



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: **Company** **WPX ENERGY**

CH082308 **Well** **SAVAGE RWF 24-25**

API No: **Field** **RULISON**

05045219790000 **County** **GARFIELD** **State** **COLORADO**

Location **SHL: 1999' FSL & 2305' FWL**

25 6S 94W **BHL: 751' FSL & 2616' FEL (SWSE)**

RWF 23-25 PAD **SEC 25 TWP 6S RGE 94W**

NABORS 677 **Other Services** **RPM**

Permanent Datum **GL** **Elevation** **6096 ft**

Log Measured From **KB** **26 ft** **Above P. D.**

Drill Measured From **KELLY BUSHING** **Elevations** **KB 6122 ft** **DF** **GL 6096 ft**

Date	31/JAN/14	
Run	ONE	
Service Order	US62E099	
Depth Driller	8644 ft	
Depth Logger	8608 ft	
Bottom Logged Interval	8598 ft	
Top Logged Interval	26 ft	
Time Started	1130	
Time Finished	1430	
Operator Rig Time	3 HRS	
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	66 fpm	
Maximum Recorded Temperature	233 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	BOB CADY	

- 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	1112 ft
8.75 in	1112 ft	8644 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1112 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8644 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 11 feet.
Logged with zero PSI at wellhead.
BHT = 233°F
SJ = 5118'-5142'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GRICCL	2459XA	10124121	CENT

PRIMARY PRESENTATION
0 PSI

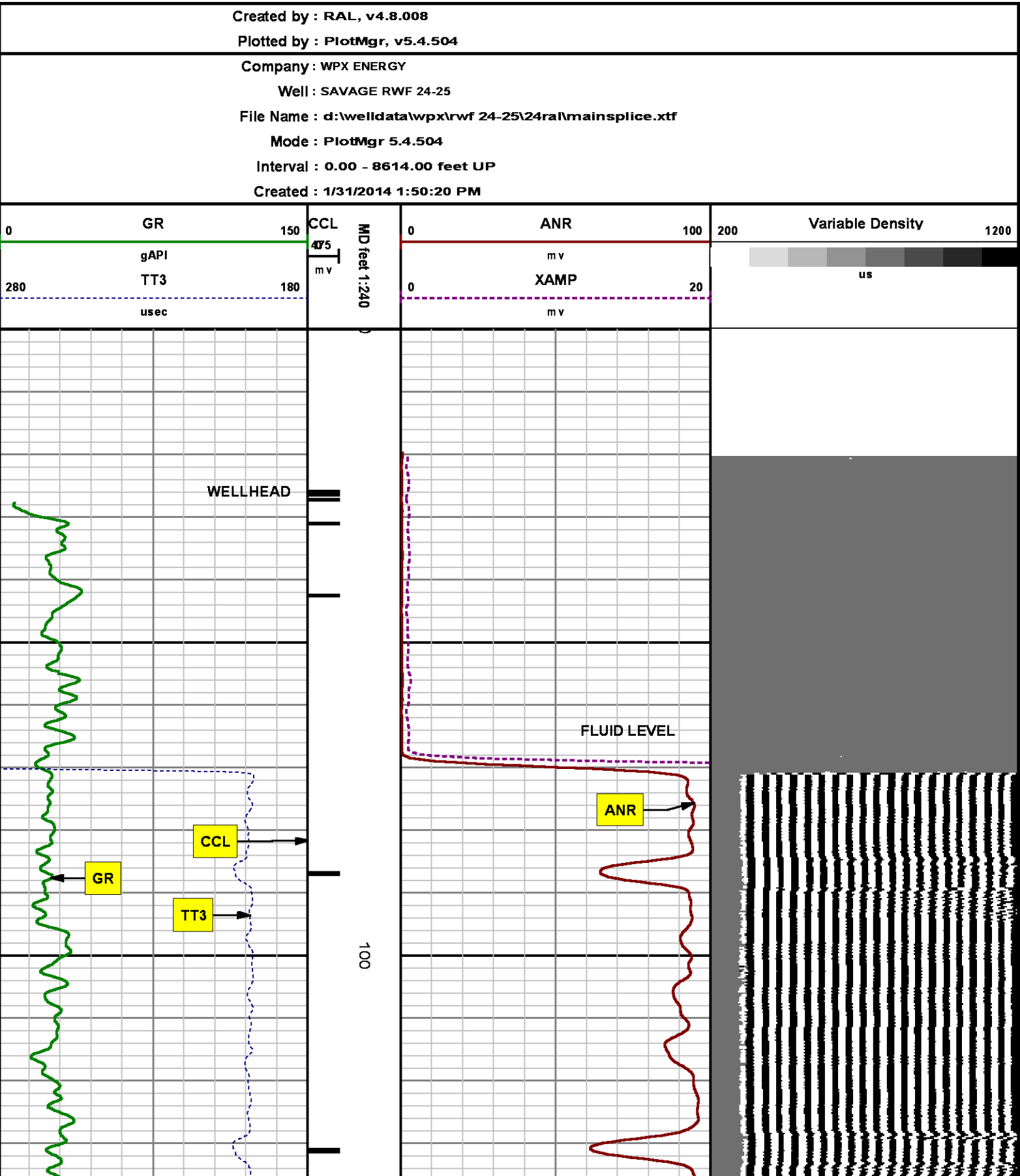
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.837	3213.000
RAL	Amp Gate Start Near	195.000	usec	35.837	3213.000
RAL	Amp Gate Start Radial	195.000	usec	35.837	3213.000
RAL	Amp Gate Width Far	25.000	usec	35.837	3213.000
RAL	Amp Gate Width Near	25.000	usec	35.837	3213.000
RAL	Amp Gate Width Radial	25.000	usec	35.837	3213.000
RAL	casing od	4.500	inches	35.837	3213.000
RAL	casing wt	11.600	lbm/ft	35.837	3213.000
RAL	FB Start Far	291.900	usec	35.837	3213.000
RAL	FB Start Near	175.391	usec	35.837	3213.000
RAL	FB Start Radial	175.391	usec	35.837	3213.000
RAL	FB Thresh Far	10.000	mv	35.837	3213.000
RAL	FB Thresh Near	4.000	mv	35.837	3213.000
RAL	FB Thresh Radial	4.000	mv	35.837	3213.000
RAL	Fluid Travel Time	200.000	usec/ft	35.837	3212.993

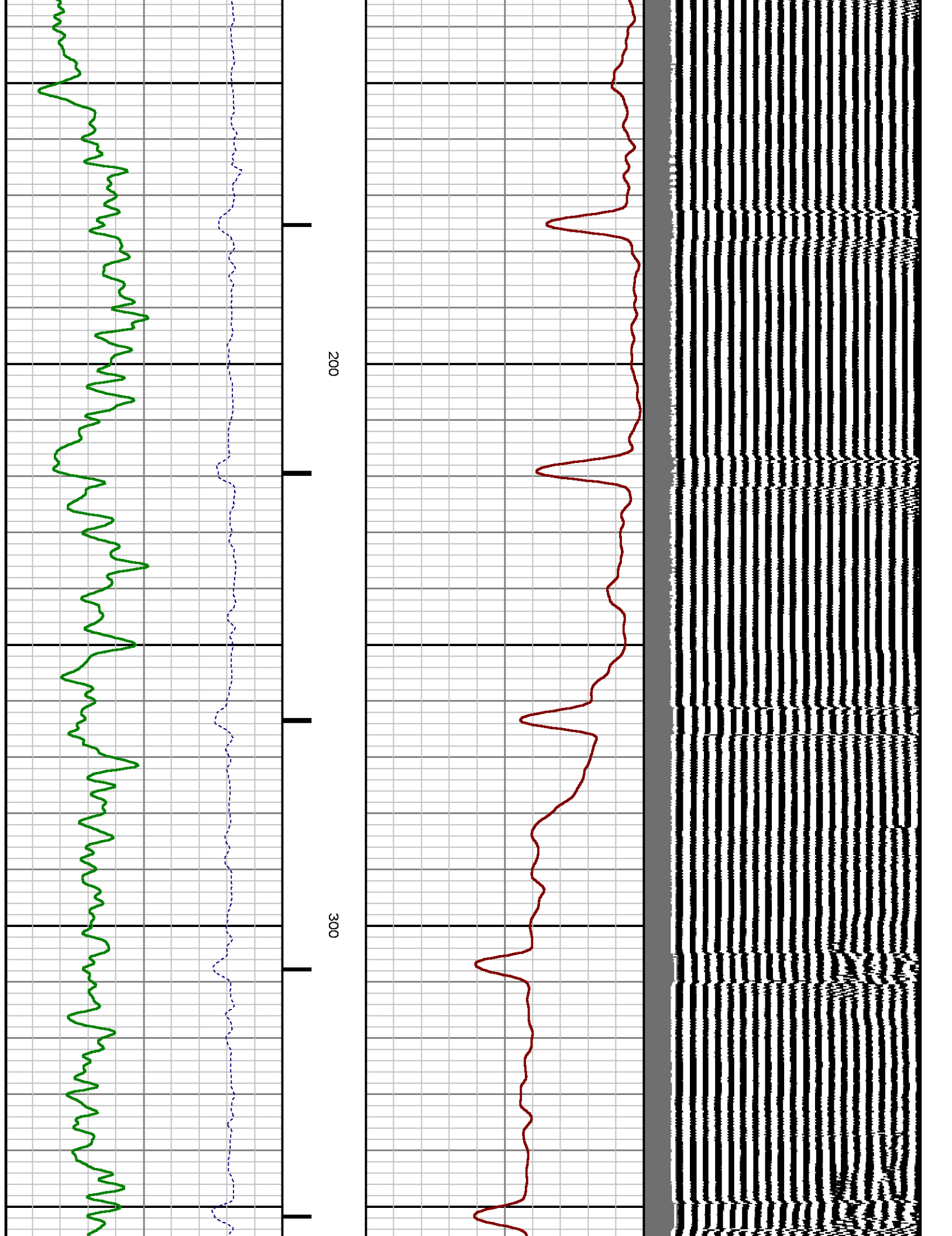
DEPTH OFFSETS

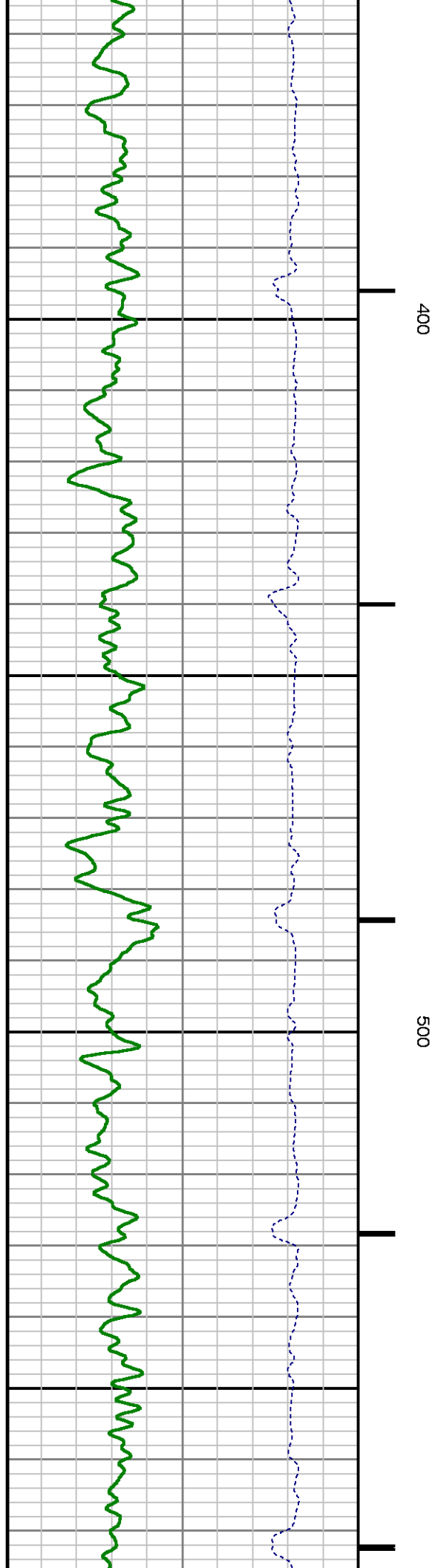
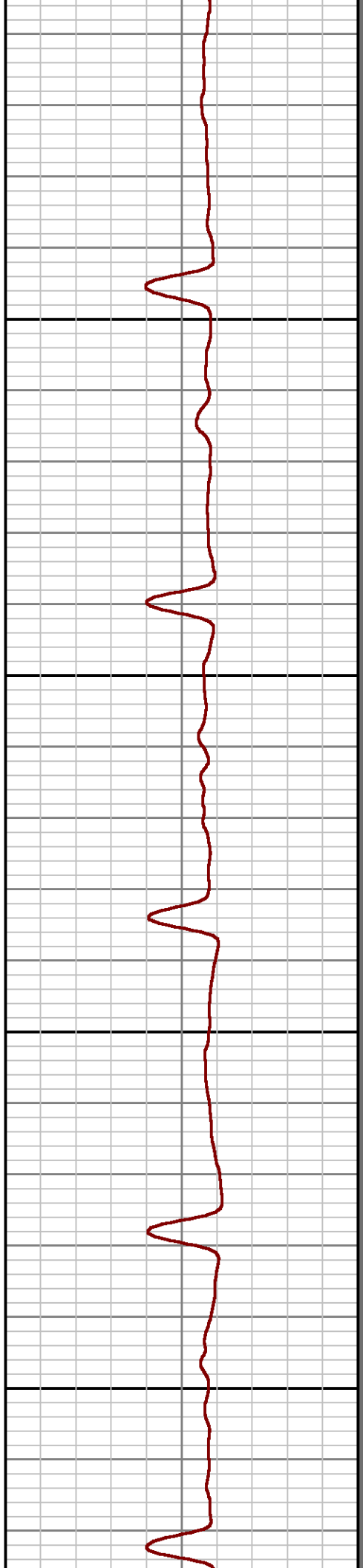
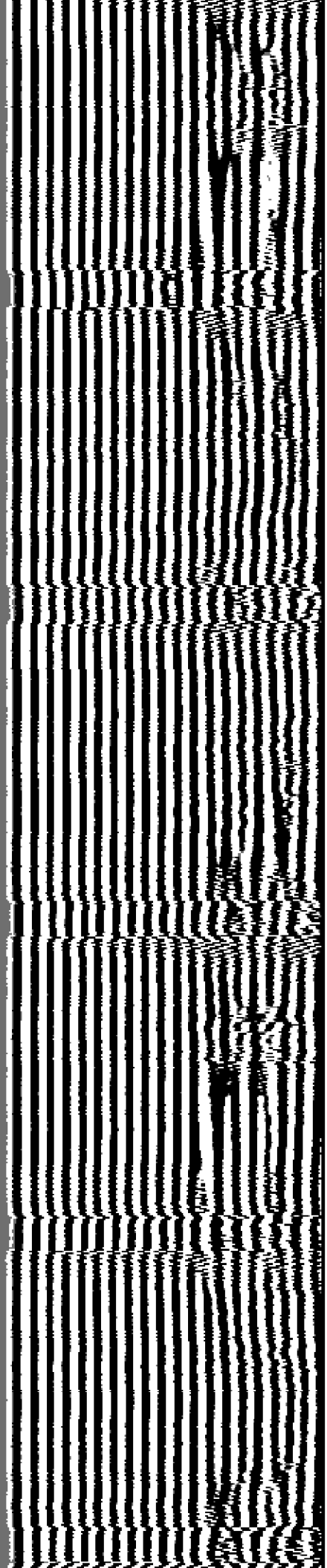
(for Acquired Curves)

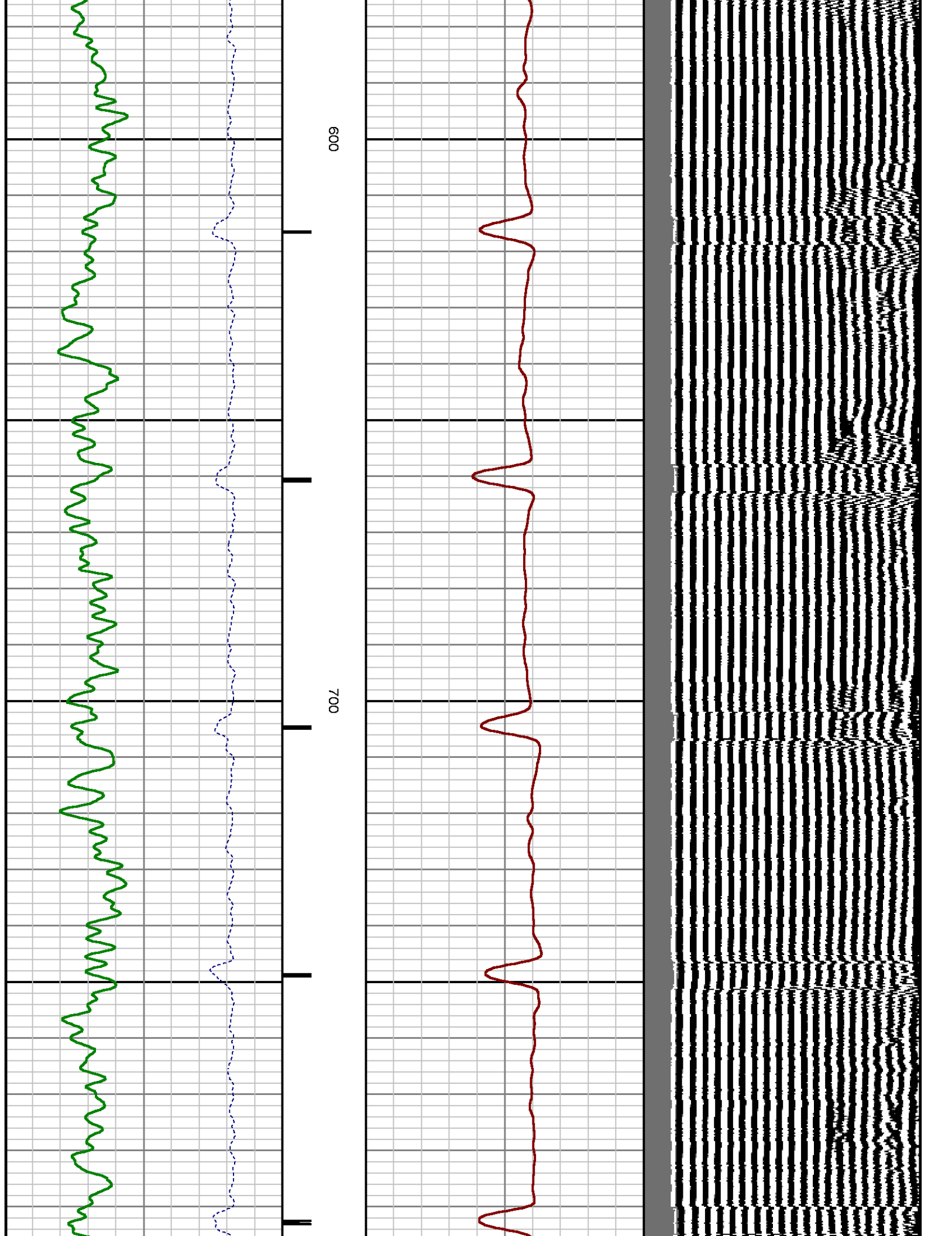
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3

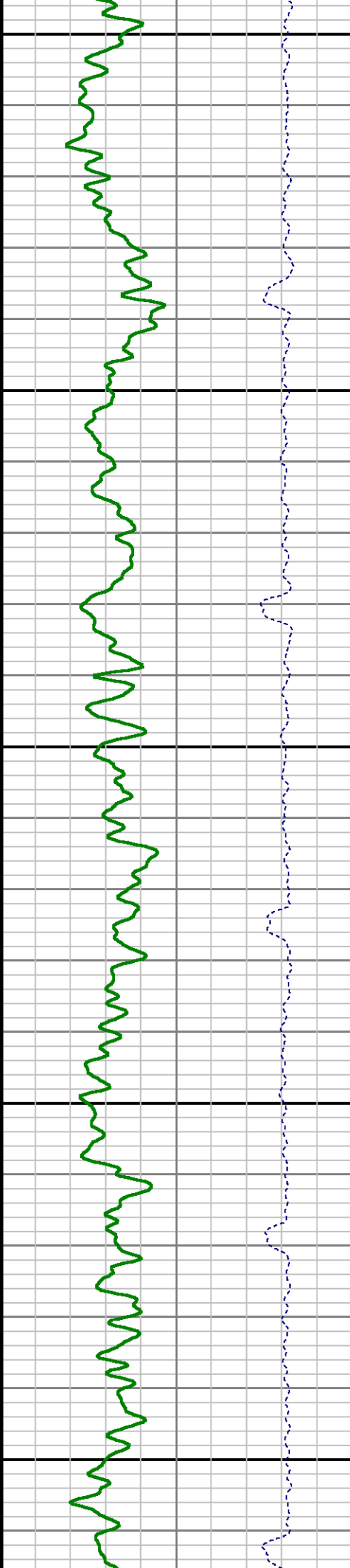
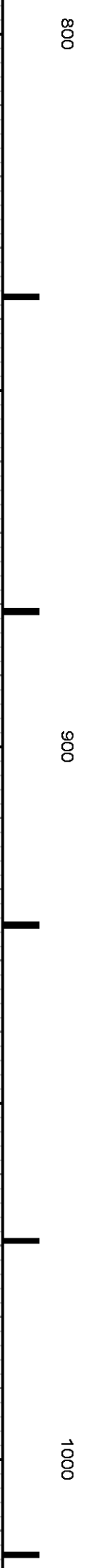
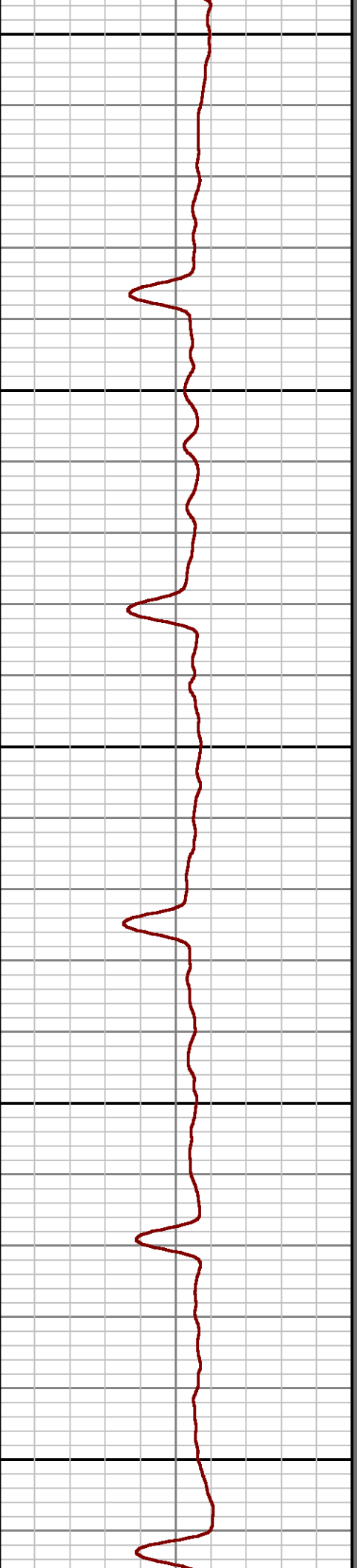
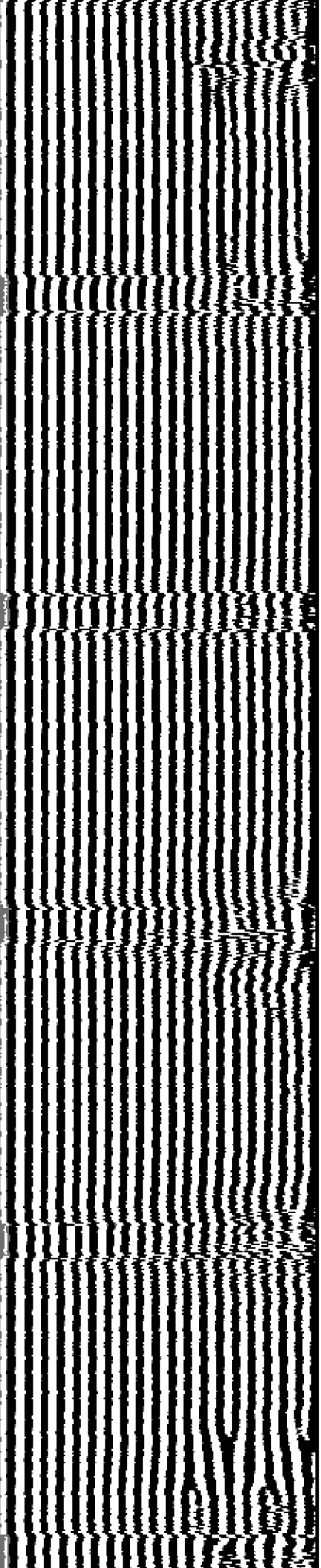
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

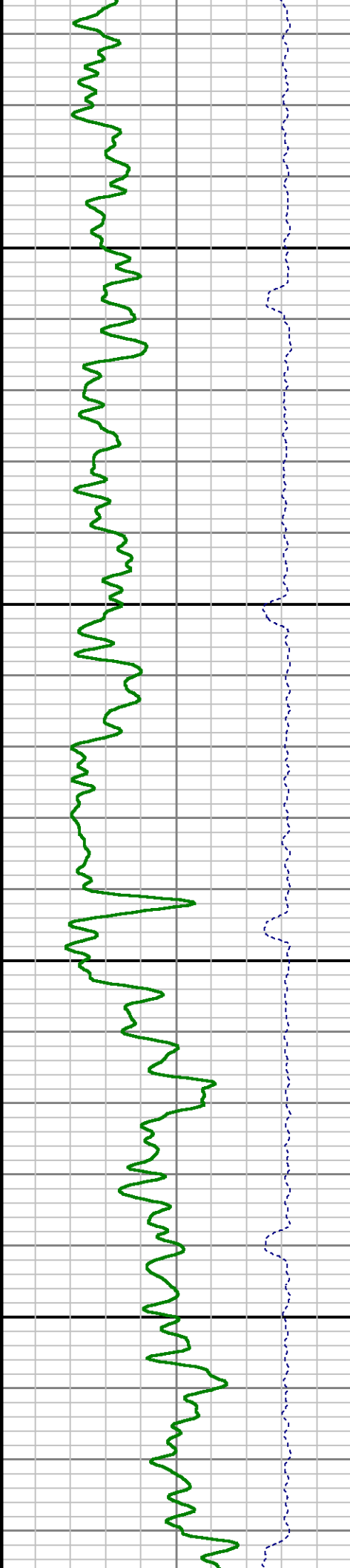
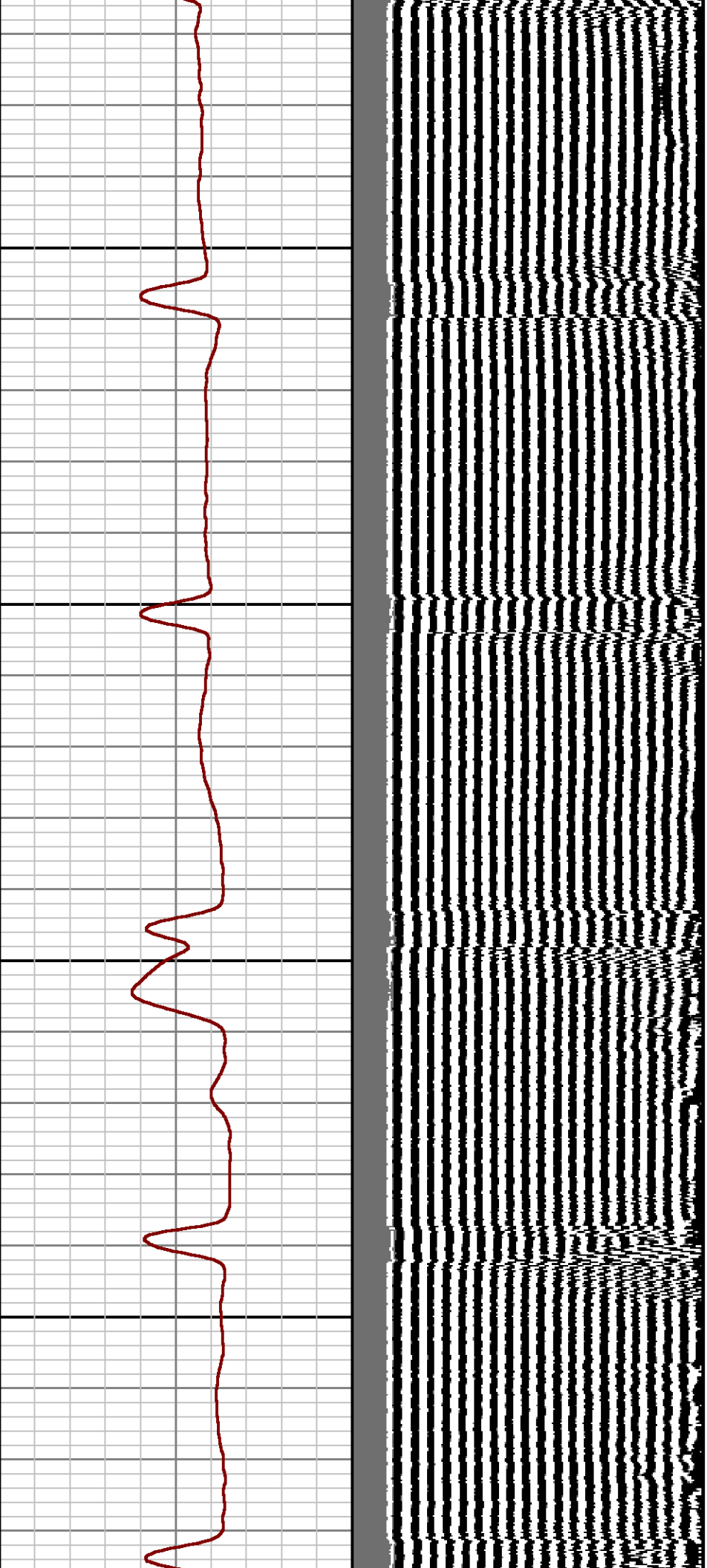


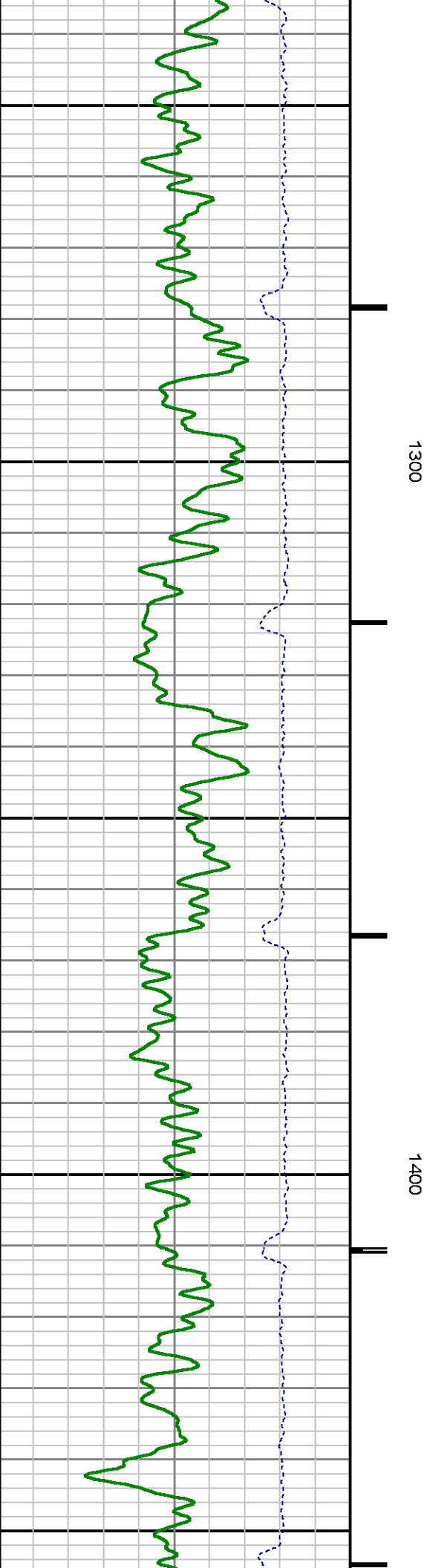
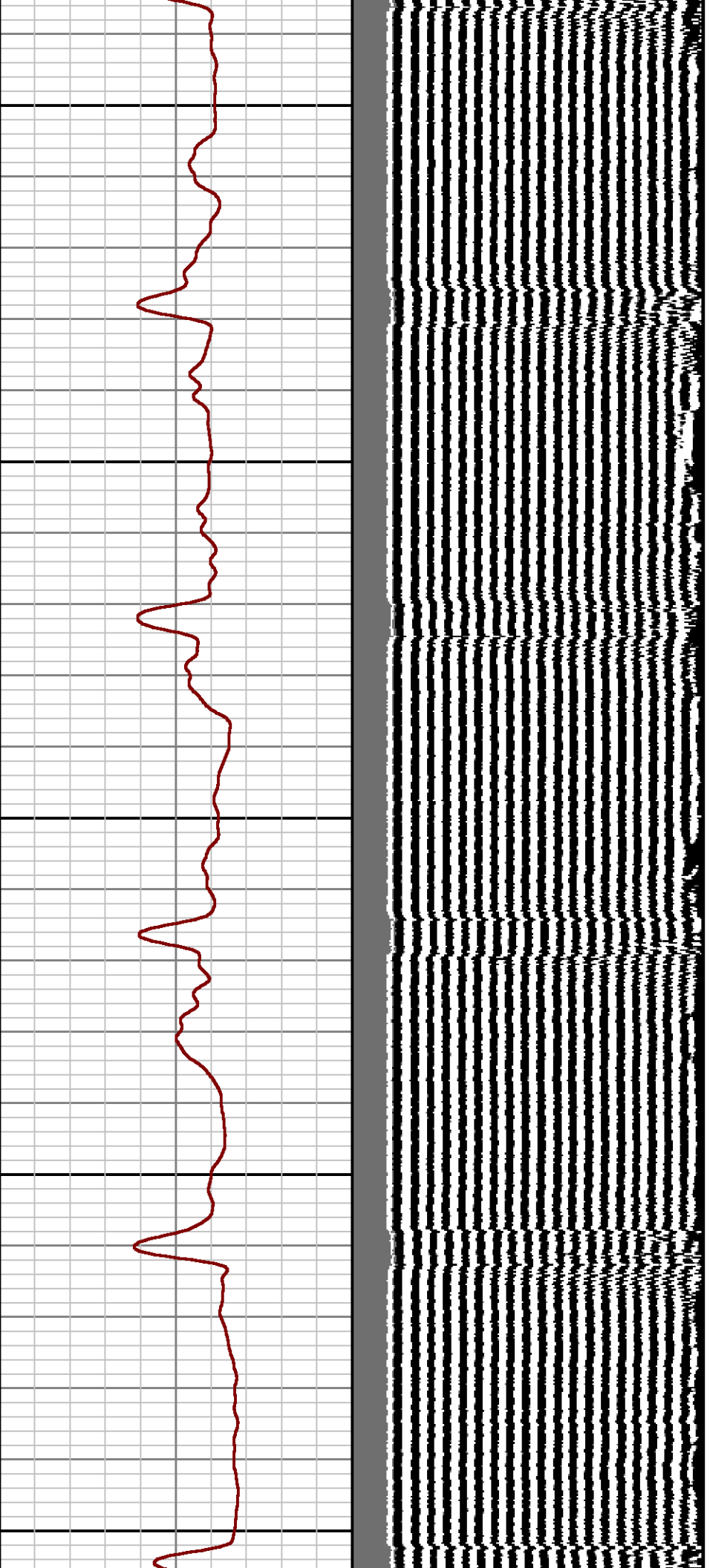


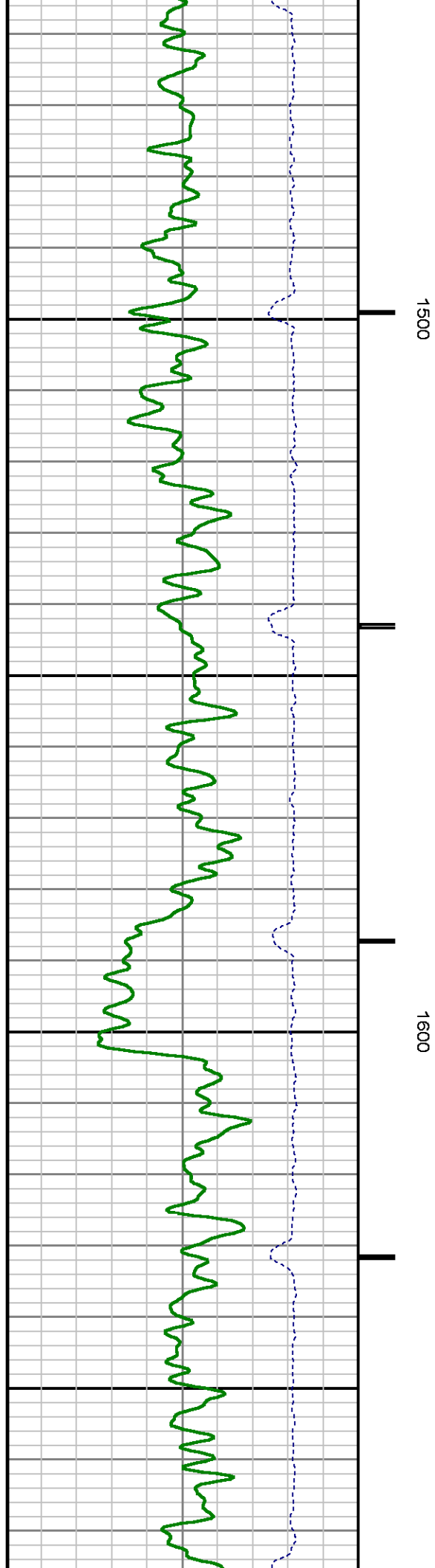
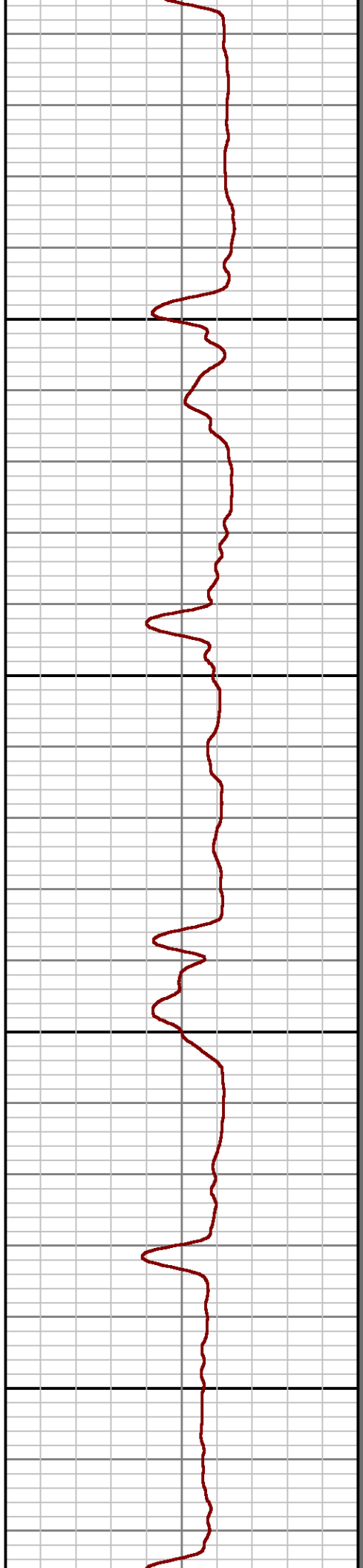
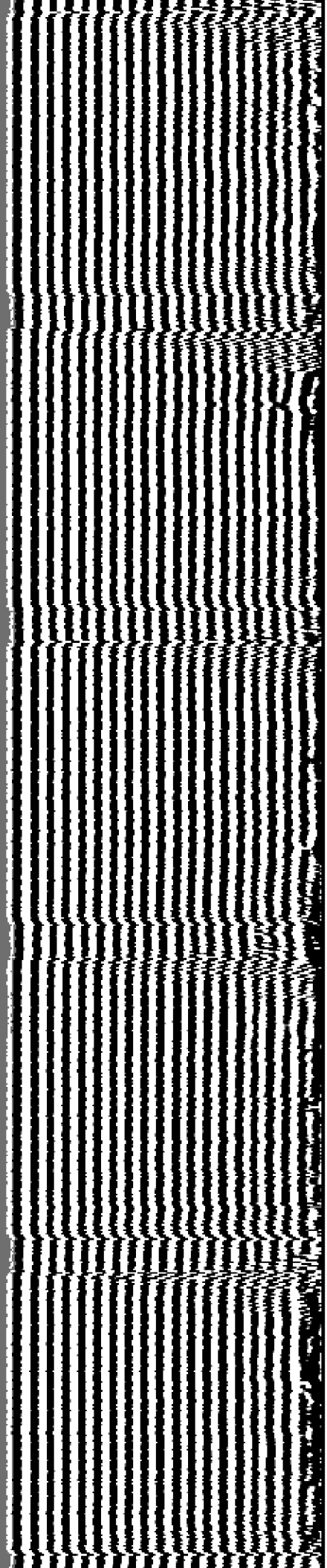


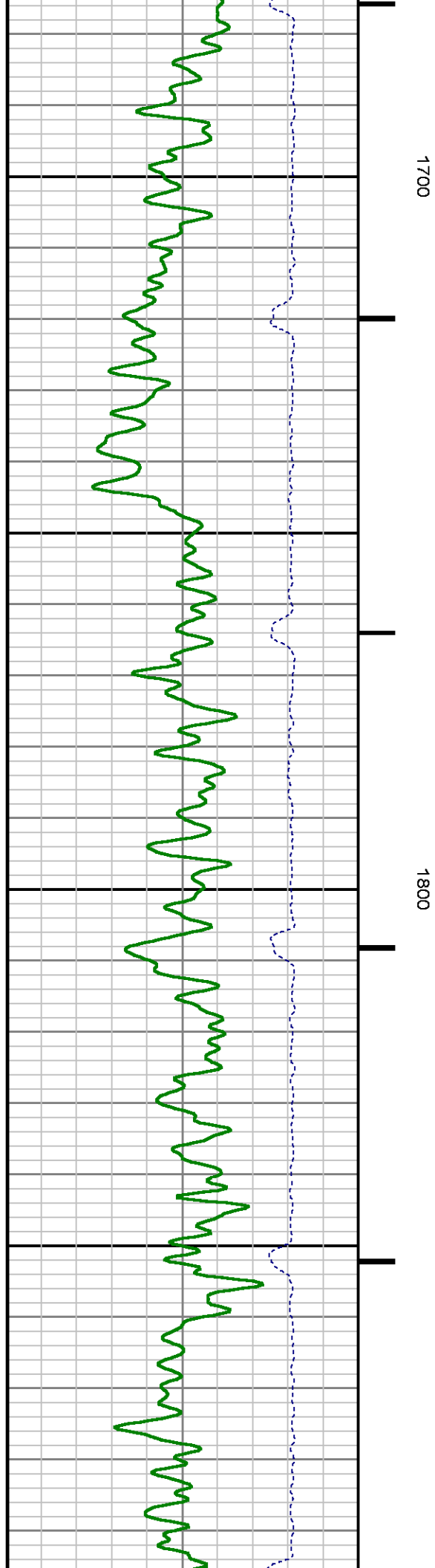
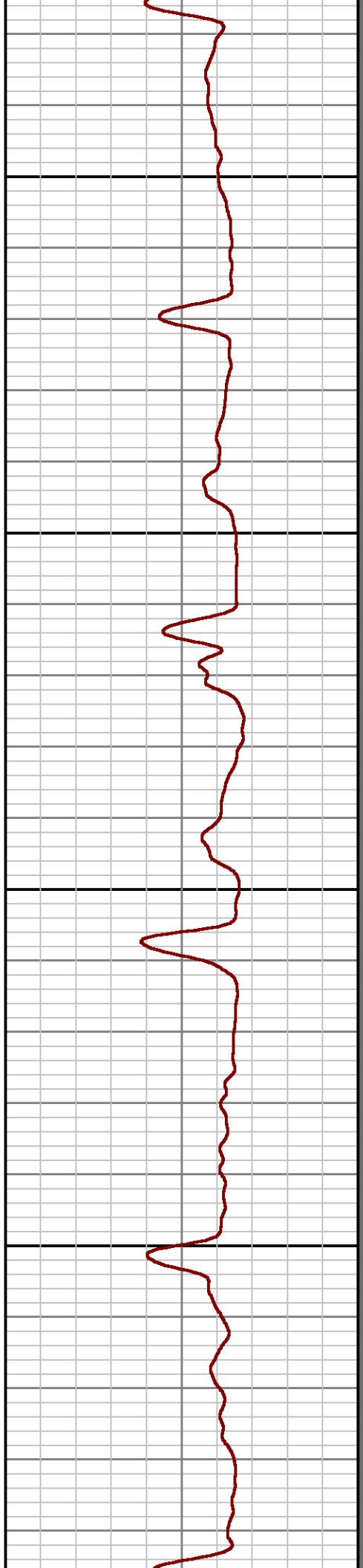
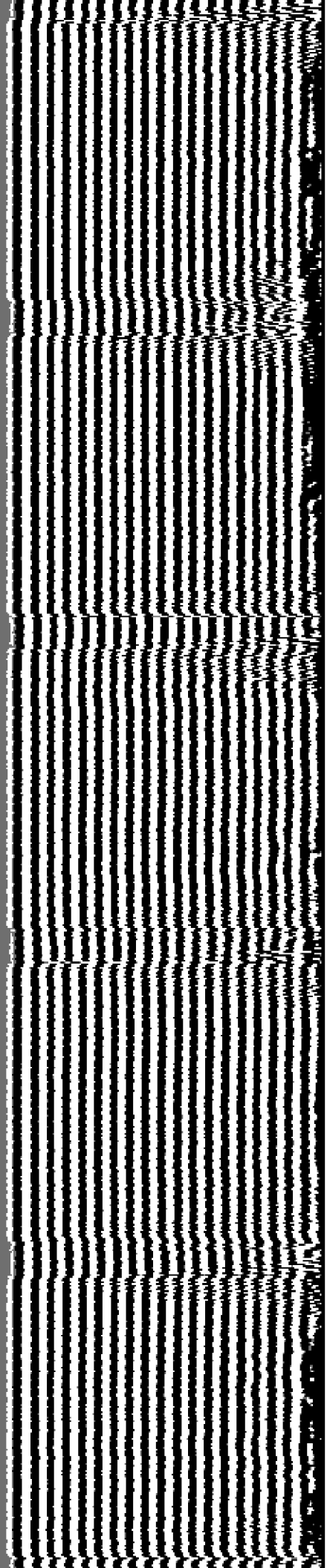


