



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH083806 Company WPX ENERGY

Well FEDERAL PA 532-21

API No: PARACHUTE

County GARFIELD State COLORADO

0504520340000

## Location

SHL: 2610' FNL X 1418' FWL

BHL: 1561' FNL X 1571' FEL (SWNE)

SEC 21 TWP 6S RGE 9SW

## Other Services

RPM

Permanent Datum GL Elevation 6030 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KELLY BUSHING

Elevations

KB 6056 ft

DF

GL 6030 ft

Date	02/APR/14	
Run	ONE	
Service Order	US628371	
Depth Driller	9301 ft	
Depth Logger	9281 ft	
Bottom Logged Interval	9271 ft	
Top Logged Interval	26 ft	
Time Started	0830	
Time Finished	1300	
Operator Rig Time	4.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	74 ft	
Logged Cement Top	0 psi	
Wellhead Pressure	NA	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	255 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRANDUCT
Recorded By	FLORYD RENEAU	
Witnessed By	GRAN JACOBS	

- 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	26 ft	1684 ft
8.75 in	1684 ft	9301 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1684 ft
4.5 in	11.6 lbm/ft	1-80	26 ft	9301 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 = 255°F
SJ = 6039'-6063'

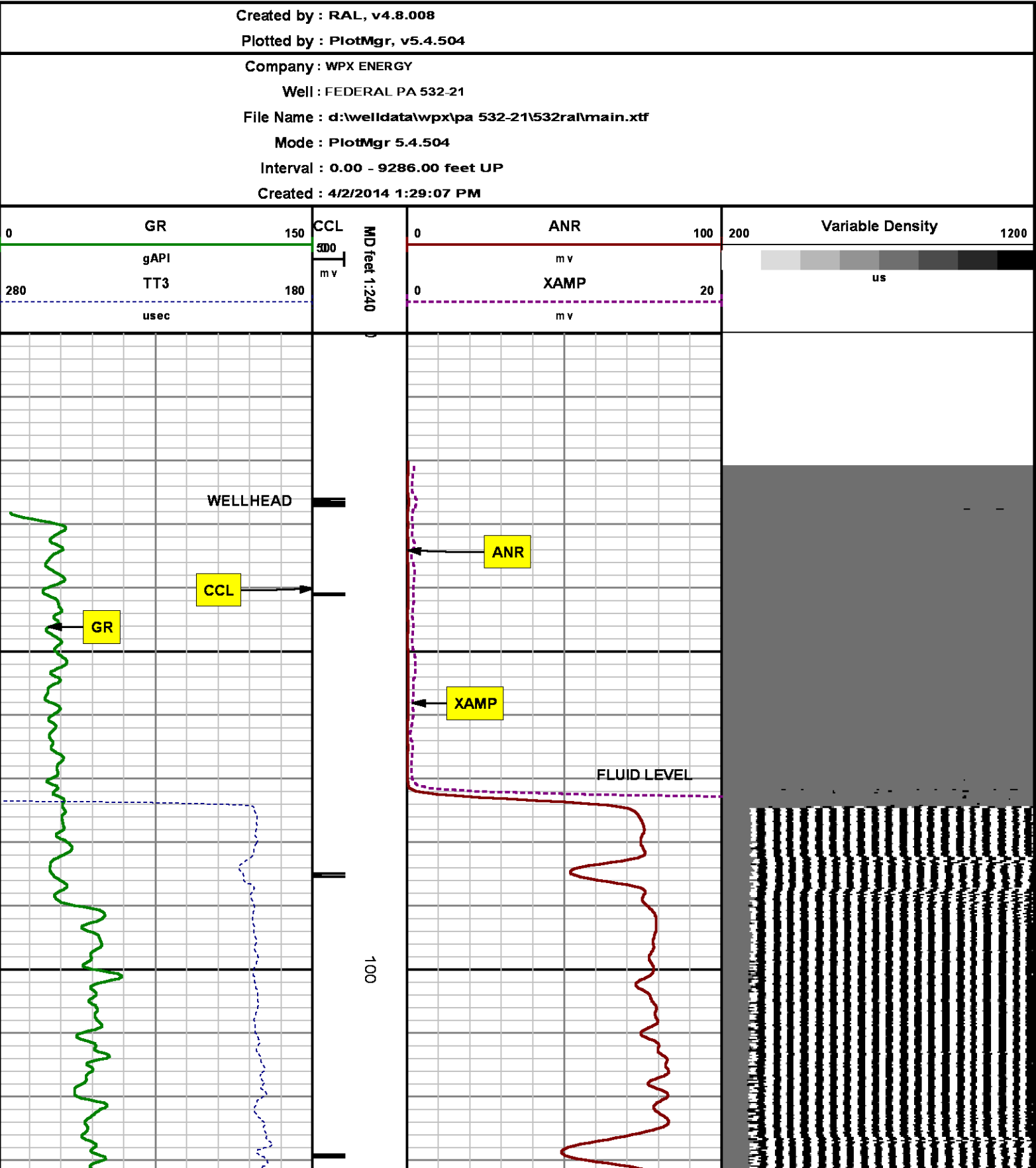
Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENT
1	1	GR/CCL	2459XA	10124121	CENT

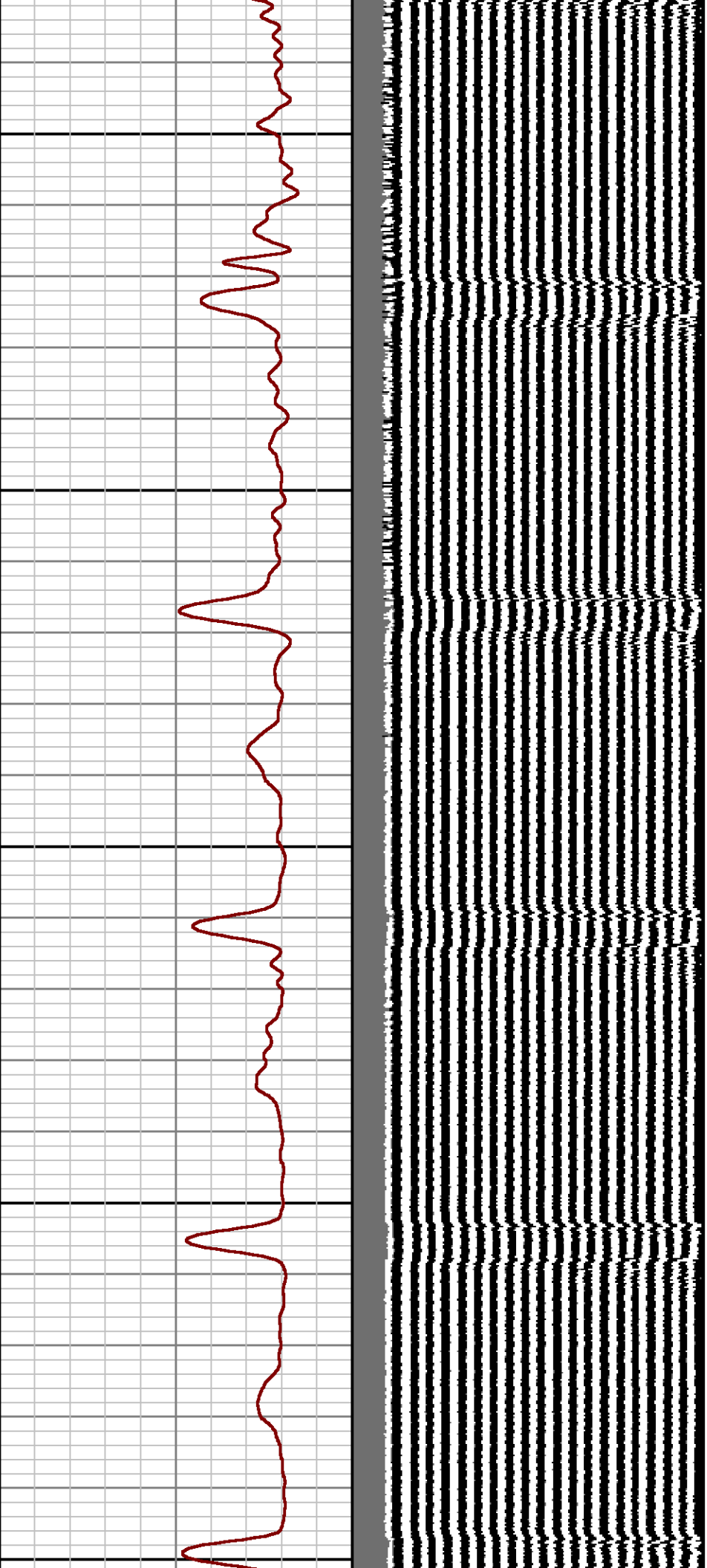
PRIMARY PRESENTATION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	36.405	9289.000
RAL	Amp Gate Start Near	195.000	usec	36.405	9289.000
RAL	Amp Gate Start Radial	195.000	usec	36.405	9289.000
RAL	Amp Gate Width Far	25.000	usec	36.405	9289.000
RAL	Amp Gate Width Near	25.000	usec	36.405	9289.000
RAL	Amp Gate Width Radial	25.000	usec	36.405	9289.000
RAL	casing od	4.500	inches	36.405	9289.000
RAL	casing wt	11.600	lbm/ft	36.405	9289.000
RAL	FB Start Far	291.900	usec	36.405	9289.000
RAL	FB Start Near	180.000	usec	36.405	9289.000
RAL	FB Start Radial	180.000	usec	36.405	9289.000
RAL	FB Thresh Far	10.000	mv	36.405	9289.000
RAL	FB Thresh Near	4.000	mv	36.405	9289.000
RAL	FB Thresh Radial	4.000	mv	36.405	9289.000
RAL	Fluid Travel Time	200.000	usec/ft	36.405	9289.000

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

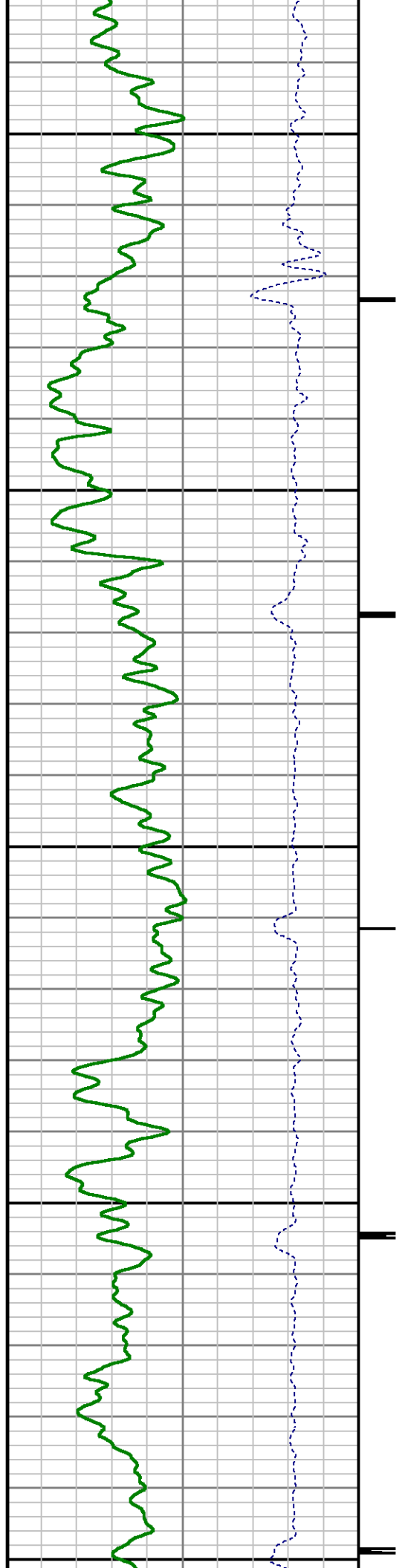
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					



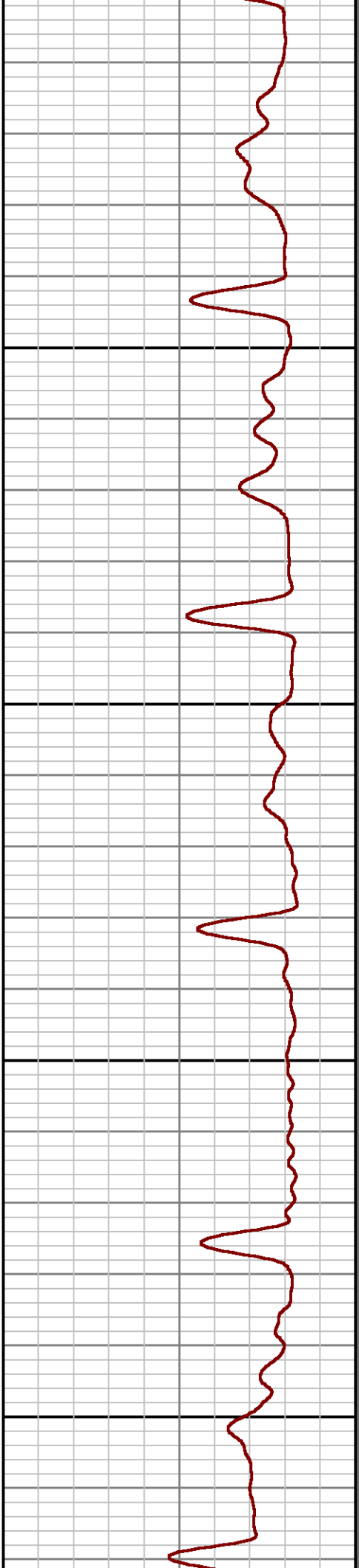
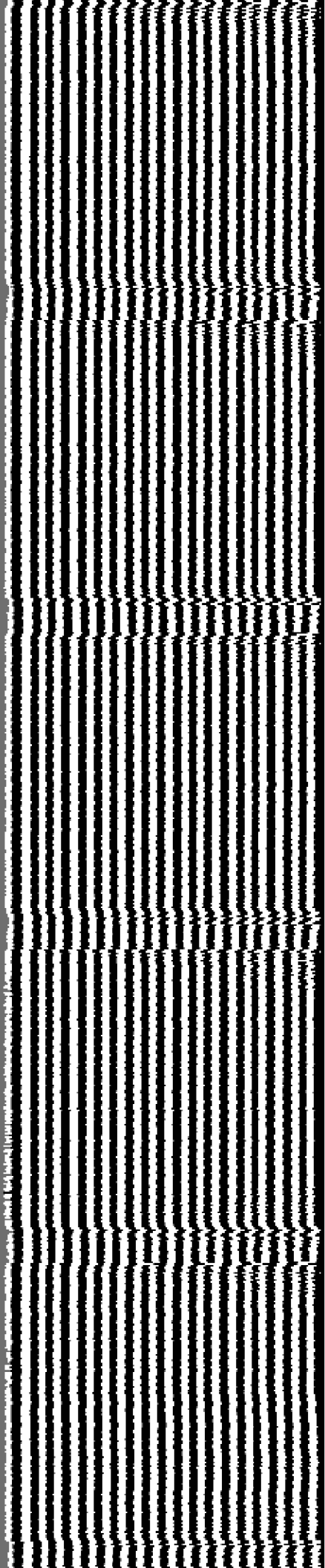


200

300

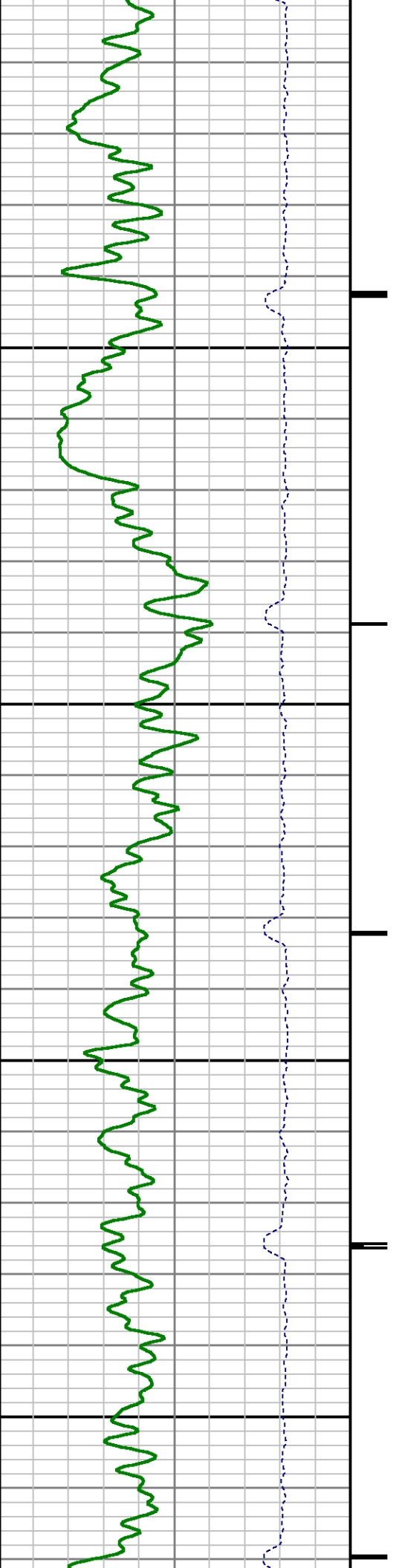


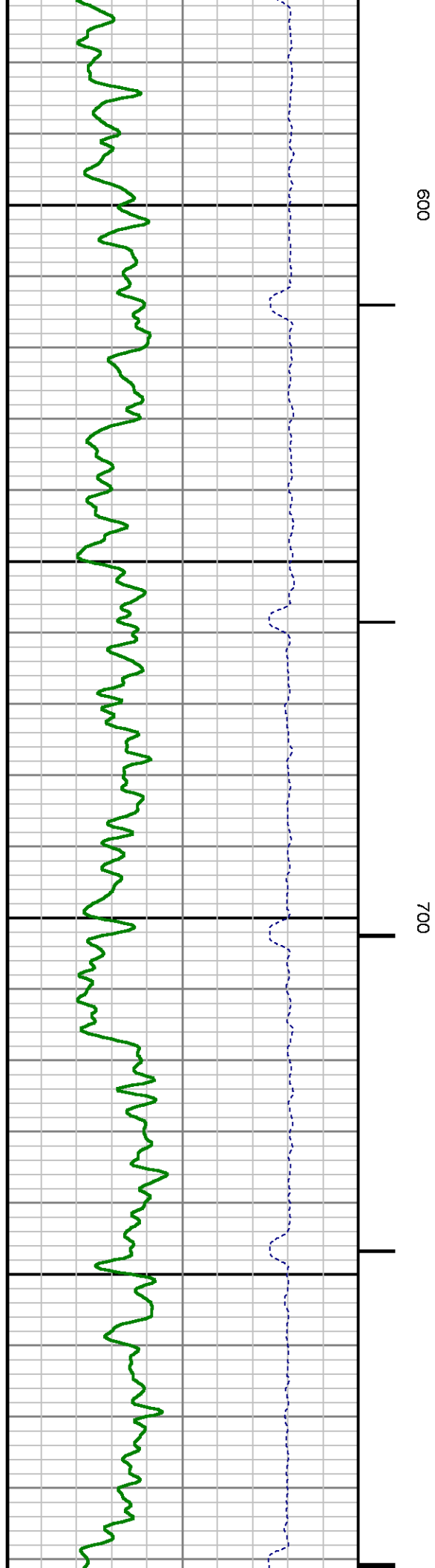
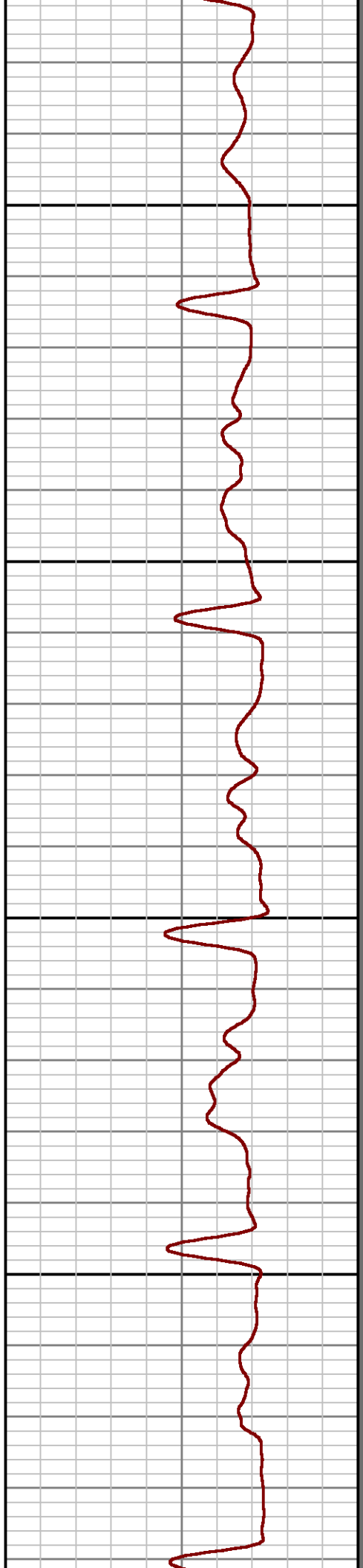
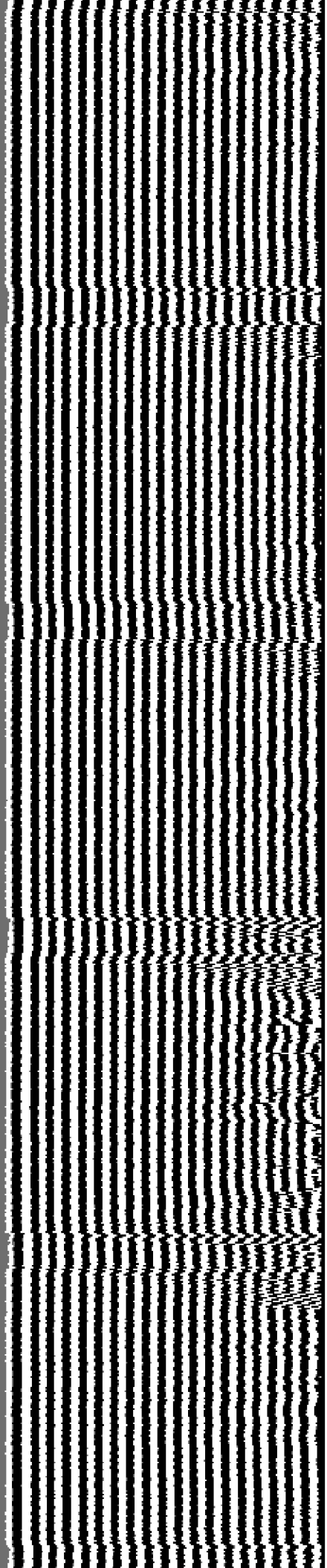


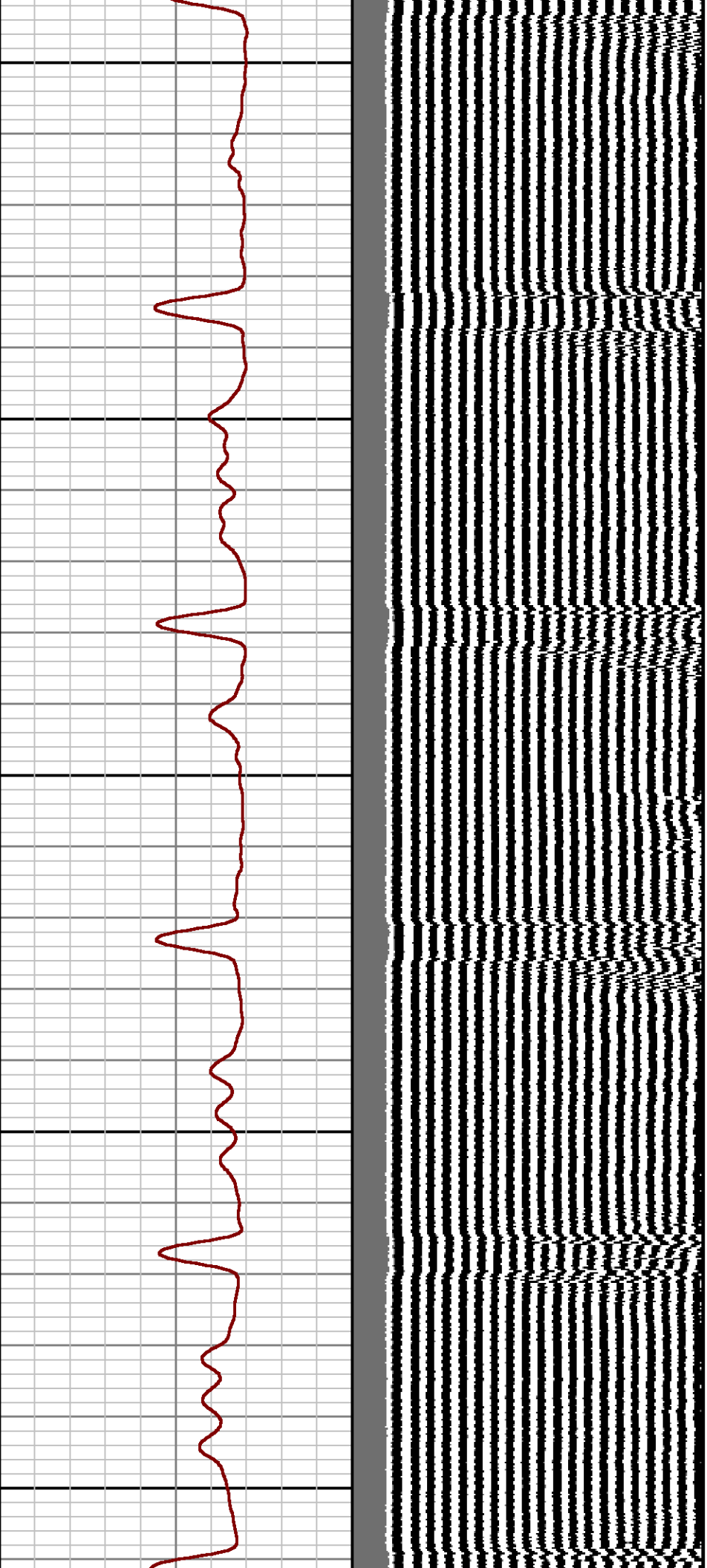


400

500



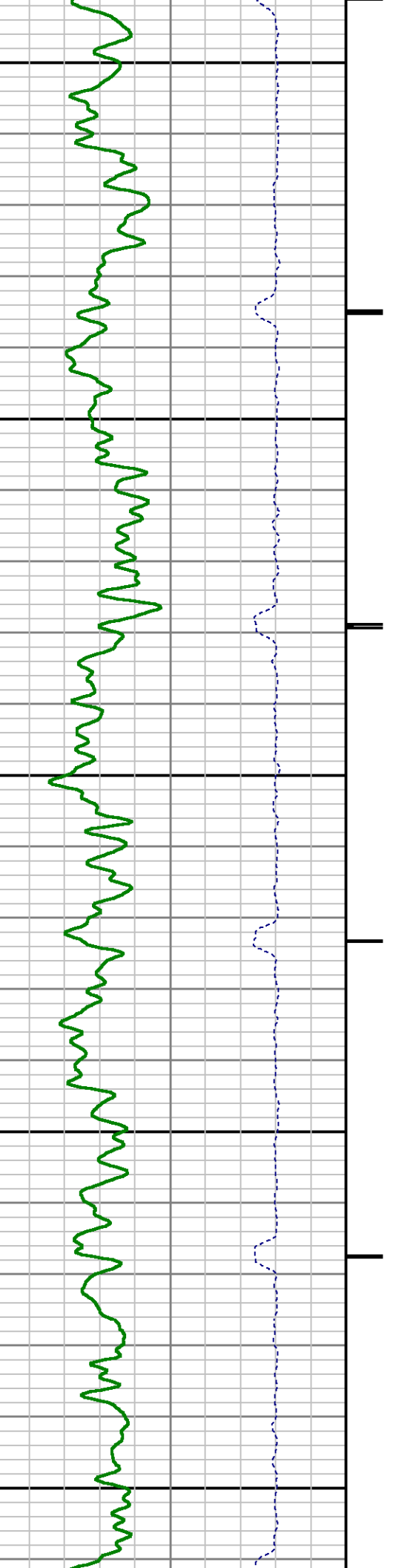


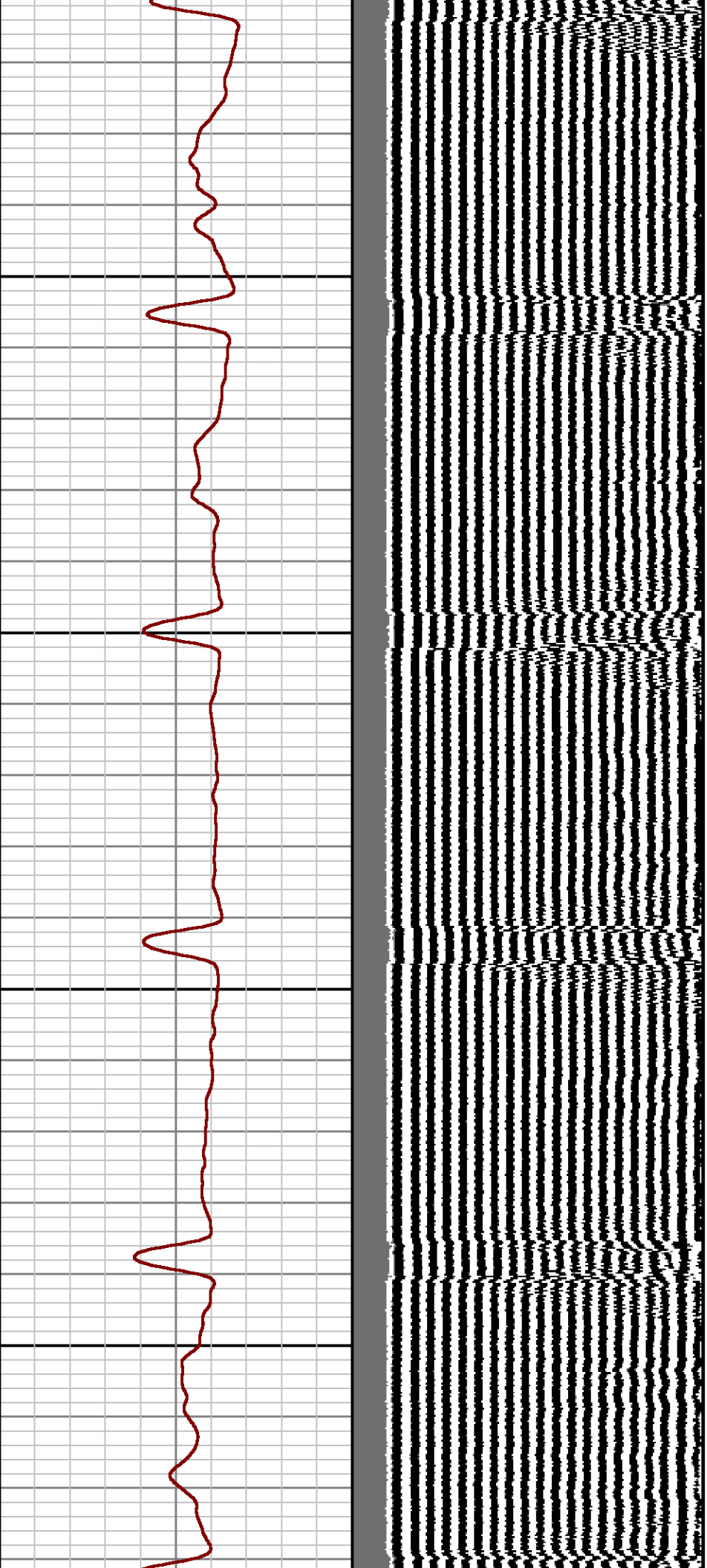


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900

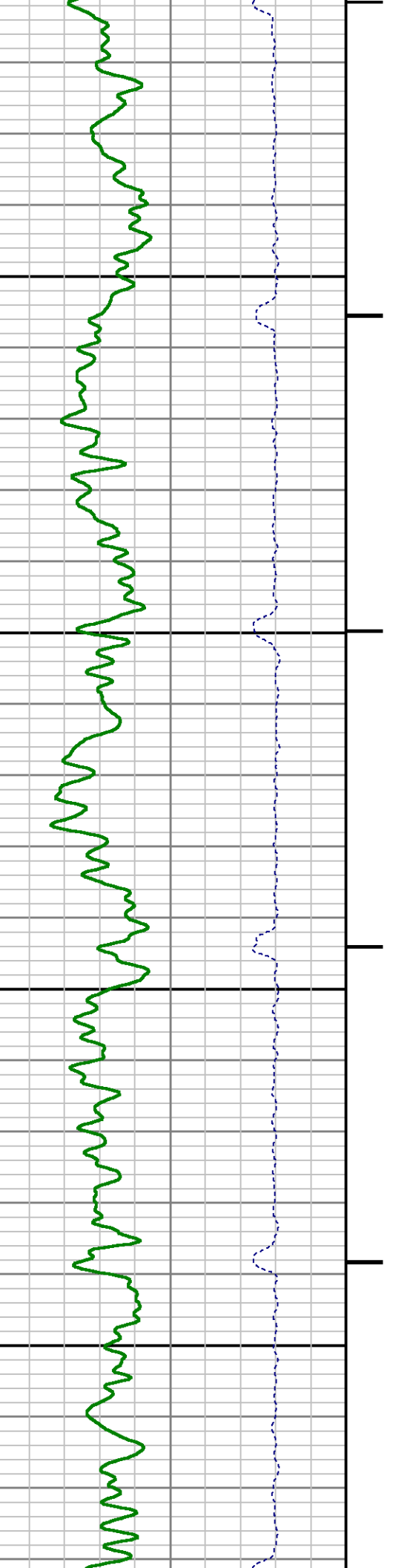
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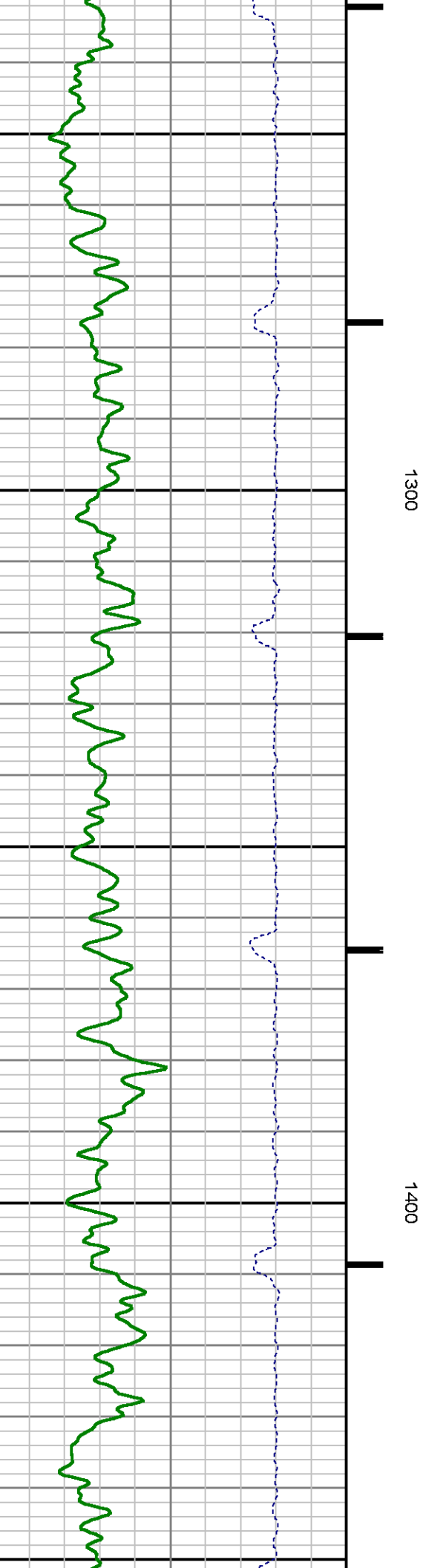
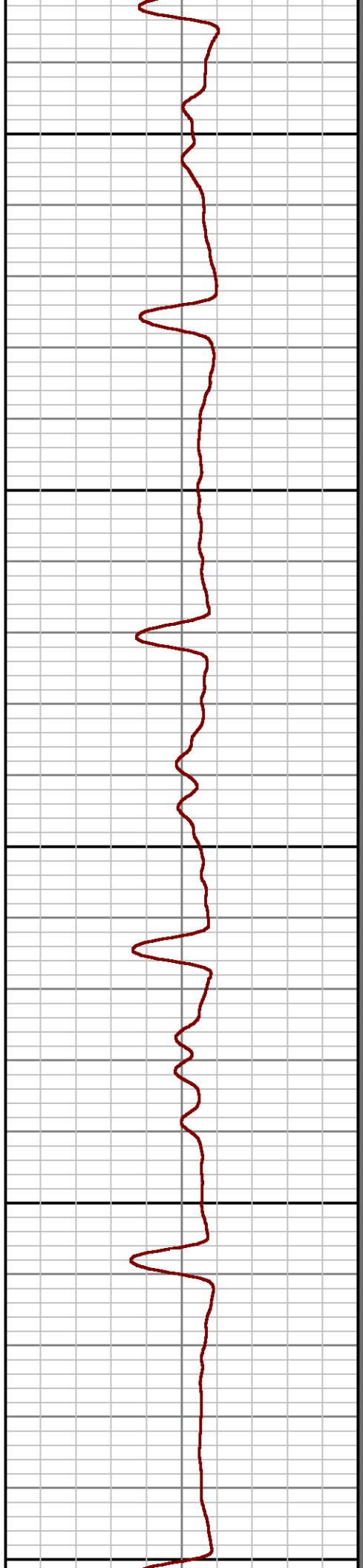
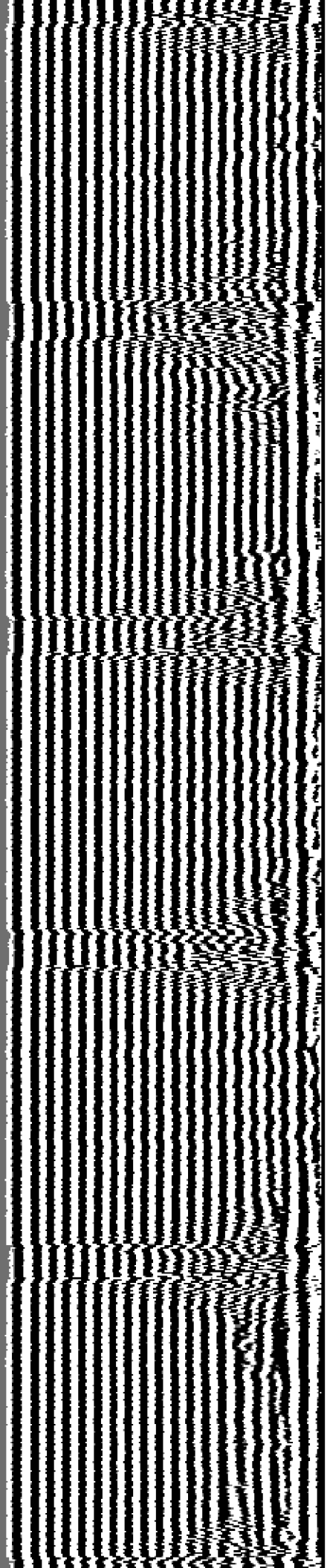


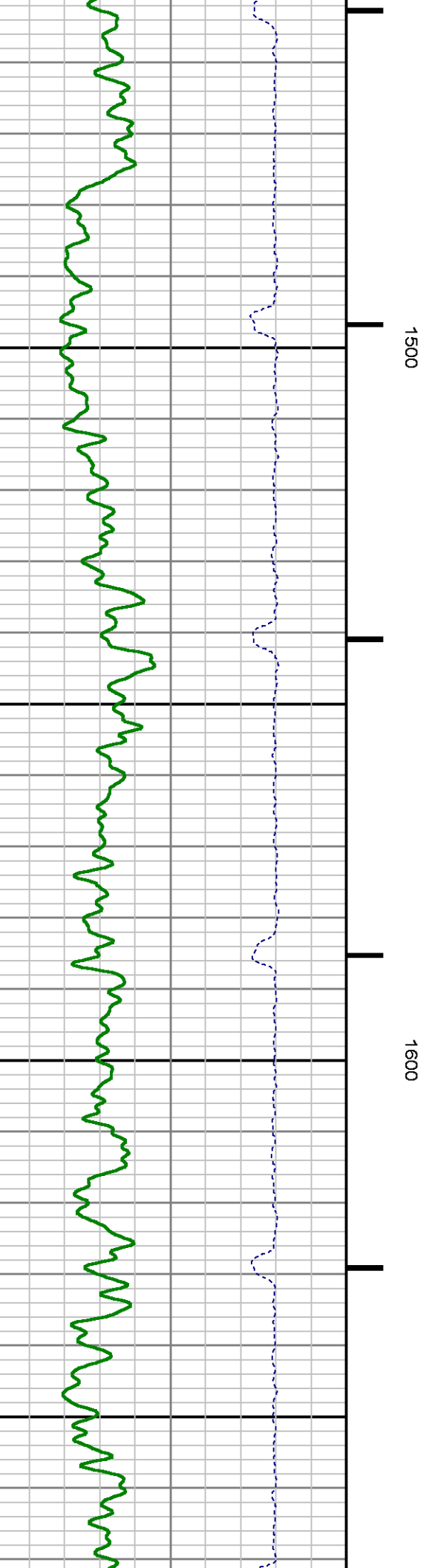
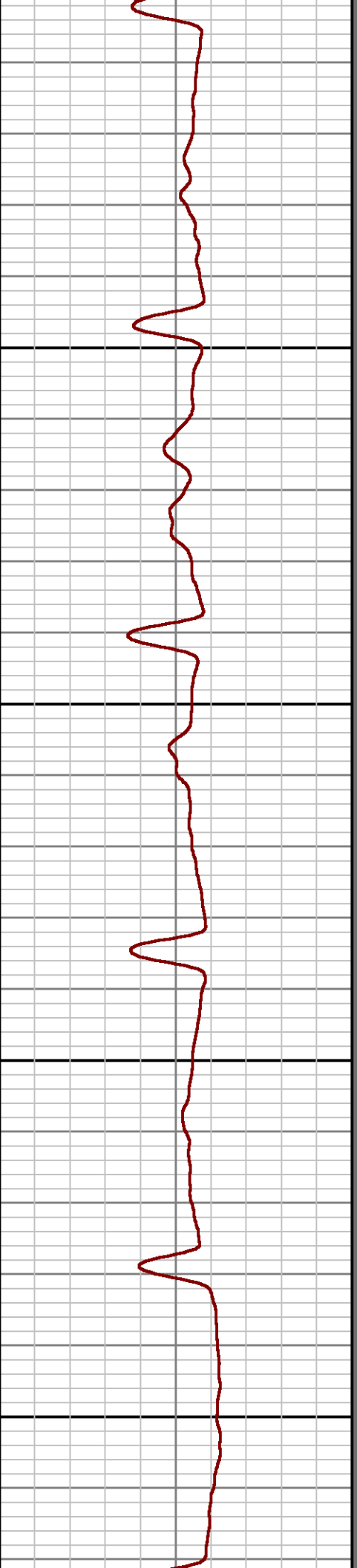
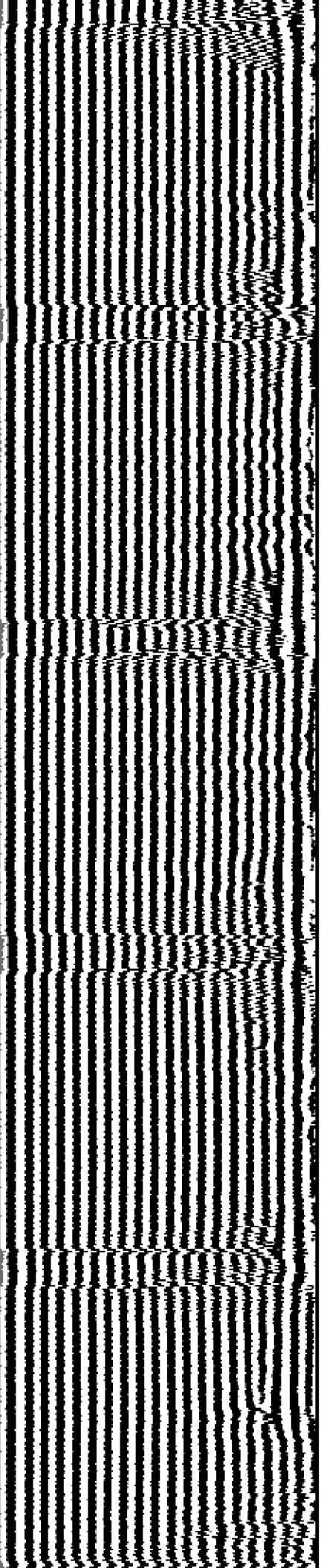


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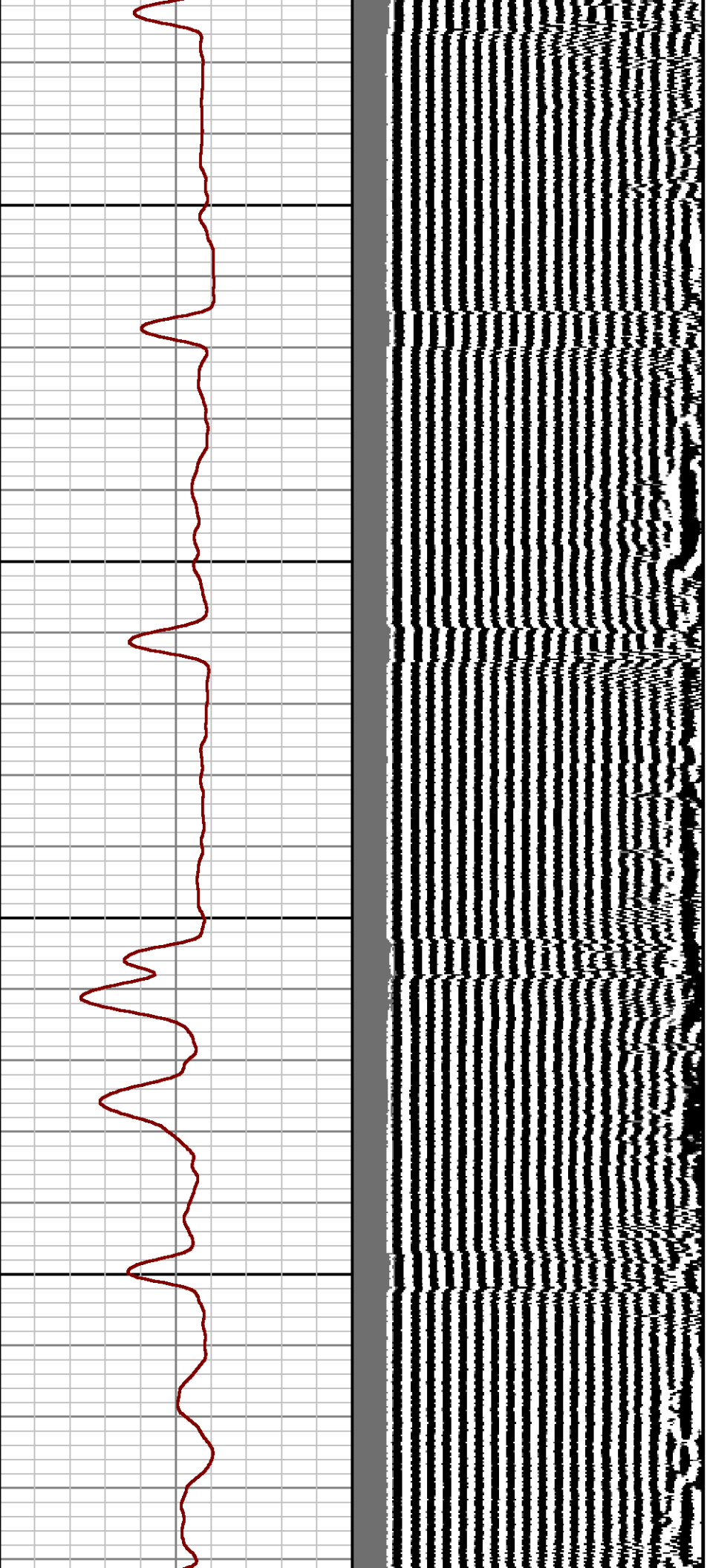
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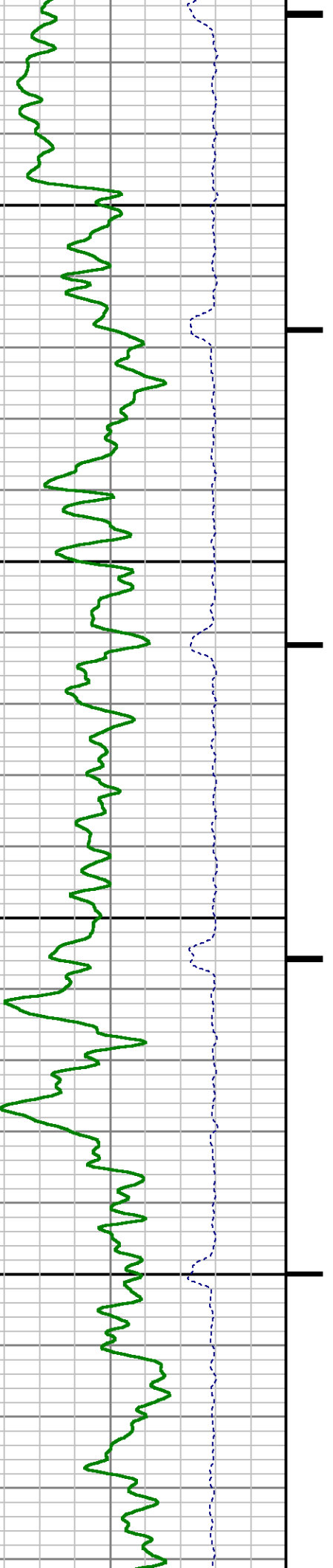


