



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH091511	Company Well Field County	WPX ENERGY SAVAGE RW/ 444-25 RULISON GARFIELD	State COLORADO
API No: 05045219990000	Location SHL: 1126' FSL x 1381' FEL (SESE) BHL: 398' FSL x 716' FEL SEC 25 TWP 6 S RGE 94W		Other Services RPM
25 6S 94W RW/ 43-25 PAD NABORS 677	Permanent Datum Log Measured From Drill Measured From	GROUND LEVEL KB 26 ft Above P. D. KB	Elevations KB 6260 ft DF GL 6234 ft

Date	14OCT2014	
Run	1	
Service Order	US091511	
Depth Driller	8858 ft	
Depth Logger	8812 ft	
Bottom Logged Interval	8802 ft	
Top Logged Interval	26 ft	
Time Started	8:00	
Time Finished	11:30	
Operator Rig Time	3.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	NA	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	245 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	44271	GRAND JCT.
Recorded By	P. EDWARDS	
Witnessed By	BOB CADY	

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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.

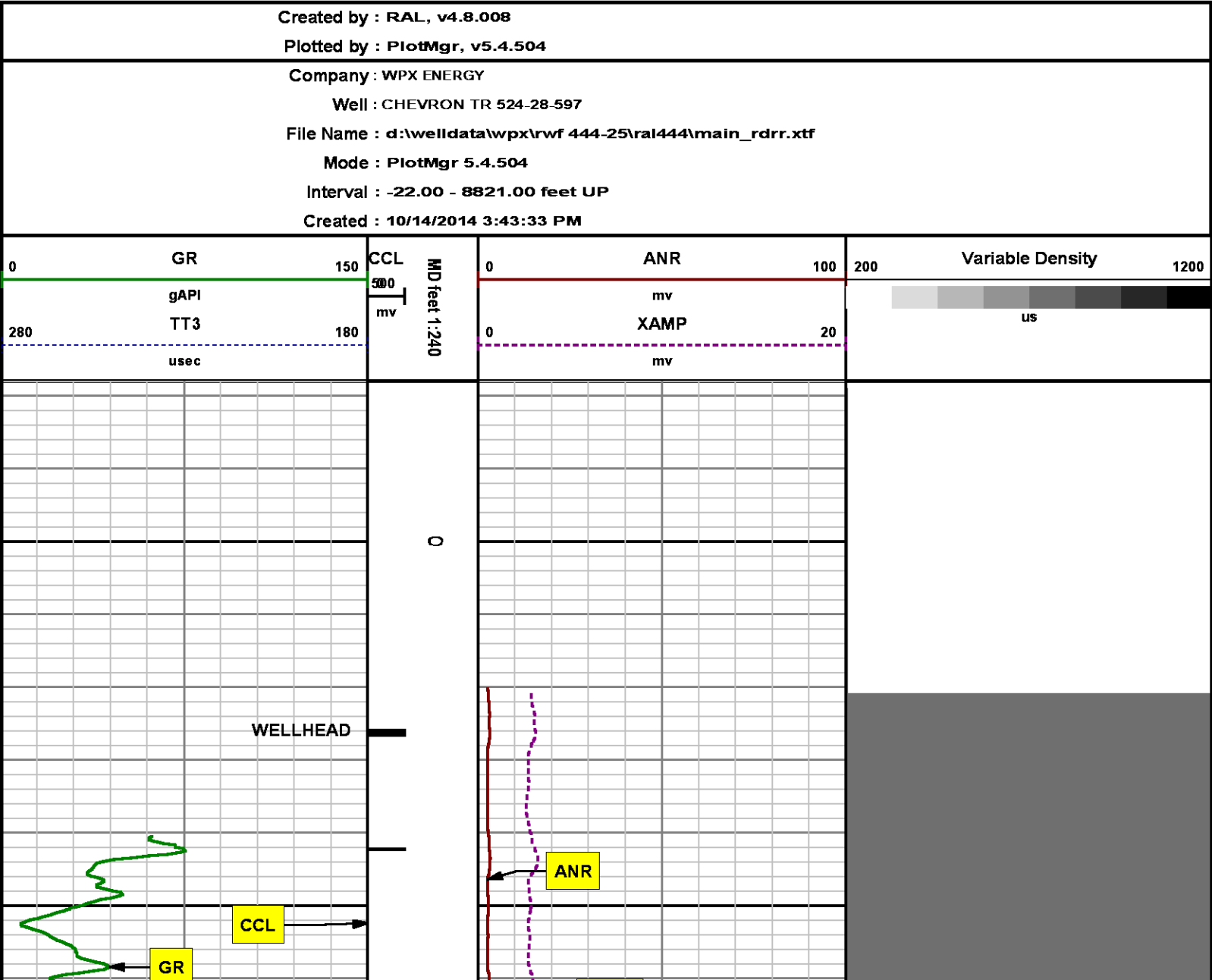
Borehole Record		
Bit Size	From	To
13.5 in	26 ft	1111 ft
8.75 in	1111 ft	8858 ft

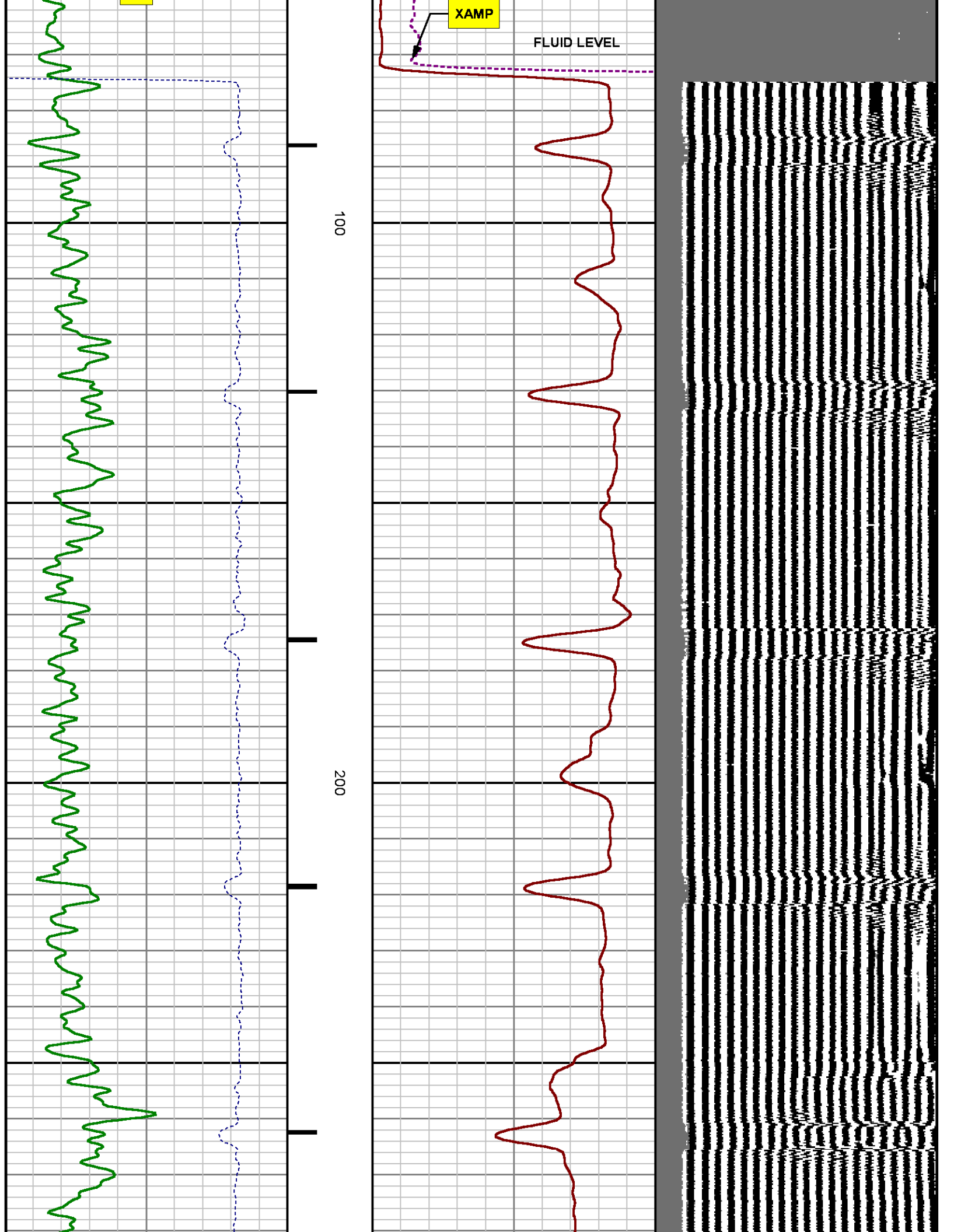
Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1111 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	8858 ft

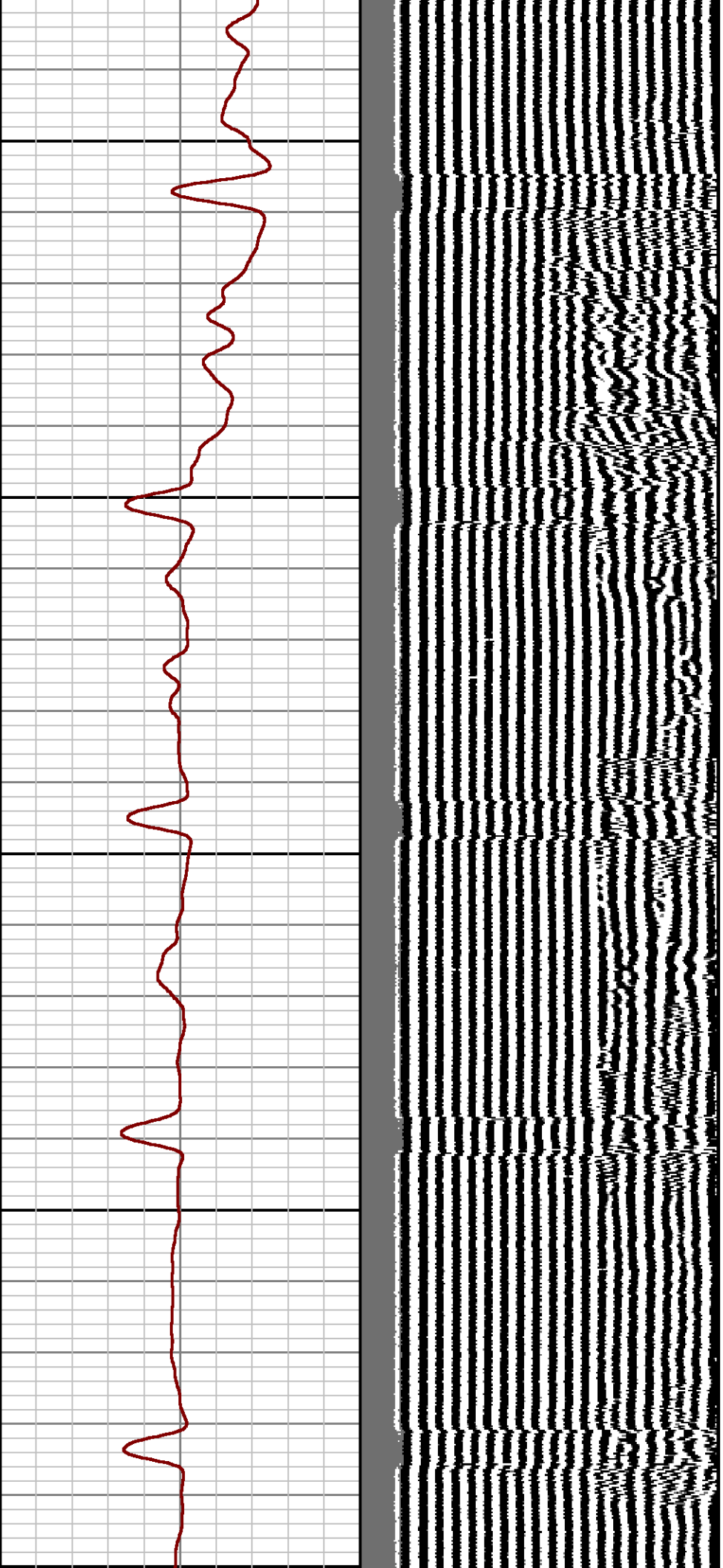
Remarks
All data on this log is shifted using the GCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the clients request.
The amount of linear shift is 1 foot.
Logged with zero PSI at wellhead.
Short Joint 5327' - 5348'
BHT 245°F
Gamma Ray failed copy from RPM.

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	RAL	1426XA	10421495	CENTRALIZED
1	1	GR	2459XA	10218503	CENTRALIZED

PRIMARY PRESENTATION  
0 PSI



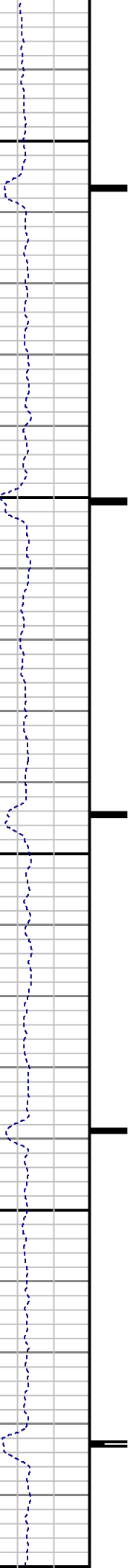


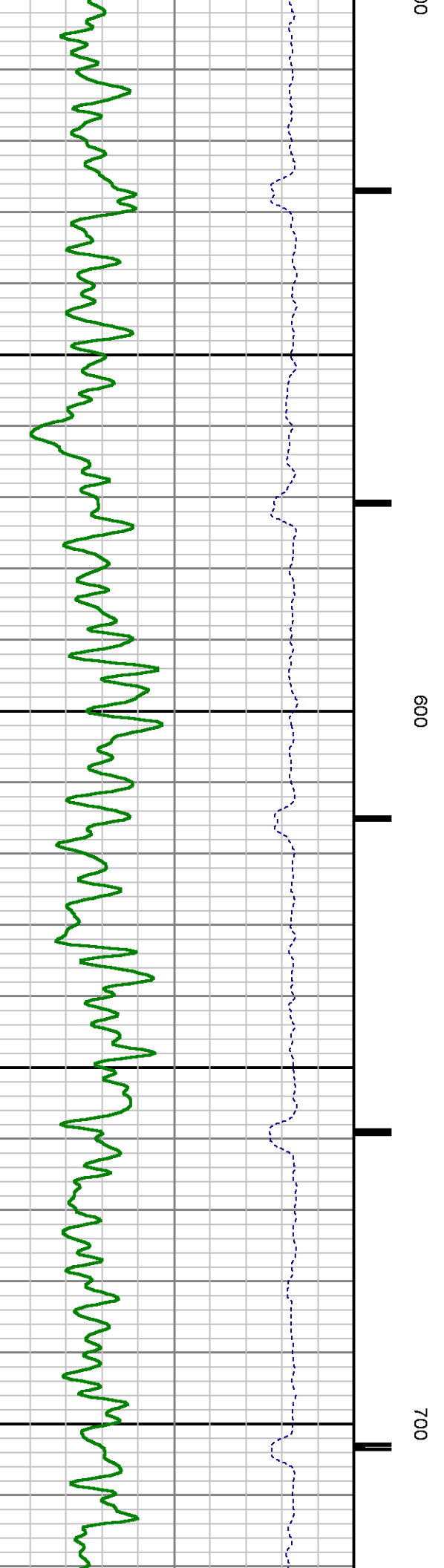
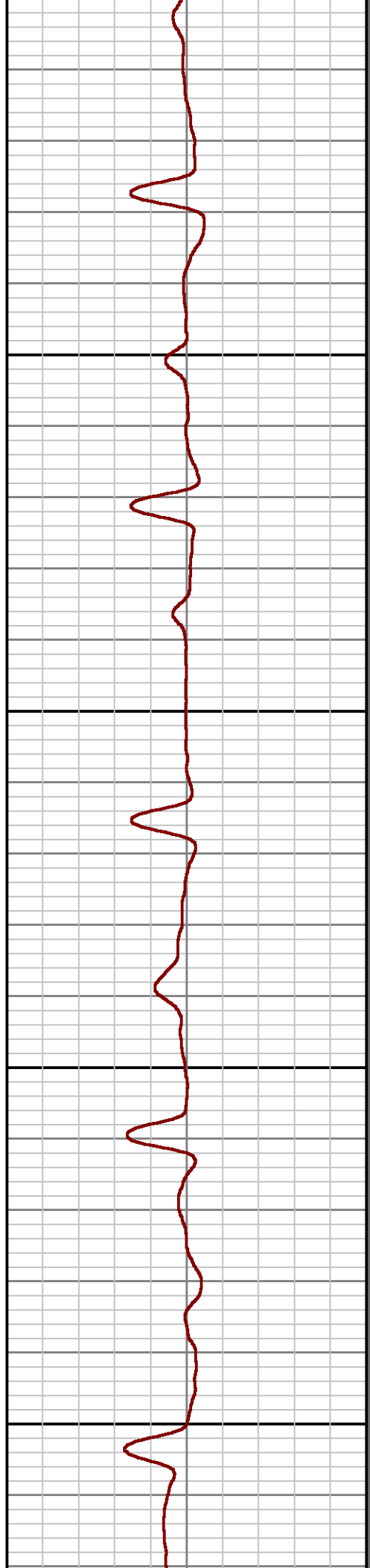
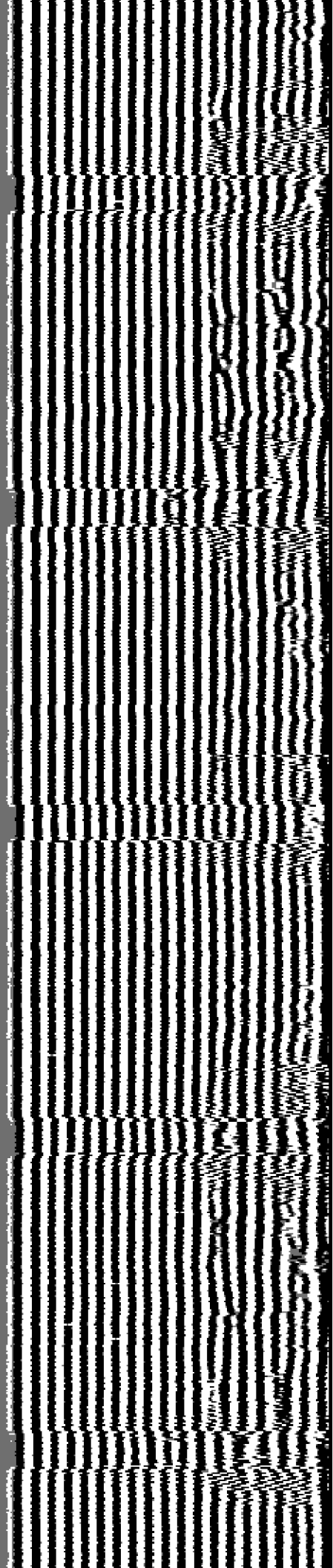


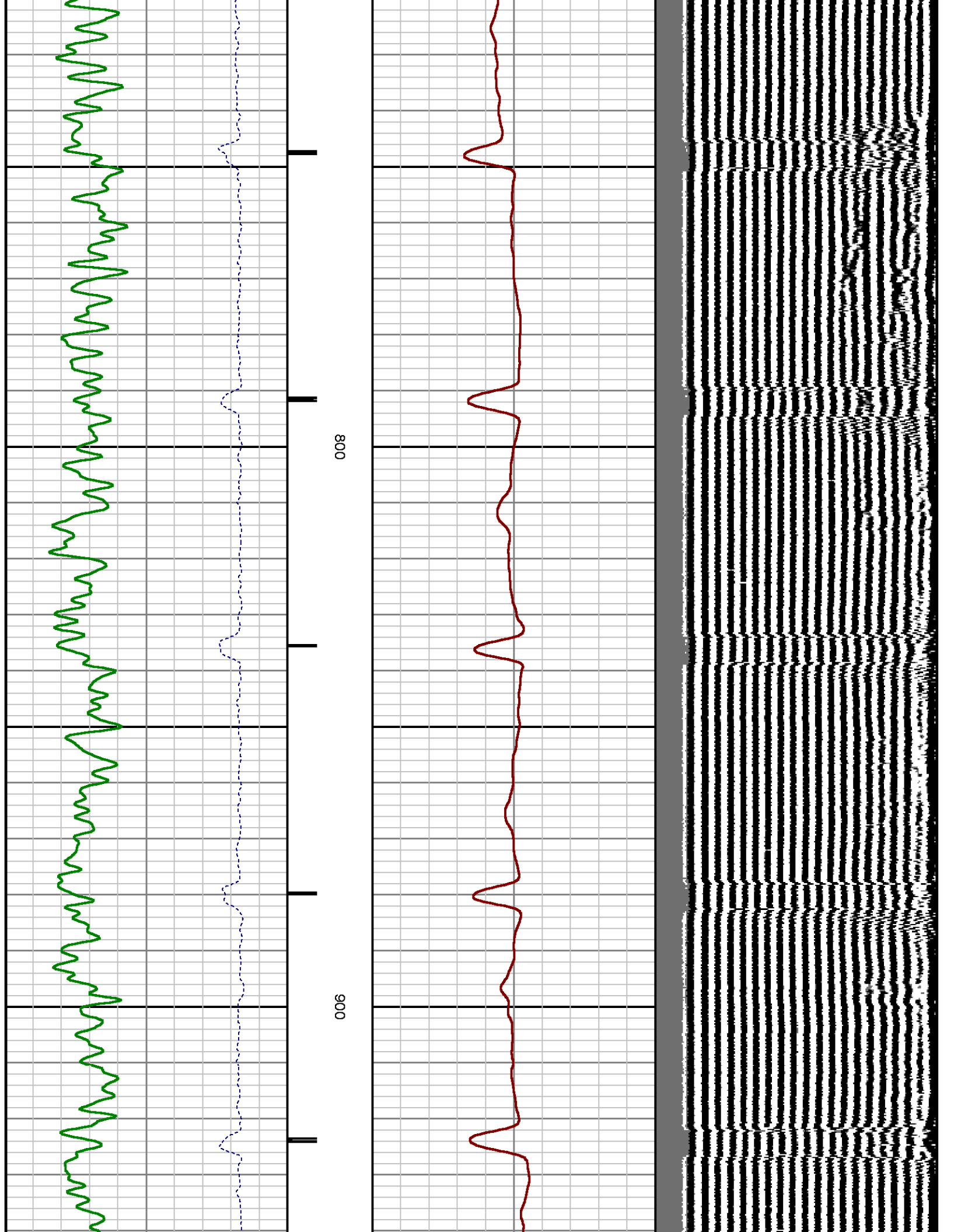
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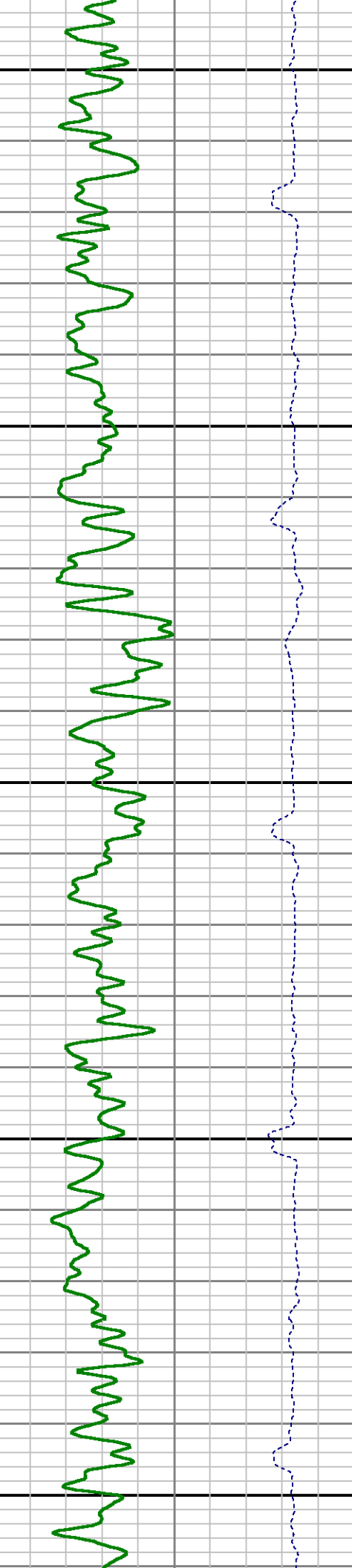
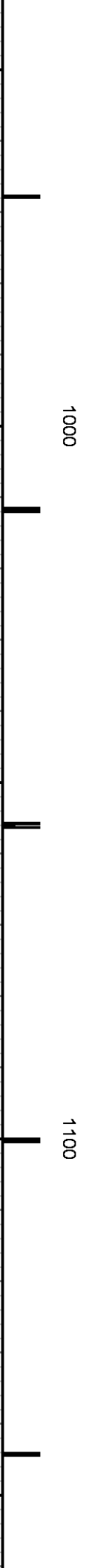
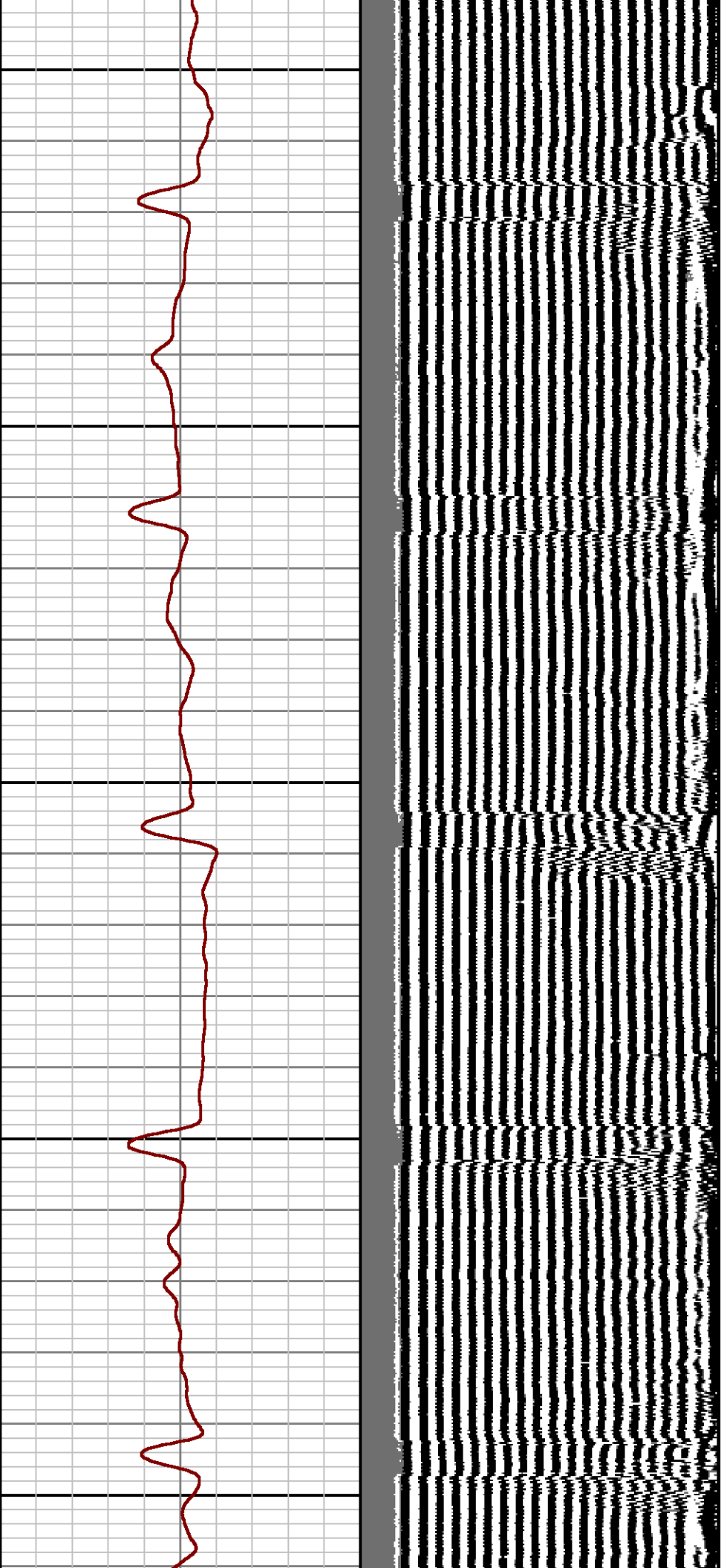
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500

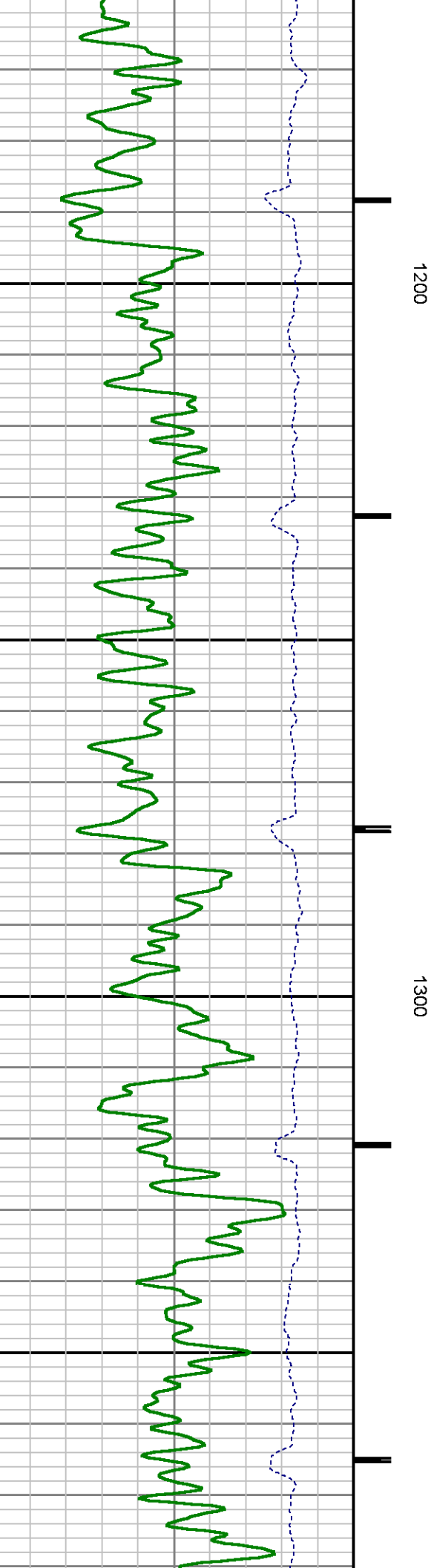
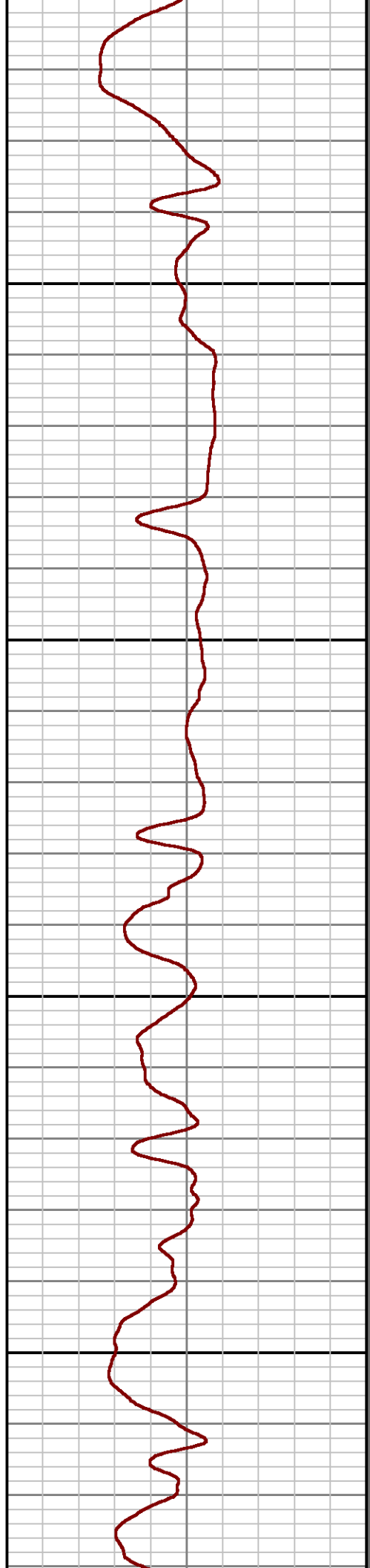
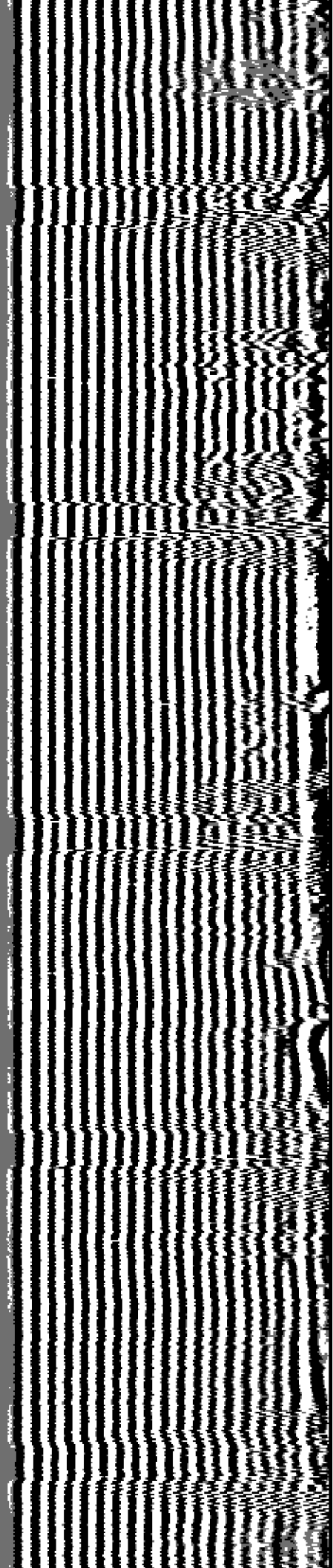




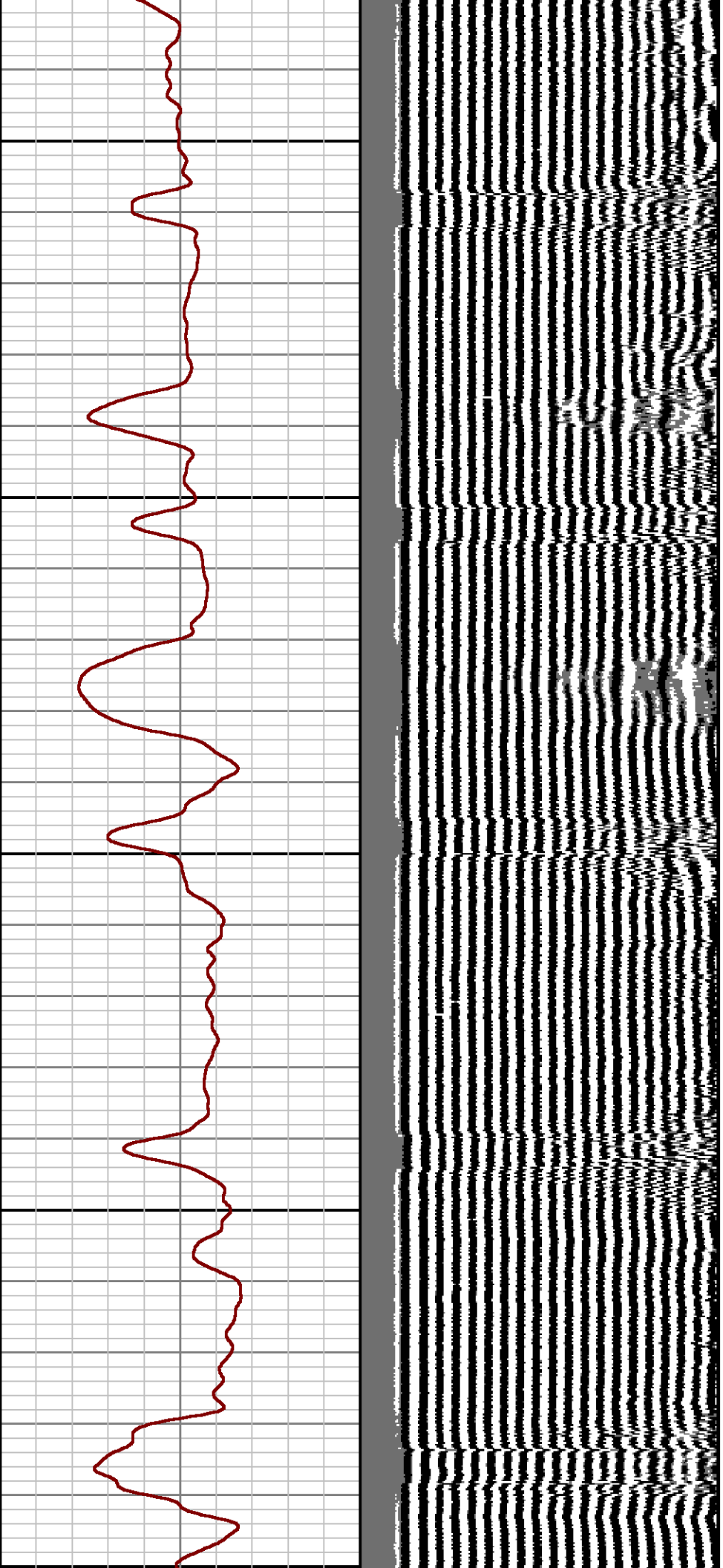








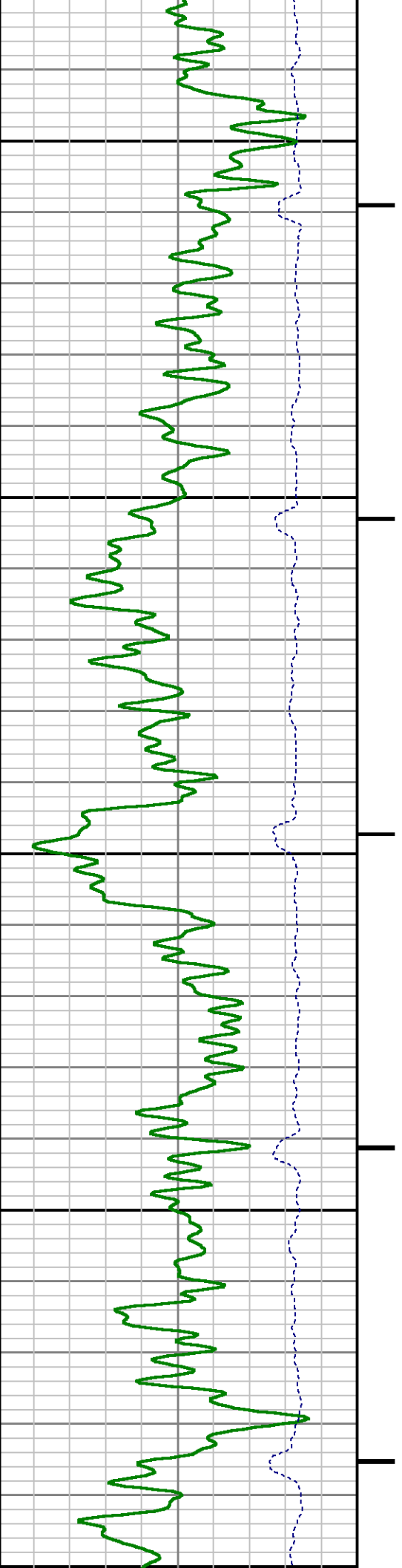


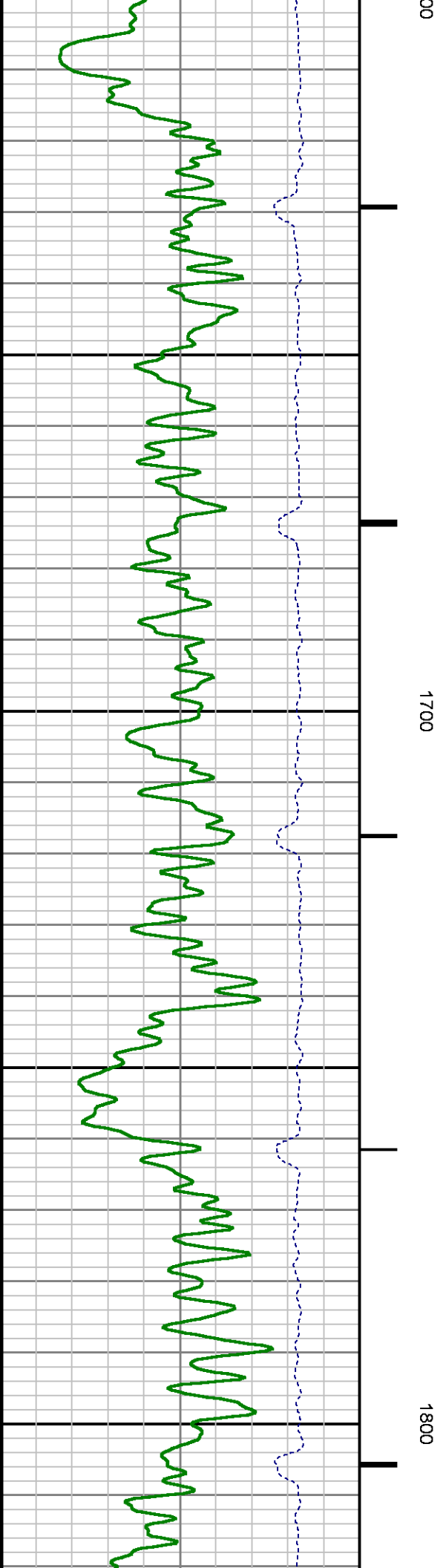
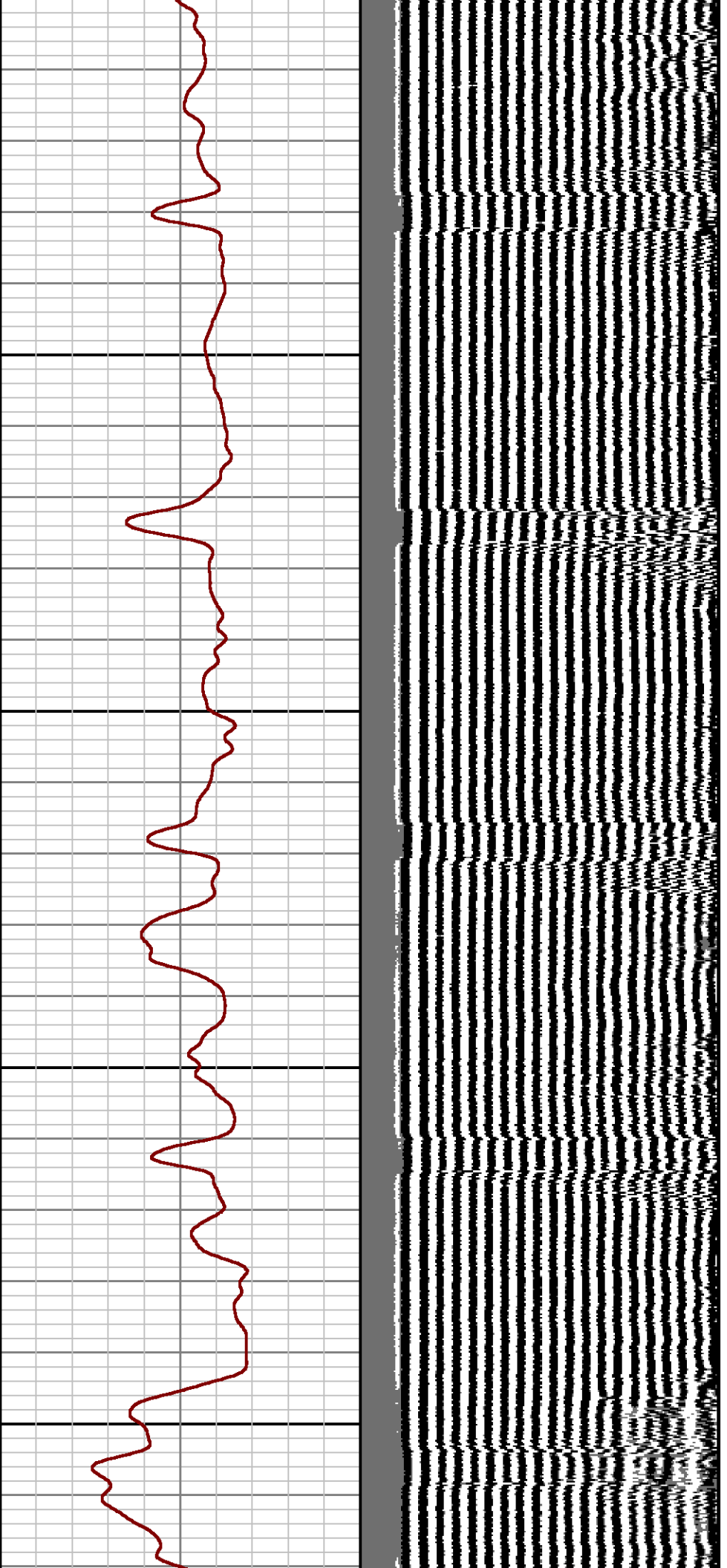


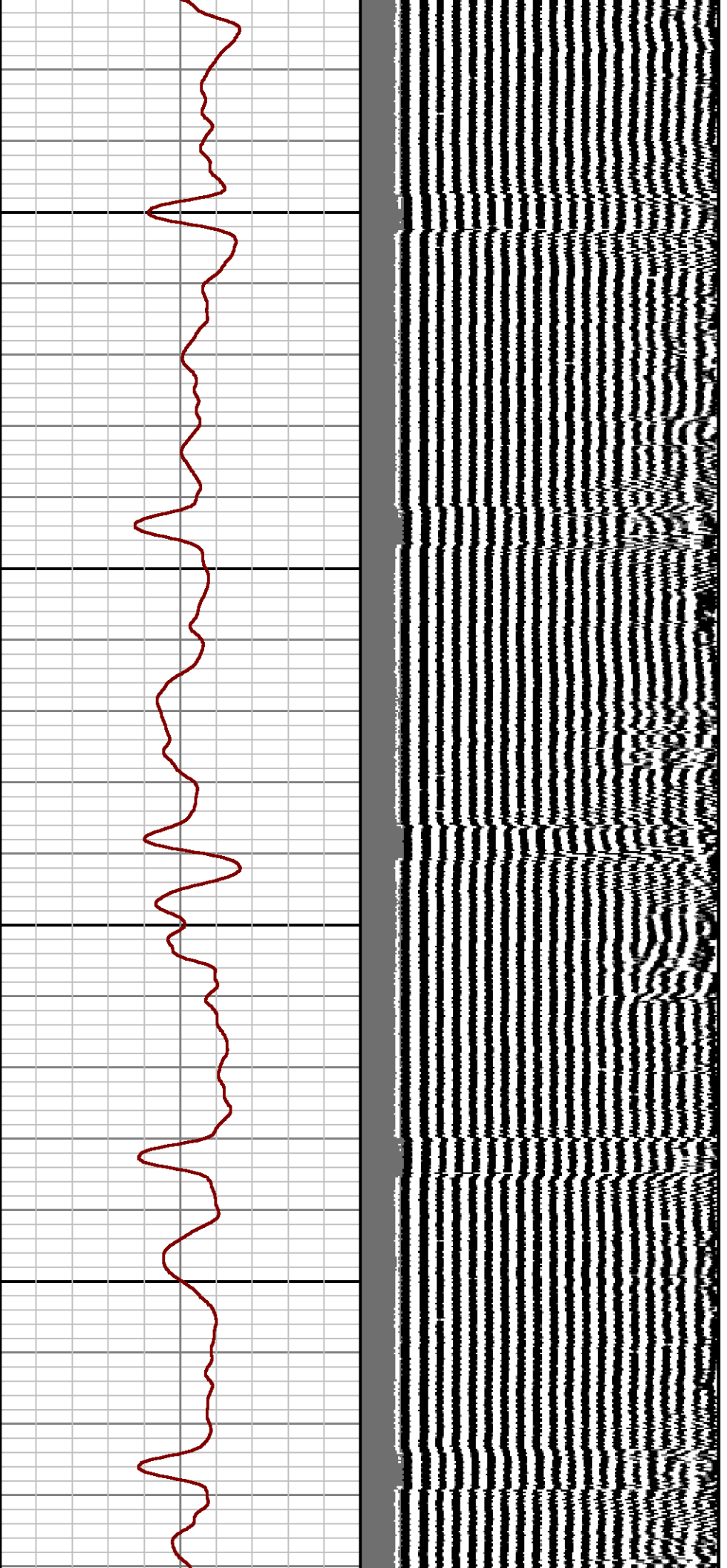
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1500

