



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH085741

Company Well WPX ENERGY C&C ENERGY GM 321-13

API No: Field GRAND VALLEY

County GARFIELD State COLORADO

0504522680000

Location SHL: 276' FSL & 1032' FWL (SEC 12)

GM 24-12 PAD BHT: 418' FNL & 2181' FWL (NENW SEC 13)

H&P 318 SEC 13 TWP 7S RGE 96W

Other Services RPM

Permanent Datum GL Elevation 5141 ft

Log Measured From KB 24 ft Above P. D.

Drill Measured From KELLY BUSHING KB 5165 ft DF GL 5141 ft

Date	27/MAY/14	
Run	ONE	
Service Order	US085741J	
Depth Driller	6226 ft	
Depth Logger	6167 ft	
Bottom Logged Interval	6157 ft	
Top Logged Interval	24 ft	
Time Started	0815	
Time Finished	1115	
Operator Rig Time	3 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	60 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	198 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND UCT
Recorded By	FLOYD RENEAU	
Witnessed By	JEFF BRADY	

- 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	24 ft	1551 ft
8.75 in	1551 ft	6226 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			24 ft	1551 ft
4.5 in	11.6 lbm/ft	I-80	24 ft	6226 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 8.5 feet.
Logged with zero PSI at wellhead.
BHT = 198°F
SJ = 2735'-2758'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENT
1	1	GR/CCL	2459XA	10417465	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	25.087	6168.500
RAL	Amp Gate Start Near	195.000	usec	25.087	6168.500
RAL	Amp Gate Start Radial	195.000	usec	25.087	6168.500
RAL	Amp Gate Width Far	25.000	usec	25.087	6168.500
RAL	Amp Gate Width Near	25.000	usec	25.087	6168.500
RAL	Amp Gate Width Radial	25.000	usec	25.087	6168.500
RAL	casing od	4.500	inches	25.087	6168.500
RAL	casing wt	11.600	lbm/ft	25.087	6168.500
RAL	FB Start Far	291.900	usec	25.087	6168.500
RAL	FB Start Near	180.000	usec	25.087	6168.500
RAL	FB Start Radial	180.000	usec	25.087	6168.500
RAL	FB Thresh Far	10.000	mv	25.087	6168.500
RAL	FB Thresh Near	4.000	mv	25.087	6168.500
RAL	FB Thresh Radial	4.000	mv	25.087	6168.500
RAL	Fluid Travel Time	200.000	usec/ft	25.087	6168.462

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 : C&C ENERGY GM 321-13

File Name : d:\welldata\wpx\gm 321-13\321ralmain.xtf

Mode : PlotMgr 5.4.504

Interval : 0.00 - 6170.00 feet UP

Created : 5/27/2014 9:43:43 AM

0

GR

150

gAPI

TT3

u sec

280

180

CCL

MD feet 1:240

500

m v

0

ANR

100

m v

XAMP

m v

0

20

200

Variable Density

1200

us

WELLHEAD

CCL

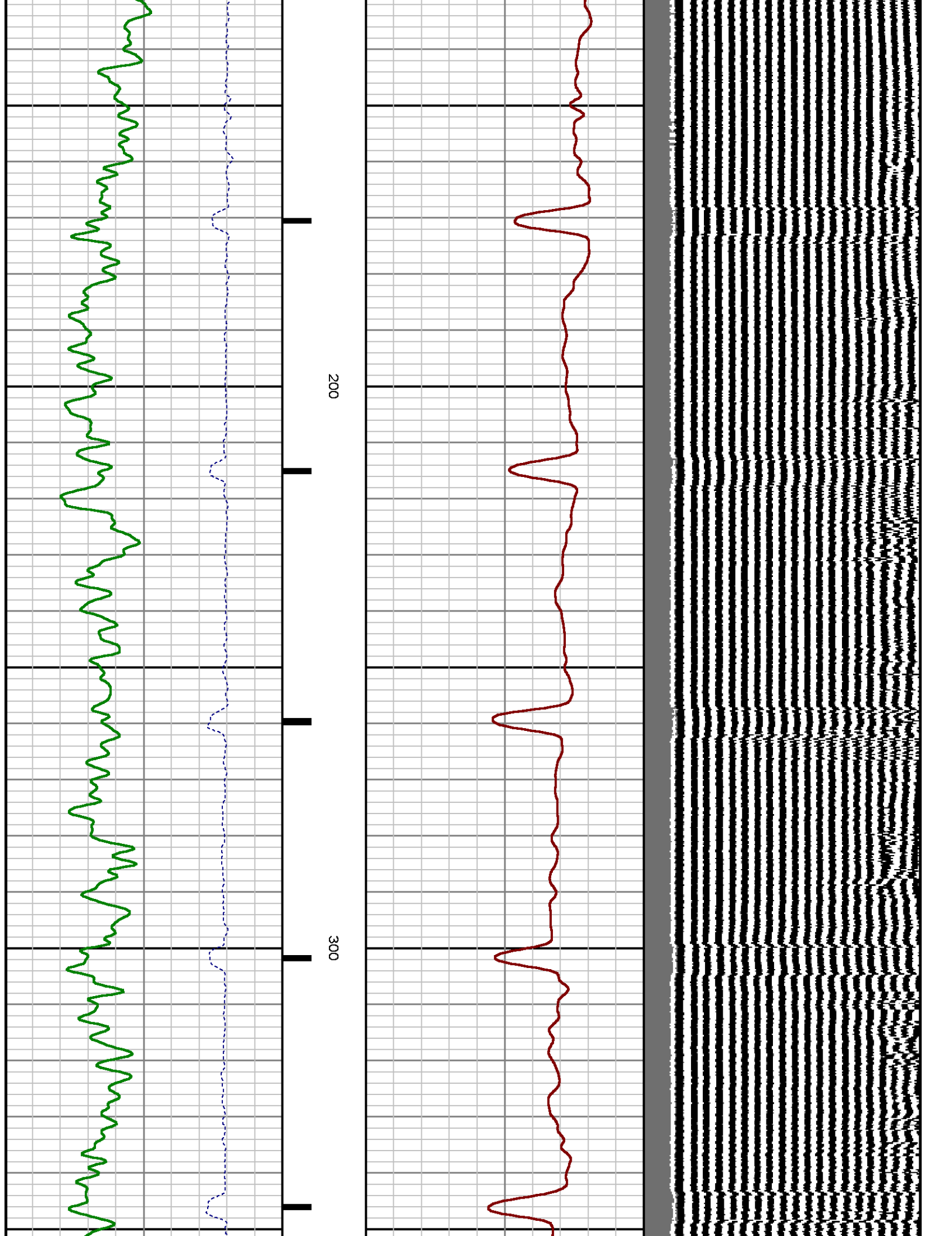
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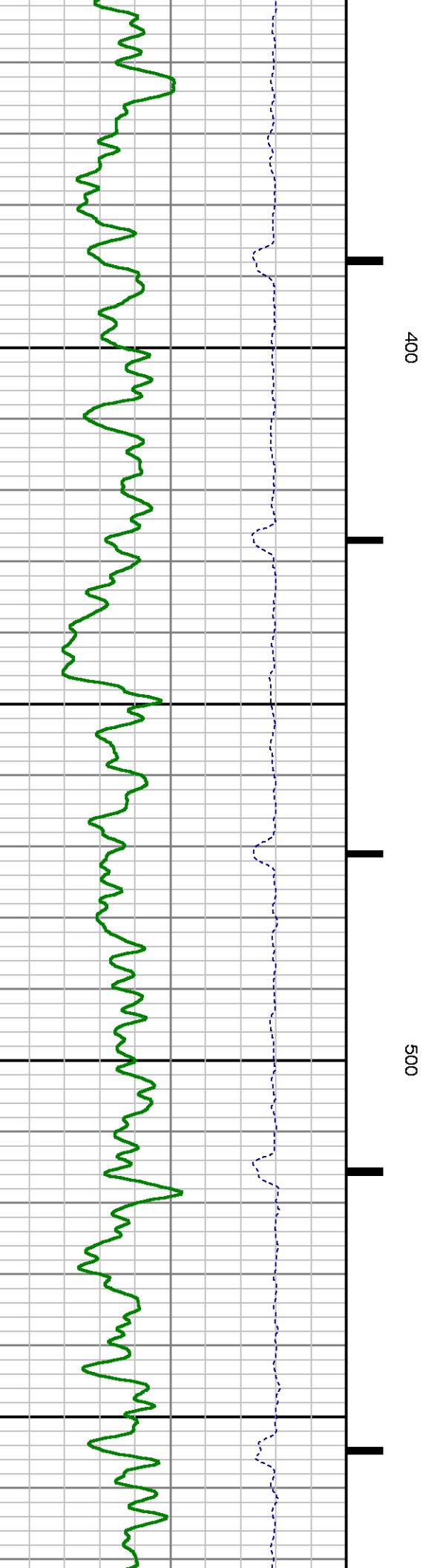
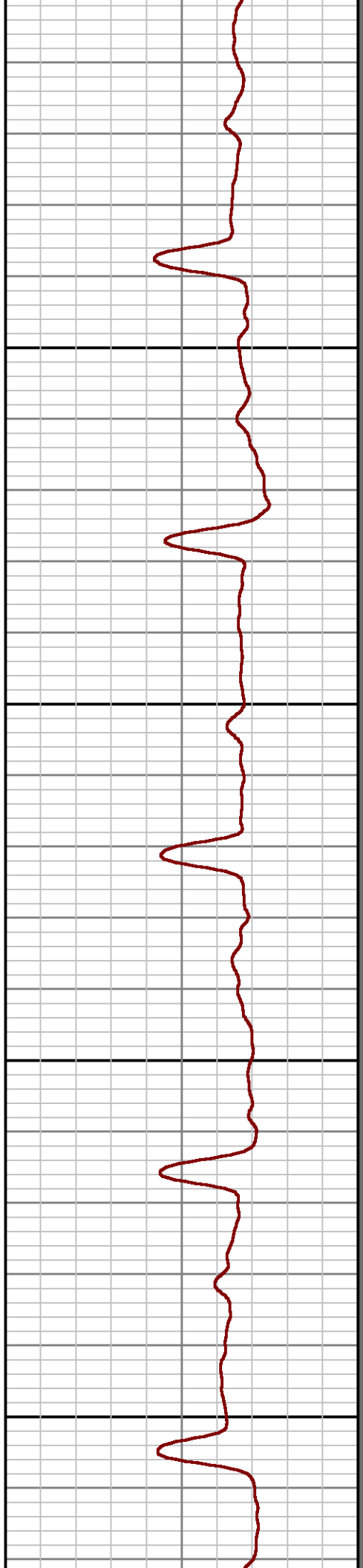
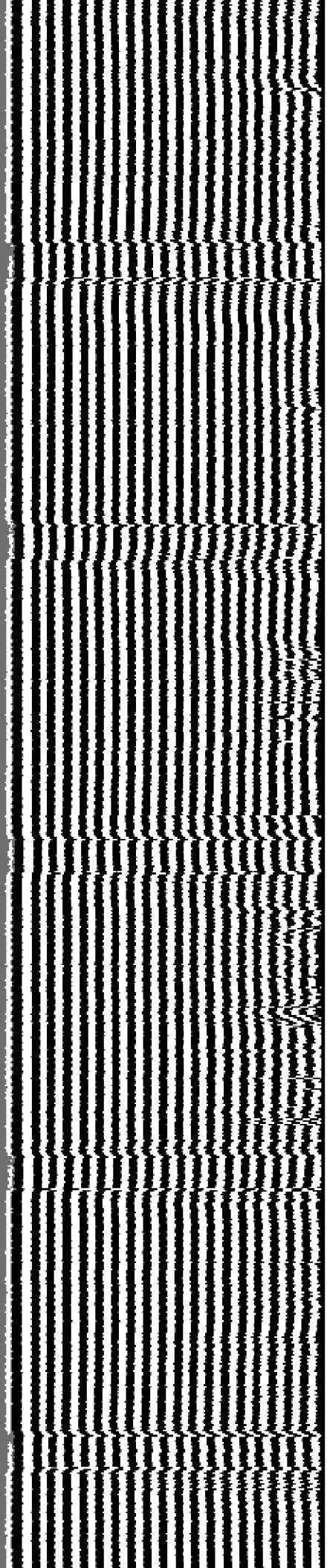
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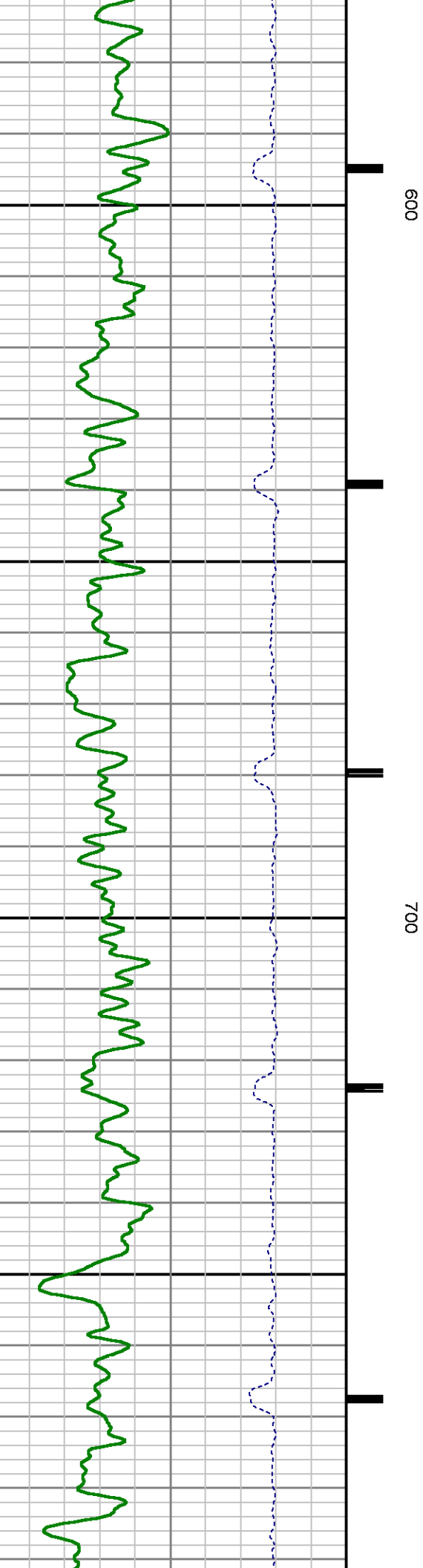
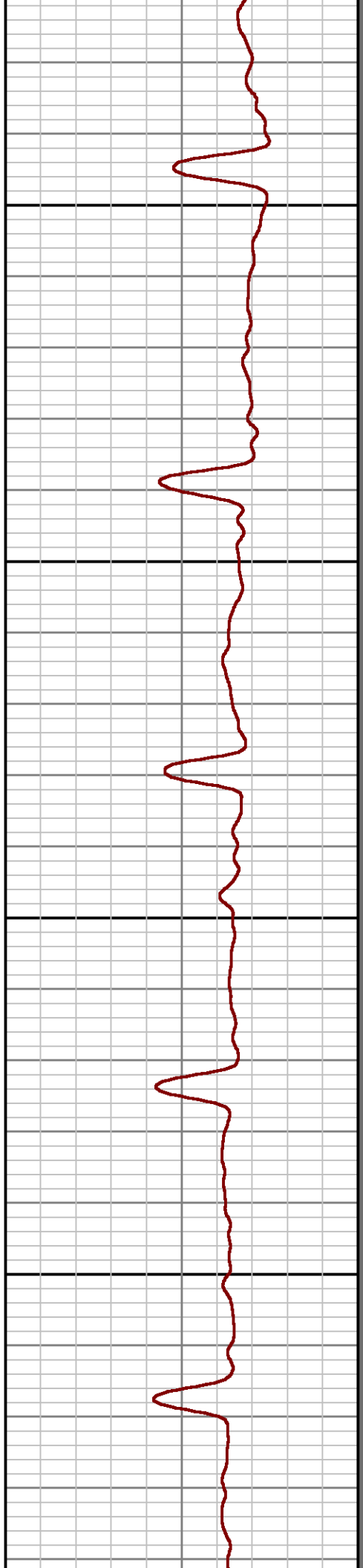
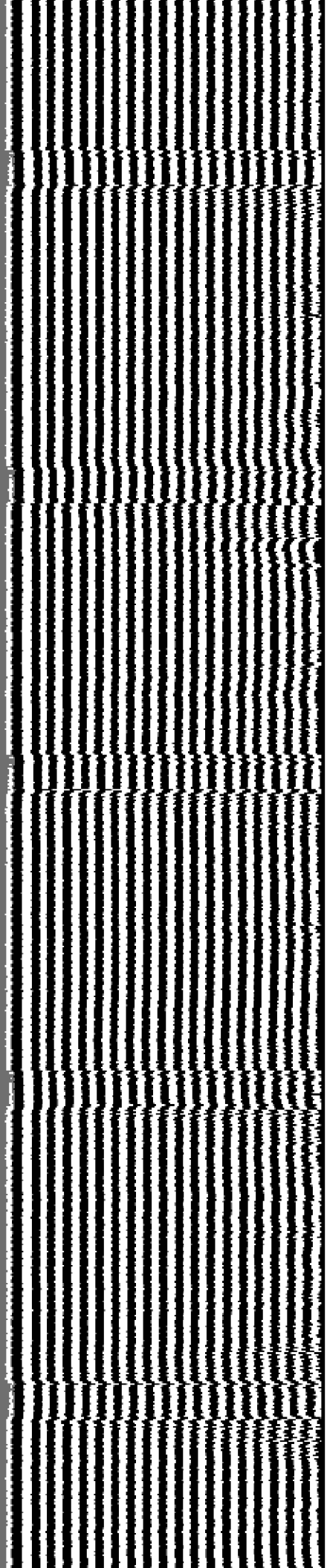
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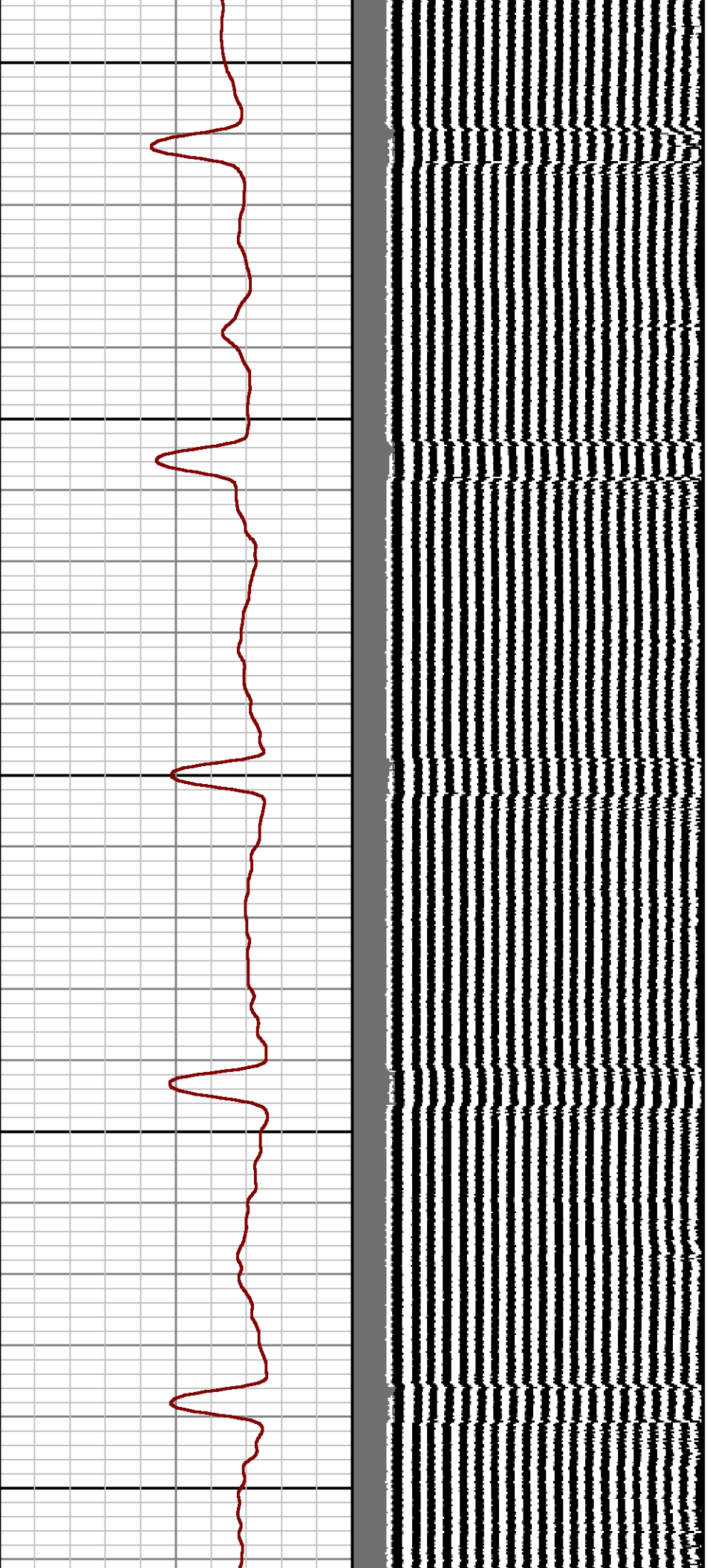
FLUID LEVEL