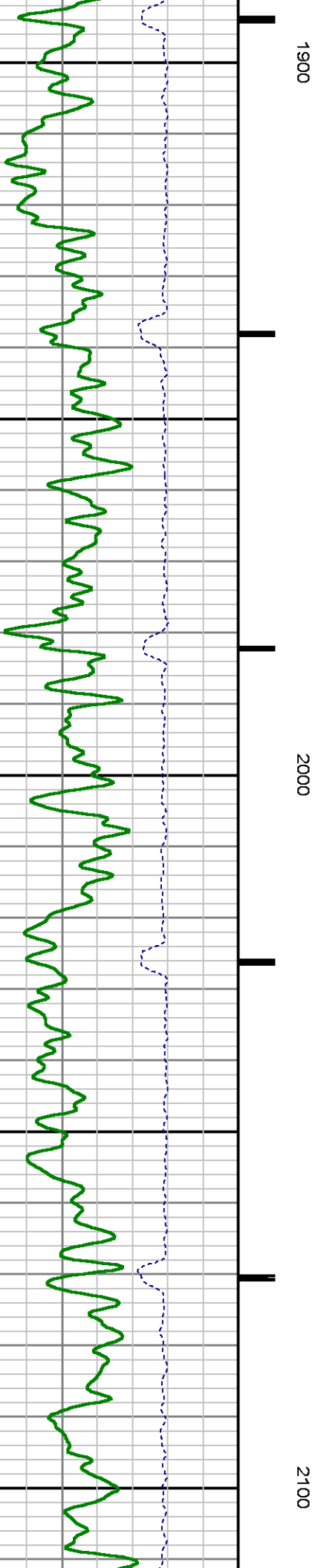
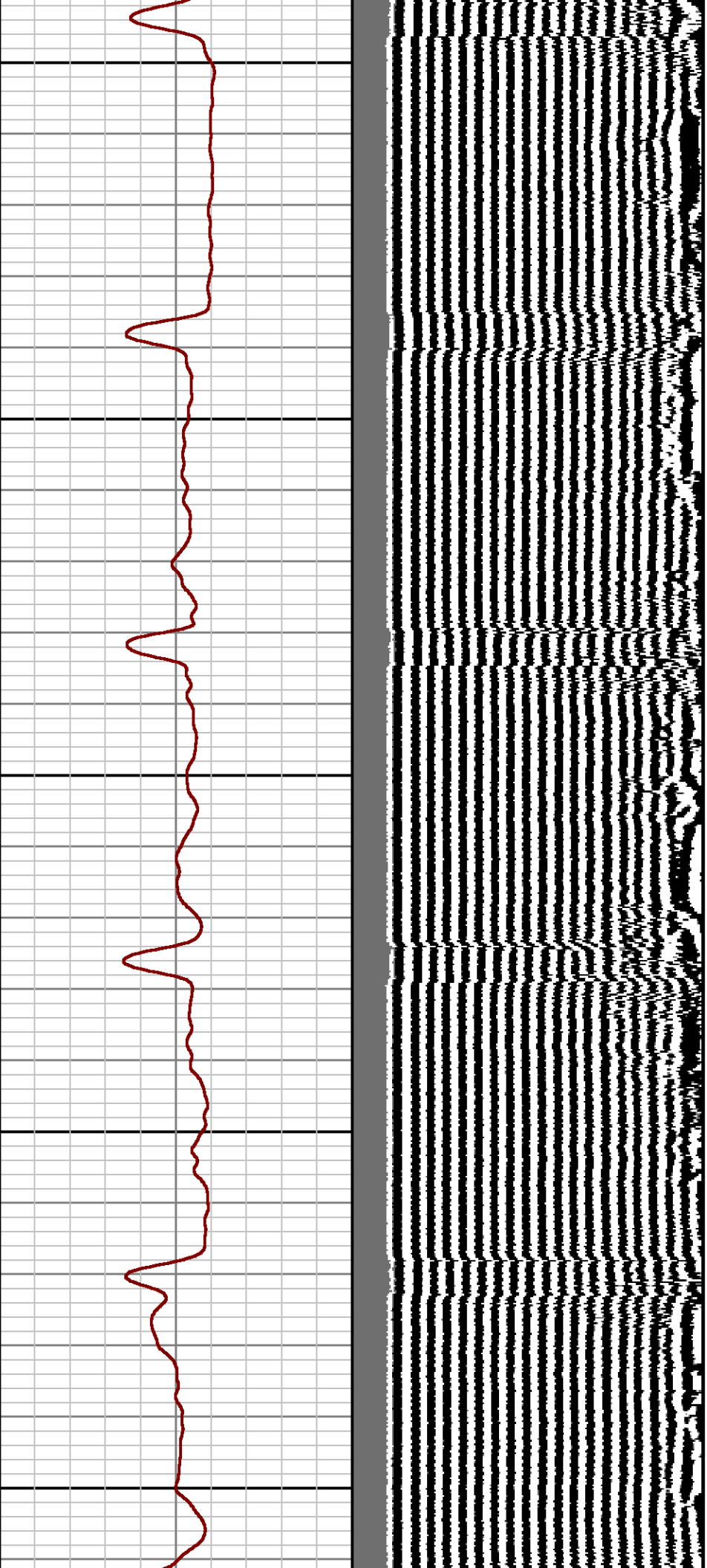




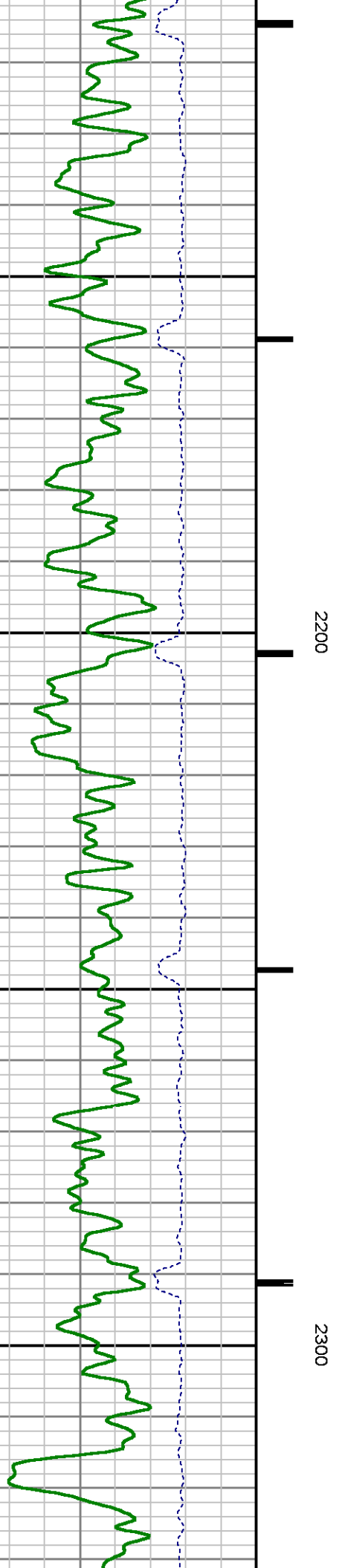
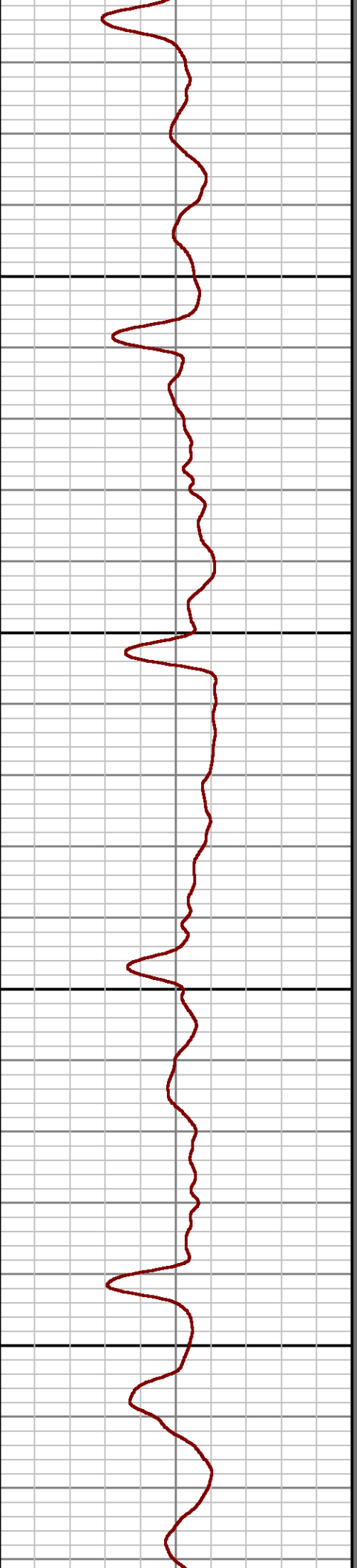
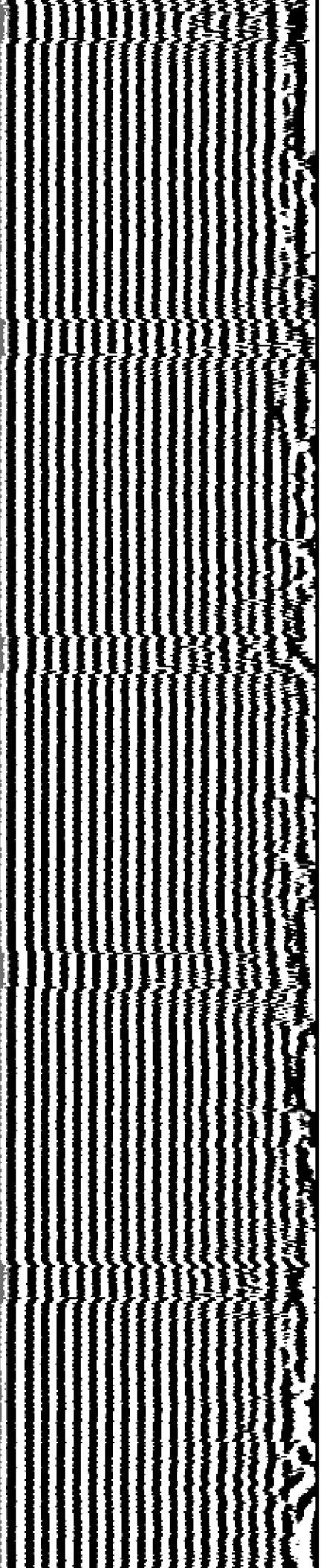
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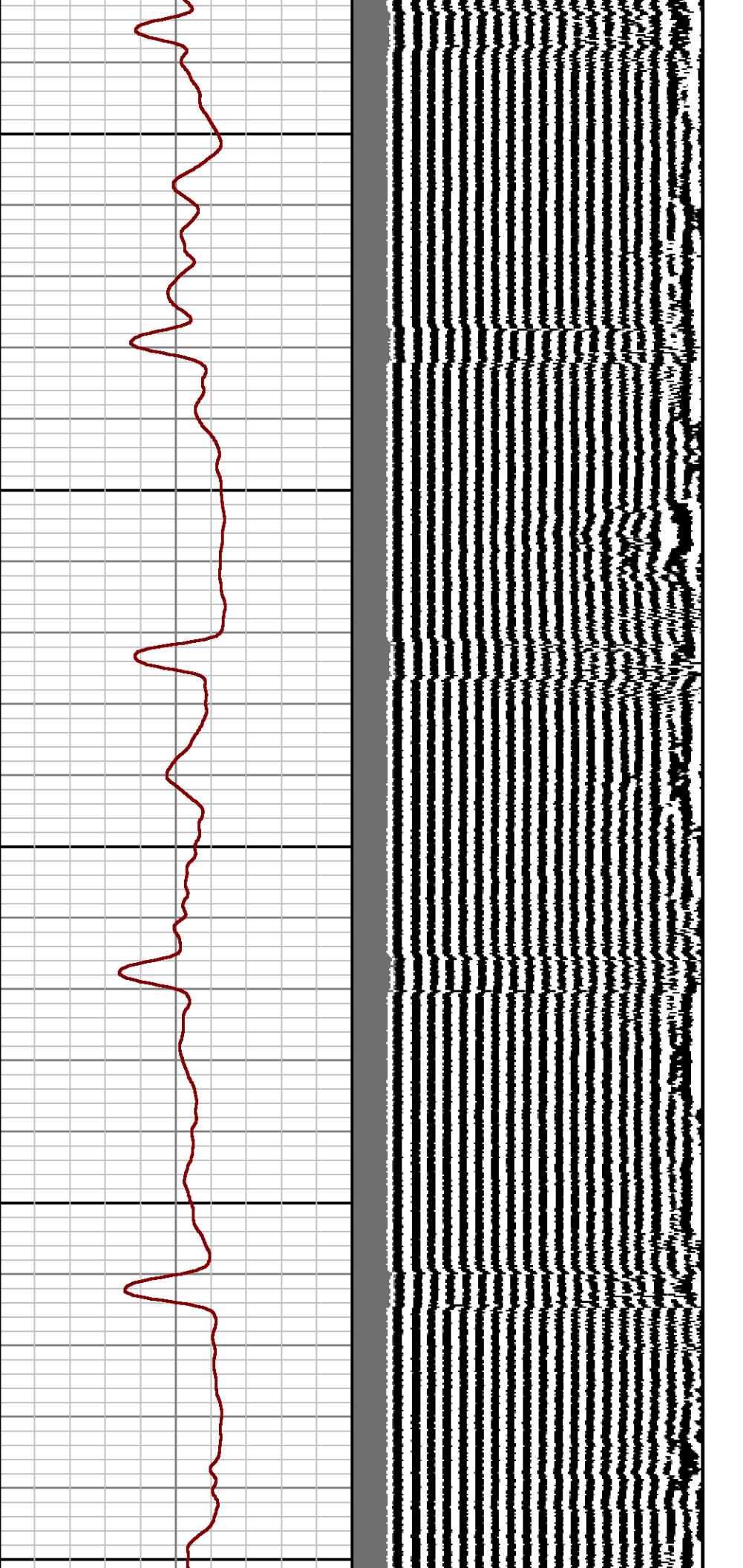
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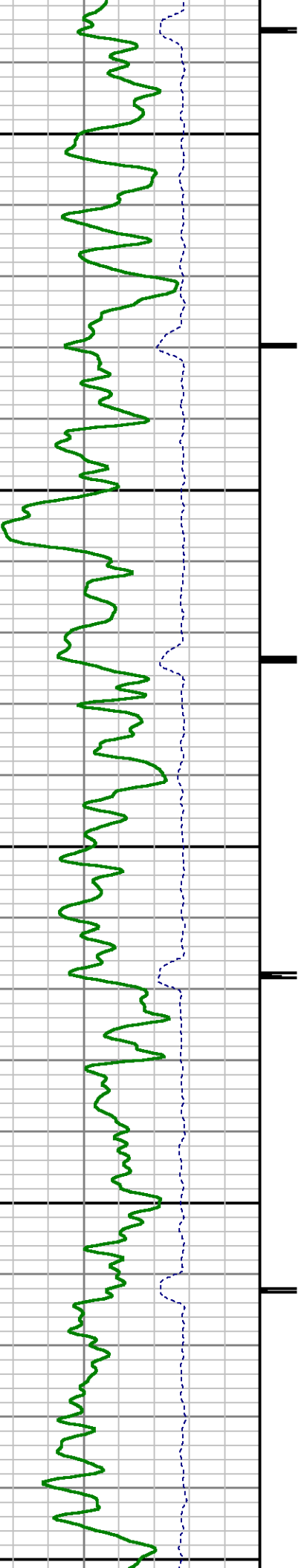


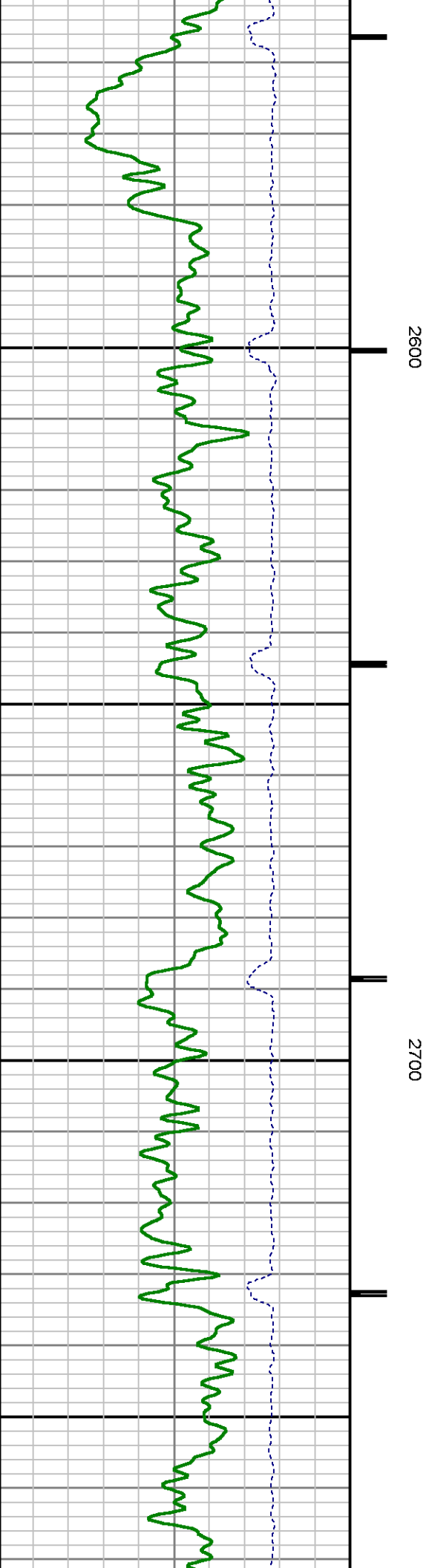
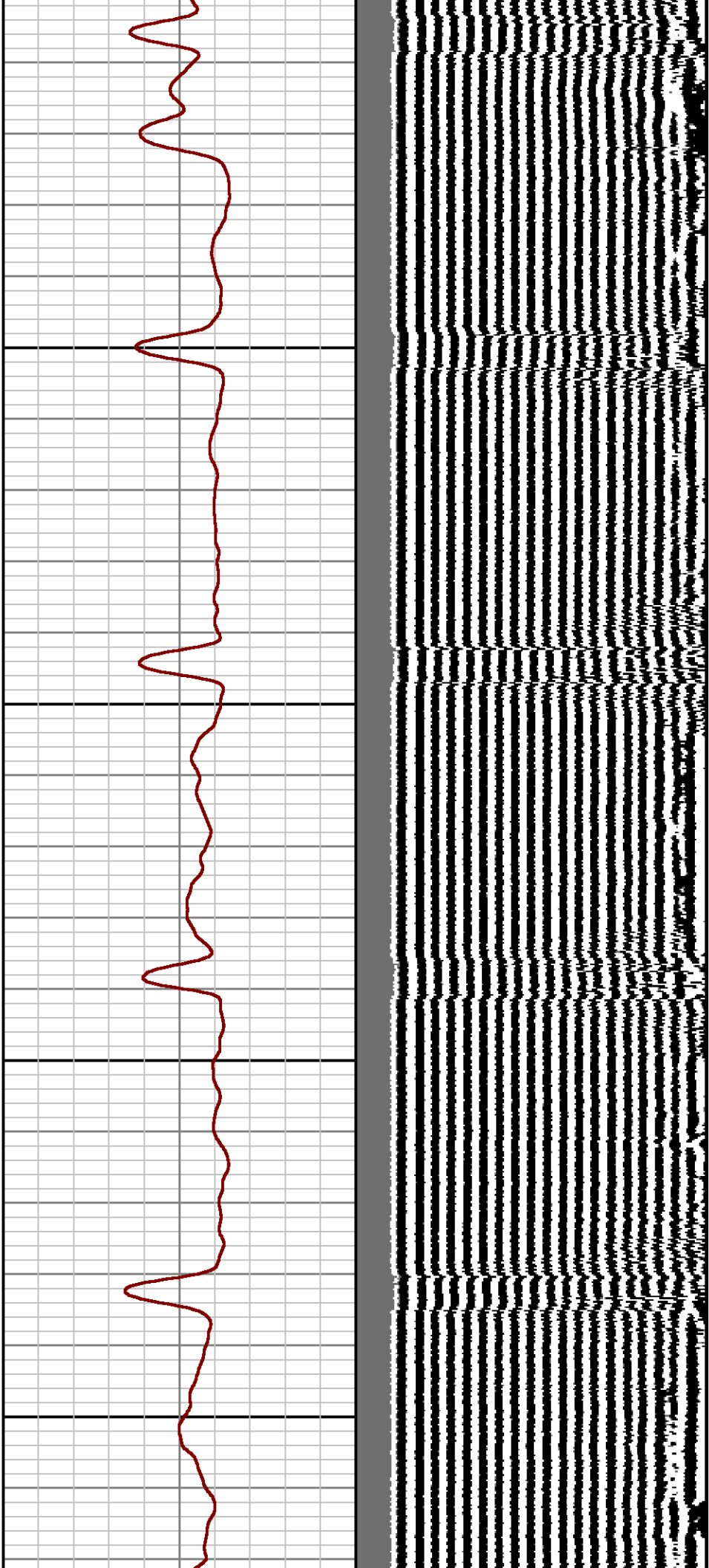


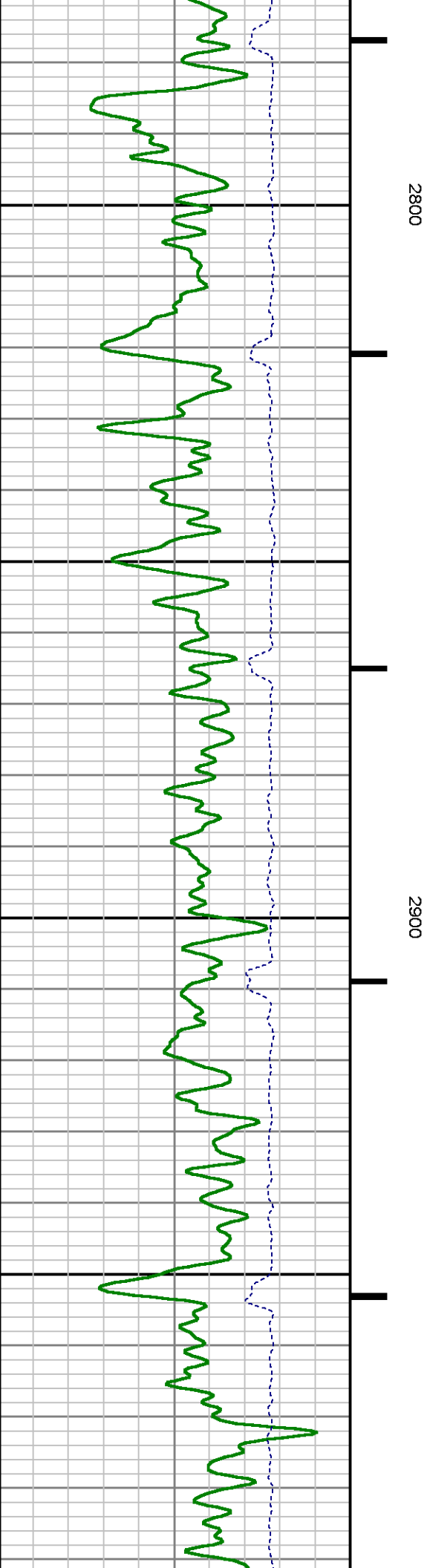
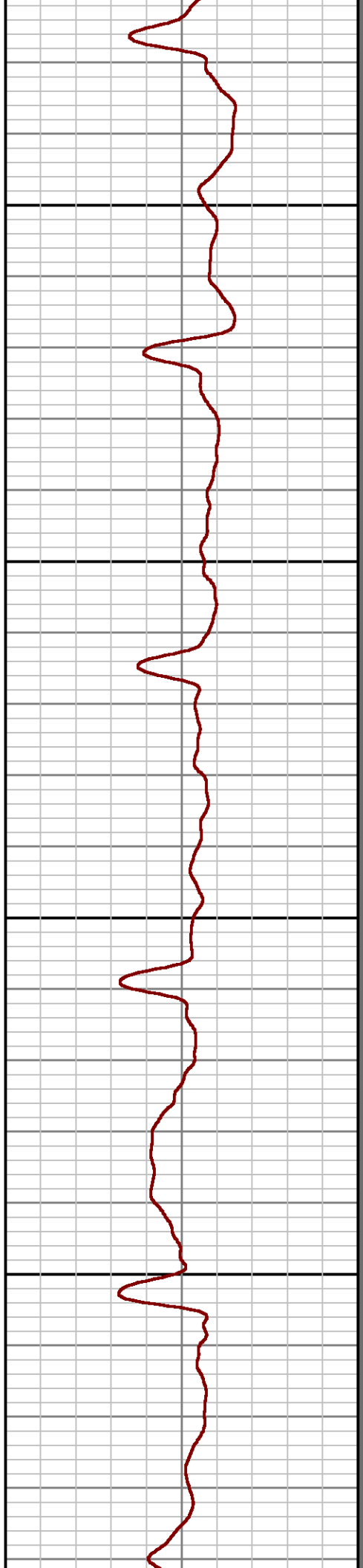
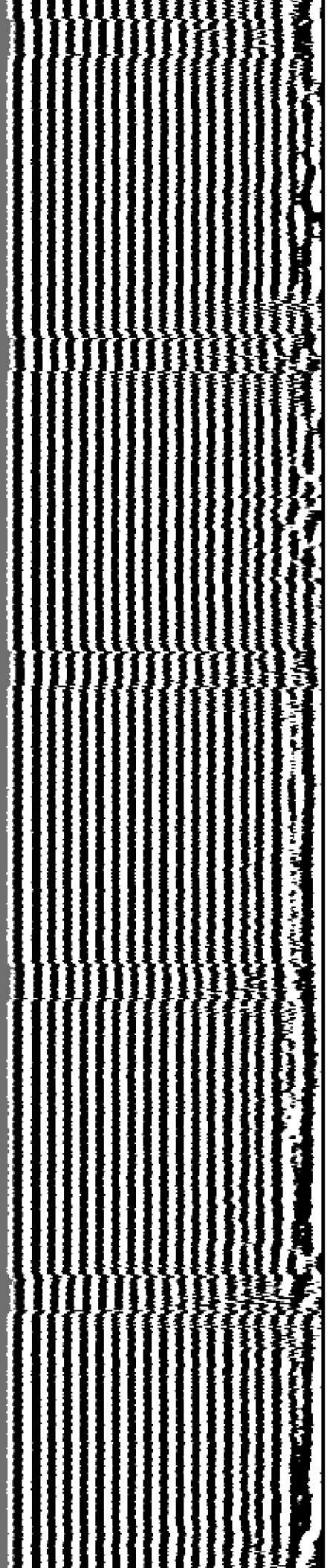


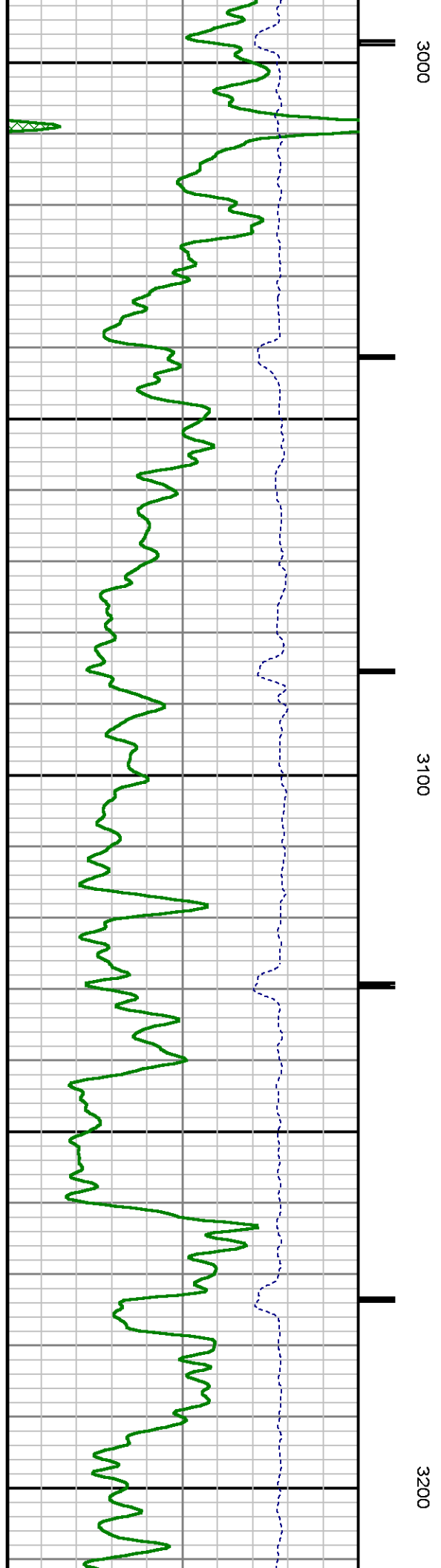
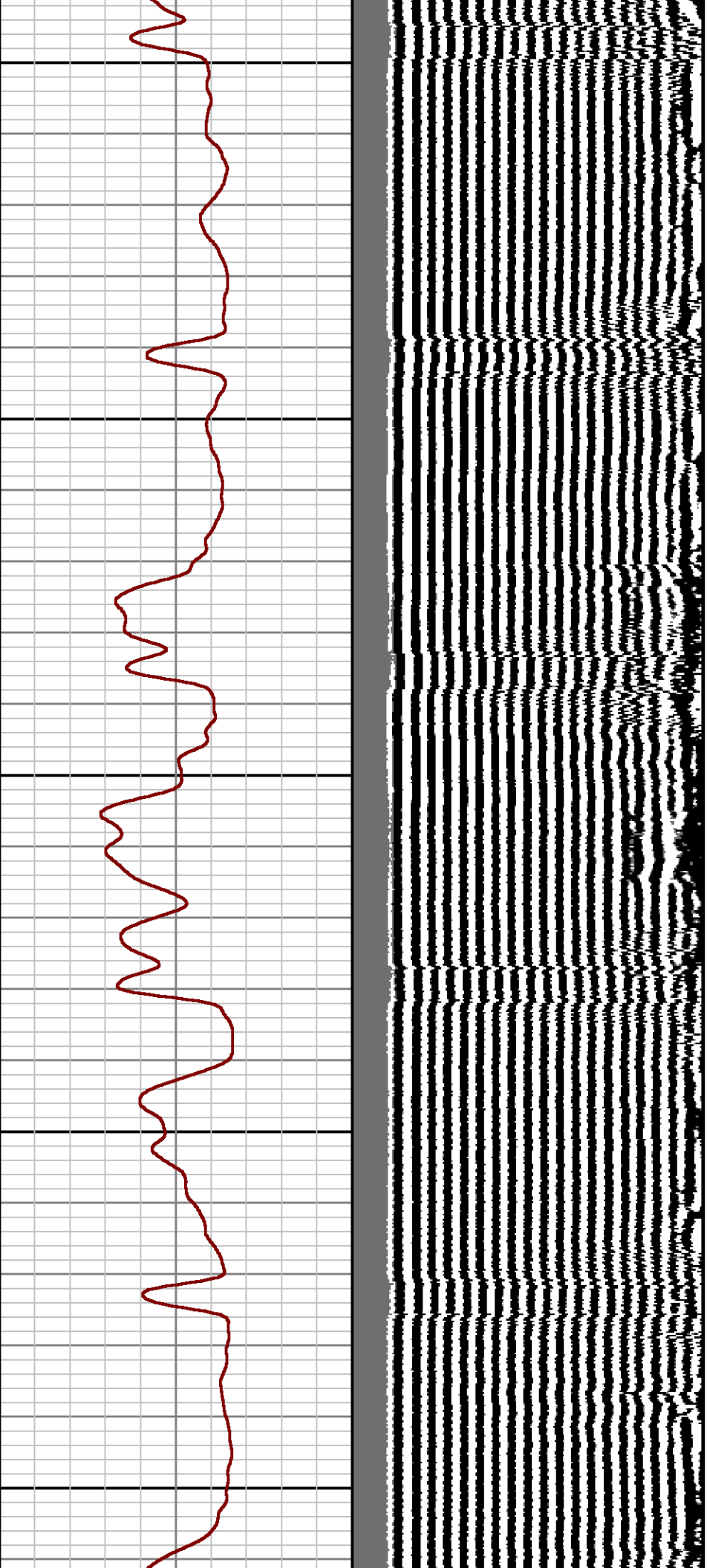
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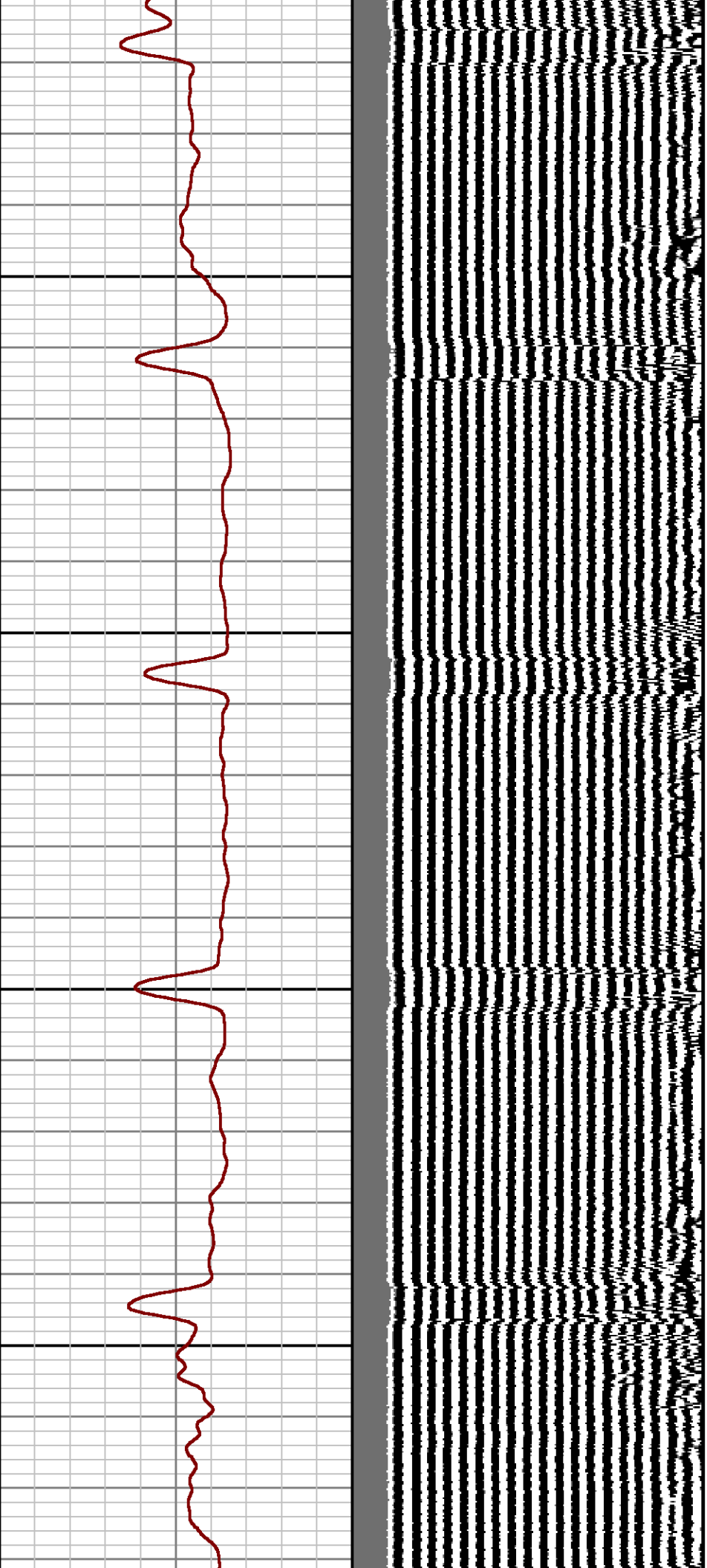
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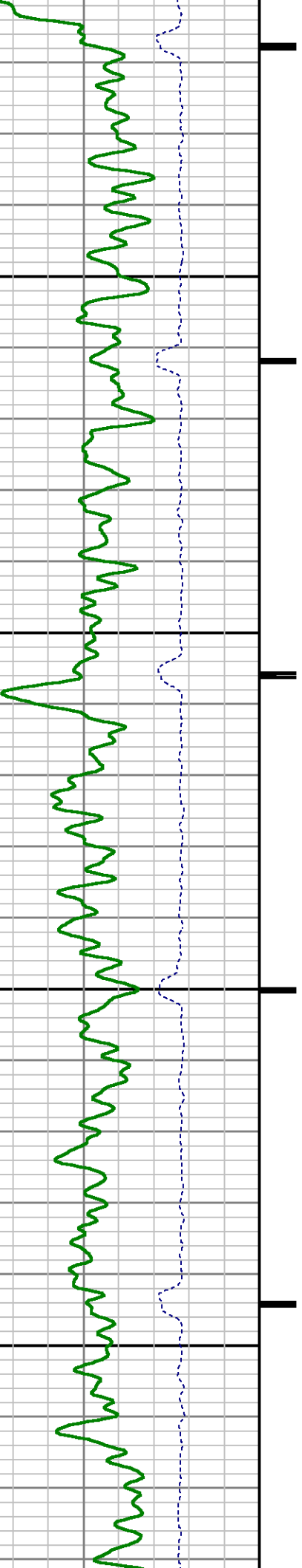




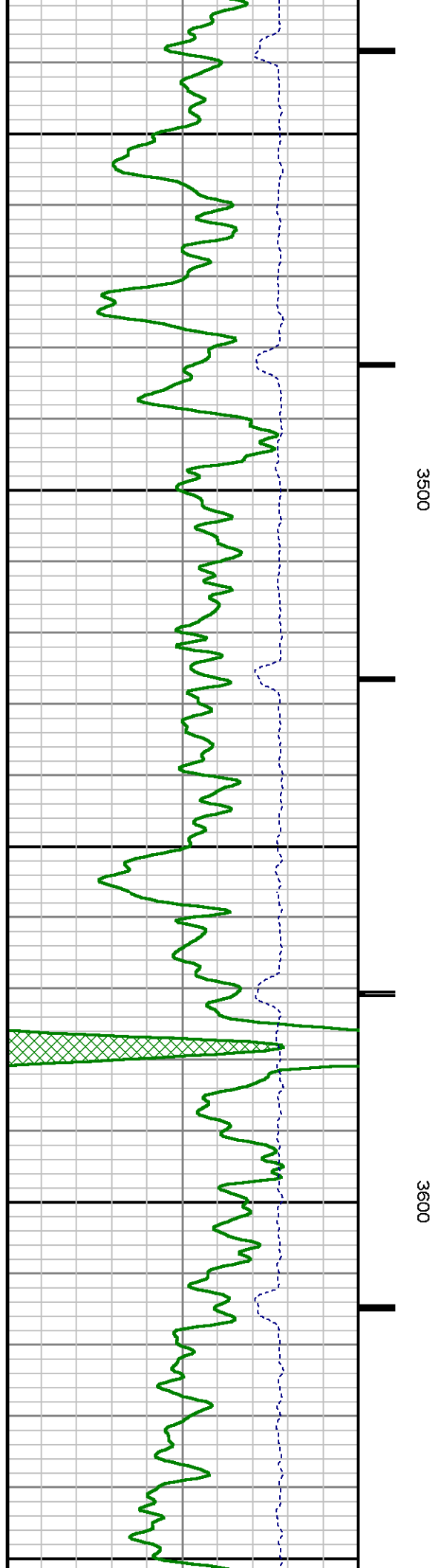
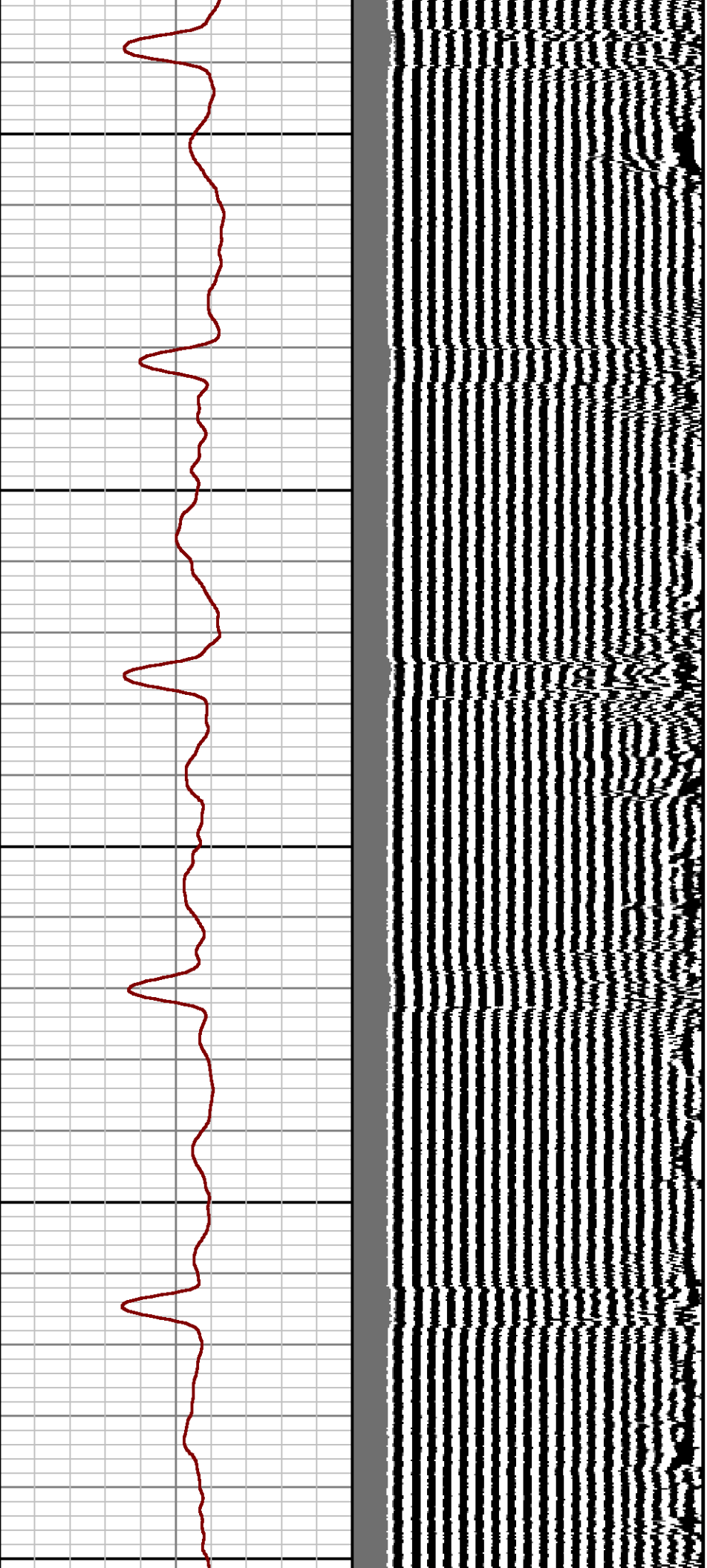


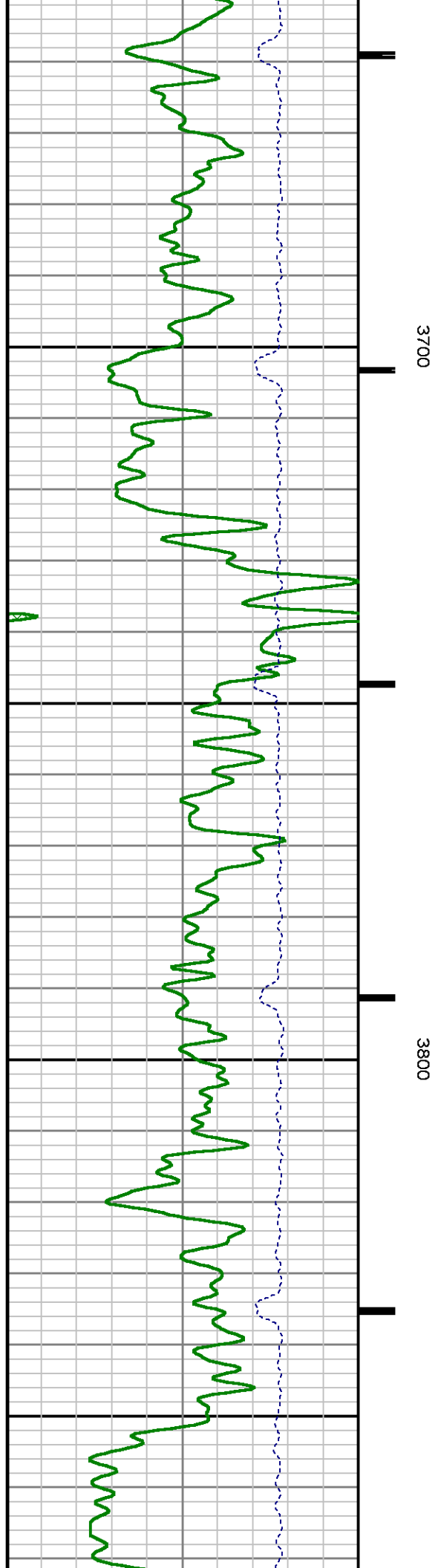
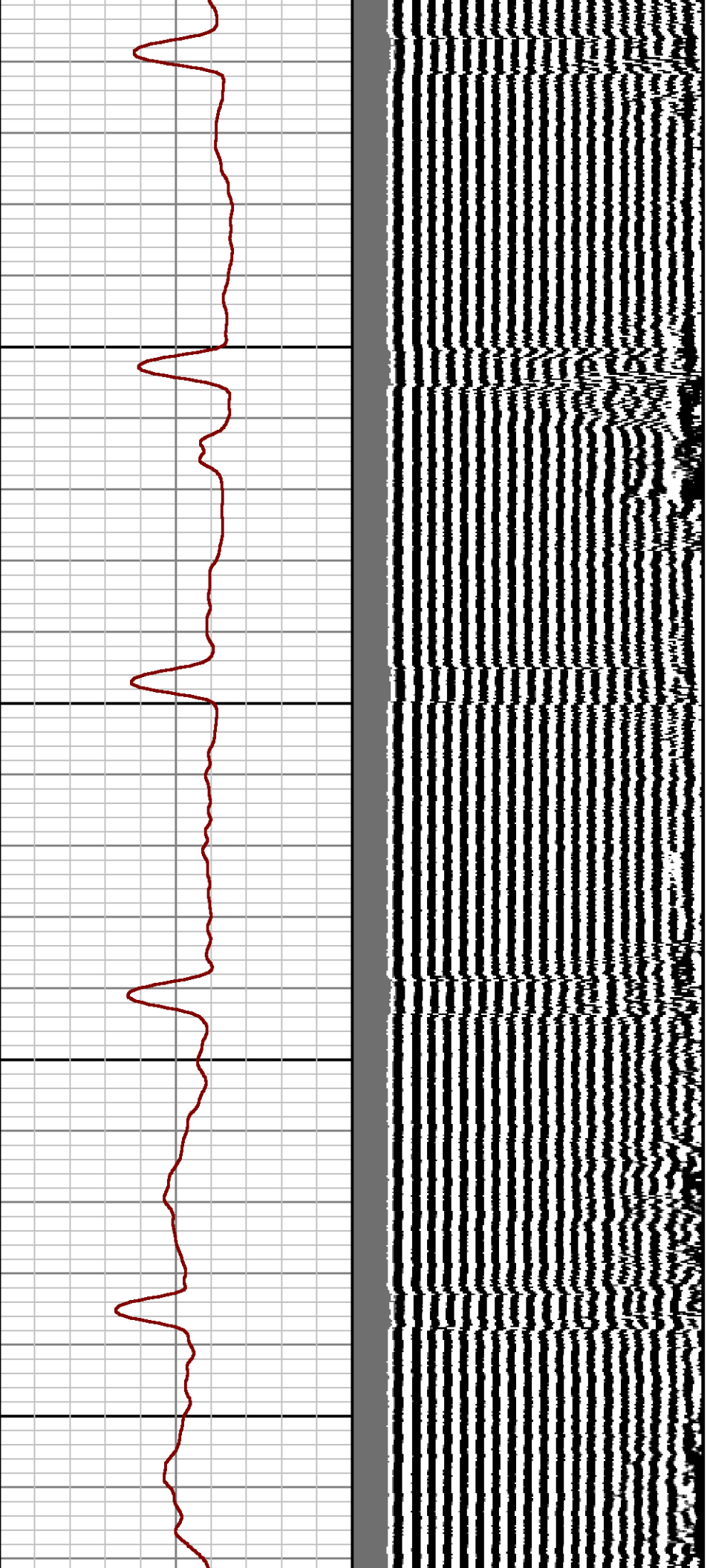
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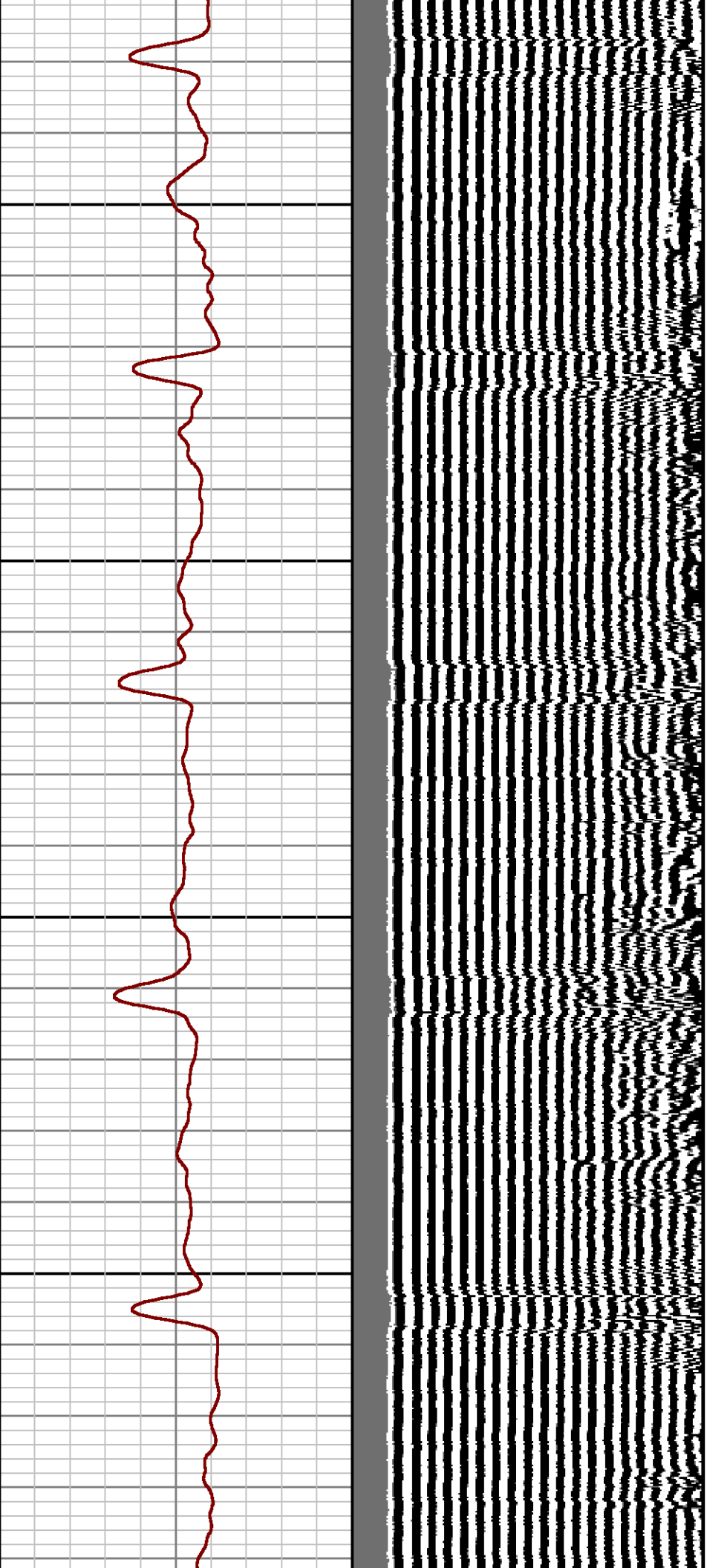