1600

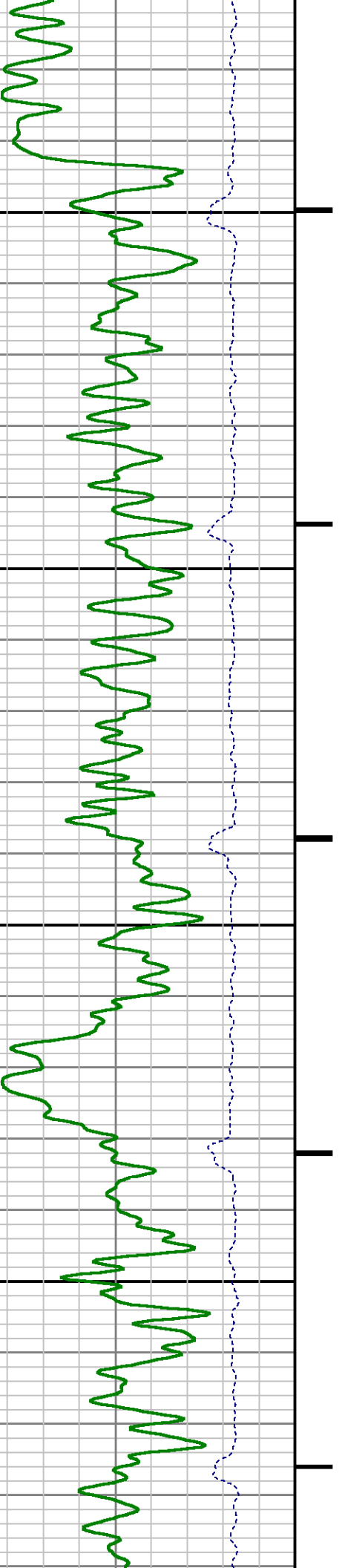


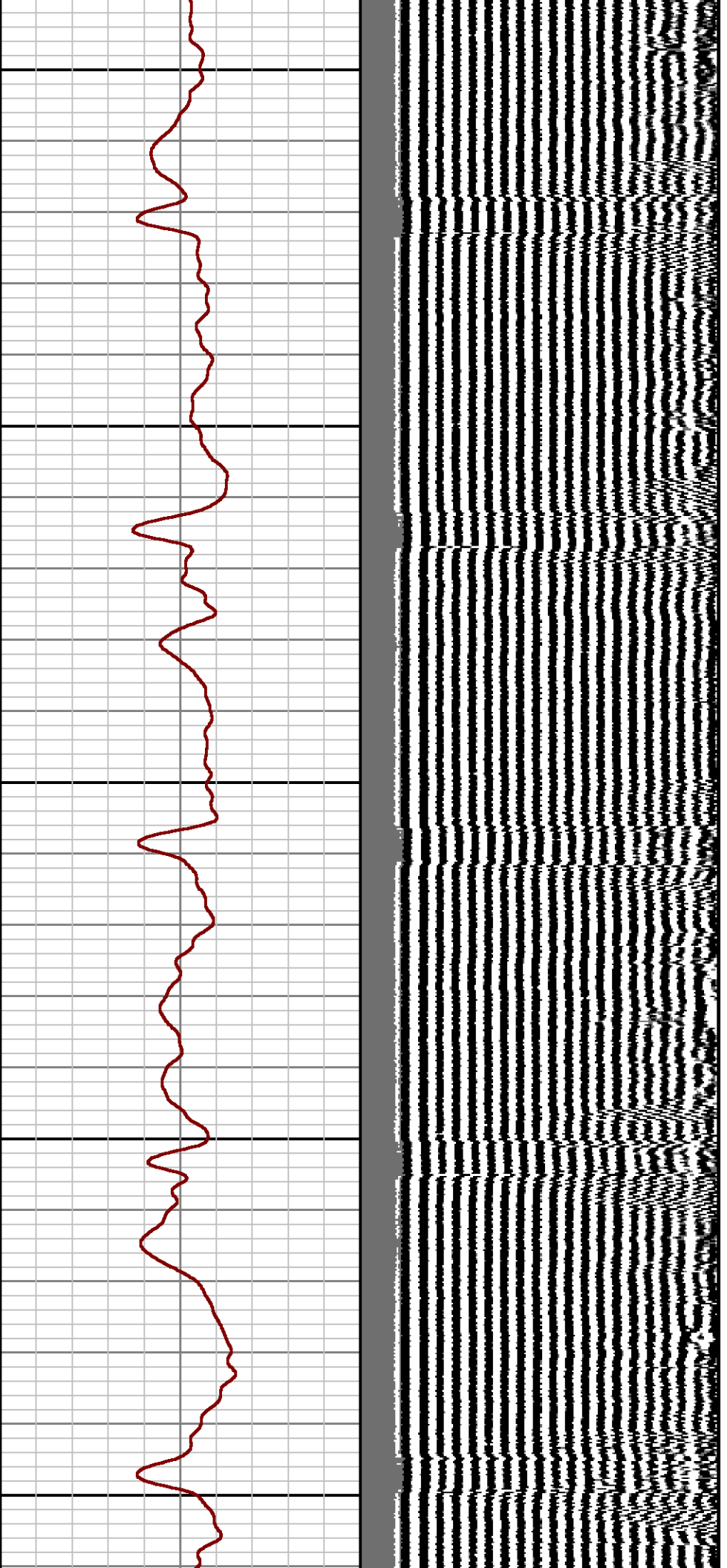




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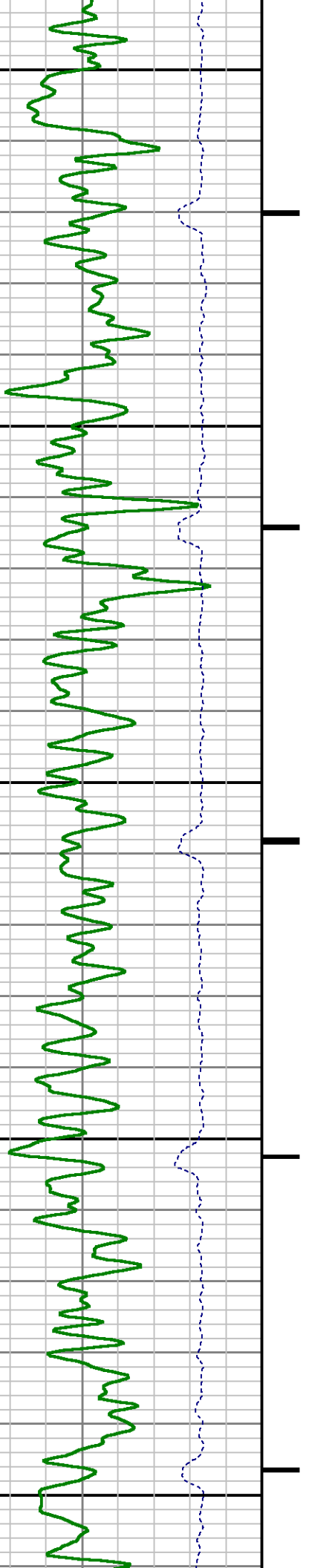
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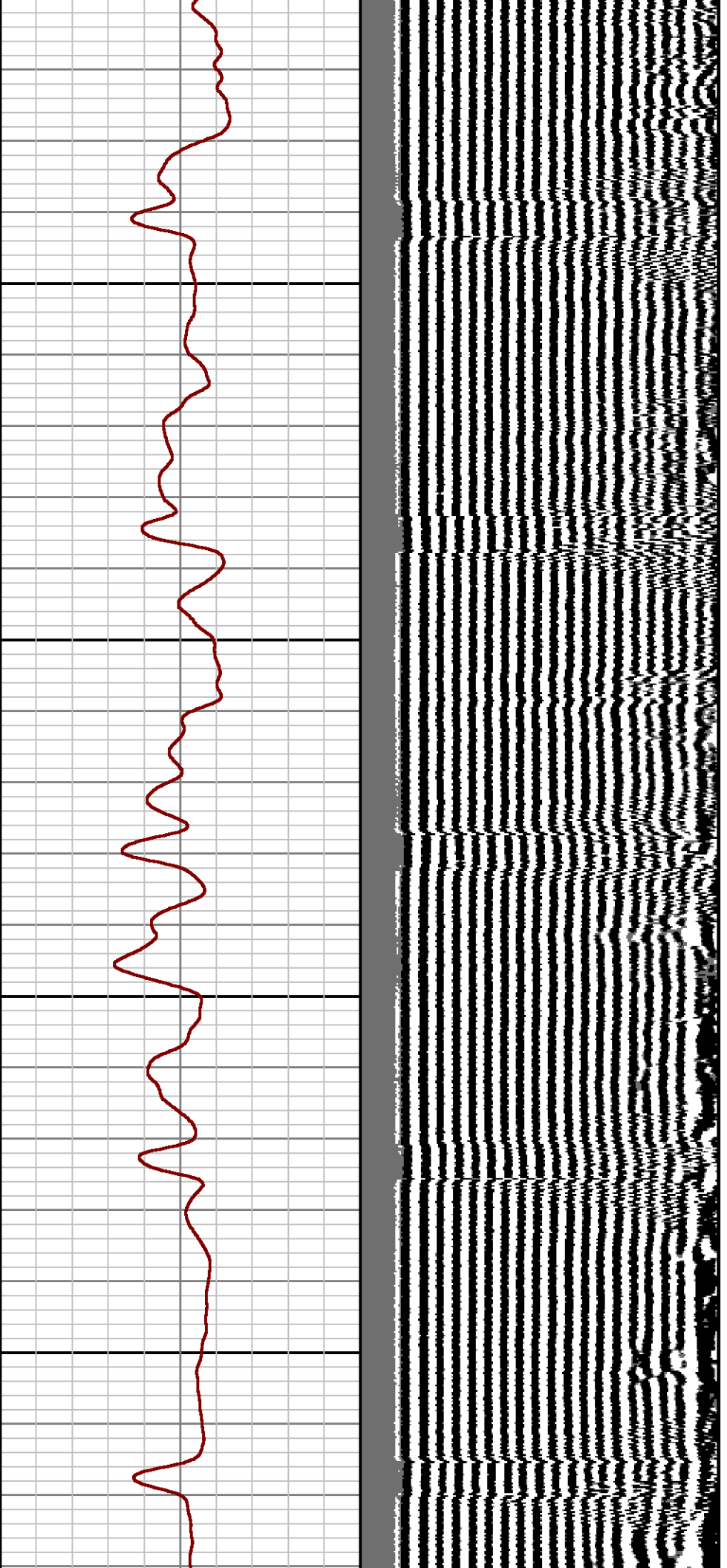




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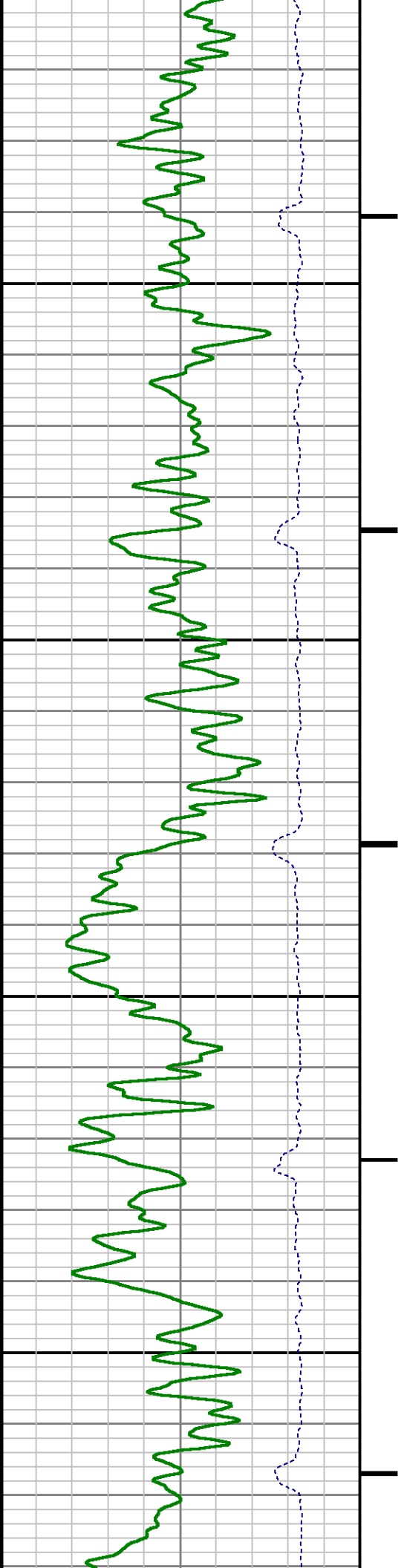
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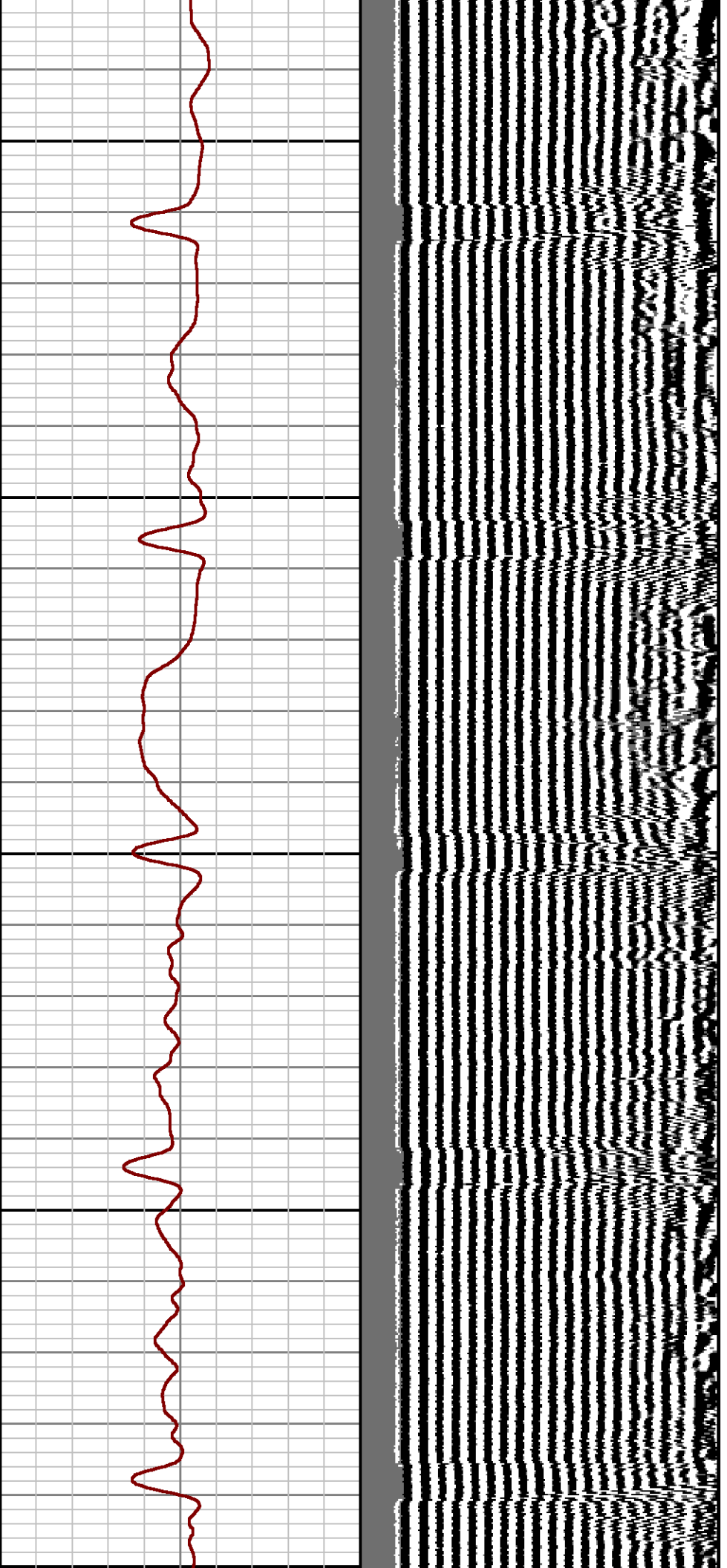


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2400



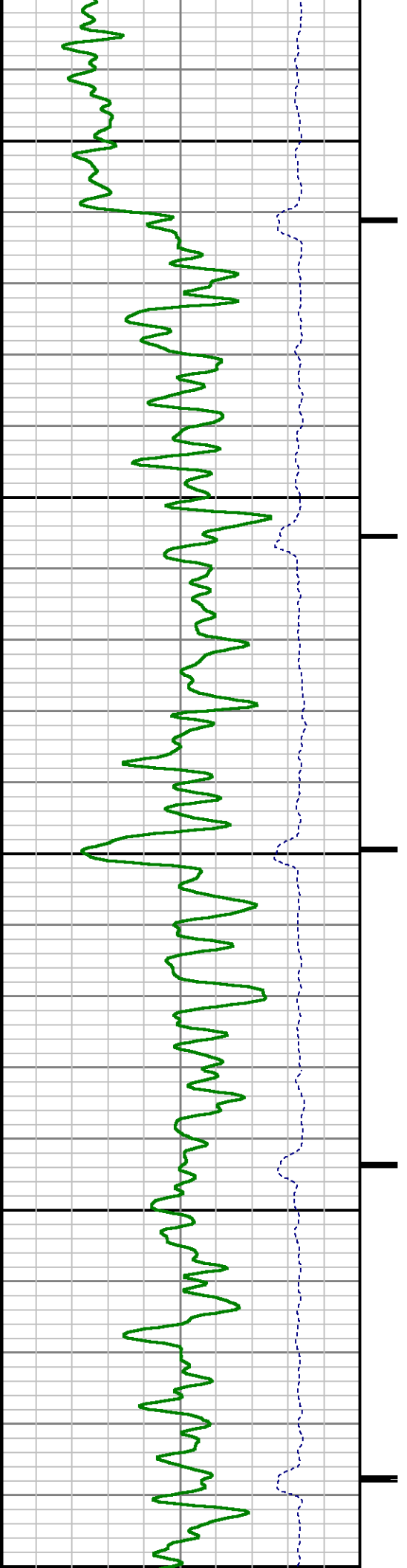




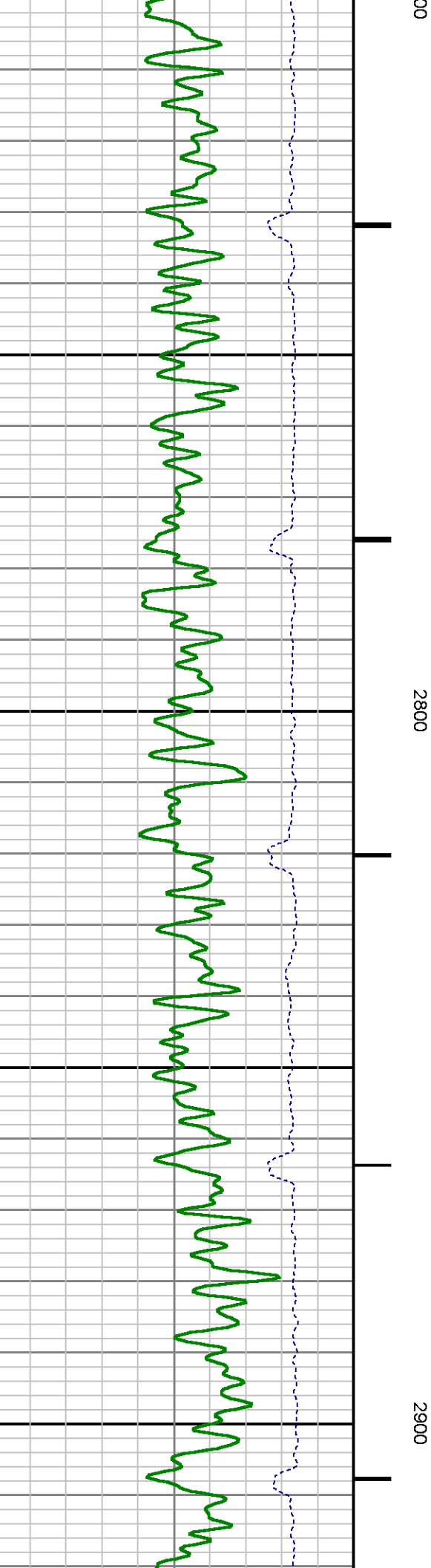
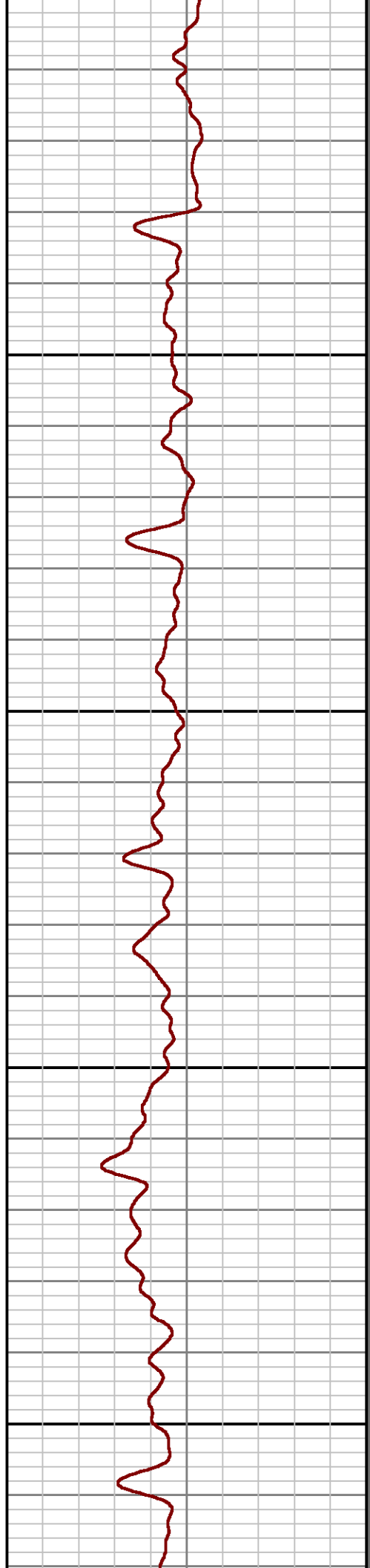
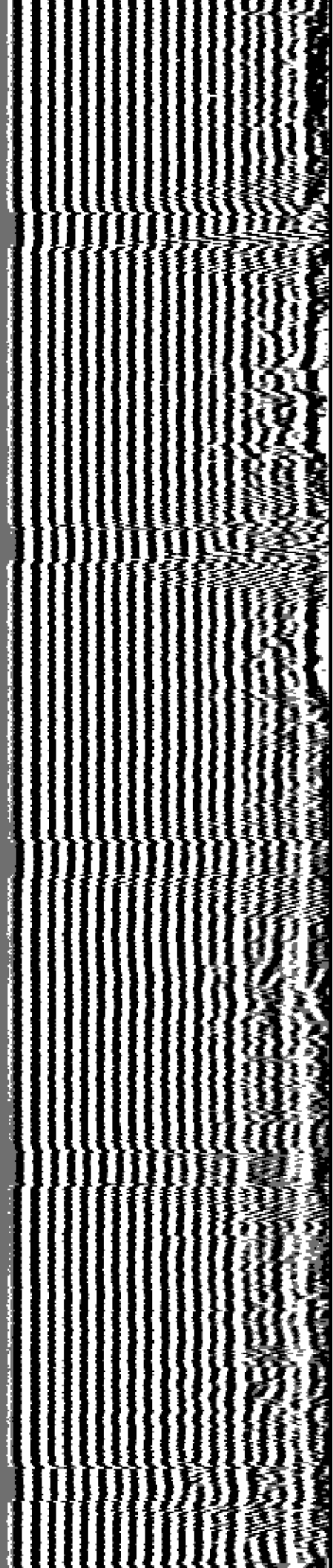
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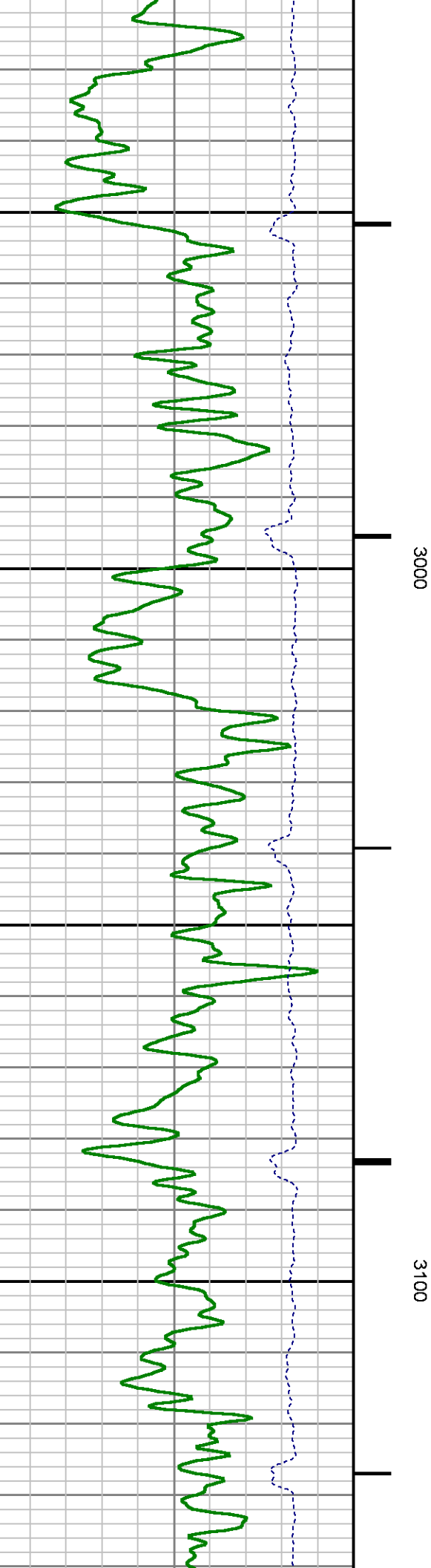
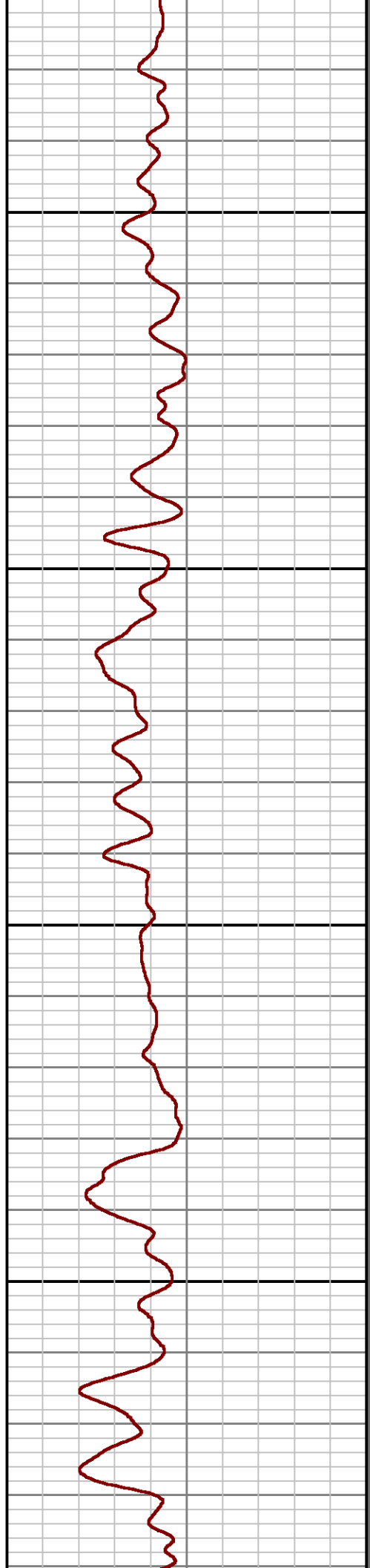
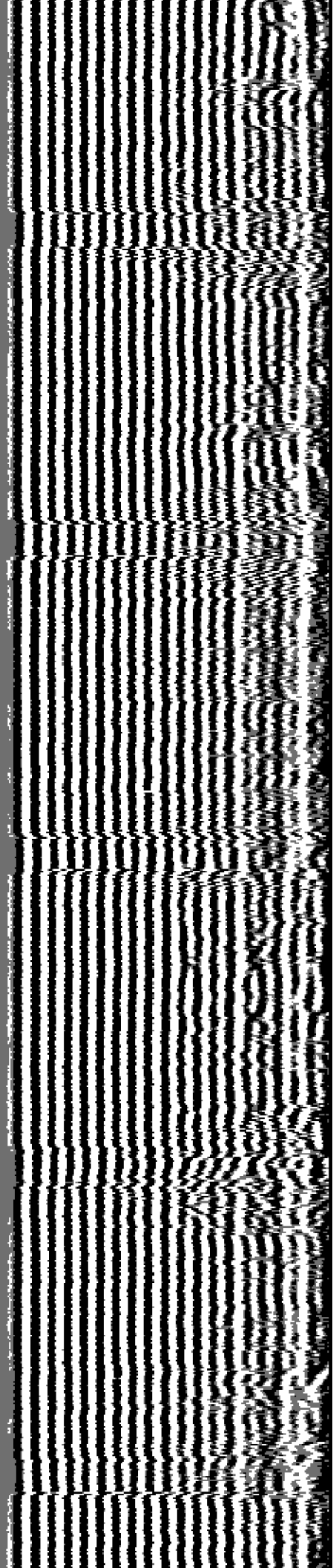
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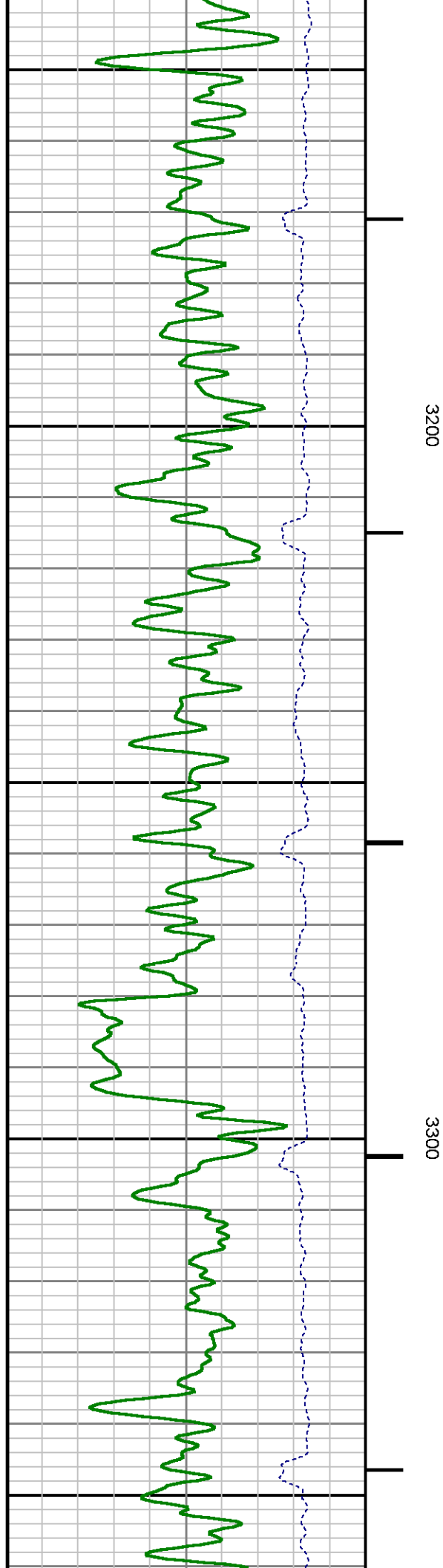
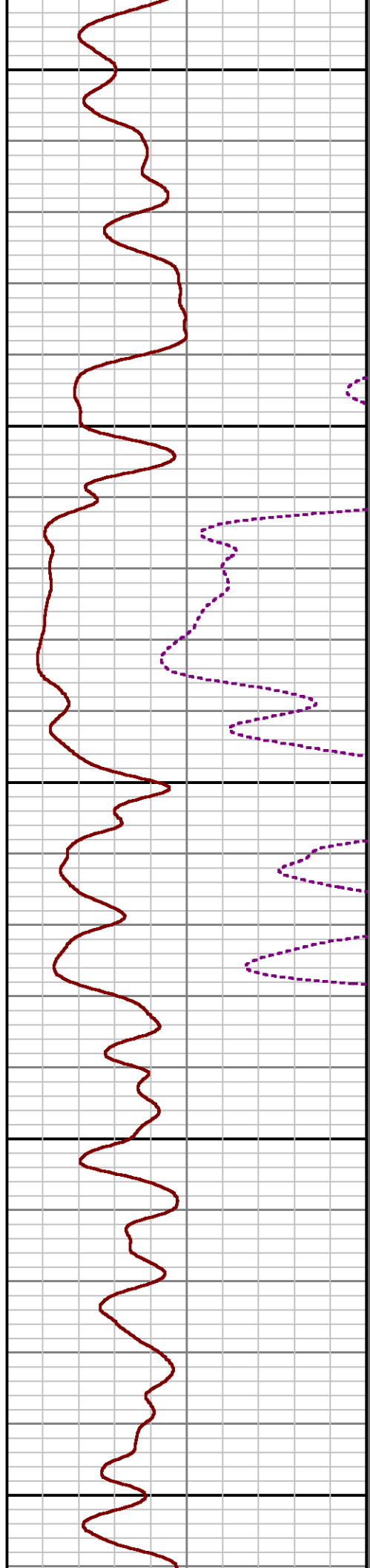
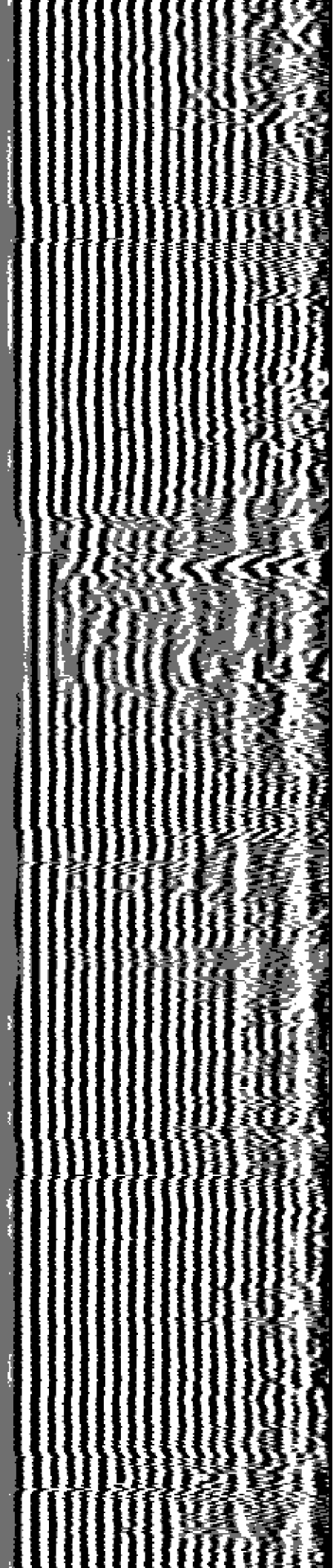
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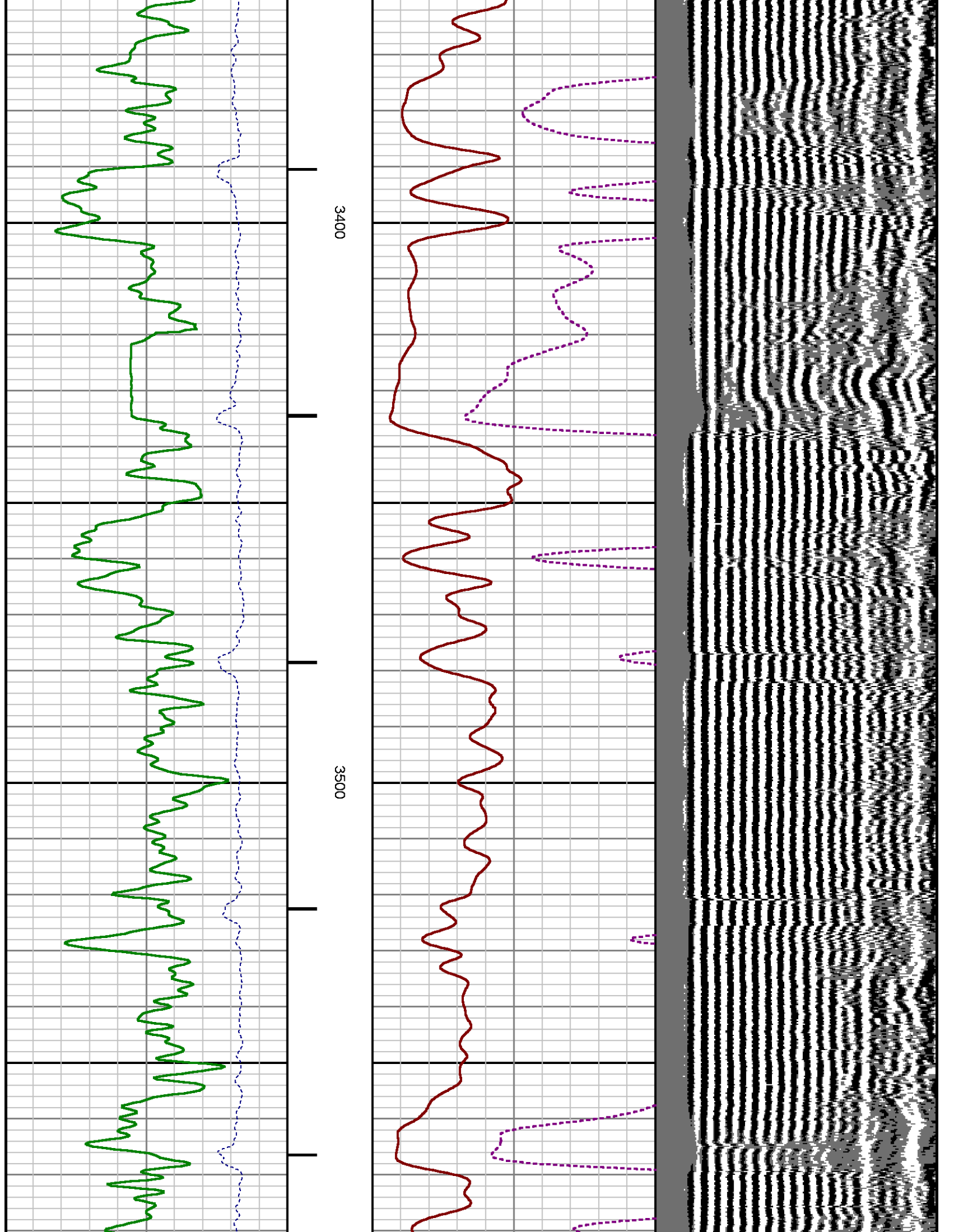


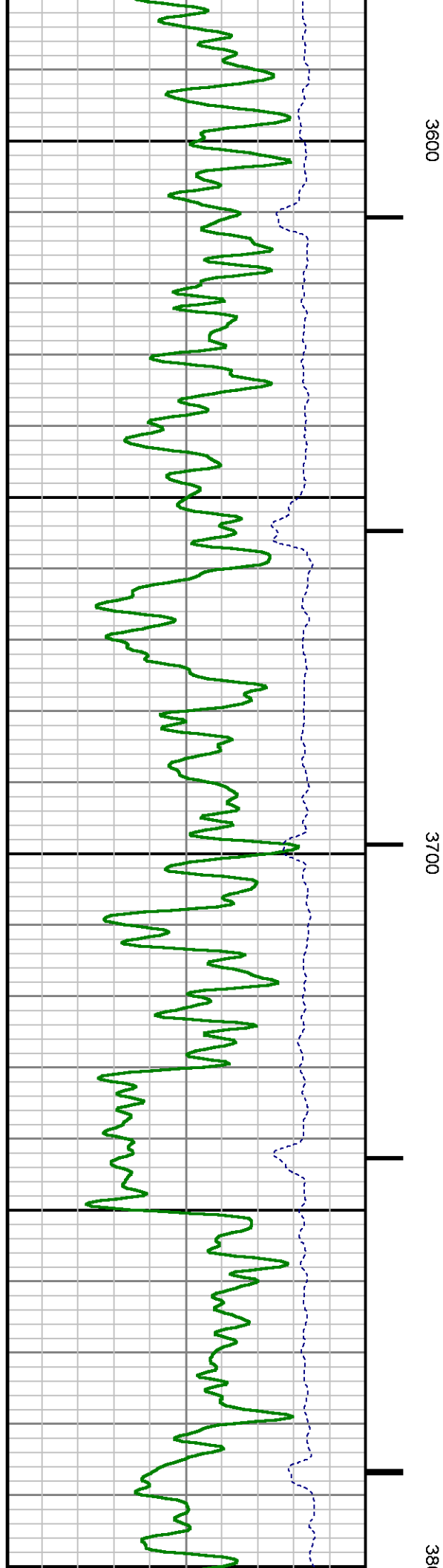
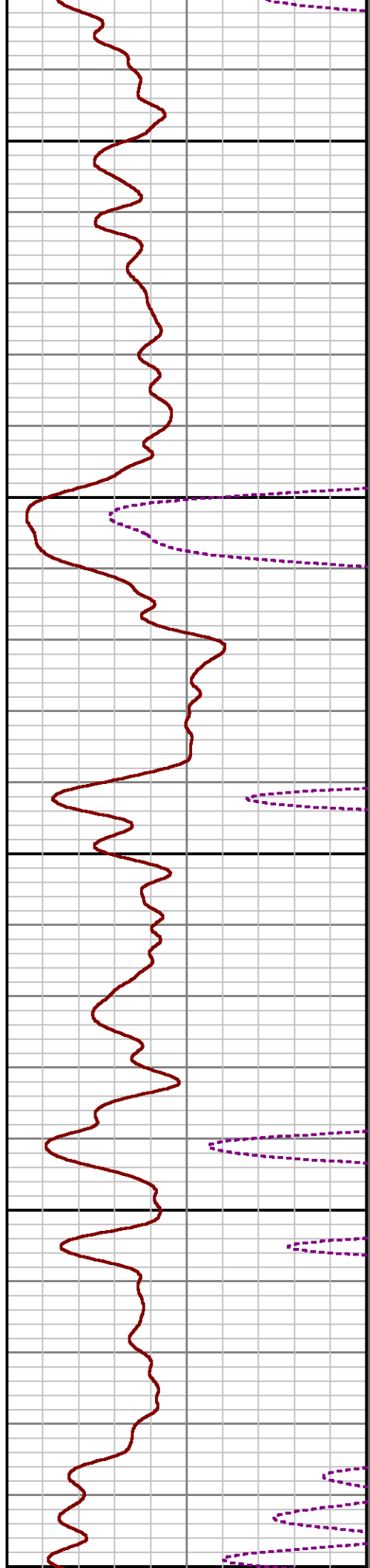
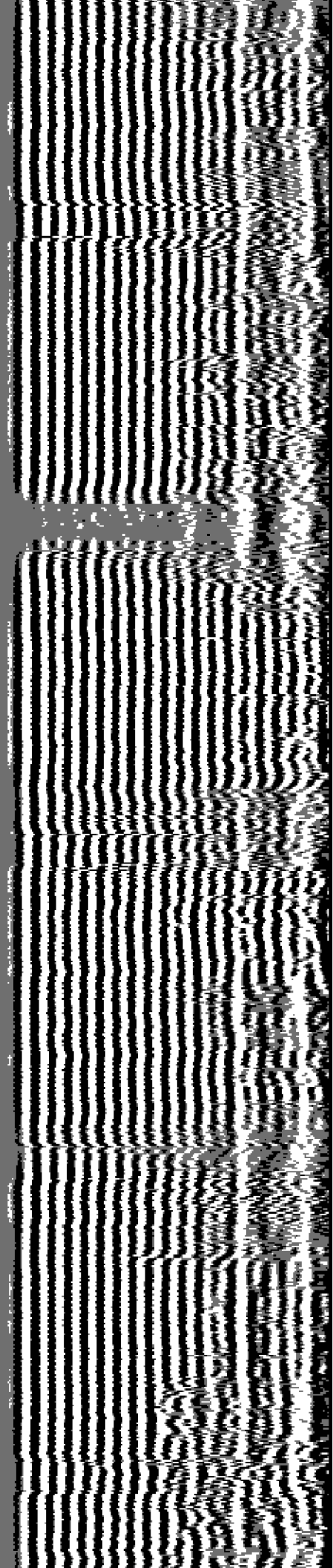




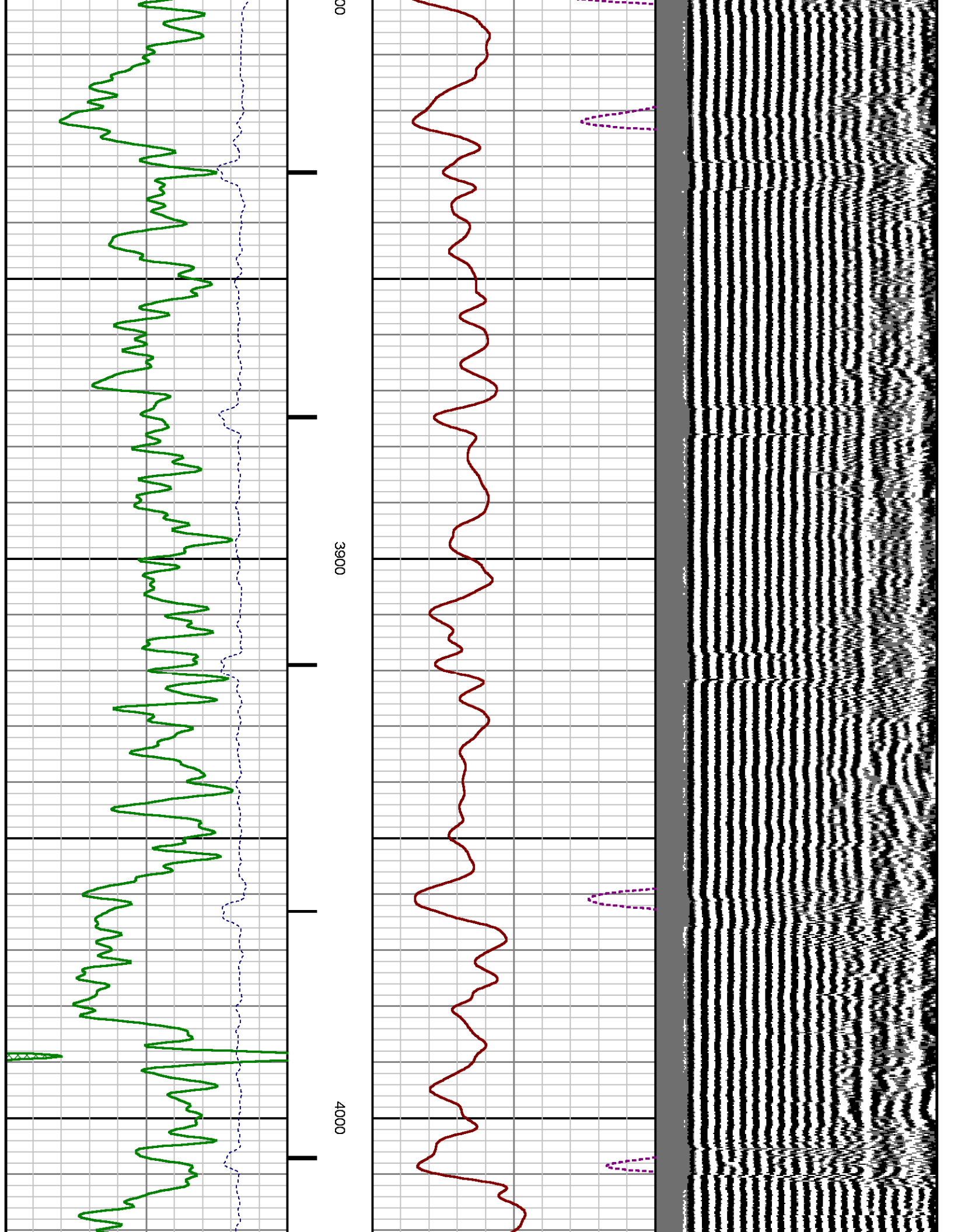




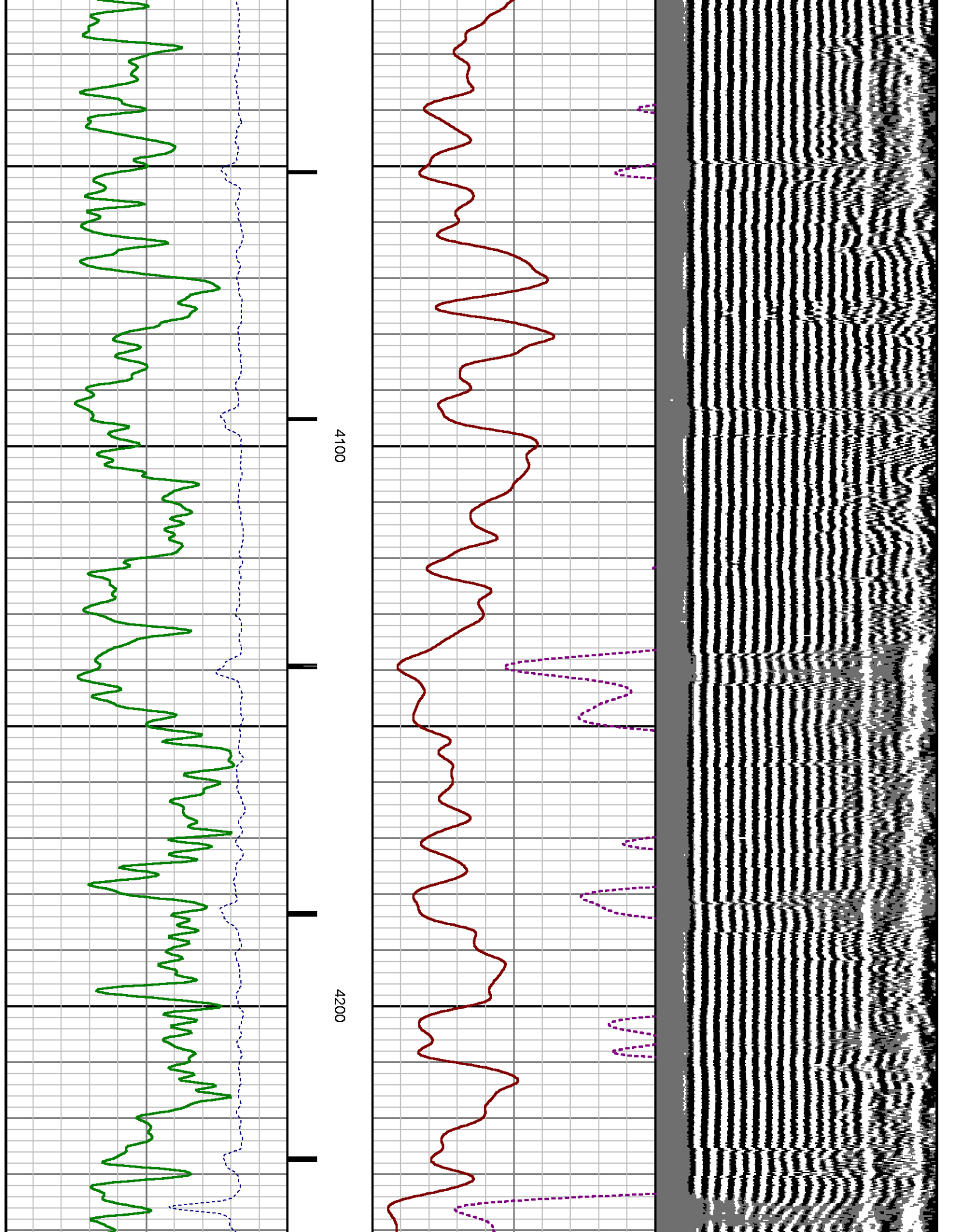


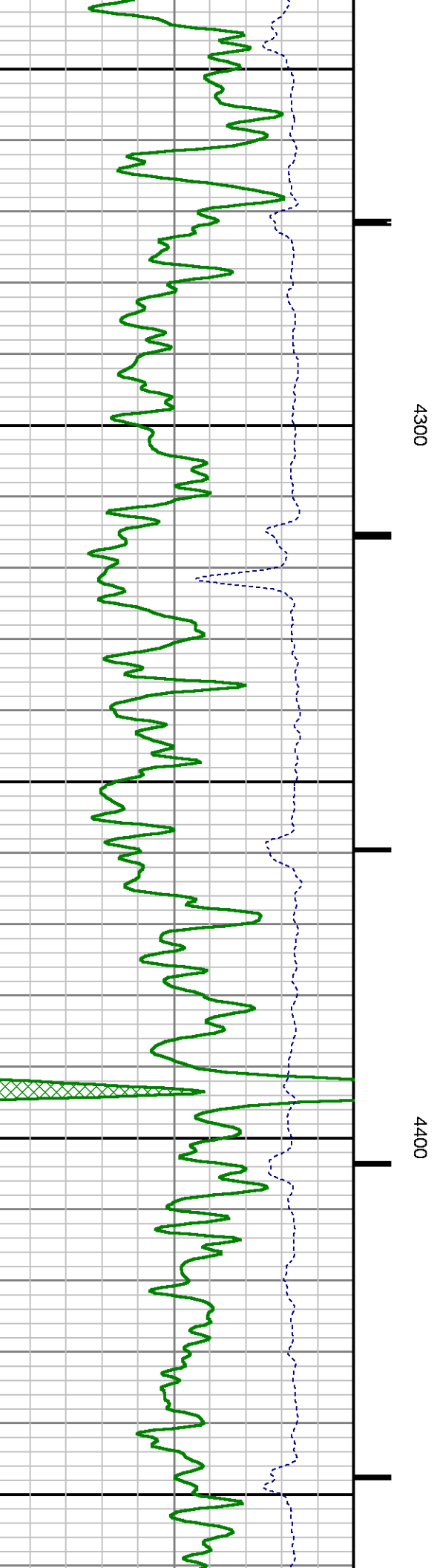
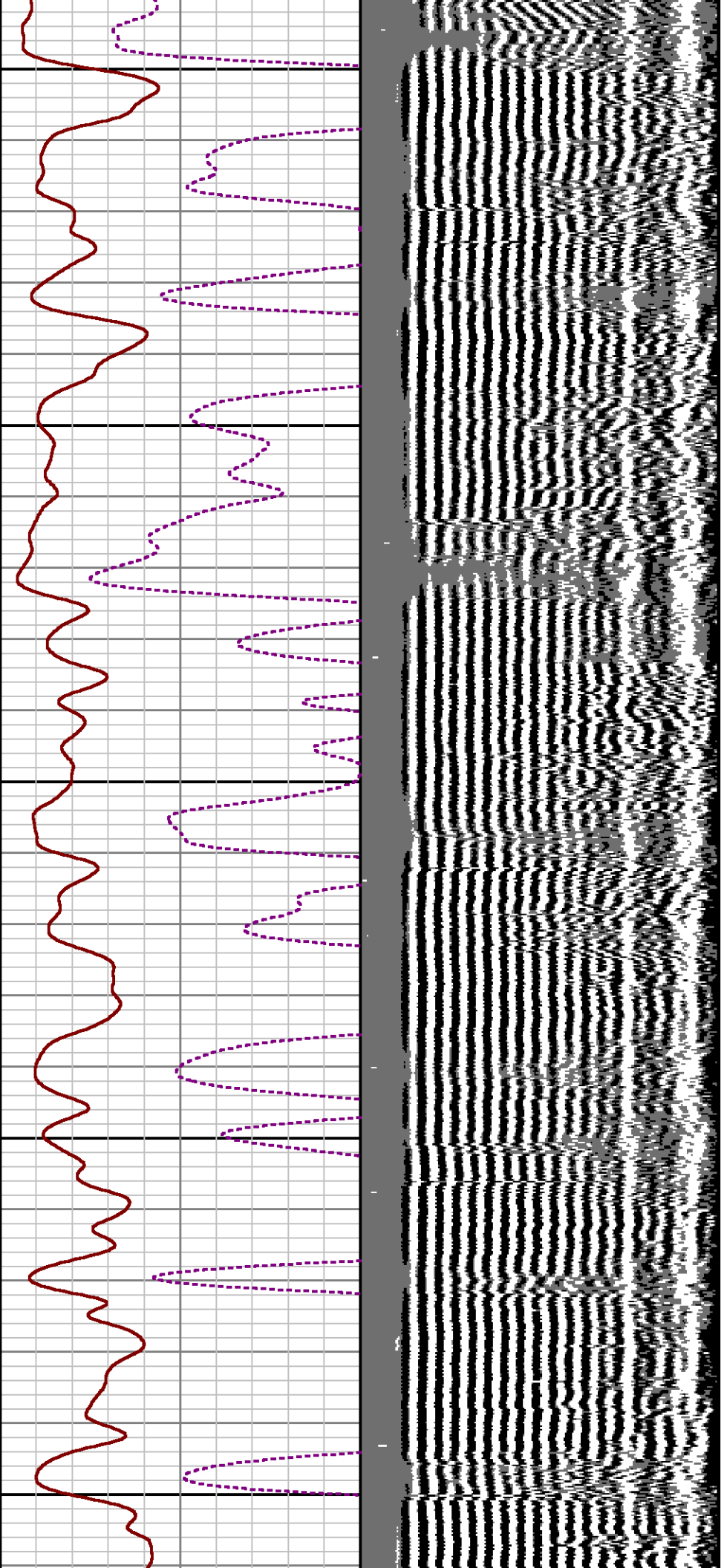


