



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH084706	Company Well	WPX ENERGY SAVAGE RWF 521-25
API No: 05045219630000	Field County	RULISON GARFIELD
	State CO	
25 6S 94W RWF 22-25 PAD CYCLONE 17	Location SHL: 2444' FNL & 1444' FWL BHL: 815' FNL & 2102' FWL SEC 25 TWP 6S RGE 94W	Other Services RPM
Permanent Datum Log Measured From Drill Measured From	GL KB KB Elevation 21 ft Above P. D.	Elevations KB 6058 ft DF GL 6057 ft

Date	19/APR/14	
Run	ONE	
Service Order	US625368	
Depth Driller	BB94 ft	
Depth Logger	BB62 ft	
Bottom Logged Interval	BB52 ft	
Top Logged Interval	21 ft	
Time Started	7:30	
Time Finished	11:00	
Operator Rig Time	3.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	70 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	234 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT.
Recorded By	NEWELL	
Witnessed By	COLE APLEGATE	

- 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	1133 ft
8.75 In	1133 ft	8945 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1133 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	8945 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 15 feet.
Logged with zero PSI at wellhead.
BHT = 234 °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	30.937	8866.000
RAL	Amp Gate Start Near	195.000	usec	30.937	8866.000
RAL	Amp Gate Start Radial	195.000	usec	30.937	8866.000
RAL	Amp Gate Width Far	25.000	usec	30.937	8866.000
RAL	Amp Gate Width Near	25.000	usec	30.937	8866.000
RAL	Amp Gate Width Radial	25.000	usec	30.937	8866.000
RAL	casing od	4.500	inches	30.937	8866.000
RAL	casing wt	11.600	lbm/ft	30.937	8866.000
RAL	FB Start Far	291.900	usec	30.937	8866.000
RAL	FB Start Near	175.391	usec	30.937	8866.000
RAL	FB Start Radial	175.391	usec	30.937	8866.000
RAL	FB Thresh Far	10.000	mv	30.937	8866.000
RAL	FB Thresh Near	4.000	mv	30.937	8866.000
RAL	FB Thresh Radial	4.000	mv	30.937	8866.000
RAL	Fluid Travel Time	200.000	usec/ft	30.937	8865.937

DEPTH OFFSETS
(for Acquired Curves)

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

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

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

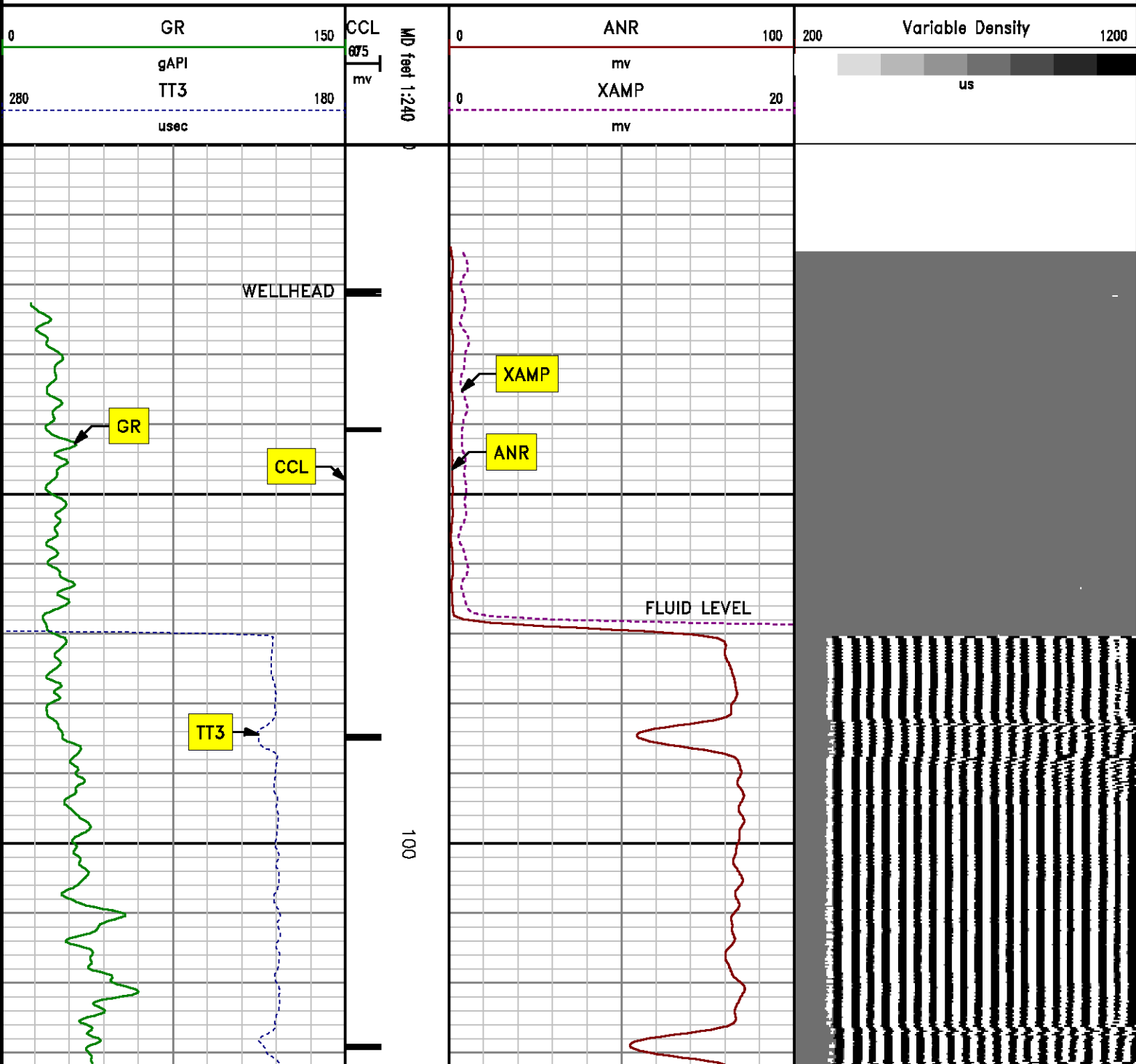
Well : SAVAGE RWF 521-25

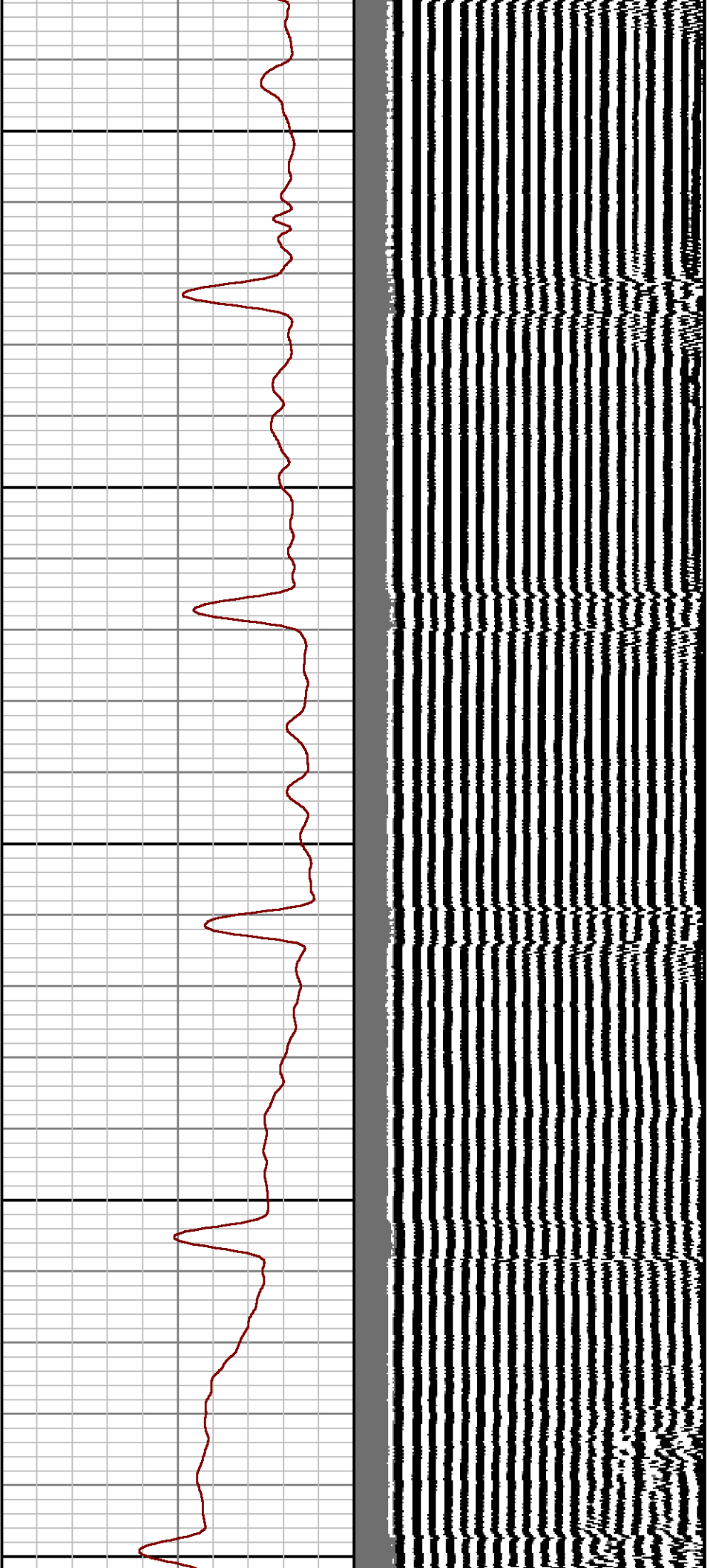
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Mode : PlotMgr 5.4.504

Interval : 0.00 - 8867.00 feet UP

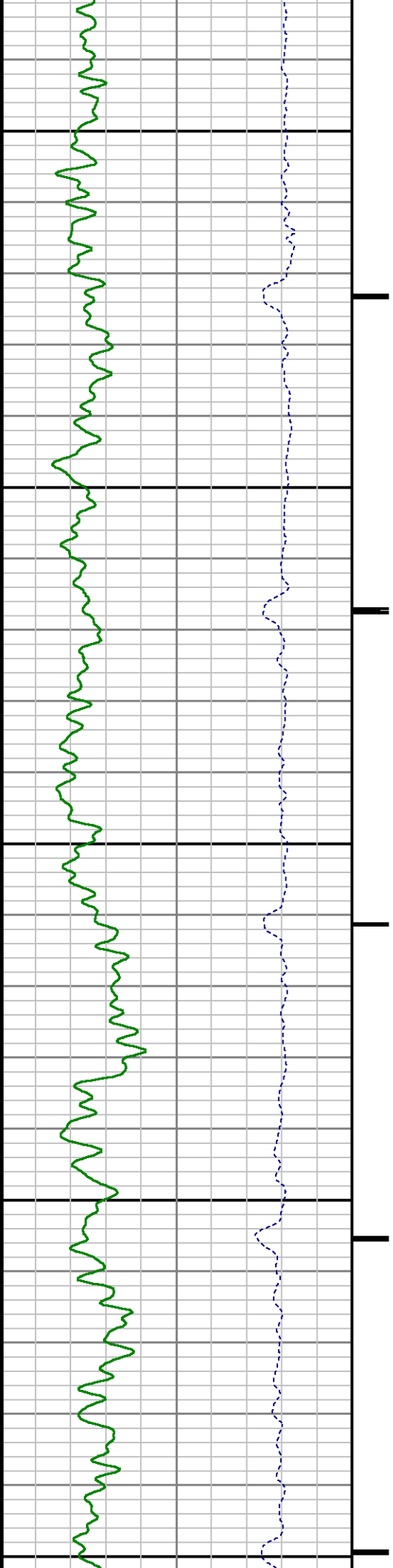
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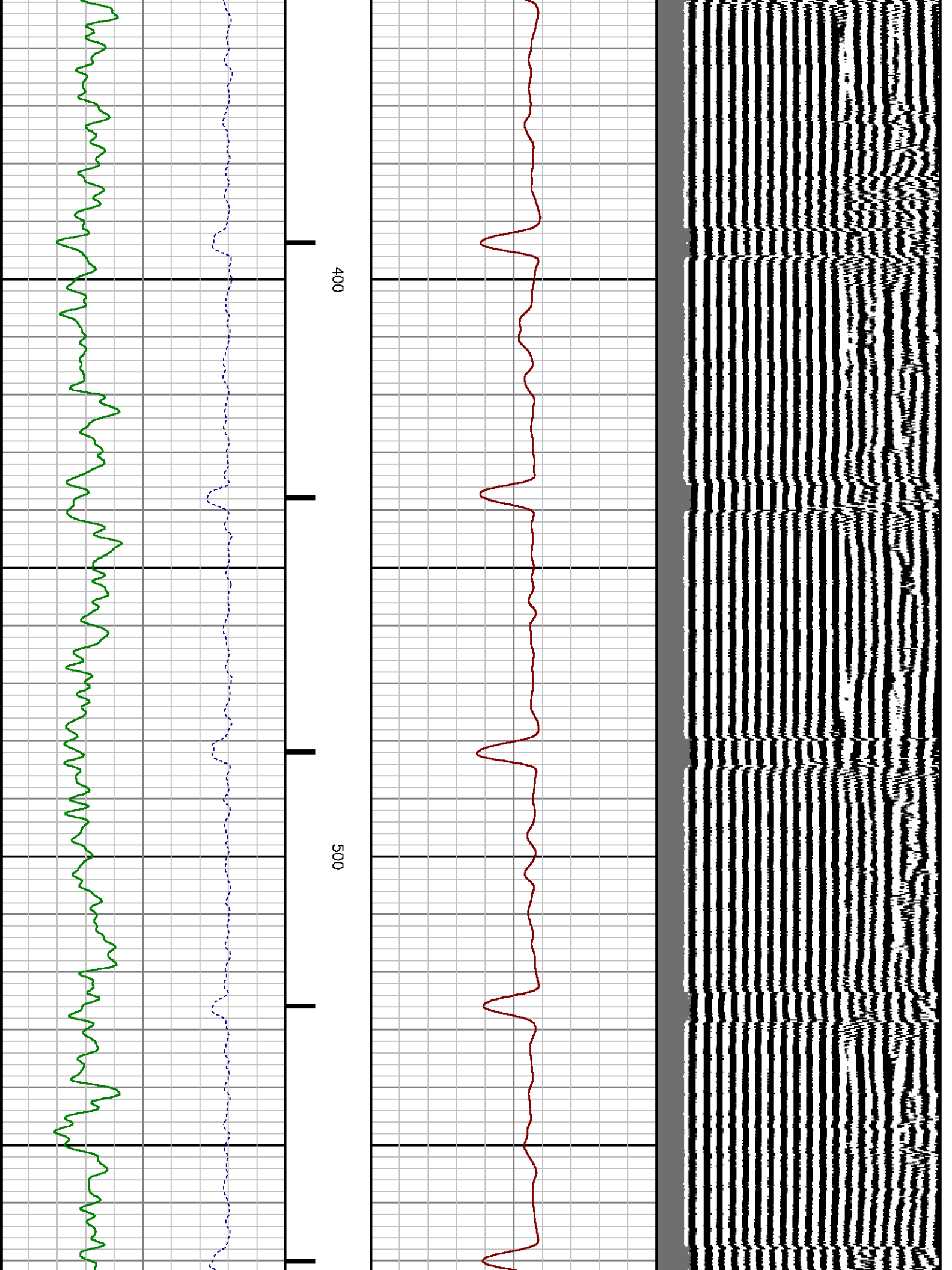


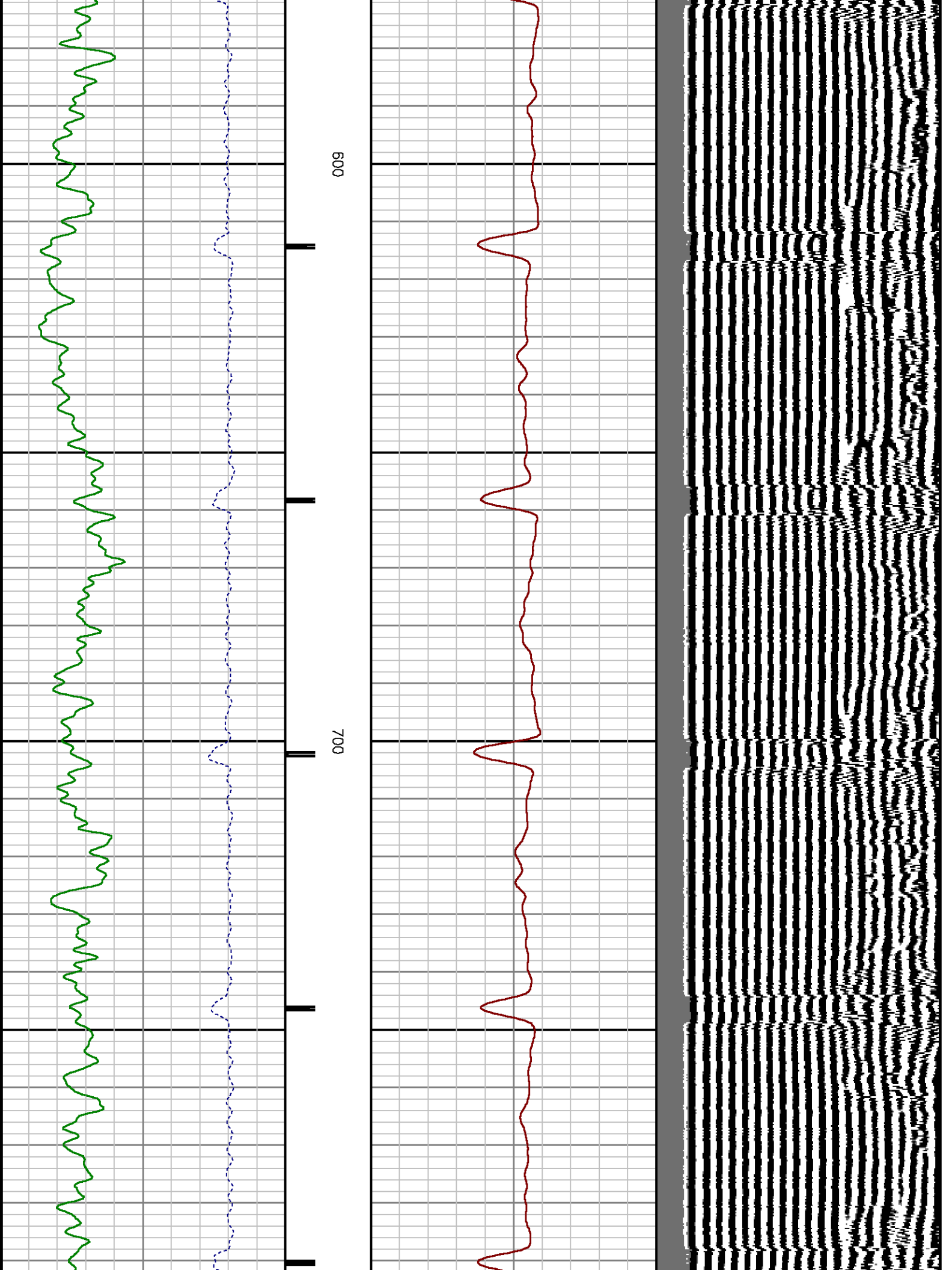


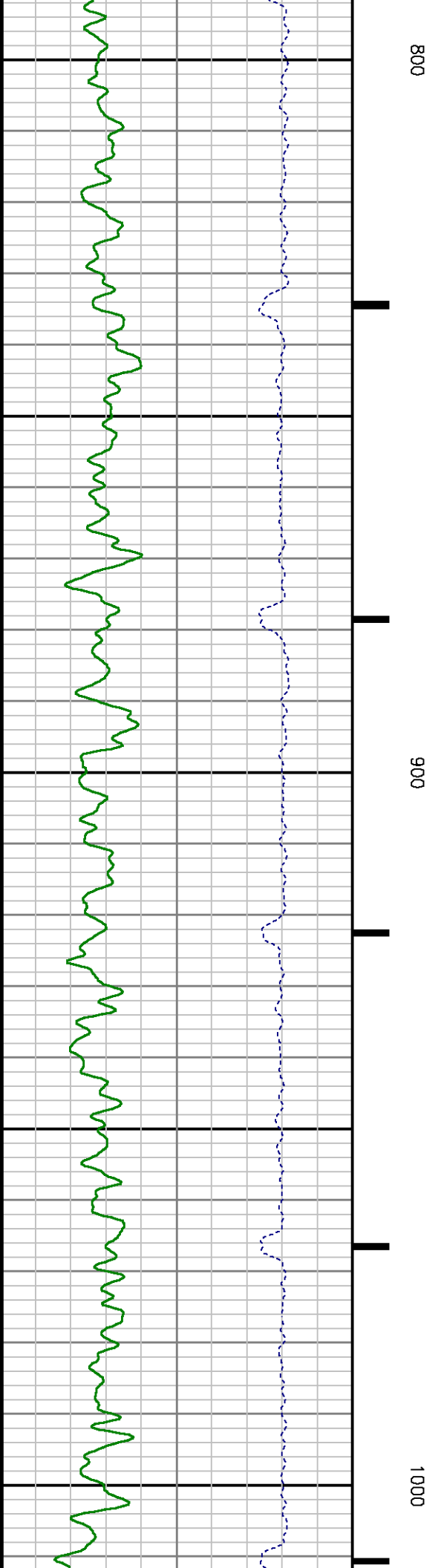
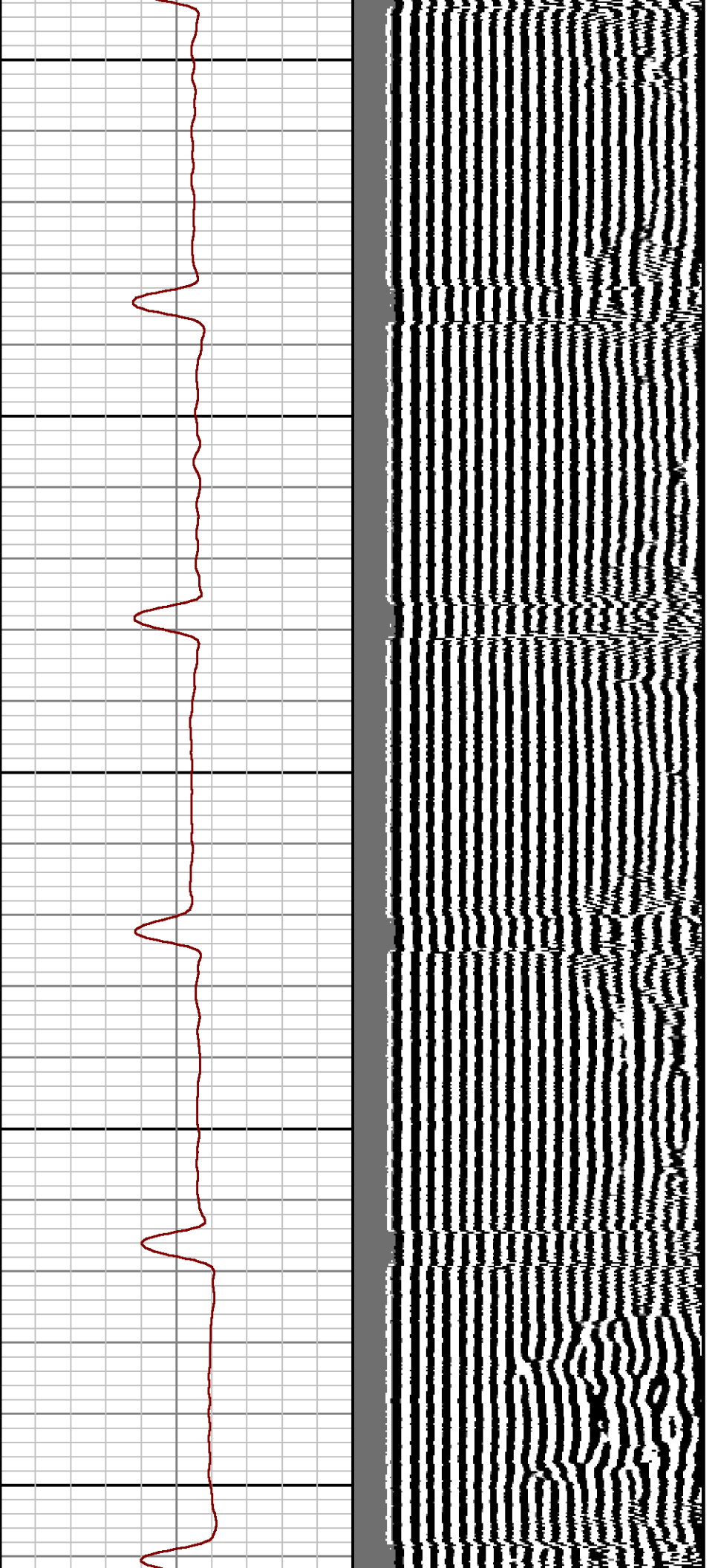
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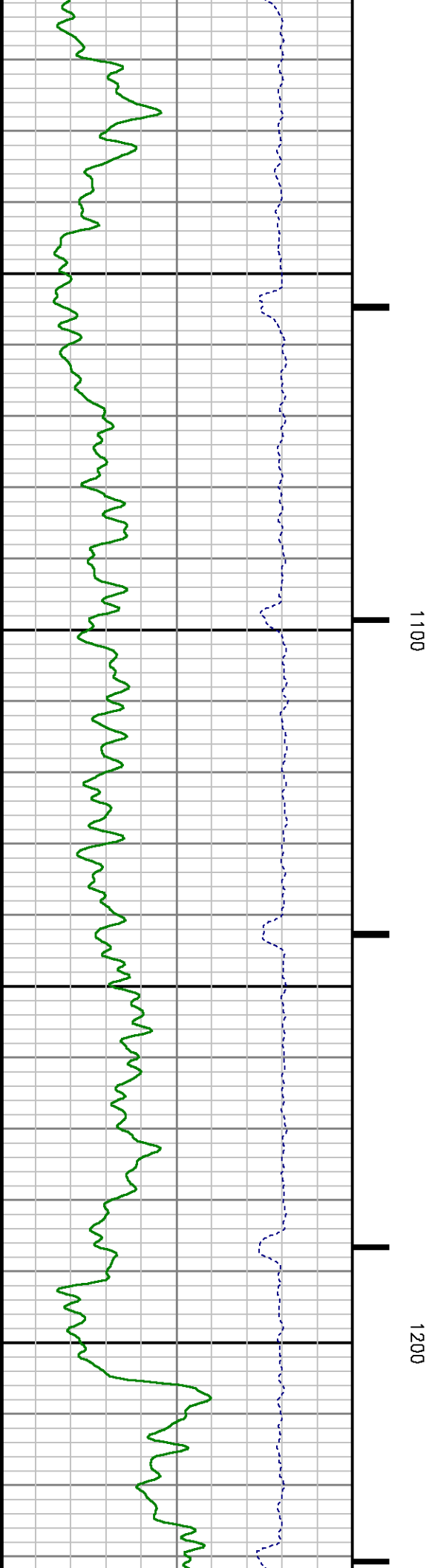
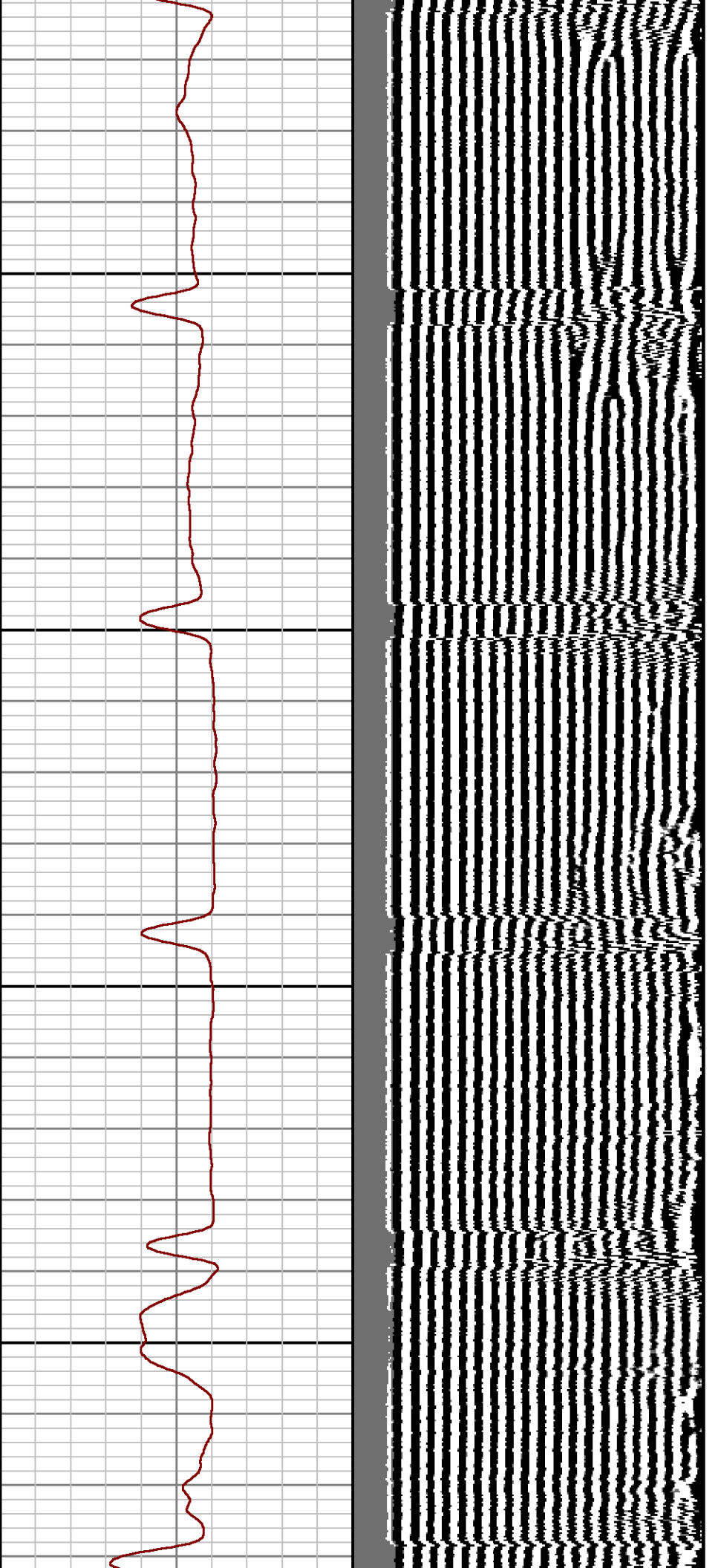
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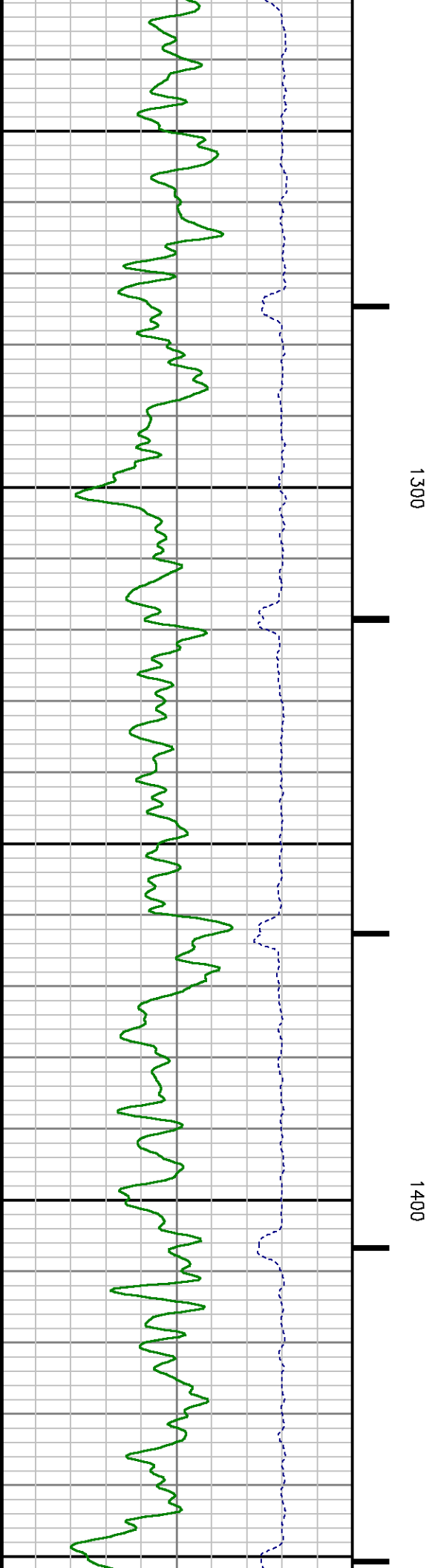
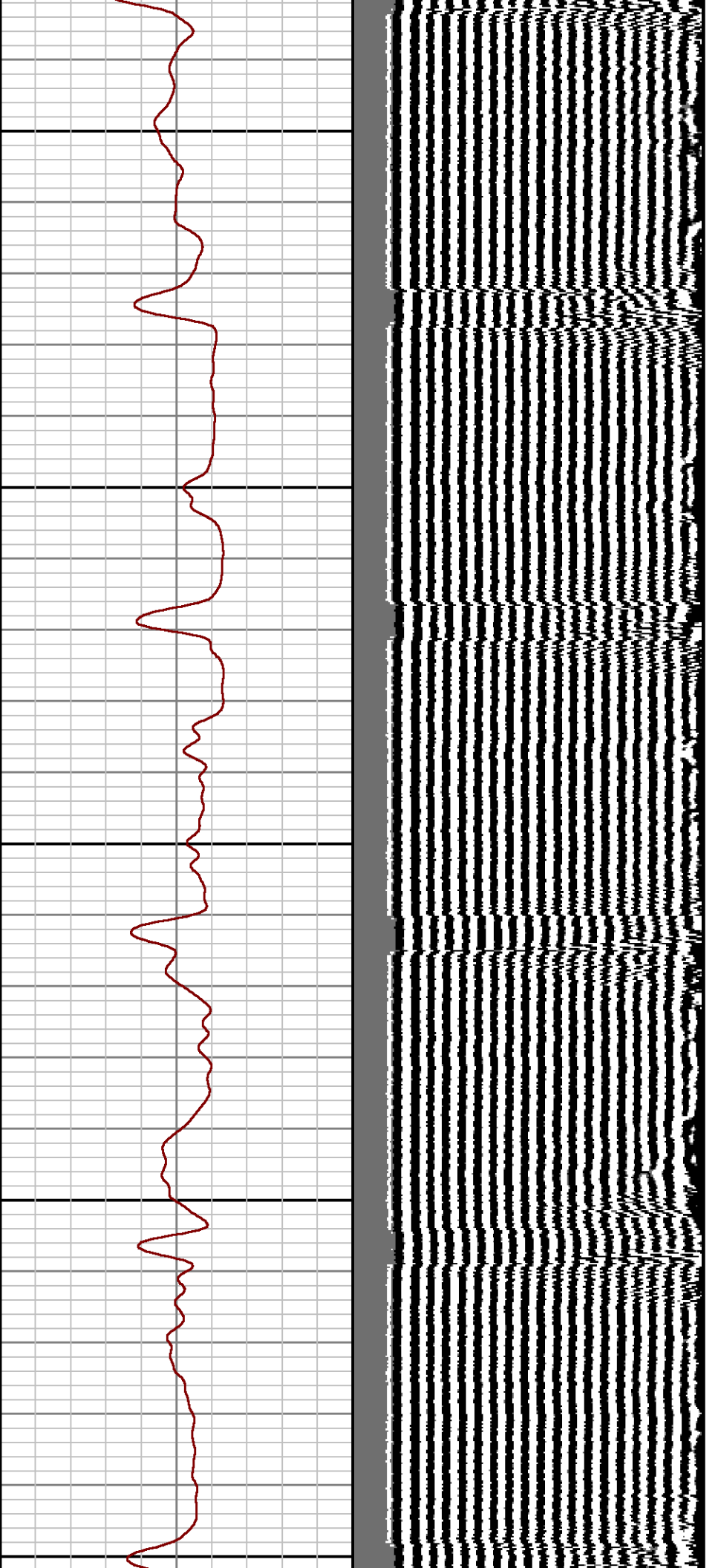