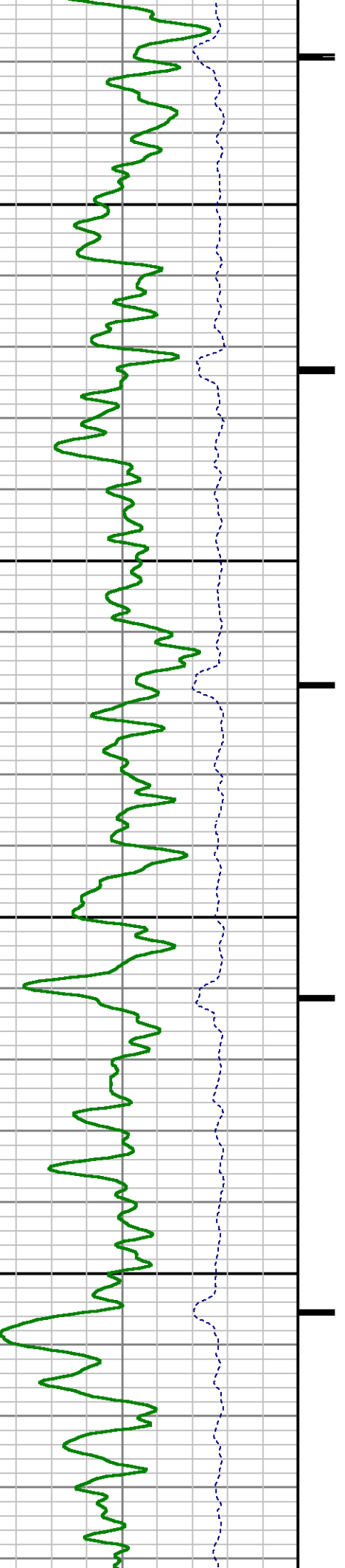


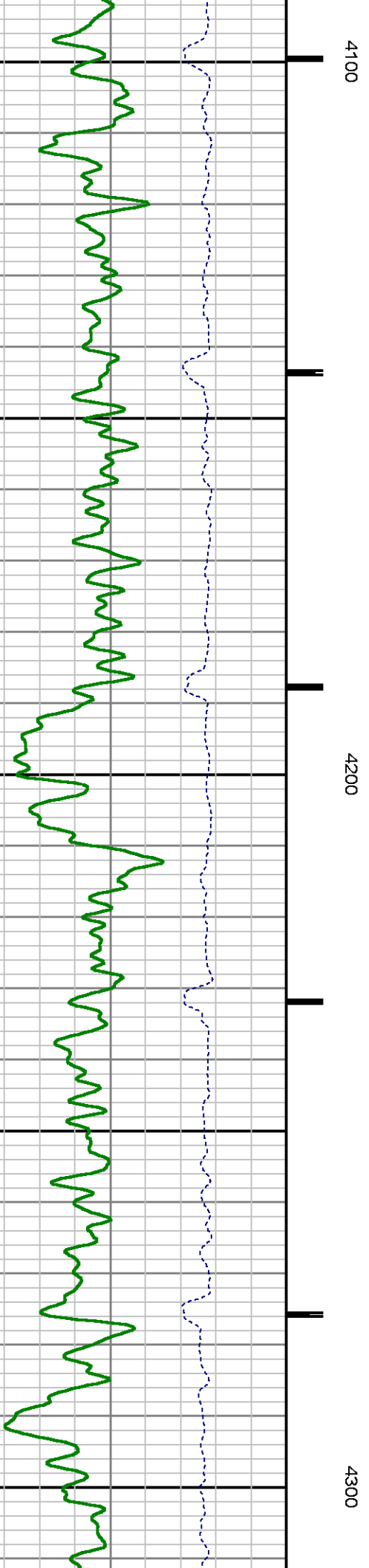
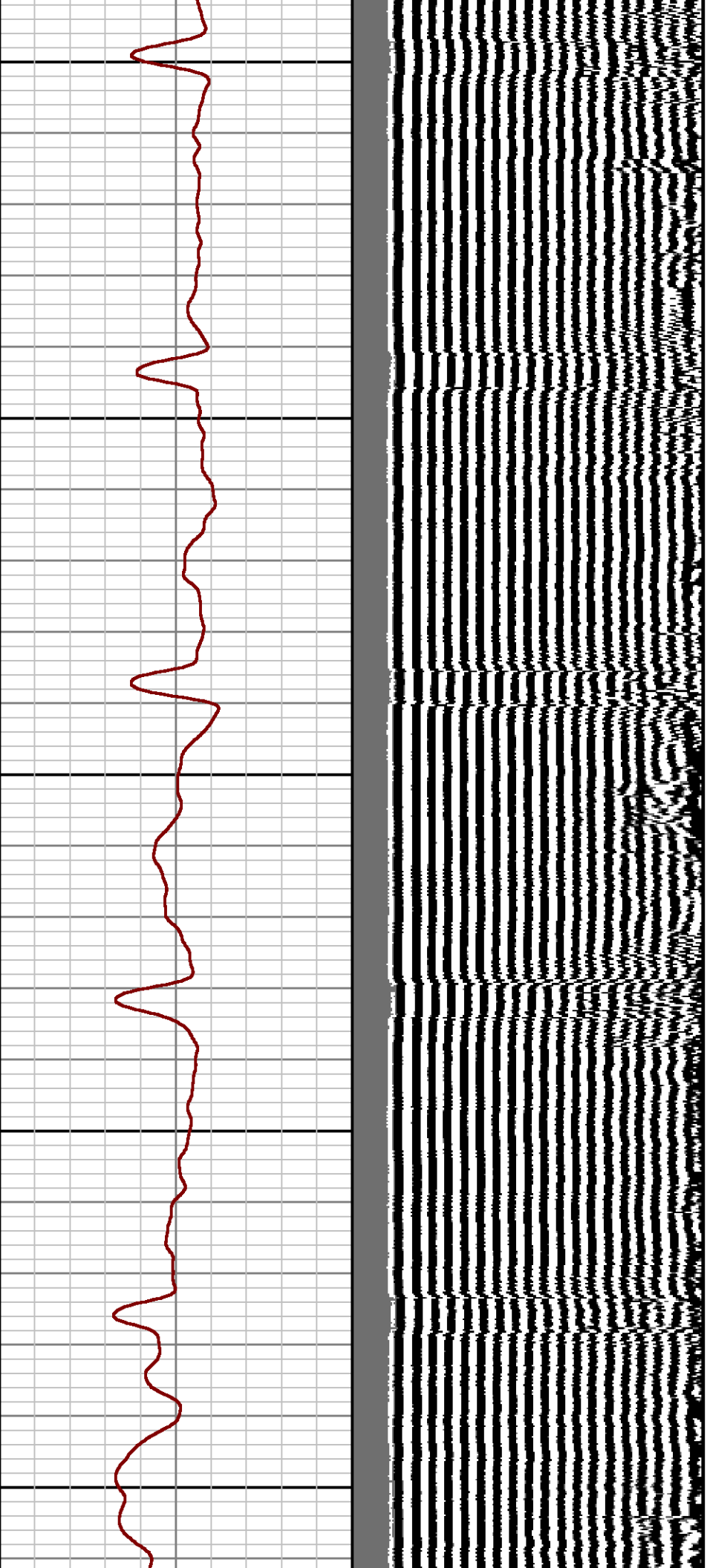


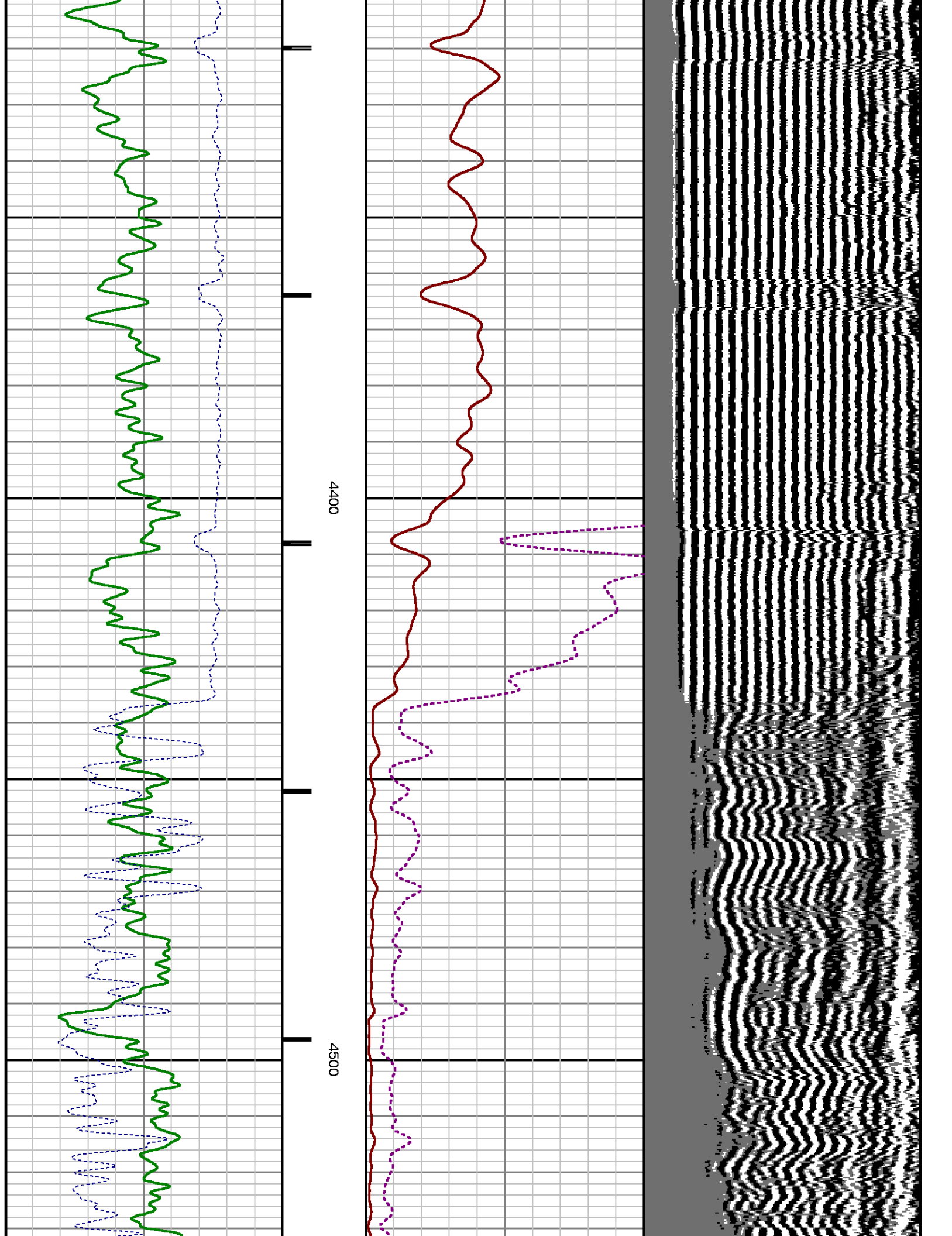


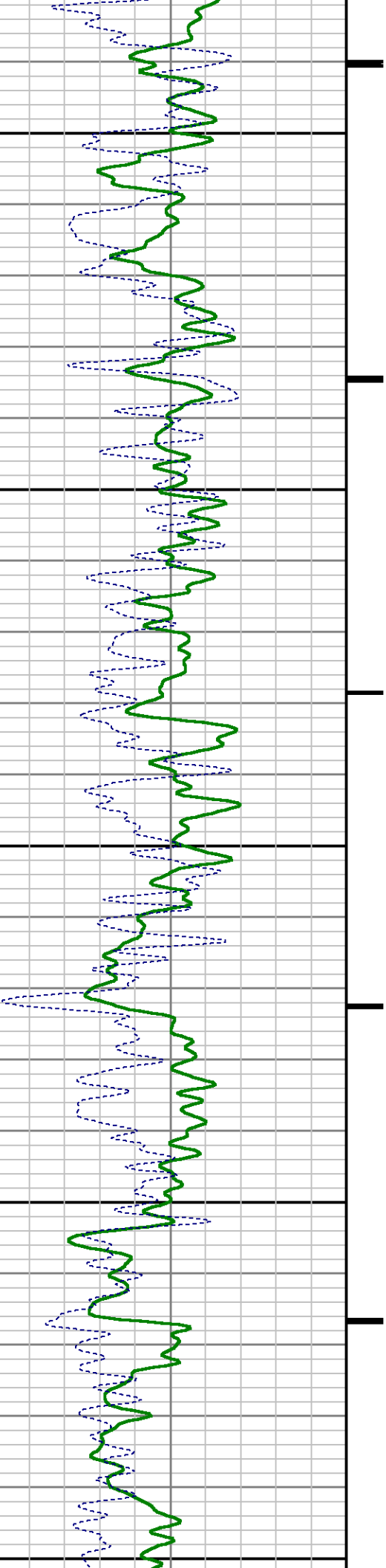
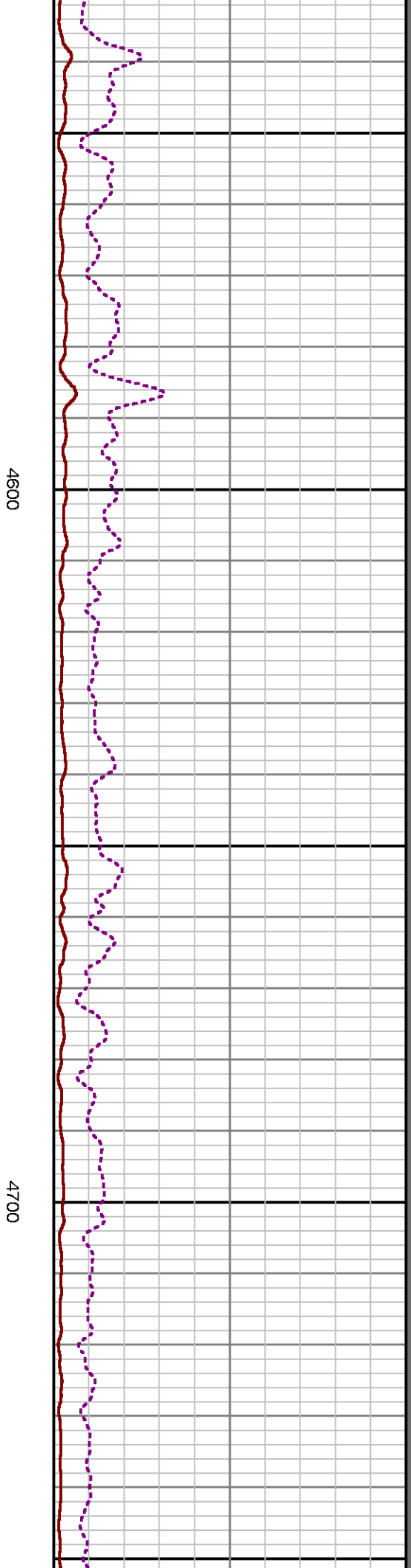
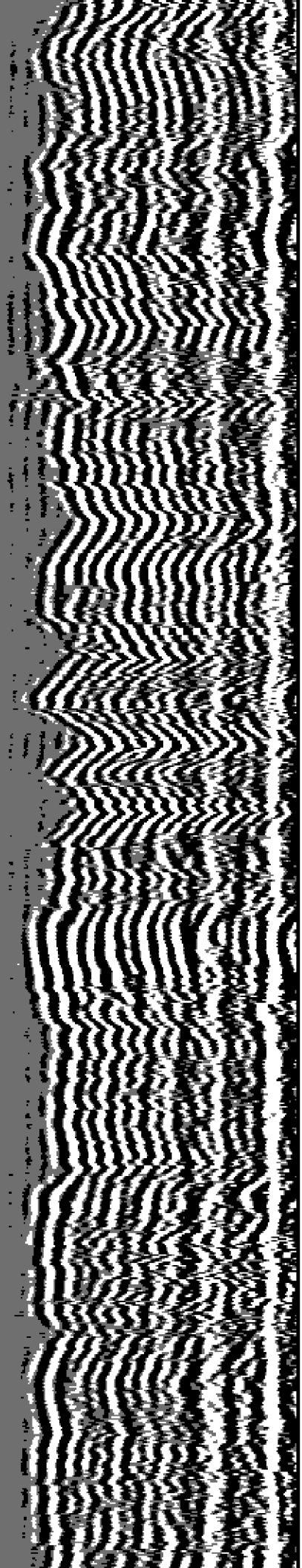
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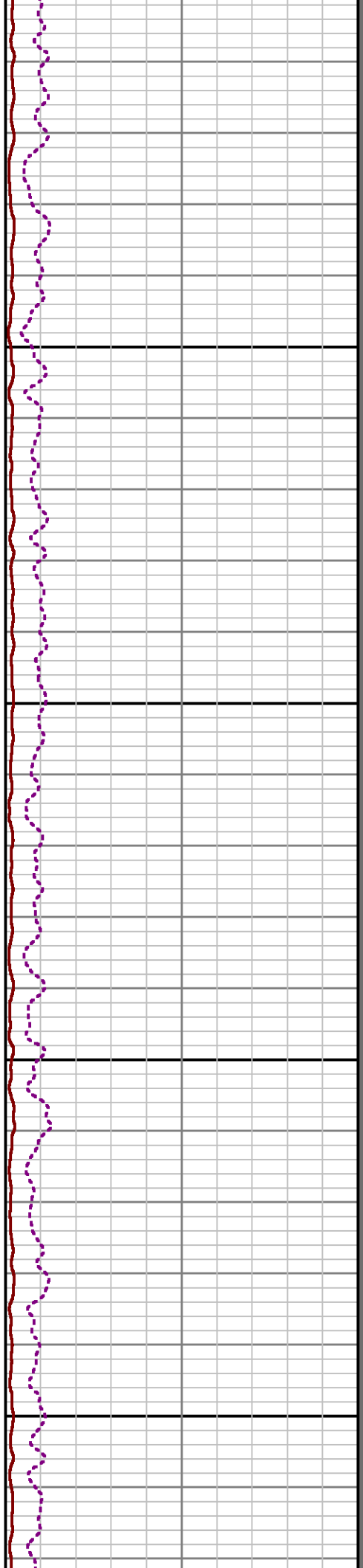
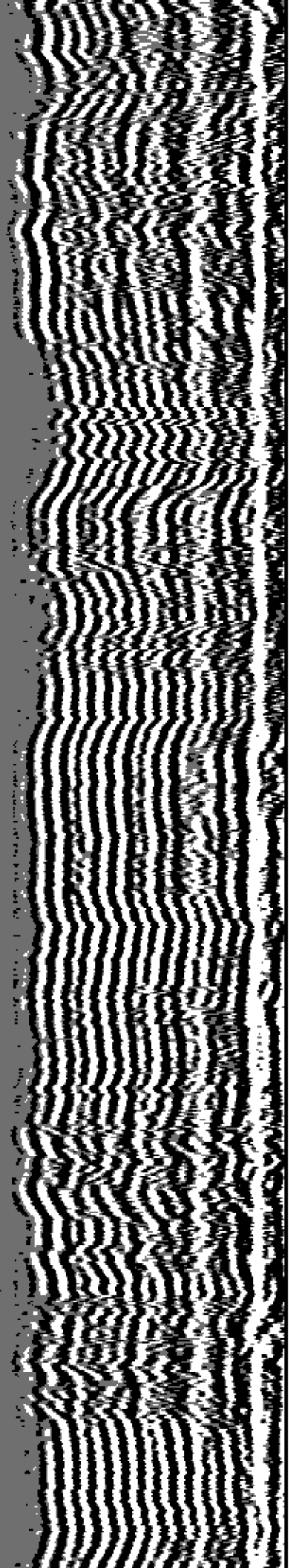
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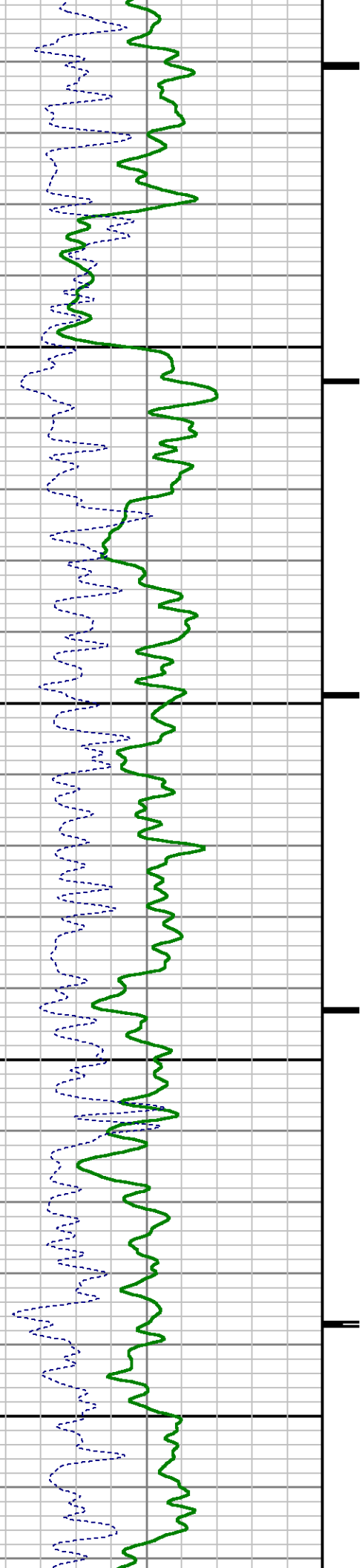




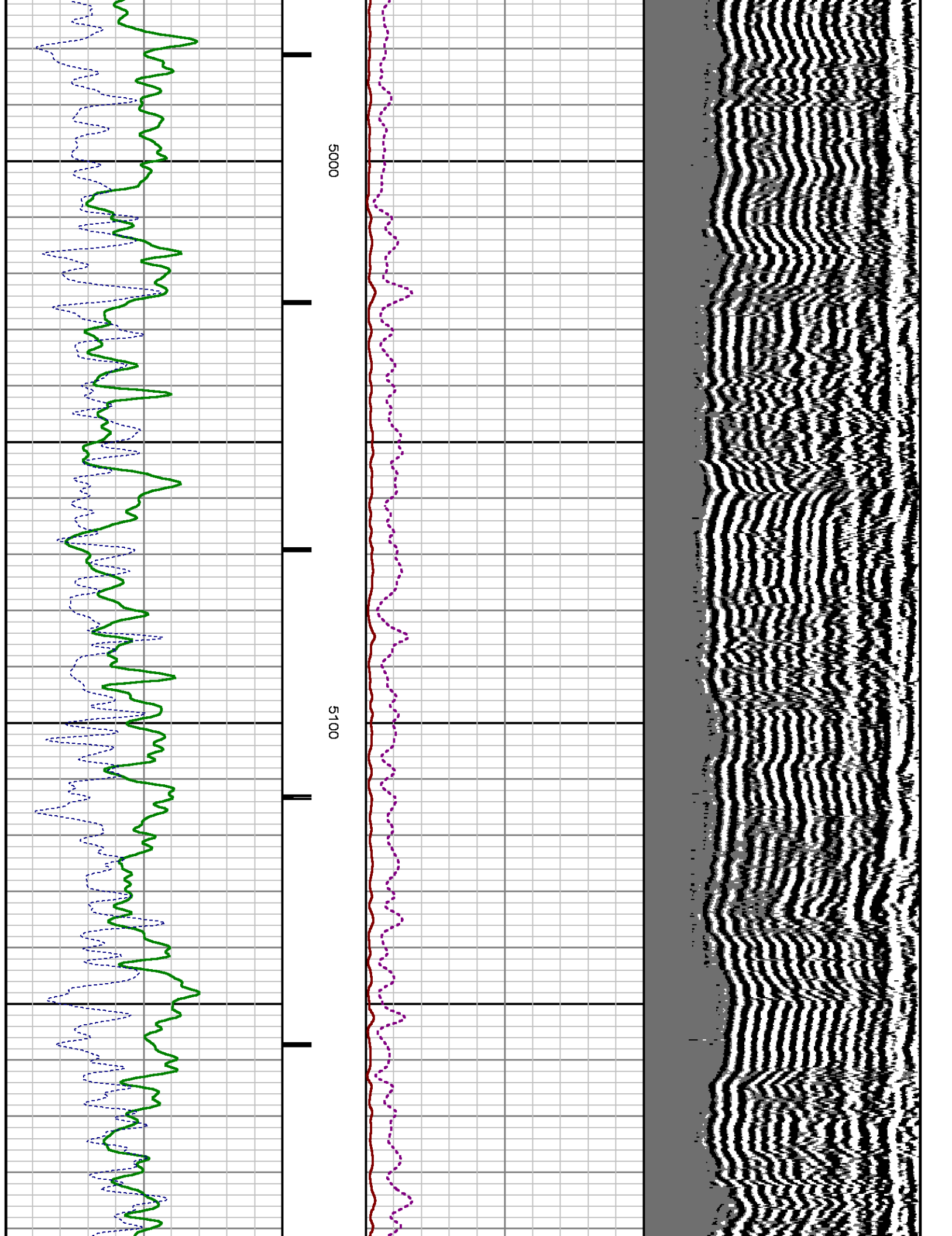


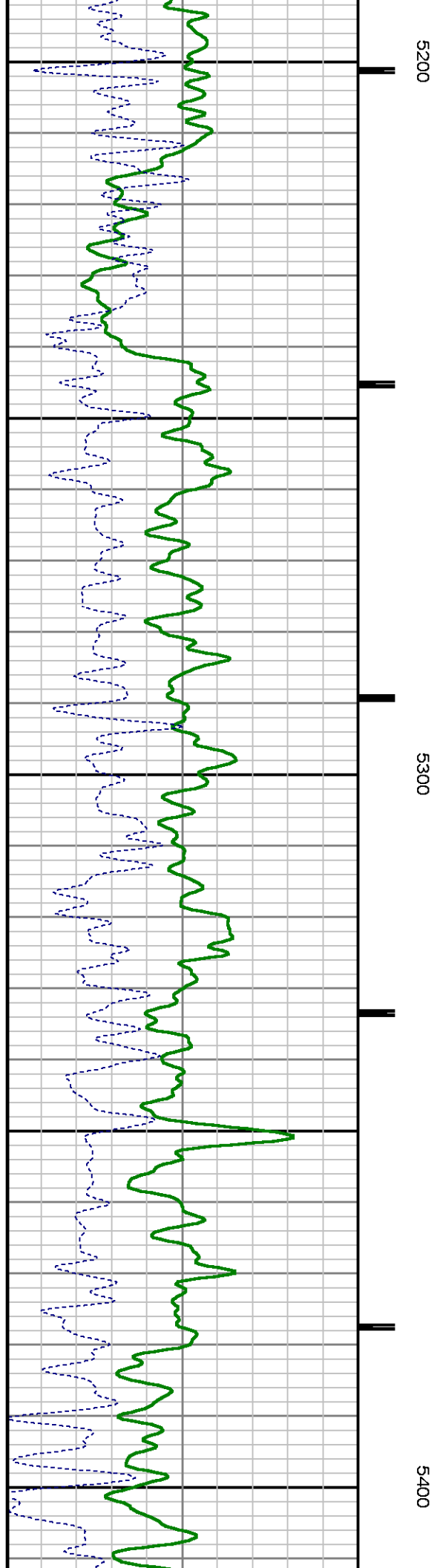
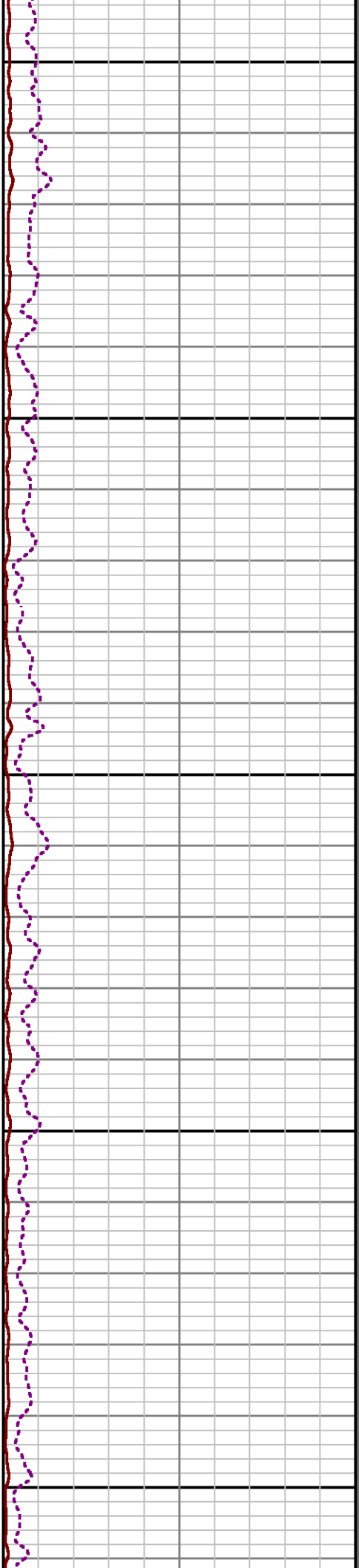
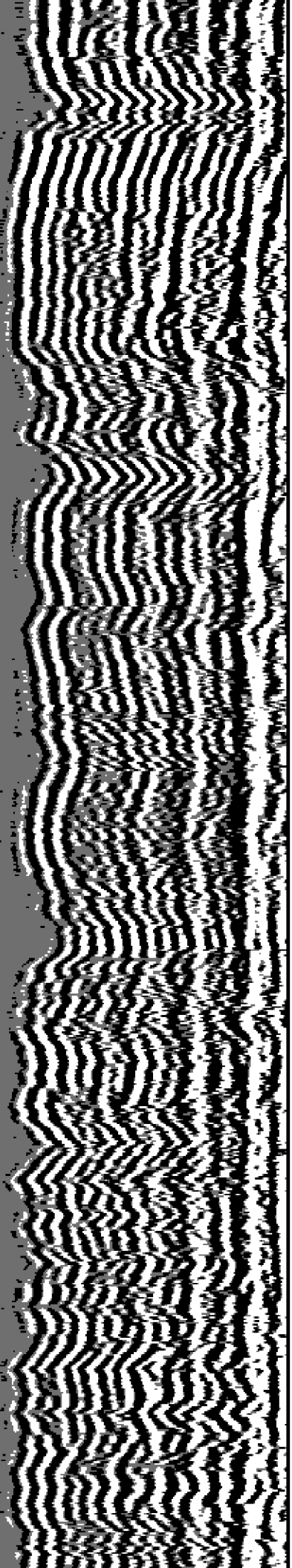
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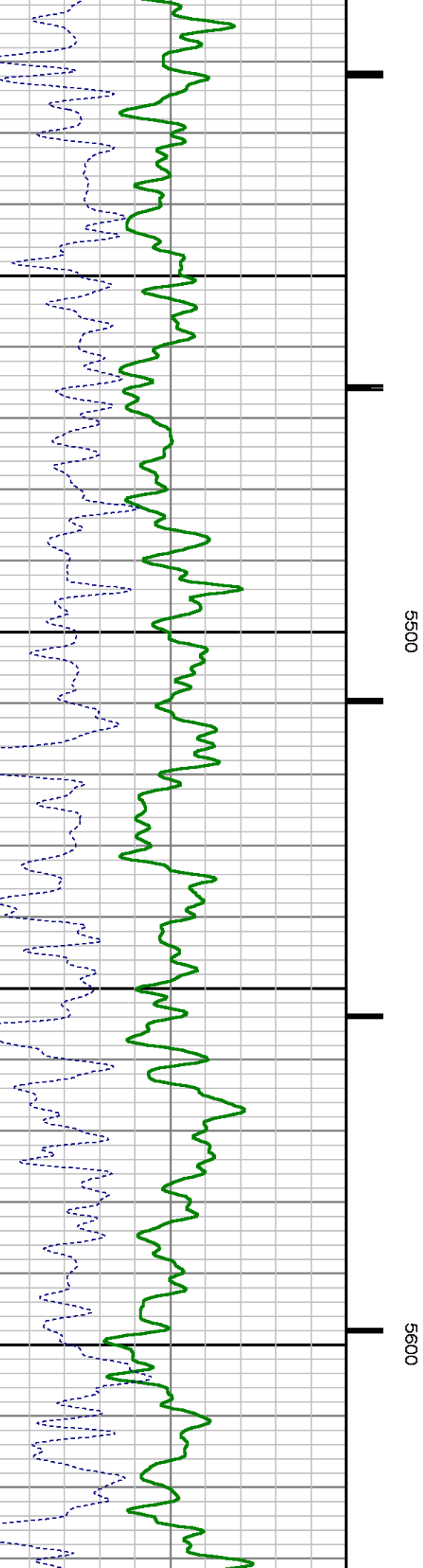
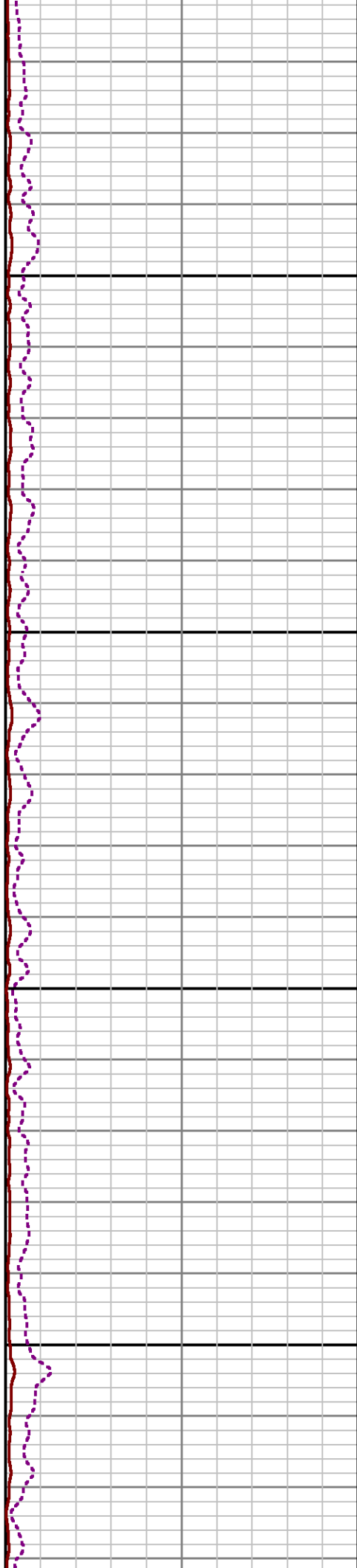
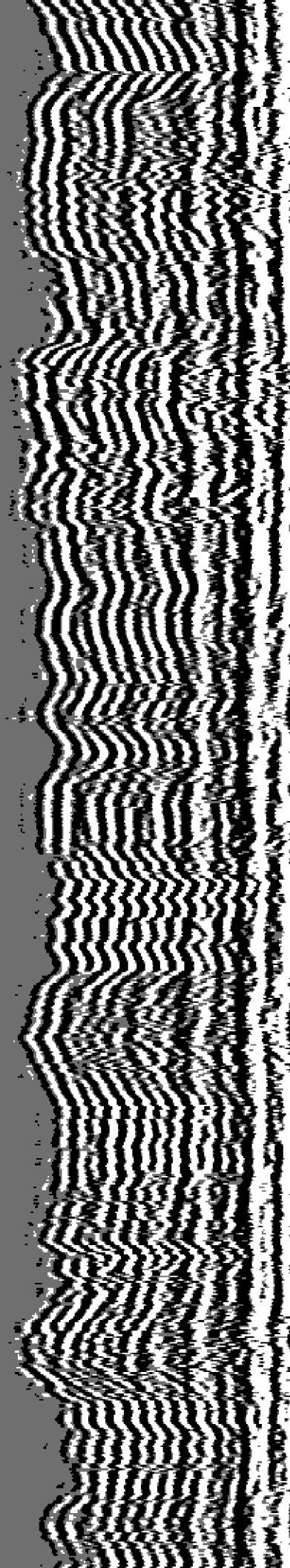
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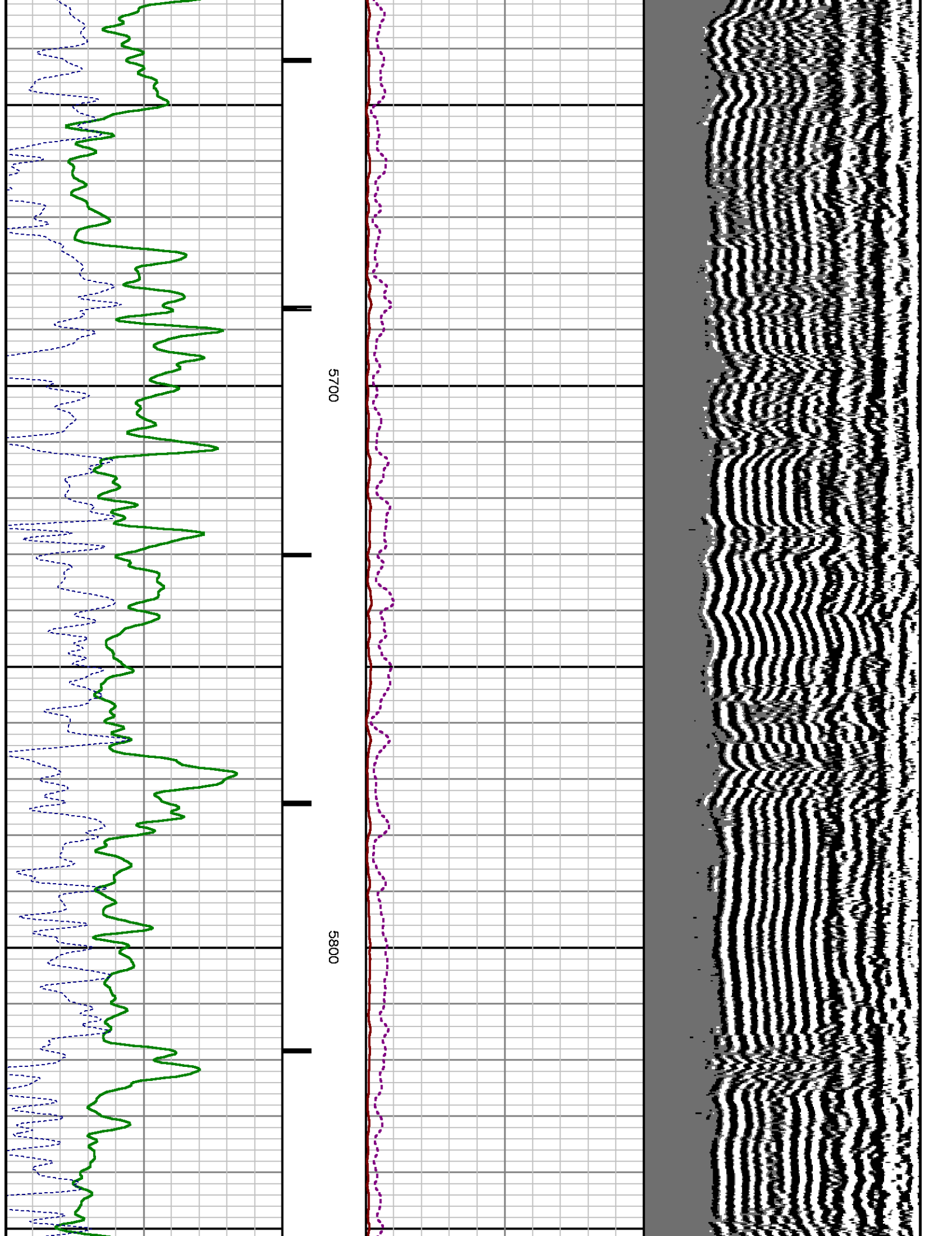


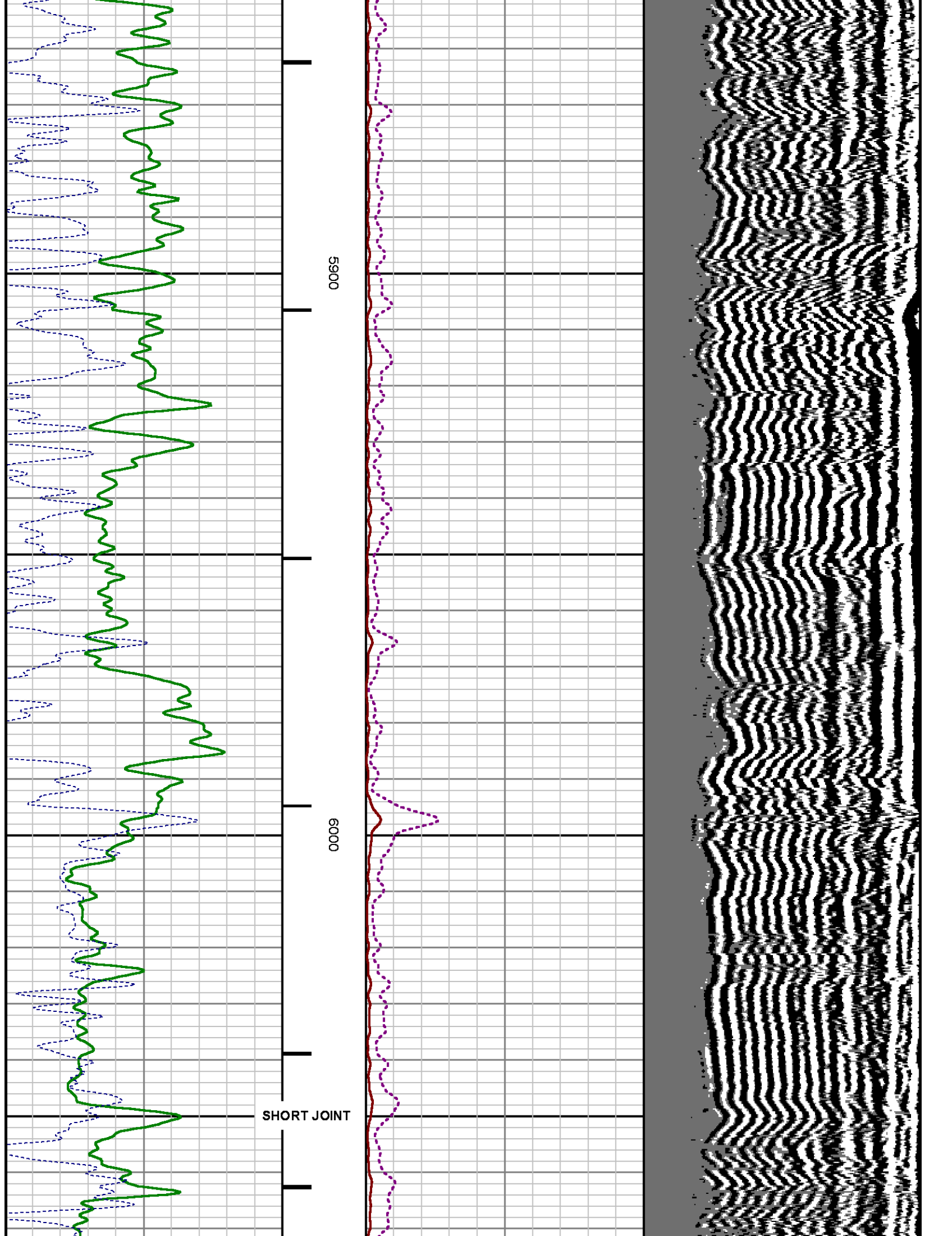


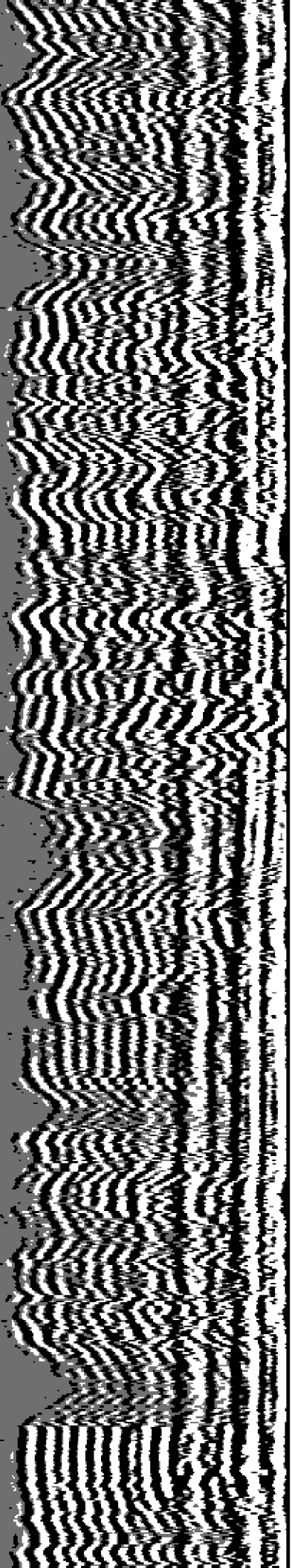






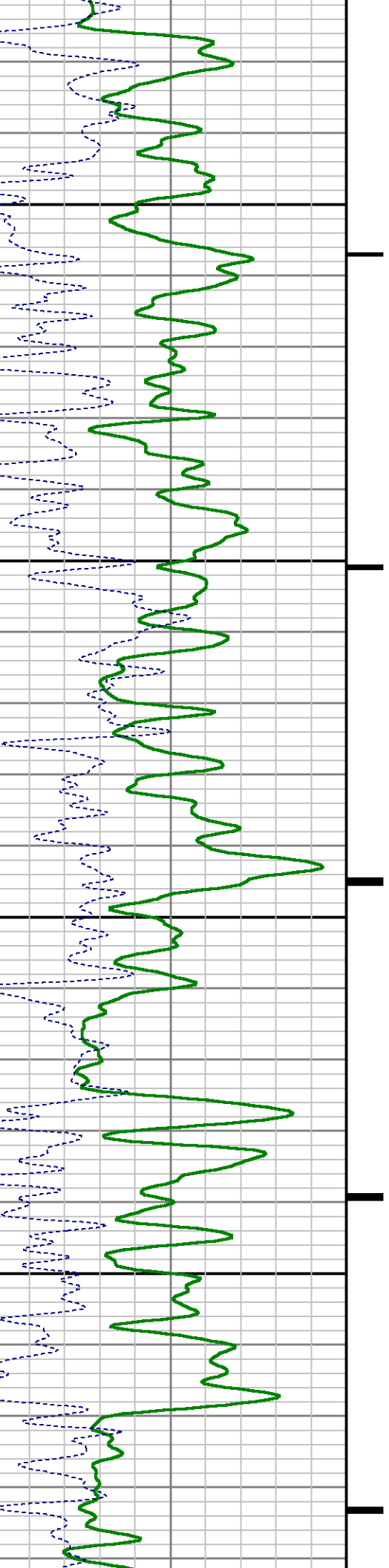


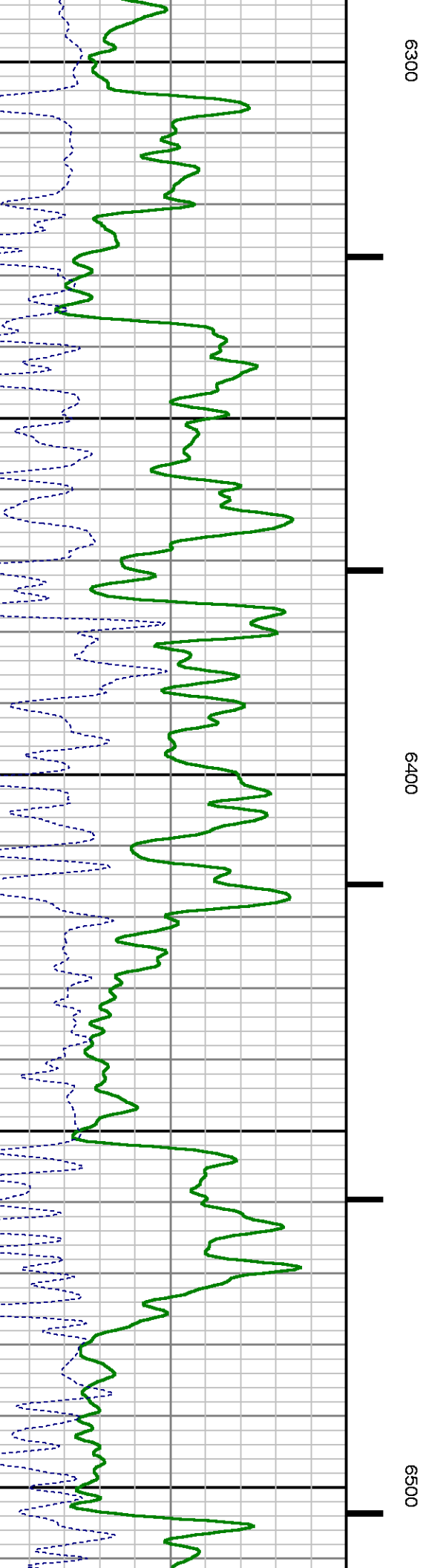
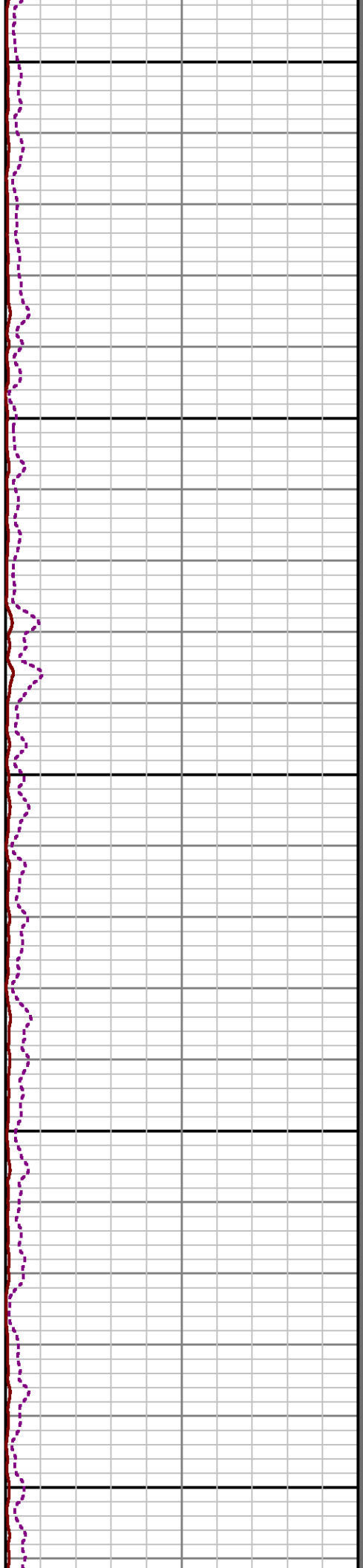
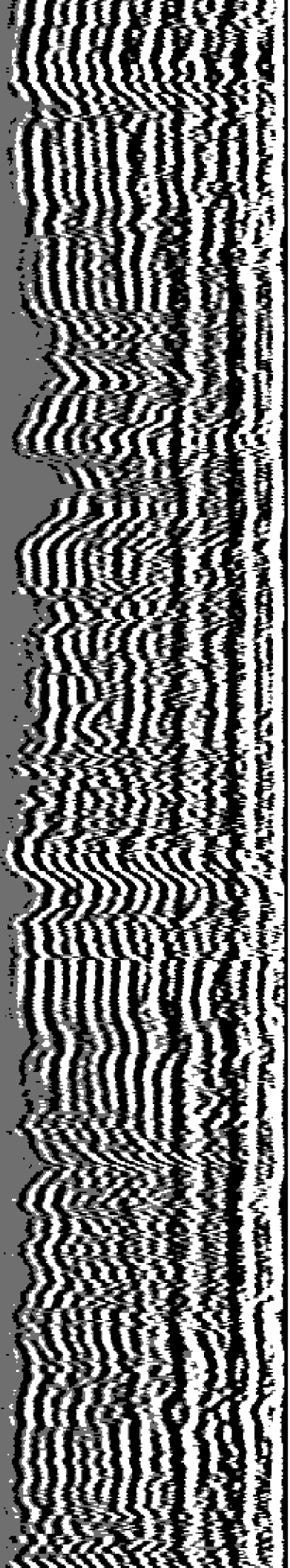


