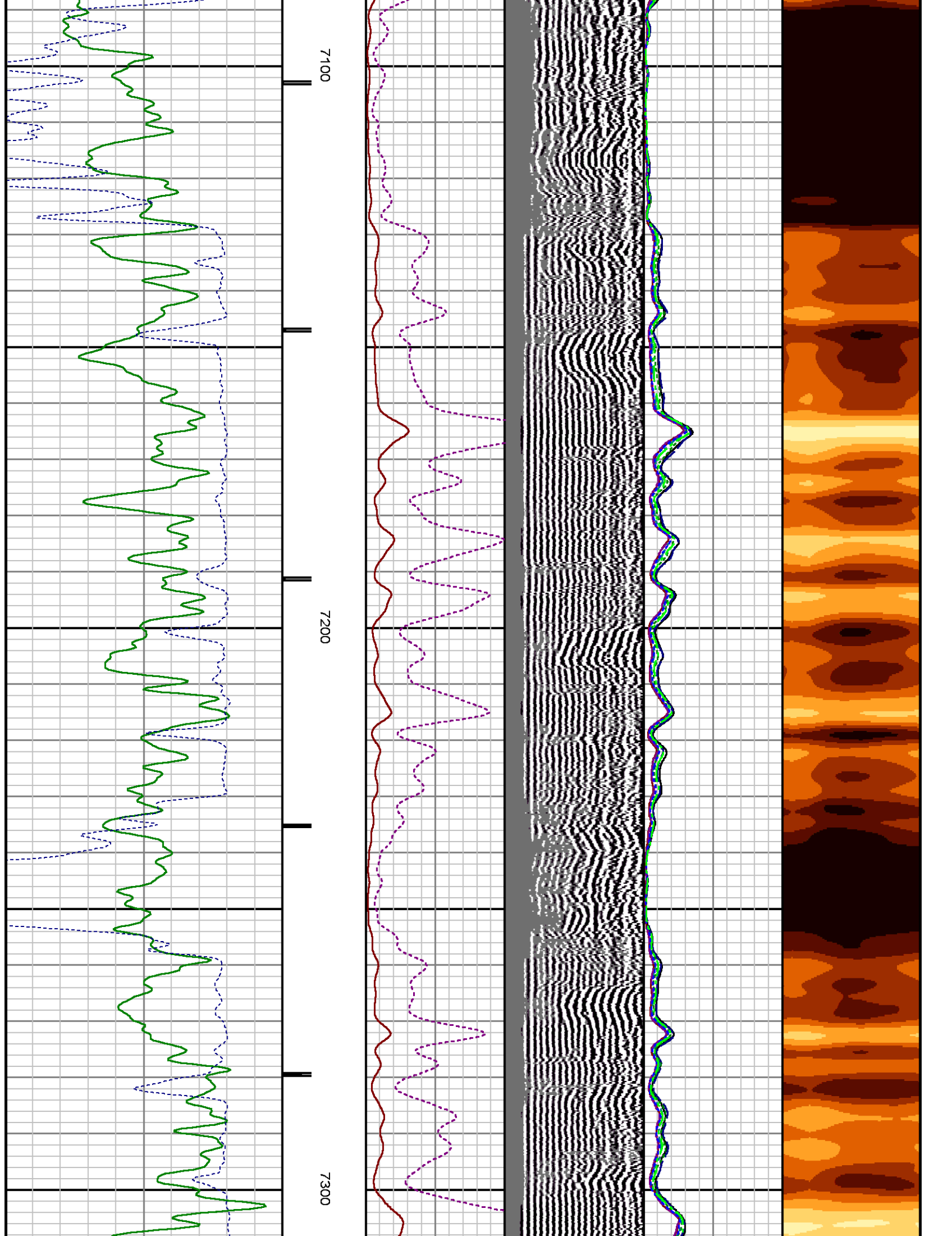


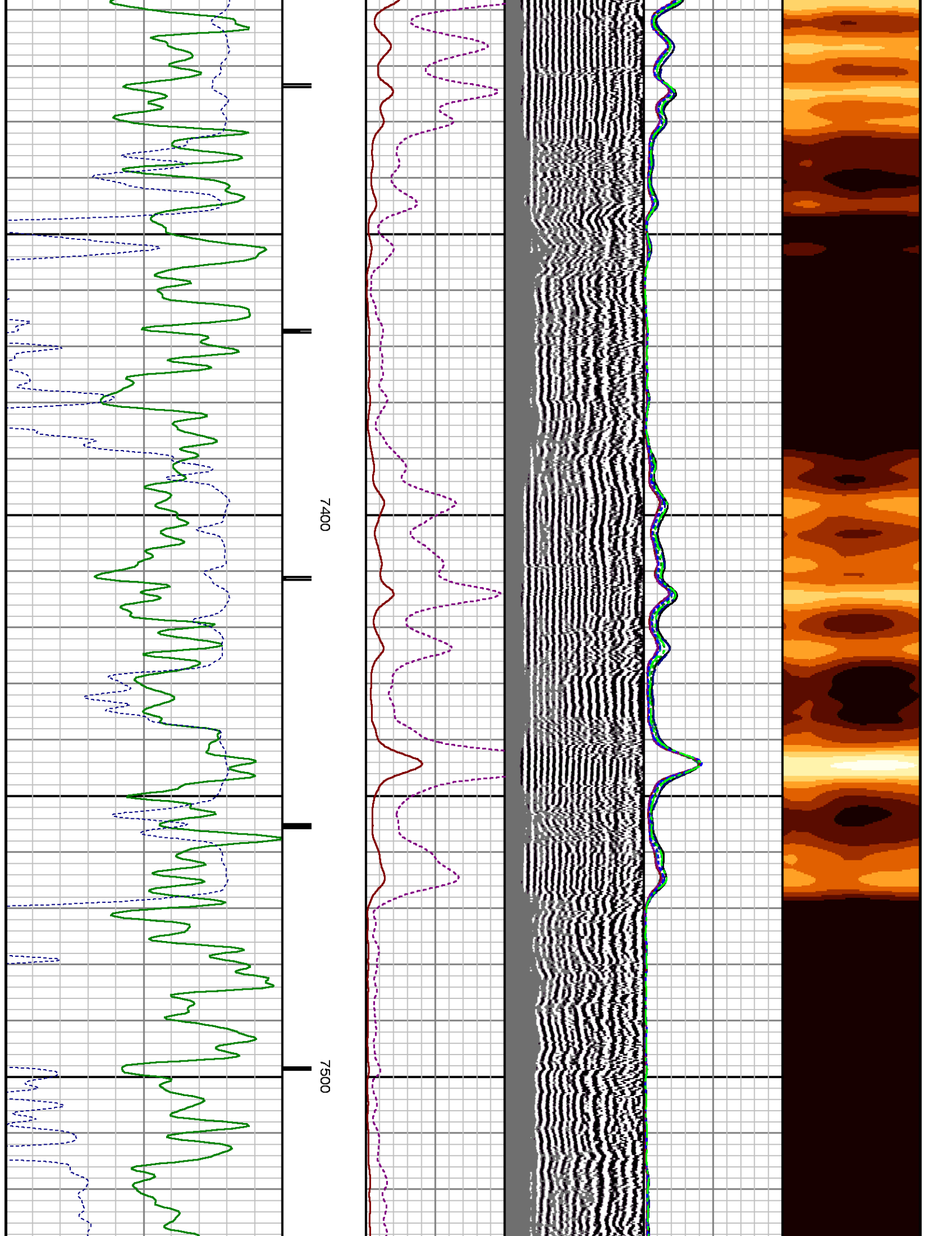


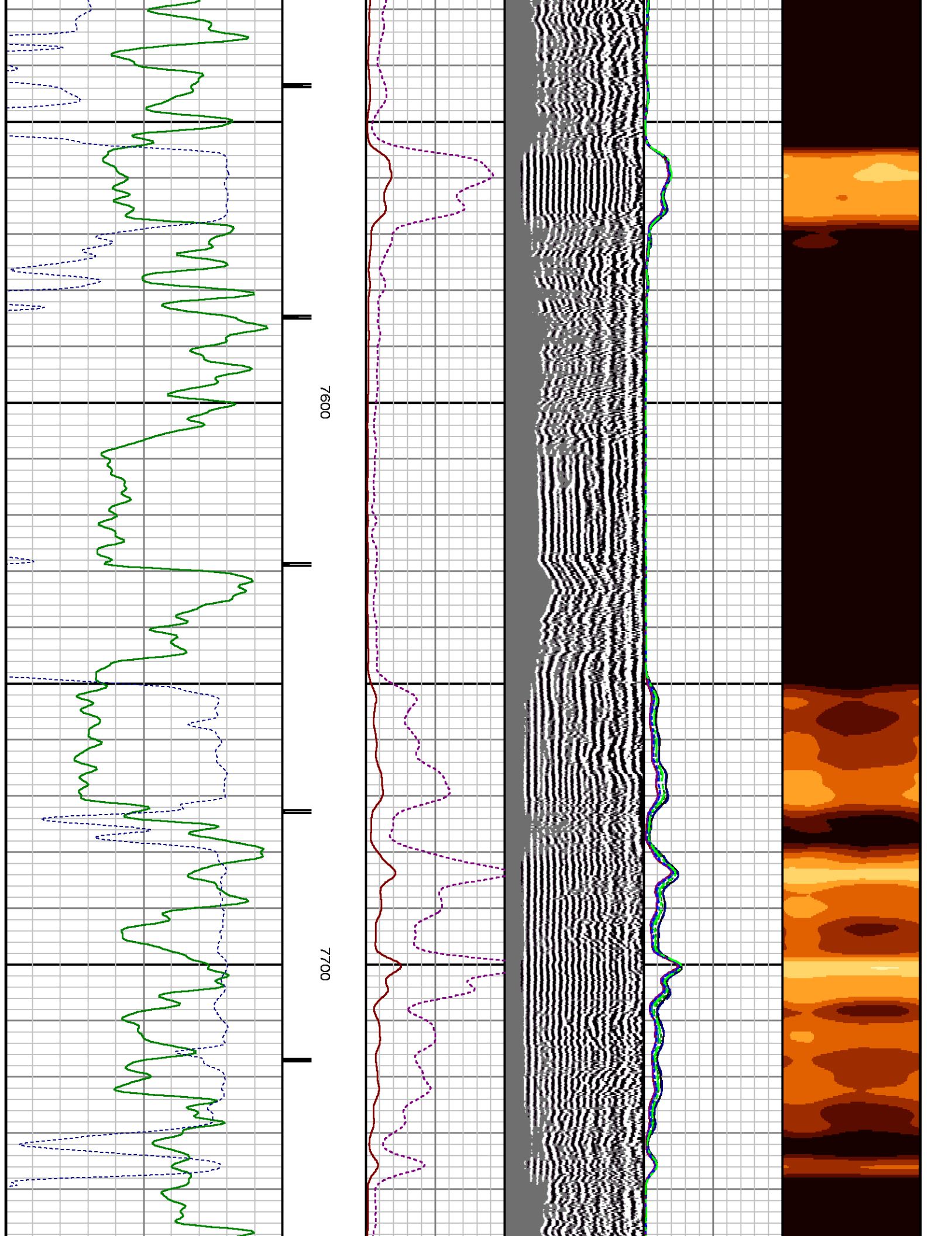


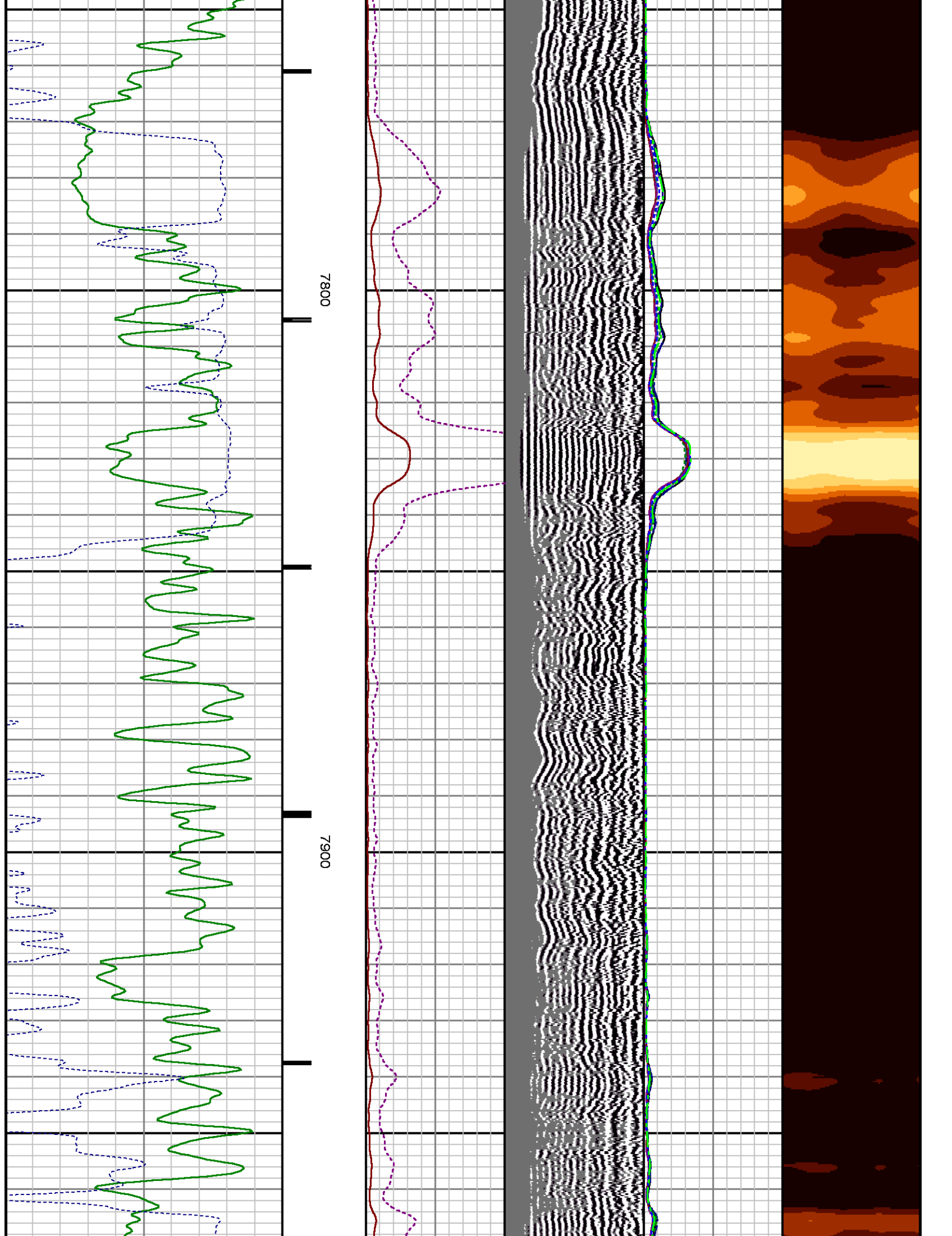


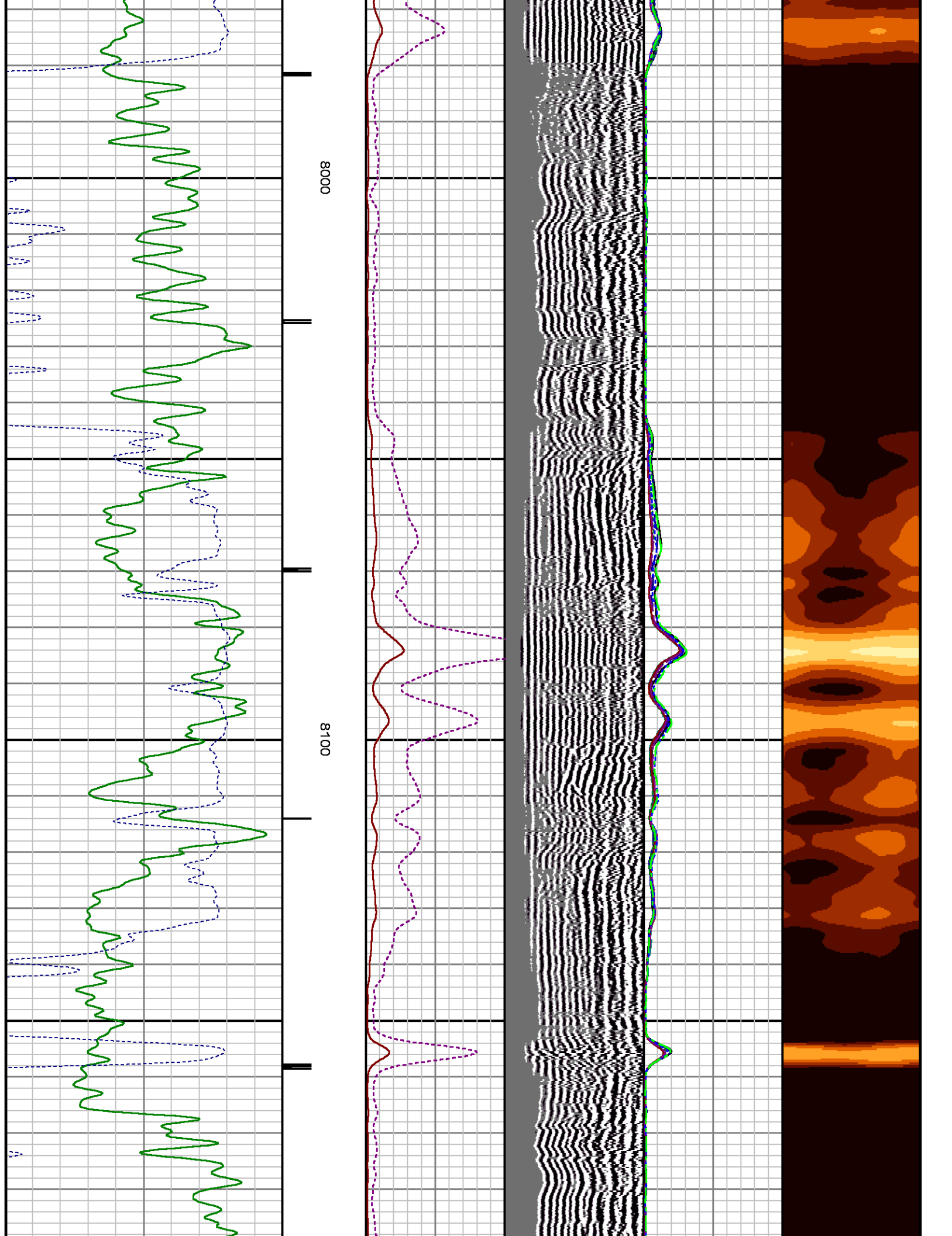


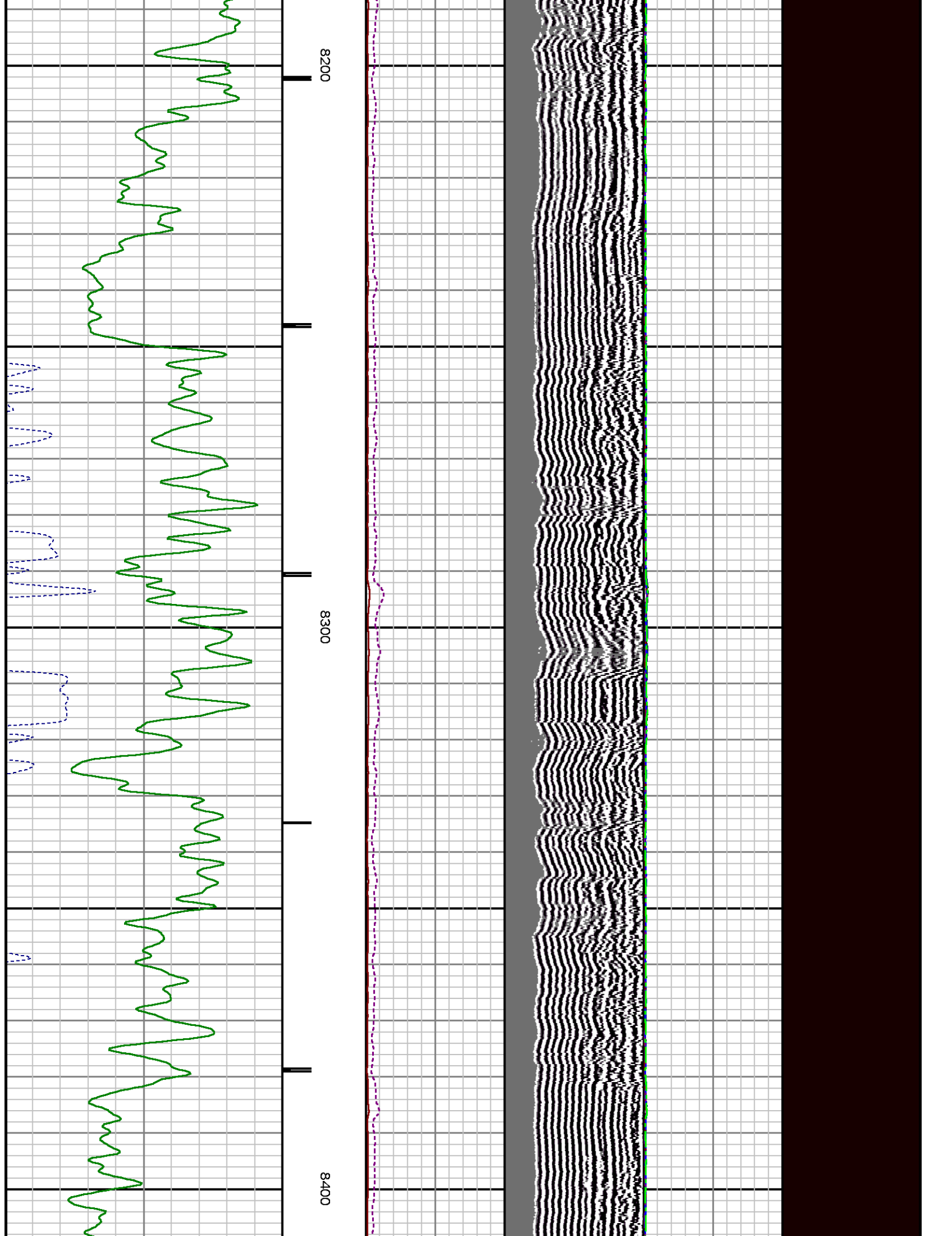