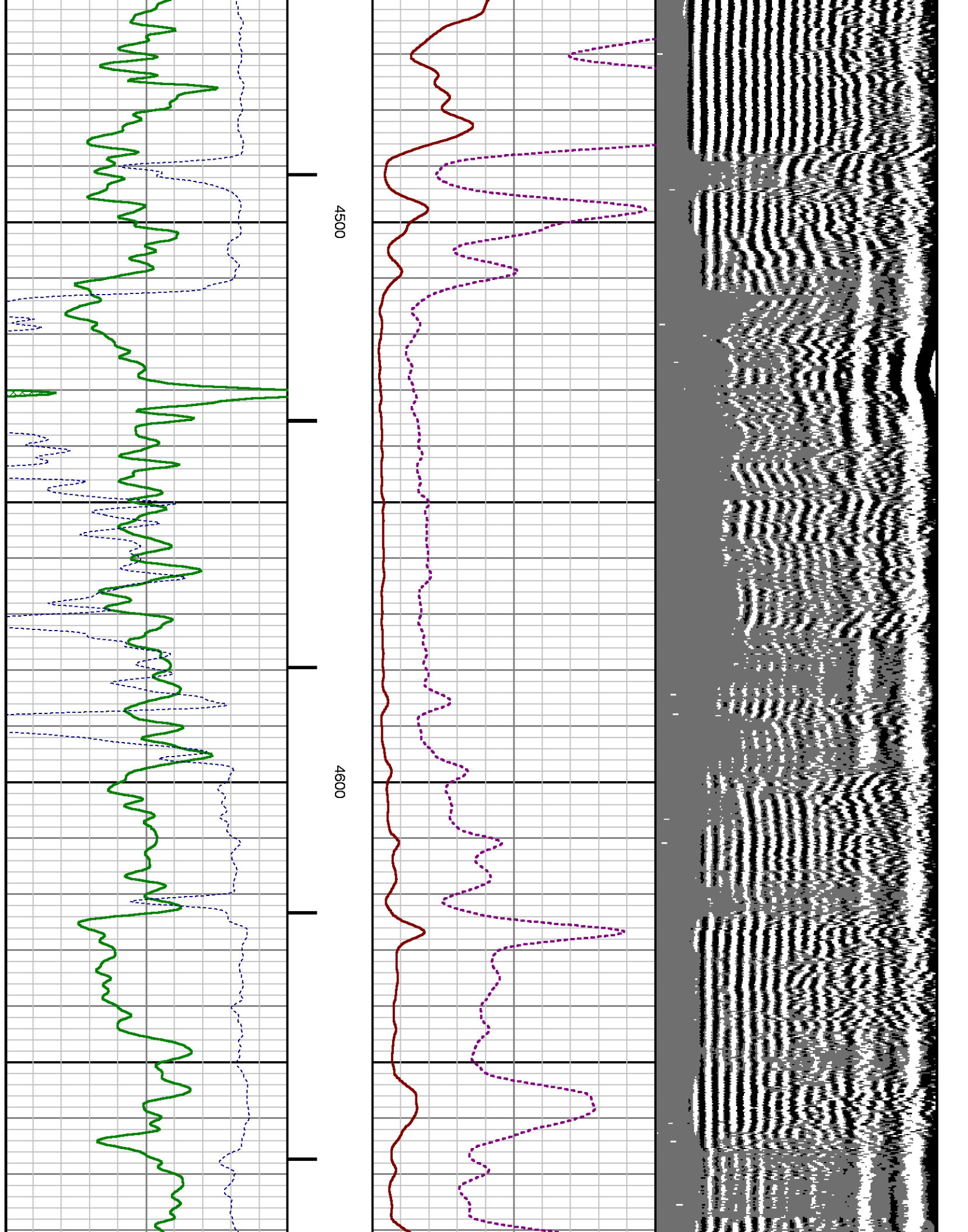


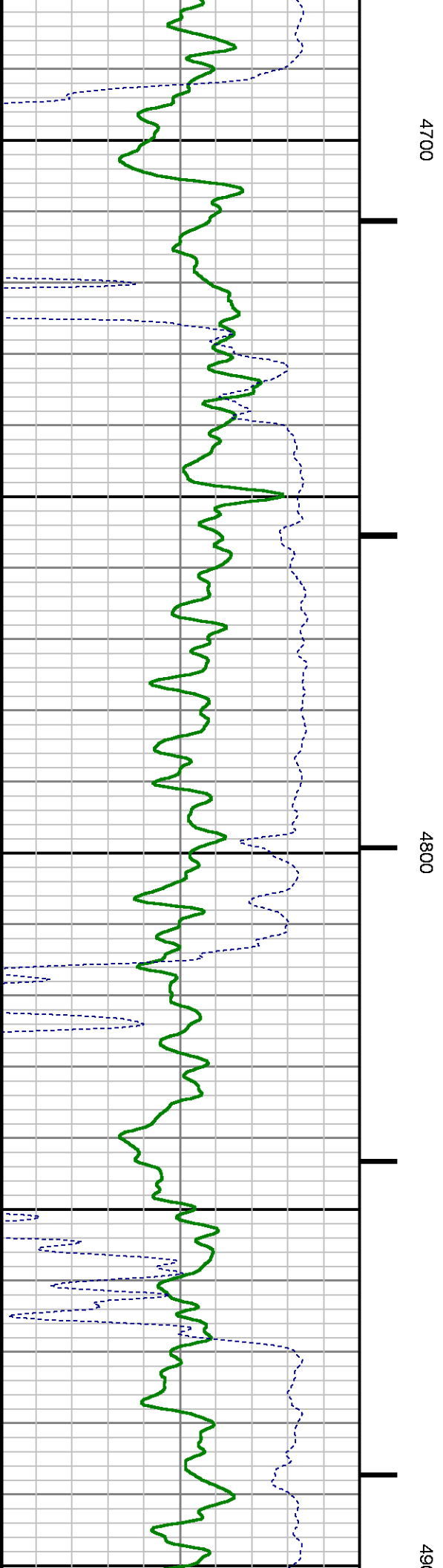
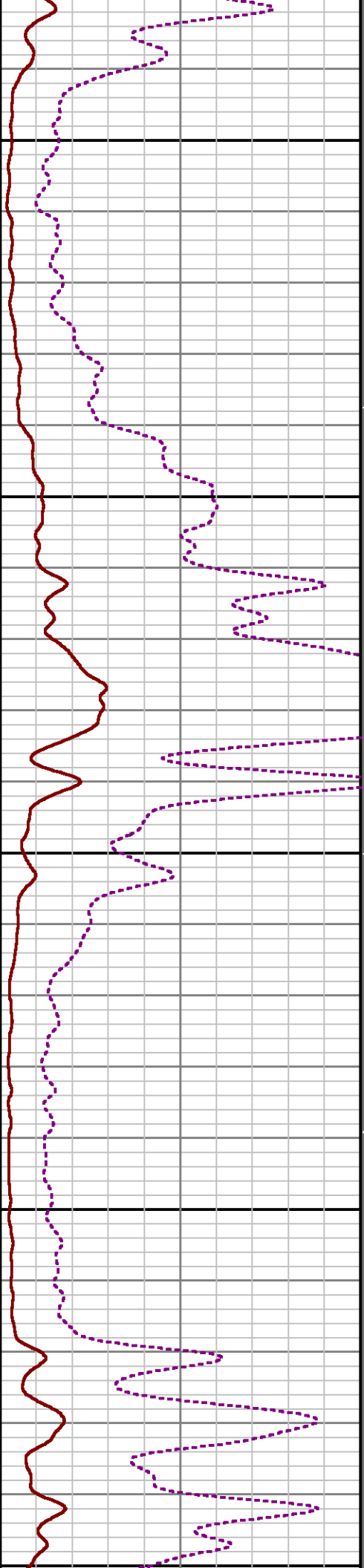
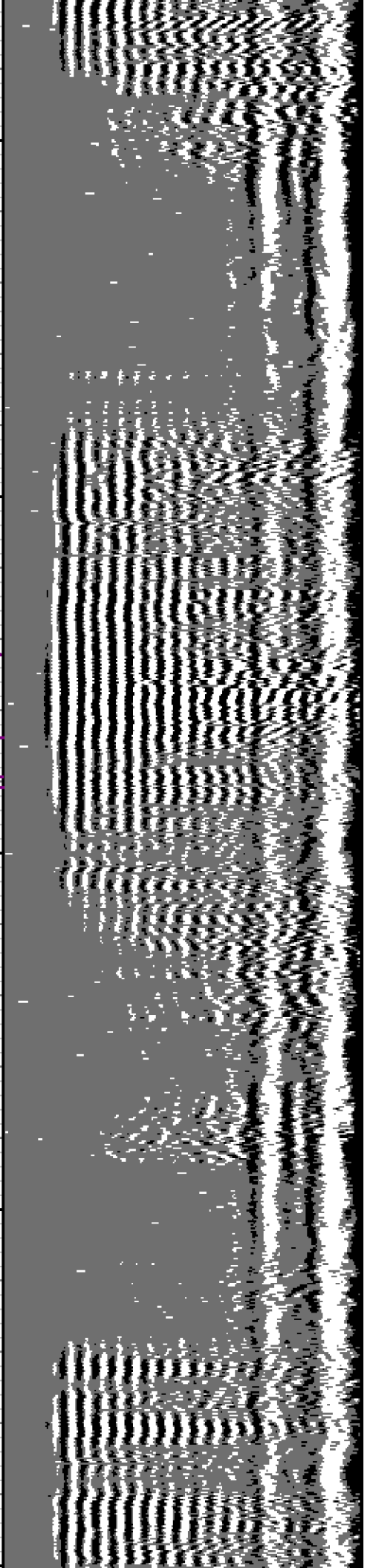


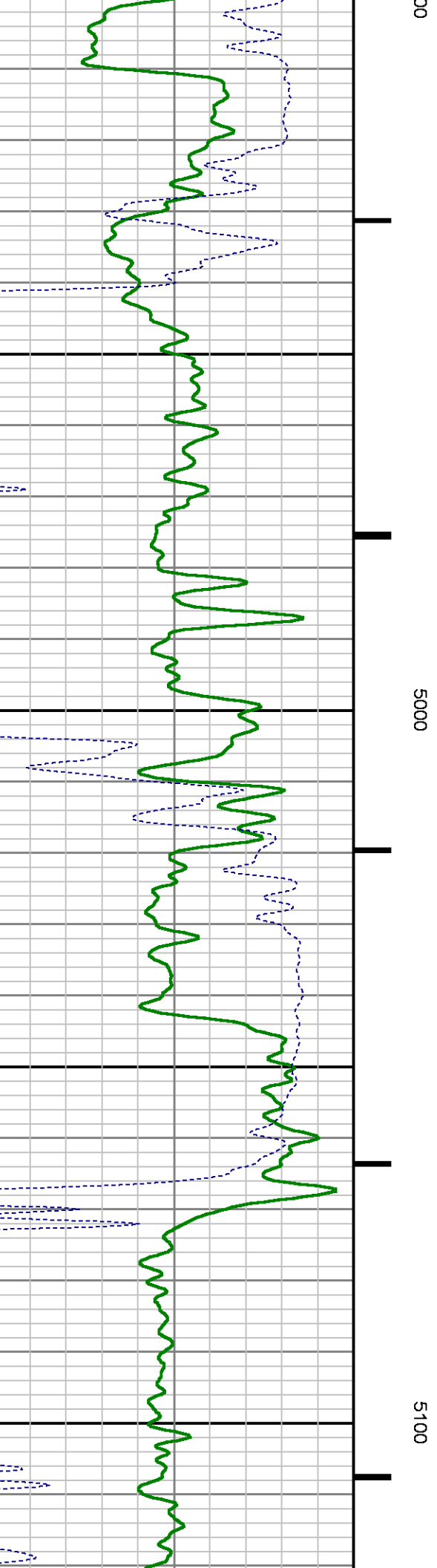
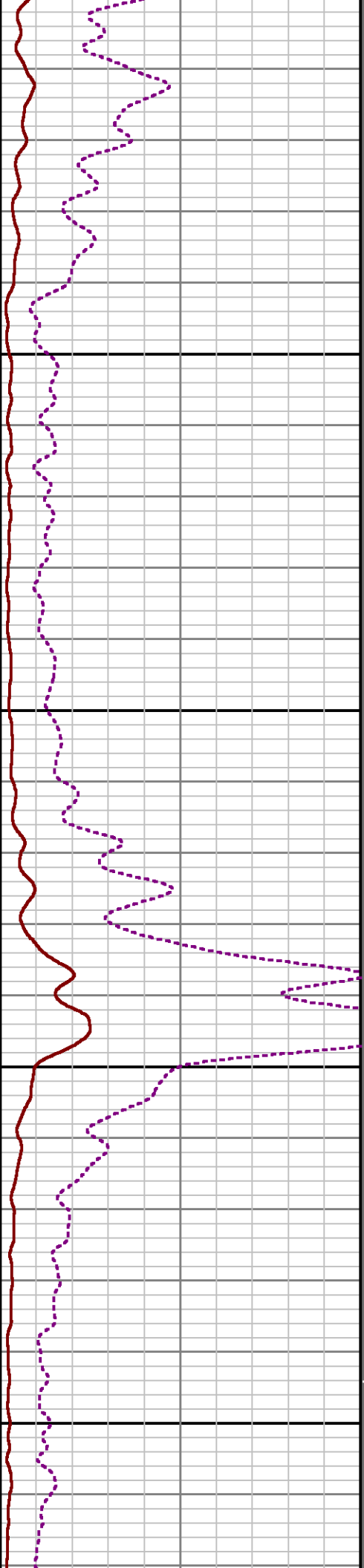
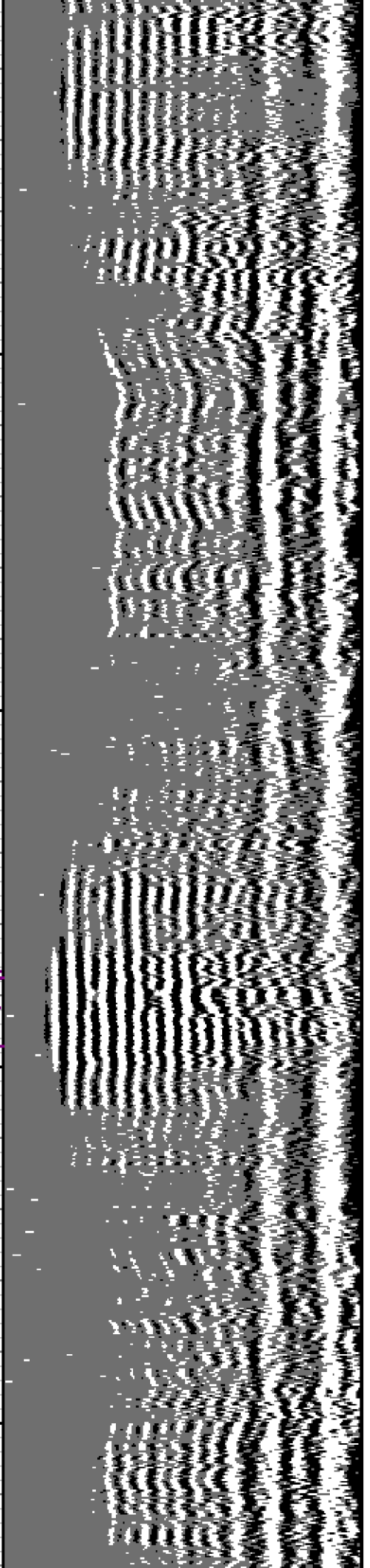




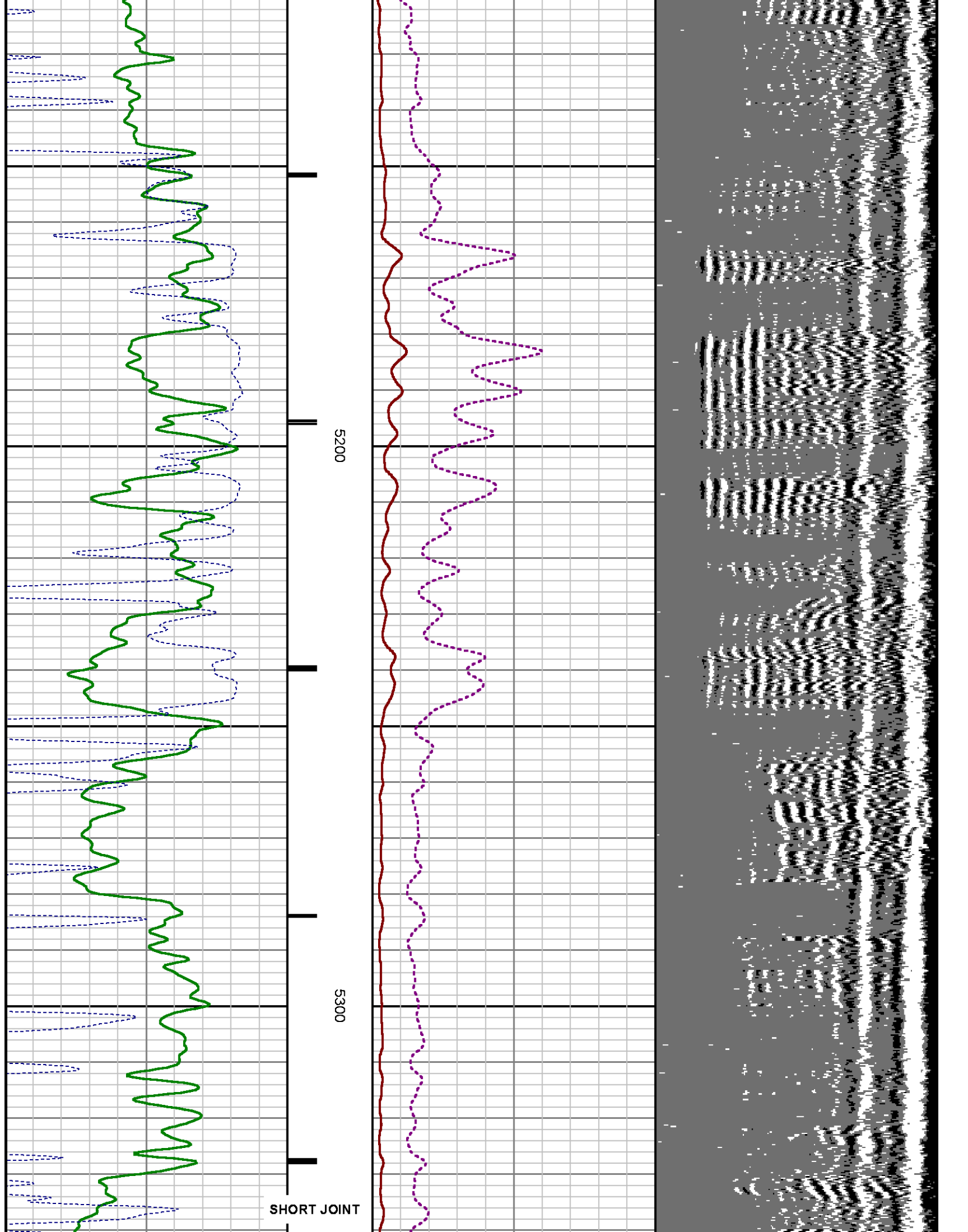




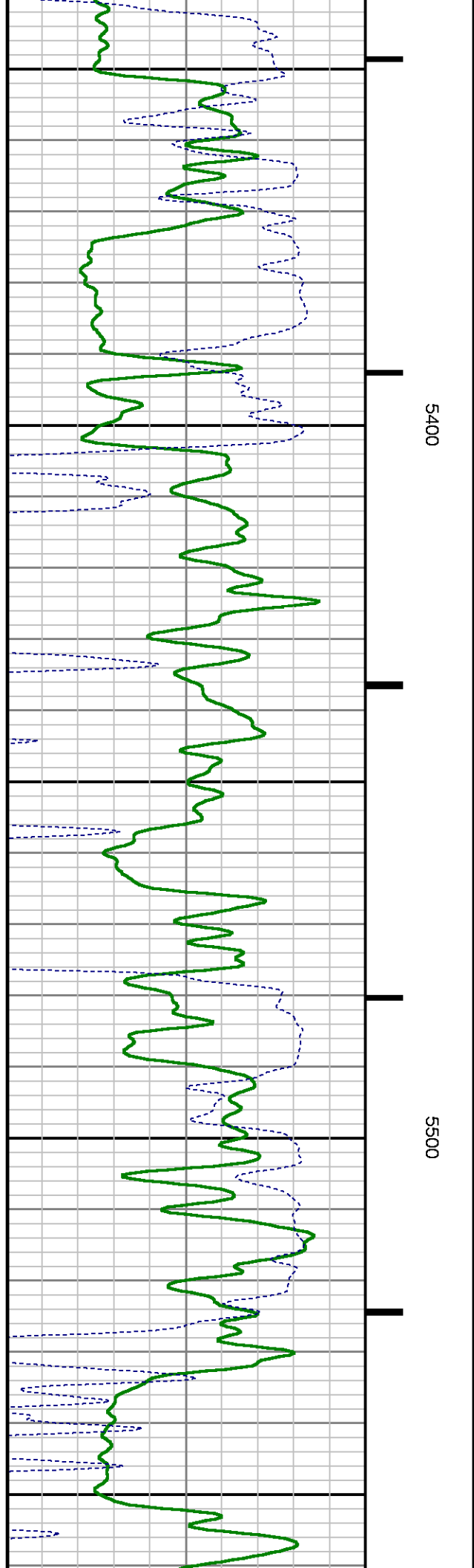
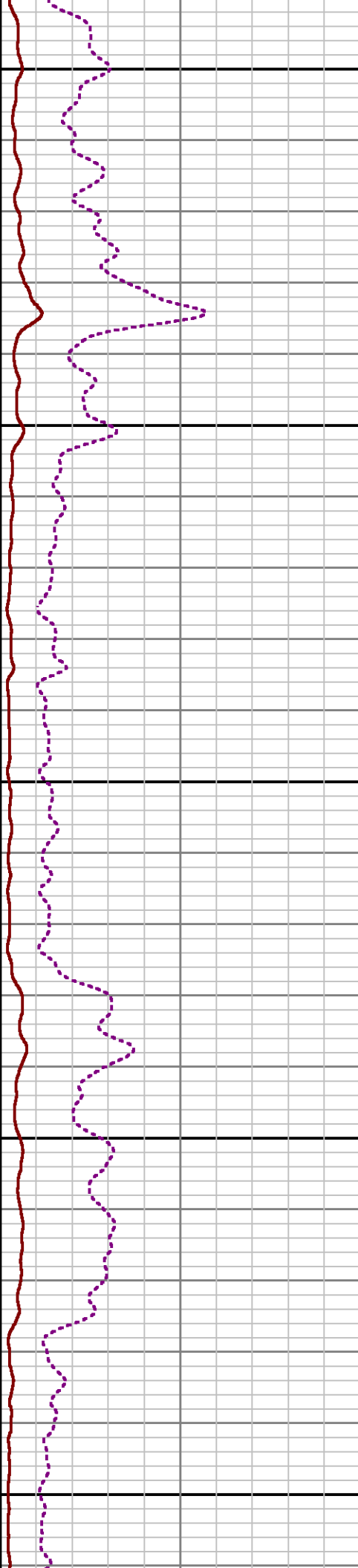
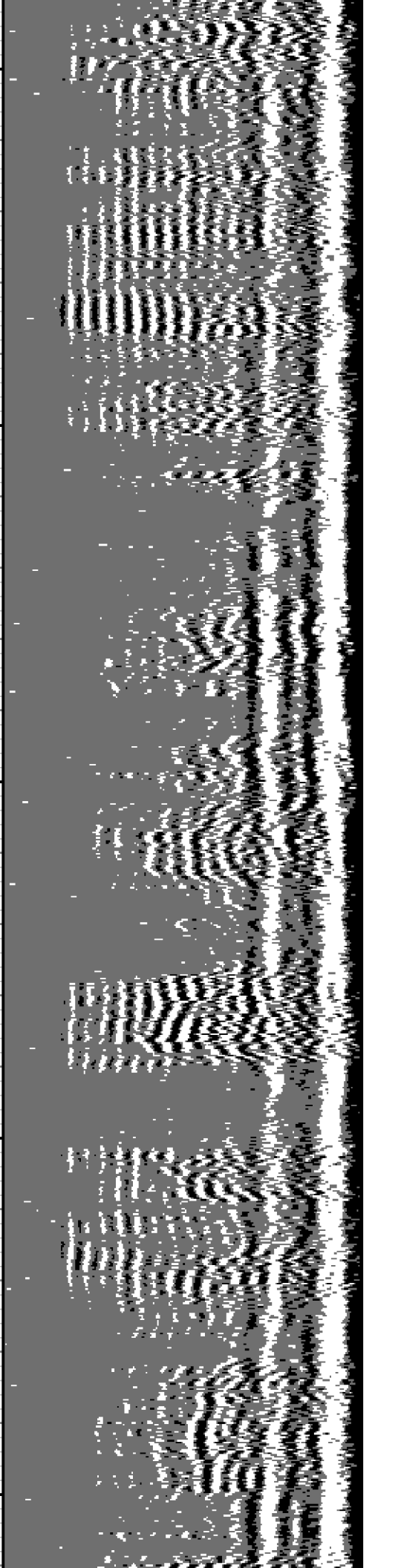


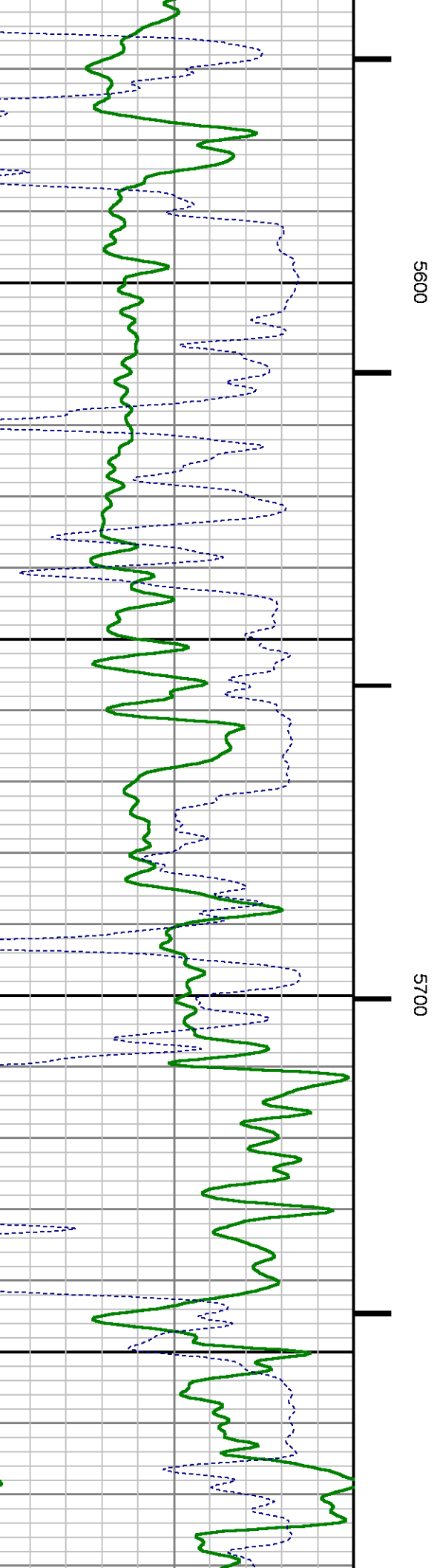
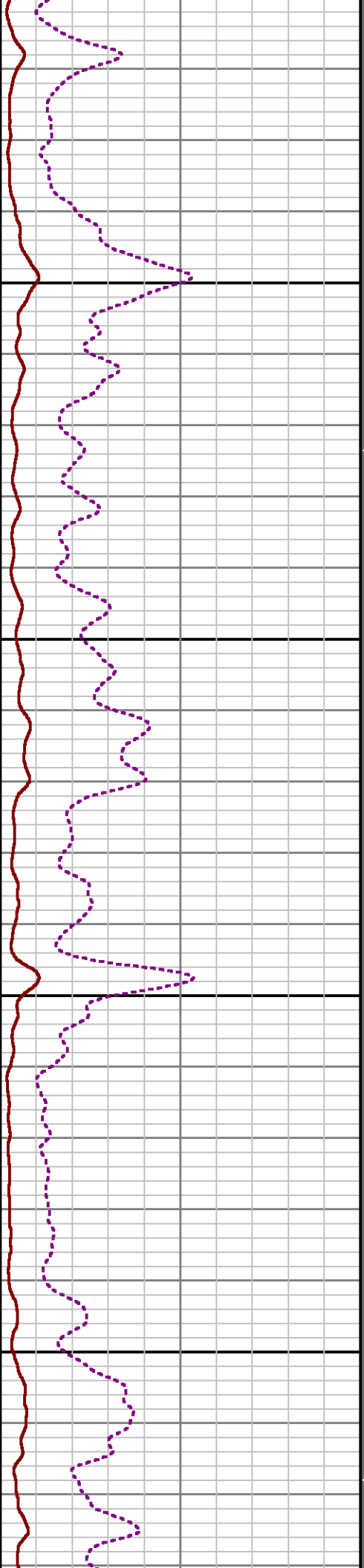
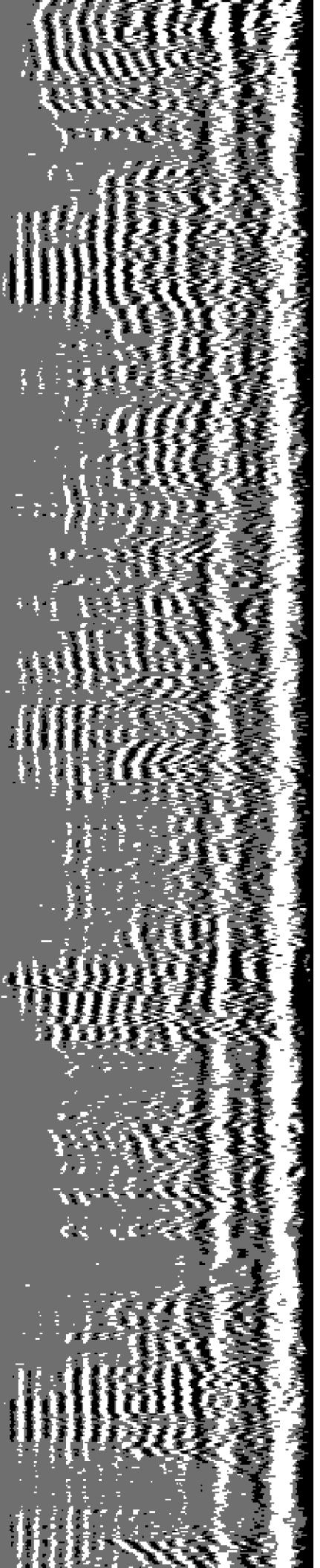


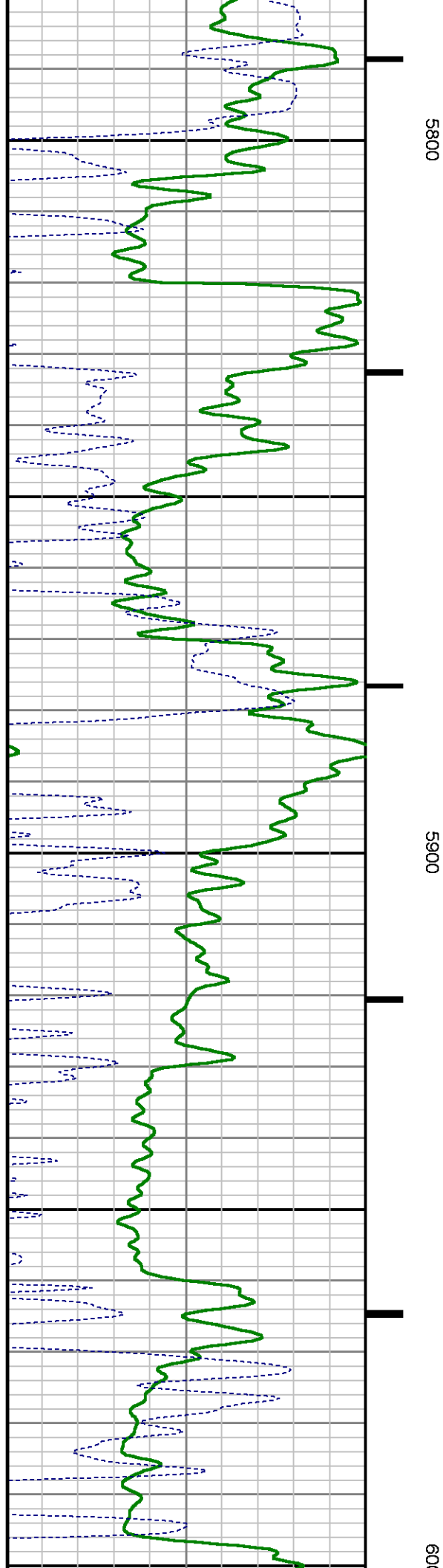
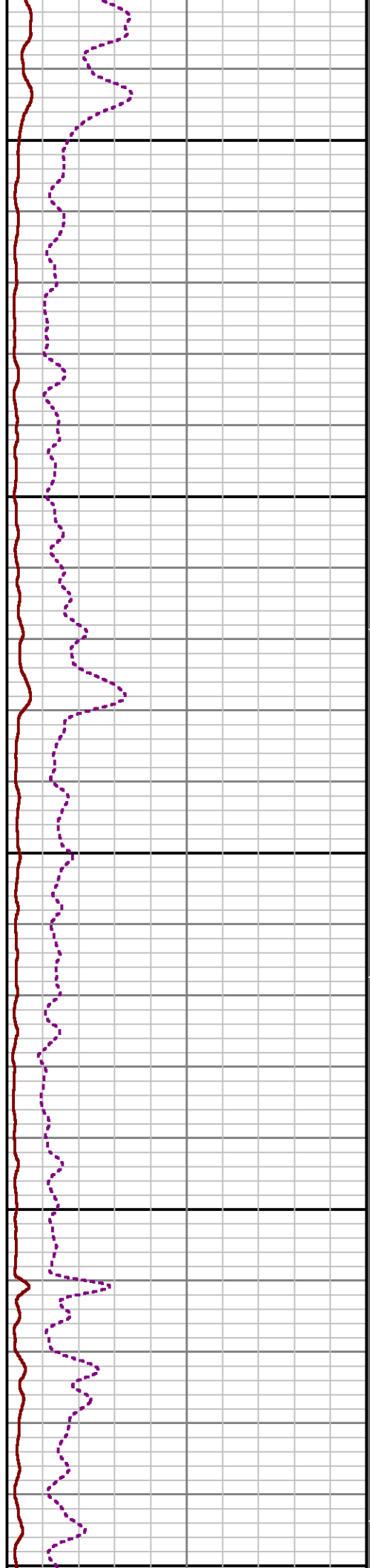
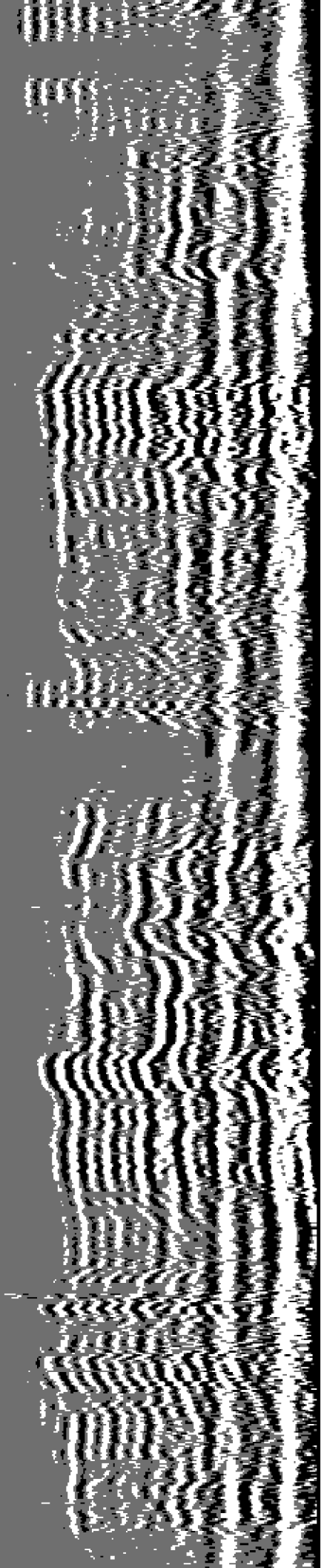


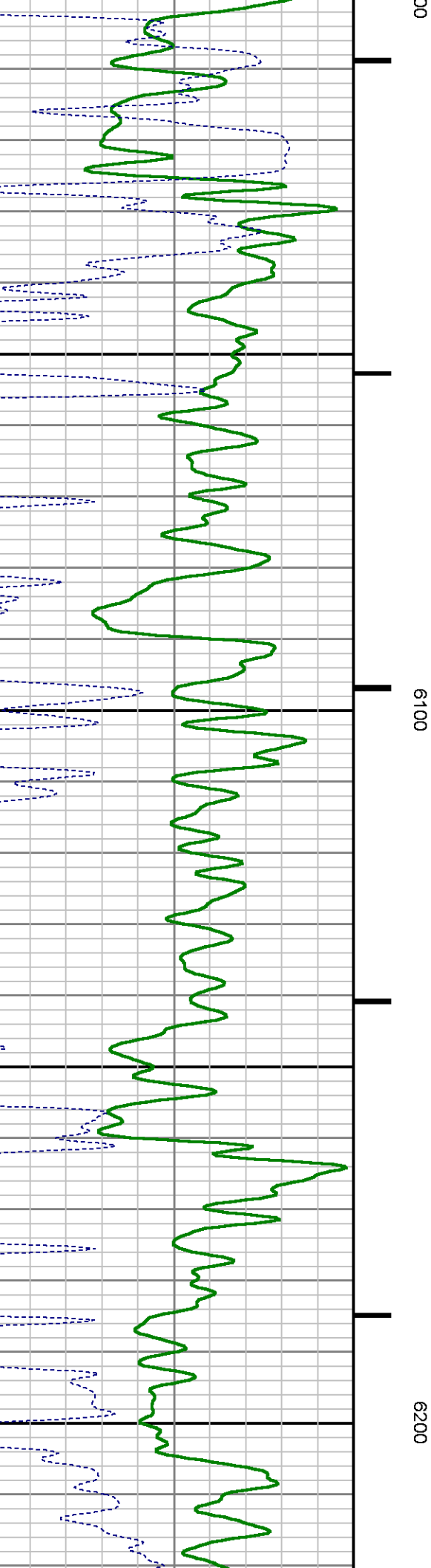
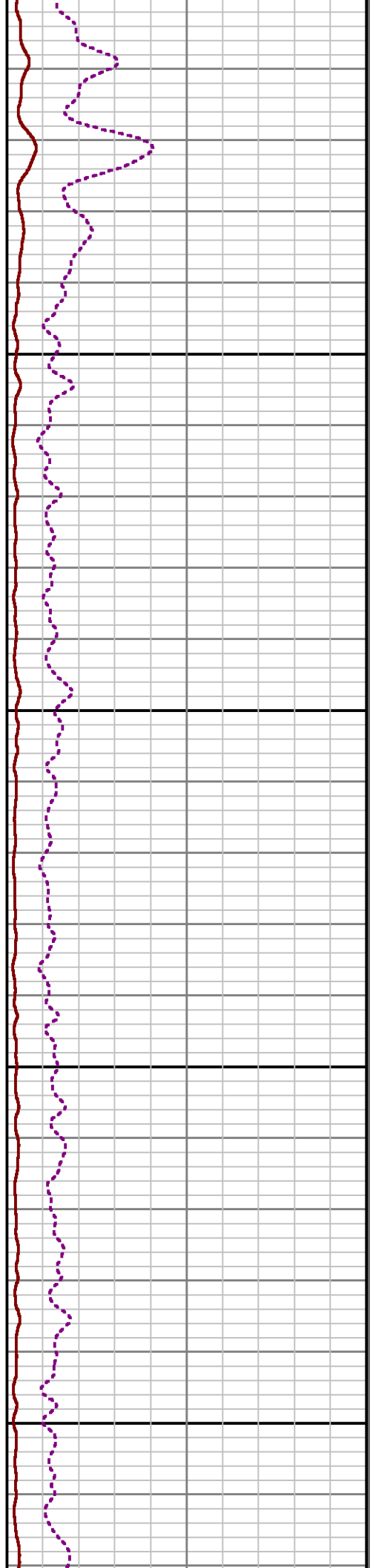
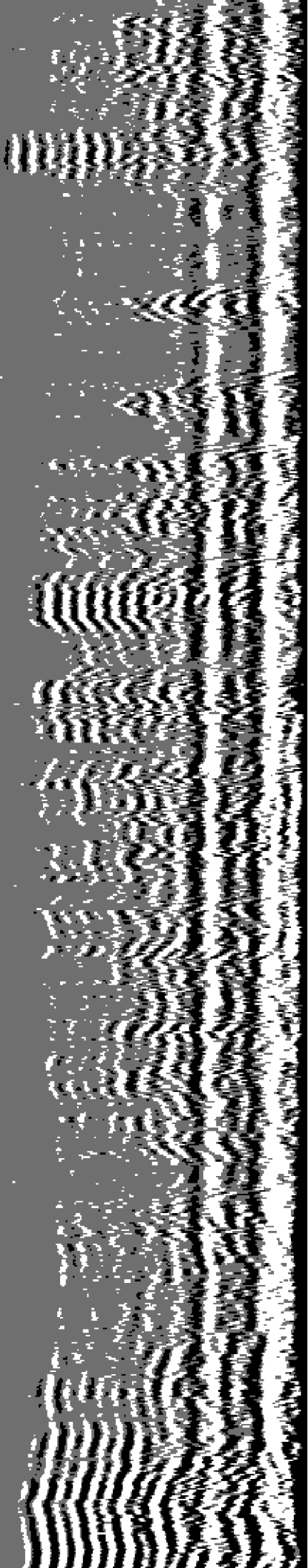


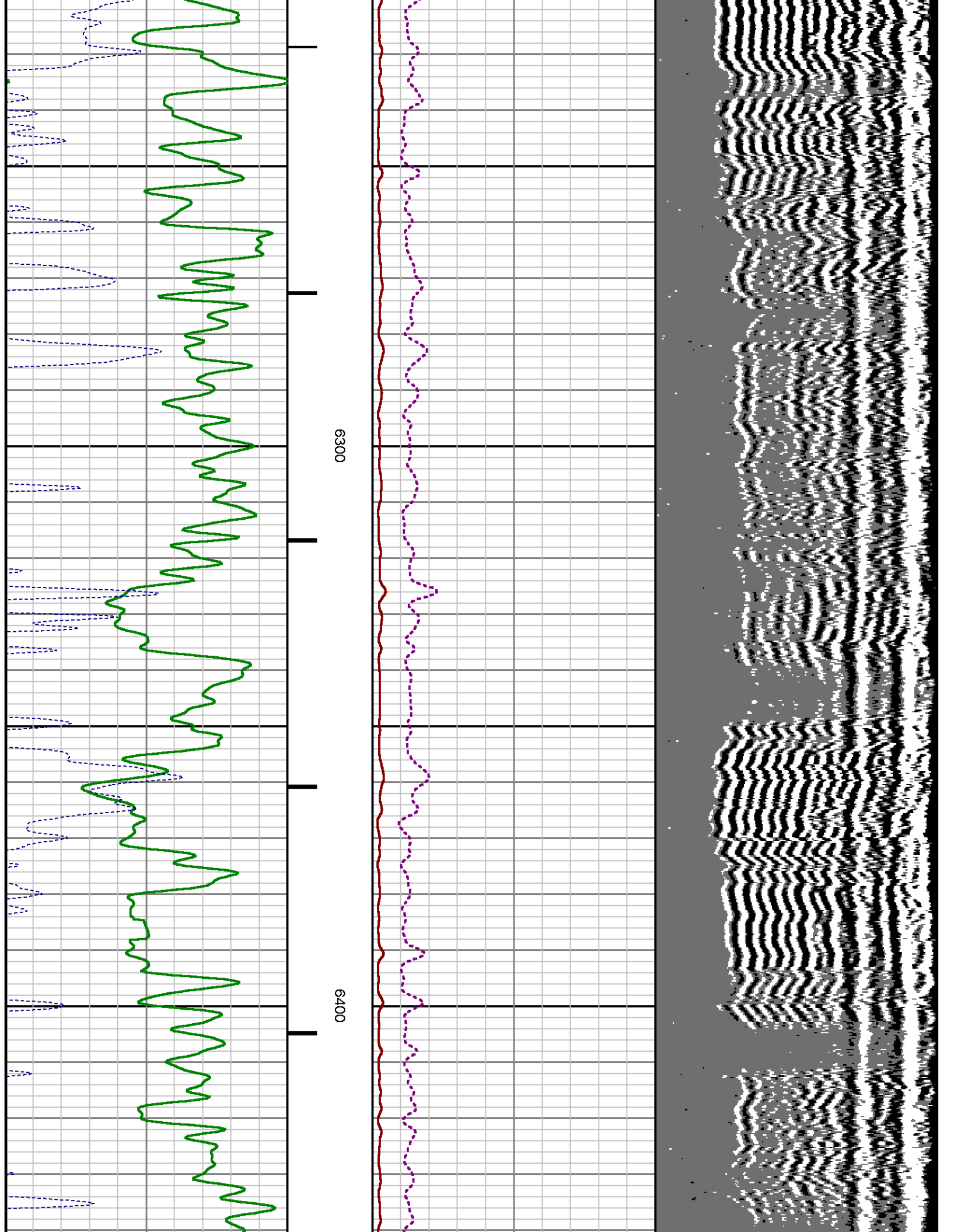




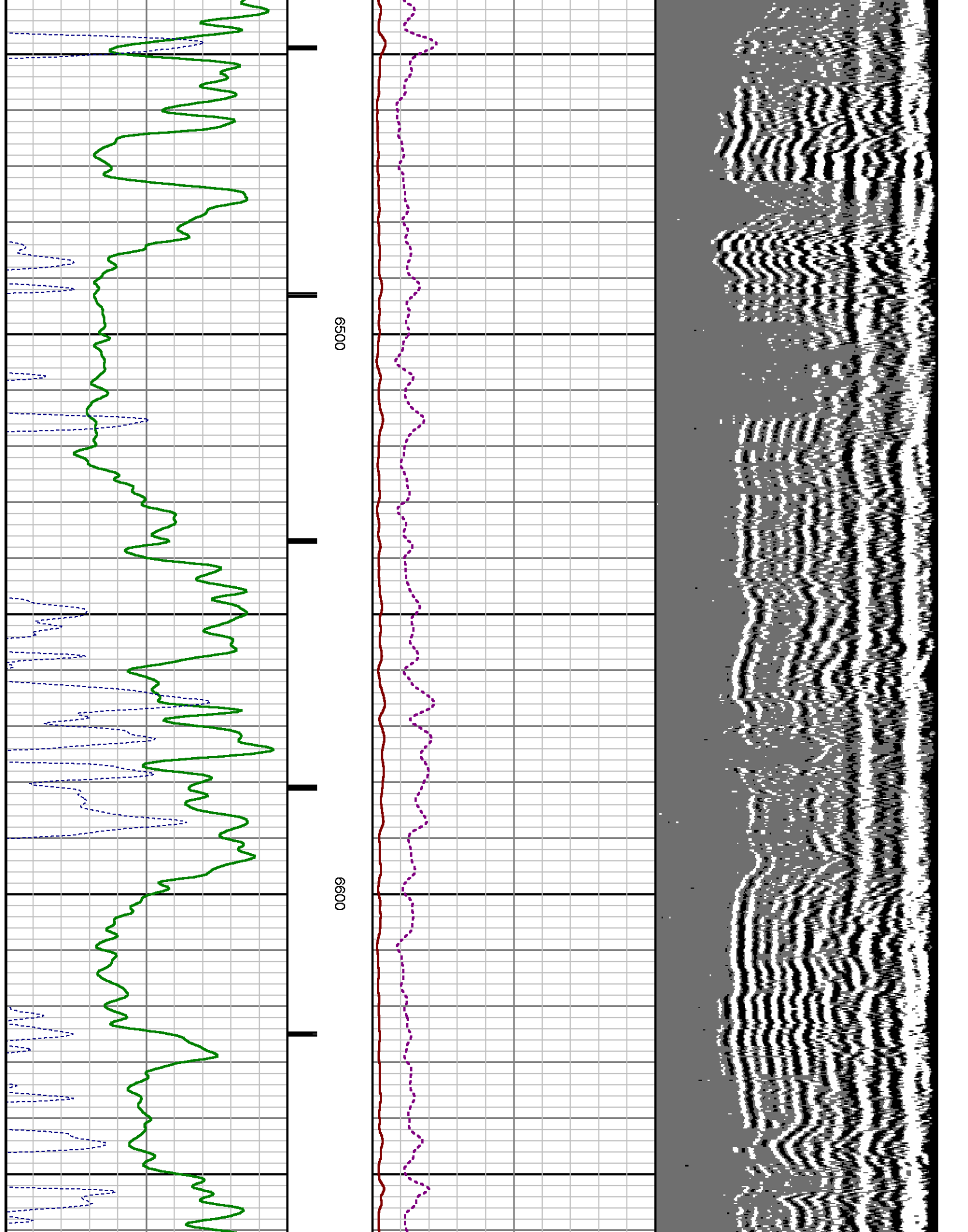


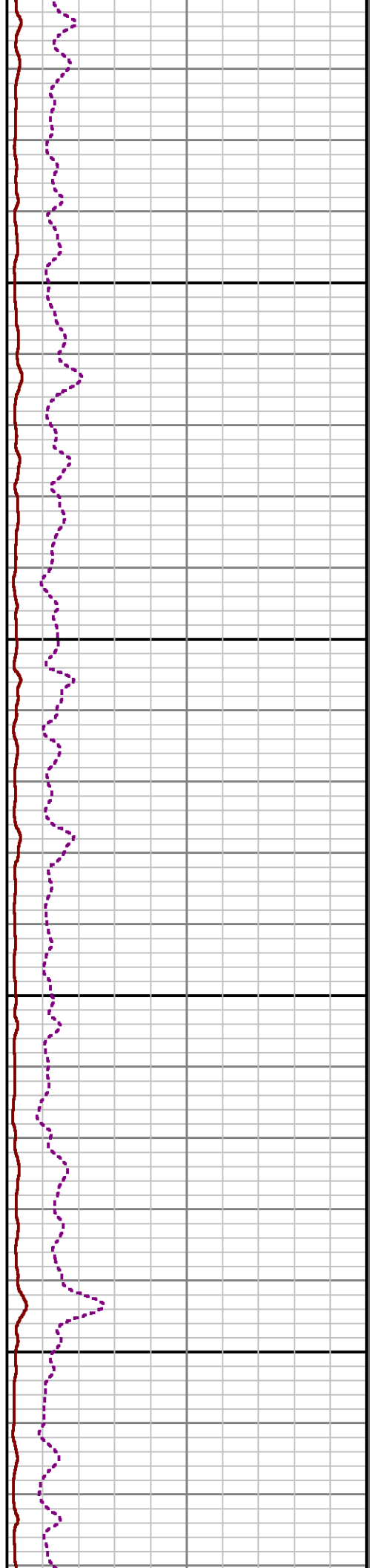
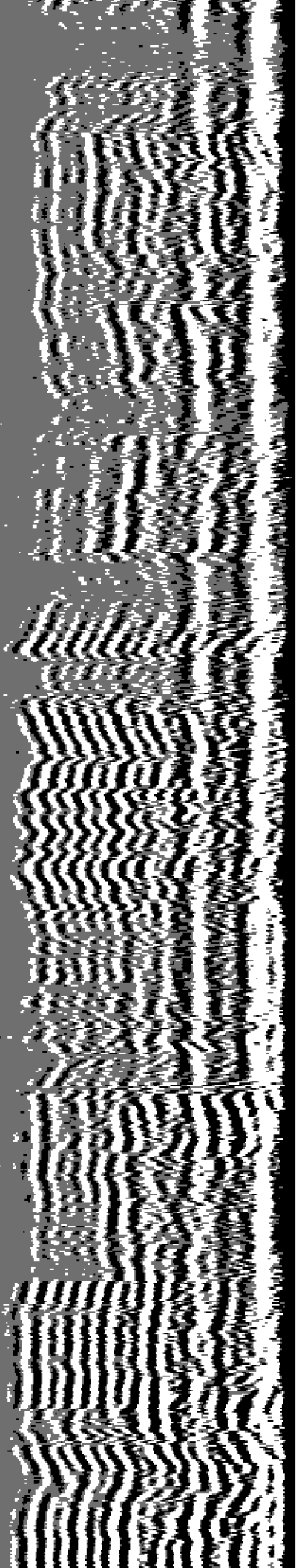