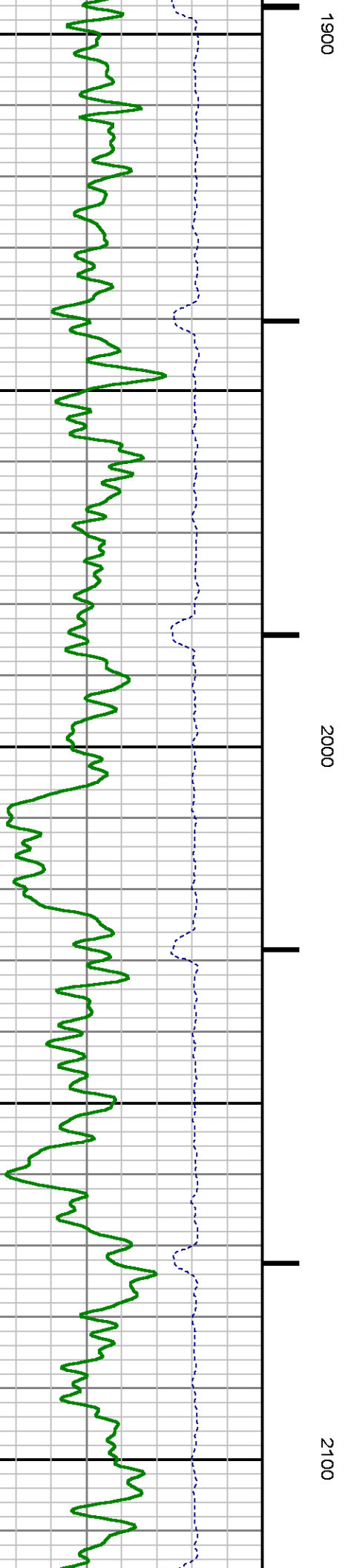
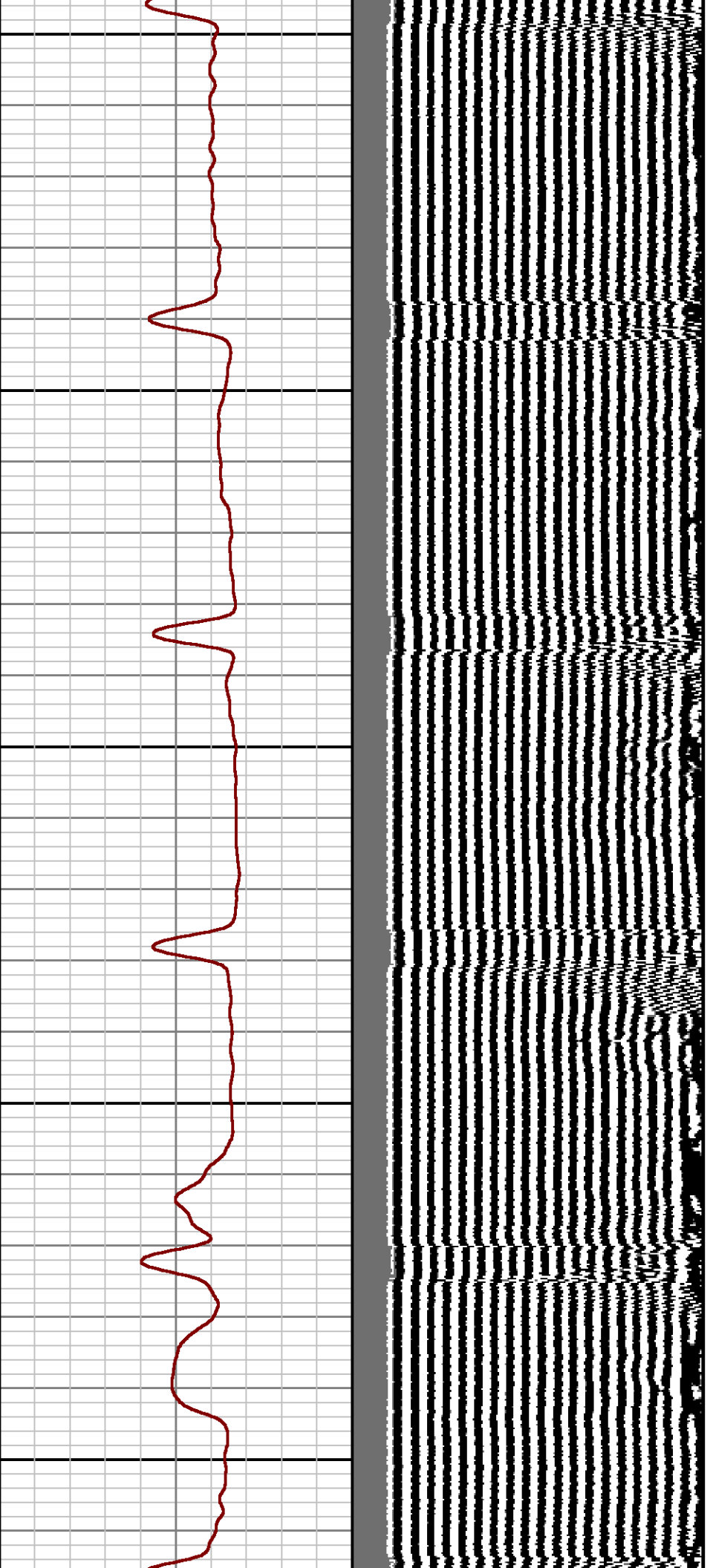


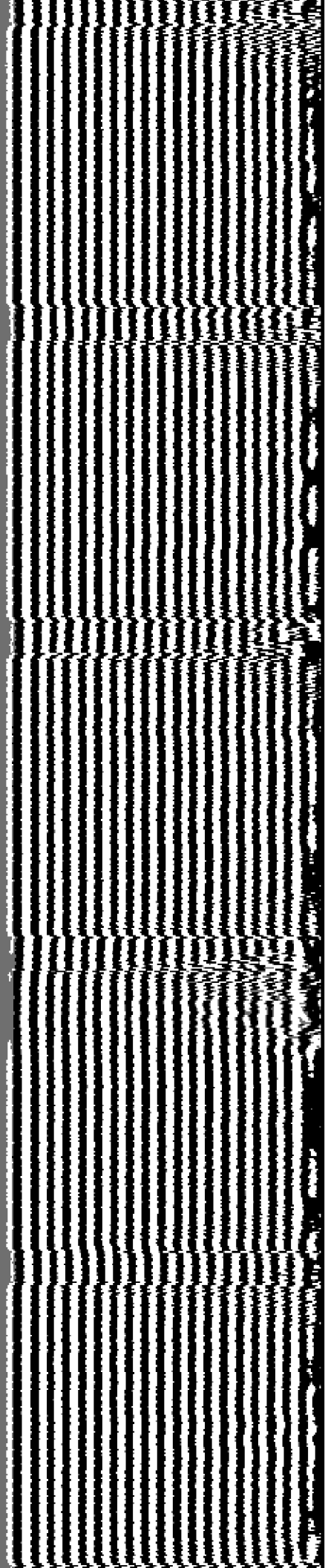






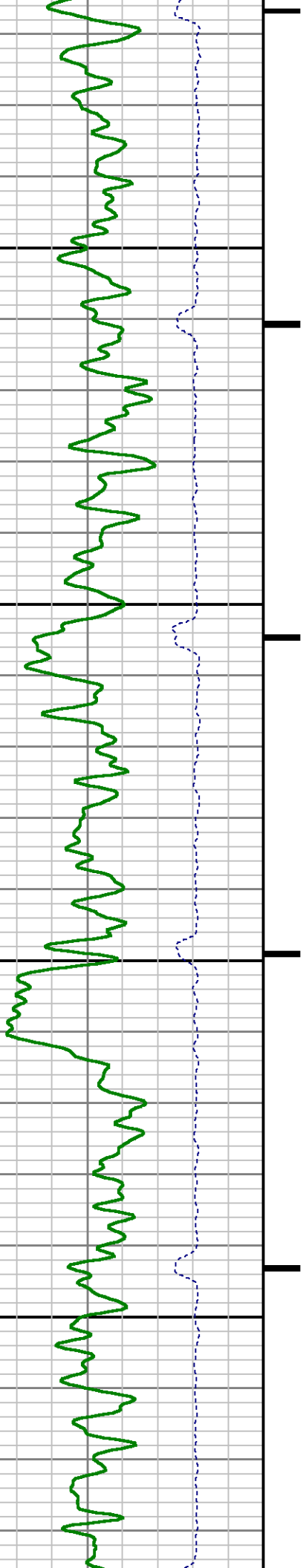


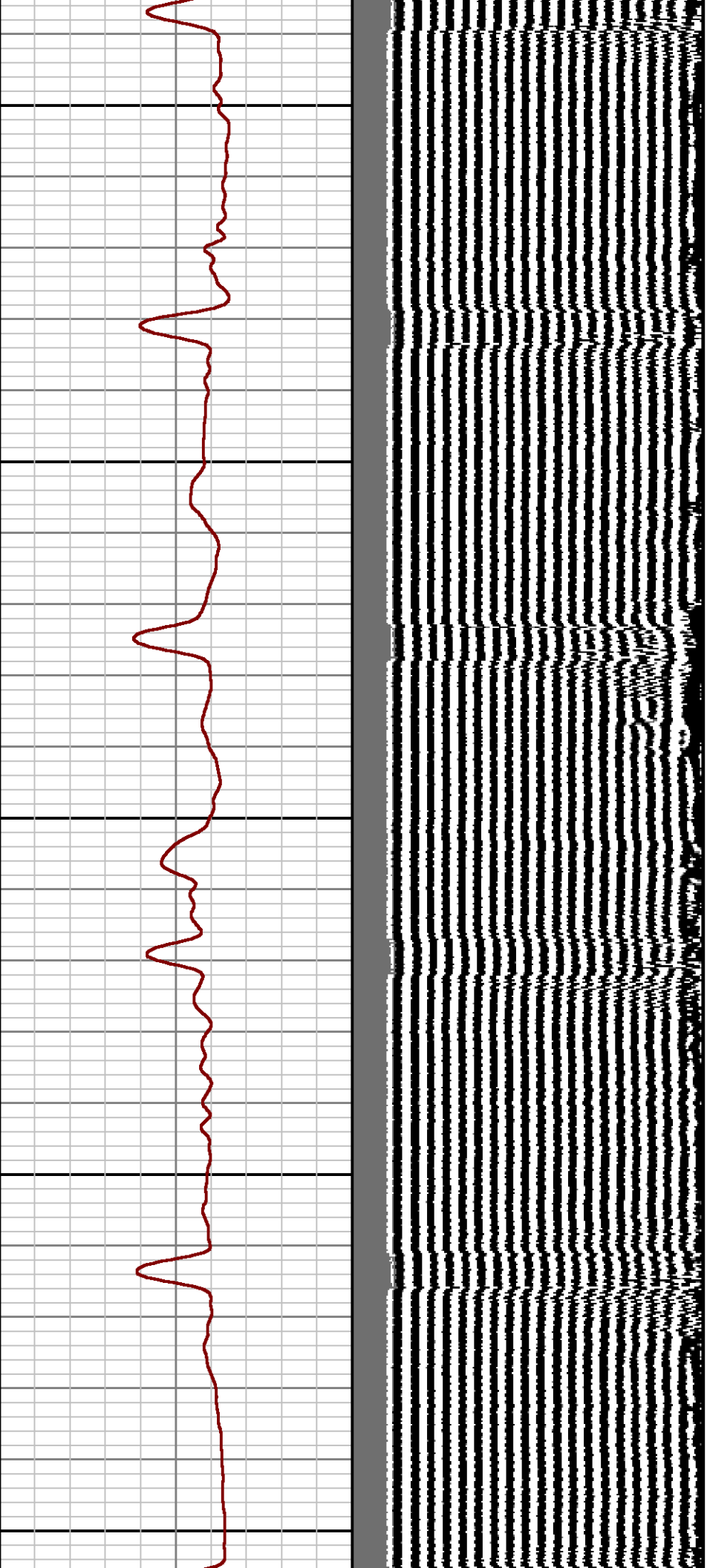




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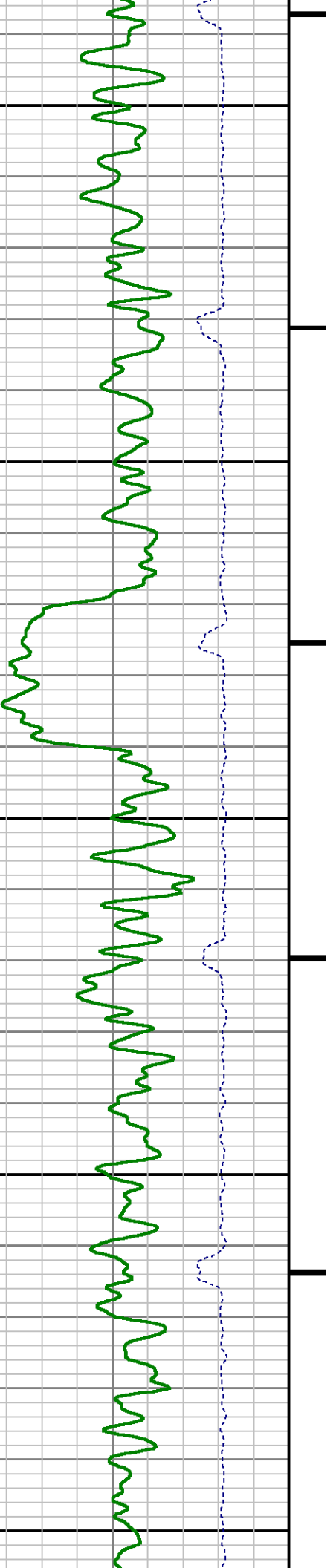
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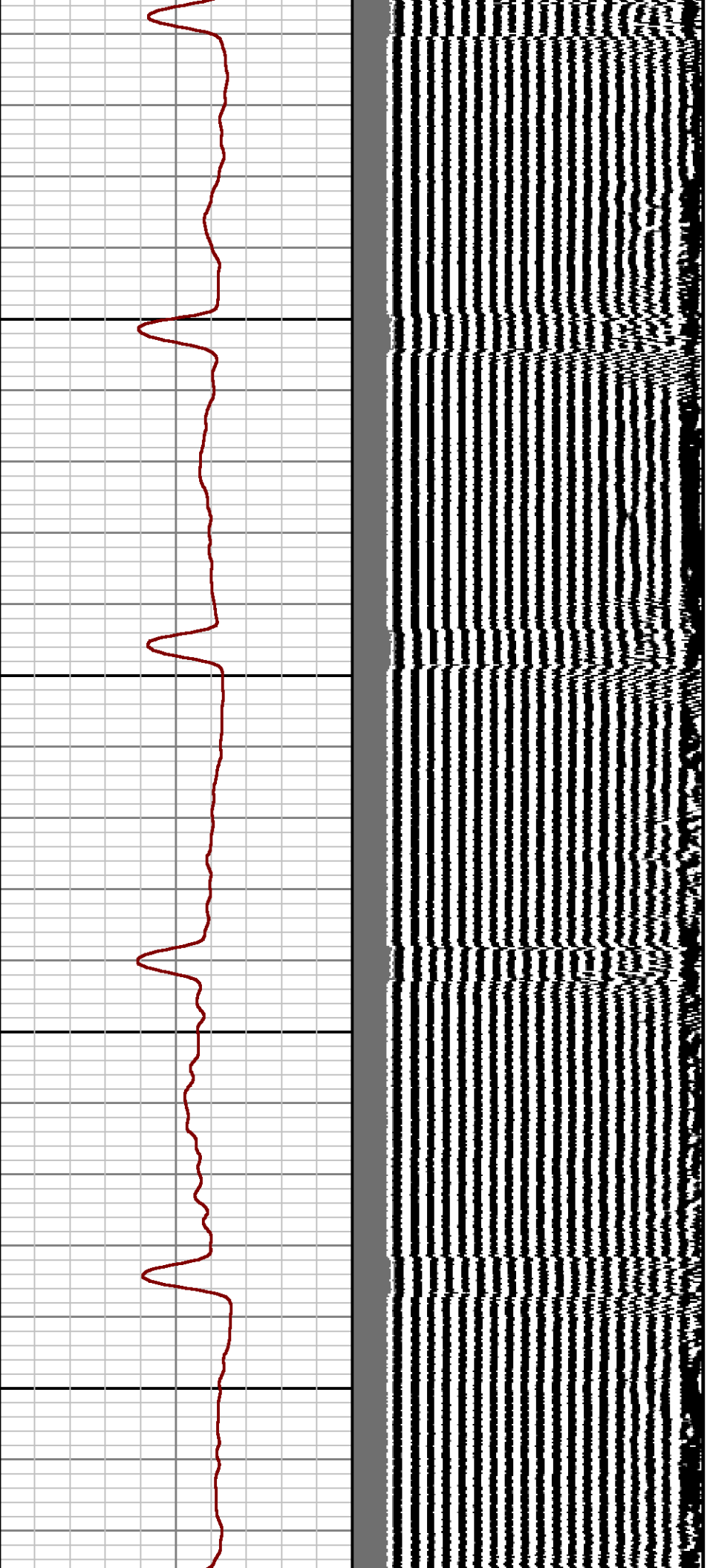




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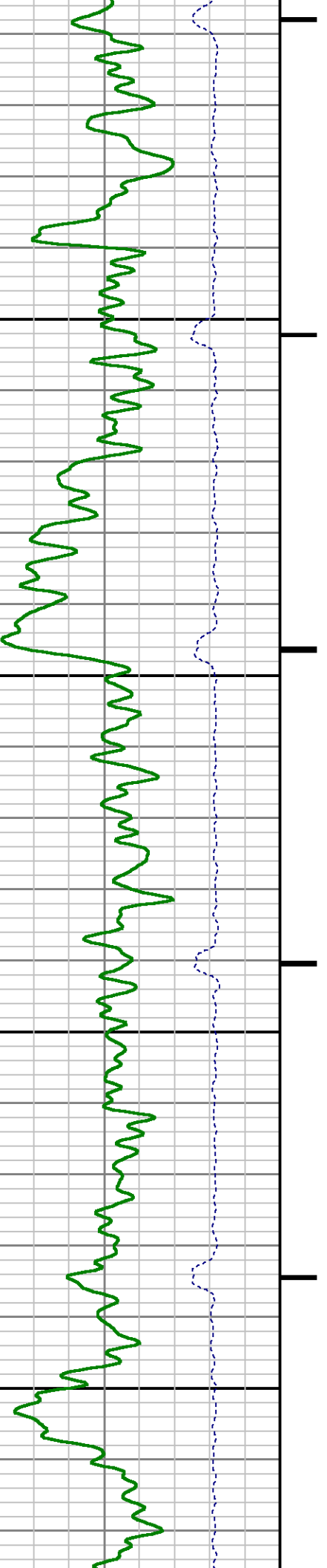
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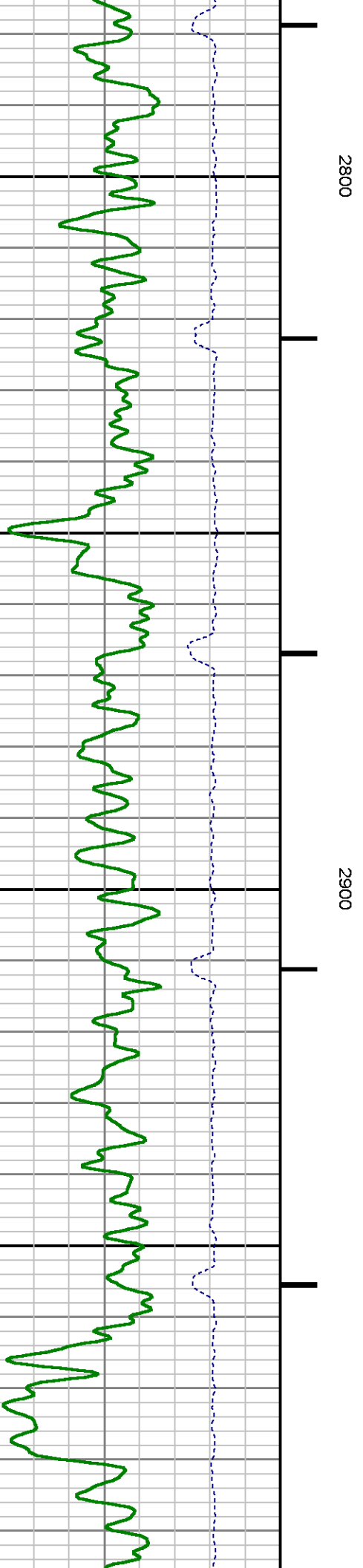
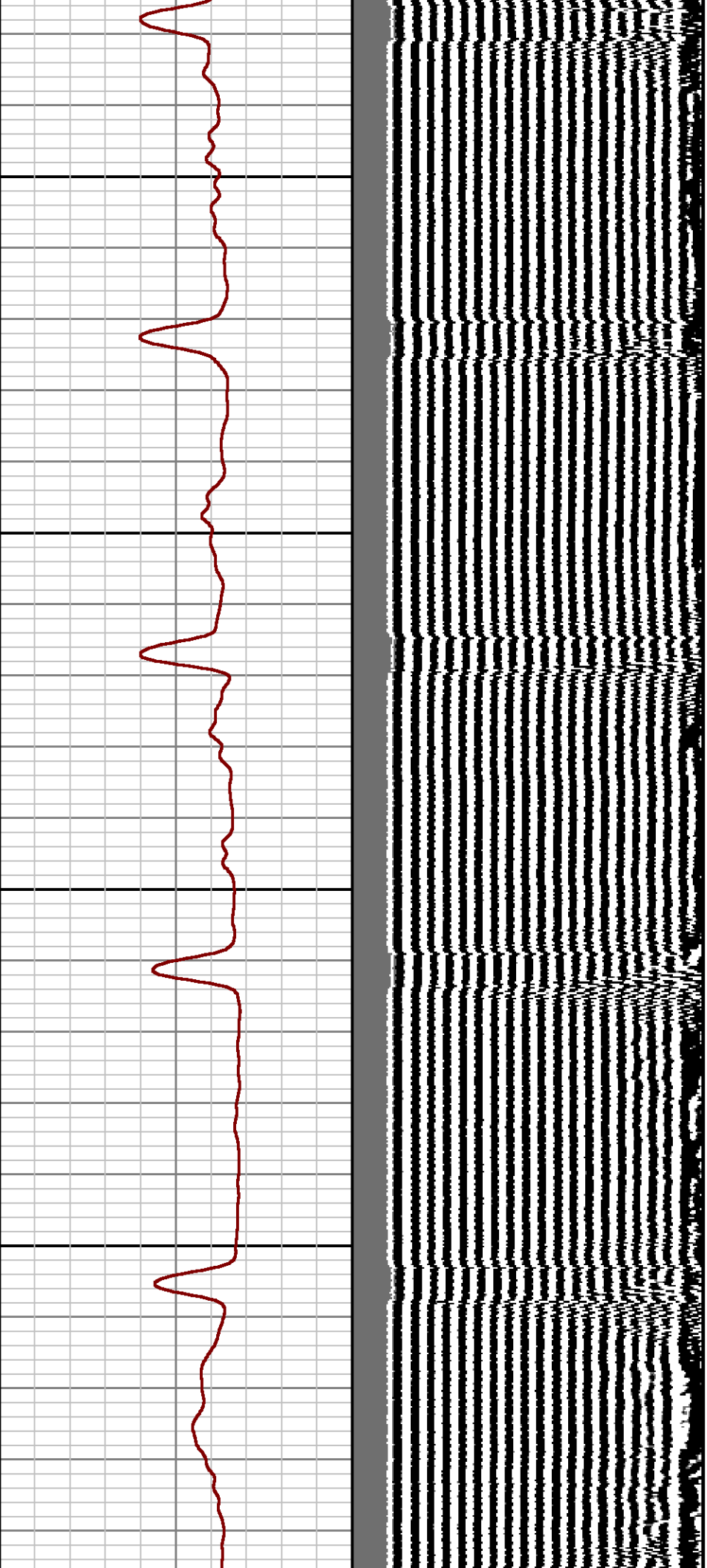


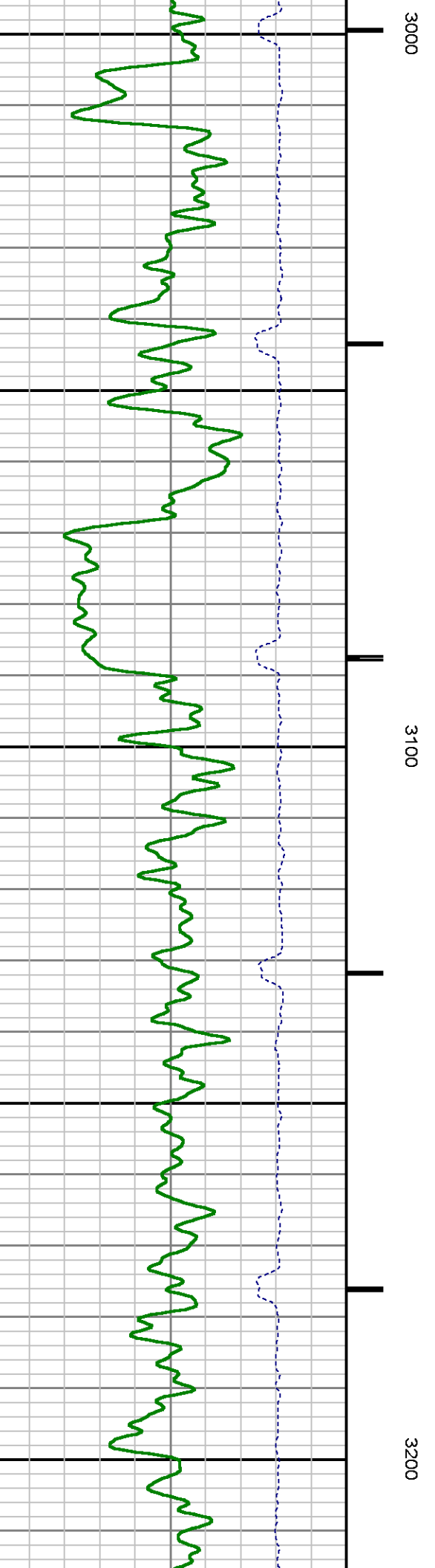
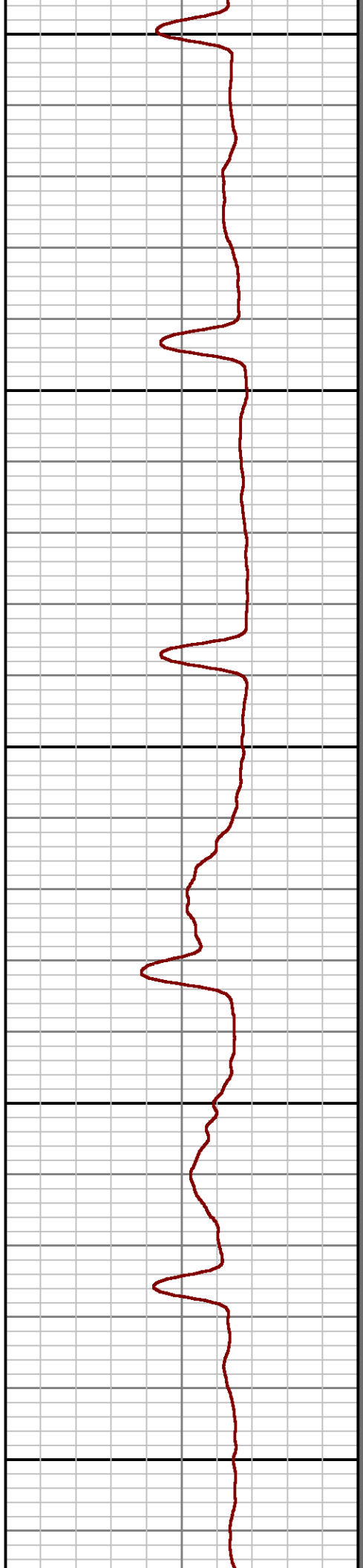
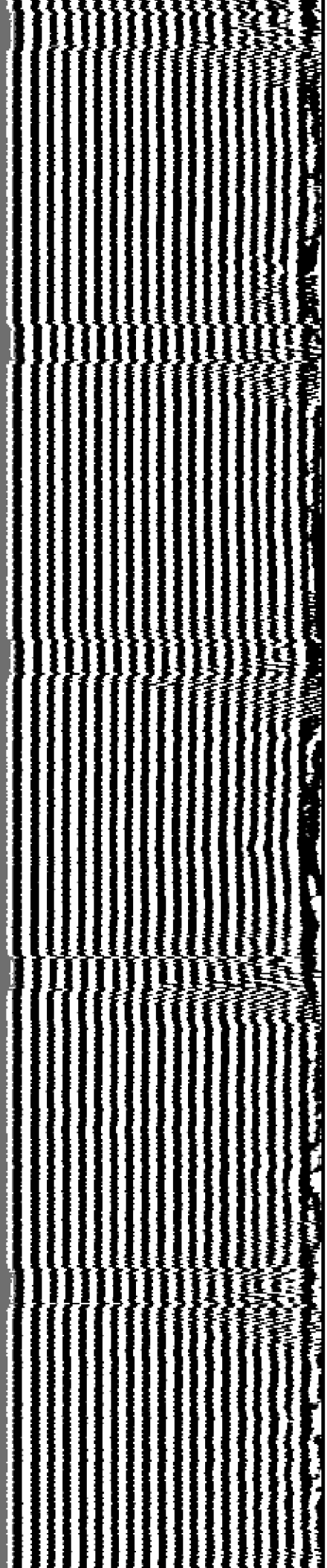


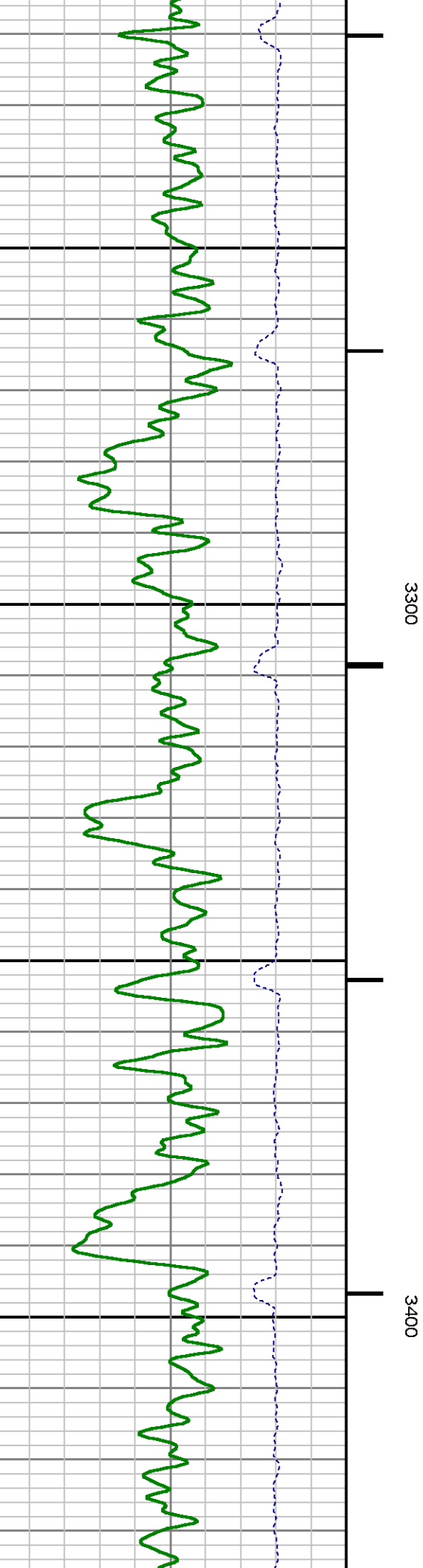
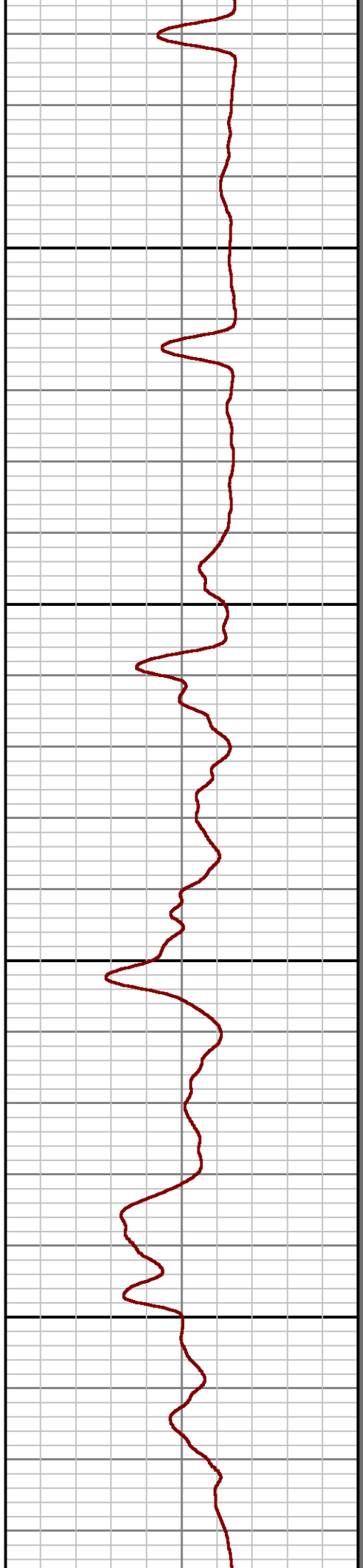
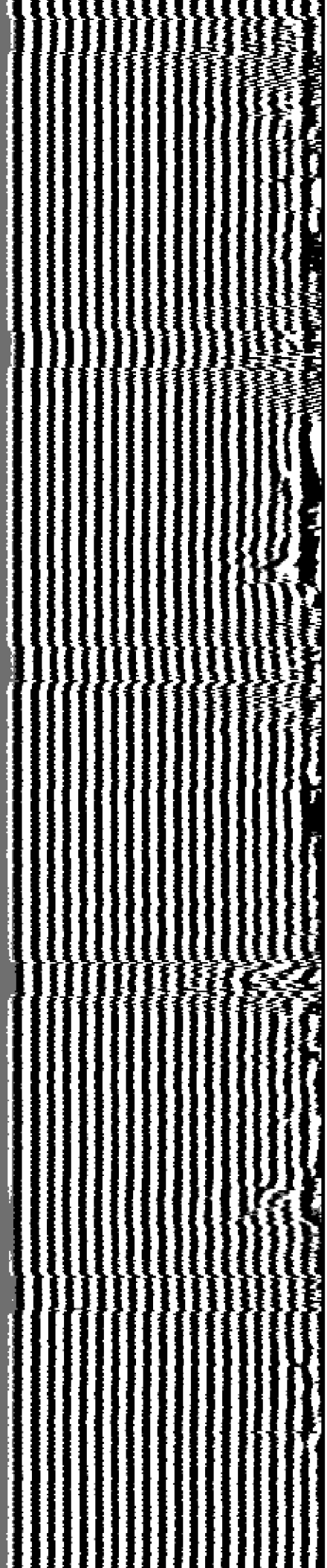
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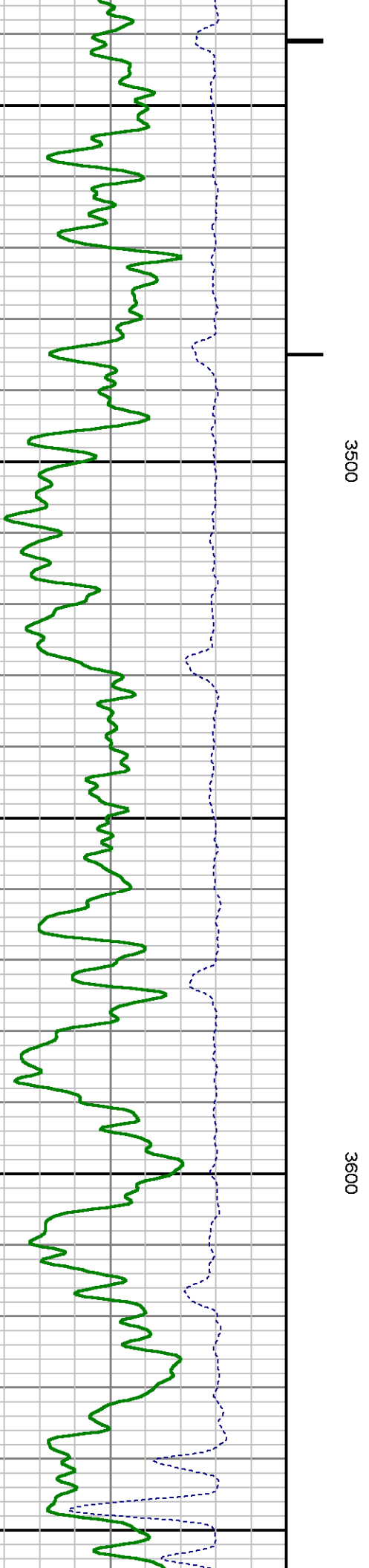
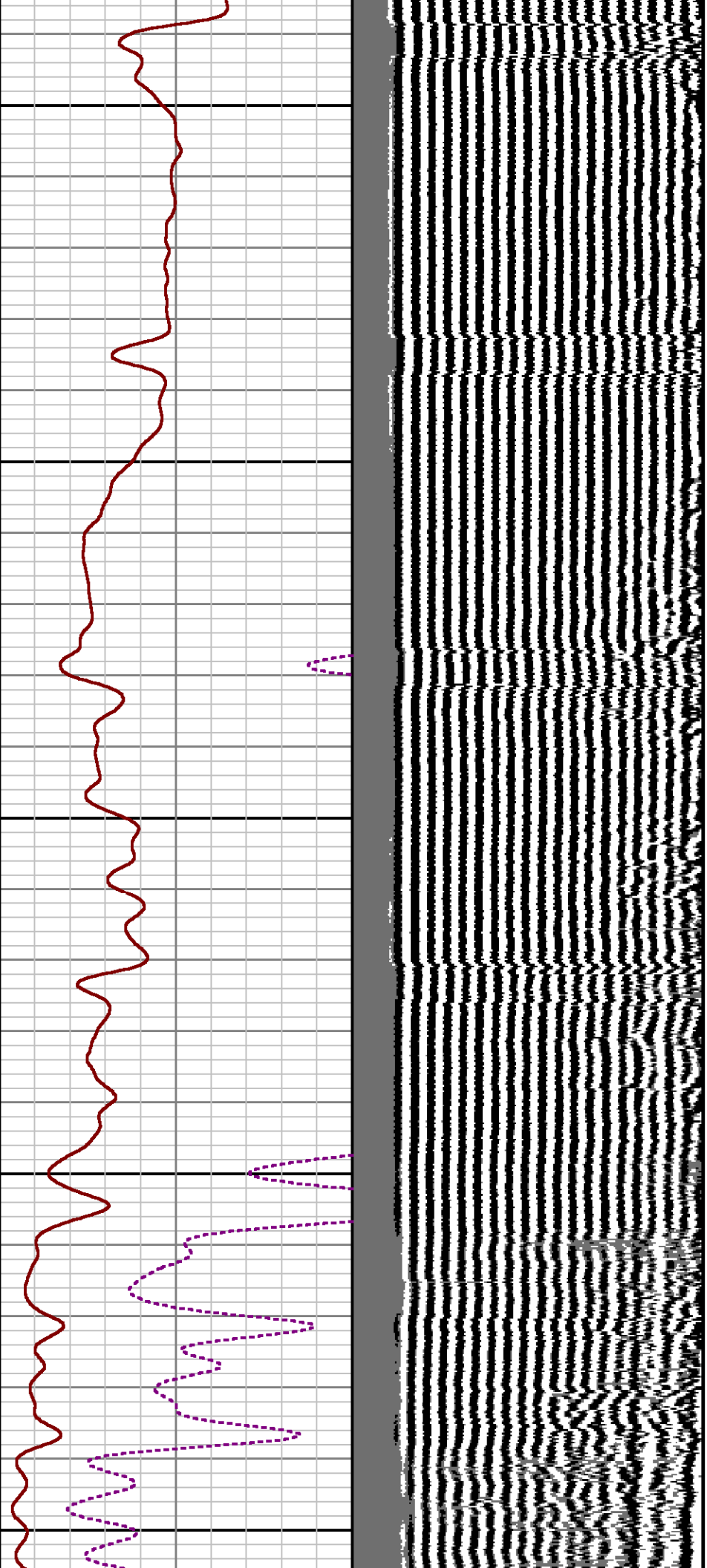
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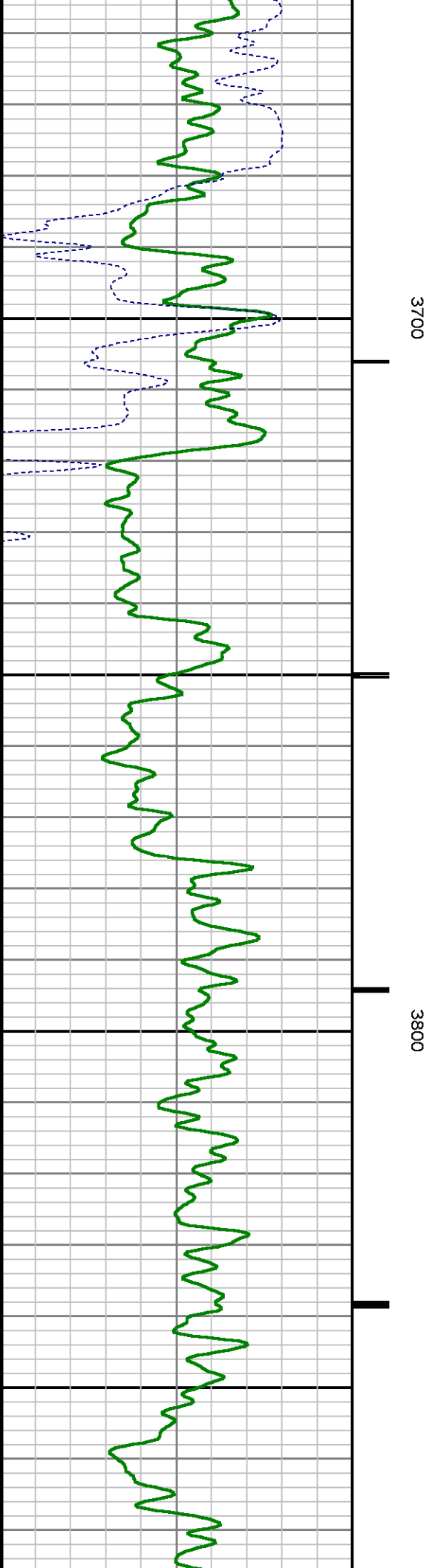
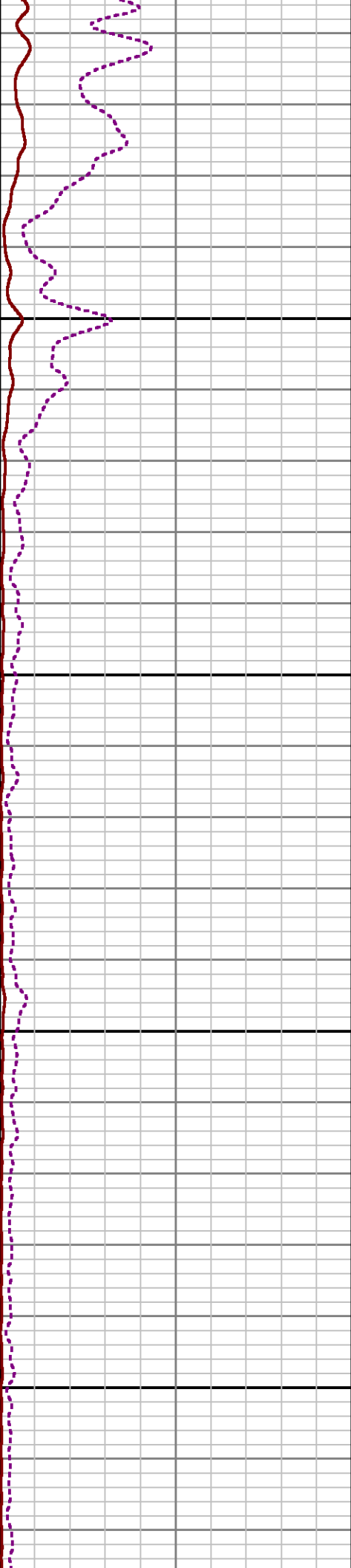
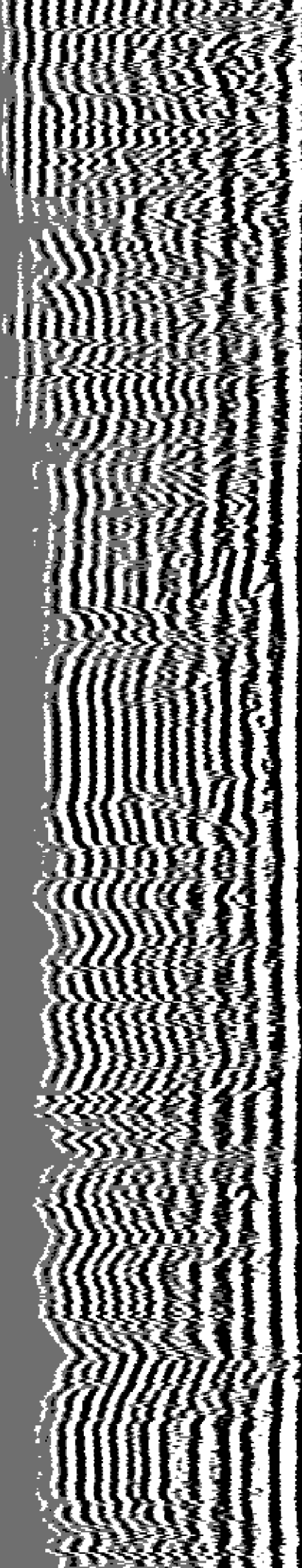