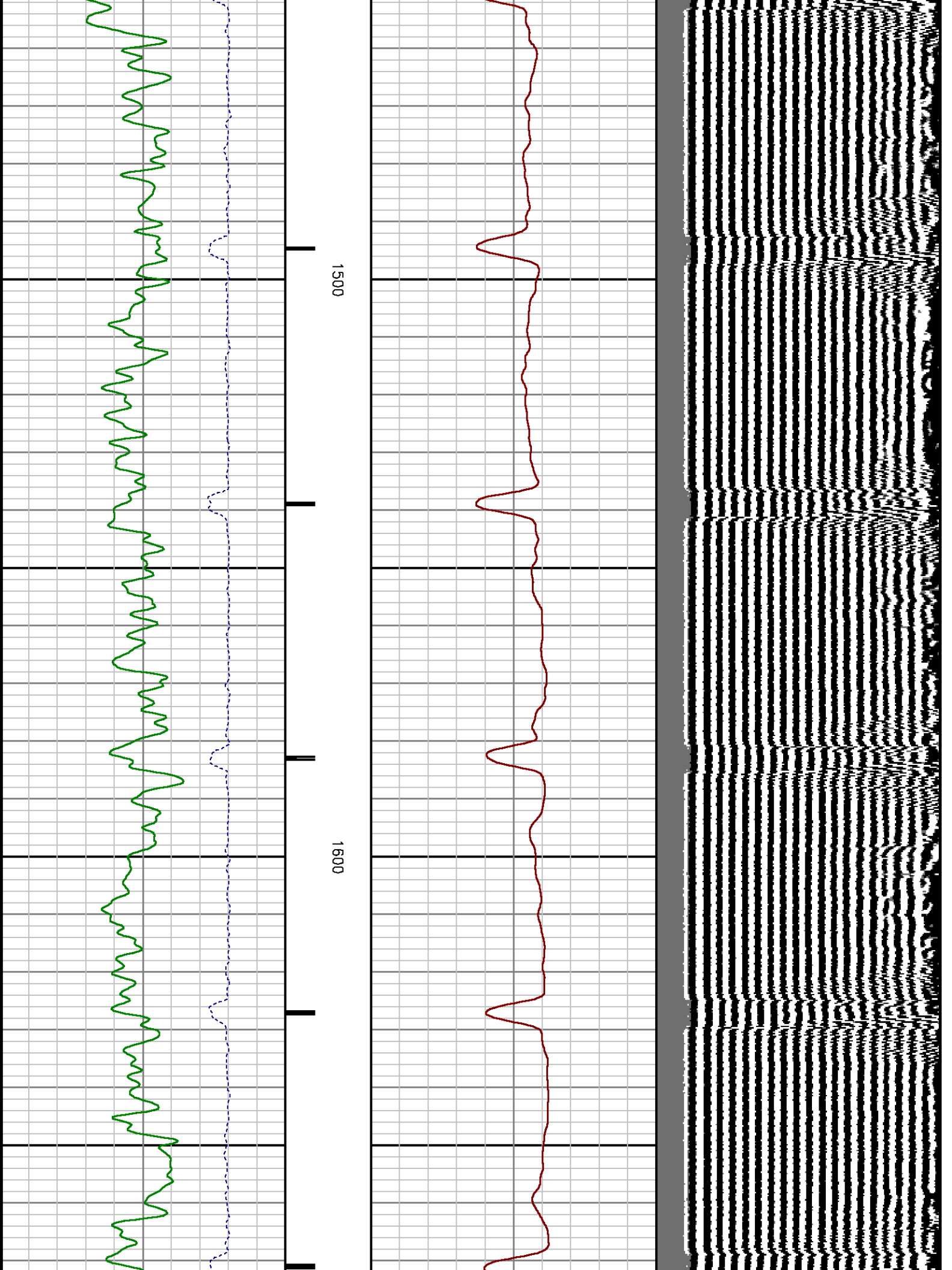


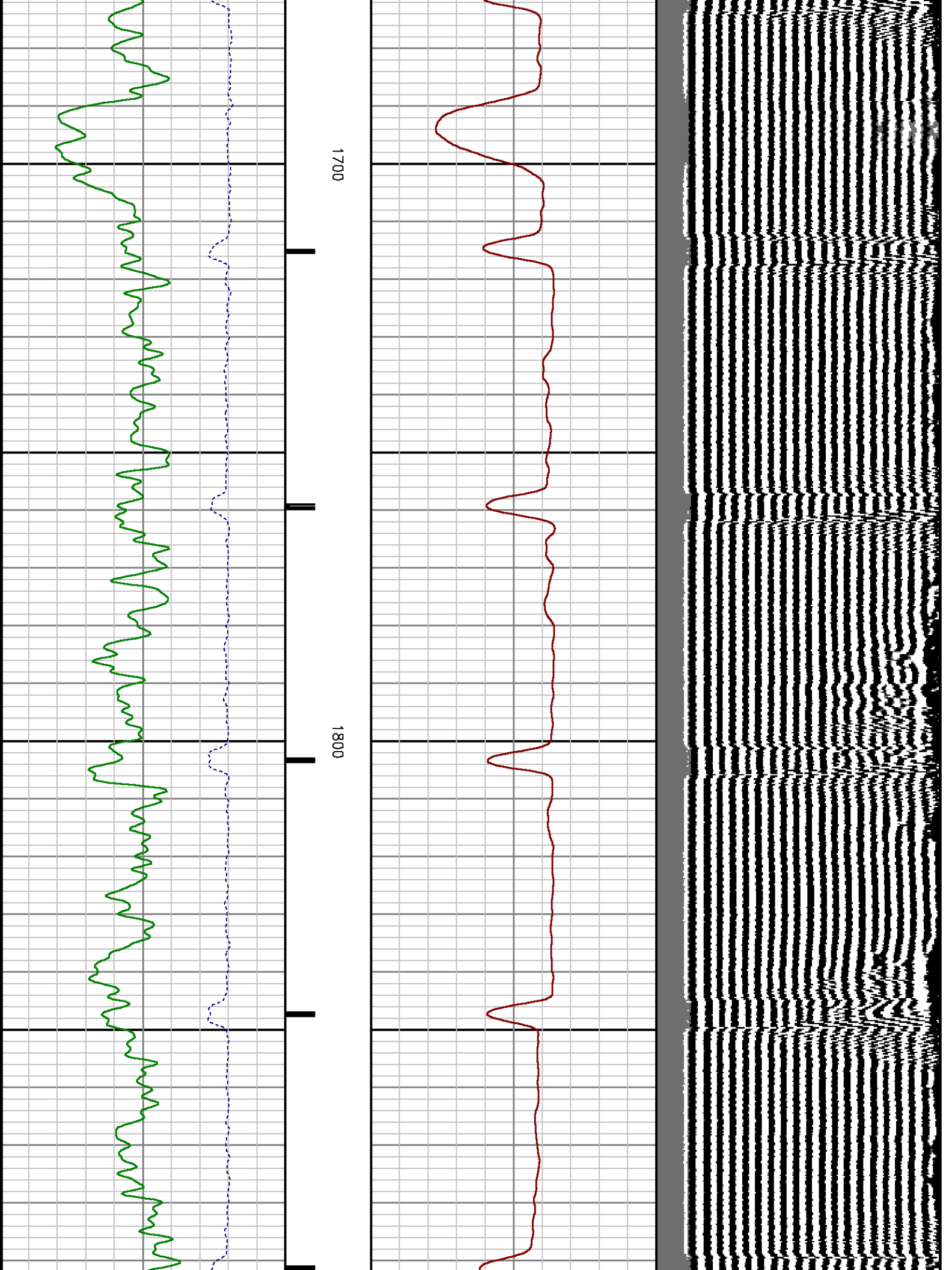


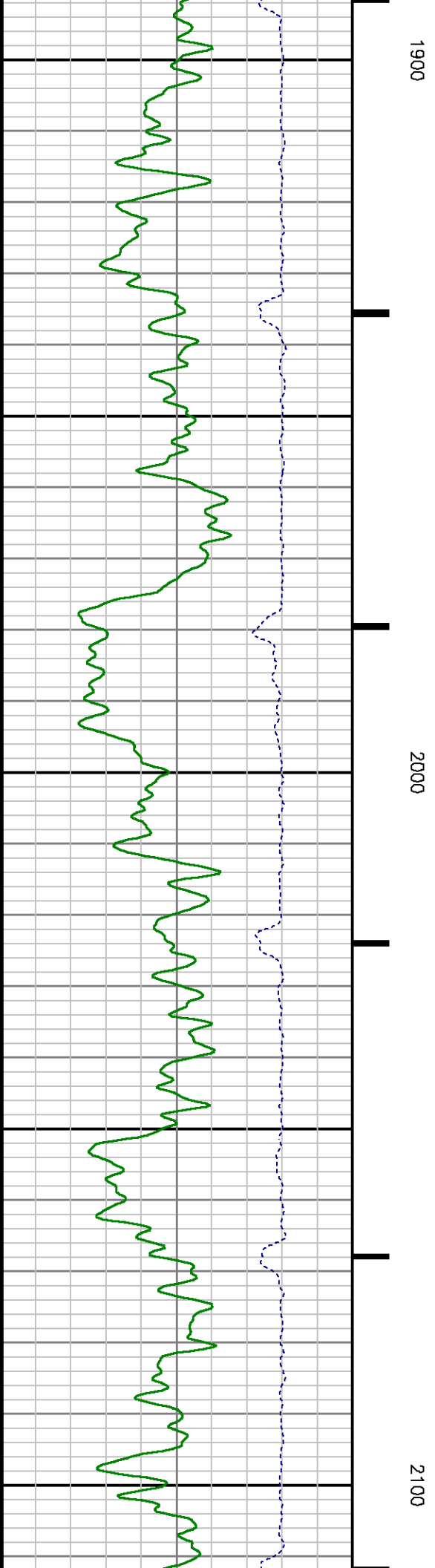
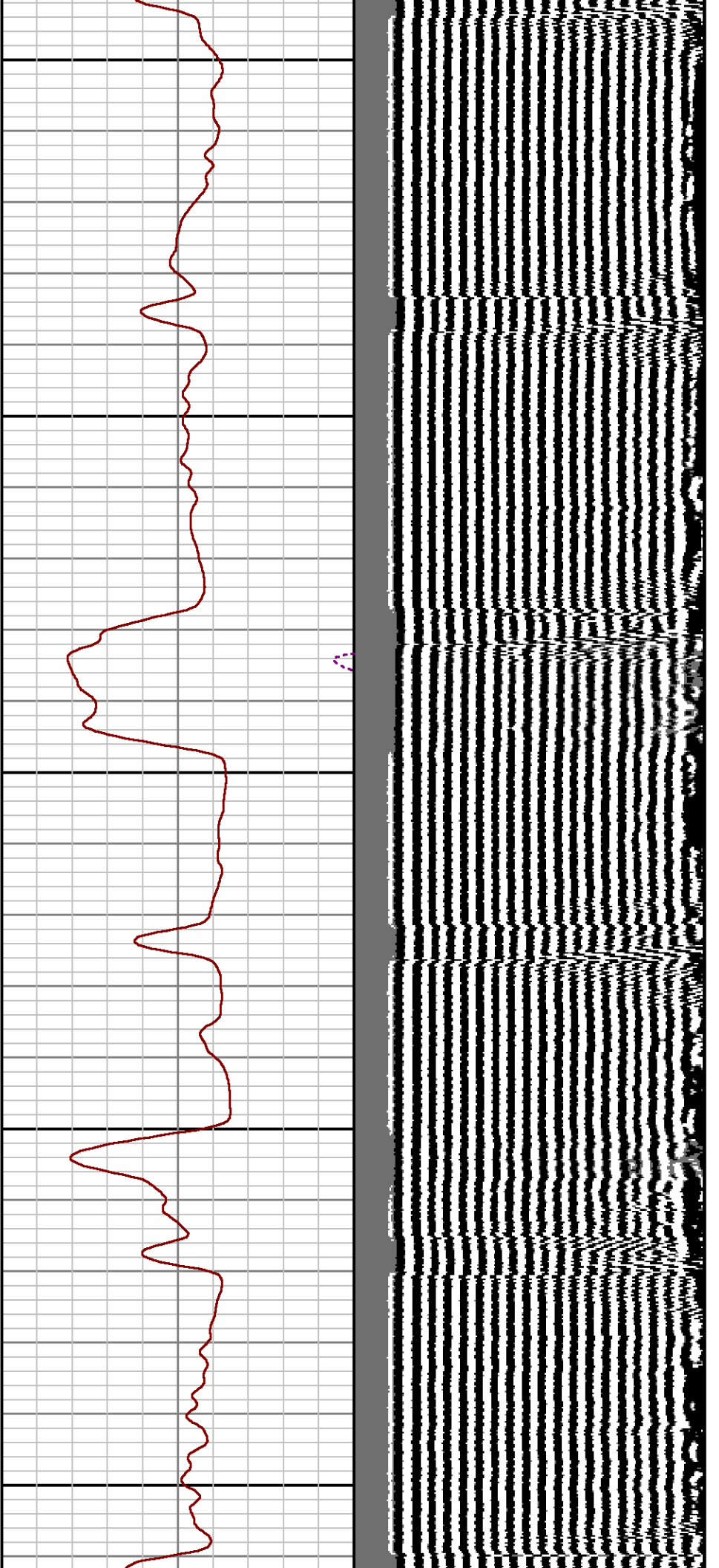


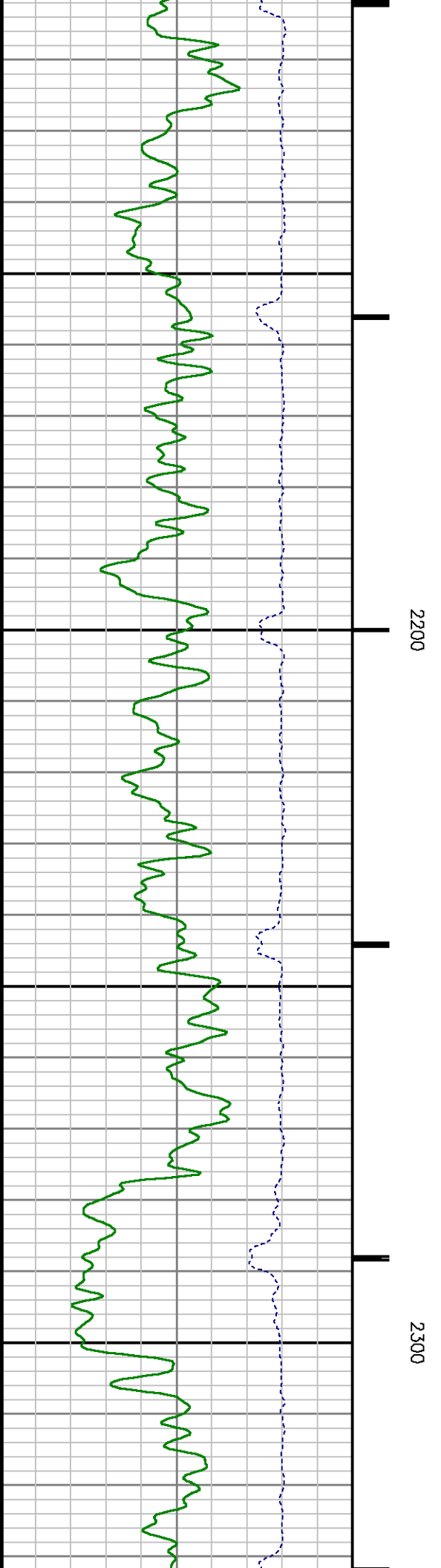
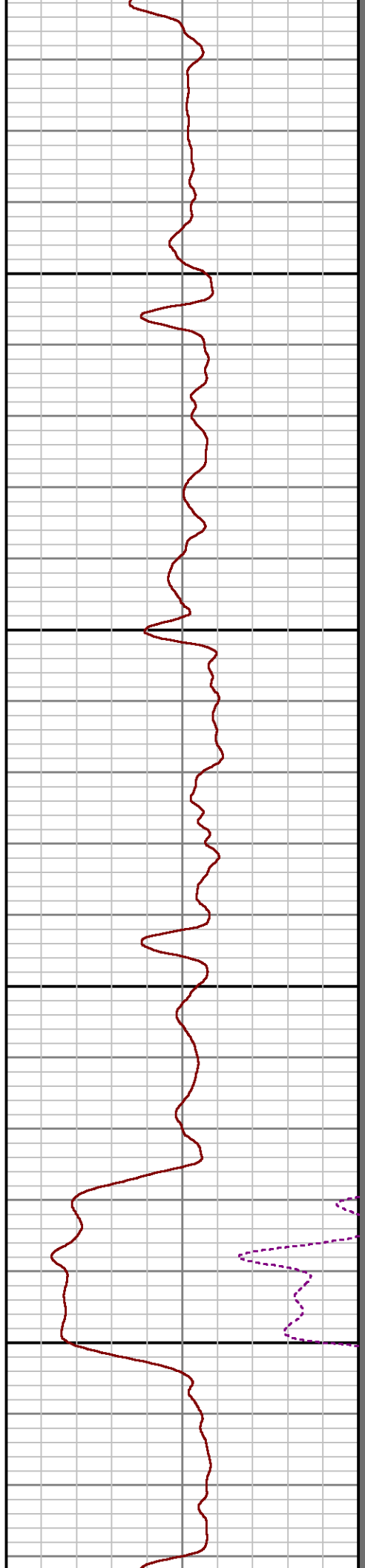
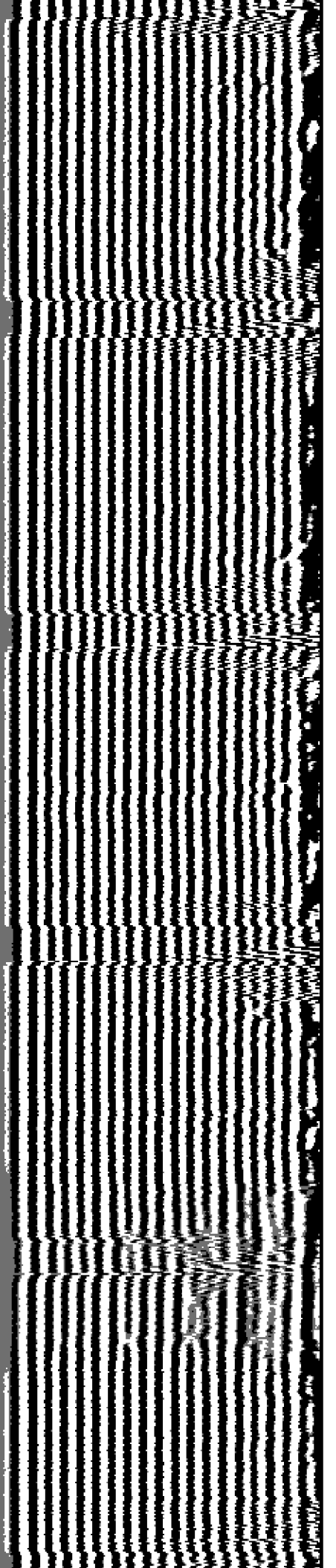


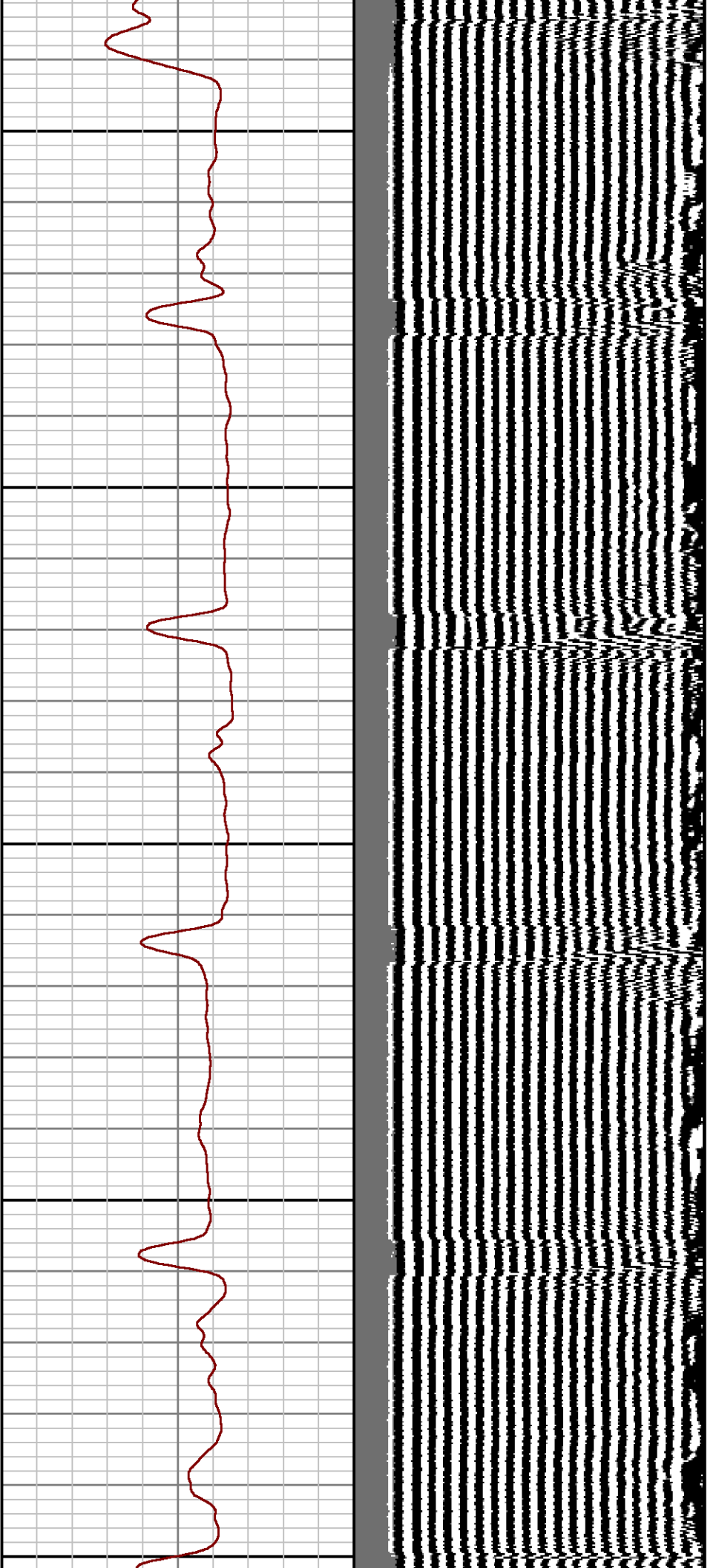






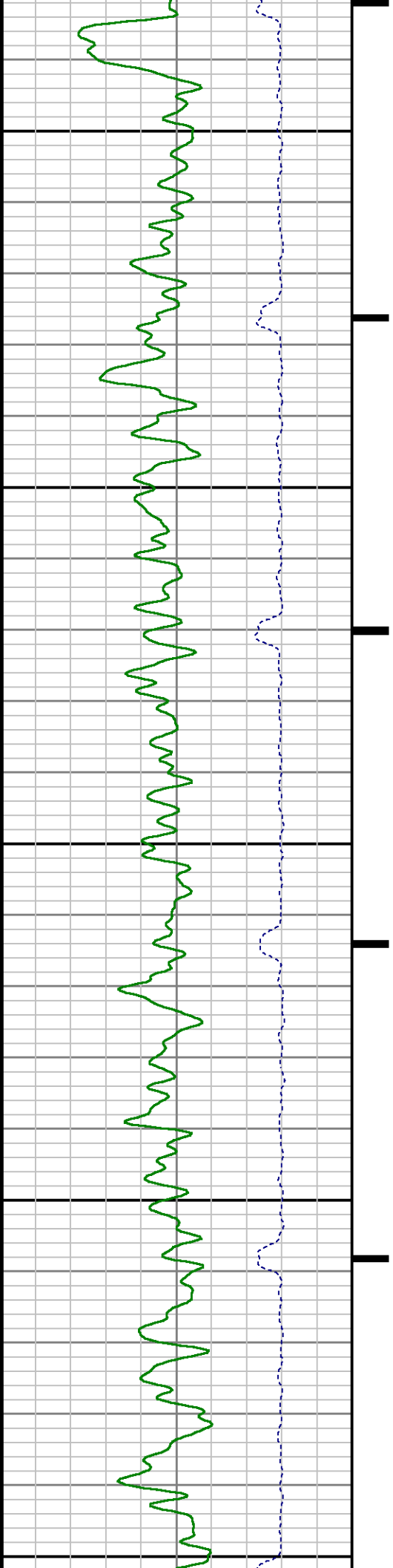


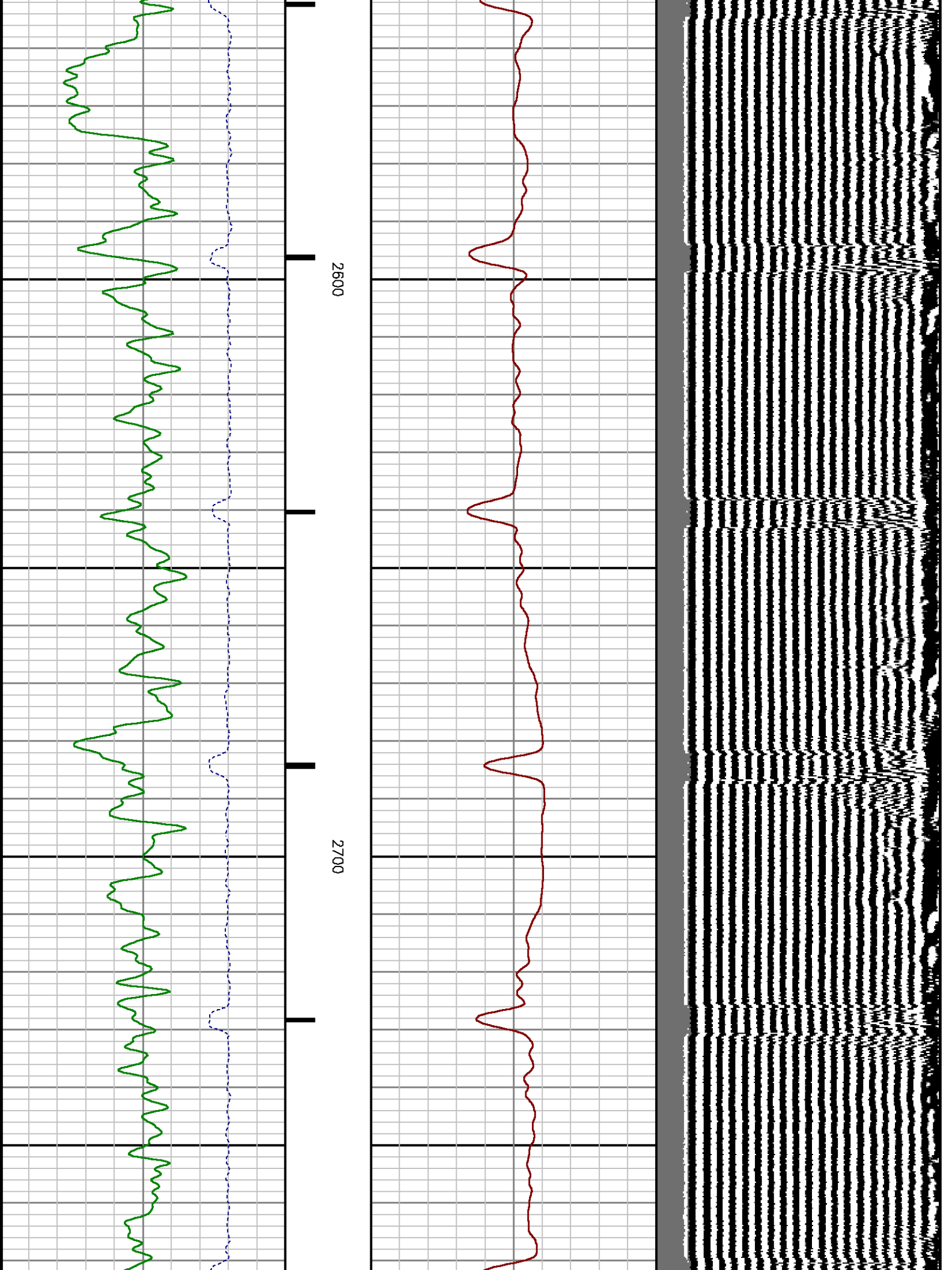


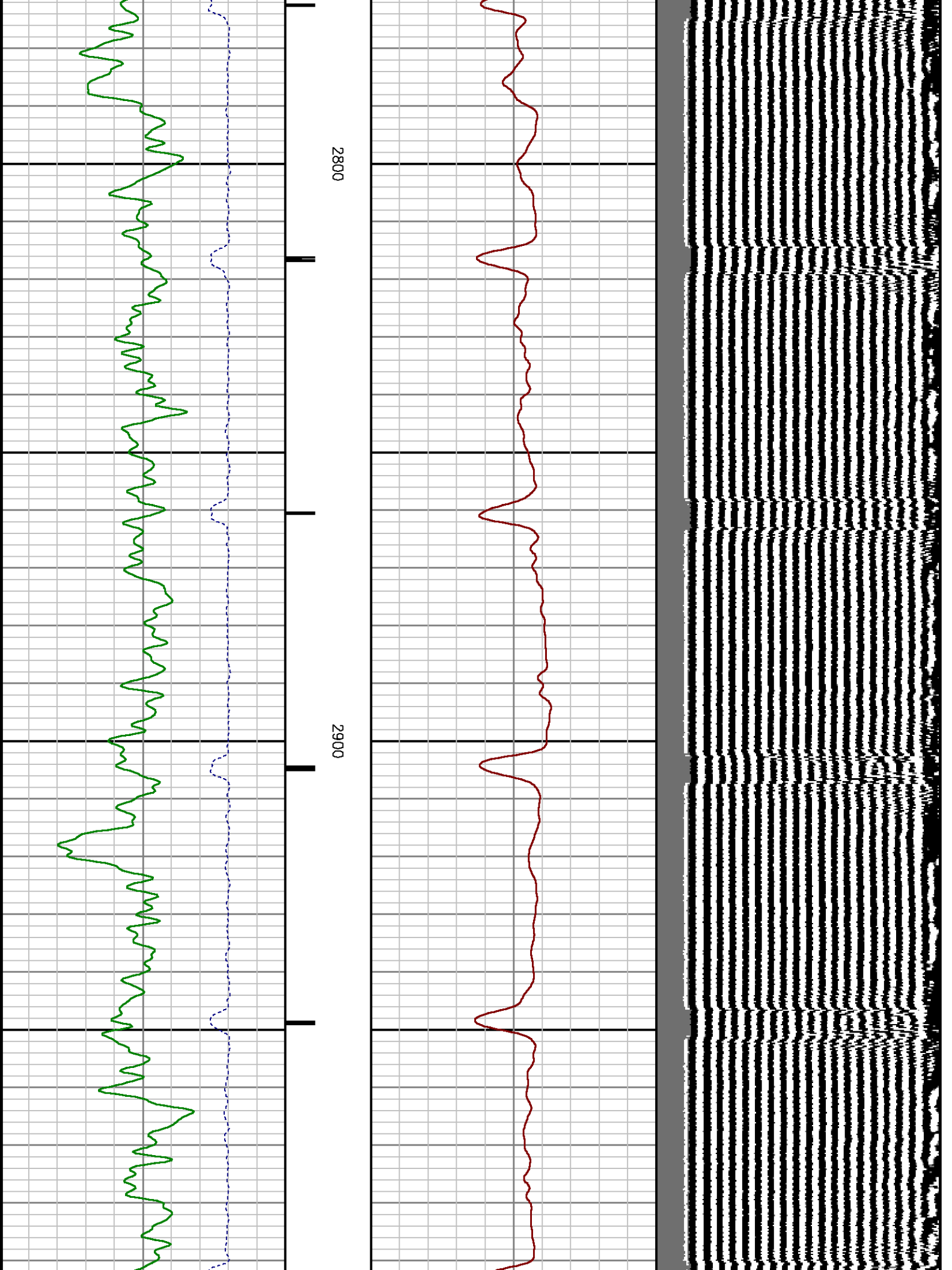


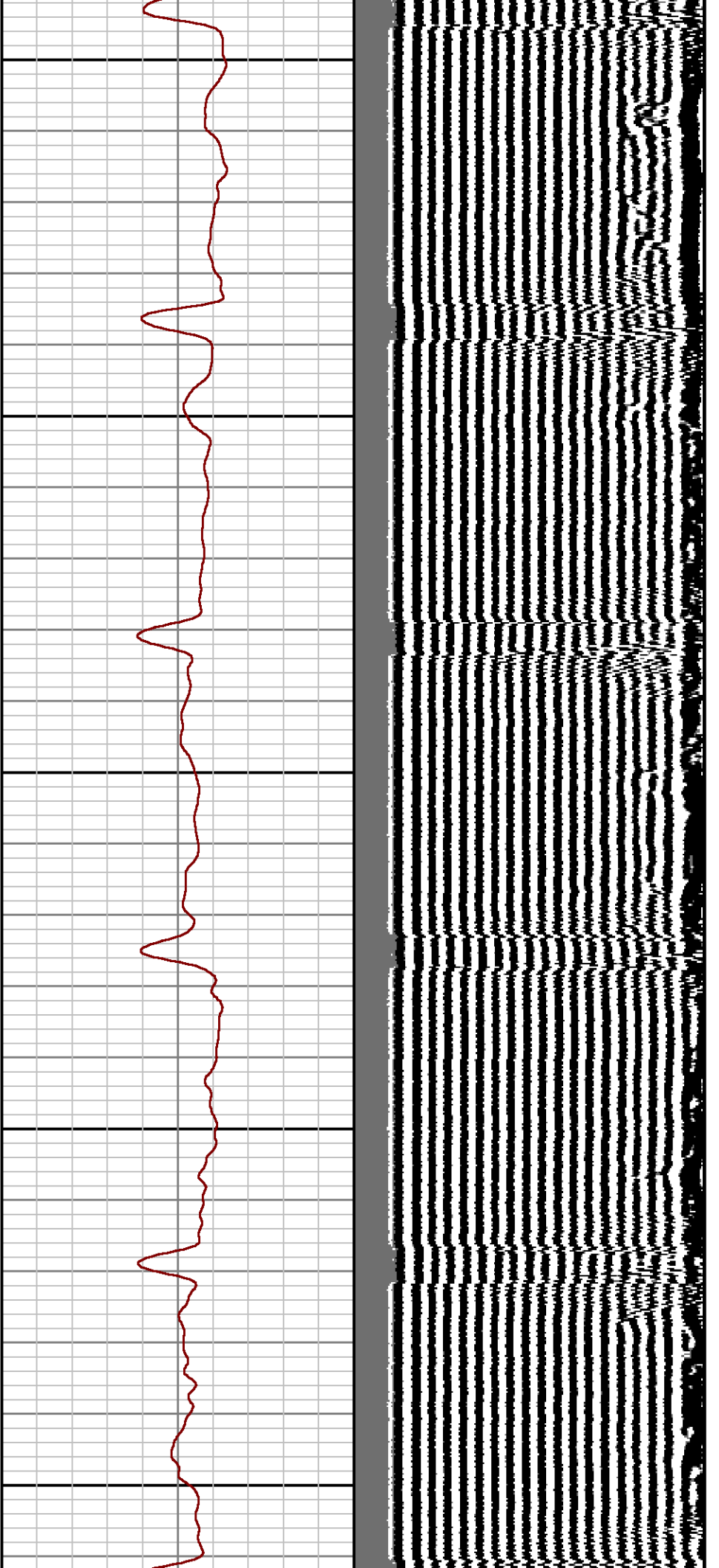
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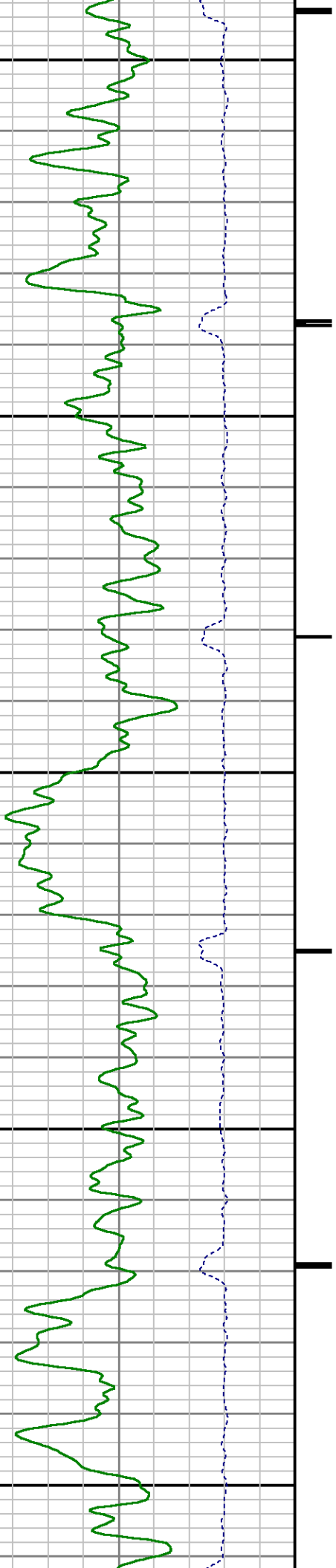


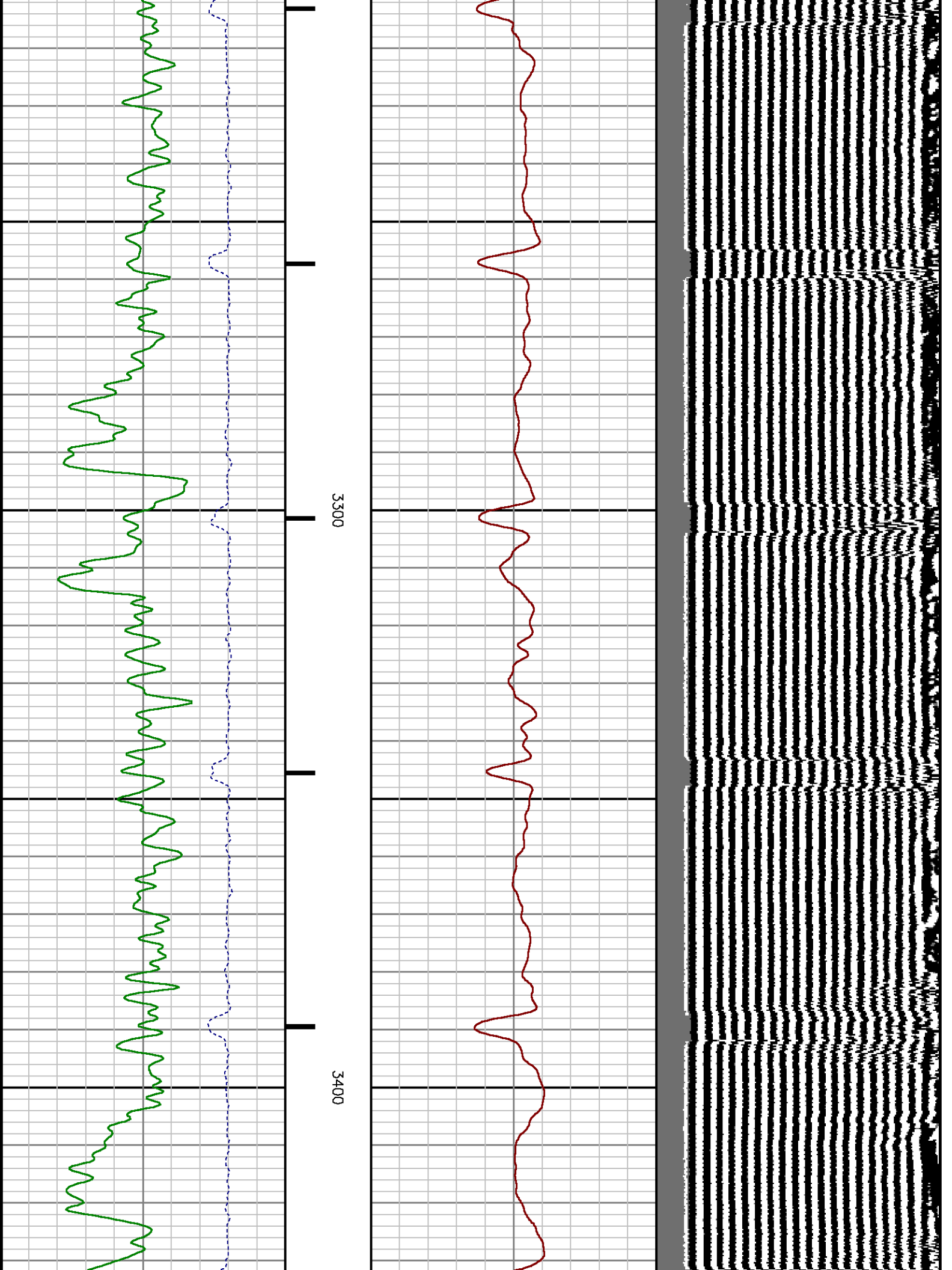


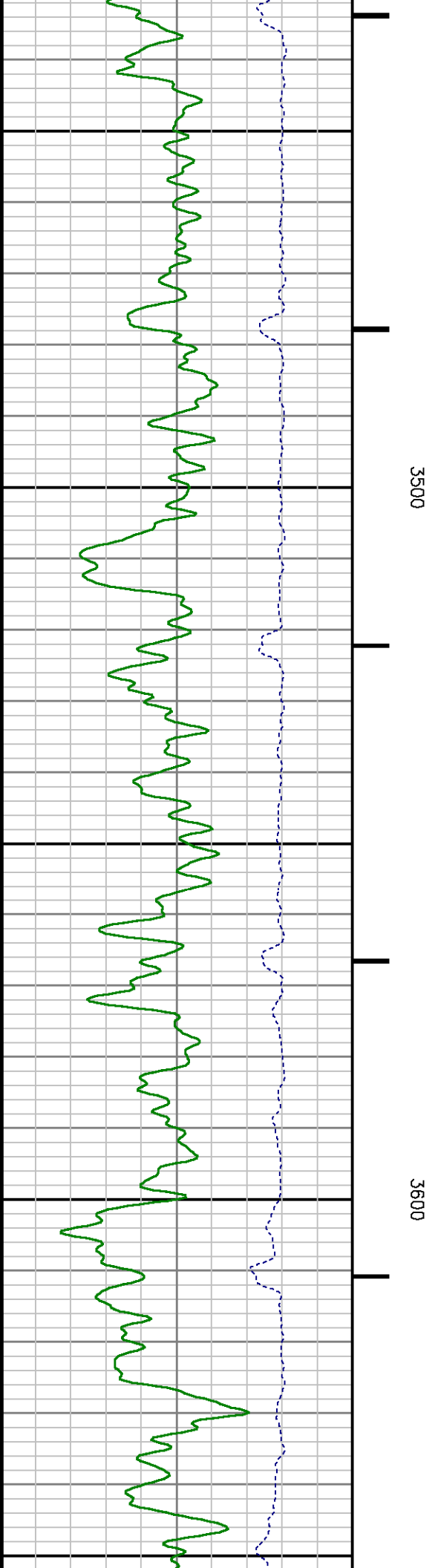
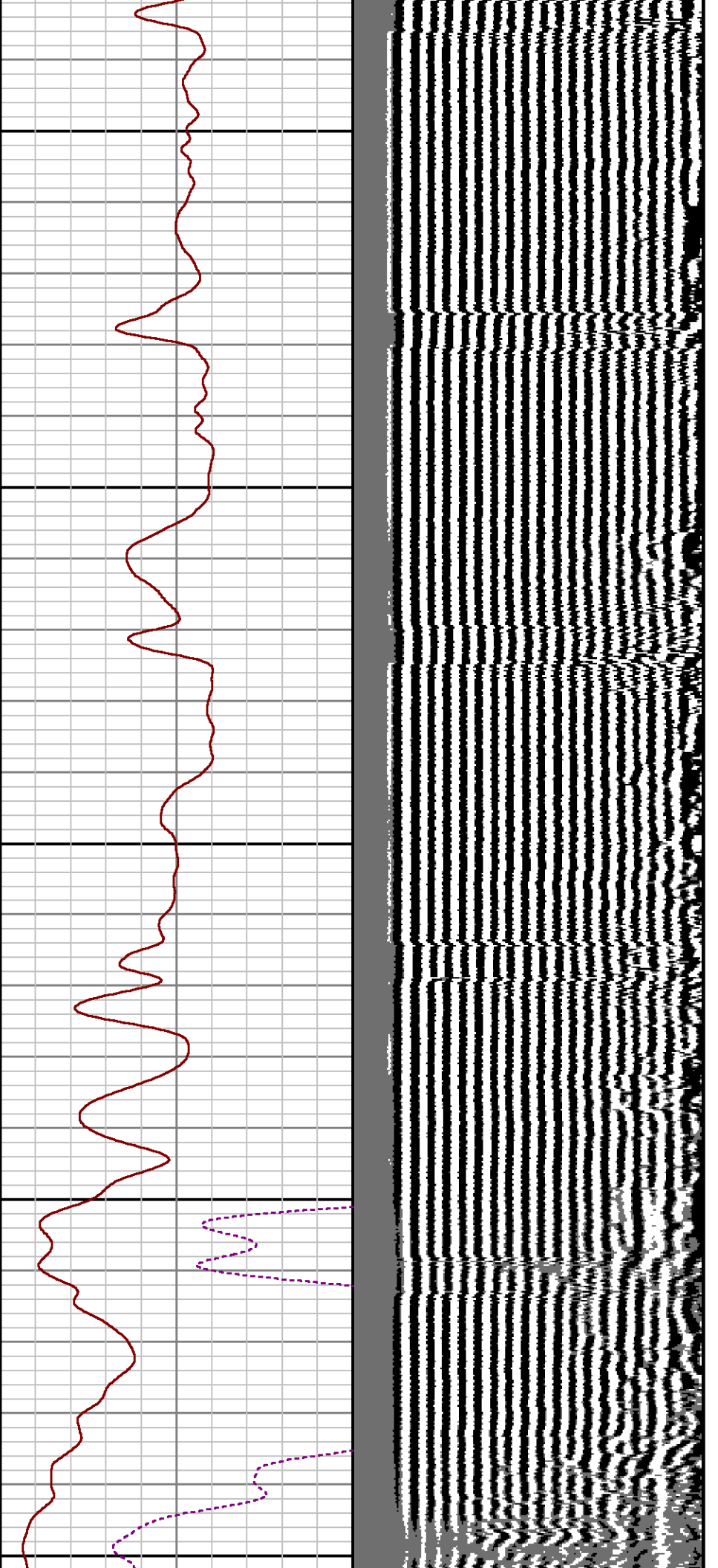
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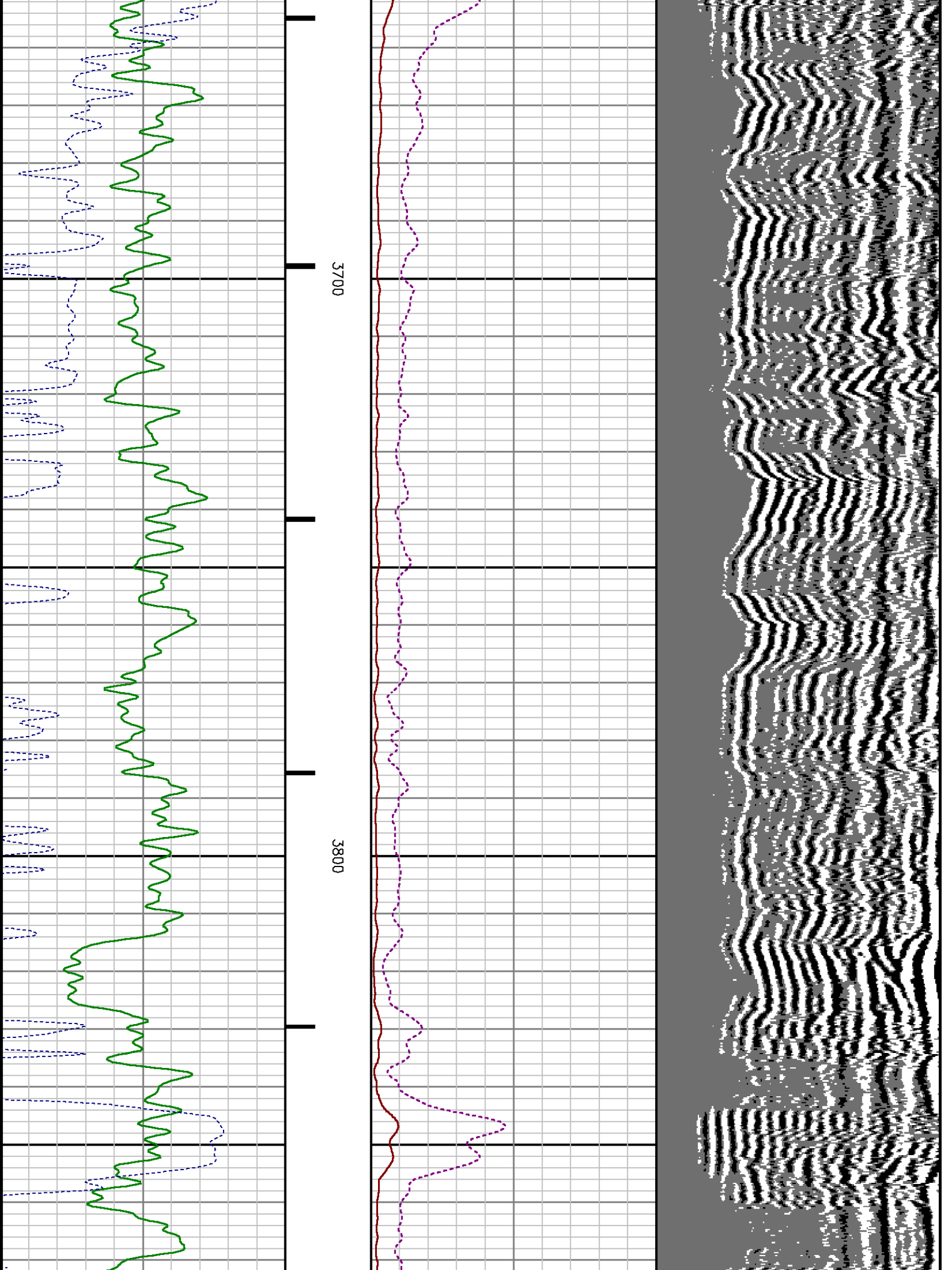
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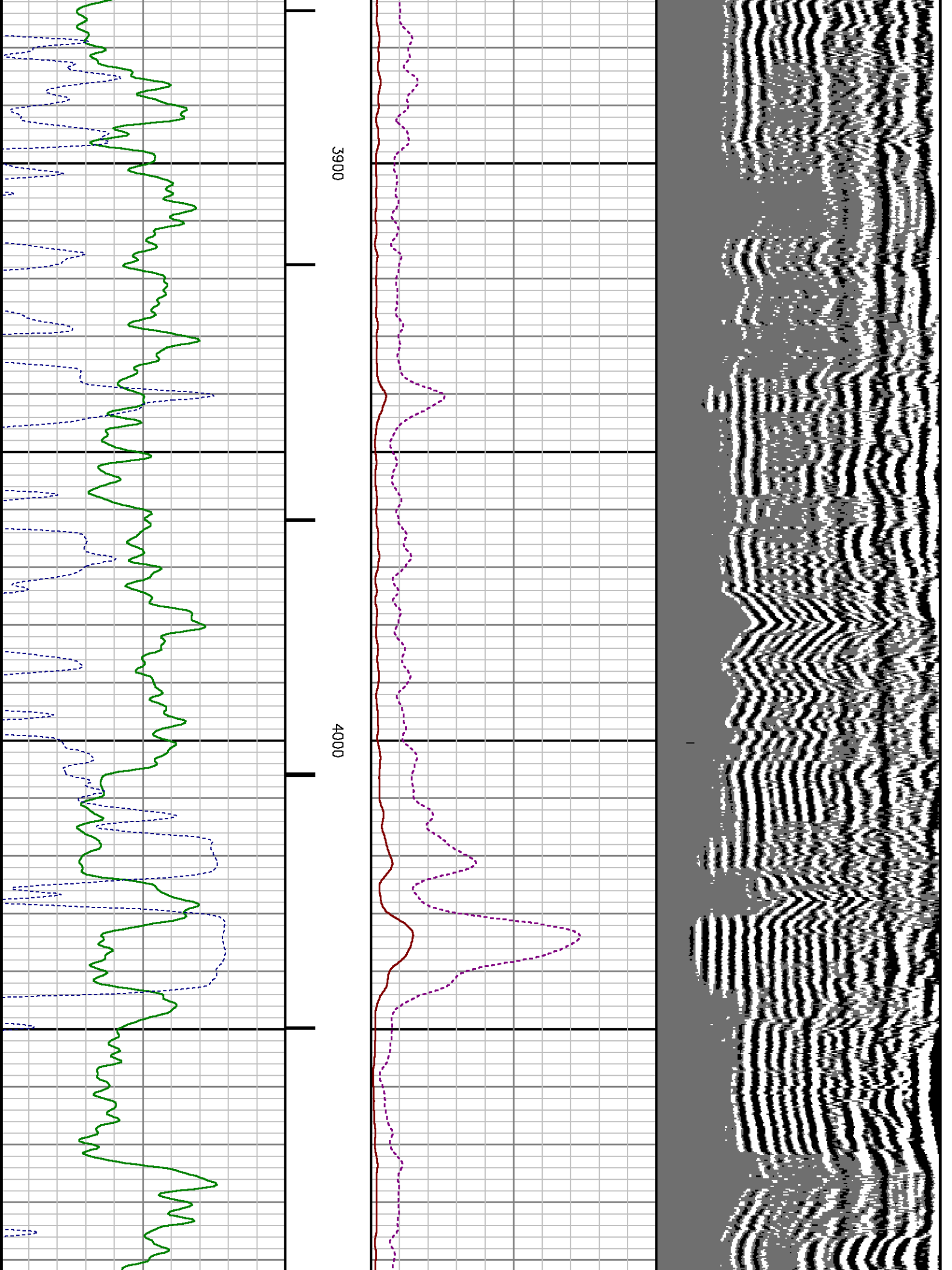
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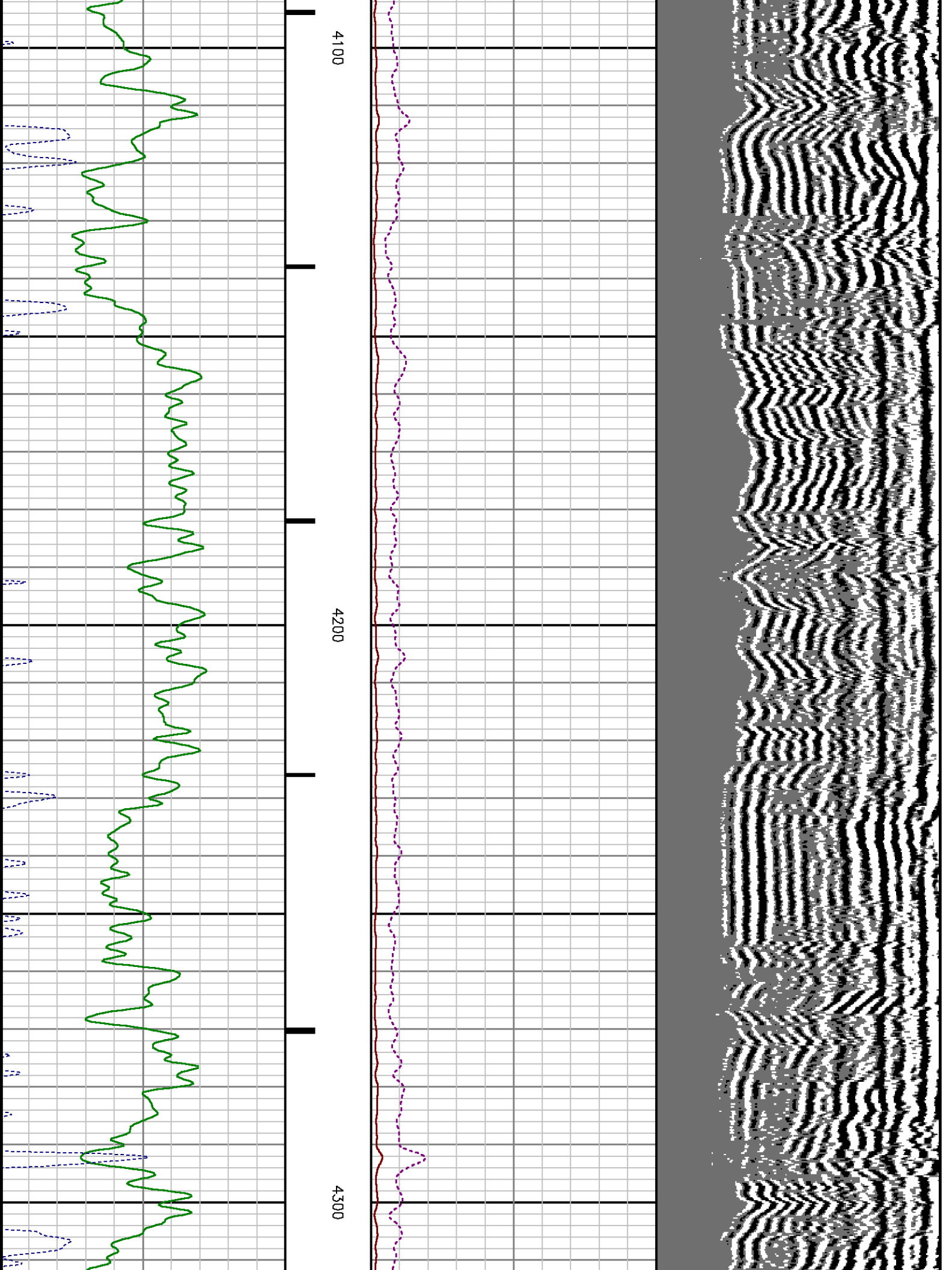