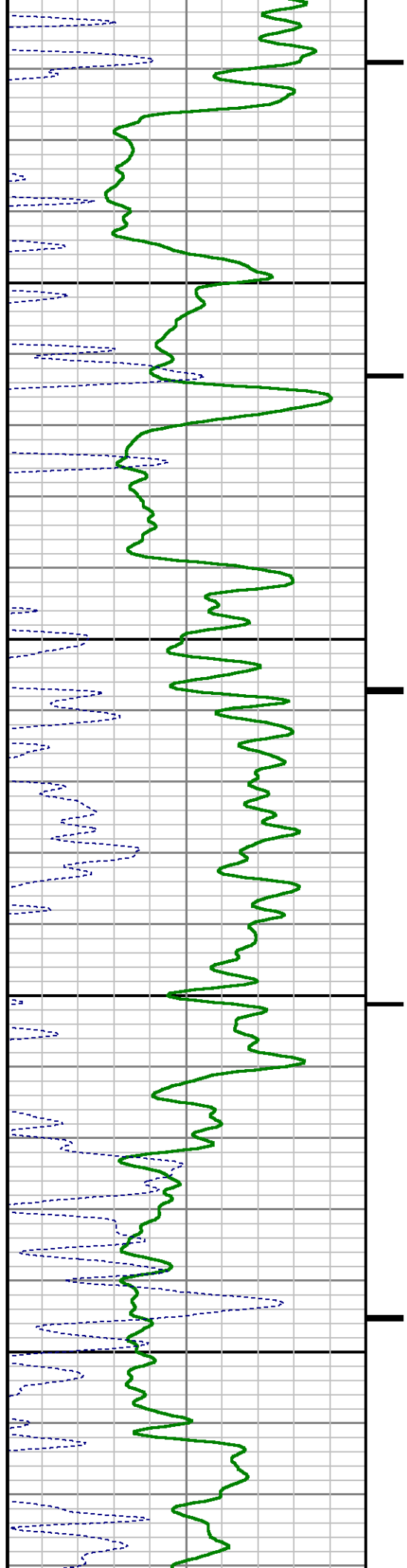


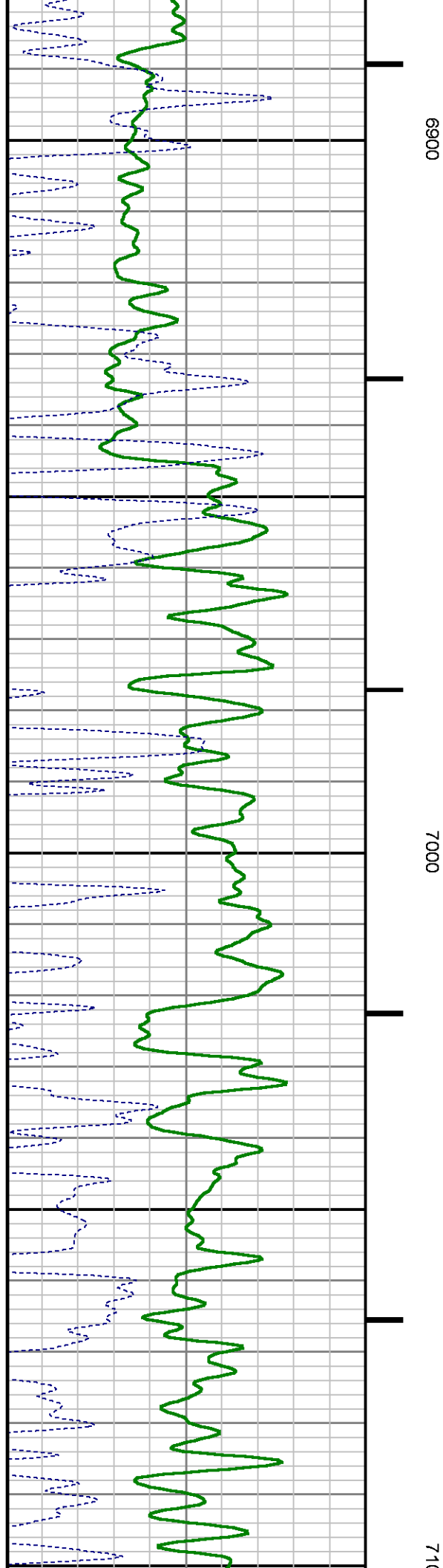
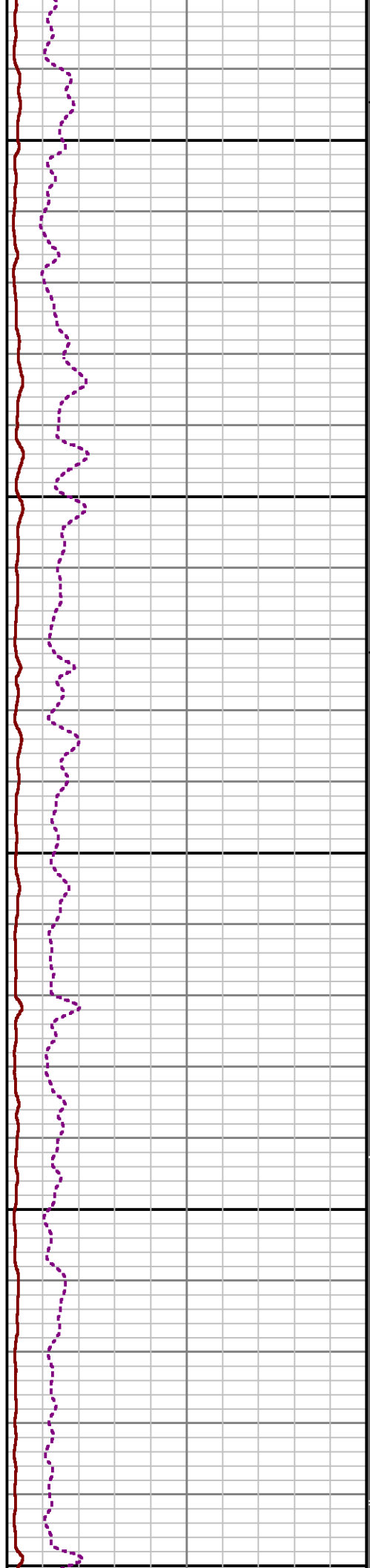
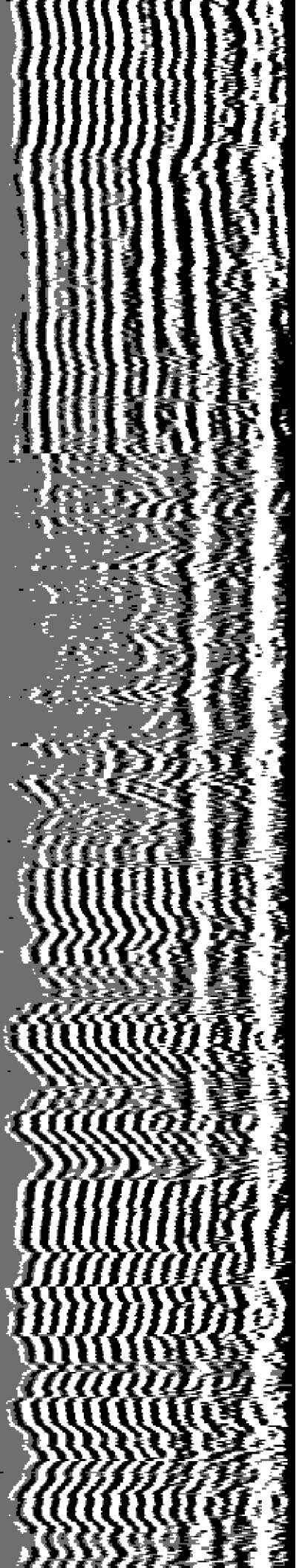


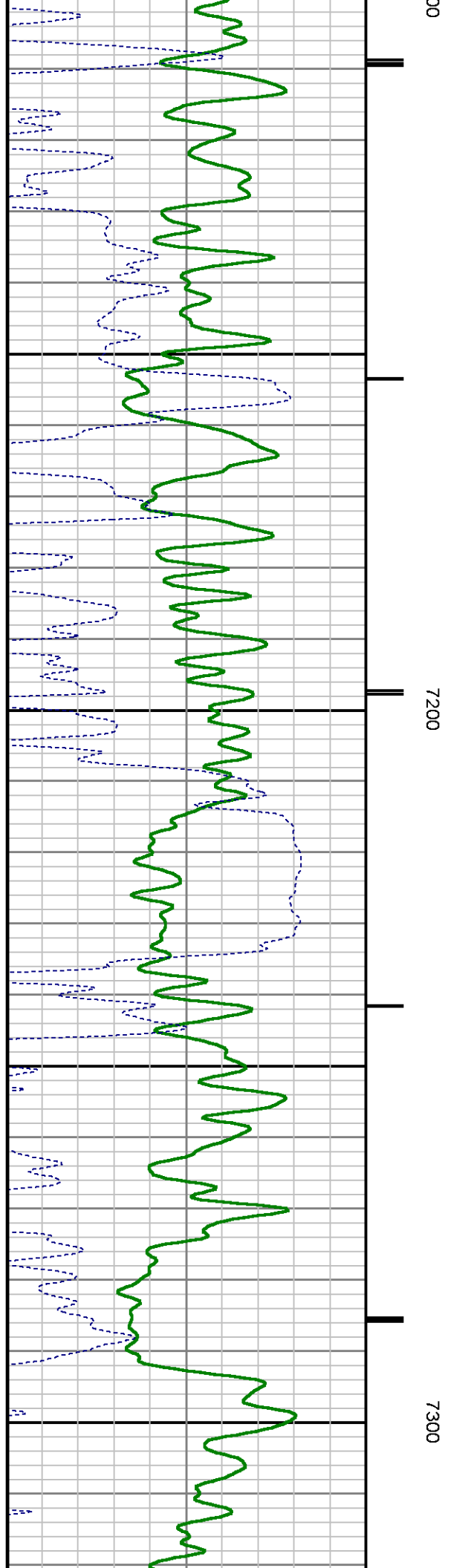
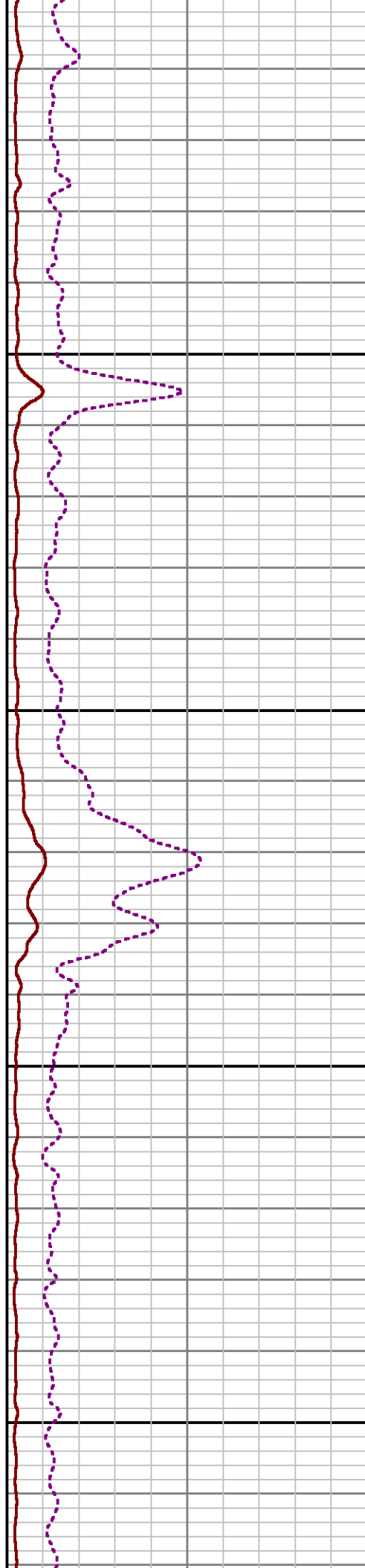
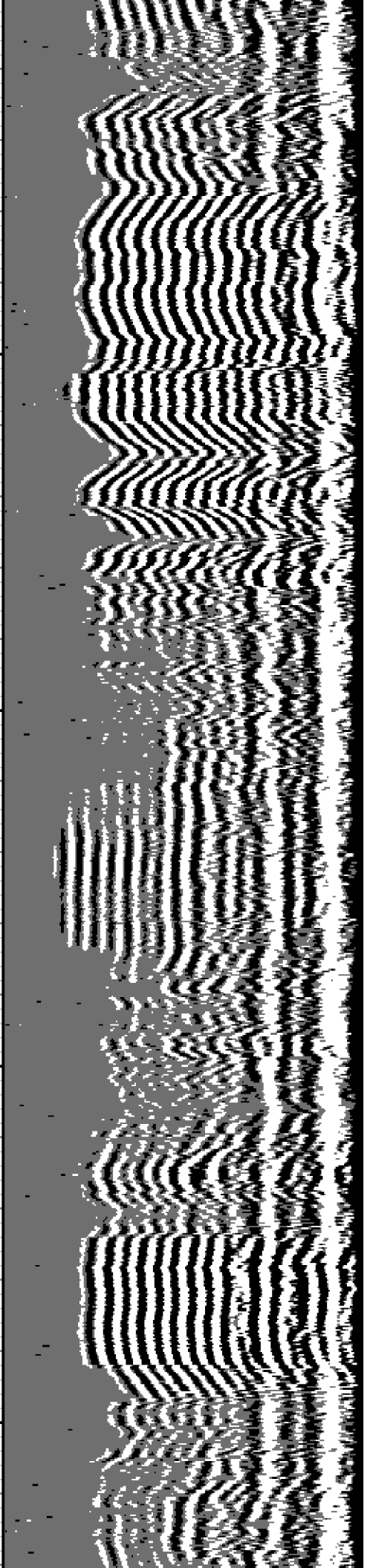


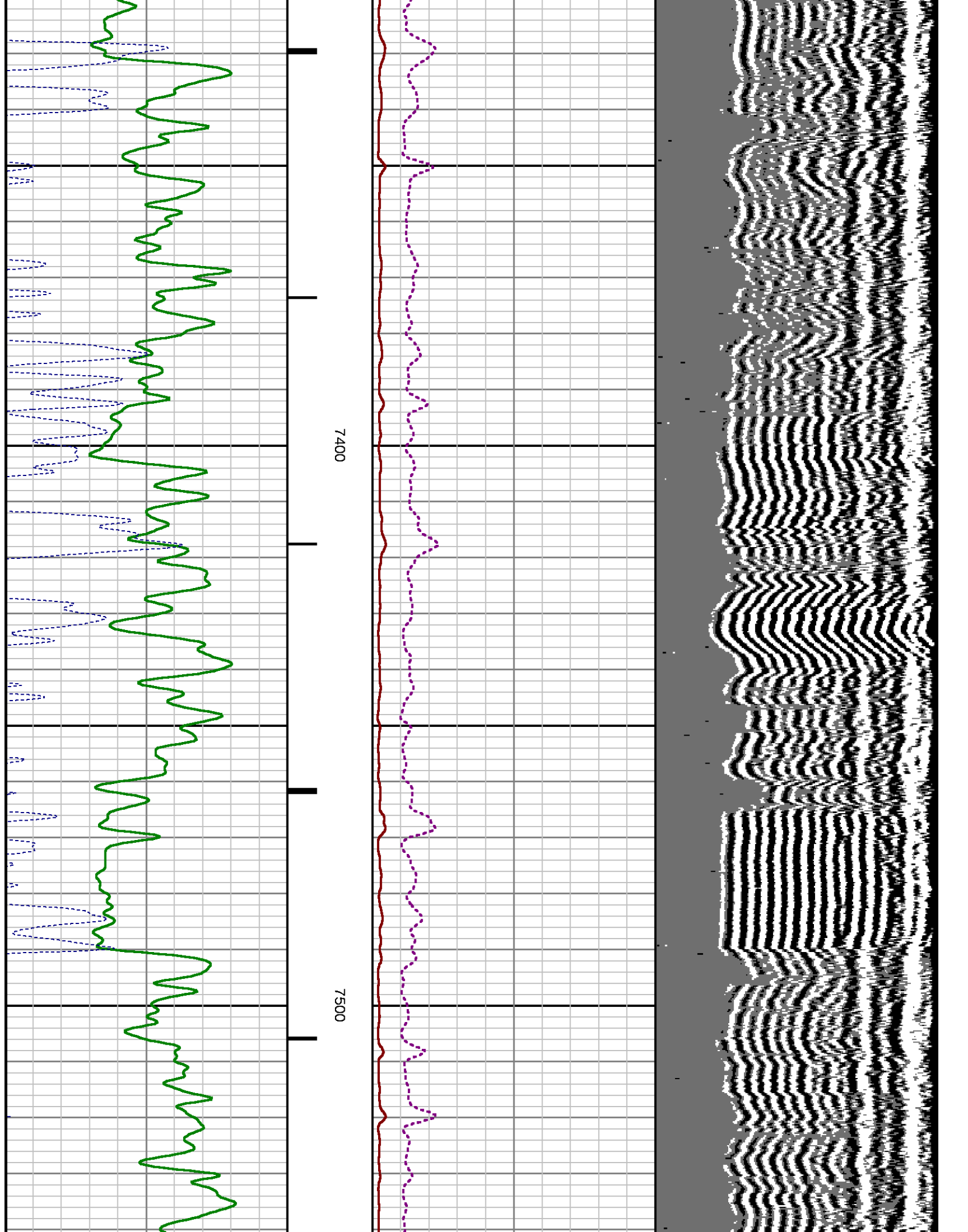
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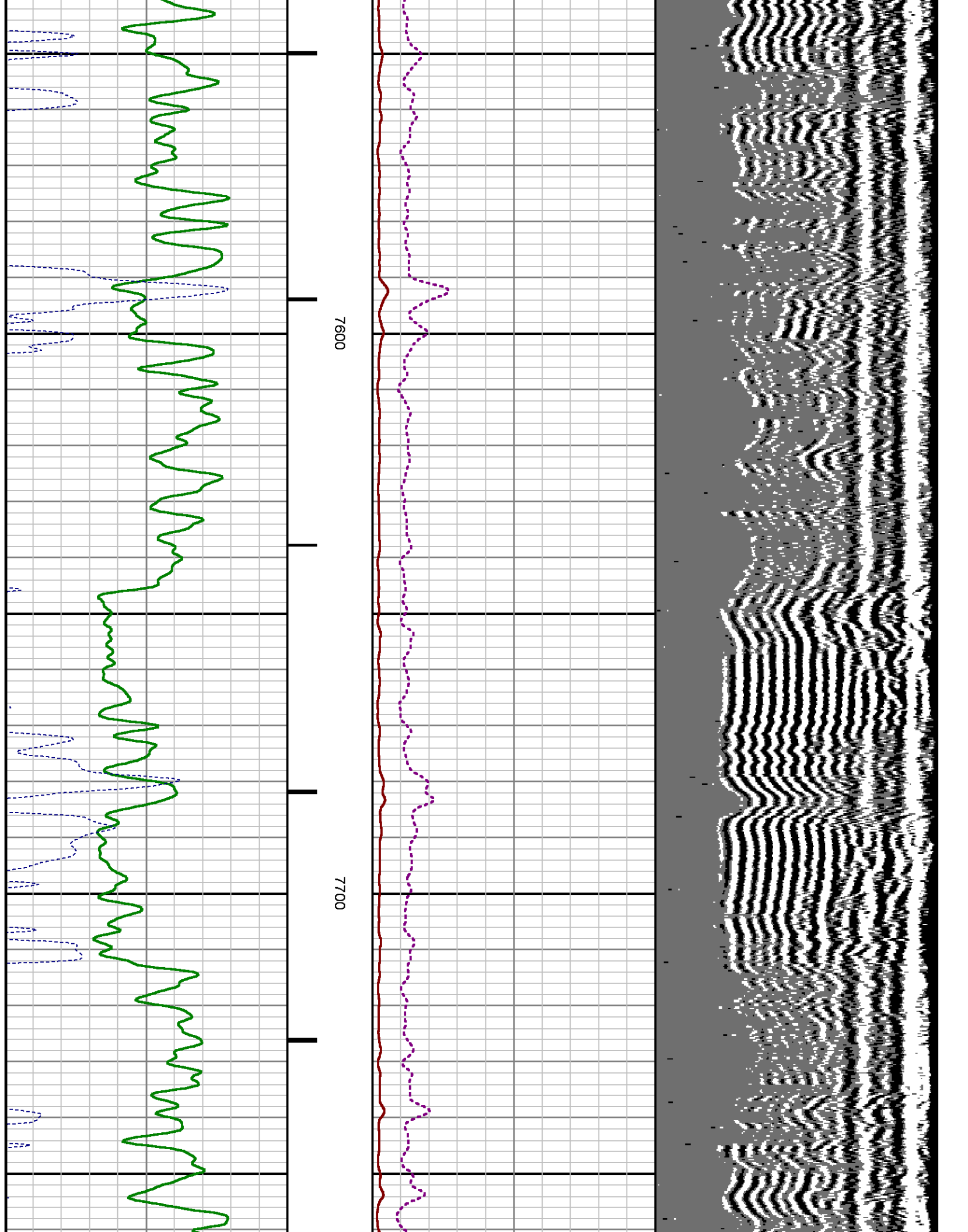


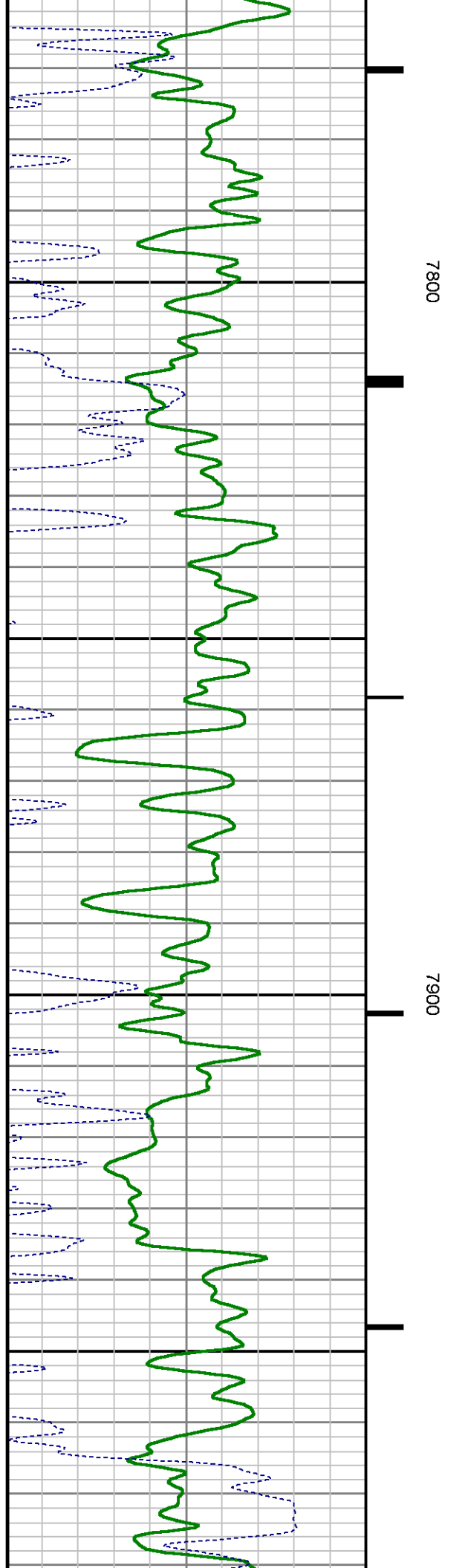
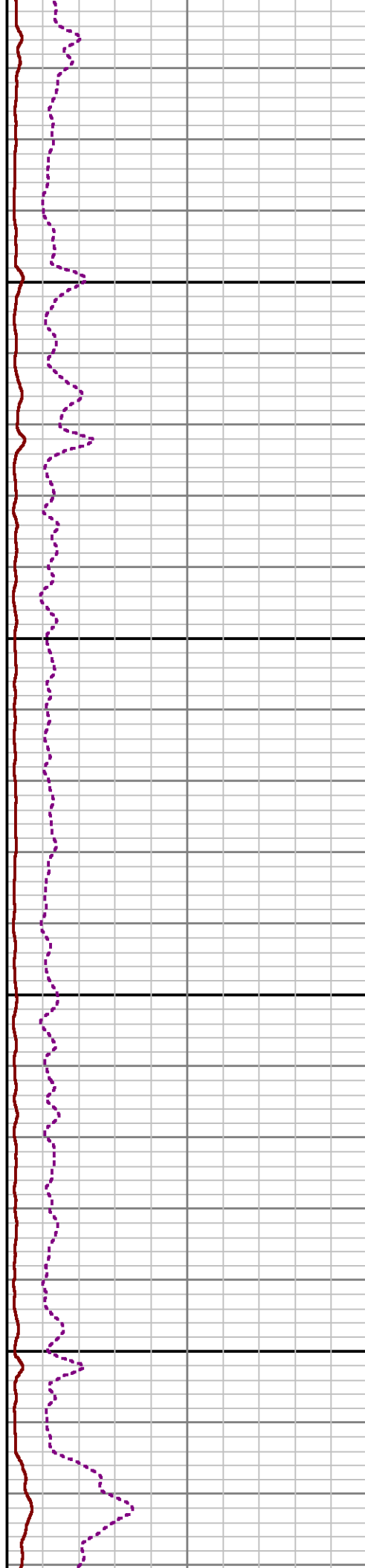
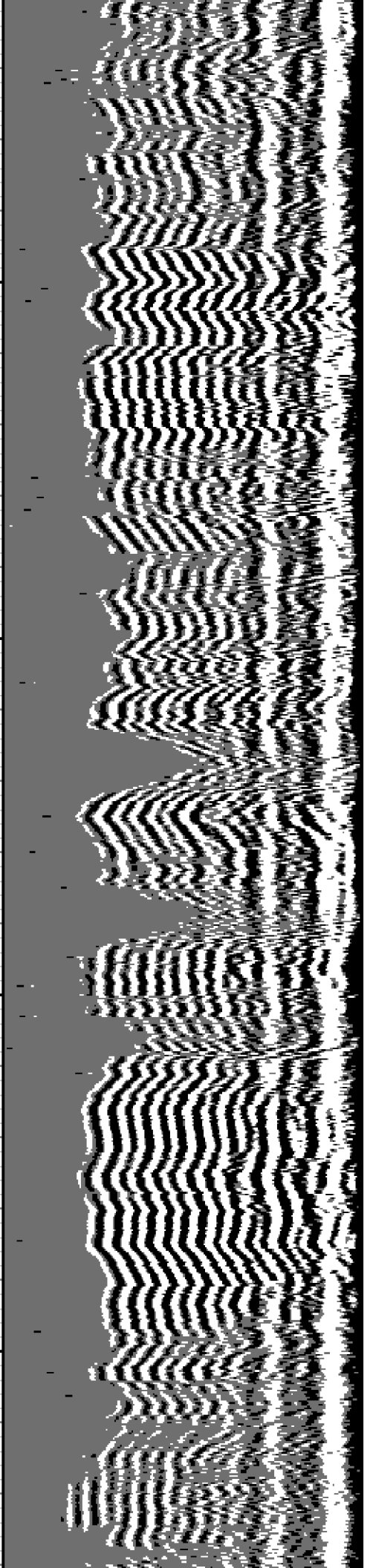


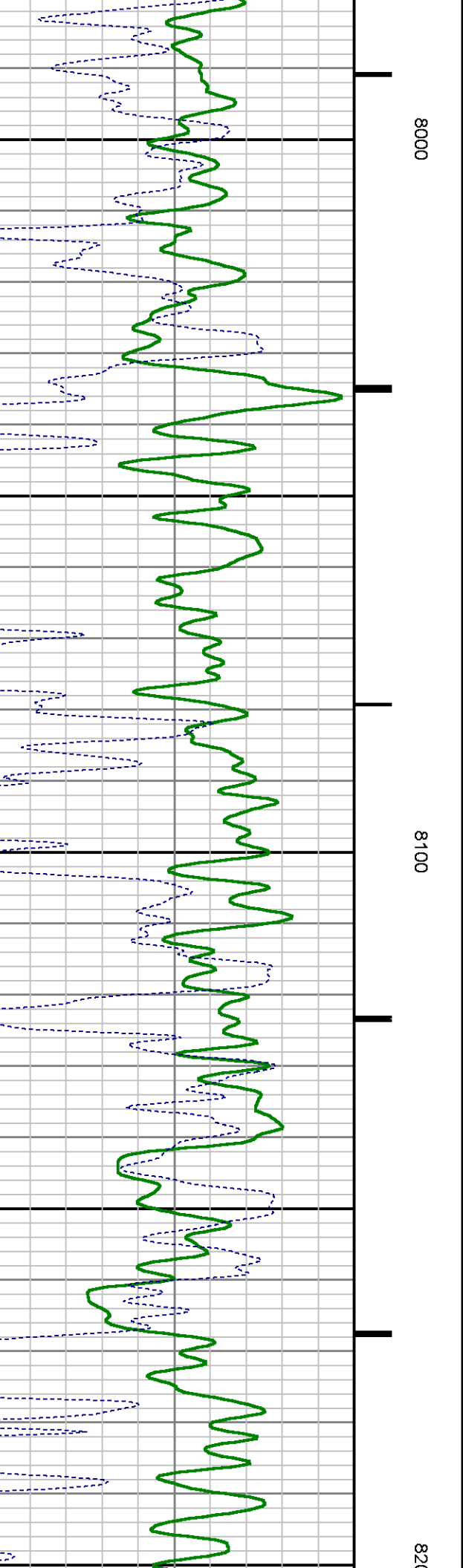
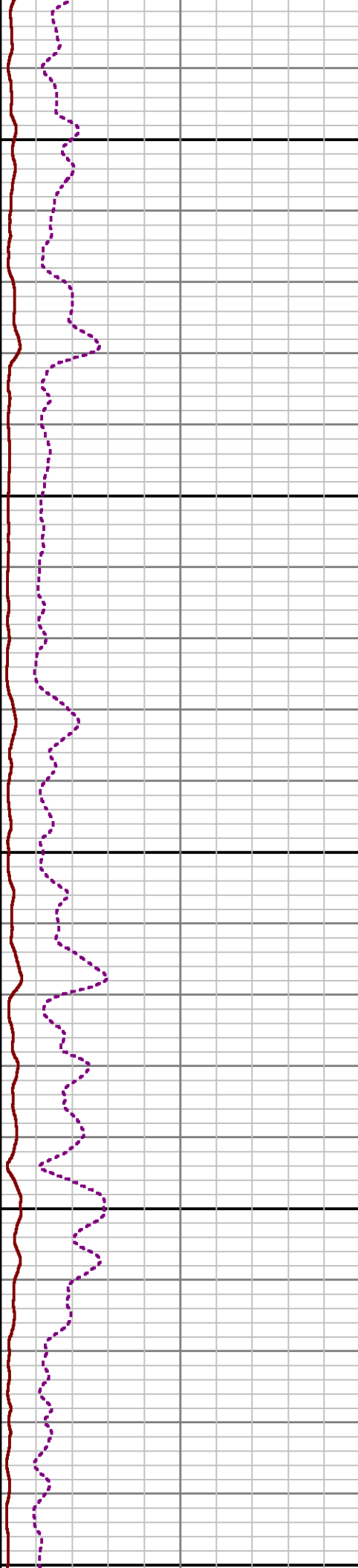
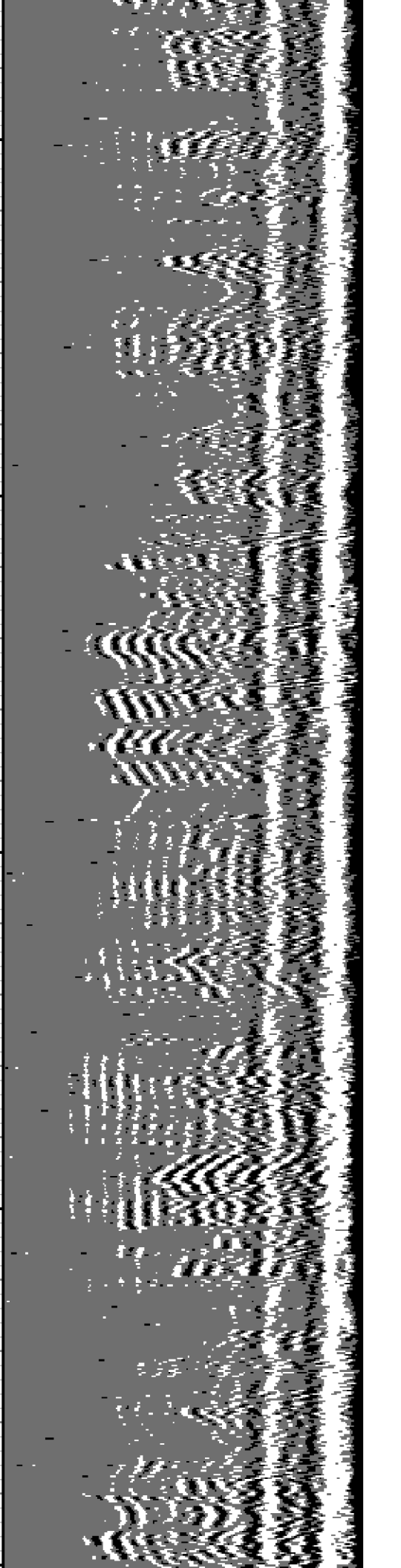


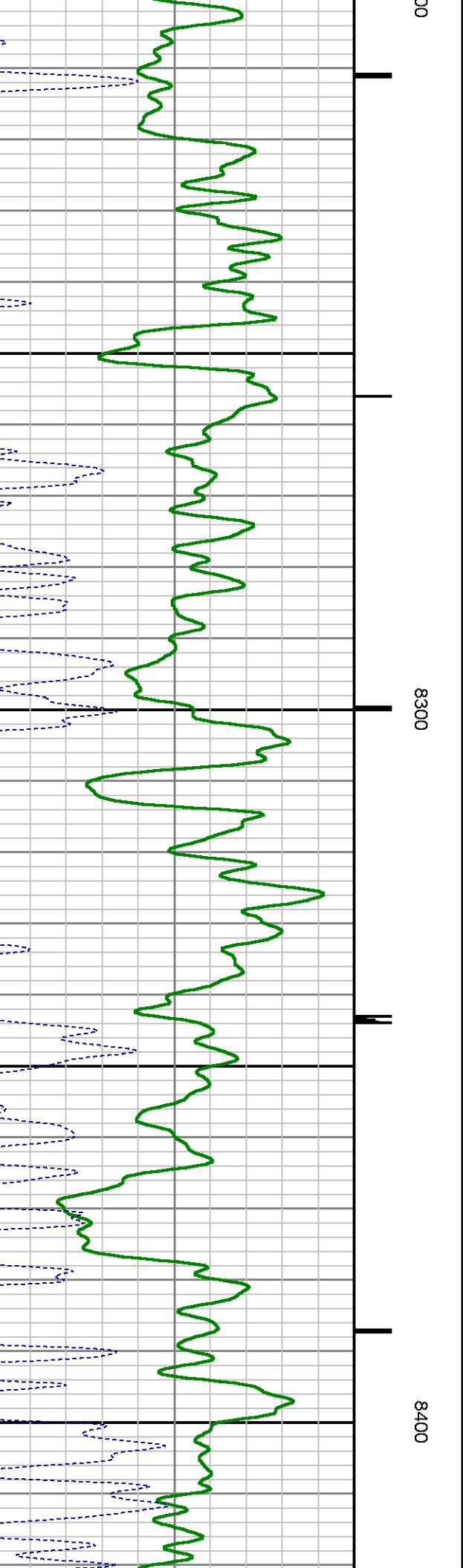
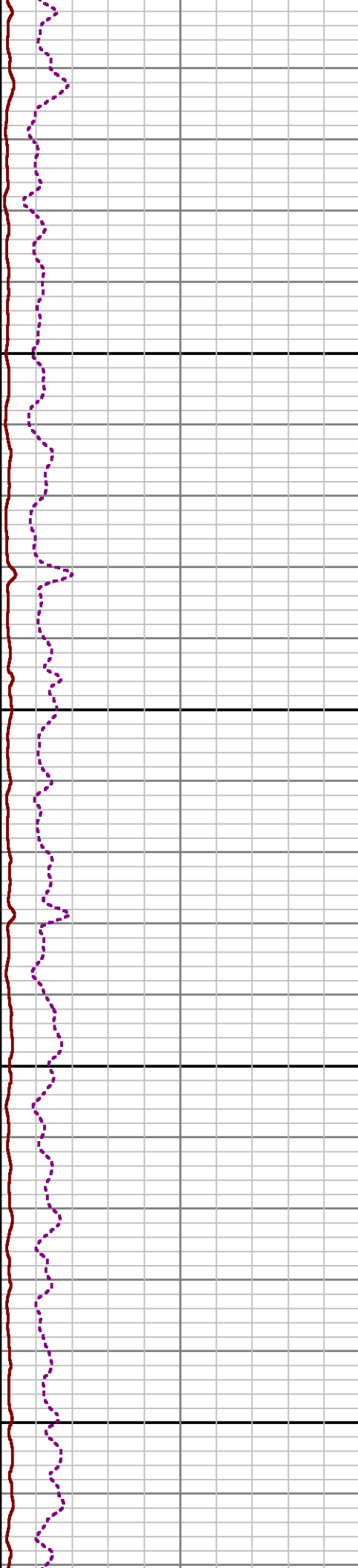
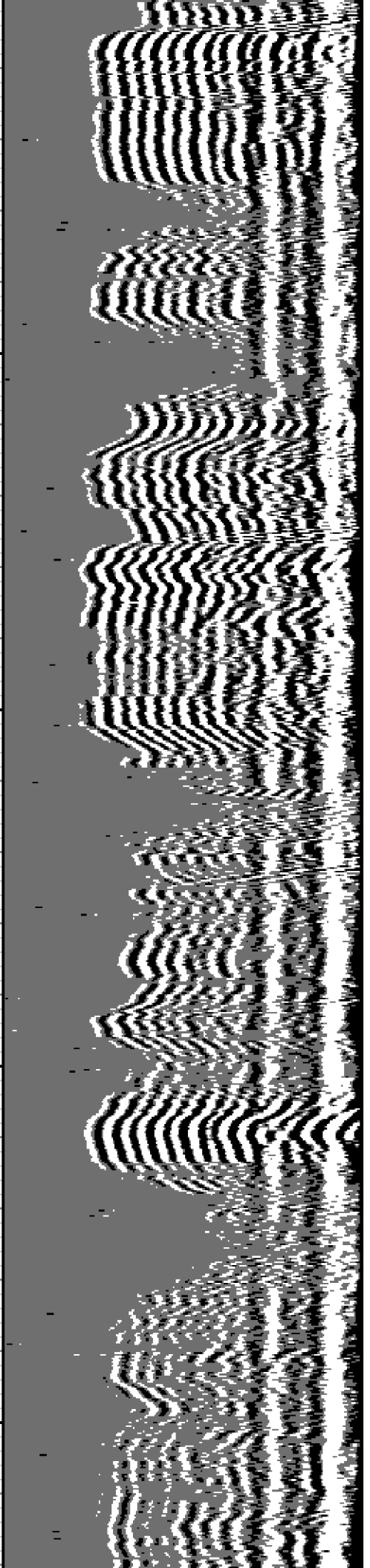