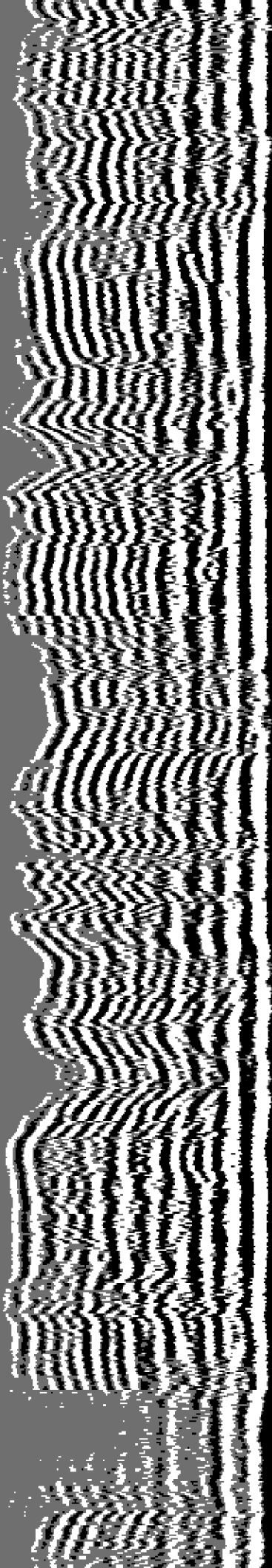






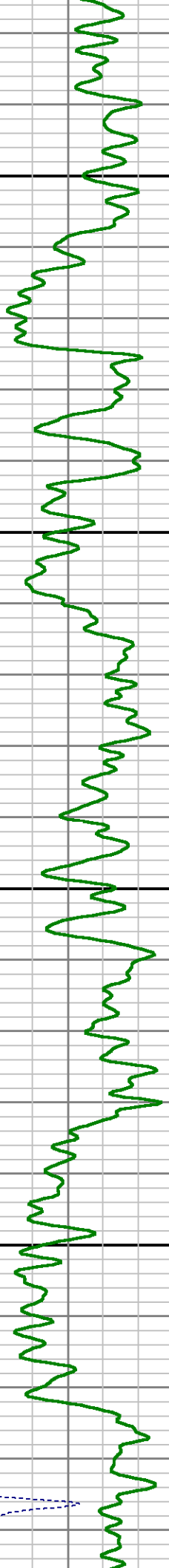


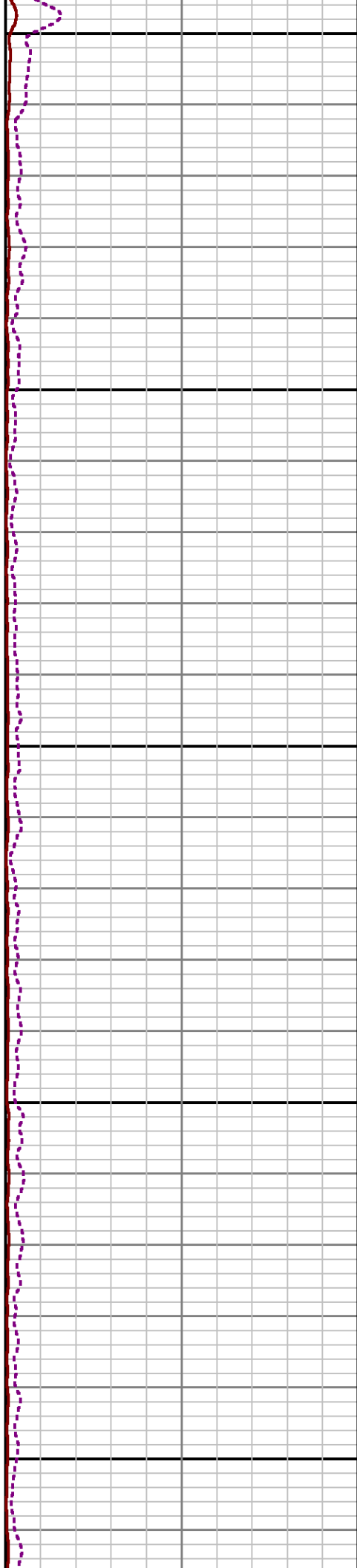
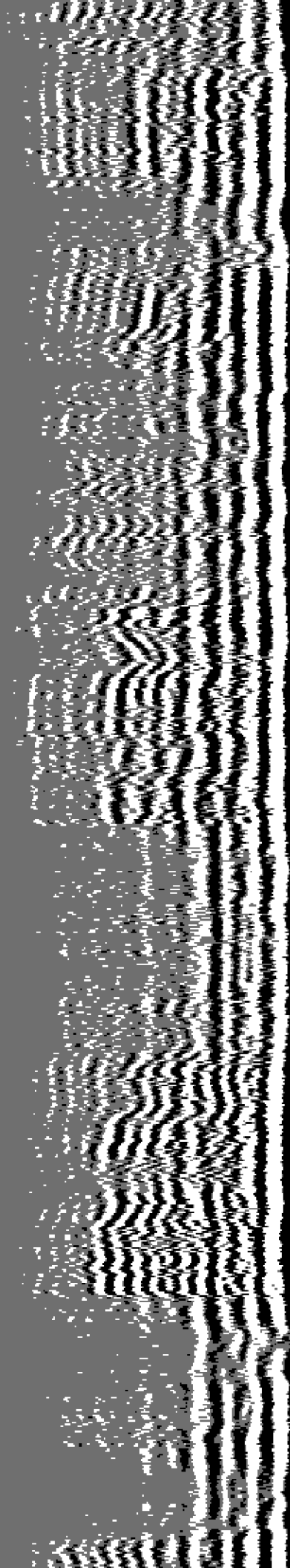




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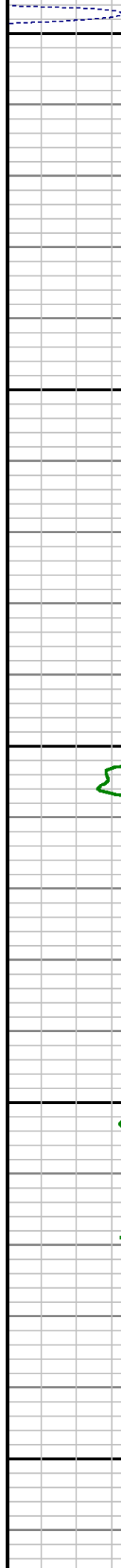
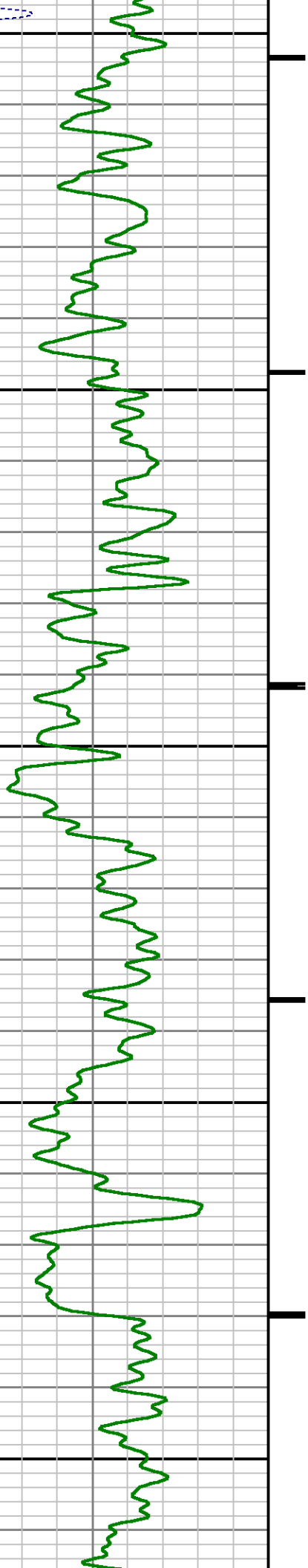


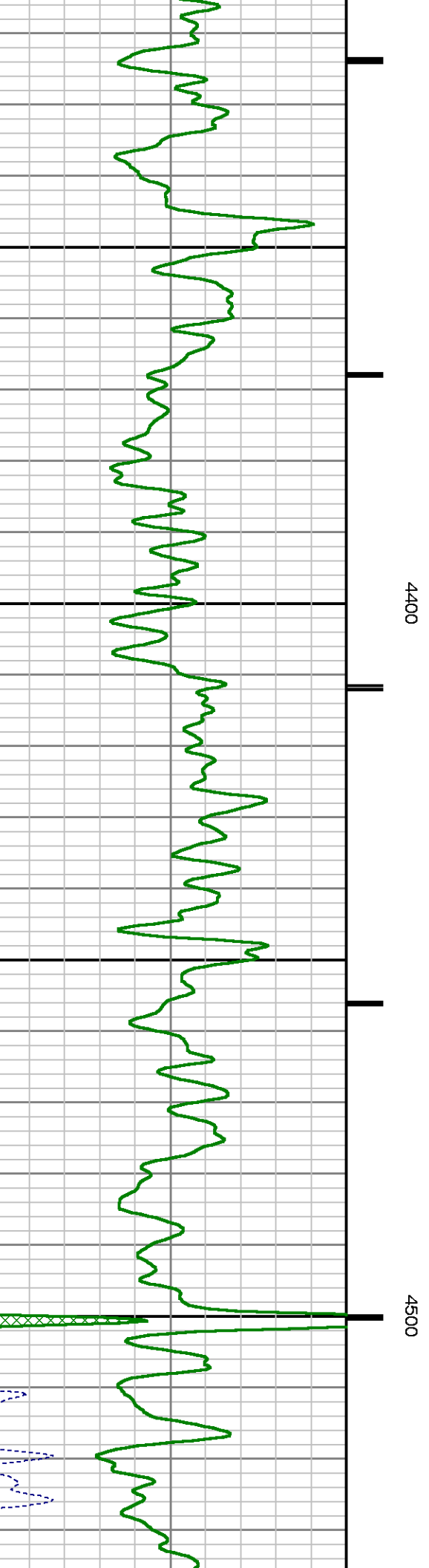
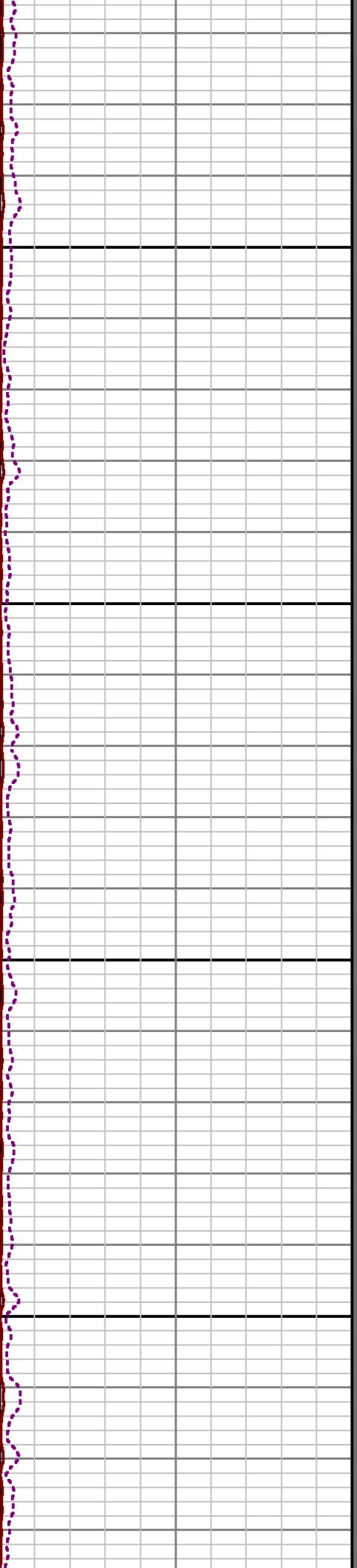
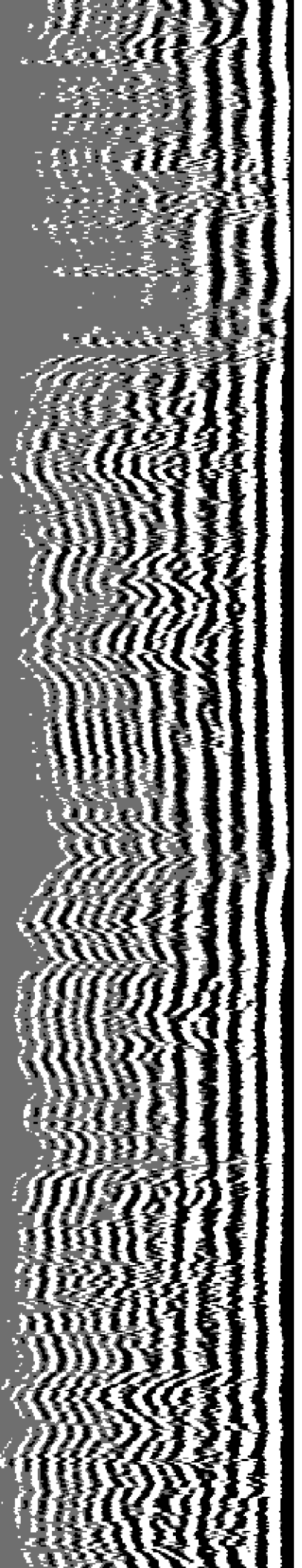


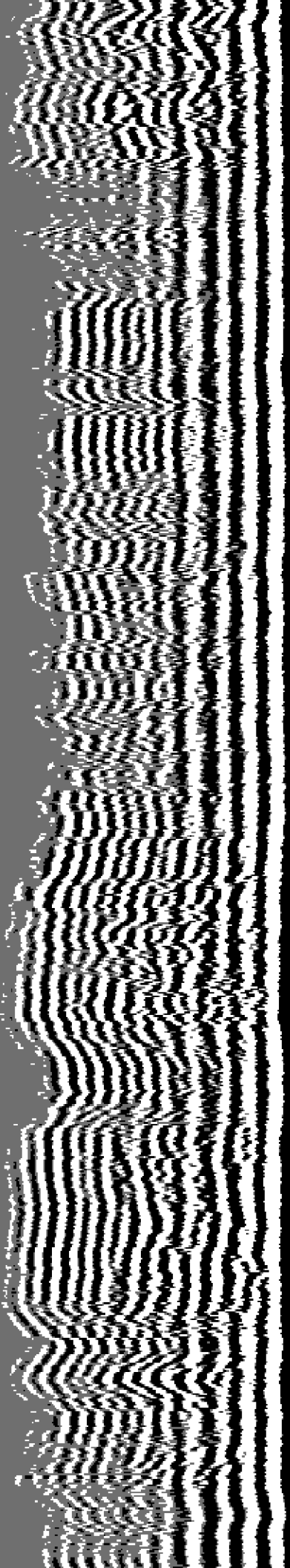
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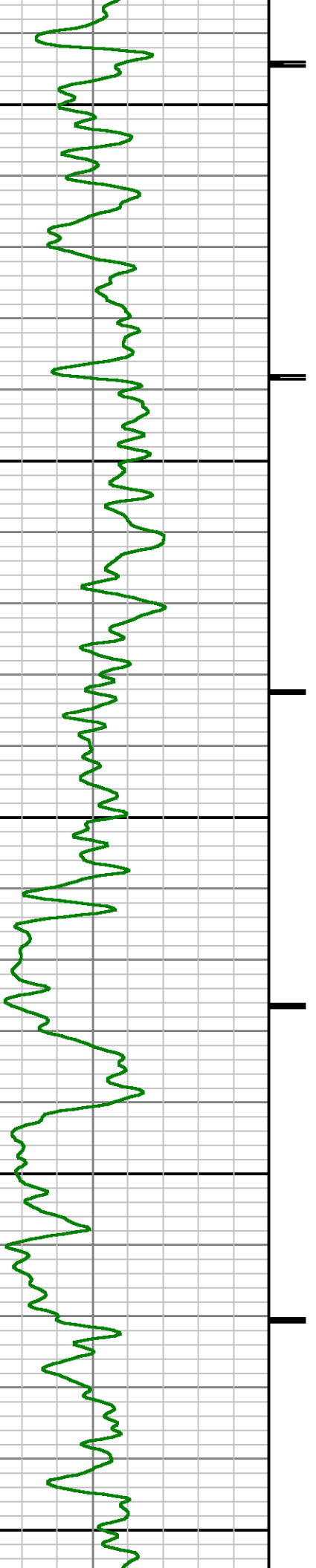






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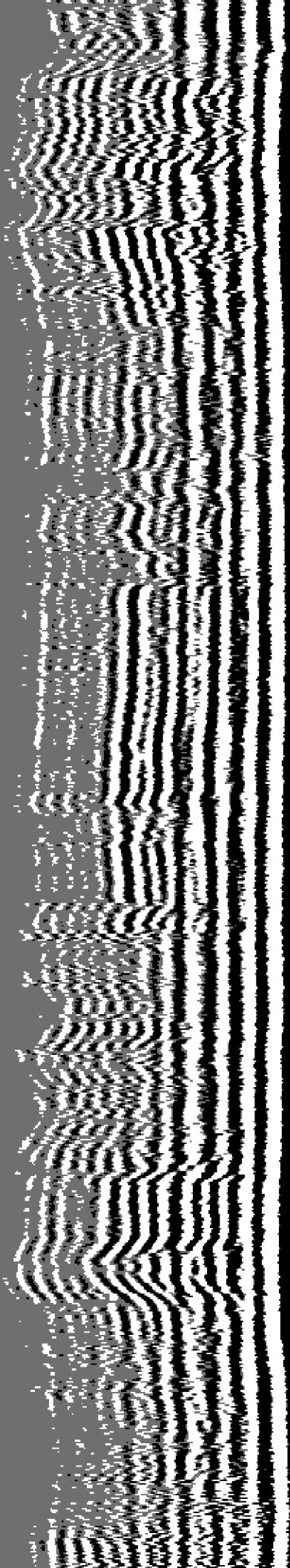
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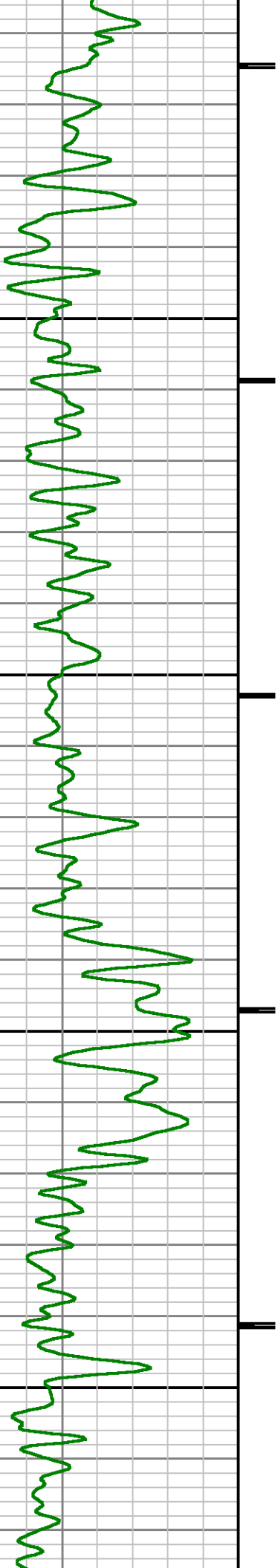
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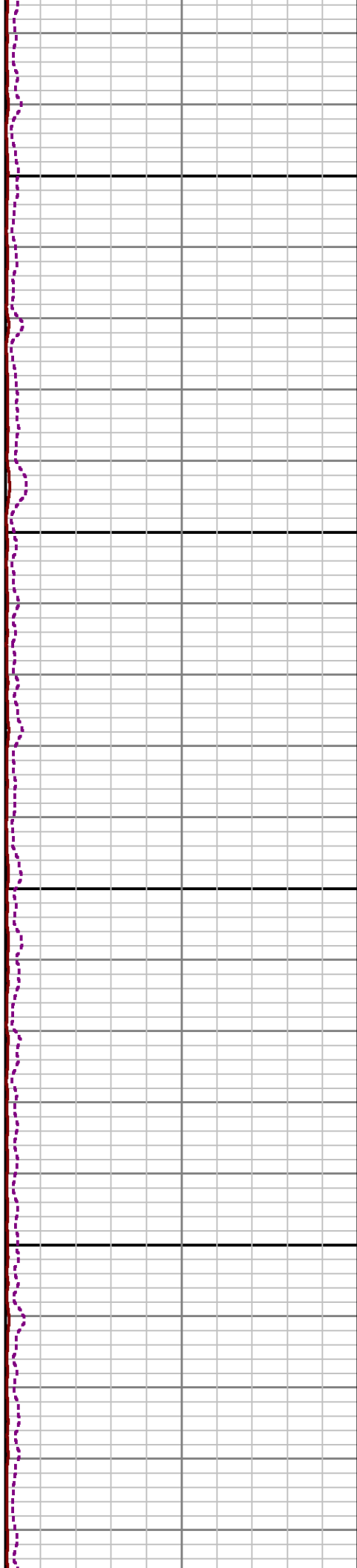
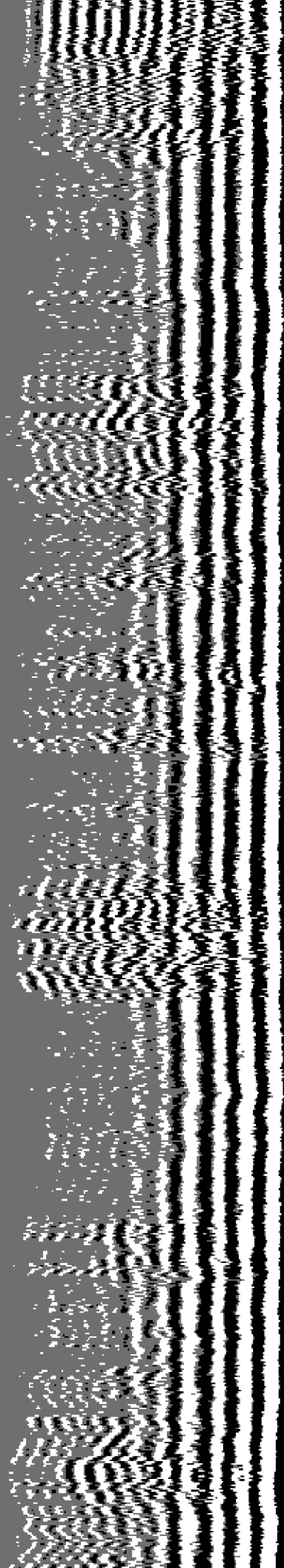
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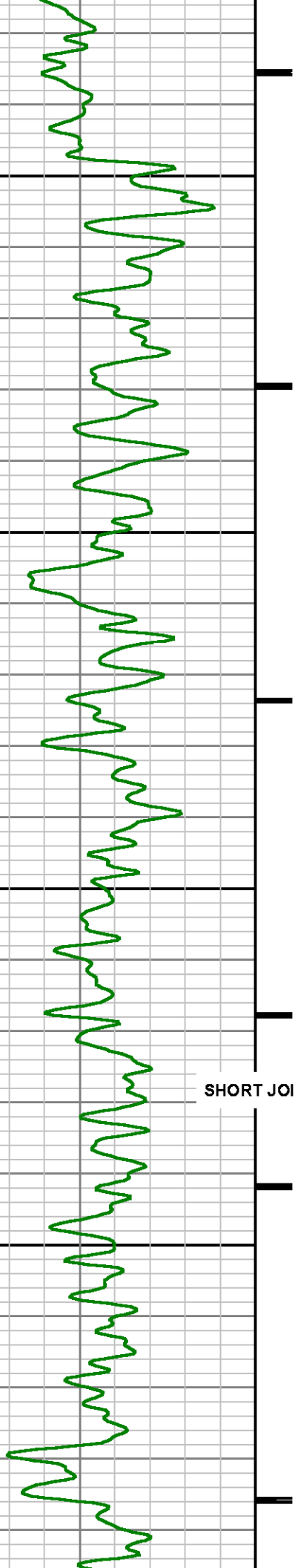


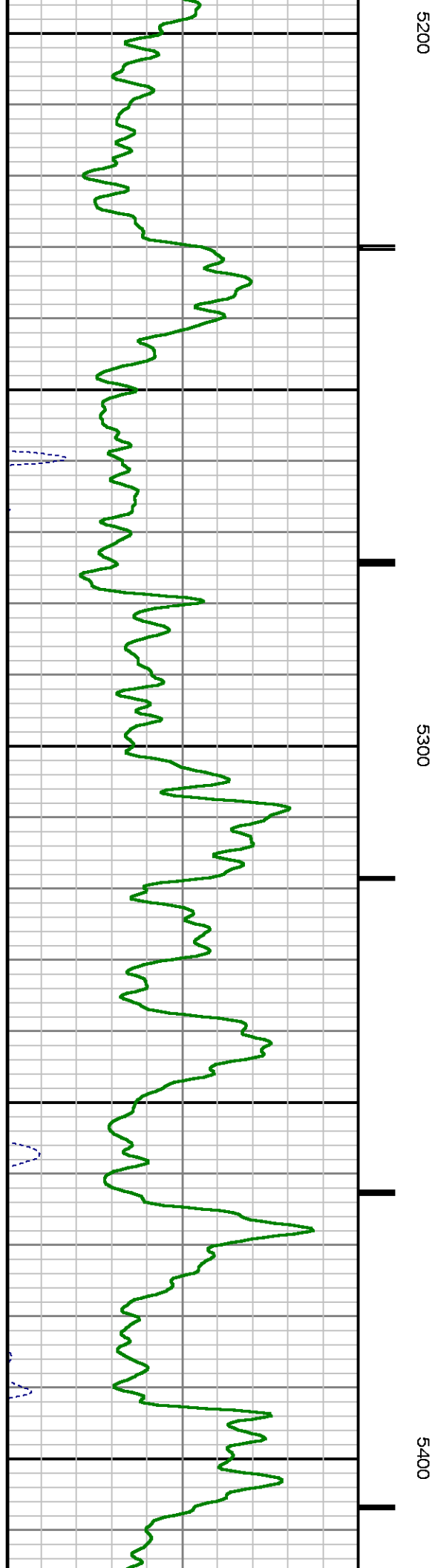
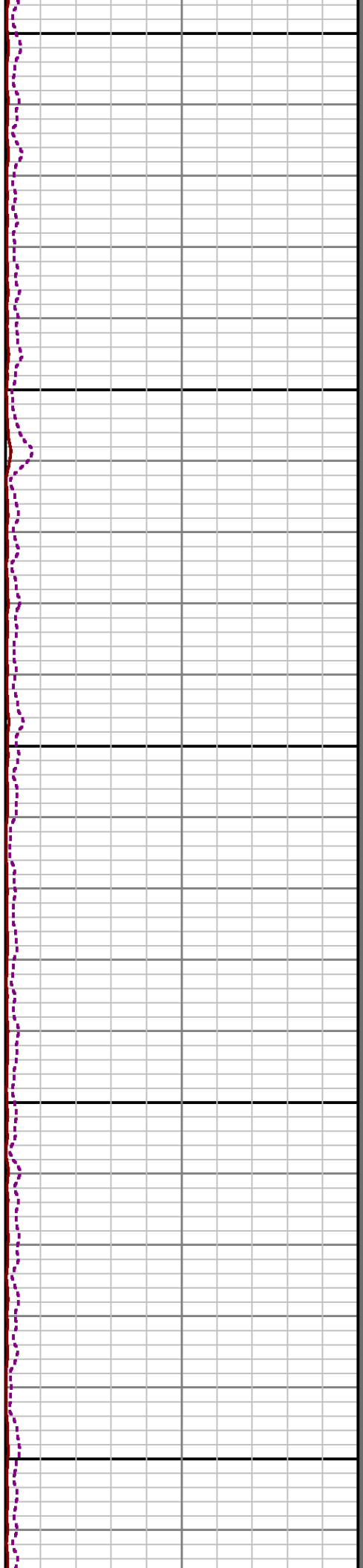
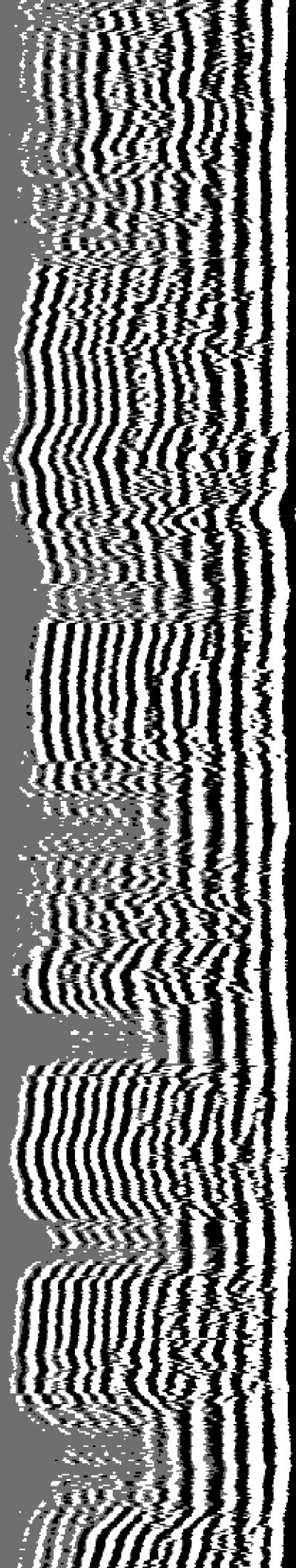


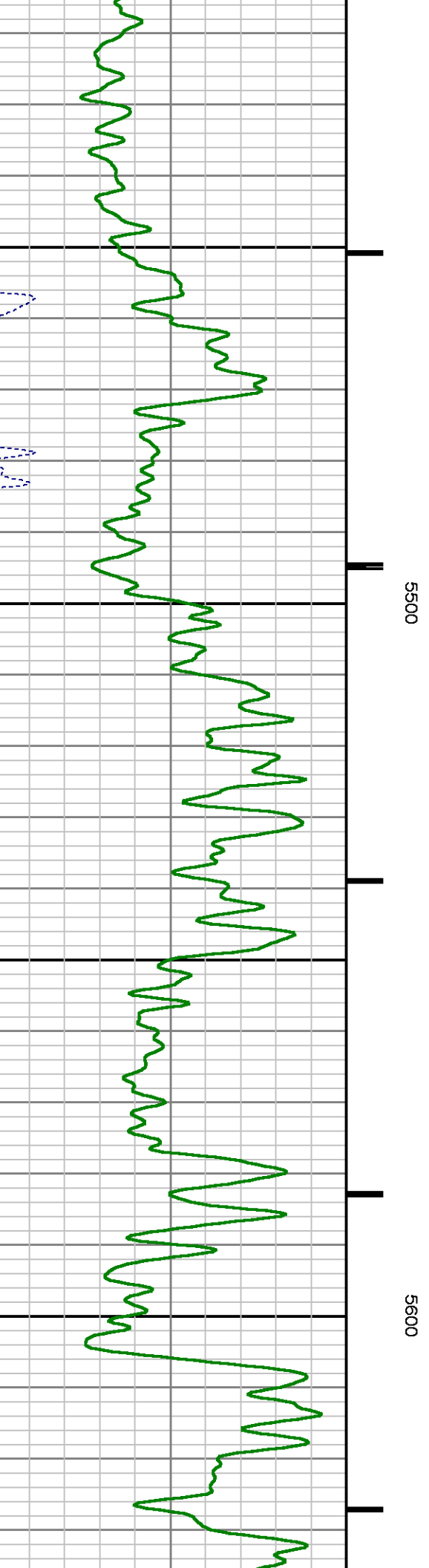
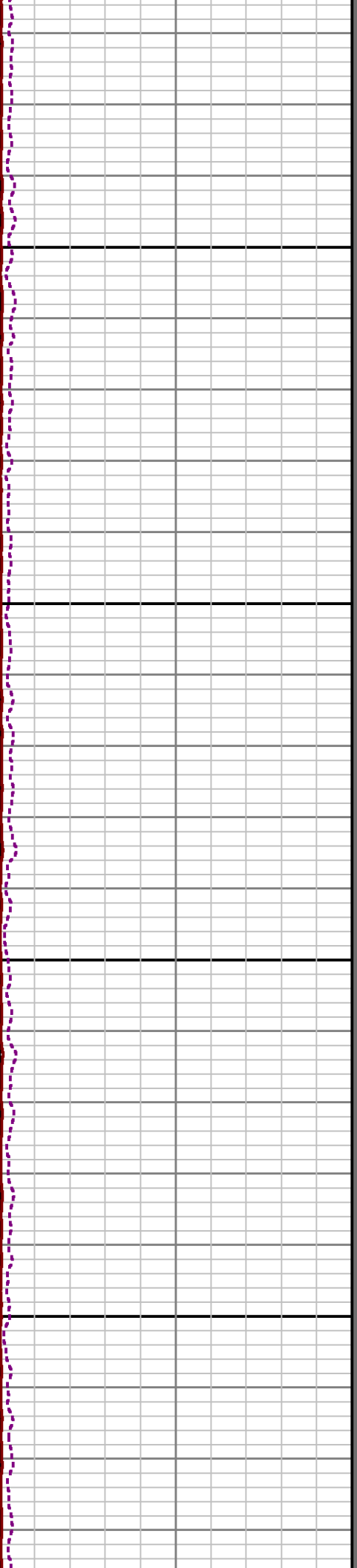
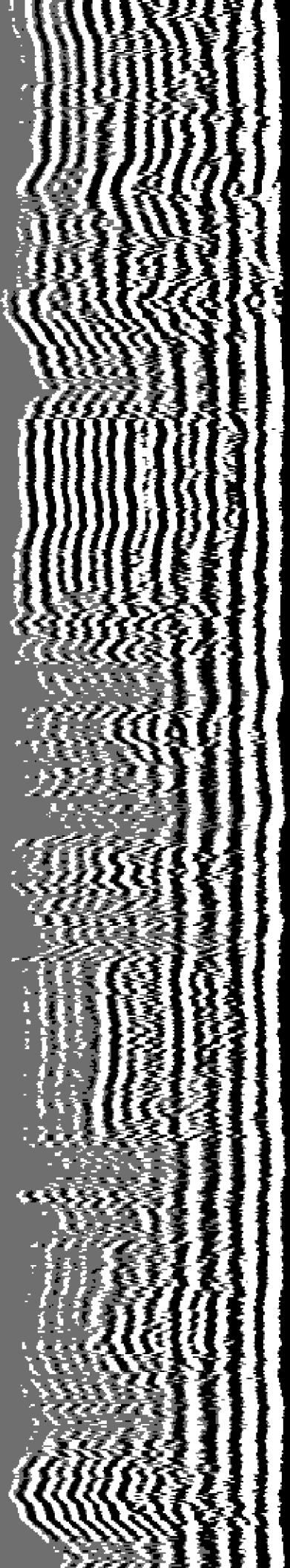
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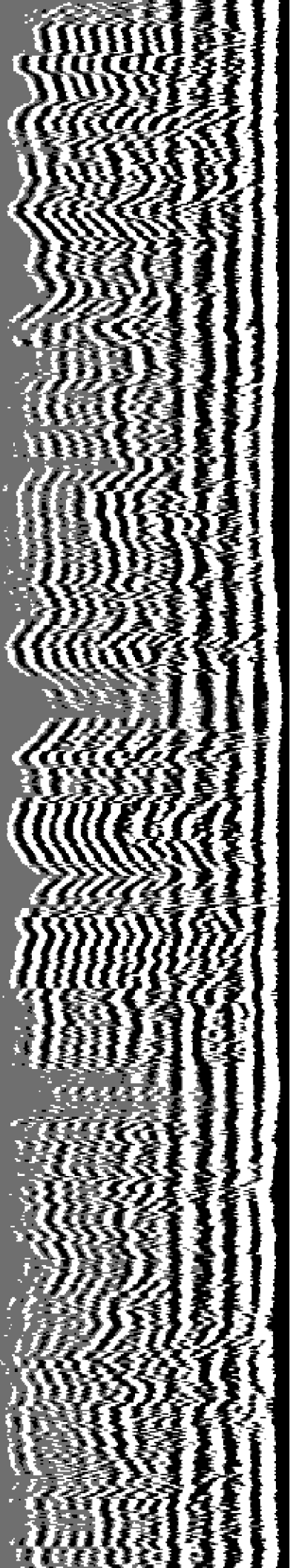
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SHORT JOINT