100





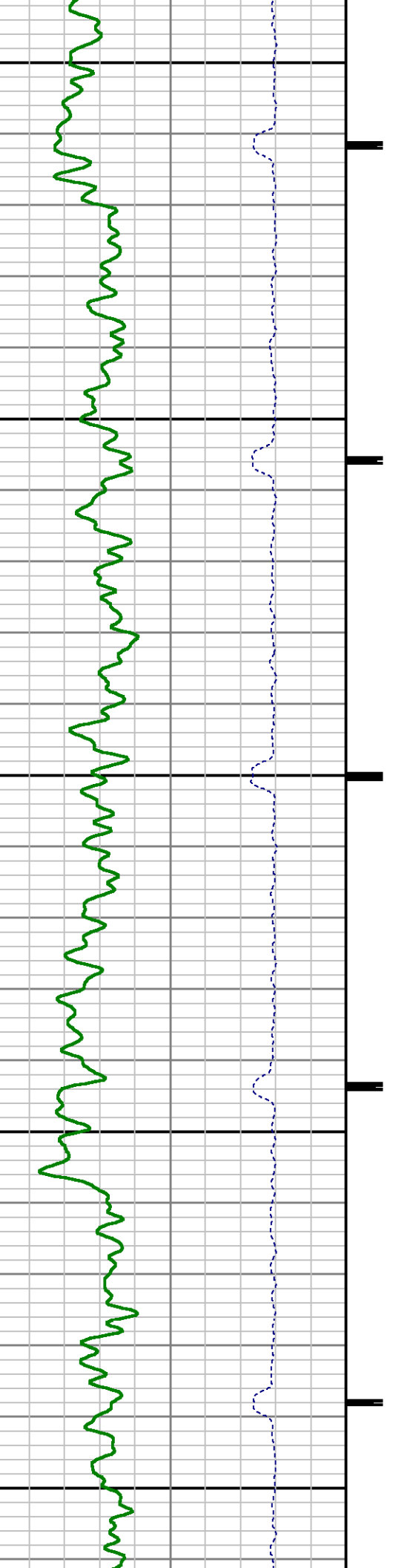


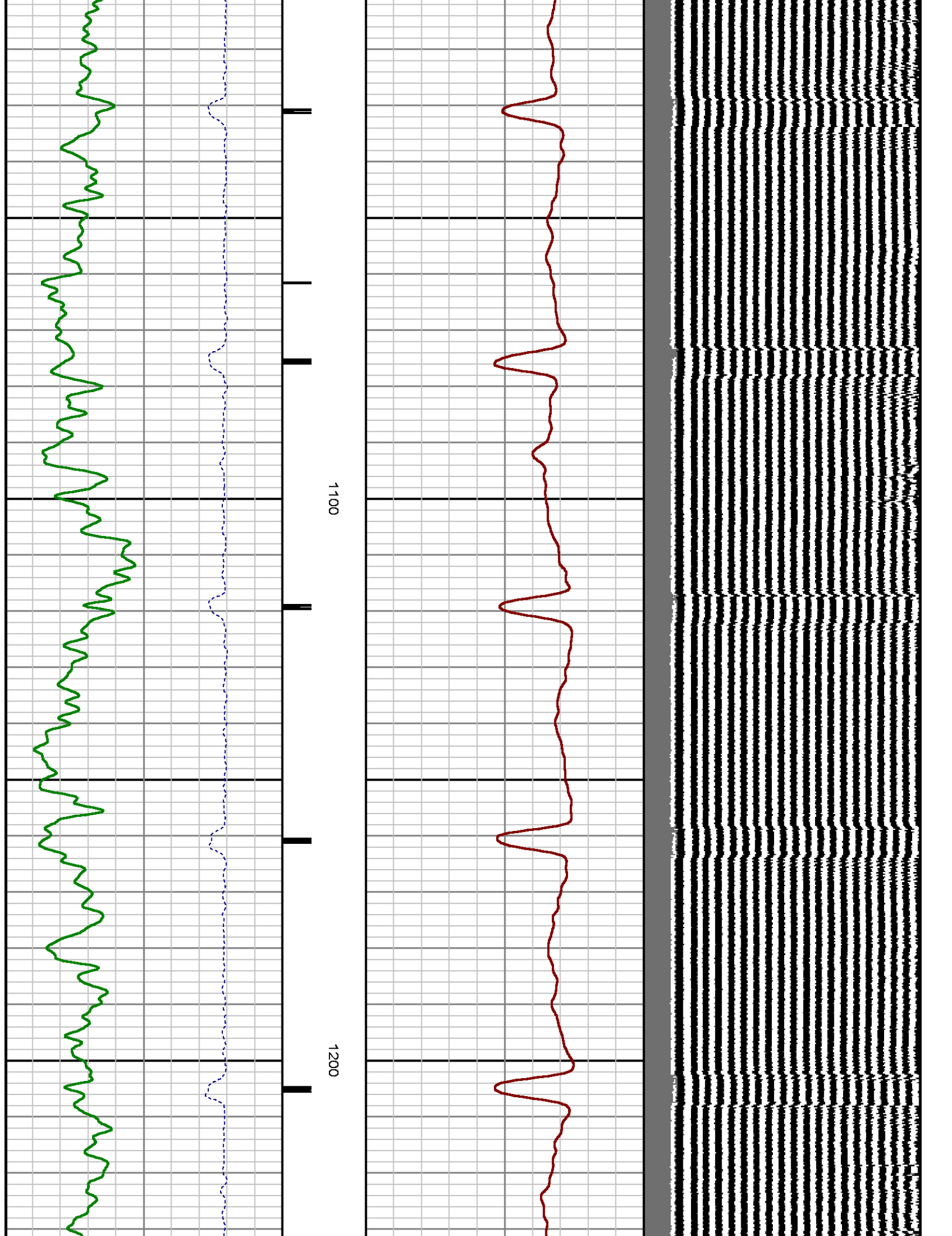


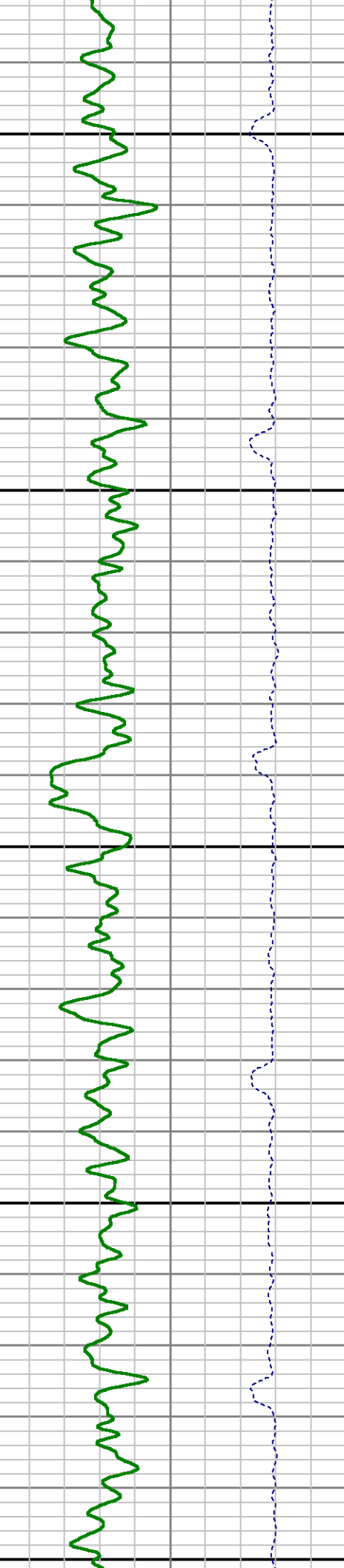
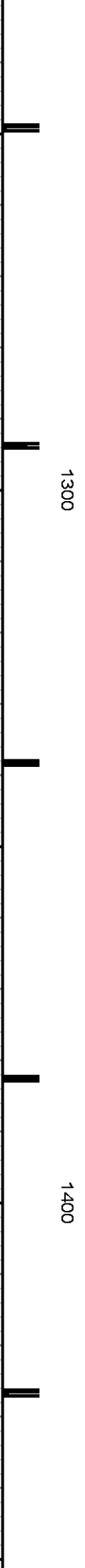
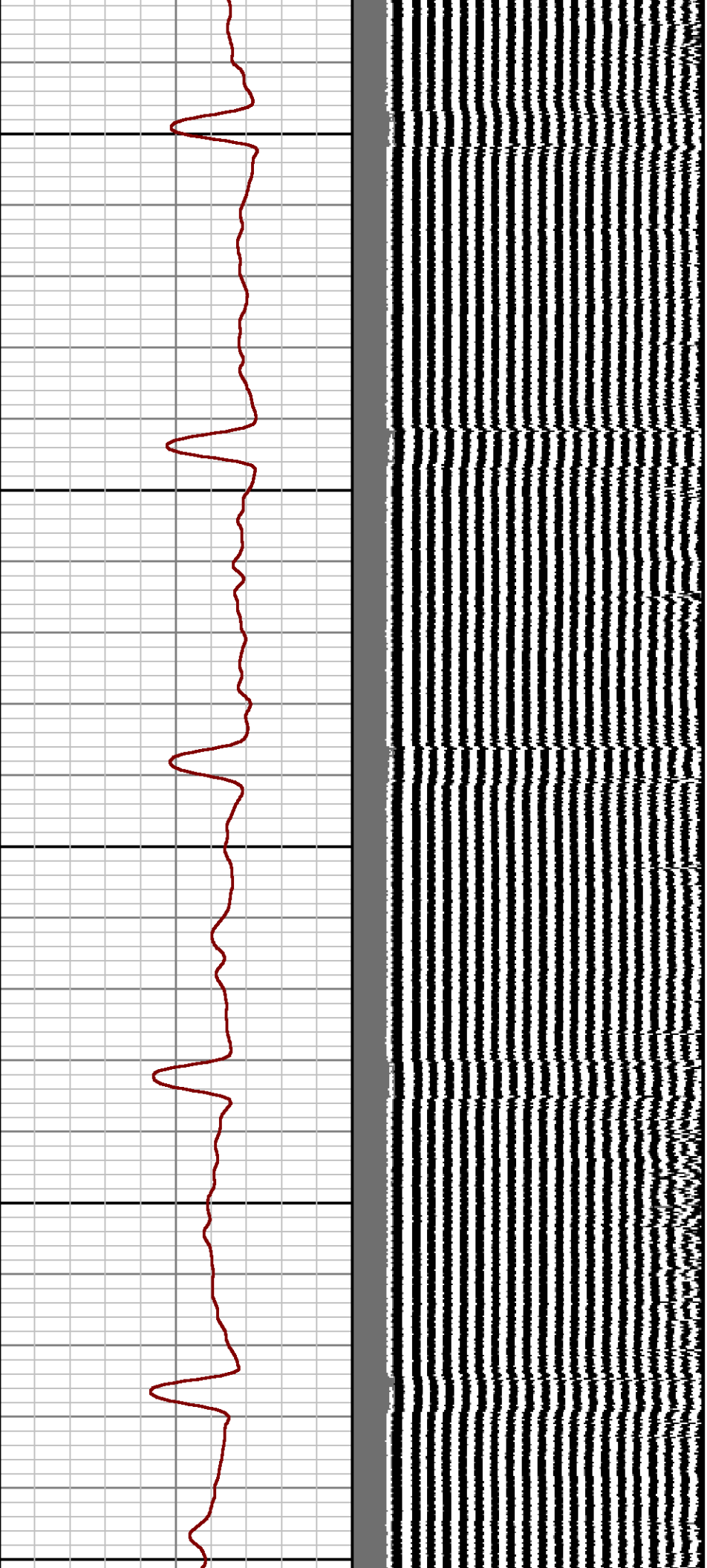
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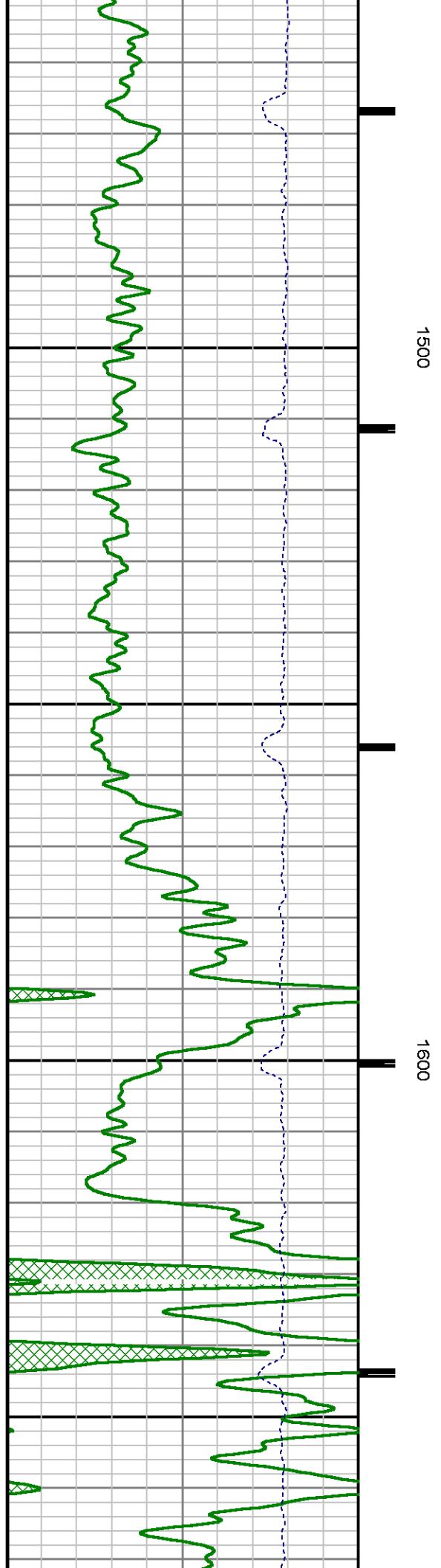
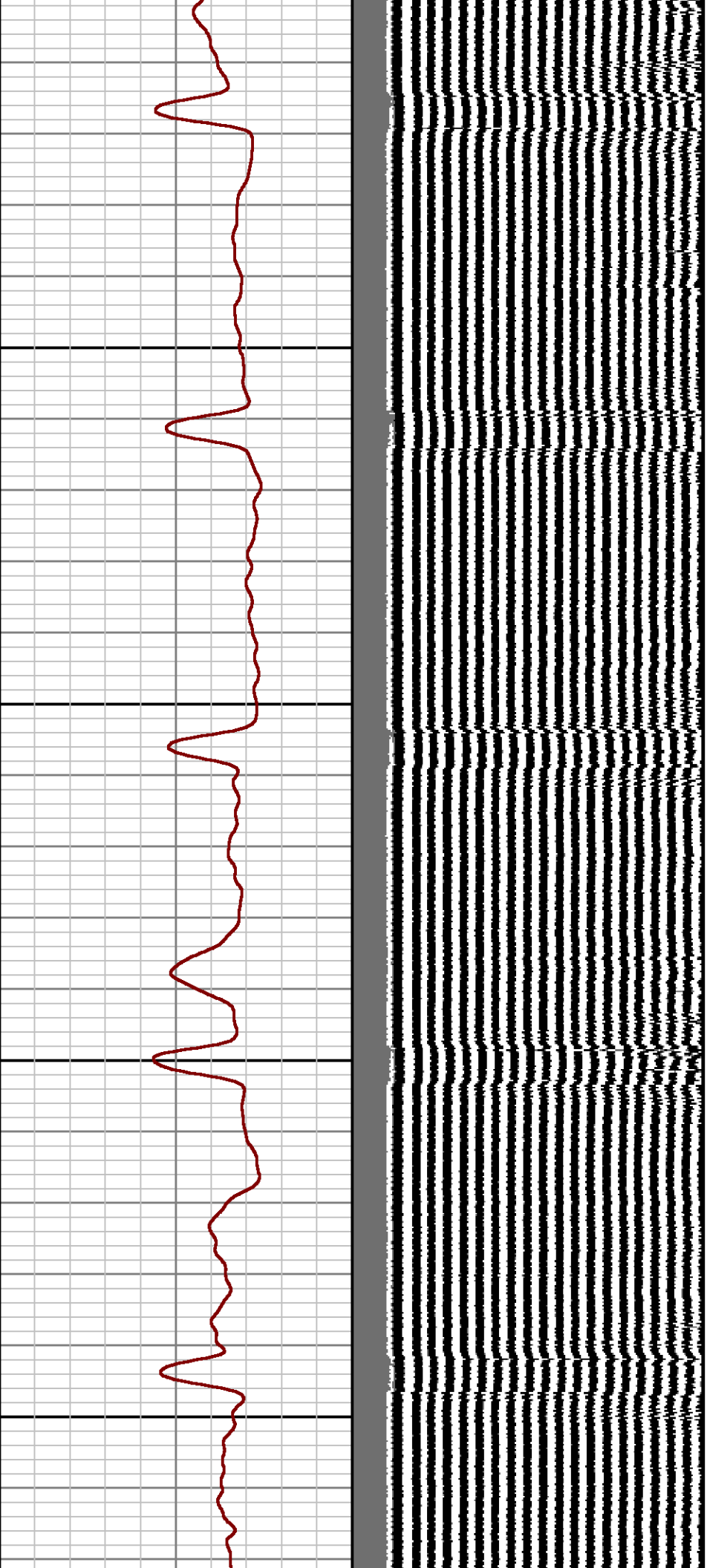
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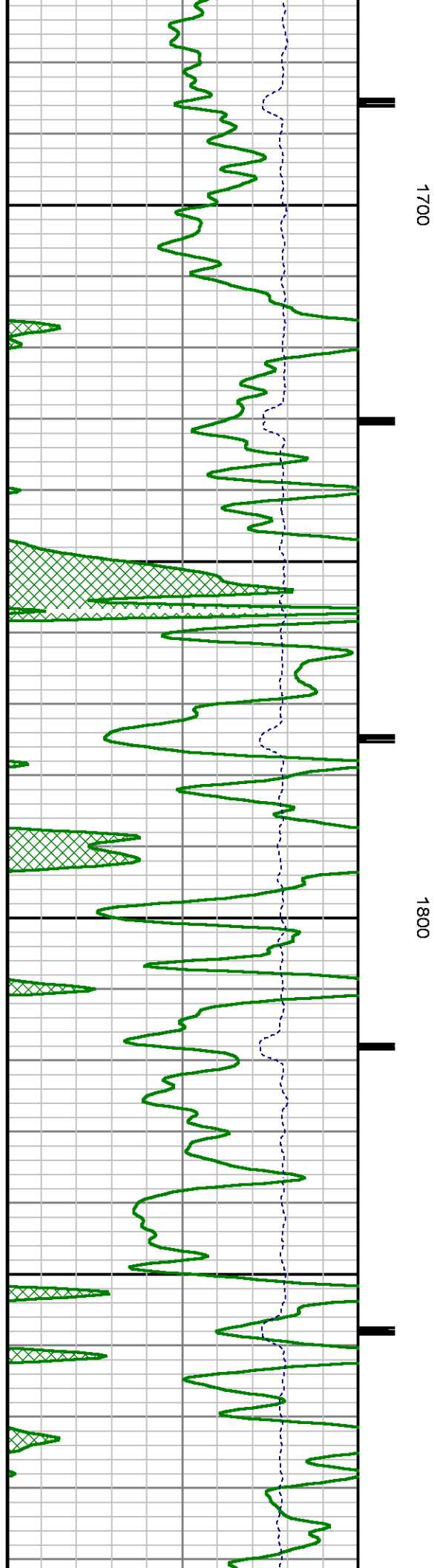
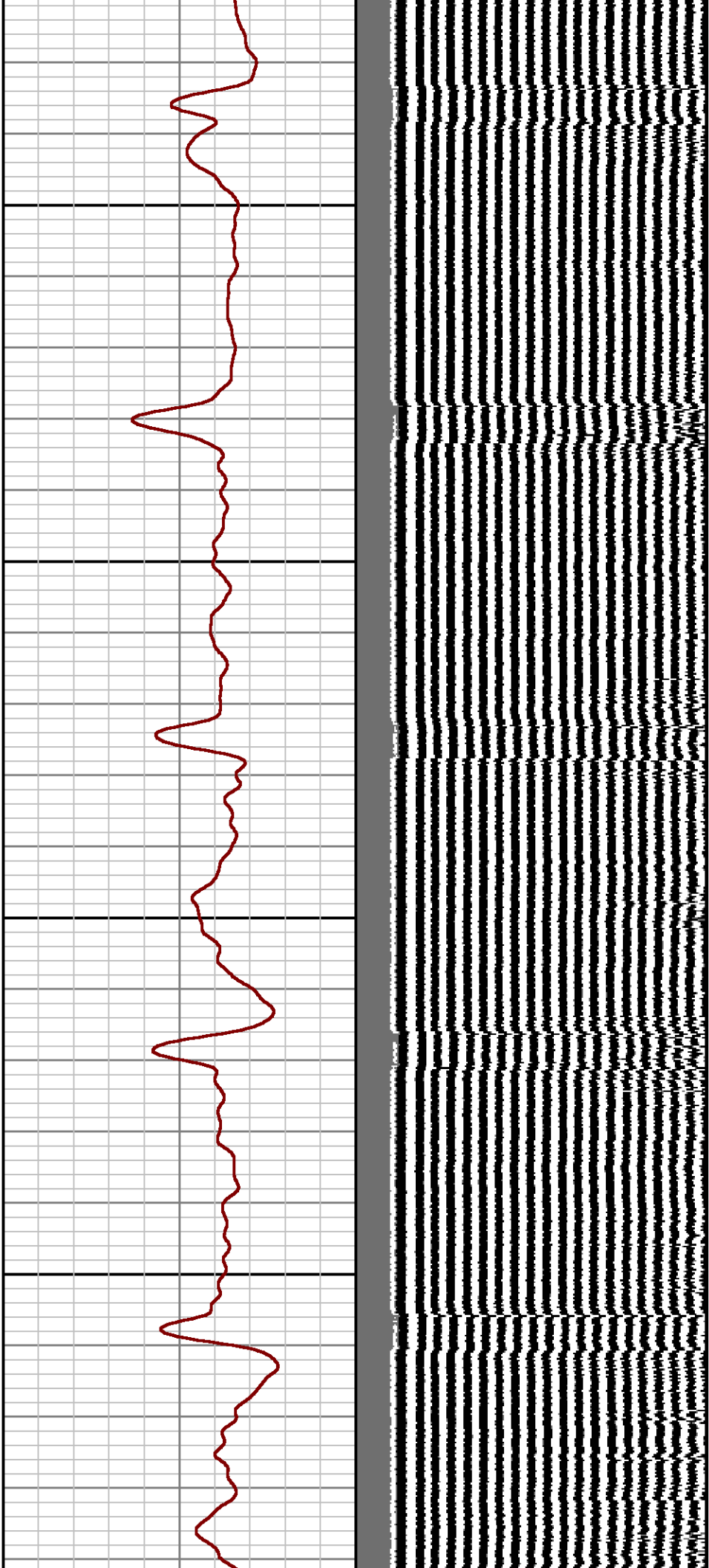
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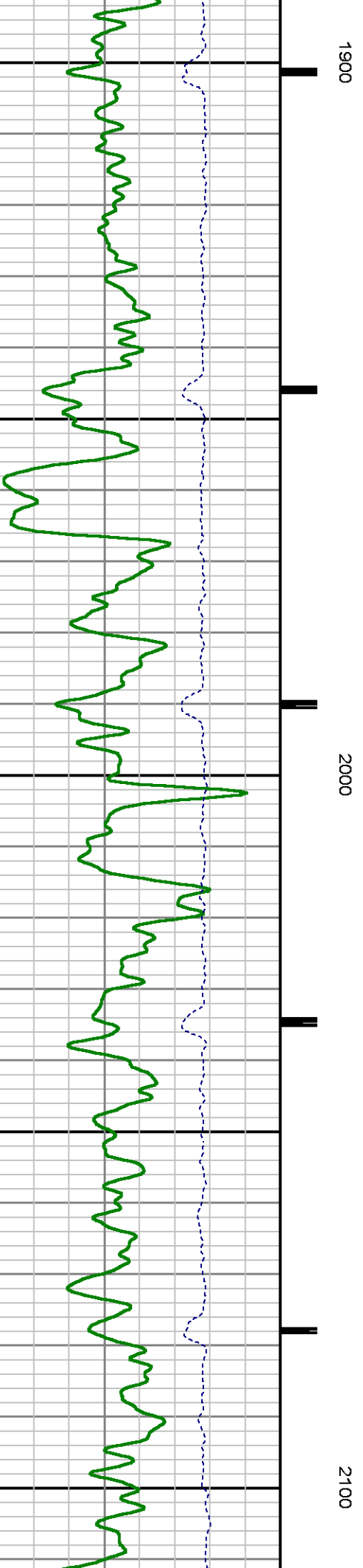
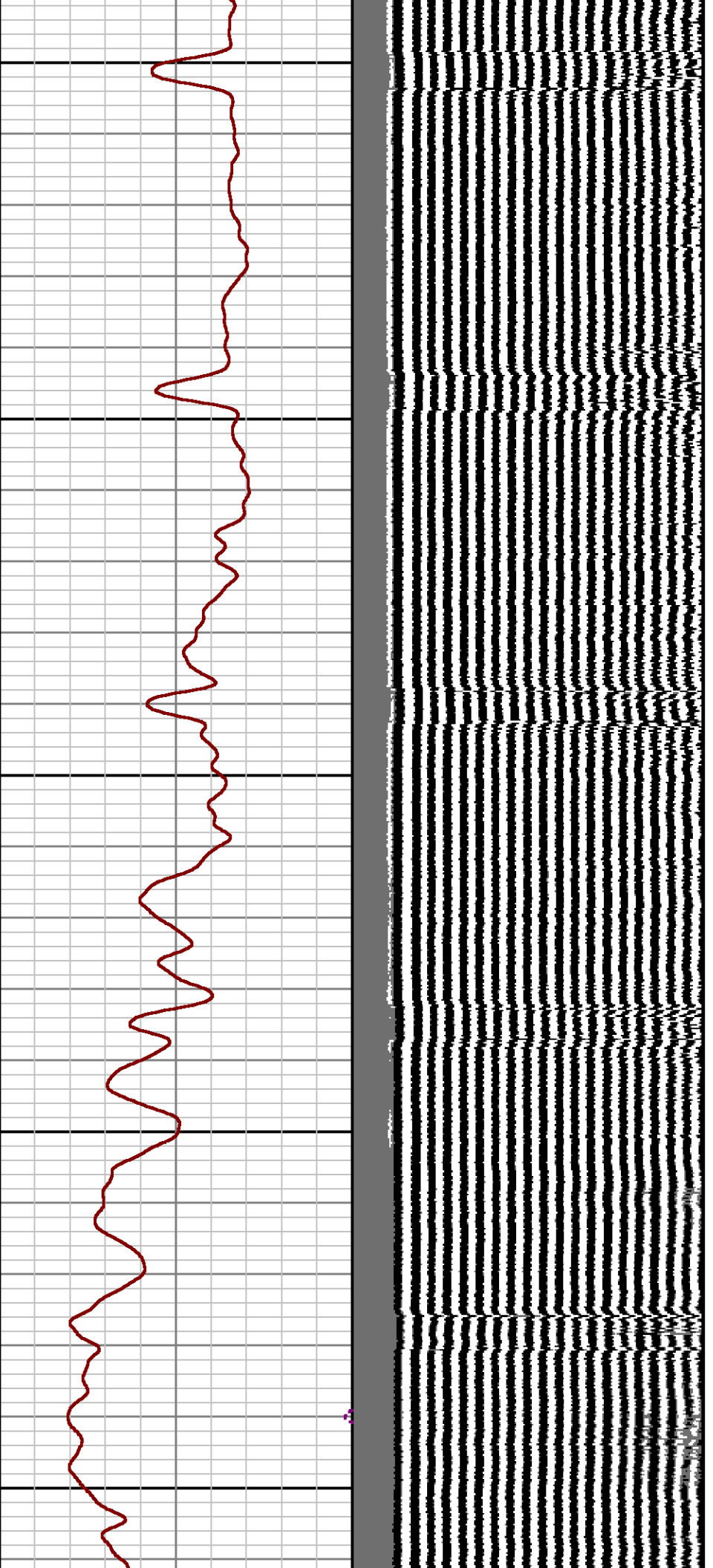


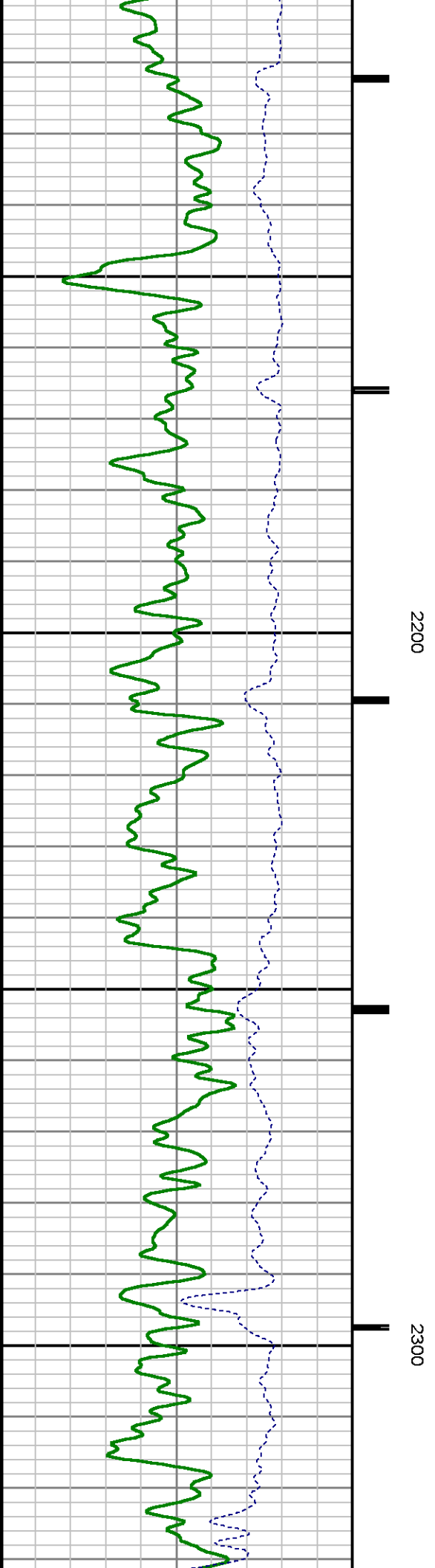
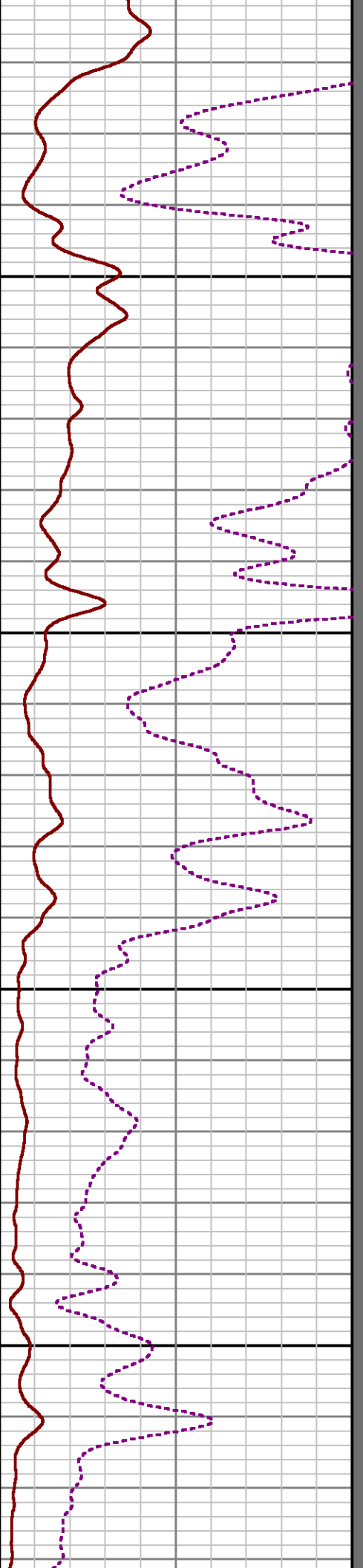
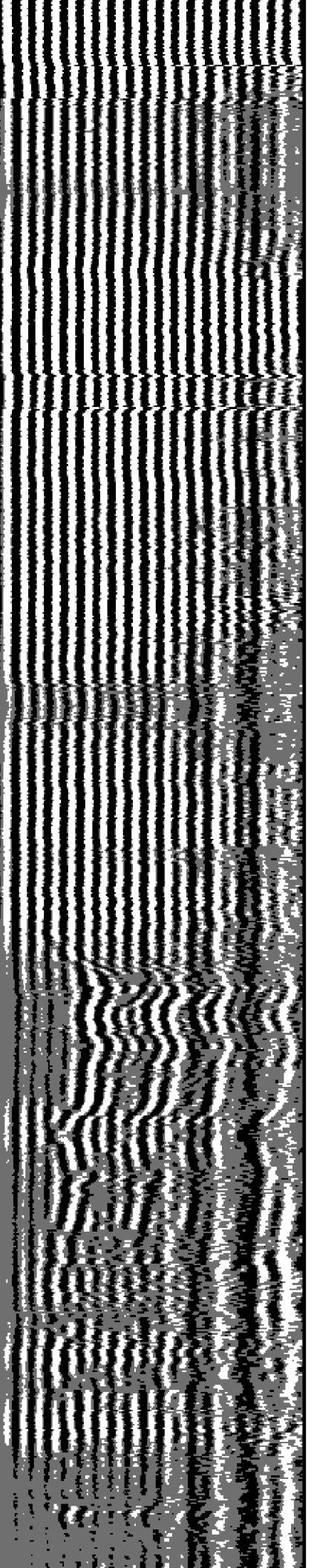


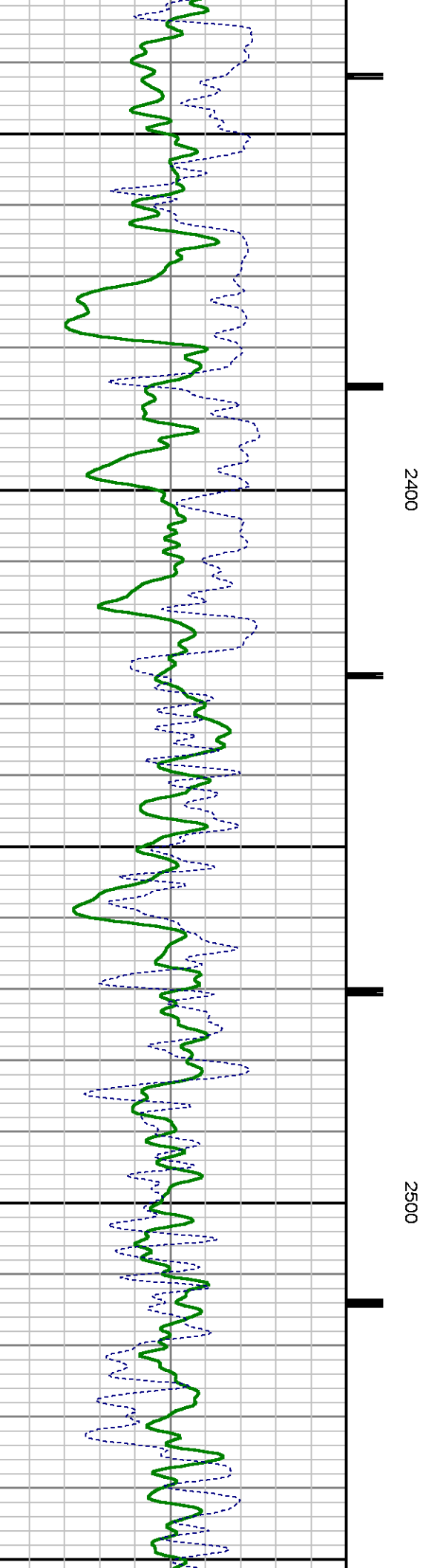
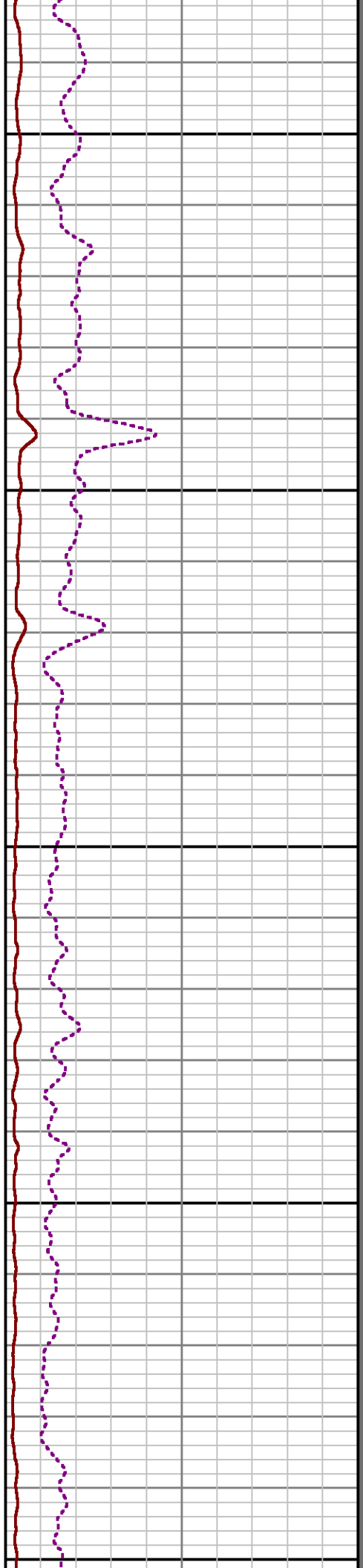
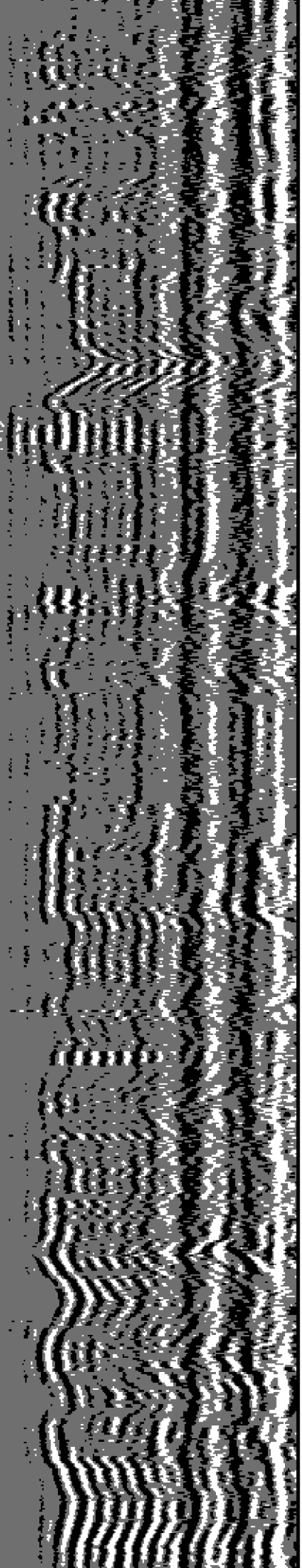


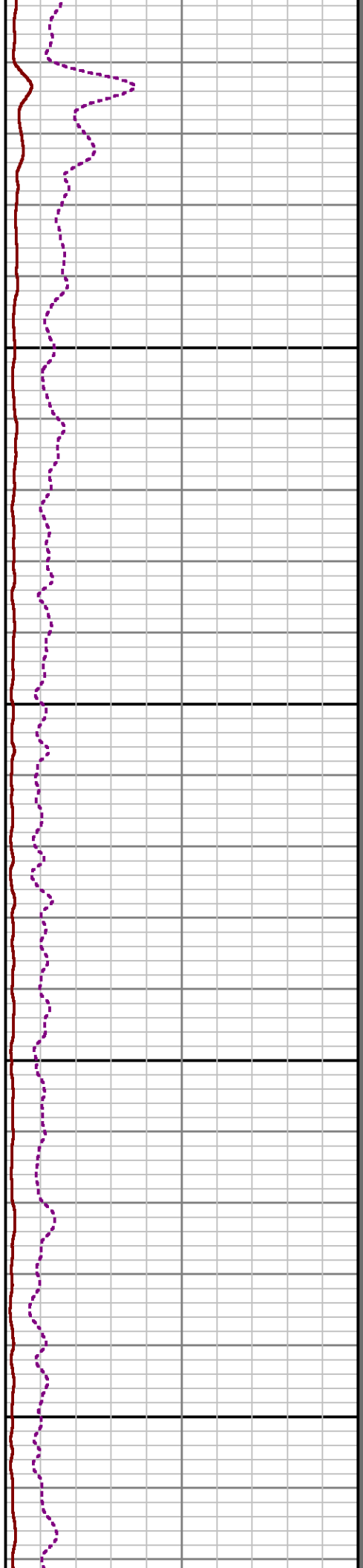
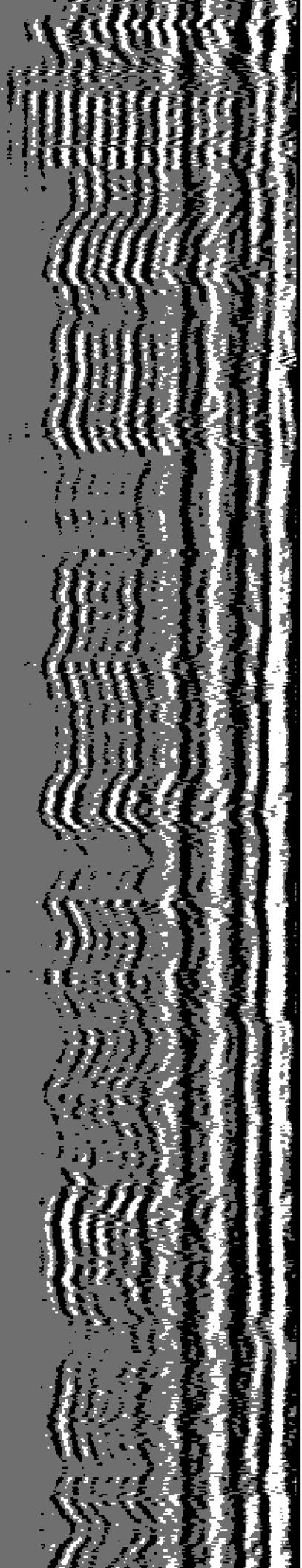








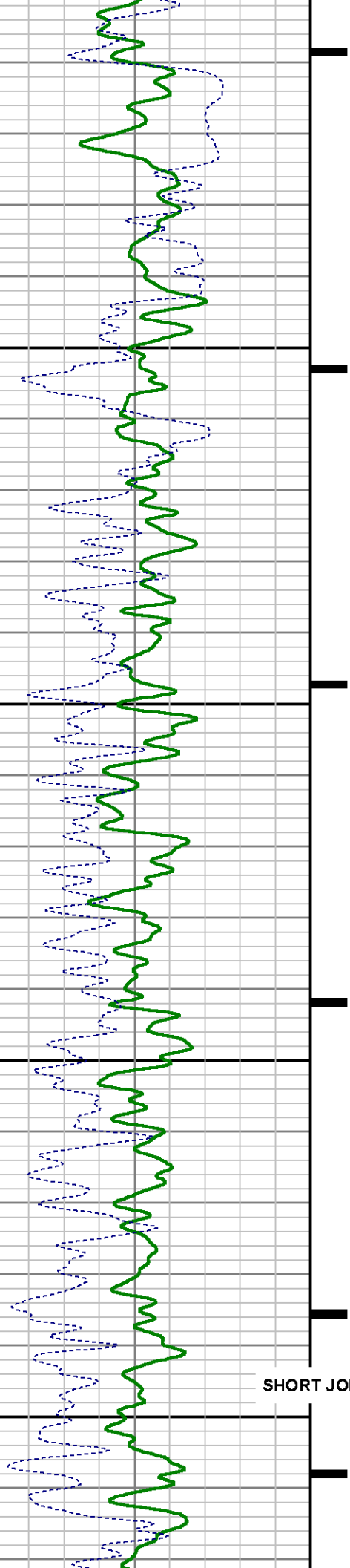


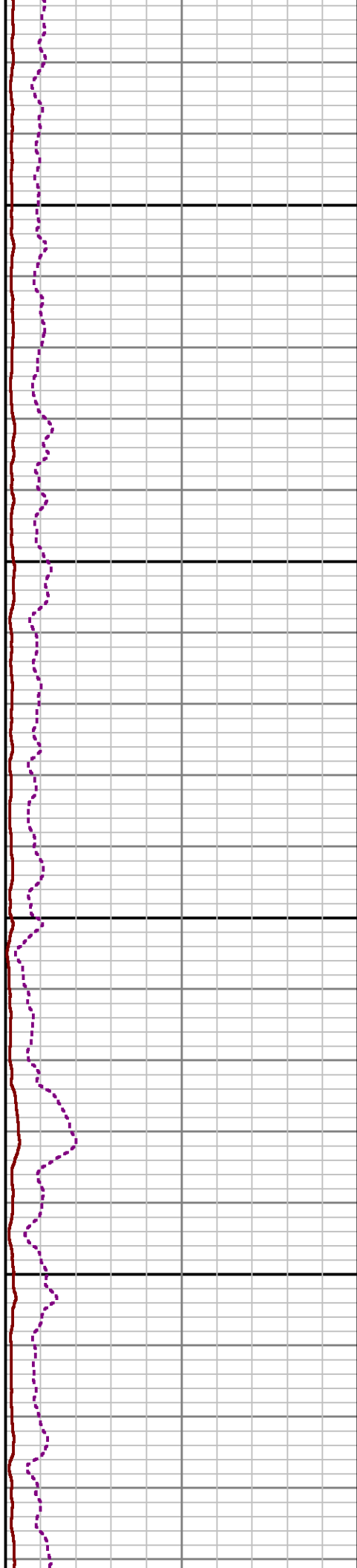
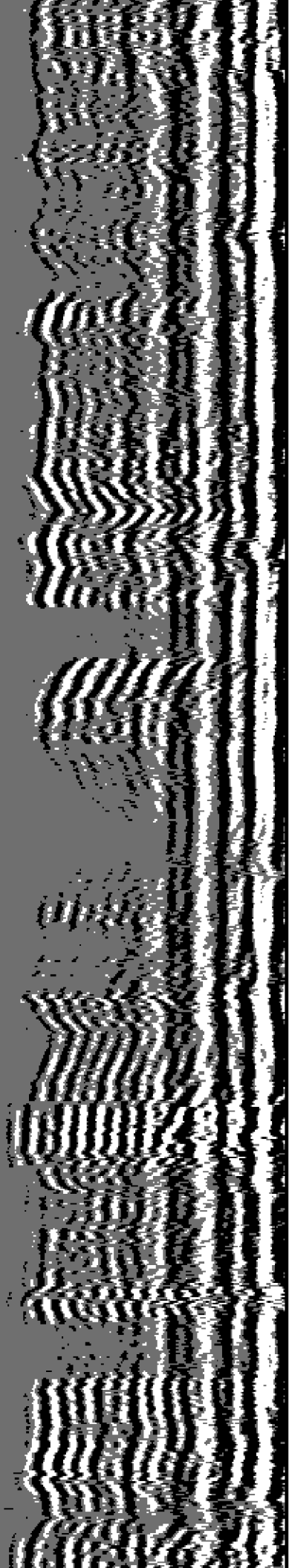