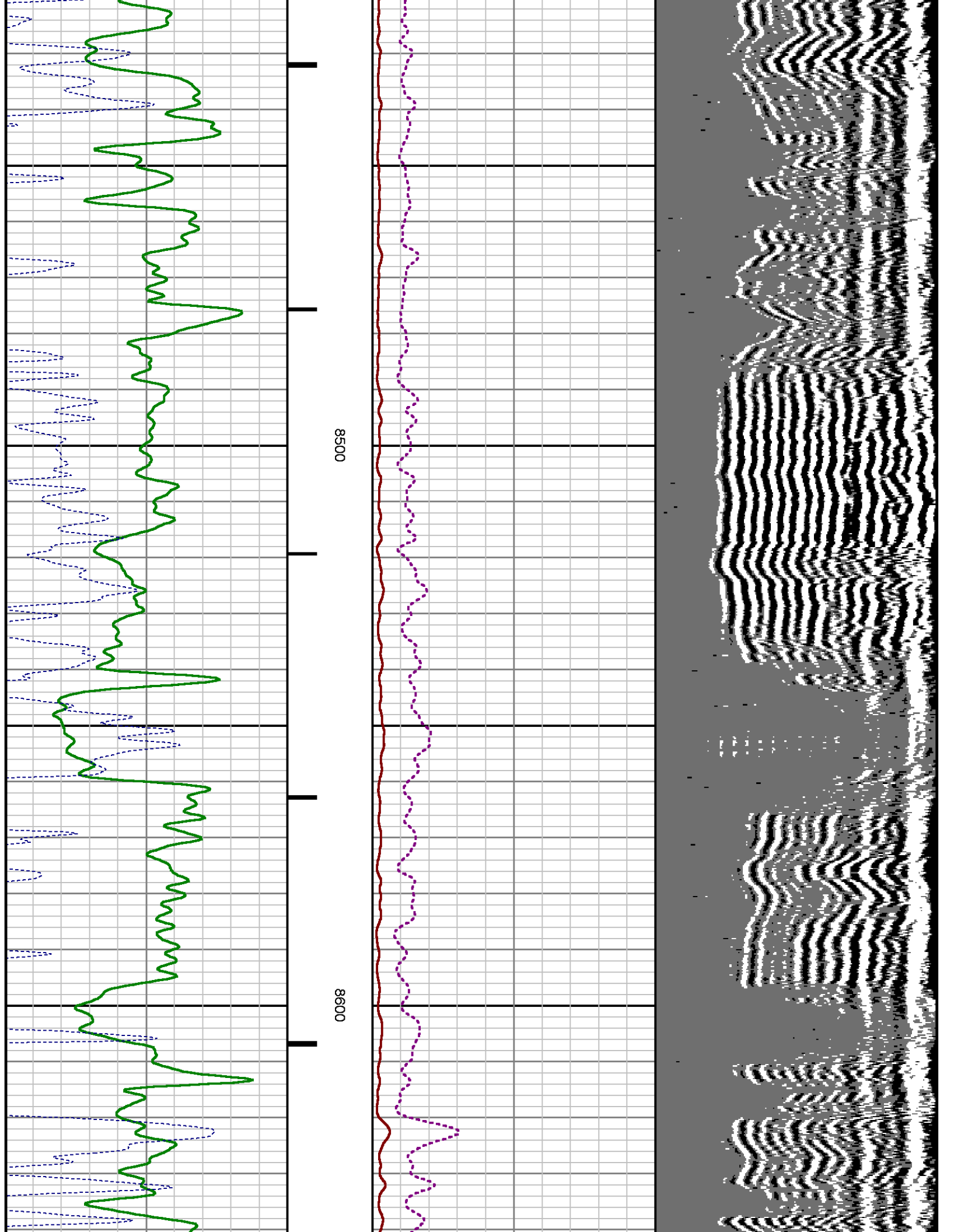




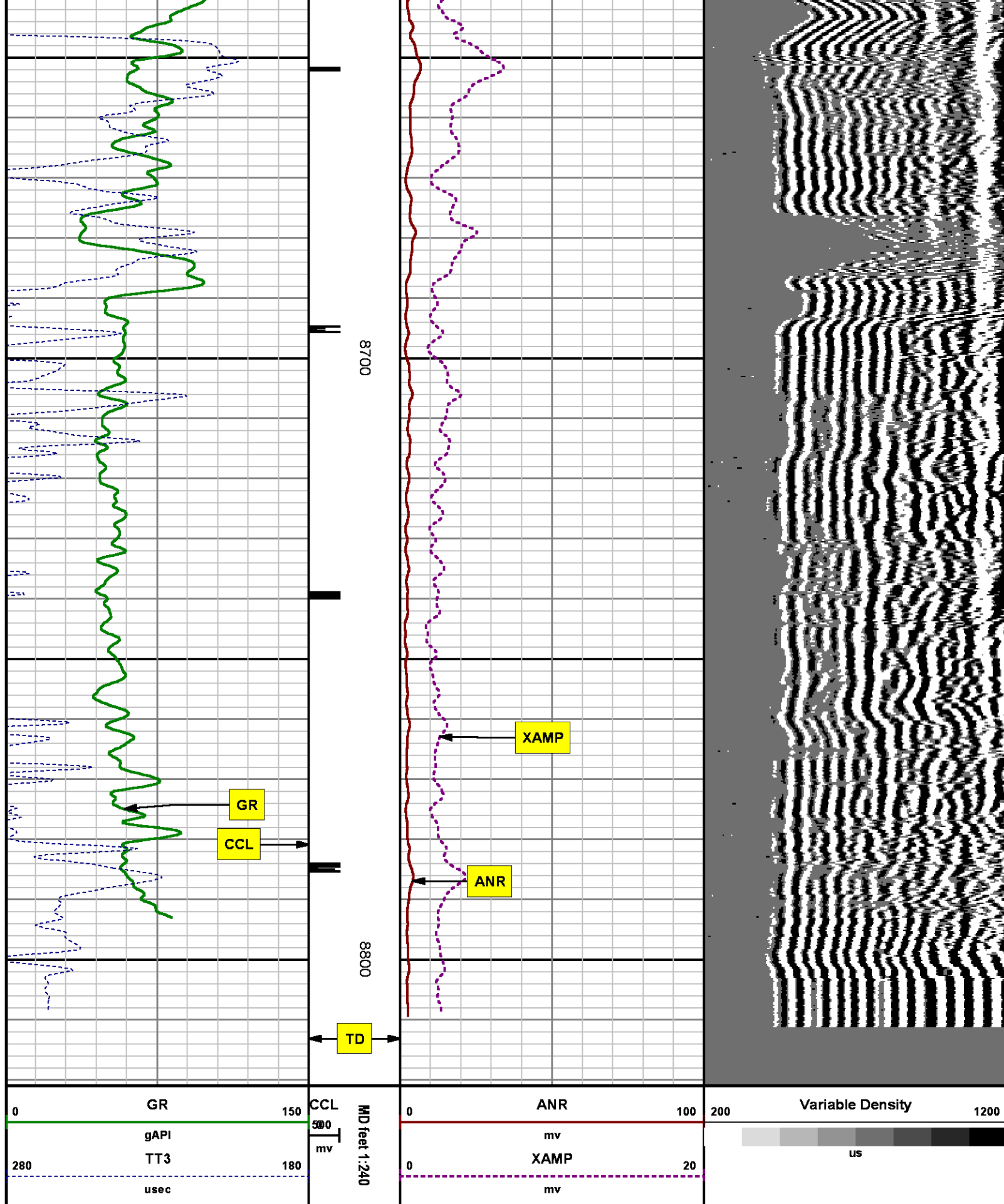












# SECONDARY PRESENTATION

## 0 PSI

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

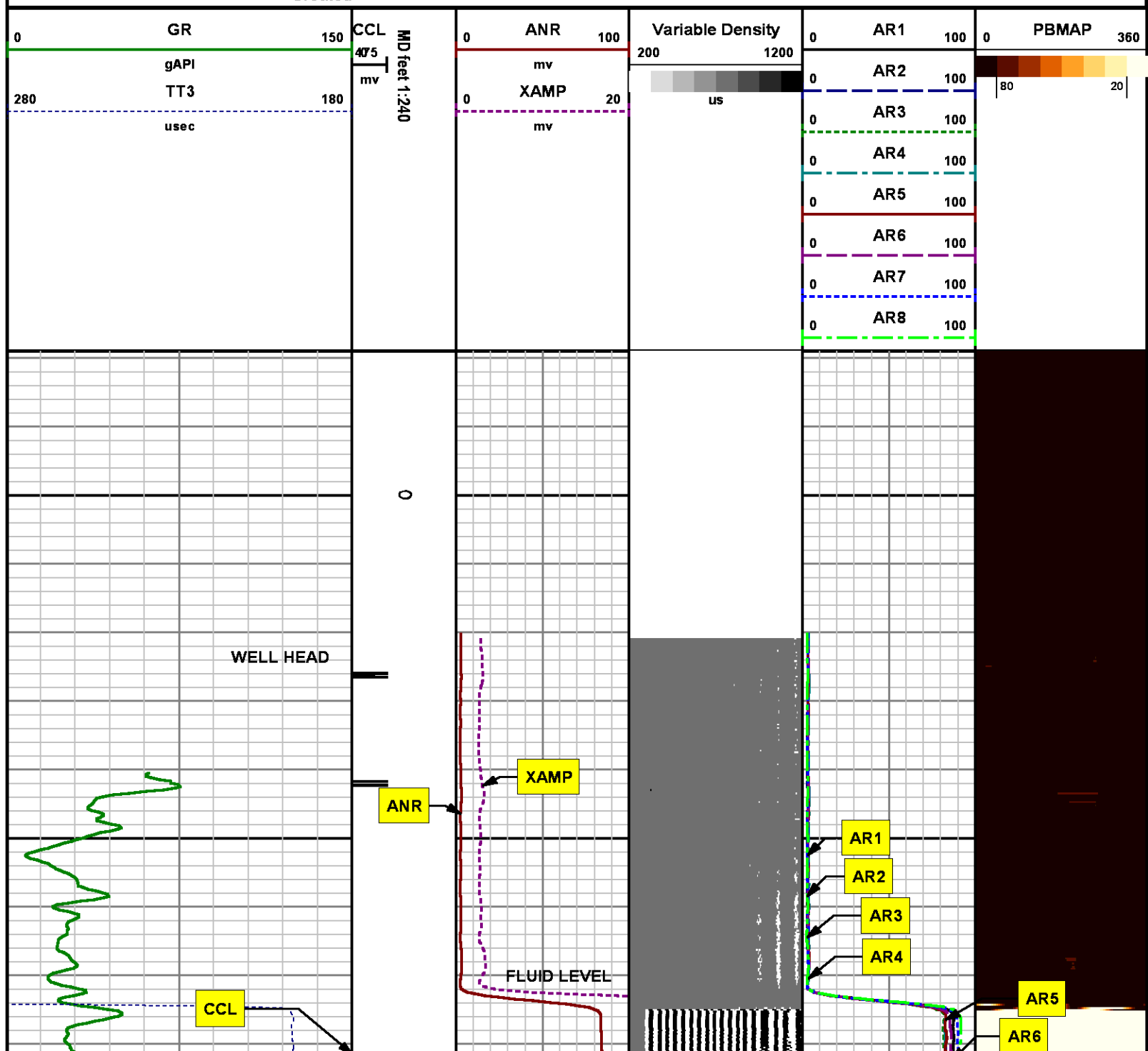
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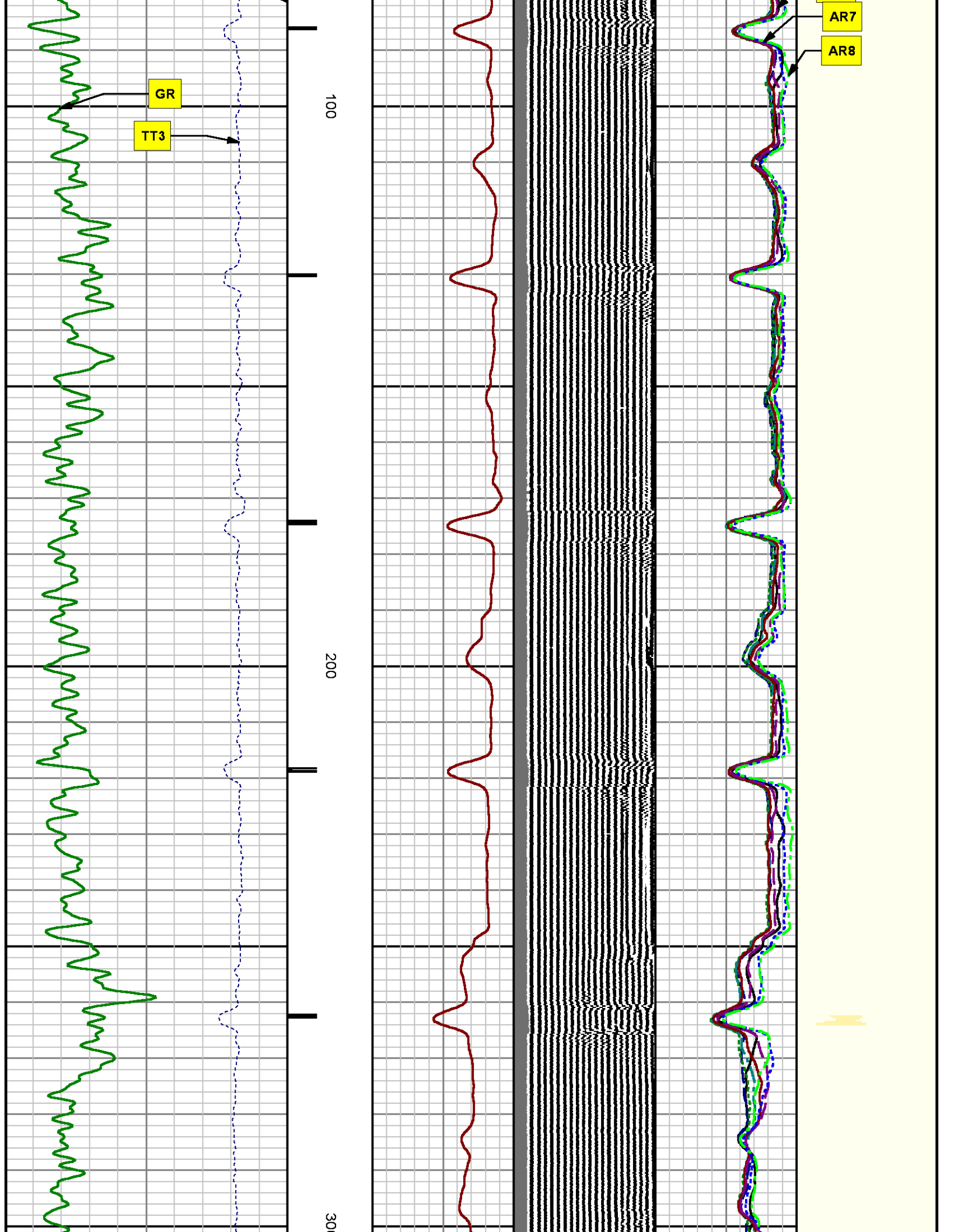
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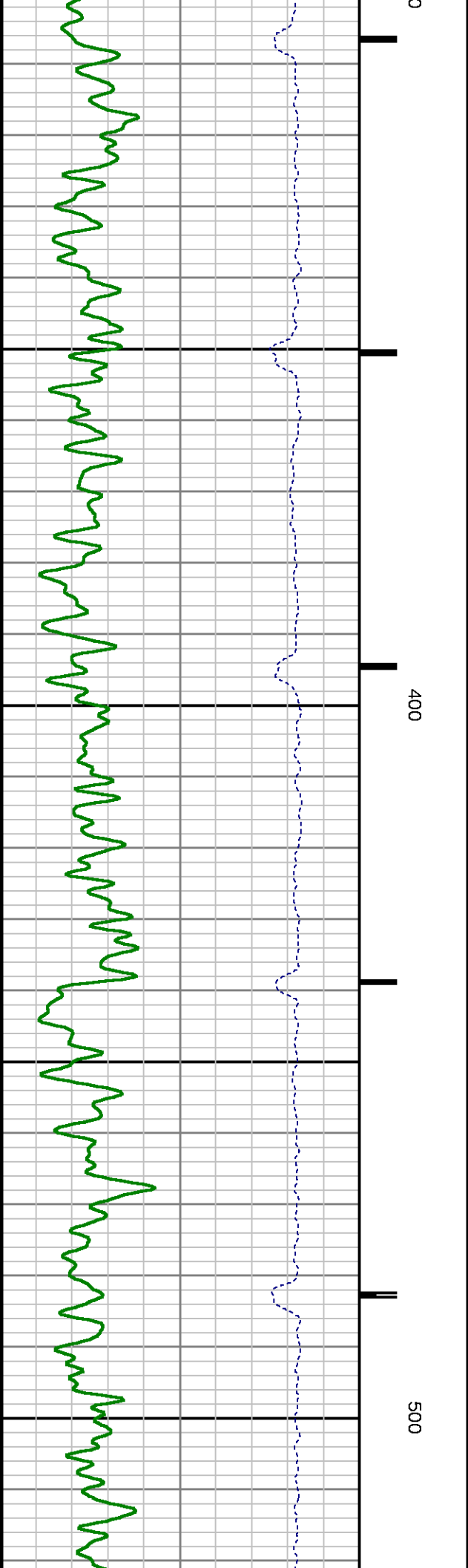
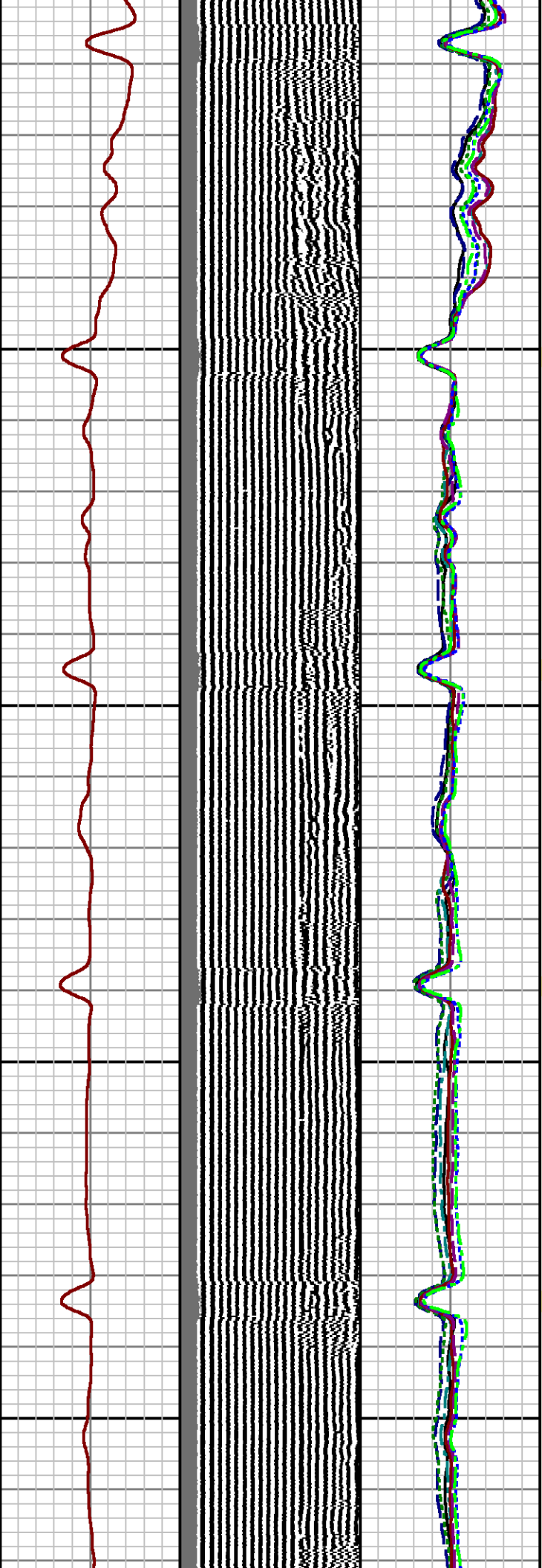
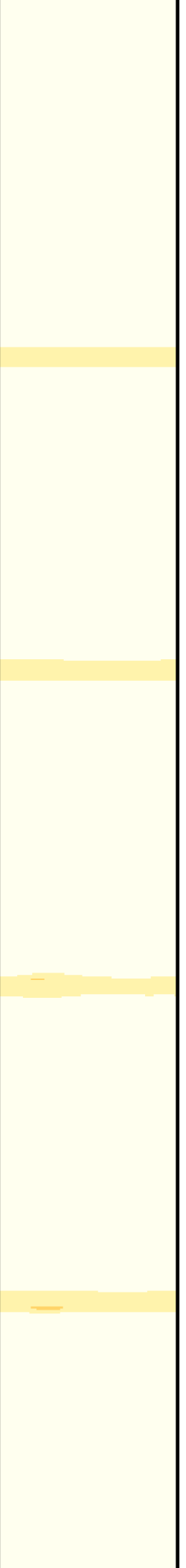
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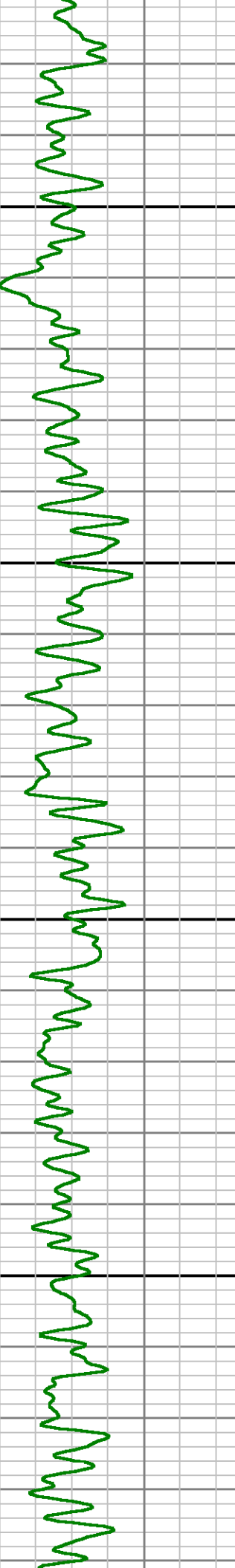
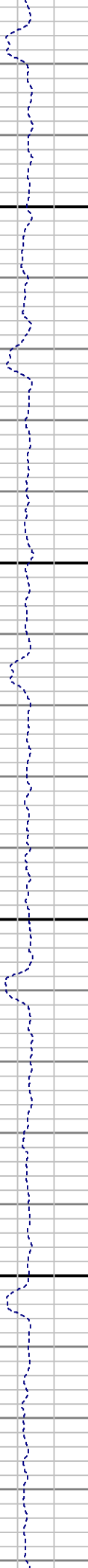
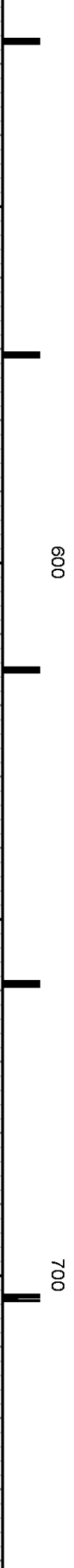
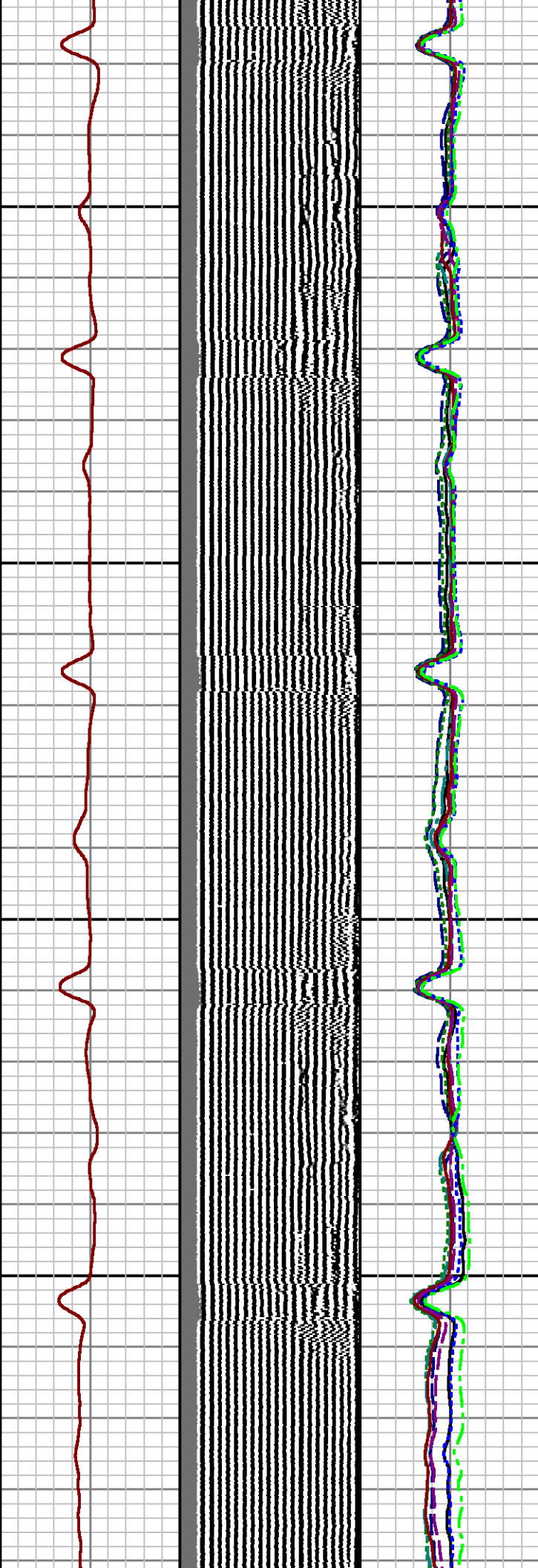
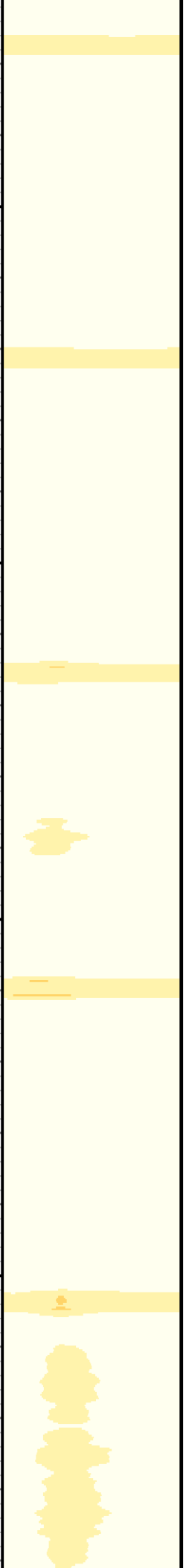
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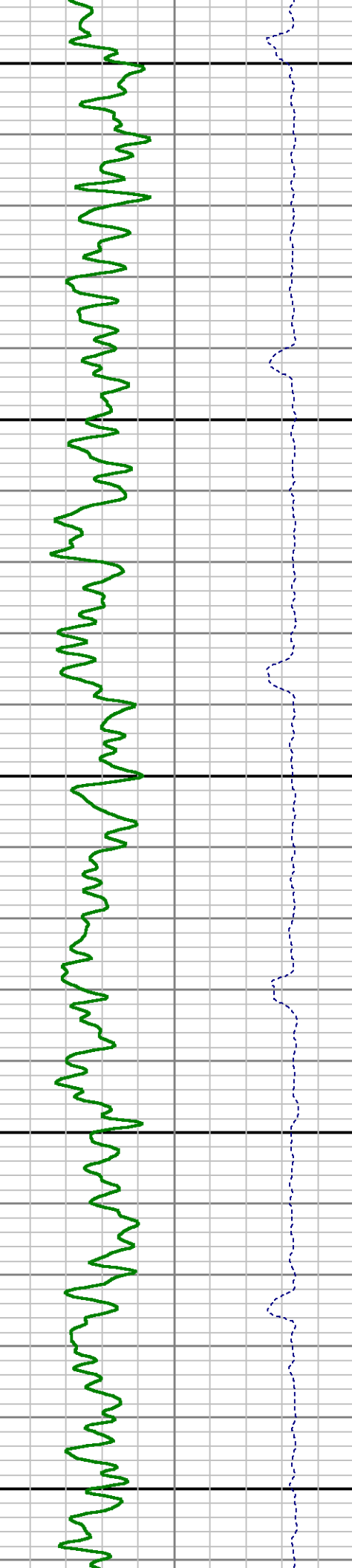
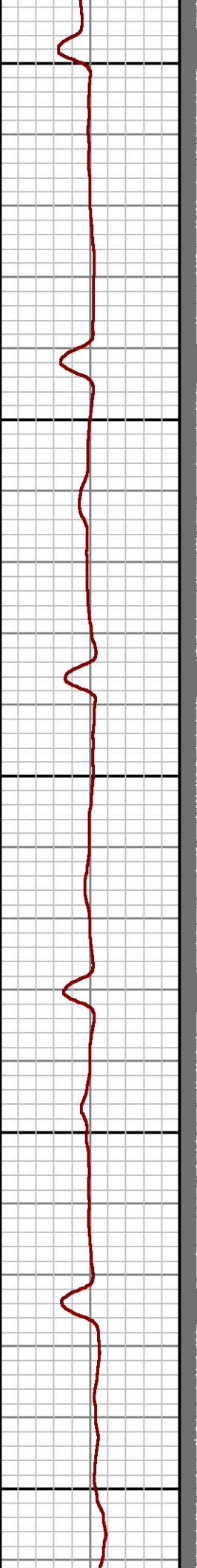
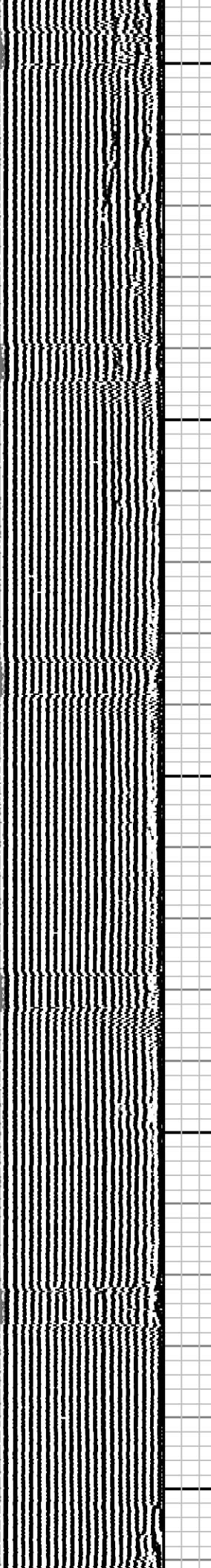
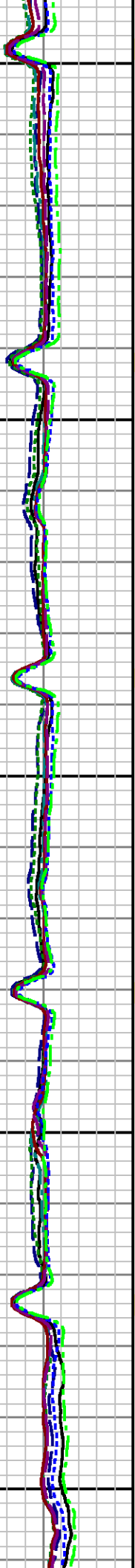
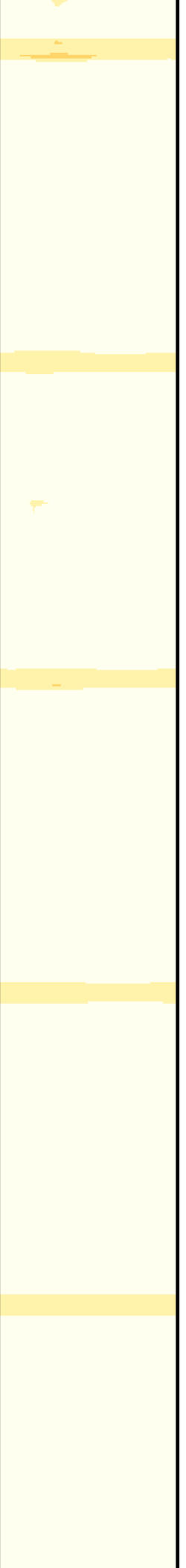


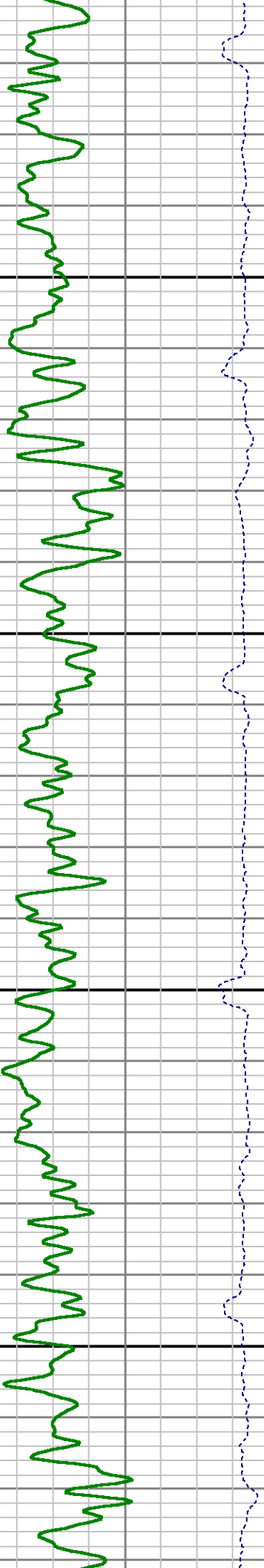
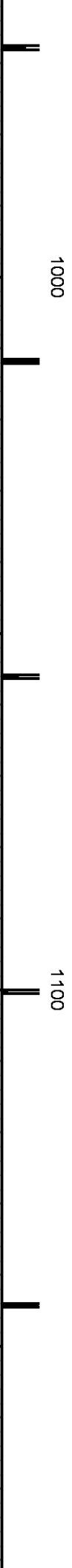
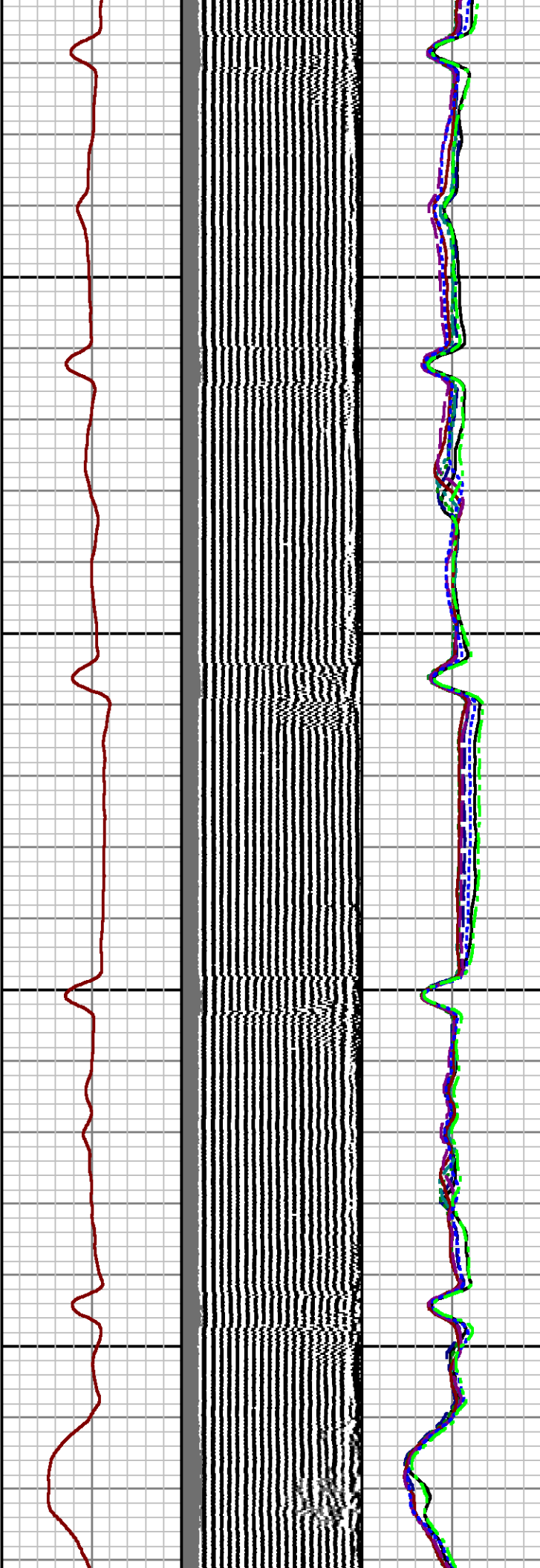
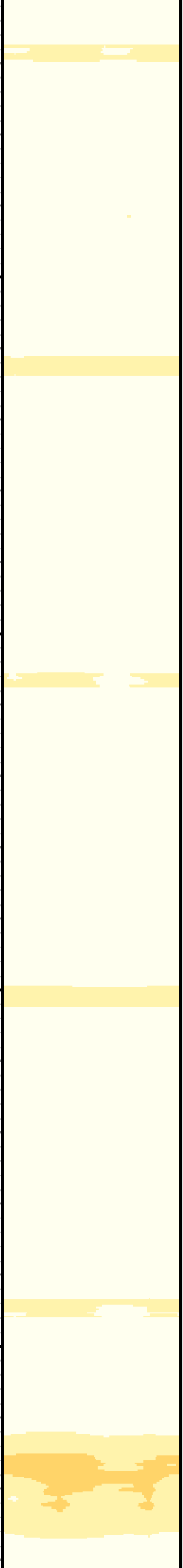


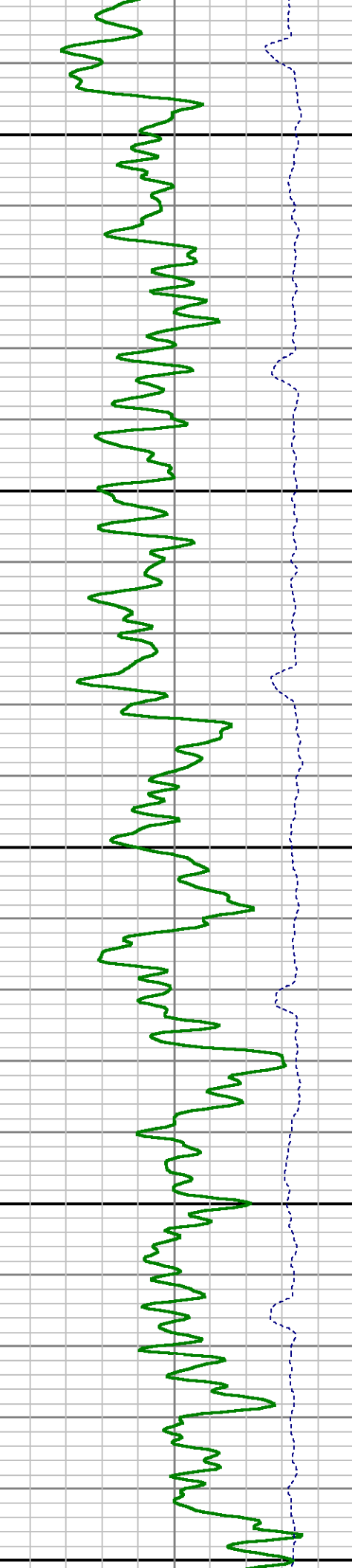
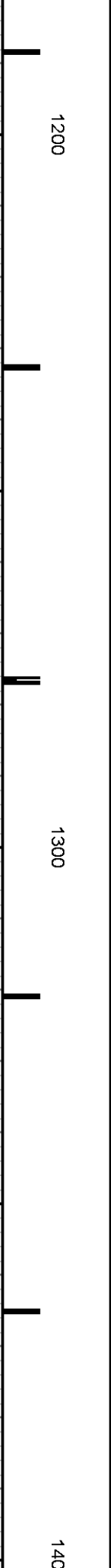
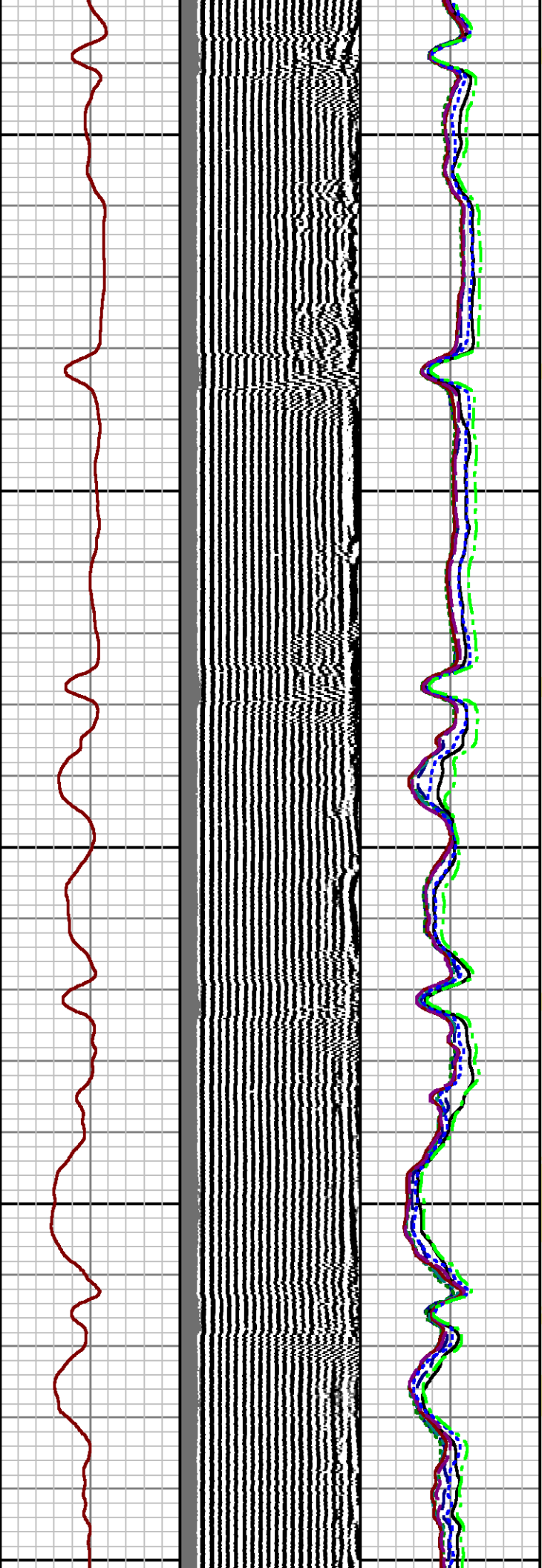
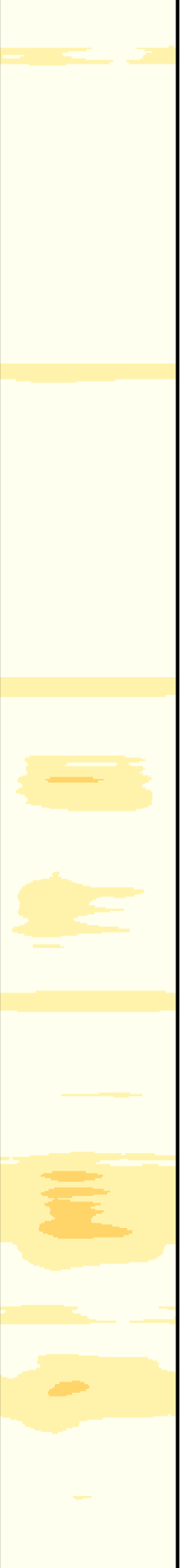


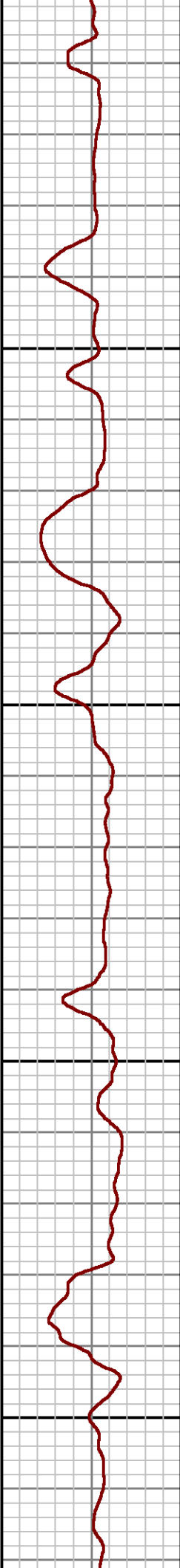
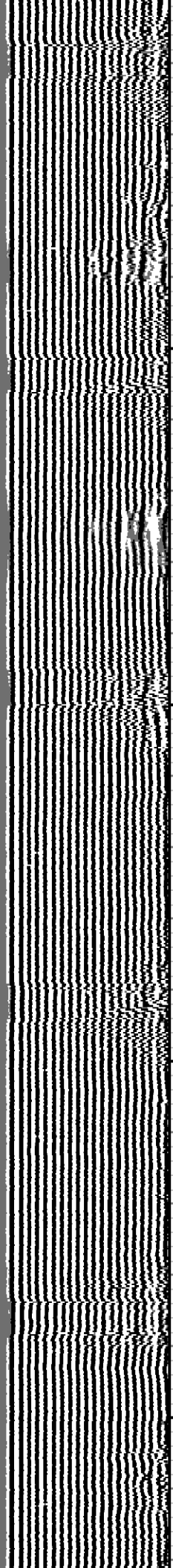
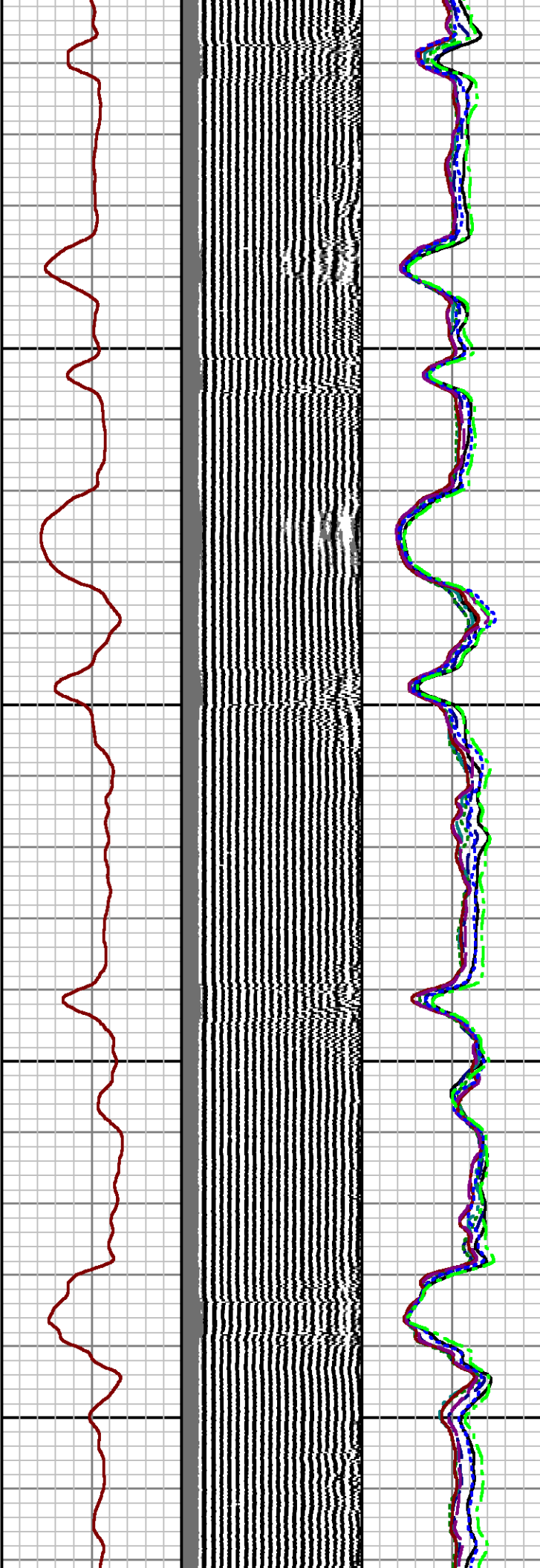
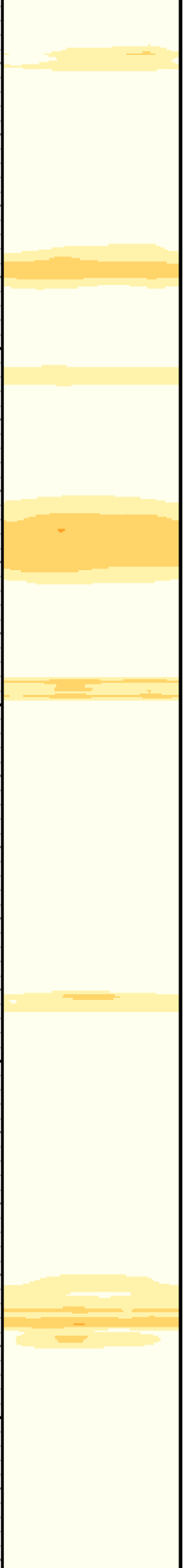




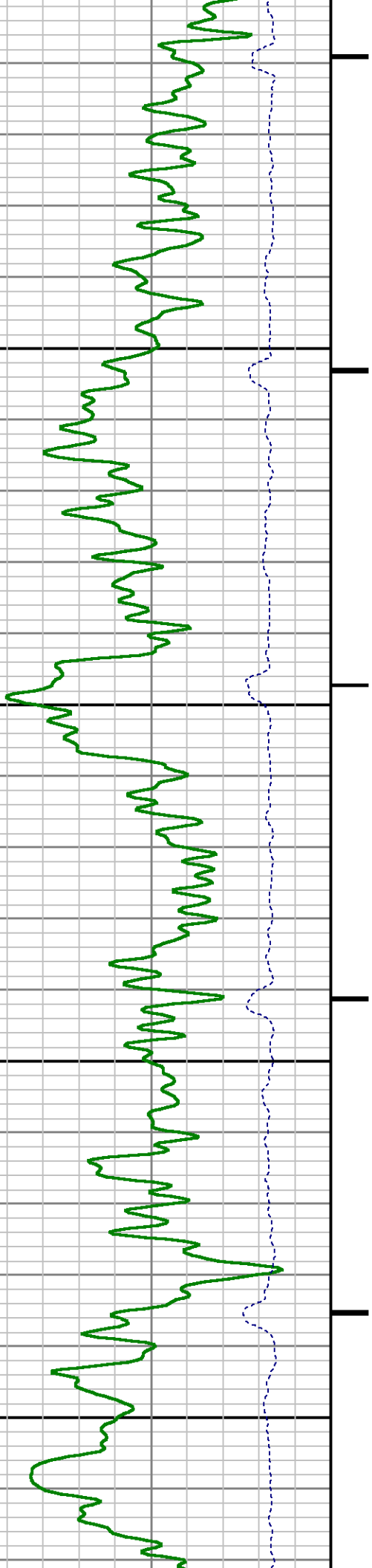


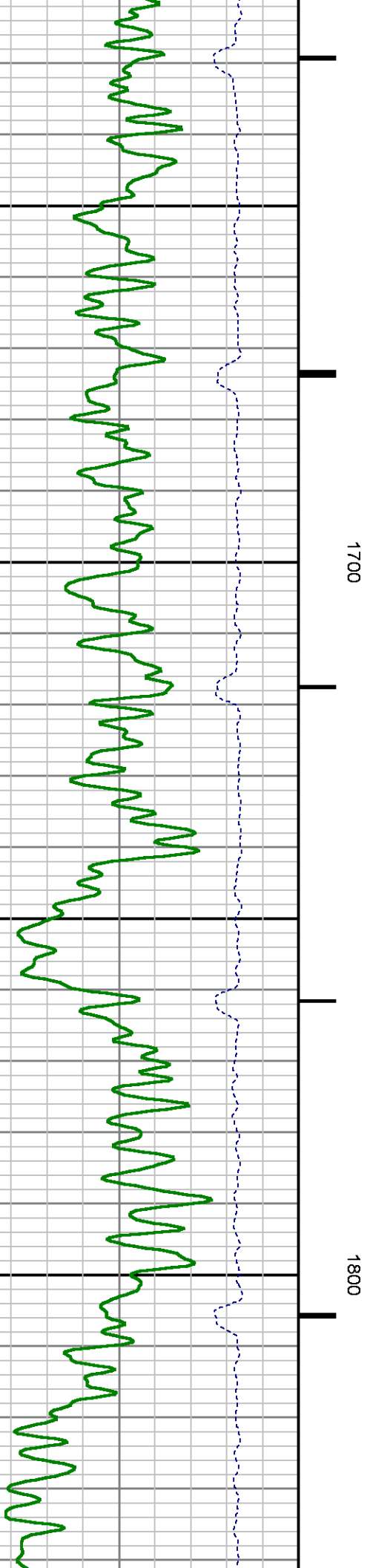
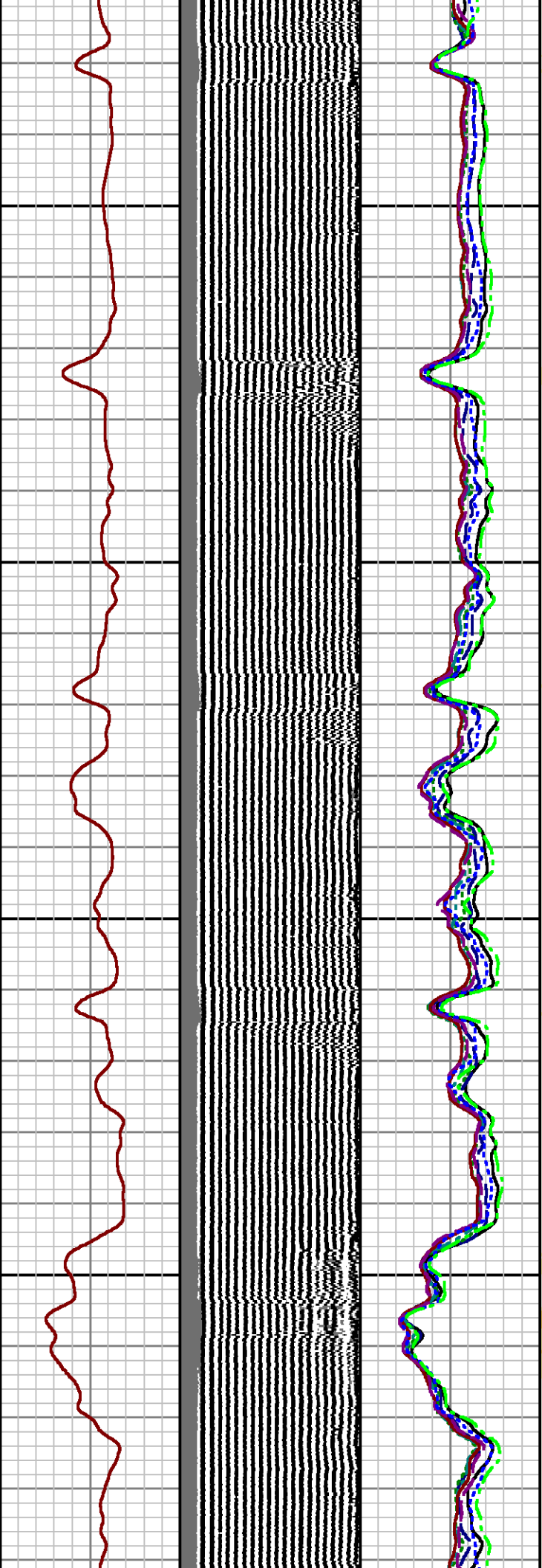
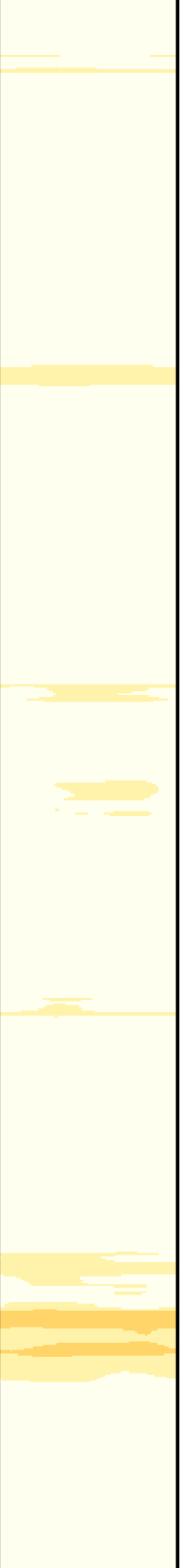




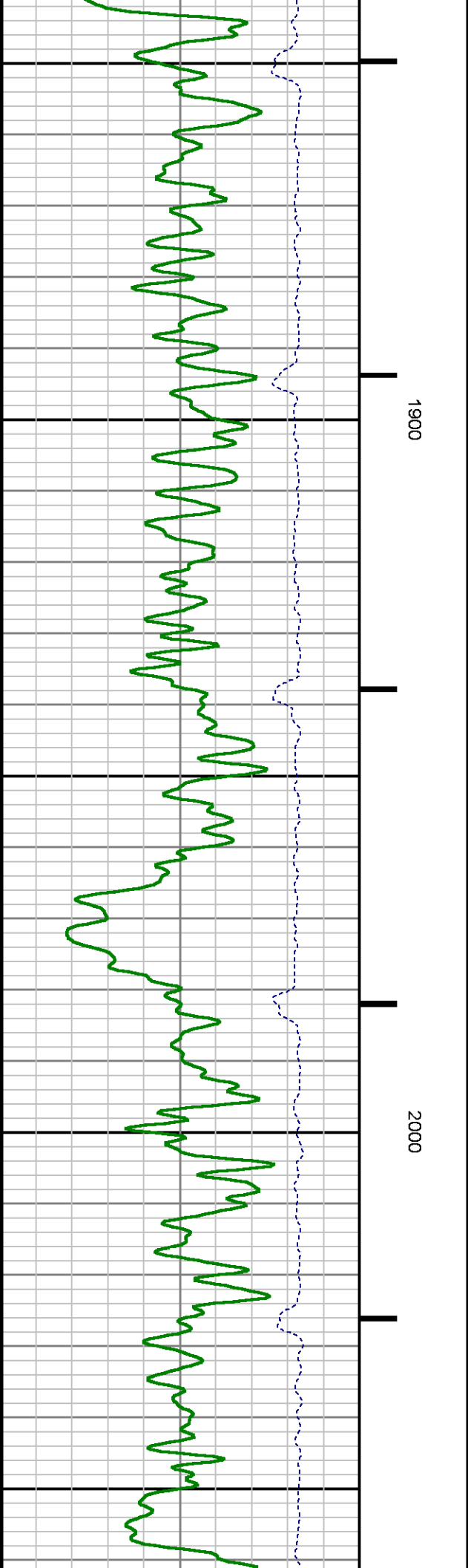
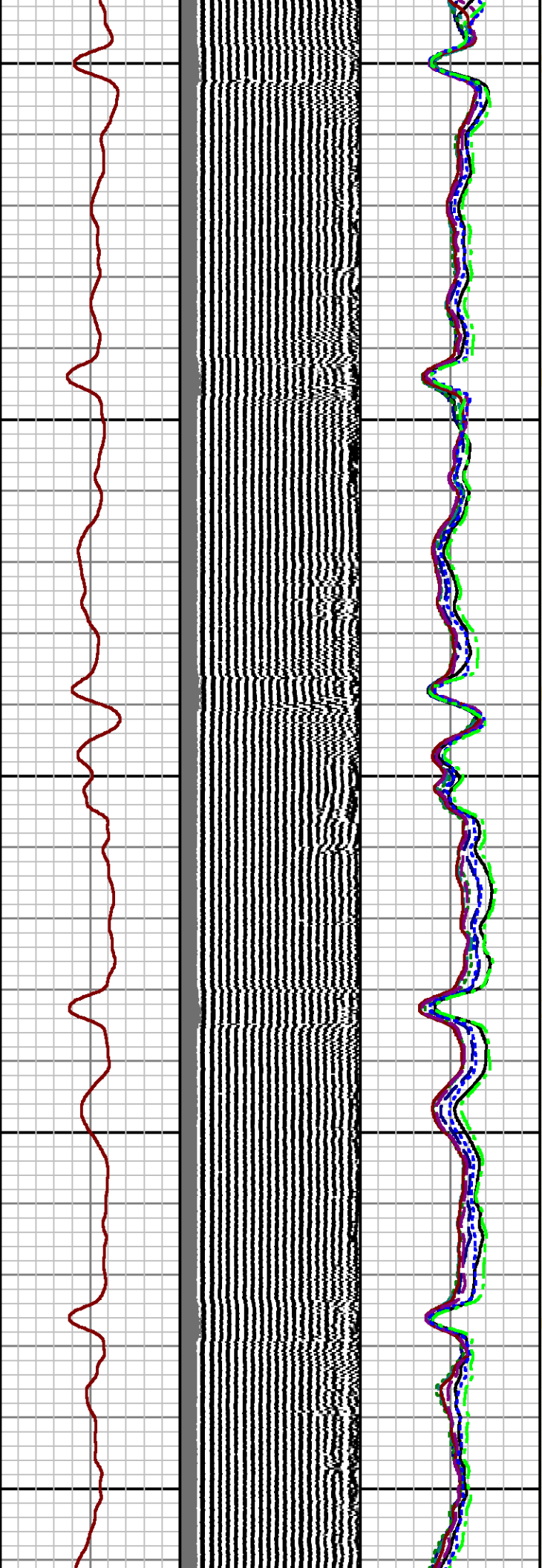
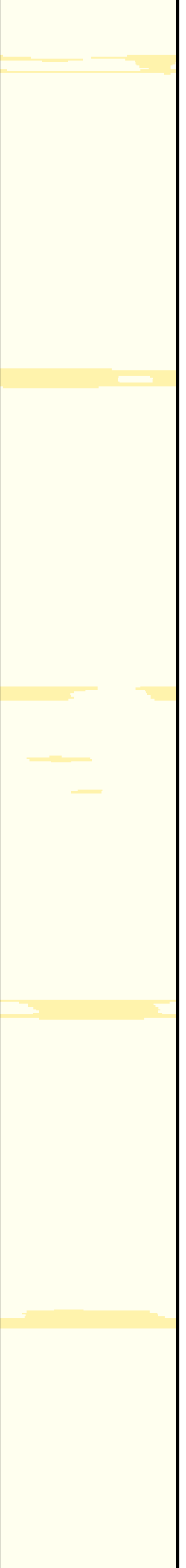


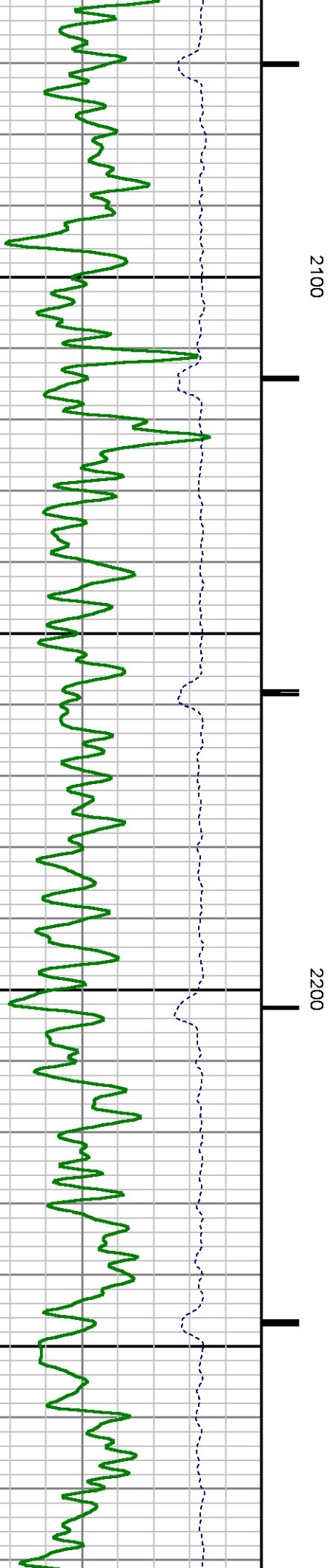
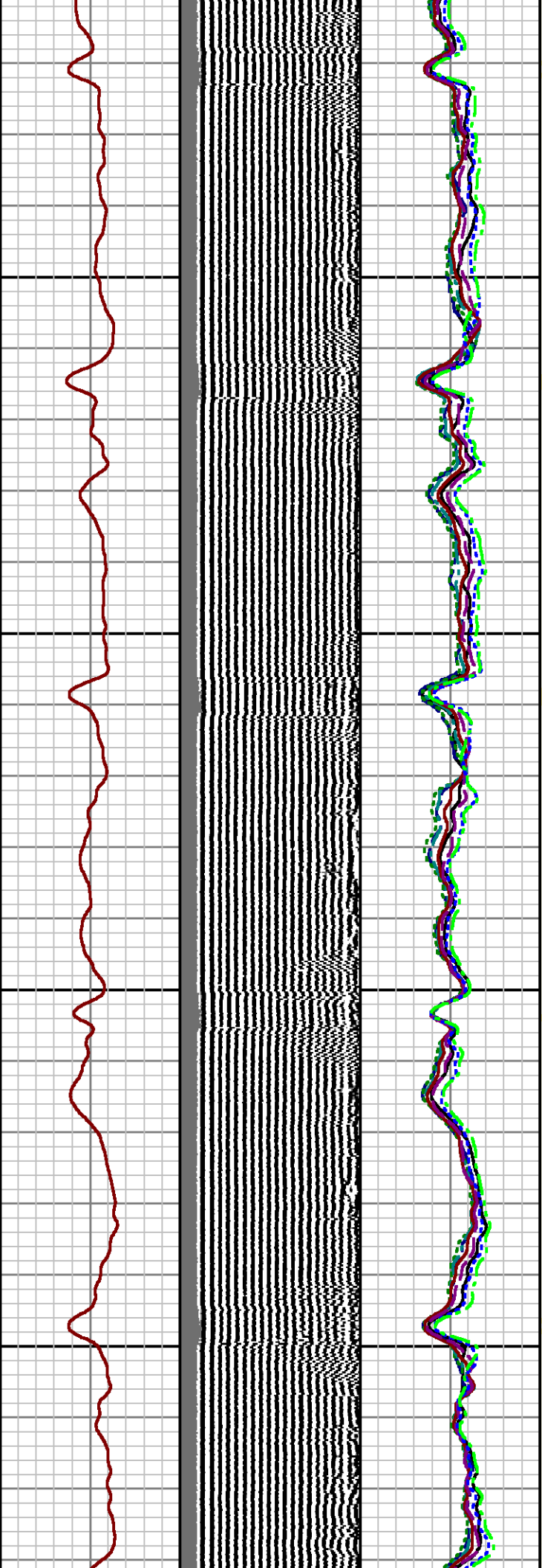
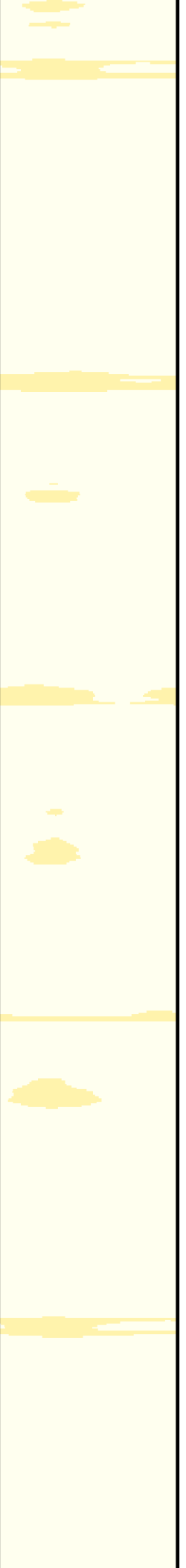
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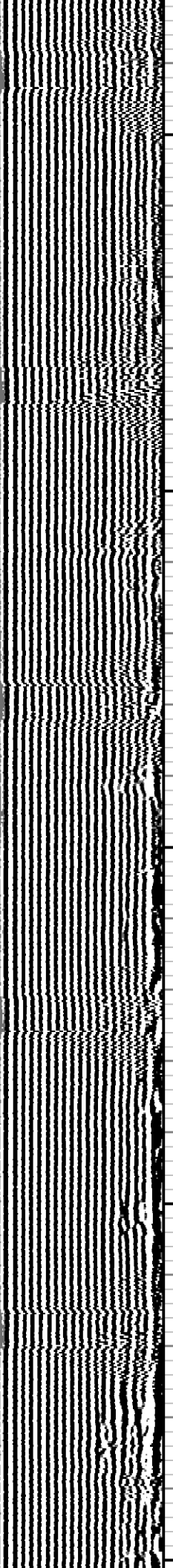
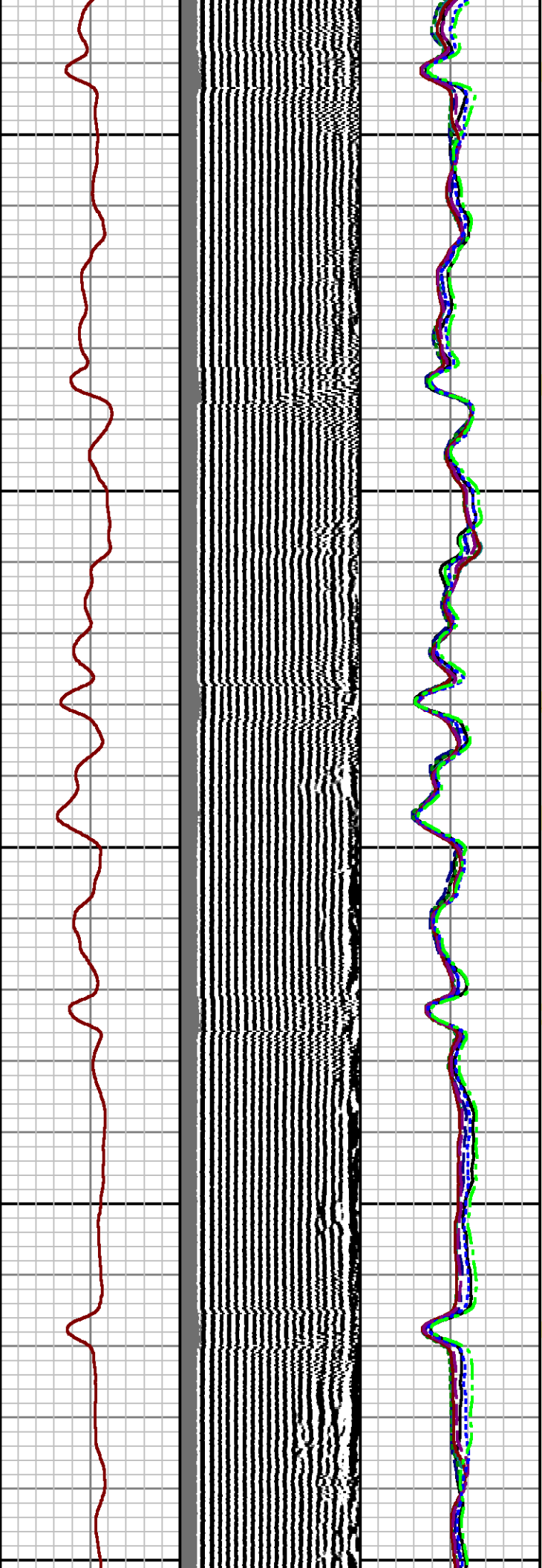