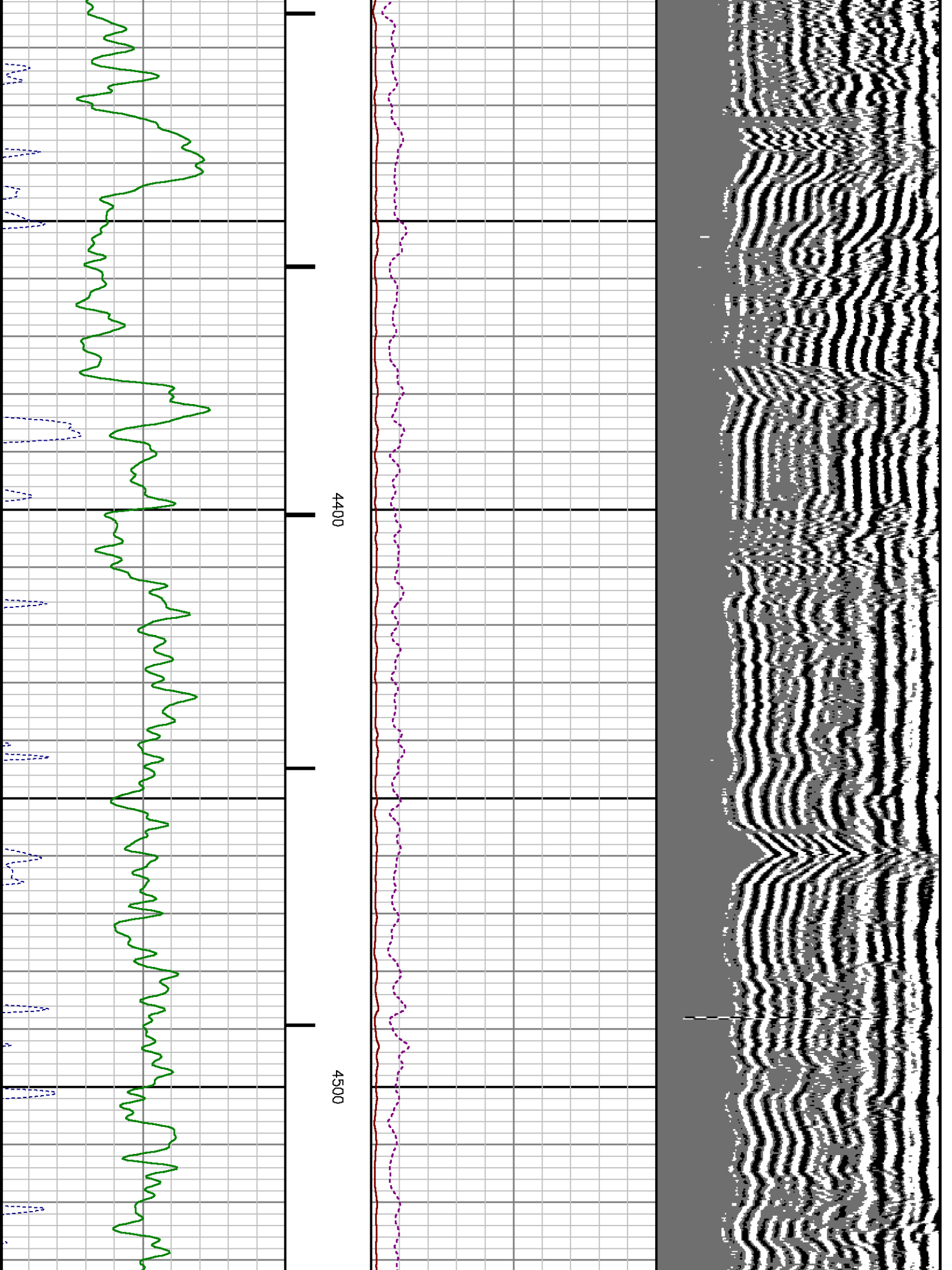


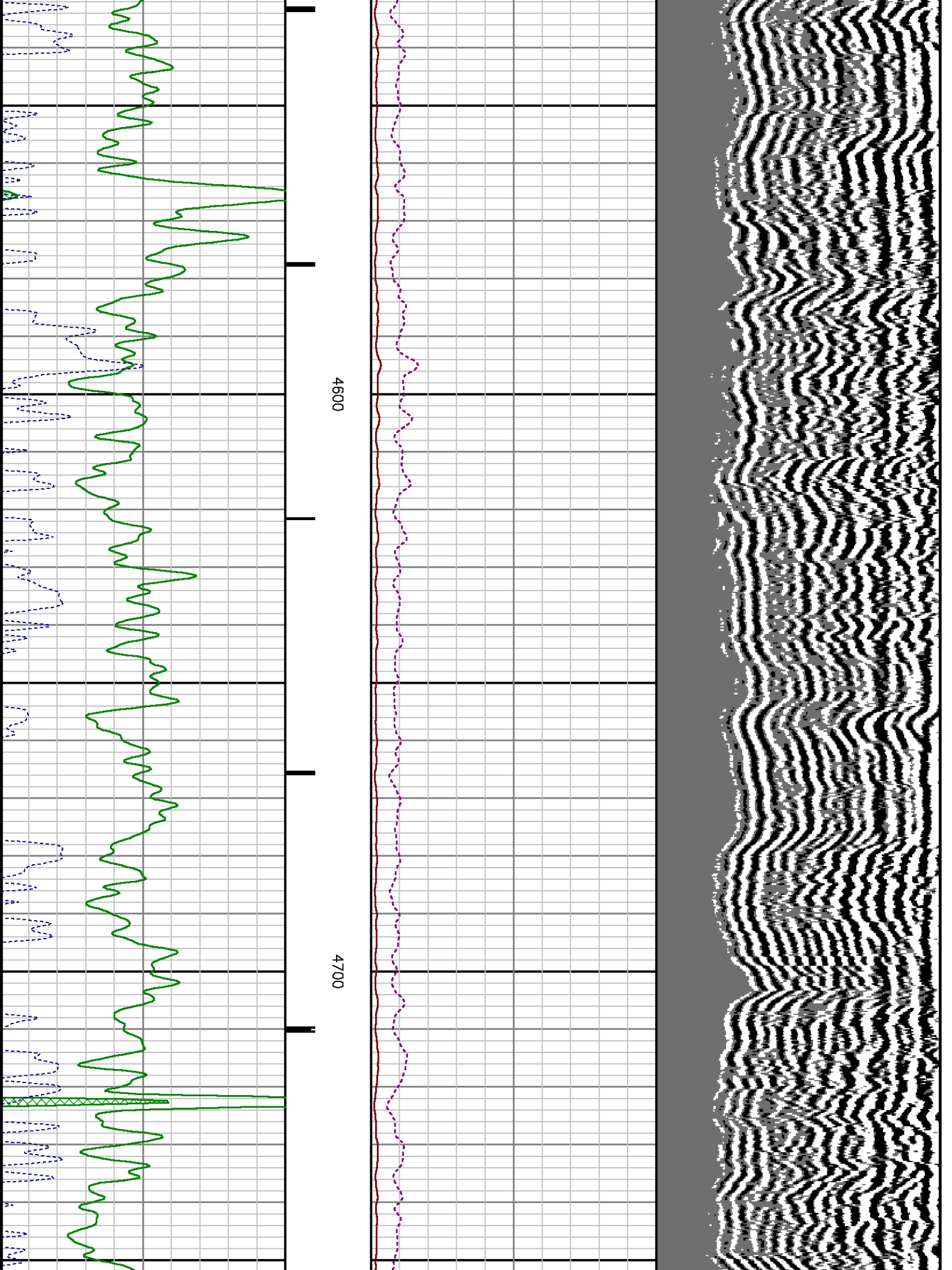


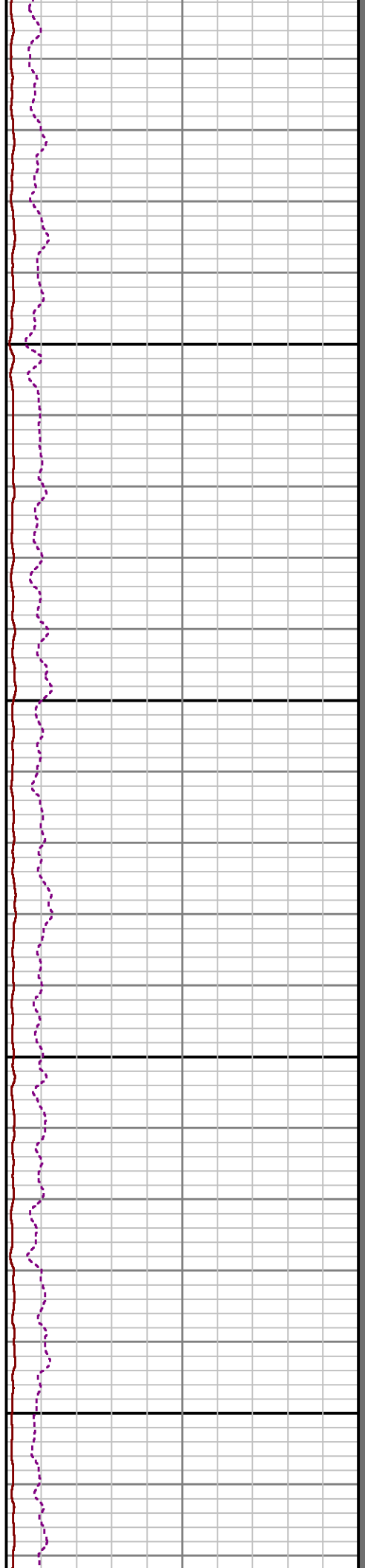
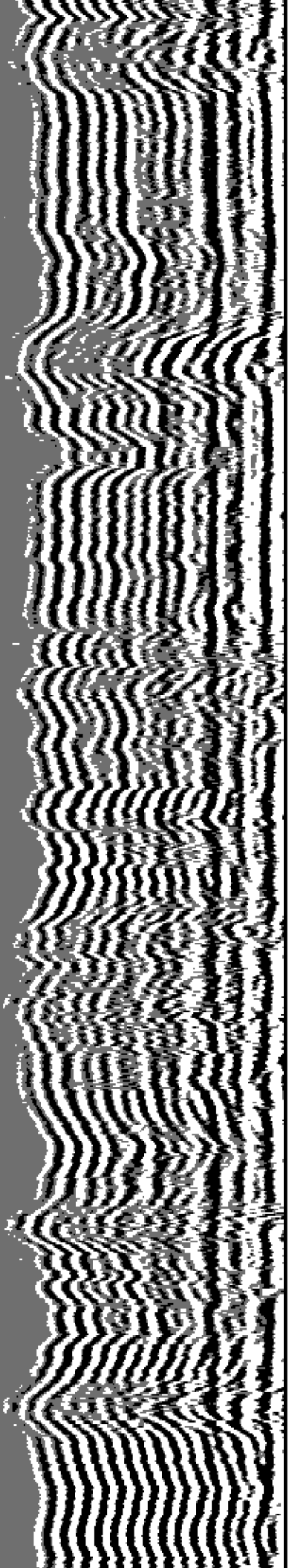






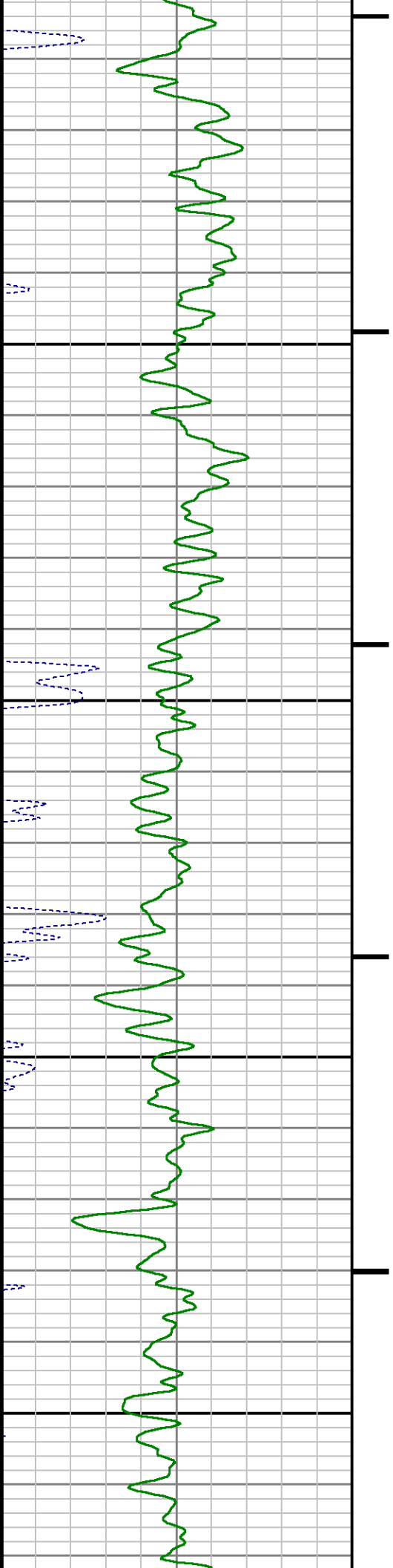


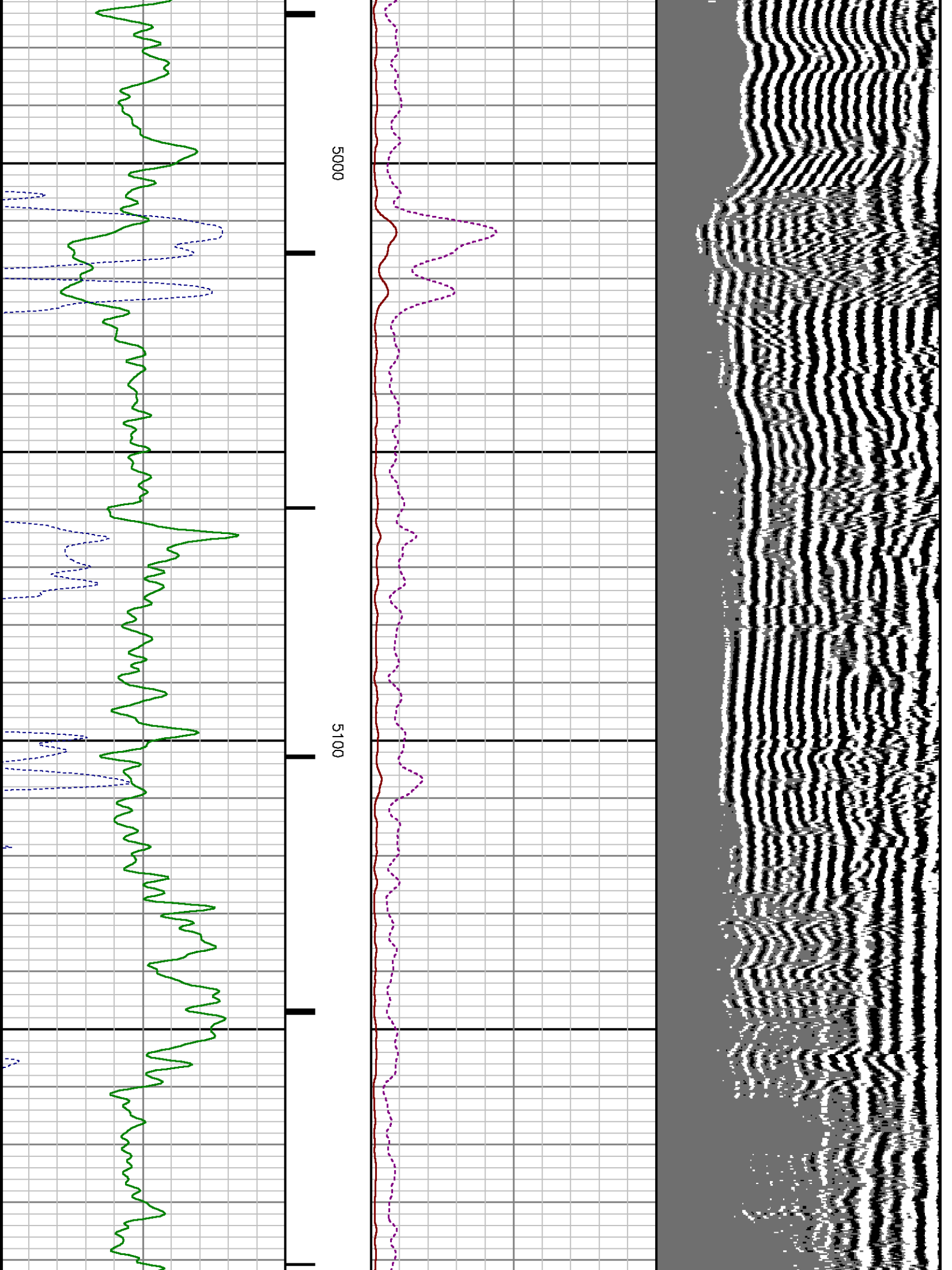


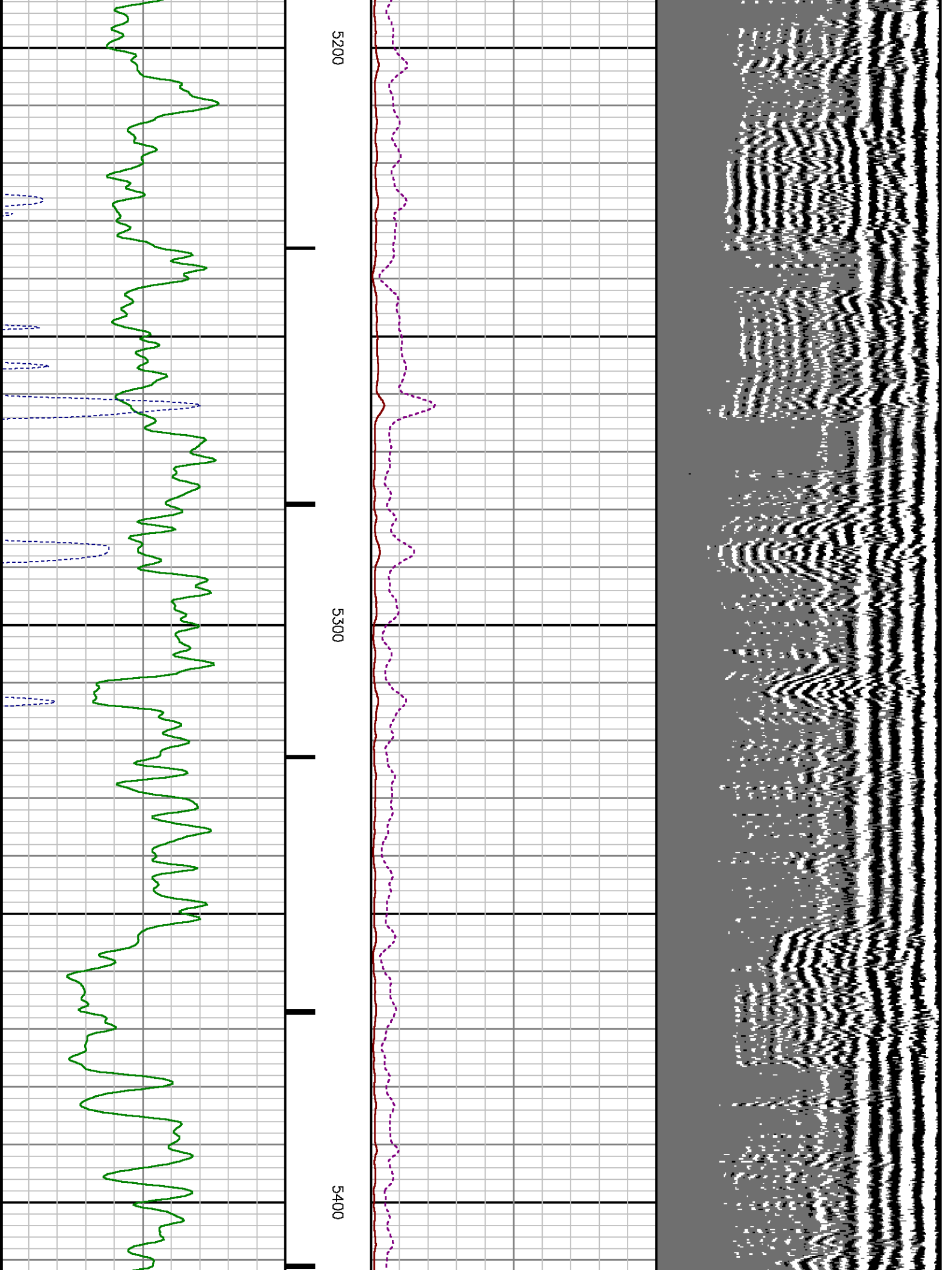


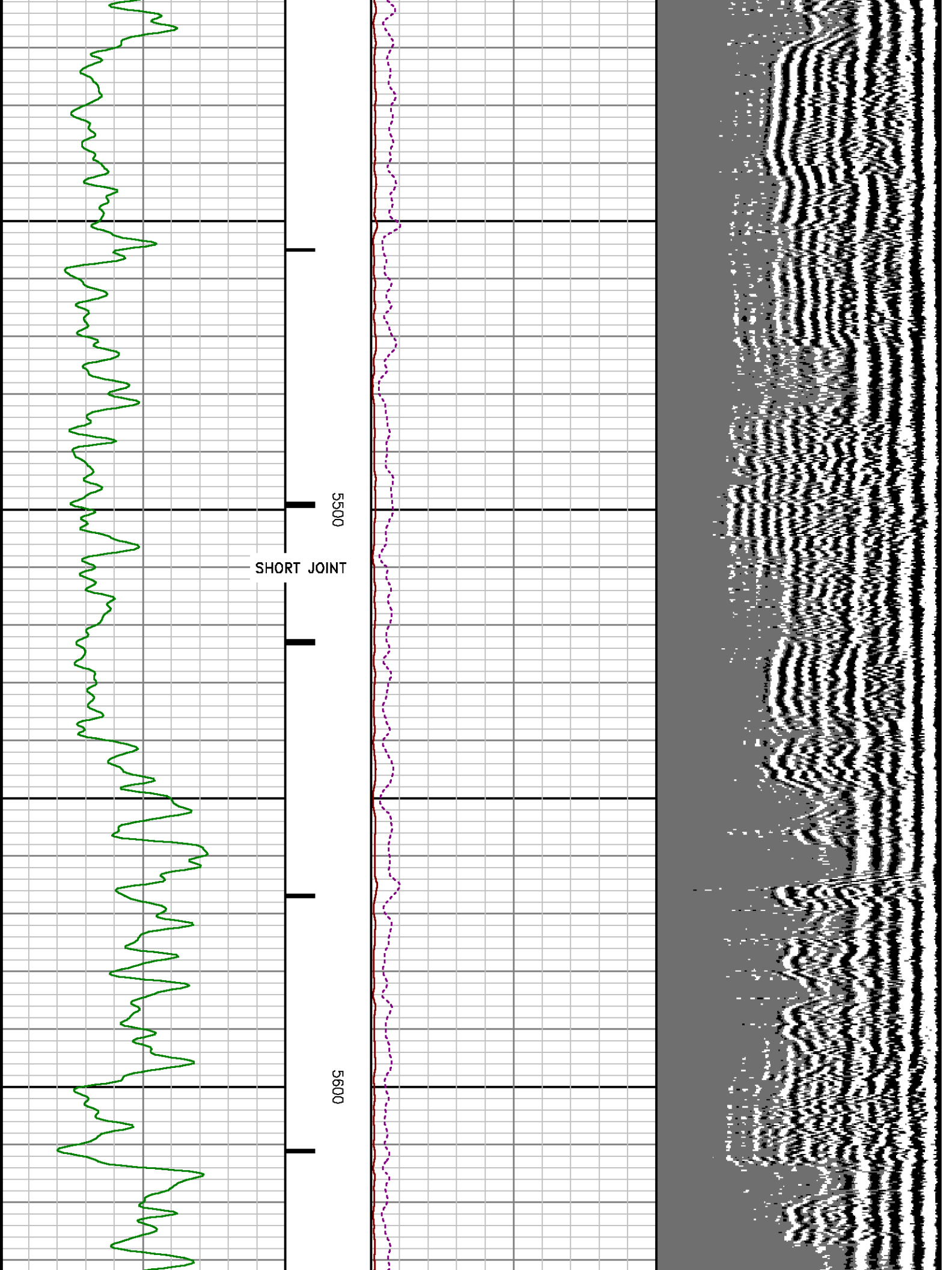
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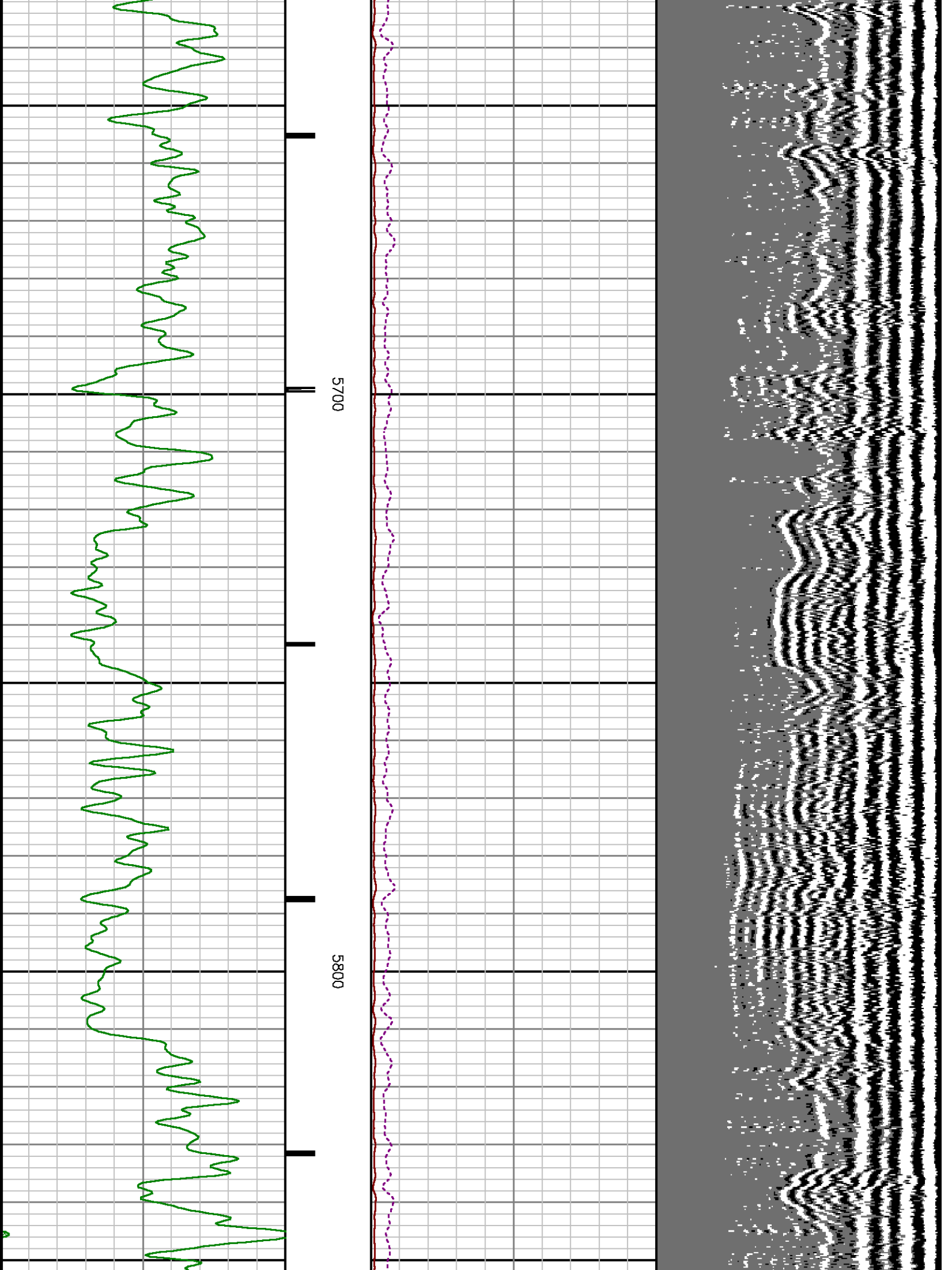
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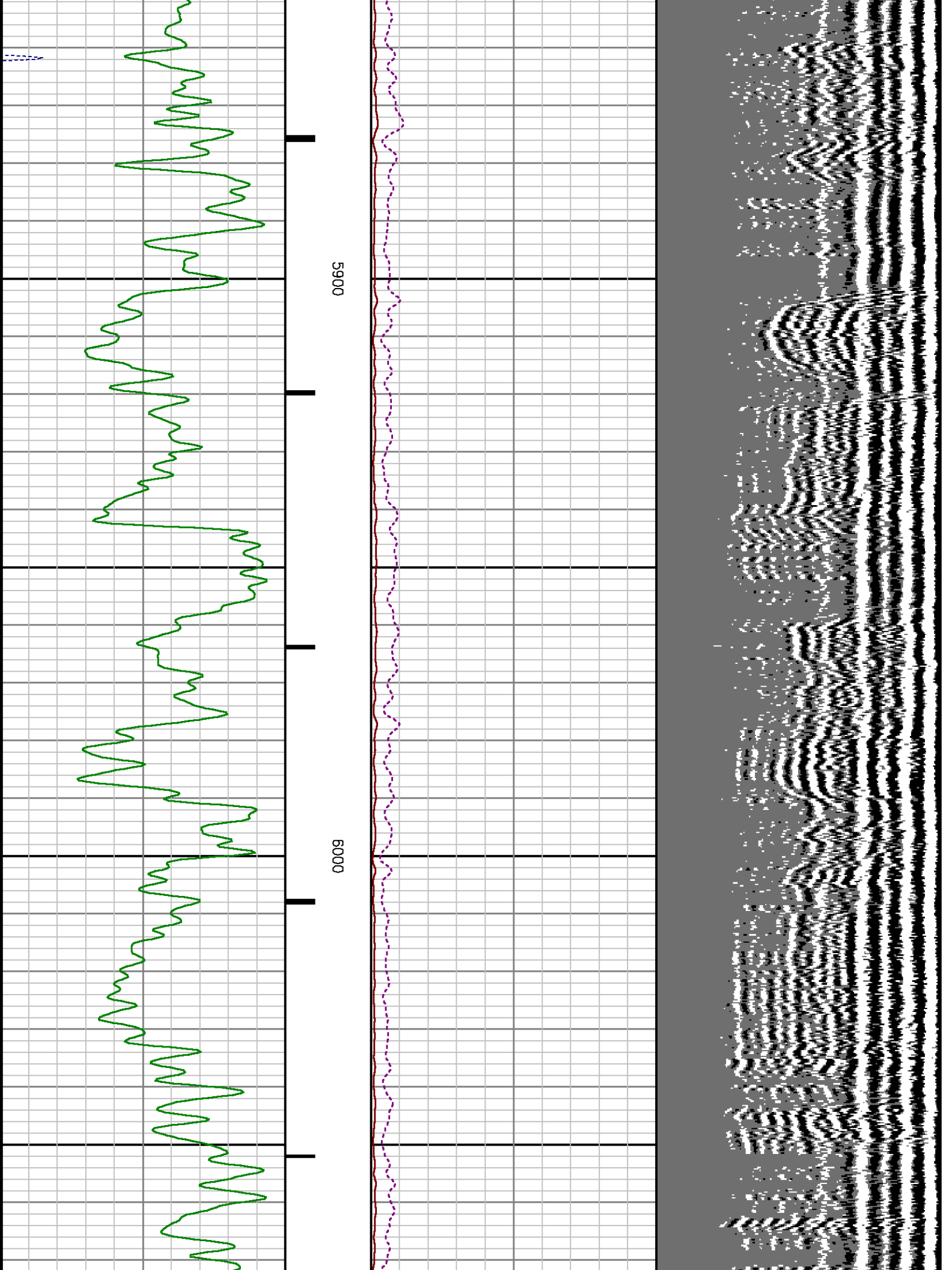


