



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: WPX ENERGY

CH084820 FEDERAL NER 414-32

API No: RULISON

05045217800000 GARFIELD State CO

Location

SHL: 185' FNL & 2593' FWL (5 75 93W)

BHL: 505' FSL & 545' FWL (32 65 93W)

SEC 32 TWP 6S RGE 93W

Other Services

RPM

GL Elevation 7603 ft

KB 26 ft Above P. D.

KB Elevations 7629 ft

GL Elevations 7603 ft

Permanent Datum
Log Measured From
Drill Measured From

Date 26/APR/14

Run ONE

Service Order US625393

Depth Driller 10322 ft

Depth Logger 10252 ft

Bottom Logged Interval 10242 ft

Top Logged Interval 26 ft

Time Started 1330

Time Finished 1700

Operator Rig Time 4.5 HOURS

Type of Fluid in Hole WATER

Fluid Density NA

Salinity NA

Fluid Level 93 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 Location GRAND JUNCTION

Recorded By FLOYD RENEAU

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	1128 ft
8.75 in	1128 ft	10322 ft

Casing Record

Size	Weight	Grade	From	To
9.625 in			0 ft	1128 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	10322 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 12 feet.
Logged with zero PSI at wellhead.

BHT = 245°F

SJ = 7016'-7037'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	2559XA	10417456	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	12.218	10242.000
RAL	Amp Gate Start Near	195.000	usec	12.218	10242.000
RAL	Amp Gate Start Radial	195.000	usec	12.218	10242.000
RAL	Amp Gate Width Far	25.000	usec	12.218	10242.000
RAL	Amp Gate Width Near	25.000	usec	12.218	10242.000
RAL	Amp Gate Width Radial	25.000	usec	12.218	10242.000
RAL	casing od	4.500	inches	12.218	10242.000
RAL	casing wt	11.600	lbm/ft	12.218	10242.000
RAL	FB Start Far	291.900	usec	12.218	10242.000
RAL	FB Start Near	180.000	usec	12.218	10242.000
RAL	FB Start Radial	180.000	usec	12.218	10242.000
RAL	FB Thresh Far	15.000	mv	12.218	10242.000
RAL	FB Thresh Near	10.000	mv	12.218	10242.000
RAL	FB Thresh Radial	10.000	mv	12.218	10242.000
RAL	Fluid Travel Time	200.000	usec/ft	12.218	10242.593

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 414-32

File Name : d:\welldata\wpx\ner 414-32\414cb\main.xtf

Mode : PlotMgr 5.4.504

Interval : -5.00 - 10258.00 feet UP

Created : 4/30/2014 7:56:19 AM

0

GR

150

gAPI

TT3

280

u sec

CCL

400

m v

MD feet 1:240

0

100

0

ANR

100

m v

XAMP

0

20

m v

200

Variable Density

1200

us

WELLHEAD

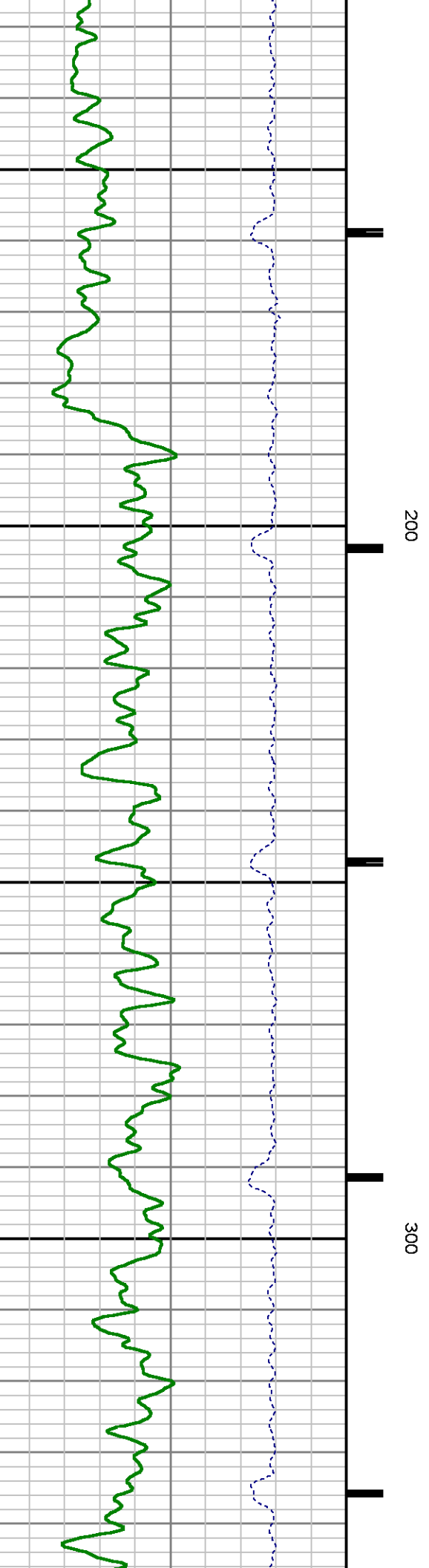
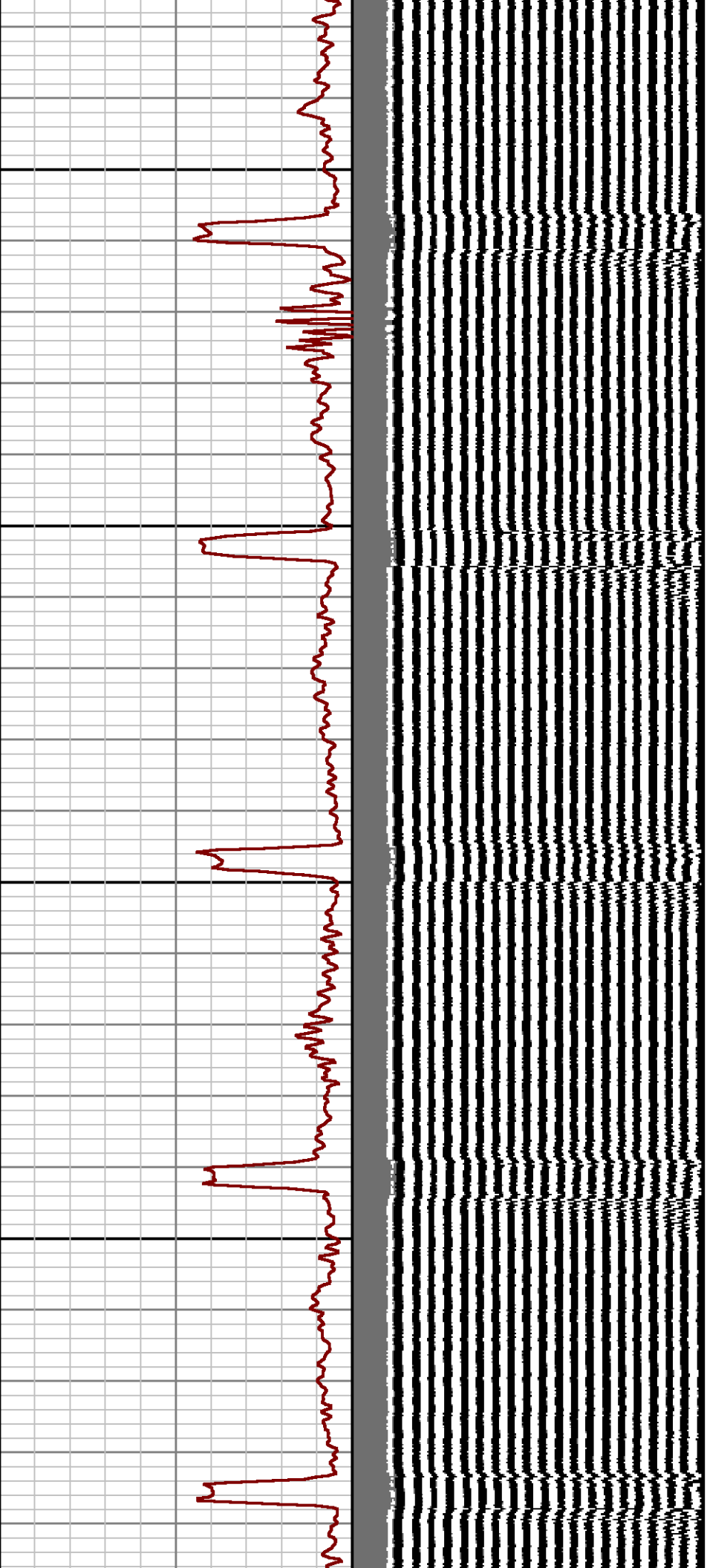
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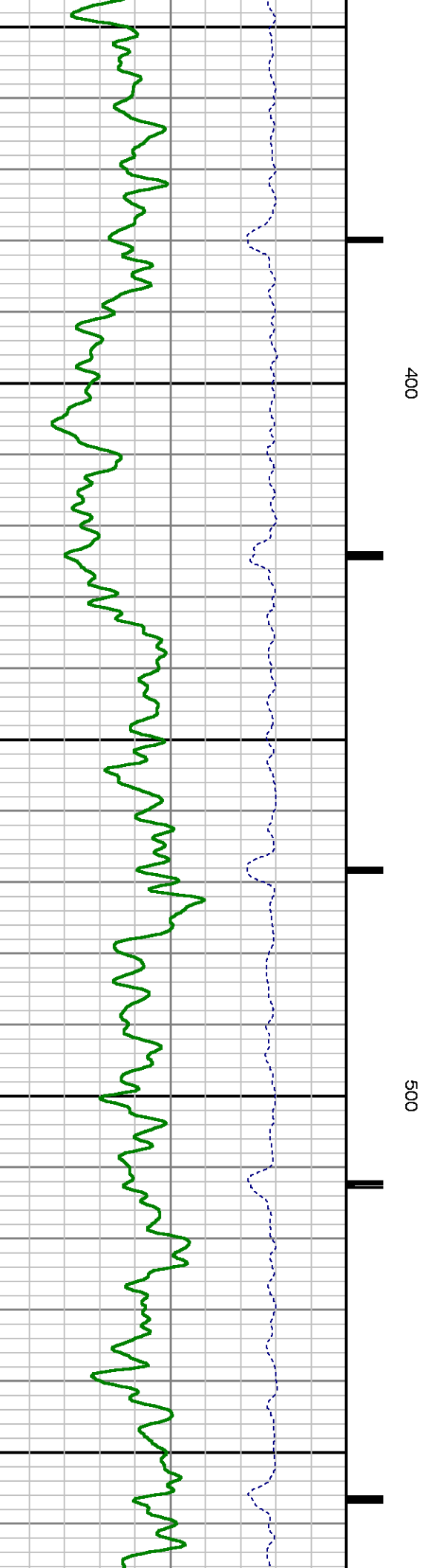
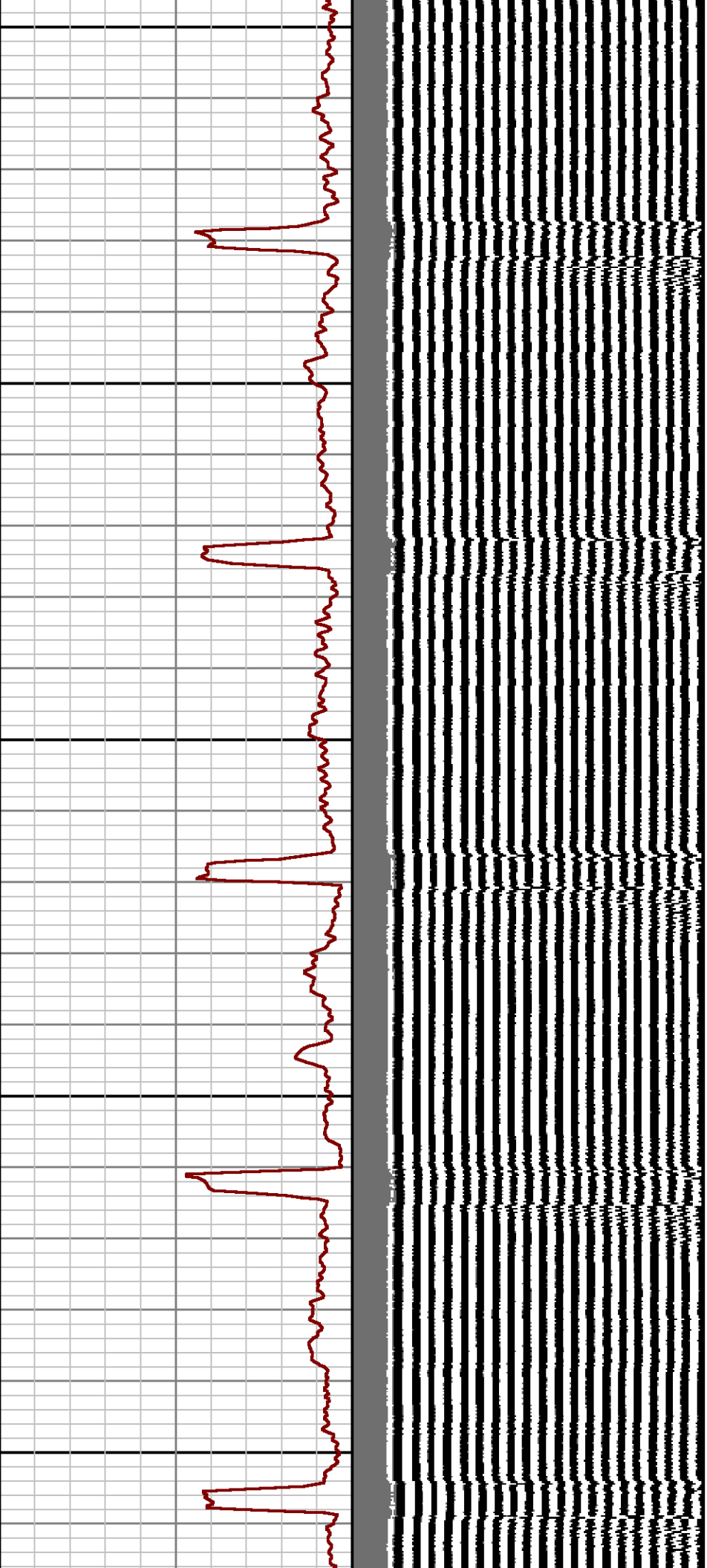
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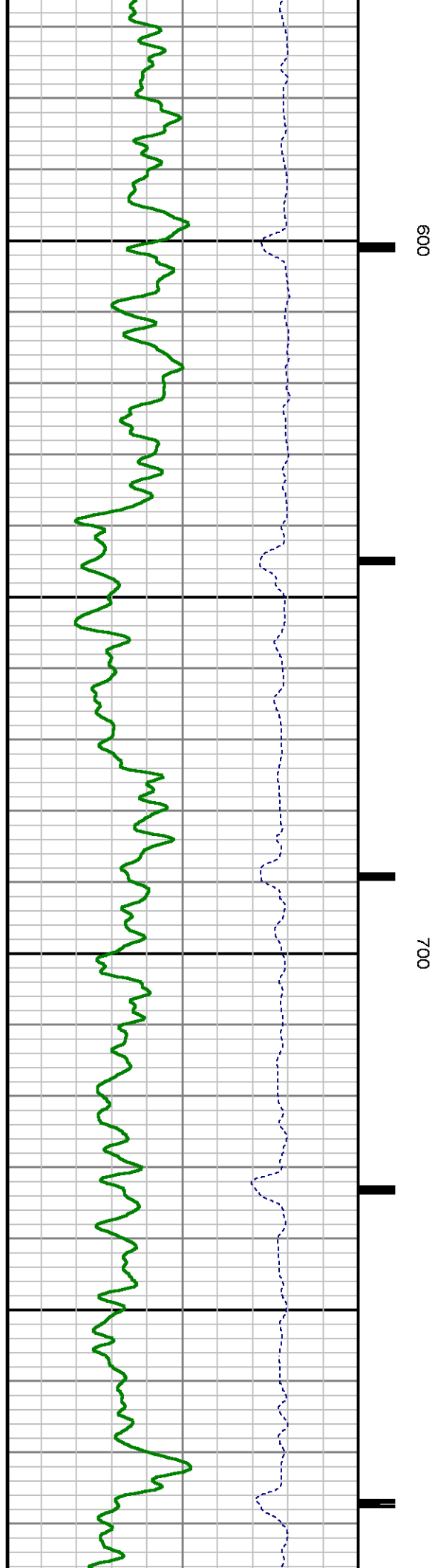
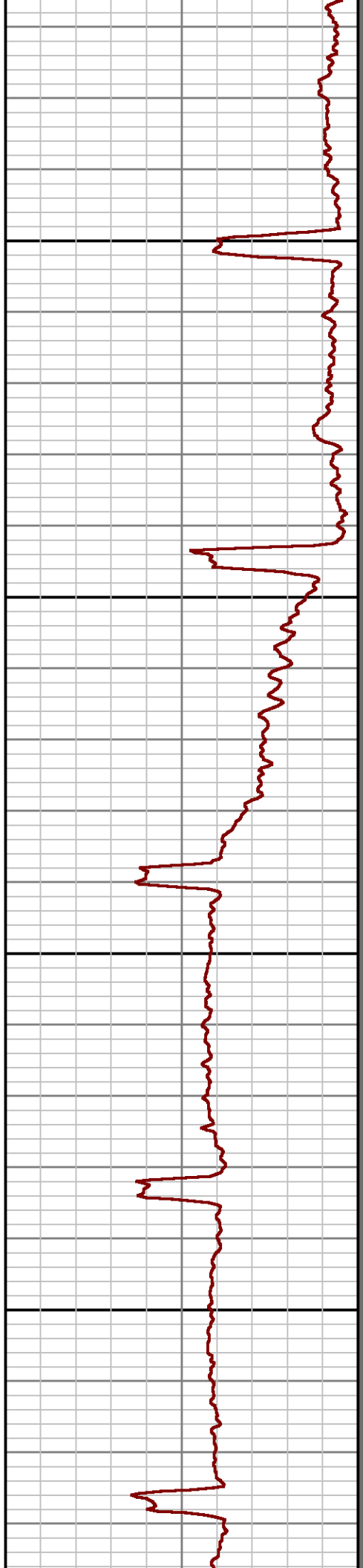
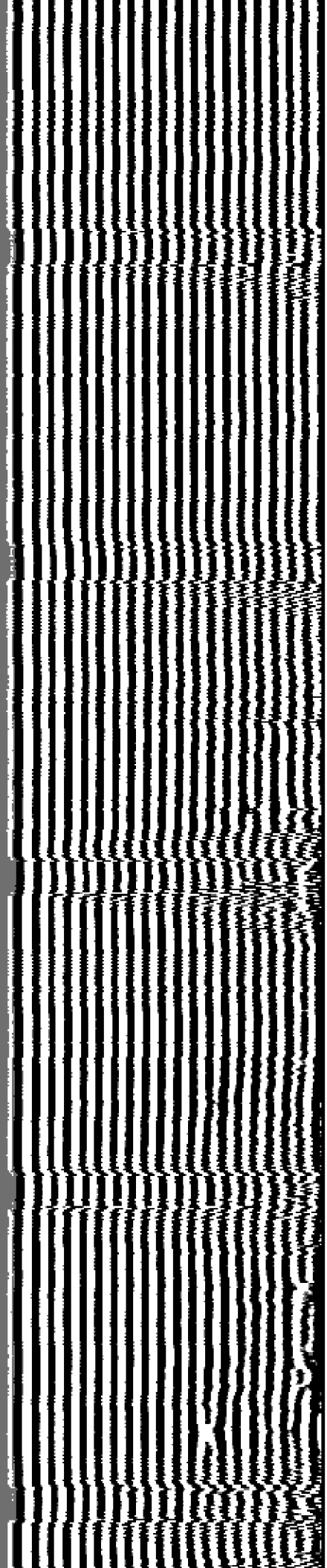
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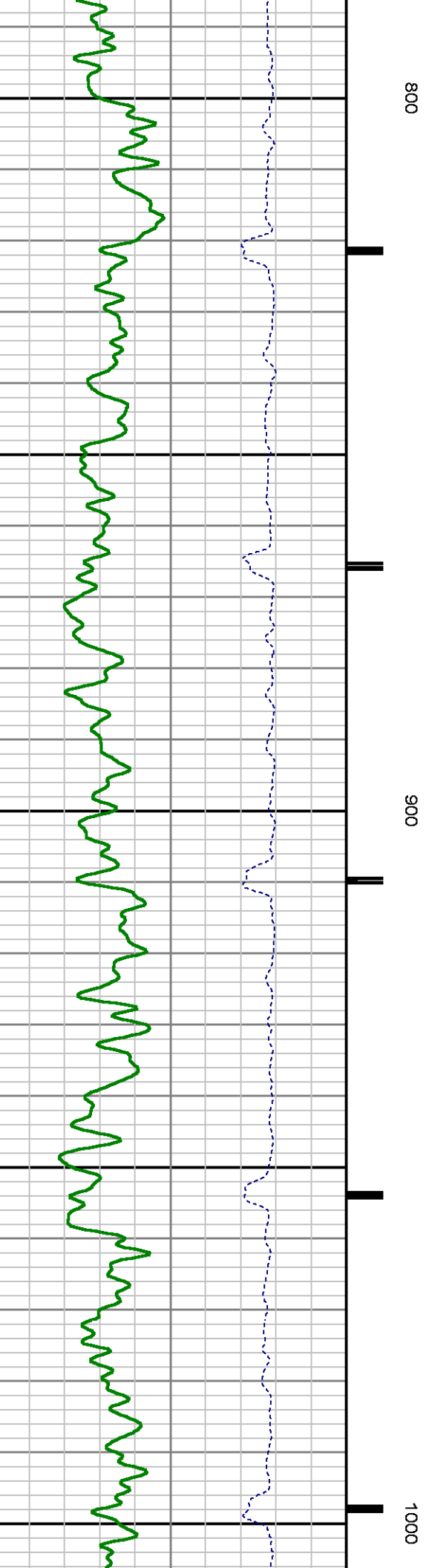
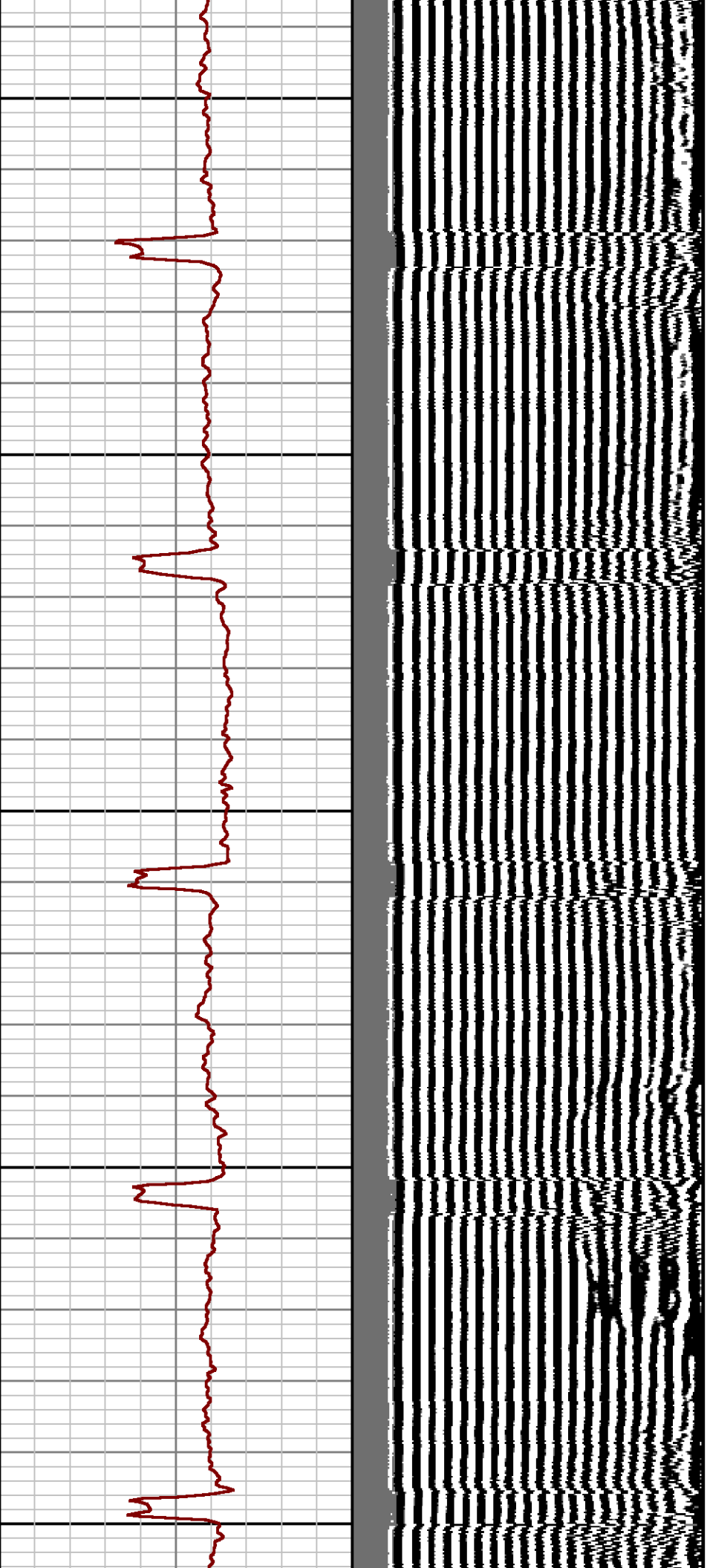
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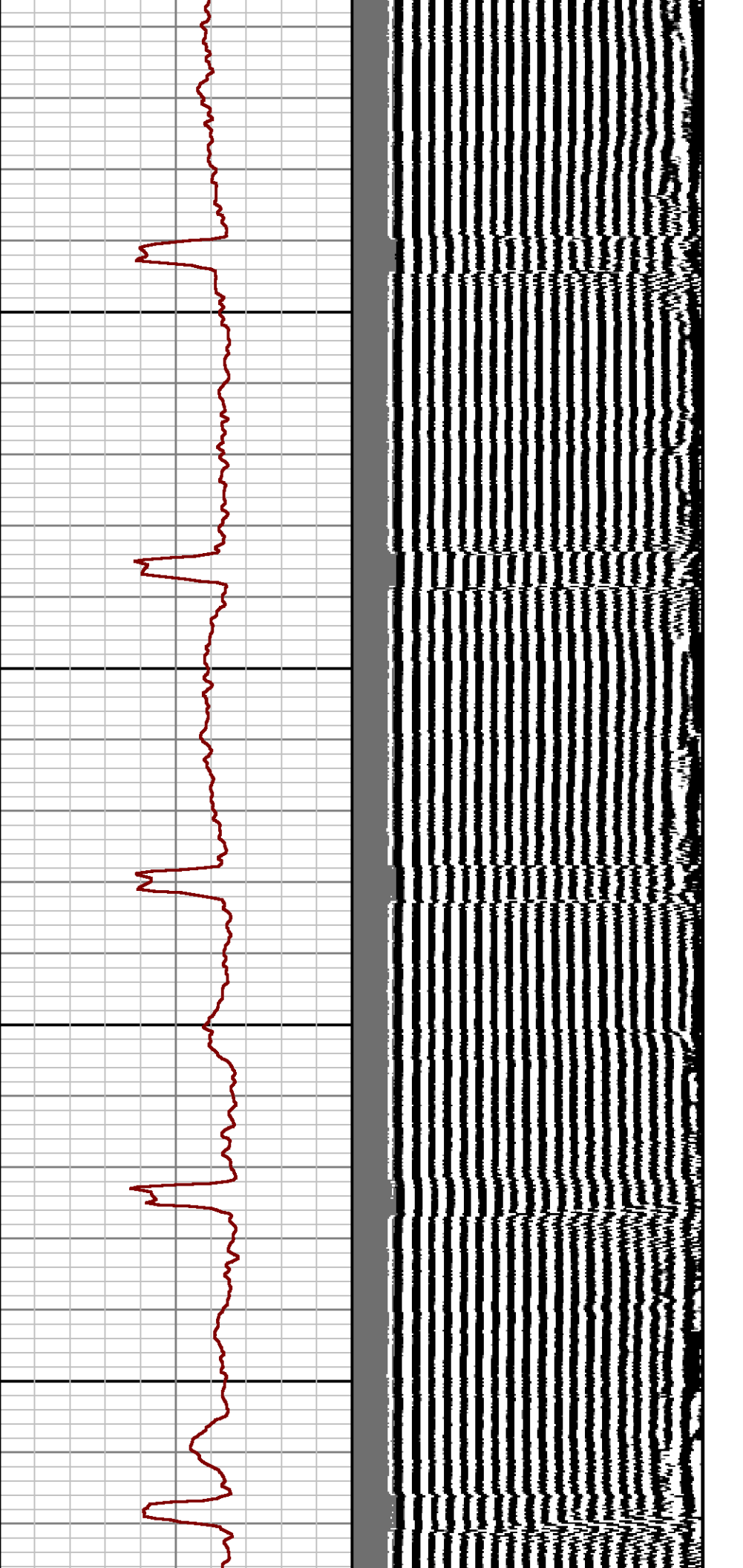
ANR





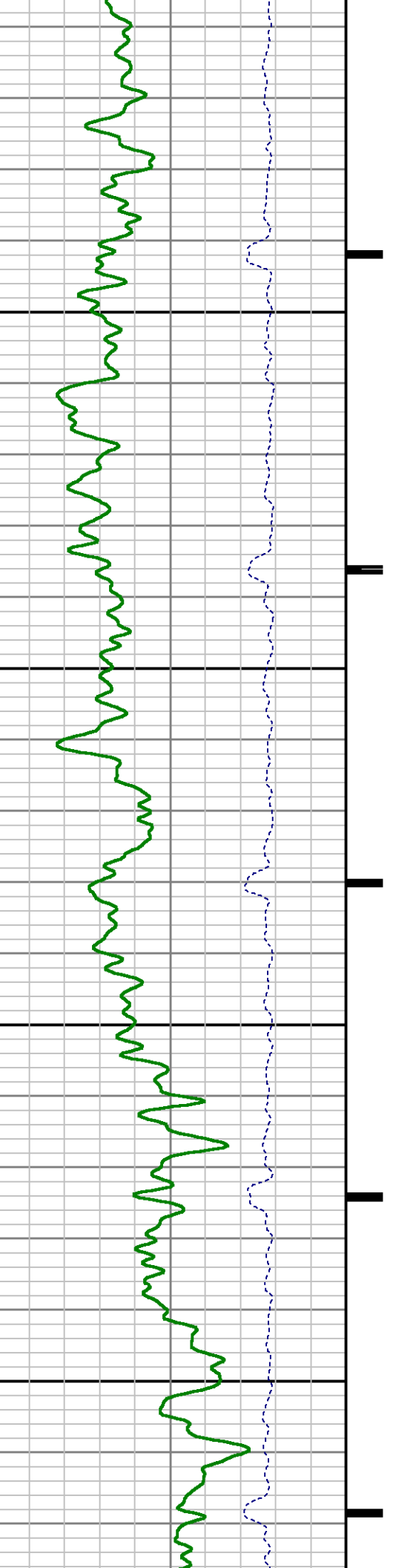


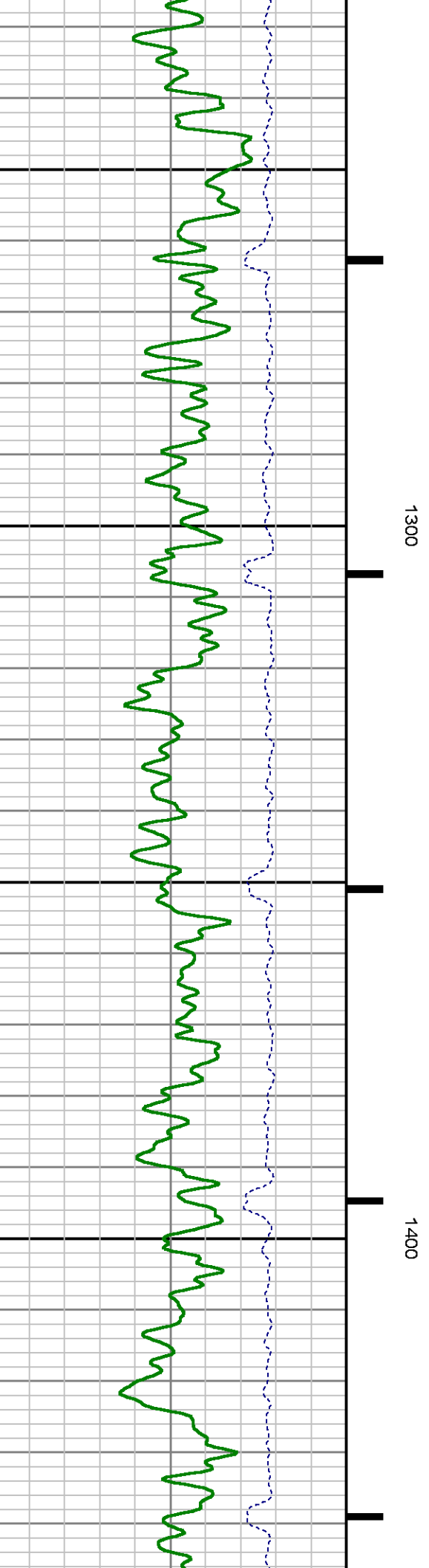
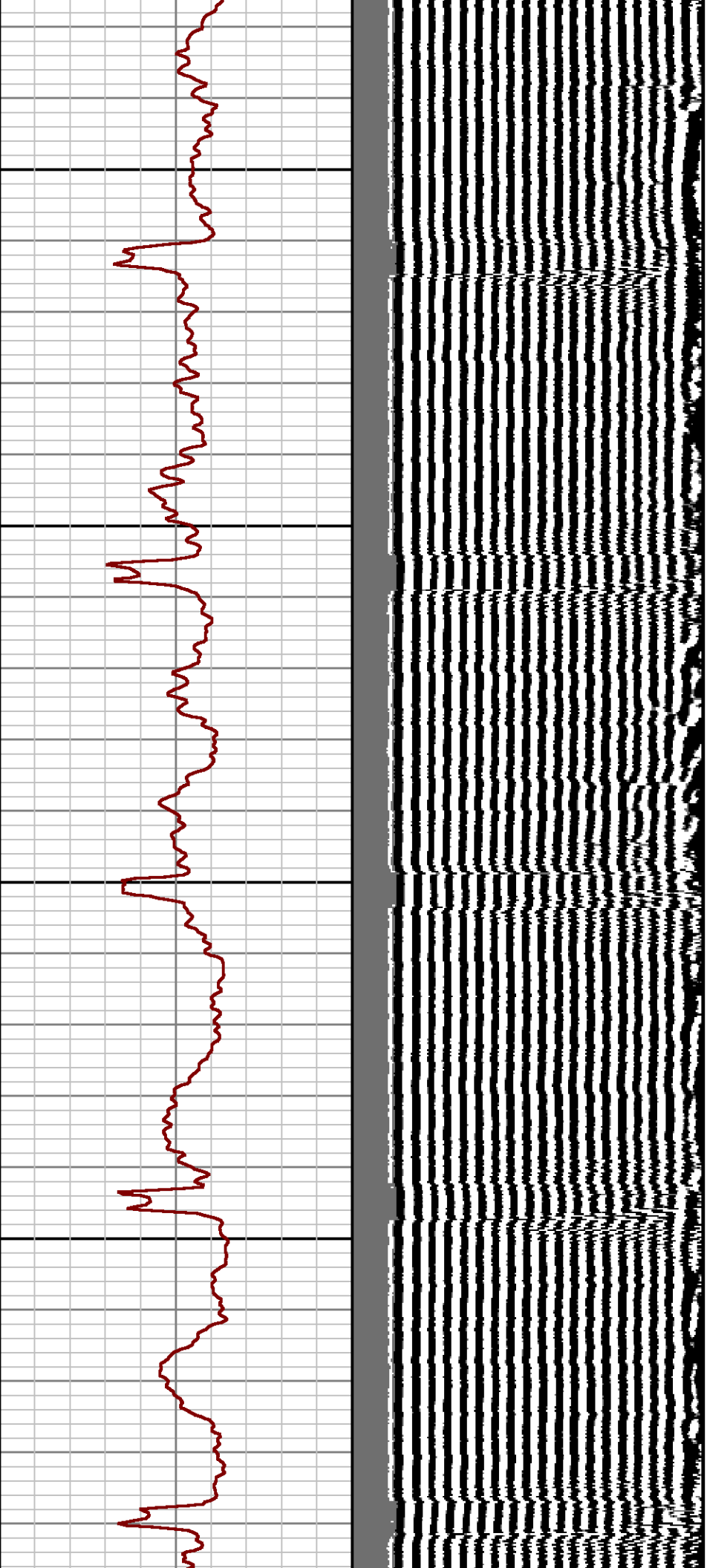


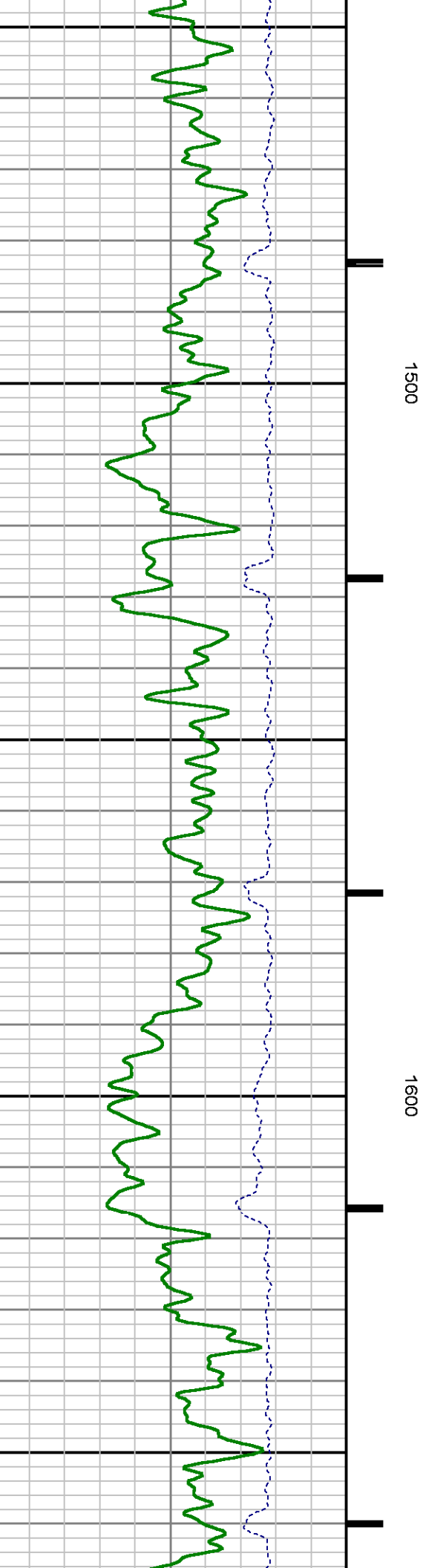
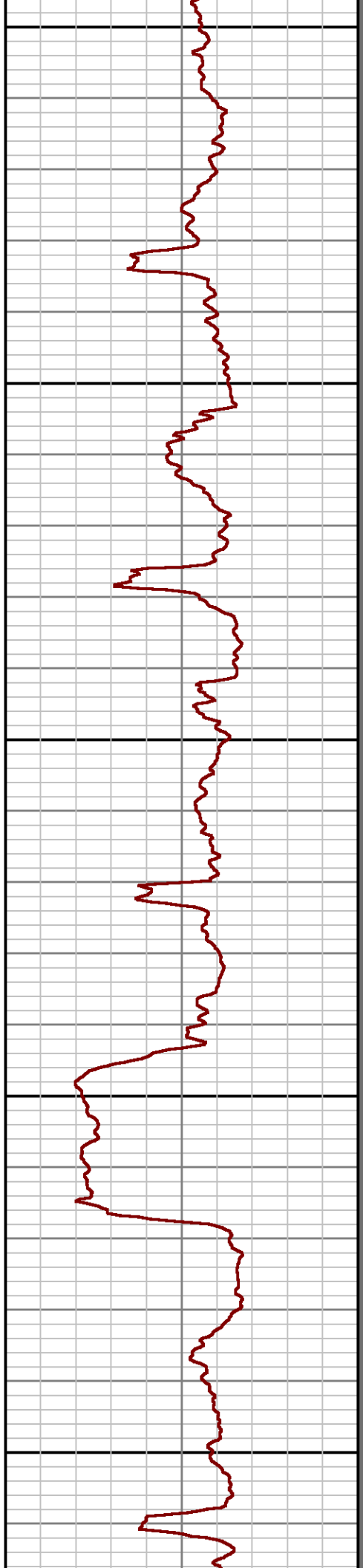
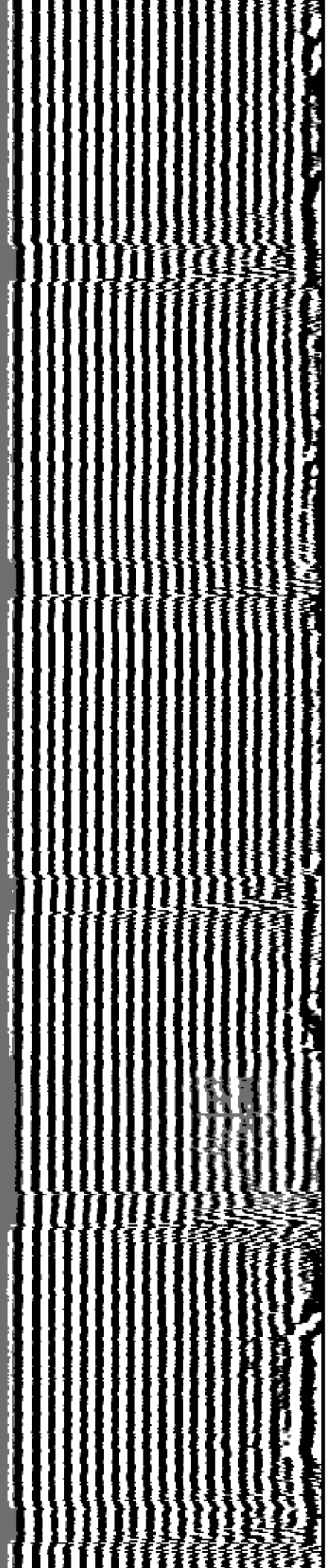


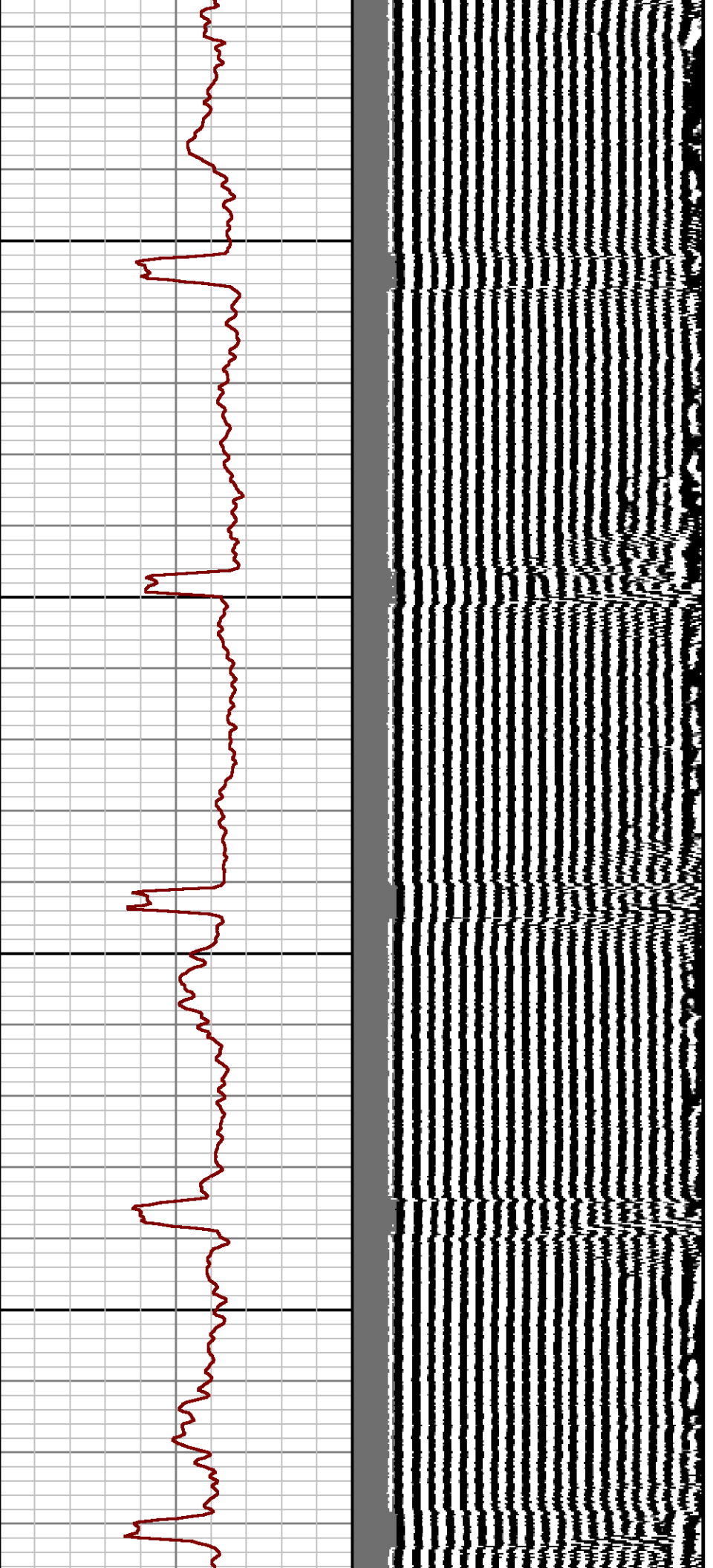
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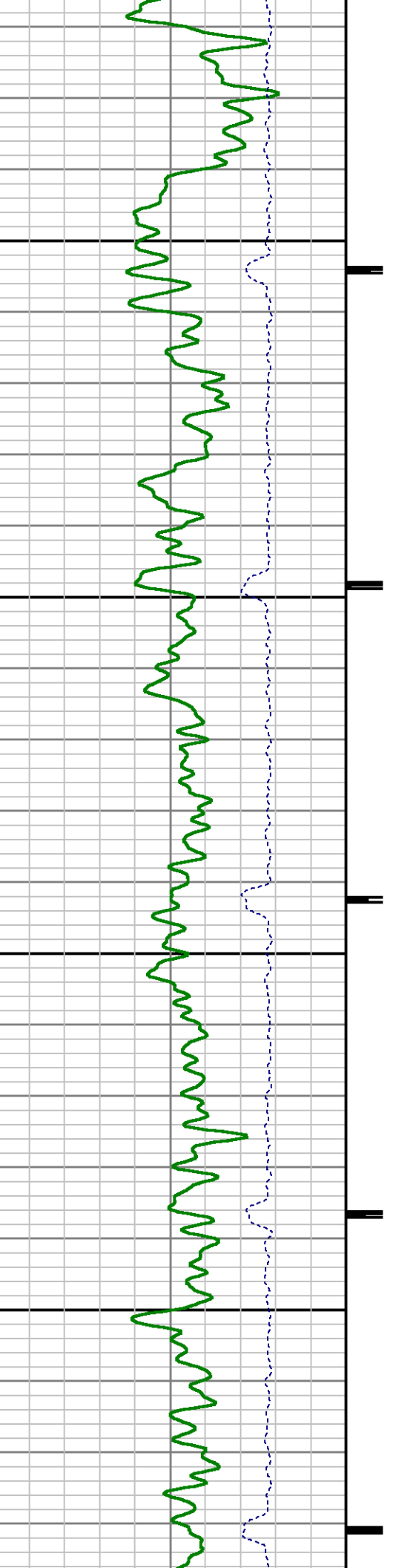


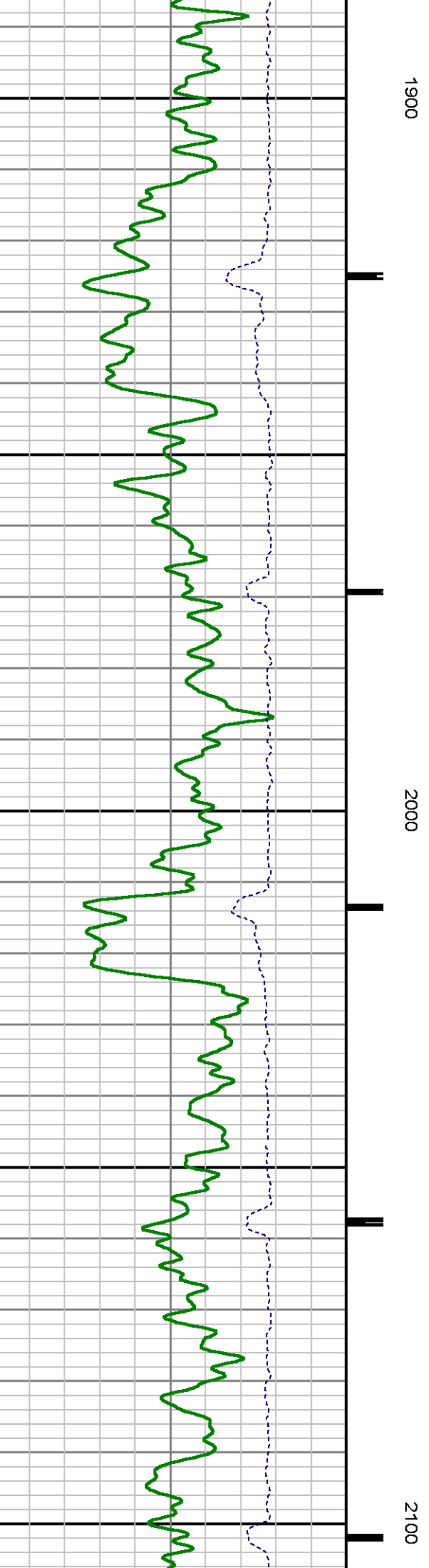
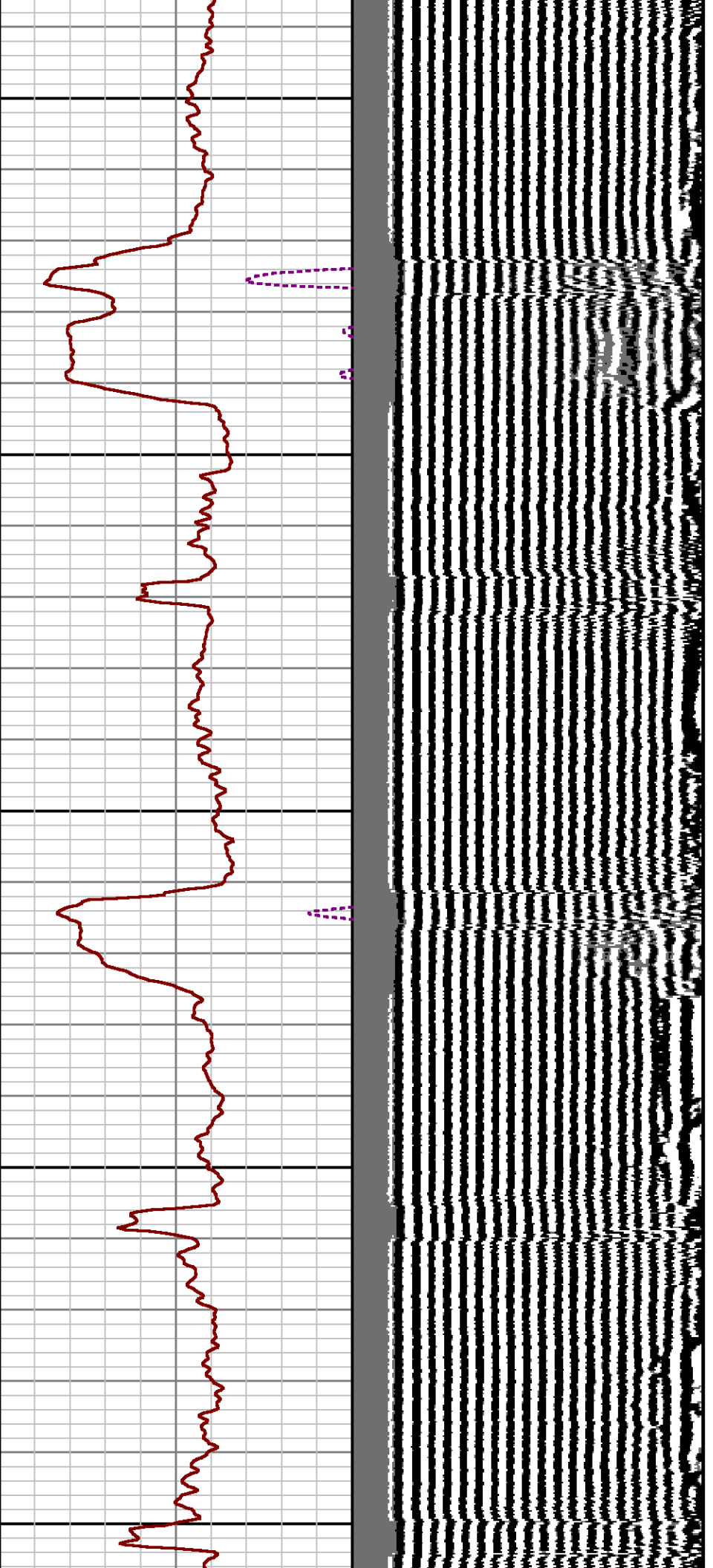