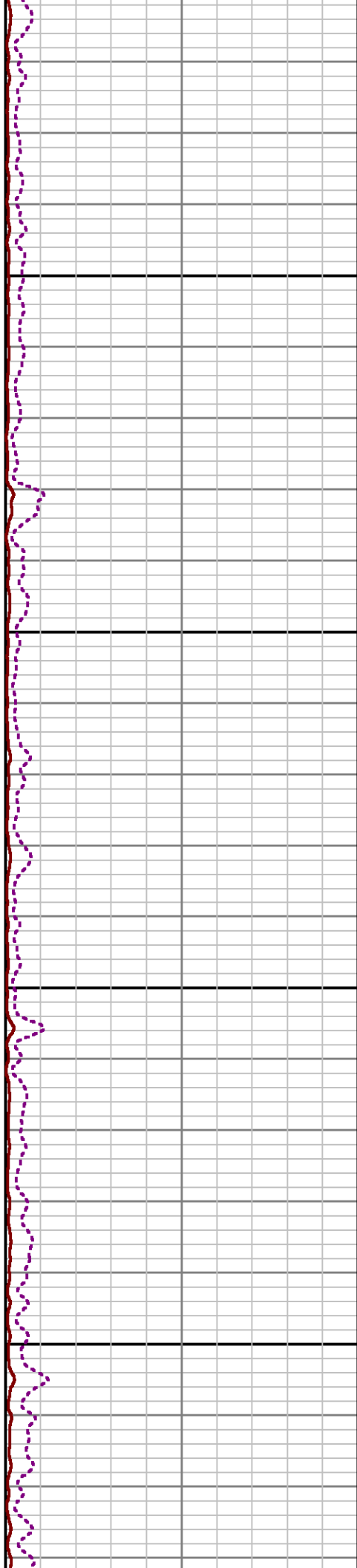
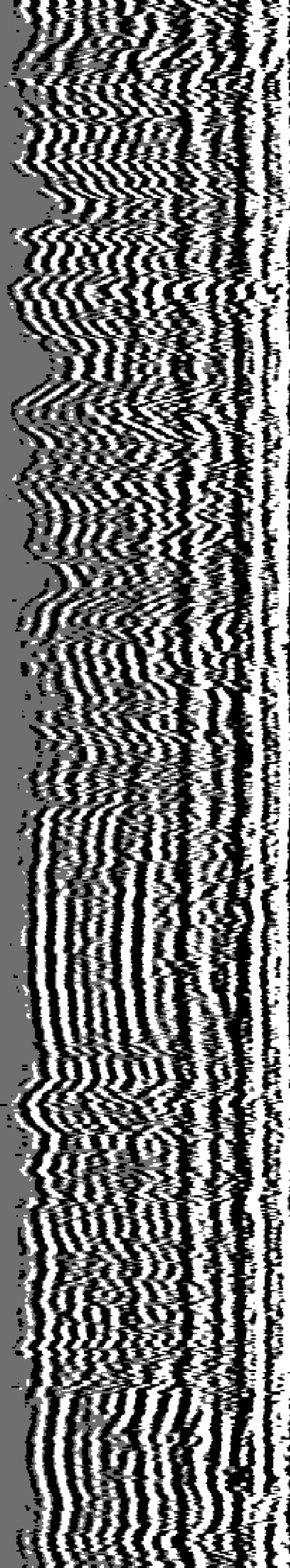


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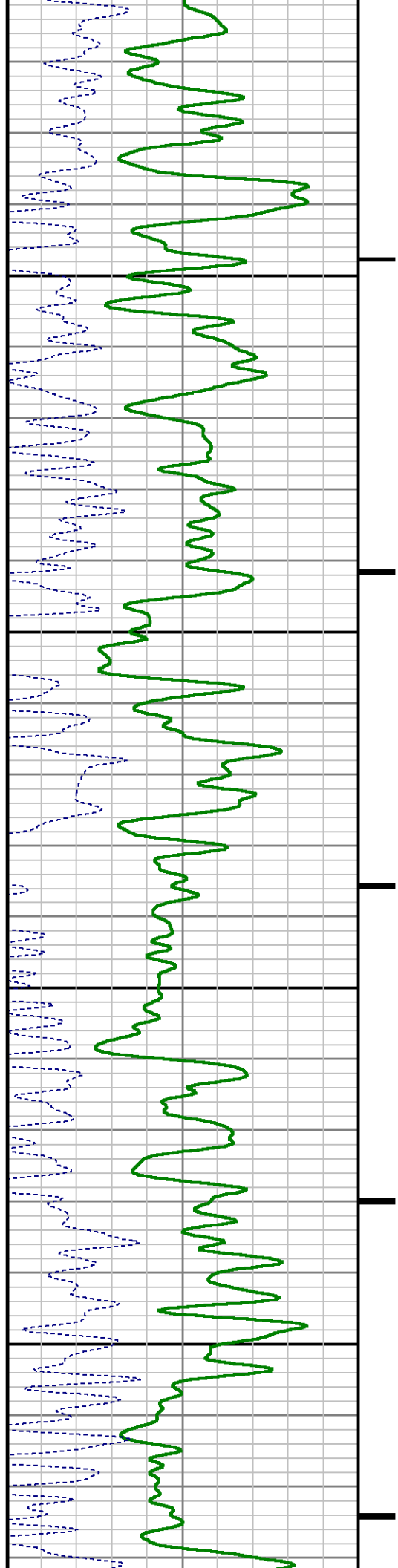




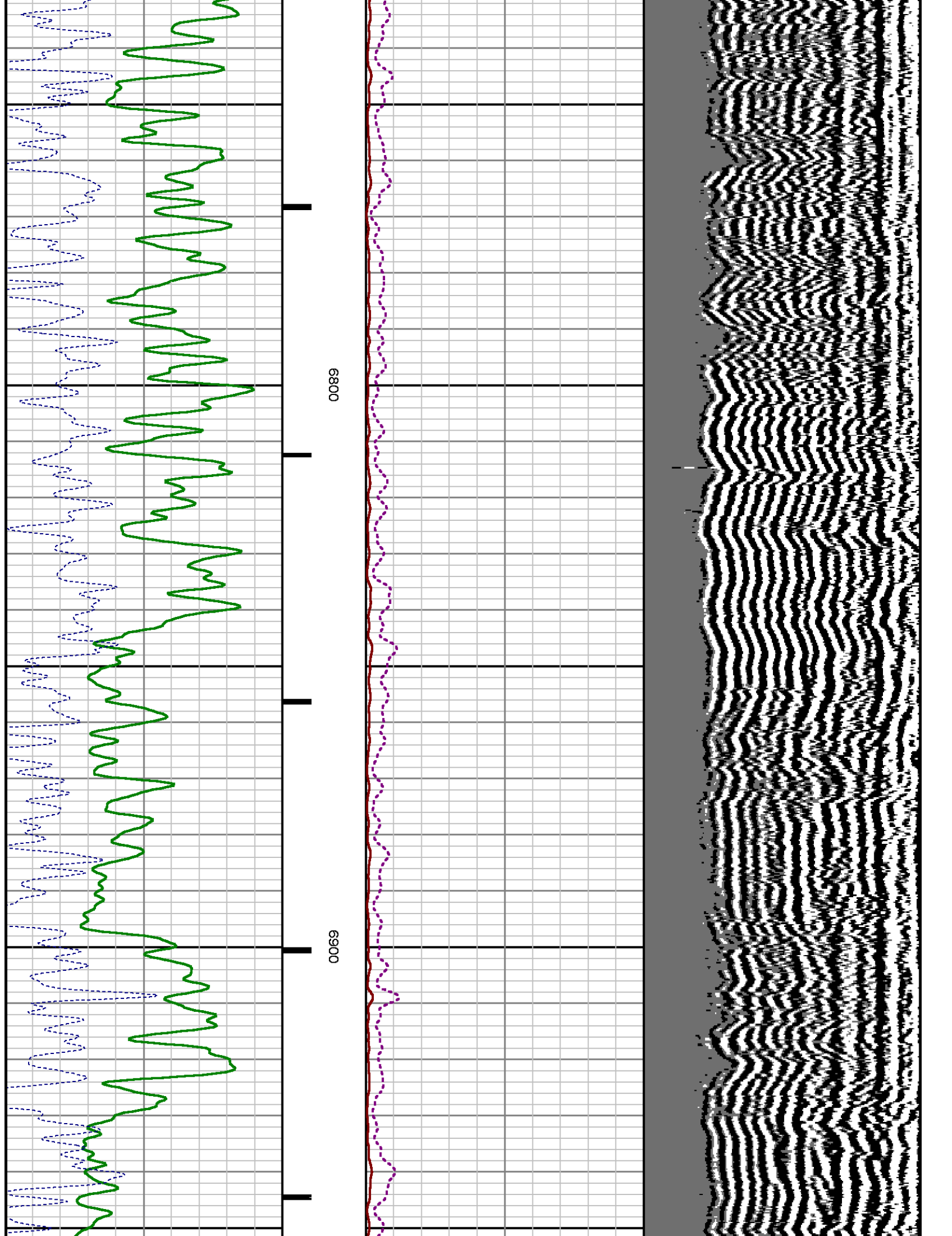


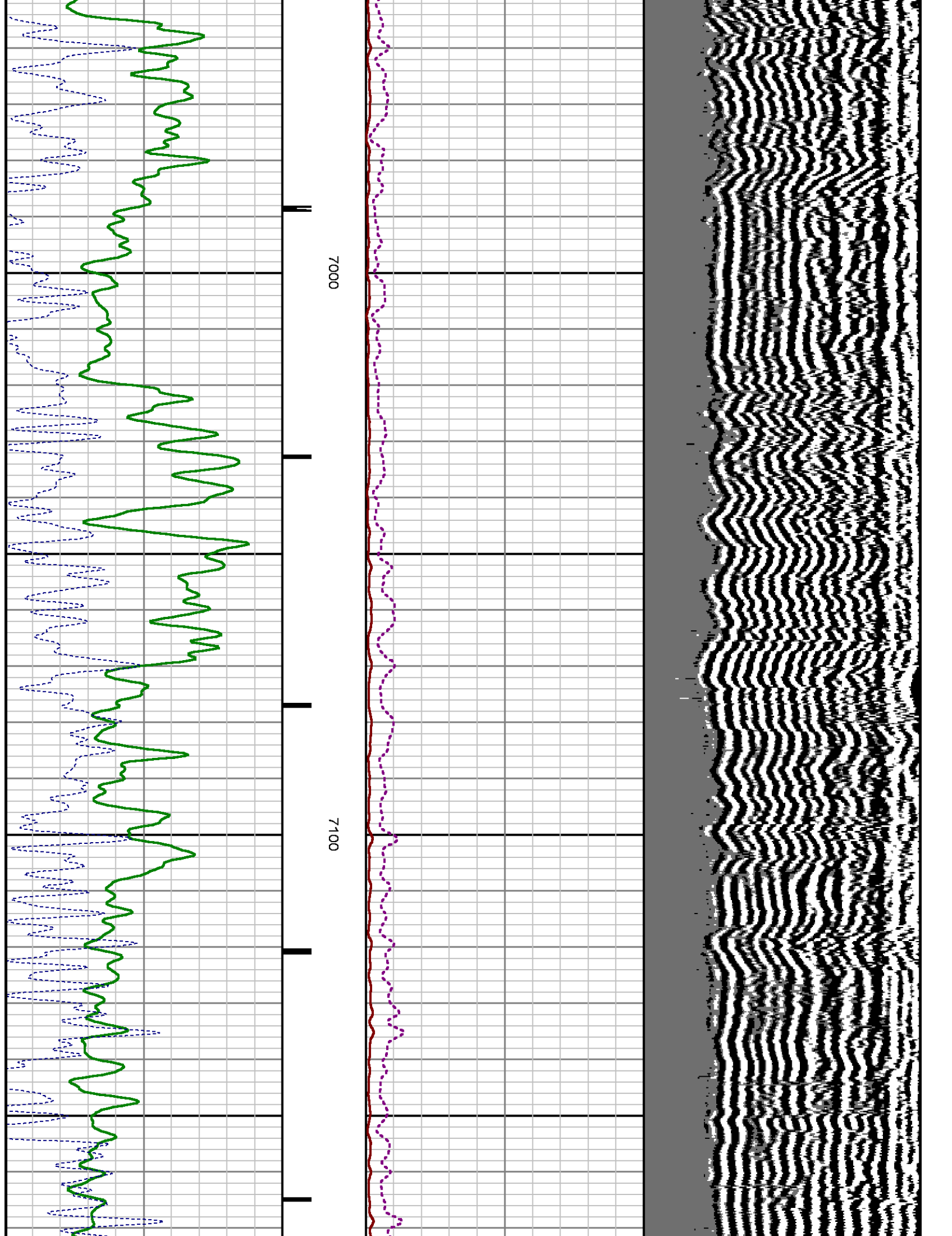
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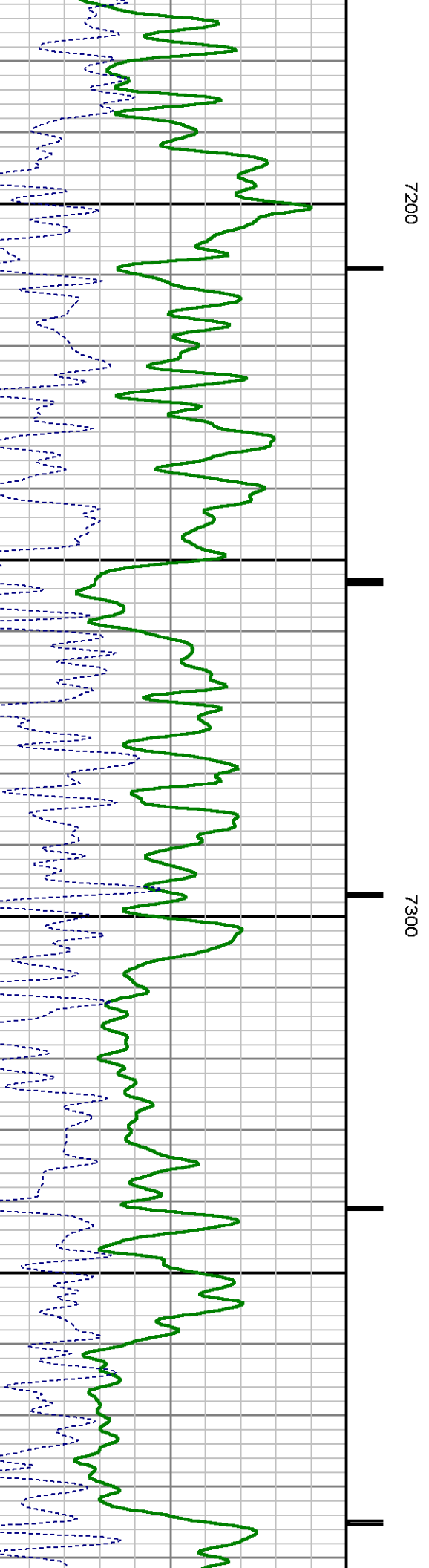
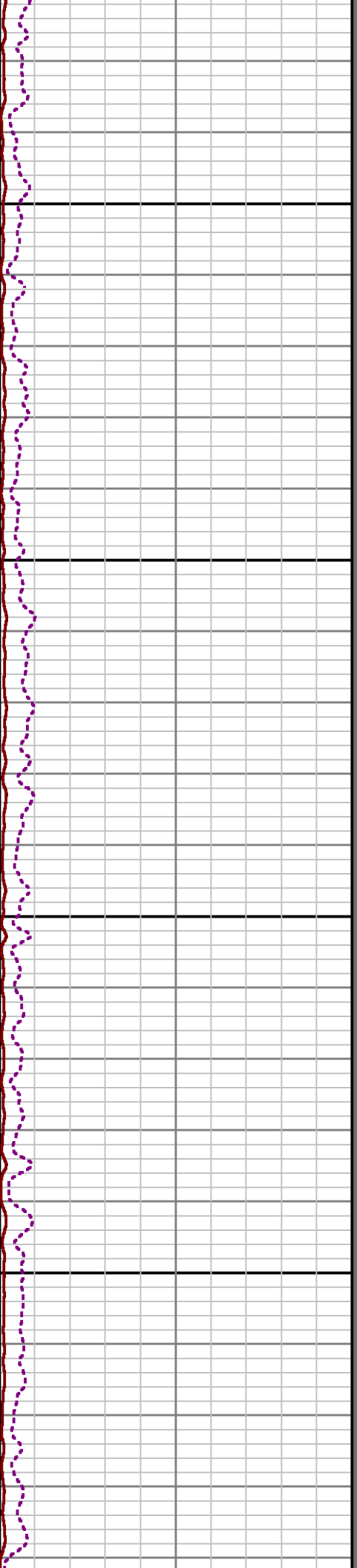
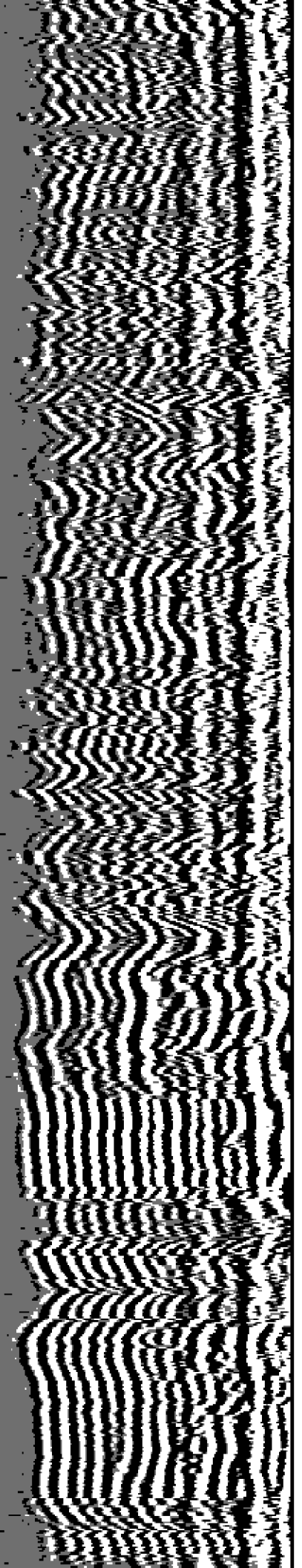
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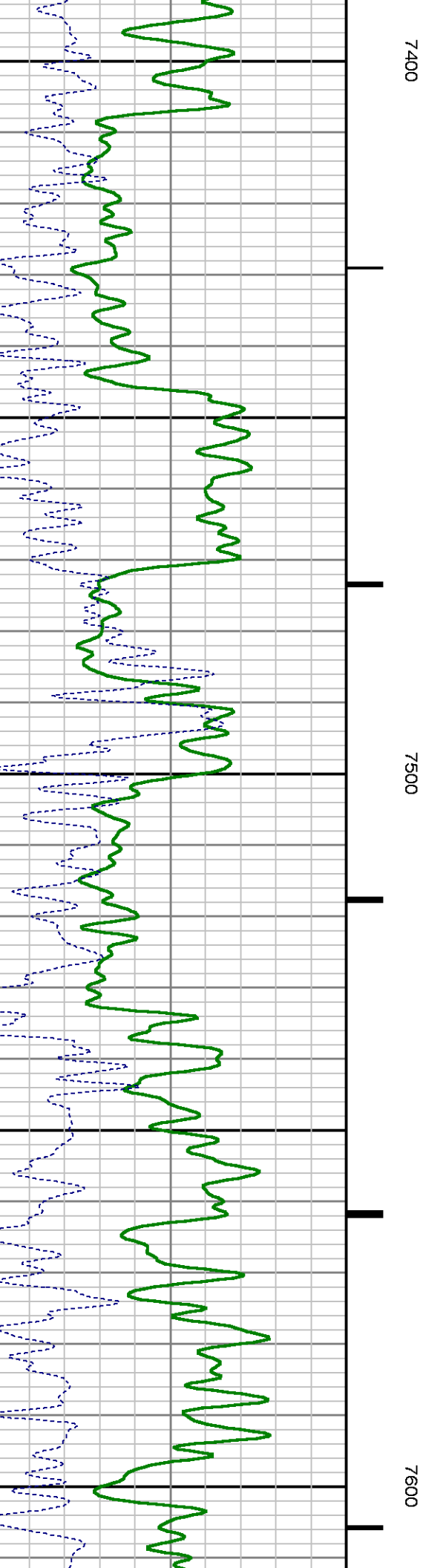
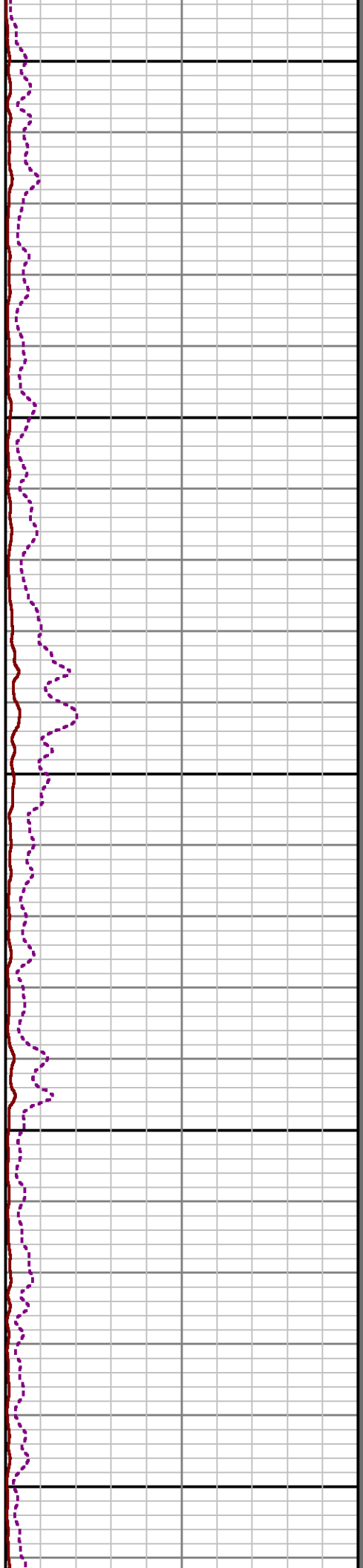
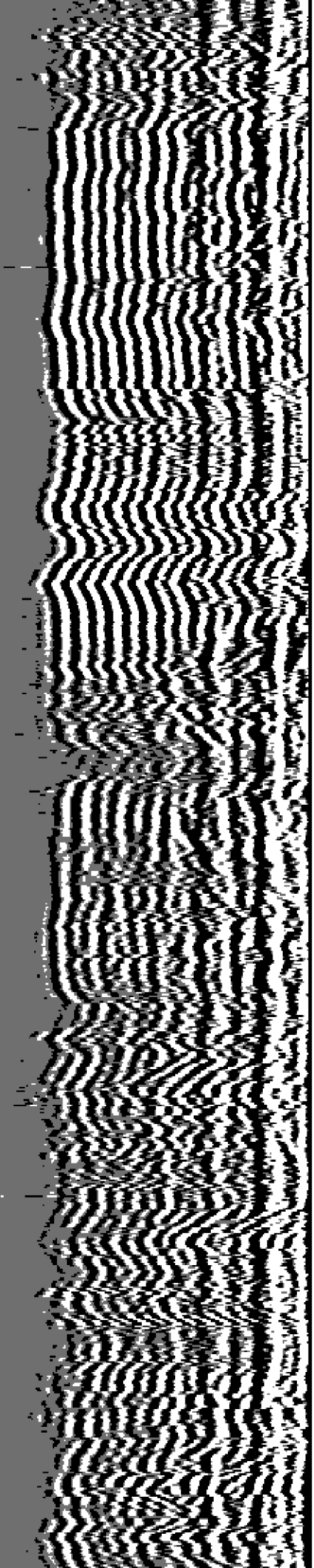


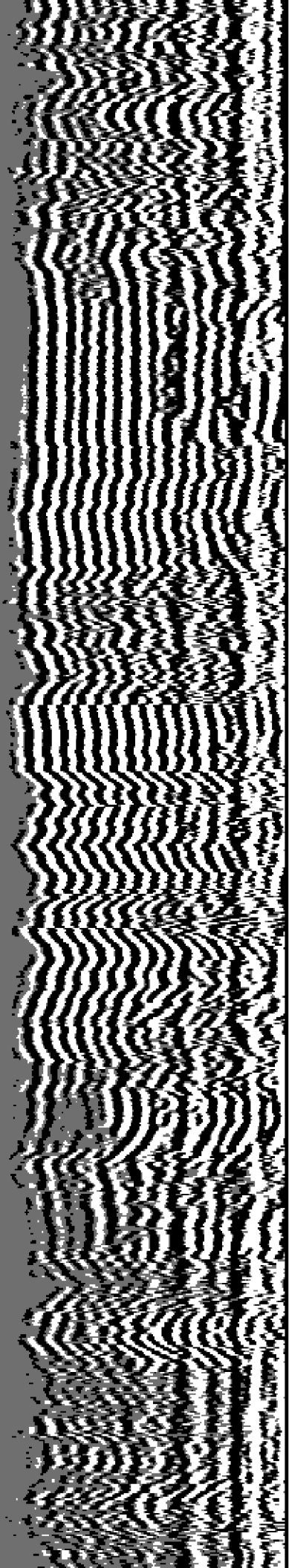






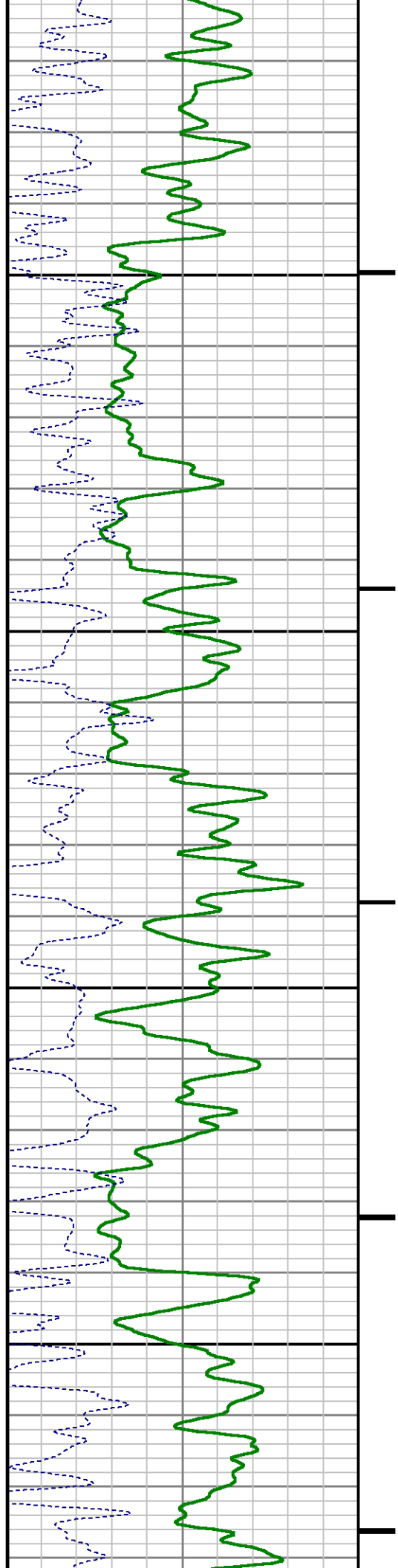


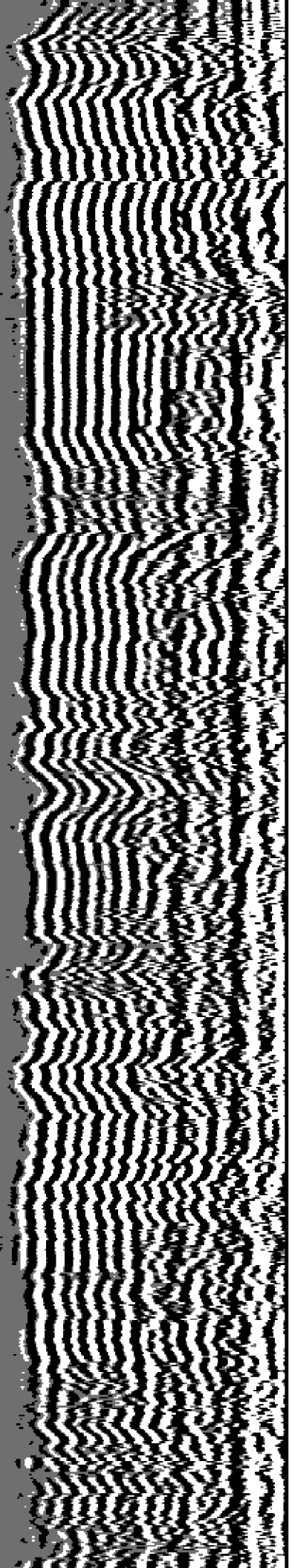




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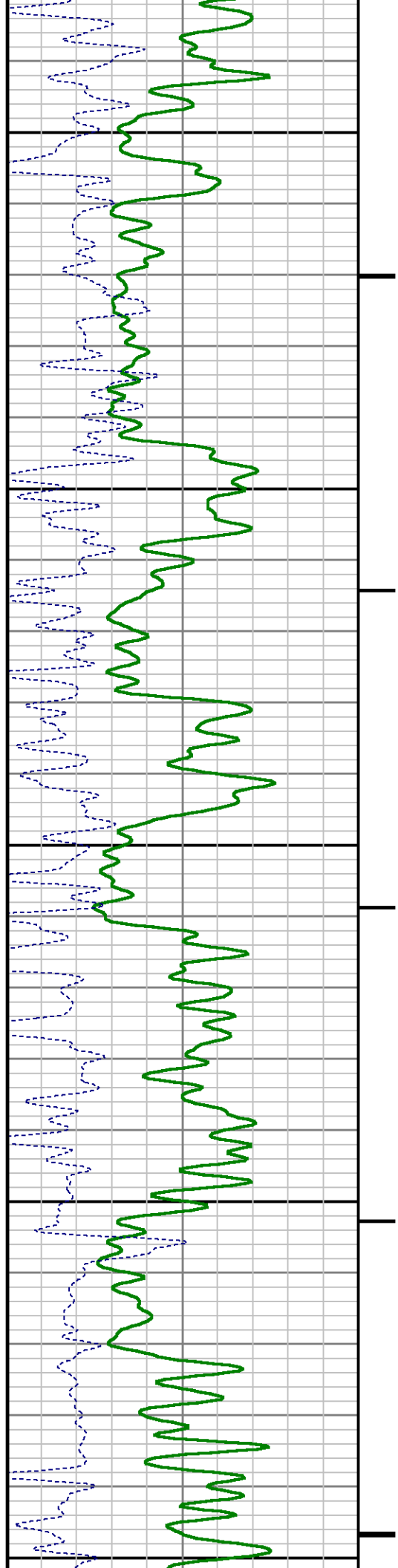
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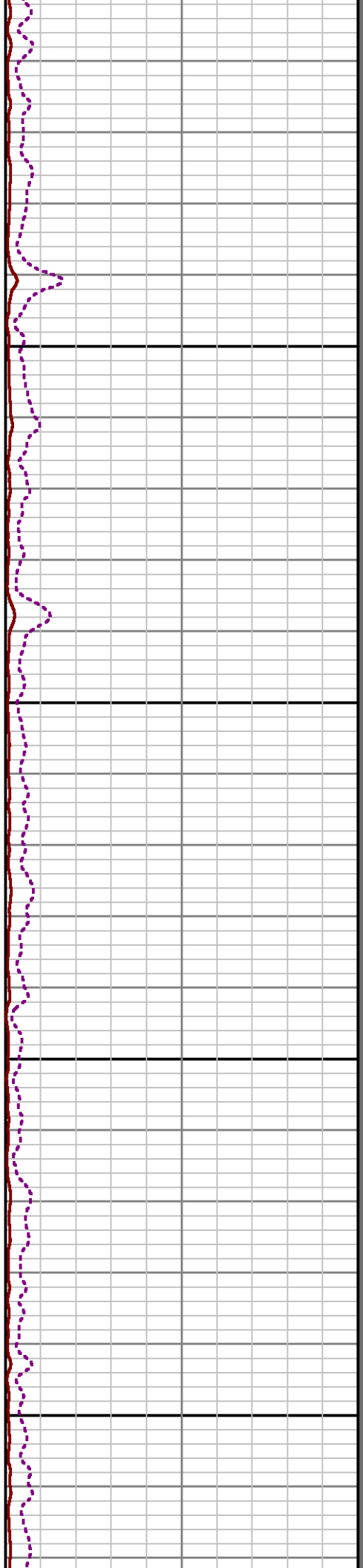
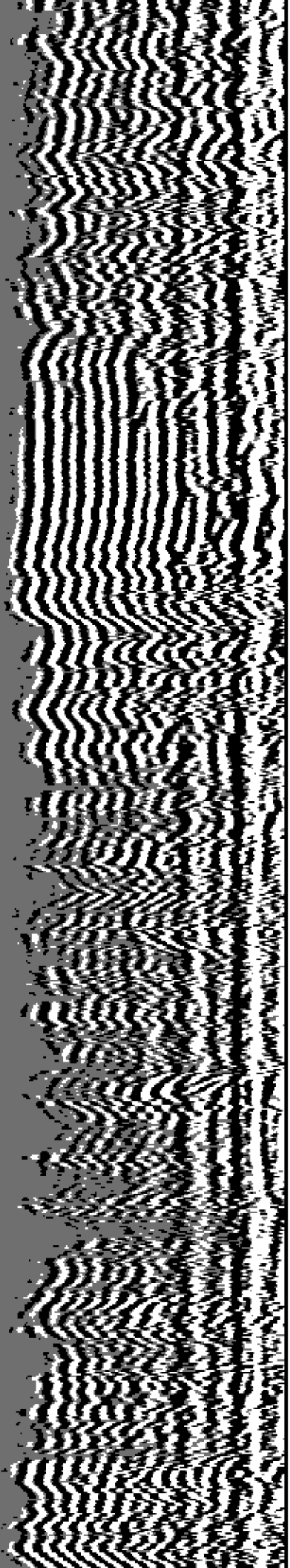




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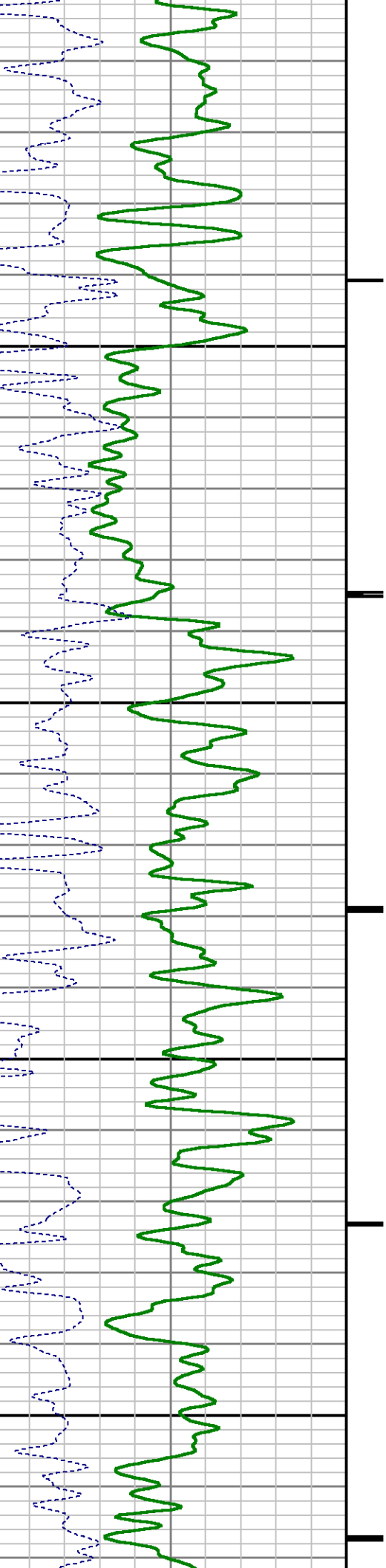
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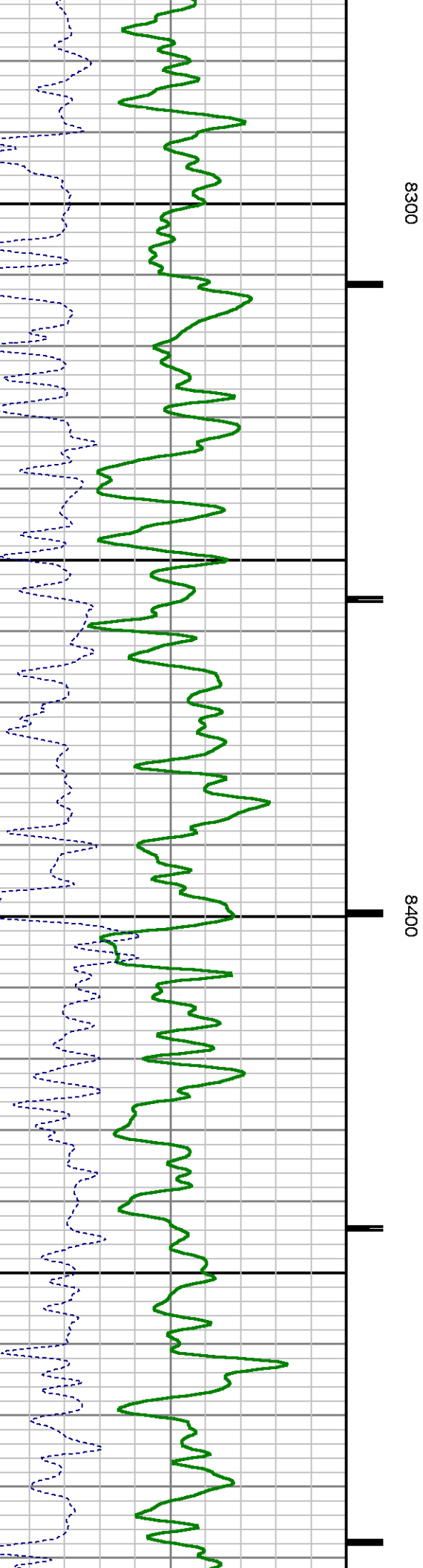
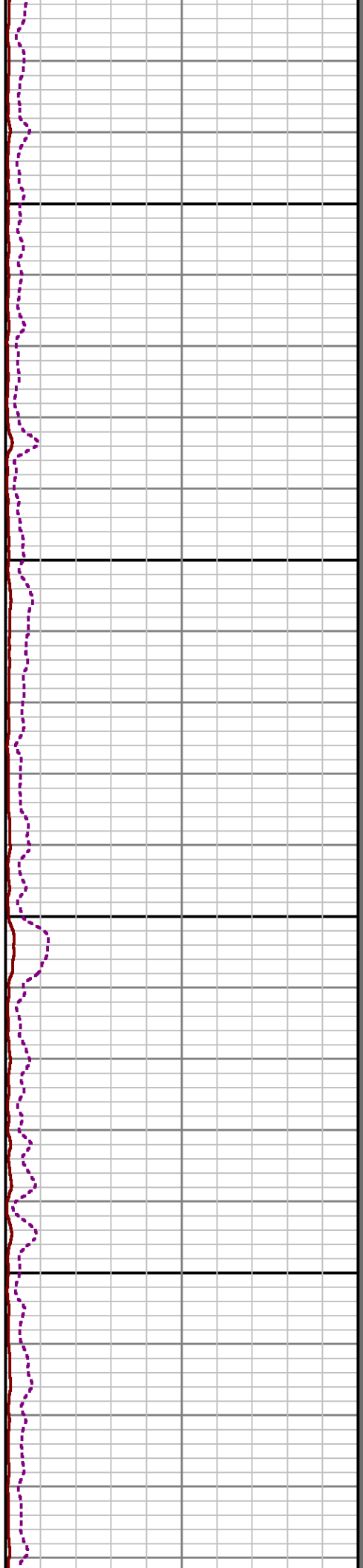
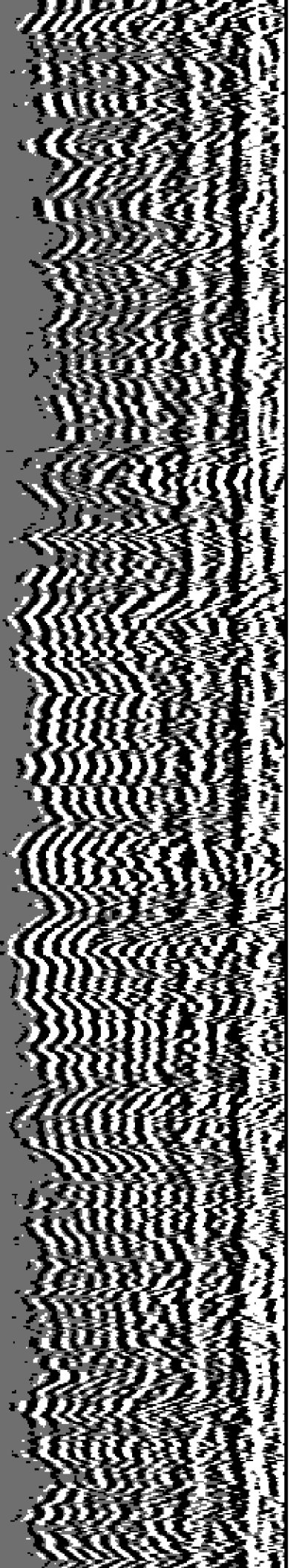




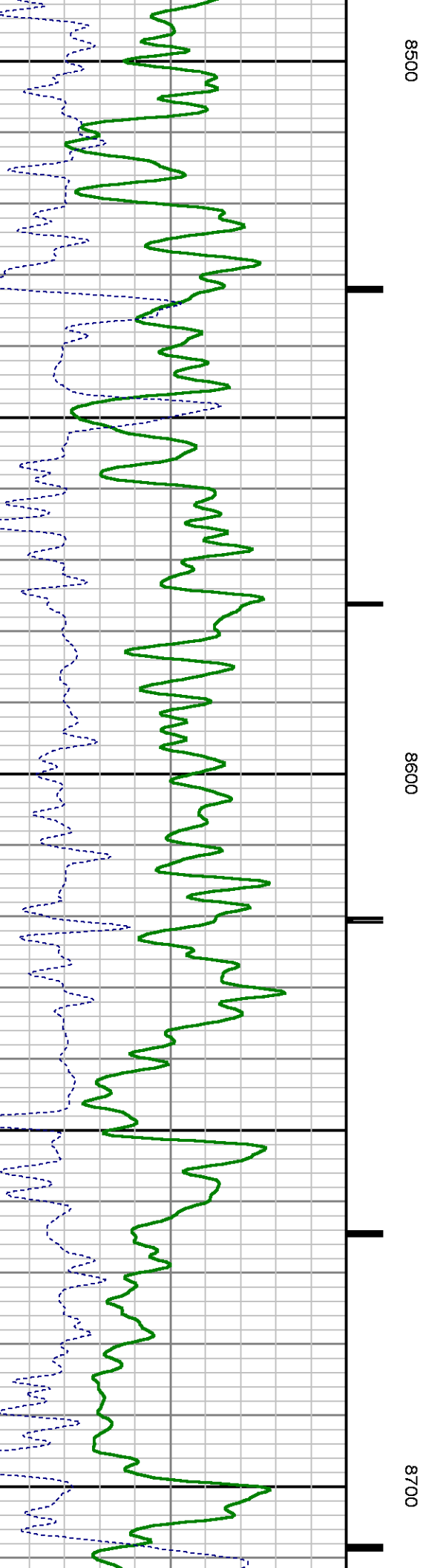
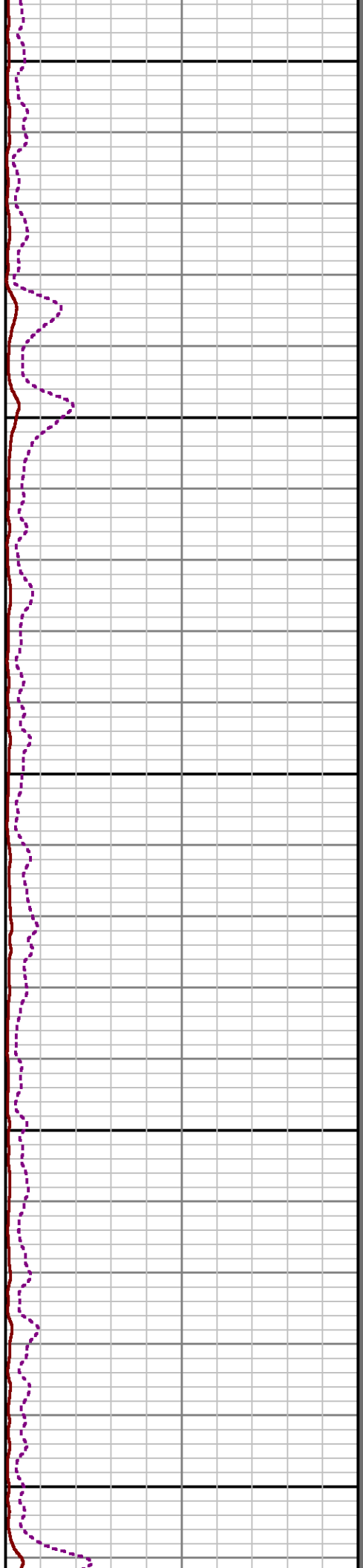
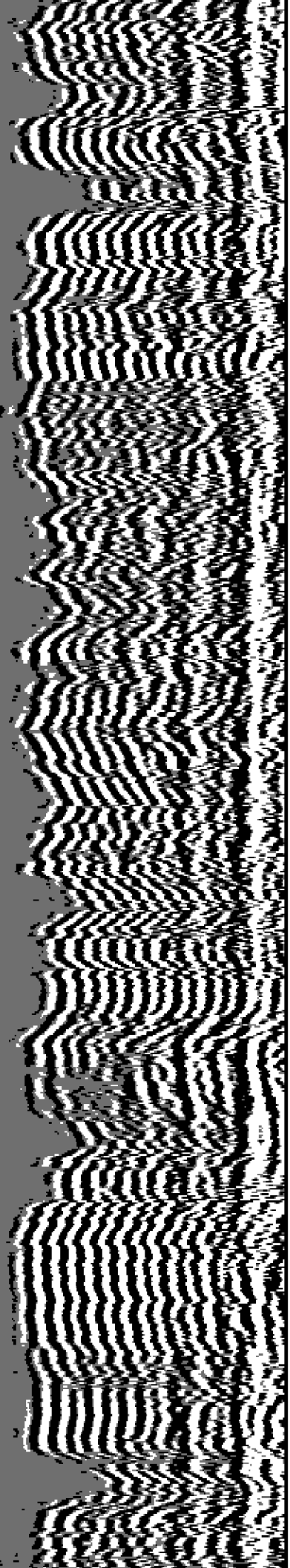
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8200

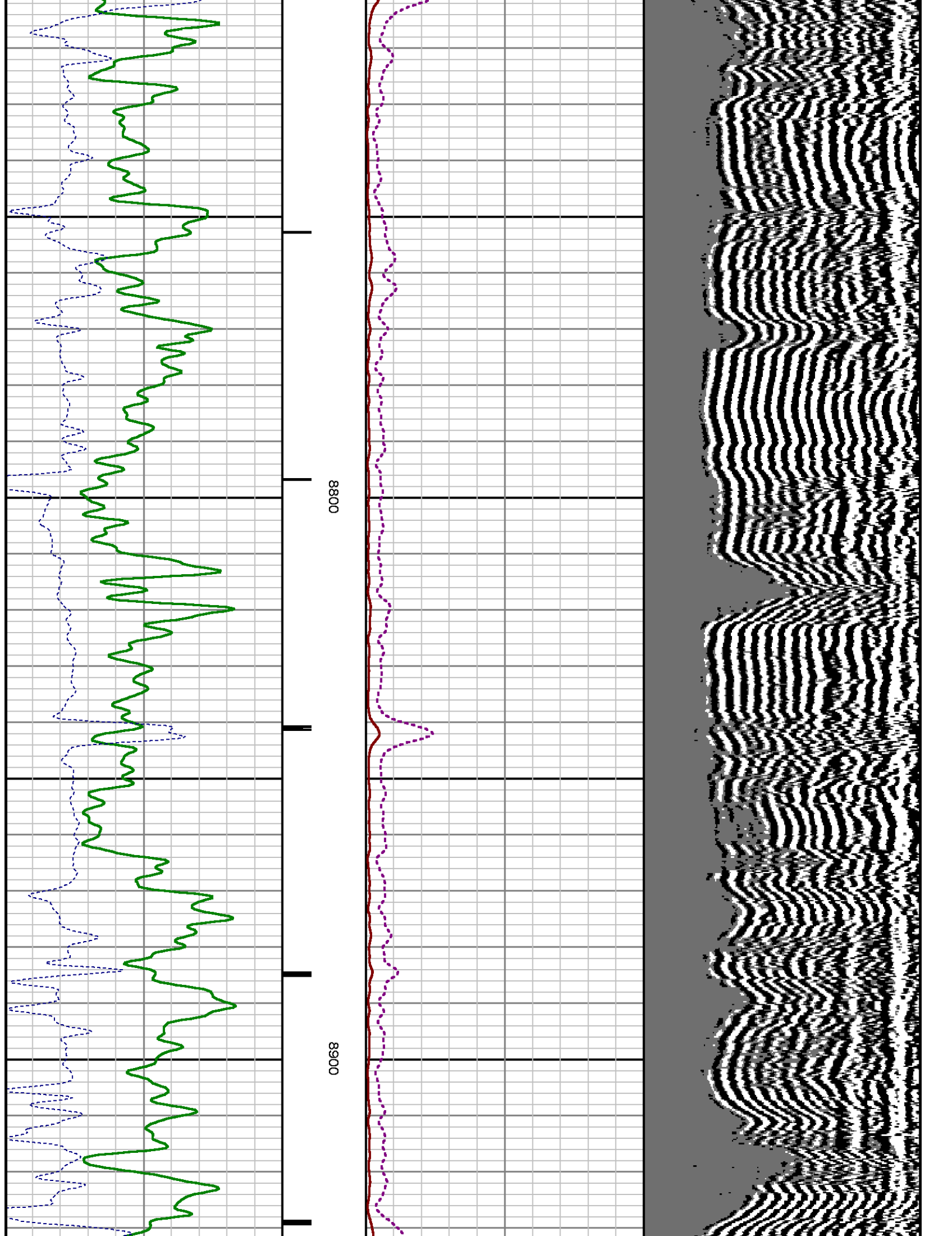


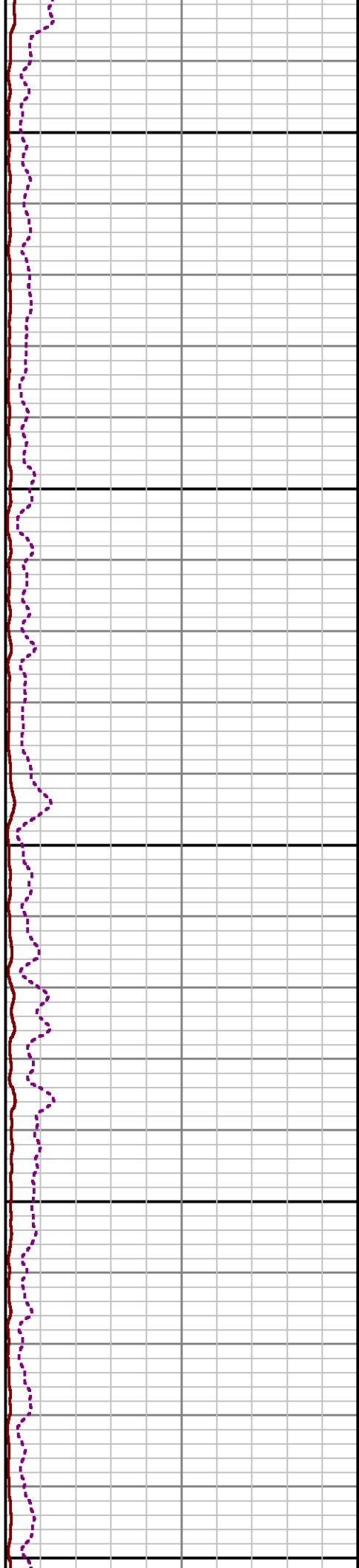
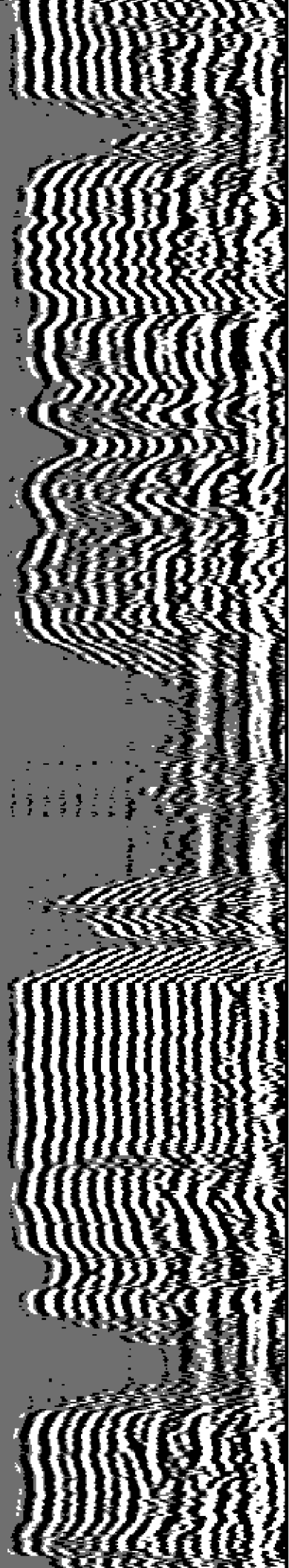