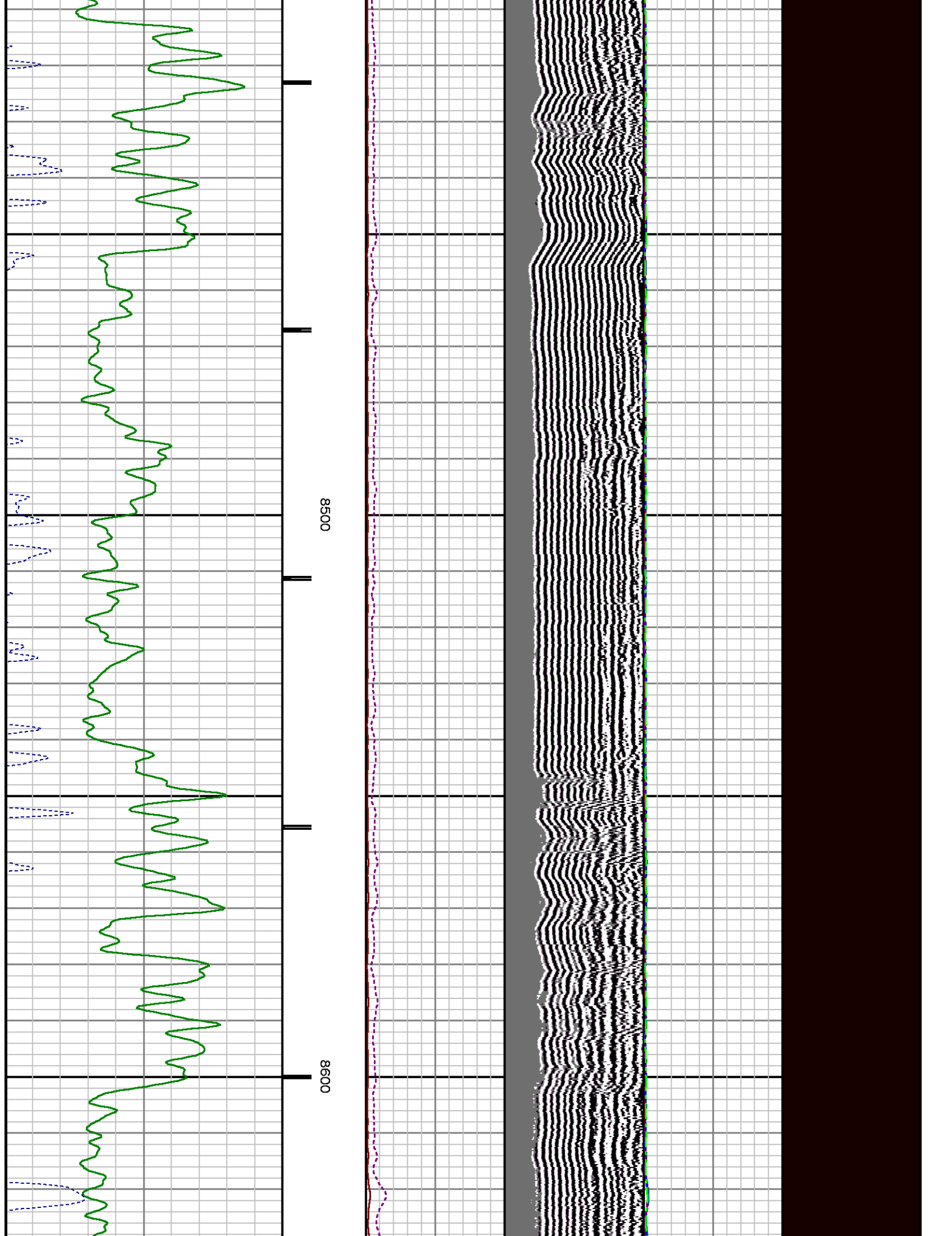


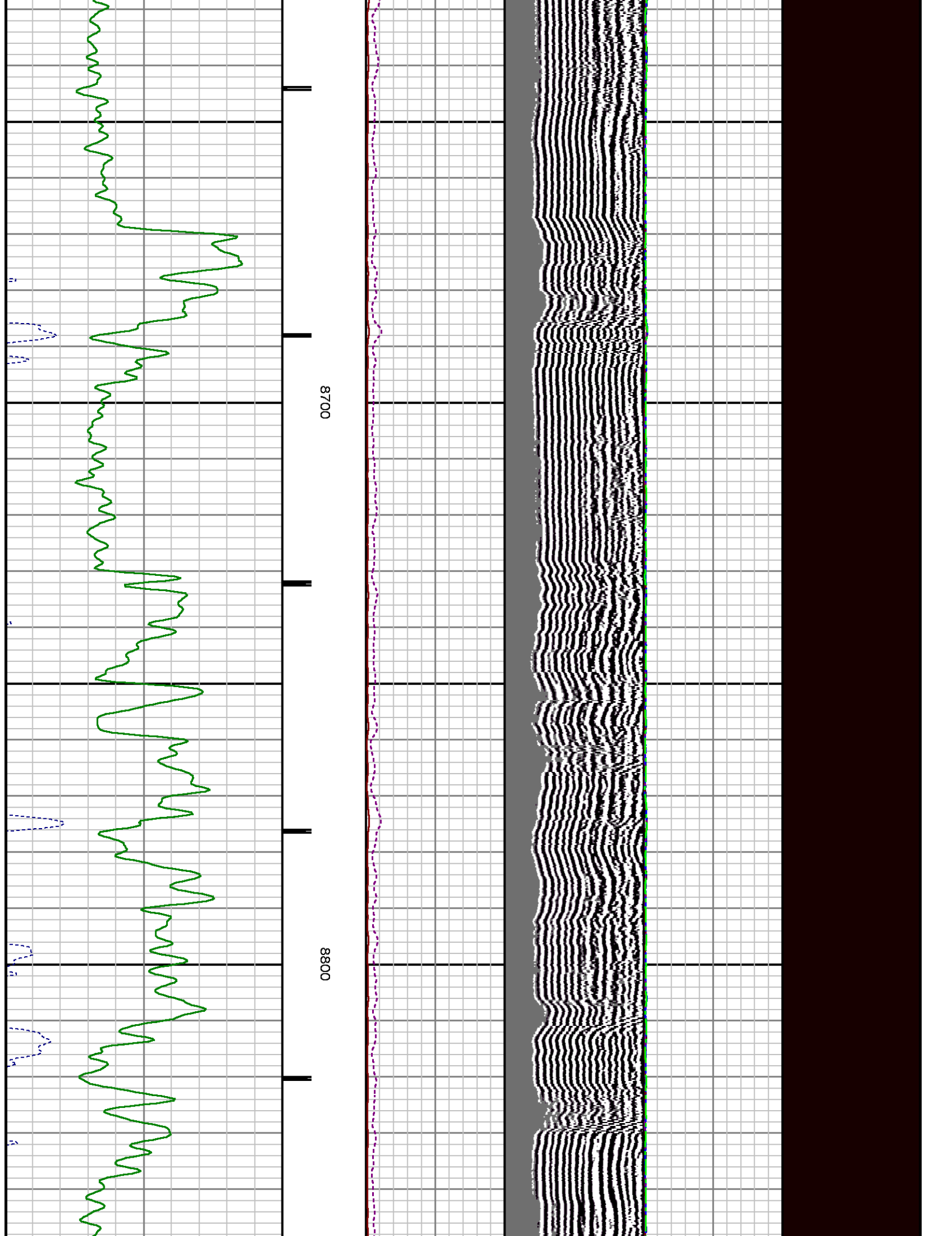


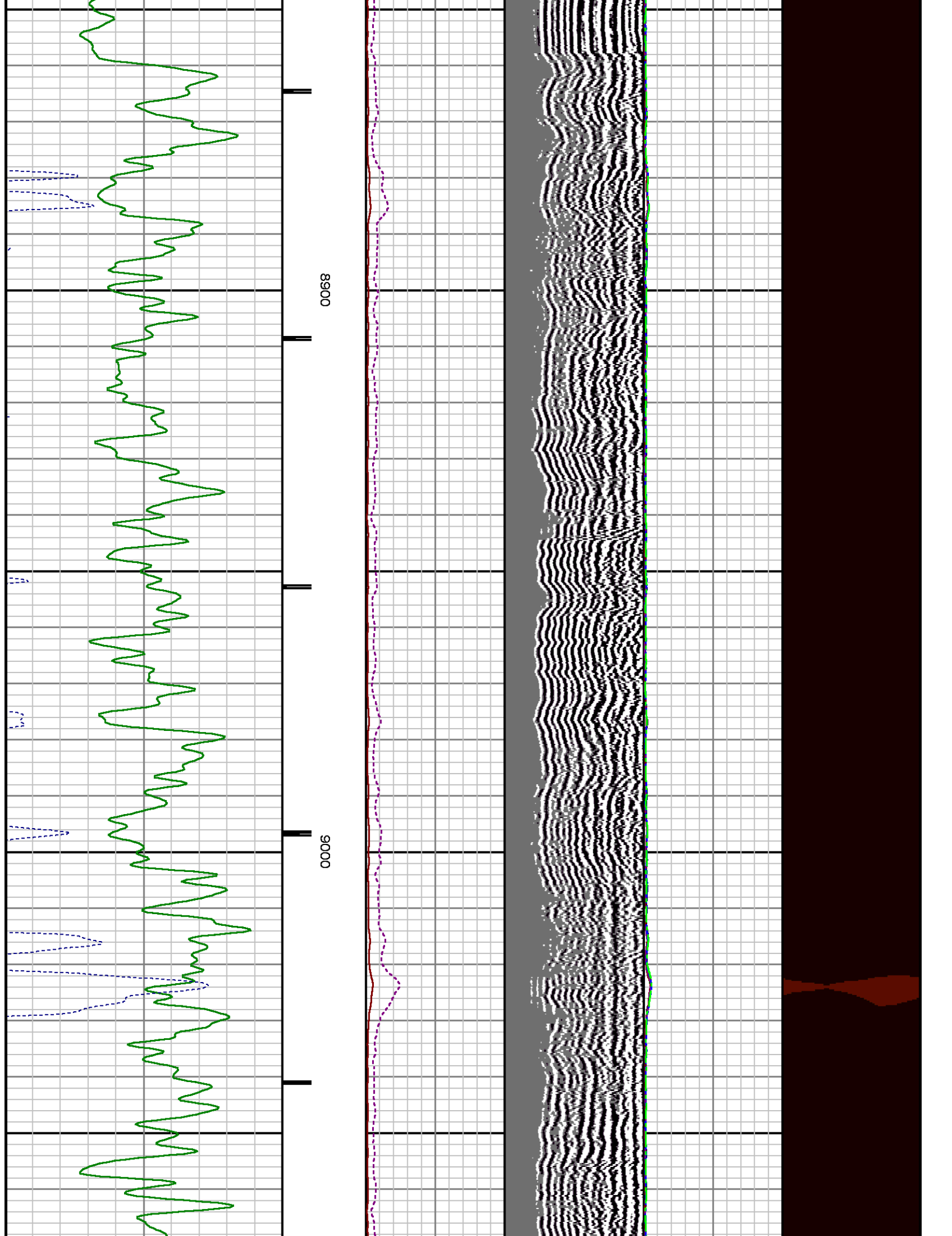


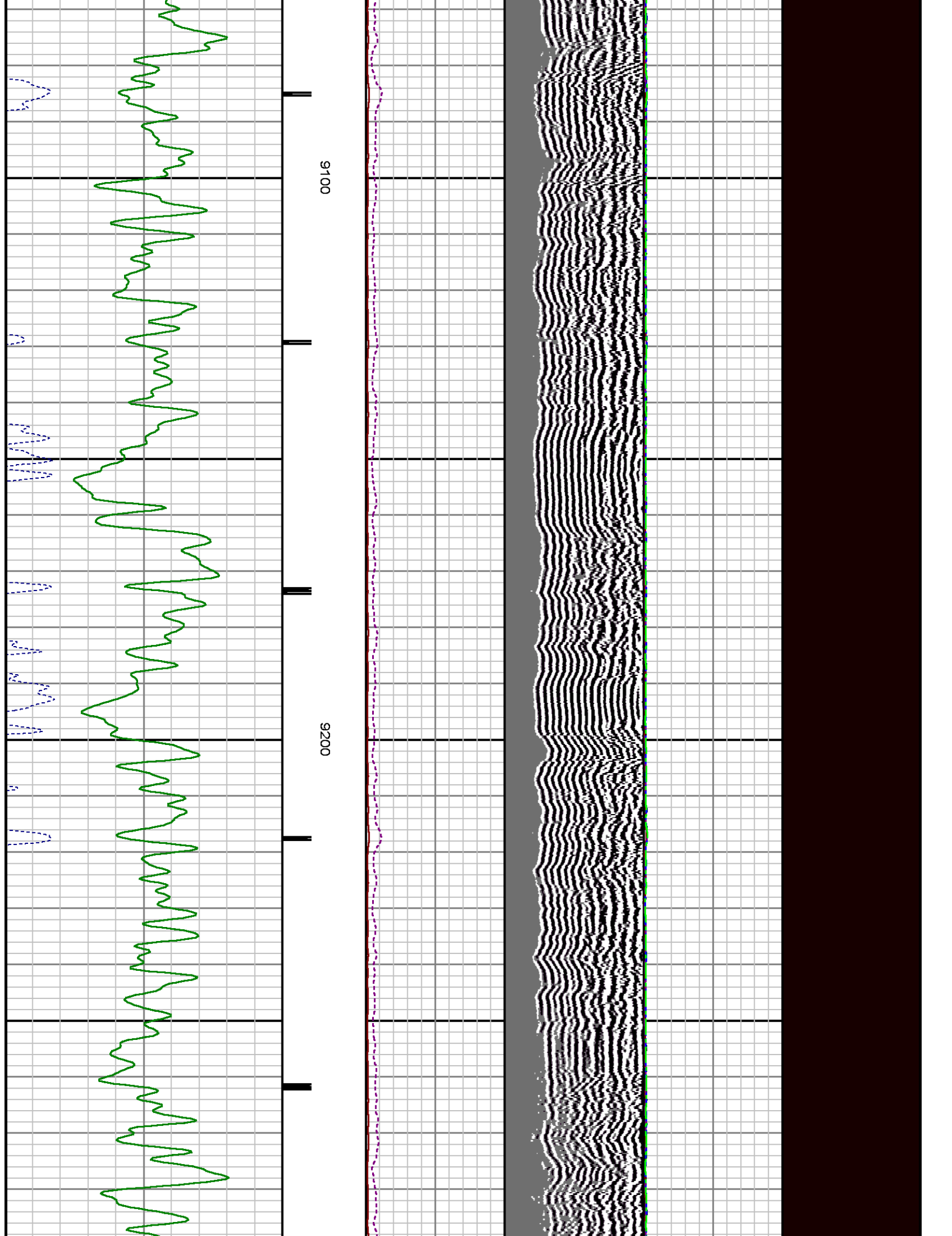


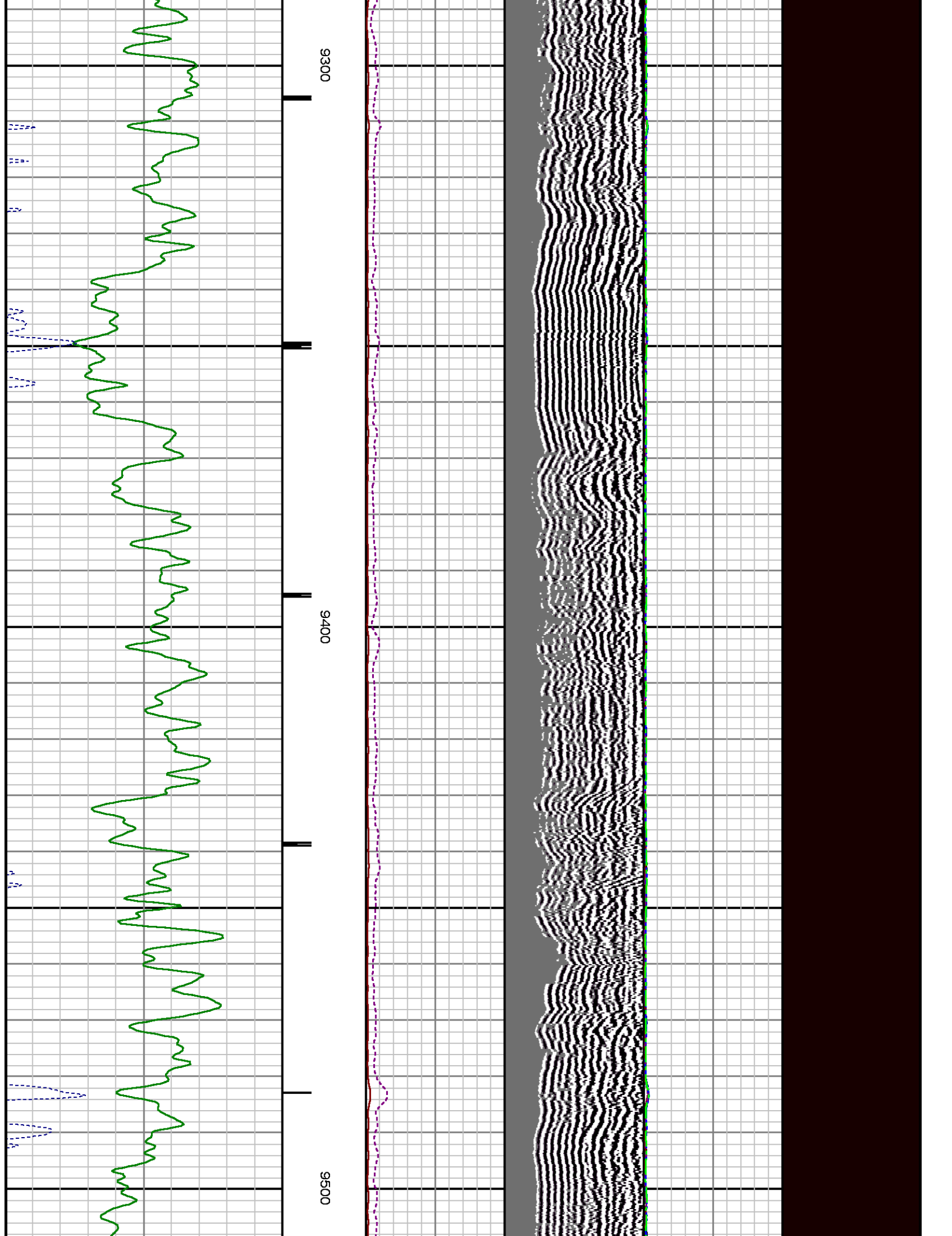


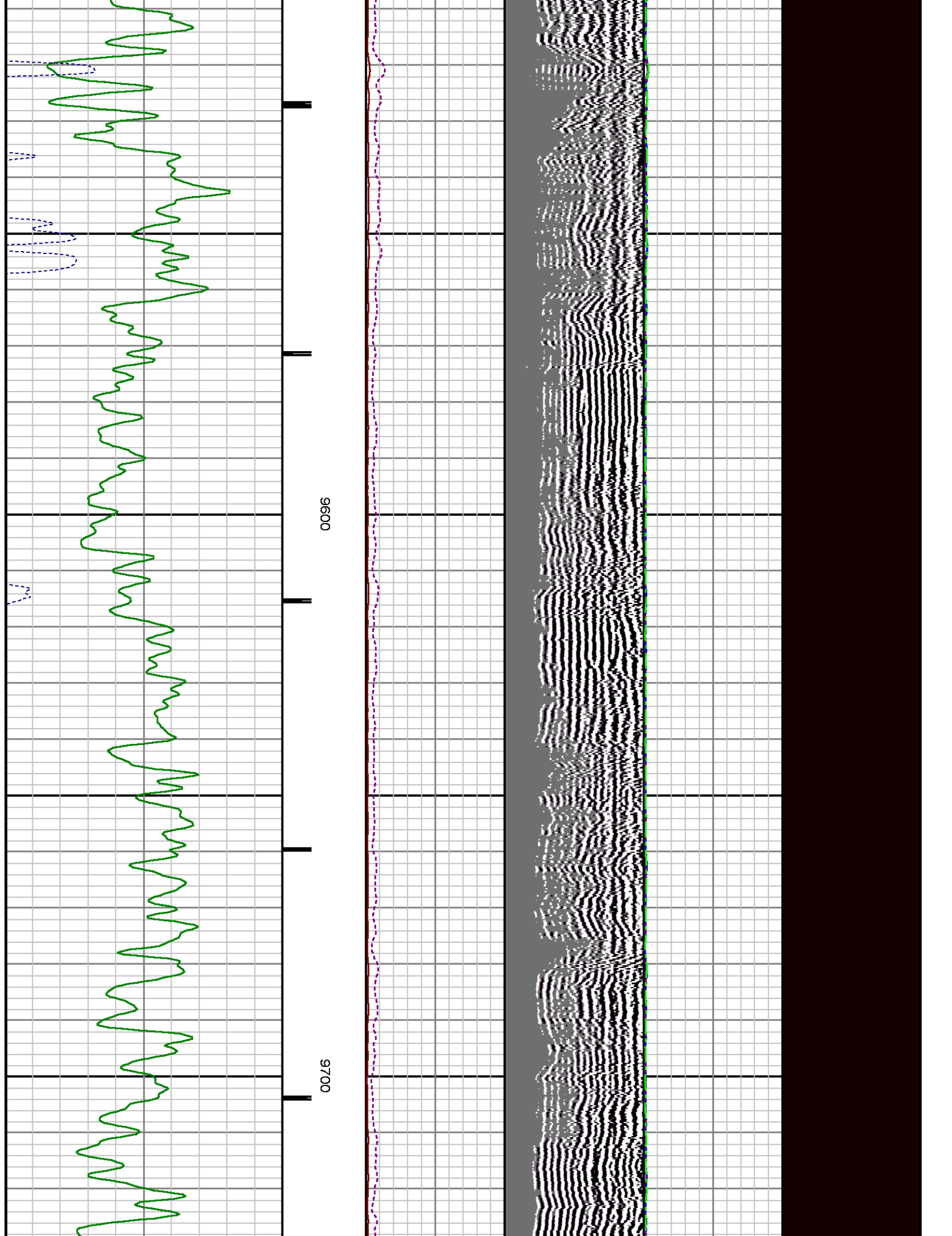