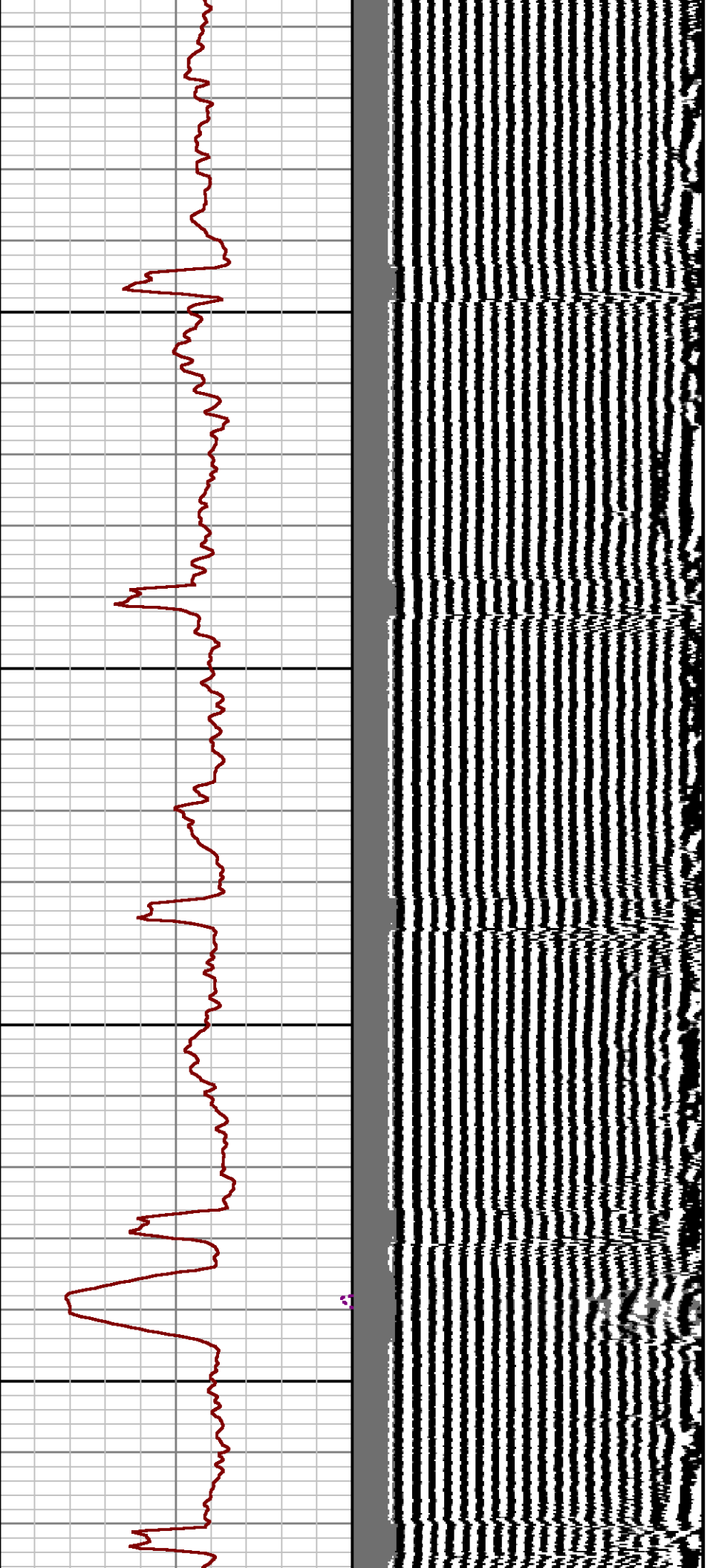


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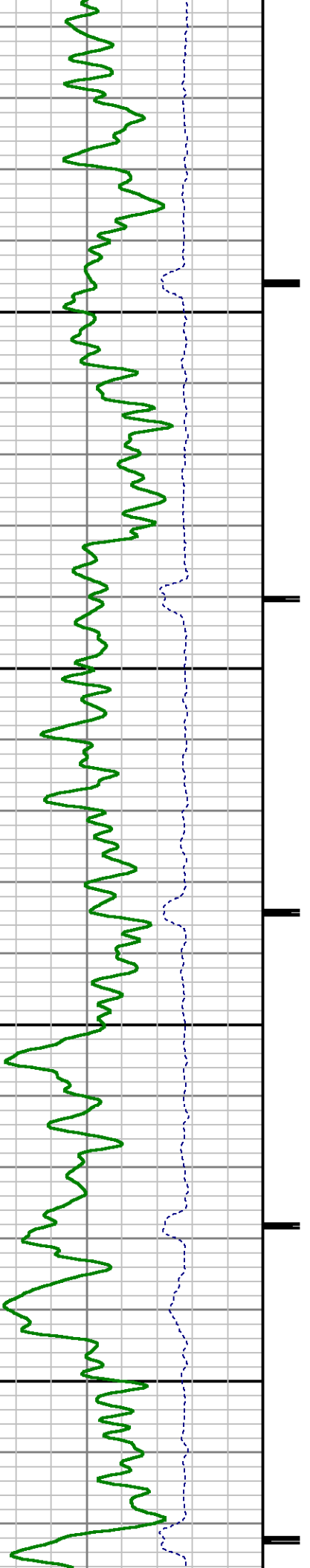


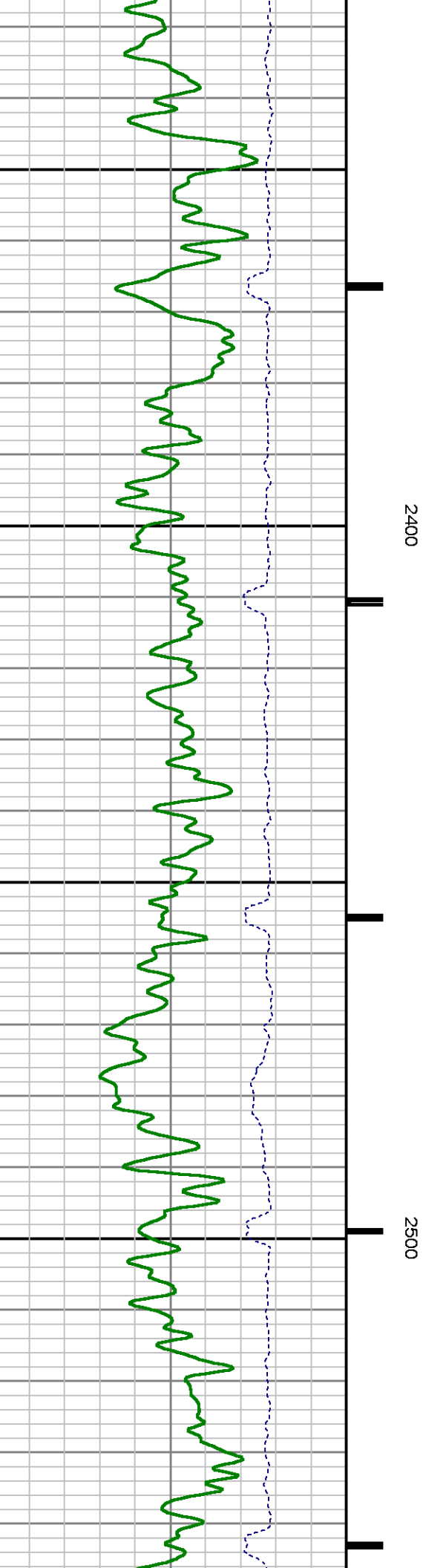
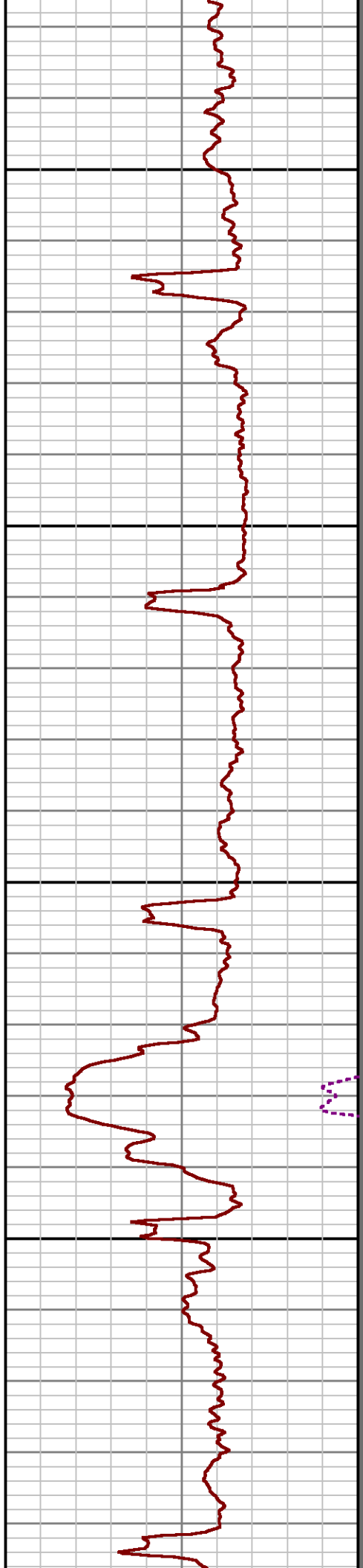
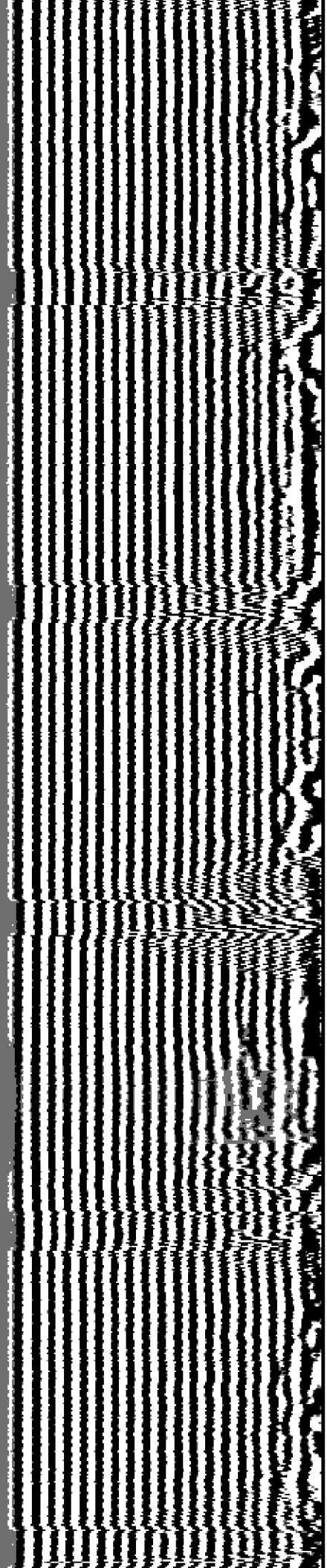


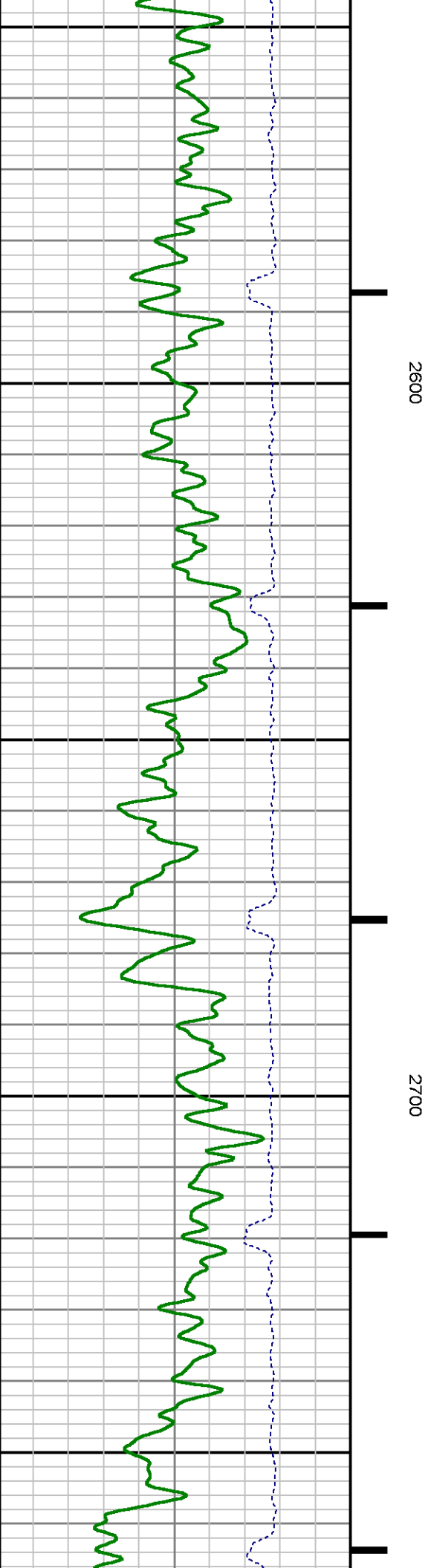
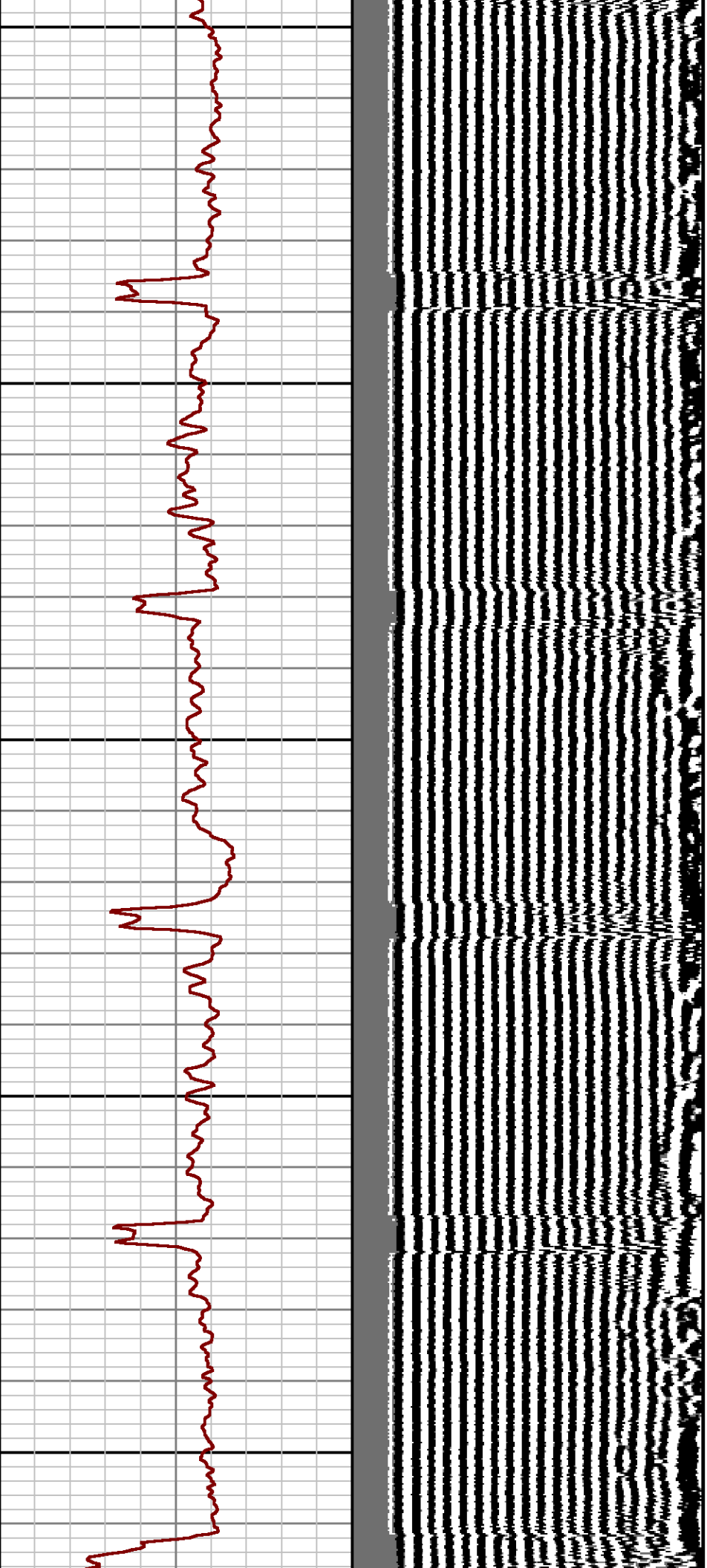


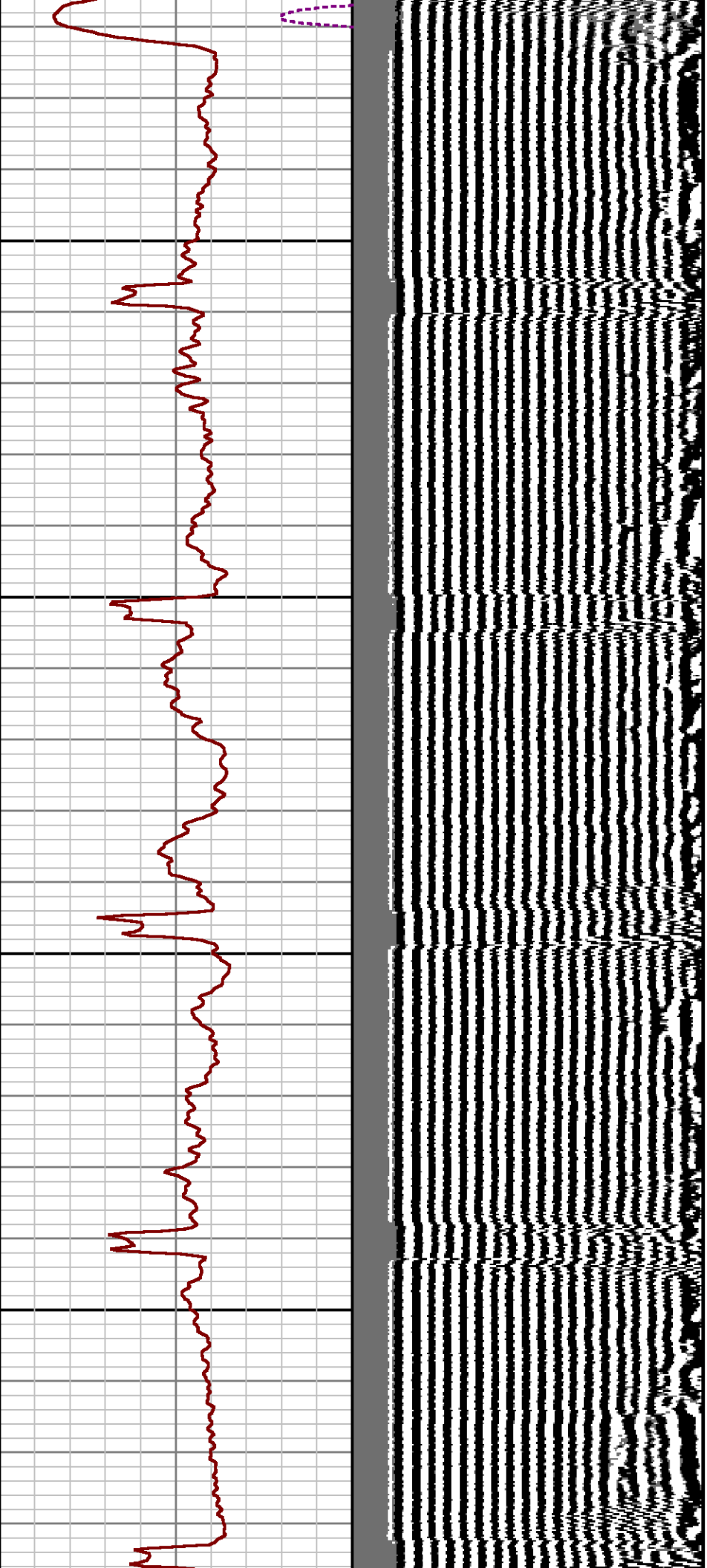
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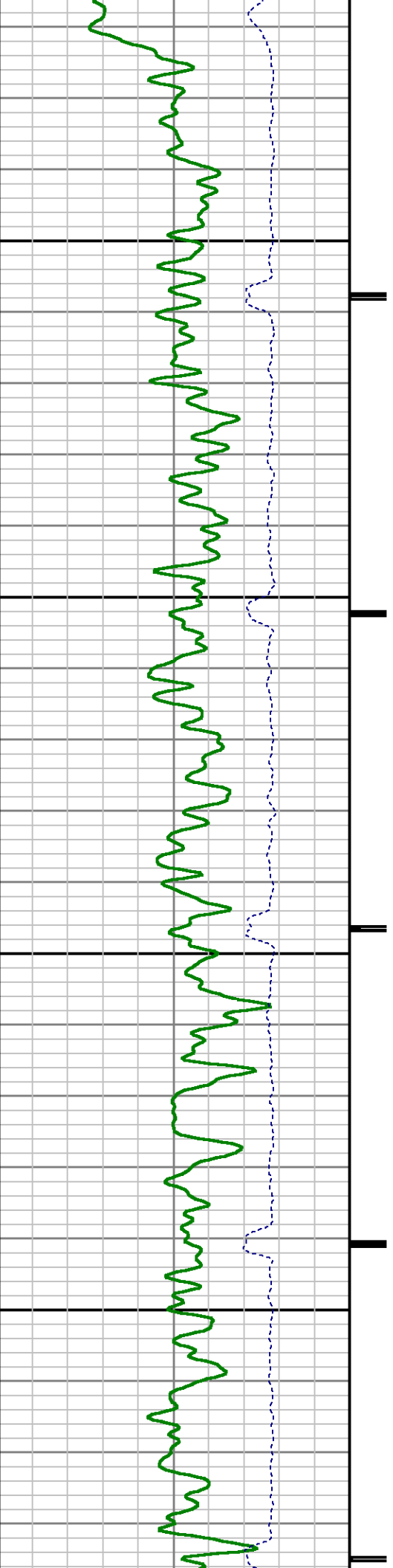


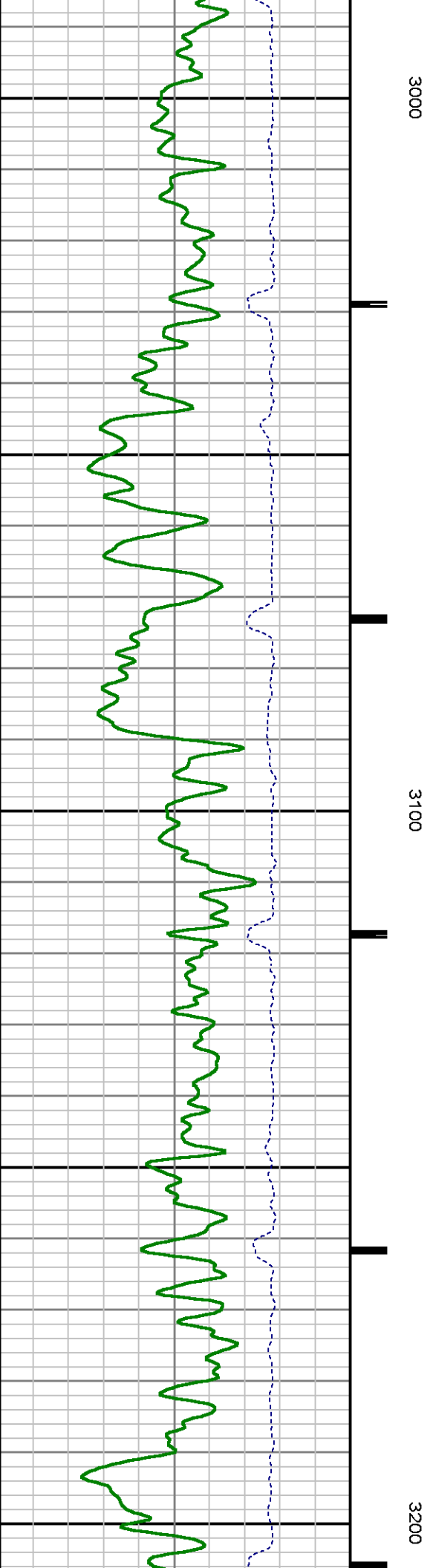
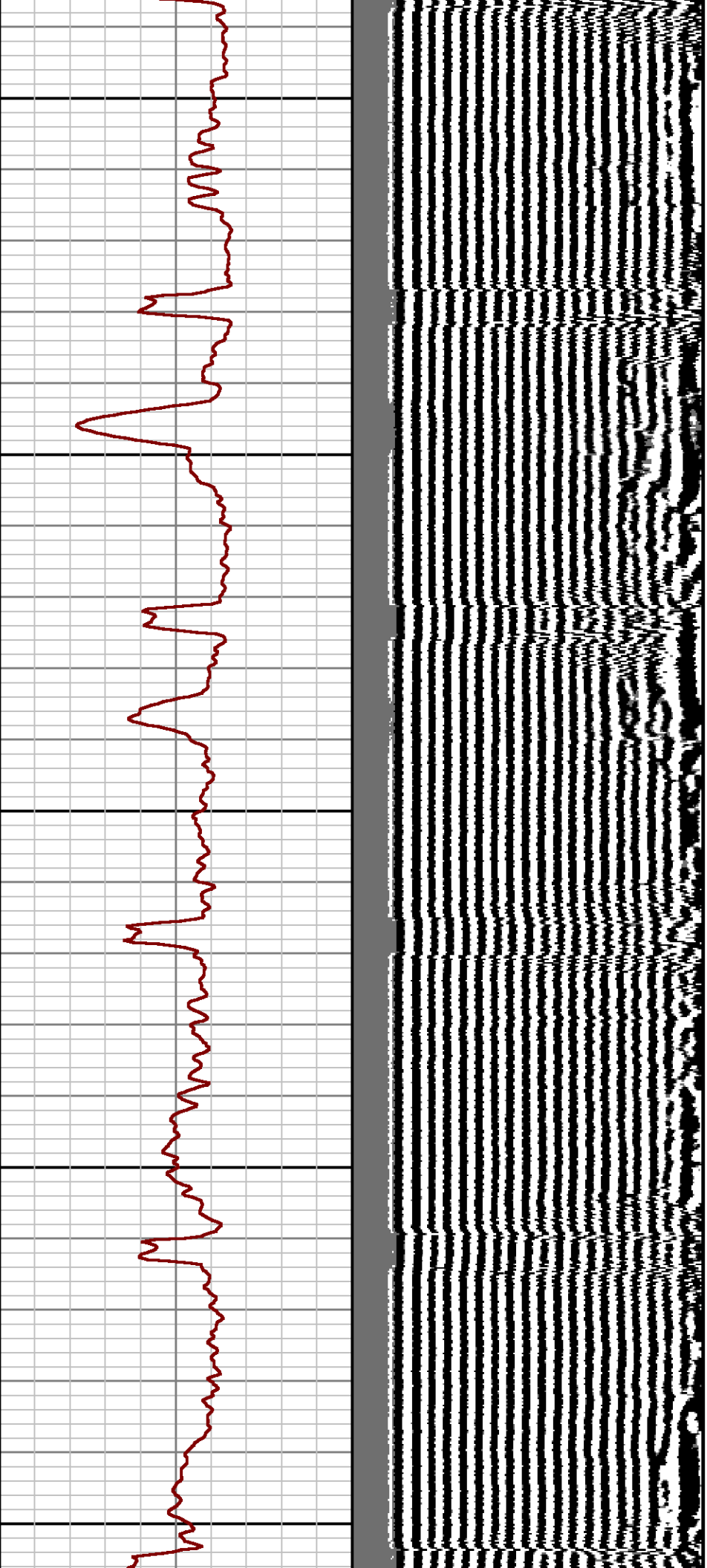


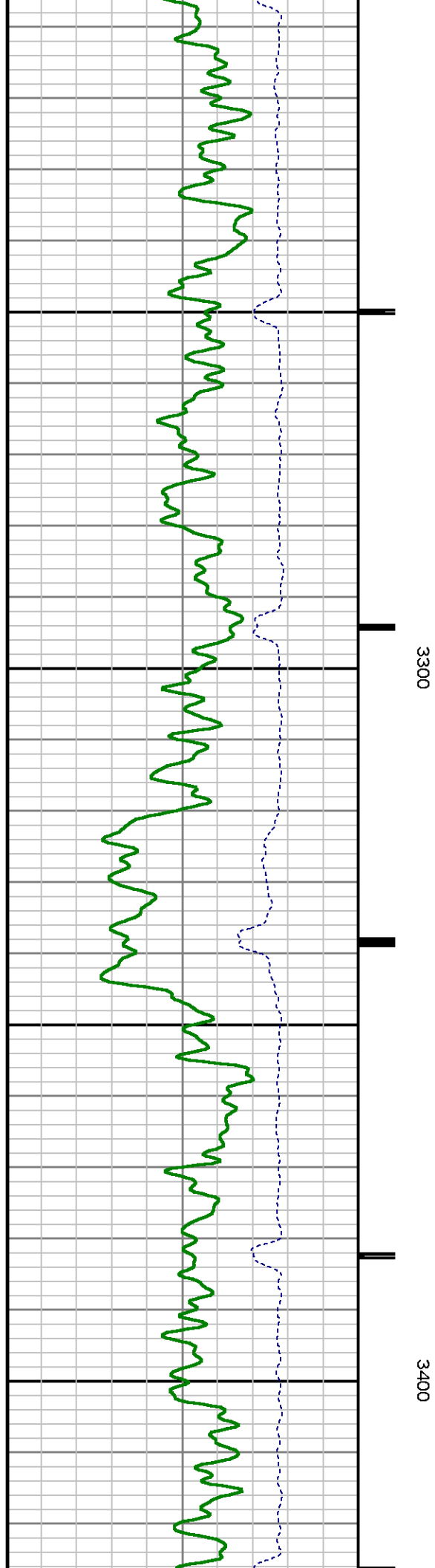
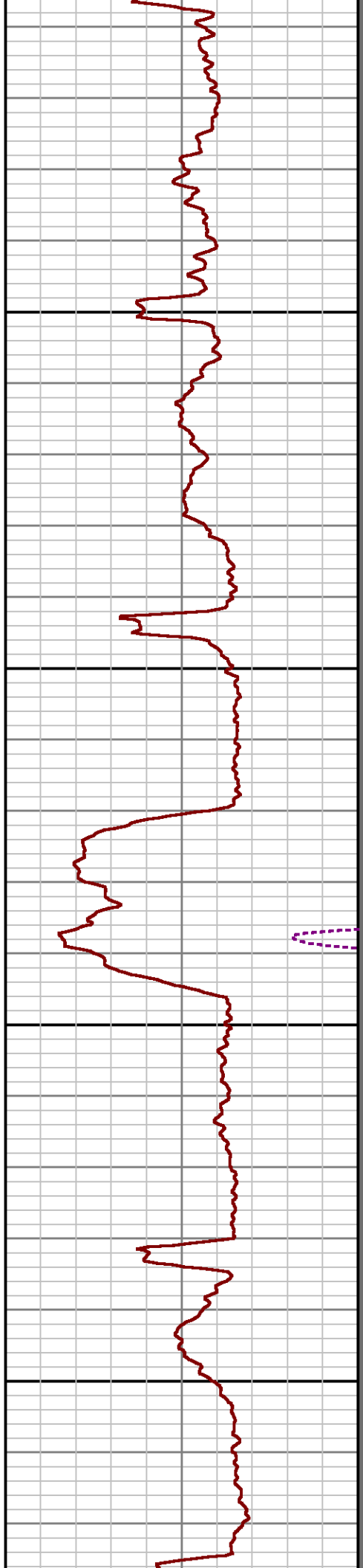
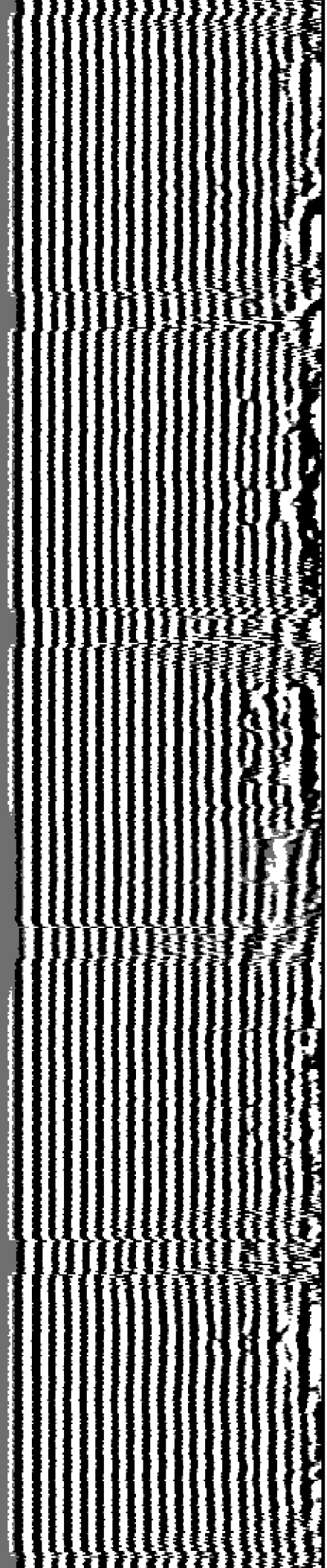


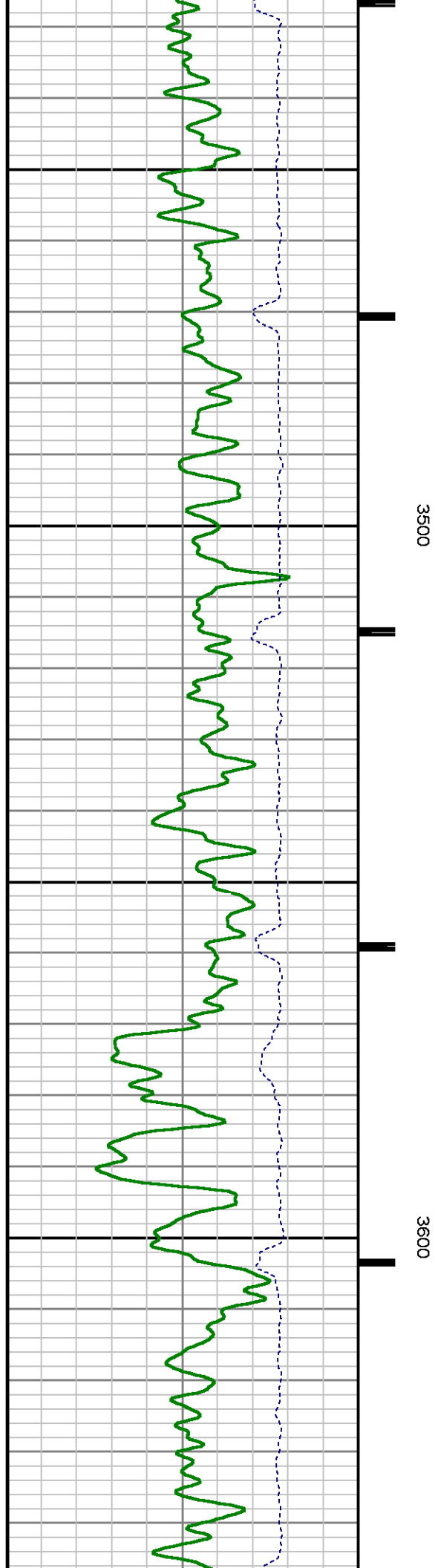
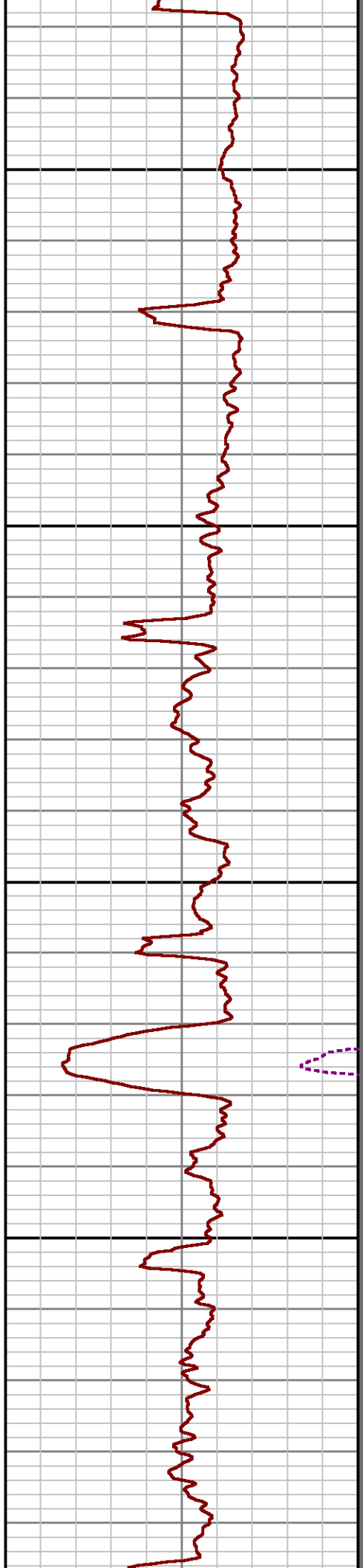
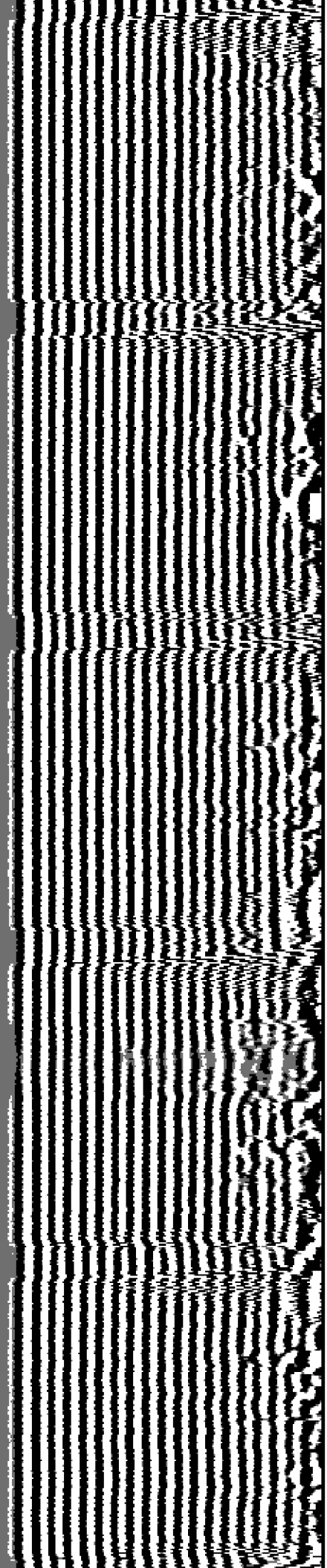
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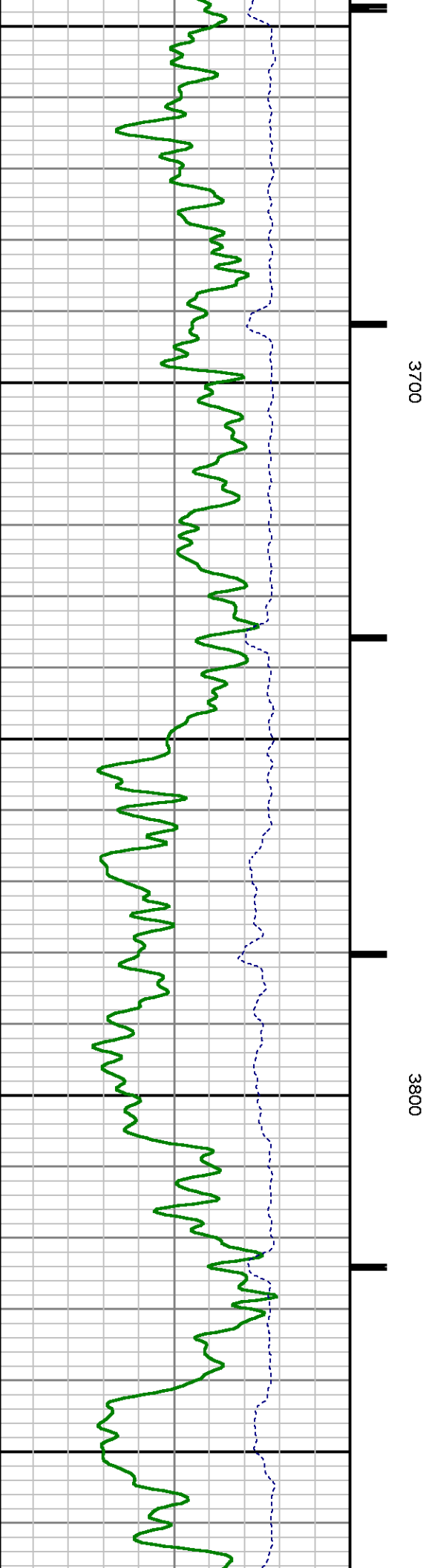
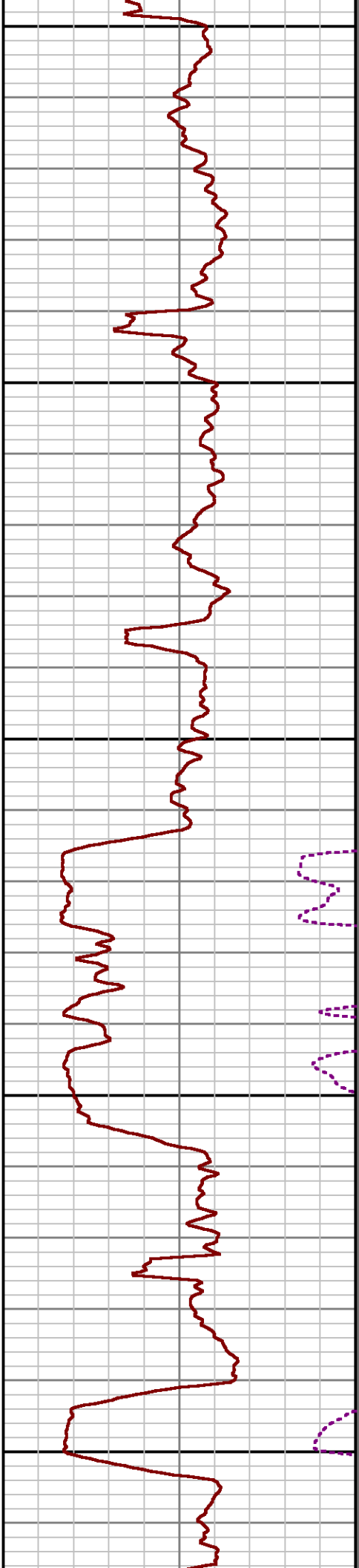
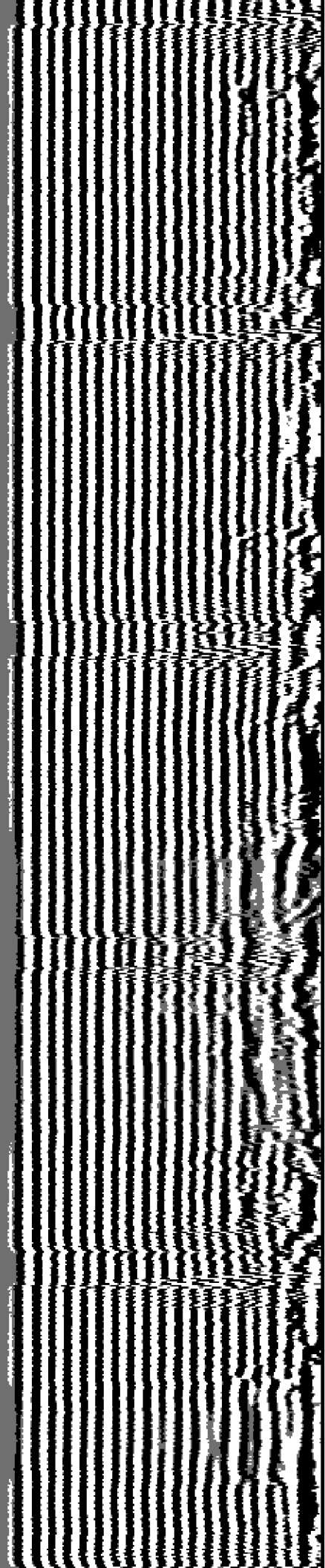
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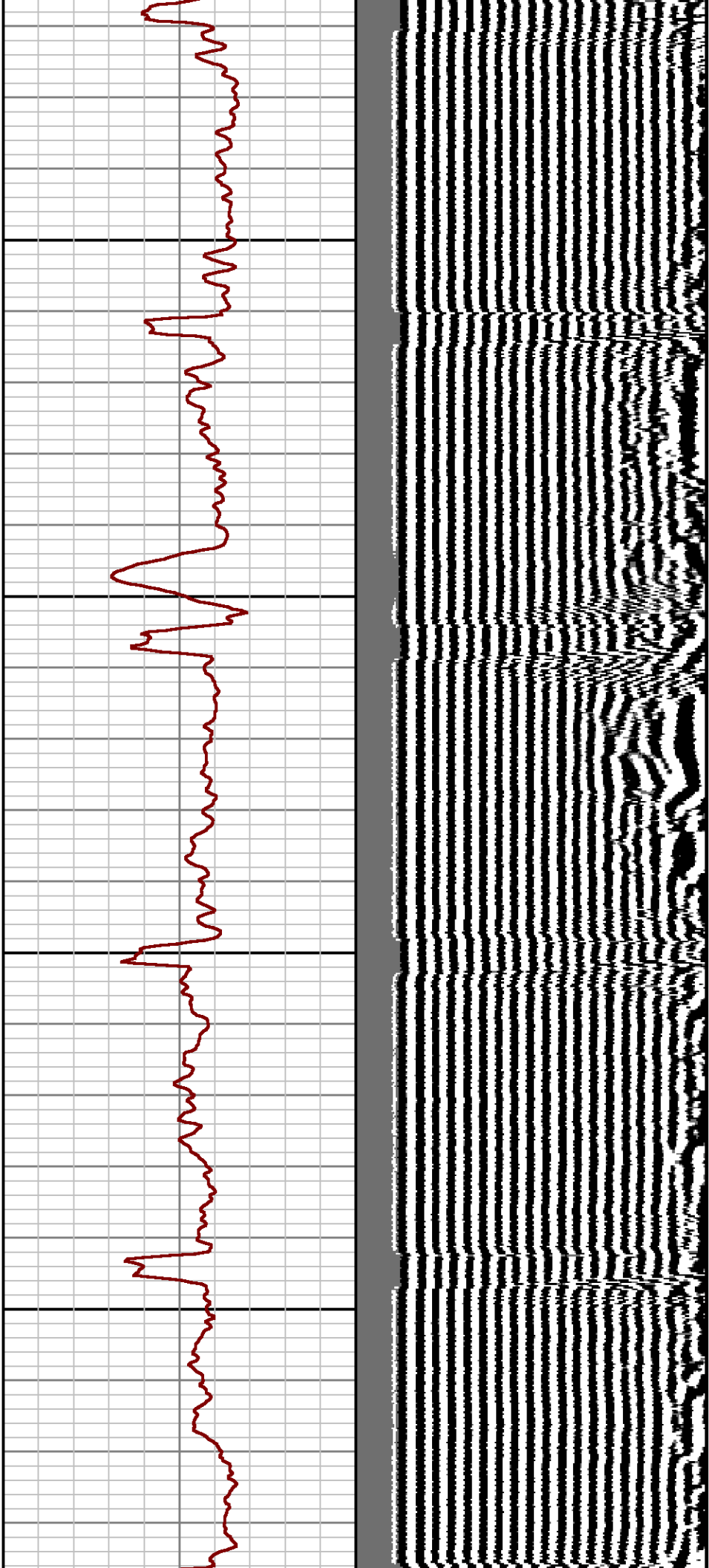






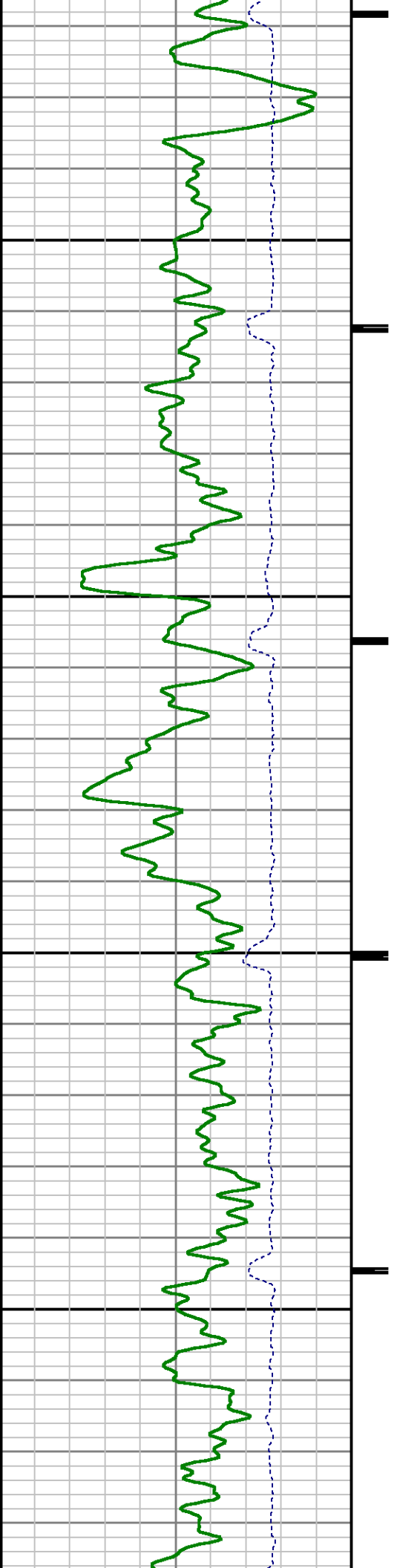


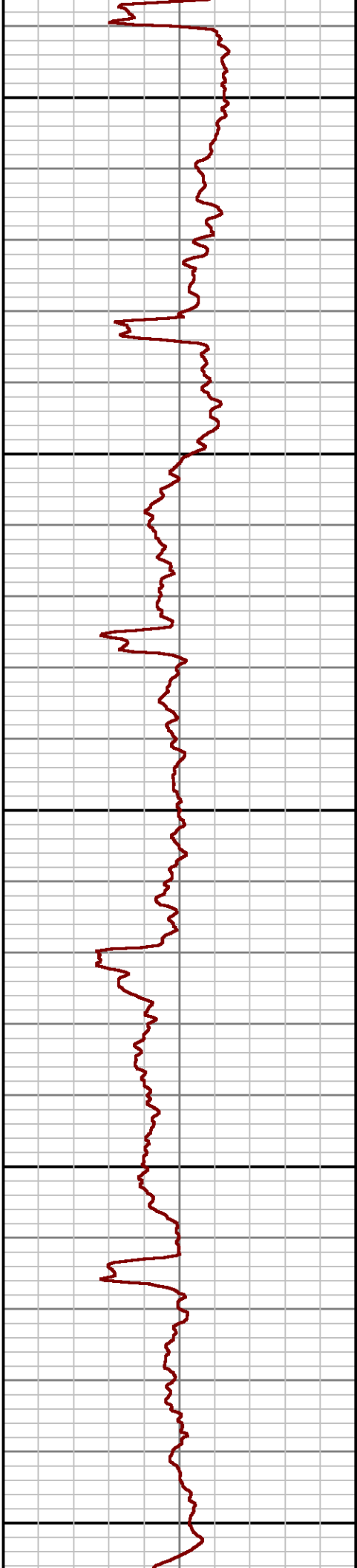
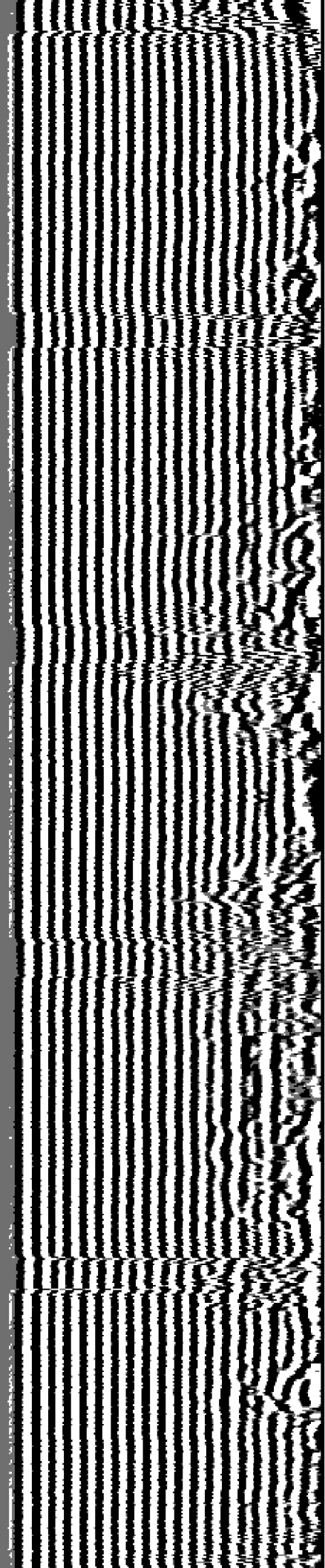




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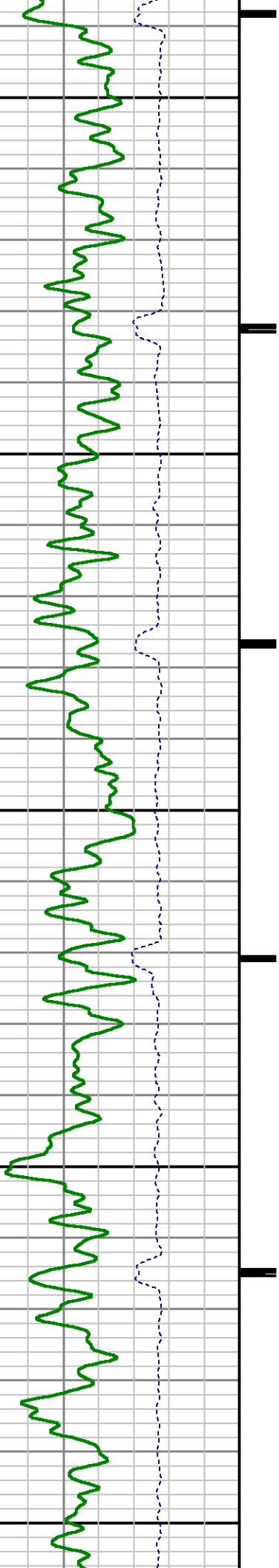