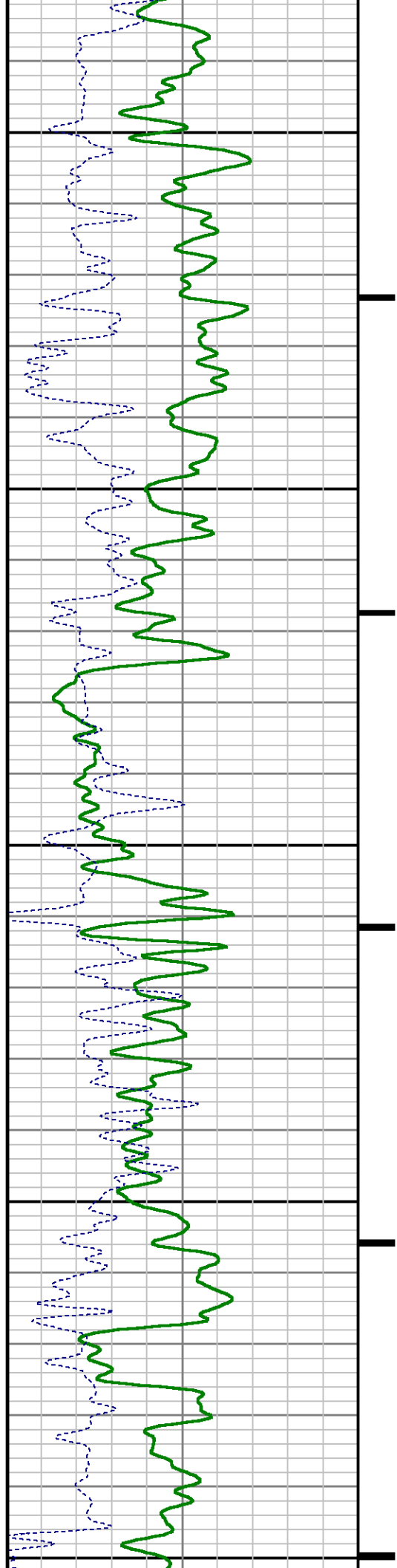


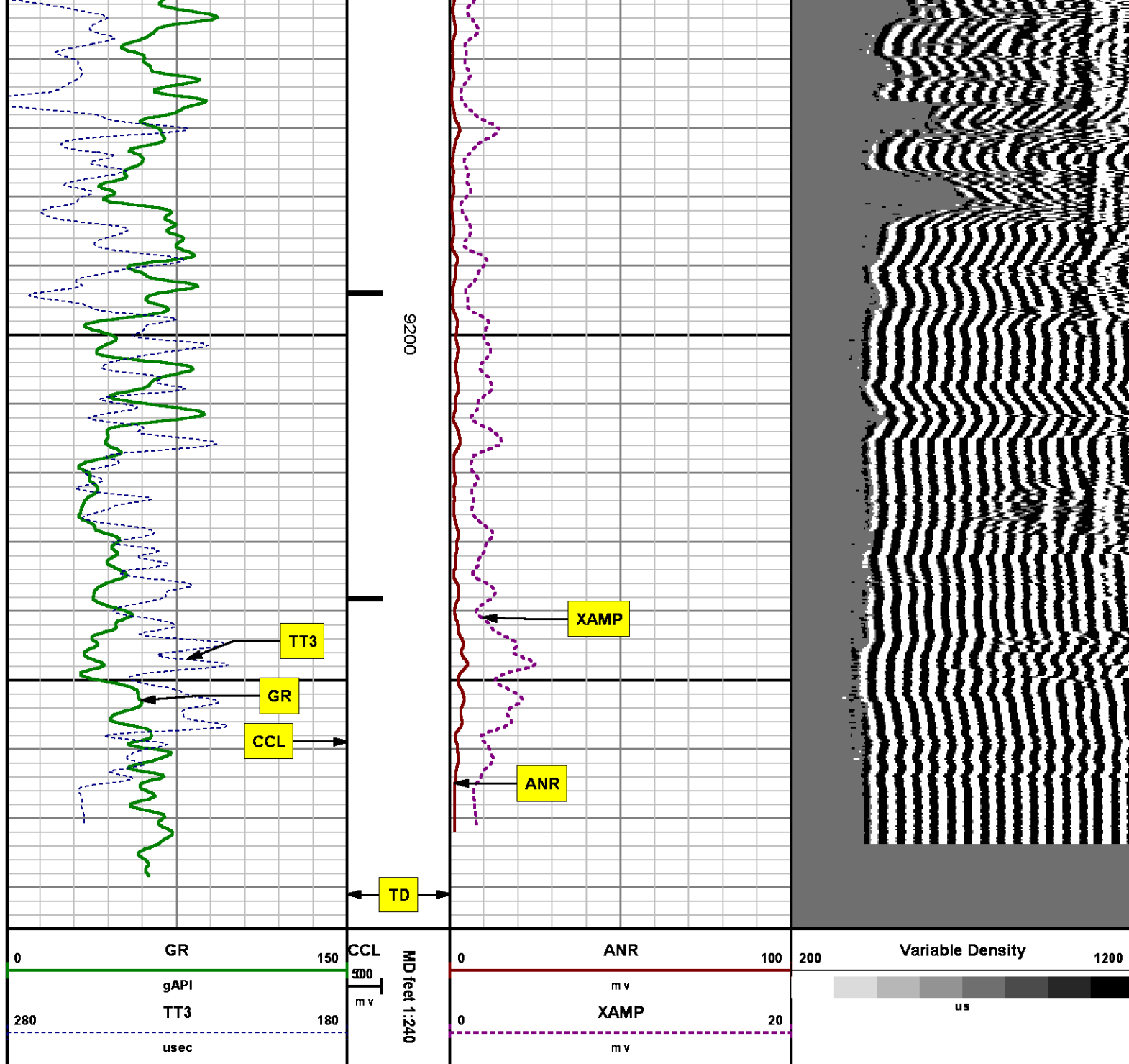




9000

9100





MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	36.405	9289.000
RAL	Amp Gate Start Near	195.000	usec	36.405	9289.000
RAL	Amp Gate Start Radial	195.000	usec	36.405	9289.000
RAL	Amp Gate Width Far	25.000	usec	36.405	9289.000
RAL	Amp Gate Width Near	25.000	usec	36.405	9289.000
RAL	Amp Gate Width Radial	25.000	usec	36.405	9289.000
RAL	casing od	4.500	inches	36.405	9289.000
RAL	casing wt	11.600	lbm/ft	36.405	9289.000
RAL	FB Start Far	291.900	usec	36.405	9289.000
RAL	FB Start Near	180.000	usec	36.405	9289.000
RAL	FB Start Radial	180.000	usec	36.405	9289.000
RAL	FB Thresh Far	10.000	mV	36.405	9289.000
RAL	FB Thresh Near	4.000	mV	36.405	9289.000
RAL	FB Thresh Radial	4.000	mV	36.405	9289.000
RAL	Fluid Travel Time	200.000	usec/ft	36.405	9289.000

## 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

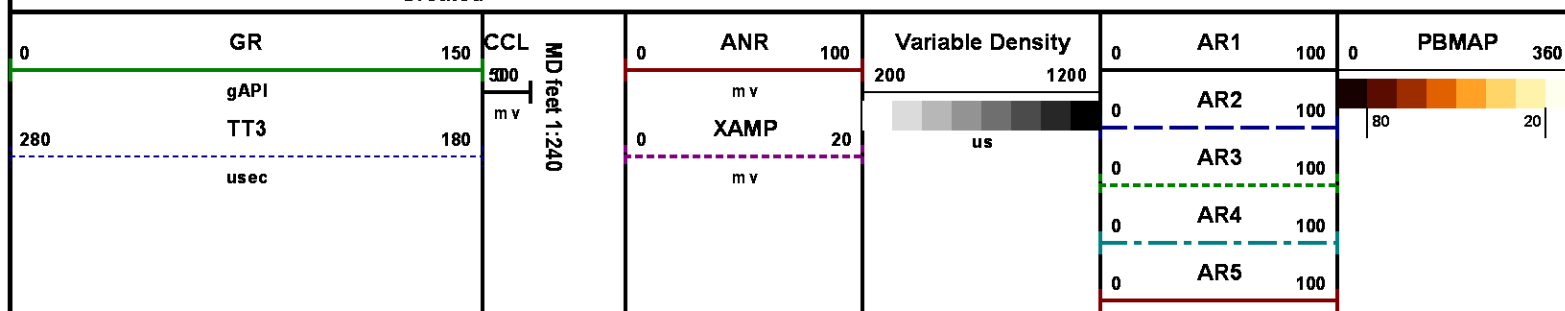
Well : FEDERAL PA 532-21

File Name : d:\well\data\wpx\pa 532-21\532ral\main.xtf

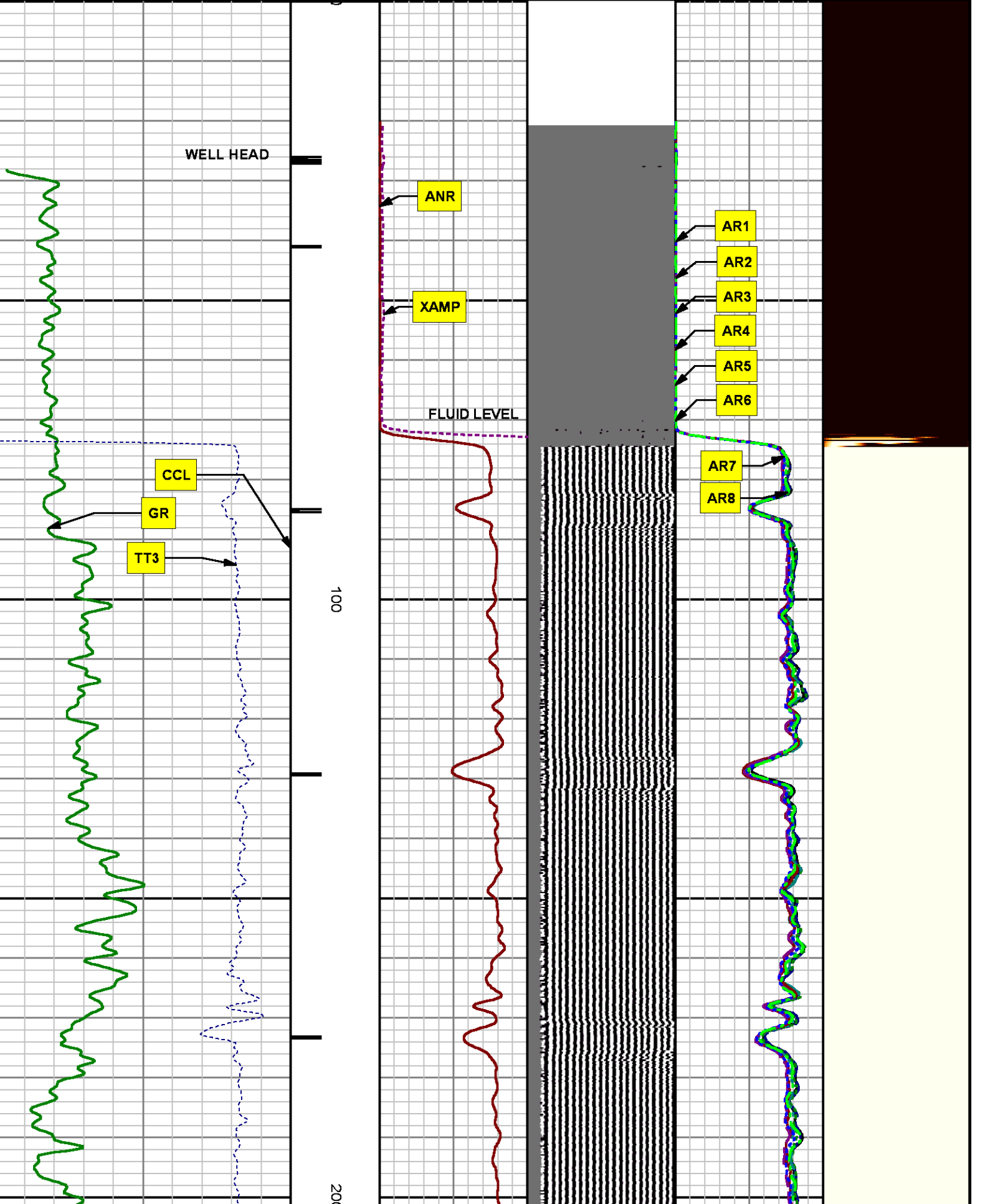
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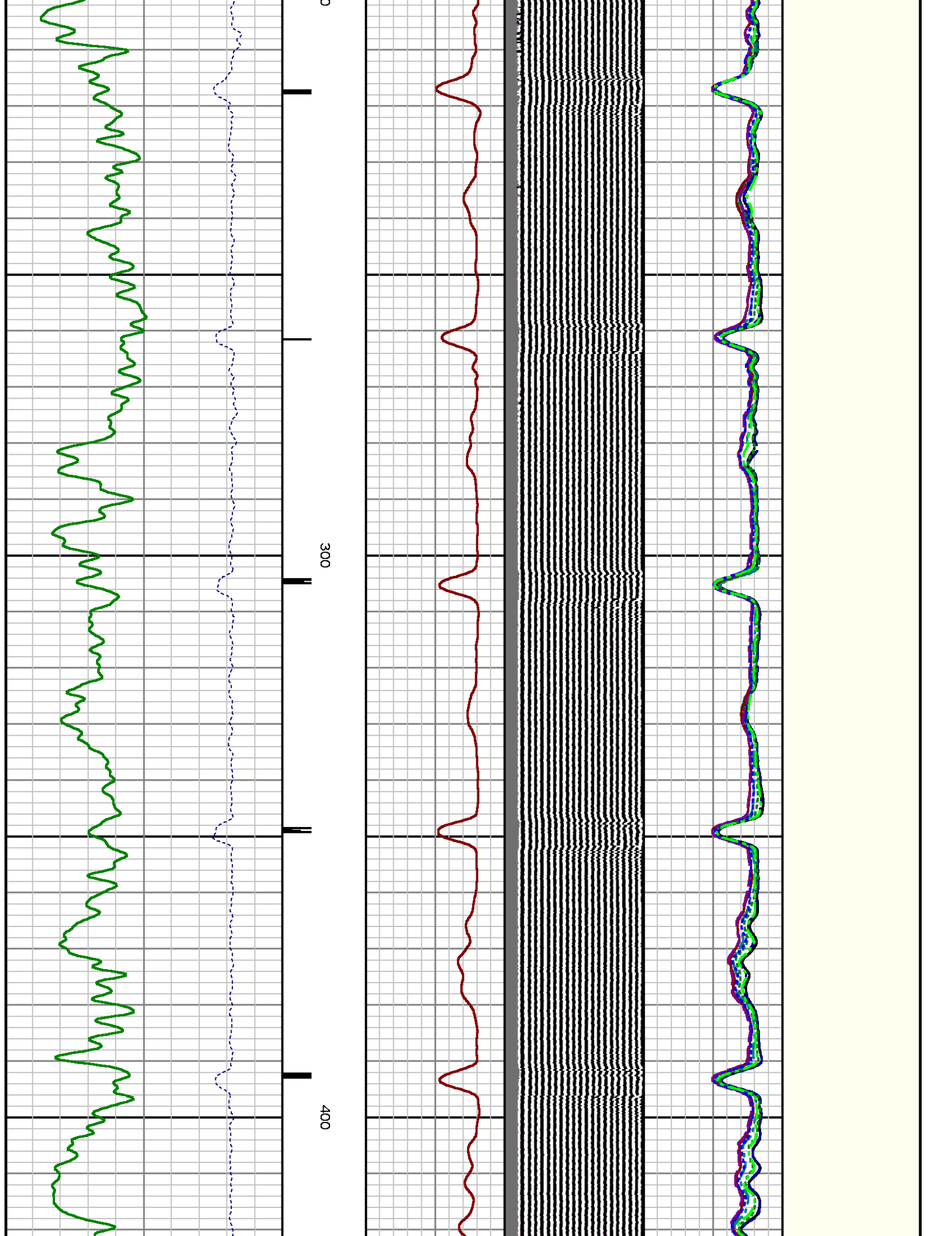
Interval : 0.00 - 9286.00 feet UP

Created : 4/2/2014 1:29:07 PM

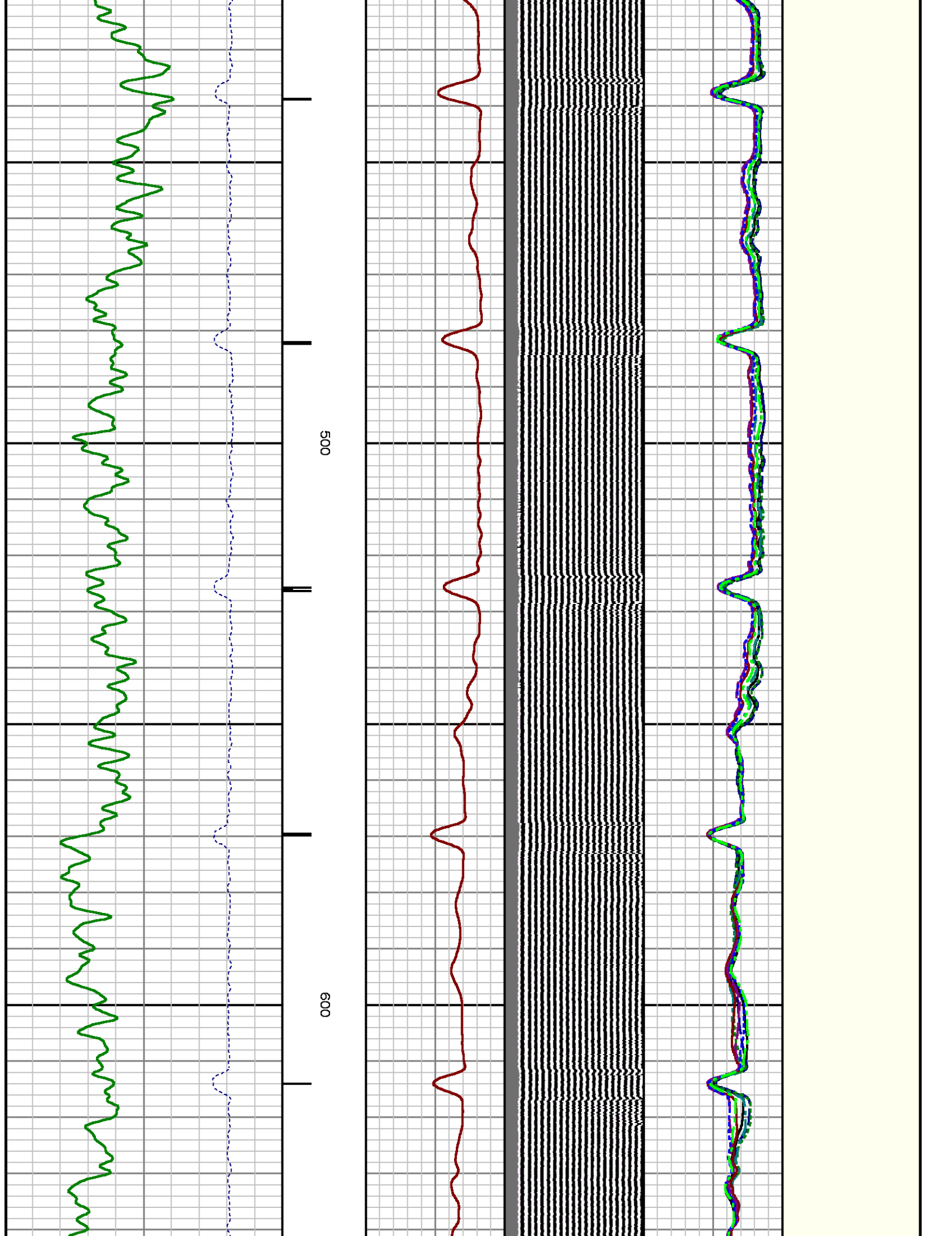


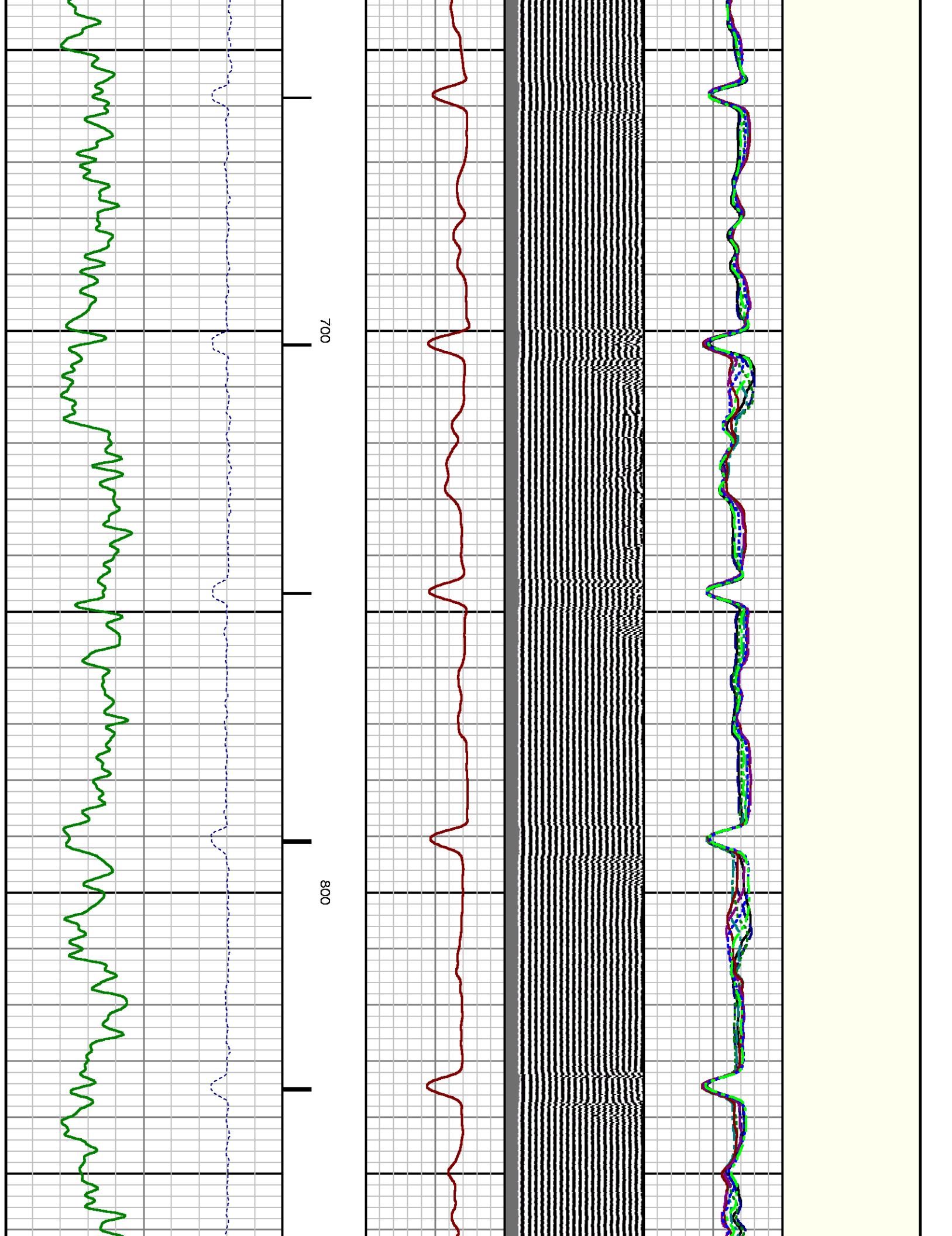
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0	AR7	100
0	AR8	100

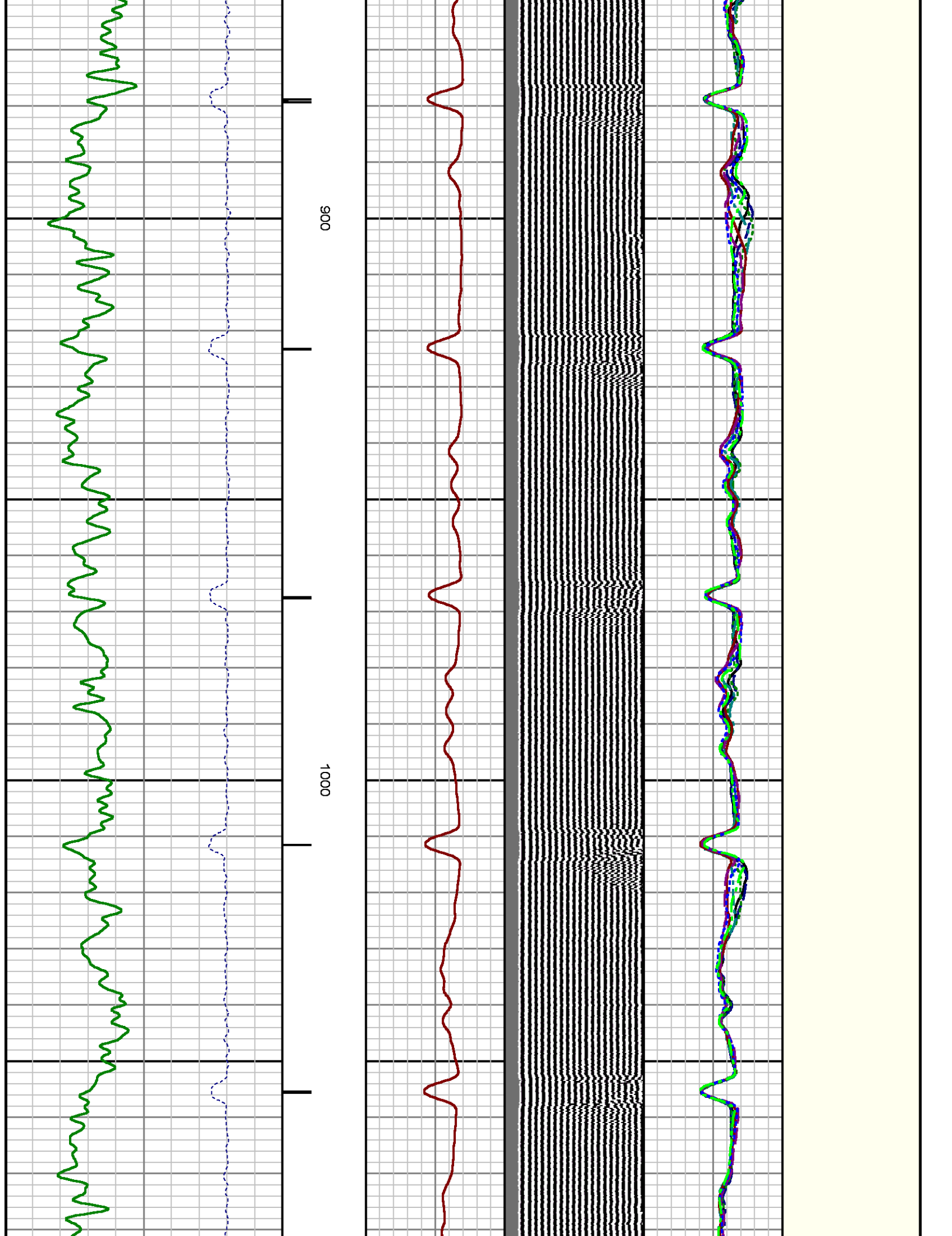


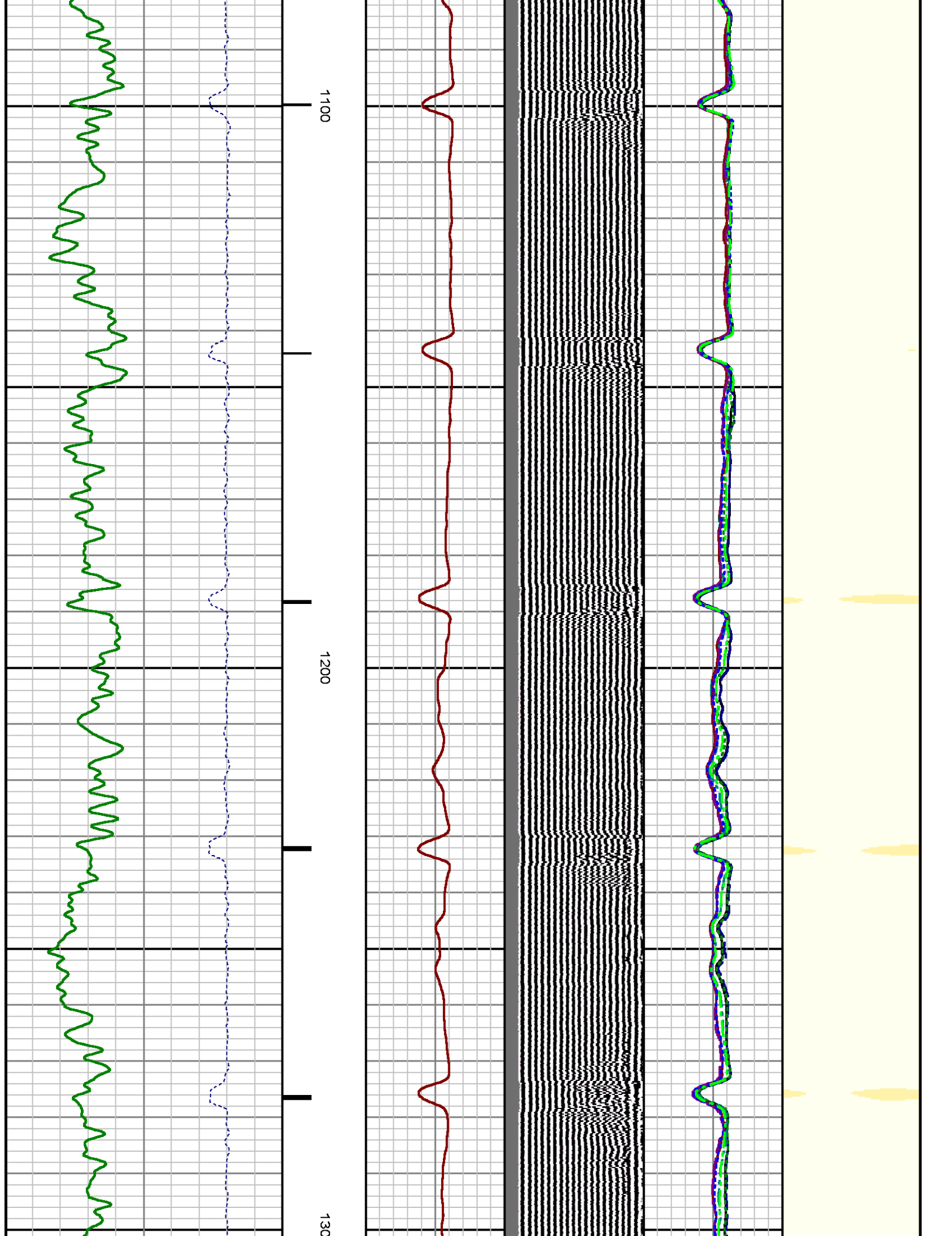


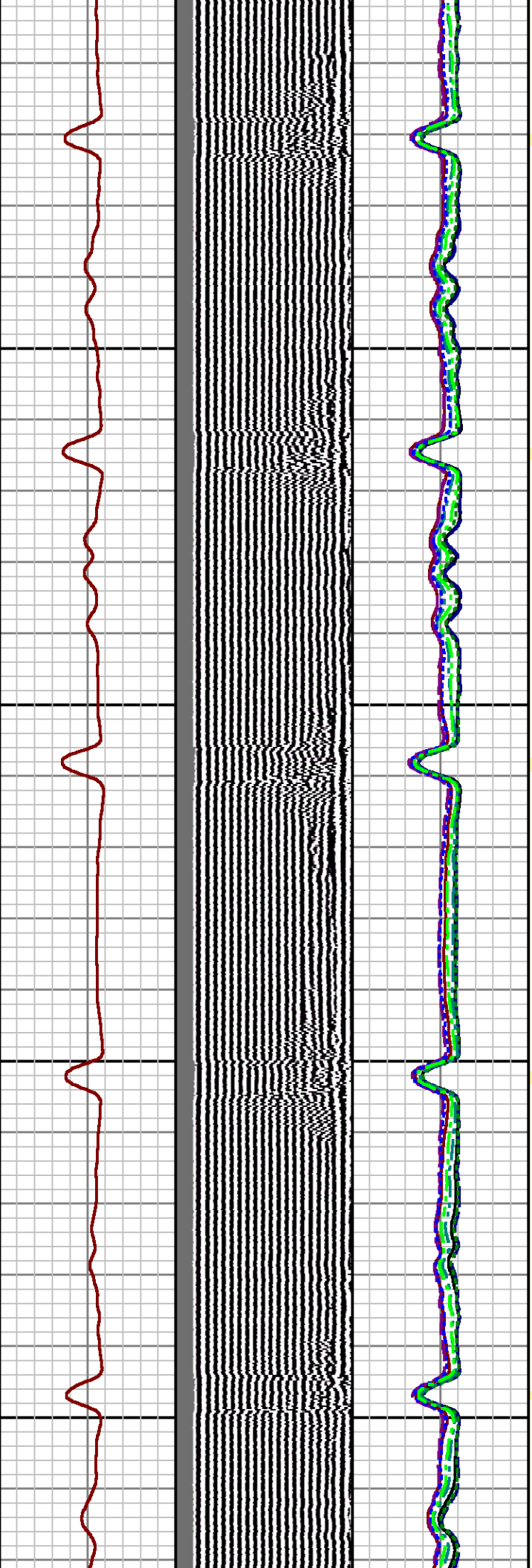




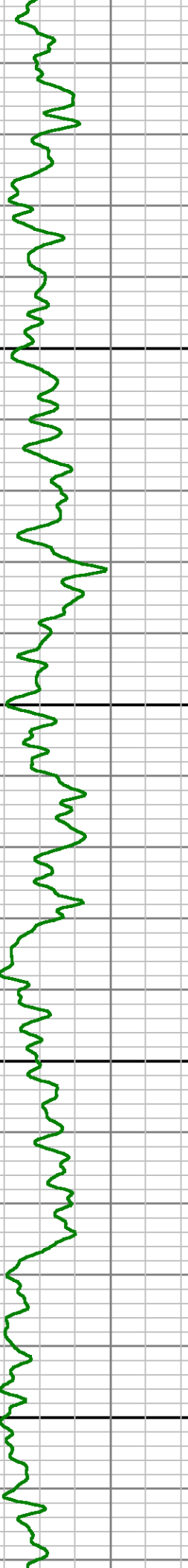




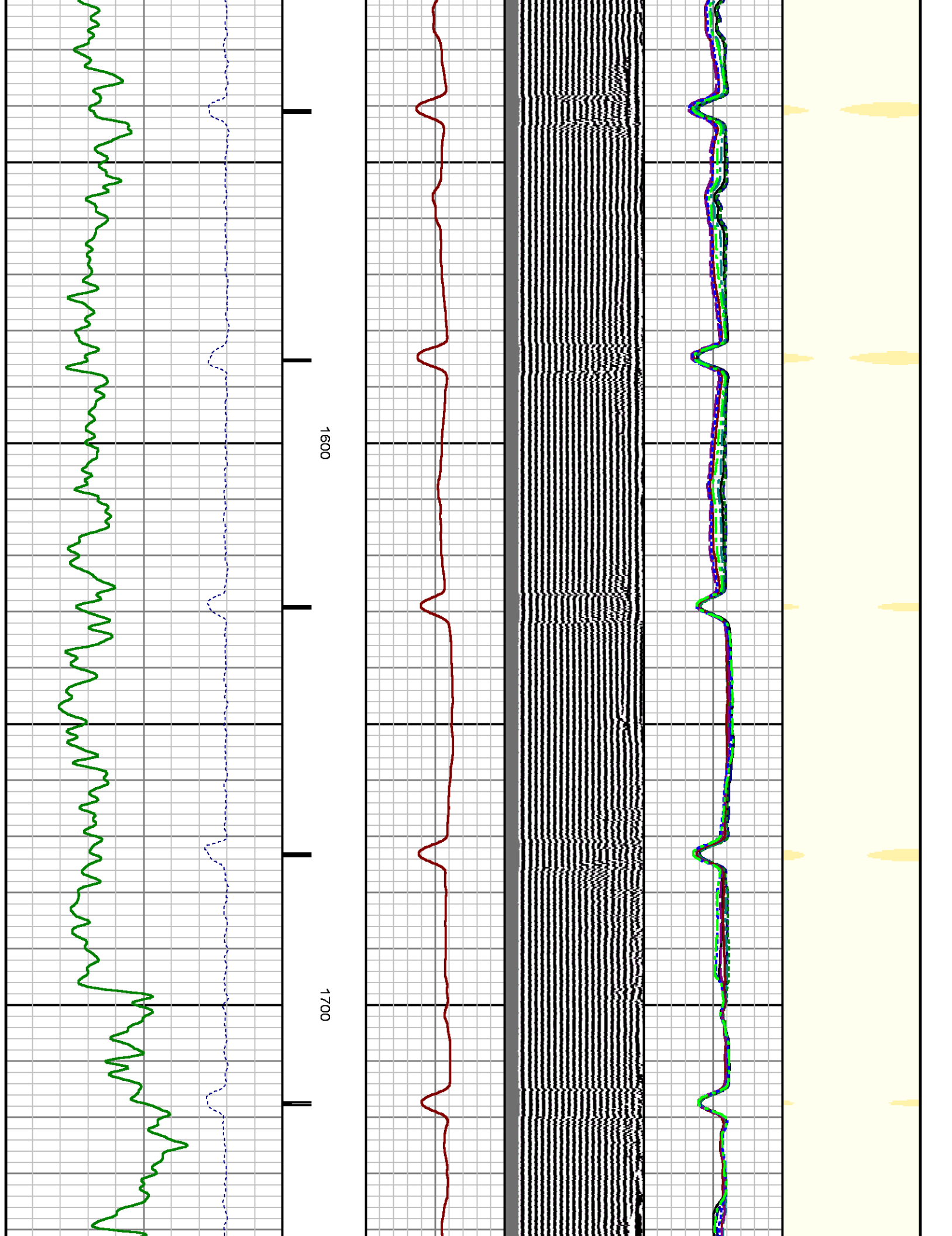




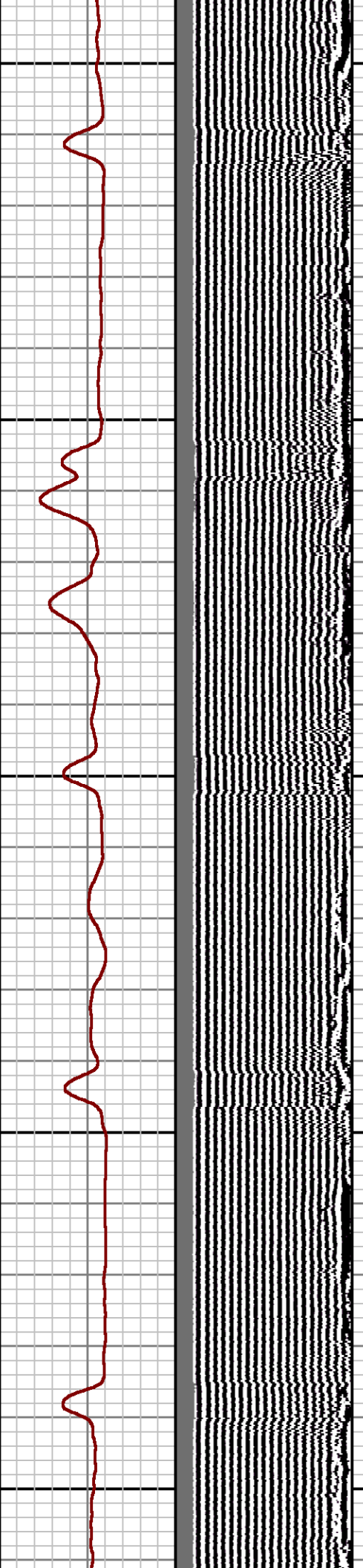
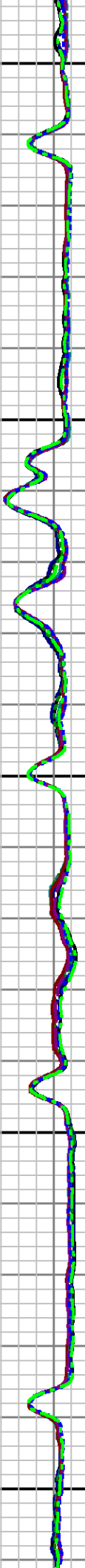
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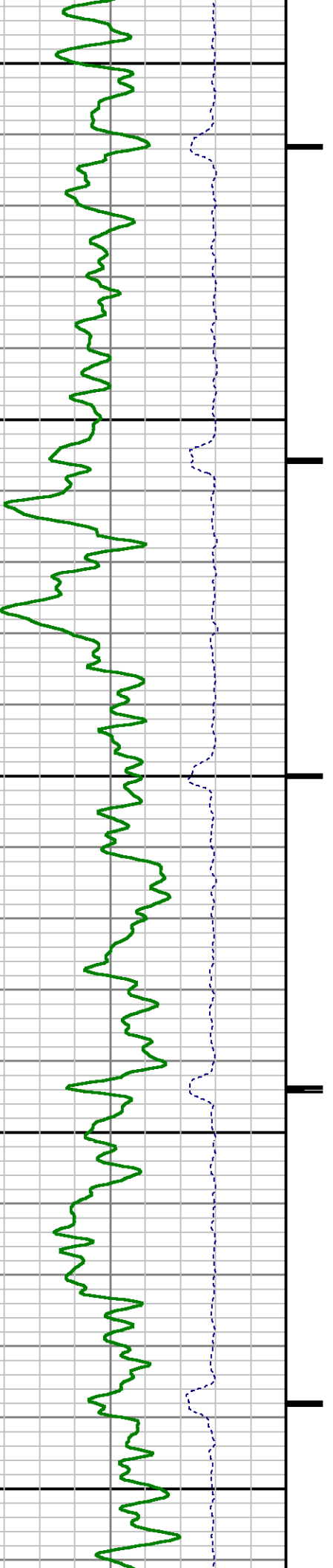


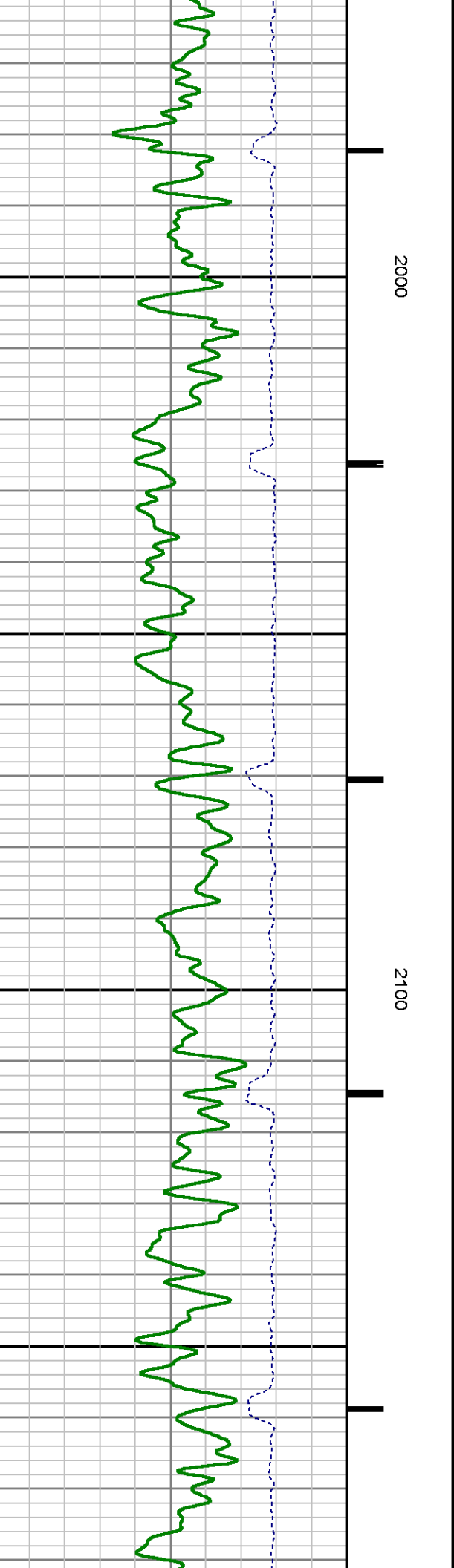
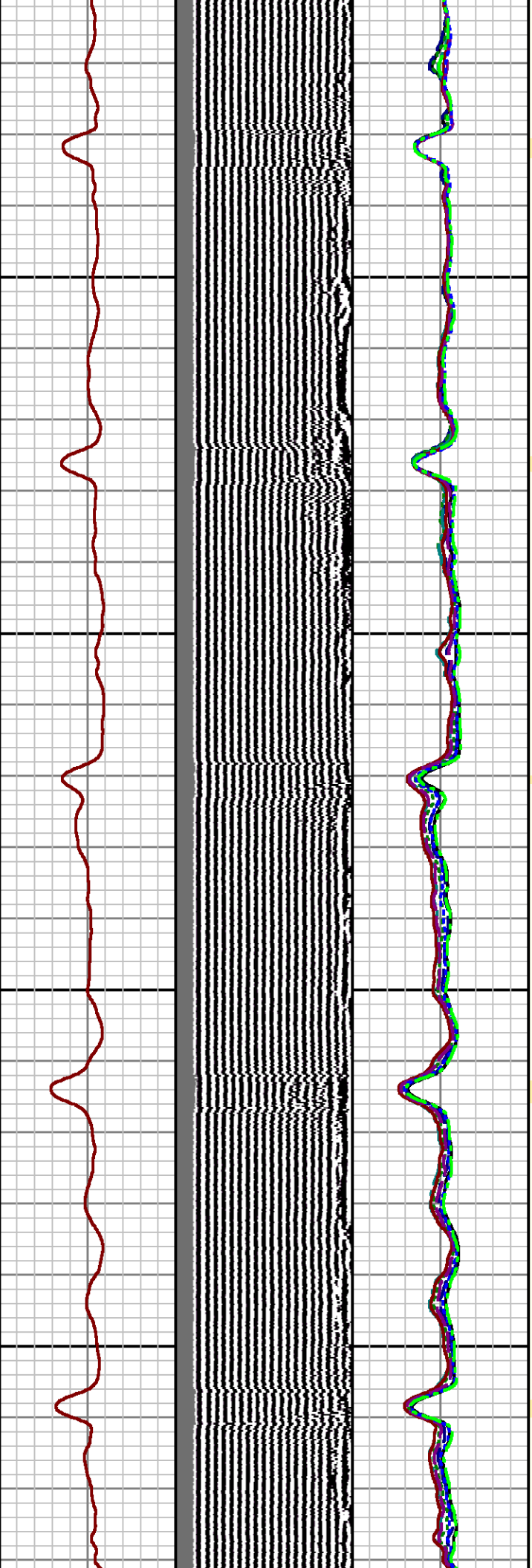