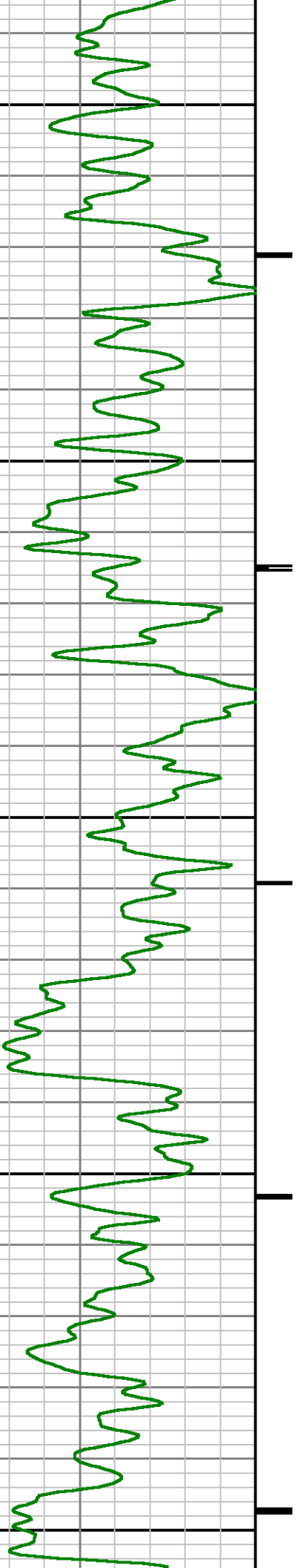




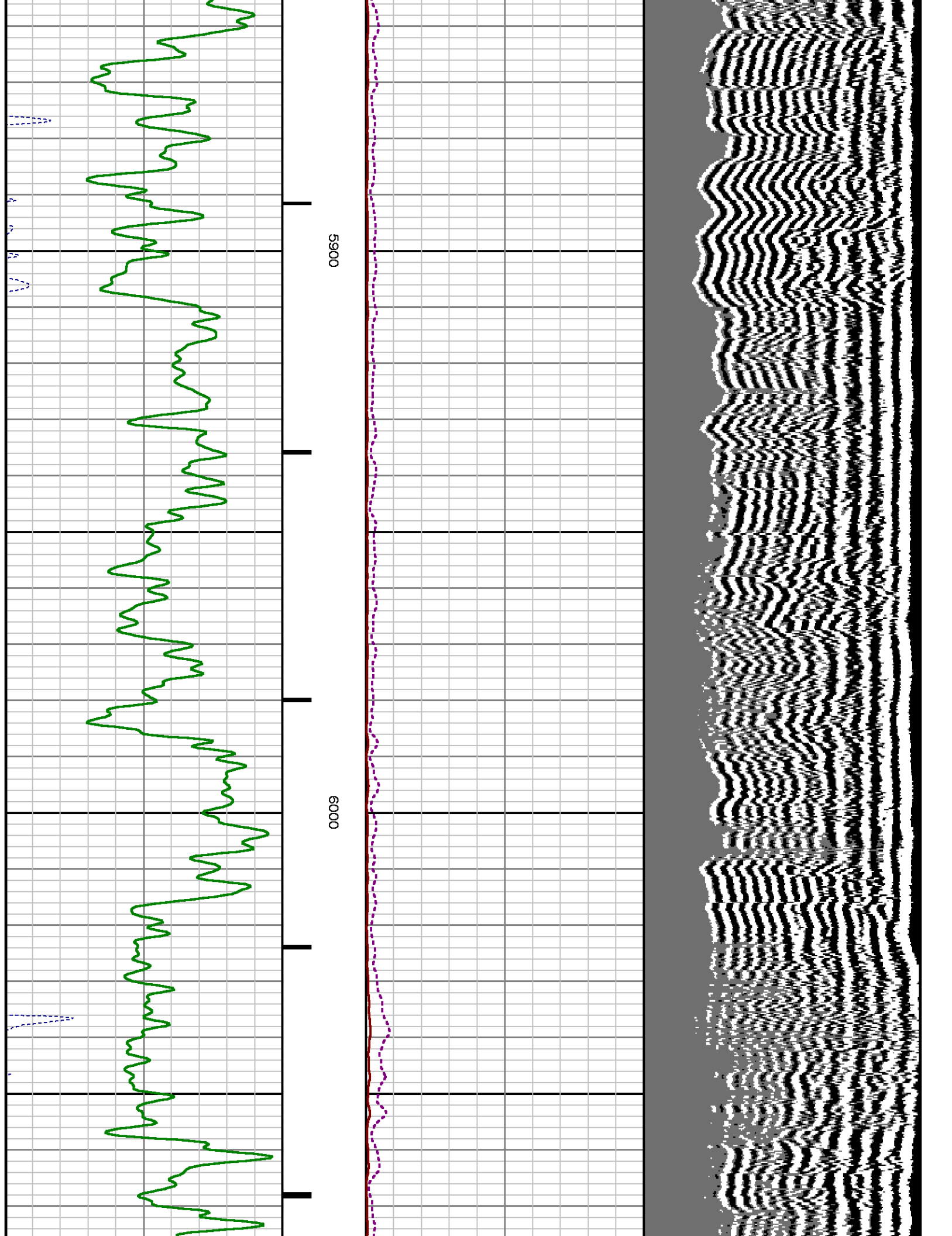


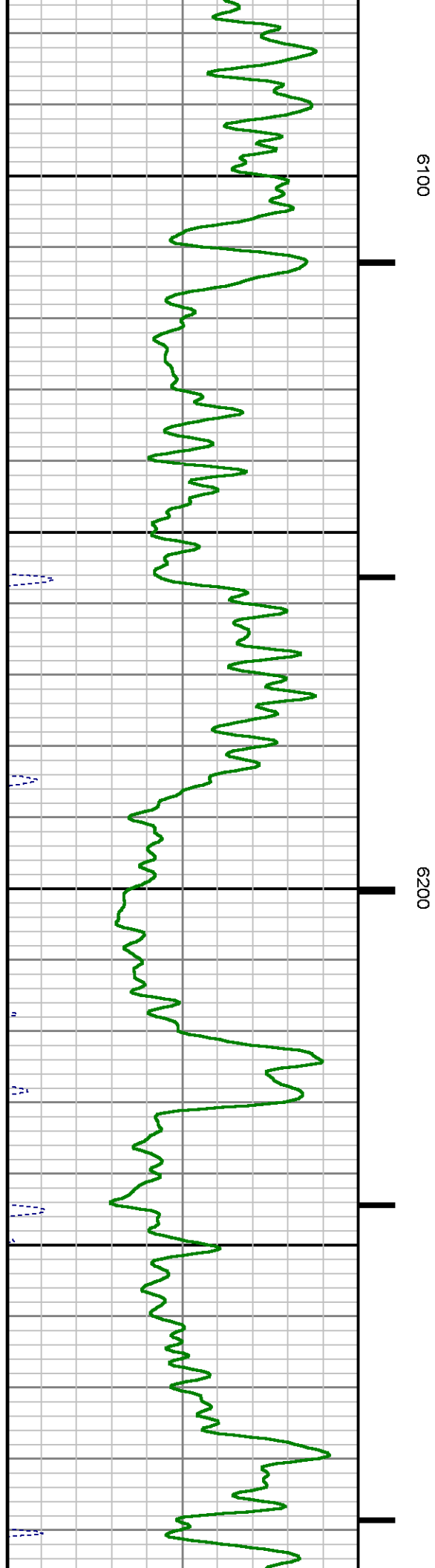
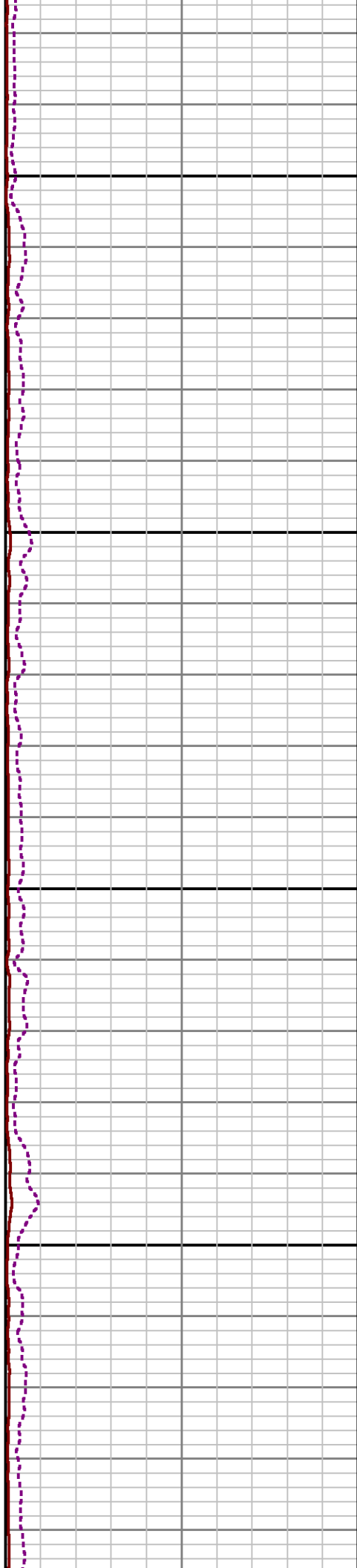
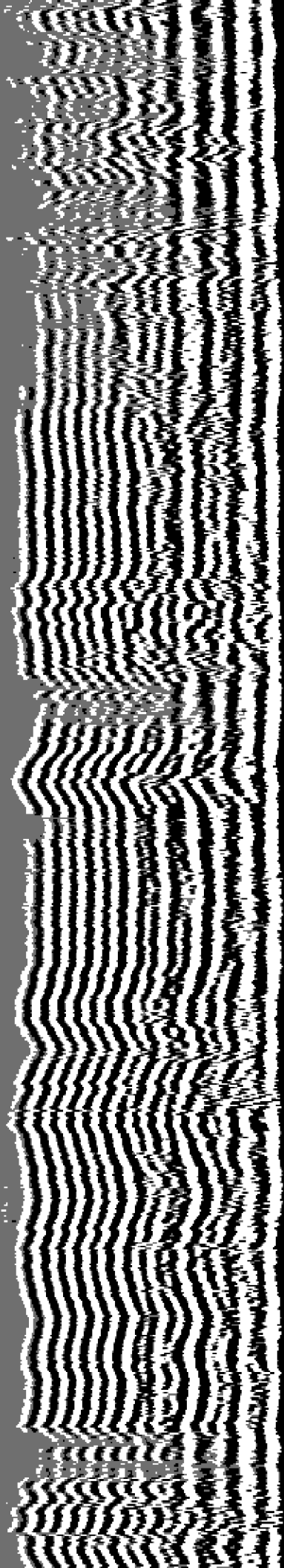
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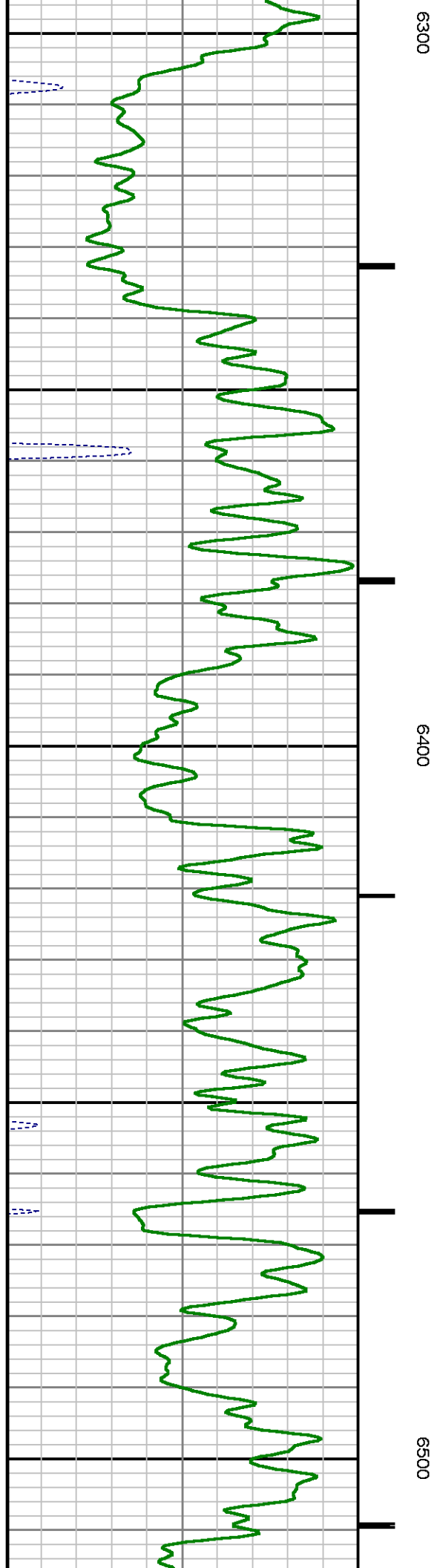
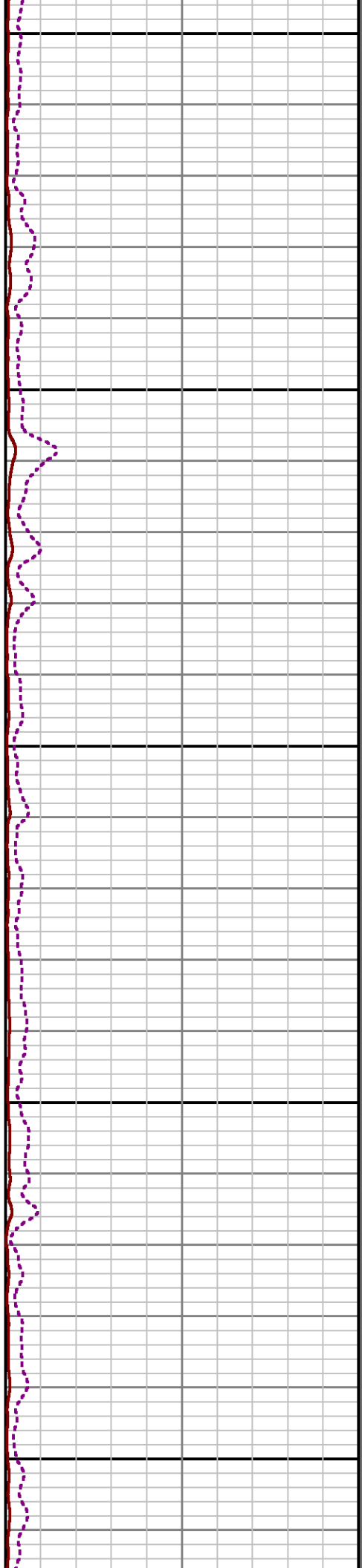
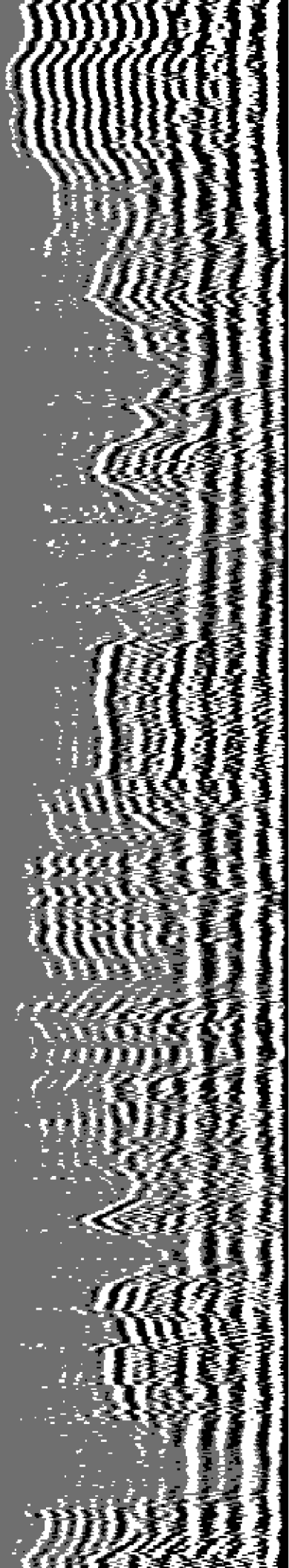
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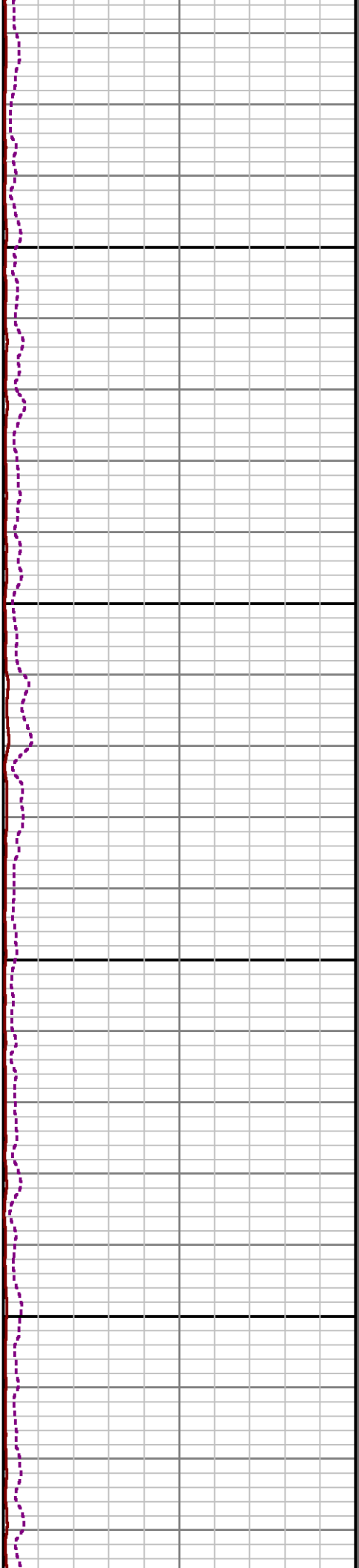
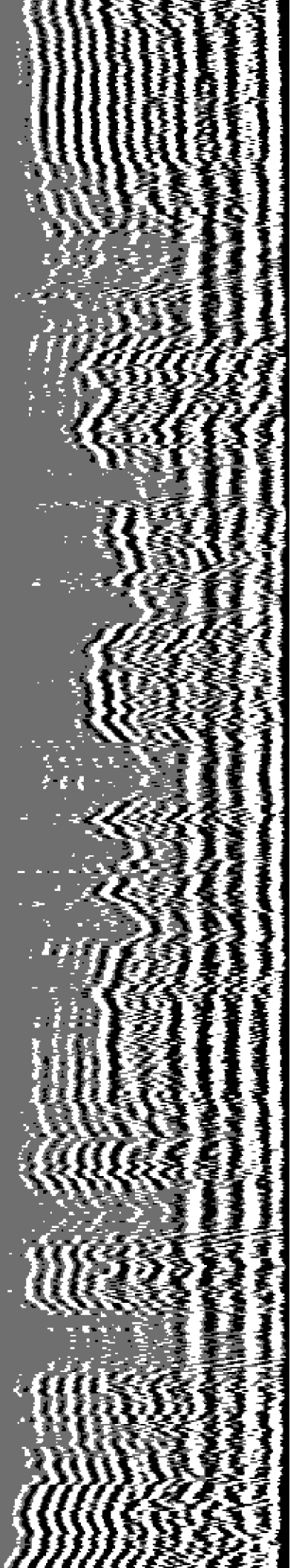


Amplitude



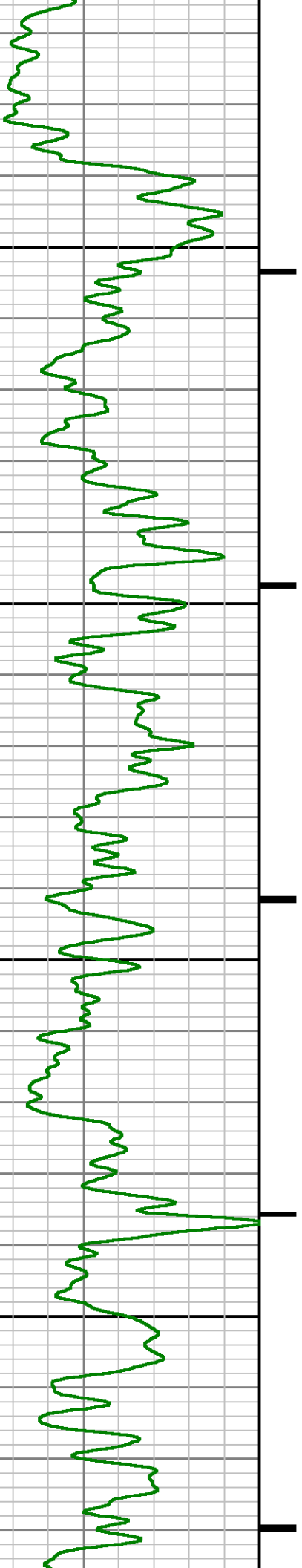






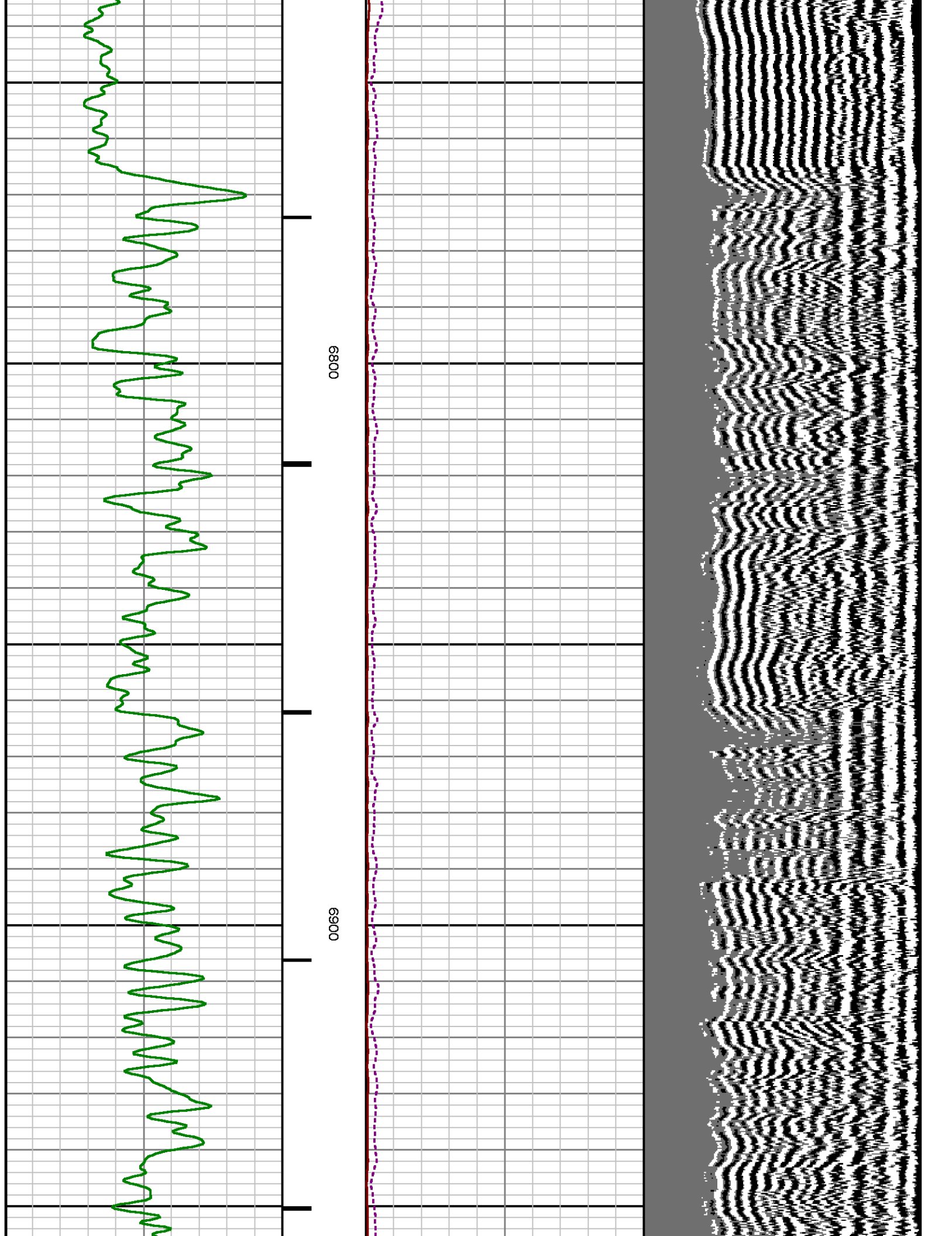
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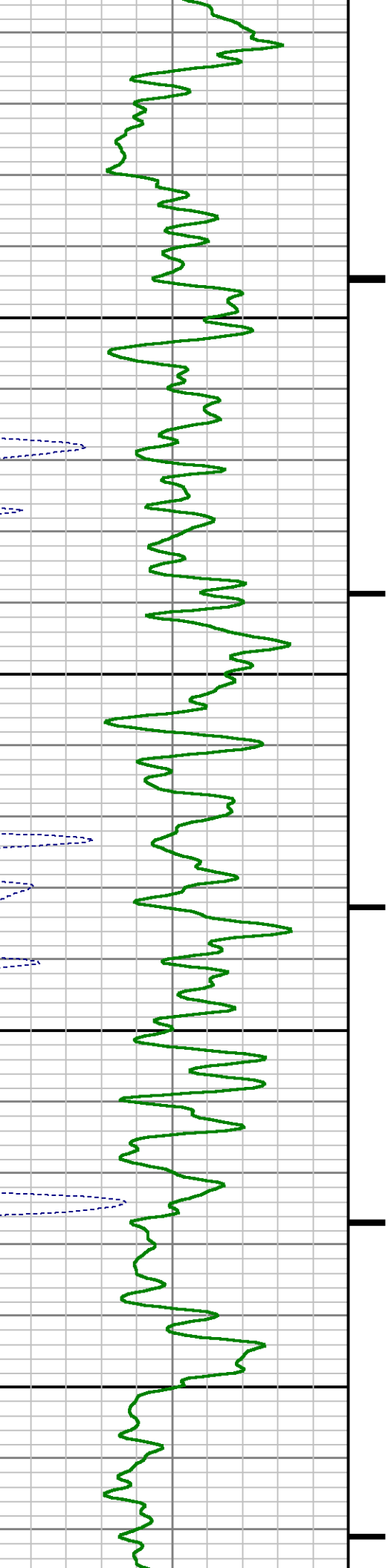
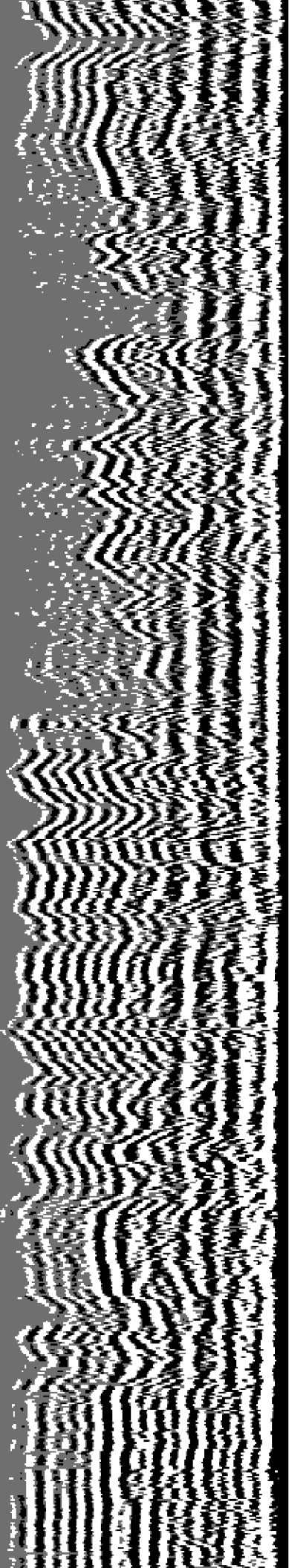
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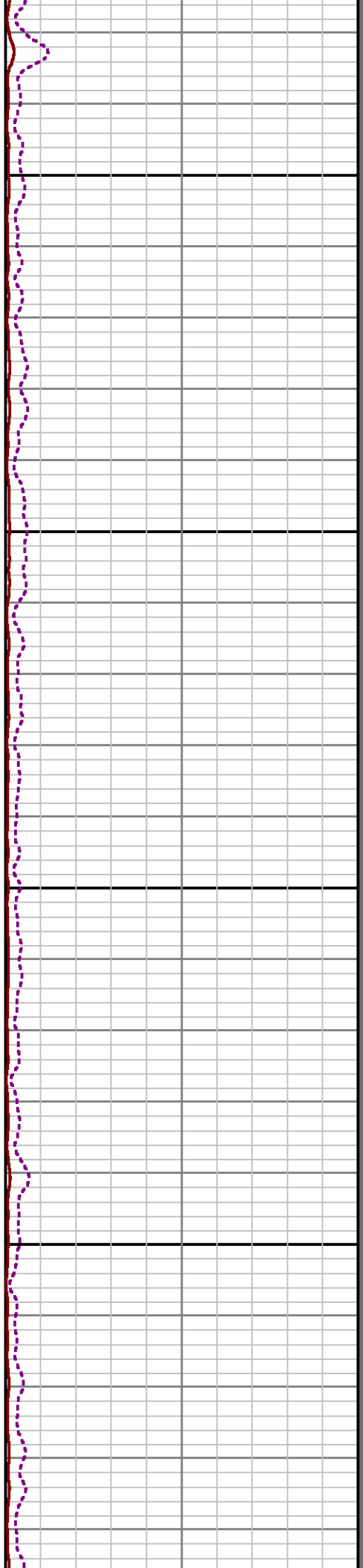
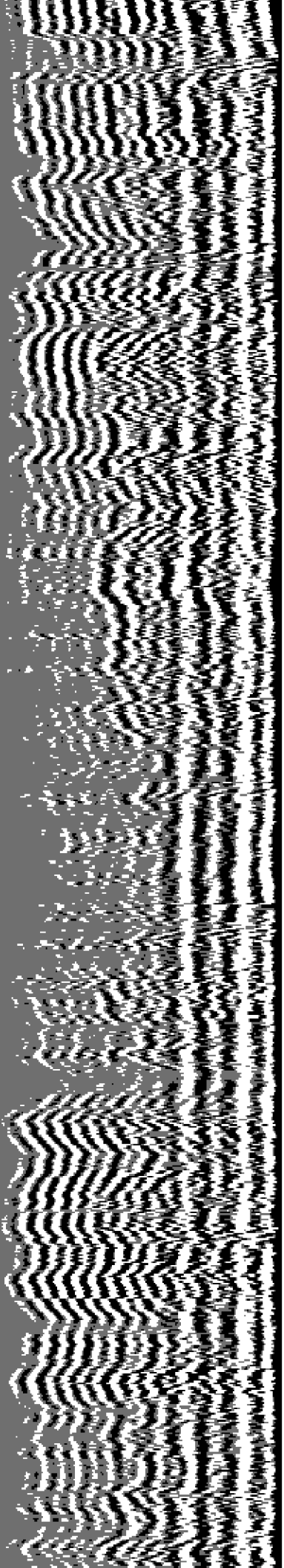


2.4

2.4

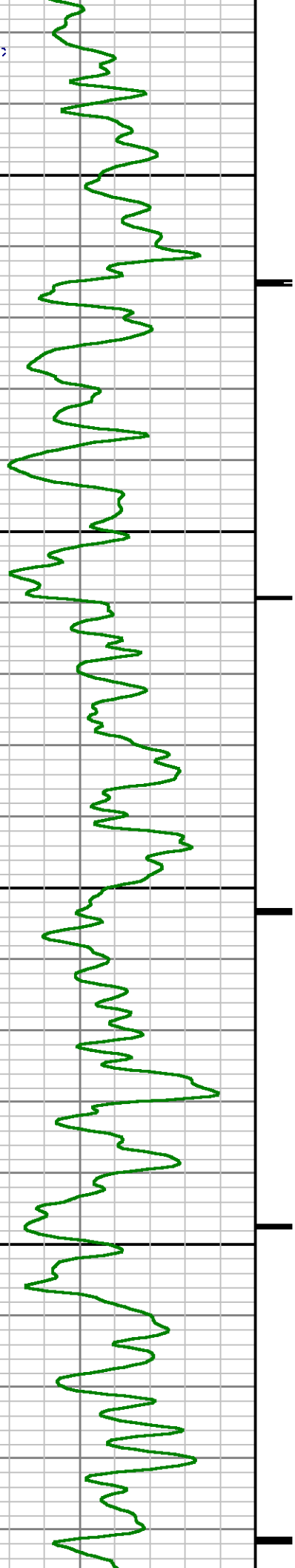


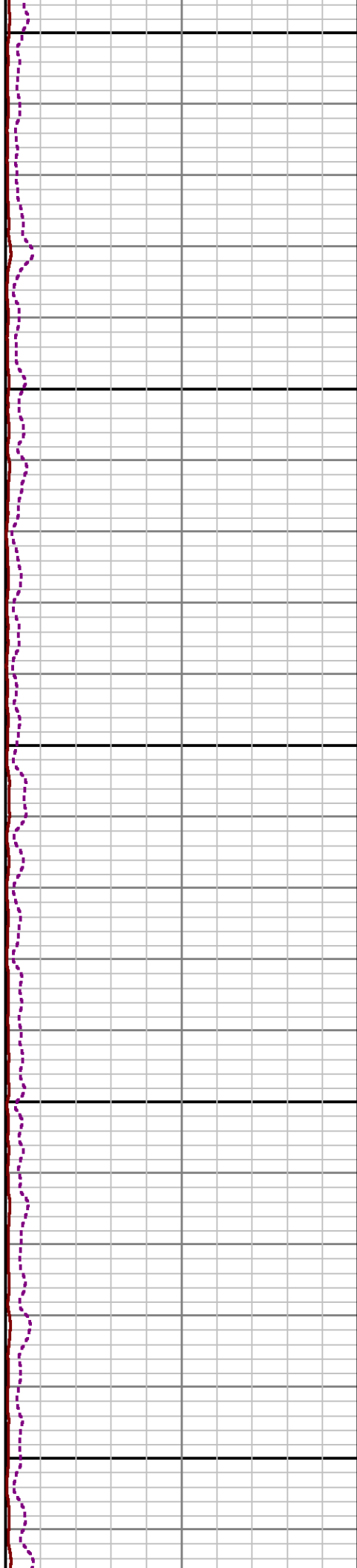
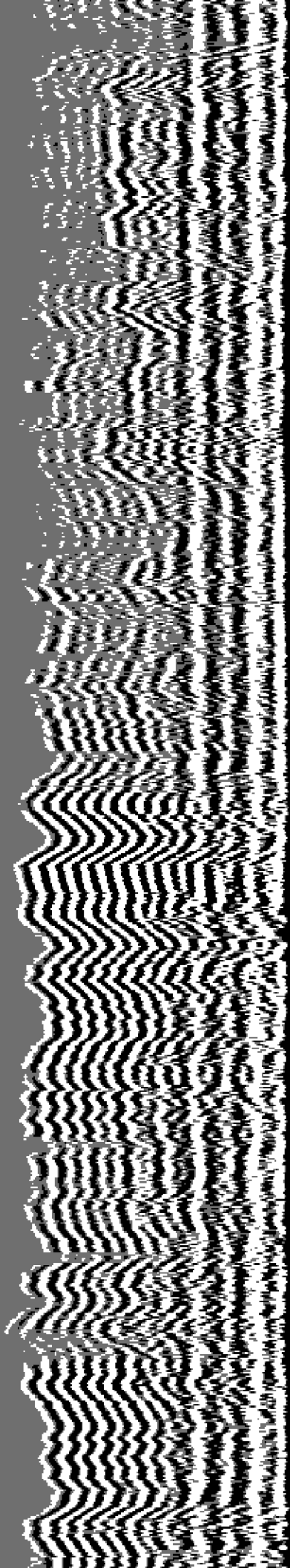




7200

7300

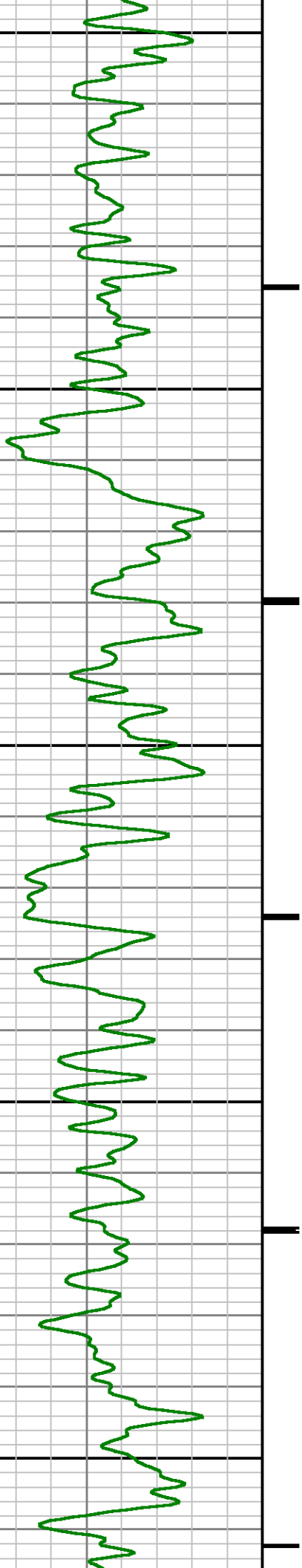




7400

7500

7600

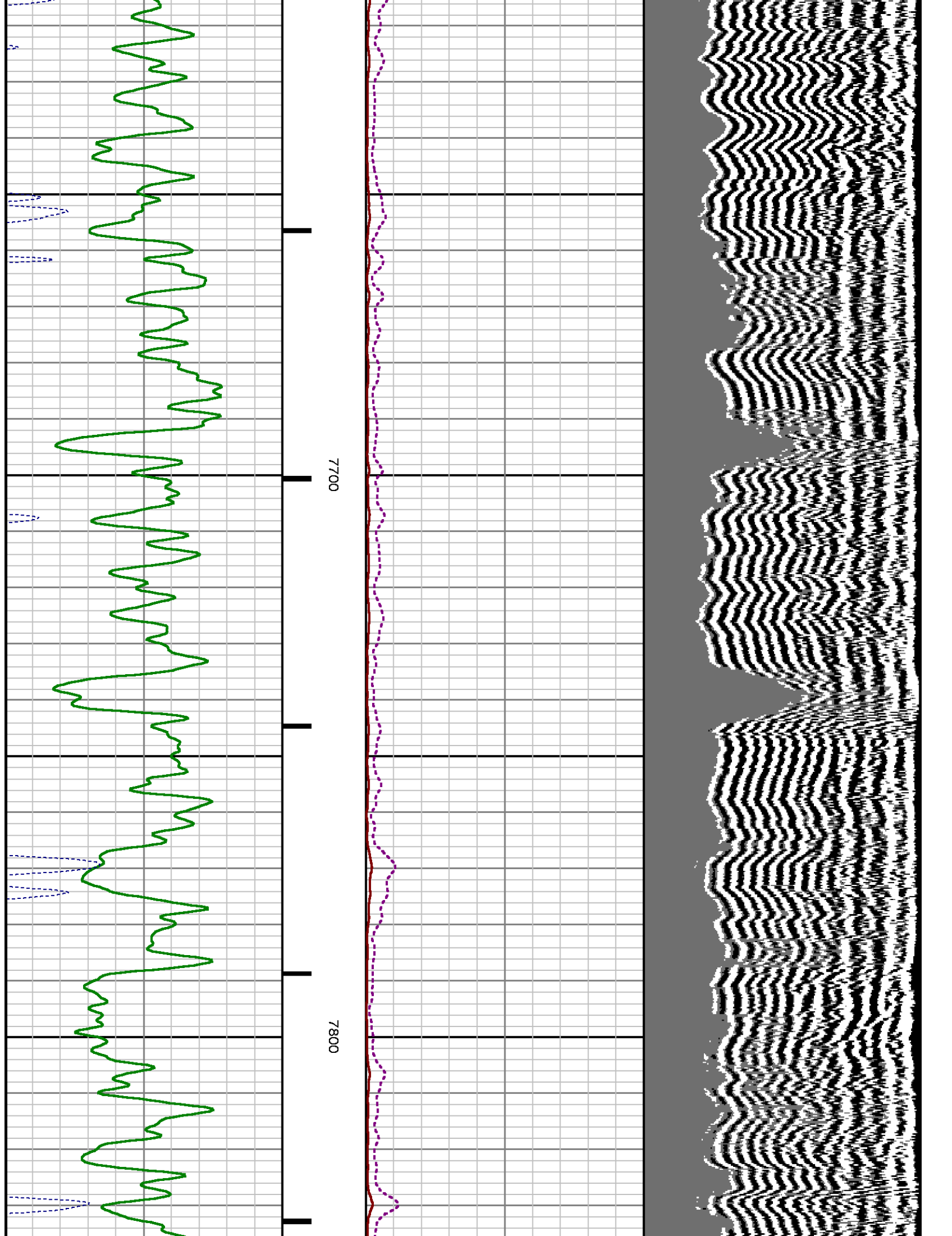


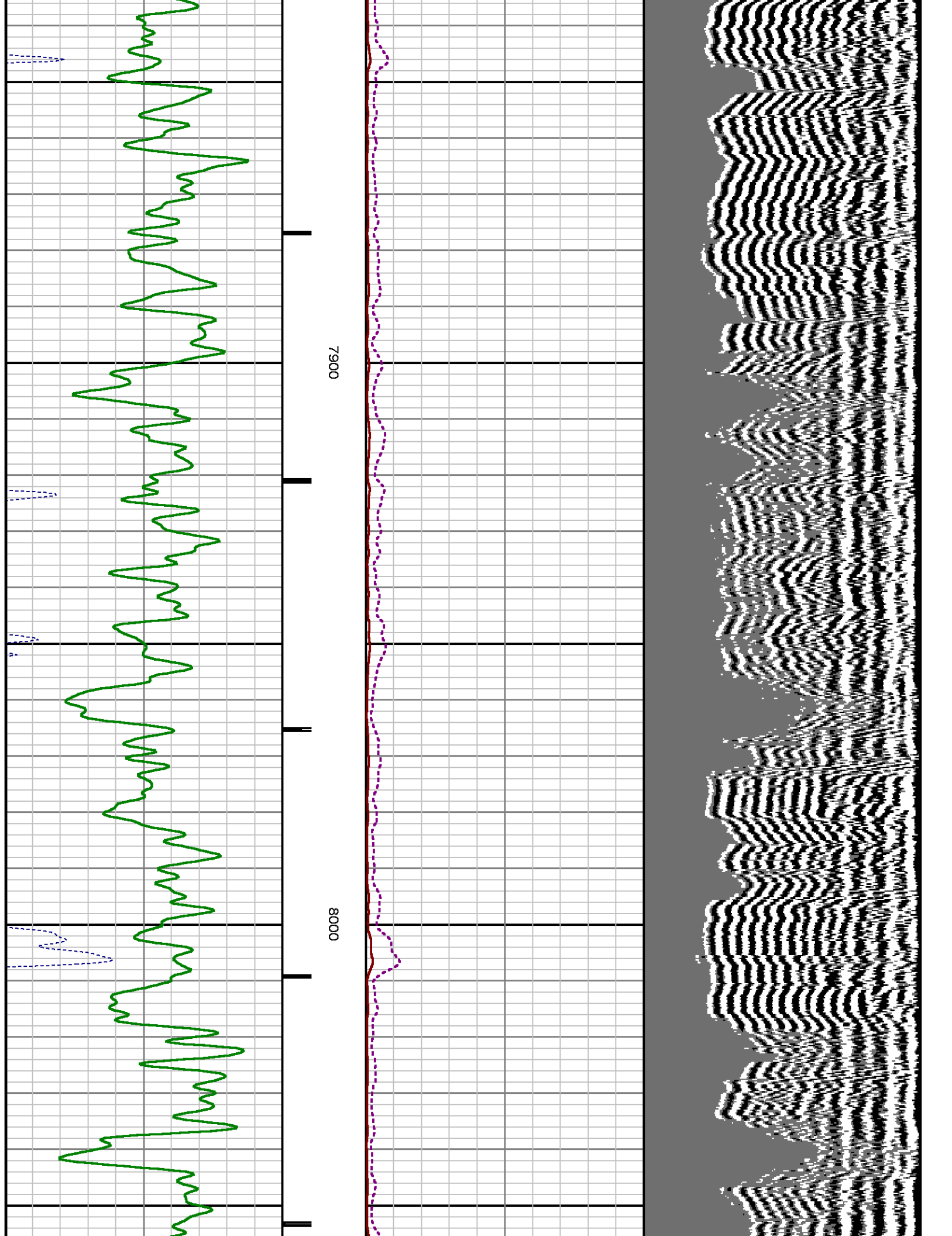
A A

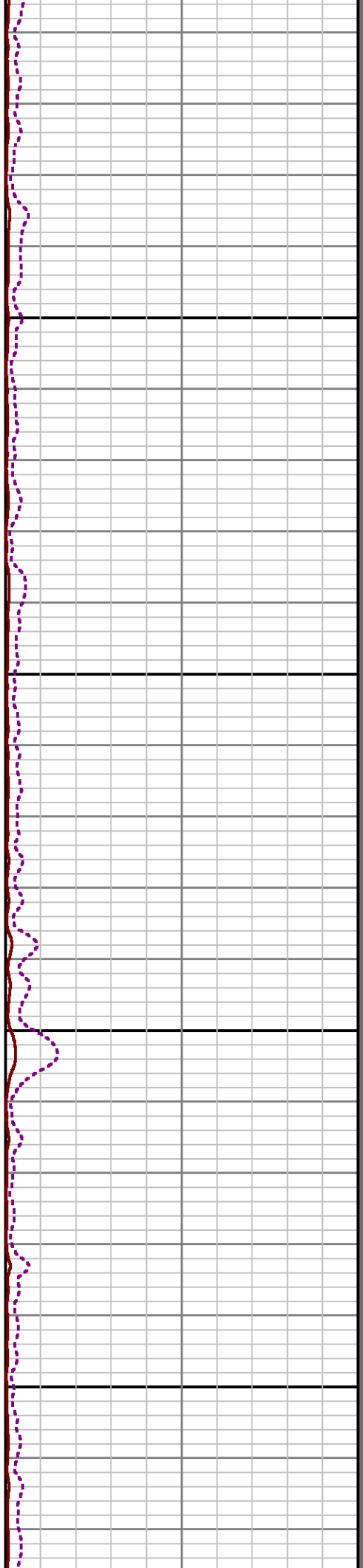
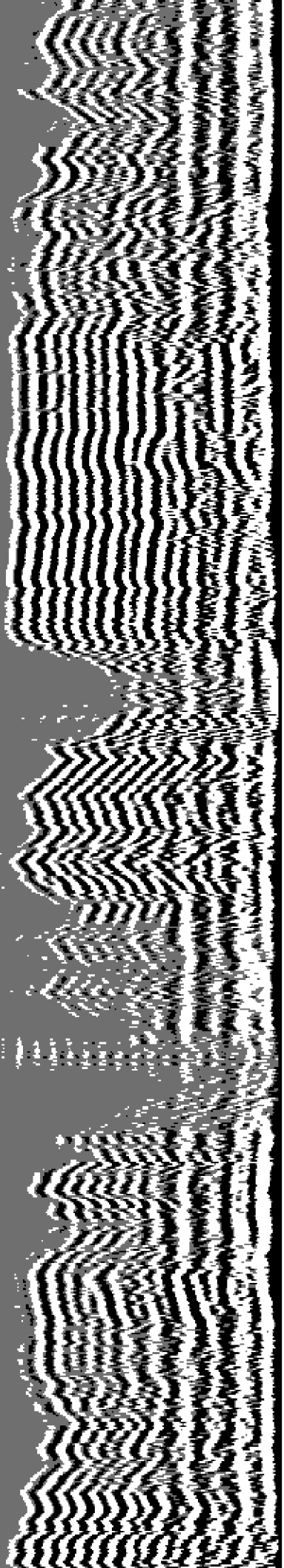
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A