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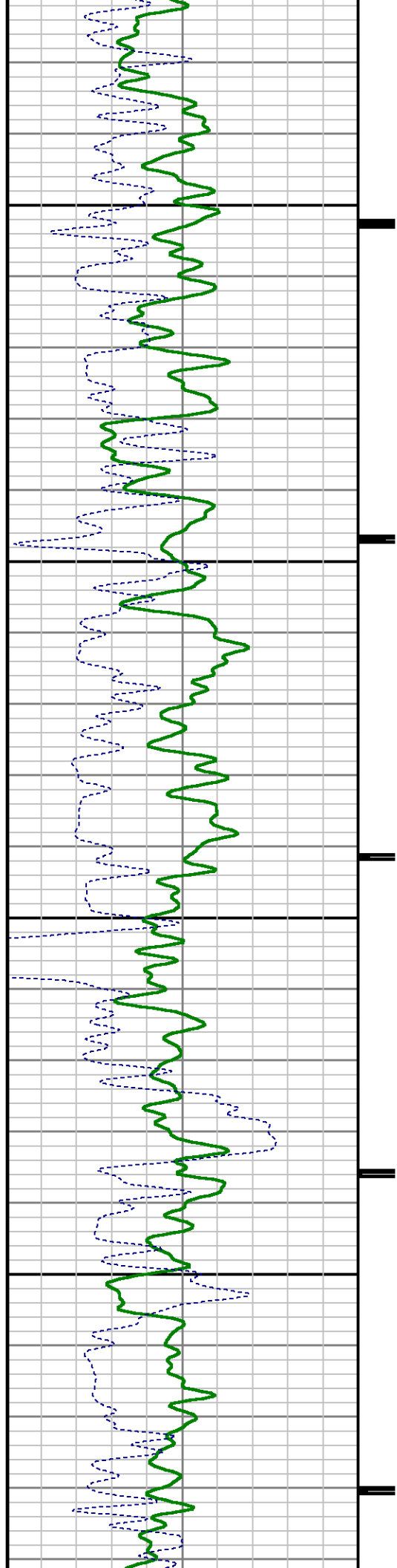
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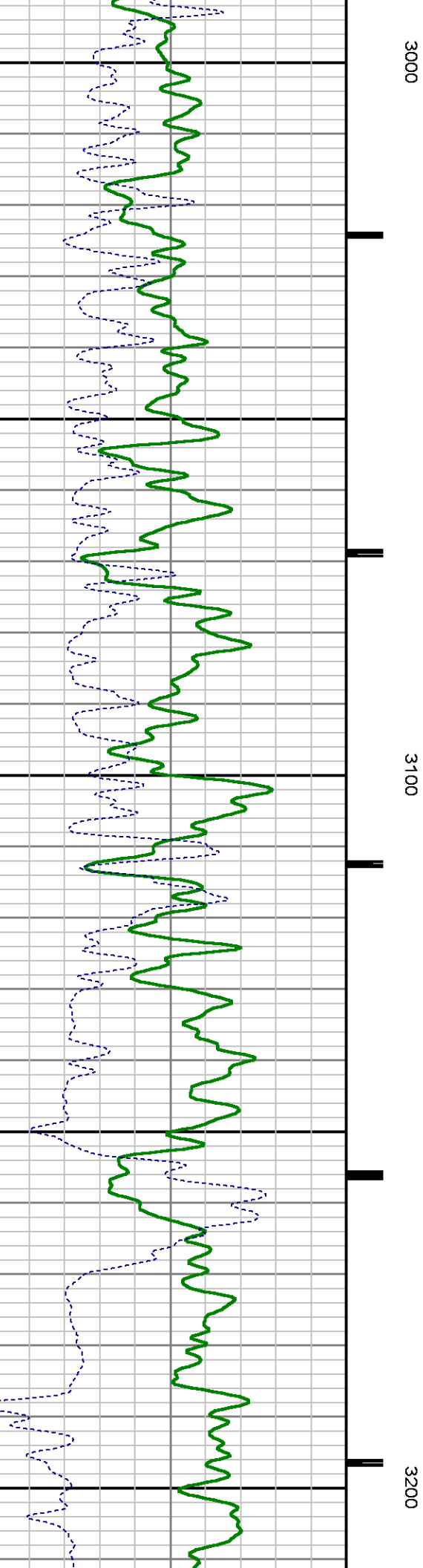
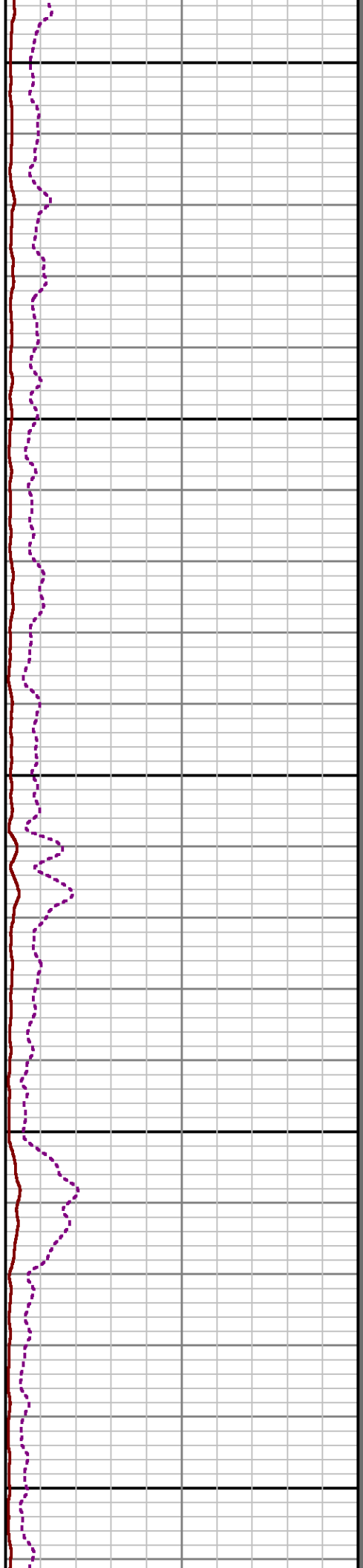
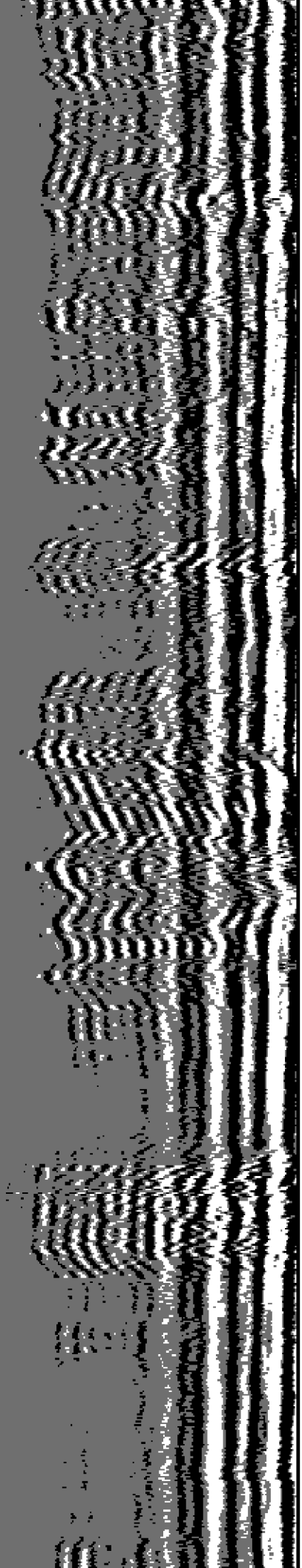


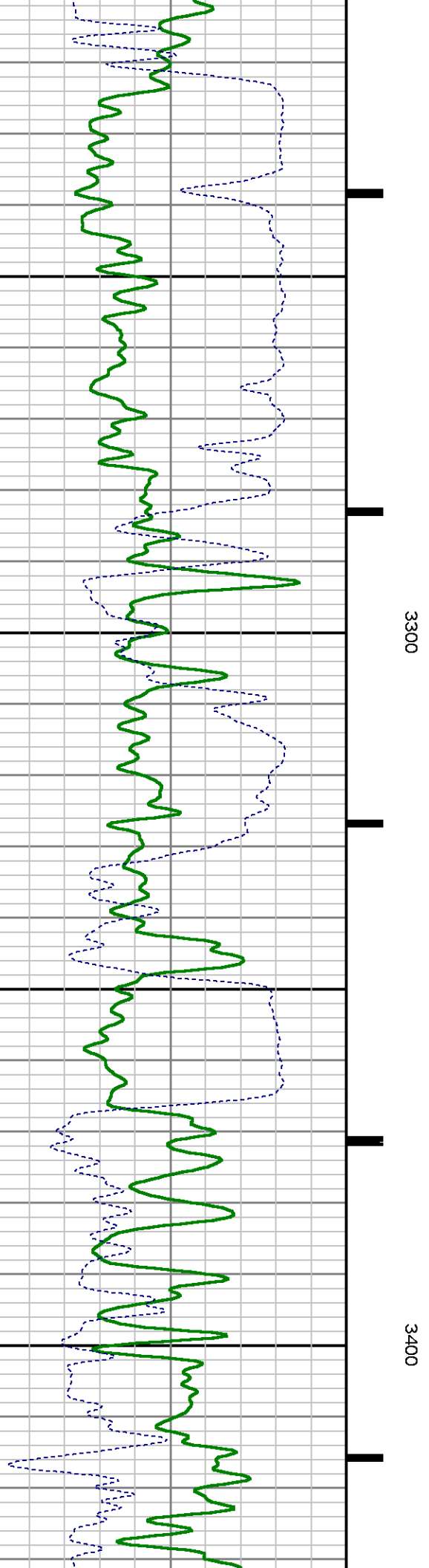
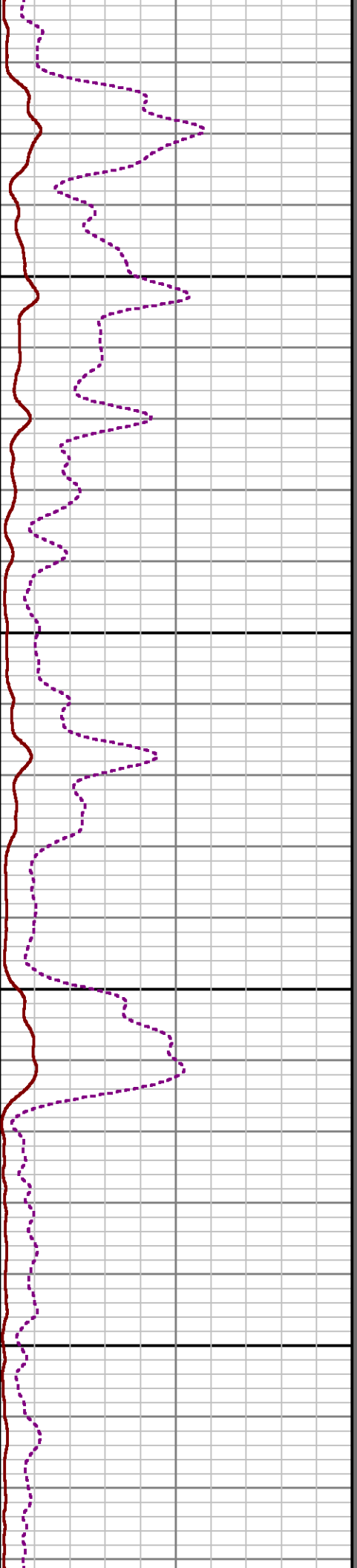
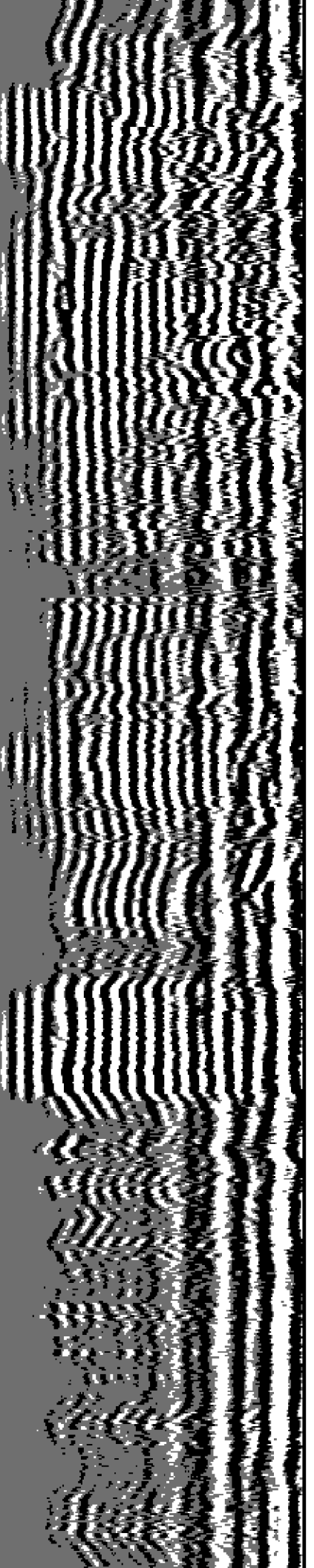


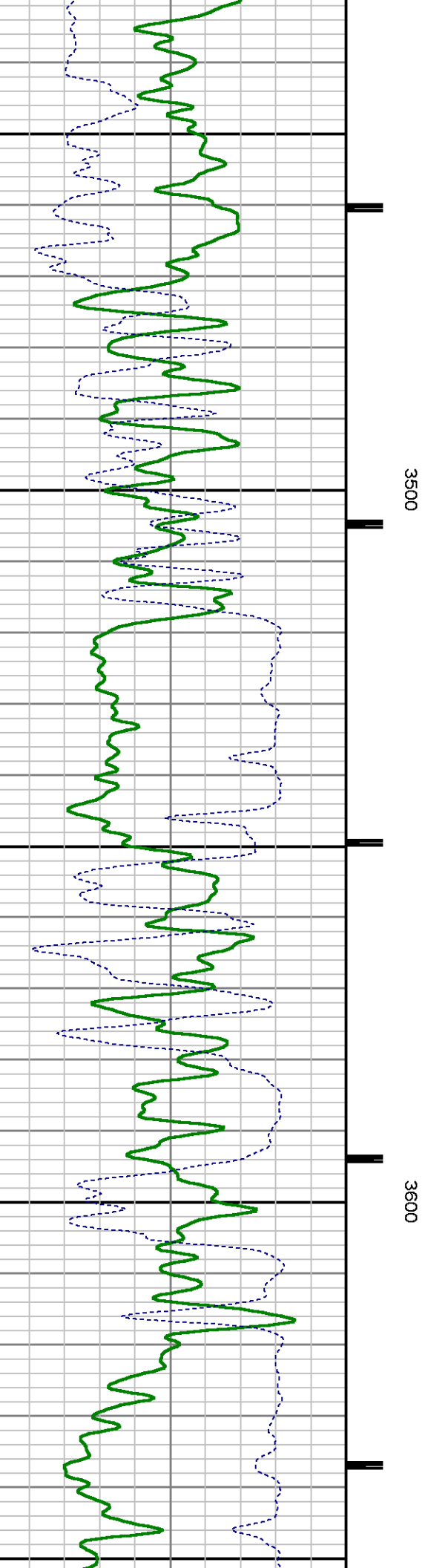
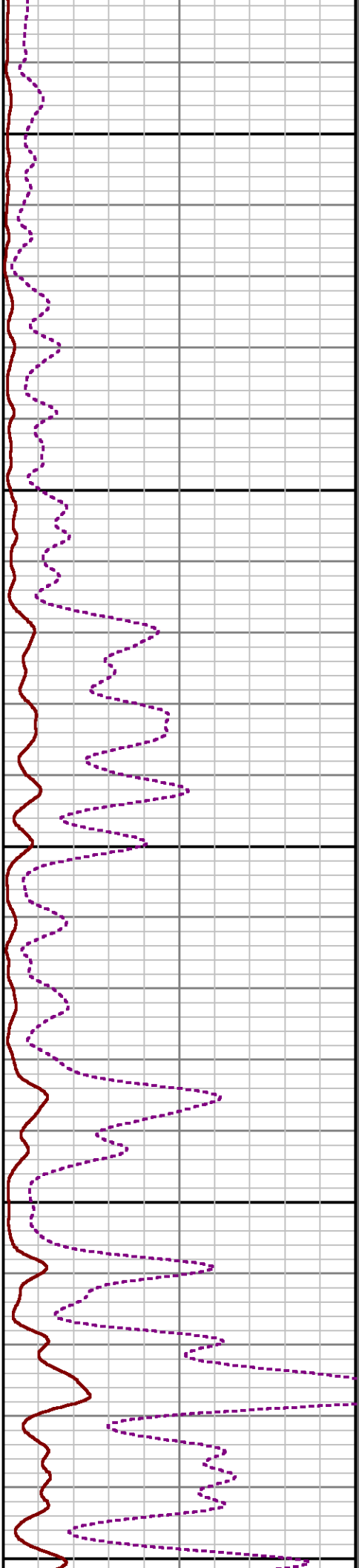
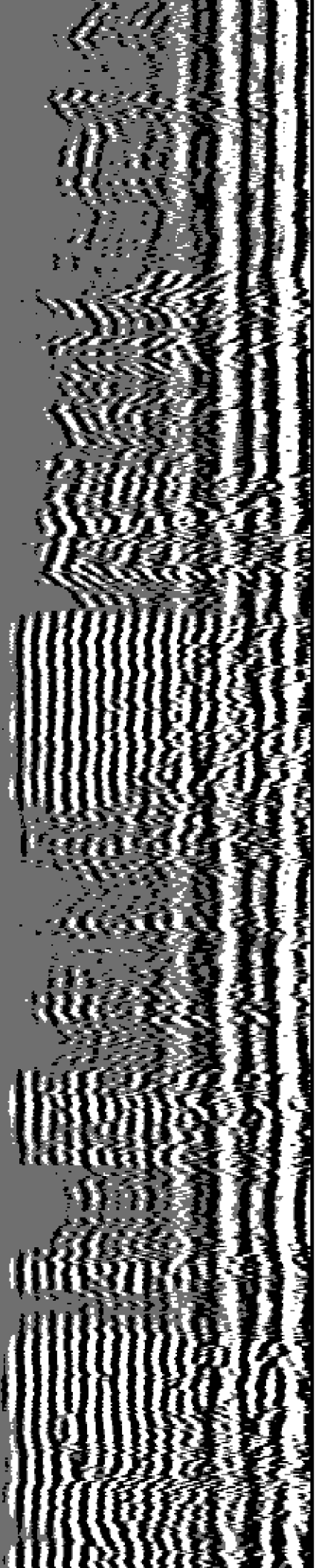
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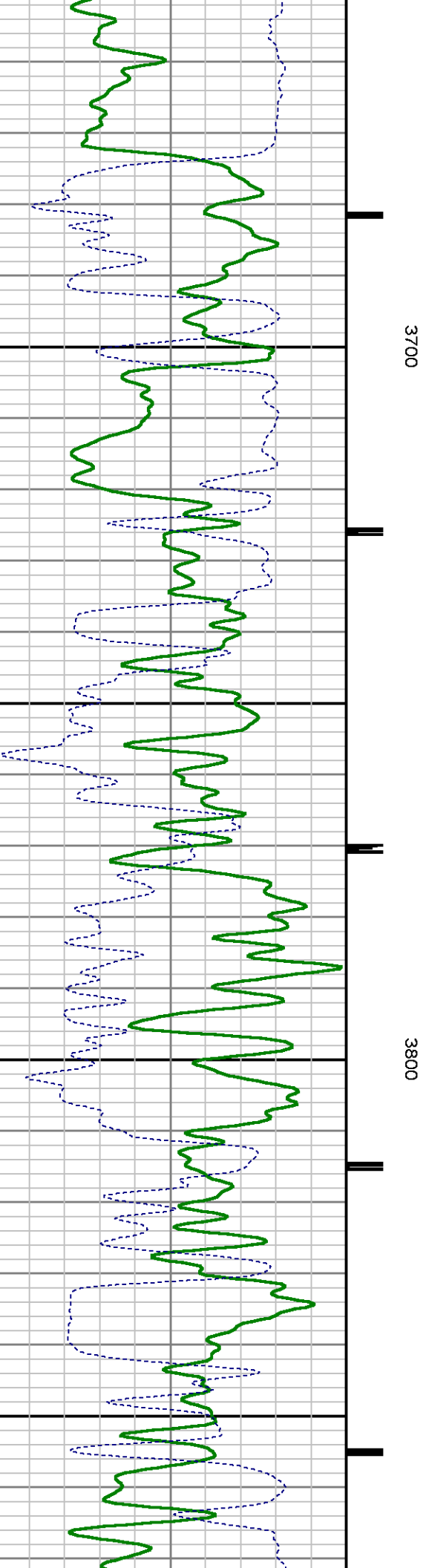
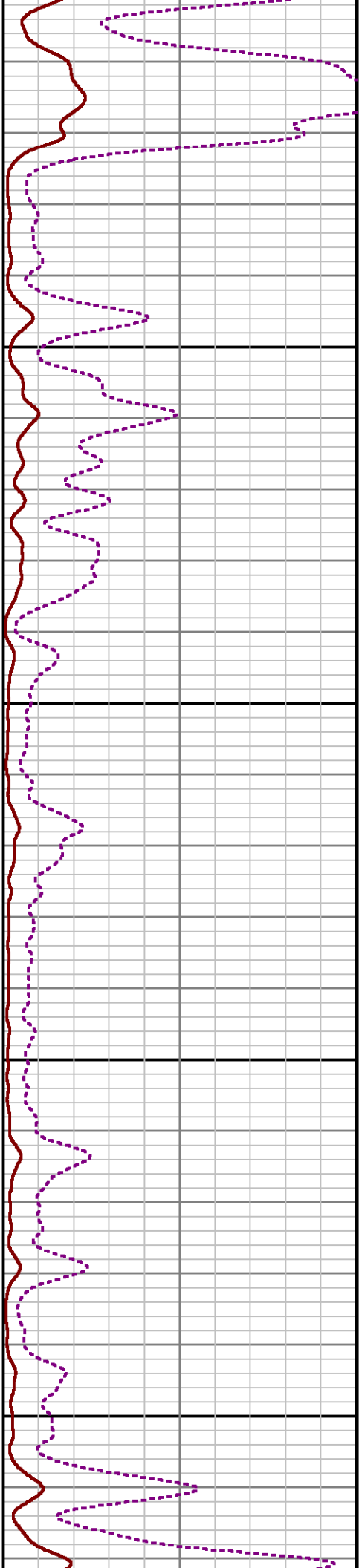
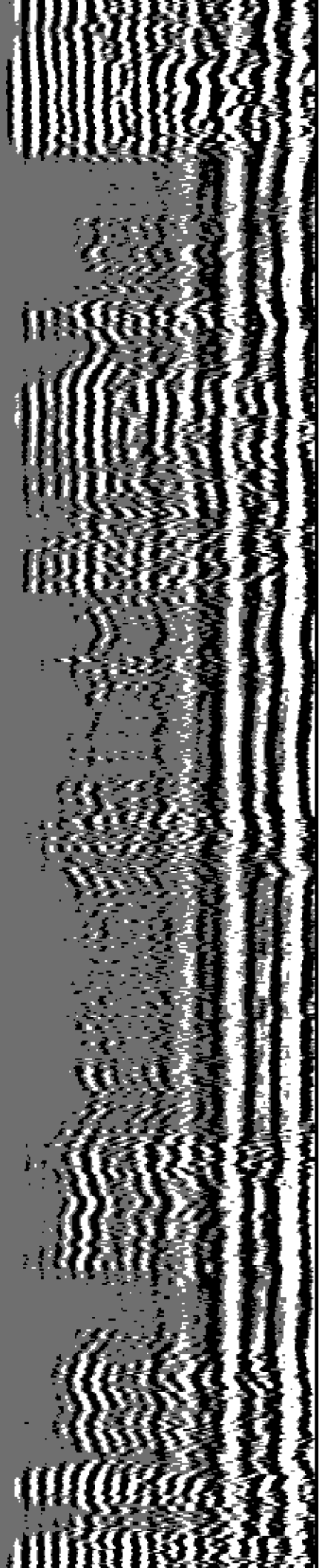
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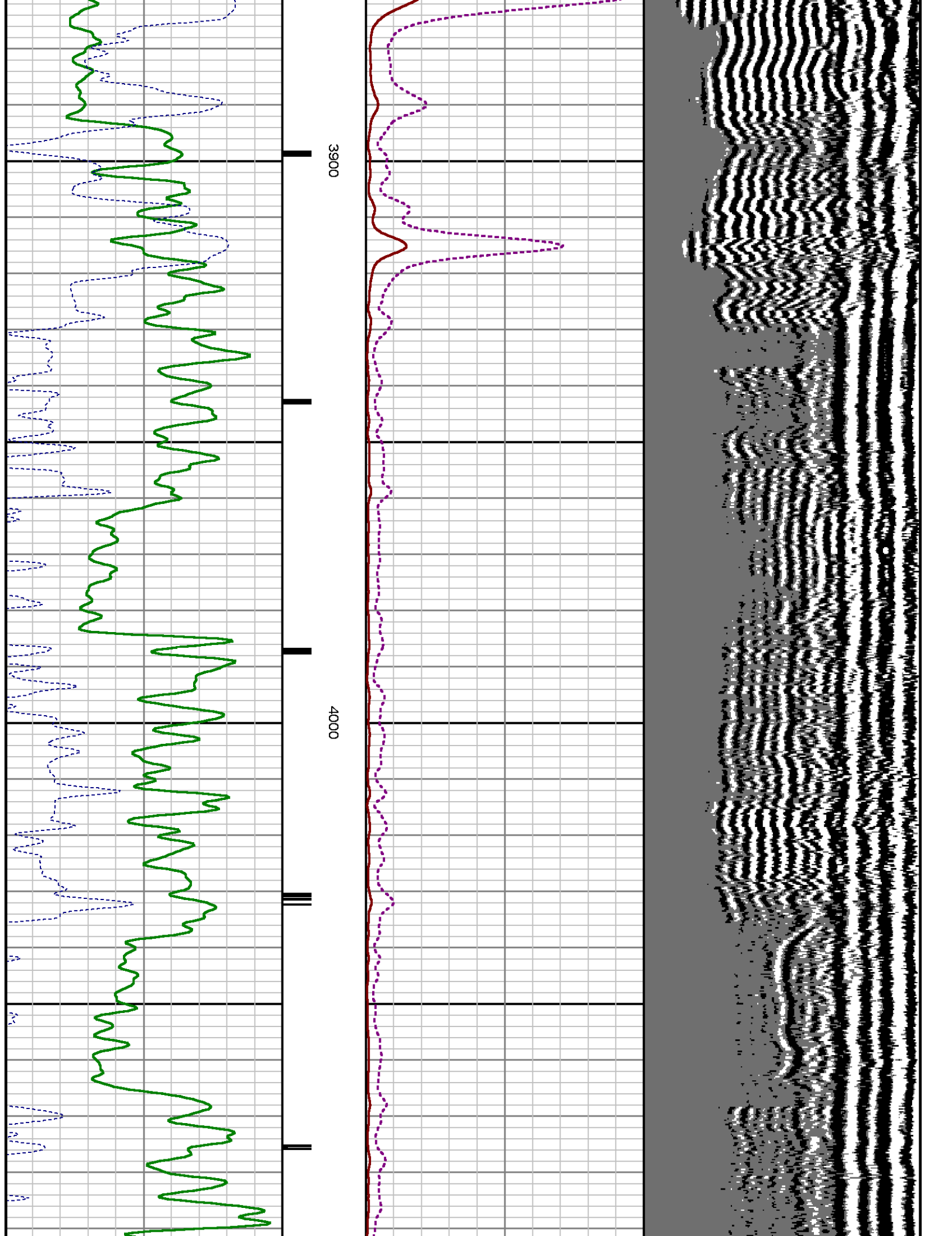


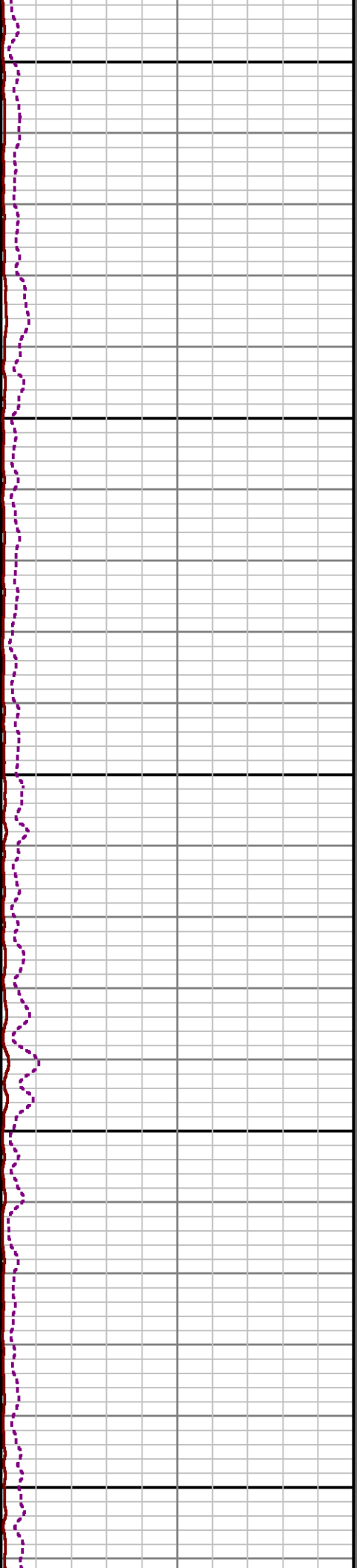
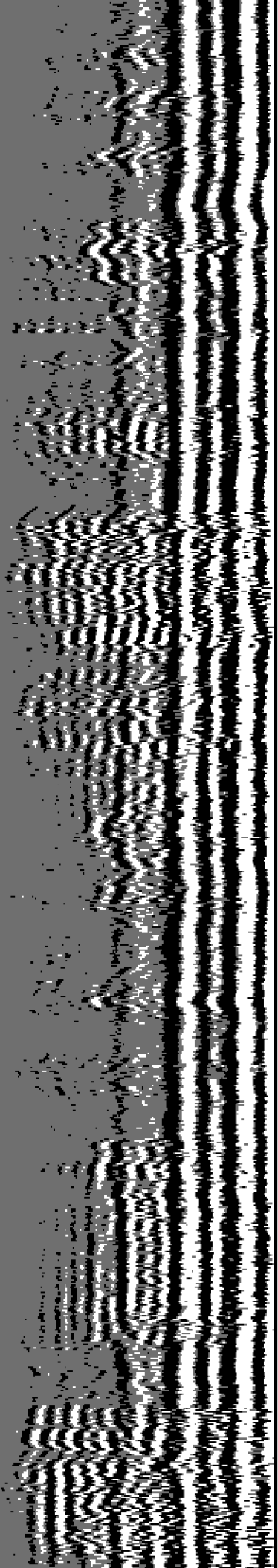