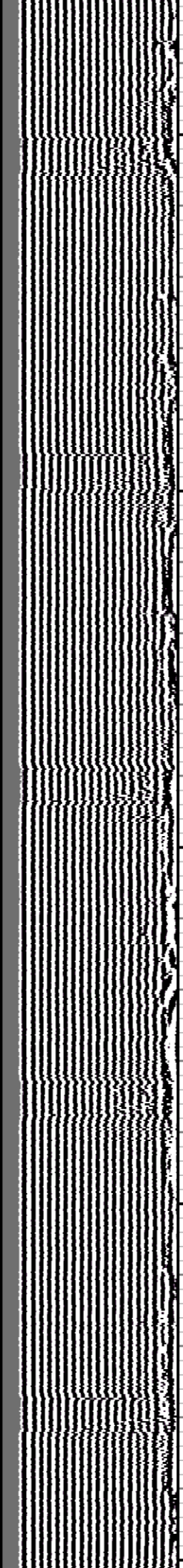
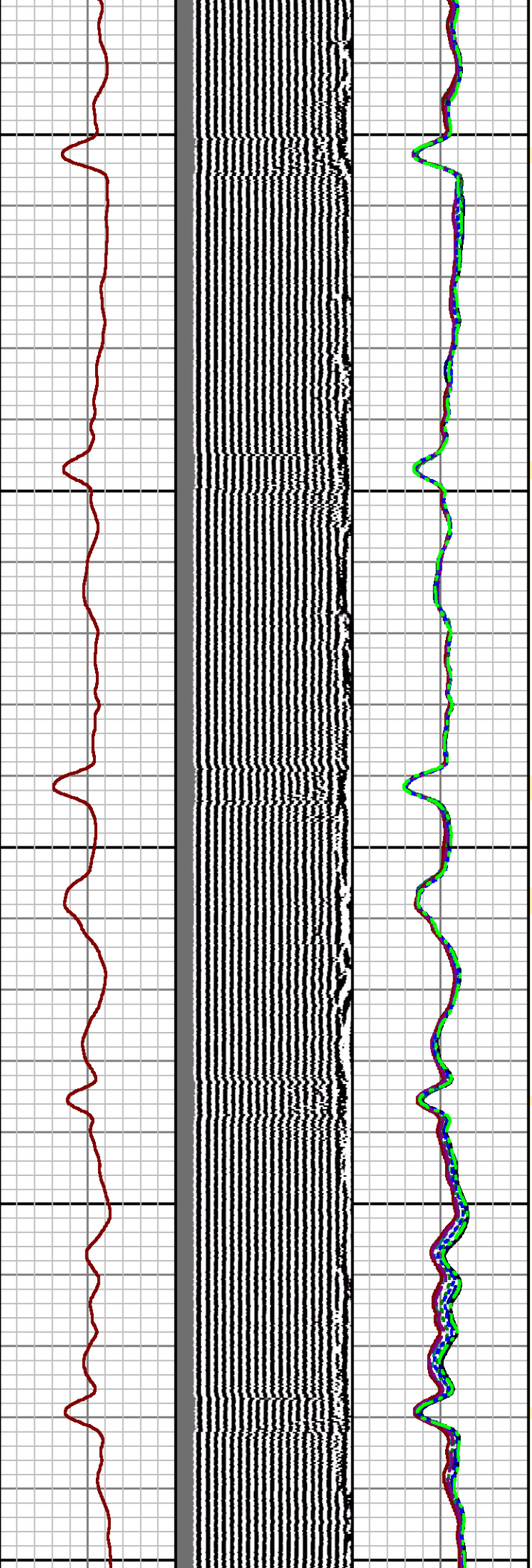


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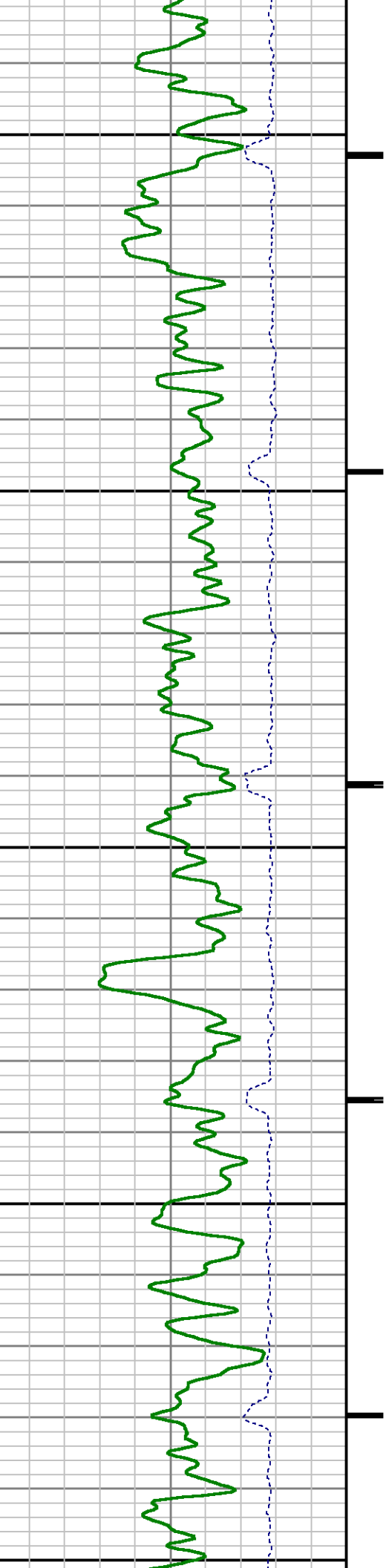


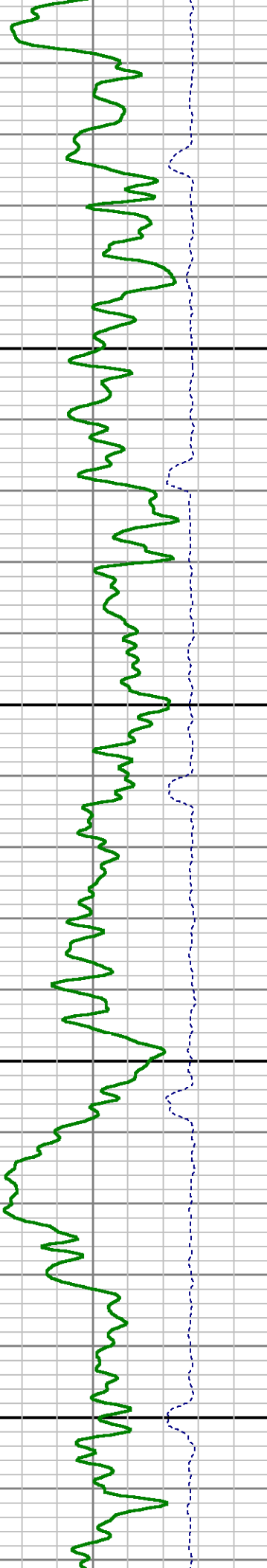
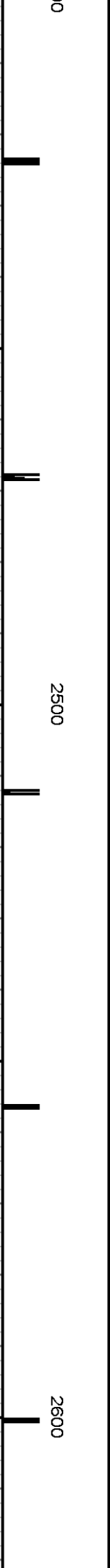
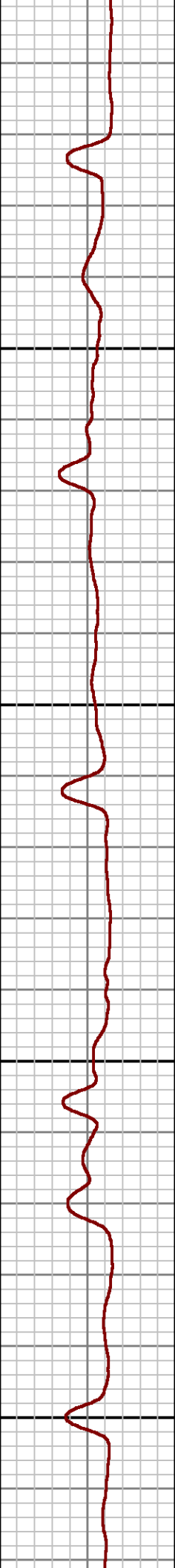
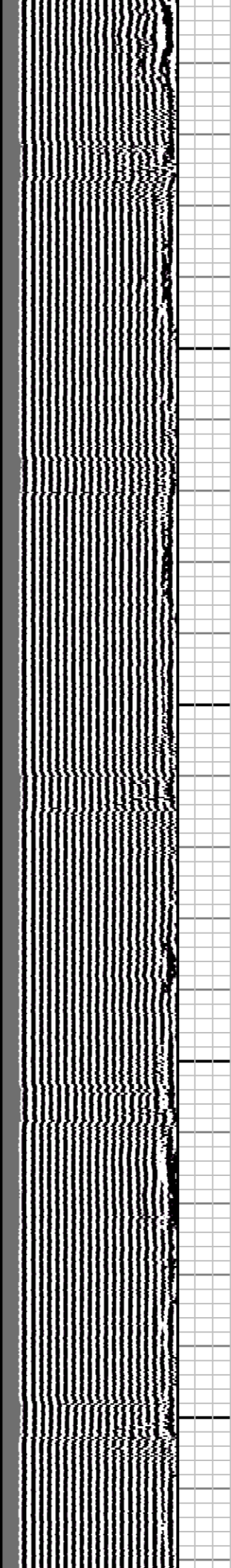
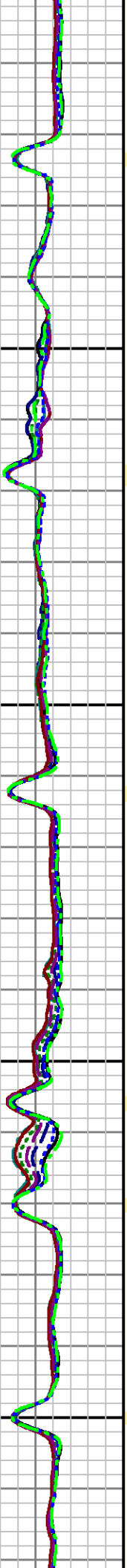


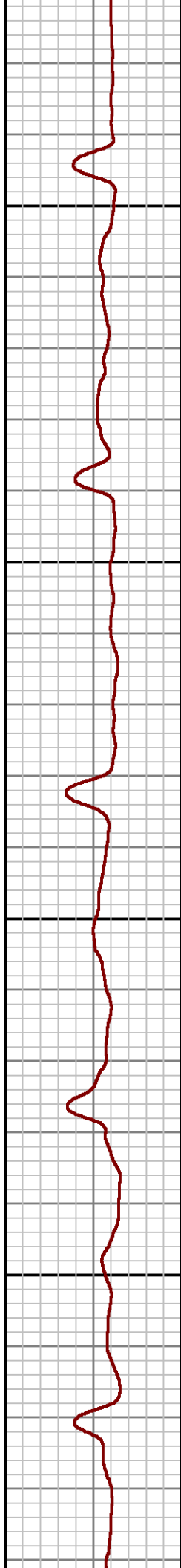
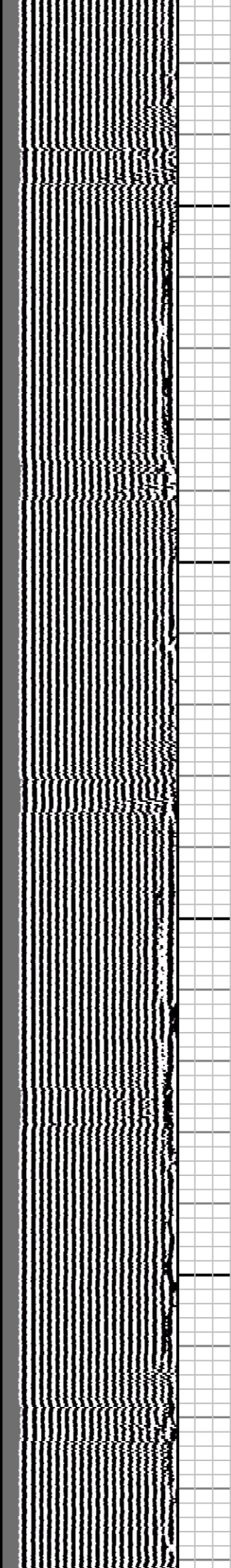
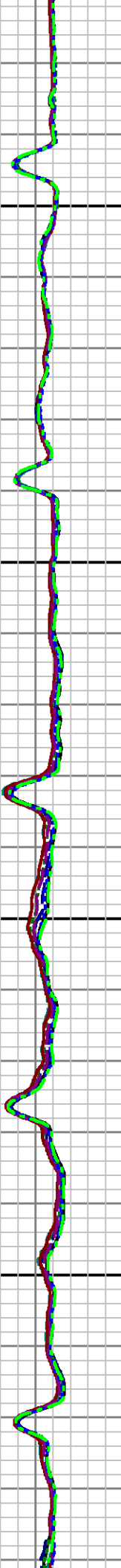
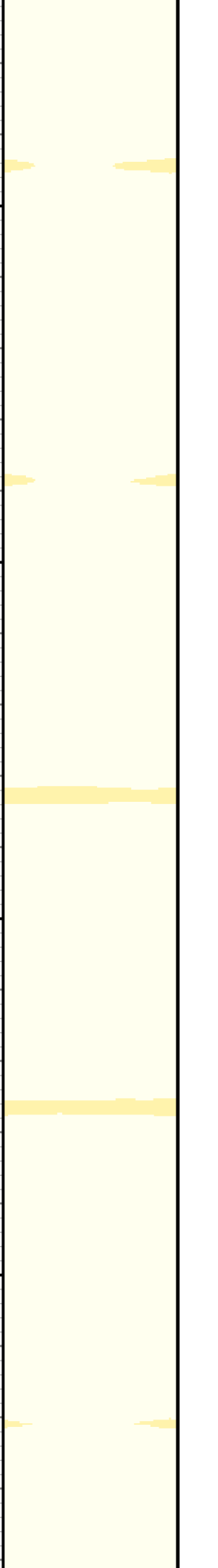
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2300

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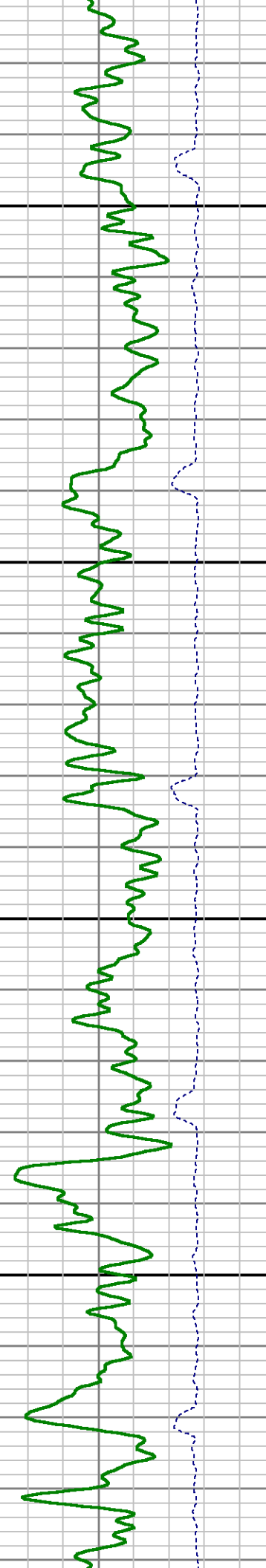




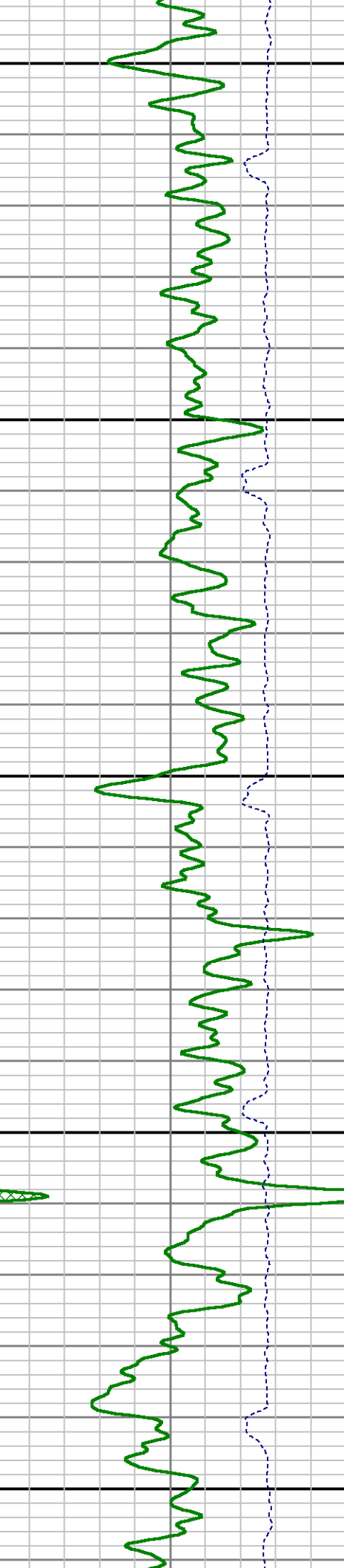
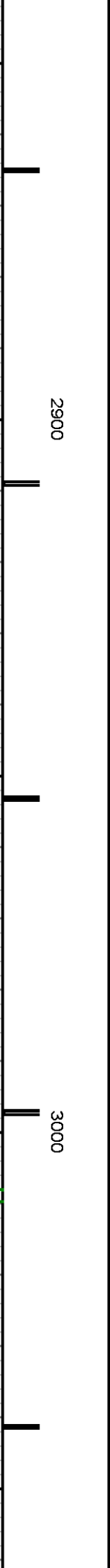
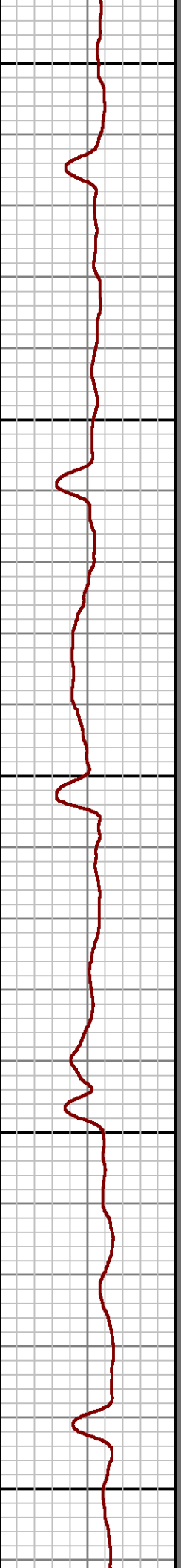
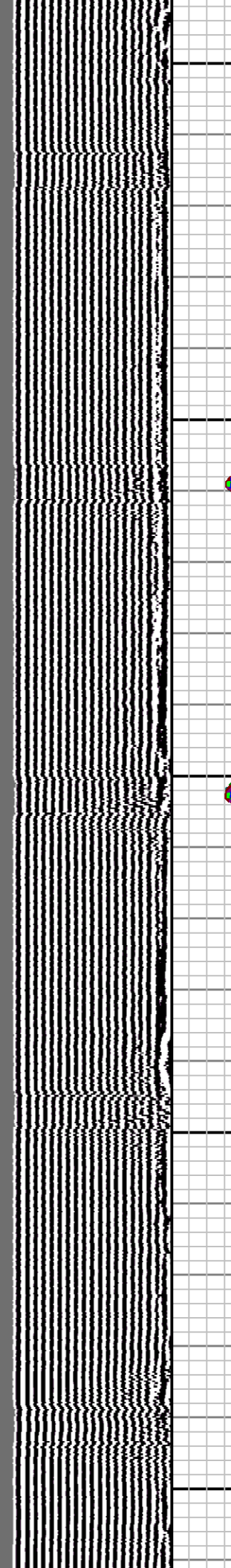
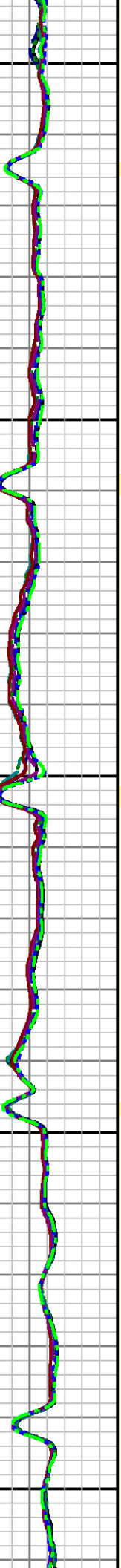


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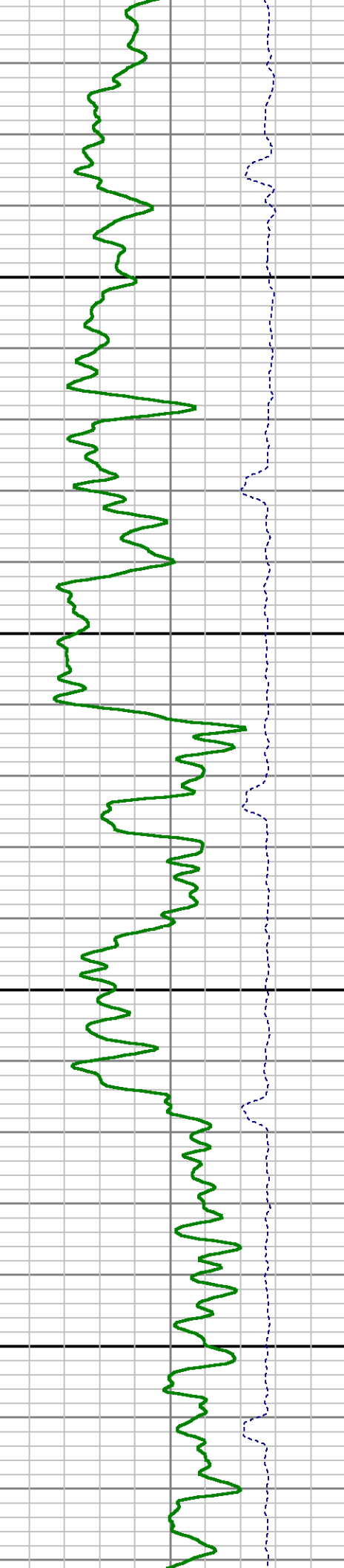
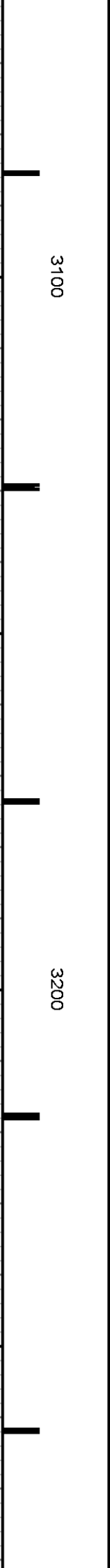
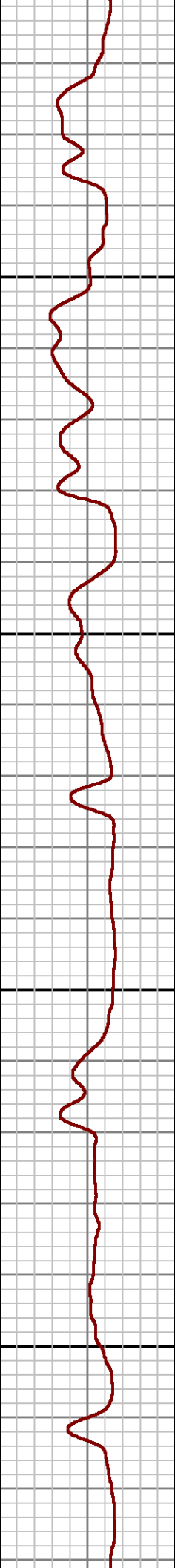
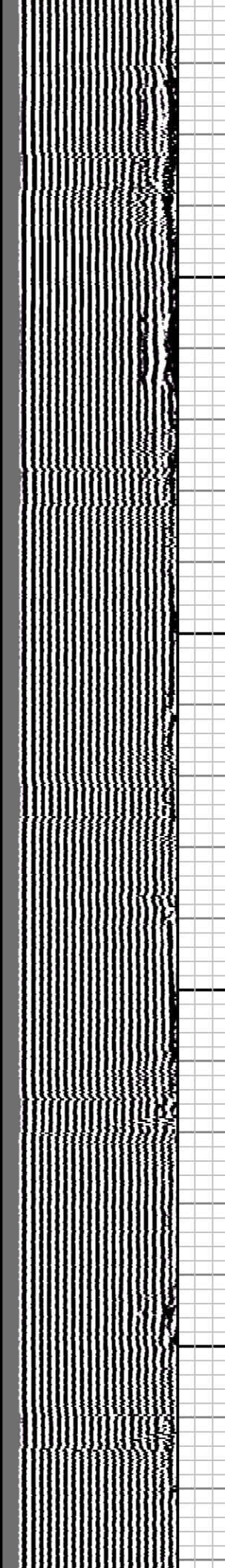
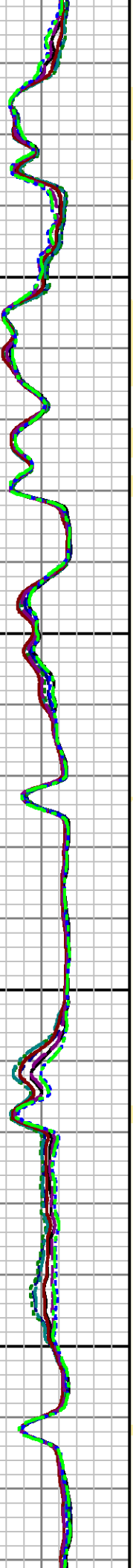


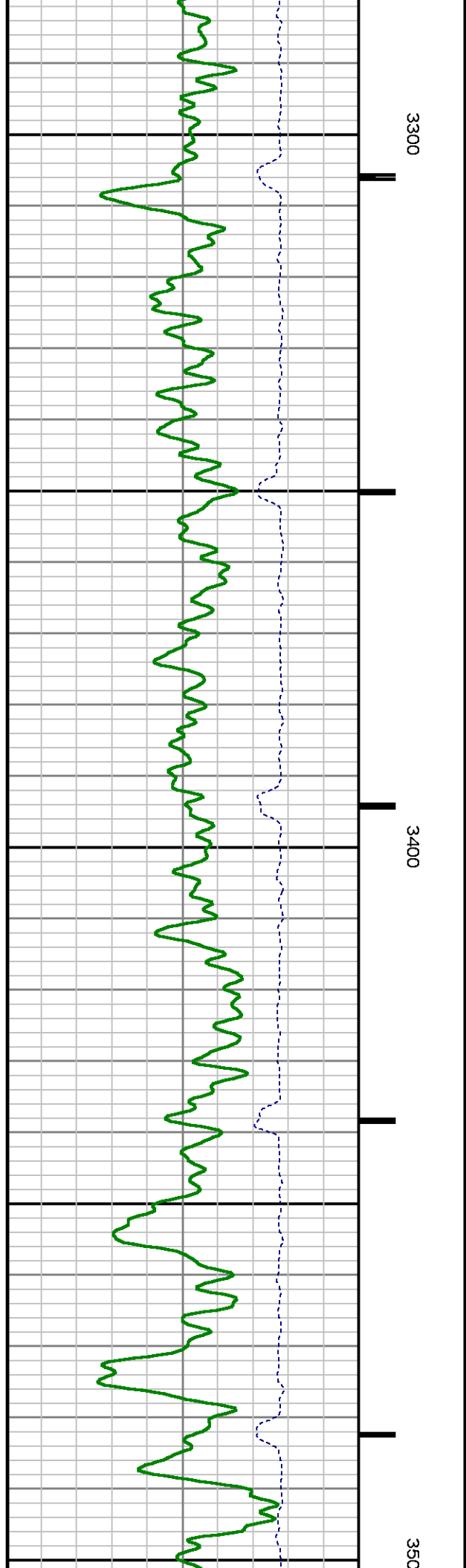
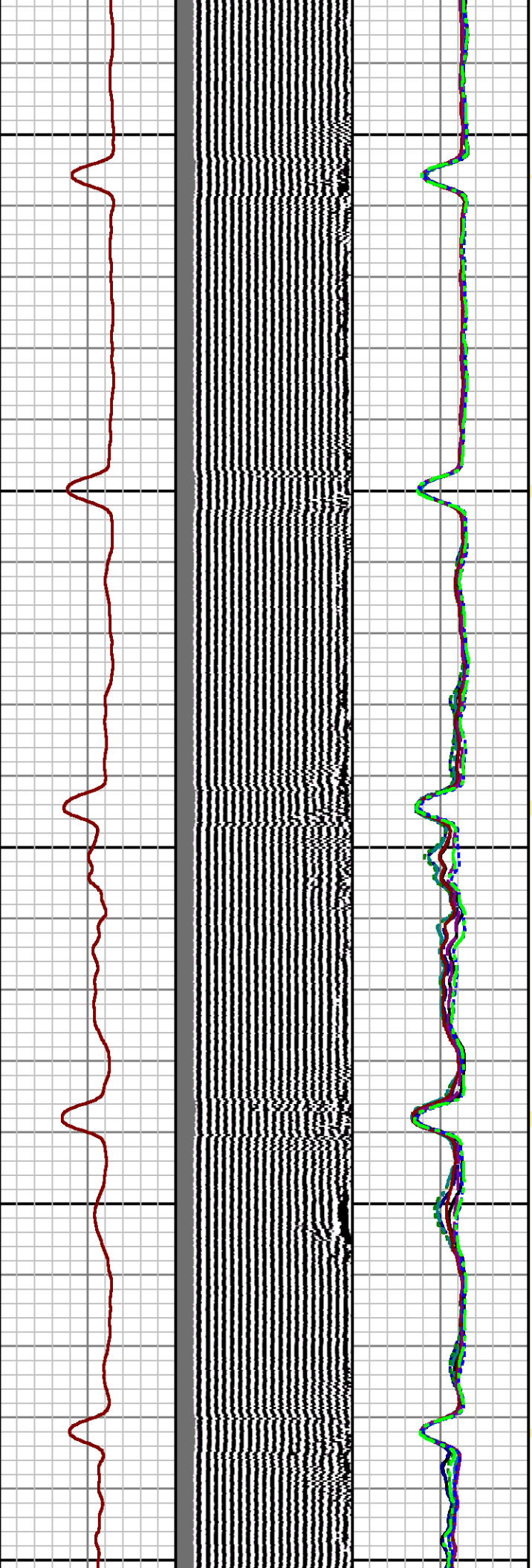


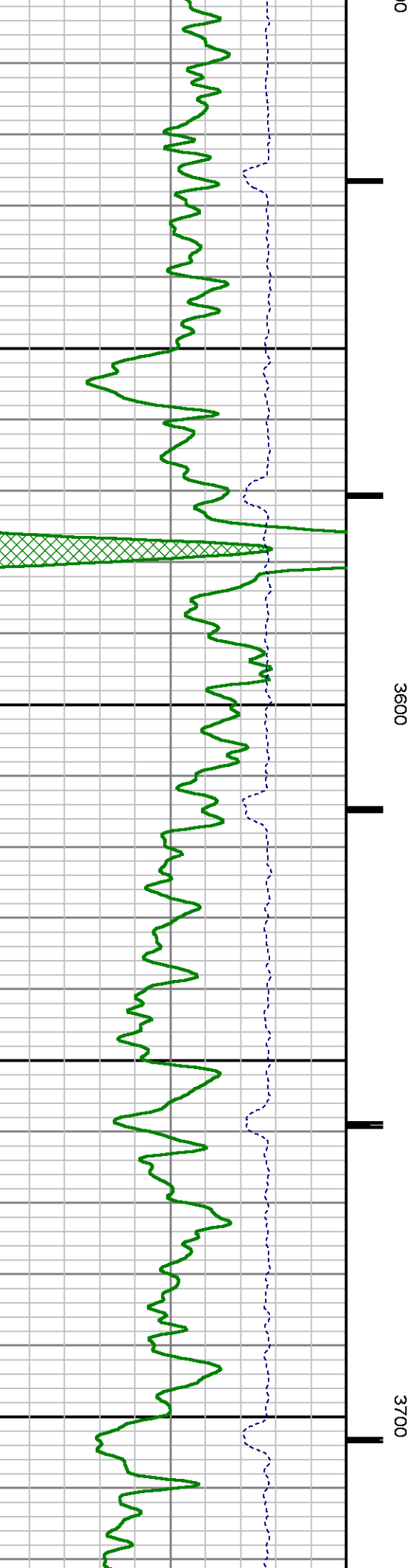
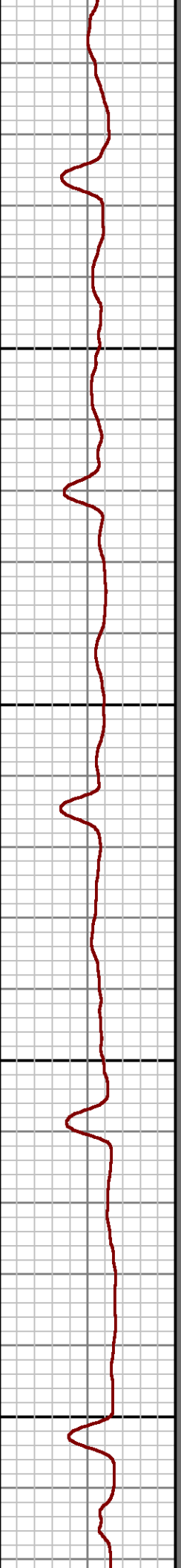
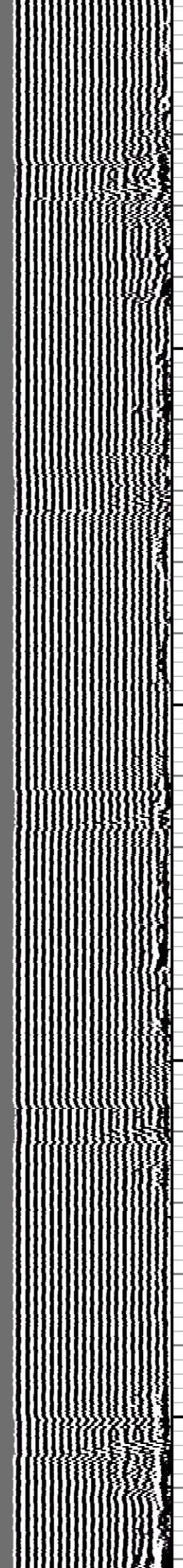
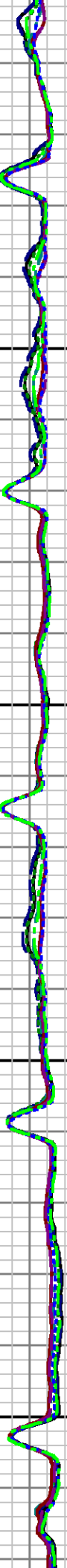
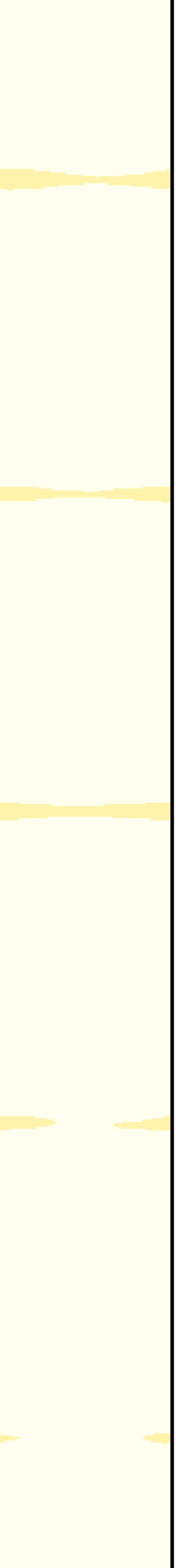
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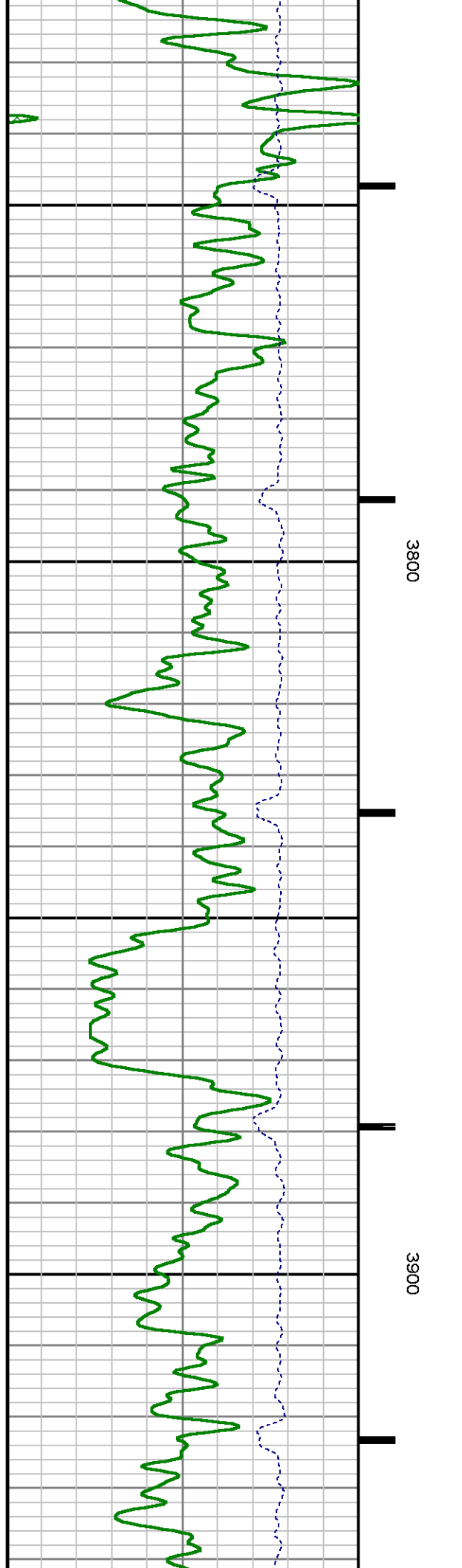
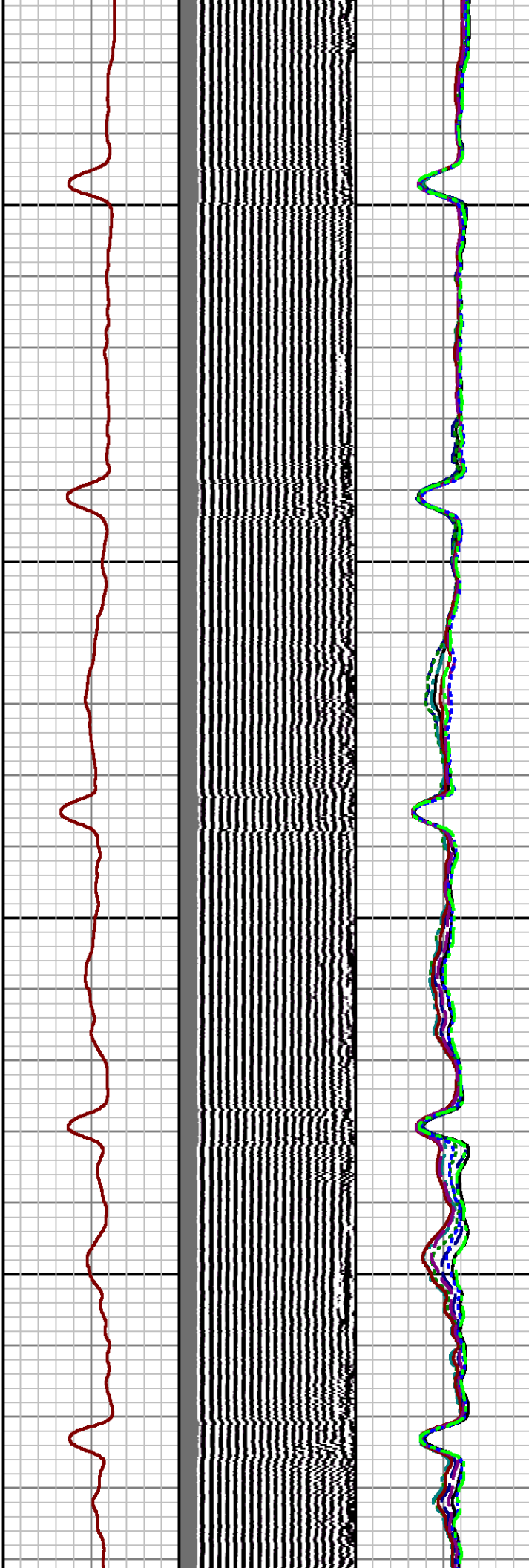
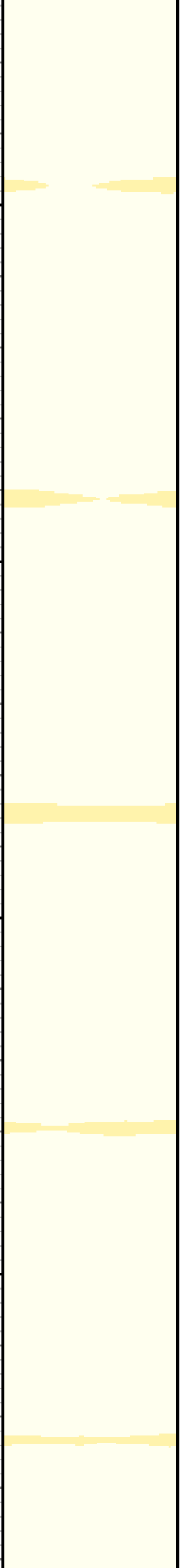
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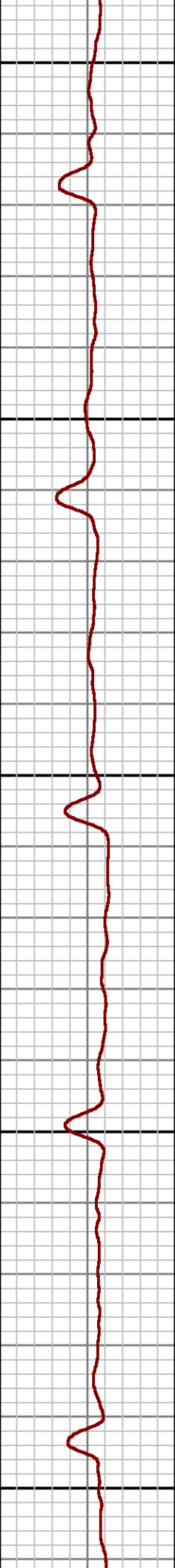
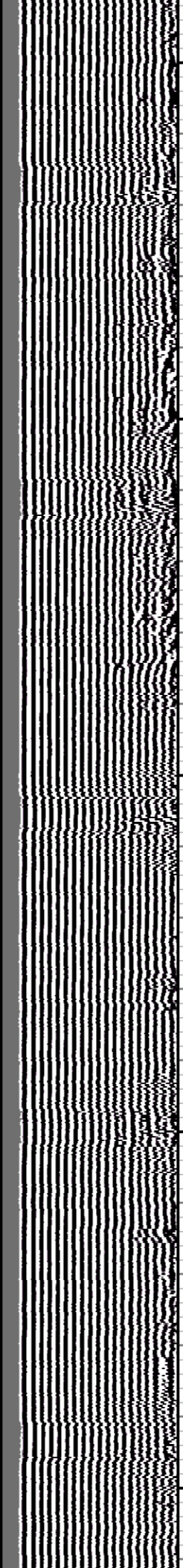
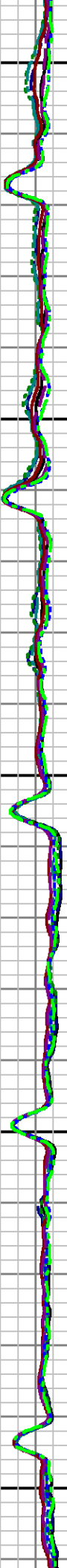
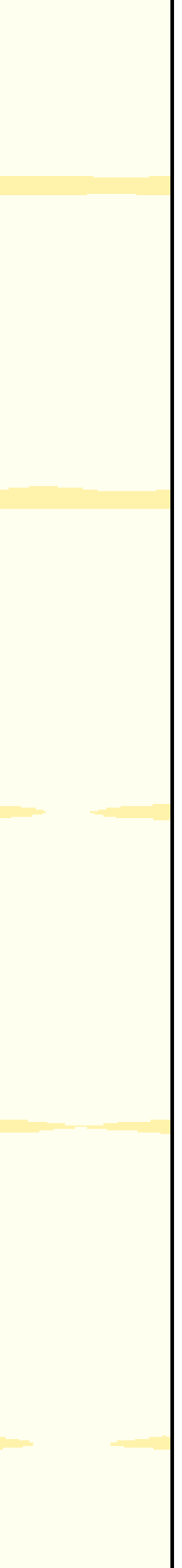






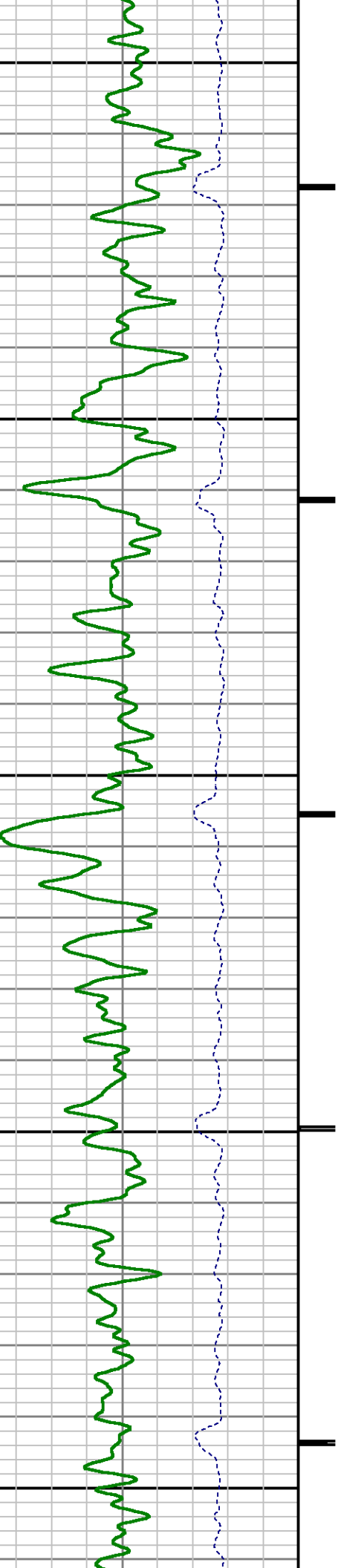




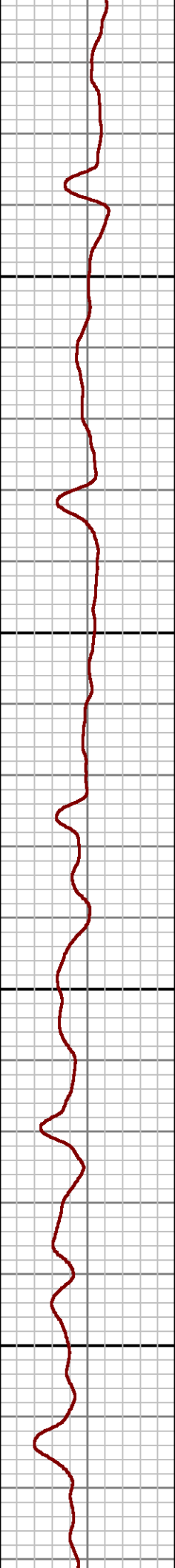
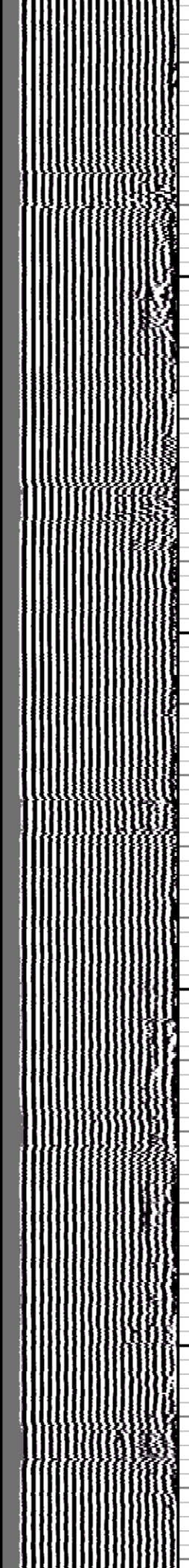
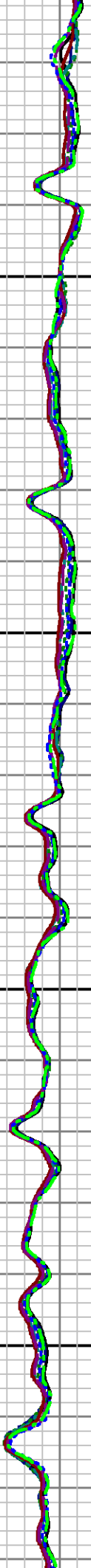


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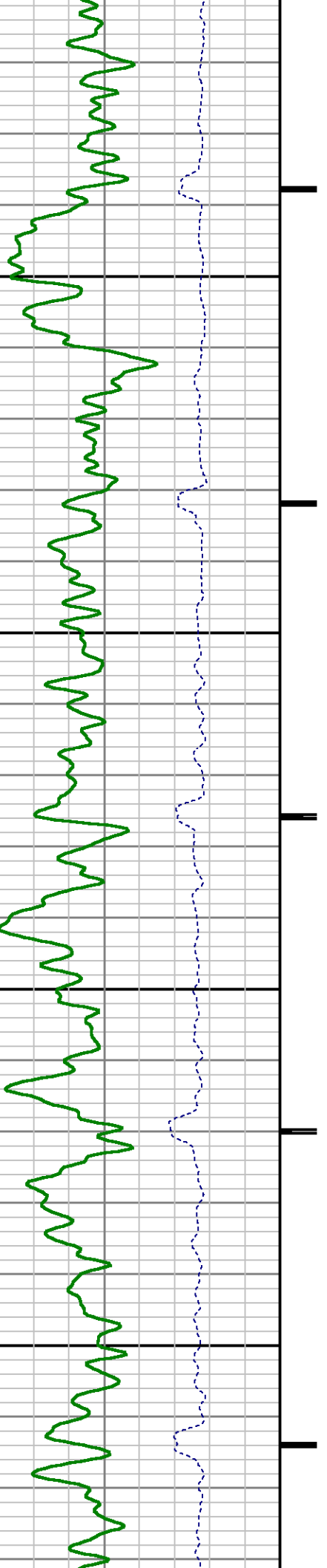


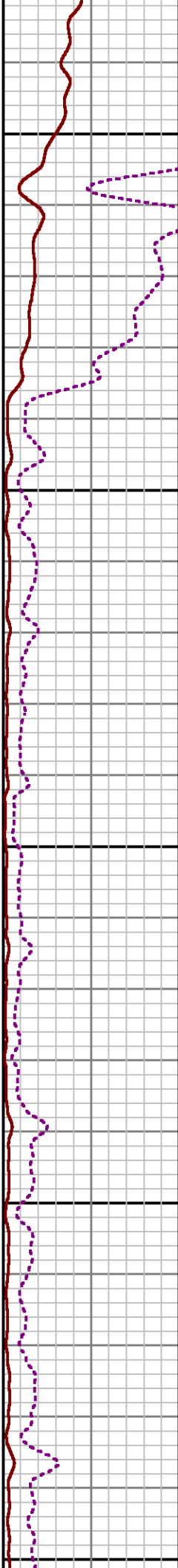
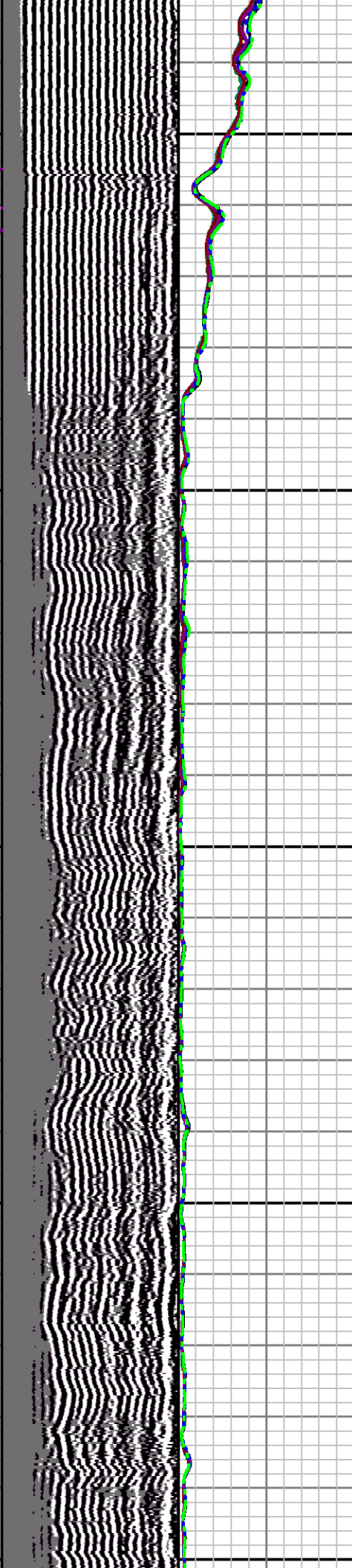