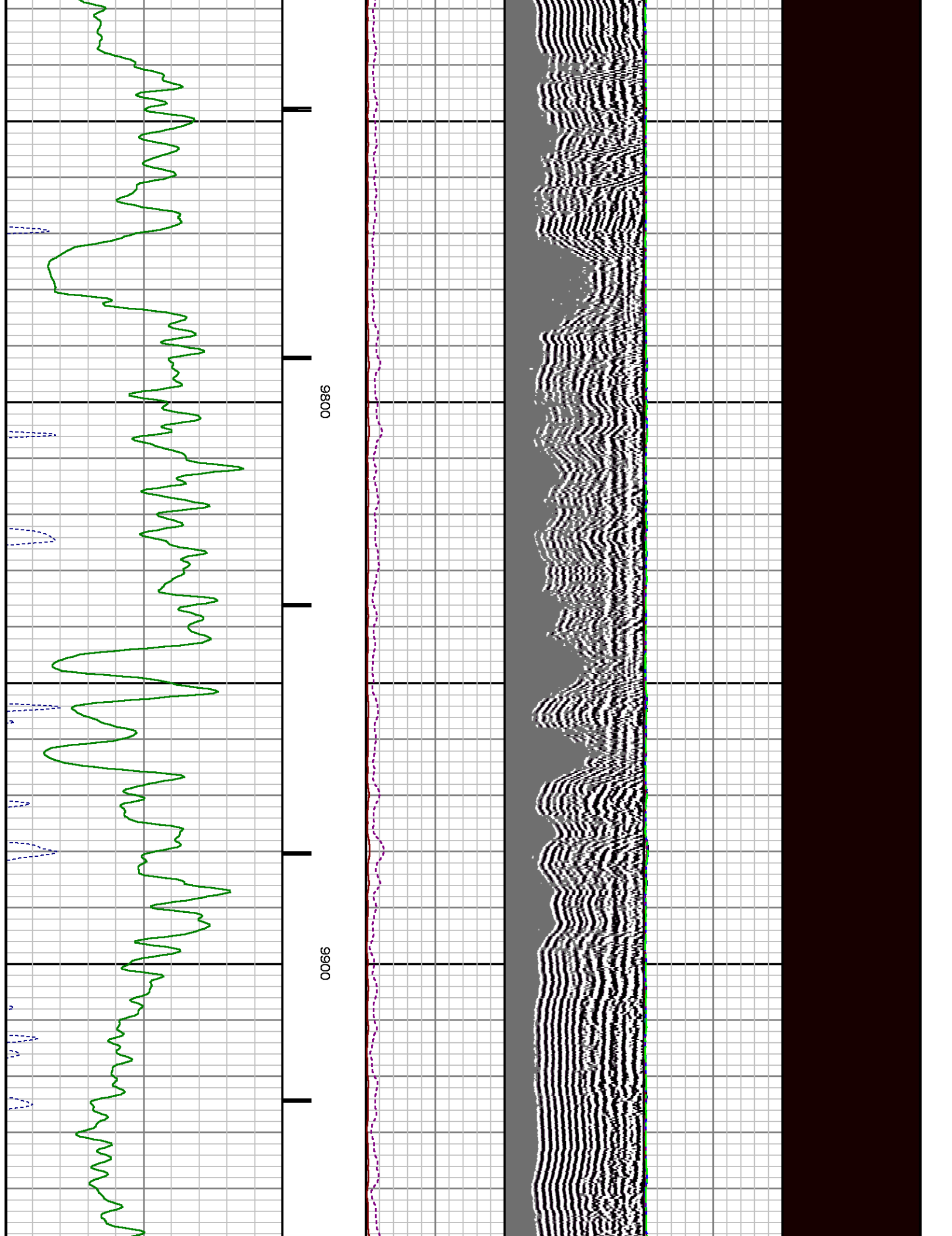


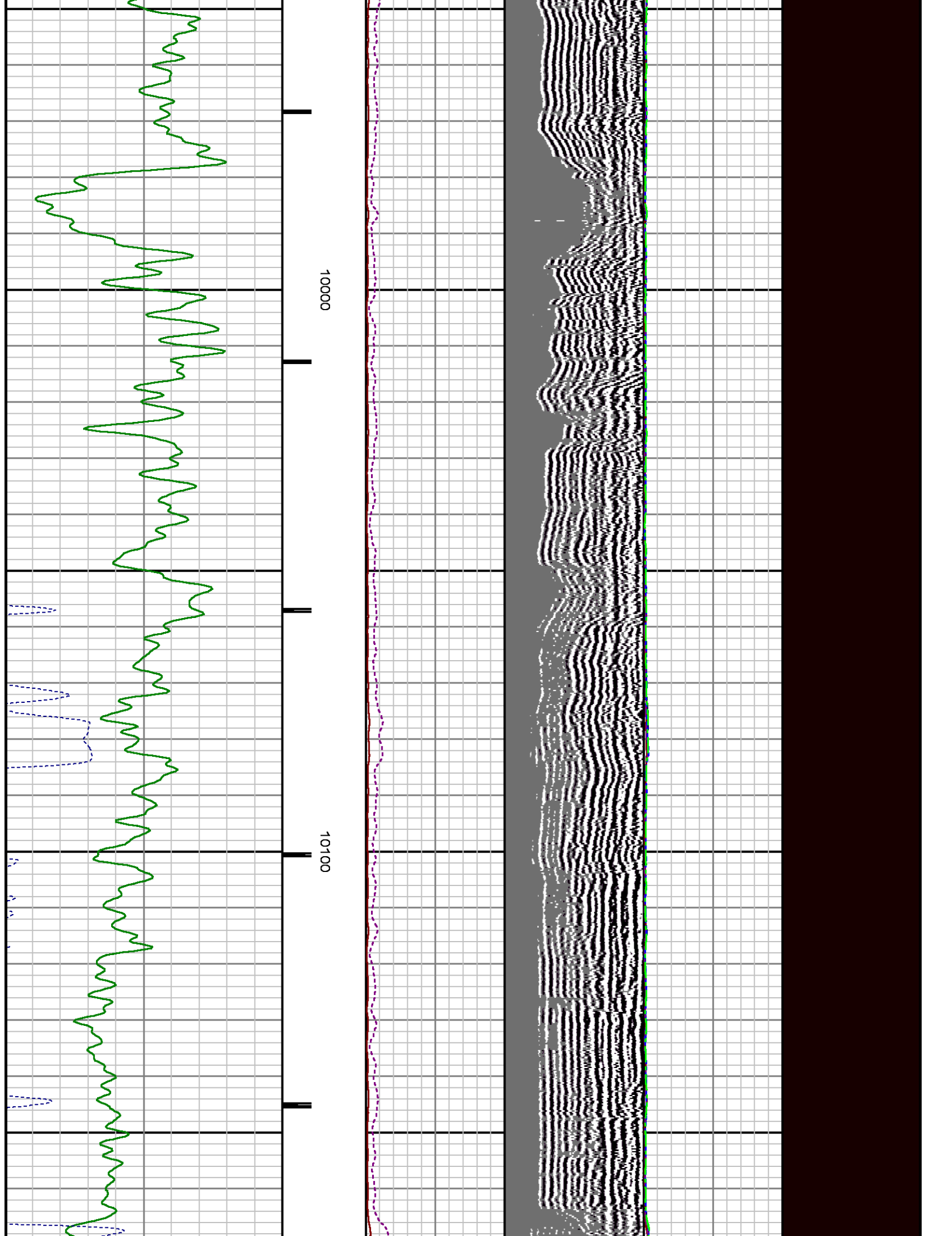












REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9985.239	10314.239
RAL	Amp Gate Start Near	195.000	usec	9985.239	10314.239
