



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH00984	Company Well Field County	WPX ENERGY FEDERAL RU 13-5 RULISON GARFIELD	State CO
API No: 05045217690000			
Location 5 7S 93W RU 23-5 PAD MABORS 576	SHL: 228' FNL & 2606' FWL BHL: 1242' FNL & 575' FWL SEC 5 TWP 7S RGE 93W	Other Services RPM	
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevation 26 ft Above P. D.	Elevations KB 7628 ft DF GL 7602 ft

Date	29/DEC/13	
Run	ONE	
Service Order	US625078	
Depth Driller	10243 ft	
Depth Logger	10214 ft	
Bottom Logged Interval	10204 ft	
Top Logged Interval	26 ft	
Time Started	8:30	
Time Finished	12:30	
Operator Rig Time	4 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	80 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	245 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT.
Recorded By	NEWELL	
Witnessed By	JEFF DUCY	

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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	1141 ft
8.75 In	1141 ft	10318 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1141 ft
4.5 In	11.6 lbm/ft		0 ft	10318 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 9 feet.
Logged with zero PSI at wellhead.
BHT = 245 °F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218495	CENTRALIZED
1	1	GR/CCL	1355XA	10580208	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.130	10238.750
RAL	Amp Gate Start Near	195.000	usec	30.130	10238.750
RAL	Amp Gate Start Radial	195.000	usec	30.130	10238.750
RAL	Amp Gate Width Far	25.000	usec	30.130	10238.750
RAL	Amp Gate Width Near	25.000	usec	30.130	10238.750
RAL	Amp Gate Width Radial	25.000	usec	30.130	10238.750
RAL	casing od	4.500	inches	30.130	10238.750
RAL	casing wt	11.600	lbm/ft	30.130	10238.750
RAL	FB Start Far	291.900	usec	30.130	10238.750
RAL	FB Start Near	180.000	usec	30.130	10238.750
RAL	FB Start Radial	180.000	usec	30.130	10238.750
RAL	FB Thresh Far	10.000	mv	30.130	10238.750
RAL	FB Thresh Near	4.000	mv	30.130	10238.750
RAL	FB Thresh Radial	4.000	mv	30.130	10238.750
RAL	Fluid Travel Time	200.000	usec/ft	30.130	10238.661

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	TTD1	TTD2	TTD3

1426XA	-10.040
1355XA	-5.620
1355XA	-1.500
1355XA	0.000

FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
TEMP					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

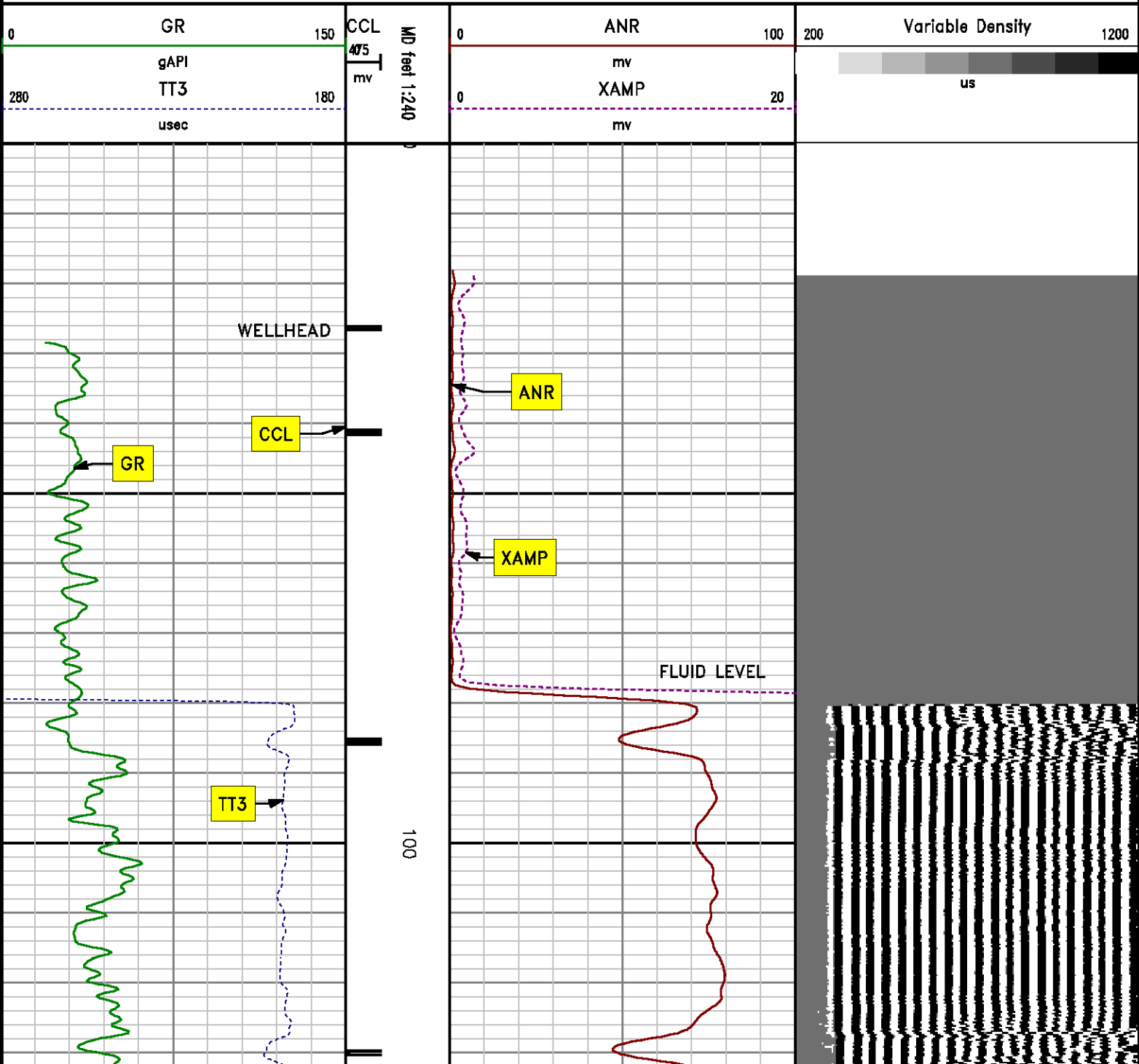
Well : FEDERAL RU 13-5

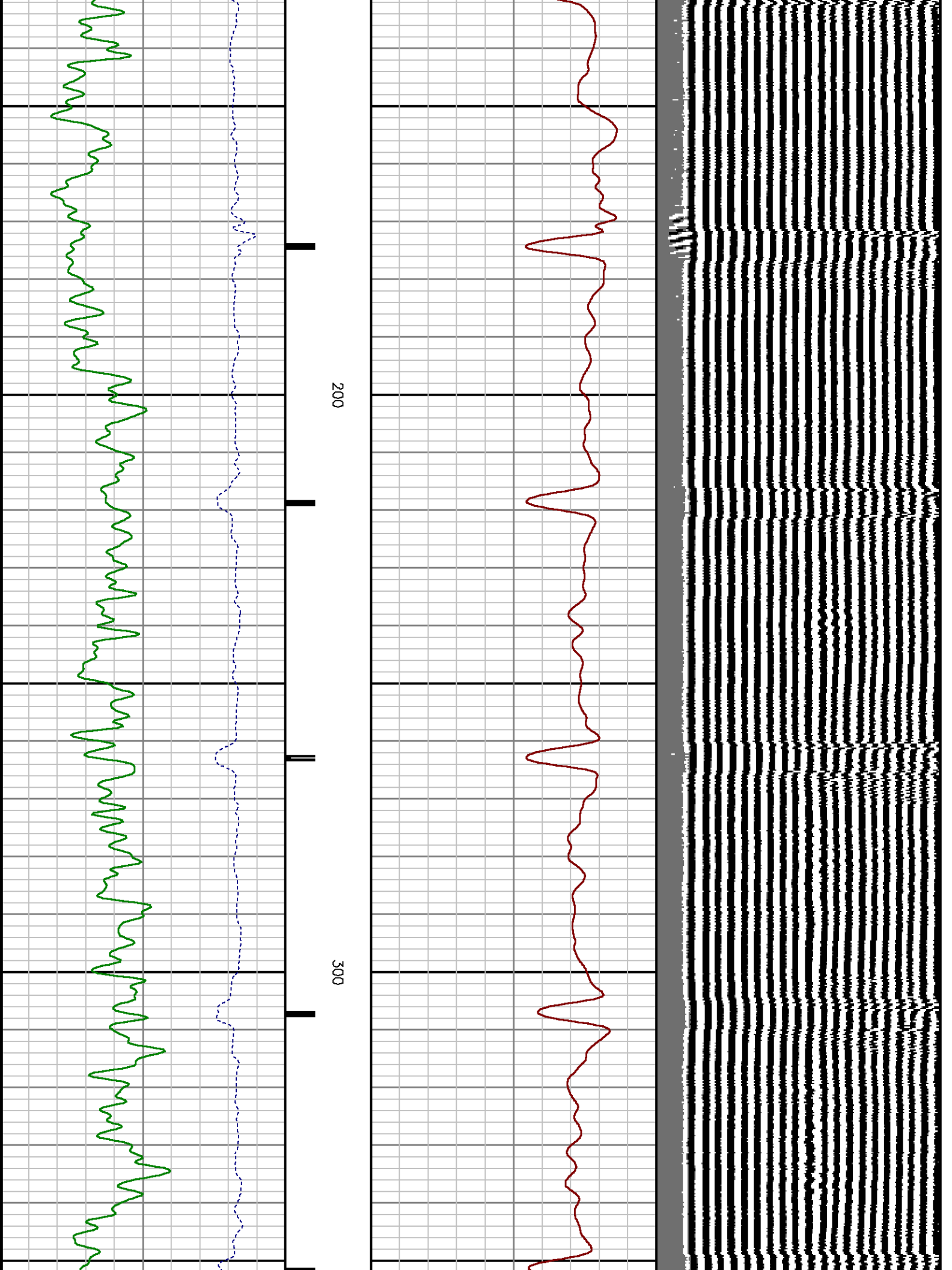
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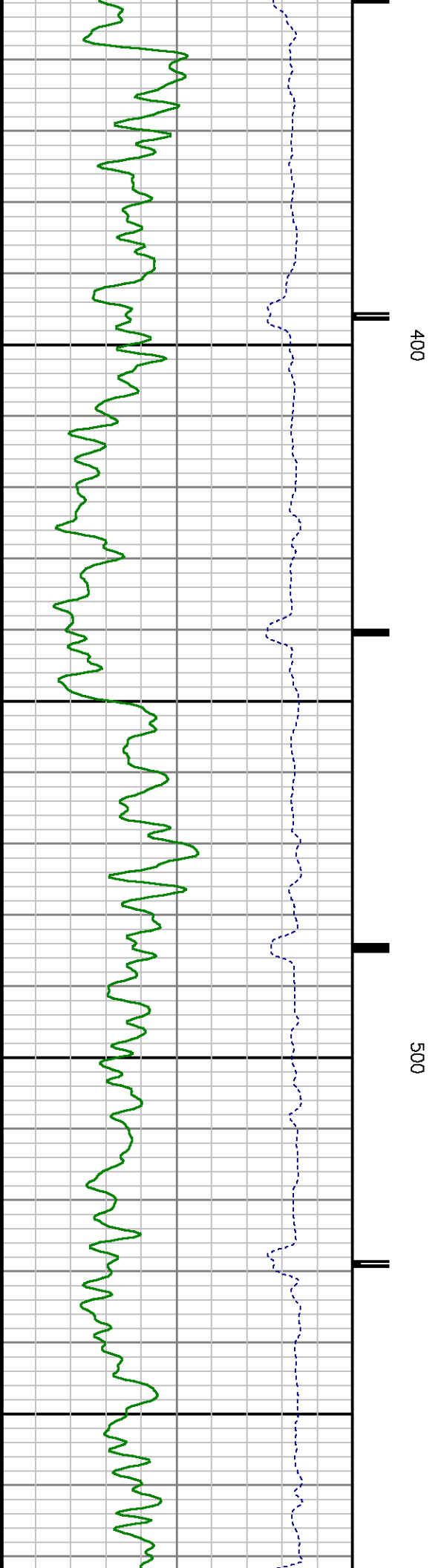
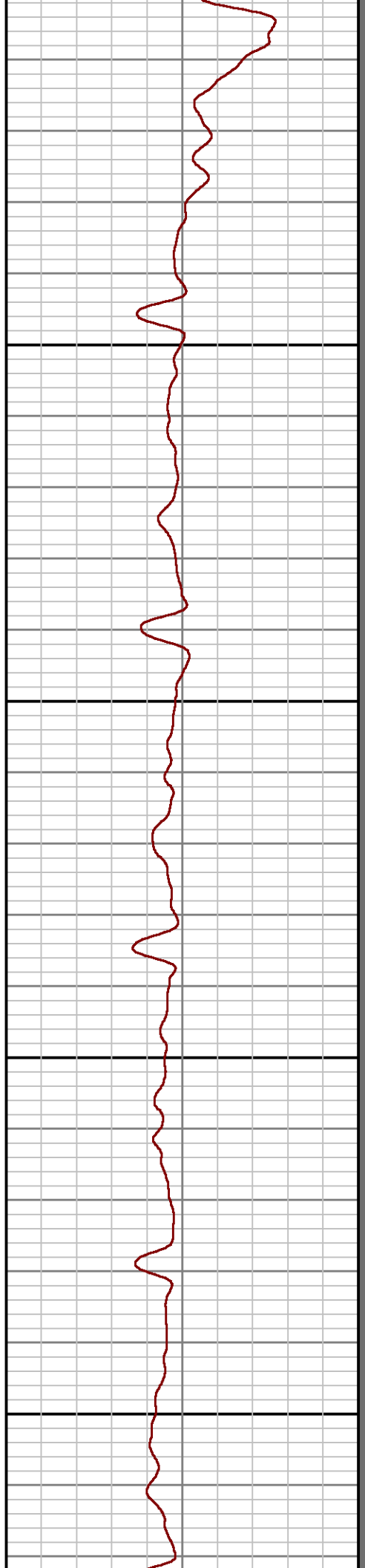
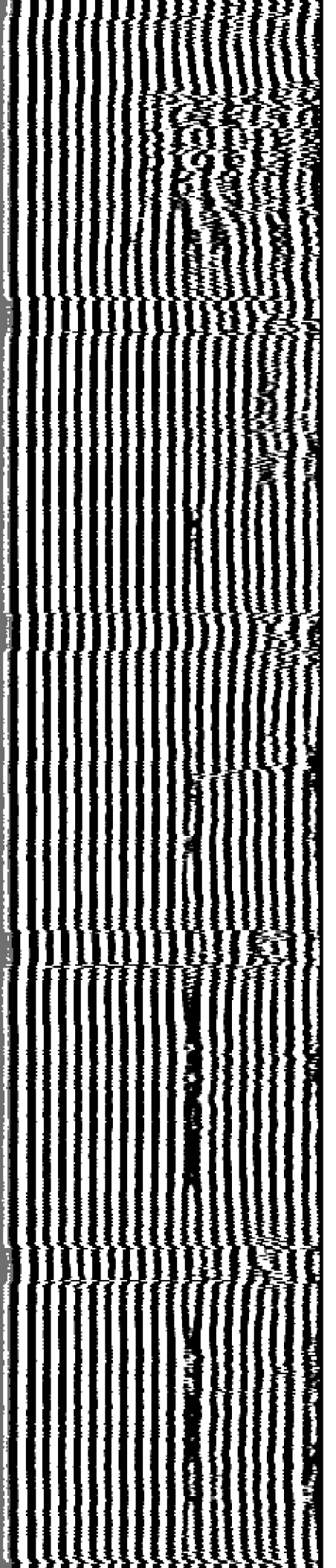
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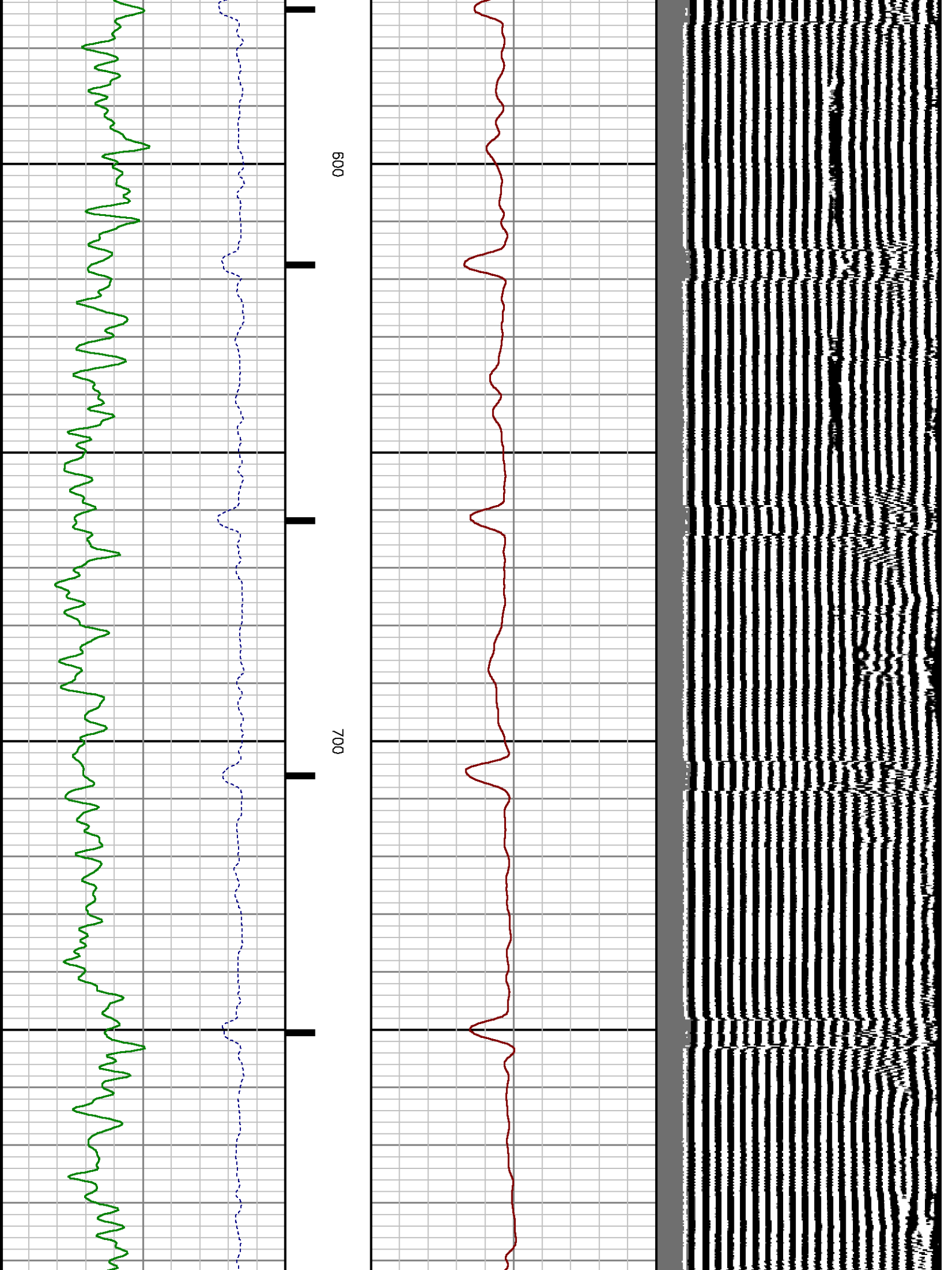
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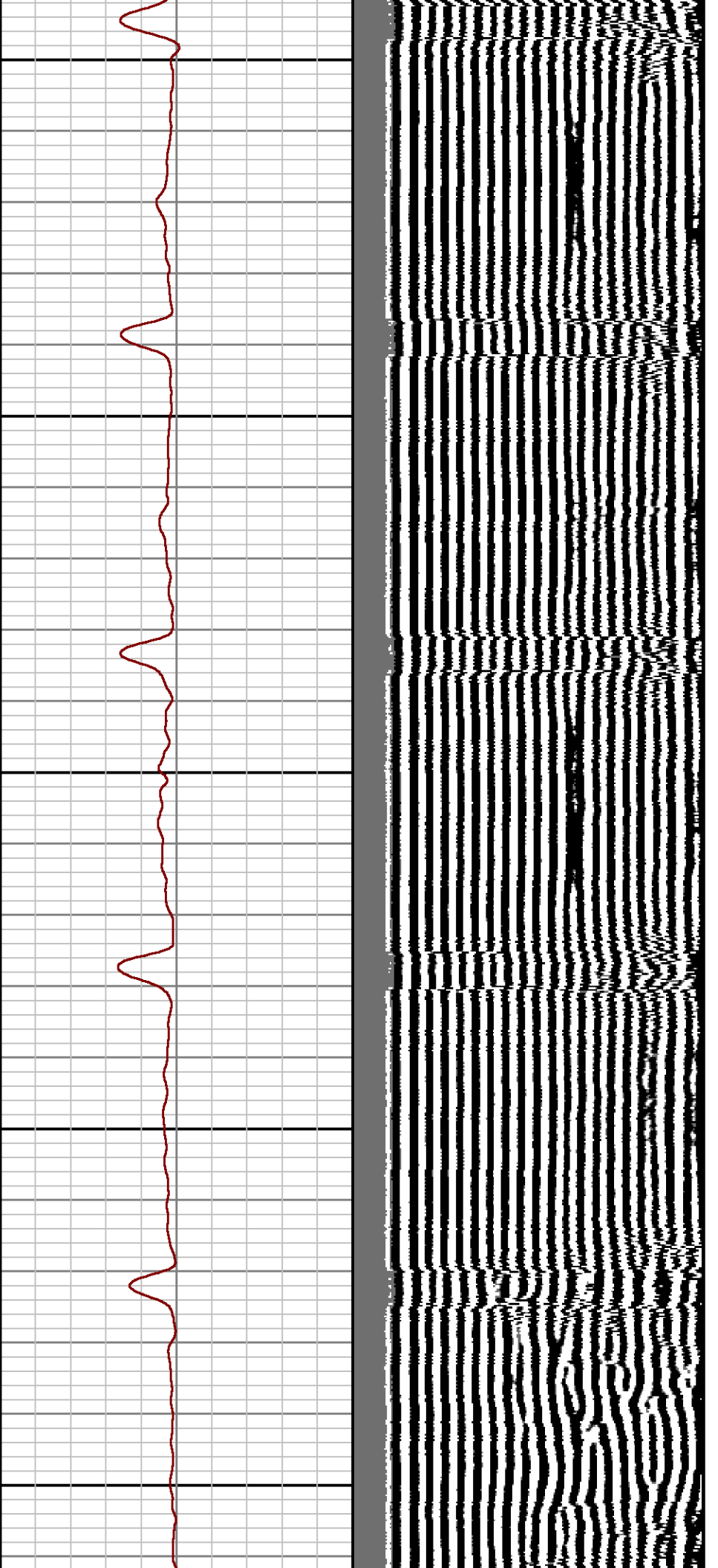
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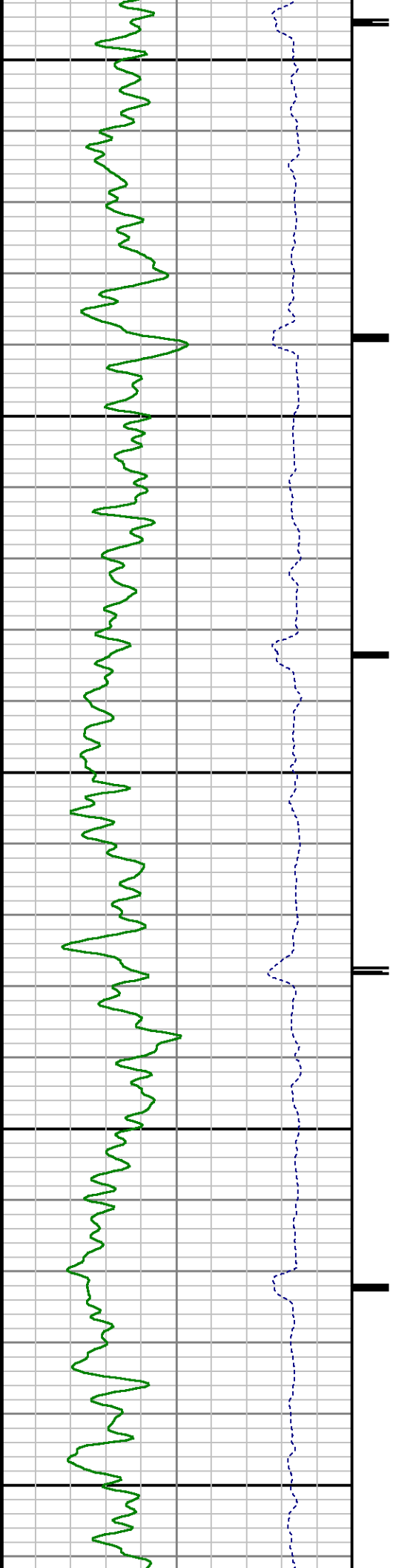


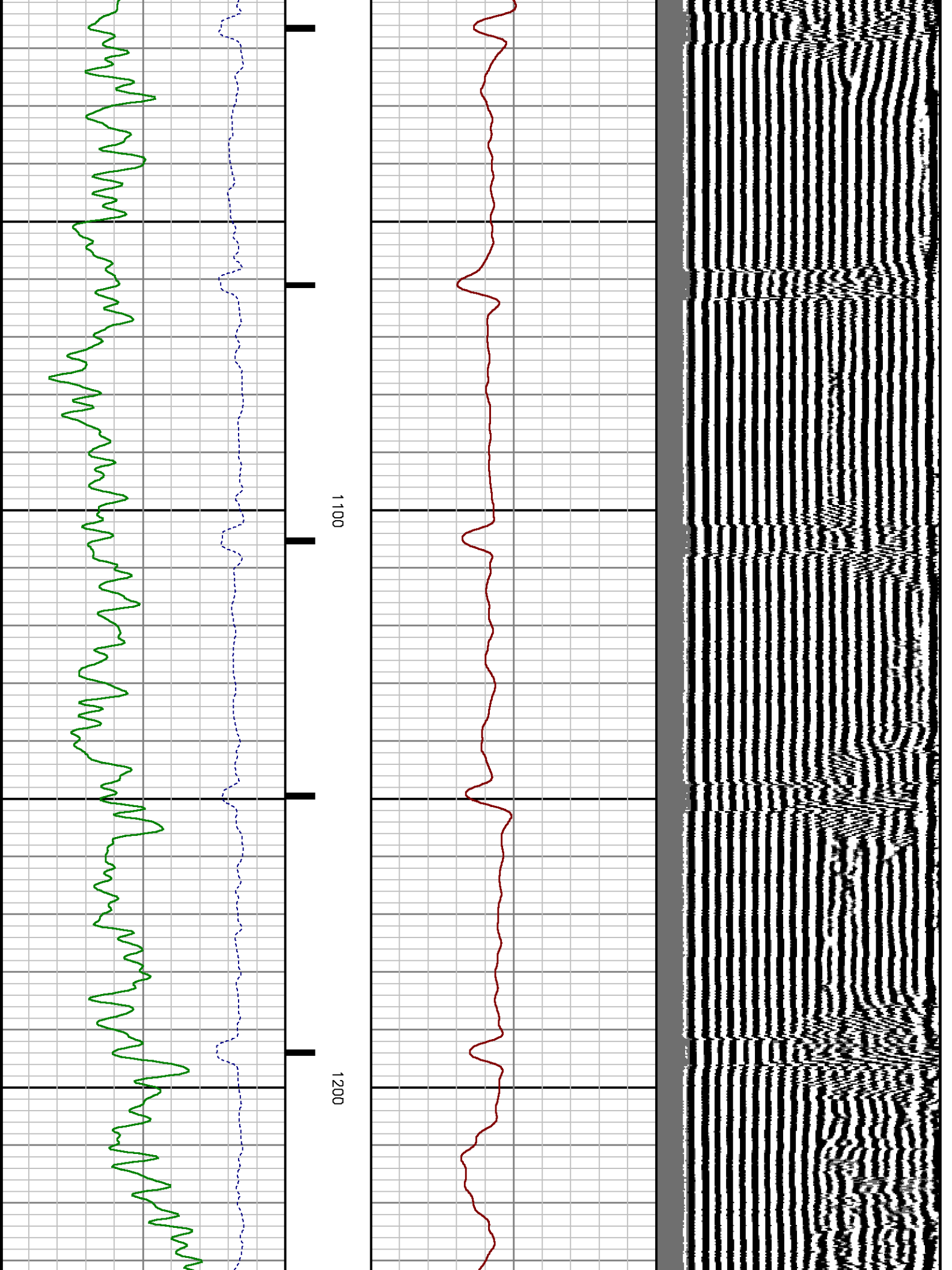


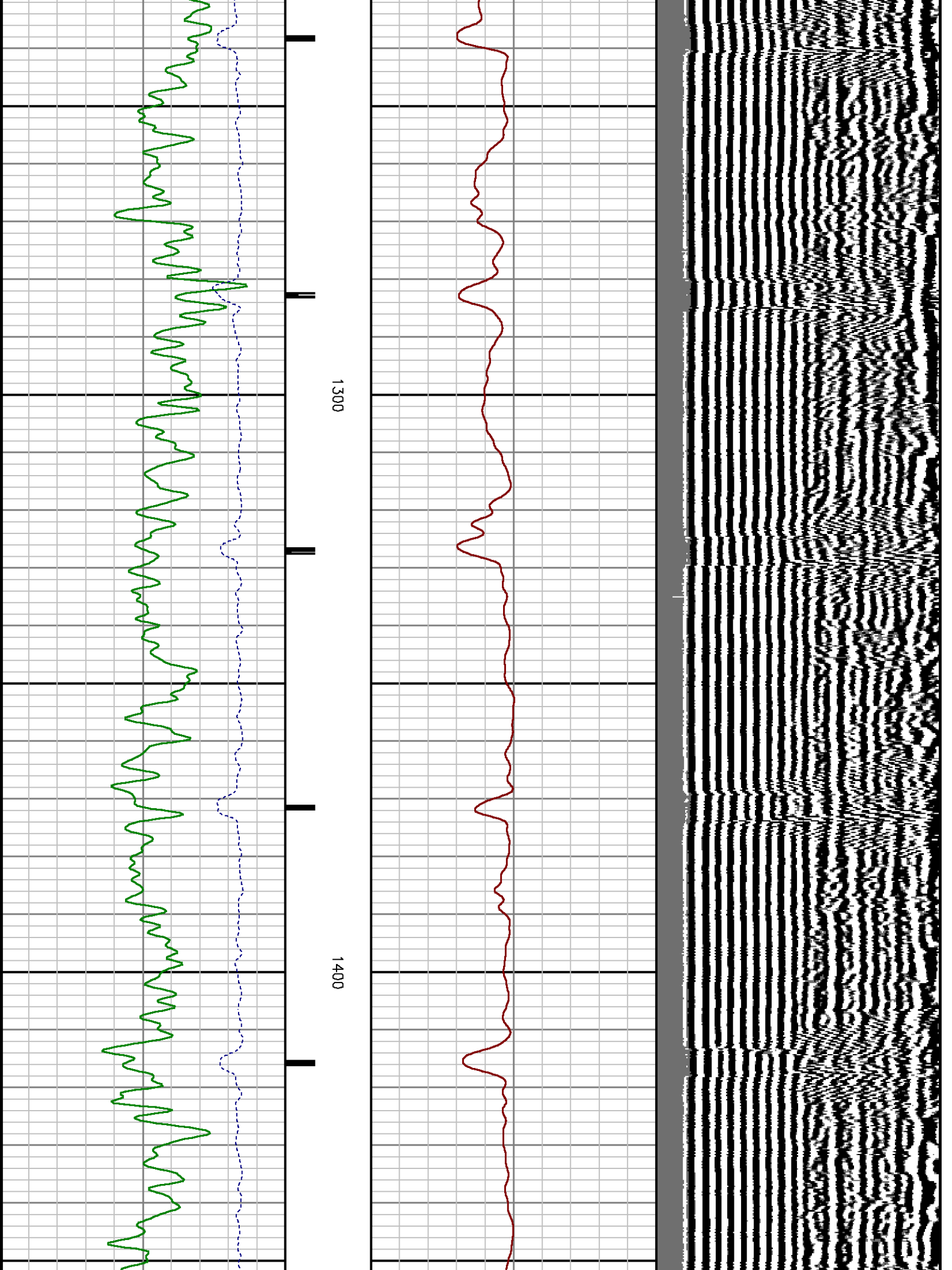
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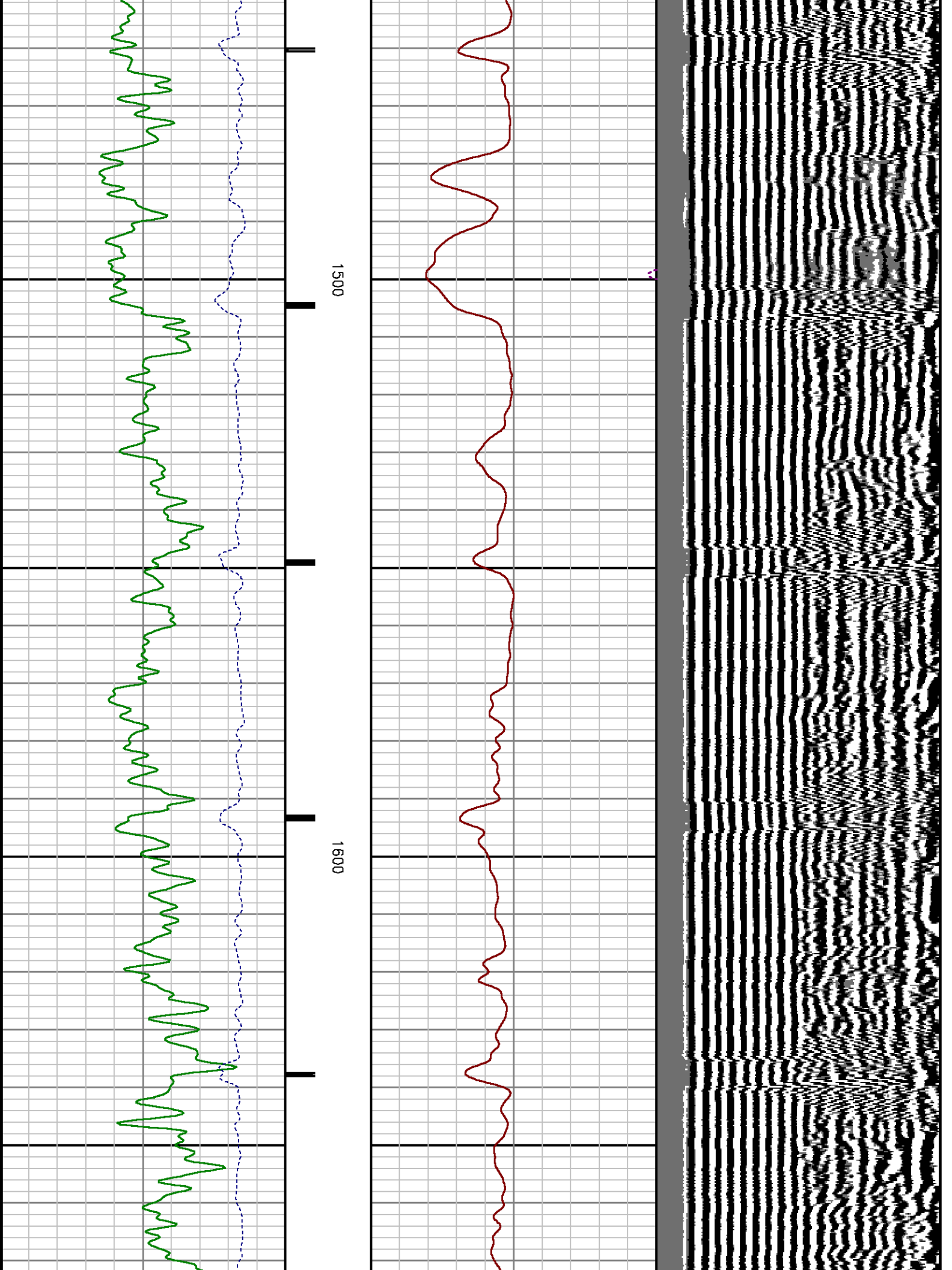
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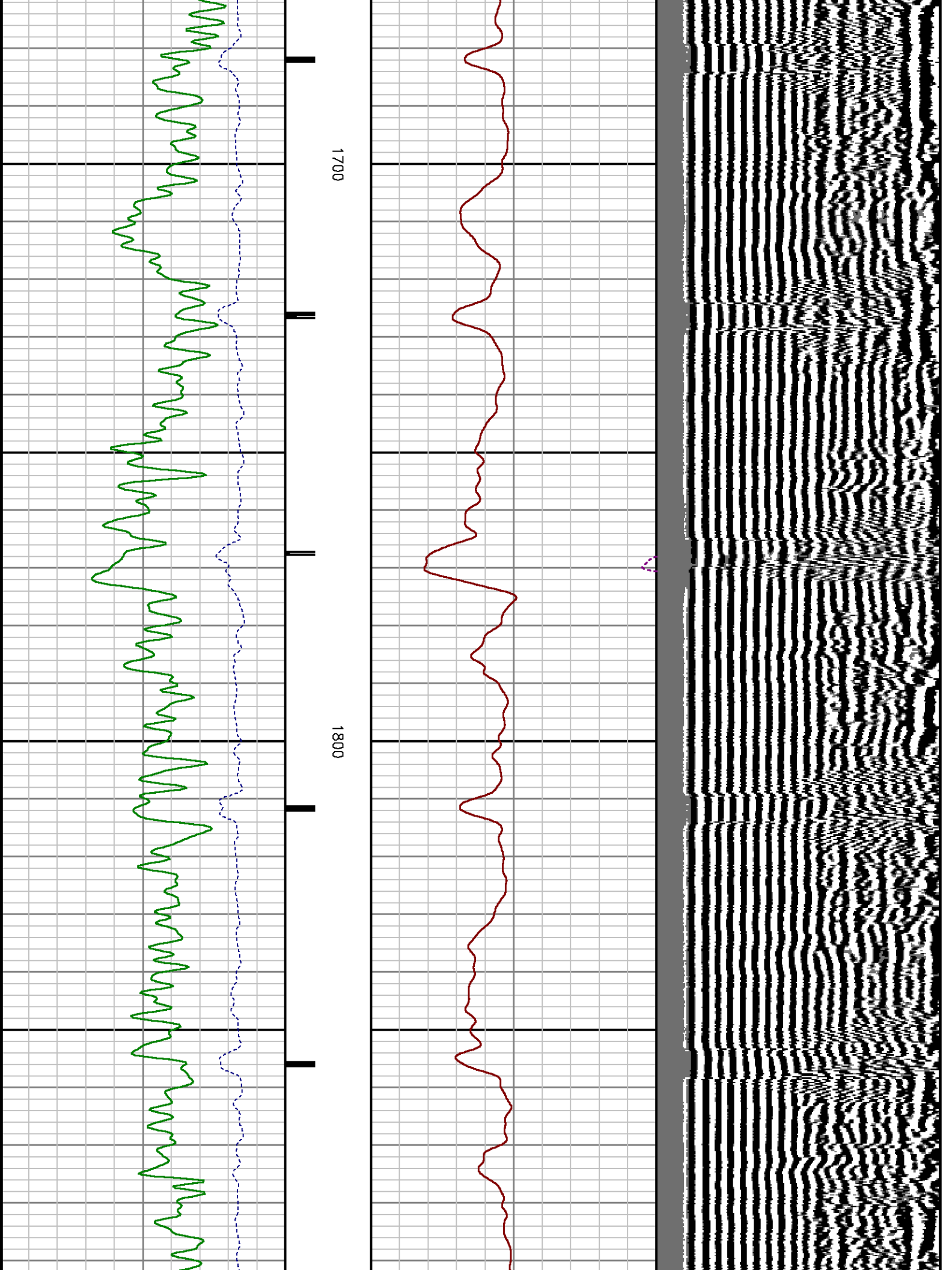
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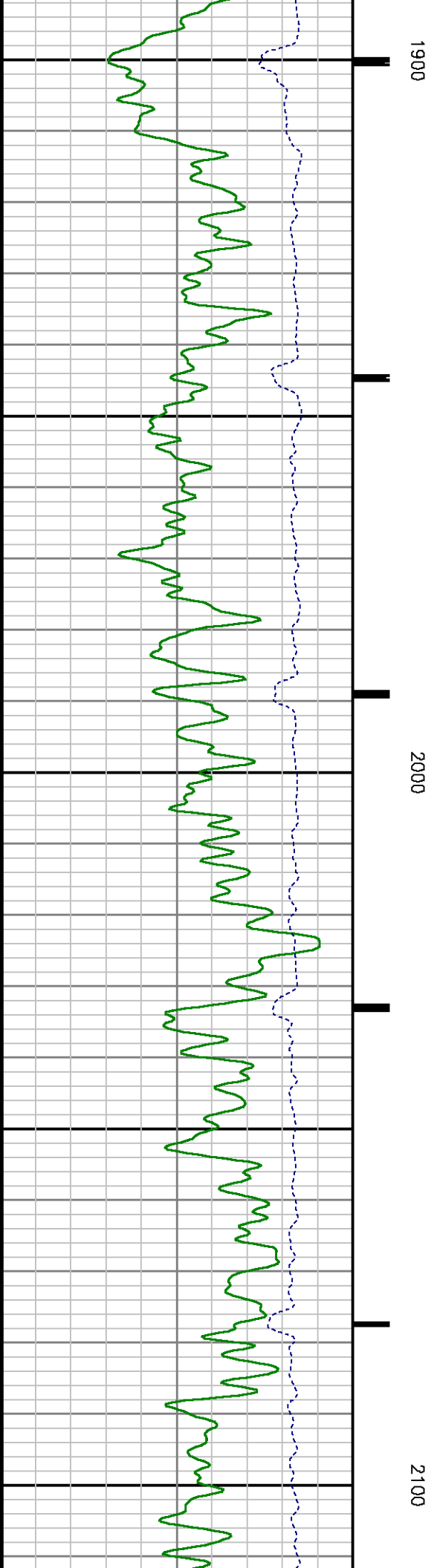
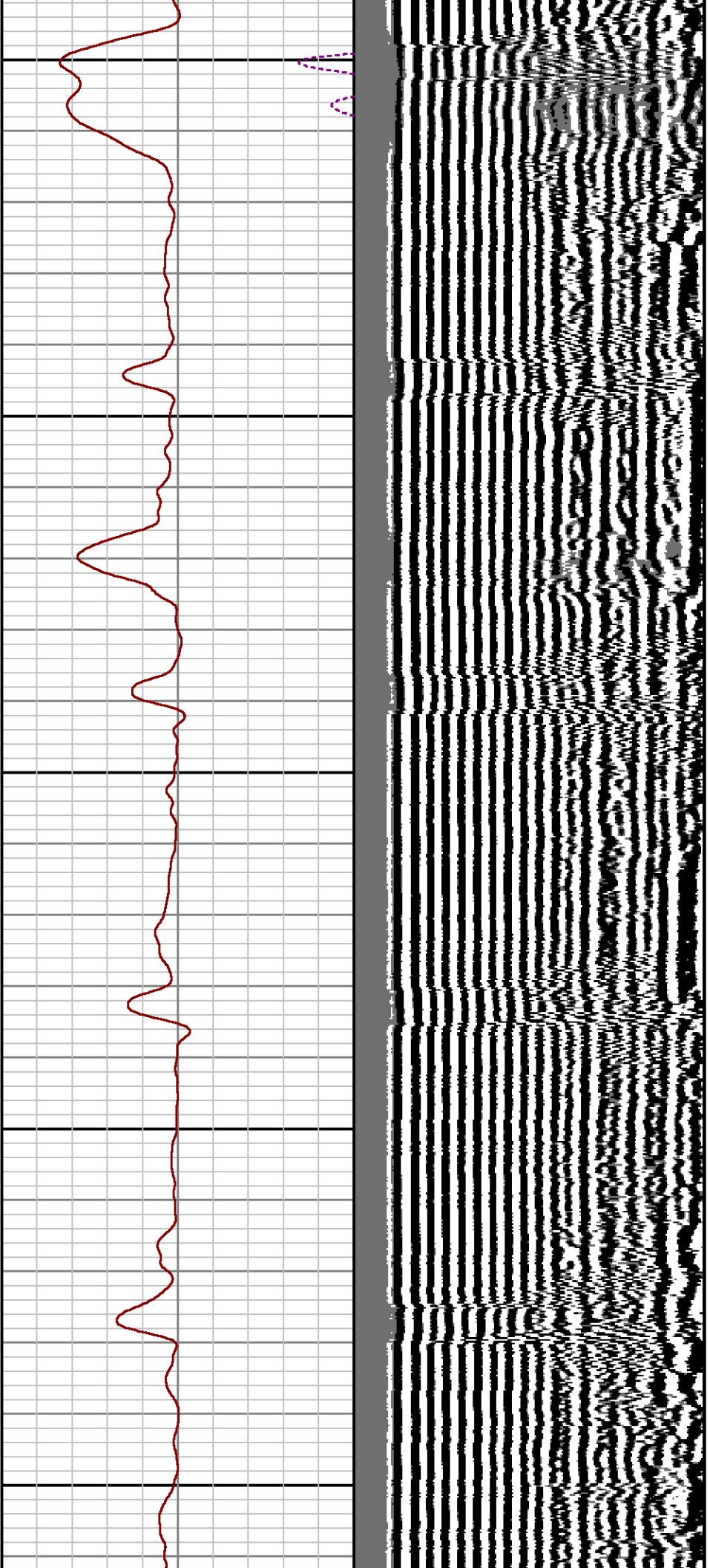