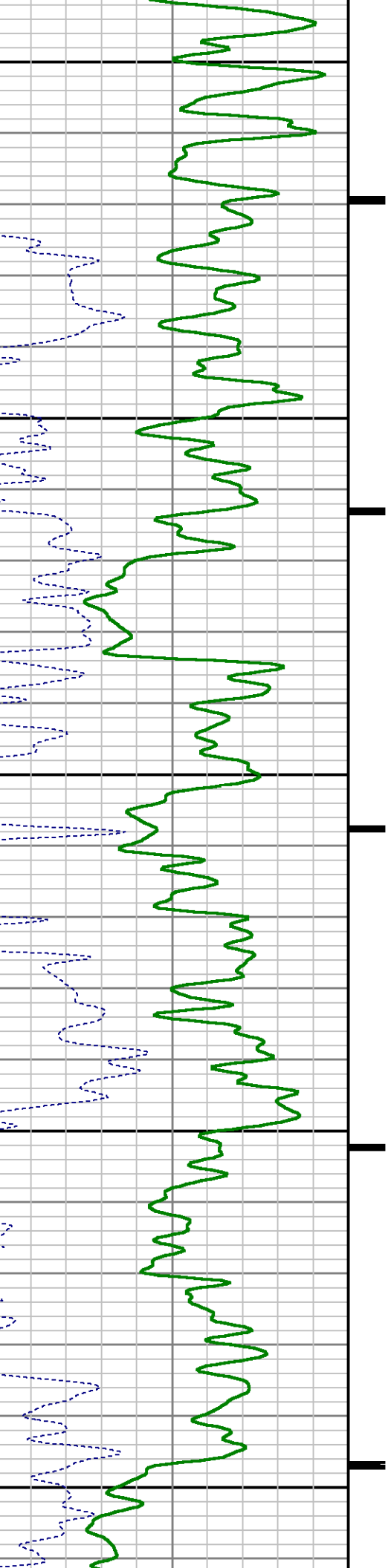


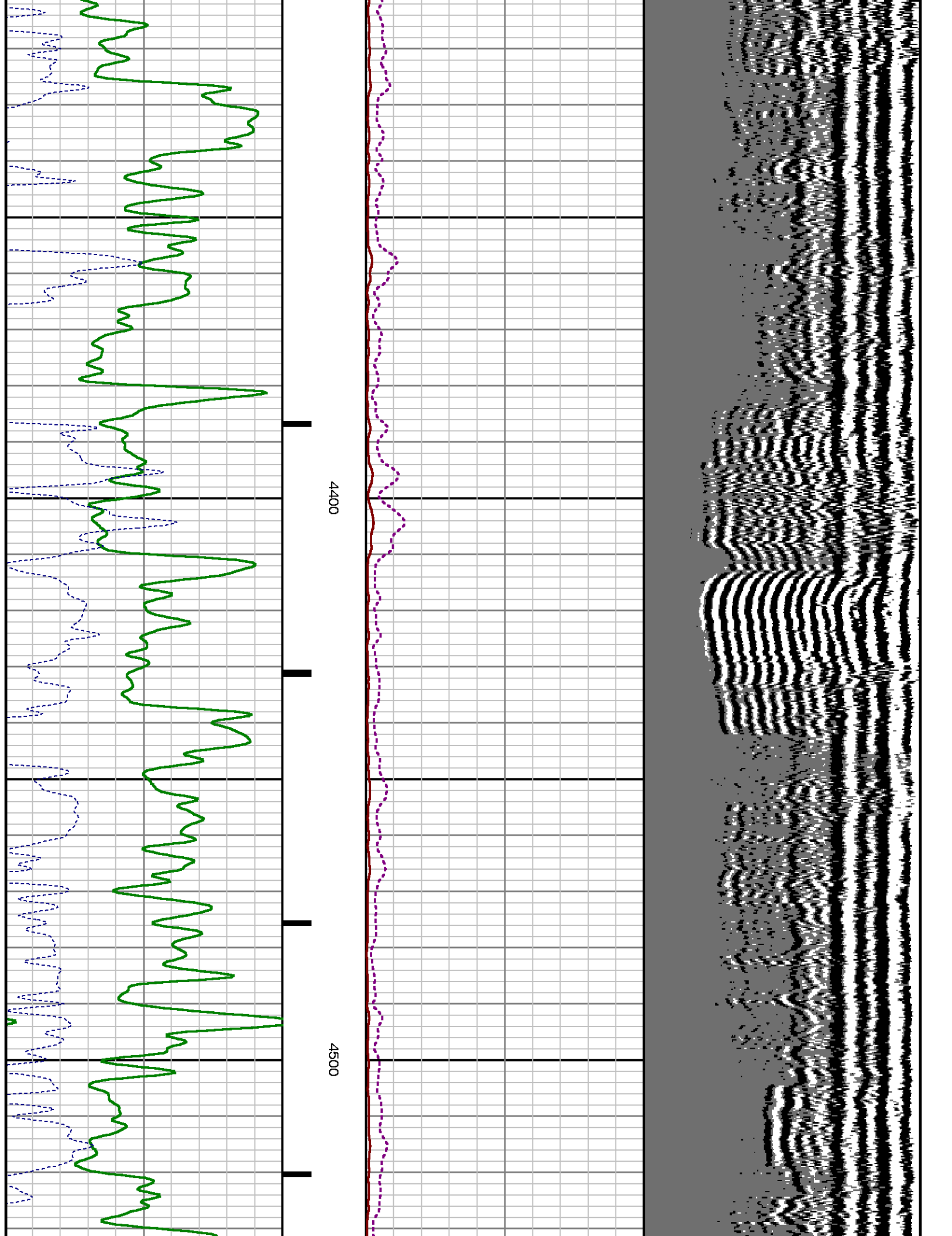


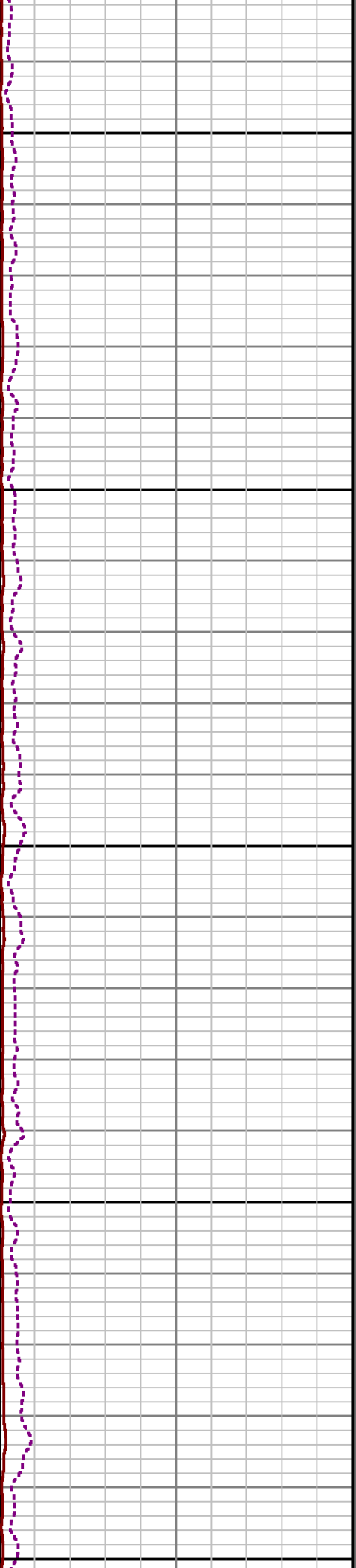
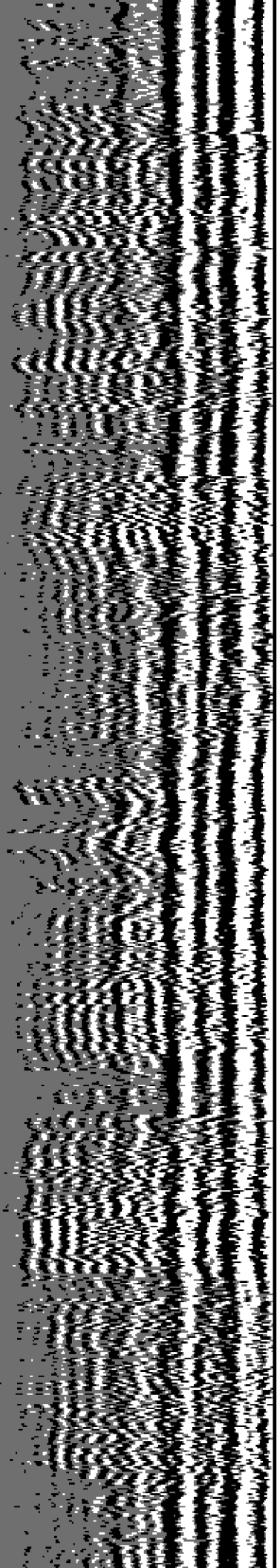
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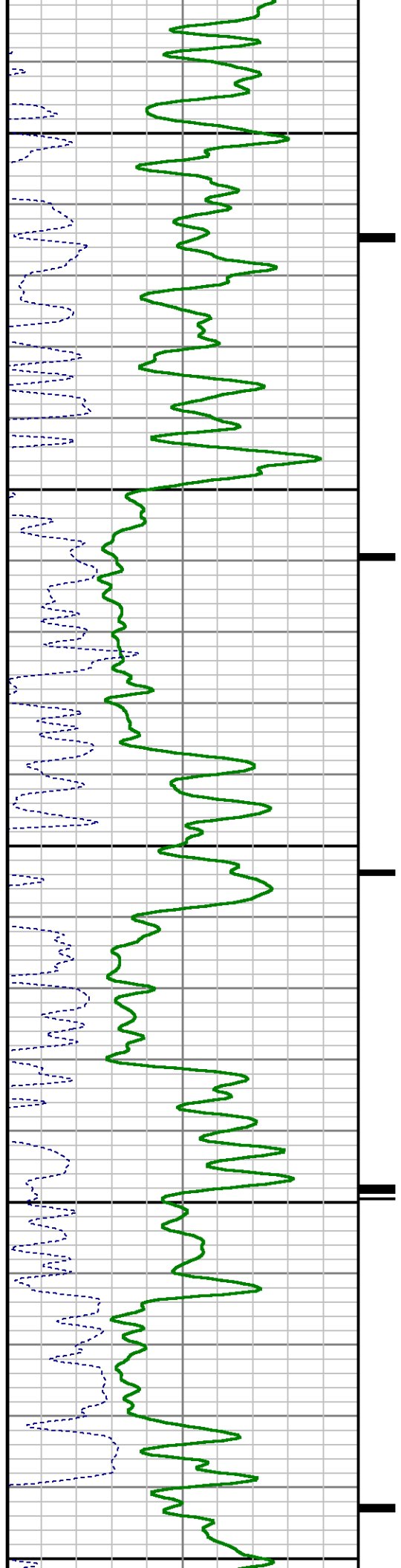


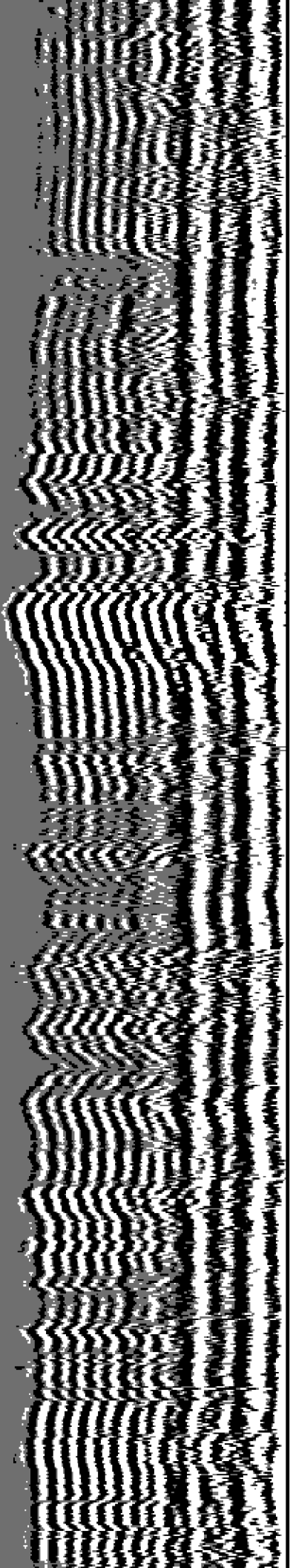




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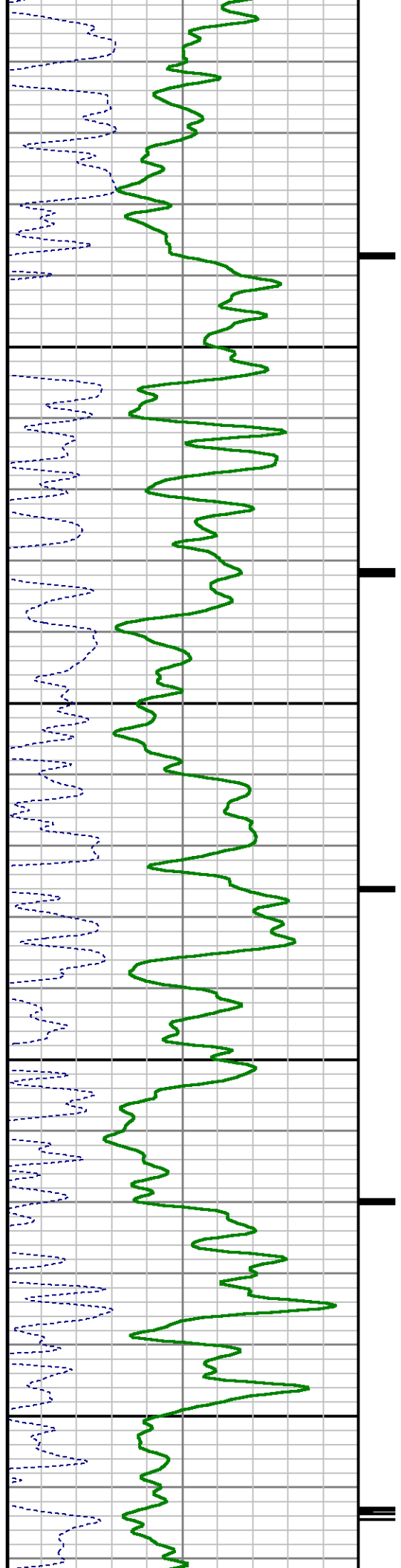
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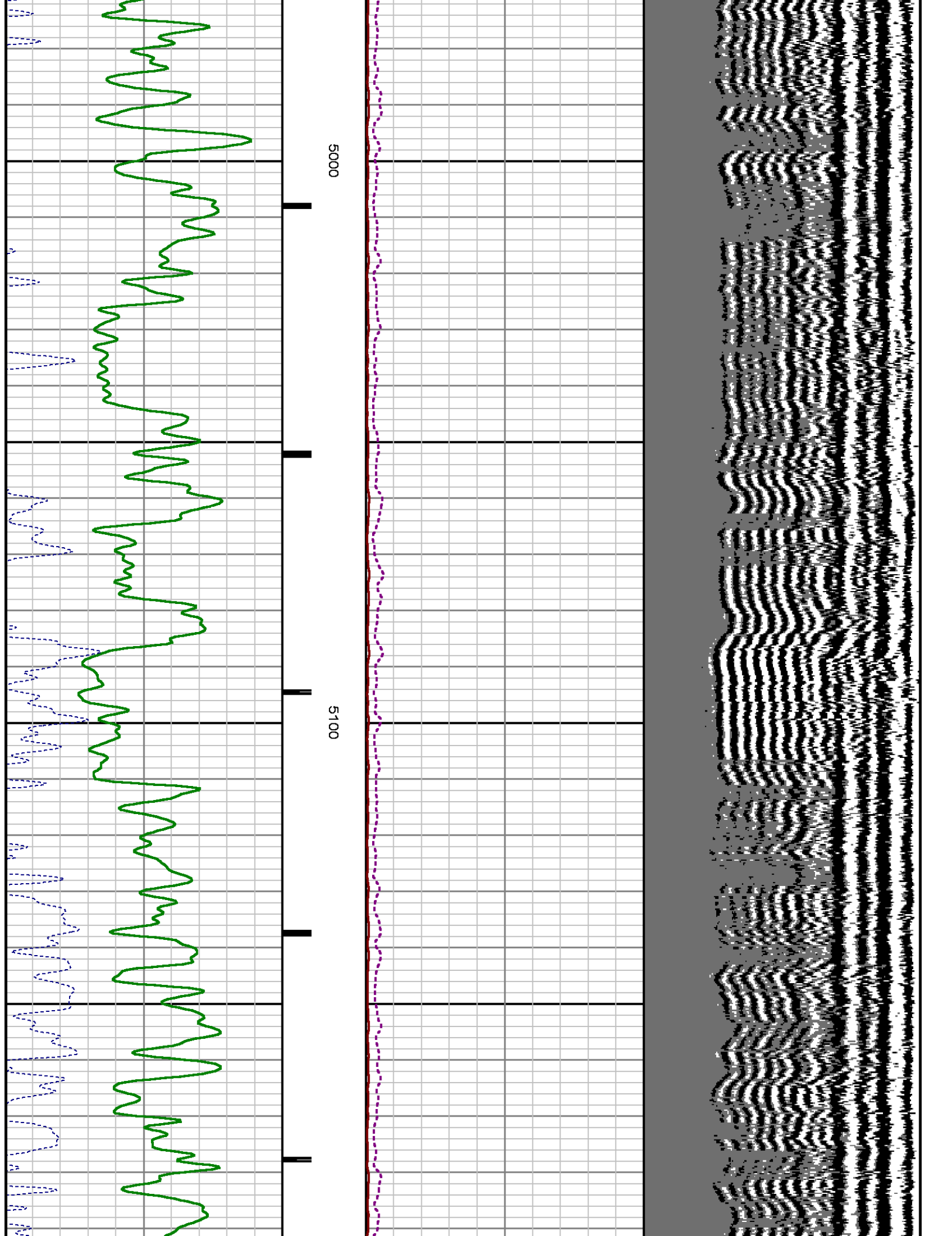


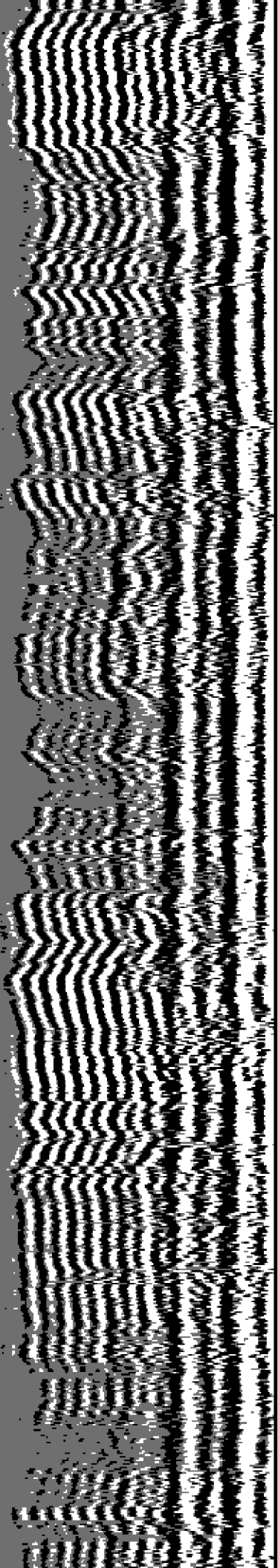


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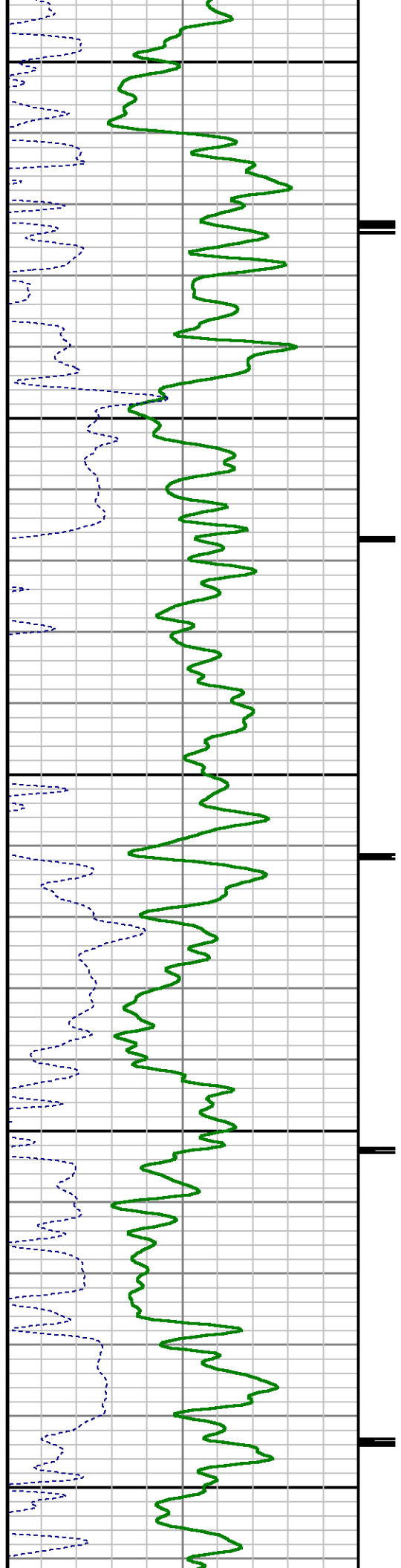


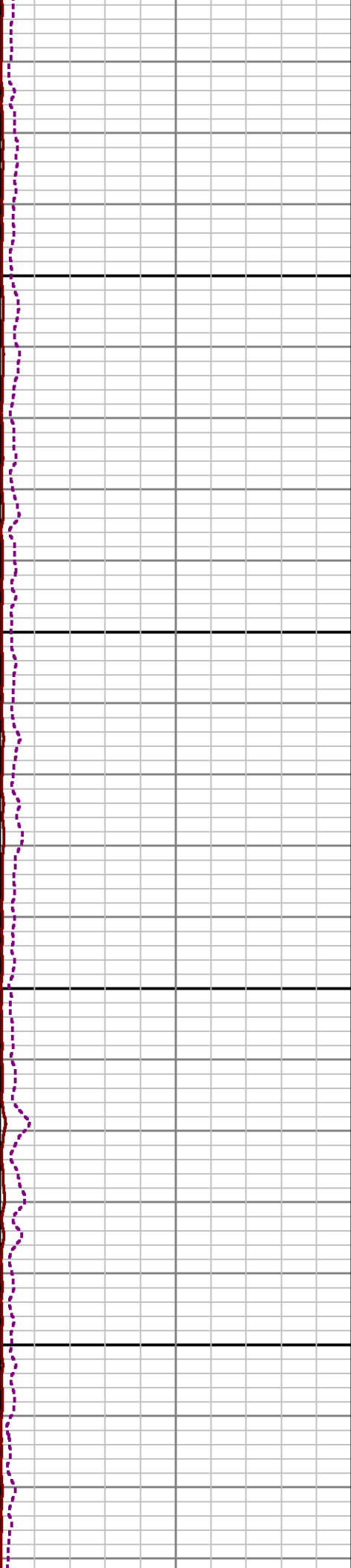
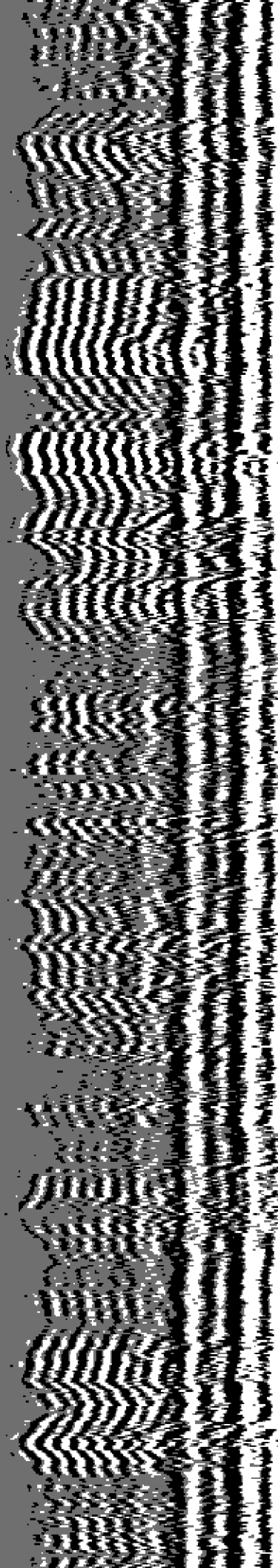


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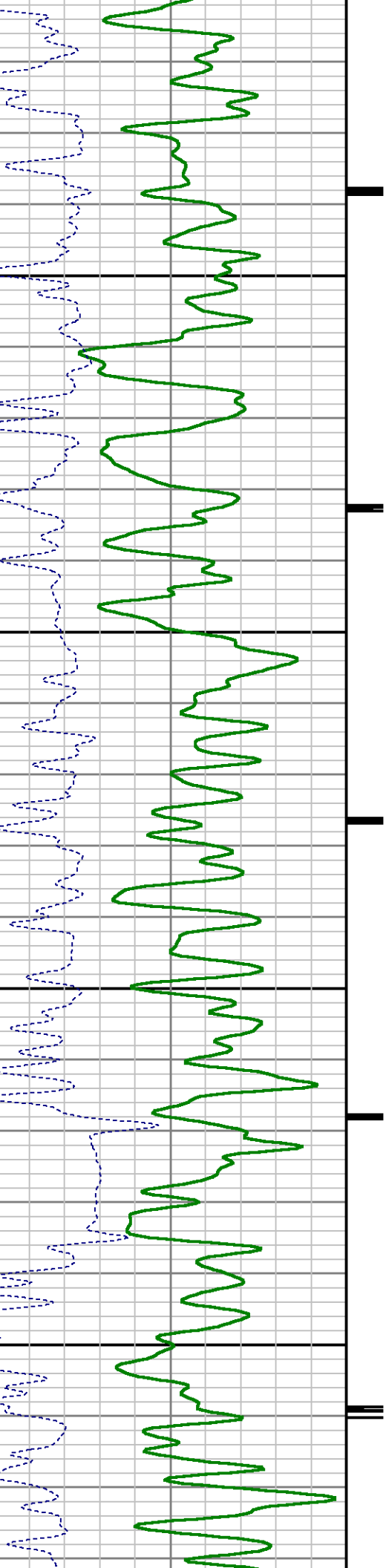
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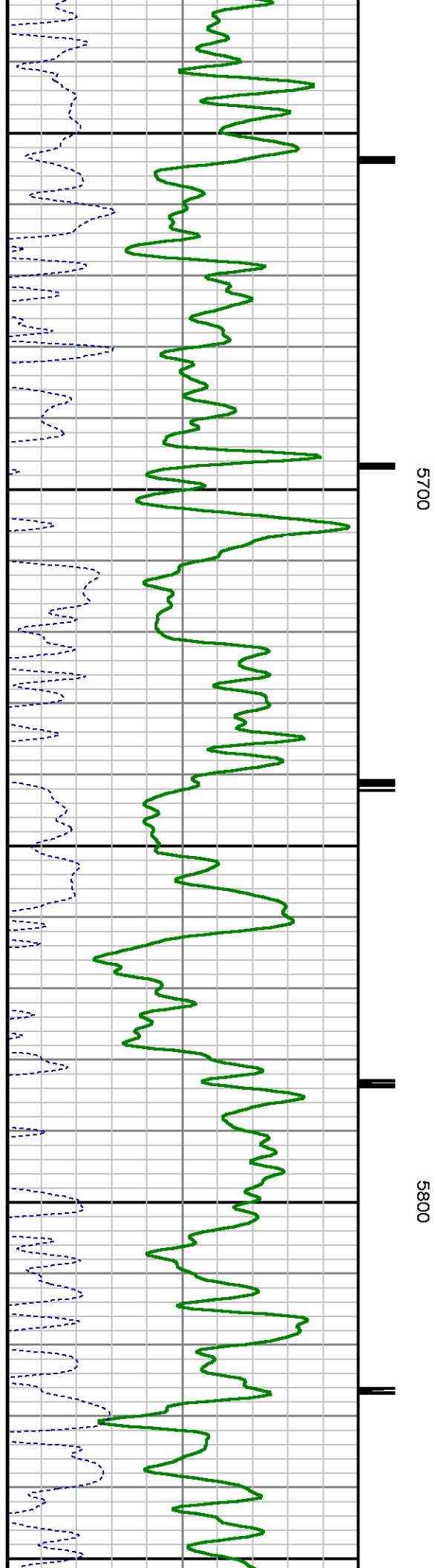
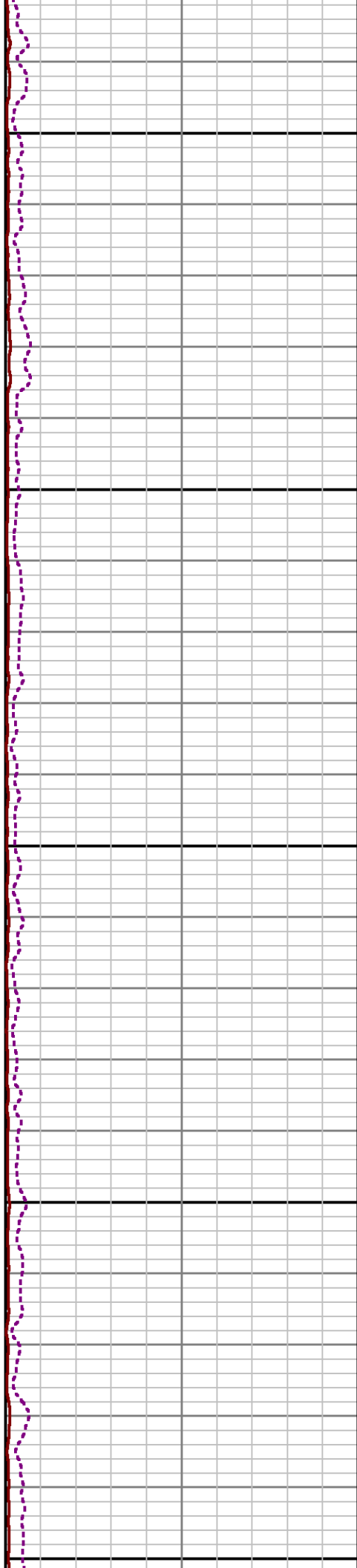
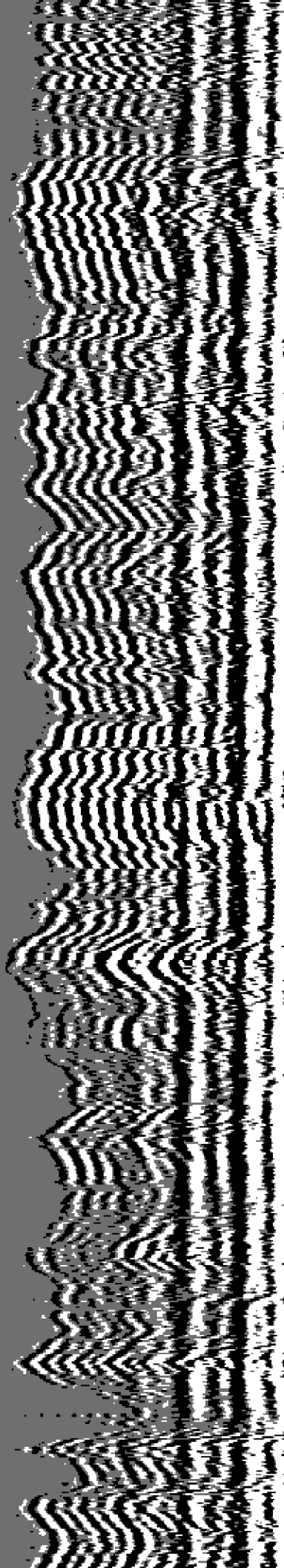


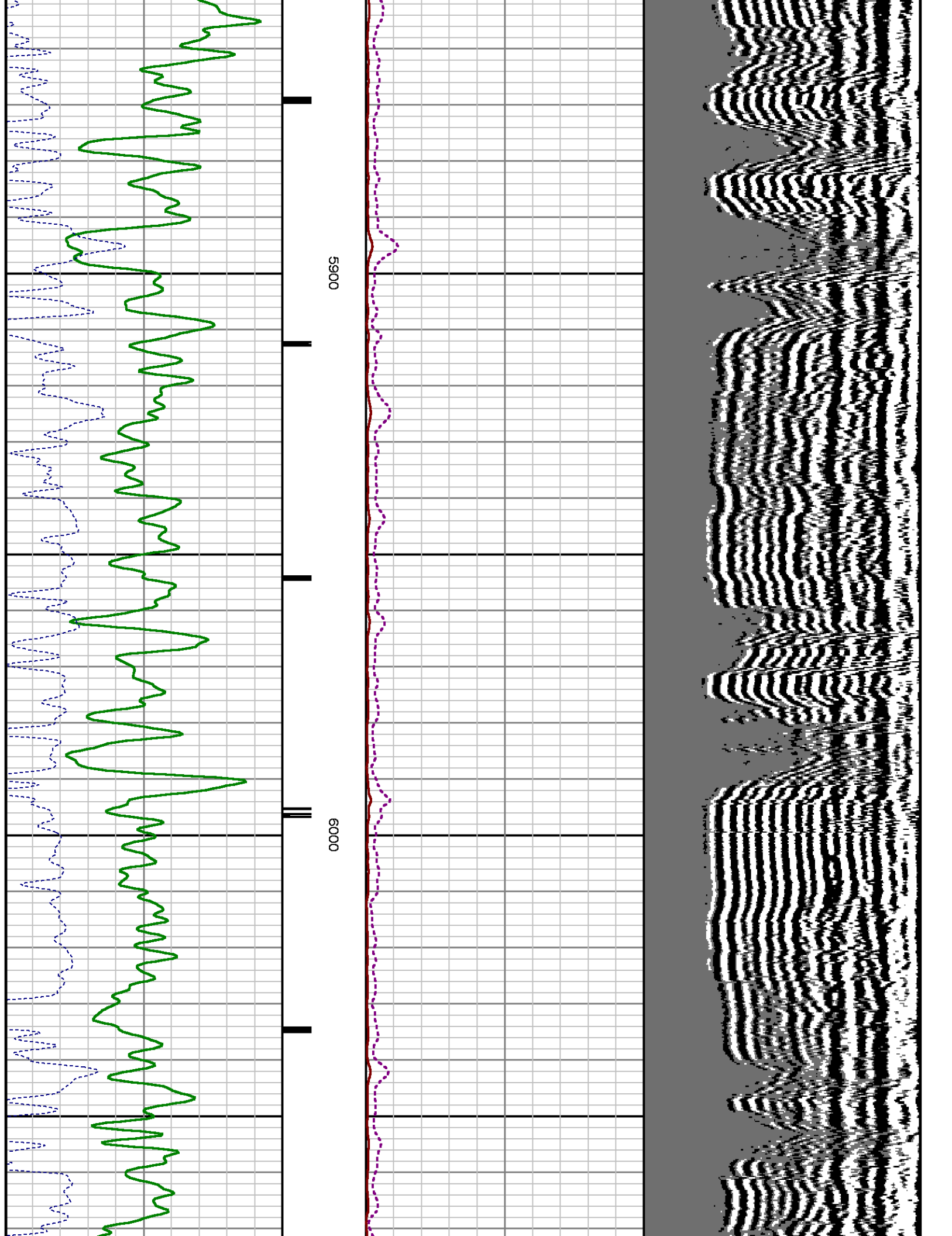


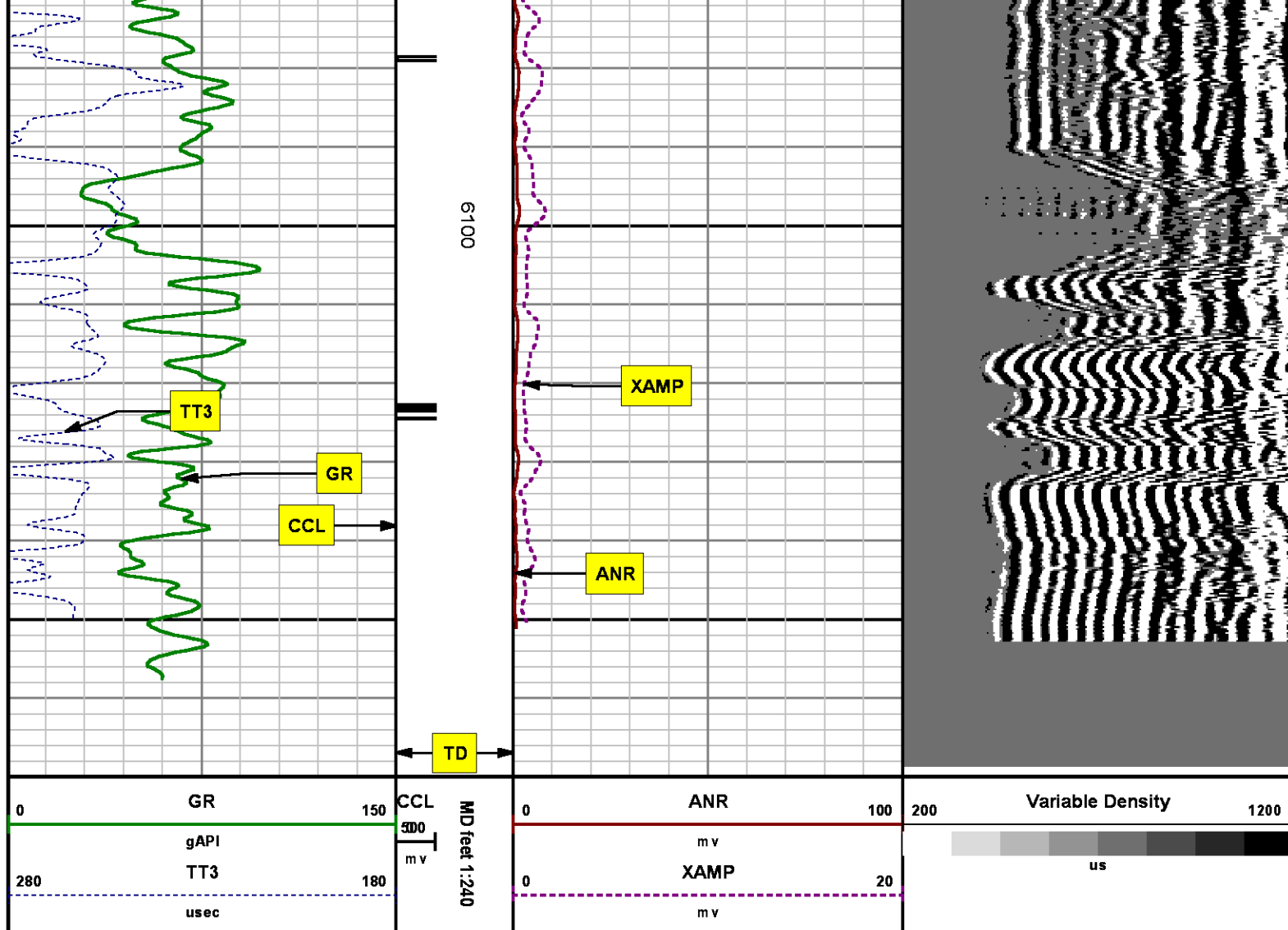
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5600