100

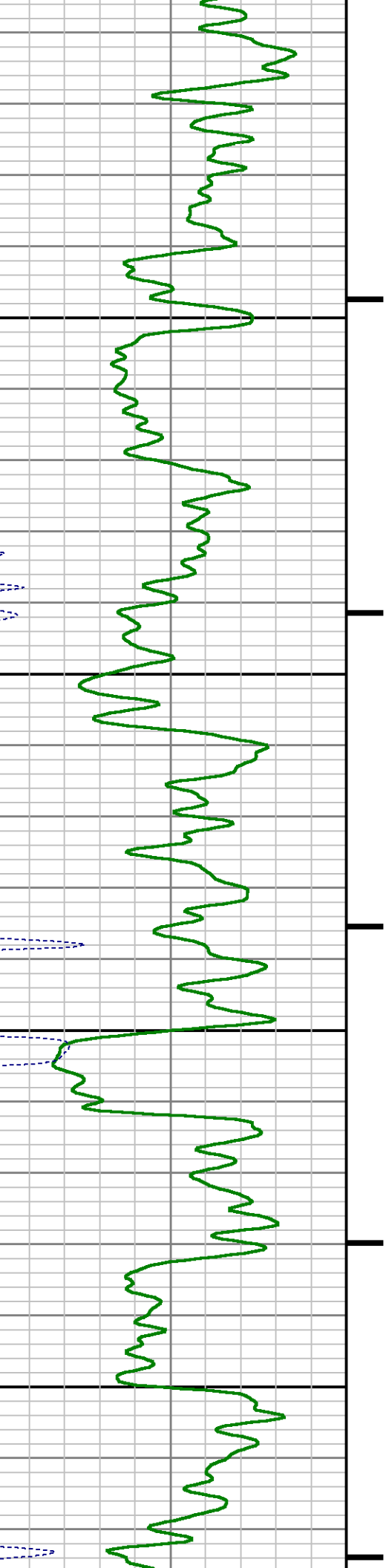


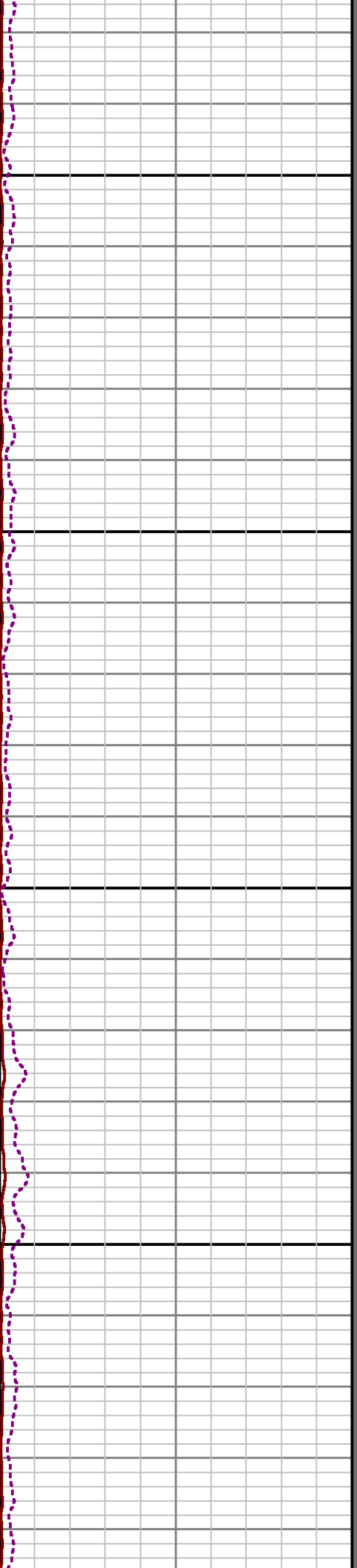
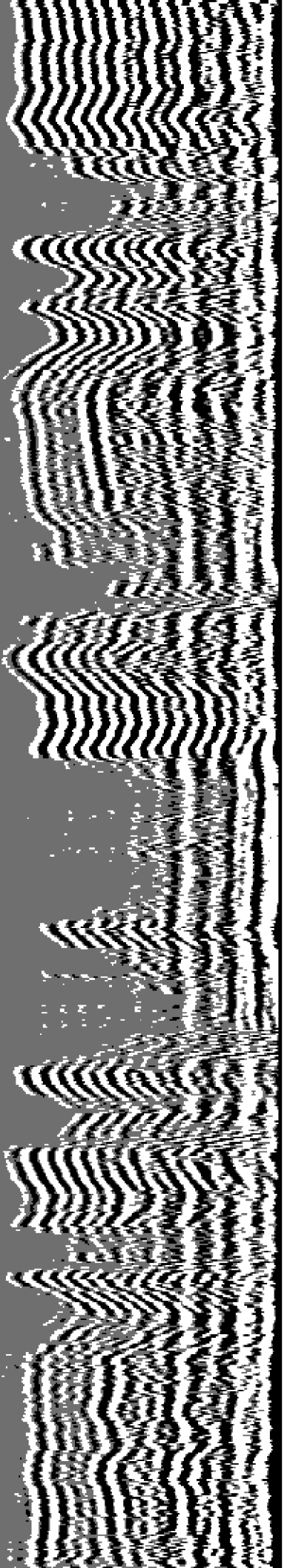




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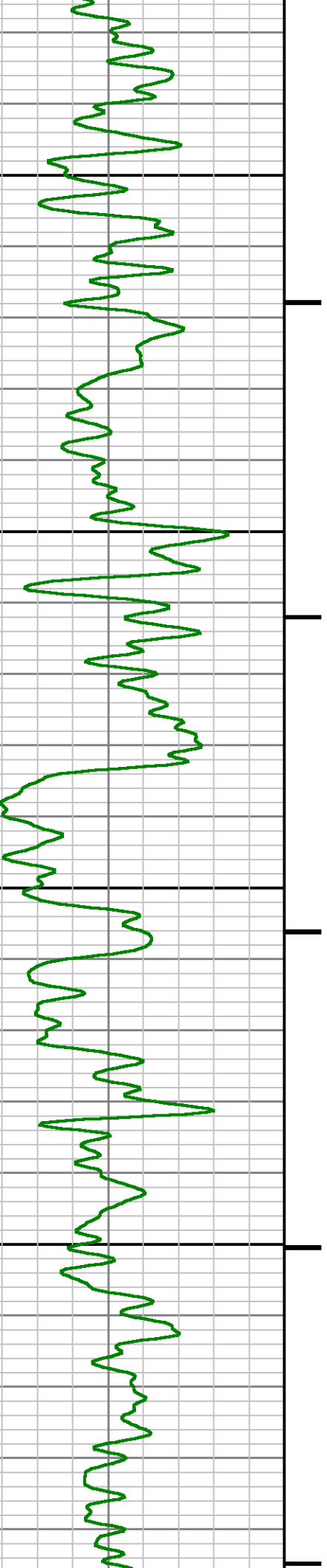
8200





8300

8400



RAL	Amp Gate Start Near	195.000	usec	35.837	3213.000
RAL	Amp Gate Start Radial	195.000	usec	35.837	3213.000
RAL	Amp Gate Width Far	25.000	usec	35.837	3213.000
RAL	Amp Gate Width Near	25.000	usec	35.837	3213.000
RAL	Amp Gate Width Radial	25.000	usec	35.837	3213.000
RAL	casing od	4.500	inches	35.837	3213.000
RAL	casing wt	11.600	lbm/ft	35.837	3213.000
RAL	FB Start Far	291.900	usec	35.837	3213.000
RAL	FB Start Near	175.391	usec	35.837	3213.000
RAL	FB Start Radial	175.391	usec	35.837	3213.000
RAL	FB Thresh Far	10.000	mv	35.837	3213.000
RAL	FB Thresh Near	4.000	mv	35.837	3213.000
RAL	FB Thresh Radial	4.000	mv	35.837	3213.000
RAL	Fluid Travel Time	200.000	usec/ft	35.837	3212.993

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

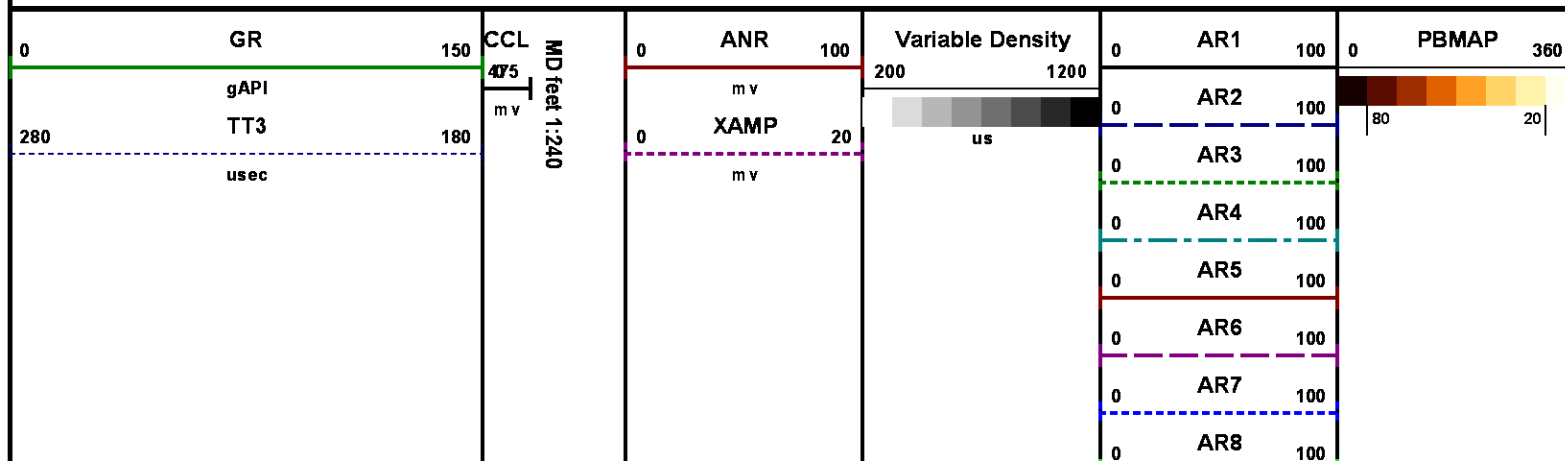
Well : SAVAGE RWF 24-25

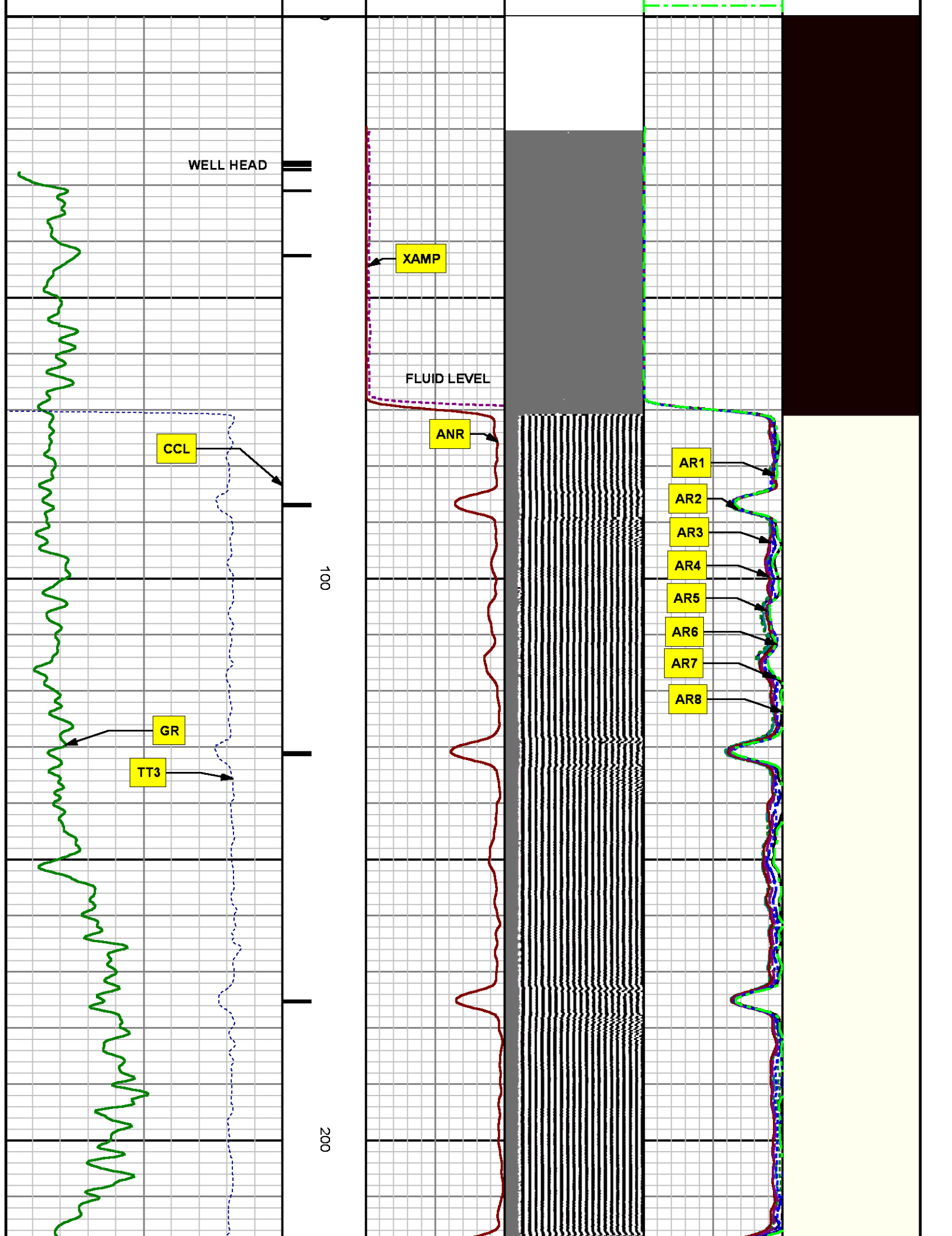
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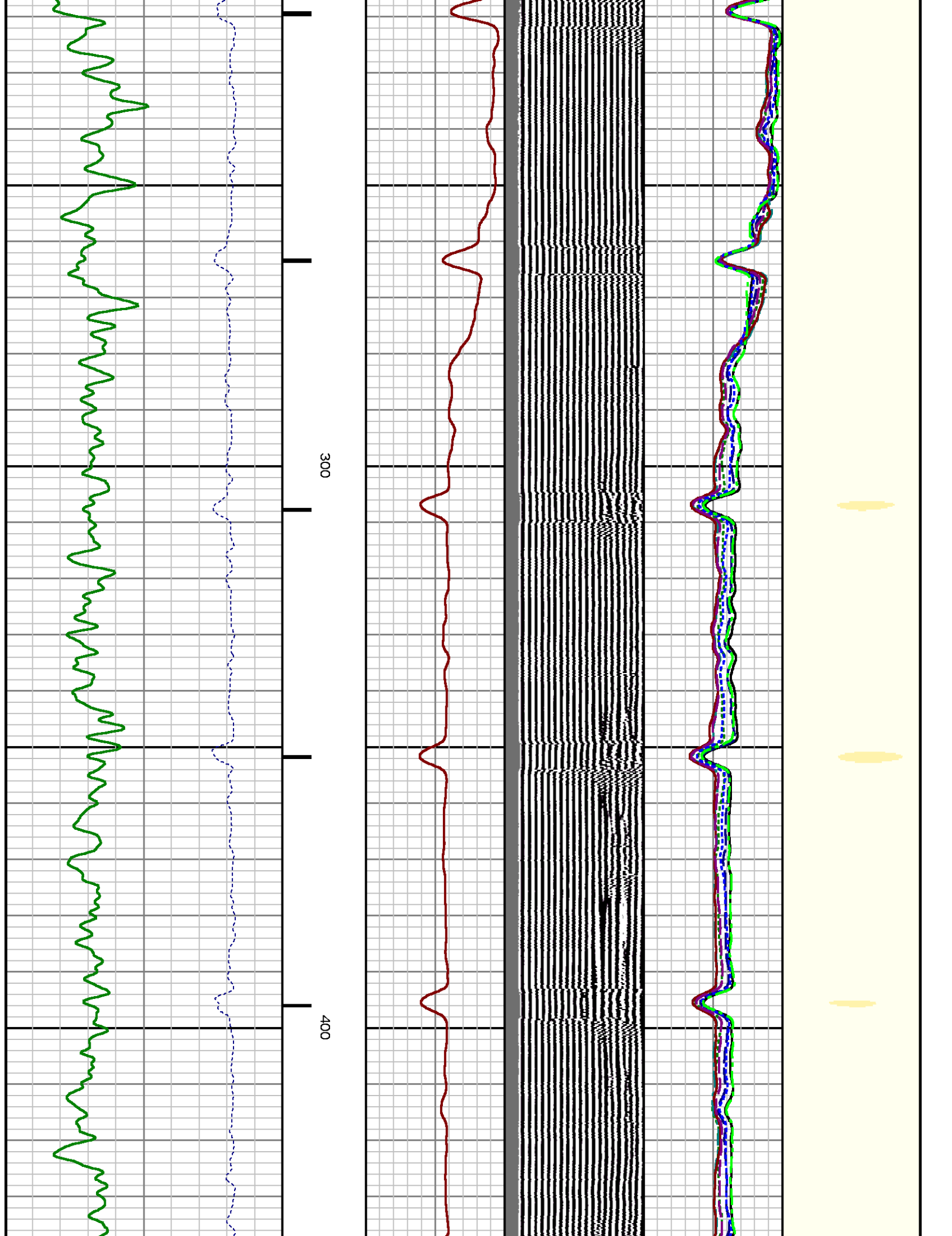
Mode : PlotMgr 5.4.504

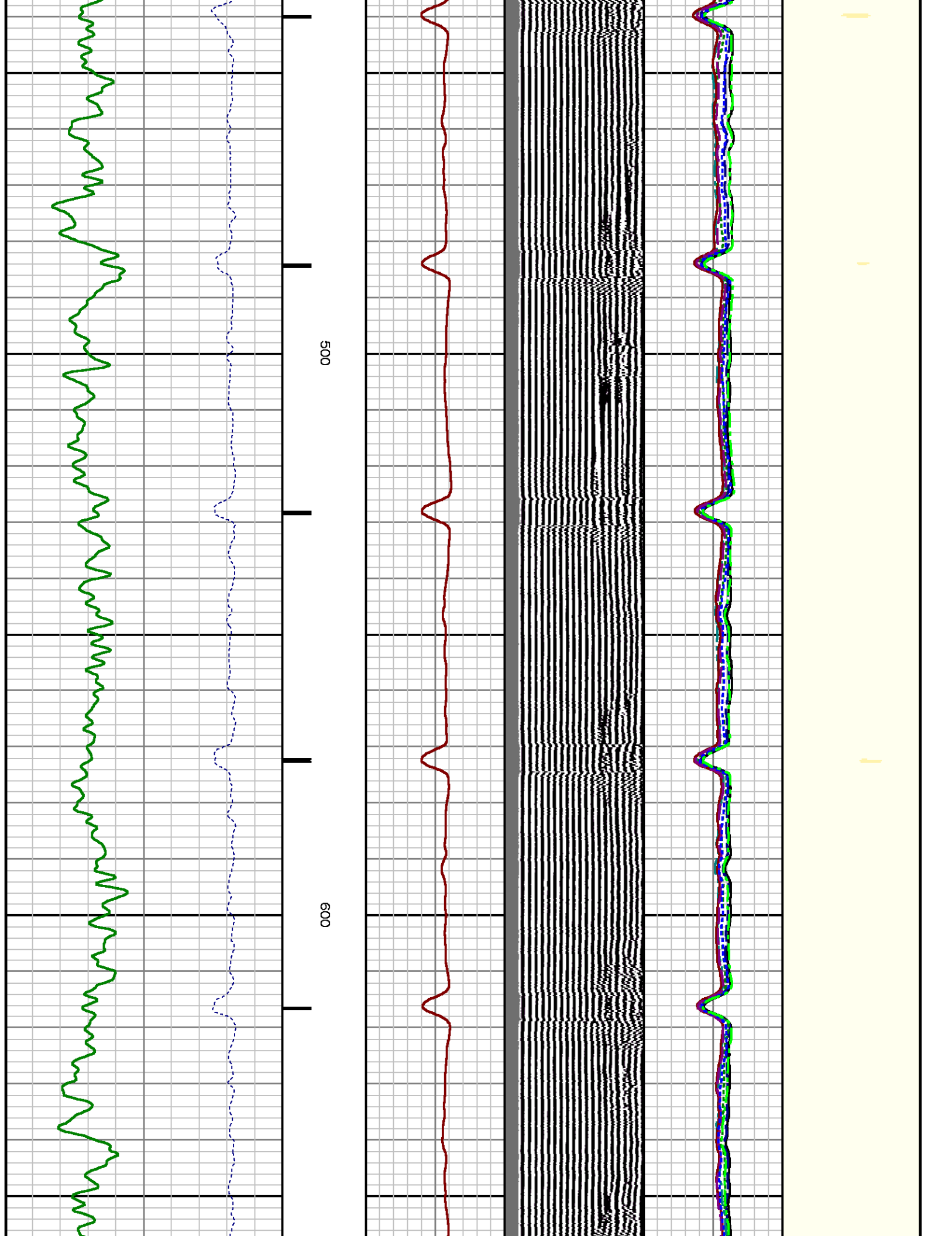
Interval : 0.00 - 8614.00 feet UP

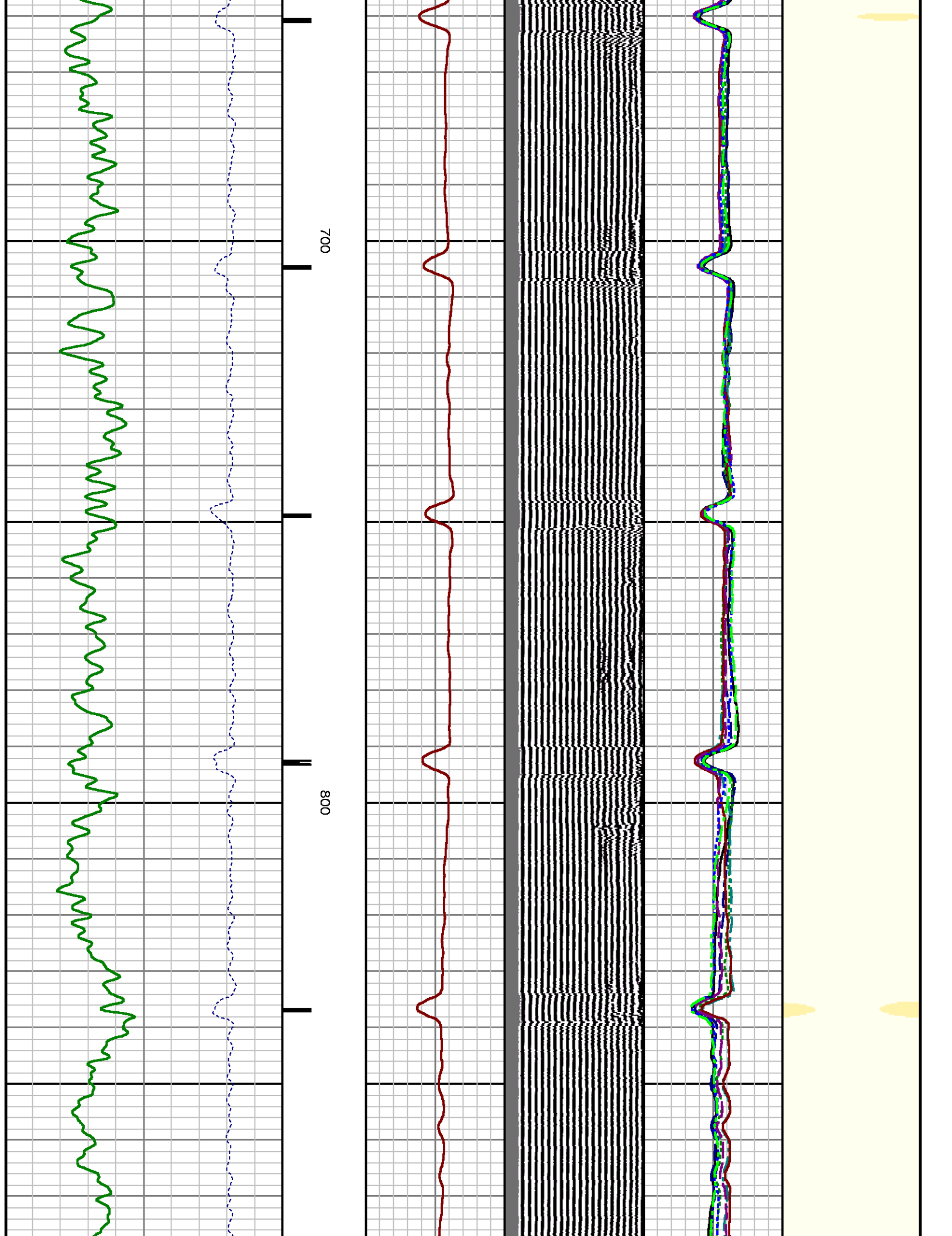
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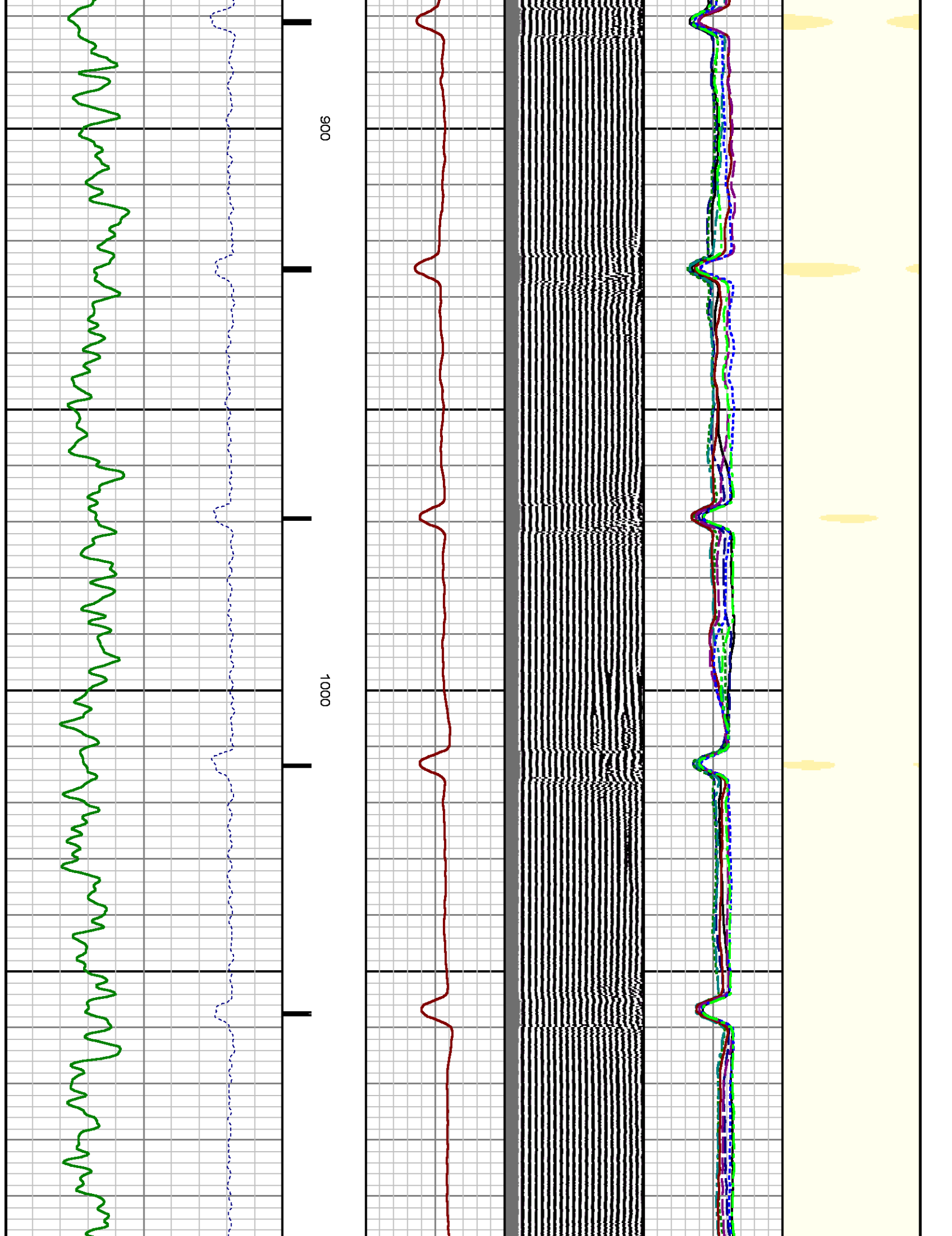