RAL	Amp Gate Start Radial	195.000	usec	9985.239	10314.239
RAL	Amp Gate Width Far	25.000	usec	9985.239	10314.239
RAL	Amp Gate Width Near	25.000	usec	9985.239	10314.239
RAL	Amp Gate Width Radial	25.000	usec	9985.239	10314.239
RAL	casing od	4.500	inches	9985.239	10314.239
RAL	casing wt	11.600	lbm/ft	9985.239	10314.239
RAL	FB Start Far	291.900	usec	9985.239	10314.239
RAL	FB Start Near	175.391	usec	9985.239	10314.239
RAL	FB Start Radial	175.391	usec	9985.239	10314.239
RAL	FB Thresh Far	10.000	mv	9985.239	10314.239
RAL	FB Thresh Near	4.000	mv	9985.239	10314.239
RAL	FB Thresh Radial	4.000	mv	9985.239	10314.239
RAL	Fluid Travel Time	200.000	usec/ft	9985.239	10314.988

DEPTH OFFSETS

(for Acquired Curves)

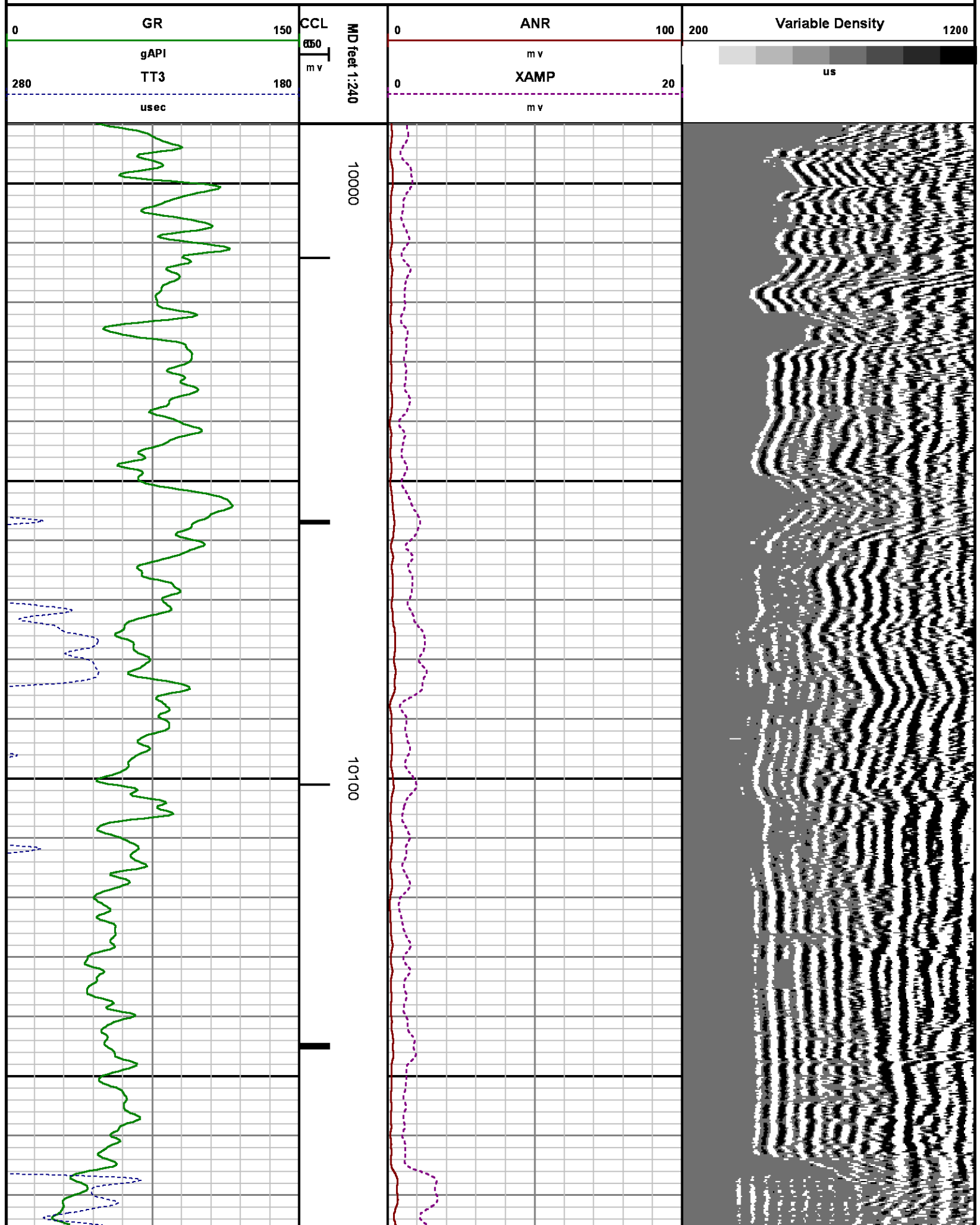
SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	-16.750	ACAL ANR AR1 AR2 AR3 AR4 AR5 AR6 AR7 AR8 CHV FPR2 FPR3 FPR5 TT3 TTR1 TTR2 TTR3 TTR4 TTR5 TTR6 TTR7 TTR8 XAMP
1426XA	-15.750	AFAR SIG TT5
2459XA	-11.340	CCL
2459XA	-9.490	GR
2459XA	-4.090	NEU