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4300

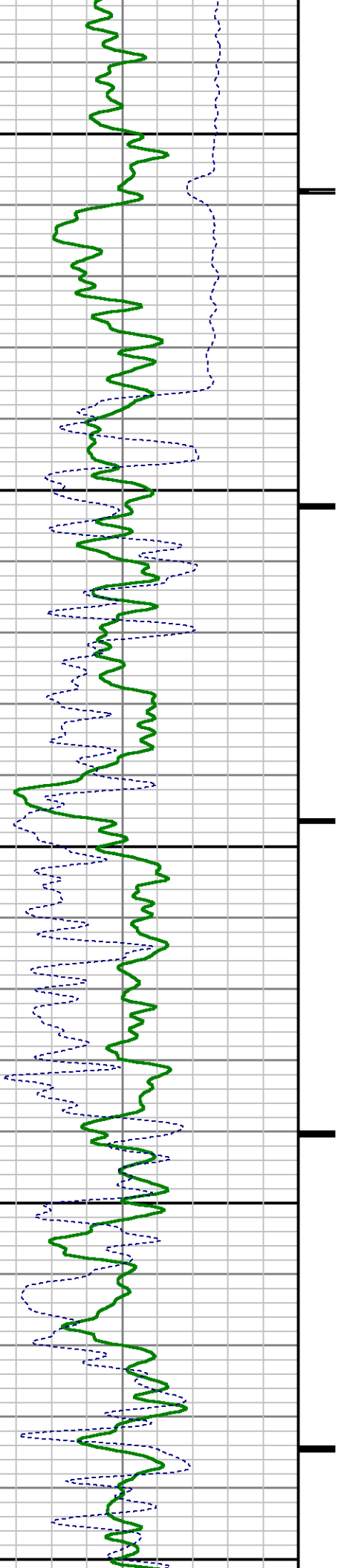


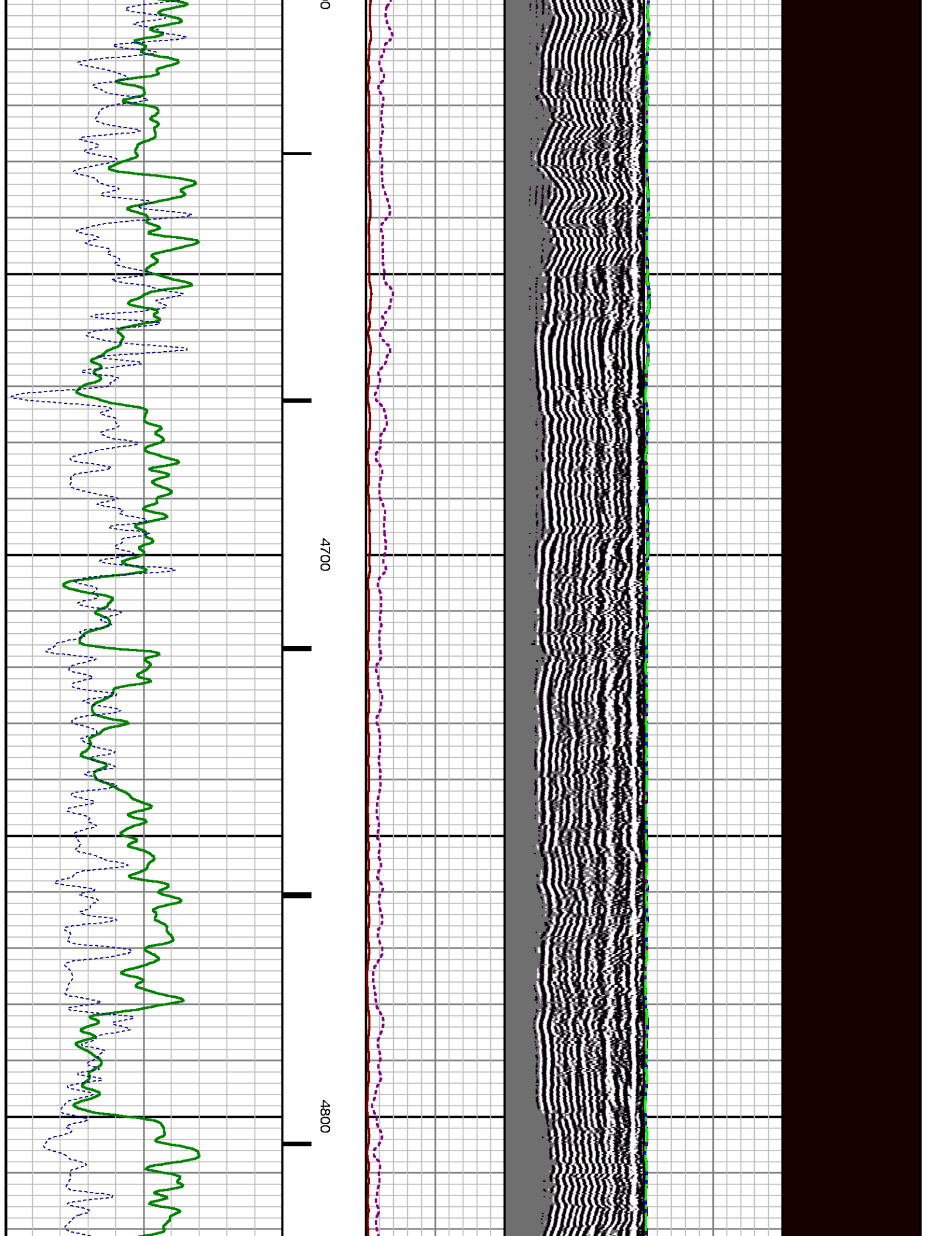


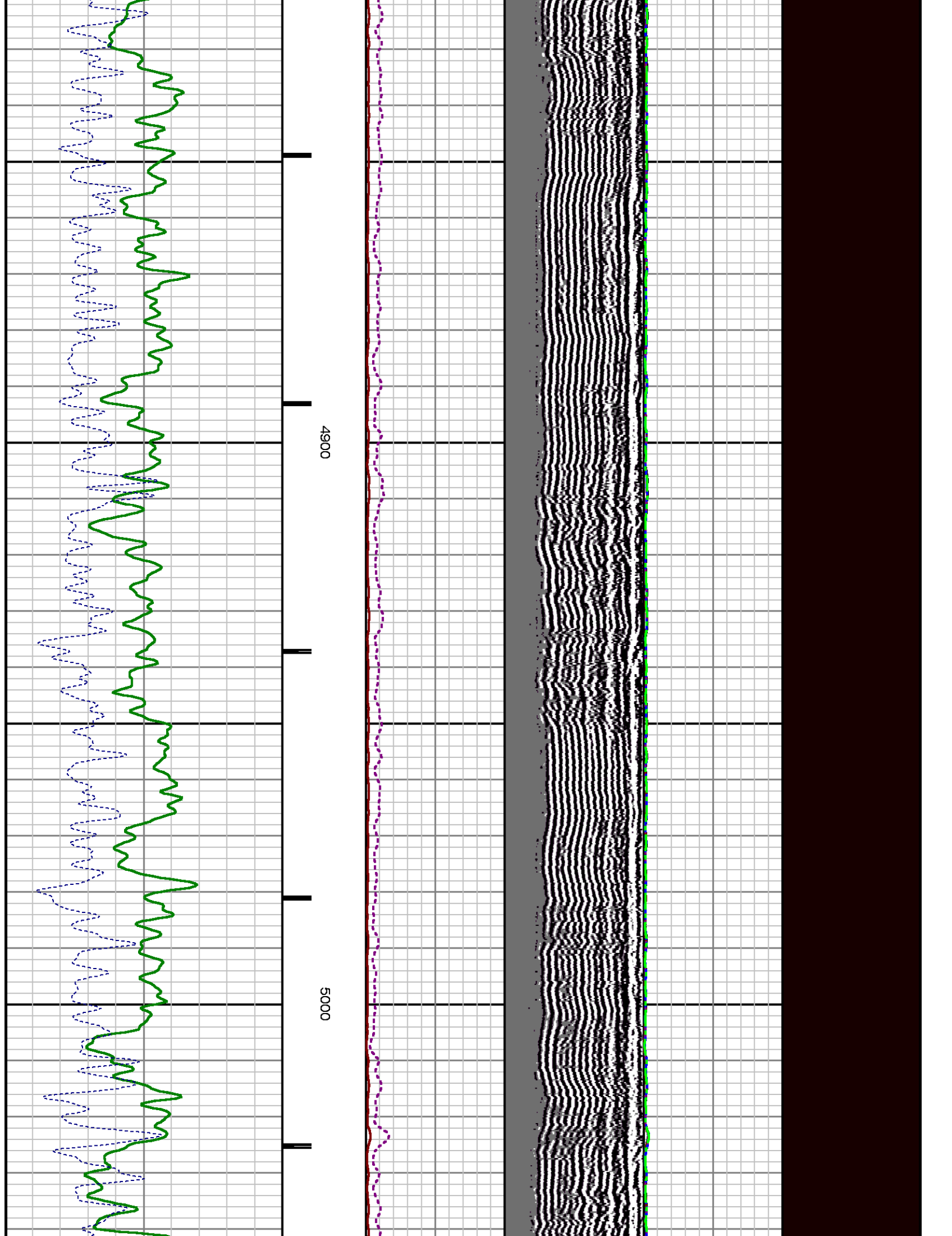
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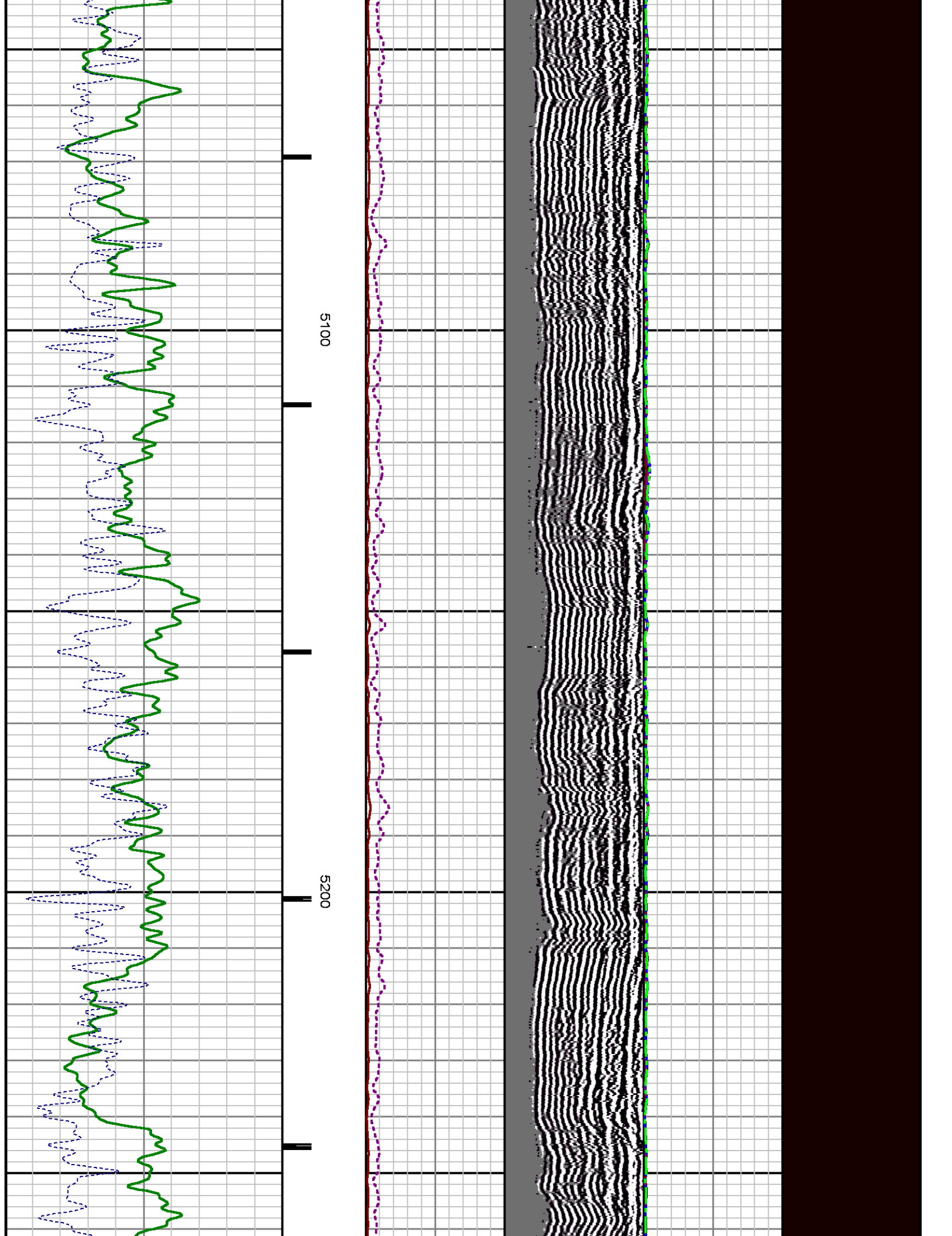
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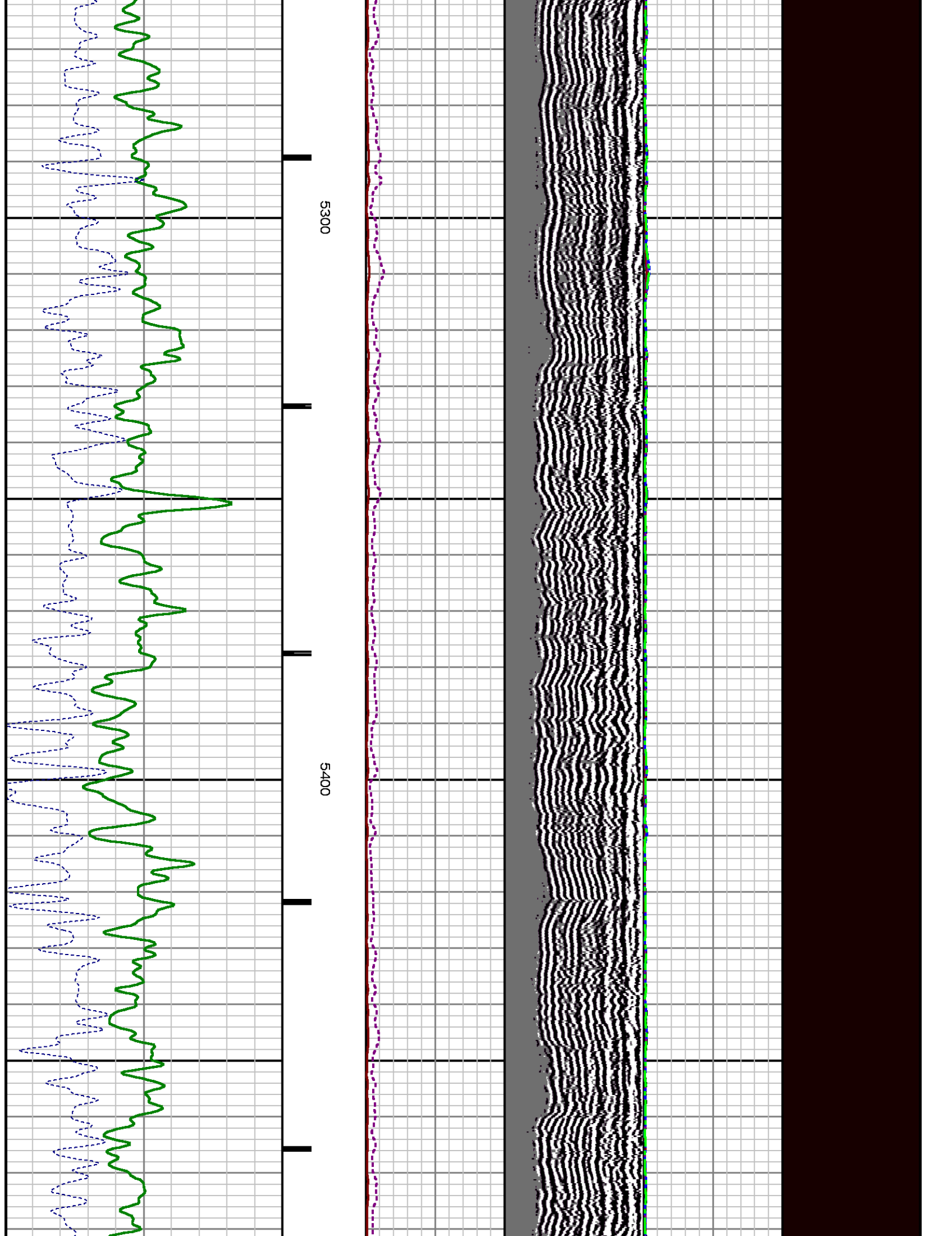