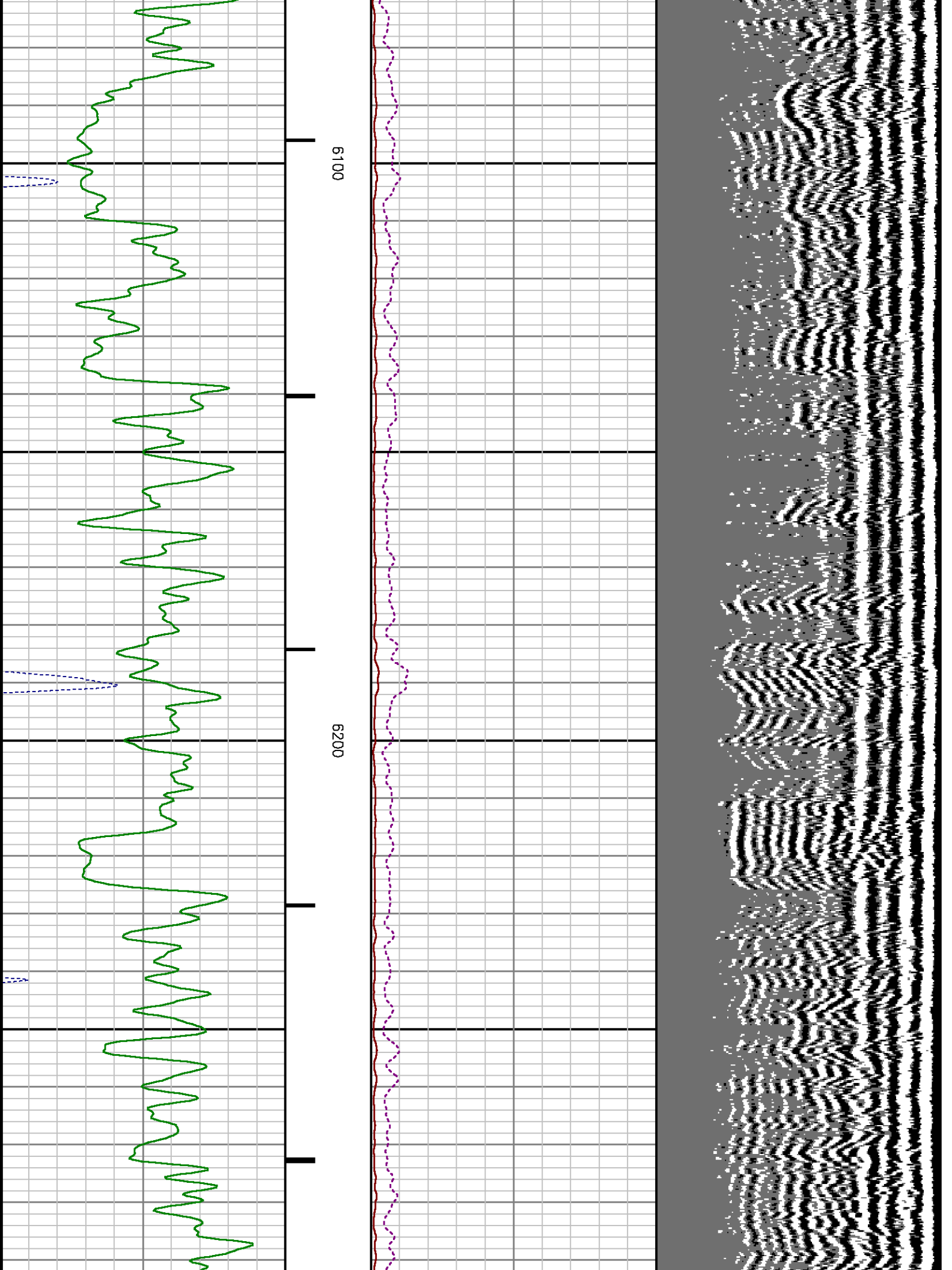


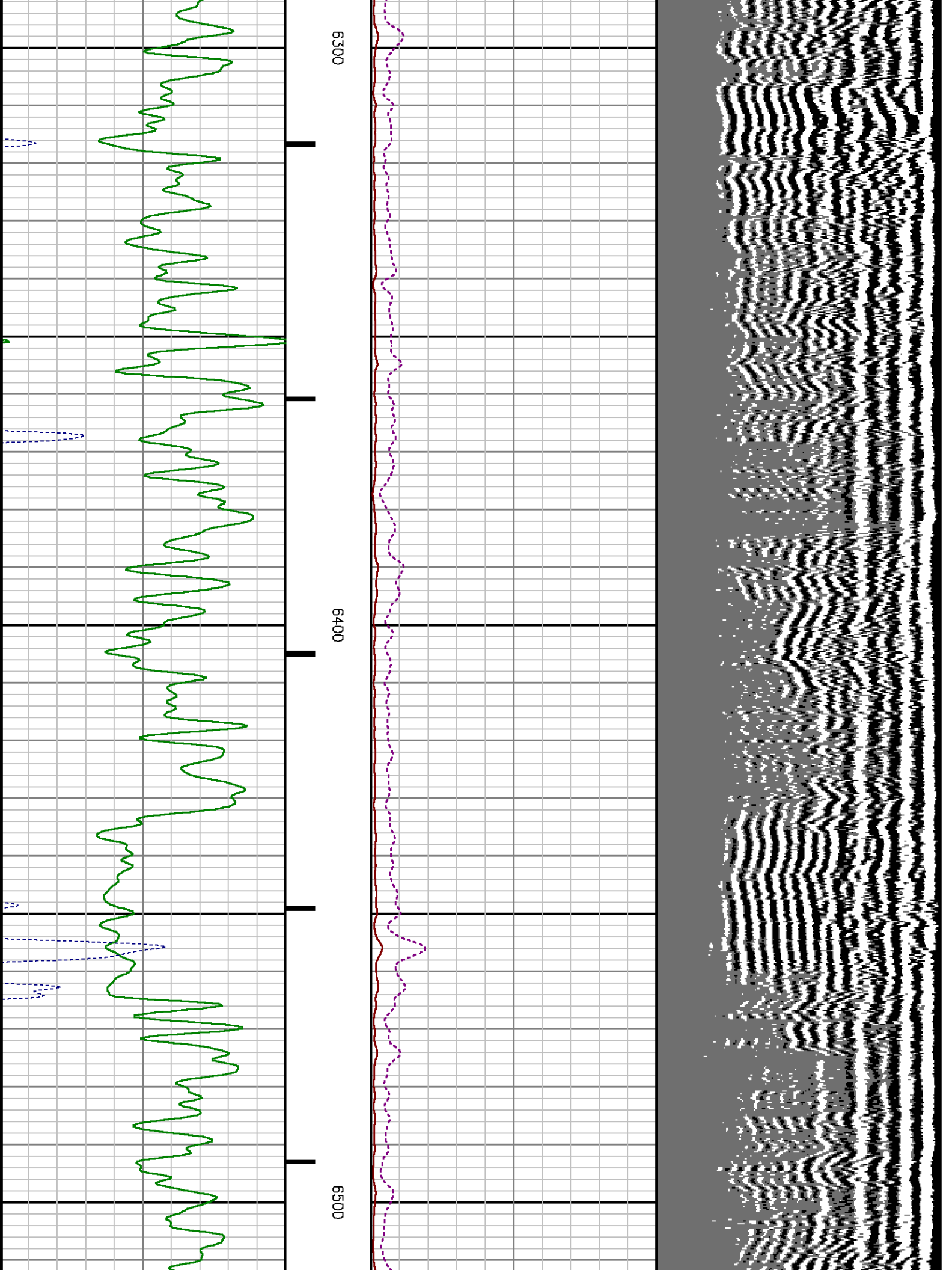


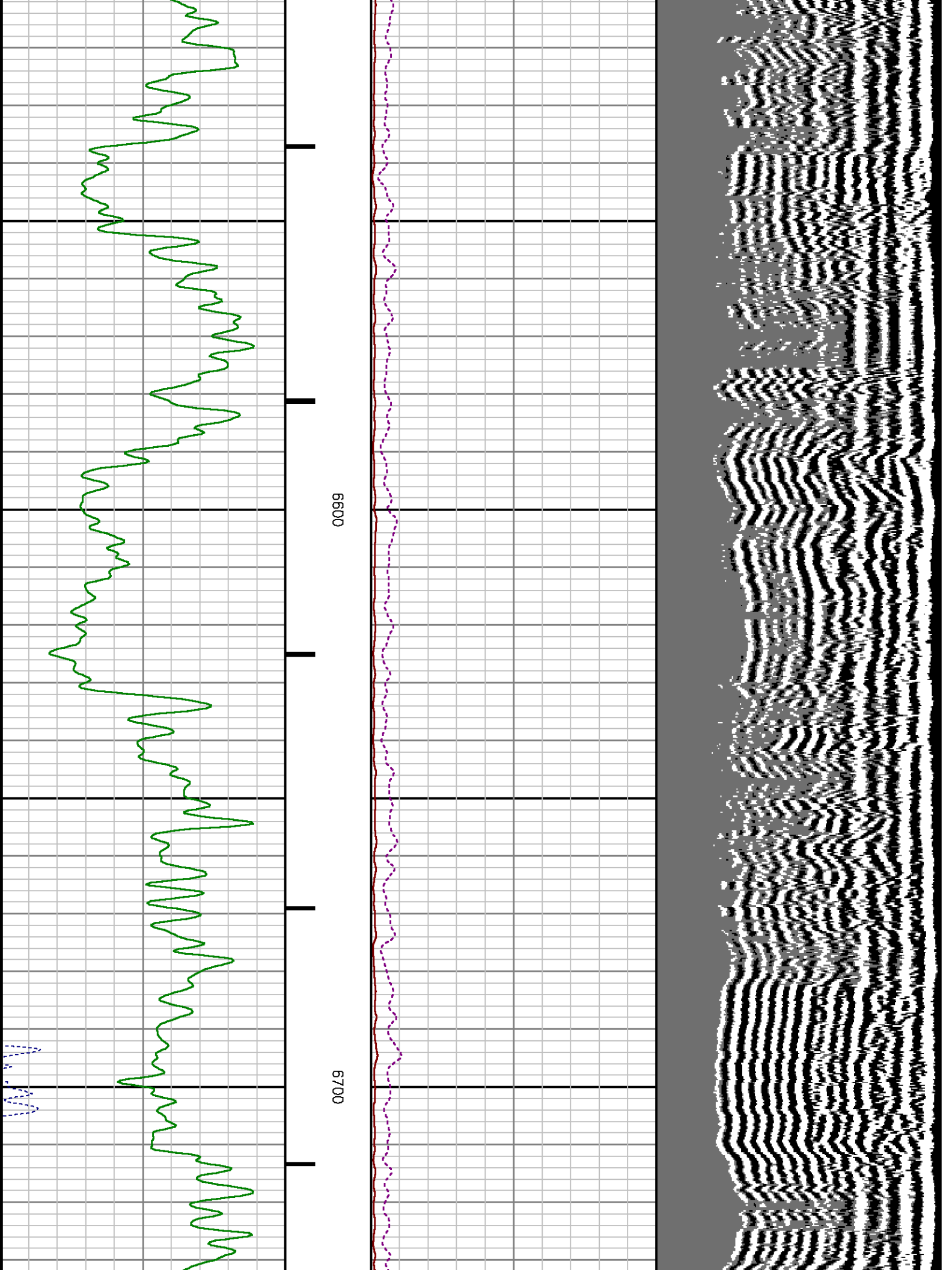


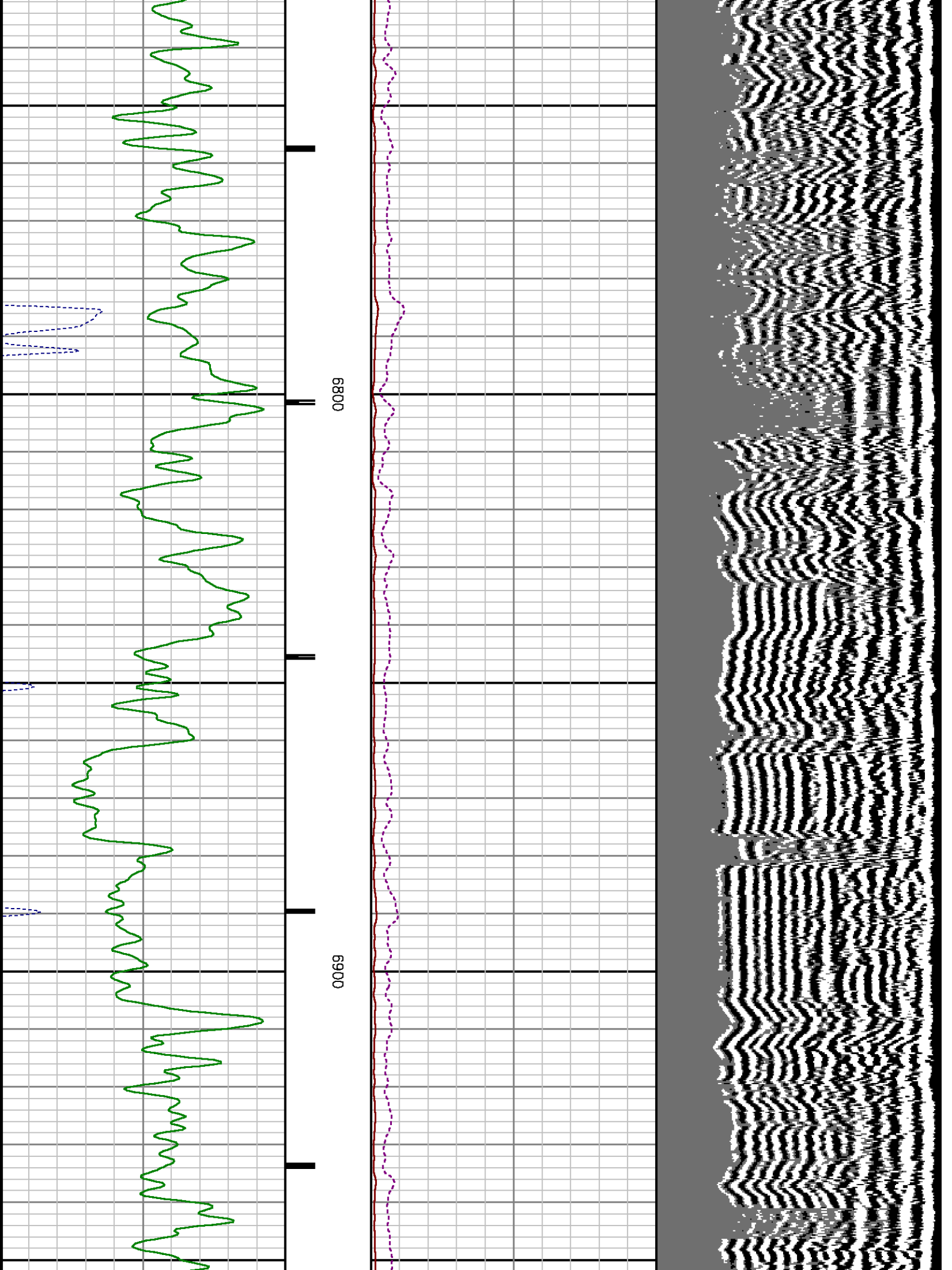


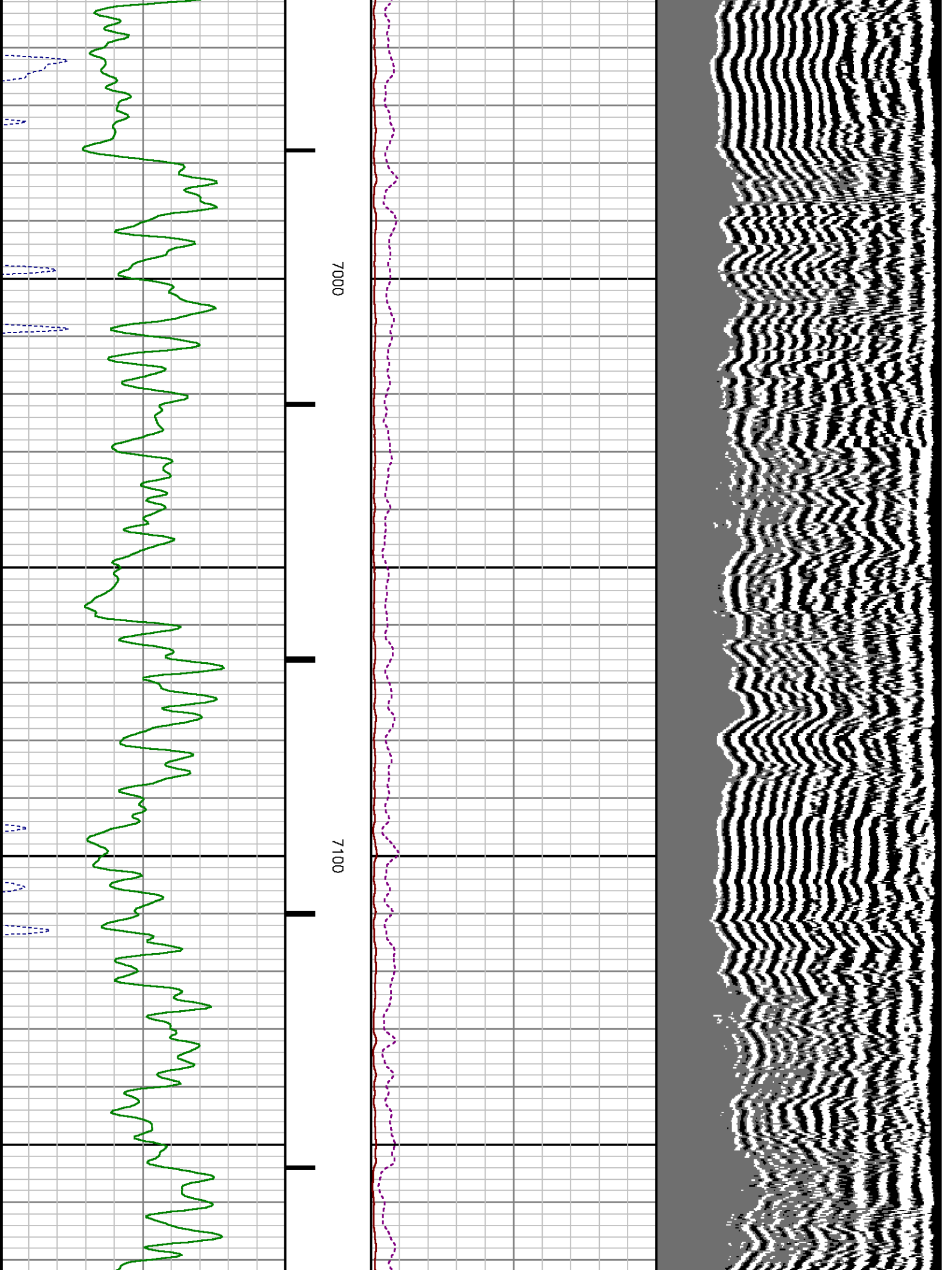


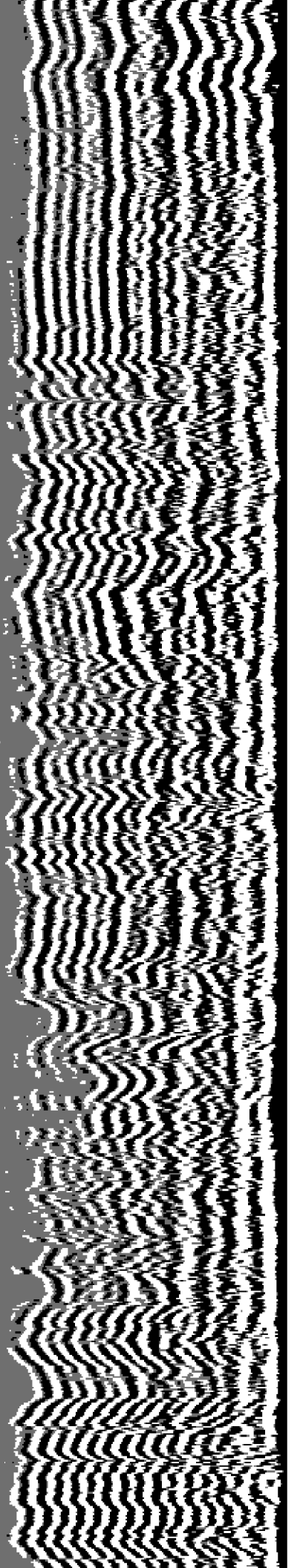






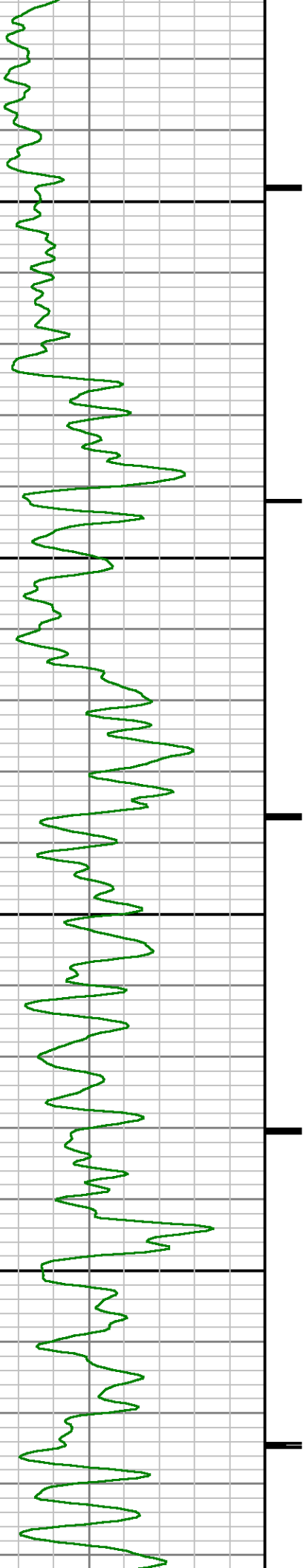






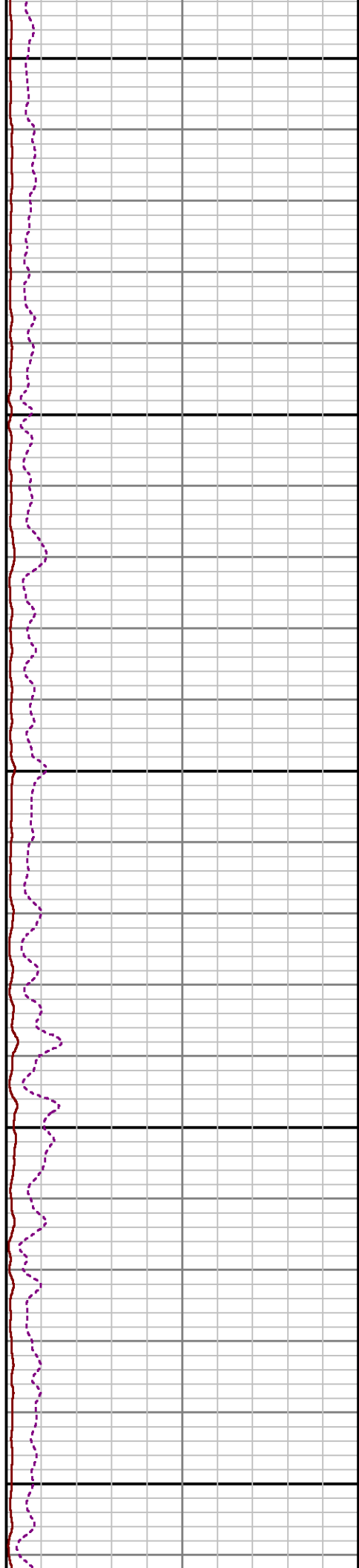
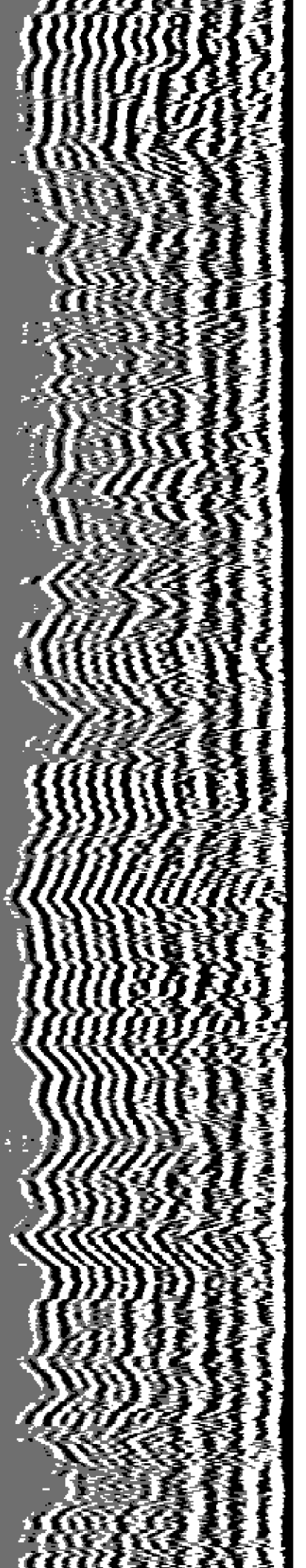
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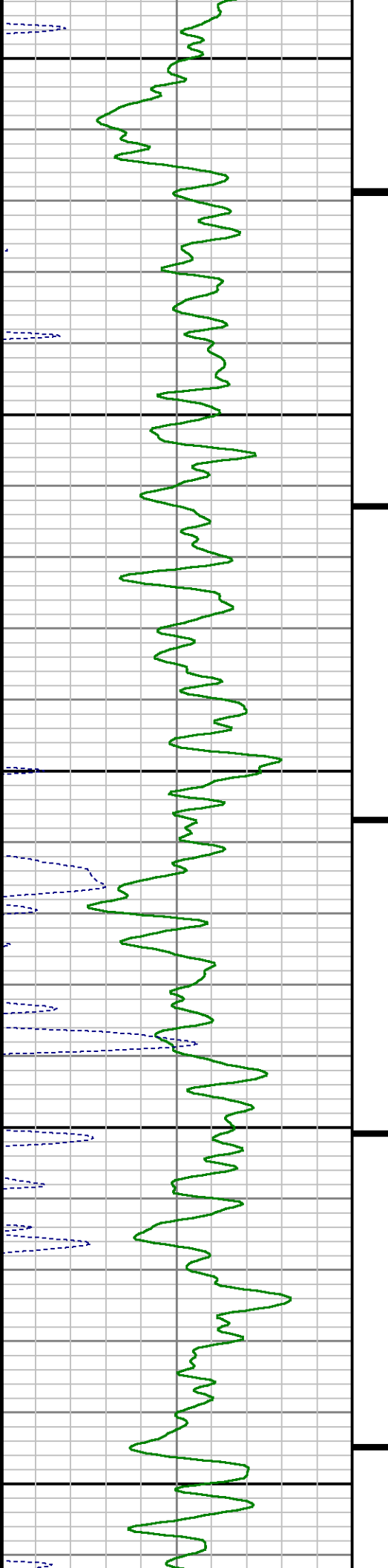
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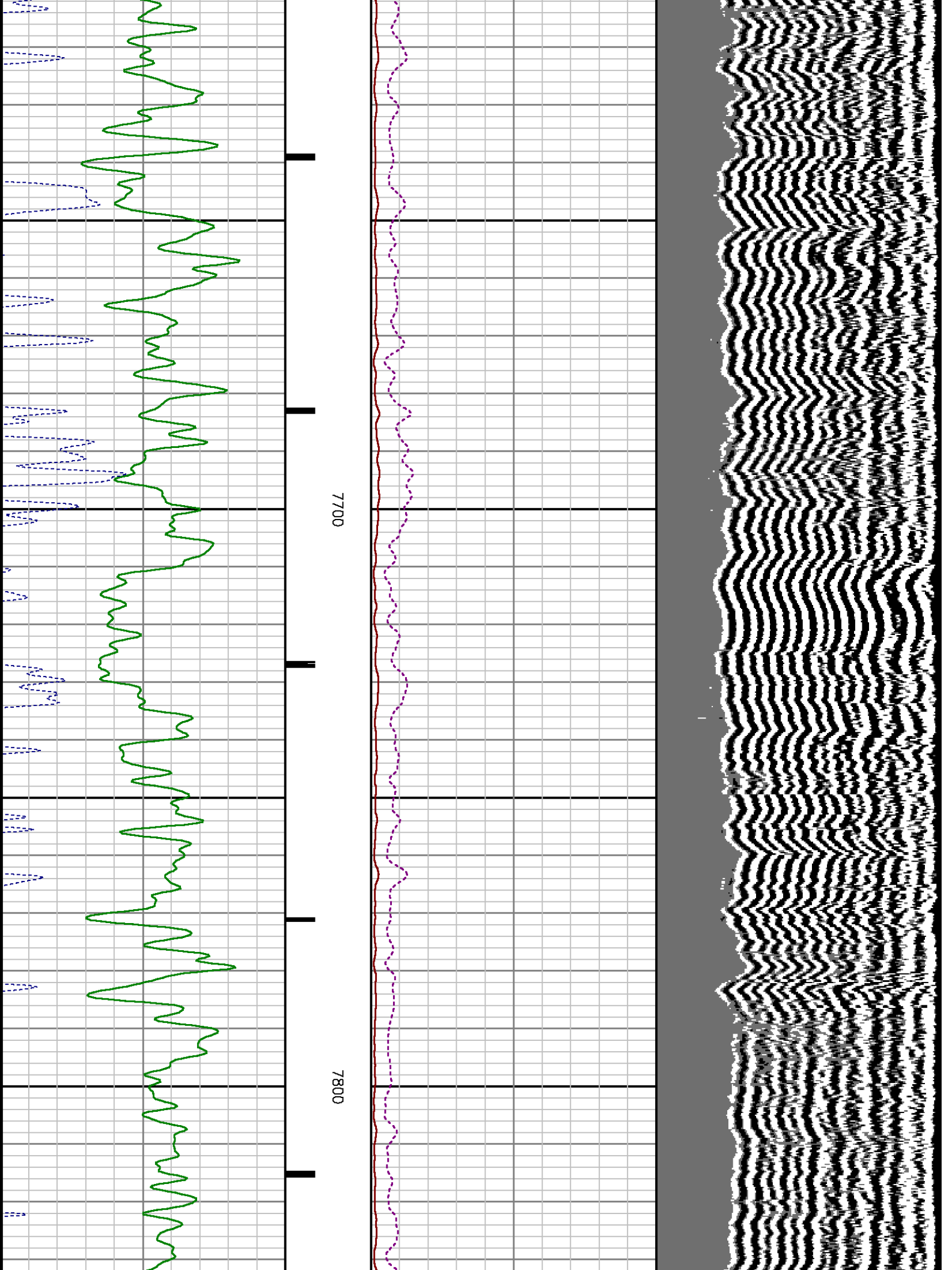


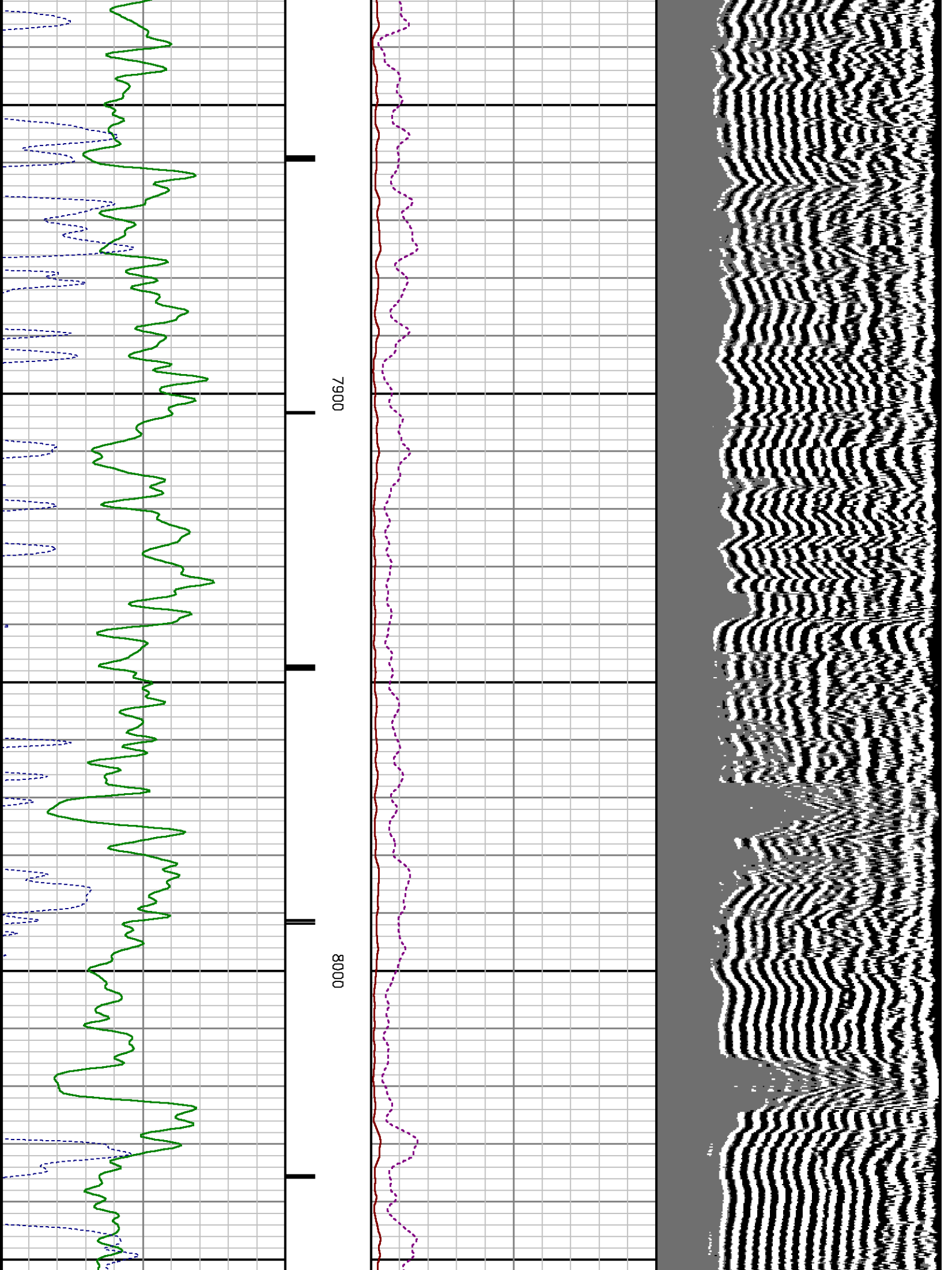
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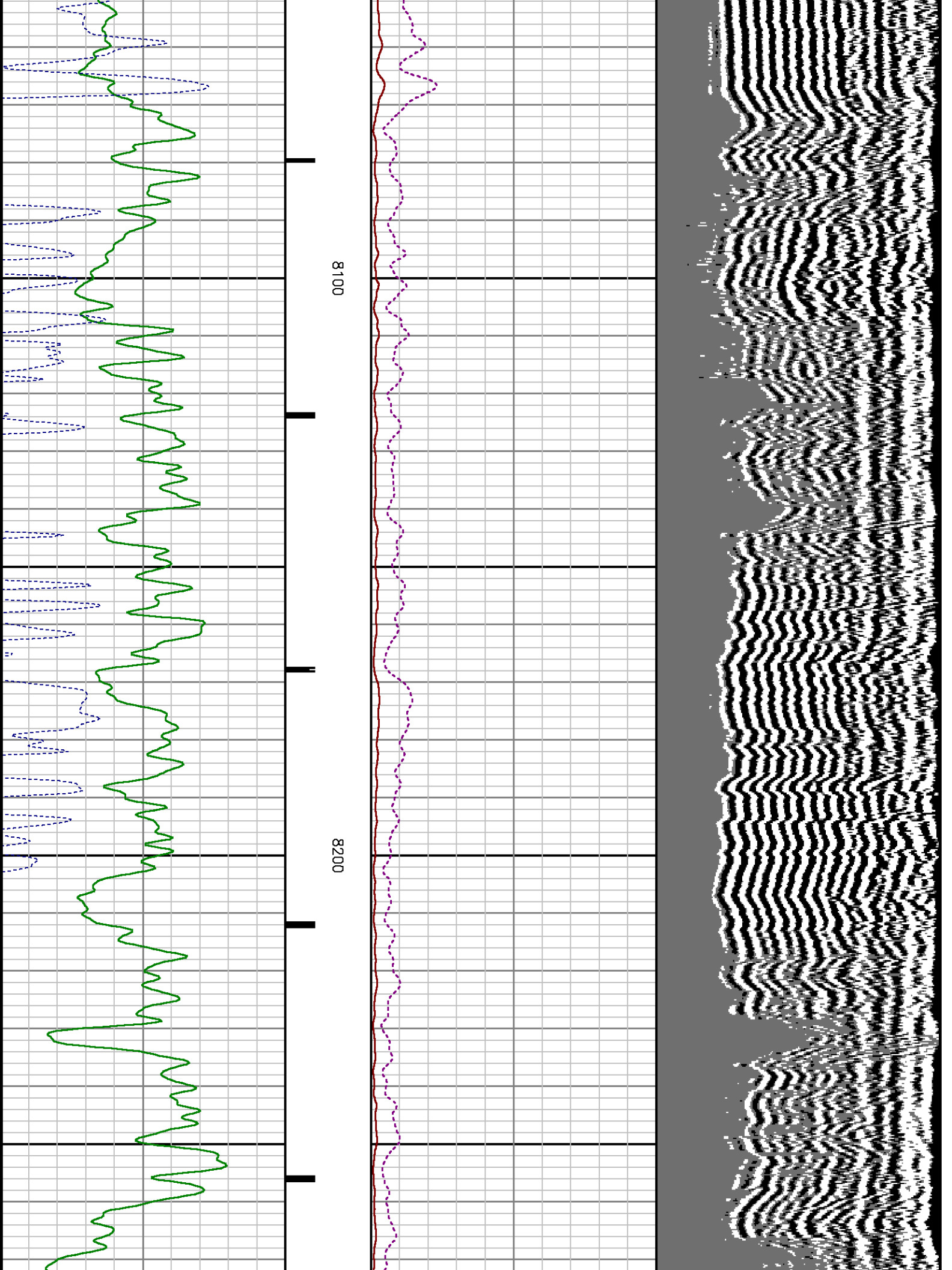
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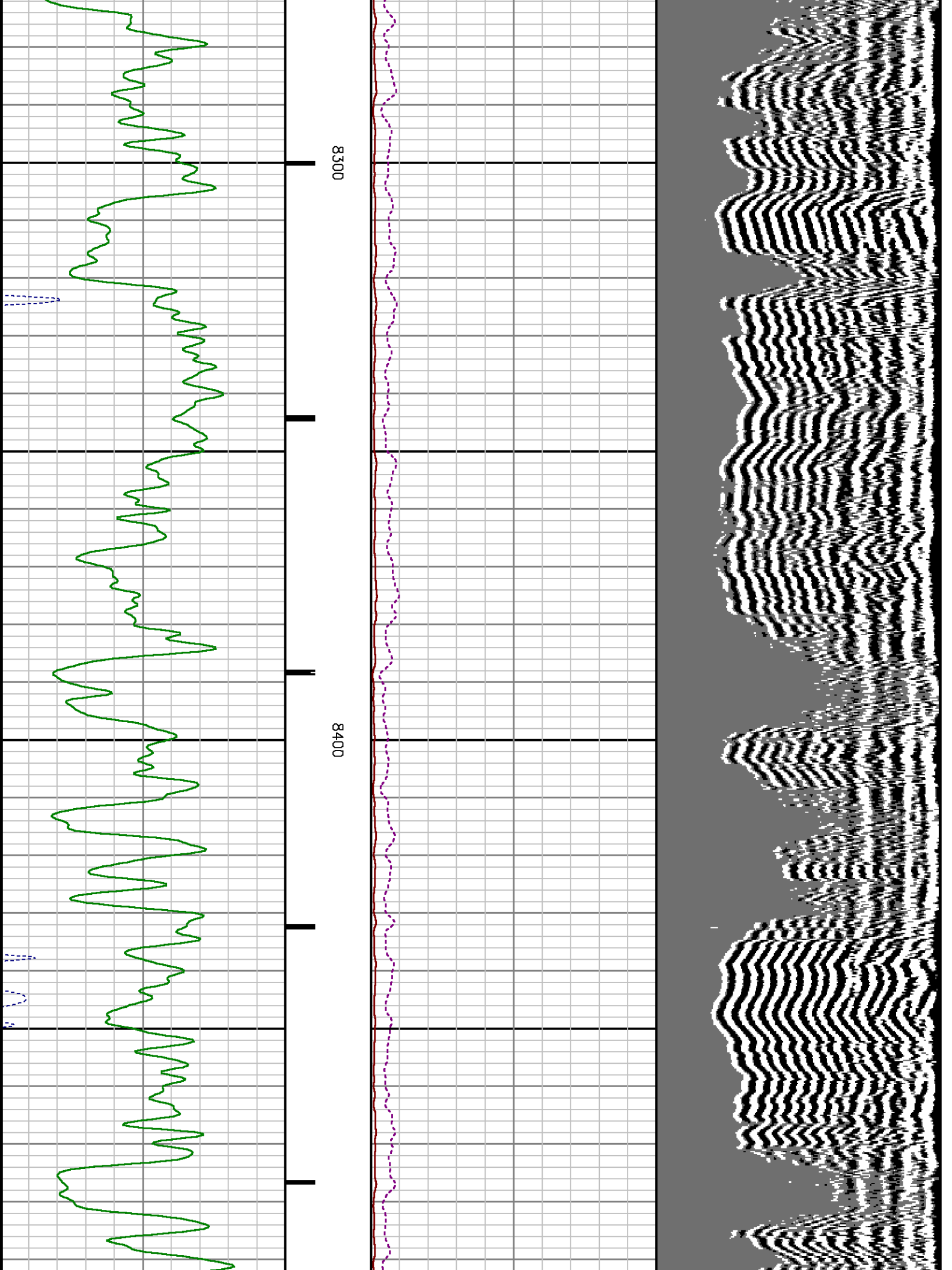
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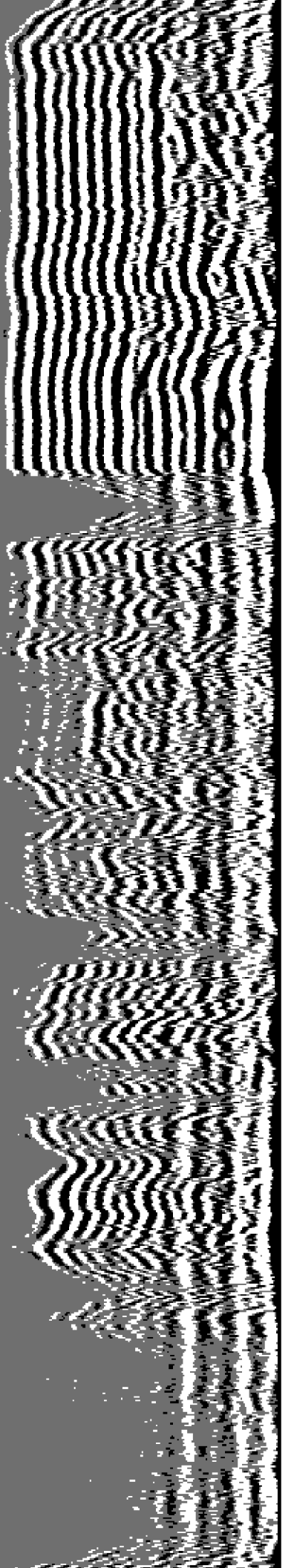