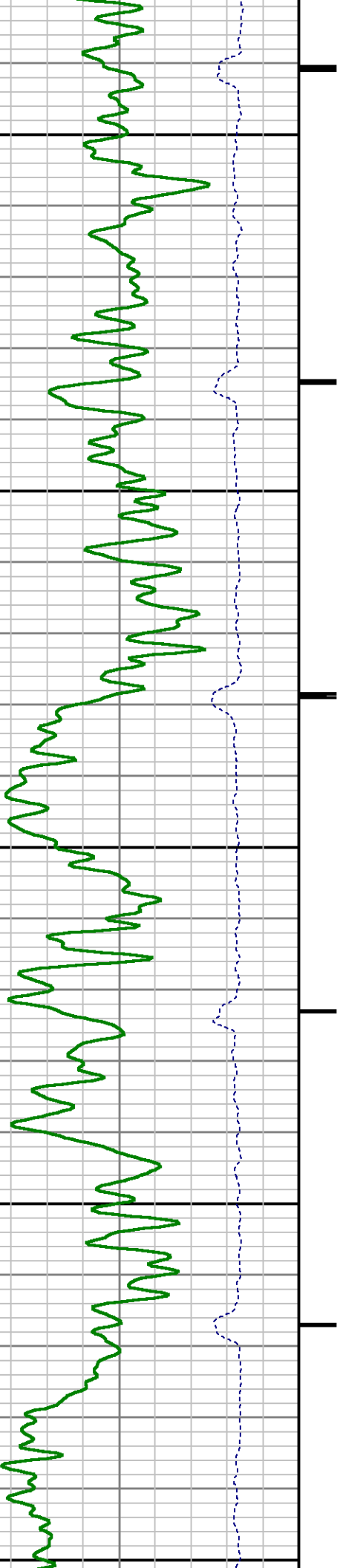


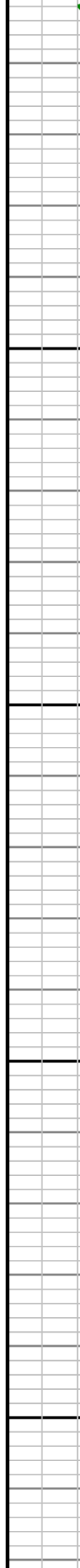
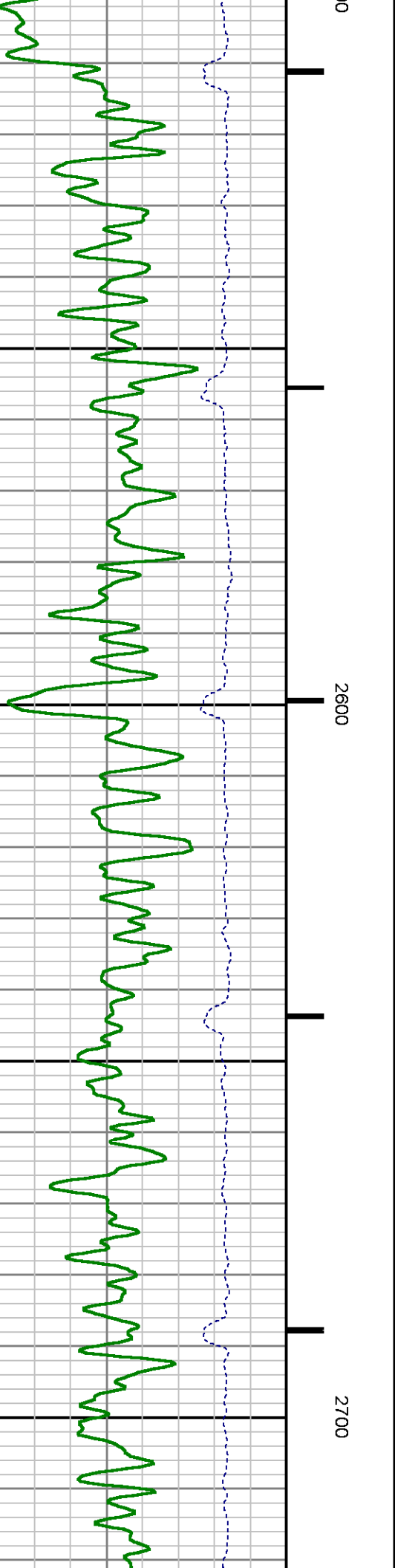
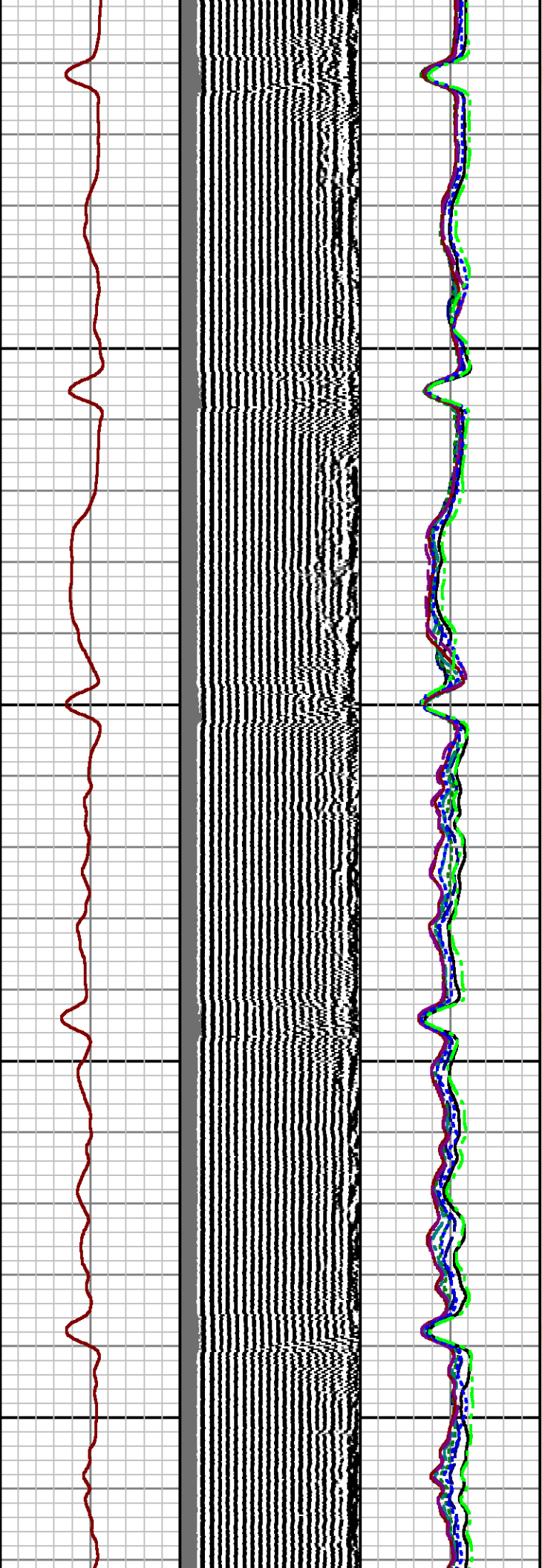
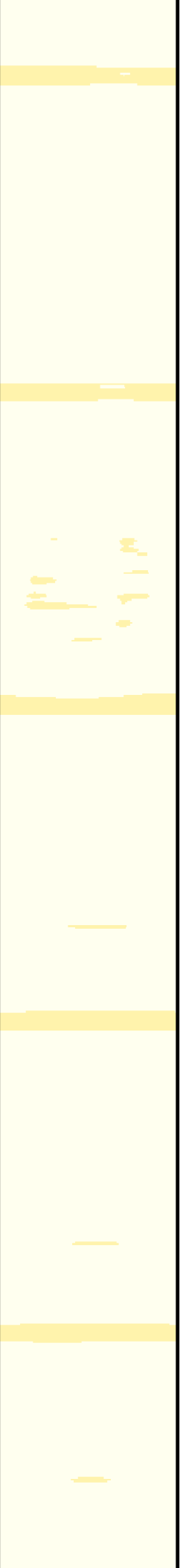


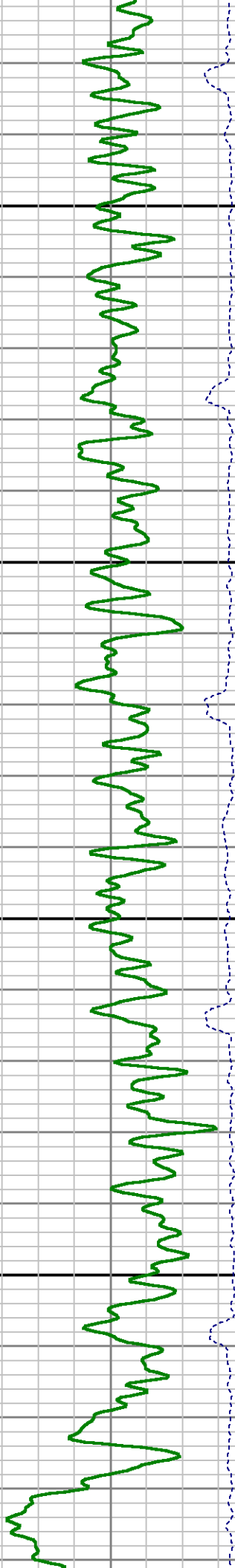
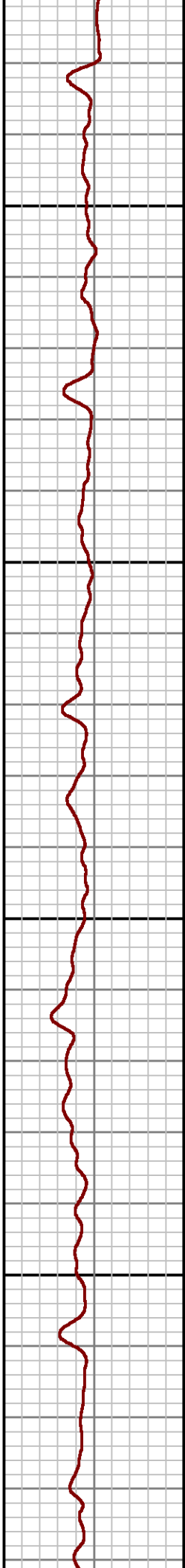
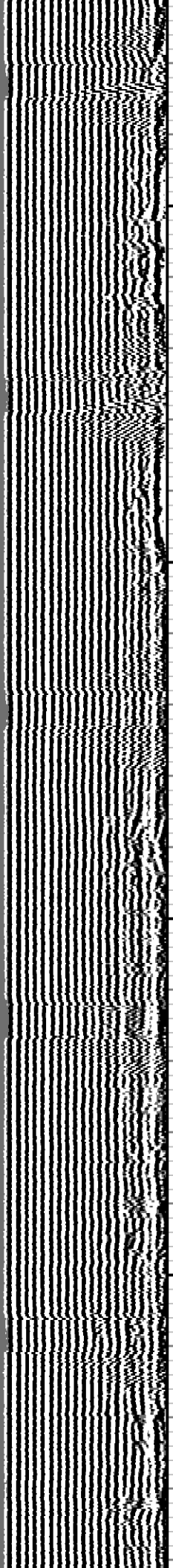
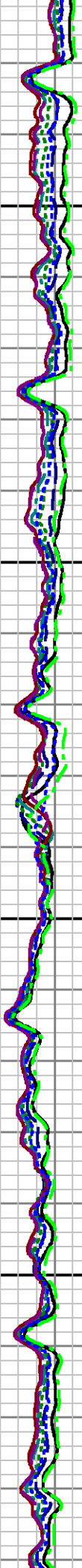
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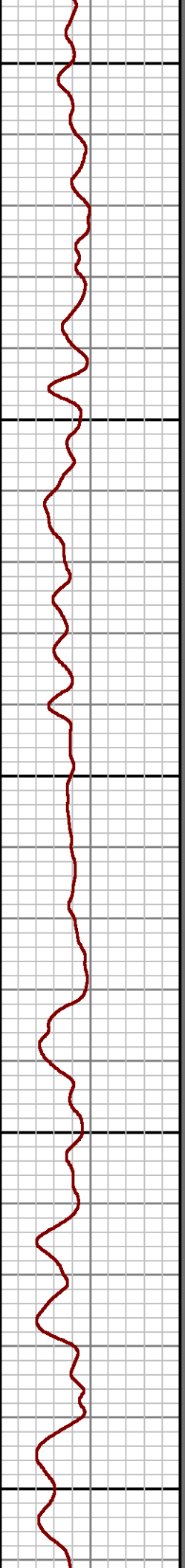
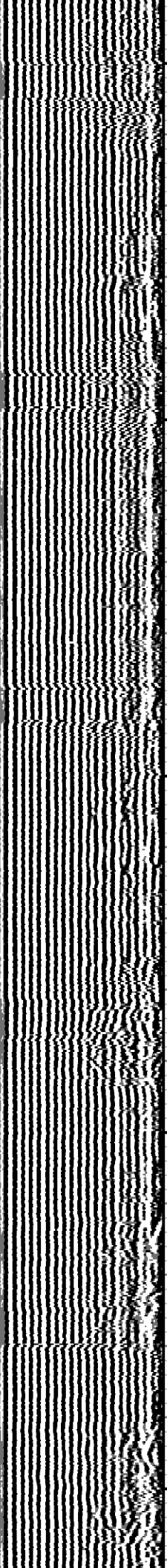
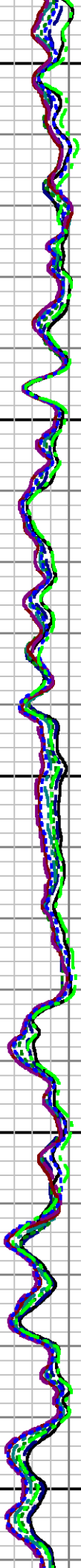
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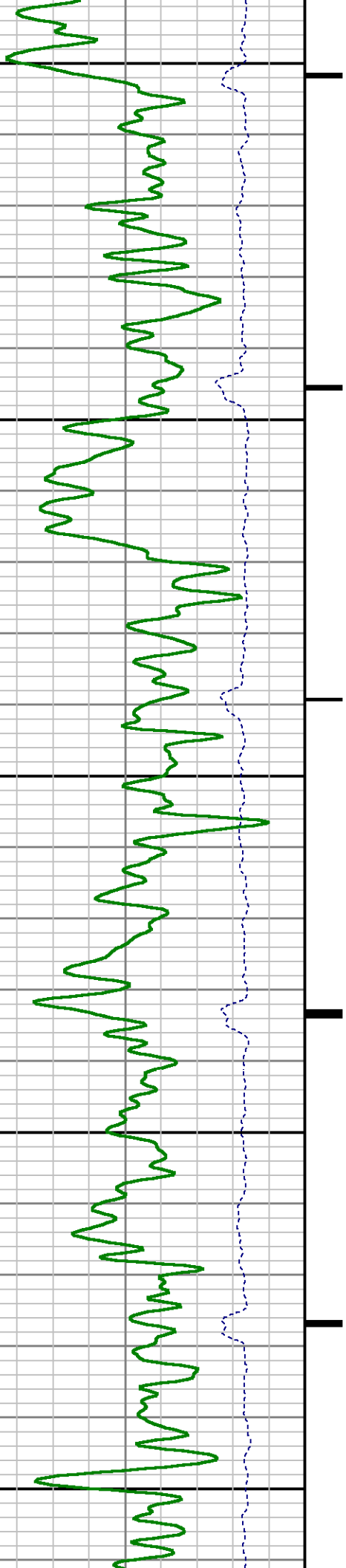


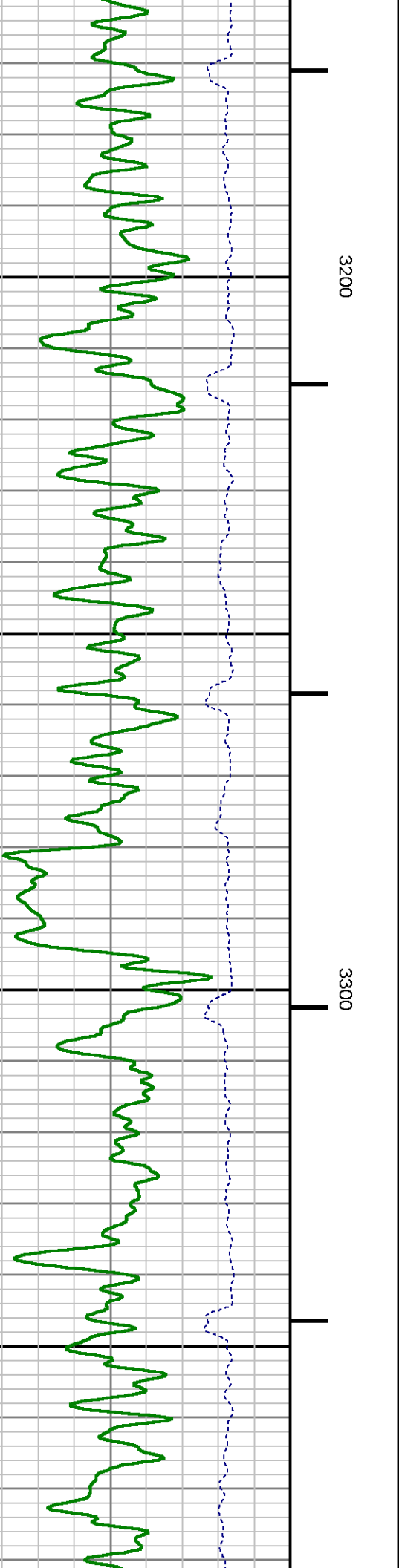
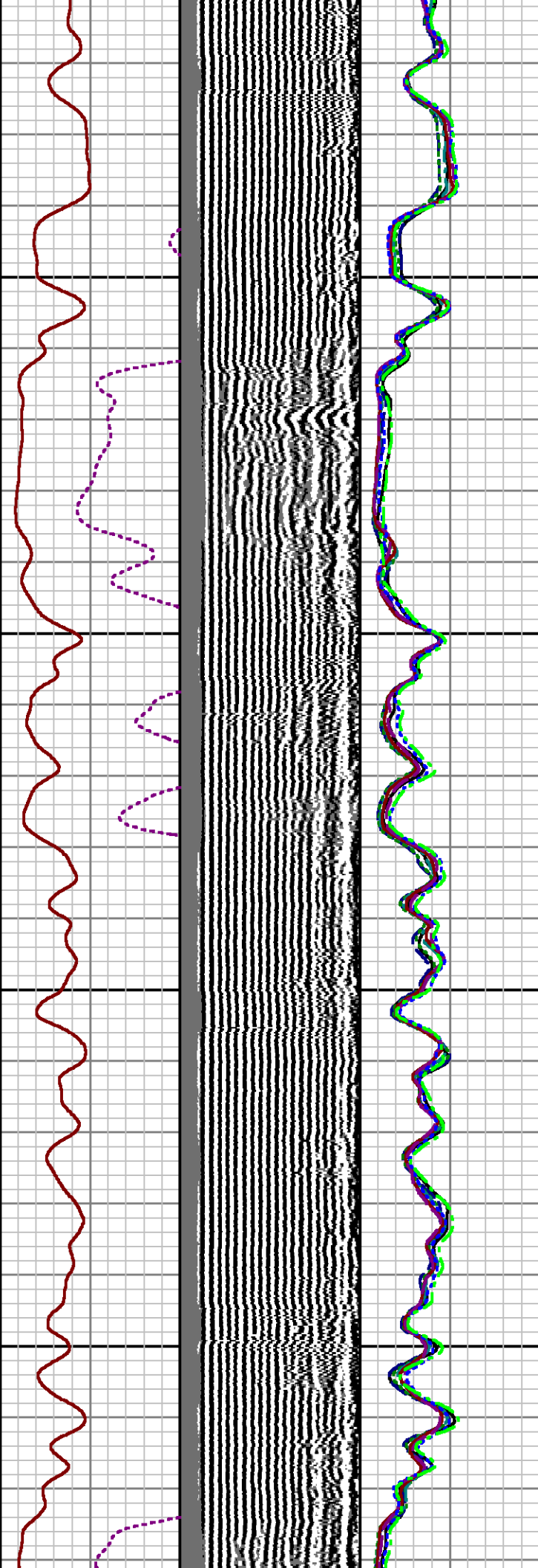
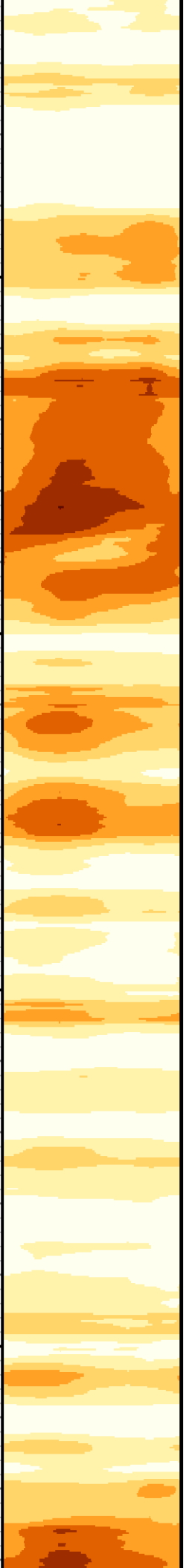


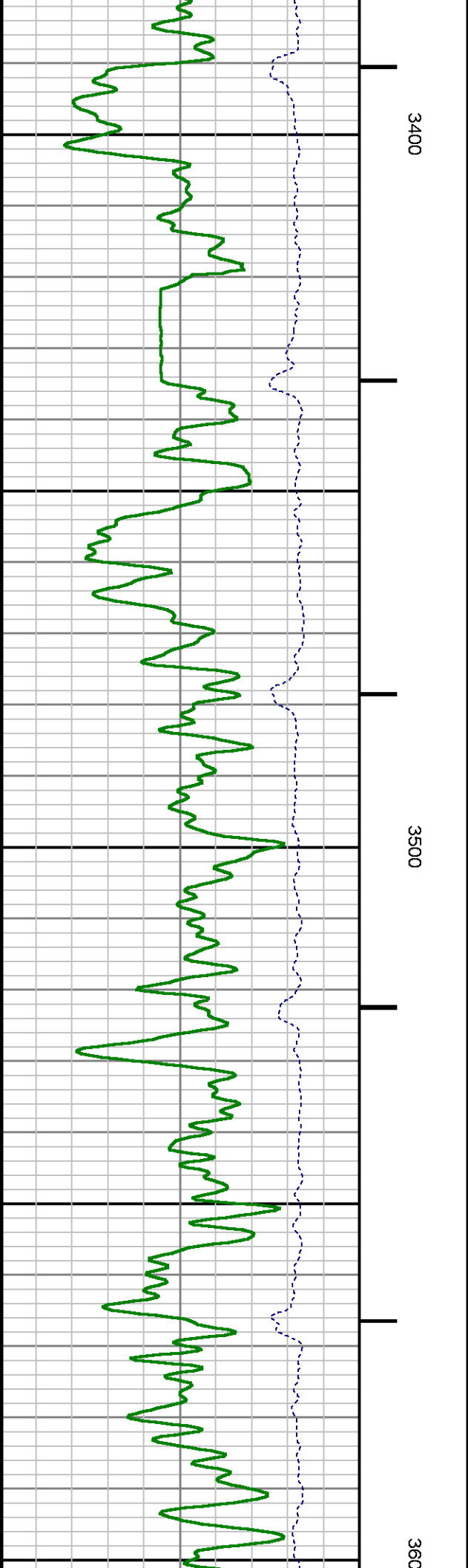
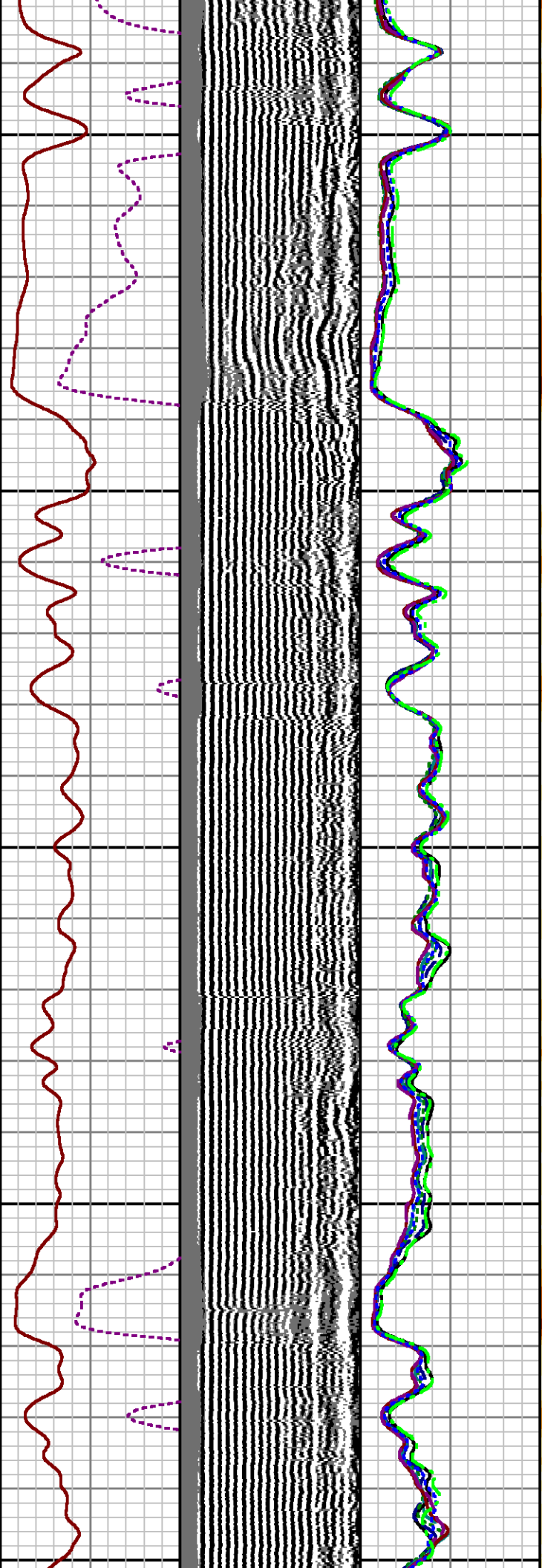
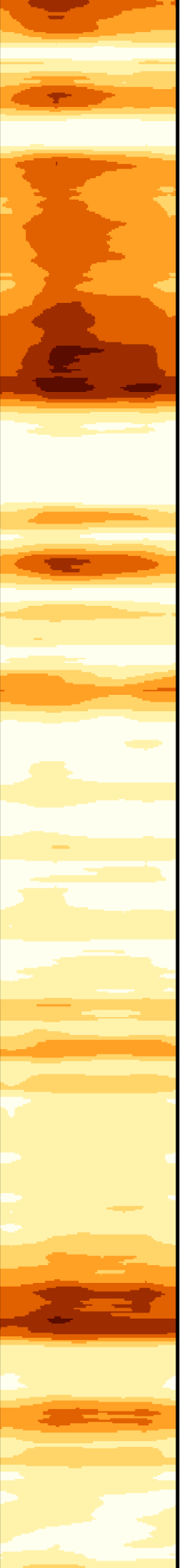


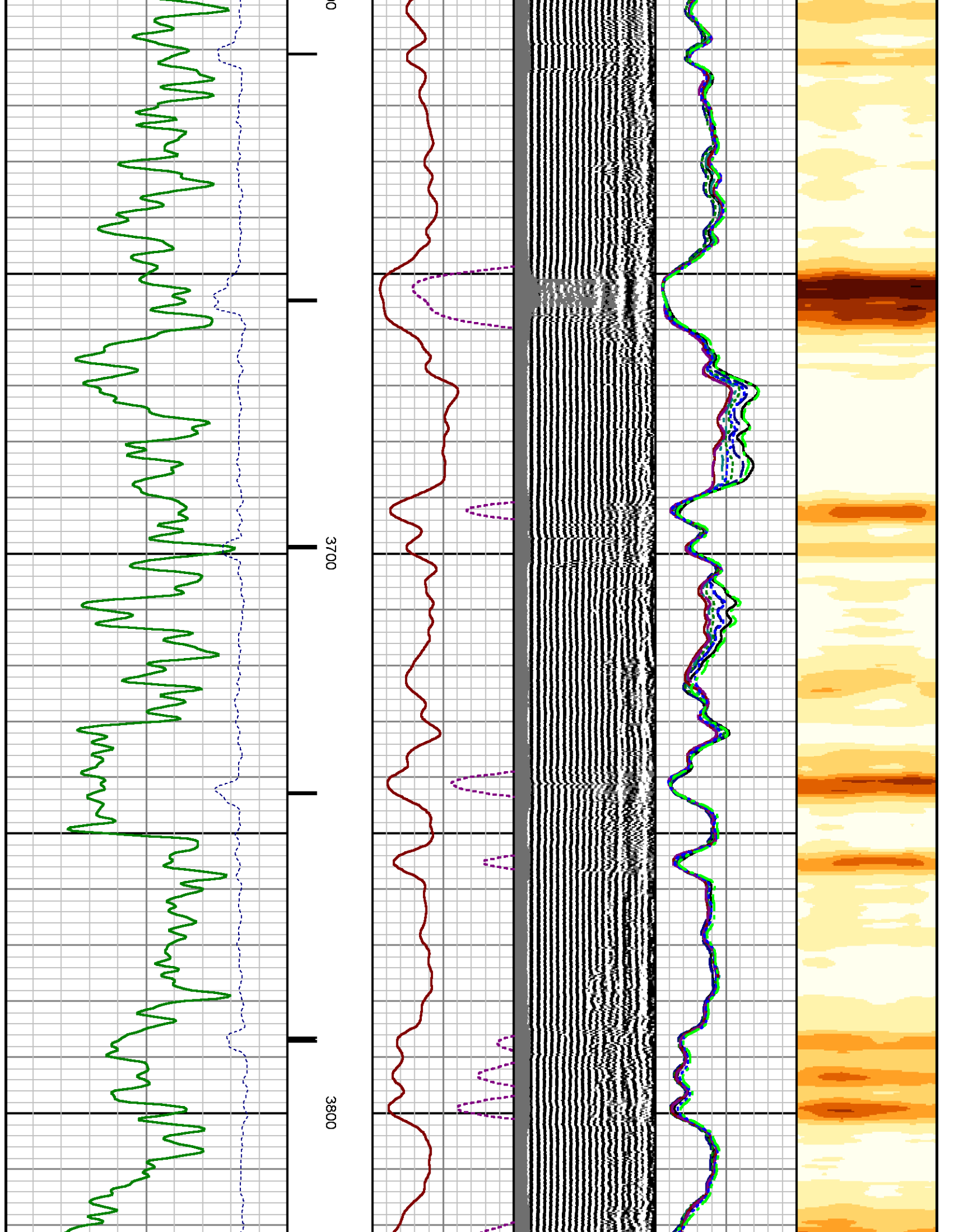
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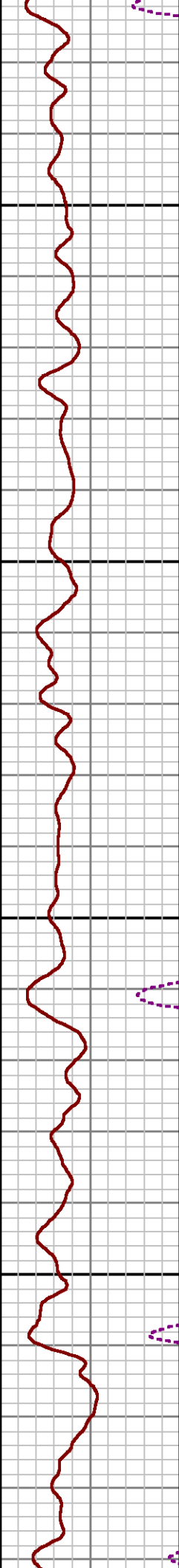
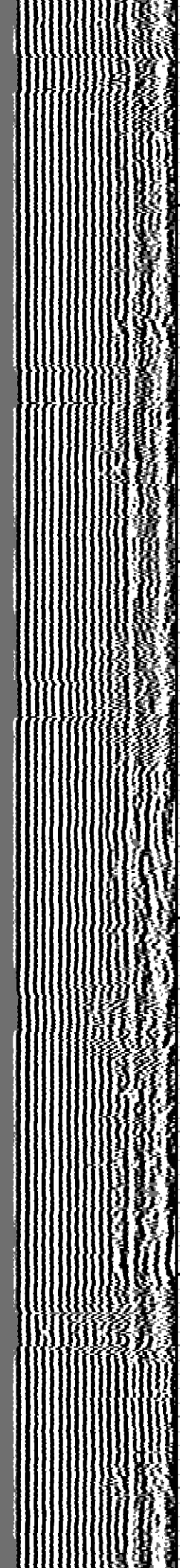
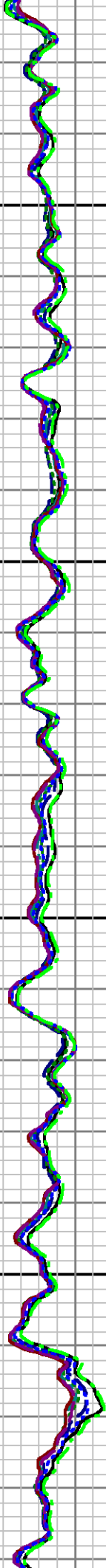
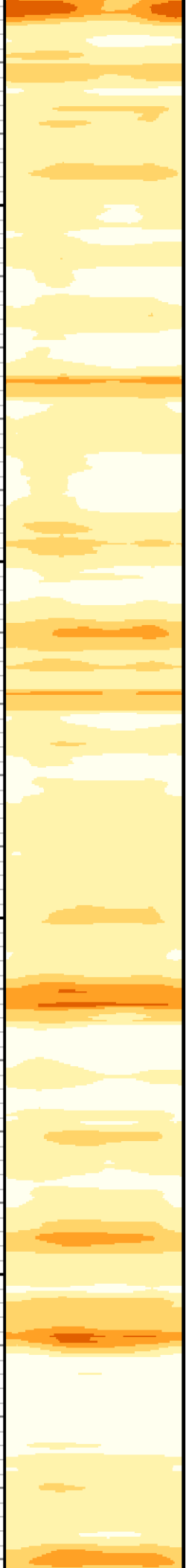
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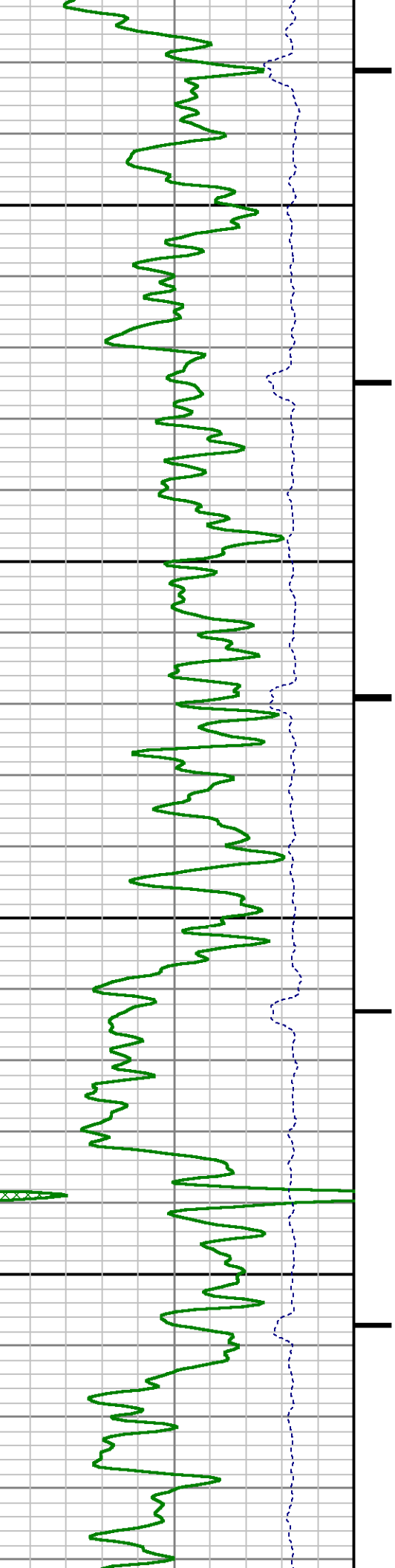




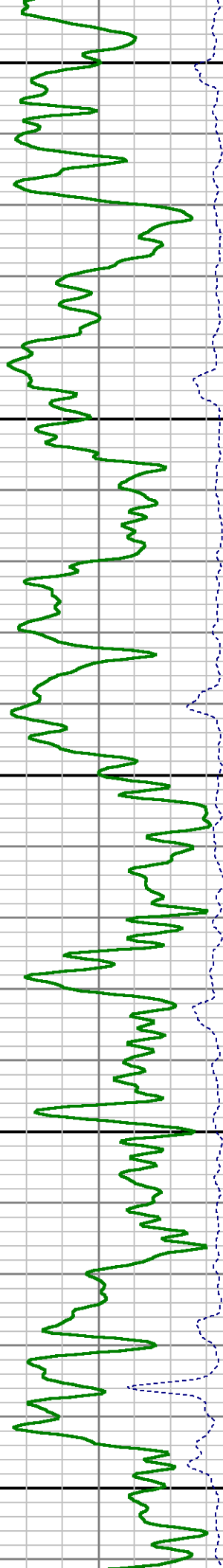
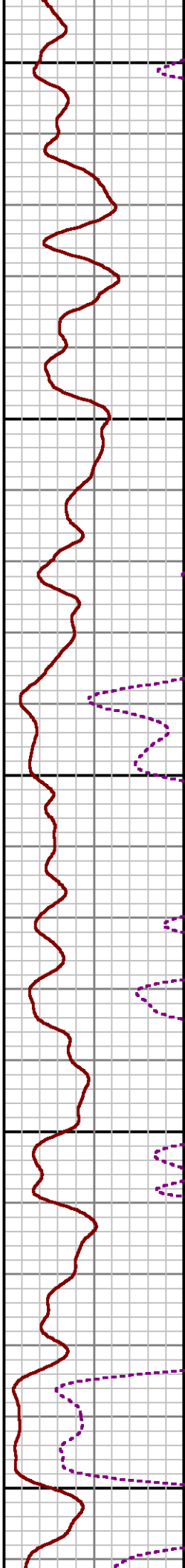
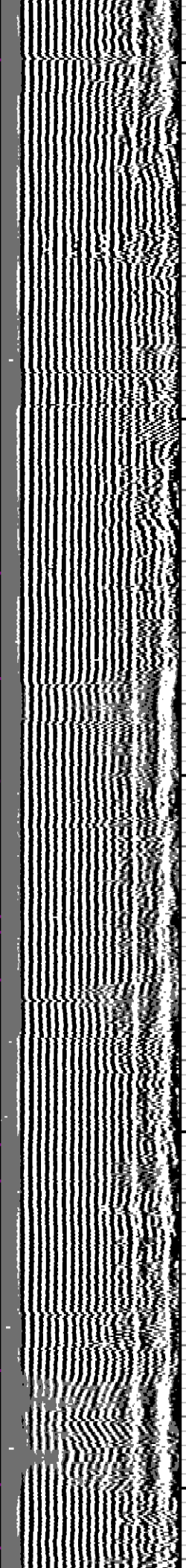
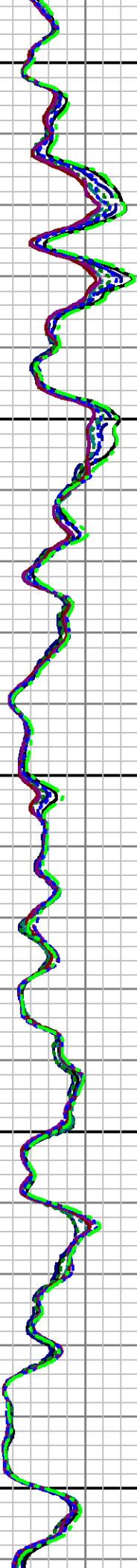


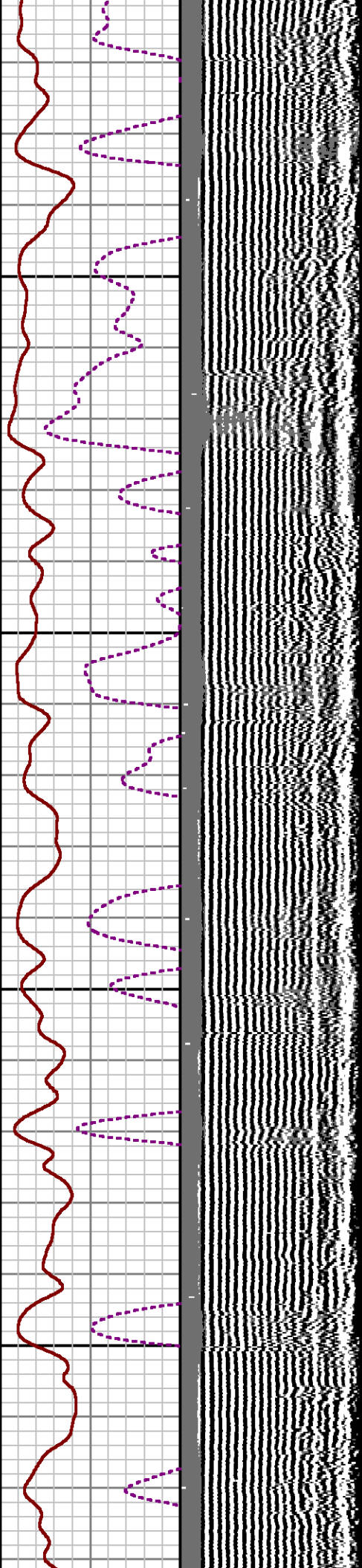
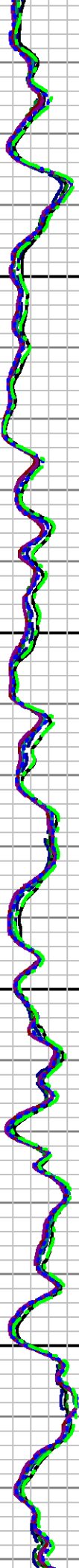
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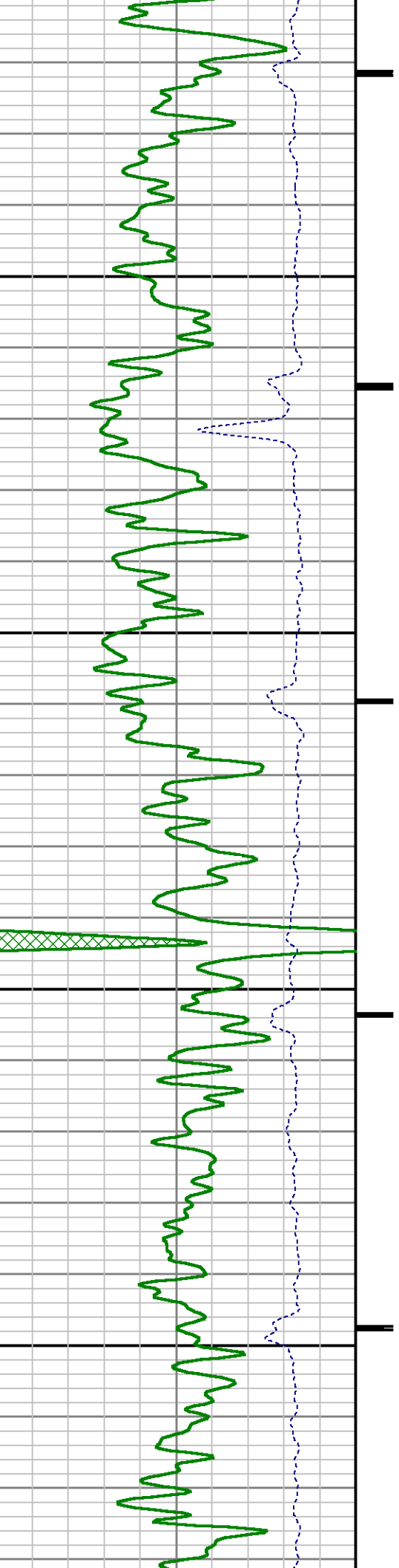


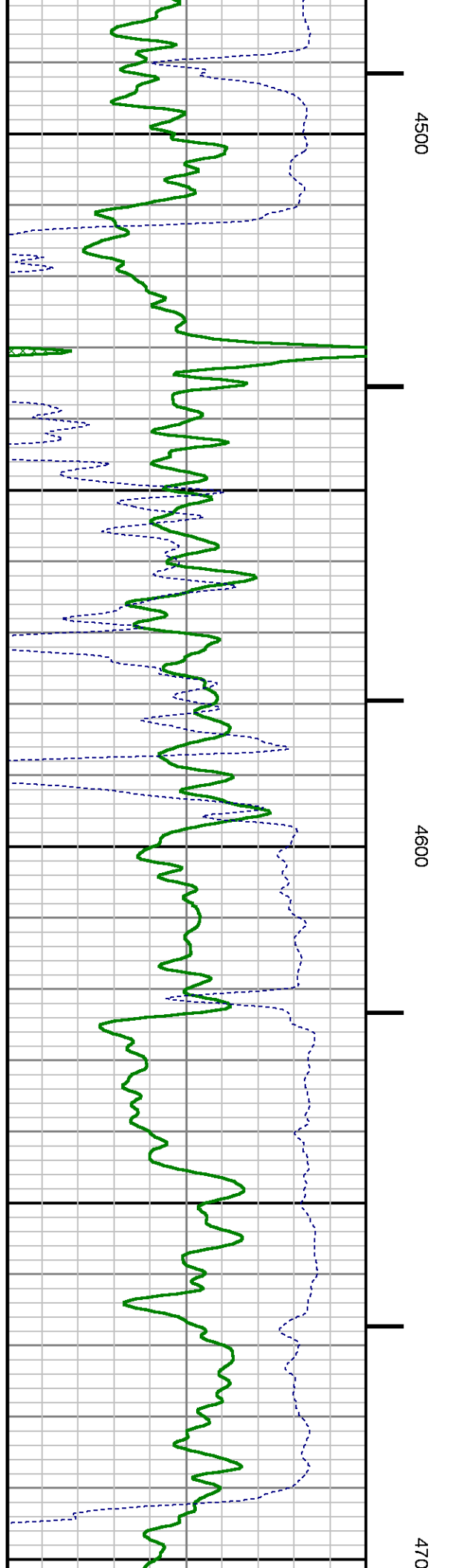
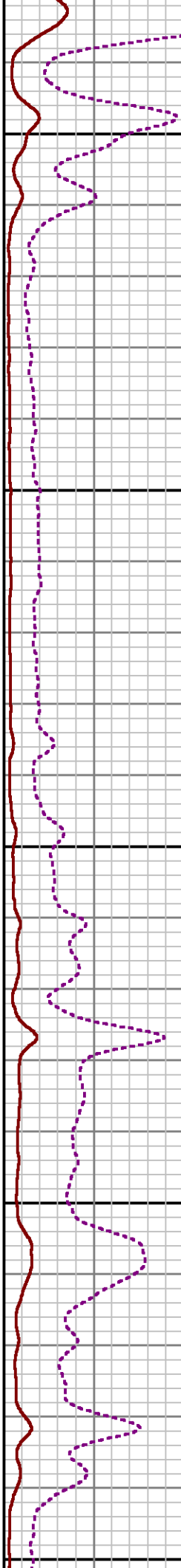
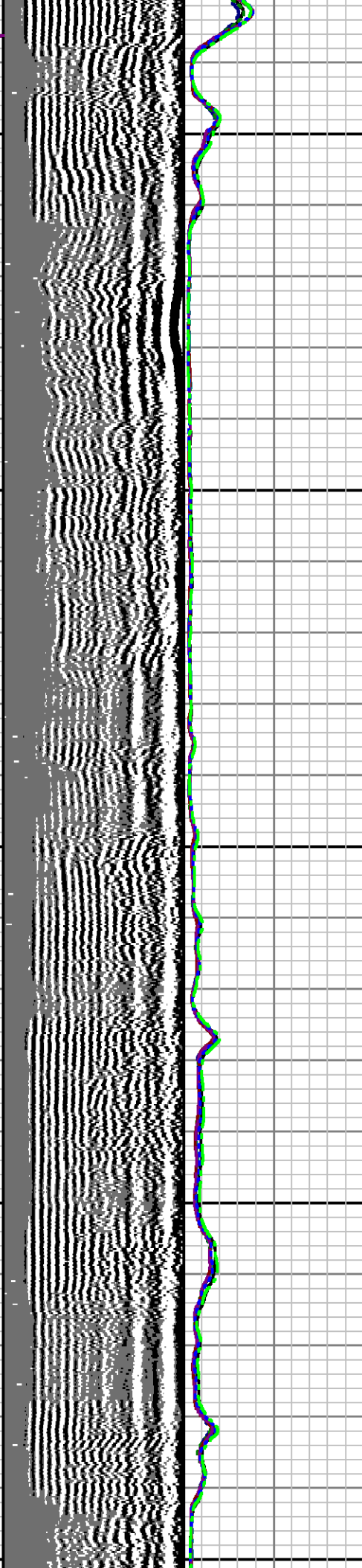
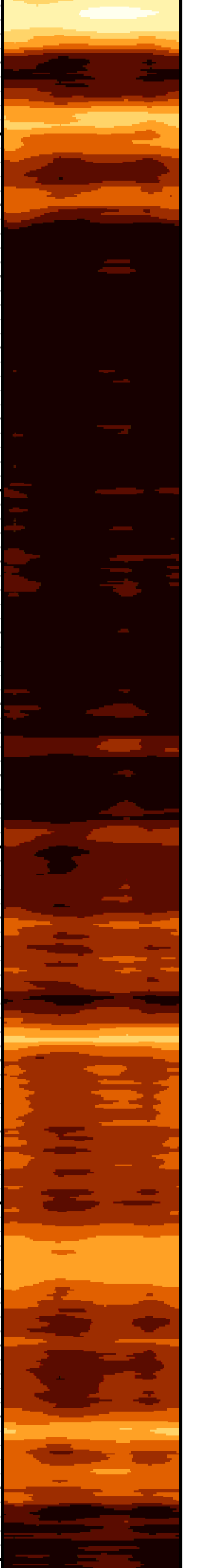


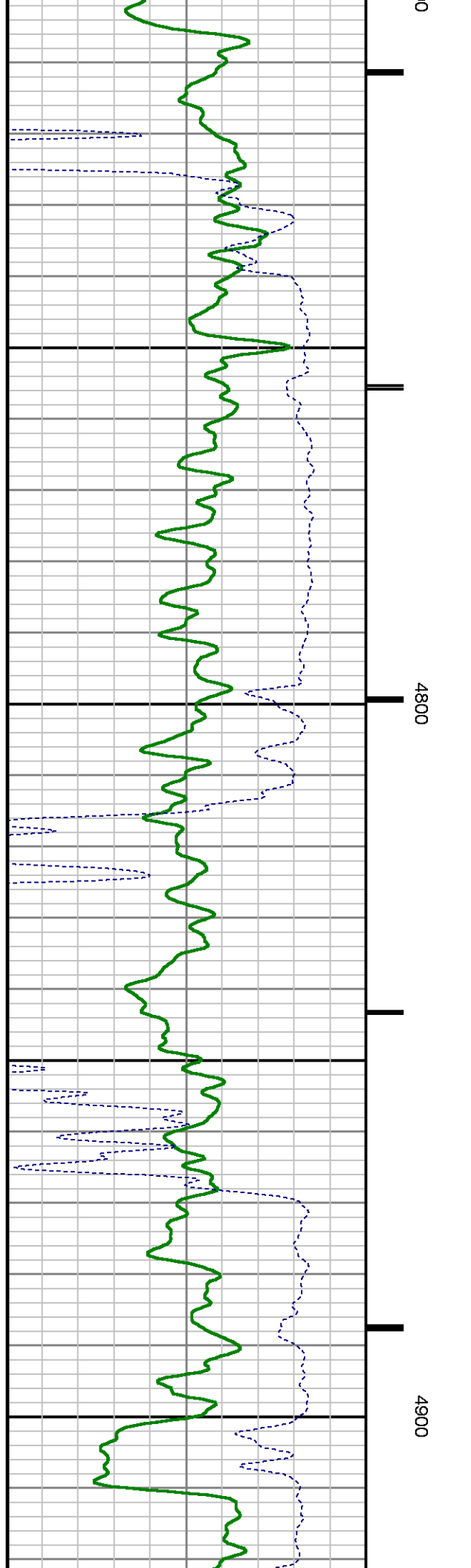
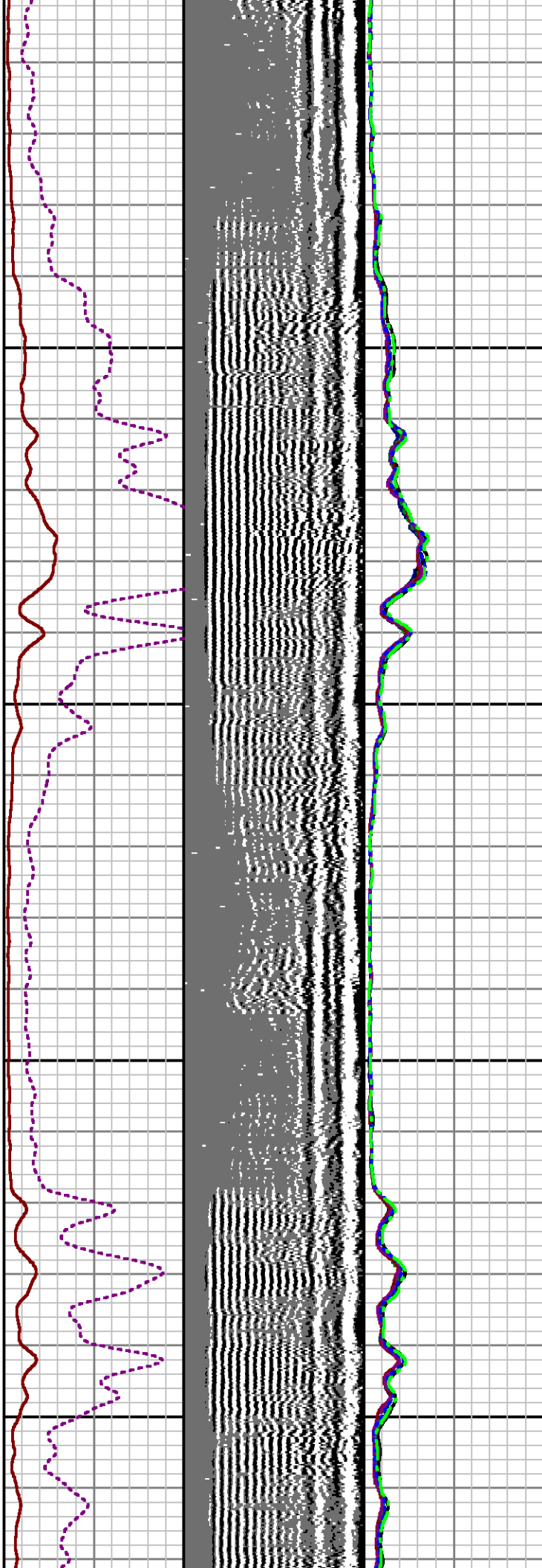