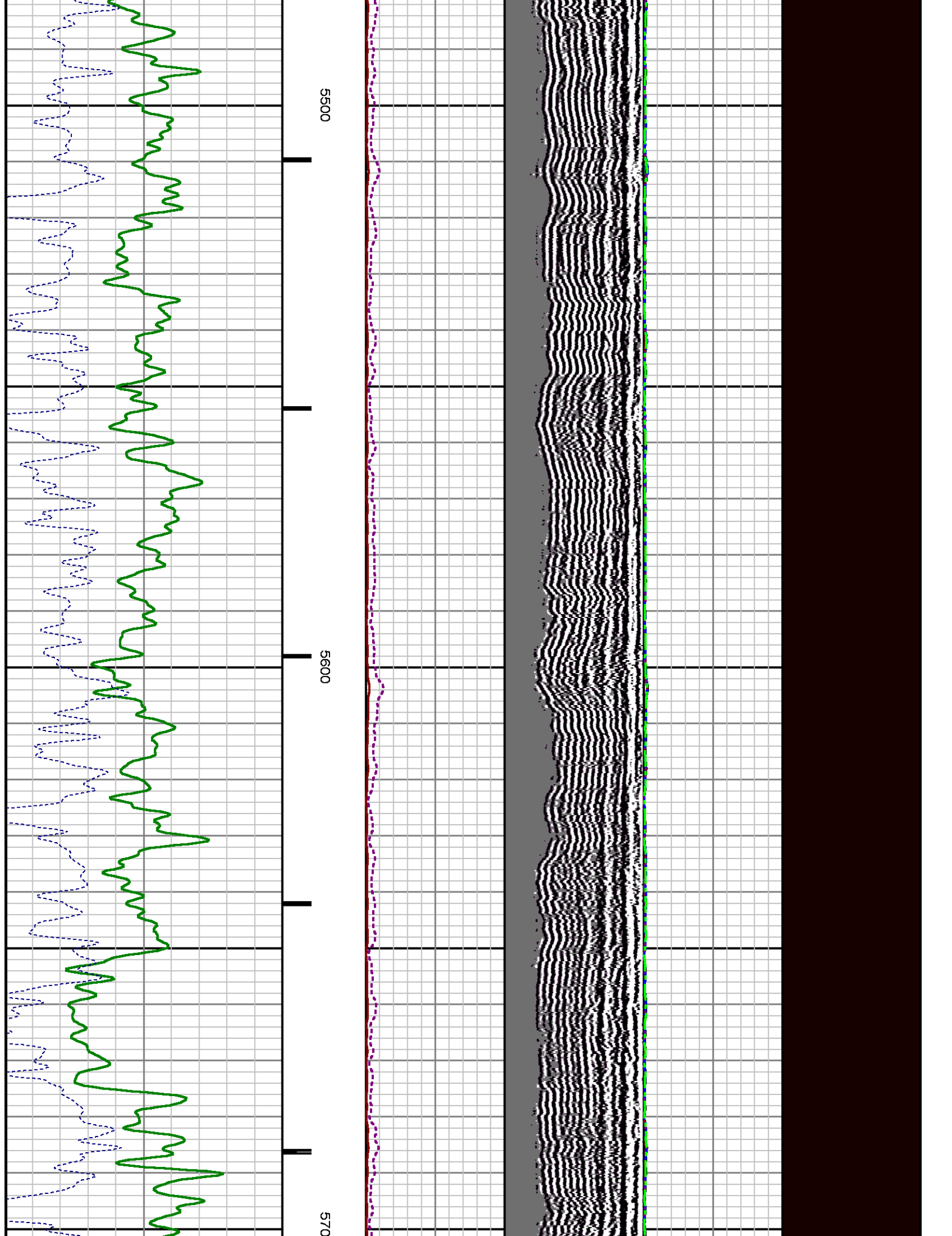


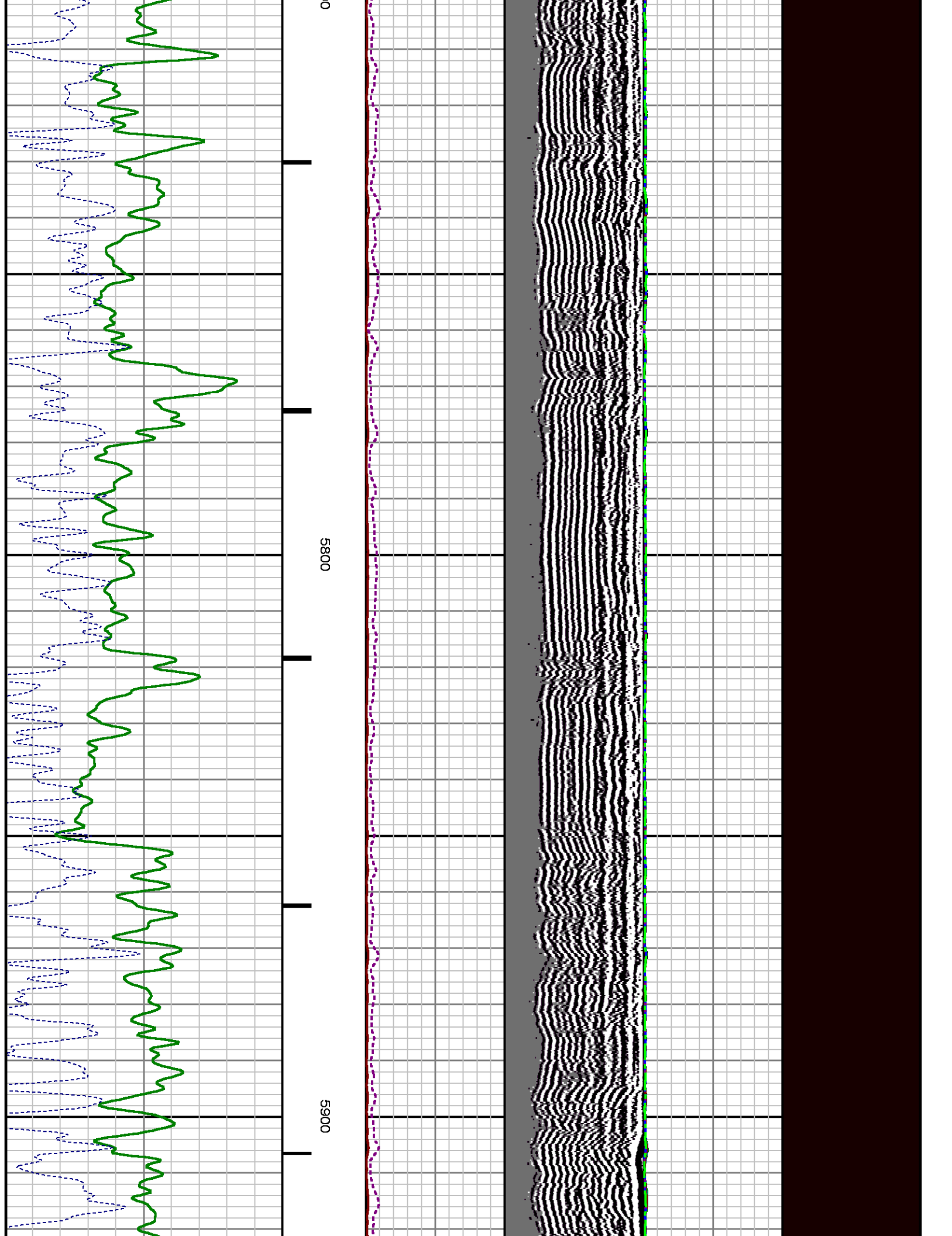


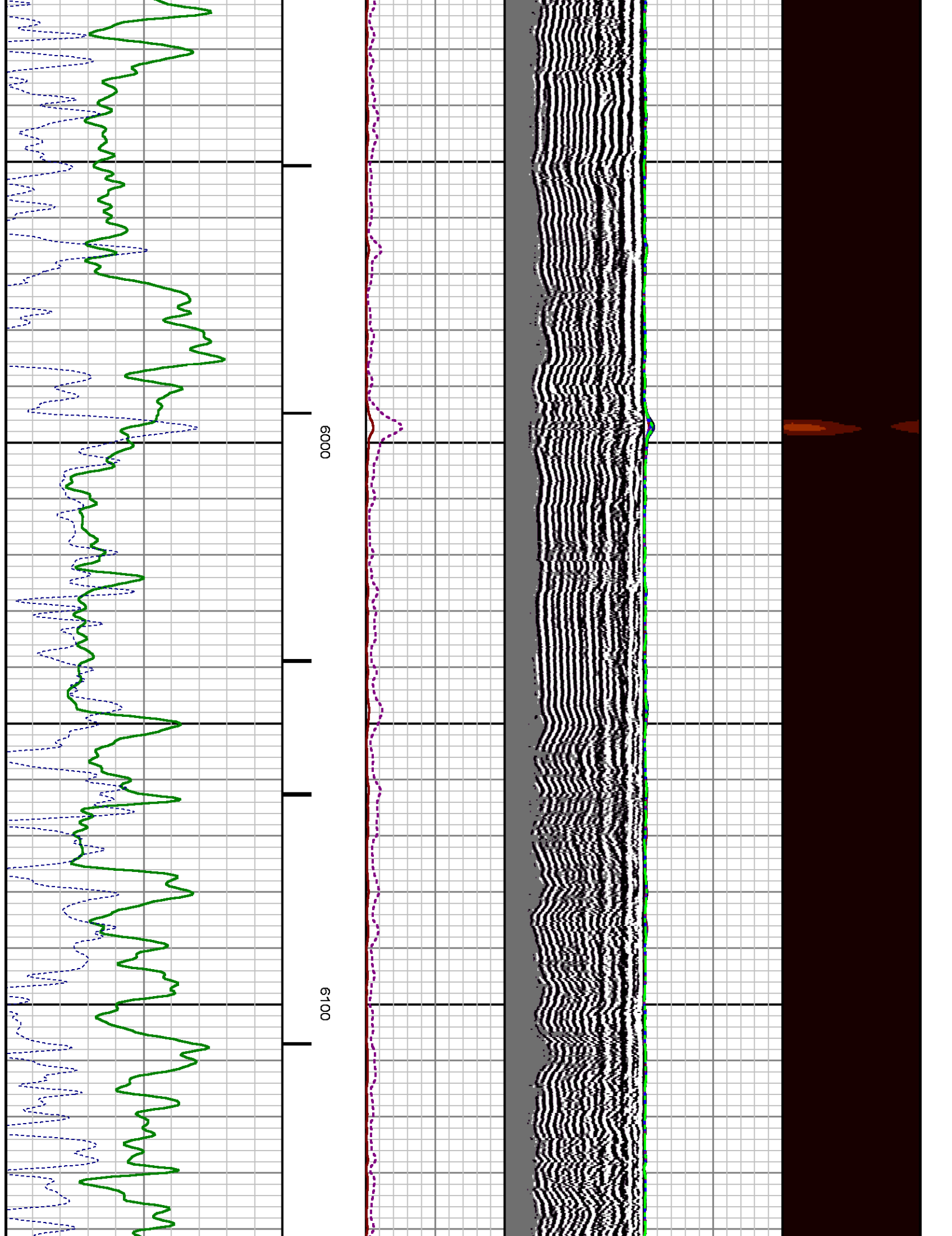


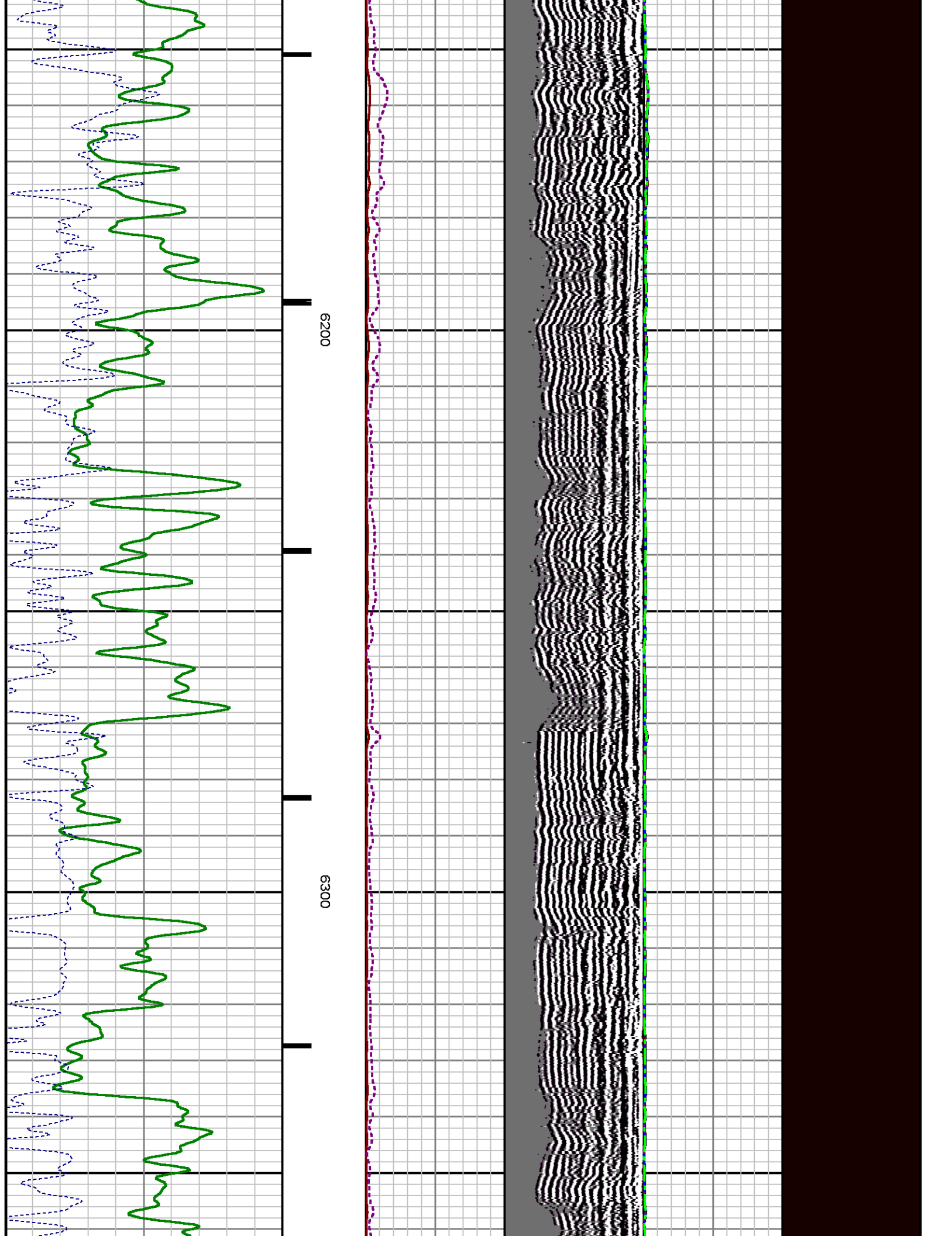




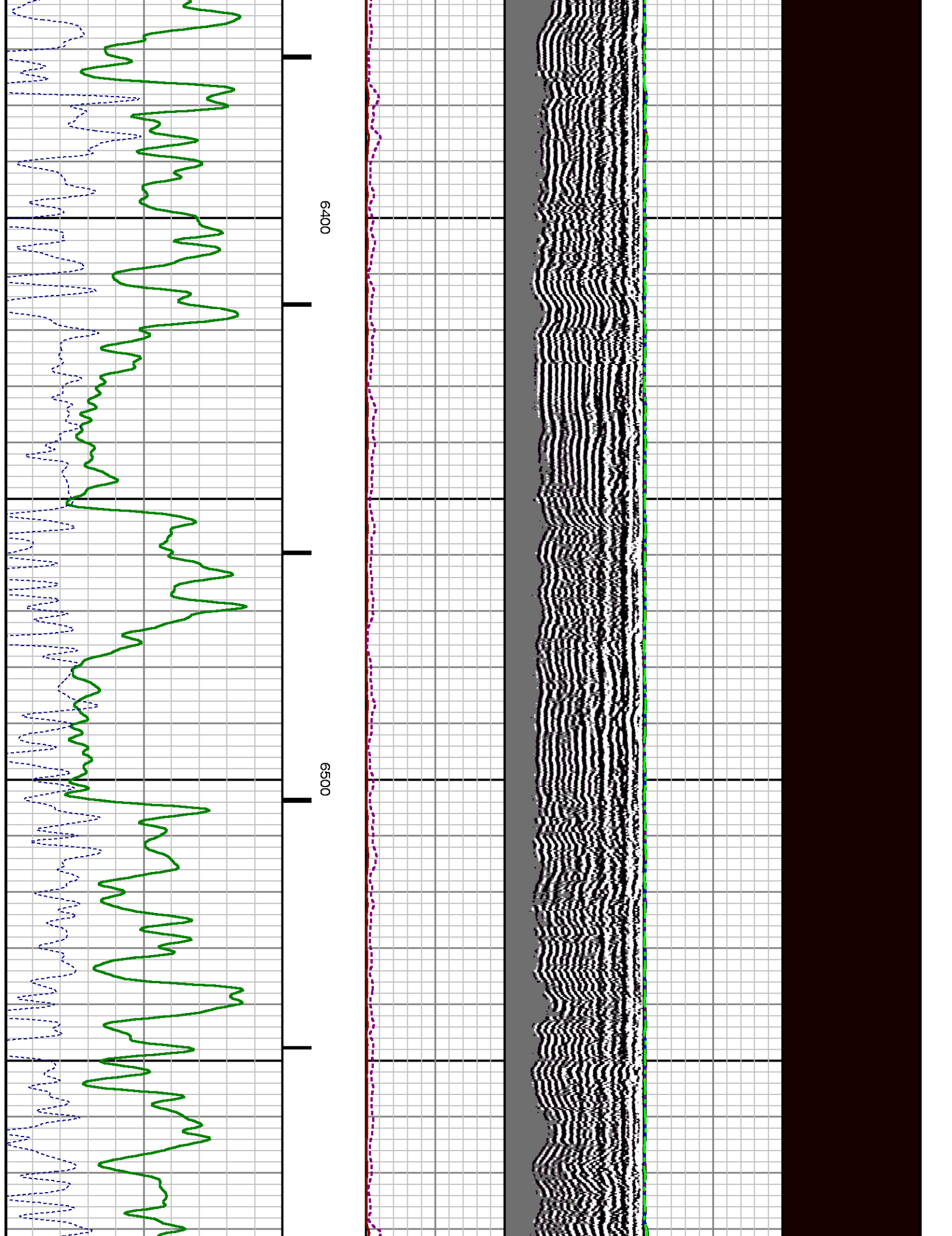


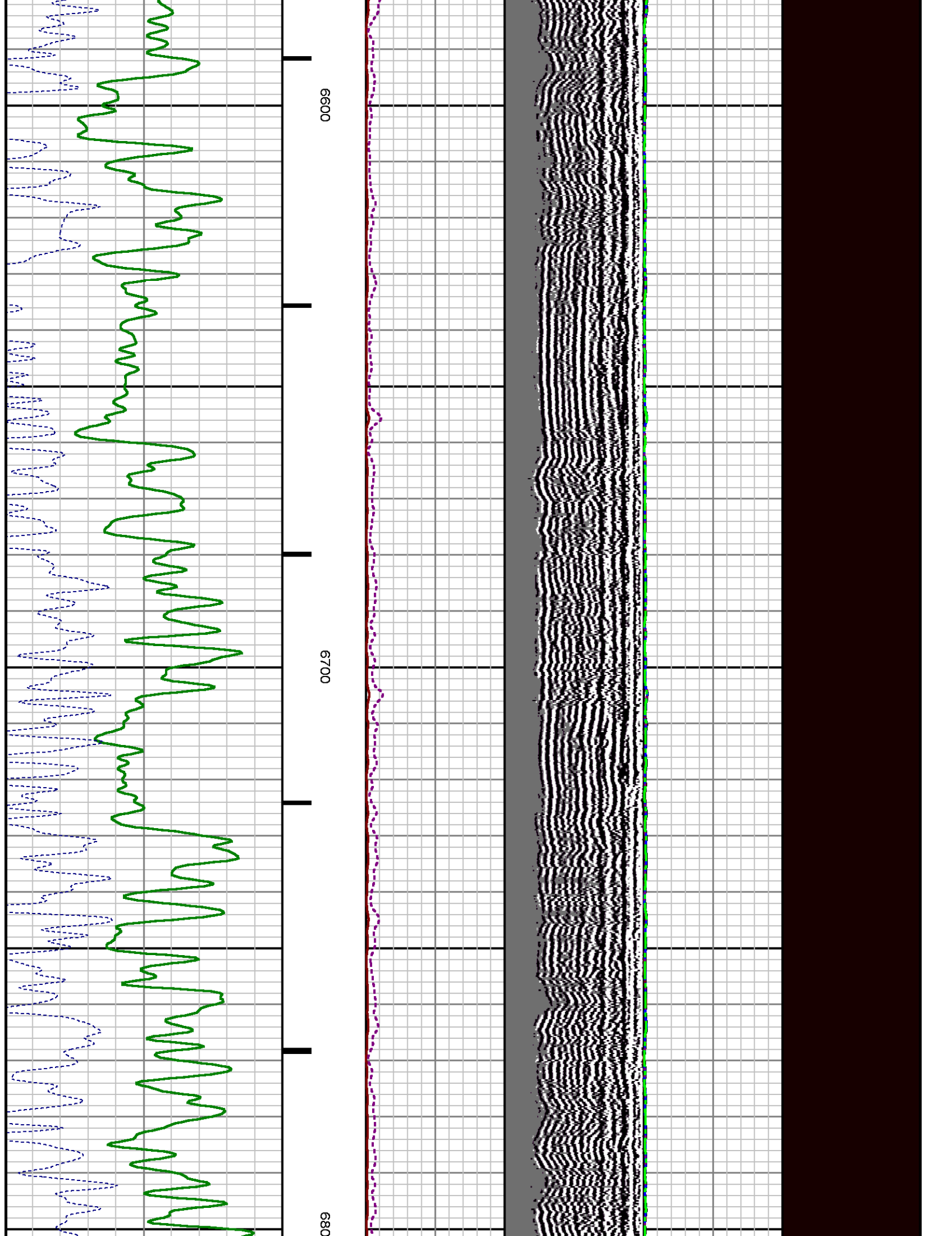




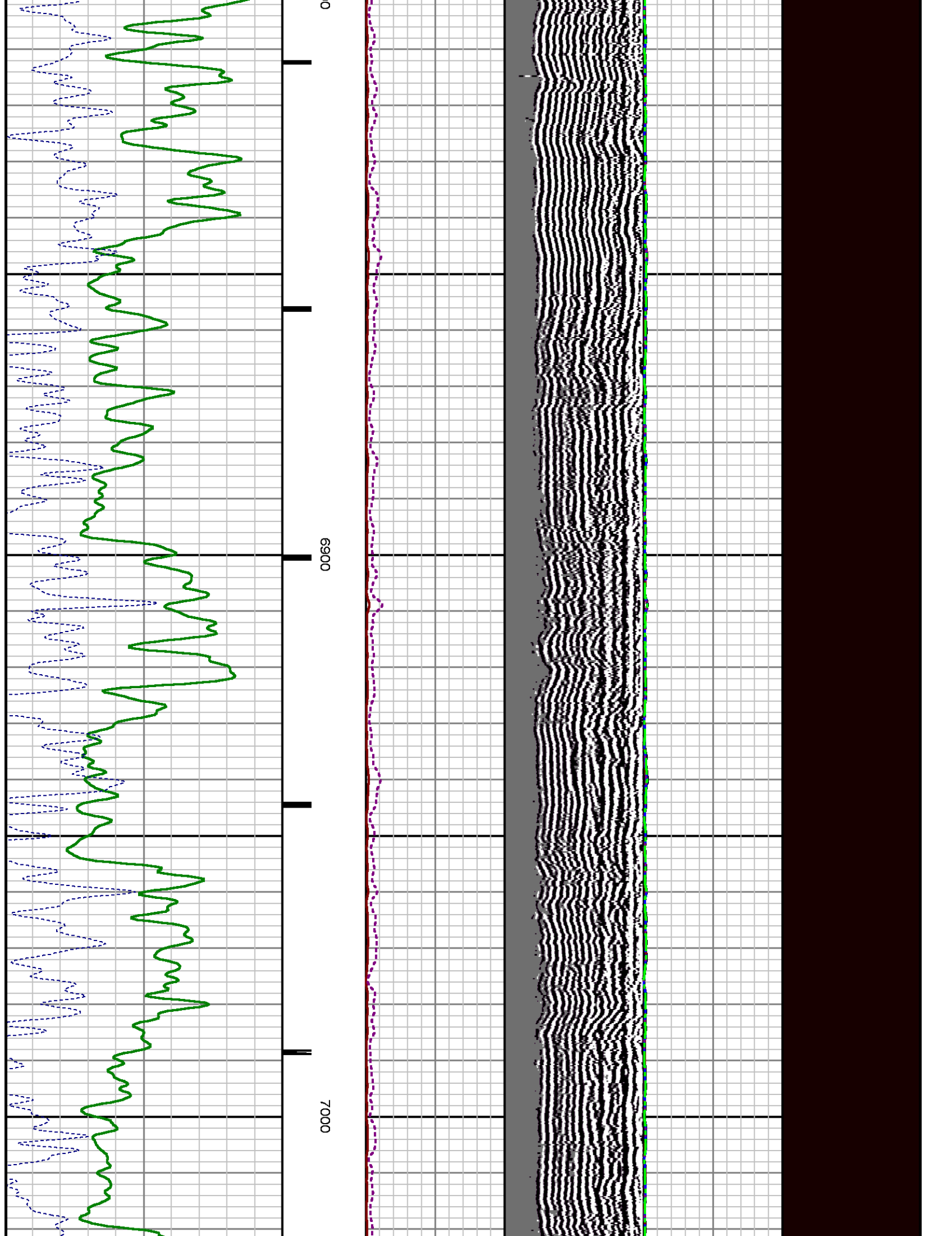


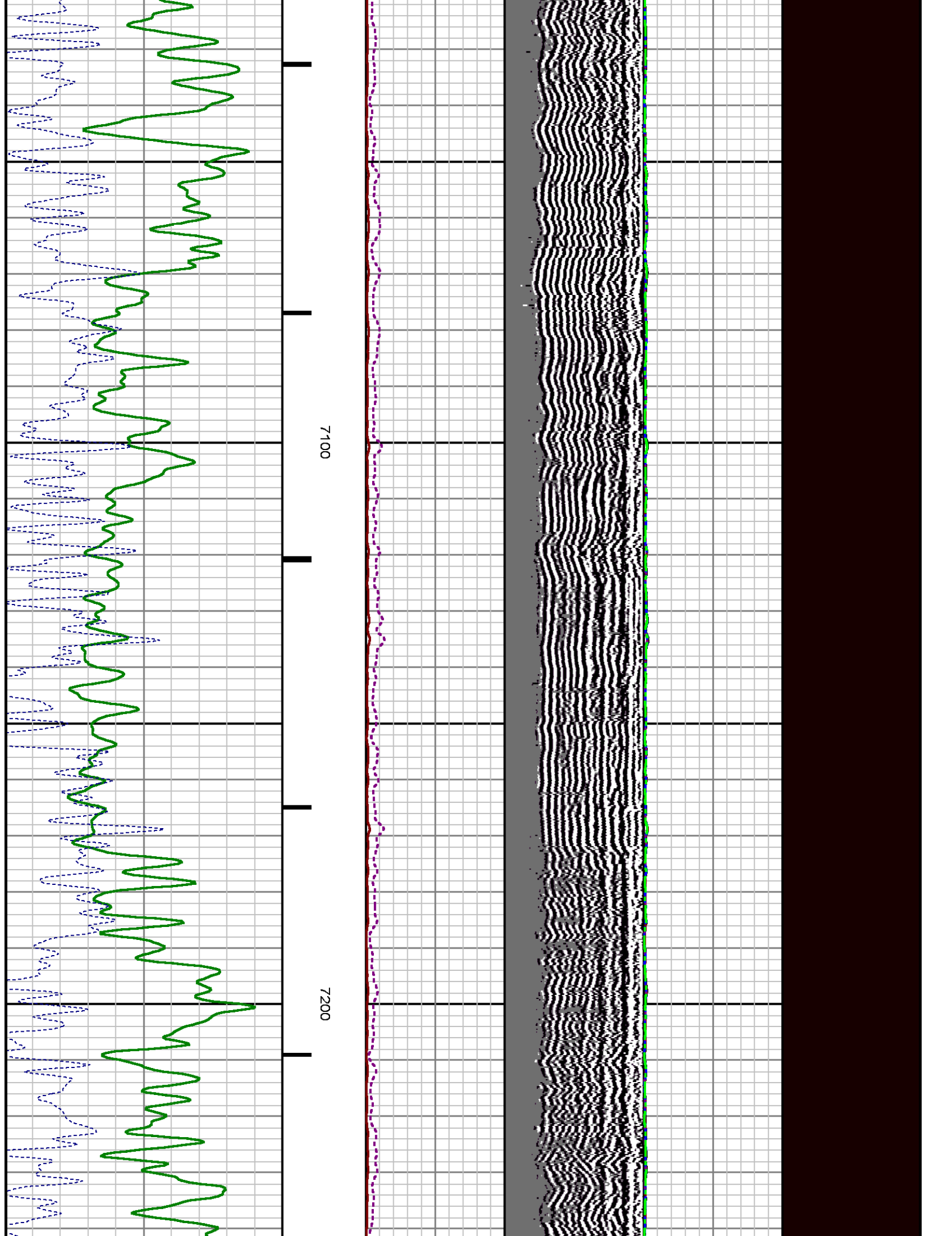


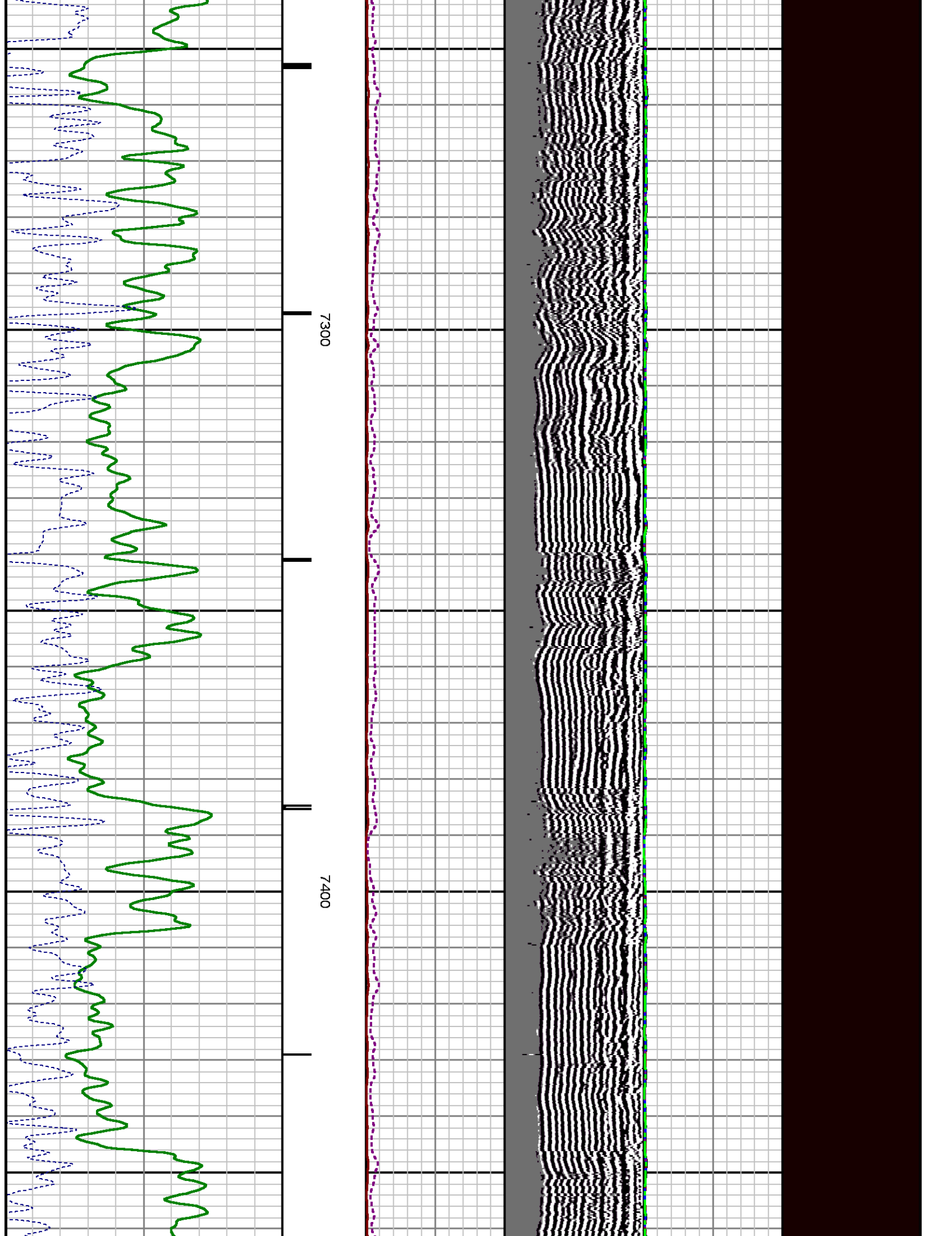


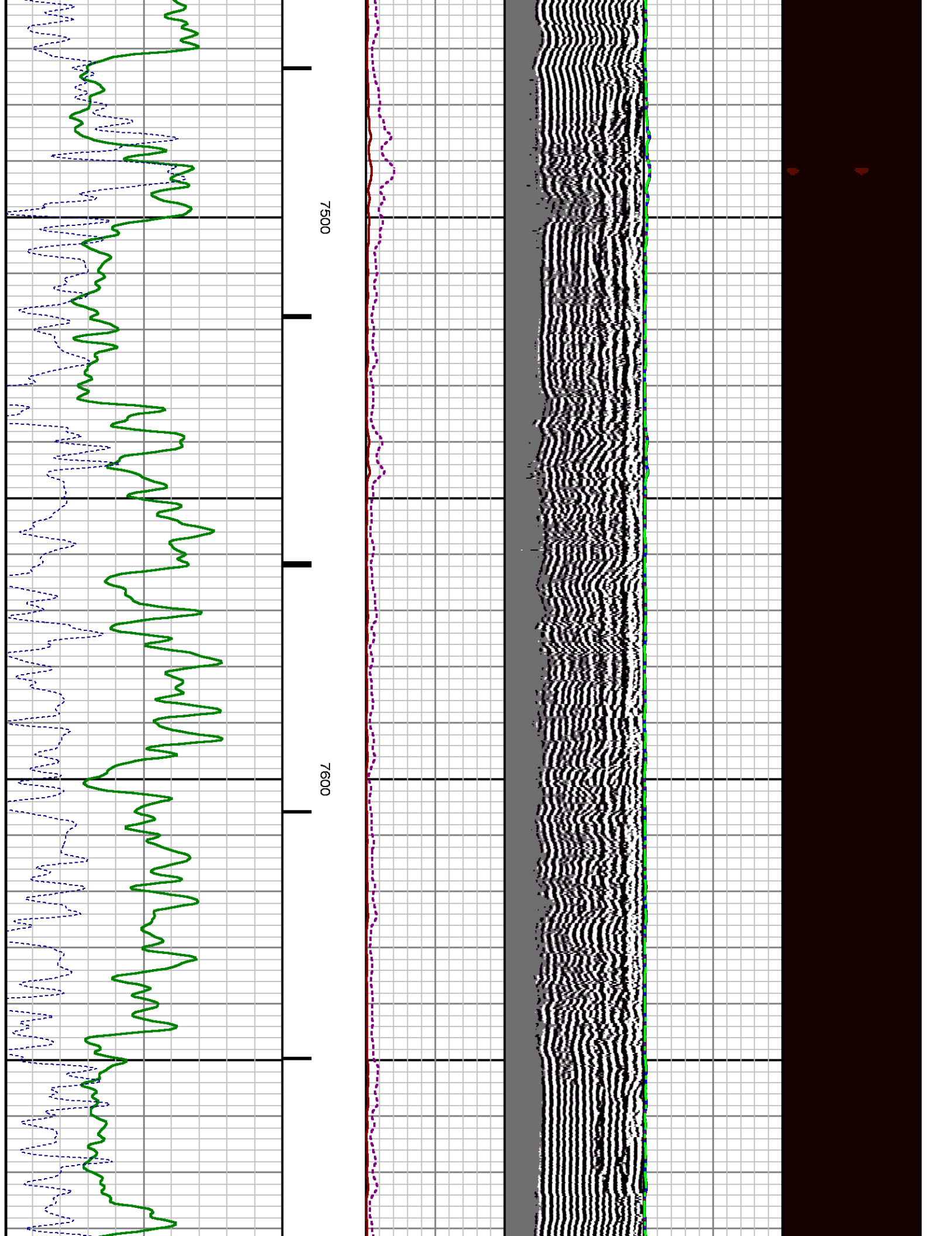


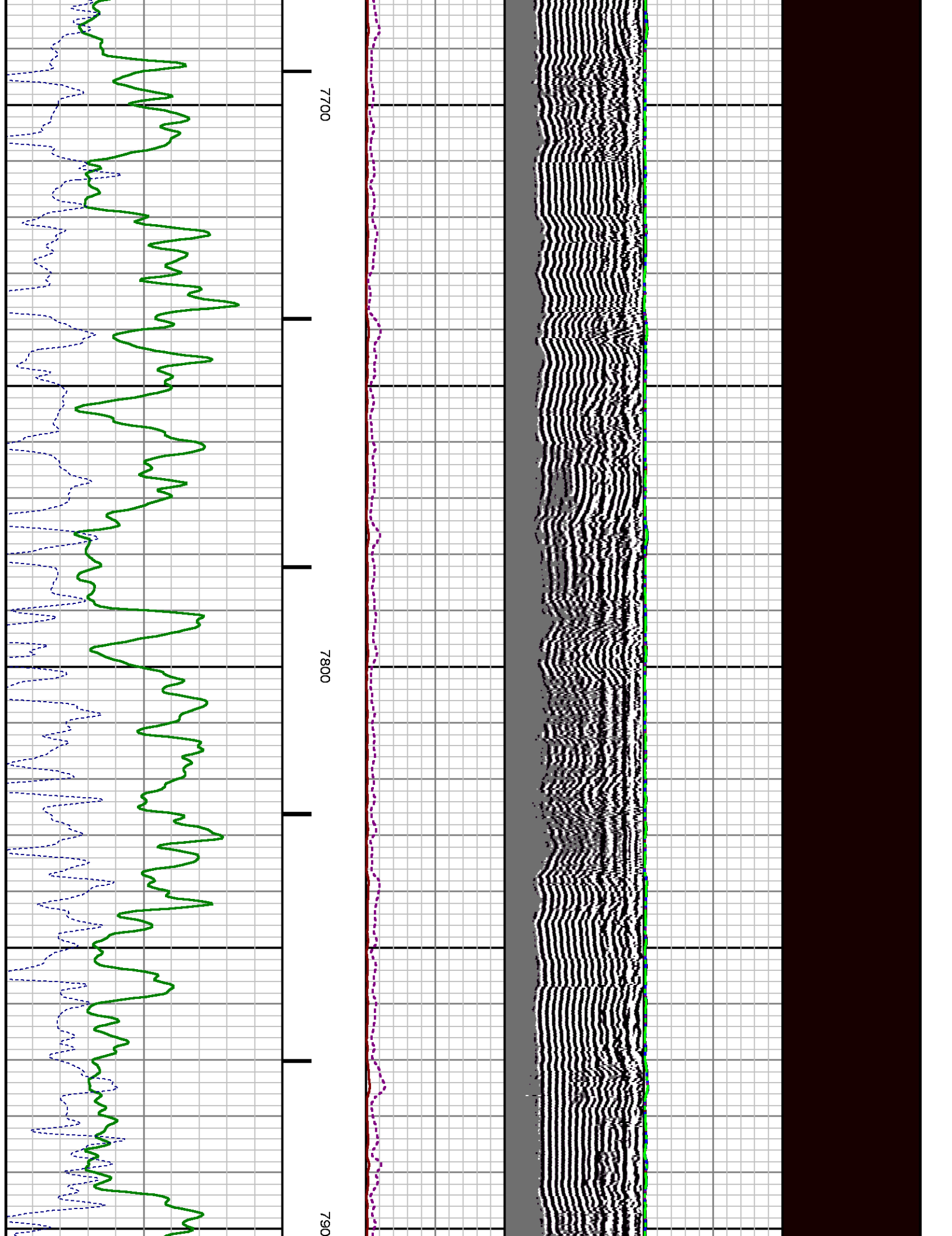




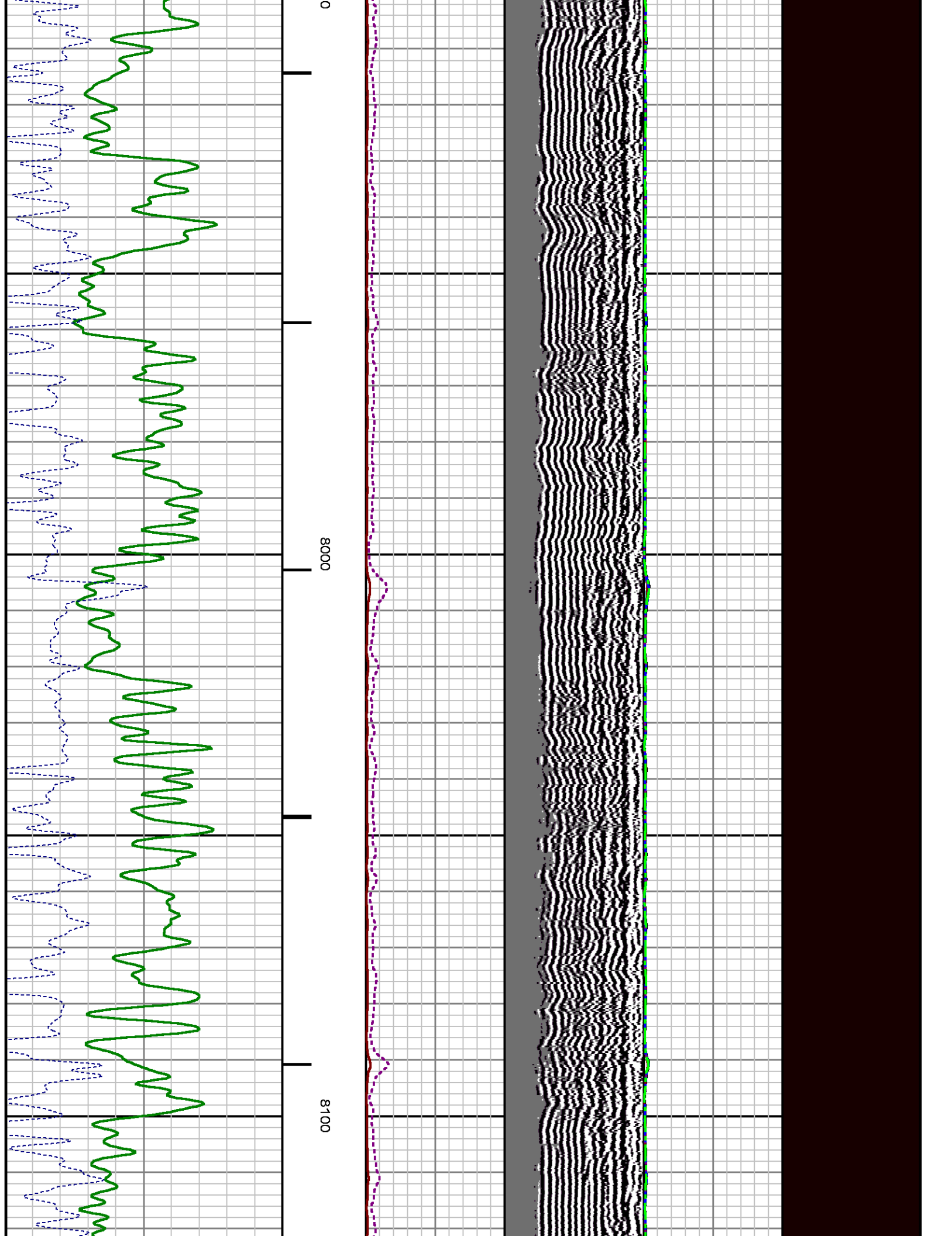




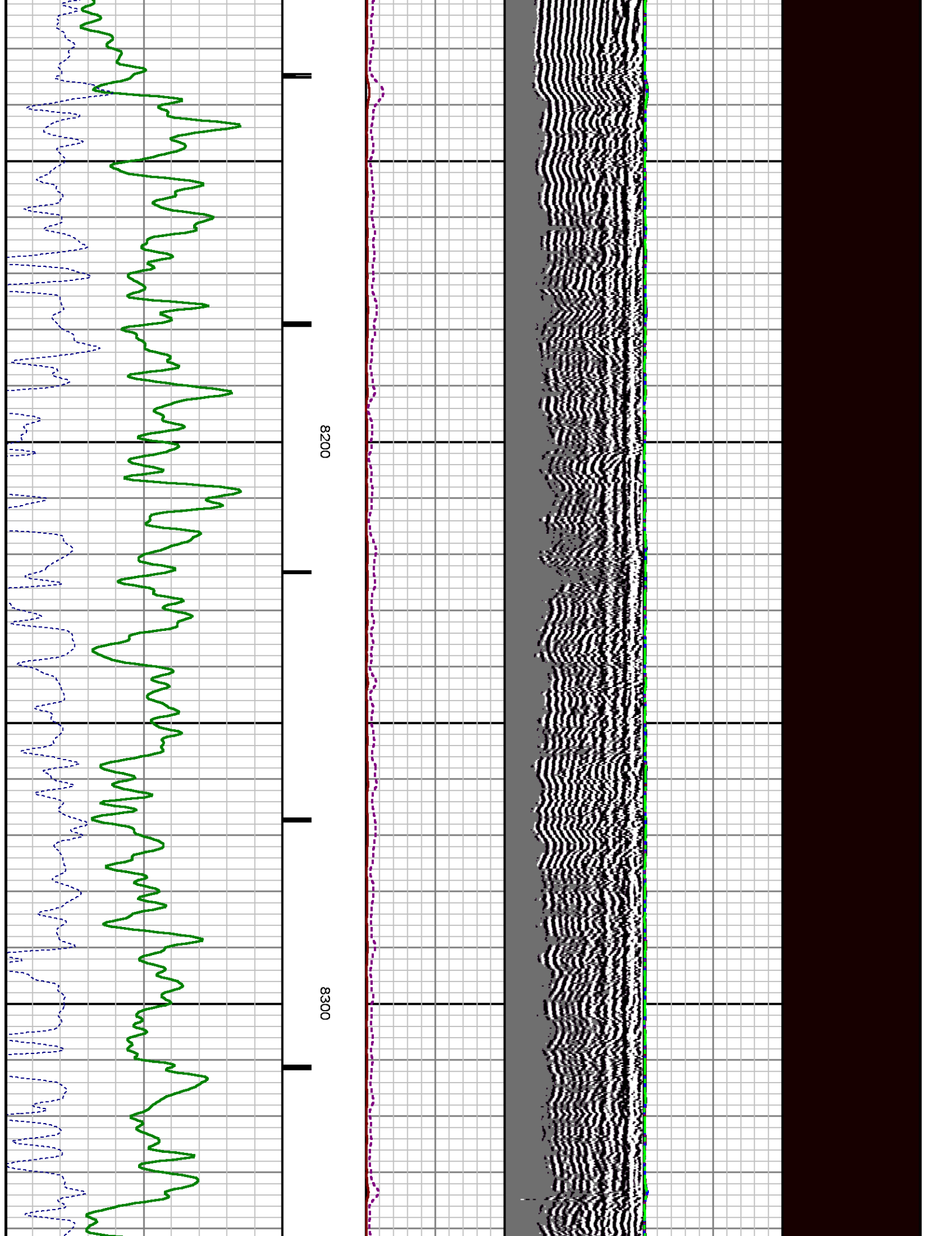


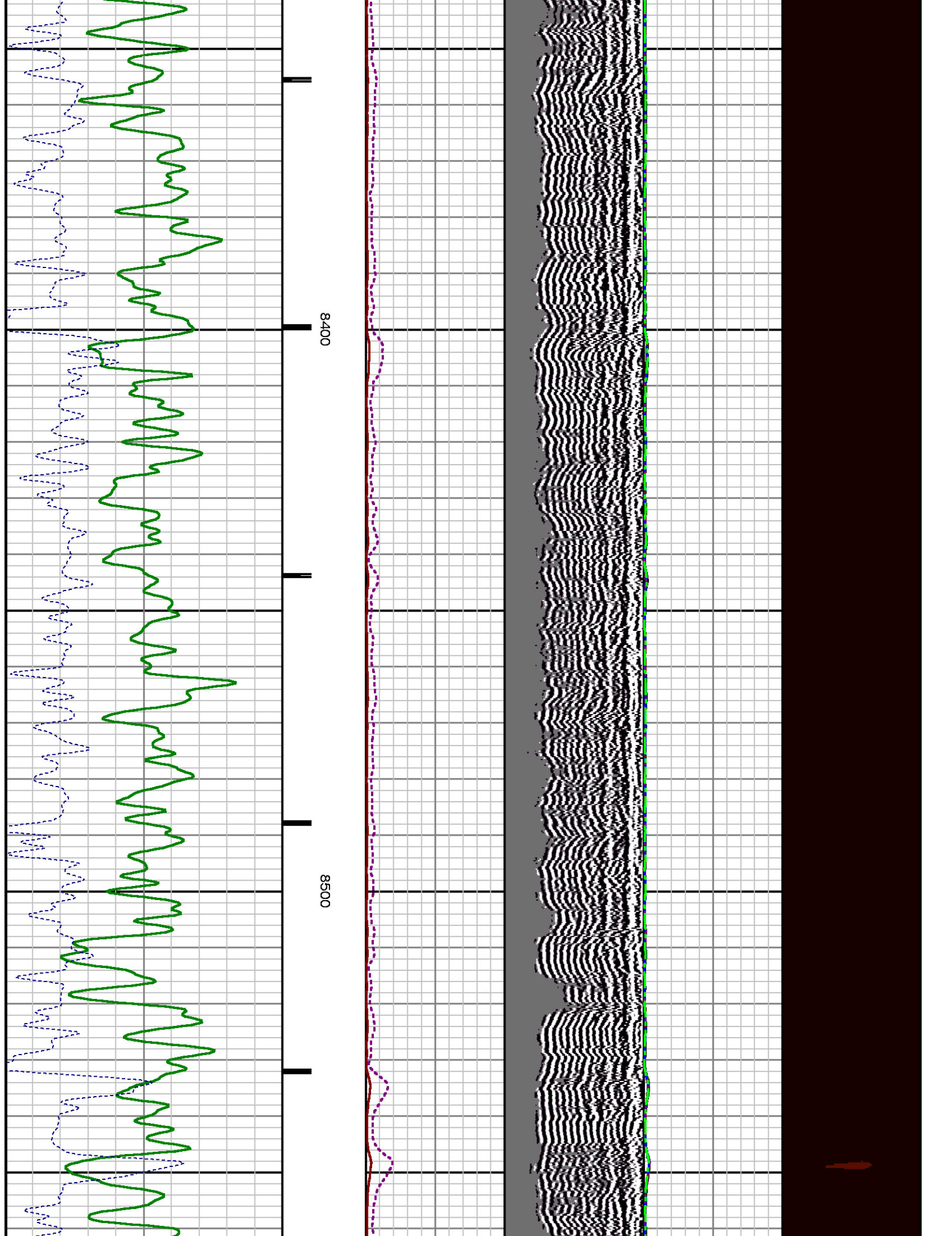


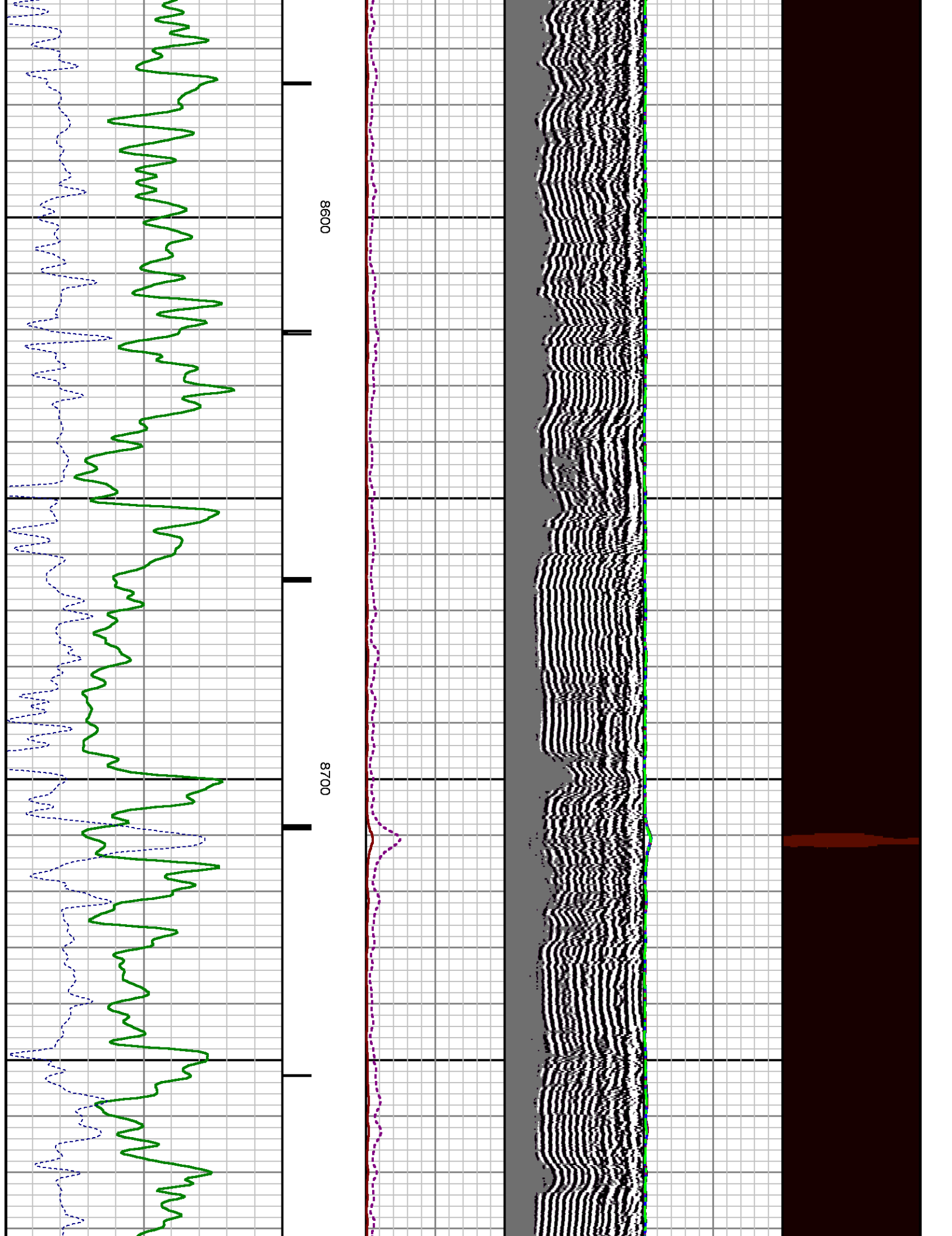


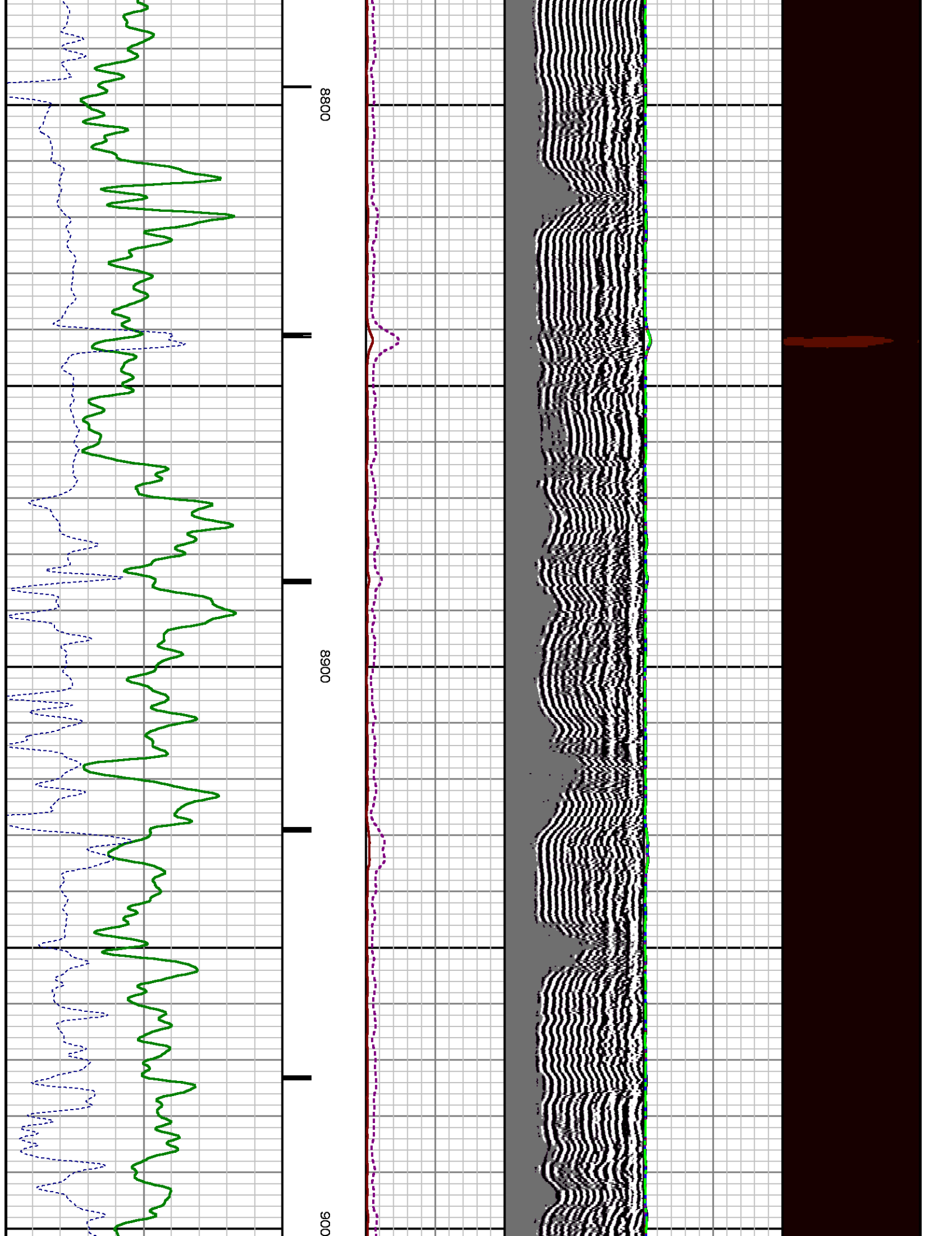


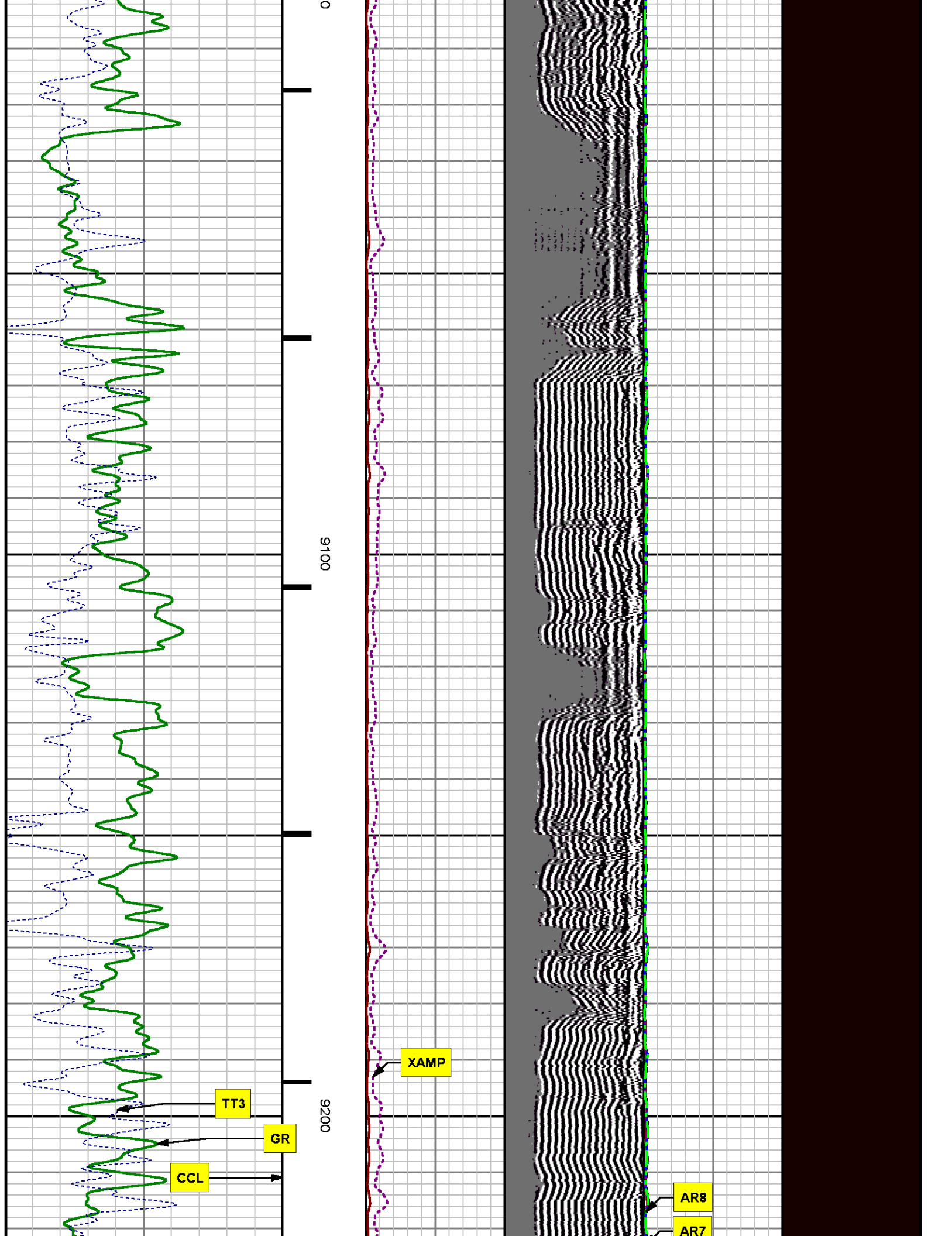




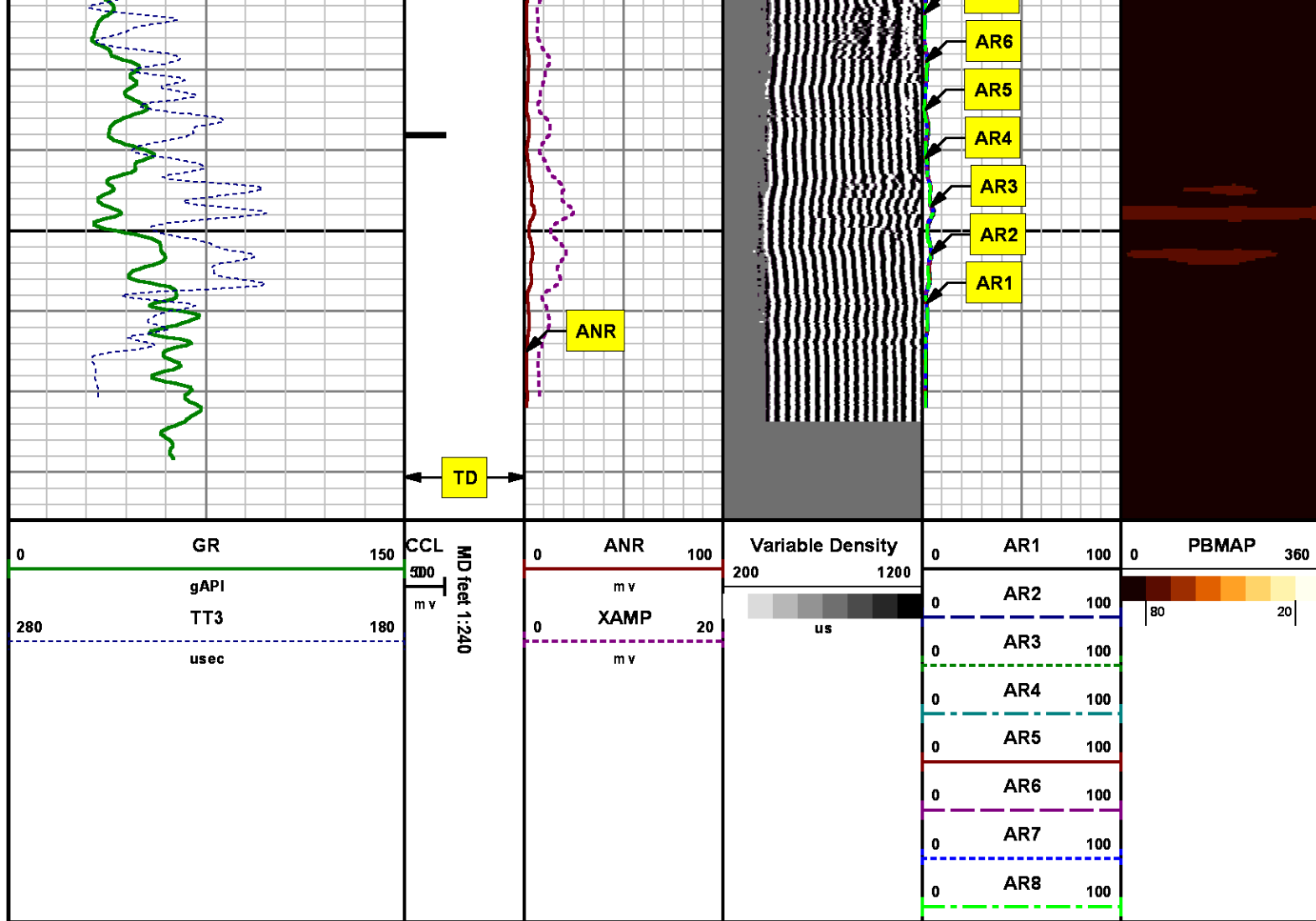












REPEAT SECTION  
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8965.470	9287.470
RAL	Amp Gate Start Near	195.000	usec	8965.470	9287.470
RAL	Amp Gate Start Radial	195.000	usec	8965.470	9287.470
RAL	Amp Gate Width Far	25.000	usec	8965.470	9287.470
RAL	Amp Gate Width Near	25.000	usec	8965.470	9287.470
RAL	Amp Gate Width Radial	25.000	usec	8965.470	9287.470
RAL	casing od	4.500	inches	8965.470	9287.470



RAL	casing wt	11.600	lbm/ft	8965.470	9287.470
RAL	FB Start Far	291.900	usec	8965.470	9287.470
RAL	FB Start Near	180.000	usec	8965.470	9287.470
RAL	FB Start Radial	180.000	usec	8965.470	9287.470
RAL	FB Thresh Far	10.000	mv	8965.470	9287.470
RAL	FB Thresh Near	4.000	mv	8965.470	9287.470
RAL	FB Thresh Radial	4.000	mv	8965.470	9287.470
RAL	Fluid Travel Time	200.000	usec/ft	8965.470	9287.470

## 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

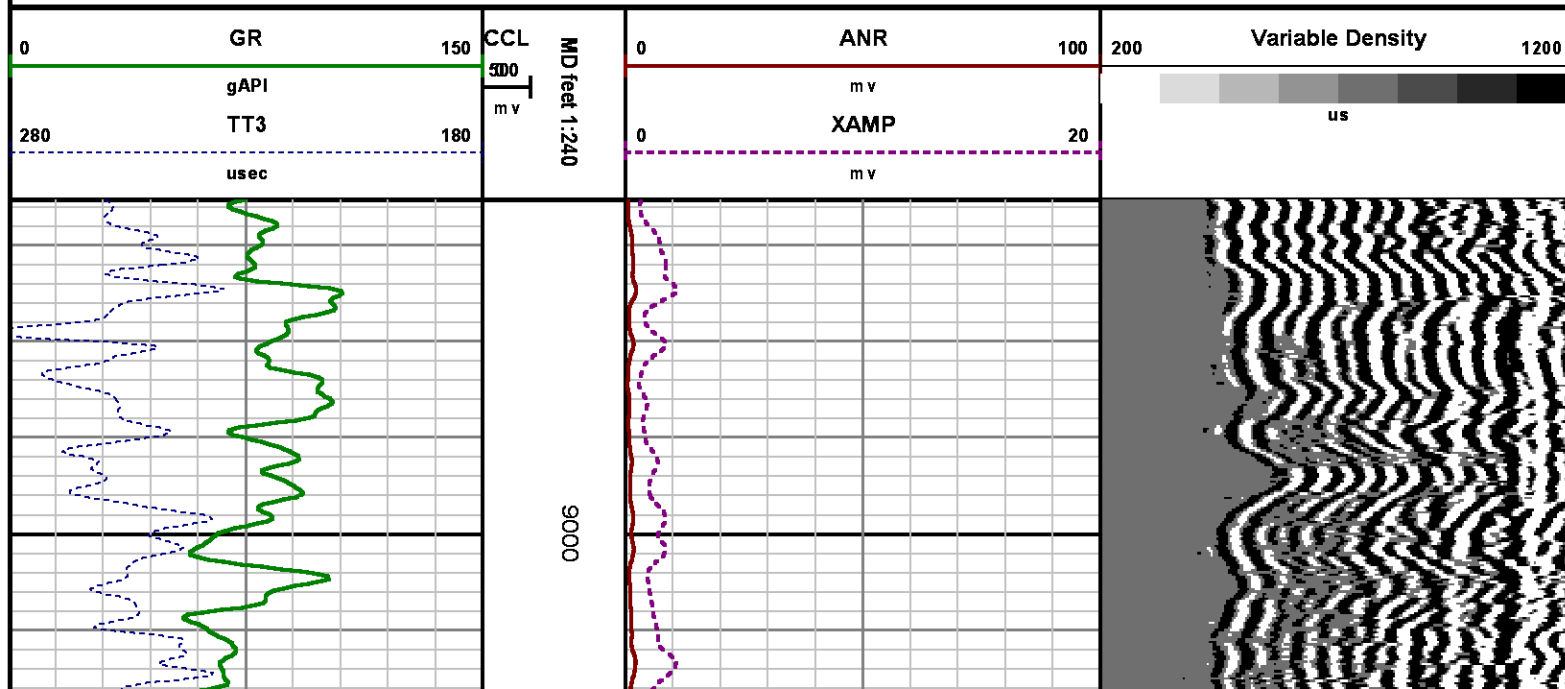
Well : FEDERAL PA 532-21

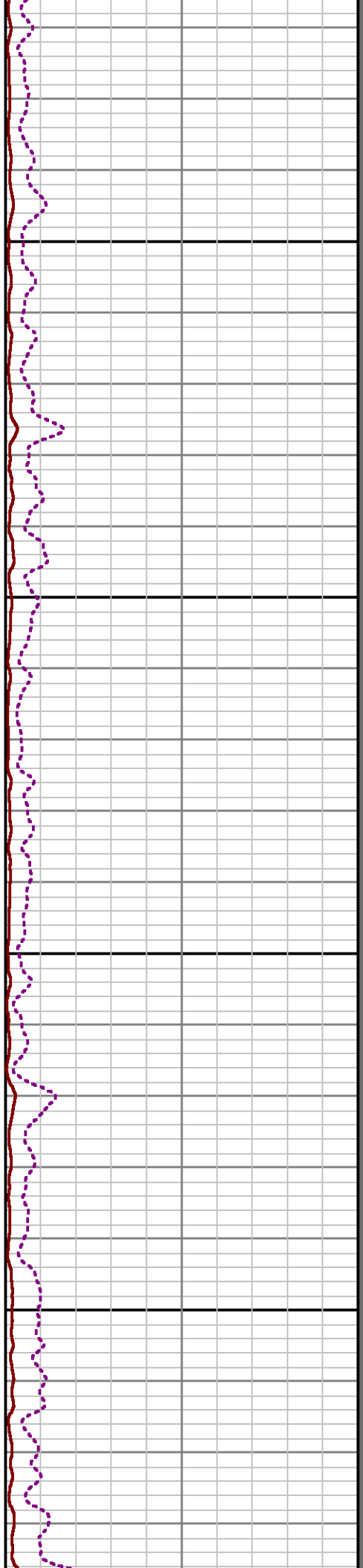
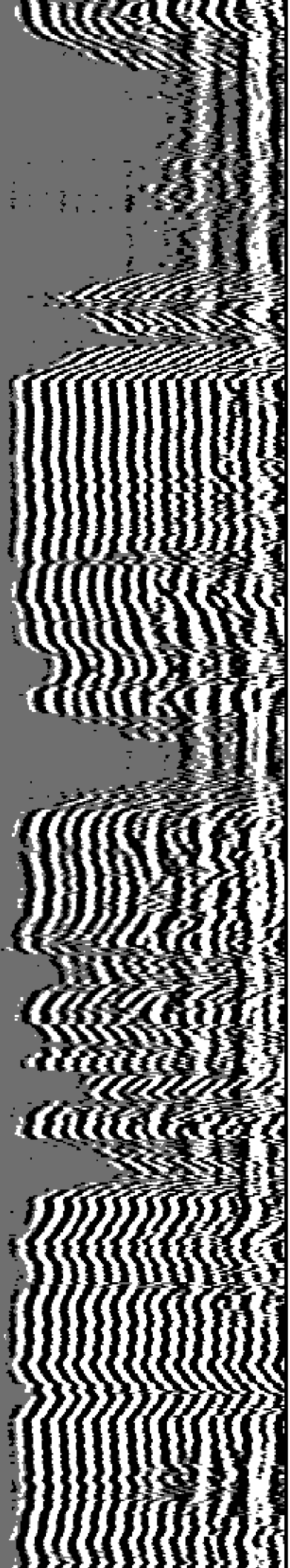
File Name : d:\welldata\wpx\pa 532-21\532ral\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8965.22 - 9287.47 feet UP

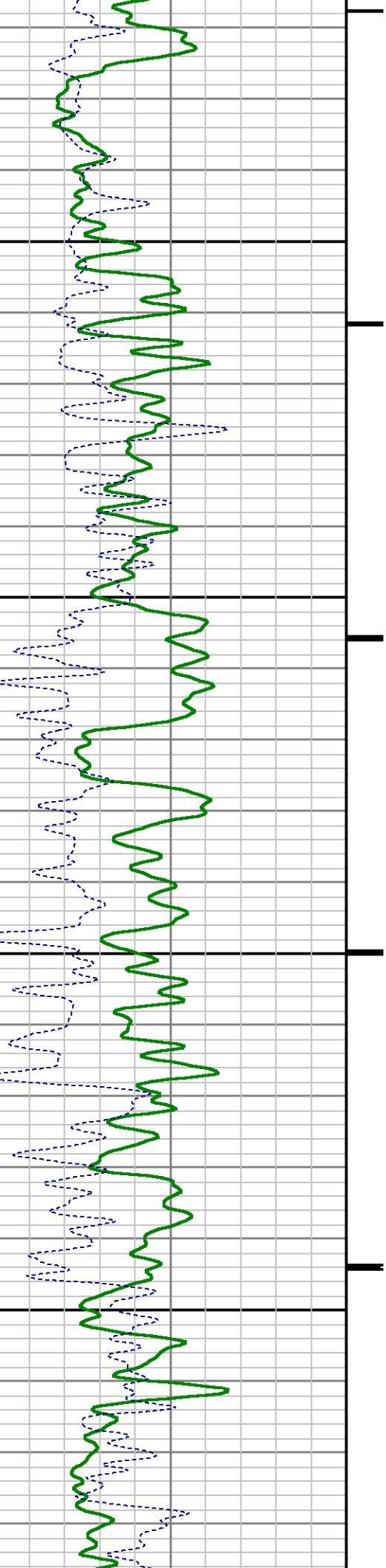
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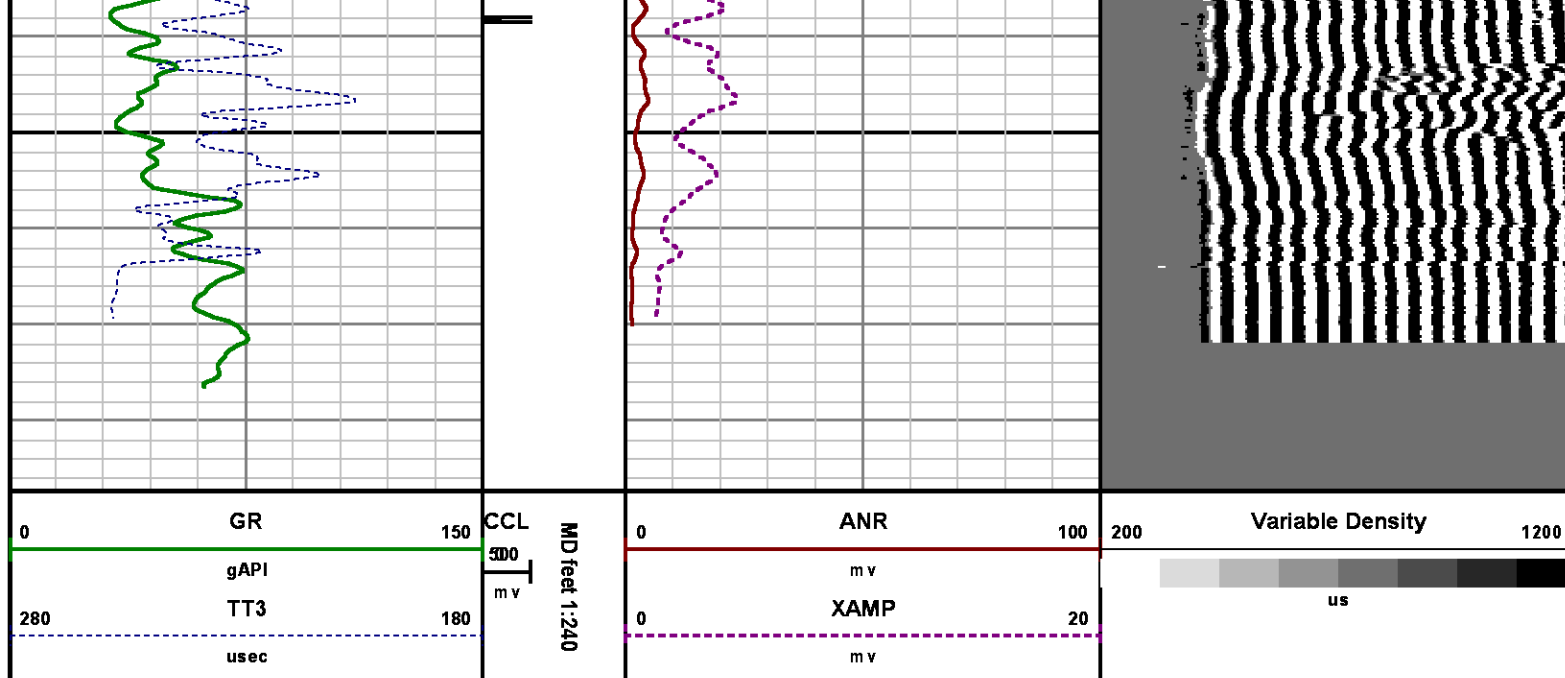




9100

9200





## CALIBRATION SUMMARY

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\106A2\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Apr 02 12:32:57 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: A2

Tool Delay [usec] -52.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	216	216	30	166	25	-0.220	100.00	0.18
3 Ft. Receiver	217	216	30	157	25	-0.269	100.00	0.17
5 Ft. Receiver	325	323	30	243	25	0.233	150.00	0.20
Radial #1	217	216	30	166	25	-0.906	100.00	0.17
Radial #2	216	216	30	166	25	-0.401	100.00	0.17
Radial #3	216	216	30	166	25	-0.358	100.00	0.17
Radial #4	217	216	30	166	25	-0.373	100.00	0.17
Radial #5	217	216	30	166	25	-0.126	100.00	0.18
Radial #6	218	216	30	166	25	-0.372	100.00	0.18
Radial #7	217	216	30	166	25	-0.521	100.00	0.18
Radial #8	219	216	30	166	25	-0.389	100.00	0.18

# RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\106A2 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Apr 02 12:35:32 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: A2

Tool Delay [usec] -52.00 Casing OD in 4.50 Casing Wt lbm/ft 11.60 Casing ID in 4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.066	0.000	1.00	100.000
3 Ft. Receiver	195	25	-1.756			
5 Ft. Receiver	305	25	-2.512			
Radial #1	195	25	-2.825			
Radial #2	195	25	-2.516			
Radial #3	195	25	-2.184			
Radial #4	195	25	-2.358			
Radial #5	195	25	-2.099			
Radial #6	195	25	-2.016			
Radial #7	195	25	-1.585			
Radial #8	195	25	-1.901			

# GAMMA RAY

Calibration File: C:\case\calver\GR\1012412122.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Feb 22 12:18:15 2014 TOOL SERIES: 2459XA ASSET: 10124121 SEQ: 22

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	36.22	291.56	0.725	26.24	211.24	185.00

Verification File: C:\case\calver\GR\1012412122.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Feb 22 12:19:23 2014 TOOL SERIES: 2459XA ASSET: 10124121 SEQ: 22

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	41.96	293.60	0.725	30.40	212.73	182.33

# GAMMA RAY #2

Calibration File: C:\case\calver\GR\121A2.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Apr 02 12:47:06 2014

TOOL SERIES: 2459XA ASSET: 121 SEQ: A2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	44.18	296.49	0.733	32.39	217.39	185.00

Verification File: C:\case\calver\GR\121A2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Wed Apr 02 12:48:15 2014

TOOL SERIES: 2459XA ASSET: 121 SEQ: A2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	44.71	298.76	0.733	32.78	219.05	186.27

## TOOL DIAGRAM

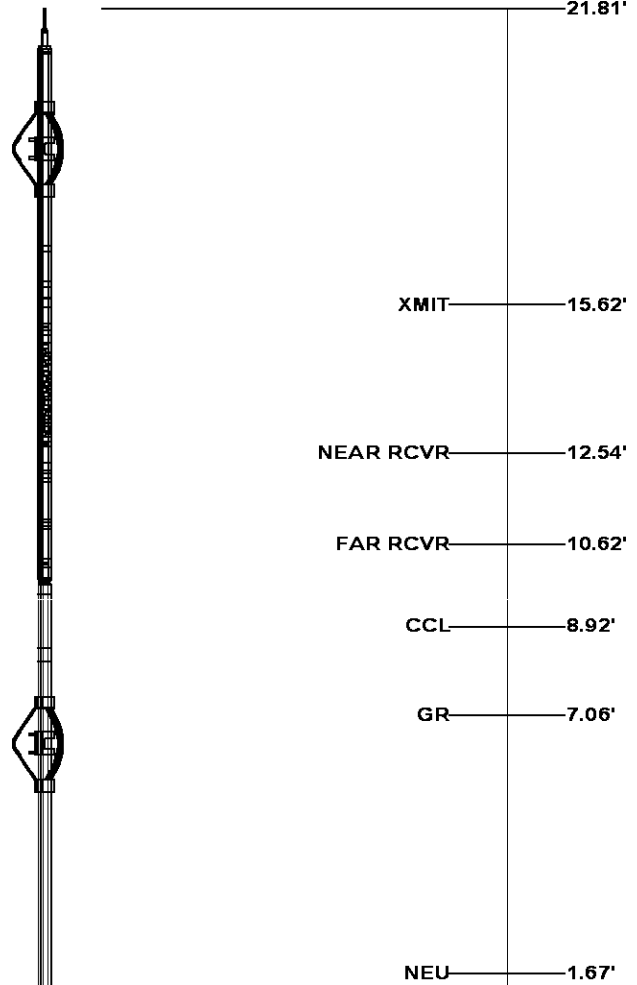
### OTA SHORT CABLE HEAD

### 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"**

0.00'



**Baker Atlas**

*CASE*

**Company**

WPX ENERGY

**Well**

FEDERAL PA 532-21

**Field**

PARACHUTE

**County**

GARFIELD

**State**

COLORADO

**File No:**

CH083906

**API No:**

05045220340000

**Location**

SHL: 2610' FNL X 1418' FWL

BHL: 1561' FNL X 1571' FEL (SWNE)

SEC 21 TWP 6S RGE 95W

**Elevations**

KB 6056 ft

DF

GL 6030 ft

21 6S 95W

PA 22-21 PAD

NABORS 573