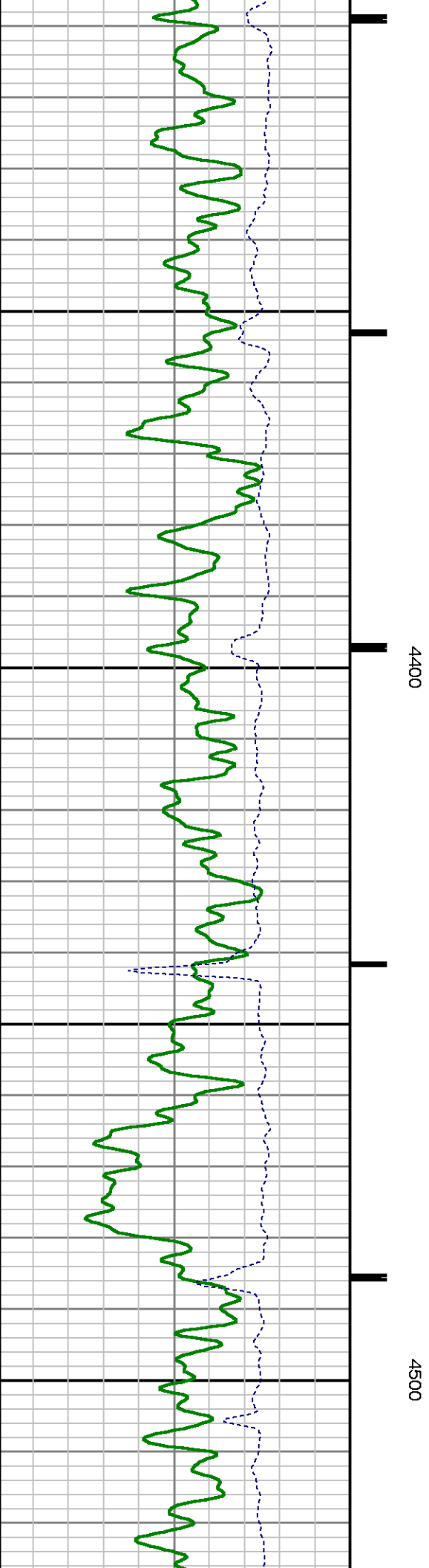
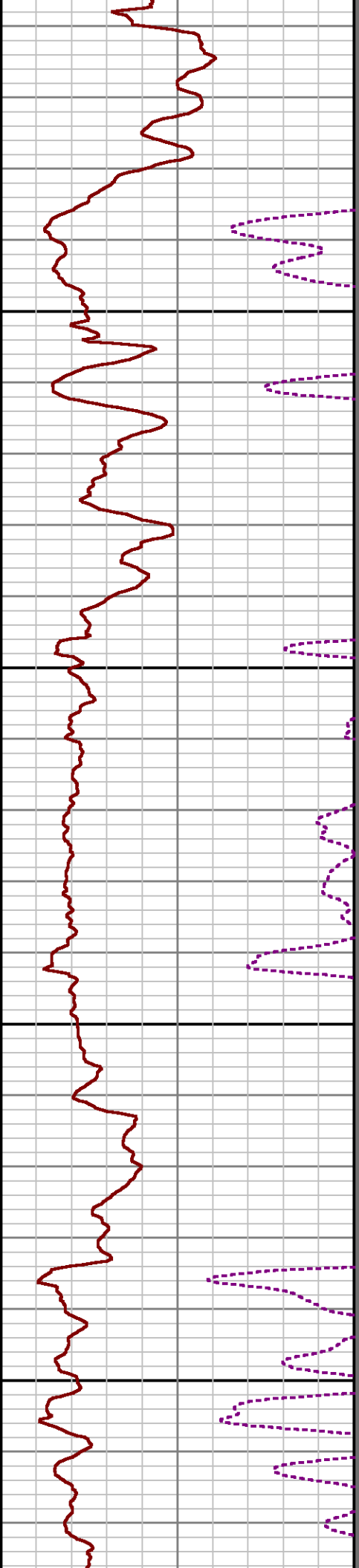
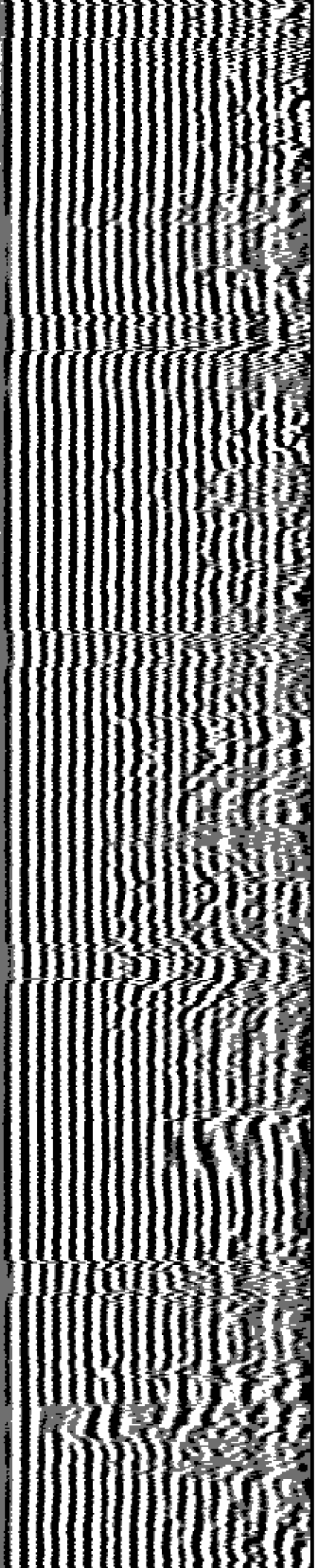


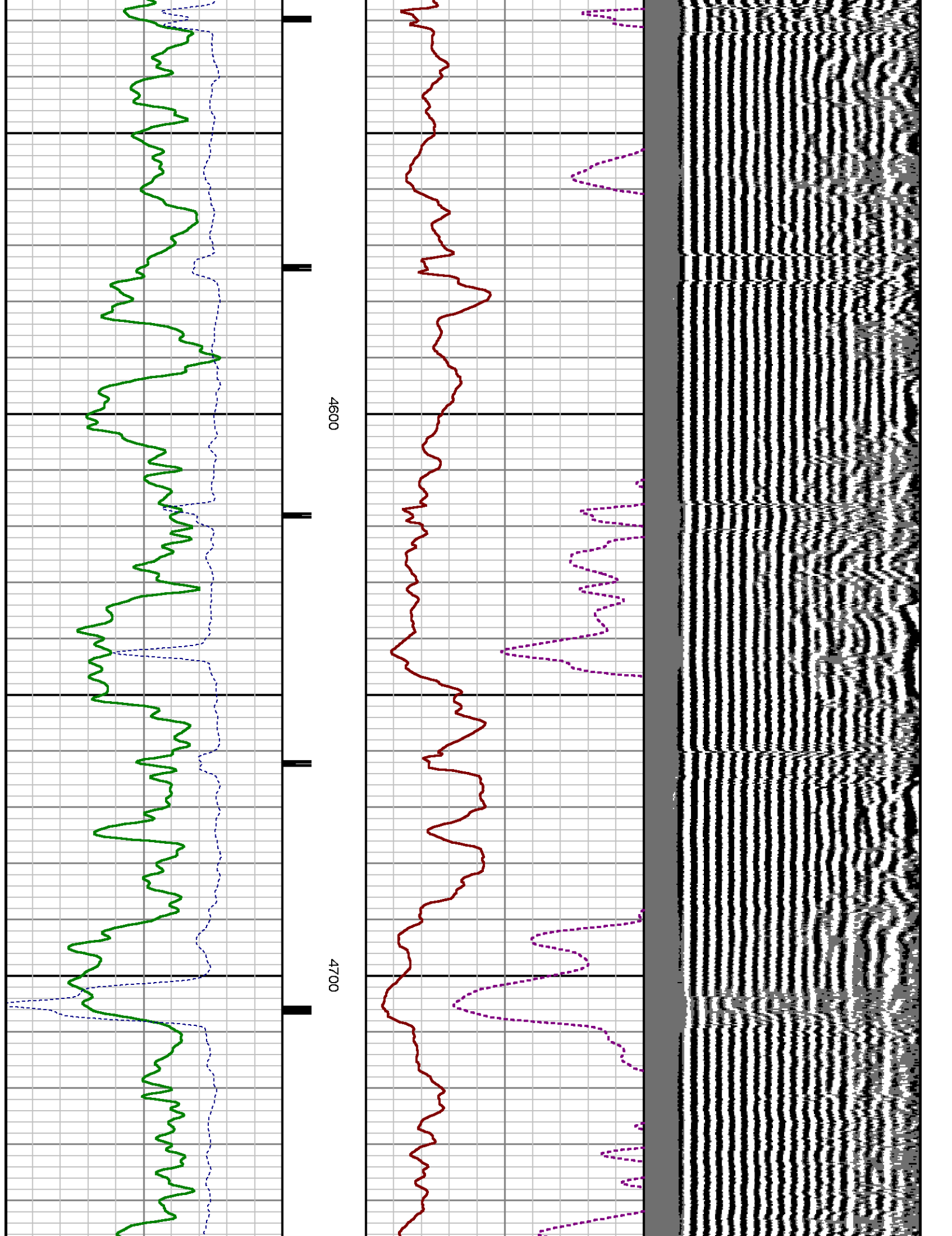
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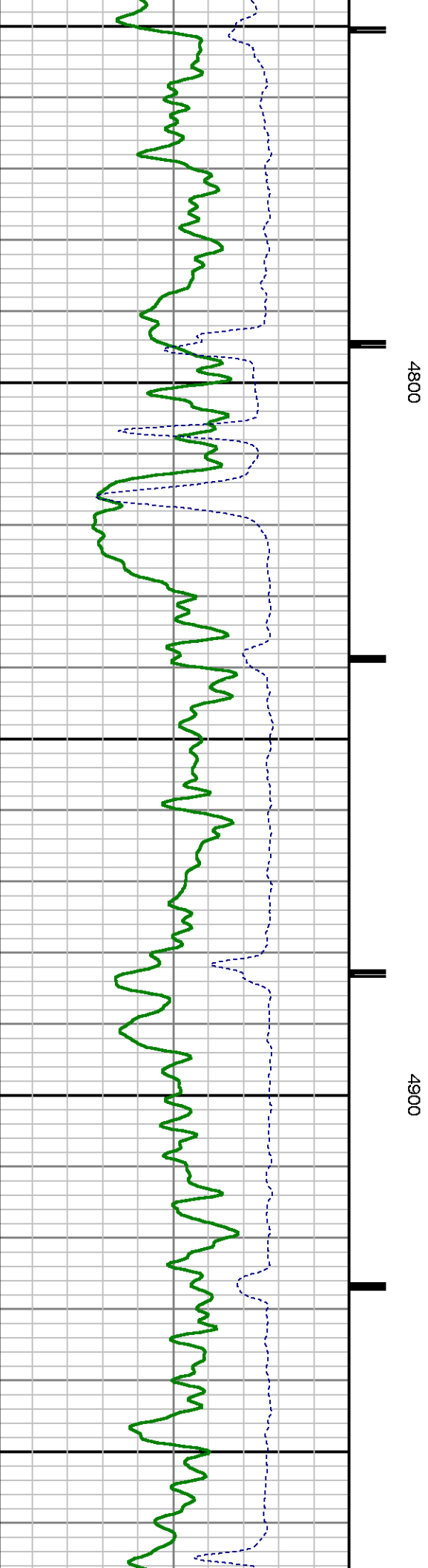
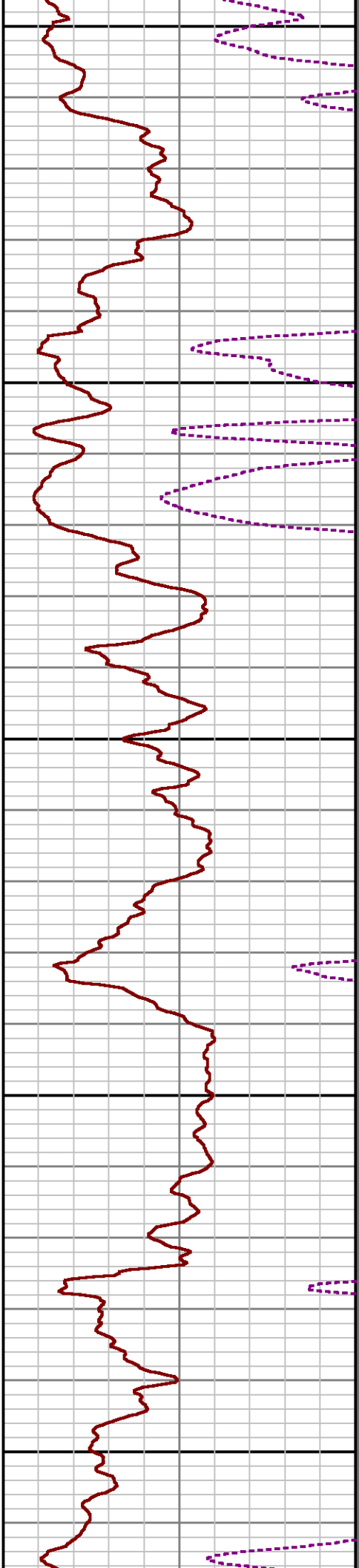
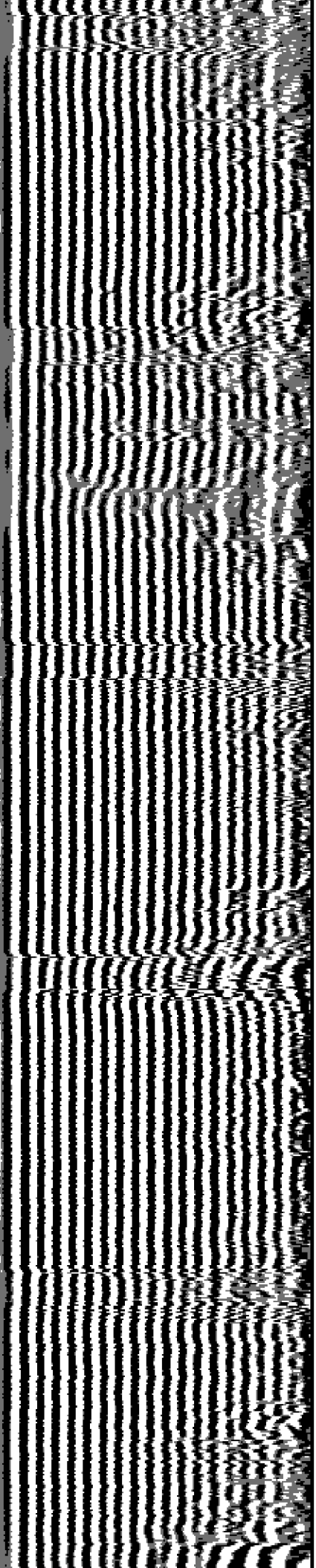
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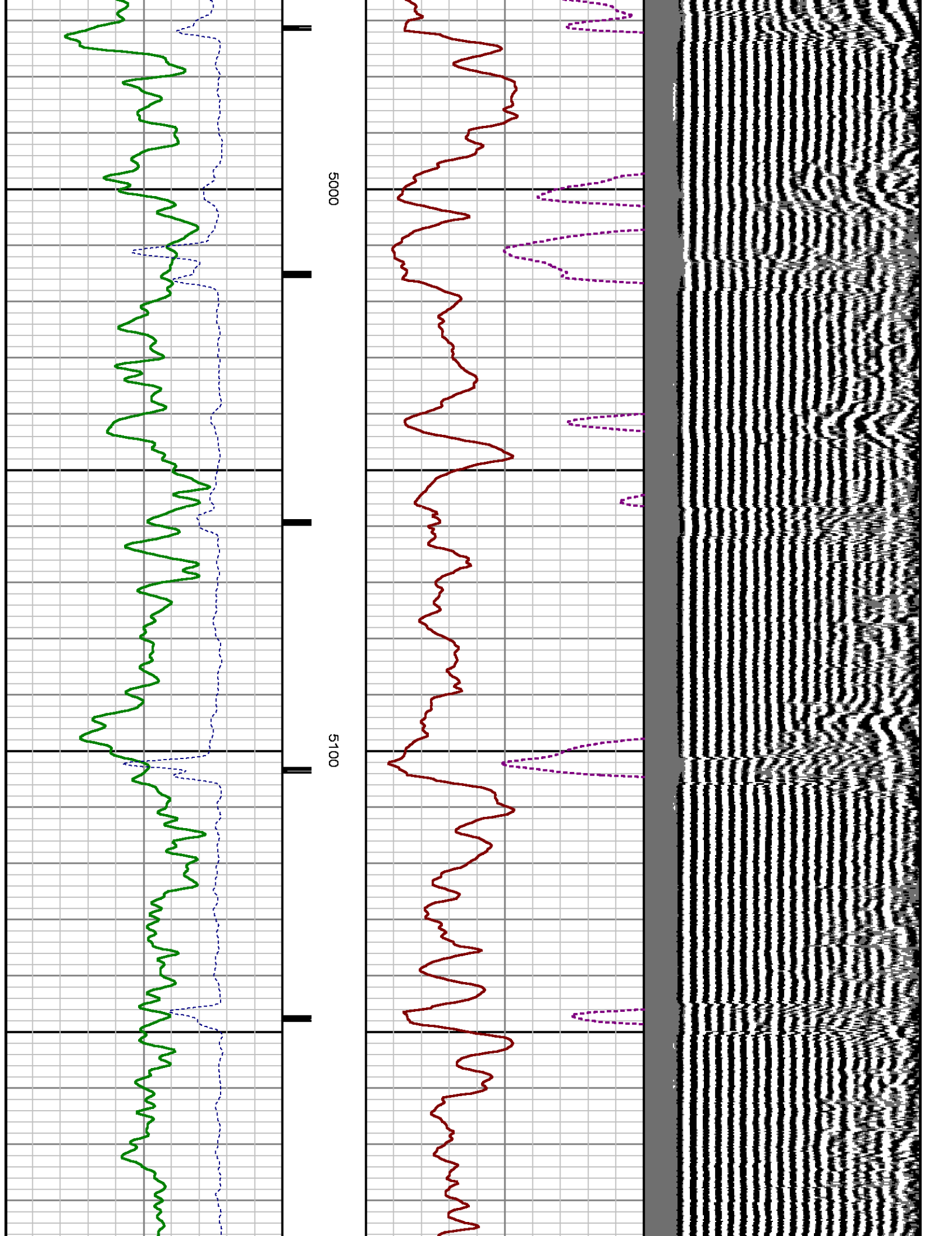
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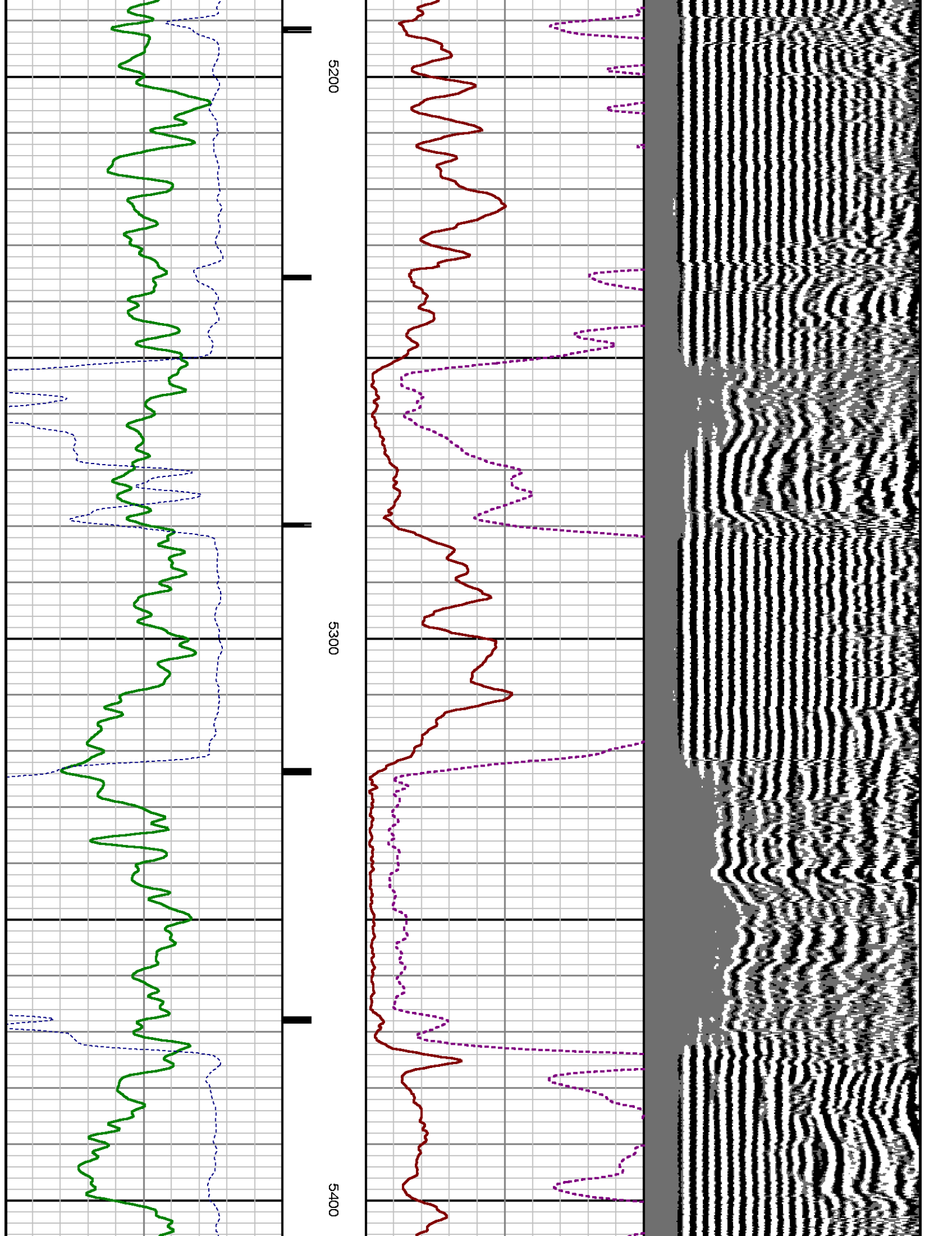


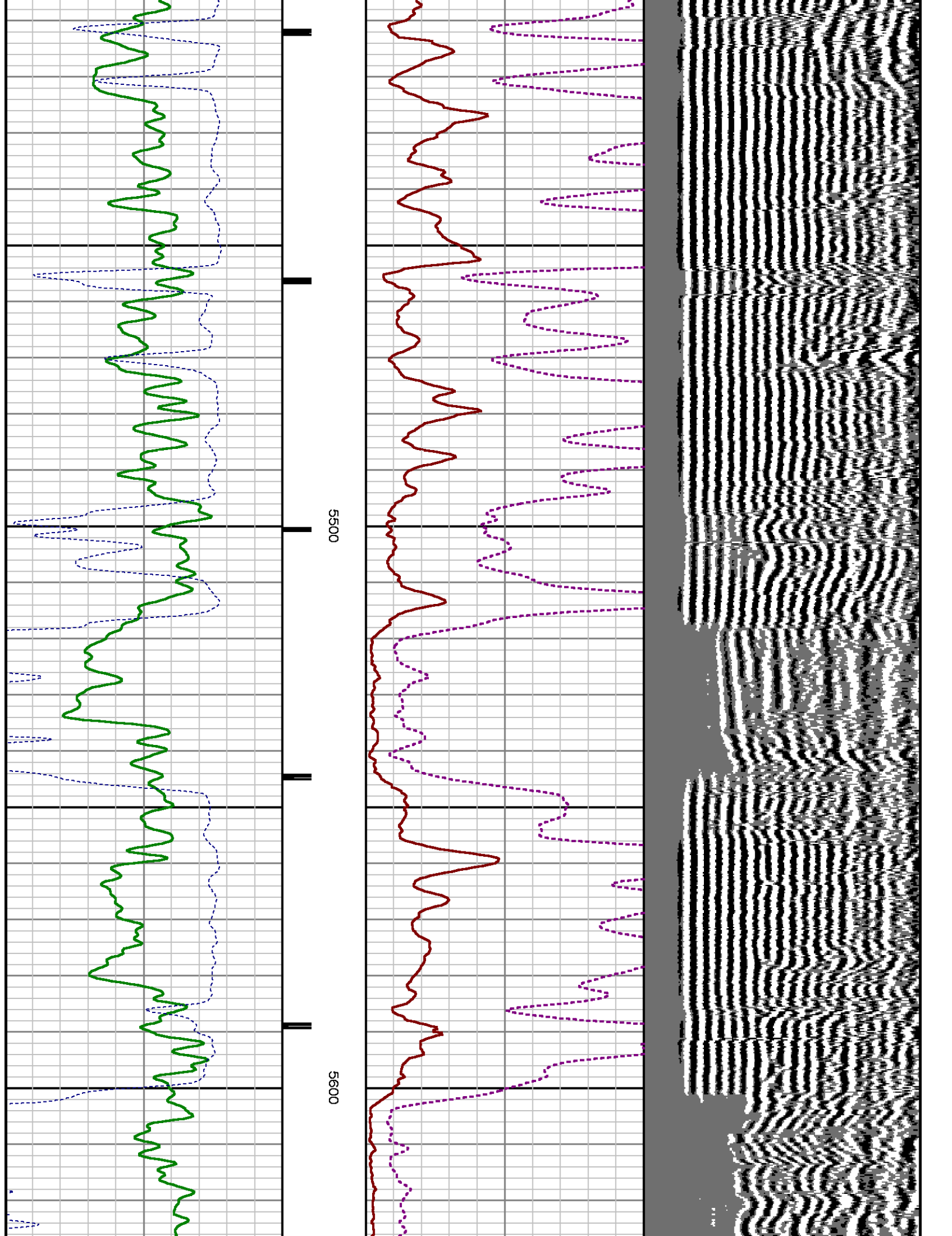


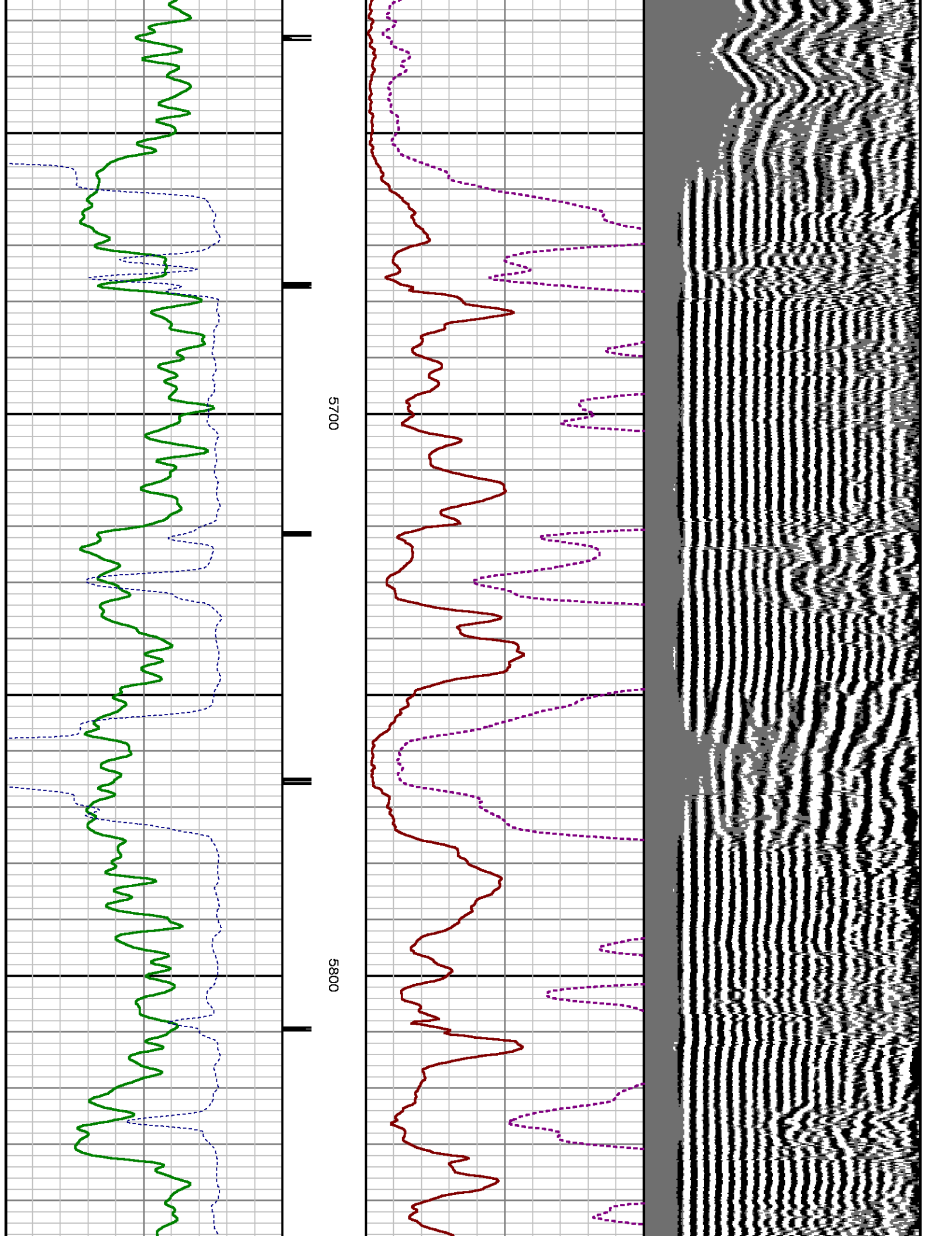


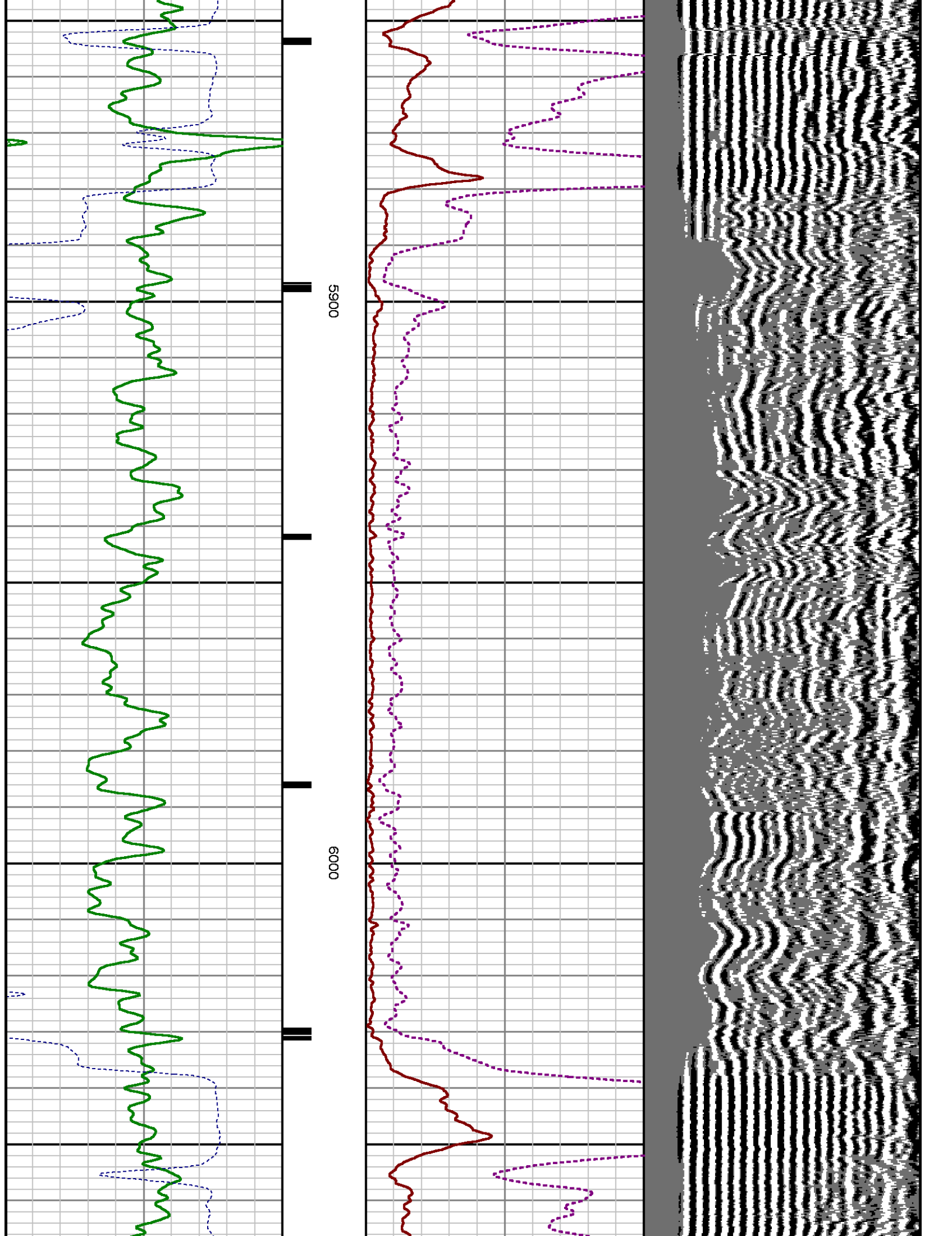


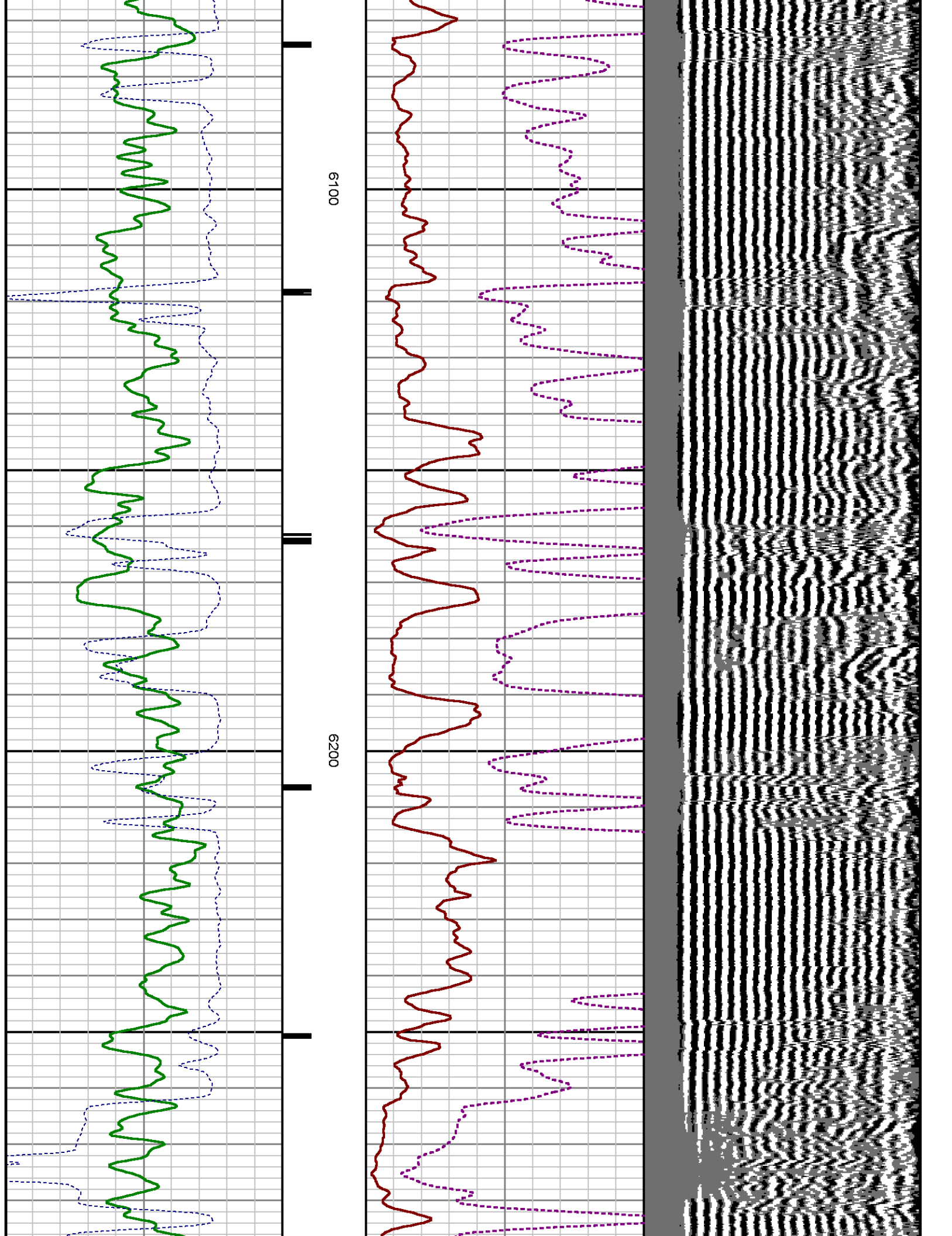


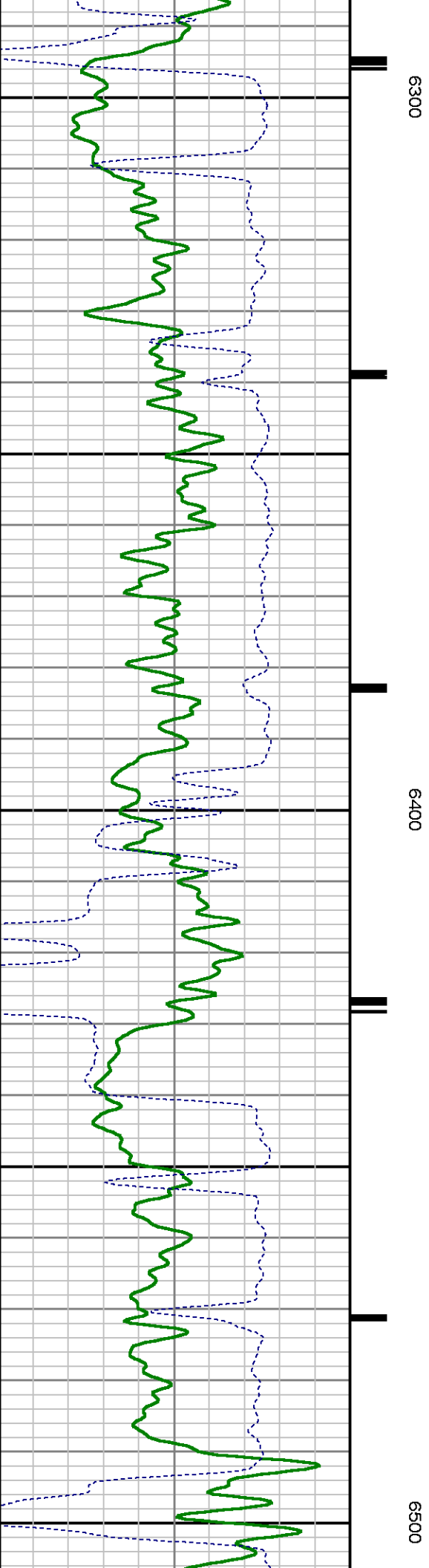
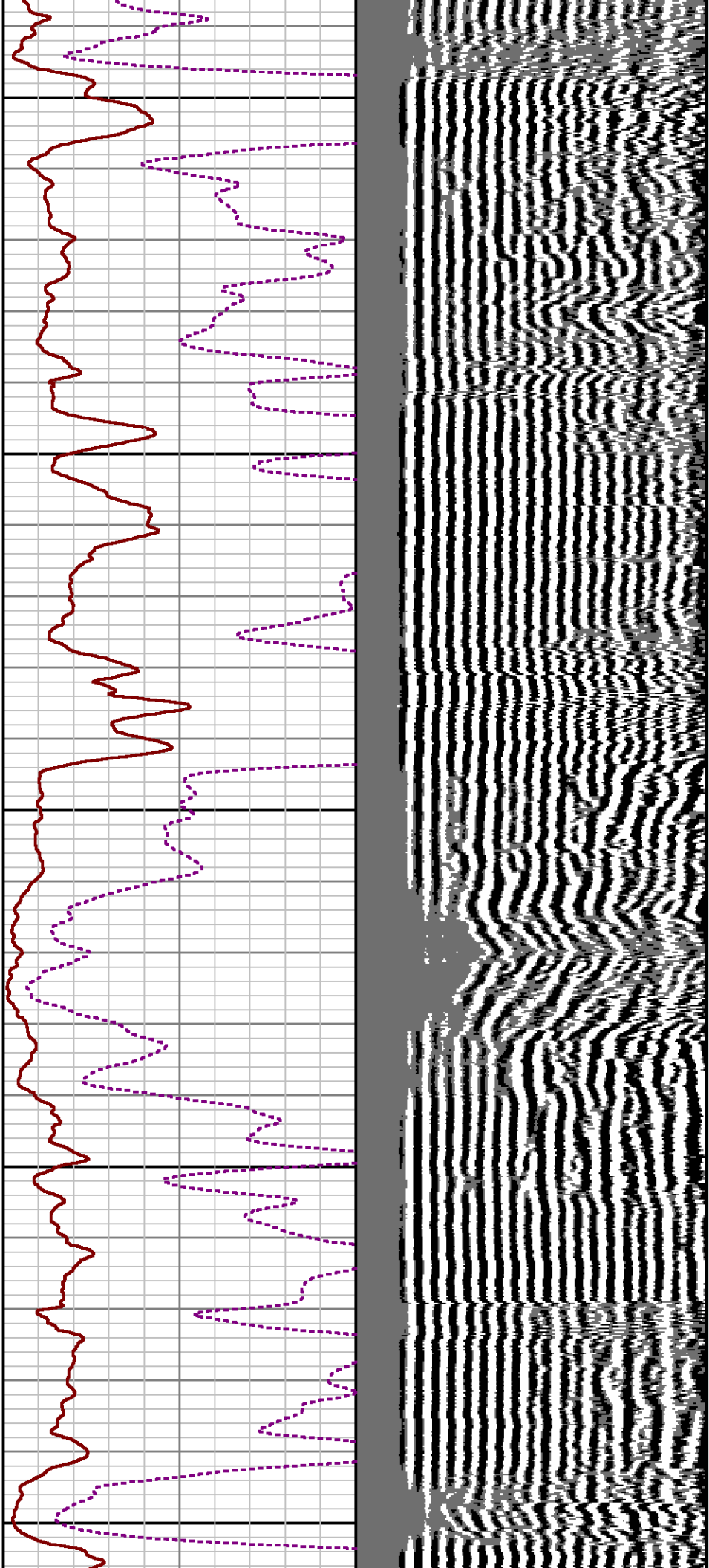


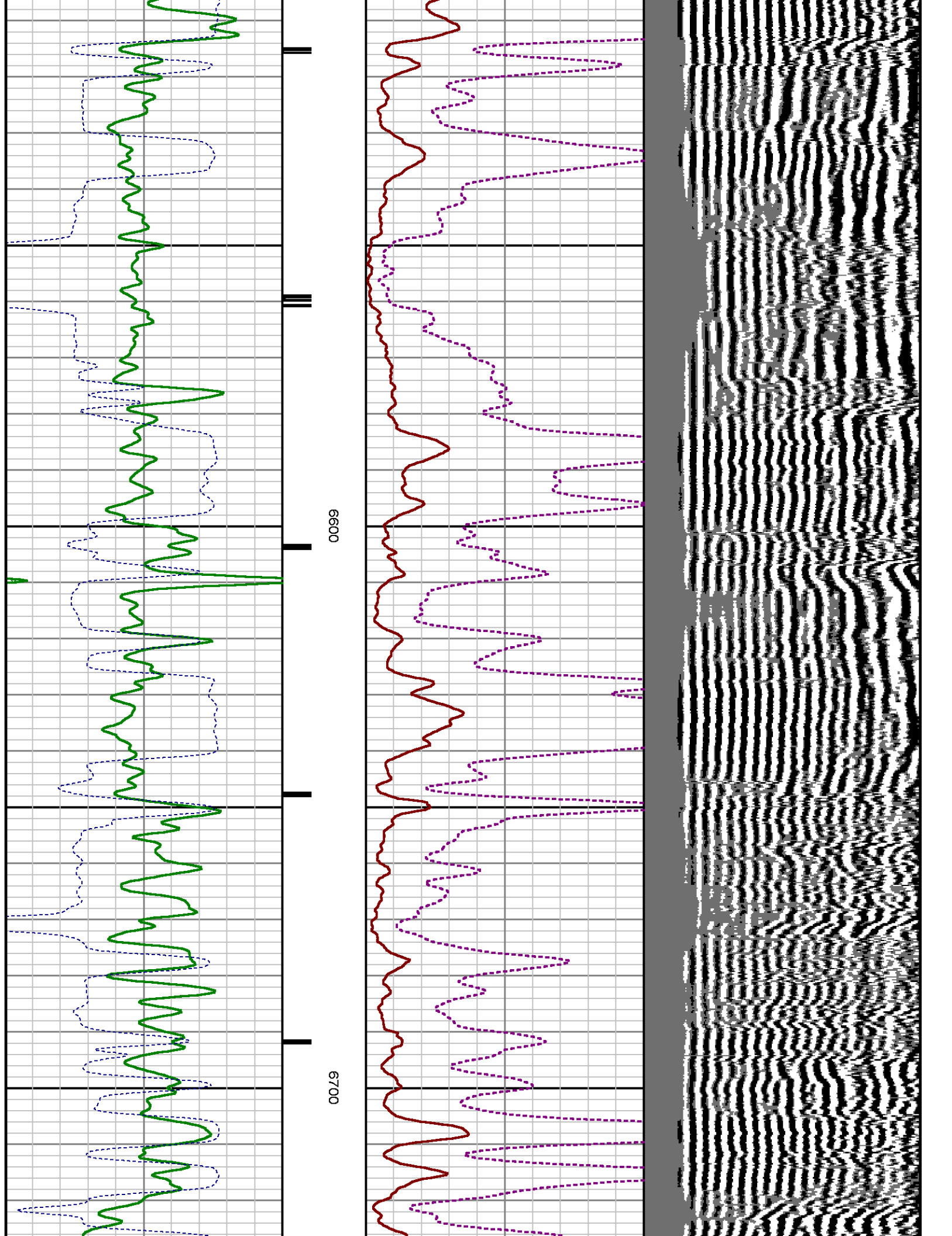


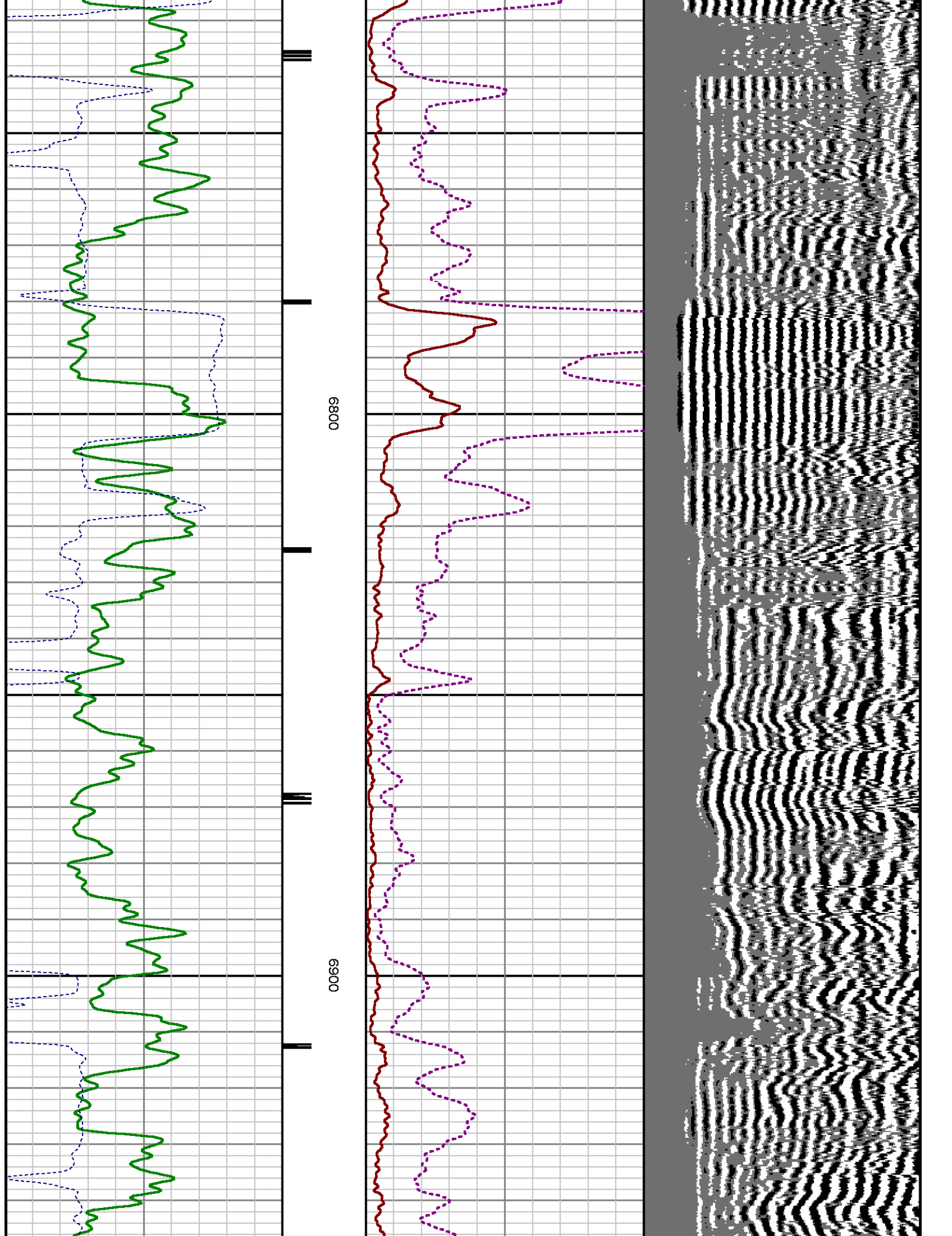


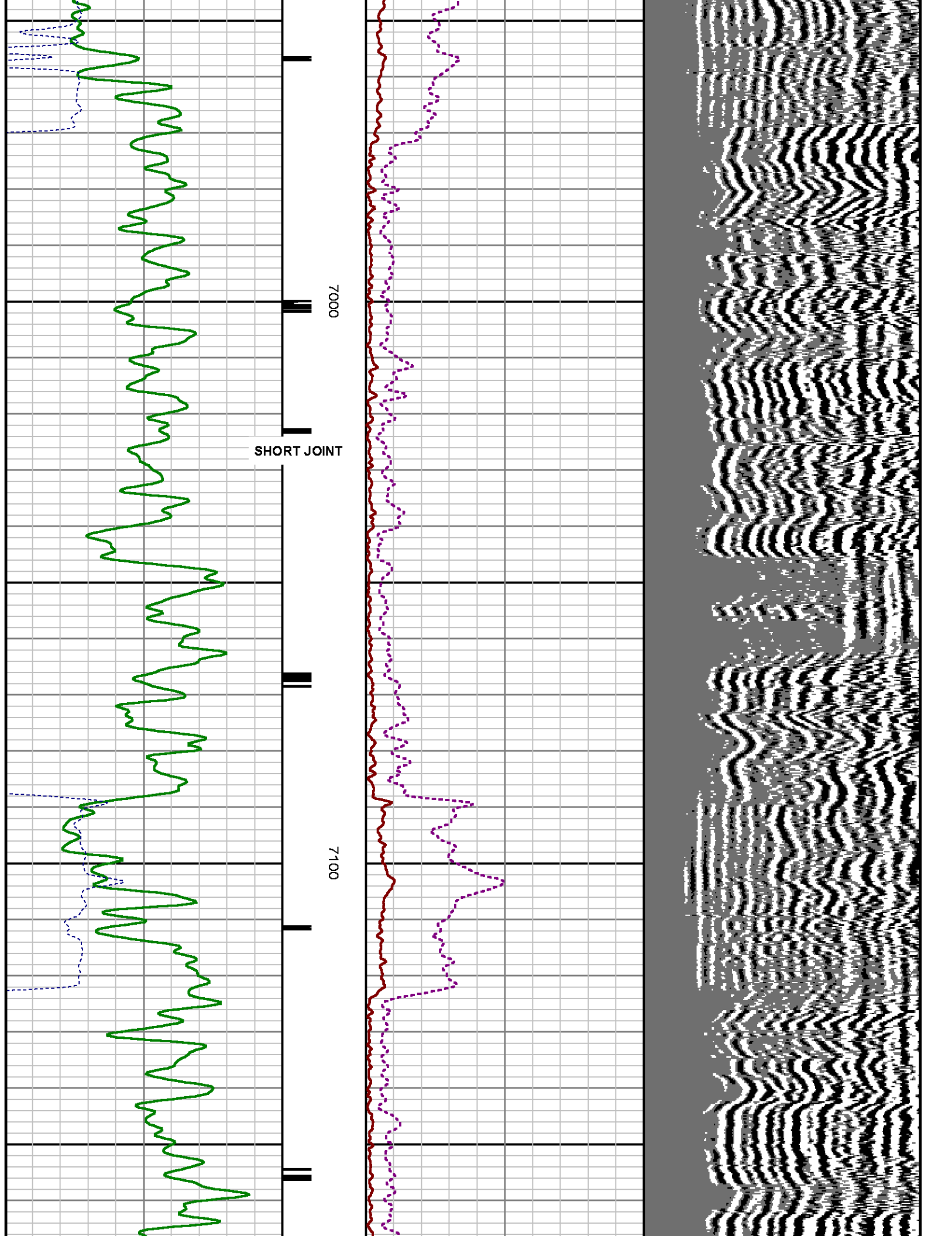


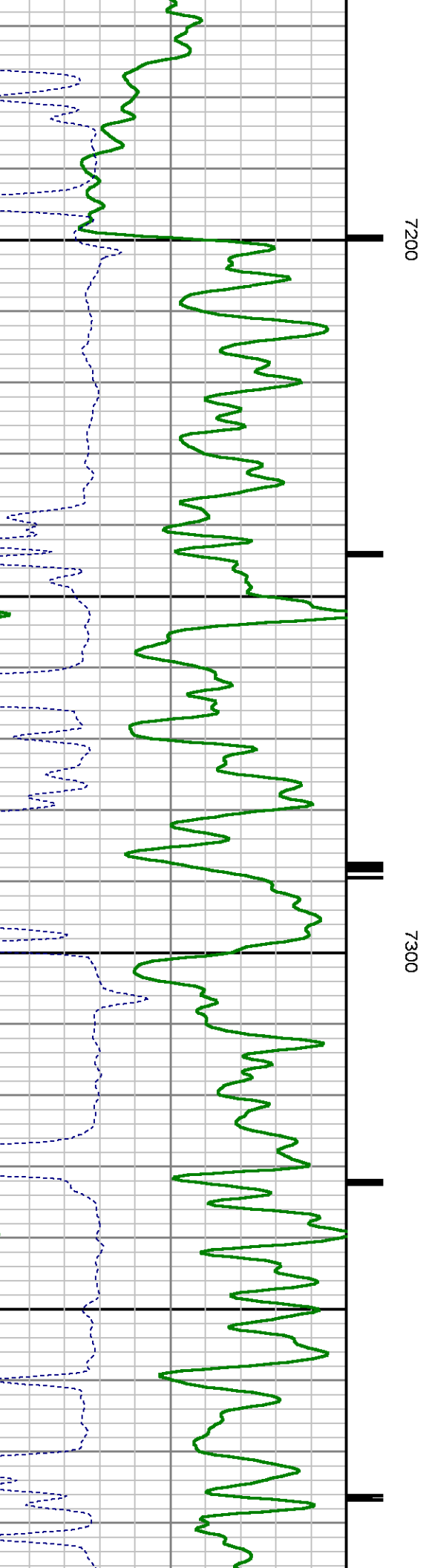
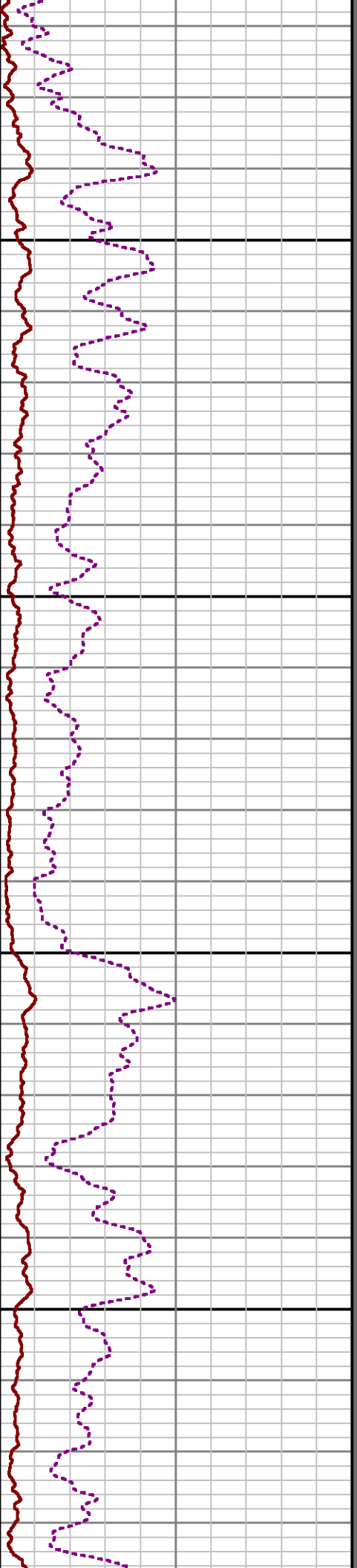
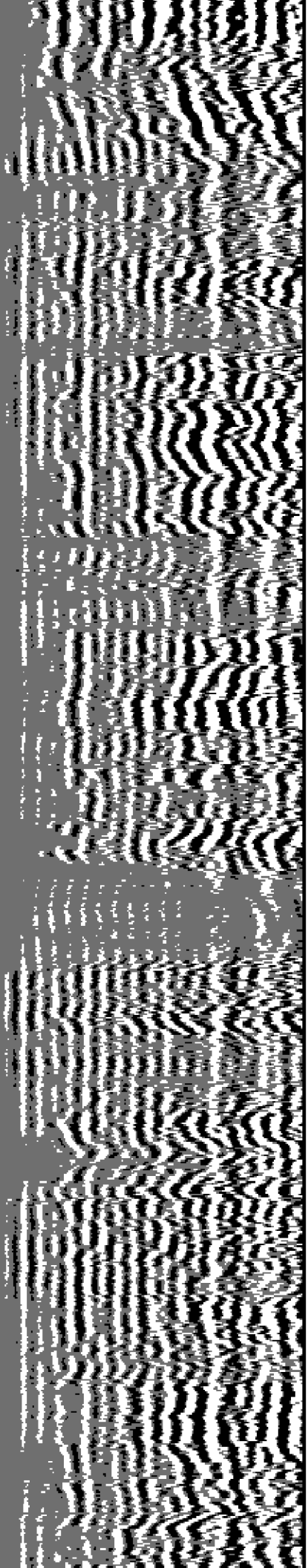