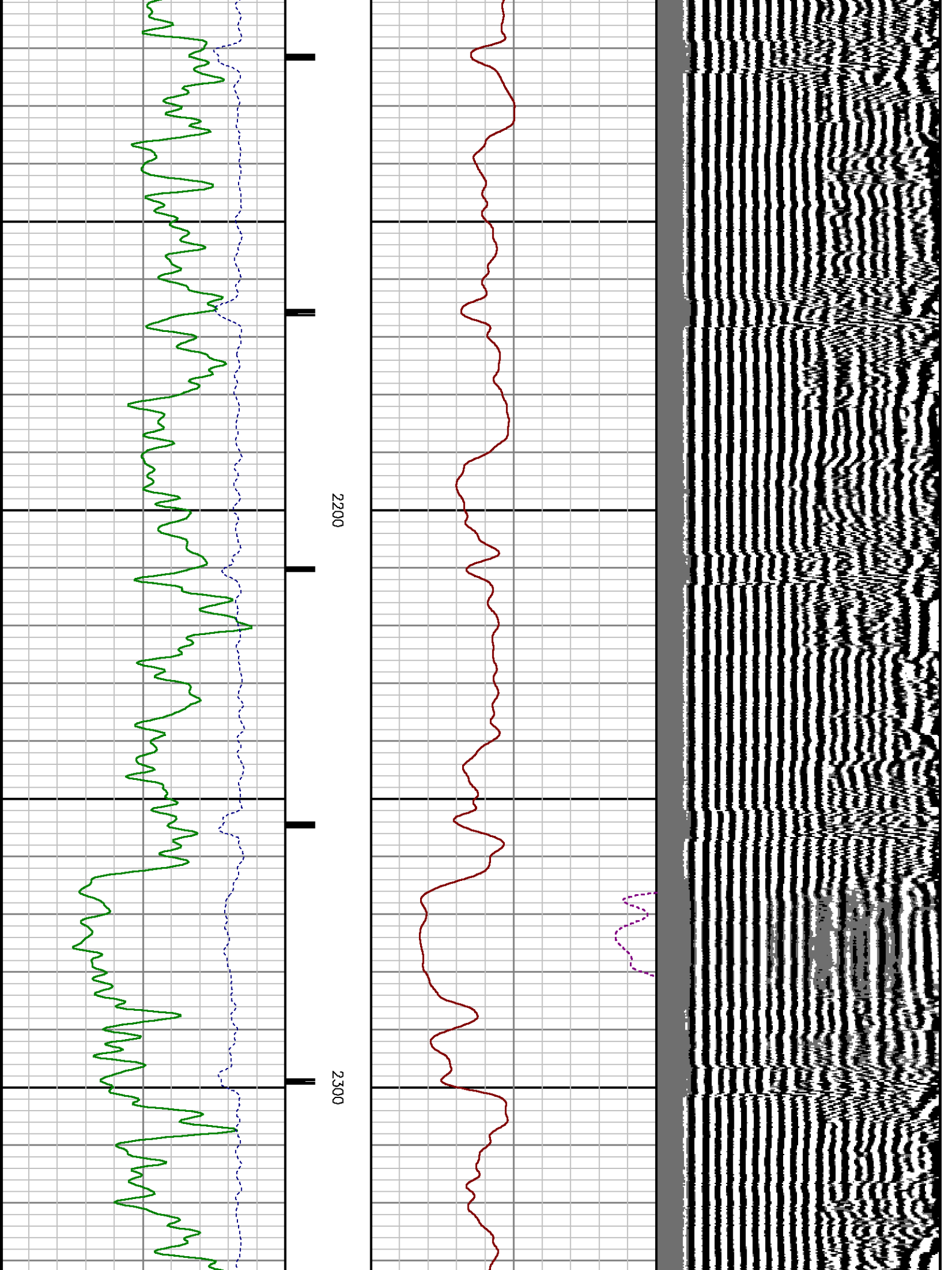


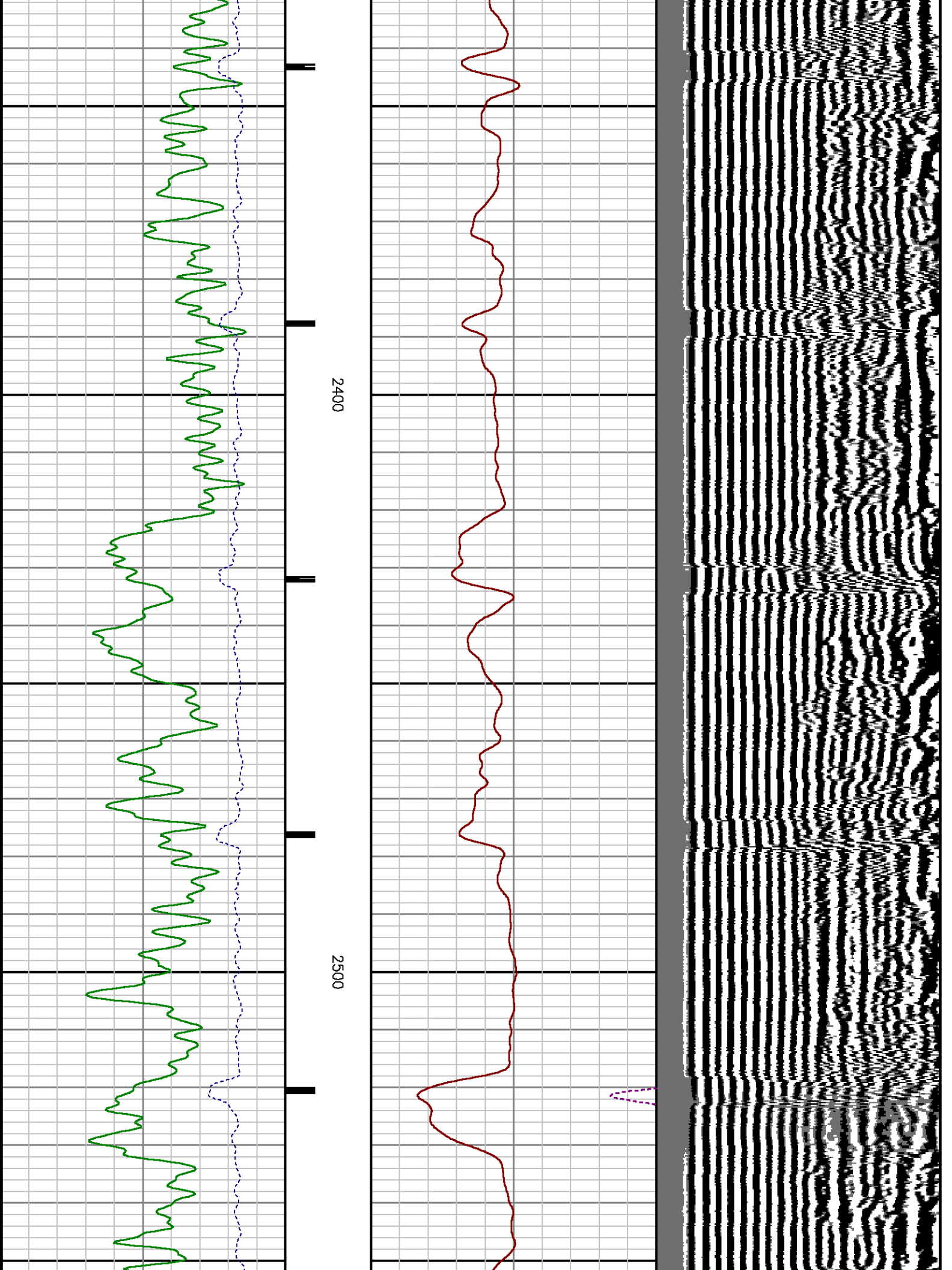


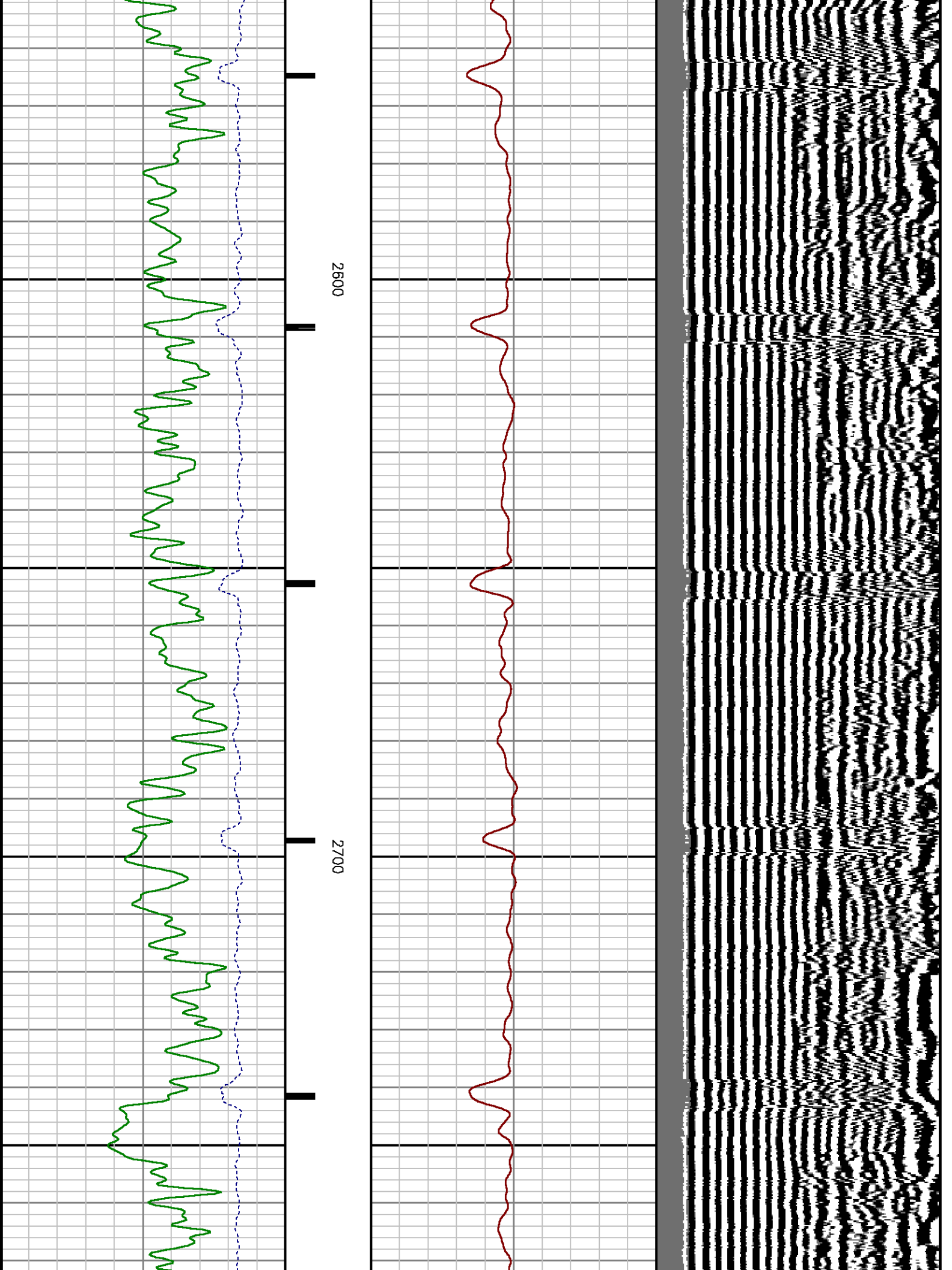


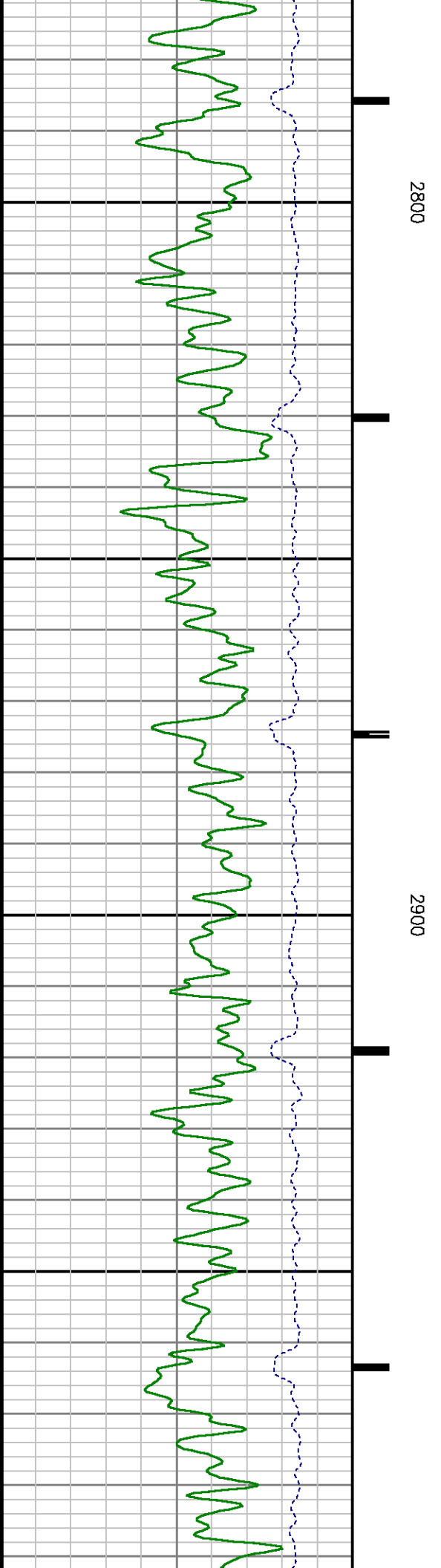
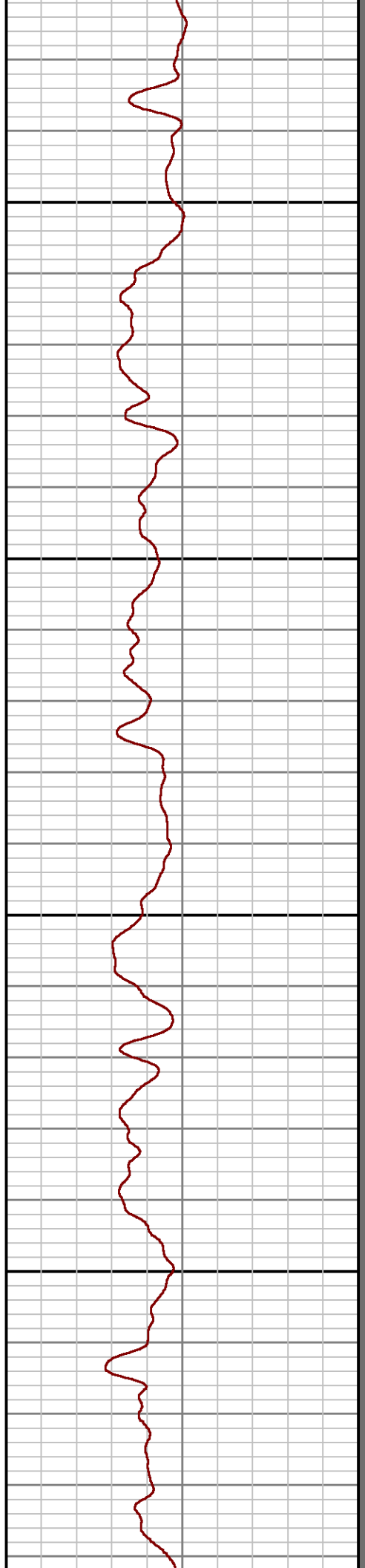
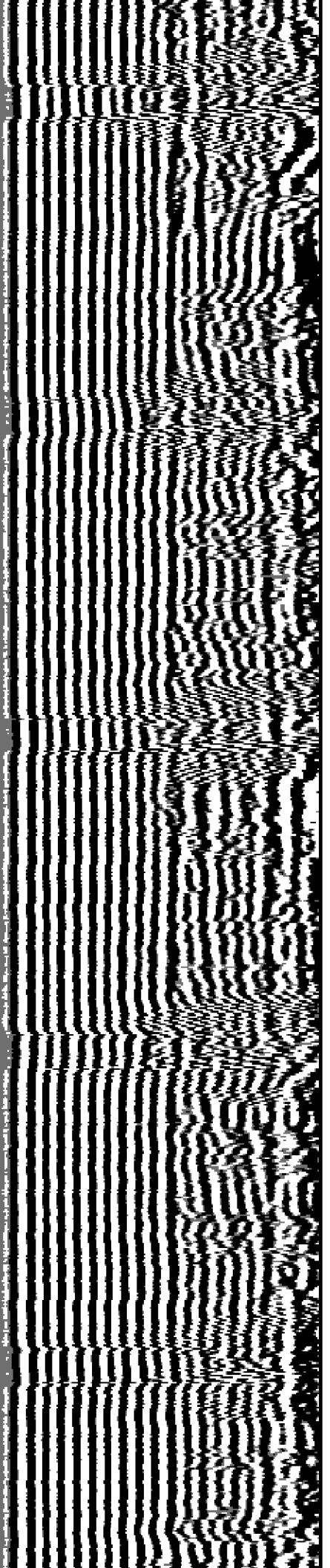


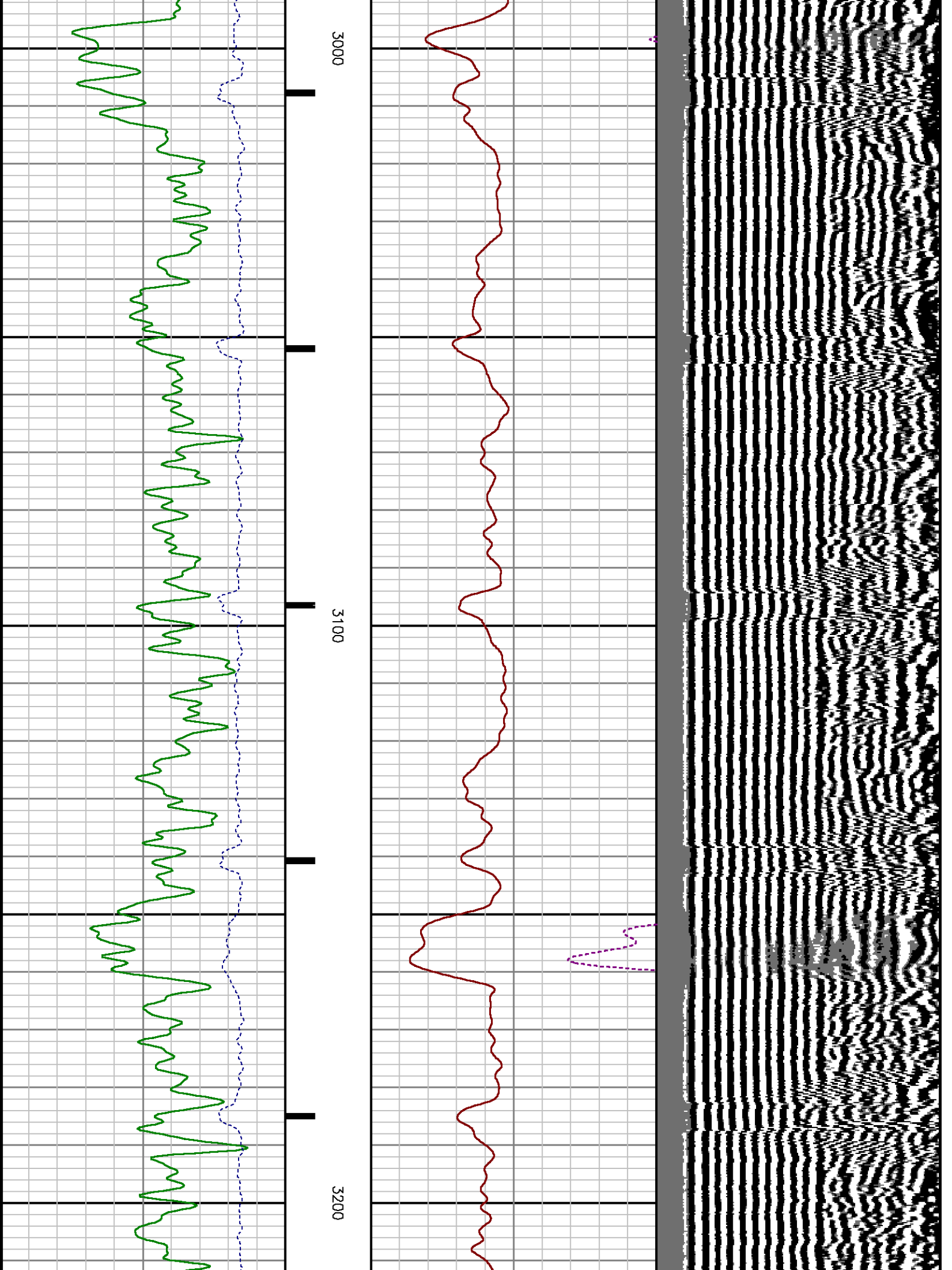


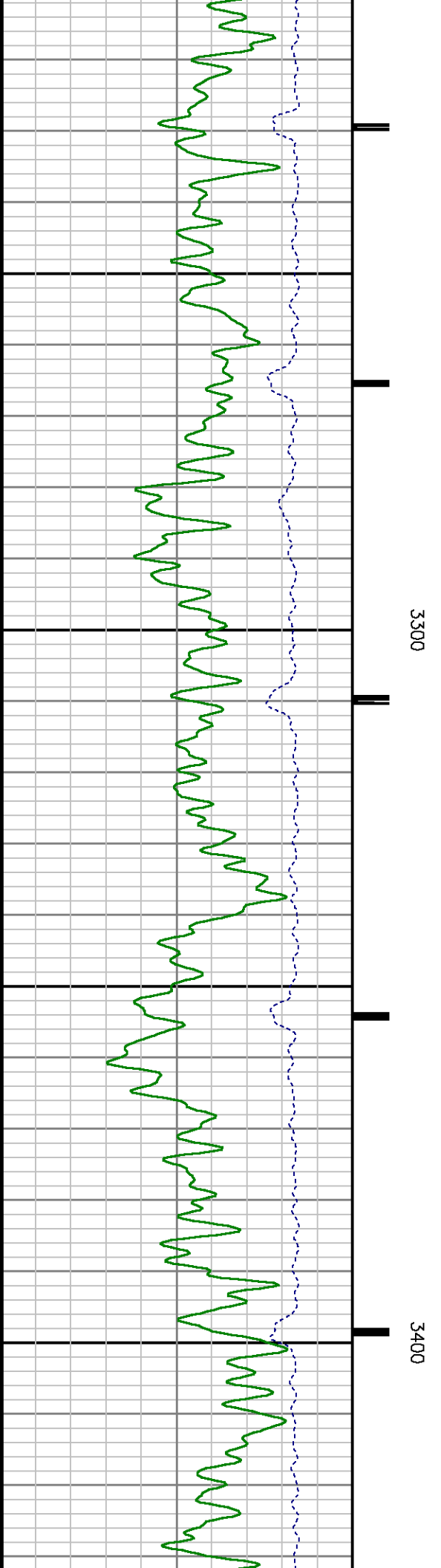
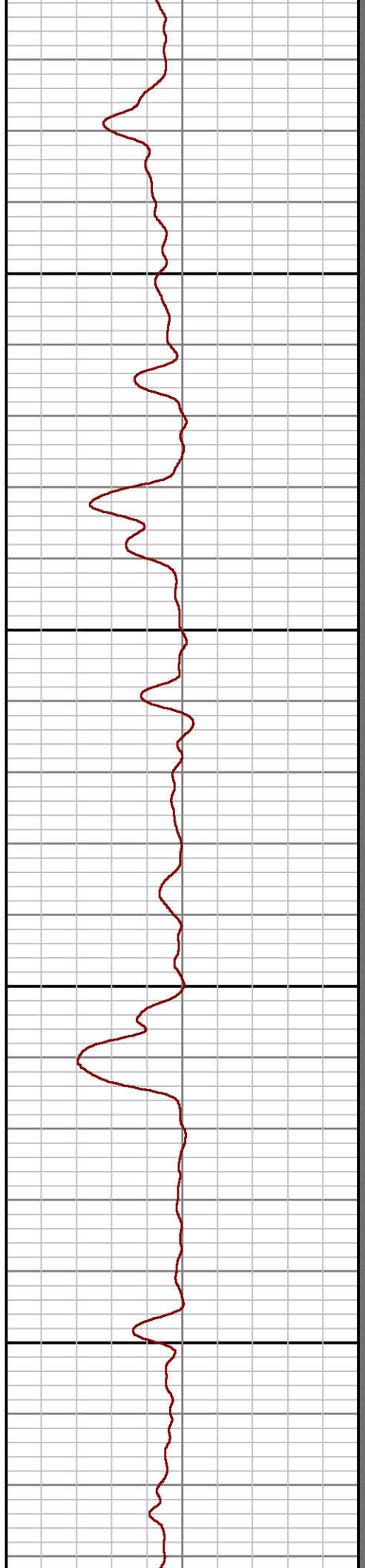
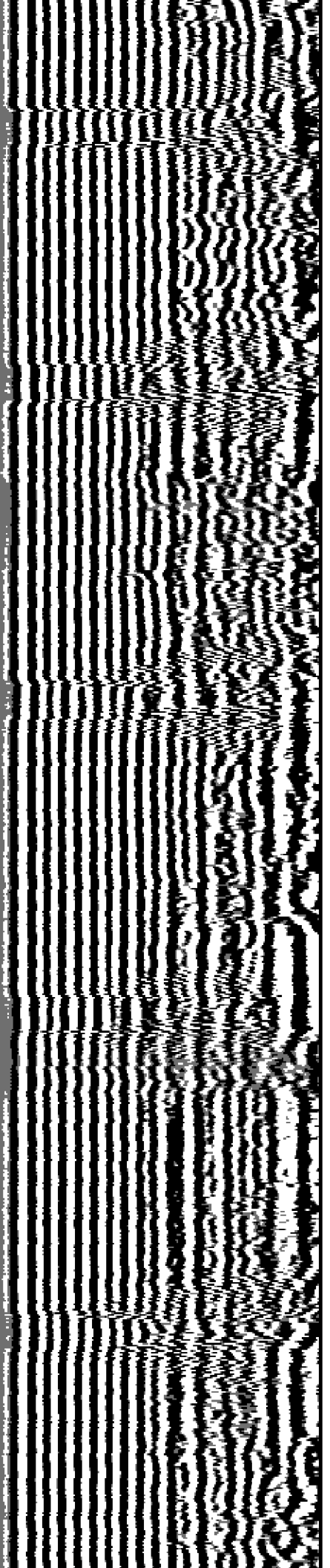