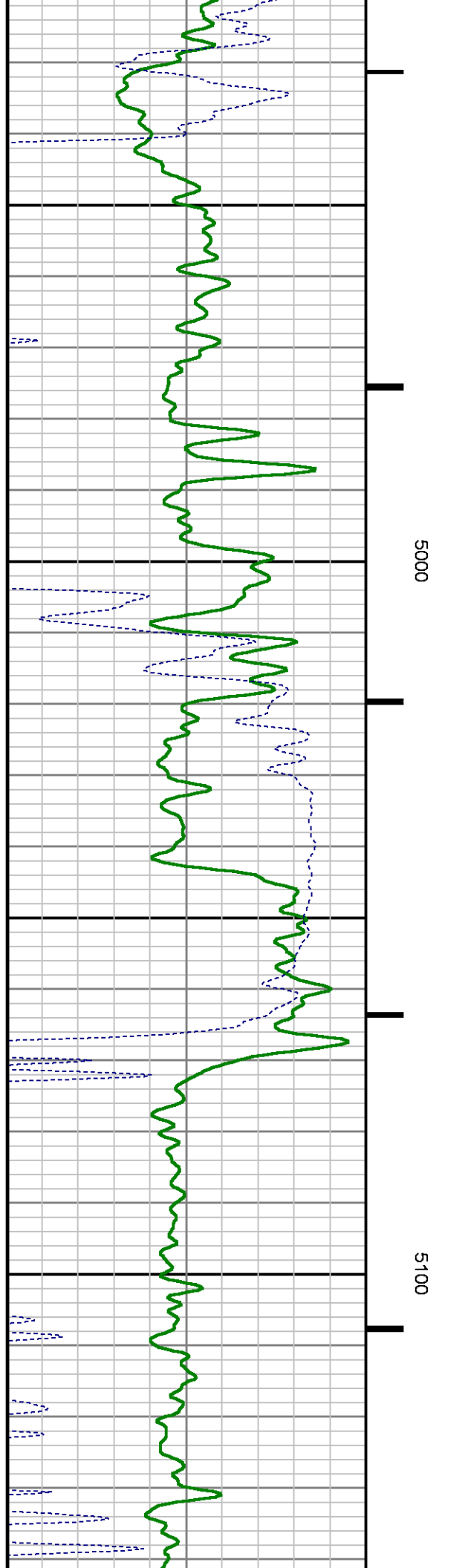
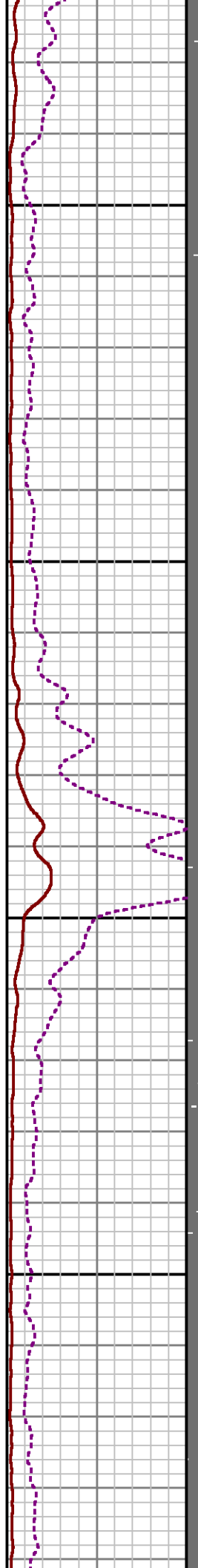
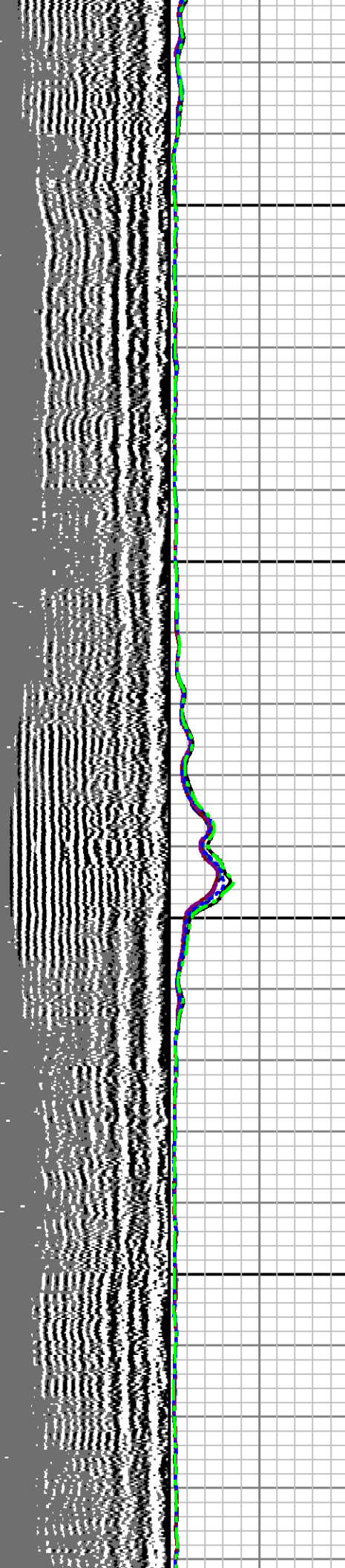
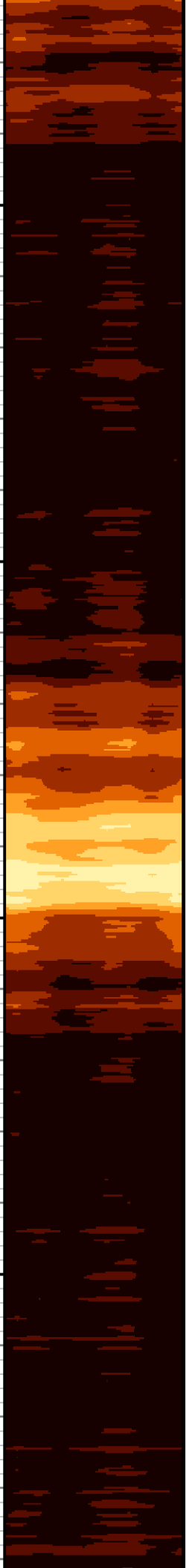
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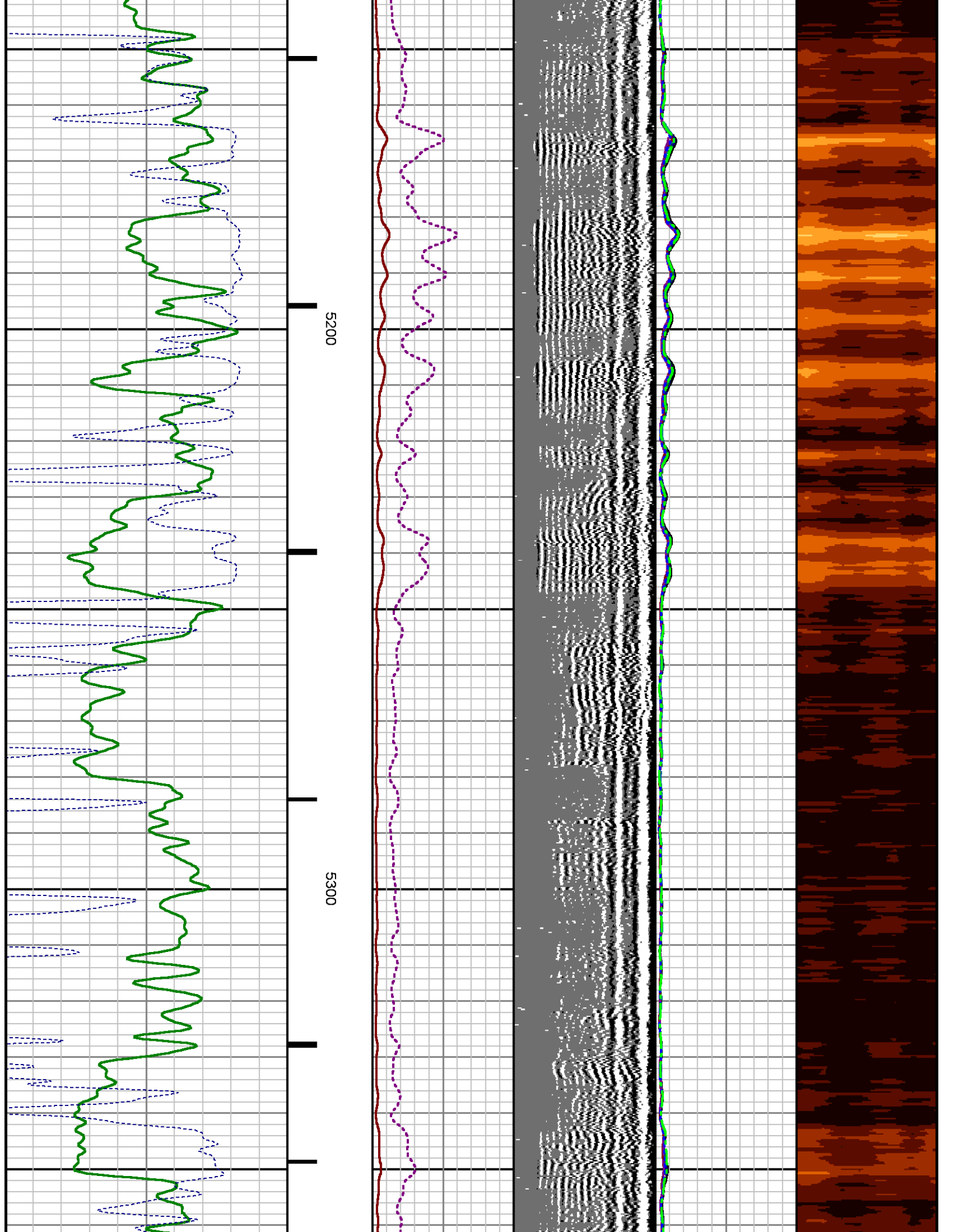


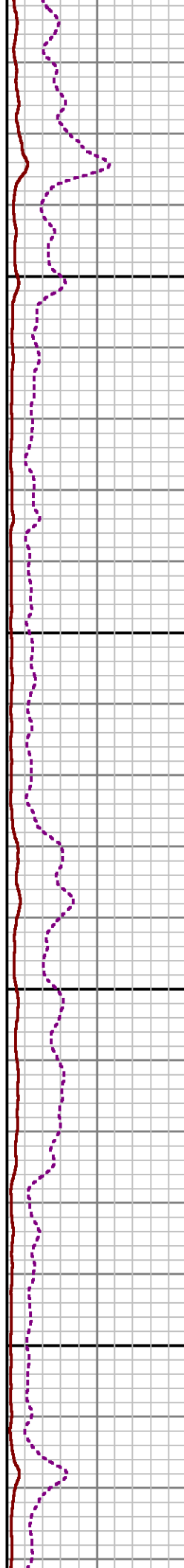
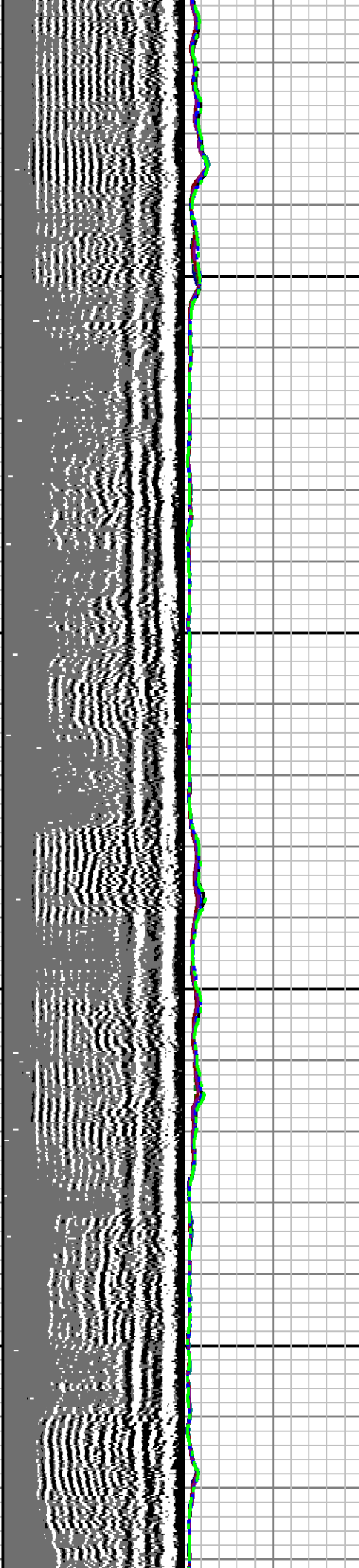
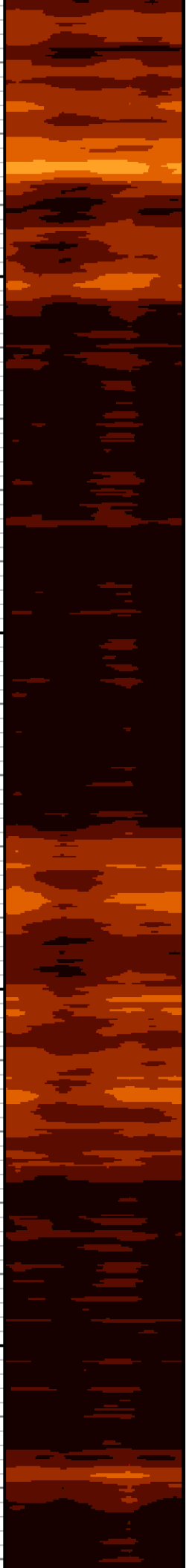






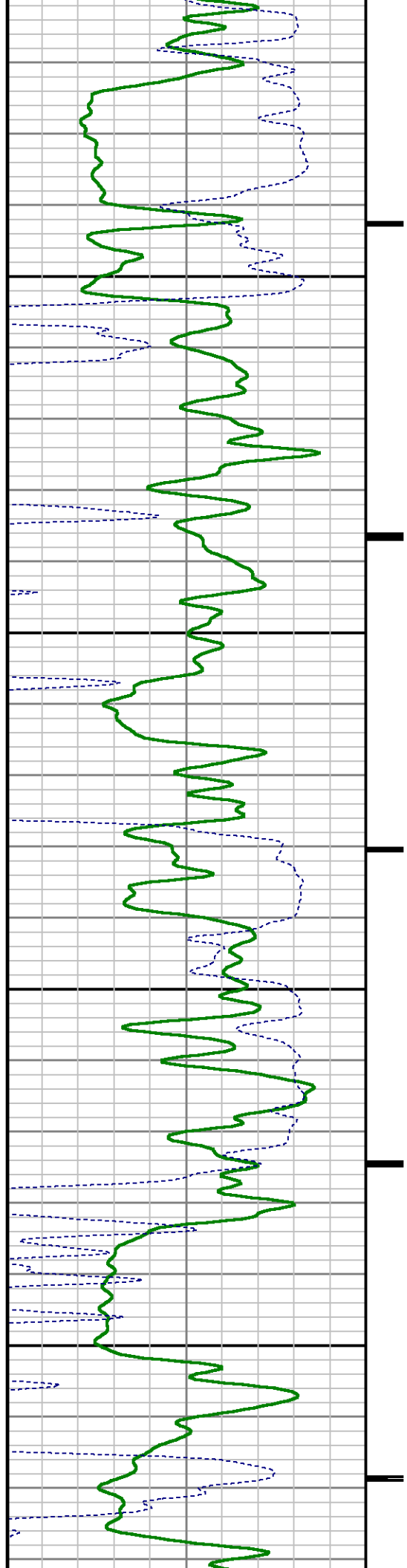


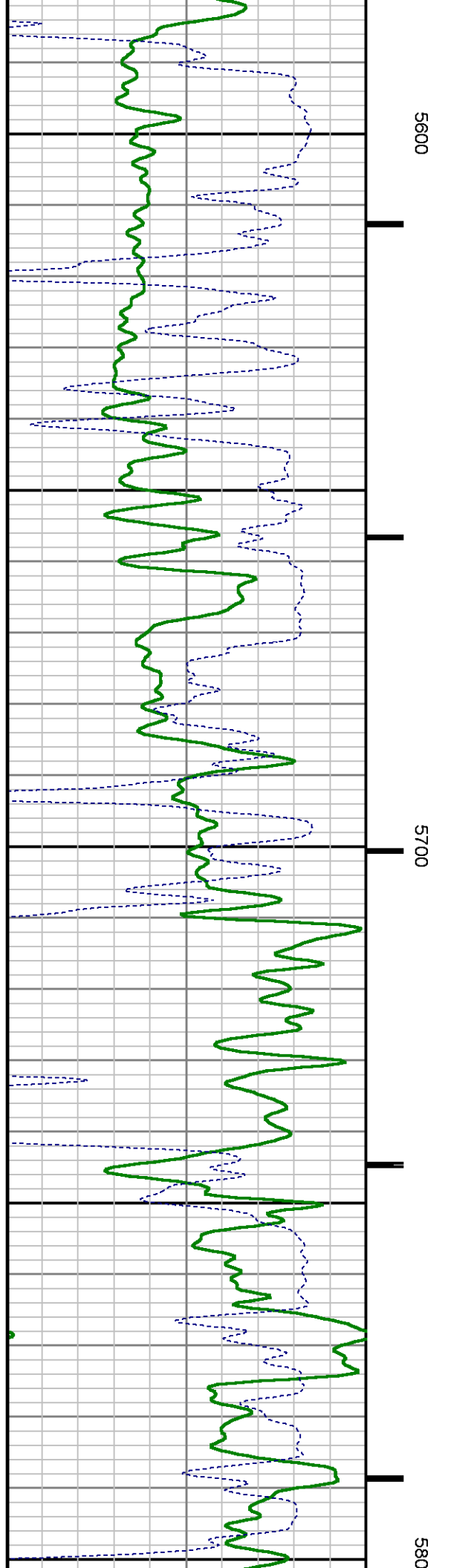
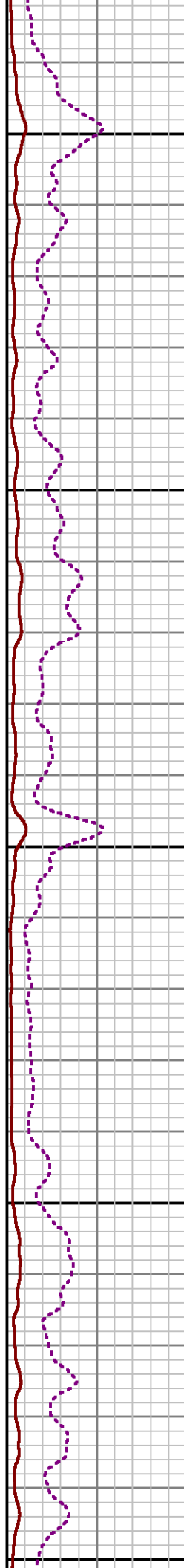
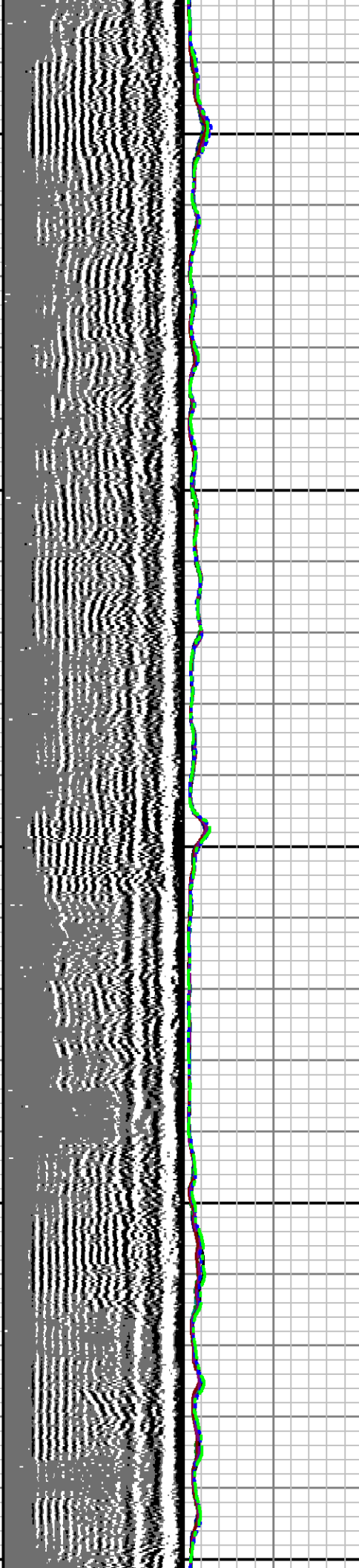
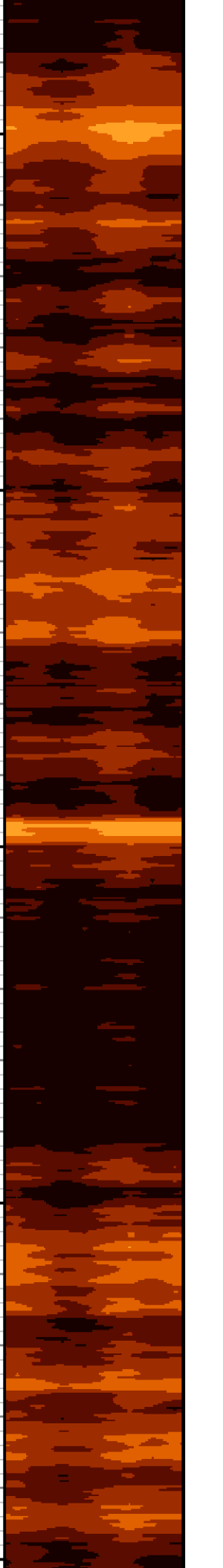


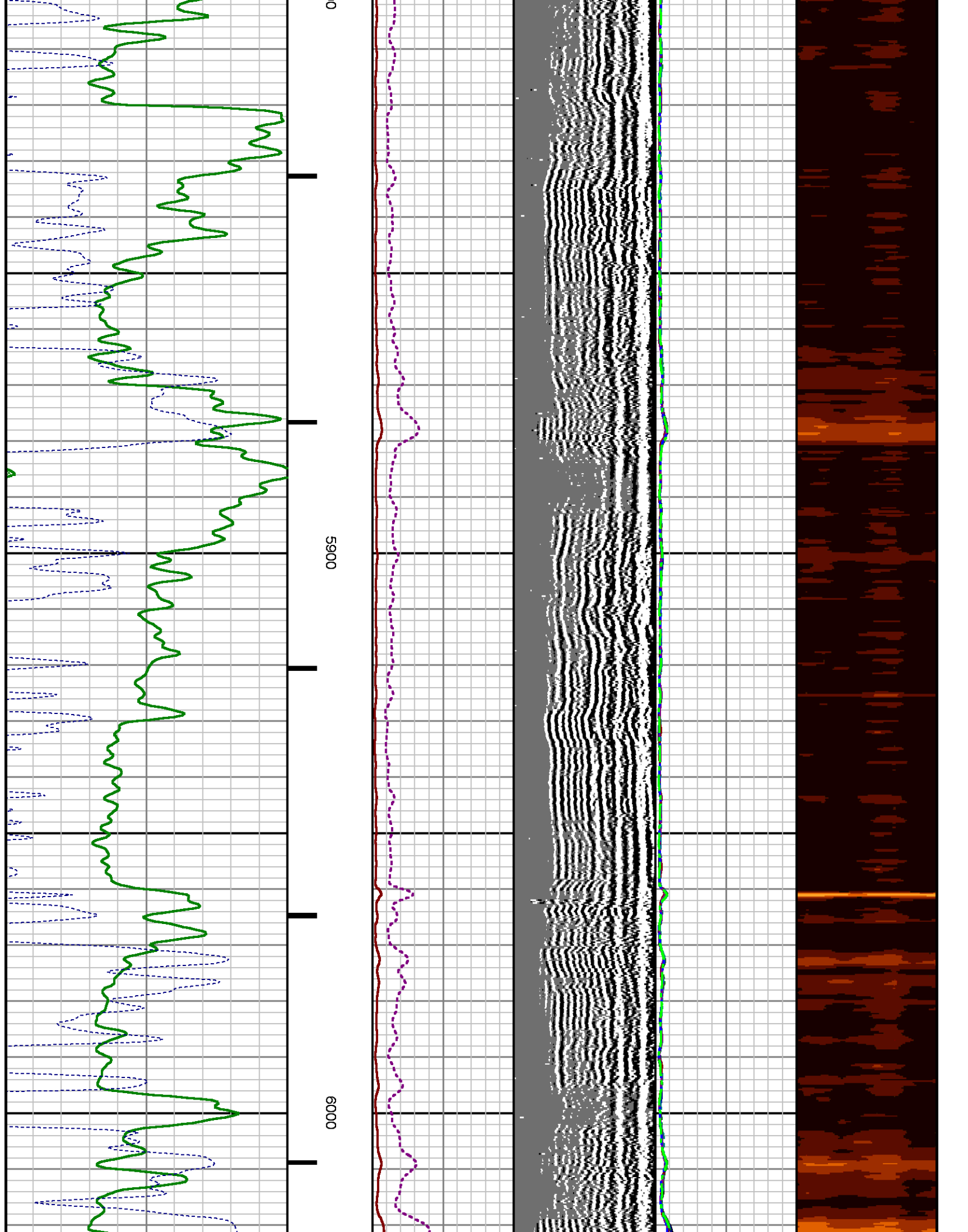


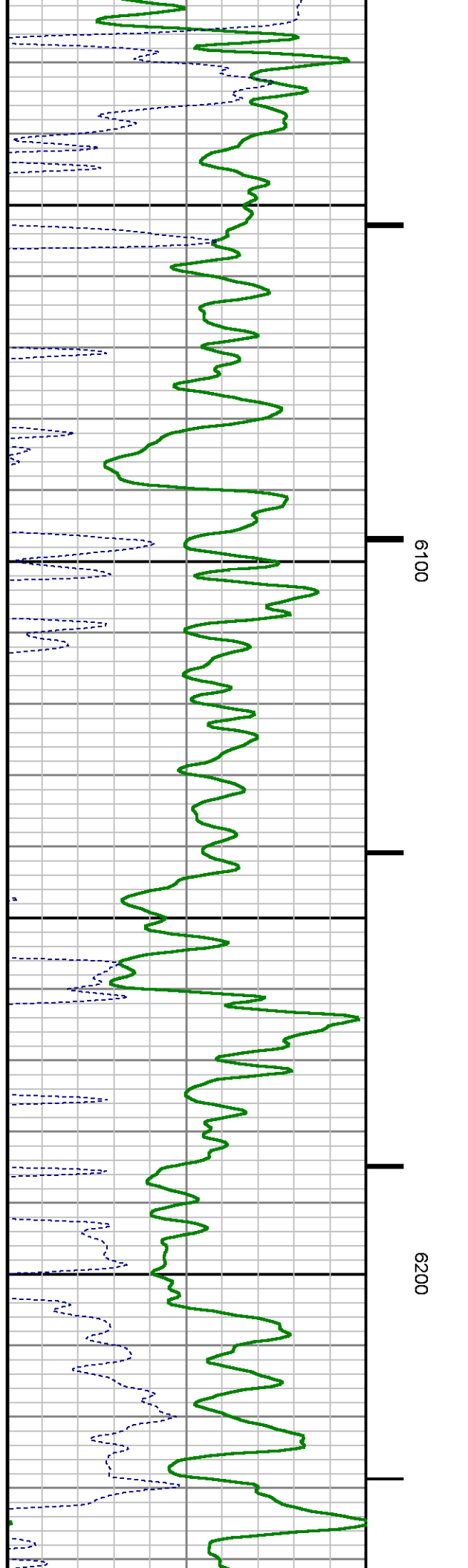
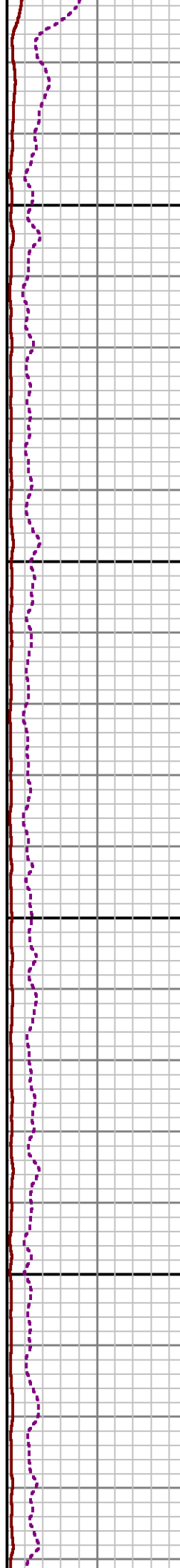
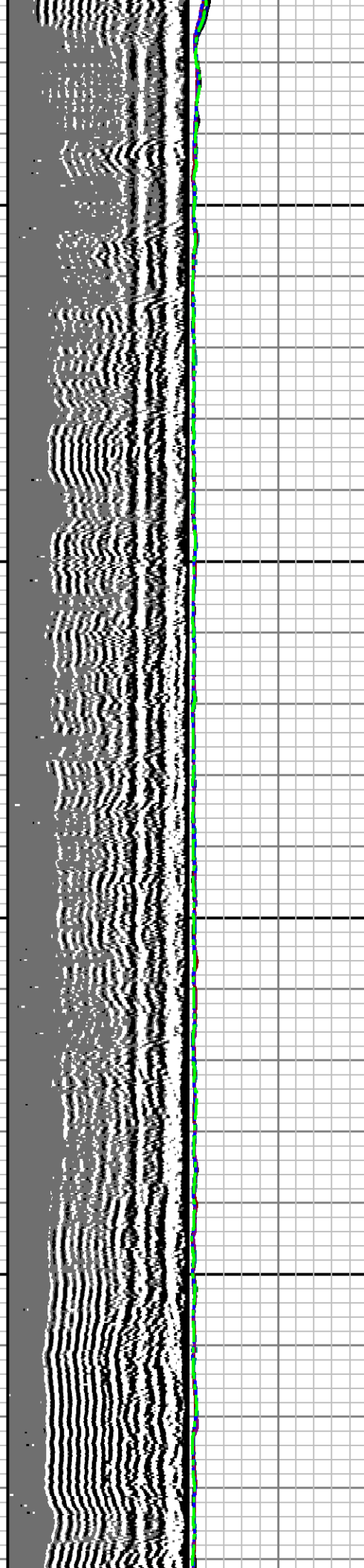
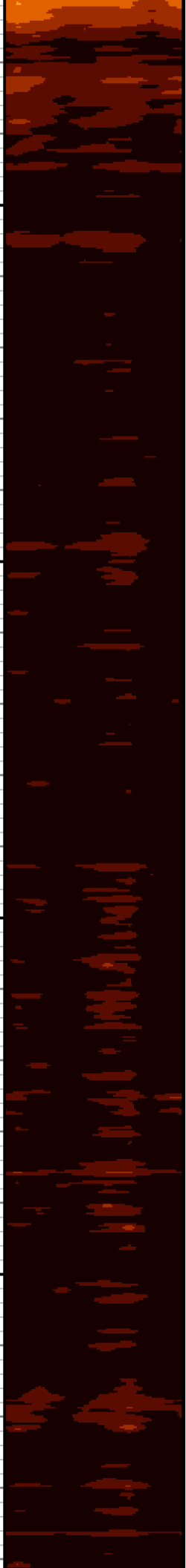
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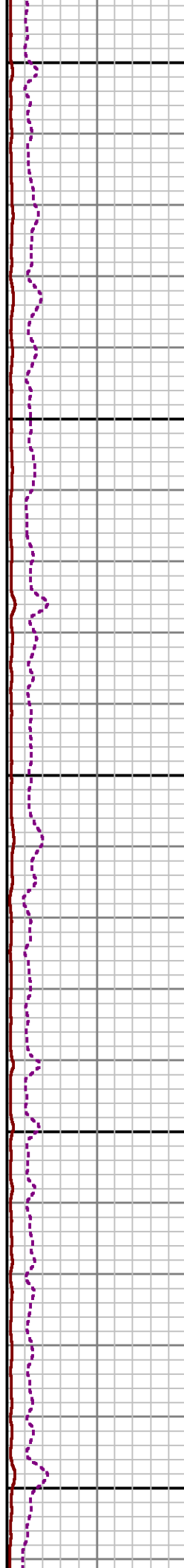
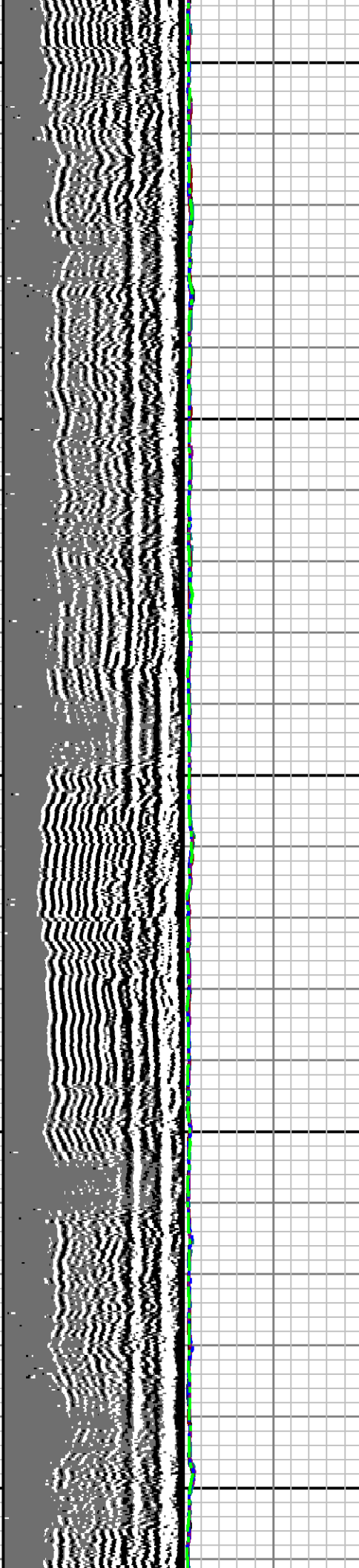
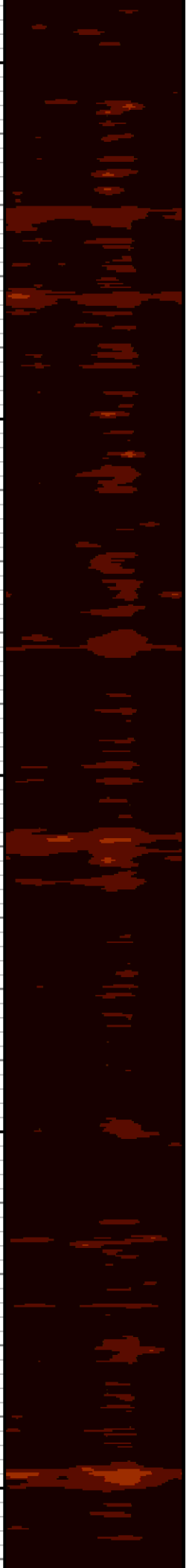






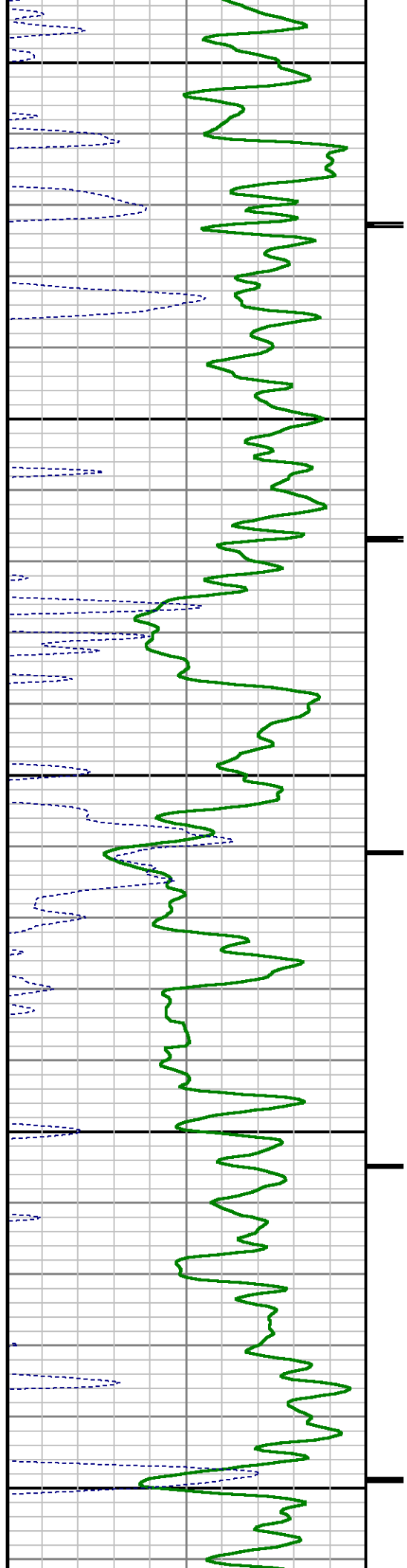


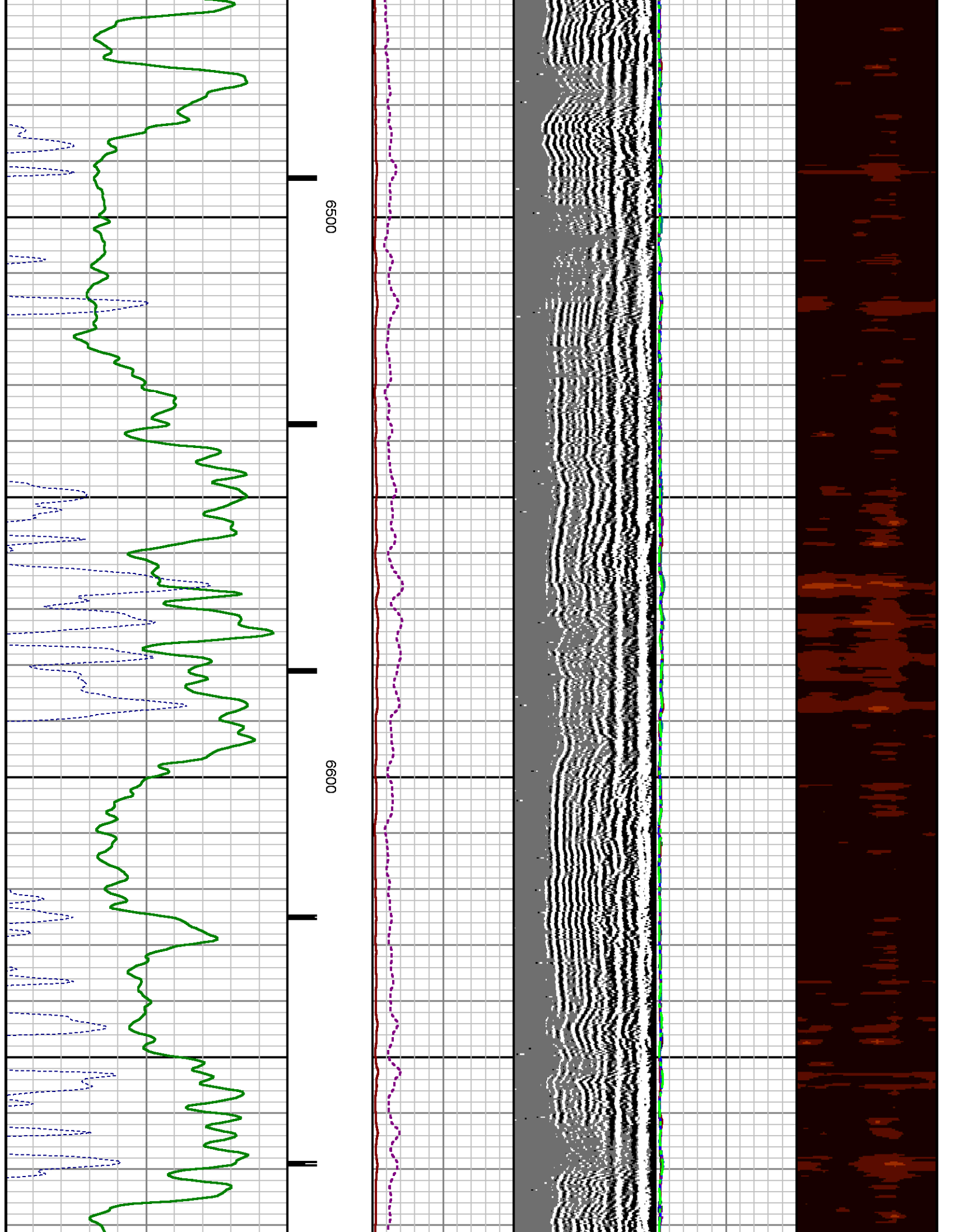


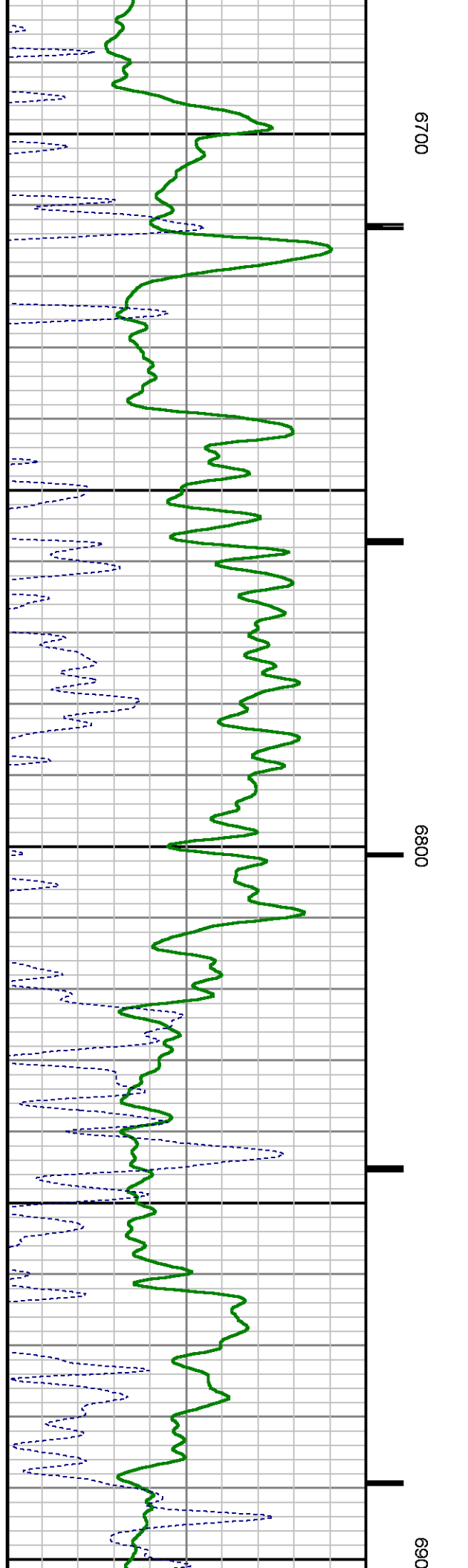
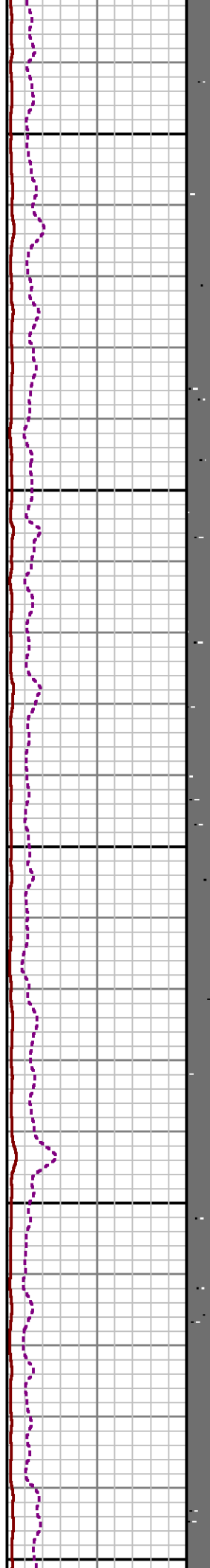
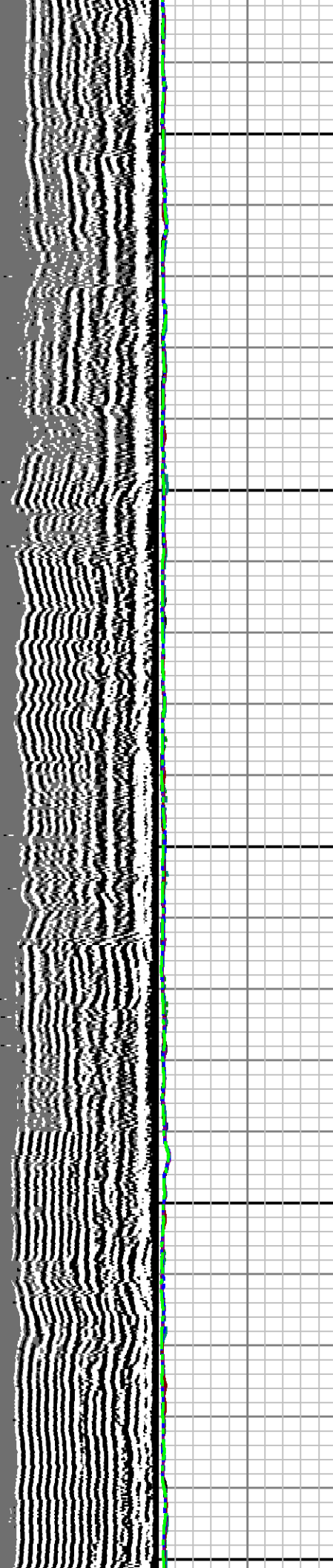
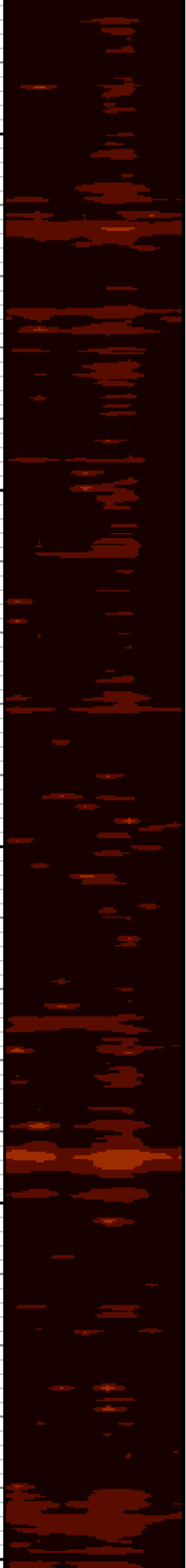


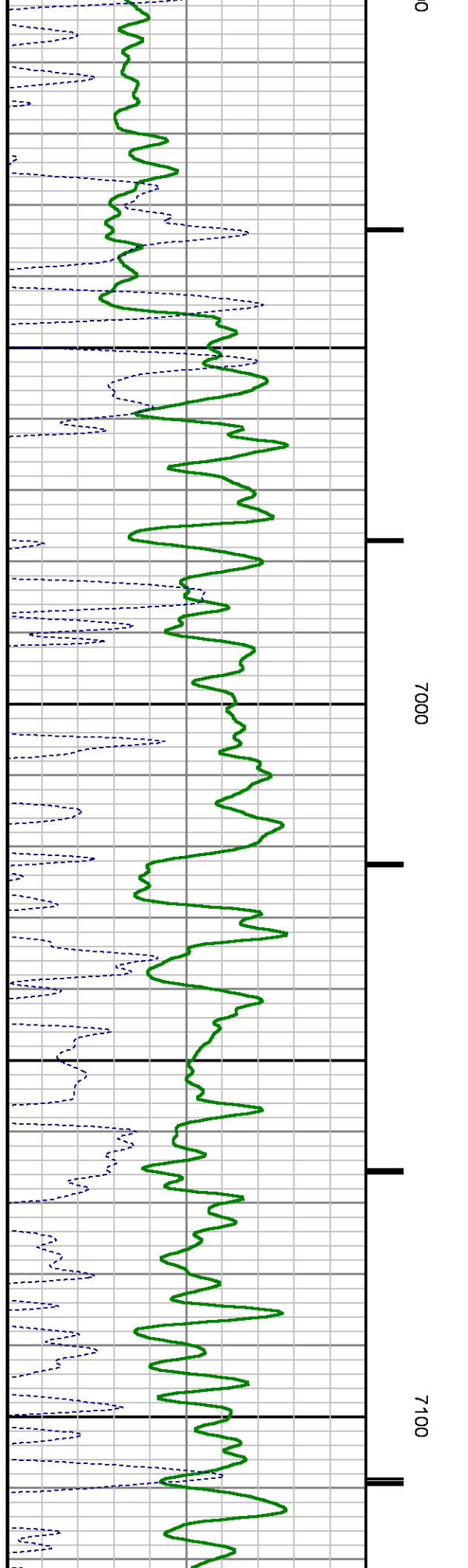
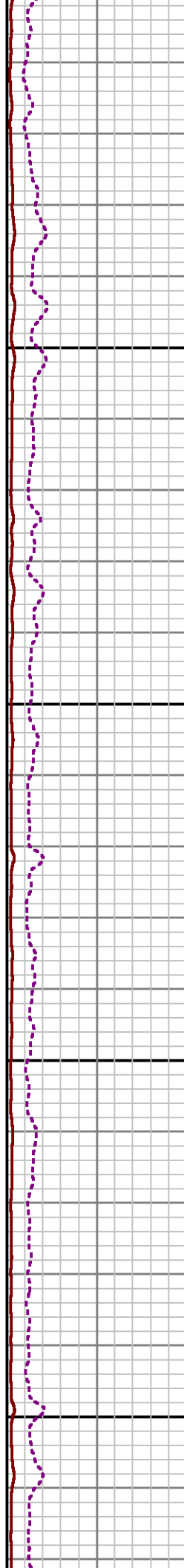
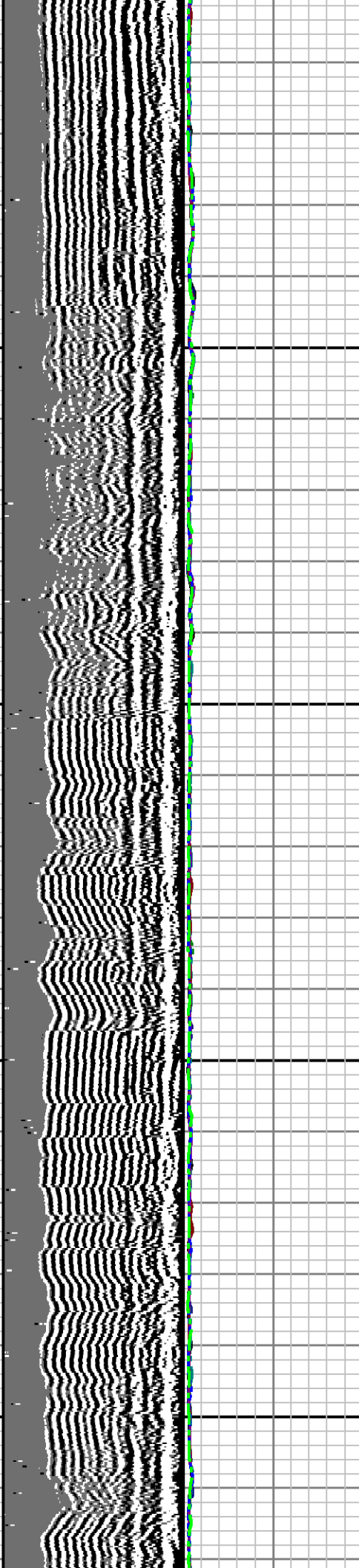
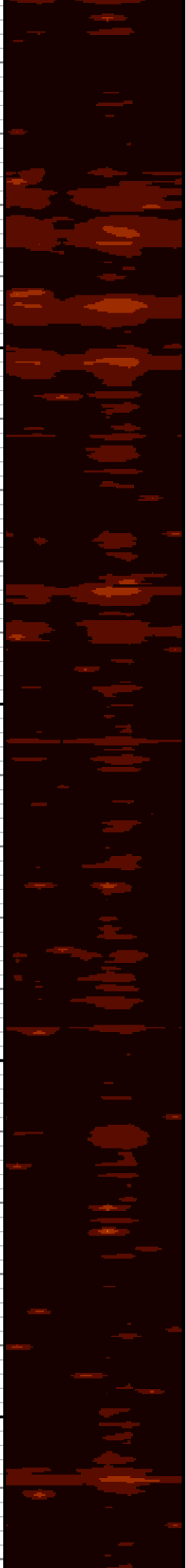
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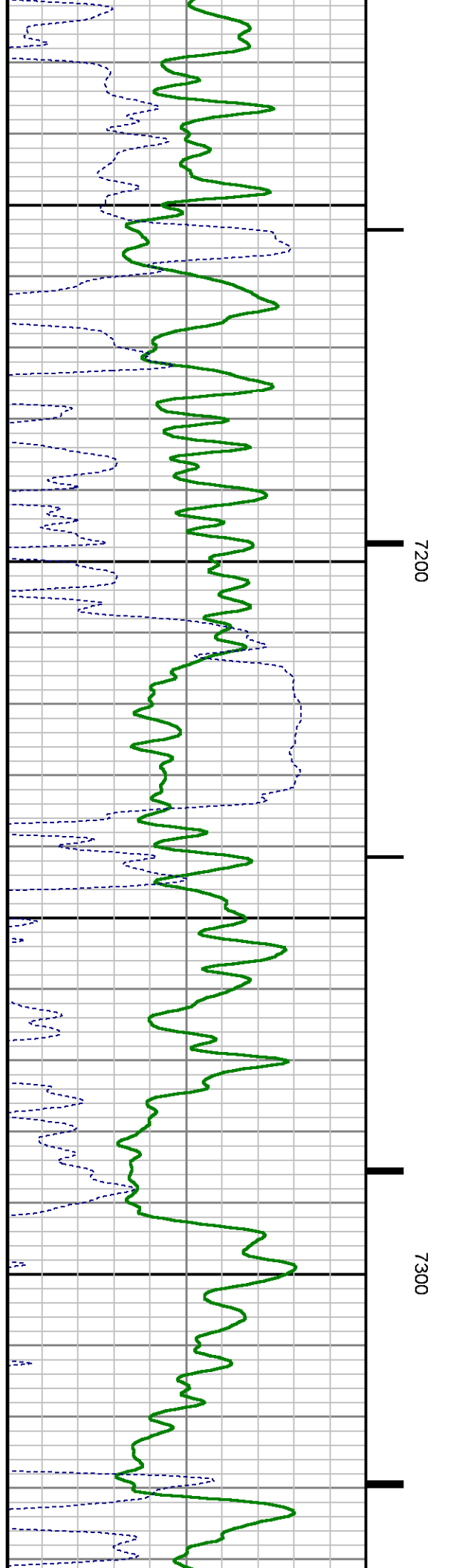
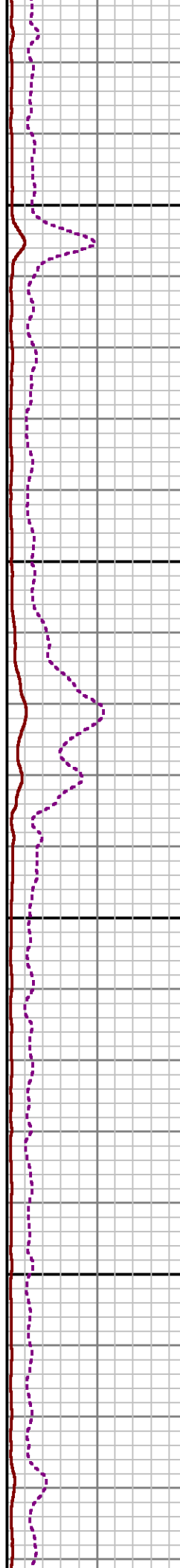
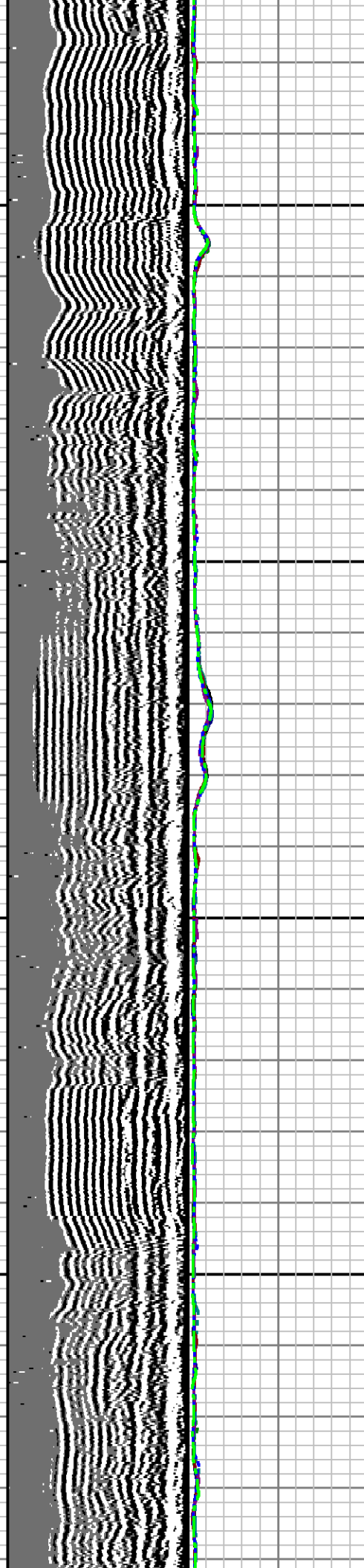
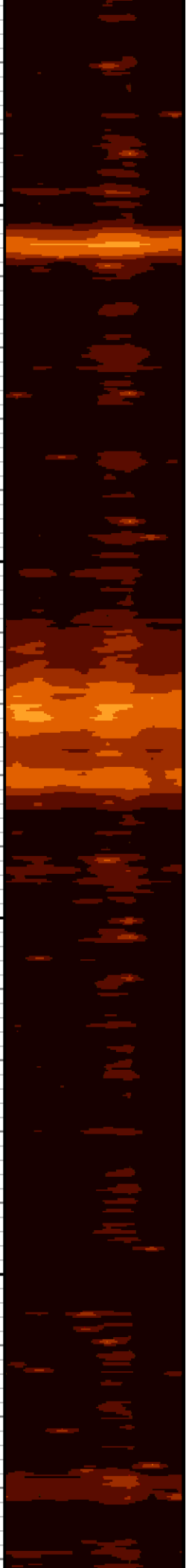
6400