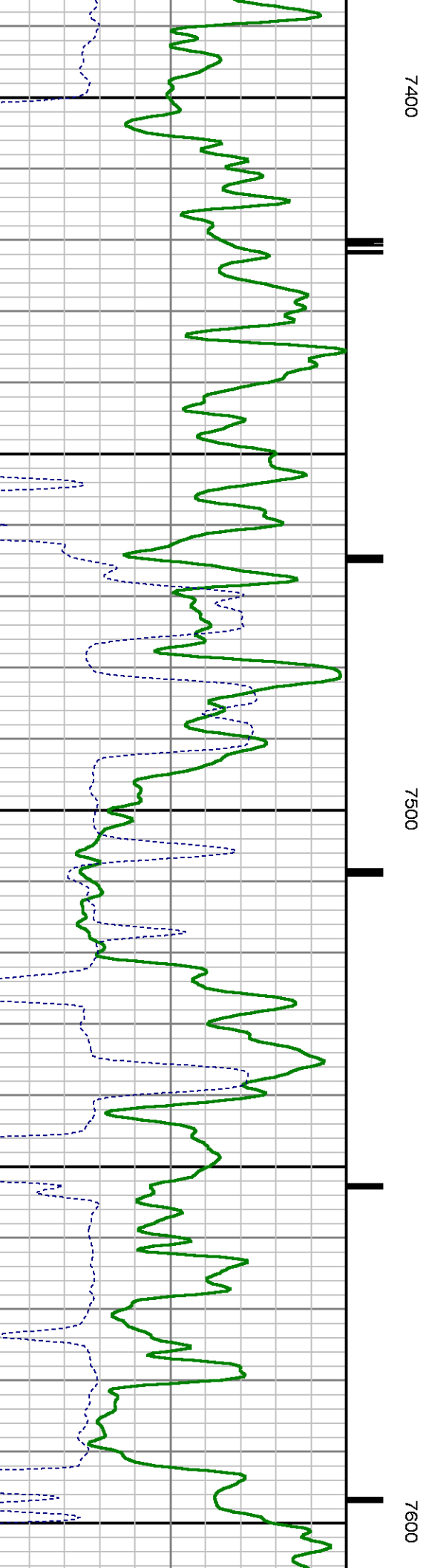
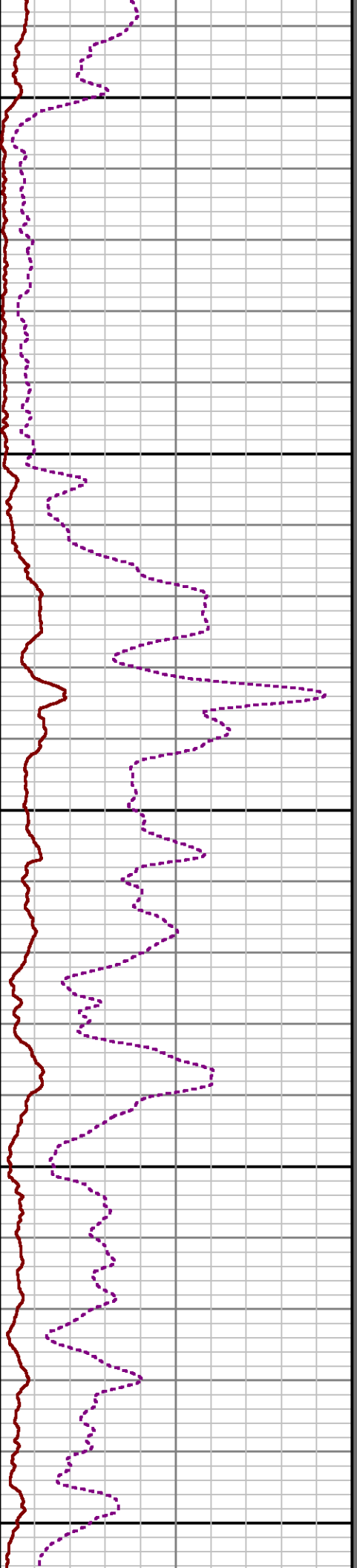
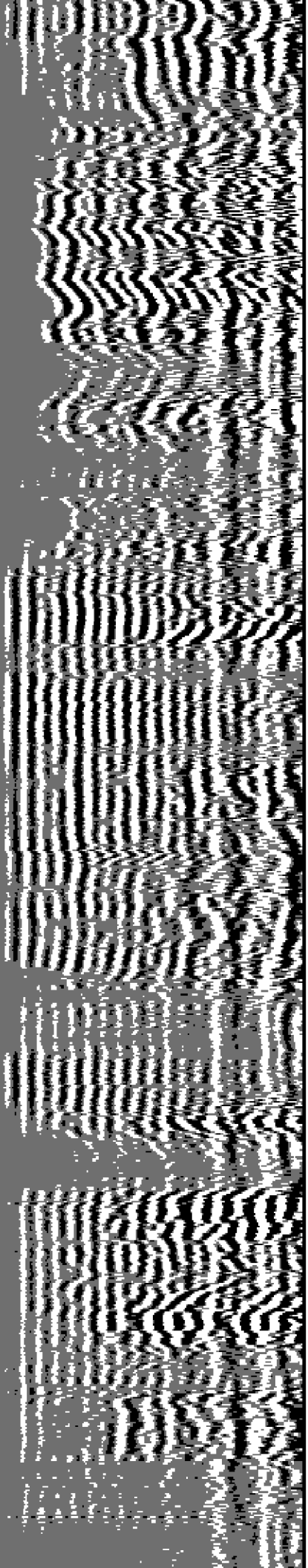


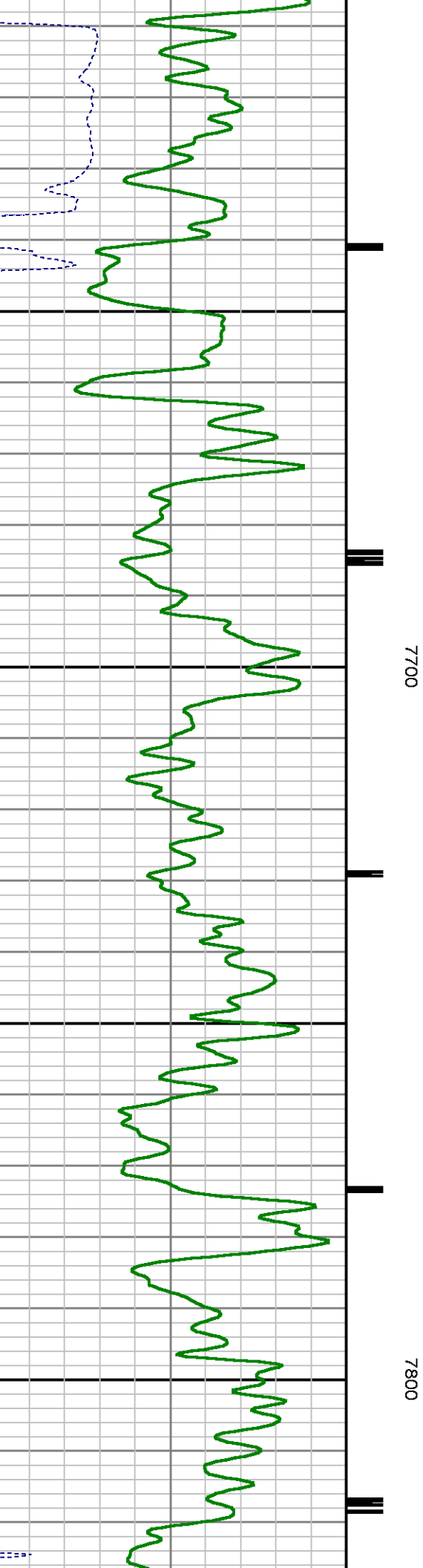
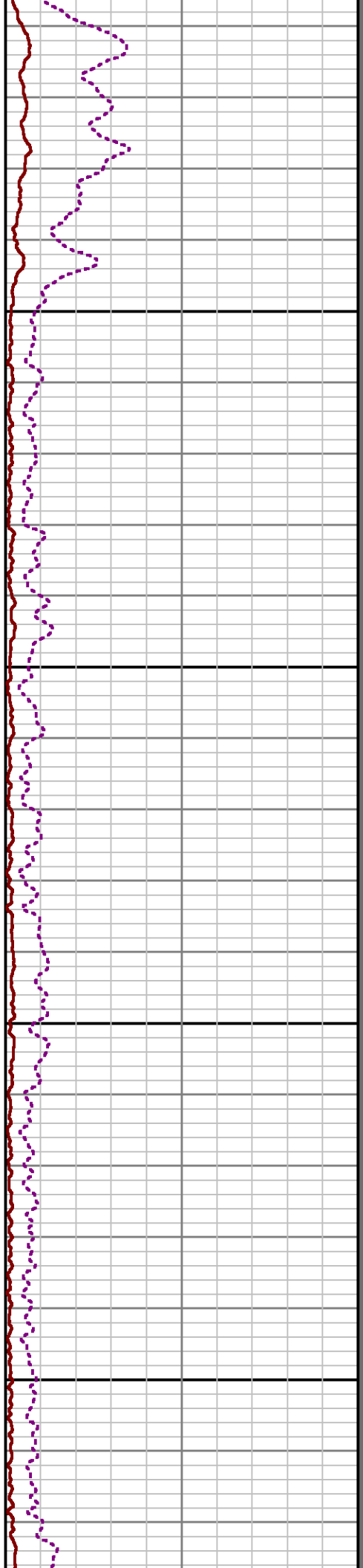
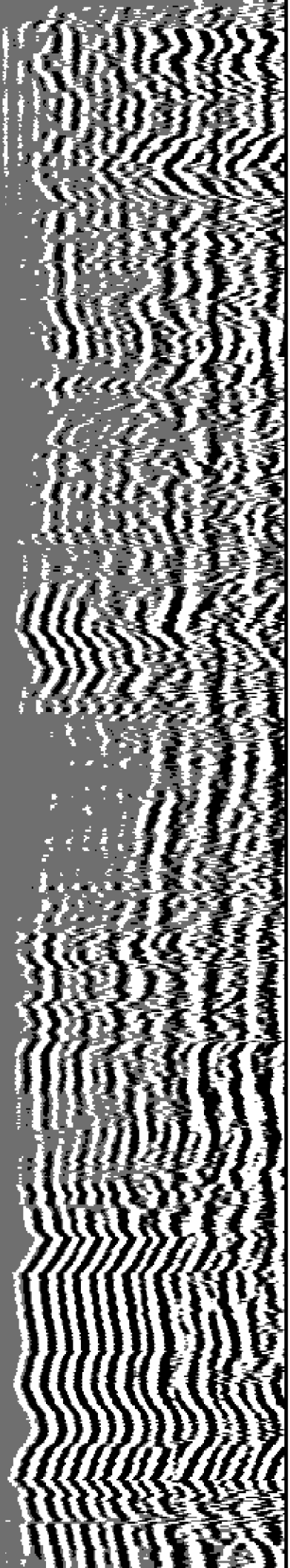


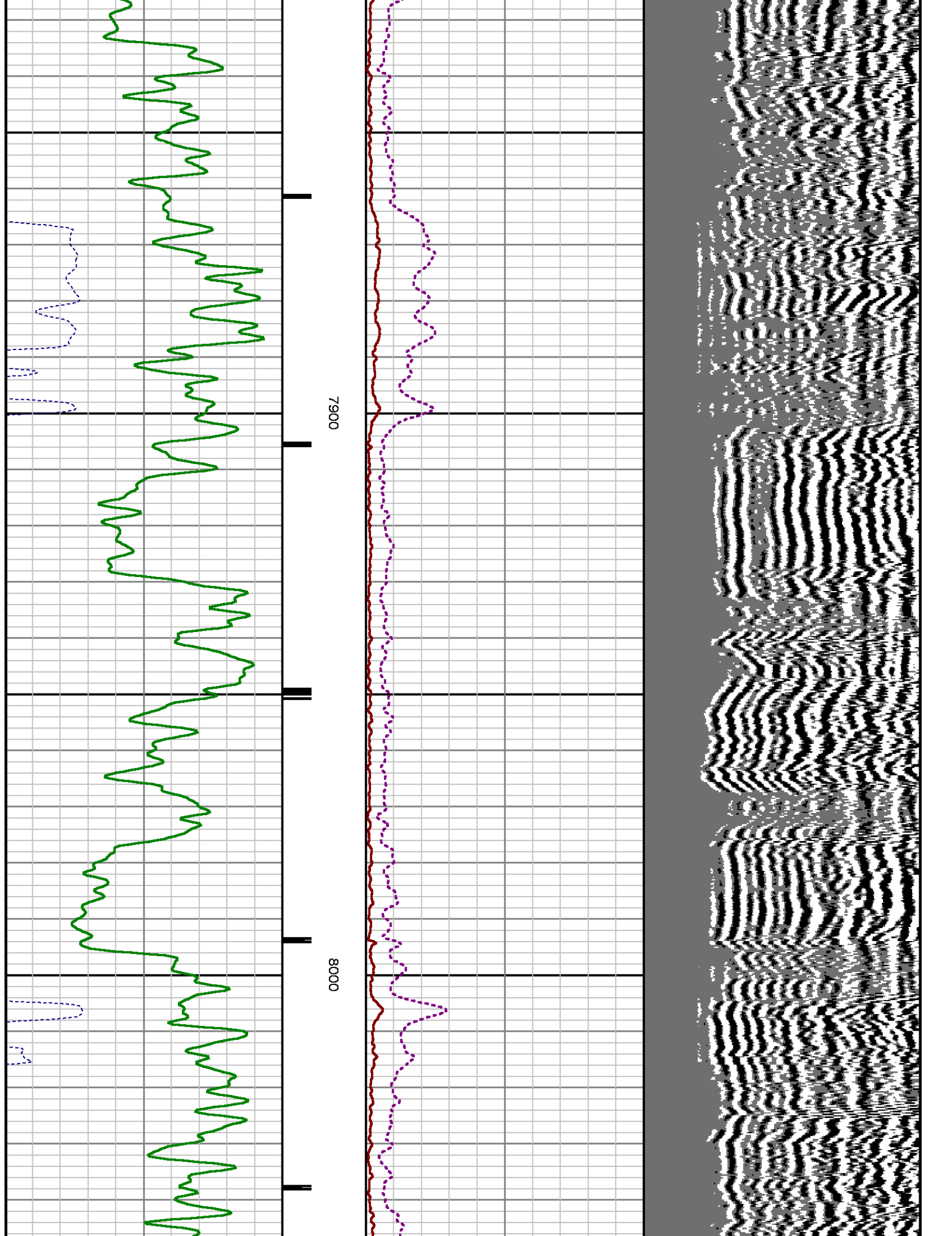


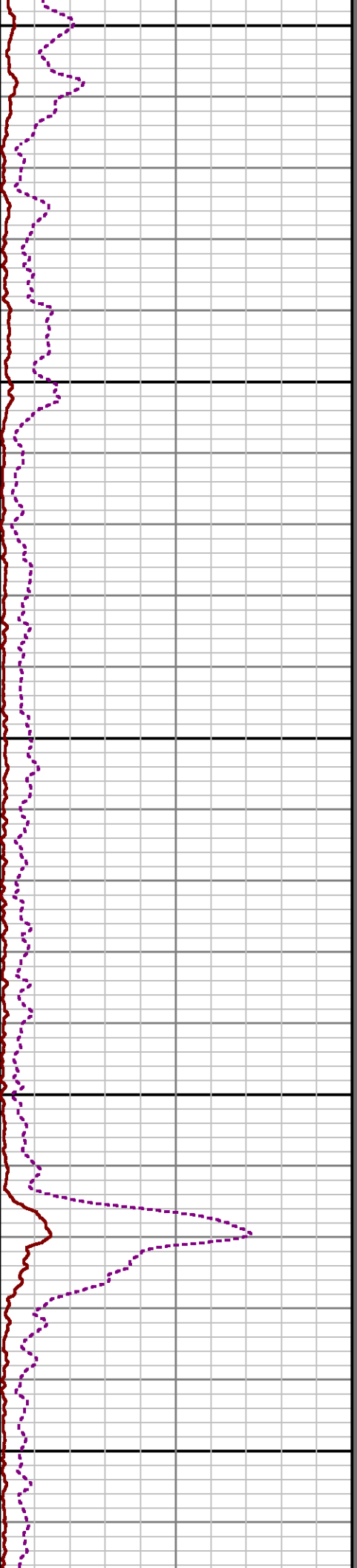
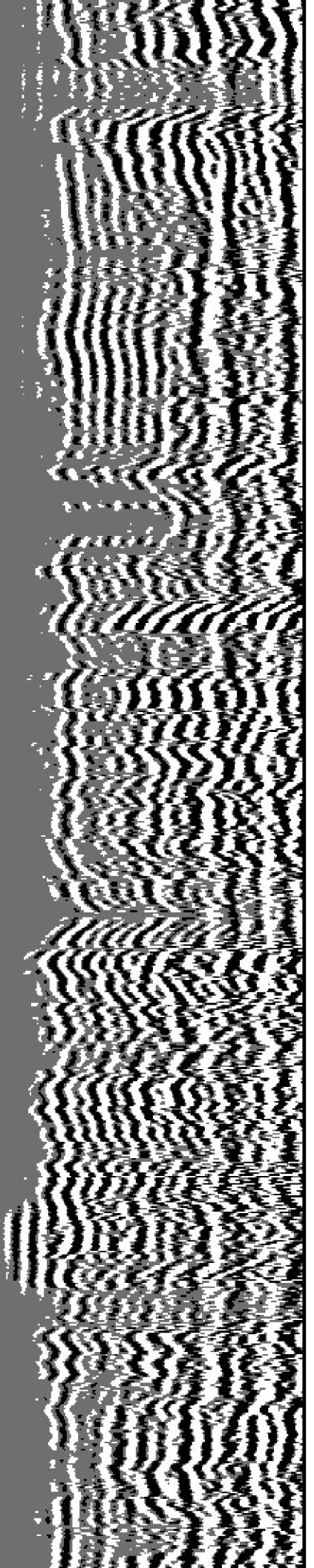






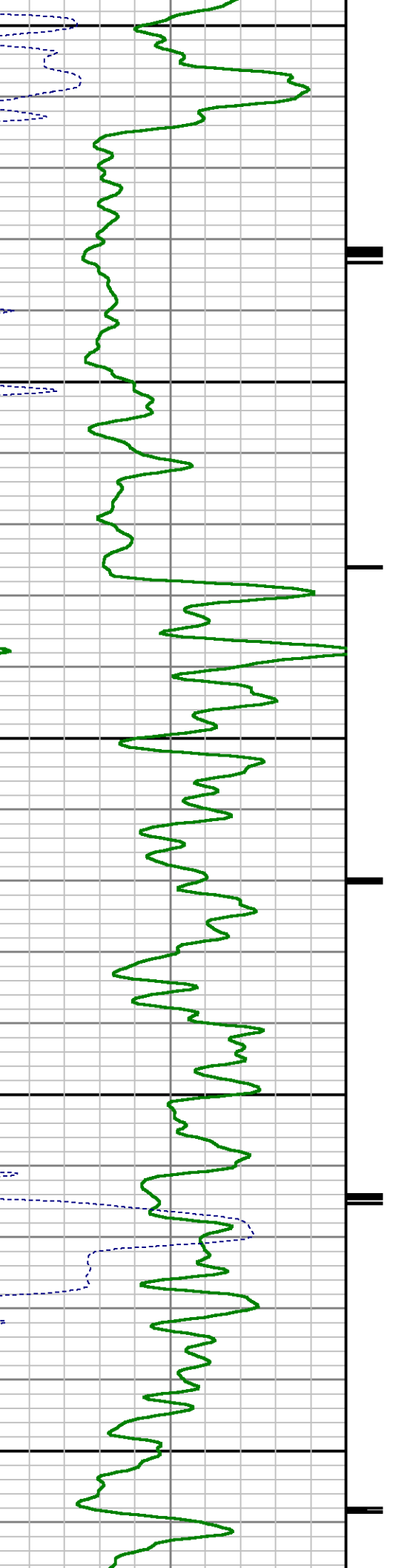


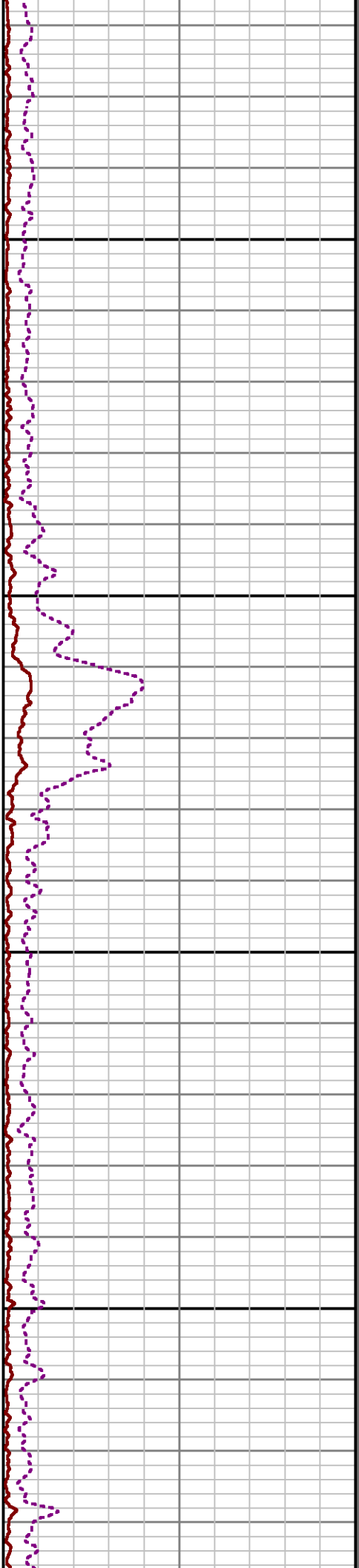
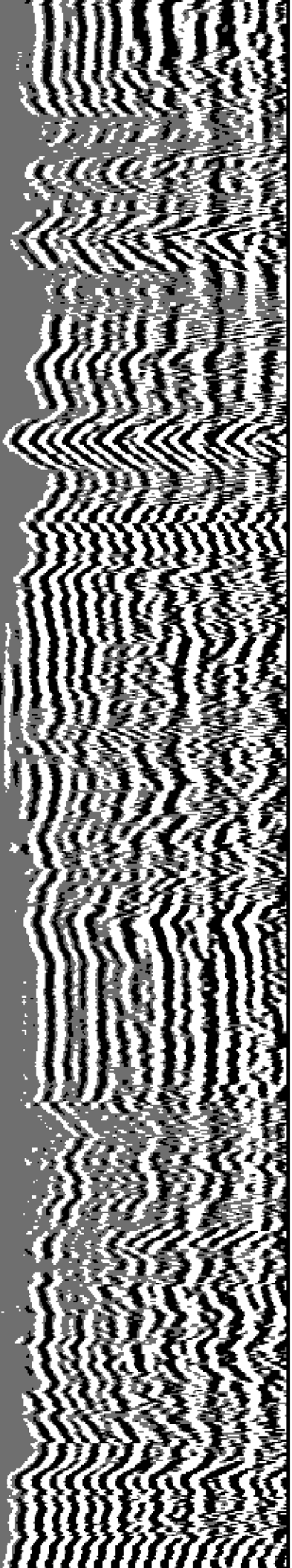




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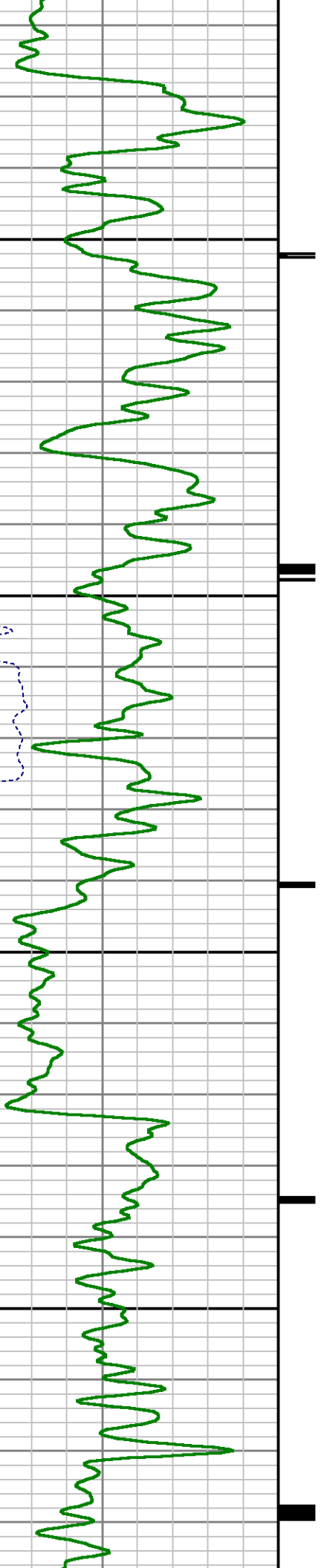
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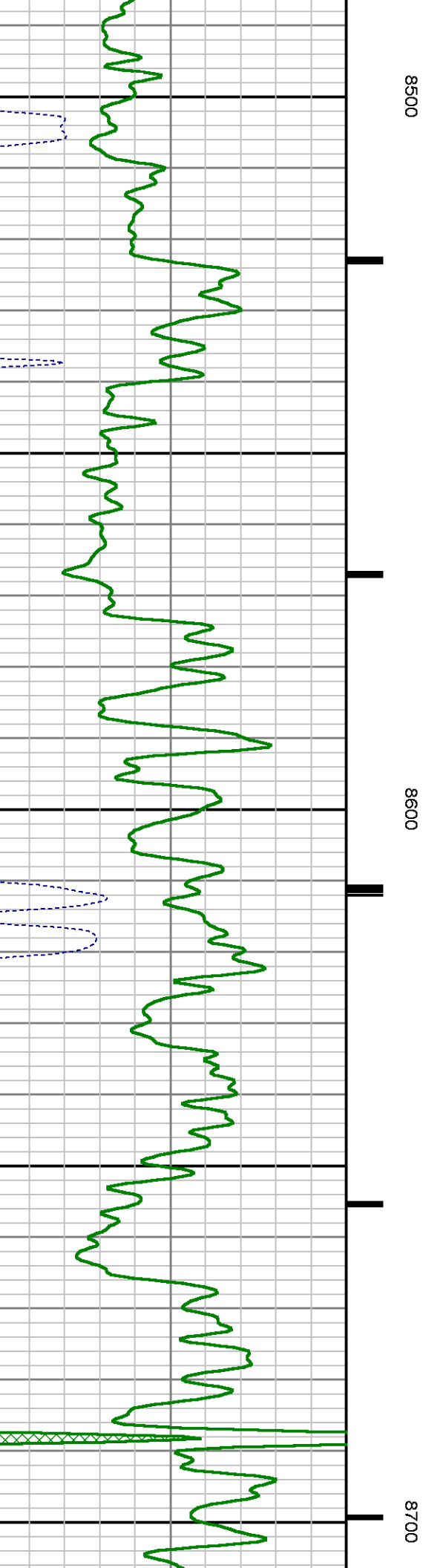
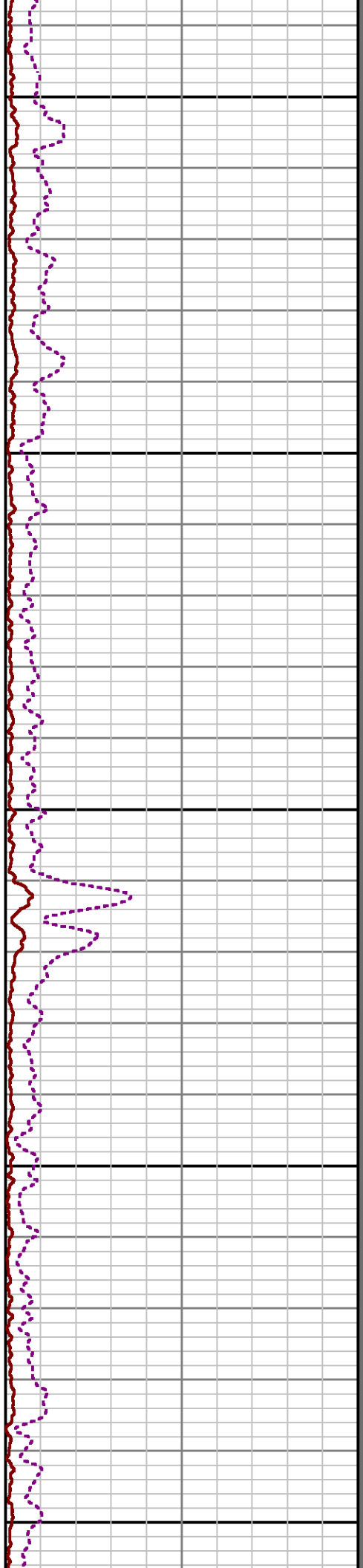
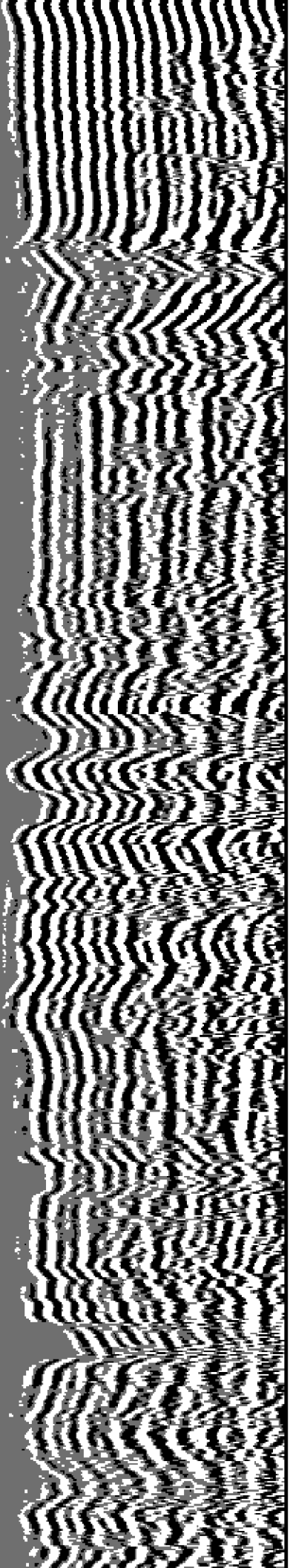


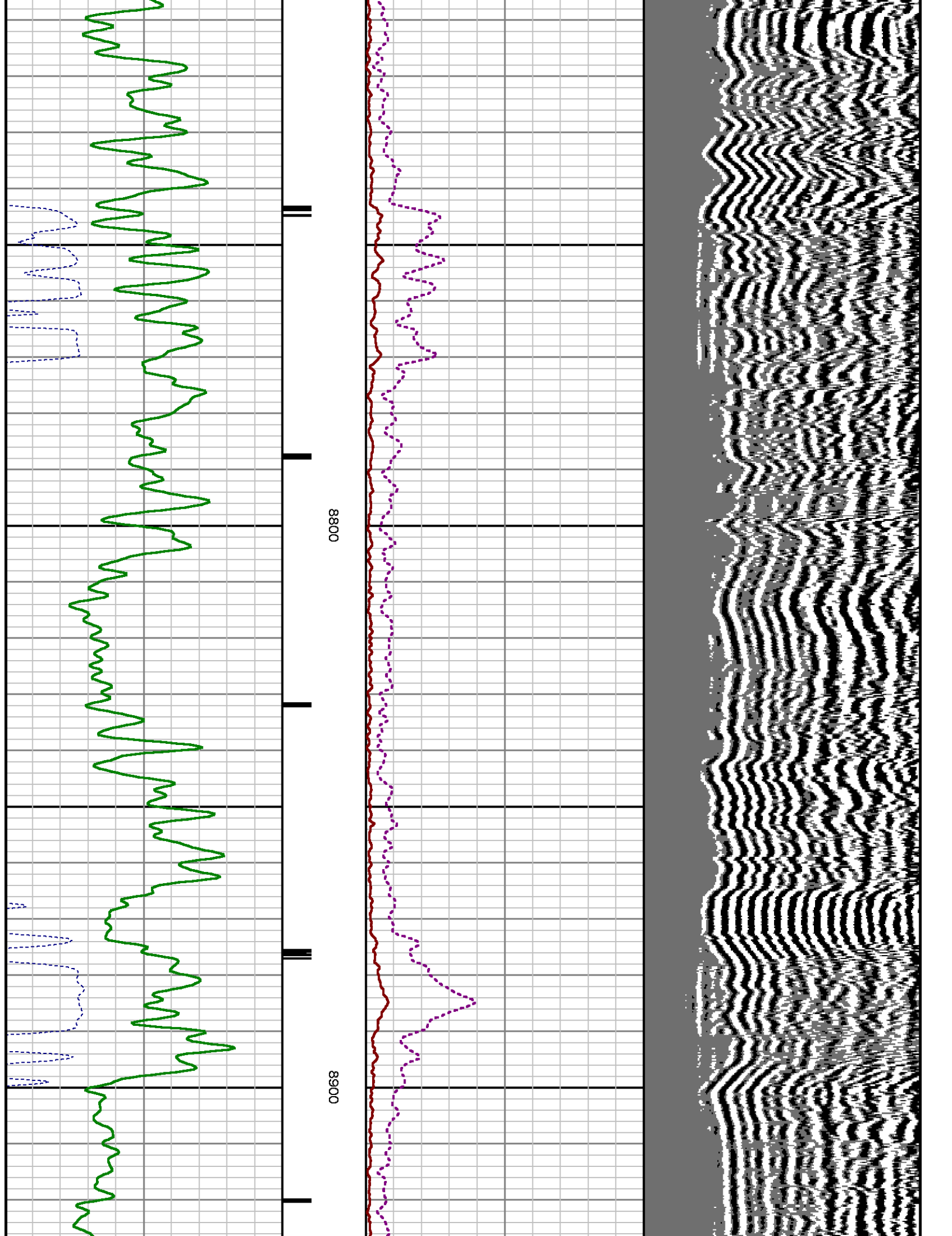


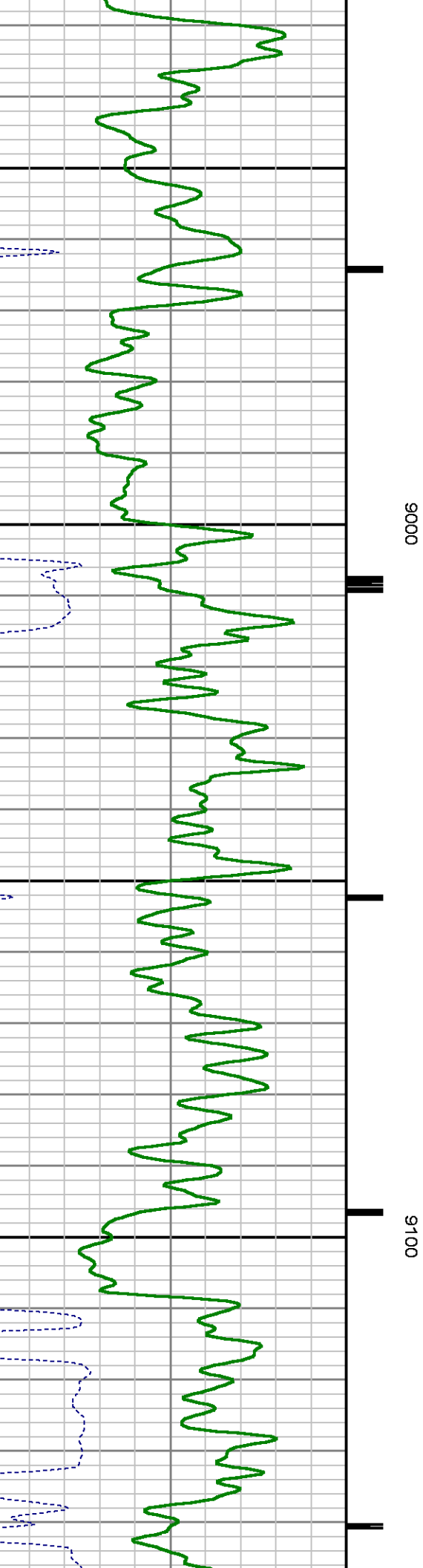
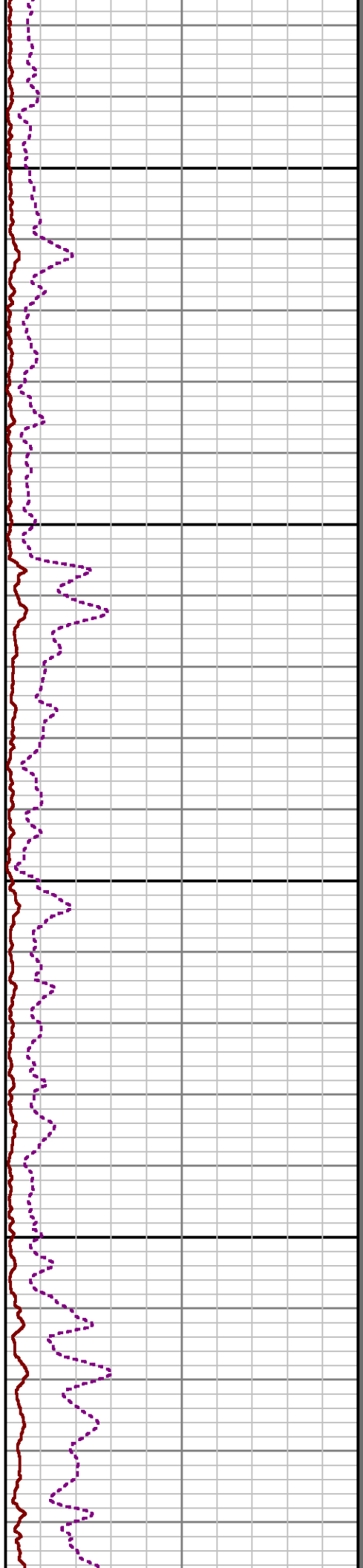
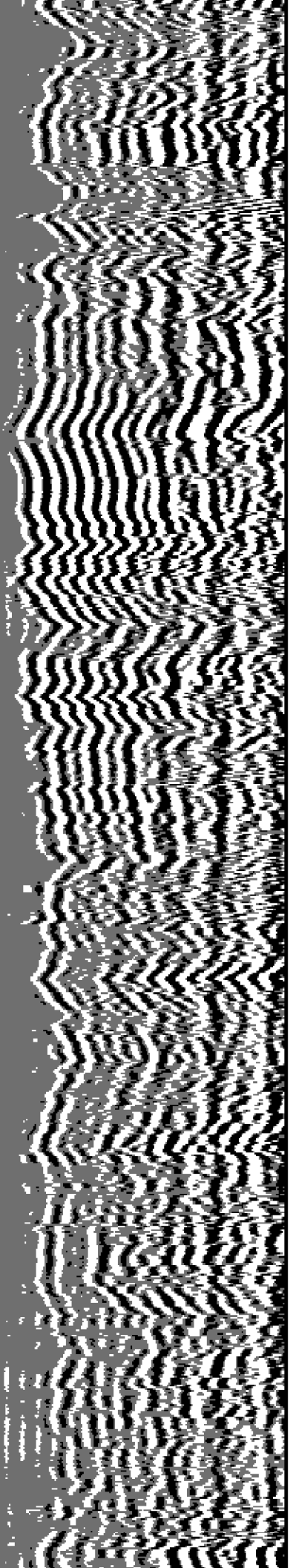
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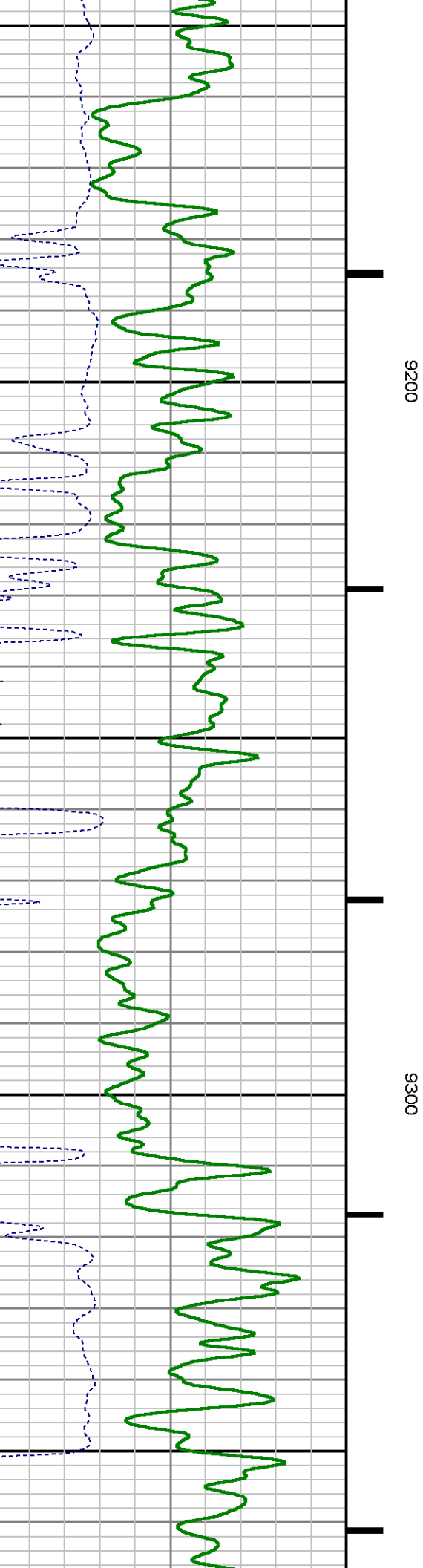
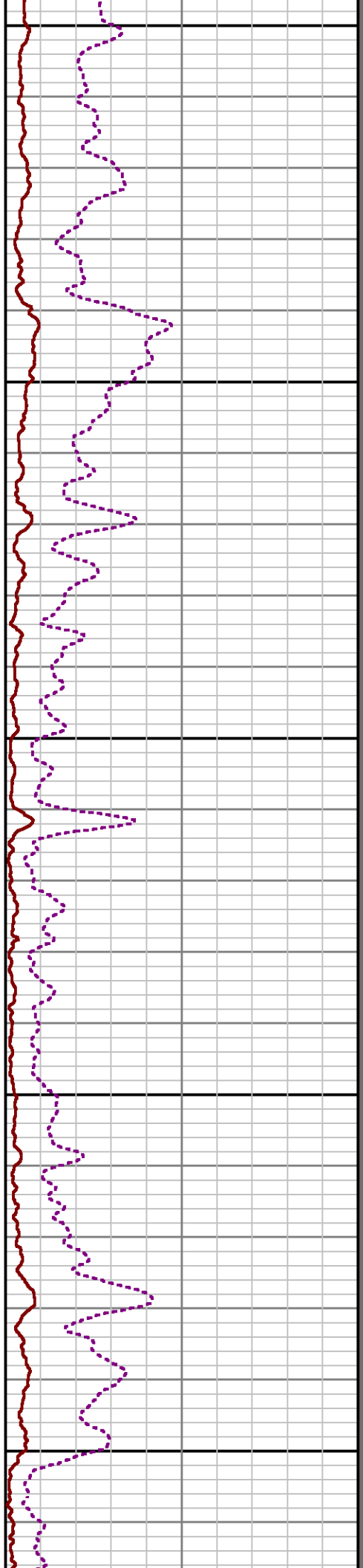
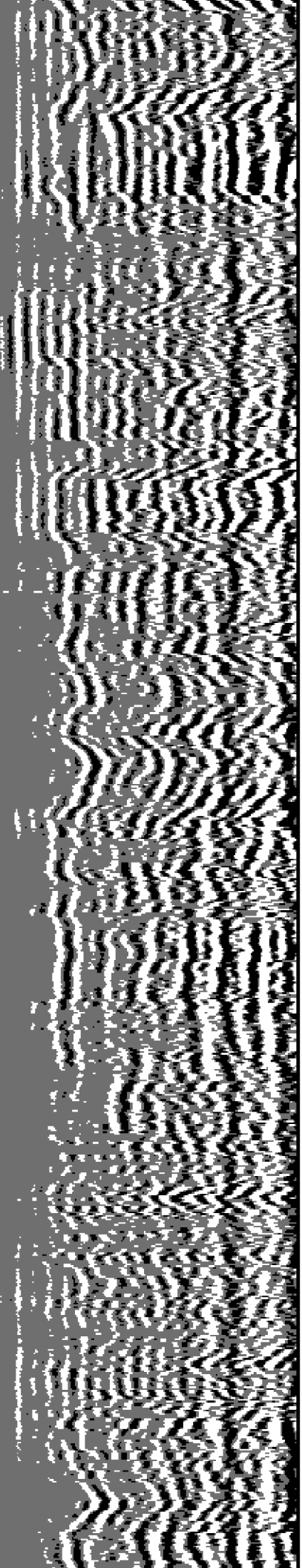
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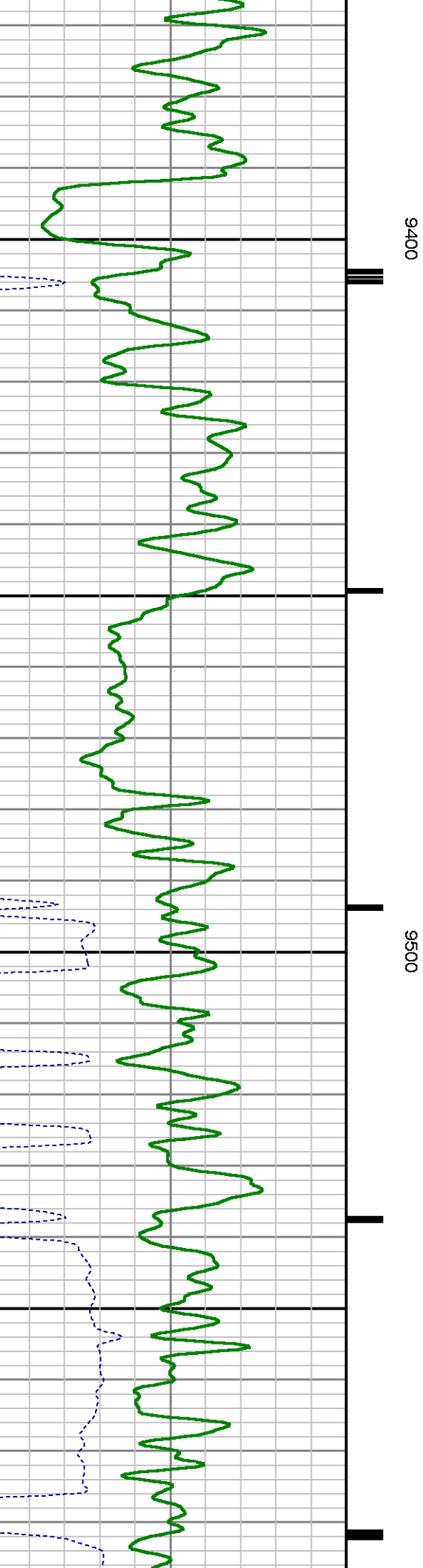
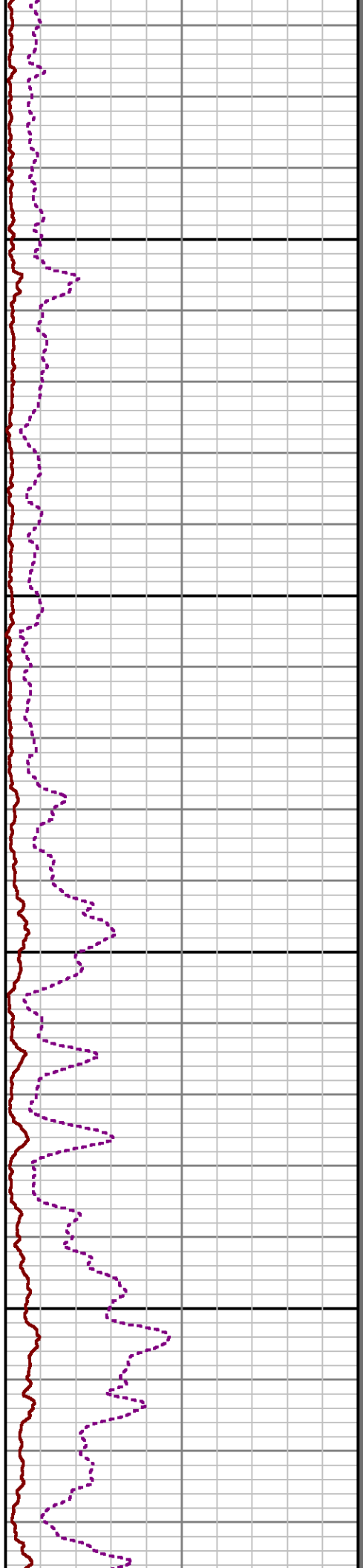
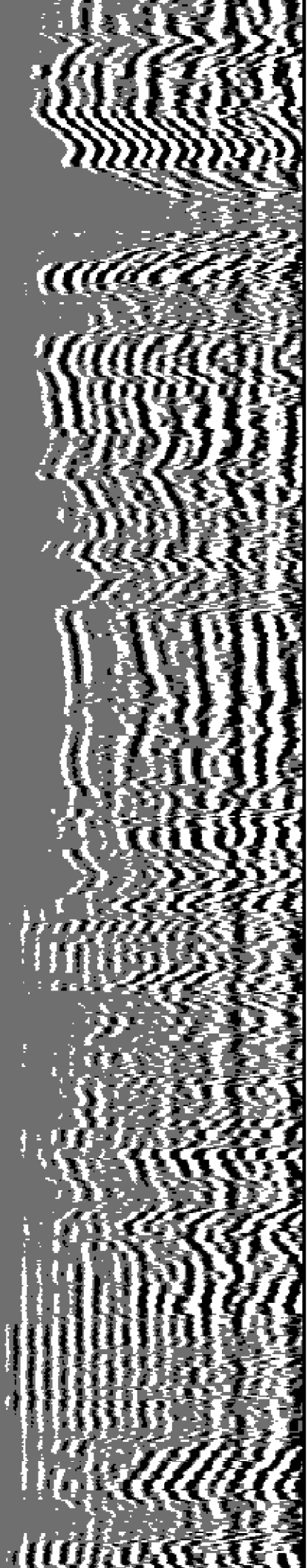