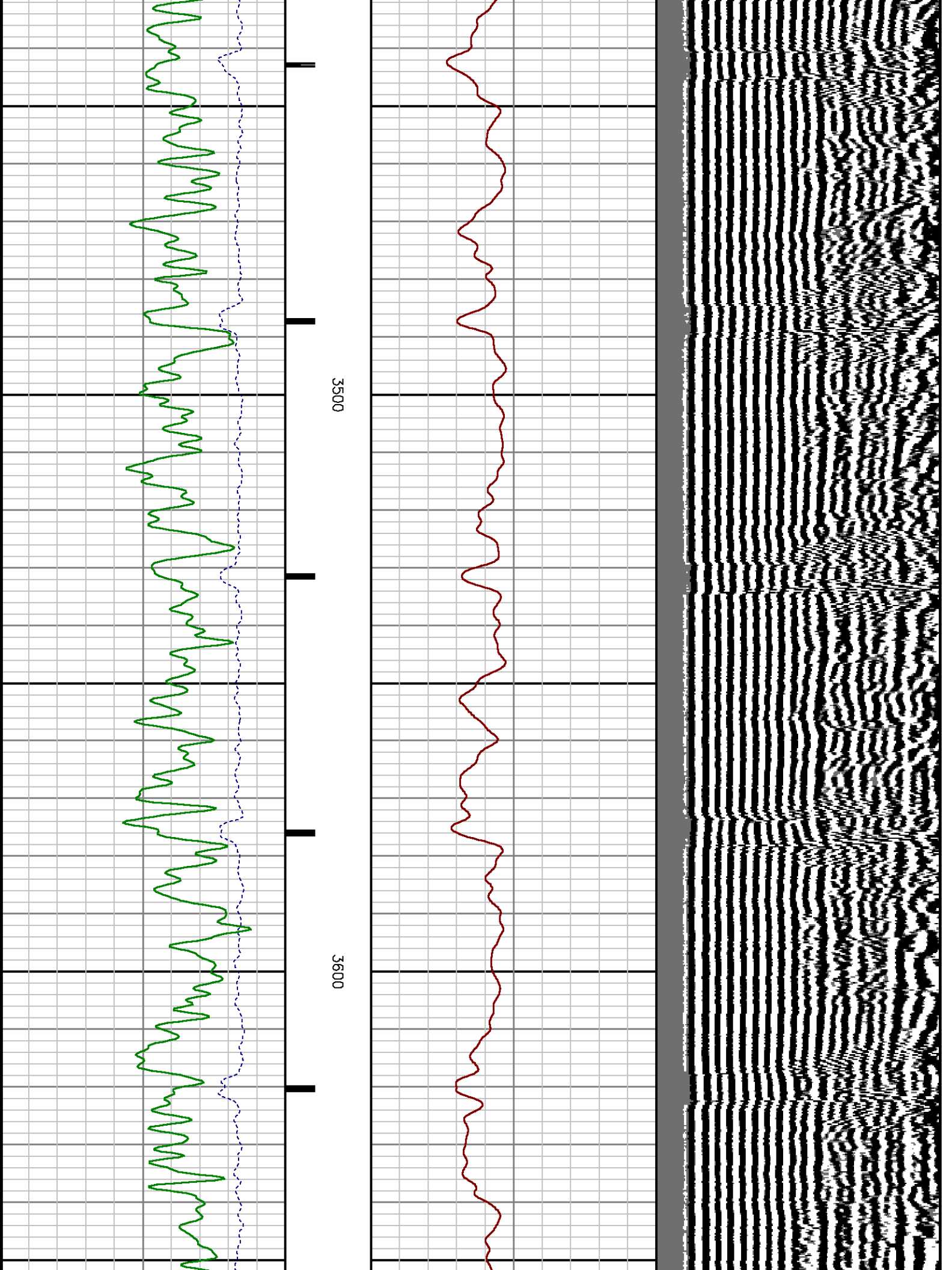


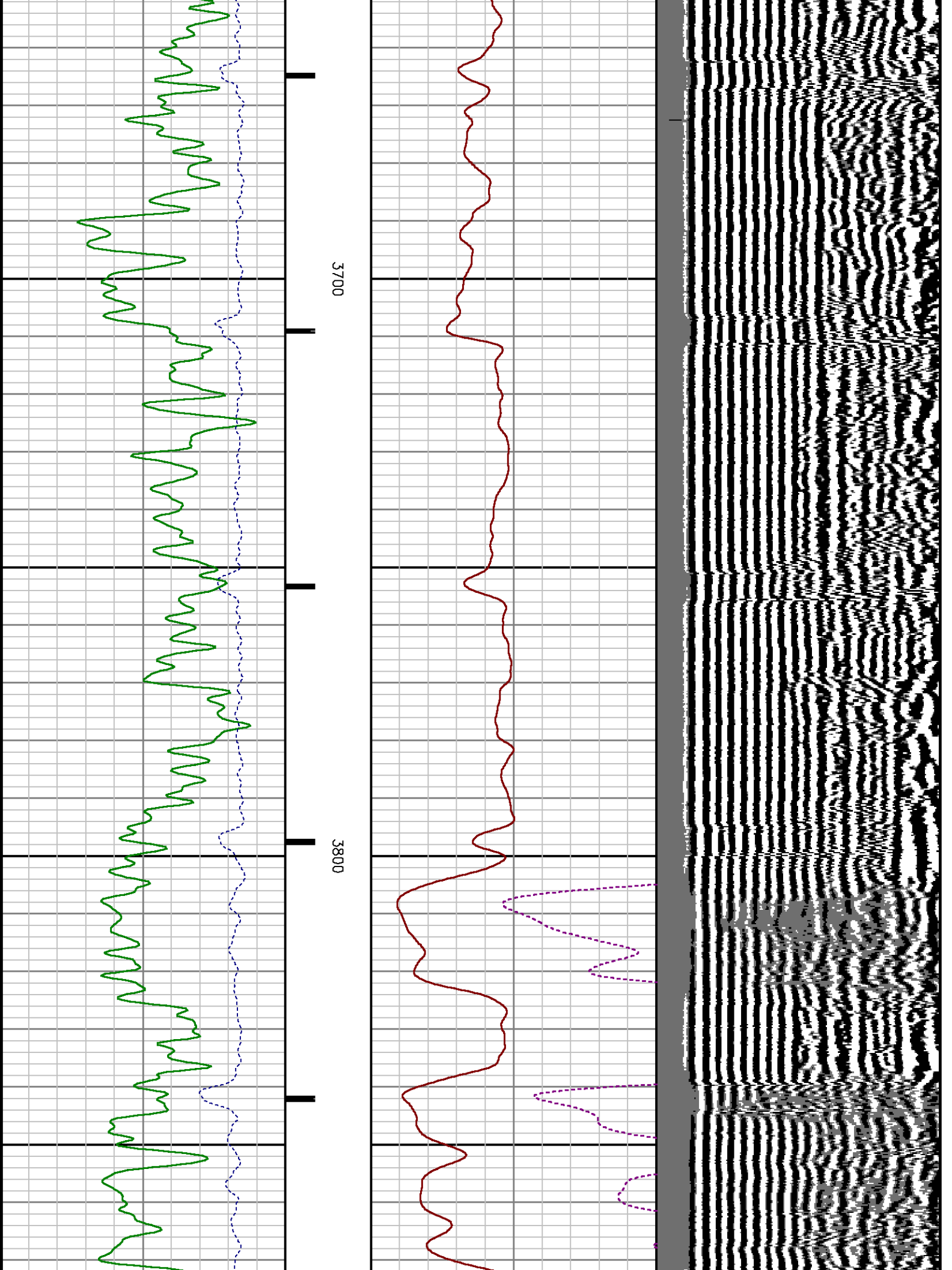


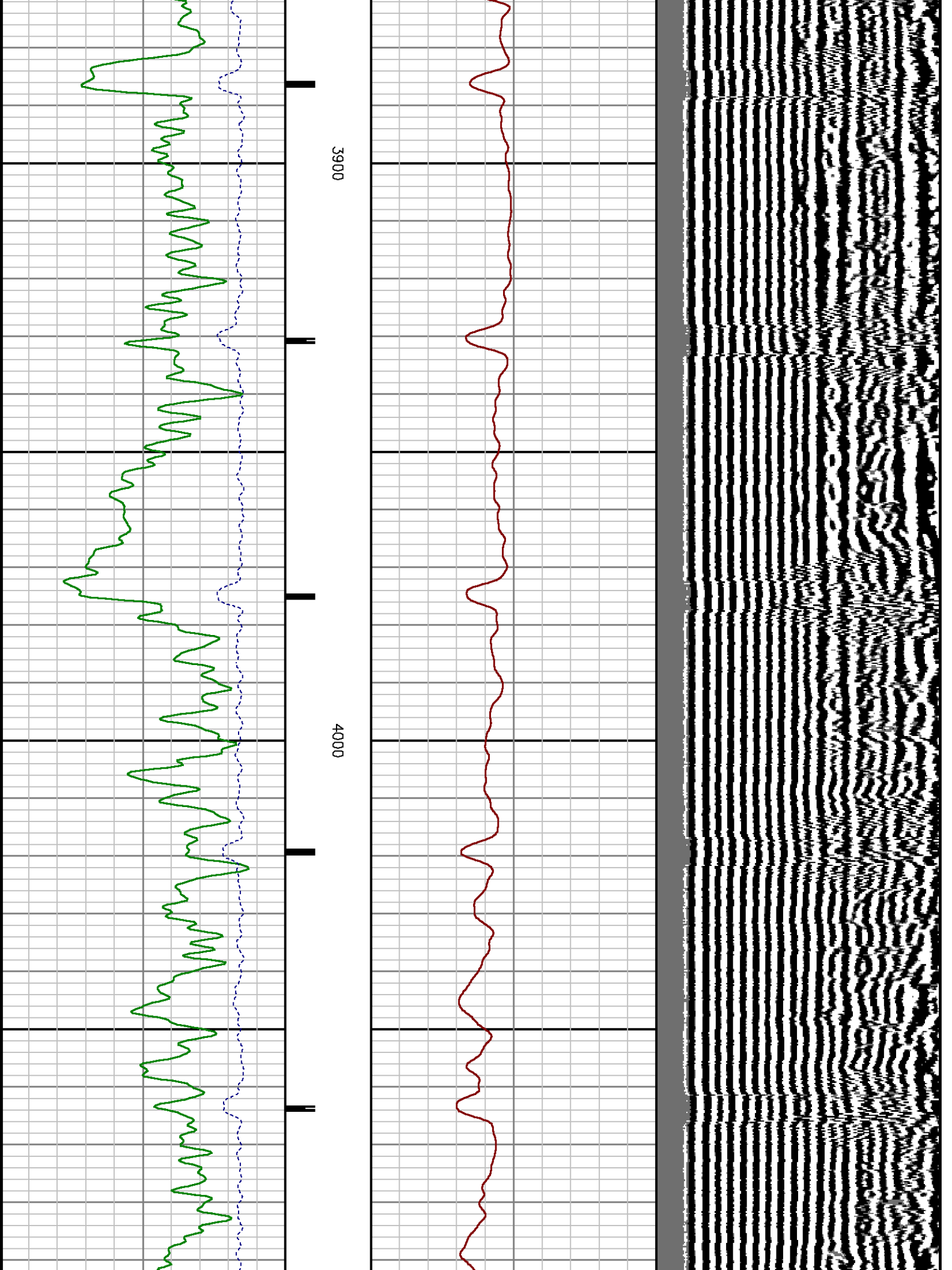


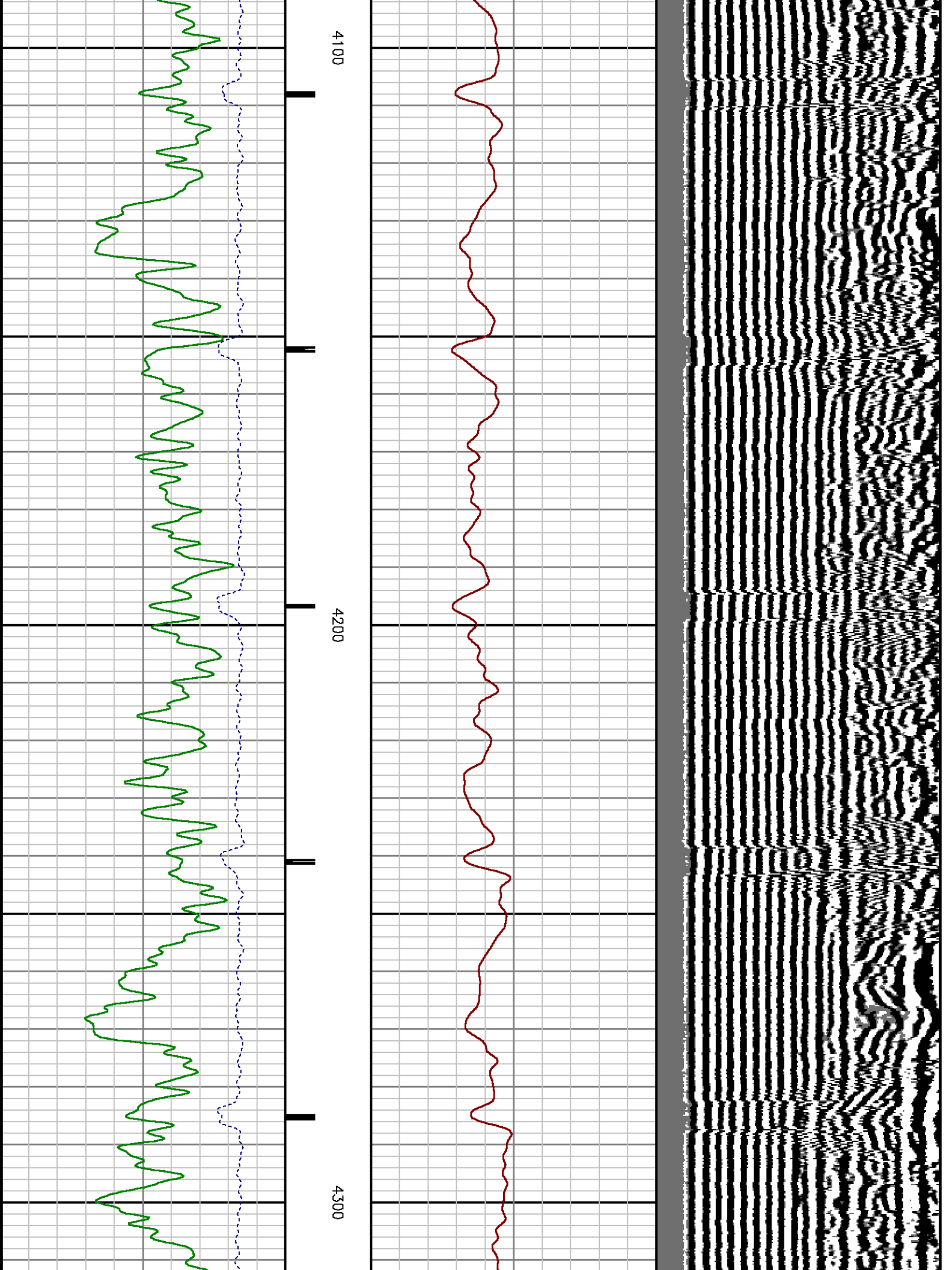


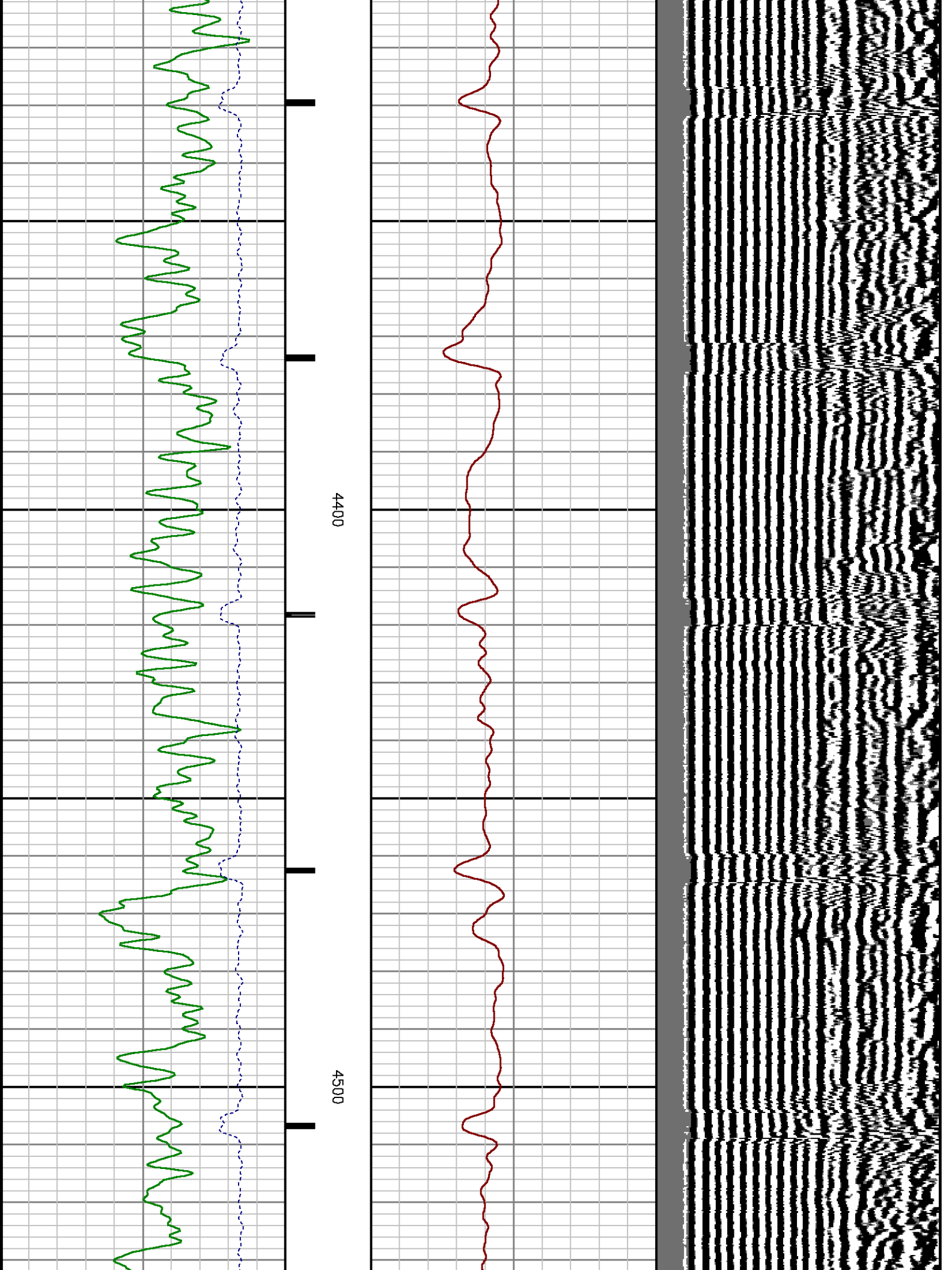


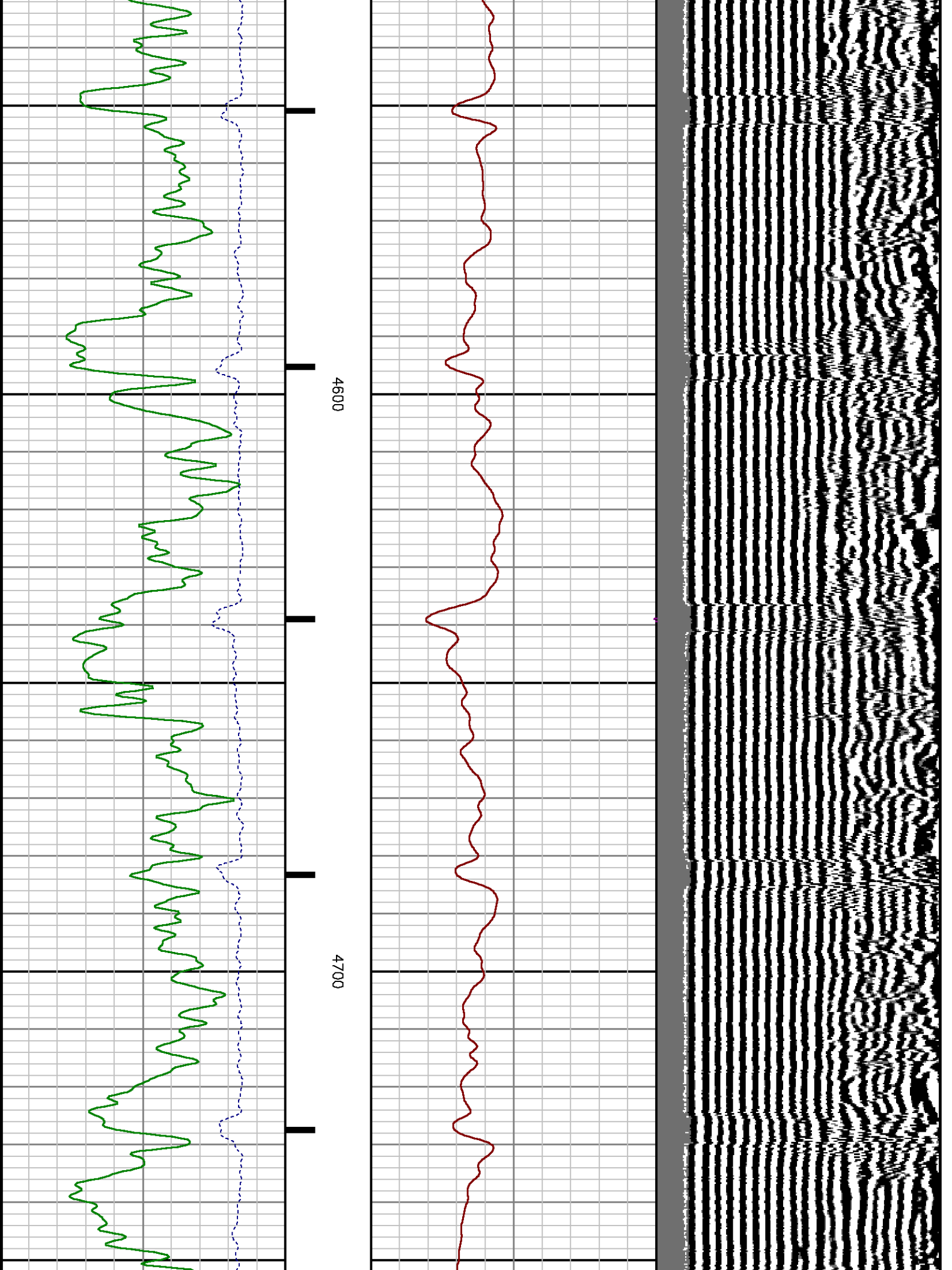


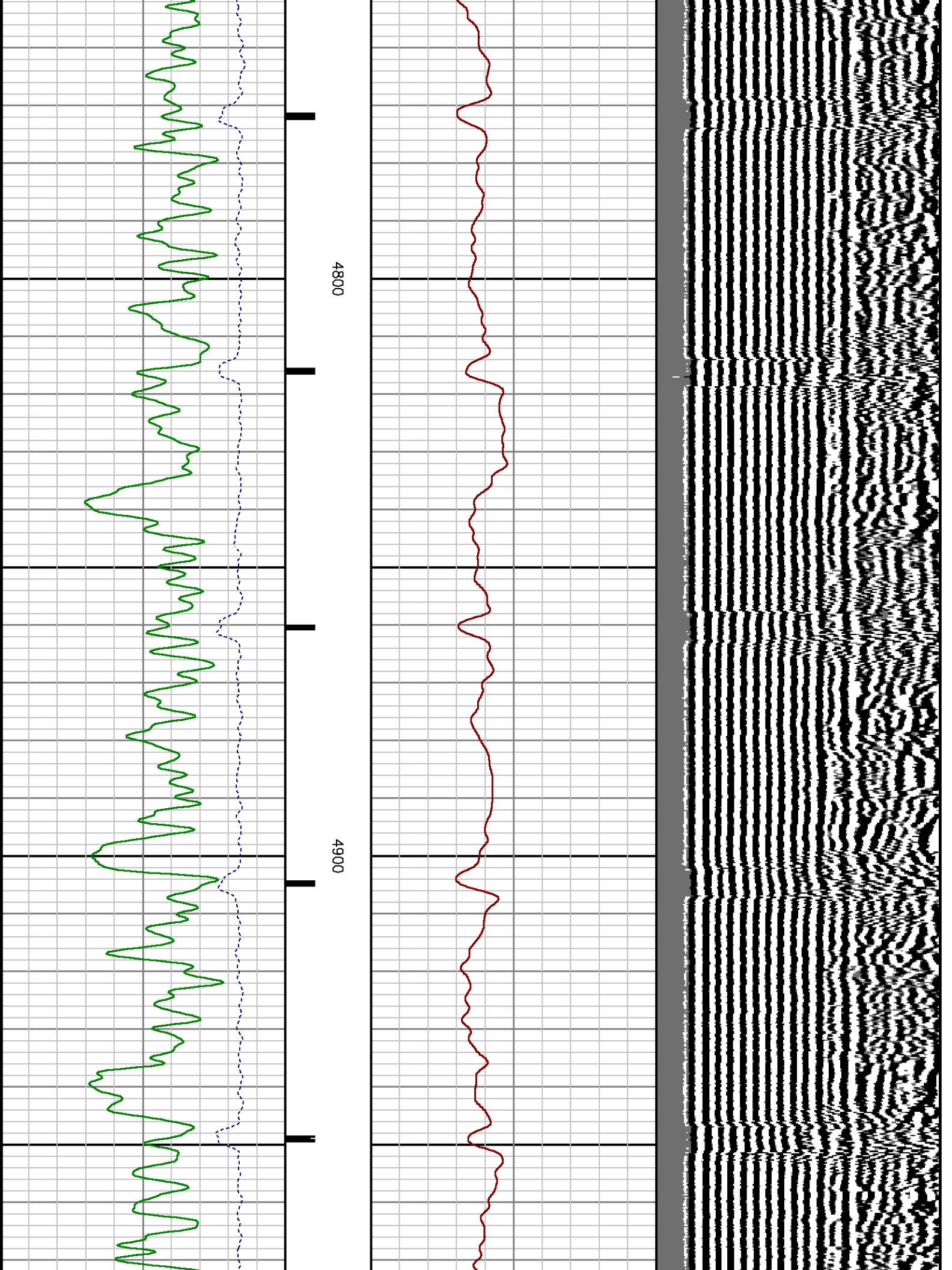


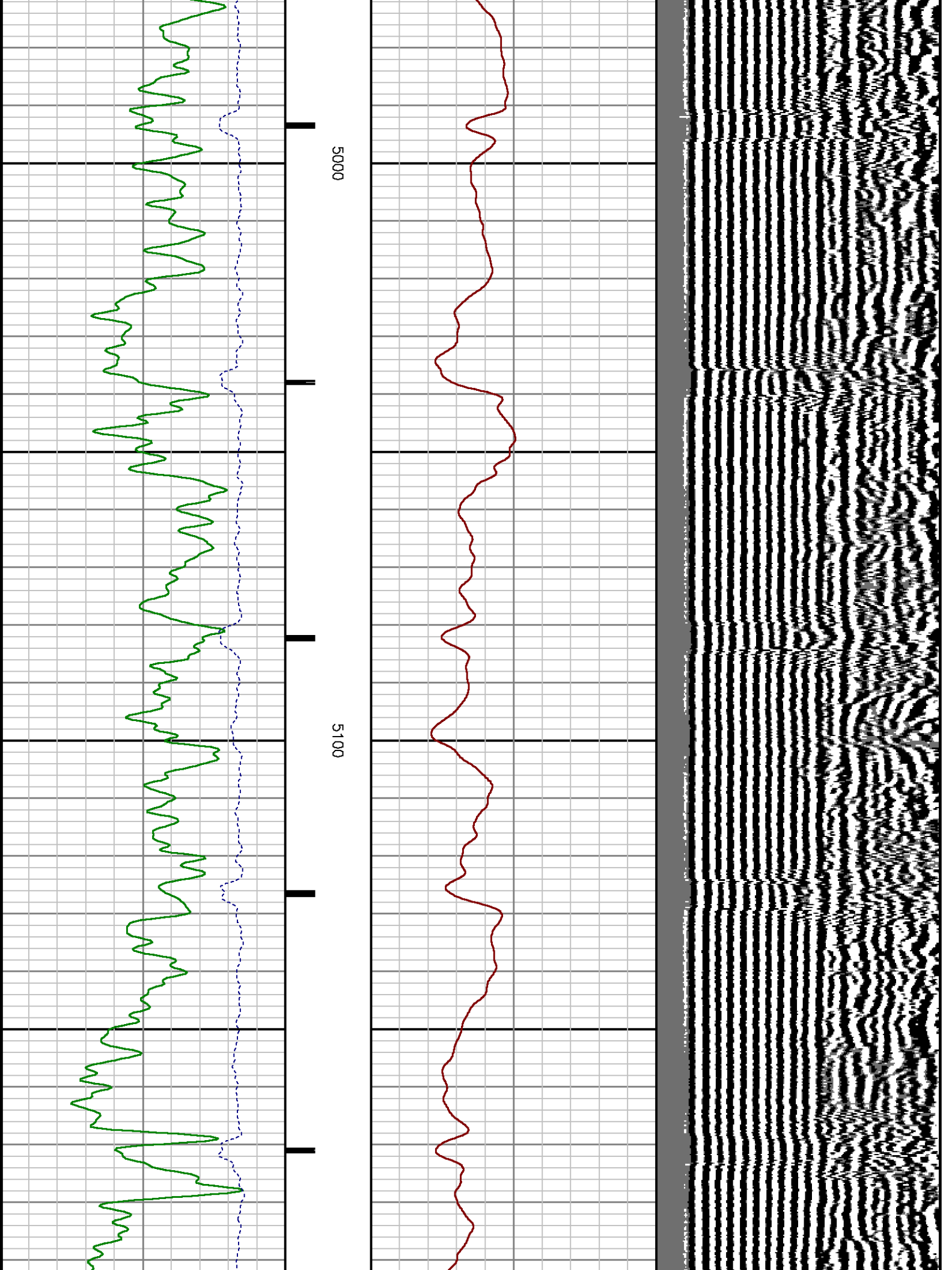


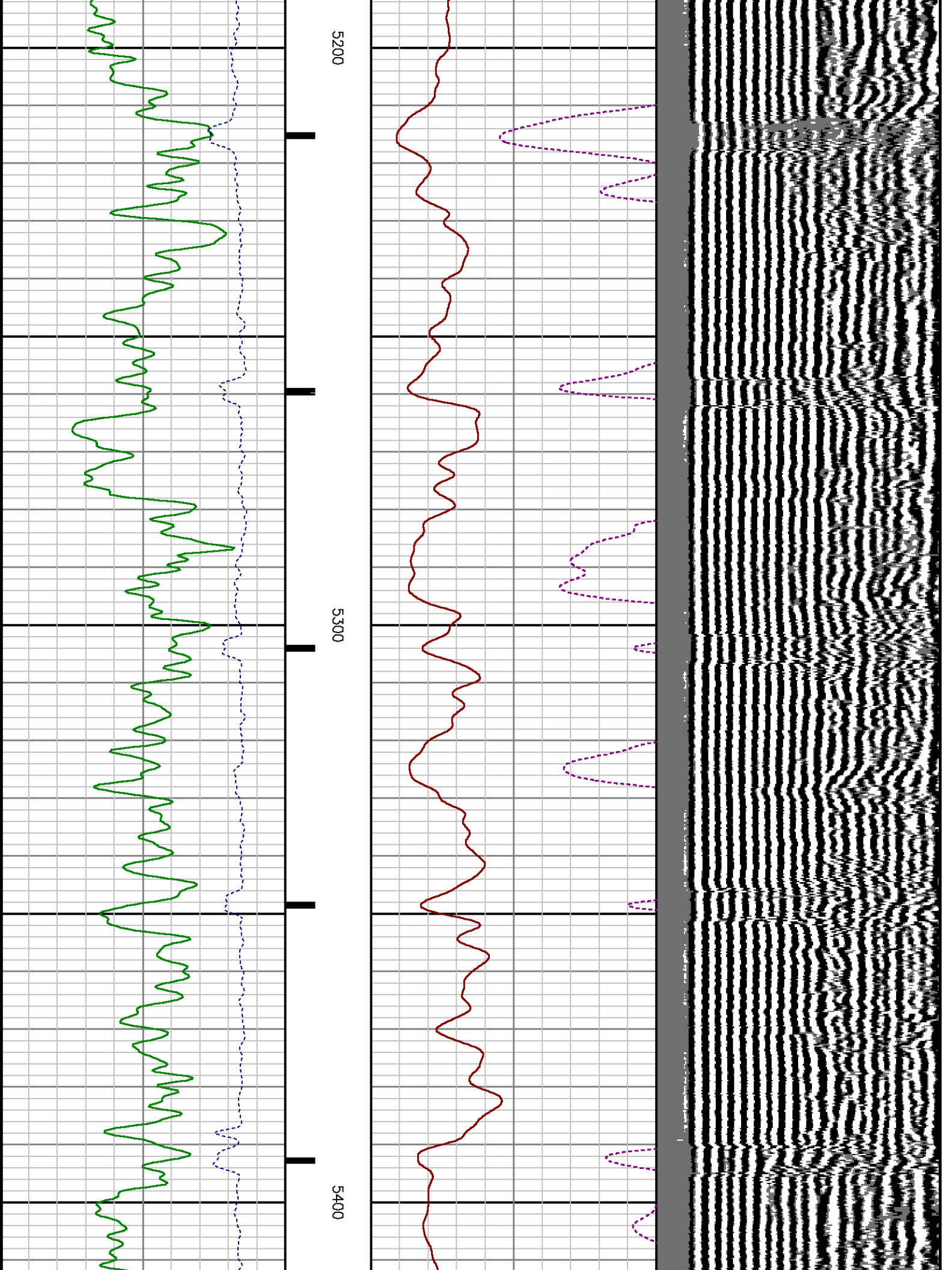


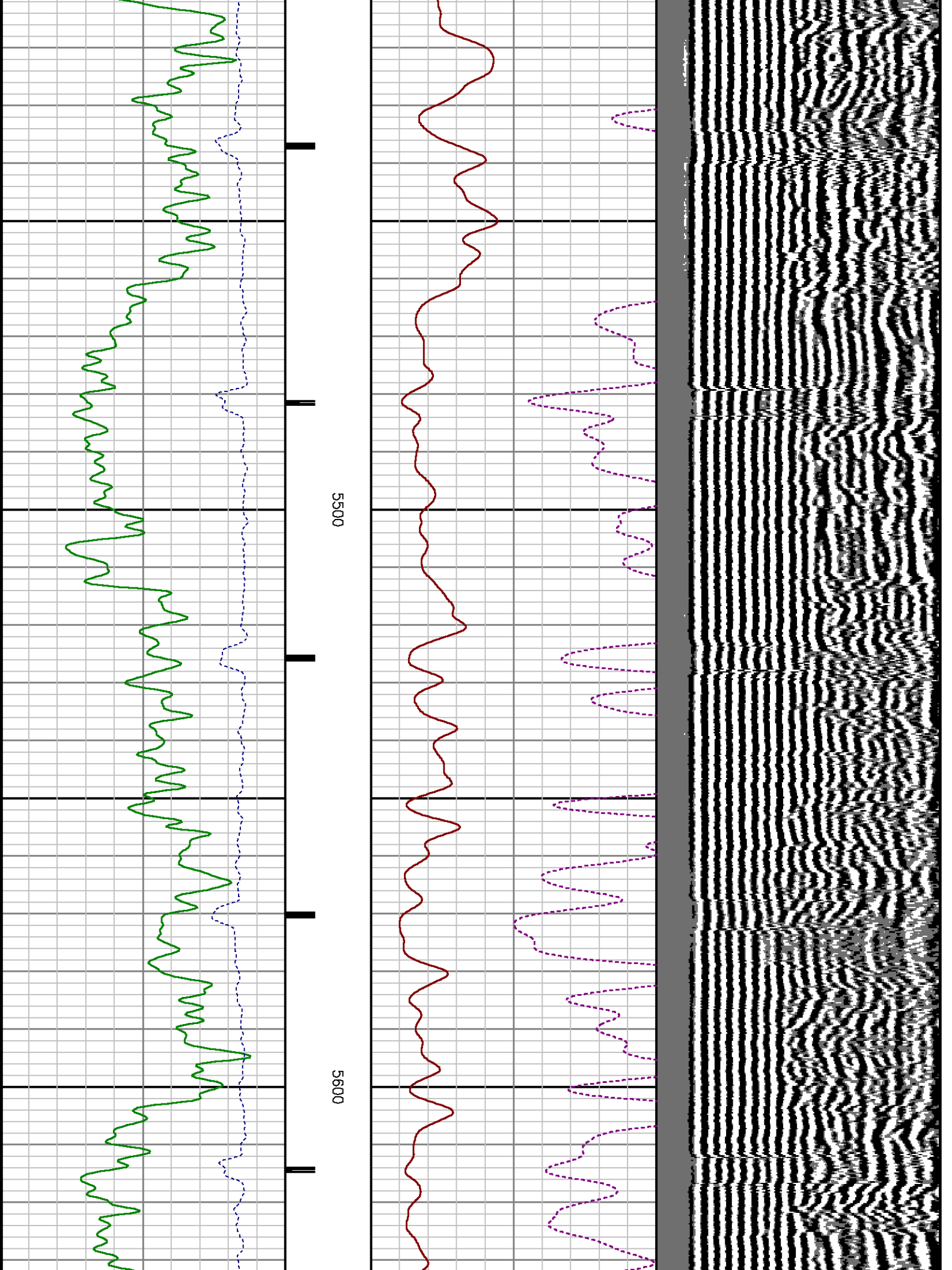


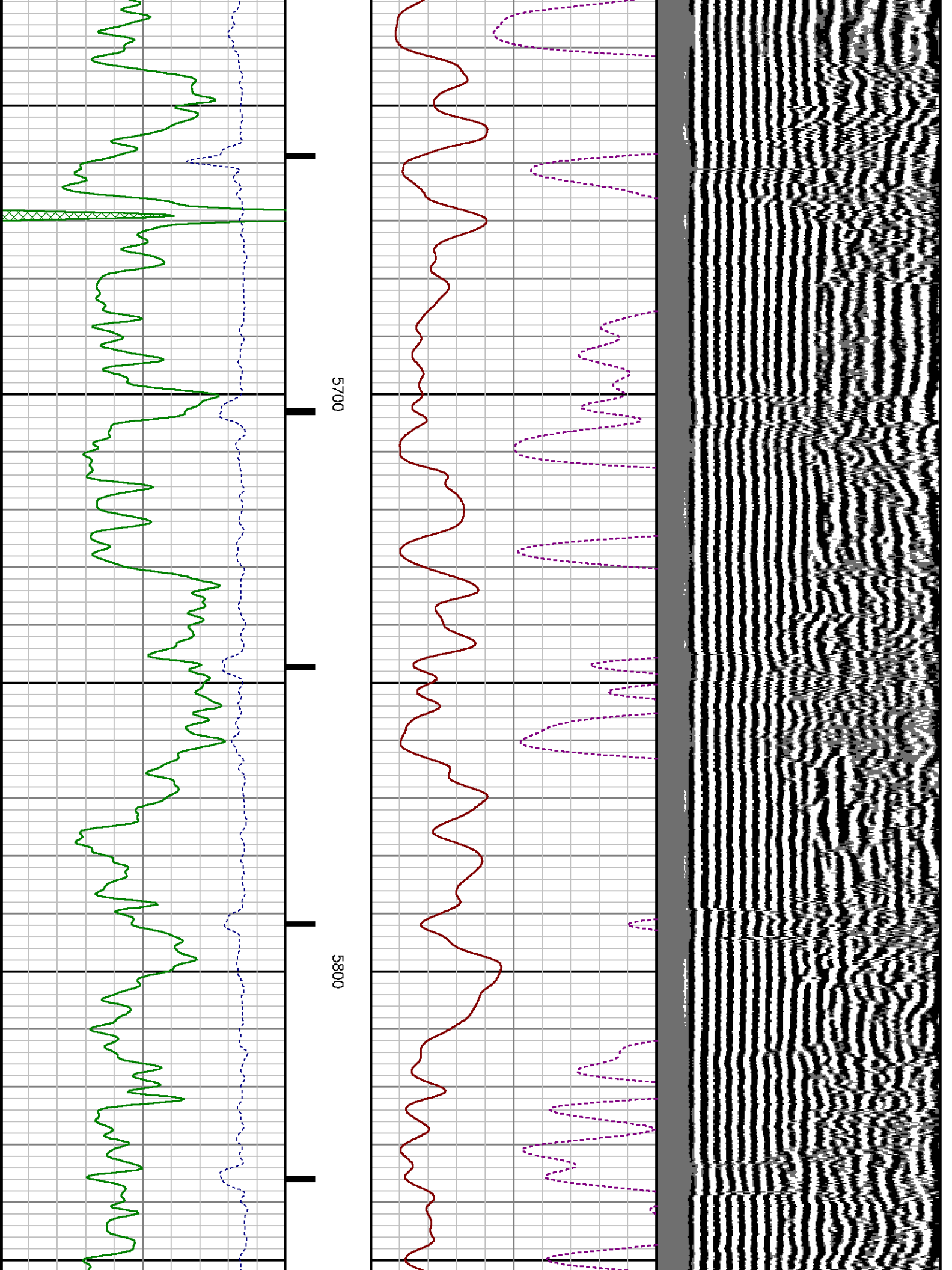


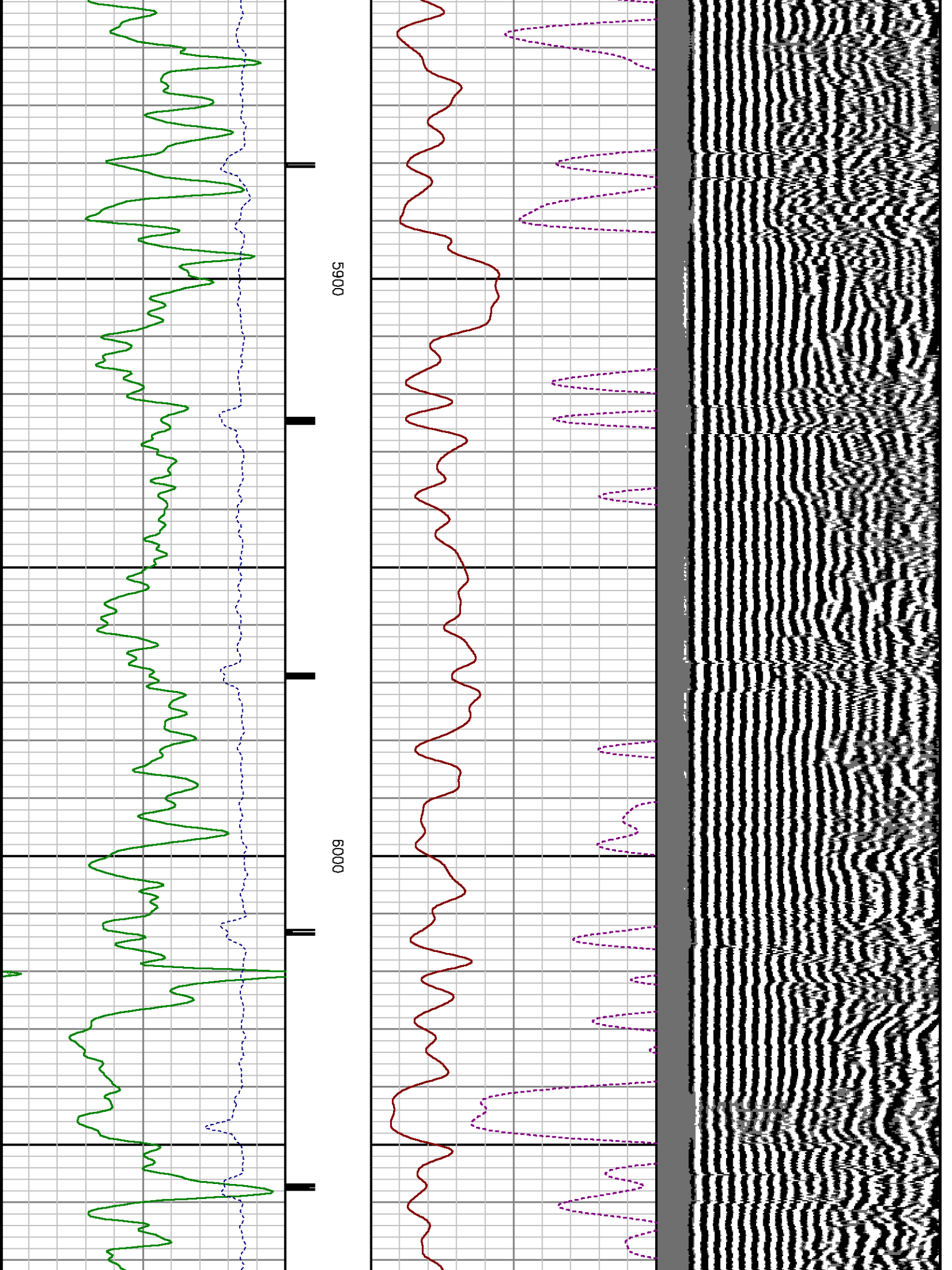


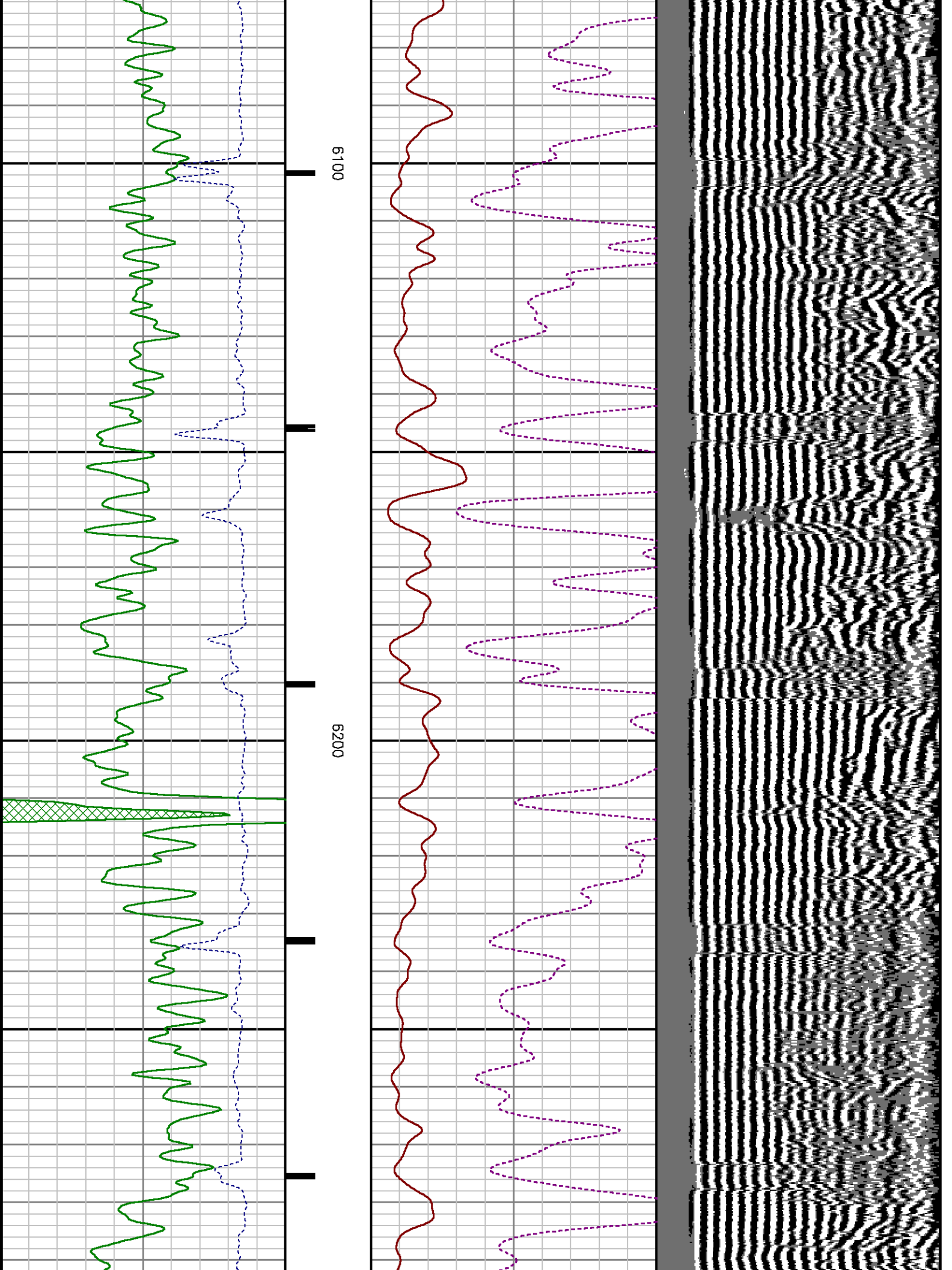


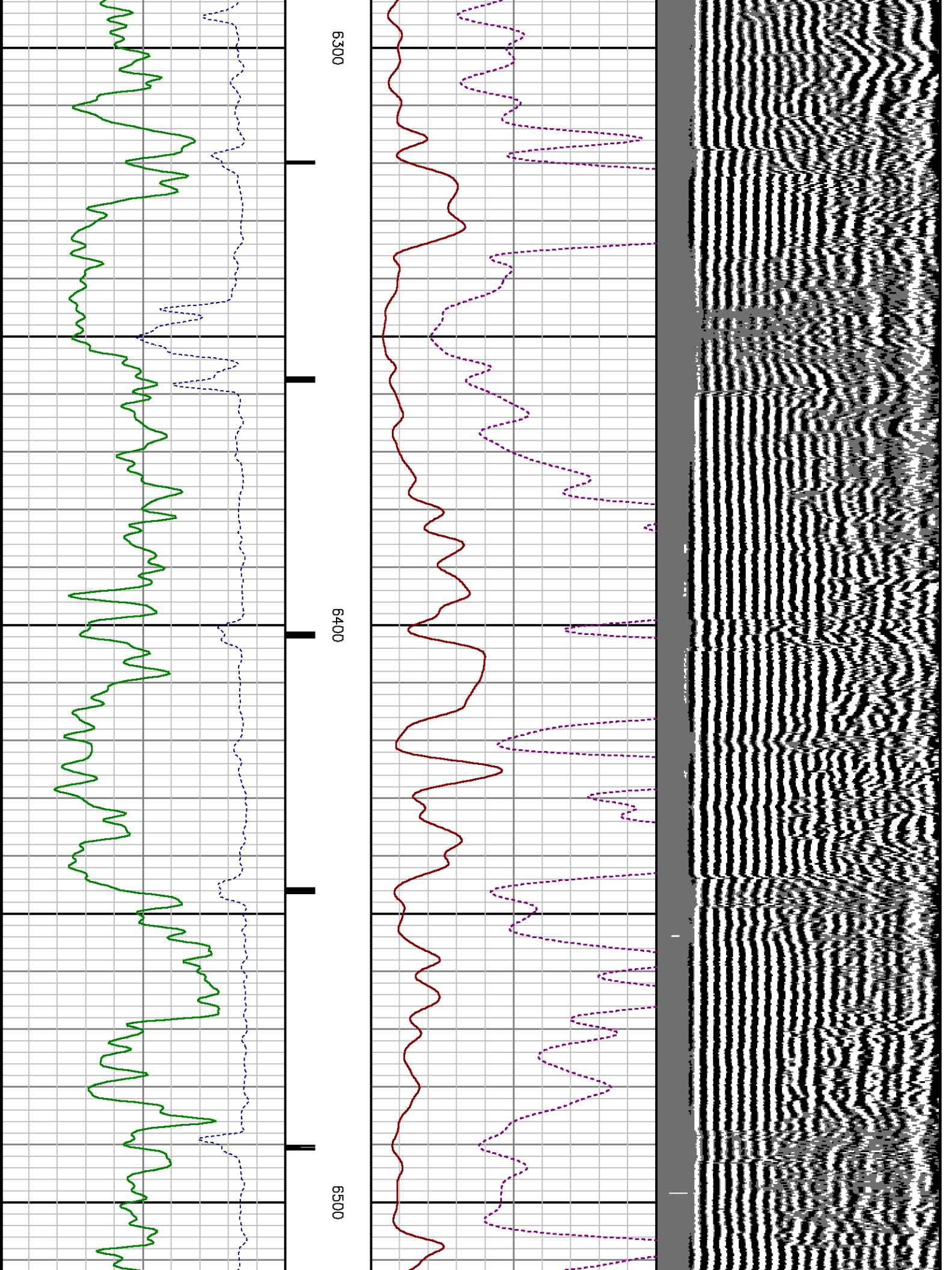


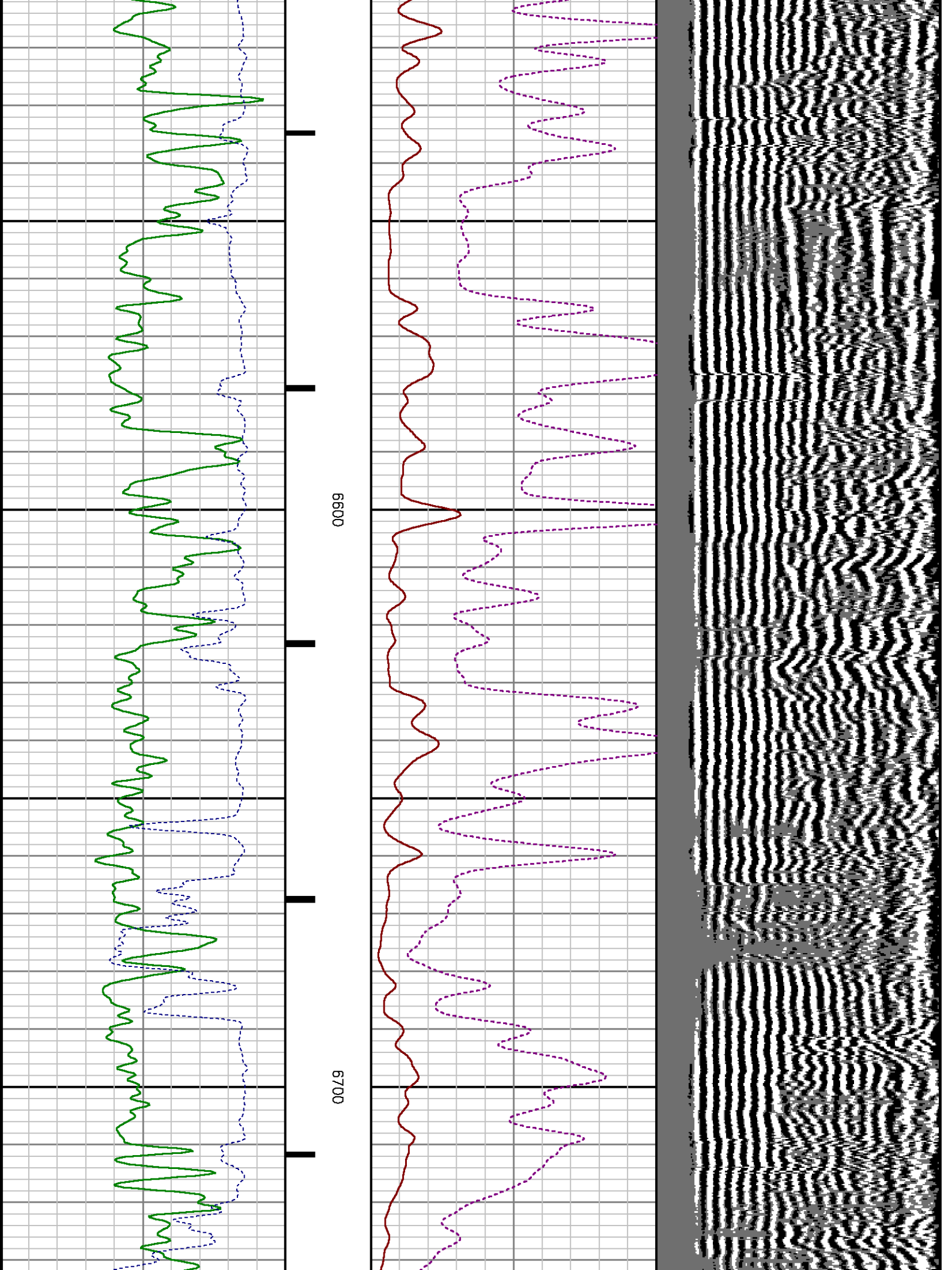


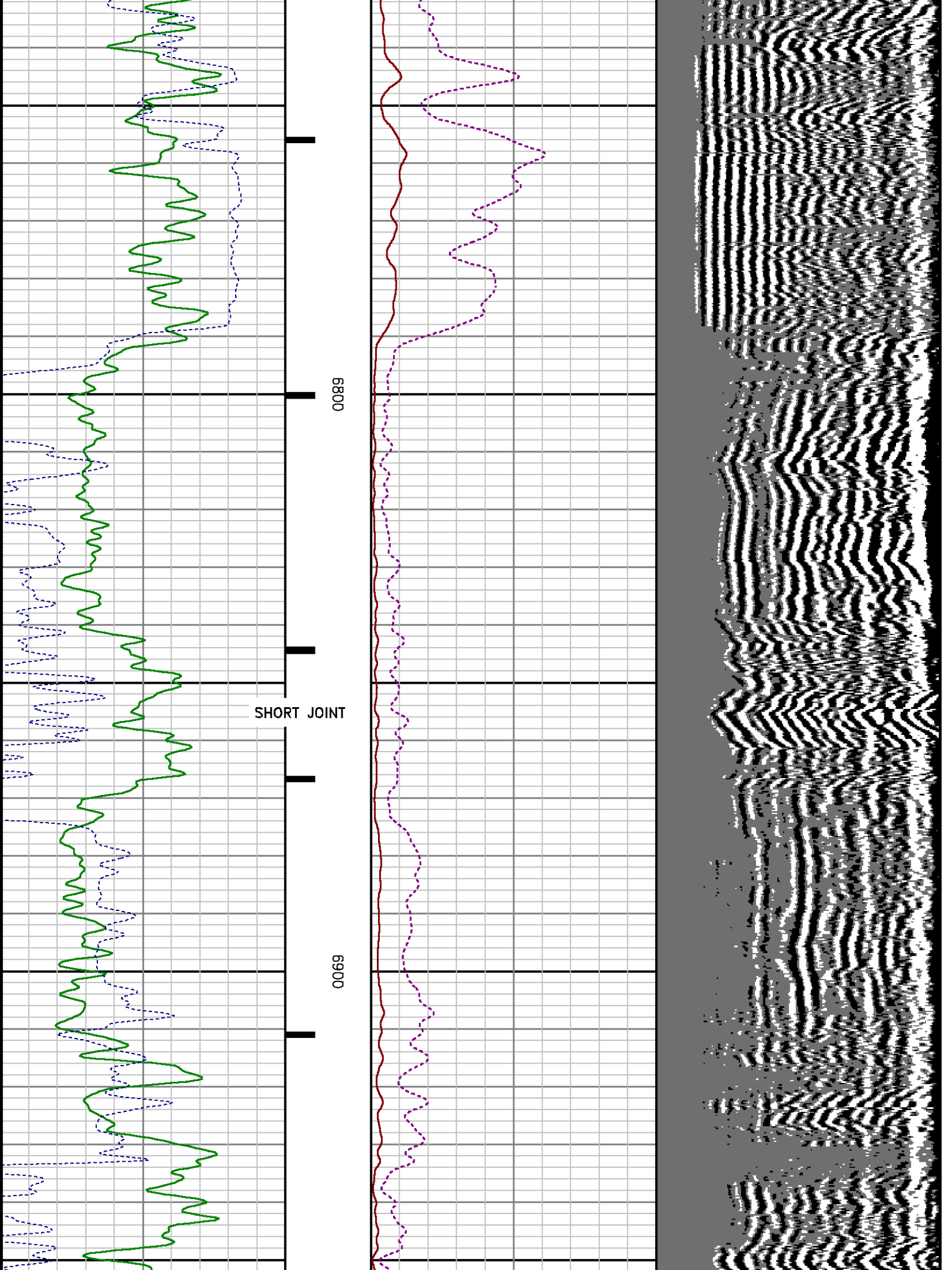


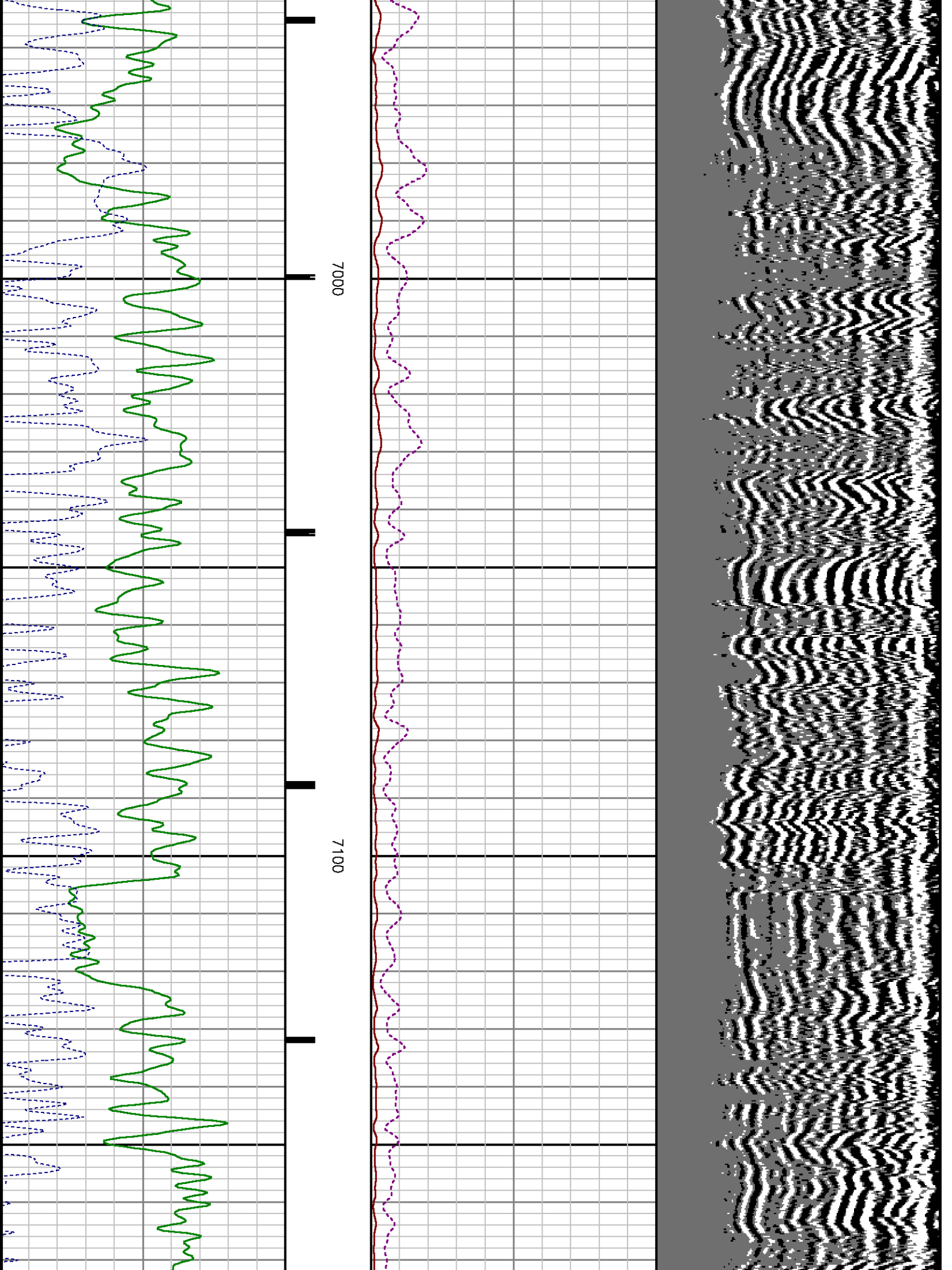


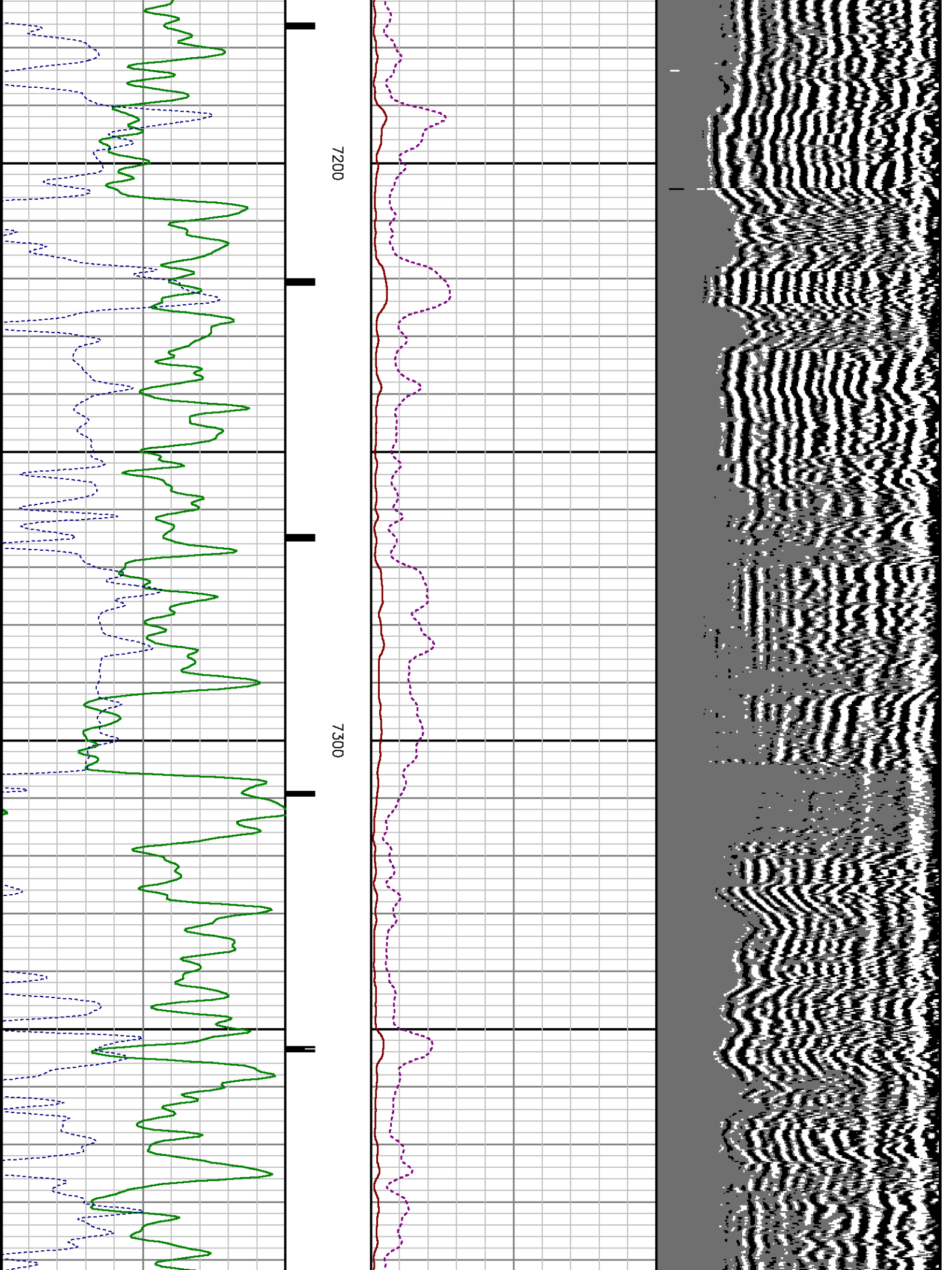


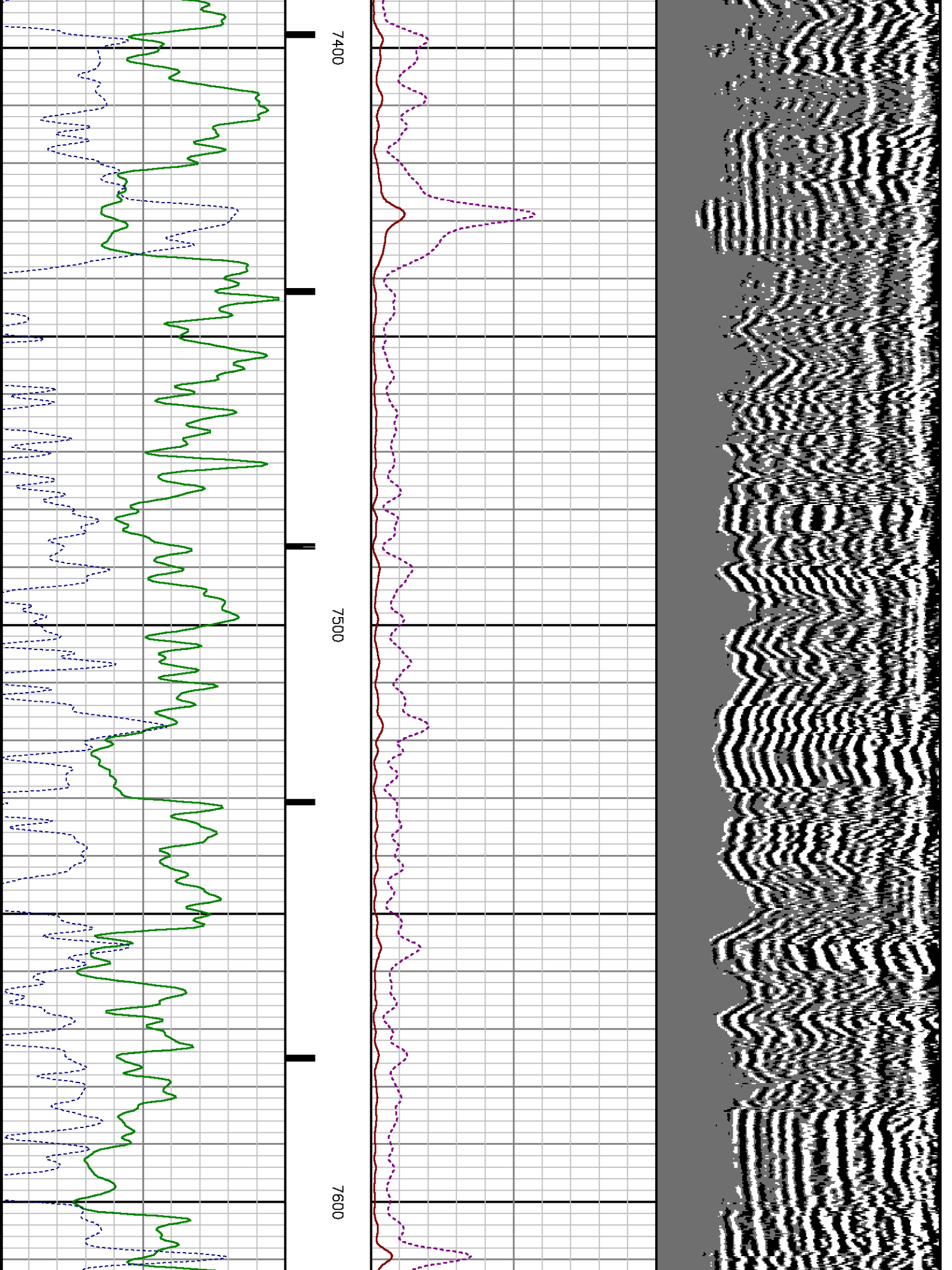


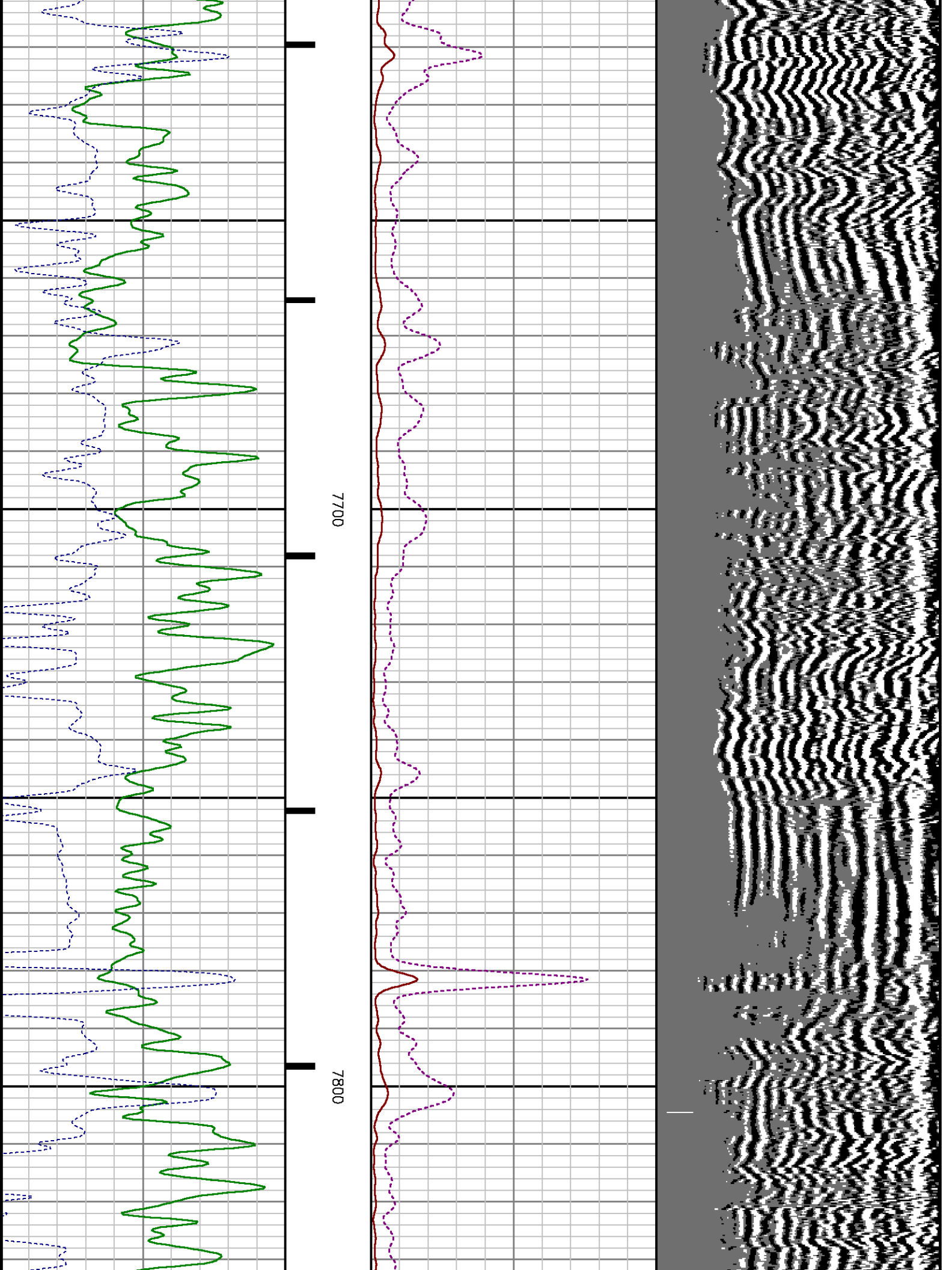