SECONDARY PRESENTATION 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	25.087	6168.500
RAL	Amp Gate Start Near	195.000	usec	25.087	6168.500
RAL	Amp Gate Start Radial	195.000	usec	25.087	6168.500
RAL	Amp Gate Width Far	25.000	usec	25.087	6168.500
RAL	Amp Gate Width Near	25.000	usec	25.087	6168.500
RAL	Amp Gate Width Radial	25.000	usec	25.087	6168.500

RAL	casing od	4.500	inches	25.087	6168.500
RAL	casing wt	11.600	lbm/ft	25.087	6168.500
RAL	FB Start Far	291.900	usec	25.087	6168.500
RAL	FB Start Near	180.000	usec	25.087	6168.500
RAL	FB Start Radial	180.000	usec	25.087	6168.500
RAL	FB Thresh Far	10.000	mv	25.087	6168.500
RAL	FB Thresh Near	4.000	mv	25.087	6168.500
RAL	FB Thresh Radial	4.000	mv	25.087	6168.500
RAL	Fluid Travel Time	200.000	usec/ft	25.087	6168.462

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

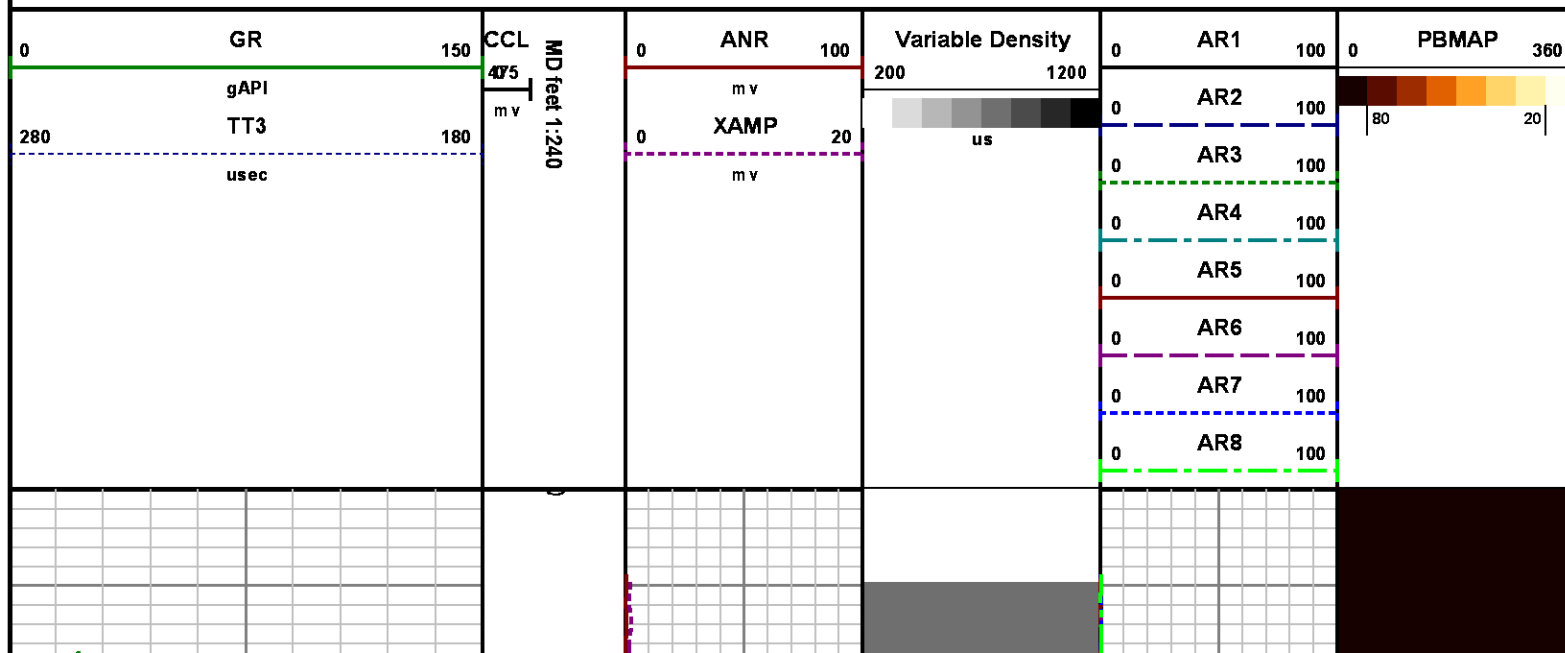
Well : C&C ENERGY GM 321-13

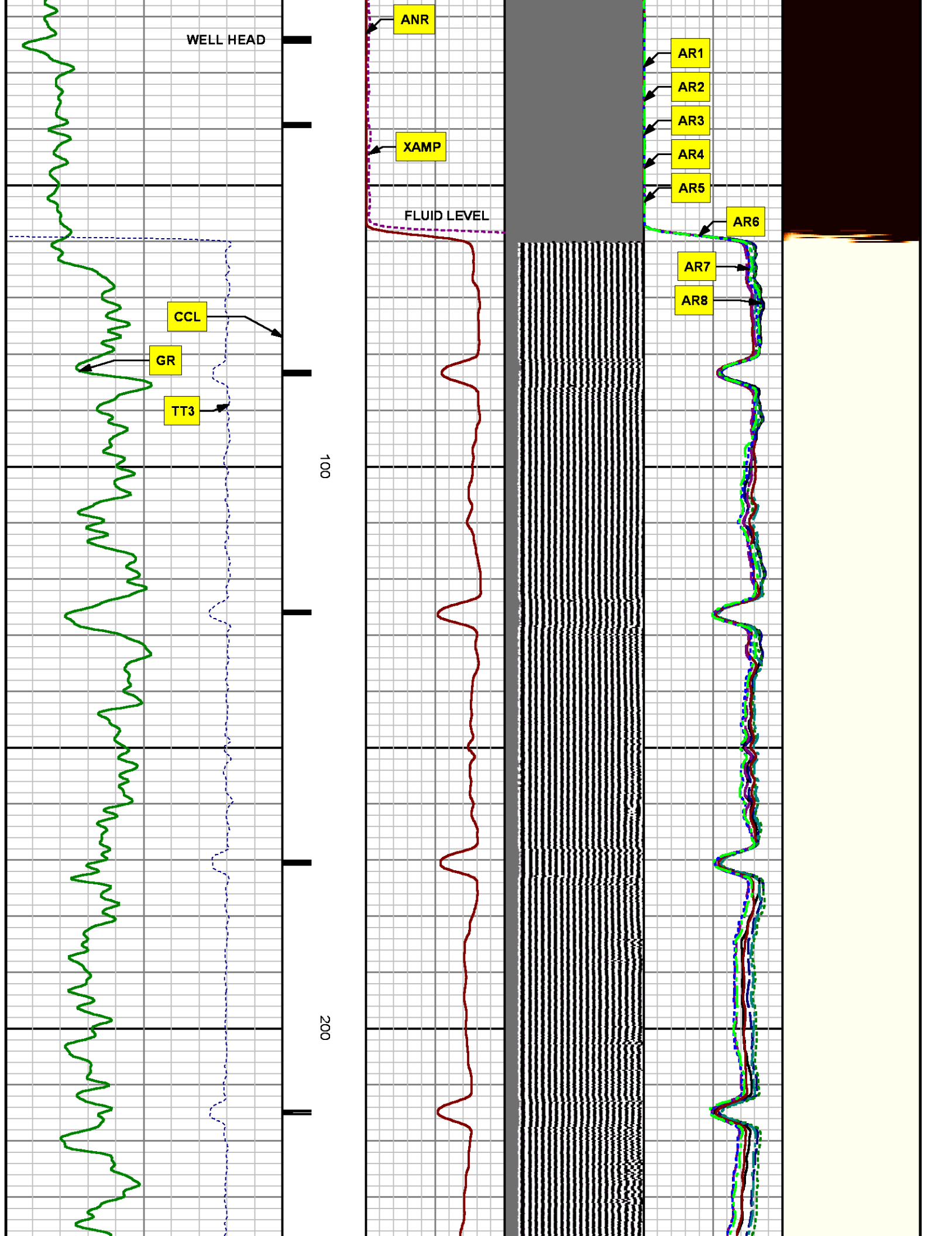
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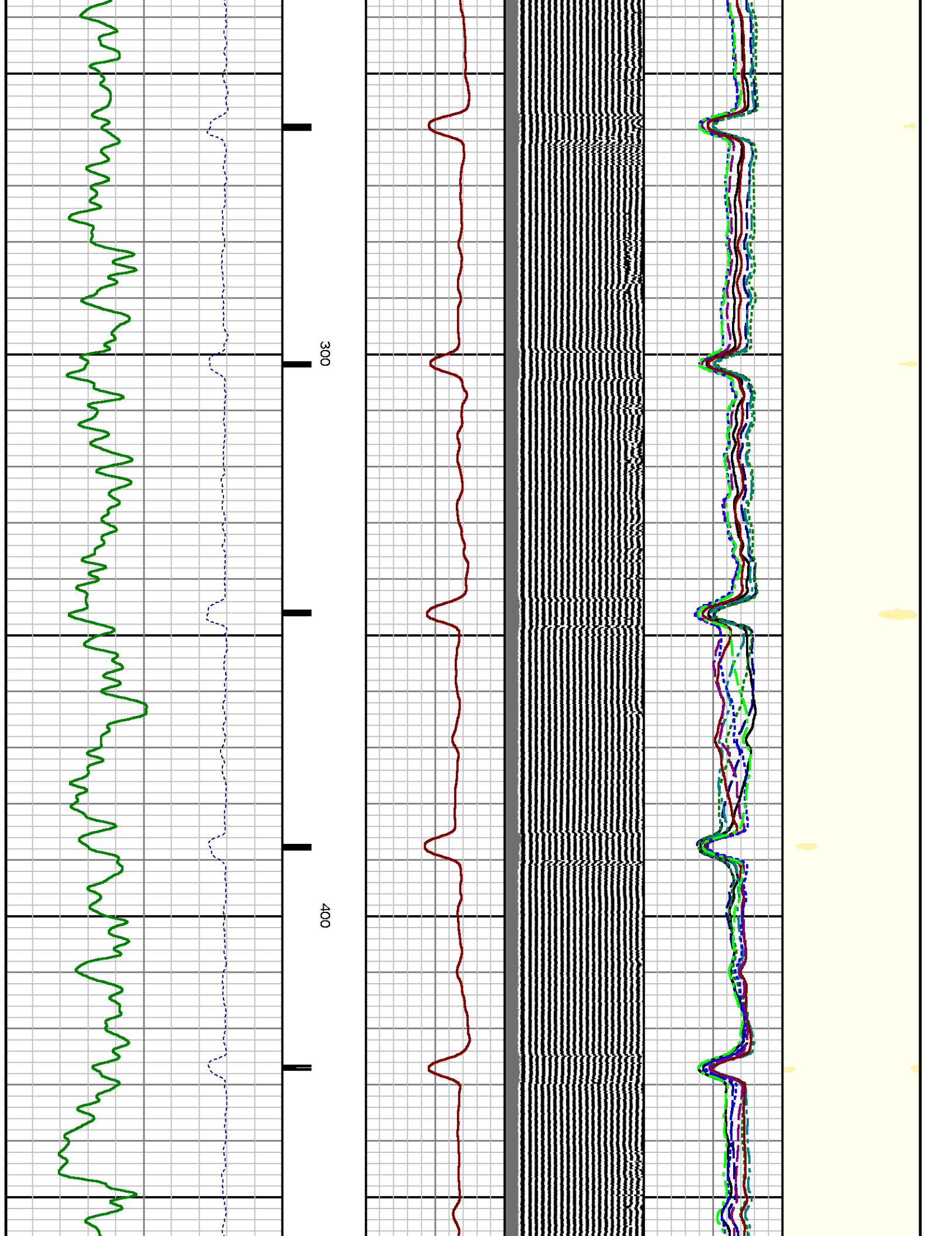
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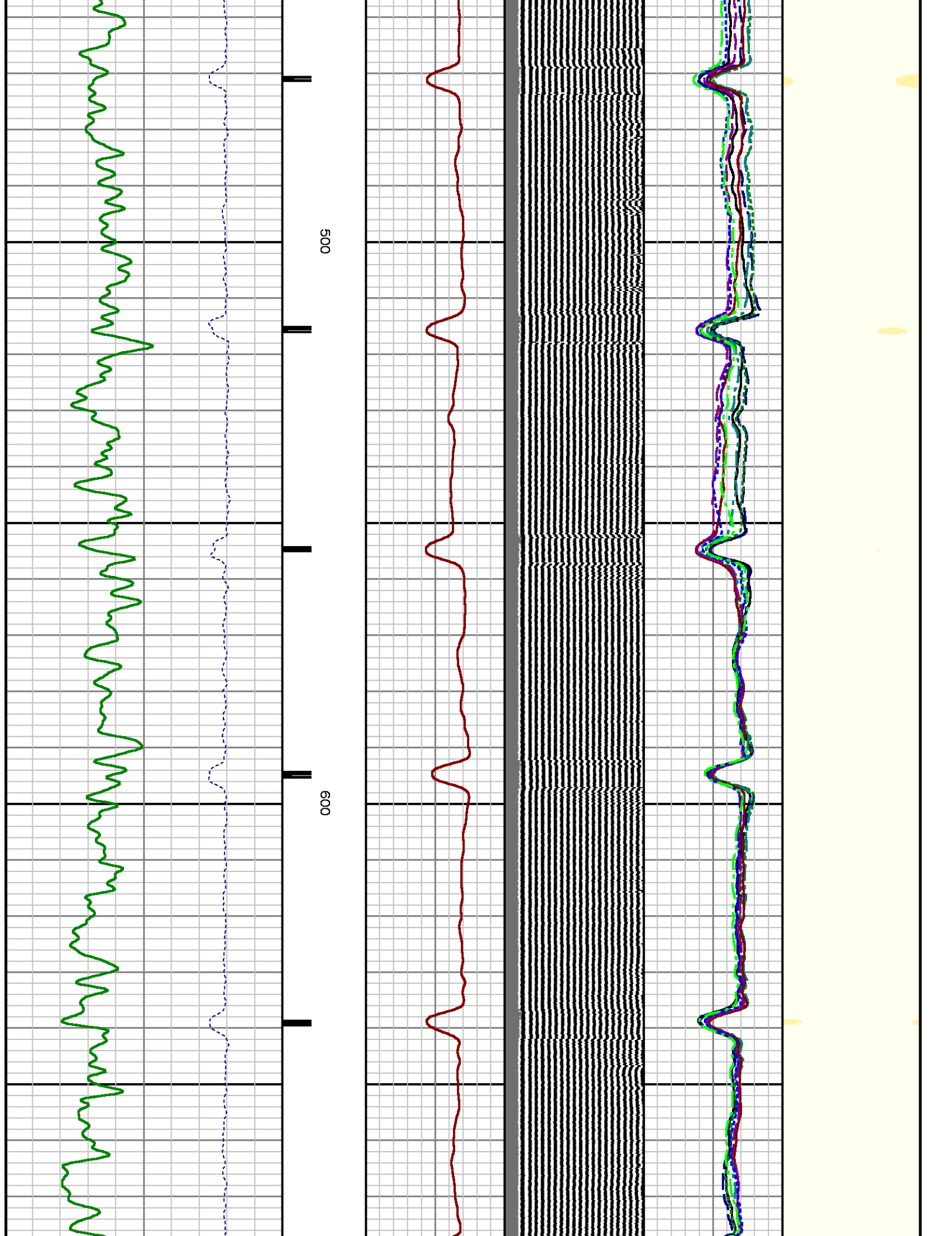
Interval : 0.00 - 6170.00 feet UP