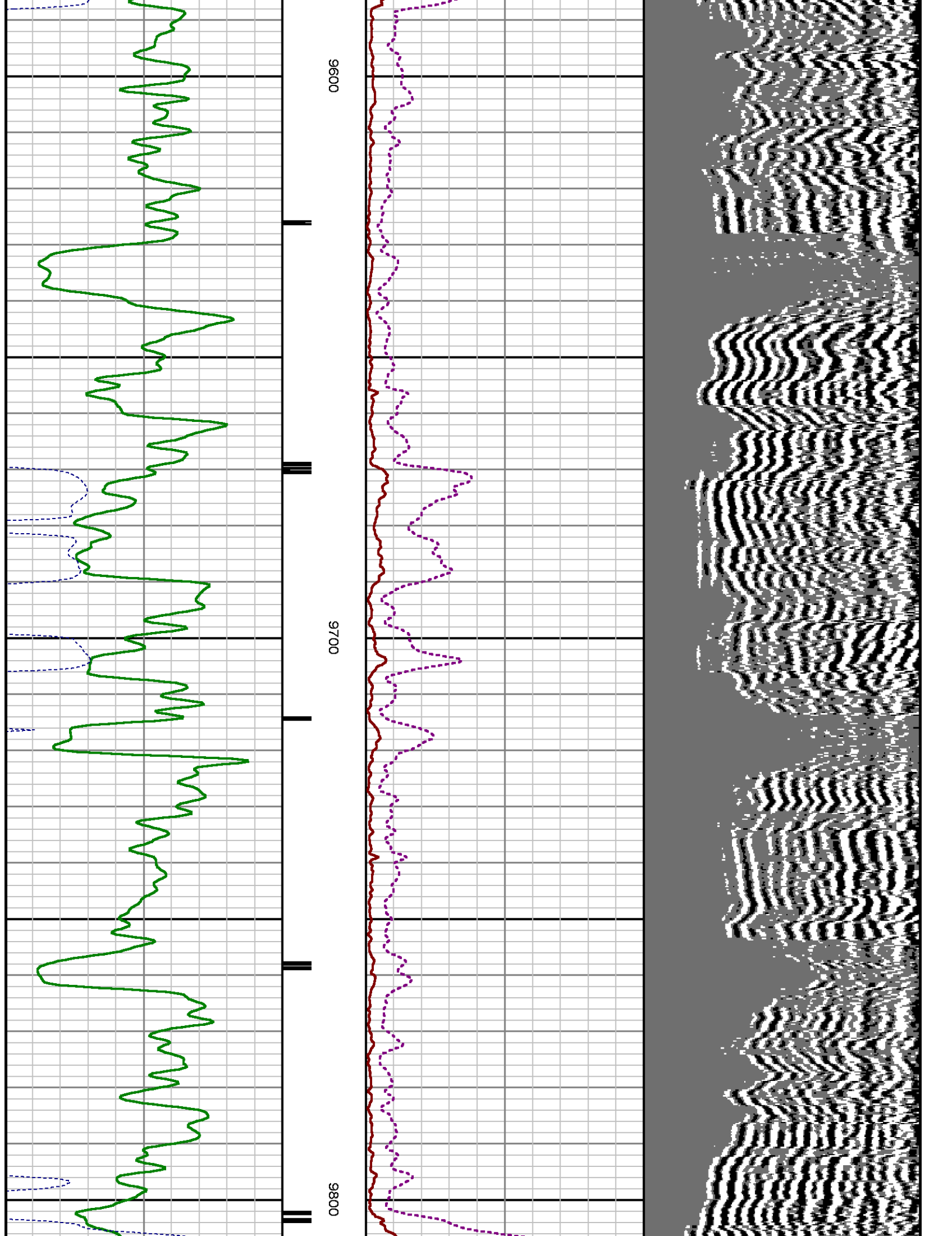


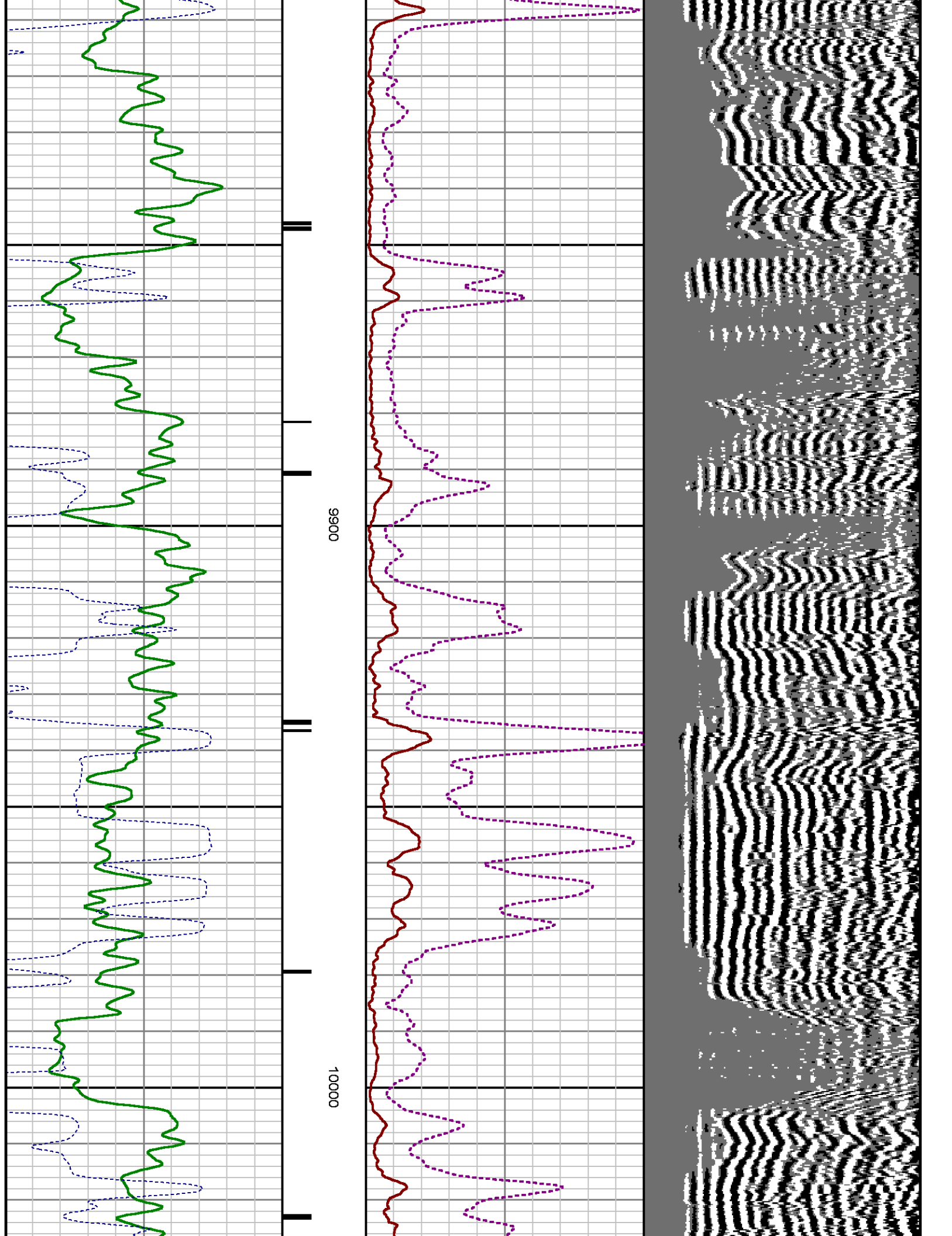


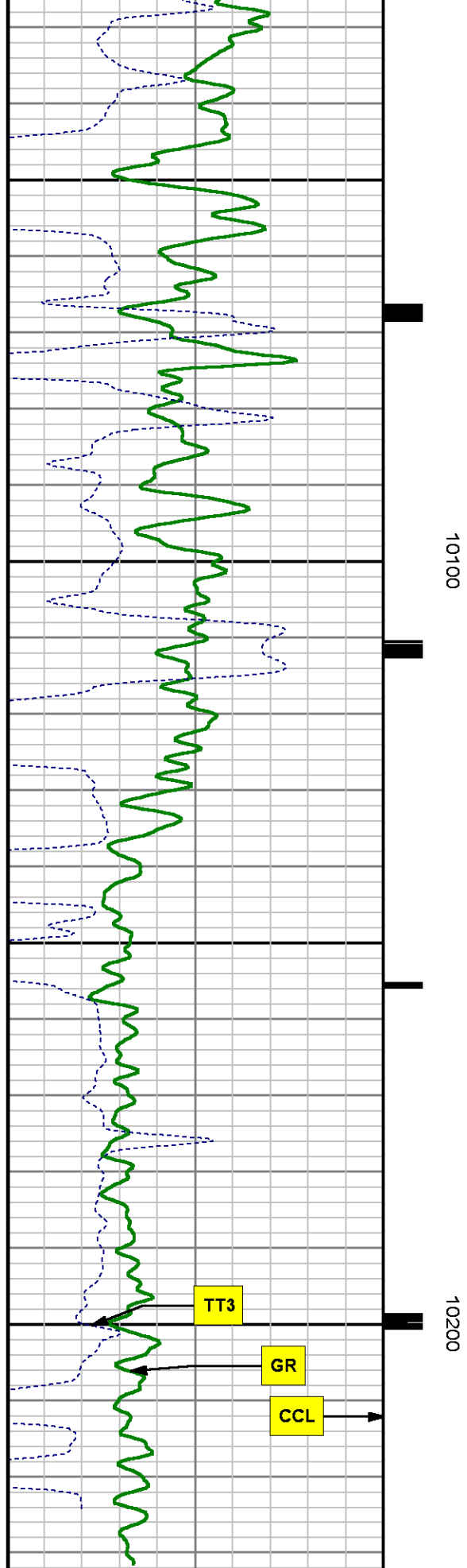
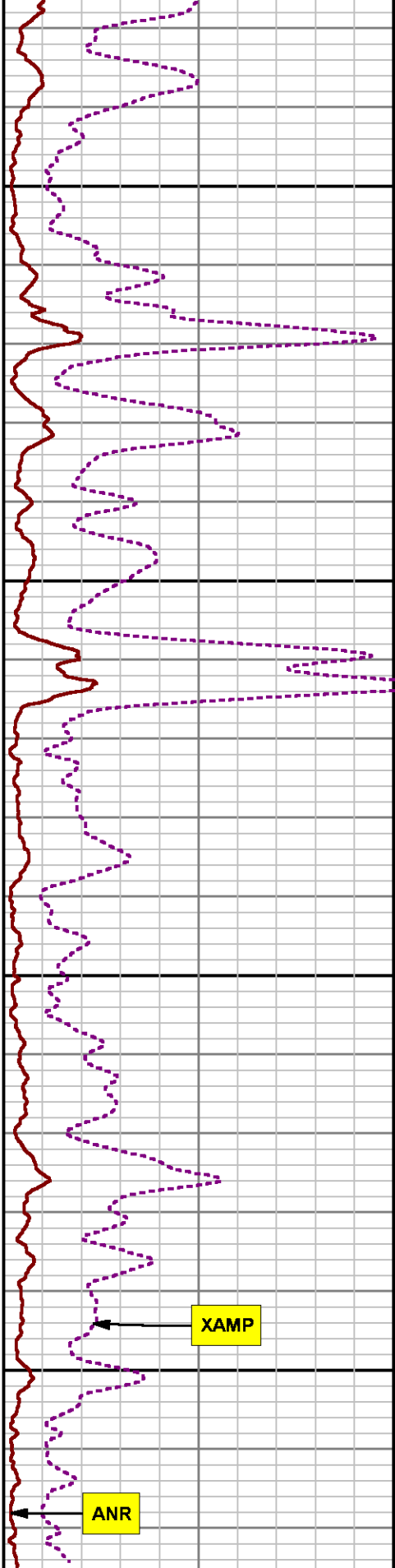
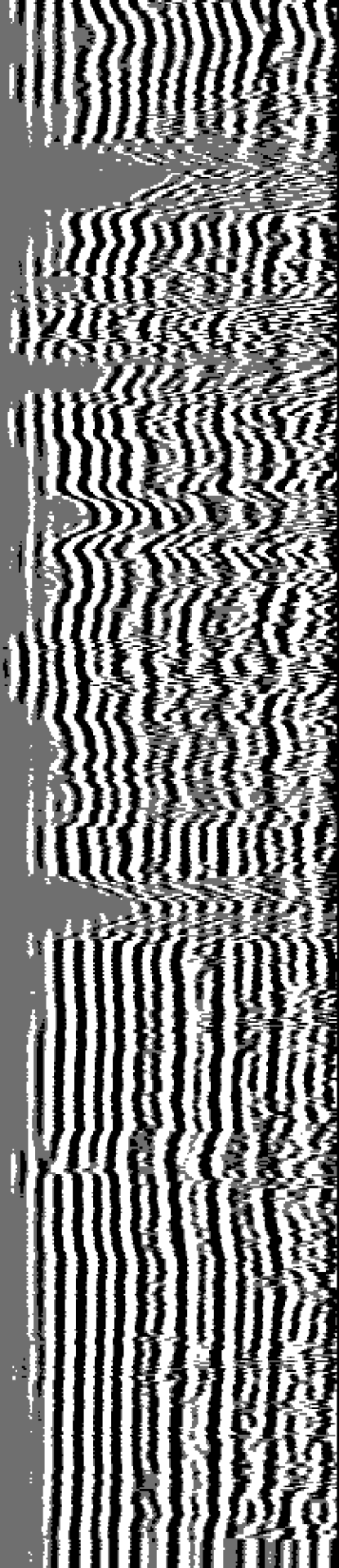


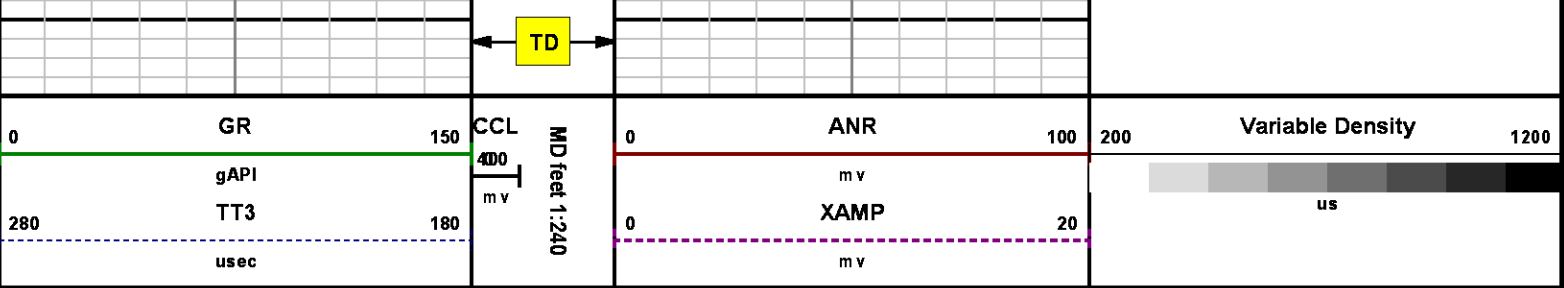












SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	12.218	10242.000
RAL	Amp Gate Start Near	195.000	usec	12.218	10242.000
RAL	Amp Gate Start Radial	195.000	usec	12.218	10242.000
RAL	Amp Gate Width Far	25.000	usec	12.218	10242.000
RAL	Amp Gate Width Near	25.000	usec	12.218	10242.000
RAL	Amp Gate Width Radial	25.000	usec	12.218	10242.000
RAL	casing od	4.500	inches	12.218	10242.000
RAL	casing wt	11.600	lbm/ft	12.218	10242.000
RAL	FB Start Far	291.900	usec	12.218	10242.000
RAL	FB Start Near	180.000	usec	12.218	10242.000
RAL	FB Start Radial	180.000	usec	12.218	10242.000
RAL	FB Thresh Far	15.000	mv	12.218	10242.000
RAL	FB Thresh Near	10.000	mv	12.218	10242.000
RAL	FB Thresh Radial	10.000	mv	12.218	10242.000
RAL	Fluid Travel Time	200.000	usec/ft	12.218	10242.593

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

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

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

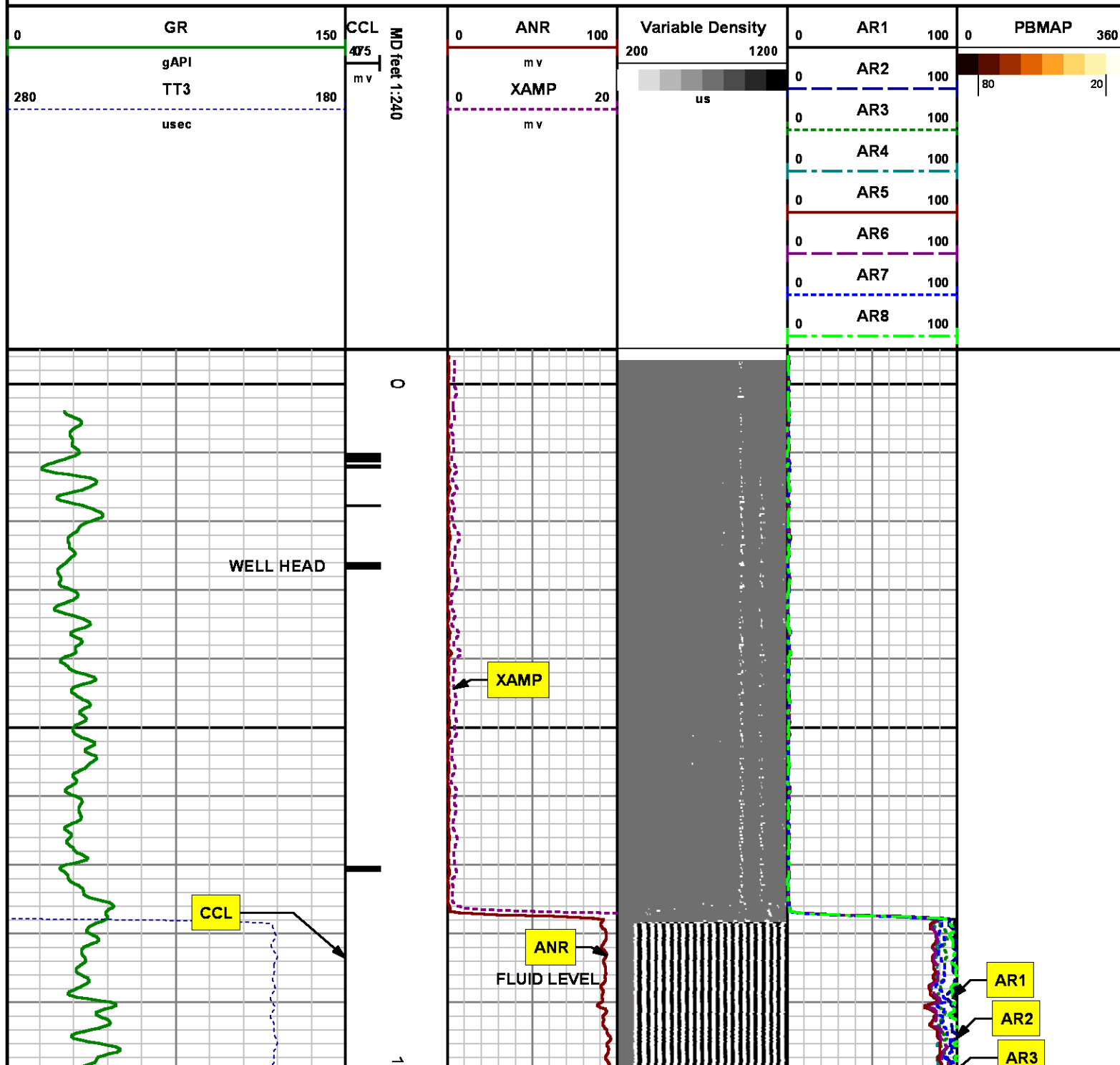
Well : FEDERAL NER 414-32

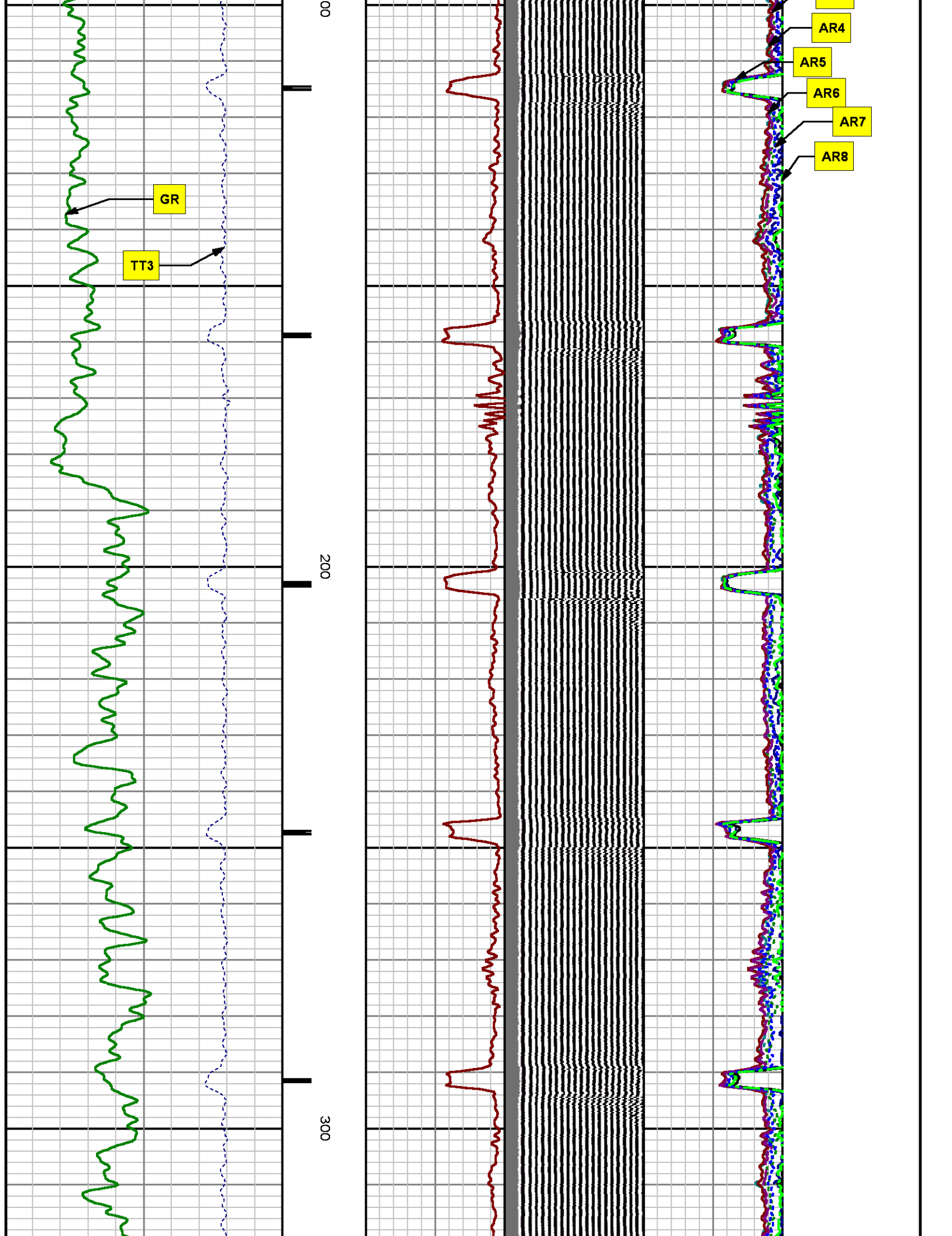
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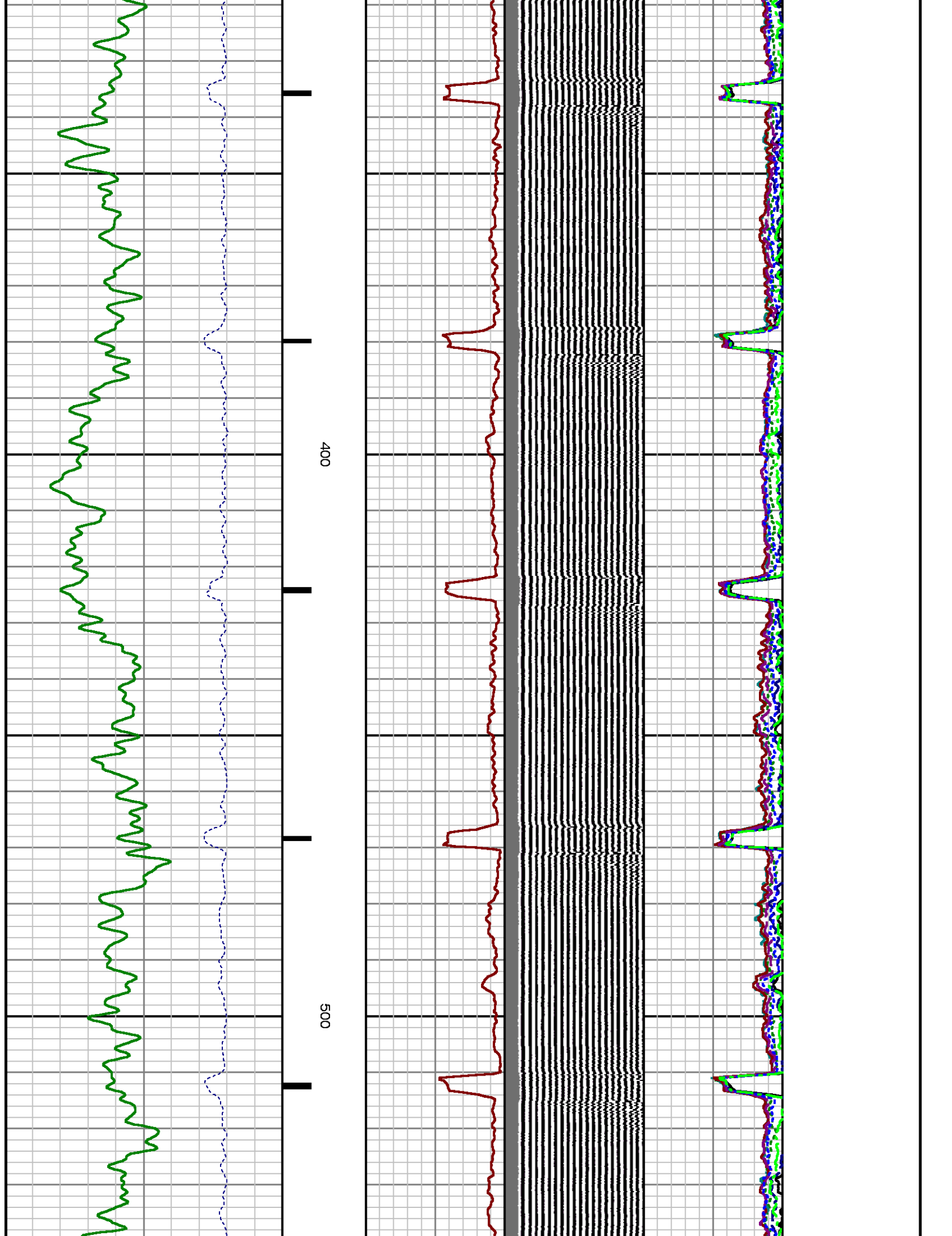
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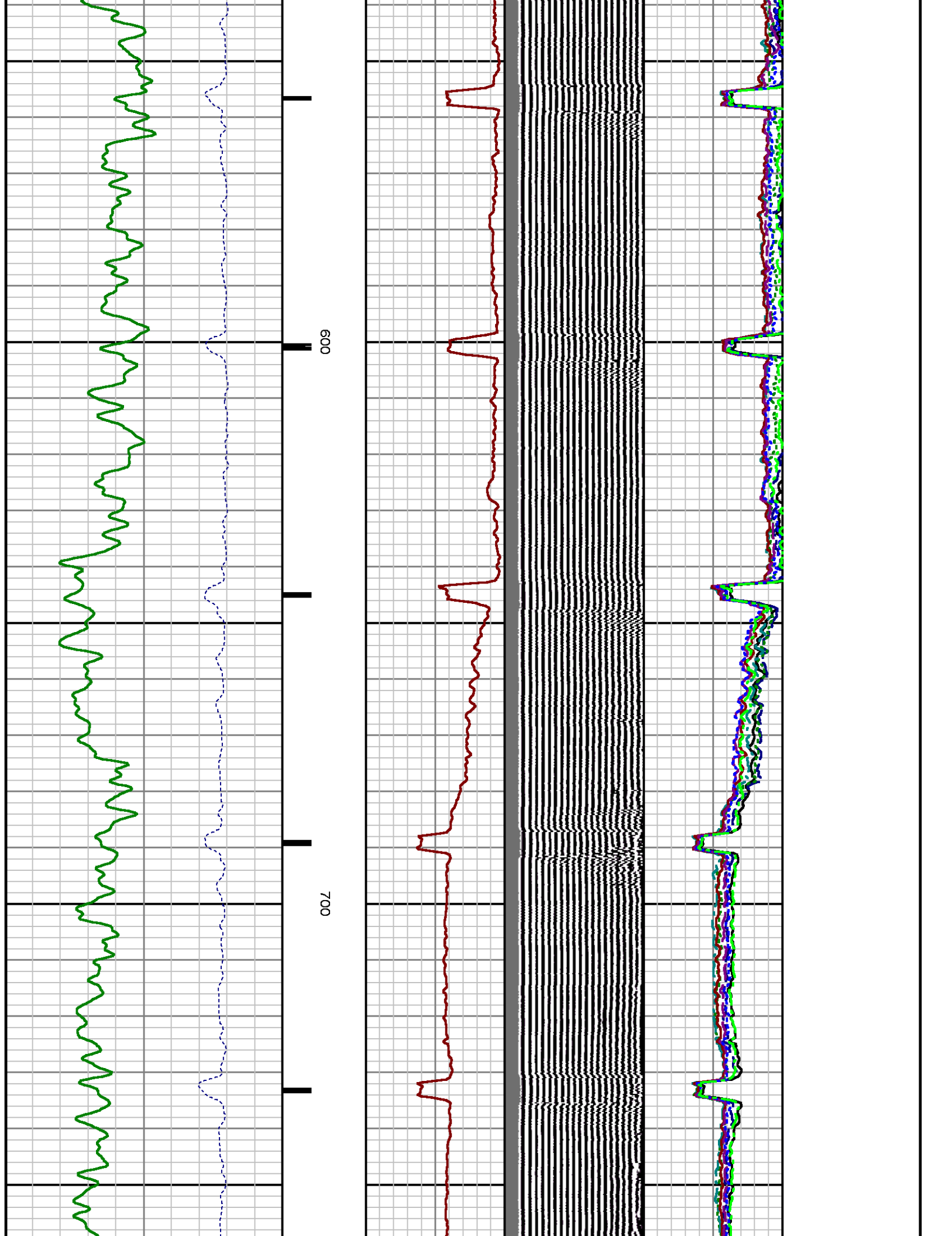
Interval : -5.00 - 10258.00 feet UP

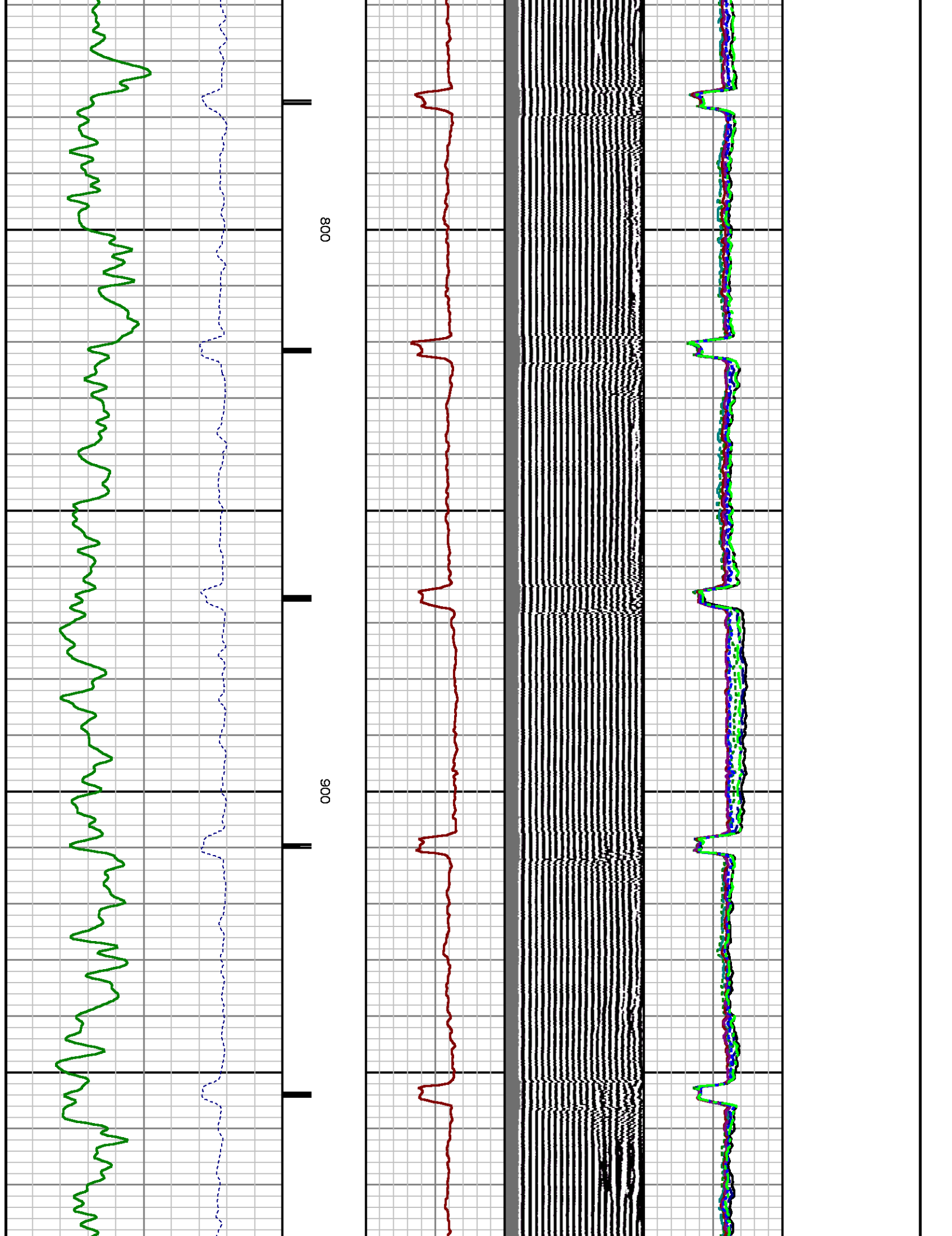
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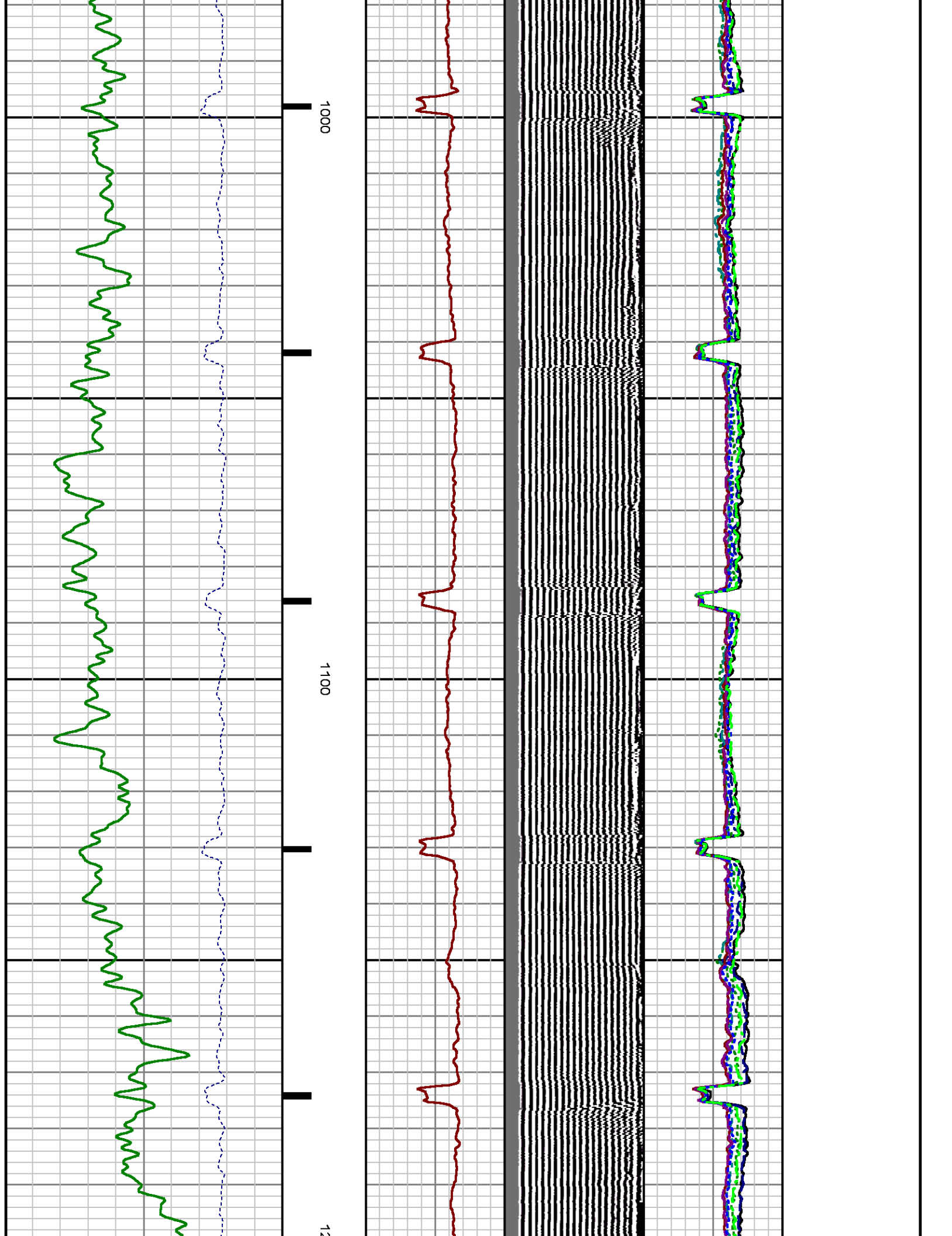


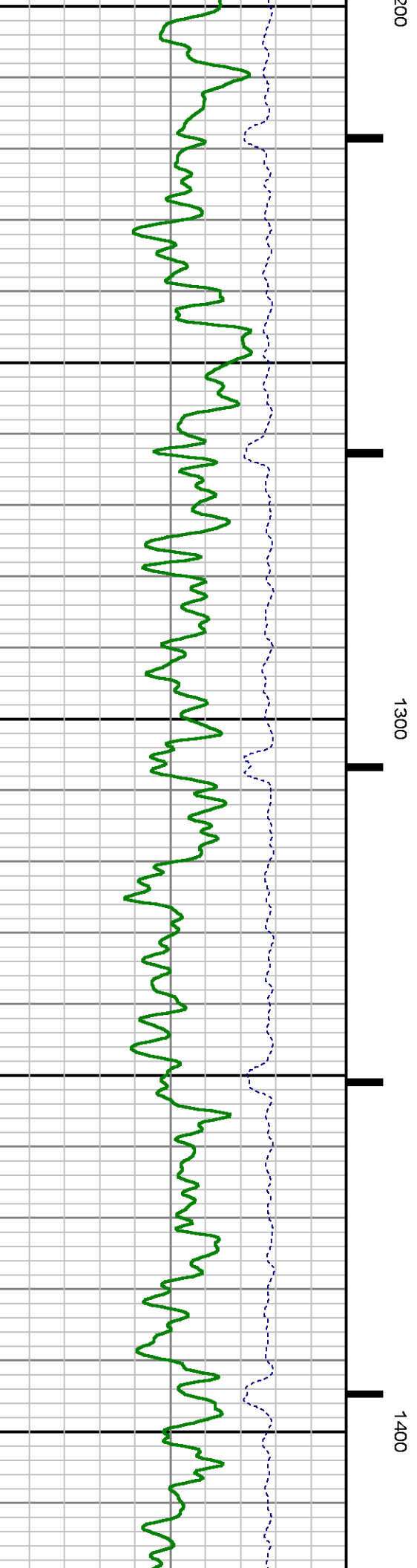
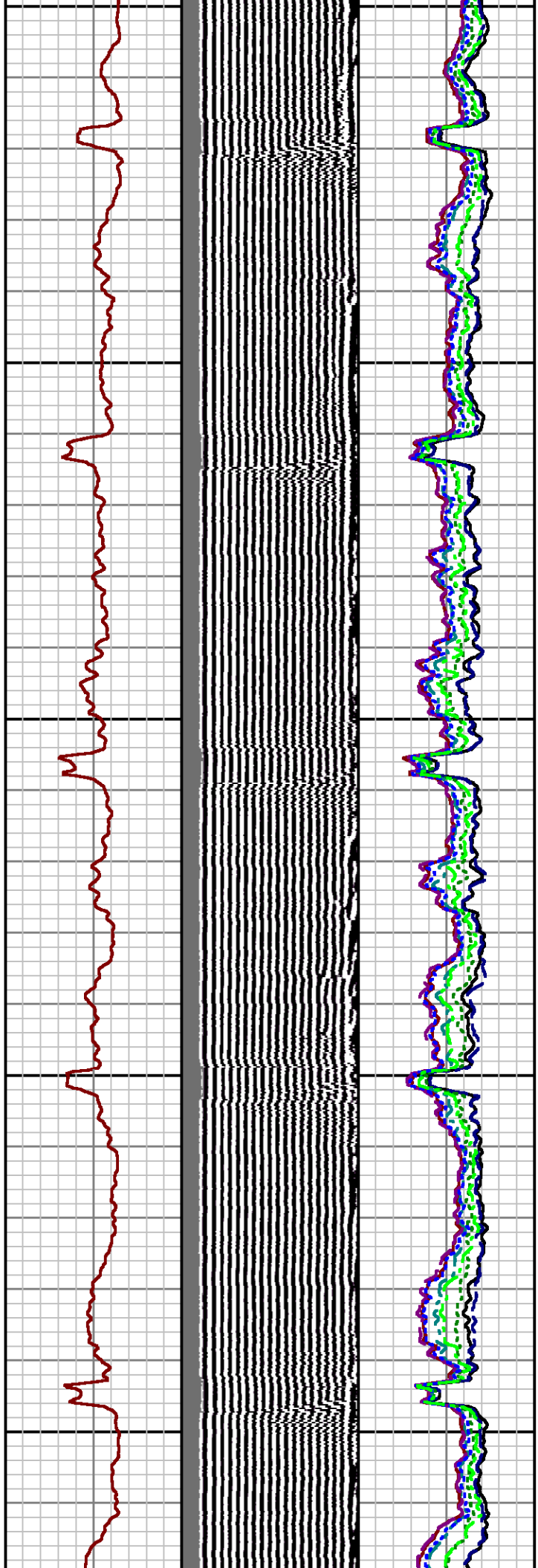


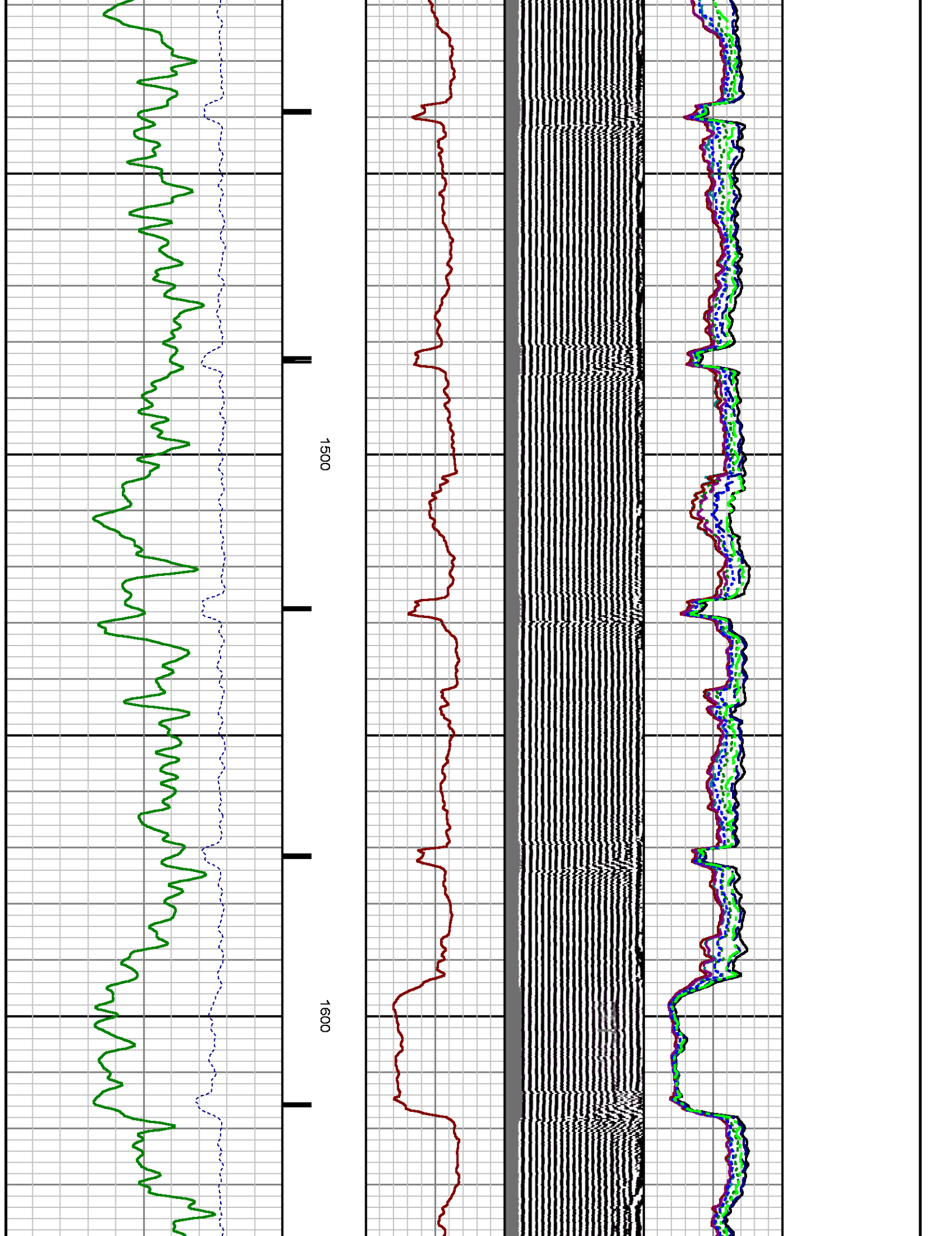


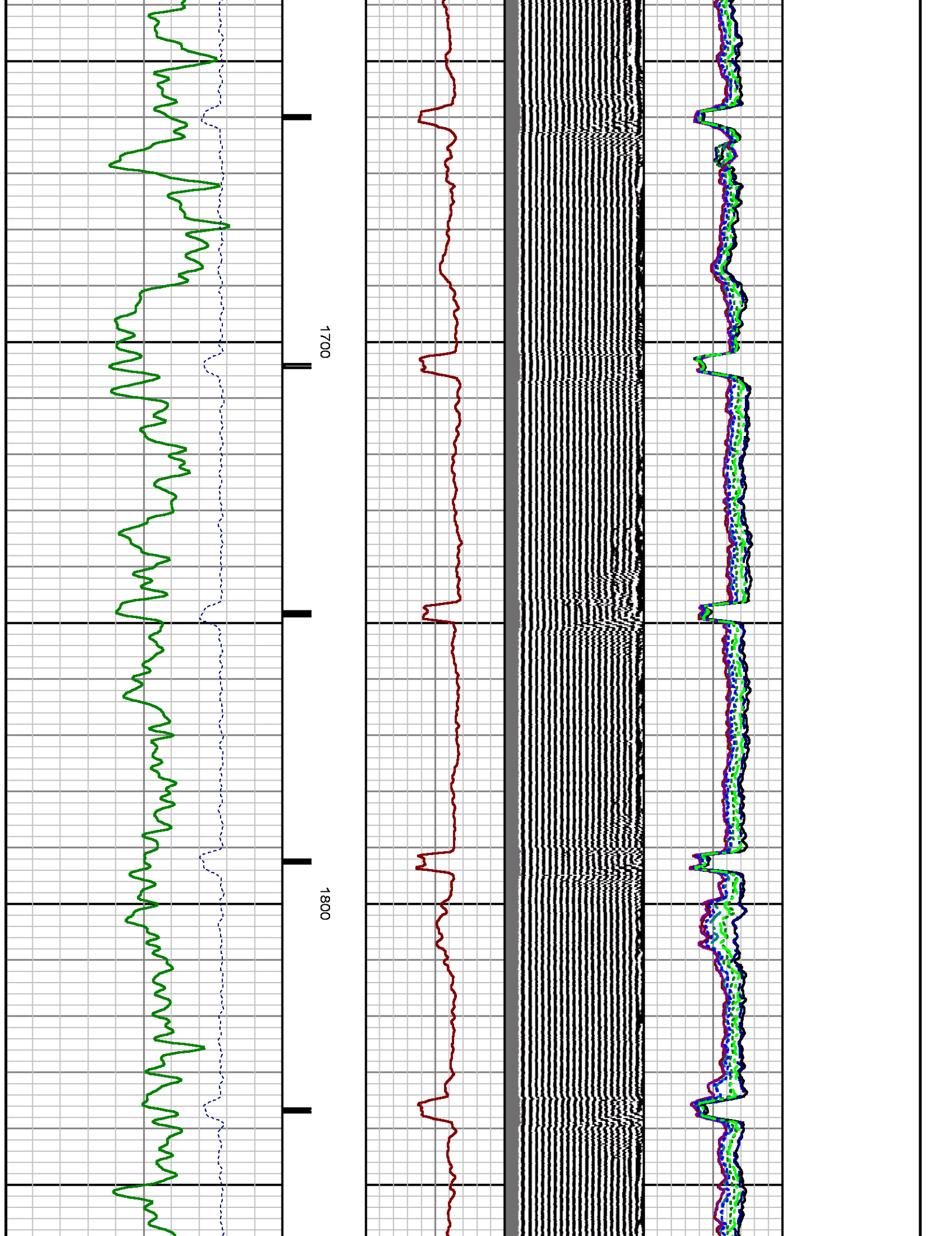


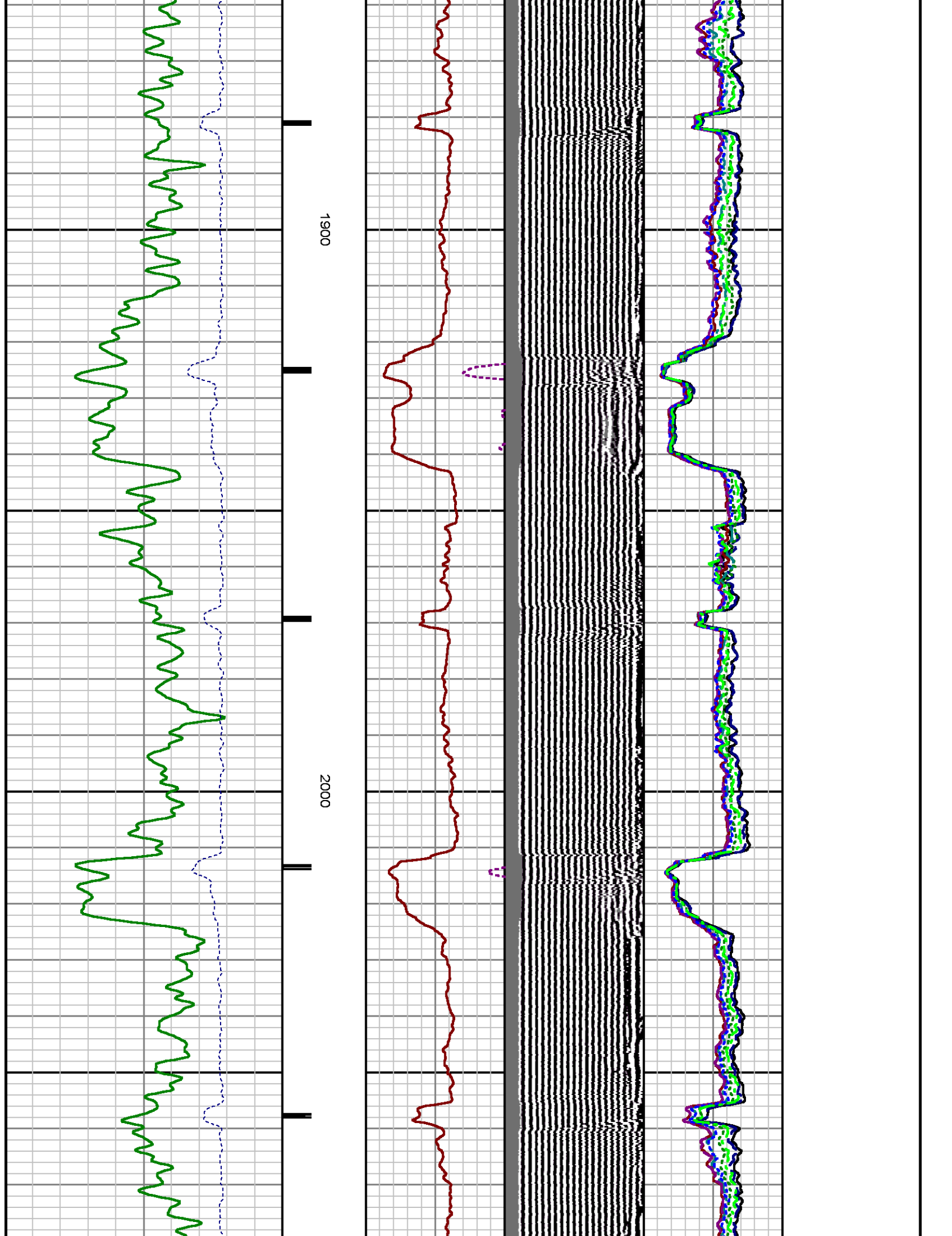


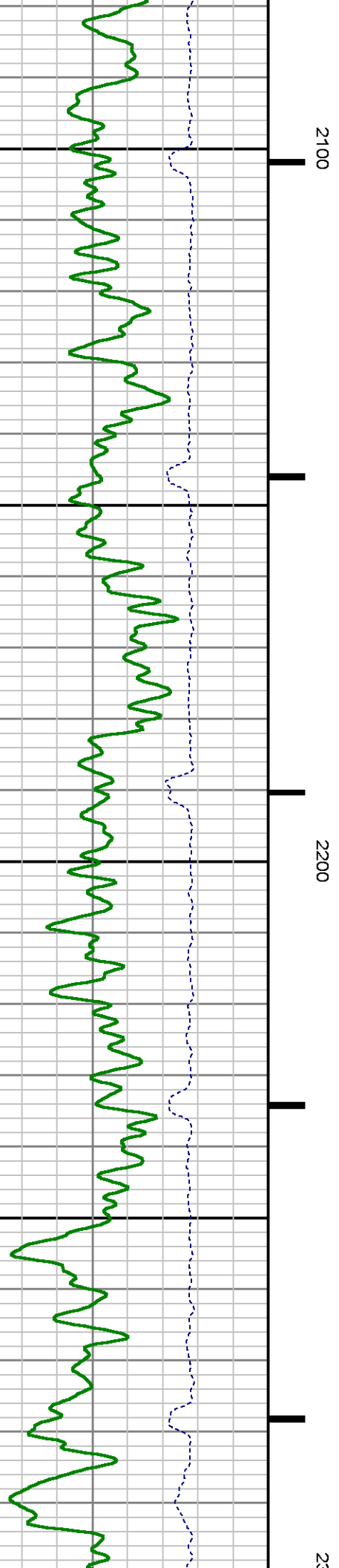
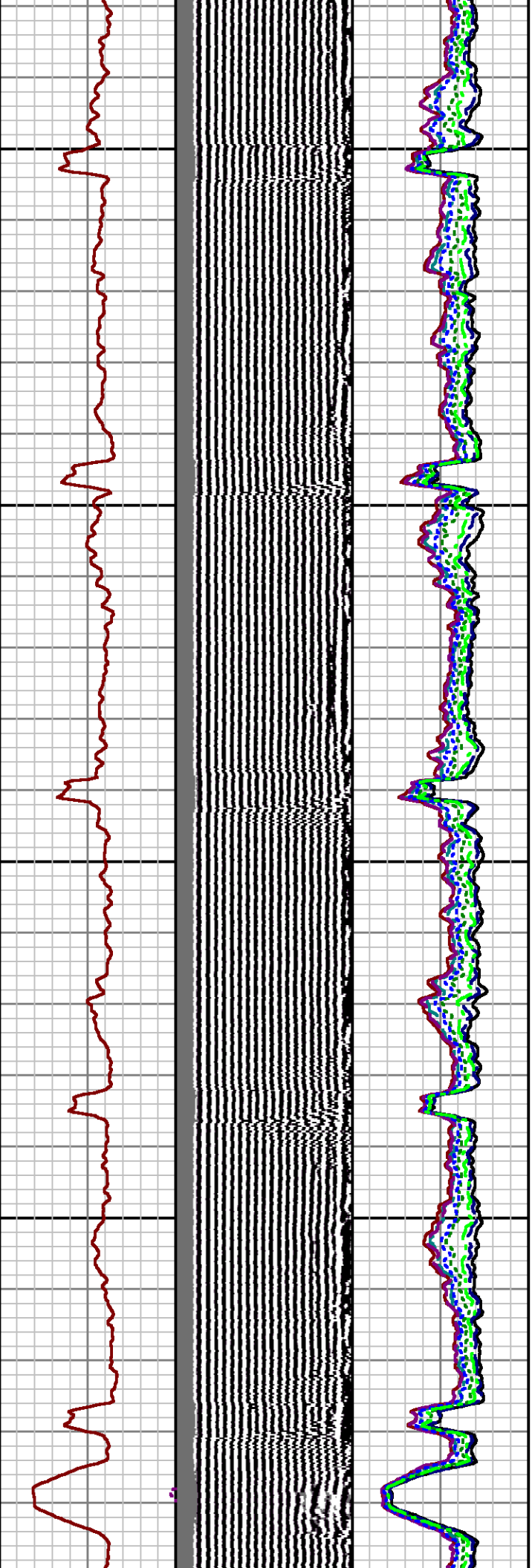