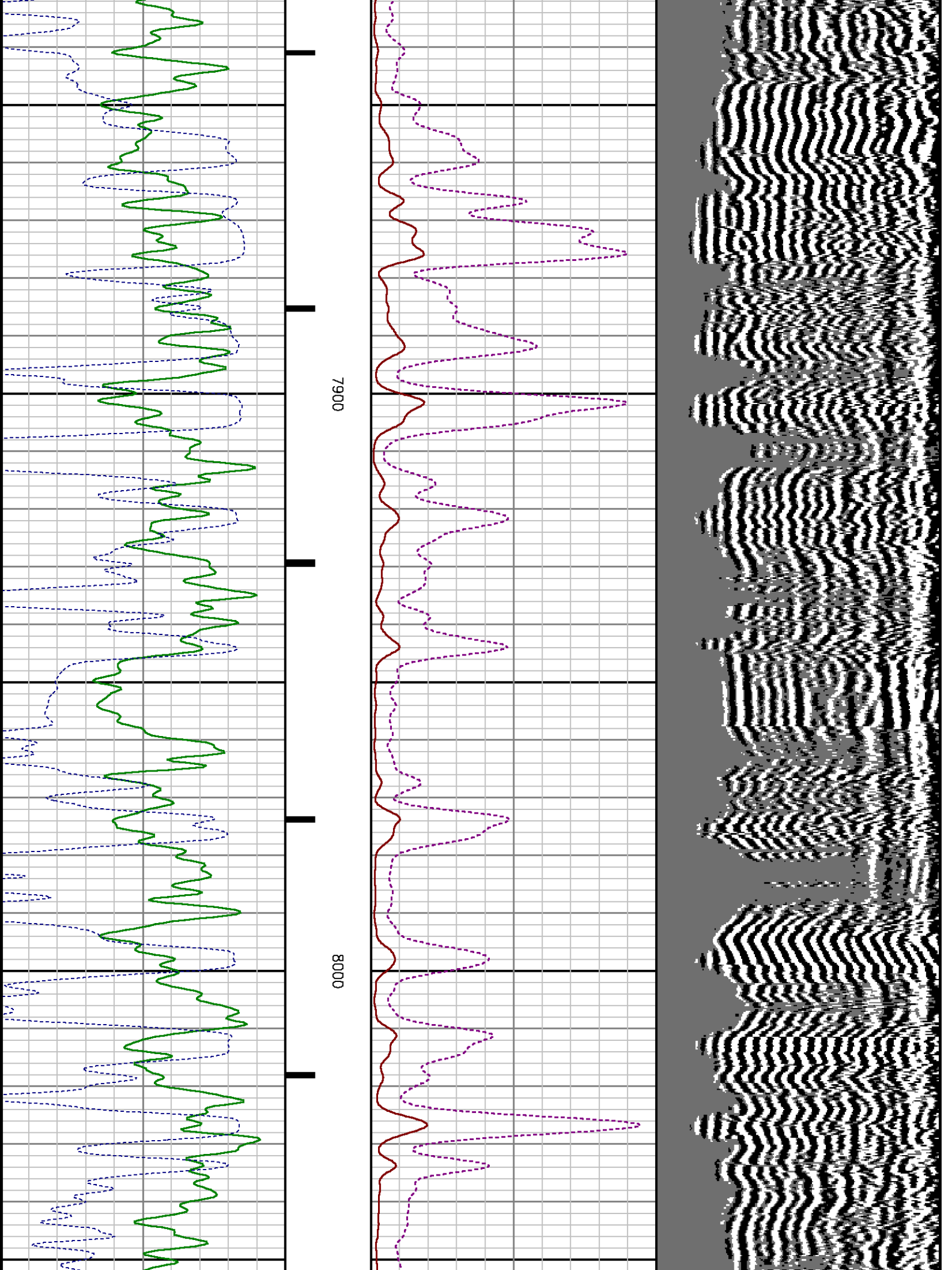


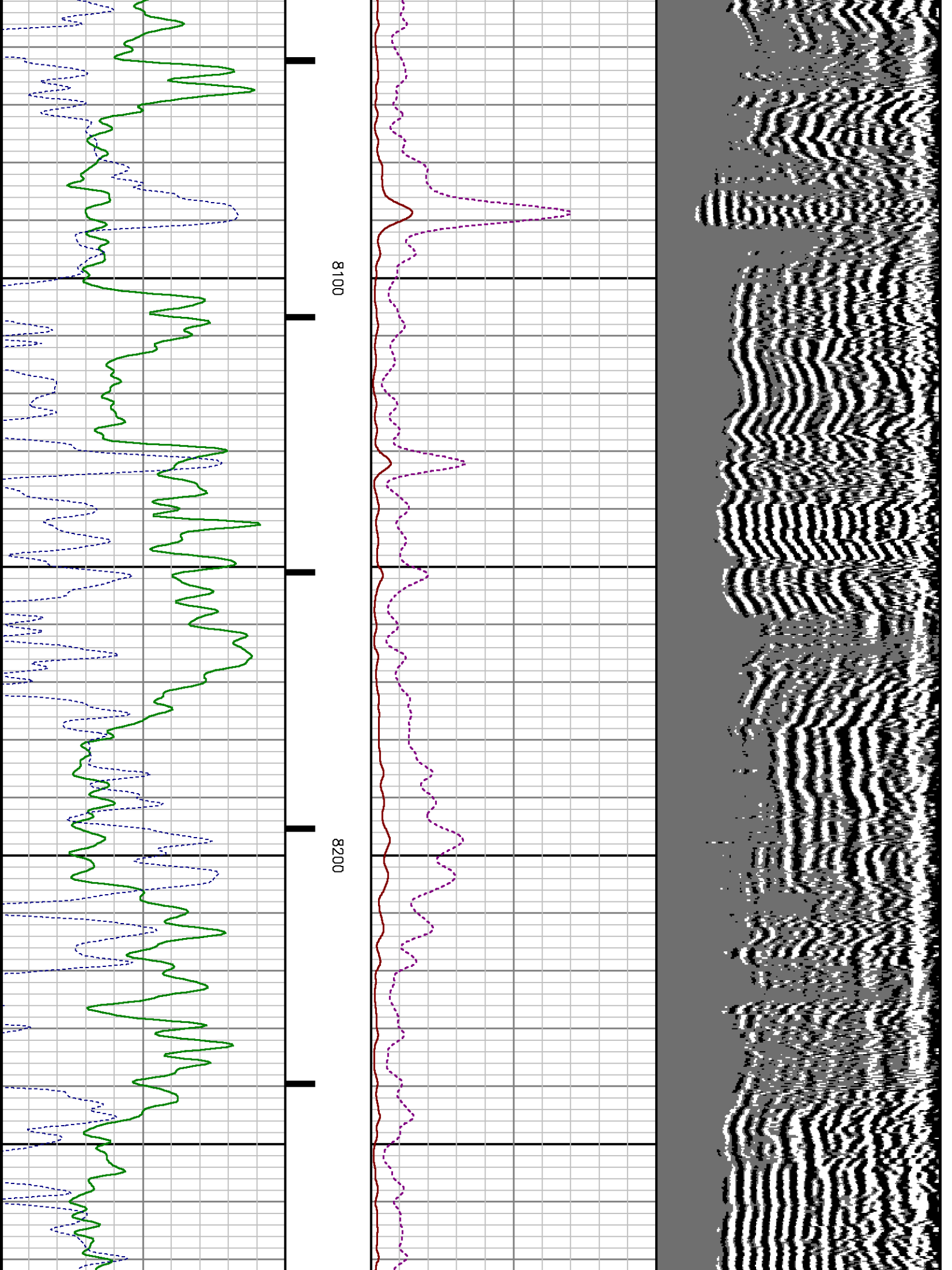


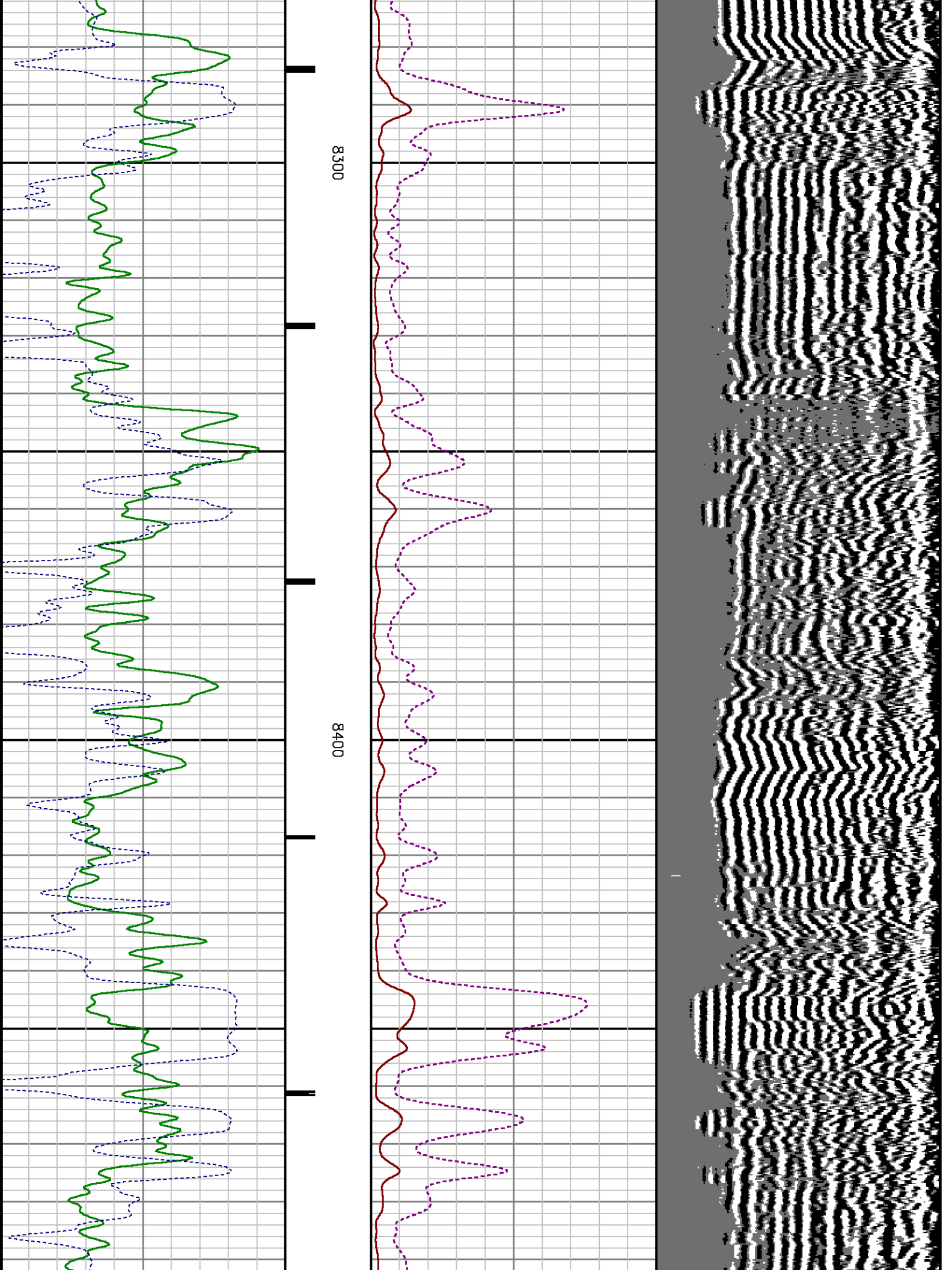


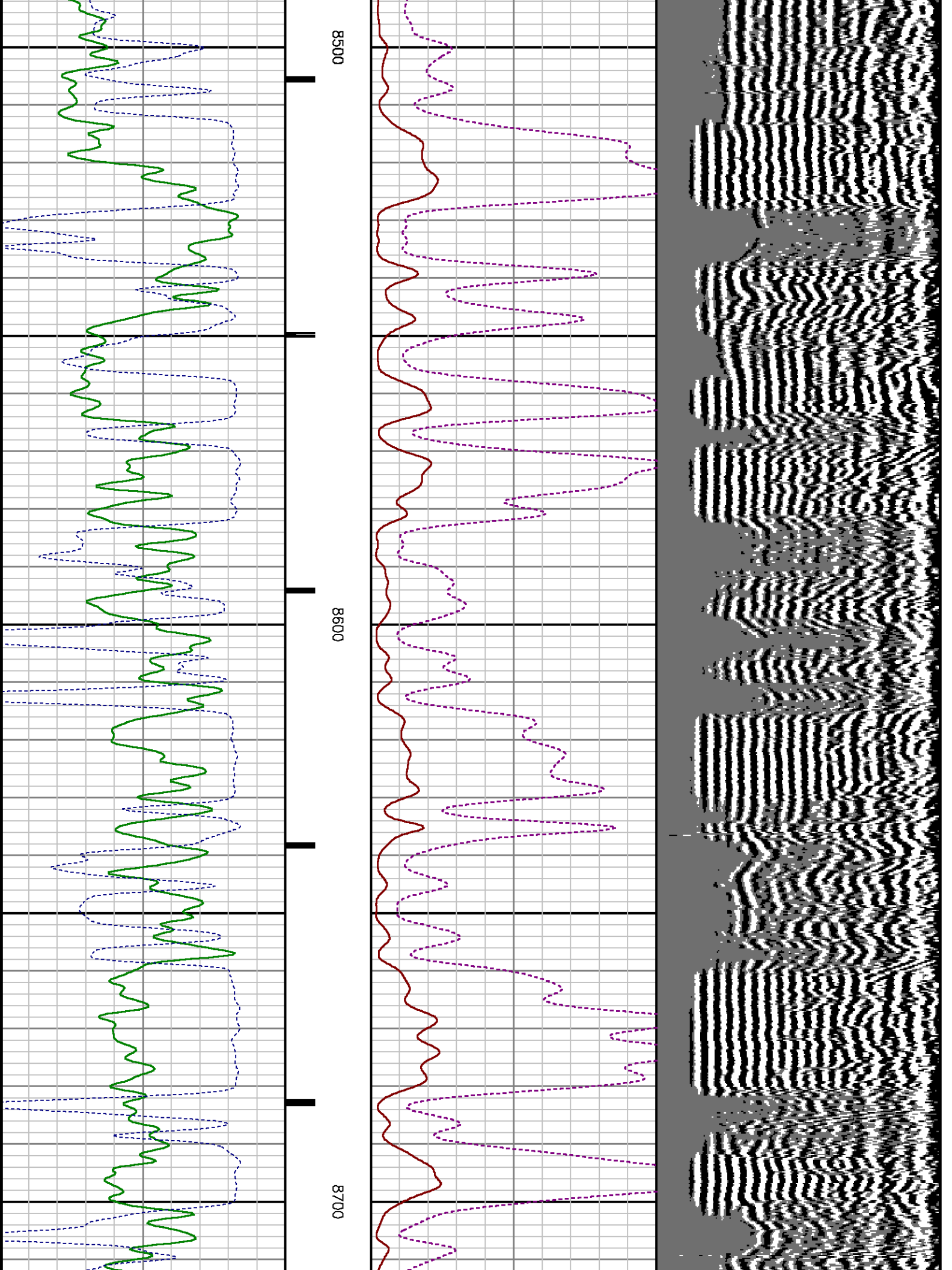


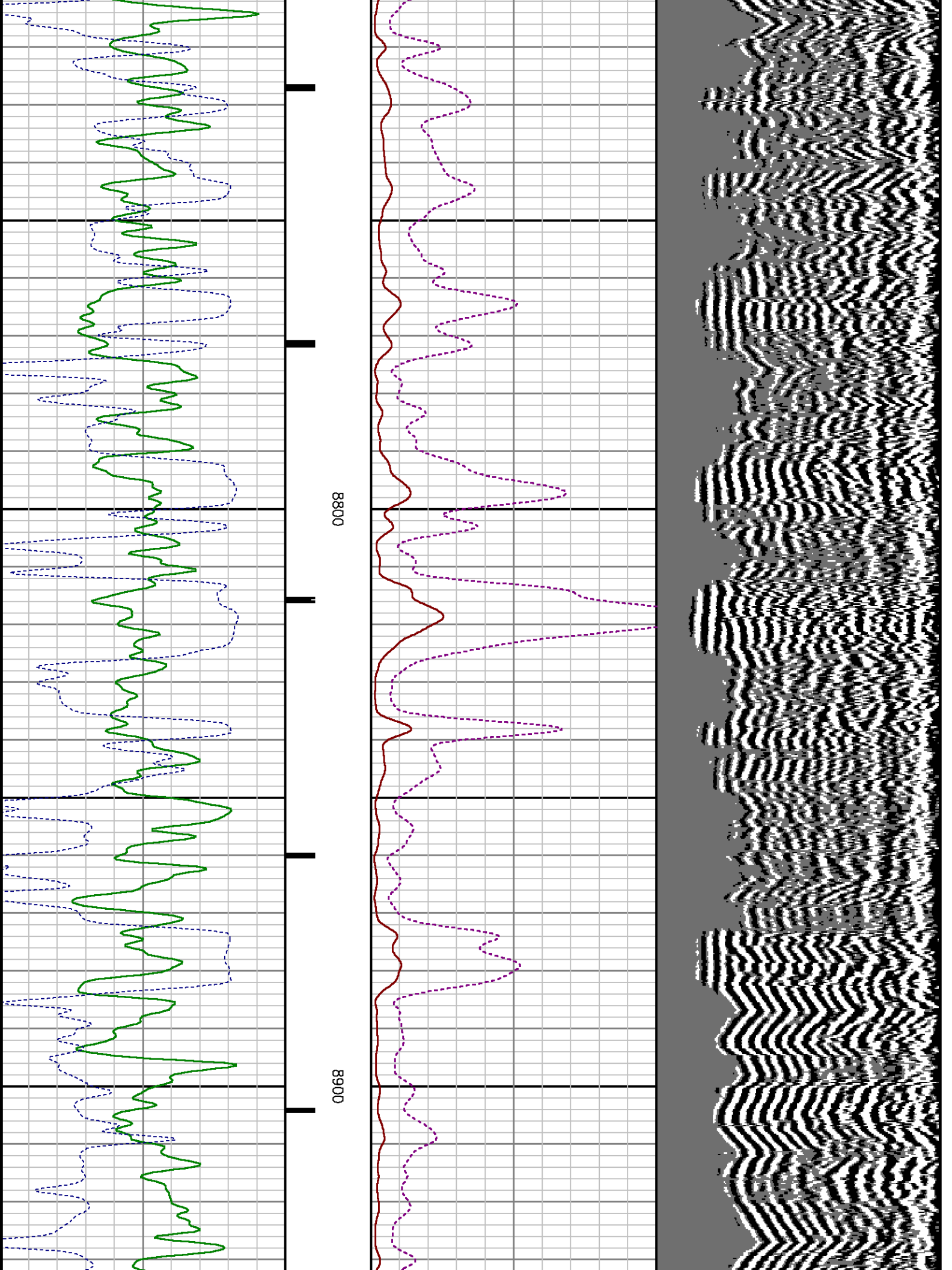


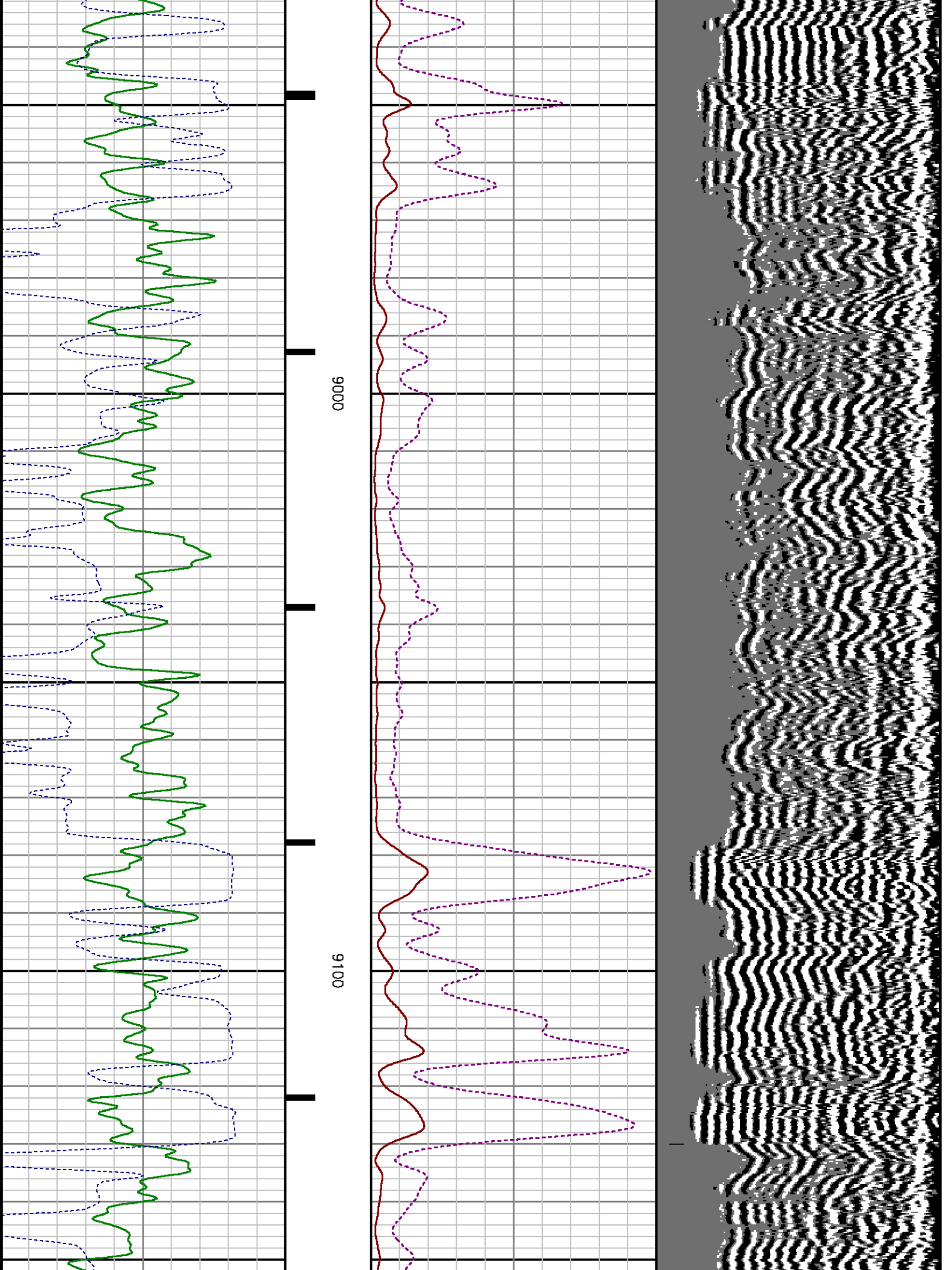


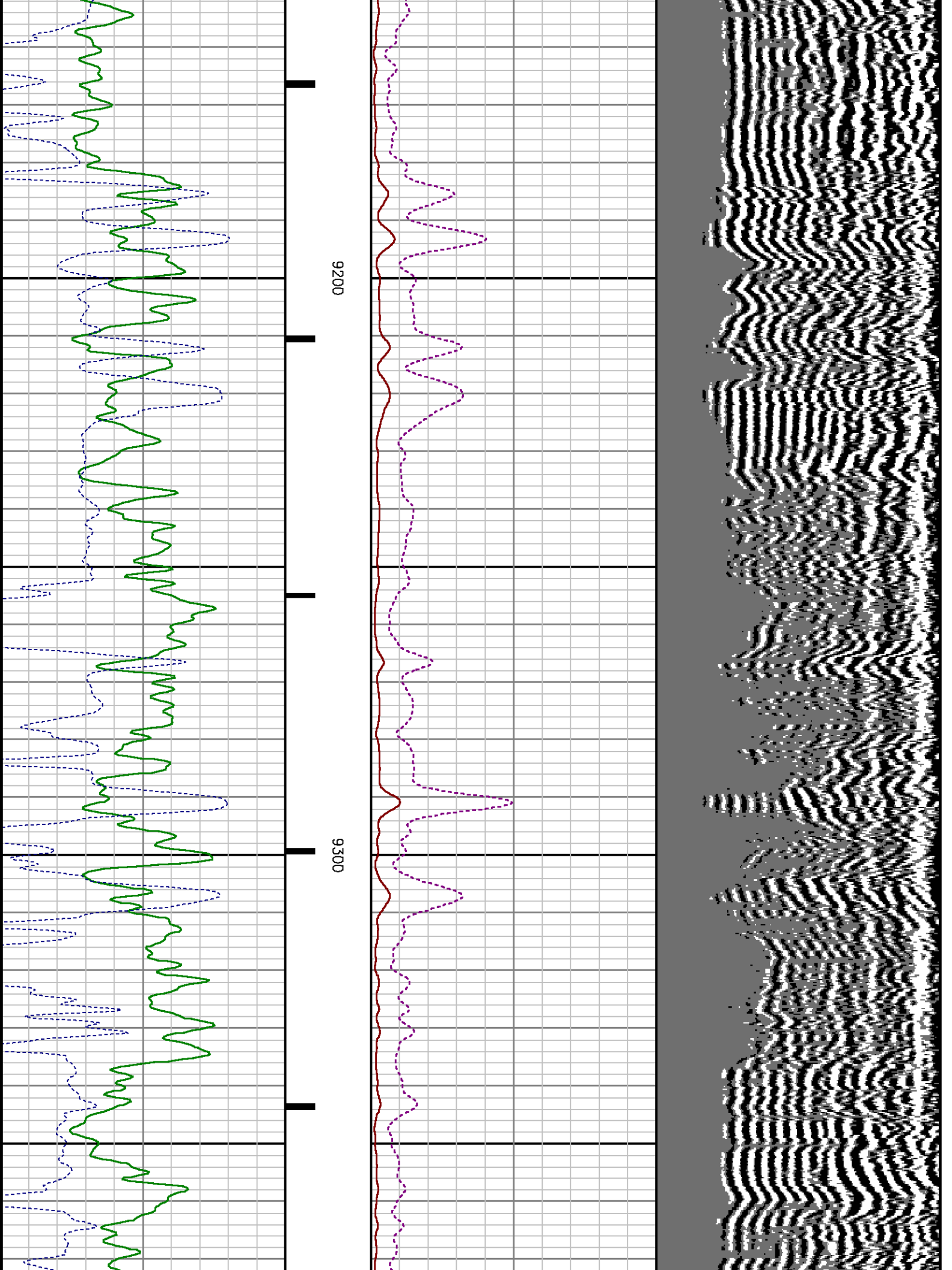


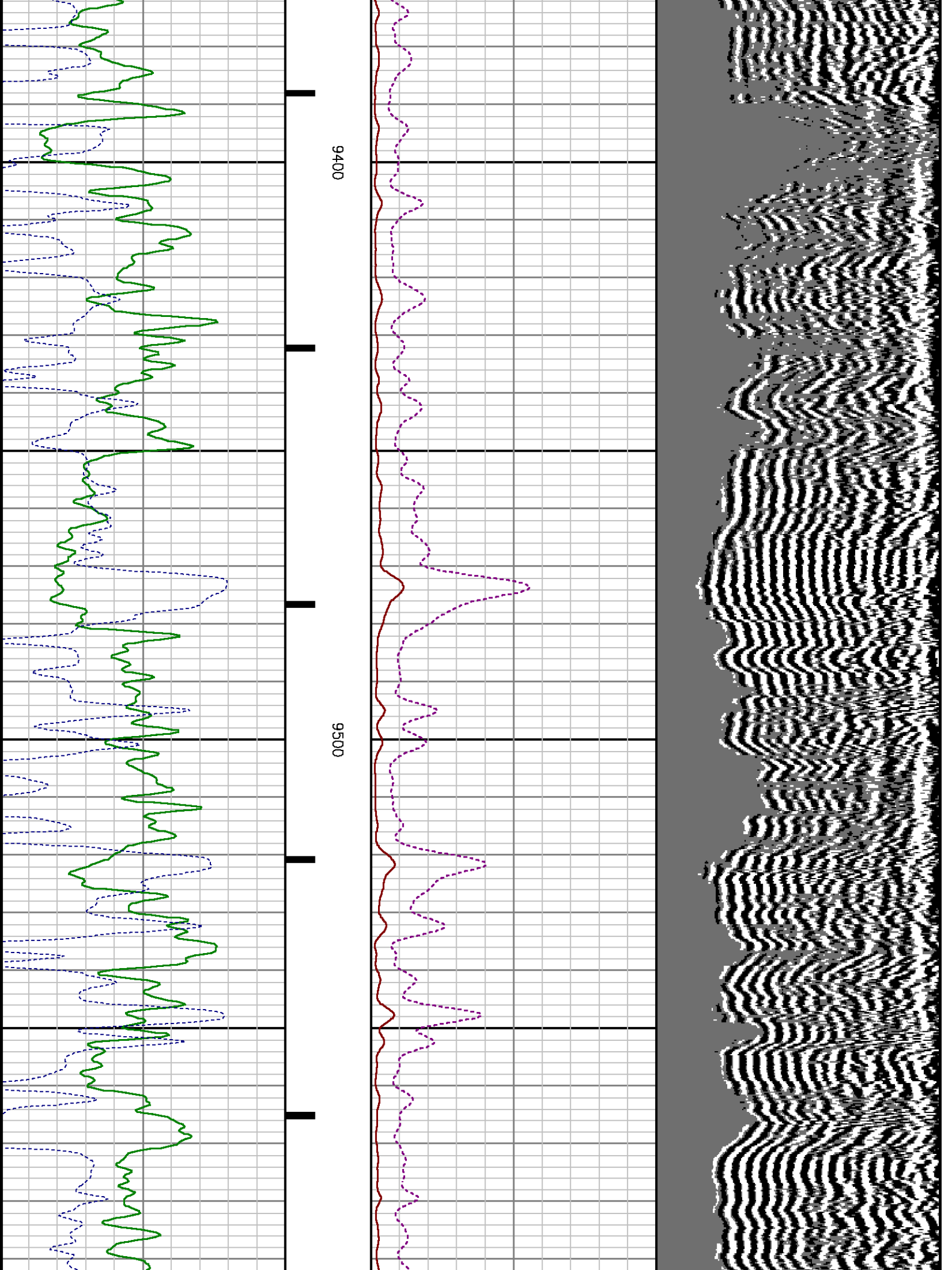


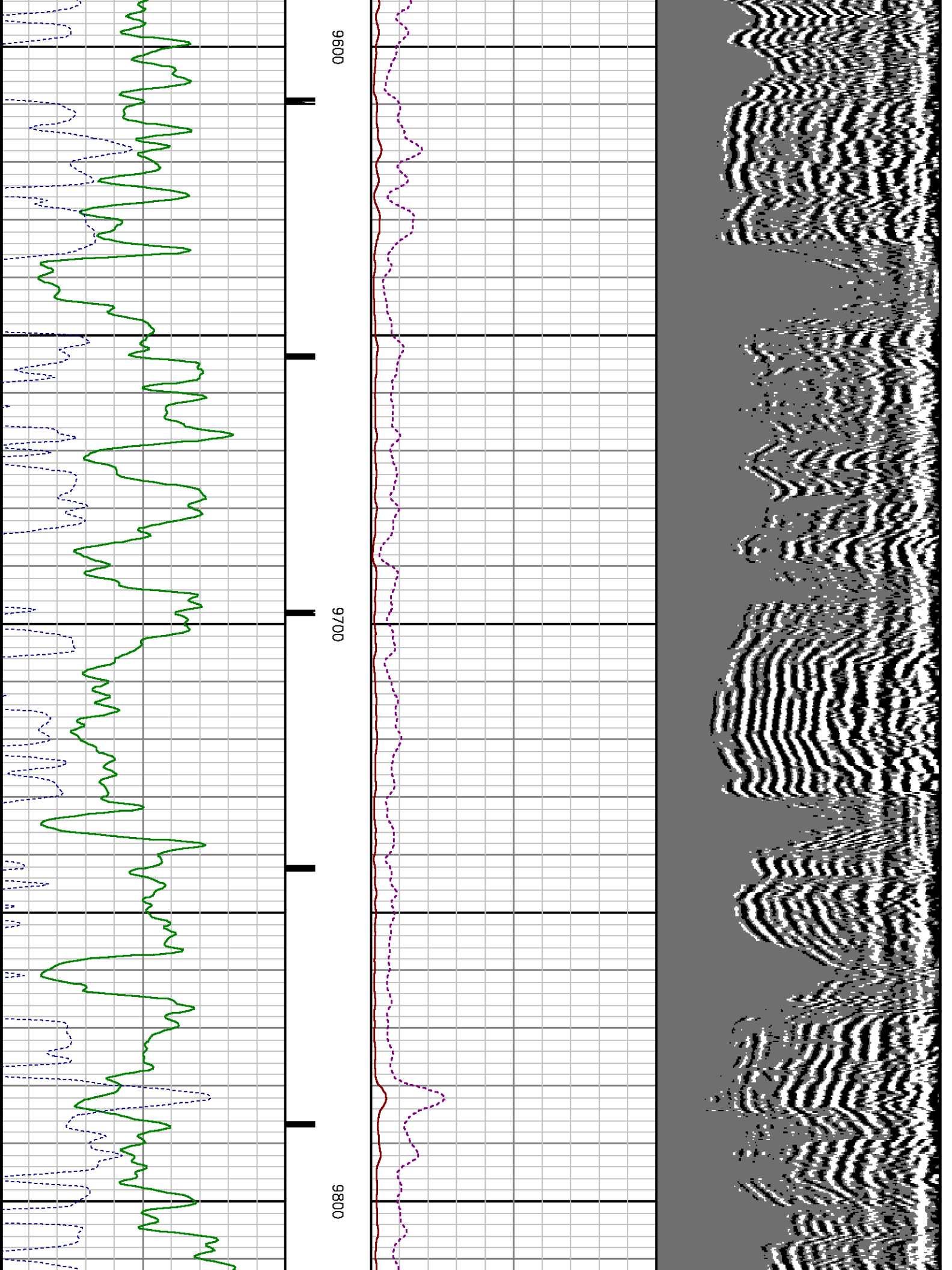


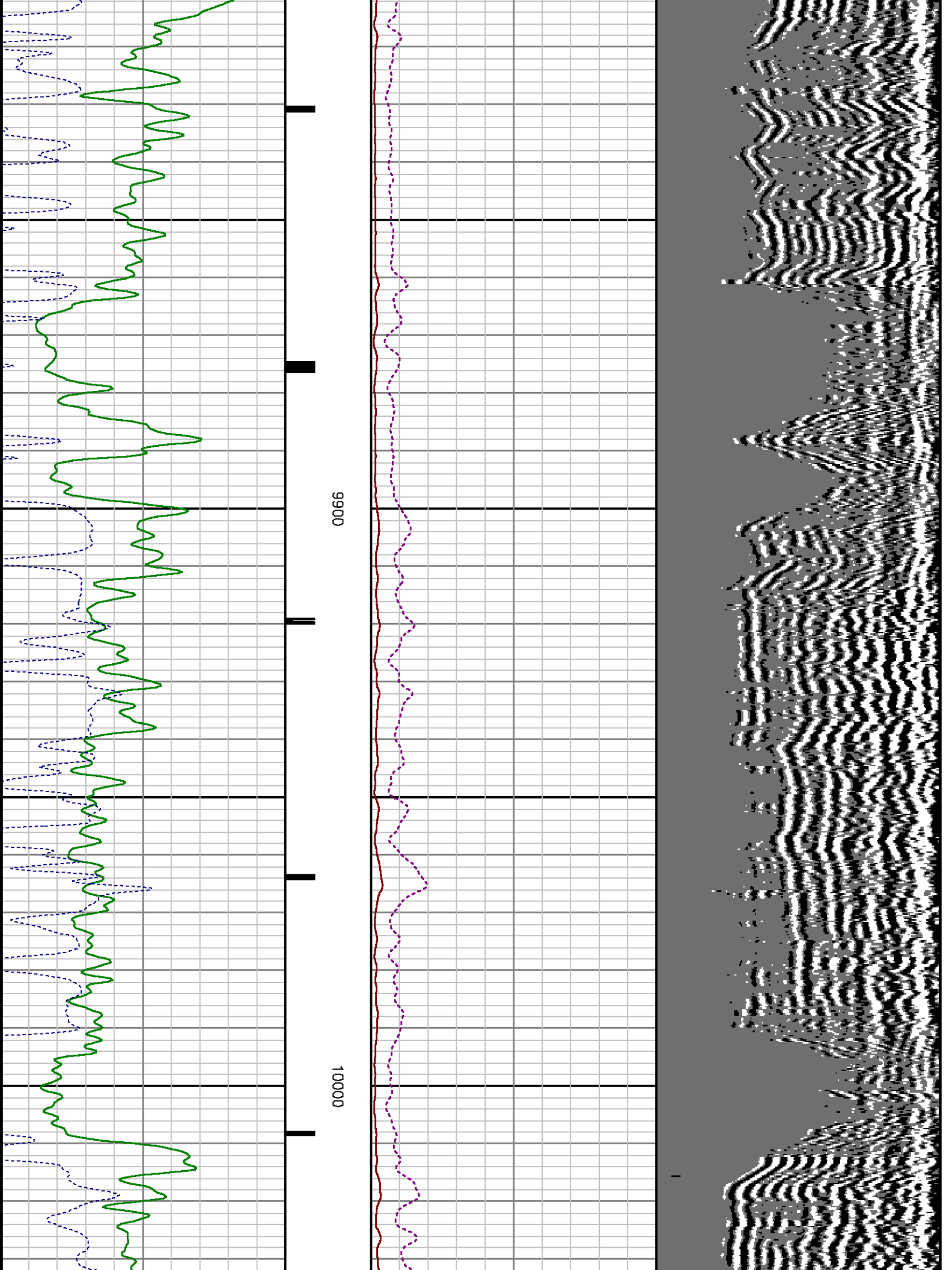


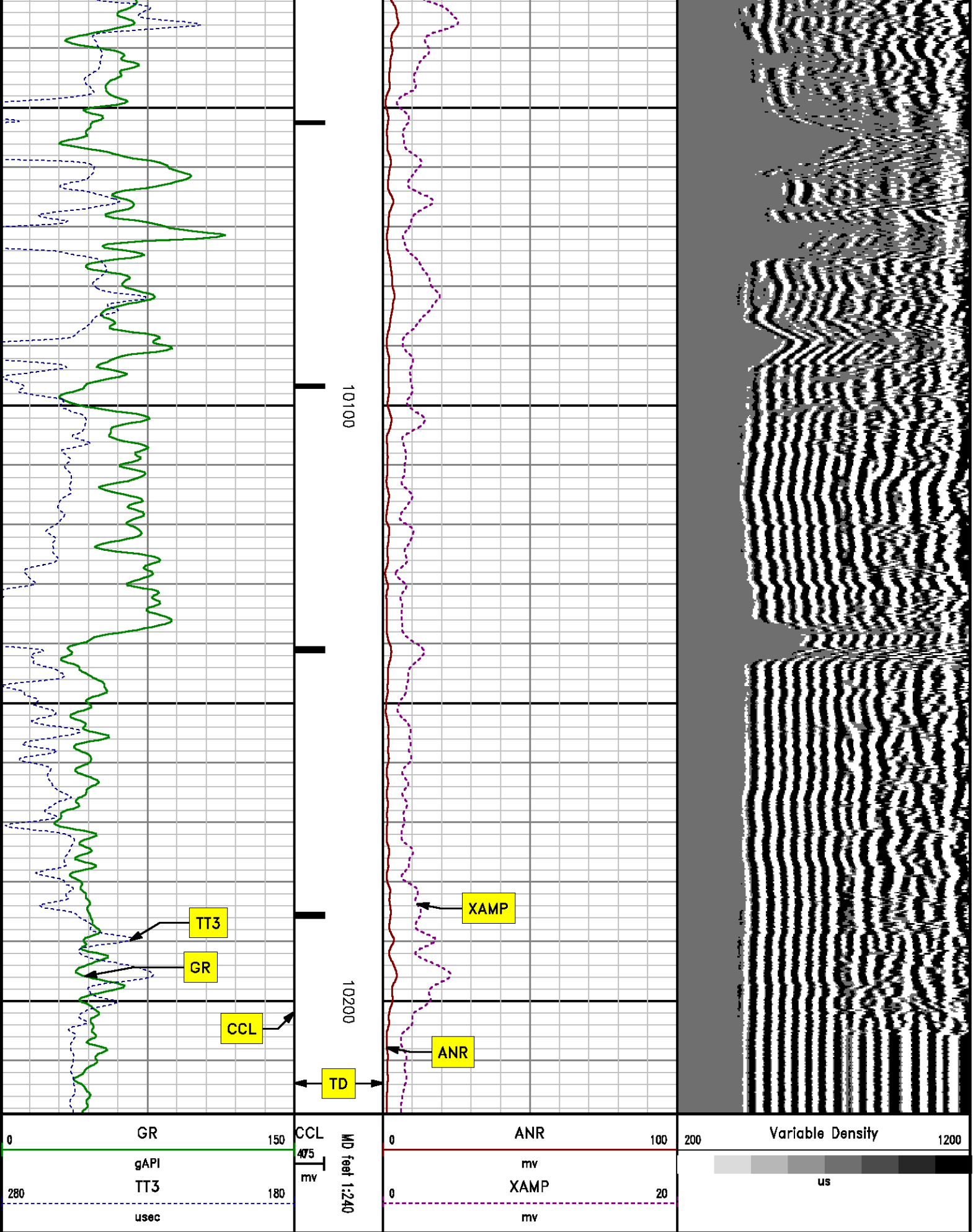












SECONDARY PRESENTATION

0 PSI

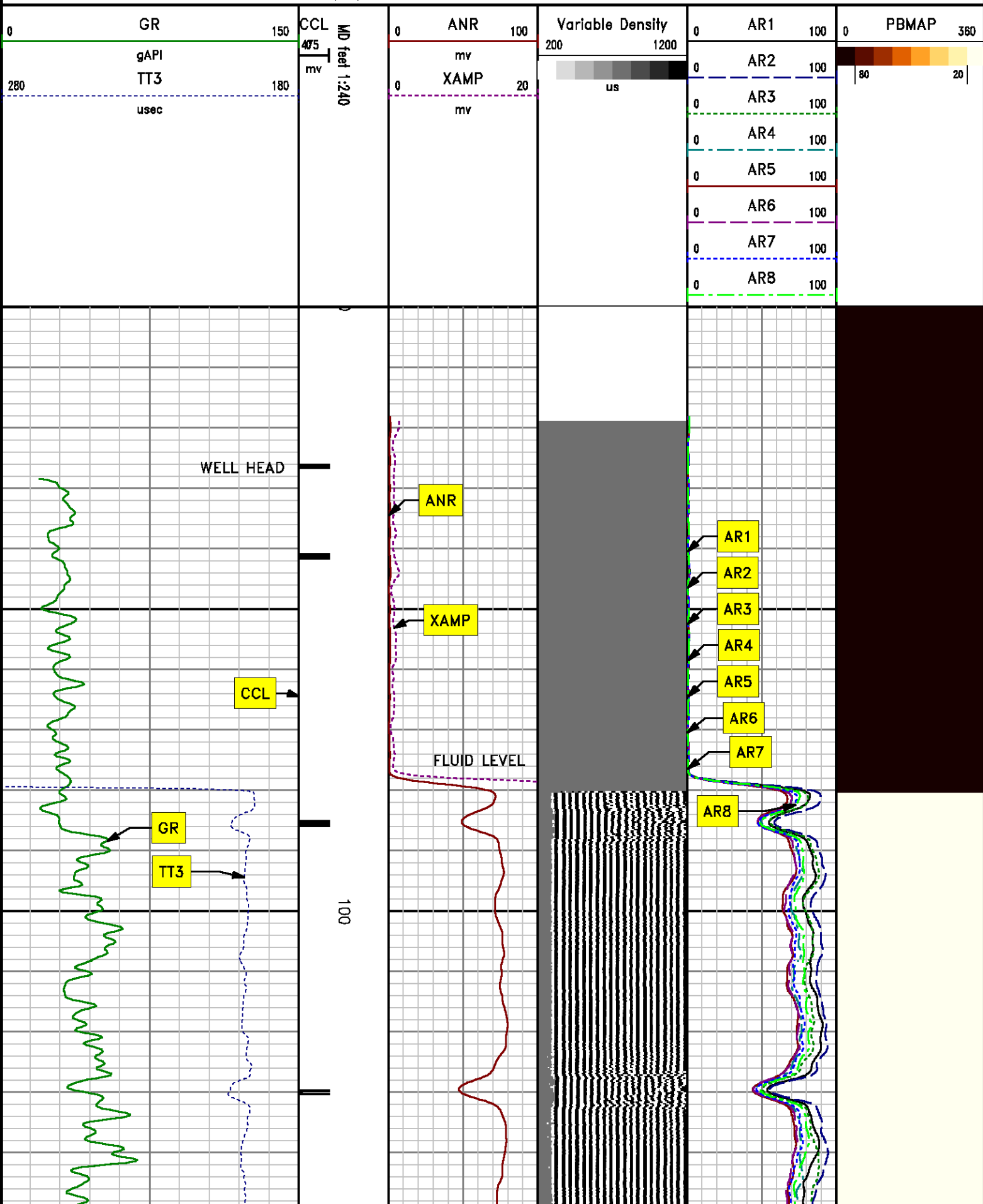
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
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RAL	Amp Gate Start Near	195.000	usec	30.130	10238.750
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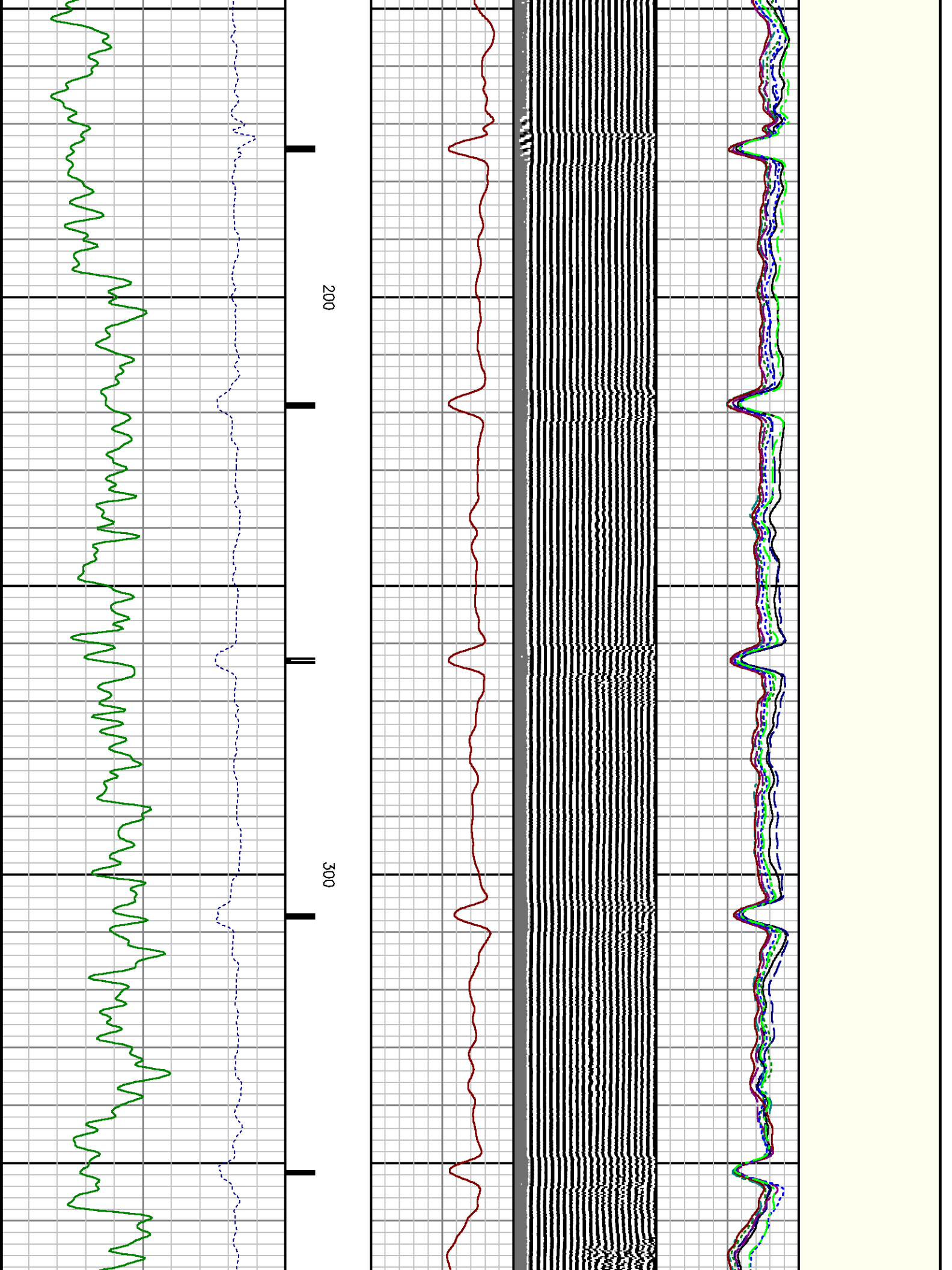
DEPTH OFFSETS