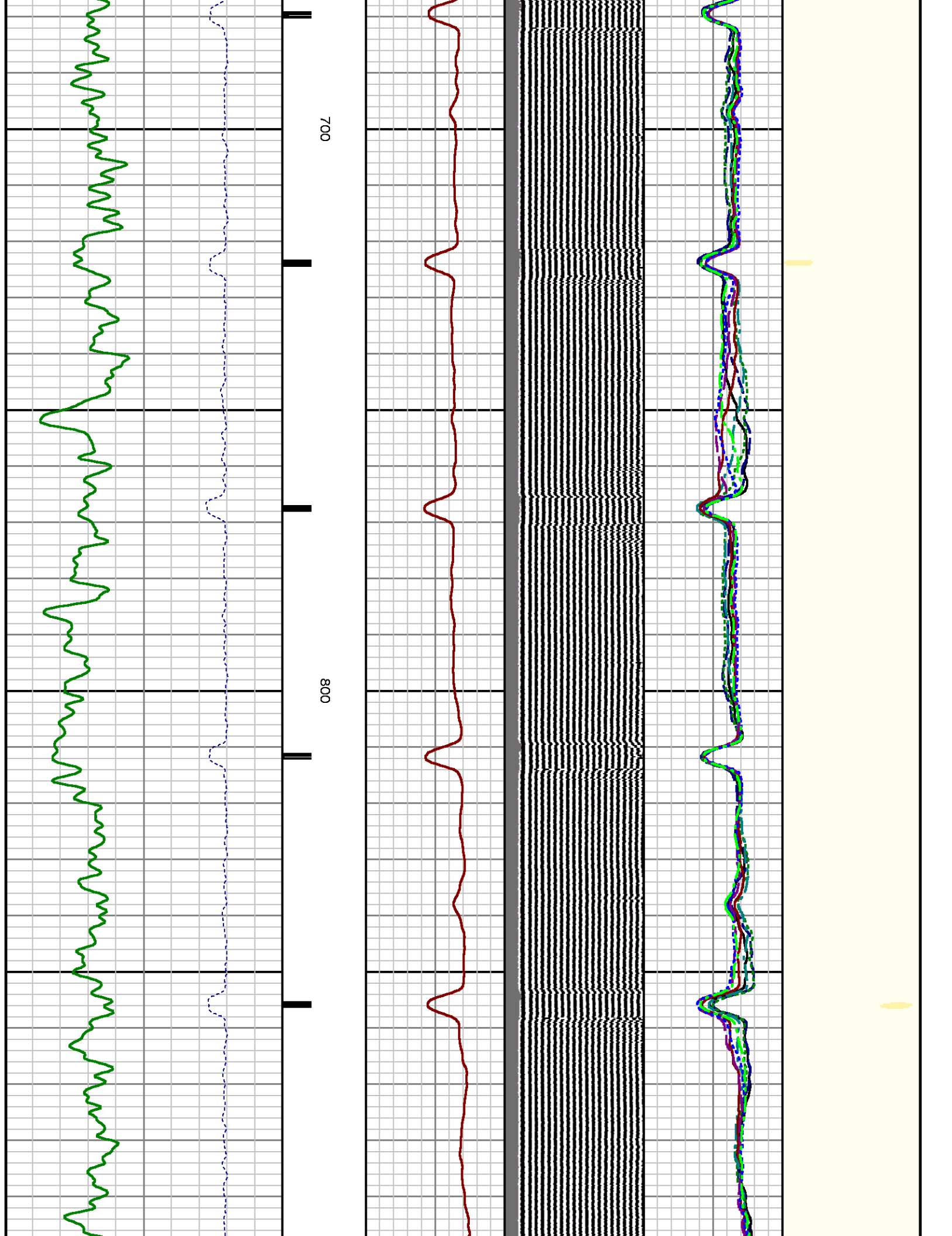
Created : 5/27/2014 9:43:43 AM

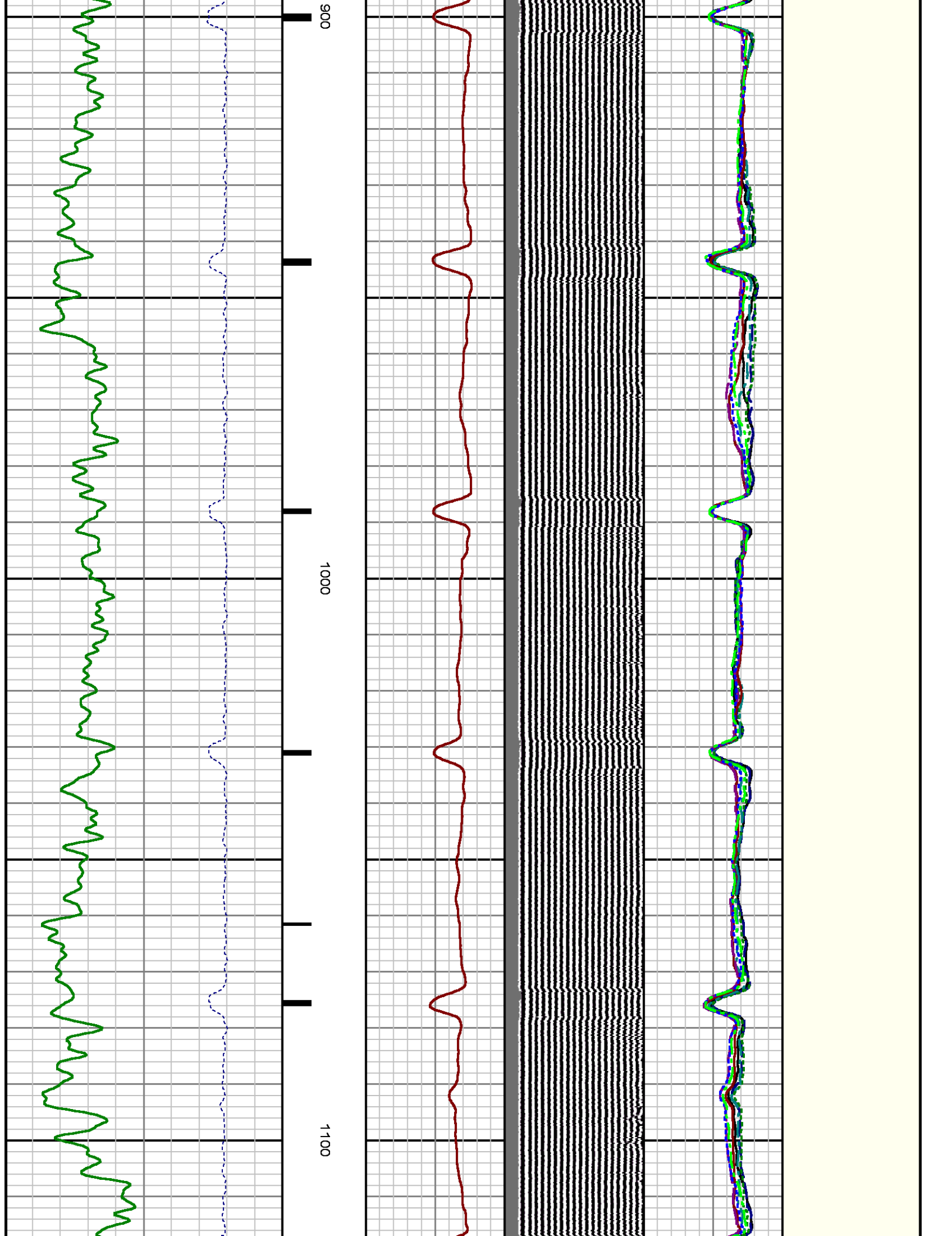


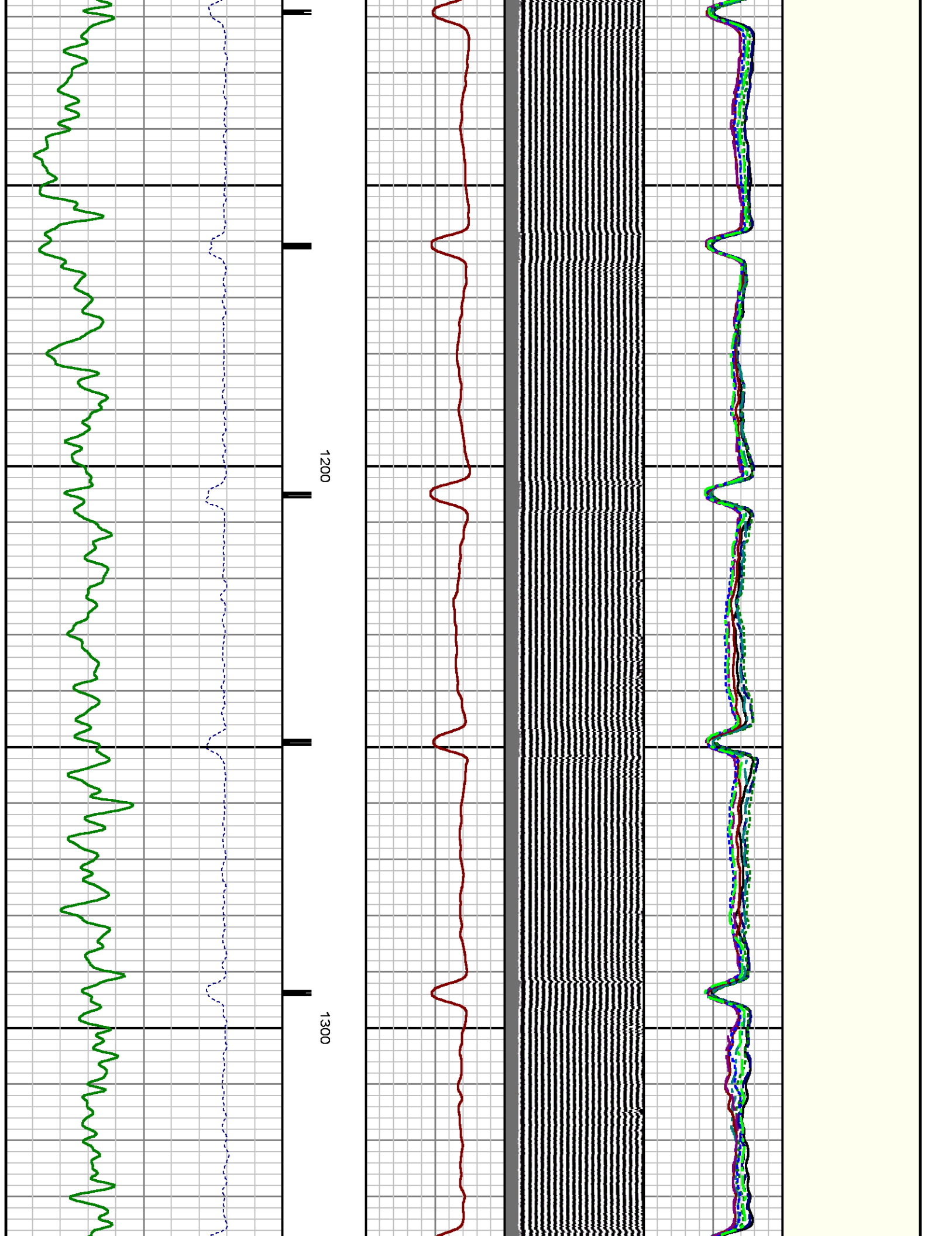


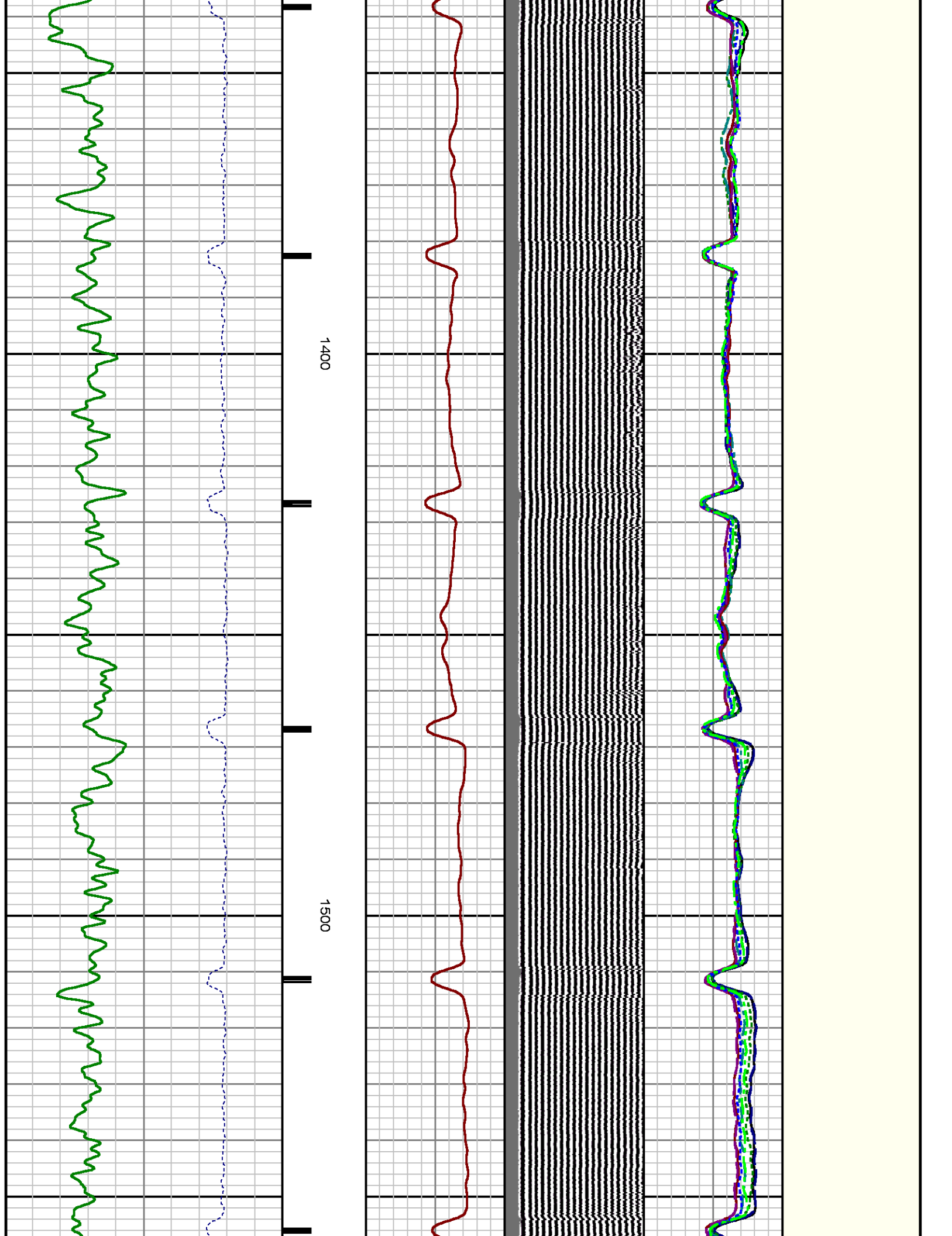


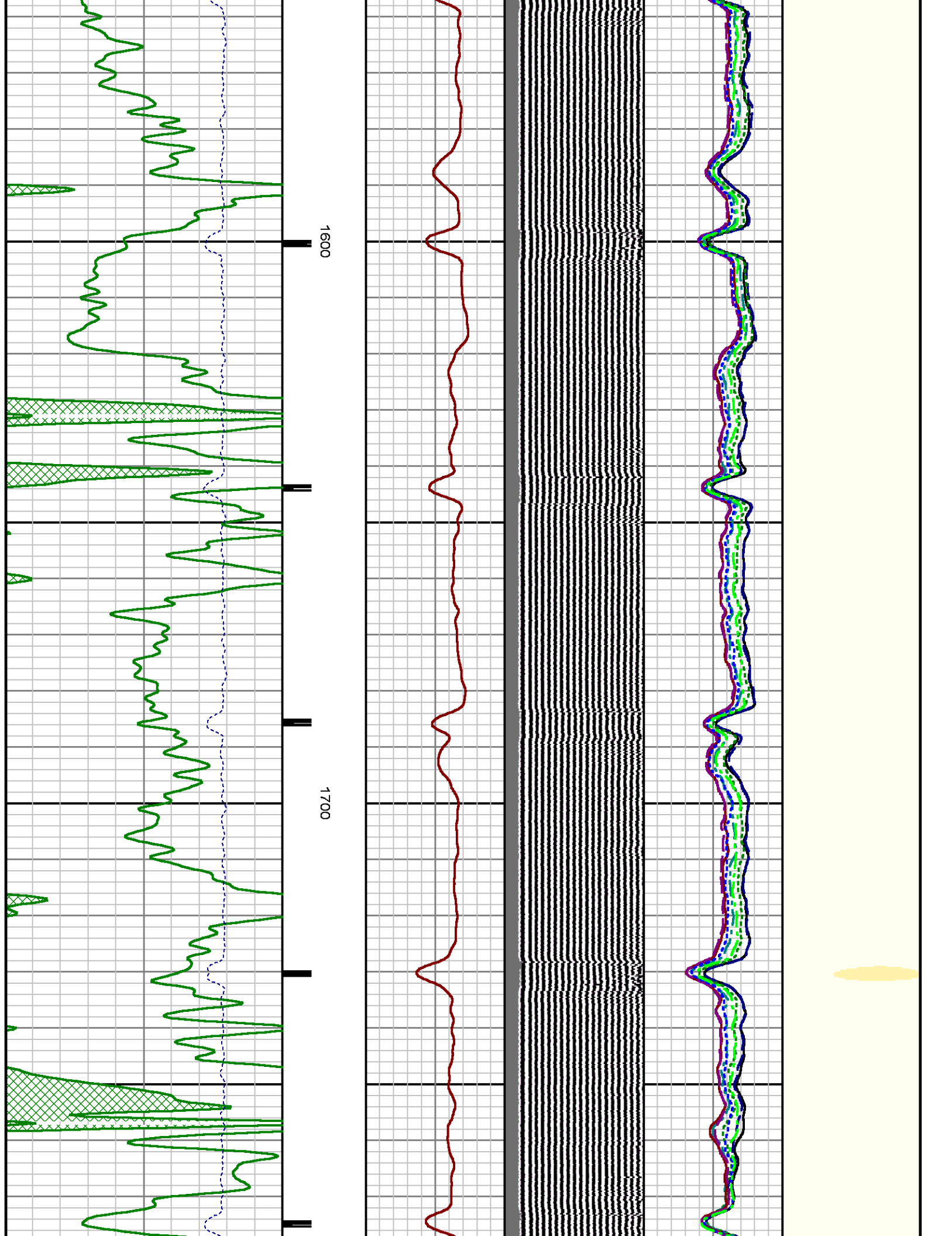


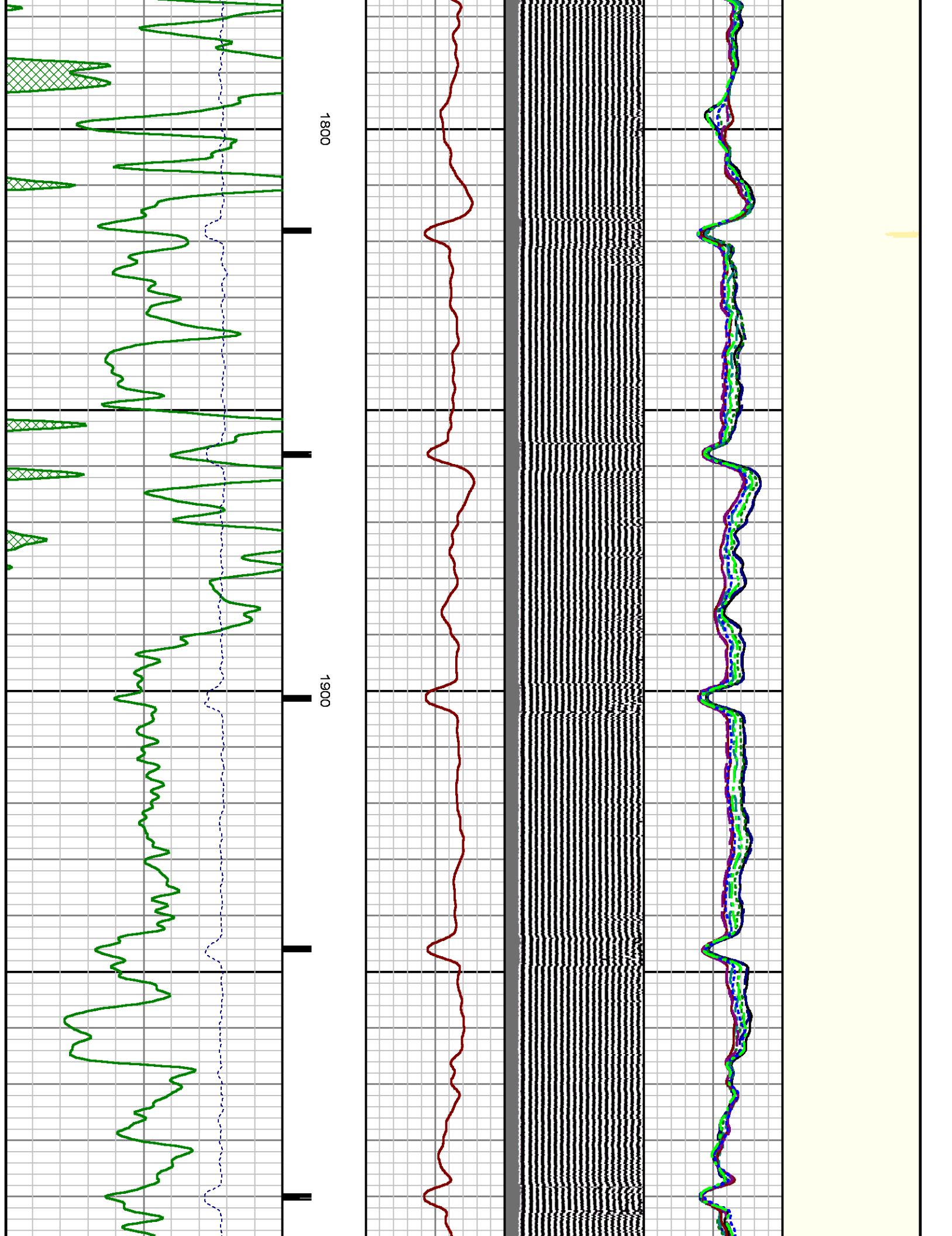


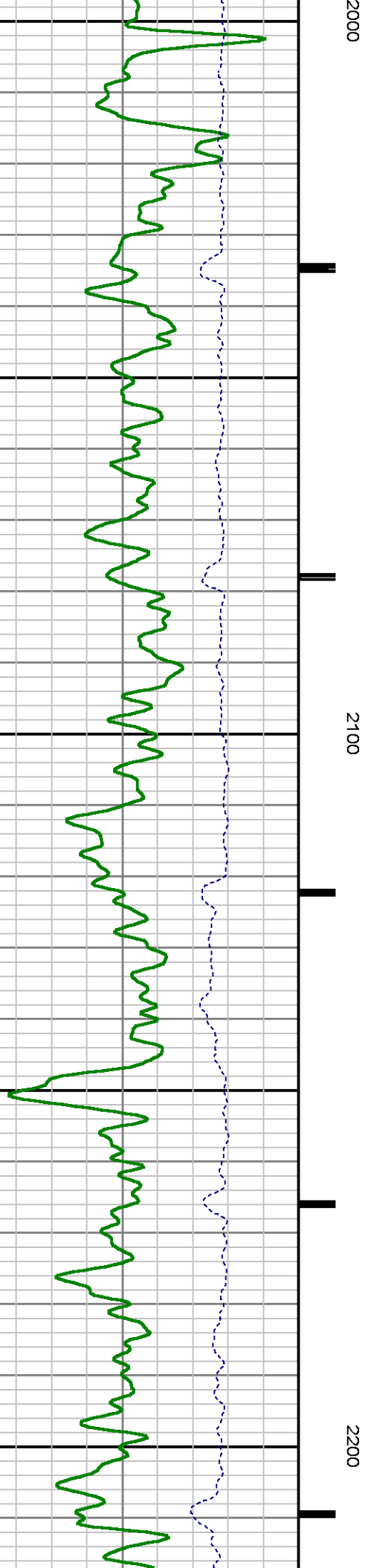
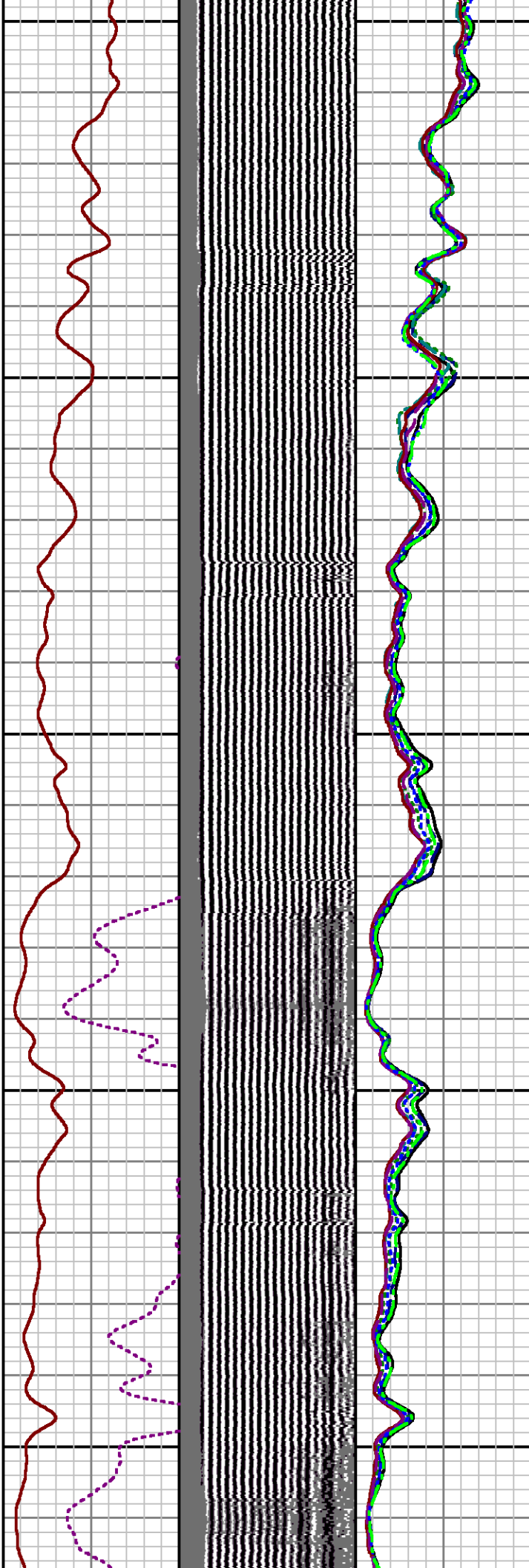
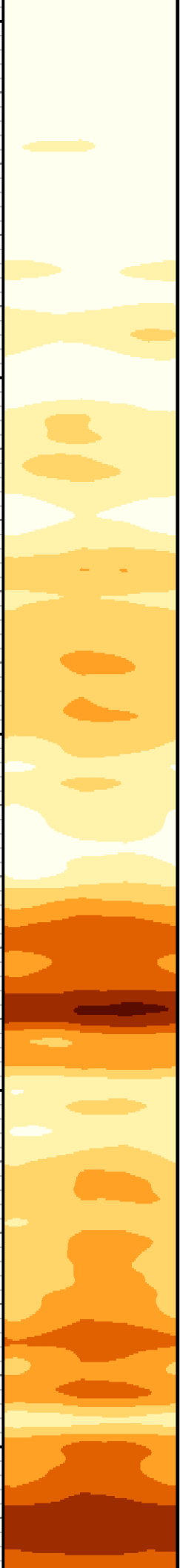


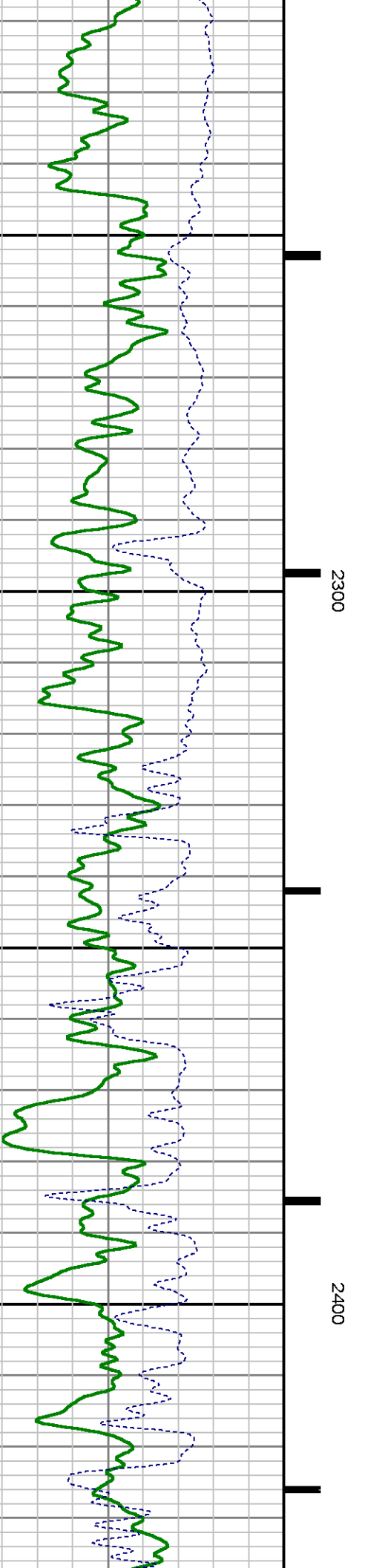
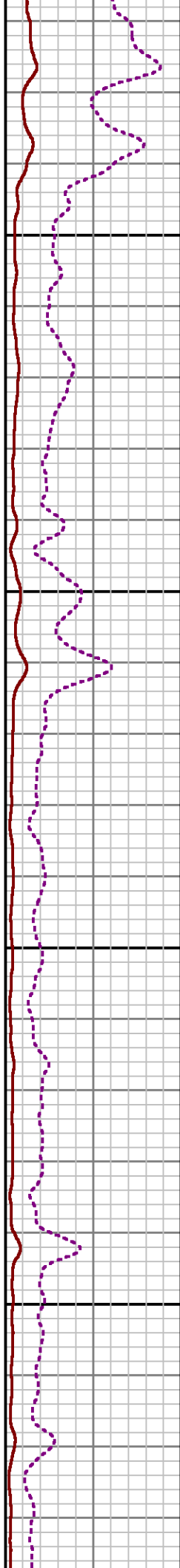
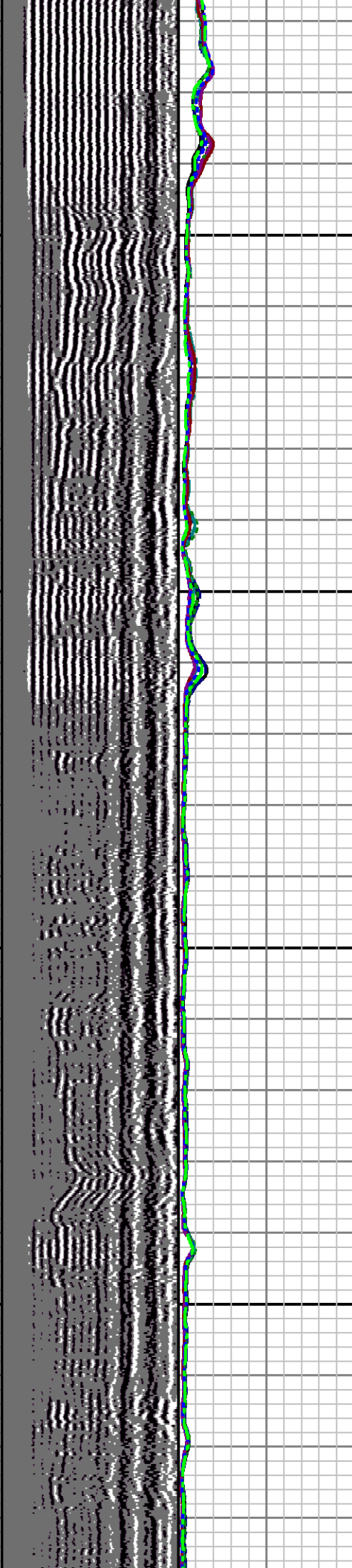


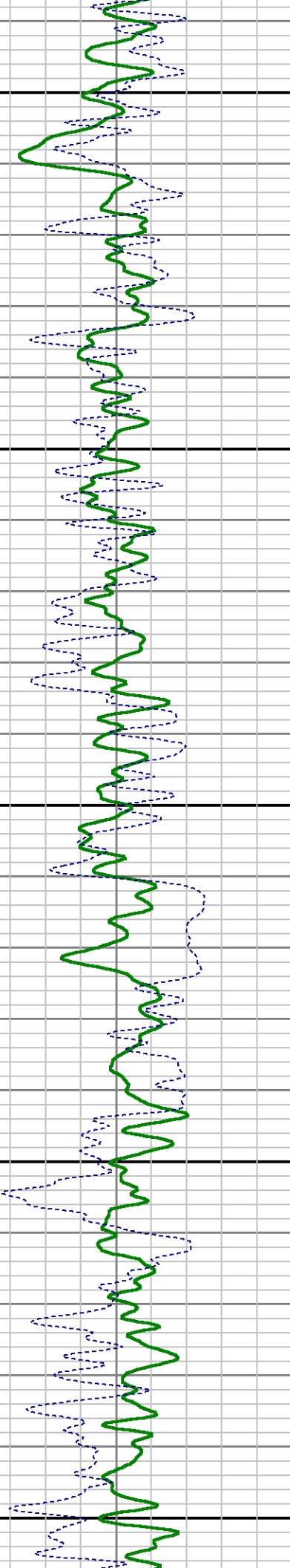
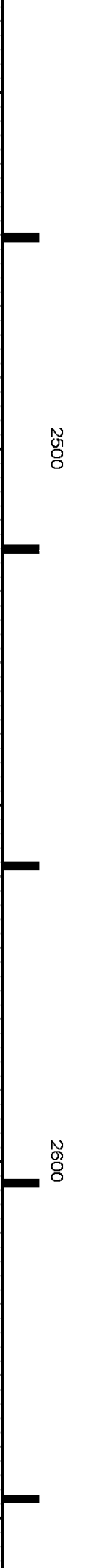
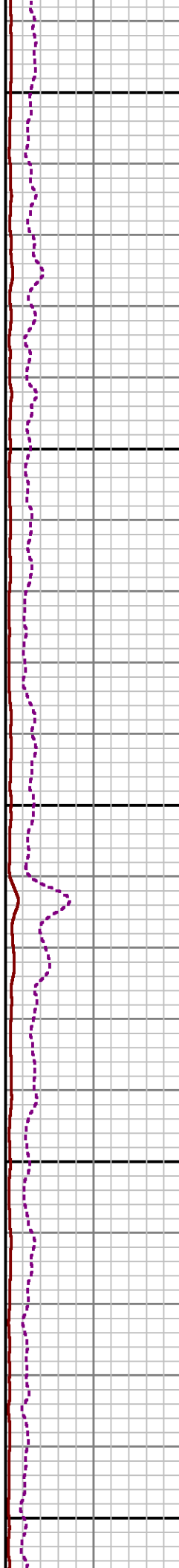
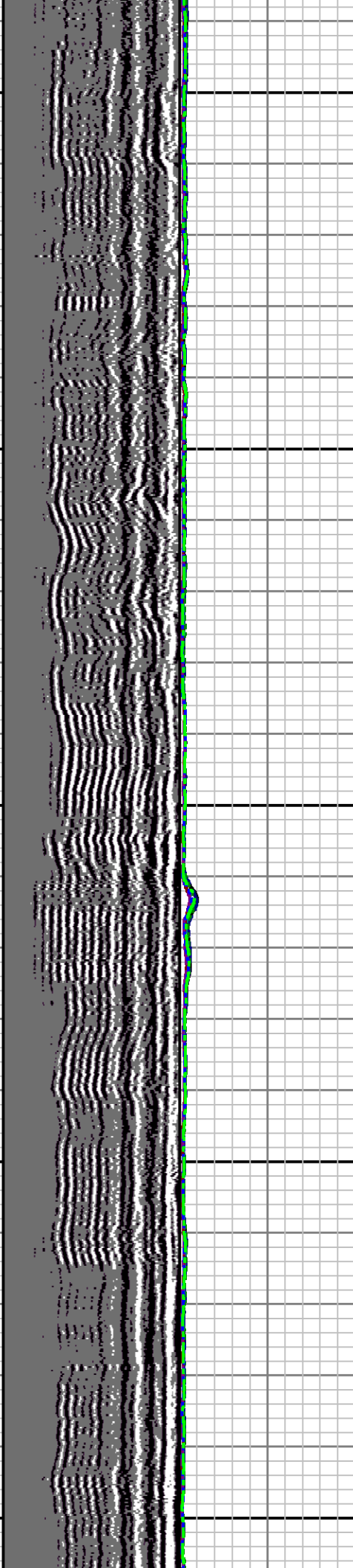


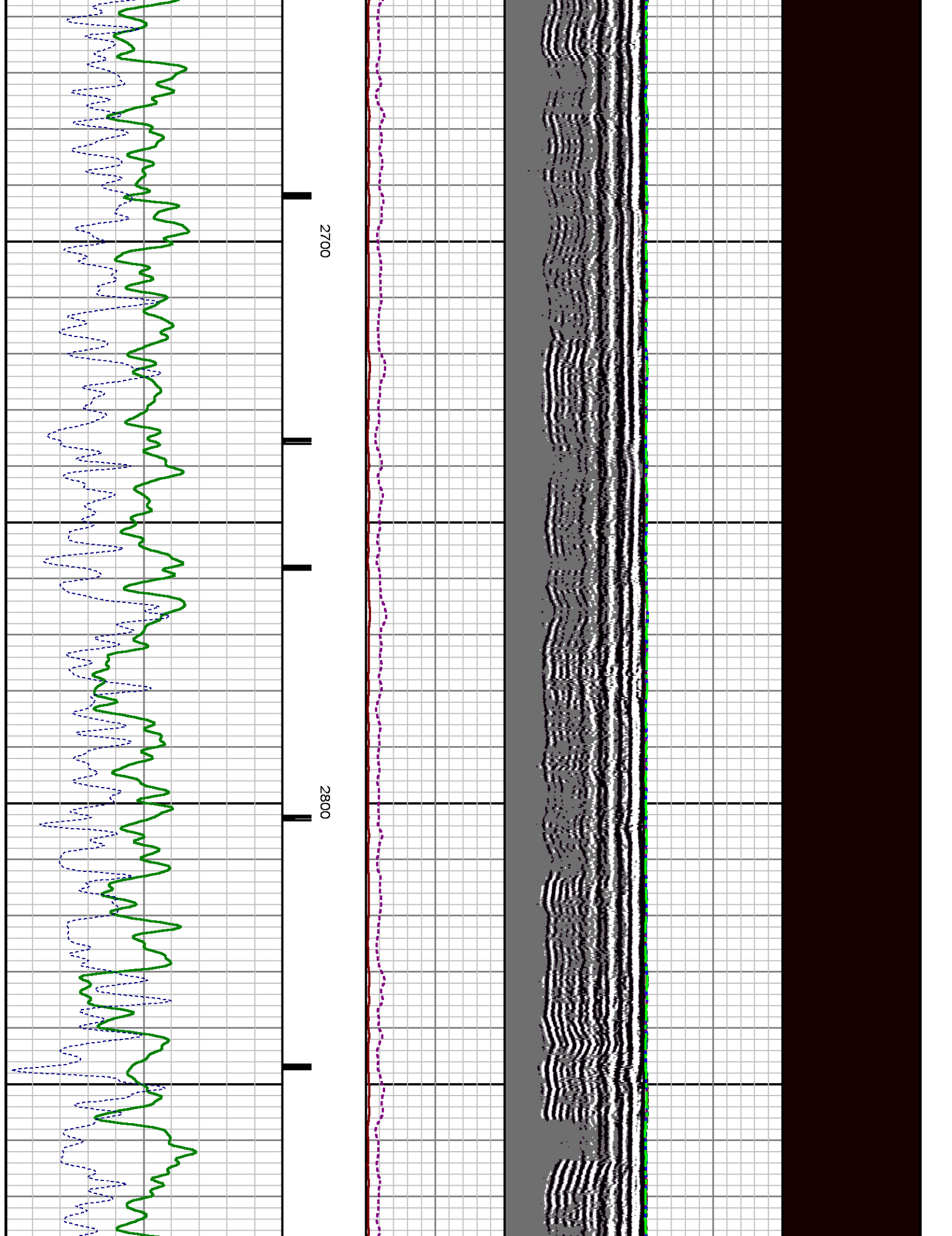


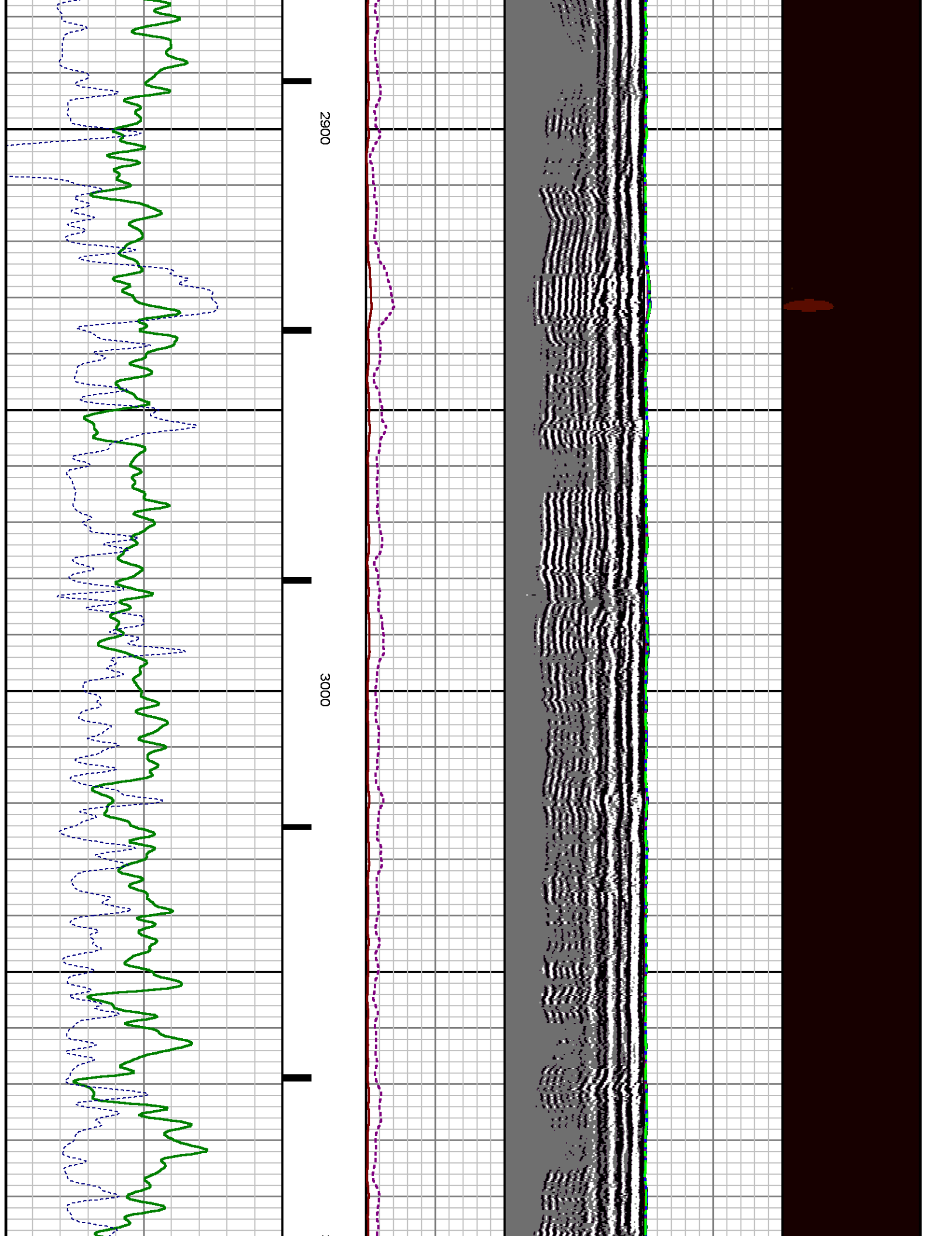


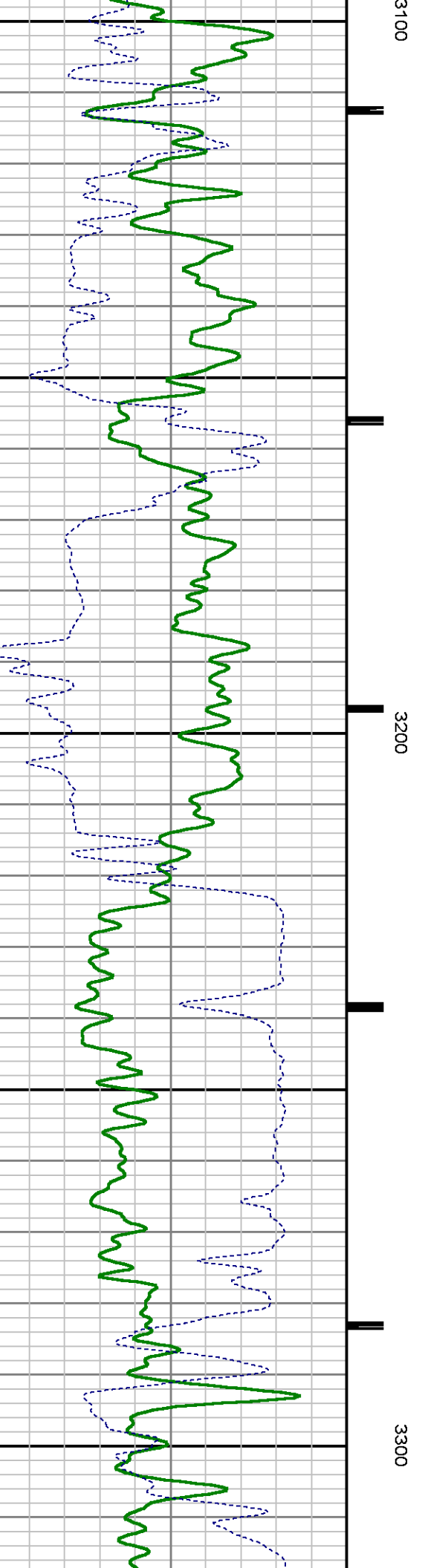
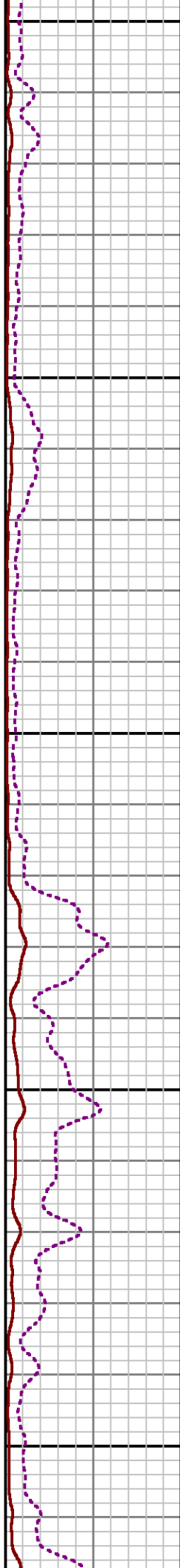
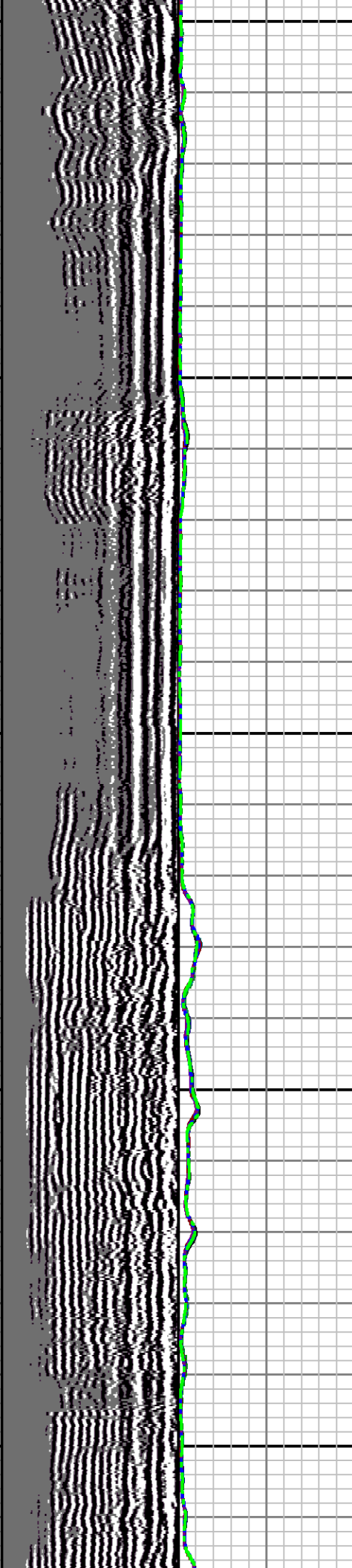