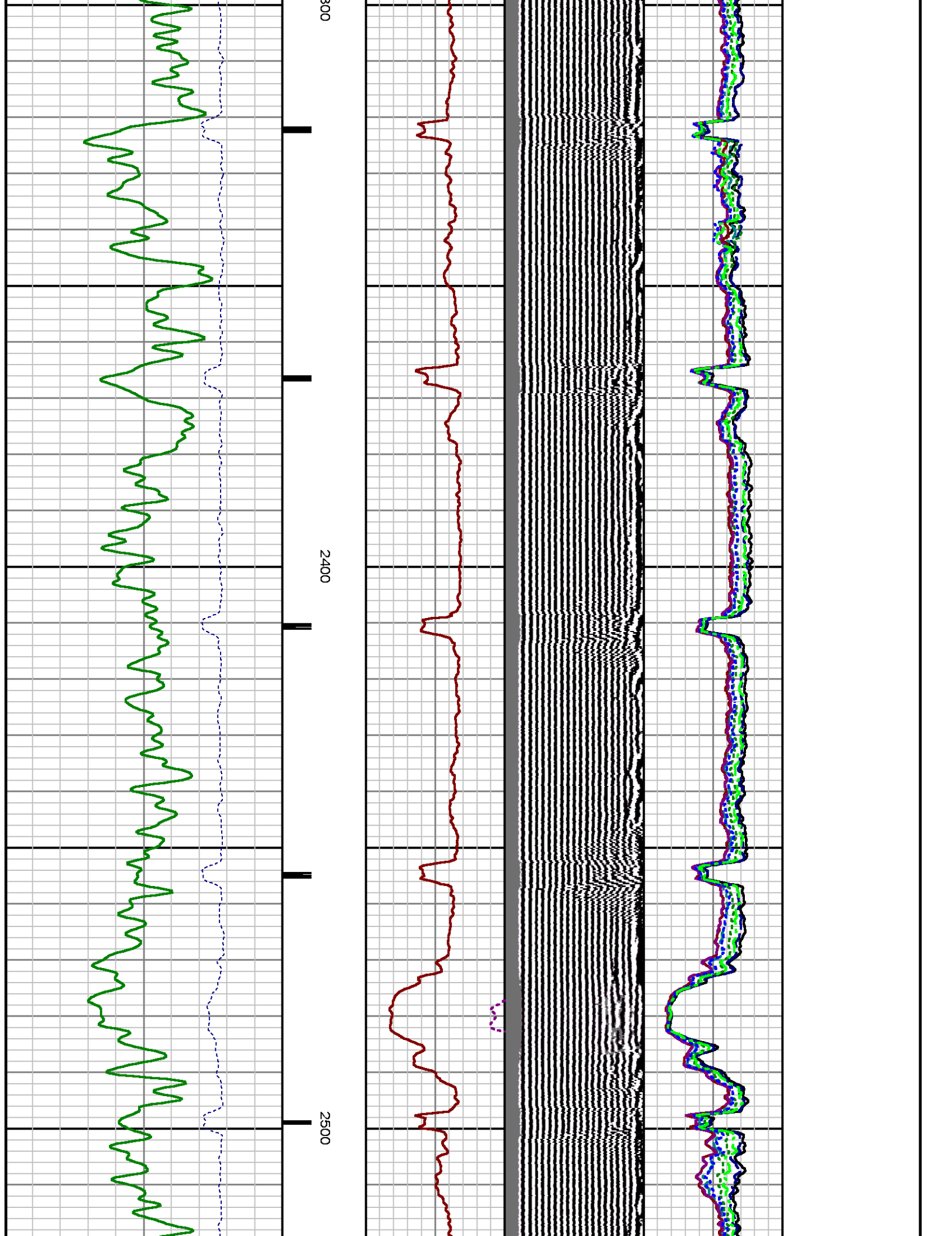


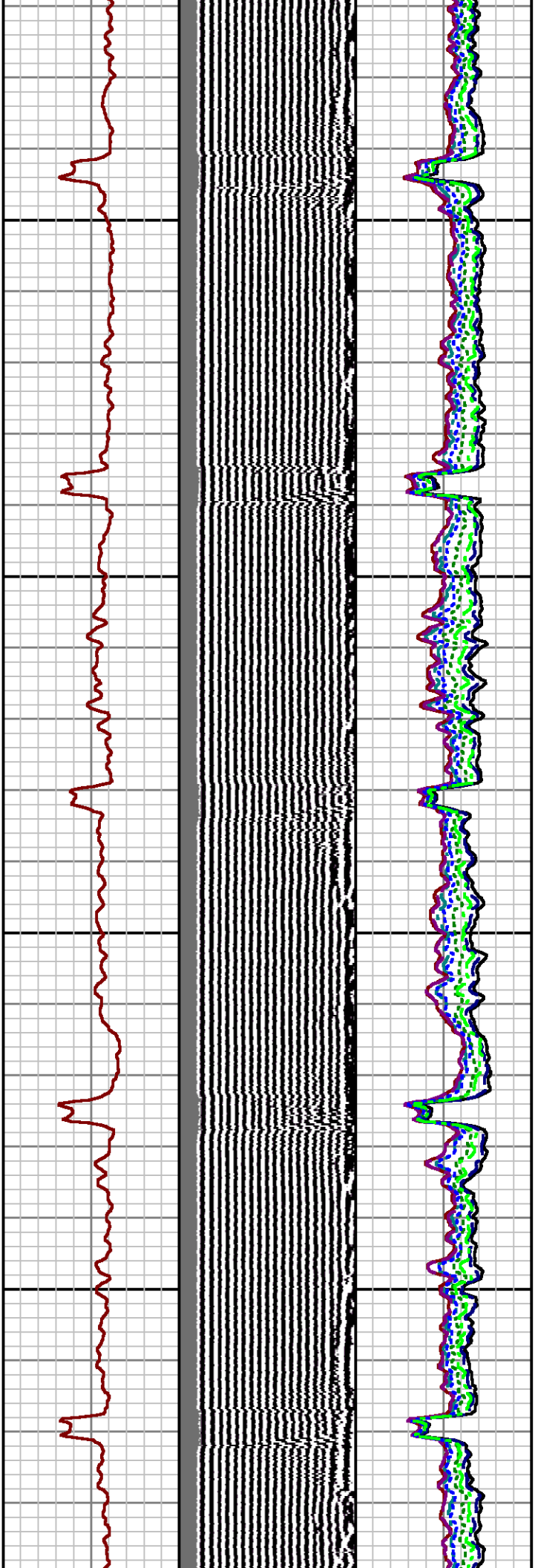






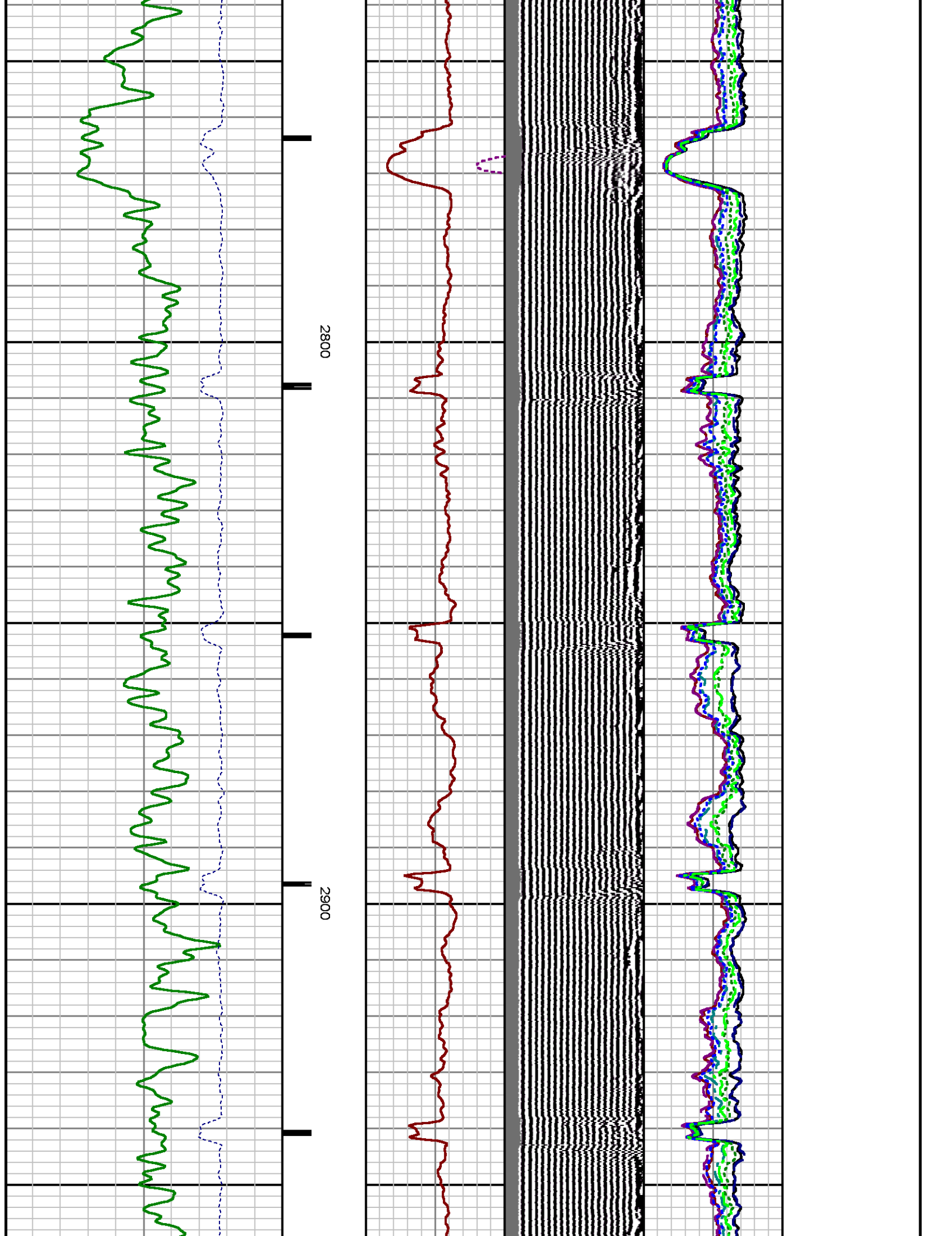


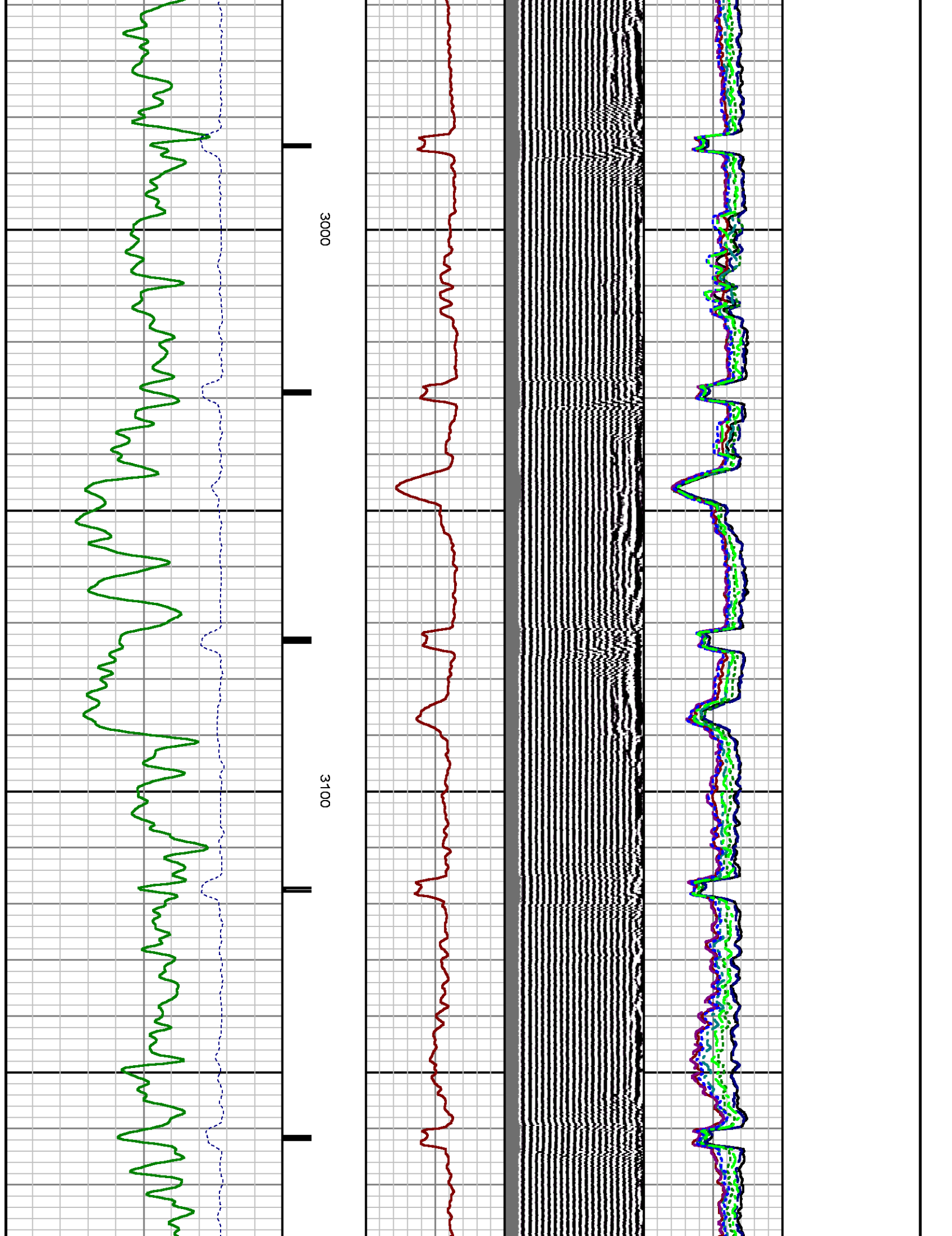


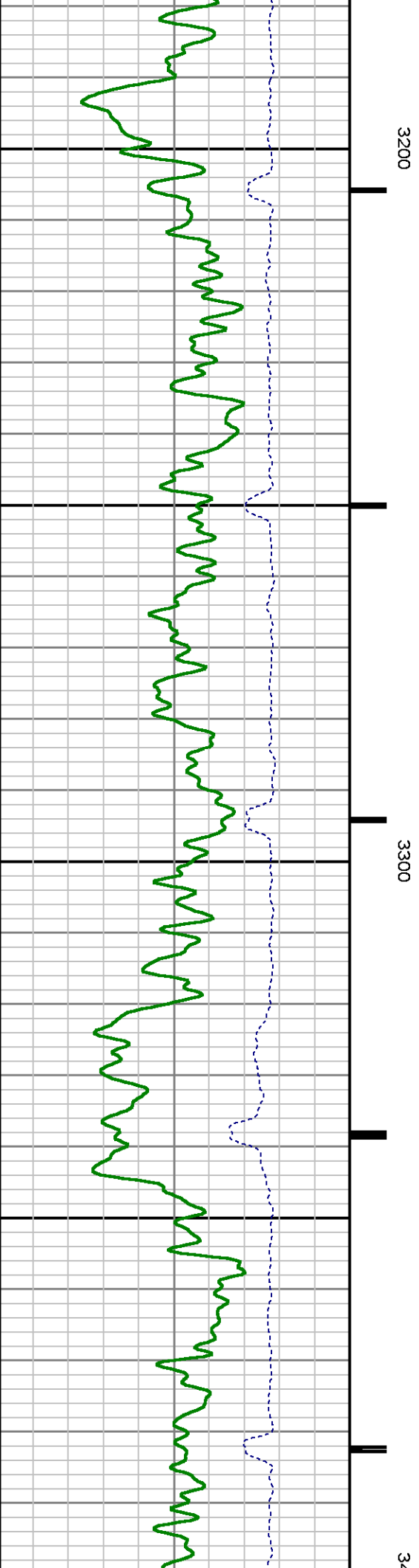
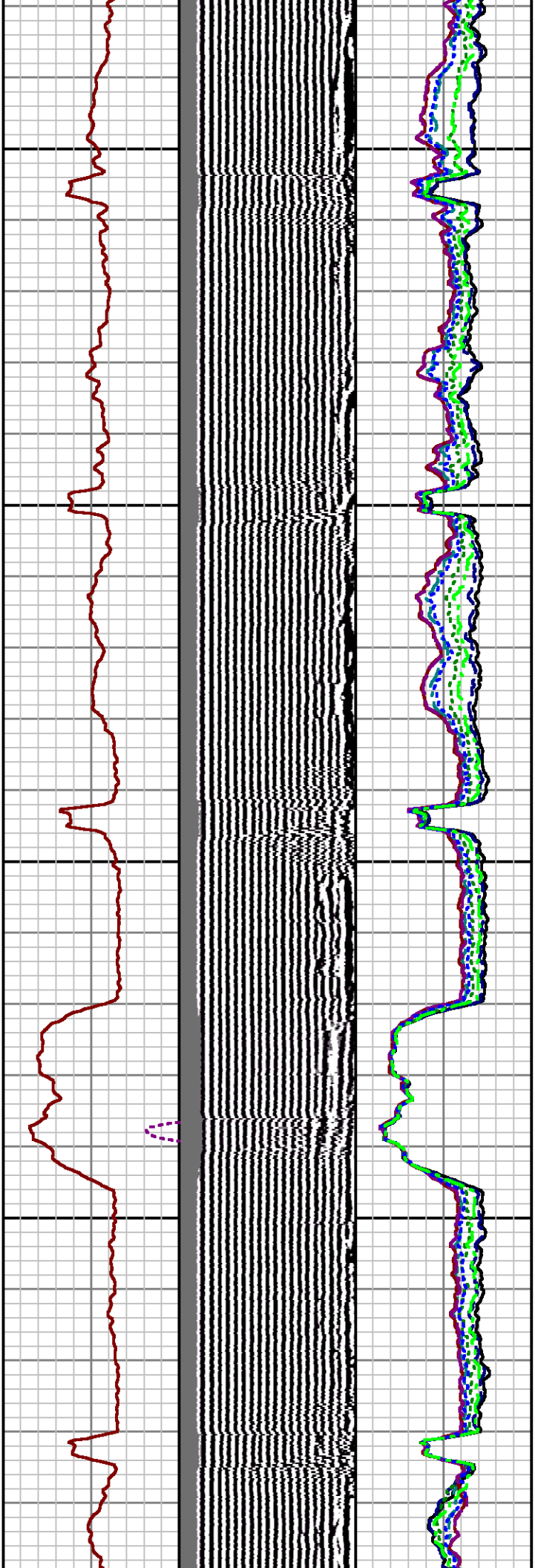


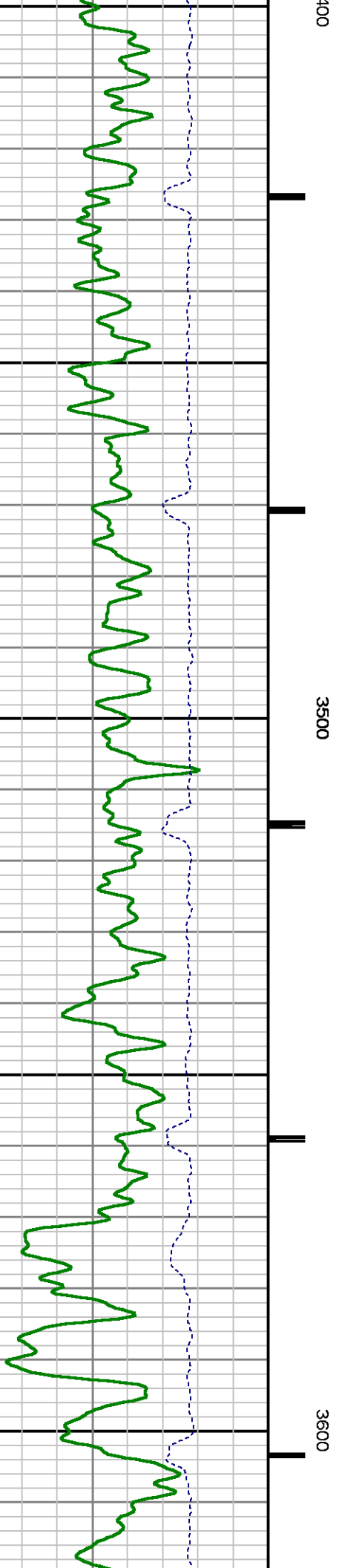
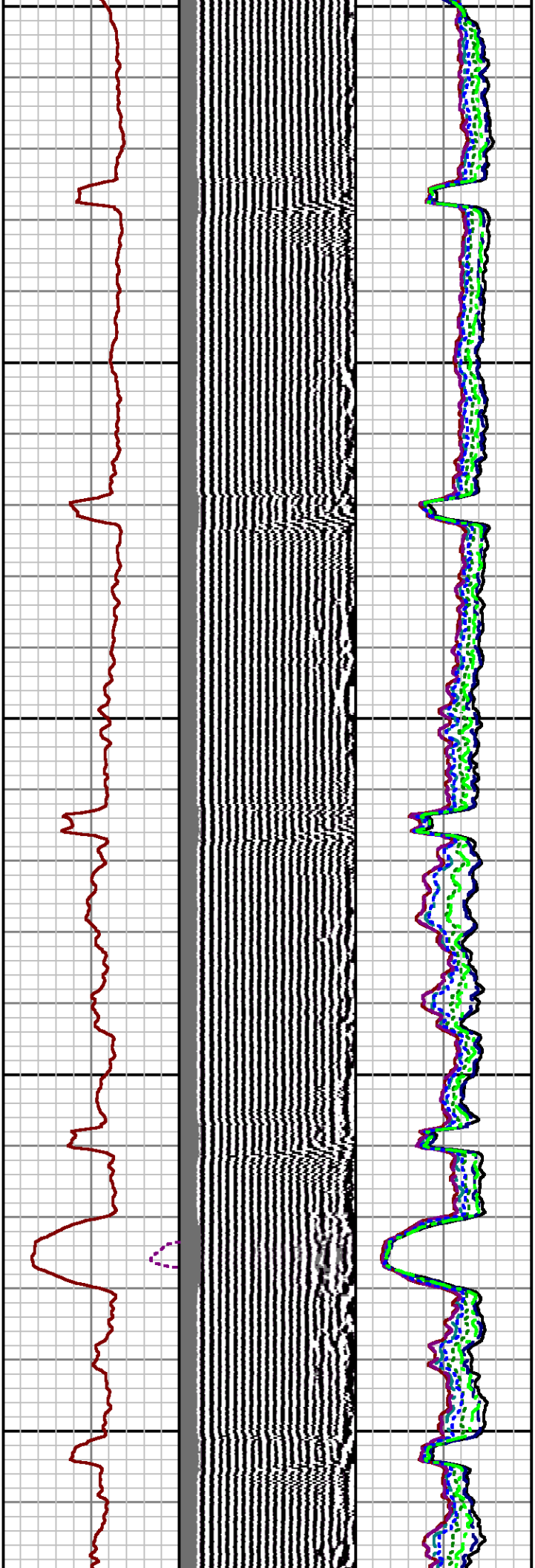
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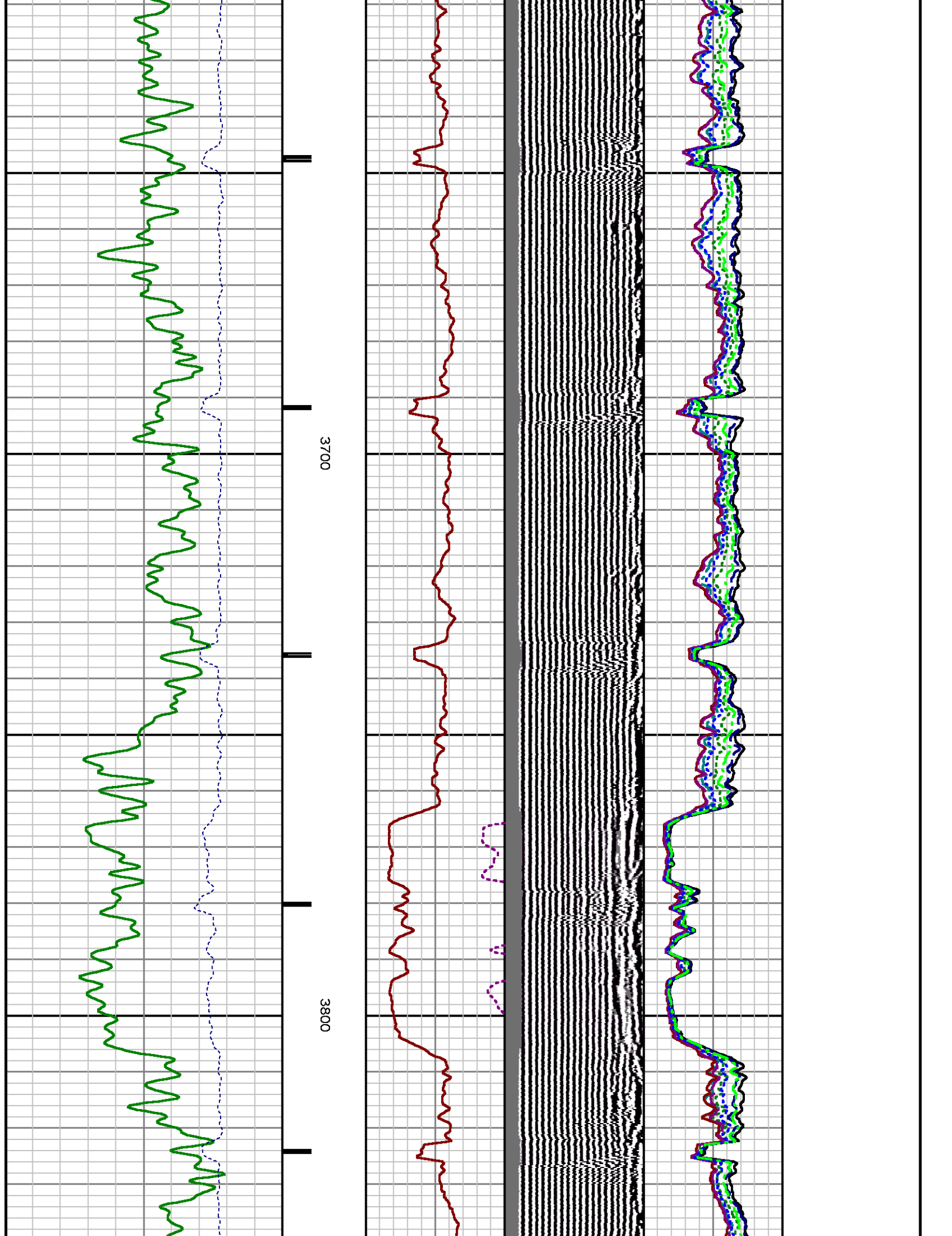
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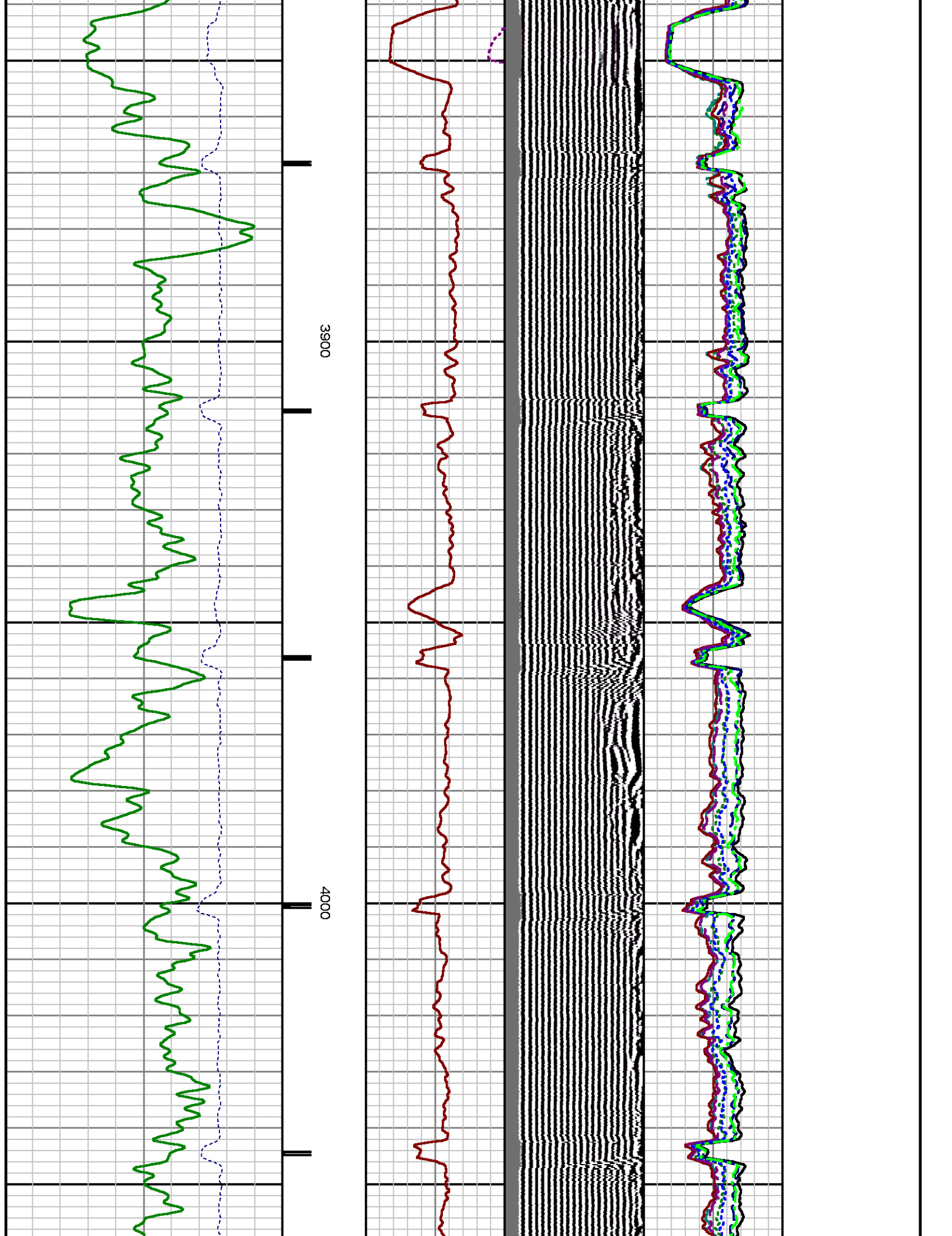


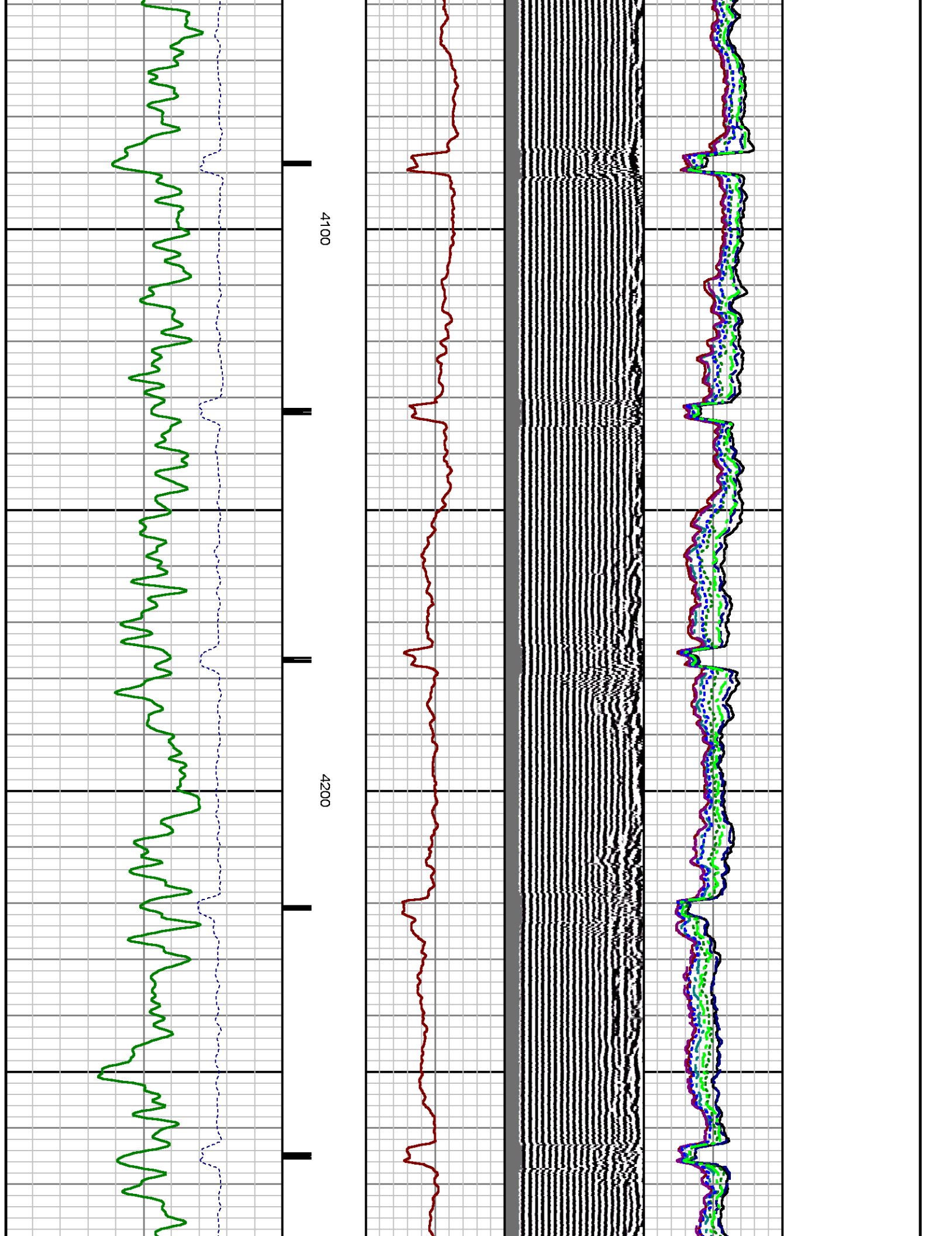


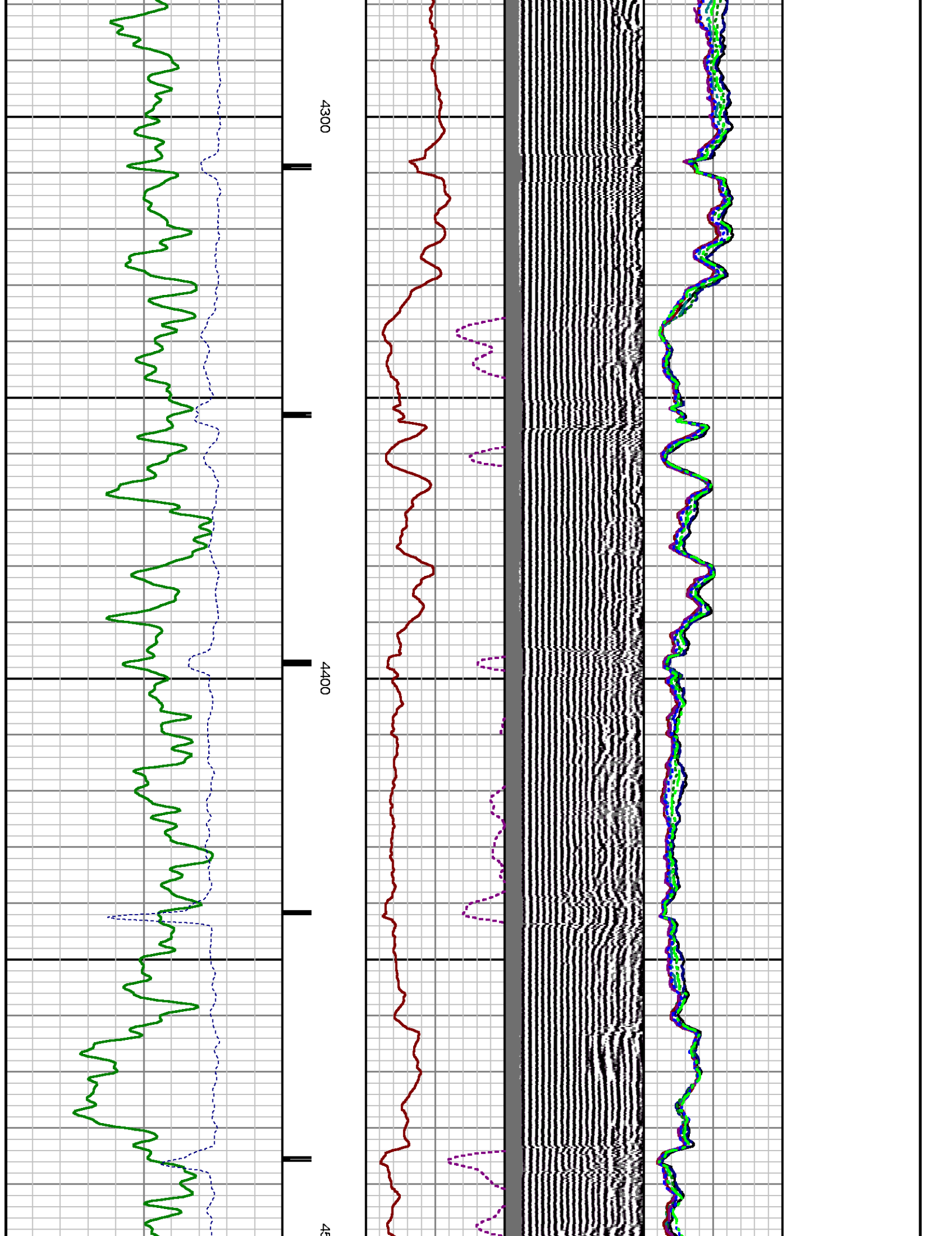


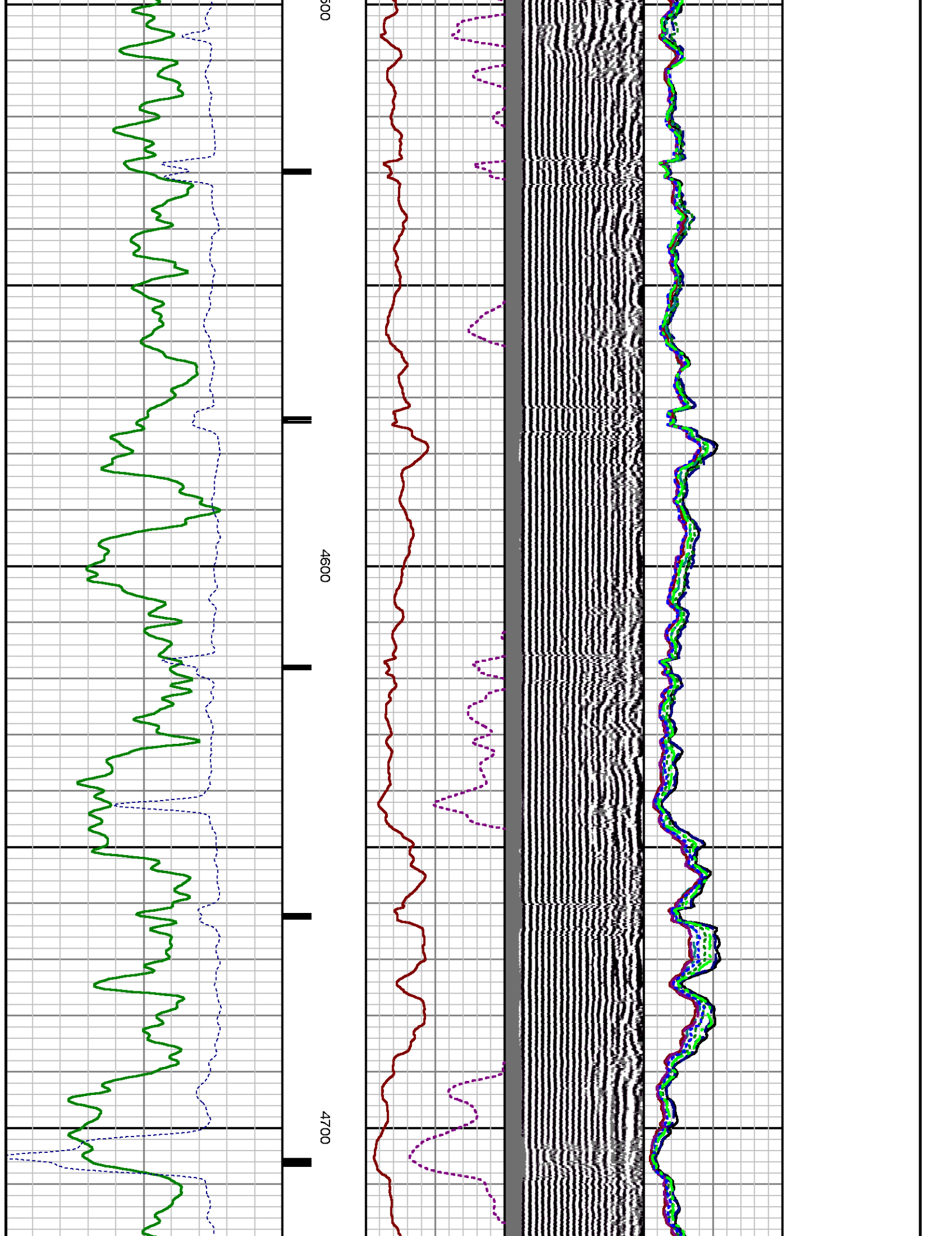


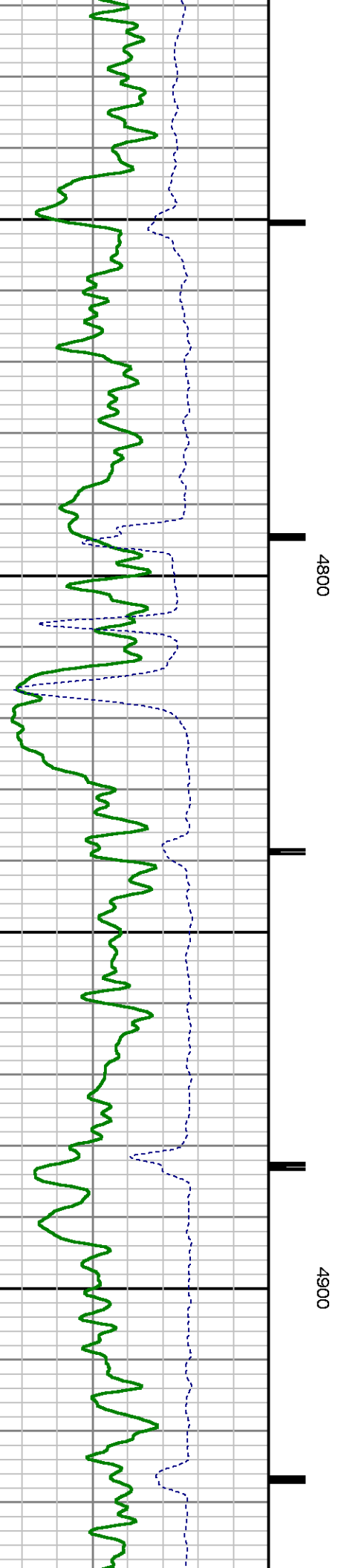
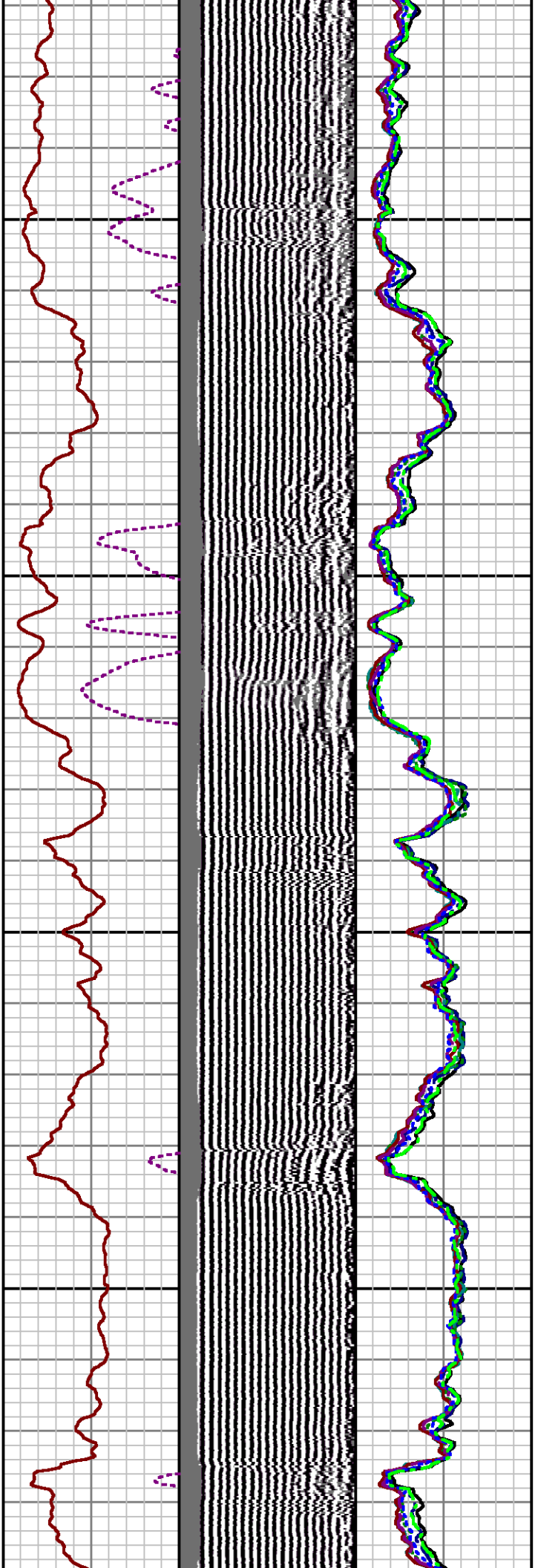