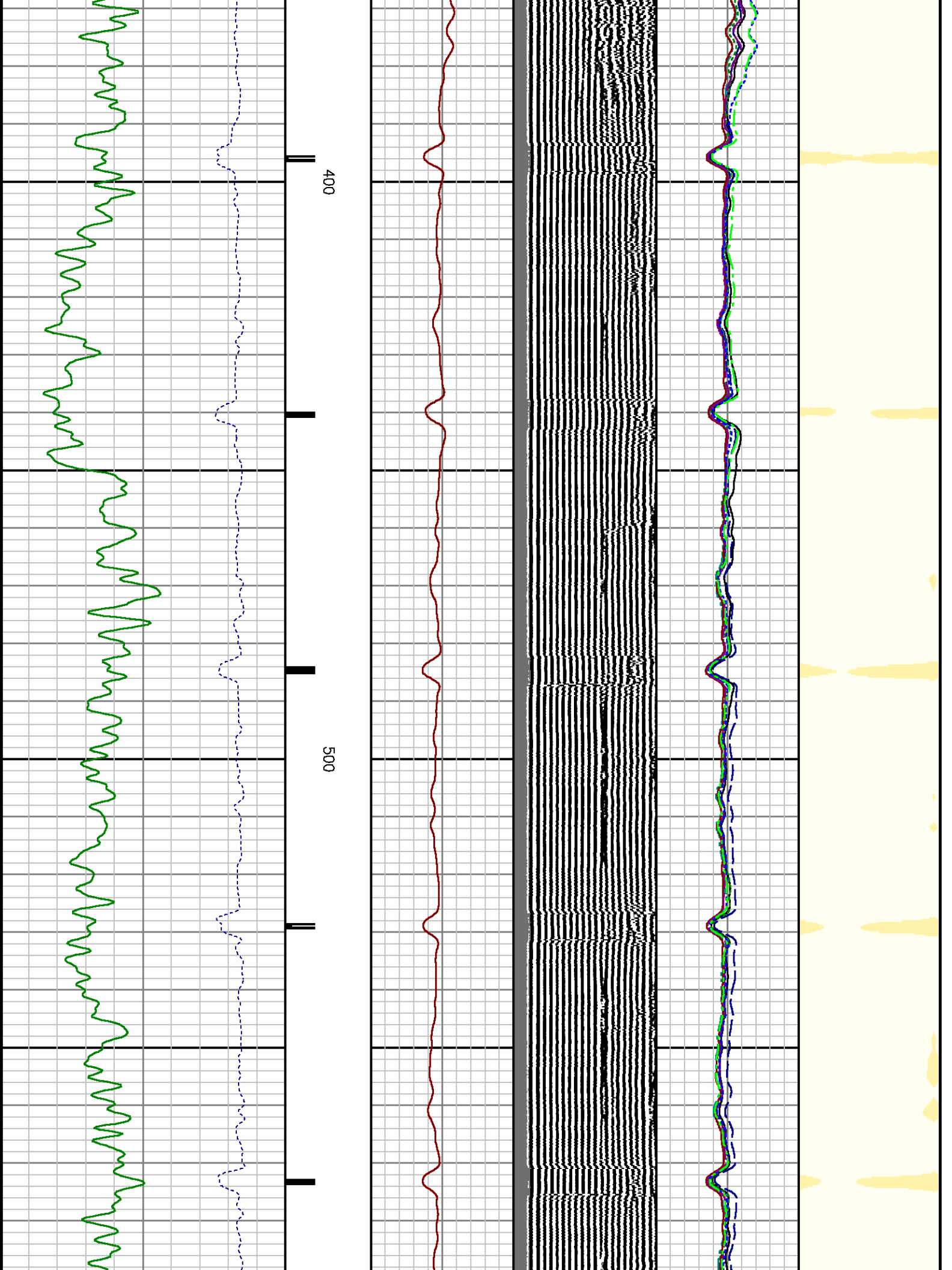
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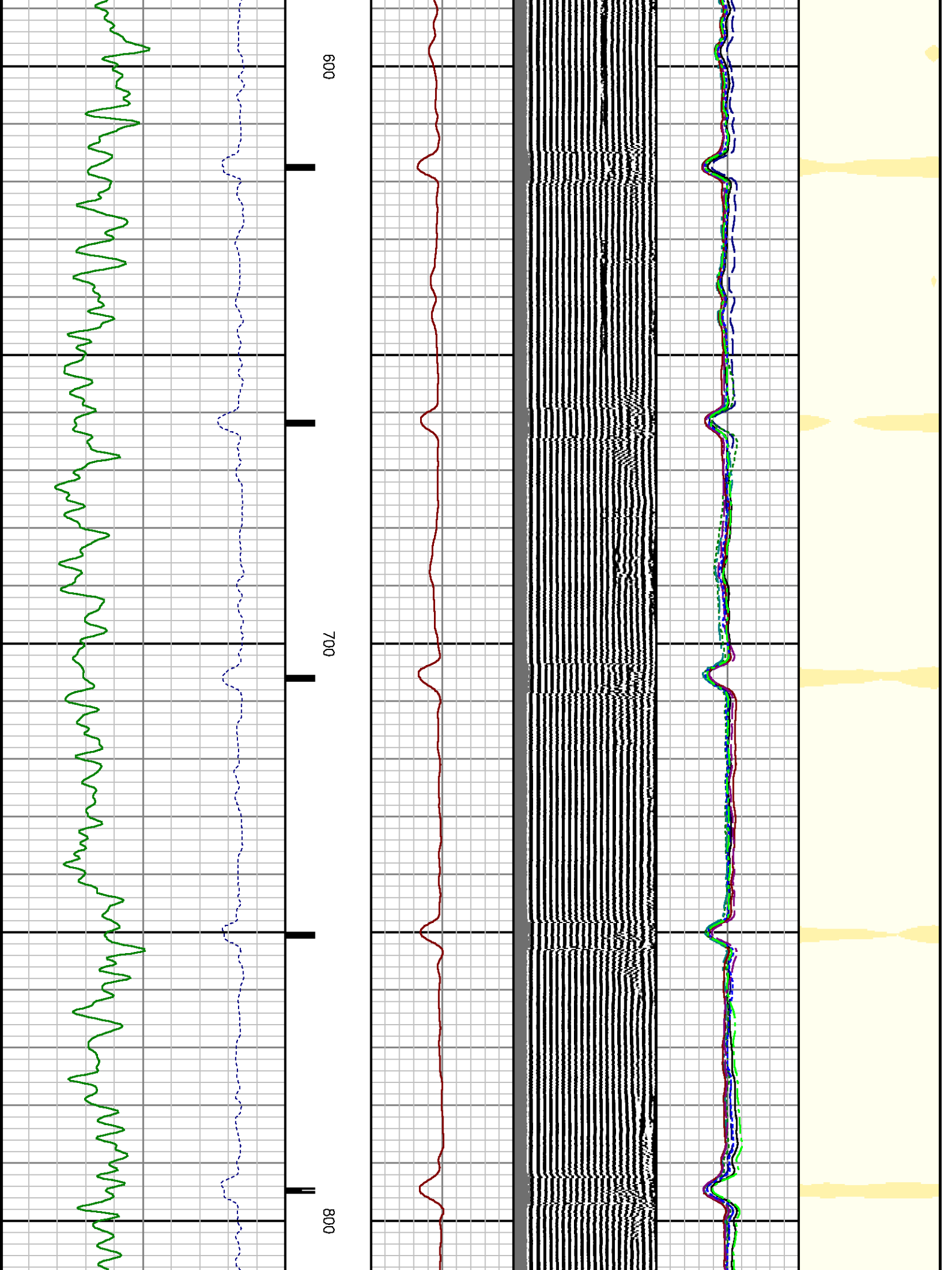
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		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

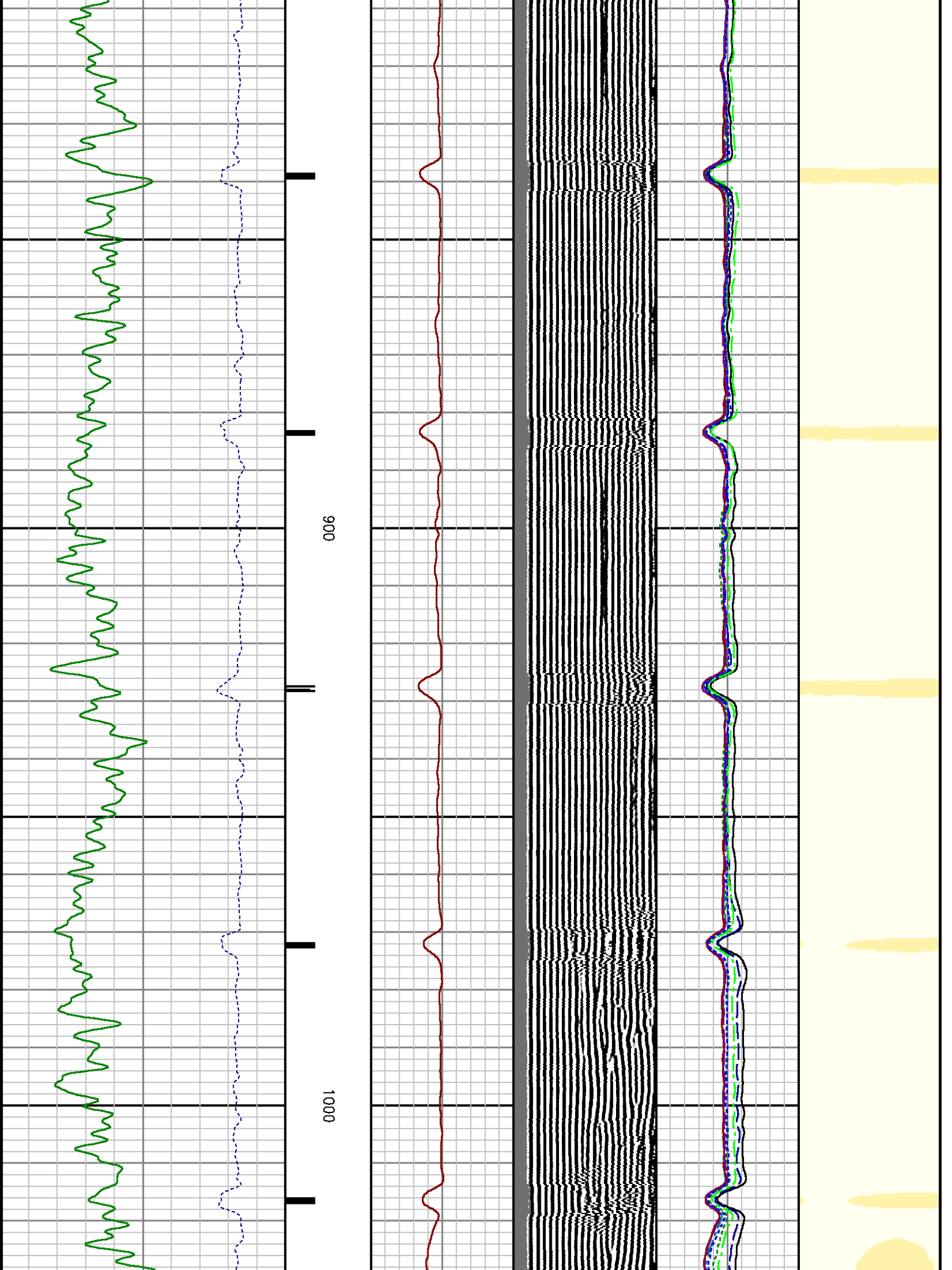
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 Interval : 0.00 - 10219.00 feet UP
 Created : 12/29/2013 9:57:17 AM

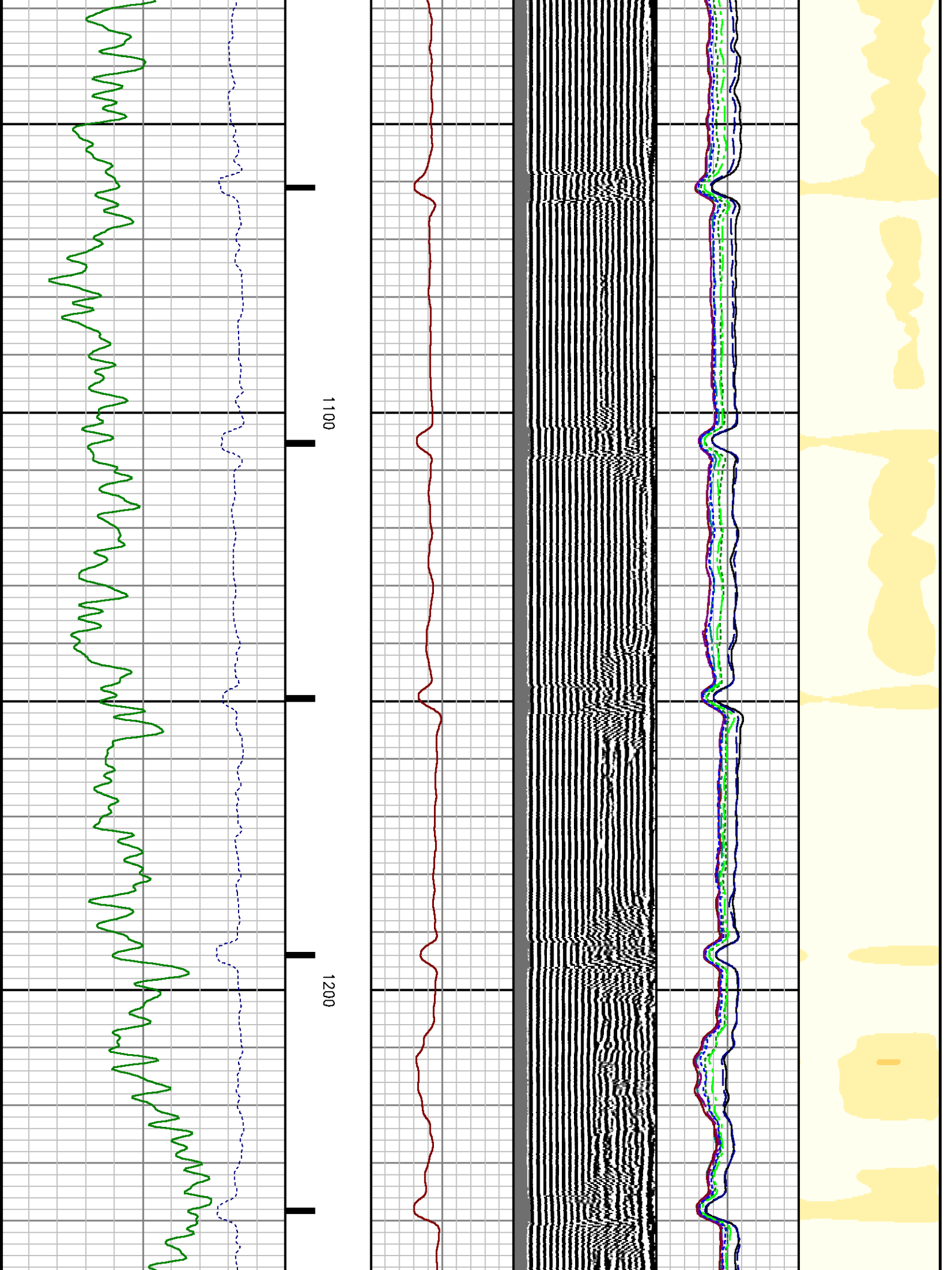


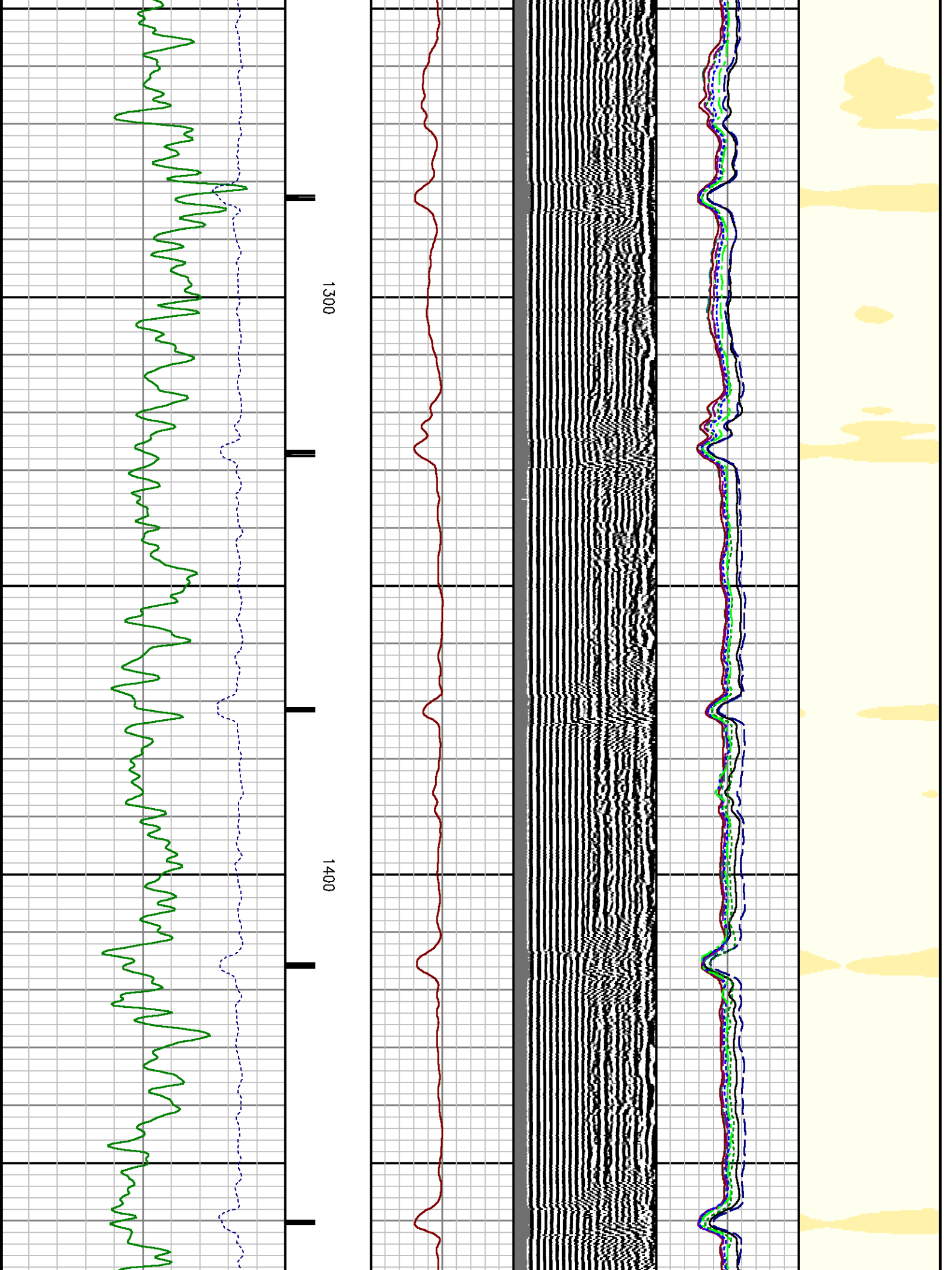


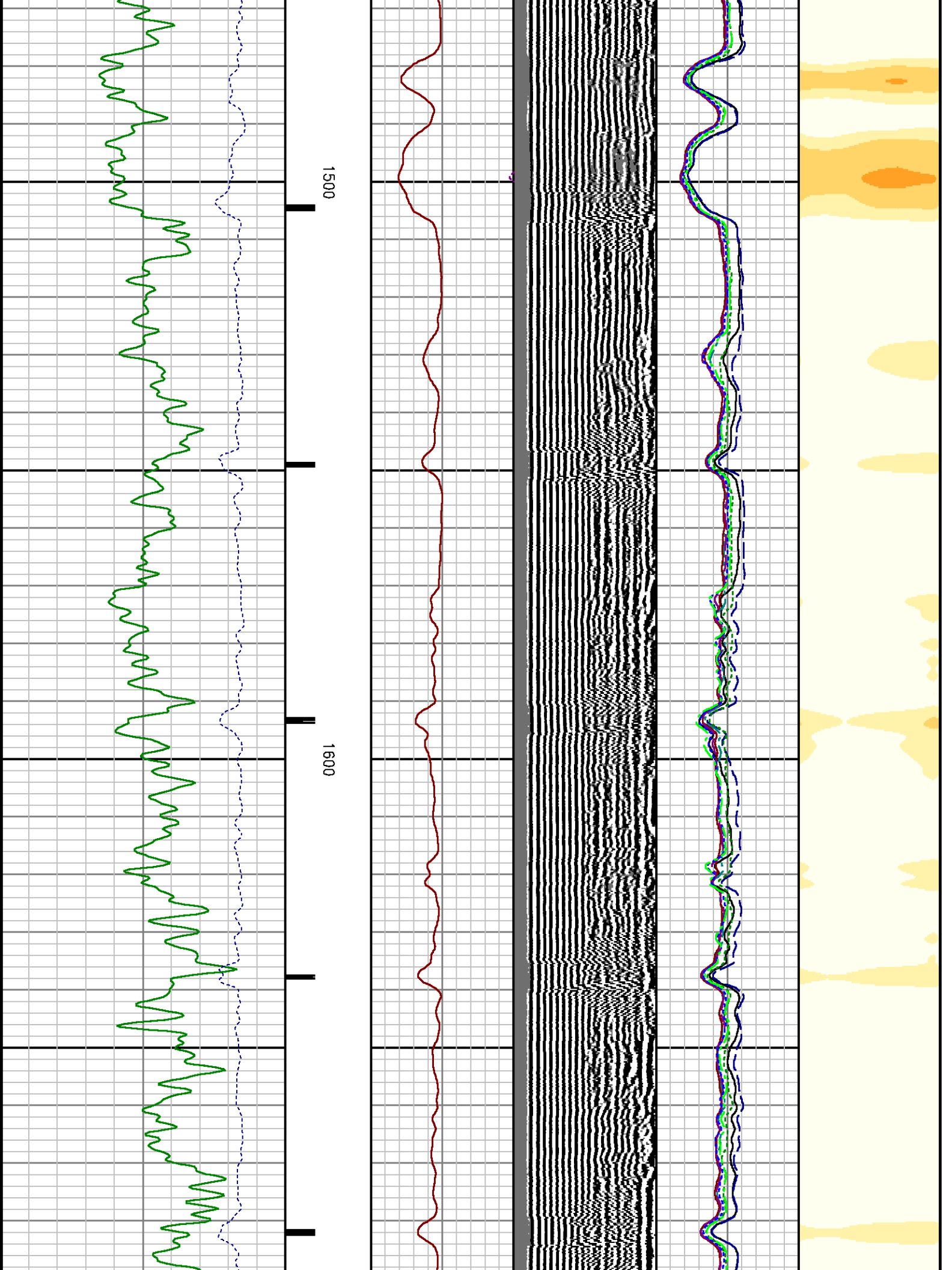


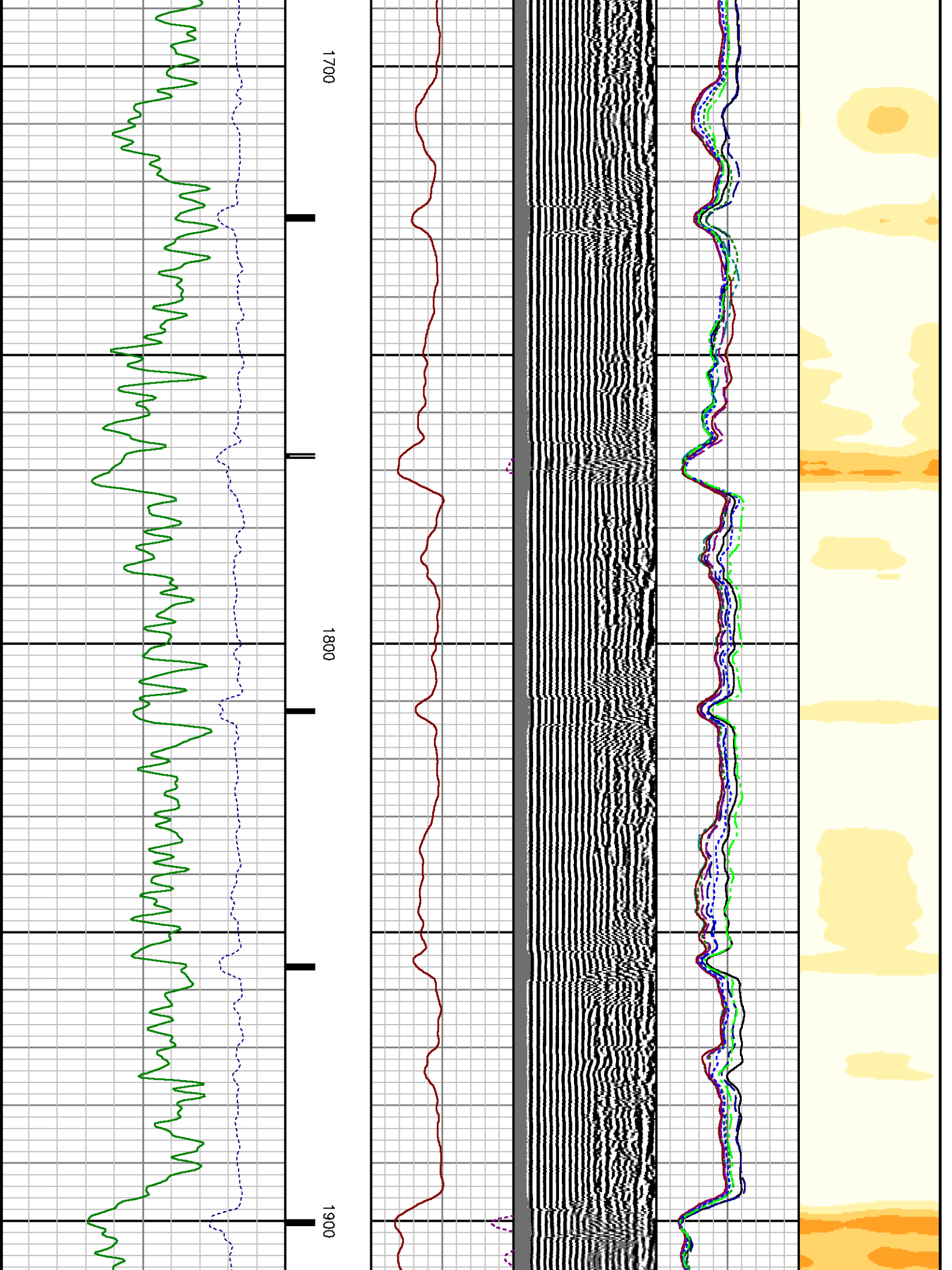


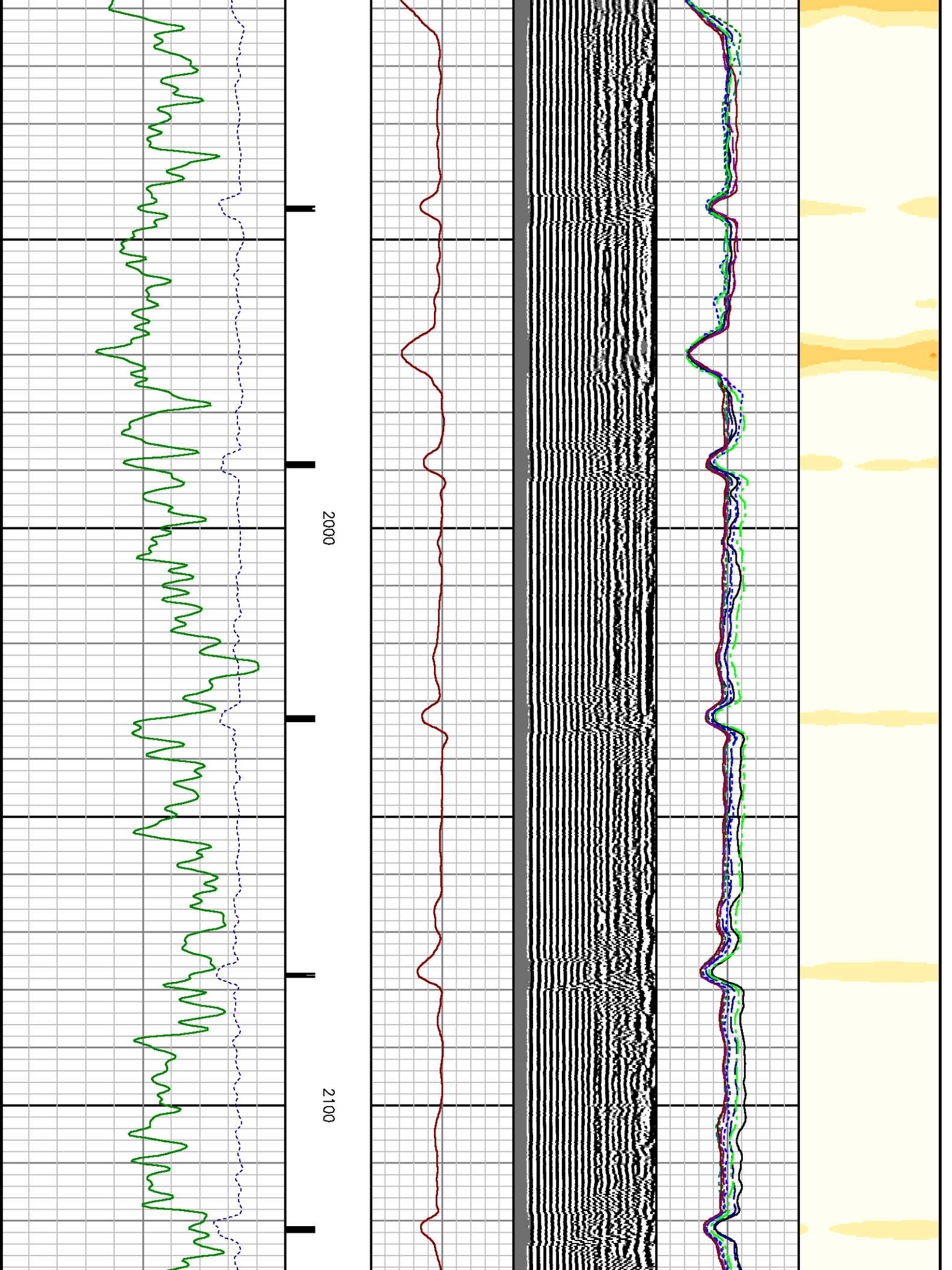


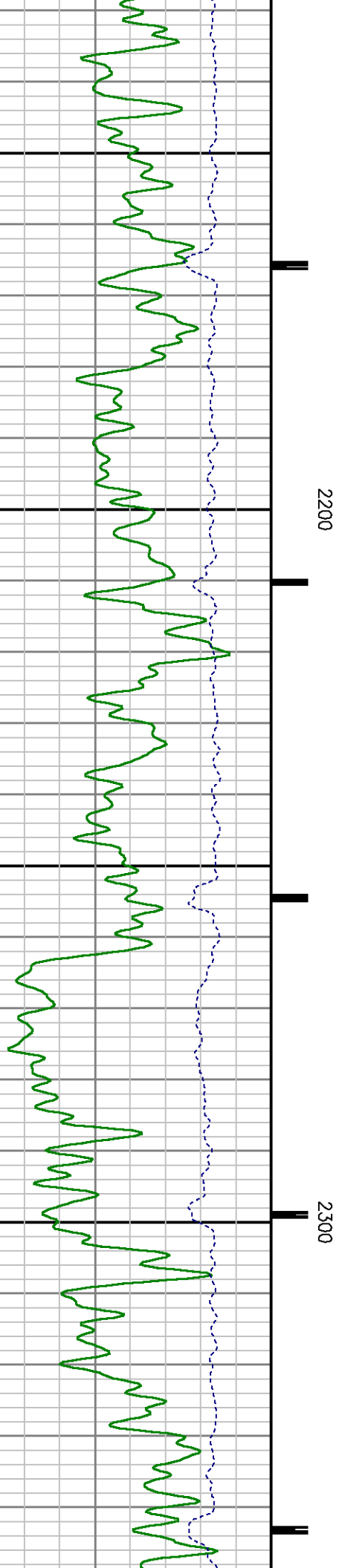
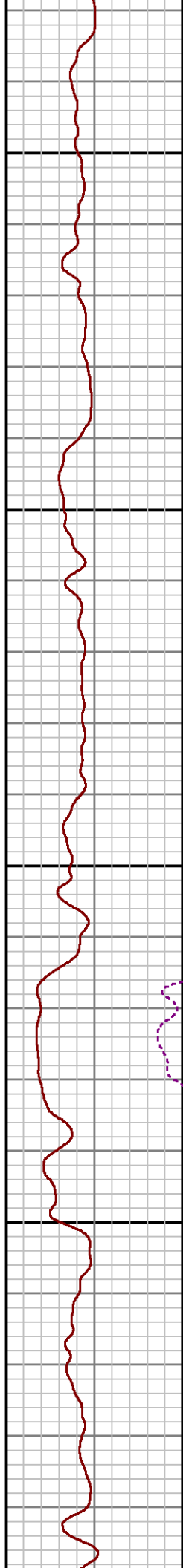
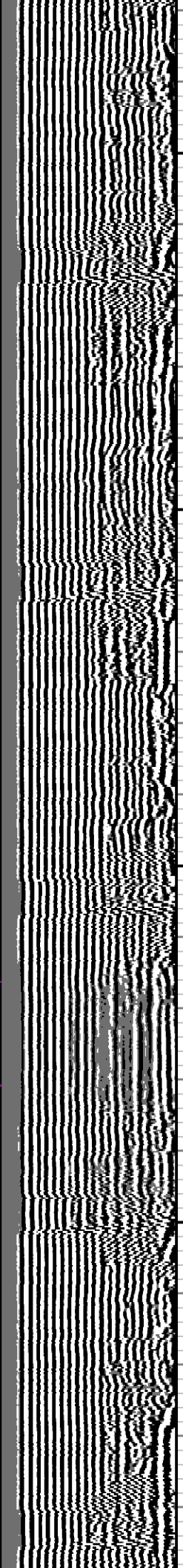
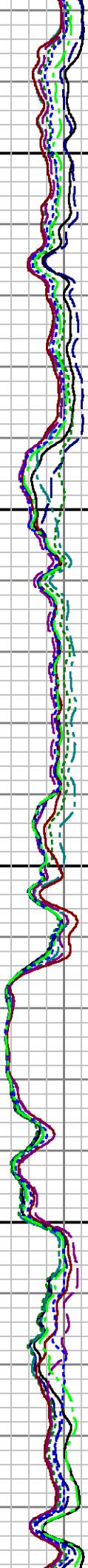
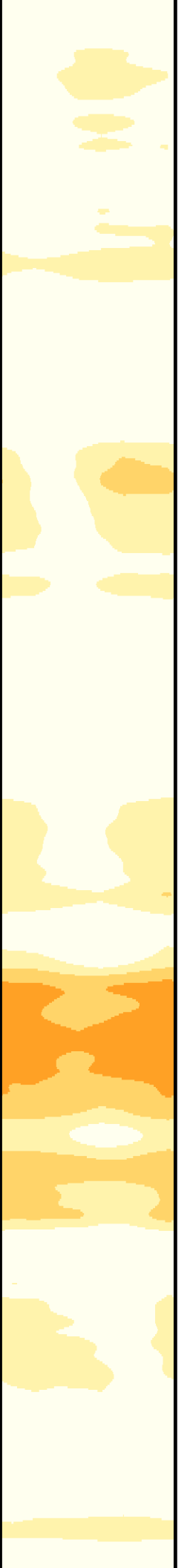


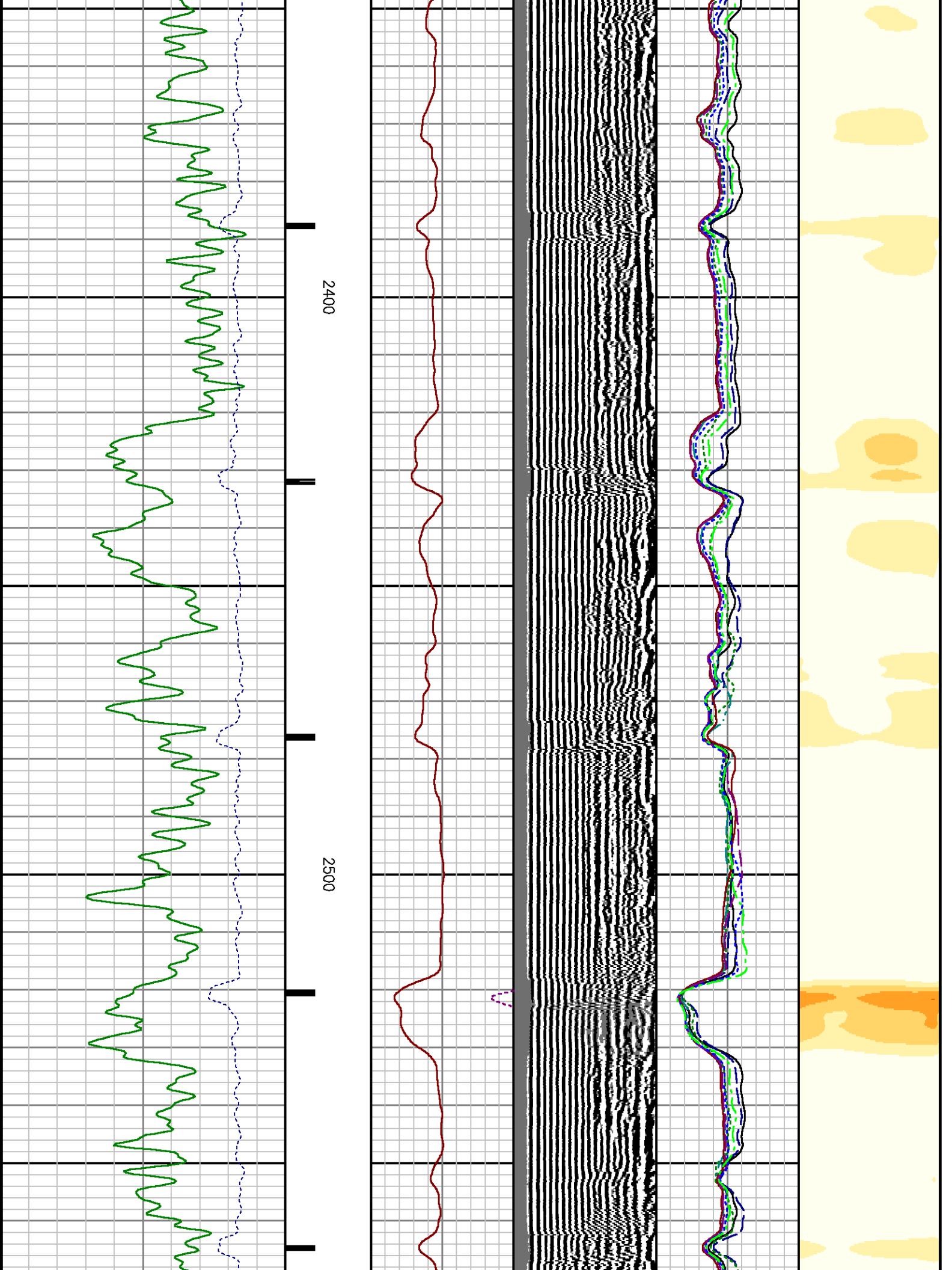


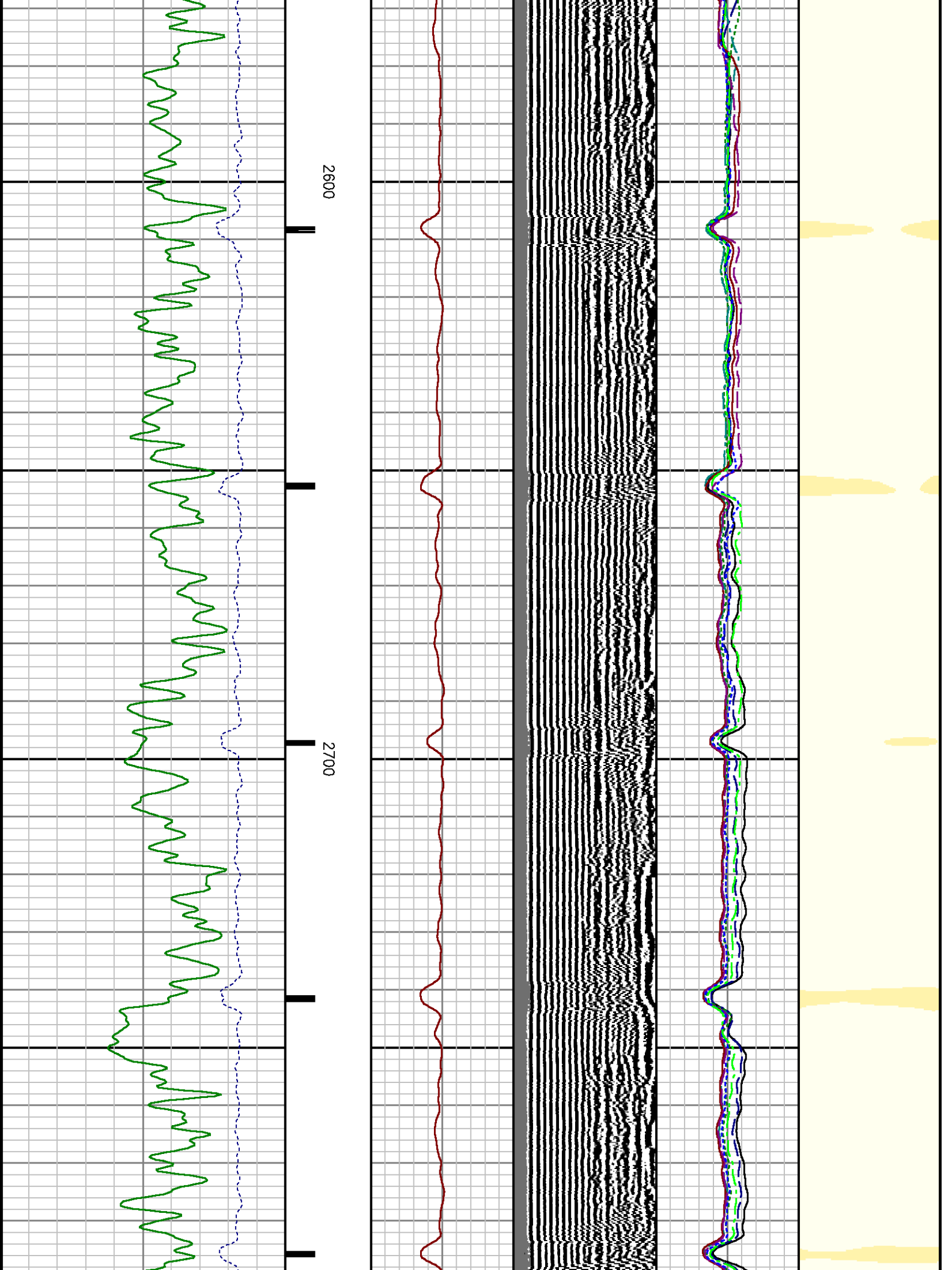


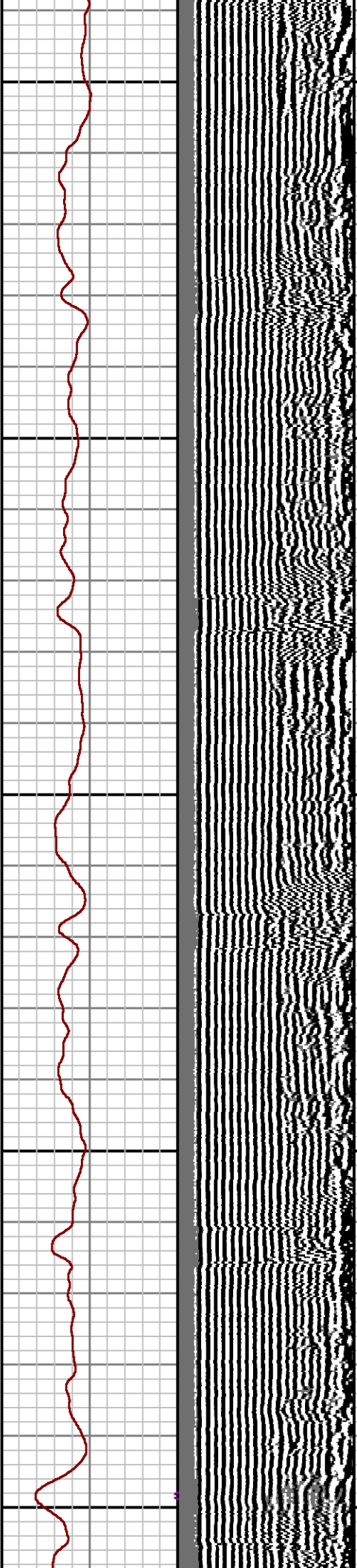
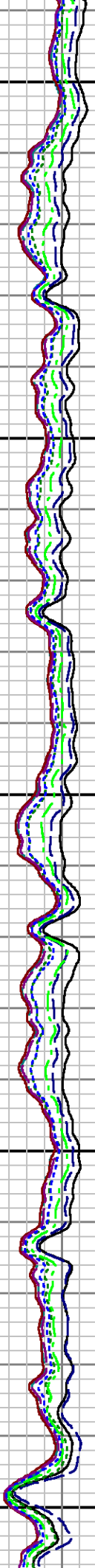
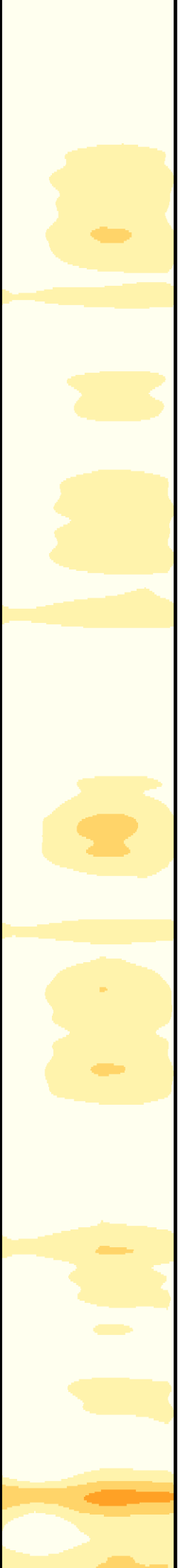