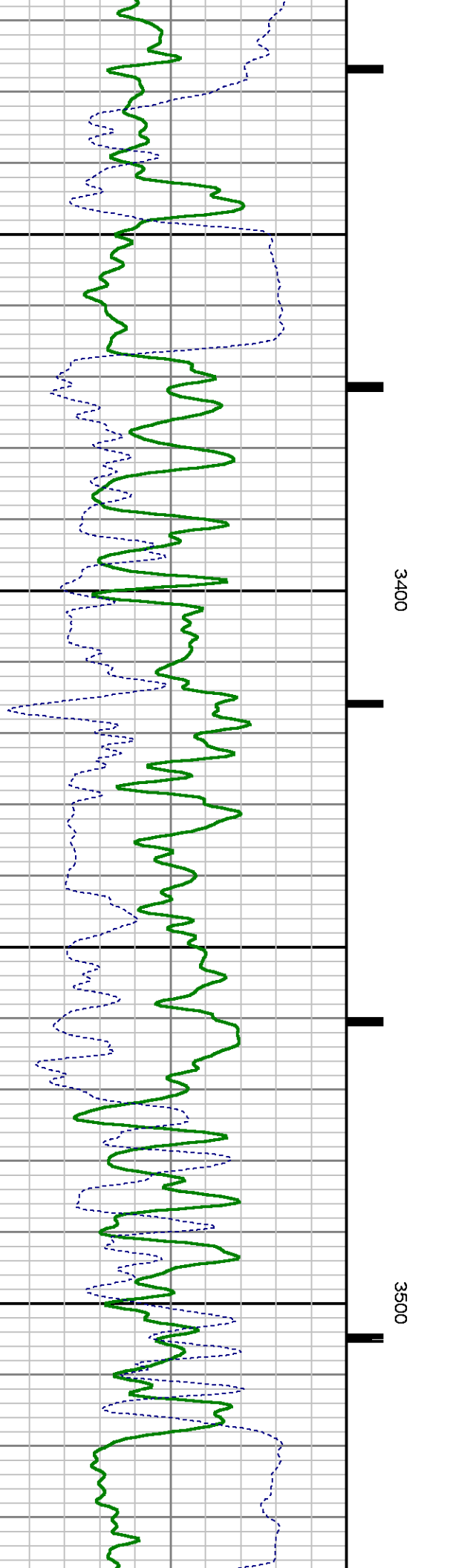
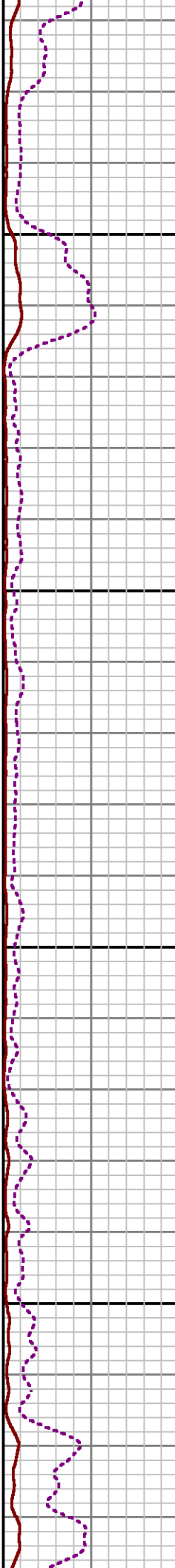
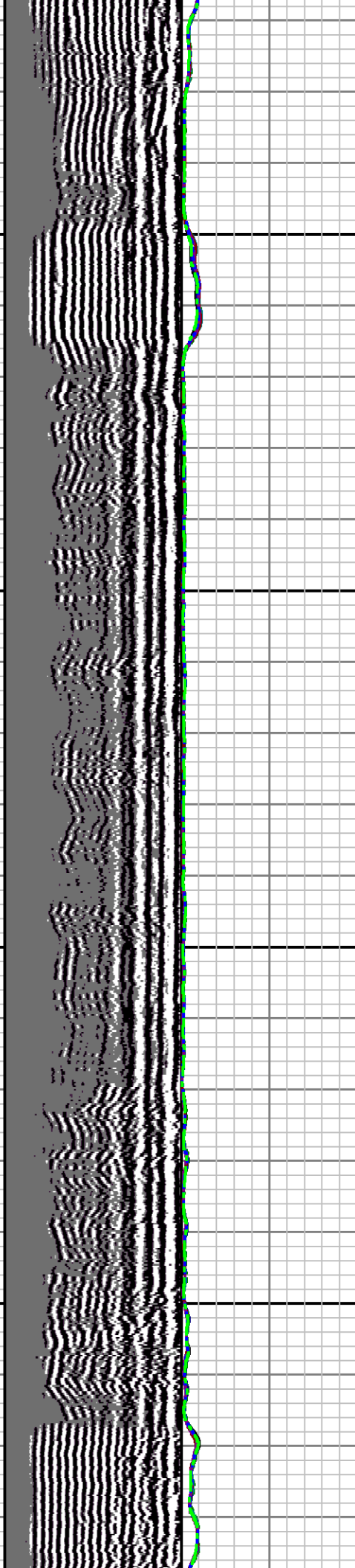


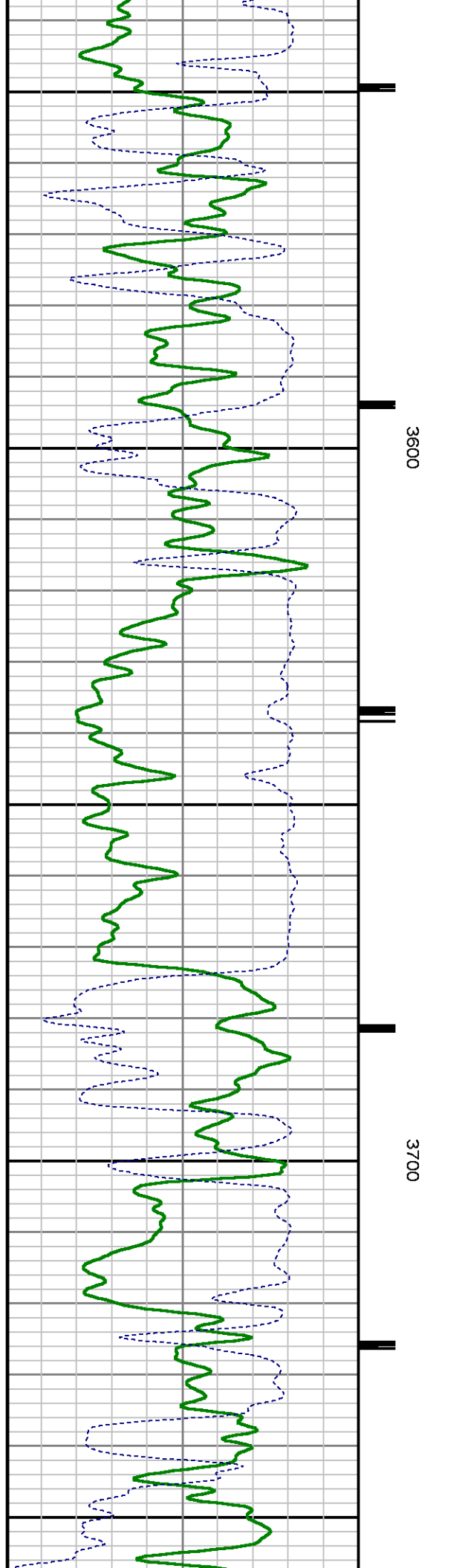
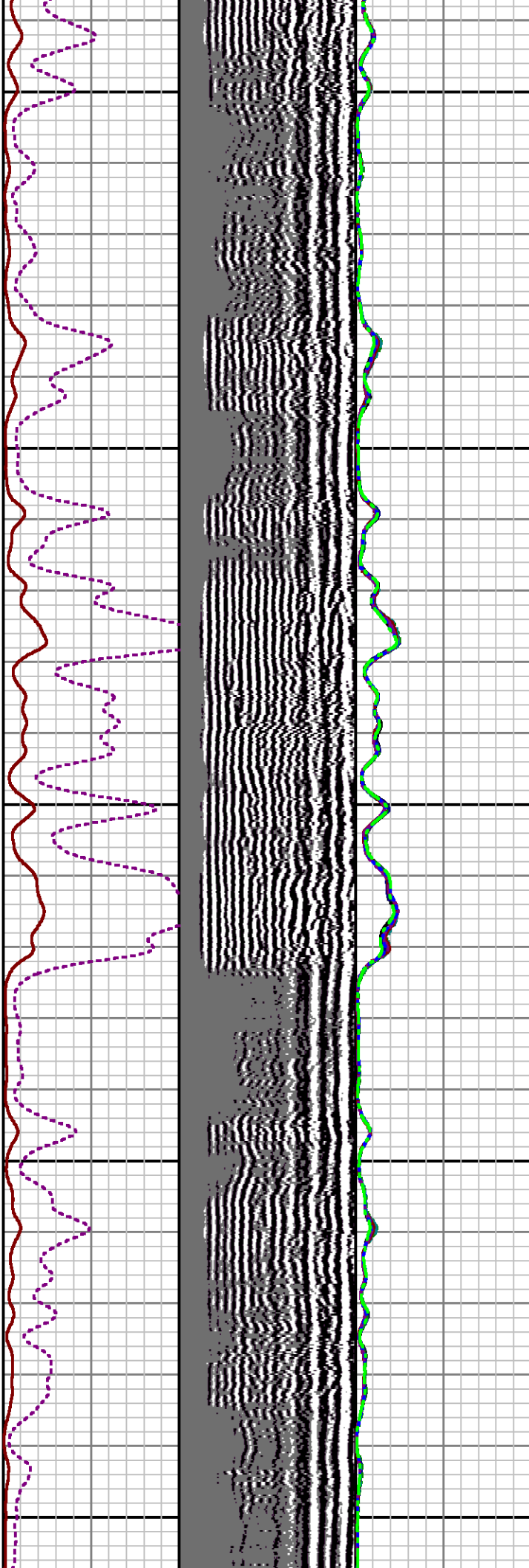
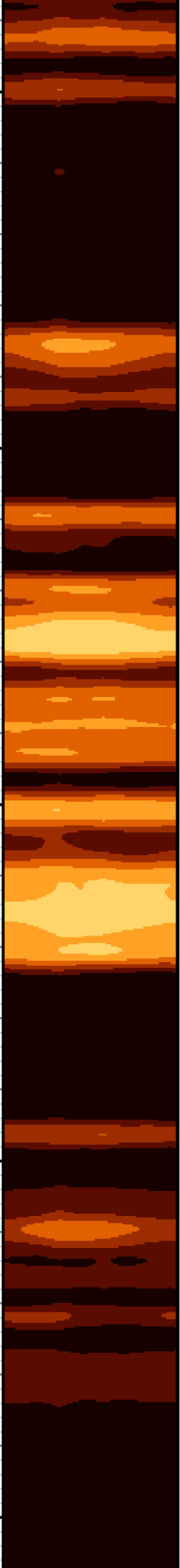