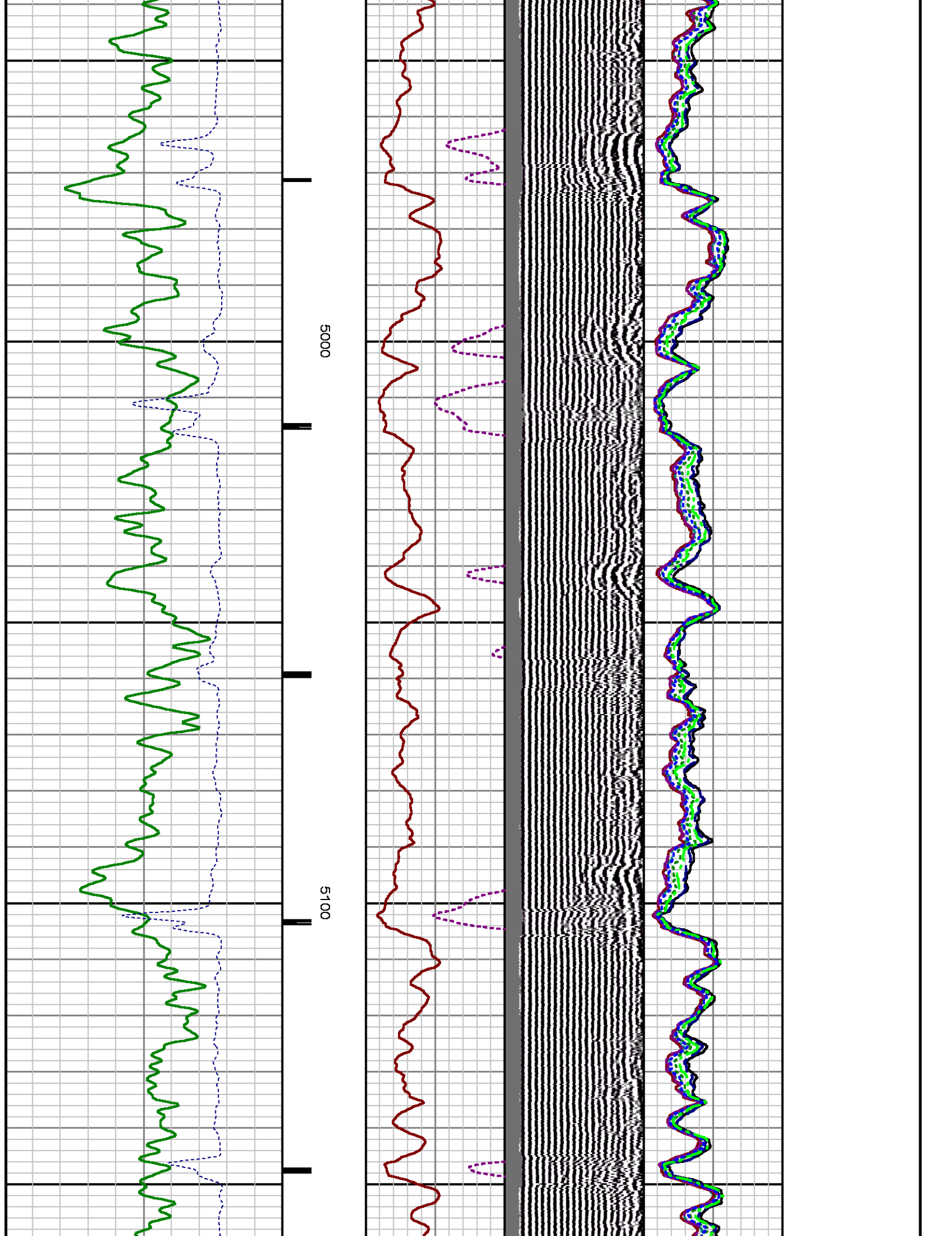


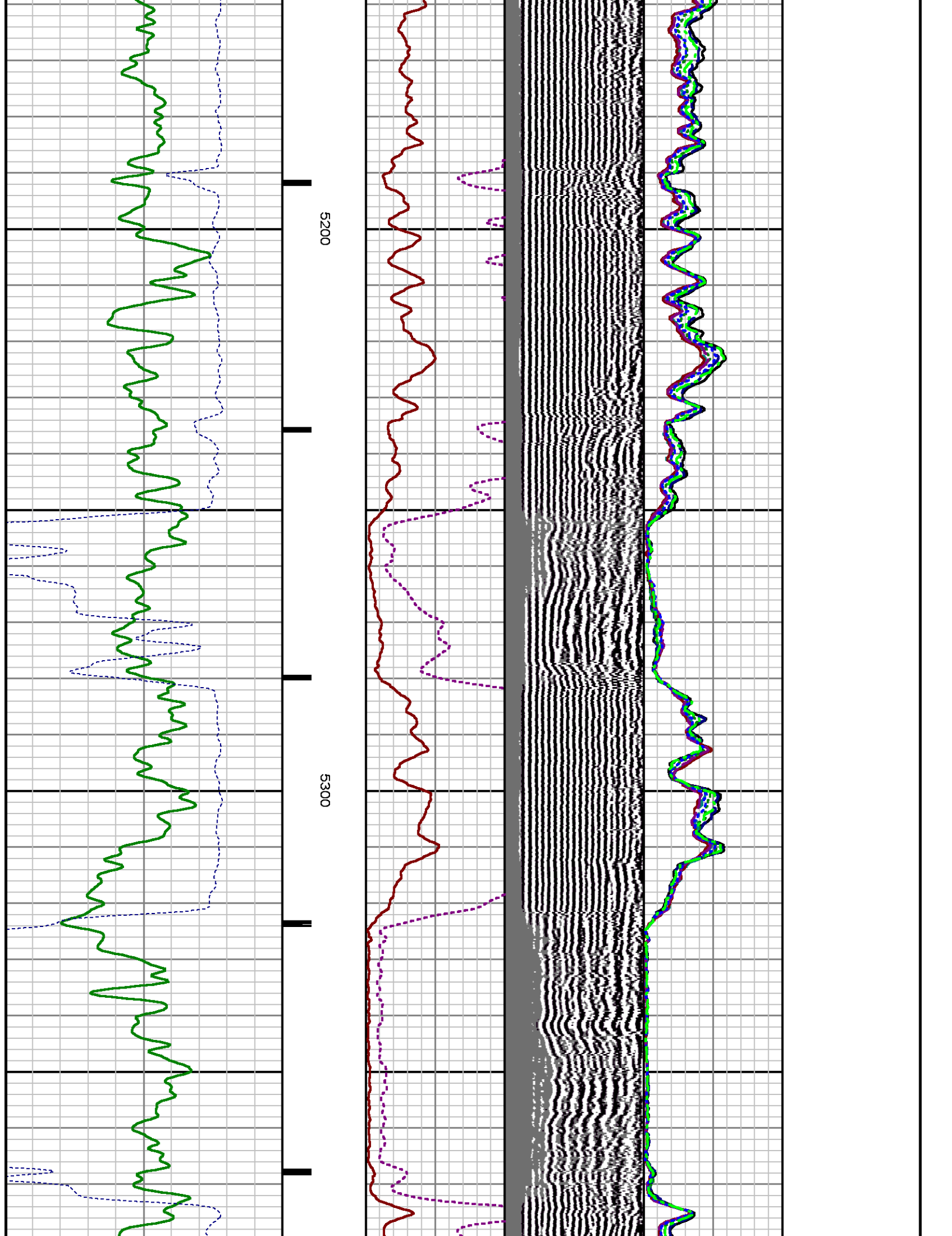


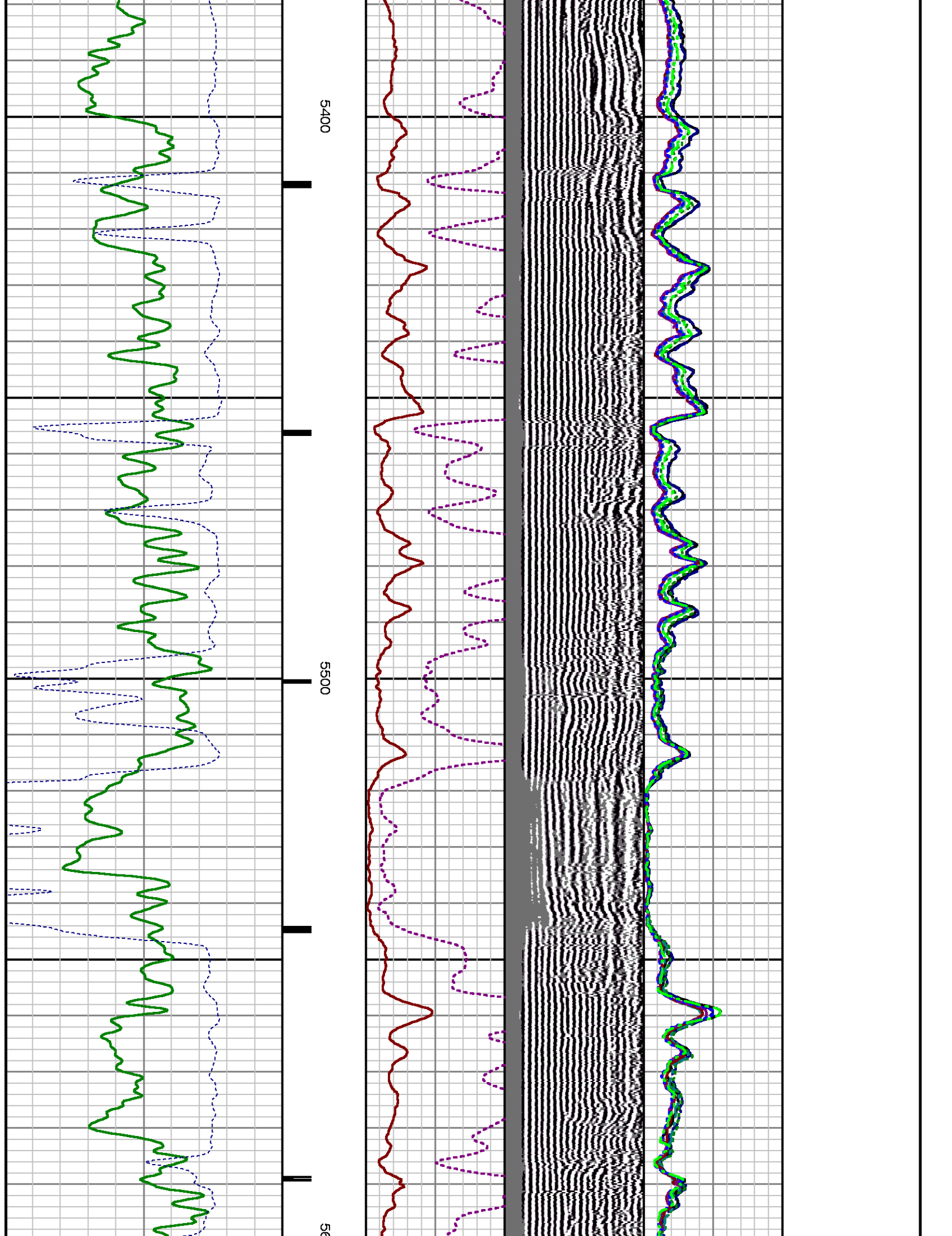


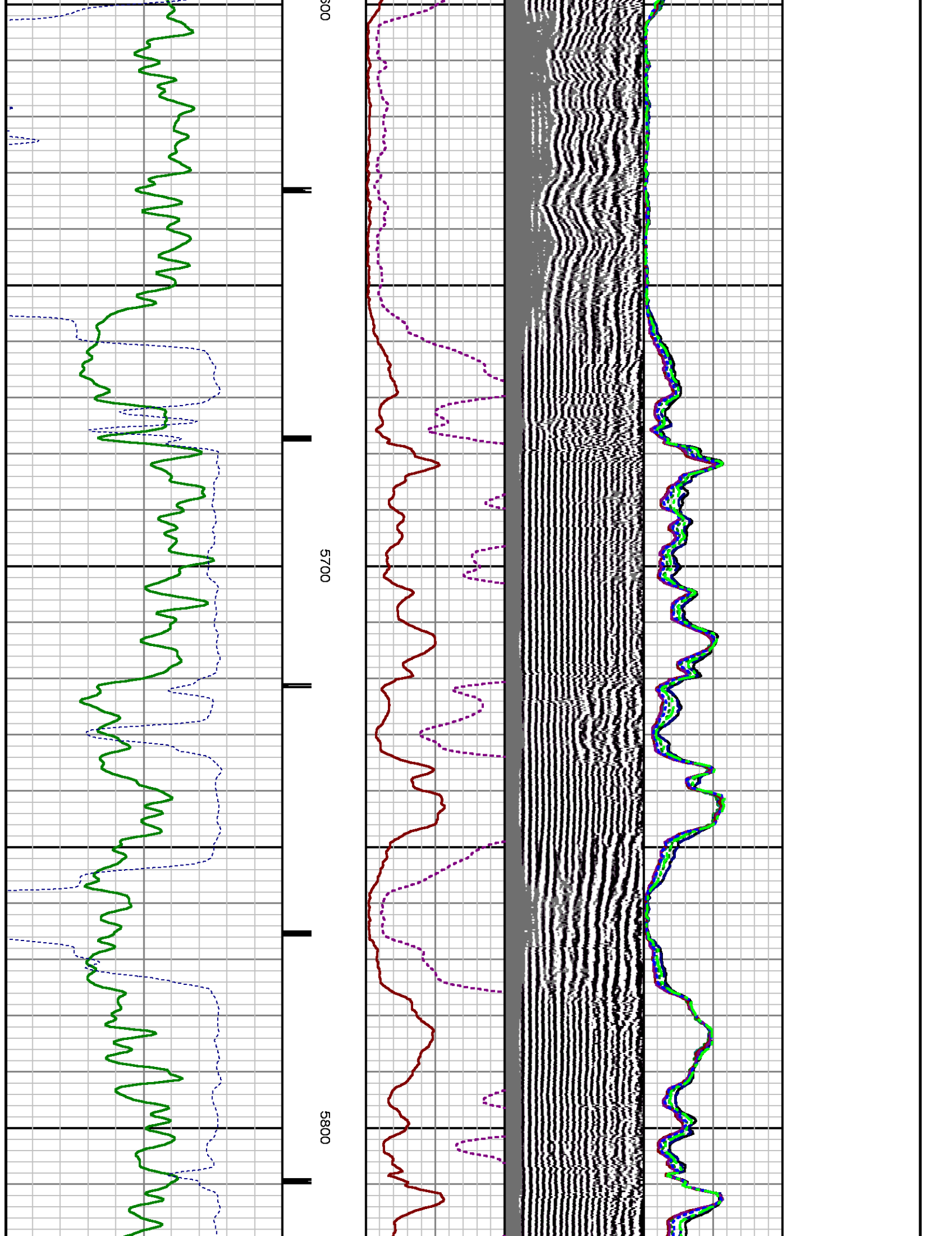


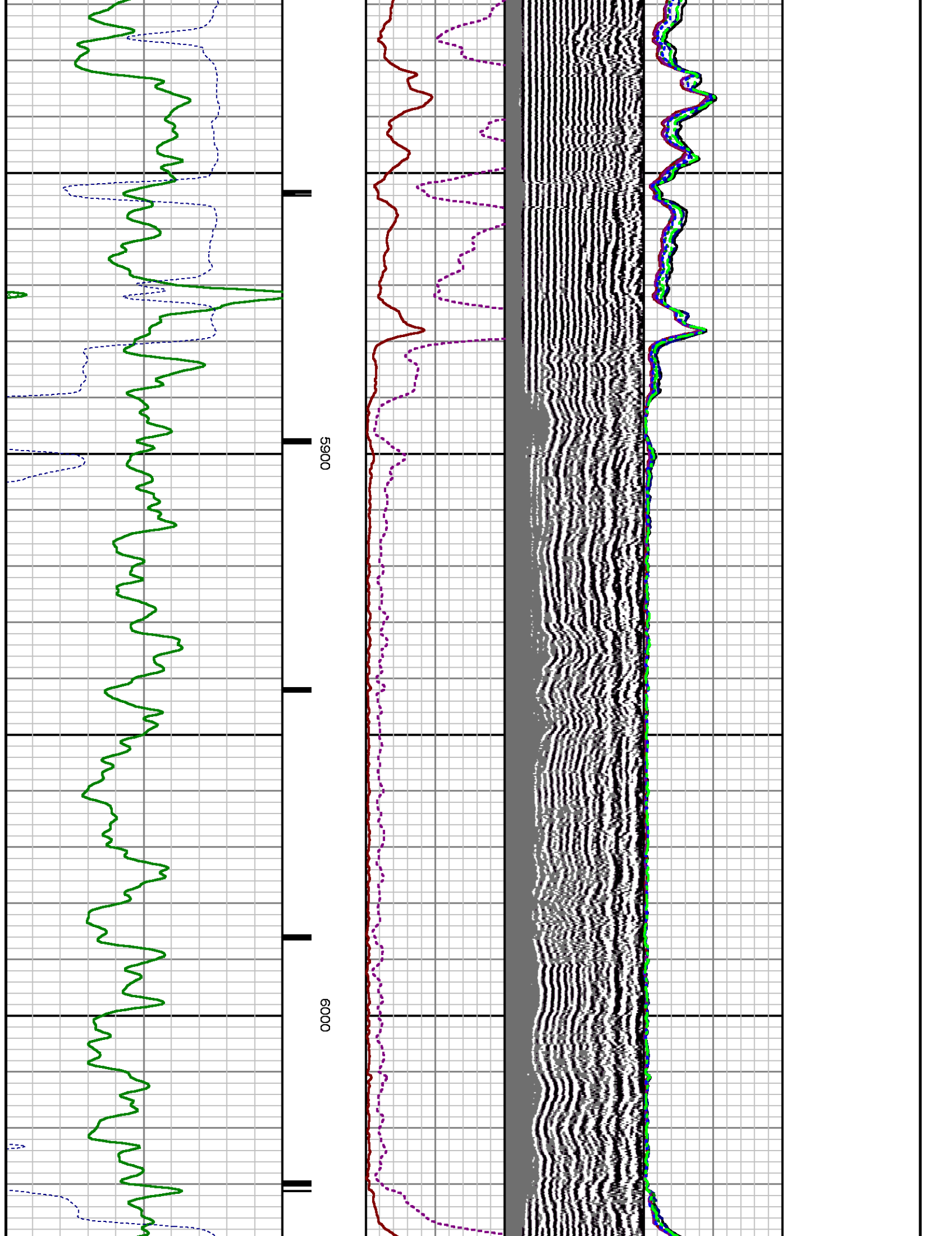


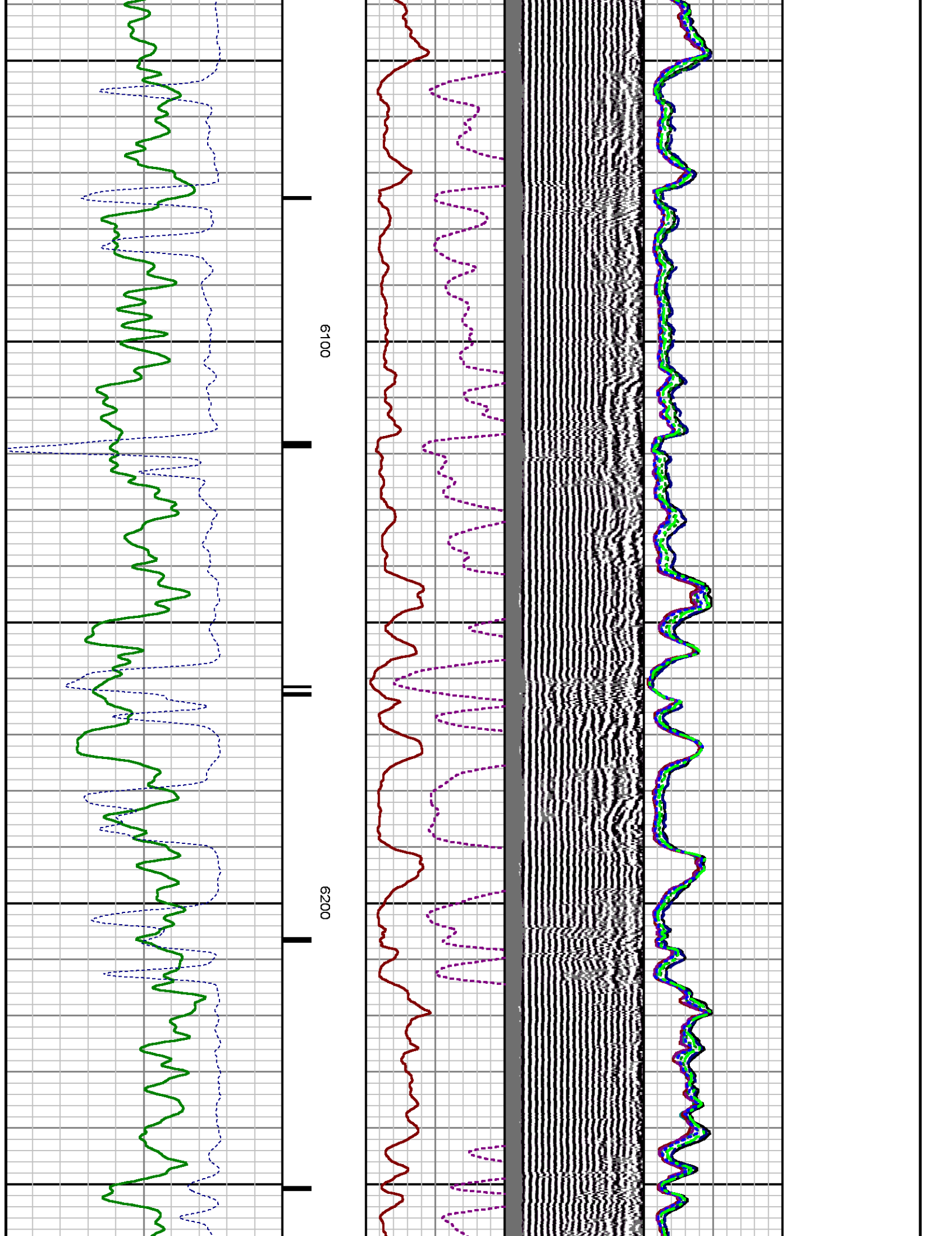


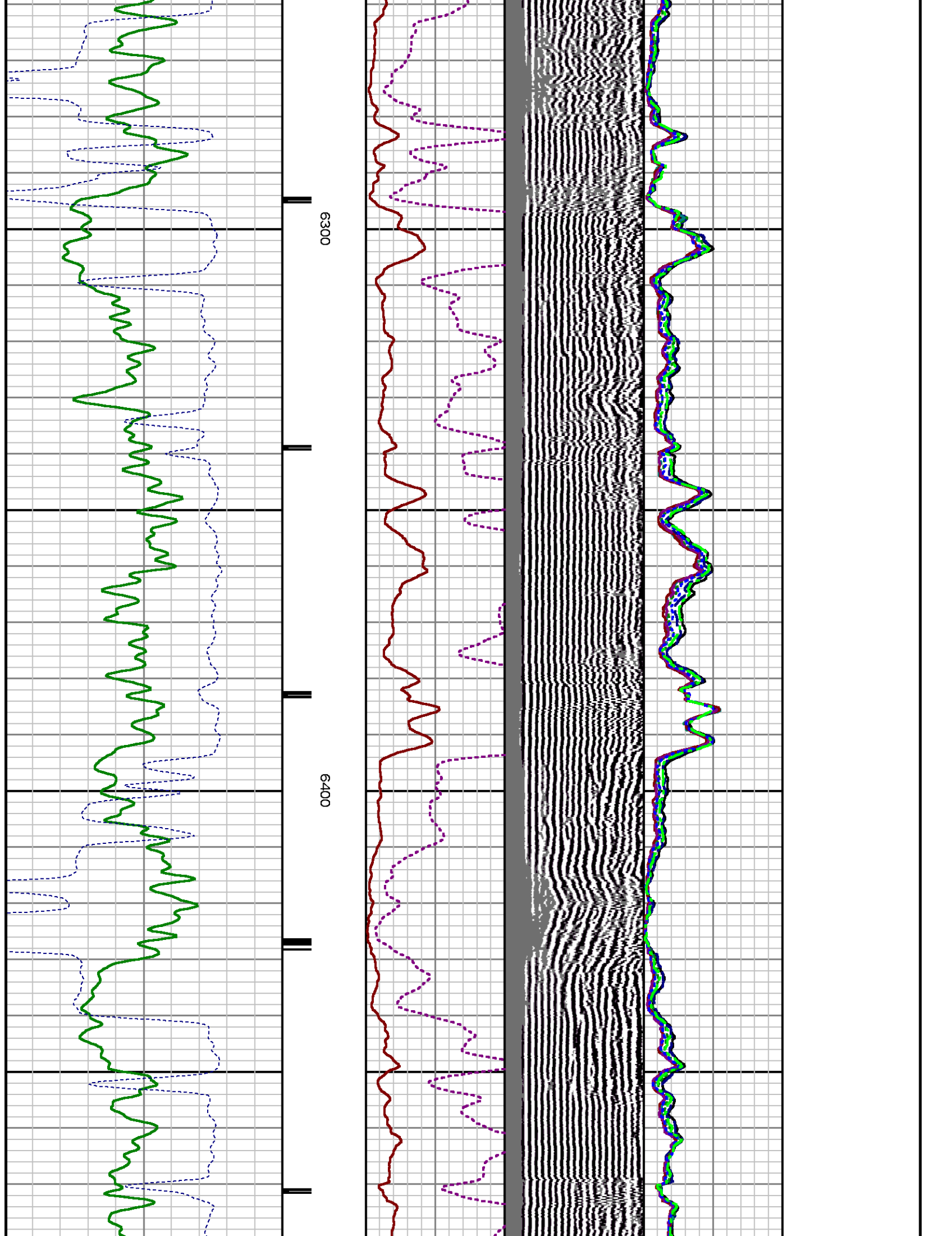


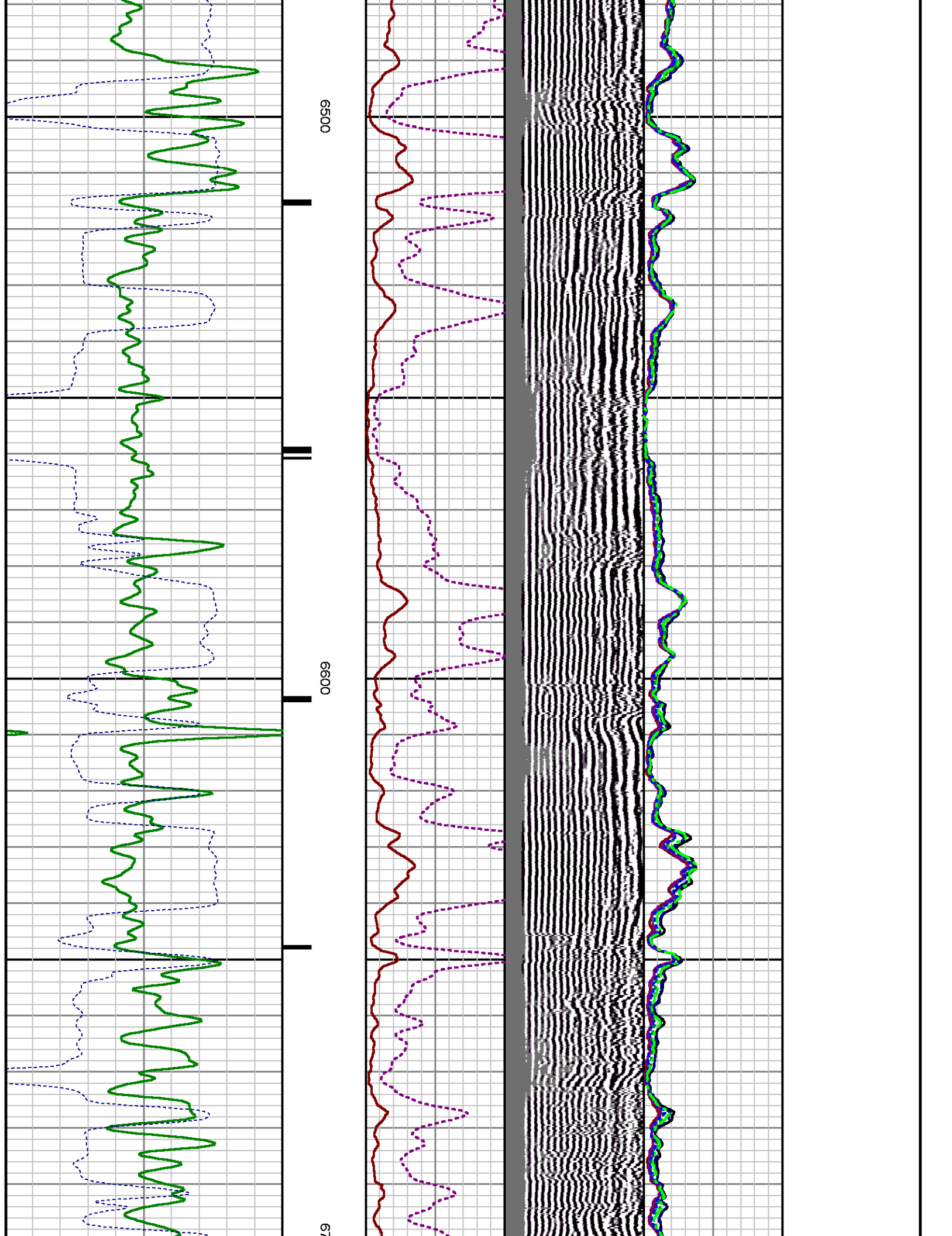


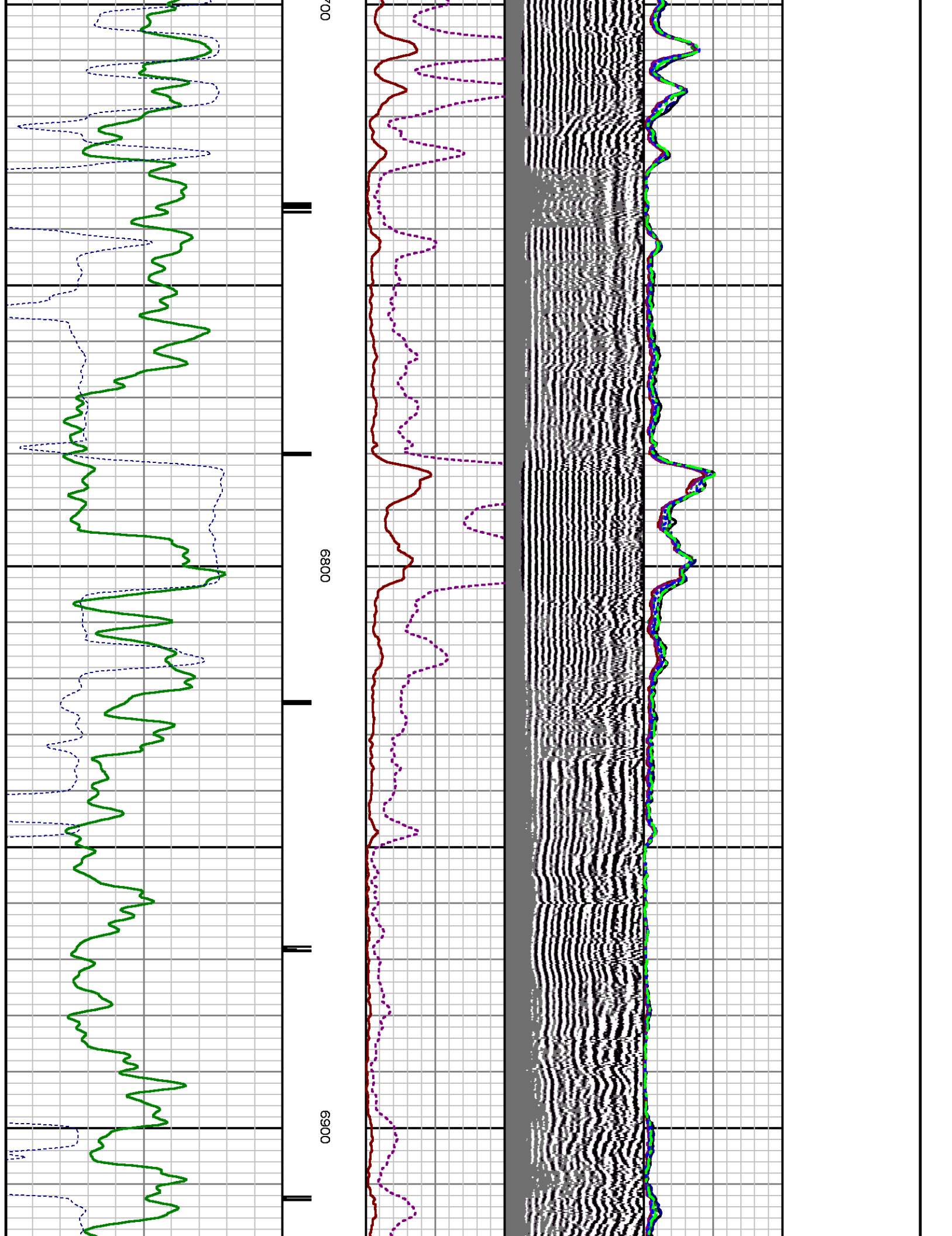


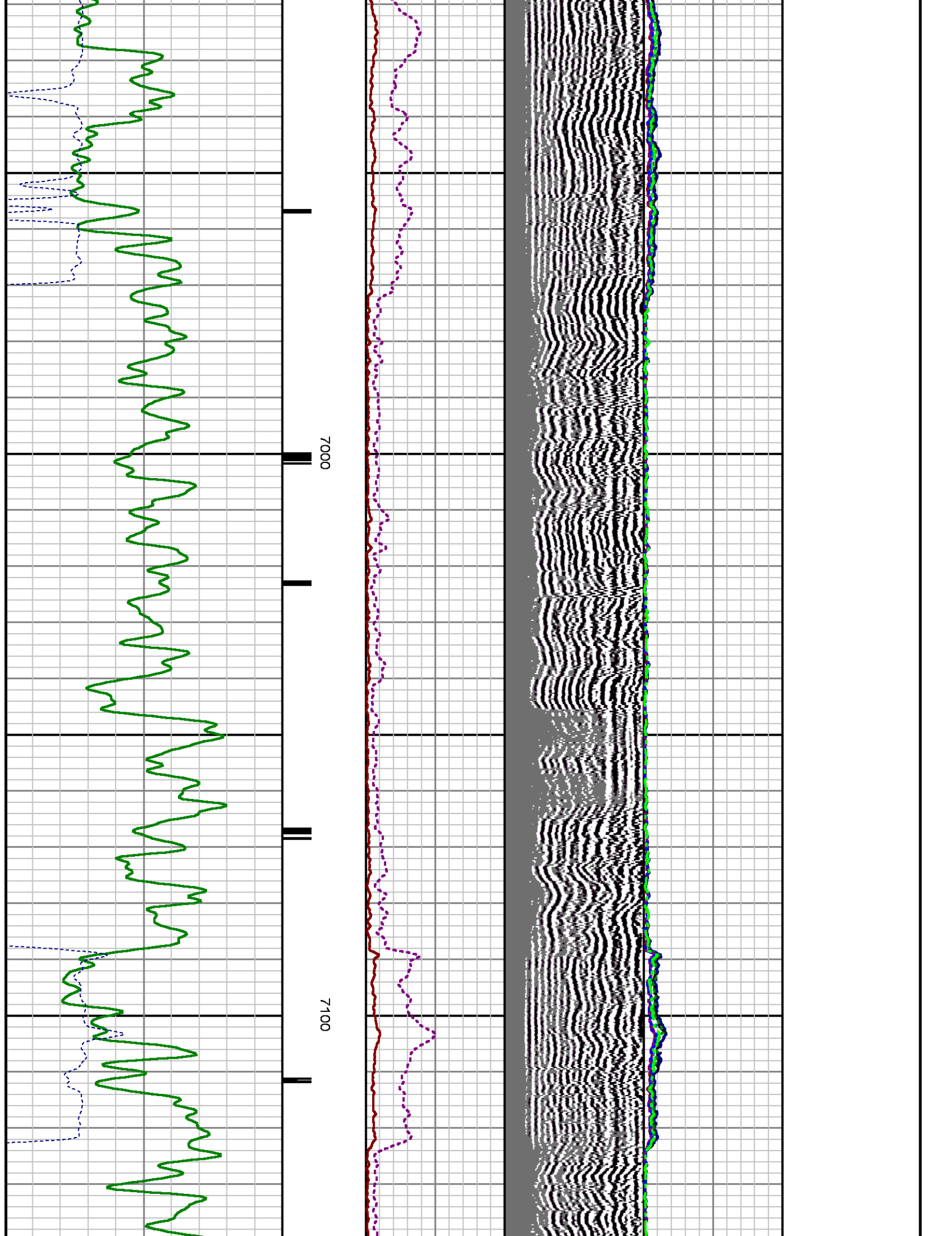


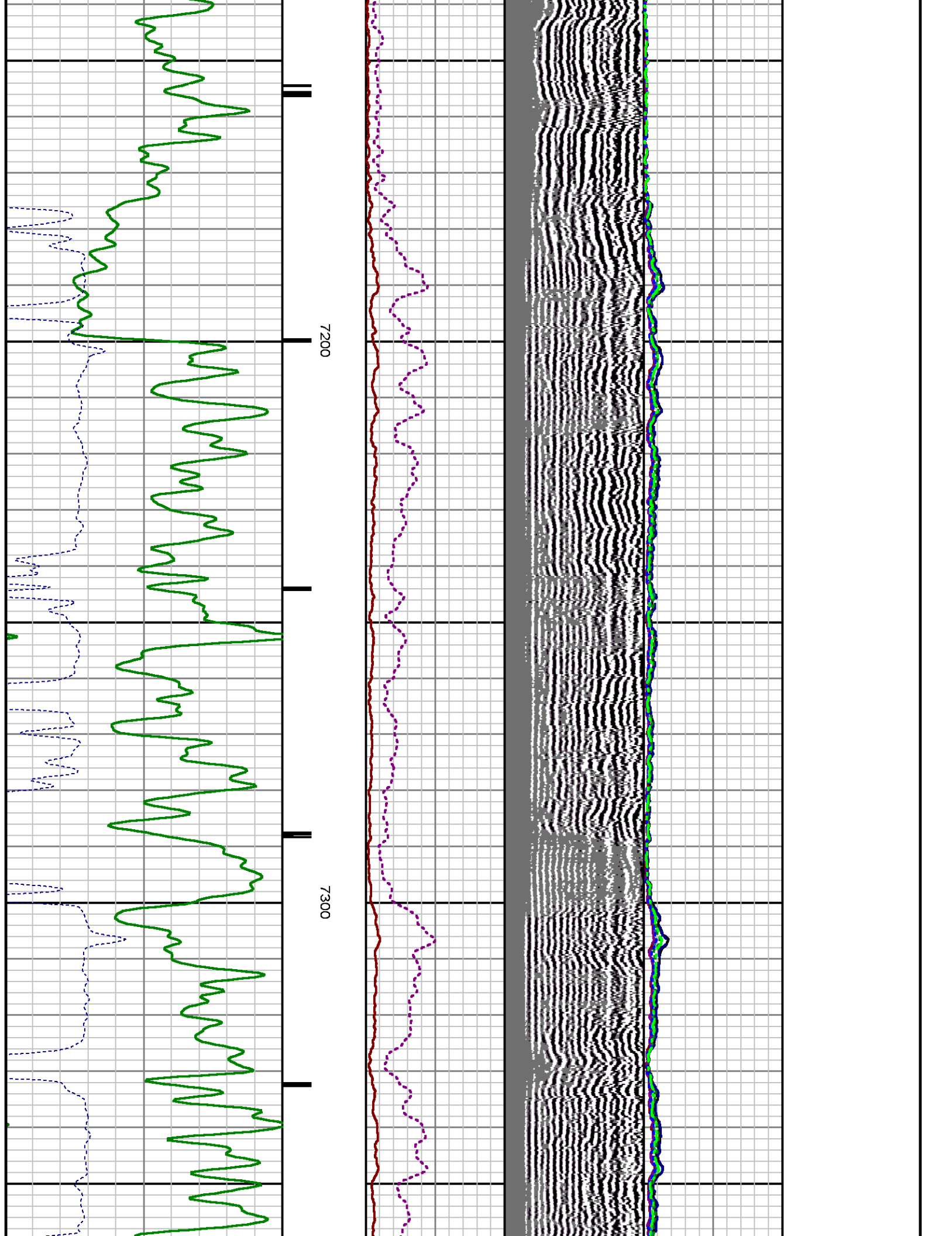


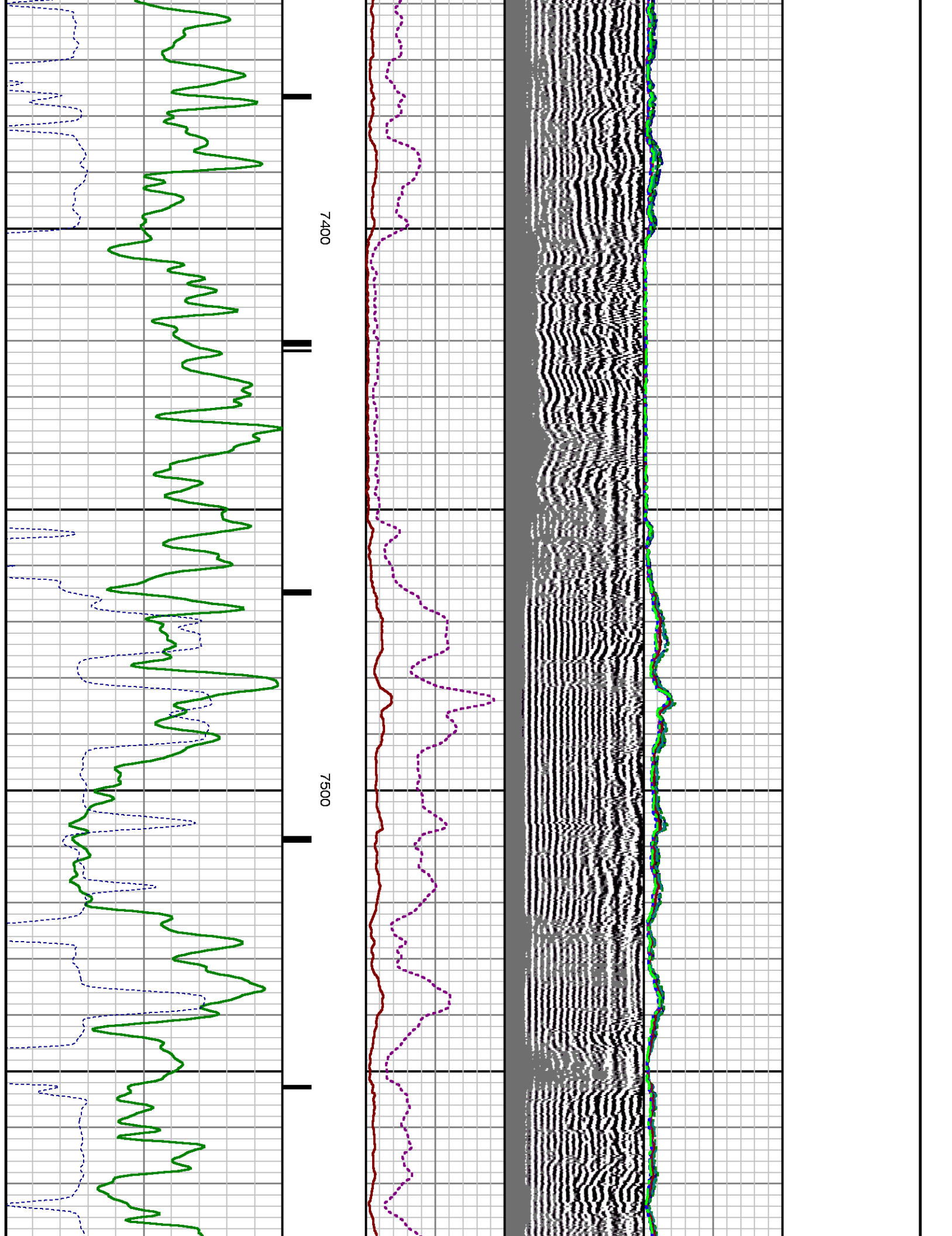


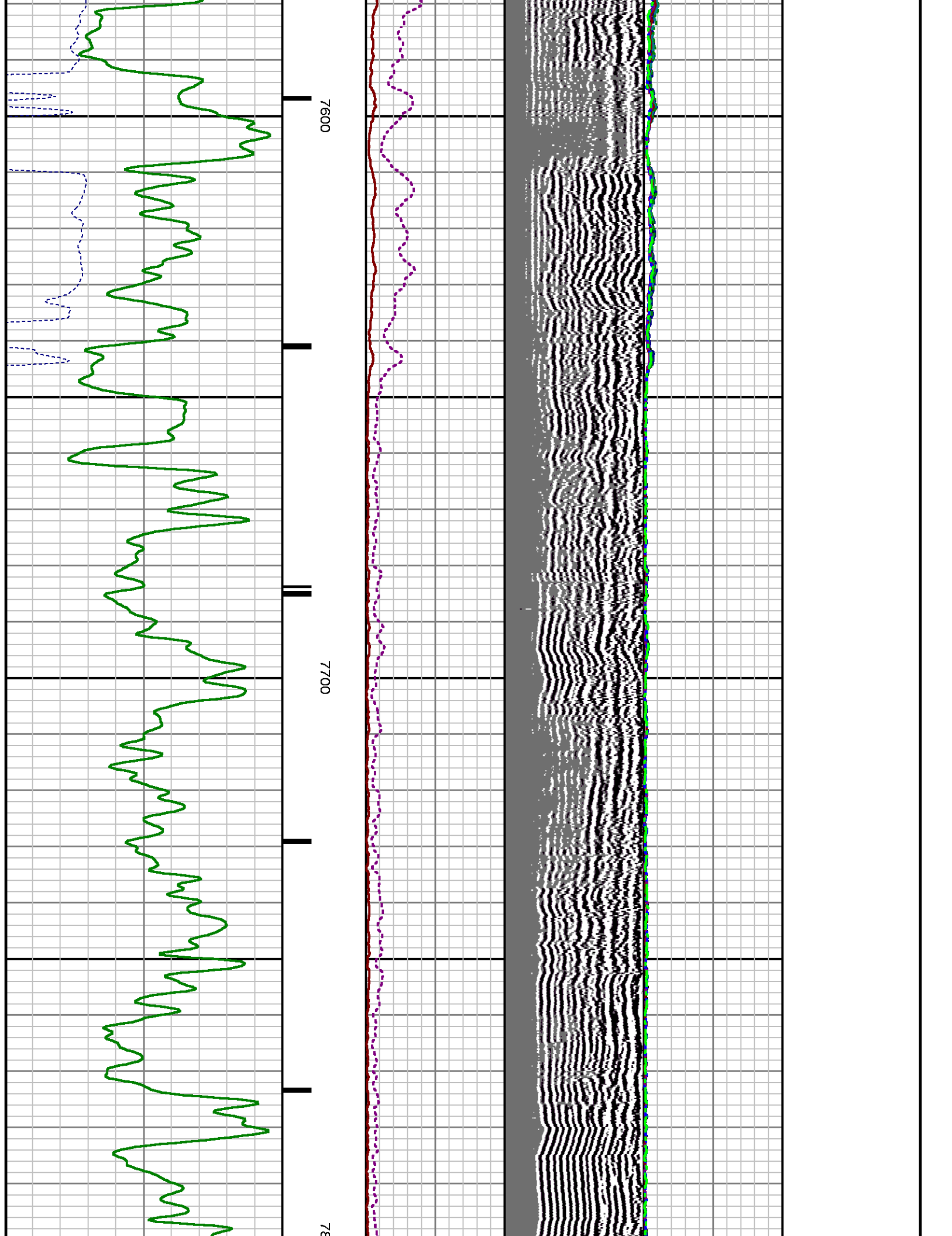


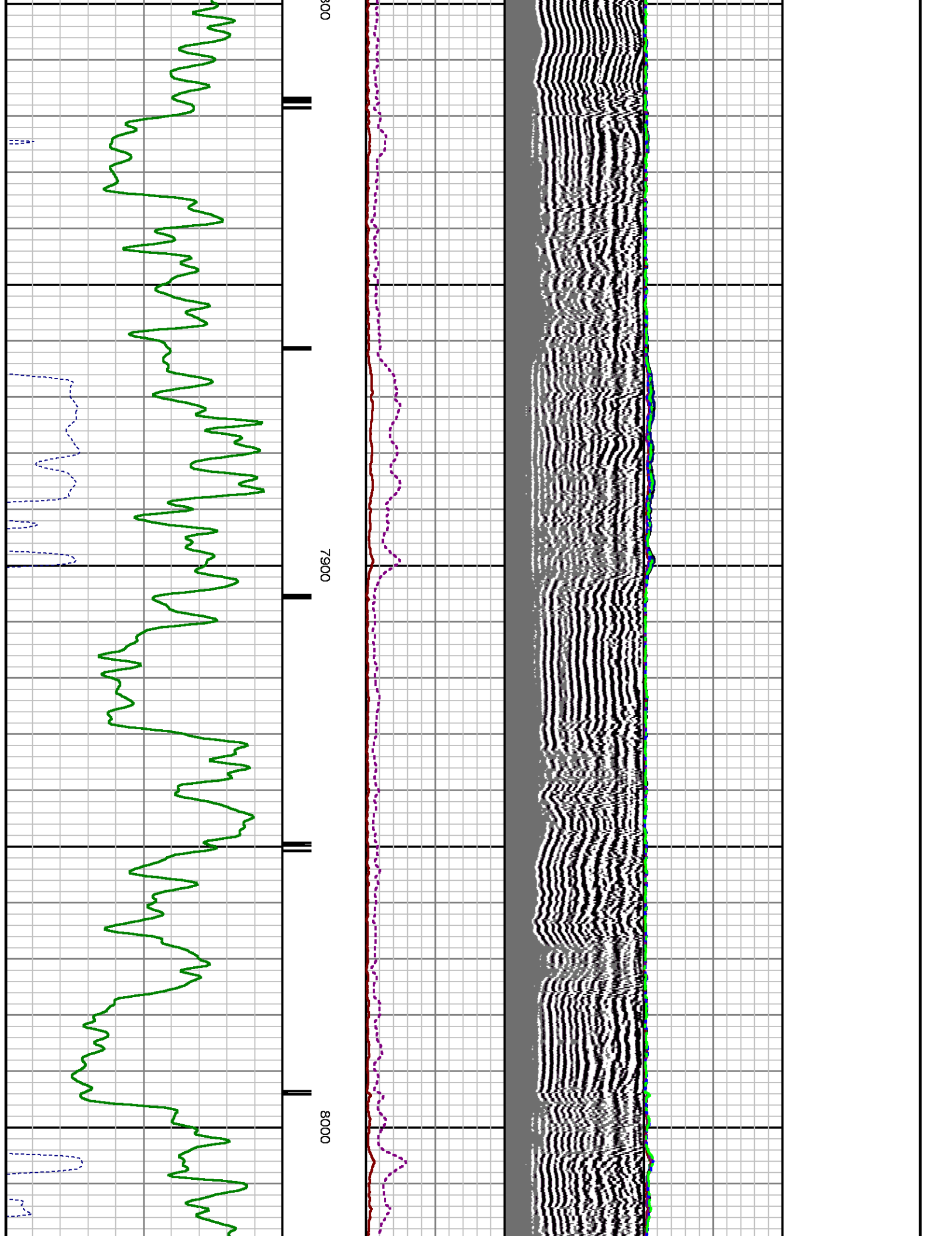


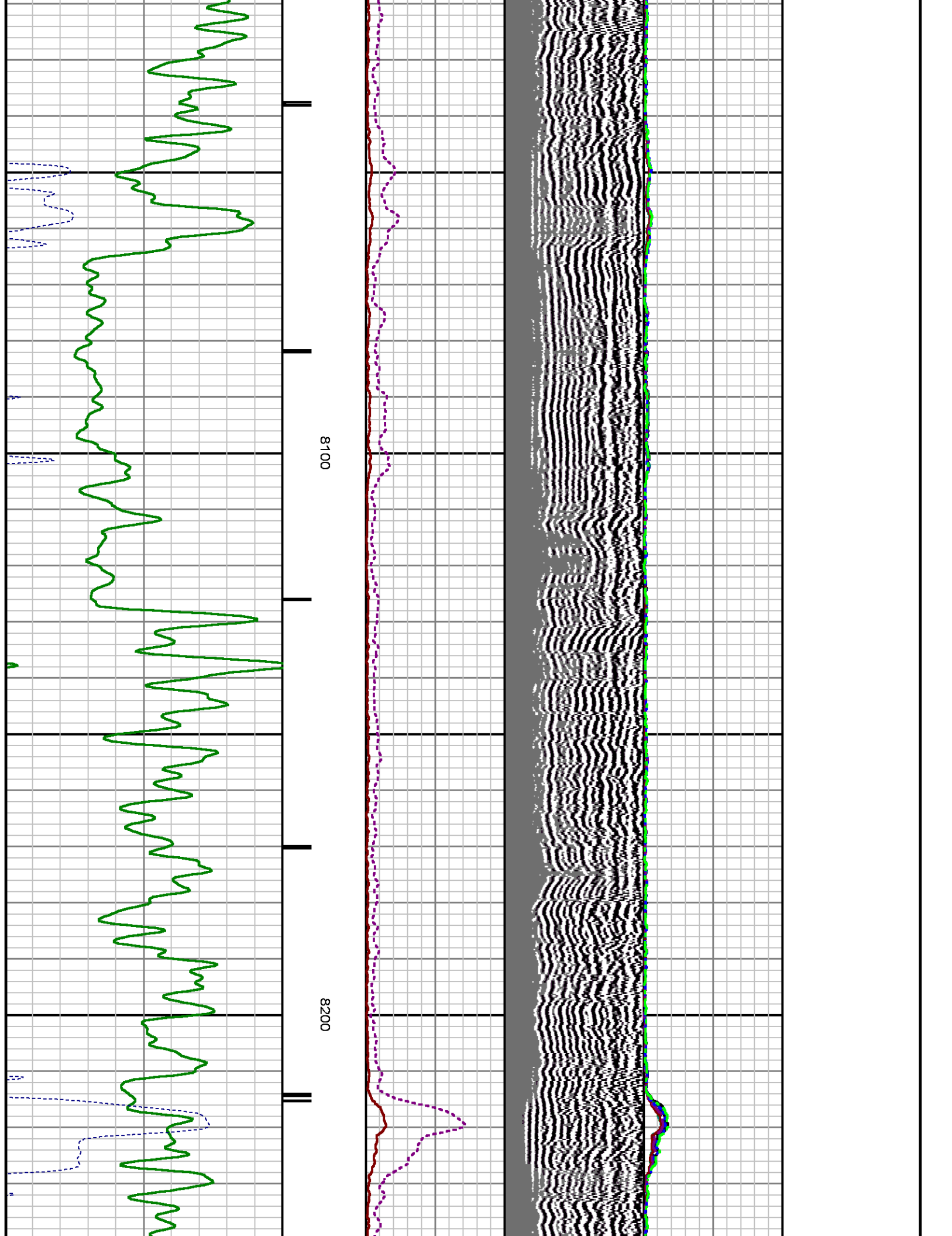


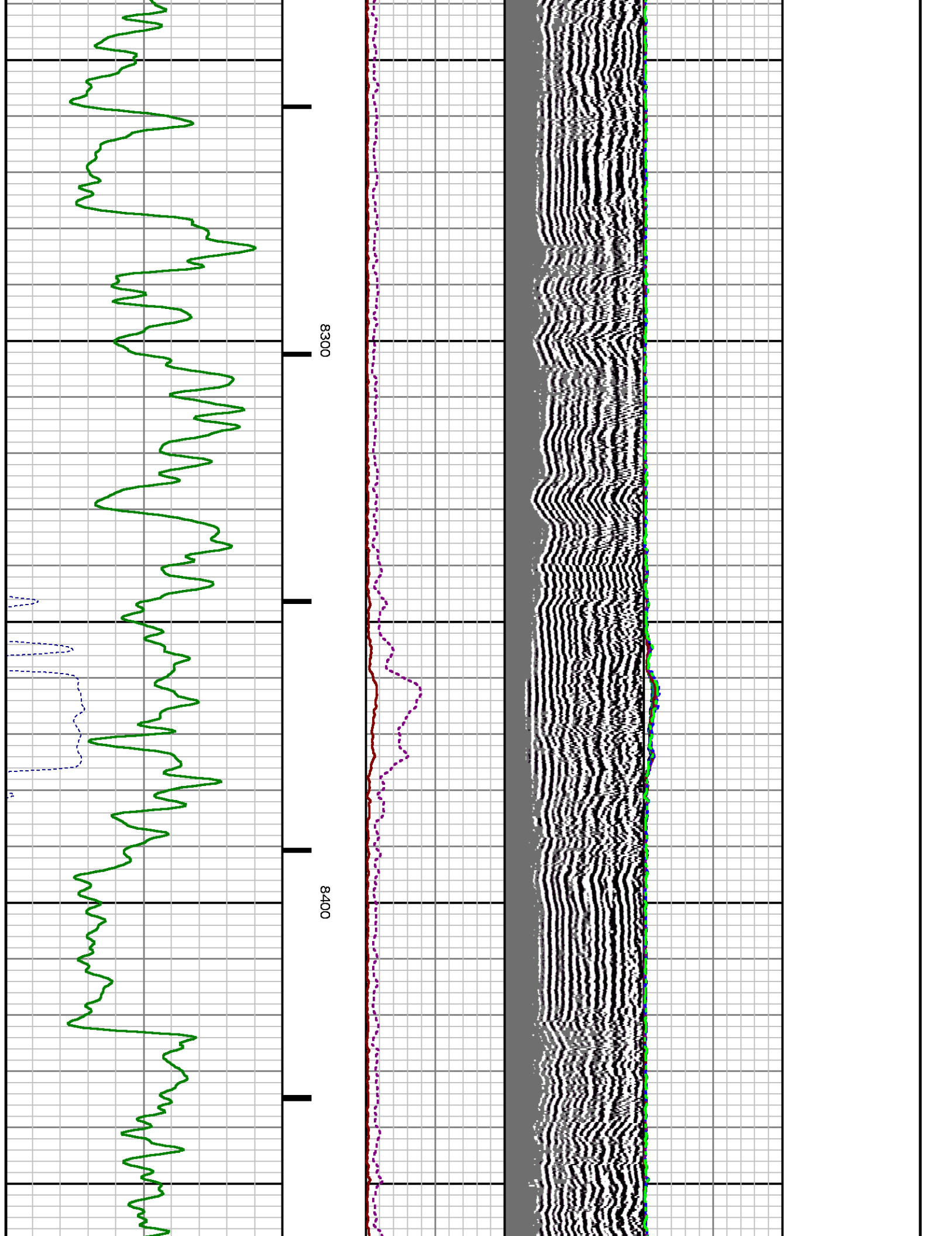


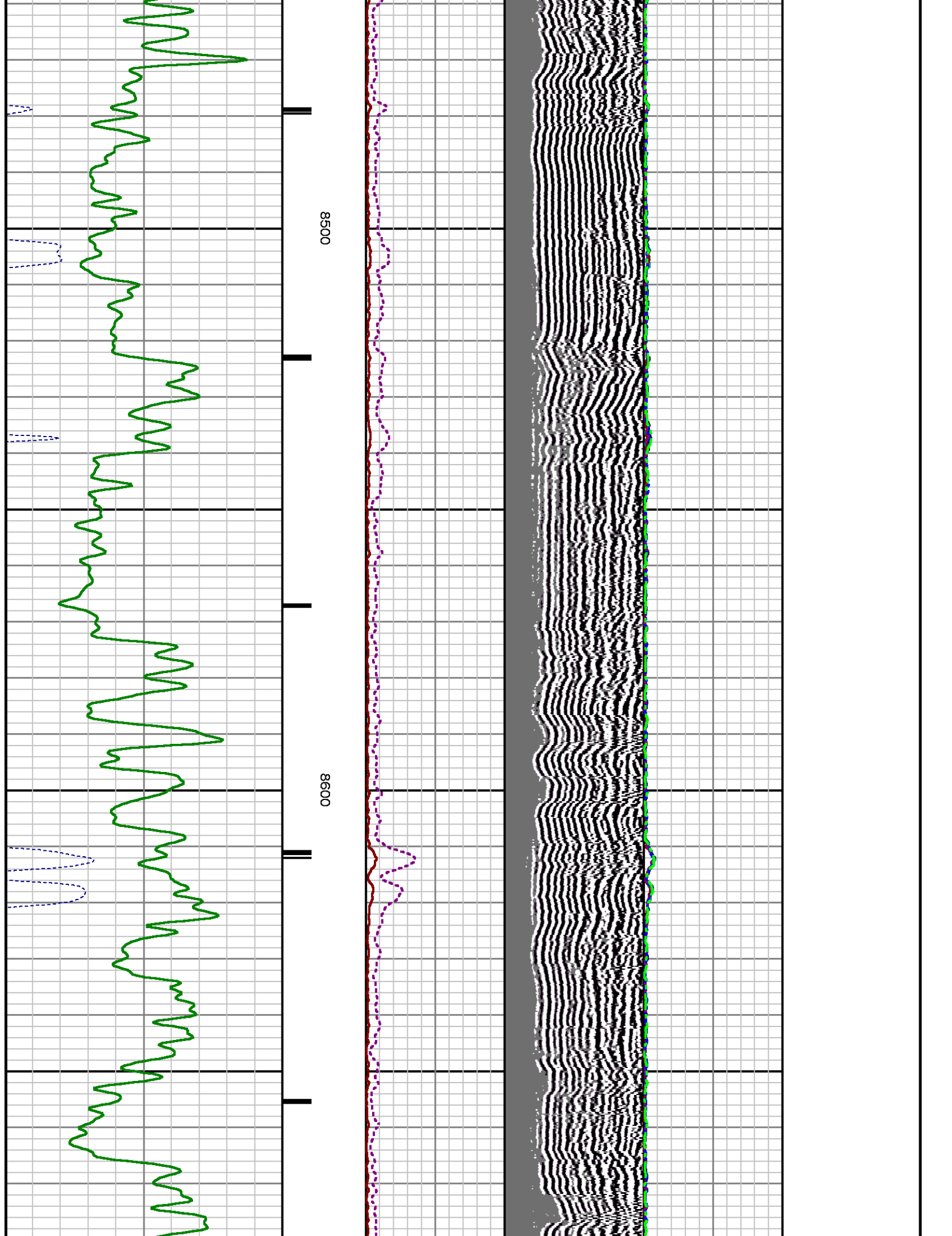


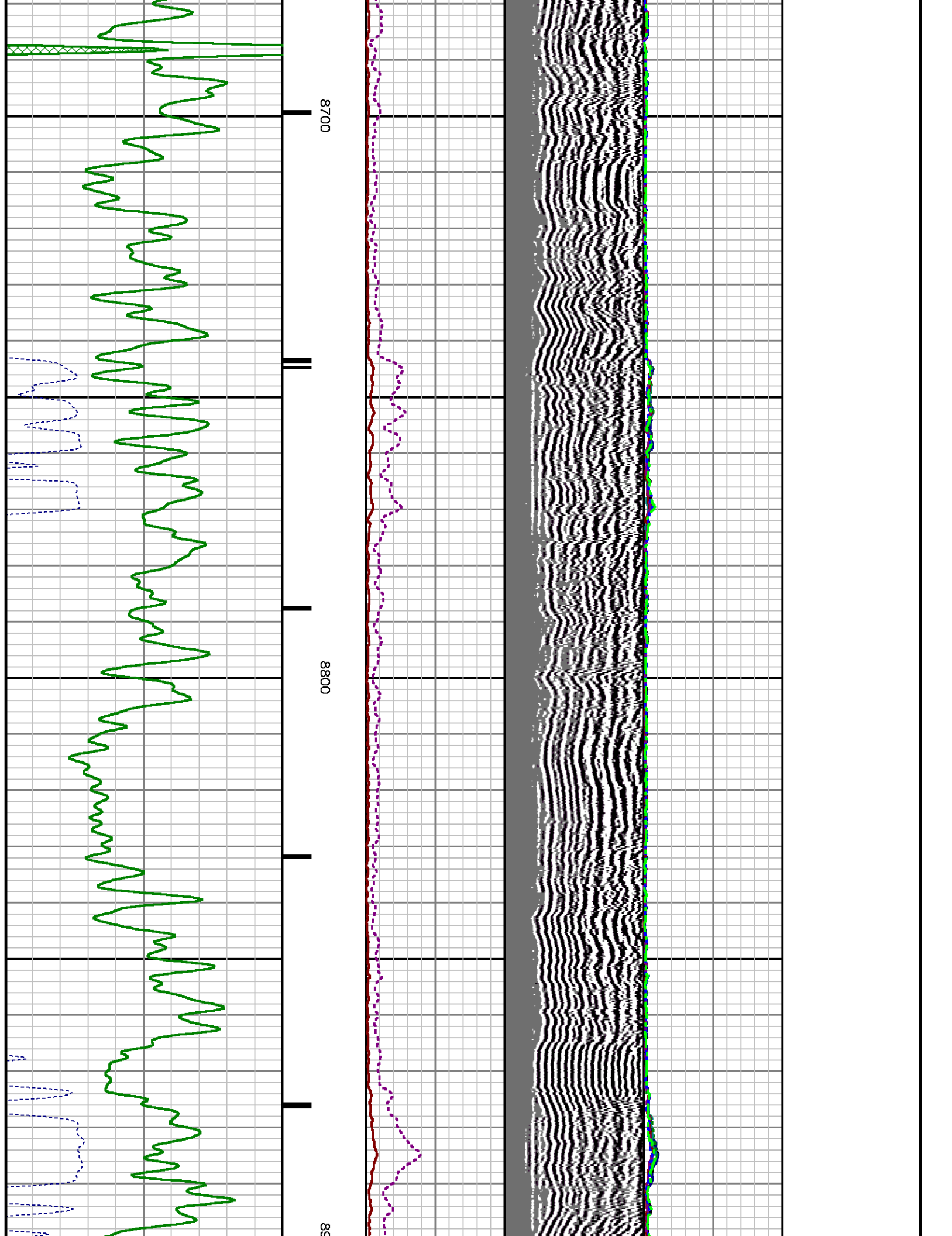


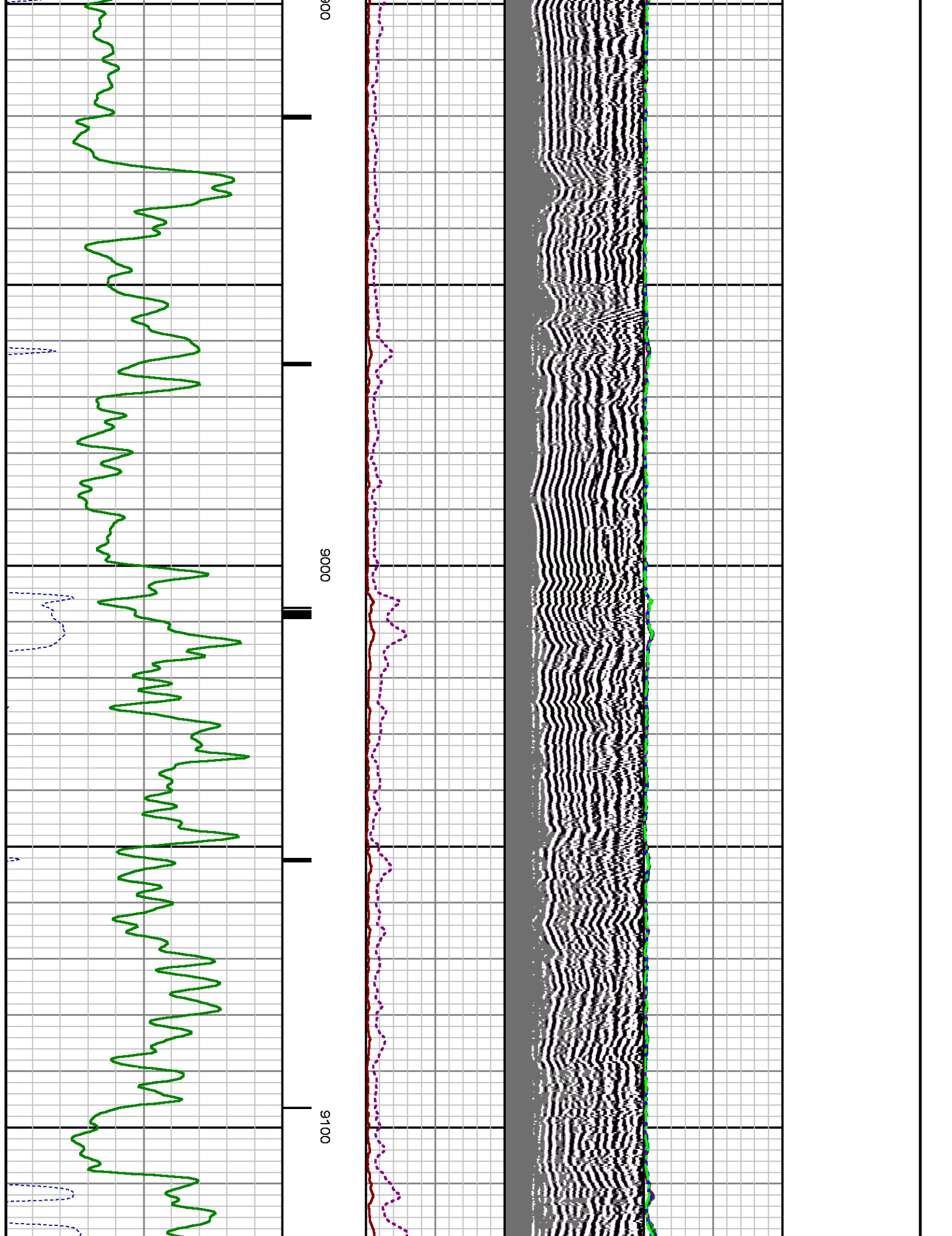


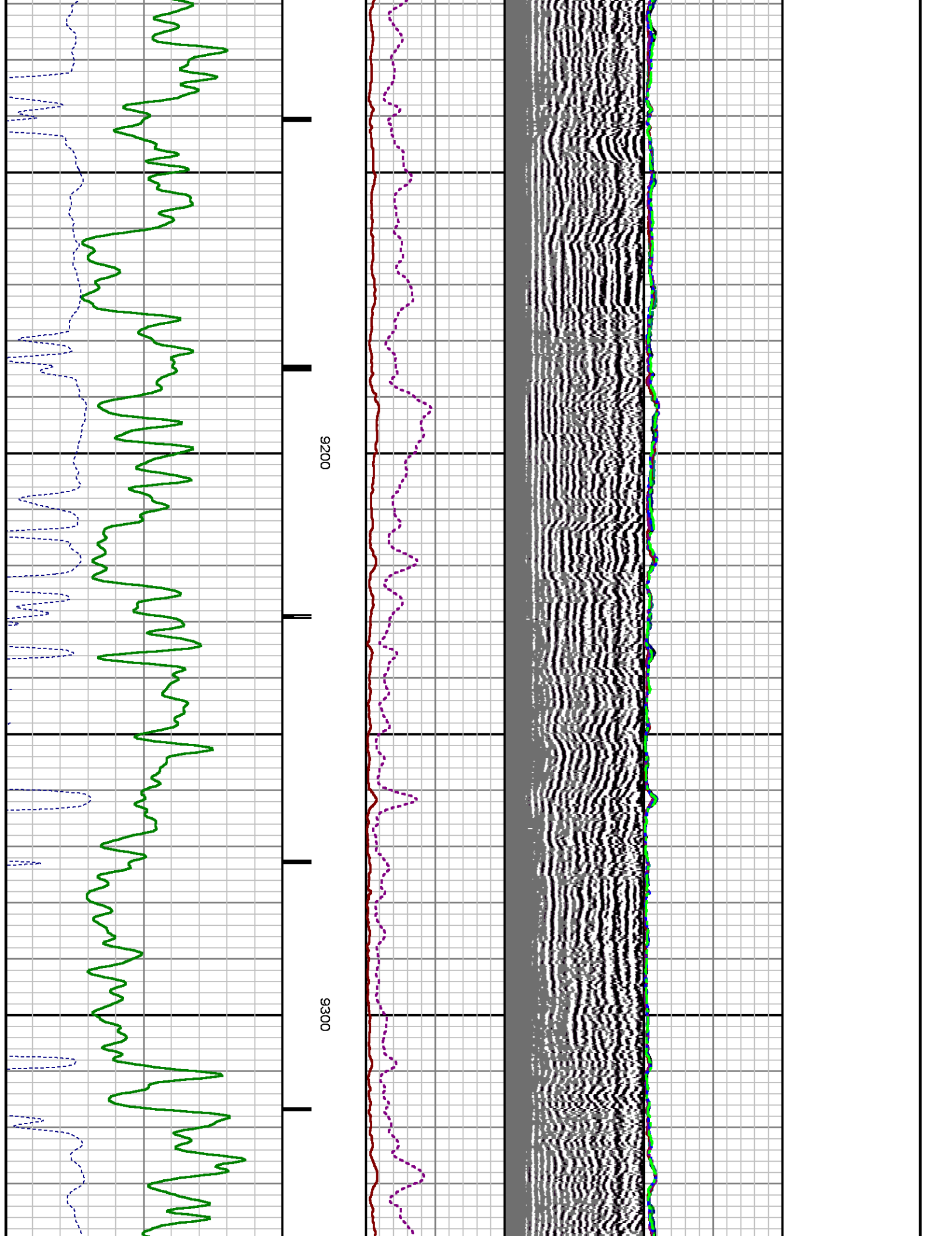


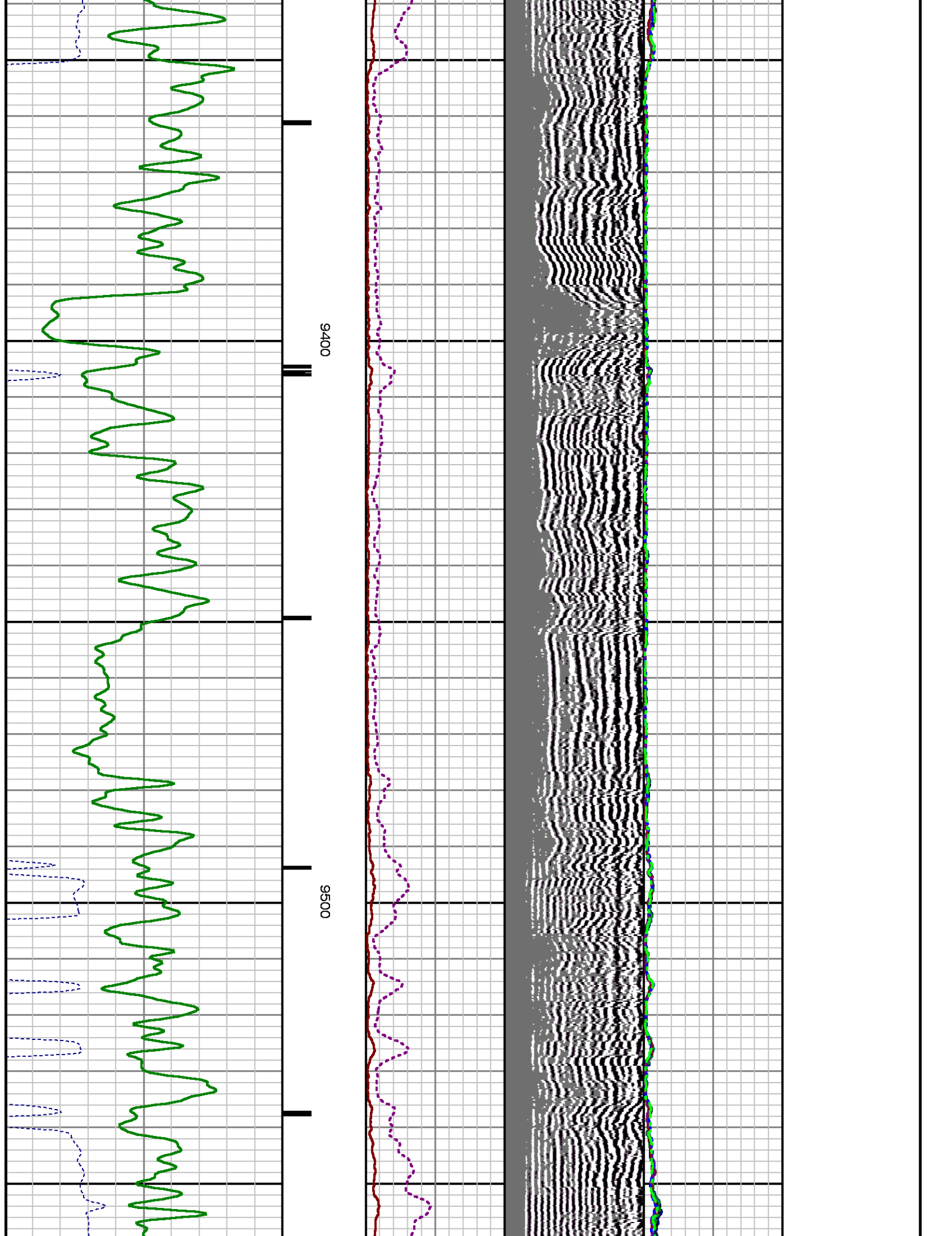


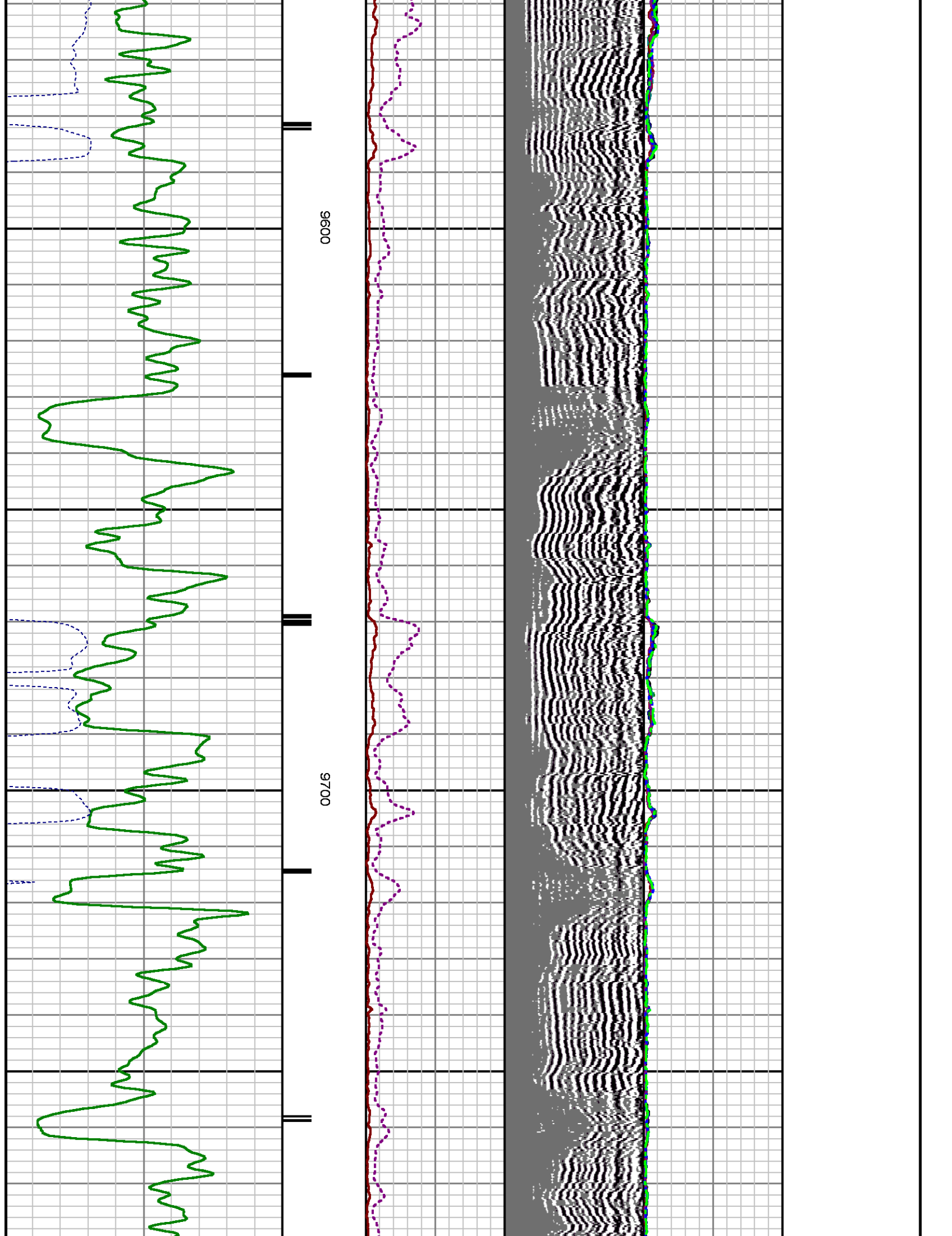


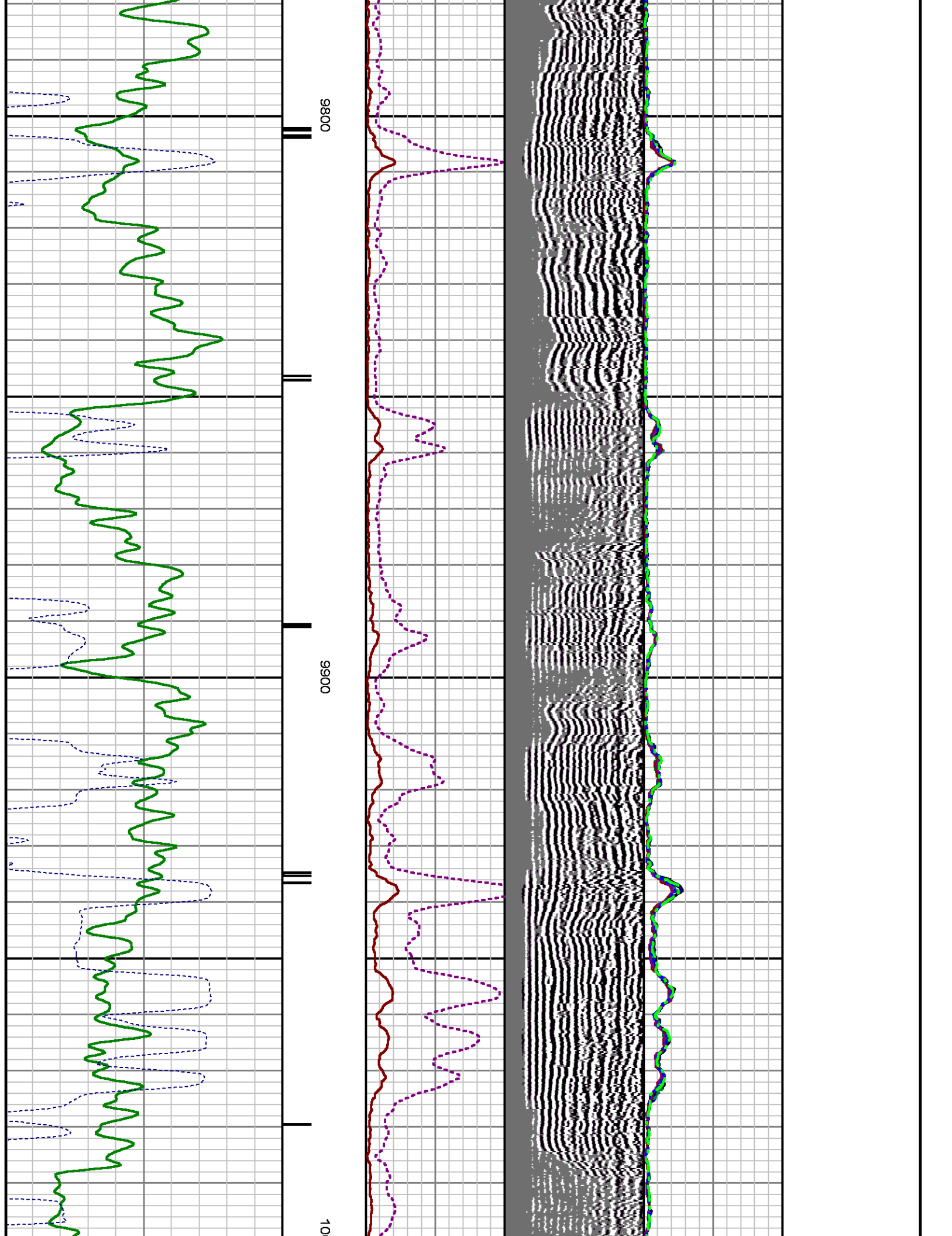


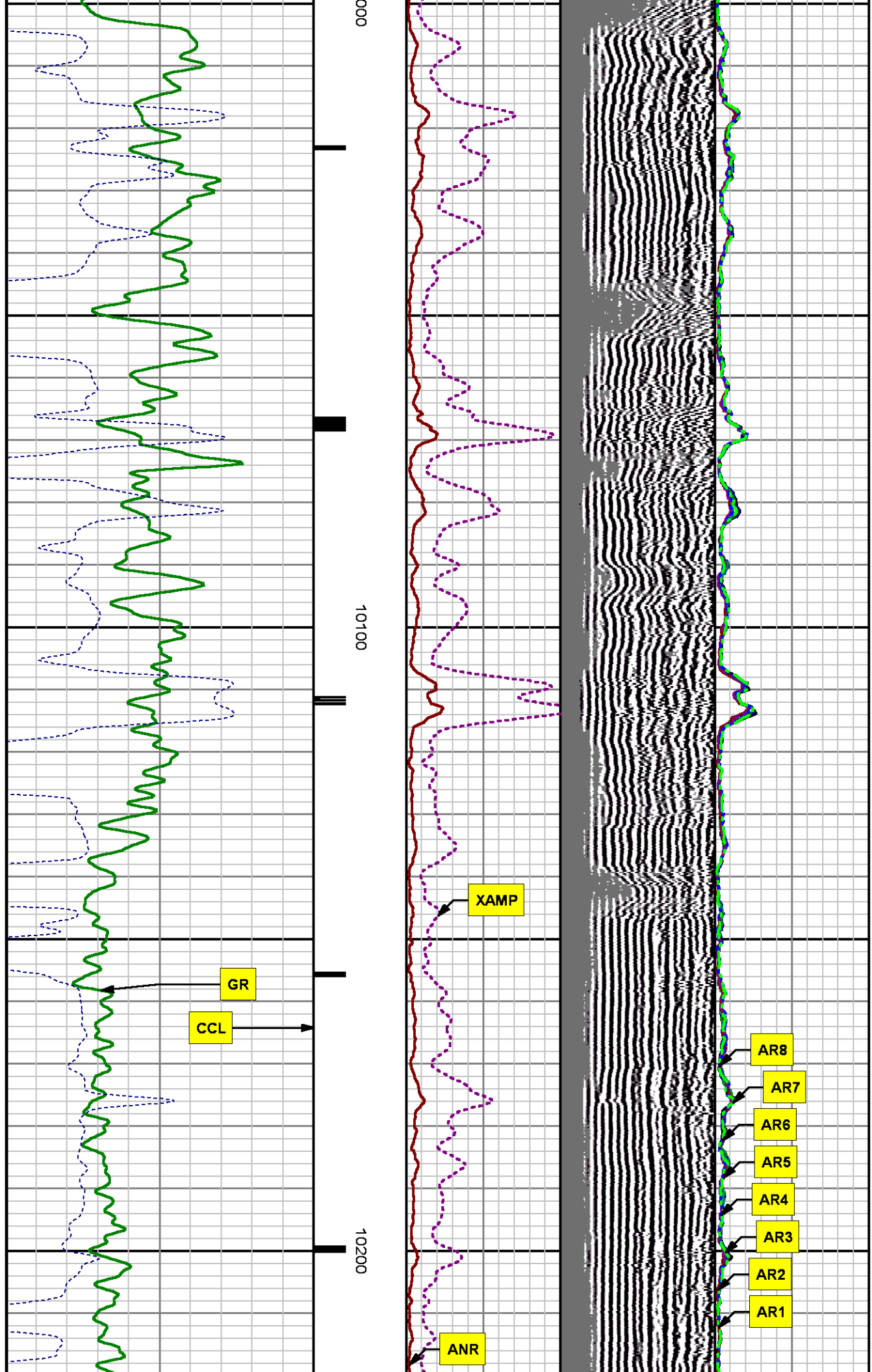


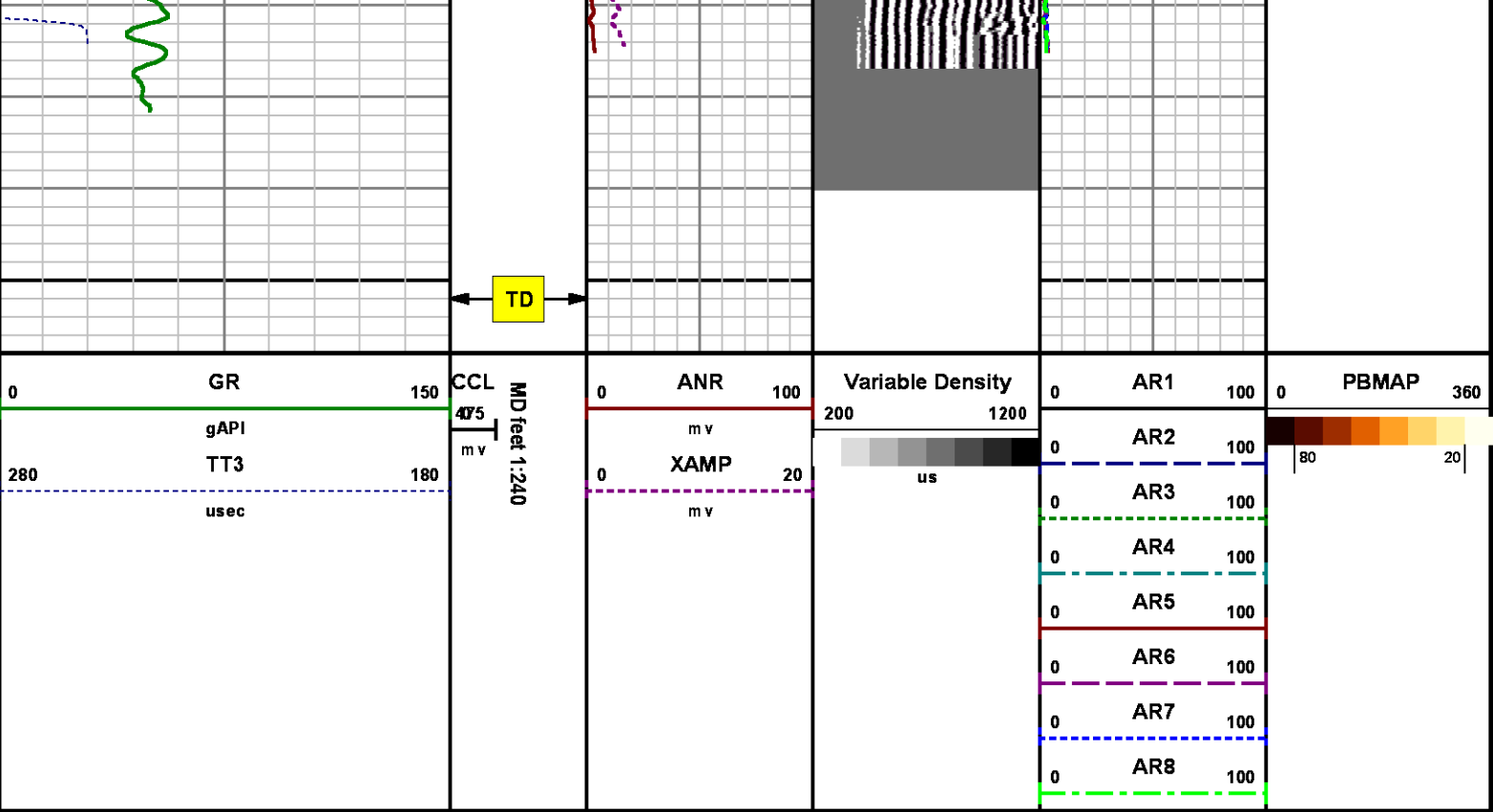












REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9900.000	10239.000
RAL	Amp Gate Start Near	195.000	usec	9900.000	10239.000
RAL	Amp Gate Start Radial	195.000	usec	9900.000	10239.000
RAL	Amp Gate Width Far	25.000	usec	9900.000	10239.000
RAL	Amp Gate Width Near	25.000	usec	9900.000	10239.000
RAL	Amp Gate Width Radial	25.000	usec	9900.000	10239.000
RAL	casing od	4.500	inches	9900.000	10239.000
RAL	casing wt	11.600	lbm/ft	9900.000	10239.000
RAL	FB Start Far	291.900	usec	9900.000	10239.000
RAL	FB Start Near	180.000	usec	9900.000	10239.000
RAL	FB Start Radial	180.000	usec	9900.000	10239.000
RAL	FB Thresh Far	15.000	mv	9900.000	10239.000