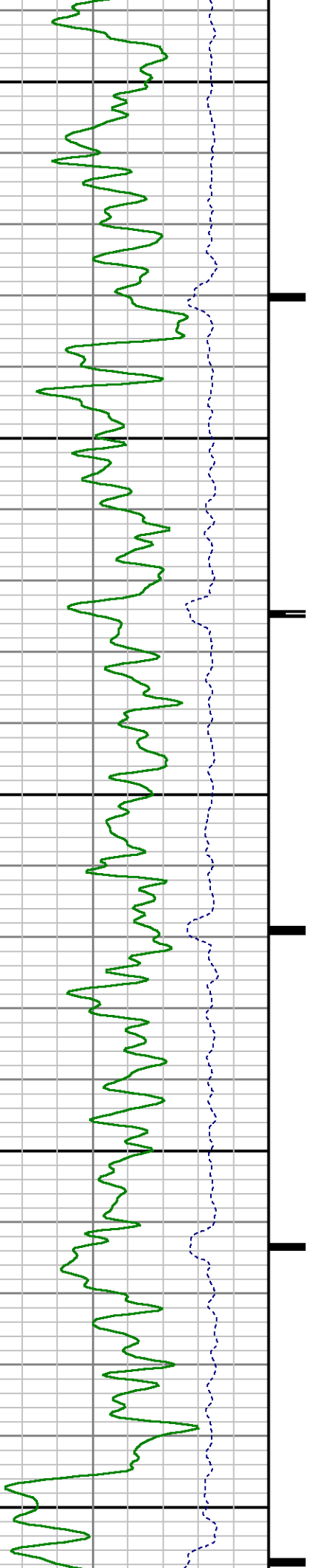


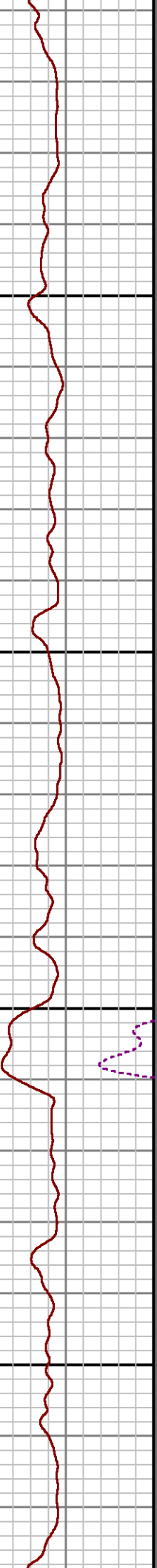
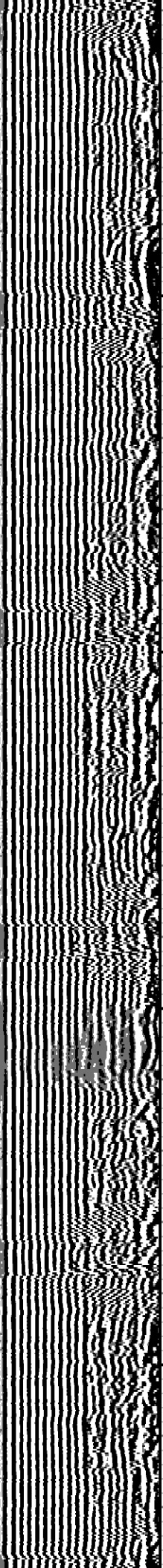
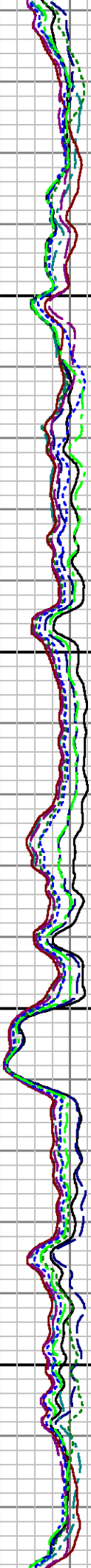
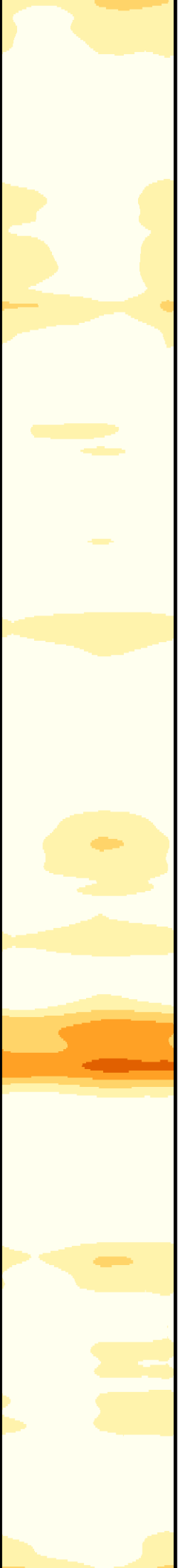


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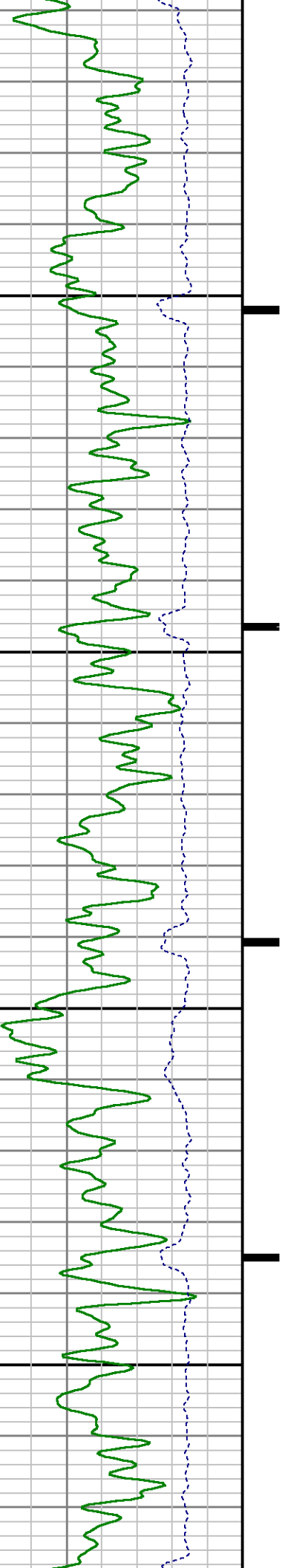
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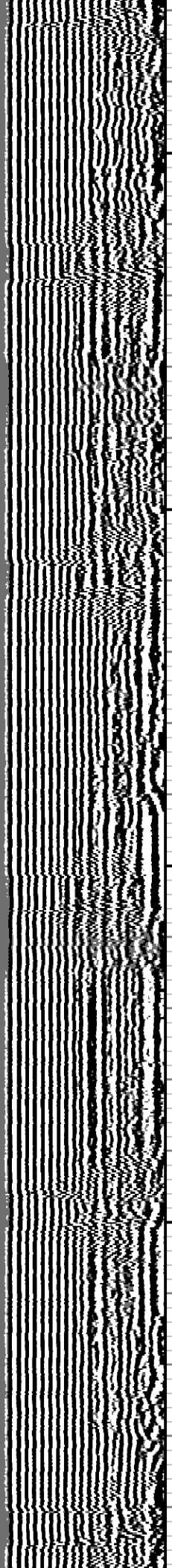
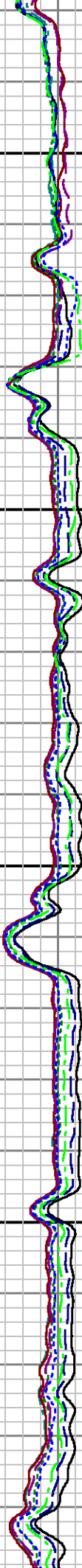
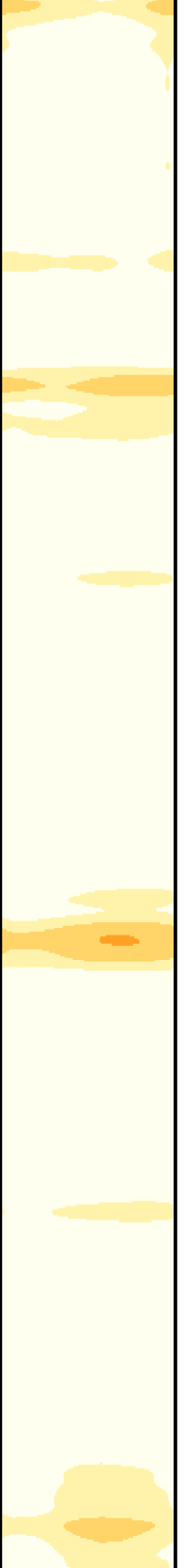




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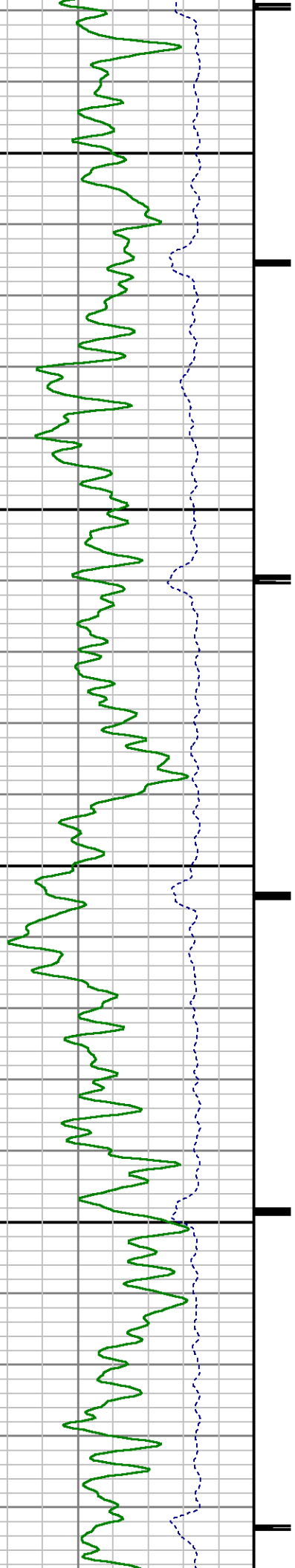
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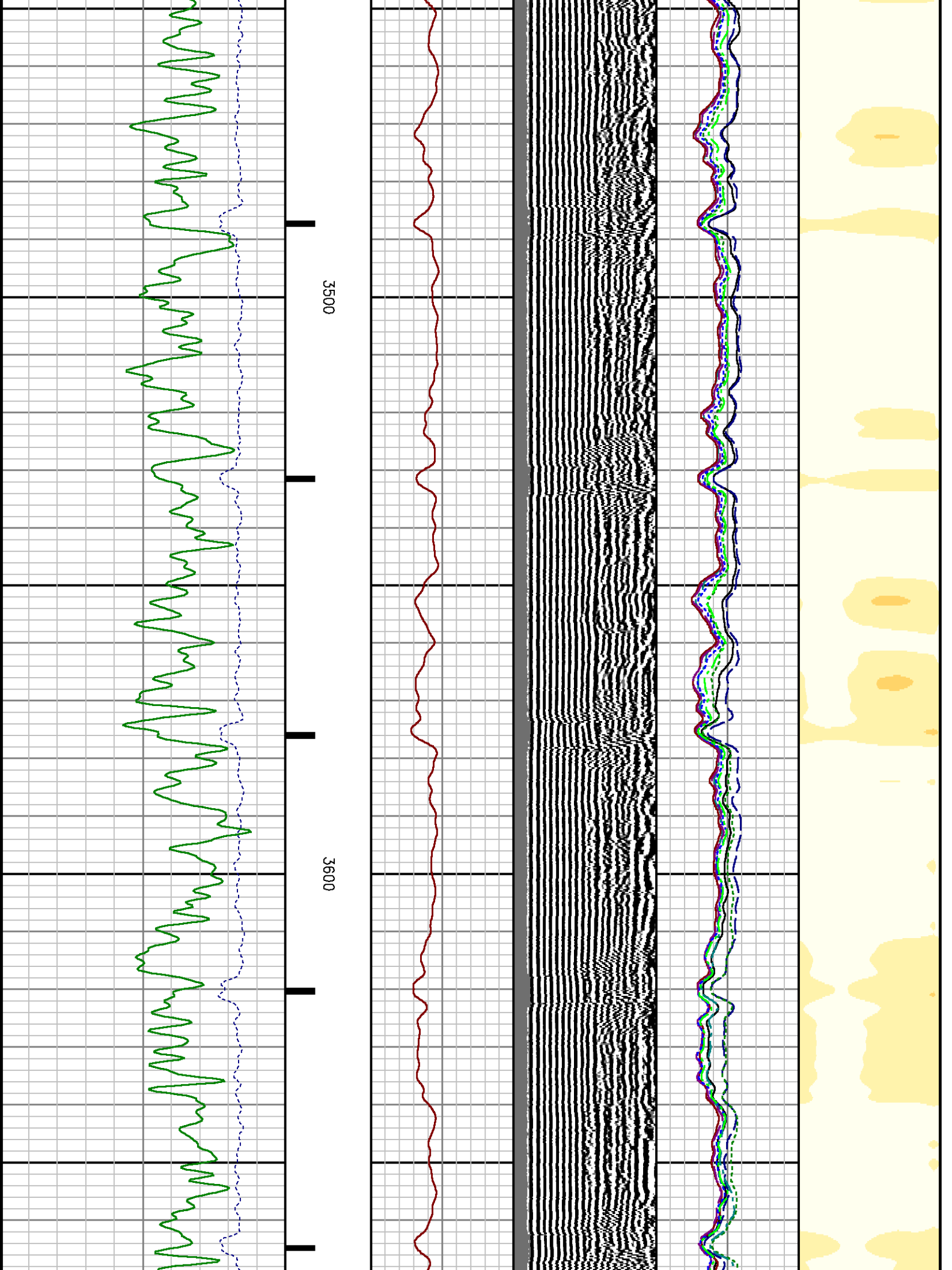


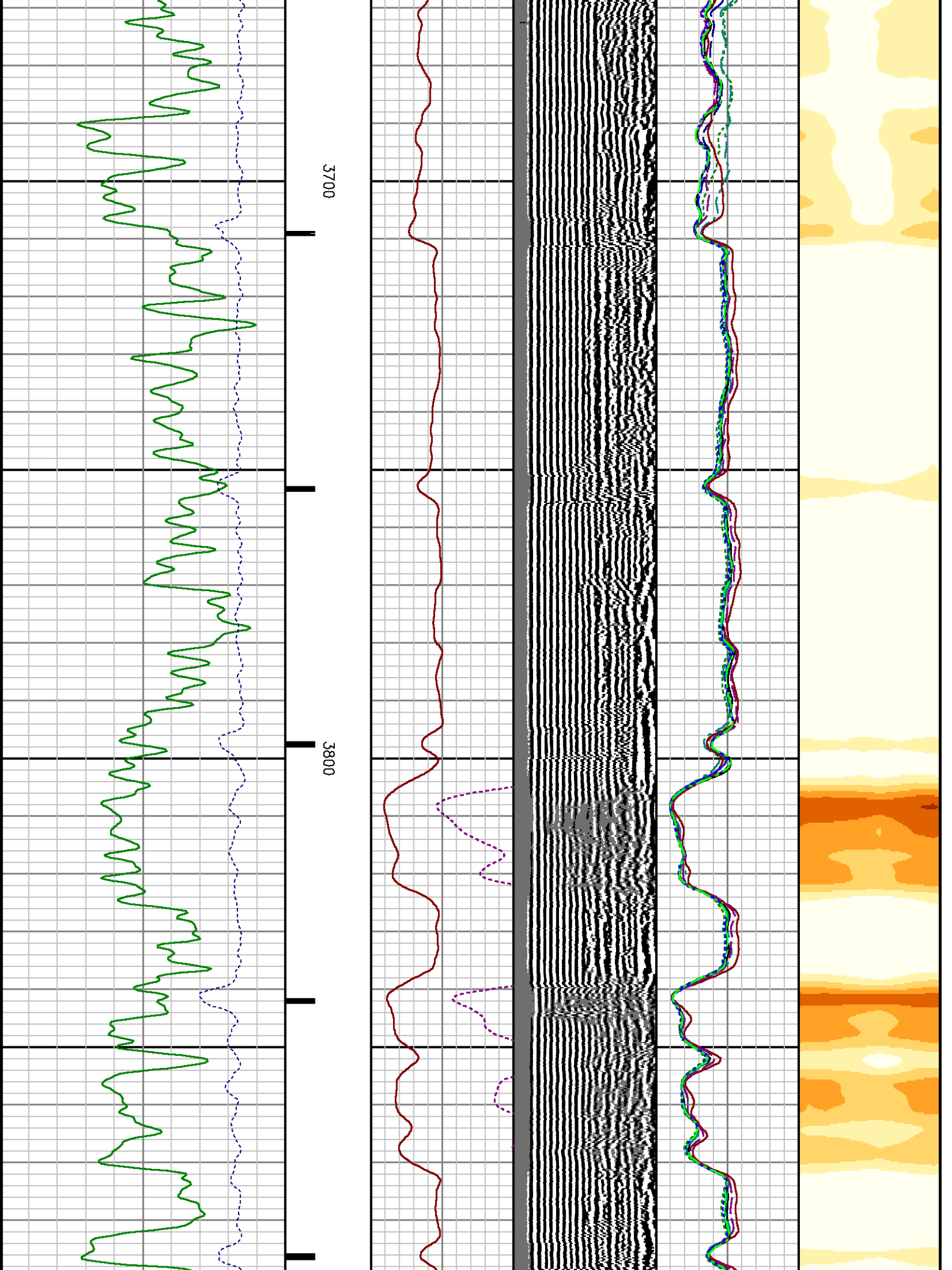


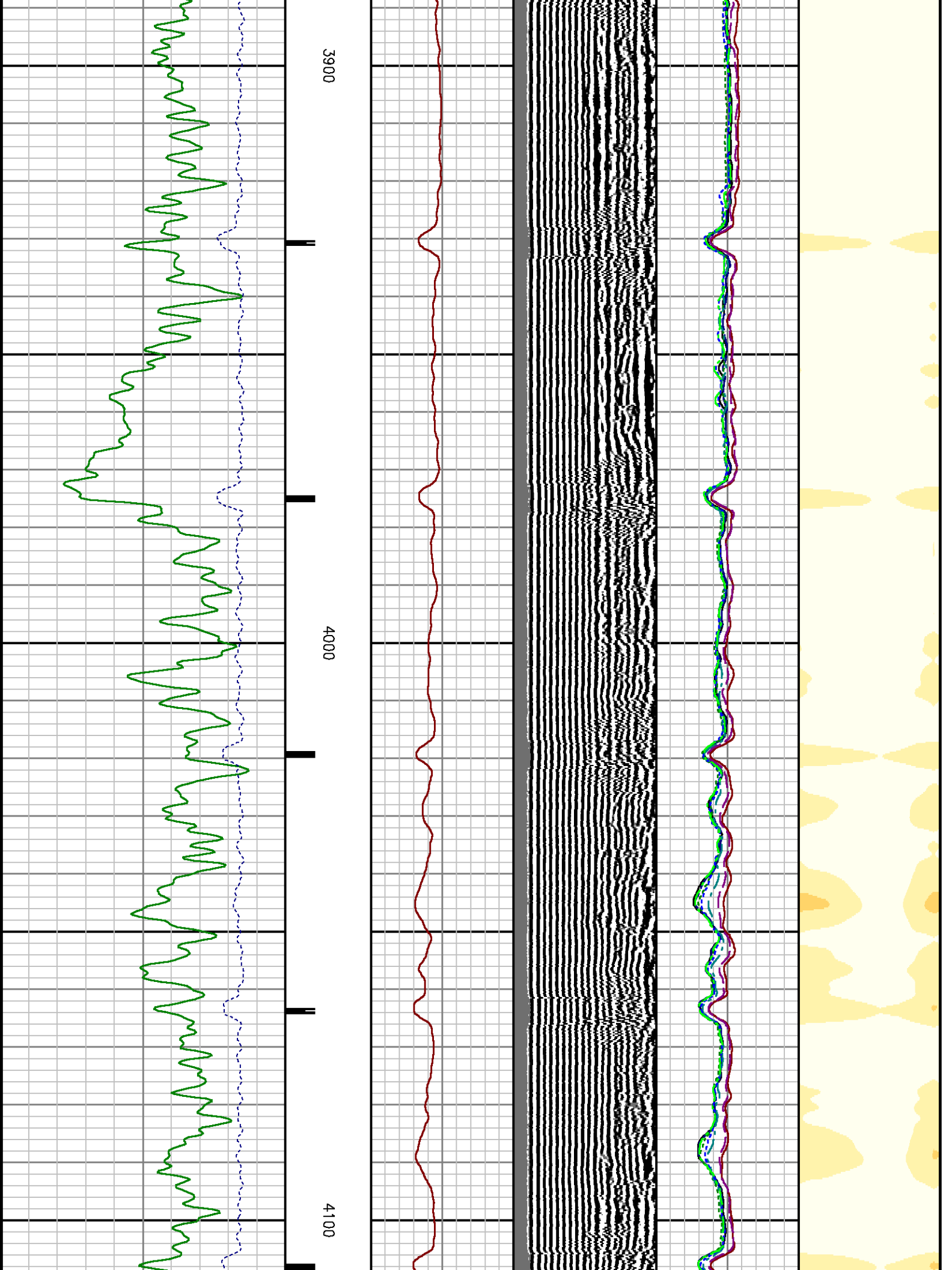
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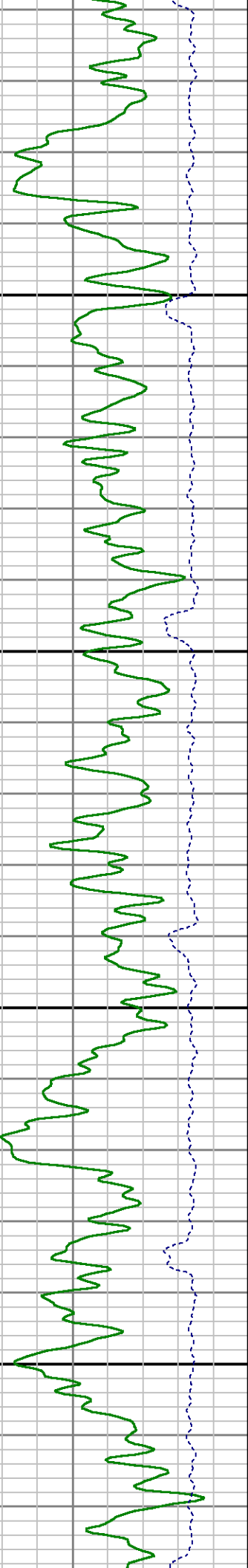
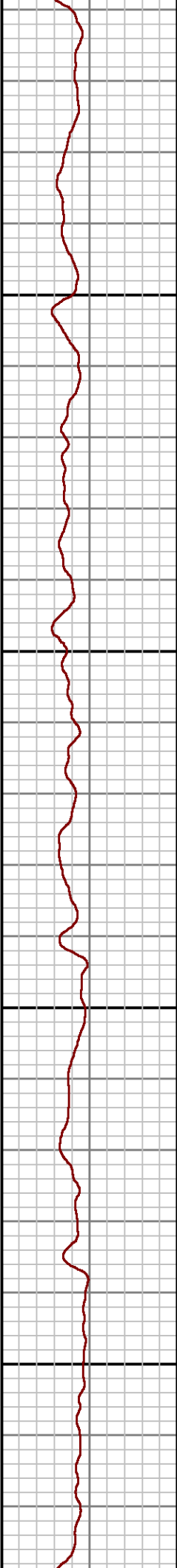
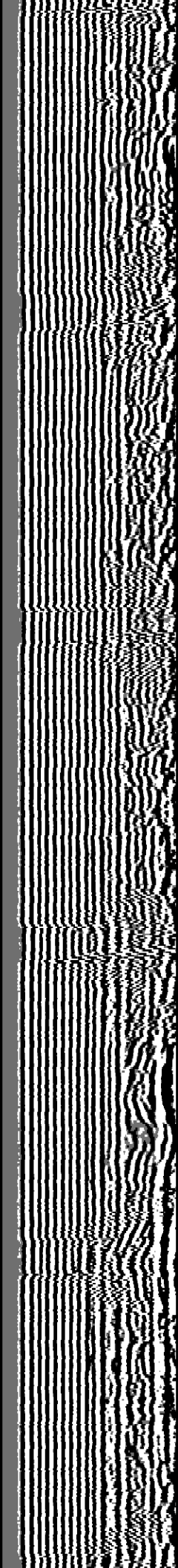
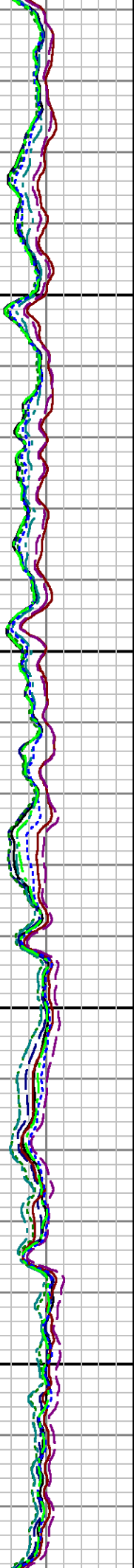
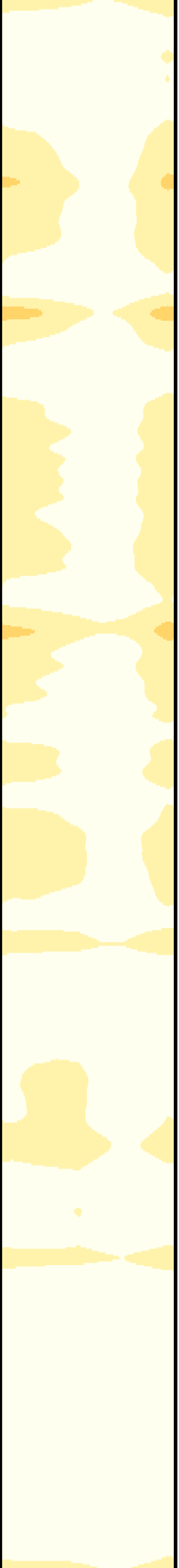
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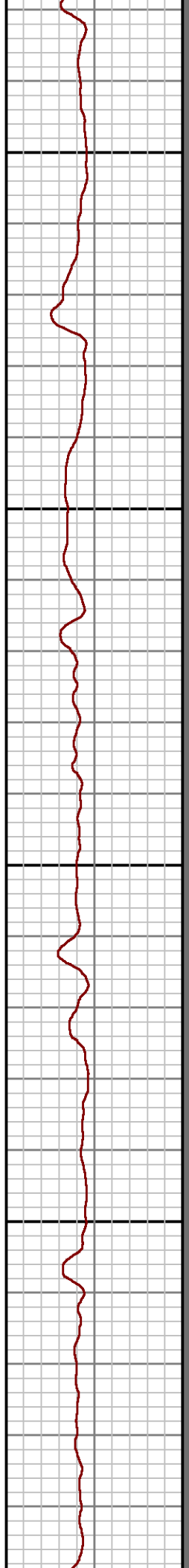
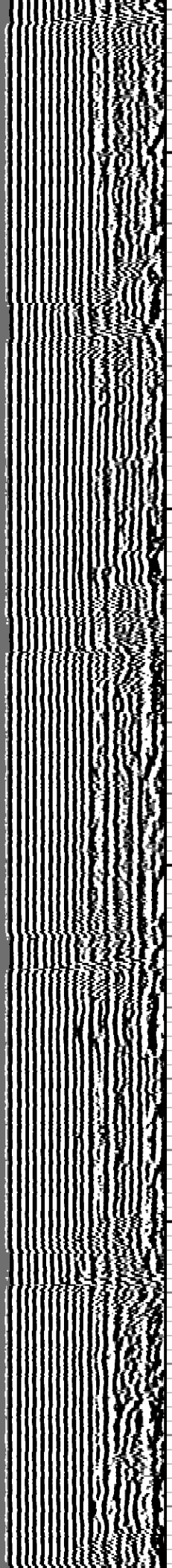
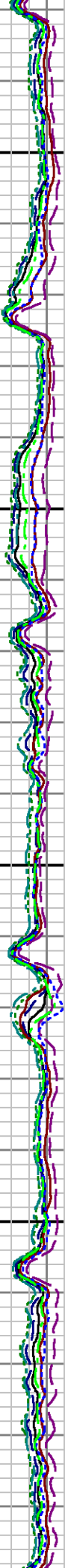
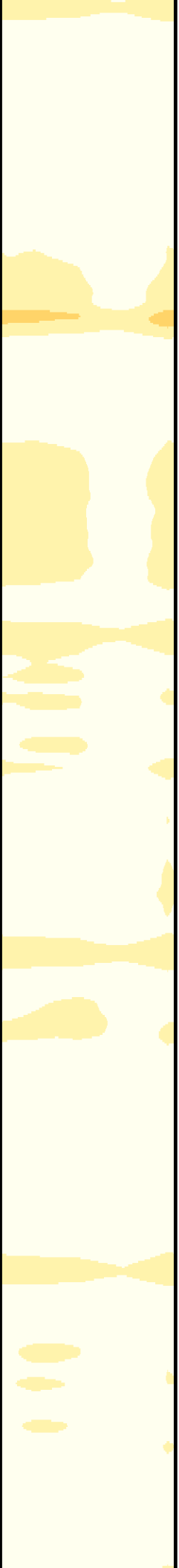






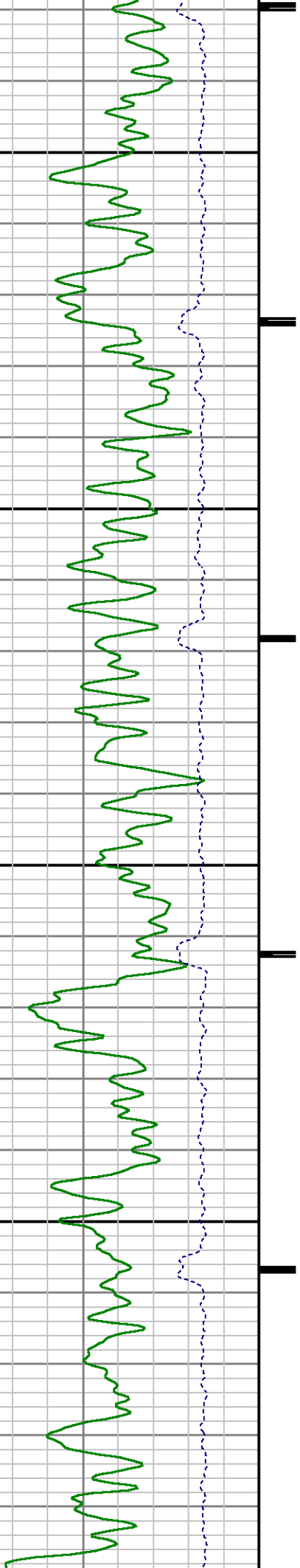


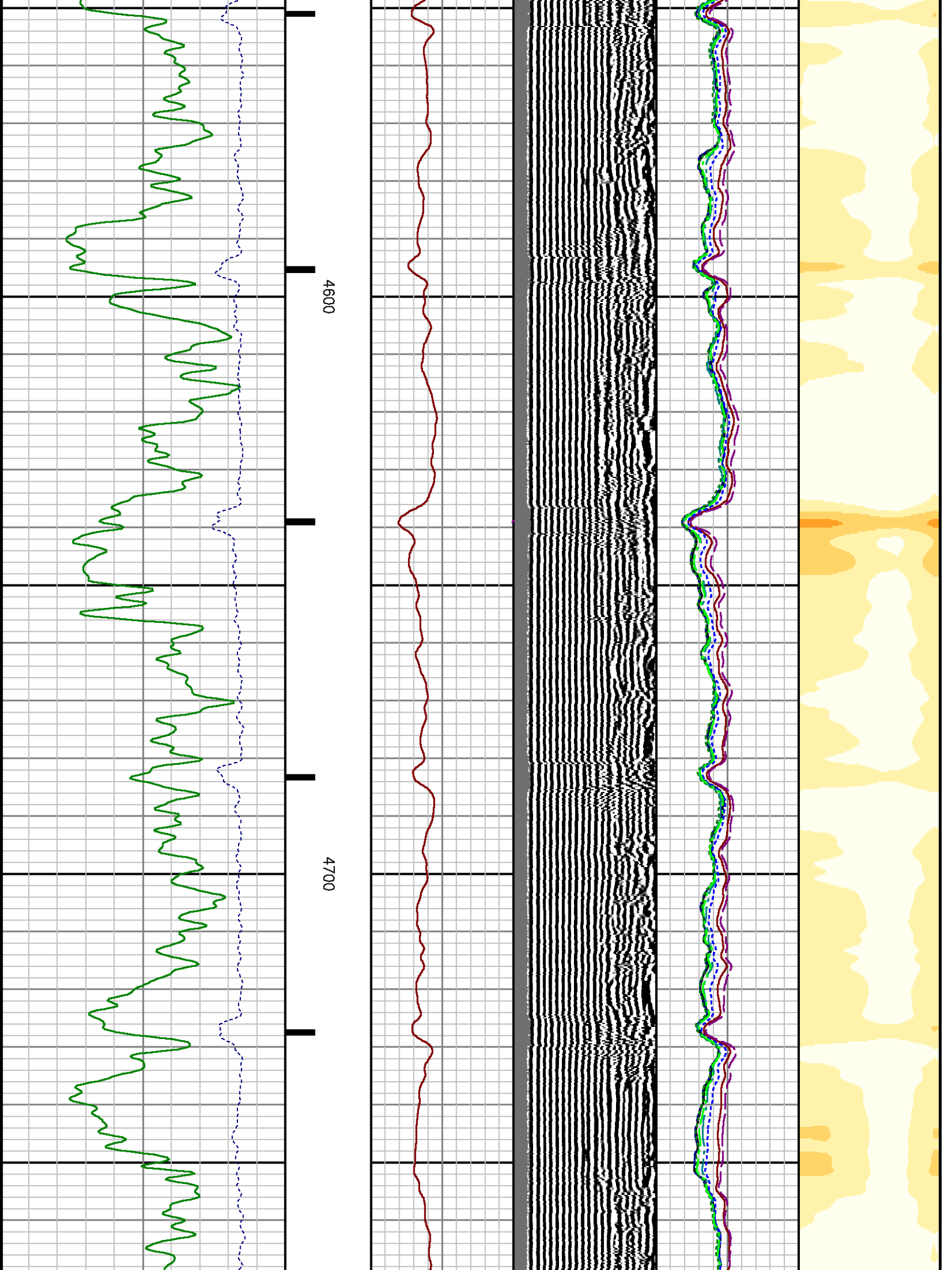


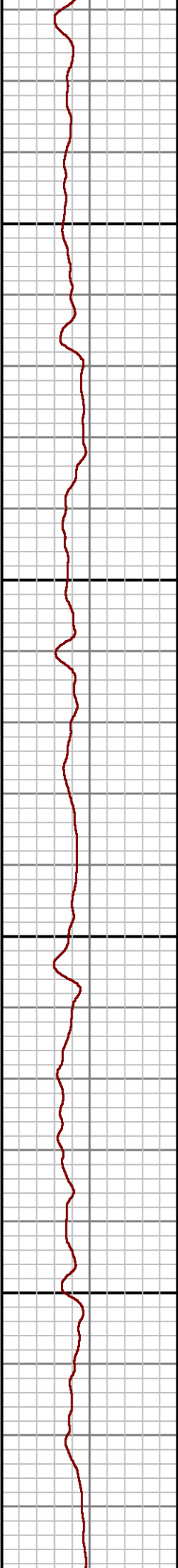
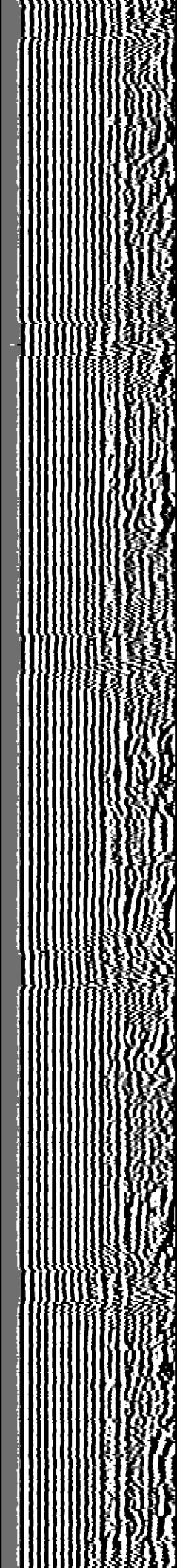
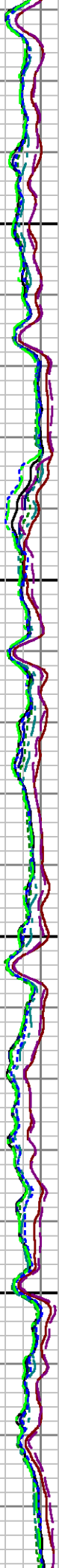
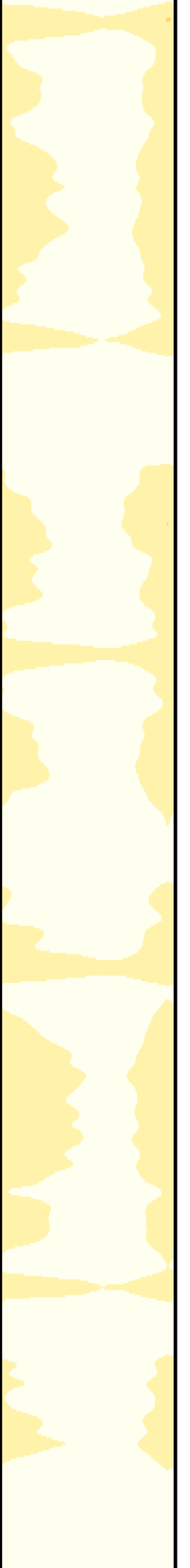


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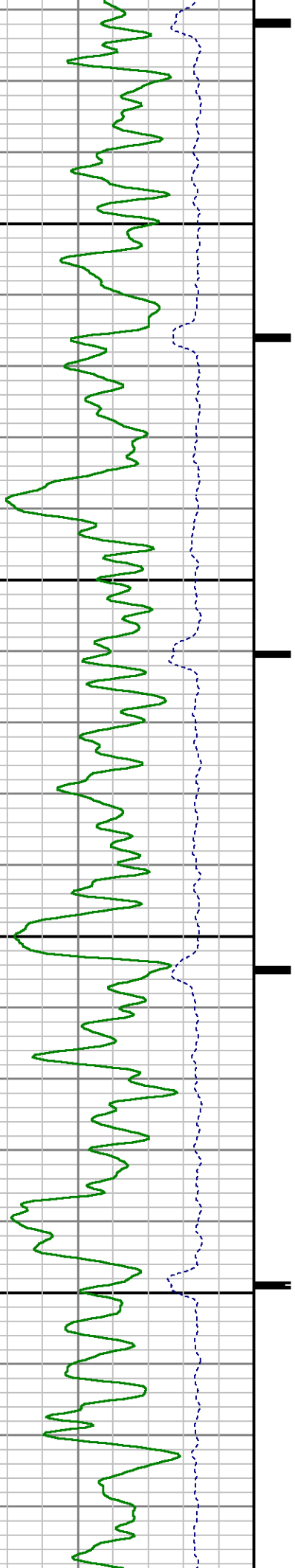