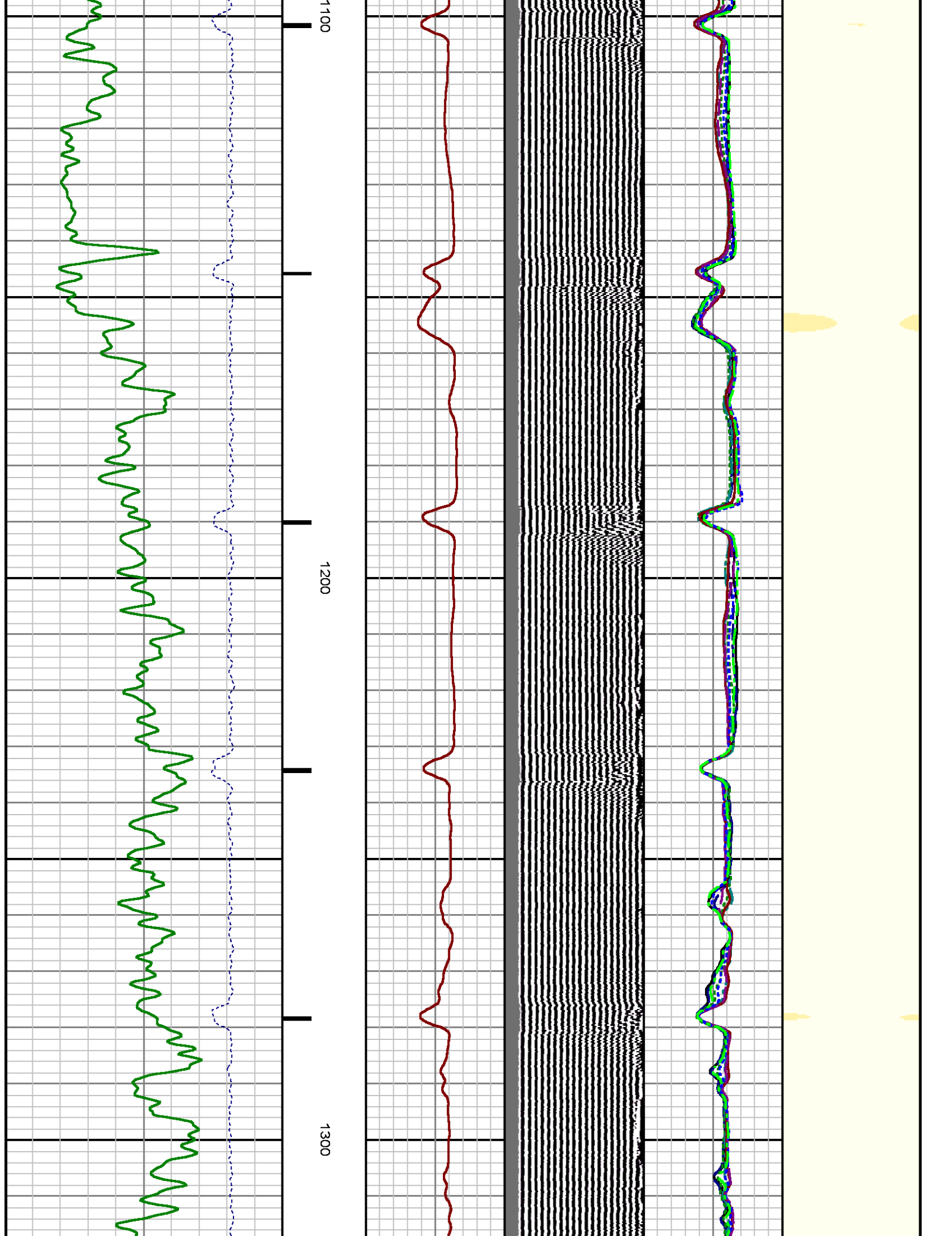


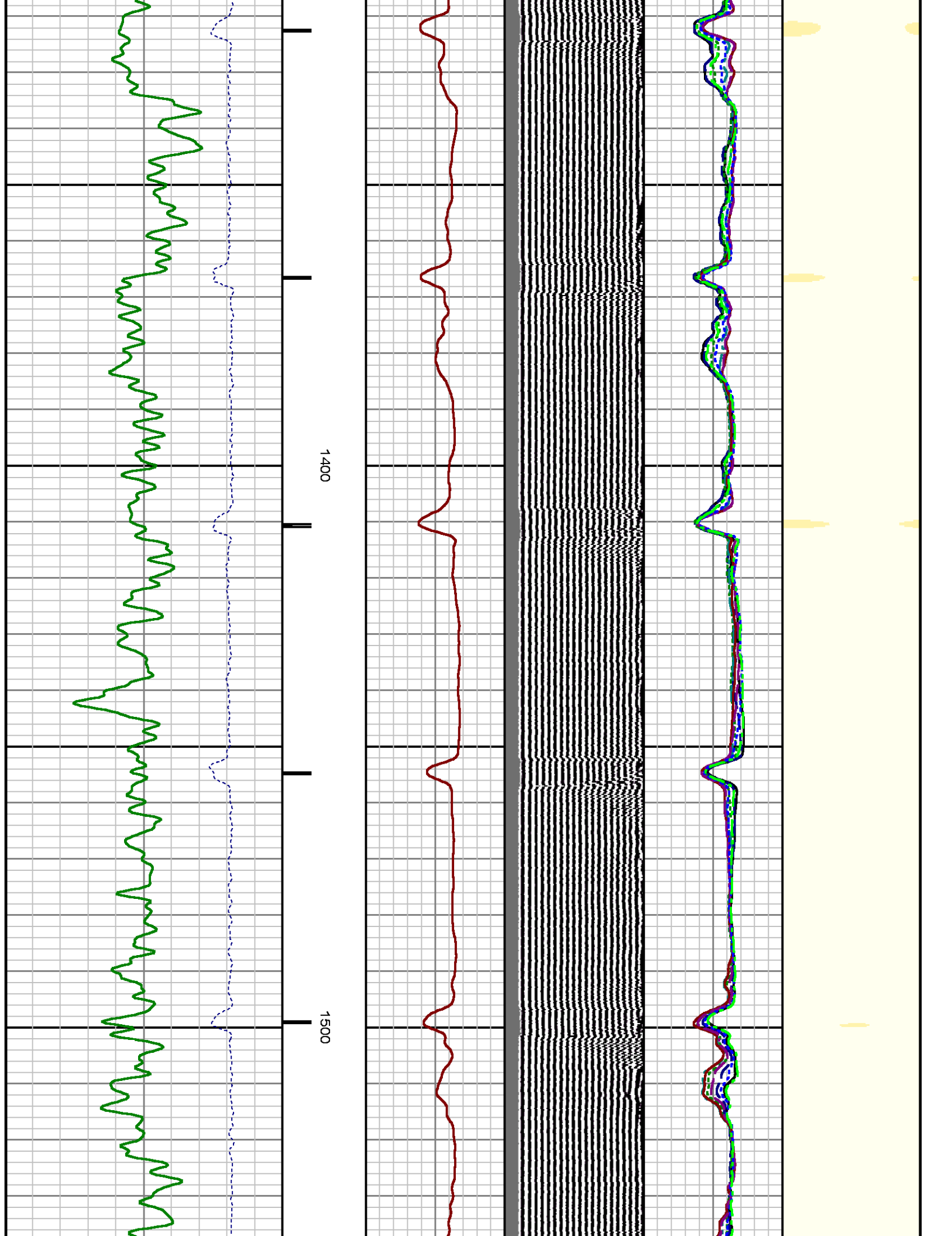


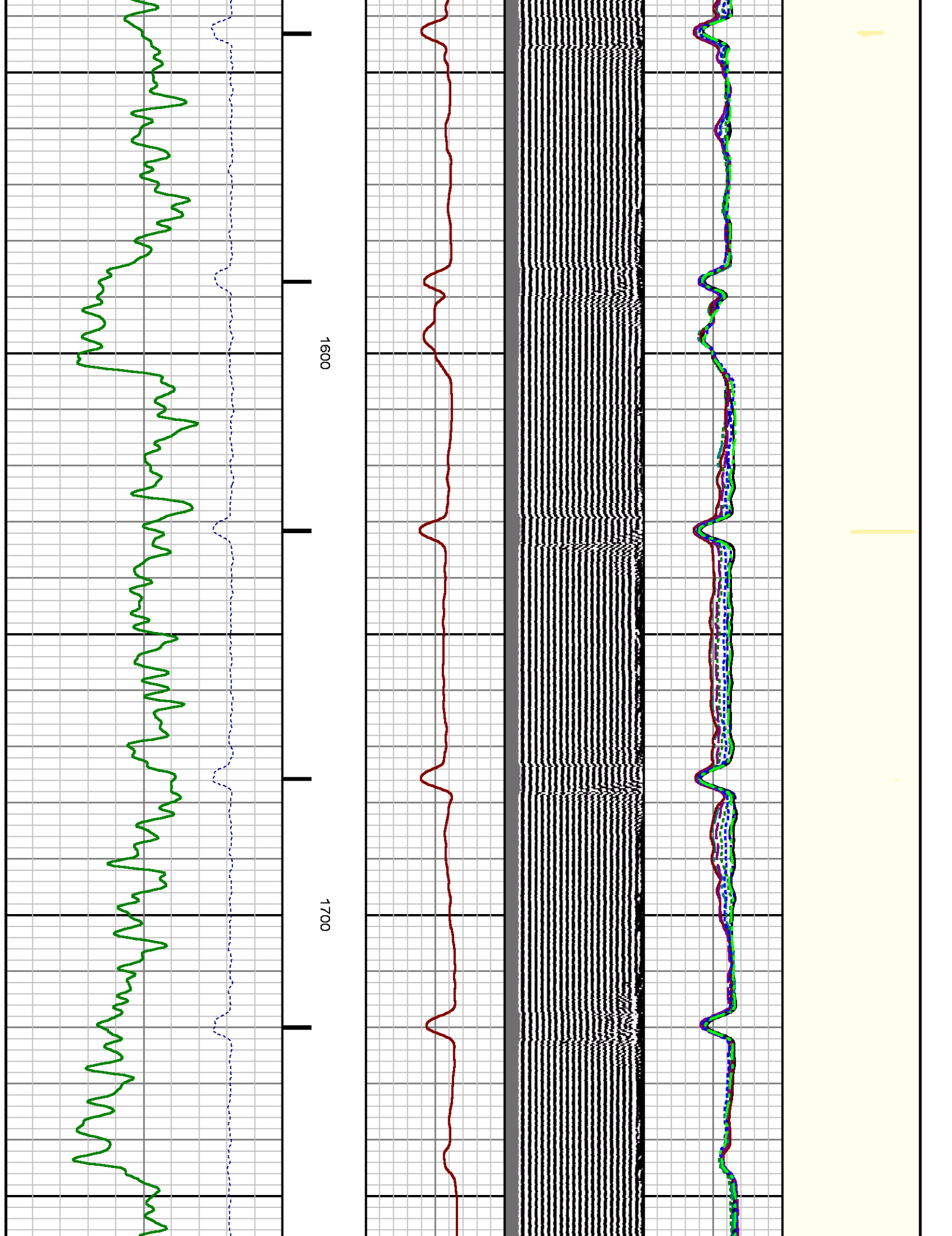


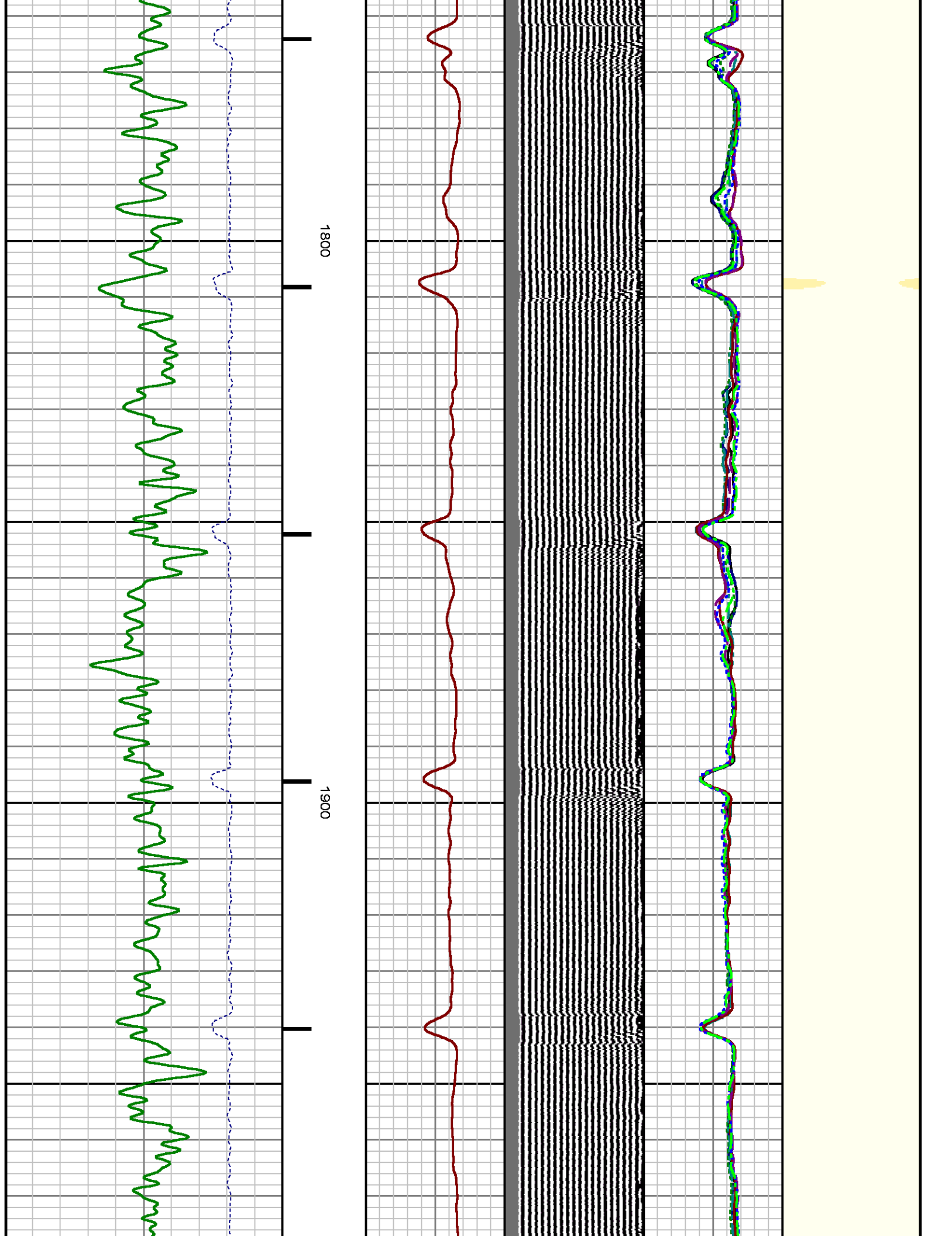


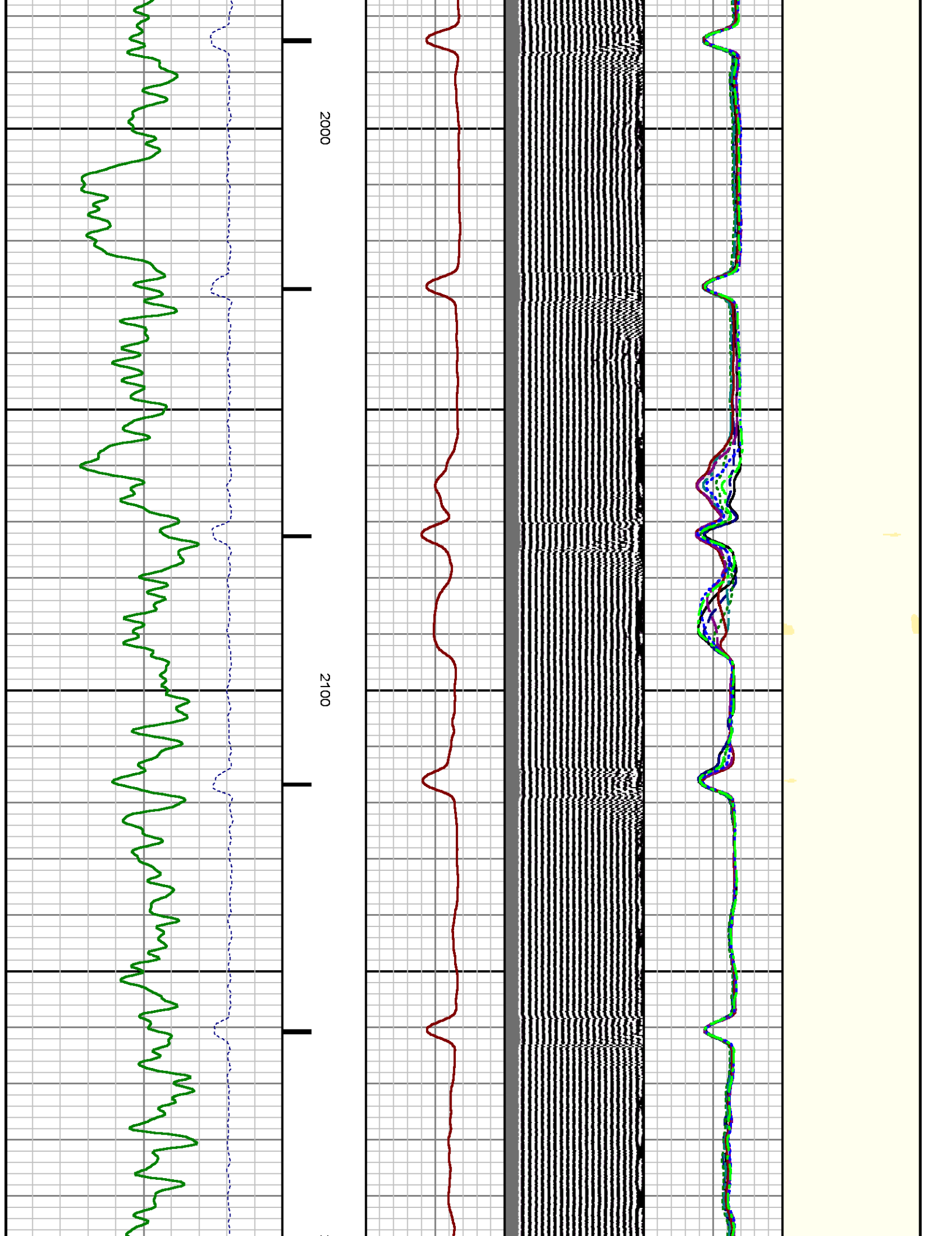


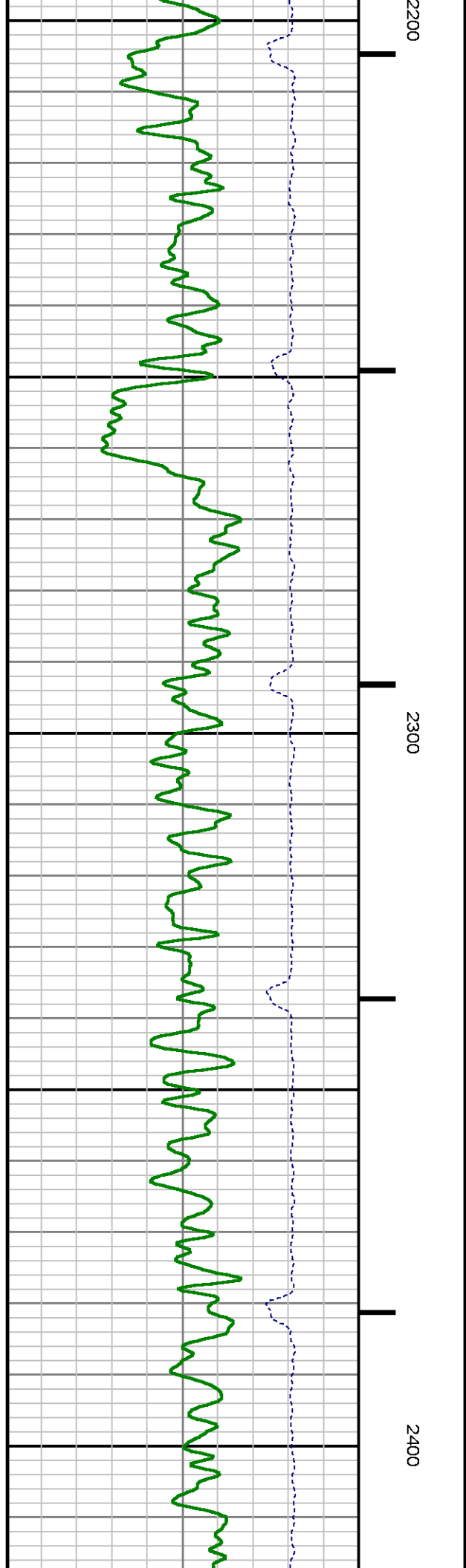
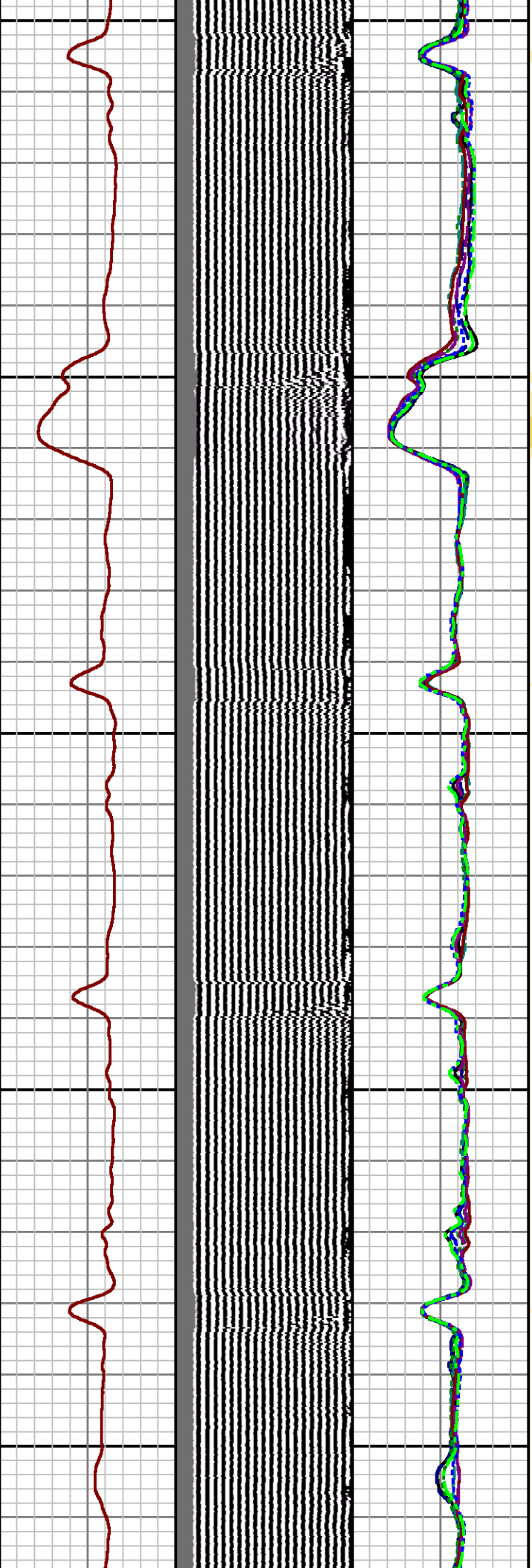
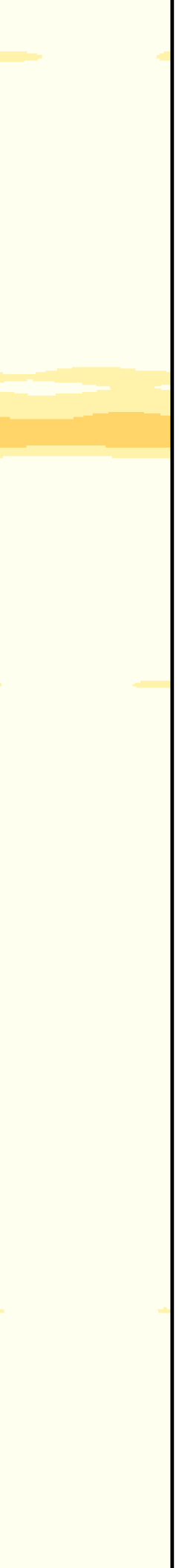


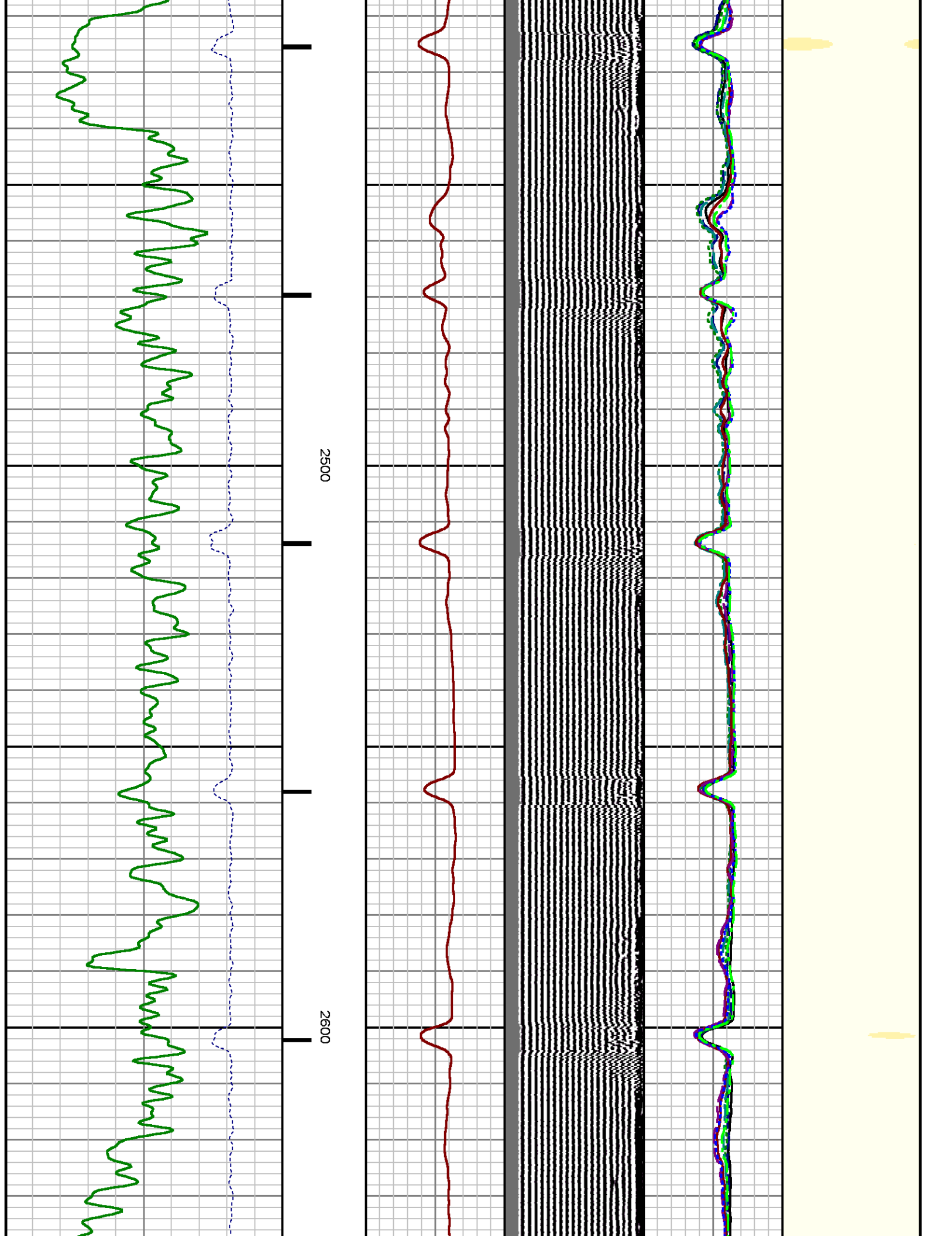


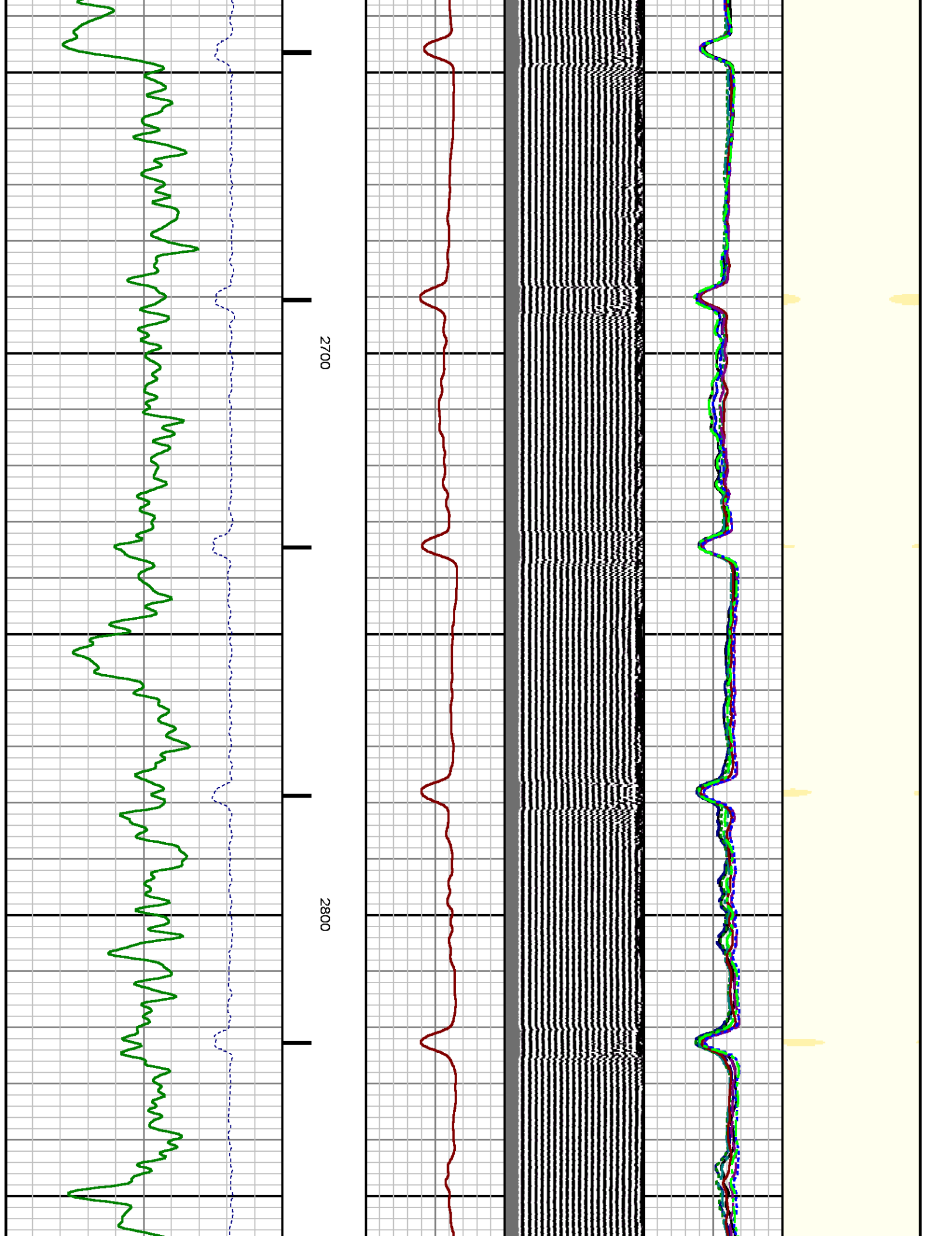


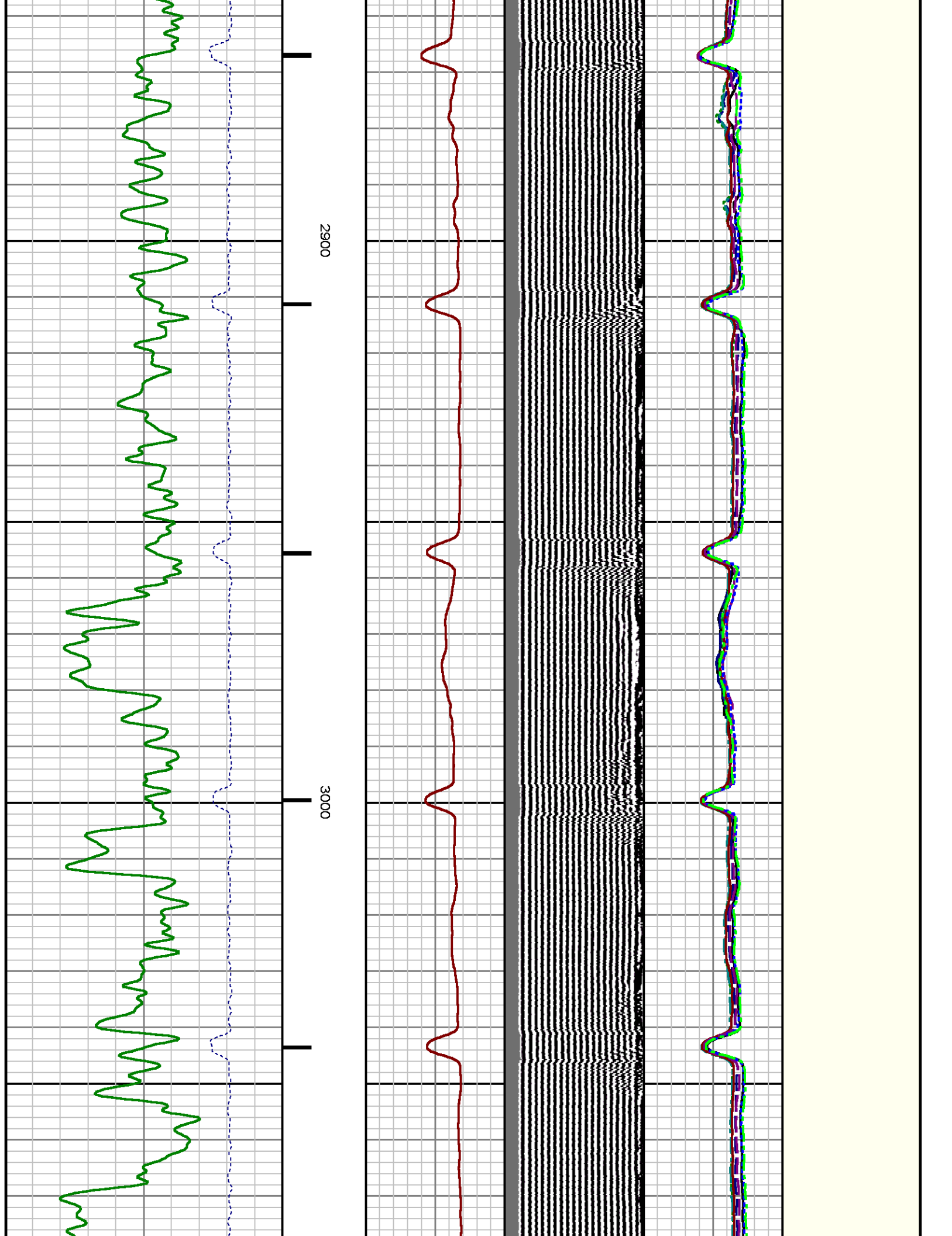




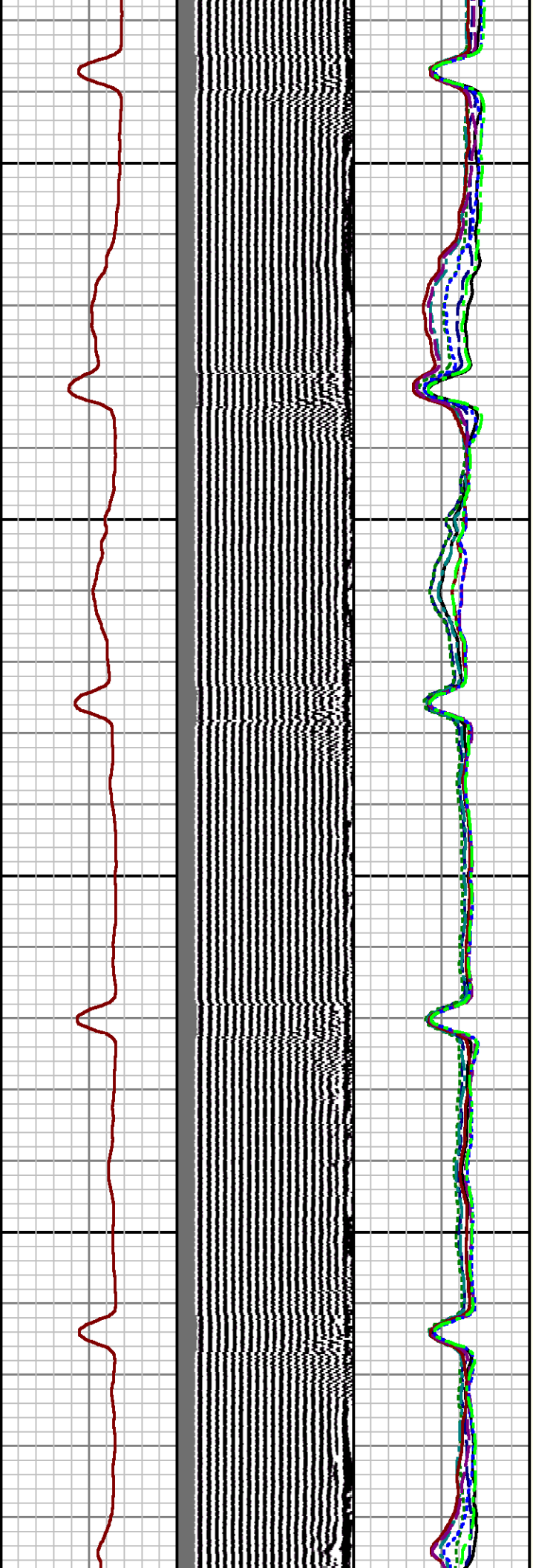






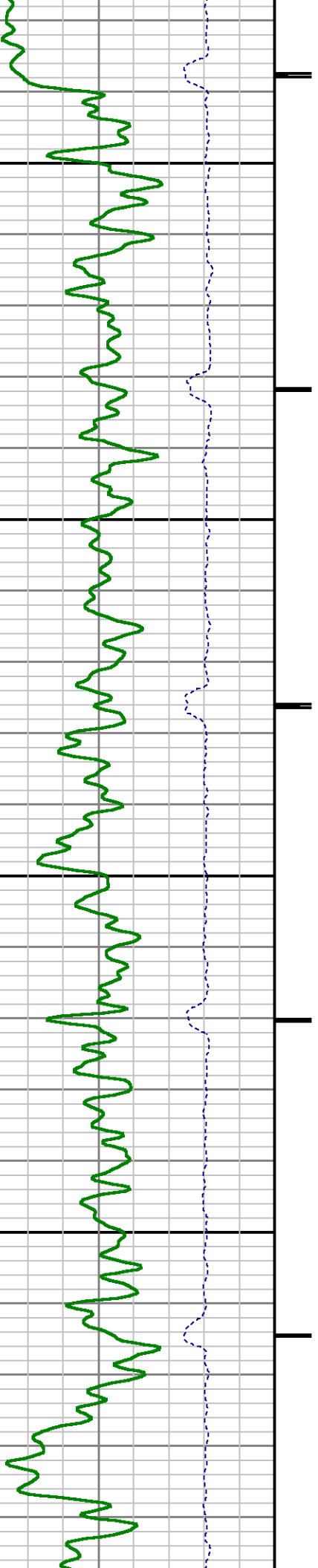


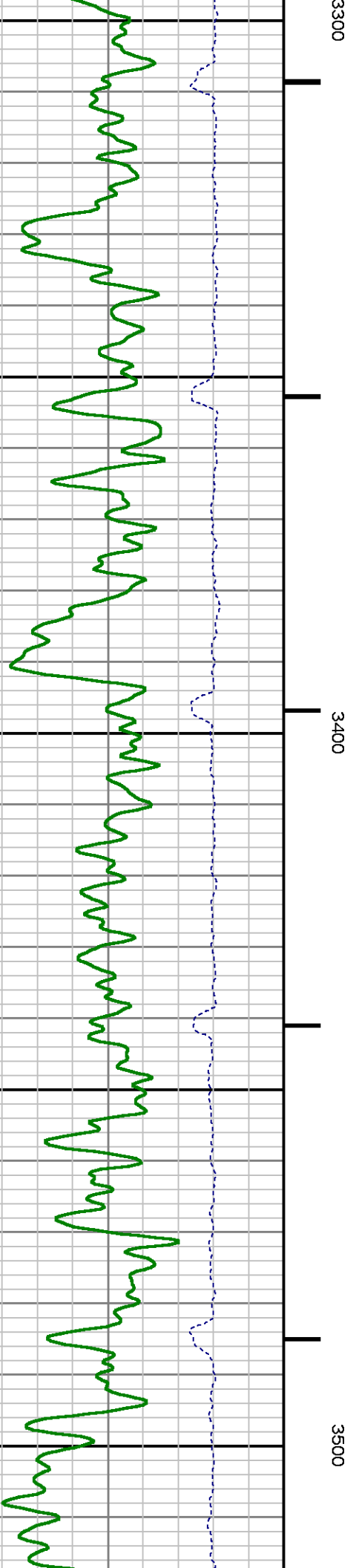
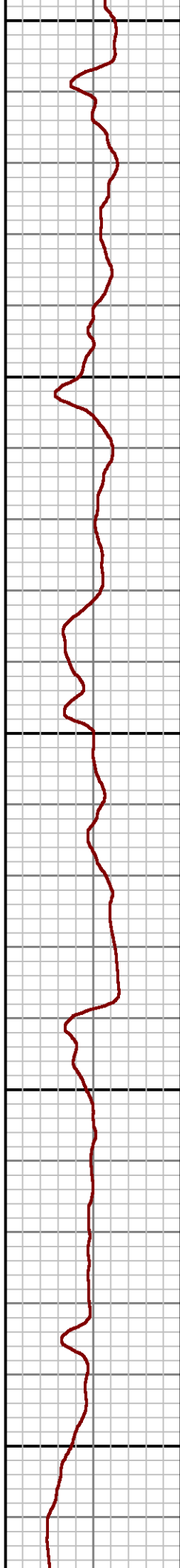
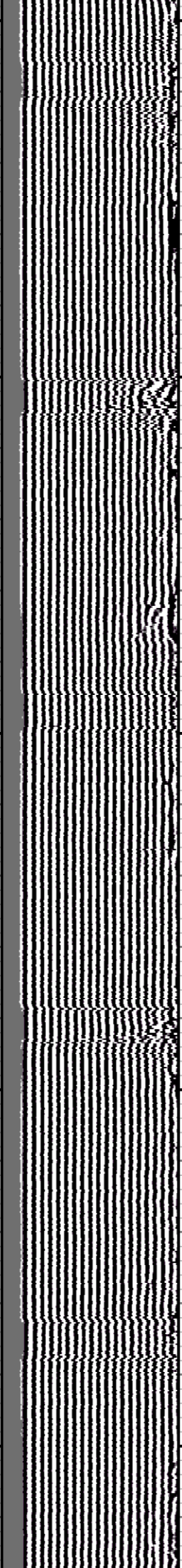
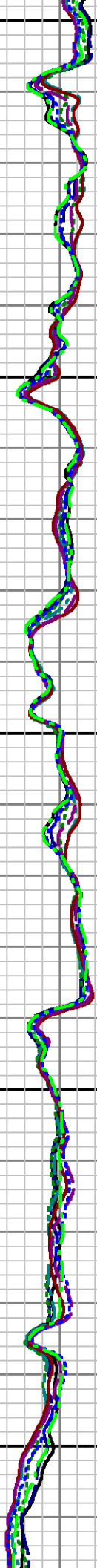
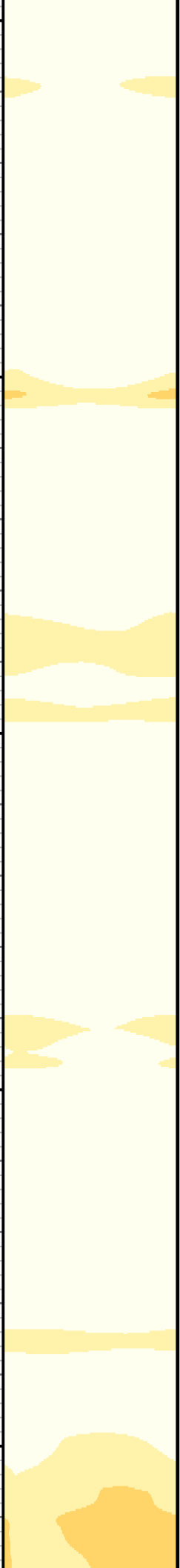
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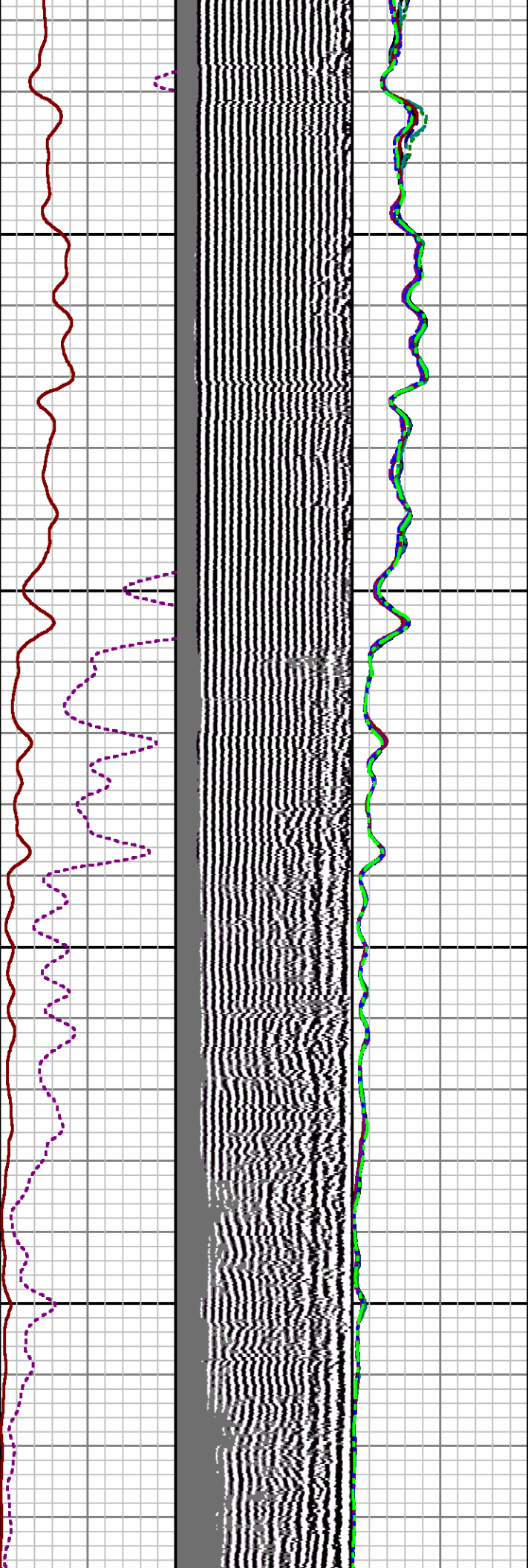
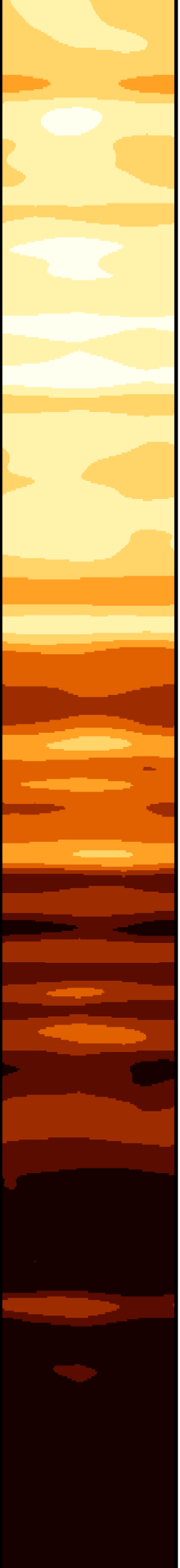


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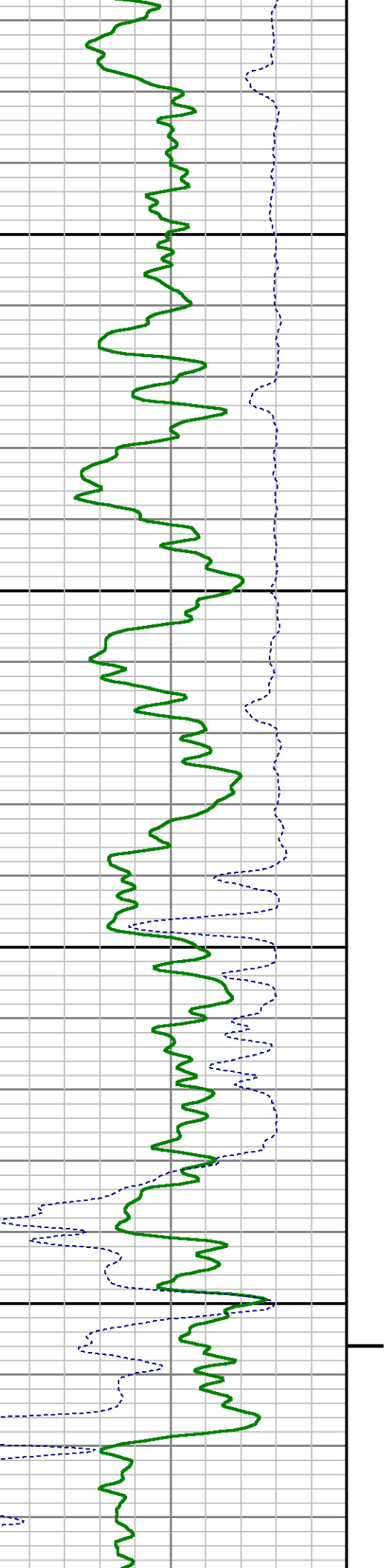