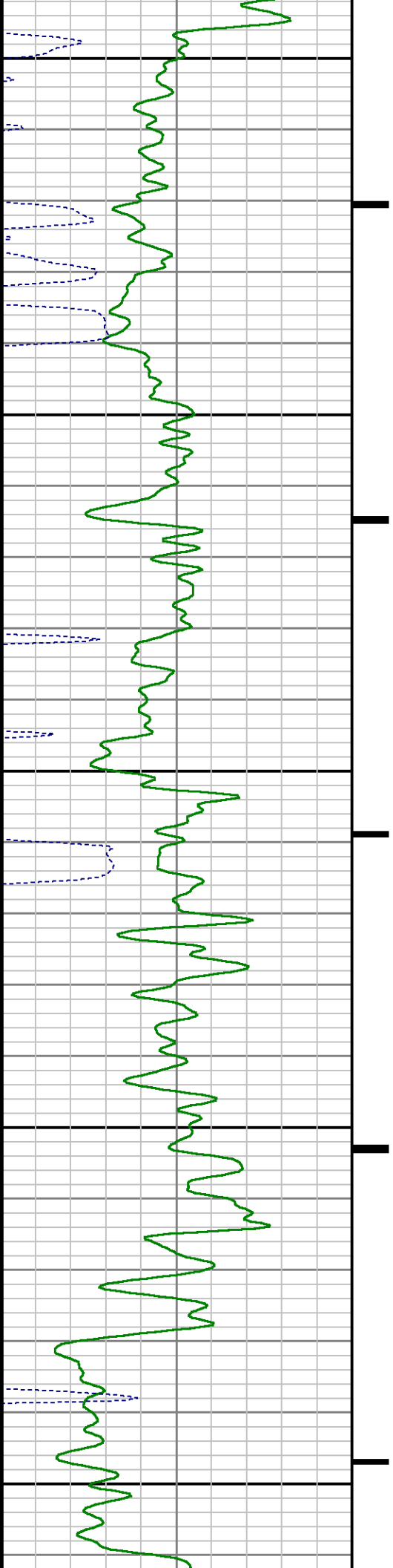


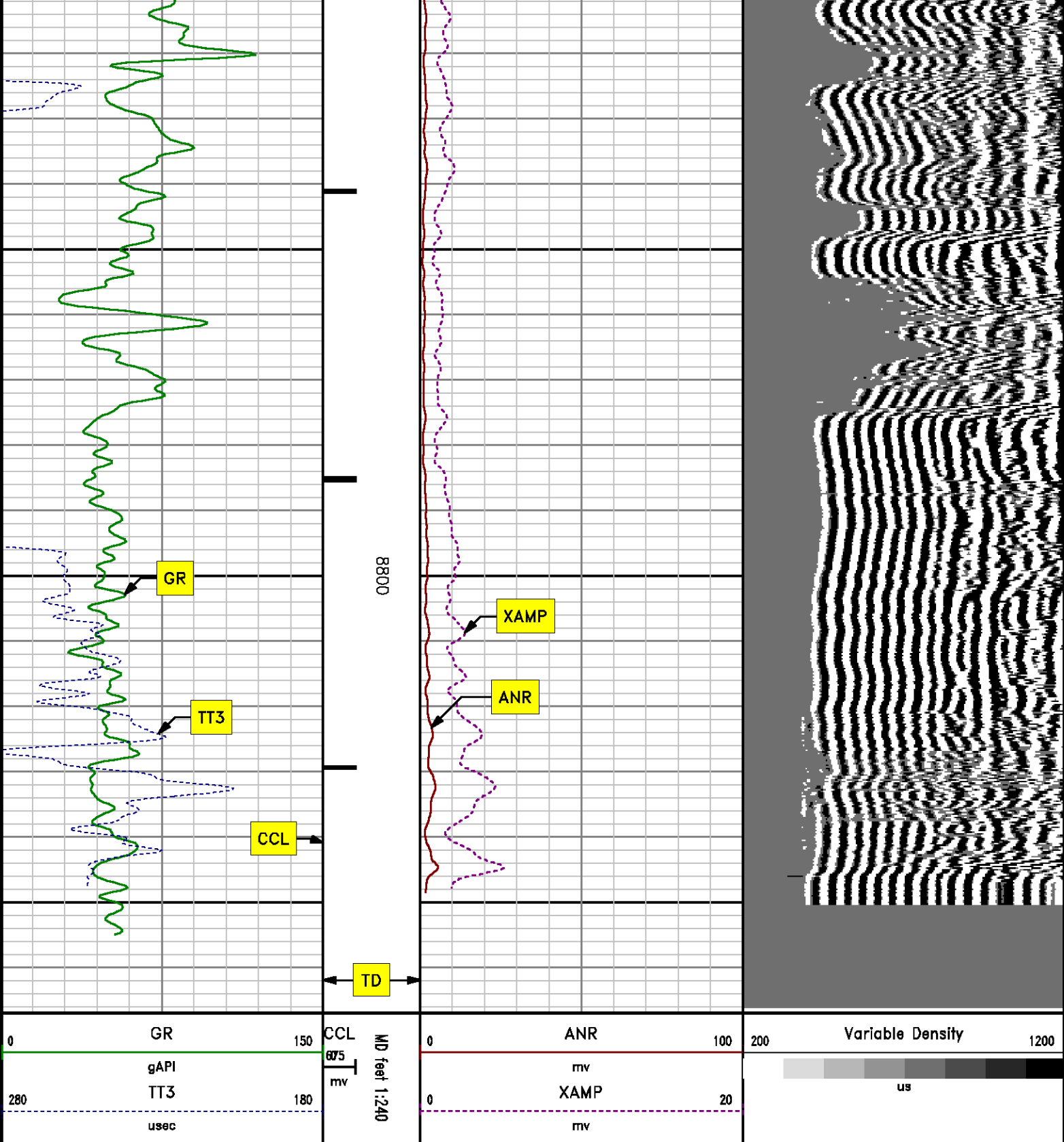


8500

8600

8700





SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.937	8866.000
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DEPTH OFFSETS

(for Acquired Curves)

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		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					
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Company : WPX ENERGY

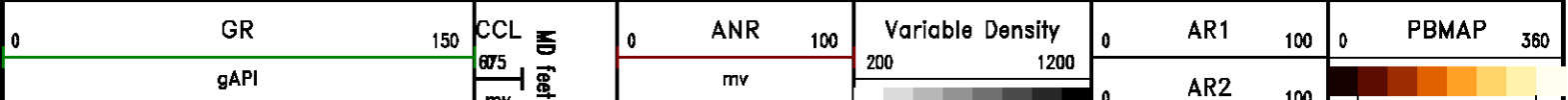
Well : SAVAGE RWF 521-25

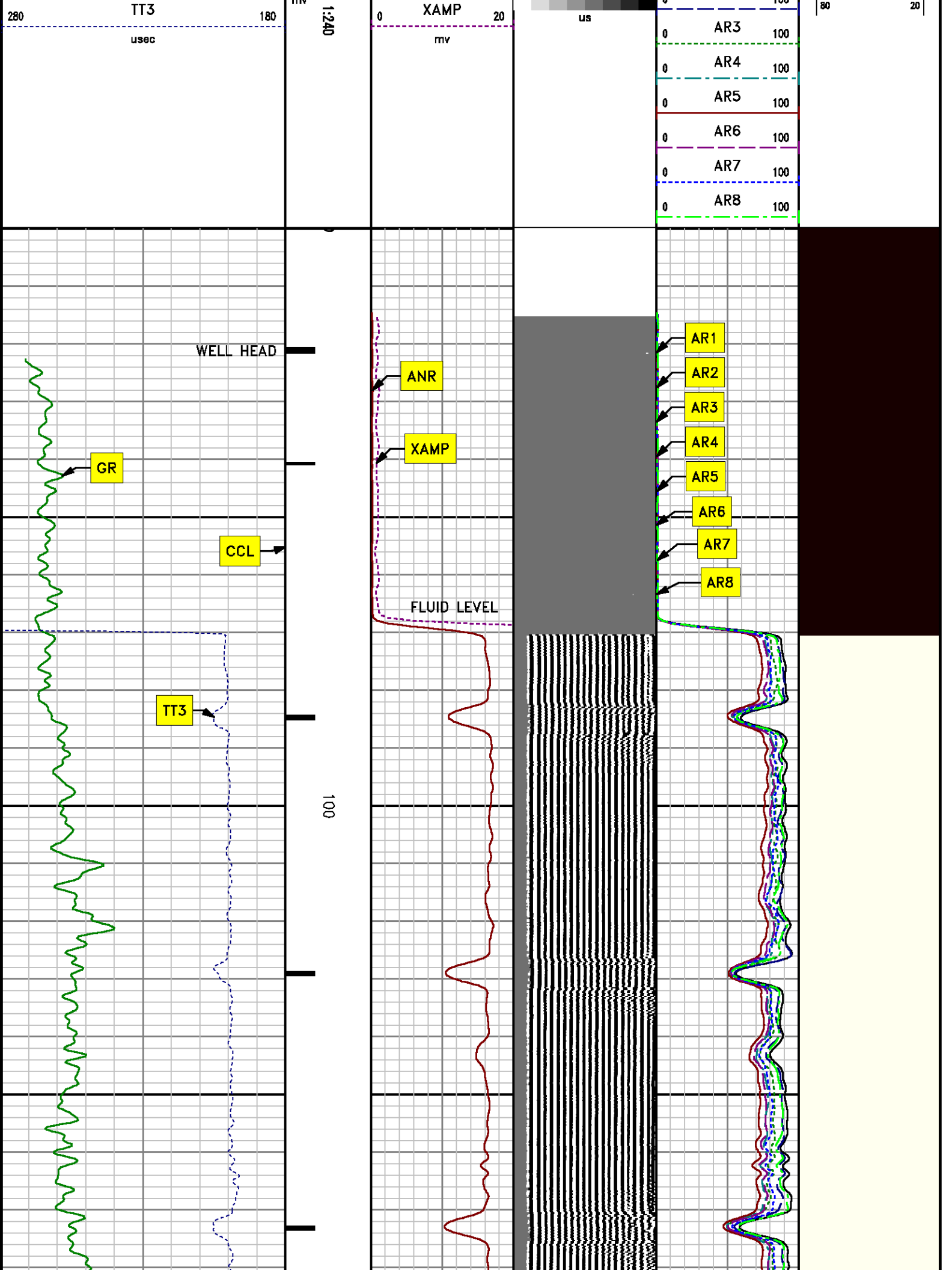
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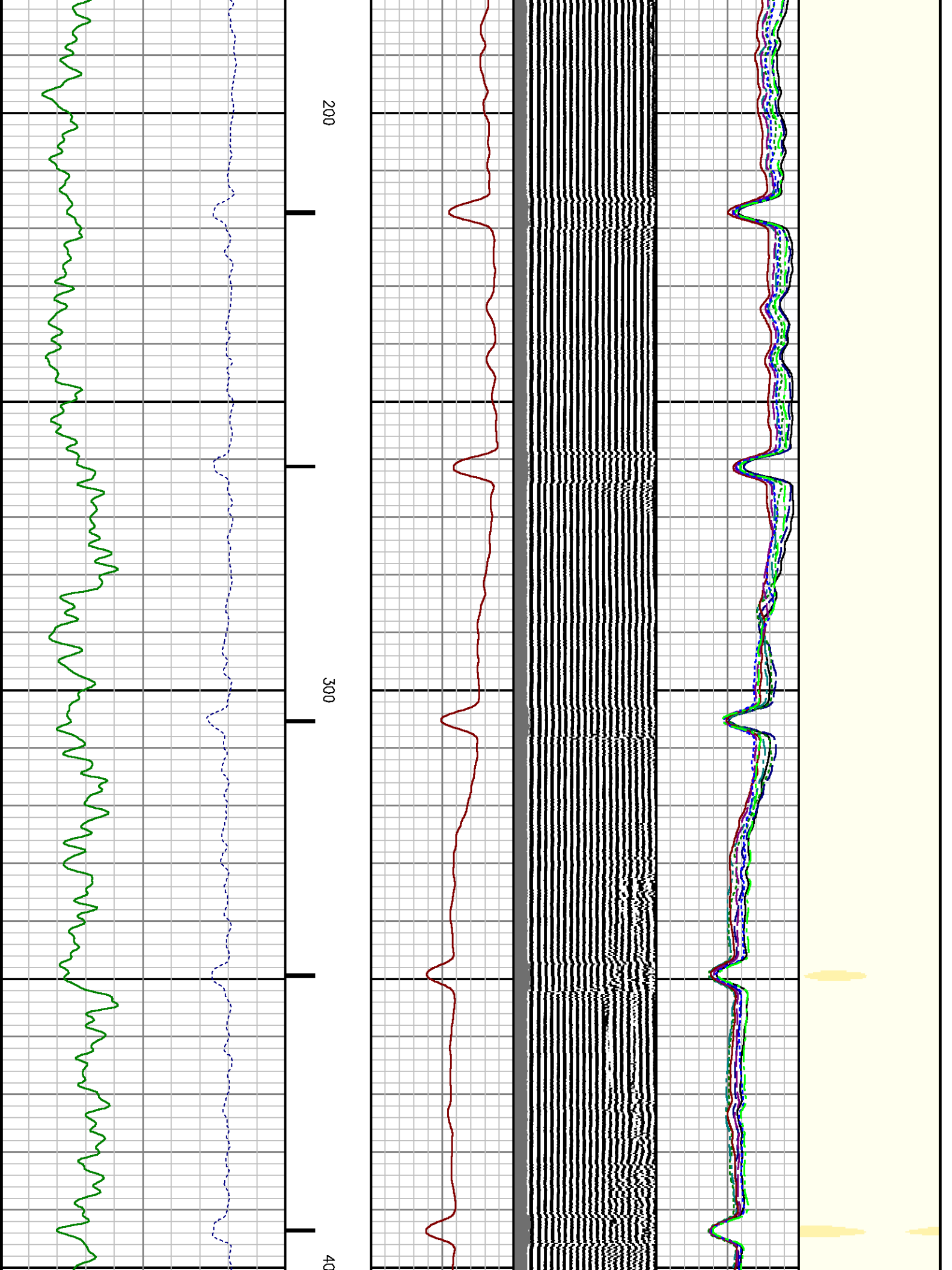
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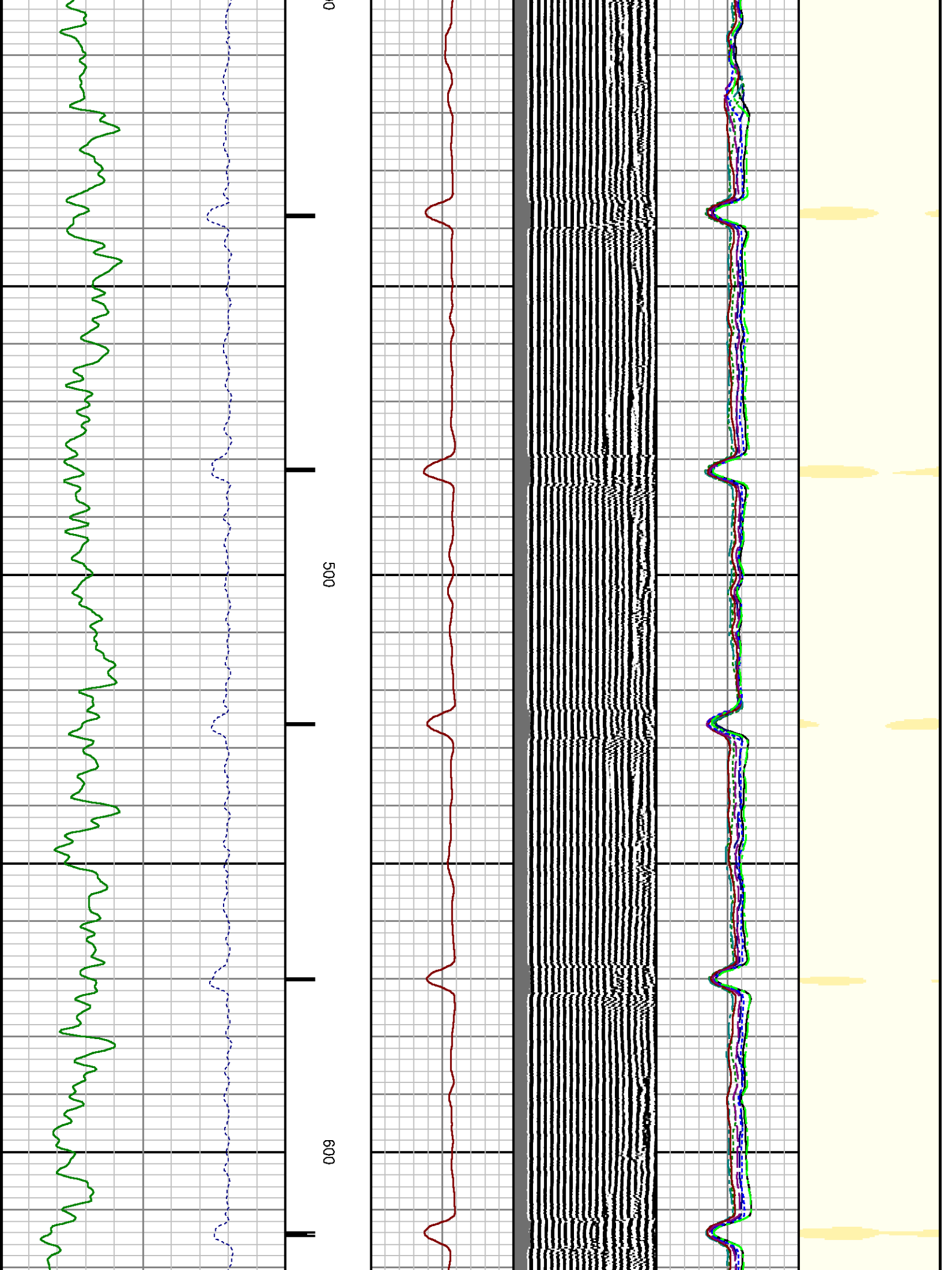
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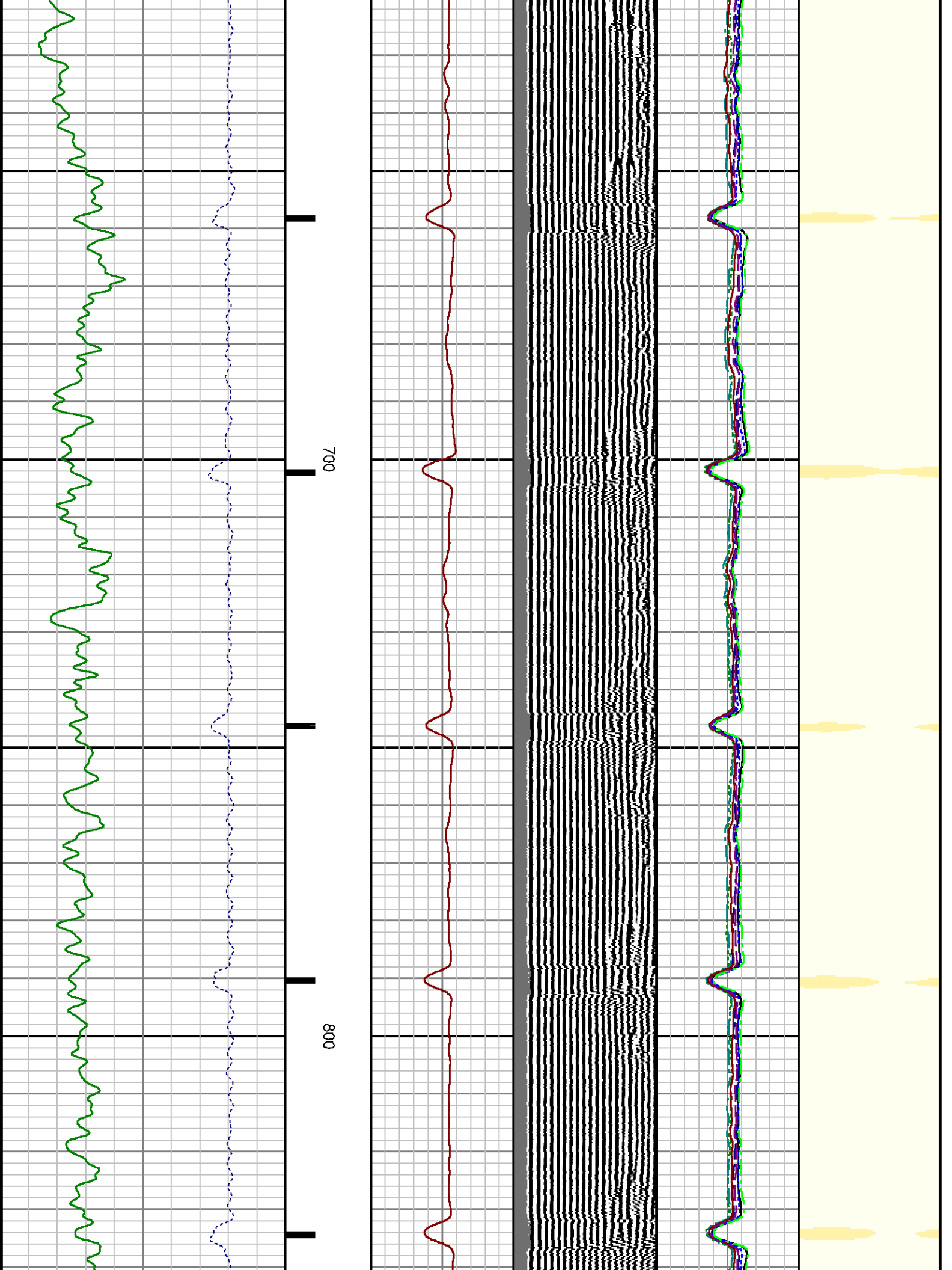
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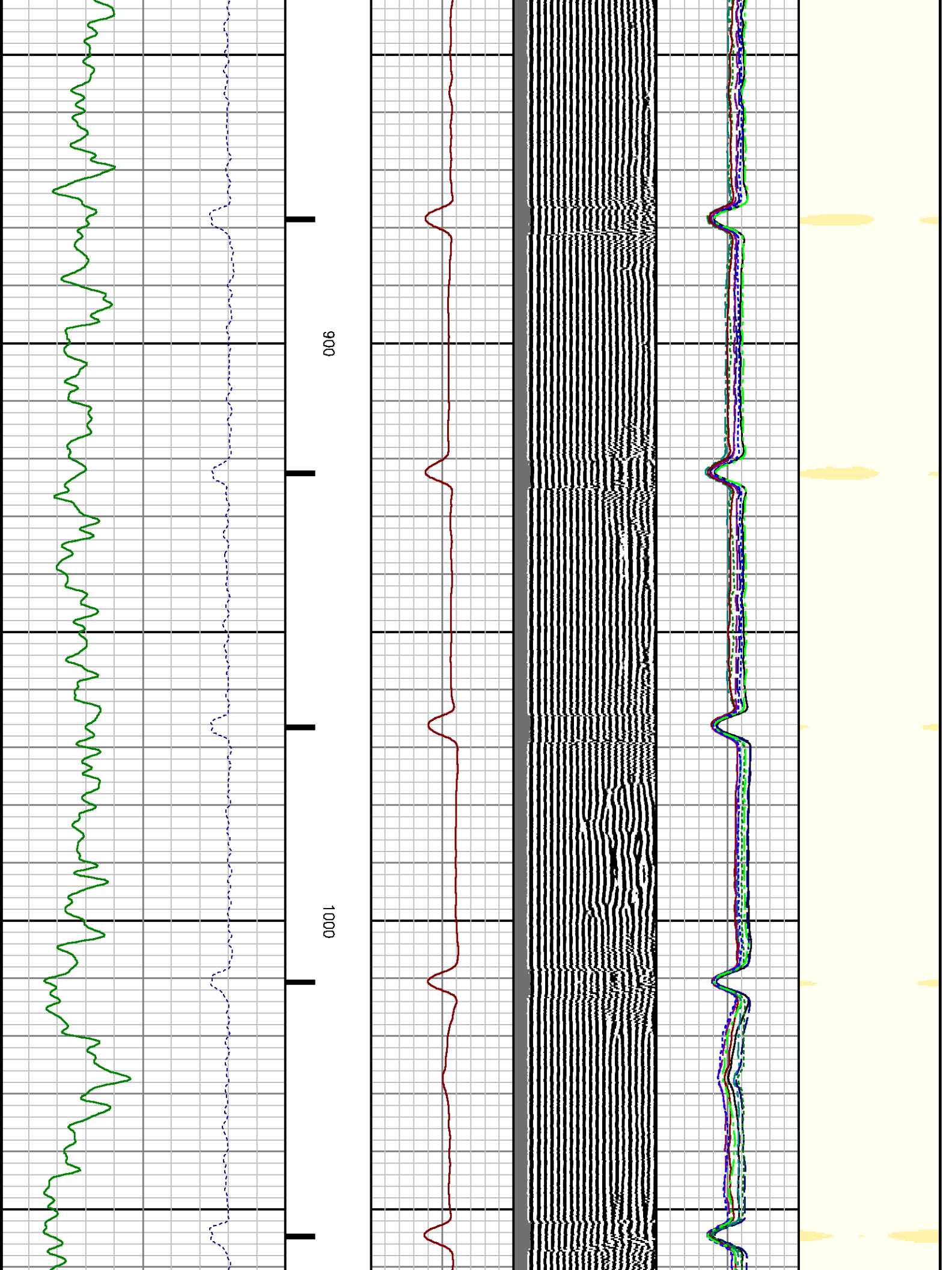