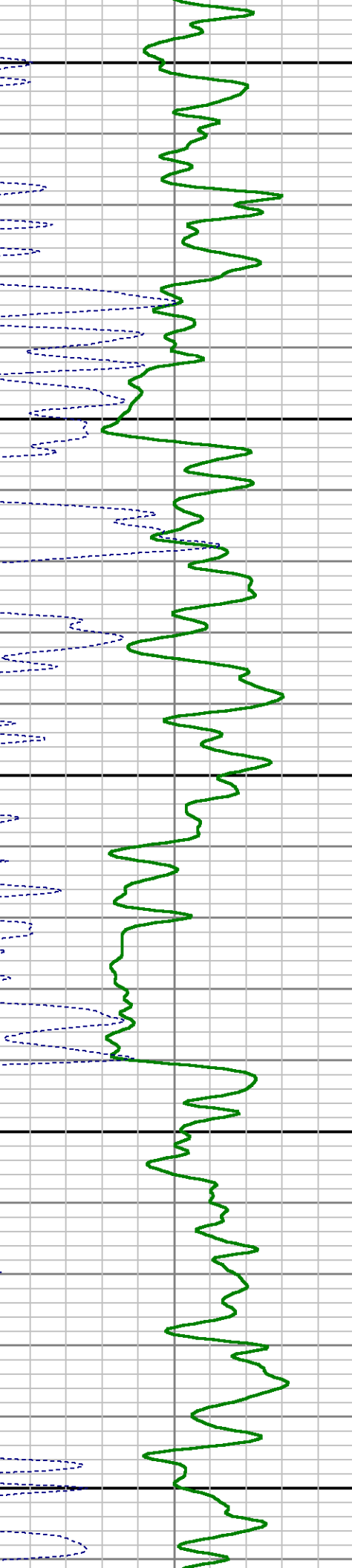
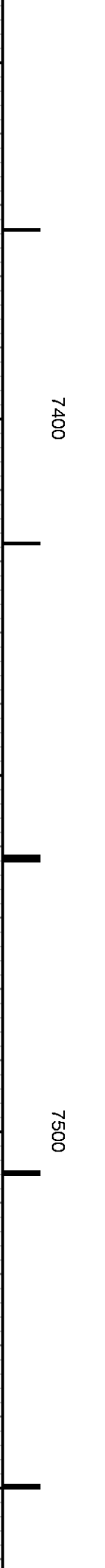
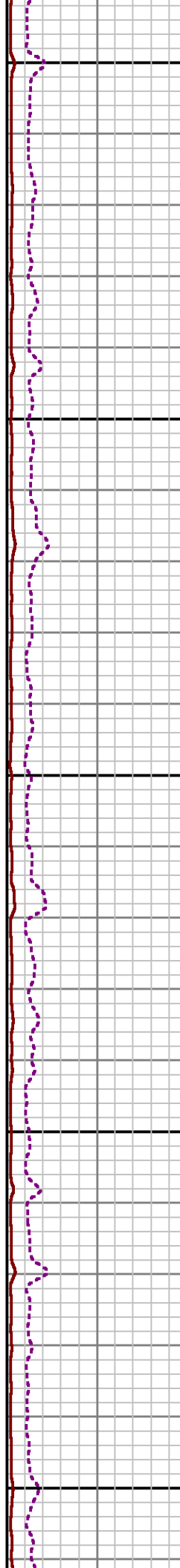
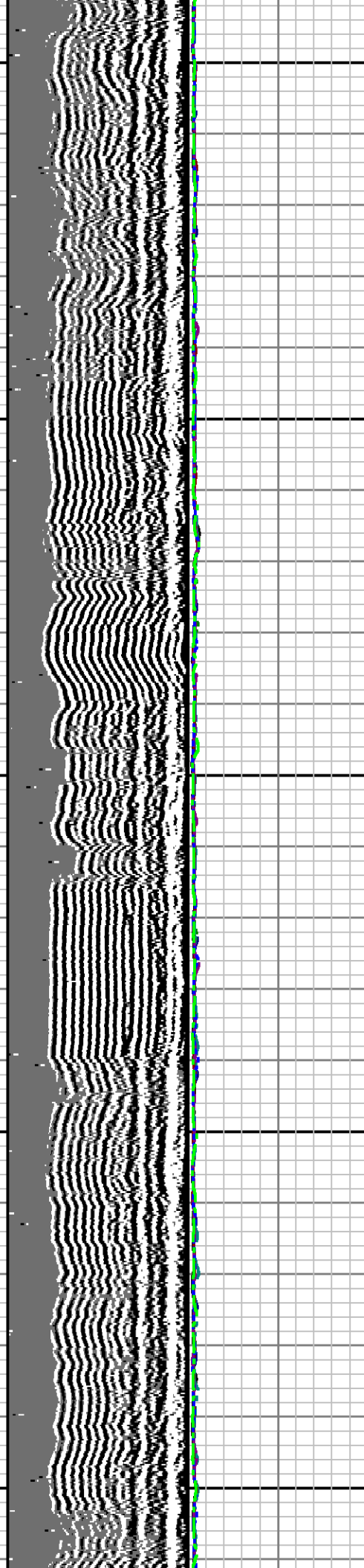
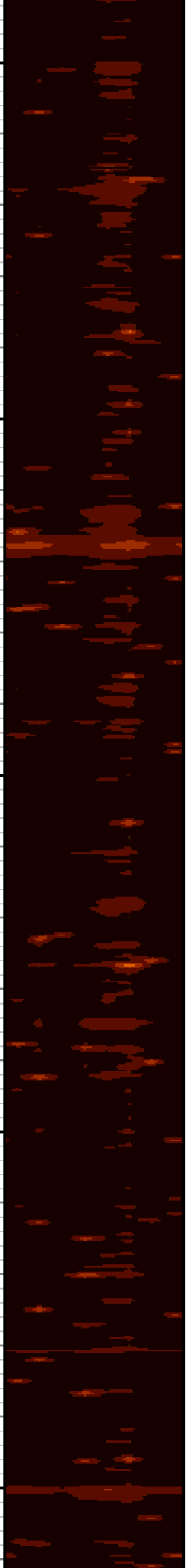


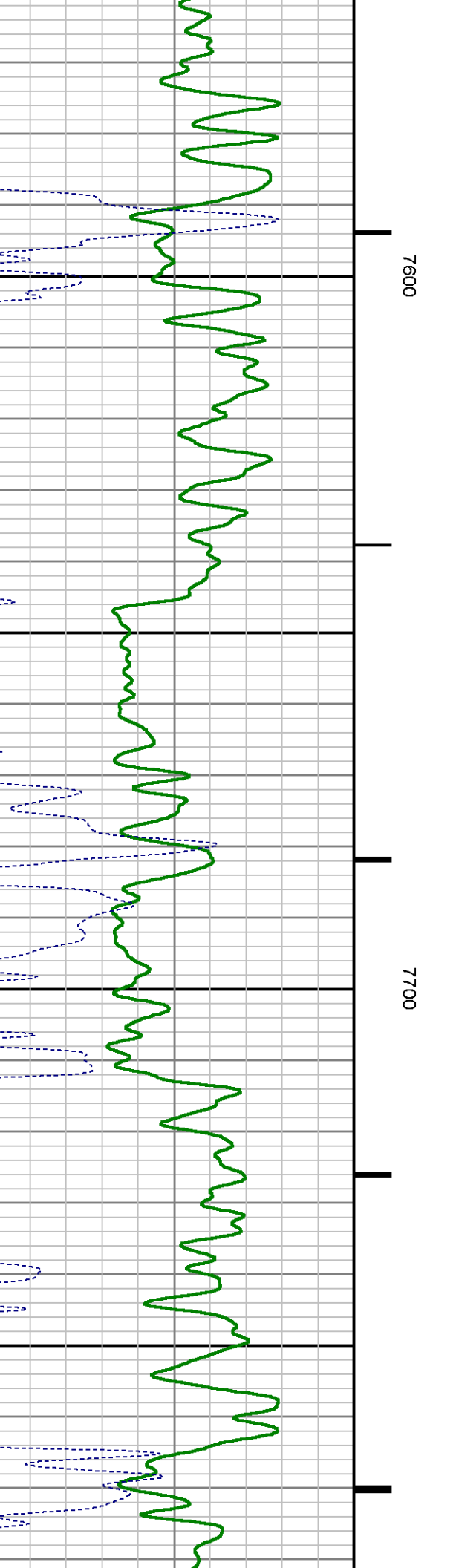
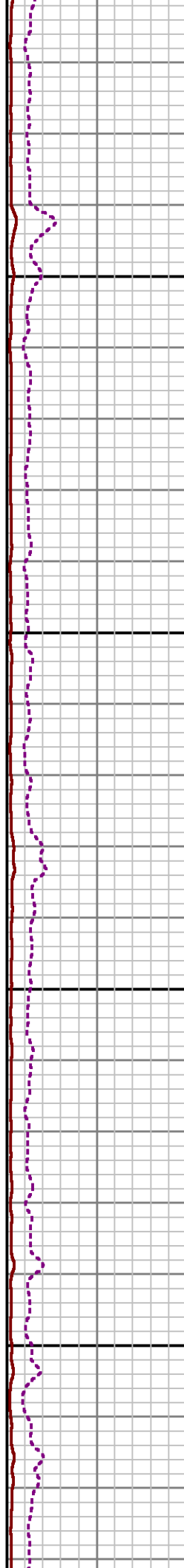
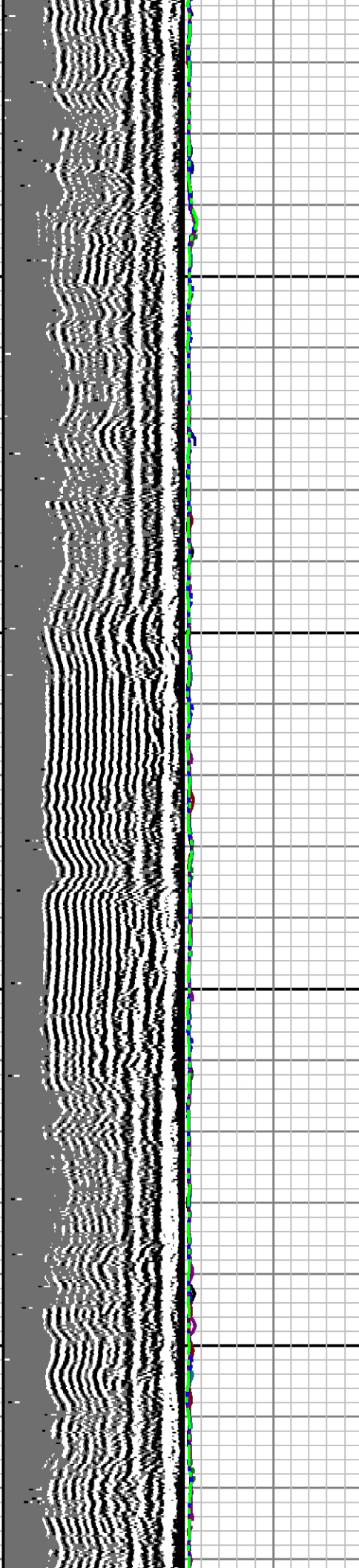
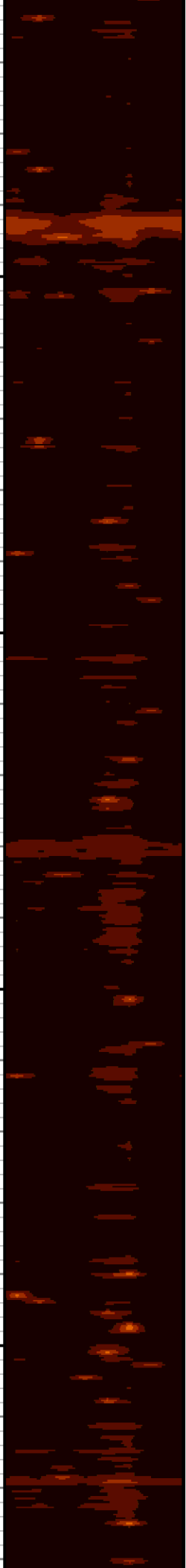


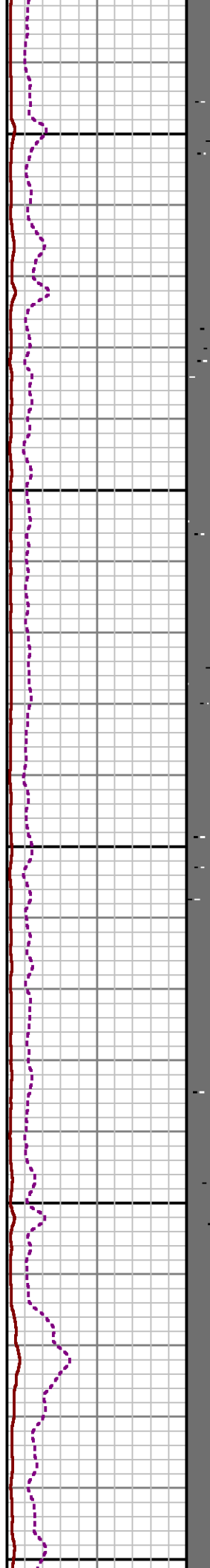
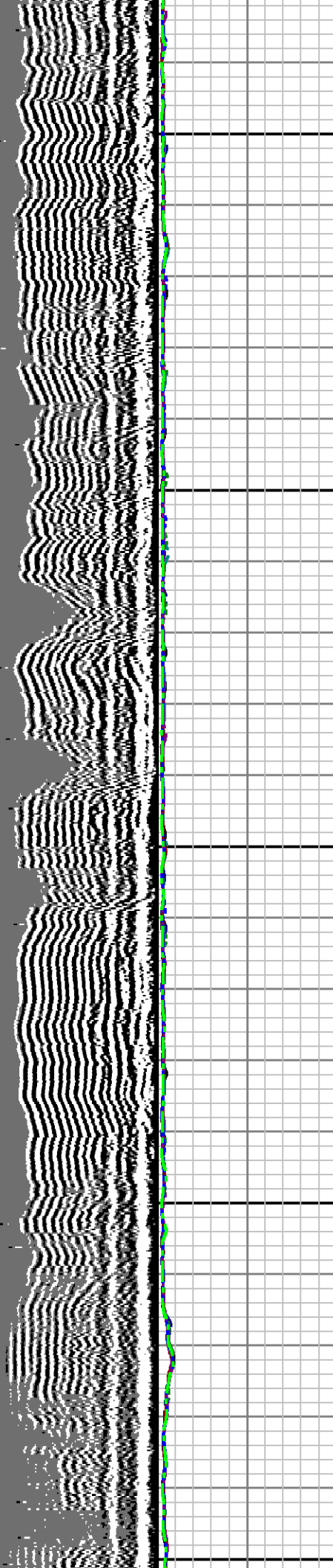
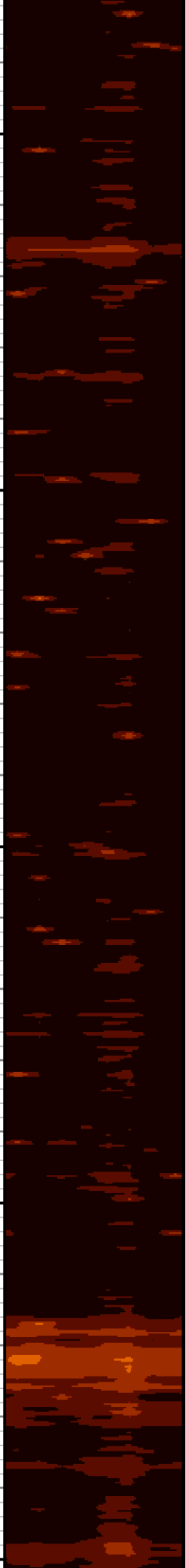








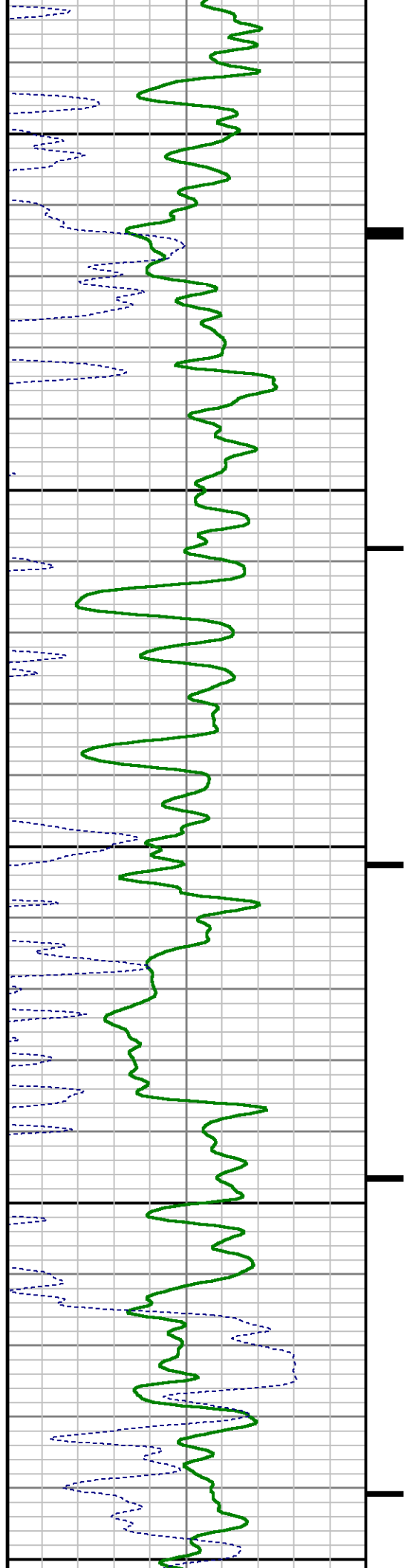


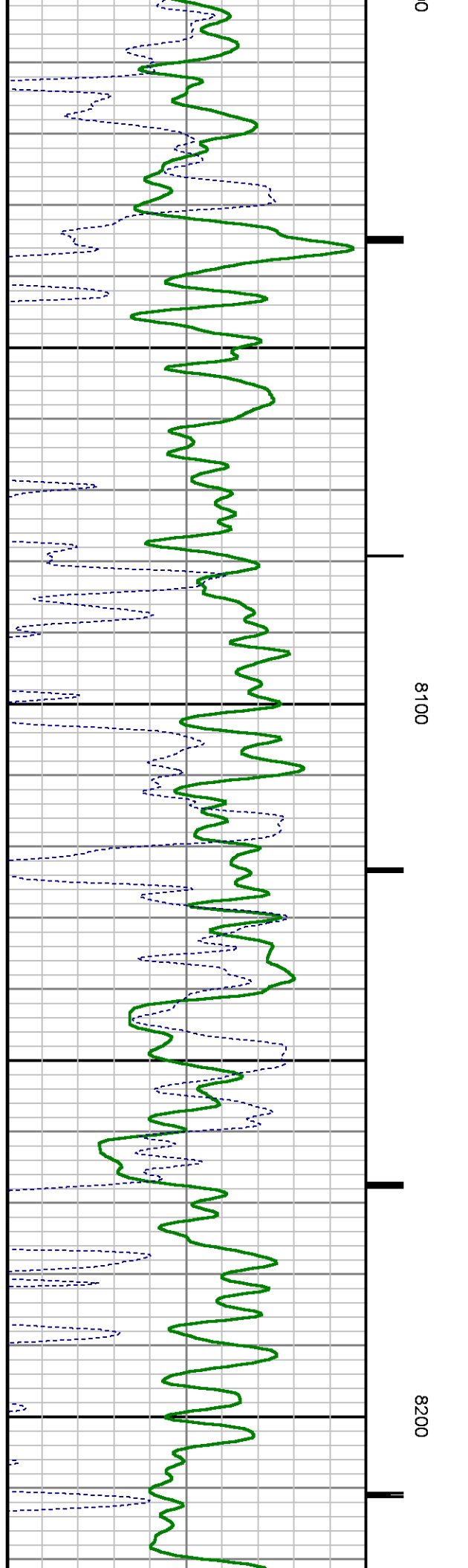
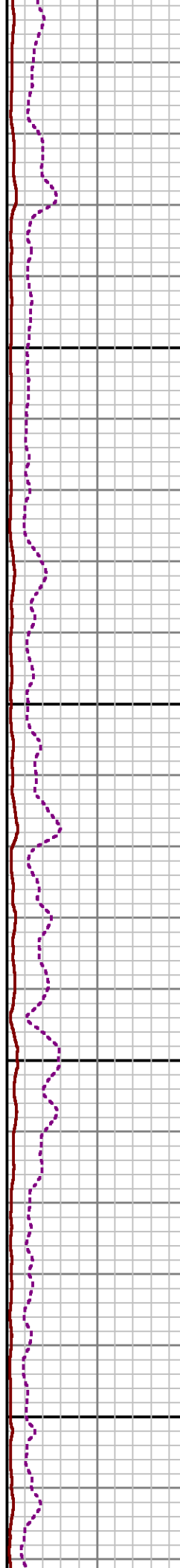
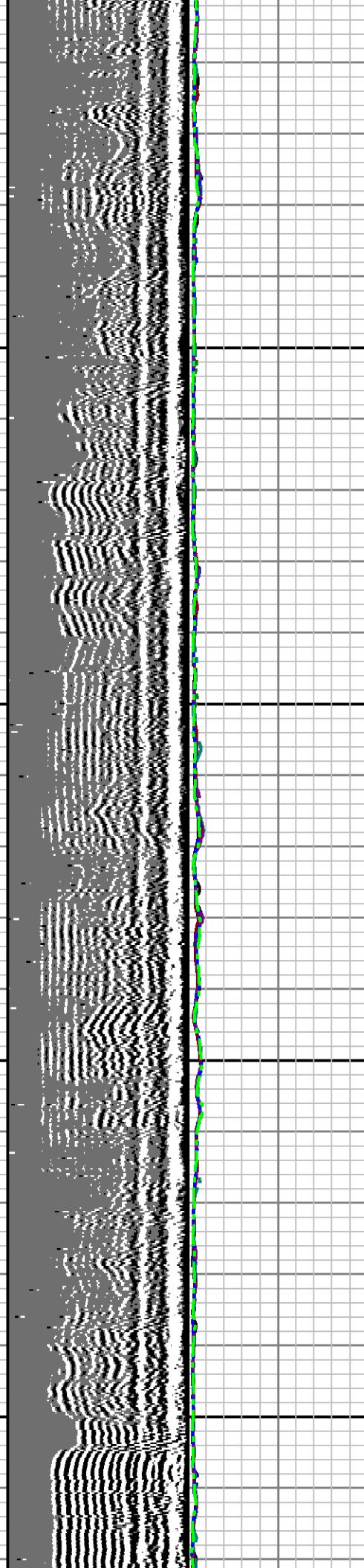
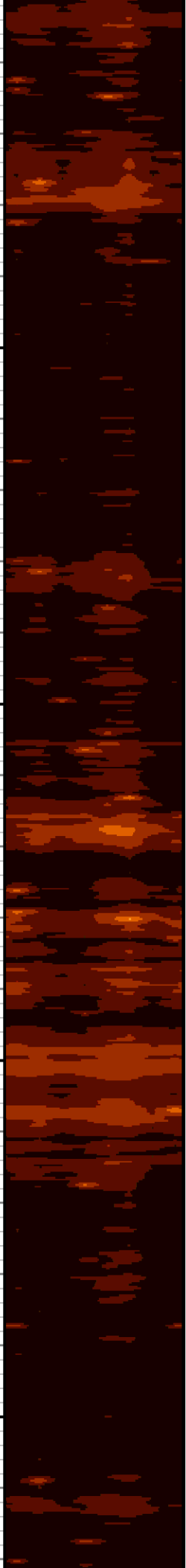


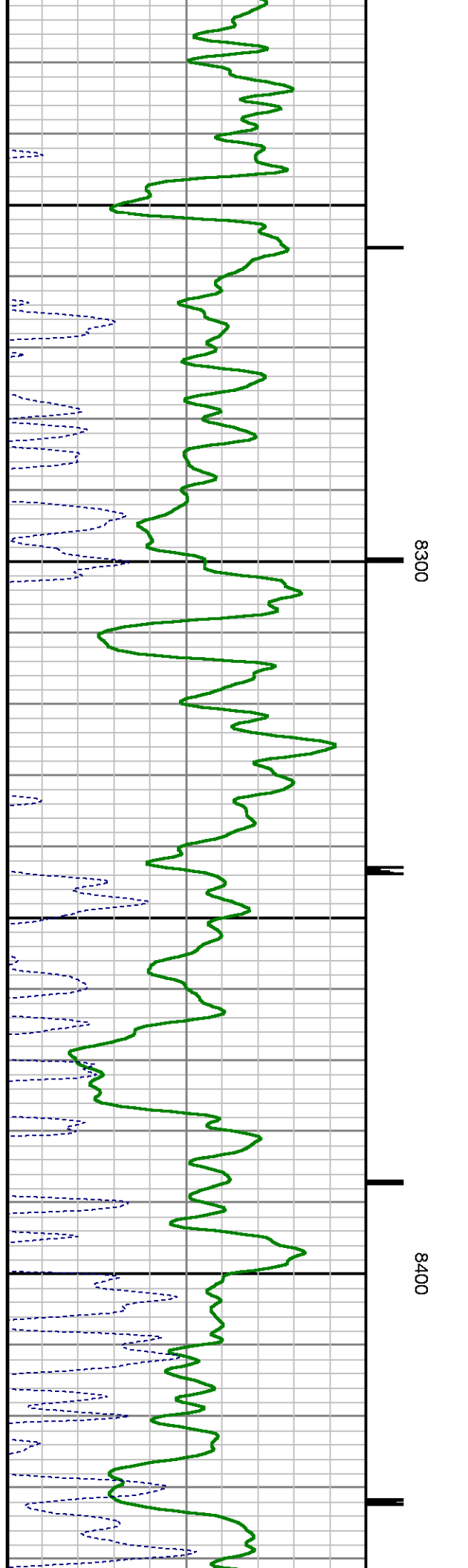
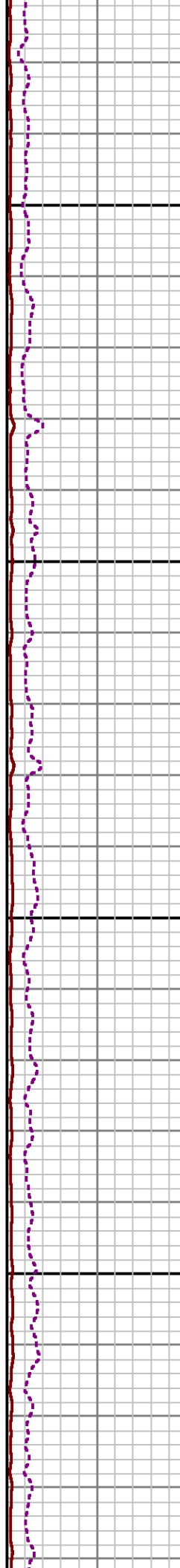
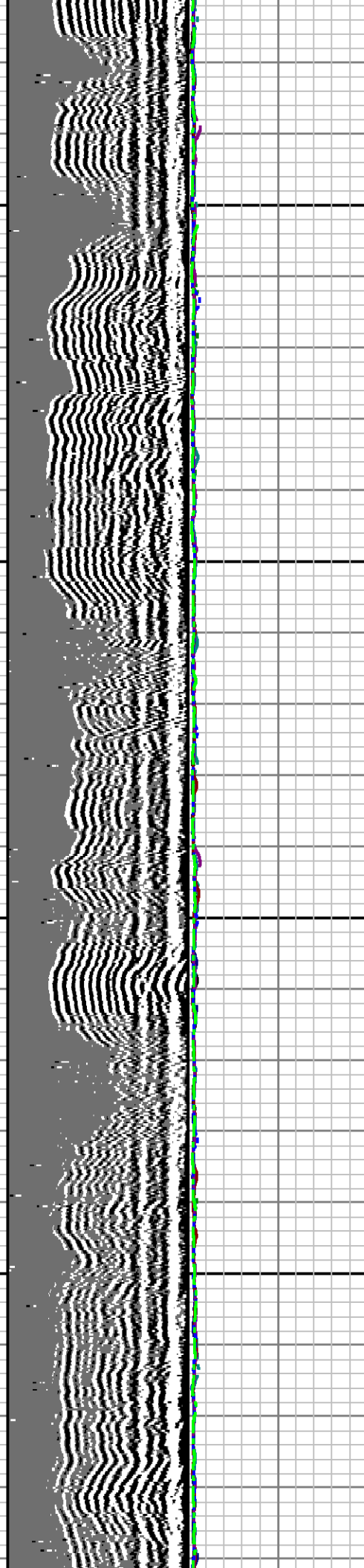
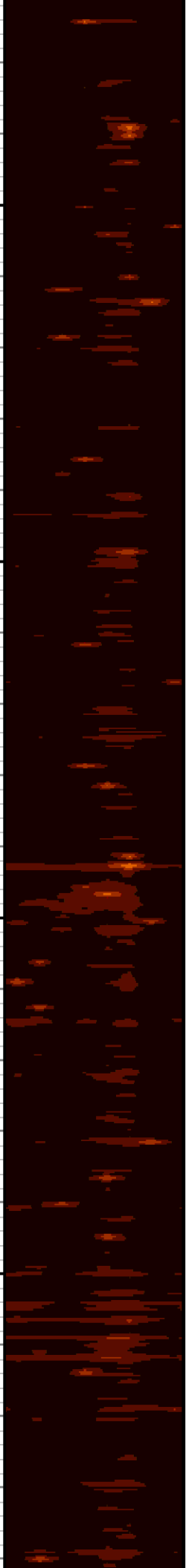
7800

7900

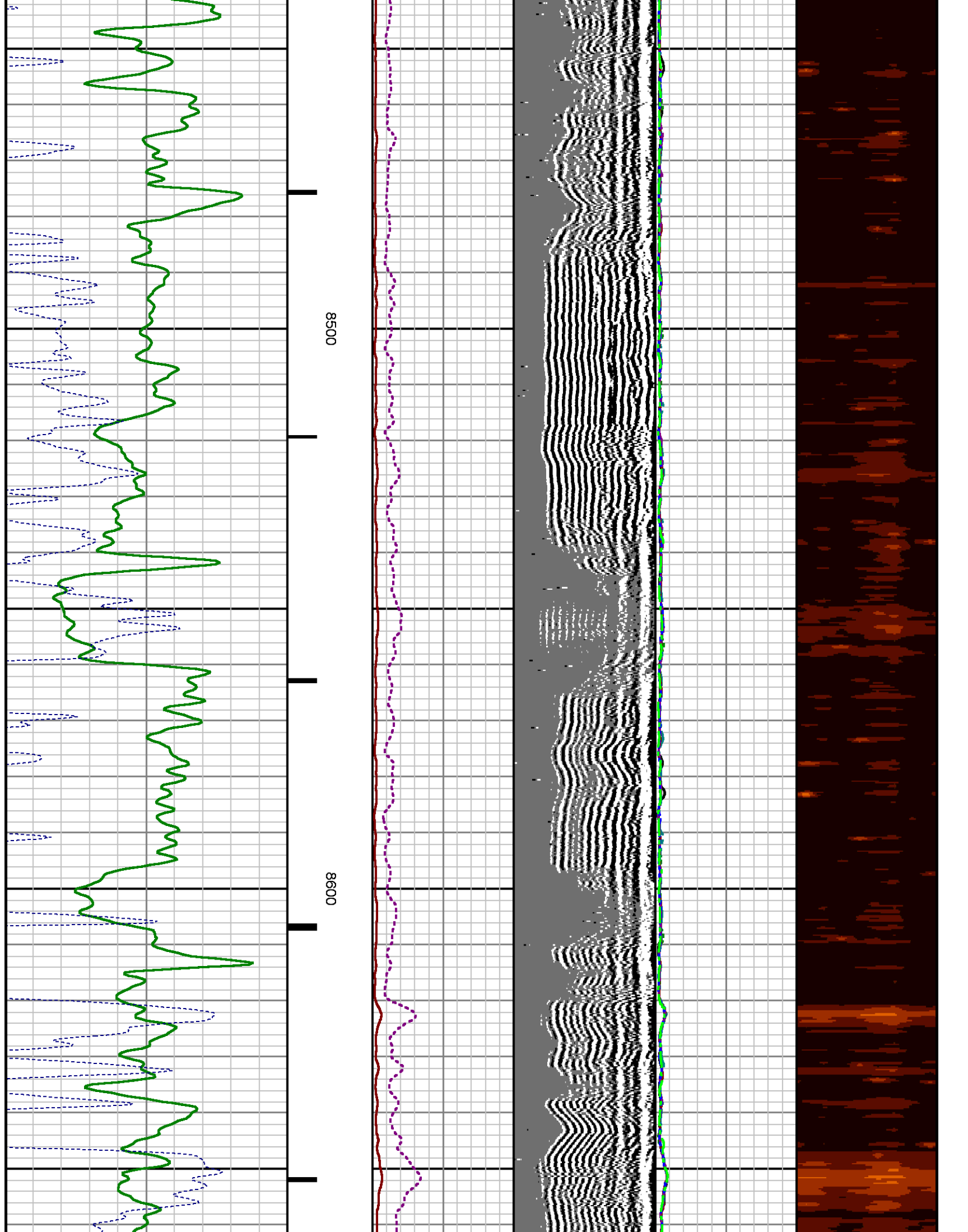
8000

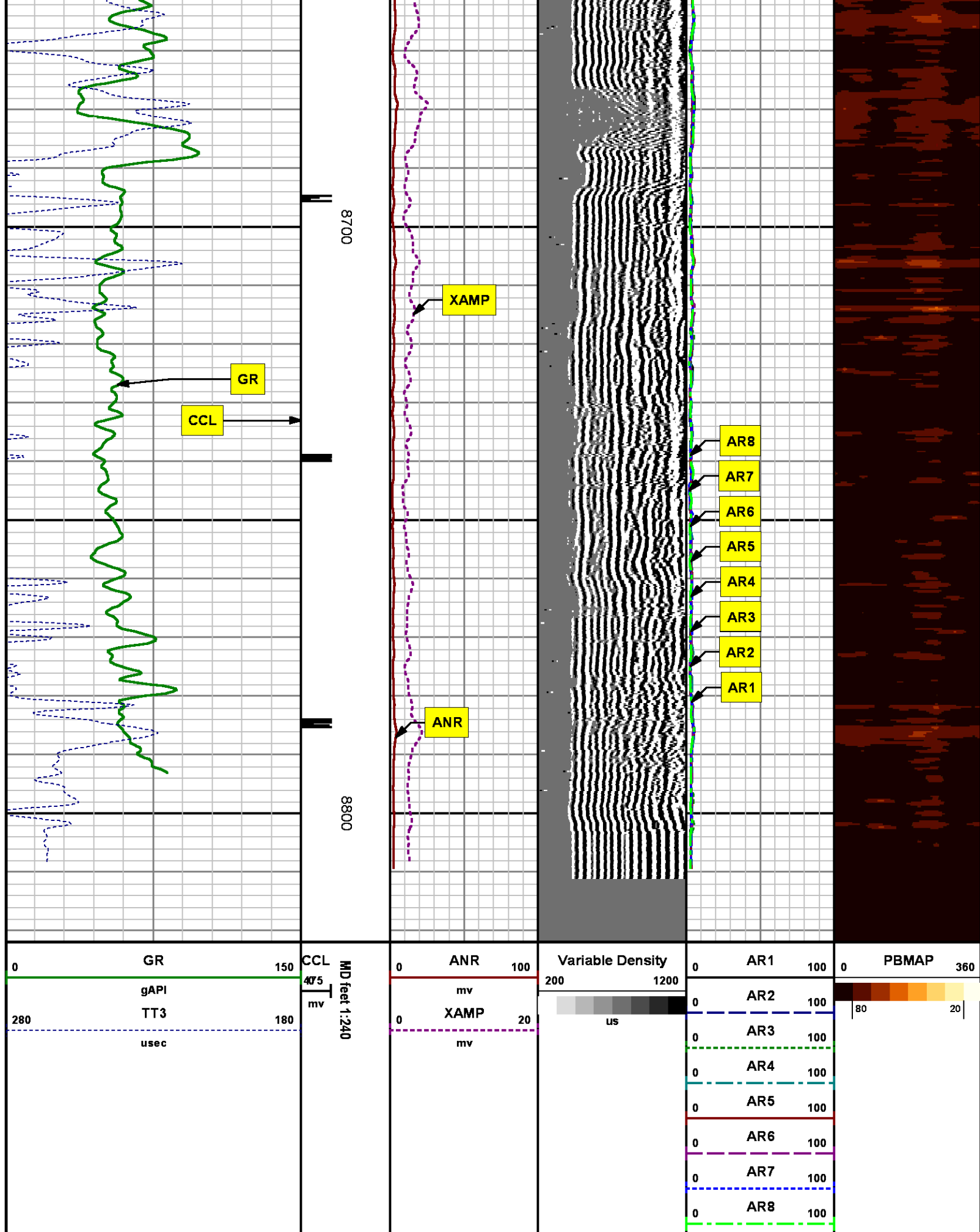












# REPEAT SECTION

## 0 PSI

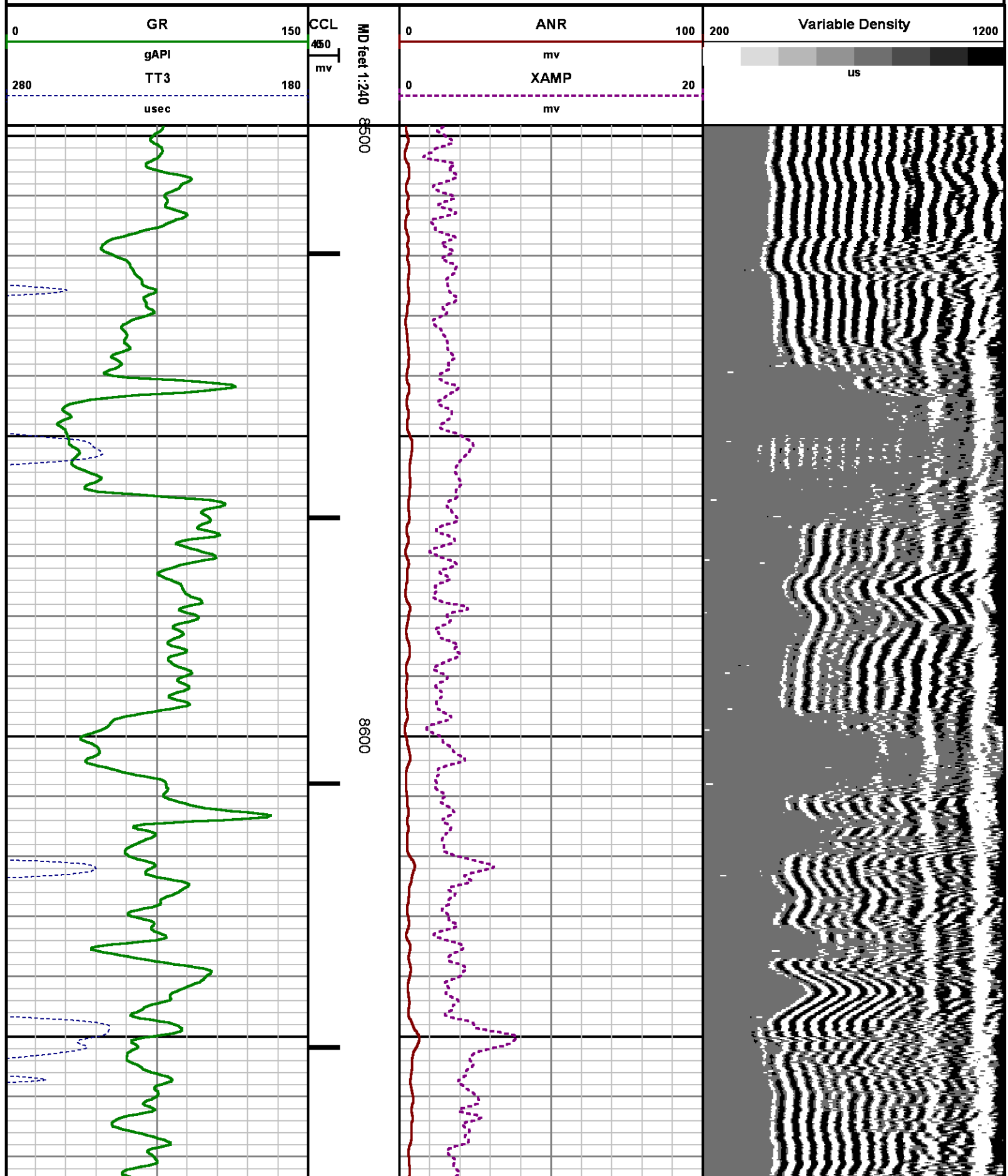
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8498.040	8824.290
RAL	Amp Gate Start Near	195.000	usec	8498.040	8824.290
RAL	Amp Gate Start Radial	195.000	usec	8498.040	8824.290
RAL	Amp Gate Width Far	25.000	usec	8498.040	8824.290
RAL	Amp Gate Width Near	25.000	usec	8498.040	8824.290
RAL	Amp Gate Width Radial	25.000	usec	8498.040	8824.290
RAL	casing od	4.500	inches	8498.040	8824.290
RAL	casing wt	11.600	lbm/ft	8498.040	8824.290
RAL	FB Start Far	291.900	usec	8498.040	8824.290
RAL	FB Start Near	175.391	usec	8498.040	8824.290
RAL	FB Start Radial	175.391	usec	8498.040	8824.290
RAL	FB Thresh Far	15.000	mv	8498.040	8824.290
RAL	FB Thresh Near	10.000	mv	8498.040	8824.290
RAL	FB Thresh Radial	10.000	mv	8498.040	8824.290
RAL	Fluid Travel Time	200.000	usec/ft	8498.040	8813.195

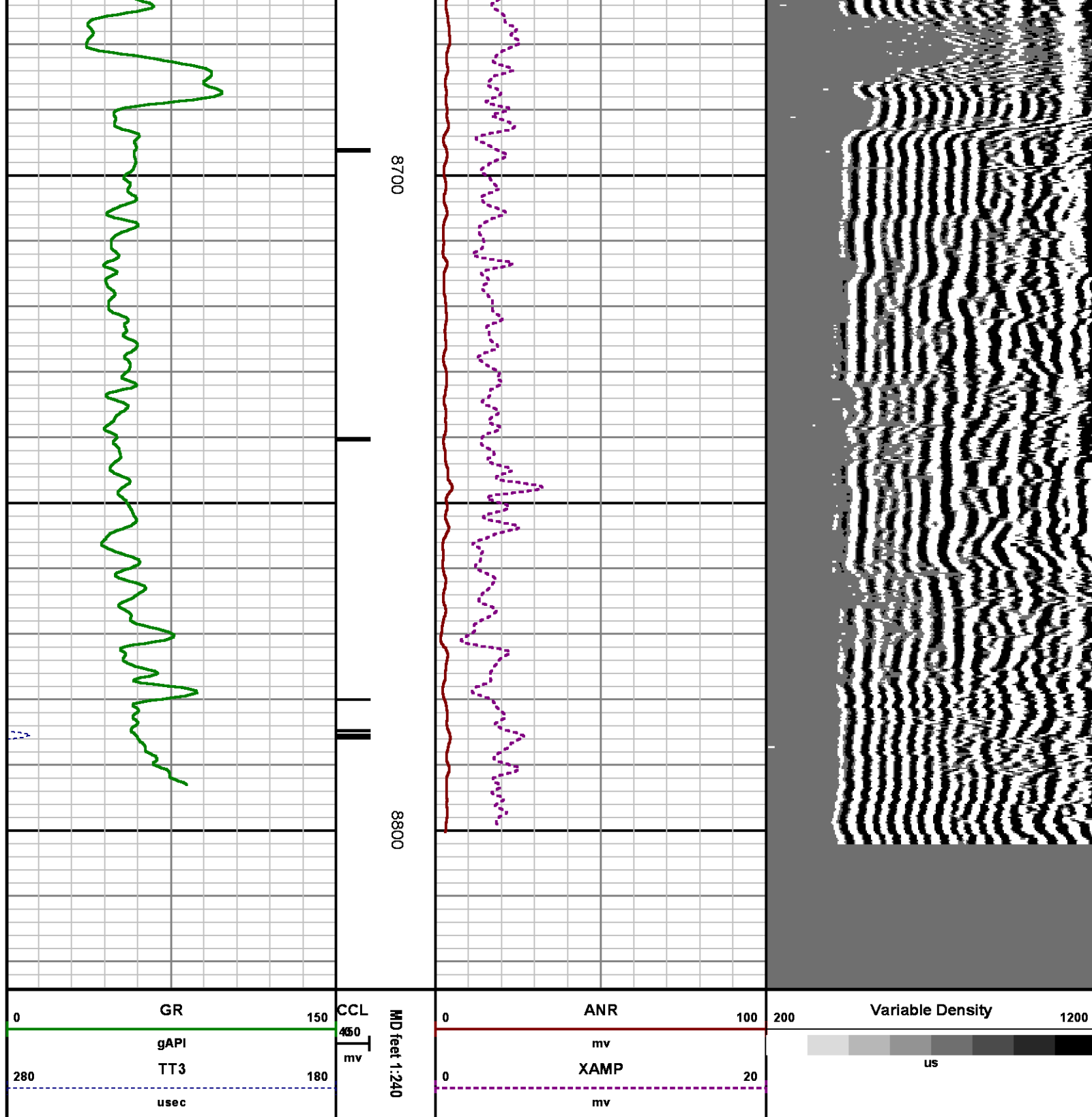
### DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	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	-11.360	AFAR	SIG	TT5			
2459XA	-7.250	CCL					
2459XA	-5.390	GR					
2459XA	0.000	NEU					

**Created : 10/14/2014 8:55:44 AM**





## CALIBRATION SUMMARY

RAI SHP



Shop Calibration: C:\case\calver\RALSHPV49512\_shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Oct 12 06:19:24 2014 TOOL SERIES: 1426XA ASSET: 495 SEQ: 12

Tool Delay [usec]  Tank OD  in Tank Wt  lbm/ft Tank ID  in

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.441"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
3 Ft. Receiver	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="15"/>	<input type="text" value="-0.086"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
5 Ft. Receiver	<input type="text" value="327"/>	<input type="text" value="325"/>	<input type="text" value="30"/>	<input type="text" value="257"/>	<input type="text" value="42"/>	<input type="text" value="4.275"/>	<input type="text" value="150.00"/>	<input type="text" value="0.29"/>
Radial #1	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.856"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #2	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.475"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #3	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.682"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #4	<input type="text" value="215"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.481"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #5	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.518"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #6	<input type="text" value="215"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.236"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #7	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.336"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>
Radial #8	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="17"/>	<input type="text" value="0.694"/>	<input type="text" value="100.00"/>	<input type="text" value="0.26"/>

# RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\49513 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Oct 13 02:44:41 2014 TOOL SERIES: 1426XA ASSET: 495 SEQ: 13

Tool Delay [usec]  Casing OD  in Casing Wt  lbm/ft Casing ID  in

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.024"/>	<input type="text" value="0.000"/>	<input type="text" value="0.99"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.982"/>			
5 Ft. Receiver	<input type="text" value="305"/>	<input type="text" value="25"/>	<input type="text" value="2.803"/>			
Radial #1	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.610"/>			
Radial #2	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.695"/>			
Radial #3	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.597"/>			
Radial #4	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.283"/>			
Radial #5	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.474"/>			
Radial #6	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.600"/>			
Radial #7	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.662"/>			
Radial #8	<input type="text" value="195"/>	<input type="text" value="25"/>	<input type="text" value="0.568"/>			

# GAMMA RAY

Calibration File: C:\case\calver\GR\503O8.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Oct 08 09:03:02 2014 TOOL SERIES: 2459XA ASSET: 503 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	110.22	393.29	0.654	72.04	257.04	185.00

Verification File: C:\case\calver\GR\503O8.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Wed Oct 08 09:04:12 2014 TOOL SERIES: 2459XA ASSET: 503 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	101.07	384.62	0.654	66.05	251.37	185.32

## 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



21.81'

XMIT 15.62'

NEAR RCVR 12.54'

FAR RCVR 10.62'

CCL 8.92'

GR 7.06'

NEU 1.67'  
0.00'

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



Baker Atlas

CASE

Company

WPX ENERGY

Well

SAVAGE RWF 444-25

Field

RULISON

County

GARFIELD

State

COLORADO

Location

SHL: 1125' FSL x 1381' FEL (SESE)

BHL: 398' FSL x 716' FEL

SEC 25 TWP 6 S RGE 94W

Elevations

KB 6260 ft

DF

GL 6234 ft

File No:

CH091511

API No:

05045219990000

25 6S 94W

RWF 43-25 PAD

NABORS 577