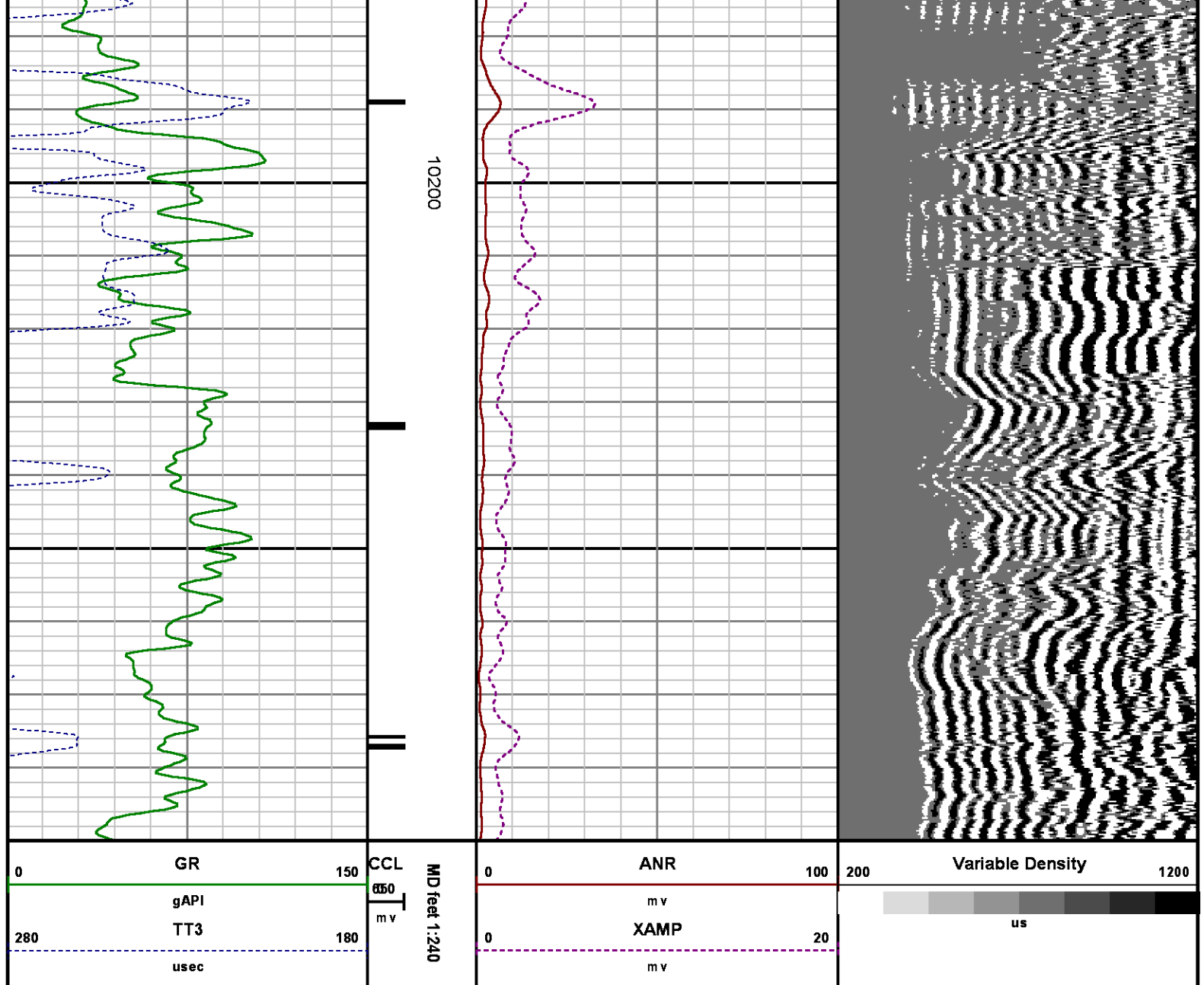
Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : FEDERAL NER 44-32





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP496A25_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 25 09:15:09 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A25

Tool Delay [usec]	<input type="text" value="-53.00"/>	Tank OD in	<input type="text" value="5.50"/>	Tank Wt lbm/ft	<input type="text" value="15.50"/>	Tank ID in	<input type="text" value="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	0.231	100.00	0.30
3 Ft. Receiver	218	216	30	166	25	1.290	100.00	0.30
5 Ft. Receiver	327	325	30	223	66	0.305	150.00	0.34
Radial #1	218	216	30	166	23	0.888	100.00	0.30
Radial #2	218	216	30	166	23	0.638	100.00	0.30
Radial #3	218	216	30	166	23	0.618	100.00	0.30
Radial #4	218	216	30	166	23	0.870	100.00	0.30
Radial #5	218	216	30	166	23	1.067	100.00	0.30
Radial #6	217	216	30	166	23	1.165	100.00	0.30
Radial #7	217	216	30	166	23	0.377	100.00	0.30
Radial #8	218	216	30	166	23	0.642	100.00	0.30

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496025_fid.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 25 12:55:21 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: 025

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	166	25	0.119	0.000	1.01	100.000
3 Ft. Receiver	195	25	2.311			
5 Ft. Receiver	305	25	2.939			
Radial #1	195	25	1.604			
Radial #2	195	25	1.586			
Radial #3	195	25	1.793			
Radial #4	195	25	1.816			
Radial #5	195	25	2.168			
Radial #6	195	25	2.221			
Radial #7	195	25	1.732			
Radial #8	195	25	1.668			

GAMMA RAY

Calibration File: C:\case\calver\AGR\456A3.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 03 13:37:28 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator # Background [cps] Calibrator On [cps] Multiplicative Background [cpm] Calibrator On [cpm] Differential [cpm]

S2K	WA612	76.84	356.71	0.661	50.80	235.80	185.00
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Verification File: C:\case\calver\GR\456A3.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Apr 03 13:38:35 2014		TOOL SERIES: 2459XA		ASSET: 456		SEQ: A3	
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]	
S2K WA612	80.98	351.78	0.661	53.53	232.54	179.01	

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

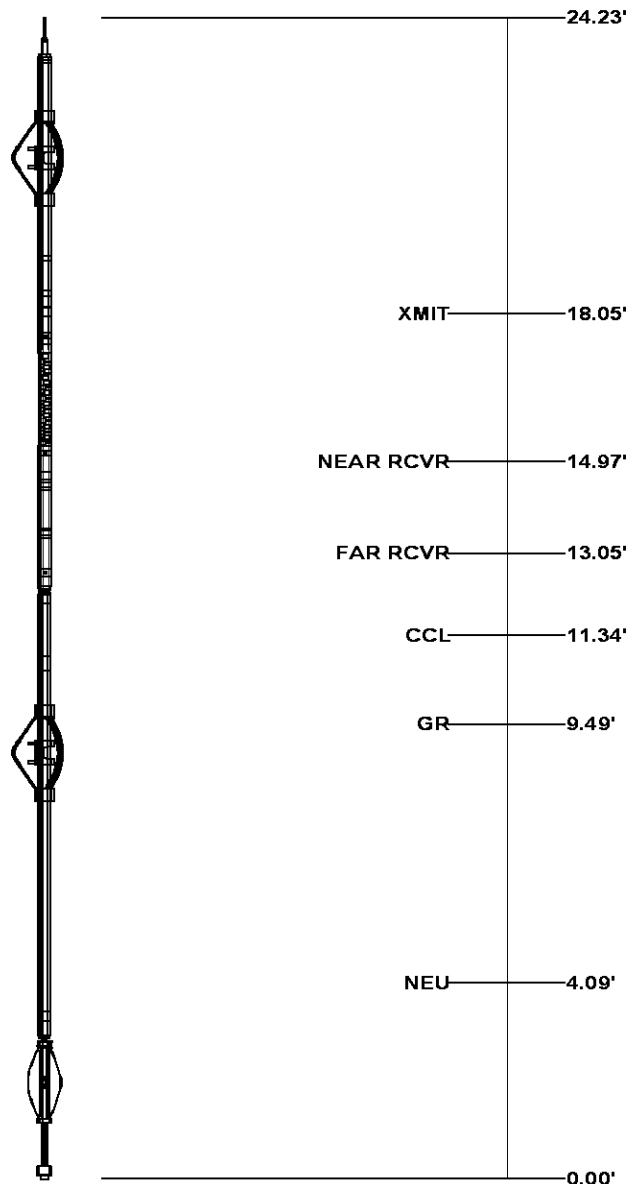
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

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"



Baker Atlas



Company	WPX ENERGY		
Well	FEDERAL NER 44-32		
Field	RULISON		
County	GARFIELD	State	CO

File No:	CH084818
API No:	05045217900000

Location
SHL: 182' FNL & 2602' FWL (5 7S 93W)
BHL: 759' FSL & 671' FEL (32 6S 93W)
SEC 32 TWP 6S RGE 93W

Elevations	
KB	7629 ft
DF	
GL	7603 ft

32 6S 93W
RU 23-5 PAD
NABORS 576