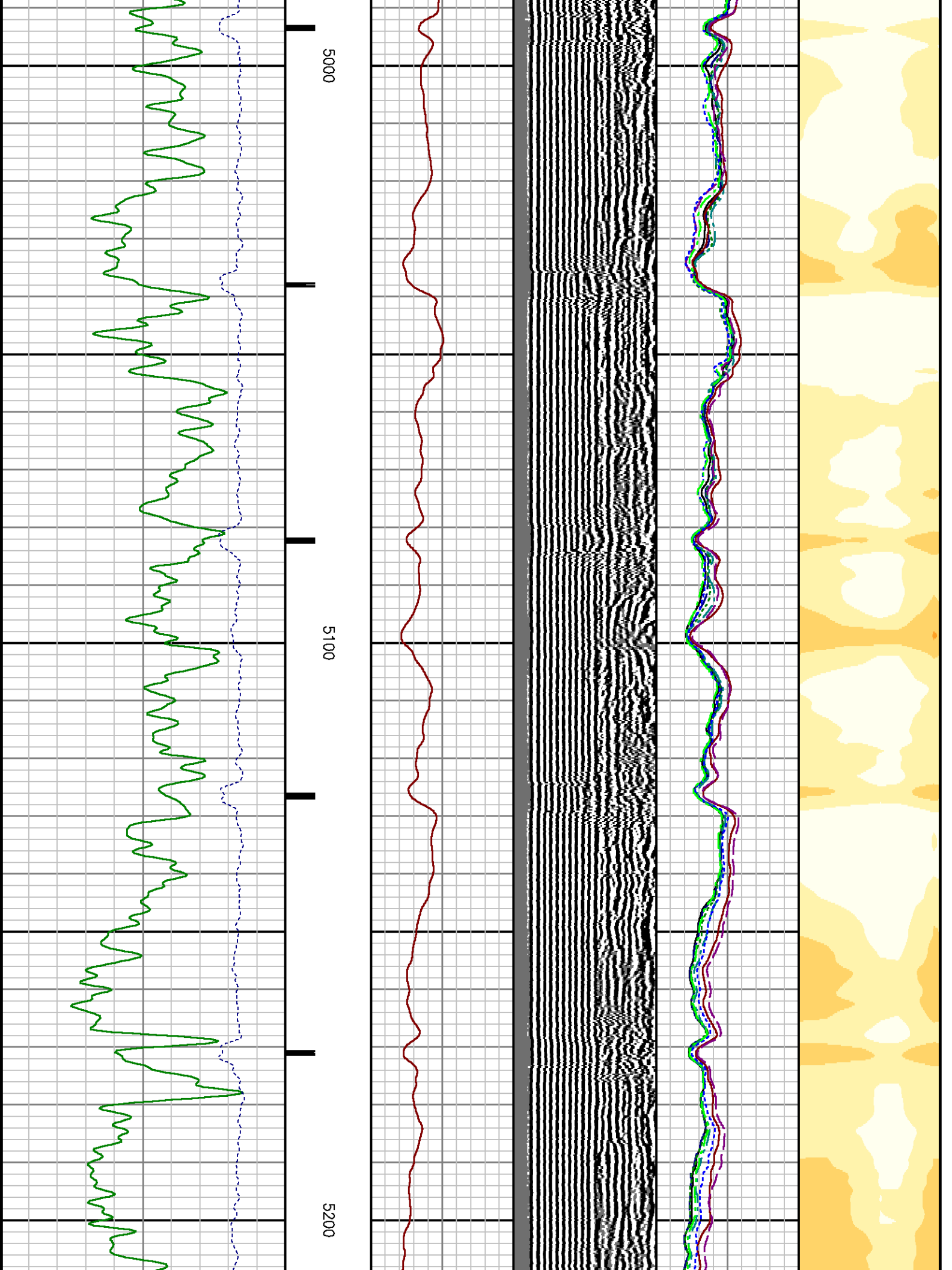


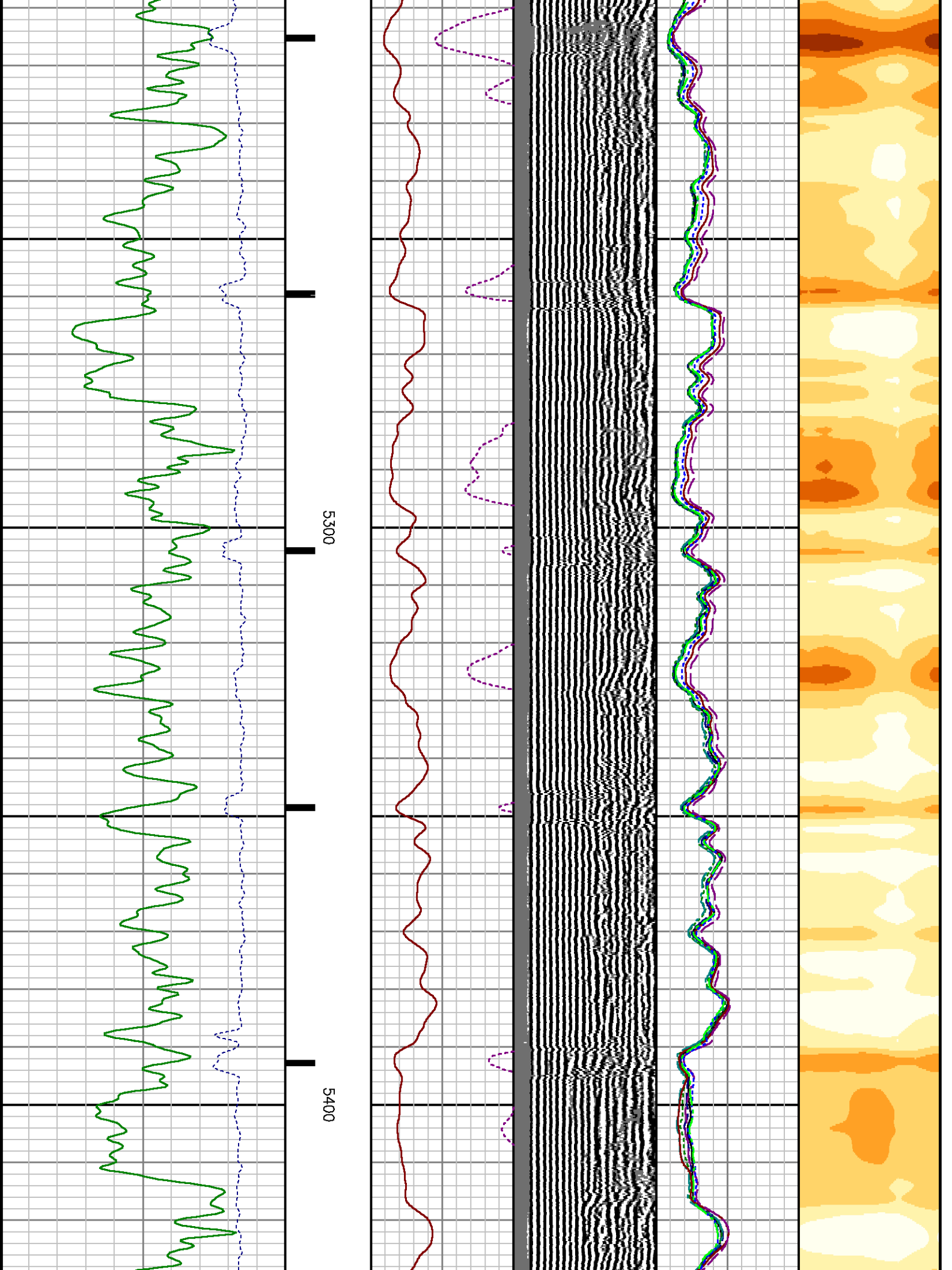


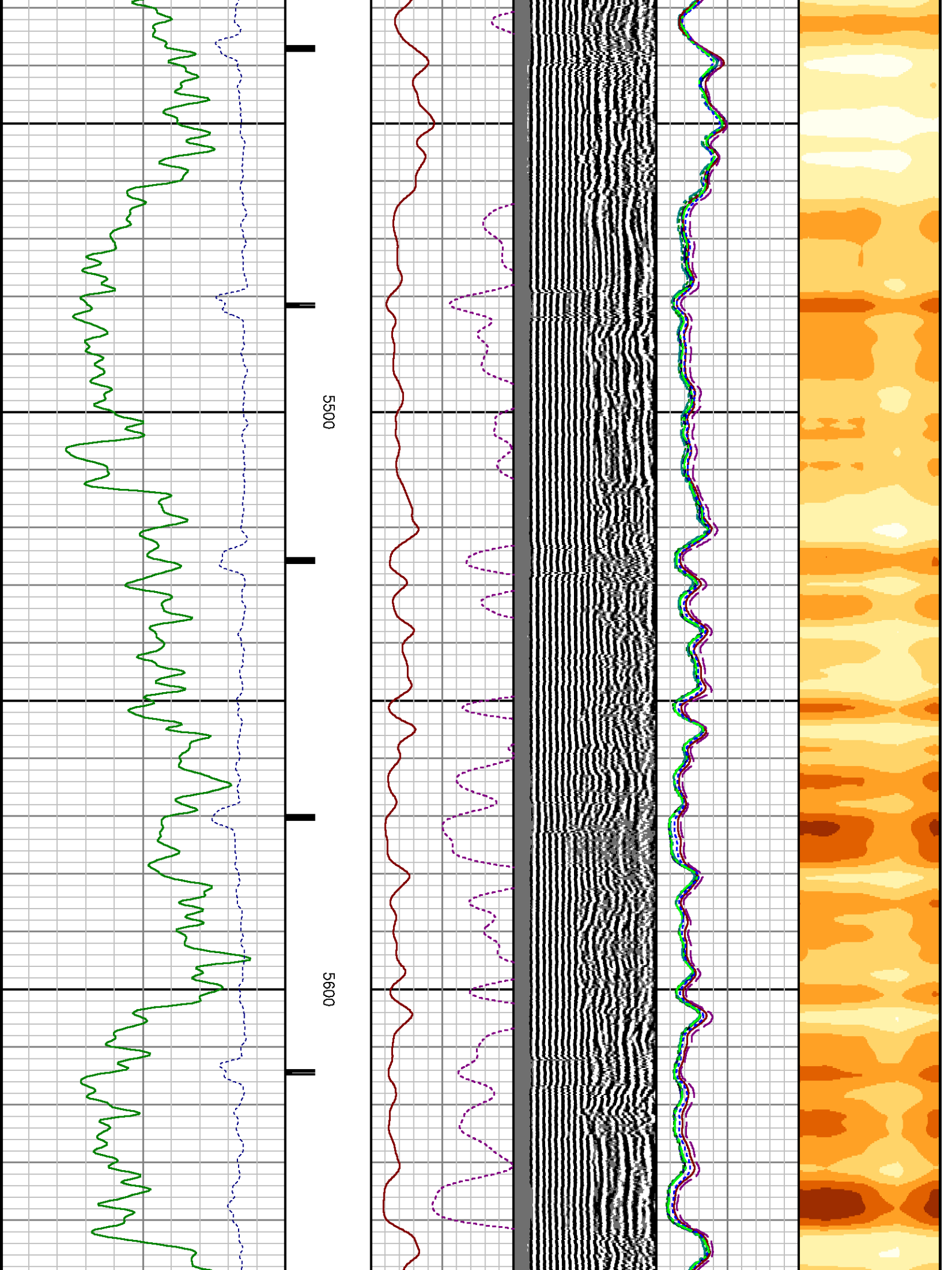
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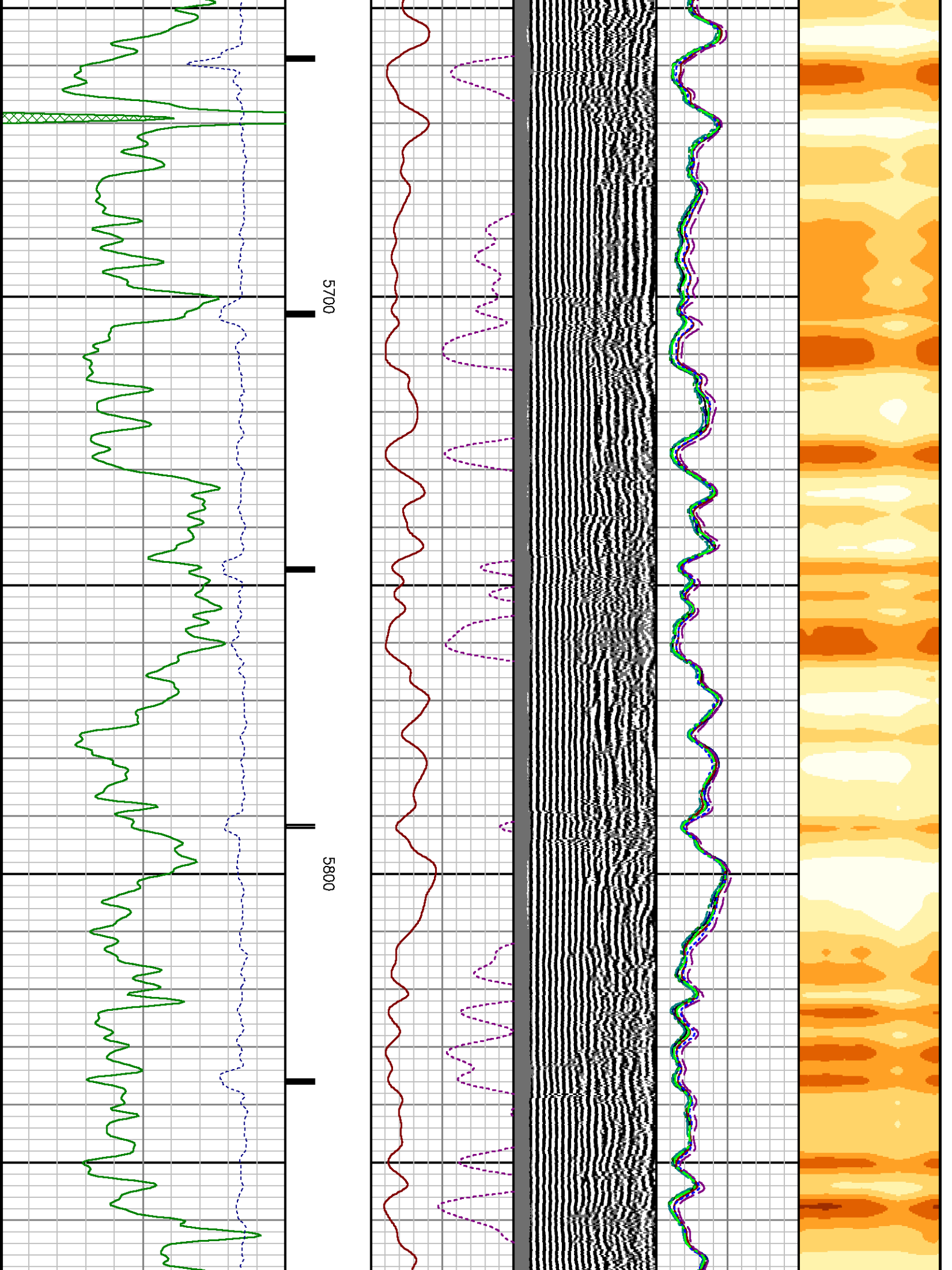
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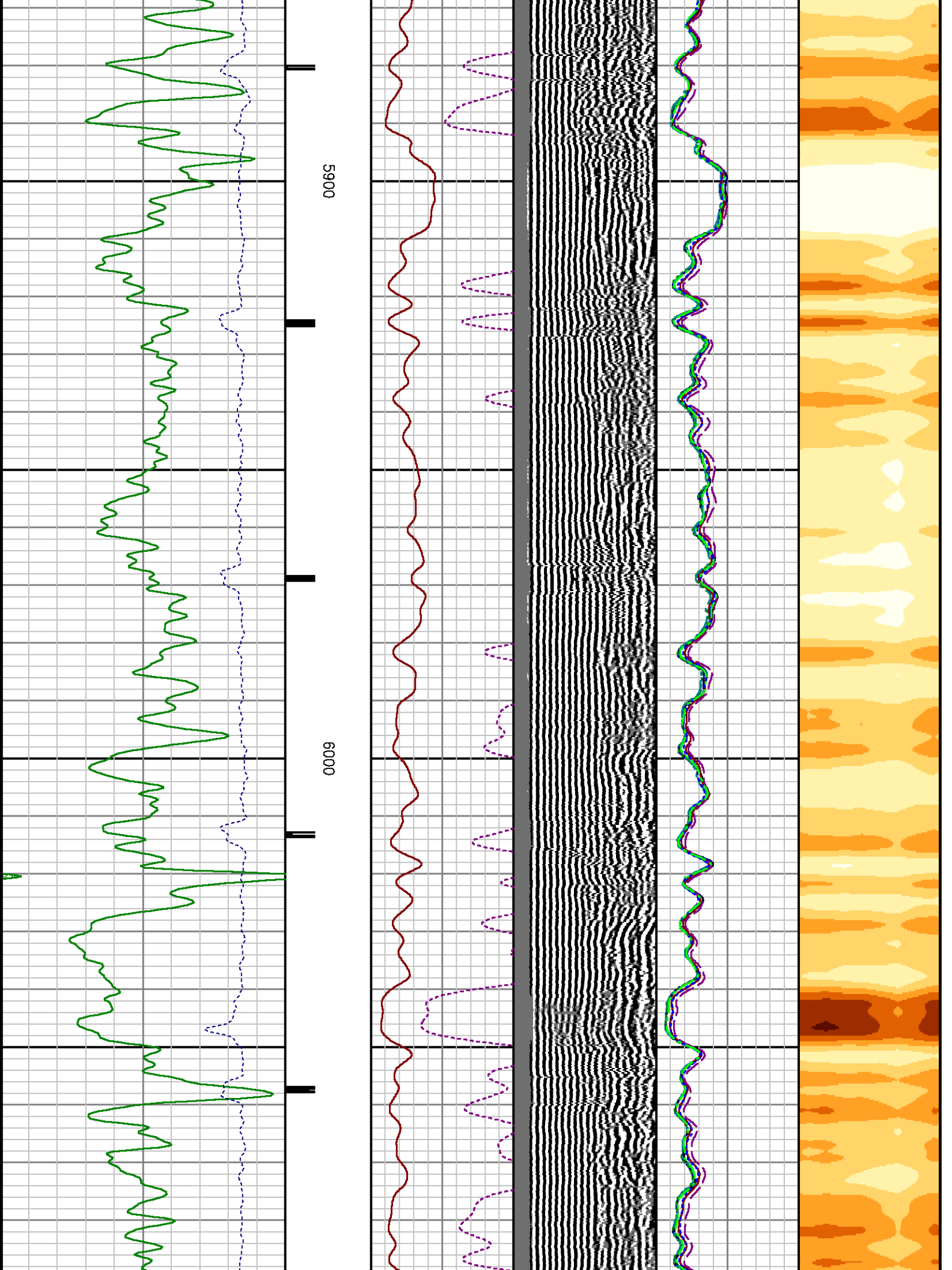