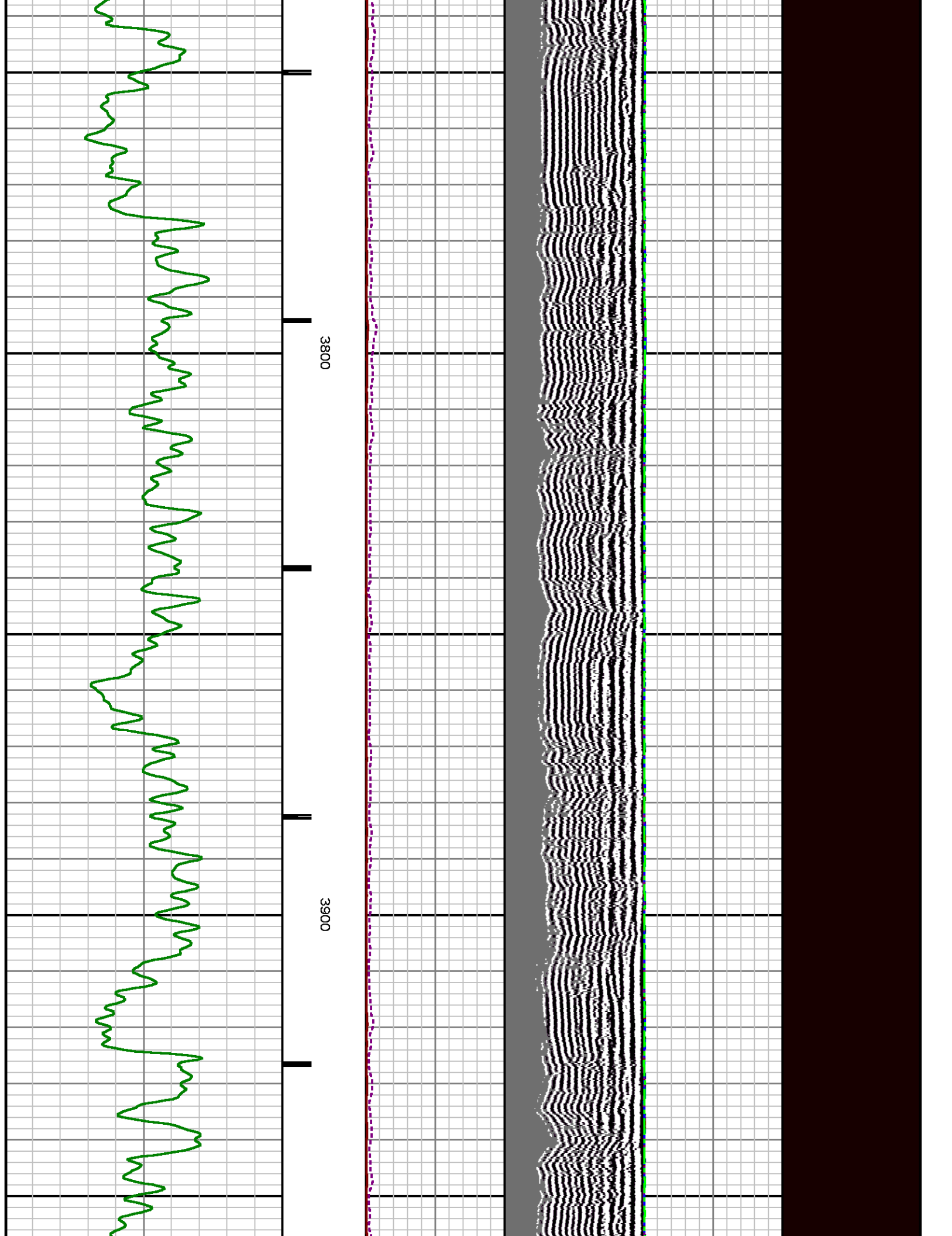


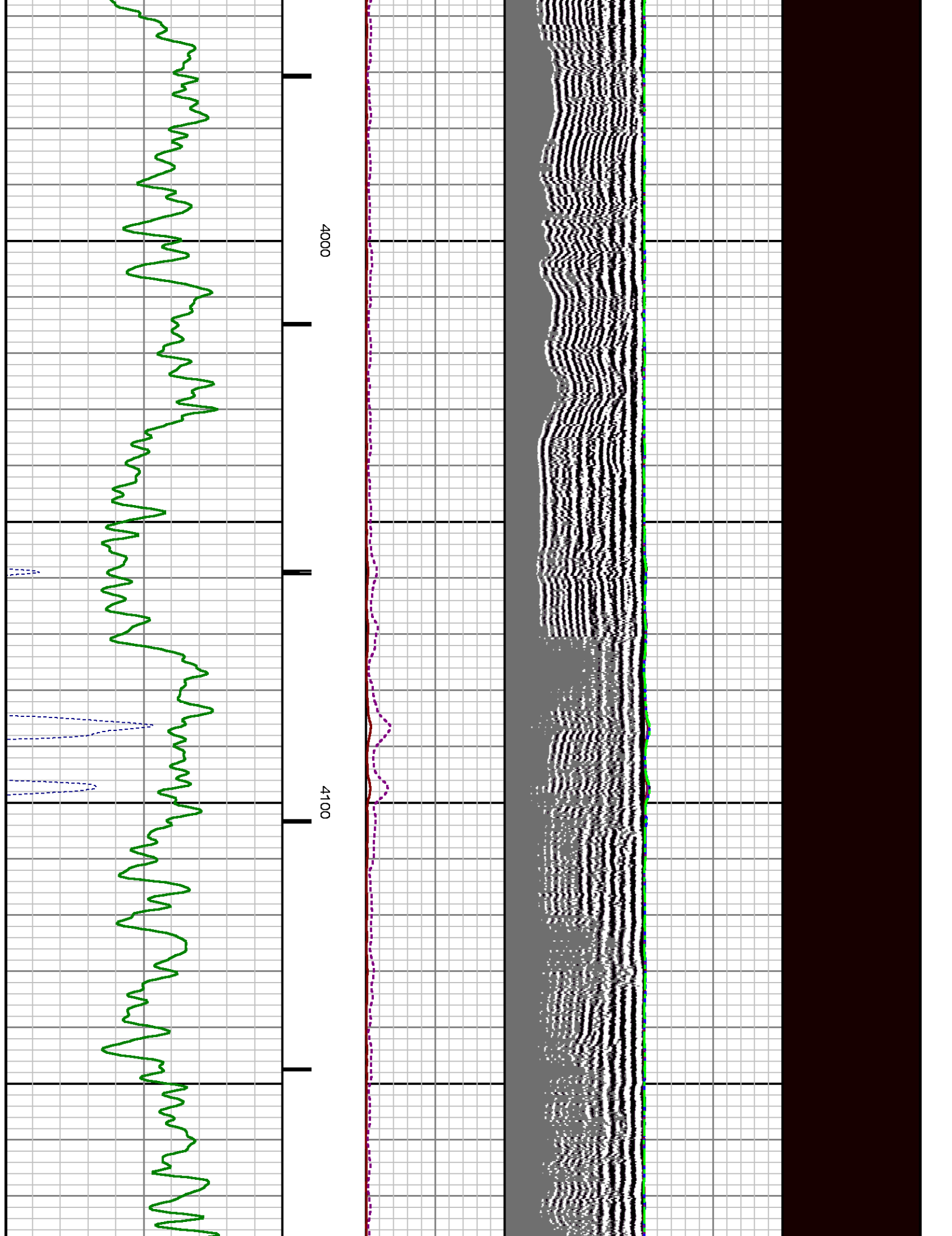


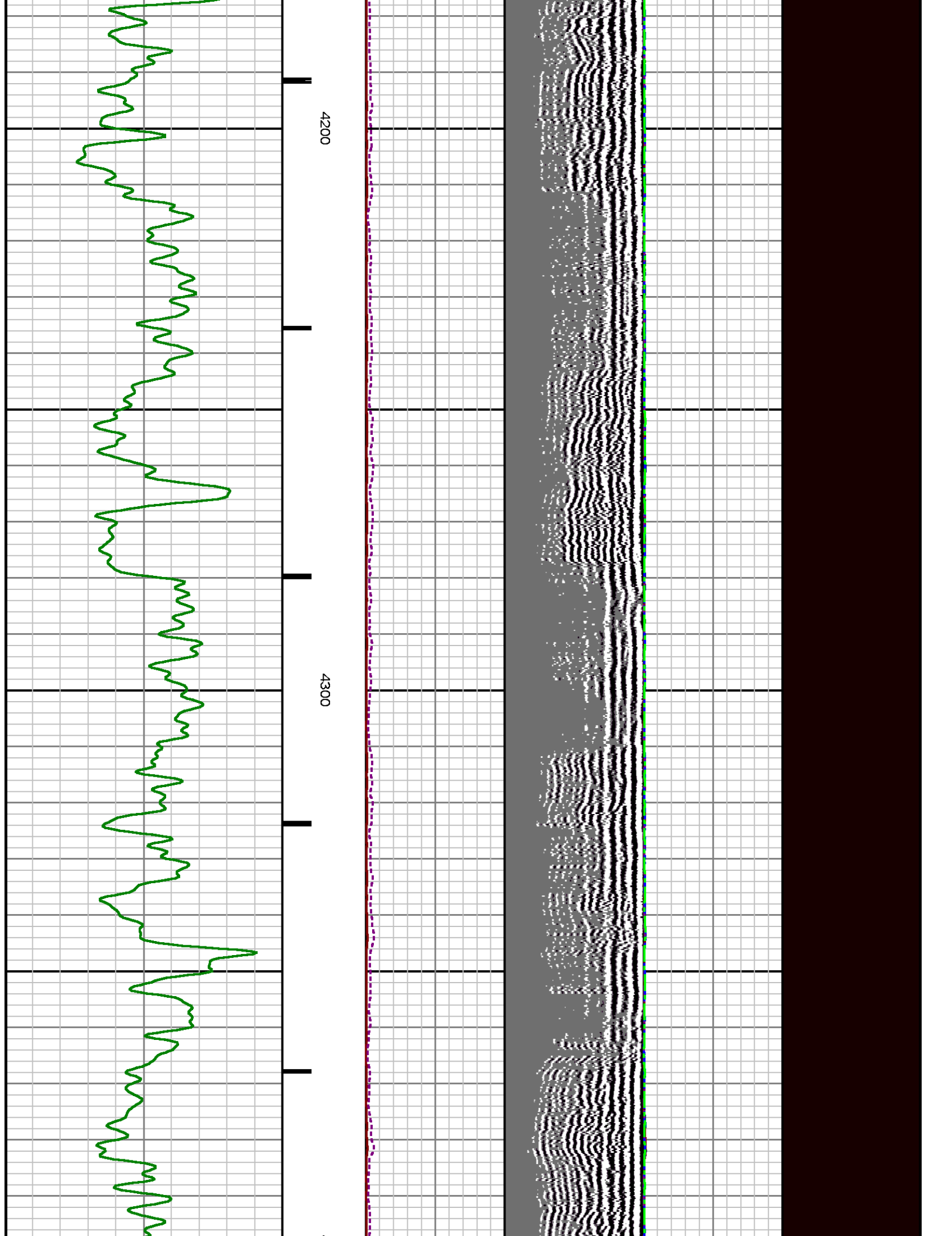
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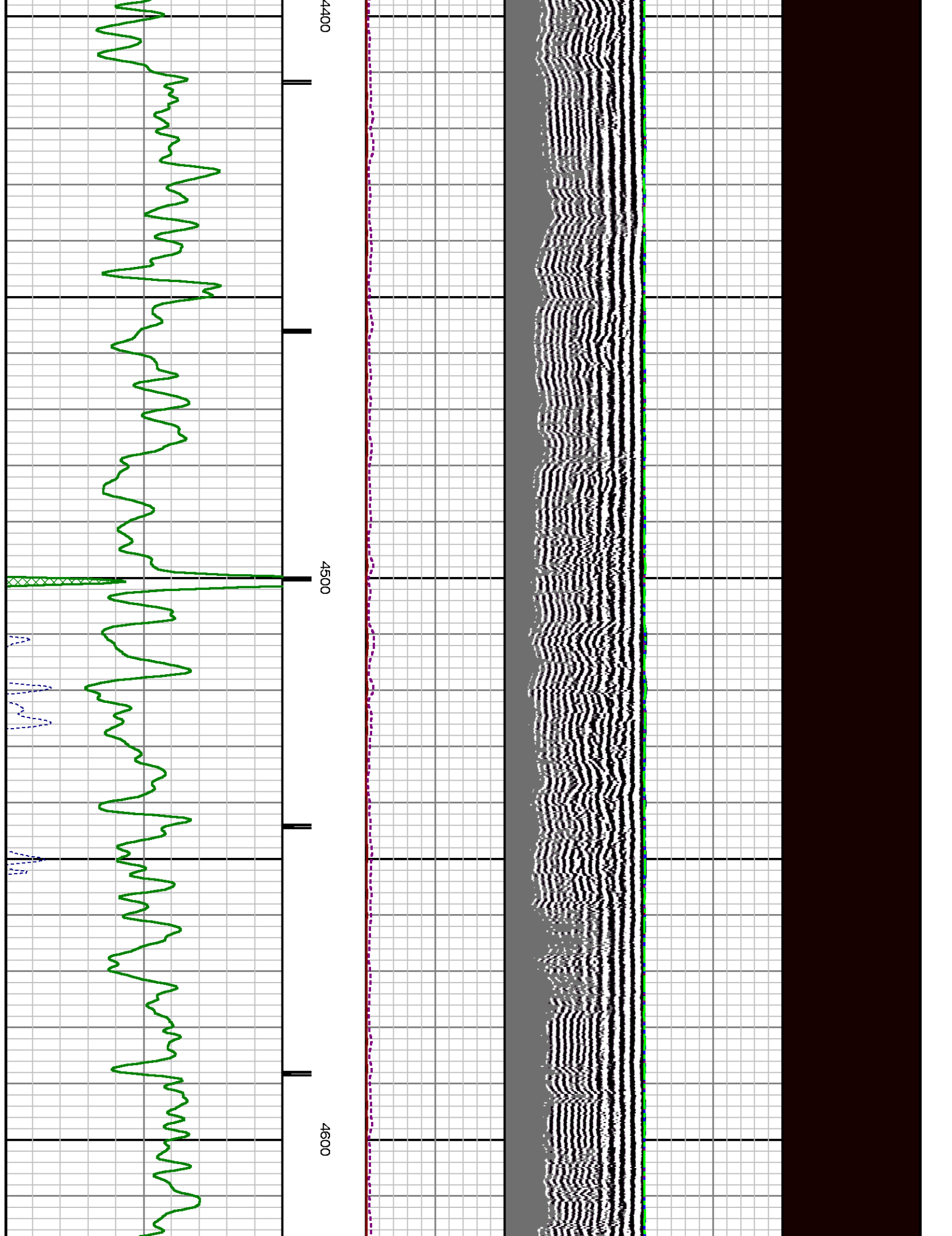
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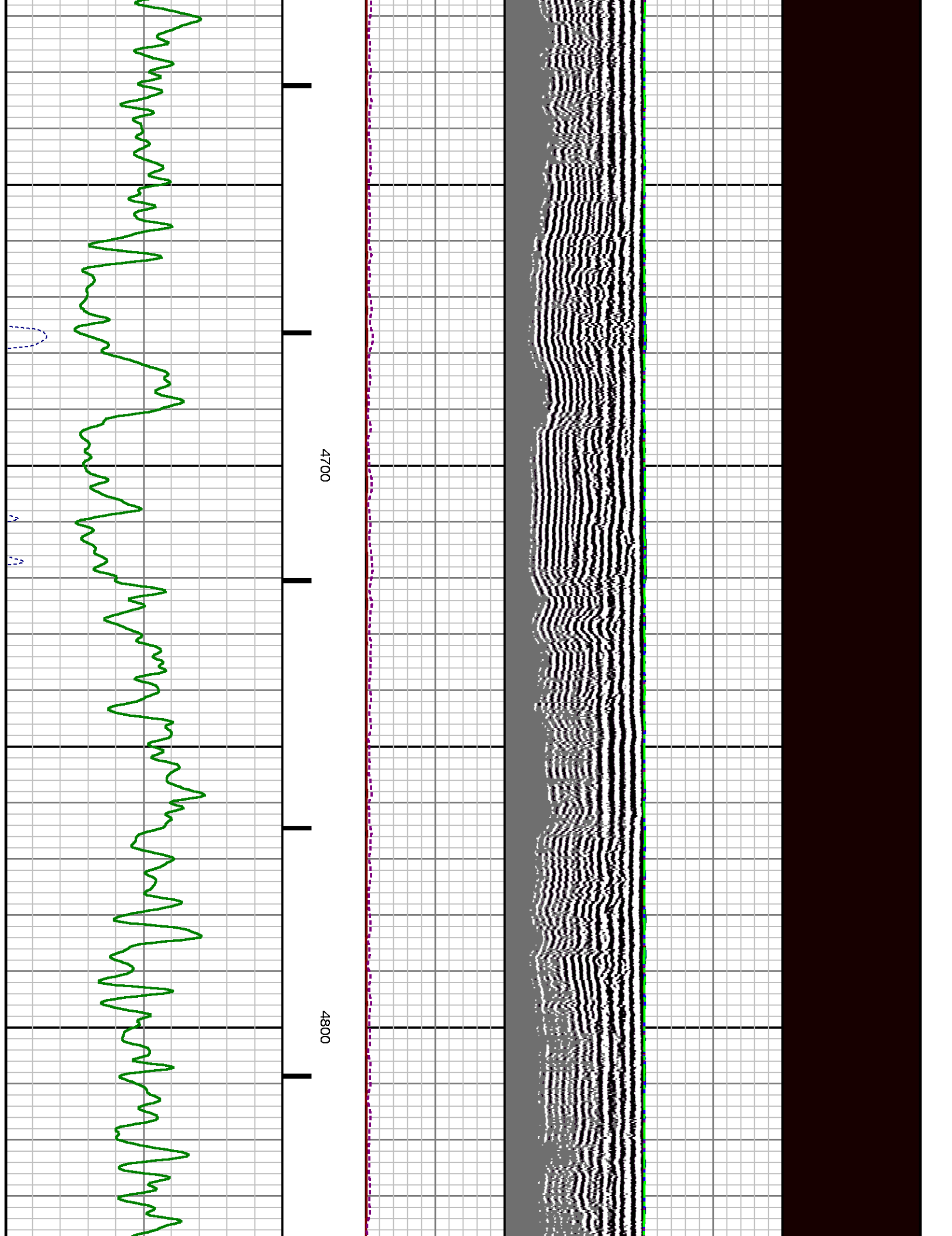