RAL	FB Thresh Near	10.000	mv	9900.000	10239.000
RAL	FB Thresh Radial	10.000	mv	9900.000	10239.000

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

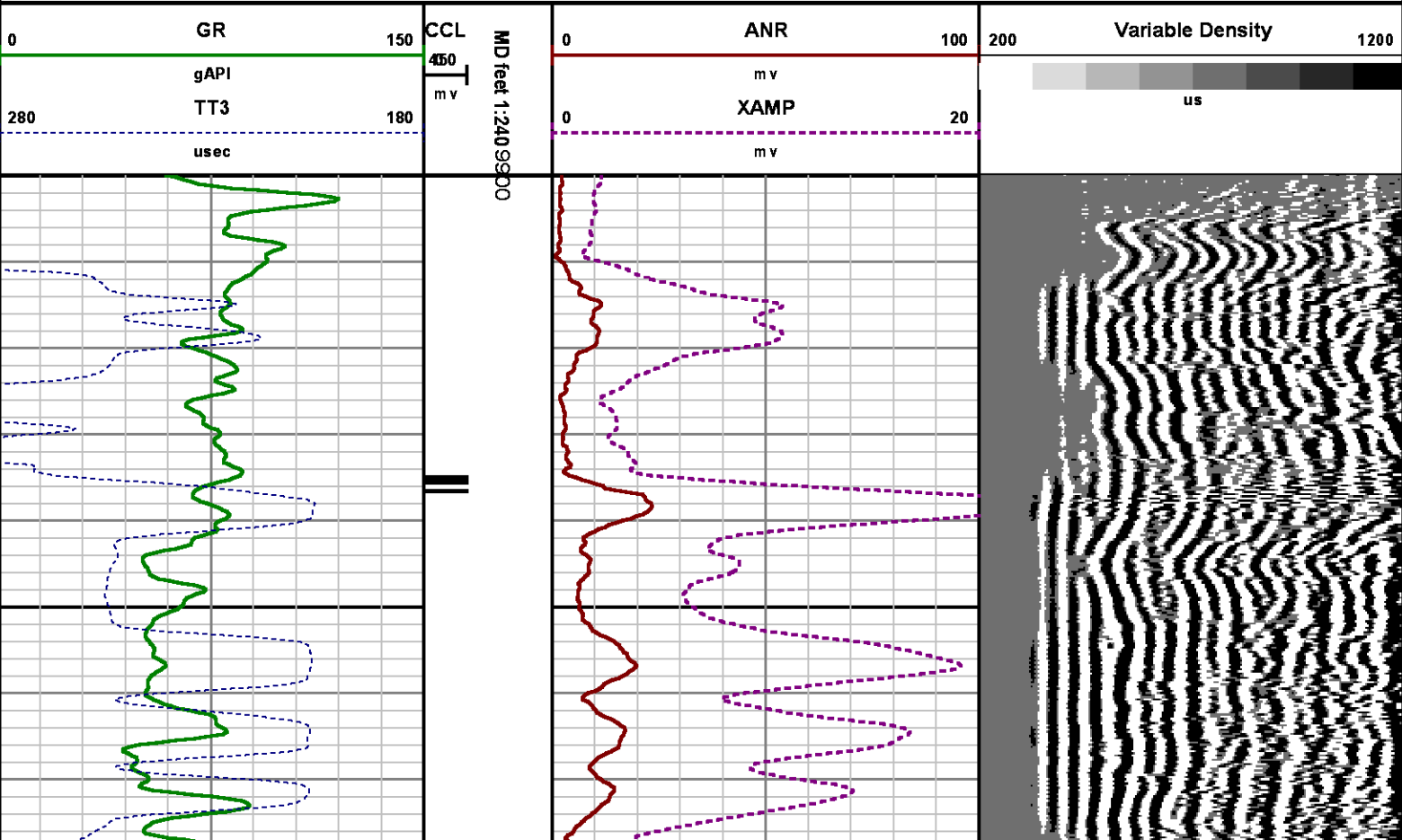
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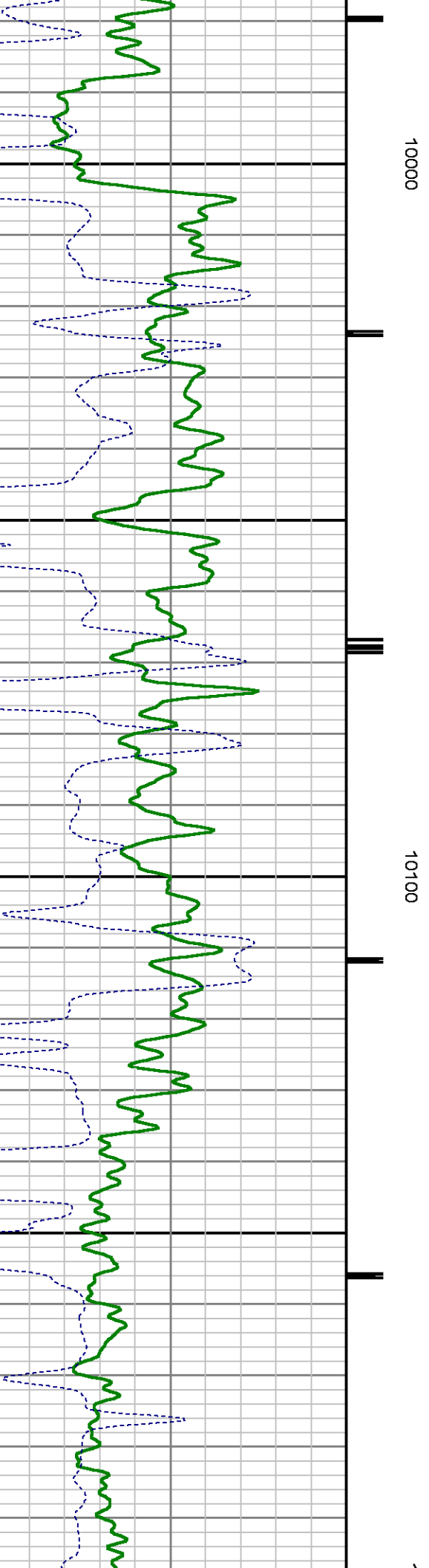
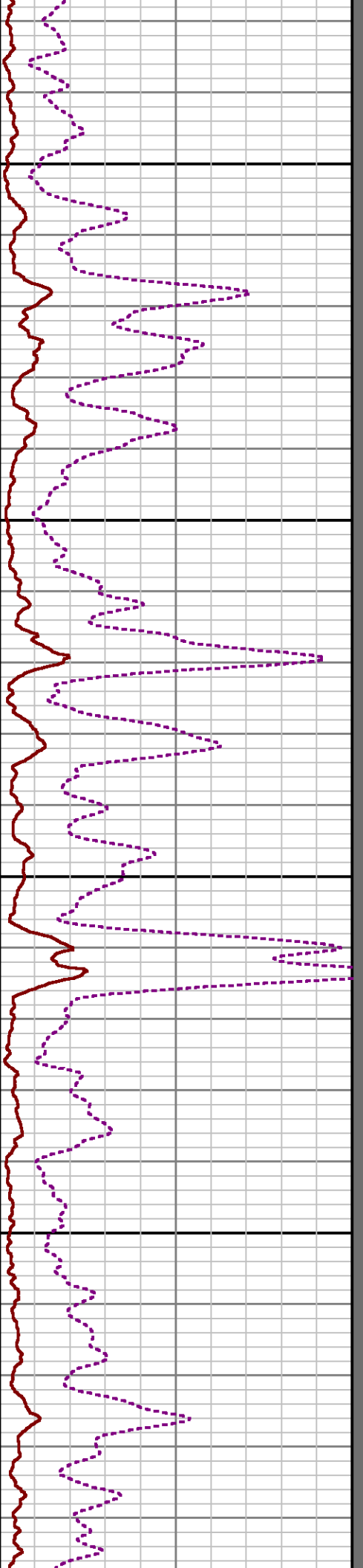
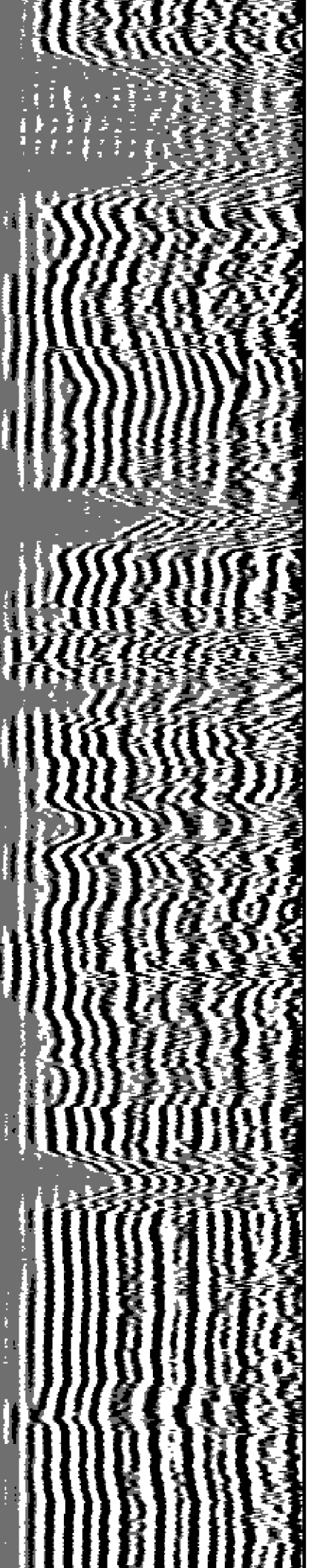
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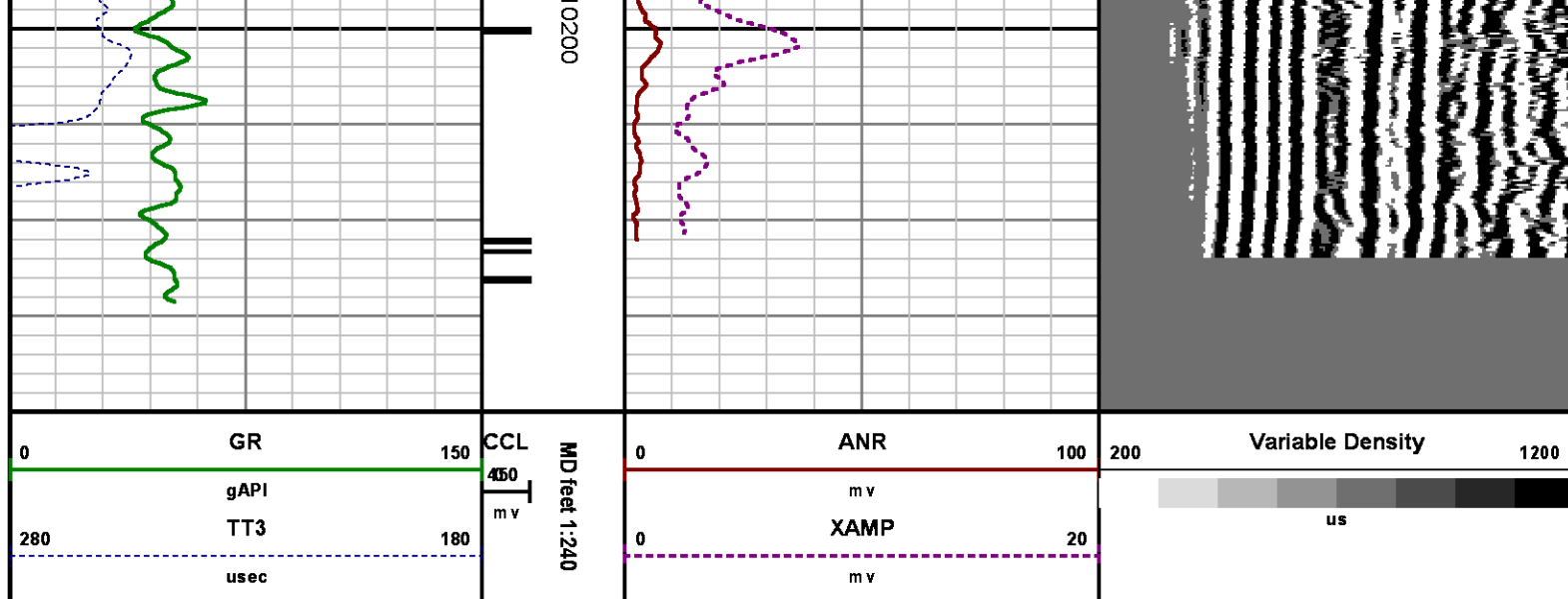
Mode : PlotMgr 5.4.504

Interval : 9900.00 - 10240.00 feet UP

Created : 4/30/2014 8:01:15 AM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496A25_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] -53.00 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	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 fld.cal

WELLSITE CALIBRATION SUMMARY

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

Tool Delay [usec] -53.00 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	0.119	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\GRV456A3.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\GRV456A3.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

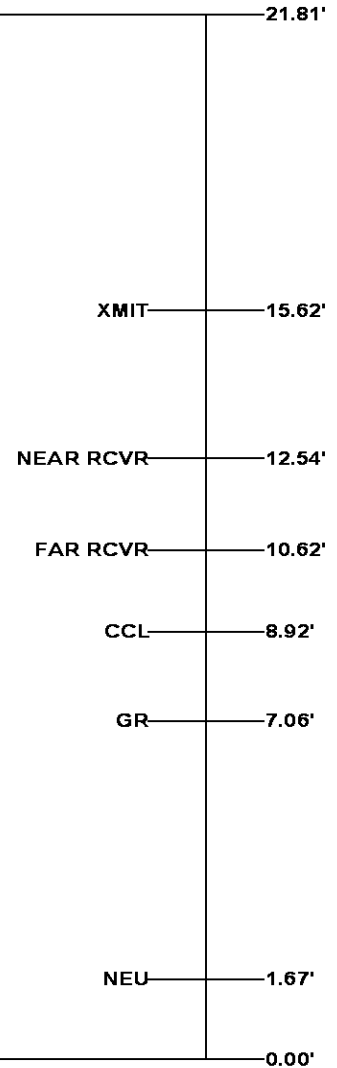
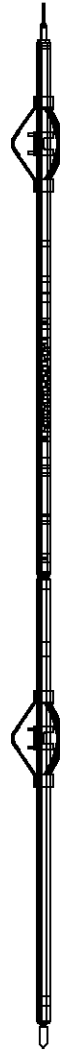
TOOL DIAGRAM

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



Total Length: 21.81'
Total Weight: Not Available
Max Diameter: 0' 2.75"

**Baker Atlas****CASE****Company****WPX ENERGY****Well****FEDERAL NER 414-32****Field****RULISON****County****GARFIELD****State****CO****Location****SHL: 185' FNL & 2593' FWL (5 7S 93W)****BHL: 505' FSL & 646' FwL (32 6S 93W)****Elevations****KB 7629 ft****DF****GL 7603 ft****File No:****CH084820****API No:****05045217800000****32 6S 93W****RU 23-5 PAD****NABORS 576****SEC 32****TWP 6S****RGE 93W**