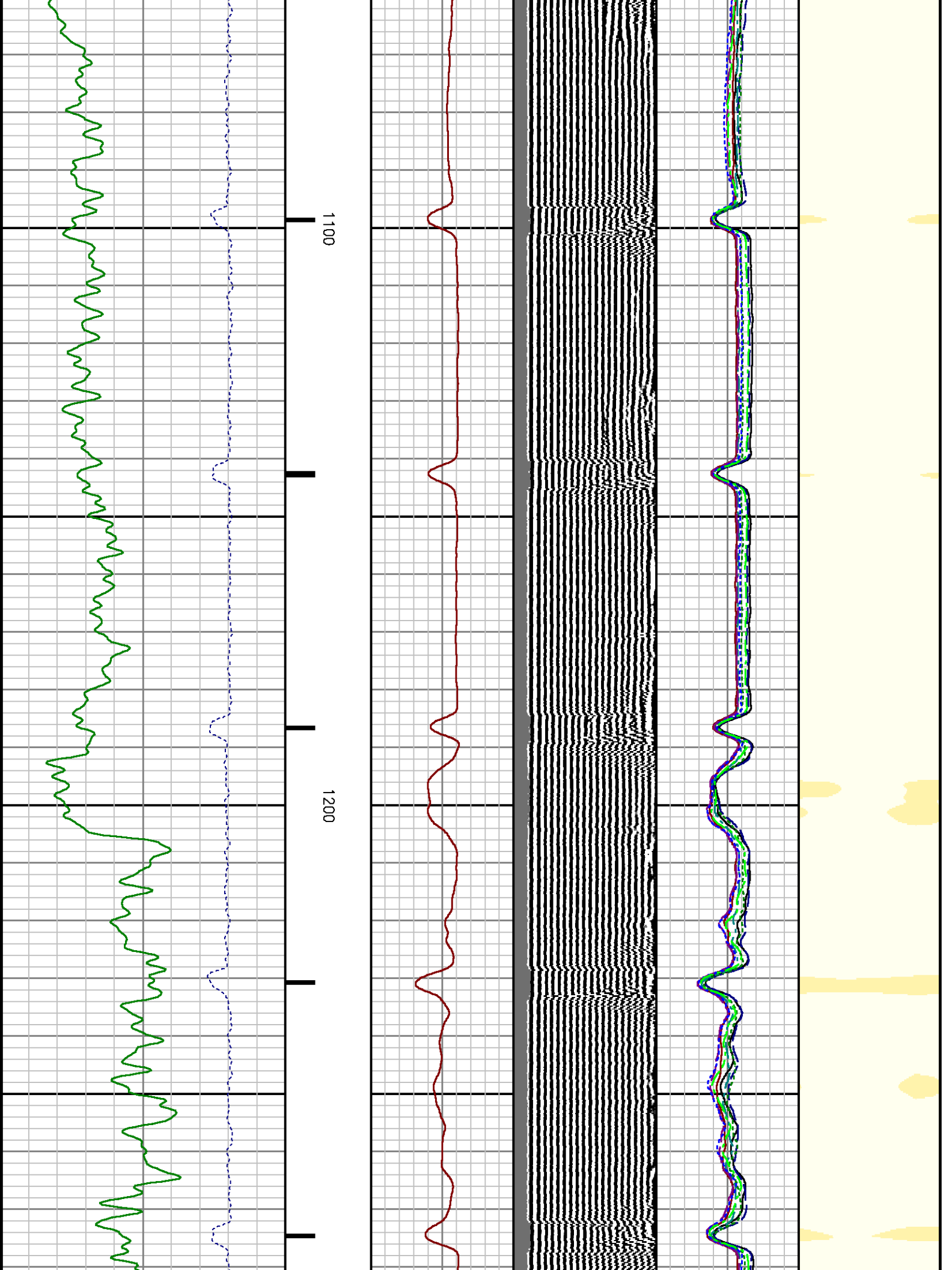


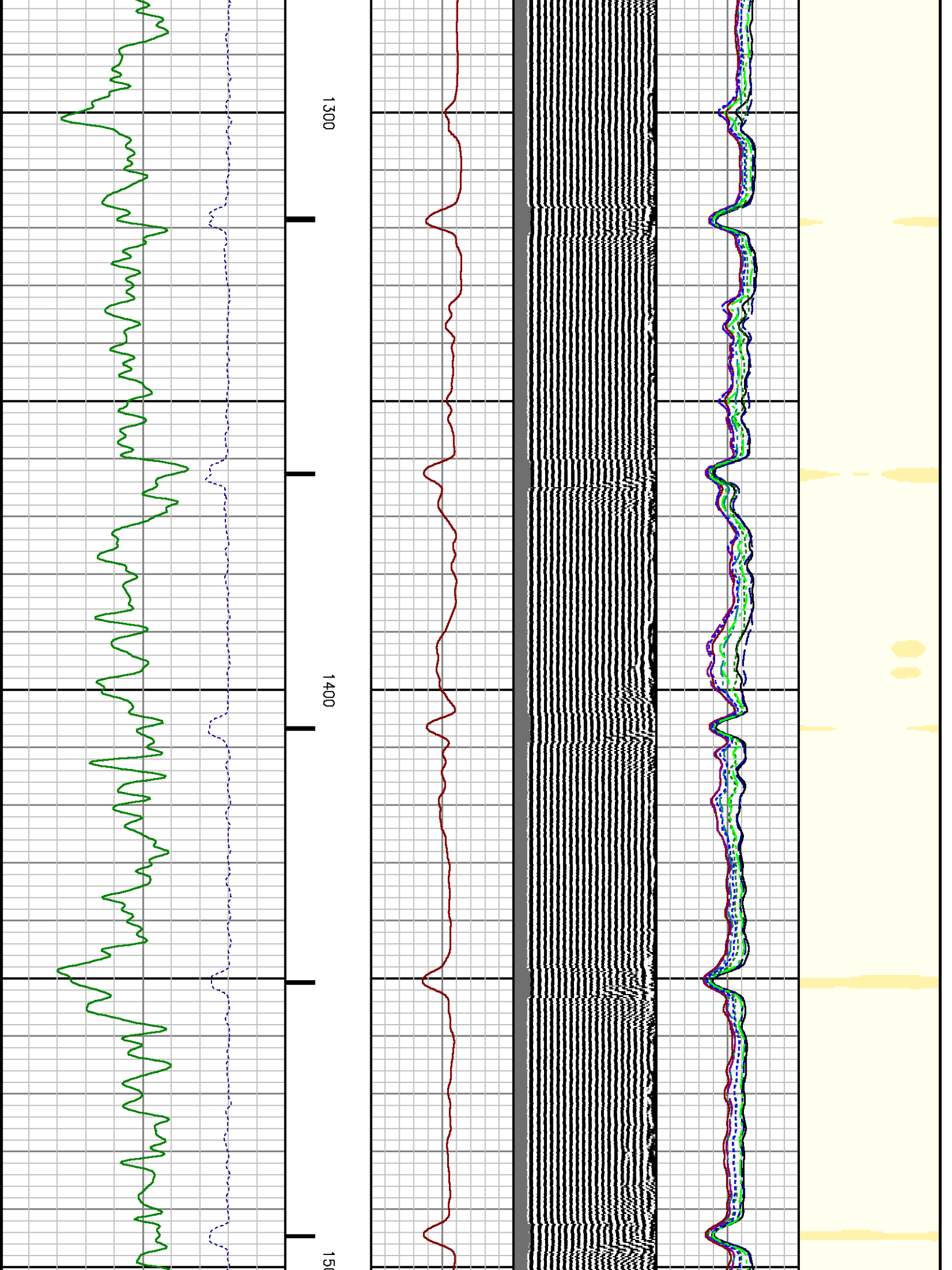


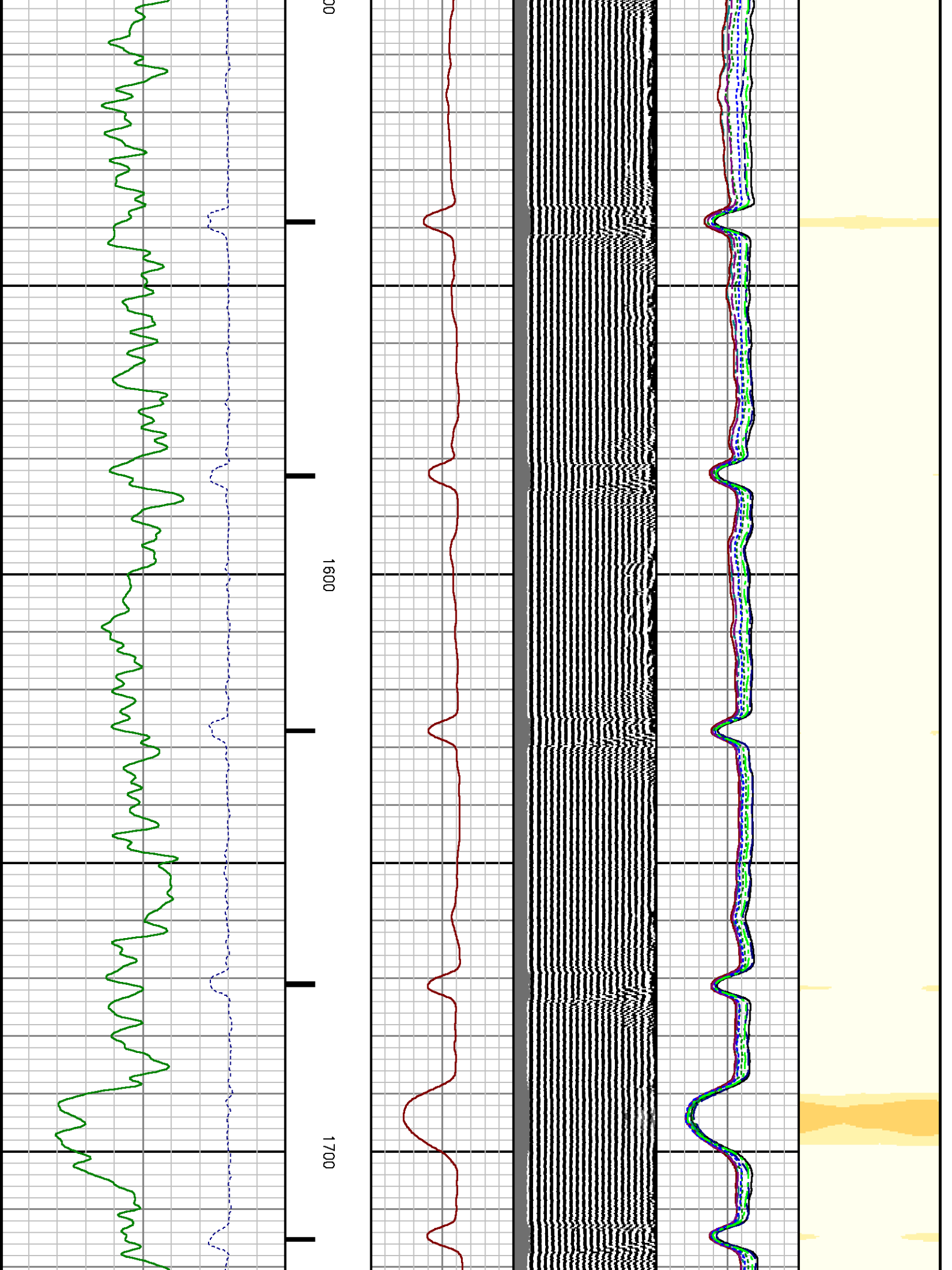


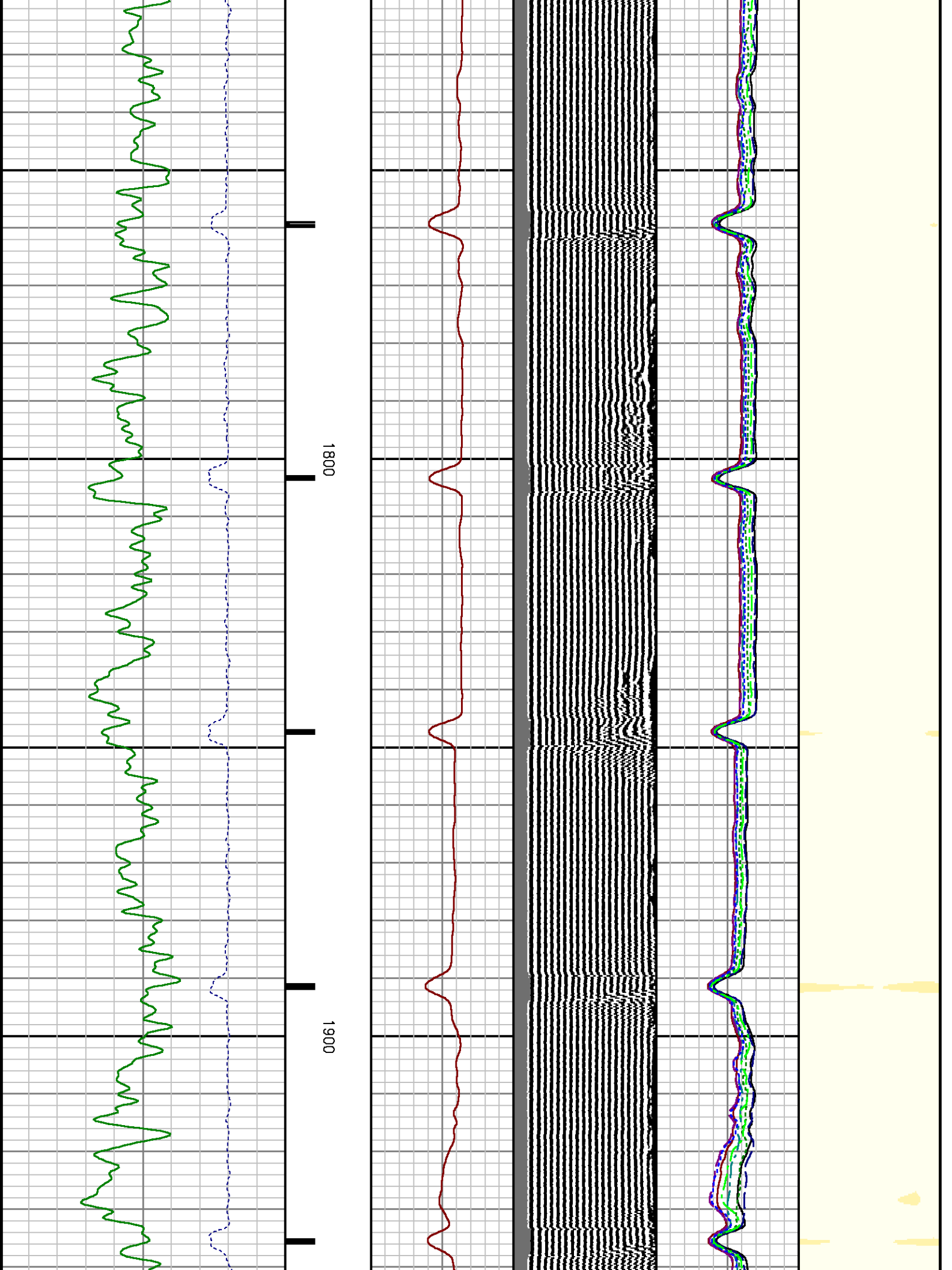


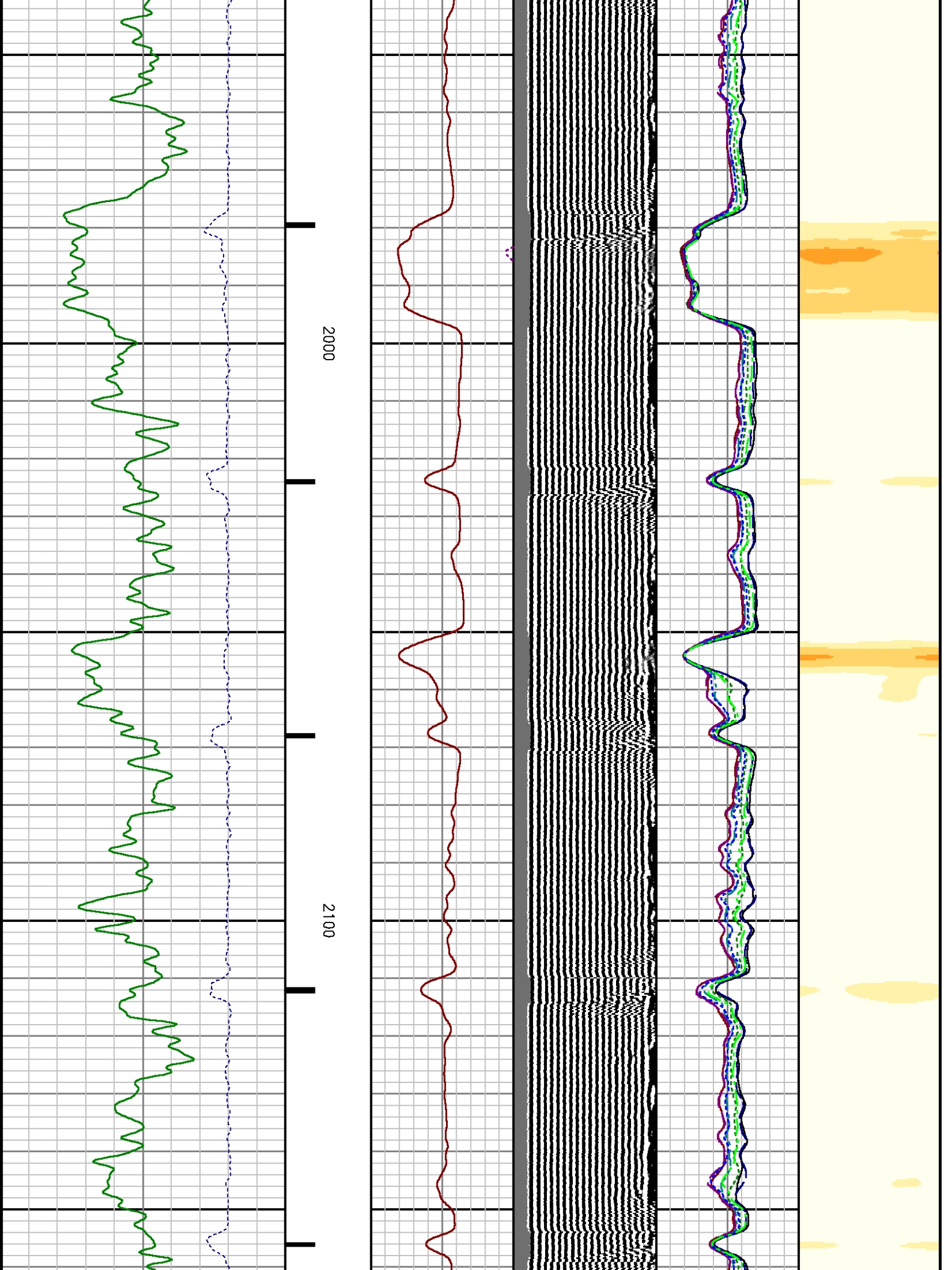


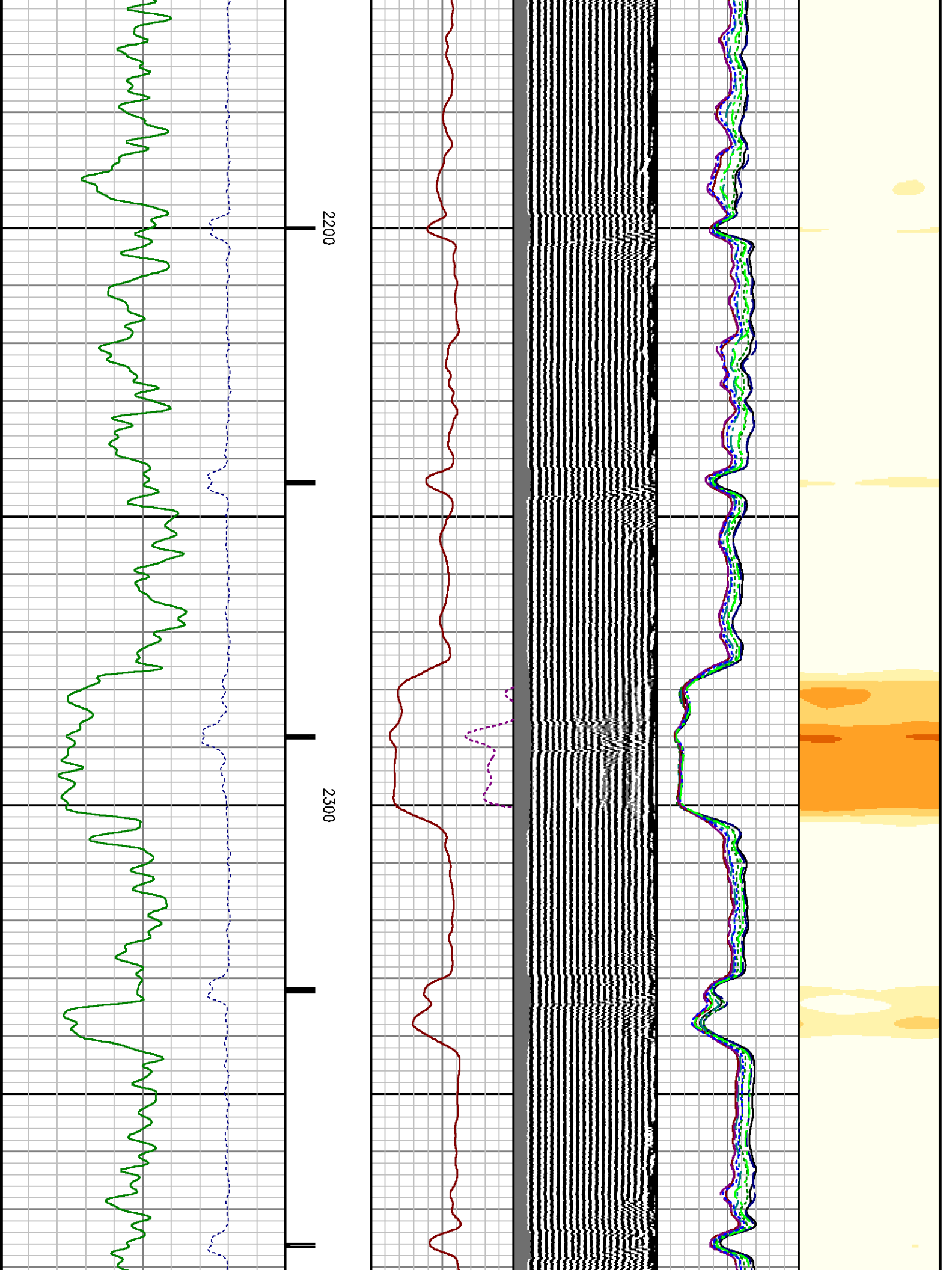


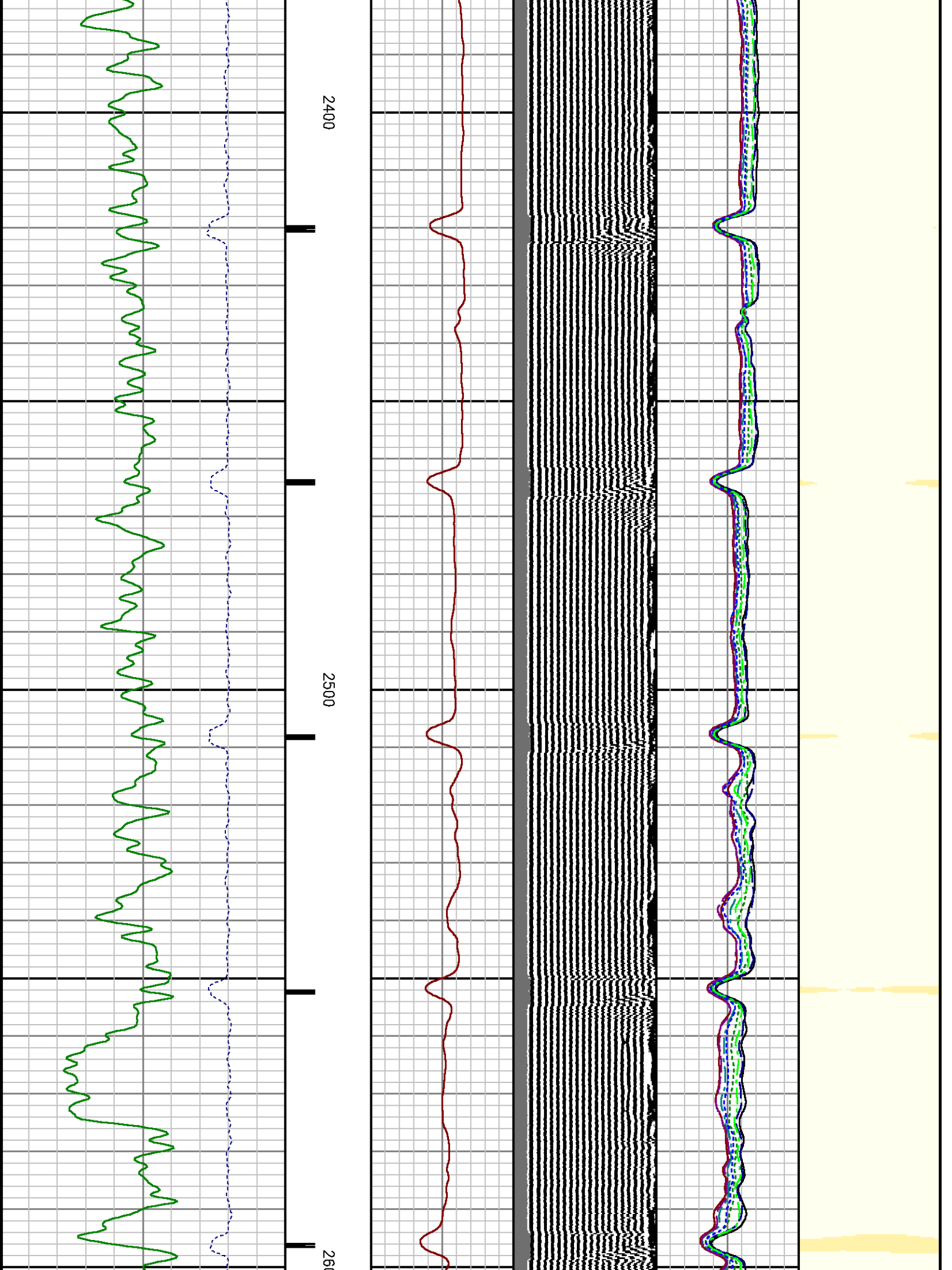


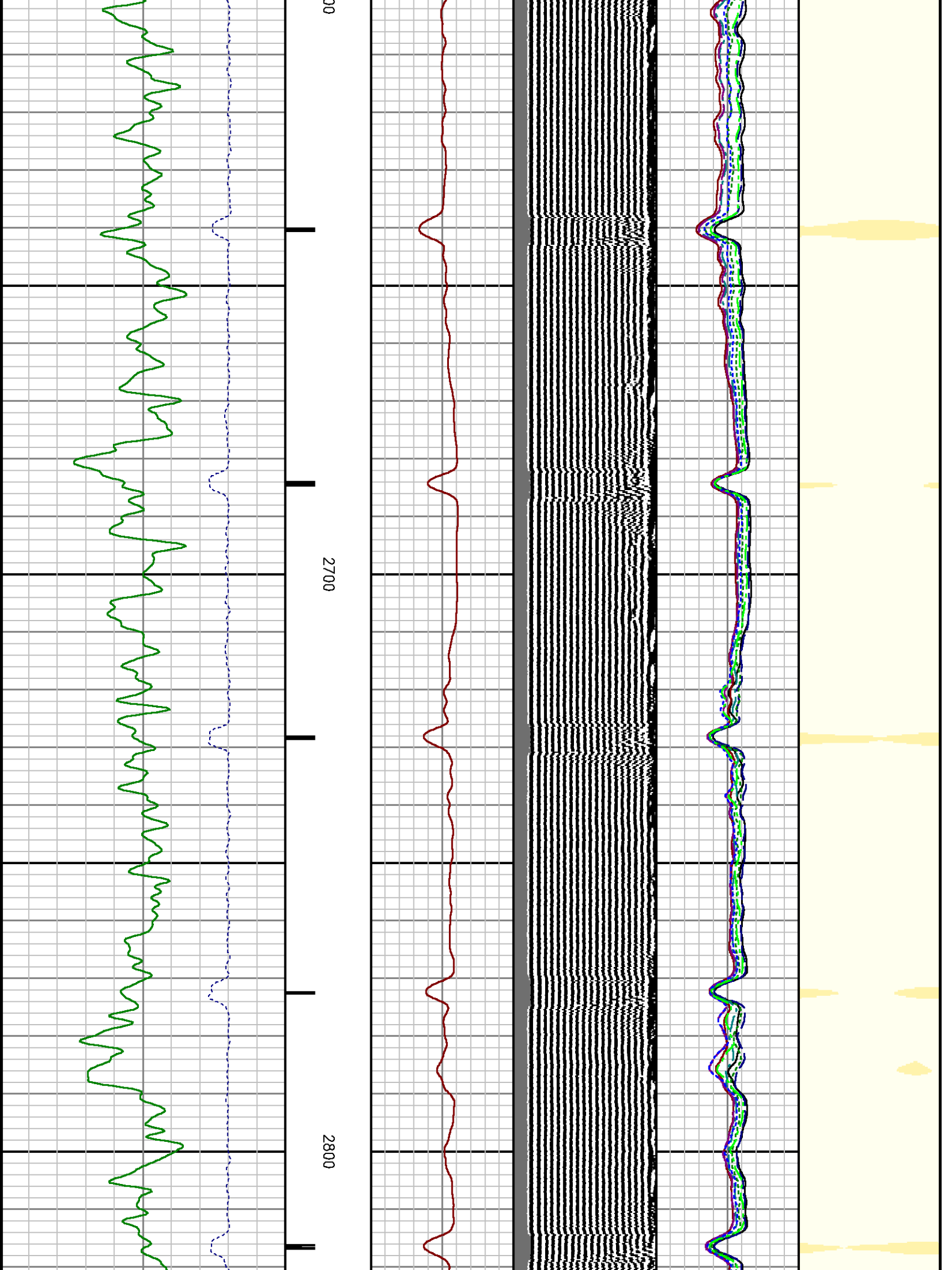


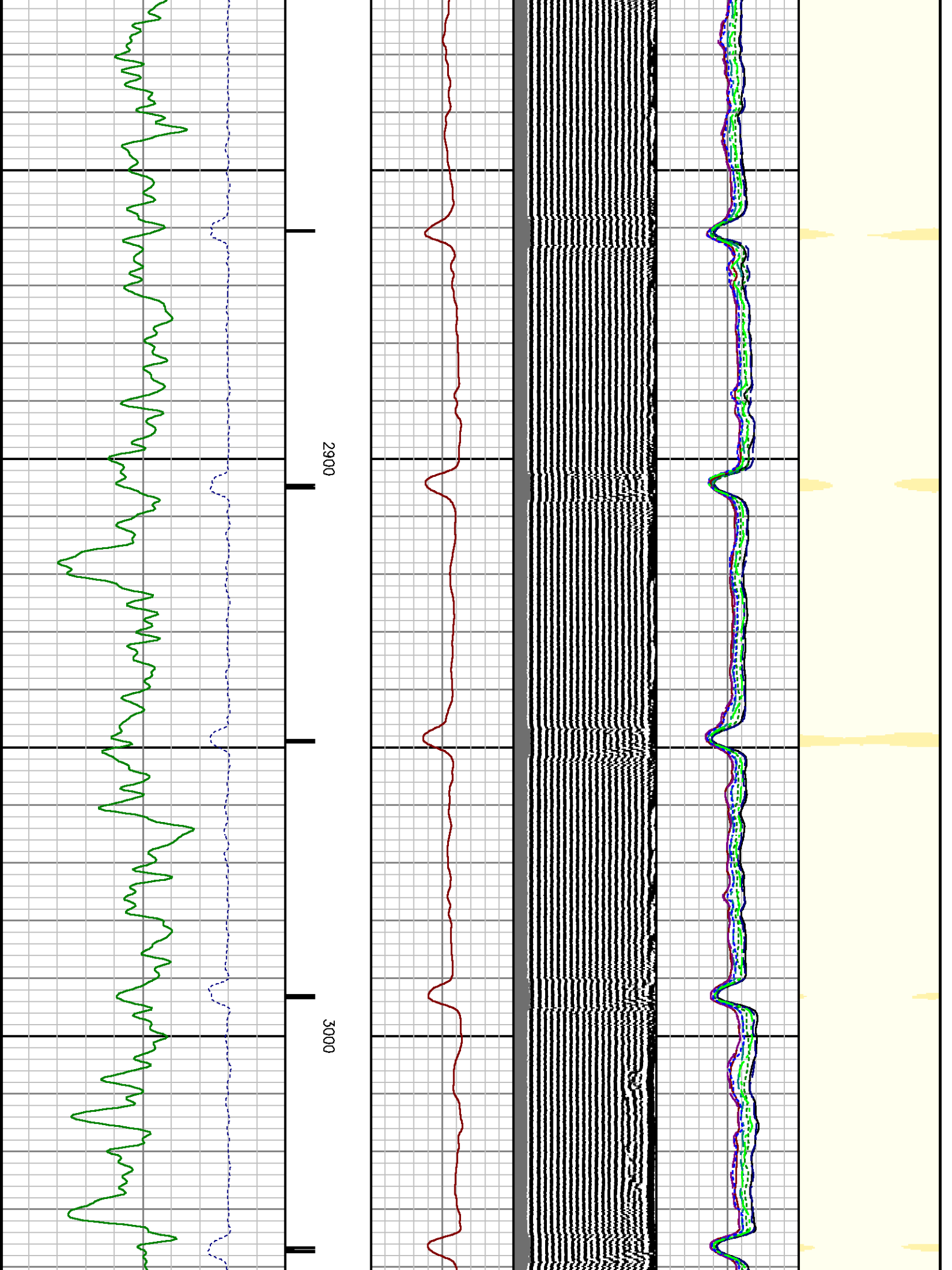


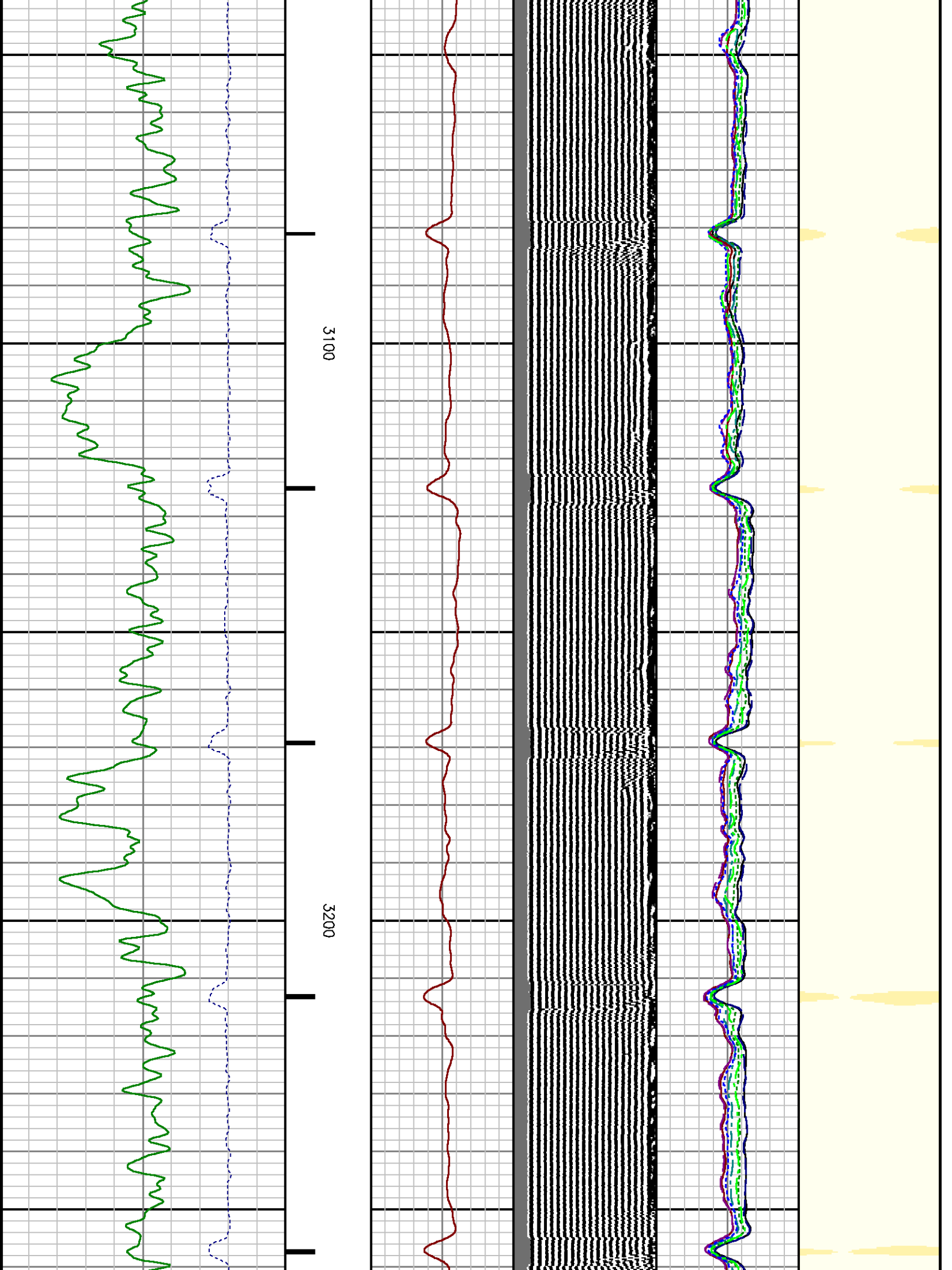


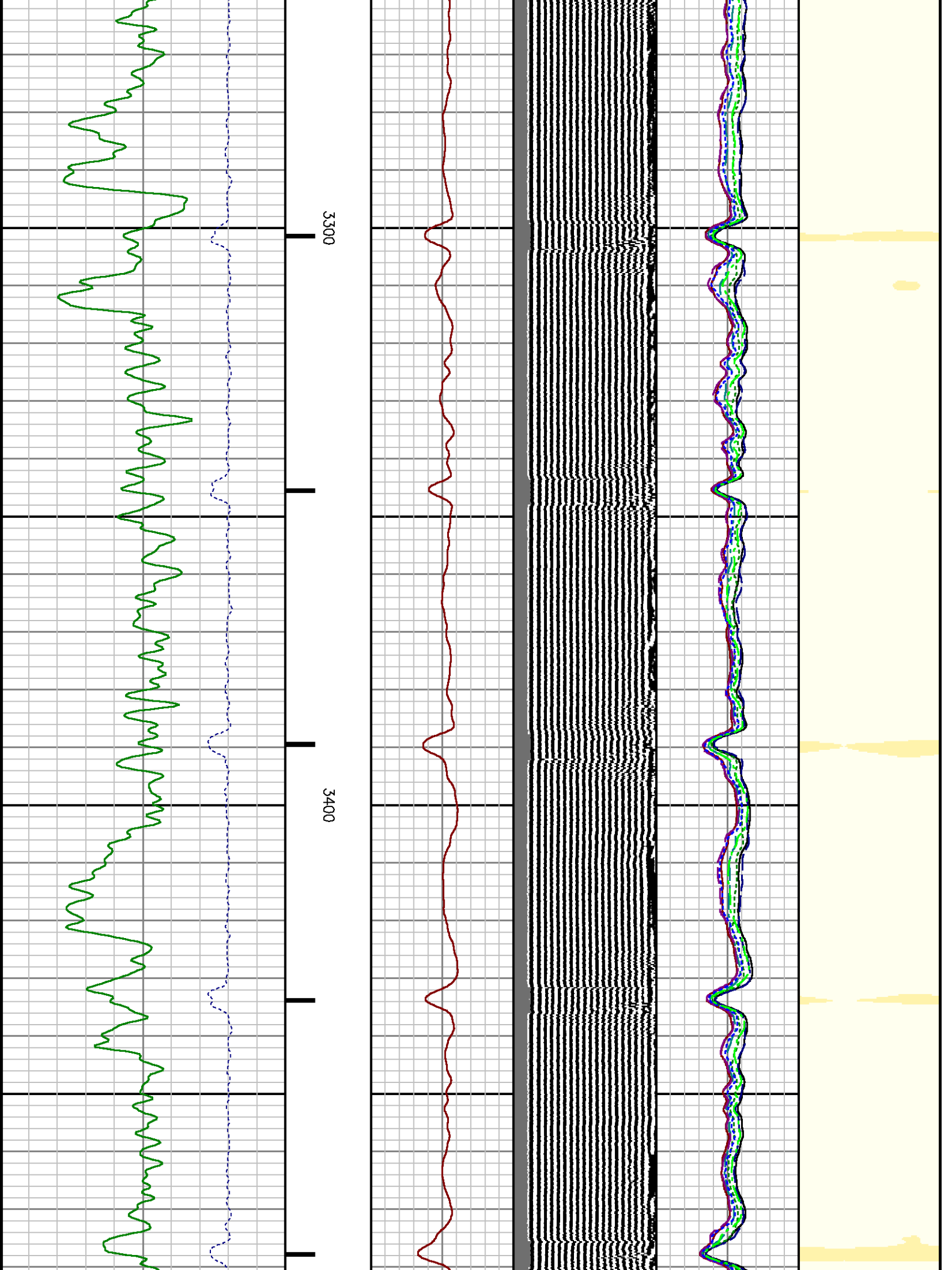


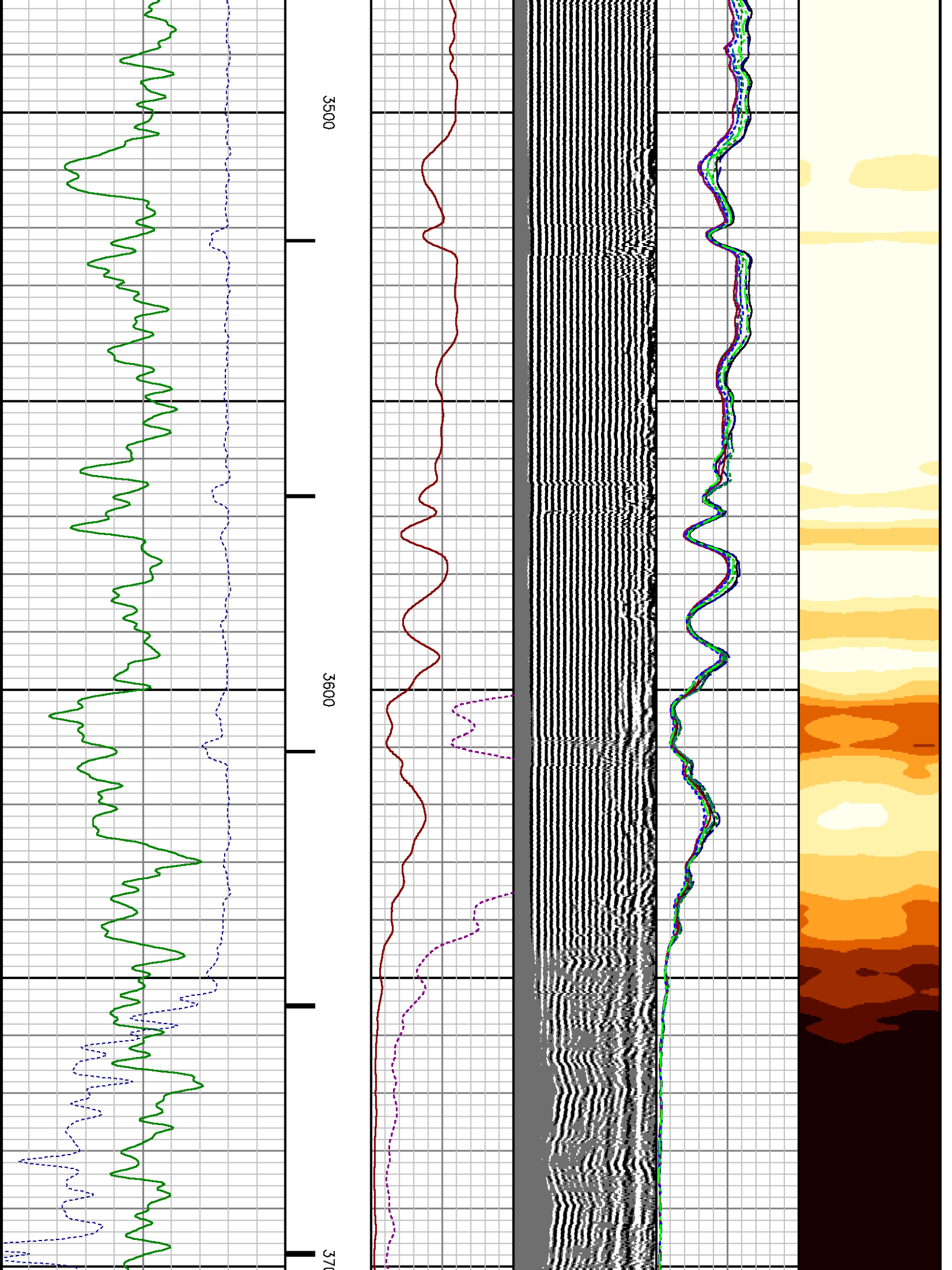


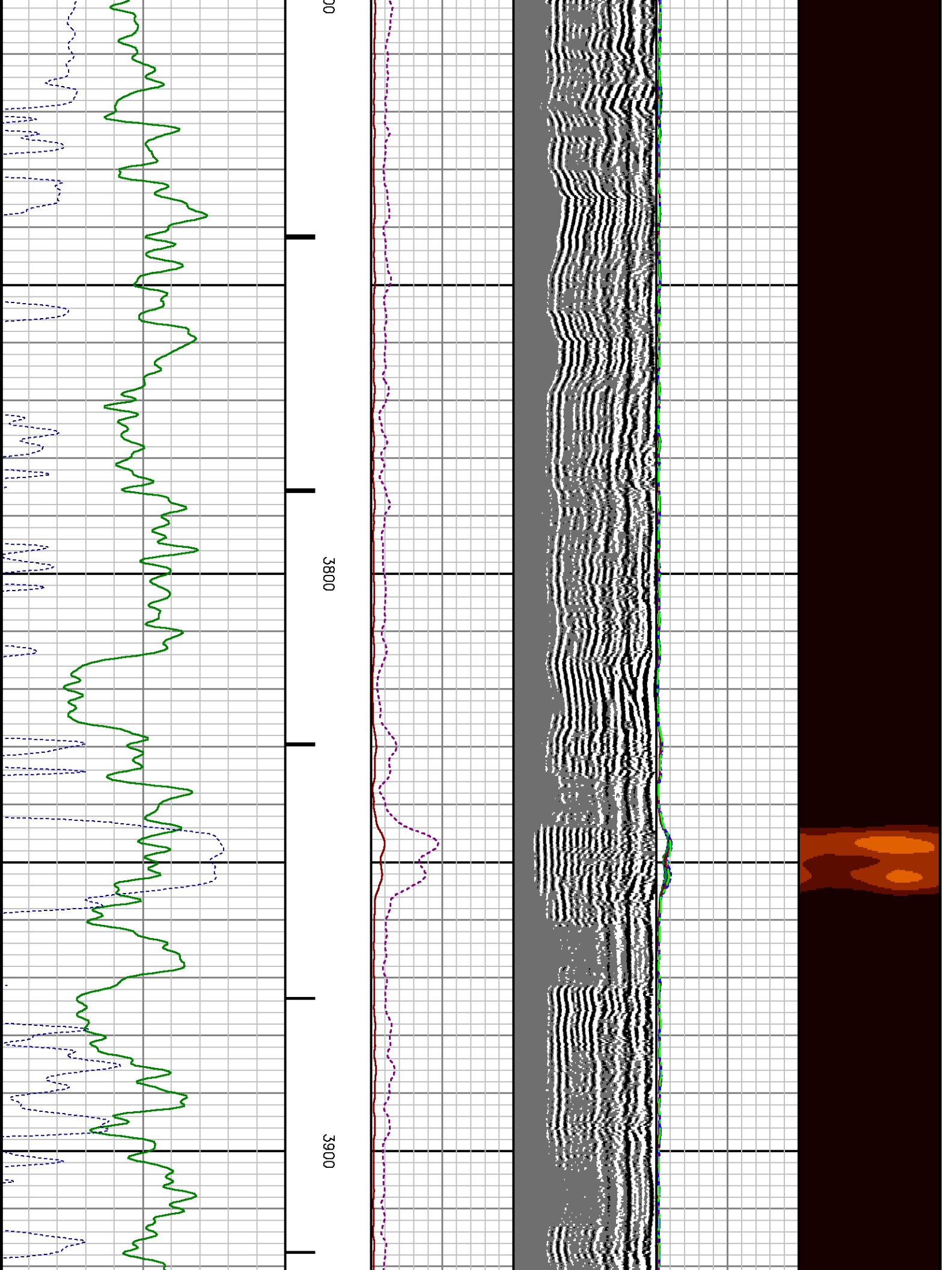


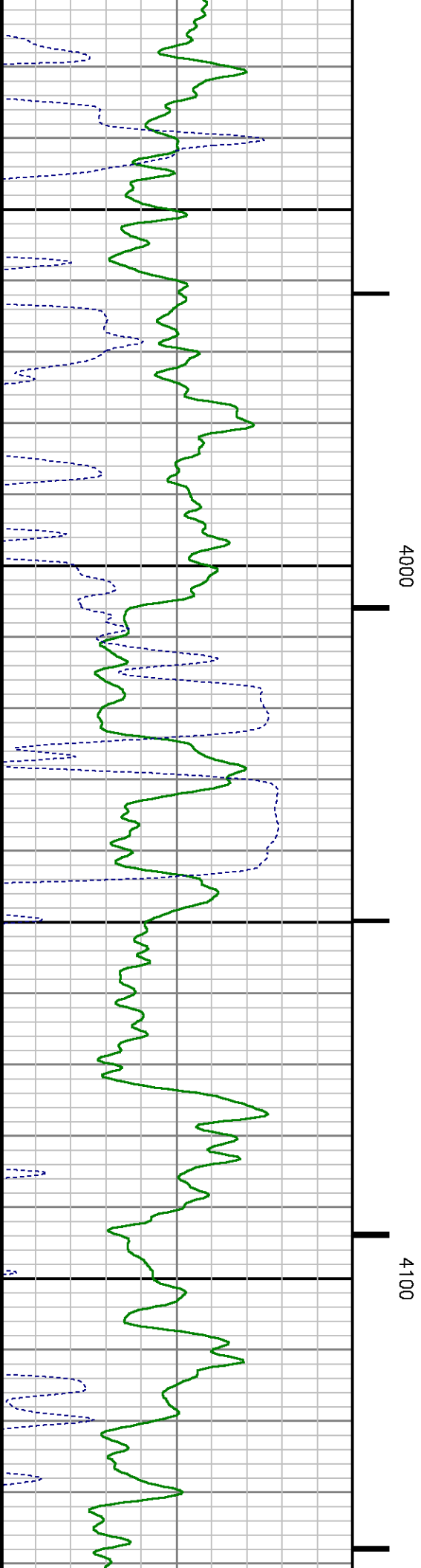
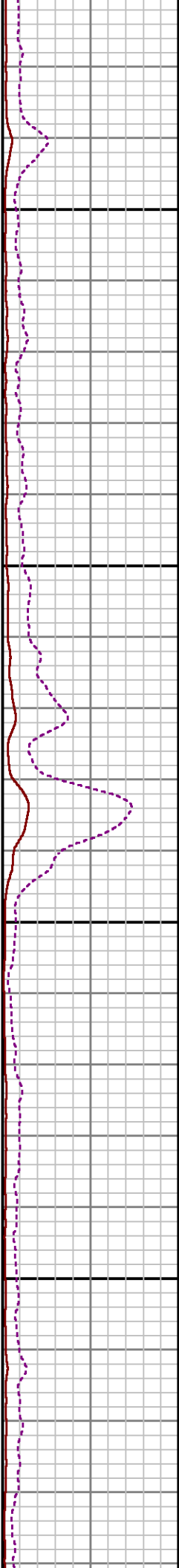
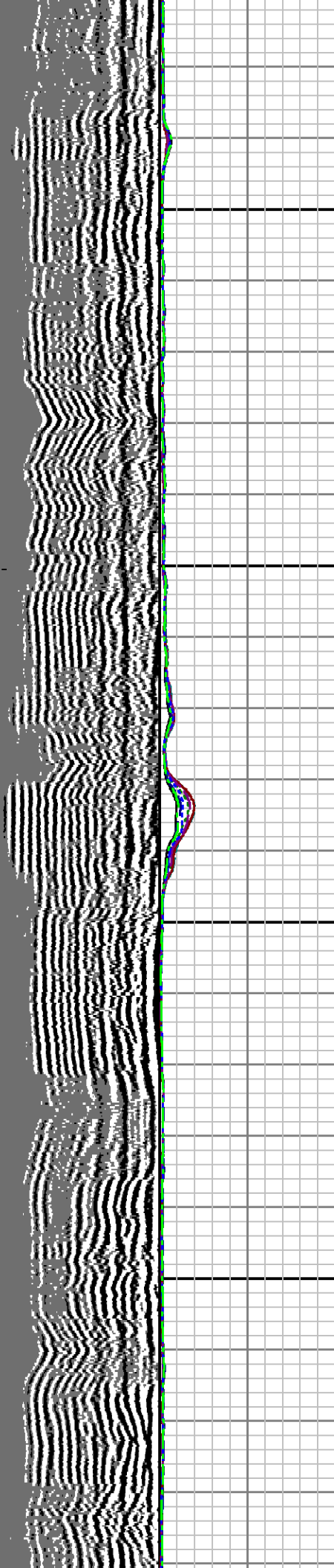
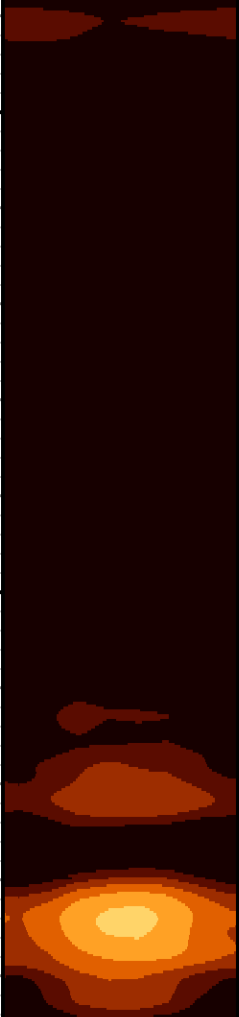