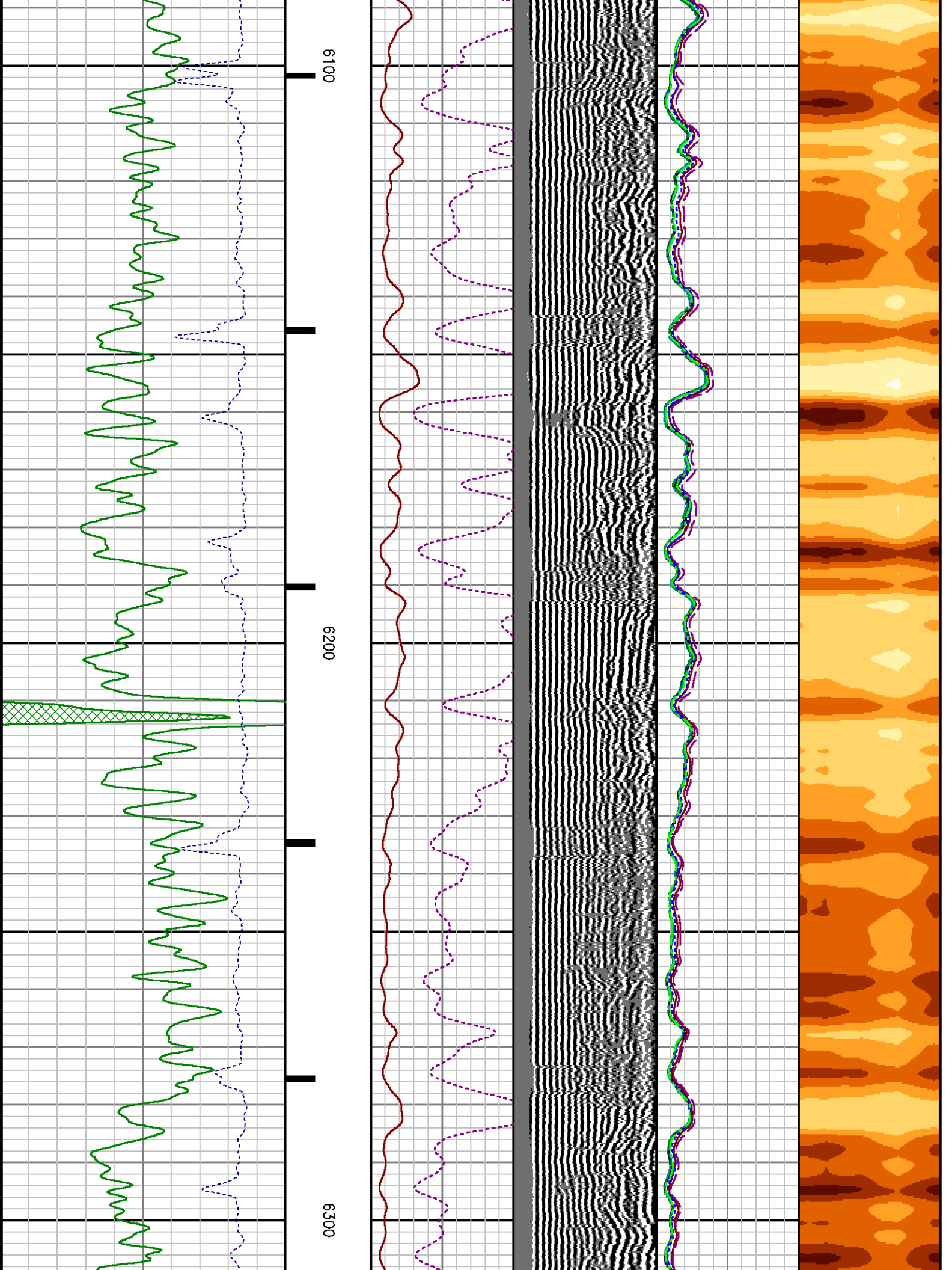


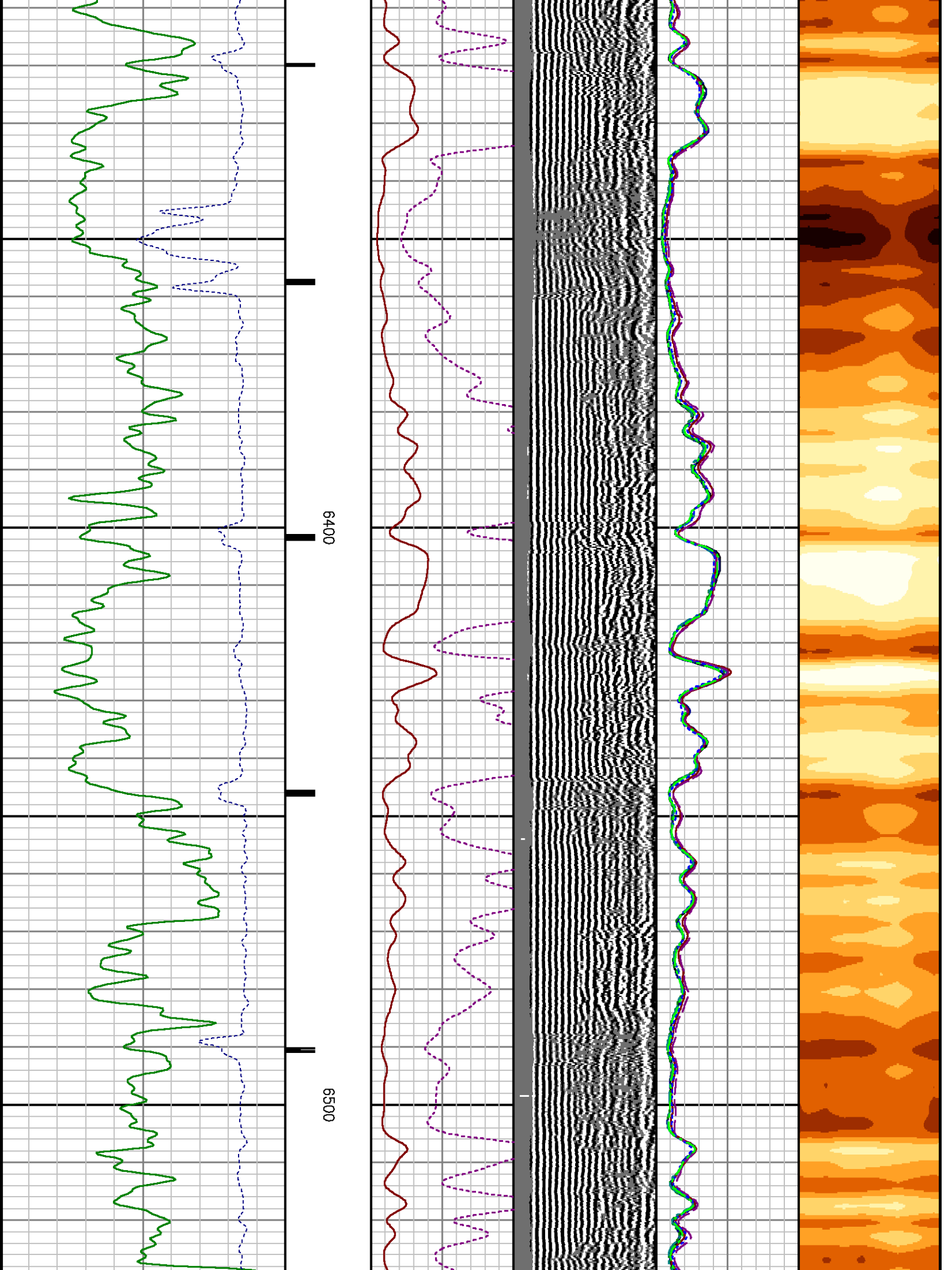


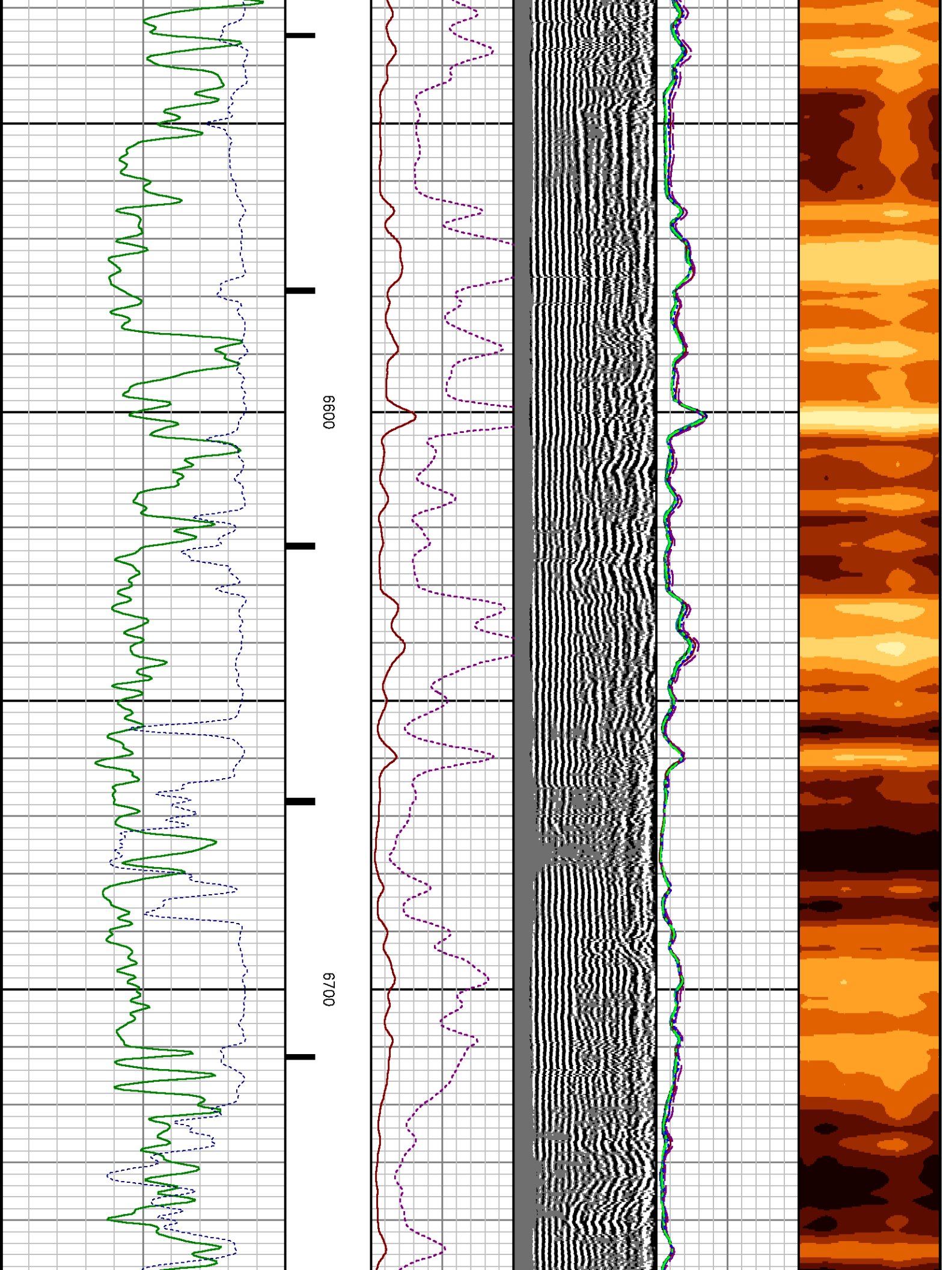


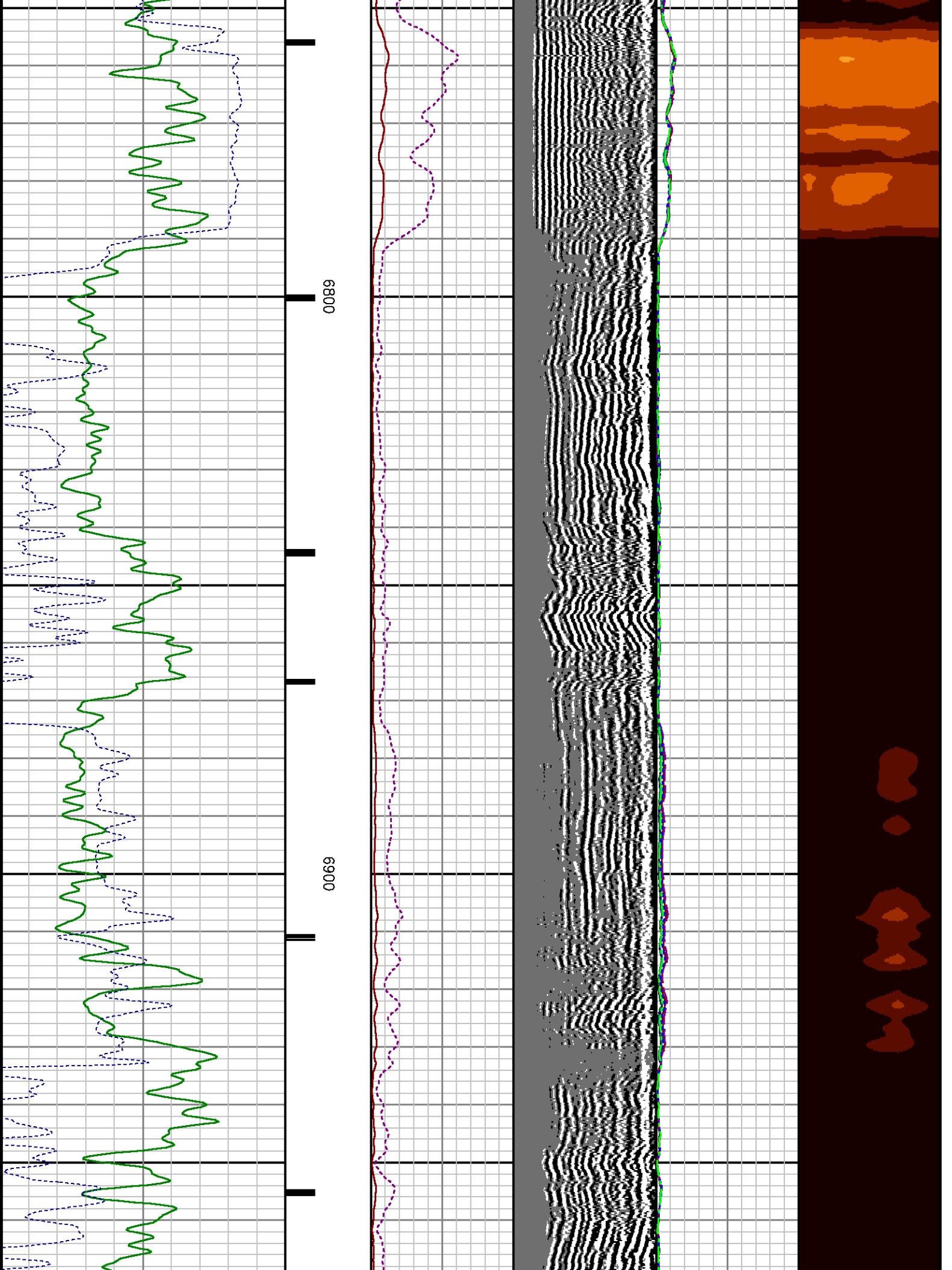


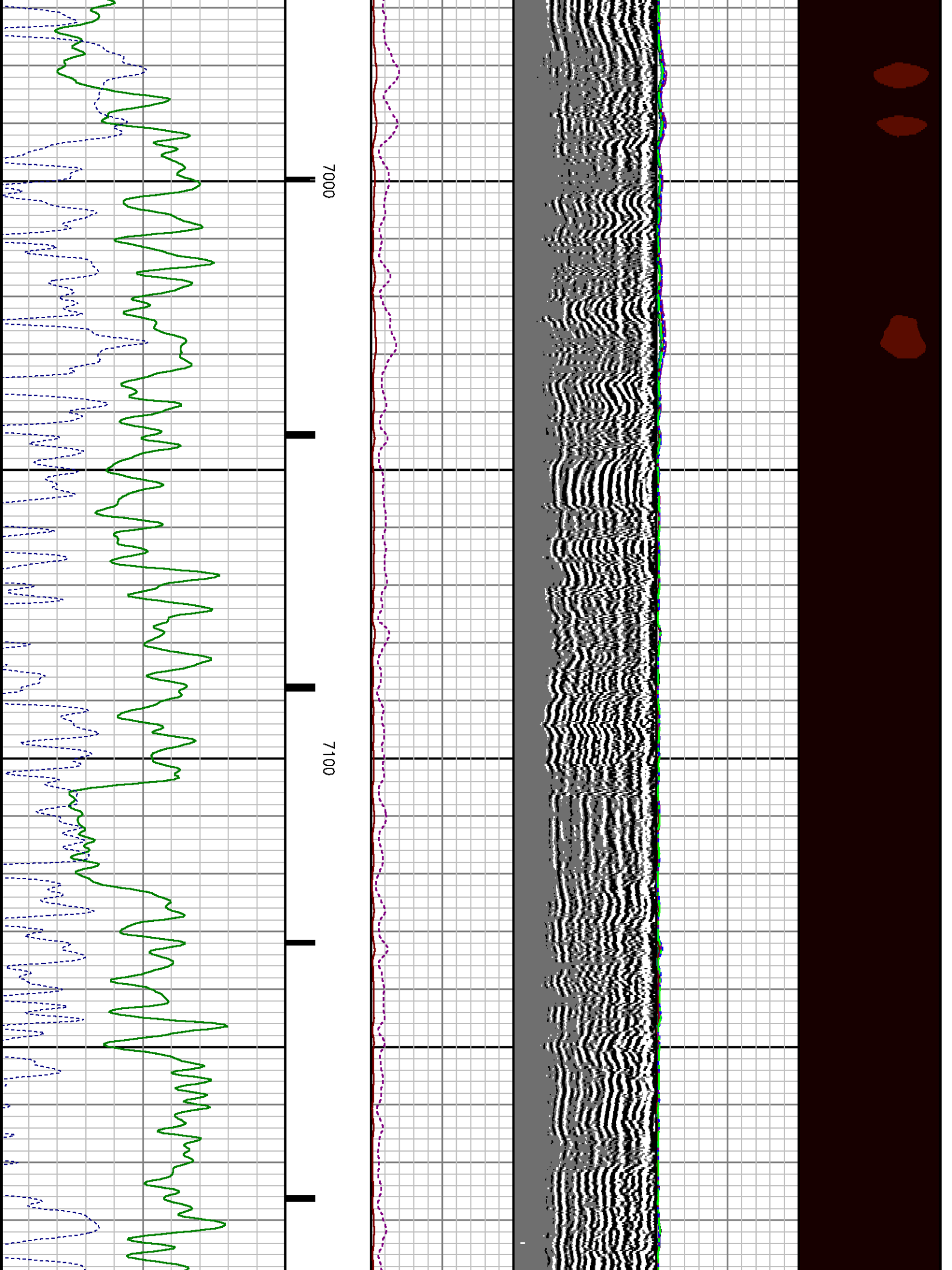


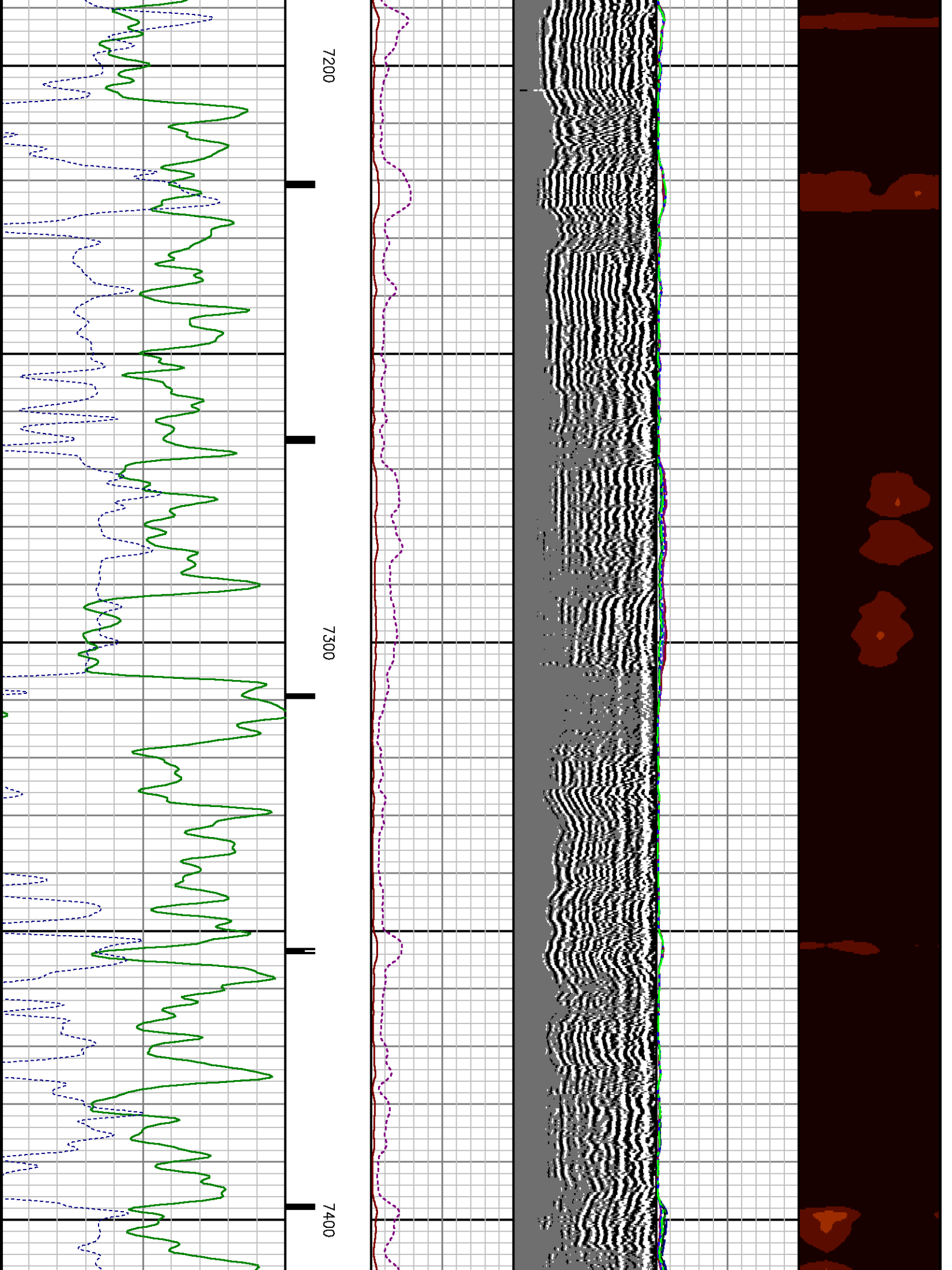


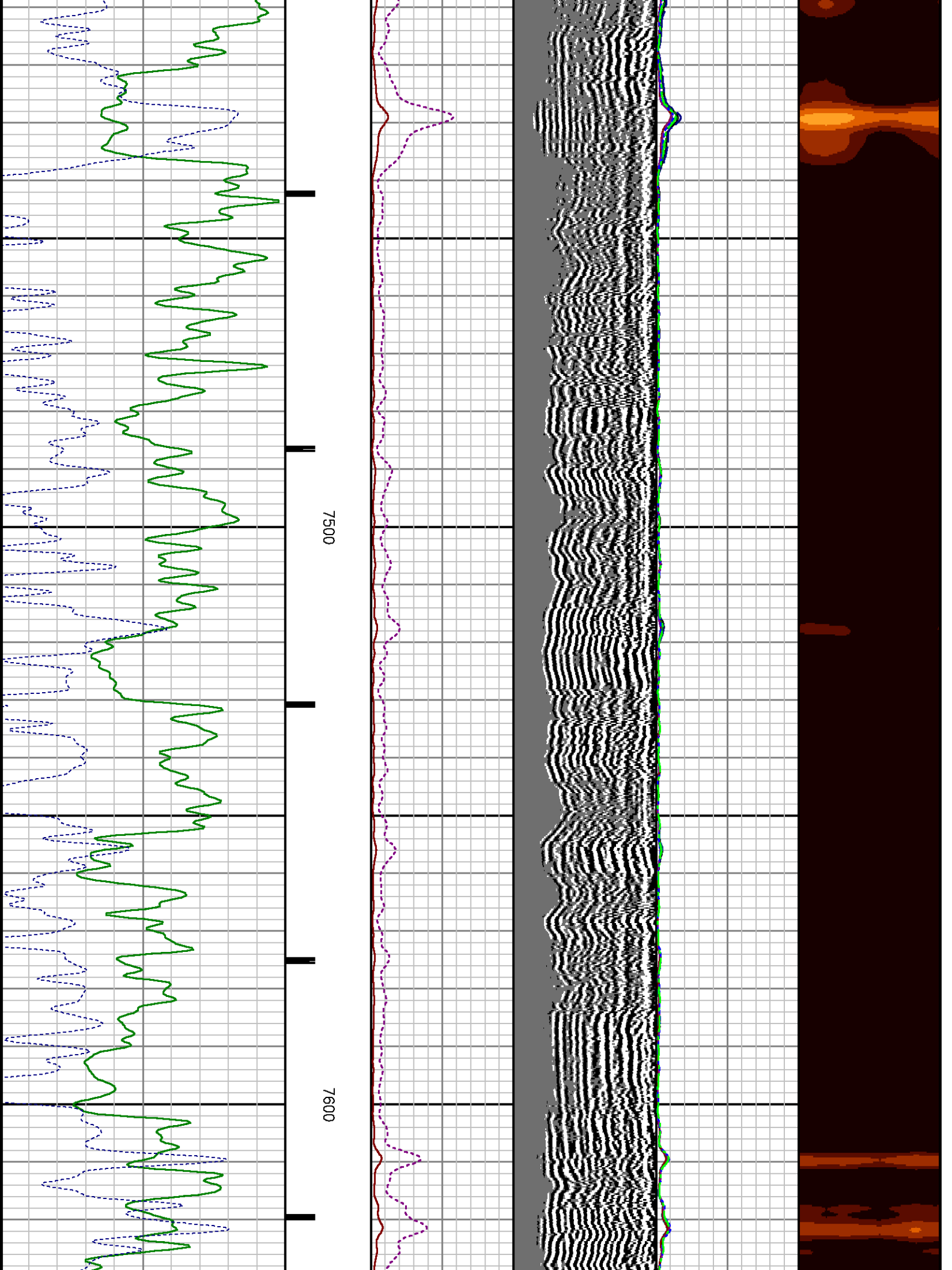


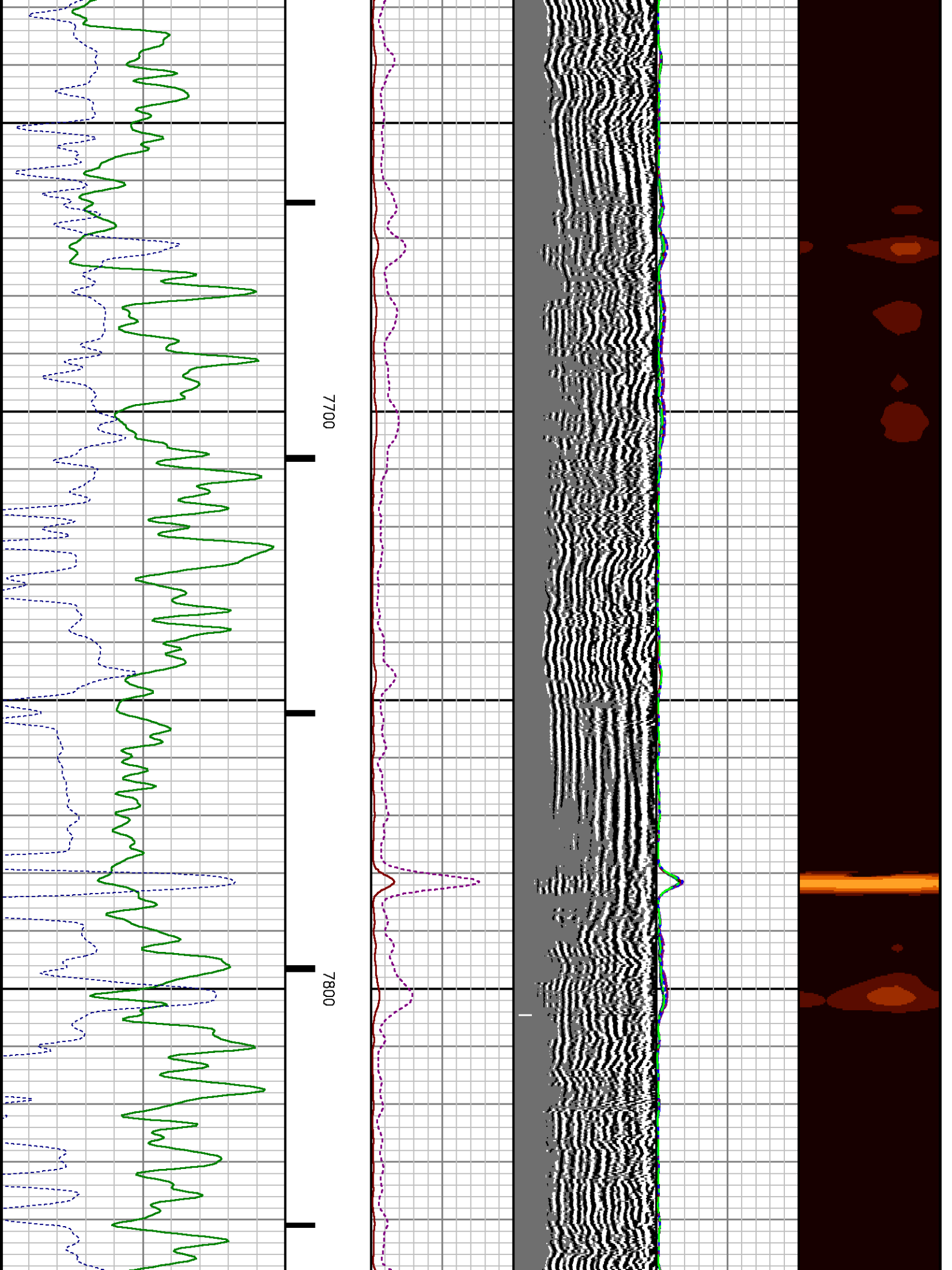


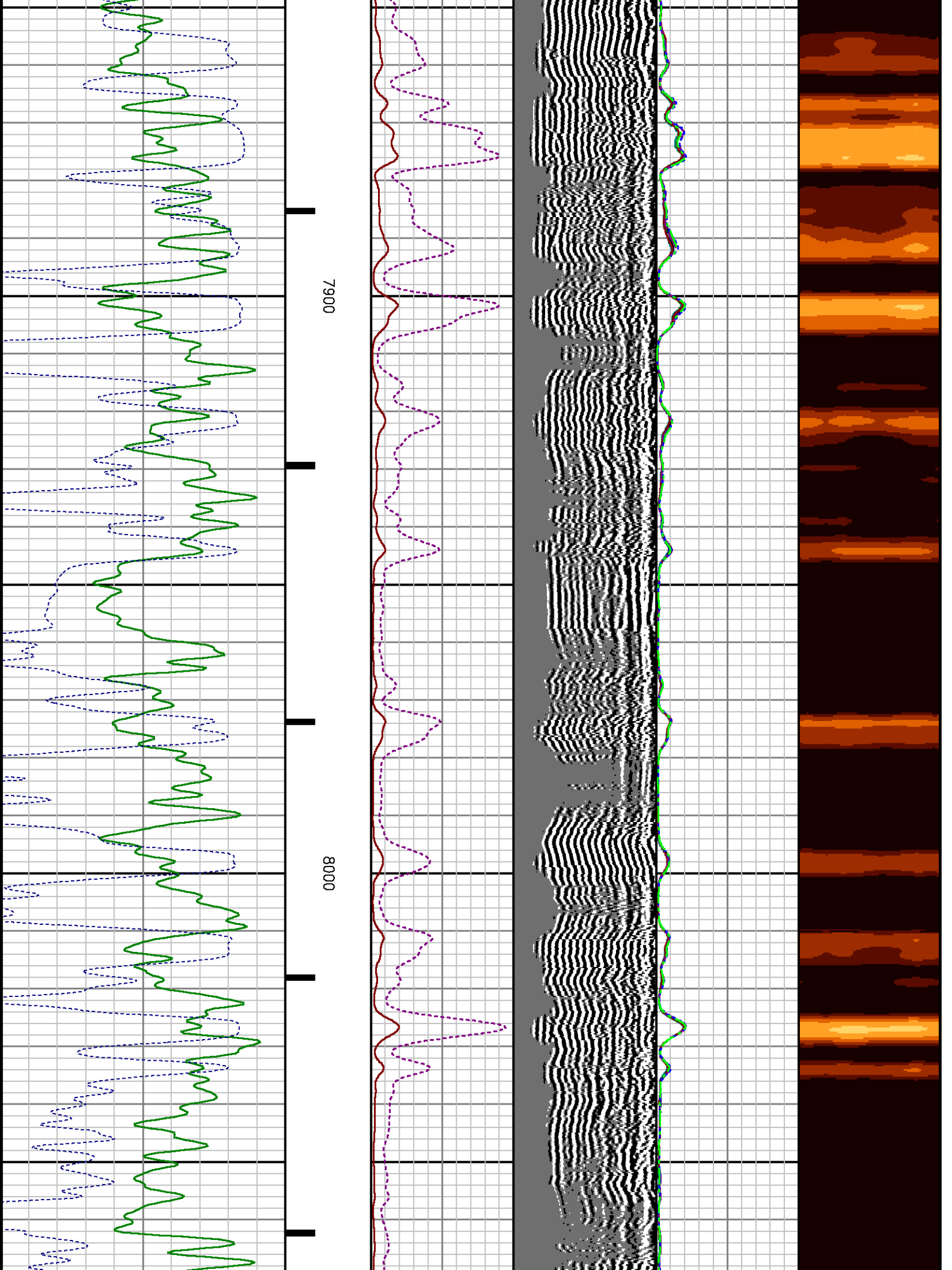


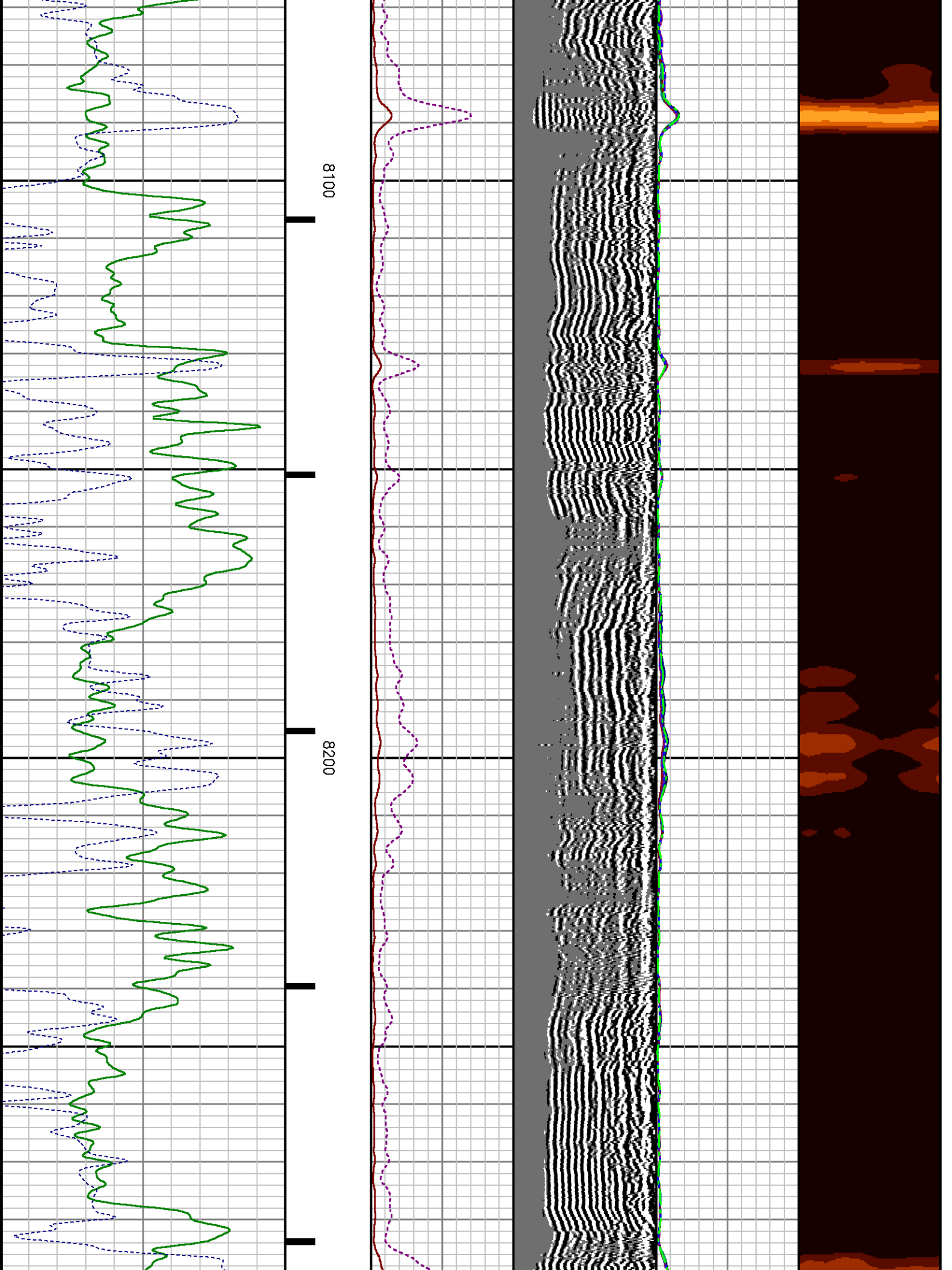


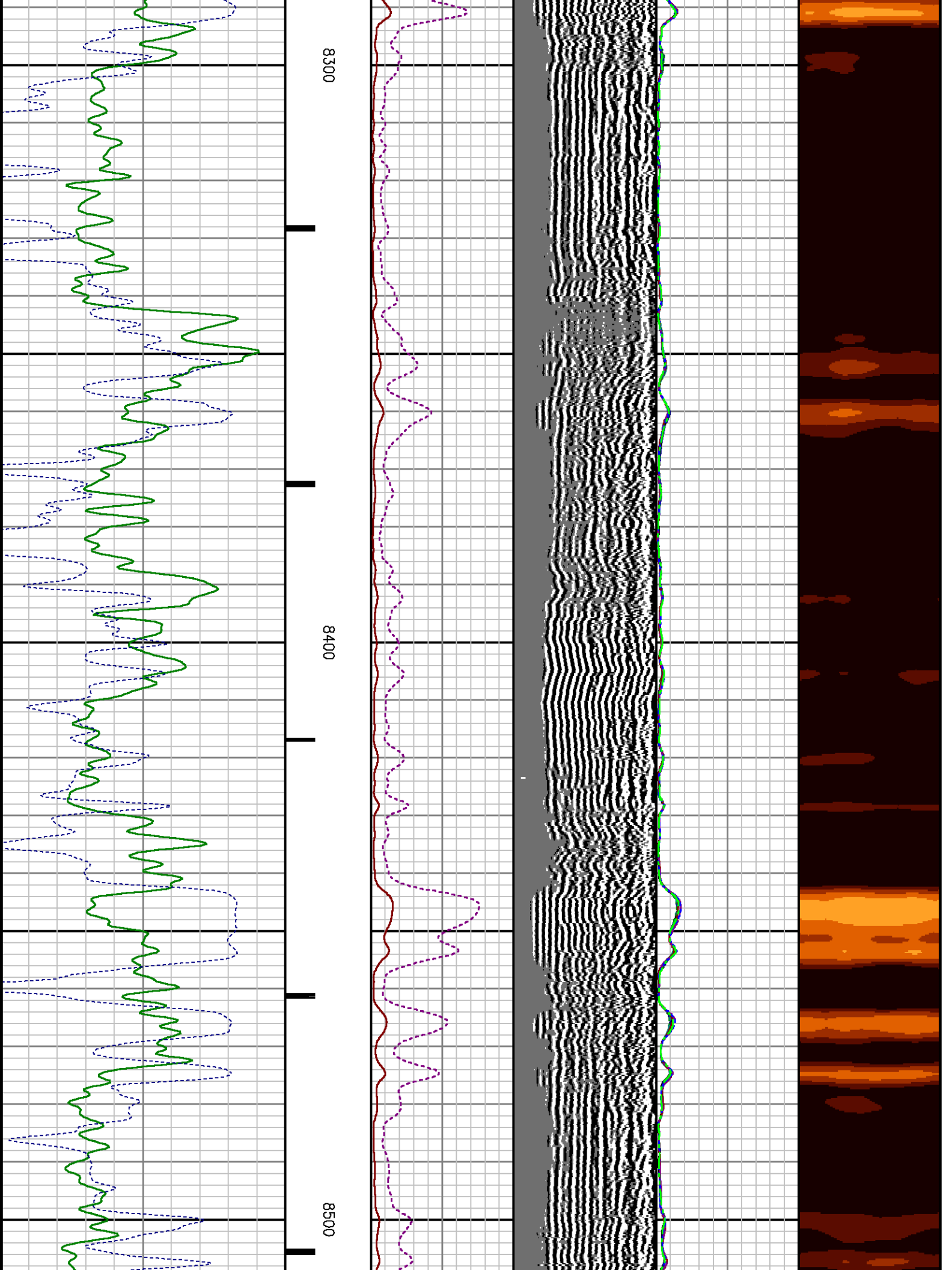


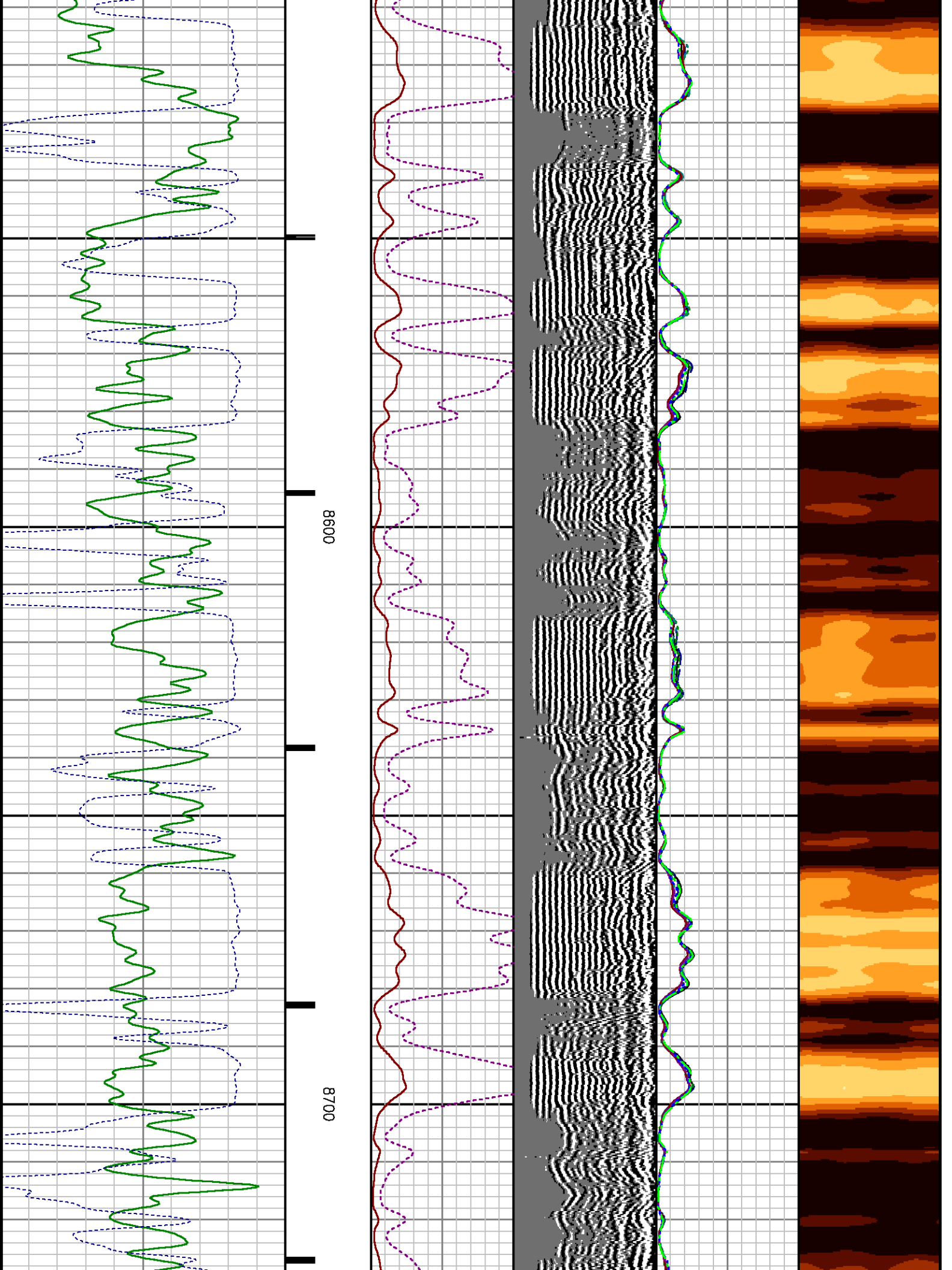


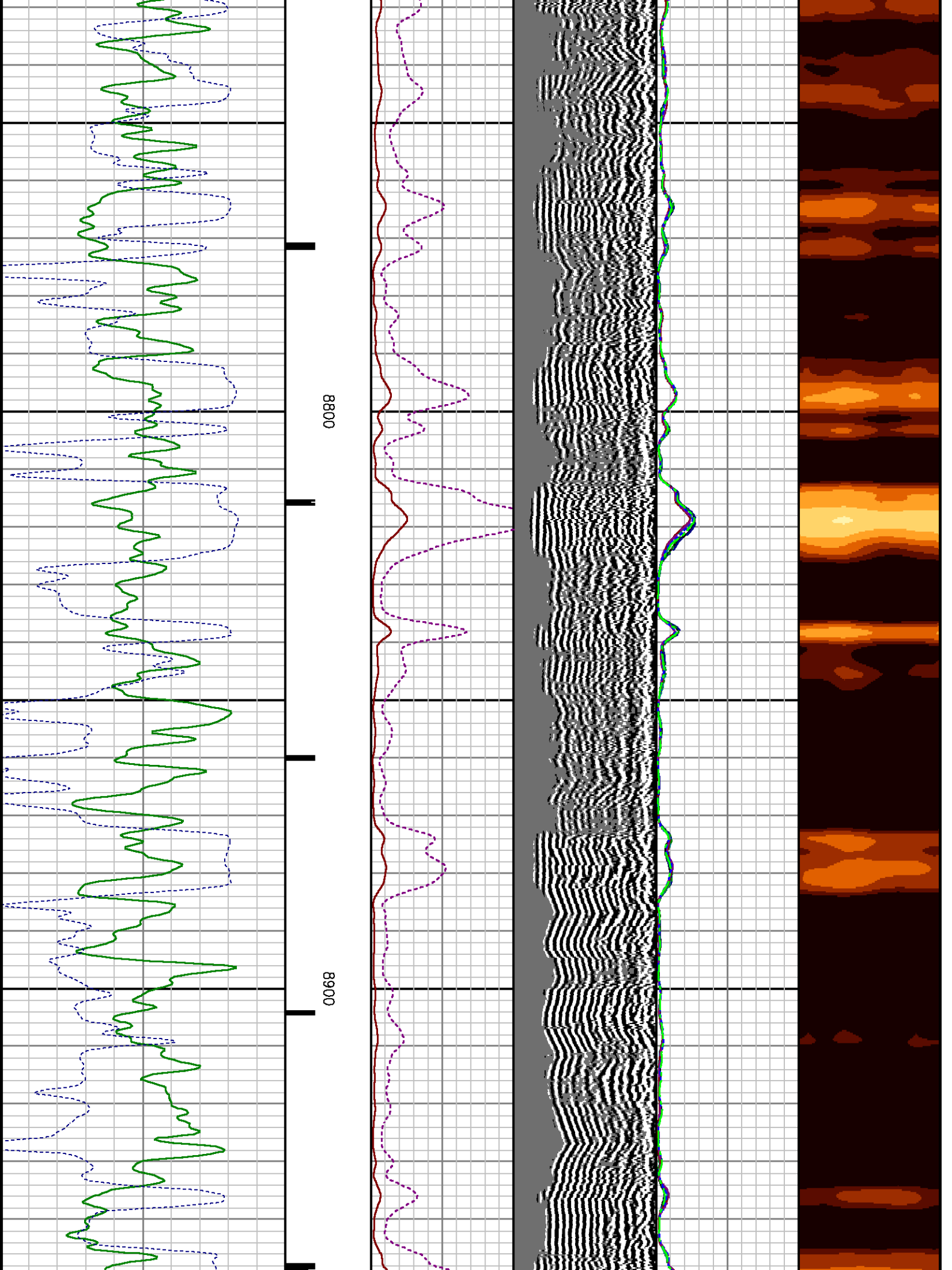


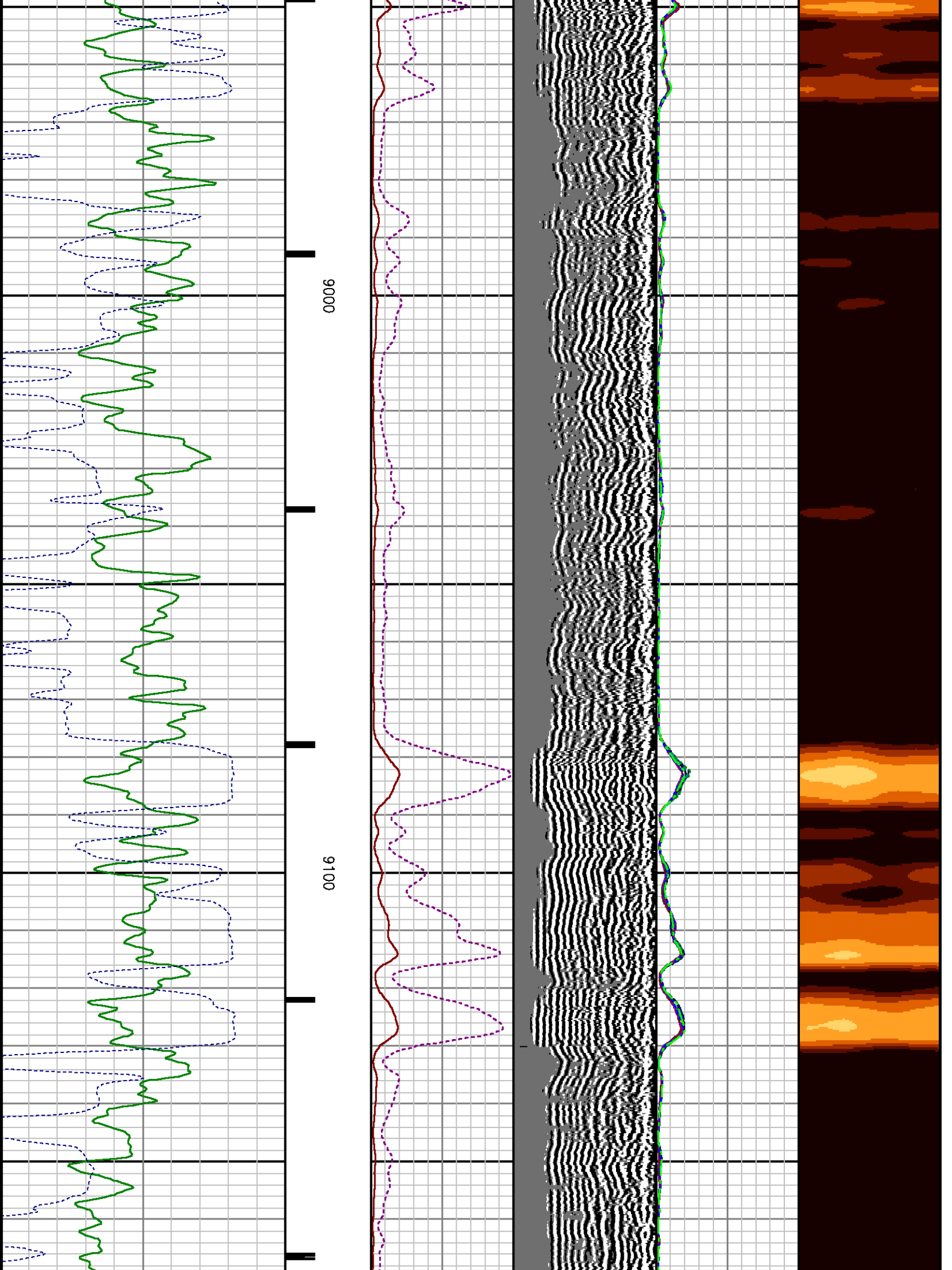


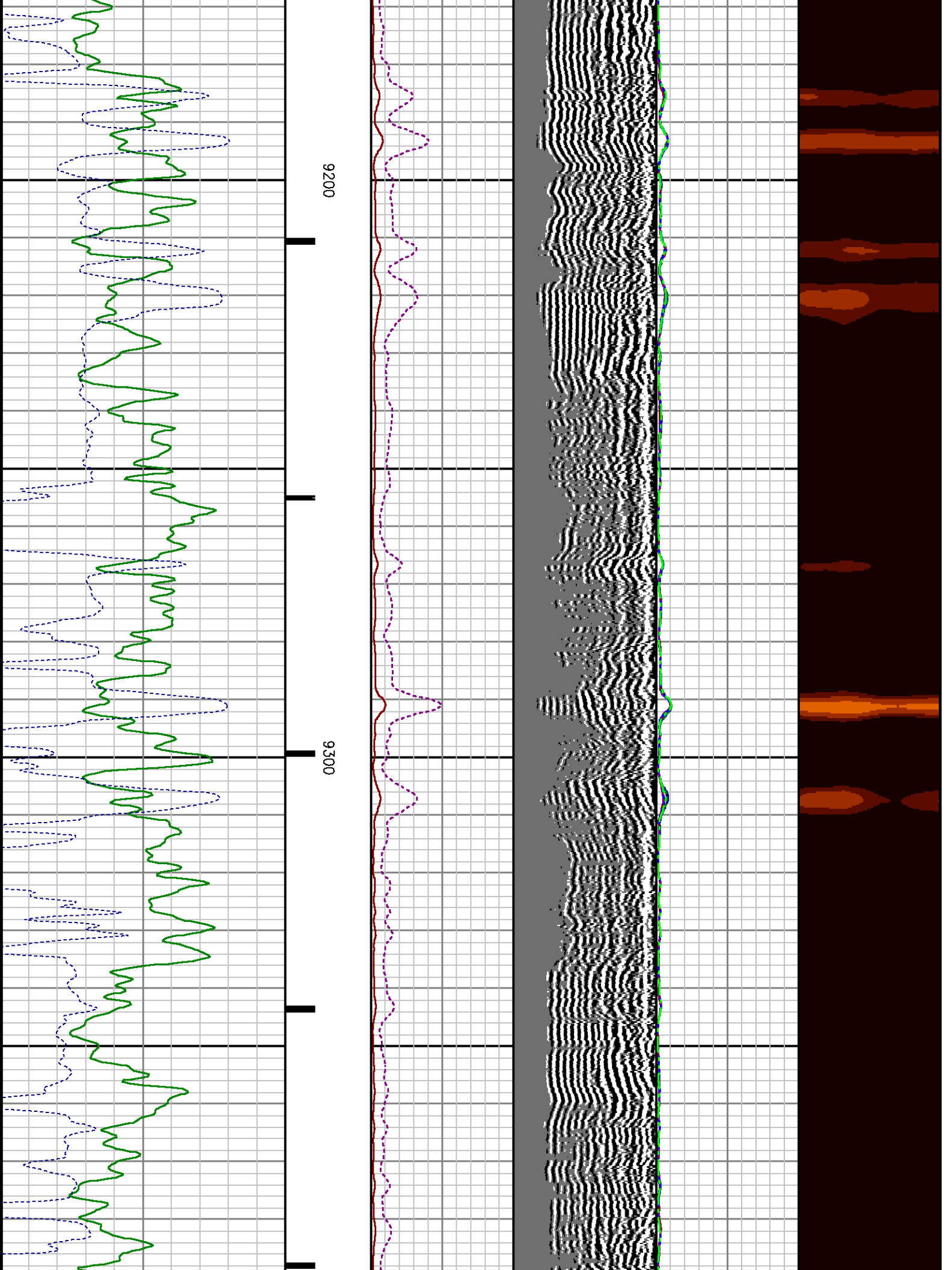


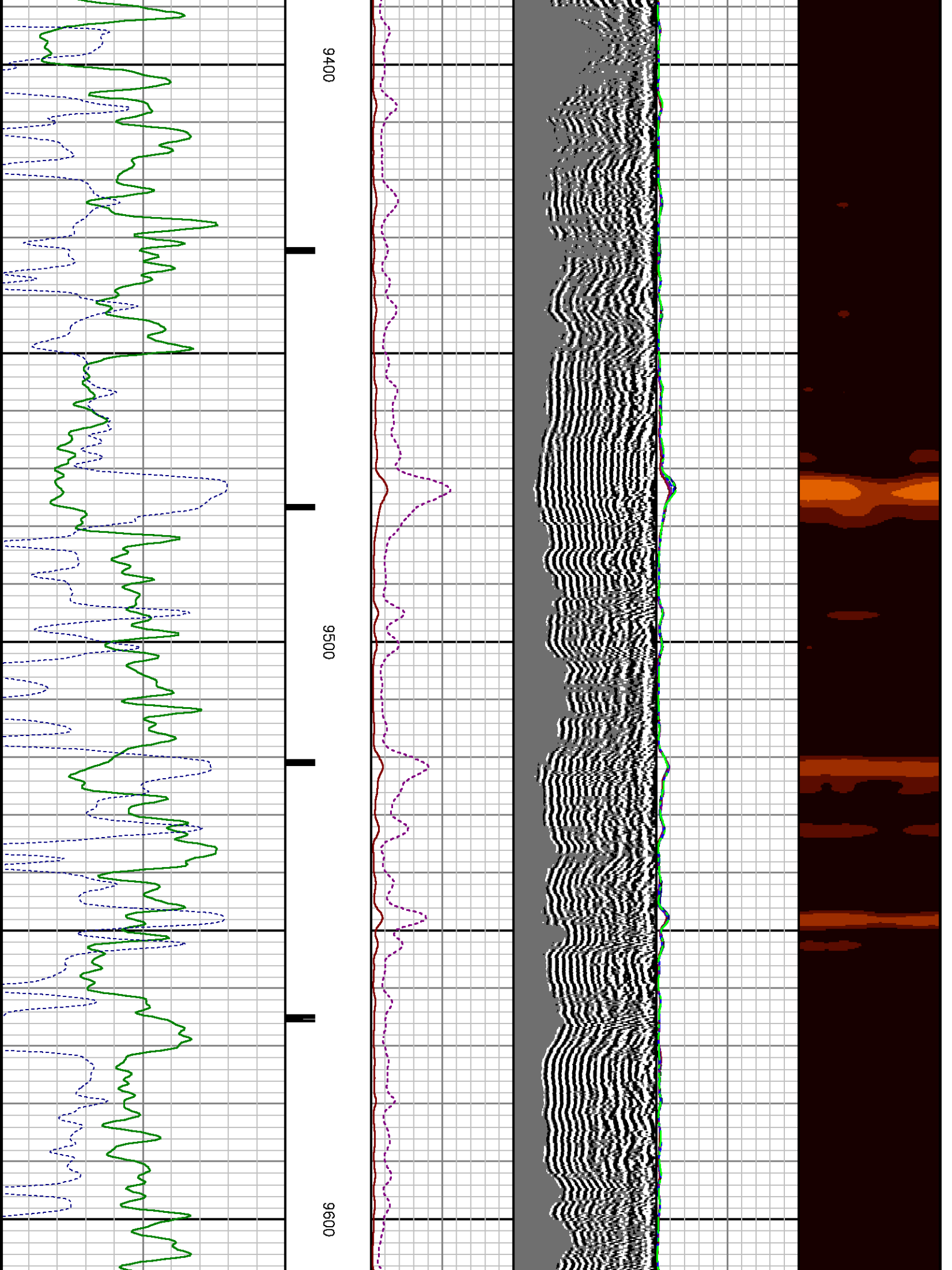


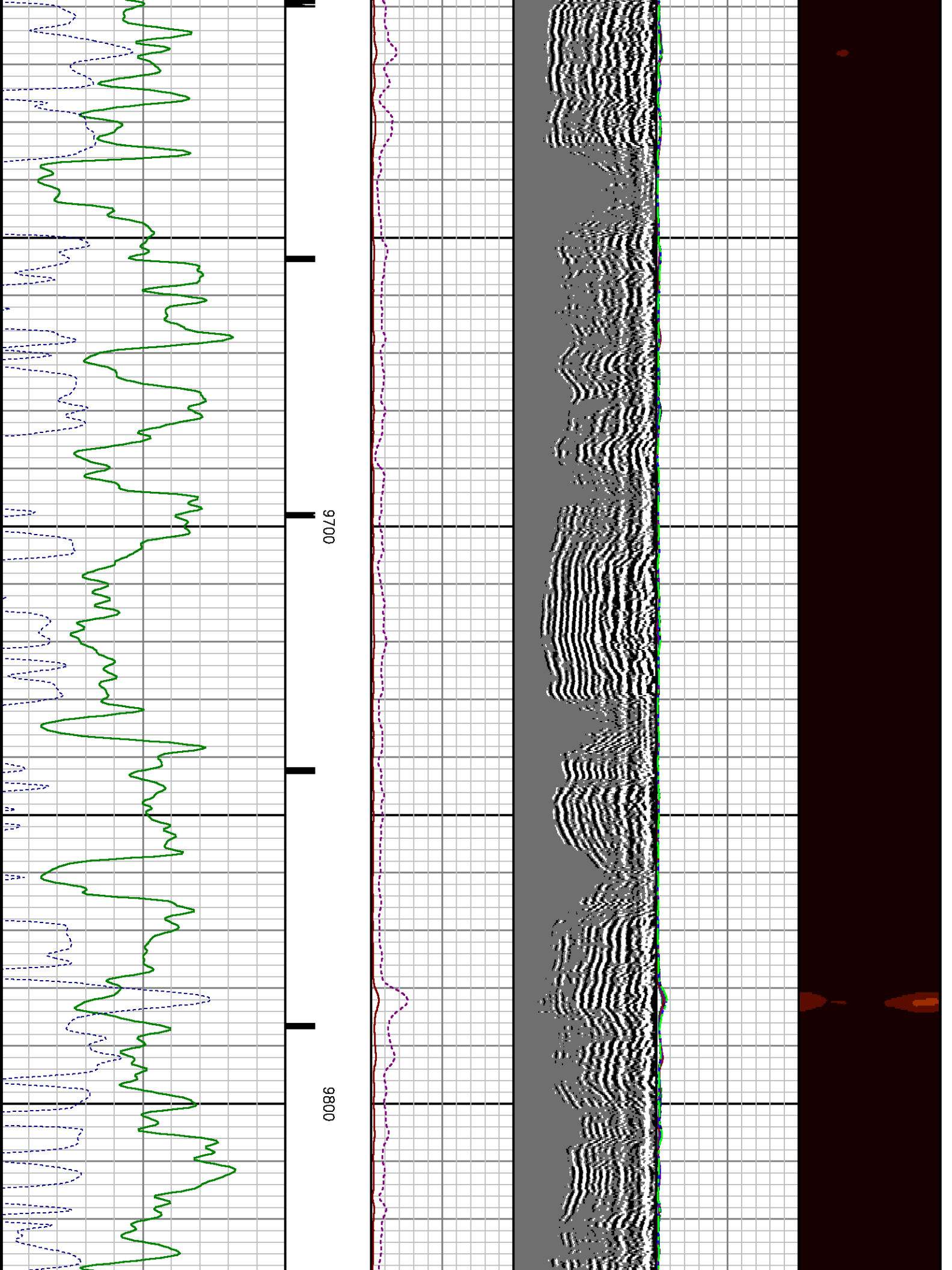


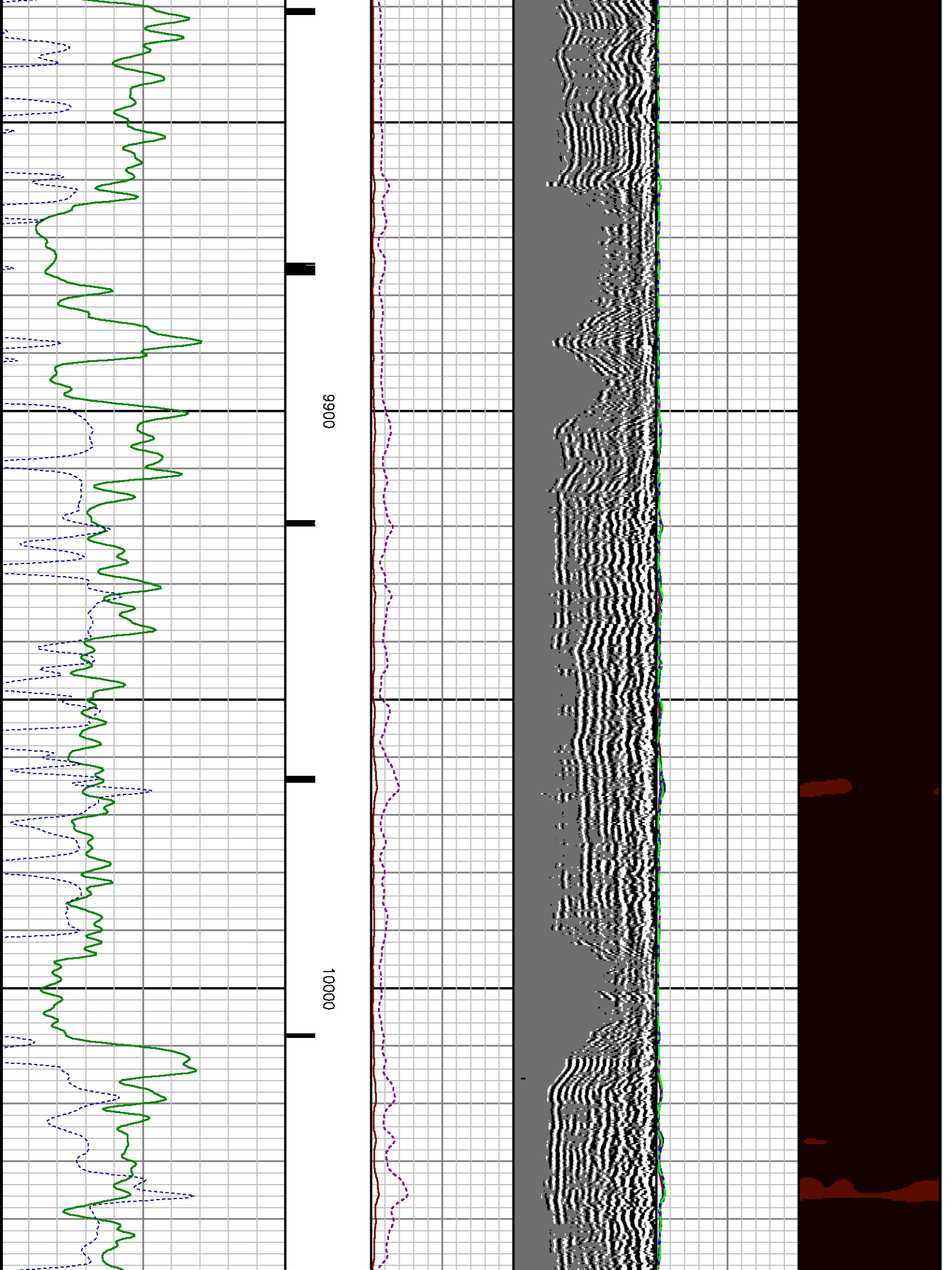


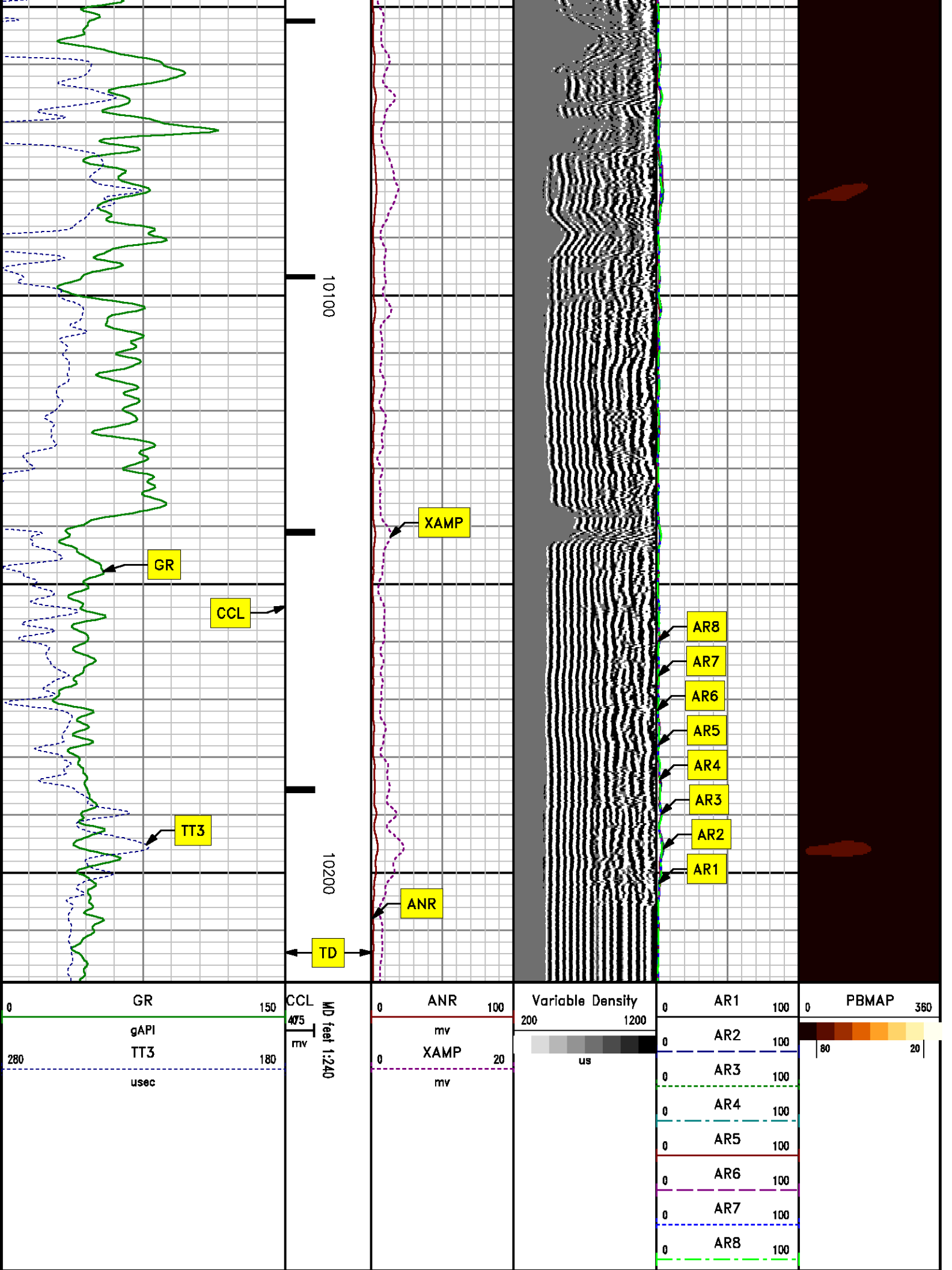













0	GR	150
280	gAPI	180
	TT3	180
	u sec	

CCL	MD feet 1:240
475	
mv	

0	ANR	100
	mv	
0	XAMP	20
	mv	

Variable Density	
200	1200
	
us	

0	AR1	100
0	AR2	100
0	AR3	100
0	AR4	100
0	AR5	100
0	AR6	100
0	AR7	100
0	AR8	100

0	PBMAP	360
80		20

REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9907.870	10248.120
RAL	Amp Gate Start Near	195.000	usec	9907.870	10248.120
RAL	Amp Gate Start Radial	195.000	usec	9907.870	10248.120
RAL	Amp Gate Width Far	25.000	usec	9907.870	10248.120
RAL	Amp Gate Width Near	25.000	usec	9907.870	10248.120
RAL	Amp Gate Width Radial	25.000	usec	9907.870	10248.120
RAL	casing od	4.500	inches	9907.870	10248.120
RAL	casing wt	11.600	lbm/ft	9907.870	10248.120
RAL	FB Start Far	291.900	usec	9907.870	10248.120
RAL	FB Start Near	180.000	usec	9907.870	10248.120
RAL	FB Start Radial	180.000	usec	9907.870	10248.120
RAL	FB Thresh Far	10.000	mv	9907.870	10248.120
RAL	FB Thresh Near	4.000	mv	9907.870	10248.120
RAL	FB Thresh Radial	4.000	mv	9907.870	10248.120
RAL	Fluid Travel Time	200.000	usec/ft	9907.870	10248.073

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

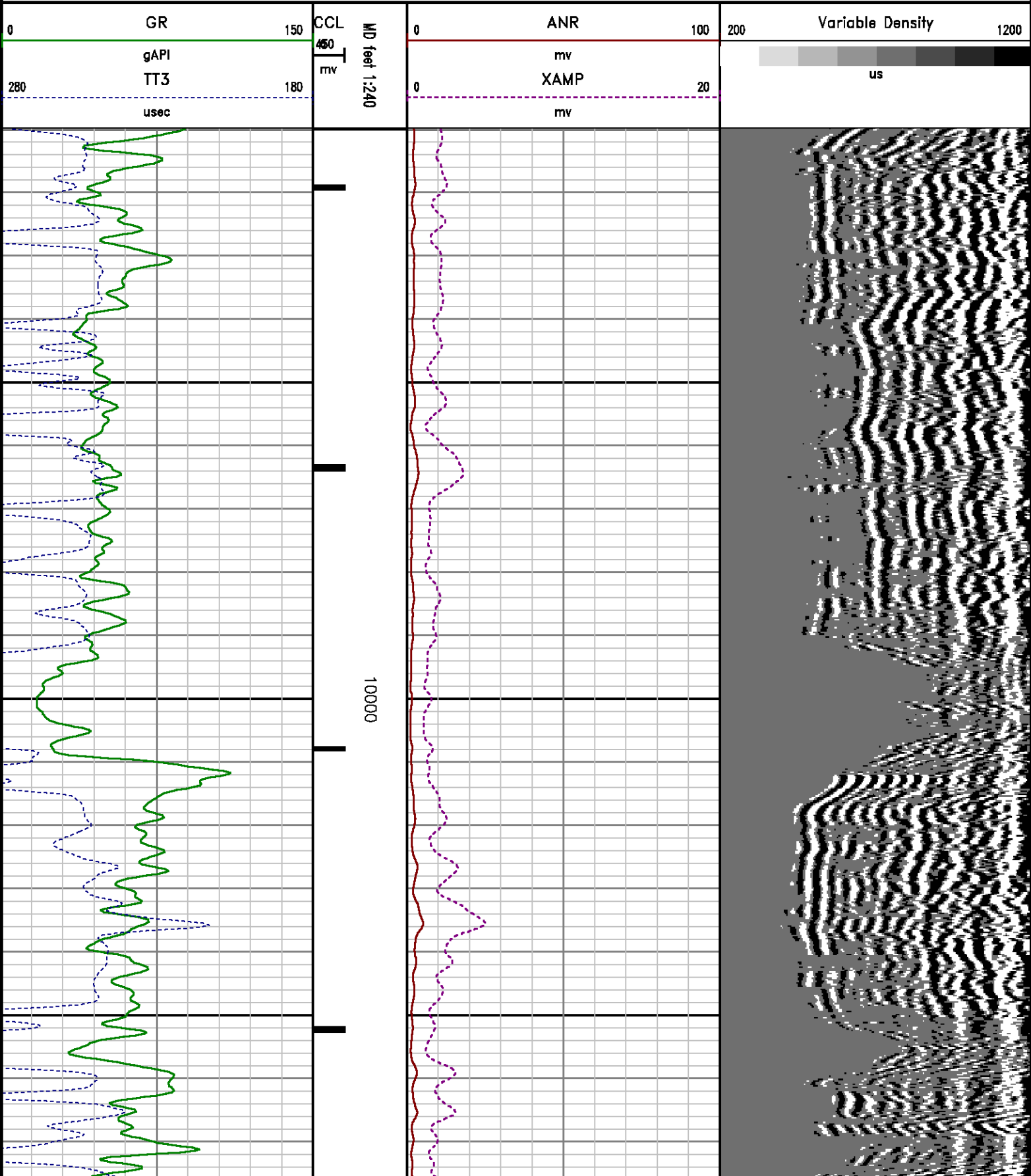
Well : FEDERAL RU 13-5

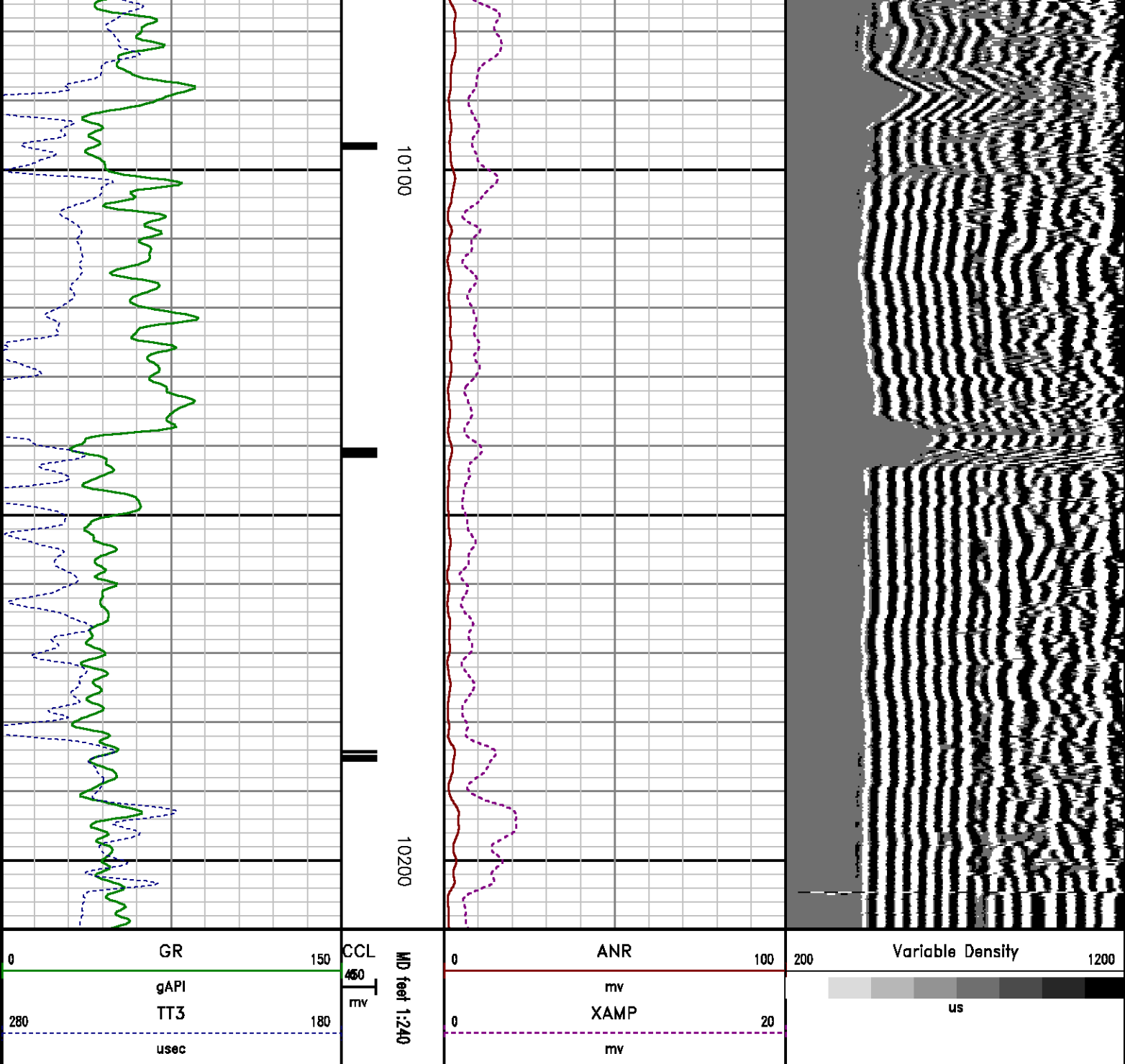
File Name : d:\welldata\wp\rfederal ru 13-5\cbl13\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 9910.00 - 10210.00 feet UP

Created : 12/29/2013 9:45:10 AM





CALIBRATION SUMMARY

RALSHP

DATE/TIME PERFORMED: Sat Dec 28 13:20:57 2013

TOOL SERIES: 1426XA

ASSET:

495

SEQ: 28

Tool Delay
[usec]

-57.00

Tank OD
in

5.50

Tank Wt
lbm/ft

15.50

Tank ID
in

4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	0.096	100.00	0.14
3 Ft. Receiver	218	216	30	184	5	-2.571	100.00	0.13
5 Ft. Receiver	328	325	30	287	12	-0.497	150.00	0.15
Radial #1	217	216	30	178	6	-6.150	100.00	0.13
Radial #2	218	216	30	178	6	-4.746	100.00	0.13
Radial #3	218	216	30	178	6	-6.154	100.00	0.13
Radial #4	219	216	30	178	6	-5.029	100.00	0.13
Radial #5	219	216	30	178	6	-3.700	100.00	0.13
Radial #6	218	216	30	178	6	-4.012	100.00	0.13
Radial #7	217	216	30	178	6	-2.783	100.00	0.13
Radial #8	218	216	30	178	6	-2.037	100.00	0.13

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\49528 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Dec 28 13:22:27 2013

TOOL SERIES: 1426XA

ASSET:

495

SEQ: 28

Tool Delay
[usec]

-57.00

Casing OD
in

4.50

Casing Wt
lbm/ft

11.60

Casing ID
in

4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.095	0.000	1.00	100.000
3 Ft. Receiver	200	30	-0.348			
5 Ft. Receiver	317	30	-0.201			
Radial #1	200	30	-0.339			
Radial #2	200	30	-0.323			
Radial #3	200	30	-0.249			
Radial #4	200	30	-0.294			
Radial #5	200	30	-0.291			
Radial #6	200	30	-0.364			
Radial #7	200	30	-0.303			
Radial #8	200	30	-0.330			

GAMMA RAY

Calibration File: C:\case\calver\GR\208D2.cal

DATE/TIME PERFORMED: Tue Dec 24 11:12:54 2013 TOOL SERIES: 1355XA ASSET: 208 SEQ: D2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	74.84	313.56	0.775	58.00	243.00	185.00

Verification File: C:\case\calver\GR\208D2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Tue Dec 24 11:14:10 2013 TOOL SERIES: 1355XA ASSET: 208 SEQ: D2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	74.76	317.24	0.775	57.94	245.86	187.93

TOOL DIAGRAM

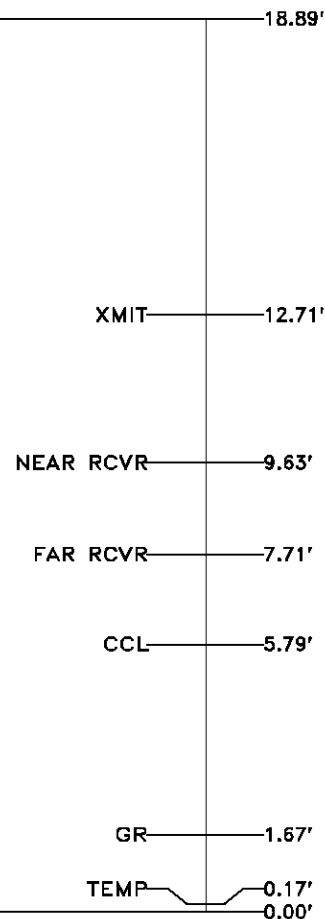
OTA SHORT CABLE HEAD

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

RAL GR/TEMP/CCL/CHV DETECTOR

Series 1355XA
 Mnemonic RAL
 Diameter 2.75"
 Weight 85.00 lb
 Length 6.96'
 Measure Point 0.17' TEMP
 Measure Point 1.67' GR
 Measure Point 5.79' CCL
 Temp Rating 400.00 °F
 Press Rating 20000.00 PSI



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



Baker Atlas

CASE

Company	WPX ENERGY			File No:	CH80984
Well	FEDERAL RU 13-5			API No:	05045217690000
Field	RULISON				
County	GARFIELD	State	CO		
Location			Elevations		
SHL: 228' FNL & 2606' FWL			KB 7628 ft		5 7S 93W
BHL: 1242' FNL & 575' FWL			DF		RU 23-5 PAD
			GL 7602 ft		NABORS 576
SEC	5	TWP	7S	RGE	93W