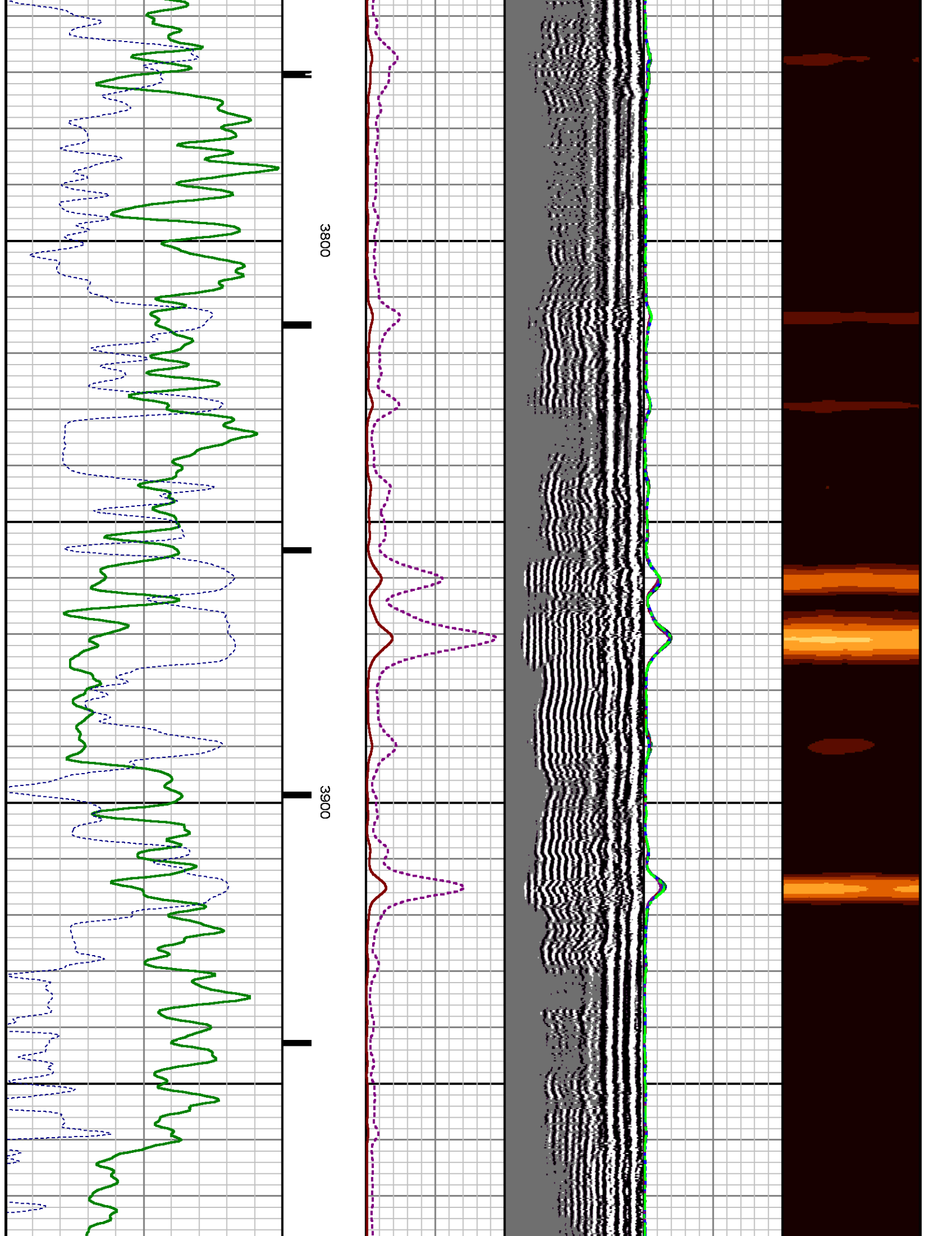


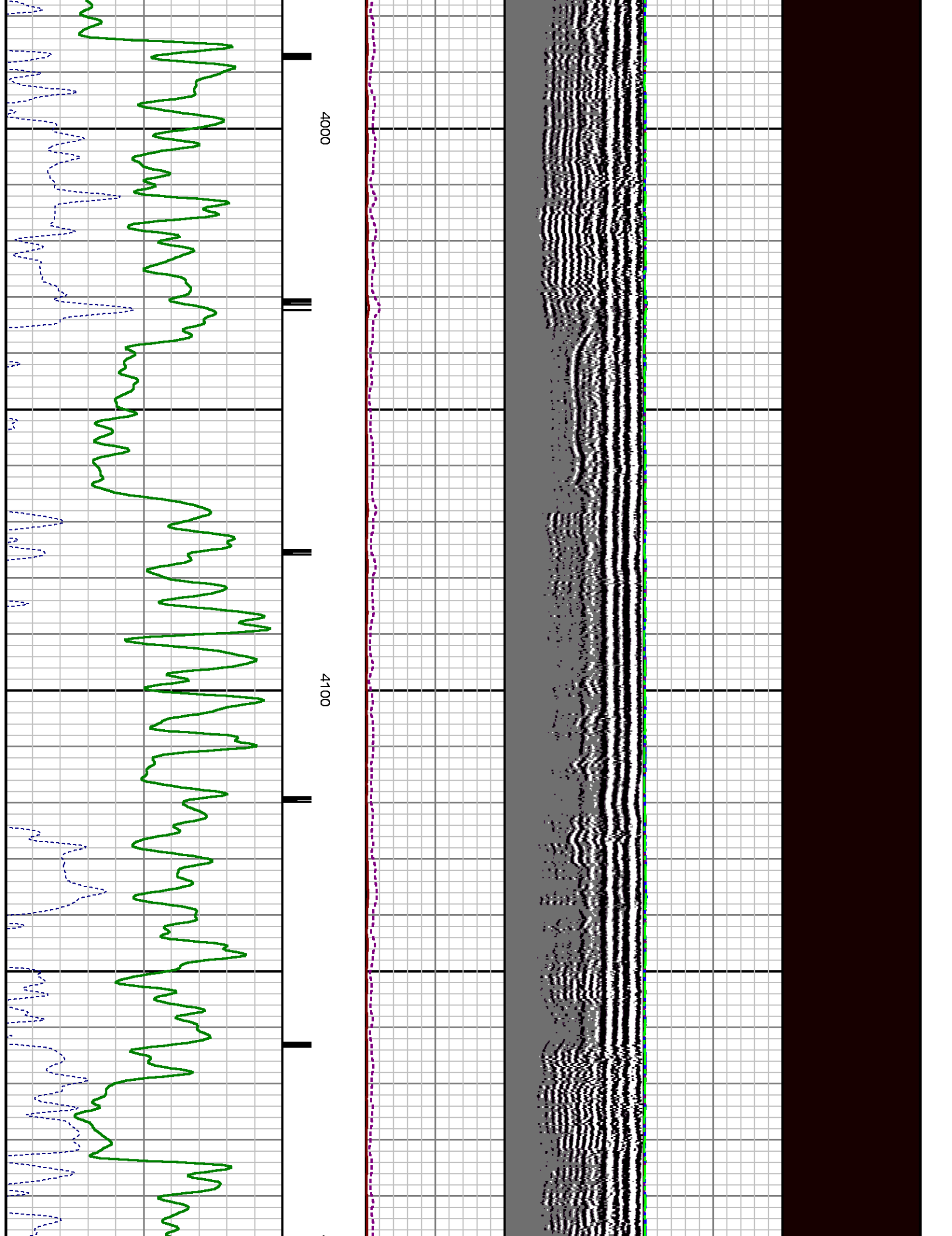


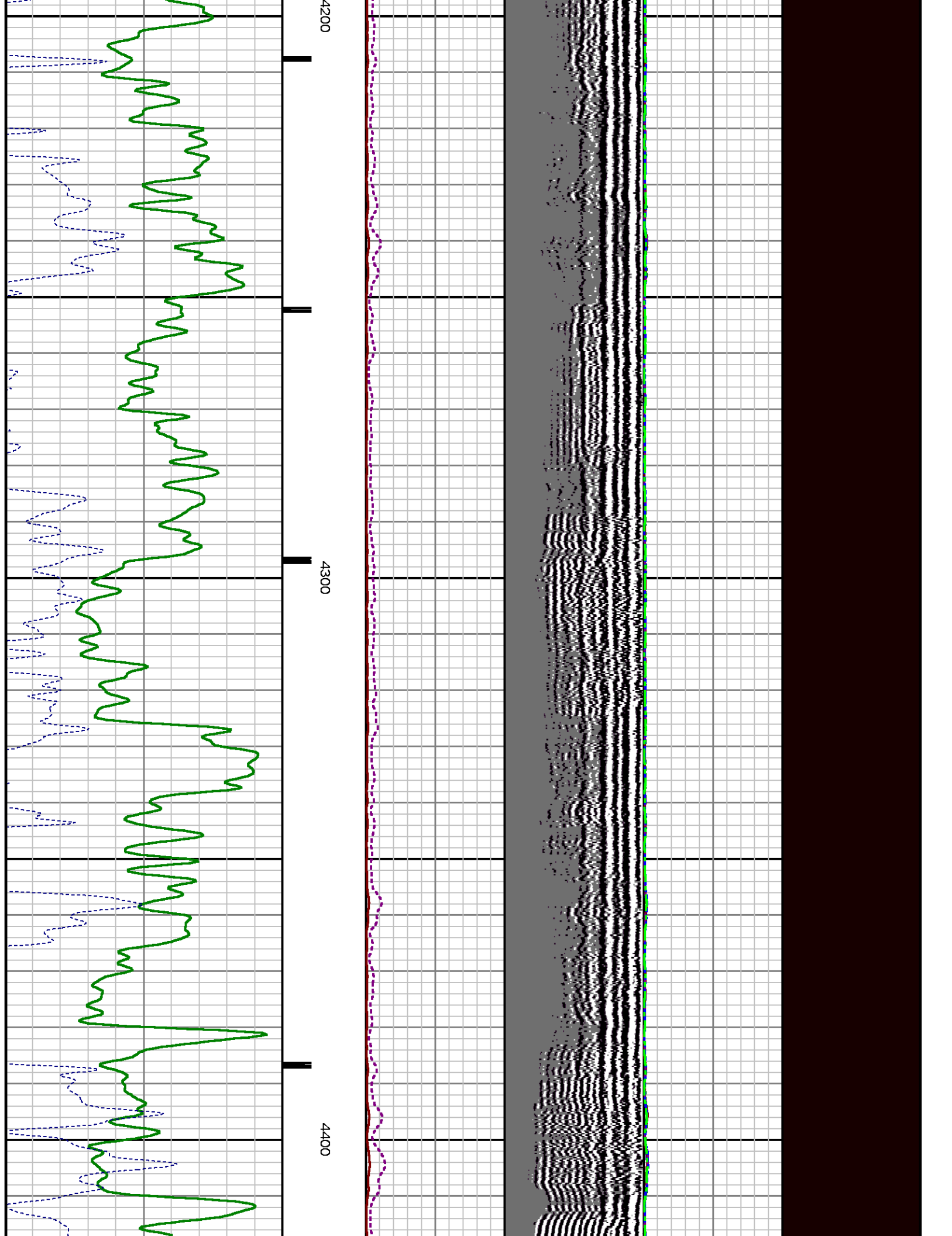


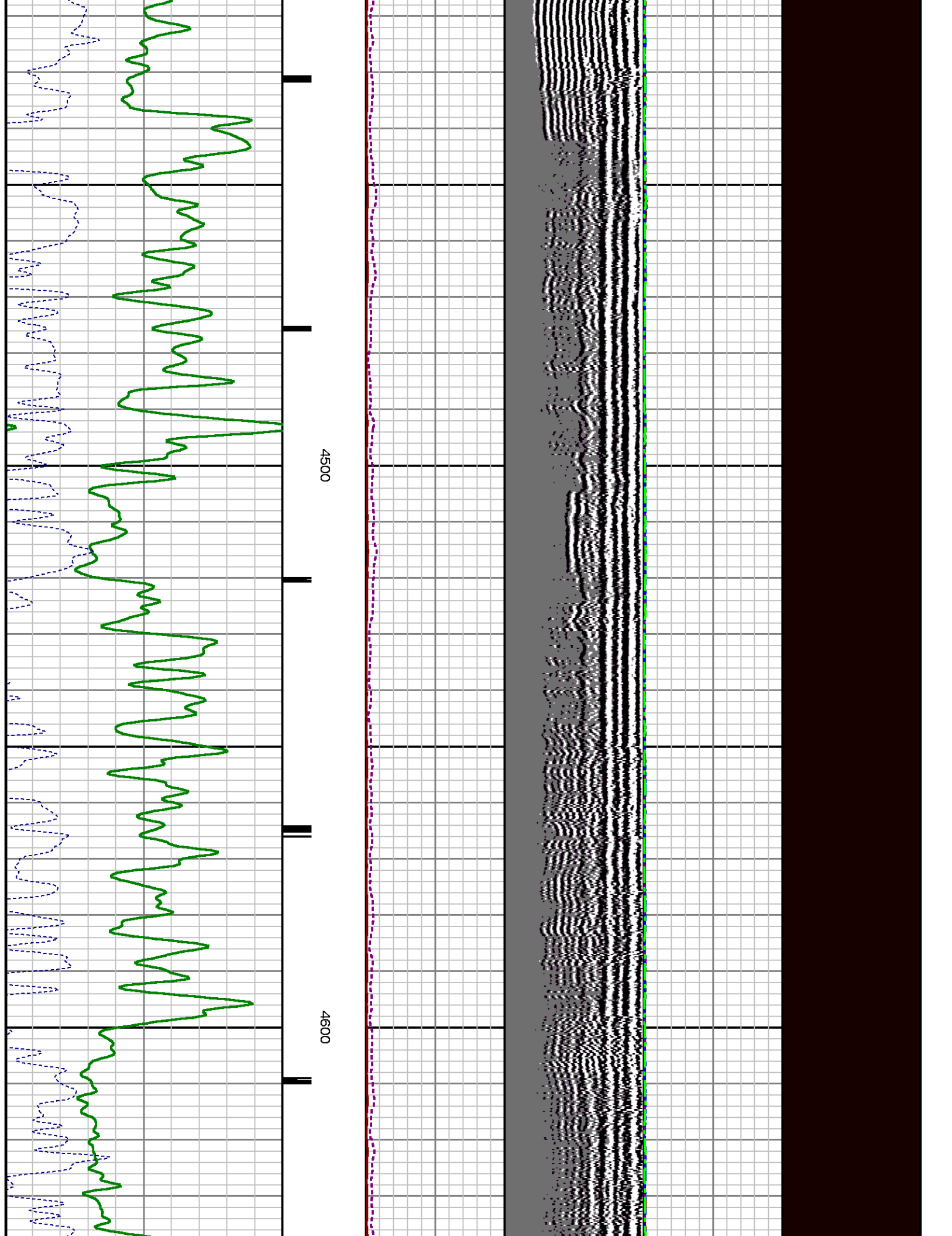


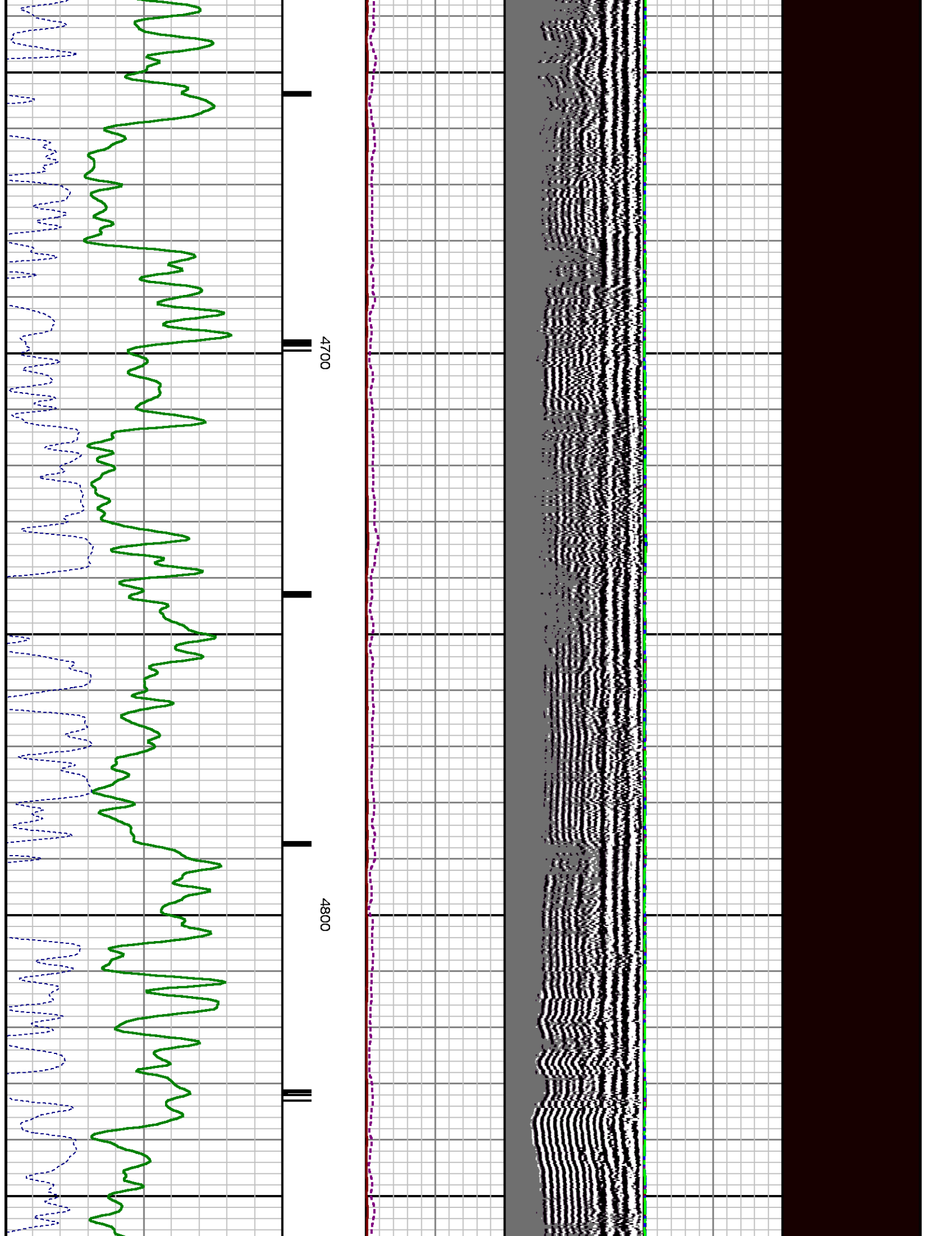


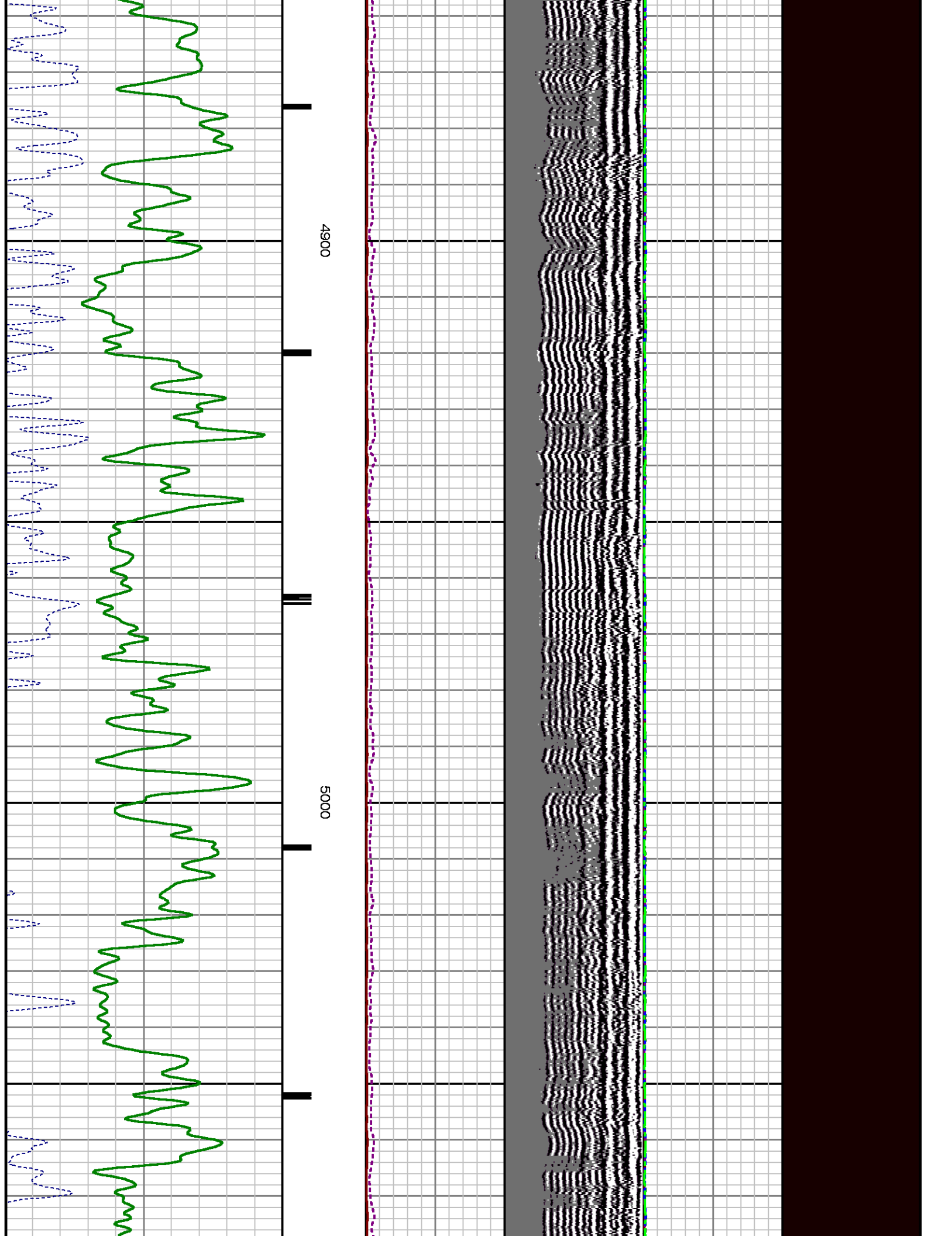


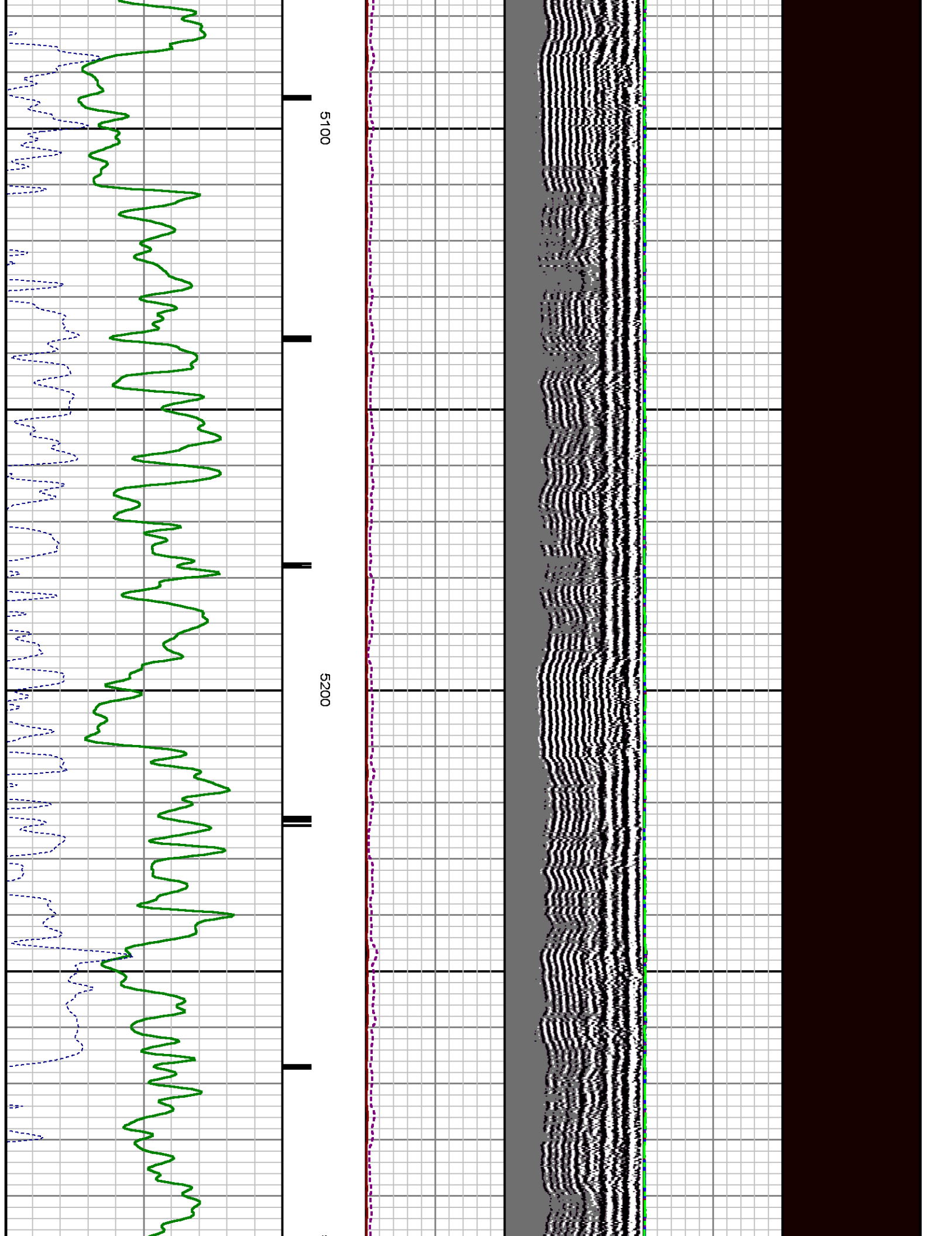


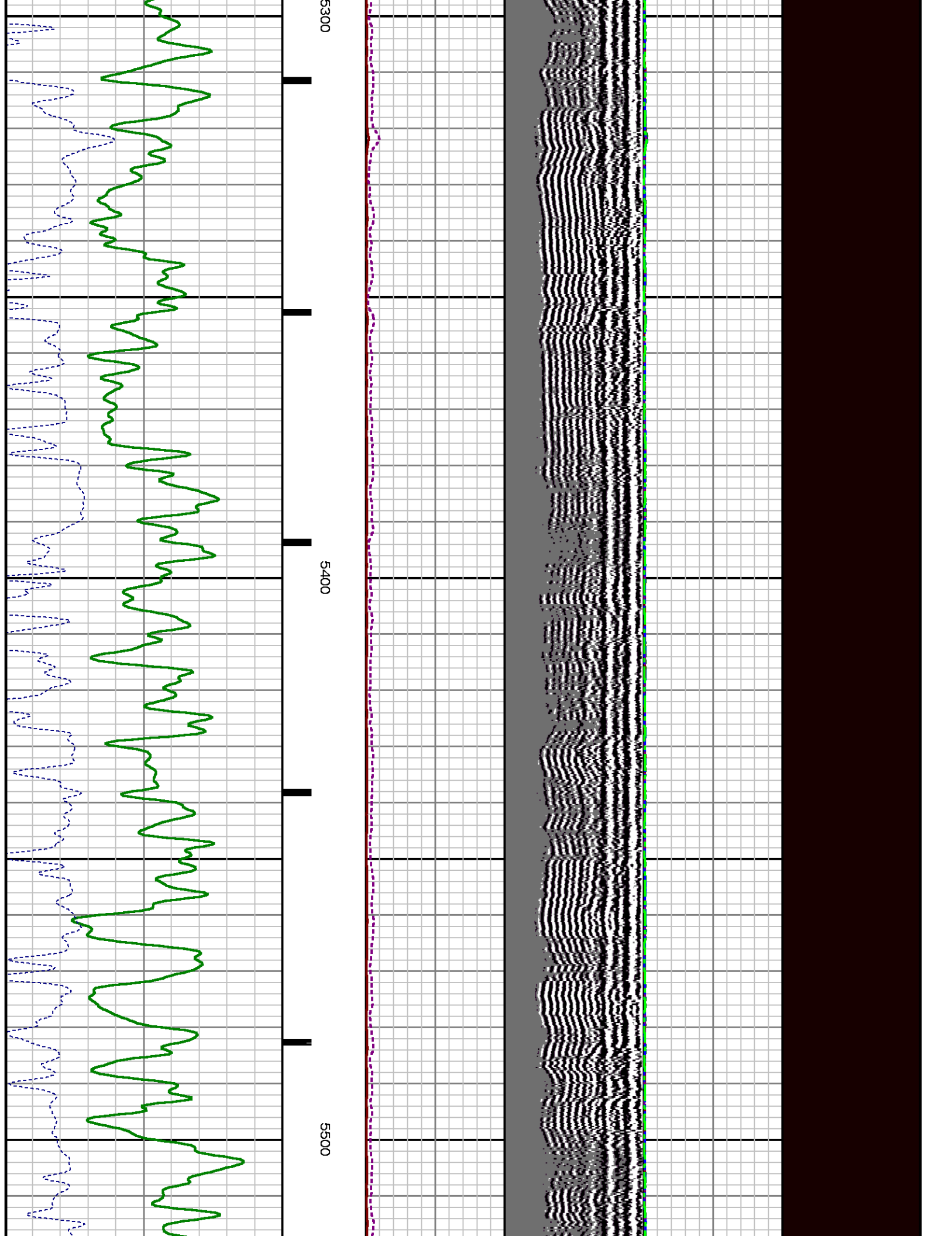


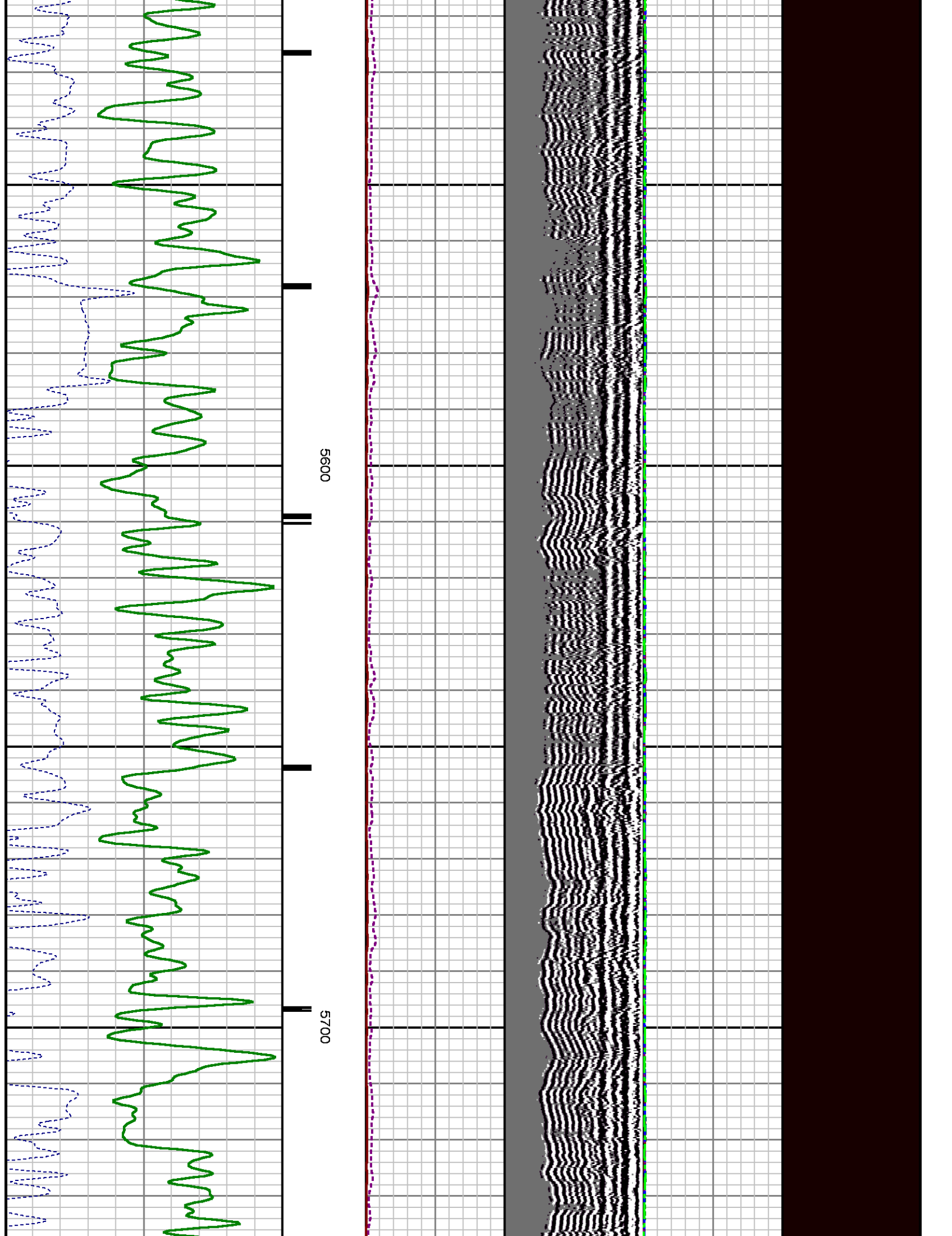


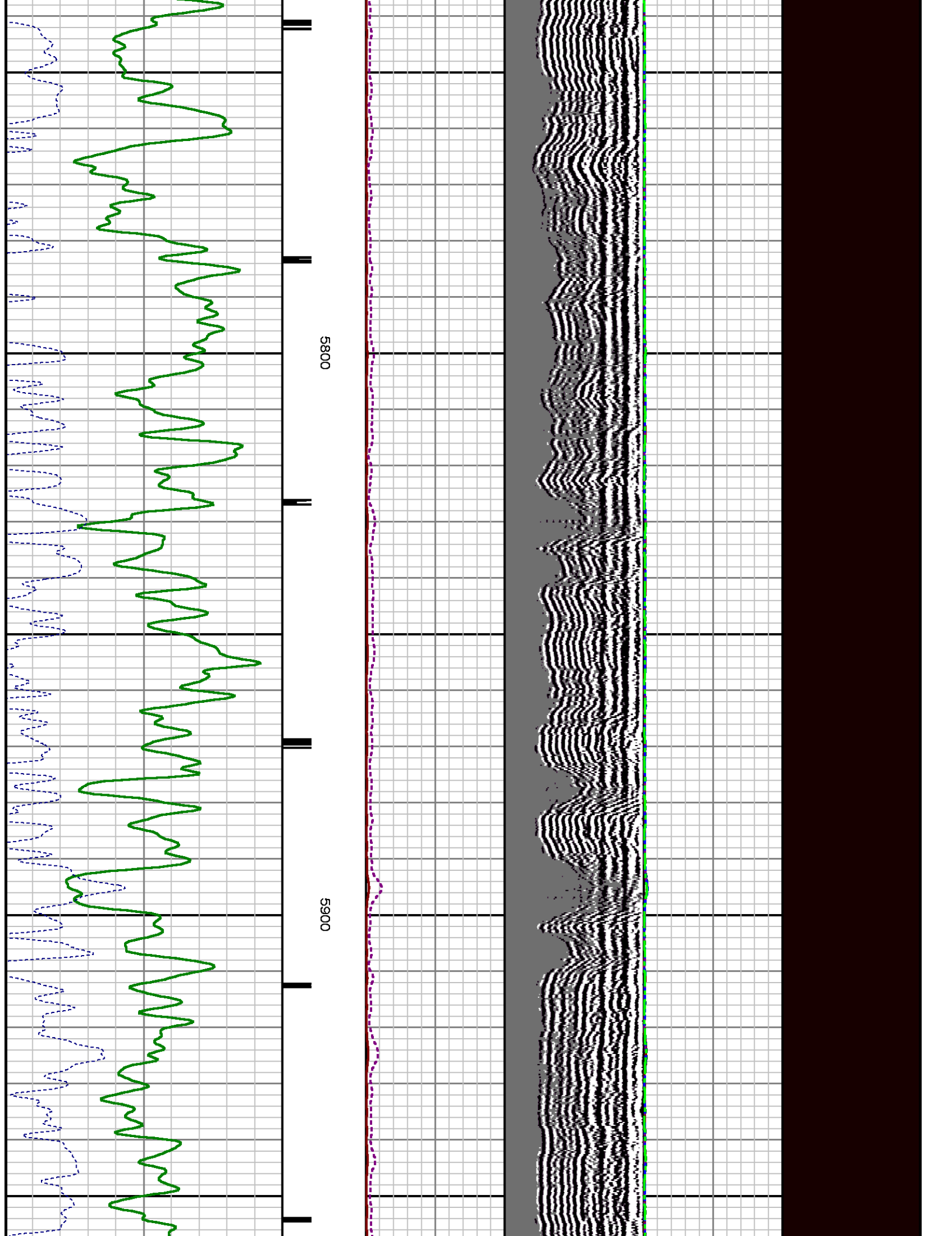


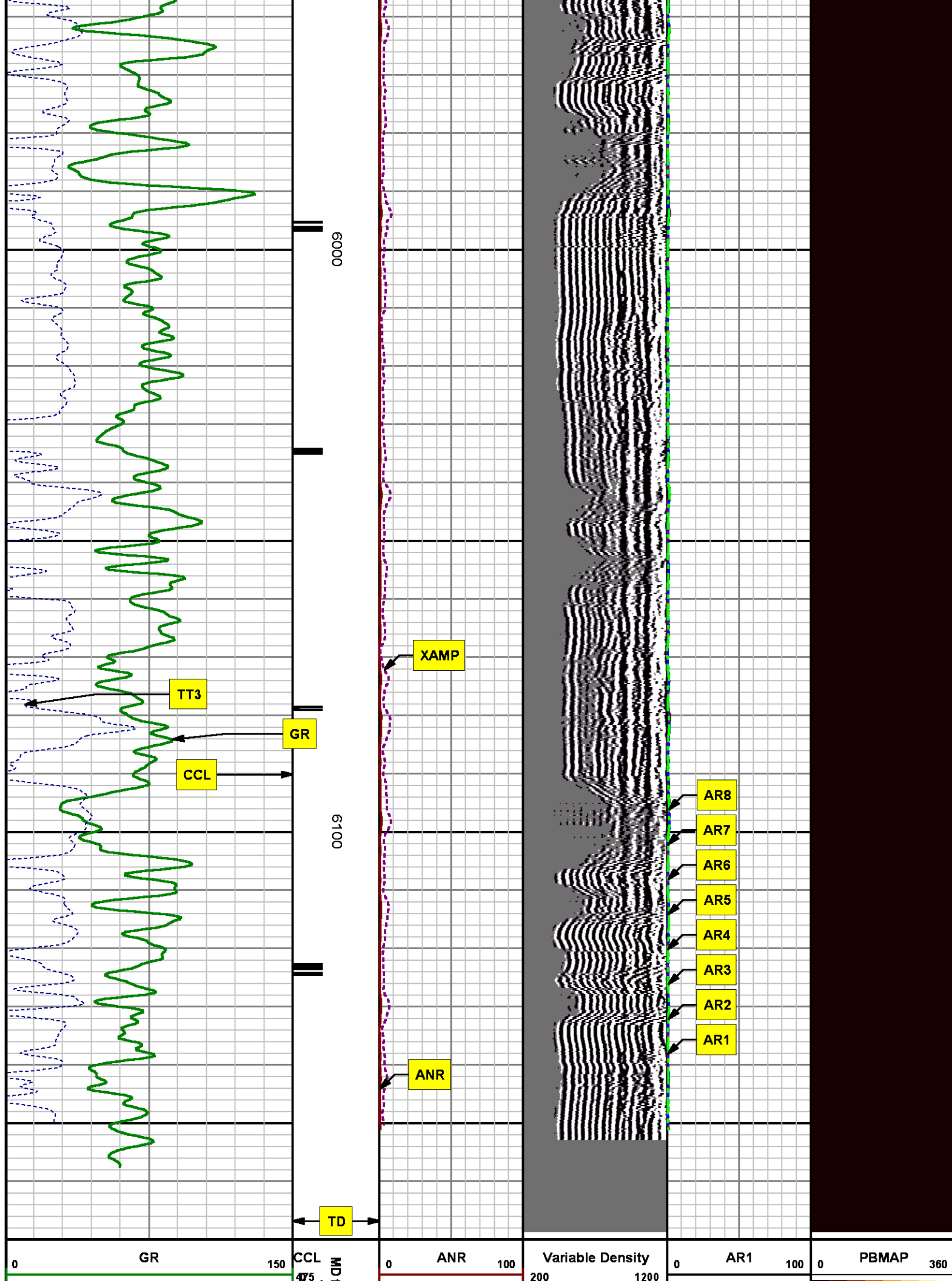


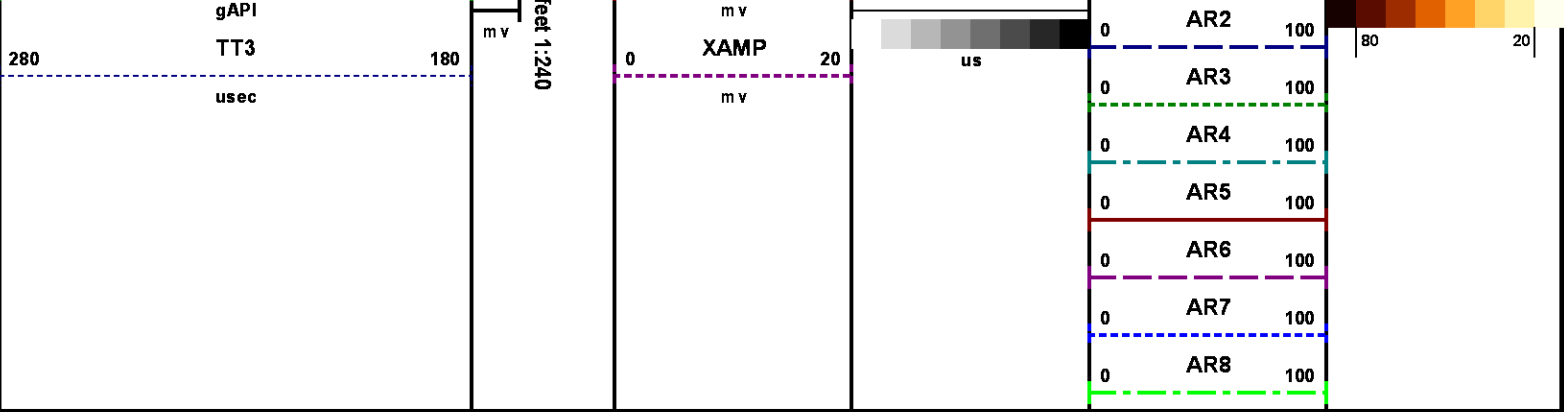












REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	5847.560	6167.810
RAL	Amp Gate Start Near	195.000	usec	5847.560	6167.810
RAL	Amp Gate Start Radial	195.000	usec	5847.560	6167.810
RAL	Amp Gate Width Far	25.000	usec	5847.560	6167.810
RAL	Amp Gate Width Near	25.000	usec	5847.560	6167.810
RAL	Amp Gate Width Radial	25.000	usec	5847.560	6167.810
RAL	casing od	4.500	inches	5847.560	6167.810
RAL	casing wt	11.600	lbm/ft	5847.560	6167.810
RAL	FB Start Far	291.900	usec	5847.560	6167.810
RAL	FB Start Near	180.000	usec	5847.560	6167.810
RAL	FB Start Radial	180.000	usec	5847.560	6167.810
RAL	FB Thresh Far	10.000	mv	5847.560	6167.810
RAL	FB Thresh Near	4.000	mv	5847.560	6167.810
RAL	FB Thresh Radial	4.000	mv	5847.560	6167.810
RAL	Fluid Travel Time	200.000	usec/ft	5847.560	6167.647

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

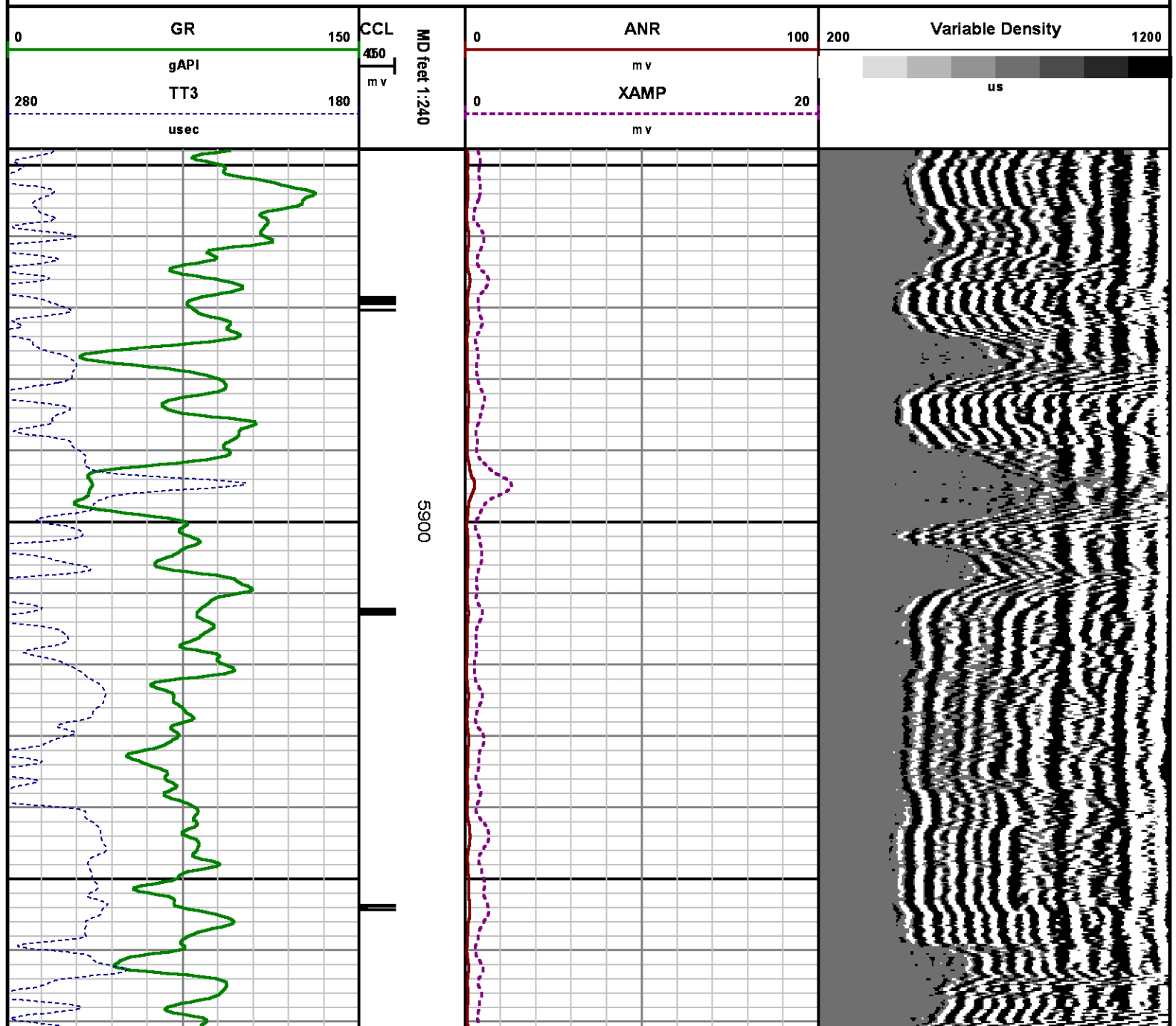
Well : C&C ENERGY GM 321-13

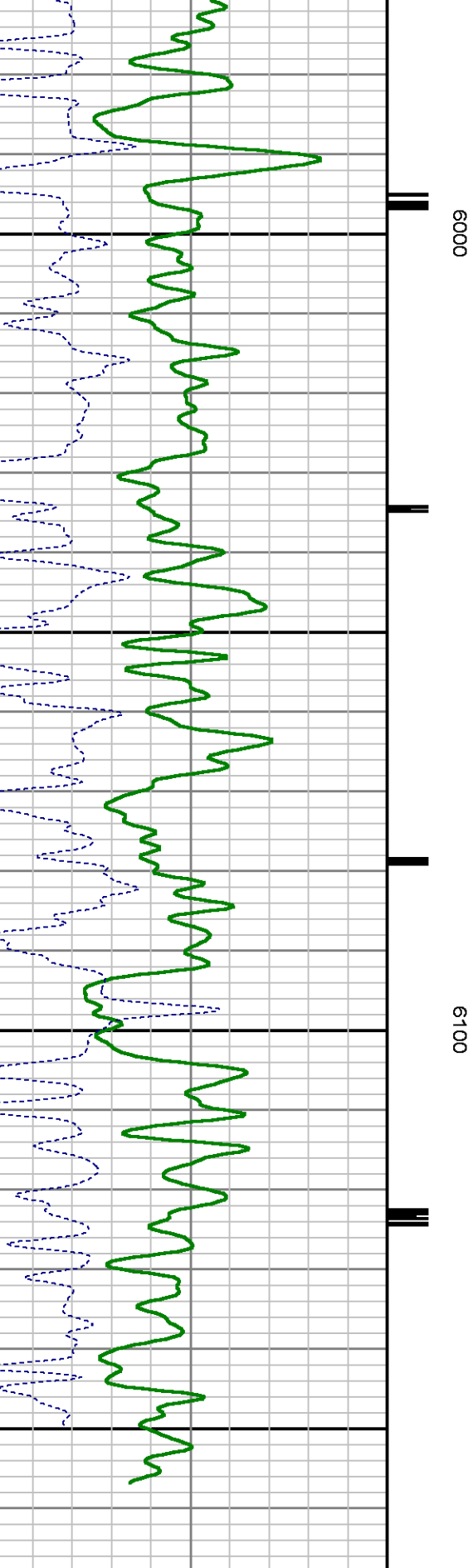
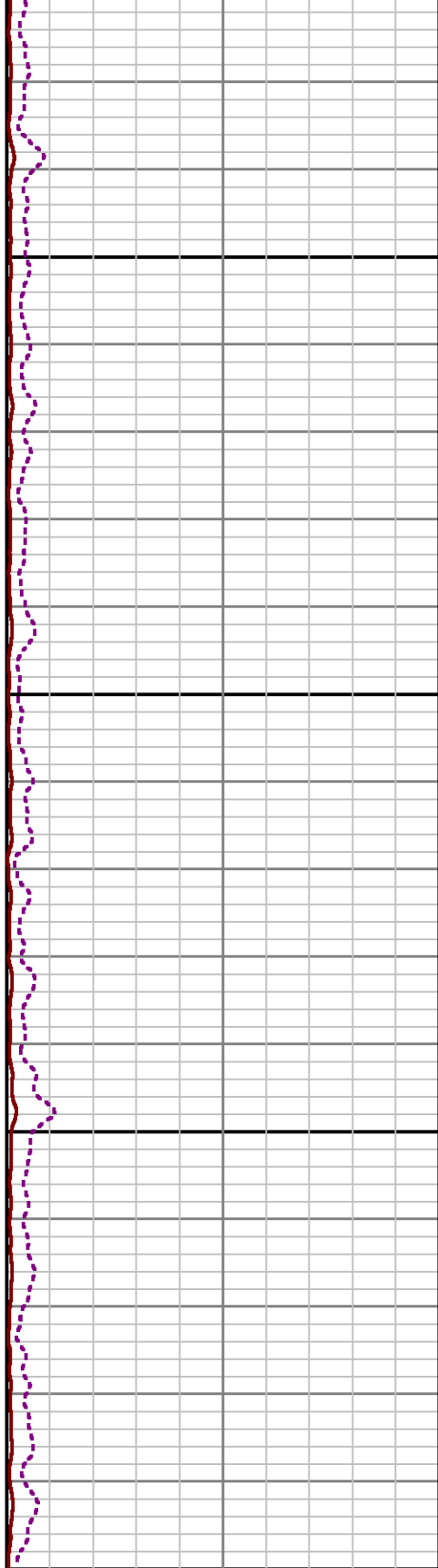
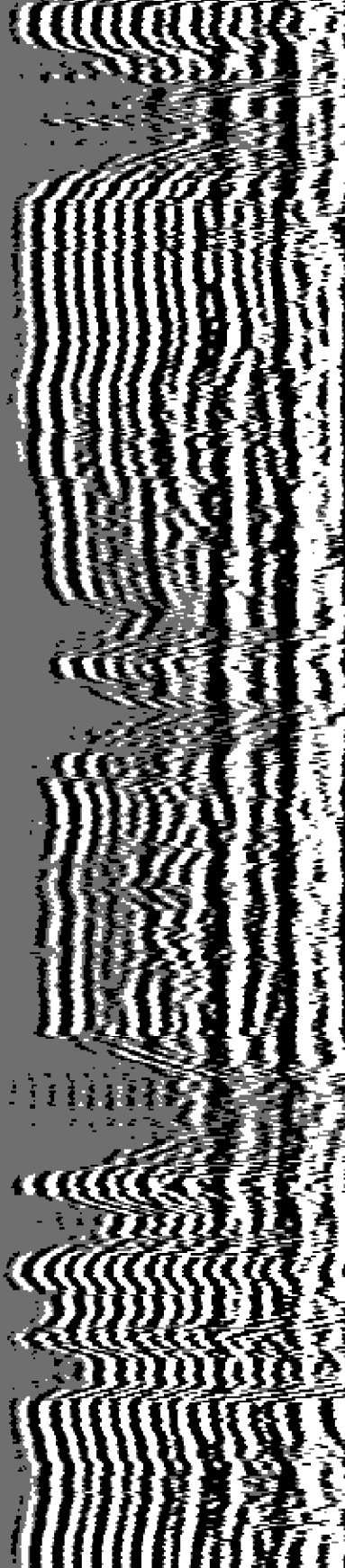
File Name : d:\welldata\wpx\gm 321-13\321ral\repeat.xtf


Mode : PlotMgr 5.4.504

Interval : 5847.81 - 6167.81 feet UP

Created : 5/27/2014 9:36:38 AM





0 GR 150		CCL 450 m v MD feet 1:240	0 ANR 100		200 Variable Density 1200	
gAPI			m v			
280 TT3 180			0 XAMP 20		us	
u sec			m v			

CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\106M27_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue May 27 09:06:15 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: M27

Tool Delay [usec] Tank OD Tank Wt Tank ID

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	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.652"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>
3 Ft. Receiver	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.206"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>
5 Ft. Receiver	<input type="text" value="326"/>	<input type="text" value="325"/>	<input type="text" value="30"/>	<input type="text" value="237"/>	<input type="text" value="25"/>	<input type="text" value="0.113"/>	<input type="text" value="150.00"/>	<input type="text" value="0.46"/>
Radial #1	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.573"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>
Radial #2	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.635"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>
Radial #3	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.276"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>
Radial #4	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.619"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>
Radial #5	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.208"/>	<input type="text" value="100.00"/>	<input type="text" value="0.44"/>
Radial #6	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.443"/>	<input type="text" value="100.00"/>	<input type="text" value="0.44"/>
Radial #7	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.335"/>	<input type="text" value="100.00"/>	<input type="text" value="0.44"/>
Radial #8	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.432"/>	<input type="text" value="100.00"/>	<input type="text" value="0.43"/>

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\106M27 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue May 27 09:08:35 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: M27

Tool Delay [usec] Casing OD Casing Wt Casing ID

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.071"/>	<input type="text" value="0.000"/>	<input type="text" value="0.99"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-1.733"/>			
5 Ft. Receiver	<input type="text" value="305"/>	<input type="text" value="25"/>	<input type="text" value="-2.724"/>			
Radial #1	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="-3.151"/>			

Radial #2	195	25	-2.752
Radial #3	195	25	-2.523
Radial #4	195	25	-2.540
Radial #5	195	25	-2.125
Radial #6	195	25	-2.030
Radial #7	195	25	-1.433
Radial #8	195	25	-1.983

GAMMA RAY

Calibration File: C:\case\calver\GR\45608.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 08 09:48:12 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	97.82	367.47	0.686	67.11	252.11	185.00

Verification File: C:\case\calver\GR\45608.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu May 08 09:49:43 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

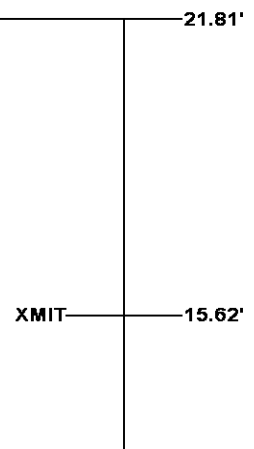
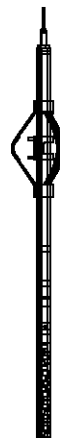
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	98.76	372.44	0.686	67.76	255.53	187.77

TOOL DIAGRAM

OTA SHORT CABLE HEAD

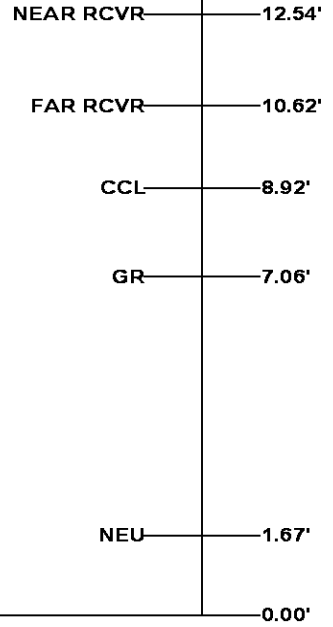
PROBE 2 3/4 DUAL RECEIVER RADII

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

C&C ENERGY GM 321-13

Field

GRAND VALLEY

County

GARFIELD

State

COLORADO

Location

SHL: 275' FSL & 1032' FWL (SEC 12)

BHT: 418' FNL & 2181' FWL (NENW SEC 13)

SEC 13 TWP 7S RGE 96W

Elevations

KB 5165 ft

DF

GL 5141 ft

File No:

CH085741

API No:

05045222690000

13 7S 96W

GM 24-12 PAD

H&P 318