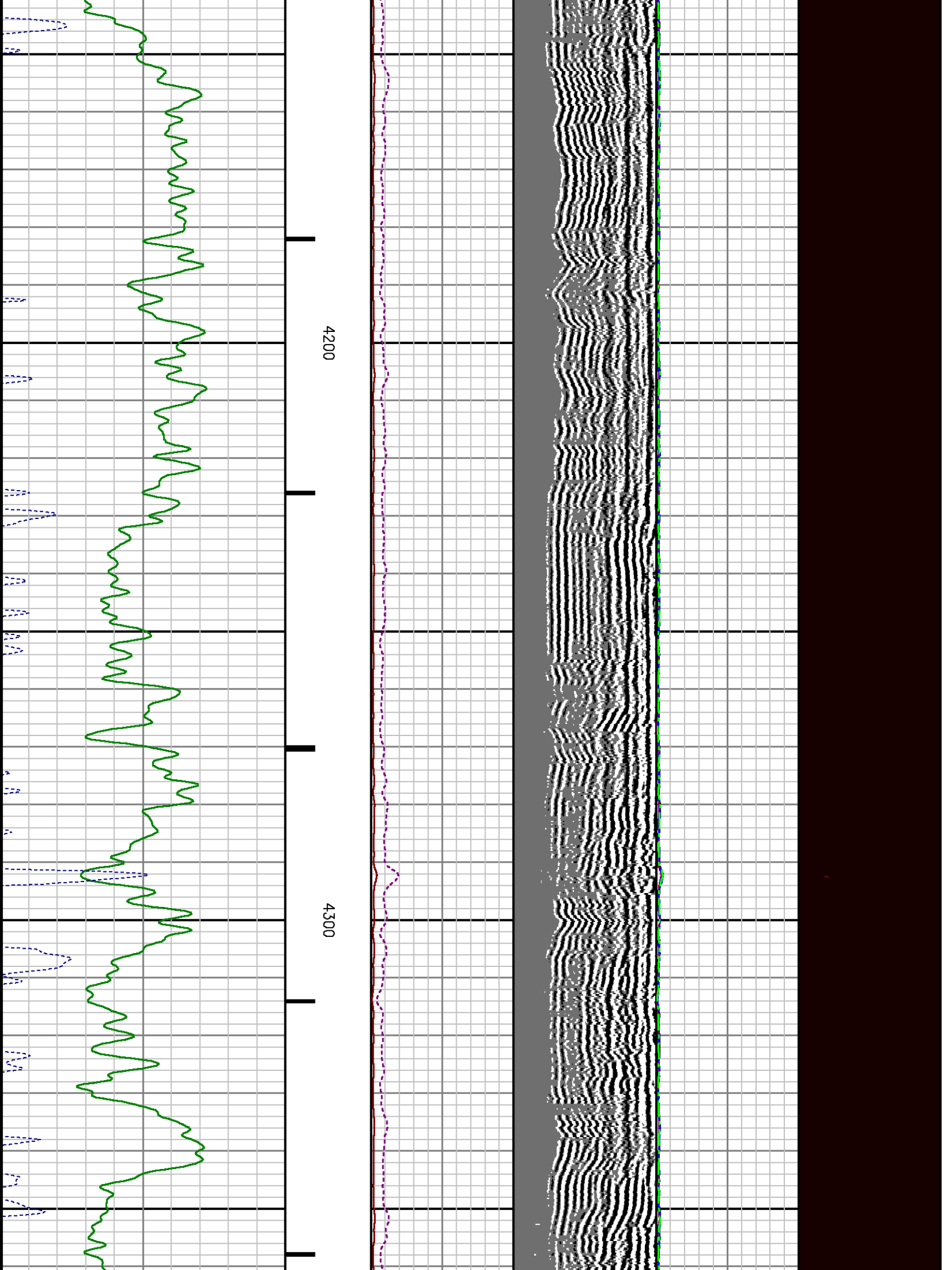


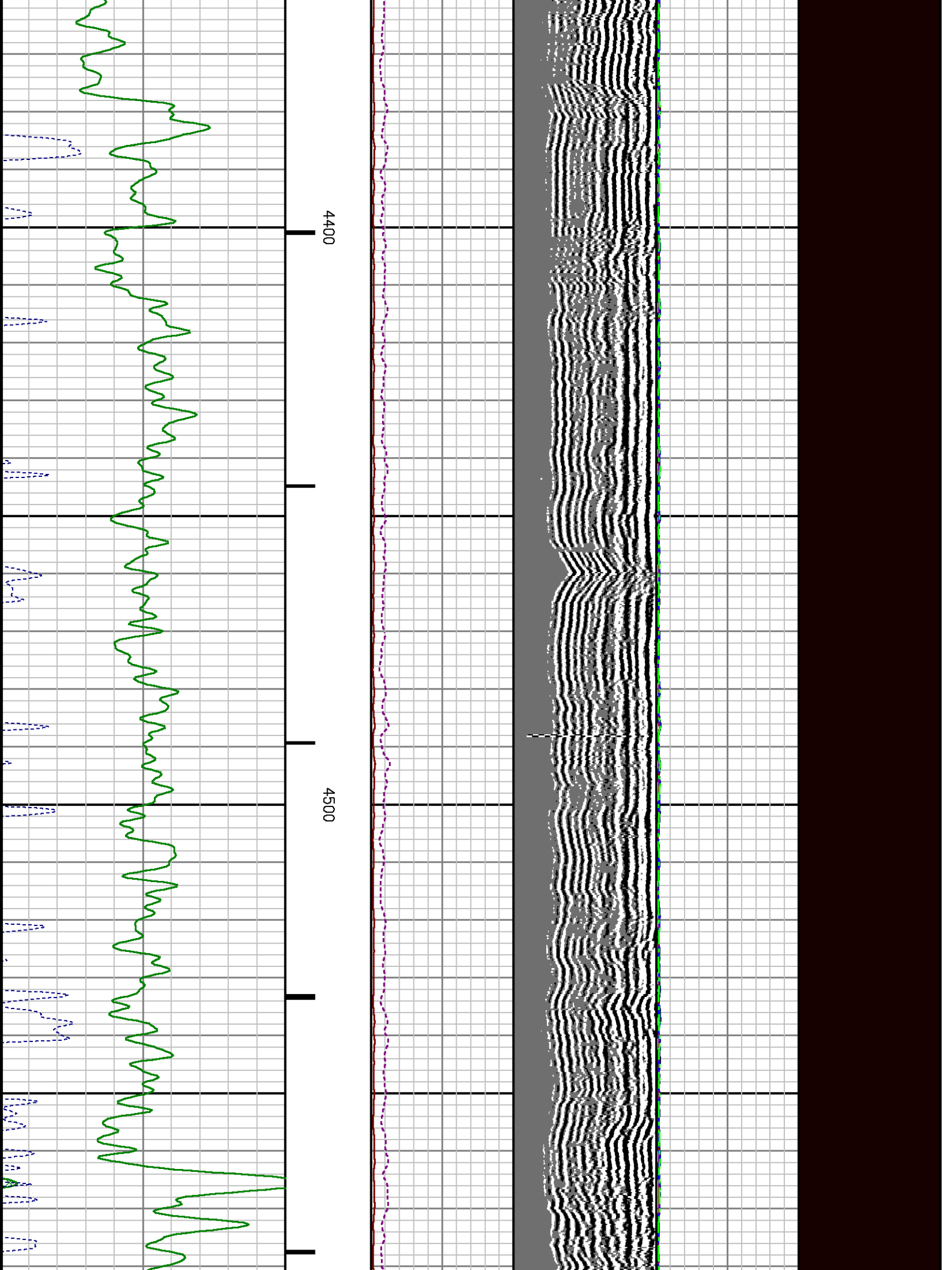


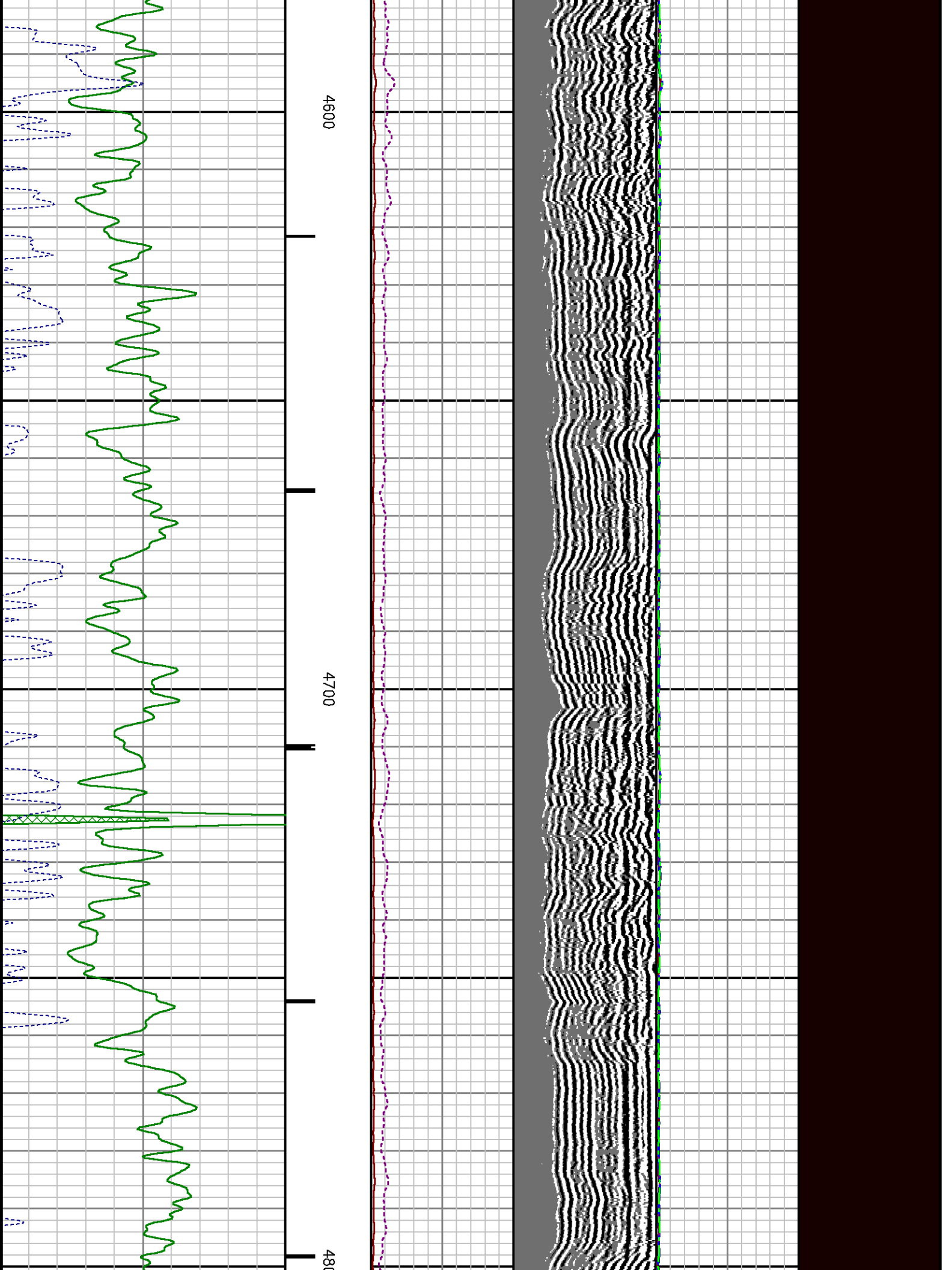


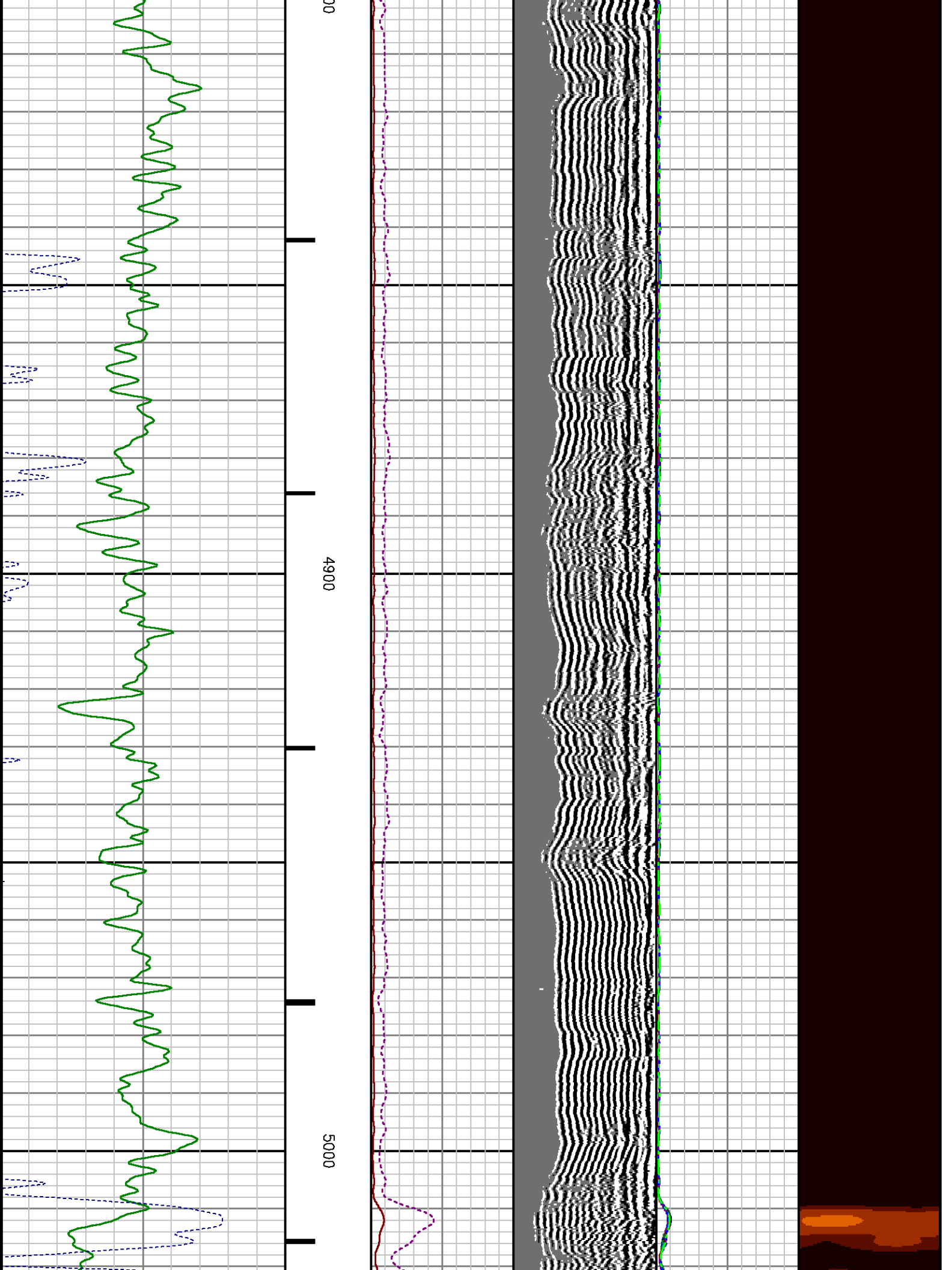


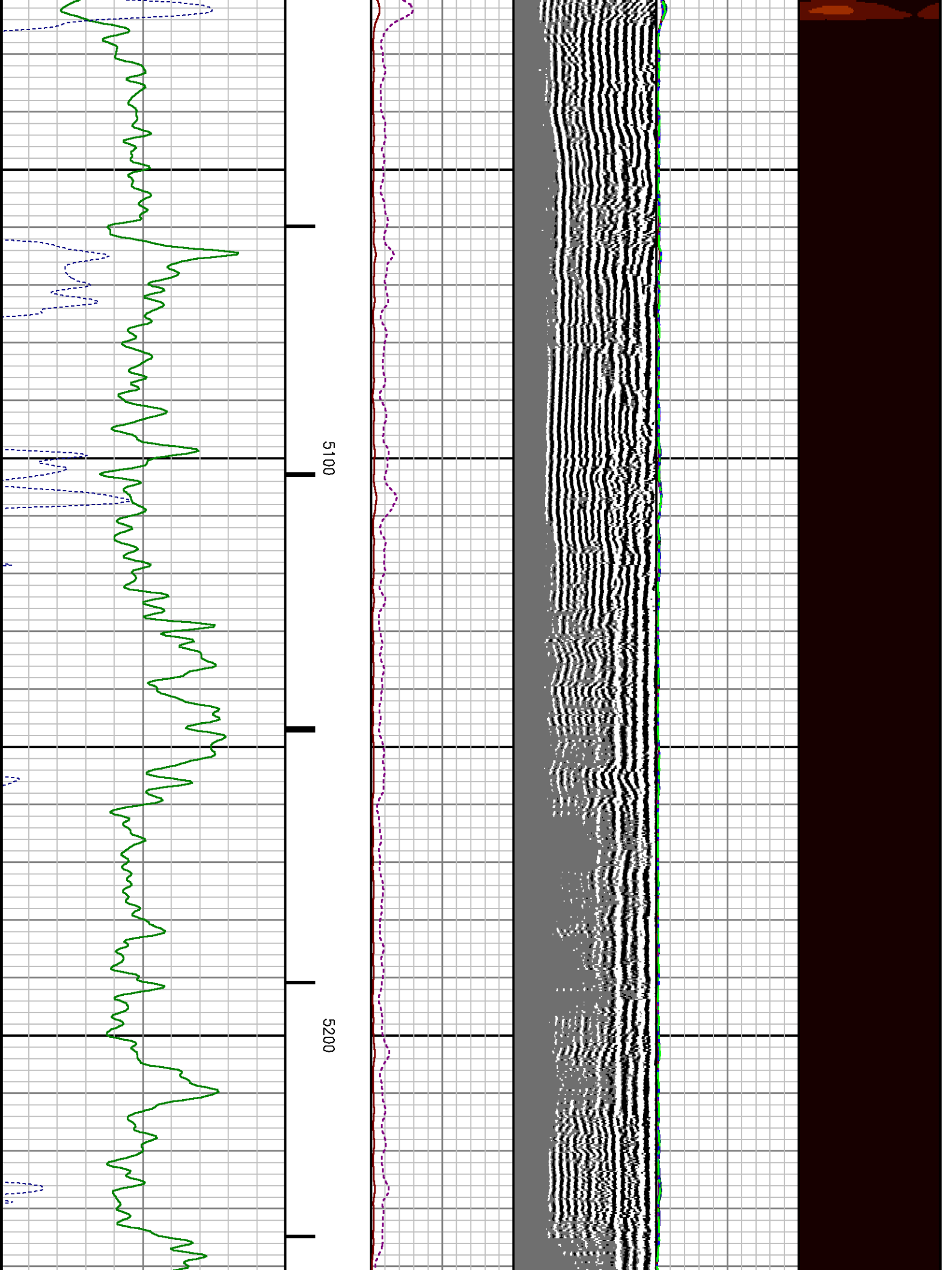


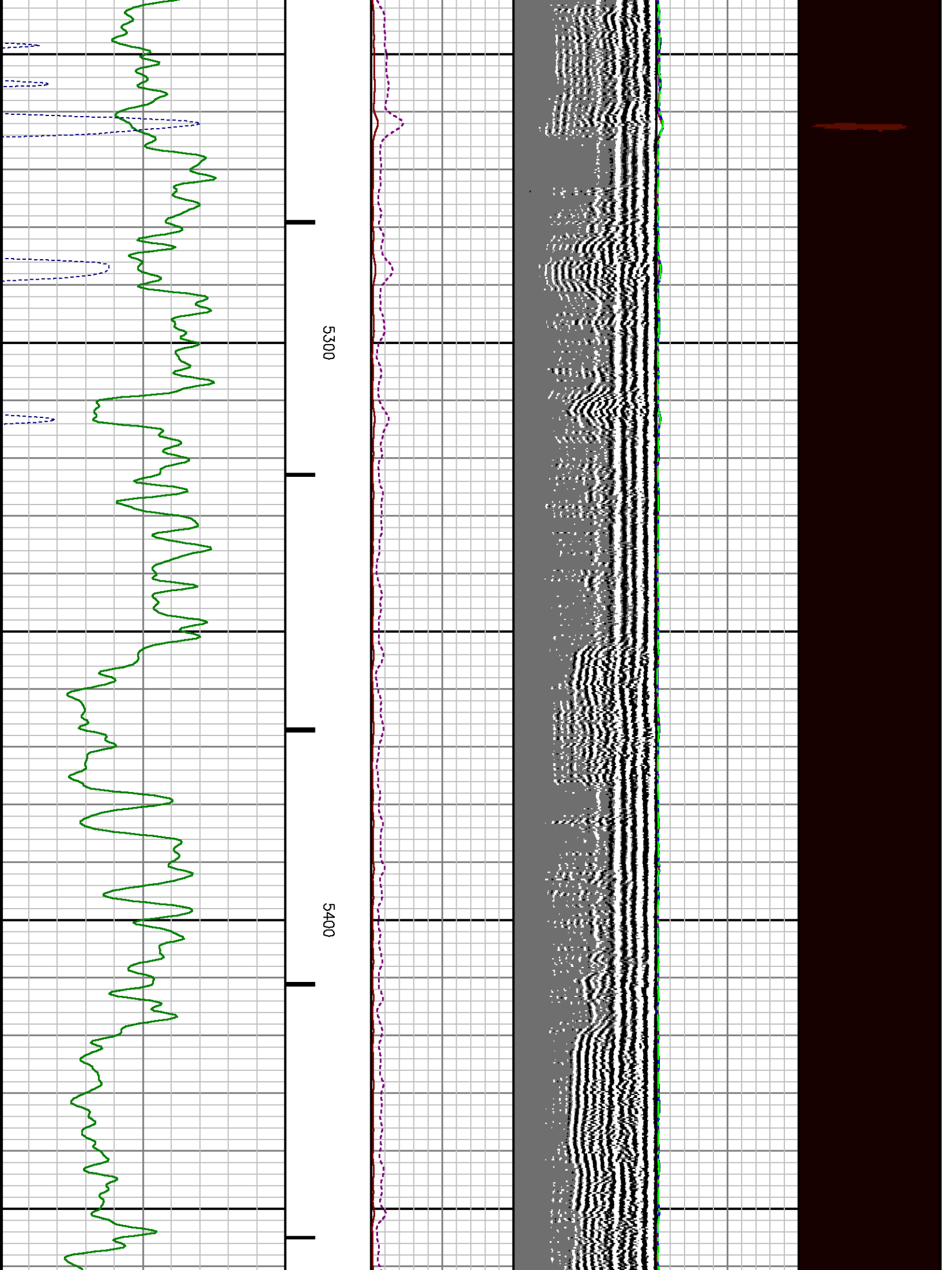


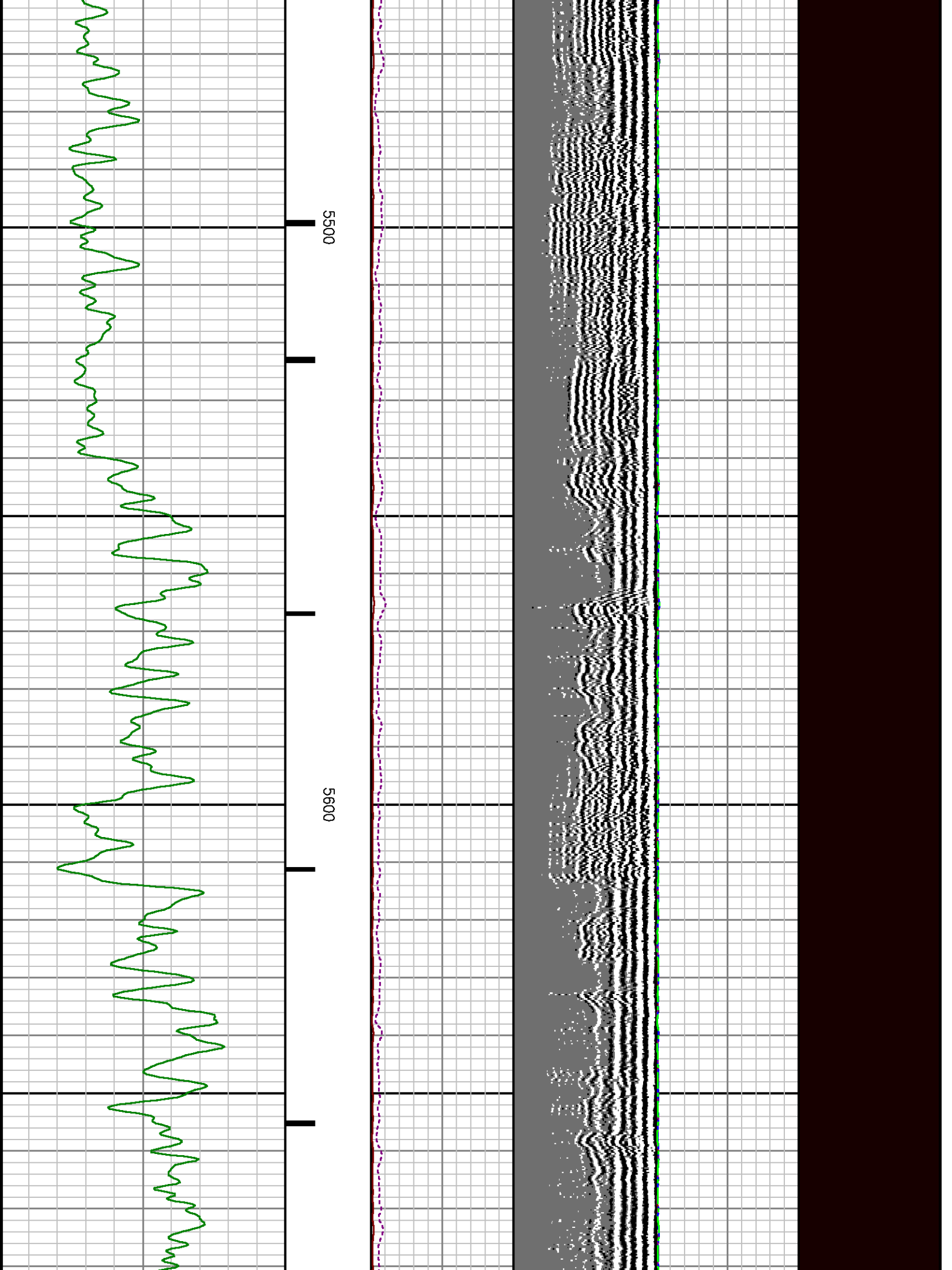


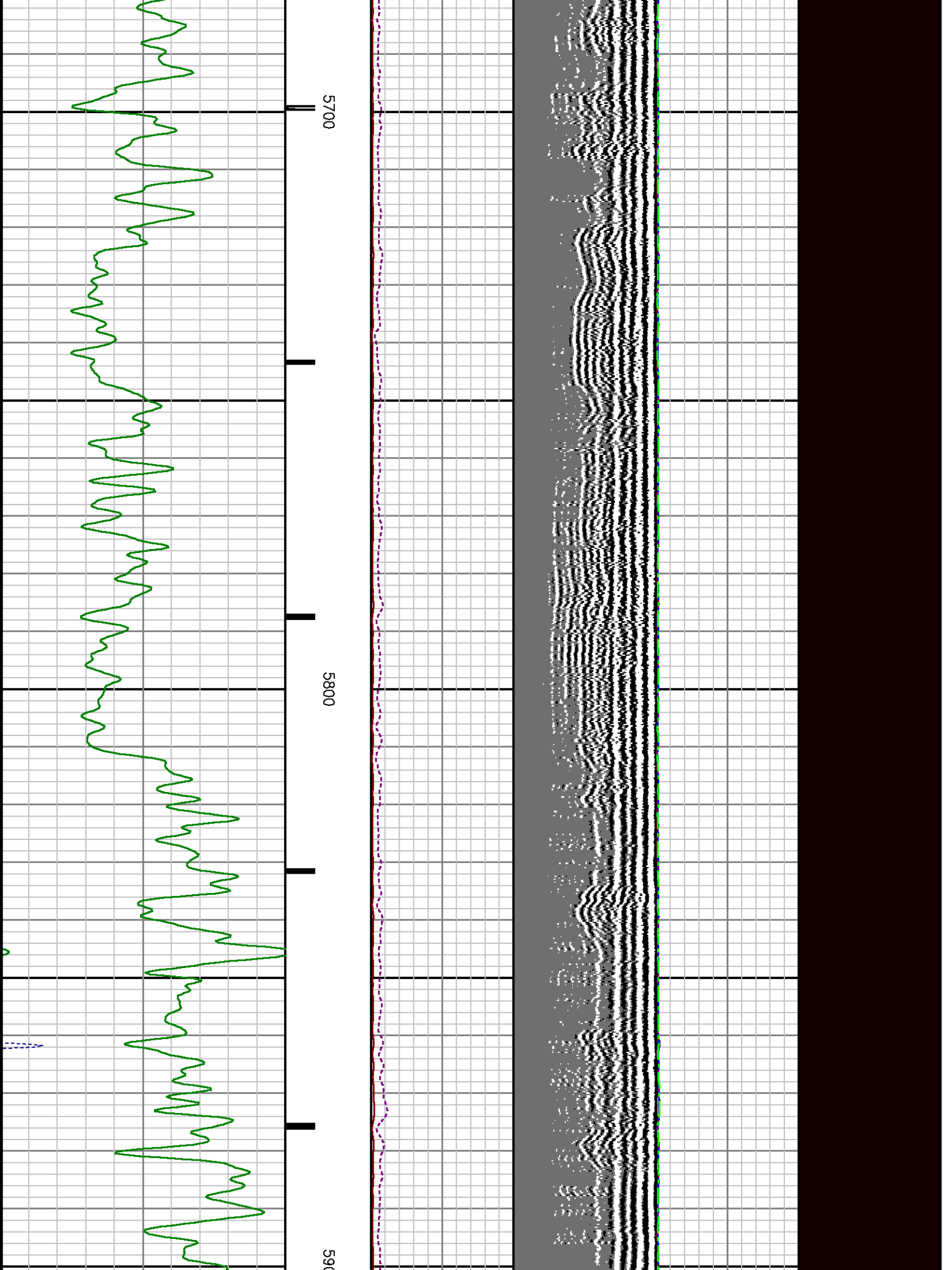


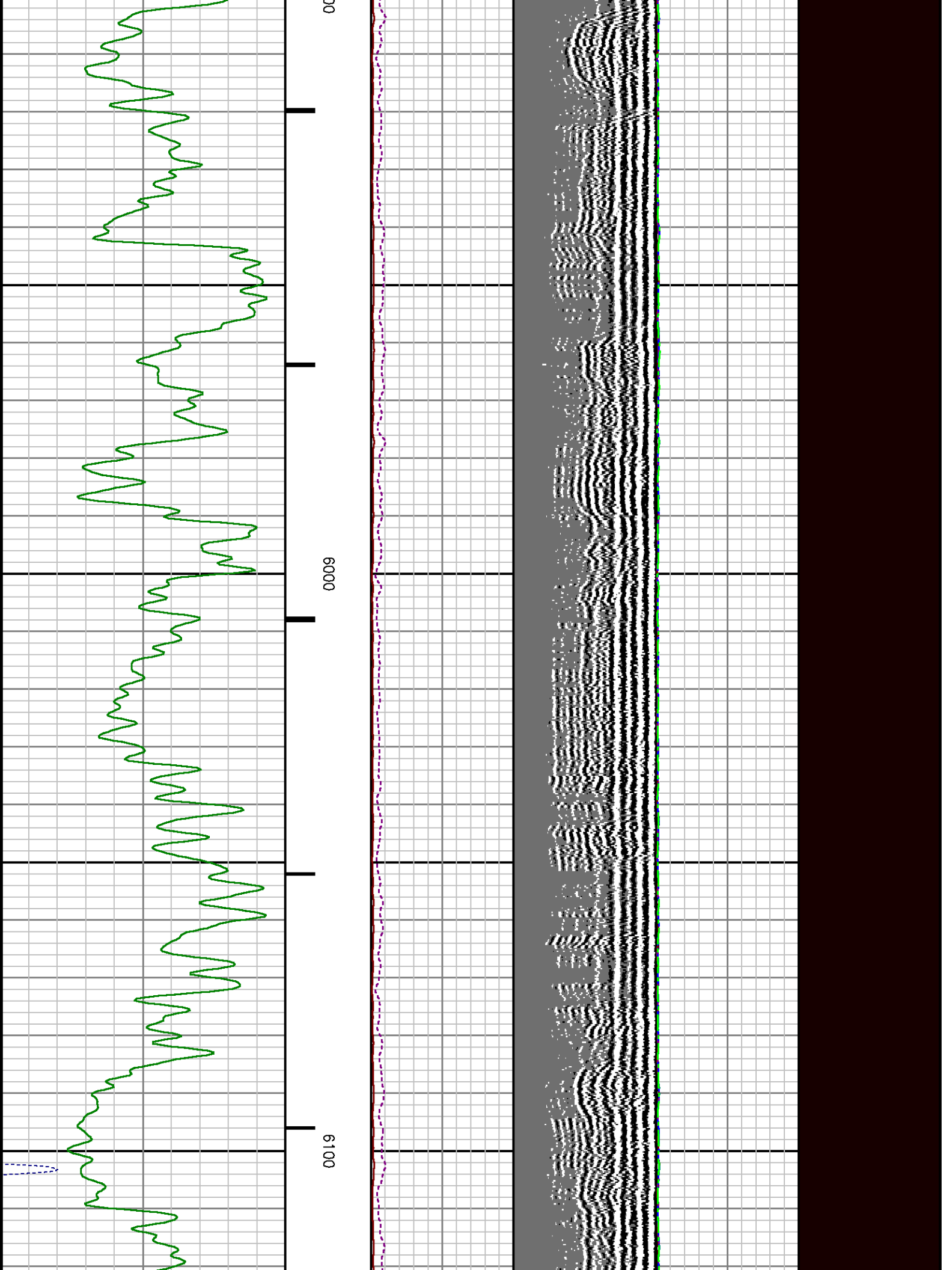


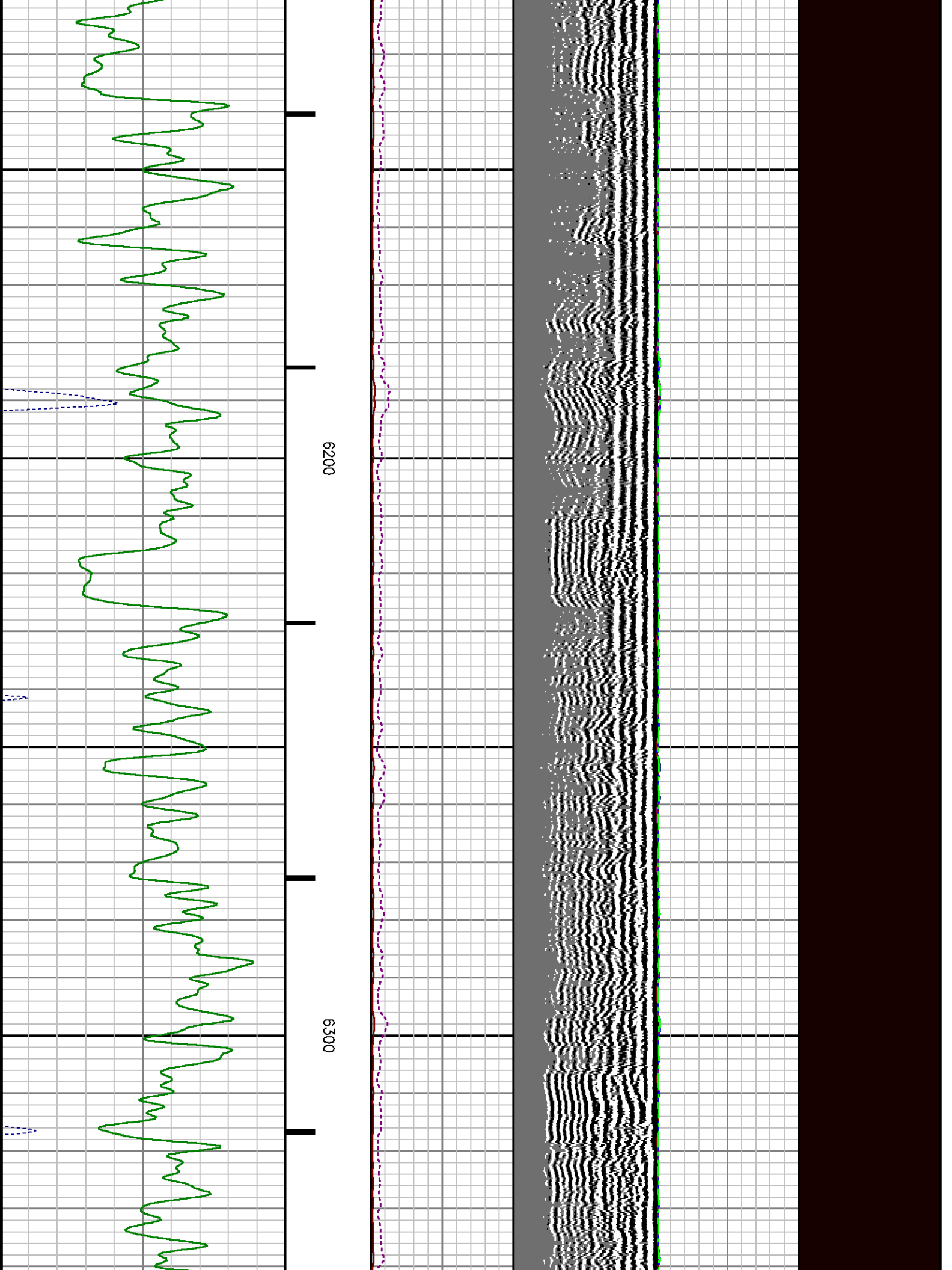


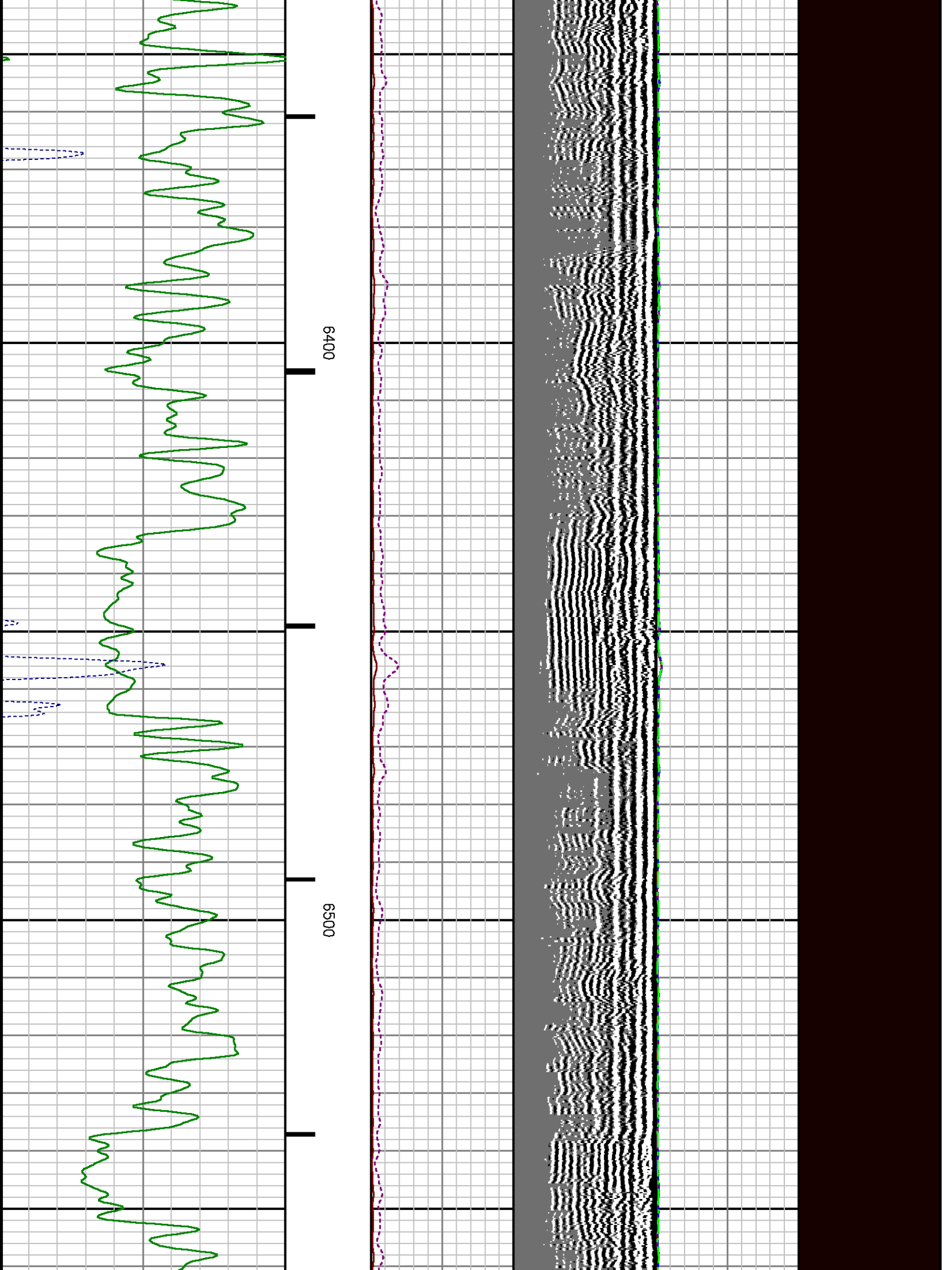


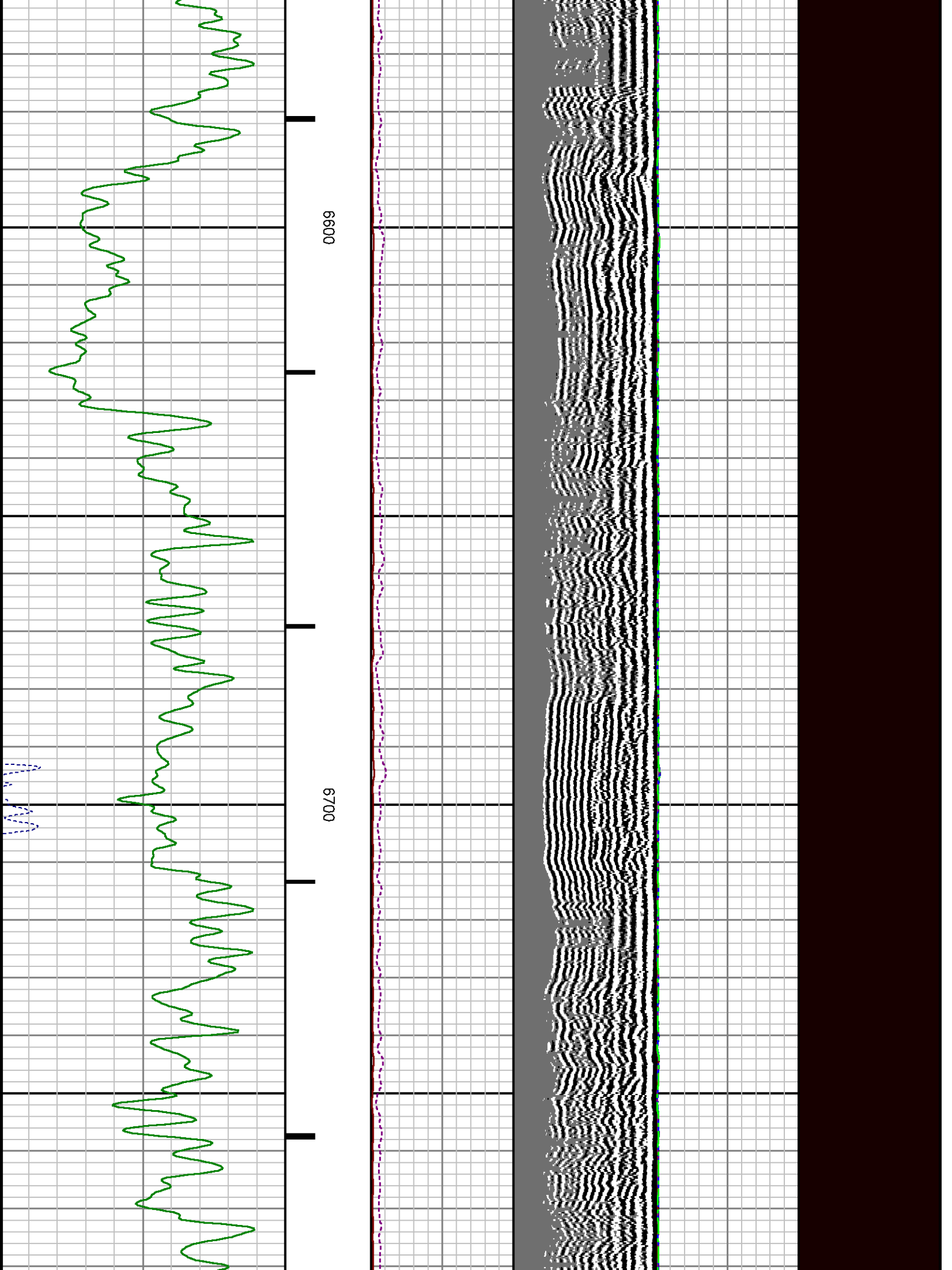


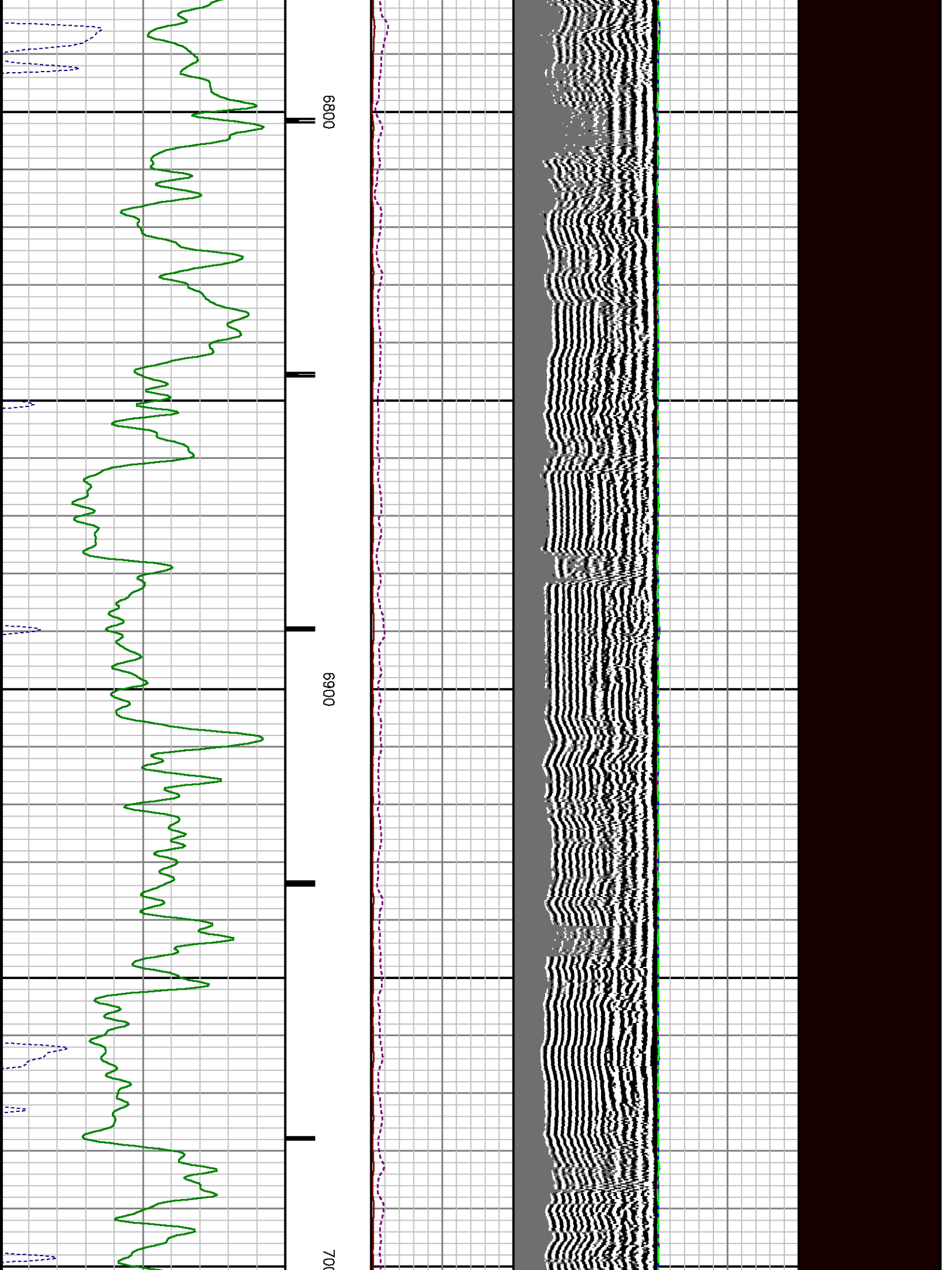


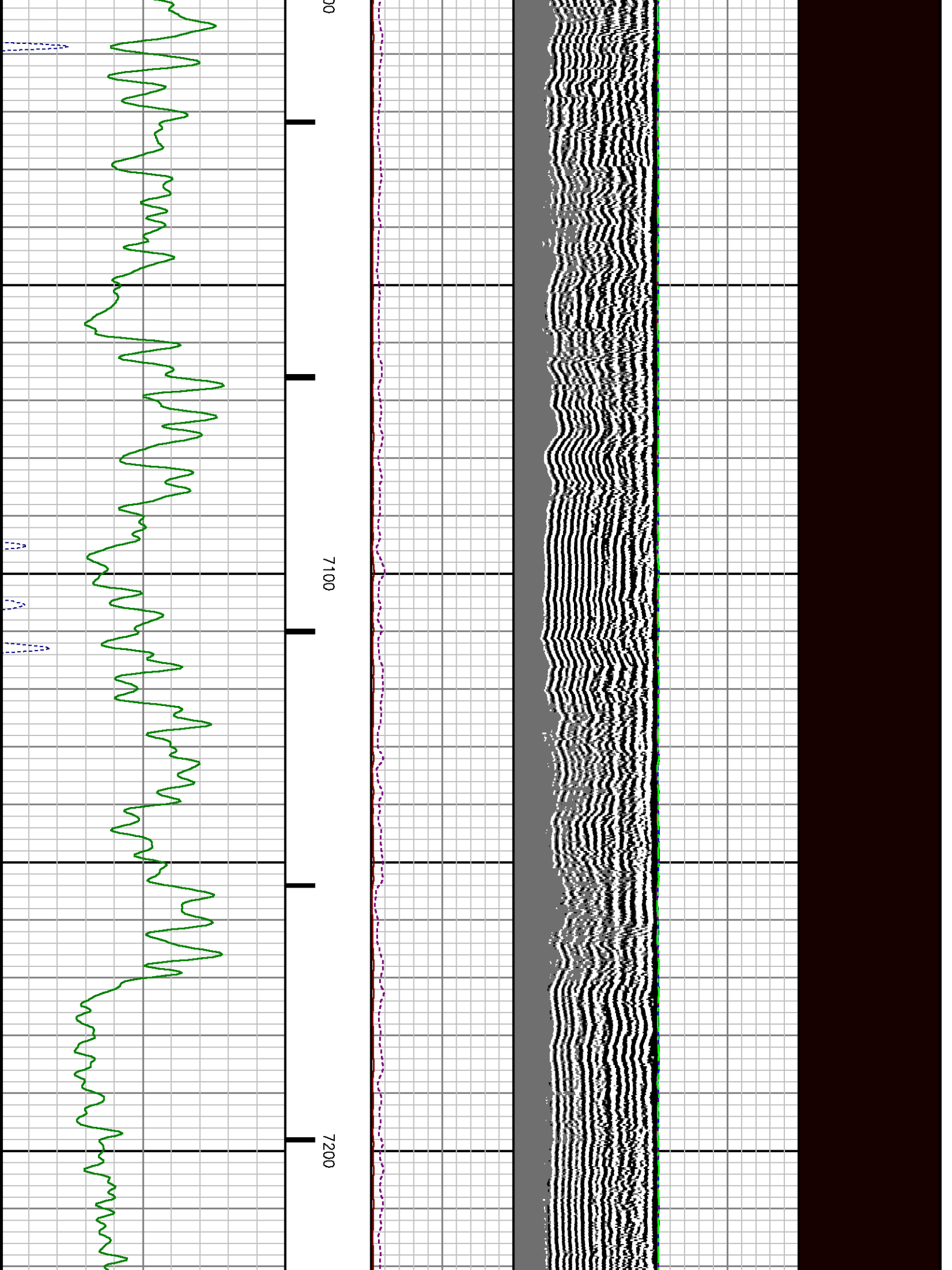


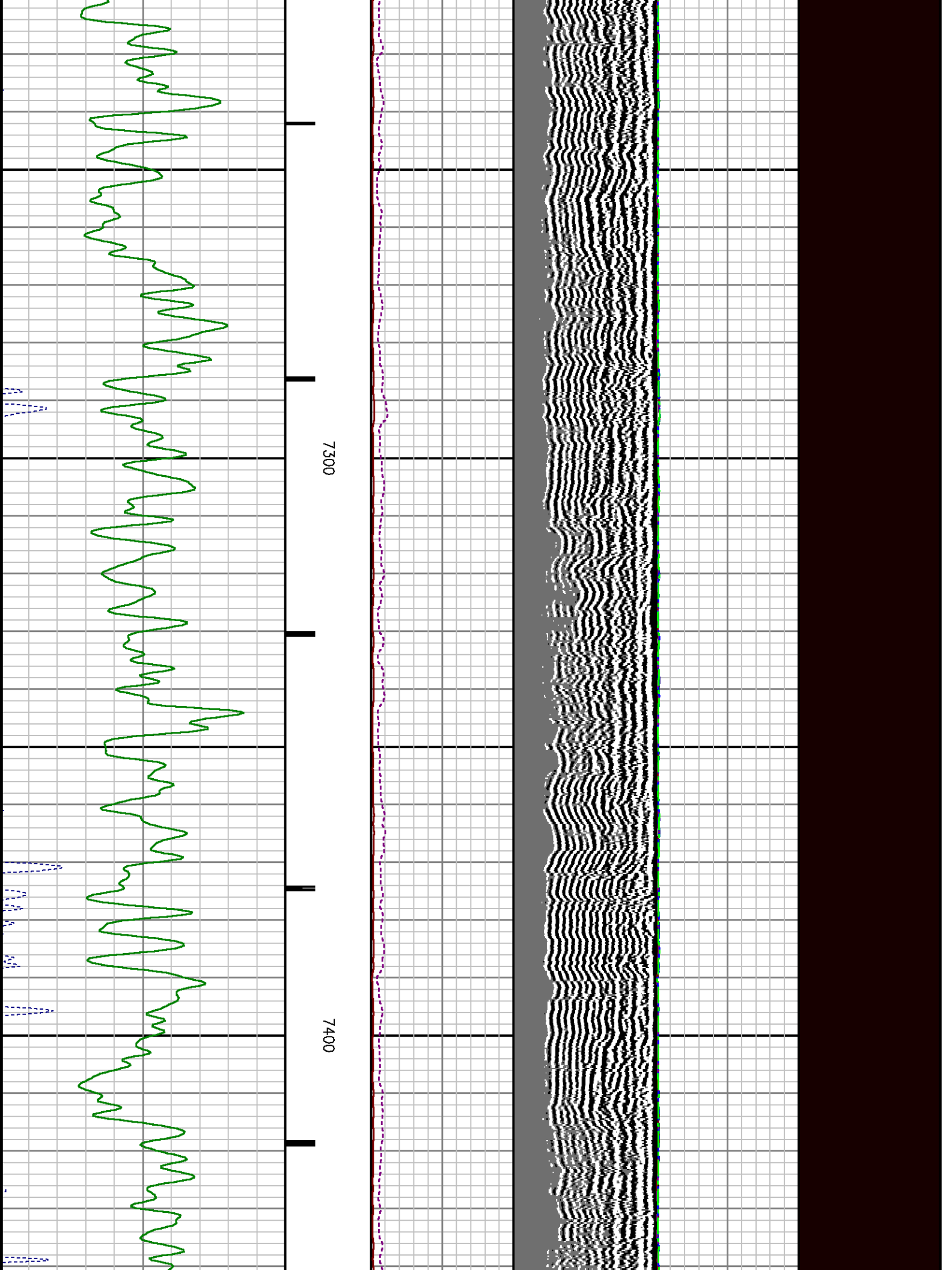


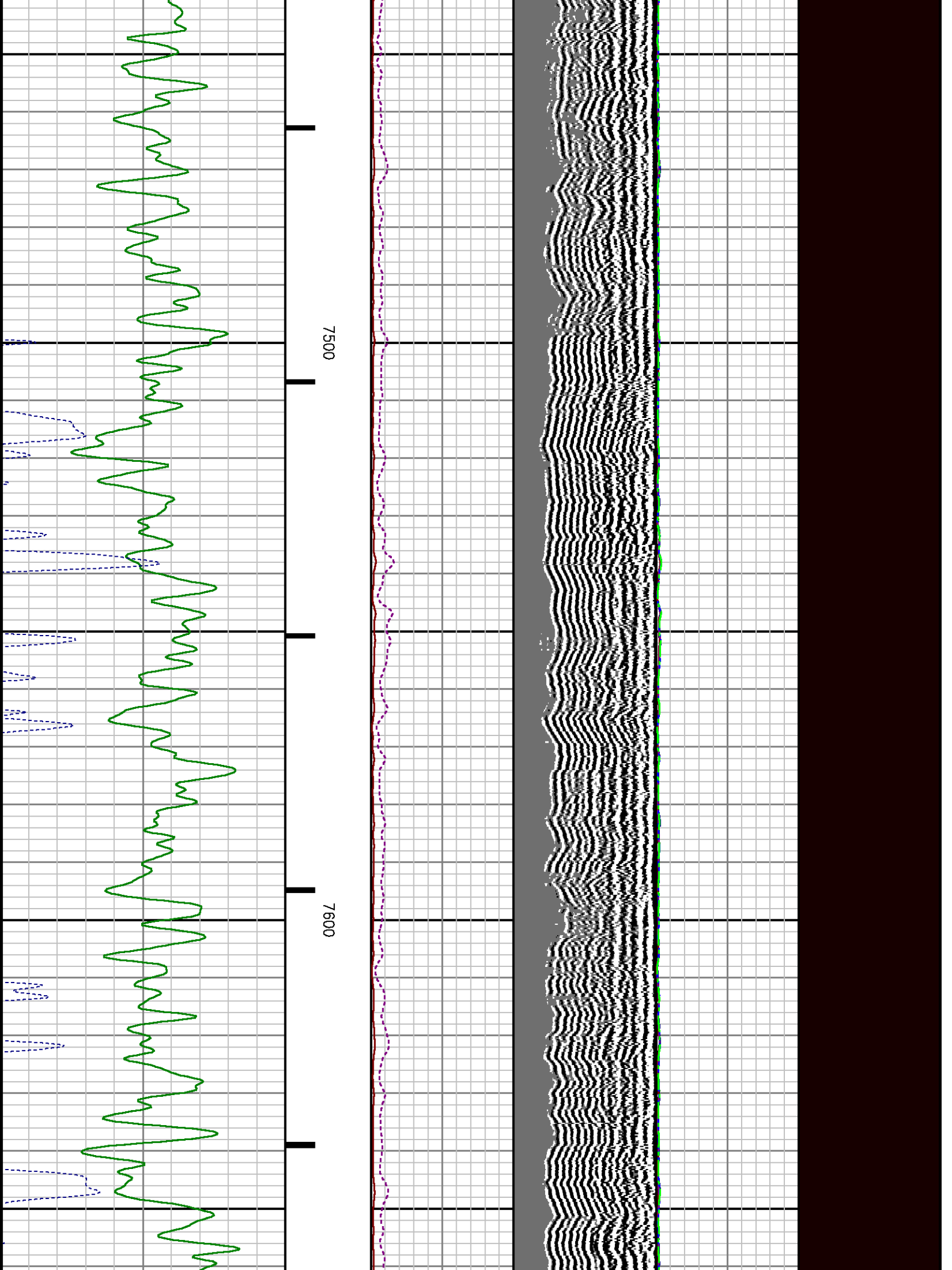


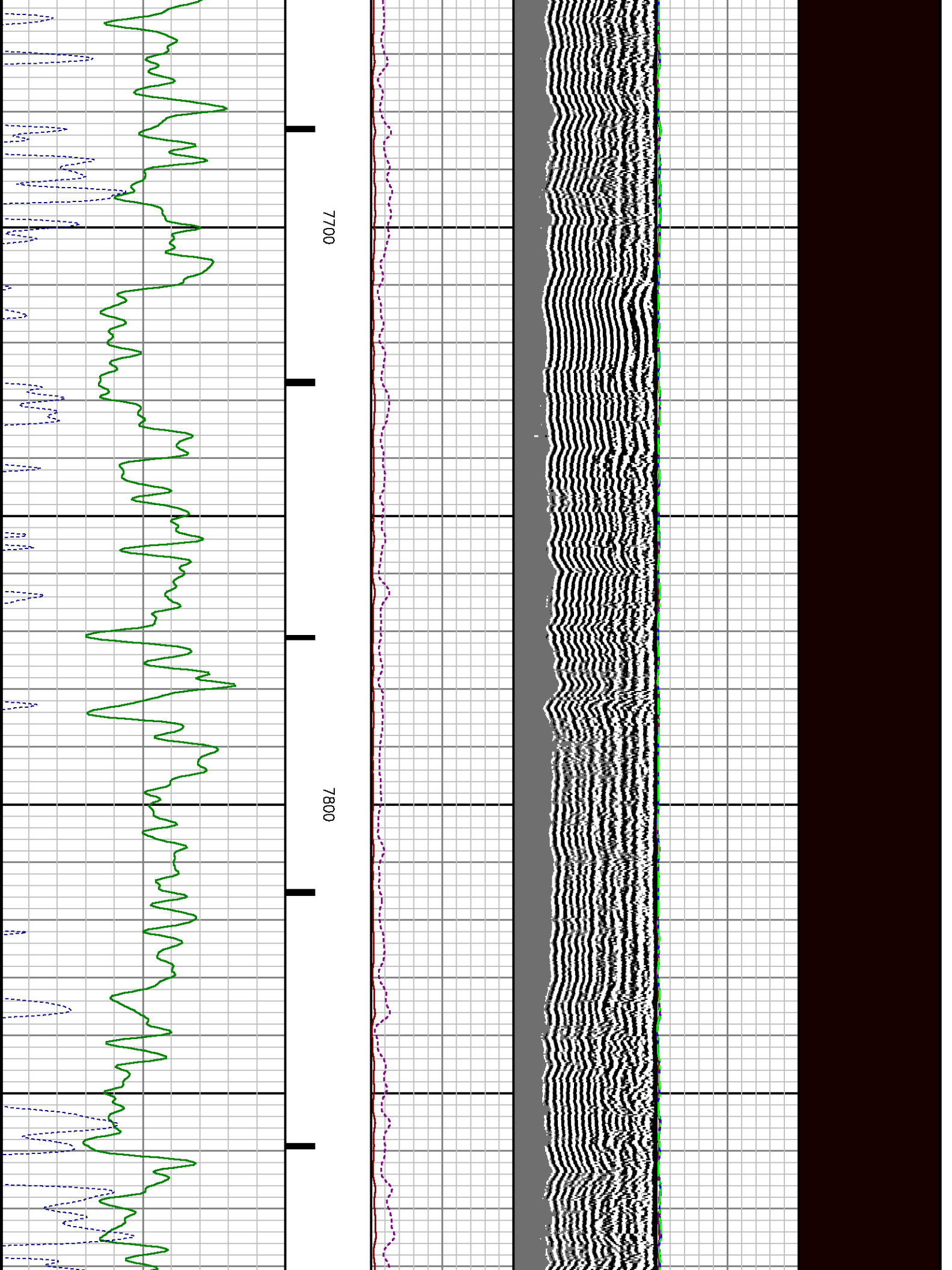


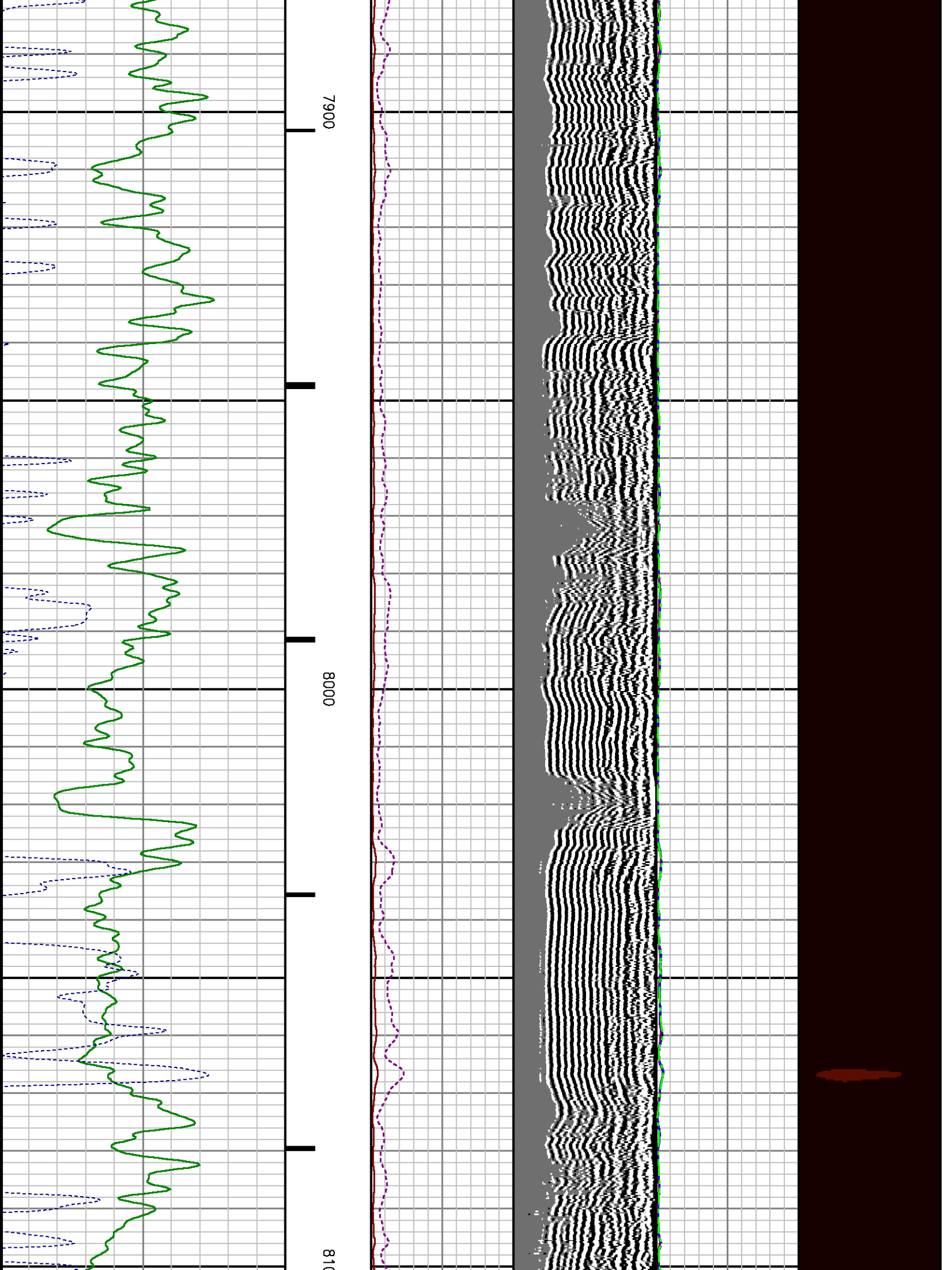


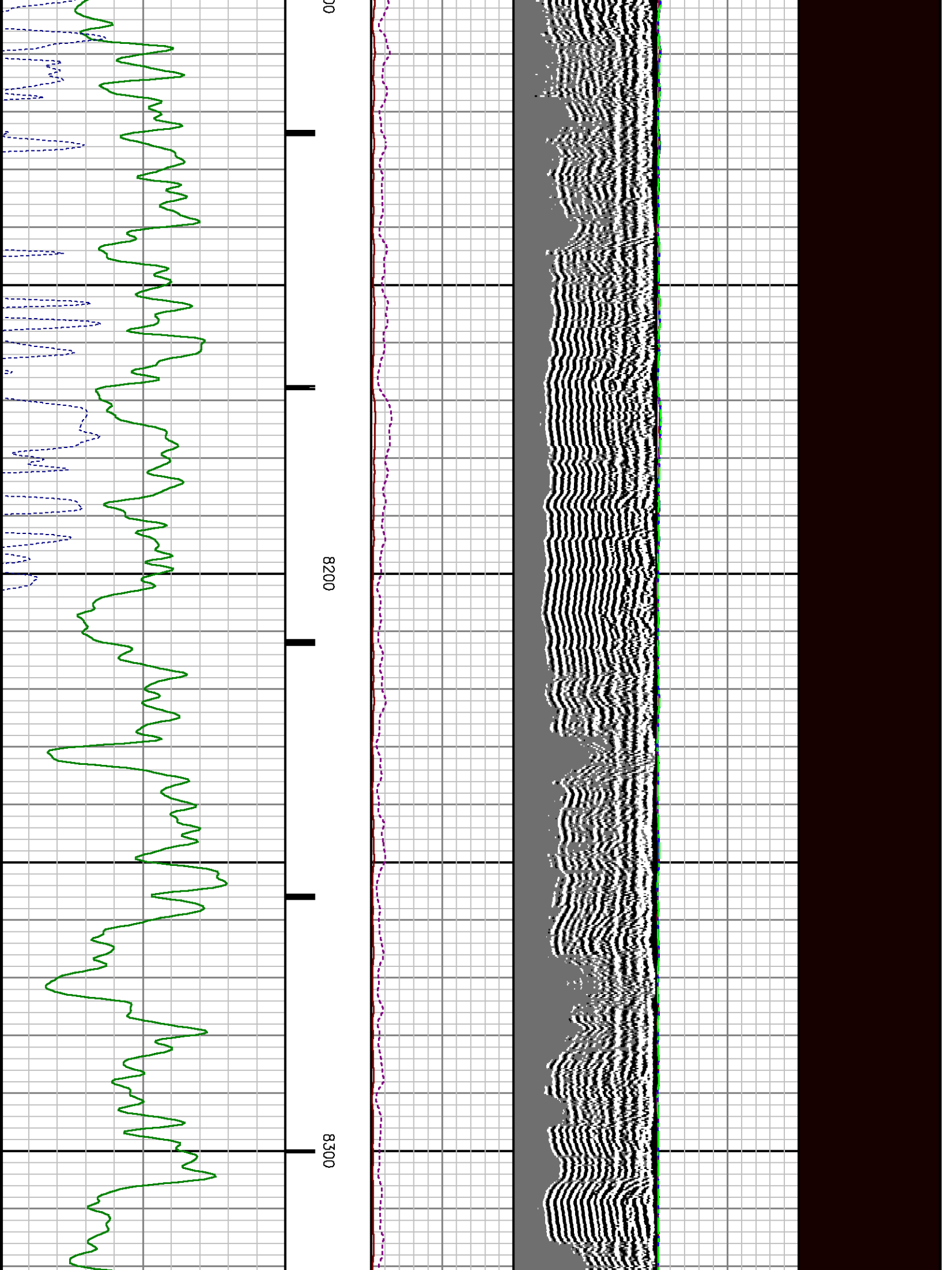


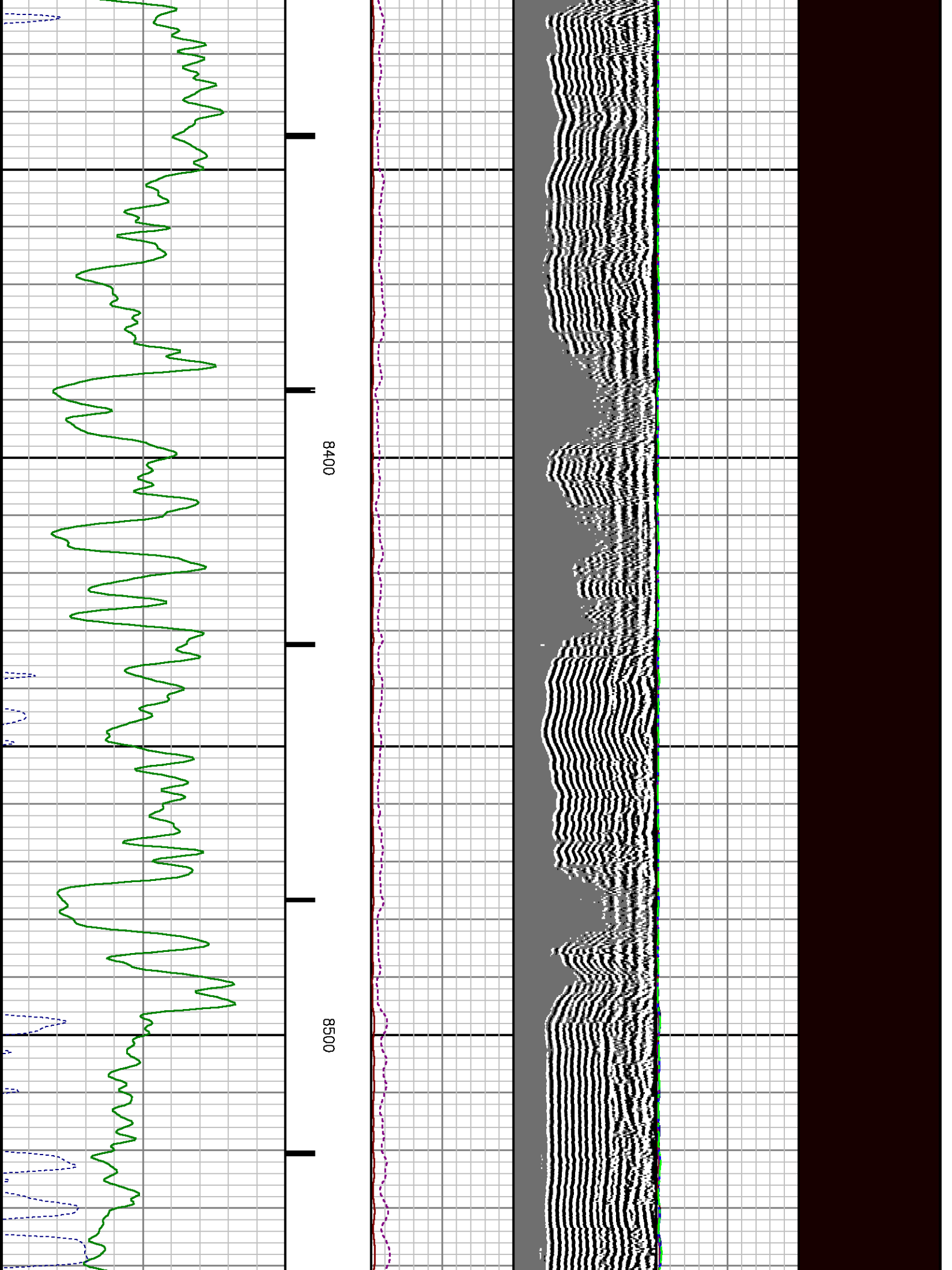


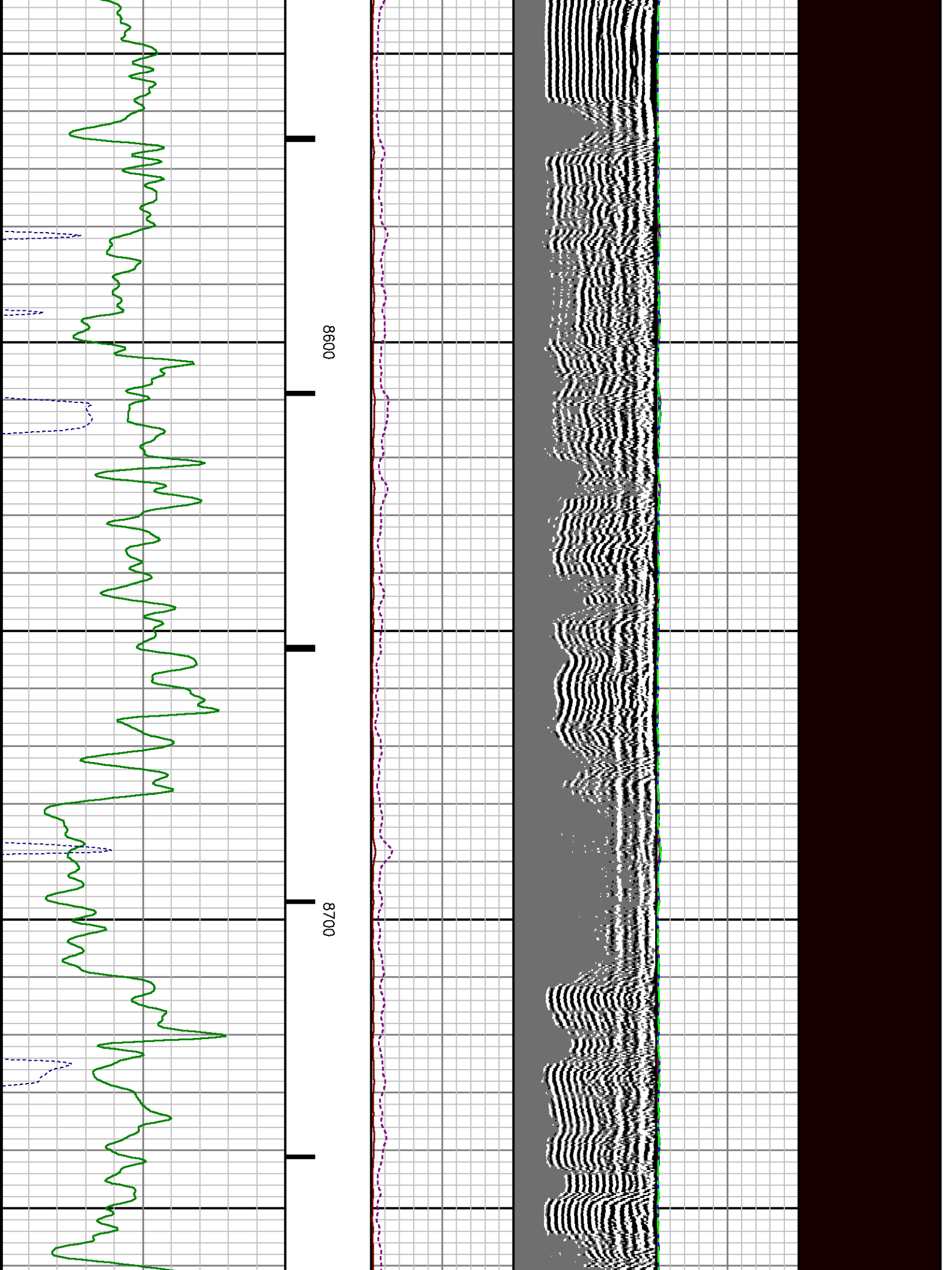












MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8535.151	8864.340
RAL	Amp Gate Start Near	195.000	usec	8535.151	8864.340
RAL	Amp Gate Start Radial	195.000	usec	8535.151	8864.340
RAL	Amp Gate Width Far	25.000	usec	8535.151	8864.340
RAL	Amp Gate Width Near	25.000	usec	8535.151	8864.340
RAL	Amp Gate Width Radial	25.000	usec	8535.151	8864.340
RAL	casing od	4.500	inches	8535.151	8864.340
RAL	casing wt	11.600	lbm/ft	8535.151	8864.340
RAL	FB Start Far	291.900	usec	8535.151	8864.340
RAL	FB Start Near	175.391	usec	8535.151	8864.340
RAL	FB Start Radial	175.391	usec	8535.151	8864.340
RAL	FB Thresh Far	10.000	mv	8535.151	8864.340
RAL	FB Thresh Near	4.000	mv	8535.151	8864.340
RAL	FB Thresh Radial	4.000	mv	8535.151	8864.340
RAL	Fluid Travel Time	200.000	usec/ft	8535.151	8864.339

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

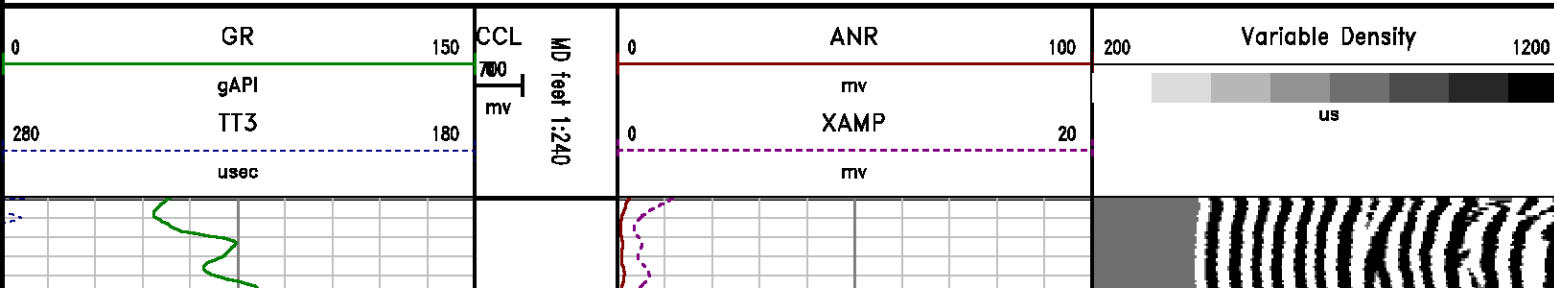
Well : SAVAGE RWF 521-25

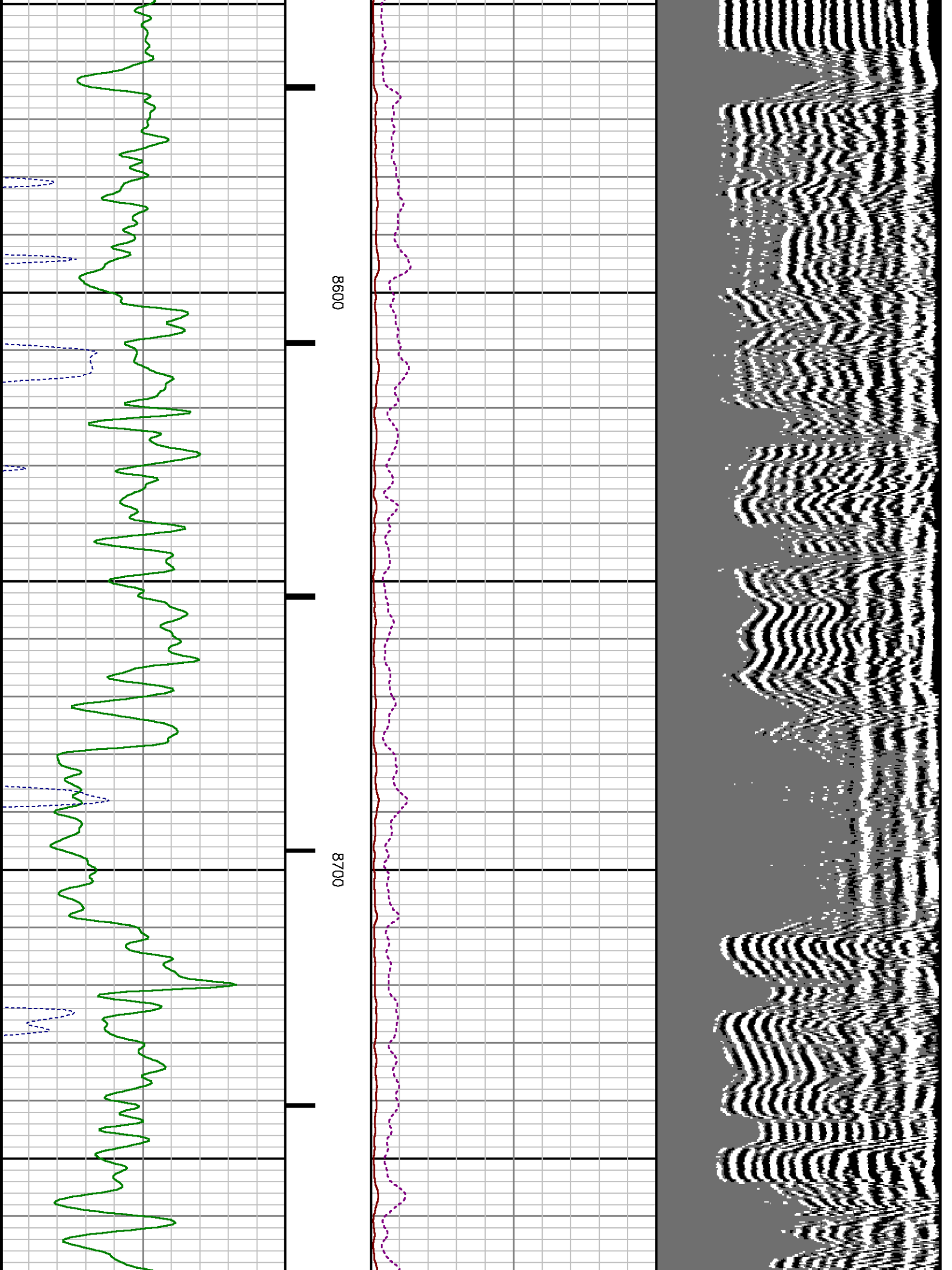
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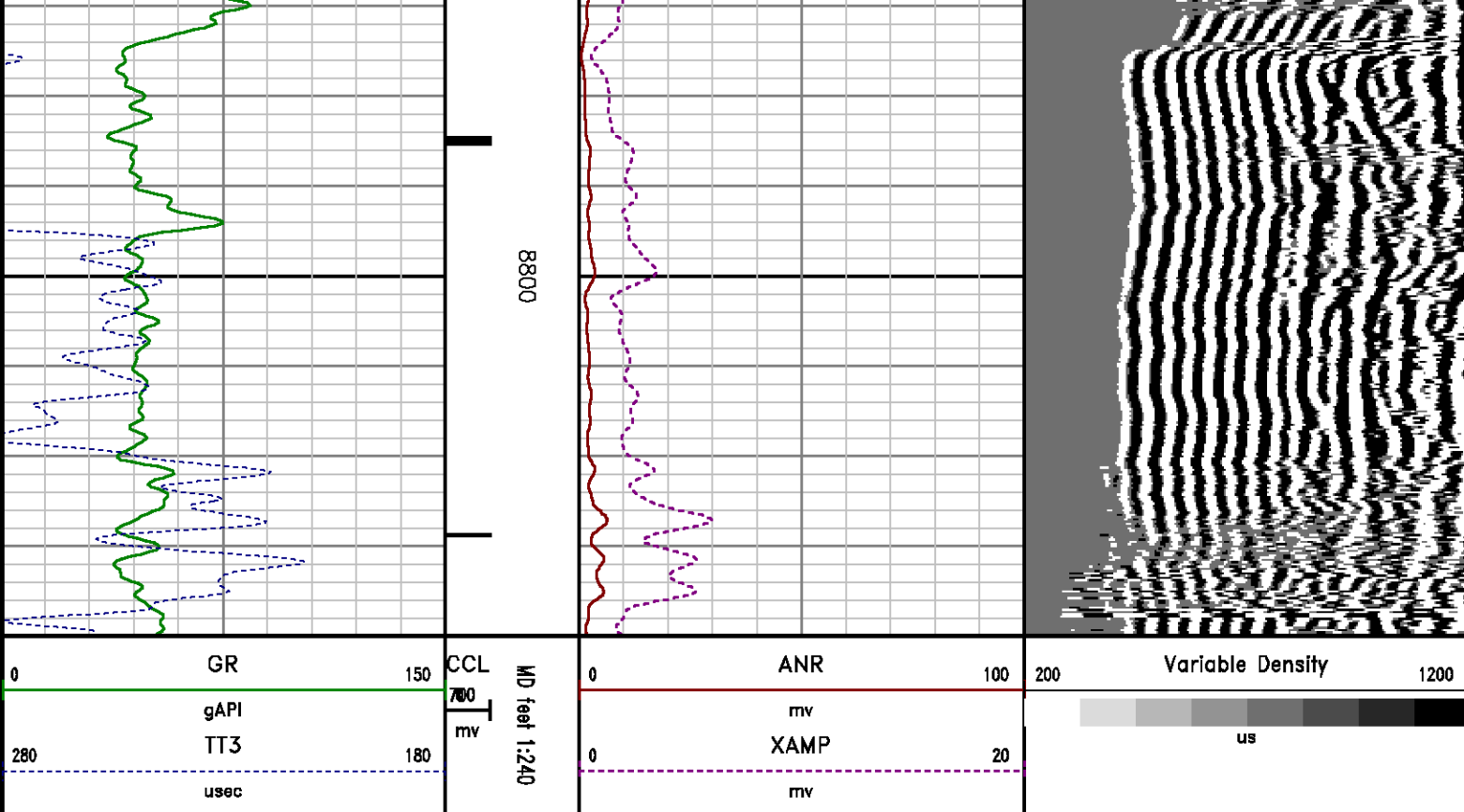
Mode : PlotMgr 5.4.504

Interval : 8540.00 - 8840.00 feet UP