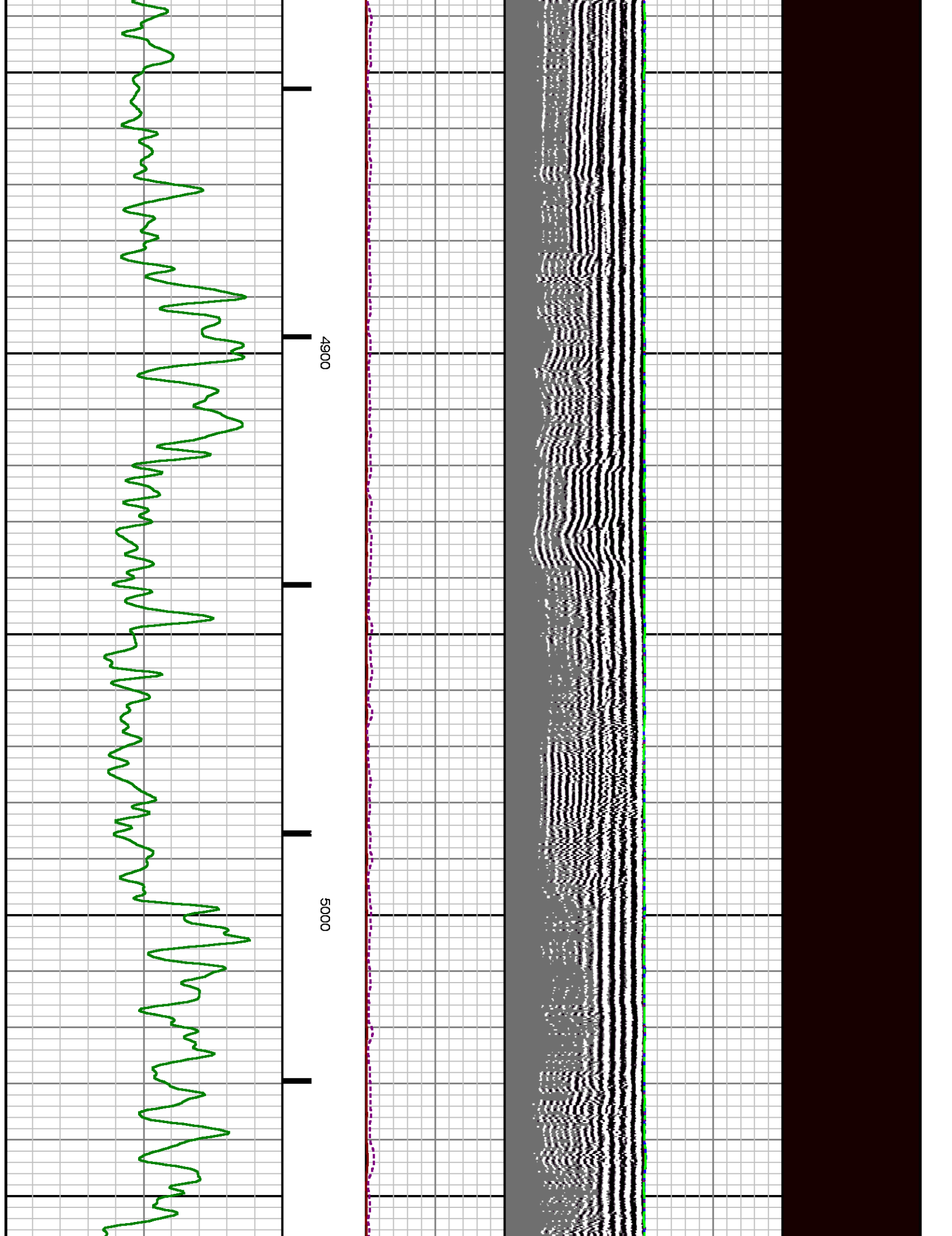


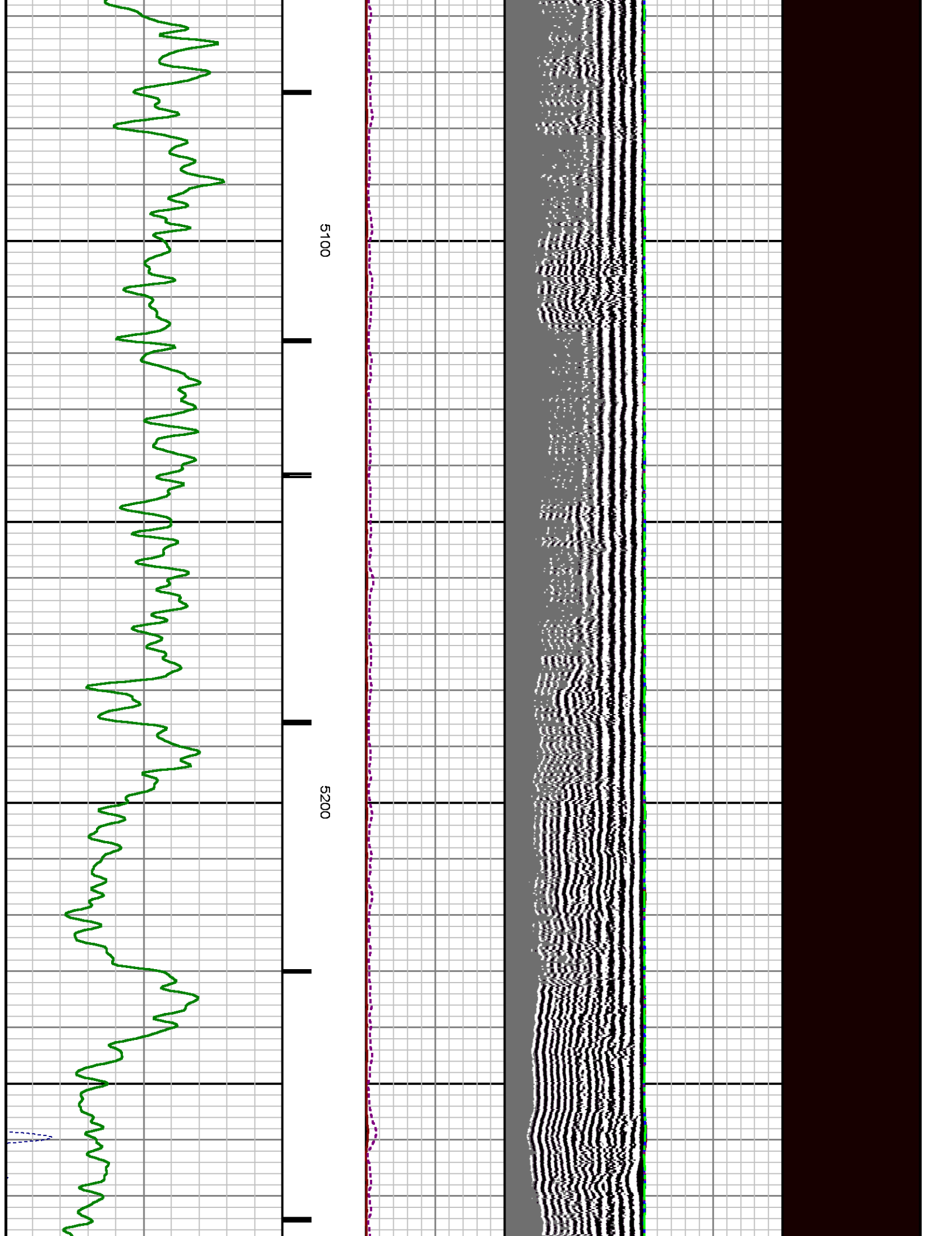


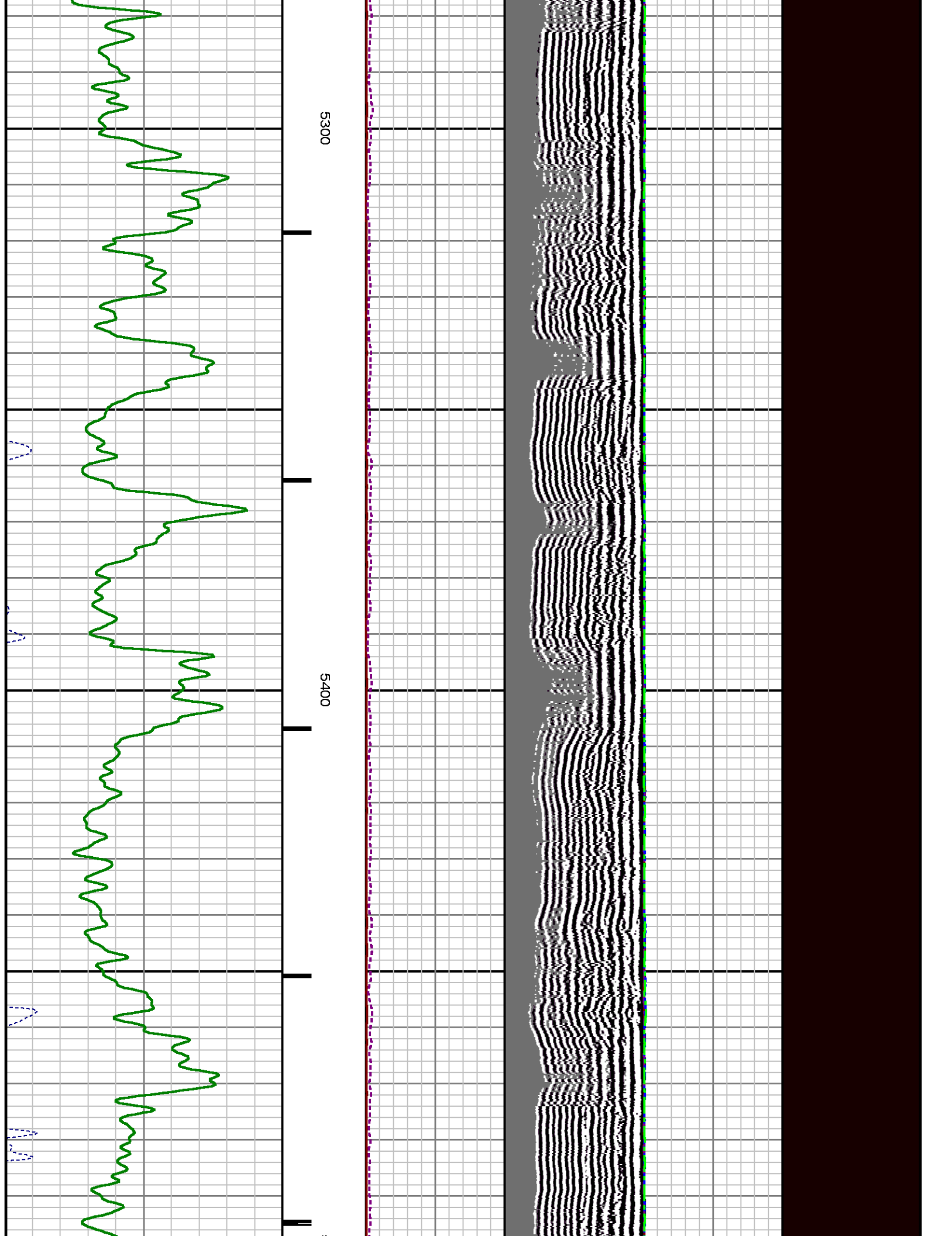


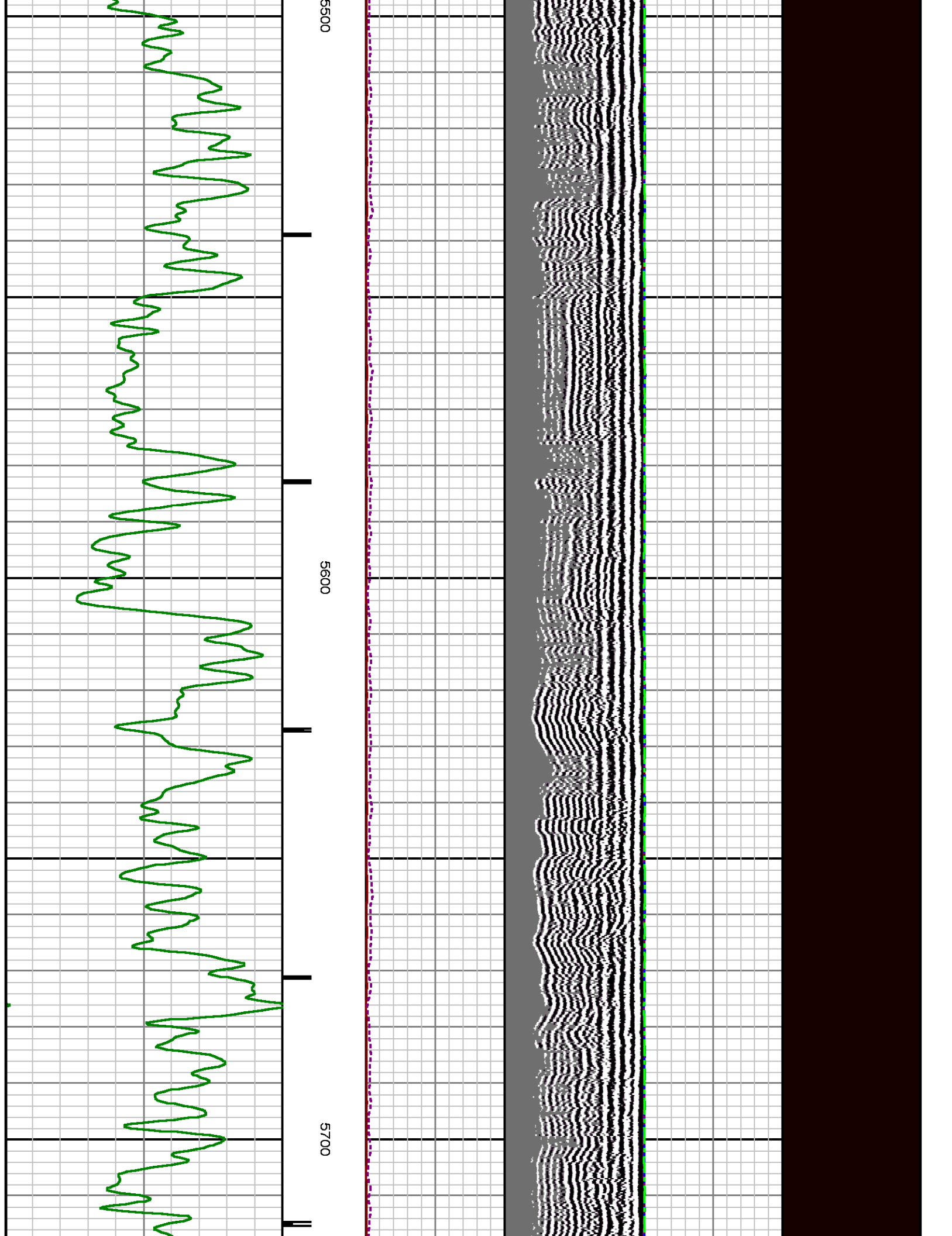


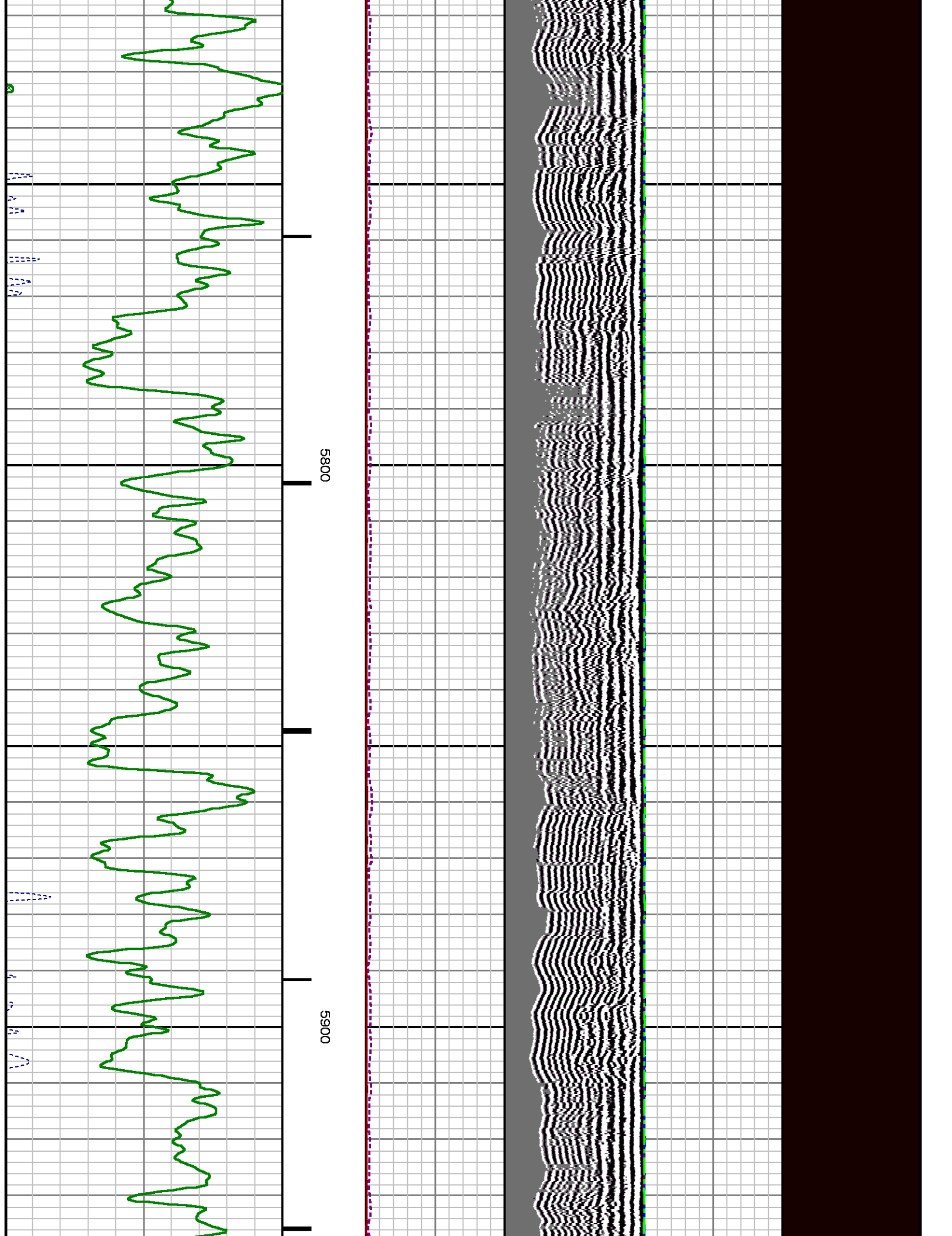


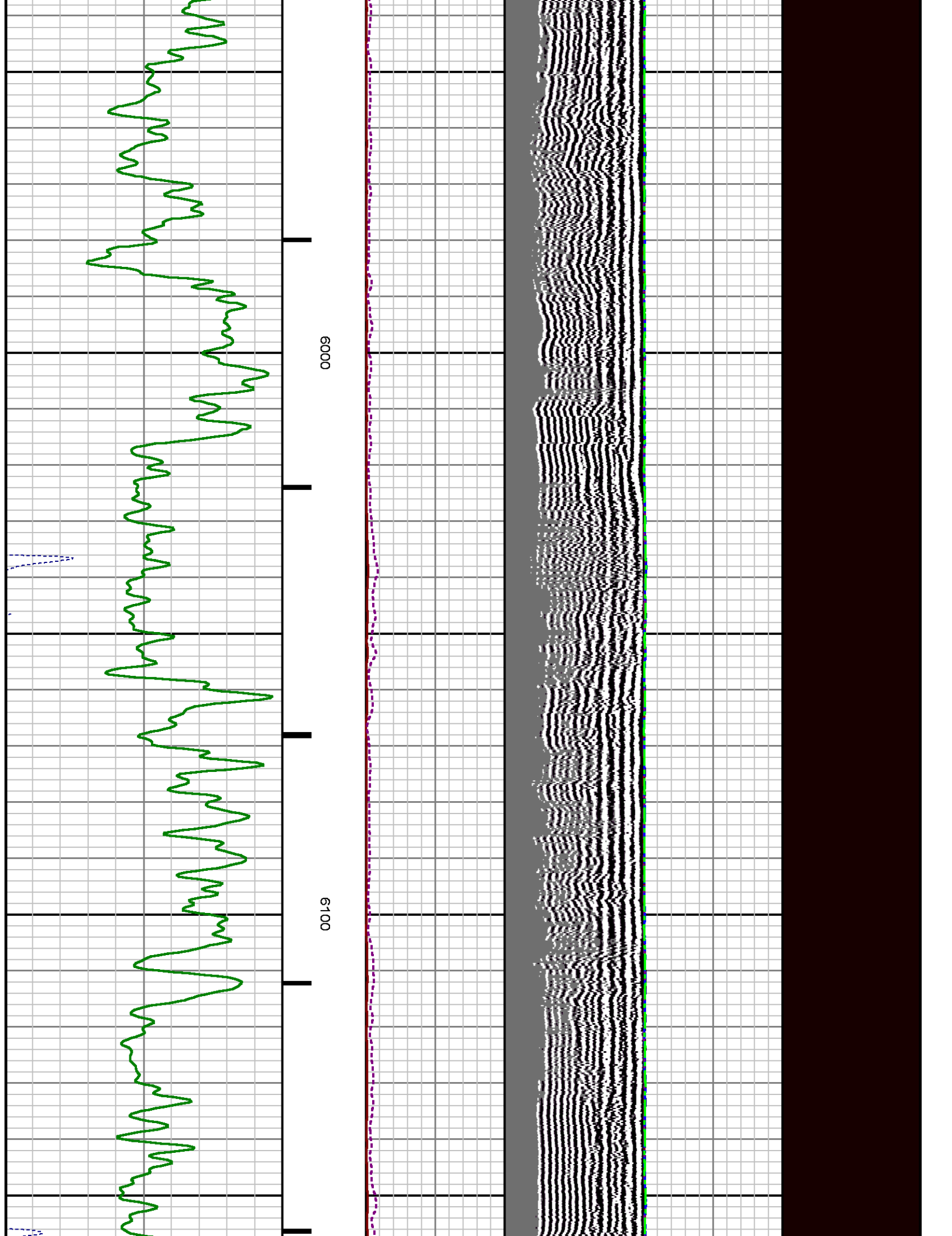


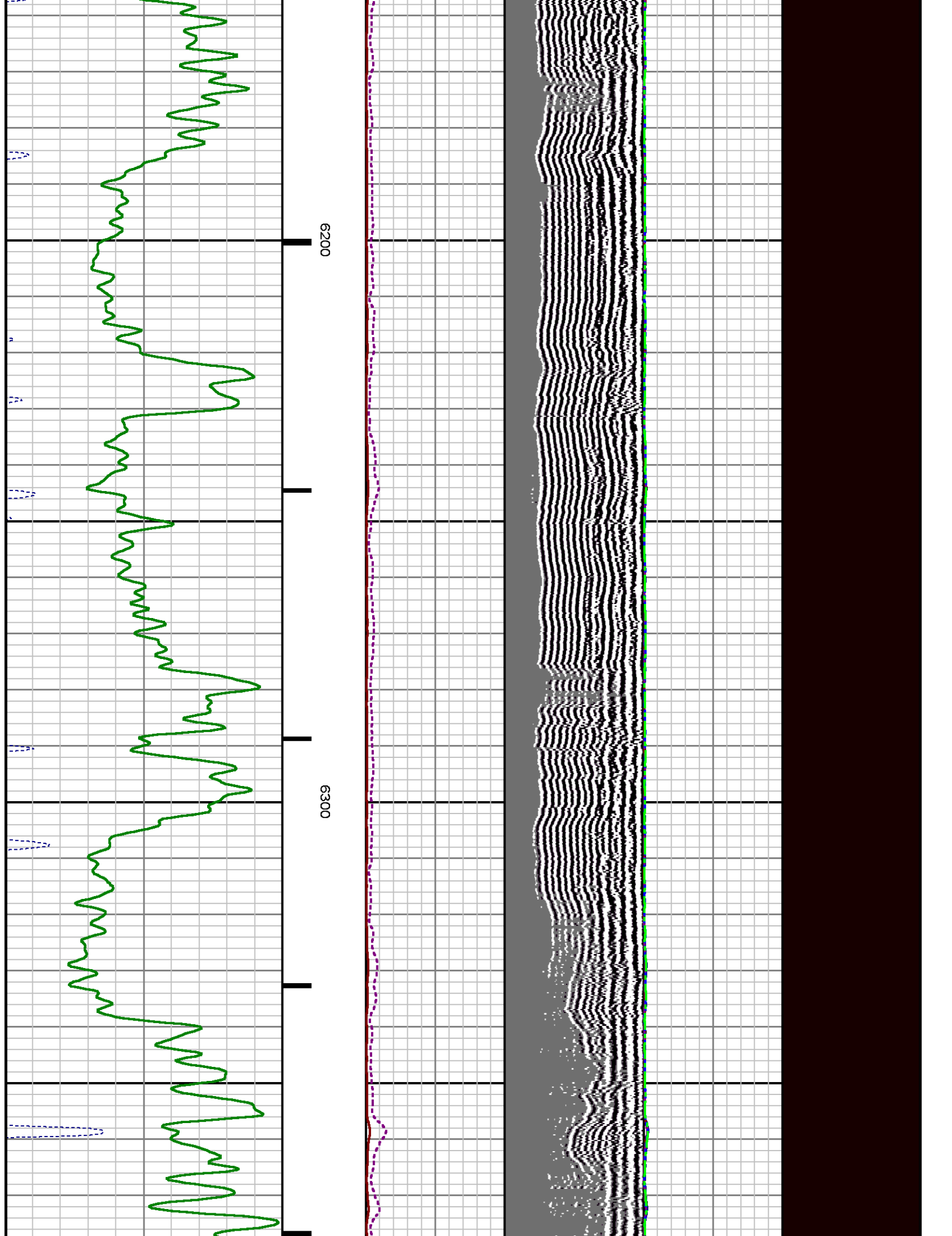


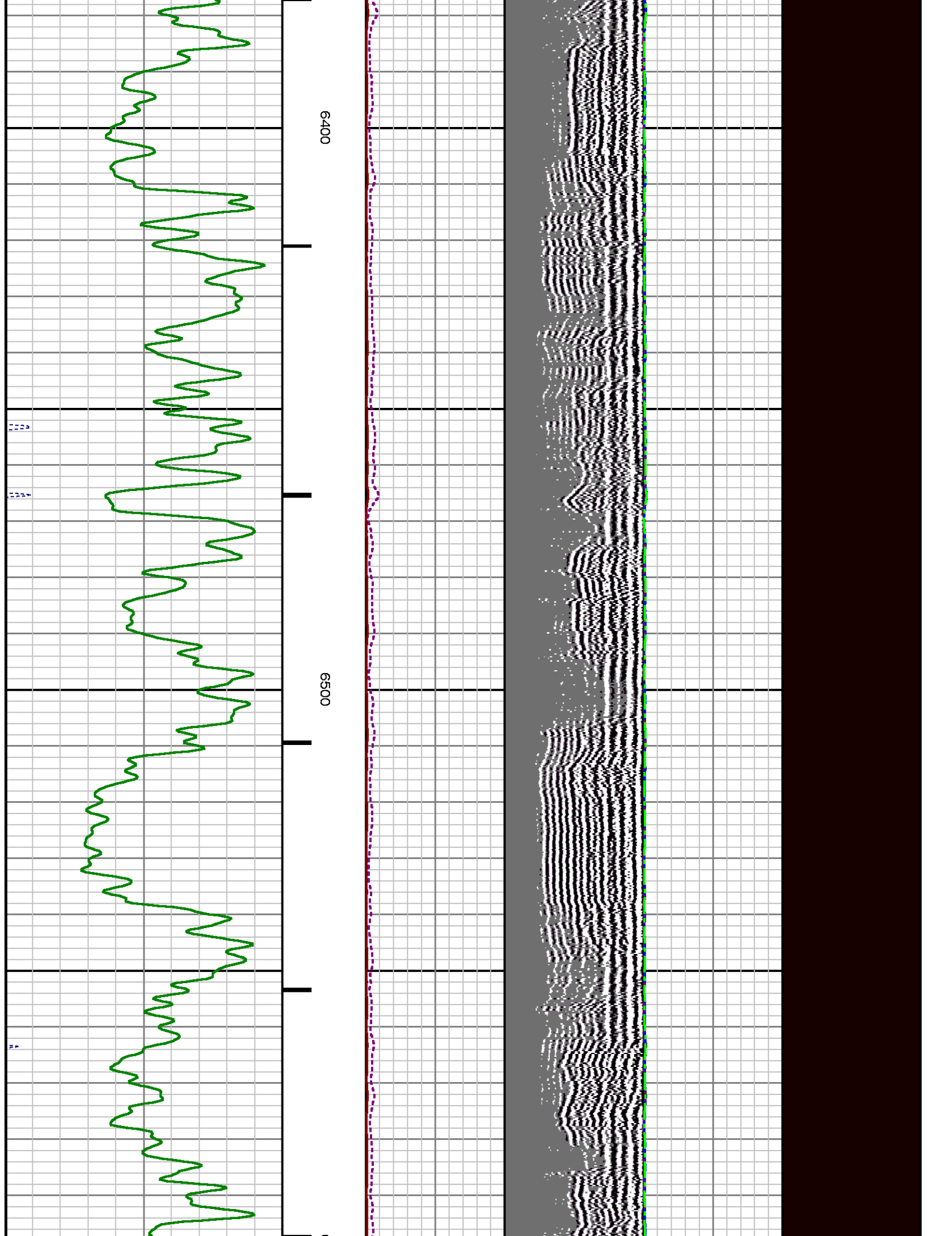


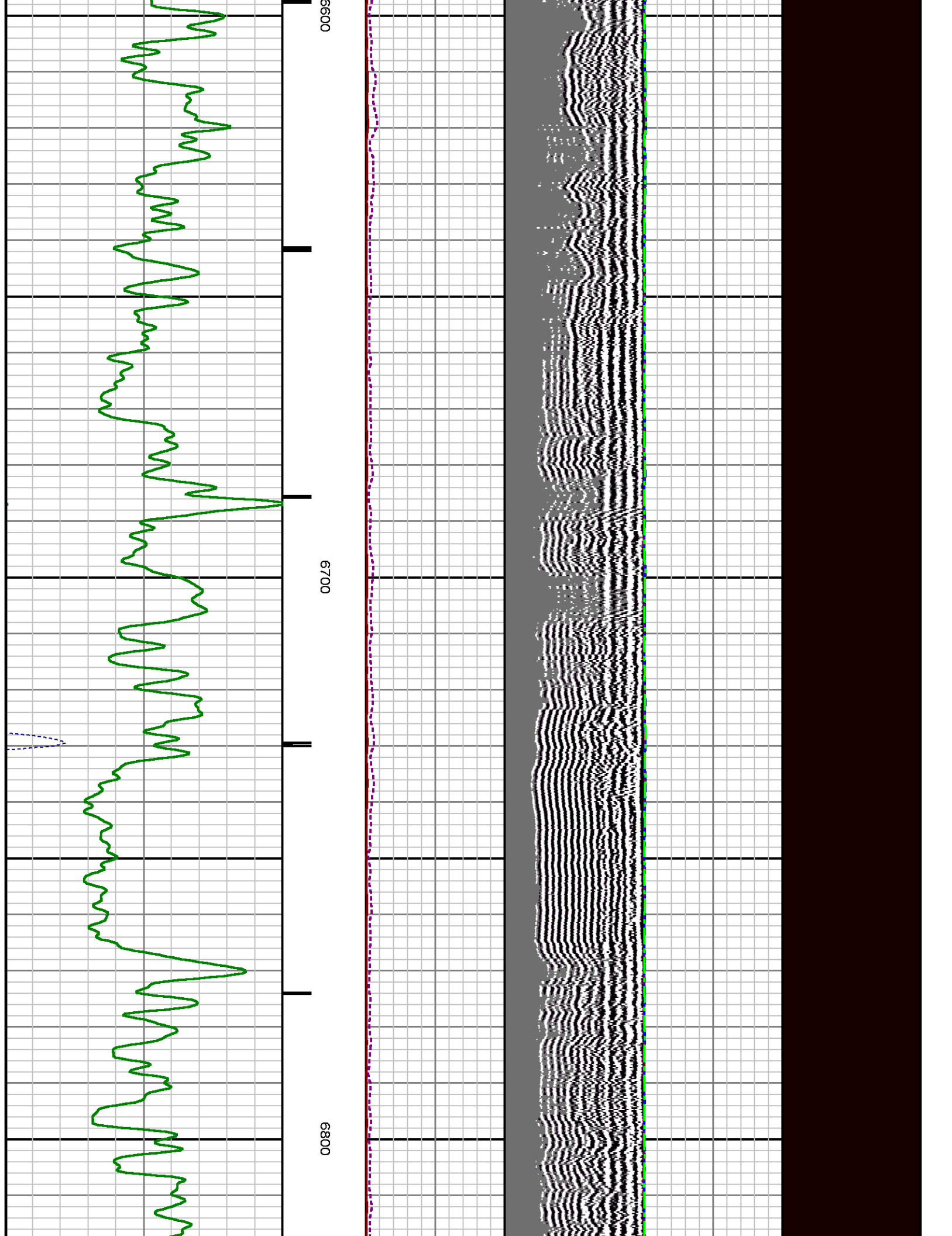


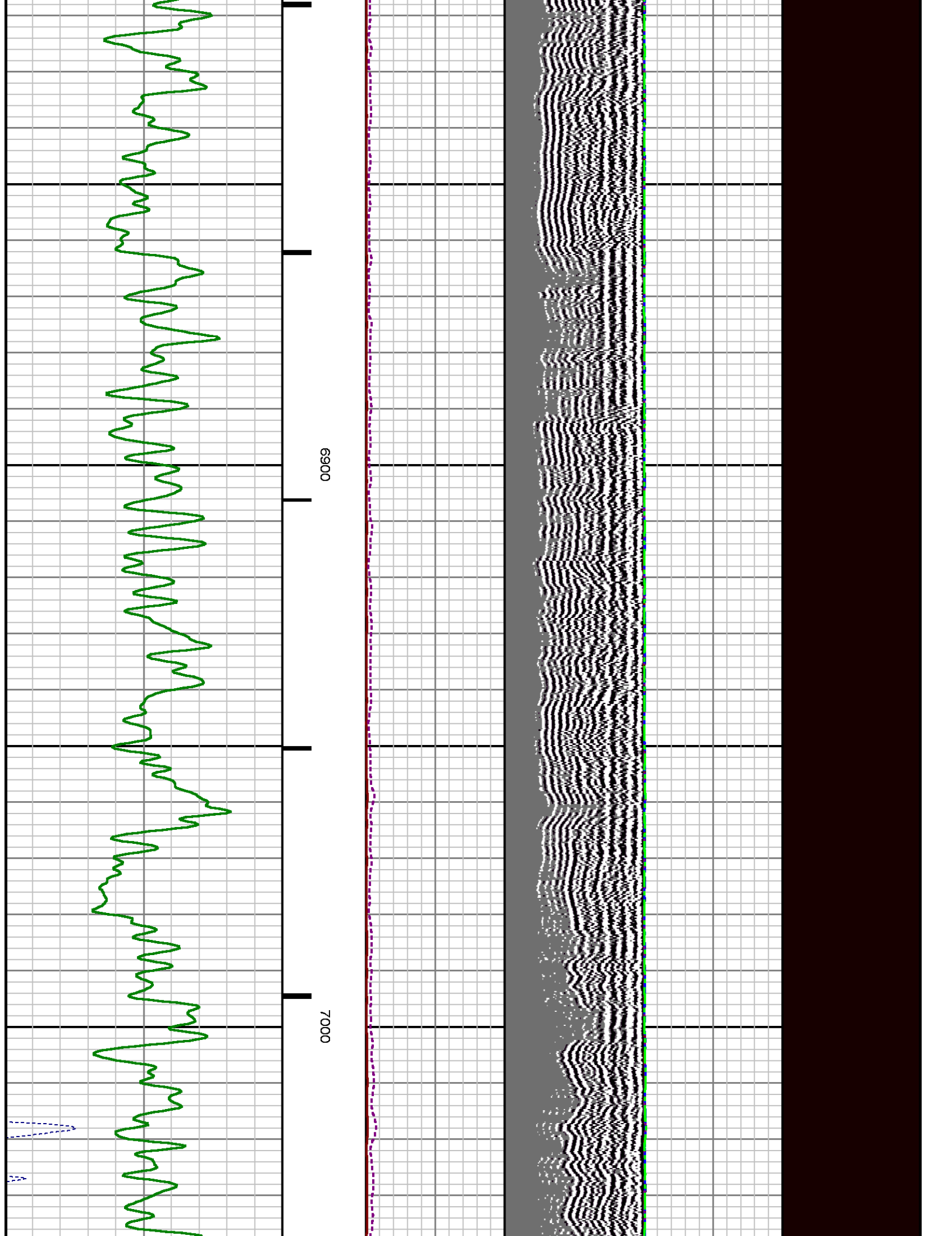


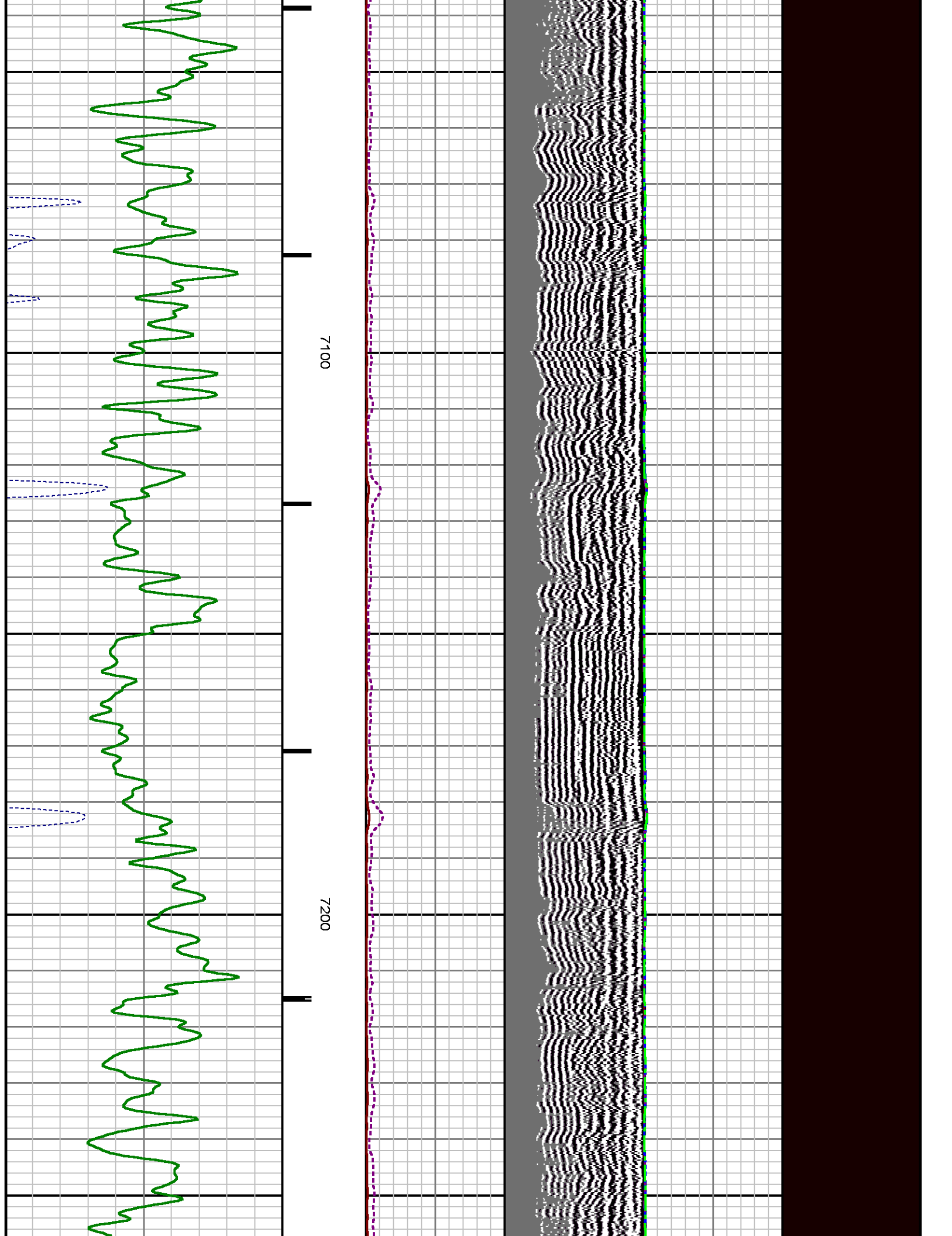


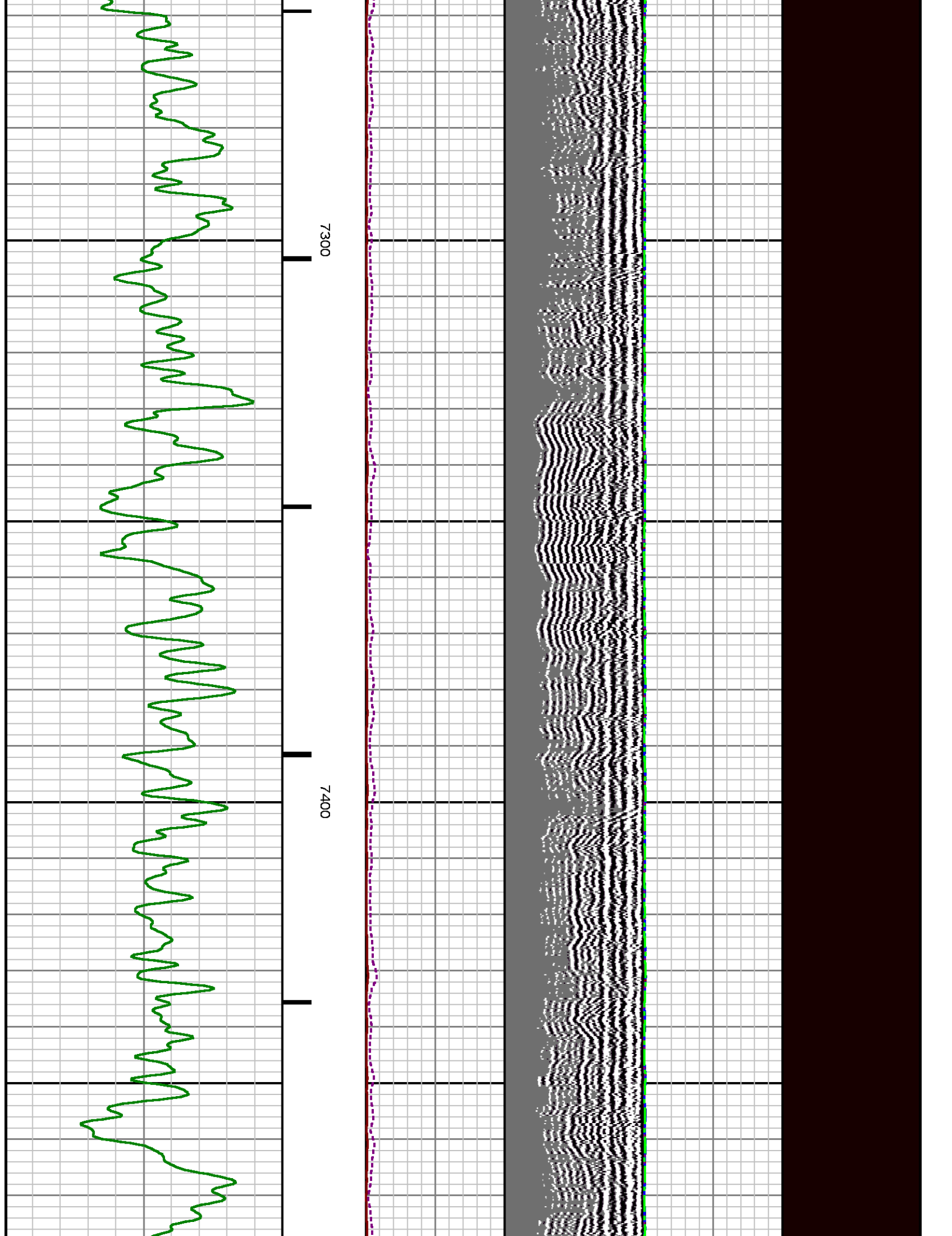


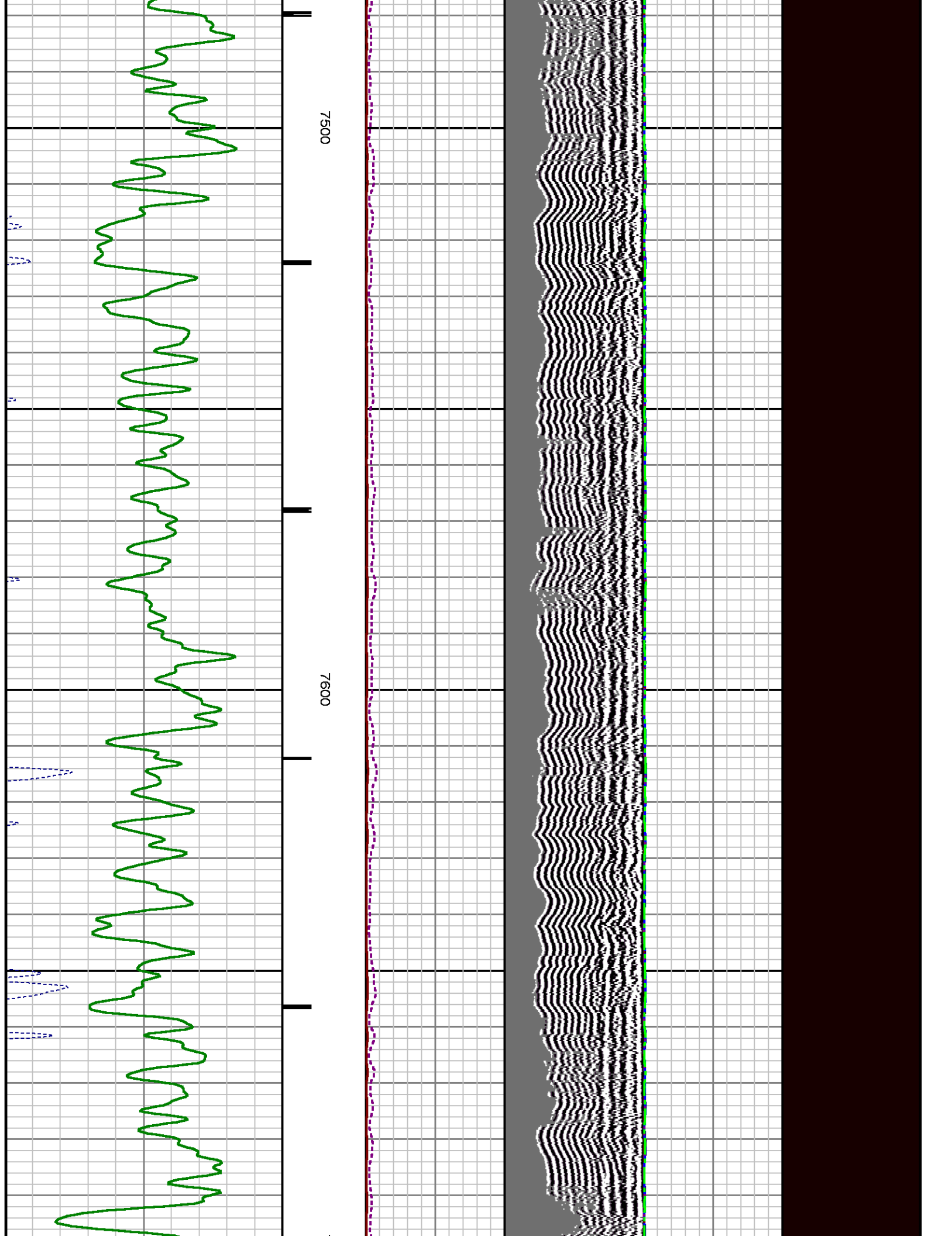


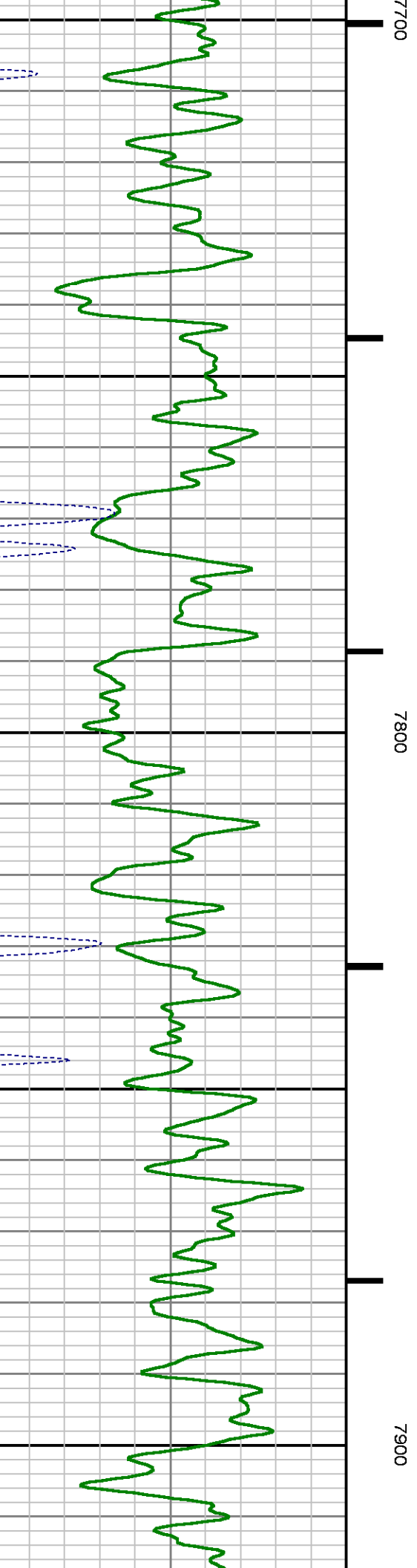
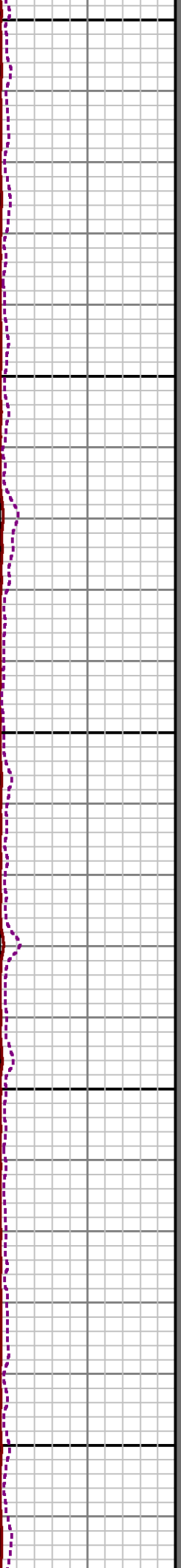
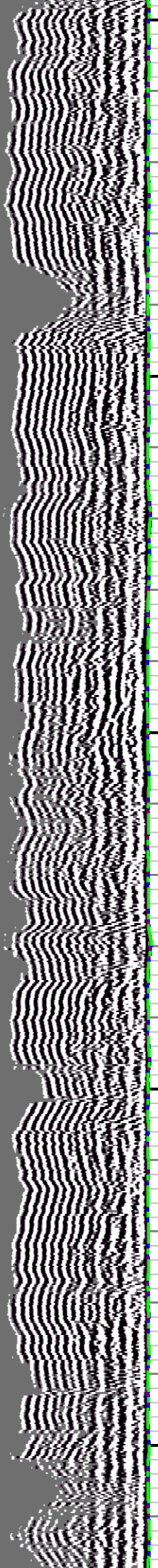


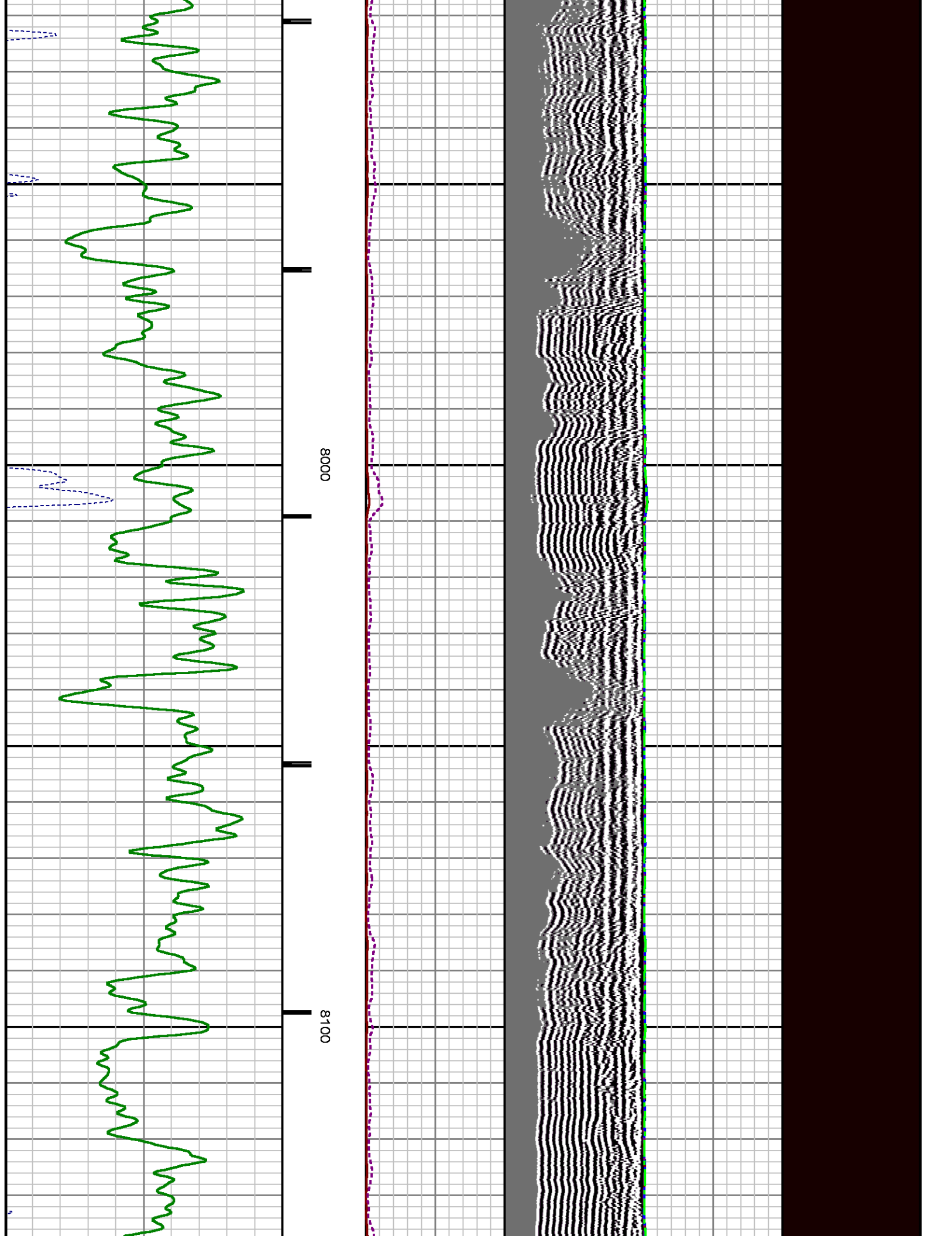


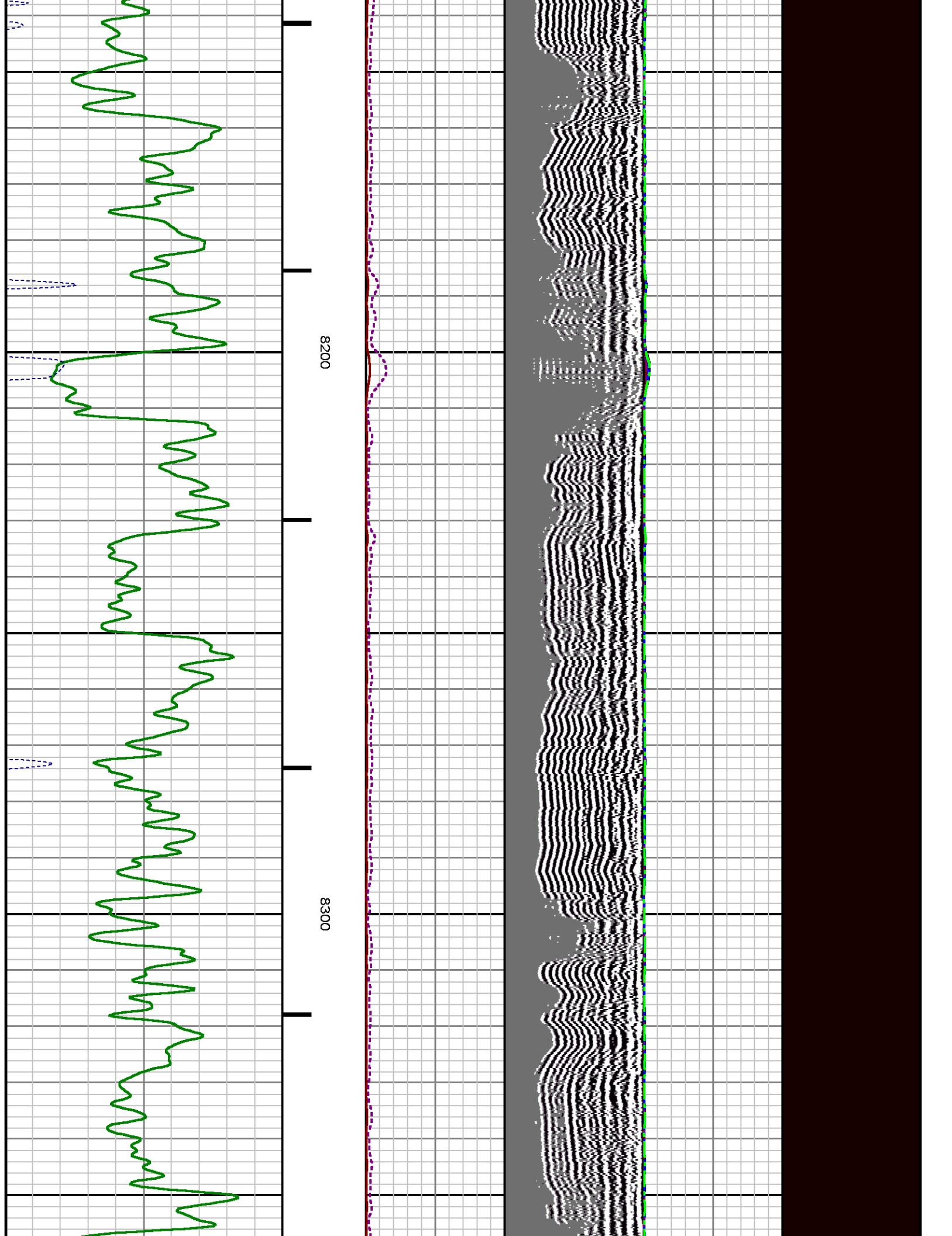


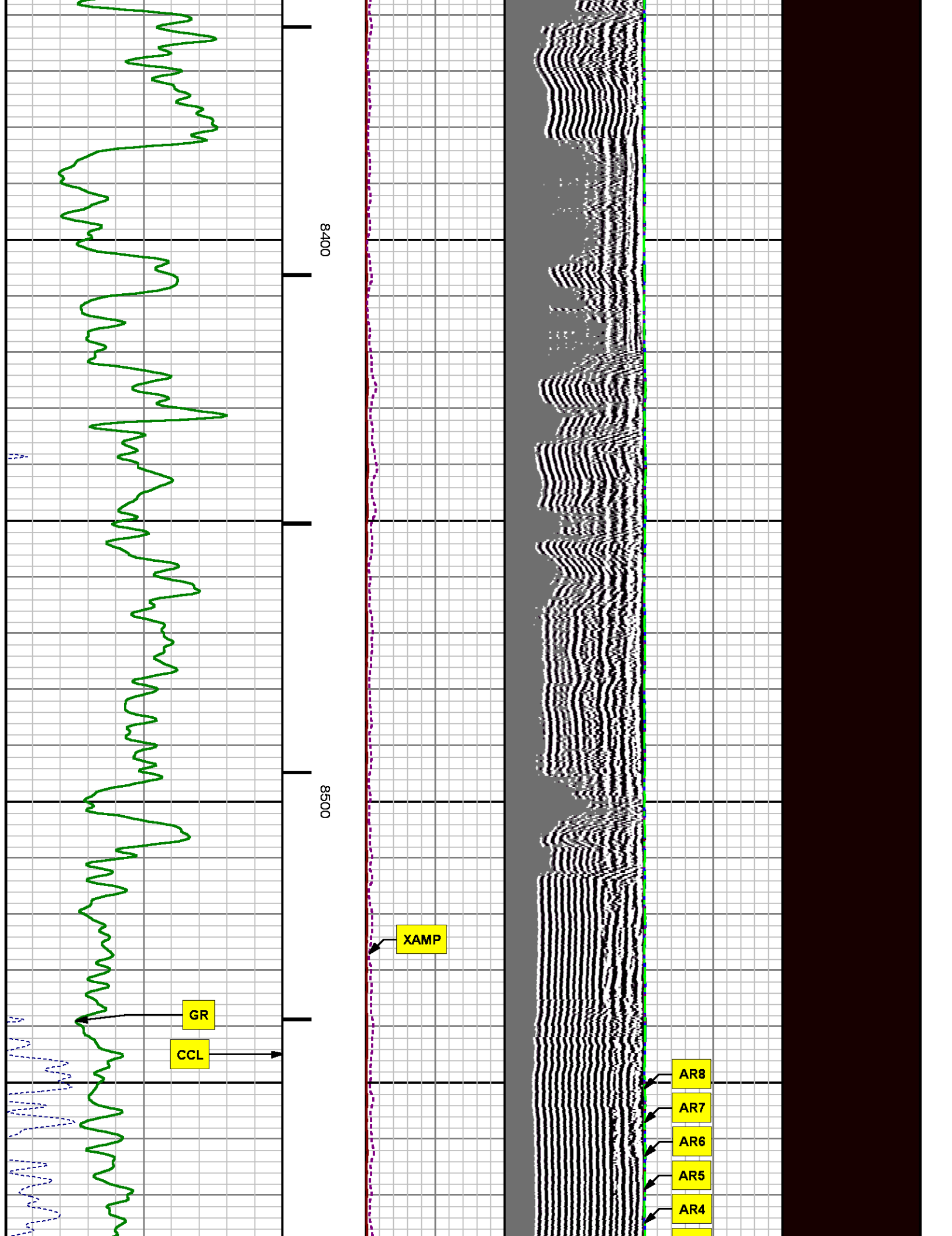


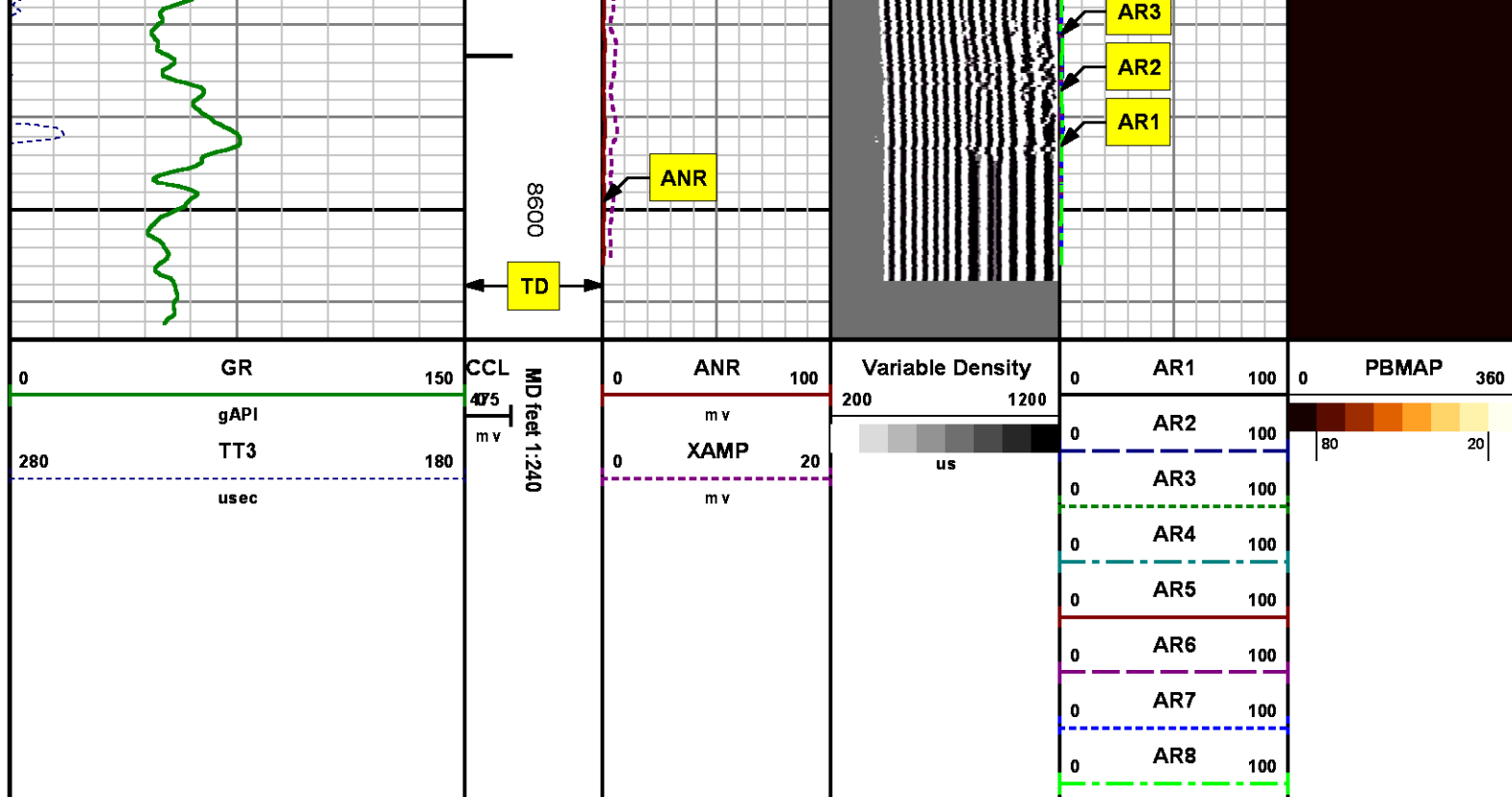












*REPEAT SECTION
0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8280.573	8613.580
RAL	Amp Gate Start Near	195.000	usec	8280.573	8613.580
RAL	Amp Gate Start Radial	195.000	usec	8280.573	8613.580
RAL	Amp Gate Width Far	25.000	usec	8280.573	8613.580
RAL	Amp Gate Width Near	25.000	usec	8280.573	8613.580
RAL	Amp Gate Width Radial	25.000	usec	8280.573	8613.580
RAL	casing od	4.500	inches	8280.573	8613.580
RAL	casing wt	11.600	lbm/ft	8280.573	8613.580
RAL	FB Start Far	291.900	usec	8280.573	8613.580
RAL	FB Start Near	175.391	usec	8280.573	8613.580
RAL	FB Start Radial	175.391	usec	8280.573	8613.580
RAL	FB Thresh Far	10.000	mv	8280.573	8613.580
RAL	FB Thresh Near	4.000	mv	8280.573	8613.580
RAL	FB Thresh Radial	4.000	mv	8280.573	8613.580

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

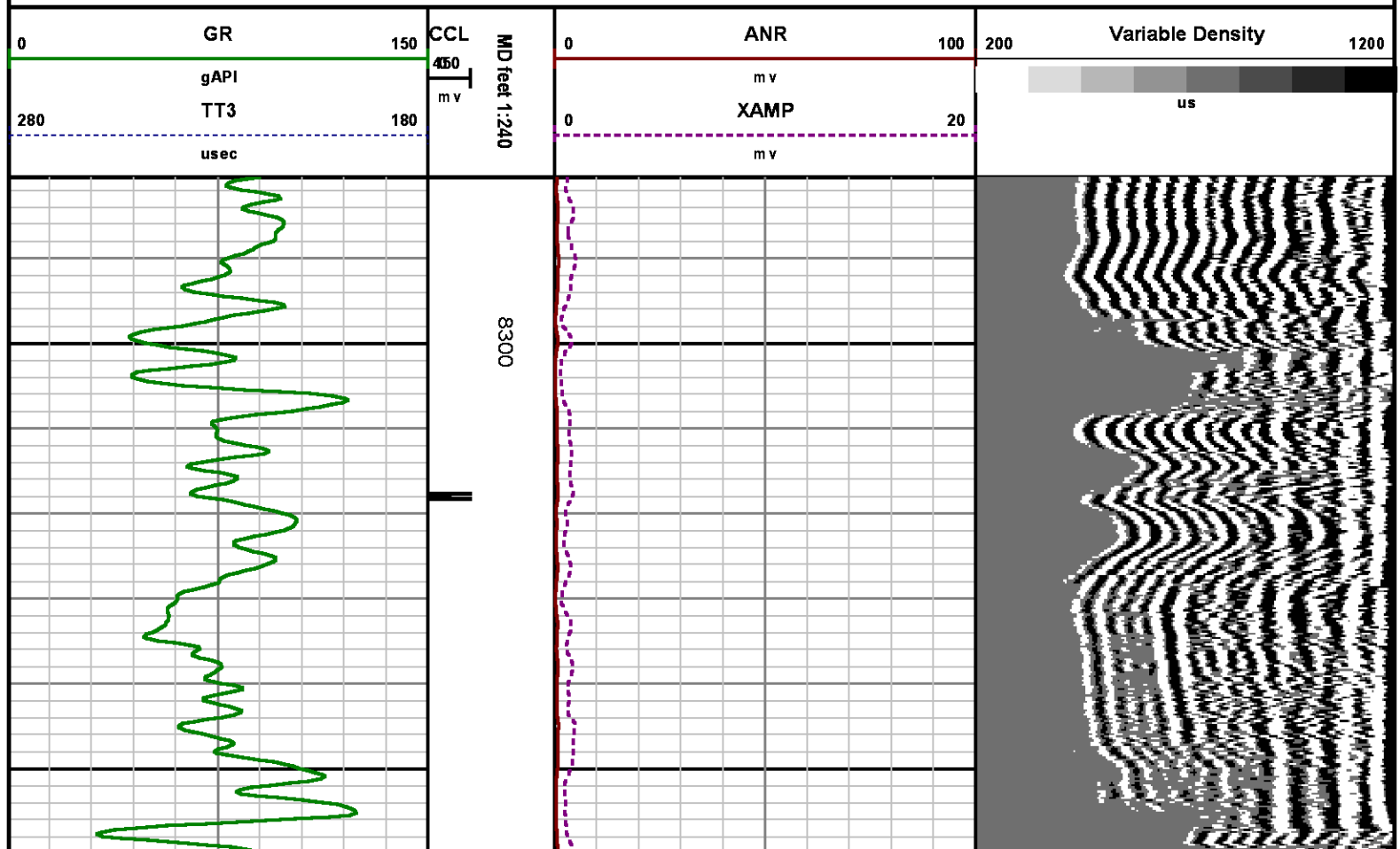
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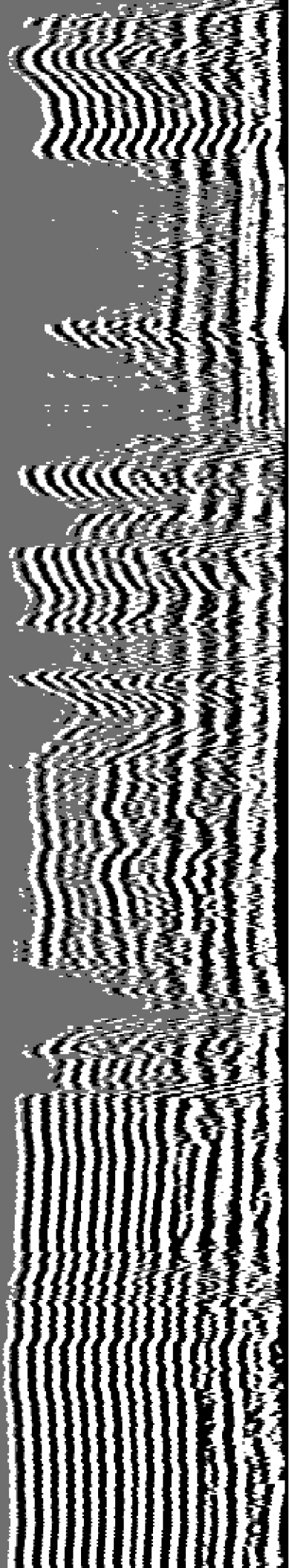
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Mode : PlotMgr 5.4.504

Interval : 8280.58 - 8613.58 feet UP

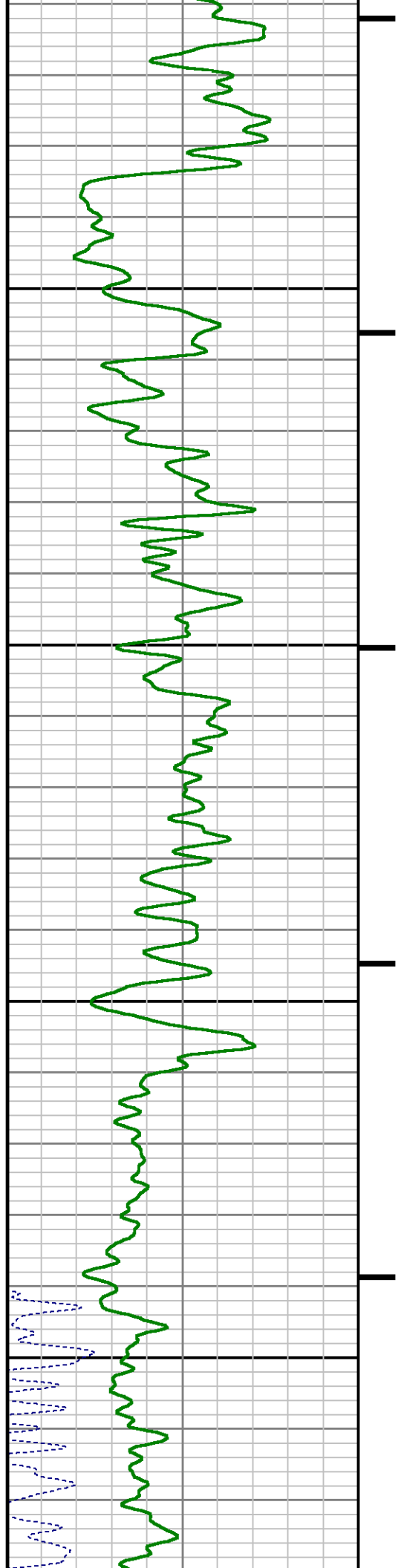
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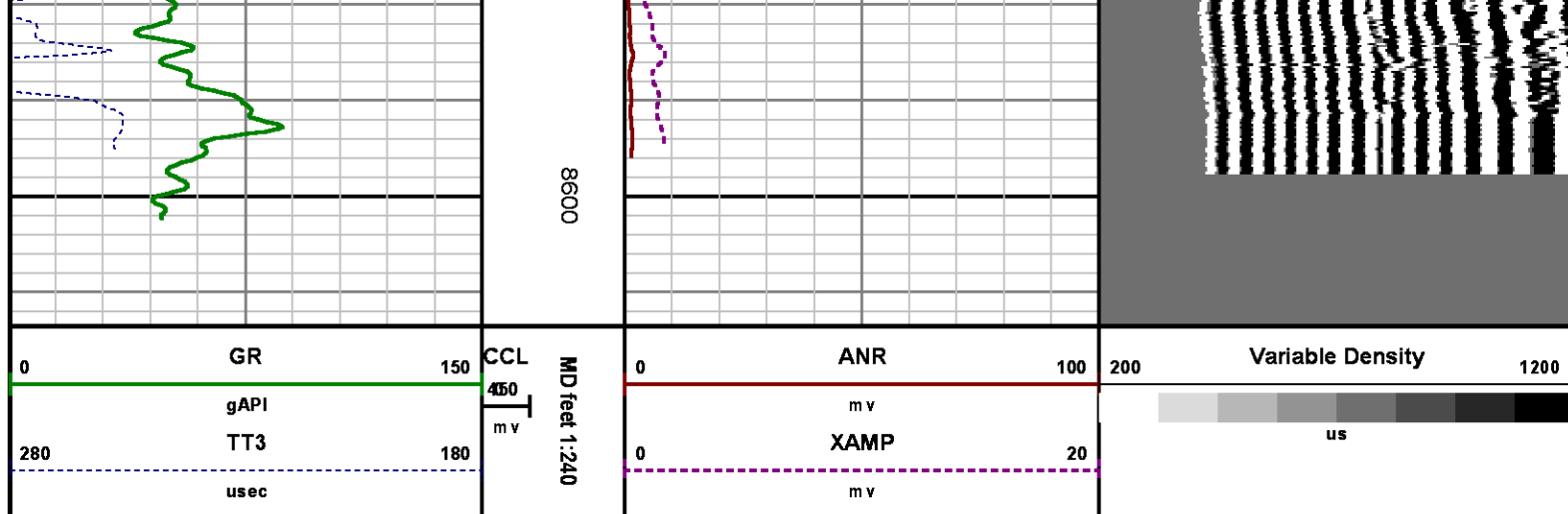




8400

8500





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP496J29_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jan 29 11:54:03 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: J29

Tool Delay [u sec] -55.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [u sec]	Amp. Gate Start [u sec]	Amp. Gate Width [u sec]	Zero Gate Start [u sec]	Zero Gate Width [u sec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.208	100.00	0.17
3 Ft. Receiver	218	216	30	155	25	-0.097	100.00	0.17
5 Ft. Receiver	326	325	30	235	25	0.056	150.00	0.19
Radial #1	217	216	30	152	25	-0.090	100.00	0.17
Radial #2	218	216	30	152	25	-0.296	100.00	0.17
Radial #3	218	216	30	152	25	-0.363	100.00	0.17
Radial #4	218	216	30	152	25	-0.277	100.00	0.17
Radial #5	217	216	30	152	25	-0.042	100.00	0.17
Radial #6	217	216	30	152	25	-0.444	100.00	0.17
Radial #7	216	216	30	152	25	-0.275	100.00	0.17
Radial #8	218	216	30	152	25	0.000	100.00	0.17

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496J29 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jan 29 11:56:20 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: J29

Tool Delay [usec] -55.00 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	-0.002	0.000	1.00	100.000
3 Ft. Receiver	195	25	1.878			
5 Ft. Receiver	305	25	2.369			
Radial #1	195	25	1.328			
Radial #2	195	25	1.338			
Radial #3	195	25	1.515			
Radial #4	195	25	1.527			
Radial #5	195	25	1.751			
Radial #6	195	25	1.907			
Radial #7	195	25	1.511			
Radial #8	195	25	1.479			

GAMMA RAY

Calibration File: C:\case\calver\GR\121J2.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Jan 21 14:45:39 2014 TOOL SERIES: 2459XA ASSET: 121 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	71.78	314.67	0.762	54.67	239.67	185.00

Verification File: C:\case\calver\GR\121J2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Tue Jan 21 14:46:51 2014 TOOL SERIES: 2459XA ASSET: 121 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	74.22	316.93	0.762	56.53	241.40	184.86

TOOL DIAGRAM

OTA SHORT CABLE HEAD**PROBE 2 3/4 DUAL RECEIVER RADII**

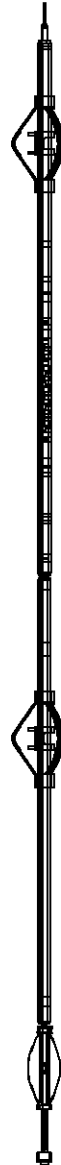
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

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



24.23'

XMIT 18.05'

NEAR RCVR 14.97'

FAR RCVR 13.05'

CCL 11.34'

GR 9.49'

NEU 4.09'

0.00'

Total Length: 24.23'**Total Weight: Not Available****Max Diameter: 0' 3.12"****Baker Atlas****CASE****Company**

WPX ENERGY

Well

SAVAGE RWF 24-25

Field

RULISON

County

GARFIELD

State

COLORADO

Location

SHL: 1595' FSL & 2305' FWL

BHL: 751' FSL & 2616' FEL (SWSE)

Elevations

KB 6122 ft

DF

GL 6096 ft

File No:

CH082308

API No:

05045219790000

25 6S 94W

RWF 23-25 PAD

NABORS 577

SEC 25 TWP 6S RGE 94W