Created : 4/19/2014 8:17:44 AM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496A18.shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 18 10:49:13 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A18

Tool Delay [usec] -52.00 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	-0.008	100.00	0.31
3 Ft. Receiver	217	216	30	166	20	0.409	100.00	0.30
5 Ft. Receiver	327	325	30	263	25	1.035	150.00	0.34
Radial #1	217	216	30	166	22	0.623	100.00	0.30
Radial #2	218	216	30	166	22	0.382	100.00	0.30
Radial #3	218	216	30	166	22	0.626	100.00	0.30
Radial #4	218	216	30	166	22	0.873	100.00	0.31
Radial #5	217	216	30	166	22	0.926	100.00	0.31
Radial #6	217	216	30	166	22	1.116	100.00	0.31

Radial #6	217	216	30	166	22	1.716	100.00	0.30
Radial #7	216	216	30	166	22	0.567	100.00	0.30
Radial #8	218	216	30	166	22	0.774	100.00	0.30

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496A18 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 18 10:50:37 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A18

Tool Delay [usec] -52.00 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	0.021	0.000	1.00	100.000
3 Ft. Receiver	200	30	2.197			
5 Ft. Receiver	317	30	2.024			
Radial #1	200	30	1.639			
Radial #2	200	30	1.572			
Radial #3	200	30	1.819			
Radial #4	200	30	1.797			
Radial #5	200	30	2.067			
Radial #6	200	30	2.157			
Radial #7	200	30	1.758			
Radial #8	200	30	1.733			

GAMMA RAY

Calibration File: C:\case\calver\GR\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 [api]	Calibrator On [api]	Differential [api]
S2K WA612	76.84	356.71	0.661	50.80	235.80	185.00

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

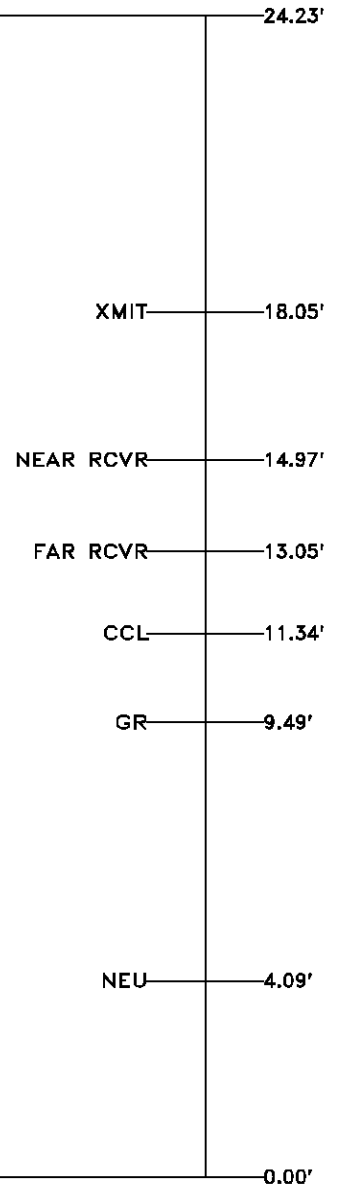
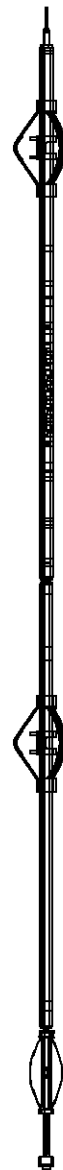
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

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"



Company
Well
Field
County

WPX ENERGY
SAVAGE RWF 521-25
RULISON
GARFIELD

State CO

File No:
CH084706
API No:
05045219630000

CASE

Location

SHL: 2444' FNL & 1444' FWL
BHL: 815' FNL & 2102' FWL

SEC 25 TWP 6S RGE 94W

Elevations

KB 6058 ft
DF
GL 6037 ft

25 6S 94W
RWF 22-25 PAD
CYCLONE 17